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OFFICIAL GAZETTE UNITED STATES PATENT OFFICE

VOL. 176 - 177

MARCH - APRIL 1912

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OFFICIAL GAZETTE

OF THE

UNITED STATES PATENT OFFICE.

VOLUME CLXXVI.

MARCH,

1912.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1912.

ERRATA.

1,019,685, page 28, second claim, line 6, for the word "rotatively" read *relatively.*

1,019,551, page 184, strike out all after number—heading, drawing, and claim—and insert the word WITHDRAWN.

1,020,310, page 468, second claim, lines 1–2, strike out the words "In an exhaust chamber a vacuum cleaning apparatus, the combination of a vacuum" and insert the words *In a vacuum cleaning apparatus, the combination of a vacuum chamber, an exhaust.*

1,020,443, page 551, in claim, line 8, after the word "depth" insert the word *equal.*

1,021,143, page 835, in heading, assignment, after the word assignor insert the words *of one-third.*

42,290, (Design,) page 501, strike out all after number—heading, drawing, and claim—and insert the word WITHDRAWN.

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Patents Nos. 1,019,012 to 1,019,745.

THE OFFICIAL GAZETTE OF THE United States Patent Office.

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ISSUE OF MARCH 5, 1912.

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Designs	15—	No. 42,361 to No. 42,395,	inclusive.
Trade-Marks	83—	No. 86,637 to No. 86,719,	inclusive.
Labels	25—	No. 16,209 to No. 16,233,	inclusive.
Prints	3—	No. 2,967 to No. 2,969,	inclusive.
Reissues	4—	No. 13,377 to No. 13,380,	inclusive.
Total	864		

TO CITIZENS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	3	.....	North Carolina	3	1
Arizona	2	1	North Dakota	2	.....
Arkansas	2	.....	Ohio	41	8
California	38	7	Oklahoma	7	.....
Colorado	5	.....	Oregon	6	1
Connecticut	6	4	Pennsylvania	67	9
Delaware	.....	.....	Rhode Island	7	1
Florida	2	2	South Carolina	2	1
Georgia	8	2	South Dakota	3	.....
Idaho	1	1	Tennessee	3	.....
Illinois	63	3	Texas	10	1
Indiana	16	2	Utah	2	1
Iowa	9	1	Vermont	1	.....
Kansas	8	1	Virginia	7	.....
Kentucky	3	1	Washington	6	2
Louisiana	7	2	West Virginia	8	1
Maine	3	.....	Wisconsin	17	2
Maryland	8	4	Wyoming	2	.....
Massachusetts	68	10			
Michigan	20	6	Alaska, District of	.....	.....
Minnesota	13	.....	Canal Zone	.....	.....
Mississippi	4	.....	District of Columbia	6	.....
Missouri	11	1	Hawaii Territory	.....	.....
Montana	2	.....	Philippine Islands	.....	.....
Nebraska	3	1	Porto Rico	.....	.....
Nevada	.....	.....	U. S. Army	.....	.....
New Hampshire	3	.....	U. S. Navy	1	.....
New Jersey	25	5			
New Mexico	.....	.....	Total to citizens of the United States	654	102
New York	120	20			

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Algeria	.....	.....	Mexico	4	.....
Argentina	.....	.....	Netherlands	.....	.....
Austria-Hungary	3	.....	Newfoundland	.....	.....
Belgium	1	.....	New South Wales	2	.....
Brazil	.....	.....	New Zealand	1	.....
British West Indies	.....	.....	Norway	1	.....
Canada	11	3	Queensland	.....	.....
Cape Colony	.....	.....	Roumania	.....	.....
Chile	.....	.....	Russia	.....	.....
China	.....	.....	Scotland	4	.....
Costa Rica	.....	.....	South Australia	1	.....
Cuba	.....	.....	Spain	.....	.....
Denmark	.....	.....	Sweden	.....	.....
Ecuador	.....	.....	Switzerland	2	.....
England	37	1	Transvaal, South Africa	.....	.....
France	9	3	Victoria	1	.....
Germany	25	1	Western Australia	.....	.....
India	1	.....			
Ireland	.....	.....			
Italy	1	.....	Total to citizens of foreign countries	94	8
Japan	.....	.....			

Notaries Public—Amended Law.

[Public—No. 362.]

An act to amend section five hundred and fifty-eight of the Code of Law for the District of Columbia.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That section five hundred and fifty-eight of the Code of Law for the District of Columbia, relating to notaries public, be amended by adding at the end of said section the following: "*Provided*, That the appointment of any person as such notary public, or the acceptance of his commission as such, or the performance of the duties thereunder, shall not disqualify or prevent such person from representing clients before any of the Departments of the United States Government in the District of Columbia or elsewhere, provided such person so appointed as a notary public who appears to practice or represent clients before any such Department is not otherwise engaged in Government employ, and shall be admitted by the heads of such Departments to practice therein in accordance with the rules and regulations prescribed for other persons or attorneys who are admitted to practice therein: *And provided further*, That no notary public shall be authorized to take acknowledgments, administer oaths, certify papers, or perform any official acts in connection with matters in which he is employed as counsel, attorney, or agent or in which he may be in any way interested before any of the Departments aforesaid."

Approved, June 29, 1906.

Preparation of Specifications and Amendments for the Printer.

The Examiners are directed before passing applications to issue to carefully examine all the papers and see that they are in such shape and condition as to avoid all possibility of error being made by the printers. Whenever interlineations or erasures have been made in the specifications or amendments which would lead to confusion and mistake, the Examiners should require the entire specification to be rewritten before passing the case to issue.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business March 2, 1912.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
313	1. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Jan. 11	Jan. 10	533
128	2. Bee Culture; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Pneumatic Despatch; Pneumatics; Presses; Store-Service; Tobacco.	Jan. 3	Jan. 22	541
175	3. Annealing and Tempering; Electric Heating and Rheostatics; Electrochemistry; Metal-Founding; Metallurgy; Shaping Finid Metal.	Feb. 3	Feb. 19	165
232	4. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Metallic Building Structures.	Feb. 1	Feb. 1	336
167	5. Bookbinding; Harvesters; Jewelry; Music.	Jan. 13	Jan. 8	474
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	Feb. 3	Feb. 3	281
312	7. Educational Appliances; Clutches; Games and Toys; Mechanical Motors; Nut and Bolt Locks; Optics; Velocipedes.	Dec. 14	Jan. 17	605
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Jan. 18	Feb. 2	409
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Pumps; Wind-Wheels.	Jan. 31	Feb. 1	282
235	10. Carriages and Wagons	Dec. 20	Jan. 18	663
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Jan. 12	Jan. 4	370
324	12. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Jan. 13	Jan. 10	606
329	13. Arms, Projectiles, and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Turning.	Dec. 28	Feb. 2	466
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Jan. 8	Jan. 24	387
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Liquid Coating Compositions; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastic Compositions; Plastics.	Jan. 10	Jan. 11	803
109	16. Telegraphy; Telephony	Jan. 24	Jan. 25	223
303	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	Jan. 25	Jan. 29	301
327	18. Injectors and Ejectors; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Boilers; Steam-Engines; Steam-Engine Valves.	Jan. 15	Jan. 27	260
236	19. Dampers, Automatic; Furnaces; Heat-Distributing Systems; Stoves and Furnaces.	Jan. 9	Jan. 13	505
179	20. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Jan. 29	Feb. 3	199
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Jan. 20	Jan. 26	337

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Dec. 8	Jan. 31	315
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Jan. 29	Jan. 26	381
144	24. Apparel; Apparel Apparatus; Sewing-Machines.	Jan. 18	Jan. 12	462
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Feb. 3	Feb. 6	203
106	26. Electricity, Generation; Motive Power.	Oct. 23	Nov. 2	479
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Feb. 2	Jan. 29	345
65	28. Internal-Combustion Engines	Dec. 15	Dec. 16	855
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Wood-working; Woodworking-Tools.	Jan. 2	Feb. 1	448
189	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Jan. 3	Feb. 5	264
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	Jan. 18	Jan. 16	353
278	32. Carbonating Beverages; Curtains, Shades, and Screens; Dispensing Beverages; Dispensing-Cans; Ornamentation; Packaging Liquids; Refrigeration.	Dec. 20	Feb. 3	288
71	33. Cutlery; Domestic Cooking Vessels; Masonry and Concrete Structures; Paving; Tents, Canopies, Umbrellas, and Canes.	Jan. 4	Jan. 15	476
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	Jan. 15	Jan. 18	467
244	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	Jan. 26	Jan. 27	700
264	36. Drafting; Driers; Engraving; Measuring Instruments; Photography.	Jan. 16	Jan. 15	563
107	37. Electric Lighting; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications	Dec. 12	Jan. 22	458
378	38. Animal Husbandry; Artesian and Oil Wells; Fishing and Trapping; Stationery; Stone-Working.	Jan. 13	Jan. 3	603
221	39. Water Distribution	Dec. 12	Dec. 14	891
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Feb. 2	Feb. 3	406
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	Dec. 15	Jan. 25	535
279	42. Electric Railways; Electric Signaling; Railway Signaling; Signals.	Dec. 14	Dec. 18	563
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Jan. 25	Jan. 17	337

Oldest new case, Oct. 23; oldest amended, Nov. 2.

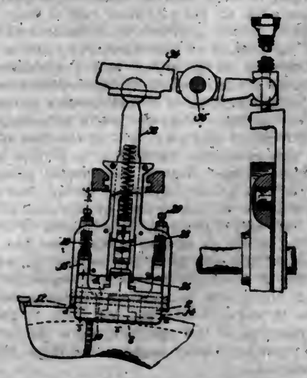
Total number of applications awaiting action 18,838

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	Jan. 20	Jan. 15	1334
	Designs	Jan. 18	Jan. 22	260
	Labels and Prints	Feb. 21	Feb. 23	36

PATENTS

GRANTED MARCH 5, 1912.

1,019,012. GRIPPER. ORRELL ASHTON, Lawrence, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Oct. 28, 1907. Serial No. 399,577. (Cl. 12—11.1.)



1. In a grippers mechanism a plurality of jaws to engage the same side of the stock, said jaws being mounted for relative movement automatically to adapt their relative positions to the thickness of the portion of the stock that is immediately against each of them, and a single means coöperating with all the jaws to engage the opposite side of the stock.

2. In a grippers mechanism, jaws arranged to engage the opposite sides of the stock and having provision for holding the stock engaged by one part of one of the jaws more firmly than a portion of the stock which is engaged by another laterally located part of that jaw.

3. A single gripper mechanism having, in combination, means arranged to engage the opposite sides of the stock including a plurality of members on one side and a common closing mechanism for all said members, said members and closing mechanism being constructed and arranged for applying to different portions of the stock engaged at one time distinctly different pressures from that applied to another laterally adjacent portion of the gripped stock.

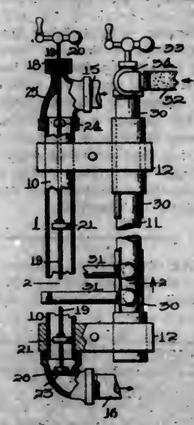
4. A single gripper mechanism having, in combination, means for engaging opposite sides of the edge portion of sheet stock, said means being constructed and arranged to grip one portion of the stock lightly and another laterally located portion of the stock more securely.

5. In a grippers mechanism adapted to engage and pull the upper at the ball of the shoe and at one side of the ball, having a single gripping means constructed and arranged to hold the upper at the ball of the shoe more securely than the upper at the side of the ball.

[Claims 6 to 24 not printed in the Gazette.]

1,019,013. BLOWER AND SHOWER FOR PAPER-MACHINES. OTTO BAKER, Piermont, N. Y., and EUGENE J. MCCARTY, Clinton, Mass., assignors to Thomas J. McNamara, Clinton, Mass. Filed June 8, 1911. Serial No. 631,941. (Cl. 92—50.)

1. In a paper machine, the combination of a set of brackets each having a pair of passages therethrough, a blower pipe and a shower pipe guide both held in said passages parallel with each other, a shower pipe longitudinally adjustable in said guides, and nozzles from the blower pipe extending on an upward inclination under the shower pipe and terminating near the outer side thereof.



2. The combination with a shower pipe having discharge openings along one side thereof, of a rod running through the same and having cleaning devices thereon for dislodging sediment from around said openings, a waste pipe, and a valve connected with said rod for permitting water to discharge into the waste pipe when said cleaning device is operated.

3. As an article of manufacture, a shower pipe having staggered rows of openings along one side for discharging water, a waste pipe at the end thereof, a valve for controlling the admission of water from the shower pipe to the waste pipe, and means for simultaneously opening said valve and cleaning the sediment away from said openings.

4. As an article of manufacture, a shower pipe having discharge openings in the wall thereof and provided with a central rod running through the same having cleaning devices thereon for said openings of a disk-shaped form but taking up only a portion of a complete circle, said rod being adapted to be turned on its axis to bring said disks on the side of the shower pipe opposite said openings, said rod having a waste valve on one end and a stop near the other end for limiting its longitudinal motion.

5. As an article of manufacture, a shower pipe having discharge openings in the wall thereof and provided with a central rod running through the same having cleaning devices thereon of a disk-shaped form but taking up only a portion of a complete circle, said rod being adapted to be turned on its axis to bring said disks on the side of the shower pipe opposite said openings.

[Claim 6 not printed in the Gazette.]

1,019,014. SAFETY APPLIANCE FOR FLYING-MACHINES. CLARENCE A. BARBER, Des Moines, Iowa. Filed July 14, 1911. Serial No. 638,476. (Cl. 244—21.)

1. The combination with a flying machine, of a parachute carried thereon in a normally recumbent and folded

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business March 2, 1912.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended	
313	1. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Jan. 11	Jan. 10	533
126	2. Bee Culture; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Pneumatic Despatch; Pneumatics; Presses; Store-Service; Tobacco.	Jan. 3	Jan. 22	541
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Feb. 3	Feb. 19	165
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235	10. Carriages and Wagons.....	Dec. 20	Jan. 18	663
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109	16. Telegraphy; Telephony.....	Jan. 24	Jan. 25	223
303	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	Jan. 25	Jan. 20	301
327	18. Injectors and Ejectors; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Boilers; Steam-Engines; Steam-Engine Valves.	Jan. 16	Jan. 27	200
230	19. Dampers, Automatic; Furnaces; Heat-Distributing Systems; Stoves and Furnaces.	Jan. 9	Jan. 13	505
179	20. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Jan. 29	Feb. 3	199
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Jan. 20	Jan. 26	337

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended	
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144	24. Apparel; Apparel Apparatus; Sewing-Machines.	Jan. 18	Jan. 12	462
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Feb. 3	Feb. 6	203
109	26. Electricity, Generation; Motive Power.	Oct. 23	Nov. 2	479
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Feb. 2	Jan. 29	345
65	28. Internal-Combustion Engines.	Dec. 15	Dec. 16	855
147	29. Coopering; Fire-Escapes; Ladders; Rools; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	Jan. 2	Feb. 1	448
189	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Jan. 3	Feb. 5	264
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	Jan. 18	Jan. 16	353
278	32. Carbonating Beverages; Curtains, Shades, and Screens; Dispensing Beverages; Dispensing-Cans; Ornamentation; Packaging Liquids; Refrigeration.	Dec. 20	Feb. 3	288
71	33. Cutlery; Domestic Cooking Vessels; Masonry and Concrete Structures; Paving; Tents, Canopies, Umbrellas, and Canes.	Jan. 4	Jan. 15	476
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	Jan. 15	Jan. 18	467
244	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	Jan. 26	Jan. 27	700
264	36. Drafting; Driers; Engraving; Measuring Instruments; Photography.	Jan. 16	Jan. 15	563
107	37. Electric Lighting; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications	Dec. 12	Jan. 22	458
378	38. Animal Husbandry; Artesian and Oil Wells; Fishing and Trapping; Stationery; Stone-Working.	Jan. 13	Jan. 3	603
321	39. Water Distribution.....	Dec. 12	Dec. 14	591
220	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Feb. 2	Feb. 3	406
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	Dec. 15	Jan. 25	635
279	42. Electric Railways; Electric Signaling; Railway Signaling; Signals.	Dec. 14	Dec. 18	563
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Jan. 25	Jan. 17	337

Oldest new case, Oct. 23; oldest amended, Nov. 2.

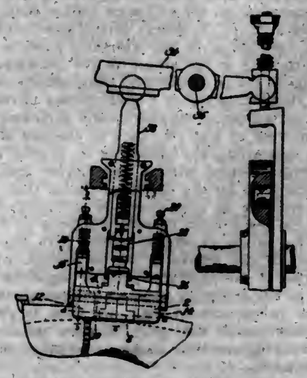
Total number of applications awaiting action 18,838

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks.....	Jan. 20	Jan. 15	1334
	Designs.....	Jan. 18	Jan. 22	260
	Labels and Prints.....	Feb. 21	Feb. 23	26

PATENTS

GRANTED MARCH 5, 1912.

1,019,012. GRIPPER. ORRELL ASHTON, Lawrence, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Oct. 28, 1907. Serial No. 399,577. (Cl. 12—11.1.)



1. In a grippers mechanism a plurality of jaws to engage the same side of the stock, said jaws being mounted for relative movement automatically to adapt their relative positions to the thickness of the portion of the stock that is immediately against each of them, and a single means coöperating with all the jaws to engage the opposite side of the stock.

2. In a grippers mechanism, jaws arranged to engage the opposite sides of the stock and having provision for holding the stock engaged by one part of one of the jaws more firmly than a portion of the stock which is engaged by another laterally located part of that jaw.

3. A single gripper mechanism having, in combination, means arranged to engage the opposite sides of the stock including a plurality of members on one side and a common closing mechanism for all said members, said members and closing mechanism being constructed and arranged for applying to different portions of the stock engaged at one time distinctly different pressures from that applied to another laterally adjacent portion of the gripped stock.

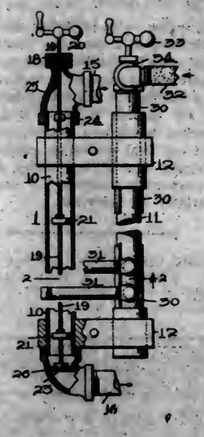
4. A single gripper mechanism having, in combination, means for engaging opposite sides of the edge portion of sheet stock, said means being constructed and arranged to grip one portion of the stock lightly and another laterally located portion of the stock more securely.

5. In a grippers mechanism adapted to engage and pull the upper at the ball of the shoe and at one side of the ball, having a single gripping means constructed and arranged to hold the upper at the ball of the shoe more securely than the upper at the side of the ball.

[Claims 6 to 24 not printed in the Gazette.]

1,019,013. BLOWER AND SHOWER FOR PAPER-MACHINES. OTTO BAKER, Piermont, N. Y., and EUGENE J. MCCARTY, Clinton, Mass., assignors to Thomas J. McNamara, Clinton, Mass. Filed June 8, 1911. Serial No. 631,941. (Cl. 92—50.)

1. In a paper machine, the combination of a set of brackets each having a pair of passages therethrough, a blower pipe and a shower pipe guide both held in said passages parallel with each other, a shower pipe longitudinally adjustable in said guides, and nozzles from the blower pipe extending on an upward inclination under the shower pipe and terminating near the outer side thereof.



2. The combination with a shower pipe having discharge openings along one side thereof, of a rod running through the same and having cleaning devices thereon for dislodging sediment from around said openings, a waste pipe, and a valve connected with said rod for permitting water to discharge into the waste pipe when said cleaning device is operated.

3. As an article of manufacture, a shower pipe having staggered rows of openings along one side for discharging water, a waste pipe at the end thereof, a valve for controlling the admission of water from the shower pipe to the waste pipe, and means for simultaneously opening said valve and cleaning the sediment away from said openings.

4. As an article of manufacture, a shower pipe having discharge openings in the wall thereof and provided with a central rod running through the same having cleaning devices thereon for said openings of a disk-shaped form but taking up only a portion of a complete circle, said rod being adapted to be turned on its axis to bring said disks on the side of the shower pipe opposite said openings, said rod having a waste valve on one end and a stop near the other end for limiting its longitudinal motion.

5. As an article of manufacture, a shower pipe having discharge openings in the wall thereof and provided with a central rod running through the same having cleaning devices thereon of a disk-shaped form but taking up only a portion of a complete circle, said rod being adapted to be turned on its axis to bring said disks on the side of the shower pipe opposite said openings.

[Claim 6 not printed in the Gazette.]

1,019,014. SAFETY APPLIANCE FOR FLYING-MACHINES. CLARENCE A. BARBER, Des Moines, Iowa. Filed July 14, 1911. Serial No. 638,476. (Cl. 244—21.)

1. The combination with a flying machine, of a parachute carried thereon in a normally recumbent and folded

position, rocking arms for holding same in such position, lifting levers for raising said parachute, means for releasing said holding arms, a spring for imparting initial movement to the parachute for raising same, a controlling lever for simultaneously actuating said releasing means for the holding arms and releasing means for the spring and the lifting levers, and a spring carried on said parachute adapted to expand same when raised, substantially as described.



2. The combination with a flying machine, of a parachute carried thereon in a normally recumbent and folded position, rocking arms for holding same in such position, lifting levers for raising said parachute, means for releasing said holding arms, a spring for imparting initial movement to the parachute for raising same, a trigger for normally holding said spring inactive, a controlling lever for simultaneously actuating said releasing means for the holding arms, spring trigger and lifting levers, and a spring carried on said parachute adapted to expand same when raised, substantially as described.

1,019,015. GAME-COUNTER. GEORGE H. BARKER, Los Angeles, Cal. Filed June 3, 1911. Serial No. 631,074. (Cl. 235—90.)



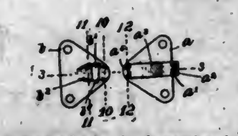
1. A game counter comprising, in combination, a base, a row of independently shiftable markers mounted in said base and having a portion extending above the same and a retracting member mounted in and longitudinally of said base, said retracting member being adapted to simultaneously return to original position all the markers in a single row, substantially as described.

2. A game counter comprising, in combination, a base, a row of independently shiftable markers mounted in said base and having a portion extending thereabove, each of said markers having a projection, and a longitudinally extending retracting member having projections adapted for coöperation with the projections on the markers, whereby all the said markers may be simultaneously returned to original position by said retracting member, substantially as described.

3. A game counter comprising, in combination, a base having a series of grooves, tubes seated in said grooves, said tubes being provided with side openings, substantially circular markers mounted in said tubes, each having a portion extending through the opening in a tube and also having a projection, shafts mounted in said base member and concentric with said tubes, said shafts having a plurality of projections, and means for rotating said shafts whereby said markers may be returned to original position, substantially as described.

4. A game counter, comprising, in combination, a base having a groove therein, a plurality of markers in said groove and independently shiftable with relation to said base, a shaft adapted for coöperation with each of said markers whereby all the markers may be simultaneously returned to their original position, substantially as described.

1,019,016. CLASP. WALTER S. BARKER, Cambridge, Mass. Filed Apr. 29, 1909. Serial No. 493,003. (Cl. 24—226.)

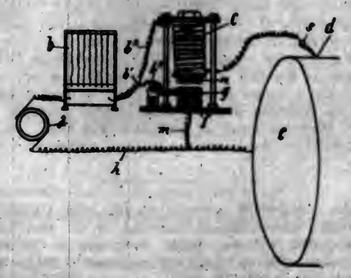


1. A clasp composed of a hook-member having a transversely curved groove formed therein extending longitudinally in front of and also back of the end of the hook, and an apertured-plate having its toe-portion in front of its aperture formed with a longitudinal groove, curved transversely on an arc of longer radius than the transverse curvature of the groove in the hook-member, whereby said toe-portion of the apertured-plate is prevented from bottoming in the groove in the hook-member when the members are in engagement, substantially as described.

2. A clasp composed of a hook-member having a transversely curved groove formed therein extending longitudinally in front of and also back of the end of the hook, and an apertured-plate having its toe-portion in front of its aperture formed with a longitudinal groove, curved transversely on an arc of longer radius than the transverse curvature of the groove in the hook-member and having its heel-portion immediately back of its aperture curved on an arc of shorter radius than the transverse curvature of the groove in its toe-portion, whereby the toe-portion of the apertured-plate is supported above the bottom of the groove in the hook-member when the members are in engagement, and the hook is permitted to easily pass out of the aperture when the members are moved toward each other to disengage them, substantially as described.

3. The clasp herein described composed of a hook-member comprising a sheet metal attaching-plate having a resilient hook, the end portion of which is bent inward and terminates at the plate and with said plate forms a converging space, the end of the hook being at the apex thereof, and an apertured-member comprising a sheet metal attaching-plate having an aperture to receive the end of said hook, the portions of said apertured-plate in front and also in rear of the aperture adapted to enter said converging space and engage the end of the hook at the apex of said space, thereby to lift and pass beneath the hook by movements of the members toward each other, the portion of said apertured-plate in rear of the aperture corresponding in shape to that portion of the attaching-plate of the hook-member in front of the hook and the portion of said apertured-plate in front of the aperture being elevated with respect to the portion in rear thereof, substantially as described.

1,019,017. ELECTRICAL WELDING APPARATUS. JOHANNES BECKMANN, Altona, Ottensen, Germany. Filed July 1, 1909. Serial No. 505,395. (Cl. 219—8.)



1. Welding apparatus comprising a source of electrical energy, a main circuit therefrom containing a resistance,

an electromagnet and a welding electrode, an armature for said electromagnet, a contact for said armature having electrical connection therewith when the armature is unattracted by said electromagnet, a shunt circuit from said main circuit, said shunt circuit including said armature and said contact and being adapted to be closed upon the breaking of the main circuit whereby the electromagnet is deënergized and the armature falls and makes electrical connection with said contact block.

2. Welding apparatus comprising a source of electrical energy, a main circuit therefrom containing a resistance, an electromagnet and a welding electrode, a shunt circuit from said main circuit and a contact device in said shunt circuit in coaction with said electromagnet for closing said shunt circuit automatically upon opening of the main circuit.

3. Welding apparatus comprising a source of electrical energy, an electromagnet electrically connected with said source, a welding electrode electrically connected with said electromagnet, a return line to the said source from the work piece, a resistance in electrical connection with said source of electrical energy, an armature for said electromagnet electrically connected with said resistance, a contact block for said armature adapted to be electrically connected therewith when the armature is unattracted by the said electromagnet, and an electrical connection between said return wire and said contact block, said electrical connection, said return wire, contact block, armature and resistance forming a circuit which is adapted to be closed upon the deënergizing of said electromagnet when the welding operation is interrupted.

1,019,018. ARM FOR SUPPORTING THE NOSE-GRIPS OF EYEGLASSES. ANDREW V. BROWN, Philadelphia, Pa. Filed Aug. 18, 1911. Serial No. 644,781. (Cl. 88—50.)



1. An arm of pliable metal for supporting a nose rest of a pair of eye glasses, the said arm being operatively connected to one end of the connecting means between the lenses of a pair of eye glasses and consisting of a part extending rearwardly from such point of connection and a part extending forwardly from the rear end of the first named part and a part extending rearwardly from the second named part, and a nose gripping member secured to the third mentioned part.

2. In a pair of eye glasses, the combination of the lenses, means for connecting the said lenses, arms having operative connection with the opposite ends of the said means, the said arms having parts which extend rearwardly and downwardly from their points of connection to the said means and also having parts which extend forwardly from the rear ends of the said rearwardly and downwardly extended parts and parts which extend rearwardly from the forward ends of the second named parts, and nose gripping members connected to the third named parts.

3. In a pair of eye glasses, the combination of the lenses, means for connecting the said lenses, arms for suporting the nose grips having operative connection with the opposite ends of the said means, the said arms extending rearwardly from their points of connection such distances as may be desired and being then extended forwardly and above the rearwardly extending parts, and nose grips having operative connection with the forwardly extending parts of the said arms.

4. In a pair of eye glasses the combination of the lenses, means for operatively connecting the said lenses, nose grips, arms for supporting the nose grips which arms have operative connection with the opposite ends of the said means and which arms extend rearwardly from their points of connection and being then extended forwardly and in a plane above the rearwardly extending parts and having connection with the anterior portions of the said nose grips.

5. In a pair of eye glasses, arms for supporting the nose gripping members each of which arms includes a straight part which extends rearwardly from its point of connection to a part of the eye glass mounting and which terminates in a bend and also a straight part which extends from said bend forwardly and in a plane above the rearwardly extending part and the forward end of each of said forwardly extending parts having connection with a nose gripping member to support the same.

[Claims 6 and 7 not printed in the Gazette.]

1,019,019. COMBINATION CAP AND BONNET. FRANK BAUMER, New York, N. Y. Filed July 10, 1911. Serial No. 639,344. (Cl. 2—106.)



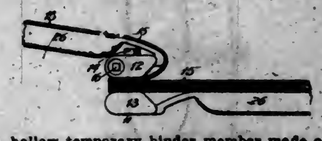
1. In a device of the class described, a hat comprising a crown, a brim substantially co-extensive with the crown and flexibly united to and adapted to be raised and lowered with respect to said crown, a slit formed in the crown, extending through the brim, and means for adjustably connecting the edges of said slit.

2. In a device of the class described, a hat comprising a crown, a brim, a slitted portion, ribbons and means for holding said ribbons in said slitted portion.

3. In a device of the class described, a crown, a brim, a slitted portion, a lining, reinforces, rings, and ribbons passing through said rings so that said hat may be worn either as a hat or a hood at the option of the wearer.

4. In a device of the class described, a crown, a brim, a slitted portion with a lining secured therein, reinforces on each side of said hood, rings means for uniting parts of one of said reinforces on each side of said hood, and a ribbon adapted to pass through said rings, whereby said hood may be opened or closed at the option of the wearer.

1,019,020. TEMPORARY BINDER. ALBERT L. BUNCE, Chicago, Ill., assignor to Workman Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 15, 1910. Serial No. 577,855. (Cl. 129—12.)



1. A hollow temporary binder member made of a single sheet of metal folded to form a hollow body with one edge portion of the sheet bent around to form a hinge pin socket, the other edge portion being disposed between the edge of the socket part and the wall of the member supplied with such socket part, substantially as described.

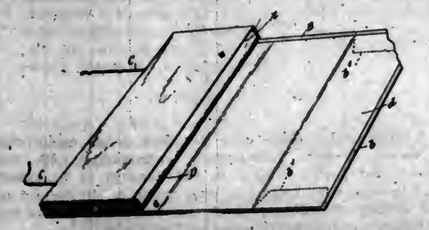
2. A hollow temporary binder member made of a sheet of metal folded longitudinally to provide a pair of substantially parallel spaced walls, one of said wall sections being bent to contact along its edge portion with the opposite wall of the member, such latter wall being bent along its edge portion to provide a hinge pin socket and to clamp between said socket and the wall said edge portion of the first wall, substantially as described.

3. A hollow temporary binder member comprising a single folded sheet of metal, provided with an integral hinge pin socket, and having a single joint concealed beneath said socket, substantially as described.

4. A hollow temporary binder member made of a single folded sheet of metal, provided with an integral hinge pin socket, and having a single unsoldered joint concealed beneath and maintained closed by said socket, substantially as described.

5. In a temporary binder, the combination of a binder member having a hinge portion offset laterally from the surface of said member adapted to contact with the leaves secured in the binder, said member having an obliquely disposed surface extending from said hinge portion to said portion adapted to contact with the leaves, and a cover having a curved portion hinged to the hinge portion of said member, whereby in the open position of the binder the leaves are adapted to follow the curvature of the cover near the hinge and lie flat upon said cover, substantially as described.

1,019,021. PUT-UP FOR DRY GOODS. MARK H. BURCH, Allenhurst, N. J. Filed June 8, 1911. Serial No. 631,907. (Cl. 206—50.)



In combination, a pocket closed on all sides and open at one end to receive the bulk of dry-goods material, a flap connected with the pocket for folding over the open end of the pocket and for carrying an end portion of the dry-goods material, and means comprising edge flaps carried by the said flap for holding said end portion of the dry-goods material to said flap whereby when the flap is folded over and away from the opening said end portion of dry-goods material is carried with it.

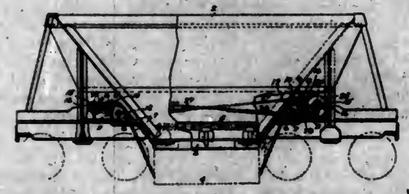
1,019,022. CONTAINER AND DROPPER. HARRY W. CADWELL, Detroit, Mich., assignor to Frederick Stearns & Company, Detroit, Mich., a Corporation of Michigan. Filed May 21, 1909. Serial No. 497,421. (Cl. 215—70.)



1. In a container for liquids, the combination of a single piece body having a dropper nipple at one end forming an integral extension thereof, the other end being open, the body portion adjacent the open end being constructed to form an annular shoulder projecting within the container, and a portion of the body beyond said shoulder being flared outwardly, and a comparatively thick single piece flexible, outwardly-bowed compressible stopper member detachably fitting within the open end and seated upon the annular shoulder, said member forming a compressible stopper or cork for the container and a drop actuating means.

2. In a container for liquids, the combination of a single piece body having a dropper nipple at one end forming an integral extension thereof, the other end being open, the body portion adjacent the open end being constructed to form an annular shoulder projecting within the container, and the open end of the body beyond said shoulder being extended to constitute a stopper securing and holding portion, and a comparatively thick single piece flexible outwardly bowed compressible stopper member detachably fitting within the extended open end of the body and seated upon the annular shoulder, said member forming a stopper or cork for the container and a drop actuating means.

1,019,023. CAR-DOOR-OPERATING DEVICE. ANDREW CHRISTIANSON, Butler, Pa., assignor to Standard Steel Car Co., Pittsburgh, Pa., a Corporation of Pennsylvania. Filed May 29, 1911. Serial No. 630,211. (Cl. 105—185.)



1. In car door operating mechanism, the combination with the car body, of a downwardly swinging door, a sheave, flexible connections between said door and sheave, a locking member carrier by the flexible connection, an abutment with which the locking member engages, a tripping member, and means for operating said tripping member by the engagement of the sheave therewith to release said locking member.

2. In car door operating mechanism, the combination with the car frame, of a downwardly swinging door, a sheave, flexible connections between said door and sheave, a locking member connected to said flexible connection, an abutment with which said locking member engages, a tripping member engaging said locking member, and a a cam on said sheave adapted to engage said tripping member.

3. In car door operating mechanism, the combination with the car frame, of a downwardly opening door, a sheave, flexible connections between said door and sheave, a locking member carried by said flexible connection, an abutment with which said locking member is adapted to engage, a tripping member for releasing said locking member, and means for operating said tripping member by said sheave, said sheave having a diagonal groove and a straight groove engaged by said chain.

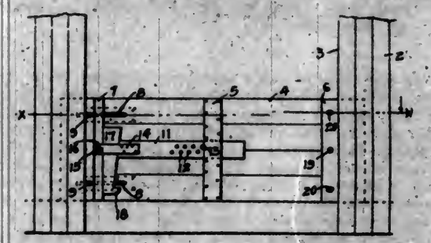
4. In car door operating mechanism, the combination with the car frame, of a downwardly opening door, a sheave having a diagonal groove and a straight groove, means for rotating said sheave, and flexible connections between said door and said sheave.

1,019,024. LACING-HOOK FOR BOOTS AND THE LIKE. BYRON GEORGE CLARK, Birmingham, England. Filed Nov. 29, 1909. Serial No. 530,841. (Cl. 24—146.)



A lacing hook having a head and a shank, and an intermediate part connecting the head at the rear thereof with the rear wall of the shank, the rear wall of the shank being extended upwardly to form a lace bearing shoulder, then substantially at a right angle, and then reversely to form the head.

1,019,025. GRAIN-DOOR. CALVIN P. COON, Bruce, Wis. Filed Feb. 4, 1911. Serial No. 608,623. (Cl. 20—30.)



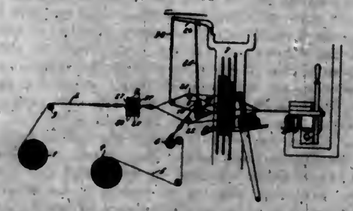
1. A grain door adapted to fit against the door frame on the inside of the car and having cleats adapted to engage the door frame, a slide connected with one of said cleats and relatively movable with respect thereto and having means for locking it against movement in one direction, and means for forcing said slide and one of said cleats apart, for the purpose specified.

2. A grain door adapted to fit the inside of a car and having longitudinal slots therein at one end, a cleat having bolts adapted to slide in said slots, a sliding bar connected with the middle portion of said cleat and having a guide on said door, said slide and cleat being relatively movable, a second cleat adapted to bear against the opposite side of the door frame, means for locking said sliding bar against movement in its guide, and means for forcing said first named cleat and said sliding bar apart.

3. A grain door adapted to fit against the door frame on the inside of a car and having cleats 6 and 7 adapted to engage the door frame, a sliding bar pivotally connected with said cleat 7 and relatively movable with respect thereto and having means for locking it against movement in one direction, and a wedge fitting between said sliding bar and said cleat 7 and operating to clamp both of said cleats against the door frame.

4. A grain door adapted to fit the inside of a car door frame and having cleats arranged to contact with the door frame, one of said cleats being slidably mounted on said door, a sliding bar mounted on said door and having means for locking it against movement in one direction, and a wedge interposed between said sliding bar and said slidable cleat and adapted to clamp said cleats against the door frame.

1,019,026. WARP STOP-MOTION FOR PILE-FABRIC LOOMS. SAMUEL B. CUTTING and EDWARD MARSHALL, Bridgeport, Conn., assignors to The Salts Textile Manufacturing Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Aug. 29, 1911. Serial No. 646,636. (Cl. 139—91.)



1. In a warp stop motion for pile fabric looms, the combination of stopping mechanism and a controller therefor, means for dividing the back warps, means for leading the pile warps into the space between the divided back warps, and drop devices carried by unbroken pile warps in said space, said drops being adapted to set in operation said controller when a pile warp breaks or becomes unduly slack to stop the loom.

2. In a warp stop motion for pile fabric looms, the combination of stopping mechanism and a controlling circuit therefor, means for dividing the back warps, means for leading the pile warps into the space between the divided back warps, and drop devices carried on unbroken pile warps in said space, said drops being adapted to close the circuit when a pile warp breaks or becomes unduly slack.

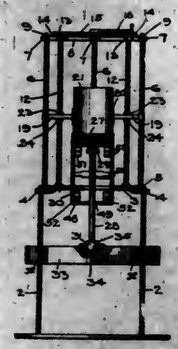
3. In a warp stop motion for pile fabric looms, the combination of stopping mechanism and a controlling circuit therefor, means for dividing the back warps, means for supporting the pile warps in the space between the divided back warps, and drop devices carried on unbroken pile warps at said point of support, said drops being adapted to close the circuit when a pile warp breaks or becomes unduly slack.

4. In a warp stop motion for pile fabric looms, the combination of stopping mechanism and a controlling circuit therefor, means for dividing the back warps, circuit terminals located in the space between the back warps, means for leading the pile warps through said space, and drop devices carried on unbroken pile warps in proximity to said terminals, said drops being adapted to close the circuit through said terminals when a pile warp breaks or becomes unduly slack.

5. In a warp stop motion for pile fabric looms, the combination of stopping mechanism and a controlling circuit therefor, means for dividing the back warps, circuit terminals located in the space between the back warps, means for leading the pile warps through said space below said terminals, drop devices carried on unbroken pile warps and normally engaging one of said terminals and adapted to close the circuit by contact with the other terminal when the corresponding pile warp breaks or becomes unduly slack.

[Claims 6 to 8 not printed in the Gazette.]

1,019,027. WAVE-MOTOR. JOHN WILLIAM DENNY, Mapimi, Mexico. Filed Feb. 7, 1911. Serial No. 607,057. (Cl. 61—51.)



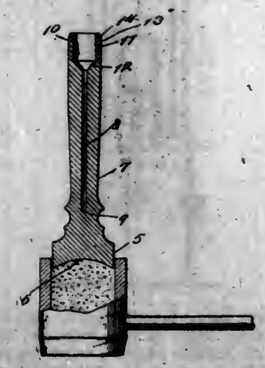
1. In a wave motor, the combination with a supporting frame, of a compression cylinder supported by the frame, a piston in the cylinder having a depending piston rod, a float secured to the latter end of the piston rod, the undulations of the waves shifting the float and thus the piston to compress air in the piston, a frame secured to and depending from the cylinder, said frame having a portion providing a guide for the piston rod, an abutment bar secured on the piston rod and lying within the frame, and resilient abutments carried by the cylinder and by the frame for engaging said bar to limit the movement of the bar and thus the piston in either direction.

2. The combination with a supporting frame, of a piston cylinder adjustably supported thereby, a piston working in the cylinder, a depending piston rod secured to said piston, a float secured to the latter end of the piston rod, the undulations of the wave shifting the float and thus through the rod the piston, a depending U-shaped frame secured to the lower end of the cylinder, said frame having an enlarged central portion having an aperture formed therein in which the piston rod slides, spring buffers secured to the under side of the cylinder, additional spring buffers secured to the upper face of the base of the U frame, and an abutment bar secured on the piston rod and adapted to contact with said spring buffers of the cylinders and frame to limit the movement of the piston rod and thus the piston in either direction.

3. A wave motor, comprising a base, supports rising therefrom, a plate secured to the upper ends of the supports, guiding and adjusting supports rising from the plate, a collar having arms engaging said latter supports, a cylinder secured to said collar, a piston in the cylinder, a piston rod depending from the piston through the bottom of the cylinder and the plate, and a float having ball and socket connection with the lower end of said piston rod and guided by the first mentioned supports, the vertical movement of said float occasioned by the undulations of the waves moving the piston to compress air in the cylinder.

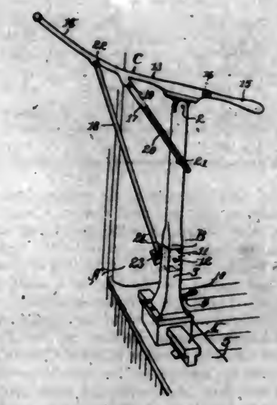
4. A wave motor comprising a base, supports rising therefrom, a plate secured to the upper ends of the supports, guide rods secured to and rising from said plate, a second plate secured to the upper ends of said rods, threaded adjusting spindles having their lower ends journaled in the first plate and having their upper ends projecting through the other plate, pinions secured to the said upper ends of the spindles, a central gear secured to the upper plate and in mesh with said pinions, means for rotating the gear and thus the pinions and their spindles, a cylinder, arms projecting radially from the cylinder and having threaded sockets in which the spindles are engaged, the rotation of the spindles serving to vertically adjust the cylinder, an air compressing piston in the cylinder, and means operated by the movement of the waves for reciprocating the piston in the cylinder to cause the operation of said piston.

1,019,028. PIPE-TAMPER, &c. PICKERING DODGE, Falls Church, Va. Filed Sept. 18, 1911. Serial No. 649,902. (Cl. 131—13.)



In combination with a circular head having a concaved under surface, of a hand-piece extending centrally from the upper surface of the head and provided with an elongated longitudinal opening terminating near said head, said hand-piece being further provided at its outer end with an enlarged opening having a vertical wall, said wall terminating in an inwardly tapering wall forming a guide and communicating with the said elongated opening, a finger-piece for the hand-piece having a tapering shank adapted to frictionally engage the vertical wall of the enlarged opening of the said hand-piece, and an elongated pointed stem extending from the shank into the longitudinal opening of said hand-piece.

1,019,029. MAIL-COLLECTOR. FRANK J. EDER, St. Paul, Minn. Filed Oct. [illegible], 1911. Serial No. 657,070. (Cl. 105—230.)



1. In a sack collector for mail coaches, a support mounted outside the door of said coach, a curved catching arm pivoted to said support to rotate into vertical and horizontal position without the door of said car, and an extension piece adapted to be connected to said catching arm in extension thereof to guide a mail sack into the interior of said coach and to be removed to permit the closing of the coach door when the catching arm is in operative position.

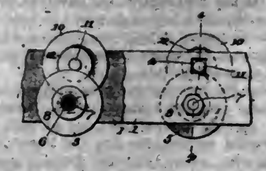
2. In a sack collector for mail coaches, a slideway rail on the threshold of said coach door, a stand having a base slidable on said rail and having latch means for adjustment thereon, a catching arm pivoted at the upper extremity of said stand to rotate transversely of said coach into and out of operative position, an extension piece adapted to be attached to said catching arm to guide mail sacks into the interior of said coach and to be removed to permit the operation of said catching arm with the coach door closed and means for bracing said arm in operative position.

3. In a mail sack collector for railway coaches, a curved catching rail positioned in the doorway of a coach and having an outer extremity extending forward to engage the suspended mail sack between its ends, and an inner extremity directed toward the interior of the car and adapted to permit the free riding of a mail sack thereon between its ends into said car by its own momentum.

4. In a sack collector for railway mail coaches, a support, a curved catching rail rotatably mounted on said support in the doorway of a coach and having an outer extremity extending forward to engage the suspended mail sack between its ends and an inner extremity directed toward the interior of the car to guide said sack caught by said arm past said support into said coach.

5. In a sack collector for mail coaches, a supporting stand detachably fixed to the door frame of a coach, a curved catching rail mounted on said stand and having a catching extremity adapted to engage a suspended mail sack between its ends, and a delivery extremity adapted to guide said sack riding under its own momentum on said rail into the interior of said coach, and means for supporting said catching arm in operative position.

1,019,030. ROLLER CONVEYER. OTTO ECK, Baltimore, Md. Filed June 5, 1911. Serial No. 631,256. (Cl. 193—1.)



1. A roll conveyer, comprising a pair of rails, each having a plurality of openings formed therein; a wheel sustained by a rail adjacent to each of said openings; and a plurality of load conveying rolls, the axles of each roll finding their bearings on a pair of oppositely-disposed wheels, the axles extending into openings located above the wheels and normally resting upon the wheels to the rear of the highest point in the peripheries of said wheels.

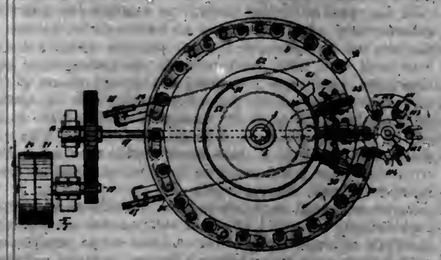
2. A roll conveyer, comprising a pair of rails each having a plurality of openings formed therein; a wheel sustained by a rail adjacent to each of said openings, the periphery of each wheel extending upwardly past the bottom of its companion opening and the highest point on the periphery of the wheel lying adjacent to the forward portion of the opening; and a plurality of conveying rolls, each having stub-axles, said axles extending into oppositely-disposed openings and resting upon the wheels.

3. In a conveyer, the combination of suitable sustaining rails; a wheel carried by each rail adjacent to an opening formed therein; and a conveyer roll sustained by said wheels, the center line of said roll standing in rear of the center line of the wheels, and the axles of the roll extending freely into the openings in the rails.

4. In a conveyer, the combination of suitable sustaining rails; a wheel carried by each rail; a conveyer roll adapted to be supported by said wheels; and means for holding said roll upon said wheels to one side of the center line of the wheels, while the roll is idle, and permitting it to move upwardly upon the peripheries of said wheels when rotating under load.

5. In a conveyer, the combination of suitable sustaining rails; a wheel carried by each of said rails; a conveyer roll provided with reduced ends or stub-axles adapted to bear upon the wheels, the center line of said axles being to the rear of the center line of the wheels; and means for normally sustaining the parts in such position while the roll is at rest, but permitting the axles to move upwardly upon the wheels and out of contact with said means when the roll is rotated in a forward direction.

1,019,031. MACHINE FOR SLITTING THE SHELLS OF NUTS. JOHN E. EMERY, Winchester, and DAVID E. HUNTER, Cambridge, Mass., assignors, by mesne assignments, to John S. Emery & Company, Inc., Boston, Mass., a Corporation of Massachusetts. Filed Aug. 10, 1905. Serial No. 273,592. (Cl. 146—3.)



1. In a machine of the class described, the combination with shell-slitting devices of devices for holding a nut and presenting it to the operation of said slitting devices, and means for imparting successive partial rotations to the nut with respect to said nut-holding devices, between the successive slitting operations.

2. In a machine of the class described, the combination with a plurality of shell-slitting devices equal in number to the slits to be cut in each nut and arranged to operate in series, one after another, of means for holding a nut and for subjecting different portions of its shell to the operation of each of said slitting devices successively.

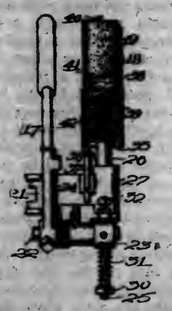
3. In a machine of the class described, the combination with a series of shell-slitting devices all operating in the same plane, of means for subjecting a nut to the operation of each of said slitting devices successively, and means for partially rotating the nut between the successive operations of consecutive devices.

4. In a machine of the class described, the combination with shell-slitting devices arranged to operate successively upon each of a series of nuts, one after another, of a series of nut carriers each provided with means for grasping a nut and for imparting successive partial rotations thereto between the successive slitting operations thereon.

5. In a machine of the class described, the combination with a series of shell-slitting devices of a series of nut carriers movable past said devices successively and arranged to present a corresponding number of nuts to the operation of each of said devices, and means for partially rotating each nut between the successive operations of the slitting devices thereon.

[Claims 6 to 35 not printed in the Gazette.]

1,019,032. PILE-WIRE-LUBRICATING DEVICE. FREDERICK FARMER, Worcester, Mass, assignor to Matthew J. Whittall and Matthew P. Whittall, Worcester, Mass., and James E. Whitin, Uxbridge, Mass., trustees for The Whittall Association. Filed Apr. 26, 1909. Serial No. 492,101. (Cl. 139—64.)



1. In a lubricating device for the pile wires of the loom, the combination of a frame, a lever mounted thereon having a slot therethrough, a slide vertically movable on the frame and resting on the lever and having a rod extending through said slot, a spring on said rod for resisting excess downward motion of said lever, a spring for normally holding said slide in elevated position, a holder carried by said slide, and a lubricating candle located in the holder.

2. In a lubricating device for the pile wires of a loom, the combination of a frame, a bell-crank mounted thereon, a slide vertically movable on the frame and resting on one arm of the bell crank, a spring for normally holding said slide in elevated position, an adjustable stop for limiting the uppermost position of the slide, a holder carried by said slide, and a lubricating candle located in the holder.

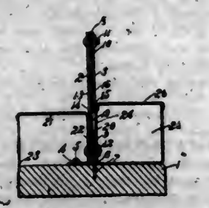
3. In a lubricating device for the pile wires of the loom, the combination of a frame, a lever mounted thereon, a slide vertically movable on the frame and resting on the lever, a spring for normally holding said slide in elevated position, an adjustable stop for limiting the uppermost position of the slide, a holder carried by said slide, and a lubricating candle located in the holder.

4. In a lubricating device for the pile wires of the loom, the combination of a frame, a lever mounted thereon having a curved upper surface and an elongated slot therethrough, a slide vertically movable on the frame and resting on the lever and having a rod extending through said slot, a spring on said rod for resisting excess downward motion of said lever, a spring for normally holding said slide in elevated position, an adjustable stop for limiting the uppermost position of the slide, a holder carried by said slide, and a lubricating candle located in the holder.

5. In a lubricating device for the pile wires of the loom, the combination of a frame, a lever mounted thereon having a curved upper surface and an elongated slot therethrough, a slide vertically movable on the frame and resting on the lever and having a rod extending through said slot, a spring on said rod for resisting excess downward motion of said lever, a holder carried by said slide, and a lubricating candle located in the holder.

[Claims 6 to 10 not printed in the Gazette.]

1,019,033. TOBACCO-KNIFE. PETER FAUCHER, Painesdale, Mich. Filed Nov. 21, 1911. Serial No. 661,600. (Cl. 131—33.)



1. A device of the character described, having a base, two vertically disposed and parallel plates carried thereby, one of said plates being provided with an aperture having its lower edge straight and forming a cutting edge, the other plate being provided with a similarly shaped aperture the upper edge of which is below the lower edge of the aperture of the first plate, a reciprocatory knife disposed between said plates and having a cutting edge to coact with the cutting edge of the aperture of one of said plates, a guiding support for the object to be cut disposed to present the object through the aperture having the cutting edge, and a receptacle disposed to receive the cuttings from the aperture of the last mentioned plate, said receptacle being provided with an aperture to aline with the aperture through which the cuttings pass.

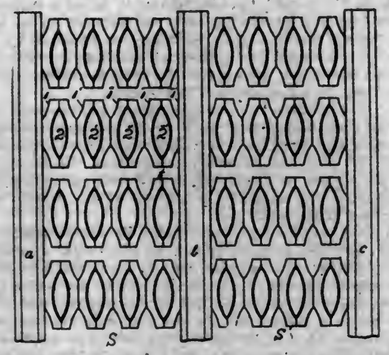
2. A device for forming cut plug tobacco, having a base, two vertically disposed plates carried thereby, means for adjustably spacing said plates, one of said plates being provided with a rectangular slot the lower edge of which is a cutting edge, while the other plate is provided with a similar shaped slot the upper edge of which is below the cutting edge of the aperture of the first plate, and a blade mounted for sliding movement within the space between the said plates and having a cutting edge to coact with the knife edge of the first mentioned aperture.

3. A device for forming cut plug tobacco, having a base, two vertically disposed plates carried thereby, means for adjustably spacing said plates, one of said plates being provided with a rectangular slot the lower end of which is a cutting edge, while the other plate is provided with a similar shaped slot the upper edge of which is below the cutting edge of the aperture of the first plate, a blade mounted for sliding movement within the space between said plates and having a cutting edge to coact with the knife edge of the first mentioned aperture, and a guiding support for the object to be cut disposed to present the object through the aperture having the cutting edge.

4. A device for forming cut plug tobacco, having a base, two vertically disposed plates carried thereby, means for adjustably spacing said plates, one of said plates being provided with a rectangular slot the lower edge of which is a cutting edge, while the other plate is provided with a similar shaped slot the upper edge of which is below the cutting edge of the aperture of the first plate, a blade mounted for sliding movement within the space between said plates and having a cutting edge to coact with the knife edge of the first mentioned aperture, a guiding support for the object to be cut disposed to present the object through the aperture having the cutting edge, and a receptacle disposed to receive the cuttings from the aperture of the last mentioned plate.

5. A device for forming cut plug tobacco, having a base, two vertically disposed plates carried thereby, means for adjustably spacing said plates, one of said plates being provided with a rectangular slot the lower edge of which is a cutting edge, while the other plate is provided with a similar shaped slot the upper edge of which is below the cutting edge of the aperture of the first plate, a blade mounted for sliding movement within the space between said plates and having a cutting edge to coact with the knife edge of the first mentioned aperture, a guiding support for the object to be cut disposed to present the object through the aperture having the cutting edge, and a receptacle disposed to receive the cuttings from the aperture of the last mentioned plate, said receptacle being provided with an aperture to aline with the aperture through which the cuttings pass.

1,019,034. EXPANDED METAL. WILLIAM D. FORSYTH, Youngstown, Ohio, assignor of one-half to Alexander M. Neeper, Pittsburgh, Pa. Filed Jan. 30, 1911. Serial No. 605,624. (Cl. 72—117.)



1. An expanded metal made for a single sheet having substantially parallel sections of entire metal connected at intervals by reticulated metal sections which are disconnected from each other between the entire metal sections, and which are corrugated so that the apexes of the corrugations thereof coincide substantially with the medial lines of the openings of the meshes thereof, and the bases of said corrugations coincide substantially with the points of connection of said meshes with each other and with the entire metal sections.

2. An expanded metal made from a single sheet having substantially parallel sections of entire metal connected at intervals by reticulated metal sections which are disconnected from each other between the entire metal sections, and which are corrugated so that the apexes of the corrugations thereof coincide substantially with the medial lines of the openings of the meshes thereof and the bases of the said corrugations coincide substantially with the points of connection of said meshes with each other and with the entire metal sections, said entire metal sections being corrugated longitudinally.

3. An expanded metal made from a single sheet having substantially parallel sections of entire metal connected at intervals by reticulated metal sections which are disconnected from each other between the entire metal sections, and which are corrugated so that the apexes of the corrugations thereof coincide substantially with the medial lines of the openings of the meshes thereof and the bases of said corrugations coincide substantially with the points of connection of said meshes with each other and with the entire metal sections, said reticulated metal consisting of meshes, the individual meshes being joined together in direction of expansion of said metal and disconnected in direction at right angles to the expansion of said metal.

4. An expanded metal made from a single sheet having substantially parallel sections of entire metal connected at intervals by reticulated metal sections which are disconnected from each other between the entire metal sections, and which are corrugated so that the apexes of the corrugations thereof coincide substantially with the medial lines of the openings of the meshes thereof and the bases of said corrugations coincide substantially with the points of connection of said meshes with each other and with the entire metal sections, said reticulated metal consisting of meshes, the individual meshes being joined together in direction of expansion of said metal and disconnected in direction at right angles to the expansion of said metal, said entire metal sections being corrugated longitudinally.

1,019,035. ARCH-PLATE FOR FURNACES. JOHN B. FORTUNE, Detroit, Mich., and FRANK B. BIGELOW, Chicago, Ill. Filed July 16, 1908. Serial No. 443,756. (Cl. 110—67.)

1. An arch plate for automatic stokers comprising a supporting wall, and an arch seat member extending outwardly from said wall and held by gravity, loosely interlocked therewith.

2. An arch-plate comprising a supporting member, a series of members together forming a continuous arch seat, and means for detachably securing said members to the supporting member, said arch plate being formed with air passages between said series of members and said member.

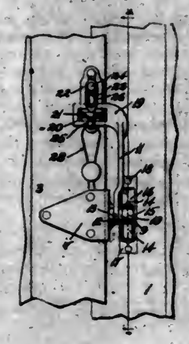
3. An arch-plate comprising a supporting member and a series of members detachably attached to the supporting member, each having a continuous imperforate upper side which sides conjointly form an arch seat and said members being formed with air passages below said side extending upward between said members and said supporting member and opening at one end along the lower longitudinal edge of said members and at their opposite ends between the upper edges of said member and said supporting member, above the arch seat.

4. An arch-plate comprising a supporting member, a series of members each having a continuous upper surface, said surfaces together forming an arch seat, ribs on said members forming air passages between said members and said supporting member, and means for attaching the said members to said supporting member.

5. An arch-plate comprising a supporting member, a plurality of members having curved ends, means on the supporting member with which said ends are adapted to be engaged to detachably attach said members to said supporting member, and ribs on said ends engaging the supporting member and forming air passages between said ends and said member.

[Claims 6 to 22 not printed in the Gazette.]

1,019,036. CAR-DOOR FASTENER. FREDERICK F. GAINES, Savannah, Ga. Filed Feb. 6, 1911. Serial No. 606,761. (Cl. 70—102.)



1. The combination with the side of a car and the car door, of a pocketed keeper secured to the side of the car adjacent to the end of the door, a bracket comprising a member secured to the outer face of the door and having a right angular portion abutting the end of the door, an offset portion and an outwardly extending portion parallel with said right angular portion, said parallel portions being perforated in alinement, a hook member adapted to engage said keeper, said hook member being located on the outer side of said outwardly projecting parallel member and having a pivot stud journaled in the perforations of said two mentioned parallel members, and a lever fixedly secured on said pivot stud between said parallel members.

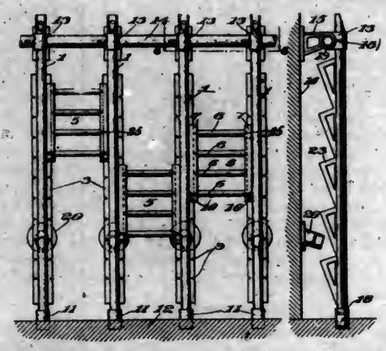
2. The combination with the side of a car and an outside car door, of a keeper comprising a pocketed member embedded in the side of the car adjacent to the end of the door and having a bar across its opening, a supporting member comprising a member secured to the face of the door and having a substantially right angular portion abutting against the end of the door, an offset portion and an outwardly extending portion at the end of said offset portion, said outwardly extending portion being parallel with said right angular portion and having alined perforations in substantially the same horizontal plane as the bar on said keeper, a hook member having a pivot stud journaled in said perforations, and a lever fixed on said stud between said parallel portions of the supporting member, the hook portion of said hook member extending first laterally from the pivot stud and being curved eccentrically therefrom and terminating at a point substantially in longitudinal alinement with said lever.

3. In a car door lock, the combination with the side of the car and the car door, of a vertically disposed pocketed keeper countersunk into the side of the car adjacent to the edge of the door, said keeper having a transverse bar across its opening, a horizontally pivoted lever mounted on the edge of the door, said lever having a hooked portion adapted to enter said pocketed keeper behind the cross bar thereof when the lever is moved in one direction, and means for securing the lever in position when its hooked portion is in engagement with said keeper, the length of the hooked portion of said lever being such and so correlated with the body portion of said lever that the latter has to be moved approximately to its complete reversed position before the hook is entirely free from said keeper.

1,019,037. GYMNASTIC APPARATUS. ALBERT E. GARLAND, Boston, Mass. Filed June 5, 1911. Serial No. 631,237. (Cl. 46—69.)

1. A gymnastic apparatus having, in combination, a plurality of standards, vertical ribs formed on opposite faces of the standards for slidingly retaining stall bars between the standards and brackets formed upon the rear side of

the standards to receive seat boards, substantially as described.



2. A gymnastic apparatus having, in combination, a plurality of standards arranged to slidingly support stall bars between them, brackets formed upon the rear sides of the standards for receiving seat boards, means for retaining the standards in a vertical position, and means for retaining the standards in an oblique position, substantially as described.

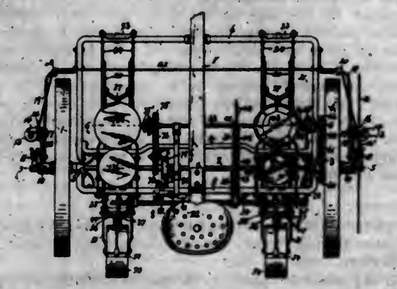
3. A gymnastic apparatus having, in combination, a plurality of standards arranged to slidingly support stall bars between them, sockets for retaining the standards in a vertical position, sockets for retaining the standards in an oblique position, and supports mounted upon the standards for receiving seat boards when the standards are supported in the oblique position, substantially as described.

4. A gymnastic apparatus having, in combination, a plurality of standards, retaining members seated in the floor to retain the lower ends of the standards, retaining members supported upon the vertical side wall and spaced laterally therefrom for holding the upper ends of the standards, means for locking the standards to the retaining members, and a stall bar supported between the standards and vertically adjustable thereon, substantially as described.

5. A gymnastic apparatus, having, in combination, a plurality of standards, stall bars provided with side bars slidingly supported between the standards, a plurality of transverse rungs having their opposite ends pivotally connected to the side bars, and means for locking the stall bars upon the standards, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,019,038. CHECK-ROW CORN-PLANTER. WILLIAM EDWARD GILROY, Utica, N. Y., assignor to Eureka Mower Company, Utica, N. Y., a Corporation of New York. Filed Oct. 16, 1908. Serial No. 458,088. (Cl. 111—5.)



1. In combination with the wheels of a check-row seed-planter, a check-row shaft passed through the hubs of the wheels, mechanism actuated by one of the wheels for rotating the shaft intermittently one complete revolution at a time and seed-feeding mechanism actuated by said shaft.

2. In a check-row seed-planter, a frame, hollow axle stubs rigid on the frame, wheels journaled on the stubs, a check-row shaft passing through and journaled within the stubs, mechanism actuated by one of the wheels for rotating the shaft intermittently one complete revolution at a time and seed-feeding mechanism actuated by said shaft.

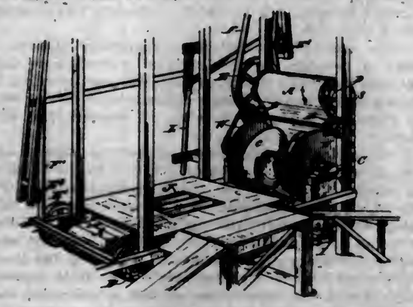
3. In a check-row seed-planter, a frame and supporting wheels therefor in combination with seed-feeding means located in the vertical plane of the axis of the wheels, a straight check-row shaft passing through the hubs of the wheels and controlling the action of the seed-feeding means, mechanism actuated by one of the wheels for operating the check shaft intermittingly one complete revolution at a time and additional means coacting with said mechanism for stopping the rotation of said shaft at the end of each complete revolution.

4. In combination with the wheels of a check-row seed-planter, a straight check-row shaft coaxial with and extending through the hubs of the wheels, a revoluble member on the check-row shaft, means for transmitting motion from one of the wheels to said member, additional means brought into action by a partial rotation of the shaft for locking said shaft to the revoluble member whereby the shaft is rotated and additional means coacting with the last named means for disconnecting the shaft from the revoluble member at the end of a complete revolution.

5. In combination with the wheels of a check-row seed-planter, a straight shaft passing through the hubs of the wheels and normally at rest, a ratchet wheel loose on the shaft, means for transmitting rotary motion from one of the first named wheels to the ratchet wheel, means actuated by a partial rotation of the shaft for locking said shaft to the ratchet wheel to rotate therewith and additional means coacting with the last named means for stopping the rotation of the shaft after one complete revolution.

[Claims 6 to 11 not printed in the Gazette.]

1,019,039. MIXING-MACHINE. JOSHUA J. GREEN, Shreveport, La. Filed June 29, 1911. Serial No. 635,989. (Cl. 99—2.)



1. In a mixing or blending machine, a traveling power driven endless apron, guides over and around which the same travels, and idler disks or wheels whereby the top ply the apron is at a suitable point depressed to form a concave constituting the bottom of a mixing trough, the heads or ends of which are formed by said idler disks or wheels, the apron at the rear of the mixing trough extending upwardly therefrom to form a back wall from which the adhering ingredients carried up along with the traveling apron will by gravity fall back into the trough substantially as and for the purpose hereinbefore set forth.

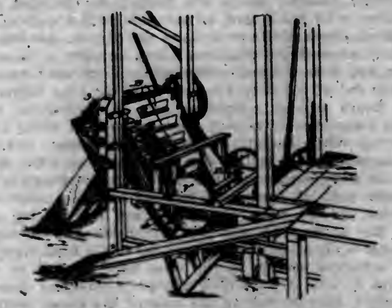
2. In a mixing or blending machine an endless traveling power driven apron, suitable guides over and around which the same travels, idler disks or wheels, which depress a portion of the upper ply of the apron into a concave constituting the bottom of a mixing trough, the ends of which are formed by said idler disks or wheels, a back wall formed by a portion of the apron extending upwardly from the rear of the trough, and means for agitating or shaking this back wall portion of the apron, substantially as and for the purpose hereinbefore set forth.

3. In a mixing or blending machine, an endless traveling power driven apron and guides over and around which the same travels, idler disks or wheels which depress a portion of the upper ply of the apron into a concave forming the bottom of a mixing trough, the ends of which are formed by said idler disks or wheels, that portion of the apron in advance of the trough, in accordance with the direction of travel of the apron, serving to convey material to, or to carry it away from, the trough, and means whereby the direction of movement of the apron can be reversed at will, substantially as hereinbefore set forth.

4. In combination with the back wall portion of the endless apron extending upwardly from the rear of the concave trough portion of said apron, and the idler disks or wheels which form the ends of the trough, the idler knocker-sprocket wheels engaging the sprocket chains of the back wall portion of the apron, and deflecting the same out of a straight line substantially as and for the purposes hereinbefore set forth.

5. The endless power driven traveling apron, in combination with idler disks or wheels which depress a portion of the upper ply of the apron into a concave constituting a mixing trough, the ends of which are formed by said idler disks or wheels, and power driven means whereby when the machine is in action the materials in the trough are constantly moved from the ends toward the center of the trough, substantially as and for the purposes hereinbefore set forth.

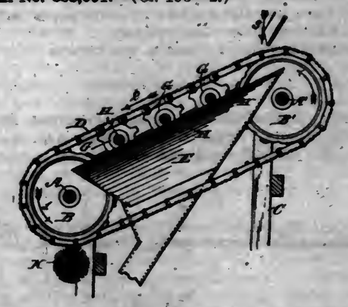
1,019,040. FEEDING-MACHINE. JOSHUA J. GREEN, Shreveport, La. Filed June 29, 1911. Serial No. 635,990. (Cl. 193—6.)



1. In a machine of the character described an endless power driven apron; supporting and guide wheels directing the course of the upper ply of said apron, to form a horizontal floor, and an upwardly rising inclined back wall leading from said horizontal portion; stationary parallel side pieces constituting the side walls of a reservoir of which the upper ply constitutes the floor and inclined rear wall; said upper ply at each edge extending closely beneath and laterally beyond said side walls, and the guide wheels at the angle between the inclined and horizontal portion of said upper ply being upon exterior opposite sides of the reservoir and bearing upon the marginal portions of the apron which project laterally beyond the reservoir walls; and delivery buckets, secured to and moving with the apron, and located upon that portion of the same which intervenes between the stationary side walls of the reservoir, substantially as and for the purposes hereinbefore set forth.

2. In a machine of the character described, an endless power driven apron; supporting and guide wheels directing the course of the upper ply of the apron to form a horizontal portion and an upwardly rising inclined portion leading from said horizontal portion; stationary parallel side pieces secured in the frame of the machine and extending lengthwise above, and in close proximity to, said portions of the apron, and constituting the side walls of a reservoir of which the said portions of the apron constitute the floor and inclined rear wall; delivery buckets secured to and moving with the apron, and located upon that portion of the same which intervenes between the stationary side walls; and inclined flights located on the apron outside of and in close proximity to the side walls and operating to catch such material as may creep out from under the side walls, and return the same to the reservoir, substantially as and for the purposes hereinbefore set forth.

1,019,041. SCREENING OR SEPARATING MACHINE. JOSHUA J. GREEN, Shreveport, La. Filed June 29, 1911. Serial No. 635,991. (Cl. 193—2.)



The combination of endless sprocket chains, an endless apron extending between and secured to said chains, driving sprocket wheels around which the sprocket chains pass and by which they are supported, and idler sprockets of relatively small diameter and few teeth as compared with the dimensions of the chain links, located below the upper ply of the apron to engage tangentially, or substantially so, the chains, the apron deriving its support solely from the chains and sprockets, and the idler sprockets being arranged and operating substantially as described to impart to the chains a jolting up and down movement with corresponding agitation of the apron.

1,019,042. PILE. AUGUST GUNDERSEN, Christiania, Norway, assignor of one-half to Olaf Hoff, New York, N. Y. Filed Nov. 27, 1911. Serial No. 662,543. (Cl. 61—43.)



1. A pile comprising a lower wood portion, and an upper portion of cementitious material reinforced by metallic members that are also anchored in the wood portion.

2. A pile comprising a lower wood member having a reduced, formed upper end portion, an upper member of cementitious material formed around and secured over the formed end portion, and reinforcing members for the cementitious portion that extend along the formed wooden portion and are embedded therein.

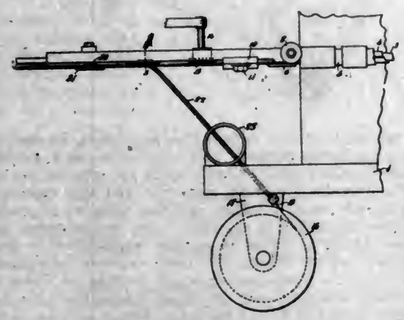
3. A pile comprising a lower wood portion, an upper portion of cementitious material reinforced by metallic members that are also anchored in the wood portion, and a central rod embedded in the concrete and anchored in the wooden portion.

4. A pile comprising a lower wood portion, an upper portion of cementitious material enveloping the upper part of the wood portion, and reinforcing members for the cementitious portion anchored in the enveloped part of the wood portion.

5. A pile comprising a lower wood portion, an upper portion of cementitious material enveloping the upper part of the wood portion, reinforcing members for the cementitious portion anchored in the enveloped part of the wood portion, and a sheathing band around the upper and lower portion adjacent their outer junction.

[Claims 6 to 10 not printed in the Gazette.]

1,019,043. MACHINE FOR MAKING METAL TUBES. HENRY HIGGIN, Newport, Ky. Filed Aug. 5, 1910. Serial No. 575,827. (Cl. 113—59.)



1. In a machine for making metal tubes, the combination with means for continuously delivering the tubes bent into cylindrical shape and having their edges abutting, of means for continuously beveling said abutting edges, with means for spreading said abutting edges, and means for delivering a continuous strip of spelter wire between said abutting edges.

2. In a machine for making metal tubes, means for delivering a continuous strip of spelter wire between the abutting edges of the tube, and means for cutting a V-shaped groove at the meeting edges of the tube to hold the spelter in place with means for spreading said abutting edges and holding the same apart both in front and to the rear of the cutting means.

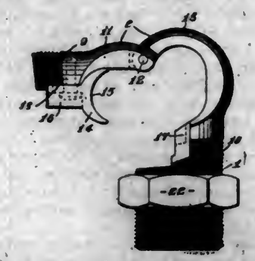
3. In a machine for making tubes, a reel adapted to hold a roll of spelter wire, a guiding channel extending from the reel to a point in line with the tube as delivered from the forming rolls, and a spreader for temporarily opening the abutting edges to receive the spelter.

4. In a machine for making tubes, a reel adapted to hold a roll of spelter wire, a guiding channel extending from the reel to a point in line with the tube as delivered from the forming rolls, and a spreader for temporarily opening the abutting edges to receive the spelter, and a grooved roller and block to center the spelter between the edges.

5. In a machine for making tubes, a reel adapted to hold a roll of spelter wire, a guiding channel extending from the reel to a point in line with the tube as delivered from the forming rolls, a receptacle for flux through which the guiding channel passes, and a spreader for temporarily opening the abutting edges to receive the spelter.

[Claim 6 not printed in the Gazette.]

1,019,044. ELECTRICAL COUPLING. JESSE L. HINDS and JOHN J. DOSSERT, Syracuse, N. Y., assignors to Crouse-Hinds Company, Syracuse, N. Y., a Corporation of New York. Filed Oct. 5, 1910. Serial No. 585,384. (Cl. 173—273.)



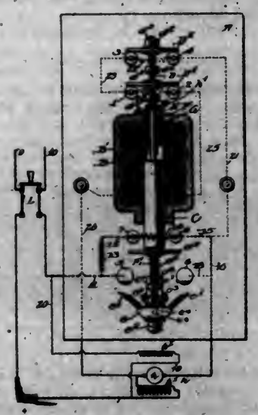
1. In an electrical coupling, a body including a threaded stem and a transversely extending sleeve or band member comprising two divisions, one being fixed to the stem and constituting the greater part of such sleeve member and the outer end portion thereof being opposed to and overhanging one end face of the stem, the other division being hinged to the outer end of the fixed division, a clamping element having a head located in the bore of the sleeve member and movable in a direction axially of the stem toward said end portion of the fixed division of the sleeve member, the hinge connecting the divisions being located at one side of the path of movement of the clamping element, and a nut turning on the stem and coacting with the hinged division and with the clamping element, substantially as and for the purpose specified.

2. In an electrical coupling, a body including a threaded stem and a transversely extending sleeve or band member at one end of the stem, the portion of the stem adjoining the sleeve member comprising two part-cylindrical sections complemental to each other, one section being fixed and the other separable from the fixed section, and the sleeve member including two divisions, one being fixed to the fixed section of the stem and constituting the greater part of the sleeve member and the outer end portion thereof being opposed to and overhanging one end face of the stem, and the other division of the sleeve member being hinged to the outer end of the fixed division, the separable section of the stem being carried by the hinged divison of the sleeve member, a clamping element having a head located in the bore of the sleeve member and movable in a direction axially of the stem toward said opposed end portion of the fixed division of the sleeve member, the hinge connecting the divisions being located at one side of the path of movement of said element, and a nut turning on the stem and the sections thereof and coacting the the clamping element, substantially as and for the purpose set forth.

3. In an electrical coupling, a body including a threaded stem and a transversely extending sleeve or band member at one end of the stem, the portion of the stem adjoining the sleeve member including two part-cylindrical sections complemental to each other, one section being fixed and the other being separable from the fixed section, and the sleeve member including two divisions, one being fixed to the fixed section of the stem, and the fixed division constituting the greater part of the sleeve member, and the outer end portion thereof being opposed to and overhanging one end face of the stem, and the other division of the sleeve member being hinged to the outer end of the fixed division, the separable section of the stem being carried by the hinged division of the sleeve member, and one of said sections being formed with a recess opening through opposite sides of said section and also into the bore of the sleeve member, a movable clamping element including a head located in the bore of the sleeve member and movable toward and from said outer end portion of the fixed division of the sleeve member and a shank movable in the recess and projecting laterally beyond the periphery of the stem, the hinge connecting said divisions being located at one side of the path of movement of the head of the clamping element, means coacting with the shank for securing the clamping element to the separable section of the stem, and a nut turning on the stem and the sections thereof and coacting with the projecting portions of the shank, substantially as and for the purpose specified.

4. In an electrical coupling, a body including a threaded stem and a transversely extending sleeve or band member at one end of the stem, the portion of the stem adjoining the sleeve member comprising two sections complemental to each other, one section being fixed and the other separable from the fixed section, and the sleeve member including two divisions, one being fixed to the fixed section of the stem and constituting the greater part of the sleeve member and the outer end portion thereof being opposed to one end face of the stem, and the other division of the sleeve member being hinged to the outer end of the fixed division, and the separable section of the stem being carried by the hinged devision of the sleeve member, said sections of the stem being formed with recesses in their opposing faces forming a transverse slot opening through opposite sides of the sections and also into the bore of the sleeve member, the recess of one section widening at its ends, a clamping element including a head movable in the sleeve member toward and from the outer end portion of the fixed division of the sleeve member and a shank slidable in the slot and formed with enlarged portions at its ends extending into the widened ends of one of said recesses and projecting laterally on opposite sides of the sections of the stem, the shank being formed with a slot in its thinner part between the enlarged portions, a fastening element extending through the slot in said shank and into the separable section of the stem, and a nut turning on the stem and the sections thereof and coöperating with the projecting portions of the shank, substantially as and for the purpose set forth.

1,019,045. MOTOR-CONTROLLER. ALBERT J. HORTON, White Plains, N. Y., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed May 4, 1908. Serial No. 430,828. (Cl. 172—288.)



1. In a controlling device for electric motors, the combination with a resistance, of a plurality of switches for controlling said resistance, an electroresponsive device for closing said switches to gradually remove said resistance from the motor circuit proportionally to the building up in speed of the motor, and means for automatically reducing the flow of current through said electroresponsive device upon closure of one of said switches and further reducing the flow of current through said device upon the closure of another of said switches.

2. In a controlling device for electric motors, the combination with a resistance, of a plurality of switches for controlling the same, an electromagnetic device for successively closing said switches to gradually remove said resistance from the motor circuit proportionally to the building up in speed of the motor, a plurality of sections of resistance adapted to be inserted in circuit with said electromagnetic device and means for inserting one of said sections of resistance in circuit upon the closure of each of said switches.

3. In a controlling device for electric motors, the combination with a plurality of sections of resistance, of a plurality of switches for controlling the same, an electroresponsive device for closing said switches successively to gradually remove said sections of resistance proportionally to the building up in speed of the motor, means for automatically reducing the amount of current flowing through said electro-responsive device upon the closure of one of said switches and further reducing the flow of current therethrough upon closure of another of said switches, and means for regulating the closure of said switches to permit the motor to attain any predetermined speed prior to the closure of each of said switches.

4. In a controlling device for electric motors, the combination with a plurality of sections of resistance, of a plurality of switches for controlling the same, an electromagnetic device for successively closing said switches to gradually remove said resistance from the motor circuit proportionally to the building up in speed of the motor, means for regulating the closure of said switches to permit the motor to attain any predetermined speed prior to the closure of each of said switches, resistance adapted to be inserted in circuit with said electromagnetic device and means for inserting a portion of said latter resistance in circuit upon the closure of each of said switches.

5. In a controlling device for electric motors, the combination with an electromagnetic winding, a plunger mounted within said winding, a plurality of resistance switches mechanically connected to and arranged to be successively closed by said plunger, a plurality of sections of starting resistance controlled by said switches, said winding being adapted to operate said plunger to close said switches upon the motor attaining predetermined speeds, said switches upon successive operation being adapted to gradually increase the mechanical load upon said plunger.

[Claims 6 to 14 not printed in the Gazette.]

1,019,046. ELECTRIC SEMAPHORE-SIGNAL FOR RAILWAYS. WINTHROP KEITH HOWE, Rochester, N. Y., assignor to General Railway Signal Company, Gates, N. Y., a Corporation of New York. Filed May 26, 1910. Serial No. 563,493. (Cl. 246—20.)



1. In a semaphore signal, a shaft carrying a semaphore blade, means for actuating said shaft and blade against the action of gravity and means for imparting a hammer blow to said shaft in the direction of the action of gravity when said first named means is not acting.

2. In a semaphore signal, operating parts, means for storing energy during the normal movement of the operating parts thereof and means for causing said stored energy to deliver a sudden blow to the parts when restrained by extraneous means.

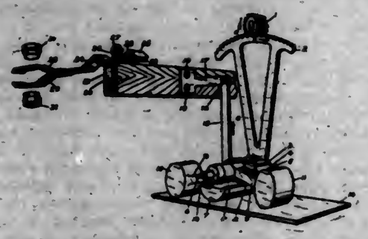
3. In a semaphore signal, a shaft carrying a semaphore blade, operating mechanism therefor, means for storing energy during the normal movement of said mechanism and means for causing said stored energy to deliver a sudden blow to the shaft when the same is restrained by extraneous means.

4. In a semaphore signal, a shaft carrying a semaphore blade, operating mechanism therefor, means intermediate said mechanism and said shaft for storing energy during the normal movement of said mechanism, and means for causing said stored energy to deliver a sudden blow to the shaft when the same is restrained by extraneous means.

5. In a semaphore signal, a shaft carrying a semaphore blade, a motor for moving said blade to "clear" position, a brake device to hold the parts in said position, means for storing energy, and means for causing said stored energy to deliver a hammer blow to the operating parts upon the release of the brake, when said shaft is restrained from free movement.

[Claims 6 to 8 not printed in the Gazette.]

1,019,047. RELAY-MOVEMENT. WINTHROP K. HOWE, Rochester, N. Y., assignor to General Railway Signal Company, Gates, N. Y., a Corporation of New York. Filed Sept. 30, 1911. Serial No. 652,156. (Cl. 175—282.)



1. In a relay movement, a pinion adapted for oscillation, a sector engaging with said pinion, a shaft for pivoting said sector for oscillation, arms extending in opposite directions from said shaft loosely mounted thereon and making an angle less than one hundred and eighty degrees with each other, both arms lying below a horizontal line through the said shaft, weights attached to the arms, a member oscillating with the sector disposed below the arms against which they are adapted to rest in normal position, a plate below the weights against which they are adapted to rest when free, a link connected to said member oscillating with the sector, and means for closing a circuit connected to the link.

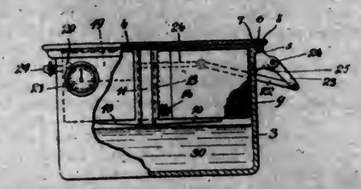
2. In a relay movement, a member adapted to be oscillated, circuit closing means operated by said member, means for creating equal counter torque upon said member, when moved in either direction, said means consisting of two weights acting in opposite directions, and one resilient means having one line of action only.

3. A relay movement, a member adapted to be oscillated, circuit closing means operated by said member, a weight acting to prevent oscillation of said member in one direction, another weight acting to prevent oscillation of said member in the other direction, and means to prevent one of said weights acting while the other acts.

4. In a relay movement, a pinion adapted for rotation, a sector engaging with said pinion, means for pivoting said sector for oscillation, a weight raised by the sector upon oscillation in one direction, a weight raised by the sector upon oscillation in the other direction, and means connected to said sector to close a circuit upon movement in either direction.

5. In a relay movement, a member adapted to be oscillated, a weight attached to said member with its center of gravity below its axis of oscillation when in normal position, and adapted to be moved so that the center of gravity is above said shaft, a movable contact connected to said member, a fixed contact in the path of movement of said movable contact, resilient means interposed between said movable contact and said member, whereby the counter-torque upon said member increases approximately uniformly.

1,019,048. EGG-PRESERVING APPARATUS. FREDERICK RENSOR JAMES and ALAN CAMERON THOMPSON, Toronto, Ontario, Canada, assignors of three-eighths to said James, three-eighths to said Thompson, and one-fourth to Thomas Allatt, Toronto, Canada. Filed May 4, 1911. Serial No. 624,912. (Cl. 99—2.)



1. An egg preserving apparatus comprising an air-tight receptacle, a vacuum pump in connection therewith, an air inlet, an egg retainer, and means for causing a relative vertical movement of said receptacle and retainer with reference to each other.

2. An egg preserving apparatus comprising an air-tight receptacle, a vacuum pump in connection therewith, an air inlet, an egg retainer and means for causing a relative vertical movement of said receptacle and retainer with reference to each other while maintaining the vacuum.

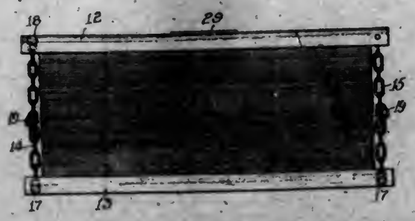
3. An egg preserving apparatus comprising an air-tight receptacle, a vacuum pump in connection therewith, an air inlet, a basket within said receptacle, and means for moving said basket vertically within said receptacle.

4. An egg preserving apparatus comprising a receptacle, a cover therefor, a yielding support for said cover, a seat against which said cover is adapted to rest, a vacuum pump in connection with said receptacle, an air inlet, a basket within said receptacle, and means for moving said basket vertically within said receptacle.

5. An egg preserving apparatus comprising an air-tight receptacle, a vacuum pump in connection therewith, an air inlet, a basket within said receptacle, fingers supporting said basket, an arm supporting said fingers, a rack on said arm, a pinion in mesh with said rack, and means for rotating said pinion.

[Claims 6 to 8 not printed in the Gazette.]

1,019,049. BAG-BINDER. WILLIAM M. JENKINS, Chicago, Ill. Filed Oct. 27, 1909. Serial No. 524,878. (Cl. 24—19.)



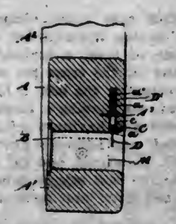
1. A bag binder comprising a plurality of binding members flexibly connected together at one end, one of said members having a recess in its other end and the other member having a flexible connecting means attached to its other end, bearings oppositely disposed in the side walls

of said recess, and a lever secured between its ends to said flexible connecting means, and having laterally projecting trunnions near one end adapted to be engaged in the bearings in the side walls of said recess, whereby rotation of the lever upon its trunnions in the bearings, will draw the members toward one another and securely lock them together.

2. A bag binder comprising two rigid members flexibly connected together at one end, one of said members having a flexible connecting means attached to its other end, and the other member being provided with a longitudinal slot at its other end, bearing members disposed in the side walls of said slot, a guide over which the flexible connecting means is adapted to pass positioned near the outer end of said slot, a locking lever provided with laterally extending trunnions adapted to be engaged in said bearings, means for attaching the flexible connecting means to the locking lever between its ends, and means for limiting the rotation of the locking lever on its trunnions when said lever has been moved to locked position.

3. A bag binder comprising two members flexibly connected at one end, the other end of one member having a recess therein, a chain engaged with the other end of the other member, bearings in the side walls of said recess, said bearings being angular and inclined upwardly and rearwardly from the adjacent end of the member, a yoke lever having trunnions on one end adapted to be seated in said bearings to fulcrum the lever, a cross bar on said lever between its fulcrum and its outer end, and a link engaged with the free end of the chain and said cross bar.

1,019,050. SHUTTLE-GUARD. FRANK JOHNSON, New York, N. Y. Filed Apr. 8, 1911. Serial No. 619,689. (Cl. 139—80.)

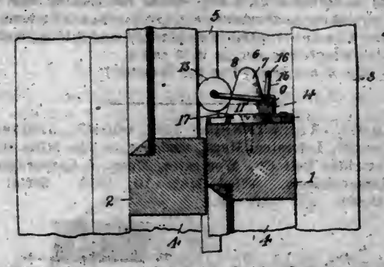


1. In a loom, a lay-beam, reed, and lay-cap, the latter having a longitudinally extending groove in its lower face, a strip received in said groove with liberty to rise and sink therein, and having vertical guiding slots, studs in said lay-cap extending through said slots, recesses in said lay-cap above said groove and strip, and springs mounted in said recesses and tending to hold said strip yieldingly in the downward position, all substantially as and for the purpose herein set forth.

2. In a loom, a lay-beam having upper and lower members, the upper member being provided with a longitudinal groove in its under face near its forward edge, a strip received in said groove, pins projecting downwardly from said strip and adapted to extend between the warp wires of the upper portion of an open shed, said strip being mounted for free vertical movement in said groove, limiting and guiding means extending through said groove and through vertical slots in the strip, and springs in the groove acting upon the upper face of the strip.

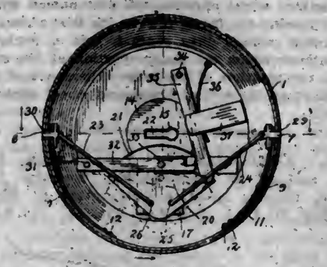
3. In a loom, a lay-beam having upper and lower members, the upper member being provided with a longitudinal groove in its under face near its forward edge, a strip received in said groove, pins projecting downwardly from said strip and adapted to extend between the warp wires of the upper portion of an open shed, said strip being mounted for free vertical movement in said groove, limiting and guiding means extending through said groove and through vertical slots in the strip, springs in the groove acting upon the upper face of the strip, and a reed, said pins forming with the lay members and reed a partially inclosed path for the shuttle and said pins when projected extended below the upper face of the shuttle.

1,019,051. SASH-HOLDER. WILLIAM H. KELLY, Waynesboro, Va. Filed Apr. 18, 1911. Serial No. 621,922. (Cl. 16—54.)



A sash holder comprising a bracket having a transverse shoulder on its front side above its base, said shoulder having a groove in its upper face, a lever comprising an intermediate transverse portion journaled in said groove and arms extending from the opposite ends of said journal portion at an angle to each other, the free ends of said arms being bent laterally inward and one of said laterally bent ends forming a handle and rest, a roller mounted loosely on the other inwardly bent end of the lever, and a detachably secured keeper extending over the groove in the transverse shoulder of the bracket and over the intermediate portion of the lever journaled in said groove.

1,019,052. MILK-CAN LOCK. PERRY O. KETLER, New Waterford, Ohio. Filed Apr. 18, 1911. Serial No. 621,861. (Cl. 70—27.)



1. A locking can top comprising bolts adapted to pass through openings in said can and top, springs adapted to actuate said bolts, a sliding member adapted to actuate said bolts, and to be actuated by said springs, arms connecting said member and said springs.

2. A locking can top comprising bolts adapted to pass through openings in said can and top, springs adapted to actuate said bolts, a sliding member adapted to actuate said bolts and to be actuated by said springs, arms connecting said member and said springs, said member adapted to be actuated by a key.

3. A locking can top comprising bolts adapted to pass through openings in said can and top, springs adapted to actuate said bolts, a sliding member adapted to actuate said bolts, and to be actuated by said springs, arms connecting said member and said springs, said member adapted to be actuated by a key, means for holding said bolts out of locking engagement with said can.

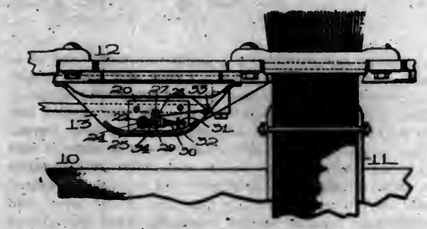
4. A locking can top comprising bolts adapted to pass through openings in said can and top, springs adapted to actuate said bolts, a sliding member adapted to actuate said bolts, and to be actuated by said springs, arms connecting said member and said springs, said member adapted to be actuated by a key, means for holding said bolts out of locking engagement with said can, said means consisting of a catch member secured to said sliding member.

5. A locking can top comprising bolts adapted to pass through openings in said can and top, springs adapted to

actuate said bolts, a sliding member adapted to actuate said bolts and to be actuated by said springs, arms connecting said member and said springs, said member adapted to be actuated by a key, means for holding said bolts out of locking engagement with said can, said means consisting of a catch member secured to said sliding member, a latch adapted to engage said catch.

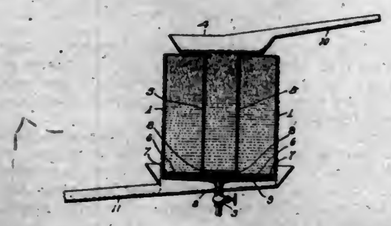
[Claim 6 not printed in the Gazette.]

1,019,053. YARN-TENSION FOR LOOMS. LIVINGSTON KNIGHT, Leicester, Mass., assignor to The Mills Woven Cartridge Belt Co., Worcester, Mass., a Corporation of Massachusetts. Filed Mar. 10, 1910. Serial No. 548,498. (Cl. 139—46.)



In a loom, the combination with a shuttle, of a tension device for the filling movable with the shuttle and comprising a stud having a square portion and a cylindrical portion, a wheel rotatably mounted on the cylindrical portion of the stud, a frame pivoted adjacent thereto, a freely rotatable wheel mounted on the frame at a distance from its pivot, yielding means located on the side of the last named wheel opposite the first named wheel for yieldingly forcing the frame toward the first named wheel to bring said wheels into contact, and a spring non-rotatably mounted on the square portion of the stud for retarding the rotation of the wheel thereon and an eye for the filling on the side of the second wheel opposite the first wheel.

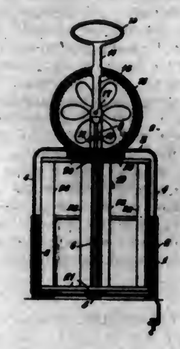
1,019,054. AMALGAMATOR. PAUL KUEHN, Detroit, Mich., assignor to Shareholders Protective League, Limited, Detroit, Mich., a Corporation of Michigan. Filed Sept. 25, 1911. Serial No. 651,111. (Cl. 83—67.)



1. In an amalgamator, the combination of a stationary receptacle having an open upper end, a stationary plate supported within the receptacle with a space between it and the bottom of the receptacle, mercury filling the space between the plate and the bottom of the receptacle and forming a film over the top of the plate, a stationary feed member extending downward into the receptacle to feed material by gravity and having a restricted space between its open lower end and the upper surface of the plate to retard flow from the feed member into the receptacle in contact with said plate, means for conducting material into the upper end of the feed member, and means for conducting overflow away from the receptacle.

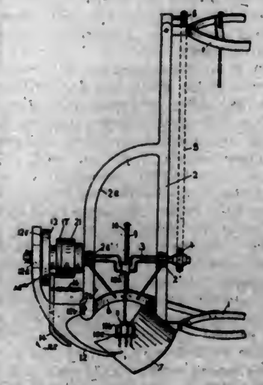
2. In an amalgamator, the combination of a stationary receptacle open at its upper end, a discharge pipe leading from the bottom of the receptacle, a stationary amalgam plate supported within the receptacle with a space between its edges and the walls of the receptacle and with a space between it and the bottom of the receptacle, a stationary feed pipe for conducting material by gravity into the said receptacle and extending downward into the same at the center thereof with a restricted space between its open lower end and the upper side of the plate, the upper end of said pipe being above the upper edge of said receptacle to cause the material to feed by gravity down the same and overflow from the receptacle.

1,019,055. CAKE-MIXER. HATTIE KYLE, Parkinson, Mont. Filed June 14, 1911. Serial No. 633,062. (Cl. 107—38.)



The hereindescribed cake mixer comprising a pan or body, a cross bar having down-turned arms detachably connected to the pan or body, a vertical shaft having a bearing in the center of the cross bar and a bearing in the center of the bottom of the pan, a head at the upper end of the said shaft and having a handle, a gear wheel mounted on the head and having a crank and a stirrer revoluble on the shaft and having a gear engaged by the first mentioned gear, the stirrer and the shaft having detachable cross bars, the said stirrer being provided with vertical blades spaced apart and inclined in opposite directions.

1,019,056. BEET-TOPPER. EDWARD LANG, Saginaw, Mich. Filed Jan. 28, 1911. Serial No. 605,312. (Cl. 55—107.)



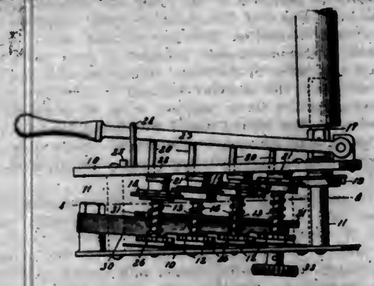
In a beet topping machine, the combination of a vertically movable frame, a topping knife secured thereto, a crank shaft on said frame, a fork actuated by said crank shaft, a topping guide vertically movable on said frame, a topping guide carried by said vertically movable guide, a rotatable clutch-actuated cam adapted to contact with said topping guide, a clutch, and means carried by said clutch adapted to rotate said cam.

1,019,057. FASTENING DEVICE OR TOGGLE. PETER C. LAWSON, Boston, Mass. Filed Aug. 28, 1911. Serial No. 645,619. (Cl. 149—21.)



A fastening device or toggle of the character described, comprising a metal member consisting of a wire rod bent intermediate of its ends to form bearing arms and a loop or eye having its side arms extended from said bearing arms in close proximity to each other, and a flexible, fibrous member having one end passed through said loop or eye and secured in fixed relation to the metal member by the resiliency of the said side arms between which the said fibrous member is gripped, substantially as described.

1,019,058. COUNTER. GEORGE ARTHUR LEES, North Adams, Mass. Filed July 17, 1911. Serial No. 638,872. (Cl. 235—113.)

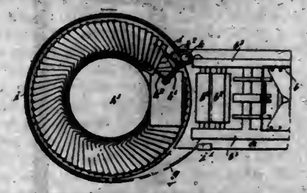


1. A device of the character described comprising a plurality of transfer wheels normally interconnected, means controllable at will for disconnecting said transfer wheels from each other, a plurality of mutilated gears for turning said transfer wheels to normal position, a plurality of gears separate from each other for meshing with said mutilated gears in order to actuate the same, a train of gears intermeshing with each other and operatively connected with said separate gears for turning the latter, and means for shifting said separate gears bodily toward and from said mutilated gears.

2. A device of the character described comprising a plurality of transfer wheels normally interconnected, means controllable at will for disconnecting said transfer wheels from each other, a plurality of mutilated gears for turning said transfer wheels to normal position, a pivotally mounted bar disposed adjacent to said mutilated gears and adapted to swing, a plurality of gears disconnected from each other and revolubly mounted upon said bar, said last mentioned gears being in the same plane as said mutilated gears and adapted to mesh therewith and unmesh therefrom, a train of gears operatively connected with said gears disconnected from each other for the purpose of turning the same, said train of gears being carried by said bar as the latter is swung upon its pivot.

3. A device of the character described comprising a plurality of shafts, a plurality of transfer wheels carried by said shafts and normally interconnected, a plurality of separate push pins one for each transfer wheel for displacing said transfer wheels to different distances upon said shafts in order to disconnect said transfer wheels from each other, and a single lever disconnected from said push pins and movable relatively to said shafts for the purpose of actuating said push pins in unison.

1,019,059. APPARATUS FOR STACKING ENVELOPS, &c. GEORGE S. LEWIS, Chicopee Falls, Mass., assignor to J. Stevens Arms & Tool Co., Chicopee Falls, Mass., a Corporation of Massachusetts. Filed June 1, 1911. Serial No. 630,732. (Cl. 101—29.)



1. A stacking apparatus for envelops, &c., comprising an endless traveling receiver upon which the envelops are delivered one by one in a substantially horizontal position and from which they may be removed at a point remote from that at which they are delivered to the receiver, and a stationary inclined guide at a point remote from that at which the envelops are delivered and by which the envelops are turned upward from a horizontal position as the movement of the receiver continues.

2. An apparatus for stacking envelops, &c., comprising a rotating annular plate upon which the envelops are delivered one by one in a substantially horizontal position and from which they may be removed at a point remote from the point of delivery, and a stationary inclined guide at a point remote from the point of delivery and by which the envelops are turned up from a horizontal position as the movement of the plate continues.

3. An apparatus for stacking envelops, &c., comprising an annular, horizontally rotating plate upon which the envelops may be delivered one by one in a substantially horizontal position and from which they may be removed at a point remote from the point of delivery, said plate having a floor grooved at an angle to the radius, and a stationary inclined guide against which the envelops are pushed in the continued movement of the plate and are turned upward thereby from the horizontal position.

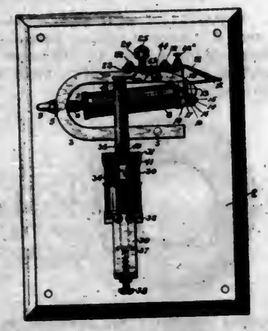
4. The combination with means for delivering envelops in rapid succession, of an envelop stacker, comprising an annular, horizontally rotating plate having a continuous surface upon which the envelops are delivered one by one in a substantially horizontal position from said means and from which they may be removed at a point remote from the point of delivery, and a stationary inclined guide located at a point in the direction of travel of the plate remote from the point of delivery of the envelops to the plate.

1,019,060. CIRCUIT-BREAKER. ALBION D. T. LIBBY, Elyria, Ohio, assignor to Kellogg Switchboard & Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 17, 1904. Serial No. 237,231. (Cl. 175—271.)

1. In a device of the class described, a single series electric circuit for the device, a pair of coöperating contacts in series in said circuit, an over-load coil in said circuit, and a combined under-load and reverse current coil in said circuit, means coöperating with said under-load coil to hold said contacts closed, and means controlled by said coils to sever the connection between said pair of contacts when the current in said circuit varies either below or above pre-determined amounts or reverses its direction of flow, substantially as described.

2. In a device of the class described, the combination with a single pair of coöperating contacts adapted to

close and open the circuit, of a pair of series electromagnetic windings, a permanent magnet and one of said windings coöperating to hold said contact closed, said permanent magnet and mechanical means operated by said windings coöperating to open said pair of contacts in case of an under-load, over-load or reverse current in the circuit thereof, substantially as described.



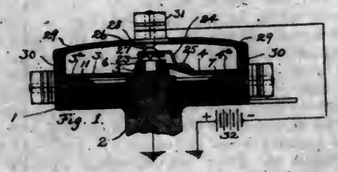
3. In a device of the class described, the combination with a horse-shoe magnet, of a pivoted coil having its free pole between the poles of the magnet, said magnet completing the magnetic circuit of the coil, a switch contact carried by the free end of the coil and coöperating with another spring contact to open and close the circuit through the coil, whereby the free pole of said coil is repelled and the switch is opened when the current in the circuit controlled by the switch is in a reverse direction or whereby the said free pole is repelled by said spring contact when the said current decreases from the normal value, substantially as described.

4. In a device of the class described, the combination with a permanent horse-shoe magnet, of a pivoted electro-magnet having its free end between the poles of the permanent magnet and adapted to be either attracted or repelled by one pole of said magnet, a switch contact movable with the electromagnet, a second contact coöperating therewith to close the circuit through the coil, whereby the free pole of said coil is repelled by the permanent magnet and the switch is opened when the current in the circuit controlled by the switch varies below the normal or flows in a reverse direction, substantially as described.

5. In a device of the class described, the combination with a switch, of a permanent magnet, a release magnet having its coil in the circuit of the switch, one end of the coil being attached to the neutral portion of the permanent magnet and the other end being movable between the poles of said permanent magnet and controlling in its movement the opening and closing of said switch, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

1,019,061. POLE-REVERSING TIMER OR DISTRIBUTER. EDWIN S. LINCOLN, Brookline, Mass., assignor to Electric Goods Manufacturing Company, a Corporation of Maine. Filed May 13, 1911. Serial No. 627,010. (Cl. 123—148.)



1. In an ignition system, the combination with an induction coil, a circuit interrupter having separable contacts, and a source of electric energy; of means including a timer adapted, in the operative timer positions, to connect said source of energy in energizing relation with the coil through said separable contacts, the poles of said source of energy being connected with said separable contacts in reversed polarity relation in the different operative positions of the timer.

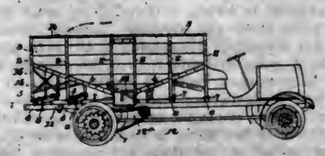
2. In an ignition system, the combination with an induction coil, a vibrator having vibrator points, and a source of electric energy; of means including a timer adapted, in the operative timer positions, to connect said source of energy in energizing relation with the coil through the vibrator points, the poles of said source of energy being connected with said virbator points in reversed polarity relation in different operative positions of the timer.

3. In an ignition system, the combination with an induction coil, a vibrator having vibrator points, and a source of electric energy; of means including a timer connecting the source of energy in energizing relation with the coil through the vibrator points, said source of energy being connected with said points in one relation of polarity in one operative position of the timer, and in the reversed polarity relation as to said points in another operative position of the timber.

4. In an ignition system, the combination with an induction coil, a vibrator having vibrator points, and a source of electric energy, of means adapted to connect said source of energy in energizing relation with the induction coil through the vibrator points, said means including a timer, comprising a moving member embodying a plurality of relatively insulated arms, one arm being in electrical connection with one pole of the source of energy and another arm with the other pole, and contact segments contemporaneously engaged by said arms in the operative positions of the timer, the segment engaged by one arm in one of the operative timer positions being in electrical connection with one vibrator point, and the segment contemporaneously engaged in such position by another arm being in electrical connection with the other vibrator point, the segment engaged by the first arm in another operative timer position being in electrical connection with the second above mentioned vibrator point and the segment engaged by the second arm in such other position being in electrical connection with the first mentioned vibrator point.

5. In an ignition system, the combination with an induction coil, a vibrator having vibrator points, and a source of electric energy; of means adapted to connect said battery in energizing relation with the induction coil through the vibrator points, said means including a timer comprising a rotating member embodying relatively insulated arms in electrical connection one with the positive pole and another with the negative pole of the battery, and contact segments contemporaneously engaged in sets by the said timer arms in the operative positions of the timer, the poles of said battery being electrically connected through the said arms and through the set of segments engaged by the same in one operative timer position with the vibrator points in one relation as to polarity, and through the said arms and through the set of segments engaged by the same in another operative position, with said vibrator points in the reversed relation.

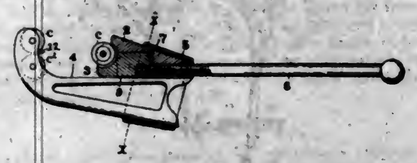
1,019,062. AUTOTRUCK-BODY. HENRY LOHSE, New York, N. Y. Filed Nov. 14, 1911. Serial No. 660,177. (Cl. 21—7.)



1. An auto-truck body composed of an open framework of angle iron, a series of cross sills of timber to which the lower ends of the upright angle irons are bolted, inclined floor angle irons extending from the middle portion upward to the front and rear ends, and sides and flooring of wooden planks bolted to the inside of said angle iron framework extending from the said inclined floor angle irons upward, but leaving the lower portion of the angle iron framework exposed in skeleton form.

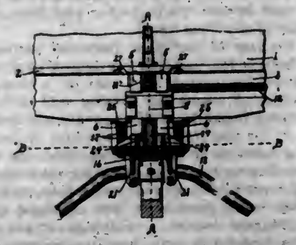
2. An auto-truck body composed of an open framework of angle iron, a series of cross sills of timber to which the lower ends of the upright angle irons are bolted, inclined floor angle irons extending from the middle portion upward to the front and rear ends, and sides and flooring of wooden planks bolted to the inside of said angle iron frame work, channel bars laid on said cross sills and clips adapted to clamp them to the chassis of the truck.

1,019,063. PIPE-CUTTER. JOHN R. LONG, East Akron, Ohio. Filed July 28, 1911. Serial No. 641,134. (Cl. 81—102.)



A pipe cutter having fixed and movable jaws respectively provided each with a rotary cutter and a slidable holder for the inner of said jaws having a recess lengthwise in its bottom open from the front and in which said inner jaw is adjustable, the said fixed jaw and the said slidable holder being tapered in opposite directions along their outer edges, a yoke confining said parts in operative relations and a handle threaded lengthwise through the lower portion of said slidable holder and rotatably locked in the said slidable jaw.

1,019,064. FIFTH-WHEEL FOR FERTILIZER-DISTRIBUTERS. ROBERT LOVE, Syracuse, N. Y., assignor, by mesne assignments, to Deere & Company, Moline, Ill., a Corporation of Illinois. Filed Jan. 22, 1903. Serial No. 140,075. (Cl. 21—24.)



1. The combination with a main frame and an axle, of a fifth wheel comprising upper and lower sections, the upper section having means for engaging the frame, and the lower section being provided with a depending axial hub and with depending arms arranged in front of the hub and on opposite sides of the same, said arms having bearings for the axle, and a tongue secured to the axle between said arms, substantially as and for the purpose described.

2. The combination with a main frame provided with surfaces unequally separated from the ground; of a fifth-wheel comprising a lower section secured to the front axle, an upper section having upwardly-extending parts of unequal length engaged with said surfaces of the main frame, means for securing the upper section of the fifth-wheel to said main frame, and means for securing the sections of the fifth-wheel together, substantially as and for the purpose set forth.

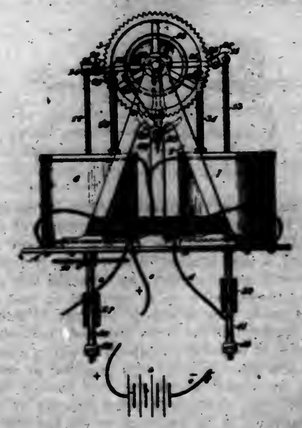
3. The combination with a main frame comprising a transverse bar and longitudinal bars having their front ends arranged beneath the transverse bar; of a fifth-wheel comprising a lower section secured to the front axle, an upper section having faces engaged with the lower surfaces of the front ends of the longitudinal bars and engaged with the lower surface of the transverse bar, and means for securing the upper section of the fifth-wheel to the main frame, substantially as and for the purpose specified.

4. The combination with a main frame provided with surfaces unequally separated from the ground; of a fifth-wheel comprising a lower section secured to the front axle, an upper section having upwardly extending parts of unequal length engaged with said surfaces of the main frame, means for securing the upper section of the fifth-wheel to said main frame, and a king-pin substantially as and for the purpose set forth.

5. The combination with a main frame comprising a transverse bar and longitudinal bars having their front ends arranged beneath the transverse bar; of a fifth-wheel comprising a lower section secured to the front axle, an upper section having faces engaged with lower surfaces of the front ends of the longitudinal bars, and additional faces arranged above the former faces at the sides of the front ends of the longitudinal bars and engaged with lower surfaces of the transverse bar, means for securing the upper section of the fifth-wheel to said main frame, and a king-pin substantially as and for the purpose described.

[Claims 6 to 14 not printed in the Gazette.]

1,019,065. MECHANISM FOR OPERATING A HAND OF A DIAL. ERNEST K. MACKINTOSH, Washington, D. C. Filed Dec. 16, 1909. Serial No. 533,319. (Cl. 73—117.)



1. In an indicator, the combination with electro-magnets having armature rods, said rods having slots formed in the upper ends thereof, of a shaft, a wheel mounted on the shaft, pawls, pins connected to the pawls received in the slots in the rods for pivotally and loosely connecting the pawls to the armature rods, said pawls adapted to engage the wheel for causing the shaft to be rotated, and indicating means operated upon the rotation of the shaft.

2. In an indicator, the combination with electro-magnets having armature rods, said rods having slots formed in the upper ends thereof, of a shaft, a wheel mounted on the shaft, pawls, pins connected to the pawls received in the slots in the rods for pivotally and loosely connecting the pawls to the armature rods, said pawls adapted to engage the wheel for causing the shaft to be rotated, indicating means operated upon the rotation of the shaft, and means for transmitting motion to the armature rods, whereby upon the operation of one armature rod, the shaft is moved in one direction, and upon the operation of the other armature rod, the shaft is moved in a reverse direction.

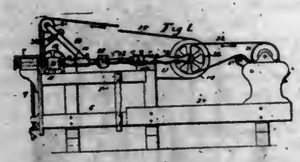
3. In an indicator, the combination with electro-magnets, having armature rods, of a shaft, a wheel mounted upon the shaft, pawls pivotally and loosely mounted on the armature rods adapted to engage the wheel for causing the shaft to rotate, indicating means operated upon the operation of the shaft, means for transmitting motion to the armature rods whereby upon the operation of one armature rod, the shaft is moved in one direction, and upon the operation of the other armature rod the shaft is moved in a reverse direction, and means for holding the shaft against movement only when the pawls are out of engagement with the wheel.

4. In an indicator, the combination with electro-magnets having armature rods, of a shaft, a wheel upon the shaft, indicating means operated by the shaft, means upon the armature rods for rotating the wheel, and means operated by the armature rods for engaging the wheel to limit the forward rotation of the wheel.

5. In an indicator, the combination with electro-magnets having armature rods and pawls on the rods, of a shaft, a wheel engaged by the pawls for rotating the shaft, indicating means operated by the shaft, an arm mounted on the shaft connected to the armature rod, and a pawl on the arm adapted to engage the wheel upon the operation of the armature rod for limiting the forward movement of the wheel.

[Claims 6 to 11 not printed in the Gazette.]

1,019,066. SANDER OR SMOOTHING-MACHINE. JOSEPH L. MARY and MILTON LAMBERT, Shelbyville, Ind., assignors to Moore Carving Machine Company, Minneapolis, Minn., a Corporation of Minnesota. Filed June 8, 1906, Serial No. 320,885. Renewed Dec. 21, 1911. Serial No. 667,212. (Cl. 51—13.)



1. In a machine of the class described, a frame, bearings thereon, a shaft journaled in said bearings and capable of longitudinal movement, one of said bearings having a sinuous face, a yoke secured to said shaft, a driven pulley carried thereby, guide pulleys, an abrading belt carried by said guide pulleys, and a collar mounted on said shaft and having a sinuous face to engage the face of said bearing.

2. In a machine of the class described, the combination, with a frame, of bearings mounted thereon, a shaft mounted in said bearings, guide pulleys provided at each end of said shaft, an abrading belt for said pulleys, means for driving said belt, said shaft being capable of a limited axial adjustment in its bearings to change the angle of said belt with respect to the horizontal without twisting the belt.

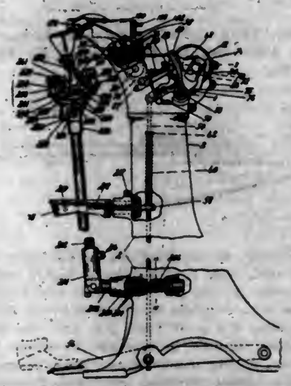
3. The combination, with a frame, of a shaft journaled thereon, guide pulleys carried by said shaft, an abrading belt for said pulleys, said shaft being capable of a limited rotary movement to vary the angle of said belt with respect to the horizontal, a driving belt operating in line with said shaft, and means for moving said shaft lengthwise to compensate for the shortening of said drive belt when the angle of said abrading belt is changed.

4. The combination, with a frame, of a shaft journaled thereon, pulleys carried by each end of said shaft, an abrading belt for said pulleys, means for driving said belt, said shaft being capable of a limited axial adjustment to permit the angle of said belt to the horizontal to be changed without twisting the belt, said driving means remaining in driving connection with said belt during said adjustment.

5. The combination, with a frame, of a shaft journaled thereon, guide pulleys carried by said shaft, an abrading belt carried by said pulleys, said shaft being capable of limited axial adjustment without twisting said belt on its longitudinal axis, a driving means for said belt, said driving means remaining in driving connection with said belt during the rotary adjustment of each end of said shaft, and a work table capable of adjustment to accommodate itself to the angle of said belt to the horizontal.

[Claims 6 and 7 not printed in the Gazette.]

1,019,067. POUNDING-UP MACHINE. RONALD F. MCFEELY, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Aug. 15, 1904. Serial No. 220,828. (Cl. 12—51.)



1. A machine of the class described having, in combination, devices constructed and arranged to engage the upper on the bottom and side of a shoe substantially to its edge, and automatic actuating means for causing said devices to form the upper against the innersole and side of the last and to shape the edge of the shoe.

2. In a machine of the class described, the combination with devices for engaging the upper on the bottom and the side of a shoe, of automatic actuating means for moving said devices first together and then relatively to shape the edge of the shoe.

3. A machine of the class described having, in combination, devices for engaging contiguous portions of upper material on the bottom and side of a shoe, and automatic actuating means for causing said devices to force said portions respectively downwardly and inwardly with relation to the last for shaping the edge of the shoe.

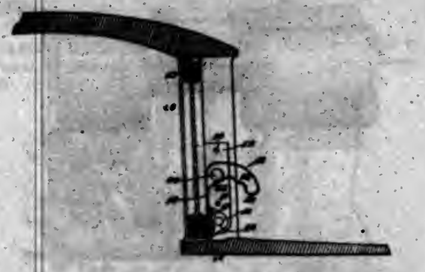
4. In a machine of the class described, the combination with pounding-up means, of actuating mechanism for moving said means toward and away from the work, said mechanism being constructed and arranged to impart to the pounding-up means a whipping stroke in a path having its major axis extending in a general direction of the plane of the work, substantially as described.

5. In a machine of the class described, the combination with pounding-up means, of mechanism for actuating said pounding-up means into and out of engagement with the work, and other means for moving said pounding-up means forwardly over the work, said other means being arranged to produce movement of the pounding-up means over the work after the movement into engagement with the work has terminated.

[Claims 6 to 91 not printed in the Gazette.]

1,019,068. DECK-SASH RATCHET. ALEXANDER E. MCKINNON, Chicago, Ill., assignor to Acme Supply Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 12, 1911. Serial No. 665,307. (Cl. 16—142.)

1. The combination with a pivoted sash and its frame; of a looped resilient strip carried by the sash and projecting therefrom, and a roller mounted on the frame and extending into the loop in contact with one side thereof, said side having a depression intermediate its ends and oppositely extending inclines on opposite sides of said depression.



2. The combination with a pivoted sash and its frame; of a looped resilient strip carried by the sash and projecting therefrom, and a roller mounted on the frame and extending into the loop in contact with one side thereof, said side having seats for the roller and said seats determining different positions of the sash.

1,019,069. STILL. RUSSELL H. MCMILLEN, Wheeling, W. Va. Filed July 25, 1910. Serial No. 573,643. (Cl. 203—5.)



A still comprising a boiler; a condenser-tube leading therefrom; a water-jacket which is connected with said boiler close to the bottom thereof and through which passes said condenser-tube; and a siphon which is connected with said water-jacket and provided with an air-valve and which constitutes a means for maintaining the desired level of water in the still, when the air-valve is open, and a means for draining the still, when the air-valve is closed.

1,019,070. SCORE-CARD. CLIVE MECKLEM, New York, N. Y., assignor to Brentano's, New York, N. Y., a Corporation of New York. Filed Apr. 22, 1903, Serial No. 153,753. Renewed Jan. 5, 1912. Serial No. 669,717. (Cl. 235—126.)

A score book comprising a plurality of tally sheets connected together at one end to form said book, each sheet consisting of an original and a duplicate leaf connected and folded together at their outer ends along a score line whereby said leaves may be readily severed from one another, said original leaf terminating short of said duplicate leaf and having a transverse score line to permit said leaf to be severed therealong and thereby divided into a relatively short and a relatively long portion, the former being provided with an illustration characteristic of a form of a game, and the latter portion being divided into



a series of columns provided with legends qualifying the use of the columns whereby scorings may be properly entered.

1,019,071. WIRE FENCE. DANIEL H. MILLER, Fort Worth, Tex. Filed Mar. 18, 1911. Serial No. 614,118. (Cl. 39—12.)



1. A fence post having a wire receiving notch, a line wire locking rod passing vertically through said notch, and a deflector supported in the notch and held in position by the locking rod, said deflector having downwardly extending inclined ends.

2. The combination with a fence post having a wire receiving notch and a wire locking rod passing vertically through said notch, of a deflector plate removably supported in said notch, said plate having downwardly extending terminal ends provided with wire supporting rollers.

3. The combination with a fence post having a wire receiving notch and a locking rod passing vertically down through said post and intersecting said notch, of a wire supporting deflector plate supported in the notch and through which said locking rod passes.

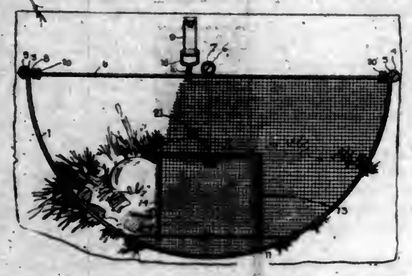
4. A fence, a series of posts each having wire receiving notches, and each provided with a locking rod passing vertically through said notches, deflector plates removably supported in the notches, longitudinal wires passing over said deflector plates and through said notches, and means for tightening the wires.

5. A fence, a series of posts each having wire receiving notches, and each provided with a locking rod passing vertically through said notches, deflector plates removably supported in the notches, longitudinal wires passing over said deflector plates and through said notches, and means mounted on one of said posts for tightening the several wires.

1,019,072. NEST. WRAY B. MILLER, Bourbon, Ind. Filed May 16, 1911. Serial No. 627,458. (Cl. 119—45.)

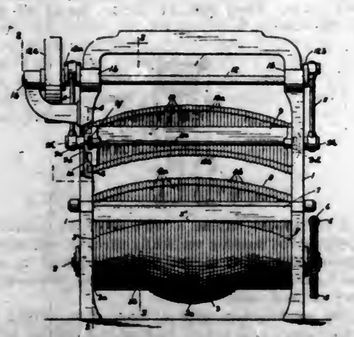
A nest comprising a body portion, said body portion comprising a length of rod metal curved for a portion of its length, the remaining portion of said metal being straight, securing eyes formed at the junction of the straight and curved portions of said length of metal, a

curved length of metal secured to the straight portion of said first mentioned length of metal, a length of curved metal secured to the curved portion of said first mentioned length of metal, a frame mounted upon said



last mentioned length of curved metal, a door frame mounted within said last mentioned frame, a fabric covering for said body portion, and for said door, and a cover hinged to said body portion.

1,019,073. FORMING-MACHINE. JOHN NAZEL, Philadelphia, Pa. Filed Aug. 4, 1909. Serial No. 511,004. (Cl. 153—76.)



1. In a machine of the character described, a master form revoluble for adjustment and means for retaining it in adjusted position, in combination with mechanism comprising a plurality of elements which are relatively adjustable by said master form and adapted for bending articles to shapes determined by the setting of the master form.

2. In a machine of the character described, a master form revoluble for adjustment and means for retaining it in adjusted position, in combination with reciprocating elements adjusted relatively by said master form and thereby adapted for bending articles to shapes determined by the setting of the master form.

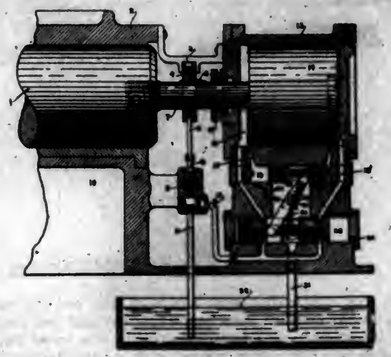
3. In a machine of the character described, a revoluble form, a set of longitudinally movable elements adjusted and supported by said form, a second set of longitudinally movable elements adjustable to conform with the positions of said elements first named, and means for reciprocating said second set of elements.

4. In a machine of the character described, a revoluble form having longitudinal contour curves of various diameters, in combination with a bed comprising separately movable elements adjusted and supported by said form, and a reciprocating head having separately movable elements adapted to coact with said elements first named.

5. In a machine of the character described, a revoluble form having gradually varying spiral cross sectional contour curves, in combination with guiding means, and separately movable elements controlled by said guiding means and relatively adjusted by means of said form.

[Claims 6 to 8 not printed in the Gazette.]

1,019,074. END-PLAY DEVICE. RAY C. NEWHOUSE, Milwaukee, Wis., assignor to Allis-Chalmers Company, Milwaukee, Wis., a Corporation of New Jersey. Filed Oct. 20, 1911. Serial No. 655,717. (Cl. 83—12.)



1. In combination, a rotary shaft, a piston connected to said shaft, and means for alternately admitting fluid under pressure to opposed surfaces of said piston whereby said shaft is reciprocated longitudinally.

2. In combination, a rotary shaft, a piston connected to said shaft, and means controlled by the movement of said piston for alternately admitting fluid under pressure to end surfaces of said piston whereby said shaft is reciprocated longitudinally.

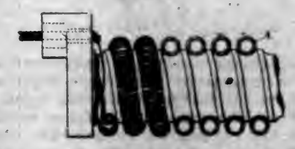
3. In combination, a rotary shaft, a piston connected to said shaft, and automatic means for admitting fluid under pressure to opposed end surfaces of said piston to reciprocate said shaft longitudinally.

4. In combination, a rotary shaft, and fluid pressure actuated means for periodically moving said shaft longitudinally in opposite directions.

5. In combination, a rotary shaft, and automatic means for effecting longitudinal reciprocation of said shaft by fluid pressure.

[Claim 6 not printed in the Gazette.]

1,019,075. ELECTRICAL RESISTANCE. CLAUDE C. NUCKOLS and FREDERIC PRUYN, Albany, N. Y., assignors to Consolidated Car Heating Company, a Corporation of West Virginia. Filed June 20, 1910. Serial No. 569,537. (Cl. 219—71.)

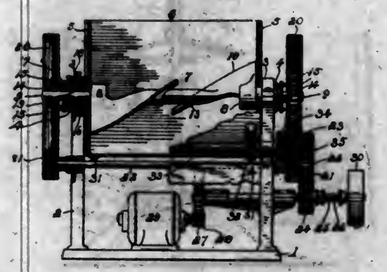


1. An electric resistance comprising a supporting wire coiled into relatively small convolutions, the coiled wire being further bent to form larger convolutions in which the smaller convolutions are maintained undisturbed, insulating material on said wire, a resistance wire wound around said insulating material, and insulating means for sustaining said larger convolutions in spaced apart relation.

2. An electric resistance comprising a supporting wire coiled into relatively small convolutions, the coiled wire being further bent to form larger convolutions in which the smaller convolutions are maintained undisturbed, insulating material on said wire, a resistance wire wound around said insulating material, and an insulating member to which the ends of said supporting wire are secured, said member being provided with means for sustaining said larger convolutions in spaced apart relation.

3. An electric resistance comprising a supporting wire coiled into relatively small convolutions, the coiled wire being further bent to form larger convolutions in which the smaller convolutions are maintained undisturbed, insulating material on said wire, a resistance wire wound around said insulating material, and an insulating core provided with helical grooves to receive said larger convolutions.

1,019,076. MACHINE FOR MIXING DOUGH. CURT E. OELMAN, Detroit, Mich. Filed June 5, 1911. Serial No. 631,851. (Cl. 107—40.)



In a dough mixing machine, the combination of a receptacle, a rotary mixer in said receptacle mounted to turn in bearings in the ends thereof and comprising spirally inclined blades arranged at opposite ends of the receptacle and at opposite sides of the axis of rotation of said mixer, each blade being formed with a straight outer end to sweep an end wall of said receptacle and a spirally inclined edge to sweep the bottom of the receptacle with the inner end of the blade overlapping the path of travel of the other blade, and a straight bar formed integral with said blades intermediate their ends connecting the same; and means for rotating said mixer.

1,019,017. TYPE-WRITING MACHINE. CHARLES V. OLIVER, West Union, Iowa. Filed Oct. 8, 1909, Serial No. 521,774. Renewed June 16, 1911. Serial No. 633,591. (Cl. 197—170.)



1. In a device of the character described, and in combination with the ribbon throw of a typewriting machine, a substitutional ribbon throw adjustably secured to the ribbon throw of the machine, and adapted to carry the ribbon and position it upon the line of the stroke of the type, and means secured upon the substitutional ribbon throw to carry a ribbon protector and position it over the ribbon at each throw.

2. In a device of the character described, and in combination with the ribbon throw of a typewriting machine, a substitutional ribbon throw consisting of a body provided with arms and means for grasping and carrying the ribbon, and means engaging the ribbon throw of the machine for adjustably securing the substitutional ribbon throw to the throw of the machine to cause the substitutional throw to travel with the throw of the machine.

3. In a device of the character described, and in combination with the ribbon throw of a typewriting machine, a substitutional ribbon throw consisting of a body provided with arms, a ribbon guide upon each arm, a spring secured to the body, and means engaging the ribbon throw of the machine and the spring on the body of the substitutional ribbon throw to adjustably secure the substitutional ribbon throw to the throw of the machine.

4. In a device of the character described, and in combination with the ribbon throw of a typewriting machine, a substitutional ribbon throw consisting of a body provided with loops for carrying the ribbon, means for attaching it to the throw of the machine to cause it to travel therewith and be operated thereby, and means for adjusting the substitutional throw on the throw of the machine to place any part of the ribbon in position to be struck by the type or to remove the ribbon from the line of the stroke of the type.

5. In a device of the character described, and in combination with the ribbon throw of a typewriting machine, a substitutional ribbon throw provided with means for carrying the ribbon, a ferrule engaging the throw of the machine and the substitutional throw for securing the substitutional throw to the throw of the machine, and a spring secured to the substitutional throw and adapted to engage the ferrule to adjust the substitutional ribbon throw to position any part of the ribbon to be struck by the type and to remove the ribbon from the line of the stroke of the type.

[Claims 6 to 9 not printed in the Gazette.]

1,019,078. AERIAL PROPELLER. CHARLES MORGAN OLMSTED, Pasadena, Cal. Filed Oct. 2, 1909. Serial No. 520,677. (Cl. 244—25.)



1. An aerial screw-propeller comprising a hub and a plurality of rigid blades, the contours whereof substantially conform to a helicoidal surface throughout their entire extent, and the cross sections whereof are concavo-convex wherever taken between hub and tip, each blade having its widest portion adjacent to said hub, and more than twice as wide as the width of that blade at a distance from the axis equal to three-fourths of the extreme radius of the propeller.

2. An aerial screw-propeller comprising a hub and a plurality of rigid blades, the contours whereof substantially conform to a helicoidal surface throughout their entire extent, and the cross sections whereof are concavo-convex wherever taken between hub and tip, each blade having its widest portion adjacent to said hub, and more than twice as wide as the width of that blade, at a distance from the axis equal to three-fourths of the extreme radius of the propeller, and each blade directly connected to said hub over a width greater than twice the width of that blade taken at a distance from the axis equal to three-fourths of the extreme radius of the propeller.

3. An aerial screw-propeller having a plurality of rigid blades, every part of which conforms, as described, to a helicoidal surface, and each of which so varies in width that more than sixty per cent. of the total amount of blade surface is included within a cylinder described about the axis, with a radius equal to one half the radius of the propeller, the variation in width being such that the radial gradation in total width is gradual.

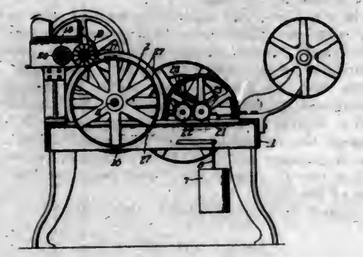
4. An aerial screw-propeller having a plurality of rigid blades, every part of which conforms, as described, to a helicoidal surface, and each of which so varies in width that more than sixty per cent. of the total amount of blade surface is included within a cylinder described about the axis, with a radius equal to one-half of the radius of the propeller, and so that more than twenty-five per cent. of the total amount of blade surface is included within a cylinder described about the axis, with a radius equal to one fourth of the radius of the propeller, the variation in width being such that the radial gradation in total width is gradual.

5. An aerial screw-propeller with rigid helicoidal blades which are wider at a distance from the axis equal to one fourth the radius than they are at a distance equal to one half the radius, and which are more than twice as

wide at a distance from the axis, equal to one half the radius as they are at a distance from the axis equal to three fourths of the radius.

[Claims 6 to 17 not printed in the Gazette.]

1,019,079. MACHINE FOR CLEANING INTESTINES OR CASINGS. HARRY D. OPPENHEIMER, Chicago, Ill. Filed Sept. 12, 1910. Serial No. 581,655. (Cl. 17—12.)



1. In a casing cleaning machine, the combination of a scraper, an adjustable rotatable drum arranged adjacent the scraper for coöperation therewith, and a feed drum corresponding in contour to said rotatable drum and arranged proximate thereto at one end thereof.

2. In a casing cleaning machine, the combination of a scraper, an adjustable rotatable drum arranged adjacent thereto for coöperation therewith, and a semi-cylindrical stationary feeding plate arranged at one end of said drum and corresponding in contour therewith, said feeding plate being mounted for adjustment.

3. In a casing cleaning machine the combination of a scraper, an adjustable rotatable drum arranged to cooperate therewith and provided with grooves on the exterior thereof and a semi-cylindrical feeding plate, corresponding in contour with said drum, arranged proximate to one end thereof and adjustable therewith.

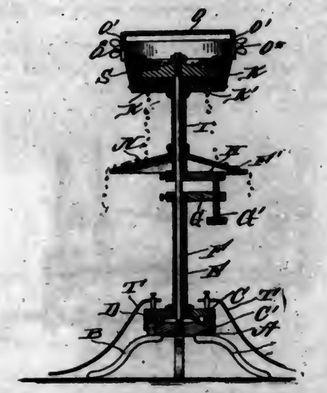
4. In a casing cleaning machine of the kind described and in combination, a frame, a rotatable drum adjustably mounted on said frame, means for adjusting the position of said drum, a plurality of scrapers and means for operating said scrapers and drum, said drum provided with a plurality of grooves on the exterior face thereof and a stationary feeding drum arranged at one end of said drum in close proximity thereto, said feed drum corresponding in curvature with the face of said drum.

5. In a casing cleaning machine, the combination of a rotatable scraper, and a rotatable drum arranged adjacent the scraper for coöperation therewith and provided with a series of grooves on its outer face extending longitudinally thereof at angles to its axis.

1,019,080. AUTOMATIC POULTRY-FEEDING APPARATUS. FREDERICK ROW PARKS, Hamburg, N. Y. Filed May 22, 1911. Serial No. 628,672. (Cl. 119—70.)

1. An automatic poultry feeding apparatus, comprising a standard with its upper end threaded, a tube telescoping over said standard, a disk fitted to said standard, arms projecting from the disk, forming means whereby the disk may be rotated, a hopper, a tube projecting from an opening in the bottom thereof and adapted to telescope over said standard, a disk mounted upon the threaded end of the standard and positioned within the hopper, and means for raising and lowering the hopper.

2. An automatic poultry feeding apparatus, comprising a standard with its upper end threaded, a tube telescoping over said standard, a disk fitted to said standard, arms projecting from the disk, forming means whereby the disk may be rotated, a hopper, a tube projecting from an opening in the bottom thereof and adapted to telescope over said standard, a disk mounted upon the threaded end of the standard and positioned within the hopper, a bracket arm fixed to said tube which rises from the disk, a thumb screw carried by said bracket arm, a bracket member mounted upon the tube which telescopes over a portion of the standard and against which the thumb screw is adapted to bear.



3. In combination with a standard, a disk upon which the latter is supported, legs upon the disk, a tube telescoping over the standard, a disk fastened to said tube and having a flange extending over the disk supporting the standard, ball-bearings between the disks, arms projecting from the disk to which said tube is fastened, a hopper, a tube communicating with an aperture in the perforated bottom of the hopper and telescoping over the upper end of the standard, and means for regulating the feeding of the seed from the hopper.

4. In combination with a standard, a disk upon which the latter is supported, legs upon the disk, a tube telescoping over the standard, a disk fastened to said tube and having a flange extending over the disk supporting the standard, ball-bearings between the disks, arms projecting from the disk to which said tube is fastened, a hopper, a tube communicating with an aperture in the perforated bottom of the hopper and telescoping over the upper end of the standard, means for regulating the feeding of the seed from the hopper, a disk fitted to the upper end of the standard and positioned in the hopper, brackets fastened one to each of the tubings which telescope over the standard, and a thumb screw mounted in a threaded aperture in one bracket member and bearing against the other bracket member.

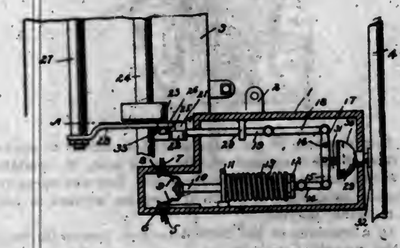
5. An automatic poultry feeding apparatus comprising a standard, a tube telescoping over the same and rotatable thereon, a hopper with a perforated bottom, a tube communicating with an opening in the bottom of the hopper and telescoping over said standard, a protecting device fastened over the hopper, a deflector fastened to the tubing which communicates with the hopper, a disk upon the hopper end of the standard and positioned in said hopper, and means for adjusting the hopper.

[Claim 6 not printed in the Gazette.]

1,019,081. SAFETY DEVICE. CHARLES F. PEEL, New York, N. Y. Filed Nov. 21, 1910. Serial No. 593,464. (Cl. 172—179.)

1. In a motor control, a contact member, an arm thereon, a lever connected to said arm, a diaphragm adapted to hold said lever in a fixed position, said diaphragm being controlled by fluid pressure, a spring on said arm adapted to hold said contact member normally out of contacting position, said air pressure diaphragm adapted to overcome the action of said spring while a predetermined pressure is maintained, a cam arm attached to said lever, means on said controller by which said contact member may be operated when said diaphragm is expanded.

2. In a motor control, a contact member, an arm thereon, a lever connected to said arm, a diaphragm adapted to hold said lever in a fixed position, said diaphragm being controlled by fluid pressure, a spring on said arm adapted to hold said contact member normally out of contacting position, said air pressure diaphragm adapted to overcome the action of said spring while a predetermined pressure is maintained, a cam arm attached to said lever, means on said controller by which said contact member may be operated when said diaphragm is expanded, the contraction of said diaphragm adapted to prevent the normal operation of said contact member.



3. In a motor control a contact member, an arm thereon, a lever connected to said arm, a diaphragm adapted to hold said lever in a fixed position, said diaphragm being controlled by fluid pressure, a spring on said arm adapted to hold said contact member normally out of contacting position, said air pressure diaphragm adapted to overcome the action of said spring while a predetermined pressure is maintained, a cam arm attached to said lever, means on said controller by which said contact member may be operated when said diaphragm is expanded the contraction of said diaphragm adapted to prevent the normal operation of said contact member, and means whereby said contact member may be operated when said diaphragm is contracted.

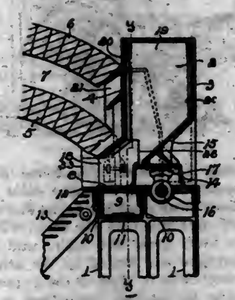
4. In a motor control, a contact member, an arm thereon, a lever connected to said arm, a diaphragm adapted to hold said lever in a fixed position, said diaphragm being controlled by fluid pressure, a spring on said arm adapted to hold said contact member normally out of contacting position, said air pressure diaphragm adapted to overcome the action of said spring while predetermined pressure is maintained, a cam arm attached to said lever, means on said controller by which said contact member may be operated when said diaphragm is contracted, means whereby a motorman will be reminded that he is operating without said determined pressure.

5. In combination with a controller and a fluid delivery, a casing at right-angles to said controller, a bottom extension to said casing, two electric contacts at the opposite walls of said extension, a bifurcated brush for engagement with said contacts, a horizontal plunger connected to said brush, a cam at the bottom of said controller, a horizontal plunger carrying a beveled arm for engagement with said cam, a lever pivoted to the ends of said plungers and fulcrumed intermediate its ends, a boss upon said lever at one side of its fulcrum, a shoulder upon the arm of said plunger, a spring embracing the first-named plunger, a diaphragm actuated from said fluid delivery to engage said boss and thereby cause said brush to engage said contacts, said cam arranged to replace the action of said diaphragm, and a manually-controlled lever engaging said shoulder after the cam has actuated the integral lever.

[Claims 6 to 8 not printed in the Gazette.]

1,019,082. AUTOMATIC STOKER. GEORGE W. PHILLIP, Canton, N. C., assignor to Murphy Iron Works, Detroit, Mich., a Corporation of Michigan. Filed Nov. 18, 1910. Serial No. 593,029. (Cl. 110—24.)

1. In an automatic stoker, the combination of a coking plate, an air flue extending beneath said plate longitudinally thereof, a magazine extending the length of said plate with its discharge throat above said plate and comprising an arch plate forming one side of the magazine provided with a seat for an arch and a member forming one end of the magazine having a chamber open at one side beneath the arch seat at the end of the coking plate and into which chamber the air flue opens, a chambered member interlocked with said member and having a vertical wall forming a closure for said opening at the end of the coking plate, and means for holding the parts interlocked.



2. In an automatic stoker, the combination of a coking plate, an air flue extending longitudinally of and beneath said plate, a coal magazine having a throat at its lower end adjacent to said plate and comprising a member formed with a vertical wall forming the end wall of said magazine and with a chamber into which said air flue opens at the lower end, thereof, said chamber having an opening in one side at the end of the coking plate, a chambered detachable member having a vertical wall forming a closure for the opening into said chamber of the other member and forming a continuation of the end wall of the magazine at the end of the coking plate, interlocking members on the meeting edges of the vertical walls of said members, and a flange on the detachable member overlapping and detachably secured to the other member.

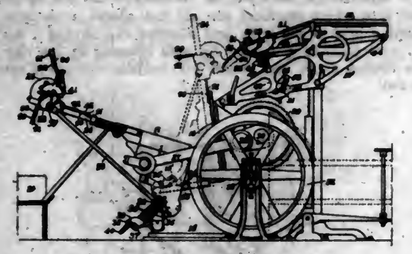
3. In an automatic stoker, the combination of a coking plate, an air flue extending longitudinally of and beneath said plate, a coal magazine having a throat at its lower end adjacent to said plate and comprising a member formed with a vertical wall forming the end wall of said magazine and with a chamber into which said air flue opens, said chamber having an open side at the end of the coking plate, a chambered member formed with a vertical wall forming a closure for the open side of the other member, and forming a continuation of the end wall of the magazine, flanges on the meeting edges of the vertical walls of said members adapted to interlock, a laterally extending flange on the closure member overlapping the end wall of the chamber of the other member, and a bolt engaging an opening in the flange and a slot in the adjacent wall.

1,019,083. METHOD OF MANUFACTURING JOINTLESS FACINGS OF FLOORS, WALLS, AND THE LIKE. LEONHARD PINK, Berlin, Germany; Joseph Simson, attorney in fact, assignor to said Joseph Simson, individually. Filed Mar. 4, 1910. Serial No. 547,201. (Cl. 106—29.)

1. The herein described method of manufacturing jointless facings for floors, walls and the like, consisting in the mixing of magnesia, magnesium chlorid, a filling agent, oleic acid, and an inorganic acid, applying the mixture and shaping to form a facing for a floor or wall.

2. The herein described method of manufacturing jointless facings for floors, walls and the like, consisting in the mixing of burned magnesite, magnesium chlorid, a filling agent, oleic acid, and phosphoric acid, applying the mixture and shaping to form a facing for a floor or wall.

1,019,084. GAGE FOR SHEET-FEEDING MECHANISM. MYRON H. PIPER, Walpole, Mass., assignor to United Printing Machinery Company, Boston, Mass., a Corporation of Maine. Filed Mar. 16, 1910. Serial No. 549,582. (Cl. 101—36.)



1. Sheet feeding mechanism comprising a feed table, sheet gripping means adapted to grip a sheet on the table and carry the sheet away from the table, and gages adapted to be engaged by a sheet on the table when the gripping means are away from the table, said gages being adapted to be engaged and moved by the gripping means to position the sheet with relation to the gripping means.

2. Sheet feeding mechanism comprising a feed table, gripping means movable to and from said table, and yielding gages arranged to be preliminarily engaged by the front edge of a sheet on said table, said gages being arranged to be engaged and moved by said gripping means to finally position the sheet with relation to said gripping means.

3. Sheet feeding mechanism comprising a feed table, gripping means movable to and from said table, and means for positioning a sheet on said table while said gripping means move to and from the table, said means being arranged to be actuated by said gripping means for positioning the front edge of said sheet relatively to the gripping means.

4. The combination with a feed table, and sheet gripping means for removing a sheet from said table; of movable means mounted on said table to be engaged and moved by said gripping means, said movable means having abutments arranged to engage the front edge of a sheet on the table and position the sheet with relation to said gripping means.

5. The combination with a feed table, and sheet gripping means for removing a sheet from said table; of means mounted on said table to be engaged and moved by said gripping means, said means including adjustable abutments arranged to engage and position a sheet on the table.

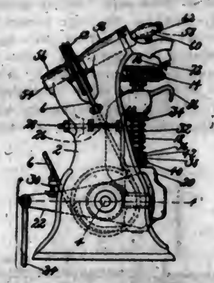
[Claims 6 to 10 not printed in the Gazette.]

1,019,085. MACHINE FOR USE IN THE MANUFACTURE OF BOOTS AND SHOES. JOHN PENNELL PRIDE and ARTHUR BATES, Leicester, England, assignors to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Mar. 15, 1906. Serial No. 306,220. (Cl. 12—17.)

1. In a machine of the class described, a device constructed and arranged to enter the angle or crease between the upper and the sole and mechanism for oscillating said device about an axis in or near its acting portion to shape a portion of the shoe.

2. In a machine of the class described, means for acting upon a sole near its margin, comprising a device arranged and constructed to enter the angle of crease between the upper and the sole of a lasted shoe, a rotary device constructed and arranged to engage the opposite face of the sole, and means for rotating said device at a rotatively high speed to rub the sole.

3. In a machine of the class described, means for bending the margin of a sole comprising a tool arranged and constructed to enter the angle or crease between the upper and the sole and actuating mechanism for the tool to cause it to exert a succession of blows or pressing actions upon the sole.

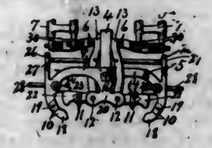


4. In a machine of the class described, means to engage one face of the marginal portion of a sole, in combination with a device engaging the opposite face and operating through a succession of blows or pressing actions to bend such marginal portion.

5. In a machine of the class described, means for bending the marginal portion of a sole-comprising a rest against which the sole is held, a tool movable in a curved path, and means for causing it to exert a succession of blows or pressing actions upon the marginal portion of the sole to bend it relatively to the general plane of the sole.

[Claims 6 to 33 not printed in the Gazette.]

1,019,086. LAUNDRY-CONVEYER DROP. WILBUR W. QUINN, Goshen, Ind., assignor of one-half to National Chemical Company, Syracuse, N. Y., a Corporation of New York. Filed Nov. 18, 1910. Serial No. 593,091. (Cl. 214—14.)



1. A drop-carrier for endless conveyers comprising a frame having apertured stripper guides and straight pins movable back and forth in the apertures in said guides, the apertures and pins being of substantially the same cross-sectional size.

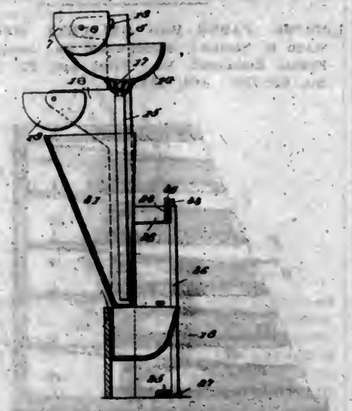
2. A drop-carrier for endless conveyers comprising a frame, rock arms on the frame, straight supporting pins connected to and movable with the rock arms, stripper guides fitting closely around the pins and secured to the frame, and guard-loops on the frame for retaining articles on the pins.

3. A drop-carrier for endless conveyers comprising a frame having fixed jaws spaced some distance apart, levers pivoted to the frame and provided with movable jaws coacting with the first named jaws, stops on the frame for limiting the upward movement of the movable jaws, pins pivoted to the levers and movable therewith, stripper guides for the pins, and guards on the frame for holding articles on the pins.

4. A drop-carrier for endless conveyers comprising a frame having fixed jaws spaced some distance apart, levers pivoted to the frame and provided with movable jaws coacting with the first named jaws, stops on the frame for limiting the upward movement of the movable jaws, pins pivoted to the levers and movable therewith, stripper guides for the pins.

5. A drop-carrier for endless conveyers comprising a frame having fixed jaws spaced some distance apart, levers pivoted to the frame and provided with movable jaws coacting with the first named jaws, pins pivoted to the levers and movable therewith, stripper guides for the pins.

1,019,087. AUTOMATIC CALF-FEEDER. JOSEPH RAU, Fayette, Iowa, assignor of one-half to Frank Rau, Fayette, Iowa. Filed Jan. 7, 1911. Serial No. 601,358. (Cl. 119—56.)



1. A stock feeder including spaced uprights, a plurality of receptacles arranged one above the other and pivotally mounted between the uprights, a stationary trough interposed between the receptacles and secured to said uprights, a feed trough, an open-sided chute for directing the material from one of the receptacles into the feed trough, and a spout extending through the chute at the open side thereof for directing the material from the upper receptacle into said feed trough.

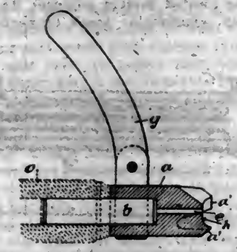
2. A stock feeder including spaced uprights having upper and lower sets of laterally extending arms of different lengths, a liquid receiving receptacle pivotally mounted on the upper short set of arms and provided with spaced transverse partitions forming a series of compartments, there being an opening formed in each partition, an auxiliary receptacle pivotally mounted on the lower long set of arms and adapted to receive solid material, feed troughs disposed beneath said receptacles, means for directing the fluid from the liquid receptacle into the feed troughs, separate means for directing the solid material into said feed troughs, and a plug adapted to enter the openings in the partitions for cutting off communication between the adjacent compartments.

3. A stock feeder including a supporting frame having upper and lower sets of laterally extending arms of different lengths, a liquid receiving receptacle pivotally mounted on the upper short set of arms and provided with laterally extending nozzles, a stationary receiving trough secured to the frame beneath the liquid receptacle and adapted to receive the liquid from said receptacle, a plurality of feed troughs, means for conducting the liquid from the receiving trough to the respective feed troughs, an auxiliary receptacle pivotally mounted on the lower long set of arms and adapted to contain a quantity of grain, and downwardly inclined chutes arranged beneath the grain receiving receptacle for directing the grain into the feed troughs.

1,019,088. RIVETING-TOOL. ALBERT CHORLEY ROGERSON, Manchester, England, assignor of one-half to Arthur Frederick Halstead, Manchester, England. Filed Mar. 10, 1911. Serial No. 613,490. (Cl. 78—46.)

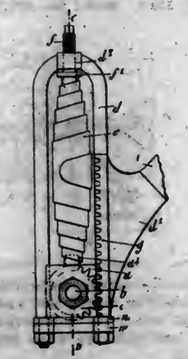
1. The riveting tool for use with a pneumatic hammer or the like, having prongs, formed internally to shape a stay head with a comparatively flat crown and steep sides, a handle to enable the tool to be rotated by hand and a shank to insert in the neck of the cylinder of a pneumatic hammer, substantially as described.

2. The riveting tool for use with a pneumatic hammer or the like having prongs formed to shape a metal head of the desired form, with a central hole into which metal is forced as the head is being formed serving to guide and center the tool, a handle to enable the tool to be



rotated by hand and a shank to insert in the cylinder of a pneumatic hammer, substantially as described.

1,019,089. ELASTIC SUSPENSION FOR WHEELS OF CYCLES AND OTHER VEHICLES. HENRI ROZE, Domaine de Haute-Fontaine, near Les Grandes Côtes, France. Filed July 12, 1910. Serial No. 571,637. (Cl. 208—101.)



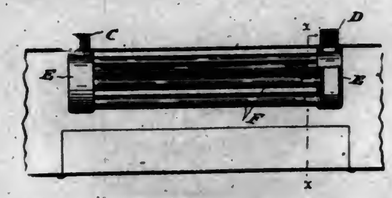
1. In an elastic suspension for wheels, a wheel spindle, bearing bushes on each end of said wheel spindle forming slides, turned nuts screwed on the spindle and adapted to rotate with the same in said bearing bushes, guides in the frame of the vehicle with which said bushes slidingly engage, springs between said bushes and the tops of the guides, and means for positively maintaining said wheel spindle parallel to its normal position at all times.

2. In an elastic suspension for cycle wheels, a wheel spindle, bearing bushes on each end of said wheel spindle forming slides, turned nuts screwed on said spindle and adapted to rotate with the same in said bearing bushes, stirrup shaped guides connected to the cycle forks, said bushes slidingly engaging said guides, springs between said bushes on the tops of said guides, collared adjusting screws for said springs passing through tops of said guides, racks formed on the inside of each of said stirrup guides and pinions on each end of said wheel spindle, said pinions engaging with said racks, whereby said spindle will at all times be maintained parallel to its normal position.

1,019,090. WATER-HEATER. CORNELIUS A. RYERSON, Toronto, Ontario, Canada. Filed May 18, 1910. Serial No. 562,036. (Cl. 122—275.)

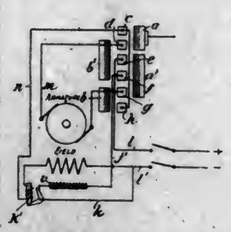
1. In a water heater the combination of an approximately horizontal smoke pipe section, a series of water heating pipes located therein adjacent its upper surface, approximately semicircular heads connected to the ends of said pipes and communicating therewith, and nipples communicating with the water spaces of the said heads at their highest points, extending through the upper portion of said smoke pipe section and attached thereto.

2. In a water heater the combination of an approximately horizontal smoke pipe section, a series of water heating pipes located therein adjacent its upper surface, approximately semicircular heads connected to the ends



of said pipes and communicating therewith, and nipples on the convex surfaces of said heads intermediate of their ends extending through the upper portion of said smoke pipe section and attached thereto.

1,019,091. CONTROLLING DEVICE FOR MOTORS. CESARE SACERDOTI, Philadelphia, Pa., assignor to Fiat San Georgio, Spezia, Italy, a Corporation of Italy. Filed Jan. 7, 1911. Serial No. 601,254. (Cl. 172—8.)



1. In a follow-up control mechanism, the combination of a motor controlling mechanism, and a manually operable means, and means for automatically throwing said manual means into operation when the motor controlling mechanism fails.

2. In a follow-up control mechanism, the combination of a motor controlling mechanism, and a manually operable means, said motor controlling means acting automatically to operate said manual means when said motor fails.

3. In a follow-up control mechanism, the combination of a motor controlling mechanism, and a manually operable means, said mechanism and means being movable in the same direction, and means for operatively connecting the two automatically when the motor fails.

4. The combination of a part to be moved, a motor for moving it, means for controlling said motor, means for moving said part by hand, and means for automatically throwing said hand operable part into operation when said motor fails.

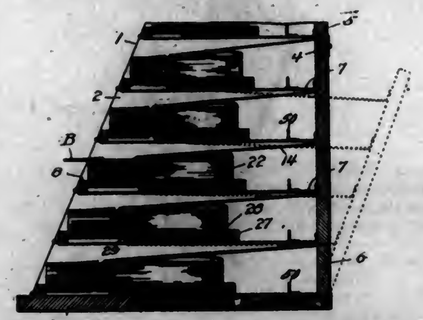
5. The combination with a part to be moved, of a manually operable device for moving it, a motor also adapted to move said part, and means for controlling said motor, said manually operable device and said motor controlling means being adapted to move in the same general direction and said motor controlling means being adapted to mechanically engage and move said manually operable device.

[Claims 6 to 23 not printed in the Gazette.]

1,019,092. METHOD OF DYEING. MAXIM SCHWARZ, Braunau, Austria-Hungary. Filed Aug. 19, 1911. Serial No. 644,958. (Cl. 8—5.)

The within described process of dyeing on vegetable and animal fibrous material which consists in mixing an alkaline solution of substantive dyes with starch gel, neutralising the said mixture, impregnating the material to be dyed with the said neutralised mixture containing the neutral gels of the substantive dyes and then fixing the dye by steaming.

1,019,093. PAPER-BAG-DELIVERY MACHINE. EDWARD B. SHANKS, Springwood, Va., assignor to Myer Frank, Richmond, Va. Filed Apr. 22, 1911. Serial No. 622,726. (Cl. 211—8.)



1. A device of the class described comprising a supporting structure; a bag-carrier slidable in a fixed plane thereon; yieldable means for moving the carrier in one direction; and a bag-engaging element held fixedly above the carrier, and adapted to engage in the fold of the uppermost bag on the carrier.

2. A device of the class described comprising a supporting structure; a bag-carrier thereon; yieldable means for moving the carrier in one direction; and a resilient, bag-engaging element held above the carrier, and adapted to engage the fold of the uppermost bag on the carrier.

3. A device of the class described, comprising a supporting structure; a bag-carrier slidable in a fixed plane upon the supporting structure; and a spring secured at one end to the supporting structure, and at the other end disposed above the carrier, adapted to exert pressure upon the bags which are upon the carrier, tangential to the plane of movement of the carrier.

4. A device of the class described, comprising a supporting structure; a bag-carrier slidable thereon; a protecting member removably united with the carrier, and adapted to rest upon the bags with which the carrier is provided; and a spring member connected with the supporting structure and adapted to bear upon the protecting member, and to pass off the protecting member, when the carrier is slid, to engage the uppermost bag, and to advance the same beyond the other bags.

5. A device of the class described comprising a supporting structure; a bag-carrier slidable thereon; a protecting member removably connected with the carrier, and adapted to rest upon the bags with which the carrier is provided; spring means upon the carrier, for holding the protecting member upon the bags; and a spring member united with the supporting structure, and adapted to bear upon the protecting member, the spring member being adapted to pass off the protecting member, when the carrier is slid, to engage the uppermost bag, and to advance the same beyond the other bags.

[Claims 6 to 8 not printed in the Gazette.]

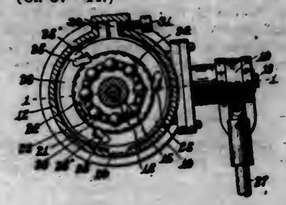
1,019,094. CLAMP FOR BURIAL-CASES. PATRICK D. SKAHEN, Syracuse, N. Y. Filed May 17, 1909. Serial No. 496,425. (Cl. 27—12.)

1. In a burial case, the combination with a box and a cover resting on the upper edge of the box; of a clamping member connected to the box by an upright threaded connection and having a portion movable into and out of a position overhanging the margin of the cover when said clamping member is turned about the axis of its threaded connection, such overhanging portion being movable toward and from said margin during the turning movement of the clamping member, and a second clamping member carried by the overhanging portion of the first-mentioned clamping member, substantially as and for the purpose described.



2. In a burial case, the combination with a box and a cover resting on the upper edge of the box; of a clamping member connected to the box by an upright threaded connection and having a portion movable into and out of a position overhanging the margin of the cover when said clamping member is turned about the axis of its threaded connection, such overhanging portion being movable toward and from said margin during the turning movement of the clamping member, and a second clamping member carried by the overhanging portion of the first-mentioned member and consisting of a cam lever pivoted to said overhanging portion, substantially as and for the purpose specified.

1,019,095. LIFTING-JACK. JOSEPH B. SMYTHE, Coaticook, Quebec, Canada. Filed June 10, 1911. Serial No. 632,511. (Cl. 57—44.)



1. In a lifting jack, the combination of a stationary member; a movable member thereon; a screw for said movable member; means for rotating said screw; a plate carried by said screw; a plate carried by said movable member; anti-friction members interposed between said plates; and adjustable mechanism for creating a variable friction on said screw plate.

2. In a lifting jack, the combination of a stationary member; a movable member thereon; a screw for said movable member; means for rotating said screw; a plate carried by said screw; a plate carried by said movable member; anti-friction members interposed between said plates; a ring surrounding said screw plate; means interposed between said ring and plate to insure their simultaneous movement in one direction; and a non-revoluble friction band surrounding said ring.

3. In a lifting jack, the combination of a stationary member; a movable member thereon; a screw for said movable member; means for rotating said screw; a plate carried by said screw; a plate carried by said movable member; anti-friction members interposed between said plates; a ring surrounding said screw plate; means interposed between said ring and plate to insure their simultaneous movement in one direction; a non-revoluble friction band surrounding said ring; and means for adjusting said band to regulate its frictional contact with said ring.

4. In a lifting jack, the combination of a stationary member; a movable member thereon; a screw for said movable member; means for rotating said screw; a plate carried by said screw; a plate carried by said movable member; anti-friction members interposed between said plates; a ring surrounding said screw plate; means interposed between said ring and plate to insure their simultaneous movement in one direction; a non-revoluble friction band surrounding said ring provided with projections positioned in depressions in the jack casing.

5. In a lifting jack, the combination of a stationary member; a movable member thereon; a screw for said movable member; means for rotating said screw; a plate carried by said screw; a plate carried by said movable member; anti-friction members interposed between said plates; a ring surrounding said screw plate; means interposed between said ring and plate to insure their simultaneous movement in one direction; a non-revoluble split friction band surrounding said ring; and means connecting the ends of said split band for regulating the frictional contact with said ring.

[Claim 6 not printed in the Gazette.]

1,019,096. HINGE. JOSEPH SOSS, Brooklyn, N. Y. Filed Dec. 30, 1911. Serial No. 668,661. (Cl. 16—105.)



1. A hinge for connecting a swinging member with a stationary member, consisting of two main parts or butts connected by movable parts and a locking device which prevents the swinging member from moving away from the stationary member when the swinging member is in a closed position.

2. A hinge for connecting a swinging member with a stationary member, said hinge consisting of two main parts or butts having housings open at the front, said parts or butts being connected by movable parts mounted in said housings and provided with a locking device or devices which prevent the swinging member from moving away from the stationary member when the swinging member is in a closed position.

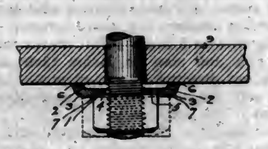
3. A hinge for connecting a swinging member with a stationary member, said hinge consisting of two main parts or butts one of which is adapted to be secured to the stationary member and the other to the swinging member, said parts or butts being connected by movable members only, and a locking device or devices which prevent the swinging member from moving away from the stationary member when the swinging member is in a closed position.

4. A hinge for connecting a swinging member with a stationary member, said hinge consisting of two main parts having housings open at the front, said parts being connected by movable members mounted in said housings and consisting partly of S-shaped floating links which are movable in both of said housings and a locking device or devices connected with said floating links and with said housings and which operate to prevent the swing member from moving away from the stationary member when the swinging member is in a closed position.

5. A hinge for connecting a swinging member with a stationary member, said hinge consisting of two parts connected by floating link devices, the swinging member being adapted to swing through an arc of 90 degrees in both directions.

[Claims 6 and 7 not printed in the Gazette.]

1,019,097. NUT-LOCK. FRANK E. SPENCER, Thomburg, Pa. Filed Dec. 12, 1911. Serial No. 665,368. (Cl. 151—50.)



1. A combined nut lock and washer concave upon one face to provide biting edges, and having a flat bearing surface at the opposite side and locking ribs at the opposite sides of said bearing face.

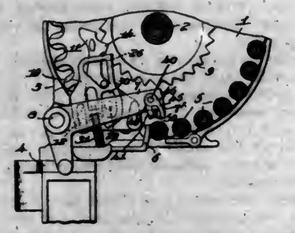
2. A combined nut lock and washer having one face concave to provide opposite biting edges and having a flat bearing face at the opposite side, locking ribs extending along opposite sides of said bearing face, said locking ribs being parallel with said biting edges.

3. A combined nut lock and washer having one face concave to form opposite biting edges, and having a flat bearing surface upon the opposite face, the edges of said washer being thickened opposite said biting edges to form locking ribs for the nut and to reinforce said biting edges.

4. A combined nut lock and washer having one face arched adjacent opposite edges to form biting edges and having locking ribs opposite said biting edges, the space between said ribs being thinned to form a flat bearing surface for the nut.

5. A combined nut lock and washer having opposite biting edges at one face and having locking ribs on the opposite face parallel with and closely adjacent to said edges, a portion of the washer between said ribs being thinned and having a flat bearing face for the nut.

1,019,098. AUTOMATIC FILLING-REPLENISHING MECHANISM FOR LOOMS. EDWARD S. STIMPSON, Hopedale, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Dec. 19, 1910. Serial No. 598,154. (Cl. 139—85.)

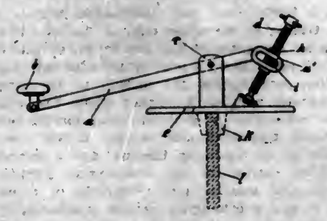


1. The combination with a rotatable feeder adapted to hold a circularly arranged series of bobbins and to advance the same one by one to transferring position, of a rocking transferrer having a butt-engaging head and a lateral arm, and a depressor comprising two members depending from the arm and adapted to engage and depress the yarn mass on the bobbin during transfer, and means acting to yieldingly maintain the rearmost member in depressing position and normally at a fixed distance from its fellow member, said member yielding if the rearmost face thereof is engaged by the yarn mass on the next bobbin in the feeder as the transferrer returns to normal position.

2. The combination with a rotatable feeder to hold a circularly arranged series of bobbins and adapted to advance the same one by one to transferring position, of a rocking transferrer having a head to engage the butt of a bobbin during transfer, a lateral arm on the transferrer, depending depressing fingers carried thereby to cooperate with the bobbin at a distance from its butt, said fingers being located one behind the other and having oppositely inclined and elongated yarn-engaging tips, and a spring to normally maintain the rearmost finger with its tip fixed in operative position relatively to the other finger but permitting the rearmost finger to yield if engaged by the next bobbin in the feeder when the transferrer returns to normal position.

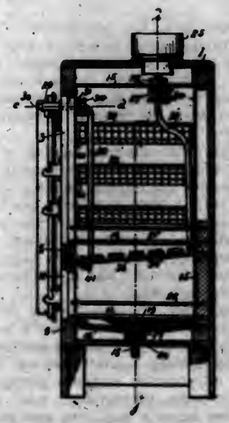
3. The combination with a rotatable feeder to hold a circularly arranged series of bobbins and adapted to advance the same one by one to transferring position, of a rocking transferrer and means carried thereby to impinge upon the yarn mass on the bobbin during transfer, said means comprising a non-yielding front member, and a spring-controlled rear member adapted to yield if the rearmost face thereof is impinged upon by the yarn mass on the next bobbin in the feeder, the said members having oppositely beveled and elongated yarn-engaging tips normally fixed with relation to each other during transfer.

1,019,099. OBSTETRICAL DEVICE. JOSEF STÖGER, Munich, Germany. Filed Dec. 17, 1909. Serial No. 533,694. (Cl. 128—20.)



In an obstetrical device, a plate, a lever pivotally supported intermediate its ends from the plate, the long arm of the lever carrying a pad and the short arm of the lever having its ends formed with a loop, an internally threaded sleeve having a stud which projects into the loop, and an exteriorly threaded rotatable spindle disposed at an incline to the plane of the plate and having its inner end secured to this plate, said spindle extending through the sleeve in engagement with the threads thereof and adapted on rotation to move the sleeve along its length and thereby raise or lower the shorter end of the lever.

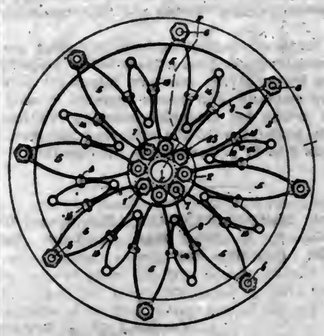
1,019,100. REFRIGERATOR. CORUS D. STOLL, Kansas City, Mo. Filed June 10, 1910. Serial No. 566,247. (Cl. 62—10.)



1. In a refrigerator, a casing having a compartment, a water conductor having a sinuously formed portion located in said compartment, an inclined rod supporting said sinuously formed portion and having its ends supported by the opposite walls of the casing, and a washer secured on said rod near its lower end but out of contact with the adjacent wall.

2. In a refrigerator, a casing having a compartment, a water conductor having a sinuously formed portion within and removable from the compartment, an inclined rod supporting the sinuously formed portion and having its ends detachably supported by opposite walls of the casing, and a washer secured on the rod near its lower end but out of contact with the adjacent wall of the casing.

1,019,101. WHEEL. JOHN E. STEIETELMEIER, Cincinnati, Ohio, assignor to The Ideal Wheel Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Dec. 14, 1910. Serial No. 597,286. (Cl. 152—51.)



1. A wheel comprising a rim, a hub, a series of semi-elliptical spring spokes extending radially from said hub to said rim and a series of smaller semi-elliptical springs connected together in pairs at their ends, said pairs having their ends free and connected near their center to the adjacent spring spokes, substantially as set forth.

2. A wheel comprising a rim, a hub, a series of elliptical spring spokes extending radially from said hub to said rim, short semi-elliptical springs each having its ends secured to similar short semi-elliptical springs and secured between their ends to the adjacent spring spokes between their ends, said short semi-elliptical springs extending parallel of and between said spring spokes, substantially as set forth.

1,019,102. PROCESS OF MANUFACTURING PARAFFIN. JULIUS TANNS, Rozniatow, Austria-Hungary, assignor of one-half to Gustave Oberländer, Berlin, Germany. Filed Dec. 2, 1909. Serial No. 530,999. (Cl. 184—6.)

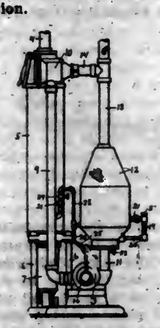
1. In the manufacture of paraffin, the process which comprises extracting material containing paraffin with a solution of acetic acid in benzene and recovering granular paraffin by cooling the solution formed in the extraction.

2. The process of separating solid hydrocarbons from materials containing the same which consists in extracting said materials by benzene containing an admixture of from 5 to 10 per cent. of acetic acid, cooling the solution obtained in a refrigerator, separating the precipitate obtained, and pressing the same.

3. The process of separating solid hydrocarbons from materials containing the same, which comprises treating such materials with a solution of acetic acid in benzene, and refining the precipitate formed.

1,019,103. LUBRICATING SYSTEM AND APPARATUS. FRANK W. VAN NESS, Milwaukee, Wis., assignor to Frank J. Matchette, Milwaukee, Wis. Filed May 2, 1910. Serial No. 558,812. (Cl. 184—6.)

1. The combination with a vacuum system of a pump for creating a vacuum therein, an oil supply chamber the upper part of which is in communication with the vacuum system, and an oil reservoir which is in communication with said oil supply chamber and in which reservoir the oil is subjected to a greater pressure than the pressure which exists in the vacuum system when the pump is in operation.



2. The combination with a vacuum system of a pump for creating a vacuum therein, an oil supply chamber the upper part of which is closed, an oil reservoir which is in communication with the lower part of said oil supply chamber, and a pipe extending upwardly from said oil supply chamber and in communication with the vacuum system.

3. The combination with a vacuum system of a pump, provided with bearings, for creating a vacuum therein, an oil supply chamber the upper part of which is in communication with the vacuum system, an oil reservoir which is in communication with the lower part of said oil supply chamber and in which reservoir the oil is subjected to a greater pressure than the pressure which exists in the vacuum system when the pump is in operation, and a pipe leading from the upper part of said oil supply chamber to supply oil to the bearings of the pump whereby the flow of oil from said oil supply chamber to said pipe is automatically established whenever a vacuum is created in the vacuum system and is stopped when the vacuum in the system is broken.

4. The combination with a vacuum system of a pump, provided with bearings, for creating a vacuum therein, an oil supply chamber the upper part of which is in communication with the vacuum system, an oil reservoir which is in communication with the lower part of said oil supply chamber and in which reservoir the oil is subjected to a greater pressure than the pressure which exists in the vacuum system when the pump is in operation, and a pipe leading from the upper part of said oil supply chamber and extending downwardly to the pump bearings whereby the flow of oil from said oil supply chamber to said pipe is automatically established whenever a vacuum is created in the vacuum system and is stopped when the vacuum in the system is broken and whereby a reserve supply of oil will be retained in said downwardly extending pipe when the flow of oil thereinto is stopped.

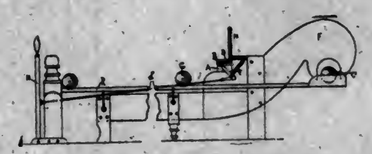
5. The combination with a vacuum system of a pump for creating a vacuum therein, an oil supply chamber the upper part of which is closed, an oil reservoir which is in communication with the lower part of said oil supply chamber and in which reservoir the oil is subjected to a greater pressure than the pressure which exists in the vacuum system when the pump is in operation, and a pipe extending upwardly from said oil supply chamber and then downwardly and communicating with the vacuum system at a higher point than it communicates with the oil supply chamber.

[Claims 6 and 7 not printed in the Gazette.]

1,019,104. BOWLING-ALLEY. JAMES C. WALLACE, Guelph, Ontario, Canada. Filed Aug. 1, 1910. Serial No. 574,919. (Cl. 46—66.)

1. In a bowling alley the combination with an alley bed provided with a curved incline at the rear end there-

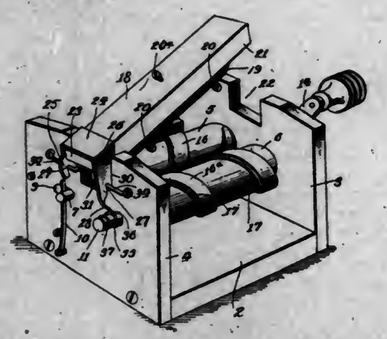
of, of a frame provided with grooves, a board whose opposite ends fit into said grooves, pins pivotally suspended from said board springs bearing on the upper end of said pins and adapted to hold them in either a horizontal or vertical position substantially as set forth.



2. In a bowling alley the combination with a frame provided with grooves, a board adapted to fit into said grooves, pins pivotally suspended from said board and springs adapted to hold the pins in either a vertical or horizontal position, of a crank rod pivotally supported to the rear of said pins, a spring adapted to hold said crank rod out of contact with the pins and means adapted to move the crank rod against the pins to change them from horizontal to vertical position substantially as set forth.

3. In a bowling alley the combination with an alley bed of a curved incline at the rear thereof, a receptacle at the rear of said incline an opening in the bottom of said receptacle and a declining runway leading from said opening to the front of the alley and above the alley bed, substantially as set forth.

1,019,105. RAZOR-STROPPER. DAVID WATERS, Pictou, Nova Scotia, Canada. Filed Mar. 13, 1911. Serial No. 614,024. (Cl. 51—16.)



1. A blade sharpening machine including a sharpening roller, means for rotating it, a blade holder supported adjustably to the roller, means actuated by the rotation of the roller for gradually lowering it to bring the blade into a position parallel to and into engagement with the roller, and means whereby the roller may be released from its engagement with the actuating means when the blade is in full engagement with the sharpening roller.

2. A blade sharpening machine including a sharpening roller, means for rotating it, a screw rotatable with the roller, a blade holder hingedly supported above the roller, said blade holder being provided with an arm engaging said screw whereby upon rotating the roller in one direction the holder may be gradually lowered to bring the blade into engagement with the roller.

3. A blade sharpening machine, including parallel coacting stropping members, a blade holder mounted above the stropping members and in a plane midway between the two means for actuating the stropping members, means operatively connected to said actuating means for gradually lowering the blade holder toward the stropping members to bring the blade carried thereby into a position parallel to the stropping members and into engagement therewith, and means whereby the holder may be released from its engagement with the holder-actuating means when the blade has been brought into a position parallel to and into engagement with the stropping members.

4. A blade sharpening mechanism including a pair of coacting sharpening members, a blade holder disposed in a plane midway between the sharpening members and supported for an arcuate movement in said plane, means for actuating said stropping members and means operatively connected to said actuating means for moving the blade holder to carry the blade therein from a position of angularity relative to the sharpening members to a position parallel thereto and into engagement therewith.

5. A blade sharpening machine, including parallel coacting stropping members, a blade holder hingedly mounted above the stropping members, means for rotating the stropping members, and means operated by said member rotating means for gradually lowering the free end of the blade holder toward the stropping members.

[Claims 6 to 17 not printed in the Gazette.]

1,019,106. COMBINATIÓN-JAR. THEODORE C. WHEATON, Millville, N. J. Filed Sept. 15, 1910. Serial No. 582,192. (Cl. 215—80.)

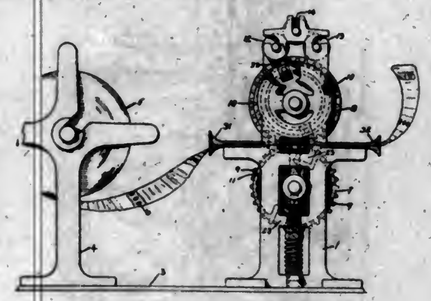


The combination with a closure having a vent, of a rigid arm pivoted to the closure for movement only in a plane at right angles to the plane of the closure; and a resilient stopper carried by the free end of the arm and adapted to drop gravitationally into the vent, and to be held in the vent solely by a diminution of pressure within the receptacle to which the closure is applied.

1,019,107. TICKET-PRINTING MACHINE. JOSEPH WHITE, Piscataway township, Middlesex county, N. J. Filed Jan. 12, 1911. Serial No. 602,209. (Cl. 101—126.)

1. In a printing machine arranged to print on a continuous strip having register perforations thereon; the combination of a pair of rolls rotated by the strip passing between them in pressure contact therewith, means whereby said rolls are relieved from contact with the strip for a portion of a revolution, and pins on one of said rolls to engage the perforations to adjust the machine in relation to the strip when the rolls are out of pressure engagement therewith.

2. In a printing machine arranged to print on a continuous strip having register perforations thereon; the combination of a type roll and an impression roll rotated by the strip passing between them in pressure contact therewith, pins on one of said rolls for engaging the perforations in the strip; said rolls so arranged that when the pins engage the perforations the pressure contact on the strip will be relieved and the rolls will be adjusted by the perforations.

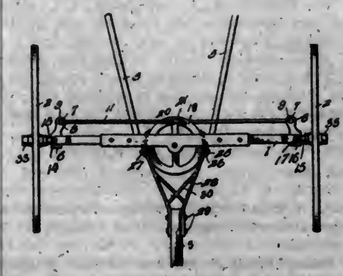


3. In a printing machine arranged to print on a continuous strip; the combination of a type roll, an impression roll, a radially movable type body in the type roll, an ink roller, bearers on said type roll, means for moving said type body to cause the type face to contact with the ink roller; said ink roller supported by said bearers in such a manner as to clear the surface of the type roll and to be revolved by said bearers.

4. In a printing machine arranged to print on a continuous strip having register perforations thereon; the combination of a type roll and an impression roll, strip adjusting means on one of said rolls, a type segment and a pressure segment on the type roll; said segments alternately engaging the strip between them and the impression roll; said adjusting means engaging the strip at the register perforations when said strip is out of engagement with the type and impression roll.

5. In a printing machine arranged to print on a continuous strip having register perforations thereon; the combination of a type roll and an impression roll, strip adjusting means on the impression roll, a type segment and a pressure segment on the type roll; said segments alternately engaging the strip between them and the impression roll; said adjusting means engaging the strip at the register perforations when said strip is out of engagement with the type and impression roll.

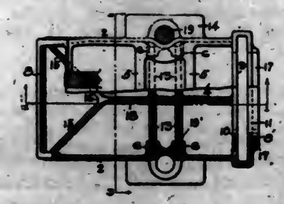
1,019,108. VEHICLE-GEAR. CHARLES A. WIBERG, Lindstrom, Minn. Filed June 26, 1911. Serial No. 635,374. (Cl. 21—93.)



1. In short turning gear, in combination, a main axle, a head upon one end thereof, inwardly extending ears formed therein, long and short transverse rods having reduced ends secured to said head at their outer ends, a head secured upon the opposite end of the axle, the other end of the long rod being secured therein, a two-part turning wheel mounted upon the axle intermediate its length and comprising an upper reciprocating member and a lower stationary member secured to the axle, a bracket carried by the upper member to which is secured the inner end of the short rod, a curved plate secured upon each side of the two-part wheel, curved connecting rods secured to the curved plates, braces therefor, and a draft connection with said connecting rods.

2. In short turning gear, in combination, a main axle, a head having a vertical opening carried upon one end of the axle, inwardly extending parallel ears formed integral with said head, said ears having alining openings therein, long and short transverse rods secured in said head, said rods having outwardly extending reduced ends provided with openings and being adapted to be secured between said ears of the head, a head secured upon the opposite end of the axle, the other end of the long rod being secured therein, a two-part turning wheel mounted upon the axle intermediate its length and comprising an upper reciprocating member and a lower stationary member secured to the axle, a bracket carried by the upper member to which is secured the inner end of the short rod, and a draft connection with said turning wheel.

1,019,109. JOURNAL-BOX. LEONARD G. WOODS, Pittsburgh, Pa. Filed Dec. 19, 1910. Serial No. 597,971. (Cl. 64—10.)



1. A journal box having integral side and bottom walls of thin metal, wedge guides extending inwardly from said side walls, and an inwardly extending box bolt corrugation arranged in each side wall, and internally thickened integral bracing ribs extending continuously across said side and bottom walls and connecting said wedge guides to brace the box in the region of greatest strain.

2. A cast metal journal box having side and bottom walls of thin metal, and a top wall of thicker metal integral with said side walls, wedge guides integral with said side walls and depending from said top wall, and continuous connecting ribs of thickened metal extending downwardly from said wedge guides in the side walls and across the bottom wall to form a complete truss framework to receive the load stresses, substantially as described.

3. A cast metal journal box having transverse integral ribs in its top portion, thin side walls and wedge guides integral therewith and extending downwardly to brace the same, a bottom wall of thin metal integral with the side walls, and a pair of continuous ribs of thickened metal extending across said side and bottom walls and connecting the wedge guides to brace the box in the region of greatest strain.

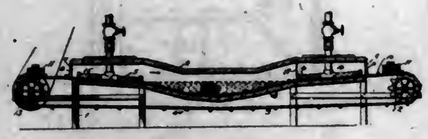
4. An integral cast metal journal box having transversely extending ribs in its top portion, wedge guides depending therefrom, and continuous connecting ribs extending downwardly from said wedge guides and across the bottom portion of the box to form a complete truss framework to receive the load stresses, the box walls being of thin metal integral with said truss framework.

1,019,110. DRILL-SOCKET. NORMAN E. WOODS, Richmond, Va. Filed Oct. 27, 1911. Serial No. 657,090. (Cl. 29—110.)



A drill socket having a tapered bore for the reception of a drill shank, and a bell mouth or annular recess at and adjoining the outer end of said bore.

1,019,111. APPARATUS FOR WASHING AND SCALDING VEGETABLES. GEORGE E. WEIGHT, Aberdeen, Md. Filed Dec. 30, 1910. Serial No. 600,034. (Cl. 146—14.)



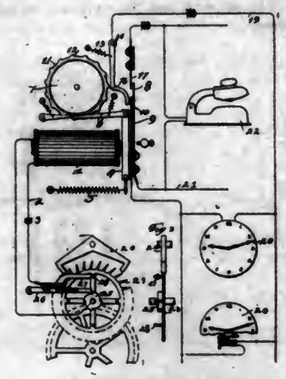
1. An apparatus for treating vegetables for canning which consists of a steam box, means for supplying live steam at the rear, and drying medium at the front of such box, a tank for water in the middle portion of the box, and a conveyer for vegetables passing through the box, means for actuating the conveyer to carry the vegetables through the box from rear to front the vegetables being subjected first to the action of steam, then washed and then subjected to the action of drying medium.

2. In a machine for scalding and washing vegetables, means for steaming the vegetables, a tank in which they may be washed, means for drying them, and a conveyer for presenting the vegetables to the steaming means, carrying them through the washing tank and presenting them to the drying medium.

3. An apparatus for treating vegetables consisting of an elongated chamber having its floor depressed near the middle steam nozzles in the rear of the depression, and means for supplying drying medium thereto at the front of the chamber, means for preventing the bulk of the steam in the rear from mixing with the drying medium, a conveyer resting on the floor of the chamber, and means for driving the same to carry the vegetables by the steam nozzles through the depressed portion which is filled with water, and through the drying medium.

4. In a machine for scalding and washing vegetables, the following members arranged in the order named, means for steaming the vegetables, a tank in which they may be washed, means for drying them, and means for presenting the vegetables first to the steaming, then to the washing, and then to the drying means.

1,019,112. SYSTEM OF ELECTRICAL CONTROL. ERNEST E. YAXLEY, Chicago, Ill. Filed Sept. 22, 1909. Serial No. 518,962. (Cl. 161—1.)



1. A system of electrical control including a magnet, means for intermittently energizing the same, two switches operated thereby and mechanism also operated by the magnet and serving to make unequal the relative frequencies with which the switches are operated.

2. A system of electrical control including a magnet, means for intermittently energizing the same, two switches each possessing two contacts, said magnet serving to operate a contact of each switch, and mechanism for advancing and withdrawing a contact complemental to one of the magnet actuated contacts whereby the relative frequencies with which the switches are effectively operated are made to differ.

3. A system of electrical control including a magnet, means for intermittently energizing the same, two switches each possessing two contacts, said magnet serving to operate a contact of each switch, and mechanism operated by the magnet for advancing and withdrawing a contact complemental to one of the magnet actuated contacts whereby the relative frequencies with which the switches are effectively operated are made to differ.

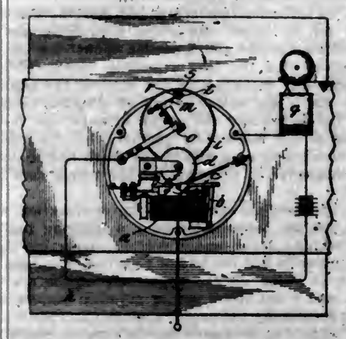
4. A system of electrical control including a magnet, means for intermittently energizing the same, two switches each possessing two contacts, said magnet serving to operate a contact of each switch, and a cam or toothed wheel coöperatively related with a contact complemental to one of the magnet actuated contacts and serving to advance and withdraw said complemental contact to render the frequencies with which the switches are operated unequal.

5. A system of electrical control including a magnet, means of intermittently energizing the same, two switches each possessing two contacts, said magnet serving to operate a contact of each switch, and a cam or toothed wheel operated by the magnet and coöperatively related with a contact complemental to one of the magnet actuated contacts and serving to advance and withdraw said complemental contact to render the frequencies with which the switches are operated unequal.

[Claims 6 to 11 not printed in the Gazette.]

1,019,113. TIMING MECHANISM. ERNEST E. YAXLEY, Chicago, Ill. Filed June 29, 1910. Serial No. 569,476. (Cl. 58—19.)

1. A timing device in combination with a circuit governed thereby, said circuit including a normally stationary contact; a complemental contact which is operated by the timing device and brought thereby into engagement with the aforesaid contact to alter the circuit governed by the timing device; an abutment serving to engage one of said contacts and temporarily withhold it from engagement with its companion contact; means whereby the line including the complemental contact and abutment may be altered to adjust the duration of closure of the circuit and a rotating support for said complemental contact and abutment which are mounted upon said support eccentric to its axis of rotation.

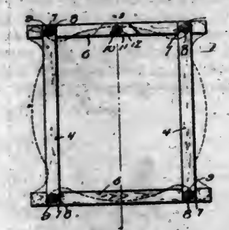


2. A timing device in combination with a circuit governed thereby, said circuit including a normally stationary contact spring; a complemental contact rotated by the timing device and brought thereby into engagement with the aforesaid contact spring to alter the circuit governed by the timing device; an abutment traveling with said complemental contact and serving to engage the spring contact and temporarily bend it away from its companion contact, thereby to insure quick engagement of the spring contact and the companion contact, which engagement occurs upon the escape of the abutment from the spring contact; means whereby the line including the complemental contact and abutment may be altered to adjust the duration of closure of the circuit and a rotating support for said complemental contact and abutment which are mounted upon said support eccentric to its axis of rotation.

3. A timing device in combination with a circuit governed thereby, said circuit including a normally stationary contact spring; a complemental contact rotated by the timing device and brought thereby into engagement with the aforesaid contact spring to alter the circuit governed by the timing device; an abutment traveling with said complemental contact and serving to engage the spring contact and temporarily withhold it from engagement with its companion contact; means whereby the line including the complemental contact and abutment may be shifted to adjust the duration of closure of the circuit and a rotating support for said complemental contact and abutment which are mounted upon said support eccentric to its axis of rotation.

4. A timing device in combination with a circuit governed thereby, said circuit including a terminal contact; a complemental terminal contact which is operated by the timing device and brought thereby into engagement with the aforesaid contact to alter the circuit governed by the timing device; an abutment serving to engage the first aforesaid contact and temporarily withhold it from engagement with said complemental contact; a turning support for said complemental contact and abutment which are mounted upon said support to one side of its axis, said support operating to bring said complemental contact in position to permit engagement between the contacts and serving to engage said abutment with the first aforesaid contact to delay engagement between the contacts; and means whereby the line occupied by said abutment and complemental contact is varied with respect to the said terminal contact to adjust the duration of engagement between the contacts.

1,019,114. TRUCK. HENRY ZARLING, Sheboygan, Wis. Filed Oct. 10, 1911. Serial No. 653,842. (Cl. 21—65.)



A truck comprising a collapsible frame consisting of a pair of rigid bars, another rigid bar and a jointed bar upon which those aforesaid are superimposed and pivotally connected at their ends, the ends of the under bars being extended beyond the upper bars; and casters in connection with said frame.

1,019,115. EYEGLASS-MOUNTING. LEO F. ADT, Albany, N. Y. Filed Feb. 17, 1906. Serial No. 301,562. (Cl. 88—50.)



1. In an eyeglass mounting, the combination with a support, of a guard pivoted on one side of the support and extending in front and rear thereof, the rear portion of said guard having a bearing pad thereon and the forward portion constituting an operating arm, and a flat spiral spring located on the side of the support opposite the guard substantially in line with the pivot and having one end connected to the support and the other to the guard.

2. In an eyeglass mounting, the combination with the support, of a guard pivoted on the upper side of the support and extending in front and rear thereof, the front portion constituting an operating arm and the rear portion having a bearing pad thereon, and a flat spiral spring arranged beneath the support and substantially in line with the pivot and having one end connected to the guard and the other connected to the support.

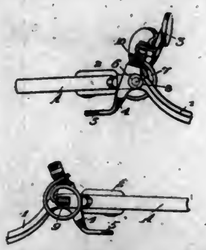
3. In an eyeglass mounting, the combination with the support, of a guard pivoted on one side of the support and extending in front and rear thereof, the rear portion having a bearing pad thereon and the front portion having an operating arm, and an arm extending from said operating arm on the side of the support opposite the guard, and a spring connected to the end of the last mentioned arm and to the support.

4. In an eyeglass mounting, the combination with a support, of a guard pivoted on one side thereof and having the rearwardly-extending portion provided with a nose-bearing pad and a forwardly-extending operating portion, an arm being extended from the guard and lying on the opposite side of the support, and a coil spring connected to the arm and to the support.

5. In an eyeglass mounting, the combination with a support, of a guard pivoted to said support and extending in front and in rear thereof, and an independent connection between the guard and the support comprising an arm extending rearwardly from the forwardly extending portion and a coil spring arranged substantially in line with the pivotal center of the guard.

[Claims 6 to 48 not printed in the Gazette.]

1,019,116. EYEGLASSES. LEO F. ADT, Albany, N. Y. Filed Sept. 18, 1907. Serial No. 393,432. (Cl. 88—50.)



1. In an eyeglass mounting, the combination with a support, a nose guard, and coöperating bearing members pivotally connecting the guard and the support, of a spring for positioning the guard mounted independently of the bearing members and held in detachable engagement with the guard and with the support by action of the spring in the direction necessary to turn the guard on its pivot.

2. The combination with a support and a nose guard mounted to turn thereon, of a spring unsupported between its ends having each end detachably held in interlocking engagement with one of said parts by the spring action.

3. In an eyeglass mounting, the combination with a support, of a guard mounted to turn on one side of the support, and a coil spring arranged on the other side of the support and held in detachable engagement with the support and the guard by the action of the spring in the direction necessary to turn the guard.

4. In an eyeglass mounting, the combination with a support having an overhanging portion thereon, of a swingingly mounted nose guard arranged beneath and in engagement with said overhanging portion and movable laterally from under the same, and a spring acting in a direction to retain said guard beneath said overhanging portion, having its ends held in detachable interlocking connection with the guard and with the support by such action of the said spring.

5. In an eyeglass mounting, the combination with a support and a nose guard, one of the parts having a fixed pivot and the other having a laterally opening bearing receiving said pivot, of a spring supported independently of the pivot, acting in a direction to retain said bearing in engagement with the pivot and having its ends held in detachable interlocking connection with the guard and the support by such action of the spring.

[Claims 6 to 21 not printed in the Gazette.]

1,019,117. EYEGLASS-MOUNTING. LEO F. ADT, Albany, N. Y. Filed Nov. 3, 1909. Serial No. 526,092. (Cl. 88—50.)



1. In an eye-glass mounting, the combination with a support for the lenses, and a nose guard mounted to swing thereon, of a coil spring for positioning the guard having a substantially elliptical transverse section and arranged with its greatest width in a plane transverse to the plane of the lenses held by the support.

2. In an eye-glass mounting, the combination with a support for the lenses and a nose guard mounted to swing thereon, of a flat spiral coil spring of elliptical transverse section for positioning the guard arranged with its greatest width transverse to the plane of the lenses and terminating in an arm coöperating with the guard.

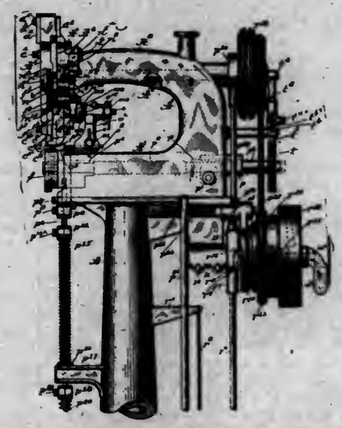
3. In an eye-glass mounting, the combination with a support for the lenses embodying a bridging portion, a lens attaching device and a portion connecting the bridging portion with the lens attaching device, of a nose guard mounted to swing on the connecting portion, and a coil spring of elliptical transverse section for positioning the guard, arranged with its greatest width transverse to the plane of the lenses held by the mounting and terminating in an arm coöperating with the guard and extending in the direction of its greatest width.

4. In an eye-glass mounting, the combination with a support for the lenses comprising a bridging portion, a lens attaching device and a portion connecting the bridging portion with the lens attaching device, of a nose guard pivotally mounted on one side of the connecting portion, and a flat spiral spring of elliptical transverse section for positioning the guard, arranged on the opposite side of the connecting portion with its axis coincident with the turning axis of the guard and its greatest width transverse to the plane of the lenses held by the support.

5. In an eye-glass mounting, the combination with a support for the lenses comprising a bridging portion, a lense attaching device and a portion connecting the lens attaching device and the bridging portion, of a nose guard mounted to swing on the upper side of the connecting portion, and a flat spiral coil of elliptical transverse section for positioning the guard, arranged on the under side of the connecting portion with its greatest width transverse to the plane of the lenses held by the support.

[Claims 6 to 12 not printed in the Gazette.]

1,019,118. QUILTING-MACHINE. ORRELL ARETON, Lawrence, Mass., assignor to United Shoe Machinery Company, Boston, Mass., a Corporation of New Jersey. Filed May 16, 1901. Serial No. 60,529. (Cl. 1—41.)



1. In a machine for inserting fastenings, a work support having a feeding device to engage and move the work over the work support, a rod coöperating with said work support, a spring acting constantly to sustain said work support, a stronger spring coöperating with said rod, and a device for compressing the stronger spring and moving said rod to clamp the stock while a fastening is being inserted.

2. In a machine provided with a foot plate to bear on the stock, the combination with a work support having a feeding device to engage and feed the work over said support, of a rod connected with said work support, a spring to raise the rod and work support, and an adjustable collar on the rod to limit the extent of movement of the work support toward the foot plate.

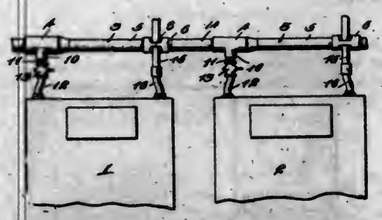
3. In a machine for inserting fastenings, the combination with a work support having a feeding device, of a spring to sustain said work support, a stop to limit the upward movement of said work support, another spring acting to press said work support upwardly to clamp the stock while a fastening is being inserted, and means to depress said work support automatically after the fastening inserting operation that the work may be fed over the work support by hand when doing monogram quilting.

4. In a machine of the class described, a work support, a shaft extended therethrough and provided with a feed wheel to engage the face of and feed the work over said support, means acting normally to press the work support and feed wheel upwardly, and means to increase the force of said upward pressure while a fastening is being driven.

5. In a machine of the class described, a vertically movable work support, means carried by the work support for feeding the work thereover, said means being movable with the work support, and means for effecting the vertical movement of said work support.

[Claims 6 to 17 not printed in the Gazette.]

1,019,119. HEADER FOR GAS-METERS. MICHAEL BALBACH, Wilkes-Barre, Pa. Filed Aug. 14, 1911. Serial No. 643,881. (Cl. 73—167.)



1. A header for gas meters consisting of a pipe having one of its ends enlarged and its other end reduced, and a coupling secured to the reduced end, said coupling being provided with a yoke, and with a bridge piece inclosing said yoke whereby a pipe is supported.

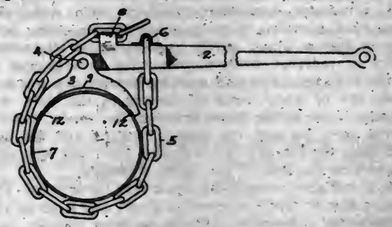
2. A header for gas meters comprising a pair of pipe sections and a coupling to which said pipe sections are connected, said coupling being formed with a curved yoke and a bridge piece inclosing said yoke, whereby a socket is formed in one side of the yoke through which the gas outlet pipe may extend, the header being also provided with means for attaching a gas inlet pipe thereto.

3. In combination with a series of gas meters, each having the usual inlet and outlet connections, a series of detachably conected headers, each comprising a pair of pipes and a coupling to which said pipes are connected, said coupling being formed with a curved yoke and a bridge piece inclosing said yoke and forming a socket on one side of said coupling, each header having an enlarged portion at one end to receive one end of the next adjacent header, pipe sections connecting the said enlarged portions of the header to the inlet connections of the meters and outlet pipes attached to the outlet connections of the meters and extending through the sockets of the header couplings.

1,019,120. CASING-TONGS. EUGENE J. BATES, San Luis Obispo, Cal. Filed Mar. 7, 1911. Serial No. 612,884. (Cl. 81—60.)

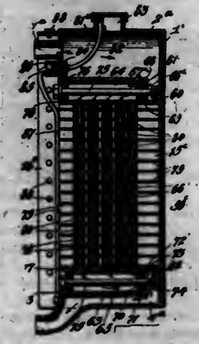
1. A casing tongs comprising a jaw provided with gripping portions which are arranged to primarily engage a casing at two points spaced apart at an angle greater than ninety degrees, the jaw having its face between the gripping portions regularly curved but slightly depressed from the surface of the casing and adapted to support the same when temporarily distorted by application of pressure, a handle to which said jaw is connected, and a tension member connected with the handle and adapted to pass around the casing.

2. A casing tongs comprising a jaw provided with gripping portions spaced to primarily engage a casing at points separated a substantial distance thereon and an intermediate curved face to receive and support the casing when temporarily distorted on application of pressure, a similar supplemental jaw having gripping portions spaced to engage the casing at points substantially diametrically opposite the points of engagement of the first mentioned jaw, and tension means for forcing said jaws against the casing.



3. A casing tongs comprising opposed jaws each having similarly spaced gripping points and intermediate curved depressions to receive the distorted portions of a casing when pressure is applied thereto, a handle connected to one jaw and a tension member connecting the handle and the other jaw, and arranged to pass around the casing, the adjacent gripping points of opposite jaws being closer together than the points on each jaw are to one another when the jaws engage a casing of normal size, whereby the casing will be distorted by elongation in a direction to enter the depressions.

1,019,121. RADIATOR. JACOB B. BEAM, Punxsutawney, Pa. Filed Sept. 26, 1910. Serial No. 583,762. (Cl. 62—28.)



1. A radiator, comprising upper and lower water chambers, a frame connecting them; a series of separately removable radiator sections resting on and supported by the top of the lower water chamber and each comprising two heads, connecting tubes and communicating ports between the water chambers and the heads, and means for detachably connecting the radiator sections with the frame.

2. A radiator, comprising upper and lower water chambers, each cast in a single piece without seam and connected by an integrally formed vertical front and side frame; a series of radiator sections, supported on the top of the lower part of the radiator frame and each comprising two heads, connecting tubes, and communicating ports between the water chambers and the heads; and means for detachably connecting the radiator sections with the upper and lower chambers.

3. A radiator, comprising upper and lower water chambers, a front frame connecting them and provided with an

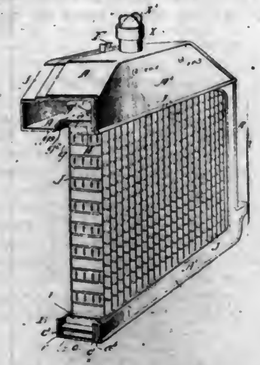
inwardly projecting flange; a series of radiator sections, removable through the back of the radiator frame and each comprising two heads, connecting tubes, communicating ports between the water chambers and the heads and radiator plates extending forwardly to the inwardly projecting flange on the front frame and bolts for detachably connecting the heads with the water chambers and for holding the plates with their front ends firmly pressed against the inwardly projecting flange of the front frame.

4. A radiator, comprising upper and lower water chambers, each provided with an inwardly projecting hollow arm or leg, a frame rigidly connecting the chambers, a series of radiator sections, removable through the back of the radiator frame and each comprising two heads, the lower one of which rests on the top of the lower water chamber, connecting tubes between the heads, communicating ports between the water chambers and the heads, and bolts for detachably connecting the front ends of the heads with the legs of the water chambers.

5. A radiator, comprising upper and lower water chambers, a frame rigidly connecting them; and a series of independently removable radiator sections resting on the top wall of the lower water chamber and each comprising two heads, connecting tubes, and communicating ports between the water chambers and the heads, radiator plates carried by the tubes and extending to the front of the radiator frame, and horizontally arranged bolts engaging the front frame holding the radiator sections in place with the front ends of the plates close to the front frame.

[Claims 6 to 11 not printed in the Gazette.]

1,019,122. RADIATOR. JACOB B. BEAM, Punxsutawney, Pa. Filed Feb. 16, 1911. Serial No. 608,944. (Cl. 62—28.)



1. A radiator, comprising upper and lower water chambers, a frame connecting them; a series of radiator sections resting on the top of the lower portion of the frame and each comprising two headers having communicating ports with the water chambers, and connecting tubes each comprising a tubular body portion having horizontally arranged grooved offsets forming lateral water spaces and vertically arranged projections between the offsets extending from one side of each tube to the other side thereof for holding the sides of the tubes apart.

2. A radiator section, comprising upper and lower heads and tubes connecting them, each comprising a body portion having horizontally arranged grooved offsets forming lateral water spaces in the tubes and vertically arranged projections interposed between the horizontal offsets extending from one side of each tube to the other side thereof and holding the sides of the tubes apart.

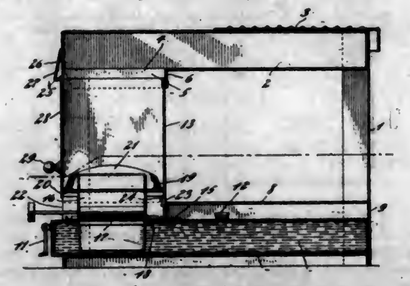
3. A radiator section, comprising upper and lower headers and tubes connecting them each made from a single piece of sheet metal bent upon itself and joined at one vertical edge and provided with horizontally arranged grooved offsets forming lateral water spaces in the tubes and other offsets or projections interposed between the horizontal offsets which hold properly spaced the sides of the tube and serve to deflect or divide the water as it passes through the tube.

4. A radiator section comprising upper and lower headers, and a series of tubes connecting them each made from a single piece of sheet metal bent upon itself and joined at one vertical edge, said tubes being provided with grooved offsets forming lateral water spaces in the tubes and which offsets in different tubes abut against each other and hold the tubes properly spaced.

5. A radiator section, comprising upper and lower headers and tubes connecting them, each header comprising a casting formed in one piece constituting the sides, ends and top or bottom of the header, and a separate sheet metal slotted bottom or top secured watertight to the casting and to which the tubes are connected.

[Claims 6 to 8 not printed in the Gazette.]

1,019,123. OIL-STOVE. LEWIS F. BETTS, New York, N. Y., assignor to Abbot A. Low, Horseshoe, N. Y., and Maurice J. Wohl and Harry Hertzberg, Brooklyn, N. Y., trustees. Filed July 1, 1910. Serial No. 569,874. (Cl. 126—45.)

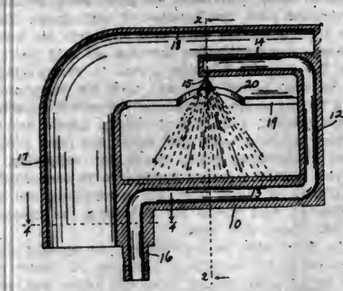


1. An oil stove, comprising an open upright supporting frame, a heat-distributing chamber shallow relatively to its horizontal dimensions supported by the upper part of said frame, a supporting shelf considerably below said heat-distributing chamber, a covering shelf over said supporting shelf provided with a recess extending from its forward edge, a fuel tank shallow relatively to its horizontal dimensions slidably received between said shelves, and an upright flame chamber and a battery of burners supported on said fuel tank and fitting in said recess, being slidable with the fuel tank out of the frame, the bottom wall of said heat-distributing chamber having an opening registering with the top of said flame chamber when the latter is in place.

2. An oil stove, comprising a fuel tank having an opening in the top thereof, a flame chamber supported on said tank over said opening, a plate removably supported on the margins of said opening, a plurality of wick tubes passing through and supported by said plate, a foraminous plate removably supported in the lower part of said flame chamber, said wick tubes passing through said foraminous plate, burner shields supported on said foraminous plate, and a door adapted to open the front of said flame chamber, said plates, wick tubes and burner shields being adapted to be removed through the open front of the flame chamber when said door is opened.

1,019,124. HYDROCARBON-BURNER. JOHN P. BLACK, Greenfield, Ind., assignor of one-third to Charles P. Duncan and one-third to David H. Bentley, Deputy, Ind. Filed Oct. 21, 1910. Serial No. 588,281. (Cl. 158—66.)

A hydrocarbon burner consisting of a single piece including a horizontal base plate with an upwardly extending arm at one side thereof, a nozzle extending from said arm horizontally over the base plate, said base plate, arm and nozzle being provided with a fuel conduit extending through them and discharging downwardly upon the base plate, a chamber over the base plate surrounding the



nozzle with an opening on the under side, and a vertical air tube extending up from the side of said base plate opposite said arm and leading to said chamber from a point below the base plate, substantially as set forth.

1,019,125. LASTING-MACHINE. MATTHIAS BROCK, Boston, Mass., assignor, by mesne assignments, to United Shoe Machinery Company, a Corporation of New Jersey. Filed Jan. 10, 1898, Serial No. 666,143. Renewed Nov. 4, 1911. Serial No. 658,619. (Cl. 12—14.)

1. In a lasting machine, toe lasting mechanism, a last supporting jack arranged to turn about a center for positioning a last supported on said jack with relation to said mechanism, heel lasting mechanism, a support therefor arranged to turn with said jack and also to have independent pivotal movement with relation to said jack, means whereby said jack and said support may be moved about their respective centers, and means to lock said parts in operative position.

2. A lasting machine comprising toe lasting mechanism, a last supporting jack arranged to turn about a center for positioning a last supported on said jack with relation to said mechanism, heel lasting mechanism, a support therefor mounted to turn about a vertical axis, means through which the said jack and said support may be moved about their respective centers, and means to move said heel lasting mechanism toward and from the toe lasting mechanism, said machine having provisions for locking said parts in operative position.

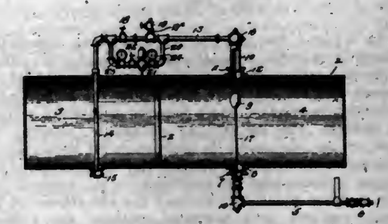
3. In a lasting machine, toe lasting mechanism, a jack to sustain a last, heel lasting mechanism mounted to turn about a vertical axis located adjacent to the end of the last, manually controlled means by which the heel lasting mechanism may be turned about said axis, means by which said axis may be shifted, and means for locking the heel lasting mechanism in its adjusted position with relation to its axis.

4. In a lasting machine, the combination with end lasting devices, of a last support movable about a center substantially under one end of the last supported by it, and other end lasting devices movable about a center substantially under the other end of the last on said support.

5. A lasting machine comprising a last support, toe lasting devices, and heel lasting devices, said parts being mounted to permit relative movement of the toe lasting devices and last support about a center located substantially under the fore part of the last sustained on the last support, and to permit relative movement of the heel lasting devices and last support about a center located substantially under the heel of the last sustained on said last support.

[Claims 6 to 51 not printed in the Gazette.]

1,019,126. STREET-FLUSHING MACHINE. JACOB I. BROBBY, Shenandoah, Iowa. Filed Mar. 25, 1911. Serial No. 616,805. (Cl. 137—63.)



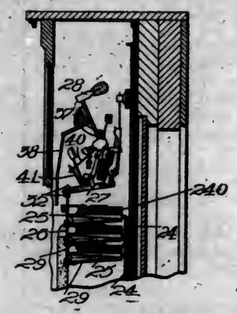
1. In a street flushing apparatus, the combination of a tank embodying water and air compartments, the water compartment having upper and lower openings, pipes having vertical branches connected with the tank in line with the said openings, a rod passing through the tank and through the openings thereof and the said vertical branches and serving to connect the latter to the tank, and a float mounted upon said rod and adapted to automatically close the openings and controlled in its movements by the change of level of the water in the tank.

2. In a street flushing apparatus, the combination of air and water compartments, a supply and discharge pipe connected with the bottom of the water compartment, an air pipe having connection with the top of the water compartment in vertical line with the point of connection of said supply and discharge pipe therewith, and having a vertical branch extending through the air compartment and the bottom thereof, a trap fitted to the bottom of the air compartment and receiving the lower end of the said vertical branch, a pipe looped into the air pipe, a pressure regulator, pressure gages and a valve located in the length of the looped pipe, a valve and a valved branch connected with the air pipe intermediate the two ends of the said looped pipe, a float valve for closing the air pipe and the said supply and discharge pipe and adapted to be actuated by the change of level of the water in the water compartment, and a guide for directing the float valve in its movements.

1,019,127. PIANO. THEODORE P. BROWN, Worcester, Mass., assignor to Simplex Player Action Company, Worcester, Mass., a Corporation of Massachusetts. Filed Mar. 29, 1909. Serial No. 486,885. (Cl. 84—233.)

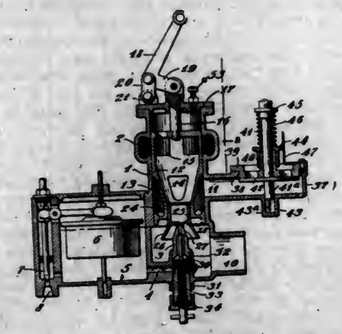
1. In a piano, the combination of striking pneumatics, hammers, a movable hammer rest-rail, means for adjusting the rest-rail to decrease the length of stroke of the hammers, a positive connection between each hammer and its striking pneumatic, whereby the motion of the pneumatic is communicated accurately to the hammer, and the motion of the hammer in either direction is communicated accurately and positively to the movable leaf of the striking pneumatic, so that the adjustment of the hammer rest-rail will partially collapse the striking

pneumatics to a corresponding degree, whereby the striking effect of the hammers will be reduced both by the position of the hammer rest-rail and by the condition of the pneumatics.



2. In a piano, the combination of striking pneumatics, hammers; a movable hammer rest-rail, means for adjusting the rest-rail to decrease the length of stroke of the hammers, and for manually controlling the collapsing of the striking pneumatic, and a positive connection between each hammer and its striking pneumatic, whereby the motion of the pneumatic is communicated accurately to the hammer, and the motion of the hammer in either direction is communicated positively to the movable leaf of the striking pneumatic, so that the adjustment of the hammer rest-rail will partially collapse the striking pneumatics to a corresponding degree, whereby the striking effect of the hammers will be reduced both by the position of the hammer rest-rail and by the condition of the pneumatics.

1,019,128. CARBURETER. CHARLES O. BULOCK, Cleveland, Ohio. Filed Apr. 6, 1911. Serial No. 619,197. (Cl. 48—155.2.)



1. In a carbureter, in combination, a cylindrical chamber having a main air inlet port at one end, a mixture outlet port, and an auxiliary air inlet port, a hollow piston slidably mounted in said cylinder and adapted when moved away from said air inlet port to close said mixture outlet port, the interior of said piston being always in communication with said auxiliary air inlet port, a carbureting tube carried by said piston adjacent said air inlet port and having a flaring outer end, a fluid fuel supply nozzle carried by said casing adjacent said air inlet port and projecting into said carbureting tube, said nozzle having a tapered apex, means for supplying liquid fuel to said nozzle, a spring pressed valve associated with said auxiliary air inlet port and controlling the supply of air thereto, and means for adjusting the pressure at which said valve opens.

2. In a carbureter, in combination an elongated chamber having a main air inlet port at one end, a mixture outlet port, and an auxiliary air inlet port, a hollow piston slidably mounted in said chamber and adapted when moved away from said air inlet port to close said mixture outlet port, the interior of said piston being always in communication with said auxiliary air inlet port and the sole communication between all said ports being through the interior of said piston, a carbureting tube carried by said piston adjacent said air inlet port and having a flaring outer end, means for adjusting said tube along said piston, a fluid fuel supply nozzle carried by said casing adjacent said air inlet port and projecting into said carbureting tube, means for supplying liquid fuel to said nozzle, a spring pressed valve associated with said auxiliary air inlet port and controlling the supply of air thereat, and means for adjusting the pressure at which said valve will open.

3. In a carbureter, in combination, an upright chamber having a main air inlet port adjacent its lower end, a mixture outlet port spaced from its upper end, and an auxiliary air inlet port, a hollow slidable piston in said chamber and having ports in its wall adapted to register with said mixture outlet port when said piston is at its lowest position and to be moved upwardly a sufficient distance to completely close said outlet port, a carbureting tube carried by the lower end of the said piston and communicating with said main air inlet port, a fluid fuel supply nozzle carried by said casing and projecting into said carbureting tube in all positions of said piston, and a pressure operated valve associated with said auxiliary air inlet port and adapted to permit the entrance of a secondary supply of air thereto dependent upon the amount of suction in said chamber, said auxiliary air inlet port being always in communication with the interior of said piston.

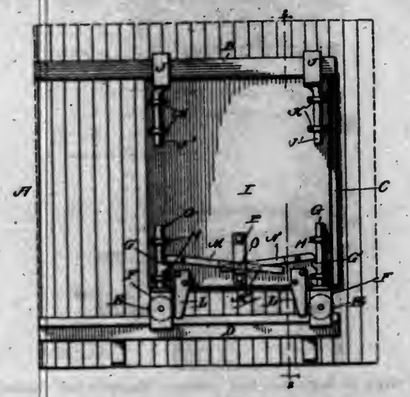
4. In a carbureter, in combination, a chamber having a main air inlet port at one end, a mixture outlet port adjacent the other end, a hollow piston slidably mounted in said chamber and adapted when moved away from said air inlet port to close said mixture outlet port, a carbureting tube carried by said piston adjacent said air inlet port and having a flaring end, a fluid fuel supply nozzle carried by said casing adjacent said air inlet port and projecting into said carbureting tube, the apex of said nozzle being tapered at a less degree than the flared end of said tube, and a fluid fuel supply reservoir communicating with said nozzle.

5. In a carbureter, in combination, an upright cylindrical chamber having a main air inlet port adjacent its lower end, a mixture outlet port spaced from its upper end, and an auxiliary air inlet port, a hollow slidable piston in said cylinder and having ports in its wall adapted to register with said mixture outlet port when said piston is at its lowest position and to move out of registry therewith as said piston is raised, a carbureting tube carried by the lower end of said piston and communicating with said main air inlet port, a fluid fuel supply nozzle carried by said casing and projecting into said carbureting tube, a spring valve associated with said auxiliary air inlet port and adapted to permit the entrance of a secondary supply of air thereto dependent upon the amount of suction in said chamber, said auxiliary air inlet port being always in communication with the interior of said piston, means for adjusting the opening through said nozzle, and means for adjusting the tension of said spring valve.

[Claims 6 to 8 not printed in the Gazette.]

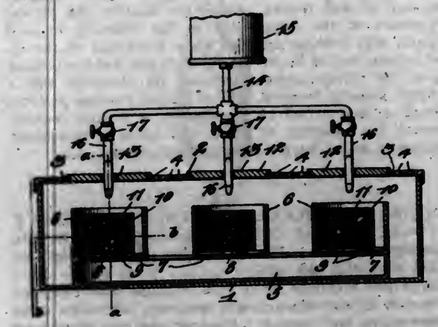
1,019,129. CAR-DOOR HANGER. JOHN T. CAMPBELL, Norfolk, Va. Filed Sept. 30, 1910. Serial No. 584,706. (Cl. 16—157.)

1. The combination with a slidable car door, of upper and lower fixed tracks, rollers carried by the door and traveling on the lower track supports adapted to rest on the lower track and normally receive the weight of the door, guide members at top and bottom, said members partially inclosing and having a slidable movement along the tracks, shanks carried by the guide members, eyes carried by the door through which the shanks loosely pass, and means for lifting the door vertically and throwing the weight of the door on the rollers, said vertical movement being independent of movement of said guide members.



2. The combination with a car door adapted to move horizontally and having a limited vertical movement, of upper and lower tracks, guide members slidably mounted upon said tracks, and provided with vertically arranged shanks, eyes carried by the door through which said shanks pass, door supporting members carried by the door and adapted to rest upon the lower track, the shanks of the lower guide members being provided with lugs, and levers pivotally carried by the door and adapted to engage said lugs, as and for the purpose set forth.

1,019,130. OIL-BURNER. MELISSA CARRIER, Bridgeport, Nebr. Filed July 12, 1911. Serial No. 638,154. (Cl. 158—28.)



1. In a burner of the class described, a base element, an outer burner body thereon open at its upper and lower ends, a supporting element in the lower portion of the outer burner body and removable therefrom and provided with openings, and an inner burner cup smaller than and disposed in the outer burner body and on the supporting element, the said inner burner cup being open at its upper and lower ends and being provided with a filler of absorbent refractory material.

2. In a burner of the class described, a base element, an outer burner body thereon open at its upper and lower ends and provided with an inwardly extending supporting flange at its lower end, a supporting element in the lower portion of the outer burner body, supported by the said flange, removable from the outer burner body and provided with openings, and an inner burner cup smaller than and disposed in the outer burner body and on and removable from the supporting element, the said inner burner cup being open at its upper and lower ends and being provided with a filler of absorbent refractory material.

1,019,131. GAS-FIXTURE. GLENN R. CHAMBERLAIN and ALBERT G. SCHROEDER, Grand Rapids, Mich. Filed Sept. 12, 1910. Serial No. 581,484. (Cl. 137—7.)



1. A gas fixture, comprising a valve body having an axial opening therethrough adapted to receive a pipe at the inner end and having a chamber surrounded by a flange at the outer end, a rotative plug in the said axial opening adapted to open or close the same, a nipple on the plug within the chamber and adapted to receive a coupling, a cap covering the flange and having an opening opposite the nipple, an arm on the plug projecting outside the flange and cap and movable therebetween to turn the plug and a disk to close the opening in the cap mounted on a pivoted lever projecting outside the flange and cap and movable therebetween.

2. A gas fixture, comprising a valve body having an axial opening therethrough adapted to receive a pipe at the inner end, a flange on the outer end of the body having recesses therein, a plug rotative in the said opening and having its axis coinciding with the axis of the opening, a passage through the plug opened and closed by rotation of the same, a spring arm on the plug alternately engaging the recesses in the flange to adjust the plug to open and closed positions, a nipple on the outer end of the plug and within the body, a coupling detachably connected to the nipple and means for closing the outer end of the body when the coupling is detached.

3. A gas fixture, comprising a valve body having an axial opening therethrough, a plug rotative in said opening and having an opening therethrough opened and closed by rotation of the plug, an arm on the plug to adjust and hold the same, a flange on the outer end of the body having recesses to receive the arm, a cap on the flange having a central opening opposite the plug, and a closure for said opening movable between the flange and cap.

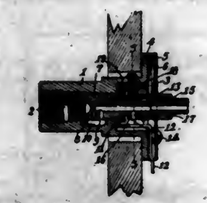
4. A gas fixture, comprising a valve body having an axial opening extending therethrough and adapted at the inner end to receive a pipe, a plug rotative in said opening and having an opening therethrough opened and closed by the rotation of the plug, a nipple on the outer end of the plug and within the body, an arm on the plug to adjust the same to open and closed position, a flange on the body having recesses to receive the arm and hold the same, a cap on the flange having a central opening, a coupling detachably secured to the nipple and extending through said opening, a disk to close said opening movable between the flange and cap, and a lever carrying the disk and extending outside the flange and cap.

1,019,132. GAS-FIXTURE. GLENN R. CHAMBERLAIN and ALBERT G. SCHROEDER, Grand Rapids, Mich. Filed Oct. 6, 1911. Serial No. 653,166. (Cl. 137—30.)

1. A gas fixture, comprising a body having an opening therethrough, a rotative plug to close said opening, a coupling connected to the plug by a bayonet joint and a stop to engage a shoulder on the coupling and lock the same in place on the plug when the latter is turned to open position.

2. A gas fixture, comprising a body having an opening therethrough, a rotative plug to close said opening, a cou-

pling connected to the plug by a bayonet joint and a stop inserted in the body and projecting into the slot of said joint to lock the coupling in place on the plug.



3. A gas fixture, comprising a body having an outwardly tapered axial opening and a lateral recess, a tapered plug in said opening having a divided axial passage and lateral openings communicating with said recess, when the plug is turned to open position, a nipple on the outer end of said plug, a coupling attached to said nipple by a bayonet joint and a stop inserted in the body and projecting into the slot of the bayonet joint to lock the said joint when the plug is in open position.

4. A gas fixture, comprising a body having an outwardly tapered axial opening, a tapered plug in said opening, a washer engaging the bottom of the recess longitudinally movable and non-rotative on the plug, a lever projecting from the washer outside of the chamber and a nut on the plug engaging the washer to hold the plug to its seat.

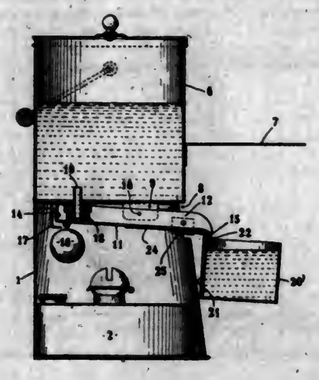
5. A gas fixture, comprising a body having an outwardly tapered axial opening, a chamber in the outer end and a lateral recess, a flange surrounding the outer end of the chamber, a cap having a central opening mounted on the flange, a movable closure for the said opening, a rotative plug in the tapered opening having a divided axial passage and lateral openings to communicate with the recess, a washer engaging the bottom of the chamber and non-rotative on the plug, a nut engaging the washer, a lever projecting from the washer between the flange and cap, a nipple on the plug, coupling attached to the nipple by a bayonet joint and a screw inserted in the body and projecting into the said joint to lock the coupling in place when the plug is in open position.

1,019,133. DRINKING-TROUGH. CLARANCE H. CHESTER, Lebanon, Pa. Filed May 3, 1911. Serial No. 624,800. (Cl. 119—73.)

1. In a device of the kind described, a reservoir having a flanged opening, a resilient bushing within said opening, extending beyond the flange of the opening, a feed tube extending within the reservoir above the wall surrounding the opening and extending within said bushing short of the outer end thereof, and a pivoted trough adapted to contact with the outer end of the bushing.

2. In a device of the kind described, a reservoir having a flanged opening, a bushing within said opening, extending beyond the flange of the opening, a feed tube extending within the reservoir above the wall surrounding the opening and extending within said bushing short of the outer end thereof, a pivoted trough adapted to contact with the outer end of the bushing, a weight at one end of said trough, and a cup into which said trough discharges at the other end of the trough.

3. In a device of the kind described, a reservoir having a flanged opening, a bushing within said opening extending beyond the flange of the opening, a feed tube extending within the reservoir above the wall surrounding the opening and extending within said bushing short of the outer end thereof, a pivoted trough adapted to contact with the outer end of the bushing, a weight at one end of said trough, and a cup into which said trough discharges at the other end of the trough, said cup being detachably connected to said trough.

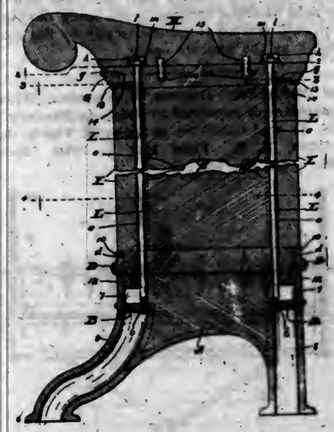


4. In a device of the kind described, a reservoir, a pivoted trough member having a discharge at one end and having a downwardly bent lip at its discharge end, a U-shaped member attached outside the trough, a flat supporting member extending between the bottom wall of the trough and said U-shaped member, and a cup carried by said supporting member.

5. In a device of the kind described, a reservoir provided with a guard having a flanged opening, a bushing of resilient material extending beyond the flange of said opening, a feed tube within said bushing extending within the reservoir beyond the wall thereof and extending within the bushing short of the outer end thereof, spaced lugs depending from the bottom of the reservoir, a trough pivoted between said lugs and having a discharge end provided with a downwardly bent lip, a weight at the inner end of said trough, means for limiting the pivotal movement of the trough due to the influence of said weight, said bushing adapted to be contacted by the inner bottom wall of the trough, a U-shaped member secured about the trough member adjacent its discharge end, a support slidable between said U-shaped member and the trough, a cup carried by the support, a tubular member beneath the reservoir to which the latter is detachably connected, and a lamp within said tubular member.

1,019,134. SIDE STANDARD FOR SEATS. WILLIAM B. COGGER, Cleveland, Ohio, assignor to Theodor Kundtz, Lakewood, Ohio. Filed Oct. 10, 1910. Serial No. 586,254. (Cl. 155—13.)

In a side standard for a seat, a metal base composed of a cast metal body provided interiorly with two metal pieces which are "cast in" the rear portion and forward portion respectively and spaced from the top of the said body and have each a screw-threaded hole which extends vertically through the respective "cast in" piece, which body above each "cast in" piece has a hole which extends upwardly from said "cast in" piece to the top of the base; a lower wooden cross-piece resting on the base and extending from the forward end to the rear end of the base; two wooden posts resting on the forward portion and rear portion respectively of said cross-piece and having portions thereof extending through said cross-piece into the holes formed in the base above the "cast in" pieces in the base, said posts being provided in their opposing sides with recesses extending endwise through the posts; an upper wooden cross-piece embracing the upper ends of and extending between the posts, and upright rods screwed into the screw-threaded holes in the aforesaid "cast in" pieces and extending from within the base upwardly



through the aforesaid recesses and connected at their upper ends to said upper cross-piece.

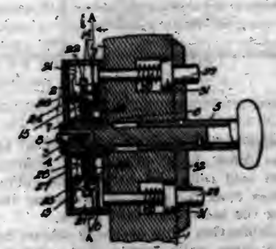
1,019,135. PNEUMATIC FLOOR-OILER. CHARLES W. COREY, Malden, Mass. Filed May 18, 1910. Serial No. 561,984. (Cl. 137—67.)



1. A sprayer comprising a container having a spraying nozzle at its lower end, a tapered top, a funnel rising from the small end of said tapered top, a pressure-pump rising from the container within said funnel, a spring for closing said sprayer nozzle, and a link between said sprayer nozzle and said top, whereby the hand of the user clasped about said funnel and top and thereby supporting the sprayer can operate the sprayer nozzle at will.

2. A sprayer comprising a container having a sprayer nozzle at its lower end, a hand-engaging means at its top, a tape operatively connected to said nozzle and having a finger-engaging ring at its upper end, and a link pivoted both to said tape and to the top of the container, the pivotal point of said link to said top being higher than the connecting point of the link and tape, and the link being disposed to bring the tape substantially into contact with the periphery of the container when the sprayer nozzle is closed, whereby, when the tape is drawn upward to open said nozzle, the tape moves out of contact with said periphery.

1,019,136. COMBINATION-LOCK. OMENZO G. DODGE, Washington, D. C. Filed Nov. 25, 1910. Serial No. 594,177. (Cl. 70—54.)



1. A combination lock comprising a casing, a plurality of blocks slidably mounted therein, said blocks having slots therein adapted to aline when said blocks are in different relative positions, independent locking bars disposed transversely of said blocks and slidably mounted in said casing above and below the center thereof, said locking bars being provided with recesses in which said blocks are adapted to normally lie, whereby said locking bars are held immovable, a latch in said casing controlled by the movement of one of said locking bars, and means for alining the slots in said blocks whereby said locking bars are released.

2. A combination lock comprising a casing, a plurality of blocks slidably mounted therein, said blocks having slots formed therein, said slots being adapted to register, bars in said casing normally locked by said blocks but adapted to be moved when said slots are registered, a latch controlled by the movement of one of said bars, and means for causing the slots in said blocks to register, said means comprising mechanism whereby all of said blocks are simultaneously moved in one direction and means whereby certain predesignated blocks forming the combination are independently moved in the other direction.

3. A combination lock comprising a casing, a plurality of blocks slidably mounted therein, said blocks being provided with slots adapted to register, locking mechanism adapted to be moved only when said slots are registered, and means for causing said slots to register, said means comprising a rock bar mounted in said casing, means extending from said rock bar engaging said blocks, mechanism for moving said bar and means for independently moving certain blocks in the other direction.

4. A combination lock comprising a casing, a plurality of blocks slidably mounted therein, said blocks being provided with slots adapted to register, locking mechanism adapted to be moved only when said slots are registered, and means for causing said slots to register, said means comprising a rock bar mounted in said casing, a plurality of arms extending from said rock bar and adapted to engage one end of each block, a spindle in said casing, a cam faced ring on said spindle adapted to operate said rock bar when said spindle is revolved and means for independently moving certain blocks in the other direction.

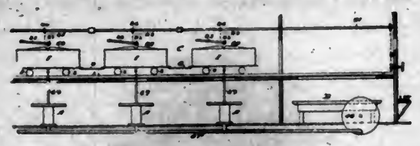
5. A combination lock comprising a casing, a plurality of movable members therein, said movable members having grooves therein, a plurality of locking bars mounted in said casing above and below the center thereof and adapted to be moved when the grooves in said movable members are alined, a latch operated by the movement of said bars, and means for alining the grooves in said movable members.

[Claims 6 to 10 not printed in the Gazette.]

1,019,137. AUTOMATIC SERVING SYSTEM. JAMES DOYLE, Pittsburgh, Pa., assignor of one-twelfth to D. L. Peller, one-twelfth to Jeremiah Moore, and one-twelfth to Alexander Jenkins, Pittsburgh, Pa., Filed July 11, 1911. Serial No. 638,035. (Cl. 186—1.)

1. The combination of an overhead cabinet having tables beneath the same, rails within said cabinet, and means traveling on said rails within said cabinet for convey-

ing edibles from the place of preparing the same and for lowering the same onto said tables.



2. The combination of an overhead cabinet having tables beneath the same, rails within said cabinet, and cars traveling on said rails and within said cabinet for conveying edibles from the place of preparing the same and for lowering the same onto said tables.

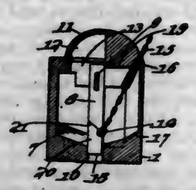
3. The combination of an overhead cabinet having tables beneath the same, rails within said cabinet, cars upon said rails and within said cabinet for conveying edibles from the place of preparing the same, and an adjustable means within said car for carrying said edibles and adapted to be lowered onto said table.

4. The combination of an overhead cabinet having tables beneath the same, rails within said cabinet, cars upon said rails and within said cabinet for conveying edibles from the place of preparing the same, and an adjustable tray within said car for carrying said edibles and adapted to be lowered onto said table.

5. The combination of an overhead cabinet having tables beneath the same, rails within said cabinet, cars traveling on said rails and within said cabinet for conveying edibles from the place of preparing the same, an adjustable tray within said car for carrying said edibles, and means connected to said tray for lowering the same onto said table.

[Claims 6 to 16 not printed in the Gazette.]

1,019,138. RAILWAY-CAR COUPLING. JAMES F. DURBIN and VOTAW S. DURBIN, Fort Scott, Kans. Filed Oct. 27, 1909. Serial No. 524,804. (Cl. 213—13.)



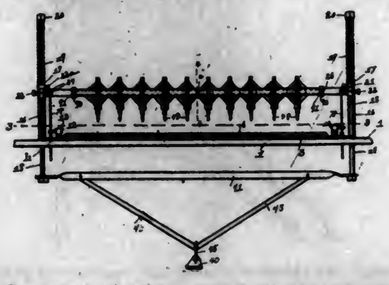
1. A car coupling, comprising, in combination, a head, a self-opening knuckle pivoted to said head and having an extended shank, a pivoted, vertically-movable latch-pin located in the path of movement of said shank and adapted to engage a fixed part of the head to lock the knuckle, said latch-pin being adapted, when released from such engagement, to be moved to one side by the shank when the knuckle swings to open position.

2. A car coupling, comprising, in combination, a head, a knuckle, a shank carried by said knuckle, a slotted latch-pin pivotally suspended in front of said shank and having locking engagement with the head, a trackway formed in said head, and means for releasing said latch-pin, the latter being adapted to be moved over said track-way by the shank in the opening movement of the knuckle.

3. A car coupling, comprising, in combination, a head having a track-way formed therein, a knuckle, a shank carried by said knuckle, and a vertically movable latch-pin suspended in front of said shank and engaging at its lower end a fixed part of the head, said latch-pin, when released from such engagement, being adapted to have its lower end moved over said track-way by the shank in the opening movement of the knuckle.

4. A car coupling, comprising, in combination, a head having a track-way formed therein, a self-opening knuckle, a shank carried by said knuckle, a vertically movable latch-pin pivotally suspended in front of said shank and adapted to have its lower end engage a fixed part of the head, and means for raising said latch-pin and thereby releasing said knuckle, said latch-pin being adapted to be carried up said track-way automatically by the movement of the shank as the knuckle opens.

1,019,139. SPACER. GEORGE W. EBERLEY, Whitesboro, N. Y., assignor of one-third to Frank L. Eberley, Whitesboro, N. Y., and one-third to Mohawk Valley Cap Factory, Utica, N. Y. Filed May 7, 1910. Serial No. 560,036. (Cl. 73—145.)



1. In a spacer of the character described, the combination of pencils rigidly held in tubes which are rotatorily mounted in casings, means on said tubes engaging means on said casings whereby said tubes are rotated to mark a garment, mechanism secured centrally to move said tubes and casings in a rectilinear manner, and mechanism to project said pencils upon a garment, substantially as described.

2. In a spacer, the combination of pencils rigidly held to tubes which are slidingly mounted in casings, lever mechanism comprising lazy tongs secured centrally adapted to move said casings rectilinearly, mechanism to project said pencils upon the surface of garments, and spring mechanism for retracting said pencils and said casings, substantially as described.

3. In a spacer, the combination of pencils rigidly mounted in tubes by screws having portions adapted to slide in spiral grooves in casings whereby to rotate said pencils to mark a garment, said casings secured to lever mechanism whereby same may be moved in a rectilinear manner for spacing, a treadle to project said pencils upon the surface of a garment, and spring means for withdrawing said pencils from off the surface of said garment, substantially as described.

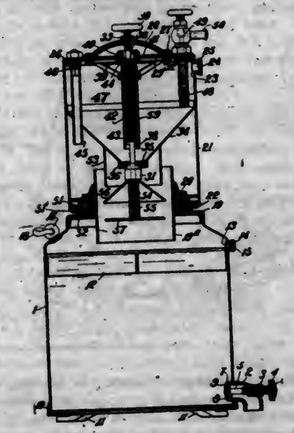
4. In a spacer, the combination of pencils, tubes, and casings, said pencils rigidly held to said tubes, said tubes mounted to spirally move in said casings, springs in said casings adapted to retract said tubes and pencils, lazy tongs to which said casings are mounted, said lazy tongs adapted to move said casings in a rectilinear manner, rods actuated by a treadle whereby to project said pencils upon the surface of a garment, and springs upon said rods adapted to retract same.

5. In a spacer of the character described, the combination of pencils, tubes, casings, lazy tongs, bars and rods said pencils rigidly held to said tubes spirally mounted in said casings held upon said lazy tongs, guides secured to said lazy tongs and adapted to secure said tubes in vertical position, said lazy tongs mounted upon said bars secured to said rods, a treadle to actuate said rods whereby said pencils may be projected upon a garment, and a stop adapted to have said pencils projected upon said garment at a predetermined distance from the edge thereof.

[Claims 6 to 19 not printed in the Gazette.]

1,019,140. CARBID-FEED ACETYLENE-GENERATOR. RICHARD P. ELLIOTT, Boston, Mass. Filed Mar. 6, 1909. Serial No. 481,798. (Cl. 48—53.3.)

1. In an acetylene generator, a carbid chamber; a water chamber beneath said carbid chamber; a carbid feeding valve located in the passage between said chambers; a diaphragm operated upon by gas pressure for closing the valve; manually operated means for mechanically closing the valve; a spring for opening the valve to feed the carbid into the water chamber; a tube extending from the space above the water chamber through and to near the top of the carbid chamber; and a check valve having a flexible member arranged to form a gas and a water-tight closure of the upper end of said tube when the generator is not in operation, and arranged to but slightly impede the flow of gas therethrough.



2. In an acetylene generator, a carbid chamber, a water chamber beneath said carbid chamber; a carbid feeding valve to close the passage between said chambers; means for mechanically closing said valve; means for closing said valve by gas pressure; spring operated means for opening the valve to feed the carbid into the water chamber; a tube extending from the space above the water chamber through and to near the top of the carbid chamber; a check valve having a flexible member arranged to form a gas and watertight closure of the upper end of said tube when the generator is not in operation; a very flexible spring to maintain said check valve normally seated upon the upper end of the tube, arranged to but slightly impede the flow of gas through said tube.

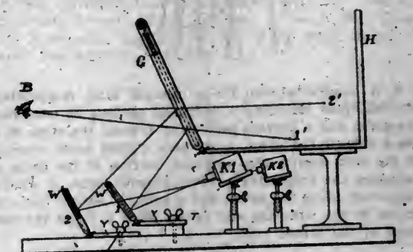
3. In an acetylene generator, a carbid chamber; a water chamber beneath said carbid chamber; a carbid feeding valve located in the passage between said chambers; means for closing said valve; means for opening the valve to feed the carbid into the water chamber; a tube extending from the space above the water chamber through and to near the top of the carbid chamber; spring operated means so arranged as to be capable of making a water tight and gas-tight closure at the upper end of said tube; and a gas outlet extending through the top of said chamber and projecting downwardly in said chamber to approximately the mid-portion thereof provided with a fibrous filter to prevent the escape of dust and moisture.

4. In an acetylene generator, the combination of a water chamber; a carbid chamber above said water chamber; a carbid feeding valve located in the passage between said chambers; spring and pressure controlled means for opening and closing said feeding valve; means for positively closing said feeding valve; a protecting ring surrounding said feeding valve; and a cone secured to the under side of said feeding valve for preventing water from splashing upon said valve.

5. In a carbid feed generator, a carbid chamber and a water chamber; a carbid feeding valve in the passage between said chambers; means for opening and closing said carbid feeding valve to start and stop the feeding of carbid; a ring surrounding said valve and projecting downward therefrom; a cone secured to the bottom of said carbid feeding valve arranged to prevent the upward splashing of water upon the feeding valve and at the same time permit a passage through which the carbid can fall to the water; and a vertical tube secured in the top of the water chamber extending upwardly into the space below the carbid chamber and downwardly into the water chamber to within a short distance of the determined water level.

[Claim 6 not printed in the Gazette.]

1,019,141. APPARATUS FOR SHOWING KINEMATOGRAPHIC PICTURES. AUGUST ENGELSMANN, Charlottenburg, Germany. Filed Jan. 7, 1910. Serial No. 536,870. (Cl. 88—24.)



1. Combined with a stage having a background, an adjustable transparent sheet pivotally connected at its lower edge at the front of said stage, a reflecting surface below said stage and in front of said transparent sheet pivotally mounted to be moved about a horizontal axis and a vertical axis, and also to be moved horizontally in a straight line, and a kinematograph adjustably mounted to project pictures on said reflecting surface from whence they are reflected to the transparent sheet and thence to an audience, whereby said reflected pictures appear in space behind the transparent sheet and before said background, which latter therefore forms a portion of the scene, and where, owing to the adjustability of the reflecting surfaces, the apparent positions of the reflected images with relation to the background may be changed.

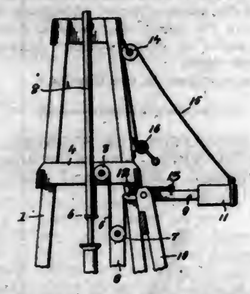
2. Combined with a stage having a background, a transparent sheet of glass adjustably mounted at its lower edge at the front of said stage, a plurality of independent reflecting surfaces, each reflecting surface being pivoted at its lower edge on a horizontally movable slide adapted to be turned on a vertical axis, and a plurality of kinematographs below said stage between the background and the reflecting surfaces, each kinematograph adapted to project pictures on one of said reflecting surfaces and from thence to the glass plate where said pictures appear to the audience in space between said plate or sheet and the background, each kinematograph and its accompanying reflecting surface being independently adjustable and so arranged that pictures produced by one kinematograph can be made to appear in space independently of the pictures produced by the other kinematograph, and to advance, recede, and pass one another.

1,019,142. ATTACHMENT FOR WINDMILLS. MATTHEW H. ENGLE, San Antonio, Tex. Filed May 3, 1911. Serial No. 624,754. (Cl. 170—3.)

1. A counterbalance for the plunger stem of a windmill comprising a beam pivoted to the windmill frame and including a weighted portion and a portion projecting beyond the pivot toward the stem, a plurality of sheaves mounted on the frame, and a cable having its terminals secured to the stem and beam respectively and engaging the sheaves and projecting portion.

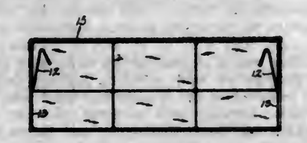
2. A counterbalance for a plunger stem comprising a pivoted beam including a weighted portion on one side of the pivot and a portion projecting toward the plunger stem on the other side of the pivot, a flexible connection between the stem and the beam engaging the projecting

portion, and manually operable means including a cable connected with the beam and a windlass on which the cable may be wound to limit the movement of the beam.



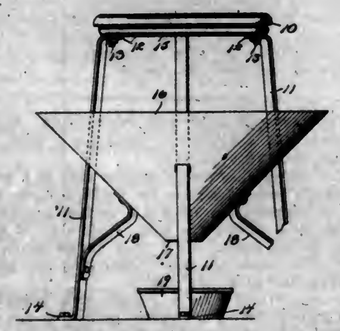
3. A counterbalance for a plunger stem comprising a pivoted beam including a weighted portion on one side of the pivot and a portion projecting toward the stem on the other side of the pivot, a suitably guided cable connected to the stem and to the weighted portion of the beam and engaging the projecting portion of said beam, a windlass supported above the beam, and a suitably guided cable connected to the windlass and to the beam to limit the movement of the latter.

1,019,143. DUST-ARRESTER FOR RADIATORS. ALBERT J. FANDREY, Indianapolis, Ind. Filed June 21, 1911. Serial No. 634,635. (Cl. 237—19.)



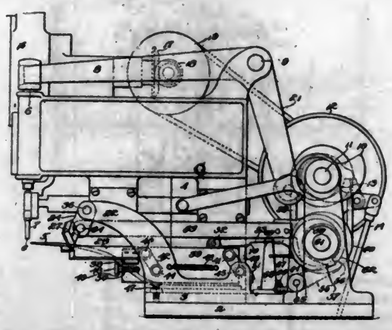
A dust collector for a radiator consisting of wires forming a substantially rectangular skeleton frame with the underside open and adapted to envelop the top of a radiator and with a downwardly and outwardly inclined extension from the lower edge of one side of said frame, a reticulated fabric covering the top and sides of said skeleton frame, and upwardly extending hooks connected with the lower part of each end of said frame adapted to engage the top of the end sections of the radiator for supporting the frame.

1,019,144. CHICKEN-ROOST. ROBERT E. FINLEY, Chamblee, Ga. Filed Jan. 7, 1911. Serial No. 601,350. (Cl. 119—25.)



A roost comprising a support, a continuous perch located thereon, a continuous receiver located upon the support below the perch and above the lower end of the support and inclined with relation to the support and spaced from the perch and the base of the support, the outer edge portion of the receiver projecting outwardly beyond the outer sides of the support and the outer edge portion of the perch.

1,019,145. HEEL-SEAT-JOINTING MACHINE. LOUIS G. FREEMAN, Cincinnati, Ohio, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed July 13, 1908. Serial No. 443,261. (Cl. 12—67.)



1. A jointing machine, consisting of scarfing mechanism and nail driving mechanism arranged to operate on different portions of the shoe, and a supporting jack for the shoe, said parts being juxtaposed so as to scarf the welt-ends and nail the scarfed ends without removing the shoe or releasing the manipulative hold on the shoe.

2. In a jointing machine, scarfing mechanism to scarf the ends of the welt, nail driving mechanism to nail the scarfed welt-ends, positioning means for engaging and maintaining the welt and upper in fixed relation to the nail driver, and a supporting jack, the tack driver and positioning means being located ahead of the scarfing mechanism and the jack mounted to move from one to the other, the distance of said nail driver and positioning means ahead of the scarfing mechanism being such as to cause the scarfed shoe properly to engage said positioning means immediately upon being swung with the jack forward away from scarfing position, whereby the operator is enabled to maintain his manipulative hold upon the loose leather about the joint until the jointing operation is completed.

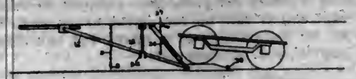
3. In a jointing machine, a welt rest in the form of a blade adapted to enter between the welt and the bottom of the shoe in supporting engagement beneath the welt and mounted for movement substantially perpendicularly with relation to the plane of action of the scarfing mechanism, and scarfing mechanism coöperating with said rest in scarfing the welt-end thus supported on said rest.

4. In a jointing machine, a welt rest in the form of a blade adapted to enter between the welt and the bottom of the shoe in supporting engagement beneath the welt and for movement to carry the work from position of presentation into welt scarfing position, a pivoted scarfing knife mounted to swing approximately tangentially to the welt-supporting surface of said rest, and means for swinging said knife.

5. In a jointing machine, a welt rest in the form of a blade adapted to enter between the welt and the bottom of the shoe in supporting engagement beneath the welt and mounted for movement lengthwise of the shoe to carry the work into and out of the path of the scarfing mechanism, and scarfing mechanism coöperating with said rest in scarfing the welt-end thus supported on said rest, said rest having projecting portions extending over the bottom of the shoe in position to guard the latter against being accidentally cut by said scarfing mechanism.

[Claims 6 to 26 not printed in the Gazette.]

1,019,146. EMERGENCY-BRAKE. MILON O. GODDING, Portland, Oreg. Filed May 20, 1911. Serial No. 628,451. (Cl. 188—65.)



1. In a safety appliance for railway cars, in combination, a crank shaft mounted transversely on the car, in front of the truck, a brake shoe suspended at each side of the car, a link connecting each shoe with a crank of said shaft, means for operating said shaft whereby the shoes will be projected beneath the car wheels, and a bar pivotally mounted at each side of the car frame and slidably connected to its corresponding shoe for seating it upon the rail of the car track.

2. In a safety appliance for railway cars, in combination, a crank shaft mounted transversely on the car, in front of the truck,—a brake shoe suspended at each side of the car,—a link connecting each shoe with a crank of said shaft,—means for operating said shaft whereby the shoes will be projected beneath the car wheels,—and a telescoping bar mounted to vibrate longitudinally, for seating the shoes upon the rails of the track.

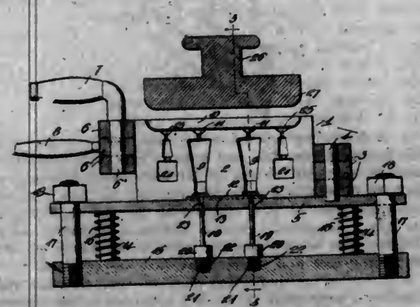
3. In a safety appliance for railway cars, in combination, a crank shaft mounted transversely on the car in front of the truck,—a depending bar at each side of the car frame,—a brake shoe detachably secured to each of said bars,—a link connecting each shoe with a crank of said shaft,—means for operating said shaft for forcing the brake shoes to the rear,—and means for detaching them from said bars.

4. A safety appliance for railways comprising a shoe having parallel upper and lower surfaces adapted to be seated upon the tread of the rail, and having a depending flange at the inner edge thereof, and a shoulder along the upper face in line with the inner face of said flange, said shoes having an inclined front end whereby the wheels of the car may move upon them, and means for sustaining the shoes under said wheels.

5. A safety appliance for railways comprising a shoe adapted to be seated upon the tread of the rail,—detachable bits secured in the face of the shoe for engaging the rail,—and means at the side thereof for preventing outward displacement, the upper surface of the shoe being adapted to receive the tread of the car wheel.

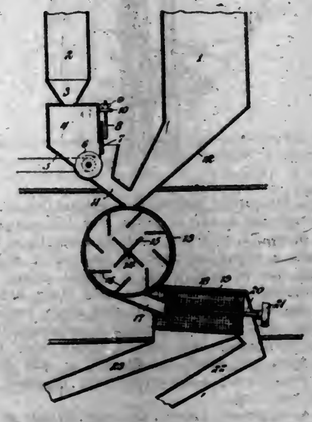
[Claim 6 not printed in the Gazette.]

1,019,147. BOTTLE-BLANK MOLD. JAMES HACKETT, Bellaire, Ohio. Filed Sept. 2, 1910. Serial No. 580,144. (Cl. 49—73.)



A mold comprising a plunger plate with a base plate arranged above the same, having plunger receiving openings, plungers having their lower ends screwed into the plunger plate and their upper ends entering said openings in the base plate, guide pins secured in the plunger plate and playing freely through the base plate, retaining bolts secured in the plunger plate and projecting through the base plate, adjustable nuts mounted on the upper ends of said bolts to limit the movement of the base plate and detachably connect the same with the plunger plate, mold sections pivoted to each other and to the base plate at one end, the opposite end of the mold being secured together by a handle locking pin, said sections having registering recesses arranged in alinement with the plunger receiving openings in the base plate, and a plunger mounted above the mold section in position to press material into the recesses therein.

1,019,148. METHOD OF CLEANING GRAIN. GEORGE HALLIDAY, Tacoma, Wash., assignor of one-half to John Dill Armstrong, Tacoma, Wash. Filed Sept. 6, 1910. Serial No. 580,613. (Cl. 83—28.)



1. The method of cleaning whole wheat which consists in freely agitating the whole wheat grains in the presence of a comminuted whole cereal of which latter all parts of the grains or berries thereof have been reduced to a pulverulent condition.

2. The method of cleaning whole wheat which consists in mixing together the whole wheat and comminuted whole wheat, of which latter all parts of the grains or berries have been reduced to a pulverulent condition, and freely agitating the mixture.

3. The method of cleaning whole wheat which consists in freely agitating the whole wheat in the presence of comminuted whole wheat, of which latter all parts of the grains or berries have been reduced to a pulverulent condition, and then separating the cleaned whole wheat from the comminuted wheat and impurities captured by the latter.

4. The method of cleaning whole wheat which consists in freely agitating a mixture of the whole wheat grains and comminuted whole wheat grains, all parts of the latter being reduced to a pulverulent condition in fineness and quantity agreeable to the condition of the wheat to be cleaned.

1,019,149. LOCKING DEVICE FOR TEMPORARY BINDERS. THOMAS P. HALPIN, Chicago, Ill., assignor to Workman Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 4, 1910. Serial No. 575,593. (Cl. 129—12.)

1. In a temporary binder, the combination of a binder member carrying a pair of posts, and a companion binder member having a revoluble shaft and apertures to receive said posts, a clamp operated by said shaft and adapted to engage one of said posts, a second clamp having a screw-threaded connection with such shaft and adapted

to bear against the other post, and means integral with said shaft providing a substantially square shoulder to prevent the said second clamp from being unscrewed from the shaft, the threads of said shaft being omitted immediately adjacent to said shoulder, substantially as described.



2. In a temporary binder, the combination of a binder member carrying a pair of posts, and a companion binder member having a revoluble shaft and apertures to receive said posts, a clamp operated by said shaft and adapted to engage one of said posts, a second clamp having a screw-threaded connection with said shaft and adapted to bear against the other post, said shaft having an integral end enlargement providing a substantially square shoulder to prevent said second clamp from being unscrewed from said shaft, the threads of said shaft being omitted immediately adjacent to said shoulder, substantially as described.

3. In a temporary binder, the combination of a binder member carrying a pair of posts, and a companion binder member having a revoluble shaft, a clamp operated by said shaft and adapted to engage one of said posts, a second clamp having a screw-threaded connection with said shaft and adapted to bear against the other post, and a pair of square shoulders integral with said shaft and adapted to limit the travel of said second clamp on the threaded part of the shaft, substantially as described.

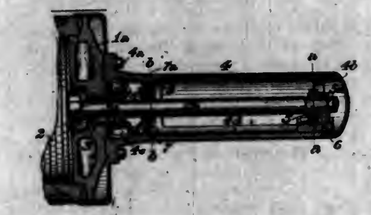
4. In a temporary binder, the combination of a binder member carrying a pair of posts, and a companion binder member having a revoluble shaft, a clamp operated by said shaft and adapted to engage one of said posts, and a second clamp having a screw-threaded connection with said shaft and adapted to bear against the other post, said shaft at one end having an integral flattened portion with a cross-sectional dimension greater than the diameter of the threaded part of the post on which the second clamp is secured, substantially as described.

5. In a temporary binder, the combination of a hollow shell, a shaft in said shell having a portion of reduced diameter, and a clamp encircling the reduced portion of said shaft and bearing against one wall of the shell, said clamp having an upturned part bearing against the opposite wall of the shell to maintain the clamp in contact with the first wall, substantially as described.

1,019,150. PISTON-ROD-EXTENSION GUIDE. CHARLES L. HEISLER, Schenectady, N. Y. Filed Dec. 20, 1911. Serial No. 666,903. (Cl. 121—105.)

1. In a steam engine, the combination of a cylinder head, and an oil chamber secured thereto, said oil chamber having a closed oil receptacle extending rearwardly from its front end and inclosing a piston rod guide face, and having an accessible chamber at and adjoining its rear end.

2. In a steam engine, the combination of a cylinder head, an oil chamber secured thereto and having an oil receptacle extending rearwardly from its front end, and inclosing a piston rod guide face, a removable cap closing the front end of said oil receptacle, and a swab box perforated for the passage of a piston rod and closing the rear end of said oil receptacle.



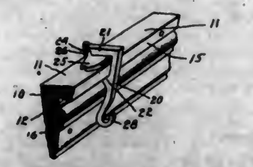
3. In a steam engine, the combination of a cylinder head, an oil chamber secured thereto and having a piston rod guide face extending rearwardly from its front end, and an accessible space between said guide and the cylinder head, a swab box closing the oil chamber at the front of said space, and an extension piston rod oiling swab box gland secured in said swab box.

4. In a steam engine, the combination of a cylinder head, a stuffing box gland secured thereto, an oil chamber secured thereto around said gland and having an oil receptacle extending rearwardly from its front end and inclosing an extension piston rod guide face, and an accessible space between said oil receptacle and the cylinder head, a swab box closing the oil chamber at the front of said space, means for supplying oil to the swab box, and means for connecting the swab box with the cylinder head stuffing box gland.

5. In a steam engine, the combination of a cylinder head, an oil chamber secured thereto and having an oil receptacle extending rearwardly from its front end and inclosing a piston rod guide face, and an accessible space between said guide face and the cylinder head, a swab box closing the oil chamber at the front of said space, an extension piston rod oiling swab gland secured to the swab box, and oil collecting wings in the swab box, extending between its central portion and the wall of the oil chamber.

[Claim 6 not printed in the Gazette.]

1,019,151. DISPLAY DEVICE. JOHN HOLMES, Boston, Mass. Filed Apr. 21, 1910. Serial No. 556,832. (Cl. 40—145.9.)

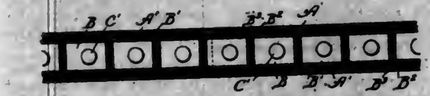


1. A device for supporting pictures, comprising in combination, a supporting rail and a detachable suspension member, said rail having a flat supporting face and an inclined interlocking face intermediate the top and bottom edges thereof, said suspension member including at the top a supporting portion having a movable locking member, and an interlocking portion to engage the flat supporting face and interlocking face respectively.

2. A device for supporting pictures, comprising in combination a supporting rail, a flat supporting face thereon, an interlocking portion terminating at the front face of the said rail, a detachable suspension member including a flat supporting portion at the top thereof and a rearwardly projecting interlocking portion coöperating with the interlocking portion on said rail, and pivotal locking means on said flat supporting portion and coöperating therewith to lock said supporting portion and said interlocking portion on the suspension member to the interlocking portion on the rail.

3. A device for supporting pictures comprising in combination a supporting rail, a flat supporting face thereon, an interlocking portion inclined rearwardly from the front edge of the rail, a detachable supporting member on said rail, said member including a straight rearwardly projecting supporting portion at the top thereof and an upwardly inclined portion adapted to engage said inclined interlocking face, and pivotal wedging means on said straight rearwardly projecting portion and coöperating therewith to lock said supporting portion and said inclined interlocking portion to the rail.

1,019,152. COMPOUND BELT. THOMAS HORSMAN, Chicago, Ill., assignor to Chicago Belting Company, a Corporation of Illinois. Filed Nov. 3, 1911. Serial No. 658,435. (Cl. 74—62.)



1. In a compound belt, the combination of a flexible substantially continuous main band portion forming the widest portion of the belt, and a series of pieces secured to the lower face thereof and spaced apart when lying in one plane and provided with end portions adapted to interlock with the adjacent pieces when closed together as in the taking of a pulley.

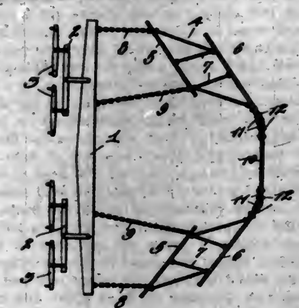
2. In a compound belt, the combination of a flexible substantially continuous main band forming the widest portion of the belt and provided with inclined lateral edges, a series of pieces secured to the lower face of the main portion and spaced apart when lying in a single plane and provided with lateral edges forming continuations of the inclined lateral edges of the main portion, each of said pieces having its ends so formed as to interlock with the ends of the adjacent pieces when bent around a curved surface.

3. In a compound belt, the combination of a flexible substantially continuous main portion or band forming the widest part of the belt and provided with inclined lateral edges, and a series of pieces secured to the lower face of said belt and spaced apart when lying in one plane, said pieces having inclined lateral edges forming a continuation of the inclined lateral edges of the main portion of the belt and provided with tongued and grooved end portions adapted to interlock when said belt is taking a curved position of small radius as on a grooved pulley.

4. In a compound belt, the combination of a flexible substantially continuous main band portion forming the widest part of the belt and provided with inclined lateral edges, a series of pieces secured to the lower face of said belt so as to provide spaces therebetween when lying in a single plane, said pices having inclined lateral edges forming a substantial continuation of the inclined lateral edges of the main band portion, and a V-shaped tongue on one end of each of said pieces and a V-shaped groove on the other end of each of said pieces so arranged that each of said pieces will interlock with the adjacent pieces when taking a curved path of small radius as around a pulley.

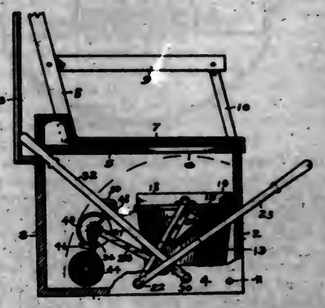
5. In a compound belt, the combination of a flexible substantially continuous main band portion forming the widest part of the belt and provided with inclined lateral edges, a series of pieces secured to the lower face of said belt so as to provide spaces therebetween when lying in a single plane, said pieces having inclined lateral edges forming a substantial continuation of the inclined lateral edges of the main band portion, a V-shaped tongue on one end of each of said pieces and a V-shaped groove on the other end of each of said pieces so arranged that each of said pieces will interlock with the adjacent pieces when taking a path of small radius as around a curved sheave pulley, and rivets securing said pieces and main band together.

1,019,153. ROAD SCRAPER AND GRADER. SAMUEL E. HUGHES, Alexandria, Ind. Filed Mar. 14, 1911. Serial No. 614,405. (Cl. 37—5.)



The herein described road scraper and grader comprising a transversely arranged central blade, a pair of drag wings, each of which comprises a plurality of obliquely disposed blades arranged one in advance of another, the blades of the respective drag wings being oppositely arranged and the rear blade of each drag wing being directly hinged at its inner end to one end of the central blade, the front blade of each drag wing being shorter than the rear blade thereof, reversely disposed V-shaped braces connecting the front and rear blades of the drag wings and flexibly connected thereto, a draft beam substantially parallel with the central blade and chains connecting the ends of the front blades of the drag wings directly to the draft beam at points near the ends and also spaced from the ends thereof.

1,019,154. COMMODE. JOHN W. HULL, Sr., Zion City, Ill. Filed July 19, 1909. Serial No. 508,382. (Cl. 4—32.)



1. A commode-box, a receptacle in said box, a lid for said receptacle, a rock shaft extending through a side of the box, an arm from the inner end of the shaft to which the lid is hinged, said arm having a stop to limit the swinging movement of the lid in that direction, a spring to force the lid toward said stop, and a hand lever connected on the outside of the box with said shaft.

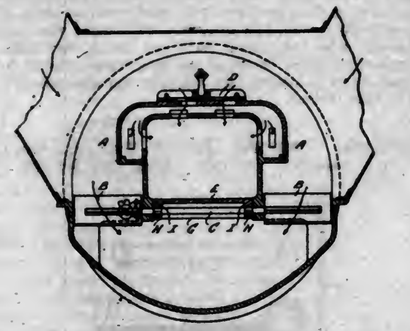
2. In a commode, a receptacle, a frame having a to and fro travel over said receptacle, means including a hand lever terminating outside of the commode for imparting to and fro movement to said frame, a wheel mounted on said frame, a pair of oblique rollers contacting with the periphery of said wheel, a roll of paper carried by said frame, the paper from said roll being carried over the periphery of said wheel and between said wheel and the

two oblique rollers, and means for imparting a forward rotary movement to said wheel.

3. In a commode, a receptacle, a frame having a to and fro movement above said receptacle, a wheel mounted on said frame said wheel having a half-round periphery, a paper roll mounted on said frame, a pair of oblique rollers mounted on said frame and contacting with said wheel on the opposite side of the latter from the paper roll, the paper from said roll passing over the wheel and between it and the two oblique rollers, means for intermittently moving said wheel in a forward rotary direction, a shield between the paper roll and wheel above the paper passing to the wheel and a shield above the two oblique rollers.

4. The combination with a commode-box, of a receptacle located therein, a rock shaft mounted in the side of the box and passing transversely therethrough, a hand lever on the outer end of the shaft, an arm on the inner end of the shaft terminating above the top of said vessel, a frame carried by the upper end of said arm, a wheel having a half-round periphery mounted in said frame, a pair of oblique friction rollers mounted on the frame and contacting with the periphery of the wheel, a shield above said oblique rollers, a paper roll mounted on the frame on the opposite side of the wheel from said oblique rollers, a guide and shield between the paper roll and wheel, a ratchet wheel on the same shaft on which the first wheel is mounted, a pawl carried by the commode-box and adapted to engage the ratchet wheel, and means to prevent the first wheel from rotating in a backward direction.

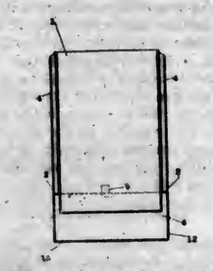
1,019,155. FURNACE-FRONT. JAMES HOWDEN HUME, Glasgow, Scotland. Filed Sept. 25, 1911. Serial No. 651,252. (Cl. 110—172.)



1. In a furnace, the combination with valves B located at the sides of the lower part of the furnace front with a space or gap between them, said valves serving to control or regulate a forced-draft supply of air to the furnace, of an upper valve controlling the inlet of the air from above, a removable base portion located in the said space or gap between said valves B at the firing front of the furnace and which removable base portion may be taken out, when desired, to permit the necessary volume of air to be supplied to the furnace when liquid fuel is to be employed.

2. In a furnace, the combination with valves B located at the sides of the lower part of the furnace front, with a space or gap between them, said valves serving to control or regulate a forced draft supply of air to the furnace, of an upper valve controlling the inlet of air from above, a rotatable spindle on which said valves B are mounted, a removable base portion located in the said space or gap between said valves at the firing front of the furnace and having front and rear depending flanges, by which it is fitted in place, and also having portions in which said spindle is rotatively mounted, so that said spindle may removably secure said base portion in place.

1,019,156. GARBAGE-RECEPTACLE. JOHN W. HUBLEY, Portland, Oreg. Filed May 15, 1911. Serial No. 627,265. (Cl. 220—115.)



1. In a garbage container, a base, an annular flange having a plurality of apertures therein formed at the upper edge of said base,—a receptacle having a perforated bottom resting thereon,—longitudinal tubes secured at each side of the receptacle,—and means for detachably securing the receptacle to said base, with said tubes registering with said apertures.

2. The combination in a garbage receptacle of a base, a perforated flange formed at its upper edge,—a receptacle adapted to rest thereon,—and tubes secured upon the sides of the receptacle, adapted to register with said perforations and opening at the top of the receptacle.

3. The combination in a garbage receptacle of a base having at its edge an inwardly projecting flange provided with a plurality of apertures at each side, and a slot at each side intermediate said apertures,—a receptacle adapted to pass within said flange and having lugs adapted to engage in said slots,—and tubes secured at opposite sides of the receptacle, adapted to rest upon said flange, the openings therein registering with said apertures.

4. The combination in a garbage receptacle of a base having an inwardly projecting flange at its upper edge, which is provided at opposite sides with a plurality of apertures and a slot at each side intermediate thereof,—a receptacle adapted to rest within said flange,—lugs secured near the bottom of the receptacle adapted to engage in said slots,—and tubes secured upon the sides of the receptacle adapted to rest upon said flange, the openings therein registering with said apertures.

1,019,157. FIGURE TOY. JAMES HUDSON, Bigbend, S. D. Filed Sept. 25, 1911. Serial No. 651,013. (Cl. 46—40.)

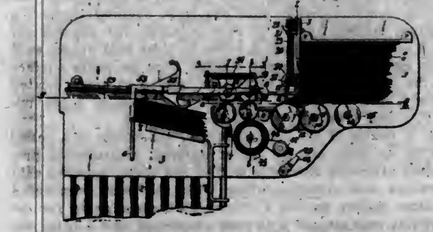


1. A toy of the class described, comprising a pair of uprights, said uprights being spaced by a horizontally

arranged bar, in combination with a jointed figure adapted for operation by said bars, the arms of said figure being rigidly connected to a horizontal rod, the opposite ends of which are formed to produce a pair of oppositely disposed eyes, cords passed through said eyes and secured to the upper end of the bars, whereby when the lower ends of the said bars are pressed together the upper ends of said bars will be spread apart to untwist said cords, whereby the figure is operated.

2. In a toy of the class described, the combination with a pair of parallel spaced bars, of a figure consisting of a trunk having slots formed in the lower extremity thereof, a pair of leg members also having slots formed therein, links having their upper and lower ends pivotally connected in the respective slots, a perforation formed in the shoulder portion of the trunk, a single length of wire passed through said perforations and constituting arms for the figure, said arms being rigidly connected to a horizontal rod, the opposite ends of which are so bent as to form a pair of oppositely disposed eyes, cords secured to the upper end of each vertical bar, said cords being twisted and passed through said eyes, whereby when the lower ends of the vertical bars are pressed together the upper ends thereof are spread apart to operate the figure.

1,019,158. MAIL-MARKING MACHINE. FRED C. ISLFIELD, Silver Creek, N. Y., assignor to Columbia Postal Supply Company, Silver Creek, N. Y., a Corporation of New York. Filed Aug. 2, 1909. Serial No. 510,827. (Cl. 101—82.)

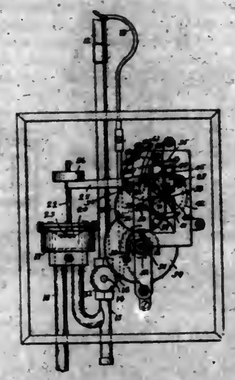


1. A mail marking machine comprising a feed table adapted to support a pack of letters to be marked, a guide wall arranged transversely on one side of the letter path and adapted to be engaged by the front ends of the letters, a feed device arranged on the feed table on the opposite side of the letter path, and a separator arranged opposite the feed device and having a laterally movable head provided with an inclined face and provided with a guide pin which moves in a guide slot in said guide wall.

2. A mail marking machine comprising a feed table adapted to support a pack of letters to be marked, a guide wall arranged transversely on one side of the letter path and adapted to be engaged by the front ends of the letters, a feed device arranged on the feed table on the opposite side of the letter path, a separator comprising a beveled head arranged opposite said feed device and having a guide pin moving in a guide slot in said wall, a rod connected with said head and moving in lugs on said wall, a spring for yieldingly holding said head in its innermost position and bearing at its ends against one of said lugs and a collar on said rod, and a stop screw nut arranged on said rod and bearing against one of said lugs.

3. A mail marking machine comprising a printing mechanism, a guide wall arranged lengthwise on one side of the path of the letters issuing from the printing mechanism and provided with a longitudinal row of locking openings, a supporting rod arranged lengthwise above said guide wall, a back stop arranged transversely in the letter path and provided on its upper rear part with a sleeve which is adapted to slide on said rod and provided on its lower rear part with a locking leg adapted to engage with one or another of said locking openings.

1,019,159. AUTOMATIC GAS LIGHTER AND EXTINGUISHER. GEORGE C. INNIS, Boston, Mass., assignor to William H. Kimball, Boston, Mass. Filed Sept. 16, 1911. Serial No. 649,715. (Cl. 67—18.)



1. In an automatic gas lighter and extinguisher, the combination of a gas-burner, a gas-cock, a motor to turn said gas-cock to turn on and off the gas, releasing and controlling means for said motor adapted to be operated to release and subsequently stop the motor, when said motor has turned the gas-cock one half a revolution, a pivoted operating-lever movable in one direction in response to an increase in the gas-pressure to first operate said means to release the motor and then to disengage said means permitting subsequent independent operation of said means and movable in the opposite direction in response to a decrease in the gas-pressure for reëngagement with said means, substantially as described.

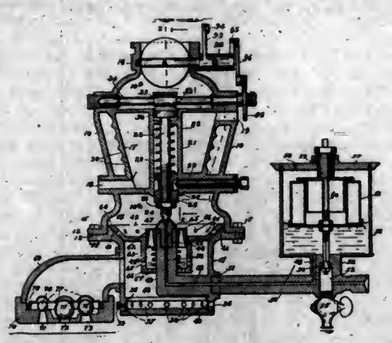
2. In an automatic gas lighter and extinguisher, the combination of a gas-burner, a gas-cock, a motor to turn the gas-cock to turn on and off the gas, a releasing-lever for said motor, means controlled by the motor to permit return of the releasing-lever to normal and stop the motor when the gas-cock has been turned one half a revolution, an operating-lever movable in one direction in response to an increase in the gas-pressure to first lift the releasing-lever and place the controlling-means therefor under the control of the motor and then disengage them, permitting independent return to normal of said releasing-lever and controlling-means, and movable in the opposite direction in response to a decrease in the gas-pressure to resume its normal position independently of said releasing-lever and controlling-means, substantially as described.

1,019,160. CARBURETER. BARRY IVOR, Chicago, Ill., assignor of one-sixth to John D. Ganzolo, one-sixth to Harry Q. Turner, one-sixth to John D. Hartford, one-sixth to Fred Freer, and one-sixth to Herbert R. McPherson, Chicago, Ill. Filed Oct. 24, 1910. Serial No. 588,834. (Cl. 48—154.1.)

1. In a carbureter, the combination with a casing having a carbureting chamber provided with a mixture outlet, of an apertured member extended across the casing within the same and having on one of its surfaces a hollow extension provided with openings, a channeled projection extended into the extension of said member, said channel having communication at one of its ends with a supply of hydrocarbon and at its other end with the carbureting chamber, and a perforated air distributer located between said projection and the extension of the apertured member.

2. In a carbureter, the combination with a casing having a carbureting chamber provided with a mixture outlet, of an apertured member movably mounted across the cavity of said casing and having on one of its surfaces a hollow extension provided with openings, a channeled projection extended into the extension of said member, the channel of said extension having communication at one of

its ends with a supply of hydrocarbon and at its other end with the carbureting chamber, and means for actuating said member.



3. In a carbureter, the combination with a casing having a carbureting chamber provided with a mixture outlet, of an apertured member movably mounted across the cavity of the casing and having on one of its surfaces a hollow extension provided with openings, a channeled projection extended into said hollow extension, the channel in said projection having communication at one of its ends with a supply of hydrocarbon and at its other end with the carbureting chamber, a perforated air distributer located between said projection and the extension on the apertured member, and means for actuating said member.

4. In a carbureter, the combination with a casing having a carbureting chamber provided with a mixture outlet, of an apertured valve movably mounted at one end of said chamber and having on one of its surfaces a hollow extension provided with openings, a channeled projection extended into said hollow extension, the channel in said projection having communication at one of its ends with a supply of hydrocarbon and at its other end with the carbureting chamber, a perforated air-distributer located within said extension and around said projection, and a spring to actuate the valve in one direction.

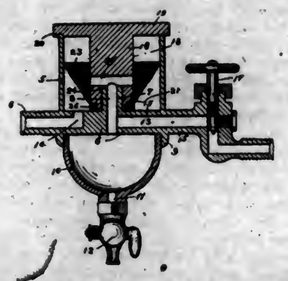
5. In a carbureter, the combination with a casing having a carbureting chamber provided with a mixture outlet, of a valve movably mounted within the casing and having near its periphery a series of openings, said valve also having on one of its surfaces a hollow extension provided with openings, a channeled projection extended into said extension, the channel in said projection having communication at one of its ends with a supply of hydrocarbon and at its other end with the carbureting chamber, a perforated air-distributer located in said extension around the projection therein, and means for actuating said valve.

[Claims 6 to 12 not printed in the Gazette.]

1,019,161. STRAINER AND WATER-SEPARATOR FOR GASOLENE-SUPPLY. BARRY IVOR, Chicago, Ill. Filed July 5, 1911. Serial No. 636,929. (Cl. 210—16.)

1. A device of the class described consisting of a vessel having inlet and outlet openings, a channeled projection extended upwardly within the vessel between said openings and communicating with the inlet opening, a strainer holder having a step adapted for engagement with said projection and a cover to close said vessel, said stem having a passageway leading from its outer surface to the channel of said projection, and a strainer located around said stem and extended at its outer edges toward the walls of said vessel.

2. A device of the class described consisting of a vessel having an inlet and an outlet opening, a channeled projection extended upwardly within the vessel between said openings and communicating with the inlet opening, a funnel-shaped strainer located at its lower end around the lower portion of said projection, and means to hold said strainer in position and to close the upper end of the vessel.

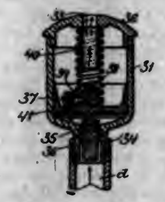


3. A device of the class described consisting of a vessel having an inlet and an outlet opening, a channeled projection extended upwardly within the vessel between said openings and communicating with the inlet opening, a funnel-shaped strainer located at its lower end around the lower portion of said projection, means to hold said strainer in position and to close the upper end of said vessel, and a receptacle mounted on the lower portion of said vessel and having communication with the inlet opening thereof.

4. A device of the class described consisting of a vessel having an inlet and an outlet opening, a channeled projection extended upwardly within the vessel between said openings and communicating with the inlet opening, a receptacle mounted on the lower portion of said vessel and having communication with the inlet opening thereof, a strainer holder having a stem adapted for engagement with said projection and a cover to close said vessel, said stem having a passageway leading from its outer surface to the channel of the projection, and a strainer located around said stem and extended at its outer edges upwardly and toward the walls of said vessel.

5. A device of the class described consisting of a vessel having an inlet and an outlet opening, a channeled projection extended upwardly within the vessel between said openings and communicating with the inlet opening, a strainer holder having a channeled stem adapted for detachable engagement with said projection and a cover for said vessel, the channel of said stem affording communication between said vessel and the channel of said projection, a strainer surrounding the lower portion of said stem, and means to secure the strainer thereon.

1,019,162. BUBBLING DRINKING-FOUNTAIN. SIMEON C. KEITH, Jr., Somerville, Mass. Filed Jan. 25, 1910. Serial No. 539,965. (Cl. 137—11.)



1. A self-contained self-regulating bubbling drinking fountain head, comprising a cup-like casing forming a chamber and having at its upper portion a nozzle immovable with respect to the remainder of said casing and provided with a port for the emission of a vertical jet or bubble, an inlet port, and yielding means in said chamber having an area exposed to the pressure of incoming water in said chamber and arranged to regulate the flow of water through said inlet port, in consequence of which the bubble or jet emitted from the outlet port is of substantially unvarying height irrespective of the pressure of water entering said casing.

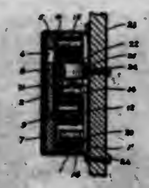
2. A self-contained self-regulating bubbling fountain head, comprising a substantially upright casing having at its upper end an immovable nozzle apertured for the emission of a jet or bubble, and a port communicating with said nozzle, and means located within said casing controlled by the pressure of the water for partially opening or closing the said port and thereby maintaining a constant jet or bubble at a predetermined height.

3. A self-contained self-regulating bubbling drinking fountain, comprising a casing having at its lower portion an inlet port with which the service pipe may be connected, a nozzle at its upper end having a centrally located outlet port or aperture for the emission of a substantially vertical jet or bubble, a valve member for controlling the flow of water through said port, a piston in said casing connected to said valve member, and a spring in said casing which bears against said nozzle and said piston to oppose the pressure of the water against said piston, whereby the pressure of water in said casing is kept substantially unvaried irrespective of the variations in the pressure of water in the service pipe leading to said inlet pipe.

4. In a bubbling drinking fountain, a cup having at its upper end a nozzle with an outlet port for the emission of a substantially vertical bubble or jet, and having at its lower end an inlet port, and means located within said cup for maintaining a constant water pressure in said cup, said means comprising a valve seat having an inlet port, a reducing valve member for controlling said port, and a spring-tensioned piston located between said ports connected to said reducing valve member and receiving the pressure of water admitted to said valve through said inlet port, there being a water duct through said piston.

5. A self-contained self-regulating bubbling fountain, comprising a casing having at its lower end an inlet port formed with a valve seat, and having at its upper end a nozzle with an outlet port or aperture for the emission of a substantially vertical jet or bubble, said nozzle having an annular flange extending into the fountain through which the water flows to said port or aperture, an apertured piston in the casing and having a reduced valve member cooperating with the said inlet port and valve seat, and a spring encircling said flange and bearing against the said piston.

1,019,163. ELECTRIC METER. ARTHUR ATWATER KENT, Philadelphia, Pa. Filed Jan. 14, 1907. Serial No. 352,083. (Cl. 171—95.)



1. In an electric meter a combination with a casing provided with two compartments, an armature and means to deflect the same in accordance with the current passing through said meter, both armature and deflecting means being located in one compartment, of an indicator connected to said armature and mounted in the second of said compartments, said second compartment comprising an air chamber, the depth of which being substantially the same as the width of said indicator but permitting said indicator to move without actual engagement with the walls of said chamber.

2. A meter comprising a permanent magnet, a pivoted indicator having a wide surface throughout its length transverse to the path of movement of said indicator, a closed chamber in which said indicator is arranged to swing, an armature on which said indicator is mounted, magnetic means to normally hold said armature in one position, and electro-magnetic means to deflect said armature and the indicator carried thereby, the depth of said chamber being substantially the same as the width of said indicator to provide a dampener for said indicator.

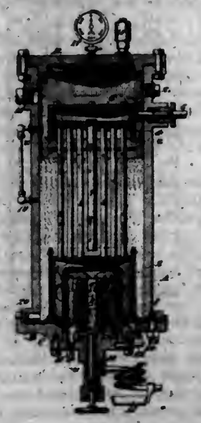
3. A meter comprising a casing, a permanent magnet therein, electro-magnetic mechanism in said casing, and a contact spring in circuit with said electro-magnetic mechanism, said casing having a back with an opening through which contact may be made with said spring.

4. In an electric meter the combination with a casing provided with two compartments, of an armature and means to deflect the same in accordance with the current passing through said meter, both arranged in one of said compartments, and an indicator actuated by the said armature to swing pivotally in the second of said compartments, said second compartment having an arc-shaped wall near the end of said indicator, the said indicator being widened throughout its length and of substantially the same width as the depth of said chamber but out of contact with the walls of said chamber to permit the indicator to swing without engaging the walls of said chamber.

5. In an electric meter a combination of the armature, means to deflect said armature in accordance with the current passing through said meter, and an indicator connected to said armature and arranged to swing about a pivot, and a closed sector-shaped chamber in which said indicator is mounted with its pivot at about the apex of said chamber, the width of said indicator transverse to the path of its movement, being substantially the same as the depth of said chamber.

[Claims 6 and 7 not printed in the Gazette.]

1,019,164. POWER-GENERATOR. GUSTAVE A. KROHN, Coarsegold, and EVERALDO M. ARREAGADA, San Francisco, Cal., assignors, by direct and mesne assignments, to The Ideal Power Generator Company, Raymond, Cal., a Corporation of California. Filed Mar. 29, 1911. Serial No. 617,740. (Cl. 60—31.)



1. In an apparatus of the character described, the combination of a boiler having a lower water space and an upper steam space, a water drum located in the boiler steam space and having a water inlet, a discharge pipe leading downwardly from said drum within the water space, a fire-box located in the water space, flues extending upwardly from said fire-box and opening directly beneath said drum, and a burner within the fire-box having air and oil inlets.

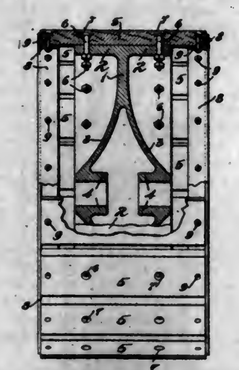
2. In an apparatus of the character described, the combination of a boiler having a lower water space and an upper steam space, a water drum located in the boiler steam space, and having a water inlet, a discharge pipe leading downwardly from said drum within the water

space, a fire-box located in the water space, flues extending upwardly from said fire-box, and opening directly beneath said drum, a baffle plate surrounding the upper portions of the flues, within the steam space and below said drum and a burner within the fire-box having air and oil inlets.

3. In an apparatus of the character described, the combination with a boiler and a fire box, of flues leading from the fire box and opening to the interior of the boiler, a drum in said boiler disposed above the open terminations of the flues, means for directing a volume of water into said drum, a pipe for discharging water from said drum to a point adjacent to the fire box, a cylindrical combustion chamber disposed in said fire box, the peripheral wall of which is perforated to render the combustion chamber and fire box intercommunicative, an oil burner in said combustion chamber, and means for delivering superheated air and volatile oil to said burner under pressure.

4. In an apparatus of the character described, the combination of a boiler having a lower water space, and an upper steam space, and provided with a water inlet, a fire-box located in the water space, flues extending upwardly from said fire-box and into the steam space, a combustion chamber within said fire-box having a perforated wall, and a burner located within said combustion chamber comprising a central mixing tube apertured at its upper end and having an oil inlet, a tubular member surrounding said mixing tube also apertured at its upper end and having an outer continuous spiral vane forming a spiral passage, a casing surrounding said tubular member, and an air inlet pipe leading through the said casing and opening into said spiral passage.

1,019,165. TRACTION-WHEEL. CHESTER B. LORD, St. Louis, Mo. Filed Feb. 27, 1911. Serial No. 611,140. (Cl. 21—64.)



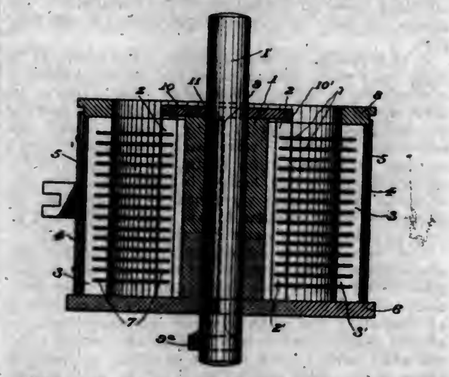
1. A traction wheel comprising a rigid metal rim, a multiplicity of cleats secured transversely on the circumferential face of said metal rim, said cleats being spaced an equal distance apart and their end portions being extended beyond the edges of said metal rim, and rings connecting the end portions of said cleats, said rings being spaced from said metal rim.

2. A traction wheel comprising a supporting ring, a multiplicity of flat wooden cleats rigidly secured to the circumferential face on said supporting ring so as to present a polygonal tread face, said cleats being spaced equidistant and extending on opposite sides of said supporting ring, and rigid ring members connecting the end portions of said cleats, said ring members being spaced from said supporting ring.

3. A traction wheel comprising an annular middle supporting member, a multiplicity of cleats secured transversely across the peripheral face of said annular middle supporting member and extending on opposite sides of the latter, and L-shape annular members whose horizontal flanges extend inwardly and are secured to the adjacent end portions of said cleats and whose vertical flanges extend outwardly and abut the ends of the cleats, said L-shaped annular members being spaced from said annular middle supporting member.

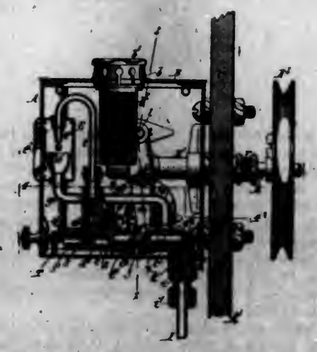
4. A wheel comprising a rigid supporting member having a hub portion and a substantially cylindrical rim portion, a multiplicity of cleats disposed transversely across the circumferential face of said rim and projecting beyond the edge thereof a considerable relative distance, and a rigid annular floating member separated from said rigid supporting member and secured to the projecting end portions of said cleats.

1,019,166. ELECTRICAL CONTACT-BANK AND PROCESS OF MAKING SAME. GEORGE W. LORIMER, Piqua, Ohio, assignor, by mesne assignments, to Western Electric Company, a Corporation of Illinois. Filed Apr. 24, 1907. Serial No. 370,046. (Cl. 179—97.)



The process of making an electrical contact bank which consists of casting a body of plaster of Paris having conducting contact pieces embedded therein and then immersing the cast in a mixture of paraffin and Brazilian wax at a temperature above the boiling point of water whereby all water in the cast is evaporated and driven out and the cast becomes saturated with the mixture described, substantially as described.

1,019,167. LUBRICATOR. CHARLES W. MANZEL, Buffalo, N. Y., assignor, by mesne assignments, to J. L. Osgood, Buffalo, N. Y. Filed Aug. 13, 1906. Serial No. 330,372. (Cl. 184—27.)



1. In a lubricator, the combination of a reservoir, a pump supplied therefrom and comprising a primary cylinder, a secondary cylinder and a piston common to both cylinders, a conduit connecting the outlet of the primary cylinder with the inlet of the secondary cylinder, and a sight device arranged in said conduit, the primary portion of the pump being constructed to deliver a smaller quantity of oil than the secondary portion thereof, substantially as set forth.

2. In a lubricator, the combination of a reservoir, a pump supplied therefrom and comprising a primary cylinder, a secondary cylinder and a piston common to both cylinders, the primary cylinder having an inlet port communicating with the reservoir, a sight device connected with the discharge port of the primary cylinder, and a conduit connecting the sight device with the inlet port of the secondary cylinder, the primary portion of the pump having its ports constructed and arranged to deliver a smaller quantity of oil than the secondary portion thereof, substantially as set forth.

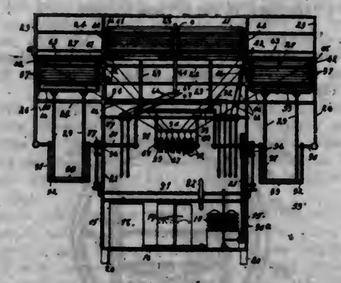
3. In a lubricator, the combination of a reservoir, a pump supplied therefrom and comprising a primary cylinder, a secondary cylinder and a piston common to both cylinders, the primary cylinders having an inlet port communicating with the reservoir, a sight device connected with the discharge port of the primary cylinder, and a conduit connecting the sight device with the inlet port of the secondary cylinder, the inlet ports of the two cylinders and the piston being so arranged that the primary part of the piston uncovers the inlet port of the primary cylinder to a greater extent than the secondary port of the piston uncovers the inlet port of the secondary cylinder, substantially as set forth.

4. In a lubricator, the combination of a reservoir, a pump supplied therefrom, a follower arranged in one end of the pump-cylinder, a stop plate arranged opposite the outer end of the follower, and an adjusting screw engaging said plate and passing through the wall of the reservoir, substantially as set forth.

5. In a lubricator, the combination of a reservoir, a pump supplied therefrom, a follower arranged in one end of the pump cylinder, a non-rotary stop plate arranged opposite the outer end of the follower, and a rotary adjusting screw held against longitudinal movement in the wall of the reservoir and engaging said stop-plate, substantially as set forth.

[Claim 6 not printed in the Gazette.]

1,019,168. AERIAL MACHINE. CHARLES I. MATSON, Chicago, Ill. Filed June 4, 1910. Serial No. 564,941. (Cl. 244—11.)



1. In an aerial machine, the combination of a main frame, an auxiliary frame arranged above the main frame and having a pivotal connection with said main frame, flexible planes supported by their extremities on said auxiliary frame, and means for flexing said planes alternately in opposite directions.

2. In an aerial machine, the combination of two superposed frames, the upper frame extending beyond the lower frame, and adapted to rock thereon, flexible planes supported by their extremities on said auxiliary frame, and means for flexing said planes alternately in opposite directions.

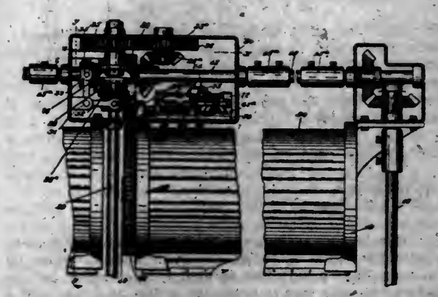
3. In an aerial machine, the combination with a main frame, of an auxiliary frame mounted to oscillate thereon, flexible planes supported by their extremities on said auxiliary frame, and means for flexing said planes alternately in opposite directions.

4. In an aerial machine, the combination with a main frame, an auxiliary frame arranged to oscillate above said main frame, flexible planes secured by their ends to said auxiliary frame, said planes comprising series of hinged vanes, means for flexing said planes alternately in opposite directions.

5. In an aerial machine, the combination with an oscillating frame, of a flexible plane secured by opposite margins to said frame, said plane comprising series of vanes supported upon cords and having their margins overlapping, and means for flexing said plane alternately in opposite directions.

[Claims 6 to 20 not printed in the Gazette.]

1,019,169. MECHANISM FOR RAISING AND LOWERING SHUTTERS OR CURTAINS. EDWARD H. MCCLOUD, Columbus, Ohio. Filed Mar. 4, 1908. Serial No. 419,211. (Cl. 189—57.)



1. In combination with a curtain and roller therefor, a power shaft and a manual shaft, a pair of clutching members and gearing connecting said clutching members with the curtain roller, and a second pair of clutching members adapted to be moved by the manual shaft to operatively connect through one of said first mentioned clutch members either the power shaft or the manual shaft with the curtain roller.

2. In combination with a curtain and roller therefor, a power shaft mounted externally of the curtain roller and a manual shaft, a pair of clutching members and gearing connecting said clutching members and also engaged with the curtain roller, and a second pair of clutching members one of which is engaged to be rotated by the power shaft, said last named clutch members connected with and to be moved by the manual shaft to operatively connect either the power shaft or the manual shaft with the curtain roller.

3. In combination with a curtain and roller therefor, a power shaft and a manually-operable shaft adapted to be moved vertically, clutching devices and gearing for operatively connecting either of said shafts with the curtain roller, said clutches being operated by the vertical movement of the manual shaft to effect the operative connection of itself or the power shaft with the curtain roller, and a member operating in connection with said manual shaft having three seats for sustaining the manual shaft in the positions effecting such connections or in a neutral position, substantially as described.

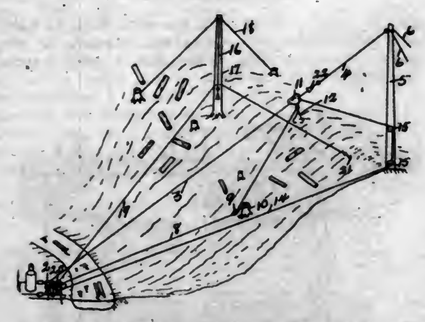
4. In combination with a group of curtains and rollers therefor, a power shaft common to all the rollers of the group, a pair of clutching members for each of said curtains, gearing connecting said clutching members with the curtain roller, a second pair of clutching members and means connecting them, a manual shaft connected with one of the last mentioned clutching members and adapted to move it into engagement with one of the first mentioned

clutch members and the other of the last mentioned pair into engagement with the other of said first mentioned clutch members.

5. In combination with a curtain and roller therefor, a horizontal power shaft and vertical manual shaft, and a gear 21 on the roller, a train of gearing including gears 23, 23^a, 24^a, 24 and 25, the gear 23 meshing with roller gear 21, clutch members respectively on the power shaft and turning with the gear 25, and clutch members operable by the manual shaft to operatively connect through one of the first mentioned clutch members either the power shaft or the manual shaft with the roller, substantially as shown and described.

[Claims 6 to 15 not printed in the Gazette.]

1,019,170. LOGGING SYSTEM. CHARLES E. MACFARLANE, Portland, Oreg. Filed June 29, 1911. Serial No. 636,060. (Cl. 214—14.)



1. In a logging system, the combination of a main line; a main line drum operating the main line; a trolley on the main line; a side line secured to the trolley for deflecting the main line to bring the trolley to a log; and a side line drum for operating the side line.

2. In a logging system, the combination of a main line; a main line drum operating the main line; a trolley on the main line; a side line secured to the trolley for deflecting the main line to bring the trolley to a log; a mounting for said side line to adapt it to act as a boldback for the trolley; and a side line drum for operating the side line.

3. In a logging system, the combination of a main line; a main line drum operating the main line; a trolley on the main line; a stop on the main line for locating the trolley; a side line secured to the trolley for deflecting the main line to bring the trolley to a log; and a side line drum for operating the side line.

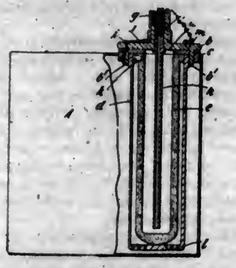
4. In a logging system, the combination of a main line; a stub line to which the main line is detachably attached; a main line drum operating the main line; a trolley on the main line; a side line secured to the trolley for deflecting the main line to bring the trolley to a log; and a side line drum for operating the side line.

5. In a logging system, the combination of a main line; a main line drum operating the main line; a trolley on the main line; a side line secured to the trolley for deflecting the main line to bring the trolley to a log; a side line drum for operating the side line; a hold back line for controlling the trolley; and a hold back drum for operating the hold-back line.

[Claims 6 and 7 not printed in the Gazette.]

1,019,171. WATER-BOTTLE OR WATER-BAG. AUGUSTA MERIEL MELVILLE-HAMILTON, Medindie, South Australia, Australia. Filed Sept. 10, 1910. Serial No. 581,400. (Cl. 221—93.)

1. A water bottle having a filter, and a suction tube within the filter, the relative sizes of the filter and tube being such as to form a chamber for the accumulation of filtered liquid, said tube communicating with said chamber only near the bottom thereof, whereby the accumulation of filtered liquid may be removed by suction.



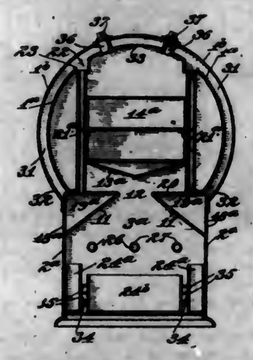
2. A water bottle comprising a body portion having a large filling aperture, a removable cover having a depending wall engaging with said filling aperture, an air vent being provided in said cover, a nozzle on said cover, a cap for closing said air vent and nozzle, and a continuous suction tube connected to said nozzle and extending approximately to the bottom of the water space of the bottle, said tube having an inlet opening only at its lower end.

3. A water bottle comprising a body portion, a large filling aperture in said body portion, a removable cover having a depending wall engaging with said filling aperture, a nozzle on said covering, a perforated casing screwed to said cover and a filter tube arranged within said perforated casing for filtering the water passing through the nozzle.

4. A water bottle comprising a body portion having a large filling aperture, a removable cover having a depending wall engaging with said filling aperture, an air vent being provided in said cover, a nozzle on said cover, a cap for closing said air vent and nozzle, a perforated casing screwed to said nozzle, a filter tube arranged within said perforated casing and a tube arranged within said filter tube and extending to the bottom thereof.

5. A water bottle comprising a body portion having a large filling aperture, a removable cover having a depending wall engaging with said filling aperture, an air vent being provided in said cover, a nozzle on said cover, a cap adapted to close said air vent and secured to the nozzle by a bayonet joint, a perforated casing detachably screwed to said nozzle, a filter tube arranged within said perforated casing and a tube arranged within said filter tube and extending to the bottom thereof.

1,019,172. HEATING-STOVE. GEORGE L. MENK, St. Louis, Mo. Filed Apr. 3, 1911. Serial No. 618,760. (Cl. 126—6.)



1. A heating stove comprising a fire-box, a horizontally disposed heating drum above said fire-box and communicating therewith, an outer shell surrounding said heating drum and spaced therefrom, said outer shell having outlet openings therein on opposite sides near its bottom and said heating drum having an outlet opening at its top communicating with the space between said drum and outer shell, an air chamber directly adjoining said fire-box and said heating drum and being separated from each by a single wall, said air chamber having an air inlet open to the outside air, and a multiplicity of air tubes extending through said heating drum, said air tubes being non-communicating with respect to the heating drum, but communicating with said air chamber and the space between said heating drum and said outer shell.

2. A heating stove comprising a rectangular base shell, a heating drum mounted above said base shell and communicating therewith through an elongated contracted opening, a baffle mounted in said heating drum above said elongated contracted opening, an outer shell surrounding said heating drum and spaced therefrom, said outer shell having outlet openings on opposite sides near the top of said base shell and said heating drum having an outlet opening at the top thereof communicating with the space between said drum and outer shell, a fire-box in said base shell, air chambers on opposite sides of the fire-box directly adjoining it and also directly adjoining said heating drum, said air chambers being separated from said fire-box and heating drum by single walls and having air inlets open to the outside air, and a multiplicity of vertical air tubes extending through said heating drum, said air tubes being non-communicating with respect to said heating drum, but communicating at their lower ends with the respective air chambers and at their upper ends with the space between said heating drum and said outer shell.

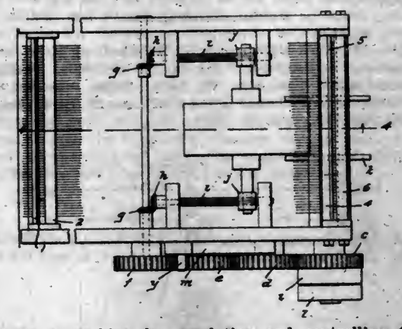
3. A heating stove comprising a fire-box, the upper portions of whose side walls are turned inwardly toward each other to provide an elongated contracted opening, a horizontally disposed heating drum mounted above said fire-box and communicating therewith through said elongated contracted opening, an outer shell surrounding said heating drum and spaced therefrom, said outer shell having outlet openings on opposite sides of said heating drum near the bottom thereof and said heating drum having an outlet opening at the top thereof communicating with the space between said drum and the outer shell, air chambers on opposite sides of said fire-box directly adjoining it and also directly adjoining said heating drum, one of the walls of said air chambers comprising the side wall of said fire-box and the other wall comprising the bottom of the heating drum, a multiplicity of vertical air tubes extending through said heating drum, said air tubes being non-communicating with respect to said heating drum, but communicating with the respective air chambers and also with the space between said heating drum and said outer shell.

1,019,173. YARN-WINDING MACHINE. ALFRED K. MILLER, Worcester, Mass., assignor of thirty one-hundredths to Ralph O. Ingram, Andover, Mass., and thirty one-hundredths to Henry L. Wadsworth, Boston, Mass. Filed May 10, 1911. Serial No. 626,149. (Cl. 28—14.)

1. In a machine for regulating and controlling the winding of woolen, worsted, cotton or other yarn upon a container, a gage mounted adjacent to the winding surface of such container, and mechanism for moving the gage away from the container as the yarn accumulates, to establish a given space into which each layer of yarn must wind.

2. In a machine for regulating and controlling the winding of woolen, worsted, cotton or other yarn upon a container, a gage device mounted adjacent to the winding surface of the container, to allow a given space for the first layer of yarn, means for moving the gage device away from the winding surface at a predetermined speed to give each accumulating layer of yarn a fixed amount of space in which to wind, and means whereby the size of such space may be regulated.

3. In a machine for regulating and controlling the winding of woolen, worsted, cotton or other yarn upon a container, a gage device with a lateral surface mounted adjacent to the winding surface of the container, and means to move such gage device away from the winding surface, to establish a predetermined space between the winding surface and the lateral surface of the gage in which each layer of yarn must wind.

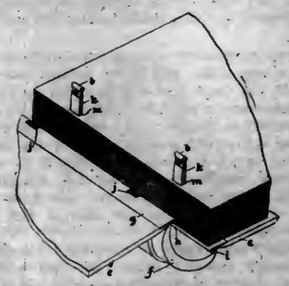


4. In a machine for regulating and controlling the winding of woolen, worsted, cotton or other yarn upon a container, a gage device with a lateral surface mounted adjacent to the winding surface of the container, means to move such gage device away from the winding surface at a predetermined rate to establish a diameter on the winding surface of the container equal at all points at any given number of revolutions of the container, and means for regulating such diameter.

5. In a machine for regulating and controlling the winding of woolen, worsted, cotton or other yarn upon a container, a gage placed adjacent to the winding surface of such container, a threaded shaft having threaded engagement with said gage, a device to revolve such shaft and move such gage device away from the container at a predetermined speed, to establish a fixed amount of space between the gage and the winding surface of the container in which each layer of yarn must wind, with means whereby the size of such space may be regulated.

[Claims 6 to 10 not printed in the Gazette.]

1,019,174. FLEXIBLE BINDER-POST. HENRY C. MILLER, Milwaukee, Wis. Filed Nov. 13, 1911. Serial No. 659,963. (Cl. 129—24.)



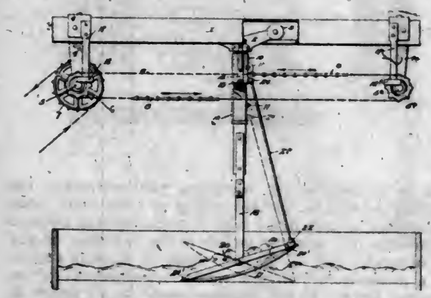
1. A nonextensible binder-post flexible in one plane only, comprising a thin metal strap, eyes upon the ends of said strap and facing-pieces of flexible and slightly extensible material on opposite sides of said strap.

2. A nonextensible binder-post flexible in one plane only, comprising a thin flat metal strap, a pair of members secured to the opposite ends of said strap, each of said members having an eye-shaped loop and a pair of flanges including the end of said strap between them, a pair of facing-pieces on opposite sides of said strap and a pair of rivets passing through the respective ends of said

strap, facing-pieces and flanges and securing them all together.

3. A nonextensible binder-post flexible in one plane only, comprising a thin metal strap, eyes upon the ends of said strap and facing-pieces of flexible and slightly extensible material on opposite sides of said strap, the outer sides of said facing-pieces being provided with metalline surfaces.

1,019,175. CARRIER. JAY W. MOORE, Gays Mills, Wis., assignor to Stoelting Brothers Co., Kiel, Wis. Original application filed Jan. 10, 1911, Serial No. 601,911. Divided and this application filed June 29, 1911. Serial No. 636,119. (Cl. 31—22.)



1. A carrier comprising a track, a trolley mounted thereon having a depending shank, an endless belt disposed parallel with the track, a shackle carried by the belt in slidable engagement with the trolley-shank, a device fulcrumed to the shank, and a reversing link connecting the device and shackle, whereby the position of the device is changed incidental to movement of the shackle.

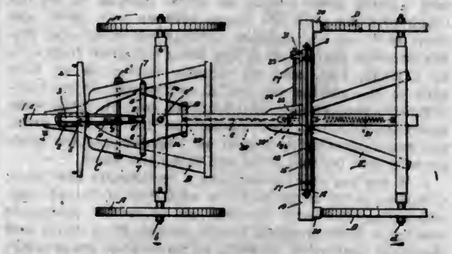
2. A carrier comprising a track, a trolley mounted thereon having a depending shank, an endless belt disposed parallel with the track, a shackle carried by the belt in slidable engagement with the trolley shank, an agitating device suspended from the carrier, and a reversing link connecting the agitating device and shackle whereby the position of the agitating device is changed incidental to movement of the shackle.

3. A device of the character described comprising a track-supported carrier, an agitator fulcrumed to said carrier, and a reversing mechanism connecting the agitator and driving belt whereby the inclination of said agitator is changed, and a lock and release means for the reversing mechanism.

4. A carrier comprising a track, a trolley mounted thereon having a depending shank, an endless belt disposed parallel with the track, a shackle carried by the belt in slidable engagement with the trolley shank, an agitating device fulcrumed to the shank, a reversing link connecting the agitating device and shackle, whereby the position of the agitating device is changed incidental to movement of the shackle, means for locking the shackle to the trolley-shank in its changed position, and fixed releasing means for engagement with the shackle lock disposed adjacent to the belt turns.

5. A carrier comprising an inverted U-shaped track having inturned edges, a trolley provided with wheels adapted to engage the inturned edges of the track, a shank extending from the trolley, an endless belt disposed parallel with and under the track, a shackle sleeve carried by the belt in slidable engagement with the trolley-shank, an agitating device fulcrumed to said trolley-shank, a reversing link connecting the agitating device and shackle, whereby the position of the agitator is changed incidental to movement of the shackle, means carried by the aforesaid trolley-shank for locking the shackle at different elevations upon the shank, whereby the agitator is secured in its changed position, and means carried by the track adjacent to the belt turns for effecting release of the locking means.

1,019,176. WAGON-BRAKE. THOMAS N. MOORE, Coleman, Okla. Filed June 7, 1911. Serial No. 631,866. (Cl. 21—9.)



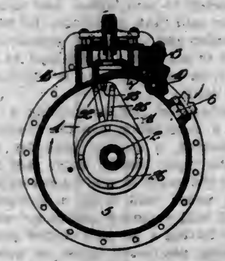
1. The combination, with a frame, an axle, and road wheels; of a brake-beam suspended from the said frame and provided with brake-blocks, a spring for pressing the brake-blocks on the said wheels, a rock-shaft pivotally supported from the brake-beam, a plate secured to the rock-shaft and provided with a slot, a spring normally holding the said plate with the inner end of its slot in advance of its outer end, a brake-releasing rod provided with a pin which is slidable in the said slot and which normally engages with its inner end, means for limiting the forward movement of the said rod, and a lever secured to the rock-shaft and adapted to move the outer end portion of the said slot to a position in advance of its inner end to neutralize the action of the brake-releasing rod in an emergency.

2. The combination, with a front frame provided with a draft-pole, a front axle, and front road wheels; and a rear frame provided with a reach connected to the front frame, a rear axle, and rear road wheels; of a brake-beam suspended from the rear frame and provided with brake-blocks, a spring for pressing the brake-blocks on the rear wheels, a brake-releasing rod operatively connected with the brake-beam at a point below the reach, a guide secured to the said draft-pole, a bar slidable longitudinally in the said guide, a draft appliance connected to the said bar, levers having their outer ends pivoted to the sides of the front frame, connections between the adjacent ends of the said levers and the said bar, an equalizing bar arranged below the said reach and having its middle part pivoted to the front end portion of the brake-releasing rod, and connections between the middle parts of the said levers and the end portions of the said equalizing bar.

3. The combination, with a front frame provided with a draft-pole, a front axle, and front road wheels; and a rear frame provided with a reach connected to the front frame, a rear axle, and rear road wheels; of a brake-beam suspended from the rear frame and provided with brake-blocks, a spring for pressing the brake-blocks on the rear wheels, a rock-shaft pivotally supported from the brake-beam, a plate secured to the rock-shaft and provided with a slot, a spring normally holding the said plate with the inner end of its slot in advance of its outer end, a brake-releasing rod provided with a pin which is slidable in the said slot and which normally engages with its inner end, a guide secured to the said draft-pole, a bar slidable longitudinally to a limited extent in the said guide, a draft appliance connected to the said bar, levers having their outer ends pivoted to the sides of the front frame, connections between the adjacent ends of the said levers and the said bar, and connections between the middle parts of the said levers and the front end of the brake-releasing rod.

1,019,177. INTERNAL-COMBUSTION ROTARY ENGINE. ROLLA R. MORTON, Fresno, Cal. Filed Feb. 25, 1909. Serial No. 480,049. (Cl. 123—15.)

1. In a rotary engine, a casing having inter-communicating compression, explosion and expansion chambers, means rotatable in said compression chamber for pressing an elastic fluid into the explosion chamber, a rotary piston in the expansion chamber, and mechanical means operative by the exploding gases for impelling said piston during a portion of its revolution, said means including an actuator engaging the piston and separating the explosion chamber from the expansion chamber and communicating the initial force of the exploded gases to said piston.



2. An internal combustion engine, comprising a circular water-jacketed casing inclosing a compression chamber and an expansion chamber, a shaft suitably journaled in said casing and carrying pistons for said chambers, an intermediate explosion chamber, an igniter located in said explosion chamber, and hinged abutments between the explosion chamber and the compression chamber and between said explosion chamber and the expansion chamber, one of said abutments closing communication between the explosion chamber and the expansion chamber and operating inwardly directly against the piston of the expansion chamber to assist the action of the exploded gases in propelling said piston.

3. In a rotary engine, a circular casing, a shaft concentric therewith, a cam-shaped piston mounted upon the shaft within the casing, a curved oscillating abutment having its axis exterior to the inner periphery of the casing, means by which the free end of said abutment is held in engagement with the piston hub, an intake passage in the casing upon one side of the abutment, an explosion chamber connected with the casing at the other side of the abutment, a check-valve in said connection through which a charge is forced into the explosion chamber, means within the explosion chamber by which the compressed charge is ignited, an expansion chamber into which the ignited charge is delivered, an actuator adapted to cut off the explosion chamber from the expansion chamber, said actuator being operated inwardly by the pressure of the exploded gases, and a piston on said shaft within the expansion chamber against which the pressure is exerted.

4. In a rotary engine, a casing, a shaft concentric therewith, a hub on the shaft having a piston projecting and revoluble against the interior periphery of the casing, a hinged abutment having its axis exterior to the inner periphery of the casing, means by which the free end of said abutment is held in engagement with the hub, said piston having a cam-shape by which the abutment is raised to allow the piston to pass, an intake passage in the casing upon one side of the abutment, a discharge passage upon the other side closable when the abutment is forced outward by the passage of the piston, an explosion chamber into which a charge is compressed by the action of said piston, a check-valve to prevent the return of the charge, means within the explosion chamber for igniting the charge, an expansion chamber within which the exploded charge is allowed to act, and a hinged abutment between the explosion chamber and the expansion chamber and adapted to cut off the former from the latter, said abutment adapted to be forced inwardly against the piston by the exploded charge to open communication between the explosion and expansion chambers and to assist the gases of the exploded charge to rotate said piston.

5. In a rotary engine, a casing having a circular compression chamber, with rotary piston and abutment, intake and discharge ports, an explosion chamber, a check-valve between the two chambers adapted to prevent the return of the charge to the compression chamber, an igniter in said explosion chamber, a circular expansion chamber having a concentric shaft, a hub and a piston carried by the shaft, said piston fitting the interior of the casing of the expansion chamber, a swinging abutment having its axis exterior to the inner periphery of the casing, and its inner edge in contact with the piston hub to form a chamber within which the expanded gases may act upon the piston and revolve the shaft, said abutment adapted to cut off communication between the explosion chamber and the expansion chamber, and opening inwardly under the pressure of the exploded charge to open communication between the explosion chamber and the expansion chamber and to assist the gases of the exploded charge in propelling said piston.

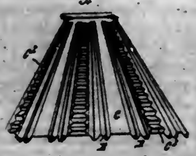
[Claims 6 and 7 not printed in the Gazette.]

1,019,178. RAIL-JOINT. LOUIS MUELLER, Owosso, Mich. Filed Sept. 8, 1910. Serial No. 580,988. (Cl. 239—10.)



In a rail joint, the combination with the meeting ends of the rails, of a tie plate on which the rails rest and which crosses beneath said joint, the ends of said plate having longitudinally extending projecting shoulders, splice bars upon opposite sides of the rails and crossing the joint between the ends thereof, said bars having narrow terminals which lie between the longitudinal faces of the shoulders of the tie plate and the web of the rail, and having flanges at the center which embrace the opposite margins of the tie plate, the ends of said flanges having terminal engagement with the inner ends of the shoulders on said plate, a transverse bolt connecting the flanges of the splice bars below the tie plate, and means for securing the splice bars in position across the rail joint.

1,019,179. COMPOUND SHADE-REFLECTOR OF GLASS. OTIS A. MYGATT, New York, N. Y. Filed July 14, 1905. Serial No. 269,715. (Cl. 240—106.)



1. A glass shade-reflector having an open mouth, provided with reflecting prisms disposed longitudinally and adapted to reflect light rays back and out of the open mouth of the reflector, and ribs interposed between the longitudinal sides of said prisms.

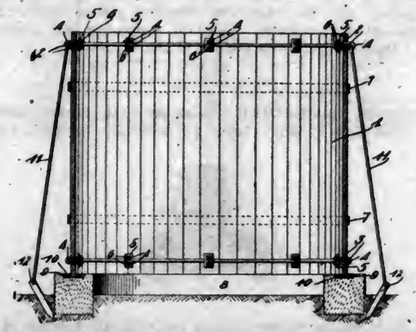
2. A shade-reflector having an open mouth, provided with radial reflecting prisms for reflecting light rays back into and out of the open mouth of the reflector, and light transmitting ribs interposed between the longitudinal sides of the prisms.

3. A glass shade-reflector having an open mouth, provided with radial reflecting prisms for reflecting light rays back into and out of the open mouth of the reflector, and light transmitting surfaces interposed between the longitudinal sides of said prisms.

4. A glass shade-reflector having an open mouth, provided with radial reflecting prisms for reflecting light rays back into and out of the open mouth of the reflector, and circumferential ribs interposed between the longitudinal sides and substantially at right angles to said prisms.

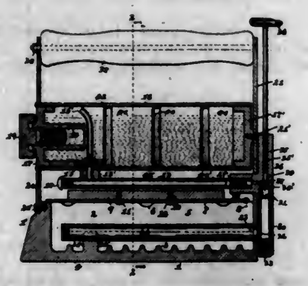
5. A glass shade-reflector having an open mouth, provided with radial reflecting prisms for reflecting light rays back into and out of the open mouth of the reflector, and light directing transverse surfaces interposed between the longitudinal sides of the prisms.

1,019,180. SILO. PAUL B. NAYLOR, Kansas City, Mo. Filed June 12, 1911. Serial No. 632,629. (Cl. 72—8.)



The herein described silo comprising a cylindrical body consisting of upright wooden staves and means for holding them together, a foundation of concrete formed in the shape of a ring rising partly above the surface to the ground and having in its upper edge an annular groove wider than the thickness of said staves, the lower end of the body resting in the body of said groove between its side walls, and a sealing compound in the groove between both sides of the staves and the walls of the groove.

1,019,181. SAD-IRON. HARRY C. NEEL, Dravosburg, and JOHN B. HATFIELD, Alexandria, Pa. Filed Jan. 27, 1911. Serial No. 605,065. (Cl. 158—23.2.)



1. A self-heating sad iron comprising a body or base provided with a combustion chamber therein, a burner within said chamber, a storage tank for the fluid and generation of the vapor therein above said body, an auxiliary generator connected to said burner and tank and positioned between said tank and the top of said chamber, and means between the top of said chamber and said generator for regulating the amount of heat to said tank.

2. A self-heating sad iron comprising a body or base provided with a combustion chamber therein, a burner within said chamber, a storage tank for the fluid and generation of the vapor therein above said body, an auxiliary generator connected to said burner and tank and positioned between said tank and the top of said chamber, and movable means between the top of said chamber and said generator for regulating the amount of heat to said tank.

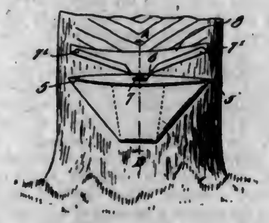
3. A self-heating sad iron comprising a body or base provided with a combustion chamber therein, a burner within said chamber, a storage tank for the fluid and generation of the vapor therein above said body, an auxiliary generator connected to said burner and to said tank and positioned under said tank, a movable lid fitting over the top of said chamber and under said generator, and a regulator connected to said lid and adapted to be positioned under or away from said generator to regulate the amount of heat to said tank.

4. A self-heating sad iron comprising a body or base provided with a combustion chamber therein, a burner within said chamber, a storage tank for the fluid and generation of the vapor therein above said body, an auxiliary generator connected to said burner and to said tank and positioned under said tank, a movable lid fitting over the top of said chamber and under said generator, and a regulator having a pin and slotted connection with said lid for being positioned under or away from said generator to regulate the amount of heat to said tank.

5. A self-heating sad iron comprising a body or base provided with a chamber therein, a burner within said chamber, a tank for the fluid and generation of the same above said body, an auxiliary generator connected to said chamber and tank, and partitions within said tank for dividing the same into compartments and provided with holes in their tops and bottoms for the passage of the fluid through the same.

1,019,182. [WITHDRAWN.]

1,019,183. TURPENTINE-CUP. DEMARIAN L. O'NEAL, Valdosta, Ga. Filed July 26, 1911. Serial No. 640,718. (Cl. 47—40.)



1. A turpentine cup formed in a single blank of sheet metal folded longitudinally to form front and rear walls, the sides of the blank being bent along diagonal lines to form triangular folds bearing upon the back wall, a flap formed along the upper edge of the back wall and lapping and holding the triangular folds, and clips formed by the ends of the flap and engaging the front wall at the sides thereof.

2. A turpentine cup formed in a single blank of sheet metal folded to form front and rear walls merging together along curved lines, the sides of the blank being folded along diagonal lines to form triangular folds bearing upon one wall of the cup a flap for holding the folds against gaping, and clips formed by the ends of the flap for engaging the sides of the cup to secure the flap in holding position.

1,019,184. HINGE. PETER A. PETERSON, New Hyde Park, N. Y. Filed June 15, 1911. Serial No. 633,327. (Cl. 16—112.)

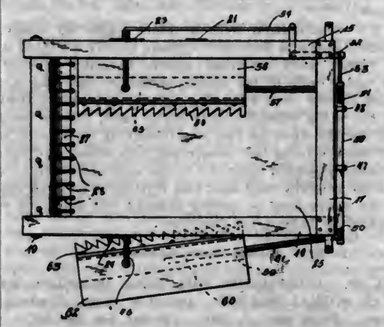
The combination with a door jamb having a plurality of openings therein, of a plate secured to one side of said jamb having a plurality of threaded openings registering respectively with the openings in the jamb, a hinge formed of a pair of pivotally connected sections, one of which latter is provided with means for attachment to a door and

the other provided with a plurality of openings adapted to register with respective openings in the jamb, screws extending through certain registering openings of the last named hinge section, jamb, and plate and having their heads disposed exteriorly of the hinge section, and screws



extending through the remaining registering openings of said hinge section, jamb and plate, said last named screws having lateral flanges disposed between the hinge section and the jamb and bearing against the inner face of said hinge section.

1,019,185. FEEDER AND GRIT-SEPARATOR. LOUIS A. PROCHNOW, Ann Arbor, Mich. Filed Jan. 26, 1911. Serial No. 604,863. (Cl. 130—2.)

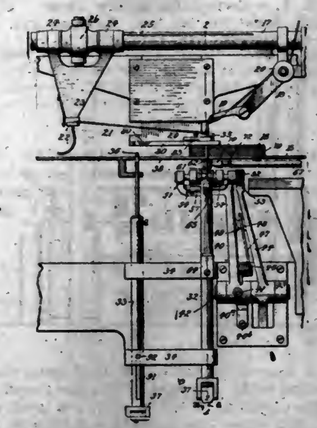


1. In a device of the character described, the combination of a frame, a feed pan supported by said frame, a vertical shaft mounted in said frame, a crank arm on said shaft, a feeding sweep having one end pivotally connected to said crank arm, whereby the movement of said crank arm will effect a movement of one end of the feed sweep longitudinally and transversely of the feed pan, means for effecting a movement of the other end of the feeding sweep transversely of the feed pan similar to the movement of the first named end of the feeding sweep under the influence of the crank arm on said vertical shaft and means for rotating said vertical shaft.

2. In a device of the class described, the combination of a frame, a feed pan supported by said frame, a vertical shaft mounted in said frame, a bar mounted on said frame for a sliding movement transversely of the latter, a crank arm on said shaft, a feeding sweep having one end pivotally connected to said crank arm, connections between the other end of said feeding sweep and the sliding bar, whereby the movements of said bar effect a movement of the last named end of the feeding sweep transversely of the feed pan similar to the movement of the first named end of the feeding sweep under the influence of the crank arm on said shaft, and means for effecting the simultaneous rotation of the shaft and sliding of the bar.

3. In a device of the class described, the combination of a frame, a feed pan supported by said frame, a pair of vertical shafts mounted in said frame, a bar mounted on said frame for a sliding movement transversely of the latter, a crank arm on each of said shafts, a pair of feeding sweeps each having one arm connected to a respective crank arm of one of said shafts, connections between the other end of each feeding sweep and the adjacent end of the sliding bar, whereby the movements of said bar will effect a movement of the last named end of each feeding sweep transversely of the feed pan similar to the movement of the first named end of each feeding sweep under the influence of the crank arm to which said feeding sweep is pivoted, and means for effecting the simultaneous rotation of each of said shafts and sliding of the bars.

1,019,186. BAG-LOOPING MACHINE. HORACE L. ROBERTS, New York, N. Y. Filed Oct. 25, 1910. Serial No. 589,017. (Cl. 112—41.)

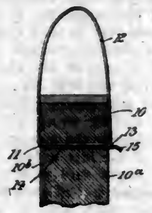


A bag looping machine comprising a flat table adapted to support a batch of bags, a coöperating presser foot having an L-shaped extension and an intervening recess adapted to compress that section of the bag-batch to which the loop is to be applied, a cutter secured to said extension and obliquely traversing the recess, a vertically reciprocative single needle adapted to pierce a single hole through the compressed bag-section and draw a thread through said hole, a spreader, a looper, a vertically reciprocative hook adapted to draw the thread over the spreader and present it to the looper, means coöperating with the looper for uniting the thread ends, whereby a loop is formed, the bight of which extends beyond the bags to constitute a hanger therefor, and a notched slotted pusher adapted to straddle the cutter and carry the thread forward into engagement therewith.

1,019,187. PAPER-BAG-SUSPENDING MEANS. HORACE L. ROBERTS, Brooklyn, N. Y. Original application filed Oct. 25, 1910, Serial No. 589,017. Divided and this application filed Feb. 7, 1911. Serial No. 607,039. (Cl. 206—57.)

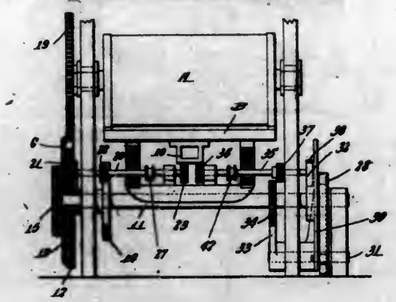
A package of paper bags having alined perforations in proximity to the open ends of said bags, combined with a knotted string passing through the bag-perforations and having an expanded bight that extends beyond the bags and constitutes a hanger from which the bags may be singly torn off, the string knot being placed closely against one of the flanking bags with one of the string ends extending into said perforations and terminating at a dis-

tance back of the other flanking bag, whereby said end is rendered inaccessible while the friction of the string



within the bag perforations is increased to maintain the contiguity between the knot and its flanking bag.

1,019,188. MECHANICAL MOVEMENT. CHARLES J ROBERTSON, Taunton, Mass., assignor, by mesne assignments, to The Autoplate Company of America, Jersey City, N. J., a Corporation of New Jersey. Filed May 25, 1905, Serial No. 262,128. Renewed Aug. 5, 1909. Serial No. 511,452. (Cl. 101—158.)



1. In a mechanical movement, the combination of a reciprocating member, a main driving mechanism for imparting the movement thereto at a uniform speed, a revolving cam, and connections actuated therefrom so that the cam will slow down, stop and start the member in the opposite direction at both ends of its travel, the time of the uniform speed movements being equal to the time of the slowing down, stopping and starting movements imparted from the cam.

2. In a mechanical movement, the combination of a reciprocating member, a shaft making two revolutions for each complete reciprocation thereof, a main driving mechanism for imparting motion to the member at a uniform speed, and a cam actuated reversing mechanism, the main driving mechanism acting alternately with the reversing mechanism and each action taking a half revolution of said shaft.

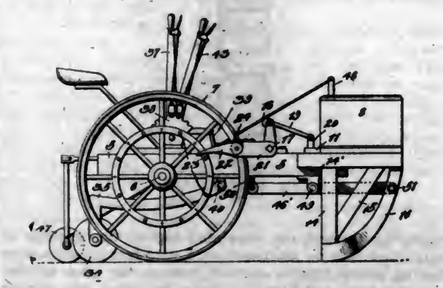
3. In a mechanical movement, the combination of a reciprocating member, a partial internal gear and a partial external gear, a shaft carrying pinions for engagement therewith and geared to the member, and means for shifting said shaft axially to make up a main driving mechanism.

4. In a mechanical movement, the combination of a reciprocating member, means for giving the same its constant speed movements, and a reversing mechanism comprising a cam, a direct and change motion connection therefrom whereby the same part of the cam can act to reverse the bed at each end of its travel.

5. In a mechanical movement, the combination of a reciprocating member, a main driving mechanism therefor, and a reversing mechanism comprising rocking segments, means for using one segment to reverse the bed at one end of its travel, and means for using the other segment to reverse the bed at the other end of its travel, the said two means being oppositely arranged relatively to the segments so that the same relative movement of the segments will be used for both reversing movements of the bed.

[Claims 6 to 11 not printed in the Gazette.]

1,019,189. COMBINED PLANTER AND FERTILIZER-DISTRIBUTER. JOSEPH HORLIN ROBINSON and LILLARD FILSON ROBINSON, Adams, Tenn. Filed Sept. 7, 1911. Serial No. 648,026. (Cl. 111—6.)



1. The combination with a wheel supported frame, of seed and fertilizer hoppers rigidly mounted upon opposite ends of said frame, seed and fertilizer receiving spouts arranged beneath the frame, the seed receiving spout being hingedly secured at its upper end to said frame, and means mounted upon said frame to swing said depositing spouts to an inoperative position beneath the hoppers.

2. The combination with a wheel supported frame, of combined seed and fertilizer hoppers rigidly mounted upon said frame, seed receiving spouts hingedly secured at their upper ends to the frame, fertilizer receiving spouts carried by the seed receiving spouts and communicating with the same adjacent their lower ends, furrow opening shoes rigidly fixed to the seed receiving spouts at their lower ends, a cross bar connecting said shoes, and operating means mounted upon the frame and connected to said cross bar whereby said seed and fertilizer receiving spouts and the shoes may be swung beneath the frame to their operative or inoperative positions.

1,019,190. COMPOUND FOR TIME BURNING RAILWAY SIGNAL-FUSEES. LOUIS S. ROSS, Newtonville, Mass. Filed Dec. 7, 1911. Serial No. 664,387. (Cl. 52—6.)

1. A time burning railway signal fusee comprising a metallic nitrate, sulfur, a carbohydrate, chlorate of potassium and a small quantity of carbonate, producing a time burning railway signal fusee compound burning with brilliancy and force of flame for the purpose stated, and which is not subject to spontaneous ignition.

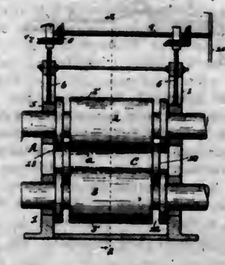
2. A time burning railway signal fusee comprising a metallic nitrate, sulfur, a carbohydrate, chlorate of potassium, and a small quantity of calcium carbonate, producing a time burning railway signal fusee compound burning with brilliancy and force of flame for the purpose described, and which is not subject to spontaneous combustion.

3. A time burning railway signal fusee comprising a metallic nitrate, sulfur, a carbohydrate and chlorate of potassium, and an ingredient mixed therewith and constituting a neutralizing agent to the acid reaction of the sulfur and chlorate of potassium, said fusee compound burning with brilliancy and force of flame for the purpose described and not subject to spontaneous combustion.

4. A time burning railway signal fusee containing sulfur, chlorate of potassium and a percentage of acid-neutralizing carbonate less than the sulfur and insufficient in quantity to retard combustion.

5. A time burning railway signal fusee including sulfur, chlorate of potassium, a metallic nitrate and a small percentage of acid-neutralizing carbonate, said fusee burning with brilliancy and force of flame and not subject to spontaneous combustion.

1,019,191. TREATING METAL ARTICLES. JAMES C. RUSSELL, Pittsburgh, Pa. Filed Apr. 29, 1911. Serial No. 624,193. (Cl. 22—216.)



1. The herein described method of treating metal ingots to prevent segregation and the injurious action of the pipe formed therein, which comprises the steps of forming the ingot circular in cross-section, and then applying pressure to the side of such ingot to reduce the same and force the gases therefrom while rotating the ingot about its longitudinal axis.

2. The herein described method of treating metal ingots to prevent segregation and the injurious action of the pipe formed therein, which comprises the steps of forming the ingot into conical shape and circular in cross-section, and then applying pressure to the side of such ingot to reduce the same and force the gases therefrom through its sides while rotating the ingot about its longitudinal axis.

3. The herein described method of treating metal ingots to prevent segregation and the injurious action of the pipe formed therein, which comprises the steps of forming the ingot into conical shape and circular in cross-section, and then applying pressure to the side of such ingot to reduce the same and force the gases therefrom through the sides and smaller end of the same while rotating the ingot about its longitudinal axis.

4. The herein described method of treating metal ingots to prevent segregation and the injurious action of the pipe formed therein, which comprises the steps of forming the ingot into conical shape and circular in cross-section, and then applying pressure to the side of such ingot to reduce the same to a uniform diameter and force the gases therefrom through the smaller end of the same.

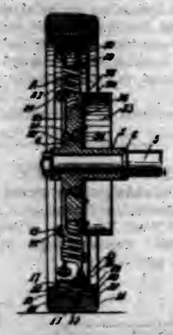
5. The herein described method of treating metal ingots to prevent segregation and the injurious action of the pipe formed therein, which comprises the steps of forming the ingot circular in cross-section, and then applying pressure to the side of the ingot to reduce the same and force the gases therefrom and while the ingot is being subjected to a spining movement about its longitudinal axis.

[Claims 6 to 12 not printed in the Gazette.]

1,019,192. VEHICLE-WHEEL. ADOLPH SCHICK, Wheeling, W. Va. Filed Oct. 20, 1910. Serial No. 588,102. (Cl. 152—28.)

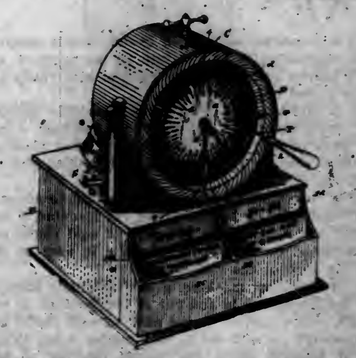
1. A spring wheel comprising in combination, a rim, a hub having a peripheral flange, and spring steel spokes coiled intermediate the ends and having the outer ends connected to the rim and the inner ends alternately disposed on either side of and connected to the hub flange, said end portions extending from diametrically opposite points of the coils, and disposed in planes parallel with the axis of the coil.

2. A spring wheel comprising in combination, a rim, a hub having a peripheral flange, said flange being provided with a series of transverse openings and a plurality of grooves extending radially from the openings to the periphery of the flange, said grooves being alternately disposed on opposite faces of the flange, spokes having their outer ends connected to the rim and their inner end portions seated within the grooves and the openings, and fastening means for the iner ends of the spokes.



3. A spoke formed of spring steel wire and coiled intermediate its ends, the end portions of the spoke extending from diametrically opposite points of the coil, and disposed in planes parallel to the axis of the coil.

1,019,193. MEMOGRAPH OR REMINDER-CLOCK. GUSTAV SCHNEIDER, CARL W. RUTENBECK, and HUGO HILL, Cleveland, Ohio. Filed Jan. 9, 1911. Serial No. 601,552. (Cl. 161—3.)



1. A reminder clock having a metallic disk provided with a series of radial slots, headed pins movably secured within said slots, a plate of insulating material to support said disk having annular rib on the front thereof bordering the edge of said disk, and a series of studs of insulating material having a thin contact strip mounted therein, in combination with the hour hand and minute hand of the clock and electric signal means electrically in circuit therewith and with said studs and said disk.

2. A reminder clock having a radially slotted disk and a series of contact pins movably mounted therein, a series of contact studs, and an annular rib encircling said disk intermediate said pins and studs, in combination with an hour hand and minute hand adapted to contact with said pins and studs respectively to close an electric signal circuit, and a spring device to constantly press said hour hand laterally in riding engagement with said annular rib.

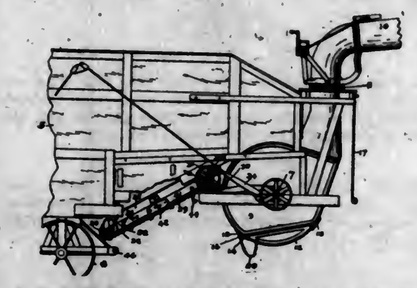
3. In a reminder clock, a face plate provided with radially disposed slots and an annular rib of insulating material projecting at the front of said plate and headed pins slidably mounted in said slots, and an hour hand adapted to slidably engage said rib and to contact with said pins according to the positions of the pins in said slots.

4. In a reminder clock, a face plate having radially arranged slots uniformly spaced apart and pins slidable in said slots having rounded heads provided with central cavities adapted to be engaged by a pointed instrument to move said pins back and forth.

5. In a reminder clock, a face having a series of rounded projections of insulating material radially thereof, said projections having therein metallic strips centrally therein for electrical contact, in combination with a minute hand having a beveled head adapted to ride over said rounded projections to momentarily contact with said strips.

[Claim 6 not printed in the Gazette.]

1,019,194. THRESHING-MACHINE. HARVEY T. SEBURN, Indianapolis, Ind., assignor, by mesne assignments, to The Indiana Manufacturing Company, Indianapolis, Ind., a Corporation of West Virginia. Filed Sept. 7, 1909, Serial No. 516,368. Renewed Sept. 23, 1911. Serial No. 650,991. (Cl. 130—21.)



1. In a threshing machine, a cavings-riddle adapted to be slid longitudinally in and out of the machine and a movable carrier normally in the path of said riddle adapted to be moved out of said path.

2. In a threshing machine, a cavings-riddle adapted to be slid longitudinally in and out of the machine, a carrier in the path of said riddle said carrier being constructed in sections whereby it is adapted to be folded out of the path of the riddle.

3. In a threshing machine, a cavings-riddle adapted to be slid longitudinally in and out of the machine, a revoluble shaft, and a carrier in the path of said riddle swingingly mounted on said shaft whereby it may be moved out of the path of the riddle.

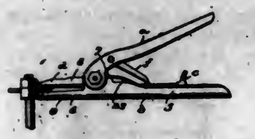
4. In a threshing machine, a cavings-riddle adapted to be slid longitudinally in and out of the machine, a revoluble shaft, and a carrier in the path of said riddle swingingly mounted on said shaft, said carrier being in a plurality of sections which are hinged together to permit folding.

5. In a threshing machine having a pneumatic stacker and a blower, the combination therewith of a cavings-riddle adapted to be slid longitudinally in and out of the machine, a blower casing the lower part of which is in the path of said riddle, said lower part being separable from the upper part, whereby it may be moved out of the path of the riddle and a carrier communicating with said riddle and said blower for conveying material to the latter from said riddle.

[Claims 6 and 7 not printed in the Gazette.]

1,019,195. PIN-REMOVER. CLARENCE ZENO SMITH, Atlanta, Ga. Filed Jan. 19, 1911. Serial No. 603,571. (Cl. 29—36.1.)

1. The herein described implement for withdrawing cotter pins comprising a body having at one end spaced bearing members, adapted to receive between them the head of a cotter pin, and having its other end forming a handle, a second handle member pivotally connected at one end with the body, a draw bar supported by the body to move between the bearing members thereof and provided at its end that moves between said members with means to engage the head of a cotter pin, said bar having a series of teeth arranged on the opposite side of the axis of the pivot of the second handle member from said pin engaging means, and a feed pawl attached to the pivoted handle member and engaging said teeth.



2. The herein described implement for withdrawing cotter pins comprising a body formed with a longitudinally extending groove or channel that extends through one end thereof, a handle member pivotally connected at one end with the body and extending rearwardly over said groove, a toothed draw bar supported in the groove in the body and having at one end means for engaging the head of a cotter pin, and a feed pawl connected to the pivotally mounted handle member and engaging the teeth of the draw bar.

3. The herein described implement for withdrawing cotter pins comprising an elongated body, one end of which is adapted to be placed in contact with the article from which the pin is to be withdrawn, a toothed draw bar of less length than the body supported by the latter to move longitudinally thereof and provided at one end with means for engaging with the head of a cotter pin, and a handle member pivotally connected at one end with the body and provided at an intermediate point in its length with a pawl that engages the teeth of the draw bar.

4. The herein described implement for withdrawing cotter pins comprising a body having one end bifurcated to form two bearing members adapted to receive between them the head of a cotter pin, one of said bearing members being tapered toward its free end, whereby it may be utilized to spread the limbs of a cotter pin, a toothed draw bar supported by the body to move between said bearing members and provided with means for engaging the head of a cotter pin inserted between said members, and a handle member pivotally connected with the body and provided with a pawl that engages the teeth on the draw bar.

5. The herein described implement for withdrawing cotter pins comprising two members, one having one end pivotally connected with ears that project laterally from the other member at an intermediate point in its length, a toothed draw bar supported by one of said members and provided at one end with means for engaging the head of a cotter pin, and a feed pawl connected with the other said member and engaging the teeth of the draw bar, whereby said bar may be moved longitudinally by rocking the pivotally mounted member about its fulcrum.

[Claim 6 not printed in the Gazette.]

1,019,196. FOUNTAIN-PEN. EDWIN RUTHVEN SMITH, Paris, Tex. Filed May 19, 1910. Serial No. 562,228. (Cl. 120—46.)

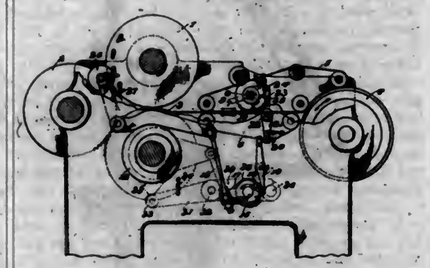


1. A fountain pen structure embodying a handle having an opening in its side wall; a compressible reservoir in the handle; and a member protruding through the opening and extended longitudinally of the handle, upon both sides of the opening, said member being bent where it passes through the opening, to permit the member to move in the opening, transversely of the handle, and to define a shoulder in said member, adapted to engage one wall of the opening, to limit the movement of said member longitudinally of the reservoir.

2. A fountain pen structure embodying a handle provided with an opening, an ink applying element mounted in the handle, a compressible reservoir within the the handle, and a resilient member extended through the opening to bear upon the reservoir, one end of the resilient member being adjustably connected with the ink-applying element to permit the resilient member to move freely in the opening.

3. A fountain pen structure embodying a handle provided with an opening, an ink applying element mounted in the handle, a compressible reservoir located within the handle, and a resilient member extended through the opening to bear upon the reservoir, there being a slot in the resilient member, and a securing element extended through said slot into engagement with the ink applying element, whereby the resilient member may be adjusted longitudinally of the fountain pen structure, to permit said resilient member to operate freely in the opening.

1,019,197. PRINTING-PRESS. WALTER H. SMITH, Niles, Ohio, assignor to The Harris Automatic Press Company, Niles, Ohio, a Corporation of Ohio. Filed Apr. 13, 1909. Serial No. 489,588. (Cl. 101—111.)



1. In a printing press having a shiftable cylinder, throw-off means therefor comprising a shaft, a spring connected to said shaft normally tending to turn the latter to shift said cylinder, a trip for holding such shaft in opposition to the action of said spring, means for releasing such trip to permit said shaft to turn under the action of its spring, and means for automatically restoring such shaft, as against the influence of its spring, to its normal position to be again held by said trip.

2. In a printing press having a shiftable cylinder, throw-off means therefor comprising eccentric bearings and a spring-impelled shaft to which said bearings are connected, a trip for normally restraining said shaft so as to hold said cylinder in its normal position, means for releasing such trip to permit said shaft to turn under the action of its spring, and means for automatically restoring said shaft to its normal position to be again held by said trip.

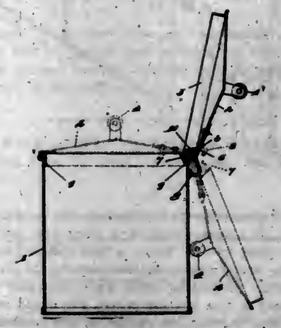
3. In a printing press having a shiftable cylinder, throw-off means therefor comprising eccentric bearings and a spring-impelled shaft to which said bearings are connected, a trip for normally restraining said shaft so as to hold said cylinder in its normal position, means for releasing such trip to permit said shaft to turn under the action of its spring, and means actuated by the revolution of said cylinder for automatically restoring said shaft to its normal position to be again held by said trip.

4. In a printing press having a shiftable cylinder, throw-off means therefor comprising eccentric bearings and a spring-impelled shaft to which said bearings are connected, a trip for normally restraining said shaft so as to hold said cylinder in its normal position, means for automatically releasing such trip in the event of any interruption in the feed supply so that said shaft may turn under the action of its spring, and means for automatically restoring said shaft to its normal position to be again held by said trip.

5. In a printing press having a shiftable cylinder, throw-off means therefor comprising eccentric bearings and a spring-impelled shaft to which said bearings are connected, a trip for normally restraining said shaft so as to hold said cylinder in its normal position, means actuated by the revolution of said cylinder for automatically releasing such trip in the event of any interruption in the feed supply so that said shaft may turn under the action of its spring, and means for automatically restoring said shaft to its normal position to be again held by said trip.

[Claims 6 to 19 not printed in the Gazette.]

1,019,198. CLOTHES-BOILER. FRANK A. SPEARS, Chicago, Ill. Filed May 17, 1911. Serial No. 627,670. (Cl. 220—22.)



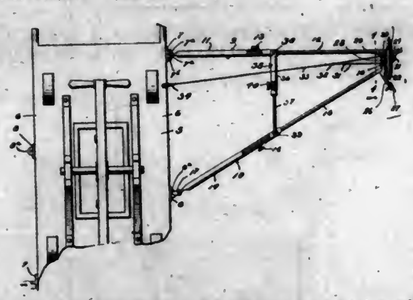
1. In a device of the character described, the combination of a receptacle open at its upper side; a cover for said receptacle; hooked members rigidly secured to said cover at one edge thereof adapted to detachably engage over the adjacent edge of said receptacle for hingedly securing said cover thereto, each of said hooked members comprising a shank; and inner and outer hooked portions formed integrally with said shank, said outer hooked portions being adapted when said inner hooked portions are in an engagement with said edge of said receptacle to engage against the outer side of the adjacent side of said receptacle to maintain said cover in upright position, said receptacle adjacent the upper edge thereof being slotted to afford clearance for said inner hooked portions when said cover is in closed position, substantially as described.

2. In a device of the character described, the combination of a receptacle open at its upper side; a cover for said receptacle; hooked members rigidly secured to said cover at one edge thereof adapted to detachably engage over the adjacent edge of said receptacle for hingedly securing said cover thereto, each of said hooked members comprising a shank; and inner and outer hooked portions formed integrally with said shank, said outer hooked portions being adapted when said inner hooked portions are in engagement with said edge of said receptacle to engage against the outer side of the adjacent side of said receptacle to maintain said cover in upright position, said receptacle adjacent the upper edge thereof being slotted to afford clearance for said inner hooked portions when said cover is in closed position, said outer hooked portions being adapted when in engagement with said edge of said receptacle to support said cover in suspended position, substantially as described.

3. In a device of the character described, the combination of a receptacle open at its upper side; a cover for said receptacle; double hooked members arranged on said cover at one edge thereof adapted to detachably engage over the adjacent edge of said vessel for hingedly securing said cover thereto, each of said hooked members compris-

ing inner and outer hooked portions, said outer hooked portions being adapted when said inner hooked portions are in engagement with said edge of said receptacle to engage against the outer side of the adjacent wall of said receptacle to maintain said cover in upright position, said outer hooked portions being adapted when in engagement with said edge of said receptacle to support said cover in snapended position, said vessel adjacent the upper edge thereof being slotted to accommodate said hooked members, substantially as described.

1,019,199. LINE-MARKER FOR RAILWAYS. THOMAS E. SUTTON, Climax, Ga. Filed Dec. 2, 1911. Serial No. 663,591. (Cl. 111—24.)



1. In a line marker for railways, the combination with a car body, of a frame including front and rear extensible arms connected to the body, a bar connecting the outer ends of the arms and arranged parallel to the car body, an outwardly projecting stub axle centrally secured to said bar, and a root cutting wheel journaled on said axle.

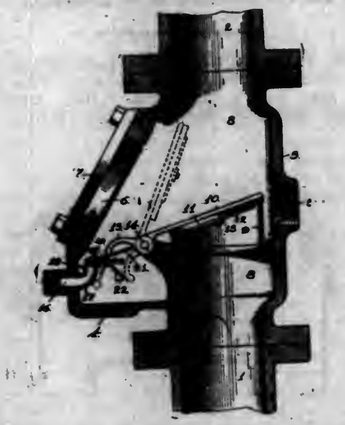
2. In a line marker for railways, the combination with a car body, of a frame including front and rear extensible arms pivotally connected to the body for vertical swinging movements, a bar pivotally connected at its ends to the outer ends of the front and rear arms of the frame and arranged parallel to the car body, an outwardly projecting stub axle centrally secured to said bar, a root cutting wheel journaled on said axle, and an earth marking tool connected to the bar and disposed in rear of said wheel.

3. In a line marker for railways, the combination with a car body, of front and rear arms pivotally connected to the body for vertical swinging movement, a bar connecting the outer ends of said arms, a root cutting wheel rotatably supported by said bar, a standard disposed in rear of the wheel and having its upper end forwardly bent and disposed upon the bar, an earth engaging tool carried by the lower end of the standard, means connecting the forward end of said standard to the bar, bolts connecting the forward end of the standards and the bar, clips carried by the bolts, cables each connected at one end to a respective clip, a third cable connected at one end to the free ends of the first mentioned cables, and a hand-piece carried by the free end of the third mentioned cable.

4. A line marker attachment for railway cars comprising a frame adapted for attachment to a car body to swing vertically, said frame including front and rear extensible arms, each arm including an inner tubular section and an outer telescopic rod section, means for fixedly securing the sections of each arm against longitudinal movement, an extensible brace connecting the outer ends of the inner sections of the arms, a bar connecting the outer ends of the telescopic rod sections, a root cutter carried by said bar, and an earth marking tool carried by the outer end of the frame and disposed in rear of the cutter.

5. A line marker attachment for railway cars comprising a frame adapted for attachment to a car body to swing vertically, said frame including front and rear extensible arms, each arm including an inner tubular section and an outer telescopic rod section, means for fixedly securing the sections of each arm against longitudinal movement, an extensible brace connecting the outer ends of the inner sections of the arms, a bar pivotally connected at its ends to the outer ends of the telescopic rod sections, an outwardly projecting stub axle centrally secured to said bar, a root cutting wheel journaled on said axle, a standard disposed in rear of the wheel and having its upper end forwardly bent and disposed upon the bar, an earth marking tool carried by the lower end of the standard, and means connecting the forward end of said standard to the bar.

1,019,200. ALARM-VALVE. HENRY P. TANK, Alameda, Cal., assignor of three-tenths to Louis B. Krieger and four-tenths to Burt L. Davis, San Francisco, Cal. Filed Feb. 6, 1911. Serial No. 606,819. (Cl. 169—23.)

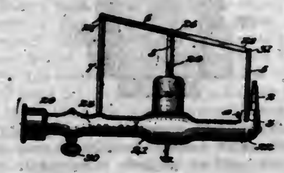


1. An alarm valve of the character described, comprising a shell formed with a main passage and with a by-pass, a hinged clapper normally closing the by-pass, said clapper having an arm extending beyond its hinge, and a second hinged clapper normally closing the main passage and adapted to be opened by the fluid flow therein, said second clapper having an arm extending beyond its hinge which arm is unconnected with the arm of the by-pass clapper and is constructed and arranged relatively to said last named arm whereby the latter by contact pressure therewith will open the by-pass clapper simultaneously with the opening of the main passage clapper.

2. An alarm valve of the described class comprising a shell formed with a main-passage and with a by-pass; a hinged clapper normally closing the by-pass, said clapper having an arm extending beyond its hinge; and a second hinged clapper normally closing the main-passage and adapted to be lifted by the fluid flow to open said main-passage, said second clapper having an arm extending beyond its hinge which arm is independent of and overlies the arm of the by-pass clapper, and is adapted by contact pressure with said last named arm, as the main-passage clapper rises, to lift the by-pass clapper and open the by-pass, the parts being constructed and arranged to permit the by-pass clapper to be opened independently of the main passage clapper.

3. In an alarm valve of the character described, the combination of a casing having a main supply conduit, and a by-pass conduit, a valve member pivotally supported intermediate its ends upon the casing and having at one end a disk shaped valve to overlie the main conduit outlet and at its opposite end an integral rigid projecting arm or tail piece, and an auxiliary valve member pivotally supported intermediate its ends on the casing and having at one end a disk shaped valve overlying the by-pass conduit outlet and at its opposite end an integral rigid arm or tail piece underlying but connected with the arm of the disk-shaped valve of the main valve-member, the parts being constructed and arranged whereby the auxiliary valve member may open independently of the other and whereby upon the opening of the main supply valve the auxiliary valve for the by-pass is simultaneously opened thereby.

1,019,201. AUTOMATIC GAS SHUT-OFF. ARZA R. TRACY, Pateros, Wash. Filed Dec. 22, 1910. Serial No. 598,876. (Cl. 67—116.)



1. The combination in an automatic gas shut off of a metal gas pipe, an ordinary gas jet at one end, a screw thread at the other end, an automatic valve between the jet end and an ordinary valve or shut off, a plunger forming part of the automatic valve working in an opening through the pipe, a hole through the plunger corresponding with the hole lengthwise through the pipe, a spiral spring around the plunger resting on a shoulder and held in place by a cap screwed to a collar raised on the pipe and extending around the plunger, a thumb lift or button attached to the lower end of the plunger, a joint or hinge in the upper extension of the plunger, an arm hinged at one end to an upright made fast to the pipe and the other end unattached, a thin piece of metal composed of brass and Norway iron braced together, made fast to the pipe in close proximity to the jet by means of a slot and set screw the other end being close to but not engaging the unattached end of the arm, all substantially as set forth.

2. In an automatic cut-off for gas burners, a thermostatic bar attached to the burner, a valve in the burner, a housing on the burner, a portion of the valve disposed within the housing, a stem on the outer end of the valve, said housing having an opening to permit the said stem to extend above the housing, a spring disposed between the housing and the valve for holding the valve normally downward in a closed position, a manually operated stem on the lower end of the valve whereby the valve may be lifted into open position, a standard on the burner, and an arm pivotally connected on the stem at approximately central portion, and pivotally connected to the standard, the free end of said arm being adapted for engagement with said thermostatic bar, whereby when the free end of the arm is engaged on the thermostatic bar, and heat from the burner acts on the thermostatic bar, said bar will move from under the end of said arm, and permit the valve to move into its normal closed position under the action of said spring.

1,019,202. FURNITURE APPLIANCE. JOHN H. TUDOR, Dallas, Tex. Filed June 15, 1910. Serial No. 567,087. (Cl. 155—22.)

The combination with a bench or the like, of a box secured thereto and beneath the side of said bench, a roll of carpet mounted in the upper portion of the box, a guide roller mounted in the lower portion of the box, a hinged cover in the upper portion of the box whereby the roll of carpet may be removed from the box, the forward wall of the box being disposed a suitable distance above the floor, one end of said carpet having a bar secured thereacross and projecting under the said forward wall, and a hinged cover for the lower portion of the box, said cover comprising a main portion hinged to the rear wall of the box, an integral portion extending at an angle from the free end, and a lateral foot on the first mentioned extension whereby when said cover is in closed position, the extension will form the bottom of the box and be



suitably spaced from the lower end of the forward wall to provide a slot to permit the withdrawal of the carpet, and the said lateral foot supporting said extension below the front wall of the box.

1,019,203. RAIL-JOINT. CAVETT V. V. TURNER, Helena, Ark. Filed Dec. 8, 1911. Serial No. 664,548. (Cl. 238—13.)



1. In a device for the purpose set forth the combination with a pair of rail-way rails, said rails having the upper portion of their webs and their heads extending beyond the main body of each of the rails, a bearing block comprising a flanged member having a central web or extension arranged to support the extended portions of the said rails, angular fish plates secured to the bearing block, the said fish plates having their ends formed of some resilient material and projecting beyond the ends of the bearing block, and means for securing the fish plates to the webs and the web extensions of the rails.

2. In combination with the meeting ends of a pair of rail-way rails, each of said rails having a portion of its web and its head extending beyond the rail proper, a chair for the rail ends, said chair embodying a central bearing block of hardened metal and having angular fish plates secured thereto, the bearing block being centrally provided with an upstanding portion forming a web which is adapted to engage the lower walls of the web extensions of the rails, the said bearing block being of a length equaling that of the extended portions of the rails, the fish plates of the chair extending beyond the ends of the bearing block, the said extending portions being formed of resilient material and adapted to tightly compress against the base flanges and webs of the rails when the chair is positioned upon the rails, means for securing the vertical members of the fish plates to the webs and to the extensions of the webs, and means for securing the chair to the ties of the rails.

1,019,204. WRENCH. GANDOLFO VALENZA, Hastings, Colo. Filed May 3, 1911. Serial No. 624,795. (Cl. 81—139.)

A wrench including a shank having a fixed jaw at the outer end and provided along one side with teeth, an approximately U-shaped sleeve slidably embracing the sides of the shank and having its sides extending in advance of the same, a movable jaw provided with an extension fitted against the shank between the extended portions of the sides of the sleeve, a flat spring fitted against the

extension of the movable jaw and extending beyond the jaw and arranged between the sides of the sleeve, a plate fitted against the spring and also arranged between the sides of the sleeve, fastening means piercing the plate and the spring and securing the same to the extension of the movable jaw, a dog pivoted between the sides of the sleeve below the extension of the movable jaw and provided with a tooth for engaging the toothed portion of



the shank and maintained in such engagement by the said spring which bears against the outer side of the dog, and an eccentric mounted between the sides of the sleeve or casing and interposed between the dog and the shank and provided with a pivot piercing the sides of the sleeve and having exteriorly arranged operating means for rotating the eccentric to carry the dog out of engagement with the toothed portion of the shank.

1,019,205. ERASING DEVICE FOR TYPE-WRITERS. HENRY M. VAUGHAN, Newton, Iowa. Filed Feb. 13, 1911. Serial No. 608,356. (Cl. 197—181.)



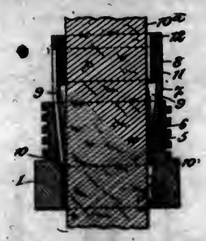
1. In a typewriting machine, in combination, fixed supporting means, a relatively movable platen, a rigid arm movable from said fixed supporting means toward and from said platen, and erasing-means mounted on said rigid arm and reversible to present unworn parts to said platen.

2. In a typewriting machine, in combination, a platen, fixed supporting means, erasing-means pivotally mounted on and adjustable relatively to said supporting-means and to the platen, said erasing-means being mounted to contact with the platen at a uniform distance from its pivotal mounting.

3. In a typewriting machine, in combination, fixed supporting means, a relatively movable platen, a rigid body movable from said fixed supporting means toward and from said platen, and erasing-means pivotally mounted on said body, said erasing-means being mounted suitably to contact with said platen at a uniform distance from the connection of said body with said fixed supporting means.

1,019,206. ROCK-CORE DRILL. WILLIAM R. WALLACE, Houghton, Mich. Filed Mar. 31, 1911. Serial No. 618,227. (Cl. 166—3.)

1. In a rock core drill, a one piece elastic core lifting ring of substantially even thickness throughout and having a full length longitudinal slot, said ring having at one end a tapered portion provided with integral interior core engaging members and at the other end an axial extension of substantially even diameter, said extension being at the larger end of the taper portion of the ring and joining the taper portion at an angle, thereby stiffening the whole ring.



2. In a rock core drill, a one piece core lifting ring comprising an elongated tubular member of even thickness throughout and split at one side from end to end, said tubular member being elastically constrained to a predetermined diameter with one end tapering and the other end of even diameter throughout, the tapering end being provided on the interior with integral spaced inward extensions or ribs adapted to engage a core and the end of even diameter throughout joining the tapering end at an angle thereby stiffening the whole ring.

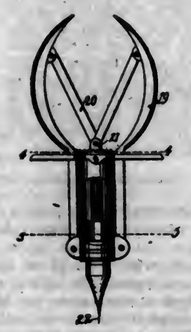
3. In a rock core drill, a one piece elastic split lifting ring of substantially even thickness throughout and having one end tapering and there provided with means for engaging the core and the other end substantially cylindrical and joining the tapering portion at a slight angle, thereby stiffening the entire ring.

4. In a rock core drill, an elastic split lifting ring having one end tapering and the other end substantially cylindrical, and a cylindrical bushing or filling ring adapted to the cylindrical end of the ring.

5. In a rock core drill, an elastic split lifting ring having one end tapering and the other end substantially cylindrical, and a cylindrical bushing or filling ring adapted to the cylindrical end of the ring, said filling ring or bushing being provided at one end with a radial flange adapted to override the corresponding end of the ring.

[Claims 6 and 7 not printed in the Gazette.]

1,019,207. SYRINGE. VOLNEY H. WARD, Batesville, Miss. Filed Mar. 12, 1910. Serial No. 548,922. (Cl. 128—25.)



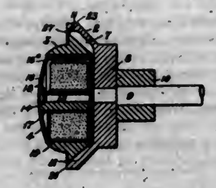
1. The combination with a syringe provided with a barrel, piston, and piston rod; of a sleeve surrounding said barrel, a ring surrounding the sleeve at its upper end and provided with laterally projecting and diametrically opposed pairs of guide arms, a pair of hand levers respectively mounted between each pair of guide arms for reciprocatory movement and pivoted at their lower ends to the lower end of the sleeve, and links connecting the hand levers and the piston rod.

2. The combination with a syringe provided with a barrel, piston, and piston rod; of a sleeve surrounding said barrel and provided at its lower end with spaced pairs of ears diametrically opposed, a ring surrounding the sleeve at its upper end and provided with laterally projecting and diametrically opposed pairs of guide arms, a pair of hand levers respectively mounted between each pair of guide arms for reciprocatory movement and pivoted at their lower ends to the said ears, and links connecting the hand levers and the piston rod.

3. The combination with a syringe provided with a barrel, piston and piston rod; of a sleeve surrounding said barrel, a ring surrounding the sleeve at its upper end, common fastening means for connecting the ring, sleeve and barrel, said ring being provided with laterally projecting and diametrically opposed pairs of guide arms, a pair of hand levers respectively mounted between each pair of guide arms for reciprocatory movement and pivoted at their lower ends to the lower end of the sleeve, and links connecting the hand levers and the piston rod.

4. The combination with a syringe provided with a barrel, piston, and piston rod, of a sleeve surrounding said barrel and provided at its lower end with spaced pairs of ears diametrically disposed, pivots carried in said ears, a ring surrounding the sleeve at its upper end and provided with laterally projecting and diametrically opposed pairs of guide arms, a pair of hand levers respectively mounted between each pair of guide arms for reciprocatory movement and provided at their lower ends with outwardly extending slots for engaging said pivots, and links connecting the hand levers and piston rod.

1,019,208. STITCH-FORMING DEVICE. SIMON W. WARDWELL, Providence, R. I. Filed May 17, 1907. Serial No. 374,192. (Cl. 112—15.)



1. In a stitch forming device for sewing machines, the combination with a needle for the upper thread and a flanged carrier for the lower thread supply, of a rotating bowl having a hook to engage the needle loop and present it to the lower thread supply and also having a track within its interior in which track the carrier rolls by its flange which alone, without other agency, restrains the carrier from axial movement, maintaining free passage for the needle loop between the carrier and the bottom of the bowl as well as past the outer end of the carrier, latter rolling over the bottom portion of the loop which extends across the track, in the formation of the stitch.

2. In a stitch forming device, the combination with a rotating bowl having a hook and an internal track, of a carrier held to the track by a flange and rolled in the track by rotation of the bowl and held within the bowl and withheld from axial movement with relation to the bowl by engagement of the flange and track and by no other agency.

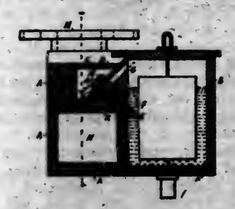
3. In a stitch forming device, the combination with a rotating bowl having a hook, of a carrier retained within the bowl and withheld from axial movement relative thereto by engagement with the interior of the rim of the bowl and rotatively driven by said engagement.

4. In a stitch forming device, the combination with a rotating bowl having a hook to engage the needle loop, of a carrier to spread the loop mounted within the bowl and rotatable therewith and having a surface protruding without the bowl, upon which surface a part of the needle loop is drawn and which by its rotary movement propels said loop along as the latter advances to the point where it is spread to pass the carrier.

5. In a stitch forming device, the combination with a rotary bowl having a hook to engage the needle loop, of a carrier for the under thread supply mounted within the bowl and rotated thereby, and having a portion protruding without the bowl upon which portion part of the needle loop is drawn and which moving with the needle loop helps to propel the latter past the lower thread supply.

[Claims 6 to 12 not printed in the Gazette.]

1,019,209. CARBURETER FOR INTERNAL-COMBUSTION ENGINES. TOM WELSH, Moffat, Scotland. Filed Jan. 21, 1910. Serial No. 539,365. (Cl. 48—155.1.)



1. In a device of the class described, in combination, a carbureter provided with an air passage, said air passage being provided with a jet opening, a float chamber, a tube positioned for conducting the hydrocarbon from the float chamber to the jet opening in said air passage, the portion of said tube adjacent said air passage being above the level of the liquid in the float chamber, said tube having a wall adapted to permit the hydrocarbon to pass therethrough into the tube and to permit the hydrocarbon to travel to the upper end thereof by capillary attraction, whereby a film is formed upon the upper portion of the tube to prevent air from passing therethrough.

2. In a device of the class described, in combination, a carbureter provided with an air passage, said air passage being provided with a jet opening, a float chamber, and a membranous tube for conducting the hyrocarbon from the float chamber to the jet opening in said air passage, the portion of said tube adjacent said air passage being above the level of the liquid in the float chamber.

3. In a device of the class described, in combination, a carbureter provided with an air passage, said air passage being provided with a jet opening, a float chamber, and a conduit of perforated material for conducting the hydrocarbon from the float chamber to the jet opening in said air passage, the portion of said tube adjacent said air passage being above the level of the liquid in the float chamber.

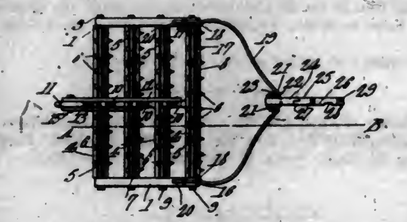
4. In a device of the class described, in combination, a carbureter provided with an air passage, said air passage being provided with a jet opening, a float chamber, a membranous tube extending between said chamber and a jet opening in said air passage for conducting the hydrocarbon from the former to the latter, the portion of said tube adjacent said air passage being above the level of the liquid in the fluid chamber, and means within said air passage for causing a portion only of the air passing through said air passage to pass over said jet opening.

5. In a device of the class described, in combination, a carbureter provided with an air passage, said air passage being provided with a jet opening, a float chamber, a membranous tube extending between said chamber and said air passage and communicating with said opening for conducting hydrocarbon from the chamber to the air passage, the portion of said tube adjacent said air passage being above the level of the liquid in the fluid chamber, and a conduit positioned within said air passage and

provided with an opening registering with the opening in said passage, whereby a portion only of the air passing through said passage will pass over said opening.

[Claims 6 and 7 not printed in the Gazette.]

1,019,210. HARROW ATTACHMENT FOR PLOWS. HARVEY B. WILSON, Dewitt, Ill. Filed Nov. 8, 1911. Serial No. 659,261. (Cl. 97—44.)



1. A harrow including side strips, tooth carrying members supported therebetween, a draw bar, a connection between the draw bar and side strips, means upon said connection and coöperating with the bar for limiting the swinging movement of the connection in one direction relative to the bar, and coöperating means upon said connection and the side strips for limiting the movement of said strips relative to the connection.

2. A harrow including side strips, soil engaging devices supported therebetween, a draw bar, a yoke pivotally connected thereto, means upon the yoke and coöperating with the bar for limiting the swinging movement of the yoke in one direction, a pivotal connection between ends of the yoke and the front ends of the side strips, and means upon the yoke and side strips for limiting the swinging movement of the said strips relative to the yoke.

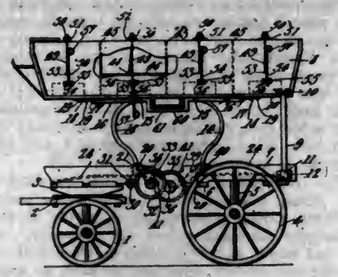
3. A harrow including side strips, soil engaging elements interposed therebetween, a sectional draw bar, each section being adjustable angularly relative to the next adjoining sections, means for holding the sections against relative movement, a yoke pivotally connected to one of the sections, means upon the yoke and coöperating with said section for limiting the swinging movement of the yoke in one direction relative to the section, and connections between the ends of the yoke and the side strips.

4. A harrow including side strips, soil engaging elements interposed therebetween, a sectional draw bar, each section being adjustable angularly relative to the next adjoining sections, means for holding the sections against relative movement, a yoke pivotally connected to one of the sections, means upon the yoke and coöperating with said section for limiting the swinging movement of the yoke in one direction relative to the section, pivotal connections between the ends of the yoke and the side strips, guide loops upstanding from the side strips, and means extending from the yoke and through said loops and coöperating with the loops for limiting the movement of the side strips relative to the yoke.

5. The combination with a harrow, of a draw bar, a connection between the draw bar and the harrow, means upon said connection and coöperating with the bar for limiting the swinging movement of the connection in one direction relative to the bar, and coöperating means upon said connection and the harrow for limiting the movement of said harrow relative to the connection.

1,019,211. COAL-WAGON. THOMAS WRIGHT, Jersey City, N. J. Filed Aug. 5, 1910. Serial No. 575,744. (Cl. 21—20.)

1. A wagon including a truck element, oppositely disposed similar cam-shaped arms supported thereby, a body element supported at all times solely by the arms, pivoted connections between the arms and the body element, and means for shifting the arms along the truck element to roll the oppositely disposed arms simultaneously upon the body element.



2. A wagon including a truck element, a body element, oppositely disposed similar cams interposed between said elements and constituting the sole supports for the body element at all times during the elevation of said element, means for shifting the cams bodily along one of said elements to roll them simultaneously upon the other element, and connections between the cams and the last mentioned element.

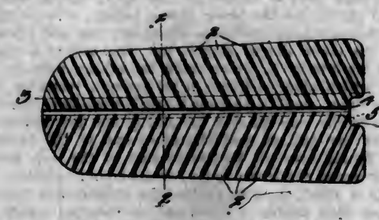
3. A wagon including a truck, oppositely disposed similar arms mounted thereon and having curved bearing faces, a body mounted on and supported solely by said faces at all times during the elevation of the body, connections between the arms and body, and means for bodily shifting the arms simultaneously along the truck and relative to each other to roll the arms upon the body.

4. A wagon including a truck, oppositely disposed cam shaped arms supported thereby, a body bearing on and supported by the arms at all times during the elevation of the body, connections between the arms and body, and means for simultaneously shifting the arms toward or away from each other on the truck to roll the arms upon the body.

5. A wagon including a truck, a body, cam-shaped arms supported by the truck and having convexed bearing faces engaging the body at all times during the elevation of the body and constituting the sole support thereof, link connections between the arms and body, and means for bodily shifting the arms toward or from each other upon the track.

[Claim 6 not printed in the Gazette.]

1,019,212. MAT. WILLIAM YATES, Upper Alton, Ill. Filed Mar. 20, 1911. Serial No. 615,564. (Cl. 4—27.)



A mat of the class described, having corrugations formed thereon and provided at one end with a cavity, said mat being decreased in thickness toward the end having the cavity therein and provided with a channel leading through said corrugations to said cavity.

1,019,213. ELECTROMAGNETIC ROCK DRILL AND CHIPPING HAMMER. CLARENCE E. ADAMS, Lebanon, Ind. Filed May 14, 1908. Serial No. 432,921. (Cl. 172—126.)

1. In an electric drill or chipping hammer, means for producing constant magnetic fields, means for alternately augmenting the strength of one field and simultaneously neutralizing or reducing the strength of the other field, means for counter-acting the counter-electric motive force developed by the alternate varying of the strength of the magnetic fields, a freely reciprocating armature in said fields constituting a hammer, and a tool holder in the path of the hammer in one direction of its travel.



2. In an electric drill or chipping hammer, means for producing constant magnetic fields, means for producing alternating magnetic-fields in operative relation to the constant magnetic fields to alternately augment the strength of each field and simultaneously reduce or neutralize the other field, and means for counter-acting the self-induction of the alternate fields.

3. In an electric drill or chipping hammer, means for producing constant magnetic fields, means for producing alternating magnetic fields in operative relation to the constant magnetic fields to alternately augment the strength of each field, and simultaneously reduce or neutralize the other field, and adjustable means for counteracting the self-induction of the alternating fields.

4. In an electric drill or chipping hammer, means for producing constant magnetic fields, means for producing alternating magnetic fields in operative relation to the constant magnetic fields to alternately augment the strength of each field and simultaneously reduce or neutralize the other field, and a closed circuit in inductive relation to the means for producing the alternating fields.

5. In an electric drill or chipping hammer, means for producing constant magnetic fields, means for producing alternating magnetic fields in operative relation to the constant magnetic fields to alternately augment the strength of each field and simultaneously reduce or neutralize the other field, and a closed circuit in inductive relation to the means for producing the alternating fields, said closed circuit including an adjustable resistance.

[Claims 6 to 9 not printed in the Gazette.]

1,019,214. EYEGLASS-MOUNTING. LEO F. ADT, Albany, N. Y. Original application filed Feb. 17, 1906, Serial No. 301,562. Divided and this application filed Nov. 6, 1909. Serial No. 526,525. (Cl. 88—50.)



1. The combination with a support for the lenses comprising a bridging portion, a lens attaching device and a portion connecting the lens attaching device and the bridging portion, of a nose guard embodying a lever having pivotal connection with the connecting portion and arranged to one side of the same, and a coil spring on the opposite side of the connecting portion with its axis vertically arranged and having one end secured to the support and its other end detachably acting against the guard.

2. The combination with a support for the lenses, of a nose guard pivoted to the support embodying a lever having an arm extending from the same on one side of and directed toward the pivot, and a coil spring arranged with its axis coincident with the pivot of the guard, secured to the support and having one end thereof detachably connected to the arm and on the guard lever.

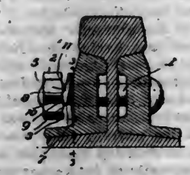
3. The combination with a support for the lenses, of a nose guard pivoted on the support embodying a lever having an arm extended from the same in front of the pivot of the guard, and a coil spring arranged with its axis coincident with the pivot of the guard, secured to the support and having one end thereof detachably connected to the arm on the guard lever.

4. The combination with a support for the lenses, of a nose guard pivoted to the support embodying a lever having an arm extended rearwardly from its forward end, and a coil spring arranged with its axis coincident with the pivot of the guard, secured to the support and having one end thereof detachably connected to the arm.

5. The combination with a support for the lenses embodying a bridging portion, a lens attaching device and a portion, connecting the lens attaching device and the bridging portion of a nose guard embodying a lever pivotally mounted on one side of the connecting portion and having an arm extending toward the pivot pin, and a coil spring secured to the support on the other side of the connecting portion, having one end detachably secured to the guard arm and arranged with its axis coincident with the turning axis of the lever.

[Claims 6 to 16 not printed in the Gazette.]

1,019,215. NUT-LOCK. SAMUEL M. T. BARCLAY, Dubois, Pa. Filed May 17, 1911. Serial No. 627,784. (Cl. 151—36.)

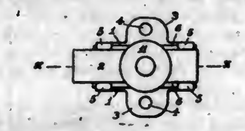


1. A nut lock comprising a threaded bolt, a nut adjustably mounted on the bolt and provided with a circular series of oppositely curved surfaces, and a substantially spiral washer-plate of spring material having one end formed to provide an anchoring portion and having its opposite end formed to provide oppositely curved surfaces conforming substantially in configuration with the inner surfaces of the nut and having locking engagement therewith to hold the nut against rotation on the bolt in one direction.

2. In a nut lock, a bolt, an adjustable nut thereon, the said nut being formed on its inner face to provide a series of curved surfaces, the surfaces being formed so as to present on the inner face of the nut an annular series of recesses, and a spring washer-plate removably mounted on the bolt at one side of the nut and having a spring free portion formed to provide a tooth for interchangeable locking engagement with the recesses on the inner face of the nut and formed to provide oppositely curved surfaces for frictionally contacting with the said curved surfaces on the inner face of the nut.

3. In a nut lock, a bolt, an adjustable nut thereon, the said nut being formed on its inner face to provide a series of curved surfaces, the surfaces being formed so as to present on the inner face of the nut an annular series of recesses, and a spring washer-plate removably mounted on the bolt at one side of the nut and having a spring free portion formed to provide a tooth for interchangeable locking engagement with the recesses on the inner face of the nut and formed to provide oppositely curved surfaces for frictionally contacting with the said curved surfaces on the inner face of the nut, the said washer-plate having its opposite end formed to provide an anchoring portion for locking engagement with the object with which the nut is engaged.

1,019,216. SPRING-LATCH. EDGAR W. BASSICK, Bridgeport, Conn., assignor to The Burns & Bassick Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Aug. 11, 1911. Serial No. 643,560. (Cl. 70—42.)

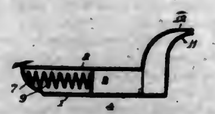


1. A device of the character described, comprising an integral flat base portion having inwardly turned lips and having a part bent upwardly to form an abutment, an integral bolt having downwardly extending sides that terminate in lateral flanges adapted to slidably engage said lips and also having its forward extremity bent downwardly and inwardly to form a beveled nose, and a coil spring confined between said abutment and nose.

2. In a device of the character described, the combination of an integral base having lips formed at its side edges and having a portion bent upwardly at substantially right angles to provide an abutment, an integral bolt element consisting of a casing having downwardly extending sides that terminate in flanges adapted to engage said lips whereby said base and casing are slidably connected said casing having its forward end bent downwardly and inwardly to form a beveled nose while its rear extremity is provided with a stop adapted to abut against the base to limit the forward movement of the bolt element, a coil spring within the bolt element and confined between said nose and abutment, and suitable means connected with the bolt element for the ready manipulation of the same.

3. In a device of the character described, the combination of an integral base having lips formed at its side edges and having its rear edge bent upwardly at right angles and provided with a stop extending upwardly near the forward end of said base, an integral casing provided with laterally extending flanges at its base portions adapted to engage said lips whereby said base and casing are slidably connected, said casing having its forward end bent downwardly and inwardly to form a beveled nose while its rear end is bent downwardly at right angles and is adapted to abut against the outer surface of the rectangular bent portion of the base, a coil spring within the casing and confined between said nose and the rectangular bent portion of the base, and suitable means connected with the casing for the ready manipulation of the same.

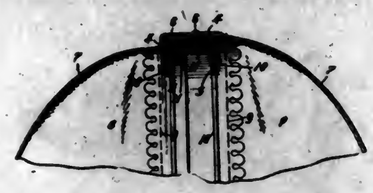
1,019,217. SPRING-LATCH. EDGAR W. BASSICK and ROBERT A. L. ADAMS, Bridgeport, Conn., assignors to The Burns & Bassick Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Aug. 11, 1911. Serial No. 643,561. (Cl. 70—42.)



In a device of the character described, the combination of the flat base and a bolt element consisting of a casing having its forward end bent downwardly and inwardly to form a beveled nose and having sides whose edges are slidably secured to said base, the coil spring within said casing and bearing against abutments extending from said base and casing, and pinch levers extending from said casing and base whereby the device may be operated by the pinching together and release of said levers.

1,019,218. TRAVELING-BAG. WILLIAM BINICK, Milwaukee, Wis. Filed May 29, 1911. Serial No. 630,049. (Cl. 190—54.)

1. In a device of the described class, the combination of a pair of bag frames pivotally connected together, each frame comprising an inner member and an outer member arranged at right angles to each other, means for detachably connecting said inner and outer members together, and means for connecting the fabrics comprising the sides and ends of the bag with the outer members of both of said bag frames.

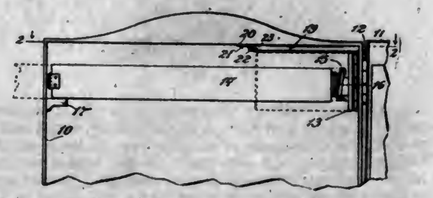


2. In a device of the described class, a pair of bag frames pivotally connected together, said frames comprising an outer and an inner member detachably secured at right angles to each other, in combination with the side and end fabrics of a bag, the opposing edges of such side and end fabrics being respectively wrapped entirely around the outer members of both of said bag frames and secured thereto by an uninterrupted series of stitches.

3. In a deivce of the described class, a pair of bag frames pivotally connected together, each frame comprising an outer and an inner member secured at right angles to each other, a plurality of brackets respectively detachably connected at one of their ends to the outer member and at their opposite ends with the inner member of said bag frames, in combination with the edges of the side and end fabrics of a bag, said edges being respectively wrapped entirely around the outer members of both of said frames and secured thereto by an uninterrupted series of stitches.

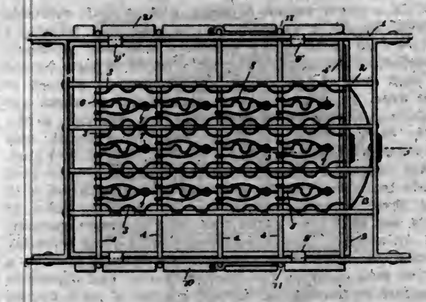
4. In a device of the described class, the combination of a pair of bag frames pivotally connected together, each frame comprising an inner member and an outer member arranged at right angles to each other, a plurality of brackets, a plurality of screws for detachably connecting said brackets at their respective ends to the outer and inner members of said frames, a flexible fabric comprising the body of the bag, the opposing edges of the ends and sides of said fabric being respectively wrapped entirely around the outer member of said bag frames, and secured thereto by an uninterrupted series of stitches, and a reinforcing plate secured to the outer member of the exterior bag frame against the exterior surface of said fabric, whereby the exterior frame member is reinforced and the contiguous edges of the fabric thus covered are securely retained in place.

1,019,219. WARDROBE. SEYMOUR W. BONSALL, New York, N. Y. Filed Apr. 28, 1910, Serial No. 558,186. Renewed Nov. 17, 1911. Serial No. 660,911. (Cl. 211—21.)



A wardrobe for suspending garments and the like comprising in combination a container, a carrier therein hinged near the front edge of one side of said container, a curved plate fixed above said carrier and arranged to afford a shelf, and means fixed to said carrier for engaging on and sliding along said shelf, substantially as described.

1,019,220. DIPPING-FRAME FOR CANDIES. GEORGE BRAIN, New York, N. Y. Filed Apr. 28, 1911. Serial No. 623,809. (Cl. 91—6.)



1. A candy dipping and coating device comprising a suitable frame, means carried by said frame for forming one or more pockets to receive the bodies of the candies to be dipped, the bottoms of said pockets being movable, and means engaged by the movable bottoms of said pockets to be moved thereby to expel the candies from the frame after the operation of dipping is finished, and imprint a suitable design upon the coatings of the candies.

2. In a candy dipping and coating device, the combination of a suitable frame, means carried by said frame to form one or more pockets to receive the bodies of the candies to be dipped, the bottoms of said pockets being pivotally mounted in said frame, and means supported by said pivotally mounted bottoms and movable thereby to expel the candy bodies from the device after the operation of dipping is finished, and at the same time imprint a suitable design upon the coatings of the candies.

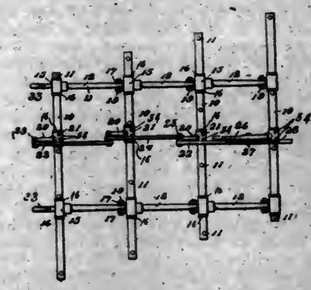
3. In a candy dipping and coating device, the combination of a relatively fixed frame and a relatively movable frame, longitudinal and transverse bars carried by said relatively fixed frame, said bars forming the outlines of one or more pockets to receive the bodies of the candies to be dipped and coated, means for forming the bottoms of said pockets, said means being pivotally mounted on said bars, means carried by the relatively movable frame for actuating said bottoms, and means supported by said pivoted bottoms and movable therewith to expel the candy bodies from the device when the operation of coating is finished, and at the same time imprint a suitable design upon the coatings formed on the candies.

4. In a candy dipping and coating device, the combination of a relatively fixed and a relatively movable frame, fixed longitudinal bars and rotatable transverse bars carried by said relatively fixed frame, said rotatable bars having laterally bent arms at their outer ends, means carried by the relatively movable frame for engaging the said laterally bent arms, said fixed and transverse bars forming the outlines of pockets to receive the candies to be dipped, movable bottoms for said pockets fixed to the rotatable transverse arms to be moved therewith, and means carried by said movable bottoms and operable therewith to expel the candies from the pockets after dipping, and at the same time imprint a suitable design thereon, whereby, when the relatively movable frame is actuated the transverse bars will be rotated to move the bottoms and the expelling and imprinting means connected therewith.

5. A candy dipping and coating device consisting of an outer fixed frame and an inner movable frame, guiding means connecting the said frames together, longitudinal fixed bars and rotatable transverse bars mounted in the fixed frame, said transverse bars having laterally bent arms at their ends engaged by the movable frame to be rotated thereby, said fixed and transverse bars forming the outlines of pockets to receive the candies to be dipped, means for forming the sides of said pockets carried by the longitudinal bars, means for forming the bottoms of said pockets fixed to the rotatable bars to be moved therewith, and means carried by said movable bottoms and coöperating with a plurality of said pockets in a row to be moved by said bottoms, said means having a suitable shape to imprint a design upon said candies, whereby, after the operation of dipping is finished, the device can be inverted and the movable frame actuated to rotate the transverse arms and cause the movable bottoms and the imprinting means carried thereby to expel the candies from the pockets and imprint a design upon the coatings formed thereon.

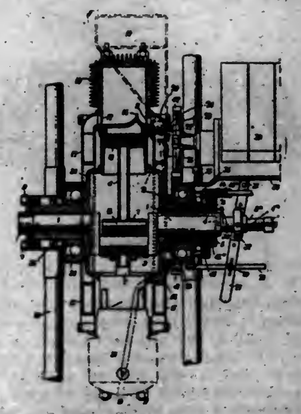
[Claims 6 and 7 not printed in the Gazette.]

1,019,221. HARROW. EDWARD T. CHANDLER, Delmont, S. D. Filed July 7, 1910. Serial No. 570,837. (Cl. 55—103.)



A harrow including transverse toothed bars, T couplings on said bars, each having alined branches loosely encircling one of said bars, and having a hinge ear on the side opposite to the lateral branch, longitudinal bars each comprising a plurality of alined sections, one end of each section being secured in the lateral branch of a T coupling and the opposite end being pivotally secured to the hinge ear of the next adjacent coupling, and means for rotating said transverse bars in said couplings.

1,019,222. INTERNAL-COMBUSTION ENGINE OF THE REVOLVING-CYLINDER TYPE. ALFRED B. E. CHESSEMAN, London, and JOSEPH G. FLORENCE, Walthamstow, England. Filed May 27, 1911. Serial No. 629,907. (Cl. 123—44.)



1. A multi-cylinder rotary valveless two-stroke internal combustion engine, comprising a fixed crank shaft, a series of radial cylinders adapted to rotate around said crank shaft, pistons in said cylinders acting on the crank shaft,

a fuel supply chamber common to and communicating with said cylinders, means for introducing fuel to said chamber, the said chamber having an air inlet to the atmosphere opening in the direction of rotation of the cylinders for automatically supplying air to the fuel under pressure produced by the speed of rotation of the engine, substantially as described.

2. A multi-cylinder rotary valveless two-stroke internal combustion engine comprising a fixed crank shaft, a radial series of cylinders adapted to rotate around said crank shaft, pistons in said cylinders acting on said crank shaft, means for supplying explosive mixture automatically to the cylinders under pressure produced by the rotation of the cylinders, and a fan for increasing the pressure produced by the rotation of the cylinders.

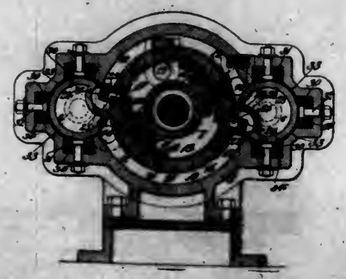
3. A multi-cylinder rotary valveless two-stroke internal combustion engine comprising a fixed crank shaft, a radial series of cylinders rotating around said shaft and having pistons acting on said crank shaft, a common supply chamber for explosive fluid revolving with and communicating with each of said cylinders, said chamber having an intake opening to the atmosphere facing in the direction of rotation of the engine for the purpose of producing pressure in said chamber, substantially as set forth.

4. A multi-cylinder rotary valveless two-stroke internal combustion engine comprising a fixed crank shaft, a radial series of cylinders adapted to rotate around said crank shaft and having pistons acting on said crank shaft, a common supply chamber for explosive fluid revolving with and communicating with each of said cylinders, said chamber having an intake opening to the atmosphere facing in the direction of rotation of the engine for the purpose of producing pressure in said chamber, and a fan for increasing the pressure produced by the rotation of the cylinders, substantially as set forth.

5. A multi-cylinder rotary valveless two-stroke internal combustion engine comprising a fixed crank shaft, a radial series of cylinders adapted to rotate around said crank shaft and having pistons acting on said crank shaft, an annular lateral supply chamber for explosive fluid revolving with and communicating with said cylinders, said chamber having an opening to the atmosphere facing in the direction of rotation of the engine for the purpose of producing pressure in said chamber, substantially as set forth.

[Claims 6 to 18 not printed in the Gazette.]

1,019,223. ROTARY ENGINE. CHRISTOFFER CHRISTOFFERSEN, Philadelphia, Pa. Filed June 20, 1911. Serial No. 634,200. (Cl. 121—51.)



1. In a rotary engine, a casing, a main shaft rotatably carried thereby, a drum secured to said shaft forming a motive fluid chest on the interior thereof and expansion chambers on the exterior thereof, means to admit motive fluid to said chest, a plurality of oppositely disposed series of ports in said drum arranged in pairs and forming a communication between said chest and said expansion chambers, a fixedly mounted valve for each pair of series adapted to control the admission and cut off motive fluid from said expansion chambers, blocks secured to said drum, a plurality of abutments rotatably mounted adjacent said drum and adapted to coact therewith, each of said abutments having a recess therein adapted to receive each block and an exhaust outlet from the expansion chamber.

2. In a rotary engine, a casing, a main shaft rotatably carried thereby, a drum secured to said shaft forming a motive fluid chest on the interior thereof and expansion chambers on the exterior thereof, a series of ports formed in each side of said drum, nozzle members secured to said drum in alinement with each series of ports and projecting transverse of each expansion chamber, a plurality of abutments rotatably mounted adjacent said drum and adapted to contact therewith, each of said abutments having a recess therein adapted to receive each nozzle member, a motive fluid inlet communicating with said chest, a valve adapted to control each series of ports, and an exhaust outlet from each expansion chamber.

3. In a rotary engine, a casing, a main shaft rotatably carried thereby, a drum secured to said shaft forming a motive fluid chest on the interior thereof and expansion chambers on the exterior thereof, a series of ports formed in each side of said drum and adapted to contact therewith, a bearing on one side of each abutment having grooves in the contact face thereof, a second bearing oppositely disposed with respect thereto, said grooved serving to admit pressure fluid back of said abutments, a motive fluid inlet communicating with said chest, a valve adapted to control each series of ports, and an exhaust outlet from each expansion chamber.

4. In a rotary engine, a casing, a main shaft rotatably carried thereby, a drum secured to said shaft forming a motive fluid chest on the interior thereof, and expansion chambers on the exterior thereof, a series of ports formed in each side of said drum and adapted to contact therewith, a plurality of bearings contacting with each abutment and having grooves in the contact face thereof, another bearing oppositely disposed with relation to said first mentioned bearings, said grooves serving to admit pressure fluid back of said abutments, a motive fluid inlet communicating with said chest, a valve adapted to control each series of ports, and an exhaust outlet from each expansion chamber.

5. In a rotary engine, a casing, a main shaft and a plurality of spindles rotatably carried thereby, a drum spaced from said shaft and from said casing forming respectively a motive fluid chest and expansion chambers, ports in said drum arranged in oppositely disposed series, blocks carried by said drum and projecting transverse of each expansion chamber, each block having passages therethrough in alinement with said ports, packing between said blocks and said casing, an inlet and an outlet for motive fluid, abutments rotatably mounted in said casing at diametrically opposite points, means to rotate said abutments, packing between each abutment and said casing, means to adjust said packing, and means to control the admission of motive fluid to said expansion chambers.

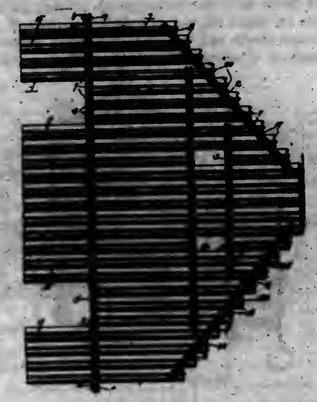
[Claims 6 and 7 not printed in the Gazette.]

1,019,224. RAFT FOR DREDGES. HORACE J. CLARK, Chicago, Ill., assignor to The Clark Dredge Manufacturing Company, Chicago, Ill., a Corporation of Maine. Filed Feb. 23, 1911. Serial No. 610,409. (Cl. 114—61.)

1. A raft of the kind described comprising a plurality of floats, each float being formed of a plurality of sections bolted together, beams carrying means for holding said floats in their proper relation, and straps and keys for connecting said floats to said beams.

2. A raft of the kind described comprising a plurality of floats arranged sidewise, beams extending transversely and obliquely of said floats, means carried by said beams for forcing said floats together, and straps carried by said floats for connecting said floats to said beams.

3. A raft of the kind described comprising a plurality of floats, transverse beams arranged on said floats having depending ends, said beams being formed of spaced channel bars, and wedge shaped keys arranged between said channel bars at their ends for holding said floats in engagement with each other.

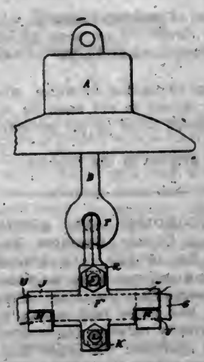


4. A raft for dredges comprising a plurality of floats, each float comprising a sectional pipe, straps carried by said pipes, beams arranged on said pipes, and extending through the openings of said straps for securing said pipes to said beams.

5. A raft for dredges comprising a plurality of floats, each float comprising a cylindrical sectional pipe formed of semicircular flanged sections, packing material arranged between the flanges of said sections, and bolts extending through said flanges.

[Claims 6 to 18 not printed in the Gazette.]

1,019,225. SUSPENSION INSULATOR-CLAMP. WALTER G. CLARK, New York, N. Y. Filed May 4, 1911. Serial No. 624,960. (Cl. 248—31.)



1. A suspension insulator clamp comprising coöperating clamping members having elongated jaws or body portions, one body portion having hook-shaped retaining members and the other having portions adapted to coöperate with said retaining members opposed outwardly projecting securing members at one side of the body portions, a bolt passing through said securing members for holding the clamping members together, and opposed outwardly extending suspending members at the other side of said body portions having means affording provision for suspending said clamping members from a support.

2. A suspension insulator clamp comprising coöperating clamping members having elongated jaws or body portions, one body portion having hook-shaped retaining members and the other having portions adapted to coöperate with said retaining members opposed outwardly projecting securing members extending longitudinally of the body portions, a clamping bolt passing through said securing members transversely across said body portions, said clamping members having outwardly projecting suspending members opposite the securing members and provided with means for suspending said clamping members from a support.

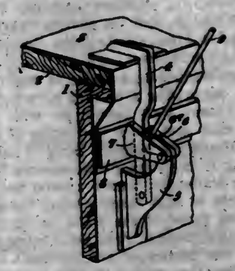
3. A suspension insulator clamp comprising coöperating clamping members having elongated jaws or body portions provided with flaring ends, one body portion having hook-shaped retaining members and the other having portions adapted to coöperate with said retaining members opposed outwardly projecting securing members extending longitudinally of the body portions, a clamping bolt passing through said securing members transversely across said body portions, said clamping members having outwardly projecting suspending members opposite the securing members and provided with means for suspending said clamping members from a support.

4. A suspension insulator clamp comprising coöperating clamping members having elongated jaws or body portions provided with flaring ends, one body portion having hook-shaped retaining members and the other having portions adapted to coöperate with said retaining members opposed outwardly projecting securing members extending longitudinally of the body portions, a clamping bolt passing through said securing members transversely across said body portions, said clamping members having outwardly projecting suspending members opposite the securing members and provided with means for suspending said clamping members from a support.

5. A suspension insulator clamp, comprising coöperating clamping members having jaws or body portions, one member being provided with separated hook-shaped retaining portions, the other member interlocking with said first named member between said retaining portions, means for securing said members together, and means affording provision for suspending said clamping members from a support.

[Claims 6 to 8 not printed in the Gazette.]

1,019,226. HATCH-FASTENER. WILLIAM CRAIGIE, Goderich, Ontario, Canada, assignor of one-sixth to William Marlton and one-sixth to William Wallace, Goderich, Canada. Filed Dec. 27, 1910. Serial No. 599,528. (Cl. 114—203.)



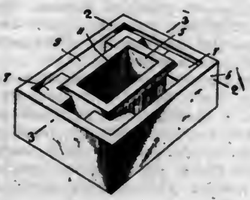
In a device of the character described, the combination with the hatch cover, coaming and tarpaulin, of a bracket arm secured to the coaming, a hook-shaped clamp pivoted to one side of the bracket arm having a suitable upper end designed to hook over the edge of the hatch cover, a cam having a suitable recess therein to receive the end of an operating lever, said cam being pivoted to the bracket arm and engaging the hook-shaped clamp, a batten for holding the canvas in place and a supplemental cam pivoted to the opposite side of the bracket arm to the aforesaid cam and engaging the batten, said supplemental cam having a recess therein to receive the end of the operating lever, substantially as described.

1,019,227. METAL SHEETING-PILE. ARMAND DESOER, Ougrée, Belgium. Filed Aug. 7, 1911. Serial No. 642,835. (Cl. 61—52.)



A sheet pile having two oppositely extending flanges lying in the same plane, one of said flanges formed with a longitudinal bead behind the plane of the flanges and the other flange provided with wings which form a longitudinal socket behind said plane and adapted to receive the bead of an adjacent pile, whereby two adjacent piles may be interlocked with their flanges at an angle.

1,019,228. BUILDING-BLOCK. EDWARD L. DOBBINS, Jewell, Kans. Filed Feb. 14, 1908. Serial No. 415,933. (Cl. 72—92.)

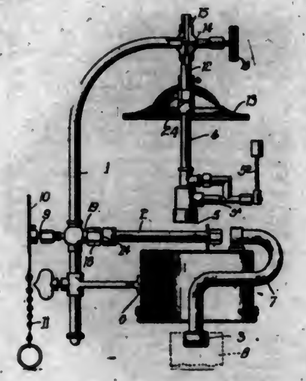


1. A building block for chimneys comprising a unitary structure having an outer wall, an inner wall concentric with and spaced from the outer wall, said inner wall being of equal height to the outer wall and the terminal faces of said inner and outer walls lying in the same plane, spacers between said inner and outer walls and spaced around the inner wall, the terminal faces of said spacers being spaced from the adjacent terminal faces of the walls at equal distances, and the confronting faces of said walls being beveled continuously from the planes of the terminal faces of the spacers.

2. A structure comprising a series of superposed building blocks each comprising a unitary structure having an outer wall, an inner wall concentric with and spaced from the outer wall, said inner wall being of equal height to the outer wall and the terminal faces of said inner and outer walls lying in the same plane, spacers between said inner and outer walls and spaced around the inner wall, the terminal faces of said spacers being spaced from the adjacent terminal faces of the walls at equal distances, and the confronting faces of said walls being beveled continuously from the planes of the terminal faces of the spacers; in combination with a packing between the inner and outer walls of cementitious material, said packing completely filling the space between said walls whereby the filling is provided with a series of opposed pairs of inner and outer circumscribing ribs constituting means to lock the blocks firmly together.

1,019,229. HYDROCARBON-LAMP. ROBERT L. DORAN, Chicago, Ill. Filed Oct. 30, 1911. Serial No. 657,438. (Cl. 67—50.)

A hydrocarbon lamp comprising a frame having a fuel inlet channel, a generator and burner connected with said frame and communicating with said fuel inlet channel, and a section of material of comparatively low heat conductivity interposed between the connection of said burner



and frame, so as to insulate said generator from said frame.

1,019,230. MANUFACTURE OF FORMATES. OLIVIER LOUIS ANDRÉ DUBOSC, ARMAND DIS LUTTRINGER, and HECTOR DENIS, Paris, France, assignors to Société Le Camphre, Paris, France. Filed Feb. 6, 1911. Serial No. 606,945. (Cl. 23—24.)

1. The process of making formates which comprises reacting with moist carbon monoxid on an organic base in a gaseous or vaporous state.

2. The process of making formates, wherein moist carbon monoxid is caused to act upon an organic base in a gaseous or vaporous state at atmospheric pressure.

3. The process of making formates, wherein moist carbon monoxid is caused to act upon an organic base in a gaseous or vaporous state at a temperature between 90° and 165°.

4. The process of making formates, wherein moist carbon monoxid is caused to act upon an organic base in a gaseous or vaporous state in the presence of an inert mass.

5. The process of making formates, wherein moist carbon monoxid is caused to act upon an organic base in a gaseous or vaporous state in the presence of a catalytic agent.

[Claim 6 not printed in the Gazette.]

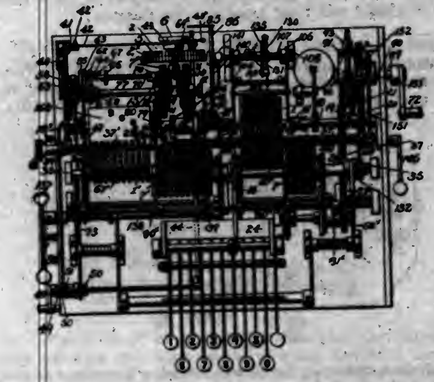
1,019,231. RECORDING AND ADDING MACHINE. GEORGE WILSON DUDLEY, Staunton, Va. Filed Aug. 6, 1903. Serial No. 168,510. (Cl. 235—59.)

1. In an adding and recording machine, adding mechanism, printing mechanism including setting up means, impression means, and paper feed means, a paper carriage shifting automatically between impressions and means for throwing out of operation the paper feed means and the adding mechanism automaticaly, alternately, substantially as described.

2. In an adding and recording machine adding mechanism, printing mechanism and an automatically reciprocating carriage moving in one direction after one impression and in the opposite direction after another impression, substantially as described.

3. In combination with printing mechanism, including setting up means and impression means a paper carriage shifting after each impression, paper feed mechanism and means for throwing the paper feed means out of operation automatically when the carriage shifts to a certain position, said throw out means being rendered effective by the longitudinal movement of the carriage, substantially as described.

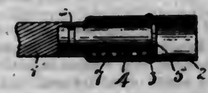
4. In combination with printing mechanism including setting up means and impression means, an automatically reciprocating paper carriage moving in one direction after one impression and in the opposite direction after another impression, line space mechanism for the paper on said carriage and means for throwing said line space mechanism out of operation automatically, substantially as described.



5. In combination, in an adding machine, adding means, printing means including setting up means and impression means, a hand lever for operating the impression means, a paper carriage with connections for shifting the same automatically from the operation of the hand lever, and automatic means for throwing the adding mechanism out of action, substantially as described.

[Claims 6 to 64 not printed in the Gazette.]

1,019,232. CURTAIN-ROD BRACKET. WILLIAM H. EDBALL, Wallingford, Conn. Filed May 5, 1911. Serial No. 625,204. (Cl. 156—19.)



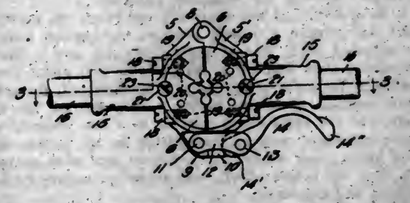
In a device of the character described, the combination of an attaching plate provided with a stem portion, a stud of relatively reduced diameter extending from the end thereof; a head on the end of said stud, a sleeve inclosing said stud and loosely bearing upon and sliding over said stem and said stud head, an annular abutment surface fixed within the sleeve between the stem and stud head, and a coiled spring within the sleeve engaging the stem and bearing against said annular abutment to normally extend said sleeve forwardly, said stud head acting as a stop to limit the forward movement of said annular abutment and its sleeve.

1,019,233. MANUFACTURE OF CASED METAL PINS FOR ARTIFICIAL TEETH. HERBERT ARTHUR EDWARDS, London, England. Filed Dec. 4, 1908. Serial No. 466,026. (Cl. 29—146.)



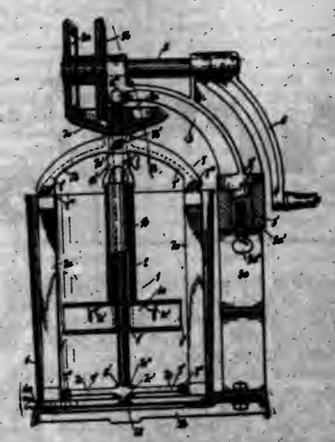
A method of making an acid proof pin for artificial teeth, which consists in applying to the surface of a base metal wire, a coating of powdered solder which consists substantially of 65 parts of gold, 10 parts of silver and 25 parts of platinum, inserting said wire and solder into a platinum tube, applying a sufficient degree of heat to fuse the solder and cause the wire and tube to be solidly united therewith, cutting the product obtained into suitable lengths and forming a head on each length.

1,019,234. STOCK AND DIE. AUGUST O. EKORENBUD, Seattle, Wash. Filed Mar. 2, 1911. Serial No. 611,865. (Cl. 10—125.)



A stock and die comprising a two-part die stock, a two-part die within said stock and provided with openings having a portion of the walls thereof inclined, a two-part guide, means for securing the guide to the die, screws engaging in said stock and having conical heads co-acting with the inclined walls of the openings of the die for adjustably-moving the die and guide parts inwardly, and means carried by the stock and extending at right angles with respect to said screws and positioned upon opposite sides thereof for securing the die and guide parts in adjusted positions and moving the same outwardly.

1,019,235. AERATING BUTTER-SEPARATOR. ALPHEUS FAY, Louisville, Ky. Filed June 7, 1911. Serial No. 631,840. (Cl. 31—43.)



1. In a device of the character described, a rotatable agitator, a rotatable brake embracing the agitator and rotating coaxially with it, a bevel gear with which the brake rotates, a bevel pinion with which the agitator rotates, a driving shaft at an angle to the axis of the agitator and brake, and bevel gears on the driving shaft meshing, respectively, with said gear with which the brake rotates, and with said pinion, said gears and pinions being so proportioned that the agitator rotates faster than the brake does, and in the same direction.

2. In a device of the character described, a rotatable agitator and a shaft therefor, a rotatable brake with said shaft for an axis, a bevel pinion on said shaft rotating

therewith, a dished bevel gear on the brake rotating therewith and embracing said pinion, and bevel gears, coaxial and of equal diameter, meshing, respectively, with the pinion and with the dished gear, for the purposes set forth.

3. In a device of the character described, a hollow agitator adapted to act centrifugally on a substance and agitate it and aerate it by rotation at a relatively high speed, and a brake adapted to coact with the agitator by rotation at a relatively low speed in the same direction as that of the rotation of the agitator, and means for actuating said agitator and said brake, whereby they are correlated through the substance agitated.

4. In a device of the character described, an agitator shaft, an agitator, a tubular shaft on the agitator around the agitator shaft and extending upward, and a brake comprising slats embracing the agitator and arms above and below the agitator having axes on the shaft, the arms below meeting in a hub having a step bearing for the shaft, and the arms above meeting in a hub whereby rotative movement may be transmitted to the brake, said arms above being arched upward from said slats to said hub, over the tubular shaft, and actuating means for the agitator and the brake.

5. In a device of the character described, an agitator having a plurality of sides and a top and a bottom, forming a closed box, except at the corners thereof, where there are apertures formed by omission of parts of said sides, bottom and top that would complete the angular formation thereat, and a communicating opening in the top.

[Claims 6 to 11 not printed in the Gazette.]

1,019,236. SIGNALING. REGINALD A. FESSENDEN, Washington, D. C., assignor to National Electric Signaling Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Nov. 3, 1905. Serial No. 285,725. (Cl. 178—819.)

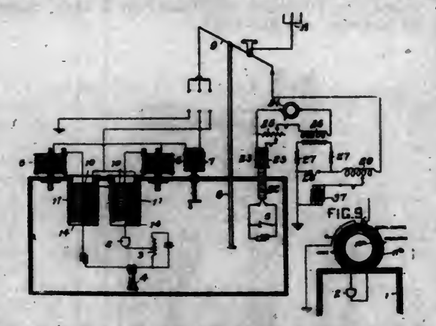


FIG. 9.

1. Apparatus for signaling by electro-magnetic waves, comprising an aerial, a receiver, a case composed of conducting material surrounding the receiver, and an inductive connection from the aerial to the receiver, the aerial circuit being entirely outside the case.

2. Apparatus for signaling by electro-magnetic waves, comprising an aerial, a receiver, a case surrounding the receiver and shielding it from electrostatic disturbances while receiving, an inductive connection between the aerial and receiver, the aerial circuit being entirely outside the case.

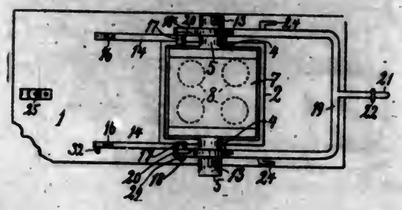
3. Apparatus for signaling by electro-magnetic waves, comprising an inductive connection between a receiver and aerial and consisting of coils located respectively outside and inside a shield, one of which coils is formed of insulated wire having a conducting coating, so as to shield the primary from disturbing effects due to the secondary of the inductive connection.

4. Apparatus for signaling by electro-magnetic waves, comprising a booth having a conducting covering, a receiver in the booth, an aerial, two coils arranged in inductive relation and respectively inside and outside the booth and connected to the receiver and aerial and one of said coils being formed of insulated wire with a conductive coating, whereby the primary is shielded from disturbing effects due to the secondary of the inductive coupling.

5. The combination with a receiver for electromagnetic waves, of a metallic inclosure therefor, an aerial, a transformer inductively connecting the aerial and the receiver, and having its primary and secondary coils respectively outside and inside said metallic inclosure.

[Claims 6 and 7 not printed in the Gazette.]

1,019,237. MACHINE FOR MAKING PASTRY CONES. PETER CORNIE FLAGSTAD and OSCAR A. FLAGSTAD, St. Paul, Minn. Filed Mar. 11, 1910. Serial No. 548,611. (Cl. 107—66.)

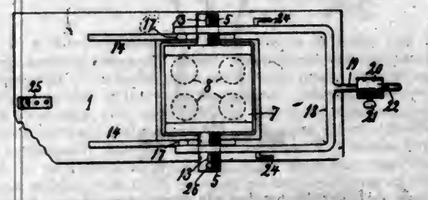


1. In a device of the kind described, a stove open at the top and provided in opposite sides of its top with open bearings, two rails extending rearwardly from the stove, two plates provided with meeting half journals adapted to rest in the bearings, conic molds on one of the plates and cores on the other plate to enter the molds with small spaces between them for the pastry, a pair of bifurcated levers pivoted together and having near said pivot-joint opposing open bearings adapted to engage over the half journals and squeeze them together, means at the free ends of the levers for holding them closed, catches on the core-carrying plate and catches on one of the levers to engage the first named catches for raising the core plate, and catching means on the oven and on the mold-carrying plate for retaining the latter in place when the other plate is being raised, said levers being slidingly supported on the rails.

2. In a device of the kind described, a stove open at the top and provided in opposite sides of its top with open bearings, two rails extending rearwardly from the stove and having each a notch near its rear end, two plates provided with meeting half journals adapted to rest in the bearings, conic molds on one of the plates and cores on the other plate to enter the molds with small spaces between them for the pastry, a pair of bifurcated levers pivoted together and having near said pivot joint opposing open bearings adapted to engage over the half journals and squeeze them together, means at the free ends of the levers for holding them closed, catches on the core-carrying plate and catches on one of the levers to engage the first named catches for raising the core plate, and catching means on the oven and on the mold-carrying plate for retaining the latter in place when the other plate is being raised, said levers being slidingly supported on the rails by means adapted to rest and rotate in the notches of the rails; the pivots connecting said levers being adjustable in one of the levers so as to permit the levers to close properly over journals of slightly varying sizes and contours.

3. In a device of the kind described, a stove open at the top and provided in opposite sides of its top with open bearings, two rails extending rearwardly from the stove and having each a notch near its rear end, two plates provided with meeting half journals adapted to occupy the bearings, conic molds on one of the plates and cores on the other plate to enter the molds with small intervening spaces between each core and mold, a pair of bifurcated levers pivoted together and having near said pivots opposing open bearings adapted to embrace the journals, and squeeze them together, means at the free ends of the levers for holding them closed, catches on the core-carrying plate and means carried by one of the levers for engaging said catches for raising the core plate, catches on the stove and means on the mold-carrying plate for engaging the latter catches and retain the said plate in the bearings of the stove when the core plate is being raised, said levers having means sliding on the rails and adapted to engage in the notches in the rear ends thereof, for the purpose set forth.

1,019,238. MACHINE FOR MAKING PASTRY CONES. PETER CORNIE FLAGSTAD and OSCAR A. FLAGSTAD, St. Paul, Minn. Filed Mar. 11, 1910. Serial No. 548,612. (Cl. 107—66.)



1. In a device of the kind described, a stove having an open top with open bearings in the edges thereof, a pair of arms extending rearwardly from the stove and provided each with a longitudinal slot, two plates provided with meeting half journals adapted to rest in the bearings, conic molds on one of the plates and cores on the other plate to enter the molds with small spaces between them for the pastry, a bifurcated gravity-actuated lever having the ends of its branches provided with studs slidable in the slots of the arms, and near said studs curved portions adapted to engage the upper sides of the journals to press the plates together when the lever is in a substantially horizontal forward position, means for engaging said lever with the core-carrying plate to lift it and means on the stove and on the mold-carrying plate adapted to engage one another by a rotary movement of the plate in its bearings, and to retain said plate when the upper plate is raised by the lever.

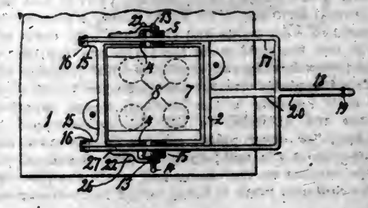
2. In a machine of the kind described, a plate with conic molds, a plate with conic cores adapted to enter the molds, a lever arranged to press the plates closely together and a weight on the lever to increase the pressure.

3. In a machine of the kind described, a plate with conic molds, a plate with conic cores adapted to enter the molds, a lever arranged to press the plates closely together and a weight on the lever to increase the pressure; said weight being slidable on the lever and the lever having means to prevent separation of the weight from it.

4. In a machine of the kind described, a plate with conic molds, a plate with conic cores adapted to enter the molds, a lever arranged to press the plates closely together and a weight on the lever to increase the pressure; said weight having a set screw by which it may be secured at the desired place on the lever.

1,019,239. MACHINE FOR MAKING PASTRY CONES. PETER CORNIE FLAGSTAD and OSCAR A. FLAGSTAD, St. Paul, Minn. Filed Mar. 11, 1910. Serial No. 548,613. (Cl. 107—66.)

1. In a device of the kind described, a stove having an open top with open bearings in opposite sides thereof, a lever fulcrumed to the rear part of the stove and normally extending forwardly, said lever having inverted open bearings normally directly above the bearing of the stove, two plates provided with meeting half-journals adapted to occupy said bearings, conic molds on one of the plates, and conic cores on the other plate, to enter the molds with small spaces between them for pastry, means for guiding the plates together, means for turning the plates at the journals, catches on the stove and catches on the journals of the mold-carrying plate adapted to engage the catches on the stove by rotating the journal, projections on the journals of the core plate, catches on the lever to engage said projections by a turning movement of the journals, and means for holding the lever firmly down on the journals; one of the catches on the lever having a pivoted turning movement and means for restoring it automatically to normal position, the means for turning the journals consisting of two overlapping handles projecting one from each of the half journals adjacent the pivoted catch on the lever.



2. In a device of the kind described, a stove having an open top with open bearings in opposite sides thereof, a lever fulcrumed to the rear part of the stove and normally extending forwardly, said lever having inverted open bearings normally directly above the bearing of the stove, two plates provided with meeting half-journals adapted to occupy said bearings, conic molds on one of the plates, and conic cores on the other plate, to enter the molds with small spaces between them for pastry, means for guiding the plates together, means for turning the plates at the journals, catches on the stove and catches on the journals of the mold-carrying plate adapted to engage the catches on the stove by rotating the journal, projections on the journals of the core plate, catches on the lever to engage said projections by a turning movement of the journals, and means for holding the lever firmly down on the journals; said means for holding the lever firmly down consisting of an arm extending forward from the front part of the stove and a ring engaging said arm and the front end of the lever to hold the latter down.

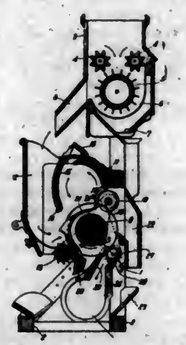
3. In a device of the kind described, a stove having an open top with open bearings in opposite sides thereof, a lever fulcrumed to the rear part of the stove and normally extending forwardly, said lever having inverted open bearings normally directly above the bearing of the stove, two plates provided with meeting half-journals adapted to occupy said bearings, conic molds on one of the plates, and conic cores on the other plate, to enter the molds with small spaces between them for pastry, means for guiding the plates together, means for turning the plates at the journals, catches on the stove and catches on the journals of the mold-carrying plate adapted to engage the catches on the stove by rotating the journal, projections on the journals of the core plate, catches on the lever to engage said projections by a turning movement of the journals, and means for holding the lever firmly down on the journals.

4. In a device of the kind described, a stove having an open top with open bearings in opposite sides thereof, a lever fulcrumed to the rear part of the stove and normally extending forwardly, said lever having inverted open bearings normally directly above the bearing of the stove, two plates provided with meeting half-journals adapted to occupy said bearings, conic molds on one of the plates, and conic cores on the other plate, to enter the molds with small spaces between them for pastry, means for guiding the plates together, means for turning the plates at the journals, catches on the stove and catches on the journals of the mold-carrying plate adapted to engage the catches on the stove by rotating the journal, projections on the journals of the core plate, catches on the lever to engage said projections by a turning movement of the journals, and means for holding the

lever firmly down on the journals; said lever having a vertical play in its connections with the journals of the plate it lifts, whereby the momentum of the lever may be used for separating the upper plate from the lower one when they are stuck together by the pastry.

5. In a device of the kind described, the combination of a base and a stove casing secured thereon and having open journal bearings in its upper edges, a pair of plates, one equipped with molds and the other with cores adapted to go into the mold when the plates are together; each of said plates having two semicylindrical journals adapted when the plates are brought together to form cylindrical split journals in the bearings, means mounted on the base and arranged to lift the core-equipped plate away from the other plate; catches on the stove casing and catches on the mold-equipped plate arranged to engage the catches on the casing and retain the plate when the core-equipped plate is being pulled away therefrom.

1,019,240. COTTON-GIN. JOHN R. FORDYCE, Little Rock, Ark. Filed Apr. 22, 1911. Serial No. 622,651. (Cl. 13—9.)



1. In a cotton gin, the combination of a series of saws separated a distance laterally to permit seed to pass between them, a doffer having grooves into which the saws pass in detaching fiber from the seed, a suction device having an inlet adjacent the peripheries of the saws and disposed remote from the doffer to permit motes to be thrown from the saws by centrifugal action, and a seed conveyer extending between the saws to direct seed from the machine.

2. In a cotton gin, the combination of a series of saws, coacting means for detaching fiber from the seed, air suction means to take the cotton from the saws, and a rotary device interposed between the saws and suction means, said suction means being disposed remote from the point where the saws detach the fiber from the seed to permit the saws to discharge the motes separate from the fiber.

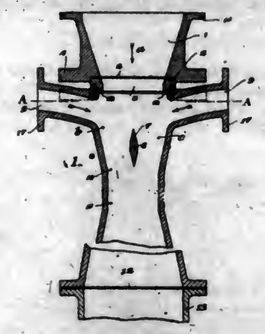
3. In a cotton gin, the combination of a series of saws, a rotary doffer coacting with the saws to detach fiber from the seed, and a suction flue having an opening adjacent the peripheries of the saws to take the fiber from the saws, said doffer and suction opening being separated a distance to permit motes to be thrown from the saws before reaching the suction opening.

4. In a cotton gin, the combination of a series of saws, a rotary doffer coacting with the saws to detach fiber from the seed, a suction flue having an opening adjacent the peripheries of the saws to take the fiber from the saws, and a mote conveyer disposed between the doffer and opening of the suction flue.

5. In a saw gin, the combination of a series of saws, a grooved doffing roller coacting therewith to detach the fiber from the seed, and a suction flue having a roller adjacent the peripheries of the saws.

[Claims 6 to 10 not printed in the Gazette.]

1,019,241. HYDRAULIC APPARATUS FOR EXHAUSTING OR EXTRACTING AIR, GAS, OR VAPOR. WILLIAM JOHNSTON FRAME, Glasgow, Scotland, assignor to Hydro-Vacuum, Limited, Glasgow, Scotland, a Corporation of Great Britain. Filed July 26, 1909. Serial No. 509,716. (Cl. 230—13.)



1. A hydraulic suction air pump, comprising, in combination, a device to which water is supplied, means in the device for breaking up the water into thin sheets, means for causing the sheets to be split crosswise and deflected, and means for the admission of air, gas or vapor to the device, whereby it is introduced between the sheets impounded in the water and carried along thereby.

2. A hydraulic suction apparatus comprising, in combination, an inclosure to which water is supplied, a slotted grating for breaking up the water into a series of thin sheets, means for causing the sheets to be split transversely and deflected, and means for leading air, gas or vapor to the inclosure, and delivering it between the sheets, whereby it is impounded in the water and carried along thereby.

3. A hydraulic suction apparatus comprising, in combination, a device to which water is supplied, a grate having a series of slots therein, a tapered deflecting bar arranged crosswise to the slots in the grate, and means located between said grate and said deflecting bar for admitting air, gas or vapor to said device.

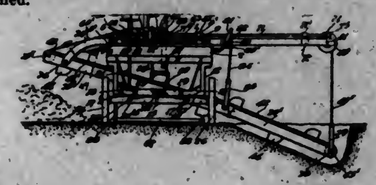
4. A hydraulic suction apparatus comprising, in combination, a device to which water is supplied, a grating having a series of parallel elongated slots therein, a tapered deflecting bar arranged crosswise to the parallel slots in said grating, and means located between said slotted plate and said deflecting bar for admitting air, gas or vapor to said device.

5. A hydraulic suction apparatus comprising, in combination, a device to which water is supplied, a grating having a series of parallel slots therein, a tapered deflecting bar arranged at right angles to the slots in said slotted grating, and means located between said slotted grating and said deflecting bar for admitting air, gas or vapor to the device between the said slotted grating and the said deflecting bar.

[Claims 6 to 18 not printed in the Gazette.]

1,019,242. DITCHING-MACHINE. ONESIME FRECHETTE, St. Pierre, Manitoba, Canada, assignor to James Forstall, St. Pierre, Canada. Filed May 14, 1910. Serial No. 561,450. (Cl. 37—24.)

1. A ditching machine, comprising a forward and a rear member forming a frame, the forward member being supported by suitable wheels, means for moving the rear member in respect to the other member forwardly or backwardly, girders secured to the rear member of the frame and extending beyond the forward member, an opposing set of beams hingedly secured to the girders at one end, further beams hingedly secured to the latter beams, a set of adjustable drums mounted in bearings carried by the girders, one of said drums being united through a suitable cable with the latter beams, and the other through a suitable cable with the former beams, cross shafts carried by the beams, chain wheels on the shafts, endless chains uniting the chain wheels, scoops secured at intervals to the chains, and reversible means for rotating one of the drums, as and for the purpose specified.



2. A ditching machine, comprising a forward and a rear member forming a frame, the forward member being supported by suitable carriage wheels, tracks located on the upper side of the forward member, cross shafts mounted forwardly and rearwardly on the rear member, such shaft carrying rollers adapted to operate on the tracks, longitudinally extending racks fixed on the under side of the forward member, a cross shaft dependent from the rear member said shaft carrying pinions operating on the racks, an engine platform dependent from the rear member of the frame, an engine mounted on the platform, girders mounted on the rear member and extending transversely across and beyond the outer member, suitable adjustable transversely extending ditching means carried by the girders, a main shaft mounted in bearings fixed on the girders, such shaft being connected to the engine shaft, a rotatable counter shaft carried by the inner member and adjoining the main shaft, a short shaft mounted in bearings carried by the inner frame and connected with the main shaft by a suitable chain and chain wheels, said short shaft, main shaft, and counter shaft being supplied with engageable pulleys whereby a forward or reverse motion can be given to the counter shaft, a bevel pinion secured to the free end of the counter shaft and meshing with a bevel wheel fixed on a cross shaft carried by the rear member of the frame, chain wheels secured to the latter shaft and to the shaft aforesaid carrying the pinions engageable with the tracks, and a chain uniting such chain wheels, as and for the purpose specified.

3. In a ditching machine, the combination with a forward and a rear member forming a frame, the forward member being supported by suitable carriage wheels, such members being adjustable longitudinally the one in respect to the other, of a platform dependent from the rear member of the frame, vertically directed guide bars passing between the platform and the rear member, guide blocks slidable between the guide bars, arms pivotally secured to the guide blocks, a foot piece swingably secured to the arms, and adjustable pins adapted to pass between the guide bars, as and for the purpose specified.

4. In a ditching machine, the combination with a forward and a rear member forming a frame, the forward member being supported by suitable carriage wheels and the rear member supported from the forward member movably by suitable rollers, racks fixed on the forward member, and pinions dependent from the rear member and operating on the racks, of a platform dependent from the inner member of the frame, guide bars passing between the platform and the rear member, and adjustable means operating between the guide bars and engageable with the ground over which the machine is operating adapted to prevent the rear member from advancing when the pinions are rotated, as and for the purpose specified.

1,019,243. NUT-LOCK. ARTHUR NEWELL GANDY, Brundidge, Ala. Filed Sept. 7, 1911. Serial No. 648,202. (Cl. 151—8.)

In a nut lock the combination of a bolt having its threads interrupted by a longitudinal groove, a nut on said bolt also having its threads interrupted by a longitudinal groove overlying the groove in the bolt, a locking key disposed in said grooves and of less width than the latter, and a plurality of teeth formed on one edge of the



locking key adapted to pass between the threads of the nut respectively when the latter is rotated in one direction.

1,019,244. INGOT-MOLD. EMIL GATHMANN, New York, N. Y. Filed Aug. 15, 1911. Serial No. 644,103. (Cl. 22—139.)



1. A metallic ingot mold separably connected with a metallic stool having a part projecting into the lower portion of the mold chamber which is out of contact with the vertical walls of said chamber and is provided with means for preventing the molten metal of the ingot from passing laterally outward from said chamber.

2. A metallic ingot mold separably connected with a metallic stool having a part projecting into the lower portion of the mold chamber which is out of contact with the vertical walls of said chamber and which has sealing means surrounding its vertical walls.

3. A metallic ingot mold separably connected with a metallic stool having a part projecting into the lower portion of the mold chamber and having sealing means located between the lower vertical chamber walls of the mold and the inwardly projecting portion of the stool.

4. An ingot mold separably connected with a stool having a part projecting into the mold chamber and having sealing means of refractory material interposed between the vertical walls of the mold and said projecting part.

5. A chambered mold resting on and separably connected with a stool having a part projecting into the mold chamber surrounded by a groove which extends below the mold base and underneath the lower outer portion of the mold chamber and which groove is filled with sealing material.

[Claims 6 to 9 not printed in the Gazette.]

1,019,245. WIND-WHEEL TOY. HERMAN C. GEELS, Decatur, Ind. Filed June 27, 1910, Serial No. 569,122. Renewed Jan. 18, 1912. Serial No. 671,963. (Cl. 46—40.)

1. In a toy of the class described, a stationary standard, a movable standard formed from a single piece of wire coiled centrally thereof around said stationary standard to form a bearing with one portion directed horizontally and provided with a vane and the other portion directed vertically with the terminal turned over in parallel relations to the vertical portion, a frame having a socket en-

gaging over the turned over portion of the movable standard, a wind wheel carried by said frame, a figure mounted upon said frame, and means for operating the figure by the movement of said wind wheel.



2. In a toy of the class described, a frame formed of a single strip of sheet metal with the intermediate portion turned inwardly at the edges and with downwardly directed forward portions spaced apart and bifurcated rear portion, a shaft extending through said forward spaced portions, arms carried by said shaft, a figure including a body supported upon said frame, upper leg members swingingly connected to said body and with turned over portions upon their free ends, lower leg members pivoted at one end to said upper leg members between said members and their turned over portions thereof and pivoted at their other ends to said arms, and a wind wheel carried by said shaft.

1,019,246. LAMP. FRANCISCO L. GODINEZ, Jersey City, N. J., and ALBERT J. MARSHALL, New York N. Y., assignors to Godinez-Marshall Company, New York, N. Y., a Corporation of New York. Filed Oct. 17, 1911. Serial No. 655,190. (Cl. 240—81.)



1. In a lamp, the combination with a base, of a translucent inverted bell-shaped dome thereon adapted to contain a light, and a shade supported from and surrounding the upper edge of said dome.

2. In a device of the class described, the combination with a pedestal adapted to carry a lighting element at its top, of a translucent bell-shaped dome secured thereto surrounding said lighting element and extending upwardly from said pedestal, and a shade carried by and surrounding said bell-shaped dome and spaced therefrom.

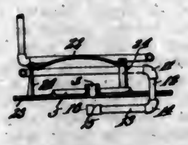
3. In a device of the class described, the combination with a pedestal, of light producing means carried on the upper end of said pedestal, a shade, and means extending upwardly from said pedestal around said light producing means for supporting said shade, the lower edge of the shade surrounding the supporting means, the said supporting means being translucent whereby the light will be uniformly diffused.

4. In a device of the class described, the combination with a pedestal, of light producing means carried on the upper end of said pedestal, a shade, an inverted translucent bell-shaped dome secured to the top of said pedestal and extending up around said light producing means, and means independent of the dome for supporting said shade from the upper edge of said bell-shaped dome.

5. In a dome of the class described, the combination with a pedestal adapted to carry lighting element at its top, of a hemispherical transparent dome secured to the upper end of said pedestal and extending upwardly around said lighting element, a frame resting upon the upper edge of said dome, and a shade carried by said frame and surrounding the same.

[Claims 6 to 8 not printed in the Gazette.]

1,019,247. LIQUID-FUEL BURNER. MANNIN GROSS, Council Grove, Kans. Filed July 21, 1911. Serial No. 639,813. (Cl. 158—63.)



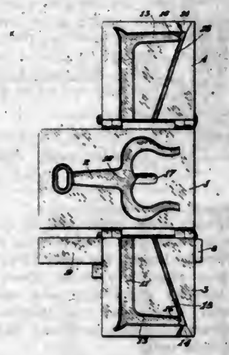
1. In a device of the type described, including a base, a mixer opening upwardly therethrough, an annular generator-coil superposed with respect to said base, an imperforate spreader spaced off from, and arranged in substantially the same horizontal plane with said generator-coil, and a jet-delivering pipe in continuation of said generator-coil and having its delivering end alining and spaced off from said mixer, said mixer having its upper end terminating below and delivering a flame upon the underside of said spreader, said generator coil, by virtue of its arrangement with respect to the latter, receiving the action of said flame at the perimeter of said spreader.

2. A device of the character described, including a base having a mixer-forming tubular member opening upwardly therethrough, said base also having its upper surface formed with an upstanding shallow receptacle, whose walls surround said mixer-forming tubular member, an annular generator coil superposed with respect to said base, an imperforate spreader spaced off from, and arranged in substantially the same horizontal plane with said generator-coil, and a jet-delivering pipe in continuation of said generator-coil and being dependable through said base and having its delivering end alining said mixer, said mixer having its upper end terminating below, and delivering a flame upon the underside of said spreader, said generator-coil by virtue of its arrangement with respect to the latter, receiving the action of said flame, at the perimeter of said spreader.

1,019,248. PERMANENT MOLD. JOSEPH ALBERT HARDIN, Anniston, Ala., assignor to Interstate Rooing & Foundry Company, Anniston, Ala., a Corporation of Alabama. Filed Oct. 28, 1911. Serial No. 657,322. (Cl. 22—156.)

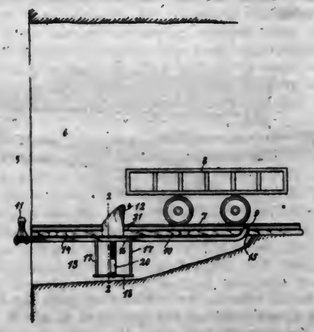
1. In a permanent mold, a drag having a mold cavity formed therein, a multi-parted cope adjustably attached to the drag, there being a mold cavity formed wholly in the cope and between the parts thereof which coincides with a mold cavity formed between the cope and drag, means to connect the cope sections to the drag, to adapt them to swing clear of the finished casting, and a gate for the molten metal formed partly in the cope and partly in the drag, substantially as described.

2. A permanent mold comprising a drag, a sectional cope, there being a horizontal mold cavity in the drag and a vertical mold cavity in the cope, the cope sections being parted in a plane intersecting the vertical cavity, means to hinge the cope sections to the drag at points where said



sections will swing clear of the castings when swung outwardly on their hinges and a gate formed in the cope and connected by a branch passage with the upper end of the mold cavity in the cope, said gate terminating in a channel formed in the drag and leading to the mold cavity therein, substantially as described.

1,019,249. SAFETY-STOP FOR MINE-CARS. HENRY H. HERBOLD, Thayer, and CHARLES HEGNER, Cainesville, Mo.; said Herbold assignor to said Hegner. Filed Dec. 16, 1911. Serial No. 666,008. (Cl. 104—49.)

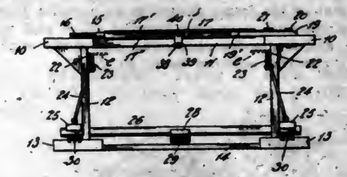


1. A car stop comprising a support, rods depending from the support, a plate carried by the rods, a lever pivoted to swing in a vertical plane between the rods, a spring between the lever and the aforesaid plate, and an abutment rising from the lever.

2. A car stop comprising a slotted support, rods depending from the support, a plate carried by the rods, a lever pivoted to swing in a vertical plane beneath the support and between the rods, a spring between the lever and the plate, and an abutment rising from the lever and passing through the slot of the support.

1,019,250. PLASTER-BOARD MACHINE. ERNEST A. HERZBERG and GEORGE H. HERZBERG, Seattle, Wash. Filed Dec. 27, 1910. Serial No. 599,549. (Cl. 25—49.)

1. In a machine of the class described, a machine frame, an invertible table pivotally supported by the opposite sides of said frame, normally inoperative longitudinal leaves hingedly connected to said two sides of the frame, a pan for said table, a pallet serving as a cover for said pan, devices detachably coupling said pallet with the table, at one side thereof and with the pan therebetween, manually actuated means whereby said leaves may be swung into position to support the pallet after the same has been presented thereto by the inverting of the table.



2. A device of the class described comprising opposite frame members, a rod trunnioned upon the top of said members, a table centrally secured to said rod between said frame members, a pan adapted to rest upon said table, a pallet adapted to rest upon said pan, a cleat secured to the table and projecting above the top of said pan and having a perforation therein, a pin upon one side of said pallet and adapted to engage within the said perforation, normally inoperative longitudinal leaves oppositely hinged to the inner faces of said frame members, and foot operated hingedly connected means whereby said leaves may be swung into a supporting position upon the inverting of the table.

1,019,251. CUTTER-HEAD. LOUIS F. HESS, Ansted, W. Va. Filed Sept. 20, 1911. Serial No. 650,438. (Cl. 125—14.)



1. A cutter head for a mining machine, having a spiral rib, the front and rear faces of the convolutions of which slope in opposite directions longitudinally of the head; and a cutter carried by the front face of the rib.

2. A cuter head for a mining machine, having a spiral rib, the front and rear faces of the convolutions of which slope in opposite directions longitudinally of the head, the angle between the front face and the axis of the head being greater than the angle between the rear face and the axis of the head; and a cutter carried by the front face of the rib.

3. A cutter head for a mining machine, having a spiral rib, the front and rear faces of the convolutions of which slope in opposite directions, longitudinally of the head, the front face of one convolution intersecting the rear face of the next adjacent convolution; and a cutter carried by the front face of the rib.

4. A cutter head having a spiral rib, the front and rear faces of the convolutions of which slope in opposite directions longitudinally of the head, the angle between the front face and the axis of the head being greater than the angle between the rear face and the axis of the head, the front face of one convolution intersecting the rear face of the next adjacent convolution; and a cutter carried by the front face of the rib.

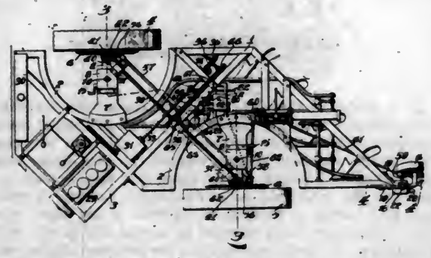
5. A cutter head for a mining machine, having a spiral rib, the front and rear faces of the convolutions of which slope in opposite directions longitudinally of the head; the front face being pierced by a socket located in a radial plane passing through the longitudinal axis of the head and disposed at an acute angle to said axis.

[Claim 6 not printed in the Gazette.]

1,019,252. MOTOR-PLOW. DANIEL B. HILL, Grayville, Ill. Filed May 9, 1910. Serial No. 560,104. (Cl. 21—114.)

1. In a machine of the class described, a substantially rhomboidal frame, a substantially semicircular cut away

portion in each side margin of the frame, one in advance of the other, a steering wheel, located for movements when steering, in each of said cut away portions, a wheeled support for the rear end of said frame, connections between all of said wheels whereby the first mentioned wheels may be turned in the same direction and the wheeled support for the rear of the frame turned in an opposite direction, manually operated means for steering all of said wheels, a motor, and means for connecting said motor with said manually operated steering means at times.



2. In a machine of the class described, a substantially rhomboidal frame, a substantially semicircular cut away portion in each side margin of the frame, one in advance of the other, a steering wheel, located for movements when steering in each of said cut away portions, a wheeled support for the rear end of said frame, connections between all of said wheels whereby the first mentioned wheels may be turned in the same direction and the wheeled support for the rear of the frame turned in an opposite direction, manually operated means for steering all of said wheels, a motor, means for connecting said motor with said manually operated steering means at times, and a manually operated means for changing the direction of movement of the steering apparatus when connected with said motor.

3. In a machine of the class described, a substantially rhomboidal frame having in each of the side frame members a semicircular portion, the semicircular portion in one side of the frame being in advance of the other semicircular portion, bearing plates secured to the frame and projecting laterally in each semicircular portion, vertical shafts rotatably held in said bearing plates, driving wheels carried by said shafts, and means whereby the vertical shafts, supporting the driving wheels are simultaneously turned.

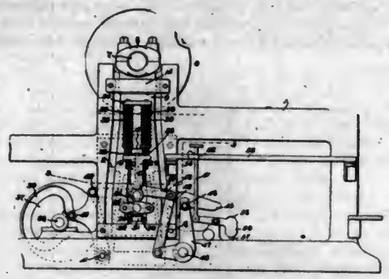
4. In a machine of the class described, a substantially rhomboidal frame in each side of which there is formed in the frame members a semicircular portion, the semicircular portion in one side of the frame being in advance of the semicircular portion in the opposite side of the frame.

1,019,253. IMPRESSION MECHANISM FOR PRINTING-PRESSES. WILLIS K. HODGMAN, Taunton, Mass., assignor to Huber-Hodgman Printing Press Co., Taunton, Mass., a Corporation of Massachusetts. Filed Aug. 1, 1910. Serial No. 574,838. (Cl. 101—111.)

1. A bed and cylinder press comprising in combination side frames, a cross or center stay connected thereto, a bed supported above the center stay, a cylinder above the bed, and side rods supporting said cylinder, said side rods being directly supported by the cross or center stay, whereby the latter receives the impression strain.

2. A bed and cylinder press comprising in combination side frames, a cross or center stay having ends projecting beyond the outer faces of said side frames, a bed supported above the center stay, a cylinder above the bed and upright members supporting said cylinder and themselves supported by and transmitting the strain of impression to said projecting ends.

3. A bed and cylinder press comprising in combination side frames having openings therethrough, a center or cross stay having ends protruding through said openings, a bed, a cylinder thereover, and side rods supporting said cylinder and transmitting the strain of impression to said protruding ends.

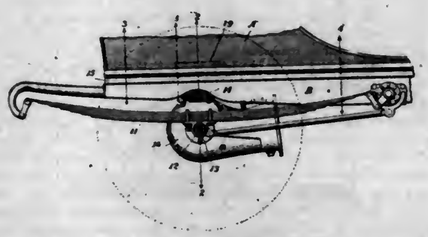


4. A bed and cylinder press comprising in combination side frames, a cross or center stay therebetween and having ends extending outwardly beyond the outer faces thereof, a bed above the center stay, a cylinder above the bed, upright side rods directly supporting said cylinder and extending below said stay ends, and cylinder tripping means interposed directly between said stay ends and the lower parts of said side rods.

5. A bed and cylinder press comprising in combination side frames, a cross or center stay therebetween and having protruding ends to receive the impression strain, a bed above the center stay, a cylinder above the bed, and upright side rods supporting said cylinder and directly connected to said protruding ends.

[Claims 6 to 13 not printed in the Gazette.]

1,019,254. MOTOR-VEHICLE. RUSSELL HUFF, Detroit, Mich., assignor, by mesne assignments, to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed May 27, 1907. Serial No. 375,962. (Cl. 21—90.)



1. In a motor vehicle, the combination with the axle and springs, of a metal frame, the side bars of which are off-set upwardly immediately over the axle, and sills supported on said metal frame, said sills being recessed to receive the off-set portions of the frame.

2. In a motor vehicle, the combination with the rear axle and springs supported thereon, of a metal frame of channel-section supported on said springs, the said frame being off-set upwardly immediately over the axle and the upper flanges of the frame in front and rear of said off-set portion being in the same plane, and sills resting upon said frame, the inner portions of said sills being recessed to receive the off-set portions of the frame.

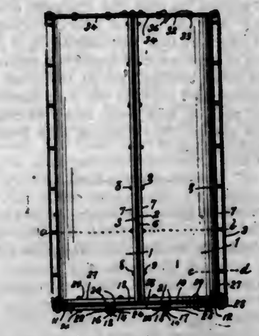
3. In a motor vehicle, the combination with the gear case and the rear axle casings, of the springs supported on said casings, a metal frame supported on said springs and having off-set portions over the axle casings, the sills supported on said metal frame and recessed to receive the off-set portions thereof, and the floor having an opening above the gear case, and a suitable raised cover for said opening.

4. In a motor vehicle, the combination with the axle and springs, of a metal frame, the side bars of which are off-set upwardly immediately over the axle, and sills supported on said metal frame, said sills being recessed to receive the off-set portions of the frame, the outside lines of said sills being straight at the off-set portions of the frame.

5. In a motor vehicle, the combination with the axle and springs, of a metal frame, the side bars of which are off-set upwardly immediately over the axle, and sills supported on said metal frame, said sills being recessed to receive the off-set portions of the frame, the lower surfaces of said sills outside of the side bars being substantially straight and horizontal.

[Claims 6 to 10 not printed in the Gazette.]

1,019,255. KNOCKDOWN TANK. PETER C. ICKES, Chanute, Kans. Filed Sept. 25, 1911. Serial No. 651,120. (Cl. 220—125.)



1. In a knock down tank, two members disposed edge to edge, adjacent edges of said members having longitudinal flanges, packing material interposed between adjacent flanges of the members, two channel clamping members having their flanges extending toward each other and bearing respectively against the said longitudinal flanges, the longitudinal flanges being located between said channel members, and securing means for holding said channel members clamped respectively against said longitudinal flanges.

2. In a knock down tank, two members disposed edge to edge, adjacent edges having longitudinal flanges each having a mating corrugation registering with the corrugation of the other member, packing material interposed between said flanges, two channel members between which the flanges are located, the flanges of one channel member extending toward the flanges of the other channel member, and securing means for holding the flanges of the channel members clamped against the said longitudinal flanges respectively.

3. In a knock down tank, two members disposed edge to edge, adjacent edges having longitudinal flanges, packing material interposed between said flanges, two channel clamping members between which the flanges are located and against which the flanges of the channel members bear respectively, and a securing device extending through said longitudinal flanges and connected to said channel members for holding the channel members clamped against the longitudinal flanges.

4. In a knock down tank, two members disposed edge to edge, adjacent edges having longitudinal flanges, the flanges having mating corrugations registering with each other, packing material interposed between said flanges, two channel clamping members between which the flanges are located and against which the flanges of the channel members bear respectively, the said corrugations being disposed between the flanges of the channel members, and a securing device extending through said longitudinal flanges and connected to the channel members for holding the channel members clamped against said longitudinal flanges.

5. In a knock down tank, two members having portions disposed parallel with each other, packing material interposed between said parallel portions, two channel clamping members having their flanges bearing respectively against said parallel portions, and means for holding the channel members clamped respectively against said parallel portions.

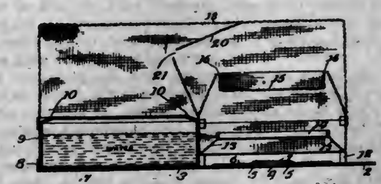
[Claims 6 to 12 not printed in the Gazette.]

1,019,256. PAPER-CLIP. JAMES H. IRVIN, Baltimore, Md. Filed Dec. 14, 1908. Serial No. 467,385. (Cl. 24—259.)



A clip for superposed sheets of paper formed of a resilient strip of sheet metal doubled to form two substantially parallel arms, said arms being provided at a point intermediate their length with oppositely disposed coöperating contacting gripping projections, the ends of said arms beyond the projections being made of different length and bent to diverge and form a converging entrance aperture; the extremities of said arms being brought into substantially the same plane with the gripping projections at different distances from the gripping projections whereby they will lie in close contact with opposite surfaces of the papers and a wide entrance opening in the side of the clip will be provided.

1,019,257. FLY-TRAP. FRANK KARNES, Geneseo, Ill. Filed Nov. 23, 1910. Serial No. 593,915. (Cl. 43—22.)



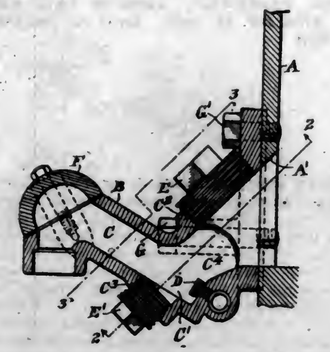
In a fly trap, a base having an upwardly directed annular ring forming a bait cup, and a mat of absorbent material bearing upon said base and provided with an opening less in diameter than the cup and projecting partly thereover and in contact with the bait in the cup and in position to absorb the same, and leaving the contents of the bait cup exposed.

1,019,258. TRACK-SANDER. CHARLES W. G. KING, Philadelphia, Pa., assignor, by mesne assignments, to United States Metallic Packing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Aug. 26, 1910. Serial No. 579,064. (Cl. 105—263.)

1. In a track sander a member formed with a sand passage which dips between its ends to form a sand trap, and a blast nozzle projecting into said passage adjacent the bottom of the sand trap portion thereof, said member having a portion of said passage at and leading away from its inlet end enlarged to provide a chamber which is substantially larger in cross section than the portion of said passage at the outlet side of the blast nozzle, and in which material tending to clog the sander may collect, and being provided with a normally closed clean out opening through which such material may be removed.

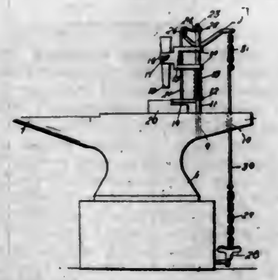
2. In a track sander a member formed with a sand passage which dips between its ends to form a sand trap, and a blast nozzle projecting into said passage adjacent the bottom of the sand trap portion thereof, said member hav-

ing a portion of said passage at and leading away from its inlet enlarged to provide a chamber, which is substantially larger in cross section than the portion of said passage at the outlet side of the blast nozzle, and in which material tending to clog the apparatus may collect, and being provided with a normally closed clean out opening through which such material may be removed, said opening being also substantially greater in cross section than said portion of the sand passage at the outlet end of the blast nozzle.



3. Track sanding mechanism comprising in combination a sand reservoir provided with a discharge port A^1, a member B, formed with a sand passage C, which dips between its ends to provide a sand trap portion C^1, and a blast nozzle projecting into said passage adjacent the bottom of the sand trap portion C^1, said member B being secured against said sand reservoir with one end of said passage C in register with said discharge port A^1, the portion of said passage C between the sand trap portion C^1 and the reservoir port A^1 as well as the latter, being substantially larger in cross section than the portion of the passage C beyond the blast nozzle, whereby lumps or foreign objects in the sand tending to clog the apparatus collect in the chamber C^4, formed by the enlarged portion of the passage C, said member being provided with a normally closed clean out opening C^2, leading from said chamber C^4 and also substantially larger in cross section than the portion of the channel C in front of the blast nozzle.

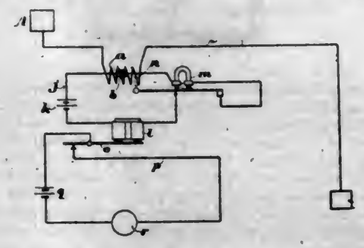
1,019,259. TOOL-SET. LOUIS F. LACER, Anadarko, Okla. Filed Apr. 6, 1910. Serial No. 553,698. (Cl. 164—92.)



1. The combination with a support, of a rod mounted on the support, a tool holding device reciprocally mounted upon the rod, an arm extending laterally from said rod, a spring surrounding said rod between the tool holding device and said arm, a second rod passed through suitable apertures in the tool holding device and secured by its lower end to said arm, the upper end of said second rod being provided with a lateral extension which is secured to the upper end of the first mentioned rod, said second rod forming a guide to hold the tool holding device against rotation, a pin extending from said second rod adjacent to its upper end, a lever bearing upon the upper face of the tool holding device and fulcrumed against said pin, and means for actuating said lever to depress said tool holding device.

2. The combination with a support, of a rod mounted upon the support and extending vertically upward therefrom, said rod being provided near its lower end with a laterally extending arm, a U-shaped member reciprocally mounted on such arm, the bight portion of said member being provided with tool engaging means, a second rod extending through suitable apertures formed in the arms of said U-shaped member and secured by its lower end to said arm, a spring surrounding the first mentioned rod between the U-shaped member and the arm, a lug extending upwardly from the upper face of said U-shaped member and spaced apart from the first mentioned rod, a pin extending laterally from the second mentioned rod adjacent its upper end, a curved lever bearing against the upper face of said U-shaped member and between the first mentioned rod and said lug, one end of said lever being fulcrumed against said pin, and means for actuating said lever to depress said U-shaped member.

1,019,260. COHERER. CHARLES D. LANNING, Boston, Mass. Filed Dec. 1, 1902, Serial No. 133,335. Renewed Dec. 13, 1910. Serial No. 597,151. (Cl. 178—319.)



1. In a receiver for electrical impulses, the combination with a receiving circuit of a second circuit containing a coherer normally interrupting the same, said coherer being out of electrical contact with said receiving circuit, but electro-magnetically actuated thereby to complete said second circuit.

2. The combination with a receiving circuit of a second circuit out of electrical contact therewith normally interrupted by an imperfect contact, said contact comprising a plurality of loose magnetic particles within the magnetic influence of the receiving circuit.

3. In a receiver for electrical impulses the combination with a receiving circuit of a second circuit normally interrupted by an imperfect contact, said contact comprising a plurality of loose magnetic particles within the magnetic influence of the receiving circuit and adapted to be brought into a state of coherence on the passage of an impulse through said receiving circuit.

4. In a receiver for electrical impulses, the combination with a receiving circuit of a second circuit containing a coherer normally interrupting the same, said coherer being out of electrical contact with said receiving circuit, and a coherer actuating coil in said receiving circuit surrounding said coherer.

5. In a receiver for electrical impulses, the combination with a receiving circuit of a second circuit out of electrical contact therewith, and normally interrupted by an imperfect contact, said contact comprising loose magnetic materials in non-conductive contact and an actuating coil in said receiving circuit surrounding said contact.

[Claims 6 to 14 not printed in the Gazette.]

1,019,261. RAZOR-SHARPENER. ALBERT E. LATTA, Washington, D. C. Filed June 10, 1911. Serial No. 632,456. (Cl. 51—16.)



1. A machine for sharpening double edged safety-razor blades, comprising a combined hone and strop, and a reciprocating blade holder, said hone and strop being provided with side flanges adapted to support the blade holder, having, each, a guide surface and a channel on each side, the guide surface on one side being opposite the channel on the other and said blade holder being provided with a pivoted blade holding clamp and with mechanism adapted at one position of the blade holder to engage one side of said flanges whereby in honing, the razor-blade is held in contact with the hone while being advanced edgewise, and said blade holder being provided with mechanism adapted at another position of the blade holder to engage the opposite sides of said flanges, whereby, in stropping, the blade is wiped or drawn backward over the strop, said mechanisms being adapted to rock the blade alternately from edge to edge at the end of each stroke, and said blade holder and its mechanisms being adapted to the honing or stropping of both sides of a blade.

2. A razor sharpener, comprising a slab having side flanges, and honing and stropping surfaces on opposite faces, a reciprocating blade holder, mounted to slide on said flanges and reversible thereon, a rotary blade clamp mounted on said holder and provided with mechanism adapted to engage and coöperate with the flanges of the sharpening slab, whereby, in honing, the blade will be held in contact with the honing surface when moved forward edgewise only and whereby, in stropping, the blade will be held in contact with the strop when wiped or drawn backward only.

3. A razor sharpener, comprising a strop with laterally projecting flanges, and a blade holder, provided with a pivotally mounted blade-clamp, adapted to be rocked or tilted in its bearings, forked pins projecting from the blade clamp, and levers engaging with said forked pins and adapted to contact with the flange of the strop and to hold the blade in wiping contact with the strop and at the end of each stroke to tilt the razor blade.

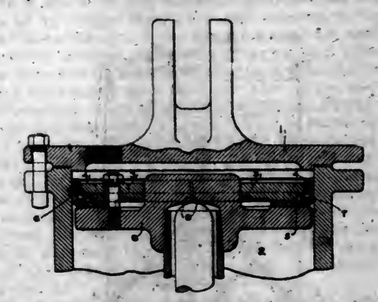
4. A razor sharpener, comprising a sharpening slab with side flanges and a reversible blade holder having a rocking blade-clamp with diametrically opposite fingers projecting radially therefrom, adapted to slide on the flanges of the sharpening slab and to hold the razor-blade in contact with the sharpening surface while advancing edgewise and to be shifted at the end of a sharpening stroke by contact with the ends of said flanges.

5. A razor-blade sharpener consisting of a strop having side flanges and a reversible reciprocating blade holder comprising two matched and separable rectangular frames, a detachable rocking blade clamp with radial pins and mounted between the frames, each frame having mounted on it means engaging with the strop flanges for holding the blade in wiping contact only with the strop, and with the pins for rocking the blade on the reversal of the stropping operation at the end of each stroke.

[Claims 6 and 7 not printed in the Gazette.]

1,019,262. PACKING-EXPANDER. WILLIAM H. LIMBER, Milwaukee, Wis., assignor to Allis-Chalmers Company, Milwaukee, Wis., a Corporation of New Jersey. Filed Feb. 20, 1911. Serial No. 609,645. (Cl. 121—108.)

1. In combination with a continuous circular packing having a cylindrical portion adapted to bear against the cylinder wall, a sheet-metal expander ring for said packing, said ring having a cylindrical portion adapted to bear directly against said cylindrical portion of said packing, a second cylindrical portion of smaller diameter than said first mentioned portion, and a plane portion connecting said cylindrical portions of said ring.



2. In combination with a continuous circular packing having a cylindrical portion adapted to bear against the cylinder wall, a sheet-metal expander ring for said packing, said ring having a cylindrical portion adapted to bear directly against said cylindrical portion of said packing, a second portion of smaller diameter than said first portion adapted to coact against another portion of said packing, and a third portion connecting said portions of said ring.

3. In combination with a continuous circular packing having a cylindrical portion adapted to bear against the cylinder wall and a plane portion extending inwardly from said cylindrical portion, an expander ring for said packing, said ring having a cylindrical portion adapted to bear directly against a major portion of said cylindrical portion of said packing, a second cylindrical ring portion free from engagement with the cylindrical portion of said packing and coacting with said plane portion of said packing, and a third portion of said ring connecting said cylindrical ring portions.

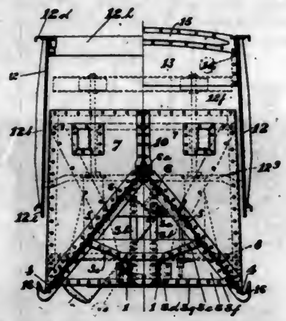
4. In combination, a piston, a follower adjacent said piston, said piston and follower having a circular recess formed between them, a circular packing extending axially from said piston and adjacent said follower, and a packing expander ring having a plurality of circular portions and a substantially plane portion connecting said circular portions, one of said circular portions coacting directly with said circular packing and extending between said packing and follower, another of said circular ring portions spanning said recess, and the plane portion of said ring coacting directly with said follower.

5. In combination, a piston, a follower adjacent said piston, said piston and follower having a circular recess formed between them, a circular packing extending axially from said piston and adjacent said follower, and a packing expander ring having a plurality of circular portions and a connecting portion for said circular portions, one of said circular ring portions extending between said follower and said packing and bearing directly against said packing, another of said circular ring portions spanning said recess, and the connecting portion of said ring coacting directly with said follower.

1,019,263. DUMP-CAR. CHARLES A. LINDSTRÖM, Pittsburgh, and JOHN F. STREIB, Avalon, Pa., assignors to Pressed Steel Car Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Oct. 21, 1909. Serial No. 523,784. (Cl. 105—186.)

1. In a dump car, the combination with a ridge-shaped floor, of a pair of center sills and an A-shaped floor frame comprising a vertical plate notched to receive said center sills, a pair of parallel vertical angles riveted to said center sills between the latter and also riveted to said plate to stiffen the frame and a transverse angle having upturned ends riveted to said center sills and also riveted to said plate.

2. In a dump car, the combination with a ridge-shaped floor, of an A-shaped floor frame comprising a vertical plate notched along its lower edge to avoid the car truck and a stiffening angle extending along the lower edge of said plate.



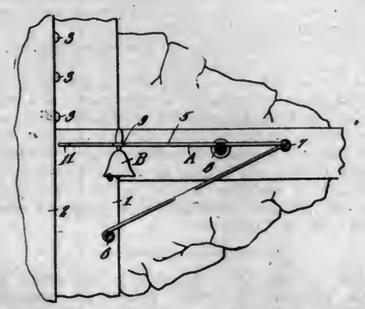
3. In a dump car having an inclined floor, a floor frame comprising a vertical plate notched along its lower edge to avoid the car trucks, an inclined stiffening member extending along one edge of said plate and a stiffening member extending along the notched edge of said plate and intersecting the said first-mentioned stiffening member.

4. In a dump car, the combination with an inclined floor, of a floor frame comprising a vertical plate notched along its lower edge to avoid the car truck, a stiffening member extending along said lower edge, an inclined stiffening member extending along another edge of said plate and intersecting said first-mentioned stiffening member and a transverse stiffening member having a horizontal central portion and upturned ends.

5. In a dump car having a liftable side and a cross-bearer, an immovable side keeper secured to said cross-bearer and having a V-shaped recess formed therein to receive the lower edge of the car side.

[Claims 6 to 10 not printed in the Gazette.]

1,019,264. BURGLAR-ALARM. ALMADORIS B. LOWE, Cleveland, Ohio, assignor of one-half to Thomas A. Lowe, Burton, Ohio. Filed Aug. 25, 1911. Serial No. 645,936. (Cl. 116—44.)



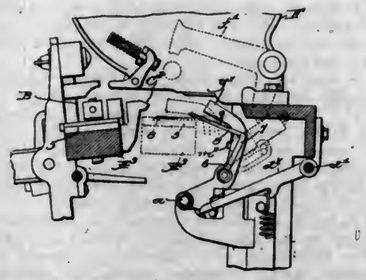
1. In a window burglar alarm, the combination of a series of projections carried by the window frame, of a bell carrying member made from a single piece of wire and bent V-shaped, said member being secured to the sash so that one terminal thereof is in the path of to engage the projections in succession, said terminal having provided intermediate of its ends a bell receiving loop.

2. In a window burglar alarm, the combination of a series of projections carried by the window frame, and an alarm carrying member attached to the sash and movable therewith, formed from a single piece of wire and bent V-shaped, said member having a plurality of engaging loops formed therein for attachment to the window sash, and so disposed upon the sash as to have a free terminal at right angles to the line of the frame and in the path of the projections, a loop being provided from the body of the member intermediate of its connecting and free terminal, and a bell disposed in said loop.

3. In a window burglar alarm, the combination with a series of projections carried by the window frame, an alarm carrying member carried by the sash, said alarm carrying member consisting of a single piece of wire bent V-shaped, one of the terminals thereof being provided with an eye at its extreme end, and an eye at the apex of the V, the other terminal having an eye intermediate of its ends whereby the member may be attached to the window sash at three points, the free end of the last mentioned terminal being disposed in the path of the projections of the window frame, and an alarm carried by said last mentioned terminal between the free end thereof and its eye.

4. In a window burglar alarm, the combination with a series of projections carried by the window frame, of a bell carrying member made from a single piece of wire and provided with two loops for connecting the same to the window sash, the free terminal of said member being disposed in the path to engage the projections in succession, said terminal having provided intermediate of its free end and first loop, a bell receiving loop.

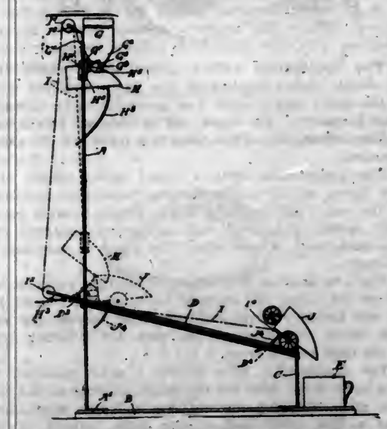
1,019,265. AUTOMATIC FILLING-REPLENISHING LOOM. HENRY LUSSIER, Salem, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Sept. 25, 1911. Serial No. 651,068. (Cl. 139—85.)



1. In an automatic filling replenishing loom, in combination, a lay transversely recessed near the mouth of the replenished shuttle-box, a shuttle feeler to prevent filling replenishment when the shuttle is improperly positioned, a thread cutting temple at the replenishing side of the loom, a laterally and inwardly extended arm fixedly attached to the shuttle-feeler and upturned at its free end, and a rearwardly extended thread retractor forming a continuation of the upturned part of said arm, movement of the shuttle-feeler into operative position when filling replenishment is called for causing the retractor to enter the recess in the lay beneath and to engage a spent filling-end, return movement of the shuttle feeler and retractor to normal position drawing the spent filling-end out of the shuttle path and into position to be acted upon by the thread cutting temple, the upper edge of the retractor having a series of notches to engage the thread.

2. In a loom in combination, a lay having a shuttle-box, mechanism to replenish the shuttle automatically with filling when properly positioned in said shuttle-box, a rearwardly extended thread retractor notched on its upper side and movable in a fore and aft direction into position to engage a spent filling-end between the cloth and the mouth of the replenishing shuttle-box when filling replenishment is to be effected, and a shuttle-feeler on which the retractor is fixedly mounted to move said retractor into and out of operative position when filling replenishment is effected, movement of the retractor to normal position operating to withdraw a spent filling-end from the path of the shuttle to thereby prevent said filling-end from being woven into the cloth by the shuttle after replenishment.

1,019,266. TOY. JAMES J. MAHAN, Jersey City, N. J. Filed Mar. 26, 1910. Serial No. 551,727. (Cl. 46—37.)



1. In a device of the character described the combination of an upright frame, a bucket mounted to travel up and down thereon, a bin adapted to contain sand or other fluent material, having an opening adjacent to the bucket in its uppermost position, a gate adapted to open and close said opening provided with a portion extending into the path of the bucket and adapted to be raised thereby, an extension connected with the bin, a bail by which the bucket is hung into the path of which the said extension projects, a lug on the bucket adjacent the bail, adapted to come in contact therewith when the bucket is tilted in one direction and to check said tilting movement and move the bail outside the said projection, an inclined track running downwardly from the lower part of the upright, a car mounted to travel thereon, a line connecting the said car with the bucket whereby the car is drawn to the top of the incline by the bucket when it descends and the bucket is drawn to the top of the upright by the car when the car descends, an arm on the bucket, a member in the path of said arm near the upper end of the incline and adapted to cause the said arm to rock the bucket and dump its contents when the bucket descends, an arm on the car, and a member near the lower end of the incline in the path of said arm adapted to dump the car.

2. In a device of the character described the combination of an upright frame, a bucket mounted to travel up and down thereon, a bin adapted to contain sand or other fluent material, having an opening adjacent to the bucket in its uppermost position, a gate adapted to open and close said opening and adapted to be moved by the bucket, a bail by which the bucket is hung, a lug on the bucket adjacent the bail adapted to come in contact therewith, an inclined track running downwardly from the lower part of the upright, a car mounted to travel thereon, a line connecting the said car with the bucket whereby the car is drawn to the top of the incline by the bucket when it descends and the bucket is drawn to the top of the upright by the car when the car descends, an arm on the bucket, a member in the path of said arm near the upper end of the incline and adapted to cause the said arm to rock the bucket and dump its contents when the bucket descends, an arm on the car, and a member near the lower end of the incline, in the path of said arm adapted to dump the car.

3. In a device of the character described the combination of an upright frame, a bucket mounted to travel up and down thereon, a bin adapted to contain sand or other fluent material, provided with an opening adjacent to the bucket in its uppermost position, an inclined track running downwardly from the lower part of the upright, a car mounted to travel thereon, a line connecting the said car with the bucket whereby the car is drawn to the top of the incline by the bucket when it descends and the bucket is drawn to the top of the upright by the car when the car descends, an arm on the bucket, a member in the path of said arm near the upper end of the incline and adapted to cause the said arm to rock the bucket and dump its contents into the car when the bucket descends, an arm on the car, and a member near the lower end of the incline in the path of said arm adapted to dump the car.

4. In a device of the character described the combination of an upright frame, a bucket mounted to travel up and down thereon a bin adapted to contain sand or other fluent material at the upper part of the frame provided with an opening adjacent to the bucket when in its uppermost position, a gate adapted to open and close said opening provided with a portion extending into the path of the bucket and adapted to be moved thereby and to open the gate, an extension of the bin in the path of a portion of the bucket when said bucket is empty, said portion of the bucket moving outside the said projection, when the bucket is filled.

5. In a device of the character described the combination of an upright frame, a bucket mounted to travel up and down thereon, a bin adapted to contain sand or other fluent material at the upper part of the frame provided with an opening adjacent to the bucket when in its uppermost position, a gate adapted to open and close said opening provided with a portion extending into the path of the bucket and adapted to be moved thereby and to open the gate, an extension of the bin in the path of a portion of the bucket when said bucket is empty, said portion of the bucket moving outside the said projection when the bucket is filled, an inclined track running downwardly from the lower part of the upright, a car mounted to travel thereon, a line connecting the said car with the bucket whereby the car is drawn to the top of the incline by the bucket when it descends and the bucket is drawn to the top of the upright by the car when the car descends, means for rocking the bucket and dumping its contents when it descends, and means near the lower end of the incline for dumping the car.

[Claims 6 to 10 not printed in the Gazette.]

1,019,267. FRICTION-CLUTCH. GEORGE CUSHING MARTIN, Los Angeles, Cal. Filed May 19, 1910. Serial No. 562,297. (Cl. 192—11.)



1. A clutch comprising two relatively rotatable members, floating shoes between said members, resilient means operable by relative rotation of said members to force the shoes into frictional engagement with one of said members upon relative rotation of the members in

one direction, means to normally hold said resilient means in operative position to force said shoes, and means to retract said forcing means to release the pressure of the shoes.

2. A clutch comprising two relatively rotatable members, floating shoes between said members, resilient means operable by relative rotation of said members to force the shoes into frictional engagement with one of said members upon relative rotation of the members in one direction, wedge means to normally hold said resilient means in operative position to force said shoes, and means to retract said wedge means to release the pressure of the shoes.

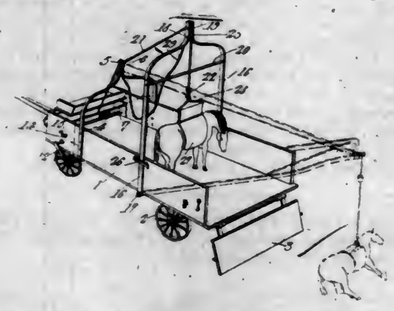
3. A clutch comprising two relatively rotatable members, a floating shoe adapted to frictionally engage one of said members, resilient toggle means between said shoe and the other member, said toggle means operable through relative rotation of said members to force the shoe toward the member with which it engages, means to force the toggle means into operating position, and means to retract said toggle forcing means.

4. A clutch comprising two relatively rotatable members, a floating shoe adapted to frictionally engage one of said members, resilient toggle means between said shoe and the other member, said toggle means being operable through relative rotation of said members to force the shoe toward the member with which it engages, wedge means to force the toggle means into operating position, and means to retract said wedge means.

5. A clutch comprising two relatively rotatable members, a floating shoe adapted to frictionally engage one of said members, resilient toggle means between said shoe and the other member, said toggle means being operable by relative rotation of said members to force the shoe toward the member with which it engages, a wedge to force the toggle means into operating position, a spring to move the wedge into toggle forcing position, and means to retract the wedge against the force of the spring.

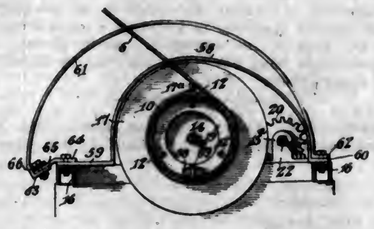
[Claims 6 to 11 not printed in the Gazette.]

1,019,268. ANIMAL-AMBULANCE. ADOLPH MELZER, Evansville, Ind. Filed Oct. 24, 1910. Serial No. 588,773. (Cl. 214—2.)



An animal ambulance including a vehicle body, side beams pivotally connected to the sides of the body at the bottom thereof and at points between the front and rear supporting wheels of the body, the upper ends of said beams converging upwardly, a guide sheave journaled between the upper end portions of said beams, a yoke fixedly connected to the front portion of the body, a flexible connection between the upper end portions of the beams and the yoke, a guide sheave carried by the yoke, an animal engaging band, a flexible hoisting element detachably engaging the band and mounted on the sheaves, a stop device carried by said element and movable against one of the sheaves to elevate the beams when said element is moved in one direction, means carried by the front portion of the body for winding said element, and means for automatically engaging the beams to lock them when elevated.

1,019,269. HOISTING-DRUM. NICHOLAS C. MILLER. Dodgeville, Wis. Filed May 25, 1911. Serial No. 629,454. (Cl. 57—22.)



1. The combination with a motor driven shaft, of a loose drum, clutch mechanism for connecting the drum with the motor driven shaft, and an eccentrically arranged weight carried by the drum for preventing free rotary movement thereof when the drum is released by the clutch mechanism.

2. The combination with a motor driven shaft, of a hollow drum, clutch mechanism for connecting the drum with the motor driven shaft, and a weight secured eccentrically within the drum and adapted to prevent free rotary movement thereof when the drum is released by the clutch.

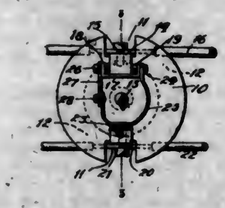
3. The combination of a drum, a hoisting rope extending from the drum and adapted to be wound around the same, and arched fenders extending over the end portions of the drum and arranged to keep the hoisting rope from the ends of the drum.

4. The combination of a frame, a shaft mounted on the frame, a drum loose on the shaft, gearing at one end of the drum for rotating the shaft, clutch mechanism located at the other end of the drum, spaced shields mounted on the frame and extending over the gearing and the clutch mechanism, bars projecting from one side of the frame and having inclined portions, and fenders arched over the end portions of the drum and supported at one end by the shields and at the other end by the inclined portions of the projecting bars.

5. The combination of a frame, a hoisting drum provided at its ends with heads and mounted within the frame, a hoisting rope connected with and adapted to be wound around the drum, and arched fenders extending across and secured at their terminals to the frame and located above the heads of the drum and adapted to keep the hoisting rope away from the same.

[Claims 6 to 9 not printed in the Gazette.]

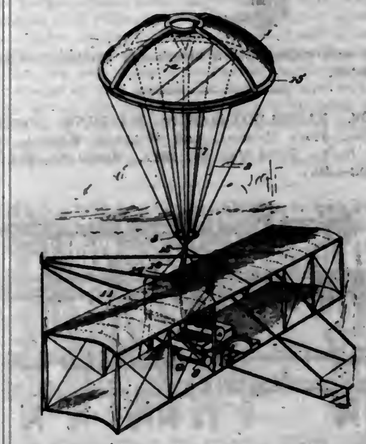
1,019,270. ELECTRIC FIRE-ALARM. ELDOR H. MOE, Salt Lake City, Utah. Filed Jan. 4, 1911. Serial No. 600,784. (Cl. 177—303.)



1. A thermostat comprising a base of insulating material having vertical recesses and transverse recesses communicating with the vertical recesses, binder plates bearing in the bottoms of said recesses and extending in advance of the base, a conductor wire extending through each of said transverse recesses, means for connecting said conductor wires respectively to said binder plates, a resilient member connected at one end to the extended portion of one of said binder plates, a fusible element connected at one end to said last mentioned binder plate and at its other end to the free end of said resilient member and holding the same normally out of contact with the projecting portion of the other binder plate.

2. A thermostat comprising a base of insulating material having vertical recesses and transverse recesses, binder plates bearing in the bottoms of said recesses and extending in advance of the base, one of said extended portions being formed with offsets at its ends, a conductor wire extending through each of said transverse recesses, means for connecting said conductor wires respectively to said binder plates, a resilient member connected at one end to one of said offsets, and a fusible element connected at one end to the other of said offsets and with the other end of the fusible element connected to the free end of said resilient member and holding the same normally out of contact with the projecting portion of the other binder plate.

1,019,271. PARACHUTE. LOUIS M. NELSON, Pennington, N. J. Filed Jan. 14, 1911. Serial No. 602,668. (Cl. 244—21.)

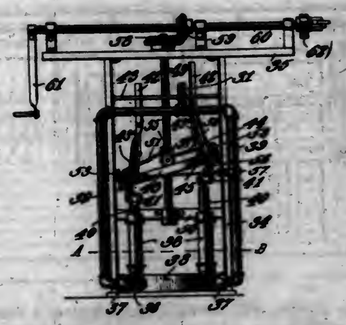


A collapsible parachute, a receptacle designed to contain said parachute in collapsed condition, the receptacle being open at its top, a distensible cover formed with a marginal bead by which it is designed to be stretched over and removably secured to the receptacle to cover the same and the receptacle being of a size to contain the parachute in the collapsed and deflated condition of the latter, the parachute including an inflatable frame, and means leading into the receptacle for inflating said frame, whereby to forcibly remove the cover from the receptacle and to raise the parachute therefrom into distended condition.

1,019,272. PUMP. JOHN L. OAKES, Kimberly, Idaho. Filed Jan. 23, 1911. Serial No. 604,184. (Cl. 103—77.)

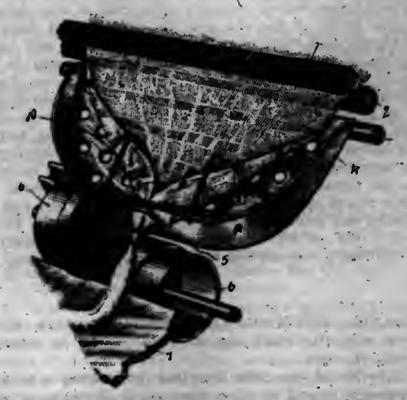
1. In apparatus of the class described a pump including separate cylinders, pistons mounted for reciprocation therein, a guide, members pivotally connected to the pistons and mounted to reciprocate within the guide, a nonrotatable wabble ring, universal connection between the periphery of said ring and the respective members and constituting the sole supports of the ring, and an inclined series of spaced rollers mounted for rotation within the ring and bearing downwardly thereon for wabbling the ring to successively shift the pistons in one direction.

2. In apparatus of the class described a pump including a base, cylinders upstanding therefrom, pistons mounted for reciprocation within said cylinders, a guide, members movably connected to the pistons and mounted to reciprocate within the guide, a wabble ring, means for holding the ring against rotation, universal connections between the periphery of the ring and the said members and constituting the sole supports of the ring, a driving element extending through the ring, and anti-friction devices supported at different distances from the base and fixed relative to each other, said devices being movable with said element for wabbling the ring to successively move the pistons in one direction during the rotation of said drive element, said anti-friction devices being mounted in a plane oblique to the axis of rotation of the driving element.



3. Apparatus of the class described including a plurality of cylinders, means for fixedly connecting the same, pistons mounted to reciprocate within the cylinders, a shaft, a wabble ring extending around and separate from the shaft, pivoted means for holding the ring against rotation, guides, members mounted to reciprocate within the guides and connected to the respective pistons, hangers pivotally connected to the said members, universal connections between the hangers and the peripheral portion of the ring, said hangers constituting the sole supports of the ring, and oppositely extending means revoluble with the shaft and supported in a plane inclined relative to the axis of rotation of the shaft, for bearing downwardly upon said ring and for wabbling the ring during the rotation of the shaft.

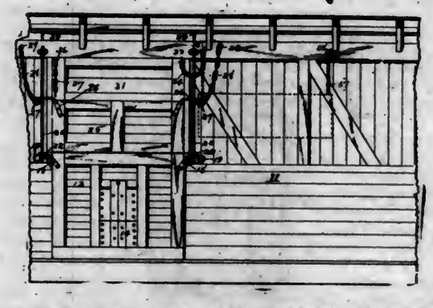
1,019,273. HEILMAN COMBING-MACHINE. OSCAR L. OWEN, Whitinsville, Mass., assignor to The Whitin Machine Works, Whitinsville, Mass., a Corporation of Massachusetts. Filed Dec. 11, 1911. Serial No. 665,124. (Cl. 19—9.)



In a Heilman type cotton combing machine, the combination of the sliver-pan 4, provided with the trumpet 5,

and a sliver-folding guide adapted to engage the sliver to fold the top surface thereof over upon itself and having the supporting hinge connection 11 with the said pan whereby it may be turned back for piecing and provided with stop means 13 for holding the said folding guide in its normal operating position substantially as described and set forth.

1,019,274. GRAIN-DOOR FOR CARS. BENJAMIN F. OWENS, Rockwell City, Iowa. Filed Sept. 5, 1908. Serial No. 451,846. (Cl. 20—34.)



1. In a grain car, having a door opening, a door comprised of an upper and a lower section, said upper section being secured at one side of its upper end to the frame of the car near the roof thereof and detachably secured at the other side of its upper end to said frame and being capable of swinging inwardly both laterally and upwardly, means for supporting said upper section on the frame of the car when it is swung end for end and rests against the inside of the car, said lower section being slidably mounted on the frame of the car and capable of vertical movement with relation thereto, and being also capable of swinging inwardly and upwardly, means for supporting said lower section adjacent to the roof of the car when it is raised to the upward limit of its vertical movement and swung inwardly and upwardly, and means for detachably securing said door sections in position in the door opening.

2. In a grain car, having a door opening, a door comprising three sections capable of independent movement with relation to each other, and designed to completely fill the door opening, means for detachably securing said sections in said opening, a chain secured to one side of the upper end of said upper section and to the frame of the car near the roof thereof, a chain secured to the other side of said upper section near its upper end, a hook secured to the frame of the car near the roof thereof designed to receive and engage said second chain when said upper section is swung end for end and rests adjacent to the inside of the car, means for securing the upper end of said middle section to the roof of the car and for permitting it to swing upwardly and inwardly, means for securing said middle section in a position adjacent to the roof of the car at the limit of its upward and inward movement, the upper end of said lower section being slidably mounted on the frame of said car in said opening to permit the lower end of said lower section to swing upwardly and inwardly, and means for securing said lower section to the roof of the car when it is moved to the upward limit of its vertical movement and then inwardly and upwardly.

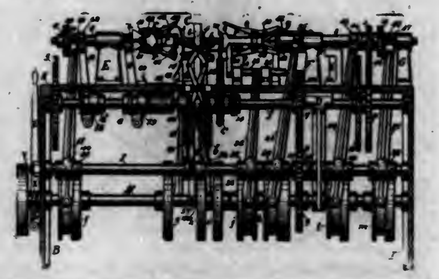
1,019,275. ENVELOP-PAD. GABRIEL G. PRESS, Hollowayville, Ill. Filed Aug. 23, 1910. Serial No. 578,602. (Cl. 11—19.)

A device of the class described, comprising a backing member, a plurality of envelops each including a stub portion and a closing flap portion separable from each other by scoring lines, each of the said stub portions being folded upon itself at its free edge to form a plurality of superimposed layers, and fastening devices extending



through said superimposed layers and through the backing member.

1,019,276. PAPER-BOX-MAKING MACHINE. VINCENT RAGONA, JOHN RAGONA, and WILLIAM RAGONA, New York, N. Y. Filed Mar. 16, 1911. Serial No. 614,949. (Cl. 93—40.)



1. In a box-making machine, the combination with a neck feeding, scoring and cutting mechanism, an axially reciprocating and rotary neck-former, means for intermittently rotating said former, means for reciprocating said former, means to engage neck strip on former to properly press and bend said strip thereto while being wrapped thereon, means for holding forward end of neck strip on former, means for holding rear end of neck strip on former, means for wrapping a surface finishing strip on wound neck strip, and means to bend and tuck in the protruding marginal portions thereof.

2. In a box-making machine, the combination with a neck feeding, scoring and cutting mechanism, an axially reciprocating and rotary shaft provided with a neck former, means for intermittently rotating said shaft, means for reciprocating said shaft, means revolving in relation with neck former to engage neck strip therewith and to properly press and bend it on former while being wrapped thereon, means for holding forward end of neck strip on former, means for holding rear end of neck strip on former, means for wrapping a surface finishing strip on wound neck, and means to bend and tuck in the protruding marginal portions thereof.

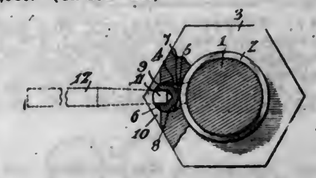
3. In a box-making machine, the combination with a neck feeding, scoring and cutting mechanism, an axially reciprocating and rotary shaft provided with a neck former, means for intermittently rotating said shaft, means for reciprocating said shaft, means mounted on said shaft and adjacent to said former for clamping forward end of neck strip thereto before being wound, means for clamping rear end of said strip thereto after being wound and movable with last mentioned means, means revolving in relation with said former to engage neck strip therewith and to properly press and bend it while being wrapped thereon, means for wrapping a surface finishing strip on wound neck, and means to bend and tuck in the protruding marginal portions thereof.

4. In a box-making machine, the combination with an axially reciprocating and rotary shaft provided with a neck former, means for rotating said shaft, means for reciprocating said shaft, means revolving in relation with said former engaging neck strip therewith while being wrapped thereon, means mounted on said shaft and adjacent to said former for clamping forward end of neck strip thereto, means for clamping rear end of neck strip thereto after being wound and movable with last mentioned means, a rotatable carrier for last two mentioned means, means for wrapping a surface finishing strip on wound neck, and means to bend and tuck in the protruding marginal portions thereof.

5. In a box-making machine, the combination with an axially reciprocating and rotary shaft provided with a neck former, means revolving in relation with said former engaging neck strip on former while being wrapped thereon, a clutch finger for clamping forward end of said strip thereto, a spring engaging said finger normally tending it against the neck former, a rotatable carrier for said finger, means on said carrier for clamping rear end of said strip, means for wrapping a surface finishing strip on wound neck, and means to bend and tuck in the protruding marginal portions thereof.

[Claims 6 to 71 not printed in the Gazette.]

1,019,277. NUT-LOCK. PETER G. RAPP and PETER H. KING, Chicago, Ill. Filed Jan. 11, 1911. Serial No. 602,040. (Cl. 151—23.)

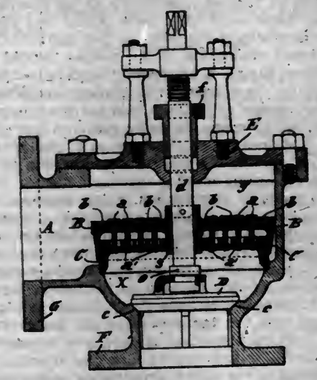


1. In a nut lock, a nut provided with a longitudinal recess parallel to and encroaching upon the central threaded bore of the nut, the recess open to one end face of the nut and closed at the other end, and a pawl of general cylindrical shape to seat within the recess and cut away upon intersecting planes generated by lines parallel to the axis of the cylinder to form a longitudinal tooth confined within the cylindrical periphery of the pawl, the pawl also provided on the side opposite the tooth and intermediate its ends with a socket, the said nut having a slot formed through its outer wall cutting the recess transversely in line with the socket and on the side remote from the bore of the nut.

2. In a nut lock, a nut provided with a longitudinally disposed seat or recess parallel with and at one side of the threaded bore of the nut, said seat or recess extending from one end face of the nut toward but terminating short of the other end face of the nut and opening into the threaded bore of the nut, the said nut being provided with a slot or passage leading from the cylindrical seat to the exterior of the nut intermediate of the ends of the nut, said slot extending to each side of the seat and entering the same at a point remote from the point of communication of the seat with the bore of the nut, and a cylindrical pawl having a tooth formed along one side thereof, said pawl being adapted to the cylindrical seat in the nut with the tooth in position to enter the bore of the nut through the passage connecting the seat with said bore and said pawl being provided with a socket on the side remote from the tooth in position to be entered by a manipulating member introduced through the intermediate slot in the nut.

3. In a nut lock, a nut provided with a longitudinally disposed cylindrical seat opening at one end face of the nut at one side of and communicating with the threaded bore of the nut with the longitudinal axis of the seat less distant from the corresponding side of the bore of the nut than the radius of said seat, and a cylindrical dog having a tooth along one side within the confines of the cylindrical periphery of the dog, the said dog being adapted to the seat with the tooth movable into the bore of the nut and having walls on either side of the tooth flattened, and the dog being provided on the side remote from the tooth with a socket for the introduction of a manipulating tool, the said nut having formed therein a slot or recess intermediate of the end faces of the nut and entering the cylindrical seat or socket on the side thereof remote from the bore of the nut.

1,019,278. STEAM-VALVE SEPARATOR. GIUSEPPE RESTUCCI, Naples, Italy. Filed May 26, 1911. Serial No. 629,683. (Cl. 136—11.)



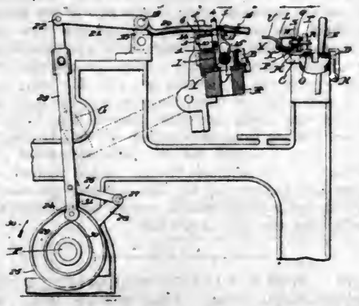
1. A steam valve with water separation by throttling, in which two partitions are arranged over the stop valve in the valve casing one of which partitions is moved by the spindle which operates the main valve, while the other fixed partition is provided with holes forming conical seats for correspondingly shaped valves provided at the end of small tubes carried by the movable partition and engaging with the corresponding seats in the fixed partition.

2. A steam valve with water separation by throttling, in which two partitions are arranged over the stop valve in the valve casing one of which partitions is moved by the spindle which operates the main valve, while the other fixed partition is provided with holes forming conical seats for correspondingly shaped valves provided at the end of small tubes carried by the movable partition and engaging with the corresponding seats in the fixed partition, a hub on the movable partition adapted to pass through the fixed partition, and a collar on the spindle of the main valve adapted to raise the movable partition when the said valve is lifted.

1,019,279. FILLING-REPLENISHING FEELER-LOOM. ALONZO E. RHOADES, Hopedale, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Jan. 9, 1911. Serial No. 601,680. (Cl. 139—85.)

1. In a loom, a lay, a rocking carrier mounted thereon, a feeler connected with said carrier, to detect, by or through its diameter, a predetermined diminution of the volume of filling in the shuttle, an actuator mounted independently of the lay and in sliding engagement with the carrier, a cam to move said actuator intermittingly and thereby rock the carrier to effect the feeling operation of said feeler, and yielding means to permit stoppage of the

feeler on its active stroke prior to substantial exhaustion of the filling.



2. In a loom, in combination, a lay, a feeler carrier pivotally mounted thereon transversely to the shuttle path, a depending feeler mounted on said carrier and adapted to engage intermittingly the filling in the shuttle to detect a predetermined diminution of the volume thereof, a rocking actuator having a stationary fulcrum and extended across the lay, said actuator in sliding engagement with the carrier, means to oscillate said actuator on alternate picks, to thereby move the feeler into and out of feeling position, and means, governed by said feeler when the filling is exhausted to a predetermined extent, to effect a change in the operation of the loom.

3. In a loom, in combination, a lay having a shuttle-box, a two-part feeler carrier comprising a member fulcrumed on the lay adjacent the shuttle-box, and a second member pivotally connected with the first-named member, a spring normally acting to prevent relative movement of said members, a feeler mounted on the second member, an actuator fulcrumed independently of the lay and in sliding engagement with the first member of the feeler carrier, to impart a uniform oscillation thereto, and means to oscillate said actuator intermittingly and positively, the controlling spring of the carrier permitting relative movement of the two members thereof on every active stroke until predetermined filling exhaustion permits the feeler to accomplish its maximum stroke.

4. In a loom, in combination, a lay having a shuttle-box, a feeler carrier comprising an inner arm fulcrumed on the lay adjacent the shuttle-box and an outer arm pivoted on said first arm and having at its outer end a depending feeler, means to rock the inner arm positively and intermittingly with a constant stroke, a yielding connection between said arms, whereby the outer arm will move relatively to the inner arm when the feeler contacts with the filling prior to predetermined exhaustion thereof, and means actuated by or through the feeler on the forward beat of the lay when predetermined filling exhaustion is reached, to effect a change in the operation of the loom.

5. In a loom, a lay, a feeler, a rocking, two-part jointed carrier therefor fulcrumed on the lay, an actuator slidably connected with said carrier to impart a constant, positive oscillation to one part thereof at every alternate pick, a spring to prevent relative movement of the carrier parts when substantial filling exhaustion is reached, and means to oscillate said actuator and move the feeler into and out of contact with the filling in the shuttle on alternate picks.

[Claims 6 not printed in the Gazette.]

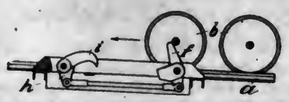
1,019,280. PIPE-WRENCH. AARON SERFOSS, Ashley, Pa. Filed Nov. 23, 1911. Serial No. 661,907. (Cl. 81—67.)

1. In a wrench, a handle formed with a tooth projecting therefrom, a fixed jaw pivoted upon said handle, and a swinging jaw pivoted to the fixed jaw, said swinging jaw being formed with a socket at one end thereof co-acting with the tooth on said handle, said fixed jaw having a cut-away portion so positioned as to engage said handle and limit its movement to such an angle thereto as to always cause the tooth on the handle to engage properly said socket.



2. A wrench comprising a fixed jaw having a laterally-extending bifurcated offset, the inner end of the bifurcation of said offset being cut away, a swinging jaw pivotally connected to the fixed jaw and provided in its free end with a pair of sockets, and a handle having a substantially circular head arranged in the bifurcated offset of the stationary jaw and eccentrically pivoted therein, the head of said handle being provided with a pair of teeth adapted to coöperate with the sockets of the swinging jaw to effect movement thereof upon application of pressure to the handle, the cut-away portion of the fixed jaw being so positioned as to engage said handle and limit its movement to such an angle thereto as to always cause the teeth on the handle to engage properly said sockets.

1,019,281. SAFETY APPARATUS FOR MINERS' TRUCKS. VALENTIN STASCH, Friedenshütte, Germany, assignor of one-half to The Firm of Gräflich Schaffgotsch'sche Werke, G. M. B. H., Beuthen, Germany. Filed Aug. 24, 1911. Serial No. 645,889. (Cl. 188—76.)



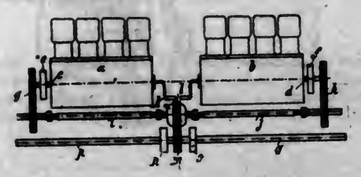
A safety-apparatus for miners' trucks to be run on inclined planes, adapted to be arranged between the rails on which the trucks are run, comprising in combination, a double-armed swing-lever adapted to project with its upper arm into the way of the wheel axles of the truck, an axle arranged at a distance from said swing-lever, a fixed tappet on said axle having a projection, a rod to connect said tappet and the lower arm of said swing-lever, a counterweight for said swing-lever adapted to bring the same back into its normal position when moved in the normal working of the trucks on the upward run of same, a catch-lever movably arranged on said axle and designed to serve as counterweight for said lever upon the latter being moved in the normal working of the trucks on the downward run of same but to be thrown by the projection of said tappet into its catching position for arresting said truck when the latter becomes ropeless, and an abutment for securing said catch-lever in its catching position, substantially as and for the purpose set forth.

1,019,282. BOLT-OPERATING MECHANISM. WILLIAM STROUSE and WALTER E. CLARK, Hughesville, Pa.; said Strouse assignor to J. K. Rishel Furniture Co., Williamsport, Pa., a Corporation of Pennsylvania. Filed July 18, 1911. Serial No. 639,100. (Cl. 16—66.)

In a bolt operating mechanism, in combination, a bolt with a diagonal perforation therethrough, a rod an interior portion of which is bent to form an inclined portion which passes through said perforation and the end portions of which are at right angles to the bolt, keepers upon both sides of said bolt through which the end portions of said rod freely pass, and a spring for normally holding the inclined portion of said rod so as to keep said bolt in its lowered position.

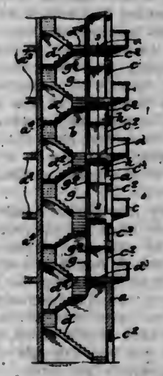


1,019,283. PROPULSION OF AIRSHIPS. EDOUARD SURCOUF, Billancourt, France, assignor to Société Anonyme "Astra," Billancourt, France. Filed Nov. 13, 1909. Serial No. 527,791. (Cl. 244—25.)



In an airship the combination of two distinct propelling groups, two distinct driving mechanisms for said propelling groups, a differential mechanism arranged between said driving mechanisms and said propelling groups, and clutches arranged between each of the driving mechanisms and said differential mechanism and each of the propelling groups, and the said differential mechanism.

1,019,284. FIRE-ESCAPE APPARATUS. JESSE R. TAFT and CLIFFORD F. PEMBER, New York, N. Y. Filed June 7, 1911. Serial No. 631,721. (Cl. 227—38.)



1. A fire-escape for buildings, comprising a stairway well tower formed in conection with or adjacent to a wall of the building and provided with outside entrance doorways at the various floors of the building and means for reaching said doorways, said well tower being provided rearwardly of said doorways with partial transverse walls, and at one side of said doorways with a smoke flue formed partially by said transverse walls and at the opposite side of said doorways with a side entrance to the stairway in the tower, and the wall of the smoke flue inwardly of the doorways being provided with inlets and the space inwardly of the doorways being provided with means for directing smoke into said flues through said inlets.

2. A fire-escape for buildings, comprising a stairway well tower formed in connection with or adjacent to a wall of the building and provided with outside entrance doorways at the various floors of the building and means for reaching said doorways, said well tower being provided rearwardly of said doorways with partial transverse walls, and at one side of said doorways with a smoke flue formed partially by said transverse walls and at the opposite side of said doorways with a side entrance to the stairway in the tower, and the wall of the smoke flue inwardly of the doorways being provided with inlets and the space inwardly of the doorways being provided with means for directing smoke into said flues through said inlets, the well tower being also provided over the doorways and in the partial transverse walls rearwardly of said doorways with windows.

1,019,285. QUININ ESTERS OF AROMATIC AMINO ACIDS AND PROCESS OF PRODUCING SAME. HEINRICH THERON, Frankfort-on-the-Main, Germany, assignor to The Firm of Vereinigte Chininfabriken, Zimmer & Co. G. M. B. H., Frankfort-on-the-Main, Germany. Filed July 3, 1911. Serial No. 636,728. (Cl. 23—24.)

1. The herein described process of producing quinin esters of aromatic amino acids which comprises reducing the quinin esters of the corresponding aromatic nitro-acids.

2. The herein described process of producing quinin esters of aromatic amino acids which comprises reacting on quinin with an acidylising reagent containing the nitro-acidyl radical of an aromatic nitro-carboxylic acid, and reducing the thus obtained nitro-acidyl-quinin.

3. The herein described process of producing amino-benzoyl-quinins which comprises reducing the corresponding nitro-benzoyl-quinins.

4. The herein described process of producing amino-benzoyl-quinins which comprises reacting on quinin with a nitro-bensoyl-chlorid, and reducing the nitro-benzoyl-quinin thus obtained.

5. The herein described process of producing para-amino-benzoyl-quinin which comprises reacting on quinin with para-nitro-benzoyl chlorid, and reducing the para-nitro-benzoyl-quinin thus obtained.

[Claims 6 to 8 not printed in the Gazette.]

1,019,286. PNEUMATIC TIRE. WILLARD IRVING TWOMBLY, New York, N. Y., assignor to Twombly Motors Company, New York, N. Y., a Corporation of New York. Filed July 22, 1910. Serial No. 573,180. (Cl. 152—10.)



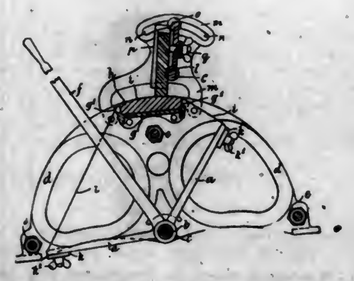
1. In a vehicle wheel, the combination of a rim of channel section fixed to the wheel felly, each wall of which has a laterally and radially projecting flange; an air tube in said rim; a flexible band extending around the air

tube; a resilient metal band outside of the flexible band; a shoe substantially U-shape in cross section fixed to said rim; and a series of circular members carried by the rim between the metal band and shoe, said members adapted to have independent radial movement into the rim and rolling engagement with each other during such radial movement; and said members being guided by the radially projecting portion of the rim flanges to prevent lateral movement thereof.

2. In a vehicle wheel, the combination with a rim of channel section fixed to the wheel felly, of an inflatable air tube in said rim; a leather band extending around the air tube of such width as to partly lap around the latter; a resilient metal band carried by the rim and extending around the leather band; a series of circumferentially disposed circular members mounted upon the rim outside of the metal band, said members adapted to have independent radial movement into the rim and rolling engagement with each other during said radial movement; and an annular shoe or cover substantially of U-shape in cross section secured to the rim to maintain the circular members in place and with the rim constituting an entirely closed housing for the radial members, bands and air tube.

3. In a vehicle wheel, the combination with the wheel felly, of a pair of annular plates fixed to the sides of the felly to form a rim of channel section, each plate having a laterally and radially projecting flange; an inflatable air tube in said rim; a flexible band extending around the air tube of such width as to partly lap around the air tube; a resilient metal band extending around the flexible band within the laterally projecting portions of the rim plates adapted to have radial flexing movement into the rim; ribs fixed to and extending transversely of the metal band, the ends of said ribs bent up to form flanges to engage between the radially projecting portions of the rim flanges; a series of circumferentially disposed rigid circular members carried by the rim between the radially projecting portions of the rim flanges outside of the metal band; and an annular shoe or cover substantially of U-shape in cross section to maintain the circular members in place, said shoe secured to the radially projecting portions of the rim flanges so that the base portions of the shoe will be seated upon the laterally projecting portions of said rim plates; said circular members normally projected outwardly by the air in the tube and the resilient band, but as they come in contact with the ground as the wheel revolves or encounters an obstruction are adapted to have radial movement into the rim and a rolling engagement with each other during such radial movement; the inward thrust of said members being taken up by the resilient band and the air in the air tube.

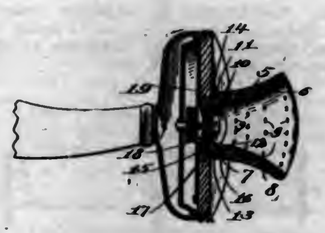
1,019,287. MACHINE FOR GRINDING THE CONTACT-SURFACES OF CARBON BRUSHES FOR DYNAMOS AND THE LIKE. ALFRED WATKINS, Chelsea, London, England. Filed July 17, 1911. Serial No. 638,972. (Cl. 51—12.)



1. Machine for grinding the contact surfaces of carbon brushes for dynamos comprising stationary side plates, a cross piece fast between the side plates, a form block mounted on said cross piece, a two-armed rocking frame pivoted between the side plates, a pliable grinding medium clamped to the rocking frame and stretched over the form-block, an operating handle for the rocking frame, extension cheeks fast on the side plates above the form-block, an adjustable cross plate held edgewise between said cheeks, and means for adjusting the angularity of said cross-plate, as set forth.

2. A machine for grinding carbon brushes, consisting of a stationary frame, a form block fast in said frame, a rocking frame, a grinding band and a handle attached to said rocking frame, slotted extension cheeks fast on the stationary frame, and a pivoted adjustable plate held fast in said slotted extension cheeks, as set forth.

1,019,288. SANITARY MOUTHPIECE. WILLIAM W. WOODRUFF, Canton, Miss. Filed July 8, 1911. Serial No. 637,489. (Cl. 179—185.)



1. In a sanitary mouthpiece, inner and outer shells having a chamber therebetween open at its inner extremity, the inner shell being perforated and the chamber containing a moist germicide, and a plug having a closing flange for entering the inner open end of the chamber between the shells and a screw-threaded neck for attaching the mouthpiece.

2. In a sanitary mouthpiece, inner and outer shells having a chamber between them and formed continuous at their outer portions and spaced at their inner extremities to provide a charging opening, the inner shell being perforated and the chamber filled with a moist germicide, and an attaching plug having means for closing the charging opening and extending inwardly between the shells and fully sealing the inner ends of the shells.

3. In a sanitary mouthpiece, inner and outer shells having a chamber between them with a charging opening at its inner extremity, the inner shell being perforated and the chamber filled with a suitable germicide, the inner side of the inner end of the outer shell having screw-threads, and a plug having an exteriorly threaded annular flange to fit in and close the inner extremity of the chamber and also provided with a threaded attaching neck, the threads of the shell and flange and neck being left and right.

4. In a sanitary mouthpiece, inner and outer shells having a germicide chamber therebetween open at its inner extremity for charging purposes, the inner shell being perforated, and a combined sealing and attaching plug having an annular sealing flange extending from one end thereof into the open extremity of the chamber and a shoulder on each side of the flange to abut against the inner ends of the shells, an attaching neck being provided at the opposite end of the plug and a perforate partition within the latter.

5. In a sanitary mouthpiece, inner and outer shells having a chamber formed between them with a charging opening at the inner ends of the shells, the inner shell being perforated and the chamber normally filled with a germicide, and an attaching plug having means for removably closing the said charging opening of the chamber.

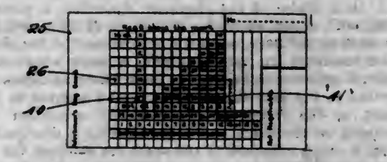
[Claim 6 not printed in the Gazette.]

1,019,289. CASE FOR CLINICAL THERMOMETERS. GILES H. ZEAL, London, England. Filed Feb. 9, 1911. Serial No. 607,480. (Cl. 73—52.)



A thermometer case provided with a resilient permanently secured extension projecting from a closed end of said case and structurally independent of the thermometer contained in said case, as set forth.

1,019,290. ACCOUNTING SYSTEM. EDWARD C. ALBREE, Swampscott, Mass., assignor to Albree Self Figuring System Company, Boston, Mass., a Corporation of Massachusetts. Filed Jan. 11, 1908. Serial No. 410,333. (Cl. 11—3.)



1. The improved card for an accounting system marked off into spaces of equal size arranged in columns vertically and in rows horizontally and provided in one of said columns with a set of numerals forming a series, said card or slip having also other sets of numerals, one set for each numeral of said series and arranged in the same row therewith, and a third set of numerals each of which is so located with relation to the numerals of the said second mentioned set that a single punch mark will indicate a numeral of the third set and a numeral of the second set.

2. The improved card for an accounting system marked off into spaces of equal size arranged in columns vertically and in rows horizontally and provided in one of said columns with a set of numerals forming a series, said card having also other sets of numerals, one set for each numeral of said series and arranged in the same row therewith, each of said last mentioned sets of numerals forming that part of the series of the first mentioned set which begins with the number of the series next higher than the number of the first set of numerals, and a third set of numerals each of which is so located with relation to the numerals of the second mentioned set that a single punch mark will indicate a numeral of the third set and a numeral of the second set.

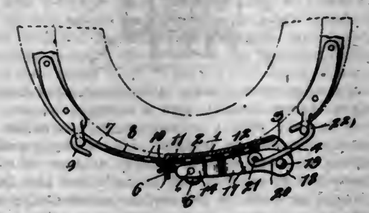
3. The improved card or slip for an accounting system having its front and back faces marked off into spaces of equal size arranged in columns vertically and in rows horizontally, said spaces on the front and back faces registering with each other, said card or slip being provided in one of the columns of spaces on the front face with a set of numerals, also with other sets of numerals, one set for each numeral of said first mentioned set and arranged in the same row therewith, and upon its back face with a third set of numerals, each of which is in register with one of the figures of the second mentioned set.

4. The improved card or slip for an accounting system marked off into spaces of equal size arranged in columns vertically and in rows horizontally and provided in one of said columns with a set of numerals indicating the hours of the working day, other sets of numerals one set for each numeral of the first mentioned set arranged in the same row therewith and beginning with the hour next above that indicated by said numeral of the first mentioned set, and a third set of numerals each of which is so located with relation to the numerals of the said second mentioned set that a single punch mark will indicate a numeral of the third set and a numeral of the second set, the numerals of said third mentioned set when divided by a constant which is the wage per hour being the difference in hours between the hour indicated by the numeral of the first mentioned set and the hour indicated by the numeral of the second mentioned set.

5. The improved card or slip for an accounting system having its front and back faces marked off into spaces of equal size arranged in columns vertically and in rows horizontally, said spaces on the front and back faces registering with each other, said card or slip being provided in one of the columns of spaces on the front face with a set of numerals forming a series, other sets of numerals, one set for each numeral of said series and arranged in the same row therewith, and upon its back face with a third set of numerals, each of which is in register with one of the figures of the second mentioned set.

[Claim 6 not printed in the Gazette.]

1,019,291. HAME-FASTENER. WILLIAM R. ANGELL, Courtenay, N. D., assignor of one-half to F. G. Lundeen, Courtenay, N. D. Filed Apr. 17, 1911. Serial No. 621,621. (Cl. 54—27.)

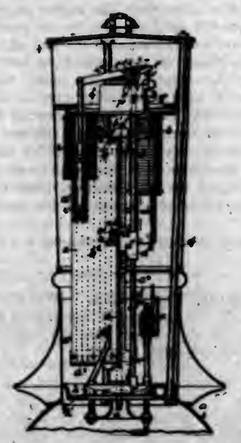


1. In hames fasteners of the class described, the combination of a body comprising a bottom, a fastening device at one end thereof and extending downwardly from the bottom of the body at a substantially right angle therefrom, a link hook having a shank to bear against the bottom of the body provided with a series of adjusting openings for engagement by the fastening device, a latch lever pivotally connected at one end to the body and adapted to be turned toward the bottom of the body and against the link hook, and a latch hook pivotally connected to said latch lever at a point eccentric to the pivot of the latch hook.

2. In hames fasteners of the class described, the combination of a body comprising a bottom, a pair of side ears at one end thereof and a fastening device at the opposite end thereof and extending downwardly from the bottom of the body at substantially a right angle therefrom, a link hook having a shank to bear against the bottom of the body and between the side ears and provided with a series of adjusting openings for engagement by the fastening devices, a latch lever pivotally connected at one end to and mounted between the ears of the body and adapted to be turned toward the bottom of the body and against the link hook, and a latch hook, said latch lever and latch hook having co-acting devices pivotally connecting the latch hook to the latch lever and also adjustably connecting said latch lever thereto.

3. In hames fasteners of the class described, the combination of a body having a pair of side ears and also provided at the end opposite said ears with a lug projecting downwardly from and at substantially a right angle to the body, a link hook having a shank to bear against the body and between the said side ears and provided with a series of adjusting openings for engagement with the lug, a key extending through the lug at a point below the link hook to lock the link hook thereon, a latch lever pivotally connected at one end to the ears of the body and adapted to be turned against the link hook to clamp the latter between the bottom of the body and the upper side of the latch lever and a latch hook pivotally connected to said latch lever.

1,019,292. ELECTRIC-ARC LAMP. ARTHUR ERNEST ANGOLD, Manchester, England. Filed Mar. 23, 1908. Serial No. 422,827. (Cl. 176—63.)



1. In a magazine arc lamp carbon magazines each comprising a bottom bracket with a straight groove, a top inverted bracket with a curved groove, a twisted plate connecting the brackets together and forming a guide for assembling the inoperative carbons, a grooved rod for the operative carbon and a spring-controlled arm for putting lateral pressure on the carbons substantially as described.

2. In a magazine arc lamp a magazine containing carbons, means for actuating the carbons, spring pressed gripping devices for the operative carbons, said gripping devices being pivoted to said magazine and having arms of arcuate form, the center of the arc of the arms coinciding with the center of the pivot.

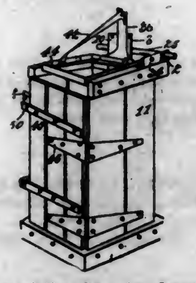
3. In an arc lamp a carbon magazine, means for gradually ejecting carbons from the magazine, said means comprising a vertically movable push bar, means for actuating said push bar comprising a stationary toothed rod and a vertically reciprocating toothed rod, and a mechanism united with said push bar and adapted to engage the teeth of said toothed rods for actuating the carbons.

4. In a magazine arc lamp the means for pushing down the carbons consisting of a push bar having two arms one pivoted to the other and spring-controlled, said arms being slidable in spaces in the carbon magazines, a vertically reciprocable rack rod on which the push bar slides, an electromagnet or solenoid actuating an armature, an electric circuit comprising a shunt to the arc, said circuit being made and broken by the movement of the armature itself, and adapted to give a continuous up and down motion when the potential is below a certain given normal, means for coupling the armature to the rack rod, a stationary rack rod alongside the movable rod and a pawl device carried by the push bar and controlled by trip gear consisting of a pivoted trip lever, a spring in compression between a point on the trip lever and points on the pawls, and stops with which the trip lever engages substantially as described.

5. In a magazine arc lamp the means for pushing down the carbons consisting of a push bar having two arms, a vertically-reciprocable rack rod on which the push bar slides, means for reciprocating the rack rod, a stationary rack rod alongside the movable rod and a pawl device carried by the push bar and controlled by trip gear consisting of a pivoted trip lever, a spring in compression between a point on the trip lever and points on the pawls, and stops with which the trip lever engages substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,019,293. HAND-PRESS. SAMUEL J. ARNOLD, Dubuque, Iowa. Filed May 18, 1911. Serial No. 628,112. (Cl. 100—5.)

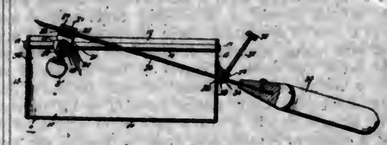


1. In a device of the character described, a press provided with a door extending the length of the press, means for locking the door, supports on the rear of the press, a shaft mounted on said supports, a gear wheel on the shaft, a gear bar engaging the gear wheel, an open frame secured to the gear bar, a follow board adapted to be engaged by the frame on the gear bar, a ratchet wheel mounted on the shaft and provided with a spur-gear and pawl, a crank attached to the shaft for rotating the shaft and partially pressing the paper, and a lever adapted to removably engage the teeth of the ratchet wheel and complete the pressing of the paper in the press.

2. In a device of the character described, a press having a plurality of vertical spaces in the rear, a plate secured to the upper part of the rear of the press, supports set a short distance apart, under and forming a support for said plate, brackets secured on said plate, a shaft mounted in the brackets, a gear roller mounted on the shaft, a gear bar adapted to mesh with the gear roller and be moved vertically thereby, an open frame secured to the gear bar, a follow-board adapted to be engaged by said frame, a ratchet wheel secured upon said shaft, a crank on said shaft to partially press the paper, and a lever adapted to engage the teeth on the ratchet wheel and complete the pressing of the paper.

3. In a device of the character described, a press, a door hinged to the press, a lock adapted to fasten the door to the press, a plate secured upon the back of the press, supports beneath said plate, a shaft mounted on said plate, a gear roller on the shaft, a gear bar adapted to mesh with the gear roller and be moved vertically thereby, said gear bar having grooves in its opposite edges, guide plates adapted to engage the grooves in the gear bar and direct the movements of said bar, a presser frame secured to the gear bar and providing an opening through which the paper is introduced into the press, a follow-board in the press adapted to be engaged at its edges by the presser frame, a ratchet wheel having teeth on its periphery and provided with a spur-wheel, a pawl secured to the side of the press and engaging the spur-wheel, a crank on the end of said shaft for partially pressing the paper, and a lever adapted to engage the teeth of the ratchet wheel and complete the pressing of the paper.

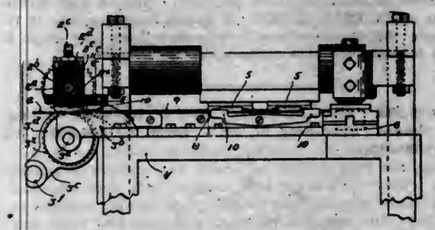
1,019,294. SCRAPER. GEORGE M. BAKER, Garden City, N. Y. Filed June 6, 1911. Serial No. 631,581. (Cl. 72—137.)



1. A scraper such as described comprising a receptacle having a slot formed in one end thereof, a pair of guide rods secured to the ends of the receptacle, a supporting rod slidable upon the guide rods, a guide plate adjustable upon the supporting rod, a blade slidable through the slot formed in the end of the receptacle and engaging said guide, means for clamping the blade against displacement and a handle secured to the blade.

2. The combination in a scraper such as described, of a receptacle, longitudinally extending guide rods secured within the receptacle, a supporting rod slidable upon the said guide rods, a sleeve slidable upon the supporting rod, a U-shaped bracket carried by the sleeve, a guide plate secured to the bracket and provided with bent ends, a thumb screw engaging the sleeve for the purpose of retaining it in its adjusted position, one of the end walls of the receptacle being provided with a slot, a bar secured to the end wall above said slot, a clamping bar adjustably secured to the first mentioned bar, a blade slidable through said slot and provided with a reduced shank and a handle carried by the blade.

1,019,295. STRIP-FEEDING MECHANISM. WILLIAM H. BAILEY, Everett, Mass., assignor to Plympton Manufacturing Company, Boston, Mass., a Corporation of Massachusetts. Filed Apr. 25, 1911. Serial No. 623,319. (Cl. 101—42.)

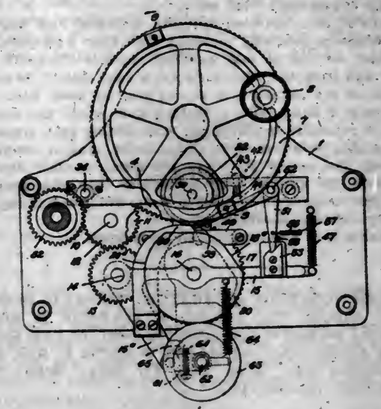


1. In strip-feeding mechanism, the combination with feed-rolls which advance a strip of material, and means acting to confine said strip within a given path widthwise and producing lateral tension in the strip adjacent the rolls in case of lateral divergence of the strip from the said path, of means for periodically varying the distance between the axes of the rolls and thereby releasing the strip from the bite of the roll, whereby said tension is permitted to restore the strip to its proper path.

2. In strip-feeding mechanism, the combination with feed-rolls which advance a strip of material, and edge-guides acting to confine said strip within a given path widthwise and producing lateral tension in the strip adjacent the rolls in case of lateral divergence of the strip from the said path, of means for periodically varying the distance between the axes of the rolls and thereby releasing the strip from the bite of the rolls, whereby said tension is permitted to restore the strip to its proper path.

3. In strip-feeding mechanism, the combination with feed-rolls which advance a strip of material, and spring-actuated edge-guides acting to confine said strip within a given path widthwise and producing lateral tension in the strip adjacent the rolls in case of lateral divergence of the strip from the said path, of means for periodically varying the distance between the axes of the rolls and thereby releasing the strip from the bite of the rolls, whereby said tension is permitted to restore the strip to its proper path.

1,019,296. MACHINE FOR MARKING MAIL-MATTER. VICTOR BEAUREGARD, Boston, Mass., assignor of one-half to Edward Broughton Waite, Chicago, Ill. Filed Mar. 15, 1911. Serial No. 614,597. (Cl. 101—82.)



1. In a mail marking machine, a rotary printing member and a rotary impression member, intermeshing gears connecting the members, means for adjusting the impression member transversely of its axis with respect to the printing member to take up wear, one of the members being also yieldable away from the other to accommodate thick letters, means for retaining the gears of said members in fixed and invariable relation with each other, and a coupling between the shaft of the impression member and its gear constructed to permit movement of the member and its shaft relatively to the gear in a direction perpendicular to its axis, the axes of the members, shafts and gears being always parallel.

2. In a mail marking machine, a feed wheel having a handle for manual operation, feeding projections on the periphery of said wheel, a driving gear directly connected to said feed wheel, a printing member having a gear meshing with said driving gear, an impression member, gears connected to the printing and impression members and continuously in mesh for causing the impression member to rotate positively and in unison with the printing member, a holder independent of the gearing on which the impression member is mounted constructed to yield for thick letters, means for adjusting the impression member on the holder to compensate for wear, and a coupling between the shaft of the impression member and its gear.

3. A mail marking machine comprising a hand-operated driver, a rotary printing member having a cut-away portion geared thereto and operated thereby, a rotary impression member, in positive geared connection with said printing member, a lock normally holding the members apart, a cam releasing the lock, yielding means tending to press the members together, a gate controlled by a letter passing between the members arranged to deflect the letter into the cut-away portion of the printing member beyond the line of centers of the members and connected with said lock whereby to render the same inoperative when said gate is pressed upon by the part of the printing member adjacent to said cut-away portion, and an abutment arranged in connection with the gate to close the passage between the printing and impression members.

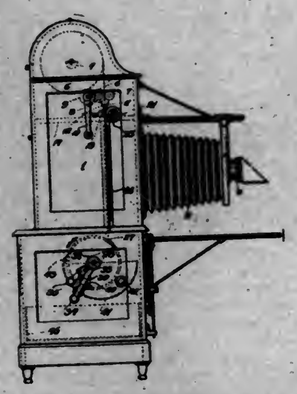
4. A mail marking machine comprising in its construction a rotary printing member and a rotary impression member arranged to rotate about parallel axes, a gear

secured to the printing member, a link connected to the printing member and having a slotted bearing, a second gear rotated and mounted on said bearing and meshing with the first gear, a holder for the impression member extending across said bearing, a shaft for the impression member rotated and contained in the holder and passing through the slot of said bearing whereby relative movement between the impression member and the second gear in a prescribed path is permitted, and a coupling between the impression member shaft and gear having a sliding engagement with each.

5. In a mail marking machine, printing and impression members rotatably mounted with their axes parallel, a holder for one of said members movable therewith toward and from the other member, a gear rigidly fastened to one of the members, a second gear in mesh with the first gear, a link having a bearing upon which the second gear is rotatably mounted for maintaining said gears in unchanging relation with one another, and a coupling between the second gear and the other member having provision for sliding with respect to both the member and gear transversely of their axes while remaining in driving connection with both.

[Claims 6 to 8 not printed in the Gazette.]

1,019,297. COPYING APPARATUS. WRIGHT D. BREESE, Los Angeles, Cal., assignor of one-fourth to Edgar Harvey Sargent and one-fourth to Coral Harrison Sloan, Los Angeles, Cal., and one-half to Martin L. Rice, San Francisco, Cal. Filed Feb. 17, 1911. Serial No. 609,224. (Cl. 95—13.)



1. The combination with a photographic casing having a developing tank, of a roll of sensitised paper journaled in the upper part of said casing, means to operate said roll to unwind the paper therefrom and cause the same to travel to said developing tank, said casing being provided with a yielding cutting surface, a rotary cutter arranged to operate against said surface to shear off said paper, a drum in said developing tank, means on said drum to clamp the end of said paper, a crank to control said clamping means, a crank to revolve said drum, and means to lock said clamp controlling crank on said revolving crank.

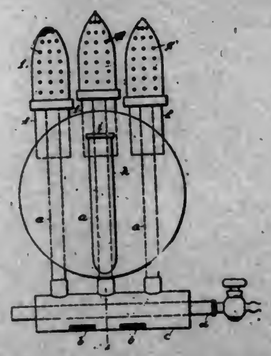
2. The combination with a photographic casing having a developing tank, and a fixing tank, of a roll of sensitised paper journaled in the upper part of said casing, means to unwind the paper from said roll to cause it to travel to the bottom of said casing, said casing being provided with a yielding cutting surface, a cutter arranged to operate against said cutting surface to shear off the paper, a drum in said developing tank provided with grooves, means on said drum to clamp the end of said paper, a plurality of cranks to control said clamping means, one of said cranks also serving to revolve said drum, and a means engaging the grooves in said drum to remove the paper therefrom and cause it to fall into said fixing tank.

3. The combination with a photographic casing having in the bottom thereof a developing tank, and a fixing tank, of a roll of sensitised paper journaled in the upper part of said casing, means to unwind said paper from said roll to cause the same to travel to the bottom of said casing, a rotary knife to shear off said paper, a drum in said developing tank, means on said drum to clamp the end of said paper, a crank to control said clamping means, a crank to revolve said drum to develop the paper thereon, means to lock said clamp controlling crank on said revolving crank to hold said paper clamped during development, and means engaging the end of said paper to lift it away from the said drum and cause it to fall into the said fixing tank.

4. The combination with a photographic casing having in the bottom thereof a developing tank and a fixing tank, of a roll of sensitised paper journaled in the upper part of said casing, means to unwind the paper from said roll to cause the same to travel to the bottom of said casing, a rotary cutter to shear off said paper, a drum in said developing tank, means to clamp the end of said paper into said drum, a crank to operate said clamping means, a crank to revolve said drum, said clamp-operating crank being movable with respect to said drum-revolving crank to cause the paper to be alternately gripped and released, and means to remove the developed paper from said drum and cause it to fall into said fixing tank.

5. The combination with a photographic casing having in the bottom thereof a developing tank and a fixing tank, of a roll of sensitized paper journaled in the upper part of said casing, means to unwind the paper from said roll and cause it to travel to the bottom of said casing, a rotary cutter to shear off said paper, a drum in said developing tank, means to clamp the end of said paper into said drum, a crank to operate said clamping means, a crank to revolve said drum, said clamp-operating crank being movable with respect to said drum-revolving crank to cause the paper to be alternately gripped and released, means to lock said clamp-operating crank on said revolving crank, and a plurality of fingers in said casing to remove the developed paper from said drum and cause it to fall into the said fixing tank.

1,019,298. GAS-BURNER. GERDA BRUNBAU, Clichy, France. Filed Sept. 27, 1910. Serial No. 584,008. (Cl. 158—13.)

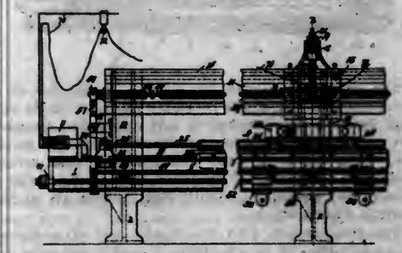


1. A gas burner, comprising a water-containing vessel, a gas duct provided with an end opening, passing through said vessel and in contact with the water therein, a conducting member relatively larger than said gas duct surrounding the same adjacent its opening and in communication with said vessel, a burner head in communication with said conducting member to draw off steam generated within said vessel to within said burner head, and a supplementary conducting member in communication with said vessel, and extending in proximity to the exterior of said burner head, to convey steam generated in the former to the latter.

2. A gas burner, comprising a water-containing vessel, a blow pipe passing through said vessel and in contact with the water therein, the blow pipe having an opening below and an opening above the water in said vessel, a gas duct provided with means directing the gas to said blow pipe at the said opening thereof below said water, and a burner head at the upper end of said blow pipe with its interior open to said vessel so that steam generated therein will be drawn into said burner head during operation of the device.

3. A gas burner, comprising a water-containing vessel, a blow pipe passing through said vessel and in contact with the water therein, the blow pipe having an opening below and an opening above the water in said vessel, a gas duct provided with means directing the gas to said blow pipe at the said opening below said water, a burner head at the upper end of said blow pipe with its interior open to the said vessel so that steam generated therein will be drawn into said burner head during operation of the device, and a conducting member in communication with said vessel and extending into proximity to the exterior of said burner head to convey steam generated in the former to the latter.

1,019,299. ELECTRIC WELDING APPARATUS. ALVIN E. BUCHENBERG, Toledo, Ohio. Filed Oct. 6, 1910. Serial No. 585,670. (Cl. 219—6.)



1. In an electric welding apparatus, the combination of elongated welding dies, means for holding work stationary adjacent such dies but free from contact therewith, and mechanism capable of movement longitudinally of the dies and work and operative to cause the dies and work to have relative lateral movements to progressively change the point of welding contact of the dies with the work longitudinally thereof.

2. In an electric welding apparatus, the combination of bar welding dies, means for holding work adjacent to said dies longitudinally thereof, and mechanism movable longitudinally of the dies and work and operative to effect relative lateral movements of the work and dies to progressively change the point of welding contact of the dies with the work longitudinally thereof.

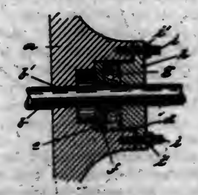
3. In an apparatus of the class described, the combination of a set of elongated welding dies, means for holding an elongated piece of work to be seam-welded adjacent such dies longitudinally thereof and normally spaced therefrom, means operative to effect relative lateral movements of the work and dies to cause them to have a gradually changing welding contact longitudinally of the work, and means for preventing a closing of the work seam in advance of the welding point.

4. In an electric welding apparatus, the combination of stationary electrical conductors, and mechanism which is capable of movement along a piece of work to progressively change its point of welding contact with the conductors.

5. In an apparatus of the class described, the combination of a set of elongated conductors, means for holding work fixed against endwise movements relative to the conductors, and mechanism operative to act on the work longitudinally thereof to progressively change its point of welding contact with the conductors.

[Claims 6 to 25 not printed in the Gazette.]

1,019,300. BEARING FOR SHAFTS. JOHN M. BURBY, Long Island City, N. Y., assignor, by direct and mesne assignments, to John M. Burby Company, New York, N. Y., a Corporation of New York. Filed May 8, 1911. Serial No. 625,933. (Cl. 121—109.)



1. A shaft bearing comprising a box, a recess in the box, a washer fitted into the box and upon the shaft; a follower, a layer of compressible packing, slid on the shaft between the washer and the follower, and means for closing the box, compressing the packing and driving the washer to close the recess, substantially as herein shown and described.

2. A shaft bearing comprising a box, a recess in the box, a washer fitted into the box and upon the shaft to close the recess; a follower; a layer of compressible packing, slid on the shaft between the washer and the follower, and means for securing the follower upon the box and so as to compress thereby the packing, substantially as herein shown and described.

3. A shaft bearing comprising a box, a recess in the box, a washer fitted into the box and upon the shaft to close the recess; a follower; a layer of compressible packing, slid on the shaft between the washer and the follower; means for securing the follower upon the box and so as to compress the packing thereby, and means for holding the shaft against lateral displacement in the bearing, substantially as herein shown and described.

4. A shaft bearing comprising a box, a recess in the box, a collar on the shaft within the recess; a washer fitted into the box and upon the shaft to close the recess; a follower; a layer of compressible packing, slid on the shaft between the washer and the follower; and means for driving the follower into the box to compress the packing thereby, substantially as herein shown and described.

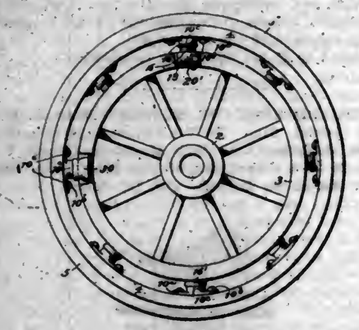
5. A shaft bearing comprising a box, a recess in the box, a collar of smaller dimensions than the interior dimensions of the recess, secured on the shaft; a washer fitted into the box and upon the shaft to close the recess; a layer of compressible packing set in the box and upon the washer; a cover and means compressing the packing by securing the cover upon the box, substantially as herein shown and described.

1,019,301. EMERGENCY ATTACHMENT FOR VEHICLE-WHEELS. EDWARD T. BURROWES, Portland, Me. Filed June 23, 1909. Serial No. 503,854. (Cl. 152—28.)

1. In an emergency attachment for vehicle wheels, a block to engage an auxiliary rim, and supporting means therefor including a block to engage the channel portion of the rim of the main wheel, and an auxiliary adjusting block interposed between the two first mentioned blocks and having a direct engagement with both of said blocks.

2. A spare rim adapted to be applied to a main wheel in combination with attaching devices comprising a block adapted to engage the rim of the main wheel, an auxiliary block adapted to engage the spare rim, an interposed ad-

justing device, and a centering stem projecting from one of said blocks.



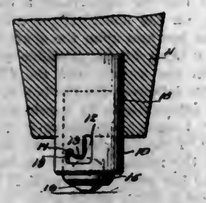
3. A spare rim adapted to be applied to the rim of the main wheel, and interposed attaching devices comprising a supporting member to be applied to the main wheel rim, a member to be applied to the spare rim, an interlocking connection between the members preventing lateral separation and an auxiliary interlocking connection preventing longitudinal separation of said members.

4. A spare rim adapted to fit over the rim of a main wheel, and attaching means therefor, including a member adapted to be applied to the spare rim, a supporting member adapted to be applied to the main wheel and spring locking means between said members.

5. A spare rim adapted to be applied to the rim of a main wheel and attaching means therefor including a supporting member adapted to engage the rim of a main wheel, a member adapted to engage the spare rim, a headed pin projecting from one member and a yieldable socket carried by the other.

[Claims 6 to 20 not printed in the Gazette.]

1,019,302. FURNITURE-CASTER. ALFRED C. BUTCHER, Staatsburg, N. Y. Filed Sept. 14, 1911. Serial No. 649,317. (Cl. 16—165.)



1. A caster comprising a hollow casing adapted to be connected to an article of furniture said casing being provided with a vertical slot having a communicating lateral extension and with an upwardly directed recess at the terminal of the lateral extension, a body mounted for rotation in said casing, a shank supported rotatively in said rotating body and carrying a caster wheel, and pins carried by the body and extending through said slots and operating through the lateral extensions and into the recess.

2. A caster comprising a hollow casing adapted to be connected to an article of furniture, said casing being provided with a vertical slot having a communicating lateral extension and with an upwardly directed recess at the terminal of the lateral extension, a caster movable rotatably and vertically in said casing, and a pin carried by said caster and operating in said slot.

1,019,303. SAFETY-RAZOR. ALFRED BÜTTNER, Krebsmühle, near Gassen, Germany. Filed May 15, 1911. Serial No. 627,102. (Cl. 30—12.)



Improved safety razor with adjustable handle, characterized by the feature that the bolt (H, I) attached to the covering plate (L) and passing through the blade (B) and the protective comb (A) and screwed into the handle (E) is provided with a joint, the axis of which is central to the joint (K) interposed between the protective comb (A) and handle (E), so that by screwing up the bolt the blade and the joint are simultaneously clamped fast.

1,019,304. HANDLE-GRIP CONTROL FOR MOTOR-CYCLES OR THE LIKE. SAMUEL J. CHUBBUCK, Toledo, Ohio, assignor to The Consolidated Manufacturing Company, Toeldo, Ohio, a Corporation of Ohio. Filed Nov. 25, 1910. Serial No. 594,181. (Cl. 21—90.)



1. The combination with the hollow handle bar of a motor-cycle, of a grip-sleeve rotatably mounted on an end of such bar, a screw attached to said sleeve and disposed within the handle bar, a nut mounted for sliding movements within the handle bar and receiving such screw, a throttle wire attached to such nut, and means preventing rotary but permitting longitudinal movements of the nut within the handle bar.

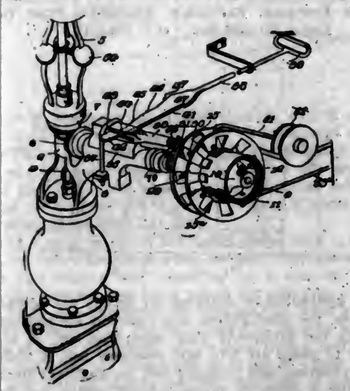
2. The combination with the handle bar of a motor-cycle, or the like, of a grip-sleeve rotatably mounted on an end thereof, a screw projecting within such end of the handle bar and fixed at its outer end to the outer end of said sleeve, a sleeve fixed within the handle bar, a nut receiving said screw and mounted for longitudinal movements within the handle bar, said nut having portions working within said fixed sleeve and coöperating therewith to prevent rotation of the nut, and a throttle control wire attached to the free end of the portion of the nut which projects within said fixed sleeve.

3. The combination with the handle bar of a motor-cycle, or the like, of a hand-grip sleeve rotatably mounted on an end thereof, a screw projecting within such end of the handle bar and fixed at its outer end to the outer end of said sleeve, a fixed sleeve within the handle bar in spaced relation to said screw, said fixed sleeve having its outer end portion longitudinally slotted and the inner end of its bore reduced, a nut receiving said screw and capable of sliding movements within the handle bar, said nut having an extension working within the enlarged portion of the fixed sleeve bore and having ribs working within said slots, and a stem projecting from its free end and working within the reduced portion of the fixed sleeve bore, and a throttle control member attached to the stem of said nut.

4. The combination with the hollow handle bar of a motor-cycle, or the like, of a handle-grip sleeve rotatably mounted on an end thereof, a plug fixed within the outer end of said sleeve and abutting against the handle bar end, a screw fixed to and projecting from said plug within the handle bar, a nut for said screw capable of movements

longitudinally of the handle bar, said nut being hollow and having a Babbitt metal filling for coacting with the screw, a stationary sleeve within the handle bar having the outer end of its bore enlarged with the wall thereof longitudinally slotted and having its opposite end reduced to a greater extent than its intermediate portion, an extension on the nut adapted to work within the enlarged end of the sleeve bore and having means coöperating with said slot to prevent rotary movements of the nut, a stem projecting from the free end of said nut extension and working within the intermediate reduced portion of the stationary sleeve, a throttle wire fixed to the free end of said stem and a coiled wire sheathing incasing the throttle wire and having the end thereof adjacent to said fixed sleeve secured within the reduced end of its bore, substantially as described.

1,019,305. GOVERNOR-PULLEY CLUTCH. ELISHA CRAFT, Wellsburg, W. Va. Filed June 18, 1909. Serial No. 502,987. (Cl. 192—4.)



1. In a mechanism of the class described, a shaft, a rotatable friction element loose on the shaft, a friction element fast on the shaft, one element being longitudinally shiftable with relation to the other, an operating rod, a supporting member formed with a socket receiving the operating rod, said operating rod and supporting member being mutually slotted, a spring urging the rod in one direction, and an operating blade insertible into said slots and having an inclined face coacting with the rod whereby the blade when shifted in one direction shifts the rod against the action of the spring.

2. In a device of the class described, a shaft, a rotatable friction element loose on the shaft, a friction element fast on the shaft, one element being longitudinally shiftable with relation to the other, an operating rod, a supporting member formed with a socket receiving the operating rod, said supporting member and the rod being mutually slotted, a pin mounted upon the longitudinally shiftable element, said pin being longitudinally shiftable and adapted when forced toward the loose element to positively engage the loose element with the friction element, said pin being connected to the operating rod, and an operating blade insertible into the slots in the rod and supporting member, said blade having one edge formed with longitudinally separated inclined edges coacting with the rod to cause a movement of the rod in one direction to a certain distance when the blade is forced in a portion of its length and when forced in its full length to entirely retract the rod to disengage the loose element from contact with the friction element.

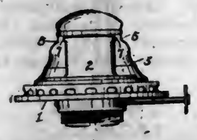
3. In a mechanism of the class described, a shaft, a loose friction element thereon, a friction element rotatable with the shaft, one of said elements having a longitudinal movement to and from the other element, a retractable pin carried by one of said elements but independently shiftable into engagement with the other element, an abutment on the last named element adapted to engage with the said pin when the same is forced outward, a collar to which the pin is connected, an operating rod attached to the collar, a supporting member formed with a socket in which the operating rod is shiftably received, said socket and rod being mutually slotted, and an operating blade insertible into said slots and having longitudinally inclined spaced faces coacting with the rod to cause an intermittent movement of the rod as the blade is shifted.

4. In a mechanism of the class described, a shaft, a loose friction element thereon, a friction element rotatable with the shaft, one of said elements having longitudinal movement along the shaft to and from the other element, and one of said elements on its inside face being annularly grooved, a stop located in said groove, a longitudinally shiftable pin carried by the other of said elements adapted to be projected into said groove and engage the stop thereof, a collar having an interior circumferential groove located at the outer end of the pin, a stud on the pin projecting into said groove, a bifurcated rod engaging with the collar, a spring for normally forcing the rod outward and the pin into engagement with the said element, and means for retracting the rod and for retracting the longitudinally shiftable element out of engagement with the fixed element.

5. In a mechanism of the class described, a shaft, a loose pulley thereon, a friction cone rotatable with the shaft and engageable with a friction face on the loose pulley, the adjacent faces of the loose pulley and the friction cone being one provided with an annular groove having a stop located in its length, a longitudinally shiftable pin carried by the other adapted to be projected into said groove, and means for projecting the pin into said groove or retracting the same therefrom.

[Claims 6 to 8 not printed in the Gazette.]

1,019,306. OIL-BURNER. FREDERIC A. CURTIS, Toledo, Ohio, assignor to The Steel Mantle Light Company, Toledo, Ohio, a Corporation of Ohio. Filed Aug. 11, 1911. Serial No. 643,515. (Cl. 67—72.)



1. A burner of the class described, having its dome provided with a flame opening and with inwardly drawn portions below the ends of the flame opening which provide elongated horizontally disposed internal ridges for the purpose described.

2. A burner of the class described, having its dome provided with a flame opening and with internal ridges which are elongated transversely of the plane of the flame opening and disposed below the ends thereof with their lower walls tapering downward and outward and terminating in a central air dividing portion, substantially as and for the purpose described.

3. A burner of the class described, having the corner portions of the upper end of its wick-tube flared outward and slightly contracted transversely of the tube to pinch the edges of a wick to retard the movement of the edges in the wick tube relative to the intermediate portion of the wick.

4. A burner of the class described, having its dome provided with internal horisontally elongated ridges below the base of its flame opening and having the corners of the upper end portion of its wick-tube flared outward to coöperate with said dome ridges in deflecting air rising within the dome at the ends of the wick-tube.

5. A burner of the class described, having its dome provided with a flame opening and with integral horizontally elongated ridges which are formed integrally

thereof below the ends of the flame opening transversely of the plane thereof, each ridge having a tapered lower portion which gradually diminishes in width downward to deflect rising air toward the ends of the respective ridges.

1,019,307. TRACK CONSTRUCTION. EDWIN F. DAVIS, Corning, N. Y. Filed Dec. 7, 1909. Serial No. 531,895. (Cl. 191—42.)

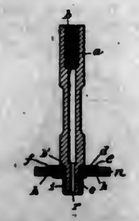


1. A track construction comprising supporting blocks, rails mounted thereon, metal cross ties embedded in and secured against movement in said blocks and having upturned ends, and a third rail secured to and supported by the upturned ends of said ties.

2. In a third rail construction, a flanged tie, one end of which is upwardly curved, a portion extending beyond the web and forming a hook, a piece constituting a second hook and having a slot which straddles the web, and means for securing the piece to the tie to constitute a support for the third rail.

3. The combination with a third rail, having a continuous flange on each side, and a casing formed of side pieces having channels engaging with the flanges and having grooves, of a support which comprises hooks which engage with the grooves in the casing.

1,019,308. FORMER AND SPINDLE FOR LENS-CUTTING MACHINES. GEORGE H. DAY, Southbridge, Mass., assignor to American Optical Company, a Corporation of Massachusetts. Filed Apr. 2, 1910. Serial No. 552,960. (Cl. 49—49.)



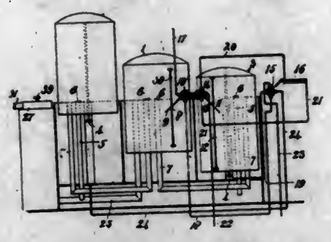
1. In a lens cutting machine, the combination of an arbor, a steady block fixed to said arbor and provided with an outwardly extending flange upon one side thereof, a former having an opening and adapted to slip over said steady block until stopped by said flange, mutually engaging elements upon said steady block and former so that their relative rotation is prevented, and a nut rotatable upon said arbor adapted to be passed by said former in one angular position but to clamp and hold the former against the aforesaid flange when rotated from said position, substantially as described.

2. In a lens cutting machine, the combination of an arbor, a steady block fixed to said arbor and provided with an outwardly extending flange upon one side thereof, a former having an opening and adapted to slip over said steady block until stopped by said flange, mutually engaging elements upon said block and former so that their relative rotation is prevented, a nut rotatable upon said arbor adapted to be passed by said former in one angular position but to clamp and hold said former against the aforesaid flange when rotated from said position, and means limiting the angle of rotation of said nut, substantially as and for the purpose described,

3. In a lens cutting machine, the combination of an arbor, a steady block fixed to said arbor, a former having an opening and adapted to be slipped over said steady block, mutually engaging elements upon steady block and former to stop said former when slipped over the steady block, other mutually engaging elements upon steady block and former to prevent their relative rotation, a rotatable nut upon said arbor adapted to be passed when in one angular position by said former and provided with a circumferential recess, and a pin set in one face of said former and adapted to coöperate with said circumferential recess to limit the angular rotation of said nut, substantially as and for the purpose described.

4. In a lens cutting machine, the combination of an arbor provided with a flange, a rotatable clamp nut at one end of said arbor provided with radial projections, a former having an opening of notched contour and adapted to be slipped axially upon said arbor past said nut and until stopped by said flange when said projections and said notches correspond, and pins upon said arbor to engage said notches when the former has passed the nut, substantially as and for the purpose described.

1,019,309. CARBURETING APPARATUS. RAYMOND PELLY DOUDNEY, Faringdon, England. Filed Dec. 5, 1910. Serial No. 595,652. (Cl. 230—17.)

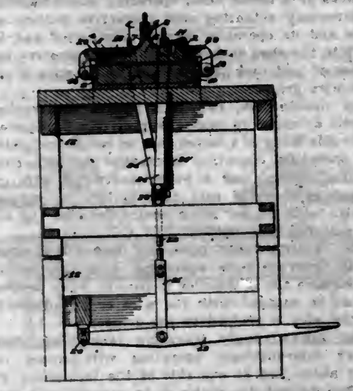


1. In hydraulically operated air pumps for carbureting apparatus, the combination of a reservoir air bell adapted to supply the carbureter with compressed air, an air bell adapted to pump air into said reservoir bell, a hydraulic piston actuating said pumping bell, an auxiliary hydraulic piston and a series of valves through which the head of water is admitted to and exhausted from said hydraulic pistons, said auxiliary hydraulic piston being reciprocable in a piston cylinder having intake and exhaust ports adapted to have their functions alternately changed, and means connected with the piston and with one of said valves for automatically actuating the latter.

2. In hydraulically operated air pumps for carbureting apparatus, the combination of a reservoir air bell adapted to supply the carbureter with compressed air, two air bells adapted to pump air into said reservoir bell one of said pumping bells being adapted to rise simultaneously with the fall of the other pumping bell, two hydraulic pistons respectively actuating said pumping bells, an auxiliary hydraulic cylinder having piston therein and having a port at each end portion in such relation to the piston that water is admitted to said cylinder and exhausted therefrom to said ports alternately, said piston being operatively connected with the valve for alternately opening and closing the same.

3. In hydraulically operated air pumps for carbureting apparatus, the combination of a reservoir air bell adapted to supply the carbureter with compressed air, an air bell adapted to pump air into the said reservoir bell, a hydraulic piston actuating said pumping bell, an auxiliary hydraulic piston, a valve controlling the water passing from the water main provided with two water passages leading respectively to a second and a third valve, water passages in said second and third valves adapted to connect sets of water pipes through which the head of water is admitted to and exhausted from said hydraulic pistons, the first of said valves being controlled by said reservoir bell, the second of said valves being controlled by said pumping bell and the third valve being controlled by said auxiliary hydraulic piston which is itself controlled by said second valve.

1,019,310. SHOE-FORMING MACHINE. ALFRED W. DUNN, Rochester, N. Y., assignor to William Eastwood & Son Company, Rochester, N. Y., a Corporation of New York. Filed Apr. 26, 1909. Serial No. 492,105. (Cl. 12—97.)



1. In a shoe machine, the combination with a sole support, of upper shaping mechanism of two parts swinging toward and from each other and into and out of coöperation with a last supported on a sole on the support to shape the upper and having lateral portions adapted to engage the edges of the upper to press said edges flatwise into engagement with the sole.

2. In a shoe machine, the combination with a sole support, of vamp and back piece shaping dies operating toward and from a last supported on a sole on the support, and common operating means for said dies.

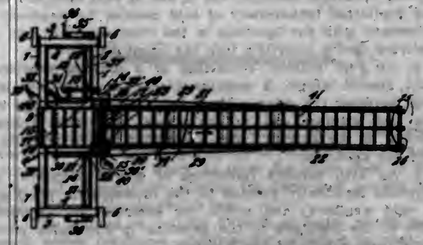
3. In a shoe machine, the combination with a support having a depression therein formed to receive a sole, of upper shaping mechanism coöperating with a last supported on a sole in the depression to shape an upper over the last and having lateral portions adapted to engage the edges of the upper to press said edges flatwise into engagement with the sole in the depression.

4. In a shoe machine, the combination with a support for a shoe sole, of a pair of upper shaping die members movable toward and from the toe and the heel of a last arranged on a sole on the support to press the edges of the upper against the sole.

5. In a shoe machine, the combination with a support for a sole, of a pair of pivotally mounted upper shaping dies movable toward and from the toe and the heel of a last arranged on a sole on the sole support.

[Claims 6 to 11 not printed in the Gazette.]

1,019,311. STACKER. SAMUEL R. FERGUS, St. John, Kans. Filed Apr. 10, 1911. Serial No. 620,043. (Cl. 198—14.)

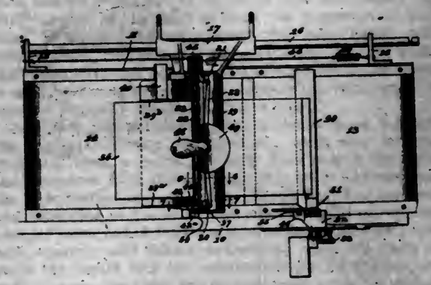


1. A stacker including a supporting structure, parallel rails thereon, a carriage mounted to travel upon the rails, an endless apron mounted on the carriage and movable transversely thereof, said apron constituting a feed table, an elevator adjustably connected to one side of the carriage and supported thereby, a housing extending downwardly from the carriage and between the rails, said housing constituting means for preventing displacement of the carriage from the rails, a motor mounted within the housing and constituting means for preventing the carriage from tilting under the weight of the elevator, and mechanism operated by the motor for simultaneously actuating the feed table and the elevator.

2. A stacker including a supporting structure, parallel rails thereon, a carriage mounted to travel upon the rails, an endless apron mounted on the carriage and movable transversely thereof, said apron constituting a feed table, an elevator adjustably connected to one side of the carriage and supported thereby, a housing extending downwardly from the carriage and between the rails, said housing constituting means for preventing displacement of the carriage from the rails, a motor mounted within the housing and constituting means for preventing the carriage from tilting under the weight of the elevator, mechanism operated by the motor for simultaneously actuating the feed table and the elevator, winding means, and a flexible connection between the winding means and the carriage for shifting said carriage in either direction along the rails.

3. A stacker including a structure normally resting on the ground, wheels movably connected thereto, means for shifting the structure relative to the wheels to elevate said structure above the lower portions of the wheels, parallel rails upon the structure, a carriage mounted to travel thereon, a winding element upon one end portion of the structure, flexible means actuated thereby for moving the carriage in either direction along the rails, an elevator connected to and extending beyond one side of the carriage, a housing depending from the carriage and into the structure, said housing constituting means for preventing lateral displacement of the carriage relative to the rails, a motor supported within the housing for preventing the carriage from tilting under the weight of the elevator, and means operated by the motor for driving the elevator.

1,019,312. COPYING-MACHINE. JOHN J. FLANIGAN, Chicago, Ill., assignor to Duplicator Manufacturing Company, Chicago, Ill., a Corporation of West Virginia. Filed Sept. 22, 1909. Serial No. 518,989. (Cl. 101—99.)



1. In a copying machine, the combination with a frame adapted to move bodily over the duplicating surface of the copying machine, of a stationary roller mounted in said frame, a platen roller carried by said frame, means for actuating said platen roller bodily toward and from said stationary roller and also toward and from said duplicating surface, and a gage-bar serving to arrest and square the advance edge of a sheet inserted between said rollers, substantially as described.

2. In a copying machine, the combination with a frame adapted to move bodily over the duplicating surface of the copying machine, of a stationary roller mounted in said frame, a platen roller carried by said frame, means for

actuating said platen roller bodily toward and from said stationary roller and also toward and from said duplicating surface, a movable gage-bar, and operating connections between the latter and the actuating means of said platen roller whereby, when said rollers are separated for the insertion of a sheet of paper between them said gage-bar is simultaneously moved to a position to arrest and square the advance edge of the sheet, substantially as described.

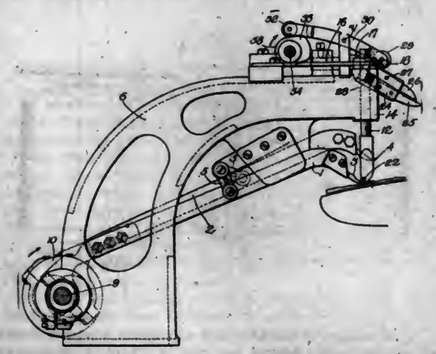
3. In a copying machine, the combination with side-frame members and a duplicating surface mounted therebetween, of a platen-frame movable bodily over said duplicating surface, means carried by said platen-frame for gripping and impressing a sheet of paper upon said duplicating surface, and a narrow shield or guard-strip overlying said duplicating surface and adapted to shield the upper marginal portion of the sheet from contact with said duplicating surface when said sheet is impressed upon the latter, substantially as described.

4. In a copying machine, the combination with side-frame members and a duplicating surface mounted therebetween, of a platen-frame movable bodily over said duplicating surface, means carried by said platen-frame for gripping and impressing a sheet of paper upon said duplicating surface, a bracket adjustably secured to one of said side members, a shield or guard strip carried by said bracket and overlying said duplicating surface, said guard strip adapted to shield the upper marginal portion of the sheet from contact with said duplicating surface, and positioning devices carried by said platen frame and bracket, respectively, for determining the initial or starting position of said platen frame relatively to said guard strip and duplicating surface, substantially as described.

5. In a copying machine, the combination with a frame adapted to move bodily over the duplicating surface of the copying machine, of a stationary roller mounted in said frame, a yoke pivotally mounted in said frame and having an operating handle, and an impression roller mounted in and between the arms of said yoke and adapted to be moved by the latter toward and from said stationary roller, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,019,313. INSOLE AND LASTING TACK PULLER AND TOE-WIRE REMOVER. LOUIS G. FREEMAN, Cincinnati, Ohio. Filed Jan. 27, 1911. Serial No. 605,017. (Cl. 12—16.)



1. In combination, two tack pullers constructed and relatively arranged to engage respectively the insole tacks and the side tacks of a lasted shoe as component parts of a single operation, backing gages formed to coöperate with said pullers respectively, and operating mechanism for actuating said respective pullers to afford opportunity for the operator to control the shoe properly with reference to one or the other of said tack pullers, as required by the special conditions of the particular lasted shoe being operated on, said tack pullers and said gages being both arranged for presentation of the lasted shoe endwise thereto and spaced apart so as to receive the shoe so presented between them, whereby both pullers may be brought into operation by a lateral shift of the shoe.

2. In combination, two tack-pullers spaced apart and constructed to engage respectively the insole tacks and the side tacks of a lasted shoe, operating mechanism for dissimultaneously actuating said respective pullers, a wire gripper and its operating means constructed and located to permit the shoe to be brought into operative relation to either of said tack-pullers while its toe-wire is engaged by the wire gripper.

3. In combination, two tack pullers constructed and relatively arranged to engage respectively the insole tacks and the side tacks of a lasted shoe as component parts of a single operation, operating mechanism for actuating said respective pullers, and a power controlled wire gripper arranged adjacent to said tack pullers for coöperation therewith, said gripper being located between and slightly above said two tack pullers.

4. An intermittingly operating tack-puller, combined with an intermittingly operating wire gripper located slightly above the tack-puller to permit, when desired, the puller to be engaged with the wire or an adjacent tack while the wire is gripped by the gripper.

5. An intermittingly operating tack-puller, combined with an intermittingly operating wire-gripper located slightly above and at one side of the tack-puller to permit, when desired, the puller to be engaged with the wire or an adjacent tack while the wire is gripped by the gripper.

[Claims 6 to 21 not printed in the Gazette.]

1,019,314. ARCH-CENTERING. HENRY H. FRICK, Fricks, Pa. Filed Sept. 14, 1910. Serial No. 582,041. (Cl. 25—131.5.)



1. An arch support comprising overlapped members, one of which is pivoted intermediate its ends to the next adjoining member; means for maintaining the overlapped end of the first named member in predetermined positions transversely of the second named member.

2. An arch support comprising overlapped members, one of which is pivoted intermediate its ends to the next adjoining member; the over-lapped end of the first named member and the second named member being provided with alining openings, the openings in one of said members being duplicated transversely of said member for successive alinement with the openings in the other member; and a securing device insertible into the openings.

3. An arch support consisting of a member provided with spaced wings; a member pivoted intermediate its ends between the wings; there being alined openings in the last member and in the wings, duplicated transversely of the support; and a securing device insertible into the openings.

4. An arch support consisting of spaced members; a keystone terminally pivoted to the intermediate portions of said members; and means for securing the adjacent ends of the members to the keystone in successive positions transversely of the keystone.

5. An arch support consisting of spaced members; a keystone consisting of plates applied to the opposite sides of said members and pivotally connected with the intermediate portions of said members; there being openings in the adjacent ends of said members, and in the keystone plates, certain of which openings are duplicated, transversely of the keystone; and securing devices insertible into the openings.

[Claims 6 and 7 not printed in the Gazette.]

1,019,315. ROLLING-MILL APPLIANCE. HARRY R. GREB, Johnstown, Pa. Filed Nov. 10, 1910. Serial No. 591,591. (Cl. 80—48.)



1. In a manipulator, a work receiving table, means mounted thereon for lifting one side of a bar and means for positively preventing the opposite side thereof from lifting, thereby rotating the same.

2. In a manipulator, a work receiving table, head-blocks mounted thereon, means movably carried by the head-blocks for lifting one side of a bar and means for positively preventing the opposite side thereof from lifting, thereby rotating the same.

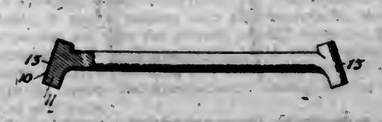
3. In a manipulator for rolling-mills, a feed-table, and a plurality of means mounted thereon, acting to lift one side of the bar and a plurality of means to positively prevent the opposite side thereof from lifting, thereby rotating the same.

4. In a manipulator, a feed-table, guideways mounted thereon, head-blocks slidably mounted upon said guideways and means movably carried by the head-block on one side for lifting one side of a bar and means carried by the head-block on the opposite side from lifting, thereby rotating the same.

5. In a manipulator, a feed-table, guideways mounted thereon, head-blocks slidably mounted upon said guideways, and sliding jaws carried by the head-blocks for lifting one side of a bar and for gripping and preventing the opposite side from lifting, thereby rotating the same.

[Claims 6 to 18 not printed in the Gazette.]

1,019,316. PROCESS OF MAKING SWISS WATCH-BOWS. WILLIAM E. GIBBS, Plainfield, N. J., assignor to Joseph Fahys & Co., New York, N. Y., a Corporation of New York. Filed Jan. 26, 1911. Serial No. 604,776. (Cl. 29—177.)

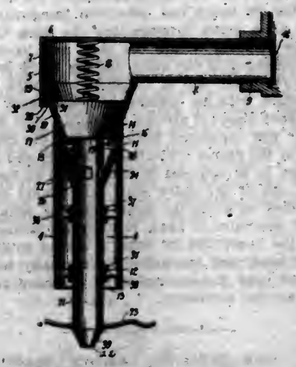


1. The process of making French or Swiss watch case bows, which comprises preliminarily striking up ears or nibs on the straight stock to form the outer ends of the bars, and subsequently alining the bars and bowing the stock to form the completed bow.

2. The process of making French or Swiss watch case bows, which comprises preliminarily striking up ears or nibs on the straight stock to form an end of each bar, then bending the ends of the stock into alinement with the nibs or ears to complete the bars, and finally bowing the stock and bringing the two bars into alinement with each other to complete the bow.

3. The process of making French or Swiss watch case bows, which comprises preliminarily striking up ears or nibs to form the outer ends of the bars, then bringing the ends of the stock into alinement with the ears or nibs to complete the bars and subsequently bowing the stock to form the completed bow.

1,019,317. FAUCET. ALFRED E. GOODWYN, Bluefield, W. Va. Filed Mar. 16, 1911. Serial No. 614,886. (Cl. 137—4.)



1. A faucet comprising in combination, a head, a valve seat connected to the head, a valve, a tubular shell extending from the valve seat, an outlet tube disposed within the shell and connected to the valve and provided with an opening near its inner end, a funnel extending from the tube below said opening, said funnel coöperating with the shell to guide the liquid into the opening of the tube when the valve is open, and a spring disposed between the valve and the head for normally holding the valve closed.

2. A faucet comprising in combination, a head, a valve seat connected to the head, a valve, a tubular shell extending from the valve seat, an outlet tube disposed within the shell and connected to the valve and provided with an opening near its inner end, arms extending radially from the projecting end of the outlet tube and coöperating with the end of the shell to limit the movement of said tube, a funnel extending from the tube below said opening, said funnel coöperating with the shell to guide the liquid into the opening of the tube when the valve is open, and a spring disposed between the valve and the head for normally holding the valve closed.

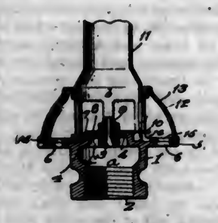
3. A faucet comprising in combination, a head, a tapering tubular extension constituting a valve seat integral with said head, a valve, a tubular shell having its upper end connected with the extension at a point intermediate the ends thereof, an outlet tube disposed within the shell and connected to the valve and provided with an opening near its inner end, a funnel extending from the tube below said opening, said funnel coöperating with the shell to guide the liquid into the opening of the tube when the valve is open, the outer end of the funnel being adapted in one position to engage behind the lower end of the valve seat, and a spring disposed between the valve and the head for normally holding the valve closed.

4. A faucet comprising in combination, a hollow head including a top and a side wall, a tapering tubular extension constituting a valve seat integral with the side wall and provided with an open end, a valve, a tubular shell having its upper end connected integrally with the extension at a point intermediate the ends thereof, an outlet tube disposed within the shell and having its upper end connected to the valve and its lower end projecting below the lower end of the shell, said tube having its wall provided with an opening disposed below the valve

seat, a funnel disposed around the outlet tube and having its smaller end connected thereto below the opening, the outer end of the funnel projecting upwardly and adapted in one position to be disposed in rear of and in contact with the lower end of the valve seat, said funnel coöperating with the shell to guide the liquid into the opening of the tube when the valve is open, radially projecting arms secured to the lower end of the tube, and a spring interposed between the head and the valve for normally holding the valve closed.

5. A faucet comprising in combination, a hollow head including a top and a side wall, a tapering tubular extension constituting a valve seat integral with the side wall and provided with an open end, a valve, a tubular shell having its upper end connected integrally with the extension at a point intermediate the ends thereof, an outlet tube disposed within the shell and having its upper end connected to the valve and its lower end projecting below the lower end of the shell, said tube having its wall provided with an opening disposed below the valve seat, a funnel disposed around the outlet tube and having its smaller end connected thereto below the opening, the outer end of the funnel projecting upwardly and adapted in one position to be disposed in rear of and in contact with the lower end of the valve seat, said funnel coöperating with the shell to guide the liquid into the opening of the tube when the valve is open, radially projecting arms secured to the lower end of tube, a spring interposed between the head and the valve for normally holding the valve closed, and means carried by the head for locking the valve against movement.

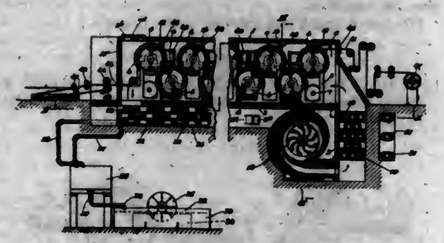
1,019,318. GAS-BURNER. ARTHUR GRANDJEAN, San Diego, Cal. Filed Dec. 20, 1910. Serial No. 598,437. (Cl. 158—119.)



A gas burner comprising a hollow body forming the base thereof and having a gas chamber and a partition above said chamber, and provided externally with a flange, a tube forming a mixing chamber above the partition, there being a gas inlet into the gas chamber, a gas port through the partition and an air port through the flange; a valve plate pivotally mounted on the partition inside the mixing chamber and provided with a port to register with the gas port and adapted to open and close said gas port as the plate is rotated; and a bonnet seated on the flange and pivotally mounted on the burner tube around the mixing chamber and communicating with said mixing chamber and provided with a plate having a port to register with the air port in the flange and also being in connection with the valve plate to rotate the same to close the gas port as the air port is opened, and vice versa.

1,019,319. APPARATUS FOR TREATING FIBROUS MATERIALS. WILLIAM M. GROSVENOR, Grantwood, N. J. Filed Jan. 25, 1910, Serial No. 539,919. Renewed Nov. 16, 1911. Serial No. 660,684. (Cl. 92—38.)

1. In a drying apparatus, the combination of a suitable chamber forming a substantially closed cyclic path for the drying medium, a plurality of suitable supports therein over which the material to be dried passes, means for independently heating each support, means for heating the drying medium in said cyclic path, means for cooling the drying medium in said path and mechanical means for forcing the drying medium around said cyclic path.



2. In a drying apparatus, the combination of a suitable chamber forming a cyclic path for the drying medium, a plurality of members therein over which the material to be dried passes, some on one side of the material and others on the other side of the material, means for heating said members, said means including a source of heat inside each member, means for heating the drying medium in said cyclic path and means for removing moisture from said cyclic path.

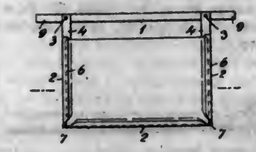
3. In a drying apparatus, the combination of a suitable chamber forming a substantially closed cyclic path for the drying medium, suitable rolls therein over which the material to be dried passes, means for heating said rolls, said means including a source of heat inside the rolls and parts arranged to cause a circulation of the drying medium about said cyclic path.

4. In a drying apparatus, the combination of a suitable chamber forming a substantially closed cyclic path over which the drying medium is caused to circulate, a series of members in said path over which the material to be dried passes, and means for independently heating each of said members to heat the members, whereby each member will independently heat the material.

5. In a drying apparatus for fibrous material, the combination of a chamber forming a cyclic path for the drying medium, means in said path for conveying the material, means for internally heating said conveying means to provide heated surfaces for the material to rest upon and parts arranged to cause the drying medium to circulate around said cyclic path.

[Claims 6 to 30 not printed in the Gazette.]

1,019,320. PHOTOGRAPHER'S DEVELOPING-FRAME. LEO GRUBMAN, New York, N. Y., assignor to Frederick B. Core, New York, N. Y. Filed Mar. 25, 1911. Serial No. 616,790. (Cl. 95—100.)



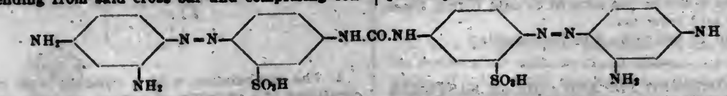
1. A developing frame comprising a cross bar of sufficient length to span across a tank and rest upon its upper edges, a vertically arranged frame depending from said cross bar and comprising continuous grooved vertical side bars and a horizontal cross bar connecting the lower ends of the side bars, said frame adapted to receive and support a photographic plate by continuous engagement of the lower horizontal and the vertical side bars of said frame with said plate the upper ends of the grooves in the vertical side bars being open.

2. A developing frame comprising a cross bar of sufficient length to span across a tank and rest upon its upper edges, a vertically arranged photographic plate supporting frame depending from said cross bar and comprising continuous grooved vertical side bars and a horizontal cross bar connecting the lower ends of the side bars certain of said bars provided with drainage openings for the escape of the developing liquids.

3. A developing frame comprising a cross bar of sufficient length to span across a tank and rest upon its upper edges, a vertically arranged photographic plate supporting frame depending from said cross bar and comprising continuous grooved vertical side bars and a horizontal cross bar connecting the lower ends of the side bars, all of said bars being arranged in the same plane.

1,019,321. BROWN TETRAZO DYE. OSCAR GÜNTHER, Elberfeld, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed July 13, 1911. Serial No. 638,309. (Cl. 8—1.)

The herein described new tetrazo dyestuff having most probably the formula:



which is after being dried and pulverized in the shape of its sodium salt a dark powder soluble in concentrated sulfuric acid with a reddish-violet coloration; yielding upon reduction with stannous chlorid and hydrochloric acid 1.2.4-triaminobenzene and 4.4'-diaminodiphenylurea-3.3'-disulfonic acid which latter compound is further split up into CO_2 and para-phenylenediamin sulfonic acid; dyeing cotton directly a yellow brown, which when developed with diazotized para-nitraniliin changes into a full reddish-brown which can be discharged to a pure white and is of excellent fastness to washing and to light, substantially as described.

1,019,322. SPRAYING DEVICE. HENRY JOHN HABER, Pittsburgh, Pa. Filed May 19, 1911. Serial No. 628,289. (Cl. 137—67.)



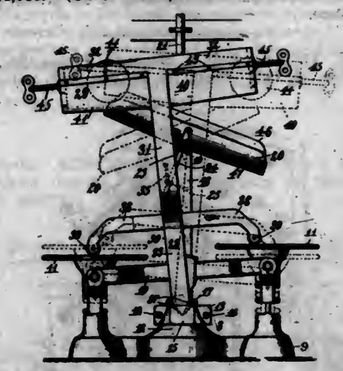
1. A spraying device comprising the combination of a receptacle, a nozzle leading into said receptacle, a duct in communication therewith and extending across the same, said duct being open at its ends, and a ball-and-socket closure mounted at each such end.

2. A spraying device comprising the combination of a receptacle, a nozzle leading into said receptacle, means for projecting air past the mounth of said nozzle, a duct in communication with the latter, said duct extending the depth of said receptacle, and being open at each end, and gravity means for alternatively closing one or the other of said ends.

3. A spraying device comprising the combination of a receptacle, a nozzle leading into, and having a discharge opening positioned laterally of, said receptacle; a duct in communication with said nozzle and extending longitudinally within said receptacle, said duct being provided with an opening near each end of said receptacle; gravity means for alternatively closing such openings; an air-compressor comprising a cylinder and piston secured to said receptacle and disposed subetantially parallel with said duct, said cylinder being provided with a discharge opening located in opposition to said nozzle discharge opening.

4. A spraying device comprising the combination of a receptacle, a primary duct communicating therewith and projecting laterally therefrom; a secondary duct open at each end and communicating intermediately of its ends with said primary duct, such open ends being respectively adjacent opposite sides of said receptacle; a compressor secured to the latter, and parallel with said secondary duct, said compressor having an opening in operative proximity to the projecting end of said primary duct; and gravity means for alternatively effecting the closure of opposite ends of said secondary duct.

1,019,323. AUTOMATIC WEIGHING-MACHINE. JOSEPH HEPTER, Buffalo, N. Y. Filed Mar. 13, 1911. Serial No. 614,083. (Cl. 73—169.)



1. A weighing scale comprising balanced tables, a support, a tilting frame carried by said support and arranged to be actuated by said tables alternately, a balancing device at the upper end of said frame, a trough located above said balanced tables and pivotally mounted at a point between its ends on said support, and means of connection between said tilting frame and said trough for inclining the latter in opposite directions.

2. In combination with a scale having a pair of tables or platforms, a supporting frame carried by said scale, a tilting frame carried by said supporting frame and having means engaging said tables to cause said tilting frame to tilt, a balance device at the upper end of said tilting frame having movable balancing means, a trough pivotally held between its ends above said scale with its ends above said balanced tables, and connection between said tilting frame and said trough for causing the latter to incline in opposite directions.

3. The combination with a platform scale, having a pair of movable tables, of a tilting frame having a movable balancing element and being operated by said tables assisted by said balancing element, a feed trough pivotally mounted between its ends to be inclined in opposite directions, and connection between said tilting frame and said feed trough for controlling the movement of the latter.

4. In a weighing machine, the combination of a support, a pair of tables movable under weight, a tilting frame carried by said support and actuated by the movements of

said tables, a feed trough pivotally secured to said support at a point between its ends, and adjustable connection between said tilting frame and said feed trough to govern the degree to which the latter is to be inclined.

5. In a weighing machine, the combination of a support, a pair of tables movable under weight, a tilting frame carried by said support and actuated by the movements of said tables, a feed trough mounted on said support and operated by said tilting frame to incline in opposite directions, a rocker frame secured to said trough and comprising a pair of depending arms and a cross bar connecting said arms, and a shifter pin secured to said tilting frame and engaging said cross bar.

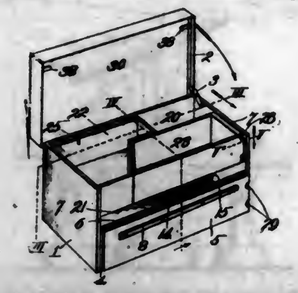
[Claims 6 to 17 not printed in the Gazette.]

1,019,324. COMBINED TIE AND COLLAR FASTENER. DANIEL HEPP, Chicago, Ill. Filed Dec. 10, 1908. Serial No. 466,858. (Cl. 24—64.)



A combined tie and collar fastener, consisting of a button having a grooved head, a tie backing, an oblong plate pivoted to said tie backing, said plate being provided with perforations at either end thereof and having slots extending therefrom for engaging the grooved head of the button, one of said perforations being at the pivotal point of said plate.

1,019,325. TRUNK. SONE A. HESSLER, Kansas City, Mo. Filed Nov. 21, 1910. Serial No. 594,240. (Cl. 190—32.)

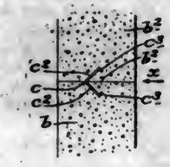


1. A trunk, comprising a body, a tray comprising a member hingedly supported within the upper part of the body of the trunk and adapted to swing forwardly out of the same, and a second member partly overlapped by the free end of the hinged member when the latter is disposed within the trunk.

2. A trunk, comprising a body, and a tray supported in the upper part of the body and consisting of a member hinged at one of its outer front corners to one of the end walls of the body and spaced forwardly from the back wall of the body and a second member fiting against the other end wall and the back wall of the trunk and against the free end of the hinged member and provided with an extension interposed between the back wall of the body and said hinged member.

3. In a trunk, a partition hinged at its lower end to the bottom of the trunk, provided with a horizontal cleat near its upper end, a partition arranged upon the bottom of the trunk and extending substantially parallel with and between the front and back walls and upon the bottom thereof, a pair of vertical cleats secured to one of the end walls and receiving between them one end of the last-named partition, a cleat secured to the bottom of the trunk at the front side of said last named partition, and means for detachably securing the ends of said partitions together.

1,019,326. CONCRETE WALL CONSTRUCTION. SYLVESTER HIGGINS, Jersey City Heights, N. J. Filed Mar. 11, 1911, Serial No. 613,712. Renewed Dec. 15, 1911. Serial No. 666,036. (Cl. 72—127.)



1. The combination with a concrete wall construction consisting of a plurality of sections or parts, one of which is cast or molded upon another, of a continuous water guard set into the top of one section or part longitudinally thereof and extending into the bottom of the section or part which is cast or molded thereon.

2. The combination with a concrete wall construction consisting of a plurality of sections or parts, one of which is cast or molded upon another, of a continuous water guard set into the top of one section or part longitudinally thereof and extending into the bottom of the section or part which is cast or molded thereon, said water guard being angular or curved in form in cross section.

3. The combination with a concrete wall construction consisting of a plurality of sections or parts, one of which is cast or molded upon another, of a continuous water guard set into the top of one section or part longitudinally thereof and extending into the bottom of the section or part which is cast or molded thereon, said water guard being angular or curved in form in cross section and the convex or outer sides thereof being directed inwardly.

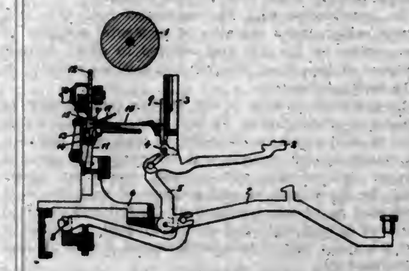
1,019,327. CONTRACTOR'S ELEVATOR. WILLIAM HENRY INSLEY, Indianapolis, Ind., assignor to Insley Manufacturing Company, Indianapolis, Ind., a Corporation of Indiana. Filed Dec. 30, 1909. Serial No. 535,645. (Cl. 214—12.)



1. An elevator structure comprising a main frame having horisontal tracks between the vertical members thereof and adapted to receive a flooring structure, and a dumping bucket having a flaring open top, an inclined discharge side and a round bottom rollingly and removably mounted on said tracks between said vertical members, and a projection carried by the bucket near its upper end and outside of the vertical supports of the main frame in the dumping direction, said projection being adapted to engage stationary guides to support the bucket in load-retaining position upon the main frame.

2. An elevator structure comprising a main frame having horisontal tracks and adapted to receive a flooring structure, and a dumping bucket rollingly and removably mounted on said tracks, said bucket having portions interengaging with the tracks to prevent slippage during rolling and also having a pair of brackets adapted to straddle a cross bar of the main frame when the bucket is moved to dumping position.

1,019,328. TYPE-WRITER ESCAPEMENT MECHANISM. MARQUIS H. LOCKWOOD, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed May 20, 1911. Serial No. 628,537. (Cl. 197—88.)



1. In an escapement for typewriters the combination of a rack, a bifurcated loose pawl coöperating therewith said pawl being actuated to move in opposition to the feed movement of the rack and means for actuating said pawl to produce step by step feed of said rack.

2. In an escapement for typewriters, the combination of a rack, a bifurcated loose pawl adapted for feeding the rack tooth by tooth by two movements of the pawl, one transversely to and the other in the plane of said rack and means for actuating said pawl to permit feed of said rack.

3. In a typewriter escapement the combination of a rack, a pawl movable relatively to said rack in two directions for feeding said rack step by step, a plurality of dogs on said pawl adapted to successively engage said rack as the pawl is moved, and means for actuating said pawl to permit feed of said rack.

4. In a typewriter escapement the combination of a rack, a pawl movable parallel with and actuated in opposition to the feed movement of the rack and also movable transversely to said rack to permit feed of the same step by step, a plurality of dogs on said pawl adapted to successively engage said rack and means for moving said pawl.

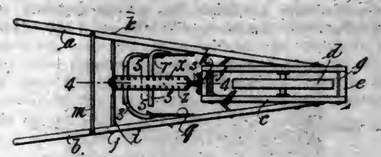
5. In a typewriter escapement the combination of a rack, a support movable relatively to said rack, a loose pawl carried by said support and actuated to move in opposition to the feed movement of the rack, a plurality of dogs on said pawl, arranged to successively engage said rack as said support is moved the engagement being hastened by said movement of the pawl, and means for actuating said support.

[Claims 6 to 18 not printed in the Gazette.]

1,019,329. METHOD FOR THE FORMATION OF THE THREAD-RESERVE FOR LOOMS WITH MECHANICAL BOBBIN CHANGE. ADOLF MARAZZI, Kottern, near Kempten, Germany, assignor to Genossenschaft für Textilpatente, Basel, Switzerland. Filed July 6, 1911. Serial No. 637,231. (Cl. 139—85.)

A method for the formation of the thread-reserve of the bobbins for looms with mechanical bobbin change, consisting in placing the bobbin after winding on a rotating spindle and allowing the end of the thread to make a few turns around the end of said spindle and thereafter pulling the bobbin off said spindle thereby placing the turns of the thread-reserve in the recessed end of the bobbin.

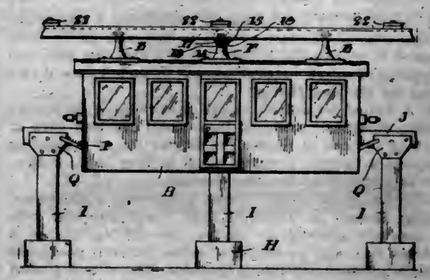
1,019,330. AGRICULTURAL IMPLEMENT. CHRISTOPHER MARGERSON, Springfield, Mass. Filed Nov. 23, 1911. Serial No. 661,997. (Cl. 97—42.)



1. In a hand-operated implement of the kind described, the combination with the frame thereof and its supporting wheel, of a brace-bar, a hanger-bar attached to the frame, a rod extending therebetween, a block rotatably supported on the rod, two sets of hoe elements, and devices for securing and laterally adjusting the hoe elements to the block, whereby when the block is rotated a different set of hoe elements may be brought into use, and each set of hoe elements will produce separate furrows.

2. In a hand-operated implement of the class described, the combination with the frame thereof, a supporting wheel, a hanger-bar secured to the frame, a brace-bar longitudinally spaced from the hanger-bar, a rod extending between the hanger and brace-bars, a block rotatably mounted on the rod and provided with recessed upper and lower edges, the ends of the channel having shoulder elements, clamping plates resting on the shoulder elements and provided with openings therethrough, bolts for securing the plates to the block, hoe elements, arms attached to said elements, and located under the plates and in the recessed portions of the block, whereby the hoe elements may be adjustably secured to the block, and devices to lock the block after being rotated on said rod to bring a different set of hoe elements into use.

1,019,331. ELEVATED RAILWAY. WILLIAM MALONEY, Ottawa, Ontario, Canada. Filed June 12, 1911. Serial No. 632,719. (Cl. 104—4.)

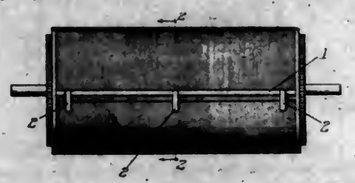


1. In combination a supporting track, a car thereon, an over-head track of inverted U shape, a steadying device on the car including rollers adapted to run on the inner surface of the side flanges of the overhead track.

2. In combination base members, standards supported thereon, cross bars connecting the standards, rails carried by the standards and T-shaped bracket members mounted on the cross bars and overhead rails carried by the extremities of the brackets and having depending side flanges, a car mounted on the first mentioned rail having steadying means extending between the depending flanges aforesaid.

3. In combination base members, steadying rails supported therefrom, T-shaped bracket members supported from the base members, overhead rails carried by the bracket members having depending flanges, a car mounted on the supporting rails having steadying means to engage with said flanges.

1,019,332. MEANS FOR SECURING THE END PORTION OF A WARP. STANLEY B. MATHEWSON, Atlanta, Ga., assignor, by mesne assignments, to Barber-Colman Company, Rockford, Ill., a Copartnership. Filed July 16, 1909. Serial No. 507,903. (Cl. 139—37.)



1. A warp having a tape adhesively secured thereto transversely of the warp threads, said tape holding the warp threads in substantial parallelism.

2. A warp beam having a warp rolled thereon, a tape adhesively secured to the warp transversely of the ends of the warp threads, and a plurality of tabs of tape adhesively secured to the end of the warp and to the body of warp threads on the beam.

3. A warp beam having a warp rolled thereon, a tape adhesively secured to the warp transversely of the ends of the warp threads, a tape adhesively secured to the warp and extending substantially at a right angle thereto at a distance inwardly of the first mentioned tape, and a plurality of tabs of tape adhesively secured to the end of the warp and to the body of warp threads on the beam.

1,019,333. CUTTER FOR ANIMAL-SHEARS. MICHAEL W. MCARDLE, Chicago, Ill., assignor to Chicago Flexible Shaft Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 1, 1911. Serial No. 663,390. (Cl. 30—1.)

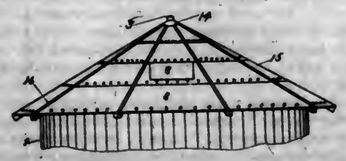


1. A cutter for animal shears comprising a die-formed cutting element of sheet metal provided with an aperture adapted to receive the driving pin of a shearing tool, and a bushing of softer material secured in such aperture as a lining for the edge thereof.

2. A cutter for animal shears comprising a die-formed cutting element of hardened sheet metal provided with an aperture adapted to receive the driving pin of a shearing tool, and a bushing of softer metal secured in such aperture as a lining for the edge thereof.

3. A cutter for animal shears comprising a die-formed cutting element of hardened sheet metal provided with an aperture adapted to receive the driving pin of a shearing tool, and an eyelet of softer material positioned in such aperture for lining the edge thereof and formed with flanges clenched against the opposite faces of the material of the cutter.

1,019,334. SILO-ROOF CONSTRUCTION. CHARLES W. MCCLURE, Saginaw, Mich. Filed June 24, 1911. Serial No. 635,207. (Cl. 20—1.4.)



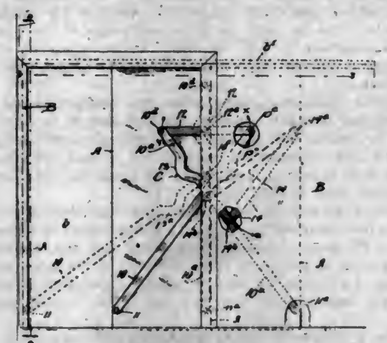
1. In combination with a silo wall, a roof comprising a transverse girder carried by said wall, an upright post carried by said girder, a plurality of segmental roof sections, means carried by said post for removably securing the upper ends of said roof sections, means for holding the lower ends of said sections to said silo wall, and means adapted to vertically adjust the upper ends of said sections and thereby fit said sections together.

2. In combination with a silo wall, a two-part transverse girder extending diametrically across said wall, a post received between the members of said girder, said post formed with a shoulder, lifting means between said shoulder and girder, a plurality of segmental roof sections, a collar on said post, means carried by the upper end of each section adapted to engage said collar, and fastening means for the lower ends of said sections.

3. In combination with the segmental roof of a silo, said roof comprising a plurality of segmental sections, of means carried by the silo and adapted to effect vertical adjustment of the upper ends of said sections whereby to fit said sections together.

4. In combination with a silo wall, a roof comprising a transverse girder carried by said wall, an upright post carried by said girder, a plurality of segmental roof sections, means carried by said post for removably securing the upper ends of said roof sections, means for loosely holding the lower ends of said sections to said silo wall, but adapted to permit independent inward and outward adjustment of said wall, and means adapted to vertically adjust the upper ends of said sections and thereby fit said sections together.

1,019,335. SUPPORTING MECHANISM FOR DOORS AND OTHER OBJECTS. EDWARD MCCLURE, Chicago, Ill., assignor of one-half to Franklin P. Smith, Chicago, Ill. Filed Nov. 13, 1911. Serial No. 659,913. (Cl. 16—156.)



1. Supporting mechanism of the class described, comprising a pair of links, each pivotally connected at one of its ends with the object to be sustained, and at fixed points of said object, and two oscillatory members, one of which is fulcrumed between its ends, upon a fixed pivot, and pivotally connected, at points on opposite sides of its fulcrum, to the other ends of said links, the other of said oscillatory members being fulcrumed at one end upon a fixed pivot, and at its other end to one of said links at a point between its ends.

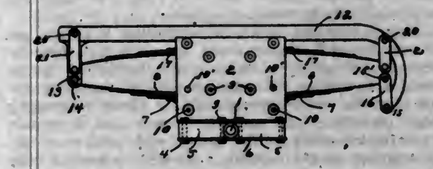
2. Supporting mechanism of the class described, comprising a pair of equal length links, each pivotally connected at one end with the object to be sustained, an oscillatory member fulcrumed between its ends upon a fixed pivot and pivotally connected at points equidistant from its fulcrum, to the other ends of said links, and a third link fulcrumed upon a fixed point and pivotally connected to one of said pair of links.

3. Supporting mechanism of the class described, comprising a pair of equal length links, each pivotally connected at one end with the object to be sustained, said pivots being arranged in a line parallel with the path of travel of the object sustained, an oscillatory member, fulcrumed between its ends upon a fixed pivot, located at a point distant from a straight line passing through said pivots on said object, equal to the distance between said pivots; the other ends of each link being pivotally connected to said oscillatory member at points thereon equidistant from its fixed fulcrum, the distance between the pivot point of the links on said oscillatory member being one-half the distance between the pivot points of said links on the object sustained, and a third link fulcrumed upon a fixed pivot lying in a line running through the fulcrum of the oscillatory member and extending parallel with a line passing through the pivot points on the object carried, the free end of said third link being pivotally connected to one of said pair of links at a point midway between its pivot points on the door and oscillatory member.

4. Supporting mechanism of the class described, for sustaining two oppositely movable doors, comprising two sets of similar instrumentalities, each consisting of a pair of equal length links, each link pivotally connected at one end with one of the doors, an oscillatory member fulcrumed between its ends upon a fixed point, and pivotally connected at points equidistant from its fulcrum to the other ends of said links, and a third link fulcrumed upon a fixed point and pivotally connected to one of said links at a point midway between its pivot points on the door and bar, and motion reversing mechanism operatively connected to said two sets of instrumentalities.

5. The combination with an inclosure having a door opening therein, and guideways above and below said doorway, of a door movable in said guideways, a pair of equal length links each pivoted to said door near its side edges, an oscillatory bar fulcrumed between its ends upon said inclosure, near one side edge of said doorway, and at a point above the pivot points of the links on the door, equal to the distance between said pivot points, said links being pivoted to said bar at points thereon equidistant from its fulcrum, and at points distant from said fulcrum equal to one-fourth the distance between the pivot points of the links on the door, and a third link fulcrumed to said inclosure on a horizontal line passing through the fulcrum of the bar, and at a distance therefrom equal to one-half the distance between the pivot points of the links on the door, said third link being pivoted also to one link at a point midway between its pivotal connections with the bar and door.

1,019,336. VEHICLE-SPRING. DANIEL J. MCCLUSKEY, San Francisco, Cal. Filed June 8, 1910. Serial No. 565,709. (Cl. 21—103.)



1. In a vehicle spring suspension, an axle, a support carried thereby, a pair of oppositely placed pivoted and load carrying springs secured to said support, a fulcrum for each of said springs below the same, a pair of oppositely placed and oppositely acting springs pivoted to said support, a fulcrum for each of said latter springs above the same, and a frame secured to said springs, as set forth.

2. In a vehicle spring suspension, an axle, a support secured thereto, a pair of oppositely placed pivoted load carrying springs one end of each pivoted to said support and the opposite end of said spring pivoted to the frame of the vehicle, and a pair of oppositely placed and oppositely acting springs pivoted in the same manner as the first mentioned springs adapted to prevent undue upward movements of the frame of said vehicle, as set forth.

3. In a vehicle spring suspension, an axle, a support carried thereby, two springs pivoted to said support and extending in opposite directions therefrom, a fulcrum upon which each spring bears, and oppositely placed springs to prevent excessive upward motions of the first mentioned springs, as set forth.

4. In a vehicle spring suspension, an axle, a support therefor, a vehicle frame, two oppositely extending springs pivoted to said axle and connected with the vehicle frame, an adjustable fulcrum for each of said springs, and a pair of oppositely placed pivoted springs adapted to prevent excessive upward motions of the first mentioned springs, as set forth.

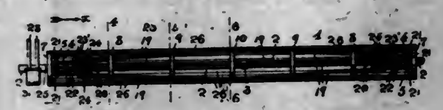
1,019,337. SAFETY SWINGING WINDOW. ERNEST MCCONNELL, Los Angeles, Cal., assignor of one-half to W. D. Hammond, Los Angeles, Cal. Filed Aug. 21, 1911. Serial No. 645,312. (Cl. 20—49.)



1. The combination of a window casing having recesses, an outer sash frame mounted to slide vertically in said casing, an inner sash frame mounted to swing within said outer sash frame the pivots for said inner sash frame being slidably mounted and having portions adapted to project into said recesses in the window casing, and means on said inner sash frame for moving said pivots to projecting position when the inner sash frame is tipped from vertical position.

2. The combination of a window casing having recesses, an outer sash frame mounted to slide vertically in said casing, an inner sash frame mounted to swing within said outer sash frame the pivots for said inner sash frame being slidably mounted and having portions adapted to project into said recesses in the window casing, and means on said inner sash frame for moving said pivots to projecting position when the inner sash frame is tipped from vertical position, and a spring acting on each of said pivots to remove the same from engagement with said recesses.

1,019,338. CURTAIN-ROLLER. JAMES MCCURRY, Kearny, N. J. Filed May 19, 1909. Serial No. 497,006. (Cl. 156—29.)

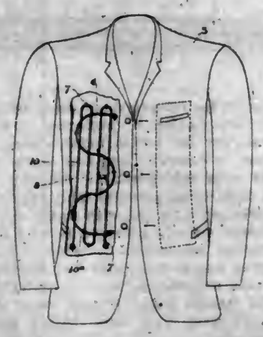


1. A curtain roller comprising a drum which consists of a hollow body having a continuous cylindrical peripheral surface for the unobstructed rolling of a large curtain thereon, a centrally disposed shaft, a series of disks mounted upon said shaft, for carrying said drum, some of said disks being provided with perforations, and one of said disks being formed with marginal depressions, a series of bowed tie-rods arranged in said perforations and said marginal depressions, portions of said tie-rods being in binding engagement with the marginal surface portions of said depressions, in the centrally disposed disk, but said tie-rods being free to move in the perforations of the other disks, said tie-rods being formed with screw-threaded end-portions, sleeves upon said shaft, each sleeve having an annular flange provided with perforations, stems arranged in said perforations and connected with said flanges, said stems being formed with screw-threaded end-portions, and turn-buckles between the screw-threaded end-portions of said stems and said tie-rods for bracing said shaft and preventing the sagging of the same.

2. A curtain roller comprising a drum which consists of a hollow body having a continuous cylindrical peripheral surface for the unobstructed rolling of a large curtain thereon, a centrally disposed tubular shaft consisting of a number of pipe-sections formed with screw-threaded end-portions, unions for connecting said pipe-sections, a series of disks mounted upon said pipe-sections, for carrying said drum, some of said disks being provided with perforations, and one of said disks being formed with marginal depressions, a series of bowed tie-rods arranged in said perforations and said marginal depressions, portions of said tie-rods being in binding engagement with the marginal surface portions of said depressions, in the centrally disposed disk, but said tie-rods being free to move in the perforations of the other disks, said tie-rods being formed with screw-threaded end-portions, sleeves arranged upon some of said connected pipe-sections, each sleeve having an annular flange provided with perforations, stems arranged in said perforations and connected with said flanges, said stems being formed with screw-threaded end-portions, and turn-buckles between the screw-threaded end-portions of said stems and said tie-rods for bracing said pipe-sections and preventing the sagging of the same.

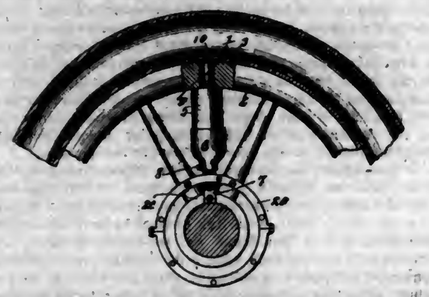
3. A curtain roller comprising a drum which consists of a hollow body having a continuous cylindrical peripheral surface for the unobstructed rolling of a large curtain thereon, a centrally disposed shaft, a series of circular disks mounted upon said shaft, each disk comprising a pair of semicircular members, bolts connected with each pair of such members so as to secure them together, for carrying said drum, some of said disks being provided with perforations, and one of said disks being formed with marginal depressions, a series of bowed tie-rods arranged in said perforations and said marginal depressions, portions of said tie-rods being in binding engagement with the marginal surface portions of said depressions, in the centrally disposed disk, but said tie-rods being free to move in the perforations of the other disks, said tie-rods being formed with screw-threaded end-portions, sleeves upon said shaft, each sleeve having an annular flange provided with perforations, stems arranged in said perforations and connected with said flanges, said stems being formed with screw-threaded end-portions, and turn-buckles between the screw-threaded end-portions of said stems and said tie-rods for bracing said shaft and preventing the sagging of the same.

1,019,339. STIFFENING DEVICE FOR GARMENTS. MICHAEL M. MCDERMOTT, Brooklyn, N. Y. Filed July 11, 1911. Serial No. 637,856. (Cl. 2—63.)



A stiffening device for garments, comprising a strip of canvas having a number of oppositely curved spring steel members, each of said members being bent to form a central loop and two spring arms, the arms and loop of one member being resilient in a lateral direction and the arms and loop of the other member being resilient in a longitudinal direction.

1,019,340. SIGNAL. JOSEPH C. MCGOWAN and ROBERT W. MICHLER, Perris, Cal., assignors of one-third to Mathias P. Deutsch, Perris, Cal. Filed Oct. 30, 1900. Serial No. 525,529. (Cl. 177—311.)



1. A tire deflation indicator comprising a circuit, an indicator included therein, said circuit being normally broken at one point, a tire pressure controlled circuit closer for governing the condition of the circuit at the point of break, said closer including a casing comprising a fixed cylinder, a cap secured thereon, and a conduit electrically grounded on the frame, said cap being slidably mounted on the conduit, a plunger operable within the cylinder in one direction by the tire pressure, a spring mounted within the cylinder for operating the plunger in the opposite direction, a fixed contact carried by the cylinder and a movable contact carried by the plunger, said contacts forming the terminals of the circuit closer.

2. A tire deflation indicator comprising a circuit, an indicator included therein, said circuit being normally broken at one point, a tire pressure controlled circuit closer for governing the condition of the circuit at the point of break, said closer including a casing comprising a fixed cylinder, a cap secured thereon, and a conduit electrically grounded on the frame, said cap being slidably mounted on the conduit, a plunger operable within the cylinder in one direction by the tire pressure, a spring mounted within the cylinder for operating the plunger in the opposite direction, a fixed contact carried by the cylinder and a movable contact carried by the plunger, said contacts forming the terminals of the circuit closer, a collecting ring secured upon the wheel, and a conductor between the movable contact and said ring, said conductor passing through the cap and conduit.

3. A tire deflation indicator comprising a circuit, an indicator included therein, said circuit being normally broken at one point, a tire pressure controlled circuit closer for governing the condition of the circuit at the point of break, said closer including a casing comprising a fixed cylinder, a cap secured thereon, and a conduit electrically grounded on the frame, said cap being slidably mounted on the conduit, a plunger operable within the cylinder in one direction by the tire pressure, a spring mounted within the cylinder for operating the plunger in the opposite direction, a fixed contact carried by the cylinder and a movable contact carried by the plunger, said contacts forming the terminals of the circuit closer, a collecting ring secured upon the wheel, a conductor between the movable contact and said ring, said conductor passing through the cap and conduit, and a spring member arranged in the circuit and bearing upon the ring.

1,019,341. FRUIT-SIZER. CHARLES C. MCINTOSH, Los Angeles, Cal. Filed Aug. 2, 1910. Serial No. 575,119. (Cl. 130—32.)

1. A fruit sizer comprising a laterally inclined supporting member, and rollers loosely journaled adjacent to said supporting member and adapted to prevent the fruit from prematurely rolling laterally from said support.

2. A fruit sizer comprising a laterally inclined supporting member, and a plurality of end to end rollers loosely journaled above said member and adapted to control the rolling of the fruit laterally across the same in accordance with the size of said fruit.



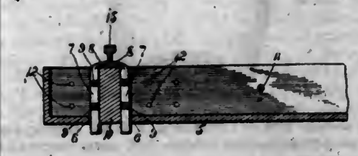
3. A fruit sizer comprising a supporting member having an inclined lateral tip surface, traveling belts moving along said surface for advancing and rotating the fruit, a series of rollers pivotally mounted above the said supporting member, means for raising and lowering said members to different heights with respect to the supporting member, whereby fruit of different size may be permitted to roll laterally from the supporting member at different points along the length thereof.

4. A sizer comprising a frame, a longitudinally disposed guide bar having a pair of longitudinally disposed grooves at different levels, cords passing longitudinally in said grooves, means for driving said cords at different speeds, a plurality of shoes having hinge connections supporting the same on the side remote from said cords, and means for adjusting said shoes on said hinge connections.

5. A fruit sizer comprising a sizing way made up of a laterally tipped supporting member, a fruit carrying means movable longitudinally of said supporting member for advancing the fruit, and a series of end to end cylinders loosely journaled above the said supporting member, and adapted to control the rolling of the fruit therefrom in accordance with the size thereof.

[Claim 6 not printed in the Gazette.]

1,019,342. TIE. HARRIET M. MILLER, Opdyke, Ill. Filed Nov. 9, 1911. Serial No. 659,425. (Cl. 238—4.)

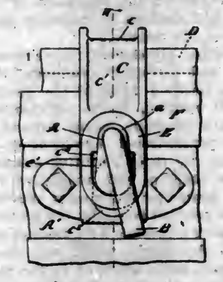


A rail tie comprising an elongated metallic box having an abutment partition cast in proximity of one end thereof and of a thickness approximately equal to the base flange of the rail, the bottom of the box having lateral slots therein adjacent the sides of the partition and upright bars bolted to the inner faces of the sides of the box adjacent the said partition and projecting through the said slots and having their upper ends twisted and bent inwardly above the partition to form lips for engaging the base flange of the rail.

1,019,343. HATCH-COVER FASTENER. EDWARD Y. MOORE and MATHEW MULHOLLAND, Cleveland, Ohio; said Moore assignor to said Mulholland. Filed July 6, 1911. Serial No. 637,046. (Cl. 114—203.)

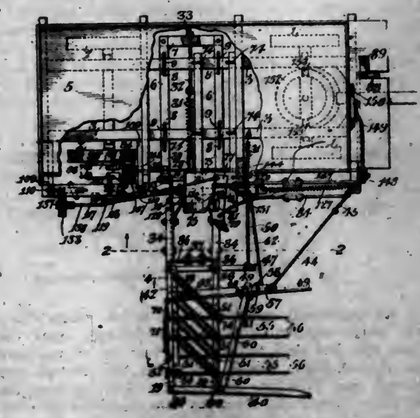
1. In a hatch-cover fastener, the combination of a bracket secured to the coaming of the hatchway; a clamping member adapted to engage the hatch cover and capable of downward movement; a tightening screw mounted in said bracket; and a member interposed between said screw and said clamping member, and adapted to be engaged by said screw; said clamping member and interposed member provided with coöperating inclined faces whereby the engagement of such interposed member by said screw will effect the inward and downward movement of said clamping member.

2. In a hatch-cover fastener, the combination of a bracket secured to the coaming of the hatchway; a clamping member adapted to engage the upper surface of the hatch cover, surrounding said bracket, and capable of downward movement; a screw mounted in said bracket; and a link interposed between said screw and clamping member, surrounding said bracket and also capable of downward movement, said screw adapted to engage said link; the latter and said clamping member being provided with coöperating inclined faces whereby the engagement of the screw and link will effect the downward and inward movement of said clamping member.



3. In a hatch-cover fastener, the combination of a bracket secured to the coaming of the hatchway; a clamping member having a vertical and a horisontal portion, said horisontal portion adapted to engage the cover of the hatchway, and said vertical portion being provided with a downwardly and outwardly inclined surface; a member adapted to engage said bracket and provided with an inclined surface coöperating with the inclined surface upon said clamping member; and a fastening member mounted in said bracket and adaped to effect the engagement of said bracket-engaging member and clamping member, whereby the latter is pulled downwardly and moved inwardly toward the coaming of the hatchway.

1,019,344. HAY AND GRAIN LOADER. DAVID M. MYERS, Hurdsfield, N. D., assignor to Myers Manufacturing Company, Fargo, N. D., a Corporation of North Dakota. Filed Mar. 13, 1911. Serial No. 614,244. (Cl. 214—2.)



1. A shock loading attachment for vehicles provided with shock engaging means, and a support for said shock engaging means movable from a substantially horisontal to a substantially upright position and provided with means for holding the shock engaging means substantially horisontal for the greater part of the movement of the support from the horisontal to the upright position, the

shock engaging means being connected to the support for free movement by gravity toward a pendent position on the final part of movement of the supporting means to the upright position.

2. A shock loading attachment for vehicles comprising a shock engaging and elevating means, and actuating means for the shock engaging and elevating means responsive to the progressional movement of the vehicle, the shock engaging means being supported by the elevating means for free movement toward a pendent position solely by gravity on the movement of the elevating means to an upright position to cause the shock to gravitate from the engaging means.

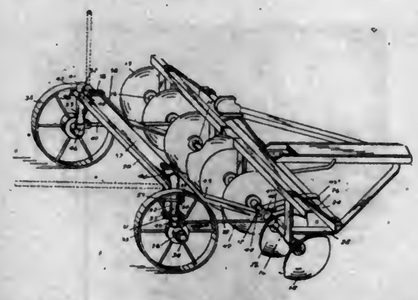
3. A shock loading attachment for vehicles comprising shock engaging and elevating means movable when in operation from a position adjacent the ground to a substantially upright position, means for causing the movement of the shock elevating means toward the upright position by the progressional movement of the vehicle, means for holding the shock elevating means in the elevated or upright position, and means for releasing the shock elevating means for unimpeded movement to the lowered or active position solely by the action of gravity.

4. A shock loading attachment for vehicles having means for engaging and elevating a shock, said shock engaging and elevating means being attached to the vehicle on the vehicle side of its center of gravity when in the elevated position and movable toward the lowered or active position solely by the action of gravity, said engaging and elevating means being also provided with means resistant to the action of gravity for easing the fall of the shock engaging and elevating means under the action of gravity.

5. A shock loading attachment for vehicles provided with a shock engaging and elevating means having a pivot support on the vehicle side of its center of gravity when the said shock engaging and elevating means is in the elevated position, and a spring retarding means for resisting the movement of the shock engaging and elevating means toward the lowered position.

[Claims 6 to 50 not printed in the Gazette.]

1,019,345. TRANSPORT-TRUCK FOR DISK HARROWS. STEPHEN D. NEEDHAM, Rantoul, Kans. Filed June 9, 1911. Serial No. 632,279. (Cl. 21—120.)



1. An implement relay elevating truck, comprising a main weight-supporting beam, and fulcrum posts connected with the ends thereof, axle bearings at the lower ends of said posts, wheels supporting the fulcrum posts mounted upon said axle bearings, an elevating lever, and a stretcher comprising stretcher bars supported upon and pivotally connected at their inner ends with the main weight-supporting beam and detachable connecting devices connected with the lower portions of the fulcrum posts one of which devices is adapted to be connected with one of said stretcher bars.

2. An implement relay elevating truck comprising a main weight-supporting beam, and fulcrum posts rigidly connected with the ends thereof, and axle bearings at the lower ends of said posts, wheels on said bearings, a sleeve on the main beam, stretcher bars connected with said sleeve, and an elevating lever connected with one of the fulcrum posts and detachable connecting devices connected with the lower portions of the fulcrum posts, one of which devices is adapted to be connected with one of said stretcher bars.

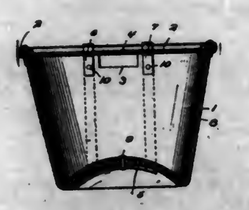
3. An implement elevating relay, comprising a main weight-supporting beam, and fulcrum posts connected with the ends thereof, axle bearings at the lower ends of said fulcrum posts, stretcher bars pivotally-connected with the main beam, and an elevating lever on one of the fulcrum posts foldable upon the main beam.

4. An elevating truck comprising a main weight-supporting beam, fulcrum posts supporting said beam connected at their upper ends with the ends of said beam, axle bearings at the lower ends of said posts, wheels mounted on said bearings, stretcher bars pivotaly-connected at their inner ends with the main beam, a socket on one of the fulcrum posts, and an elevating lever having a bent inner end within said socket.

5. An elevating truck comprising a main weight-supporting beam, fulcrum posts supporting the said beams at their upper ends, and axle bearings at their lower ends, wheels on said axle bearings, and stretcher bars having their inner ends pivotally connected with the main beam, and downwardly-bent portions at their outer ends, a lever mounted on the fulcrum post, and brace rods on the lower portions having outer hooked ends.

[Claims 6 and 7 not printed in the Gazette.]

1,019,346. BASKET. THEODORE C. NELSON, Wood Lynne, N. J. Filed May 5, 1911. Serial No. 625,312. (Cl. 217—123.)



1. A woven basket comprising a body having an upwardly projecting arched bottom, two metal strips at their intermediate portions crossed, and fitting snugly against the lower face of the bottom, and conforming to the shape of the bottom, a third metal strip positioned across the upper face of the bottom and at an angle to the first-mentioned strips, a rivet projected through the bottom at its center, and through all of said metal strips securing them together, said outside strips extending up the outer face of the body, bent over the top of the body, and secured upon themselves, and the ends of said inner strip extending up the inner face of the body, and bent outwardly over the upper edge of the body, substantially as described.

2. A basket having an arched bottom, and straight side walls, crossed metal straps located against the under face of the bottom crossing at the center of the bottom and secured at their ends in the side wall, a third metal strip located on the upper face of the bottom, crossing the bottom at its center in line with the point of crossing of the two strips below, a single securing device projecting through the center of the bottom and through all of said strips securing them together, and the ends of said last-mentioned strip secured to the side walls of the basket, substantially as described.

1,019,347. SIEVE. SUSAN NICKERSON, Portland, Oreg. Filed Aug. 8, 1910. Serial No. 576,137. (Cl. 220—9.)

The combination with an open ended receptacle having a peripheral groove formed therein near the open end, of a handle bracket having a depending curved portion extending across the groove and outwardly at an angle to the receptacle, a resilient split ring fitting into the groove, a closure cap for the end of the receptacle pivoted to the



ring and having its movement limited by the depending portion of the handle bracket, and a resilient clasp carried by the cap for engagement in the groove between the ends of the split ring for locking the cap in closed position.

1,019,348. PAPER-CLIP. ROBERT J. NORTHAM, Los Angeles, Cal. Filed Mar. 6, 1911. Serial No. 612,627. (Cl. 24—66.)



1. A paper clip comprising a back board and a spring actuated jaw having an aperture therethrough; a pintle bolt connected with the base and upon which said jaw is rockably mounted; a rocking arm also mounted upon said pintle bolt; a spring actuated detent bar pivotally mounted in the outer end of said rocking arm, said detent bar having a plurality of notches in its outer edge and projecting through the aperture in said jaw, the notches being adapted to engage the edge of the aperture.

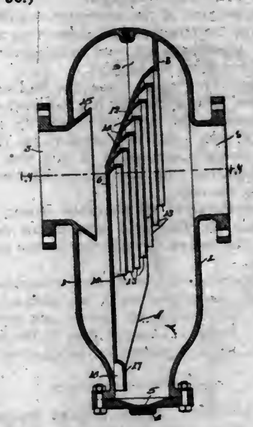
2. A paper clip comprising a back board and a spring actuated jaw having an aperture therethrough rockably mounted on said back board, connecting means therebetween, a rocking arm formed of sheet metal bent into U-shape mounted upon the connecting means which connects the jaw to the back; a detent bar formed of sheet metal bent into U-shape and having one end flattened and being provided with a plurality of notches and pivotally mounted on the rocking arm; and passing through the aperture in the jaw and adapted to engage the jaw when actuated and hold the same in an elevated position; connecting means between said bar and arm; and a spring mounted on the connecting means of said bar and arm and adapted to throw the free end of the bar away from the arm.

1,019,349. SLED. CHARLES D. ORCUTT, North Tonawanda, N. Y., assignor to Buffalo Sled Company, Buffalo, N. Y. Filed Mar. 31, 1911. Serial No. 618,079. (Cl. 21—94.)



A sled comprising a side bar, a ferrule applied to the end of said bar and having a lower horizontal base engaging with the lower horizontal underside of said bar, two upright longitudinal side walls projecting upwardly from opposite longitudinal edges of the base and engaging with opposite longitudinal vertical sides of said bar and a vertical transverse wall projecting upwardly from the outer transverse edge of the base and extending across the outer end of said bar, a runner having its front end arranged underneath the underside of the base of the ferrule, a cross bar arranged on top of the front end of the side bar, and a fastening bolt or member extending vertically through the base of said ferrule and through said runner, side bar and cross bar.

1,019,350. STEAM-SEPARATOR. EDWIN D. PACKARD, Marion, Ohio. Filed Apr. 11, 1908. Serial No. 426,487. (Cl. 83—90.)

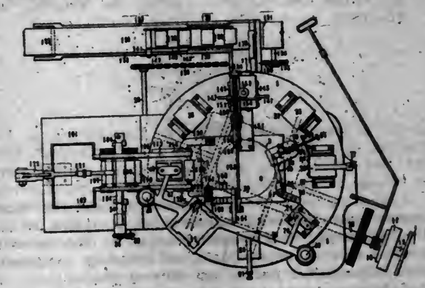


1. A steam separator comprising a casing having an inlet and an outlet, a baffle plate mounted within said casing and having its sides converging away from said inlet and provided with a series of substantially U-shaped ribs arranged concentrically on the faces of said converging sides adjacent to said inlet and extending at an acute angle to said baffle plate to form channels at their points of connection therewith.

2. A steam separator comprising a casing having an inlet and an outlet, a baffle plate mounted within said casing and having a series of substantially U-shaped ribs concentrically arranged thereon, each succeeding rib extending beyond the outer edge of the preceding rib, and a wedge-shaped member connecting the upper end of said baffle plate to said casing and adapted to direct the steam against the sides of said casing.

3. A steam separator comprising a casing having an inlet and an outlet, a concave baffle plate mounted within said casing, having portions of its edges secured to the inner walls of said casing and having the upper portion of its edges spaced away from the walls of said casing, a series of ribs secured to the concave face of said baffle plate, and a wedge-shaped deflector mounted between the upper edge of said baffle plate and the wall of said casing, said deflector being arranged with its sides diverging in the direction of flow of the steam.

1,019,351. LABELING-MACHINE. LYNDON C. PALMER, Buffalo, N. Y., assignor to The F. N. Burt Company, Limited, Buffalo, N. Y., a Corporation of Canada. Filed Dec. 17, 1910. Serial No. 597,914. (Cl. 216—35.)



1. In an apparatus of the character described, in combination, means for telescopically supporting a box,

movable means for transferring a label to the box, means for affixing the label to the box, and movable means for stripping the box from its support.

2. In an apparatus of the character described, in combination, means for telescopically supporting a box, means for affixing a label to the box, and reciprocatory means for stripping the box from its support.

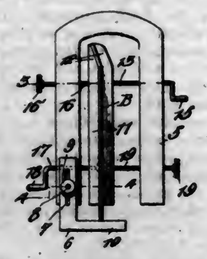
3. In an apparatus of the character described, in combination, a box rest, a presser pad adapted to move toward the rest under the influence of gravity, a cross head supporting said pad, a link connected to the cross head, a cam, a lever pivotally connected to said link and having a portion coöperating with the cam to positively move the pad away from the rest.

4. In an apparatus of the character described, in combination, means for feeding a box, means for gluing a label thereto, and means for applying to the label a series of light blows.

5. In an apparatus of the character described, in combination, means for supporting a box element, a presser, and means to move the presser toward and from said support to apply a series of blows or taps to the box element.

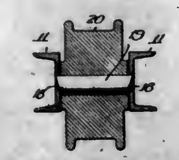
[Claims 6 to 109 not printed in the Gazette.]

1,019,352. SAW-SET. JESSE BREANT PAYTON, Hydesville, Cal. Filed June 2, 1910. Serial No. 564,553. (Cl. 76—60.)



In a saw set, the combination of a frame, saw engaging plates arranged therein in substantially parallel spaced relation, the opposed faces of said plates being angularly disposed at their upper extremities to correspond to the set to be given the saw teeth, adjusting rods threaded in the frame and bearing upon opposite sides of the respective plates immediately below the angularly disposed portion and other independently mounted adjusting rods threaded in the frame and bearing upon opposite sides of the plates near their lower margin, and a blade rest comprising a depending L-shaped bar adjustable vertically on one side of the frame and extending beneath the space between the plates.

1,019,353. CAR-BUNK. ELMER E. PERKINS, Chicago, Ill. Filed Dec. 8, 1911. Serial No. 664,502. (Cl. 21—122.)



1. In a car bunk, the combination of a plurality of side members provided with axle-receiving apertures, an axle having inclined ends adapted to seat in said apertures, a wheel mounted on said axle, and means for compressing said side members against the ends of said axle.

2. In a car bunk, the combination of a plurality of side members provided with axle-receiving apertures, an axle having its ends cut at an angle to the longitudinal axis of said axle to provide acute angles adapted to project into the apertures in said side members, a wheel mounted on said axle, and means for holding said side members in engagement with the ends of said axle.

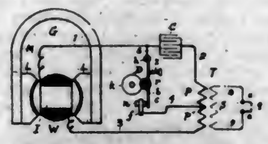
3. In a car bunk, the combination of side members provided with axle-receiving apertures, an axle having an acute angle at each end disposed in said apertures, and means for clamping the side members against the ends of said axle.

4. In a car bunk, the combination of side members, having a plurality of D-shaped openings therethrough, axles formed of material circular in cross-section, each having the ends thereof inclined to the axis of said axle, and adapted to engage said D-shaped openings, rollers mounted on said axles, and means for securing said side members together.

5. In a car bunk, the combination of side members, having a plurality of semi-circular openings therethrough, an axle formed of substantially circular stock, and having the ends thereof inclined to the axis of the axle, the outward portion of said ends being adapted to protrude into said semi-circular openings, a roller mounted on said axle, and means fastening the side members together.

[Claim 6 not printed in the Gazette.]

1,019,354. EXPLOSIVE-ENGINE. HENRY J. PODLESAK, Chicago, Ill. Filed Dec. 7, 1910. Serial No. 596,063. (Cl. 123—148.)



1. In an ignition system, the combination of a primary winding, a secondary winding inductively related to the primary winding, a circuit containing capacity and the primary winding in series relation, means for supplying electric current to the circuit, a shunt circuit in parallel with the capacity and a portion of the primary winding, and means for intermittently closing and opening the shunt circuit.

2. In an ignition system, the combination of a primary winding, a secondary winding adapted to be effectively energized inductively from the primary winding when the whole of the latter is traversed by current, a circuit possessing inductance and containing source of current and means for causing current to pass intermittently through only a part of the primary winding, and a condenser so related to the primary winding and to said circuit so as to cause the electric impulse due to inductance to traverse the whole of the primary winding.

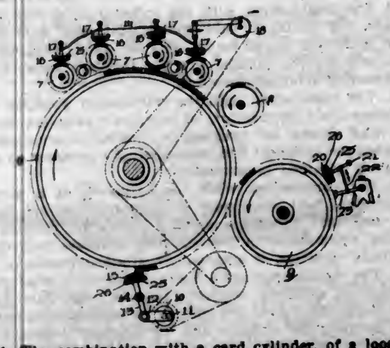
3. In an ignition system, the combination of a transformer, a circuit containing a source of current and possessing inductance in which only a part of the primary winding of the transformer is included, means for periodically closing and opening the circuit, a condenser so related to the said circuit and primary winding as to be charged by a flow through the whole of the primary winding upon the opening of the circuit, and a secondary circuit connected with the transformer and including a device for producing a spark by current induced by the primary winding during the charging of the condenser.

4. In an ignition system, the combination of a transformer consisting of inductively related primary and secondary windings, the former comprising two sections connected in series, a circuit possessing inductance, means for closing the circuit to produce a momentary flow of current through one section of the winding, a condenser connected with the winding whereby current flows through the whole of the winding to the condenser due to inductance when the flow through the one section of the winding is interrupted, a secondary winding energized by the current flow through the whole primary winding, and a sparking device connected with the secondary winding.

5. In an ignition system, the combination of a primary winding, a secondary winding in inductive relation to the primary winding, a sparking device connected with the secondary winding, a circuit containing the primary winding and a condenser in series relation, means for supplying electric energy to said circuit, a shunt circuit in parallel with the condenser and including a portion of the primary winding, and means for closing and opening the shunt circuit.

[Claims 6 to 12 not printed in the Gazette.]

1,019,355. LOOSENER FOR CARDING-MACHINES. ARTHUR F. POIRIER, East Douglass, Mass., assignor of one-half to Samuel B. Taft, Uxbridge, Mass. Filed Mar. 20, 1911. Serial No. 615,467. (Cl. 19—3.)



1. The combination with a card cylinder, of a loosener therefor arranged at the bottom of the cylinder, means for oscillating the same to swing on an arc tangent to the card without removing the loosener from the carding teeth, workers at the opposite side of the cylinder, and oscillatable looseners for said workers.

2. In a carding machine, the combination with a carding cylinder having card clothing thereon, and the doffers, of a convex fiber loosener located in position to operate on the stock left on the cylinder just after it leaves the doffers and having card clothing teeth thereon projecting backward in a direction the same as that of the teeth of the card, and means for oscillating said loosener about an axis below the cylinder and substantially at the axis of its convex surface so as to keep the ends of some of the teeth thereof among the teeth of the carding cylinder at all times.

1,019,356. SUBMARINE LIFE-SAVING AND OBSERVATION TENDER. STANLEY PONTIERS, Ocean City, N. J. Filed Dec. 6, 1910. Serial No. 595,925. (Cl. 114—16.7.)

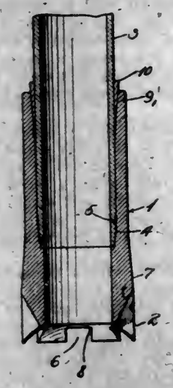
1. In a device of the class described, a buoyant hollow body adapted for making visual observations, an anchorage member revoluble in the bottom of the body and having portions disposed exteriorly and interiorly of the body, a cable member connected thereto, insulated electrical conductors extended through and insulated from the anchorage member, respective insulated commutator rings carried by the inner portion of the anchorage member brush contact members engaged respectively with the rings, and electrical communication means within the body and in circuit with the contact members.

2. In a device of the class described, an observation tender comprising a hollow body having sights and means for supplying oxygen, a hollow pin engaged revolubly in the bottom of the body, an anchoring cable secured thereto, electrical conducting members extended inwardly through the pin and insulated therefrom concentric insulated commutator rings carried by the pin within the body contact means engaged with the rings, and electrical devices within the body and in circuit with the contact means.



3. In devices of the class described, a parent body, a buoyant observation body separate therefrom, a revoluble anchorage member extended through the bottom of the observation body, an anchoring cable secured thereto, and engaged with the parent body, electrical communication devices within each body, electrical conductors in circuit with the devices on the parent body and extended through the revoluble member on the observation body, commutator rings carried by and insulated from the said revoluble member contact means engaged therewith and connections between the contact means and the communication devices in the observation body.

1,019,357. WELL-DRILLING TOOL. ROBERT L. PORTER and GEORGE D. WATSON, Los Angeles, Cal. Filed Mar. 2, 1911. Serial No. 611,752. (Cl. 166—8.)

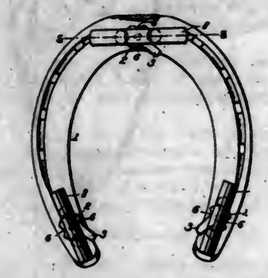


1. A drilling tool comprising a body portion having teeth formed at its lower edge provided with straight outer surfaces parallel with the axis of the tool and curved inner surfaces and inclined tamping spaces arranged between the said teeth.

2. A drilling tool comprising a hollow casing have a series of teeth formed at its lower edge, and provided with rearwardly extending outwardly inclined faces between the teeth extending to the peripheral surfaces of the tool and adapted to guide the material between the teeth and tamp the same even with the bore of the well produced by the tool.

3. A drilling tool comprising a body portion having teeth formed at its lower edge provided with straight outer surfaces parallel with the action of the tool and having inner inclined surfaces, outwardly and upwardly inclined tamping surfaces being arranged between the said teeth.

1,019,358. HORSESHOE. ELMER K. POWELL, Steubenville, Ohio. Filed June 2, 1911. Serial No. 630,925. (Cl. 168—40.)



1. The combination with a horseshoe having stud-receiving holes therein, of a calk seated on the under face of said shoe, said calk having studs fitted in said holes, and a substantially circular locking member pivotally mounted on said shoe between said holes, said member when in one position allowing insertion and removal of said studs and when in other positions interlocking with said studs.

2. The combination with a horseshoe having stud-receiving holes therein, of a calk seated on the under face of said shoe, said calk having studs fitted in said holes, and a substantially circular locking member pivotally mounted on said shoe between said holes, said calk having a recess formed therein in which said member is received, the ends of said recess extending partially beneath said studs, and said member having in its periphery recesses adapted to register with said holes when it occupies one position.

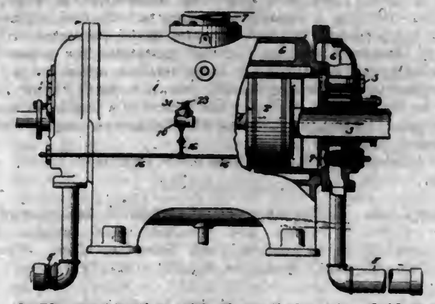
3. The combination with a horseshoe having stud-receiving holes therein, of a calk seated against the under face of said shoe, studs carried by said calk mounted in said holes, said calk having a recess in its upper face which partially undercuts said studs, and a disk pivoted on said shoe received in said recess and interlocking with said calk.

4. The combination with a horseshoe having stud-receiving holes therein, of a calk seated against the under face of said shoe, studs carried by said calk mounted in said holes, said calk having a recess in its upper face which partially undercuts said studs, and a disk having recesses therein mounted on said shoe and received in said recess in the calk in interlocking engagement with said studs.

5. The combination with a horseshoe having stud-receiving holes therein, of a circular disk pivoted to said shoe intermediate said holes, said disk having oppositely disposed recesses therein which register with adjacent portions of said holes when the disk occupies one position, a calk having a pair of studs adapted to seat in said holes and having therein a disk-receiving recess whose opposite ends undercut said studs, said disk being adapted to interlock with said calk when turned from the aforementioned position.

1,019,359. UNLOADER FOR FLUID-COMPRESSORS. WILLIAM PRELLWITZ, Easton, Pa., assignor to Ingersoll-Rand Company, New York, N. Y., a Corporation of New Jersey. Filed May 31, 1907. Serial No. 376,702. (Cl. 230—24.)

1. The combination with the cylinder of a fluid compressor, of auxiliary receivers therefor, and means for opening or closing communication between the cylinder and its auxiliary receivers at successively attained pressures.



2. The combination with the cylinder of a fluid compressor, of auxiliary receivers therefor, and fluid pressure controlled means for opening or closing communication between the cylinder and its auxiliary receivers at successively attained pressures.

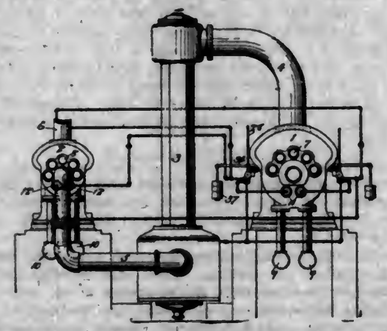
3. The combination with the cylinders of a duplex single-stage fluid compressor, of auxiliary receivers therefor, and means for opening or closing communication between the cylinders and their auxiliary receivers at successively attained pressures.

4. The combination with the cylinders of a duplex single-stage fluid compressor, of auxiliary receivers therefor, and fluid pressure controlled means for opening or closing communication between the cylinders and their auxiliary receivers at successively attained pressures.

5. The combination with the cylinder of a fluid compressor, of auxiliary receivers therefor, and fluid pressure controlled valves for opening or closing communication between the cylinder and its auxiliary receivers at successively attained pressures.

[Claims 6 to 46 not printed in the Gazette.]

1,019,360. UNLOADER FOR COMPOUND FLUID-COMPRESSORS. WILLIAM PRELLWITZ, Easton, Pa., assignor to Ingersoll-Rand Company, New York, N. Y., a Corporation of New Jersey. Filed May 31, 1907. Serial No. 376,703. (Cl. 230—24.)



1. The combination with the high and low pressure cylinders of a compound fluid compressor, of auxiliary receivers therefor, and means for opening or closing communication between the cylinders and their auxiliary receivers at successively attained pressures.

2. The combination with the high and low pressure cylinders of a compound fluid compressor, of auxiliary receivers therefor, and fluid pressure controlled means for opening or closing communication between the cylinders and their auxiliary receivers at successively attained pressures.

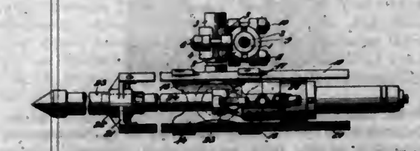
3. The combination with the high and low pressure cylinders of a compound fluid compressor, of auxiliary receivers therefor, and fluid pressure controlled valves for opening or closing communication between the cylinders and their auxiliary receivers at successively attained pressures.

4. The combination with the high and low pressure cylinders of a compound fluid compressor, of auxiliary receivers therefor, valves for opening or closing communication between the cylinders and their auxiliary receivers at successively attained pressures and unloading devices for the said valves.

5. The combination with the high and low pressure cylinders of a compound fluid compressor, of auxiliary receivers therefor, valves for opening or closing communication between the cylinders and their auxiliary receivers at successively attained pressures and fluid pressure controlled unloading devices for the said valves.

[Claims 6 to 39 not printed in the Gazette.]

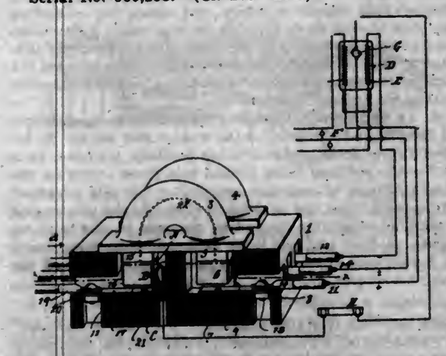
1,019,361. MOUNTING FOR AIR-FEED DRILLS. WILLIAM PRELLWITZ, Easton, Pa., assignor to Ingersoll-Rand Company, New York, N. Y., a Corporation of New Jersey. Filed May 25, 1909. Serial No. 498,202. (Cl. 125—10.)



1. In mining apparatus a drill support comprising ways, a cross-head connecting the ways and forming a support for an air feed cylinder and a guide ring fitted to slide along the ways and forming a support for a drill cylinder, the drill cylinder being fitted to rock within the said guide ring.

2. In mining apparatus, a drill support comprising a bracket, ways attached to and projecting in opposite directions from the bracket, a cross-head connecting the ways and forming a support for an air feed cylinder and means for supporting a drill cylinder in sliding and rocking adjustment on the ways.

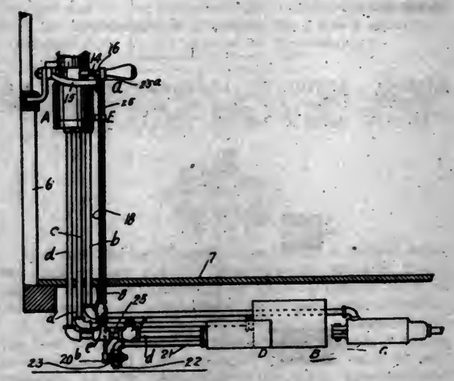
1,019,362. PROTECTIVE ELECTRIC CUT-OUT. SAMUEL G. RHODES, New York, N. Y. Filed Nov. 14, 1911. Serial No. 660,193. (Cl. 175—274.)



1. In combination with a meter and a three-wire supply system, separated terminals in the positive lead, a terminal connected to the meter potential coil, and a removable fuse plug cooperating with said terminals simultaneously to close branch circuits from the source of current supply to the fuse and to said potential coil.

2. In combination with a meter and three-wire supply leads, a base block, having two sockets, terminals of the positive lead respectively disposed therein, a terminal in one of said sockets connected to the potential coil of said meter, and a fuse plug entering said sockets and coöperating with said terminals simultaneously to close branch circuits from the source of current supply to the fuse and to said potential coil.

1,019,363. RAILWAY PNEUMATIC APPARATUS. JAMES R. RICKETTS, Los Angeles, Cal., assignor to Air Device Company, Los Angeles, Cal., a Corporation of California. Filed June 2, 1911. Serial No. 630,851. (Cl. 188—7.)



1. In railway pneumatic apparatus, a compressed air supply, a container for partially spent compressed air, a controller for directing compressed air from the compressed air supply to brake actuating mechanism and for directing partially spent compressed air from such brake actuating mechanism to said container, and means for passing partially spent air to the open atmosphere at a point between said controller and said container; said last named means being actuated by the handle member of the controller.

2. In railway pneumatic apparatus, a compressed air supply, a container for partially spent compressed air, a controller for directing compressed air from the compressed air supply to brake actuating mechanism and for directing partially spent compressed air from such brake actuating mechanism to said container, and means for passing partially spent air to the open atmosphere at a point between said controller and said container; said last named means being actuated by the handle member of the controller; and means operated by the handle member of the controller for leading partially spent compressed air from said container to mechanism for consuming energy thereof.

3. In railway pneumatic apparatus, a compressed air supply, a container for partially spent compressed air, a controller for directing compressed air from the compressed air supply to brake actuating mechanism and for directing partially spent compressed air from such brake actuating mechanism to said container, and means for passing partially spent air to the open atmosphere at a point between said controller and said container; said last named means being actuated by the handle member of the controller; and means operated by the handle member of the controller for leading partially spent compressed air from said container to mechanism for consuming energy thereof and for opening communication between said last named mechanism and the outer air.

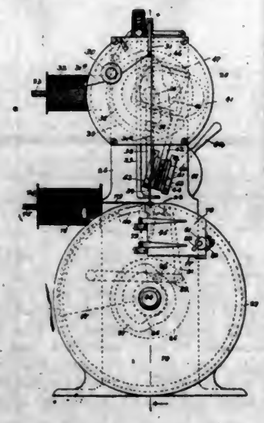
4. In railway pneumatic apparatus, a compressed air supply, a container for partially spent air, a controller for directing compressed air from the compressed air supply to brake mechanism and from brake mechanism to

said container, and means for exhausting partially spent compressed air to the open air between said controller and said container; said last named means comprising a normally seated release valve, and means disposed in the path of travel of the handle member of the controller and operating to unseat said release valve.

5. In railway pneumatic apparatus, a compressed air supply, a container for partially spent compressed air, a controller for directing compressed air to brake mechanism and from such brake mechanism to said container, and means for exhausting partially spent compressed air to the open air between said controller and said container; said last named means comprising a pivoted element disposed in the path of travel of the handle member of the controller, a normally seated exhaust valve, and operative connections between said pivoted element and said exhaust valve.

[Claims 6 and 7 not printed in the Gazette.]

1,019,364. AUTOMATIC LEATHER-STITCHING MACHINE. RAYMOND H. RUDOLPH, Elgin, Ill. Filed Oct. 17, 1910. Serial No. 587,450. (Cl. 112—28.)



1. In a machine of the character described, the combination with the main frame having a bed-plate, of a needle and an awl operatively mounted above the bed-plate, a thread-embracing and guiding shuttle mounted below the same, a tracker-arm for the shuttle-thread mounted below the bed-plate, and means to operate the shuttle and to raise and lower said arm.

2. In a machine of the character described, the combination with the main frame having a bed-plate, of a needle and an awl operatively mounted above the bed-plate, a thread guiding shuttle having means to cause it to embrace the thread, a tracker-arm for the shuttle-thread mounted below the bed-plate, and means to operate the shuttle and to raise and lower said arm.

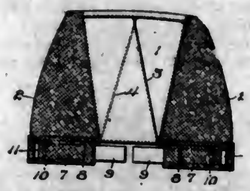
3. In a machine of the character described, the combination with the main frame having a bed-plate, of a needle and an awl mounted above the bed-plate, means to reciprocate both the needle and the awl vertically, means to impart a back and forth movement to the awl, a thread-embracing, and thread guiding shuttle mounted below the bed-plate, a tracker-arm for the shuttle-thread mounted below the bed-plate, and means to operate the shuttle and to raise and lower said arm.

4. In a machine of the character described, the combination with the main frame having a bed-plate, of a needle and an awl mounted above the bed-plate, means to reciprocate both the needle and the awl vertically, means to impart a back and forth movement to the awl, a thread-embracing and thread-guiding shuttle mounted below the bed-plate, a tracker-arm for the shuttle-thread mounted below the bed-plate, means to automatically cause the shuttle to embrace its thread, and means to operate the shuttle and to raise and lower the tracker-arm.

5. In a machine of the character described, the combination with the main frame, of a needle and an awl mounted on the upper portion thereof, means to reciprocate both the needle and the awl vertically, means to impart a back and forth movement to the awl, a thread-embracing and thread-guiding shuttle mounted on the lower portion of the frame, a tracker-arm for the shuttle-thread mounted on the lower portion of the frame, means to automatically cause the shuttle to embrace its thread, and means to operate the shuttle and to raise and lower the tracker-arm.

[Claims 6 to 11 not printed in the Gazette.]

1,019,365. ABDOMINAL SUPPORTER. LAURA N. SIEMANN, Oak Park, Ill. Filed Feb. 23, 1911. Serial No. 610,169. (Cl. 2—188.)



1. An abdominal supporter comprising a band adapted to pass over the abdomen and hips of the wearer, the hip portions of the band having tubular members along their lower edges to overlie the thighs, and two independent removable thigh straps passing loosely through said tubular members.

2. An abdominal supporter comprising a band adapted to surround the body of the wearer, the band consisting of a front panel of inelastic material and hip portions of elastic material, said hip portions having long tubular members formed along their lower edges and adapted partially to encircle the thighs, and removable thigh straps passing loosely through said tubular members, said hip portions being long enough to permit each of said straps to encircle the thigh portion of one of the legs of a wearer.

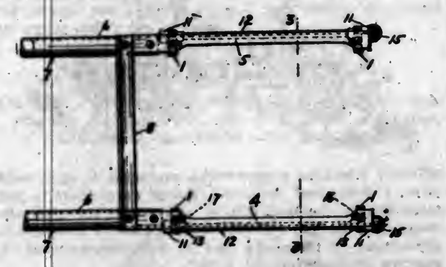
3. An abdominal supporter comprising a band adapted to pass over the abdomen and hips of the wearer, the hip portions of the band having members in the form of elongated tubes formed integral therewith along their lower edges, removable thigh straps passing loosely through said tubular members, and means for connecting the ends of each strap together, each of said tubular members having an opening in the outer side between the ends thereof to give access to the connecting means between the ends of the straps when the connecting means are housed within the tubular members.

4. An abdominal supporter comprising a band adapted to surround the body of the wearer and having an inelastic front panel and elastic hip portions, the lower ends of the hip portions being formed into tubes overlying the thighs, straps of inelastic material removably arranged within said tubes and adapted to surround the thighs, and means for adjustably connecting the ends of said band together, said hip portions being long enough to permit each of said straps to encircle the thigh portion of one of the legs of a wearer.

1,019,366. MAIL-BAG HOLDER. WILLIAM P. SARGENT, Philadelphia, Pa., assignor to The Curtis Publishing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed July 20, 1911. Serial No. 639,580. (Cl. 88—26.)

1. A bag holder comprising the combination of a group of self-binding clamps each adapted for independent receiving operation, and means for simultaneously releasing several of these clamps.

2. A bag holder comprising the combination of a group of self-binding clamps each comprising a fixed jaw and a movable jaw having between them a wedge-like face, and means for permitting independent movement of the movable jaw of each clamp for the receiving operation and for simultaneously moving the movable jaws of several clamps for the releasing operation.



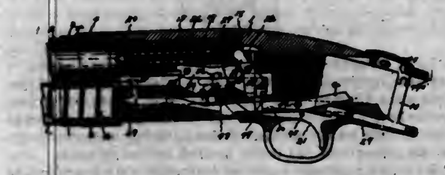
3. In a bag holder the combination of fixed jaws, a rod turnable on its axis and in juxtaposition with the fixed jaws, movable jaws turnably mounted on said rod and adapted to coöperate with the fixed jaws, and connections between said rod and movable jaws whereby the latter are afforded a range of motion independent of the rod and are turned by the turning of the rod, substantially as described.

4. In a bag holder the combination of fixed jaws, a turnable rod, jaws independently pivoted on the rod, and constituting with the fixed jaws self binding clamps and coöperating projections on the rod and movable jaws, substantially as described.

5. In a bag holder the combination of a fixed jaw, a turnable rod provided with a handle by the weight of which it is positioned, a movable jaw turnably mounted on the rod, and means interposed between the movable jaw and rod, whereby the former may be independent of the rod when the latter is in one position and whereby the movable jaw is turned when the rod is turned out of such position.

[Claims 6 to 8 not printed in the Gazette.]

1,019,367. FIREARM. ARTHUR J. SAVAGE, Utica, N. Y., assignor to Sears, Roebuck & Co., Chicago, Ill., a Corporation. Filed June 1, 1910. Serial No. 564,515. (Cl. 42—3.)



1. In a firearm, the combination, with a magazine tube having a segmental stop formed on its outer surface; of a barrel yoke embracing the magazine tube and having a segmental slot to accommodate said stop, and an action bar formed to engage with said stop to limit the forward movement of the action bar.

2. In a firearm, a magazine tube having a segmental stop disposed at its outer surface, and a barrel yoke embracing the magazine tube and having a segmental slot formed to receive the stop and accommodate the stop in rotation of the magazine tube.

3. In a firearm, the combination, with a barrel, of a rotatable magazine tube, a magazine band extending from the barrel and embracing the magazine tube, a spring actuated longitudinally operating magazine lock co-acting with the magazine band, and a magazine plug movable longitudinally of and within the magazine tube and connected with the magazine lock.

4. In a firearm, the combination, with a barrel, and a magazine tube rotatably mounted; there being a magazine band extending from the barrel and embracing the magazine tube; of longitudinally operating locking means for the magazine tube co-acting with the magazine band, and a finger piece disposed at the forward end of the magazine tube and operatively connected with the locking means.

5. In a firearm, the combination, with a barrel, and a rotatable magazine tube; there being a magazine band extending from the barrel and embracing the magazine tube; of locking means operating longitudinally of the magazine tube for the magazine tube and co-acting with the magazine band; and a finger piece disposed at the forward end of the magazine tube operatively connected with the locking means.

[Claims 6 to 17 not printed in the Gazette.]

1,019,368. AEROSTATICS. ROBERT COOKE SAYER, Redland, Bristol, England. Filed June 13, 1910. Serial No. 566,644. (Cl. 244—3.)



1. A body for aerial navigation having a central vacuum, and having a series of adjacently disposed chambers or cells arranged along its outer periphery, each of said chambers or cells containing a gas under pressure.

2. A body for aerial navigation having a central vacuum, and having a series of adjacently disposed chambers or cells arranged along its outer periphery, each of said chambers or cells containing a gas under pressure, and valve openings arranged so as to afford communication between adjacent cells.

3. A body for aerial navigation having a series of adjacently disposed chambers or cells arranged along its outer periphery, each of said chambers or cells containing a gas under pressure, a passageway through said body to admit external fluid, and said body being formed with a vacuum in the space between said passageway and said chambers or cells.

4. A body for aerial navigation having a series of adjacently disposed chambers or cells arranged along its outer periphery, each of said chambers or cells containing a gas under pressure, a passageway from end to end of said body for admitting external fluid, laterally arranged passageways passing across said first-named passageway, and said body being formed with a vacuum in the space between said passageways and said chambers or cells.

5. A body for aerial navigation having a series of adjacently disposed longitudinal tubular chambers arranged along its outer periphery, each of said chambers containing a gas under pressure, and a chamber surrounded by said tubular chambers having a vacuum therein.

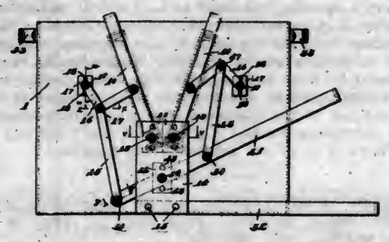
[Claims 6 and 7 not printed in the Gazette.]

1,019,369. MOP-PRESS. SIMON M. SCHAEFLE, Naperville, Ill. Filed Feb. 6, 1911. Serial No. 606,773. (Cl. 15—12.)

1. In a mop press the combination of a vessel open at its upper side; a pair of substantially vertically disposed oppositely arranged plates mounted in said vessel, the lower ends of said plates being in fixed relation and in proximity with each other and pivotally mounted, permitting of free oscillation of the upper ends of said plates toward and from each other; a toggle connected with each of said plates for oscillating the same; and an oscillatory lever for operating said toggles, substantially as described.

2. In a mop press the combination of a vessel open at its upper side; a pair of substantially vertically disposed

oppositely arranged plates mounted in said vessel, the lower ends of said plates being in fixed relation in proximity with each other and pivotally mounted, and permitting of free oscillation of the upper ends of said plates toward and away from each other; oppositely disposed toggles connected with said plates for oscillating the same; an oscillatory lever for operating said toggles; and connections between said toggles and said lever on opposite sides on the fulcrum of said lever, substantially as described.



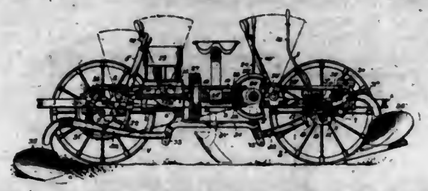
3. In a mop press the combination of a vessel open at its upper side; a pair of substantially vertically disposed oppositely arranged plates mounted in said vessel, the lower ends of said plates being in fixed relation in proximity with each other and pivotally mounted permitting of free oscillation of the upper ends of said plates toward and away from each other; oppositely disposed toggles connected with said plates for oscillating the same; an exteriorly positioned oscillatory lever mounted upon said vessel for operating said toggles; and connections between said toggles and said lever on opposite sides of the fulcrum of said lever, substantially as described.

4. In a mop press the combination of a vessel open at its upper side; a pair of substantially vertically disposed opposingly arranged mop-head portion plates mounted in said vessel, the lower end of said plates being in fixed relation and in proximity with each other and pivotally mounted, permitting of free oscillation of the upper ends of said plates toward and from each other; toggles arranged adjacent each of the lateral edges of each of said plates and operatively connected therewith for oscillating said plates; and a manually operable oscillatory lever operatively connected with said toggles whereby said plates will be simultaneously rocked toward or from each other upon operation of said lever, substantially as described.

5. In a mop press the combination of a vessel open at its upper side; a pair of substantially vertically disposed oscillatory opposingly arranged plates mounted in said vessel; mountings for said plates; each of said mountings being constituted in a substantially U-shaped frame movable within said vessel, the ends of said frame being bent over opposite edges of said vessel and pivotally secured to the opposite sides of said vessel, the central portions of said frame members within said vessel being hingedly connected together; toggles connected with the outer end portions of said frame members for effecting rocking thereof toward and from each other; an oscillatory lever mounted upon said vessel; and an operative connection between said toggles and said lever whereby oscillation of said lever effects rocking of said plates toward or from each other, substantially as described.

1,019,370. AGRICULTURAL IMPLEMENT. ANDREW SCHLOSSER, West Allis, Wis. Filed Mar. 20, 1911. Serial No. 615,565. (Cl. 97—50.)

A plow comprising a truck, cross-girders carried by the truck, a centrally disposed reach connecting the cross-girders, oppositely disposed plow-beams having their draft ends hinged to the reach, the plow-beams being in juxtaposition to the furrow side of the truck, a right hand plow carried by one plow-beam and a left-hand plow carried by the opposite plow-beam, crank-shafts journaled at opposite ends of the truck-frame, the crank portion of said shafts being in juxtaposition to the furrow side of the truck, hangers suspended from the cranked portion of said crank-shafts, upper and lower anti-friction rollers carried by the hangers for sliding engagement with the plow-beams, independent hand-levers mounted upon the frame, means for locking the hand levers in



different positions, a gear-wheel connected to each hand lever, a gear-wheel connected to each crank-shaft in juxtaposition to the land side of said truck, and link-belts connecting the pairs of gear-wheels whereby independent adjustment of the plows may be had through their respective crank-shafts.

1,019,371. AUTOMATIC SELF-PACKING PLUNGER-PUMP. EDWARD J. SCHNEIDER, Hollywood, and WILLIAM RUFUS RITCHIE and WILLIAM KAMMERER, Colegrove, Cal. Filed July 7, 1909, Serial No. 506,412. Renewed July 24, 1911. Serial No. 640,331. (Cl. 103—63.)



1. A plunger-pump comprising a working-barrel, a plunger inside the barrel, and a distensible jacket between the plunger and the barrel, said jacket being hermetically sealed at its lower end to the plunger and being free to slide on the plunger and also being open interiorly to the pressure of the liquid carried by the plunger.

2. A pump-plunger provided exteriorly with a distensible jacket practically impermeable to the liquid to be pumped, a portion of said jacket being hermetically sealed to the plunger, and a portion of said jacket above said sealed portion being subject interiorly to the pressure of the liquid carried by the plunger and the upper end of the jacket being slidable on the plunger.

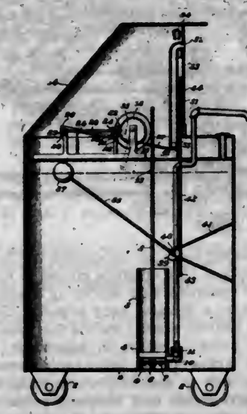
3. A pump-plunger provided with a rigid portion, a distensible jacket hermetically sealed to said rigid portion and extending therealong above the seal, and having its upper end slidable on the plunger and means for admitting to the interior hydraulic pressure from the liquid carried by the plunger.

4. A pump-piston comprising a hollow, rigid portion, a distensible jacket surrounding the same, a sleeve sealing the lower end of said jacket to said rigid portion, said rigid portion being permeable to the liquid carried by the plunger, and said jacket being practically impermeable to such liquid and its upper end slidable on the plunger.

5. A pump-piston comprising a hollow, rigid portion, a distensible jacket surrounding the same, a sleeve sealing the lower end of said jacket to said rigid portion, said rigid portion being permeable to the liquid carried by the plunger, and said jacket being practically impermeable to such liquid, the upper end of the jacket being slidable on the plunger and a sleeve on said rigid portion to protect the upper end of the jacket.

[Claims 6 to 9 not printed in the Gazette.]

1,019,372. AUTOMATIC GASOLENE-VENDING MACHINE. RANDOLPH SHAFFER, Albany, Ga. Filed Sept. 16, 1911. Serial No. 649,663. (Cl. 194—29.)



1. In a liquid vending machine, the combination with dispensing mechanism, of means for operating the dispensing mechanism, releasable locking means for the operating means, a coin operated means including a coin slot and a trip for releasing said locking means, and means for locking said operating means after a predetermined operation of the dispensing mechanism.

2. In a liquid vending machine, the combination with a tank of a dispensing device, means for operating said dispensing device, releasable locking means for said operating means, a coin operated means including a coin slot and a trip for releasing said locking means, means for locking said operating means after a predetermined operation of said dispensing device, and means for preventing the insertion of a coin in said operating means to throw said trip when the liquid in the tank is exhausted.

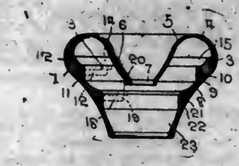
3. In a liquid vending machine, the combination with a tank of a dispensing device, means for operating said dispensing device, releasable locking means for said operating means, a coin operated means including a coin slot and a trip for releasing said locking means, means for locking said operating means after a predetermined operation of said dispensing device, a rod extending upwardly from said tank adjacent said coin operated means, a float in said tank operatively connected to said rod to raise it as the level of the liquid falls, means operated by the rod to close the coin inlet when the liquid falls to a predetermined level, and a gage operated by said rod to indicate the level of the liquid.

4. In a liquid vending machine, the combination with a tank, of coin operated means for permitting the delivery of a predetermined quantity of liquid including a coin slot, a rod in the tank extending from a point adjacent said slot, a float pivotally mounted in said tank and operatively connected with said rod and means operated by said rod for obstructing the inlet to said coin slot when the float falls to a predetermined level.

5. In a liquid vending machine, the combination with a tank, of coin operated means for permitting the delivery of a predetermined quantity of liquid including a coin slot, a rod extending from a point adjacent said slot down into said tank and provided with teeth, a float in said tank, a pivoted segment secured to said float having teeth engaging the teeth of said rod to raise it, a pivoted closure for said coin slot, adapted to be engaged and turned to closed position by said rod when it rises a predetermined extent, and a spring for normally holding said closure in open position.

[Claims 6 to 9 not printed in the Gazette.]

1,019,373. UTERINE SUPPORTER. EDWARD F. SHAULIS, Indiana, Pa. Filed Mar. 24, 1911. Serial No. 616,591. (Cl. 128—21.)



1. A uterine supporter composed of interlocking telescoping sections.

2. A uterine supporter comprising a uterus cup section, and a lower tapering section telescopically connected to said cup section to support the latter.

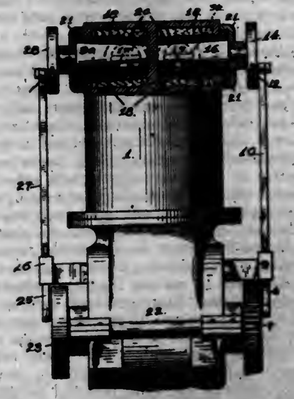
3. A uterine supporter comprising a uterus cup section, and an interlocking telescopical supporting section for said cup.

4. A uterine supporter comprising a uterus supporting cup section, and a three part interlocking telescopical supporting section for said cup.

5. A uterine supporter having a smooth curved outer surface comprising a uterus engaging section, and an interlocking detachable telescopical supporting section for said cup.

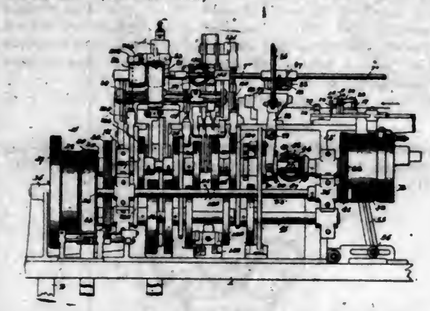
[Claims 6 to 11 not printed in the Gazette.]

1,019,374. VALVE. JAMES SHAW, San Francisco, Cal. Filed May 11, 1910. Serial No. 560,711. (Cl. 136—7.)



A valve for internal combustion engines comprising a cylinder, the casing of the cylinder having passages therein, a removable, non-rotating conical sleeve mounted within the casing, said sleeve having diametrically disposed openings therein connecting with said passages said openings being smaller than the passages, means for supplying oil to said sleeve, a solid conical valve fitting snugly in the sleeve and having an opening passing diametrically therethrough and means for rocking the valve from the crank shaft to bring the opening into alinement with the openings in the sleeve.

1,019,375. MACHINE FOR MAKING HAIR-PINS. ISAAC H. SISSON, Chicago, Ill., assignor to Solomon H. Goldberg, Chicago, Ill. Filed Oct. 15, 1910. Serial No. 587,345. (Cl. 140—87.)



1. In a machine for making hair-pins, the combination with mechanism for feeding wire blanks, of mechanism for bending each blank centrally into an initial loop portion, mechanism for bending the free upper ends of said loop portion downwardly into substantial parallelism with the closed lower end of said loop portion to form the outer legs, and mechanism for twisting said closed loop at its juncture with said outer legs.

2. In a machine for making hair-pins, the combination with mechanism for feeding wire blanks, of mechanism for bending each blank centrally into an initial loop portion, mechanism for bending the free upper ends of said loop portion downwardly into substantial parallelism with the closed lower end of said loop portion to form the outer legs, mechanism for twisting said closed loop at its juncture with said outer legs, and mechanism for forming a hump in said central leg.

3. In a machine for making hair-pins, the combination with mechanism for feeding wire blanks, of mechanism for bending each blank centrally into an initial loop portion, mechanism for bending the free upper ends of said loop portion downwardly into substantial parallelism with the closed lower end of said loop portion to form the outer legs, and mechanism for tightly closing the upper end of said loop portion at the juncture with said outer legs to form the central leg.

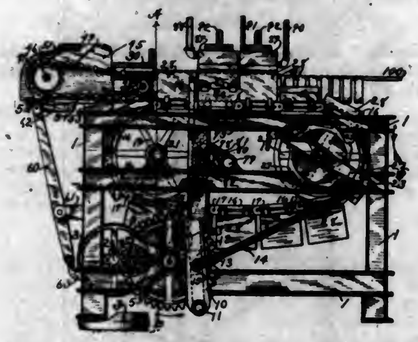
4. In a machine for making hair-pins, the combination with mechanism for feeding wire blanks, of mechanism for bending each blank centrally into an initial loop portion, mechanism for bending the free upper ends of said loop portion downwardly into substantial parallelism with the closed lower end of said loop portion to form the outer legs, mechanism for tightly closing the upper end of said loop portion at the juncture with said outer legs to form the central leg, and mechanism for forming a hump in said central leg below the closed upper end thereof.

5. In a machine for making hair-pins, the combination with means for feeding stock to the cutting device, said means comprising a reciprocatory carriage having a clamping device, of a pair of cutters, binding mechanism for holding the stock during the operation of cutting, mechanism for bending the severed blank upon itself and for bending down the upper ends of said looped blank whereby the blank is initially formed into a central and outer legs mechanism for twisting the upper end of said central leg, mechanism for crowning the outer legs and bending them into substantial parallelism, all of said operations being carried on automatically and synchronously.

[Claims 6 to 50 not printed in the Gazette.]

1,019,376. CAN-MAKING MACHINE. CHARLES W. SLEEPER, Lancaster, N. H. Filed Jan. 17, 1908. Serial No. 411,300. (Cl. 113—10.)

1. In a can making machine, an endless carrier comprising a series of links; a pair of wings hinged to each of said links; means for operating said carrier in a series of step by step movements; a forming horn adjacent and parallel with which said carrier passes; means for feeding blanks to each of said pairs of wings in succession; intermittently operating means acting upon each successive link to thereby move them in succession toward said horn, to thereby temporarily clamp said blanks between said horn and said links; and intermittently operative means for folding each of said pairs of wings and the blanks about said horn while the blanks are held against said horn; and means for folding said wings and blanks about said horn.



2. In a can making machine, an endless carrier comprising a series of links, a pair of wings hinged to each of said links; means for operating said carrier in a series of step by step movements; a forming horn adjacent and parallel with which said carrier passes; means for feeding blanks to each of said pairs of wings in succession; intermittently operating means acting upon each successive link to thereby move them in succession toward said horn, to thereby temporarily clamp said blanks between said horn and said links; and intermittently operative means for folding each of said pairs of wings and the blanks about said horn while the blanks are held against said horn; means for folding said wings and blanks about said horn; soldering mechanism; and means for maintaining said wings folded about said horn during the soldering operation.

3. In a can making machine, an endless carrier comprising a series of links; a pair of wings hinged to each of said links; sprocket wheels about which said carrier passes; means for rotating one of said sprocket wheels to thereby drive said carrier; a forming horn beneath which said carrier passes; means for feeding blanks to each of said pairs of wings in succession; means for intermittently moving said second sprocket wheel toward said horn to thereby clamp said blanks between said links and said horn; and means for folding said wings and blanks about said horn.

4. In a can making machine, an endless carrier comprising a series of links; a pair of wings hinged to each of said links; sprocket wheels about which said carrier passes; means for imparting intermittent rotary motion to one of said sprocket wheels to thereby drive said carrier; a forming horn beneath which said carrier passes; means for feeding blanks to each of said pairs of wings in succession; means for moving each of said links toward said horn to thereby press said blanks against said horn; a pair of reciprocating racks for engaging said wings to fold them and said blanks about said horn; a shaft; a pair of gears upon said shaft and engaging said racks; and means for oscillating said shaft to thereby reciprocate said racks.

5. In a can making machine, an endless carrier comprising a series of links; a pair of wings hinged to each of said links; sprocket wheels about which said carrier passes; means for imparting intermittent rotary motion to one of said sprocket wheels to thereby drive said carrier; a forming horn beneath which said carrier passes; means for feeding blanks to each of said pairs of wings in succession; means for moving each of said links toward said horn to thereby press said blanks against said horn; a pair of reciprocating racks for engaging said wings to fold them and said blanks about said horn; a shaft; a pair of gears upon said shaft and engaging said racks; means for oscillating said shaft to thereby reciprocate said racks; means for maintaining said wings closed about said horn after they have been folded by said racks as aforesaid; and means for soldering the ends of said blanks together while held in position by said wings.

[Claims 6 to 17 not printed in the Gazette.]

1,019,377. HEAT-PRODUCING COMPOUND. CLARENCE G. SMITH, Cleveland, Ohio, assignor to Henry J. Haber, Pittsburgh, Pa. Filed Jan. 7, 1909. Serial No. 471,099. (Cl. 44—1.)

1. A heat-producing element comprising the combination of an alkali-metal hydrate, aluminum, and a substance which will combine with hydrogen.

2. A heat-producing element comprising the combination of an alkali-metal hydrate, aluminum and a substance which will combine with nascent hydrogen.

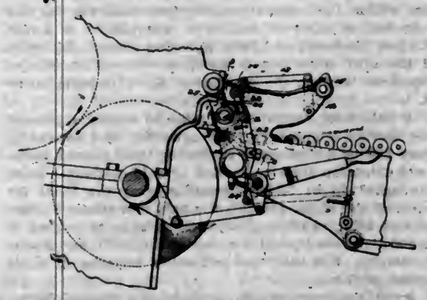
3. A heat-producing element comprising the combination of an alkali-metal hydrate, aluminum, and an alkali-metal nitrate.

4. A heat-producing element comprising the combination of an alkali-metal hydrate, aluminum in the form of a unitary mass and a substance which will combine with hydrogen.

5. A heat-producing element comprising the combination of an alkali-metal hydrate, aluminum in the form of a unitary mass and a substance which will combine with nascent hydrogen.

[Claims 6 and 7 not printed in the Gazette.]

1,019,378. TRIP MECHANISM. WALTER H. SMITH, Niles, Ohio, assignor to The Harris Automatic Press Company, Niles, Ohio, a Corporation of Ohio. Filed Jan. 31, 1911. Serial No. 605,674. (Cl. 101—111.)



1. In combination with tripping means, a feeler lever, a carrier therefor, a support for said carrier upon which it is loosely mounted, an active shaft paralleling said support, means for reciprocating such active shaft, means for transmitting motion from said shaft to said carrier, a normally idle member with which said feeler lever is designed to automatically interlock, and means for transmitting the movement of said member to said tripping means.

2. In combination with a printing press having a feed roll shaft and tripping means for the press, a feeler lever, a carrier therefor loose on said shaft, means for reciprocating said carrier independently of such shaft, a normally idle member with which said feeler lever is designed to automatically interlock, and means for transmitting the movement of said member to the said tripping means.

3. In combination with a printing press having a feed roll shaft and tripping means for the press, a feeler lever, a carrier therefor loose on said shaft, an active shaft paralleling the feed roll shaft, means for reciprocating such active shaft, means for communicating motion from said active shaft to said carrier, a normally idle member with which said feeler lever is designed to automatically interlock, and means for transmitting the movement of said member to the said tripping means.

4. In combination with tripping means, a feeler lever, a sleeve carrying such feeler lever, a support for said sleeve, an active shaft, means for reciprocating the latter, gearing between said active shaft and said sleeve, a normally idle member with which said feeler lever is designed to automatically interlock, and means for transmitting the movement of said member to the tripping means.

5. In combination with tripping means, a feeler lever, a sleeve carrying such feeler lever, a support for said sleeve, an active shaft, means for reciprocating the latter, said sleeve having a toothed disk, a second toothed disk carried by said active shaft and in mesh with the sleeve disk, a normally idle member with which said feeler lever is designed to automatically interlock, and means for transmitting the movement of said member to the tripping means.

[Claims 6 to 14 not printed in the Gazette.]

1,019,379. LOCK-NUT. HIRAM E. TAFT, Northbridge, Mass., assignor of one-half to Edward V. Granger, Burrillville, R. I. Filed Apr. 12, 1910. Serial No. 554,981. (Cl. 151—21.)



1. As an article of manufacture, a lock nut having a slit formed in the body of the nut in a plane oblique to the axis of the nut and extending beyond the axis, with the outer edge of the slit terminating at the angle between the pressing surface of the nut and one of its sides.

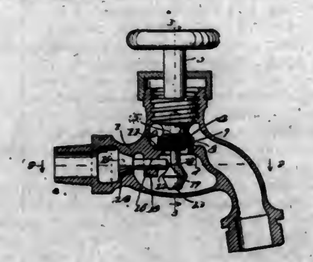
2. As an article of manufacture, a lock nut having a slit formed in the body of the nut in a plane oblique to the axis of the nut, with the inner edge of said slit extending partially through the screw threaded opening of the nut and nearer the pressing surface of the nut than the crown, and with the outer edge of said slit terminating at the angle between the pressing surface of the nut and one of its vertical sides, forming a bearing corner overhanging the outer edge of said slit.

3. A lock nut having an oblique slit in the body of the nut, said slit extending upward from the angle between the pressing surface of the nut and one of its vertical sides partially through the screw threaded central opening of the nut, with said pressing surface forming a triangular tongue and also forming a bearing corner at the lower edge of said vertical side, with said bearing corner slightly above said pressing surface.

1,019,380. FAUCET. JOSEPH E. TICHON, New Bedford, Mass., assignor to Robert Grieve, Providence, R. I. Filed July 10, 1911. Serial No. 637,818. (Cl. 137—4.)

1. In combination with a valve body having a horizontal seat, a spindle having a square lower face and a threaded socket, a cup having its bottom engaging the said face and having packing therein, an auxiliary vertical valve seat to the rear of the first named valve seat, a valve in said vertical valve seat having a stem which is horizontally disposed and formed with a cone-shaped free end, and a member for operating said stem consisting of a head part having oppositely beveled annular faces to engage

said cone shaped end of the stem, a stem carried by said head and having a threaded end which engages in said socket of the spindle, and a collar on said second stem which abuts the packing.

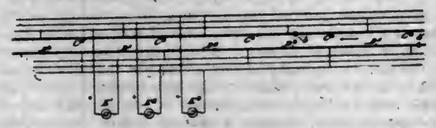


2. In a faucet, in combination with a rotatable and reciprocating valve, a sliding auxiliary valve, and a head carried by the first mentioned valve and formed with oppositely beveled annular faces to engage the sliding valve to move same to open position.

3. In a faucet, in combination with a main valve, an auxiliary valve, and a head carried by the main valve and formed with oppositely beveled annular faces to engage with the auxiliary valve.

4. In a faucet, in combination with a casing and a main valve therein, an auxiliary valve having a stem, a head carried by the main valve and having a cone-shaped part engaging the stem of the auxiliary valve whereby when the main valve is moved outwardly the auxiliary valve will be unseated, said head being further formed with a second cone-shaped part the base of which contacts with the base of the first named cone-shaped part so that when the main valve is introduced into the casing the second named cone-shaped part engages said stem of the auxiliary valve and unseats the auxiliary valve so as to permit the base of the first named cone-shaped part to extend to a point beyond the stem of the auxiliary valve.

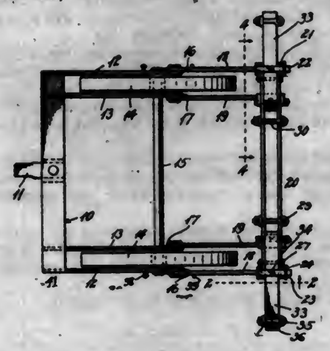
1,019,381. ELECTRIC RAILWAY. NOEL H. TURNER, Vulcan, Mich. Filed Mar. 29, 1911. Serial No. 617,602. (Cl. 191—41.)



1. In an electrical-railway system, two parallel conductors, each divided into successive sections insulated from each other, more than two generators, leads from the poles of the generators running to the conductor sections, and connecting them in groups, the lead from one pole of each generator running successively to corresponding sections of each group in one conductor and the lead from the other pole of each generator running successively to corresponding sections of each group in the other conductor, the sections in each group being equal in number to the generators and being arranged in the same order, the sections in one conductor being placed opposite the gaps between the correspondingly-connected sections in the opposite conductor, and a car having two shoes contacting with the two conductors and separated longitudinally by such distance that the two shoes lie always on sections connected to the same generator.

2. In an electric-railway system, two parallel conductors, each divided into successive sections insulated from each other, three generators, leads from the poles of the generators running to the conductor sections, and connecting them in groups, the lead from one pole of each generator running successively to corresponding sections of each group in one conductor and the lead from the other pole of each generator running successively to corresponding sections of each group in the other conductor, the sections in each group being equal in number to the generators and being arranged in the same order, the sections in one conductor which are connected to any one generator being placed directly opposite the junction between the two sections in the opposite conductor which are connected to the remaining two generators, as illustrated, and a car having two shoes contacting with the two conductors and separated longitudinally by such distance that the two always lie on the sections connected to the same generator.

1,019,382. CULTIVATOR. EDWARD T. VAN BOVEN, Redlands, Cal. Filed Feb. 18, 1911. Serial No. 608,278. (Cl. 97—34.)



1. A cultivator comprising a supporting frame, wheels carrying the same, a transversely extending beam structure mounted on said frame, extension end beams carried by the said beam structure and adapted to be set at different points within the beam structure when loose for varying the amount of their projection or adapted to be folded back upon the beam, and beam inclosing means adapted to hold the said extensions in position when extended and clamp them between the portions of the said beam structure.

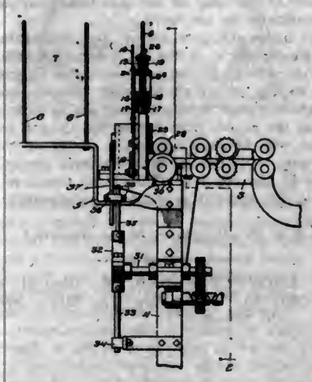
2. A cultivator comprising a wheeled frame, a pivoted frame section adapted to rock upwardly and forwardly thereon having a transverse cultivator beam formed thereon, end extension sections carried by said cultivator beam and adapted to be folded upwardly upon the beam for shortening the reach thereof, the said end extension sections also being capable of adjustment so as to project to different distances beyond the ends of the beam, and means for clamping the said end extension sections in their adjusted positions.

3. A cultivator mechanism, comprising a wheeled frame, a pivoted beam frame mounted thereon, the beam portion thereof being made up of vertically arranged parallel bars spaced apart, U shaped extension frames fitting in the spaces between the bars of said beam and adapted to be adjusted longitudinally or turned upwardly with respect thereto, and inclosing clamps fitting upon the bars of the beam and adapted to hold the said U shaped extension frames in their adjusted positions.

4. A cultivator mechanism comprising a wheeled frame, an implement beam, pivotally secured thereto and made up of spaced bars suitably connected, beam extensions mounted between said spaced bars, yokes adapted to hold said extensions upon the beam, and spring actuated latches for removably securing said beam extensions within the said yokes.

5. A cultivator comprising a suitable frame, an implement carrying extension beam pivotally mounted thereon having space bars adapted to receive extension beams, extension beams mounted in the space between said bars, yokes for holding the beam extensions in place, having latched bars adapted to extend across the beam extensions, pivoted latches for holding said bars in place, and set screws carried by the latch bars and adapted to impinge upon the beam extensions for holding them in adjusted position.

1,019,383. GRASS-TWINE MACHINE. OSSIAN T. WAITE, Oshkosh, Wis., assignor to Waite Grass Carpet Co., Oshkosh, Wis., a Corporation of Wisconsin. Filed Apr. 4, 1911. Serial No. 618,825. (Cl. 28—21.)



1. In a grass twine machine, the combination of a holder for grasses, mechanism for feeding the grasses longitudinally of themselves, selecting mechanism for carrying the ends of the grasses out of the hopper into position to be engaged by the feeding mechanism, and means for straightening out the ends of the grasses carried by the selecting mechanism, whereby they separately enter the feeding mechanism, substantially as described.

2. In a grass twine machine, the combination of a holder for the grasses, a selecting mechanism for flexing the ends of the grasses to carry said ends out from the mass of grasses within the holder, mechanism for feeding the grasses longitudinally of themselves, and means for subjecting the ends of the grasses to a combing action during the flexing operation, whereby they enter the feeding mechanism in parallel arrangement, substantially as described.

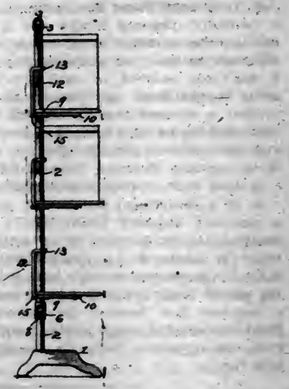
3. In a grass twine machine, the combination of a holder for grasses, means for feeding the grasses longitudinally of themselves, selecting mechanism for carrying the ends of the grasses out of the hopper and into position to be engaged by the feeding mechanism, and mechanism operatively connected to the feeding mechanism for straightening out the ends of the grasses carried by the selecting mechanism, causing them to separately enter the feeding mechanism, substantially as described.

4. In a grass twine machine, the combination of a holder for grasses, mechanism for feeding the grasses longitudinally of themselves, selecting mechanism for conveying the ends of the grasses from the holder into position to enter the feeding mechanism, and a member carried by the feeding mechanism for straightening out the ends of the grasses carried by the combing mechanism, whereby they separately enter the feeding mechanism, substantially as described.

5. In a grass twine machine, the combination of feed rolls for feeding the grasses forward, a portion of the surfaces of at least one of said rolls being provided with teeth adapted to engage the grasses prior to their entrance into the feed rolls, whereby they are subjected to a combing action prior to the feeding operation and enter the feed rolls in parallel arrangement, substantially as described.

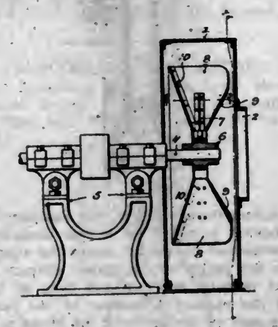
[Claims 6 to 18 not printed in the Gazette.]

1,019,384. DISPLAY-RACK. JOHN WALK, Burlington, Iowa. Filed Nov. 30, 1910. Serial No. 594,915. (Cl. 211—14.)



In a display rack comprising an upright and a series of bracket shelves pivotally supported thereon, the combination with a bracket shelf provided with a hole near its rear edge through which passes the upright, of a bracket having a lower horizontal arm which extends beneath and is secured to the under side of the shelf and is provided with a bearing for the upright which alines with the hole in the shelf, said bracket being also provided with an upper horizontal arm having a bearing encircling the upright, and a vertical arm connecting the two horizontal arms, substantially as set forth.

1,019,385. CENTRIFUGAL FAN. ROBERT WARG, Milwaukee, Wis. Filed Aug. 4, 1911. Serial No. 642,348. (Cl. 230—11.)



1. A centrifugal fan of the character described comprising an incased fan-wheel having a hub, radially disposed curved spokes extending therefrom, concavo-convex faced blades carried by the spokes, the curvature of the blades starting from the hub end and extending outwardly to the tips in a gradual sweep to present a continuous concaved face in a direction of travel of the fan, the outer intake edges of the blades being flared for a portion of their length outwardly from the hub axis, and a backing disk secured to the rear edges of said blades.

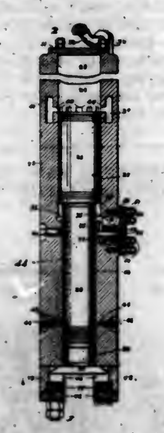
2. In a centrifugal fan having a casing provided with a centrally disposed intake and a peripheral discharge mouth; the combination of an arbor in axial alinement with the intake, and a spoked hub carried by the arbor, a fan-blade secured to each hub-spoke, each fan-blade being curved from its hub end to its peripheral tip to present a concave face toward the direction of rotation, the front intake edge being flared outwardly from the hub

and for the most part curved forwardly, the rear edge being flared in an opposite direction from the front edge, and a backing disk secured to said rear edge.

3. In a centrifugal fan having a casing provided with a centrally disposed intake and a peripheral discharge mouth; the combination of an arbor in axial alinement with the intake, and a spoked hub carried by the arbor a fan-blade secured to each hub-spoke, each fan-blade being curved from its hub end to its peripheral tip to present a concave face toward the direction of rotation, the front intake edge being flared outwardly from the hub axis toward the casing intake, the rear edge being flared in an opposite direction from said front intake edge, and a backing disk secured to said rear edge.

4. In a centrifugal fan having a casing provided with a centrally disposed intake and a peripheral discharge mouth; the combination of an arbor in axial alinement with the intake, and a spoked hub carried by the arbor a fan-blade secured to each hub-spoke, each fan-blade being curved from its hub end to its peripheral tip to present a concave face toward the direction of rotation, the front intake edge being provided with a forwardly curved fold the curvature being in the direction of travel of said fan.

1,019,386. AUTOMATIC PILE-DRIVER. JAMES N. WARRINGTON, Los Angeles, Cal. Filed Aug. 31, 1911. Serial No. 646,959. (Cl. 61—39.)



1. In an automatic pile driver, the combination with a ram-frame having a cavity, of a ram mounted in said cavity for reciprocal movement, means for supplying motive fluid to the cavity of the frame whereby said fluid will first act to raise the ram and then at the proper time during the upward movement of the ram will be supplied to a part of the cavity of the frame so as to act to accelerate the downward stroke of the ram, substantially as set forth.

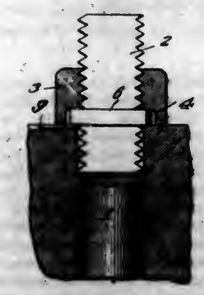
2. In an automatic pile driver, the combination with a ram-frame having a cavity, of a ram mounted in said cavity for reciprocal movement, means for supplying motive fluid to the cavity of the frame whereby said fluid will first act on the ram to raise the same and then at the proper time during the upward movement of the ram will be supplied to the cavity of the frame above a part of the ram to accelerate the downward stroke thereof, substantially as set forth.

3. In an automatic pile driver, the combination with a ram-frame having a cavity, of a ram mounted in said cavity for reciprocal movement, means for supplying motive fluid to the cavity of the frame below a portion of the ram whereby said fluid will first act to raise the ram and then at the proper time during the upward movement of the ram will be supplied to the cavity of the frame above a part of the ram to accelerate the downward stroke thereof, said frame having means for the exhaust of motive fluid at the end of the downward stroke of the ram, substantially as set forth.

5. In an automatic pile driver, the combination with a ram-frame having a cavity, of a ram mounted in said cavity for reciprocal movement, means for supplying motive fluid to the cavity of the ram below a portion of the ram whereby said fluid will first act to raise the ram and then at the proper time during the upward movement of the ram will be supplied to the cavity of the frame above the ram to accelerate the downward stroke thereof, and means at the upper portion of the frame to cushion the ram in its upward movement, substantially as set forth.

[Claims 6 to 18 not printed in the Gazette.]

1,019,387. LOCK-NUT FOR BOLTS. OBRA M. WATSON, Dallas City, Ill. Filed Aug. 21, 1911. Serial No. 645,077. (Cl. 151—9.)



1. A nut-lock, including an axially slotted bolt, a nut engaging said bolt and having an annular recess therein, whose walls are formed with a ratchet-surface, and a dog received by the slot of said bolt and adapted to engage the ratchet-surface of said nut, said dog having a lug outstanding therefrom out of alinement with the dog.

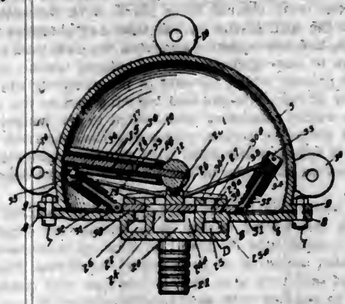
2. A nut-lock, including an axially slotted bolt, a nut having a ratchet-surfaced recess and a dog of zigzag outline received by the slot of said bolt, with end portions thereof standing tangentially to the surface of the bolt and adapted to engage the ratchet surface of the recess of said nut, the end-portions of said dog having lugs outstanding therefrom, out of alinement with the dog.

3. A nut-lock including an axially slotted bolt, a nut having an annular recess whose walls are formed with a ratchet surface, and a dog of approximately L-shaped outline received bodily and transversely within the slot of the bolt, the terminals of which dog extend tangentially to the surface of the bolt and in opposite directions to engage said ratchet-surface of the nut, said terminals of the dog having lugs projecting at right-angles from the upper edges thereof.

1,019,388. FLUID-PRESSURE MOTOR. CHARLES WEBER and HENRY D. SWALLEN, Columbus, Ohio. Filed Aug. 10, 1910. Serial No. 576,535. (Cl. 138—1.)

1. A water motor comprising an oscillating piston, a slide valve, a buffer connected to each end of said slide valve, and means governed by the throw of said slide valve for swinging either buffer into the path of said piston.

2. A water motor comprising a casing, an oscillating piston, a slide valve, a buffer pivoted to each end of said slide valve, and links connected to said casing and to said buffer, whereby reciprocation of said slide valve alternately throws said buffer into the path of said piston.



3. A water motor comprising an oscillating piston, a slide valve adapted to receive reciprocatory impetus by the piston at the end of its movement in each direction, and a rod pivoted at each end of said valve, a tubular casing on each rod, and a spring within each casing and interposed between each rod and its casing, said rods, casing and springs forming resilient buffers.

4. The combination with a casing, a shaft extending therethrough, a piston comprising a central section connected to the shaft, and side plates connected to said central section, a valve chamber having an inlet and an outlet, a central water chamber within the valve chamber and communicating with the piston casing, said valve chamber having outlet channels and ports at opposite sides of the water chamber, and a sliding valve provided with openings for controlling the inlet and outlet of the fluid to the piston chamber, and spring tensioned pivoted members at the ends of the sliding valve adapted to be actuated by the piston to reciprocate such valve.

5. The combination with a piston casing formed of a single piece of metal and having bearings and legs formed integral therewith, a piston oscillating within the casing, a valve casing connected to the chamber and having inlet and outlet ports, a valve sliding in said chamber, and spring tensioned members pivoted at the ends of the valve, and connected through rods with the side wall of the valve casing, said members being adapted to be depressed by the movement of the piston to shift the valve.

1,019,389. GATE-HINGE MEMBER. WILLIAM A. WEBSTER, Galesburg, Ill. Filed Jan. 15, 1912. Serial No. 671,203. (Cl. 16—49.)



A hinge-member comprising a gate-sustaining element having a pintle-receiving element cast on one of its ends.

1,019,390. ELECTRICAL RESISTANCE. EZECHIEL WEINTRAUB, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Oct. 27, 1909. Serial No. 524,941. (Cl. 219—76.)



1. A resistance element consisting of boron associated with an appreciable quantity of carbon, and having a relatively high negative temperature coefficient of resistance.

2. A self-reducing resistance element consisting mainly of boron and containing at least a small quantity of another element.

3. A resistance stick consisting of boron associated with carbon in appreciable quantity but less than eighteen per cent.

4. A resistance element consisting essentially of boron associated with about five per cent. carbon.

5. A resistance element, consisting of boron associated with an appreciable quantity of carbon and having a terminal of metal fused thereto.

[Claim 6 not printed in the Gazette.]

1,019,391. BORONIZED CONDUCTOR AND METHOD OF MANUFACTURE. EZECHIEL WEINTRAUB, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Oct. 27, 1909. Serial No. 524,943. (Cl. 176—130.)

1. The method of changing the characteristics of carbon and giving to it a positive temperature coefficient, which consists in subjecting the carbon at a high temperature to the action of boron.

2. The method which consists in changing the specific resistance and the temperature coefficient of a carbonaceous conductor by subjecting the conductor while hot to the action of boron.

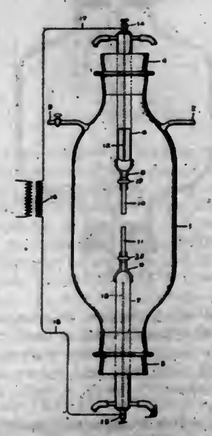
3. The method of constructing a conductor, which consists in depositing carbon on a conductive body and simultaneously modifying the character of said deposited carbon through the action thereon of boron.

4. The method of constructing a conductor having a positive temperature coefficient, which consists in depositing carbon on a heater conductive body and governing the character of the deposit by the action of a boron halid.

5. The method of constructing a conductor which consists in depositing carbon of low vapor tension, low specific resistance and positive temperature coefficient, by heating a conductive body in a mixture of boron halid and a volatile hydrocarbon.

[Claims 6 to 10 not printed in the Gazette.]

1,019,392. ELECTRIC FURNACE METHOD AND APPARATUS. EZECHIEL WEINTRAUB, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Oct. 27, 1909. Serial No. 524,947. (Cl. 204—64.)



1. An electric furnace comprising a glass envelop, means for exhausting the envelop, means for supplying hydrogen thereto, water-cooled stationary terminals for said furnace, means for supporting at the end of at least one

terminal refractory material to constitute an electrode for the furnace, and means for establishing and maintaining a high voltage arc between said refractory material and the other electrode.

2. The method of fusing a refractory powder of low conductivity, which consists in compressing it into a stick, mounting it in a chamber containing hydrogen and maintaining a high voltage arc to the stick until fused.

3. The method of forming dense, fused bodies from refractory material of low conductivity, which consists in mounting the material as electrode for a furnace, and there heating it progressively by a high potential arc operating in an inert gas.

4. The method of making pure conductive boron, which consists in shaping impure boron into a stick and then heating said stick by running it as electrode for a high potential arc.

5. The method of making pure boron from magnesium borid, which consists in heating magnesium borid with a high potential arc running to said borid in an inert environment.

[Claims 6 to 9 not printed in the Gazette.]

1,019,393. BORON-CARBON ALLOY. EZECHIEL WEINTRAUB, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Oct. 27, 1909. Serial No. 524,950. (Cl. 204—64.)

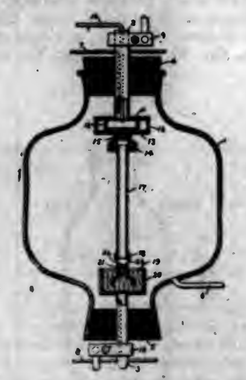
1. As a composition of matter, boron chemically combined with carbon only, said carbon being present in an appreciable quantity less than 15%.

2. As a composition of matter, a dense fusion consisting of boron associated with other material, the material other than boron aggregating less than 15 per cent.

3. As a composition of matter, fused boron associated only with a small amount of carbon.

4. As a composition of matter, a dense fusion of boron in massive form containing chemically combined therewith less than 15 per cent. of another element.

1,019,394. REDUCTION OF CHEMICAL COMPOUNDS. EZECHIEL WEINTRAUB, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed July 20, 1910. Serial No. 572,830. (Cl. 204—63.)



1. The process which consists in progressively depositing on the wall of a heated tube, a dense uniform coating which chemically unites with the material of said tube to form a brittle substance, and subsequently removing said brittle substance to leave a uniform body of deposited material.

2. The process which consists in depositing on a carbon tube heated to incandescence, a thick uniform layer of material capable of uniting with the carbon of said tube at the depositing temperature to form a brittle material, said deposition being effected from a mixture of reducible halid and hydrogen and subsequently removing said brittle material.

3. The process which consists in progressively supplying a mixture of boric chlorid and hydrogen to a carbon tube heated with current to the temperature at which reduction of the boric chlorid takes place, with deposition of boron on the wall of the carbon tube and chemical union therewith, and subsequently removing the combined carbon and boron to leave a dense uniform body of boron.

4. The process which consists in progressively applying a mixture of reducible gas and reducing gas to the inside of a thin-walled refractory tube heated to the temperature at which reduction occurs, continuing the operation until the tube is substantially filled with deposited material and then removing said tube to leave a body of pure deposited material.

5. An apparatus for the reduction of compounds comprising a thin-walled carbon tube, means for supplying current to said tube to heat the same to incandescence, said means including a connection permitting free expansion of said tube with thermal changes, and means for bringing in contact with said tube a mixture of reducible compound and reducing gas.

[Claims 6 to 9 not printed in the Gazette.]

1,019,395. TRACK-LAYING MACHINE. JOHN H. WHITE and EDWARD N. BARTHELEMY, Foley, Minn., assignors, by direct and mesne assignments, of two-thirds to said Barthelemy and one-third to Casimir J. Galarneault, Foley, Minn. Filed Jan. 26, 1911. Serial No. 604,735. (Cl. 104—16.)



1. The combination with a car, of posts applied to the sides thereof and provided with outwardly extended vertically movable depending arms, of tramways detachably supported between the bodies and arms of said posts, substantially as described.

2. The combination with a car, of posts applied to the sides thereof and provided with outwardly extended, vertically movable depending arms, block and tackle devices anchored to the upper portions of said posts, and tramways detachably supported by said block and tackle devices and normally positioned between the body and the arms of said posts, substantially as described.

3. In an apparatus of the kind described, a pioneer car provided with a tramway at one side thereof for the delivery of ties and having a tramway extension extended upward from said tramway and in front of said car, and an automatic tie discharger in the form of an inclined curved discharge trough, substantially as described.

4. The combination with a pioneer car having an extended tramway for the delivery of ties, of an automatic tie discharger at the delivery end of said tramway in the form of a curved and inclined trough.

5. The combination with a pioneer car having an extended tramway for the delivery of ties, of a tie discharger at the delivery end of said tramway in the form of a curved and inclined trough, the said trough having a hinged side movable to drop the ties, substantially as described.

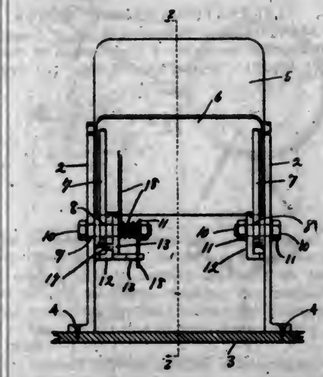
[Claims 6 to 12 not printed in the Gazette.]

1,019,396. PROCESS OF PRODUCING CONICAL CLUTCH-FACINGS. HOWARD S. WILLIAMS, Cleveland, Ohio. Filed Mar. 22, 1911. Serial No. 616,144. (Cl. 69—21.)



The herein described process of producing a curved leather strip for a conical clutch facing which consists in moistening a straight flat leather strip, forming such moist strip into a flat curved strip with its side edges describing substantially concentric arcs, and holding said strip in such position until set.

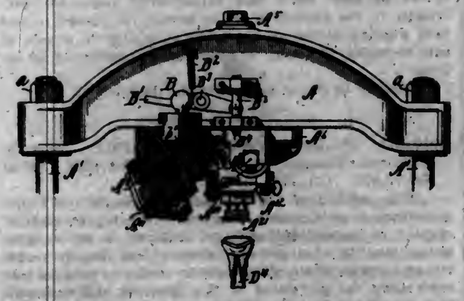
1,019,397. ATTACHMENT FOR HINGED SEATS. WESLEY G. WINANS, Cleveland, Ohio. Filed Sept. 8, 1910. Serial No. 581,089. (Cl. 155—34.)



1. The combination of a seat, a standard, a hinge bolt pivotally supporting said seat on said standard, a plate arranged on said bolt and having a foot piece arranged at a right angle thereto, said foot piece having a slot and a series of projections extending into said slot and a coil spring arranged on said bolt, one end of said coil spring being adapted to engage the under side of said seat and the other end of said coil spring being adapted to engage with one of the said projections on said foot piece.

2. The combination of a seat, a standard, a hinge bolt pivotally supporting said seat on said standard, a plate arranged on said bolt, said plate being provided with a lug on its outer face adapted to engage with a stationary portion of said standard and also having a foot piece extending in the opposite direction from said lug and arranged at a right angle to said plate, said foot piece having a slot and a projection extending into said slot and a coil spring arranged on said bolt, one end of said coil spring being adapted to engage the under side of said seat and the other end of said coil spring being adapted to engage with the projection on said foot piece.

1,019,398. HEEL-ATTACHING MACHINE. ERASTUS WOODWARD, Somerville, Mass., assignor, by mesne assignments, to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed June 6, 1901. Serial No. 63,385. (Cl. 1—35.)



1. A machine for use in the manufacture of boots and shoes, comprising a work support, a head mounted on a vertical axis to move horizontally, and a device for carrying a heel part to be attached movable relatively to said work support on a horizontal axis in said head simultaneously with its movement on said vertical axis.

2. In a heel attaching machine, a heel carrier, and means for sustaining said carrier in substantially horizontal attaching position and inclined receiving position constructed to permit said carrier to be swung simultaneously upon horizontal and vertical axes in its movement between said positions.

3. In a heel attaching machine, a carrier for receiving and carrying a heel, means for sustaining said carrier alternately in substantially horizontal attaching position and inclined receiving position constructed to permit the said carrier to be swung simultaneously upon horizontal and vertical axes in its movement between said positions, and means for imparting movement to said carrier.

4. In a heel attaching machine, a shoe support, a head mounted above the support for movement in a plane substantially parallel to the heel seat face of a shoe sustained upon said support, and a carrier for receiving and carrying the part to be attached to the shoe, said carrier being pivotally sustained upon said head for movement about an axis parallel to the plane of movement of the head during the movement of said head.

5. In a heel attaching machine, a head mounted for horizontal movement, and a heel carrier and a top lift carrier pivotally mounted for vertical movements upon said head during said horizontal movement.

[Claims 6 to 41 not printed in the Gazette.]

1,019,399. PUTTY-TROWEL. SAM F. WRIGHT, Anna, Tex. Filed Oct. 20, 1910, Serial No. 588,134. Renewed Jan. 6, 1912. Serial No. 669,883. (Cl. 18—3.5.)

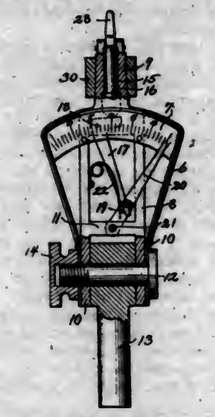


A glazier's tool, comprising a blade having a flat intermediate portion with the ends turned slightly backward, the backwardly turned portions being oppositely beveled, a handle, a shank connected to the blade and extending through the handle in the form of a rod, said shank being bent at an angle to the longitudinal plane of the handle and threaded at its free end, a knife having oppositely beveled edges and with a laterally directed ear through which the threaded portion of said shank extends, and a clamp nut engaging the threaded end of the rod and operating to clamp the ear and the knife connected thereto, to the handle.

1,019,400. UNIVERSAL TEST-INDICATOR. LOUIS W. ZUBONER and AL VERNAS LANGSDON, Chicago, Ill. Filed Feb. 21, 1908. Serial No. 417,218. (Cl. 73—149.)

1. In an indicator, a suitable open frame provided with a perforation in one end and two extending lugs at the other end, a bell crank lever pivoted to said frame near the

perforated end, a pin slidably mounted in said perforation engaging the short arm of said bell crank lever, an indicator arm pivoted to said frame near said lugs provided with a pin or shoulder near its pivotal point with which the long arm of said bell crank lever is in constant engagement, a graduated scale with which the free end of said indicator arm coöperates and a shank pivotally secured between said two lugs.



2. In an indicator, a suitable open frame provided with a perforation in one end and two extending lugs at the other end, a bell crank lever pivoted to said frame near the perforated end, a pin slidably mounted in said perforation engaging the short arm of said bell crank lever, an indicator arm pivoted to said frame near said lugs provided with a pin or shoulder near its pivotal point with which the long arm of said bell crank lever is in constant engagement, a graduated scale with which the free end of said indicator arm coöperates, and a shank pivotally secured between said two lugs and an outer casing inclosing said frame, bell crank lever, indicator arm and scale, provided with an opening to expose to view said scale.

3. In an indicator, a suitable open frame provided with a perforation in one end and an extending lug at the other end, a bell crank lever pivoted to said frame near the perforated end, a pin slidably mounted in said perforation engaging the short arm of said bell crank lever, an indicator arm pivoted to said frame near said lug provided with a pin or shoulder near its pivotal point with which the long arm of said bell crank lever is in constant engagement, a graduated scale with which the free end of said indicator arm coöperates and a shank pivotally secured to said lug.

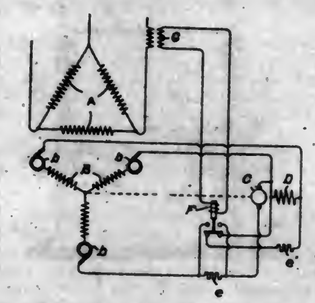
1,019,401. HORSESHOE. LOUIS AHRENS and EMANUEL M. GILOWSKY, Milwaukee, Wis. Filed Oct. 25, 1911. Serial No. 656,729. (Cl. 168—15.)



1. The combination with a horseshoe having a grooved heel and toe bosses each provided with opposite inturned lower flanges, a calk slidably engaging each boss and provided with head projections, as well as with upper outer side flanges that seat upon those of the boss; a cushion-block boss-groove filler in which the head projections of each calk are embedded, and means for securing each calk in vertical play connection with the boss with which it and the cushion-block are engaged.

2. The combination with a horseshoe having heel and toe bosses each grooved its entire length to be open at both ends and provided with opposite inturned lower flanges, a calk slidably engaging each boss from either end thereof and provided with head projections, as well as with upper outer side flanges that seat upon those of the boss; a cushion-block boss-groove filler in which the head projections of each calk are embedded, and means for securing each calk in vertical play connection with the boss with which it and the cushion-block are engaged.

1,019,402. ALTERNATING-CURRENT MOTOR. ERNST F. W. ALEXANDERSON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Oct. 19, 1911. Serial No. 655,476. (Cl. 172—274.)



1. In combination, an alternating current motor having distributed windings on both primary and secondary members, and a quick-acting series-wound direct-current exciter electrically connected to the secondary of the motor.

2. In combination, an alternating current motor having distributed windings on both primary and secondary members, and a quick-acting series-wound direct-current exciter permanently connected electrically to the secondary of the motor and mechanically driven by said motor.

3. In combination, an alternating current motor having distributed windings on both primary and secondary members, a quick-acting-series-wound direct-current exciter permanently connected electrically to the secondary of the motor and mechanically driven by said motor, and a variable resistance in series with said exciter and motor secondary for starting the motor.

4. In combination, an alternating current motor having distributed windings on both primary and secondary members, the secondary winding being polyphase, and a quick-acting series-wound direct-current exciter electrically connected to the secondary of the motor, the armature and field winding of the exciter being connected to phases of said secondary differing in phase by approximately 90 degrees.

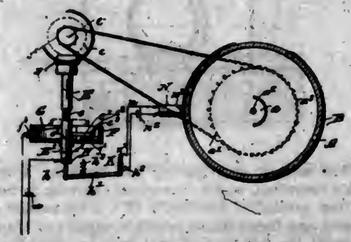
5. In combination, an alternating current motor having distributed windings on both primary and secondary members, the secondary winding being polyphase, and a quick-acting series-wound direct-current exciter mechanically driven by said motor and permanently connected electrically to the secondary of the motor, the armature and field winding of the exciter being connected to phases of said secondary differing in phase by approximately 90 degrees.

[Claims 6 to 10 not printed in the Gazette.]

1,019,403. ILLUSTRATIVE TELEGRAPHY. NOAH S. AMSTUTZ, Cleveland, Ohio. Filed Aug. 30, 1901. Serial No. 73,813. (Cl. 178—310.)

1. The method of reproducing photographs, or representations thereof, which consists in causing an electric current of normal intensity to conform to the varying image tonality of a pictorial subject and thereby transmit said image, in simultaneously by means of said current controlling the movement of the receiving and transmitting apparatus in a synchronous manner and in suitably recording said image.

2. The method of reproducing photographs, or representations thereof, which consists in causing the varying tonal or image characteristics of a pictorial subject to change the conditions of an electric current in conformity therewith without materially affecting its intensity, in utilizing the said electric current to synchronize the transmitting and recording apparatus and in suitably recording the received image.



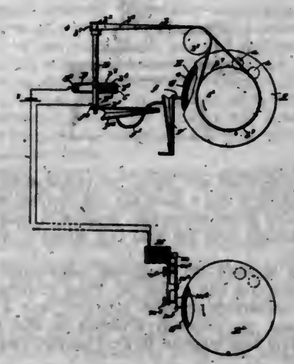
3. The method of reproducing photographs or representations thereof, which consists in using the same electric current to simultaneously transmit an image of a pictorial subject, and synchronising the transmitting and recording apparatus without materially changing the intensity of the current and in suitably recording the transmitted image.

4. The method of reproducing photographs, or representations thereof, which consists in propagating electric impulses, in transmitting an image of a pictorial subject by means of said impulses, in synchronising the apparatus by the said impulses without materially modifying the intensity of current and in suitably recording said image impulses.

5. The method of reproducing photographs, or representations thereof, which consists in propagating electric impulses of normal strength at a uniform rate, in transmitting a pictorial image by means of said impulses, in simultaneously synchronizing the apparatus, and in suitably recording the transmitted image.

[Claims 6 to 20 not printed in the Gazette.]

1,019,404. ILLUSTRATIVE TELEGRAPHY. NOAH S. AMSTUTZ, Cleveland, Ohio. Filed Sept. 12, 1901. Serial No. 75,196. (Cl. 178—310.)



1. The method of reproducing sketches, photographs, or representations thereof, which consists in causing the propagation of electrical impulses independently of a subject, and causing the subject to control the duration of said impulses without varying their periodicity, and suitably recording the same.

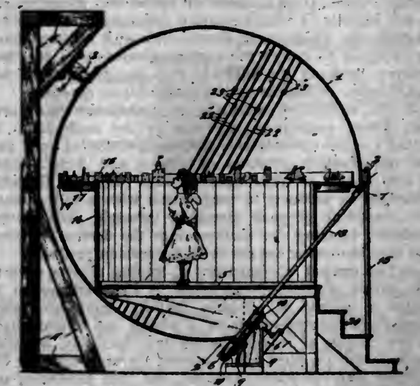
2. The method of reproducing sketches, photographs, or representations thereof, which consists in subjecting a device to the characteristics of a subject, causing a displacement between the device and the subject, independently propagating electric impulses at a uniform rate, causing the characteristics of a subject to vary the duration of said impulses, and suitably recording the same.

3. The method of reproducing sketches, photographs, or representations thereof, which consists in causing a movable member to pass at a predetermined distance from the face of a relief subject while under the control of said subject, in controlling an electric circuit by means of said member, whereby a suitable record of the subject is produced.

4. The method of reproducing sketches, photographs, or representations thereof, which consists in causing a subject to automatically vary the duration of impulses in an electrical circuit by changing the relation between axial and rotary movements of translating members, and suitably recording the same.

5. The method of reproducing sketches, photographs, or representations thereof, which consists in causing continuous unidirectional movement in a primary translating member, and a variable reversible movement of a second coöperative translative member, in causing a pictorial subject to control the variable reversible movement to confirm to the characteristics of said subject, in transmitting the same electrically, and in suitably recording the same.

1,019,405. SIDEREAL SPHERE. WALLACE W. ATWOOD, Chicago, Ill. Filed June 21, 1911. Serial No. 634,497. (Cl. 35—3.)



1. Apparatus of the class described comprising a rotatable sphere having its axis inclined to correspond with the latitude of the place, and a stationary platform within said sphere for supporting an observer.

2. Apparatus of the class described comprising a hollow sphere rotatable about an inclined axis, said sphere having an opening concentric with its axis at the lower pole, and a platform projecting through said opening into the sphere and adapted to support an observer.

3. Apparatus of the class described comprising a rotatable hollow sphere having an opening concentric with its axis at the lower pole, a journal bearing for said sphere at the upper pole thereof, a track secured to the sphere adjacent to the periphery of said opening and wheels for supporting said track.

4. Apparatus of the class described comprising a hollow sphere rotatable about an inclined axis, said sphere having an opening concentric with its axis at the lower pole, a journal bearing for said sphere at the upper pole thereof, a track upon said sphere near the lower pole thereof concentric with the axis of rotation, wheels for supporting said track, and means for rotating said wheels to thereby rotate said sphere.

5. In combination, a hollow rotatable sphere, a platform therein below the center thereof, and a stationary

horizon circle arranged horizontally at approximately the level of the center of the sphere, said horizon circle being formed to represent a landscape.

[Claims 6 to 11 not printed in the Gazette.]

1,019,406. COMPOSITE CARDBOARD. LEO H. BAEKELAND, Yonkers, N. Y., assignor to General Bakelite Company, New York, N. Y., a Corporation of New York. Filed Nov. 30, 1910. Serial No. 594,979. (Cl. 154—40.)

A composite cardboard consisting of superposed layers of paper or the like combined with intermediate layers of an insoluble, infusible condensation product of phenols and formaldehyde.

1,019,407. METHOD OF UNITING OBJECTS. LEO H. BAEKELAND, Yonkers, N. Y., assignor to General Bakelite Company, New York, N. Y., a Corporation of New York. Filed Dec. 16, 1910. Serial No. 597,607. (Cl. 87—17.)

1. The method of cementing or joining objects or articles, which consists in applying to the surfaces to be united a cement or adhesive material containing such partial condensation products of phenol and formaldehyde as are capable of transformation into insoluble, infusible condensation products, bringing the surfaces into the desired relation, and then hardening the partial condensation product.

2. The method of cementing or joining objects or articles, which consists in applying to the surfaces to be united a cement or adhesive material containing such partial condensation products of phenol and formaldehyde as are capable of transformation into insoluble, infusible condensation products, in conjunction with a filling material adapted to reduce the shrinking stresses of the final product, bringing the surfaces into the desired relation, and then hardening the partial condensation product.

3. The method of cementing or joining objects or articles, which consists in applying to the surfaces to be united a cement or adhesive material containing such partial condensation products of phenol and formaldehyde as are capable of transformation into insoluble, infusible condensation products in conjunction with a filling material consisting of such insoluble, infusible condensation products, bringing the surfaces into the desired relation, and then hardening the partial condensation product.

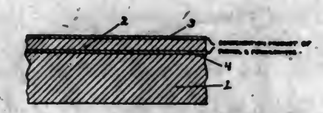
4. The method of cementing or joining objects or articles, which consists in applying to the surfaces to be united a cement or adhesive material containing such partial condensation products of phenol and formaldehyde as are capable of transformation into insoluble, infusible condensation products and a solvent therefor, bringing the surfaces into the desired relation, and then hardening the partial condensation product.

5. The method of cementing or joining objects or articles, which consists in applying to the surfaces to be united a cement or adhesive material containing such partial condensation products of phenol and formaldehyde as are capable of transformation into insoluble, infusible condensation products in conjunction with a solvent and a filling material adapted to reduce the shrinking stresses of the final product, bringing the surfaces into the desired relation, and then hardening the partial condensation product.

1,019,408. WOOD-FINISHING. LEO H. BAEKELAND and NATHANIEL THURLOW, Yonkers, N. Y., assignors to General Bakelite Company, New York, N. Y., a Corporation of New York. Filed Apr. 30, 1909, Serial No. 493,160. Renewed Dec. 21, 1911. Serial No. 667,213. (Cl. 144—309.)

1. The method of finishing wood which consists in applying thereto a coating consisting essentially of a condensation product of phenol and formaldehyde which is capable of transformation under the influence of heat into an insoluble and infusible coating material, and then pressing the coated surface, with simultaneous application of heat, against a surface having the desired finish.

2. The method of finishing wood which consists in applying thereto a coating consisting essentially of a condensation product of phenol and formaldehyde which is capable of transformation under the influence of heat into an insoluble and infusible coating material, partially effecting this transformation, and then pressing the coated surface, with simultaneous application of heat, against a surface having the desired finish.

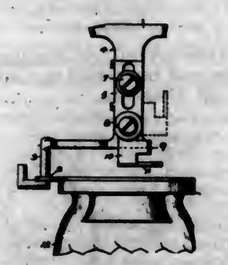


3. The method of attaching and finishing a veneer in a single operation, which consists in applying to the veneer a coating consisting essentially of a condensation product of phenol and formaldhyde which is capable of transformation under the influence of heat into an insoluble and infusible substance, and then pressing the coated veneer against the base to be veneered, with simultaneous application of heat, thereby simultaneously finishing the veneer and permanently securing the same to the base.

4. As a new article of manufacture, a base, and a veneer of wood therefor, said veneer attached to said base by means of an infusible and insoluble condensation product of phenol and formaldehyde, and having a surface coating thereof.

5. As a new article of manufacture, a non-combustible base, and a veneer of wood therefor, said veneer attached to said base by means of an infusible and insoluble condensation product of phenol and formaldehyde, and having a surface coating thereof.

1,019,409. SAFETY-STOP FOR GAS-CAPS. PERCY S. BAILEY, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed July 23, 1909. Serial No. 509,121. (Cl. 176—113.)

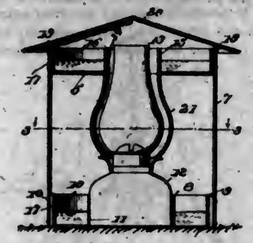


1. In an inclosed arc lamp, the combination with the tripping platform and a loose gas cap therebelow, of vertically movable slides adjustably secured to said platform, and a U-shaped stop for said cap pivotally attached to said slides.

2. In an inclosed arc lamp, the combination with the tripping platform and a gas cap hung thereon, of slides vertically adjustable on said platform, and a U-shaped stop for said cap pivotally attached to said slides and provided with lugs adapted to abut against said platform.

1,019,410. FLY-CATCHER FOR LAMPS. AMBROSE B. BAKER, Salem, Ohio. Filed July 26, 1911. Serial No. 640,684. (Cl. 43—22.)

An insect trap including upper and lower liquid receiving pans, the lower pan being provided with an upstanding flange and the upper pan with an opening surrounded by a similar flange, and rods forming a detachable connection between said pans, the flange of the upper pan being adapted to fit within the flange of the lower pan when the rods



are detached and said pans inverted to permit nesting thereof.

1,019,411. PROCESS OF PREPARING FOOD PRODUCTS. PRISCILLA FOULKE BALDWIN, Wooster, Ohio. Filed Sept. 22, 1911. Serial No. 650,806. (Cl. 99—11.)

1. The process of preparing a food product, which consists in reducing a starchy material to a pulp while immersed in water, of placing said pulp in a suitable strainer and washing it three or more times, cooking said pulp in a double cooker, a small amount of salt being added thereto, spreading the cooked pulp in thin sheets to dry, and then breaking the same into pieces for packing.

2. The process of removing starch from potatoes and forming the residue into a food product, which consists in reducing the potato to a pulp while immersed in water, washing the starch from said pulp, cooking the pulp from which the starch has been washed in a double cooker, drying and browning the same in a hot oven, and then breaking into several pieces.

1,019,412. SINGLE-OBSERVER RANGE-FINDER. ARCHIBALD BARR, Glasgow, Scotland, and WILLIAM STROUD, Leeds, England. Filed Apr. 24, 1907. Serial No. 370,003. (Cl. 88—3.)



1. A single observer rangefinder comprising two telescopes, parts of which extend in co-axial alinement from the center of the instrument, two end reflectors, the objectives of the telescopes being situated at an appreciable distance from their respective end reflectors, two refracting prisms of equal angle of deviation each disposed near an end reflector, means for rotating the prisms, and a graduated scale moved in accordance with the prisms, for the purposes set forth.

2. A single observer rangefinder comprising two telescopes, parts of which extend in co-axial alinement from the center of the instrument, two end reflectors, the objectives of the telescopes being situated at an appreciable distance from their respective end reflectors, two refracting prisms of equal angle of deviation each disposed outside and near an end reflector, means for rotating the prisms, and a graduated scale moved in accordance with the prisms, for the purposes set forth.

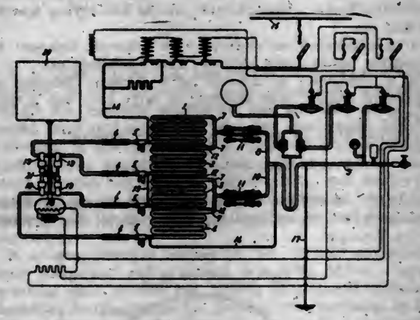
3. A single observer rangefinder comprising two telescopes, parts of which extend in co-axial alinement from the center of the instrument, two end reflectors, the objectives of the telescopes being situated at an appreciable distance from their respective end reflectors, two refracting prisms of equal angle of deviation disposed respectively near the said end reflectors, means for rotating the prisms, and a graduated scale moved in accordance with the prisms, for the purposes set forth.

4. A single observer rangefinder comprising two telescopes, parts of which extend in co-axial alinement from the center of the instrument, two end reflectors, the objectives of the telescopes being situated at an appreciable distance from their respective end reflectors, two refracting prisms of equal angle of deviation disposed respectively outside and near the said end reflectors, means for imparting equal and opposite rotational motions to the prisms, and a graduated scale moved in accordance with the prisms, for the purposes set forth.

5. A single observer rangefinder comprising two telescopes, parts of which extend in co-axial alinement from the center of the instrument, two end reflectors, the objectives of the telescopes being situated at an appreciable distance from their respective end reflectors, two refracting prisms of equal angle of deviation each disposed near an end reflector, means for rotating the prisms, a range indicating scale moved in accordance with the prisms, an index, a subsidiary prism that can be introduced at will into one of the beams and a subsidiary scale to be used when the subsidiary prism is inserted for the purpose set forth.

[Claims 6 to 12 not printed in the Gazette.]

1,019,413. ELECTRIC STEAM-HEATING SYSTEM. ASA F. BATCHELDER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Sept. 28, 1908. Serial No. 455,164. (Cl. 219—20.)



1. The combination with a plurality of sections of piping each having a separate inlet, of a common main into which said sections deliver, a separate pumping device connected with each inlet, and means for sending an electric current through said sections in series.

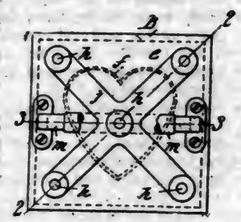
2. The combination with a plurality of sections of piping each having a separate inlet, of a common main, of the same sized piping, into which said sections deliver, pumping mechanism connected with said inlets, insulating joints separating said sections from the pumping mechanism and the delivery main, and an electric circuit in which said sections are connected in series.

3. The combination with a plurality of sections of piping, all of the same size, length and number of bends, of a multiple cylinder pump having its cylinders connected respectively with said sections, and an electric circuit including said sections in series.

1,019,414. MANUFACTURE OF TILES. CHARLES H. BELLAMY, Philadelphia, Pa., assignor, by direct and mesne assignments, to Concrete & Clay Products Company, a Corporation of Delaware. Filed Apr. 6, 1909. Serial No. 488,279. (Cl. 18—61.)

The method of making tiles with faces of different colored materials which consists in producing a plurality of contiguous face sections by molding plastic materials of different colors in a forming-box having separated compartments, expelling the tile face sections from the forming box into a press mold, providing a plastic material in the press mold to constitute the tile back and subjecting

the materials in the press mold to pressure thereby causing the contiguous edges of the tile face sections to be-



come adjoined and united and the tile backing material to be connected with the variably colored tile face.

1,019,415. PAINT COMPOUND. WILLIAM N. BLAKEMAN, Jr., New York, N. Y. Filed June 30, 1911. Serial No. 636,236. (Cl. 134—39.)

1. A compound or mixture of a pigment deficient in spreading power; lead chlorid; and a fatty oil.

2. A compound or mixture of a pigment deficient in spreading power; lead chlorid and a non-drying fatty oil.

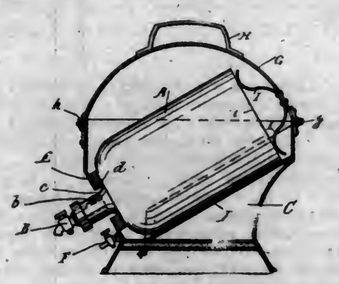
3. A compound or mixture of a pigment deficient in spreading power; lead chlorid; and a non-drying marine animal oil.

4. A compound or mixture of a pigment deficient in spreading power; lead chlorid; and menhaden oil.

5. A compound or mixture of a pigment deficient in spreading power; lead chlorid; a fatty oil; and a drying oil.

[Claims 6 to 21 not printed in the Gazette.]

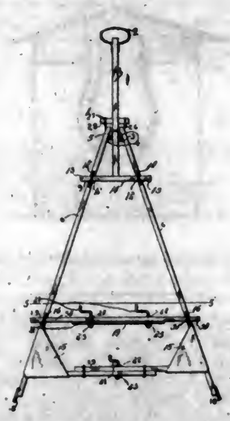
1,019,416. WATER-COOLER. RUSSELL BONNELL, Elizabeth, N. J. Filed May 25, 1911. Serial No. 629,469. (Cl. 62—13.)



1. In a cooler, the combination, with an outer chamber for ice provided with an opening at its lower part and having a hinged cover at its top, and a packing arranged around the said opening; of a bottle for holding the liquid to be cooled arranged with its neck protruding through the said opening, and resilient means, for pressing the said bottle against the said packing, secured to the said cover and arranged between it and the bottom of the bottle.

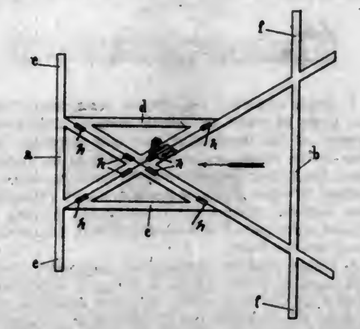
2. In a cooler, the combination, with an outer chamber for ice provided with an opening at one side of its lower part and having a cover hinged to its upper part on the opposite side from the said opening, and a packing arranged around the said opening; a bottle for holding the liquid to be cooled, an inclined guide, for supporting the said bottle, said guide being secured in the said chamber between the said opening and the cover hinge, and a spring secured to the cover adjacent to the hinge and adapted to press the bottle against the packing when the cover is closed.

1,019,417. ROAD-DRAG. WILLIAM L. BOTT and OTIS M. DAVIS, Star City, Ind. Filed Oct. 9, 1911. Serial No. 653,697. (Cl. 37—5.)



A road drag comprising a beam, a cross bar carried thereby, scrapers pivoted to the cross bar, overlapping braces secured to the scrapers and having alined apertures formed therein, locking bolts engaged in certain of the apertures for clamping the braces together to retain the scrapers in relatively adjusted position, a leveler plate having vertically extending slots formed therein, a transverse brace adjustably secured to the scrapers, and clamp bolts passing through the said brace and through the vertical slots of the plate, whereby tightening of said bolts serves to clamp the plate to the brace in vertically adjusted position.

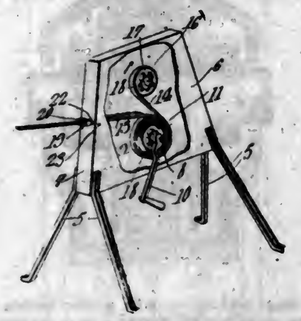
1,019,418. AEROPLANE OR FLYING-MACHINE. JEAN JACQUES BOURCART, Kolmar, Germany. Filed June 20, 1910. Serial No. 567,775. (Cl. 244—31.)



A jointed framework for aeroplanes or flying machines, composed of four triangular members arranged with their apices meeting at a point and hinged together so that the rear member can swing, in conjunction alternately with the right and the left side member, on two axes which intersect each other at the said meeting point substantially as set forth.

1,019,419. DEVICE FOR USE IN LAYING CONDUCTORS. ISAIAH BOWDLE, Pasadena, Cal., assignor to Frank Crawford, Pasadena, Cal. Filed Jan. 21, 1911. Serial No. 603,916. (Cl. 247—23.)

1. In a device of the class described, two reels, a flexible lead tape, and a flexible feed tape, each tape having one terminal secured to one reel, the other terminal of the feed tape being secured to the other reel, the body portions of both tapes being of such a length as to normally be wound in overlapping relation with the convolutions of the lead tape between the convolutions of the feed tape and upon the reel to which both tapes are secured, while the other terminal of the lead tape is free.



2. In a device of the class described, two reels, a flexible lead tape, and a flexible feed tape, each tape having one terminal secured to one reel, the other terminal of the feed tape being secured to the other reel, the body portions of both tapes being of such a length as to normally be wound in overlapping relation with the convolutions of the lead tape between the convolutions of the feed tape and upon the reel to which both tapes are secured, while the terminal of the lead tape is free, and a guide for the free terminal of the lead tape.

3. In a device of the class described, two reels, a flexible lead tape, and a flexible feed tape, each tape having one terminal secured to one reel, the other terminal of the feed tape being secured to the other reel, the body portions of both tapes being of such a length as to normally be wound in overlapping relation with the convolutions of the lead tape between the convolutions of the feed tape and upon the reel to which both tapes are wound, while the other terminal of the lead tape is free, and a guide for the free terminal of the lead tape pivoted to have its free end projected toward the reels.

4. In a device of the class described, two superposed reels, a flexible lead tape, and a flexible feed tape, one terminal of each tape being secured to the lower reel and the other terminal of the feed tape being secured to the upper reel, the body portions of the tapes being of such a length as to normally be wound in overlapping relation with the convolutions of the lead tape between the convolutions of the feed tape upon the lower reel, and the other terminal of the lead tape being free.

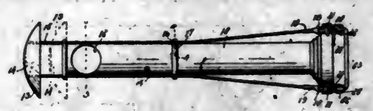
5. In a device of the class described, two superposed reels, a flexible lead tape, and a flexible feed tape, one terminal of each tape being secured to the lower reel and the other terminal of the feed tape being secured to the upper reel, the body portions of the tapes being of such a length as to normally be wound in overlapping relation with the convolutions of the lead tape between the convolutions of the feed tape upon the lower reel, the other terminal of the lead tape being free, and a guide for the free terminal of the lead tape.

[Claims 6 and 7 not printed in the Gazette.]

1,019,420. FIRE-NOZZLE. THOMAS D. BEATH, Rochester, N. Y. Filed May 25, 1911. Serial No. 629,396. (Cl. 137—57.)

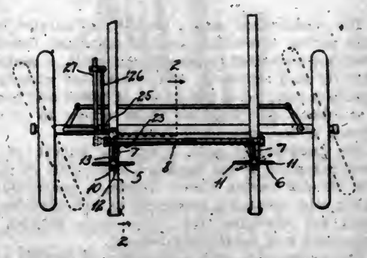
1. A nozzle having a supplementary discharge orifice near its discharge end, a concave baffle confronting the discharge end of the nozzle, rods slidingly fitted on said nozzle and operating to move said baffle relatively to said nozzle, and means for manually actuating said rods.

2. A nozzle having a supplementary discharge orifice near its discharge end, a concave baffle confronting the discharge end of said nozzle, rods extending longitudinally of said nozzle and operating to move said baffle into and out of contact with the discharge end of said nozzle,



means slidably attaching said rods to said nozzle, and means for manually actuating said rods.

1,019,421. BRACKET ATTACHMENT. JOSEPH W. BRIGGS, Reward, Cal. Filed Mar. 2, 1911. Serial No. 611,772. (Cl. 240—62.)



1. A light supporting mechanism comprising pivoted brackets having actuating arms projecting therefrom, sockets for movably supporting the brackets, arms projecting from said sockets for stopping one bracket against movement in one direction and the other bracket against movement in the other direction, yielding means interposed between the arms of said brackets, and means for reciprocating the said yielding means whereby one of the brackets may be turned when the other is held fixed and vice versa.

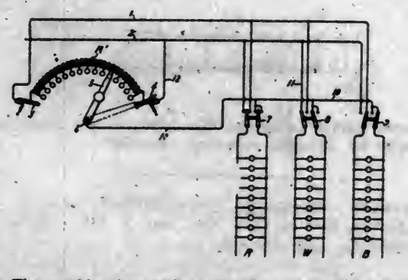
2. A lamp bracket mechanism for vehicles comprising lamp supporting yokes having depending pivots, sockets receiving said pivots, and having projections extending therefrom forming stops for limiting the movement of the yokes, actuating arms for turning the yokes, a connecting member interposed between the arms and having bearings for movably engaging the ends thereof, yielding means interposed between the said arms and carried by said connecting member, and means for joining the said connecting member with the steering mechanism of the vehicle, whereby the lamp supporting yokes will be actuated in accordance with the guiding of the vehicle.

3. A lamp bracket mechanism comprising a plurality of brackets for lamps, means for pivotally supporting the same, the said brackets having arms by which they may be turned, a connecting member joining the free ends of said arms, stops projecting into the path of said arms upon their outer sides for preventing the lights from being turned inwardly, but admitting of their being turned outwardly, said connecting member being made up of a hollow casing, divided bearings mounted therein, a spring interposed between the inner parts of said dividing bearings and an arm connecting the said casing with the steering mechanism of the vehicle.

1,019,422. CONTROLLING DEVICE FOR LIGHTING-CIRCUITS. ARNOLD E. BUTTON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Dec. 19, 1907. Serial No. 407,183. (Cl. 175—312.)

1. The combination with a main electric circuit having a plurality of branches, and translating devices connected in said branches, of a rheostat connected across the main circuit, and connections whereby resistance is included in one of said branches and simultaneously excluded from

another branch by a single movement of the controlling member of the rheostat.



2. The combination with a plurality of parallel branch circuits having translating devices connected therein, of a resistance connected in parallel therewith, a controlling member for said resistance, and connections whereby said resistance is included in the circuit of one of said branches and simultaneously excluded from others by a single movement of the controlling member.

3. The combination with a lighting circuit, of a resistance connected across the same, a plurality of parallel branch circuits having lamps therein, a controlling element for said resistance connected to said branches, and switches for changing the connections between said branches and said controlling element.

4. The combination with a plurality of parallel branch circuits having translating devices therein, of a rheostat connected in parallel therewith, connections whereby resistance may be included in certain of said branches and simultaneously excluded from others by a single movement of the controlling member of the rheostat, and a double pole switch in each branch for changing its connections with the rheostat.

5. The combination with a lighting circuit, of a plurality of branches having different colored lights therein, a rheostat connected in parallel therewith, and connections whereby the lights in certain of said branches are dimmed while others are brightened continuously by moving the controlling member of the rheostat.

[Claim 6 not printed in the Gazette.]

1,019,423. TERMINAL FOR ELECTRIC CONDUCTORS. FRANK E. CASE, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Mar. 7, 1906. Serial No. 304,648. (Cl. 173—269.)



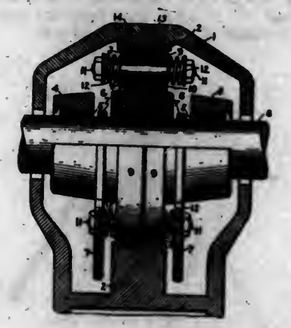
1. A terminal for electric conductors comprising a metallic strip having holding clips formed at opposite ends thereof, said clips being arranged so as to be co-axial and engage adjacent portions of the conductor.

2. A terminal for electric conductors comprising a metallic strip having integral clips formed at opposite ends, said clips being arranged so as to be co-axial and engage adjacent portions of the conductor.

3. A terminal for electric conductors comprising a duplex metallic strip having clips formed at one end thereof, said clips being co-axial and longitudinally adjacent, one clip being arranged to surround the conductor and the other to surround the insulator.

1,019,424. SHAFT-BEARING. FREDERICK H. CLOUGH, Rugby, England, assignor to General Electric Company, a Corporation of New York. Filed Feb. 5, 1910. Serial No. 542,204. (Cl. 64—54.)

1. In a shaft bearing, an outer portion having a spherical seat, an inner portion having a part registering with said spherical seat, and a sleeve part, and means for clamping said parts together so as to allow of relative movement between them under pressure.



2. In a shaft bearing, an outer portion having a spherical seat, an inner portion having a part registering with said spherical seat and a sleeve part having clearance holes therein, and spring pressed bolts passing through said clearance holes for clamping said parts together so as to permit of their relative movement under pressure.

3. In a shaft bearing, an outer portion having a spherical seat, an inner portion having a part registering with said spherical seat and a sleeve part having clearance holes therein, and bolts passing through said clearance holes for clamping said parts together so as to permit of their relative movement under pressure.

4. A shaft bearing comprising an outer portion having a spherical seat, an inner portion having a flange, and rings between which said flange is clamped so as to allow of relative movement under pressure between said rings and said flange, said rings having spherical outer surfaces coöperating with said spherical seat.

5. A shaft bearing comprising an outer portion having a spherical seat, an inner portion having a flange, rings, and bolts arranged to clamp said rings and flange together but allowing them to move relative to one another under pressure, said rings having spherical outer surfaces coöperating with said spherical seat.

[Claims 6 and 7 not printed in the Gazette.]

1,019,425. TIME AND CURRENT LIMIT RELAY. ARCHIBALD S. CUBITT, Pittsfield, Mass., assignor to General Electric Company, a Corporation of New York. Filed Oct. 15, 1909. Serial No. 522,799. (Cl. 175—281.)

1. In an electric switch, a switch member, an electromagnet for operating the same, a flywheel for controlling the operation of said switch member biased to rotate in one direction, and means for moving said wheel against its bias upon the energization of said magnet.

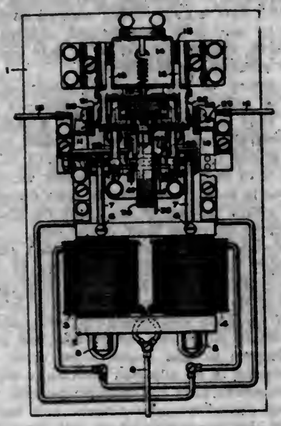
2. In an electric switch, the combination with a pivoted arm for opening said switch, of a fly-wheel biased to rotate in one direction, and an actuator moving with said arm and acting to turn said wheel in the opposite direction.

3. In an electric switch, the combination with a movable switch-arm, of a pivoted arm for opening said switch, a flywheel coöperating with said switch-arm and biased to turn in a direction to close said switch, and means for moving said pivoted arm and simultaneously turning said wheel in the opposite direction.

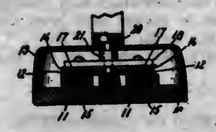
4. In an electric switch, the combination with a movable switch-arm, of a crank having an arm on its hub for opening said switch, a flywheel biased to turn in one direction, means whereby said wheel effects the closing of said switch, and an actuator on said hub for turning said wheel in the opposite direction when said switch is opened.

5. In an electric switch, the combination with a movable switcharm, of a crank having an arm on its hub for opening said switch, a lock for holding said switch open, a flywheel biased to turn in one direction, a lug on said wheel to trip said lock, and an actuator on said hub for rotating said wheel in the opposite direction when said switch is opened.

[Claims 6 to 10 not printed in the Gazette.]



1,019,426. ELECTRIC FLAT-IRON. ARCHIBALD S. CUBITT, Pittsfield, Mass., assignor to General Electric Company, a Corporation of New York. Filed Oct. 29, 1910. Serial No. 589,688. (Cl. 219—25.)



1. An electric flat-iron comprising a body portion having a groove therein, a flat heating unit bent to conform to the shape of the groove, and means for clamping the unit into the groove.

2. An electric flat-iron comprising a body portion having a V-shaped groove therein, a flattened heating unit bent to conform to the shape of the groove, and means for clamping the unit into the groove.

3. An electric flatiron comprising a body portion having a tapered groove therein, a flat heating unit within said groove and a clamping block conforming to the shape of the groove engaging the unit to press it into the groove.

4. An electric flat-iron comprising a body portion having a V-shaped groove therein, a similarly shaped unit for said groove, and a V-shaped block for clamping the unit into the groove.

5. An electric flat-iron comprising a body portion having a pair of tapered grooves, a flattened heating unit in each groove conforming to the shape thereof, a clamping block for each unit, and a member engaging both of said blocks simultaneously to clamp the units in place.

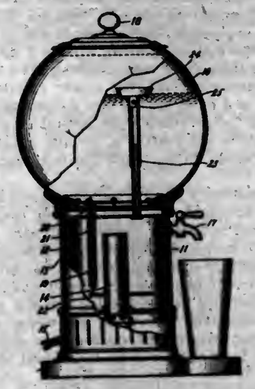
[Claim 6 not printed in the Gazette.]

1,019,427. ELECTRIC WATER-HEATER. ARCHIBALD S. CUBITT, Pittsfield, Mass., assignor to General Electric Company, a Corporation of New York. Filed Nov. 10, 1910. Serial No. 591,632. (Cl. 219—38.)

1. An electric water heater comprising a heating chamber, a storage chamber, a thermostat, and means controlled thereby for establishing circulation between said chambers.

2. An electric water heater comprising a heating chamber, a storage chamber, a thermostat located in the heating chamber, and means controlled thereby for establishing circulation between said chambers.

3. An electric water heater comprising a heating chamber, a storage chamber, a thermostat, and a valve between said chambers controlled by the thermostat.

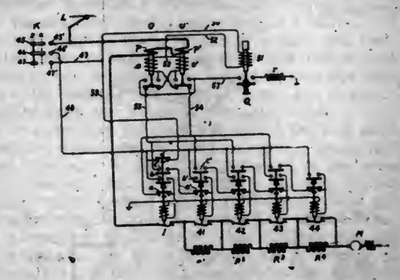


4. An electric water heater comprising a heating chaming chamber, and a valve between said chambers controlled by the thermostat.

5. An electric water heater comprising a heating chamber, a storage chamber, a pipe extending from one chamber into the other, and means whereby the effective length of said pipe varies with the height of the water in the chamber into which it extends.

[Claims 6 and 7 not printed in the Gazette.]

1,019,428. MOTOR-CONTROL SYSTEM. ARCHIBALD S. CUBITT, Pittsfield, Mass., assignor to General Electric Company, a Corporation of New York. Filed May 16, 1910, Serial No. 561,682. Renewed Nov. 8, 1911. Serial No. 659,248. (Cl. 172—179.)



1. In combination, a plurality of contactors intended for operation in succession to effect certain connections in a power circuit, actuating circuits for said contactors, means limited by current in said power circuit for temporarily interrupting said actuating circuits between the operation of successive contactors, and means coöperating with said last-mentioned means for preventing the reestablishment of said actuating circuits for a certain interval of time dating from their interruption.

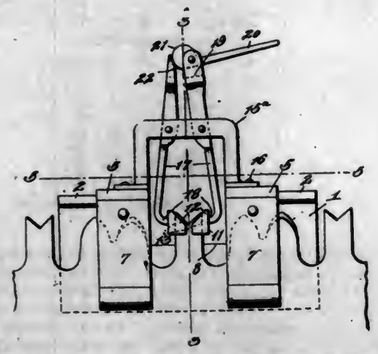
2. In combination, a plurality of contactors intended for operation in succession to effect certain connections in a power circuit, actuating circuits for said contactors, electromagnetic switch devices arranged to temporarily interrupt said actuating circuits between the operation of successive contactors, and means coöperating with said switch devices for preventing them from reëstablishing the actuating circuits while the current in the power circuit exceeds a certain value and until after a certain definite interval of time has elapsed dating from the interruption of said circuits.

3. In combination, a plurality of contactors intended for operation in succession to effect certain connections in a power circuit, actuating circuits for said contactors, electromagnetic switch devices arranged to temporarily interrupt said actuating circuits between the operation of successive contactors, means responsive to current in the power circuit and coöperating with said switch devices for preventing them from reëstablishing the actuating circuits while the current in the power circuit exceeds a certain valve, and other means also coöperating with said switch devices for preventing the reëstablishment of said actuating circuits until after a certain definite interval of time has elapsed dating from the interruption of said circuits.

4. In combination, a plurality of contactors intended for operation in succession to effect certain connections in a power circuit, actuating circuits for said contactors, electromagnetic switch devices having actuating and holding coils respectively energized by current in said actuating circuits and current in the power circuit and arranged to temporarily interrupt said actuating circuits between the operation of successive contactors, and means coöperating with said switch devices for maintaining said actuating coils energized for a certain definite interval of time after said switch devices have ininterrupted an actuating circuit, whereby said actuating circuits are maintained interrupted for a certain interval of time and may then be completed immediately by said switch devices if the current in the motor circuit does not exceed a certain value.

5. In a motor control system, a plurality of contactors arranged for operation in succession for controlling the connections of the motor circuits, actuating circuits for said contactors, means operated by current in said actuating circuits and responsive to current in the motor circuit for temporarily interrupting said actuating circuits between the operation of successive contactors, and means coöperating with said last-mentioned means for preventing the reëstablishment of said actuating circuits for a certain interval of time dating from their interruption.

1,019,429. SAW-GAGE. MICHAEL DALLENBACH, Ridgway, Pa. Filed Nov. 18, 1911. Serial No. 661,071. (Cl. 76—81.)



1. In a device of the character described, the combination of a body having clamping members adapted to engage over the cutting edge of a saw, an adjustably secured clamping member carried by said body to engage the raker teeth, and means carried by said body for clamping said second mentioned member securely to the teeth.

2. In a device of the character described, the combination of a body member, angular plates secured to the rear face of the body member, said plates having their free ends bent upon themselves to form a groove, plates disposed in said grooves and arranged between the angular plates and the upper edge of the body member, resilient sheet metal straps having one end secured to the rear face of the body member and the other end bent twice at right angles and disposed over said angular plates and then bent inwardly and curved upon themselves to form spring clamping members to clamp the body member to the cutting edge of a saw, an adjustably secured clamping member carried by said body member and adapted to engage the raker teeth, and means carried by said body to clamp the member securely to the saw teeth.

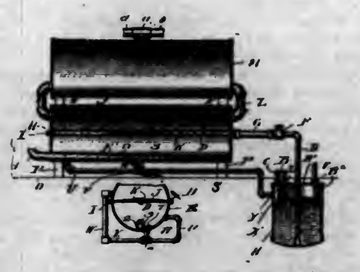
3. In a device of the character described, the combination of a body having clamping members adapted to clamp said body to the cutting edge of a saw, said body having a centrally arranged recess formed in its upper edge and a groove formed in the rear face of the body communicating with said recess, a clamping member adjustably mounted in said groove, having jaws disposed in said recess, and means carried by said body for clamping said jaws securely to the raker teeth of the saw.

4. In a device of the character described, the combination of a body having clamping members to clamp said body to the cutting edge of a saw, said body having a recess formed in its upper edge and a groove formed in the rear face of the body communicating with said recess, a clamping member adjustably mounted in said groove, having jaws disposed in said recess, a set screw therein to hold said member in an adjusted position, a plate secured to the bottom of the body and disposed beneath the groove, an adjusting screw mounted therein and engaging the lower end of said member to adjust the same, and means carried by the body for clamping said jaws to the raker teeth of a saw.

5. In a device of the character described, the combination of a body having clamping members to clamp said body to the cutting edge of a saw, said body having a recess formed in its upper edge, a clamping member adjustably secured to said body, having jaws disposed in said recess, said jaws having grooves formed in their inner faces to receive the raker teeth, an inverted U-shaped bar carried by the body and disposed above said jaws, and means carried by said bar to engage said jaws and clamp them tightly to the raker teeth.

[Claims 6 and 7 not printed in the Gazette.]

1,019,430. METHOD OF CARBURETING AIR. ROBERT C. DAWSON, McKeesport, Pa. Original application filed May 14, 1910, Serial No. 561,297. Divided and this application filed Dec. 7, 1910. Serial No. 596,137. (Cl. 48—219.)



A method of carbureting air comprising the supplying of liquid hydrocarbon in the form of upwardly directed jets within a carbureting chamber, simultaneously with the supplying of the said upwardly directed jets of hydrocarbon breaking the jets of hydrocarbon up to atomize a portion of the hydrocarbon, collecting the remaining portion of the supplied hydrocarbon at the bottom of the carbureting chamber, passing upwardly directed jets of air simultaneously and of uniform pressure through the collected hydrocarbon at the bottom of the carbureting chamber, and through the hydrocarbon that is falling toward the bottom of the carbureting chamber thereby enriching the upwardly directed jets of air, and then mixing the enriched air with the atomized hydrocarbon by passing the enriched air up through the said atomized hydrocarbon.

1,019,431. DECARBURIZED SILICON AND METHOD FOR MAKING THE SAME. JOHN T. H. DEMPSTER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Jan. 20, 1909. Serial No. 473,371. (Cl. 75—17.)

1. The process of decarburizing silicon, which consists in heating the carbon-containing silicon in the presence of carbon dioxid.

2. The method of decarburizing silicon, which consists in fusing the silicon over a decomposable carbonate.

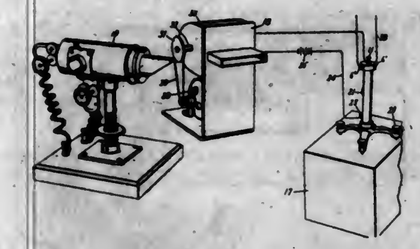
3. The process, which consists in heating silicon containing carbon in the presence of an alkaline earth carbonate and the casting the decarburized fusion so produced.

4. The process, which consists in melting silicon containing carbon in the presence of a decomposable carbonate.

5. The process, which consists in heating electric furnace silicon in a crucible containing limestone to produce fluid silicon substantially free from carbon and having a specific resistance when cold materially higher than the electric furnace silicon with which the process was begun.

[Claims 6 and 7 not printed in the Gazette.]

1,019,432. OSCILLOGRAPH. JOHN THOS. DEMPSTER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Apr. 4, 1910. Serial No. 553,256. (Cl. 171—95.)



1. In an oscillograph, a magnet, a looped conductor normally passing through the field of said magnet, supports for said conductor and said magnet rigidly fastened to each other, a mirror secured to said conductor, and means for relatively displacing laterally the mirror and the magnet.

2. In an oscillograph, a magnet, a looped conductor normally passing through the field of said magnet, supports for said conductor and said magnet rigidly fastened to each other, means for resiliently holding the conductor, a mirror secured to the conductor, and means for relatively displacing laterally the mirror and the magnet.

3. In an oscillograph, a magnet, a winding therefor, a support for the magnet connected to one terminal of the winding, a looped conductor normally passing through the field of the magnet, a spring for resiliently holding said conductor, a support for the spring connected to the second terminal of the winding, a mirror secured to the conductor, and means for displacing relatively the conductor and the magnet.

4. In an oscillograph, a magnet, a support therefor, a looped conductor normally passing through the field of the magnet, supports for the ends of said conductor, terminals connected to said supports, a spring attached to the looped portion of the conductor resiliently holding the same, a mirror secured to the conductor, and means for relatively displacing laterally the conductor and the magnet.

5. In an oscillograph, a magnet, a support therefor, a conductor normally passing through the field of the magnet, a mirror secured to the conductor, a device adapted to push the conductor away from the magnet normally out of engagement with the conductor, and means for operating said device.

[Claims 6 to 13 not printed in the Gazette.]

1,019,433. PISTON-LIFT. DAN F. DENHAM, Laurel, Miss. Filed Oct. 5, 1911. Serial No. 652,941. (Cl. 121—45.)



1. In a device of the class described, a track; a carriage adapted to move upon the track; a cylinder supported adjacent the track; a piston rod operating in the cylinder and connected with the carriage; a movably supported auxiliary track, located parallel to the first named track; a member movable in the cylinder at an angle to the rod and adapted to engage and to support the rod within the cylinder; a bell crank connecting said movable member with the auxiliary track; means for maintaining the rod-engaging portion of the movable member normally upon the outside of the working face of the cylinder; and means upon the carriage adapted to ride upon and to move the auxiliary track.

2. In a device of the class described, a track; a carriage; axles upon the carriage, one of said axles being prolonged; wheels upon the axles, adapted to engage the track; an auxiliary track movably supported along side of the first named track; a wheel upon the prolonged portion of said axle, adapted to engage the auxiliary track; a cylinder supported adjacent the track; a rod in the cylinder and connected to the carriage; a member movable in the cylinder and adapted to engage the rod, to support the same within the cylinder; and means for operatively connecting the movable member with the auxiliary track.

3. In a device of the class described, a supporting structure; a track thereon; a carriage adapted to move upon the track; an auxiliary track; links connecting the auxiliary track with the supporting structure; a buffer adapted to receive one end of the auxiliary track; a cylinder supported adjacent the first named track; a piston rod working in the cylinder, and operatively connected with the carriage; a member movable in the cylinder at an angle to the rod, and adapted to engage and to support the rod; mechanism operatively connecting the movable member with the auxiliary track; means upon the carriage to engage the auxiliary track, thereby to actuate the movable member into rod-engaging position; and means upon a portion of said mechanism, to retract the movable member outside the working face of the cylinder, and to move the auxiliary track into abutment with the buffer.

4. In a device of the class described, a track; a carriage adapted to move upon the track; a cylinder supported adjacent the track; a piston rod operating in the cylinder and connected with the carriage; a movably supported auxiliary track, located parallel to the first named track; a member movable in the cylinder at an angle to the rod and adapted to engage and to support the rod within the cylinder; a bell crank connecting said movable member with the auxiliary track; and means for maintaining the rod-engaging portion of the movable member normally upon the outside of the working face of the cylinder.

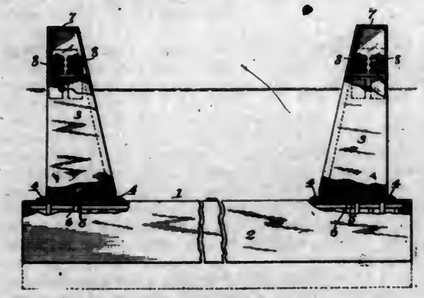
5. In a device of the class described, a track; a carriage; axles upon the carriage; one of said axles being prolonged; wheels upon the axles, adapted to engage the track; an auxiliary track movably supported along side of the first named track; a wheel upon the prolonged portion of said axle, adapted to engage the auxiliary track; a cylinder supported adjacent the track; a rod in the cylinder and connected with the carriage; a member movable in the cylinder and adapted to engage the rod, to support the same within the cylinder; and means for operatively connecting the movable member with the auxiliary track.

[Claims 6 and 7 not printed in the Gazette.]

1,019,434. FLOATING DRY-DOCK. WILLIAM THOMAS DONNELLY, Brooklyn, N. Y. Filed Sept. 17, 1910. Serial No. 582,515. (Cl. 114—45.)

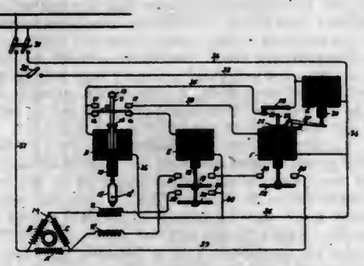
1. In a floating dry dock, heavy solid buoyant means formed of wood and located in the top of the wings nor-

mally above the water line thereof at approximately the greatest degree of submergence of the dock, when under control and thereby normally acting as ballast and adapted, when control of the dock is lost, to be thereby automatically submerged and caused to act as buoyancy and prevent the dock from being entirely submerged, substantially as described.



2. In a floating drydock, heavy non-sinkable solid sectional buoyant means formed of wood and located in the top of the wings normally above the water line thereof at approximately the greatest degree of submergence of the dock, when under control, and thereby normally acting as ballast and adapted when control of the dock is lost, to be thereby automatically submerged and caused to act as buoyancy and prevent the dock from being entirely submerged, substantially as described.

1,019,435. STARTING DEVICE FOR SINGLE-PHASE MOTORS. GEORGE H. DORGELOH, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Nov. 19, 1907. Serial No. 402,790. (Cl. 172—279.)



1. The combination with a single-phase motor, of a resistance reactance device for producing a current of displaced phase in a portion of the windings thereof, an electromagnetic switch for actuating said device, an automatically operated circuit controller for said switch, and means for retarding the operation of said controller.

2. The combination with a single-phase motor, of a resistance reactance device for producing a current of displaced phase in a portion of the windings thereof, an electromagnetic switch for connecting the same in circuit, an automatically operated circuit controller for said switch, means for retarding the operation of said controller, and an electromagnetic switch controlled by said circuit controller for closing the motor circuit independently of said resistance reactance.

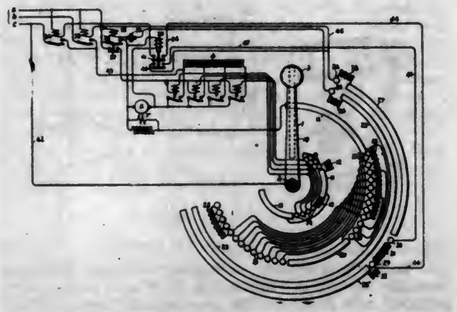
3. The combination with a single phase motor, a resistance-reactance device in the motor circuit, a solenoid switch for closing the motor circuit independently of the device, means whereby said solenoid switch deënergizes itself upon closing, means for mechanically locking said switch in closed position, and a no-voltage magnet for controlling the locking device.

4. The combination with a single-phase motor, of a resistance reactance device for producing a current of displaced phase in a portion of the windings thereof, an electromagnetic switch for connecting the same in circuit, an electromagnetically operated circuit controller for said switch, means for retarding the operation of said controller, an electromagnetic switch controlled by said circuit controller for closing the motor circuit independently of said resistance reactance, and means for opening the circuit of the circuit controller when said latter switch is closed.

5. The combination with a single-phase motor, of a resistance reactance device for producing a current of displaced phase in a portion of the windings thereof, an electromagnetic switch for connecting the same in circuit, an electromagnetically operated circuit controller for said switch, means for retarding the operation of said controller, an electromagnetic switch controlled by said circuit controller for closing the motor circuit independently of said resistance reactance, and means for mechanically locking said latter switch closed.

[Claim 6 not printed in the Gazette.]

1,019,436. CONTROLLING DEVICE FOR ELECTRIC MOTORS. GEORGE H. DORGELOH, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Jan. 6, 1910. Serial No. 536,745. (Cl. 172—179.)



1. A device for controlling electric motors on a multi-voltage system comprising a rheostat arranged to start the motor on low and high voltage respectively, and means controlled by conditions in the motor circuit for preventing the starting on the higher voltage.

2. A device for controlling electric motors on a multi-voltage system comprising a rheostat arranged to start the motor on low and high voltage respectively, and means controlled by the speed of the motor for preventing the starting under higher voltage.

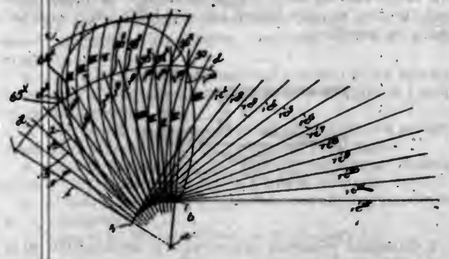
3. A device for controlling electric motors on a multi-voltage system comprising a resistance, a controlling member therefor, electromagnetic switches controlled by said member for closing the motor circuit through the resistance on the high and low voltage respectively, and means for preventing the operation on the high voltage switch until the motor reaches a predetermined speed.

4. A device for controlling electric motors on a multi-voltage system comprising a starting resistance, a controlling member therefor arranged to start the motor through the resistance on one voltage and then increase the speed on the other voltage, and means controlled by the speed of the motor for preventing the closing of the motor circuit on the higher voltage.

5. A device for controlling electric motors on a multi-voltage system comprising a rheostat arranged to successively start the motor, weaken the field, and open the armature circuit on the low voltage, and then successively strengthen the field and start the motor on the high voltage, and means for preventing the closing of the motor circuit under certain conditions.

[Claims 6 to 8 not printed in the Gazette.]

1,019,437. SCREW-PROPELLER. CLARE H. DRAPER, Hopedale, Mass., assignor to C. F. Roper & Company, Hopedale, Mass., a Firm. Filed Jan. 6, 1910. Serial No. 536,688. (Cl. 115—46.)

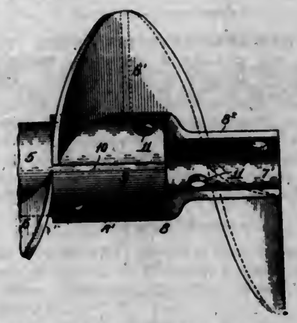


1. A propeller blade having generating lines for its working surface increasing in curvature from the leading to the following edge, said generating lines being tangent to radii at the periphery of the hub, the pitch being uniform at the hub.

2. A propeller blade whose working surface has generating lines increasing in curvature from the leading to the following edge, said generating lines being tangent to radii at the periphery of the hub and forward of such radii throughout their length.

3. A propeller blade whose working surface is of uniform pitch at the hub, the generating lines of such surface increasing in curvature from the leading to the following edge of the blade, said lines being tangent to radii at the periphery of the hub and lying wholly between such radii and the leading edge.

1,019,438. SCREW CONVEYER. DAVID D. DRUMMOND, Oglesby, Ill. Filed July 22, 1910. Serial No. 573,205. (Cl. 193—13.)



1. A coupling for spiral conveyer sections, said coupling comprising a head having a recess therein, a coacting member adapted to be received and secured in said recess, the part of said head on one side of said recess being detachable to permit separation of said head and coacting part without longitudinal movement thereof.

2. A screw conveyer comprising a plurality of sections, journals between the adjoining ends of said sections, couplings means bearing in said journals ad secured to said conveyer sections, and conveyer flights upon said coupling means.

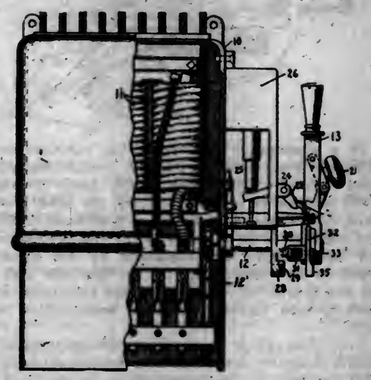
3. A screw conveyer formed in separable sections, connecting gudgeons, each conveyer section comprising a shaft with a screw flight mounted thereon, coupling members having sockets to receive the ends of adjoining shafts and gudgeons, each coupling member having a separable cap forming one side of one of the sockets therein, and means for securing said parts together.

4. A screw conveyer formed in separable sections, connecting gudgeons, each conveyer section comprising a shaft with a screw flight mounted thereon, coupling members having sockets to receive the ends of adjoining shafts and gudgeons, each coupling member having a separable cap forming one side of one of the sockets therein, screw flights on said coupling members, and means for securing said coupling members to said shafts.

5. A screw conveyer formed in separable sections, each section comprising a shaft having a screw flight mounted thereon, said shafts at their ends extending beyond said screw flights, gudgeons and coupling members, each of said coupling members having a socket in one end fitted over the adjoining shaft, and a socket in the opposite end fitted over one end of one of said gudgeons.

[Claims 6 to 8 not printed in the Gazette.]

1,019,439. MOTOR-CONTROLLING DEVICE. PARKER DUNNING, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Oct. 31, 1910. Serial No. 589,847. (Cl. 172—179.)



1. In a motor starting device, in combination, switch mechanism biased to an off position between two operative positions, an operating handle for said mechanism, means for locking the handle to the mechanism, and means responsive to abnormal circuit conditions for releasing the mechanism from the handle and allowing it to return to off position.

2. In a motor starting device, in combination, switch mechanism biased to off position, an operating handle arranged to be locked to said mechanism, means for holding the handle in running position, means responsive to abnormal circuit conditions for releasing the mechanism from the handle to allow it to return to the off position, and means for releasing the handle when said mechanism is moved to off position.

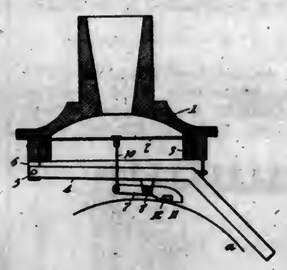
3. In a motor starting device, in combination, switch mechanism biased to off position, an operating handle arranged to be locked to said mechanism, means for holding the handle in running position, and means responsive to abnormal circuit conditions for releasing the mechanism from the handle and releasing the handle.

4. In a motor starting device, in combination, switch mechanism biased to off position, an operating handle movable independently of said mechanism, a toggle for locking the handle to said mechanism, a locking device for holding the handle in running position, means responsive to abnormal circuit conditions for tripping the toggle to allow the mechanism to return to off position, and means for unlocking the handle when said mechanism is moved to off position.

5. In a starting device, in combination, switch mechanism biased to an off position between two operative positions, an operating handle movable independently of said mechanism, means for locking the handle to said mechanism, a locking device for holding the handle in

running position, means responsive to abnormal circuit conditions for releasing the locking means to allow the mechanism to return to off position, and means for releasing the handle when said mechanism is moved to off position.

1,019,440. PHONOGRAPH-REPRODUCER. THOMAS A. EDISON, Llewellyn Park, Orange, N. J., assignor to Thomas A. Edison, Incorporated, West Orange, N. J., a Corporation of New Jersey. Filed June 11, 1908. Serial No. 437,843. (Cl. 181—10.)



1. In a phonograph reproducer, the combination with a vibratory member, of a pair of reproducing styluses adapted to coact with a sound record, means for supporting said styluses in position to track the same groove of a sound record, said styluses being positioned sufficiently closely together to be operated in the reproduction of the record substantially simultaneously by the same note recorded on the record, but not to interfere with each other, and means for transferring the vibrations of said styluses to said vibratory member, substantially as described.

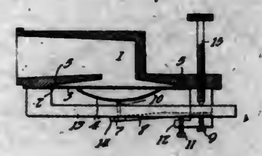
2. In a phonograph reproducer, the combination with a vibratory member, of a stylus lever connected to said member and a pair of reproducing styluses carried by said lever, adapted to coact with a sound record and track the same groove, said styluses being supported with their operative surfaces located in substantially the same plane parallel to the grooves of said sound record when the reproducer and record are in operative position and in substantially the same plane tangent to said record, substantially as described.

3. In a phonograph reproducer, the combination with a vibratory member, of a floating weight, a stylus lever carried by said weight and connected to said member and a pair of styluses carried by said lever, adapted to coact with a sound record, said styluses being supported with their operative surfaces located in substantially the same plane parallel to the grooves of said sound record when the reproducer and record are in operative position and in substantially the same plane tangent to said record, substantially as described.

1,019,441. SOUND-RECORDING APPARATUS. THOMAS A. EDISON, Llewellyn Park, West Orange, N. J., assignor to Thomas A. Edison, Incorporated, West Orange, N. J., a Corporation of New Jersey. Filed Apr. 20, 1910. Serial No. 556,469. (Cl. 181—10.)

1. In sound recording apparatus, the combination with a flexible ring diaphragm and a non-flexible central member bridging the opening of the ring and in contact therewith, of a recording stylus connected to the non-flexible member, and means for applying an elastic pressure on the stylus to hold the flexible and non-flexible members in engagement, substantially as described.

2. In sound recording apparatus, the combination of a knife edge support, a two-part diaphragm, comprising a flexible ring member freely mounted on said support with the latter contacting the same adjacent to one edge thereof, and a non-flexible member bridging the opening of said ring and making contact therewith near the other edge thereof, a recording stylus, and a spring arm carrying the stylus and by its tension imposing an initial flexure on the diaphragm to keep the parts thereof in engagement and the ring member seated on said knife edge, substantially as described.



3. In sound recording apparatus, the combination with a sound box, of a flexible ring diaphragm mounted therein, a non-flexible member mounted to contact the inner edge of said ring but not attached thereto, and a recording stylus connected to said non-flexible member, substantially as described.

4. In sound recording apparatus, the combination with a sound box, of a diaphragm mounted therein comprising a flexible outer portion and a rigid inner portion, the outer edge of which contacts the inner edge of the flexible outer portion but is not attached thereto, and a recording stylus rigidly connected to said rigid inner portion of the diaphragm, substantially as described.

5. In sound recording apparatus, the combination with a supporting knife edge, of a diaphragm comprising a flexible ring mounted with its surface adjacent its outer edge contacting said knife edge, a non-flexible member mounted with its outer edge contacting the free inner edge of said ring but not attached thereto, and a recording stylus connected to said non-flexible member, substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

1,019,442. GASOLENE-MEASURING RULE. FRANK M. EDMONDS and RUSSELL J. GOODNOW, Boston, Mass.; said Edmonds assignor to said Goodnow. Filed Nov. 3, 1910. Serial No. 590,438. (Cl. 73—120.)



The measure above described comprising a rod having a series of pointers slidable thereon whereby they may be adjusted according to the number of units which each is to measure, in combination with a marker consisting of an elastic member embracing said rod and also slidable thereon without interfering with said pointers, whereby the depth of liquid at any one time may be measured and marked, and the depths at other times measured.

1,019,443. ELECTRODE. CHARLES A. ERNST, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Apr. 6, 1904. Serial No. 201,829. (Cl. 176—323.)

1. An arc light electrode material consisting of a powdered mixture of franklinite, titanium oxid and a restrainer.

2. An arc light electrode material consisting of a powder containing a preponderating amount of a mixture of franklinite and titanium oxid.

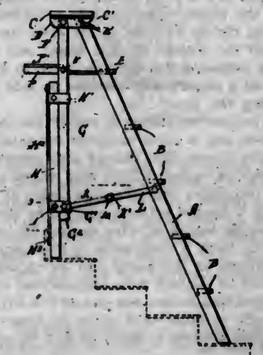
3. An arc light electrode material consisting of a powder containing a preponderating amount of franklinite.

4. An arc light electrode mixture containing seventy parts of franklinite and thirty parts of titanium oxid.

5. A composite arc-light electrode containing franklinite as a constituent.

[Claims 6 to 10 not printed in the Gazette.]

1,019,444. STAIRWAY-LADDER. JOHN HENRY ERSKINE, Charleston, W. Va. Filed Oct. 25, 1909. Serial No. 524,483. (Cl. 228—19.)



A ladder of the kind described, comprising front and rear sections, the rear section comprising supporting legs formed in upper and lower sections, guide sleeves carried by the upper section, said sleeves being in vertical alinement and spaced apart, the legs of the lower section being slidable in and adjustably secured in said guide sleeves, and braces pivotally connected to the front section and also pivotally connected to the lowermost guide sleeves.

1,019,445. BRACELET. FRANCIS FEID, Wrentham, Mass., assignor of one-half to Cornelius E. Hale, North Attleboro, Mass. Filed Nov. 11, 1910. Serial No. 591,783. (Cl. 63—5.)

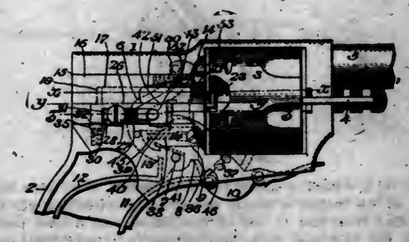


1. A bracelet comprising a band having overlapped ends, and a connector for the overlapped portions of the bracelet, comprising a single loop of a size to snugly embrace the overlapped portions of the bracelet, the adjacent portion of said loop and one end of the bracelet being provided one with a recess and the other with a rigid projection normally held within said recess by the other end of said bracelet to lock said loop to the end of the bracelet and prevent disengagement thereof.

2. A bracelet comprising a band having overlapped ends, one end of said bracelet being provided with a recess therein, a connector for the overlapped portions of the bracelet, comprising a single loop of a size to snugly embrace the overlapped portions of the bracelet, said loop being provided on its interior with a projection rigid therewith fitting within the recess in one end of the bracelet and normally held therein by the other end of said bracelet.

3. A bracelet comprising a band having overlapped ends, and a connector for the overlapping portions of the bracelet comprising a loop provided with a single opening of a size to snugly embrace the overlapped portions of the bracelet, said loop and the adjacent portion of one end of the bracelet being provided with interfitting portions normally held in engagement by the other end of the bracelet.

1,019,446. AUTOMATIC SHELL-EJECTING DEVICE FOR REVOLVERS. CHARLES FOEHL, Philadelphia, Pa. Filed July 18, 1911. Serial No. 639,114. (Cl. 42—68.)



1. In a revolver, a hammer, means for cocking and releasing the same, a slide provided with an ejector and with means engaged by the hammer for carrying it forward with the same, a spring bearing against said slide to move it backward, a latch engaging the slide to keep it from moving backward, a sliding plate arranged to depress said latch, and means connected to the hammer to actuate said plate before the latter moves forward in the act of firing.

2. In a revolver, a hammer, means for cocking and releasing the same, a slide provided with an ejector and with means engaged by the hammer for carrying it forward with the same, a spring bearing against said slide to move it backward, a latch engaging the slide to prevent backward movement of the same, a sliding plate upon the slide and constructed to release said latch, and a dog upon the hammer and constructed to engage and move the sliding plate when the hammer is cocked.

3. In a revolver, a hammer formed with a cam, means for cocking and releasing the same, a slide provided with an ejector and with a stud engaged by the cam upon the hammer, a spring bearing against said slide to force the same rearward, a latch engaging a notch in the slide and having a spring forcing it into such engagement and a rounded head-portion, a sliding plate upon the slide formed with a rounded cam portion for engaging the rounded head portion of the latch and with a shoulder, a spring forcing such plate forward, and a dog pivoted to be longitudinally movable upon the hammer and formed with a shoulder adapted to engage the shoulder of the sliding plate when the hammer is cocked.

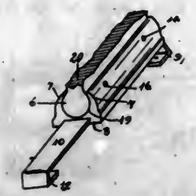
4. In a revolver, a hammer formed with a curved cam on one side, means for cocking and releasing such hammer, a slide having an ejector at its forward end, a finger-piece pivoted to rock in the slide and having a stud engaged by the cam of the hammer, a spring bearing against the slide to throw the latter rearward, a latch engaging a notch in the slide and having a spring forcing it into such engagement and formed with a rounded head-portion, a sliding plate upon the slide formed with a cam riding over said rounded portion and with a shoulder, a spring forcing said plate forward, and a dog pivoted to slide upon the hammer and having a spring forcing it rearward and formed with a rearwardly facing shoulder adapted to engage the shoulder of the sliding plate.

5. In a revolver, a main slide having means for throwing it rearward, a latch engaging said slide to hold it against rearward movement, a sliding plate upon said slide formed with a cam adapted to engage such latch to disengage the same, a hammer, means for cocking and releasing the same, a dog upon said hammer having a shoulder

adapted to engage the sliding plate to move it rearward, a pin in the slide having its end adapted to bear against the dog, and a pivoted cartridge-gate in the slide formed with a shoulder to be engaged by the rim of the cartridge and to be depressed by the insertion of the same and formed with a bevel engaging and depressing the pin when the gate is rocked by the insertion of a cartridge.

[Claims 6 and 7 not printed in the Gazette.]

1,019,447. SCALE. JOHN FOERST, Newark, N. J. Filed Mar. 28, 1911. Serial No. 617,336. (Cl. 248—30.)



1. In a weighing scales, the combination of a frame having at its bottom a single downwardly projecting rib extending from end to end of the scales, and a base piece, said rib and base piece having one a lateral thickened edge and the other a groove adapted to receive said thickened edge, said thickened edge adapted to slide longitudinally in said groove and to turn or twist therein, means for securing said base to a counter or the like, and means for clamping said base piece and rib against relative movement.

2. In a weighing scales, the combination of a frame having at the bottom a longitudinal downwardly projecting rib, a base piece, said rib and base piece having one of its outer edges thickened and rounded upon an arc of a circle in cross section and the other having a groove adapted to receive said rib, means for securing said base piece to a counter or the like, and means for clamping said base piece and rib against relative movement.

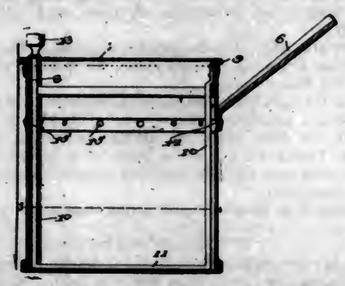
3. In a weighing scales, the combination of a frame having at its bottom a longitudinal downwardly projecting rib, with its outer edge thickened and rounded upon the arc of a circle in cross section, a base piece having a groove adapted to receive said rib, means for securing said base piece to a counter or the like, and means for clamping said base piece and rib against relative movement.

4. In a weighing scales, the combination with a frame having at its bottom a longitudinal downwardly projecting rib, a base piece having a groove adapted to receive said rib and also provided with a slideway extending longitudinally of itself, a bar entering said slide way and adjustable with respect to the base piece, and means upon the opposite ends of said base piece and bar for engaging the opposite edges of a counter or the like.

5. In a weighing scales, the combination of a frame having at its bottom a longitudinal downwardly projecting rib with its outer edge thickened and rounded upon the arc of a circle in cross section, a base piece having a groove adapted to receive said rib, and also having in its bottom a slideway with undercut walls, set screws working through the side walls of said groove against said rib, a bar entering said slideway and slidably fitting the same, a set screw working through the bottom of said groove against said bar, and means upon the opposite ends of said base piece and bar for engaging the opposite edges of a counter or the like.

1,019,448. CORN-POPPER. MERRIEL A. FREEMAN, New Harmony, Ind. Filed Mar. 7, 1911. Serial No. 612,832. (Cl. 53—4.)

1. A corn popper including a vessel having a closed bottom and open top, a cover mounted for rotation on the vessel and having a laterally extending flange projecting over the top of said vessel, and an agitator rigidly secured to the cover and having its lower end normally resting on the bottom of the vessel, thus to space the flange of said cover from the upper edge of the vessel.



2. A corn popper including a vessel having a closed bottom and open top, a cover mounted for rotation on the vessel above the upper edge thereof, a substantially U-shaped agitator rigidly secured to the cover and normally bearing against the bottom of said vessel, one end of the agitator being extended through the cover to form a supporting pin, and a finger piece mounted on said supporting pin for rotating the cover.

3. A corn popper including a vessel having a closed bottom and open top, a cover mounted for rotation on the vessel above the upper edge thereof and provided with a depending flange extending within said vessel and a horizontal flange projecting over the upper edge of the vessel, a substantially U-shaped agitator carried by the cover and formed of a single length of wire having its intermediate portion bent to form a transverse bar normally bearing against the bottom of the vessel and its opposite end extended upwardly in contact with and secured to the inner face of the depending flange, one end of the wire being extended upwardly through said cover to form a support, and a finger piece secured to said support for rotating the cover.

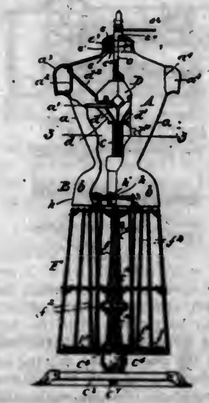
4. A corn popper including a cylindrical vessel having an open top and closed bottom, a cover mounted for rotation on the vessel and provided with a depending flange fitting within said vessel and a laterally extending flange projecting over the upper edge of the vessel, and a substantially U-shaped agitator carried by the cover and formed of a single piece of metal having its intermediate portion bent to produce a horizontally disposed bar normally resting on the bottom of the vessel and its opposite ends extended upwardly in contact with and secured to the inner face of the depending flange of the cover, one end of the metal constituting the agitator being projected through the top of the cover to form a support for a finger piece, the height of the agitator being greater than the height of the vessel so as to normally space the laterally extending flange of said cover from the upper edge of the vessel.

1,019,449. GARMENT-FORM. JULIUS FREDERICK GEMS, Hampstead, London, England. Filed Sept. 18, 1903. Serial No. 173,706. (Cl. 223—18.)

1. In a garment form the combination of a plurality of relatively movable longitudinal sections constituting the body of said form, a rotary screw-threaded spindle within said body, an internally threaded traveler on said spindle, means, including inclined converging rails and sliding members in engagement with said rails, for operatively connecting said traveler with said sections.

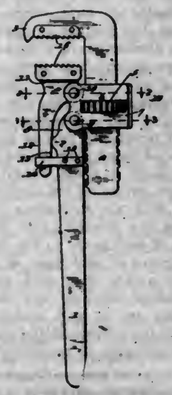
2. In a garment form, the combination of a plurality of relatively movable sections constituting the body, a plurality of transverse ribs rigidly attached to said section, a longitudinal screw-threaded spindle in said body, a screw-threaded traveler on said spindle, and means comprising inclined rails secured to said traveler and arranged to be slidably engaged by said ribs, whereby the said body may be contracted and expanded.

3. In a lay figure, the combination of a central vertical support, a vertically divided bust thereon, a plurality of slidably mounted U-shaped sections connected to the neck of said bust, a rotatable plate provided with spiral slots, a plurality of arms secured to said U-shaped sections provided with studs for engaging in said slots, and means for imparting an angular oscillation to said plate to expand and contract said sections.



4. In a garment form, the combination of a body, an expansible skirt stand, engagement devices thereon capable of being shifted out of their normal positions so as to project beyond said body when desired, said expansible skirt-stand being slidably suspended from said body by means of said engagement devices, and normally of less diameter at the top than the bottom diameter of the body.

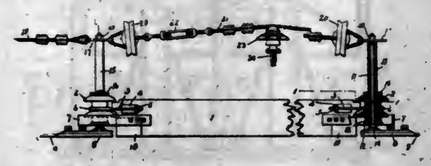
1,019,450. PIPE-WRENCH. RAYMOND GEOFFROY, Arctic, R. I. Filed May 5, 1911. Serial No. 625,309. (Cl. 81—91.)



1. In a wrench, a handle formed adjacent to its inner end with a cam nose, a fitting pivoted to said inner end of the handle, an adjustable jaw carried by the fitting, a jaw for coöperation with the adjustable jaw pivoted to the fitting and having a tail which extends partly along the length of the handle in spaced relation to the front side edge thereof to a point beyond the cam nose, and means to engage said tail to restrict the pivotal movement of the pivoted jaw, said nose riding on the rear longitudinal side edge of the tail.

2. In a wrench, a handle formed with a cam nose at one end thereof, a U-shaped fitting pivoted at its lower end to said end of the handle above said cam nose, a jaw pivoted to the upper end of said fitting and having a depending tail which extends below said cam nose and has its rear longitudinal side face in engagement with the cam nose, a U-shaped strap secured to the handle and located below the cam nose and embracing said tail to restrict the pivotal movement of said jaw, and a jaw carried by the fitting for coöperation with said first named jaw.

1,019,451. SECTIONAL INSULATOR. JOHN C. GILLETTE, Baltimore, Md., assignor to General Electric Company, a Corporation of New York. Filed Aug. 13, 1908. Serial No. 448,297. (Cl. 191—1.)



1. A section insulator for messenger supported trolley wires comprising a runner bar of insulating material, an insulator secured to each end thereof, means carried by said insulators for supporting the ends of the trolley wire under tension, and an adjusting and supporting connection provided at its ends with insulated devices for engaging said trolley wire supporting means and for receiving the ends of the messenger.

2. A section insulator for messenger supported trolley wire systems comprising a runner bar of insulating material, an insulator secured to each end thereof, an upright bolt in each insulator, a trolley wire shoe attached to the lower end of each bolt, means for attaching the messenger cable to the upper end of each bolt, and an adjusting and supporting connection between the upper ends of said bolts, and said connection including one or more strain insulators.

3. A section insulator comprising a runner bar of insulating material, a spool insulator at each end of said bar, a U-shaped yoke connecting said insulator and bar, an upright bolt in said insulator, and an insulating connection between the upper ends of said bolts.

4. A section insulator comprising a runner bar of insulating material, a spool insulator at each end of said bar, a guard surrounding said insulator, and secured to said bar, an upright bolt in said insulator, and an insulating connection between the upper ends of said bolts.

5. A section insulator comprising a runner bar of insulating material, a spool insulator at each end thereof, an upright bolt in said insulator extending below and above the same, a trolley shoe attached to the lower end of said bolt, a sleeve on the upper portion of said bolt, a plate washer clamped on top of said sleeve, and an insulating connection between the plate washers including a turn buckle.

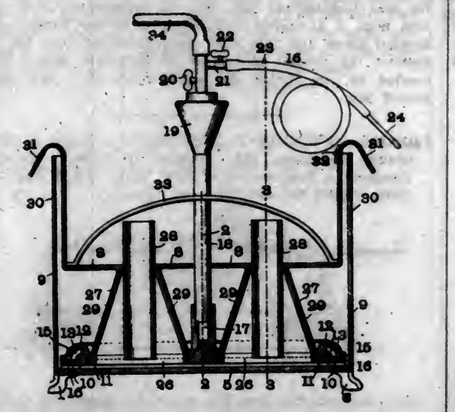
[Claims 6 and 7 not printed in the Gazette.]

1,019,452. WATER-HEATER. ALICE M. GIRTANNER and FREDERICK GIRTANNER, St. Louis, Mo. Filed Feb. 23, 1911. Serial No. 610,324. (Cl. 126—360.)

1. In a portable water heater, the combination with a combustion chamber adapted to be submerged in the water to be heated, of a burner arranged in said chamber, an air inlet supplying air to said burner, an outlet for the products of combustion leading from said chamber, and a shield carried by said outlet for deflecting said products downwardly against the water in which the heater is submerged.

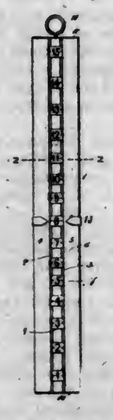
2. In a portable water heater, the combination with a combustion chamber adapted to be submerged in the water to be heated, of a burner in said chamber, a fuel supply for said burner, an auxiliary burner for igniting said main burner, an air inlet supplying air to said main burner, an outlet for the products of combustion leading from said

chamber, and a shield carried by said outlet for deflecting said products downwardly against the water in which



the heater is submerged, said shield being movable to allow the insertion of said auxiliary burner.

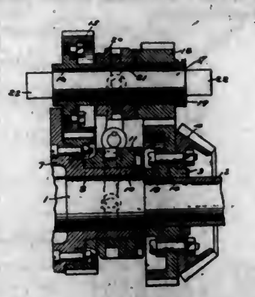
1,019,453. FLUID-MEASURING DEVICE. RUSSELL J. GOODNOW, Boston, Mass. Filed Sept. 5, 1911. Serial No. 647,523. (Cl. 73—120.)



1. The measure of the character specified comprising a rod having formed therein separate spaced slots parallelly arranged to extend longitudinally along said rod on one side thereof and angularly inclined, a series of movable clips each having a central or body portion extending laterally over the portion of said rod between the slots therein and with turned ends contained within said slots, the turned ends of said clips having a normal angular inclination different from that of said slots whereby said clips may yieldingly bear against the walls of said slots.

2. The measure of the character specified comprising a rod having formed therein separate spaced slots parallelly arranged to extend longitudinally along said rod on one side thereof and angularly and outwardly inclined, a series of movable clips each having a central or body portion extending laterally over the portion of said rod between the slots therein and with outwardly turned end portions contained within said slots, the outwardly turned end portions of said clips having a normal angular inclination less than that of said slots whereby said clips may yieldingly bear against the outer walls of said slots.

1,019,454. SPEED-GEAR MECHANISM. LELAND F. GOODSPEED, Milwaukee, Wis., assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Original application filed Mar. 2, 1908, Serial No. 418,732. Divided and this application filed Aug. 7, 1909. Serial No. 511,790. (Cl. 74—89.)



1. In a variable speed gear mechanism, the combination with a driving shaft, of a stationary shaft, a gear mounted on and adapted to be rotated with the driving shaft, a gear mounted and free to rotate on the stationary shaft and meshing with the gear on the driving shaft, a second gear adapted to freely rotate on the stationary shaft, a gear on the driving shaft meshing with said second gear, and means for operatively connecting the gears on the stationary shaft.

2. In a variable speed gear mechanism, the combination with a driving shaft, of a stationary shaft, a pair of meshing gears carried by and adapted to freely rotate on the respective shafts, a second pair of meshing gears also carried by said shafts and adapted to freely rotate thereon, means for operatively connecting one of said gears to the driving shaft, and a clutch for connecting the gears on the stationary shaft.

3. In a variable speed gear mechanism, the combination with a driving shaft, of a stationary shaft, a gear carried by and adapted to be rotated with the driving shaft, a square sleeve on said gear, a clutch member mounted to slide longitudinally on said sleeve, a gear mounted to freely rotate on the stationary shaft and meshing with the gear on the driving shaft, a square sleeve on said gear, a clutch member mounted to slide longitudinally on said sleeve, a second pair of meshing gears adapted to freely rotate on the respective shafts, and means for connecting one or the other of said clutch members to a corresponding gear of the last mentioned pair of gears.

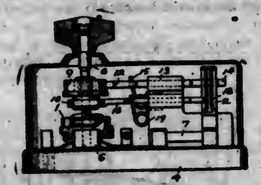
4. In a variable speed gear mechanism, the combination with a driving shaft, of a stationary shaft, a pair of gears adapted to freely rotate on the stationary shaft, a pair of gears meshing with the stationary gears and adapted to freely rotate on the driving shaft, means for operatively connecting one of said gears to the driving shaft, a sleeve on one of the gears of each pair of gears, a clutch member mounted to rotate with each sleeve and adapted to slide longitudinally thereon, and means for operatively connecting either one of said clutch members to the remaining gear on the corresponding shaft to thereby transmit power from one gear to the other gear on a shaft.

1,019,455. COMBINED SWITCH AND BRANCH PLUG. FRITZ GRAF, Pankow, Germany, assignor to General Electric Company, a Corporation of New York. Filed July 29, 1909. Serial No. 510,316. (Cl. 175—282.)

1. The combination with an attachment plug and its stationary contacts, of a switch in circuit with said contacts, and controlling means for said switch actuated by said plug.

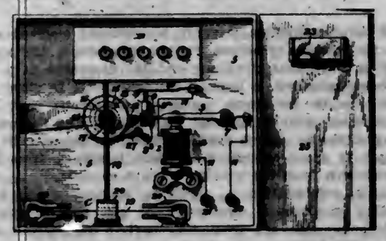
2. The combination with an attachment plug and its stationary contacts, of a switch in circuit with said contacts, and means for preventing the closing of said switch until said plug has been brought into engagement with its stationary contacts.

3. The combination with an attachment plug and its stationary contacts, of a switch in circuit with said contacts, and a device having means at one end to disable said switch and means at the other end whereby it may be engaged and controlled by the attachment plug.



4. A combined switch and attachment plug provided with means for preventing closure of the switch until after insertion of the plug, and means for preventing removal of plug until after opening of the switch.

1,019,456. ELECTRIC METER. JOHN E. GRAYBILL and PAUL MCJUNKIN, York, Pa., assignors to General Electric Company, a Corporation of New York. Filed June 9, 1904. Serial No. 311,770. (Cl. 171—265.)



1. In an electric meter, in combination, an alternately energized and deënergized actuating electro-magnet, indicating means acted upon by each operation of said actuating magnet, a progressively moving governing means opposing the operation of said actuating means in proportion to its speed and an energy storing device operated by said electro-magnet and progressively driving said governing device.

2. In an electric meter, in combination, an alternately energized and deënergized actuating electro-magnet, an electro-magnetic governing device having an opposition to movement which is proportional to its speed, an indicating device progressively driven by said actuating magnet and an energy storing device operated by said electro-magnet and progressively driving said governing device.

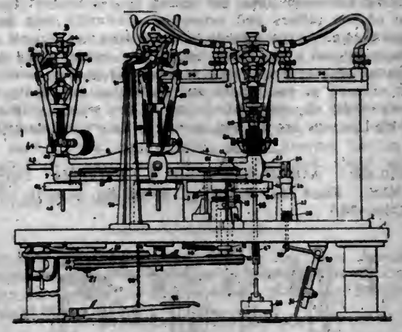
3. In an electric meter in combination, an alternately energized and deënergized actuating electro-magnet, a governing device having an opposition to movement which is proportional to its speed, connections including a spring connecting said governing device and said actuating magnet and an indicating device connected with said governing device.

4. In an electric meter, the combination with alternately energized and deënergized electro-magnetic actuating means consisting of an electro-magnet, of an armature oscillated thereby, a contact carried by said armature and located in the circuit of said electro-magnet, a governing device comprising a conductor moving in a constant field, a pawl and ratchet connection between said armature and said governing device, and an indicating device connected with said governing device, substantially as described.

5. In an electric meter, the combination with alternately energized and deënergized electro-magnetic actuating means, of a governing device having an opposition to movement which is proportional to its speed, an energy storing device connecting said governing device and said actuating means, and an indicating device connected with said governing device, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,019,457. AUTOMATIC STEM-MAKING MACHINE. JOHN E. GRAYBILL, York, Pa., assignor to General Electric Company, a Corporation of New York. Filed Oct. 17, 1908. Serial No. 458,209. (Cl. 49—2.)



1. In a stem-making machine, the combination with automatic positioning mechanism for placing the component parts of a stem in proper relation to each other, of a sealing device for securing said parts to each other, and common operating means arranged to actuate said positioning mechanism and said sealing device in succession.

2. In a stem-making machine, the combination with feed mechanism for placing loose lengths of wire in position in a glass tube to form leading in wires, of a sealing device for sealing said wires into said tube, and common operating means arranged to actuate said feed mechanism and said sealing device in sequence.

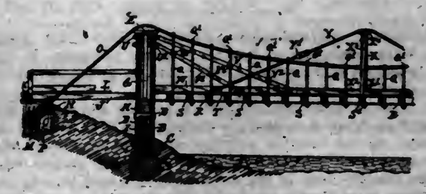
3. In a stem-making machine, the combination with a holder for positioning the component parts of a stem, of feed mechanism for placing said parts in position in said holder, a sealing device for uniting said parts to form a stem, and common operating means arranged to actuate said feed mechanism and said sealing device in sequence.

4. In a stem-making machine, the combination with a stem holder for positioning the component parts of a stem, of a plurality of feed mechanisms for placing the component parts of a stem in said holder, said feed mechanisms and said holder being relatively movable, and means for successively bringing said holder and each of said feed mechanisms into operative relation in predetermined sequence.

5. In a stem-making machine, the combination with a movable stem holder, of a feed mechanism for each of the component parts of a stem, and common operating means arranged to bring said holder and each of said feed mechanisms into operative relation to each other in succession and to actuate each of said mechanisms to place a part of a stem in said holder.

[Claims 6 to 48 not printed in the Gazette.]

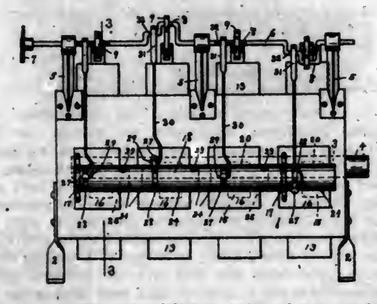
1,019,458. SUSPENSION-BRIDGE. WILLIAM H. C. GREER, Sherman, Tex. Filed Dec. 28, 1911. Serial No. 668,380. (Cl. 14—20.)



In a suspension bridge, the combination with supporting pillars arranged on each bank, of cables anchored in a bed of concrete and passing over the tops of the pillars and connecting the pillars on opposite banks, a series of

rods depending from the cables, horizontally disposed plates extending to the opposite pillars, the intermediate portion of said plates being supported by the rods, transverse beams supported by the plates, a flooring carried by the beams, wheel guards bearing upon the flooring for retaining the same upon the beams, braces secured to the top of the pillars and extending outwardly and downwardly to the wheel guards to which they are secured and also connected to the depending rods, a central pillar adjacent to each of the cables, a truss rod passing over the top of each of the pillars and extending outwardly and downwardly in either direction to the wheel guards to which the ends are secured, as herein shown and described.

1,019,459. AIR-MOTOR. IRA L. GRINNELL, Detroit, Mich. Filed May 6, 1911. Serial No. 625,516. (Cl. 230—36.)



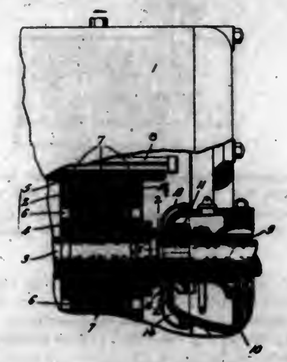
1. In a motor comprising a series of pneumatics, the combination of a frame on which the same are mounted provided with a common air passage, a cylindrical tube extending along said frame and provided with three ports for each pneumatic, one connecting with the pneumatic, one connecting to the common passage and an intake port to the outside air, a cylindrical valve mounted in said tube for each pneumatic, means for independently oscillating each valve, and absorbent pads for lubricators separating the ends of the valves.

2. In a motor comprising a series of pneumatics, the combination of a frame on which they are mounted, said frame having a main passage, a crank shaft mounted on the frame and having a crank for each pneumatic, a pitman extending from each pneumatic to its crank, a cylindrical valve casing extending along the frame and provided with three ports for each pneumatic, a series of cylindrical valves within the casing, one for each pneumatic, an arm extending through a transverse slot in said tube to each valve whereby the valve may be oscillated, and a rod connecting to the crank shaft and to each arm to operate each valve independently, one of said ports for each pneumatic connecting to a passage opening into the pneumatics, another to the main passage and the third opening to the outside air, each of said valves being formed so as to connect the pneumatic to the main passage and to the outside air alternately and lubricating pads separating the adjacent ends of the valves.

1,019,460. OIL-GUARD. BRACE H. HAMILTON, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Nov. 1, 1906. Serial No. 341,586. (Cl. 64—22.)

1. In combination, a shaft, a bearing supporting said shaft, a revolving element mounted on said shaft, said element by its rotation drawing air into itself over said bearing, and means forming a space for transforming the velocity head of the air drawn over said bearing and before it is drawn into said element into a static head near the inner end of said bearing to prevent said element from withdrawing lubricant from the bearing.

2. A revolving element which by its rotation produces an air circulation, a shaft for said element in combination with a bearing supporting the shaft therefor, and a shield for the end of the bearing, said shield being bent away from said revolving element so as to form a space in which the velocity head of the air is transformed into a static head to prevent said element from withdrawing air and lubricant from said bearing.



3. In combination, a shaft, a revolving element which by its rotation produces an air circulation, the suction taking place near the shaft and the discharge at a point remote therefrom, a bearing for said shaft in close proximity to the revolving member, and means bent away from said revolving element for transforming the velocity head of the air drawn over said bearing into a static head which is great enough to prevent lubricant from being withdrawn from the bearing by said member.

4. In combination, a revolving element which by its motion produces a circulation of air, the direction of flow being outward from the shaft, a supporting shaft, a bearing having a throttled opening through which the shaft extends to restrict the escape of lubricant, and a shield bent away from said revolving element located between one end of the bearing and the revolving element and arranged to maintain a static air pressure between it and said bearing which is substantially equal to that within the latter, thereby preventing said element from sucking air charged with lubricant out of the bearing.

5. In an apparatus of the character described, the combination of relatively rotating elements, a shaft for one of said elements, a bearing supporting the shaft, and a divided shield bent away from said elements, supported by the parts of the bearing and located between it and the revolving element, said shield forming spaces in which the velocity head of the air drawn over said bearing is transformed into a static head to prevent air charged with lubricant from being withdrawn and discharged into and through one of said elements.

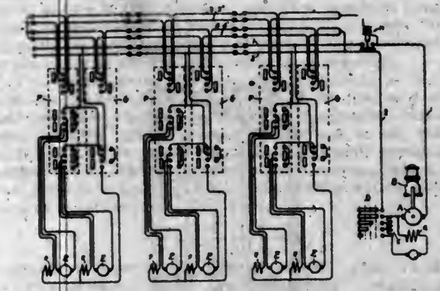
[Claims 6 and 7 not printed in the Gazette.]

1,019,461. MOTOR-CONTROL SYSTEM. MAX R. HANNA, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Sept. 18, 1911. Serial No. 649,862. (Cl. 172—179.)

1. In a motor operated train, a plurality of cars each equipped with driving motors, a source of current on one car for supplying all the motors of the train, independent switches on the several cars located in the motor circuits, and means controlled by each of said switches for controlling the supply of current from said source to all the motors.

2. In a motor operated train, a plurality of cars each equipped with driving motors, a source of current on one car for supplying all the motors of the train, independent means on each car for controlling the motor circuits thereon, and means for preventing the supply of current from the source to all the motors except when the motor circuit connections are the same on all the cars.

3. In a motor operated train, a plurality of cars each equipped with driving motors, a source of current on one car for supplying all the motors of the train, a supply circuit extending through the train to which the motor circuits on the several cars are connected in parallel, independent switches on the several cars included in said motor circuits, a control circuit extending through the train including in series contacts controlled by said independent switches, and means controlled by said control circuit for controlling said supply circuit.

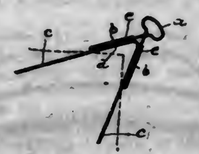


4. In a motor operated train, a plurality of cars each equipped with driving motors, a source of current on one car for supplying all the motors of the train, a supply circuit extending through the train to which the motor circuits on the several cars are connected, independent switches on the several cars included in said motor circuits, and means for preventing the closing of said supply circuit except when all of said switches are in the same position.

5. In a motor operated train, a plurality of cars each equipped with driving motors, a source of current on one car for supplying all the motors of the train, a supply circuit extending through the train to which the motor circuits on the several cars are connected in parallel, a second circuit extending through the train, and independent switches on the several cars included in the motor circuits and having auxiliary contacts, said auxiliary contacts on the several cars being in series in said second circuit.

[Claims 6 to 15 not printed in the Gazette.]

1,019,462. CLIP FOR CORNER-BEADS. MICHAEL A. HANNON, Boston, Mass. Filed Aug. 25, 1906. Serial No. 332,041. (Cl. 72—121.)



1. The combination with a corner bead having divergent sides or wings forming an angular recess, of a bracket having an angular portion extending into said recess, a shank connected to said angular portion, and a clamp on each side of said angular portion to form a V-shaped clip, said clamps engaging the outer faces of said sides and being at an angle to each other, substantially as set forth.

2. The combination with a corner bead having divergent sides or wings forming an angular recess, of a bracket formed of a metallic strip and having an angular portion extending into said recess and engaging the inner faces of said sides, and converging tongues cut from the body of said strip and overlapping the outer faces of said sides so as to clamp said sides against said angular portion.

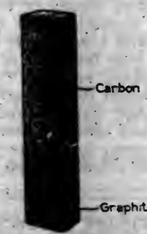
3. A bracket comprising a metallic strip bent to form an angle to project into the angular space between the sides of a corner-bead, converging clamps arranged at an angle to each other for coacting with the angular portion of said bracket to form a V-shaped clip, and a shank extending from the bent portion of said strip substantially as set forth.

4. The combination with a corner bead having an edge bead and divergent sides or wings, of a supplemental holder bracket having a V-shaped clip detachably engaging between and about said divergent sides or wings.

5. A corner bar for walls, comprising a body strip having an edge bead, and divergent wings at one side of the bead, and a supplemental holder bracket having a member detachably engaging between and about said wings.

[Claim 6 not printed in the Gazette.]

1,019,463. CARBON ELECTRODE. CHARLES A. HANSEN, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed July 23, 1909. Serial No. 509,138. (Cl. 204—64.)



1. As an article of manufacture, an electric furnace electrode having a body portion of carbon and a tip of graphite.

2. The method of graphitizing electrodes which consists in arranging them end to end with imperfect contact and passing a current through them so as to cause a greater graphitizing tendency at the contacting ends than at other parts of the electrodes.

1,019,464. ARC-LIGHT ELECTRODE. JOHANNES HARDEN, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Dec. 10, 1903. Serial No. 184,565. (Cl. 176—134.)

1. An arc light electrode containing titanium carbid, ferro-manganese, and carbon.

2. An arc light electrode, containing two parts of titanium carbid, two parts of ferro-manganese, and one part of carbon.

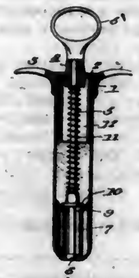
3. An arc light electrode, consisting of forty per cent. of titanium carbid, forty per cent. of ferro-manganese, and twenty per cent. carbon.

1,019,465. MEDICINE-EJECTOR. JAMES J. HARRISON and ALONZO B. CHATFIELD, Jr., Wichita, Kans. Filed Dec. 20, 1911. Serial No. 667,000. (Cl. 128—25.)

1. A medicine ejector comprising a reservoir barrel, a charge barrel, a normally-closed valve between the barrels for preventing medicine from passing from the reservoir to the charge barrel, an injector plunger movable in the charge barrel in one direction to open the valve to permit the medicine to enter the charge barrel and movable in the opposite direction to eject the charge of medicine from the charge barrel.

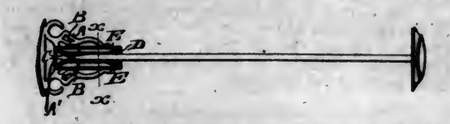
2. A medicine ejector comprising a reservoir barrel, a charge barrel, a seat at the inner end of the charge barrel, a plunger having a head movable longitudinally of the charge barrel and adapted to be withdrawn from the latter into the reservoir barrel to permit a charge of medicine to enter the charge barrel, a self-seating valve normally engaging the seat and arranged to be engaged and opened

by the head of the plunger as the latter is withdrawn into the reservoir barrel and thereby permit medicine to pass into the charge barrel.



3. A medicine ejector comprising a reservoir barrel, a charge barrel arranged at one end thereof and in axial relation thereto, a mouth through which medicine passes from the reservoir to the charge barrel, a plunger in the form of a rod extending axially of the reservoir barrel and having a head movable in the charge barrel and adapted to be withdrawn into the reservoir barrel to permit medicine to pass from the latter to the charge barrel, an annular valve normally seated on the said mouth and through which the plunger rod is freely movable whereby the head on the plunger rod is adapted to engage and unseat the valve as said head is withdrawn into the reservoir barrel, and a spring in the reservoir acting on the valve to hold the same normally seated.

1,019,466. HAT-PIN-POINT PROTECTOR. MORRIS H. HARTZELL, Philadelphia, Pa. Filed Jan. 18, 1911. Serial No. 603,272. (Cl. 24—155.)



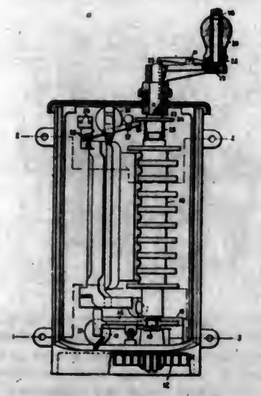
A sleeve having an inturned conical flange at the inlet end thereof, and an axial extension on said flange, resilient jaws within said sleeve having flaring ends fitted between said flange and the wall of said sleeve, said jaws having longitudinal channels merging into said flared ends, and means for closing said jaws at the ends opposite said flange, said means being adapted to form an abutment for the point of the pin, said flaring ends of the jaws bearing against the inner end of the extension and being pressed outwardly thereby.

1,019,467. CONTROLLER FOR ELECTRIC CIRCUITS. HAMMOND C. HASTINGS and WILLIAM L. WISE, Rugby, England, assignors to General Electric Company, a Corporation of New York. Filed Mar. 15, 1909. Serial No. 483,368. (Cl. 172—179.)

1. A controlling device for electric circuits comprising a controlling member biased to an initial position, a no-voltage magnet, means controlled by said magnet for holding the member in operative position, a switch normally independent of the controlling member for deenergizing the magnet, and a device movable with the controlling member for operating the switch in any position of said member.

2. A controlling device for electric circuits comprising a controlling member biased to an initial position and provided with an operating handle, a no-voltage magnet, means controlled by said magnet for holding the member in various operative positions, a switch normally independent of the handle for deenergizing the magnet, and an actuating device mounted upon the handle for closing the switch in any position of the handle.

3. A controlling device for electric circuits comprising a controlling member biased to an initial position, a no-voltage magnet, means controlled by said magnet for holding the member in operative position, a switch normally independent of the controlling member for deenergizing the magnet, a device movable with the controlling member for operating the switch in any position of said member, and an overload magnet for controlling the said switch.



4. A controlling device for electric circuits comprising a controlling member biased to an initial position provided with an operating handle, a no-voltage magnet, means controlled by said magnet for holding the member in various operative positions, a switch normally independent of the handle for deenergizing the magnet, an actuating device mounted upon the handle for closing the switch in any position of the handle, and an overload magnet for controlling the switch.

1,019,468. TIRE-PROTECTOR. RALPH V. HASTINGS, Chicago, Ill. Filed Mar. 8, 1911. Serial No. 613,141. (Cl. 152—16.)

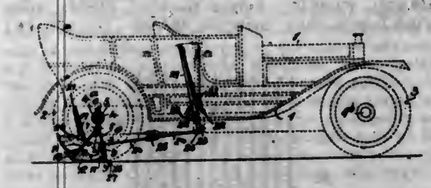


1. A tire protector comprising a flexible body adapted to embrace the tread portion of a tire; resilient pyramidal tread blocks arranged in close proximity with each other upon the outer side of said body; and means for detachably securing said blocks in position upon said body, said means comprising holders for said blocks detachably engaging the latter; and channel-formed base members permanently secured to said body, said block holders slidably and detachably engaging said base members, corresponding ends of said base members being closed to prevent movement of said block holders in one direction, said base members being so arranged that each serves as a means of normally preventing movement of the next adjacent holder in the opposite direction, substantially as described.

2. A tire protector comprising a flexible body adapted for securing upon a tire to embrace the tread portion thereof; resilient rubber pyramidal tread blocks arranged upon the outer side of said body in rows extending longitudinally about the latter; and means for detachably securing said blocks in position upon said body, said means comprising pyramidal holders for said blocks detachably engaging the latter; and channel-formed base members permanently secured to said body, the longitudinal base of said block holders slidably and detachably engaging said base members, corresponding ends of said base members being closed to prevent movement of said block holders in one direction, said base members being arranged end to end so that each serve as a means for normally preventing movement of the next adjacent holder in the opposite direction, substantially as described.

3. A device of the class described comprising a tire; base blocks secured to the periphery of the tire, each of said base blocks being provided at its longitudinal edges with inwardly turned securing flanges and at one end with an upwardly turned stop flange; outwardly tapering holders having side flanges engaging said securing flanges; and outwardly tapering tread blocks fitting within said holders, substantially as described.

1,019,469. COMBINED ANTISKIDDING AND JACK ATTACHMENT FOR AUTOMOBILES. FLORENCE FRANK HEFFERNAN, New York, N. Y. Filed May 20, 1911. Serial No. 628,378. (Cl. 21—8.)



1. A device of the character described, having a part of its external surface containing gripping members to be used as a drag brake, and a triangular portion having a smooth external surface to act as a base for holding a vehicle supported above the ground when desired.

2. A combined brake-shoe and jack formed with a socket at one end and two straight bars extending therefrom in spread apart relation to each other, a curved bar extending between the spread apart ends of the straight bars, the external surface of said curved bar containing gripping members to act as a drag brake, and a triangular portion on one of said straight bars at its lower part, having a smooth external surface and adapted to act as a base for holding a vehicle supported above the ground when desired.

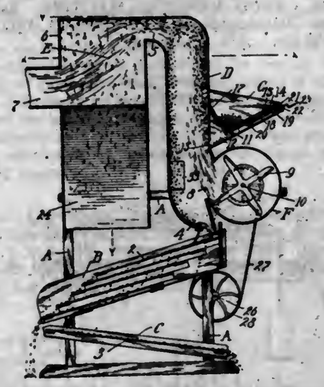
3. In combination with an automobile, an antiskidding device comprising two hangers provided with shoes at their lower ends, clamps secured to the rear axle sleeve of the machine and to which the hangers are pivotally connected, means for normally carrying the hangers elevated from the roadway, a revoluble shaft journaled in bearings on the machine forward of the rear axle, and having two downward projecting arms, one in line with each hanger, rods pivotally connected at one end to the lower ends of said arms and bifurcated at their other ends straddling the forward bars of said hangers, rollers pivoted between the prongs of said rods to the rear of said front bars of the hangers and riding thereon and a hand lever secured to one end of said shaft, whereby the tilting of said lever in a backward direction will draw the shoes on said hangers into contact with the roadway.

4. In combination with an automobile, an antiskidding device comprising two hangers provided with shoes and jacks at their lower ends, clamps secured to the rear axle sleeve of the vehicle and to which the hangers are pivotally connected, springs, one end of each of which is connected to the rear bars of the hangers and their other ends connected to the bottom of the vehicle, whereby the hangers are normally carried elevated from the roadway, a revoluble shaft journaled in bearings on the vehicle forward of the rear axle and having two downwardly projecting arms, one in line with each hanger, rods pivotally connected at one end to the lower ends of said arms and bifurcated at their other ends straddling the front bars of said hangers, rollers pivoted between the prongs of said rods to the rear of said front bars of the hangers and riding thereon, and a hand lever secured to one end of said shaft, whereby the tilting of said lever in a backward direction will draw the shoes on said hangers into contact with the roadway.

5. In combination with an automobile, an antiskidding device comprising two hangers provided with shoes at their lower ends, said shoes being provided with a plurality of removable grippers, clamps secured to the rear axle sleeve of the vehicle and to which the hangers are pivotally connected, springs, one end of each of which is connected to the rear bars of the hangers and their other ends connected to the bottom of the vehicle whereby the hangers are normally carried elevated from the roadway, a revoluble shaft journaled in bearings on the vehicle forward of the rear axle and having two downwardly projecting arms, one in line with each hanger, rods pivotally connected at one end to the lower ends of said arms and bifurcated at their other ends to straddle the front bars of said hangers, rollers pivoted between the prongs of said rods to the rear of said front bars of the hangers and riding thereon, a hand lever secured to one end of said shaft, whereby the tilting of said lever in a backward direction will draw the shoes on said hangers into contact with the roadway, and means for locking said lever in position.

[Claims 6 and 7 not printed in the Gazette.]

1,019,470. GRAIN-CLEANER. THOMAS O. HELGERSON, Minneapolis, Minn., assignor of one-half to Fosston Manufacturing Company, St. Paul, Minn., a Corporation of Minnesota. Filed Sept. 29, 1908. Serial No. 455,258. (Cl. 130—17.)



In a grain cleaner, the combination, with the screens, of a refuse chamber and a wind trunk arranged side by side, the wind trunk extending upwardly from the screens and terminating in an elbow leading into the refuse chamber, and the refuse chamber having on the opposite side a baffle wall opposed to the elbow outlet and a discharge flue positioned lower down than the elbow, an inclined chute extending across the chamber and leading to the bottom thereof for the discharge of refuse, a blower in position to send an air blast up through the wind trunk, and means for supplying grain to the wind trunk above the blower, the wind trunk having a grain outlet above the screens.

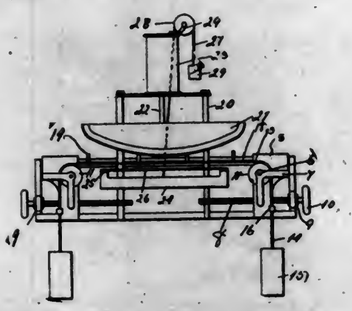
1,019,471. SHIPPING-CASE. KARL I. HERMAN, Chicago, Ill. Filed Nov. 16, 1911. Serial No. 660,660. (Cl. 229—23.)



1. A shipping case comprising a sheet of material having a center panel and four outer panels, the outer panels being bent up to form the ends and sides of a container and being provided with securing flaps at the outer edges arranged to extend diagonally outward; a second sheet of material having a center panel and four outer panels, the outer panels being bent up to form the ends and sides of a cover and being provided with securing flaps similar to the securing flaps of the container and adapted to lie adjacent thereto; and means for finally securing the flaps of the container and the casing together, thereby to seal the case, for the purposes set forth.

2. A shipping case comprising a sheet of material having a center panel and four outer panels, the outer panels being bent up to form the ends and sides of a container and being provided with securing flaps at the outer edges arranged to extend diagonally outward; a second sheet of material having a center panel and four outer panels, the outer panels being bent up to form the ends and sides of a cover and being provided with securing flaps similar to the securing flaps of the container and adapted to lie adjacent thereto; means for finally securing the flaps of the container and the casing together thereby to seal the case; and a sealing cord passing through the flaps of the container and the casing.

1,019,472. WOOD-BENDING MACHINE. JACOB W. HILGER, Philadelphia, Pa. Filed May 31, 1911. Serial No. 630,358. (Cl. 144—256.)



1. In combination, a frame, horizontally sliding brackets carried by said frame, manually operated means carried by the frame for causing the sliding of said brackets, wheels journaled on said brackets, a belt running over said wheels, weights carried by the ends of said belt, and a form slidably mounted above the belt.

2. A wood bending machine consisting of a frame, horizontally sliding brackets adjustably mounted upon said frame, manually operated means carried by the frame for causing sliding of said brackets, a shaft mounted in each of said brackets, a groove pulley journaled upon each of said shafts a belt passing over said pulleys, a weight carried by each end of said belt, a metallic belt mounted upon the first named belt, and a form slidably mounted above the belts.

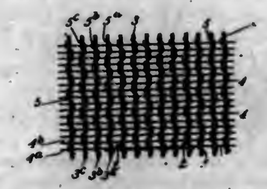
3. In a belt for a wood bending machine of the class described, a canvas belt, a steel belt secured to a portion of the canvas belt, and L-shaped guides mounted between the belts and extending beyond the outer face of the metallic belt.

4. In a wood bending machine, the combination of a frame, a pair of brackets slidably mounted thereon, braces secured to said brackets, shafts, the ends thereof being mounted in the brackets and braces, a pulley provided with flanges mounted upon each of said shafts, a belt carrying guides passing over the pulleys, weights carried by the ends of said belt, and a form slidably mounted above the belt.

5. In a wood bending machine, the combination of a frame, a pair of brackets slidably mounted thereon, braces secured to said brackets, shafts, the ends thereof being mounted in the brackets and braces, a pulley provided with flanges mounted upon each of said shafts, screw rods journaled in the frame and passing through the brackets for adjusting said brackets, a canvas belt passing over the pulleys, a cable fastened to each end of the belt, weights secured to the ends of the cables, notched guides carried by the brackets through which the cables pass, a metallic belt mounted upon the canvas belt, L-shaped guides mounted between the canvas belt and the metallic belt, the ends of said guides extending beyond the outer face of the metallic belt, and a form slidably mounted above the belts.

[Claims 6 and 7 not printed in the Gazette.]

1,019,473. FABRIC. ALFRED HOPKINS, Chelsea, Mass. Filed July 15, 1911. Serial No. 638,600. (Cl. 139—70.)



1. A fabric, having, in combination, a plurality of warp threads, a plurality of weft threads extending transversely of said warp threads and a plurality of binding threads, each of said binding threads extending alternately over one of said warp threads and under two of said weft threads, the binding thread extending over one of said warp threads passing between a pair of weft threads, and the binding thread passing over the warp threads contiguous to said warp thread passing under said pair of weft threads.

2. A fabric having, in combination, a plurality of elastic warp threads, a plurality of non-elastic weft threads extending transversely of said warp threads and entirely on one side thereof, and a plurality of binding threads, each of said binding threads extending alternately over one of said warp threads and under two of said weft threads, the binding thread extending over any one of said warp threads passing between a pair of weft threads, and the binding threads passing over the warp threads contiguous to said warp thread passing under said pair of weft threads.

1,019,474. CURTAIN-POLE FIXTURE. JEREMIAH J. HOULAHEN, Etna, Pa. Filed Aug. 30, 1911. Serial No. 646,802. (Cl. 156—19.)



1. A curtain pole fixture comprising a cylindrical casing having a longitudinal slot formed therein and adapted to surround a pair of curtain poles, caps arranged upon the outer ends of said casing and provided with means for the reception of the outer ends of the poles for supporting said ends, and a coupling member arranged within said casing for the reception of the inner ends of the curtain poles and in connection with said means supporting said poles centrally with respect to said casing, said caps inclosing the outer ends of said poles.

2. A curtain pole fixture comprising a cylindrical casing having a longitudinal slot formed therein and adapted to surround a pair of curtain poles, caps arranged upon the outer ends of said casing and provided with means for the reception of the outer ends of the poles for supporting said ends, funnel-shaped portions carried by said caps and extending into the ends of said casing to brace the walls thereof, and means arranged in said casing for the reception of the confronting ends of curtain poles and in connection with said means supporting said poles centrally with respect to said casing, said caps inclosing the outer ends of the poles.

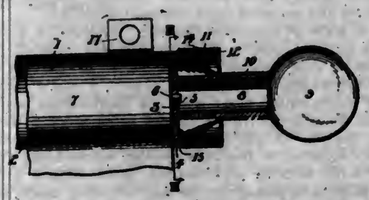
3. In a curtain pole fixture, the combination with a pair of curtain poles extending in the same longitudinal plane, of a casing inclosing said poles, said poles projecting from the ends of said casing, caps mounted upon the ends of said casing and having means projecting therefrom for supporting the outer ends of said poles, and a double coupling member arranged within said casing for the reception of the inner ends of said poles and in connection with said means supporting the poles centrally with respect to said casing.

4. In a curtain pole fixture, the combination with a pair of poles extending in the same longitudinal plane, of a casing inclosing said poles, said poles projecting from the ends of said casing, caps carried by the ends of said casing and having means projecting therefrom for supporting the outer ends of said poles, funnel-shaped portions carried by said caps for bracing the walls of said casing, and a double conical-shaped coupling member arranged in said casing for the reception of the confronting ends of said poles and in connection with said means supporting said poles centrally with respect to said casing, said means inclosing the outer ends of said poles.

5. In a curtain pole fixture, the combination with a pair of poles extending in the same longitudinal plane, of a casing inclosing said poles, said poles projecting from the ends of said casing, caps carried by the ends of said casing and having means projecting therefrom for supporting the outer ends of said poles, funnel-shaped portions carried by said caps for bracing the walls of said casing, a double conical-shaped coupling member arranged in said casing for the reception of the confronting ends of said poles and in connection with said means supporting said poles centrally with respect to said casing, said means inclosing the outer ends of said poles.

[Claim 6 not printed in the Gazette.]

1,019,475. CURTAIN-SHADE-ROLLER FIXTURE. JEREMIAH J. HOULAHEN, Etna, Pa. Filed Aug. 30, 1911. Serial No. 646,803. (Cl. 156—23.)



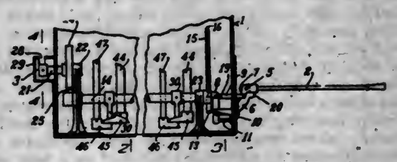
1. A curtain shade roller fixture comprising a cylindrical casing having a longitudinal slot formed therein extending from one end of said casing to the opposite end, heads arranged within and spaced from the ends of said casing capable of supporting the pintles of a curtain shade roller, tubular stems carried by the outer sides of said heads and projecting beyond the ends of said casing, ornamental caps detachably mounted upon the projecting ends of said stems and detachably connected to the ends of said casing, funnel-shaped members carried by said caps and supporting said heads concentrically of said casing, said members forming stops to arrest the outward movement of said heads.

3. A curtain shade roller fixture comprising a cylindrical casing having a longitudinal slot formed therein extending from one end of said casing to the opposite end, heads arranged within and spaced from the ends of said casing capable of supporting the pintles of a curtain shade roller, lugs carried by the heads and engaging in the slot of the casing to prevent rotative movement of the heads, tubular stems carried by the outer sides of said heads, ornamental caps detachably mounted upon said stems and detachably connected to the ends of said casing, funnel-shaped members carried by said caps and supporting said heads concentrically of said casing, said members in connection with said caps arresting outward movement of the heads, clasps arranged at the ends of said casing, and clasps arranged intermediate the ends of said casing.

4. A curtain shade roller fixture comprising a cylindrical casing having a longitudinal slot formed therein, heads arranged in the ends of said casing and provided with lugs extending into said slot, said heads having openings formed therein adapted to receive the pintles of a curtain shade roller, tubular stems carried by the outer sides of said heads, caps detachably mounted upon the ends of said casing and supporting said heads concentrically of said casing, and further constituting means to prevent outward movement of the heads.

5. A curtain shade roller fixture comprising a casing having a slot formed therein extending from one end of said casing to the opposite end, heads arranged in the ends of said casing and adapted to support the pintles of a curtain shade roller, lugs carried by said heads and extending into the slot of said casing to prevent rotative movement of the heads, tubular stems carried by the outer sides of said heads, ornamental caps arranged upon said stems and having funnel-shaped members supporting said heads concentrically of said casing, said caps preventing outward movement of said heads, and clasps mounted upon said casing.

1,019,476. LOCKING DEVICE FOR REGISTERING MECHANISMS. GUSTAF JOHNSON, Pigeon Cove, Mass., assignor to Carl E. Hjarne, Beverly, Mass. Filed Aug. 12, 1905, Serial No. 273,913. Renewed Jan. 5, 1912. Serial No. 669,721. (Cl. 235—55.)



1. In a locking device, the combination of a shaft provided with means to engage and prevent any movement of the operative parts of a registering or similar machine, when said shaft is in a locked position, a transverse camfinger on said shaft, a hook adapted to engage said camfinger and lock said shaft, means to rotate said shaft to release said operative parts, and means to return said shaft to a locked position.

2. In a locking device for mechanisms, the combination of a shaft provided with means to engage and to lock the

operative parts of a given mechanism, a transverse cam-finger on said shaft, a hook, adapted to engage said cam-finger and lock said shaft, operating means connected to said hook, a spring attached to said cam-finger, a finger mounted on said shaft, a cam-lever adapted to engage said finger to return said shaft to a locked position and a locking-lever operatively connected to said cam-lever.

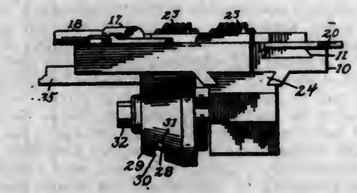
3. In a locking device, the combination of a shaft provided with a plurality of transverse members adapted to engage the operating parts of a machine, means to lock said shaft in a position where the said operating parts will be locked, means to unlock said shaft, means to rotate said shaft to release said operative parts, a finger mounted on said shaft, a cam-lever adapted to engage said finger to return said shaft to a locked position and a locking-lever operatively connected to said cam-lever.

4. In a locking device for registering and similar machines, the combination of a shaft provided with a plurality of transverse members adapted to engage and lock the operative parts of the machine, means to unlock said shaft, means to rotate said shaft when unlocked to release said operative parts, a finger mounted on said shaft, a cam-lever adapted to engage said finger to return said shaft to a locked position and means to operate said cam-lever.

5. In a locking device, the combination of a shaft provided with a plurality of transverse members adapted to engage and to lock the operative parts of a given mechanism, means to lock said shaft when it is in a position to lock said operative parts, means to unlock said shaft, a lever to control said unlocking means, means to operate said shaft when unlocked to release said operative parts, means to return said shaft to a locked position and a lever to operate said returning means.

[Claims 6 to 11 not printed in the Gazette.]

1,019,477. CUTTING-OFF TOOL. NELS A. JOHNSON, Jamestown, N. Y. Filed May 26, 1911. Serial No. 629,600. (Cl. 82—25.)



1. A cutting-off tool comprising oppositely placed slides, connecting toggle links pivotally attached to said slides to simultaneously operate the same, and means on said slides for holding oppositely placed cutting tools.

2. A cutting-off tool comprising a supporting plate, plates slidably mounted on said supporting plate, toggle links pivotally connecting said slidably mounted plates, a lever attached to one of said links for simultaneously actuating said links and slide plates, and means for holding oppositely placed cutters on said slide plates.

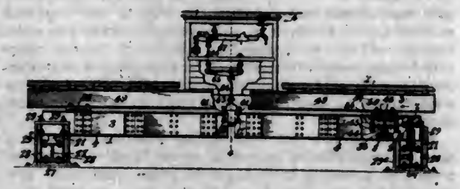
3. A cutting-off tool comprising a base plate having parallel dove-tail-shape grooves therein, slide-plates slidably mounted in said grooves, toggle links connecting said slide-plates, a lever attached to one of said toggle links for manually operating said slide-plates, means for clamping oppositely placed cutting tools upon said slide-plates, coil springs attached to said slide-plates and said base plate to return said slide-plates to normal position when released from manual pressure, and a bar attached to said base plate for manually controlling the same.

4. A cutting-off tool comprising a base plate having an opening in the side thereof to receive the bar to be cut off, oppositely placed cutting tools on said base plate, means for supporting said base on said bar to be cut off, and means for simultaneously moving said cutters toward one another on said base to cut on opposite sides of said bar.

5. A cutting-off tool comprising a base plate having an opening therein to receive the bar to be cut off, jaws slidably mounted on one side of said plate for clamping said bar to be cut off, means for operating said jaws, and cutters on said base plate having means for actuating the same to cut the bar.

[Claims 6 to 9 not printed in the Gazette.]

1,019,478. RAILROAD TRACK-SCALE. ALFRED JAMES JONES, New Orleans, La. Filed July 11, 1911. Serial No. 637,930. (Cl. 73—121.)



1. A scale of the class described including a platform, a pair of platform levers located beneath the platform and extending from the outer ends thereof to the center of the scale and provided at their inner ends with fixed point pivots, fulcrum and bearing pivots secured to the outer portions of the platform levers and having a preliminary adjustment through their fastening means, which rigidly and permanently secure the said pivots to the platform levers after such preliminary adjustment, bearing stands receiving the fulcrum pivots of the levers, and bearings supporting the platform and mounted upon the bearing pivots of the levers.

2. A scale of the class described including a platform, platform levers located beneath the platform and extending from the outer ends thereof to the central portion of the scale, fulcrum pivot holders arranged at the outer ends of the levers, bearing pivot holders arranged at points intermediate of the ends of the levers, fastening means securing the said holders to the levers and permitting a preliminary adjustment of the same and rigidly securing the holders in their adjustment, fulcrum and bearing pivots carried by the said holders, bearing stands receiving the fulcrum pivots, platform bearings supporting the platform and mounted upon the bearing pivots, a weighing beam, and means for connecting the inner ends of the levers with the weighing beam.

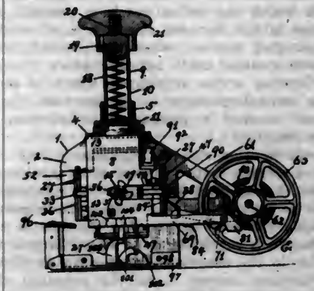
3. A scale of the class described including a platform, levers located beneath the platform and extending from the outer ends thereof to the center of the scale and each comprising a longitudinal beam, a brace connected at an intermediate point with the longitudinal beam and having its outer portion arranged in parallelism with the outer portion of the beam, inner and outer transverse struts connected to the outer portion of the brace and the said beam, fulcrum and bearing pivots adjustably mounted on the said struts, bearing stands receiving the fulcrum pivots, and platform bearings supporting the platform and mounted upon the bearing pivots.

4. A scale of the class described including a platform, levers located beneath the platform and extending from the outer ends thereof to the center of the scale and each comprising a longitudinal beam, a brace connected at an intermediate point with the longitudinal beam and having its outer portion arranged in parallelism with the outer portion of the beam, inner and outer transverse struts connected to the outer portion of the brace and the said beam, fulcrum and bearing pivot holders provided with slots or openings and having fastening means operating in the slots or openings and adjustably securing the pivot holders to the said struts, fulcrum and bearing pivots carried by the said holders, bearing stands receiving the fulcrum pivots, and platform bearings supporting the platform and mounted upon the bearing pivots.

5. A scale of the class described including a platform, levers located beneath the platform and extending from the outer ends thereof to the center of the scale, and each comprising a longitudinal beam, a brace secured to the beam at a point intermediate of the ends threof and having an outer portion arranged in parallelism with and spaced from the outer portion of the beam, a transverse beam extending laterally from the inner end of each longitudinal beam, inner longitudinally disposed terminals carried by the transverse beams, inner and outer transverse struts connecting the brace and the longitudinal beam, fulcrum pivots secured to the outer struts, bearing pivots mounted upon the inner struts, bearing stands receiving the fulcrum pivots, and platform bearings supporting the platform and mounted upon the bearing pivots.

[Claims 6 to 25 not printed in the Gazette.]

1,019,479. STAMP OR LABEL AFFIXING MACHINE. EDWARD R. JONES, Baltimore, Md. Filed Nov. 27, 1911. Serial No. 662,549. (Cl. 216—22.)



1. The combination with an outer frame, of an inner frame movable vertically in said outer frame; a platen carrier mounted on the inner frame and having a plurality of platens thereon; means for partially rotating the platen carrier as the inner frame is moved in a vertical direction and means for feeding a stamp to one platen at a time at each rotation.

2. The combination with an outer frame, of an inner frame movable vertically in said outer frame; a platen carrier rotatably mounted in the inner frame and movable vertically therewith and having a plurality of platens; clamp devices for each platen on the carrier; means for partially rotating the platen carrier as the inner frame is moved in a vertical direction and means for feeding stamps to the platens.

3. The combination with an outer frame, of an inner frame movable vertically in said outer frame; a platen carrier rotatably mounted in the inner frame and having a plurality of platens; means for partially rotating the carrier; a roll containing a strip; means for guiding the strip toward the path through which the platens rotate; means movable with each platen for clamping the strip against the latter and means for cutting the strip between two platens.

4. The combination with an outer frame, of an inner frame movable vertically in said outer frame; a platen carrier rotatably mounted in the inner frame and having a plurality of platens; means for partially rotating the carrier; a roll containing a strip; means for guiding the strip toward the path through which the platens rotate; means movable with each platen for clamping the strip against the latter; cutters carried by the outer frame and a cutter at one end of each platen whereby the vertical movement of the inner frame and platen carrier will bring the cutters and strips together and cut the latter.

5. The combination with an outer frame, of an inner frame movable vertically in said outer frame; a platen carrier rotatably mounted in the inner frame and having a plurality of platens; means for partially rotating the carrier; a roll containing a strip; cutters carried by the outer frame; a cutter movable with each plate; a movable strip guide to coact with the platens in succession and means for moving the said guide to present the strip to one platen after it has been cut from that portion left on the platen in advance.

[Claims 6 to 14 not printed in the Gazette.]

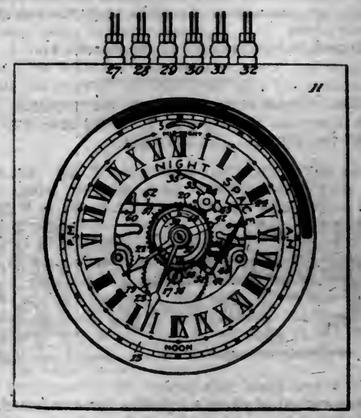
1,019,480. SHAVING-BRUSH. EDWARD S. JONES, Columbus, Ind., assignor of one-half to Columbus Realty Company, Columbus, Ind., a Corporation. Filed Nov. 4, 1910. Serial No. 590,688. (Cl. 15—38.)



1. A shaving brush having a hollow handle closed at one end adapted to receive a solid antiseptic body and open at the other end, and a spring entirely within said handle for holding said antiseptic body therein and away from said opening.

2. A shaving brush having a hollow handle open at one end, and a pair of oppositely positioned spring loops secured within the handle and projecting therein toward the open end and adapted to hold antiseptic material between them, away from the opening and the wall of the hollow handle.

1,019,481. BURGLAR-ALARM SYSTEM. MAXIMILIAN F. JURUICK, New York, N. Y., assignor, by mesne assignments to Electric Bank Protection Company, a Corporation of Delaware. Filed June 20, 1908. Serial No. 439,611. (Cl. 161—2.)



1. In a burglar alarm system, a clock, an alarm signal, a circuit including said clock and signal and adapted to be acted upon by a burglar and operate said signal, means whereby said circuit is thrown out of operation during a predetermined portion of each day, and a supplementary emergency clock included in said circuit and operatable independent of said first clock to retain the circuit in operation for a period longer than the control of said first clock.

2. In an alarm system, an alarm signal, a clock, a circuit including said signal and said clock and adapted to be operated upon by a burglar and operate said signal, means whereby said clock prevents the operation of said signal during a predetermined portion of each twenty-four hours, and a supplementary emergency clock included in said circuit and operatable to retain the circuit in operation for a predetermined number of hours independent of the period of control of said first clock.

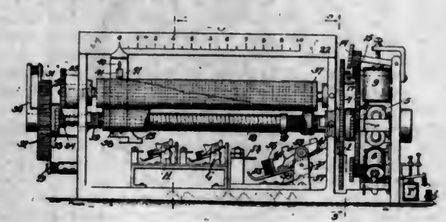
3. In an alarm system, an alarm signal, a clock, a circuit including said signal and said clock adapted to be operated upon by a burglar and operate said signal, means whereby said clock prevents the operation of said signal during a predetermined portion of each twenty-four hours, and a supplementary emergency clock included in said circuit and operatable independent of said first clock to retain the circuit in operation for a period longer than the twenty-four hour control of said first clock.

4. In a burglar-alarm system, an alarm circuit including an automatic circuit breaker and terminals adapted to be brought into contact to close the circuit upon interference by a burglar, a shunt in parallel with said terminals and said circuit breaker and including an alarm signal and a switch adapted to be closed upon the operation of said circuit breaker, and means whereby said shunt is closed independently of said switch to operate said signal and indicate the time of day, said means comprising a cam wheel, a brush bearing on the periphery thereof, and switches upon opposite sides of said brush and adapted to be alternately brought into contact therewith upon the rotation of the cam wheel.

5. In a burglar-alarm system, an alarm circuit including an automatic circuit breaker and terminals adapted to be brought into contact to close the circuit upon interference by a burglar, a shunt in parallel with said terminals and said circuit breaker and including an alarm signal and a switch adapted to be closed upon the operation of said circuit breaker, a clock for breaking said circuit independently of said terminals during a predetermined portion of the day, means whereby said clock closes said circuit to give a warning at a predetermined time prior to the expiration of said portion of the day, and means whereby said shunt is closed independently of said switch to operate said signal and indicate the time of day, said last named means comprising a rotating cam wheel, a brush in engagement with the periphery of said wheel, and switches upon opposite sides of said brush and adapted to be alternately brought into engagement therewith upon the rotation of said cam wheel.

[Claims 6 to 9 not printed in the Gazette.]

1,019,482. CHARGING STORAGE BATTERIES. PATRICK KENNEDY, Brooklyn, N. Y. Filed Mar. 17, 1908. Serial No. 421,662. (Cl. 171—314.)



1. The method of charging storage batteries which consists in supplying a charging current to the storage battery for a predetermined number of ampere hours regardless of the electromotive force of the battery, and thereafter causing a predetermined maximum potential difference across the battery terminals to discontinue the charging current, substantially as described.

2. The method of charging storage batteries, which consists in supplying a charging current of substantially constant value to the storage battery for a predetermined number of ampere hours regardless of the electromotive force of the battery, and thereafter causing a predetermined maximum potential difference across the battery terminals to discontinue the charging current, substantially as described.

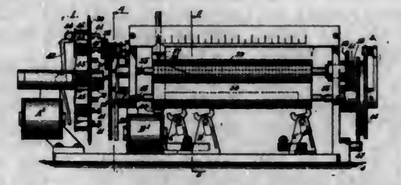
3. In a train-lighting system, a generator driven from the car axle, a storage battery connected to said generator to be charged thereby, and mechanism for regulating the generator to a constant-current output, in combination with a controlling device in said circuit which discontinues the charging current when the potential thereof reaches a predetermined limit, and mechanism for rendering the controlling device inoperative until the battery has been charged to a predetermined number of ampere-hours; substantially as described.

4. In a train-lighting system, a generator driven from the car axle, a storage battery connected to said generator to be charged thereby, and mechanism for regulating the generator to a constant-current output, in combination with a movable indicator for showing the number of ampere-hours to which the batter has been charged, a controlling device in the charging circuit adapted to discontinue the charging current when the potential thereof reaches a predetermined limit, and mechanism for rendering the controlling device inoperative which is actuated to allow the controlling device to operate when the movable indicator reaches a predetermined position; substantially as described.

5. In a train-lighting system, a generator driven from the car axle, a storage battery connected to said generator to be charged thereby, and mechanism for regulating the generator to a constant-current output, in combination with a movable indicator for showing the number of ampere-hours to which the battery has been charged, a controlling device in the charging circuit adapted to discontinue the charging current when the potential thereof reaches a predetermined limit, mechanism for rendering the controlling device inoperative which is actuated to allow the controlling device to operate when the movable indicator reaches a predetermined position; and a device for making a permanent record associated with the indicator; substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

1,019,483. ELECTRIC-CURRENT-SUPPLY SYSTEM. PATRICK KENNEDY, New York, N. Y. Filed Oct. 26, 1908. Serial No. 459,485. (Cl. 171—313.)



1. In an electric current-supply system, a generator, a supply circuit extending therefrom and containing translating devices, a storage battery shunted across said circuit, and a potential-operated circuit-breaker in the circuit between the storage-battery and the generator and set to open the circuit when the generated electromotive force falls below a predetermined point and to close the circuit when the generated electromotive force rises to that point, in combination with a switch between the storage battery shunt and the translating devices and having contacts for opening and closing the translating device circuit, a shunt about said contacts, and mechanism for actuating the said switch contacts excited by the current which flows through said shunt when the supply circuit is completed through any translating device.

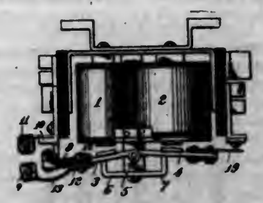
2. In an electric current-supply system, a supply circuit containing translating devices, an intermittently operated generator in said circuit, a storage battery shunted across said circuit, a current-operated regulator for the generator, a motor constituting an operative part of said regulator, a switch controlling the flow of current to the translating devices, and connections controlled by said switch for exciting the regulator motor from the generator circuit when no current is flowing to the translating devices and from the battery circuit when current is flowing to the translating devices.

3. In a current-distribution system, a generator, a supply circuit extending therefrom and containing translating devices, a storage battery connected across the circuit, a switch excited by the current flowing to the translating devices to open and close the supply circuit, a device for indicating the charge in the storage battery, and a switch controlled by the indicating device to prevent the closing of the supply-circuit switch when the battery charge is below a predetermined minimum.

4. In a current-distribution system, a supply circuit containing a generator and translating devices, a storage-battery connected across the circuit, and a device for indicating the charge in the storage battery comprising an indicator, means controlled by the current flowing to the storage battery to move the indicator in one direction, and a magnet in series with the translating devices and excited by the current flowing to said devices to effect the movement of the indicator in the opposite direction.

5. In a current-distribution system, a supply circuit containing a generator and translating devices, a storage battery connected across the circuit, and a device for indicating the charge in the storage battery comprising an indicator, means controlled by the current flowing to the storage battery to move the indicator in one direction, a plurality of devices arranged to move the indicator in the opposite direction, and a magnet in series with the translating devices for actuating a progressively increasing number of said plurality of indicator moving devices as the strength of the current increases.

1,019,484. ELECTRIC SWITCH. PATRICK KENNEDY, New York, N. Y. Filed Oct. 26, 1908, Serial No. 459,484. Renewed Dec. 6, 1911. Serial No. 664,278. (Cl. 175—281.)

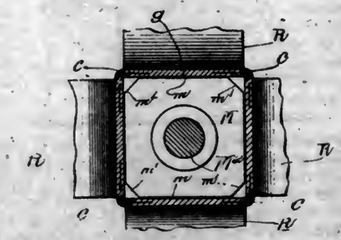


1. A switch for electric current-supply circuits, comprising main terminals and coöperating contacts controlling the main circuit, a shunt about said terminals including a magnet, a supplemental circuit controlled by said magnet, mechanism included in said supplemental circuit for controlling said main contacts, and an exciting coil on said first-named magnet included in series with the main circuit.

2. A switch for electric-supply circuits, comprising a magnet, a lever arm controlled by said magnet and carrying a contact plate, main circuit terminals coöperating with said contact plate, a second magnet, a lever arm controlled by the second magnet and carrying a second contact plate, supplemental terminals coöperating with the second contact plate, a coil on the second magnet shunted across the main circuit terminals, a second coil on the second magnet in series with the main circuit, and a coil on the first magnet the circuit of which is controlled by the second contact terminals and the second terminal plate.

3. A switch for electric-supply circuits, comprising a magnet, a lever arm controlled by said magnet and carrying a contact plate, main circuit terminals coöperating with said contact plate, a second magnet, a lever arm controlled by the second magnet and carrying a second contact plate, supplemental terminals coöperating with the second contact plate, a coil on the second magnet shunted across the main circuit terminals, a second coil on the second magnet in series with the main circuit, a coil on the first magnet the circuit of which is controlled by the second contact terminals and the second terminal plate, another contact plate on one of said lever arms, and circuit terminals coöperating with the last named contact plate in the opened or the closed position of the last named lever arm.

1,019,485. BUTT-SEAMED METAL TUBE AND METHOD OF MAKING THE SAME. ROBERT KOENIG, Brooklyn, N. Y., assignor to Phenix Tube Company, Brooklyn, N. Y., a Corporation of New Jersey. Filed July 27, 1910. Serial No. 574,076. (Cl. 80—11.)



1. The method of making butt-seamed tubes, which consists in bending a sheet of metal into tubular form and then producing in the sheet a permanent peripherally contractile internal strain.

2. The method of making butt-seamed tubes, which consists in bending a metal sheet into prismatic tubular form and producing in the metal of the sheet at the salient angles of the prism a permanent, internal, compressive strain.

3. The method of making butt-seamed prismatic metal tubes, which consists in bending a strip of metal into the desired tubular form, and compressing the metal at the sides of the prism causing internal flow toward the salient angles sufficient to produce at said angles a condition of permanent internal compressive strain.

4. A tube consisting of a sheet of metal bent in prismatic form with edges in one of the faces of the prism abutting under mutual pressure.

5. A tube consisting of a bent sheet of metal in prismatic form with abutting edges on one of the faces of the prism, the material of which the sheet is composed being under permanent internal compressive strain at the salient angles of the prism.

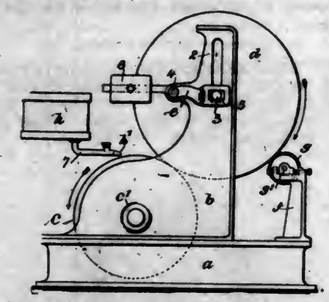
1,019,486. MACHINE FOR MANUFACTURING SHEETS, BOARDS, TUBES, AND OTHER ARTICLES FROM PULP. AUGUST R. KOLB, Pelham, N. Y. Filed Sept. 1, 1910, Serial No. 580,004. Renewed July 31, 1911. Serial No. 641,660. (Cl. 92—67.)

1. In a machine for making pulp board and in combination, a mold or pulp cylinder, means for supplying pulp to the surface thereof, a winding roll running in juxtaposition to said roll or pulp cylinder and means for slightly raising or disturbing the fibers of the layer of pulp on the winding roll so that the same may better felt with the superimposed layer.

2. In a machine for making pulp board and in combination, a mold or pulp cylinder, a device for holding pulp and means for applying said pulp to the surface of the movable pulp cylinder, a winding roll, the surface of which runs in juxtaposition to that of the mold or pulp cylinder, and a brush roll, the surface of which also runs in juxtaposition to the surface of the winding roll.

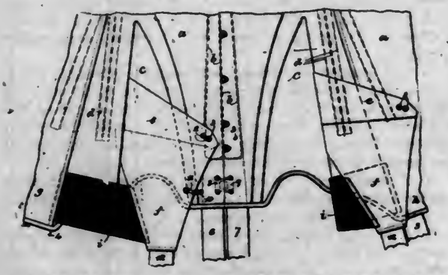
3. In a machine for making pulp board and in combination, a mold or pulp cylinder, a device for holding pulp and means for applying said pulp to the surface of the movable pulp cylinder, a winding roll, the surface of which runs

in juxtaposition to that of the mold or pulp cylinder, means for substantially balancing the winding roll so as to cause the same to maintain the same relation to the mold or pulp cylinder with the successive superimposed layers of pulp, and a brush roll having a surface also running in juxtaposition to the surface of the winding roll for acting upon fibers of the layer of pulp prior to an additional layer being superimposed thereon.



4. In a machine for making pulp board and in combination, a mold or pulp cylinder, means for supplying pulp to the surface thereof, a winding roll running in juxtaposition to said roll or pulp cylinder and means for slightly raising or disturbing the fibers of the layer of pulp so that the same may better felt with the superimposed layer.

1,019,487. APPAREL-CORSET. DANIEL KOPS, New York, N. Y. Filed Nov. 29, 1910. Serial No. 594,653. (Cl. 2—73.)



1. An apparel corset combining with each stiffened fabric body half, flexible fabric portions below the steels and means for connecting the same together, skirts below the stiffened body halves around the thighs, flexible fabric members depending from the front of the corset body, elastic fabric members secured at upright edges to the lower front corners of the skirts and to the nearer edges of the depending fabric members and means for connecting said depending fabric members to the front of the corset.

2. In an apparel corset, the combination with the stiffened fabric body halves and flexible skirt extensions below the stiffened body, of elastic webbing members secured at upright edges to the lower front corners of said skirt extensions, and flexible tapering fabric members depending from the front of the corset body and at their lower narrower ends secured to the free ends of said elastic webbing members, and devices for producing a downward tension on said parts.

3. In an apparel corset, the combination with the fabric body halves, skirt extensions from the lower edges thereof and inclined tapering straps at the front, of prolongations of said inclined tapering straps and means for connecting said prolongations adjustably to the lower front portions of the corset below the steels, and elastic webbing members interposed between the skirt extensions of the corset and the prolongations of the said inclined tapering straps and at their ends secured to said parts and adapted for applying tension in use over the thighs of the wearer, and devices for producing a downward tension on both the extensions and prolongations.

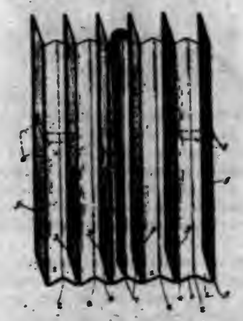
4. An apparel corset combining with each stiffened fabric body half, flexible fabric portions below the steels and means for connecting the same together, skirts below the stiffened body halves around the thighs, flexible fabric members depending from the front of the corset body, elastic fabric members secured at upright edges to the lower front corners of the skirts and to the nearer edges of the depending fabric members and means for connecting said depending fabric members to the front of the corset at the steels and other means for connecting the same to the flexible parts below the steels in the horizontal line of tension of the elastic fabric members.

1,019,488. VALVE FOR EXPLOSION-ENGINES. ARTHUR CONSTANTIN KREBS, Paris, France, assignor to Société Anonyme des Anciens Etablissements Panhard & Levassor, Paris, France. Filed June 15, 1910. Serial No. 566,983. (Cl. 123—79.)



In an explosive engine, the combination with concentrically disposed intake and exhaust valves having slidably associated stems, of a lever operating on one of the stems to move its valve to open position, and another lever mounted on said stem and engaging the first mentioned lever and the stem of the other valve to transmit motion from said first mentioned lever to said other valve.

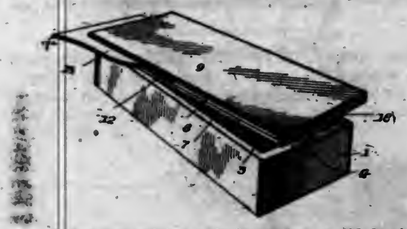
1,019,489. TIE-HOLDER. EMIL A. KREVIS, Chicago, Ill. Filed May 17, 1911. Serial No. 627,680. (Cl. 211—28.)



1. A device of the class described comprising a series of elongated parallel compartments formed from an elongated rectangular blank scored transversely, the partitions between the compartments being double-walled and formed by bending said blank along the scores thereof, and metallic reinforcing clips provided on the exterior walls of the outermost compartments, substantially as described.

2. A device of the class described comprising a series of elongated parallel compartments formed from an elongated rectangular paper blank scored transversely, the partitions between the compartments being double-walled and formed by bending said blank along the scores thereof, the walls of said partitions being pasted together, and pliable metallic reinforcing clips provided on the exterior walls of the outermost compartments, said clips being centrally positioned on their respective walls, substantially as described.

1,019,490. BOX. ANTON KRZAN, Chicago, Ill. Filed Apr. 29, 1911. Serial No. 624,069. (Cl. 46—41.)

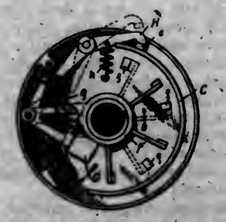


1. A box comprising a body-portion, a lid having one end provided with a pocket, a recess, and a slot communicating with the recess, a pivot for the lid extending through said slot, recess and pocket, a slide mounted in said pocket and through which extends said pivot, a disk carried by the slide and extending in said recess, the size of said recess with respect to said disk being such as to permit of the lid shifting longitudinally when the disk is swung a quarter revolution within said recess, and means engaging with said lid to prevent shifting of the latter until the disk has been swung a quarter revolution.

2. A box comprising a body-portion, a lid mounted thereon and having one end provided with a pocket, a recess, and a longitudinal slot communicating with said recess, a pivot for the lid extending through said slot, recess and pocket, shiftable means mounted in said pocket and through which said pivot extends and adapted when shifted in one direction to permit of moving the lid longitudinally to released position, and means engaging with the lid to prevent moving of the lid to open position until the means within the pocket has been shifted.

3. A box comprising a body, a lid provided with a longitudinal slot and a recess at one end, a pivot for the lid extending through said slot and recess, a slide mounted upon said pivot and arranged within said lid and provided with a locking element extending in said recess, said element capable of being shifted to permit of the lid being moved longitudinally upon its pivot, and means engaging with the lid to prevent the swinging thereof upon its pivot until longitudinal movement of the lid is had by shifting said element in one direction.

1,019,491. INDUCTION-MOTOR. KARL KUHLMANN, Berlin-Pankow, and HEINRICH MÜLLER, Berlin, Germany, assignors to General Electric Company, a Corporation of New York. Filed Mar. 27, 1906. Serial No. 308,269. (Cl. 172—279.)



1. In combination with an alternating current motor having different connections of the primary member for starting and running and having two secondary windings, one a starting winding and the other a running winding, automatic means serving to change the primary connections and also to short-circuit the secondary running winding.

2. In combination with an alternating current motor having different connections of the primary member for starting and for running and having two secondary windings, one a squirrel-cage starting winding of high resistance and the other a running winding of low resistance, automatic means serving to change the primary connections and also to short-circuit the secondary running winding.

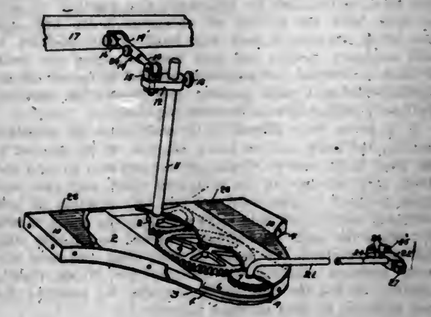
3. In a single phase motor, a primary member having a main winding and a starting winding, a secondary member having a starting winding and a running winding, and automatic means serving to cut the primary starting winding out of circuit and also to short-circuit the secondary running winding.

4. In a single phase motor, a primary member having a main winding and a starting winding, a secondary member having a squirrel-cage starting winding of high resistance and a running winding of low resistance, and automatic means serving to cut the primary starting winding out of circuit and also to short-circuit the secondary running winding.

5. In combination with an alternating-current motor having different connections of the primary member for starting and for running and having two secondary windings, one short-circuited and of high resistance and the other open-circuited and of low resistance, automatic means arranged both to change the primary connections and to close the circuit of the low-resistance secondary winding when the motor is up to speed.

[Claims 6 to 10 not printed in the Gazette.]

1,019,492. MUSIC-LEAF TURNER. ARTHUR J. KUSS, Mojave, Cal. Filed Apr. 8, 1911. Serial No. 619,825. (Cl. 84—17.)



1. In a device of the class specified, the combination of a base, an upright shaft carried thereby, an arm extending outwardly from said base and operatively connected with said shaft to be rotated thereby, means carried by said arm and adapted to grip a music leaf, said means rendered operative by impact against one end portion thereof and rendered inoperative by impact against the other end portion thereof, a bar operatively connected with a foot pedal in piano mechanism, and means operatively connecting said shaft with said bar, substantially as described.

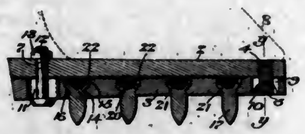
2. In a device of the class specified, the combination of a bar operatively connected with a foot-pedal, a base, an upright shaft carried thereby, a crank arm on said shaft, a link having one end thereof pivotally connected with said crank arm and carrying at the other end thereof means for connecting the link with said bar, an arm extending outwardly from said base and operatively connected with said shaft to be rotated thereby, an open-ended box carried at the end of said arm, a substantially V-shaped spring metal member movably mounted in said

box, said member adapted, by impact, to grip a music leaf, substantially as described.

3. In a device of the class specified, the combination of an arm, means to rotate said arm, means carried by said arm and adapted to grip a music leaf, said means including an open-ended box at the end of said arm and a substantially V-shaped spring metal member movably mounted in said box, said member provided with jaws and having abutments near its ends, said means rendered operative by impact against said jaws at one end of the member and rendered inoperative by impact against the other end of the member, substantially as described.

4. In a device of the class specified, the combination of a base, an upright shaft carried thereby, a crank arm adjustably mounted on said shaft, an arm extending outwardly from said base and operatively connected with said shaft to be rotated thereby, a movable bar operatively connected with a foot pedal in piano mechanism, an extensible link pivotally connected between said crank arm and said bar, an open-ended box at the end of said arm, and a substantially V-shaped spring metal member movably mounted in said box, said member provided with jaws and having abutments near its ends, substantially as described.

1,019,493. HORSESHOE. GEORGE B. KYLE, Philadelphia, Pa. Filed Jan. 3, 1911. Serial No. 600,402. (Cl. 168—12.)



1. A horse shoe formed of a main and an auxiliary section, the main section being adapted to be secured to the hoof, a pin and an elongated slot common to said sections, said pin having an elongated head, and said slot being adapted to pass said head in one position of said auxiliary section and said head engaging the walls of said slot when the auxiliary section is turned to coincide with said main section, and means for securing the heel portions of said sections together.

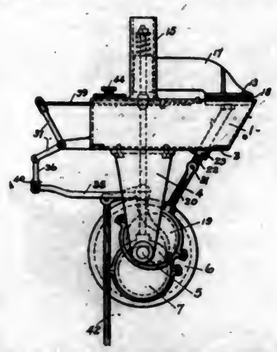
2. A horse shoe formed of a main and an auxiliary section, the main section being adapted to be secured to the hoof, a pin and an elongated slot common to said sections, said pin having an elongated head, and said slot being adapted to pass said head in one position of said auxiliary section and said head engaging the walls of said slot when the auxiliary section is turned to coincide with said main section, the walls of said head and said slot being inclined whereby the sections are drawn tightly together at the toe portion, and means for securing the heel portions of said sections together.

1,019,494. SHOE-GUMMING MACHINE. JOHN F. LA BORDE and PETER K. WILLIAMS, Columbus, Ohio. Filed Apr. 8, 1911. Serial No. 619,897. (Cl. 91—47.)

1. The combination in a machine as described comprising a reservoir having an opening therein, of a carrier plate bodily movable through the reservoir to close said opening, a complementary open work supporting plate over the reservoir opening, and a presser member, with actuating means whereby the presser member and plate are brought into operative relation with the work support.

2. The combination with a reservoir having an opening and a work support formed with a complementary opening, of a presser member, a carrier bodily movable through the reservoir to the opening therein and formed with a dished face, and actuating means whereby the presser member and carrier are brought into operative relation with the work support.

3. The combination in a machine as described comprising a reservoir having an opening therein, of a carrier plate bodily movable through the reservoir to close said opening, a complementary open work supporting plate over the reservoir opening, a driving shaft, eccentric connections from said shaft for moving the presser member, and eccentric connections for operating the carrier plate.

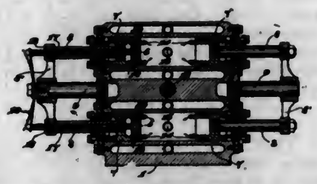


4. The combination in a machine as described comprising a reservoir having an opening therein, of a carrier plate bodily movable through the reservoir to close said opening, a complementary open work supporting plate over the reservoir opening, a presser member and actuating means therefor, a shutter, and means connected to and actuated by said presser actuating means for causing the shutter to close the reservoir opening during the reverse stroke of the presser member and carrier.

5. The combination with a reservoir having an opening therein and a presser member, of a carrier bodily movable through the reservoir to close said opening, an open work supporting plate above the reservoir opening, an open wire frame connected to said carrier for mixing the contents of the reservoir, means for actuating the presser member, and means for actuating the carrier.

[Claim 6 not printed in the Gazette.]

1,019,495. INTERNAL-COMBUSTION ENGINE. ALONZO LAFONTAINE and ROSARIO LAFONTAINE, St. Stanislas, Quebec, Canada. Filed Aug. 28, 1911. Serial No. 646,335. (Cl. 123—73.)



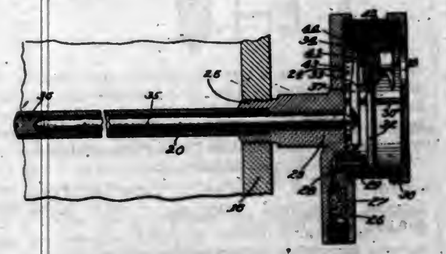
1. In combination, an engine cylinder provided with an exhaust port, a piston slidably mounted in said cylinder and provided with an exhaust port adapted to be alined with the port in said cylinder, a block slidably mounted in said piston and adapted to close the port therein, and means for moving said block to operative position.

2. In combination, an engine cylinder provided with an exhaust port, a piston slidably mounted in said cylinder and provided with an exhaust port adapted to be alined with the port in said cylinder, a hollow piston rod connected to said piston, a bar slidably mounted therein, a block carried by said bar and adapted to cover the port in said piston, and means adapted to engage the aforesaid bar and actuate said block.

3. In combination, an engine cylinder provided with an exhaust port, a piston slidably mounted in said cylinder and provided with an exhaust port adapted to be alined with the port in said cylinder, a hollow piston rod connected to said piston, a bar slidably mounted therein, a block carried by said bar and adapted to cover the port in said piston, and means for yieldingly engaging said bar and actuating said block as the aforesaid piston approaches the limit of its outward movement.

4. In combination, an engine cylinder provided with an exhaust port and delivery ducts, a piston slidably mounted therein and provided with an exhaust passage adapted to be alined with the port in said cylinder, said piston being also provided with a part adapted to cover and close the inner ends of said delivery ducts during such alinement, a disk mounted in said piston and adapted to close the port therein, and means for actuating said disk.

1,019,496. TEMPERATURE-REGULATING APPARATUS. JOHN M. LARSON, Chicago, Ill., assignor to National Regulator Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 18, 1909. Serial No. 518,435. (Cl. 236—8.)



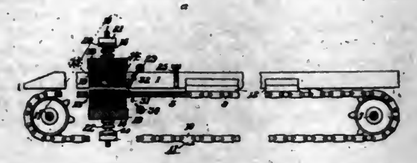
1. The combination with a motor and a source of supply of fluid under pressure, of means for governing said motor, said means having a waste port, a valve closing against the flow from said port, a spring supporting said valve, a lever to which said spring is secured, means secured to said lever normally tending to unseat said valve, an adjusting screw carried by said lever, a second lever bearing upon said screw, a rod thrusting against said second lever, and a tubular thermostat inclosing said rod and arranged to thrust said rod toward said second lever when the temperature of the medium surrounding said thermostat falls.

2. The combination with a motor and a source of supply of fluid under pressure, of means for governing said motor, said means having a waste port, a valve closing against the flow from said port, a spring supporting said valve, a lever to which said spring is secured, a rod mounted thereon, a spring secured to said rod and normally tending to unseat said valve, an adjusting screw carried by said lever, a second lever bearing upon said screw, a rod thrusting against said second lever, and a tubular thermostat inclosing said rod and arranged to thrust said rod toward said second lever upon a change in the temperature of the medium surrounding said thermostat.

3. The combination with a motor and a source of supply of fluid under pressure, of means for governing said motor, said means comprising a head having a shank screw-threaded for insertion into a threaded opening, a thermostat extending from said shank, said head having a waste port in communication with said motor, a valve for closing said port against the flow of fluid therefrom, a lever supported by said head, connection between said lever and said thermostat whereby contraction of the thermostat moves said lever, and resilient connection between said lever and said valve and a spring in connection with said lever normally tending to hold said valv in closed position.

4. The combination with a motor and a source of supply of fluid under pressure, of means for governing said motor, said means comprising a head having a shank screw threaded for insertion into a threaded opening, a thermostat extending from said shank, said head having a waste port in communication with said motor, a valve for closing said port against the flow of fluid therefrom, a rod extending from said thermostat through an opening in said head, resilient connection between said rod and said valve, and an adjusting screw accessible from the front of said head for varying the effect of the movement of said rod upon said valve and a spring in connection with said lever normally tending to hold said valve in closed position.

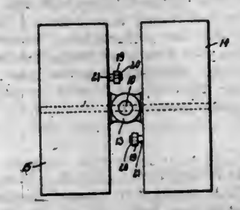
1,019,497. SCALING DEVICE. GEORGE F. LEHBERGER, Weirton, W. Va., and EDWARD VAUGHAN, New Castle, Pa. Filed Sept. 6, 1911. Serial No. 647,864. (Cl. 51—15.)



1. A cleaning apparatus comprising longitudinal frames, a bed plate supported by said frames, an endless conveyer for moving bars, sheets or plates upon said bed plate, adjustable brushes supported by said frames and providing a pass for the bars, sheets or plates, an adjustable transverse gage supported by said frames for controlling the movement of bars, plates or sheets upon said bed plate, and pipes arranged transversely of said frames for projecting water at the forward end of the pass between said brushes.

2. A cleaning apparatus comprising longitudinal frames, confronting brushes adjustably supported by said frames, an endless conveyer adapted to move bars, sheets or plates between said brushes, means for projecting streams of water upon the bars, sheets or plates at the entrance of the pass between said brushes, and means including an adjustable transverse spring supported gage for controlling the movement of bars, sheets or plates by said conveyer.

1,019,498. SCREW-PROPELLER. JOSEPH LEOPOLD, South Bethlehem, Pa., assignor of one-half to Stephen Lancsar, South Bethlehem, Pa. Filed Feb. 27, 1911. Serial No. 611,110. (Cl. 115—45.)

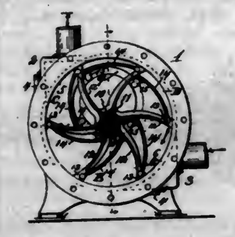


In a reversible propeller, the combination with a propeller shaft, of a hub upon one end thereof, a stem passing through said shaft and hub, flat propeller blades provided with holes extending throughout the width of the same, said stem passing through said holes, holding thereby said blades oscillatably on said stem at diametrically opposite points with respect to the axis of said shaft, a reciprocable member carried by said shaft, connecting rods pivoted to said blades and engaging said reciprocable member, and means for operating said reciprocable member, at will, whereby said blades are shifted around said stem.

1,019,499. POSITIVE-PRESSURE BLOWER. HOWARD S. LEVY and GORDON H. BRANDES, Philadelphia, Pa. Filed Nov. 10, 1910. Serial No. 591,596. (Cl. 230—30.)

1. In a rotary positive pressure blower, a casing having on opposite sides induction and eduction chambers, heads

for the casing having centrally located shaft bearings and eccentric guideways, a shaft maintained by the bearings, a frame fixedly attached to the shaft and comprising curved arms and blades, curved pistons pivoted to the blades, extensions on the pistons which carry extensions for engagement with the guideways, the parts being organized to provide intercommunicating spaces adjacent to the shaft and between the blades and pistons and non-communicating spaces between the casing the blades and the pistons.



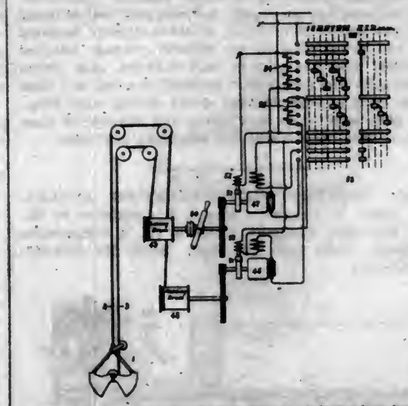
2. In a rotary compressor or positive pressure blower, a casing having a cylindrical inner portion provided with induction and eduction chambers located on opposite sides of a line drawn through the center of the casing, heads for the cylinder having centrally located shaft bearings, and guideways positioned to be eccentric to the shaft bearings, a shaft mounted in the bearings, a frame carried by the shaft and provided with radial blades having concave faces, pistons connected to the ends of the blades and means for connecting the pistons with the guideways so that the ends of the pistons will be moved over the concave faces of adjacent blades providing compression chambers the area of which decreases from the induction to the eduction ports, and means for maintaining communication between each of the areas that include the blades, pistons and shaft.

3. In a rotary compressor or positive pressure blower, a casing having a cylindrical inner portion, chambers on opposite sides of the casing, heads for the casing having centrally located shaft bearings and guideways which are eccentric to the bearings, a shaft having fast thereon a plurality of longitudinally curved blades, pistons hinged to each of the outer ends of the blades the opposite ends of the pistons being adapted to contact with the concave faces of the adjacent blades, means carried by the pistons for engagement with the guideways and means for permitting a circulation of air between the areas comprising the concave faces of the pistons the convex faces of the blades and a portion of the concave face of an adjacent blade, substantially as set forth.

1,019,500. GRAB-BUCKET HOIST. SAM H. LIBBY, Bloomfield, N. J., assignor to General Electric Company, a Corporation of New York. Filed Sept. 21, 1910. Serial No. 583,029. (Cl. 172—152.)

1. In a grab bucket hoist, the combination with the bucket and the holding and lacing ropes, of a separate drum for each rope, a clutch for the lacing drum, a separate series wound electric motor geared to each drum, and a controller comprising suitable segments, fingers and resistances and adapted in its various positions to operate first the lacing motor, then both motors at the same speed for hoisting, and then throwing increased resistance into both motor circuits for lowering the bucket closed by overhauling both of said motors.

2. In a grab bucket hoist, the combination with the bucket and the holding and lacing ropes, of a separate drum for each rope, a clutch for the lacing drum, a separate series wound electric motor geared to each drum, and a controller comprising suitable segments, fingers and resistances and adapted in its various positions to operate first the lacing motor, then both motors at the same speed for hoisting, then throwing increased resistance into both motor circuits for lowering the bucket closed by overhauling both of said motors, and finally



open-circuiting the lacing motor and lowering by control of resistance in the circuit of the holding motor.

1,019,501. TRUSS. CHARLES A. LOVE and JAMES P. TURNER, Paris, Tenn. Filed Apr. 7, 1911. Serial No. 619,593. (Cl. 128—26.)

1. A truss of the character described comprising a body portion and means for attaching the same to the body of the wearer and provided with a central opening therein, a transverse strap removably secured to the said body portion for subdividing said opening into compartments, means for attaching said strap to said body portion, a pouch, means for attaching said pouch to said strap and to said body portion, substantially as and for the purposes described.

2. A truss of the character described comprising a padded body portion having an elongated central opening therein, a transverse strap removably secured to the said body portion transversely of the said elongated opening for subdividing the opening into compartments, and a pouch removably secured to said strap substantially as described and for the purposes set forth.

3. A truss of the character described comprising a padded body portion provided with a central opening therein, straps 17 on the bottom of said body portion, each of said straps being split to form supplemental straps 18, means at the upper portion of said body portion for connecting one of each pair of supplemental straps to said body portion, a belt for suspending said body portion in proper position and means for connecting the other of each pair of supplemental straps to said belt substantially as and for the purposes described.

1,019,502. APPARATUS FOR REDUCING OR NEUTRALIZING THE NOXIOUS FUMES RESULTING FROM THE COMBUSTION OF NITROGLYCERIN EXPLOSIVES. EDWARD MACAULAY, Paignton, England. Filed Mar. 9, 1911. Serial No. 613,263. (Cl. 102—5.)



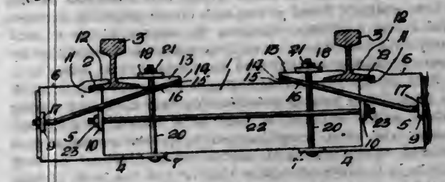
1. A device for neutralizing the noxious gases consequent on the combustion of nitroglycerin explosives in drill holes, comprising in combination a container adapted for insertion in the drill hole, said container being divided into compartments, an alkali salt in one compartment, a base and a quantity of permanganate of potash in the other compartment, and means adapted to expand the container in the hole.

2. A device for neutralizing the noxious gases consequent on the combustion of nitroglycerin explosives in drill holes, comprising in combination a container adapted for insertion in the drill hole, said container being divided into compartments, an alkali salt in one compartment, a base and a quantity of permanganate of potash in the other compartment, means adapted to expand the container in the hole, and a closable waterproof sleeve adapted to envelop said container.

3. A device for neutralizing the noxious gases consequent on the combustion of nitroglycerin explosives in drill holes, comprising in combination a container adapted for insertion in the drill hole, said container being divided into compartments, salammoniac in one compartment, calcium oxid and a quantity of permanganate of potash in the other compartment, and means adapted to expand the container within the hole.

4. A device for neutralizing the noxious gases consequent on the combustion of nitroglycerin explosives in drill holes, comprising in combination a container adapted for insertion in the drill hole, said container being divided into compartments, salammoniac in one compartment, calcium oxid and a quantity of permanganate of potash in the other compartment, means adapted to expand the container within the holes, and a closable waterproof sleeve adapted to envelop said container.

1,019,503. TIE AND RAIL-FASTENER. JOSEF MALEK, Braceville, Ill. Filed Dec. 29, 1911. Serial No. 668,484. (Cl. 238—4.)



1. In a tie and rail fastener, the combination with a tie, and rails supported thereby, of caps mounted upon the ends of said tie and providing outer rail fasteners for said rail, apertured lugs carried by said caps, inner rail fasteners mounted upon said tie and bracing the inner sides of said rails, transverse bars arranged upon said inner fasteners, vertical bolts connecting said bars with some of the apertured lugs of said caps, yokes engaging the inner ends of said inner fasteners and connected to other apertured lugs of said caps, and longitudinal tie rods connecting still other apertured lugs of said caps.

2. In a tie and rail fastener, the combination with a tie, and rails supported thereby, of caps fitted upon the ends of said tie, outer rail fasteners carried thereby and bracing the outer sides of said rails, apertured lugs carried by said caps, inner fasteners mounted upon said tie and bracing the inner sides of said rail, yokes connecting said inner fasteners to the outer ends of said caps, bolts connected to some of the apertured lugs of said caps and adapted to retain said fasteners upon said tie, and means connecting said caps whereby said caps cannot become longitudinally displaced relatively to said tie.

3. The combination with a tie, and rails supported thereby, of caps mounted upon the ends of said tie and providing outer rail fasteners, inner rail fasteners arranged upon said tie, yokes anchoring said inner fasteners relatively to said outer fasteners, and tie rods arranged longitudinally of said tie and connecting said caps.

1,019,504. SHOCK-ABSORBER. CHARLES H. MCCOMBS, Cleveland, Ohio, assignor of one-half to Charles S. Britton, Bratenahl, Ohio. Filed Apr. 7, 1911. Serial No. 619,548. (Cl. 21—105.)



1. A shock absorber comprising the combination of a cylinder, a hollow piston, a piston ring provided with a frictional covering, a piston rod, and adjustable means within said piston adapted to expand said ring.

2. A shock absorber comprising the combination of a cylinder, a hollow piston, an expansible piston ring, a piston rod, a plurality of diametrically disposed springs within said ring, and means for adjusting the tension of such springs.

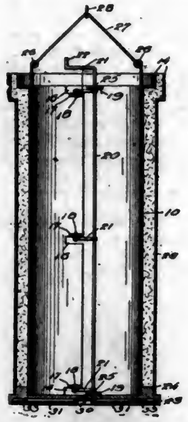
3. A shock absorber comprising the combination of a cylinder, piston in said cylinder, a friction ring upon said piston, a piston rod movable through said piston, projections upon said rod and positioned on opposite sides of said piston, and springs interposed between said piston and projections adapted to establish an operative relationship between said rod and piston.

4. A shock absorber comprising the combination of a cylinder and piston-rod movable relatively to each other; a piston movable upon said rod; an expansible piston-ring provided with a frictional covering; adjusting means associated with said piston for effecting such expansion; a plurality of reacting resistance members adapted to establish an operative relationship between said rod and piston; and adjusting means for one such resistance member.

1,019,505. PIPE-MACHINE. WILLIAM MCCONNELL, Sioux Falls, S. D. Filed Apr. 19, 1910. Serial No. 556,348. (Cl. 25—127.)

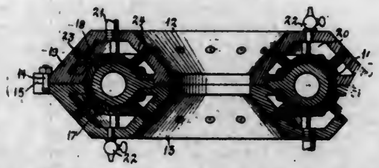
1. An adjustable base for pipe molds, comprising a disk divided into a plurality of sector shaped members,

said disk having a depending peripheral flange and a smaller upstanding annular flange projecting in the opposite direction from the peripheral flange, a plate disposed centrally of the disk on the side having the depending flange, said plate having depending sides, bolts rotatably secured to the depending sides, and threaded bearing blocks secured to the sectors and engaging the ends of the bolts, whereby rotation of the bolts serves to radially shift the sectors to vary the perimeter of the annular flange.



2. A mold comprising a circular shell, a casing disposed within said shell and spaced therefrom, said shell and casing comprising sections having overlapped edges, means disposed at said overlapped edges whereby the diameters of the shell and casing may be varied, additional means disposed on the opposite sides of the casing and shell for varying the diameters thereof, and an adjustable base provided with a rib adapted to fit between the shell and casing, said base comprising a circular plate divided segmentally, adjusting screws journaled in but longitudinally immovable from the central point of said base and bearing brackets secured to the under side of the sections adapted to receive said adjusting screws, whereby rotation of the screws in either direction will transmit longitudinal movement to the sections.

1,019,506. VULCANIZING-MOLD. WILLIAM A. MCCOOL, Beaver Falls, Pa., assignor to Hercules Tire & Rubber Company, a Corporation of Delaware. Filed Dec. 2, 1910. Serial No. 595,282. (Cl. 18—38.)



1. A jacketed vulcanizing mold comprising a vulcanizing chamber, a heating chamber outside of said vulcanizing chamber and tightly closed to the latter, an inlet for the heating medium through the outer wall of said heating chamber, and vent apertures passing from said vulcanizing chamber through said heating chamber and said outer wall, said apertures extending through conduits which are closed to said heating chamber.

2. A jacketed vulcanizing mold comprising a vulcanizing chamber, a heating chamber outside of said vulcanizing chamber and tightly closed to the latter, an inlet for the heating medium through the outer wall of said heating chamber, and nipples extending through both walls of the jacketed mold and provided with vent apertures extending from said vulcanizing chamber outward through the said heating chamber and its outer wall.

3. A jacketed vulcanizing mold comprising an inner wall inclosing a vulcanizing chamber, an outer wall inclosing a heating chamber outside of said inner wall, and nipples extending through said walls, said nipples having vent apertures extending from said vulcanizing chamber through the said heating chamber and the outer wall of the latter.

4. A jacketed vulcanizing mold comprising an inner wall inclosing a vulcanizing chamber, an outer wall inclosing a heating chamber outside of said inner wall, and apertured nipples extending through said walls and in threaded engagement therewith, said apertured nipples serving to vent said vulcanizing chamber through said heating chamber and said outer wall.

5. A jacketed vulcanizing mold comprising a relatively thin inner wall inclosing a vulcanizing chamber, a relatively thick outer wall inclosing a heating chamber outside of said inner wall, and apertured members extending between said walls, said members serving to vent said vulcanizing chamber through said heating chamber and said outer wall.

1,019,507. GLASS-LINED PUMP-BARREL. WARREN LEE MCCORMICK, Sapulpa, Okla. Filed Oct. 20, 1911. Serial No. 655,754. (Cl. 103—59.)



1. A pump barrel comprising an outer metallic shell, an inner glass tube disposed within said shell, elastic packings between said tubes, couplings engaging the opposite ends of said outer tube and rubber rings disposed in said couplings between shoulders thereof and the ends of said tubes.

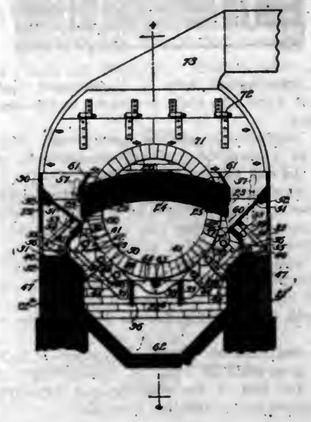
2. A pump barrel comprising an outer metallic shell, an inner glass tube disposed within said shell and having a bore which is flared at one end, elastic packings between said tubes, couplings engaging the opposite ends of said outer tube and rubber rings disposed in said couplings between shoulders thereof and the ends of said tubes.

3. A pump barrel comprising an outer metallic shell, an inner glass tube disposed within said shell and having a bore which is flared at both ends, elastic packings between said tubes, couplings engaging the opposite ends of said outer tube and rubber rings disposed in said couplings between shoulders thereof and the ends of said tubes.

4. A pump barrel comprising an outer metallic shell, an inner glass tube disposed within said shell and provided with exterior recesses at its opposite ends, elastic packings disposed between said tubes in said recesses, couplings engaging the opposite ends of said outer tube and rubber rings disposed in said couplings between shoulders thereof and the ends of said tubes.

5. A pump barrel comprising an outer metallic shell, couplings engaging the opposite ends thereof, and a glass tube universally cushioned within said shell between said couplings.

1,019,508. FURNACE. DOUGAL J. MCKENZIE, Chicago, Ill. Filed Oct. 20, 1908, Serial No. 458,636. Renewed Jan. 2, 1912. Serial No. 669,129. (Cl. 110—29.)



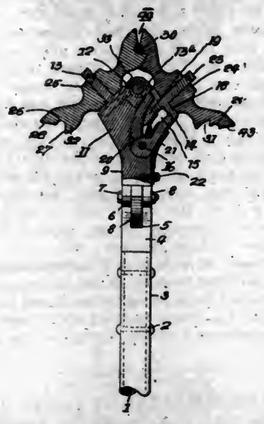
1. A furnace having masonry side walls bounding the ash pit, grates sloping downwardly and inwardly from said side walls, fuel magazines adjacent to the upper edges of said grates, hinged closures for the bottom of said fuel magazines, shafts lying above the masonry side walls, operating levers connected to said shafts, and crank and link connections from the shafts to the respective closures.

2. A furnace having masonry side walls bounding the ash pit, grates sloping downwardly and inwardly from said side walls, fuel magazines adjacent to the upper edges of said grates, hinged closures for the bottom of said fuel magazines, the free edges of said closures lying directly adjacent the top edges of the grates, shafts lying above the masonry side walls, operating levers connected to said shafts, and crank and link connections from the shafts to the respective closures.

1,019,509. TROLLEY. ROBERT MCMILLEN, Pittsburgh, Pa., assignor of one-third to Horace S. McLaughlin, Pittsburgh, Pa. Filed July 10, 1911. Serial No. 637,821. (Cl. 191—39.)

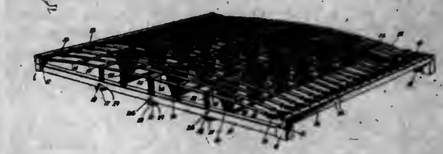
1. In a trolley, a pole, a harp pivotally supported by the upper end of said pole, said harp having oppositely inclined faces, a trolley wheel mounted upon one of said faces and having the periphery provided with an annular groove to receive one side of the wire and an annular lip adjacent the groove to engage the lower surface of the wire, a wheel supporting member pivotally connected to said harp and normally retained upon the other face of said harp, a trolley wheel revolubly supported by said member and having the periphery thereof provided with a groove and a recess opposing the groove and the lip of the first mentioned wheel for embracing a trolley wire, and means including a trigger adapted to engage said member to shift the wheel thereof relatively to the other wheel.

2. In a trolley, a pole, a harp pivotally supported by the upper end of said pole, an upward and laterally inclined trolley wheel revolubly mounted upon said harp and having the periphery thereof provided with an annular groove to receive one side of the wire and an annular lip adjacent the groove to engage the lower surface of the wire, a supporting wheel member having side arms pivotally connected to said harp, a web carried by said member and extending into said harp, said arms limiting the movement of said member relatively to said harp, a trolley wheel revolubly mounted upon said member and having the periphery thereof provided with a groove and a recess opposing the groove and the lip of the first mentioned wheel for embracing a trolley wire, and means including a trigger at the upper end of said harp and adapted to engage one of the arms of said member to shift said member relatively to said harp.



3. In a trolley, a pole, a harp having a rule hinge at the upper end of said pole, an upward and laterally inclined trolley wheel revolubly mounted upon said harp and having the periphery thereof provided with an annular groove to receive one side of the wire and a lip adjacent the groove to engage the lower surface of the wire, a wheel supporting member having side arms pivotally connected to said harp and a web extending into said harp, said arms limiting the movement of said member relatively to said harp, a trolley wheel revolubly supported by said member and having the periphery thereof provided with a groove and a recess opposing the groove and lip of the first mentioned wheel for embracing a trolley wire, a pin arranged transversely of said harp, a trigger mounted upon one end of said pin and adapted to engage said member to shift said member relatively to said harp, and a brace rod connected to the opposite end of said pin.

1,019,510. METALLIC MATTRESS. JOSÉ VALLE MESTAS, Mexico, Mexico. Filed June 23, 1911. Serial No. 634,879. (Cl. 5—26.)



1. A metallic spring mattress comprising; a rigid frame; longitudinal and transverse interwoven upper straps; springs securing said longitudinal straps to the ends of said frame; cylindrical springs held between the sides of said frame and the interwoven straps to support the latter; lower transverse straps; and conical springs held between said upper and lower straps.

2. A metallic spring mattress comprising: side pieces and riser at the end of each piece, and end pieces secured to said riser to provide a rigid frame; longitudinal and transverse interwoven straps; springs securing said longitudinal straps to said end pieces; cylindrical springs

resting on said longitudinal side pieces and having their lower ends passing through suitable perforations provided therein and turned over to secure the said springs to the said pieces; means adapted to secure the end longitudinal straps and said transverse straps to each other and to the upper end of said cylindrical springs; lower straps secured to the side pieces; and conical springs between said upper and lower transverse straps, the ends of said conical springs passing through perforations provided therefor in the said upper and lower straps and turned back to secure said springs to the said upper and lower straps.

3. A metallic spring mattress comprising: two side pieces and a riser at the end of each piece, and end pieces secured to said risers to provide a rigid frame; longitudinal and transverse interwoven upper straps; springs securing said longitudinal straps to said end pieces; cylindrical springs resting on said longitudinal side pieces and having their lower ends passing through suitable perforations provided therein and turned over to secure the said springs to the said pieces; means adapted to secure the end longitudinal straps and said transverse straps to each other and to the upper end of said cylindrical springs; lower transverse straps secured to the side pieces; conical springs between said upper and lower transverse straps, the ends of said springs passing through perforations provided therefor in the said upper and lower straps and turned back to secure said conical springs to the said upper and lower straps; and means to tie the upper ends of adjacent conical springs to one another.

1,019,511. AUTOMATIC RELIEF-VALVE. CHARLES E. MISER, Watertown, N. Y., assignor to Miser-Shaff Specialty Company, Watertown, N. Y., a Corporation of New York. Filed July 3, 1911. Serial No. 636,747. (Cl. 220—121.)



1. In a relief valve, the combination of a main casing and a lateral casing, said main casing having a receiving chamber and an exhaust chamber disposed above said receiving chamber, said lateral casing having an auxiliary chamber and an intake chamber disposed below the auxiliary chamber, the exhaust chamber communicating with the open air, and the intake chamber communicating with the open air, a valve disposed in the exhaust chamber, adapted to relieve the said casings of air pressure derived from a tank, and a valve disposed in the auxiliary chamber adapted to supply atmospheric pressure to the said casings, when acted upon by a vacuum or suction in the tank.

2. In combination, a main casing having a vertically arranged cylindrical portion, inclosing a common receiving chamber and having a laterally arranged portion communicating with the receiving chamber its lowermost end comprising an intake chamber, the main casing having an exhaust chamber disposed above the receiving chamber, the lateral portion having an auxiliary chamber disposed above an intake chamber, a valve seat disposed between the receiving chamber and the exhaust chamber, a valve seat disposed between the auxiliary and the intake chambers, a valve in the exhaust chamber adapted to relieve the air pressure from the receiving and auxiliary chambers, and a valve in the auxiliary chamber adapted to relieve or destroy a vacuum in the receiving and auxiliary chambers.

1,019,512. HIGH-VOLTAGE TRANSFORMER. WALTER S. MOODY, Pittsfield, Mass., assignor to General Electric Company, a Corporation of New York. Filed July 21, 1910. Serial No. 573,014. (Cl. 171—124.)



1. The combination with a transformer including a winding, of a metallic plate connected to the end turn of the winding.

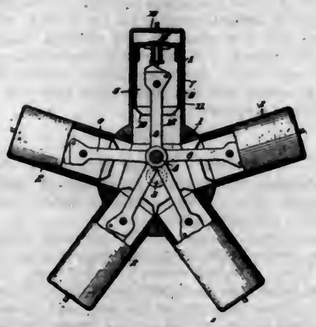
2. The combination with a transformer including a winding, of a metallic plate of considerable area connected to the end turn of the winding.

3. The combination with a transformer including a winding having separate coils, of a metallic plate of considerable area overlapping the end coil of the winding and connected to one end of said coil.

4. The combination with a transformer including a winding having separate coils, of a metallic plate applied to the end coil of the winding and connected to one end thereof, said plate having flanges fitting down over said coil.

5. The combination with a transformer including a winding, of a metallic plate of considerable area connected to the end of the winding and affording means for the attachment of the line terminal.

1,019,513. GAS-ENGINE. ROBERT S. MOORE and JAMES LEE SIMMONS, Washington, D. C., assignors to The Gyro Motor Company, Washington, D. C., a Corporation of the District of Columbia. Original application filed Nov. 1, 1910, Serial No. 590,236. Divided and this application filed Mar. 30, 1911. Serial No. 617,855. (Cl. 121—104.)



1. The combination of a cylinder, a piston reciprocating in said cylinder and an oil guard connected to the piston and movable therewith for directing the lubricating oil to the outer face of the piston.

2. The combination of a cylinder, a piston reciprocating in said cylinder and an oil guard connected to the inner end of the piston and having an inwardly projecting portion shaped as the frustum of a cone to receive and guide the lubricating oil to the outer surface of the piston.

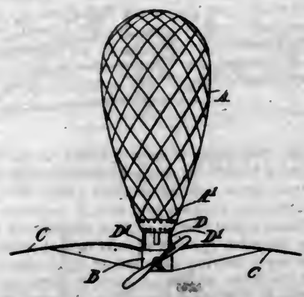
3. The combination of a cylinder, a piston reciprocating therein, a piston rod pivotally connected to the piston, and an oil guard connected to the inner end of the piston and having an inwardly projecting portion shaped as the frustum of a cone to receive and guide the lubricating oil to the outer surface of the piston, the inner end of said oil guard being closed except for a slot formed therein to permit the operation of the piston rod.

4. The combination of a revolving cylinder, a piston reciprocating therein, an intake valve in the piston, and an oil guard connected to the piston and movable therewith for directing the lubricating oil to the outer surface of the piston.

5. The combination of a revolving cylinder, a piston moving therein, an intake valve in the piston, and an oil guard connected to the piston and having an inwardly projecting portion shaped as the frustum of a cone, to direct the lubricating oil to the outer surface of the piston.

[Claim 6 not printed in the Gazette.]

1,019,514. AERIAL VESSEL. HIDALGO MOYA, Leicester, England. Filed Nov. 4, 1910. Serial No. 590,612. (Cl. 244—6.)



1. In an aerial vessel the combination with a car, of lifting planes connected to said car, a balloon situated above the car and hinged thereto, the axis of the hinge being horizontal and disposed transversely to the direction of travel, and arranged to permit the balloon to automatically swing backwardly and downwardly during the movement of the aeroplane through the air; substantially as described.

2. In an aerial vessel, the combination of a lifting or supporting plane, a car or load carrying vessel supported therefrom a propeller for the aerial vessel, a balloon situated above the lifting plane and car, a support connected to the lower end of said balloon, and a hinged connection between the support and the car, the axis of the hinge being horizontal and transverse to the direction of travel and arranged to permit the balloon to automatically swing to the rear when moving through the air; substantially as described.

3. In an aerial vessel, the combination of a lifting or supporting plane, a car or load carrying vessel supported therefrom, a propeller for the aerial vessel, a balloon situated above the lifting plane or car, a support connected to the lower end of the car, and a hinged connection between the support and the car, the axis of the hinge being horizontal and transverse to the direction of travel and arranged to permit the balloon to automatically swing rearwardly and downwardly when moving through the air, and stops for limiting the swinging movement of the support; substantially as described.

4. In an aerial vessel the combination of an aeroplane, a balloon situated above said plane, a support connected to the lower end of the balloon, a hinged connection between the aeroplane and the support, the axis of the hinge being horizontal and transverse to the direction of travel, said support being arranged to prevent the lateral swaying of the balloon, and a propeller for the aeroplane situated at a lower level than the hinge; substantially as described.

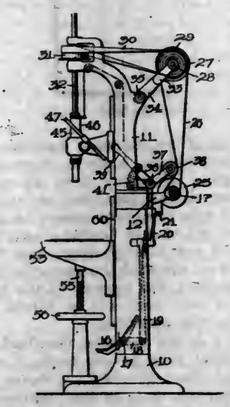
1,019,515. NAPPING-MACHINE. AUGUST MÜLLERS, München-Gladbach, Germany. Filed Mar. 28, 1911. Serial No. 617,466. (Cl. 26—19.)

In a napping machine, a frame, a shaft rotatably supported thereby, a pair of disks secured to the shaft, a plurality of napping rollers and a plurality of intermediate counter napping rollers arranged in a circle and jointly constituting a napping drum, means for rotating said drum in one direction, means for rotating the napping rollers in the opposite direction with a peripheral speed that is less than that of the drum, means for rotating the counter napping rollers in like direction with



the napping rollers with a peripheral speed that exceeds that of the drum, friction bearings carried by the disks for the napping rollers, said bearings tending to retard the movement of said rollers, and anti-friction bearings mounted in the disks intermediate the friction bearings, said anti-friction bearings being engaged by the counter napping rollers.

1,019,516. BELT-DRIVE. ALBERT E. NEWTON, Worcester, Mass., assignor to Prentice Bros. Company, a Corporation of Massachusetts. Filed Oct. 20, 1910. Serial No. 588,206. (Cl. 74—21.)



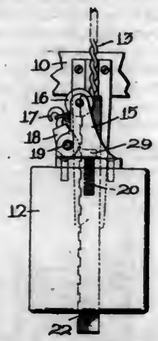
1. The combination with a driving pulley on a horizontal axis, a driven pulley on a vertical axis, two connected pulleys, a substantially vertical belt extending from the pulley on the horizontal axis to one of the connected pulleys, and a substantially horizontal belt extending from the other of the connected pulleys to the pulley on the vertical axis, of a pivoted arm making an acute angle with both belts having bearings for supporting said connected pulleys, and mounted so as to be free to swing on its pivot, a hand lever, and means connected with said hand lever and independent of said arm for changing the tensions of both of said belts.

2. In a drill, the combination of a frame having a goose neck, an arm pivoted on the rear thereof and extending upwardly and outwardly from its pivot, a shaft supported by the outer end of said arm, two sets of pulleys carried by said shaft, a driving cone pulley near the bottom of the goose-neck, a driven pulley near the top thereof, belts connecting said driving and driven pulleys with the two pulleys on said shaft, said arm being free to swing on its pivot, a hand-lever mounted on said frame, and means connected with said hand-lever for tightening the belts, said means comprising a roller having a length equal to that of the cone pulley and engaging one of the belts.

3. In a drill, the combination of a frame having a goose-neck, an arm pivoted on the rear thereof and extending

upwardly and outwardly from its pivot, a shaft supported by the outer end of said arm, two pulleys carried by said shaft, a driving pulley near the bottom of the goose-neck, a driven pulley near the top thereof, belts connecting said driving and driven pulleys with the two pulleys on said shaft, said arm being free to swing on its pivot, a hand lever mounted on said frame, means connected with said hand lever for tightening the belts, a foot treadle near the bottom of the frame, and a belt shifter for the belt on the driving pulley connected with said foot treadle.

1,019,517. WEIGHT SAFETY DEVICE. ALBERT E. NEWTON, Worcester, Mass., assignor to Prentice Bros. Company, a Corporation of Massachusetts. Filed Apr. 12, 1911. Serial No. 620,562. (Cl. 77—36.)



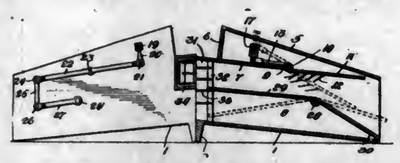
1. In a device of the character described, the combination of a counter-weight, a sheave journaled thereon, a flexible connection depending from above and passing under the sheave, a shaft journaled on the counter-weight and having an arm projecting upwardly at one side of the sheave, the end of said flexible connection being connected with said arm after passing under the sheave, an eccentric clutch on the shaft for engaging the frame, and means whereby when the support of the flexible connection is removed said shaft will be turned to bring said eccentric clutch into operation.

2. In a device of the character described, the combination of a vertical rack having teeth, a counter-weight slidable up and down the rack, a sheave journaled on the counter-weight, a shaft on the counter-weight having two arms thereon, a flexible supporting member passing under the sheave and connected with one arm at one side of the sheave, a spring supported on the counterweight and bearing on the other arm and tending constantly to turn the arm and shaft about the axis of the shaft, and an eccentric clutch on said shaft in position to be forced into engagement with said rack when the shaft is turned by the spring.

3. In a device of the character described, the combination of a counter-weight having a frame or brackets extending upwardly therefrom, a sheave journaled in said frame or brackets, a flexible connection depending from above and passing under the sheave, a pivoted arm projecting upwardly at one side of the sheave with a hook thereon, the end of said flexible connection being connected with said hook after passing under the sheave, a clutch connected with the arm for engaging the frame, and means whereby when the support of the flexible connection is removed said clutch is brought into operation.

1,019,518. TRAP. ANDREW PAULL, Seward, Pa. Filed Sept. 28, 1911. Serial No. 651,681. (Cl. 43—24.)

1. A trap comprising a main housing, a pair of oppositely disposed branch housings communicating with each other at their inner end, an inclined bridge for establishing communication between said branch housings and said main housing, a partition in each of said branch housings, a platform mounted in each of said branch housings and having its outer portion disposed at an inclination with respect to its inner portion, a movable pivot for each of said platforms, a closure pivotally connected in each of said branch housings and in proximity to said partition, arranged over a portion of a platform and provided with deepnding prongs, means supported by each of said partitions and extending from a branch housing and connected to a closure for shifting it, the operative connections between said means and the movable pivots of said platforms for operating said means when the platforms are tilted whereby said closures will be shifted to close the branch housings when the inner portions of the platforms are lowered, a lid for said main housing, a longitudinally extending paddle wheel within said lid, and a tiltable platform arranged within said lid and coöperating with said paddle wheel for entrapping rodents in the bottom of said main housing.



2. A trap comprising a main housing, a pair of oppositely disposed branch housings communicating with each other at their inner end, an inclined bridge for establishing communication between said branch housings and said main housings, a partition in each of said branch housings, a platform mounted in each of said branch housings and having its outer portion disposed at an inclination with respect to its inner portion, a movable pivot for each of said platforms, a closure pivotally connected in each of said branch housings and in proximity to said partition, arranged over a portion of a platform and provided with depending prongs, means supported by each of said partitions and extending from the branch housing and connected to the closure for shifting it, operative connections between said means and the movable pivots of said platforms for operating said means when the platforms are tilted whereby said closures will be shifted to close the branch housings when the inner portions of the platforms are lowered, a lid for said main housing, a longitudinally extending paddle wheel within said lid, and a tiltable platform arranged within said lid and coöperating with said paddle wheel for entrapping rodents in the bottom of said main housing.

3. A trap comprising a main housing, a detachable lid carried thereby, a pair of oppositely disposed branch housings, an inclined detachable bridge for establishing communication between the inner ends of said branch housings and said lid, a tiltable platform arranged in each of said branch housings and having a movable pivot journaled in the side wall of its respective branch housing, each of said platforms including an outer portion disposed at an inclination with respect to its inner portion, a closure arranged within each of the branch housings above said platform and capable of being shifted to closed position when the inner portion of the platform is moved downwardly, downwardly depending prongs carried by said closures, operative connections between said pivots and said closures for operating these latter simultaneously with the tilting of said platforms, and means within the lid of the main housing for entrapping rodents in the bottom of the main housing.

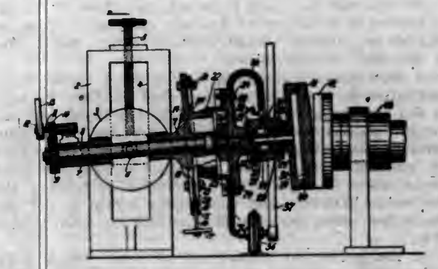
4. A trap comprising a main housing, a detachable lid carried thereby, a pair of oppositely disposed branch housings, an inclined detachable bridge for establishing communication between the inner ends of said branch housings and said lid, a tiltable platform arranged in each of said branch housings and having a movable pivot journaled in the side wall of its respective branch housing, each of said platforms including an outer portion disposed at an inclination with respect to its inner portion, a closure arranged within each of the branch housings above said platform and capable of being shifted to closed position when the inner portion of the platform is moved downwardly, downwardly depending prongs carried by said closures, operative connections between said pivots and said closures for operating these latter simultaneously with the tilting of said platforms, a paddle wheel arranged within the lid of the main housing, and a tiltable platform within said lid and coöperating with said tiltable wheel for entrapping rodents in the bottom of the main housing.

1,019,519. APPARATUS FOR MAKING BACKING FOR TEETH. OSCAR MARTIN POLIN, San Luis Obispo, Cal. Filed July 11, 1911. Serial No. 637,982. (Cl. 32—10.)



An instrument for forming backings for interchangeable teeth, having jaws, and means for pressing said jaws together, said jaws having in one portion of each respectively a punch and a die for forming a slot in plate metal, and in another portion thereof, two opposing flat surfaces adapted to press tightly together folded over portions of plate metal to form an anchor.

1,019,520. GLASS-BEVELING MACHINE. WLADYSLAW J. POROWSKI, Brooklyn, N. Y. Filed Dec. 7, 1911. Serial No. 664,488. (Cl. 51—11.)



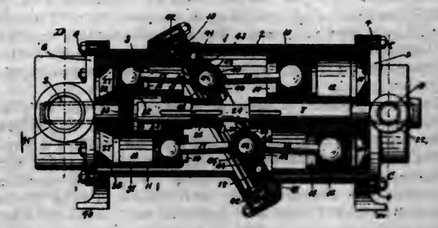
1. In a grinding or polishing machine, a vertically adjustable support carrying a shaft and a radial adjustable support carrying a second shaft, means for adjusting said second shaft out of alinement with said first mentioned shaft, means for driving said first mentioned shaft, connection therefrom for driving said second shaft while out of alinement therewith, and a chuck carried by said second shaft.

2. In a grinding or polishing machine, a vertically adjustable support carrying a shaft and a radial adjustable support carrying a second shaft, means for adjusting said second shaft out of alinement with said first mentioned shaft, means for driving said first mentioned shaft, connection therefrom for driving said second shaft while out of alinement therewith, and a chuck carried by said second shaft, said chuck being adapted to be exhausted of air and having a hollow spindle, a hollow sleeve around said spindle, and air exhausting apparatus connected to said sleeve.

3. In a grinding machine, a rotatable grinding element, a bracket or support mounted adjacent said grinding element adapted for vertical and radial adjustment, a rotatable shaft carried by said bracket, a stub shaft mounted adjacent said bracket adapted for adjustment out of alinement with the axis of the shaft carried by said bracket, means actuated by the shaft in said bracket adapted to actuate said stub shaft, and a chuck carried by said stub shaft.

4. In a grinding machine, a rotatable grinding element, an independent rotatable shaft mounted adjacent thereto, a guide carried by said shaft, a block slidably mounted in said guide, a stub shaft carried by said guide, means adapted to cause said block to slide to and fro, in said guide, when said stub shaft is rotated, a chuck carried by said stub shaft consisting of a body adapted to receive the object to be ground, said body being provided with a chamber in communication with the rear surface of said object when said object is in position on said chuck, and means adapted to produce a vacuum in said chamber.

1,019,521. PUMP. CHARLES R. PRATT, Montclair, N. J., assignor, by direct and mesne assignments, to The Universal Speed Control Company, a Corporation of New York. Filed Apr. 18, 1910. Serial No. 556,096. (Cl. 103—67.)



1. In a pump, two barrels in axial alinement each having an annular series of cylinders, fluid inlet and outlet means at one end of each barrel for the cylinders thereof, a controlling disk arranged between said barrels, pistons in the cylinders having rods projecting at the other ends of said barrels from the fluid inlet and outlet means and connected to said controlling disk, means for supplying fluid under pressure to one of said barrels, and means for holding said controlling disk in oblique relation to the axial line of said barrels.

2. In a pump, two barrels each having an annular series of cylinders, fluid inlet and outlet means for said cylinders at one end of each barrel, a controlling disk arranged between said barrels, pistons in the cylinders having rods projecting from the other ends of said barrels from the said fluid inlet and outlet means and connected to said controlling disk, means for holding said controlling disk in a plane oblique to the axial lines of both barrels, and means for supplying fluid under pressure to one of said barrels.

3. In a pump, two barrels each having an annular series of cylinders, fluid inlet and outlet means for said cylinders at one end of each barrel, a controlling disk arranged between said barrels, pistons in the cylinders having rods projecting from the other ends of said barrels from the said fluid inlet and outlet means and connected to said controlling disk, means for holding said controlling disk in a plane oblique to the axial lines of both barrels, means for causing said barrels to rotate in unison, and means for supplying fluid under pressure to one of said barrels.

4. In a pump, two barrels each having an annular series of cylinders, fluid inlet and outlet means for said cylinders at one end of each barrel, a controlling disk arranged between said barrels, pistons in the cylinders having rods projecting from the other ends of said barrels from the said fluid inlet and outlet means and connected to said controlling disk, means for holding said controlling disk in a plane oblique to the axial lines of both barrels, means for rotating said barrel from said controlling disk, and means for supplying fluid under pressure to one of said barrels.

5. In a pump, two barrels in axial alinement each having an annular series of cylinders, fluid inlet and outlet means for said cylinders at one end of each barrel, pistons in the cylinders having rods projecting from the other ends of said barrels from said inlet and outlet means, means for supplying fluid under pressure to one of said barrels, and means connecting the piston rods of one barrel to those of the other and adapted to guide them in an elliptical path around the axis of rotation of said barrels.

[Claims 6 to 37 not printed in the Gazette.]

1,019,522. MACHINE FOR COATING OR MIXING MINERAL AGGREGATE WITH BITUMINOUS MATERIAL. CHARLES P. PRICE, Malden, Mass., assignor, by mesne asignments, to Bituminous Road Implement Company, a Corporation of Massachusetts. Filed Feb. 23, 1910. Serial No. 545,395. (Cl. 94—6.)



1. A machine for coating mineral aggregate with bituminous material, including in combination, a platform and side portions, said side portions having openings therein at a distance above the platform, a tank having connections with said openings, and means for heating the tank.

2. A machine for coating mineral aggregate with bituminous material including in combination, a platform having an inclined receiving portion, an inclined delivering portion, and a central depressed portion, side portions connected to said platform and having openings therein at a distance above the platform, a tank having connections with said side portions, and means for heating said tank.

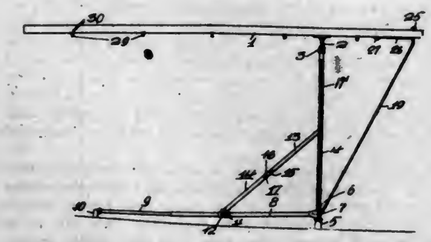
3. A machine for coating mineral aggregate with bituminous material including in combination, a platform having an inclined receiving portion, an inclined delivering portion and a central depressed portion, side portions connected to said platform and having openings therein at a distance above the platform, a tank extending underneath the platform and along the side thereof, and having connections with said openings, and a heating chamber underneath the tank.

4. A machine for coating mineral aggregate with bituminous material, including in combination a platform, a frame on which the platform is mounted, wheels attached to said frame, said platform having a central depressed portion, side portions carried by the platform, and a tank located adjacent the central depressed portion, said side portions having passages leading to the tank.

5. A machine for coating mineral aggregate with bituminous material, including in combination a platform, a frame on which the platform is mounted, wheels attached to said frame, said platform having a central depressed portion, side portions carried by the platform, a tank located adjacent the central depressed portion, said side portions having passages leading to the tank, and means for heating the tank and platform.

[Claims 6 to 13 not printed in the Gazette.]

1,019,523. IRONING-TABLE. MAXMILLIAN E. PRIMBS and PHILLIP J. BITTNER, Reserve township, Allegheny county, Pa. Filed Mar. 14, 1910. Serial No. 549,215. (Cl. 68—10.)



1. The combination of an ironing board, a standard pivotally connected to the under side of said board, a foot carried by the lower end of said standard, a leg pivotally connected to said standard adjacent to said foot, a leg extension adjustably mounted in said leg, toggles connecting said leg with said standard, and a brace pivotally connected to the foot of said standard and adapted to engage in the end of said board, substantially as described.

2. The combination of an ironing board, depending bearings carried by said board adjacent to the large end thereof, a standard trunnioned in said bearings, a foot carried by the lower end of said standard, a leg pivotally connected to said standard adjacent to said foot, toggles connecting said leg with said standard, a brace pivotally connected with said foot, and a latch carried by the large end of said board and adapted to engage the upper end of said brace.

3. The combination of an ironing board, depending bearings carried by said board adjacent to the large end thereof, a standard having the upper end thereof trunnioned in said bearings, a leg pivotally connected to the lower end of said standard, toggles pivotally connected to said standard and to said leg, means adapted to brace the lower end of said standard relatively to the large end of said board, said means including a V-shaped brace adapted to have the upper end thereof extend into said board, a V-shaped member pivotally connected to the under side of said board and to the upper side of said brace, and a latch arranged in said board and adapted to engage the upper end of said brace.

1,019,524. PROCESS OF REMELTING AND REFINING OLD OR SCRAP COPPER ALLOY. WALTER S. ROCKEY and HILLIARY ELDRIDGE, New York, N. Y., assignors to Metallurgical Research Company, a Corporation of Arizona. Filed Feb. 2, 1911. Serial No. 606,160. (Cl. 75—62.)

1. The process of refining old or scrap copper alloy consisting in first reducing to a fluid condition by heat a flux containing boron trioxid, and then submerging beneath said flux the old or scrap copper alloy and fusing same beneath said flux causing said flux to dissolve or hold in suspension the metallic impurities contained in said scrap metal thus purifying the alloy metal beneath the surface of said flux, and then adding carbon to the flux to further reduce the metallic impurities contained in said flux.

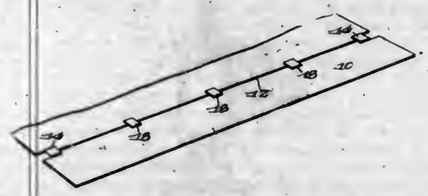
2. The process of refining old or scrap copper alloy consisting in first reducing to a fluid condition by heat a flux of boron trioxid, and then submerging beneath said flux the old or scrap copper alloy and fusing same beneath said flux causing said flux to dissolve or hold in suspension the metallic impurities contained in said scrap metal thus purifying the alloy metal beneath the surface of said flux, and then adding carbon to the flux to further reduce the metallic impurities contained in said flux.

3. The process of refining old or scrap copper alloy consisting in first reducing to a fluid condition by heat a suitable flux having the quality of dissolving or holding in suspension the oxids, and other metallic impurities contained by the metals which form the alloy, then submerging beneath said flux the old or scrap copper alloy and fusing same beneath said flux causing said flux to dissolve or hold in suspension the metallic impurities contained in said scrap metal thus purifying the alloy metal beneath the surface of said flux, and then adding carbon to further reduce the metallic impurities contained in said flux.

1,019,525. WRAPPER FOR NEWSPAPERS, PERIODICALS, AND THE LIKE. EPHRAIM H. RODEN, Chicago, Ill. Filed June 4, 1908. Serial No. 436,568. (Cl. 229—92.)

1. A wrapper for newspapers, periodicals and the like, comprising a body portion, a thread or cord extending transversely across said body portion and terminating adjacent the edge thereof, and an integral flap cut from the body portion by spaced slits on each side of the end of the thread, said flap being folded back and pasted flat to the body portion over the end of said thread.

2. A wrapper for newspapers, periodicals and the like, comprising a body portion having a thread or cord extending transversely across the body portion and terminating flush with the edge thereof, said body portion being provided with slits in the edge thereof forming integral flaps adjacent to the ends of the thread or cord, said flaps being folded inwardly from the edge to cover the ends of the thread and pasted flat to said body portion.



3. In a wrapper for newspapers, periodicals and the like, the combination with a body portion, of a thread or cord arranged transversely of the body portion terminating flush with the edges thereof, said body portion being provided with integral flaps cut therefrom adjacent the edges and the ends of said thread or cord and said integral flaps and the ends of said thread or cord being folded inwardly and pasted flat to the body portion of the wrapper, and means intermediate the ends of said thread or cord for securing the same to the body portion.

1,019,526. COMPOUND OR ALLOY OF TITANIUM AND SILICON. AUGUSTE J. ROSSI, Niagara Falls, N. Y., assignor to The Titanium Alloy Manufacturing Company, New York, N. Y., a Corporation of Maine. Filed Sept. 14, 1909. Serial No. 517,546. (Cl. 75—1.)

1. As a new article of manufacture a ternary alloy of titanium, silicon and iron, containing principally titanium and silicon.

2. The aforesaid method of producing an alloy or compound containing principally silicon and titanium associated with a smaller quantity of other metal which comprises incorporating such other metal with the oxids of silicon and titanium in presence of a deoxidising agent and subjecting the whole to a temperature sufficient to insure reduction of said oxids of silicon and tinanium.

1,019,527. PROCESS FOR PRODUCING THE ALLOY OF TITANIUM WITH ZINC. AUGUSTE J. ROSSI, Niagara Falls, N. Y., assignor to The Titanium Alloy Manufacturing Company, New York, N. Y., a Corporation of Maine. Original application filed May 6, 1910, Serial No. 559,657. Divided and this application filed Feb. 4, 1911. Serial No. 606,449. (Cl. 75—17.)

1. The method of producing an alloy comprising titanium and zinc which comprises producing over a bath containing molten zinc a covering comprising carbon, titanium in chemical combination reducible by carbon, and calcium in chemical combination reducible by carbon, and imparting to the whole a temperature sufficient to insure liberation of metallic titanium by carbon reduction.

2. The method of producing an alloy comprising titanium and zinc which comprises superimposing over a bath containing molten zinc a covering comprising carbon, oxid of tinanium, and a compound of calcium and imparting to the whole a temperature sufficient to insure reduction of said oxid of titanium under the conditions specified.

3. The method of producing an alloy or compound of titanium with zinc which comprises superimposing over a bath of molten zinc a covering of molten oxid of calcium, superimposing above said oxid of calcium oxid of titanium and carbon and imparting to the whole a temperature sufficient to insure reduction of said oxids under the conditions specified.

4. The method of producing an alloy or compound of titanium with zinc which comprises superimposing over a bath containing molten zinc a covering comprising carbon, a compound of titanium reducible by carbon, and oxid of calcium, and imparting to the whole a temperature sufficient to insure liberation of metallic titanium by carbon reduction.

1,019,528. PROCESS FOR PRODUCING ALLOYS OF TITANIUM WITH FERROMETAL. AUGUSTE J. ROSSI, Niagara Falls, N. Y., assignor to The Titanium Alloy Manufacturing Company, New York, N. Y., a Corporation of Maine. Original application filed May 6, 1910, Serial No. 559,657. Divided and this application filed Feb. 4, 1911. Serial No. 606,450. (Cl. 75—17.)

1. The method of producing an alloy or compound of titanium with other metal which comprises superimposing over a molten bath of said other metal a coating comprising carbon, titanium in chemical combination reducible by carbon, and calcium in chemical combination reducible by carbon, and imparting to the whole a temperature sufficient to insure liberation of metallic titanium by carbon reduction.

2. The method of producing an alloy of titanium and a ferro-metal which comprises superimposing over a molten bath containing such ferro-metal a covering comprising a compound of titanium, carbon, and a compound of calcium, and imparting to the whole a temperature sufficient to insure reduction of said compound of titanium under the conditions specified.

3. The method of producing an alloy of titanium and iron which comprises superimposing over a molten bath containing such iron a covering comprising a compound of titanium reducible by carbon, carbon and a compound of calcium, and imparting to the whole a temperature sufficient to insure reduction of said compound of titanium under the conditions specified.

4. The method of producing an alloy or compound of titanium and a ferro-metal which comprises superimposing over a molten bath containing such ferro-metal a covering comprising carbon, a compound of titanium reducible by carbon, and oxid of calcium, and imparting to the whole a temperature sufficient to insure liberation of metallic titanium by carbon reduction.

1,019,529. PROCESS FOR PRODUCING THE ALLOY OF TITANIUM WITH LEAD. AUGUSTE J. ROSSI, Niagara Falls, N. Y., assignor to The Titanium Alloy Manufacturing Company, New York, N. Y., a Corporation of Maine. Original application filed May 6, 1910, Serial No. 559,657. Divided and this application filed Feb. 4, 1911. Serial No. 606,451. (Cl. 75—17.)

1. The method of producing an alloy comprising titanium and lead which comprises producing over a bath containing molten lead a covering comprising carbon, titanium in chemical combination reducible by carbon, and calcium in chemical combination reducible by carbon, and imparting to the whole a temperature sufficient to insure liberation of metallic titanium by carbon reduction.

2. The method of producing an alloy comprising titanium with lead which comprises superimposing over a bath containing molten lead a covering comprising carbon, oxid of titanium, and a compound of calcium and imparting to the whole a temperature sufficient to insure reduction of said oxid of titanium under the conditions specified.

3. The method of producing an alloy or compound of titanium with lead which comprises superimposing over a bath of molten lead a covering of molten oxid of calcium, superimposing above said oxid of calcium oxid of titanium and carbon and imparting to the whole a temperature sufficient to insure reduction of such oxids under the conditions specified.

4. The method of producing an alloy or compound of titanium and lead which comprises superimposing over a bath containing molten lead a covering comprising carbon, a compound of titanium reducible by carbon, and oxid of calcium, and imparting to the whole a temperature sufficient to insure liberation of metallic titanium by carbon reduction.

1,019,530. PROCESS FOR PRODUCING THE ALLOY OF TITANIUM WITH TIN. AUGUSTE J. ROSSI, Niagara Falls, N. Y., assignor to The Titanium Alloy Manufacturing Company, New York, N. Y., a Corporation of Maine. Original application filed May 6, 1910, Serial No. 559,657. Divided and this application filed Feb. 4, 1911. Serial No. 606,453. (Cl. 75—17.)

1. The method of producing an alloy comprising titanium and tin which comprises producing over a bath containing molten tin a covering comprising carbon, titanium in chemical combination reducible by carbon, and calcium in chemical combination reducible by carbon, and imparting to the whole a temperature sufficient to insure liberation of metallic titanium by carbon reduction.

2. The method of producing an alloy comprising titanium and tin which comprises superimposing over a bath containing molten tin a covering comprising carbon, oxid of titanium, and a compound of calcium and imparting to the whole a temperature sufficient to insure reduction of said oxid of titanium under the conditions specified.

3. The method of producing an alloy or compound of titanium with tin which comprises superimposing over a bath of molten tin a covering of molten oxid of calcium, superimposing above said oxid of calcium oxid of titanium and carbon and imparting to the whole a temperature sufficient to insure reduction of such oxids under the conditions specified.

4. The method of producing an alloy or compound of titanium and tin which comprises superimposing over a bath containing molten tin a covering comprising carbon, a compound of titanium reducible by carbon, and oxid of calcium, and imparting to the whole a temperature sufficient to insure liberation of metallic titanium by carbon reduction.

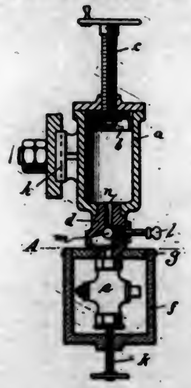
1,019,531. METHOD OF TREATING ALUMINUM. AUGUSTE J. ROSSI, Niagara Falls, N. Y., assignor to The Titanium Alloy Manufacturing Company, New York, N. Y., a Corporation of Maine. Filed Mar. 10, 1911. Serial No. 613,624. (Cl. 75—58.)

1. The method of treating aluminum containing impurities including nitrogen and carbon, which consists in bringing said aluminum into molten state, incorporating therewith titanium, and then imparting to and maintaining in the resulting bath a temperature at which said titanium can combine chemically with said nitrogen and carbon, the said titanium being proportioned to secure a resulting aluminum product containing less than one-half of one per centum of titanium.

2. The method of treating aluminum containing impurities including nitrogen and carbon, which consists in bringing said aluminum into molten state, adding thereto titanium oxid proportioned to satisfy chemical affinities of all said impurities for titanium, raising the temperature of the resulting bath to one at which aluminum reduces said oxid, and then maintaining said temperature until resulting metallic titanium has combined chemically with said impurities including said nitrogen and carbon to secure a resulting aluminum product containing less than one-half of one per centum of titanium.

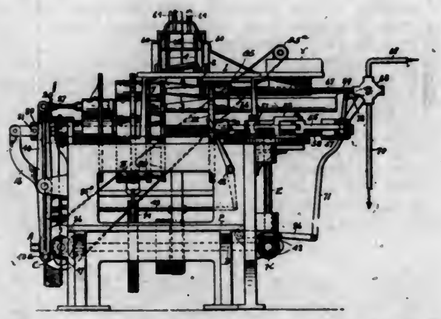
1,019,532. APPARATUS FOR MAKING TIGHT THE PORES OF CASTINGS. SALI SALM, Cologne-Ehrenfeld, Germany. Filed Feb. 20, 1911. Serial No. 609,768. (Cl. 91—18.)

An apparatus for making tight porous parts of castings, comprising in combination a pressure cylinder adapted to hold water-glass and having an outlet channel in its bottom plate, a pressure piston guided in said cylinder, a fixed support in which said cylinder is pivotally mounted, a valve casing fixed to the lower part of the cylinder and having an inclined path, a ball-shaped valve in said valve casing on said inclined path, and means for pushing the valve away from its seat, a cross bar fixed at the end of the valve casing, a U-shaped frame fixed to said cross-bar, a clamping spindle guided in the arch of said frame and adapted to hold a casting against



the end of the valve casing, substantially as described and shown and for the purpose set forth.

1,019,533. BOTTLE-MACHINE. JAMES A. SANFORD, Jackson, Mich. Filed Oct. 10, 1910. Serial No. 586,186. (Cl. 93—79.)



1. In a paper bottle forming machine, in combination with a series of matrix dies rotatable about a common center, means for periodically actuating said dies, a longitudinally reciprocative plunger die, means for actuating the same lengthwise of its axis into one of the matrix dies, a folder member adapted to periodically fold a previously deposited blank about said plunger die at the beginning of each forward movement, means for exhausting the air from the interior of said plunger die after the blank has been wrapped thereabout, whereby it is held in place during the forward movement of the plunger die, and for forcing air thereinto at the end of such forward movement, thereby driving the blank from further engagement thereabout, and means adapted to act complementarily to the other portions of the mechanism for successively forcing from each matrix die a formed blank previously deposited therein, substantially as described.

2. In a paper bottle forming machine, in combination with a plunger die, means for positively actuating said plunger die in either direction along its axis, means for gumming the edge of a prepared blank before its treatment by the parts of the mechanism, a folder for wrapping said blank around said plunger die with its edges overlapping at the beginning of each forward movement thereof, a suction pipe leading into the interior of said plunger die, whereby air may be exhausted therefrom when the blank is first wrapped therearound, and whereby air under pressure may be forced thereinto when the subsequent separation of the plunger die from the blank is desired, and interconnecting members between the parts whereby the termination of the exhaust action and the beginning of the blast action through said pipe is made to conform to the position of the plunger die in the cycle of operations, substantially as described.

3. In a paper bottle forming machine, the combination of means for coating a selected edge of each blank fed thereto with an adhesive substance when the blank is withdrawn from an adjacent place of storage, a longitudinally reciprocative plunger die provided with air perforations through the working surface thereof, an air duct communicating with the interior and perforated portion thereof, means actuated by the movement of other portions of the mechanism for alternatingly producing suction and pressure action therethrough contemporaneously with the beginning of the forward and of the retractive movement respectively of the plunger die, a folder member movable transversely of the axis of said plunger die and adapted to automatically wrap a blank therearound with the gummed edge overlapping an ungummed portion, at the beginning of each forward movement, a matrix die into which the plunger die forces the blank at the end of its forward movement, and an expelling member working synchronously with the beginning of the rearward movement of said plunger die, and from the opposite side of the matrix die from that on which said plunger die is located, whereby the formed article is expelled from the matrix die, substantially as described.

4. In a paper bottle forming machine, in combination with a matrix die, an anvil plunger adapted to engage in said matrix die, a coöperating folding member adapted to successively engage individual prepared blanks and to fold the same about said anvil plunger, an edge turning tool adapted to engage in said matrix die and to rotate therein, and means adapted to act on the formed article after the operation of said edge turning tool, whereby the article is expelled from the matrix die, substantially as described.

5. In a paper bottle forming machine, in combination with a matrix die, an expelling plunger adapted to loosen the bottle formed in said matrix die, and a projectile head to said expelling plunger adapted to complete the expulsion of said paper bottle, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,019,534. CHAIR-LEG OR FURNITURE CASTER. ADAM E. SCHATZ, Mount Vernon, N. Y., assignor to Harpoon Caster Manufacturing Company, New York, N. Y., a Corporation of New York. Filed May 5, 1911. Serial No. 625,374. (Cl. 155—33.)



An article of manufacture consisting of a single piece of metal forming a sliding shoe adapted to be secured to the lower end of the leg of a piece of furniture, one portion of said shoe having a smooth convex contour, and the other portion bent inward toward the center and terminating with projecting fastening spurs, in combination with a hard wood or metal support to prevent the collapsing of the metal under pressure, whereby said shoe may be driven into the furniture leg.

1,019,535. NON-REFILLABLE BOTTLE. MAX P. SCHELL, San Francisco, Cal., assignor to Christopher H. Koblcke, San Francisco, Cal. Filed Nov. 14, 1911. Serial No. 660,216. (Cl. 215—69.)

1. In a non-refillable bottle, the combination, with the neck of a bottle, of an apertured casing in said neck having a base formed with a plurality of circular openings, corresponding valves adapted to project through said openings to close the same, a plate formed integral with all of said valves, and a ball in said casing on said plate.

2. In a non-refillable bottle, the combination, with the neck of a bottle, of an apertured casing in said neck having a base formed with a plurality of circular openings, corresponding valves adapted to project through said openings to close the same, a plate formed integral with all of said valves, and formed at the edge with guide arms for guiding it in said casing, and a ball in said casing on said plate.



3. In a non-refillable bottle, the combination, with the neck of a bottle, of an apertured casing in said neck having a base formed with a plurality of circular openings, corresponding valves adapted to project through said openings to close the same, a plate formed integral with all of said valves, and a ball in said casing on said plate, said casing being of such size and form relatively to the diameter of the ball as to prevent the vertical movement of the ball permitting said valves to be moved from said openings to the full depth of the valves, while permitting said valves to move from said openings.

1,019,536. PNEUMATIC WHEEL. ADAM CHARLES SCHRODER, Derry Station, Pa., assignor of one-half to Conrad Proessler, Pittsburgh, Pa. Filed June 17, 1911. Serial No. 633,685. (Cl. 152—28.)



In a pneumatic wheel, spokes, units arranged circumferentially of the outer ends of said spokes, each unit comprising a felly piece, a sectional outer tube, an inner tube inclosed by the sections of said outer tube, tread blocks, washers arranged upon said spokes, shields arranged circumferentially of said spokes and having pockets formed therein providing clearance for said outer tubes with the lower edges thereof embracing said washers and the outer edges thereof retaining said tread blocks in position relatively to said outer tubes, springs encircling the outer ends of said spokes between said washers and said felly pieces, and means inclosed by said shields to facilitate the inflating of said inner tubes.

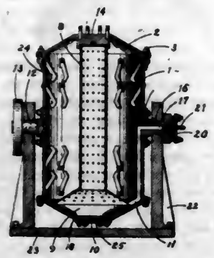
1,019,537. BREAST-SUPPORTER. AUGUSTE SCHWENKLER, *née* DEEGE, Berlin, Germany. Filed June 8, 1910. Serial No. 565,749. (Cl. 2—87.)



A device of the character specified, comprising spaced straps, the uppermost strap being curved downwardly at

its center, a rear cushion connecting the straps, end straps connecting the ends of the said straps, an annular cushion arranged adjacent to each of the said end straps, and connected therewith, a plurality of intermediate straps arranged between the two first-named straps and connecting the annular cushions and passing transversely of the rear cushion, and other straps connecting each annular cushion with the uppermost of the first-named straps near the end thereof, and means for connecting the free edges of the end straps together.

1,019,538. STERILIZING APPARATUS. JAMES H. SCOTT, San Diego, Cal. Filed Aug. 21, 1911. Serial No. 645,287. (Cl. 71—1.)



1. In a sterilizing apparatus, an outer drum having two-edged mixing knives on the inner side of the wall, and an inner chamber having a perforated wall, the inner chamber being concentric with the outer drum, and adapted to distribute and force live steam throughout the mass of material placed in the outer chamber for sterilization, substantially as shown.

2. In a sterilizing apparatus, a rotatable drum having two sets of clamping faces, and a pair of trunnions adapted to be secured to the drum, one of the trunnions having a driving wheel attached, and the other trunnion having an opening with a gland whereby the trunnion may be rotatably connected to a steam pipe for the admission of steam to the interior of the drum, the trunnions being adapted to be secured to the clamping faces by stud bolts, whereby the drum may be rotated on its horizontal longitudinal axis, or on its transverse axis, in accordance with the position of the trunnions, substantially as shown.

3. In a sterilizing apparatus, a drum adapted to rotate on a transverse axis or on a longitudinal axis, in accordance with the position of the trunnions thereon, supporting standards in which the trunnions are journaled, and a base on which the standards may be secured in different positions whereby the drum may be mounted to rotate on its transverse or longitudinal axis, in accordance with the position of the trunnion bearings, substantially as shown.

4. In a sterilizing apparatus, a rotatable drum adapted to rotate in different positions, having detachable trunnions and supporting standards therefor, and a clamped cover on the end of the drum and a pivoted cover on the side of the drum, whereby the drum may be opened for the removal of the contents, in accordance with the position in which it is mounted for rotation on its trunnions, substantially as shown.

5. A sterilizing apparatus, comprising a drum having a removable cover on the end thereof and a pivoted door on the side thereof, means for securing the cover and the door, agitating and mixing knives arranged on the interior of the drum, an inner chamber concentric with the longitudinal axis of the drum, having a perforated wall and an enlarged end section, clamping faces arranged on the ends and on the side of the drum, an opening communicating with the inner chamber, on an end clamping face, an opening and a passage communicating with the inner chamber and a side clamping face, a trunnion bearing adapted to be clamped to the drum, having a drive wheel thereon, a trunnion adapted to be clamped to the faces having an opening, the trunnion being provided with a steam port, and a packing gland therefor, supporting standards for the trunnions, and a base to which the supporting standards may be bolted in different positions, whereby the device may be operated by rotating on a transverse axis or on a longitudinal axis, and steam may be admitted to the interior of the drum and inner chamber while the apparatus is operated in either position, substantially as shown and set forth.

1,019,539. CEMENT-FINISHING MACHINE. GEORGE W. SHARP, Enid, Okla. Filed Jan. 28, 1910. Serial No. 540,514. (Cl. 94—6.)



1. A machine of the character specified, comprising an open wheel supported frame, a smoothing plate arranged transversely of the frame, the lower face thereof being substantially flush with the lower edges of the frame, an inclined plate arranged transversely of the frame at each side of the smoothing plate, each of the said plates having one edge abutting the adjacent edge of the smoothing plate and inclining upwardly and outwardly toward its free edge, a roller journaled transversely of the frame behind the smoothing plate, an edging bar outside of the frame, each of the said bars having a longitudinal concave face facing inwardly and downwardly and extending below the frame, and a plate arranged transversely of the frame at one edge thereof and mounted to swing above and below the frame, said plate having a beveled lower edge.

2. In a machine of the character specified, a wheel supported frame, a horizontal smoothing plate arranged transversely of the frame, the lower face of the plate being substantially flush with the lower edge of the frame, an inclined plate at each side of the smoothing plate and having its lower edge abutting the adjacent edge of the smoothing plate, and a marking plate arranged transversely of the frame at one end thereof and mounted to swing above and below the frame and having a lower beveled edge.

3. A machine of the character specified, comprising an open wheel supported frame, a smoothing plate arranged transversely of the frame, said plate being substantially triangular in cross section and having its apex extending substantially flush with the lower edge of the frame, and a transverse marking plate at one end of the frame mounted for swinging movement toward and from the surface to be operated upon.

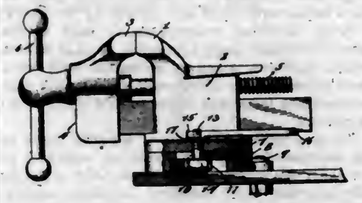
4. A machine of the character specified, comprising an open wheel supported frame, a smoothing plate arranged transversely of the frame, said plate being substantially triangular in cross section and having its apex extending substantially flush with the lower edge of the frame, a transverse marking plate at one end of the frame mounted for swinging movement toward and from the surface to be operated upon, said plate having a lower beveled edge for engaging and marking the plastic material.

5. In a machine of the character specified, an open frame, a smoothing plate arranged transversely of the frame intermediate the ends thereof, said plate being substantially triangular in cross section and arranged with its apex extending substantially flush with the lower edge of the frame.

[Claim 6 not printed in the Gazette.]

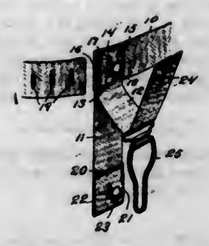
1,019,540. BENCH-VISE SUPPORT. CARL E. SHIELDS, Rock Island, Ill. Filed June 3, 1911. Serial No. 630,977. (Cl. 81—41.)

In a device of the class described, a stationary jaw and a movable jaw, means for adjusting one with relation to the other, a base for supporting said jaws, a support to which said base is pivoted, a threaded bolt passing eccentrically through said base and through a circular slot in said support, a clamping member threaded on said bolt, said member having a cam-shaped face, and a cam-shaped



projection on said base adapted to engage said clamping member, and an arm for operating said clamping member to securely clamp said base to said support.

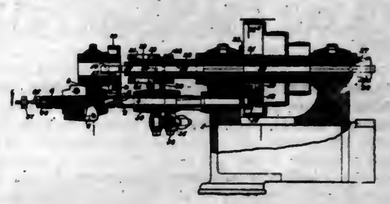
1,019,541. GARTER. DANIEL A. SINCLAIR, New York, N. Y. Filed Oct. 26, 1911. Serial No. 656,887. (Cl. 24—6.)



1. A garter including strips of non-elastic tape secured together to form a band adapted to encircle the limb, and two superposed depending portions, one of said depending portions and one end of said band being overlapped, stitching connecting said overlapped portions to define a pocket open along one edge, and the outer wall of said pocket having a buttonhole partly encircled by said stitching, a detachable button having a base within said pocket and a shank extending out through said buttonhole, the opposite end of said band having a buttonhole for receiving said shank and the outer of said depending portions being folded back upon itself to form a loop and provided with a buttonhole adjacent to its free end for receiving said button, a detachable button carried by the other of said depending portions adjacent to its free end and an eye detachably carried by said loop and adapted to coöperate with said last-mentioned button to receive and retain a portion of the garment therebetween.

2. A garter including strips of fabric secured together to form a band adapted to encircle the limb and two superposed depending portions, one of said depending portions and one end of said band being overlapped and stitched to form a pocket therebetween, open along one edge, and the outer wall of said pocket having a buttonhole partly encircled by said stitching, a button removable from said pocket through said open edge and having a base within said pocket and a shank extending out through said buttonhole, the opposite end of said band having a buttonhole for receiving said shank, the inner one of said depending portions at its lower end being folded back upon itself and stitched to form a pocket open at one edge and having a buttonhole in its outer wall, a button having a base within said pocket and a shank projecting out through said last-mentioned buttonhole and removable through said open edge and the outer of said depending portions having a buttonhole adjacent its free end adapted to receive either of said buttons.

1,019,542. FEED MECHANISM FOR AUTOMATIC LATHES. ALBERT HENRY SMITH, Birmingham, England. Filed Oct. 6, 1911. Serial No. 653,264. (Cl. 29—59.)



1. Feed mechanism for automatic lathes comprising a slidable stock carrier; a longitudinally movable feed-bar; a one-way clutch connecting said feed-bar with said carrier; means for moving the feed-bar in a forward direction; a chuck for holding the stock; a device for retaining the feed-bar in a withdrawn position; means for releasing the retaining device when the chuck is unlocked; to permit the feed-bar to be moved forward for feeding the stock; and a screw gear adapted for engagement with the feed-bar, to return the same to its normal position.

2. Feed mechanism for automatic lathes comprising a slidable stock carrier; a longitudinally movable feed-bar; a one-way clutch connecting said feed-bar with said carrier; a coiled compression spring acting upon the adjacent end of the feed-bar to move the latter in a forward direction; a chuck for holding the stock, a catch device for retaining the feed-bar in a withdrawn position; means for releasing the catch device when the chuck is unlocked, to permit the feed-bar to be moved forward for feeding the stock; and a screw gear adapted for engagement with the feed-bar when the chuck is unlocked, to return said feed-bar to its normal position.

3. Feed-mechanism for automatic lathes comprising a slidable stock carrier; a longitudinally movable feed-bar; a one-way clutch connecting said feed-bar with said carrier; a spring for moving forward the feed-bar; a chuck for holding the stock; a catch device for retaining the feed-bar in a withdrawn position; a movable part for locking and unlocking the chuck; means operated by said movable part for operating the catch device, to release the same by the operation of unlocking the chuck, for permitting the feed-bar to be moved forward for feeding the stock; and a screw gear adapted for engagement with the feed-bar to return the same to its normal position.

4. Feed mechanism for automatic lathes comprising a slidable stock carrier; a longitudinally-movable feed-bar; a one-way clutch connecting the feed-bar with said carrier, said feed-bar having a worm-rack cut at one end; a main spindle; a worm driven from said spindle and adapted to engage with the said rack; a rocker carrying the said worm; a spring for moving forward the feed-bar; a chuck for holding the stock; a catch device for retaining the feed-bar in a withdrawn position; means for releasing the catch device by the unlocking of the chuck; means for tilting the rocker when the catch device is released to disengage said worm from said feed-bar for permitting the latter to be moved forward for feeding the stock; and means for returning said rocker to its former position, when the chuck is locked, to reëngage said worm with the feed-bar, to return said feed-bar to its normal position.

5. Feed mechanism for automatic lathes comprising a slidable stock carrier; a longitudinally-movable feed-bar; a one-way clutch connecting the feed-bar with the said carrier, said feed-bar having a worm rack cut at one end; a main spindle; a worm driven from said spindle and adapted to engage with the said rack; a rocker carrying the said worm; a spring for moving forward the feed-bar; a chuck for holding the stock; a lever catch for retaining the feed-bar in a withdrawn position and having a nose end engaging with the said rocker; a sliding part for locking and unlocking the chuck; a rod carried by the sliding part and adapted, when the chuck is unlocked, to engage with the catch-lever to disengage the same from the

feed-bar and cause its nose end to tilt the rocker, for disengaging the worm from the feed-bar; means carried by the chuck-operating slide for locking the rocker in this position; and means for returning said rocker to its former position when the chuck is locked, to reëngage said worm with the feed-bar, to return said feed-bar to its normal position.

1,019,543. DEVICE FOR POISONING RODENTS. DAISY ELLEN SMOOT, Piedmont, Mo. Filed June 29, 1911. Serial No. 635,997. (Cl. 167—6.)



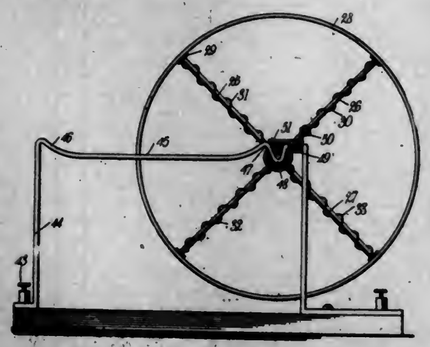
1. As a new article of manufacture, a poisoning device composed of layers of material connected at adjacent sides, the layers being formed with registering apertures providing an opening through the device, and a poisonous substance interposed between said layers.

2. As a new article of manufacture, a poisoning device composed of superposed layers of material adhesively connected together, and a poisonous substance interposed between said layers, the poisonous substance as aforesaid being spaced from the edges of the layers and wholly inclosed by the latter, the layers being formed with registering apertures centrally thereto, forming an opening through the device, the poisonous substance being spaced from the edges of the apertures.

3. As a new article of manufacture, a rodent poisoning device made from a single blank of material folded upon itself to form layers, said layers being provided with registering apertures therein forming an opening through the device, and a poisonous substance between said layers.

4. As a new article of manufacture, rodent poisoning means comprising a single blank of material folded upon itself to form layers, adhesive means connecting said layers, the folded blank having lines of perforations at intervals in its length dividing the same into a plurality of poisoning devices, and a poisonous substance interposed between said layers.

1,019,544. FIELDLESS MOTOR. FRANK LEE SOUTH, Baldhill, Pa. Filed May 7, 1910. Serial No. 560,005. (Cl. 172—36.)



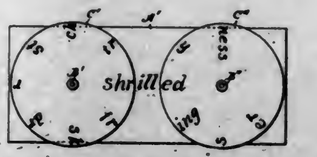
1. A fieldless motor comprising a longitudinal frame provided with substantially horizontal portions, an armature carrying sectors for engaging said horizontal portions, said armature being provided with magnetic members extending radially outward from it and acted upon inductively by the earth's magnetic field, and connections for supplying a current to said horizontally disposed portions of said frame.

2. In a fieldless motor, the combination of a frame provided with substantially horizontal portions of conducting material, an armature provided with substantially cylindrical portions carrying sectors, said armature being further provided with magnetic members extending radially outward, and with windings mounted upon said magnetic members and connected to said sectors, said magnetic members being acted upon inductively by the earth's magnetic field, electrical connections to said substantially horizontal portions, loops supported by said substantially horizontal portions, journals connected with said armature and connected for direct engagement with said loops, and connections from said frame to said sectors carried by said armature.

3. The combination of a pair of metallic frame members having portions formed into loops, an armature provided with a shaft for engaging said loops, said armature being further provided with magnetic members extending radially from it and acted upon by the earth's magnetism, contact members made of spring wire and mounted upon said frame members, each contact member being provided with a counterweight for normally holding it in a predetermined position, each contact member being so balanced that when it occupies a predetermined abnormal position, it rests upon said armature, sectors carried by said armature, and adapted to be engaged by said contact members, and windings connected with said sectors and mounted upon said magnetic members.

4. A fieldless motor comprising a track of conducting material, a revoluble armature resting directly upon said track, and adapted to roll along the same, sectors carried by said armature and successively engaging said track for the purpose of energizing said armature, said armature thus energized being acted upon inductively by the earth's magnetism, and means for supplying an electric current to said track.

1,019,545. ETYMOLOGICAL CHART. EDWARD F. SOUTHWORTH, Syracuse, N. Y. Filed May 13, 1911. Serial No. 627,071. (Cl. 35—9.)



In an educational appliance, the combination with a base-piece upon which at a definite point is located the radical of a word, a rotary disk journaled to said base-piece in a position such that its periphery is adjacent to the beginning of said radical and having located radially thereon prefixes for said radical, and another rotary disk journaled to said base-piece in a position such that its periphery is adjacent to the end of said radical and having located radially thereon suffixes for said radical, whereby on the rotation of said disks different words may be successively built up from said radical and said prefixes and suffixes.

1,019,546. EGG-BEATER. FANNIE G. SPEAR, New York, N. Y. Filed Jan. 10, 1911. Serial No. 601,821. (Cl. 107—30.)

1. In combination, a base piece, a spiral shaft journaled therein, a spring retracted operating means for rotating said shaft in alternate opposite directions, and oppositely disposed beater wings secured on said shaft in different planes and in fixed relation one to the other.

2. In combination, a supporting base, a spiral shaft having one end journaled therein, a slotted frame slidably mounted on said shaft, means for operating the same, a head journaled on the opposite end of the shaft and slidably mounted in the frame, a retracting spring interposed between the head and the frame for raising the frame on the shaft, and right angularly and oppositely disposed beater wings secured to the shaft in different planes and in fixed relation one to the other.

3. In an egg beater, a shaft, means to rotate said shaft in alternate opposite directions, a pair of separated beater wings secured at right angles to each other in fixed relation, one of the said beater wings having downwardly and inwardly turned ends, and the other beater wing having upwardly and inwardly turned ends.



4. In an egg beater, a shaft, means to rotate said shaft in alternate opposite directions, a pair of separated beater wings secured on the shaft at right angles to each other in fixed relation, one of said beater wings having downwardly and inwardly turned ends, and the other beater wing having upwardly and inwardly turned ends, and means on the upper beater wing for forcing the material operated upon downwardly, and means on the lower wing for forcing the material upwardly.

1,019,547. BRACING DEVICE FOR SUIT-CASES. LOUIS SEIBO, Clarksburg, W. Va. Filed Dec. 8, 1911. Serial No. 664,526. (Cl. 190—50.)

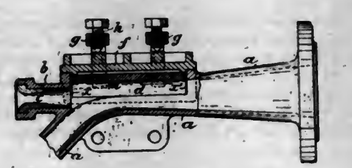


1. In a bracing device for suit cases having a spring lock, a plate secured to the inside of the suit case and registering with said lock, a latch plate having slots and being secured to said plate, a U-shaped brace member provided with lugs arranged to enter the slots in said U-shaped latch plate, and a second latch member secured on the inner side of said suit case and arranged to engage the opposite end of said brace member for holding said brace member in position.

2. In a bracing device for suit cases having a spring lock, a plate secured to the inside of the suit case and registering with said lock, a U-shaped latch plate having slots and being secured to said plate, a U-shaped brace member provided with lugs arranged to enter the slots in said U-shaped latch plate, a bracing strip at the bend of the U-shaped brace member contiguous to said lugs, and a second latch member secured on the inner side of said suit case and arranged to engage the opposite end of said brace member for holding said brace member in position.

3. In a bracing device for suit cases having a spring lock, a plate secured to the inside of the suit case and registering with said lock, a U-shaped latch plate having slots on its central portion and a recess, a brace member having one end bent laterally and being provided on its lateral portion with lugs arranged to enter the slots in the U-shaped latch member, said brace member having a brace strip extending from said laterally extending portion to the main body portion of the brace, said bracing strip being arranged to enter the recess in said U-shaped latch plate, a U-shaped latch member secured to the inner portion of the suit case on that side opposite the lock, and means carried by said latch member for engaging and holding the opposite end of said brace member.

1,019,548. SUCTION DEVICE FOR DUST-LADEN AIR. KARL SPITZER, Vienna, Austria-Hungary. Filed Nov. 14, 1911. Serial No. 660,294. (Cl. 230—13.)



1. In a suction device for dust laden air the combination of an elbow tube, a nozzle for fluid under pressure having its issuing end in the wall of the elbow tube and being substantially coaxial with the issuing end of the elbow tube, an opening in the elbow tube in front of such nozzle, a piece loosely fitting such opening and means for holding such piece in position on the elbow tube, substantially as and for the purpose described.

2. In suction device for dust laden air the combination of an elbow tube, a nozzle for fluid under pressure having its issuing end in the wall of the elbow tube and being substantially coaxial with the issuing end of the elbow tube, a rectangular opening in the elbow tube in front of such nozzle, a rectangular piece loosely fitting such opening, packing cords inserted into the corners of the said opening and having their ends laid on top of the said piece, a cover and means for pressing the cover against the top of the said piece, substantially as and for the purpose described.

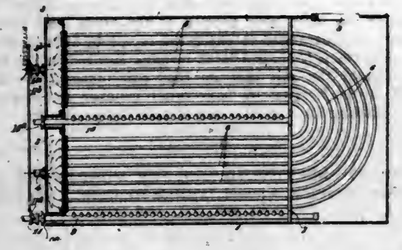
3. In suction device for dust laden air the combination of an elbow tube a nozzle for fluid under pressure having its issuing end in the wall of the elbow tube and being substantially coaxial with the issuing end of the elbow tube, a rectangular opening in the elbow tube in front of such nozzle, a rectangular piece loosely fitting such opening, the bottom side of such rectangular piece being provided with a semicylindrical recess substantially coaxial with the nozzle, the radius of such recess being greater than the radius of the issuing end of the nozzle and the rear end of the said piece being in substantially the same plane as the issuing end of the nozzle and means for holding such piece in position on the elbow tube, substantially as and for the purpose described.

1,019,549. WATER-HEATER. GEORGE E. STARN, Camden, N. J., assignor to Hannah M. Dover, Palmyra, N. J. Filed Dec. 1, 1909. Serial No. 530,862. (Cl. 122—275.)

1. A water-heater comprising a cold water chamber, a hot-water chamber, a multiple of independent pipes connecting said chambers, gas burners for heating said pipes, and a casing inclosing said burners and pipes, the

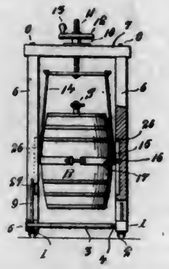
cold water chamber having a cold water inlet and the hot water chamber having a hot water outlet that is restricted over the cold water inlet.

2. A water heater comprising an inlet chamber, an inlet pipe therefor, an outlet chamber, an outlet pipe therefrom, tube-means connecting the two chambers to establish fluid communication between them, means for heating the tubes, the outlet being restricted over the inlet whereby the flow of water through the heater is retarded to facilitate its heating.



3. In a water heater, the combination of a water inlet chamber and a water outlet chamber at a higher level, a plurality of water pipes connecting said chambers and arranged in a vertical bank of horizontally disposed pipes, and a row of gas-burners under said bank of water pipes, the flow from the outlet chamber being restricted as compared with the flow into the inlet chamber.

1,019,550. BARREL-RACK. ALWYN N. STAVELY, Lynch, Md. Filed Sept. 6, 1911. Serial No. 647,862. (Cl. 248—17.)

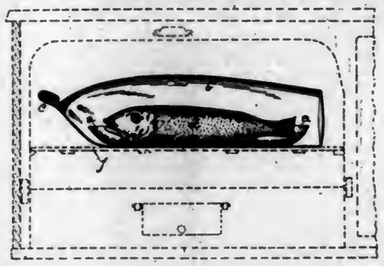


1. In a barrel rack, the combination with upright standards mounted on suitable feet and connected by a cross head, a wear plate on the latter, a screw passing through the cross head and plate, a hand wheel threaded on the screw above the plate, and a yoke connected with the lower end of the screw and having eyes at the lower ends of its arms; of a band having diametrically opposite pins at its sides, the uprights being provided in their inner faces with grooves for the pins opening at their lower extremities in mouths, means for tightening the band around a barrel, and a handle connected with said band.

2. In a barrel rack, the combination with upright standards connected by a cross head and having upright grooves in their inner faces each opening out one edge at one extremity, and barrel-elevating means connected with said cross head; of a band of a size to surround a barrel and split at one point and having ears at its extremities at opposite sides of said split, a screw connecting said ears, a handle having an eye pivoted on said screw, pins projecting radially outward from opposite sides of said band and adapted to engage said grooves, and connections between the arms of the barrel-elevating means and said pins.

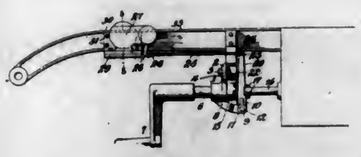
1,019,551. PROCESS OF COOKING FOODS. EDWARD E. SWEERS, Toledo, Ohio, assignor to The Diamond Wood Dish Company, Delta, Ohio, a Corporation of Ohio. Filed Dec. 8, 1911. Serial No. 664,561. (Cl. 99—11.)

WITHDRAWN



The process of cooking foods which consists, first, in confining in a paper receptacle a thin wood dish containing the food to be cooked, and then submitting the paper receptacle and its contents to the requisite degree of heat for the required time.

1,019,552. ALARM FOR AUTOMOBILES. WILSON E. SYMONS, Chicago, Ill. Filed May 15, 1911. Serial No. 627,259. (Cl. 116—1.)



1. In a device of the class described, the combination with the starting crank mechanism of an automobile, an alarm, and operating mechanism for the alarm arranged in the path of and adapted to be engaged by the said crank mechanism, said operating mechanism being connected with the said alarm.

2. In a device of the class described, the combination with the starting crank mechanism of an automobile, an alarm, and operating mechanism for the alarm arranged in the path of and adapted to be engaged by said crank mechanism, and means for connecting the operating mechanism with and disconnecting it from the said alarm.

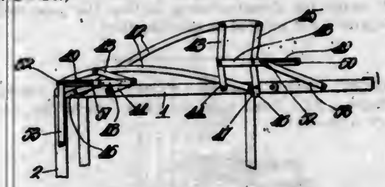
3. In a device of the class described, the combination with the starting crank mechanism of an automobile, an alarm, an operating shaft having an arm or projection arranged in the path of said crank mechanism and adapted to be engaged and actuated by the same, and means for connecting the shaft with and disconnecting it from, the alarm.

4. In a device of the class described, the combination with the starting crank mechanism of an automobile, an alarm, a transverse shaft having inner and outer arms, the inner arm being arranged in the path of and adapted to be engaged and actuated by said crank mechanism, and means for connecting the outer arm of the shaft with and disconnecting it from the alarm.

5. In a device of the class described, the combination with the starting crank mechanism of an automobile, an alarm having a trigger, a transverse shaft provided with inner and outer arms, the inner arm being arranged in the path of and adapted to be engaged and actuated by the said crank mechanism, and connecting means extending from the outer end of the shaft to the trigger and detachably connected with the latter.

[Claims 6 to 8 not printed in the Gazette.]

1,019,553. COT OR COUCH. JOHN L. TANDY, Kansas City, Mo. Filed Dec. 14, 1911. Serial No. 665,808. (Cl. 5—16.)



1. The combination with a cot or couch having a body and a wing hinged to one side of the body, of a head or foot frame consisting of a bar hinged to the body, and means whereby downward movement of the wing to a horizontal position shall effect the elevation or raising of the head or foot frame.

2. The combination with a cot or couch having a body and a wing hinged to one side of the body, of a head or foot frame consisting of a bar hinged to the body, means whereby downward movement of the wing to a horizontal position shall effect the elevation or raising of the head or foot frame, and means for locking said head or foot frame and said wing in elevated or horizontal position.

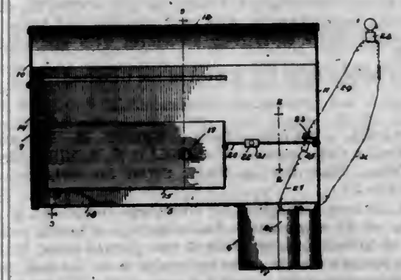
3. The combination with a cot or couch having a body and a wing hinged to one side of the body, of a head or foot frame consisting of a bar hinged to the body, a toggle connecting said bar with the body, and means pivoted to the wing and bearing a slidable relation to said toggle and adapted as the wing is moved to impart expanding or collapsing movement to said toggle to effect elevation or lowering respectively of the head frame.

4. The combination with a cot or couch having a body and a wing hinged to one side of the body, of a head or foot frame consisting of a bar hinged to the body, a toggle connecting said bar with the body, means pivoted to the wing and bearing a slidable relation to said toggle and adapted as the wing is moved to impart expanding or collapsing movement to said toggle to effect elevation or lowering respectively of the head frame, and means for limiting expanding movement of the toggle as the wing in moving downward attains a horizontal position.

5. The combination with a cot or couch having a body and a wing hinged to one side of the body, of a head or foot frame consisting of a bar hinged to the body, a toggle connecting said bar with the body, a bar pivotally connecting the wing with one of the links of the toggle and bearing a slidable relation thereto, and means for limiting the expansive or opening movement of the toggle.

[Claim 6 not printed in the Gazette.]

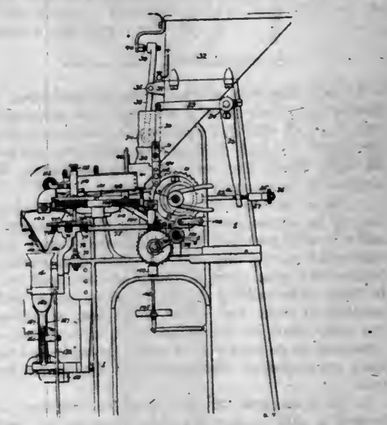
1,019,554. MAIL-BOX. FRANK W. TAYLOR, Canute, Okla. Filed July 6, 1910. Serial No. 570,631. (Cl. 177—318.)



1. In combination a mail box having a letter entrance slot in one of its side walls, pins secured to the side walls, of the box below the horizontal plane of said slot and projecting inwardly of said side walls, an open receptacle adapted to receive letters passed through the slot into the box, screws for pivotally supporting said receptacle, said screws having conical ends extending through the side walls of the receptacle and bearing at their conical ends against the free ends of said pins, said screws being adjustable to hold the receptacle against free movement or to permit of free pivotal movement, an arm secured to one end of the receptacle and provided with a transverse terminal circuit closer on its free end, a weight adjustably mounted on the arm to balance the receptacle, angular contact plates secured to the box in spaced relation from each other and with their free ends supported in position to be engaged by the circuit closer of said arm, a leaf spring secured to the box and bearing at its free end against the bottom of the receptacle, and an alarm circuit connected with the contact plates.

2. In a mail box, a box having a side wall formed with a letter entrance slot extending longitudinally thereof, pivot pins secured to the side walls of the box in registering positions and laterally of the central point in said slot, a receptacle movable within the box and disposed below the letter slot to receive the letters inserted in said slot, screws extending through the side walls of the receptacle and engaging the pins to support said receptacle for pivotal movement within the box, said screws removably supporting the receptacle on the box, a spring adapted to support the receptacle in a normal horizontal position, a stop for limiting the upward movement of the receptacle at one end thereof, a weighted arm mounted on one end of the receptacle and extending longitudinally thereof and formed on its terminal with a transverse circuit closer, angular contact members secured to the box and adapted to be engaged by the transverse circuit closer and an alarm circuit connected with the contacts.

1,019,555. TACK WEIGHING AND PACKAGING MACHINE. WILLIAM O. TAYLOR, Limerick Square, Pa., assignor to Taylor and Company, Limerick Square, Pa., a Firm. Filed Nov. 22, 1910. Serial No. 593,695. (Cl. 73—177.)



1. In a tack weighing machine, the combination of a hopper, a segregating plate at the outlet thereof, and reciprocating devices for said plate having, as elements, an arm, a reciprocated rod passing therethrough, and a block on said rod for contacting with the arm, said block being adjustable to vary the amount of lost motion permitted.

2. The combination, in a tack weighing machine, of the feed hopper, the segregating plate, and means for reciprocating the same in front of the delivery mouth of the hopper, said segregating plate having inwardly curved hooks for engaging the mass of tacks.

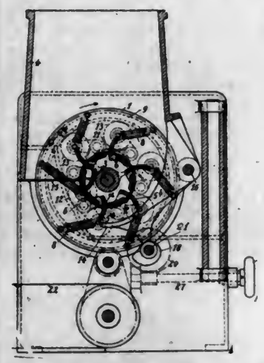
3. The combination, in a tack weighing machine, of the feed hopper, a plate upon which the mass of tacks in the lower portion of the hopper bears and by which it is pushed outwardly, means for pressing the plate inwardly against the pressure of the mass of tacks, and a signaling device whose operation is dependent upon the movement of the plate.

4. The combination, in a tack weighing machine, of the feed hopper, a plate upon which the mass of tacks in the lower portion of the hopper bears and by which it is pushed outwardly, means for pressing the plate inwardly against the pressure of the mass of tacks, an electric signaling device, and connections whereby the inward and outward movement of the plate is caused to close and open the circuit through said device.

5. The combination, in a tack weighing machine, of a feed hopper, a pivoted and vibratable feed trough, and means for changing the relation of the pivot to the bottom of the trough, so as to increase or diminish the forward pitch in the vibration of the latter.

[Claims 6 to 54 not printed in the Gazette.]

1,019,556. DOUGH-DIVIDING MACHINE. OTTO TEICHMANN, Stuttgart-Cannstatt, Germany. Filed Dec. 17, 1909. Serial No. 533,714. (Cl. 107—15.)



1. In a machine of the character described, a hopper having an egress duct, a dividing disk arranged in proximity to said duct and having a slotted cutter head, levers fulcrumed to said disk, spring-influenced curved cutters on said levers and engaging the head-slots, and cams adapted to be engaged by the levers.

2. In a machine of the character described, a hopper having an egress duct, a dividing disk arranged in proximity to said duct and having a slotted cutter head, levers fulcrumed to said disk, curved broad-edged cutters on said levers that pass through the head-slots and are adapted to form intermediate dough receiving cells, and springs tending to draw the cutter edges into engagement with the outer wall of the egress duct, said springs being so tensioned as to permit a receding movement of the cutters upon an excessive compression of the dough within the cells.

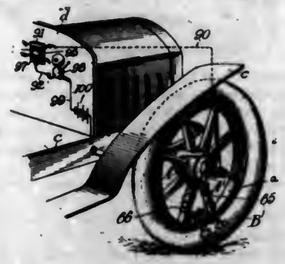
3. In a machine of the character described, a hopper having a gate, a dividing disk arranged in proximity to said gate, spring-influenced cutters carried by the disk and adapted to engage the gate, and means for setting said gate.

4. In a machine of the character described, a hopper having an adjustable gate, a dividing disk arranged in proximity to said gate, spring-influenced cutters carried by the disk, and an adjustable cam coöperating with the cutters for regulating the distance between the cutters and gate.

5. In a machine of the character described, a hopper having a movable gate, a rotative dividing disk arranged in proximity to said gate, spring-influenced cutters carried by the disk and adapted to engage the gate, a movable cam coöperating with the cutters for regulating the distance between cutters and gate prior to their engagement, and means for simultaneously setting the gate and cam.

[Claim 6 not printed in the Gazette.]

1,019,557. TIRE-ALARM. ELMER ALONZO TERPENING, Mokena, Ill. Filed Mar. 19, 1909. Serial No. 484,868. (Cl. 177—311.)



1. The combination with a vehicle wheel having a pneumatic tire, provided with a valve stem, of a pressure gage provided with a coupling attached to the valve stem, a guide member slidably engaging said gage and secured in fixed relation to the wheel, and an alarm device operatively associated with said gage.

2. The combination with a vehicle wheel provided with a pneumatic tire, of a tire alarm comprising a pressure responsive gage, means for supporting said gage between the spokes in connection with a valve stem comprising a positive connection between the gage and valve stem, and a guiding connection between the gage and the wheel structure, and an alarm device operatively associated with said gage.

3. The combination with an automobile wheel provided with a pneumatic tire having an inwardly projecting valve stem, of a pressure gage arranged for support in a radial direction upon the valve stem, a guide secured to the wheel engaging the gage and an alarm device operatively associated with said gage.

4. The combination with an automobile wheel, provided with a pneumatic tire, having a valve stem projecting inwardly toward the hub of the wheel, of a pressure gage adapted to be positioned between the spokes of the wheel, provided on one side with a coupling for connecting said gage to the valve stem to receive support therefrom, and upon another side with an inflation valve, and an alarm device operatively associated with said gage.

5. In a tire alarm, the combination with a vehicle wheel provided with a pneumatic tire having a valve stem projecting radially inward, of a closed casing, a coupling carried by said casing for connecting said casing to the tire valve stem, an inflation valve carried by said casing on another side thereof, a Bourdon tube within the casing having communication with said coupling and valve, and a signal device operatively associated with said Bourdon tube.

[Claims 6 to 10 not printed in the Gazette.]

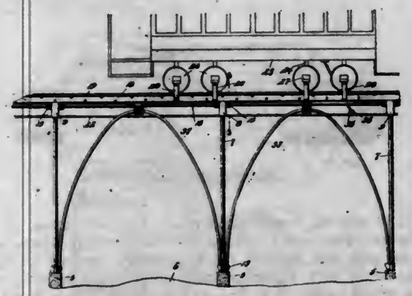
1,019,558. WATER-PLUG. KNIGHT H. THOMPSON, Shelby, Ohio, assignor of one-half to H. T. Miller, Shelby, Ohio. Filed Dec. 5, 1911. Serial No. 664,103. (Cl. 137—28.)

1. A hose connection for fire plugs comprising a plug adapted for connection to the hydrant, and having a chambered portion with an inclined seat formed about the central opening therein, cams projecting from the wall of the chambered portion, a shell for connection with the hose, a handle having a head, a circular outlined opening therein, in which said shell is swiveled, one end of the shell being adapted to contact with said inclined seat, cams upon the circumference of the head, adapted to coöperate with those projecting from the chamber to hold the parts locked together.



2. A hose connection for fire plugs comprising a plug, adapted for connection to the hydrant, and having a chambered portion with an inclined seat formed about the central opening therein, cams projecting from the wall of the chamber portion, a shell for connection with the hose, a handle having a head, a circular outlined opening therein, in which said shell is swiveled, one end of the shell being adapted to contact with said inclined seat, cams upon the circumference of the head, adapted to coöperate with those projecting from the chamber, to hold the parts locked together, the circumference of said shell terminating in a shoulder adapted to contact with one face of the head to limit the longitudinal movement of the shell in one direction, and a collar projecting from the shell and in contact with the opposite end of the face of the head to limit the movement of the shell in the opposite direction.

1,019,559. ELEVATED ELECTRIC RAILWAY. FRED T. THURBER, Red Lion, Colo. Filed June 23, 1911. Serial No. 634,849. (Cl. 104—4.)



1. A railway comprising a plurality of upwardly converging posts, foundation blocks anchoring the lower ends of said posts, castings fitted upon the upper ends of the posts, sleeves surrounding the posts near their lower ends, brace rods connected with the castings and the said sleeves, longitudinal reinforcing rods engaged in the castings and disposed in spaced parallel relation to each other, V-shaped supports connected with the castings, an electric current rail mounted medially upon said supports, and track rails supported by the castings.

2. A railway comprising a plurality of upwardly converging posts, foundation blocks anchoring the lower ends of said posts, castings fitted upon the upper ends of the posts, sleeves surrounding the posts near their lower ends, brace rods connected with the castings and the said sleeves, longitudinal reinforcing rods engaged in the castings and disposed in spaced parallel relation to each other, V-shaped supports connected with the castings, an electric current rail mounted medially upon said supports, track rails supported by the castings, and means adapted to be carried by a car truck and engageable with the under face of the treads of the track rails for securing such car upon the said track.

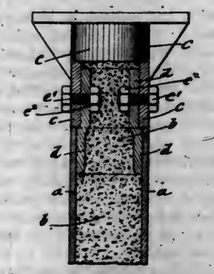
3. The combination with railway rails, of a skeleton structure supporting said rails elevated from the ground, substantially V-shaped supporting members mounted in the skeleton structure below the plane of the rails, a current rail fixed medially on said supporting members, a car having its wheels movable upon the rails, means on the car and engageable with the under face of the treads of the rails for preventing the jumping of the wheels from the rails, and a trolley device depending from the car and engageable with the current rail.

1,019,560. VEHICLE-SPOKE. LEWIS ELSTON TICHENOR and SAMUEL EDWARD MCANULTY, Saratoga, Wyo. Filed June 7, 1911. Serial No. 631,775. (Cl. 152—47.)



In combination with a tubular casing having a swaged end provided with registering apertures, a second tubular casing for telescopical engagement with the first casing and having a swaged end provided with registering apertures, retaining members mounted on the swaged ends of the said casings, pins extending through the registering apertures in the said swaged ends and apertures in the said retaining members to rigidly secure the retaining members to the said swaged ends and a spring mounted in the said casings, the ends of the said springs being secured to the said retaining members by passing the ends of the said springs through apertures in the free ends of the said retaining members.

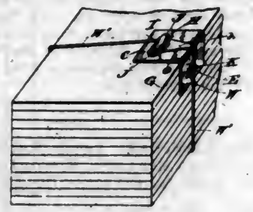
1,019,561. CAP AND BASE FOR FIREPROOF COLUMNS. JOHN J. TRESIDDER, New York, N. Y., assignor to American Column Company, Brooklyn, N. Y., a Corporation of New York. Filed June 21, 1910, Serial No. 568,117. Renewed Jan. 6, 1912. Serial No. 669,885. (Cl. 72—75.)



In a fireproof column, the combination of a cylindrical steel shell, a shank having an upper reduced portion and an enlarged lower end fitting snugly in the upper end of the shell and forming internal and external shoulders even with the upper end of the shell, a cap snugly receiving said reduced portion and resting with its lower edge against said external shoulder and the upper edge of the shell, means for locking said reduced portion and said cap together, the ends of said shank terminating near the ad-

jacent ends of said cap and shell respectively, and a concrete filling in said cap, shank and shell and forming an anchorage engaging over the internal shoulder and ends of the shank.

1,019,562. BALE-TIE. DAVID W. TURK, Cleveland, Ohio. Filed July 12, 1911. Serial No. 638,230. (Cl. 24—28.)



1. A fastening device adapted to retain a securing wire comprising a plate bent at right angles to correspond to a corner of a bale to form vertical and horizontal portions, the horizontal portion of said plate provided with a horizontal opening and the vertical portion with a triangular opening having a vertical angle, the free end of the wire passing through said horizontal opening and through said triangular opening, the cut out metal from said triangular opening being integral with the plate at the lower edge of the opening and projecting inwardly to engage the bale, and means on the horizontal portion for engaging the other end of the tie.

2. In combination, in a fastening device for the wire of a bale tie, a horizontal plate, a tongue longitudinally cut from said horizontal portion providing a longitudinal opening, said tongue integral with said plate at its inner base, said tongue having a raised and curved integral portion adjacent to its base, said plate provided with a depression on each side of the base of said tongue, and in front of said base, substantially as described.

3. In combination, in a fastening device for the looped wire of a bale tie, a horizontal plate, a tongue longitudinally disposed of said plate, and integral therewith at its base, providing a longitudinal opening, the base of said tongue bent upwardly in an arc and also bent laterally in an arc, to correspond to the loop of the wire, the edges of said opening depressed on each side of said base to admit the passage of the wire without cutting.

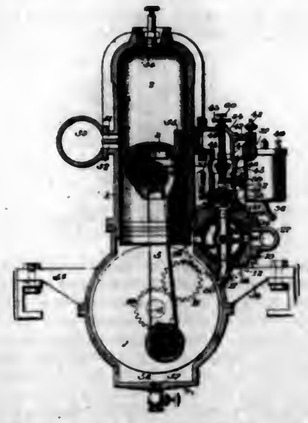
1,019,563. GAS-ENGINE. JULIUS M. ULRICH, Greenwich, Conn., assignor of one-half to William Rahr, Jr., Manitowoc, Wis. Filed Aug. 14, 1906. Serial No. 330,577. (Cl. 123—73.)

1. In a two-cycle gas engine, in combination with the combustion chamber and the crank chamber thereof, a carbureter communicating with said chambers, a driving shaft, and rotary means actuated thereby for controlling the discharge of air from said crank chamber to said carbureter and the admission of air to said crank chamber.

2. In a two-cycle gas engine, in combination with the combustion chamber and the crank chamber thereof, a carbureter communicating with said chambers, a driving shaft, and a distributer valve operatively connected therewith and adapted to admit air to the crank chamber at a predetermined time and to permit on the completion of the compression stroke the discharge of air from said crank chamber to said carbureter.

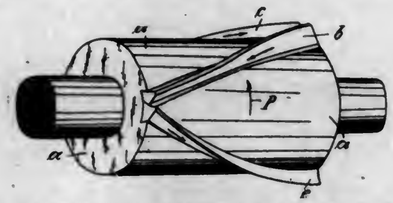
3. In a two-cycle gas engine, in combination with the combustion and crank chamber thereof, a carbureter communicating with said chambers, a driving shaft, and a rotary distributer valve having a port therethrough and operatively connected with said shaft, there being ports for the admission of air to said crank chamber and the discharge of air from said crank chamber to said combustion chamber adapted to register with said distributer port and there being an inlet port communicating with the atmosphere and controlled by said valve.

4. In a two cycle gas engine, the combination with a casing forming the combustion and crank chamber thereof, a carbureter communicating with said chambers, a driving shaft, valve mechanism having a port therethrough operatively connected with said shaft and controlling the delivery of air from the crank chamber to the carbureter,



said casing having ports for the admission of air to said crank chamber and the discharge of air from said crank chamber to said combustion chamber and adapted to register with the port of said valve mechanism, and said casing ports including an inlet port communicating with the crank chamber and with the atmosphere and controlled by said valve mechanism.

1,019,564. MILLING-CUTTER. OTTO UNTERLOFF, Oberschöneweide, Germany, assignor to Stahlwerk Becker Aktien-Gesellschaft, Willich, Crefeld, Germany. Filed Mar. 2, 1911. Serial No. 611,787. (Cl. 29—105.)



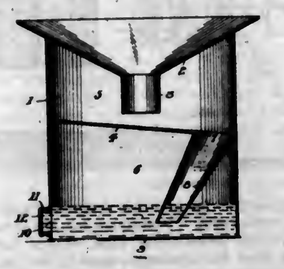
1. A milling cutter comprising, in combination, a cylindrical body part having grooves therein, alternately right and left handed helical cutters inserted in said grooves in such a manner that each cutter bears at the end which tends to be forced out during the working of the milling cutter against the end of the adjacent cutter.

2. A milling cutter comprising, in combination, a cylindrical body part having undercut grooves in the periphery thereof, alternately right and left handed helical cutters inserted in said grooves and a beveled face on one end of each cutter, said beveled face bearing against the end of the adjacent cutter.

3. A milling cutter comprising, in combination, a cylindrical body part and a plurality of helical cutters inserted in grooves in the periphery of said body part, each groove being inclined to the adjacent groove and being arranged longitudinally of the body part and at an inclination to the axis thereof, so that the meeting ends of adjacent grooves intersect one another at the ends of the body part in such a manner that each cutter bears at the end which tends to be forced out during the working of the milling cutter against the end of the adjacent cutter.

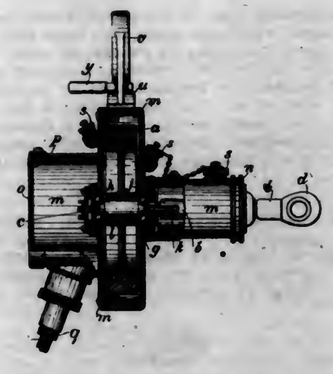
4. A milling cutter comprising, in combination, a cylindrical body part having undercut grooves in the periphery thereof, each groove being inclined to the adjacent groove and being arranged longitudinally of the body part and at an inclination to the axis thereof so that the meeting ends of adjacent grooves intersect one another at the ends of the body part, alternately right and left handed helical cutters inserted in said grooves and a beveled face on one end of each cutter, said beveled face bearing against the end of the adjacent cutter.

1,019,565. CUSPIDOR. MARKUS WALENT, Berwick, Pa., assignor of one-half to Albert Greenberger, Berwick, Pa. Filed Dec. 26, 1911. Serial No. 667,774. (Cl. 4—38.)



A cuspidor comprising a body portion, a mouth piece mounted in one end thereof and terminating in a centrally disposed cylindrical sleeve, an inclined partition arranged in said body and forming an upper and lower compartment, said partition provided with an opening in one side thereof, and an inclined tapering spout carried by said partition communicating with said opening and depending into said lower compartment to a point in proximity to the bottom thereof.

1,019,566. SHIP'S-LOG APPARATUS. THOMAS SYDNEY WALKER, Birmingham, England. Filed Jan. 20, 1911. Serial No. 603,789. (Cl. 73—122.)



1. A ship's log comprising, in combination, log mechanism, a fly-wheel governor, a shaft for said governor connected to said mechanism, ball bearings supporting said shaft on both sides of said governor, a casing inclosing said mechanism and said governor and shaft, means to rotate said shaft to actuate said mechanism, and means for supporting said casing universally whereby the log may accommodate itself to changes in the direction of the course of the ship.

2. A ship's log comprising, in combination, log mechanism, a fly-wheel governor, a horizontally disposed shaft for said governor connected to said mechanism, ball bearings supporting said shaft and located on both sides of said governor, a casing inclosing said mechanism and said governor and shaft, means to rotate said shaft to actuate said mechanism, trunnions upon said inclosing casing, and means for supporting said casing universally whereby the log may accommodate itself to changes in the direction of the course of the ship.

3. A ship's log comprising, in combination, log mechanism, a fly-wheel governor, a horizontally disposed shaft for said governor connected with said mechanism, ball bearings supporting said horizontal shaft and located on both sides of said governor, a primary spindle connected to said governor shaft, a casing inclosing said mechanism and said governor and governor shaft, a towing line connected to said primary spindle, a rotator to rotate same for actuating said governor and said mechanism, trunnions upon said inclosing casing, a sling engaging said trunnions, and means for suspending said sling whereby the log may accommodate itself to changes in the direction of the course of the ship.

1,019,567. FOLDING WINDOW-BLIND. GEORGE W. WEARN, Charlotte, N. C., assignor of one-fourth to William E. McElroy, West Pompano, Fla. Filed May 19, 1910. Serial No. 562,122. (Cl. 156—17.)



1. The combination with a window having brackets, of a folding window blind comprising a series of slats provided with registering slots, guide cords arranged to pass through said slots, the upper ends of said guide cords being fastened to said brackets, and the lower ends of the guide cords being fastened to the lower window sill, flexible members loosely supporting said slats at the edges of the latter, guide rods at the ends of said slats, guide members secured to the bottom slat, and spring-actuated locking members carried by said bottom slat and arranged to project through said guide members to engage said guide rods.

2. The combination with a window having brackets, of a folding window blind comprising a series of slats provided with registering slots, guide cords arranged to pass through said slots, the upper end of said guide cords being fastened to said brackets and the lower ends of said guide cords being fastened to the lower window sill, flexible members loosely supporting said slats at the edges of the latter, said flexible members comprising a ladder-like structure of yielding material, guide rods at the ends of said slats, guide members secured to the bottom slat, a thumb member pivotally secured beneath said bottom slat and having an end arranged to project through said guide member to engage said guide rod, and a spring for pressing said thumb member away from said bottom slat and for holding the end of said thumb member in engagement with said rod.

1,019,568. METHOD OF MAKING RESISTANCE MATERIAL. EZECHIEL WEINTRAUB, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Original application filed Oct. 27, 1909, Serial No. 524,941. Divided and this application filed Oct. 5, 1910. Serial No. 585,389. (Cl. 219—76.)



1. The method which consists in reducing boric anhydrid with magnesium, adding carbon to the material thus produced, and heating to free the material from substantially all components except boron and carbon.

2. The method which consists in mixing carbon with impure boron, pressing into sticks, and heating to eliminate all components except the boron and carbon.

3. The method of making resistances of boron associated with carbon which consists in sintering impure boron in the presence of carbon until only boron and carbon remain.

4. The method which consists in associating carbon with impure boron and heating to eliminate impurities and to sinter the residue.

5. The method of making resistance bodies which consists in sintering impure boron in the presence of carbon.

[Claim 6 not printed in the Gazette.]

1,019,569. METHOD OF MAKING BORON AND BORON ALLOYS. EZECHIEL WEINTRAUB, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Original application filed Oct. 27, 1909, Serial No. 524,950. Divided and this application filed Oct. 5, 1910. Serial No. 585,390. (Cl. 204—63.)

1. The process which consists in bringing a mixture containing boron halid and reducing gas into contact with a heated surface thereby depositing boron thereon.

2. The method of coating a conductor, which consists in heating the conductor in a mixture containing boron chlorid and reducing gas.

3. The process which consists in bringing a gaseous mixture containing boron chlorid vapor and hydrogen into contact with an incandescent surface thereby depositing boron on the surface.

4. The process which consists in incandescing a carbon conductor in a mixture containing boron chlorid and hydrogen to deposit boron on the surface of said conductor.

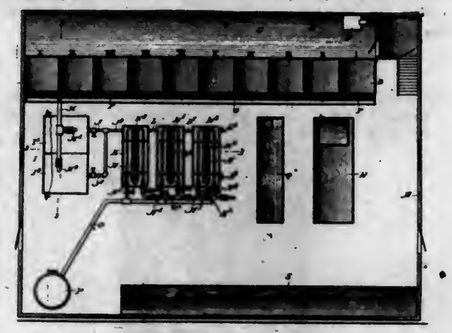
5. The process of depositing boron and carbon on a heated surface which consists in subjecting the surface to a mixture of boron halid, hydrogen and a hydrocarbon.

[Claim 6 not printed in the Gazette.]

1,019,570. GRADING, PROCESSING, AND CONCENTRATING APPARATUS. CHARLES B. WELCH, Lowville, N. Y. Filed Feb. 21, 1911. Serial No. 609,863. (Cl. 99—2.)

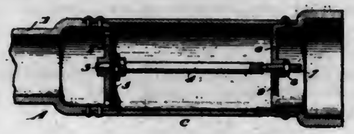
1. An apparatus for grading, processing and concentrating maple syrup into standard weight syrup, comprising a series of tanks for the reception of the syrup of different colors, each tank having a faucet, a trough common to all faucets, preparation pans into which the trough discharges for mixing differently colored syrups and determining the specific gravity and grade of the syrup, and a heater connected with said preparation pans for heating or boiling the syrup.

2. An apparatus for grading, processing and concentrating maple syrup, comprising a series of storage tanks for the reception of maple syrup of different colors, each tank having a faucet, a trough common to all faucets, for the reception and conveyance of maple syrup and like products from the tanks to the preparation pans for mixing the different colored maple syrup and determining the correct specific gravity and grade, one or more preparation pans, having separate chambers, alternately connected with said trough, and a heater having a plurality of connecting chambers, of which the first one is alternately connected with said pan chambers, the last one of said compartments having a drawing off means for drawing off the maple syrup.



3. An apparatus for grading, processing and concentrating syrup, comprising a receptacle for receiving syrups of different colors, preparation pans, means for delivering the syrups from the receptacle first to one pan and then to the other one, a heater, and means for delivering the contents of the said pans alternately to the heater.

1,019,571. AUTOMOBILE-HORN. LOUIS WEST, Rochester, Minn. Filed Mar. 7, 1911. Serial No. 612,769. (Cl. 116—59.)



An automobile horn comprising two tubular heads having integral radial arms across their inner ends, a cylindrical barrel telescoping at its opposite ends, the ends of the two tubular heads removably connected therewith, a shaft stepped in a bearing formed at the intersection of the arms of one head and carrying a fan adjacent thereto, and a screw turning through a threaded orifice at the intersection of the arms of the other head to form an adjustable bearing for the adjacent end of the shaft.

1,019,572. HOSE-COUPLING WASHER. ARDEN WHIPPLE, Oakland, Cal., assignor of forty-nine one-hundredths to Charles L. Blodgett, Oakland, Cal. Filed Aug. 15, 1910, Serial No. 577,186. Renewed Oct. 28, 1911. Serial No. 657,337. (Cl. 137—28.)



1. A resilient gasket comprising a body portion provided with alined openings, and a straight bar of metal passing through said openings and extending to each side of said body portion.

2. A gasket comprising a body portion provided with alined openings, and a straight bar of resilient metal passing through said openings and extending beyond the outer edges of said body portion.

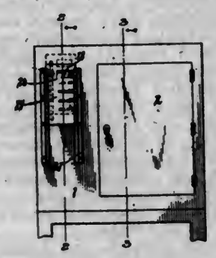
3. A resilient gasket comprising a body portion having a central open space and also provided with diametrically disposed alined openings, and a straight bar of resilient metal extending through said openings and projecting beyond the outer edges of said body portion, the intermediate portion of said bar serving as a finger hold, and the ends of said bar adapted to engage the threads of a socket piece to hold said gasket in place.

1,019,573. RAILROAD-JOINT. ANDREW WHITLOW, Georgetown, Ill. Filed Sept. 7, 1911. Serial No. 648,020. (Cl. 239—8.)



A rail joint comprising a pair of rail sections, the end of one of said sections being cut away to provide a depending tongue and having the tread extending beyond the end of said tongue, the web to each side of said tongue and adjoining the same being thickened and having its end provided with an inwardly beveled seat, the end of the adjoining rail section being thickened and having the tread removed and the web provided with a longitudinally extending slot, to receive said tongue, the end of said second rail section being provided with beveled faces adapted to fit within the seat formed in the end of the first rail section, and the tongue and walls of said slot being provided with openings through which securing means are adapted to pass.

1,019,574. TELEPHONE-PAY-STATION CABINET. HERMAN IGNACIO WIECHERS, Leon, Mexico. Filed Mar. 29, 1911. Serial No. 617,636. (Cl. 194—18.)



1. In a device of the character described a casing, two compartments in said casing, one of said compartments adapted to receive a telephone instrument, a door to said latter compartment, slots leading into the other compartment, a plate slidable on said casing adapted to normally cover said slots and means whereby said door is unlocked when a coin is dropped in any of said slots.

2. In a device of the character described, a casing having two compartments therein, one of said compartments adapted to receive a telephone instrument, a door to said latter compartment, means for locking said door when the latter is closed, slots extending into the other compartment, said slots adapted to receive coins of different denominations, a plate slidable on said casing adapted to normally cover said slots, a plate in said compartment upon which the coins are adapted to fall, and means connecting said plate and the locking mechanism of said door whereby said coins are caused to unlock said door.

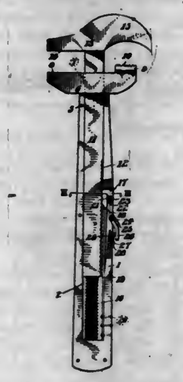
3. In a device of the character described, a casing having two compartments therein, one of said compartments adapted to receive a telephone instrument, a door to said latter compartment, said door adapted to be normally in a locked position, said casing adapted to be provided with a plurality of slots, said slots adapted to receive coins of different denominations, coinways connected to said slots, one of said coinways adapted to be disposed directly above a portion of said locking means which holds said door in a locked position whereby, when a coin is inserted into said slot, it will engage said locking means and means slidable upon said casing adapted to normally close said slots, an opening formed in said last named means whereby, when said last named means is operated upon said casing said opening will register with one of said slots for the purpose described.

4. In a device of the character described, a casing having two compartments, one of said compartments adapted to receive a telephone instrument, a door to said latter compartment, means whereby said door may be locked, a plurality of slots extending into said other compartment, a plate adapted to normally cover said slots, means whereby said plate may be moved so as to uncover any desired slot, means whereby the uncovering of a slot and the depositing of a coin therein indicates to the central office the denomination of said coin, and means whereby the depositing of said coin unlocks the door to the other compartment.

5. In a device of the character described, a casing having two compartments therein, one of said compartments adapted to receive a telephone instrument, a door to said latter compartment, locking mechanism for said door, slots extending into the other compartment adapted to receive different sized coins, a plate slidable on said casing adapted to normally close all of said slots, a handle carried by said plate whereby the latter may be operated to uncover any desired slot, a lever extending from said handle into the interior of said casing, means whereby the depositing of a coin in any of said slots unlocks said door, means whereby the releasing of said handle and lever permits the locking mechanism to return to its normal position, and means whereby the operation of said handle and lever indicates to the central office the denomination of the coin deposited.

[Claim 6 not printed in the Gazette.]

1,019,575. WRENCH. JOHN WIERNICKI, Glassport, Pa. Filed Aug. 28, 1911. Serial No. 646,345. (Cl. 81—139.)



A wrench comprising a handle having a centrally disposed longitudinal recess, a jaw integral with the outer end of the handle having a centrally disposed opening alining the said recess, a face plate detachably mounted upon the handle for closing it, and having its outer end abutting against said jaw, a shank slidably mounted in said opening and recess having one edge toothed, a jaw integral with the shank opposing the jaw of the handle, said handle having its front provided with a slot opening into said recess, a locking member fixed at its inner end to one wall of said recess and having its outer end provided with a plurality of teeth normally engaging the toothed edge of the shank for maintaining the latter from movement, a spring controlled lever pivotally mounted in said slot and normally engaging said locking member for maintaining it in engagement with the shank, and a coil spring

interposed between the inner end of the shank and the inner end of said recess for forcing the shank outwardly from the handle when the teeth of the lever are clear of the teeth of the shank.

1,019,576. HAIR-DYE. RICHARD WOLFFENSTEIN and JAMES COLMAN, Berlin, Germany, assignors to Actien Gesellschaft für Anilin Fabrikation, Berlin, Germany. Filed May 17, 1910. Serial No. 561,870. (Cl. 167—5.)

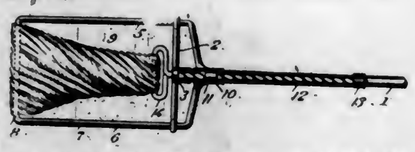
1. As new compositions of matter improved hair dyes derived from an aromatic para-diamin comprising an aromatic diamin and a normal alkali sulfite in such proportion that to two parts by weight of the diamin they contain at least one part by weight of an anhydrous normal alkali sulfite of the formula Me_2SO_3, in which formula Me stands for an alkali metal.

2. As new compositions of matter improved hair dyes comprising para-toluylenediamin and a normal alkali sulfite in such proportions that to two parts by weight of the diamin they contain at least one part by weight of an anhydrous normal alkali sulfite of the formula Me_2SO_3 in which formula Me stands for an alkali metal.

3. As a new composition of matter improved hair dyes in solution comprising para-toluylenediamin and a normal alkali sulfite in such proportion that to two parts by weight of the para-toluylenediamin they contain at least one part by weight of an anhydrous normal alkali sulfite of the formula Me_2SO_3, in which formula Me stands for an alkali metal.

4. As a new composition of matter an improved hair dye in solution comprising 9 parts of para-toluylenediamin ($CH_3 : NH_2 : NH_2$=1 : 2 : 5), 9 parts of anhydrous normal sodium sulfite and 82 parts of water.

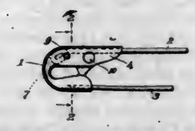
1,019,577. COMBINED MOP HOLDER AND WRINGER. LESLIE WORMWORTH, Goodlands, Manitoba, Canada, assignor of one-half to James E. Avery, Goodlands, Canada. Filed June 17, 1911. Serial No. 633,796. (Cl. 15—43.)



1. A device of the class described comprising a handle, a head carried at the end thereof, a spiral shaft mounted in bearings carried by the head and handle, a fabric frame slidably mounted on the handle, a mop fabric secured to the frame and shaft, means carried by the frame for rotating the shaft.

2. A mop comprising a handle, a head secured to said handle, a spiral shaft journaled in bearings on the handle and head and lying parallel with the handle, a sleeve slidably mounted on the handle, a frame carried by the sleeve, a mop fabric connected to the frame and shaft, and means carried by the sleeve for rotating the shaft.

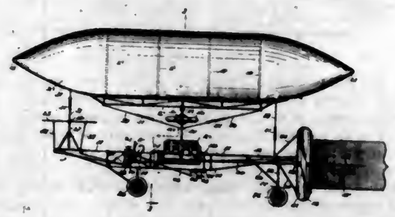
1,019,578. SAFETY-PIN. ARTHUR WRIGHT, New York, N. Y. Filed Jan. 6, 1910. Serial No. 536,710. (Cl. 24—158.)



1. In a safety pin, a rigid head having an abutment, a plurality of prongs, one of which is sharpened and the other of which engages with the abutment in the head in the closed position of the pin, the abutment and the prong engaging therewith being so constructed as to effect the release of the prong engaged thereby merely moving the head away from the point of the sharpened prong.

2. In a safety pin, a head, having an abutment at its side, a pair of prongs, one of which is bent to form a loop in the plane of the prongs and the end of the loop being bent laterally out of the plane of the head to engage with said abutment.

1,019,579. COMBINED AEROPLANE AND DIRIGIBLE BALLOON. WALTER EDWARD ZELLS, Ann Arbor, Mich. Filed Feb. 25, 1911. Serial No. 610,674. (Cl. 244—6.)



1. In a combined aeroplane and dirigible balloon, an aeroplane carrying frame comprising a skeleton frame; a motor fixedly mounted therein, said motor being provided with pivot pins; and a supporting mast pivotally connected with said pins and extended above the said motor and carrying frame to be pivotally connected with said balloon.

2. In a combined aeroplane and dirigible balloon, an aeroplane carrying frame comprising a skeleton frame; a motor fixedly mounted therein, said motor being provided with pivot pins disposed at near the balancing center thereof; and a supporting mast pivotally connected with said pins and extended above the said motor and carrying frame to be pivotally connected with said balloon.

3. In a combined aeroplane and dirigible balloon, an aeroplane carrying frame comprising a skeleton frame; a motor fixedly mounted therein, said motor being provided with pivot pins; a supporting mast pivotally connected with said pins and extended above the said motor and carrying frame to be pivotally connected with said balloon; a plurality of elongated cylindrical pointed fuel containing tanks, said tanks being disposed in parallel arrangement to said carrying frame; and a plurality of outrigger arms for supporting in laterally extended position from said mast the said tanks.

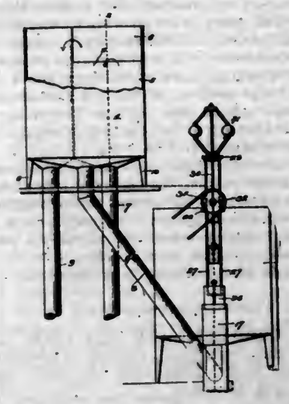
4. In a combined aeroplane and dirigible balloon, an aeroplane frame carrying frame comprising a skeleton frame; a motor fixedly mounted therein, said motor being provided with pivot pins; a supporting mast pivotally connected with said pins and extended above the said motor and carrying frame to be pivotally connected with said balloon; and a plurality of fuel carrying tanks mounted on said mast above said motor.

5. In a combined aeroplane and dirigible balloon, an aeroplane carrying frame comprising a skeleton frame; a motor fixedly mounted therein, said motor being provided with pivot pins; a supporting mast pivotally connected with said pins and extended above the said motor and carrying frame to be pivotally connected with said balloon; a plurality of fuel carrying elongated tanks; and a plurality of outrigger supports for said tanks suitably mounted on said mast to balance said tanks.

[Claim 6 not printed in the Gazette.]

1,019,580. AUTOMATIC FEED-REGULATING MECHANISM FOR PAPER-MAKING MACHINES. HENRY C. ZIEMANN, Millinocket, Me. Filed Nov. 6, 1911. Serial No. 658,894. (Cl. 92—46.)

1. In a feed regulating mechanism for paper making machines, the combination of a pressure box having a pulp discharging opening, a valve for regulating the size of said opening and a valve operating mechanism arranged in said box and adapted to be connected with a moving part of the engine whereby the position of the valve is automatically regulated to control the flow of the pulp from the box according to the speed at which the machine is working.



2. In a feed regulating mechanism for paper making machines the combination with a pressure box having therein a discharge opening, of valves adapted to regulate the size of said opening and thereby control the flow of pulp from the box, a valve operating mechanism connected with one of said valves and adapted to be actuated by the overflow of the pulp from the box whereby the valve is regulated according to the consistency of the pulp, and means connected with the other valve and adapted to be connected with a moving part of the engine whereby the latter valve is automatically regulated to control the flow of the pulp from the box according to the speed at which the machine is working.

3. In a feed regulating mechanism for paper making machines, the combination with a pressure box having therein a discharge opening, an overflow box adapted to receive the overflow of the pulp from said pressure box, valves adapted to regulate the size of said discharge opening, a valve operating mechanism connected with one of said valves and with the machine whereby the valve is regulated to control the discharge of the pulp according to the speed at which the machine is working, a pressure actuated operating mechanism connected with the other valve, said mechanism comprising a pressure plate hingedly connected in the upper end of the pressure box and adapted to be engaged and operated by the overflow of the pulp from said compartment, an operating rod connected at one end with said valve and having its opposite end adjustably connected with said pressure plate whereby the valve is opened and closed by the movement of said plate according to the consistency of the pulp overflowing from the box and pressing against the plate.

4. In a feed regulating mechanism for paper making machines, the combination with a pressure box having therein a discharge opening, valves to open and close said opening, a valve operating mechanism connected with one of said valves and adapted to be actuated by the pressure of the pulp overflowing from the box whereby the discharge of the pulp through said discharge opening is regulated according to the consistency of the pulp, a valve controlling mechanism connected with the other valve, said mechanism comprising valve shifting rods secured at their lower ends to the valve, a centrifugal governor having an operative connection with the upper ends of said rods, and means whereby said governor is connected with and driven by the machine thereby regulating said valve to control the flow of pulp through the discharge opening in the box according to the speed of the engine.

5. In a feed regulating mechanism for paper making machines an upper box having arranged therein a feed compartment, a gravity pressure compartment and an overflow compartment, a feed pipe connected to said feed compartment, an overflow pipe connected with said overflow compartment, a lower box arranged below said upper box and having formed therein a pressure compartment, and an overflow compartment, said pressure compartment having formed therein a discharge opening, a pulp conducting tube to connect said upper gravity pressure compartment with the pressure compartment in the lower box, valves adapted to regulate the size of the discharge opening in said lower pressure compartment, a valve operating mechanism connected to one of said valves and comprising a pressure plate hingedly connected to one side of the compartment and adapted to be actuated by the pressure of the pulp therein, a valve operating rod to connect said valve with said plate, a nut adapted to be screwed onto the upper end of said rod whereby an adjustable connection is provided between the same and said plate, a weight arranged on said valve plate and a valve operating mechanism connected with the other valve whereby the latter is regulated by the speed of the machine.

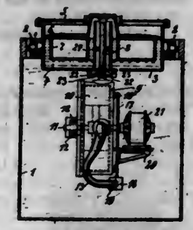
1,019,581. PROCESS OF PRODUCING HYDROGENOUS COMPOUNDS OF TUNGSTEN AND SIMILAR METALS. HERMANN ZERNING, Halensee, near Berlin, Germany, assignor, by mesne assignments, to The International "Z" Electric Lamp Association Limited London, England, an Incorporated Company. Filed Mar. 3, 1906. Serial No. 304,073. (Cl. 75—17.)

1. The method of producing nitrogenous and hydrogenous compounds of chromium, molybdenum, tungsten, and like elements for use in the manufacture of incandescent lamp filaments, which consists in reducing the metal in a dry way with the aid of finely divided zinc while forming said compounds in a heated vessel, substantially as described.

2. The method of producing hydrogenous compounds of tungsten, which consists in reducing the metal and forming said compounds in the dry way in a suitably heated vessel, with the aid of finely divided zinc; and purifying the product, substantially as described.

3. The method of producing hydrogenous compounds of a metal of the tungsten group, which consists in partly reducing the metal with the aid of finely divided zinc, and completely reducing the same with the aid of another metal while forming said compounds, substantially as described.

1,019,582. GYROSCOPE. HERMANN ANSCHÜTZ-KAEMPFE, Kiel, Germany. Filed June 6, 1908. Serial No. 437,075. (Cl. 73—151.)



1. In a gyroscope apparatus, the combination of a rotatable body, a spindle for said body, supporting means for carrying the said spindle in approximately a horizontal plane, a pendulum device connected to said supporting means, damping means carried in part by the supporting means and in part by the pendulum device and connected and operative to be non-counteractive to the said apparatus when the spindle is horizontal and to exert a counter-action force to the said apparatus when the spindle is shifted from the horizontal plane, thereby to effect a turning movement of the apparatus to dampen its oscillation.

2. In a gyroscope apparatus, the combination of a rotatable body, a spindle for said body, supporting means for

carrying the said spindle in approximately a horizontal plane, a pendulum device connected to said supporting means, the pendulum being supported to swing on a horizontal axis and in a plane coinciding with the axis of said spindle, damping means carried in part by the supporting means and in part by the pendulum device and connected and operative to be non-counteractive to the said apparatus when the spindle is horizontal and to exert a counter-action force to the said apparatus when the spindle is shifted from the horizontal plane, thereby to effect a turning movement of the apparatus to dampen its oscillation.

3. In a gyroscopic apparatus, the combination with a rotatable body, of a spindle for said body, a support for supporting the said spindle in approximately a horizontal plane, a pendulum connected to said support, vanes on the pendulum, means for supplying fluid under pressure, jets carried by the support and constructed and arranged to direct said fluid in opposite directions in balanced relationship thereto against the said vanes when the gyroscope spindle is horizontal and in unbalanced relationship to said jets when the said spindle is moved from the horizontal thereby causing the said pendulum to throttle one or the other of the said fluid jets for exerting a turning movement on the apparatus for damping the oscillation of the said apparatus.

4. In a gyroscopic apparatus, the combination with a rotatable body, of a spindle for said body, a support for supporting the said spindle in approximately a horizontal plane, a pendulum connected to said support, vanes on the pendulum, air current supplying means carried by the support, directing means for directing the air in balanced relationship thereto against the said vanes when the rotating gyroscope spindle is horizontal and in unbalanced relationship to said air directing means when the said spindle is moved from the horizontal for exerting a turning moment on the apparatus for damping oscillations of the said apparatus.

5. In a gyroscopic apparatus the combination with a rotatable body, of a spindle for said body, a casing for supporting the said spindle and inclosing the rotatable body, said casing having openings for the escape of air currents created by the rotation of said rotatable body, means for maintaining the casing in such a position that the spindle will normally be in approximately a horizontal paine, a pendulum connected to the casing, vanes on the pendulum constructed and located to be opposite the respective holes in the casing and in relatively balanced relationship thereto when the said spindle is horizontal and in unbalanced relationship when the spindle is moved from the horizontal for exerting a turning moment on the apparatus by the unbalanced escape of the air for damping the oscillations of the said apparatus.

[Claims 6 to 10 not printed in the Gazette.]

1,019,583. BRAKE-SHOE. CHARLES W. ARMBRUST, Crystal Lake, Ill., assignor of one-fourth to Sydney Stein, Chicago, Ill. Filed Mar. 25, 1911. Serial No. 616,801. (Cl. 188—28.)



1. A brake shoe comprising a body portion and an elevated flange portion, the back and face of said body and flange portions being provided with interlocking means whereby similarly shaped shoes may be locked together.

2. A brake shoe comprising a body portion and a flange portion, the back of the body portion and the face of the flange portion being provided with locking lugs and the face of the body portion and the back of the flange portion being provided with recesses adapted to interlockingly engage with the locking lugs on a similar shoe.

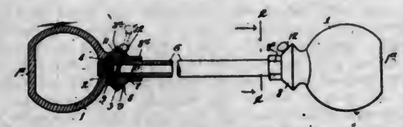
3. An interlocking brake shoe comprising a body portion and a flange portion, the back of said body portion being provided with locking lugs spaced apart and the back of said flange portion being provided with locking recesses disposed intermediate said locking lugs and the face of the shoe being provided with locking recesses and locking lugs adapted to interlockingly engage with the lugs and recesses on the back of a similar shoe.

4. An interlocking brake shoe comprising a body portion and a flange portion, locking lugs formed on the face of said flange portion and recesses formed on the back thereof and adapted to interlockingly engage with the locking lugs on a similar shoe.

5. An interlocking brake shoe comprising a body portion and a flange portion, the back and face of said flange portion being provided with means for locking the flanges of similar shoes together and the back and face of the body portion being provided with means for locking the body portions of similar shoes together.

[Claims 6 to 22 not printed in the Gazette.]

1,019,584. DUMB-BELL AND THE LIKE. CLYDE C. BALSTON, New York, N. Y., assignor to Anthony Barker, New York, N. Y. Filed Mar. 10, 1911. Serial No. 613,606. (Cl. 46—69.)



1. The combination of a hollow bell having a funnel-like mouth, with a bar provided with an enlarged head having a cone-like surface fitting said mouth, and means for retaining said bar in position.

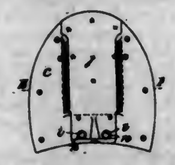
2. The combination of a hollow bell having an opening provided with threads and having a funnel-like mouth exterior to said threads, with a bar having threads fitting the first named threads, and having an enlarged head having a cone-like surface fitting said mouth, and means to retain said bar in set position.

3. The combination of a hollow bell provided with a funnel-like mouth and a seat, a gasket for said seat, and a bar passing into said mouth and fitted to said bell, said bar having a head provided with a conical face engaging said mouth and gasket.

4. The combination of a hollow bell provided with a funnel-like mouth and a seat, a gasket for said seat, a bar passing into said mouth and fitted to said bell, said bar having a head engaging said mouth and gasket, and a screw passing through said head to bear against said mouth.

5. The combination of a hollow bell provided with a mouth, a bar, means for securing said bar to said bell through said mouth, said bar having a head fitting said mouth, and a screw passing through said bar and mouth and bearing against said mouth to retain the bar from rotation therein.

1,019,585. DETACHABLE HEEL. JOHN GEORGE BARNES, Harrogate, England. Filed Apr. 11, 1911. Serial No. 620,320. (Cl. 36—42.)



1. A device for securing a detachable portion of a boot or shoe heel to its main portion comprising an attaching plate made in two parts of different sizes arranged to

partly fit within each other and adapted when placed together to partly slide under and partly over each other, said smaller part being in the form of a lever, said larger part having a fulcrum supporting the smaller part and adapted to bind the parts together.

2. In a device for securing a detachable portion of a boot or shoe heel to its main portion the combination of a plate shaped to the contour of the heel and provided with a central recess extending from the rear to within a suitable distance of its front portion, said recess being enlarged at its rear, and the edges of the smaller portion of the recess being turned slightly at an angle to form a parallel slide, with a second plate of the same width as and arranged to fit into the enlarged portion of the recess, said second plate being shaped at its rear end in conformity with the heel and slidably engaging beneath the marginal bent edges of the recess of the first part, and outstanding tapering pins carried upon the forward end of the first plate, said second plate having a reduced forward end provided with openings receiving the pins to lock the plates together.

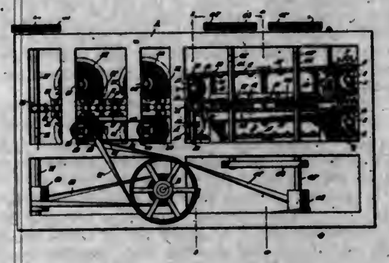
3. In a device for securing a detachable portion of a boot or shoe heel to its main portion the combination of an attaching plate made in two parts of different widths arranged to partly fit one within the other and under and partly over each other, the smaller plate being perforated at the front and arranged to fit at the back into an opening at the rear of the larger plate for completing its contour, and tapering pins fixed to the front of the larger plate and engaging in the perforations of the smaller plate to lock the plates together.

4. The combination with a fixed heel section, of a detachable heel section, a plate attached to one of said sections, and a second plate attached to the other of said sections, one of said plates being smaller than the other and adapted to fit partly within and partly over the other whereby said fixed and said detachable sections are secured together.

5. In combination, a receiving plate having a longitudinal opening in one end and having the marginal edges of the opening bent out of the plane of the plate and providing a forward cross-piece to the plate, a sliding plate fitting in the opening in the receiving plate and having its edges bent out of the plane of the sliding plate for engagement beneath the bent marginal edges of the receiving plate, said sliding plate having a reduced prolongation resting against the cross-piece of the receiving plate, and interlocking pins carried between the plates, the interfitting bent edges of the plates binding the prolongation against the receiving plate.

[Claim 6 not printed in the Gazette.]

1,019,586. CORN-HUSKING MACHINE. CHARLES E. BARRIE, Brattleboro, Vt. Filed Sept. 1, 1910. Serial No. 579,975. (Cl. 130—5.)



1. In a corn husking machine, an ear carrying device comprising two endless chains having opposed leads diverging at the receiving end and disposed in substantially parallel relation for the greater portion of their length, said chains having cupped links to engage diametrically opposite sides of an ear of corn, in combination with ear stripping means supported for rotation in planes approximately at right angles to the planes of movement of the endless carrying means, said stripping means being disposed to engage diametrically opposite sides of the ears of corn exposed between the carrying means.

2. In a corn husking device, gripping and carrying means comprising two endless chains having opposed leads moving in one direction, the greater portions of said leads being disposed in substantially parallel relation and diverging at their receiving ends, each link of each of said chains being provided with a longitudinal V-shaped groove which is provided with husk engaging teeth to engage diametrically opposite sides of ears of corn and to convey such ears positively in the direction of their length, in combination with husk stripping devices arranged in pairs adjacent to opposite sides of the carrier and operating between the opposed leads of the chains constituting such carrier to engage diametrically opposite sides of the ears exposed between the oppdsed leads of the chains.

3. In a corn husking machine, a plurality of sets of ear stripping devices supported for rotation and arranged in pairs adapted for simultaneous engagement with diametrically opposed sides of an ear of corn, some of said ear stripping devices being mounted for rotation in planes substantially at right angles to others of said ear stripping devices, in combination with means for positively conveying ears of corn lengthwise between said several sets of ear stripping devices, said conveying means consisting of endless chains arranged in pairs having opposed leads moving in the same direction, said chains being made up entirely of links having longitudinal grooves having husk engaging teeth, a plurality of such links combining to form a groove or gutter wherein the entire length of an ear of corn may be supported, the opposed leads of the chains combining to engage diametrically opposed sides of the corn ears.

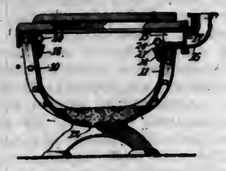
4. In a corn husking machine, an ear carrying device comprising two endless chains having opposed leads converging from the front in a rearward direction, a guide wheel engaging one of the opposed leads and deflecting the same to place the greater portion of the opposed leads in substantially parallel relation, stationary supporting means for one of said opposed leads, spring actuated supporting means for the other lead, and ear stripping means supported for rotation in planes approximately at right angles to the planes of movement of the endless carrying means and adapted to engage diametrically opposite sides of the ears of corn exposed between the carrying means.

5. In a corn husking machine, an ear carrying device comprising two endless chains having opposed leads converging from the front in a rearward direction, a guide wheel engaging one of the opposed leads and deflecting the same to place the greater portion of the opposed leads in substantially parallel relation, stationary supporting means for one of said opposed leads, spring actuated supporting means for the other lead, said spring actuated supporting means comprising a plurality of hingedly connected leaves adapted to yield independently to pressure against the lead of the chain engaged thereby, and ear stripping means supported for rotation in planes approximately at right angles to the planes of movement of the endless carrying means and adapted to engage diametrically opposite sides of the ears of corn exposed between the carrying means.

1,019,587. LATRINE. EUGENE BISHOP BARTLETT, Cleveland, Ohio, assignor to American Foundry and Furnace Co., Bloomington, Ill. Filed Oct. 5, 1907. Serial No. 396,038. (Cl. 4—23.)

1. A latrine, including a body having inclined sides and means for wetting said sides including an overflow trough adjacent the upper edge of each of said sides and supply pipes for delivering water to each trough, each of said troughs being substantially V-shaped in cross section and having a notched or serrated overflow edge and a lower unbroken dripping edge, and independent means adjacent opposite ends of each trough for securing the same to the side of the body and permitting of a vertical ad-

justment to maintain a uniform overflow of the troughs throughout the length thereof.



2. A latrine including a body having an inclined side and means for wetting said side, including an overflow trough adjacent to the upper edge of the side, and a supply pipe for delivering water to the trough, the trough being substantially V-shaped in cross section and having an unbroken dripping edge at the bottom thereof, one side of said trough being located substantially against the inclined side of the latrine, and the other side provided with serrations over which the flushing water may pass in a solid film to flush the side of the latrine.

3. A latrine comprising a body and means for wetting a side of the body including an overflow trough adjacent to the upper edge of the side of the body and a supply pipe for delivering water to the trough, the trough being substantially V-shaped in cross section and having an unbroken dripping edge at the bottom thereof, one side of the said trough being located substantially against the side of the body and its other side inclined to the first mentioned side at such an angle that the water overflowing the second mentioned side flows directly along the outer surface of the side and onto the side of the body to flush the latter.

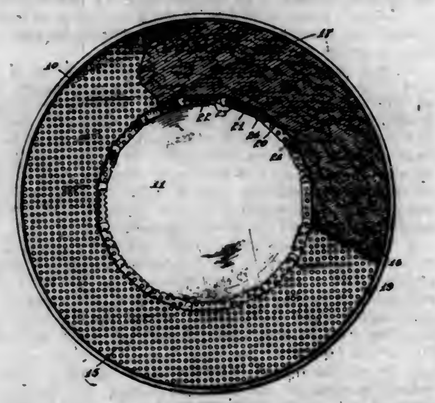
1,019,588. ELECTROLYTIC ANODE. HERBERT EDWARD BEACH, Birmingham, England. Filed Mar. 18, 1911. Serial No. 614,179. (Cl. 204—4.)



1. In a device of the class specified, the combination of an anode, a current conducting suspension rod removably fitted in the upper end of the anode and having a hook at its upper extremity and screw-threads on the body thereof, a non-conducting rigid sleeve mounted over the suspension rod, a washer of a compressible structure surrounding the rod and interposed between the lower end of the sleeve and the upper edge of the anode, and a single nut engaging the screw-threads on the body of the rod and adjustable to tightly bear on the upper end of the sleeve to institute a tight engagement between the lower end of the sleeve and the washer and a non-leakable joint between the said washer and the upper edge of the anode adjacent to the point of attachment of the rod for the latter.

2. In a device of the class specified, an electrolytic anode having an enlargement at the center of the upper edge thereof around a screw socket, a current conducting suspension rod having a lower screw-threaded end removably fitted in the socket of the anode and also provided with a hook at its upper end and screw-threads on the body thereof, a non-conducting rigid sleeve mounted over the suspension rod, a non-conducting compressible washer interposed between the lower end of the sleeve and the central enlarged portion of the anode, and a nut engaging the screw-threads on the body of the rod and movable toward and adapted to clamp tightly against the upper end of the sleeve and set up a tight engagement between the lower end of the latter and the washer and the enlarged portion of the anode.

1,019,589. CONTAINER FOR PICTURE-FILMS AND THE LIKE. BENJAMIN W. BEADELL, Chicago, Ill., assignor to National Waterproof Film Company, Chicago, Ill., a Corporation of Illinois. Filed June 26, 1911. Serial No. 635,493. (Cl. 206—59.)



1. A storage vessel comprising in combination, a continuous side wall, an end wall fixedly connected to the said side wall, there being a circumferential groove in the side wall adjacent the said end wall, and an annular foraminous partition plate having a laterally projecting flange upon its inner edge, the rim of the said plate being seated in the said circumferential groove and the laterally projecting flange of the said plate being seated against and secured to the said end wall whereby an annular compartment for receiving an absorbent material is provided within the chamber of the vessel.

2. A storage vessel comprising in combination, a continuous side wall, an end wall fixedly connected to the said side wall, there being a circumferential groove in the side wall adjacent the said end wall, and an annular foraminous partition plate having a laterally projecting flange upon its inner edge, the rim of the said plate being elastically seated in the said circumferential groove and the laterally projecting flange of the said plate being seated against and secured to the said end wall whereby an annular compartment for receiving an absorbent material is provided within the chamber of the vessel.

1,019,590. COMBINED CHECK AND STOP VALVE. EDWIN S. BECK, Duncannon, Pa. Filed July 24. 1911. Serial No. 640,277. (Cl. 137—4.)

1. A valve of the class described including a valve casing having opposite openings or passages arranged in the same transverse plane, a rotary cut-off sleeve mounted within the casing and provided with opposite openings or passages arranged to register with the openings or passages of the casing, a valve plug mounted for rotary adjustment within the cut-off sleeve and provided with opposite openings and having a valve seat at one of the said openings, the openings of the valve plug being arranged to register with the openings or passages of the cut-off sleeve and the valve casing, the valve plug and the cut-off sleeve, being provided between their openings or passages with imperforate portions arranged to cover, respectively, the openings or passages of the cut-off sleeve and the openings or passages of the valve casing, and a check valve disposed transversely of the valve plug and operating in the plane of the said openings or passages and coöperating with the said valve seat and adapted to be reversed by the rotary movement of the valve plug.



2. A valve of the class described comprising a valve casing having opposite openings, a rotary cut-off sleeve mounted for rotary movement in the valve casing and having opposite openings adapted to be moved into and out of register with the openings of the valve casing, a valve plug mounted for rotary movement in the cut-off sleeve and having opposite openings, a guide arranged at one of the openings of the valve plug, a tubular valve seat detachably secured in the other opening of the valve plug and extending into the same, and a transversely disposed check valve co-acting with the tubular valve seat and having a stem slidable in the guide.

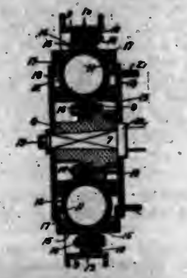
3. A valve of the class described comprising a valve casing having opposite openings, a rotary cut-off sleeve mounted for rotary movement in the valve casing and having opposite openings adapted to be moved into and out of register with the openings of the valve casing, a valve plug mounted for rotary movement in the cut-off sleeve and having opposite openings and provided at one of the openings with a valve seat, and a tapered hollow guide detachably secured in the other opening of the valve plug and projecting into the latter and provided at its apex with a guide opening and having an opening located at one side of the guide opening and forming a passage for water or other fluid, and a check valve co-acting with the valve seat and having a stem slidable in the said guide opening.

4. A valve of the class described comprising a valve casing having opposite openings, a rotary cut-off sleeve mounted for rotary movement in the valve casing and having opposite openings adapted to be moved into and out of register with the openings of the valve casing, a valve plug mounted for rotary movement in the cut-off sleeve and having opposite threaded openings, a tubular valve seat extending into the valve plug and having a threaded portion engaging the threads of one of the openings of the valve plug, a threaded guide detachably engaging the threads of the other opening of the valve plug and extending into the same and having a guide opening, and a valve co-acting with the tubular valve seat and provided with a stem slidable in the opening of the guide.

1,019,591. PNEUMATIC HUB. CHARLES EDWARD DE BOOS, Temora, New South Wales, Australia. Filed Aug. 2, 1911. Serial No. 641,945. (Cl. 152—41.)

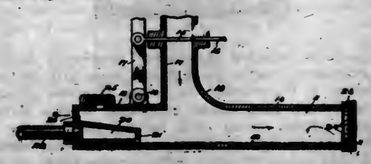
1. A pneumatic hub comprising in combination, a central hub bush, annular flanges projecting therefrom, an annular pneumatic cushion surrounding said bush, a two-part sheath or cover for said cushion, a two-part inner ring seat for said cushion, means securing the inner ring seat and the cover to said bush, a two-part outer ring seat provided with flanges engaging the flanges of said bush, and means for securing the sheath and the parts of said outer ring seat together, substantially as described.

2. A pneumatic hub comprising in combination, a central hub bush, annular flanges projecting therefrom, an annular pneumatic ring cushion surrounding said bush, a two-part sheath or cover for said cushion provided with flanges, a two-part inner ring seat for said cushion anchored to said annular flanges of said bush, means securing the inner ring seat and the flanges of said cover to



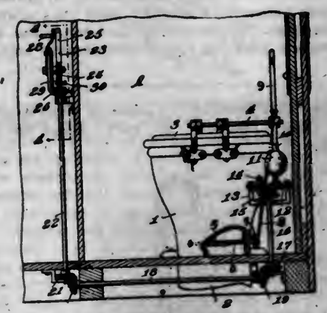
said bush, a two-part outer ring seat provided with flanges engaging the flanges of said bush, and means for securing the flanges of the sheath and the parts of said outer ring seat together, substantially as described.

1,019,592. BURNER. WILLIAM BOOTH, Scranton, Pa. Filed Sept. 23, 1909. Serial No. 519,200. (Cl. 110—104.)



In a burner, a housing, means to introduce solid fuel upon the floor of the housing, a nozzle extending transversely across the housing and having an inclined upper surface, such nozzle being adapted to direct a current of fluid under pressure against the fuel upon the flooring of the housing, means to introduce liquid fuel upon the inclined upper surface of the nozzle, and means at the discharge end of the housing adapted to spread the fuel as discharged.

1,019,593. RAILWAY-TOILET. GEORGE V. A. BROWN, Chicago, Ill. Filed May 3, 1911. Serial No. 624,751. (Cl. 4—17.)

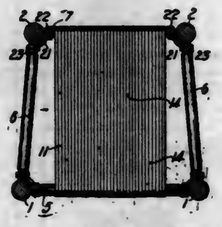


1. In a toilet appliance of the character described, the combination of a compartment, a hopper therein, a dropper valve, a lever for tilting the same, means for holding said lever from actuating movement, gearing for throwing said holding means into and out of action, an operating device on the exterior of the compartment for actuating said gearing, and means associated with said operating device for locking said gearing in lever-holding position.

2. In a toilet appliance of the character described, the combination of a hopper, a dropper valve, a lever for normally tilting the same, means for holding said lever from actuating movement, gearing for throwing said holding means into and out of action, and means for locking said gearing in lever-holding position.

3. In a toilet appliance of the character described, the combination of a hopper, a dropper valve, a lever for tilting the same, said lever having a counterweight arm for normally maintaining it in valve-closing position, means for holding said lever from actuating movement, gearing for throwing said holding means into and out of action, and means for locking said gearing in lever-holding position.

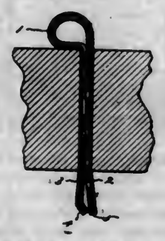
1,019,594. CHAIR. ROBERT S. CALEF, Keene, N. H. Filed Feb. 4, 1909. Serial No. 475,963. (Cl. 155—3.)



1. A chair composed of side and transverse front and rear stretchers, seating strands and legs, with means for supporting a transversely extending stretcher from the side stretchers, said means consisting of two strips of slightly resilient metal each having its opposite ends coiled about the adjacent ends of a transverse stretcher and a side stretcher, each strip intermediate its coiled ends having a non-coiled portion constituting means substantially to prevent yielding of said transverse stretcher toward the opposite transverse stretcher, thereby holding said stretcher comparatively rigid but providing flexible end supports, and maintaining under normal tension the strands extending from the front to the rear of said chair.

2. A chair seat frame composed of side and transverse front and rear stretchers, with means for connecting one or both of the transversely extending stretchers to the side stretchers, said means consisting of strips of metal each having its opposite ends coiled about the adjacent ends of a transverse stretcher and a side stretcher, each strip intermediate its coiled ends having a non-coiled portion constituting means substantially to prevent yielding of said transverse stretcher toward the opposite transverse stretcher, thereby holding said transverse stretcher comparatively rigid but with slightly flexible angular supports.

1,019,595. COTTER-PIN. ANDREW C. CAMPBELL, Waterbury, Conn. Filed Dec. 21, 1911. Serial No. 667,161. (Cl. 74—8.)



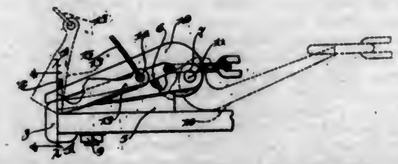
1. A cotter-pin made of a piece of half round wire bent so as to provide an off-center eye at one end and have two limbs of unequal length that extend with the flat surfaces adjacent, the tip of the long limb being bent at an angle across the top of the short limb, whereby when the eye is given a blow, the short limb will be driven longitudinally of the long limb, and by the engagement of the tips cause a separation of the limbs and increase the normal diameter of the pin.

2. A cotter-pin made of a piece of half round wire bent so as to provide an eye at one end and have two limbs of unequal length that extend with the flat surfaces adjacent, the tip of the long limb being bent at an angle across the top of the short limb, whereby when the short limb is driven longitudinally of the long limb, by the engagement of the tips a separation of the limbs and an increase in the normal diameter of the pin is caused.

3. A cotter-pin made of a piece of wire bent so as to form an off-center eye at one end and have two limbs of unequal length, the tip of the long limb being bent at an angle across the top of the short limb, whereby when the eye is given a blow, the short limb will be driven longitudinally of the long limb and by the engagement of the tips the normal diameter of the pin is increased.

4. A cotter-pin made of a piece of wire bent so as to provide an eye at one end and have two parallel limbs of unequal length, with the tip of the long limb bent across the tip of the short limb in such manner that forcing the short limb longitudinally will cause the tips to engage and result in a separation of the free ends of the limbs.

1,019,596. RELEASABLE COUPLING FOR DRAFT-EQUALIZERS. CARL S. CARLSON, Amery, Wis. Filed Apr. 17, 1911. Serial No. 621,471. (Cl. 21—75.)



In a device of the kind described, the combination with a pole and a draft device, of a base block having an anchoring hook embracing the rear end of said pole, a hook ended lever coupling pivotally attached at its hooked end to said base block, a connection from said draft device to said lever coupling, a lock loop pivotally attached to said base block, arranged to embrace the free end of said lever coupling for holding the same in an operative position, and having a normally forwardly projecting operating arm normally holding said lock loop in an operative position under the action of gravity, and an operating connection secured to the arm of said lock loop, substantially as described.

1,019,597. SADDLE FOR MOTOR-CYCLES, &c. CHARLES EDWARD CHAPMAN, Fort Edward, N. Y., assignor of one-half to Alfred Raper, Fort Edward, N. Y. Filed June 20, 1911. Serial No. 634,370. (Cl. 208—15.)

1. A saddle of the class described comprising frame-bars, a cantle-plate supported by the rear ends of the frame-bars, a pommel plate supported by the forward ends of the frame-bars, a plurality of springs connected at their forward ends to the forward ends of the frame bars, the springs diverging in the direction of their rear ends and secured at their said ends to the cantle-plate, and a flexible top secured at its front to the pommel plate and resting upon the springs.

2. A saddle of the class described comprising frame-bars, a cantle-plate supported by the rear ends of the frame-bars, a pommel plate supported by the forward ends of the frame-bars, a plurality of springs connected at their forward ends to the forward ends of the frame-bars, the springs diverging in the direction of their rear ends and secured at their said ends to the cantle-plate, a flexible top secured at its front to the pommel plate

and resting upon the springs, and clips carried by the said top and embracing certain of the springs.



3. A saddle of the class described comprising frame-bars, a cantle plate supported by the rear ends of the frame-bars, a pommel plate supported by the forward ends of the frame bars, a plurality of springs connected at their forward ends to the frame bars, the springs diverging in the direction of their rear ends and secured at their said rear ends to the cantle-plate, a flexible top secured at its front to the pommel plate and resting upon the springs, a resilient strip secured to the under side of the top and extending transversely at the rear thereof, and clips upon the said strip through which certain of the springs extend.

4. A saddle of the class described comprising frame-bars, a cantle-plate supported by the rear ends of the frame-bars, a pommel plate supported by the forward ends of the frame-bars, a plurality of links pivotally connected at the forward ends to the frame-bars, springs connected at their forward ends to the links and at their rear ends to the cantle-plate, and a flexible top disposed upon the springs.

5. A saddle of the class described comprising frame-bars, a cantle-plate supported by the rear ends of the frame-bars, a transverse pin connecting the forward ends of the frame-bars, a plurality of links pivoted to the said pin, springs connected at their forward ends to the links and at their rear ends to the cantle-plate, and a flexible top disposed upon the springs.

[Claims 6 and 7 not printed in the Gazette.]

1,019,598. CEMENT-MOLD. HORACE W. CLARK, Mattoon, Ill. Filed Nov. 15, 1911. Serial No. 660,358. (Cl. 25—128.)



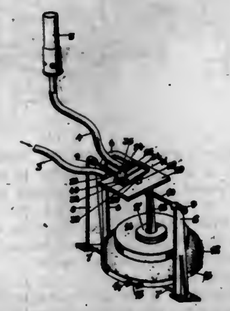
1. A clamping and fastening means for a longitudinally divided cement mold, the same comprising parallel bars having wedges arranged oppositely and adapted to slide on each other, guide pins fixed in the movable bar and passing through slots in the outer fixed bar, springs applied to the pins and bearing on the outer bar, and angular clamps secured to the outer bar and engaging the edge of the mold section which is farthest removed from the wedge-bars, substantially as described.

2. A clamping and fastening means for a longitudinally divided cement mold, the same applied thereto and consisting of parallel wedge-bars arranged in proximity and provided with a series of wedges adapted to work in slidable contact, the outer fixed bar having a series of longitudinal slots, screw-pins passing through said slots and inserted in the inner or slidable bar, springs applied to the outer ends of the pins, and angular clamps secured to the outer wedge-bar and their opposite ends engaging the continuous edge of the mold, substantially as described.

3. A clamping and fastening means for a longitudinally divided cement mold, the same comprising two parallel bars provided with opposite wedges arranged for slidable contact, one pair of the wedges being constructed with corrugated and inclined surfaces adjacent to their plain inclined surfaces, the corrugations being adapted to receive a rotatable key for adjusting the wedges on each other, guide pins secured to the inner wedge bar and projecting through the outer one, springs applied to such pins, and angular clamps secured to the outer bar and engaging the farther edge of the mold, substantially as described.

4. The improved means for clamping and fastening a mold which is divided longitudinally, the same comprising two bars arranged parallel and provided with opposite wedges adapted to work in contact, the outer bar having a series of longitudinal slots and the inner bar having a series of pins which pass through said slots and are provided with springs pressing against the outer bar and angular clamps secured to the outer bar, as shown and described.

1,019,599. FLASHING GAS-SIGN. WILLIAM CLAYTON-JOEL, Melbourne, Victoria, Australia. Filed Sept. 20, 1911. Serial No. 650,468. (Cl. 67—111.)



1. An apparatus of the character described, including an inflatable receiving chamber, a tiltable burner supply chamber, having an outlet; an operative connection between the inflatable receiving chamber and the supply chamber whereby the inflation and deflation of the receiving chamber will tilt the supply chamber in one direction or the reverse, and a rocking valve carried by and in the supply chamber and adapted to automatically control the said outlet.

2. An apparatus of the character described, including a tiltable burner supply chamber, a feed pipe communicating with the interior thereof, a burner pipe also communicating with the interior thereof, a rocking valve carried by said chamber and adapted to rock alternately to cut off one or the other of said pipes, an inflatable receiving chamber, an operative connection between the receiving chamber and the supply chamber, and a pipe establishing communication between the interior of the receiving chamber and the interior of the supply chamber.

3. An apparatus of the character described, including an inflatable receiving chamber, a movable supply cham-

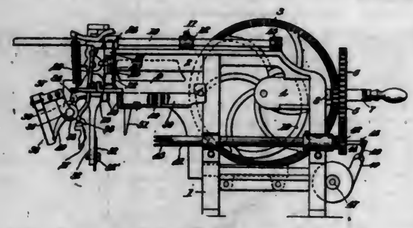
ber having communication therewith, the chamber being formed with gas inlet and outlet ports, a rocking valve mounted in the supply chamber and adapted to automatically engage the respective ports upon the upward and downward movement of the supply chamber, a link operatively connecting the inflatable receiving chamber with the supply chamber, and means for adjusting the position of the link at varying distances relative to the axis of the supply chamber.

4. An apparatus of the character described, including an inflatable receiving chamber, a burner supply chamber formed with gas inlet and outlet ports and having communication with the interior of the receiving chamber, said supply chamber being mounted to tilt, a link communication between said receiving chamber and supply chamber, a rocking valve carried by and in the supply chamber and adapted to alternately close said ports, and a weight carried by said valve and adapted to reciprocate thereon for the purpose specified.

5. An apparatus of the character described, including an inflatable bag, a valve casing, a support upon which said valve casing is mounted to tilt, a link connection between the inflatable bag and said support, the valve casing being formed with gas inlet and outlet ports, and having communication with the interior of the bag, said outlet port being formed with a by-pass, and a rocking valve carried by said casing and adapted to alternately open and close said ports.

[Claims 6 and 7 not printed in the Gazette.]

1,019,600. ATTACHMENT FOR APPLE-PARING MACHINES. SAMUEL L. COATES, Rickreall, Oreg. Filed June 6, 1911. Serial No. 631,589. (Cl. 146—8.)



1. In an apple paring machine, the combination, with a paring knife, a coring knife adapted to remove the apple after it is cored, and a knife adapted to slice the apple spirally, of a knife adapted to automatically cut the spiral into separate rings after the apple has been removed upon the slicing knife, and means to finally discharge the apple from said coring knife.

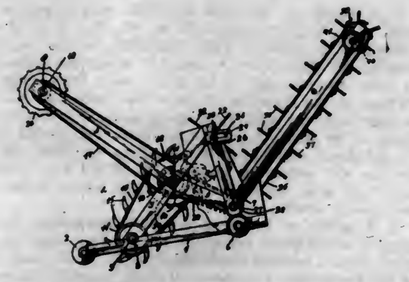
2. In an apple paring machine, the combination, with a stationary frame, of a carriage mounted on said frame, a fork for supporting an apple in position to be pared, means for rotating said fork and for reciprocating said carriage, a paring knife, a coring knife, and a spiral slicing knife, all mounted on said carriage, and a fixed knife mounted on the stationary frame for automatically cutting the spiral slice into separate rings.

3. In an apple paring machine, the combination, with a stationary frame, a revoluble fork mounted on said frame, a carriage adapted to reciprocate on the frame, paring, coring and spirally slicing knives mounted on said carriage and adapted to perform their functions during the movement of said carriage toward said fork, of another knife fixed on the stationary frame and adapted to cut the spirally sliced apple into rings during the movement of the carriage away from the fork.

4. In an apple paring machine, the combination, with a stationary frame, a revoluble fork mounted on said frame, a carriage adapted to reciprocate on the frame, paring, coring and spirally slicing knives mounted on said carriage and adapted to perform their functions during the movement of said carriage toward said fork, said coring knife adapted to remove the apple from said fork on the reverse movement of the carriage, of another knife fixed on the stationary frame and adapted to cut the spirally sliced apple into rings during the movement of the carriage away from the fork.

5. In an apple paring machine, the combination, with a stationary frame, a revoluble fork mounted on said frame, a carriage adapted to reciprocate on the frame, paring, coring and spirally slicing knives mounted on said carriage and adapted to perform their functions during the movement of said carriage toward said fork, said coring knife adapted to remove the apple from said fork on the reverse movement of the carriage, said spirally slicing knife serving to retain the apple upon said coring knife as they are withdrawn from said fork, of another knife fixed on the stationary frame and adapted to cut the spirally sliced apple into rings during the movement of the carriage away from the fork.

1,019,601. CLAM-DIGGER. WILLIAM D. COLLIER, Marco, Fla. Filed June 5, 1911. Serial No. 631,452. (Cl. 43—11.)



1. In a device of the character described, a supporting structure, digging mechanism in the form of an inclined endless belt, a rotatable device disposed near the upper discharge end of the digging mechanism to remove material therefrom, means whereby said rotatable device may be moved toward or away from the digging mechanism, a spring to oppose the movement of said rotatable device away from the digging mechanism, and a conveyer having its take up end disposed near and below the rotatable device.

2. In a device of the character described, a supporting structure, wheels upon which the supporting structure is mounted, digging mechanism in the form of an inclined endless belt and including digger bars provided with teeth adapted to operate below said wheels to primarily engage the clams and subsequently convey the same upwardly, a rotatable device disposed near the upper discharge end of the endless belt digging mechanism to remove the clams from the same and throw them downwardly, brackets provided with elongated slots to receive the shaft of said rotatable device, springs engaging the ends of said shaft to oppose its movement in that direction, a casing disposed below the discharge end of the endless belt digging mechanism and said rotatable device, and an endless belt conveyer having its take up end operating within said casing.

3. In a device of the character described, a supporting structure, digging mechanism in the form of an inclined endless belt, a rotatable element disposed near the upper discharge end of the digging mechanism to remove material therefrom, means whereby said rotatable element may be moved toward or away from the digging mechanism, and a conveyer having its take up end disposed near the rotatable element.

1,019,602. SHOE-LAST. IRVING A. COOK, Lancaster, Ohio. Filed Apr. 1, 1910, Serial No. 552,808. Renewed Oct. 7, 1911. Serial No. 653,452. (Cl. 12—136.)

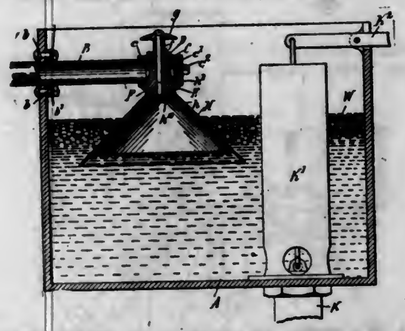
1. A last comprising fore and heel sections, the fore section having a slot in its rear end and a groove extending upwardly from said slot, a hinge connecting said sections, said hinge having a forwardly extending arm pivoted in the slot and an upwardly projecting arm fixed to the heel section and sliding in said groove, and a sliding catch mounted on the fore section and working across said groove and engaging the upper end of said arm when the last is straightened.



2. A last comprising fore and heel sections, a hinge member connecting said sections, said member having an upwardly extending arm fixed to the heel section, and a forwardly extending arm pivoted at its front end to the fore section, the upper edge of said upwardly extending arm being inclined, and a spring latch member mounted on the fore section to the rear of the said pivot and having a beveled face engaging said edge when the last is straightened.

3. A last comprising a fore section having a slot in its rear end and a groove extending upwardly from said slot, a heel section, and a hinge member connecting said sections, said hinge member having a forwardly extending arm working in said slot and pivoted to the fore section, and an upwardly extending arm fixed to the heel section and working in said groove.

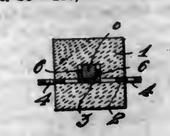
1,019,603. AUTOMATIC INLET-VALVE. SIGURD CARL CORNETT and AUSTIN DWIGHT DAVENPORT, Gustine, Cal. Filed July 18, 1911. Serial No. 639,106. (Cl. 137—104.)



1. An inlet valve for tanks and reservoirs, comprising a horizontally arranged inlet pipe, a pair of conical valve seats arranged in vertical alinement with each other and at diametrically opposite points in the inlet pipe, the upper valve seat being of smaller diameter than the lower one, a conical plug of sufficient length to engage both valve seats and arranged for vertical movement with relation thereto, and a float attached to the under side of said conical plug.

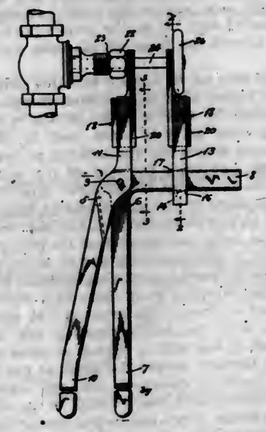
2. An inlet valve for tanks and reservoirs, comprising a horizontally arranged inlet pipe, a pair of conical valve seats arranged in vertical alinement with each other and at diametrically opposite points in the inlet pipe, the upper valve seat being of smaller diameter than the lower one, a conical plug of sufficient length to engage both valve seats and arranged for vertical movement with relation thereto, a float attached to the under side of said conical plug, and a deflecting cap attached to the upper end of the conical plug above the upper valve seat.

1,019,604. HANGER FOR CEMENT POSTS. JOHN S. CULLEY, Louisville, Ky. Filed Oct. 17, 1910. Serial No. 587,476. (Cl. 39—12.)



In a cement post the combination with a longitudinally disposed rectangular reinforcing bar located therein, of a wire hanger comprising a plate having apertured ends and laterally disposed anchoring lugs formed from the plate intermediate its ends leaving correspondingly shaped openings in the plate, the latter being adapted to be embedded in the post with the lugs thereof arranged in binding contact with the opposite sides of the reinforcing bar, whereby the openings will be filled with cement in completing the post, said apertured ends of the plate projecting beyond the face of the post.

1,019,605. ADJUSTABLE PACKING-PLIERS. CLARENCE A. CUMMINGS, Fresno, Cal. Filed Nov. 18, 1911. Serial No. 661,043. (Cl. 81—44.)

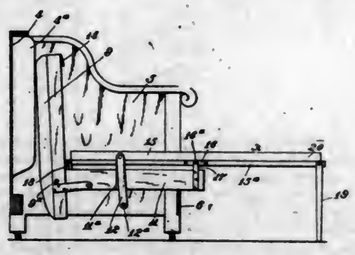


1. Spreading pliers comprising members pivoted together, one of said members having a work engaging jaw, and an adjustable work engaging jaw carried by the other member, the operation of the said members being capable of forcing the jaws apart to exert pressure upon a given object.

2. Spreading pliers comprising pivoted members having operating handles, one of said members having a laterally projecting arm, an adjustable jaw having gripping means for securing it in different positions upon said lateral arm, and a fixed jaw carried by the other member of the pliers, the drawing together of the handles operating to force the jaws apart.

3. Spreading pliers comprising members pivotally connected having operating handles, one of said members having a bifurcated jaw formed with a tapering recess therein, the other member having a lateral arm, an adjustable jaw thereon, having a tapering recess and removable jaws adapted to be inserted in said tapering recess, the said removable jaws also having bifurcated work engaging portions, the drawing together of the handles operating to spread the jaws and exert pressure upon a given mechanism.

1,019,606. SOFA OR DAVENPORT BED. JAMES G. CURTIS, Columbus, Ohio, assignor to The E. M. Hulse Company, Columbus, Ohio, a Corporation of Ohio. Filed June 12, 1909. Serial No. 501,741. (Cl. 5—51.)



1. In a sofa or davenport bed, the combination with the main frame, of a seat pivoted therein, a frame or box to support a bed, hangers pivoted at their lower ends to the main frame and pivotally supporting the said box at their upper ends, and means connecting the seat and box whereby the latter can be projected upward and forward toward the front of the main frame by raising the seat.

2. In a sofa or davenport bed, the combination with the main frame, of a seat pivoted therein, a frame or box to support a bed, hangers pivoted at their lower ends to the main frame and pivotally supporting the said box at their upper ends, and means rigidly attached to the seat and connected with the box to project the box upward and forward toward the front of the sofa when the seat is raised.

3. In a sofa or davenport bed, the combination with the main frame, of a seat pivoted therein to swing upward toward the back, a frame or box to support a bed, hangers pivoted at their lower ends to the main frame and pivotally supporting the said box at their upper ends, and means connecting the rear of the seat and the box whereby the latter can be projected upward and forward toward the front of the main frame by raising the seat.

4. In a sofa or davenport bed, the combination with the main frame, of a seat pivoted at its rear portion in said main frame, a bed supporting box or frame pivotally hung on hangers supported in the main frame below and forward of the points of their connection with the bed supporting box or frame, and arms on the rear of the seat connected with the bed supporting box or frame and adapted when the seat is raised to move the latter upward and forward toward the front of the sofa.

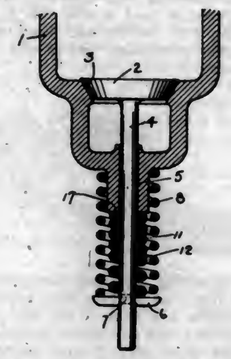
5. In a sofa or davenport bed, the combination with the main frame, of a seat pivoted at its rear portion in said main frame, a bed supporting box or frame pivotally hung on hangers supported in the main frame below and forward of the points of their connection with the bed supporting box or frame, and rigid arms on the rear of the seat connected with the bed supporting box or frame and adapted when the seat is raised to move the latter upward and forward toward the front of the sofa.

[Claims 6 to 10 not printed in the Gazette.]

1,019,607. PACKING. ANDREW C. DANVER, Providence, R. I., assignor of one-half to Harvey J. Flint, Providence, R. I. Filed June 14, 1911. Serial No. 633,163. (Cl. 121—109.)

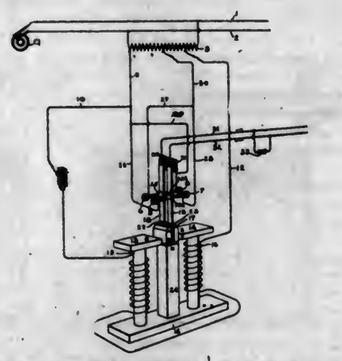
1. As a new article of manufacture, a packing having a central opening adapted to fit closely about a reciprocating valve stem, and a coil spring also about said stem acting on said packing to hold it in position one end of said spring resting against a member carried by said stem to reciprocate therewith and adapted to tighten the packing when the valve stem moves inward.

2. As a new article of manufacture, a packing having a comparatively soft outer covering and a core of spring wire the same being wound into a helical coil of close formation at one end and open formation at the opposite end whereby the latter end is adapted to rest against and move with the reciprocations of the stem inclosed within the coil.



3. As a new article of manufacture, a packing having a comparatively soft outer covering and a core of spring wire, the same being wound into a helical coil to fit around a reciprocating valve stem, the coils at one end of the packing being wound in close formation and the coils at the opposite end in open formation whereby the latter coils may serve as a spring to rest against a member carried by said stem to reciprocate therewith and yet retain the other coils in a fixed position.

1,019,608. VIBRATING RECTIFIER. JOHN THOS. DEMPSTER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Sept. 17, 1908. Serial No. 453,412. (Cl. 171—253.)



1. In a rectifier, the combination of a magnet having a substantially closed magnetic circuit and having opposing pole pieces with an intervening air gap, means for causing an alternating magnetic flux in said magnet, a magnetic member free to vibrate in the air gap, magnetic means having a pole adjacent to said member and said gap for exerting upon the said member a magnetising effect of constant polarity and coöperating switching contacts actuated by the vibration of said member for delivering alternating impulses of current as a succession of unidirectional impulses.

2. In a mechanical rectifier, the combination of a magnet having a substantially closed magnetic circuit and having opposing poles with an intervening air gap, means for causing an alternating flux in said magnet, a resilient magnetic reed adapted to freely vibrate between the poles of said magnet in the air gap, a fixed support therefor, magnetic means adjacent to said member and said gap furnishing a unidirectional magnetising flux and coöperating switching contacts actuated by the vibration of said member for delivering alternating impulses of current as a succession of unidirectional impulses.

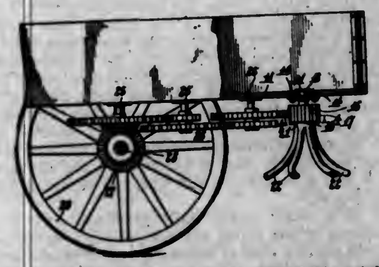
3. In a vibrating rectifier, the combination of a magnet energized by alternating current and having free poles oppositely disposed with an intervening air gap, an armature free to vibrate in said gap, a resilient tongue support for said armature on one side of the gap, a magnetic member of constant polarity in operative relation with said armature on the other side of the gap for exerting upon said armature a magnetising flux in the direction of its length and means actuated by the vibration of said armature for delivering impulses of alternating current as rectified current.

4. In a mechanical rectifier, the combination of a U-shaped magnet having oppositely disposed poles with an intervening air gap, means for causing an alternating flux in said magnet, an armature of substantially the dimensions of said gap free to vibrate longitudinally between the poles of said magnet, a control magnet of constant polarity mounted between the legs of the alternating current magnet and having a pole adjacent to the armature for impressing thereupon a magnetising flux in the direction of its length, and means actuated by the vibration of said armature for delivering impulses of alternating current as a succession of unidirectional impulses.

5. The combination of an alternating current source, an electromagnet having oppositely disposed poles with an air gap but having an otherwise substantially closed magnetic circuit, means for exciting said magnet with an alternating flux in step with the vibrations of the current from said source but displaced in phase therewith, a vibrator comprising an armature free to vibrate between said poles, resilient tongue supports for said armature insulated from one another, a magnet of constant polarity opposite said vibrator and adjacent to said gap, exerting an inductive effect upon said armature, stationary contacts, and contacts mounted on said supports and operating in conjunction with said fixed contacts by the vibrations of said armature to rectify the alternating current.

[Claims 6 and 7 not printed in the Gazette.]

1,019,609. DISTRIBUTING APPARATUS. HECTOR DERDEYN, Jacksonville, Ill. Filed May 5, 1911. Serial No. 626,125. (Cl. 111—38.)



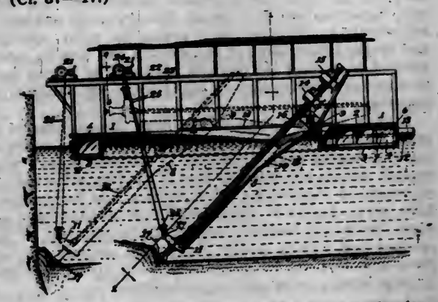
1. A device of the class described comprising a tubular shank for engagement with the under side of a vehicle and in register with an aperture in the floor of the vehicle a toothed wheel journaled on the said shank, a collar threadedly engaging the shank to revolubly retain the toothed wheel on the shank, a spider threadedly connected with the lower end of the toothed wheel and revoluble therewith, the said spider being provided with an aperture in register with the said tubular shank, curved tubular prongs depending from the said spider and integral therewith and a train of gears connecting the said toothed wheel with the axle of the said vehicle for rotating the said spider when the said vehicle is operated.

2. A device of the class described comprising a tubular shank for engagement with the under side of a vehicle and in register with an aperture in the floor of the vehicle, a toothed wheel journaled on the said shank, a collar threadedly engaging the shank to revolubly retain the toothed wheel on the shank, a spider threadedly connected with the lower end of the toothed wheel and revoluble therewith, the said spider being provided with an aperture in register with the said tubular shank, curved tubular prongs depending from the said spider and integral therewith, a train of gears connecting the said toothed wheel with the axle of the said vehicle for rotating the said spider when the said vehicle is operated and means mounted on the said vehicle for controlling the supply of material from the vehicle to the said spider.

3. A device of the class described comprising a tubular shank for engagement with the under side of a vehicle and in register with an aperture in the floor of a vehicle, a toothed wheel journaled on the said shank, a collar threadedly engaging the said shank for retaining the said toothed wheel in position thereon, a spider rigidly connected to the said toothed wheel and provided with an aperture in register with the said shank, curved tubular prongs depending from the said spider and means for rotating the said spider.

4. A device of the class described comprising a tubular shank for engagement with the under side of a vehicle and in register with the aperture in the floor of a vehicle, a toothed wheel journaled on the said shank, a collar threadedly engaging the said shank for retaining the said toothed wheel in position thereon, a spider rigidly connected to the said toothed wheel and provided with an aperture in register with the said shank, curved tubular prongs depending from the said spider, means for rotating the said spider and controlling means for controlling the supply of material from the said vehicle to the said spider.

1,019,610. DREDGING APPARATUS. WILLIAM THOMAS DONNELLY, Brooklyn, N. Y. Filed Apr. 27, 1910, Serial No. 557,978. Renewed Jan. 25, 1912. Serial No. 673,494. (Cl. 37—47.)



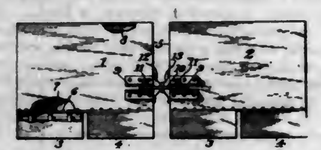
1. A dredging apparatus comprising a scow having a well leading through its hull, a reciprocable arm fulcrumed thereon and being adapted to be turned on its fulcrum and lowered through said well into the water to place it in operative position and to be turned on its fulcrum and raised through said well above the bottom of the scow to place it in transportable position, said arm having on the submergible portion thereof at one side of its fulcrum a centrifugal pump, a pipe leading therefrom and cutting means and on the non-submergible portion thereof at the other side of its fulcrum a source of power, and means operatively connecting the pump, the cutting means and the rotatable elements of the source of power, substantially as described.

2. A dredging apparatus comprising a scow having a well leading through its hull, a reciprocable arm fulcrumed thereon and being adapted to be turned on its fulcrum and lowered through said well into the water to place it into operative position and to be turned on its fulcrum and raised through said hull above the bottom of the scow to place it in transportable position, said arm having on the submergible portion thereof, a centrifugal pump, a pipe leading therefrom and cutting means and on the non-submergible portion thereof a source of power, and a ro-

tatable shaft directly connecting the rotatable elements of the source of power and the pump and having the said cutting means thereon adjacent the inlet of the pump, substantially as described.

3. A dredging apparatus comprising a scow having a well leading through its hull, a reciprocable arm fulcrumed thereon and being adapted to be turned on its fulcrum and lowered through said well into the water to place it in operative position and to be turned on its fulcrum and raised through said well above the bottom of the scow to place it in transportable position, said arm having on the submergible portion thereof at one side of its fulcrum a centrifugal pump, a pipe leading therefrom and cutting means and on the nonsubmergible portion thereof at the other side of its fulcrum a source of power, and a rotatable shaft directly connecting the rotatable elements of the source of power and the pump and having the said cutting means thereof adjacent the inlet of the pump, substantially as described.

1,019,611. SECTIONAL FLOATING DRY-DOCK. WILLIAM THOMAS DONNELLY, Brooklyn, N. Y. Filed Sept. 17, 1910, Serial No. 582,514. Renewed Jan. 25, 1912. Serial No. 673,495. (Cl. 114—46.)



1. In a sectional floating dry dock, means adapted to space and aline the sections in all directions, consisting of laterally spaced groove members at one end of each section and laterally spaced tongue members at the other end of each section, said tongue members being adapted to extend into and disconnectedly engage the groove members and means independent of the spacing and alining means adapted to connect the sections and hold the tongue members and groove members in engagement, substantially as described.

2. In a sectional floating dry dock, means adapted to space and aline the sections in all directions, consisting of laterally spaced groove members at one end of each wing of each section, and laterally spaced tongue members at the other end of each wing of each section, said tongue members being adapted to extend into and disconnectedly engage the groove members and means independent of the spacing and alining means adapted to connect the sections and hold the tongue members and groove members in engagement, substantially as described.

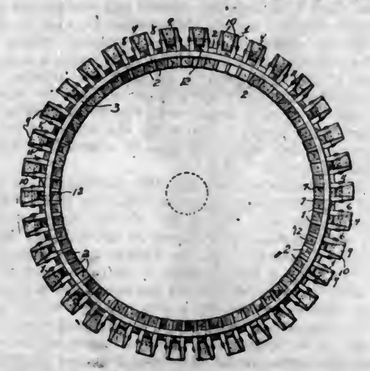
1,019,612. BEATING-ENGINE. ROBERT I. DOWD, Beloit, Wis., assignor to Dowd Knife Works, Beloit, Wis., a Corporation of Wisconsin. Filed Aug. 15, 1911. Serial No. 644,262. (Cl. 92—22.)

1. A beater roll comprising an annular series of beater bars forming pockets between them each of which extends the width of the roll, abrasive material secured in alternate pockets, and fillers disposed between the abrasive material and beater bars, substantially as set forth.

2. A beater-roll comprising an annular series of beater bars forming pockets between them, abrasive material secured in alternate pockets, fillers disposed between the abrasive material and beater bars, and bolts extending through the beater bars, abrasive material and fillers, substantially as set forth.

3. A beater roll, comprising an annular series of beater-bars, wooden fillers disposed between the beater-bars and separating them to form an annular series of pockets, and slabs of abrasive material located in alternate pockets, said slabs having such depth as to leave clearance spaces between their inner faces and the outer faces of the adjacent wooden fillers.

4. A beater roll comprising a series of beater bars arranged to form pockets between them, abrasive material secured in alternate pockets, wooden spacing strips inter-



posed between the inner ends of the beater bars, and wooden strip interposed between the abrasive material and the adjacent faces of the beater bars, substantially as set forth.

1,019,613. ROTARY PUMP. DOMINICK DREHER, Springdale, Mont. Filed Apr. 6, 1911. Serial No. 619,418. (Cl. 103—44.)



1. In a rotary pump, the combination with a casing consisting of face plates, a rim between said plates and having a cam groove in one of the outer faces of its walls, the said face being separated from the corresponding face plate, the said rim having an inlet and an outlet therein, and a partition between the inlet and outlet, of a hub rotatably mounted in the casing, the hub being provided with a slot in its body, a wing slidably mounted in said slot, an arm projecting outwardly from the wing into the space between the wall of the rim and the adjacent face plate, and a member on the said arm engaging the said cam groove.

2. In a rotary pump, the combination with a casing consisting of face plates whereof one has a socket bearing and the other a tubular bearing, a rim of channeled metal between said plates and having cam grooves in the outer faces of its walls, an inlet and an outlet disposed adjacent each other through said rim, a partition between them, and engaging flanges on the rim walls and on the face plates and holding these elements separated; of a hub having a stub shaft mounted in said socket bearing and a power shaft mounted through said tubular bearing, the hub being provided with slots in its body, a series of wings slidably mounted in said slots, an arm projecting outward from each end of each wing into the space between that wall of the rim and the adjacent face plate, and an anti-friction roller on each arm engaging one of said cam grooves.

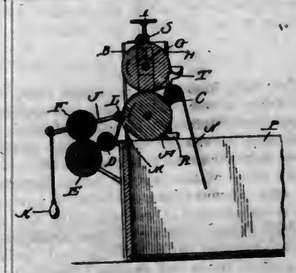
3. In a rotary pump, the combination with a casing having an adjacent inlet and outlet through its periphery and a partition between them, and having annular cam grooves with a depression opposite said partition; of a

hub mounted for rotation within said casing and having annular notches around its corners, two end plates for said hub having annular ribs fitting said notches, the hub and the plates being provided with a series of slots registering with each other and each disposed on a line between a radius of and a tangent to said hub, and a series of wings mounted slidably in said slots and each comprising a blade, arms projecting outward from the extremities of said blade, and anti-friction rollers at the outer ends of said arms traveling in the cam grooves.

1,019,614. CHEMICAL PRODUCT FOR PRESERVING EGGS. ALOIS DUBOUX, Grandvaux, and CONSTANT HENRI RAPIN, Lalex, near Grandvaux, Switzerland. Filed Sept. 23, 1911. Serial No. 650,986. (Cl. 99—8.)

A chemical product for preserving eggs consisting of magnesium silicate, vaseline, tannate of aluminium and gum-dragon, intimately mixed, so that they form an unctuous, unalterable, tasteless, and inorodous paste which is almost insoluble in water and in alcohol, but soluble in ether and which melts at 37° C., substantially as described and shown and for the purpose set forth.

1,019,615. CLOTH-FINISHING MACHINE. JOHN B. DUNN, Woonsocket, R. I. Filed Oct. 13, 1910. Serial No. 586,915. (Cl. 26—2.)



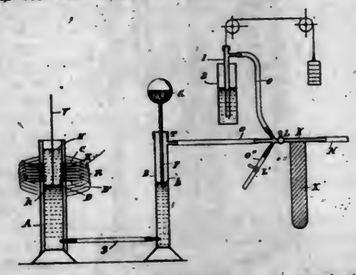
1. In a machine for finishing woolen and worsted cloth, the combination of lower and upper squeeze rolls, a brush supported above the upper of the squeeze rolls and having bristles the ends of which are opposed to the perimeter of said roll and also having the said bristles arranged to permit lint that adheres to the roll and brings up against the brush to work through the bristles and by so doing form into balls or rolls, and a suitably supported receptacle arranged back of the roll in position to receive said balls or rolls of lint.

2. In a machine for finishing woolen and worsted cloth, the combination with a tub and squeeze rolls; of means for stretching the cloth while in a wet state to its full width, said means being located at a point intermediate the tub and the squeeze rolls, a roll adapted to be driven and to take up the cloth, means arranged directly between the squeeze rolls and the said take-up roll for stretching the wet cloth to its full width as it passes from the squeeze rolls to the take-up roll, a spindle adapted for the winding of the cloth thereon, and means for holding the said spindle under yielding pressure toward the take-up roll.

1,019,616. RHEOSTAT. LUCIEN CHARLES EILERTSEN, Paris, France. Filed Mar. 28, 1911. Serial No. 617,468. (Cl. 219—57.)

1. In a rheostate of the kind described the combination of two communicating vessels, a conducting liquid in said vessels, a resistance coil adapted to coöperate with said conducting liquid, a pressure fluid adapted to exert pressure on the liquid contained in one of said vessels and an indicator receiving the same pressure as the said liquid and adapted to show this pressure, substantially as and for the purpose set forth.

2. A rheostat including spaced intercommunicating vessels, a conducting liquid in each, circuit terminals in one vessel, one of said terminals being at all times in contact with the liquid therein, the other terminal including resistance to be varied as the depth of liquid varies, pressure means for directly varying the depth of the liquid in said other vessel to reversely vary the depth in the first named vessel, and means remote from said vessels for controlling the pressure means.



3. A rheostat including spaced intercommunicating vessels, a conducting liquid in each, circuit terminals in one vessel, one of said terminals being at all times in contact with the liquid therein, the other terminal including resistance to be varied as the depth of liquid varies, pressure means for directly varying the depth of the liquid in said other vessels to reversely vary the depth in the first named vessel, means remote from said vessels for controlling the pressure means, and an indicator to indicate the depth of liquid in the first named vessel.

4. A rheostat including spaced intercommunicating vessels, a conducting liquid in each, circuit terminals in one vessel, one of said terminals being at all times in contact with the liquid therein, the other terminal including resistance to be varied as the depth of liquid varies, pressure means for directly varying the depth of the liquid in said other vessel to reversely vary the depth in the first named vessel, means remote from said vessels for controlling the pressure means, and an indicator open to the pressure means and adapted to indicate the depth of the liquid in the first named vessel.

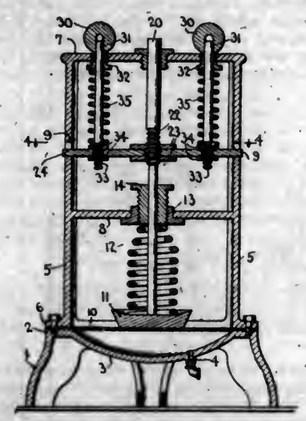
5. A rheostat including spaced intercommunicating vessels, a conducting liquid in each, circuit terminals in one vessel, one of said terminals being at all times in contact with the liquid therein, the other terminal including resistance to be varied as the depth of liquid varies, pressure means for directly varying the depth of the liquid in said other vessel to reversely vary the depth in the first named vessel, means remote from said vessels for controlling the pressure means, and an indicator to show the depth of liquid in the first named vessel, said indicator comprising an open vessel containing liquid, and an interior bell operable in said open vessel and itself open to the pressure means.

1,019,617. FLUID-PRESSURE REGULATOR. CHARLES O. EVERHART, Warren, Pa., assignor of one-half to Aquilla Miles, Warren, Pa. Filed July 20, 1911. Serial No. 639,581. (Cl. 50—23.)

1. In a liquid or vapor fuel burner pressure regulator, the combination with a framework having guides, a diaphragm forming the top of a chamber in the framework to which the pressure is admitted, a guide bar whose extremities move in two of said guides, a stem connected with the diaphragm and leading through a third guide and having threads on its body, and nuts on said threads above and below said bar; of a main spring acting on the diaphragm to oppose the rise of said stem, and fixed valve casings and valves therein whose stems project through said guide bar, nuts on the stems above and below this bar, and a spring acting on the bar to hold the valves normally open.

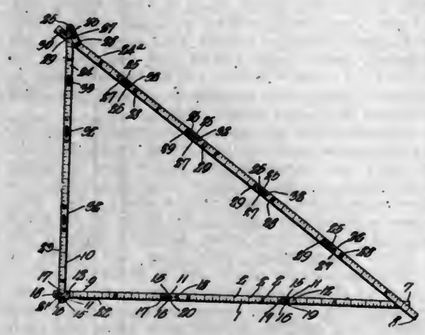
2. In a liquid or vapor fuel burner pressure regulator, the combination with a framework having guides in its

sides and one in its top, a cross bar whose extremities move in the former, an upright stem passing through said bar and with its upper end moving in the last-named guide, pressure-actuated means for raising said stem, and a



main spring counteracting the force of said lifting means; of a series of valves whose stems are connected with said guide bar, means for independently adjusting their points of connection, and means for adjusting the point of attachment of said bar upon said stem.

1,019,618. STEEL TAPE. JOHN MCDONALD EZZELL, Ardmore, Okla. Filed Oct. 2, 1911. Serial No. 652,377. (Cl. 73—49.)



1. A tape consisting of primary and secondary parts, the primary part having a slot adjacent its ends; a link pivoted adjacent one end to the primary part and provided with a slot; and spaced elements in the secondary part, one of which elements rides in the slot of the link, and the other of which elements rides in the slot of the primary part.

2. A tape consisting of primary parts and secondary parts, the primary parts having slots therein; links pivotally connected with the primary parts and provided with slots; and spaced elements in the primary parts, certain of said elements being adapted to ride in the slots of the primary parts, and other of said elements being adapted to ride in the slots of the links; the slots being of different lengths, at successive points along the tape, whereby the primary and secondary parts will be disposed at different angles, at such points, when the elements of the secondary parts engage the ends of the slots.

3. A tape consisting of primary and secondary parts, the primary part being provided with a slot; a link pivoted to the primary part and having a slot; and spaced elements in the secondary part, one of which elements is adapted to ride in the slot of the link, the other of which elements is adapted to ride in the slot of the primary part; the tape being provided with unit graduations, and one portion of the tape consisting of a series of pivotally connected links, the links being of less length than the graduation unit.

1,019,619. TROLLEY-HARP. PETER FABROWICZ, Scranton, Pa. Filed Sept. 5, 1911. Serial No. 647,619. (Cl. 191—39.)



1. A trolley harp having on its upper ends, oil boxes, said boxes having in one side journal box receiving apertures, journal boxes arranged in said apertures and projecting into said oil boxes, said journal boxes having formed in one side wick receiving notches, said notches intersecting the bores of the journal boxes, bearing sleeves arranged in said journal boxes, said sleeves having formed therein apertures adapted to register with the apertures in said journal boxes, a trolley wheel shaft having its ends revolubly engaged with said journal boxes, wicks arranged in said oil boxes and passing through the notches of said journal boxes whereby the oil from the oil boxes is applied to the sides of the axle, a trolley wheel fixedly mounted on said shaft, and means arranged on the fork to protect the flanges of said wheel during replacement on the wire.

2. A trolley harp having on its upper ends, oil boxes, said boxes having in one side journal box receiving apertures, one of said boxes having in its opposite side a shaft receiving aperture, means to normally close said aperture, journal boxes adapted to be engaged with said journal box apertures, retaining flanges formed on the outer ends of said boxes whereby the latter are held in place, means whereby the oil in said oil boxes is applied to the journal boxes, a trolley wheel shaft having its ends revolubly mounted in said boxes, a trolley wheel fixedly mounted on said shaft, and a wheel protecting casing arranged on said fork and adapted to inclose the lower portion of the wheel whereby the flanges thereof are protected from breakage when being replaced after jumping the wire.

3. A trolley harp having on its upper ends, oil boxes, said boxes having in their inner sides, journal box receiving apertures and in one edge filling and wick receiving apertures, doors slidably engaged with said apertures, said doors having recessed lower edges adapted to engage the lower edges of the apertures whereby an oil tight connection is formed between these parts, means to fasten the doors in closed position, journal boxes arranged in the journal box apertures of said oil boxes, bearing sleeves arranged in said boxes, a trolley wheel shaft having its ends engaged with said bearing sleeves, a trolley wheel fixedly mounted on said shaft, and a wheel protecting casing arranged on the harp around the inner portion of the wheel whereby the wheel is protected in replacing the trolley on the wire.

4. A trolley harp comprising a shank, a forked body, said boxes having formed in their inner sides, journal box receiving apertures, and in one of their outer edges filling openings, sliding doors adapted to form fluid tight closures for said filling openings, means to secure said doors in closed position, journal boxes adapted to be engaged with the journal box openings in the inner sides of the oil box, said journal boxes having circular bores and having in one side notches intersecting said bores, retaining flanges formed on one end of said boxes, a trolley wheel shaft having its ends revolubly and slidably engaged with said journal boxes, wicks, secured to said journal boxes and adapted to engage the notches therein whereby the lubricant from the oil box is conveyed to the sides of the trolley wheel shaft, a trolley wheel fixedly mounted on said shaft, and means whereby the wheel is yieldingly held in position midway between the sides of the ends of the trolley fork.

5. A trolley harp comprising a shank having forked upper ends, oil boxes formed on the forked upper ends of the harp, said boxes having on their inner sides journal box apertures, journal boxes adapted to be engaged with said openings and projecting into said oil boxes, said journal boxes having formed in one side notches, said notches intersecting the bore of the boxes, a trolley wheel shaft having its ends revolubly mounted in said boxes, wicks secured in the notches of said journal boxes and adapted to engage and convey the lubricant from the oil boxes to the ends of said trolley wheel shaft whereby the latter are lubricated, and a trolley wheel fixedly secured to said shaft.

[Claim 6 not printed in the Gazette.]

1,019,620. AUTOMATIC FIREARM. MOUBRAY GORE FARQUHAR and ARTHUR HENRY HILL, Birmingham, England. Filed Apr. 15, 1911. Serial No. 621,338. (Cl. 42—3.)



1. In an automatic fire arm, the combination, with a barrel, and a breech block coöperative therewith; of a breech-opening spring having means for compressing it preparatory to the opening of the breech block, said spring having a strength less than the force initially acting to resist opening of the breech block, whereby a delayed opening of said breech block is insured; a second spring adapted to be compressed by said compressing means; holding means adapted to engage one end of the breech-opening spring when compressed; means for disengaging said holding means; and a spring compressed by the expansion of said breech-opening spring for returning that spring to normal position and for closing the breech block.

2. In an automatic fire arm, the combination, with a barrel, and a breech block coöperative therewith; of a breech-opening spring; a gas-operated plunger for compressing the spring preparatory to the opening of the breech block, said spring when under compression having a strength less than the force initially acting to resist opening of the breech block, whereby a delayed opening of said breech block is insured; a second spring adapted to be compressed by said plunger for returning the latter to its normal position; a catch associated with one end of the breech-opening spring when compressed; means for disengaging said catch during the return movement of the plunger; and a spring compressed by the expansion of said breech-opening spring for returning that spring to normal position and for closing the breech block.

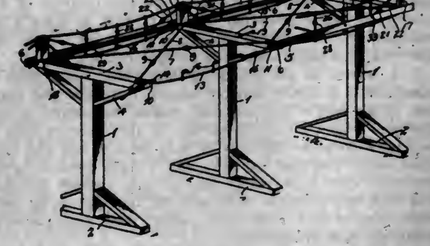
3. In an automatic fire arm, the combination, with a barrel, and a breech block coöperative therewith; of a breech-opening spring provided at its forward end with an abutment; a gas-operated plunger for compressing the spring preparatory to the opening of the breech block, said spring when under compression having a strength less than the force initially acting to resist opening of the breech block, whereby a delayed opening of said breech block is insured; a second spring adapted to be compressed by said plunger for returning the latter to normal position; a pivoted catch for engaging said abutment when the breech-opening spring is compressed, said catch being formed with a pair of controlling plate springs; means adapted for coaction with said plate springs, to disengage said catch during the return movement of the plunger; and a spring compressed by the expansion of said breech-opening spring for returning that spring to normal position and for closing the breech block.

4. In an automatic fire arm, the combination of a barrel, a breech block coöperative therewith, a breech-opening spring provided at its forward end with an abutment, means associated with said spring for compressing the same preparatory to the opening of the breech block, and a pivoted catch for engaging said abutment, said catch having resilient controlling means formed integral therewith.

5. In an automatic fire arm, the combination of a barrel, a breech block coöperative therewith, a breech-opening spring provided at its forward end with an abutment, means associated with said spring for compressing the same preparatory to the opening of the breech block, and a pivoted catch for engaging said abutment, said catch having a pair of controlling plate springs formed integral therewith.

[Claim 6 not printed in the Gazette.]

1,019,621. TROLLEY-LINE CONSTRUCTION. JOSEPH W. FAWKES and EMMA C. FAWKES, Burbank, Cal. Filed May 11, 1911. Serial No. 626,509. (Cl. 104—4.)



1. A railroad line construction, comprising vehicle supporting and guiding rails, posts for the same, transverse beams on said posts, and suspension means carried by the ends of said beams, and extending longitudinally above said rails for supporting and stiffening the same at intermediate points.

2. A railroad line construction comprising vehicle guiding rails, posts supporting the same at intervals, and having transverse arms carried thereby, standards projecting from the ends of said arms, and suspension means held by the said standards and connected with the guide rails at intermediate points.

3. A railroad line construction, comprising posts, beams mounted thereon, angle rails mounted upon the ends of said beams, standards also carried by the said beams, rods suspended upon said standards and hangers connecting the rods with the flanges of the said angle irons for supporting them at intermediate points.

4. An aerial line construction, comprising posts having transverse heads, angle beams mounted thereon, angle rails secured to the heads, standards also carried by the said heads and braced with respect to the heads and the angle bars, suspension rods extending from standard to standard, hangers carried by the said extension rods and having foot portions secured to the flanges of the angle bars, and laterally extending braces carried by the foot

portions and connected with other flanges of said angle bars.

5. A railway line construction comprising posts having supporting cross beams, standards mounted upon the ends thereof, T irons secured to the ends of said beams, suspension rods extending from the top of one standard to the top of the next standard and so on, hangers slipped upon the said suspension rods, and having foot portions being provided with bases adapted to be fastened to the webs of the said T irons, lateral arms being provided on the said lower portions and extending through apertures in the vertical flanges of the said T irons for bracing the T irons laterally as well as vertically and turnbuckles connecting the hangers with said foot portions.

[Claim 6 not printed in the Gazette.]

1,019,622. DEMONSTRATING-CAMERA. HENRY LA FAYETTE FINZEL, Milledgeville, Ill. Filed June 13, 1911. Serial No. 632,865. (Cl. 88—1.)



1. A demonstrating camera comprising a camera box, a mirror holder slidably mounted therein, a mirror mounted upon said mirror holder, a slide rod connected with said mirror holder for the purpose of shifting the position of said mirror, said slide rod being provided with means whereby the degree of movement of said mirror relatively to said camera box may be indicated, a screen disposed adjacent to said mirror for the purpose of receiving an image projected by aid thereof, a lense tube provided with a tray for holding a number of lenses, the said lens tube being supported by said camera box.

2. A device of the character described, comprising a camera box, a mirrer slidably mounted therein and movable at the will of the operator, means for indicating the position of said mirror relatively to said camera box, a lens tube movable relatively to said camera box and provided with a flanged portion, said flanged portion being provided with graduations, and a tray carried by said lens tube and provided with cells for holding lenses, said cells being of such form as to permit their rotation relatively to said graduations.

3. A device of the character described, comprising a camera box, a screen therefor, an extension box mounted upon said camera box and partly shielding said screen, a mirror movably mounted within said camera box and inclined relatively to said screen, means controllable at will for shifting the position of said mirror relatively to said screen, and for indicating the degree of movement of said mirror, and a lens tube for supporting the lens in suitable position to project an image upon said screen by aid of said mirror.

4. A device of the character described, comprising a camera box, a screen connected therewith, a mirror mounted within said camera box and movable relatively to the latter, a tube support mounted upon said camera box and having generally an annular form, said tube support being disposed adjacent to the path of travel of said mirror, a lens tube slidably mounted within said tube support, and a tray carried by said lens tube for supporting the lens.

5. A device of the character described, comprising a camera box, a screen connected therewith for receiving an image, a mirror mounted within said camera box and adjustable relatively to the same, a lens tube having a predetermined position relatively to the path of travel of said mirror, said lens tube being provided with a flanged portion having graduations disposed thereupon in substantially the form of a circle, and a tray carried by said flanged portion and extending therefrom for the purpose of supporting lenses.

[Claims 6 to 9 not printed in the Gazette.]

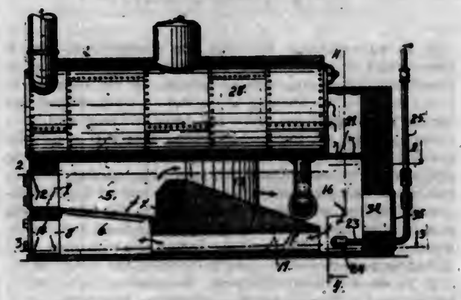
1,019,623. SASH-LOCK. EDWARD FLEMING and ALBERT M. MARSH, Columbus, Ohio, assignors of one-third to William D. Hopkins, Columbus, Ohio. Filed Apr. 17. 1911. Serial No. 621,584. (Cl. 16—18.)



1. The combination with the upper and lower sashes of a window and locking latches therefor, of a locking rod for actuating the lower latch, an independent locking rod combined with a pair of pivoted links and a plunger rod for actuating the upper sash latch, a metallic cup and a turn button pivoted therein, cam surfaces on the button for engaging the ends of the locking rods, and bosses on the button for engaging complementary openings in the cup.

2. The combination with the upper and lower latches of a window and locking latches therefor, of a locking rod for actuating the lower latch, an independent locking rod combined with a pair of pivoted links and a plunger rod for actuating the upper sash latch, a metallic cup and a turn button pivoted therein, and cam surfaces on the button for engaging the ends of the locking rods.

1,019,624. DOWNDRAFT SMOKE-CARBONIZING FURNACE. JAMES W. FOLEY, Denver, Colo. Filed June 26, 1911. Serial No. 635,384. (Cl. 110—51.)

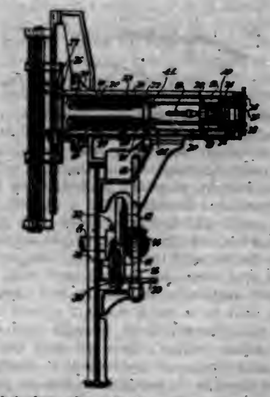


1. A down-draft smoke-carbonizing furnace equipped with an upper flue leading rearwardly from the fire-box, a lower flue leading forwardly to the ash-pit from the rear extremity of the upper flue and in communication therewith, and a flue leading rearwardly from the ash-pit and having its forward extremity in communication with the forward end of the said lower flue, the last-named rearwardly-extending flue having its rear extremity in communication with the stack, the rear extremity of the main upper flue being cut off from the stack.

2. A furnace of the class described equipped with a main top flue leading rearwardly from the fire-box, a chamber in the rear extremity of the furnace with which the rear end of the said flue is in communication, the said chamber being cut off from communication with the stack, a bottom companion flue leading forwardly from the said chamber to the ash-pit, means located at the rear extremity of the last-named flue and producing suction therethrough in the direction of the ash-pit, and carbonizing the smoke therein, and flues extending rearwardly from the ash-pit, their rear extremities being in communication with the stack, substantially as described.

3. A furnace of the class described, equipped with a top flue leading rearwardly from the fire-box, its rear extremity being cut off from the stack, a companion flue extending forwardly to the ash-pit, its rear extremity being in communication with the said top flue, a fluid jet located at the rear extremity of the bottom companion flue for producing suction therethrough in the direction of the ash-pit and carbonizing the smoke therein, and a bottom flue leading rearwardly from the ash-pit, its rear extremity being in communication with the stack, substantially as described.

1,019,625. LOOM FOR WEAVING COIR MATS AND THE LIKE. WILLIAM HENRY FORTY, Kings Langley, England, assignor to Charles Egerton Forbes Milman Mainwaring, Sloane Gardens, London, England. Filed July 25, 1910. Serial No. 573,786. (Cl. 139—49.)



The hereinbefore described combination of mechanism for passing a shuttle to and fro across a loom consisting of two horizontal slide ways in line with one another at opposite sides of the loom, slides 19 capable of being slid to and fro along the slide ways, bars 20 extending inward from the slides which when the slides are moved inward toward one another meet approximately end to end, a shuttle 10 means for supporting the shuttle by one half of its length alternately first by the end of one of said bars 20 and then by the end of the other bar, a rod 41 extending along each bar 20, means for locking the inner end of the rod to or disengaging it from one end of the shuttle, and means for giving a partial turn to each rod just before the slides are to be moved inward toward one another to turn one into engaging and the other into disengaging positions.

1,019,626. BALING-PRESS. SAMUEL P. FOSTER, East Chattanooga, Tenn. Filed Aug. 28, 1911. Serial No. 646,325. (Cl. 100—7.)



1. In a baling press, a horizontal wheel, a baling chamber, a plunger slidably mounted therein, a plunger operating rod connected with said plunger and tangentially located with reference to the wheel, a peripheral chain connecting said plunger operating rod with said wheel whereby said rod and the plunger will be projected in said tangential line into said baling chamber, a plunger retracting mechanism, a sweep, and means whereby said sweep is operatively engaged with said wheel and with said plunger retracting mechanism at the proper time to project and retract the plunger.

2. In a baling press, a baling chamber, a plunger slidably mounted in said chamber, a plunger projecting rod, a plunger projecting mechanism, said mechanism comprising a revolubly supported wheel, a plunger projecting chain connected to said plunger rod and adapted to be wound on said wheel whereby the plunger is projected, an operating block slidably mounted in said wheel, a revolubly mounted sweep, wheel operating rollers carried by said sweep and adapted to be successively brought into engagement with said block whereby the wheel is turned in the proper direction to wind said chain thereon and thereby project said plunger rod and plunger, means whereby said block is disengaged from said rollers of the sweep and means whereby the plunger is retracted.

3. In a baling press, a baling chamber, a plunger slidably mounted therein; a plunger operating rod, a plunger projecting mechanism, said mechanism comprising a revolubly supported wheel, a plunger projecting chain secured at one end to and adapted to be wound upon said wheel, a plunger projecting bar arranged on the outer end of said plunger rod and connected to the free end of said chain whereby when the latter is wound on said wheel, said plunger will be projected, a spring projected wheel operating block slidably mounted in said wheel, a sweep comprising a revolubly mounted cross head, wheel operating rollers revolubly mounted on said cross head adjacent to its ends and adapted to be successively brought into engagement with said block whereby said wheel is turned, a block retracting plate adapted to disengage said block from said rollers at the end of the inward or working stroke of the plunger, a plunger retracting lever adapted to be engaged by said rollers when disengaged from said block, double pulley and plunger retracting cables connected to said plunger rod and to said lever and adapted to be wound on and off said pulley whereby said plunger is retracted by said plunger retracting lever.

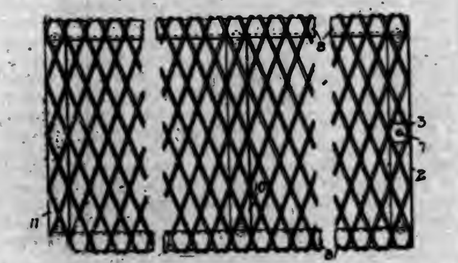
4. In a baling press, a baling chamber, a plunger slidably mounted therein, a plunger rod connected with said plunger, a plunger operating mechanism, said mechanism comprising a revolubly mounted wheel having formed in one side a radially disposed notch, a wheel operating block slidably mounted in said notch, said block having on its opposite edges guiding and supporting flanges adapted to engage the edges of said notch and having in its inner end a socket, a coiled block projecting spring arranged in said socket and adapted to engage the inner end of said notch whereby the block is projected and held in a projected or operative position, a stop plate arranged on said wheel and adapted to limit the outward movement of said block, a lug formed on the upper side of said block, a roller revolubly mounted in the projecting outer end of the block, a plunger projecting chain connected at one end to said wheel and adapted to be wound thereon to project the plunger, a plunger projecting bar arranged on the outer end of said plunger rod and having its outer end connected with the free end of said chain, a revolubly mounted sweep, wheel operating rollers carried by said sweep and adapted to be successively brought into engagement with said lug whereby the plunger projecting wheel is turned and a block retracting plate adapted to be engaged by the roller on the outer end of said block whereby the latter is retracted, and the rollers thus disengaged therefrom, and released from the wheel, and a plunger retracting mechanism operated by said sweep.

5. In a baling press a baling chamber, a plunger slidably mounted therein, a plunger rod connected with said plunger, a plunger operating mechanism, said mechanism comprising a revolubly mounted plunger projecting wheel operatively connected to said plunger rod, a revolubly mounted sweep, wheel operating rollers carried by said sweep, means whereby said rollers are engaged with and disengaged from the wheel, a plunger retracting mecha-

nism, said mechanism comprising a pivotally mounted bell crank lever, one arm of which is disposed in the path of movement of the rollers on said sweep whereby said lever is actuated by said rollers as soon as the same are disengaged from said plunger projecting wheel, a slidably mounted plunger retracting rod connected at one end with one arm of said bell crank lever, a double pulley, said pulley comprising large and small members, a short cable connected at one end to the inner end of said plunger retracting rod and having its other end connected to one side of the smaller member of said pulley and adapted to be wound thereon, a main plunger retracting cable connected to the larger member of said pulley on the opposite side thereof to the point where the shorter cable is connected with said smaller member of the pulley and having its opposite end connected to said plunger rod, said short cable being adapted to be wound on the smaller member of the pulley when the plunger is projected whereby when the plunger is retracted, said short cable will be unwound from said smaller member of the pulley and the main cable wound on the larger member of the pulley thereby retracting the plunger rod.

[Claim 6 not printed in the Gazette.]

1,019,627. RUNNING-BOARD FOR FREIGHT-CARS. WILLIAM EDWARD FOWLER, Jr., Hammond, Ind. Filed Oct. 12, 1911. Serial No. 654,424. (Cl. 105—194.)



1. The combination, in a device of the class described, with longitudinally extending side rails, of transverse saddles, supporting braces connecting said rails, and an expanded metal sheet having its edges secured to said side rails, substantially as described.

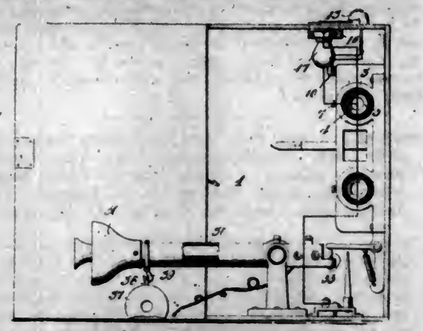
2. The combination, in a running board for freight cars, with longitudinally extending side rails, of a series of transverse saddles, supporting braces connecting said rails and secured upon the top of the car, an expanded metal sheet having diamond shaped meshes therein, and means securing the edges of said sheet to said side rails whereby said sheet is held with a space between its under surface and the top of the car, substantially as described.

3. A running board for freight cars, comprising suitable saddles secured upon the top of the car, longitudinally extending side rails secured to said saddles, and an expanded metal sheet having diamond shaped meshes arranged with its edges secured to said rails, substantially as described.

4. The freight car running board, comprising the transverse saddles 2, having the end standards 5 and the central depression 3 with the standard 6, side rails 8 secured to said standard 5 and the expanded metal sheet resting upon the tops of said side rails and saddles with its edges secured to said side rails, substantially as described.

1,019,628. RAILROAD-TELEPHONE. WALTER E. FROST, Lewiston, Me., assignor of one-fourth to Alfred L. Childs and Ralph W. Crockett and one-fourth to William W. Sanborn, Lewiston, Me. Filed Apr. 10, 1911. Serial No. 620,055. (Cl. 179—100.)

1. A telephone of the character described comprising a box or casing, a switch mechanism arranged therein, main current conducting wires connected with said switch mechanism, contact terminal plates arranged on said switch mechanism and yieldingly held in operative position, a telephone instrument pivotally mounted in said casing, contact terminals arranged on the inner end of said instrument and adapted to be brought into engagement with the yielding contact plates on said switch mechanism whereby the telephone instrument is electrically connected to the main supply wires, means to hold said instrument in an inoperative position, and a signal light adapted to be operated by the telephone circuit.



2. A telephone of the character described comprising a box or casing, a switch mechanism arranged therein, contact plates yieldingly secured to said switch mechanism, telephone supporting standards arranged in said casing, a telephone instrument pivotally supported in said standards, said instruments comprising a forked cross head pivotally mounted and insulated from said standards, a tube connected to said cross head, a transmitter arranged on the outer end of said tube, a casing formed of insulating material and arranged around said tube and transmitter contact terminals secured to and insulated from the forks of said cross head, contact screws arranged in said plates and adapted to be brought into engagement with the yielding contact plates on said switch mechanism when said telephone instrument is swung down to an operative position, a receiver, means to support said receiver on said tube when the receiver is not in use, and main current conducting wires connected with said switch mechanism, current conducting wires to connect said transmitter and receiver with the terminal plates on said forked cross head whereby when said terminal plates are engaged with and disengaged from the contact on said switch mechanism the circuit from the main current wires to said telephone instrument will be opened and closed.

3. A telephone of the character described comprising a box or casing, a switch mechanism arranged therein, said mechanism comprising a pair of attaching plates, lugs formed on said attaching plates, tubes formed of non-conducting material and having their ends engaged with and fastened in said lugs, insulating sleeves arranged around said tubes between the same and said lugs, current conducting bars arranged on and insulated from said tubes, extensions formed on the lower ends of said bars, terminal contact plates pivotally connected to the extensions of said bars, springs to yieldingly hold said plates in operative position, a telephone instrument pivotally supported in said casing and adapted to be swung to operative and inoperative positions, and terminal contacts on said instrument adapted to be brought into engagement with the contact plates on said switch mechanism whereby the circuit from the switch mechanism to the telephone instrument is opened and closed.

1,019,629. MAIL-BAG CATCHER. MARION N. GEORGE, Irondale, Ala., assignor to George Mail Device Company, Inc., Birmingham, Ala., a Corporation of Arizona. Filed July 28, 1911. Serial No. 641,164. (Cl. 105—230.)

1. In a mail bag catcher, the combination of a support: an arm fulcrumed on said support and adapted to engage and hold the mail bag; said arm having a projecting portion adjacent the fulcrumed point thereof; a tensioning spring secured to said support and engaging with said arm projecting portion; a trigger fulcrumed on the support and adapted to engage with said arm and hold the same in engaging position and operable to be released by the mail bag; and a tensioning spring for the trigger on said support, substantially as described.

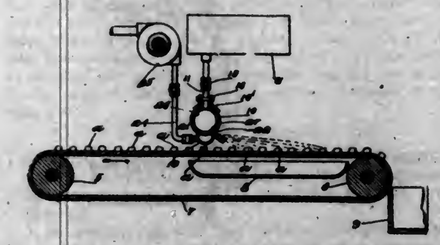


2. In a mail bag catcher, the combination of a support comprising a bar provided with a slot; an arm fulcrumed on the bar within said slot and adapted to engage and hold the mail bag; said arm provided with a projecting member adjacent the fulcrum point thereof; a tensioning spring secured to the arm within said slot and engaging with said projecting member; a trigger fulcrumed on the support and adapted to engage with the arm and hold the same in engaging position, and operable to be released by the mail bag; and a tensioning spring for the trigger secured to the bar within said slot, substantially as described.

3. In a mail bag catcher, the combination of a support; an arm fulcrumed on the support and adapted to engage with and hold a mail bag, said arm having a projection to the opposite side of said fulcrum; a trigger fulcrumed on the support and adapted to hold the arm in engaging position and effect the automatic release thereof; and a device engaging with said arm projection operable to set the arm in engaging position, substantially as described.

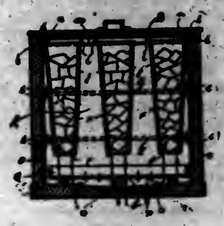
4. In a mail bag catcher, the combination of a support comprising a bar provided with a slot; an arm fulcrumed on said bar within said slot and adapted to engage with and hold a mail bag, said arm having a projection to the opposite side of said fulcrum; a cable connected with said arm projection operable to set said arm in engaging position, and a spring tensioned trigger adapted to hold the arm in set position and to automatically effect the release thereof, substantially as described.

1,019,630. MACHINE FOR TREATING CRACKERS. OSMON B. GILMAN, Boston, Mass. Filed Feb. 28, 1910. Serial No. 546,516. (Cl. 91—3.)



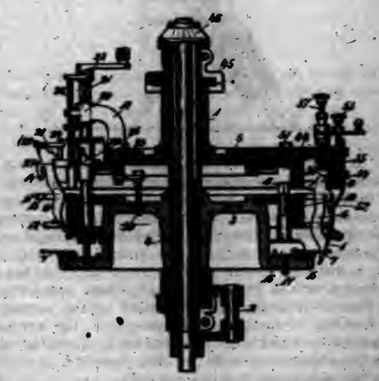
In a machine for treating crackers and similar articles with oil, an oil spraying mechanism comprising a slotted shell having a longitudinally extending series of perforations and an exterior air chamber having an outlet in line with said perforations and a deflector plate, means mounted on said shell for contracting the diameter of said shell, a tubular valve rotatable and slidable within said shell and having a line of perforations adapted to be brought into registry with the perforations of said shell, said valve having means adapted to be intercepted by said shell to limit the sliding movement of said valve in one direction, substantially as described.

1,019,631. ICE-BOX. GUSTAV J. GRUENDLER, St. Louis, Mo. Filed Sept. 7, 1909. Serial No. 516,518. (Cl. 62—10.)



In an ice-box or refrigerator a plurality of removable conical shaped ice receptacles provided with supporting flanges around the outer upper edges of same, the lower ends being open, a removable catch basin having a horizontal, perforated bottom provided directly under said ice-receptacles, the bottom of the ice box being inclined and connected at its lowest point with a drain pipe, all as described and for the purpose intended.

1,019,632. CIRCULAR-KNITTING MACHINE. EMIL HAAGA, Stuttgart, Germany. Filed Mar. 1, 1909. Serial No. 480,556. (Cl. 66—26.)



1. In a circular knitting machine, the combination with needles, of loopers supported above said needles having flattened portions, and pressing wheels engaging said flattened portions of said loopers co-acting with said needles.

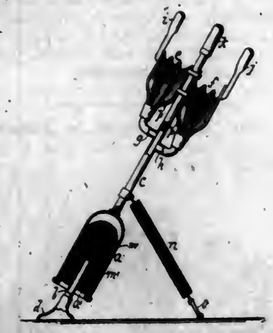
2. In a circular knitting machine, the combination with the spring beard needles, of loopers, each provided at its upper end with a slot and a shoulder, and at the opposite end with a flattened part, pressing wheels co-acting with the flattened portions of said loopers, said loopers having a beak adapted to be pressed between the needles for forming the loop, and having a projection for taking off the old meshes over the closed needles beards.

3. In a circular knitting machine, the combination with the spring beard needles, of loopers, each provided at its upper end with a slot and a shoulder, and at the opposite end with a flattened part and having a beak adapted to be pressed between the needle for forming the loop, pressing wheels co-acting with the flattened portions of said loopers, and having a projection for taking off the old meshes over the closed spring beard needles, each of said loopers having also a notch, which at the end of the formation of the meshes again engages between the meshes, draws them entirely off, equalizes their tension and returns the material into its old position between the spring beard needles and means for operating said loopers.

4. In a circular knitting machine, the combination with a plurality of fixed spring needles, of loopers suspended above said needles provided with beaks at their lower ends, and flattened side portions, means for operating said loopers, and pressing wheels engaging the flattened portions of said loopers co-acting with said needles.

5. In a circular knitting machine, the combination with a plurality of spring fixed needles, of a plurality of loopers suspended above said needles, a guiding ring having guides for said loopers, said loopers being provided with beaks at their lower ends and having flattened side portions, means for operating said loopers and a spring actuated pressing roller engaging the flattened portion of said loopers co-acting with said needles.

1,019,633. VACUUM-CLEANER. MICHAEL D. HADJISPIRIDIS, New York, N. Y. Filed Apr. 6, 1911. Serial No. 619,238. (Cl. 15—60.)



1. A vacuum cleaner comprising a tank having a depending nozzle, a vacuum pipe extending upwardly from the tank, devices operatively carried by the vacuum pipe for creating a suction at the mouth of the nozzle, and steadying means connected to the vacuum pipe adapted to force the mouth of the nozzle toward the floor.

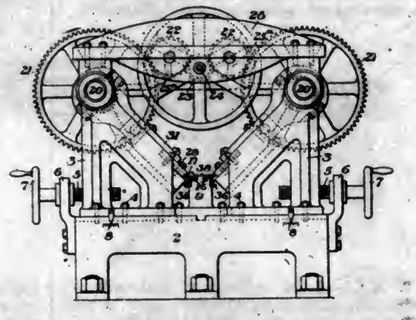
2. A vacuum cleaner comprising a tank having a depending nozzle, a vacuum pipe extending upwardly from the tank, devices operatively carried by the vacuum pipe for creating a suction at the mouth of the nozzle, and an adjustable steadying device depending from the vacuum pipe for engagement with the floor adapted to yieldingly hold the nozzle against the ground.

3. A vacuum cleaner comprising a tank having a depending nozzle, a vacuum pipe extending upwardly from the tank, devices operatively carried by the vacuum pipe for creating a suction at the mouth of the nozzle, a spring connected to the vacuum pipe, a stirrup suspended from the lower end of the spring for engagement with the foot of an operator and adapted to hold the nozzle against the ground.

1,019,634. MACHINE FOR POINTING TIE-PLATE CLAWS. THOMAS V. HANDLOSER and JOHN C. DILWORTH, Pittsburgh, Pa., assignors to Dilworth, Porter & Company, Limited, Pittsburgh, Pa., a Partnership. Filed Aug. 8, 1910. Serial No. 575,363. (Cl. 29—16.)

1. In a machine for pointing tie plate-claws, a support for the plate arranged to resist movement of the cutters and provided with male dies, female dies, and mechanism arranged to move the female dies through a path at an oblique angle to the claws and transversely of the tie plate body, substantially as described.

2. In a machine for pointing tie plate claws, a backing support for the plate arranged to receive the claws projecting at substantially right angles from the plate and having projecting male dies, recessed cutters coacting with the male dies, and mechanism for moving said recessed cutters at an oblique angle to the claws and transversely of and away from the plate, substantially as described.



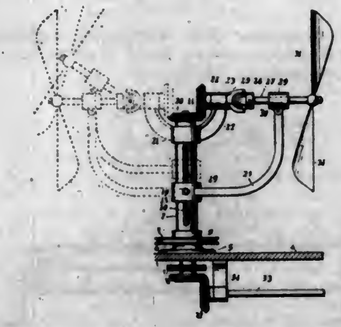
3. In a machine for pointing tie plate claws, a tie plate support, a pair of reciprocating plungers, mechanism for moving the plungers at an oblique angle to the claws and transversely of the plate and its support, and mechanism for adjusting the plungers to accommodate different lengths of plates, substantially as described.

4. In a machine for pointing tie plate claws, a tie plate support, a pair of plungers having cutting mechanism arranged to point the claws, a pair of gear wheels arranged to actuate the plungers, connecting mechanisms for the gear wheels, and mechanism for adjusting the plungers and their gearing connections to accommodate different lengths of plates, substantially as described.

5. In a pointing machine for tie plate claws, a die block, a die holder in said block, adjustable male dies secured in the die holder, plungers carrying female dies arranged to coact with the male dies in cutting the claws at opposite sides of the plate and mechanism for simultaneously actuating the plungers, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

1,019,635. ADJUSTABLE PROPELLER. FRANK HARLOW, Boston, Mass. Filed Dec. 1, 1910. Serial No. 595,033. (Cl. 115—35.)



1. The combination of a barrel, a pulley mounted fixedly thereupon for turning said barrel, a shaft extending axially through said barrel and through said pulley, a gear member mounted upon said shaft for turning the latter continuously, an arm provided with a bearing, said bearing being slidably mounted upon said barrel, said arm being also provided with a second bearing pivotally connected with it, a shaft extending through said last-mentioned bearing and made in separate parts connected together by a universal joint, a gear member carried by said last-mentioned shaft, and meshing with said first-mentioned gear member, and two propellers mounted upon one of said separate parts connected together by said universal joint.

2. The combination of a barrel provided with a slot, means for turning said barrel, a revoluble sleeve mounted within said barrel and provided with a thread mechanism for turning said sleeve, a ring provided internally with a thread and operatively fitted upon said sleeve, said ring being provided with a trunnion extending through said slot in said barrel, an annular bushing encircling said barrel and engaging said trunnion, said bushing serving as a bearing which is slidable relative to said barrel, an arm connected with said bushing and adapted to be raised and lowered as said bushing is raised and lowered during the rotation of said sleeve, a shaft extending through said barrel and through said sleeve, a gear wheel mounted upon said ring, a second gear wheel engaging said first-mentioned gear wheel, and a shaft made in two parts connected together by a universal joint, one of said parts being connected with said second-mentioned gear wheel, the other of said parts engaging said second-mentioned bearing carried by said arm, and a propeller mounted upon said last-mentioned part.

1,019,636. PROCESS OF MAKING SWISS WATCH-BOWS. CHARLES W. HARMAN, New Rochelle, N. Y., assignor to Joseph Fahys & Co., New York, N. Y., a Corporation of New York. Filed Jan. 26, 1911. Serial No. 604,838. (Cl. 29—177.)



1. The process of making Swiss or French watch case bows which comprises striking up and bowing the stock to form the bow portion and preliminary bars, and subsequently contracting the precious metal at the inner ends of the bars to completely inclose the inner or base metal.

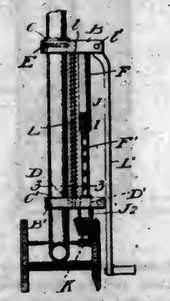
2. The process of making Swiss or French watch case bows which comprises striking up ears or nibs of the filled stock to form the outer ends of the bars, bending down the outer ends of the stock to complete the preliminary form of bars, removing the inner or base metal from the inner ends of the bars and bowing the stock and contracting the precious metal about the inner ends of the bars to completely inclose the inner or base metal and leave only the precious metal exposed.

3. The process of making Swiss or French watch case bows which comprises forming the preliminary bow of filled stock with base metal exposed in the ends of the bars and subsequently drawing together the precious metal of the shell of the filled stock over the exposed base metal at the ends of the bars to complete the inclosure of the base metal.

1,019,637. MOTOR FOR BICYCLES AND VARIOUS KINDS OF VEHICLES. JAMES W. HAYS, Baltimore, Md. Filed Apr. 15, 1911. Serial No. 621,243. (Cl. 208—23.)

1. In combination with the frame of a vehicle, an upper and lower yoke, the former slidable upon an upright portion of the frame, and the lower yoke fixed to such upright; a tube secured to and depending from the upper yoke, a rod having oppositely pitched external, spiral grooves, revolubly supported at its lower end on the vehicle frame and extending into the tube; sleeves within the tube, loosely encircling the rod, and having internal lugs traveling in the spiral grooves, means for holding either sleeve from rotating on the rod, means for reciprocating the upper yoke and the tube; and means for transmitting motion from the rod to the driving wheel of the vehicle.

2. The combination with the frame of a vehicle, an upper and lower yoke, the former slidable upon an upright portion of the frame, and the lower yoke fixed to such upright, a tube secured to and depending from the upper yoke, a rod having oppositely pitched external spiral grooves revolubly supported at its lower end on the vehicle frame and extending into the tube, sleeves within the tube loosely encircling the rod and having internal lugs traveling in the spiral grooves, means for holding either sleeve from rotation on the rod, means for reciprocating the upper yoke, and the tube, and means for transmitting motion from the rod to the driving wheel of the vehicle; of toothed wheels located on the exterior of the sleeves, plates loosely fitting within a cut out portion of the tube, fingers engaging the ratchet teeth of said sleeves, a spring slide operated by a finger piece moving in a slot in the tube.



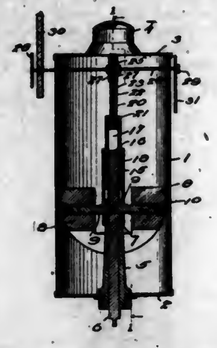
3. The combination with the frame of a vehicle an upper and lower yoke, the former slidable upon an upright portion of the frame, and the lower yoke fixed to such support a tube secured to, and depending from the upper yoke, a rod having oppositely pitched external spiral grooves revolubly supported at its lower end on the vehicle frame and extending into the tube, sleeves within the tube loosely encircling the rod and having internal lugs traveling in the spiral grooves, means for holding either sleeve from rotation on the rod, means for reciprocating the upper yoke and the tube, and means for transmitting motion from the rod to the driving wheel of the vehicle, toothed wheels located on the exterior of the sleeves, plates loosely fitting within a cut-out portion of the tube, fingers engaging the ratchet teeth of said sleeves, a spring slide operated by a finger piece moving in a slot in the tube; of a rod having one end secured in one of the yokes, and its other end passing freely through a guide hole in the other yoke, a coiled spring surrounding said rod and bearing against the yokes.

1,019,638. SPEEDOMETER. FRED B. HEALEY and CARL S. HOMSHER, Denver, Colo. Filed May 6, 1911. Serial No. 625,501. (Cl. 73—123.)

1. In a speed indicating device, a shaft supported for rotation and having a longitudinal slot, an annular weight pivoted on the shaft, a sleeve longitudinally movable upon the shaft, a pin extending through the sleeve and through the slot in the shaft, means associated with the pivoted weight and engaging the pin to effect longitudinal movement of the sleeve, a yoke swiveled with relation to the sleeve and having arms constituting, respectively, a rack bar and a guide bar, a rock shaft having a pinion meshing with the rack bar, and disks or flange members upon the rock shaft adjacent to the pinion and embracing between them the arms of the yoke.

2. In a speed indicating device, a cylindrical casing, a shaft supported for rotation axially therein, an annular weight pivotally connected with the shaft, a sleeve longitudinally slidable upon the shaft, means connecting the sleeve with the shaft for rotation therewith, means associated with the pivoted weight and with said connecting means to move the sleeve longitudinally upon the shaft

when the weight is tilted about its pivot, a yoke member pivotally connected with the sleeve for longitudinal movement therewith, said yoke member having arms constituting respectively a rack bar and a guide bar, a rock shaft supported for rotation diametrically in the casing and having a pinion engaging the rack bar, flange members upon the shaft embracing the rack bar and the guide bar between them, a large and a small indicator hand connected with opposite ends respectively of the rock shaft, and suitably supported dials having corresponding characters to coöperate with the indicator hands.



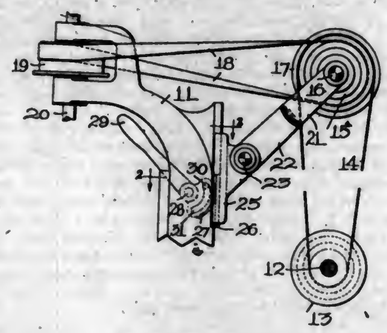
3. In a speed indicating device, a lamp casing having a transparent glass and an opalescent plate constituting a dial, said glass and plate coöperating to constitute a housing, a speedometer casing associated with the lamp casing and having a rock shaft extending diametrically therethrough, one end of said rock shaft being equipped with an indicator hand operating in the housing formed by the transparent glass and the semi-transparent plate, a relatively small indicator hand at the opposite end of the rock shaft, and a dial coöperating with the latter hand.

4. In a speed indicating device, a lamp casing having a housing including an opalescent plate constituting a dial, a speedometer casing associated with the lamp casing and having a rock shaft, an indicator hand upon one end of said rock shaft operating over the dial within the housing, a relatively small indicator hand upon the opposite end of the rock shaft, a dial coöperating with the latter hand, and means for supporting the lamp casing and the parts associated therewith in position for operation upon the dash board of a motor vehicle.

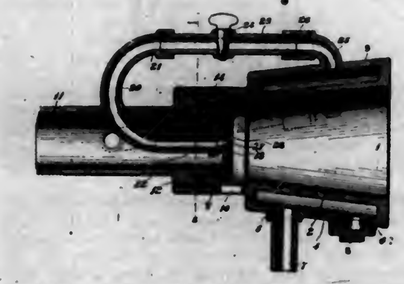
1,019,639. BELT-TIGHTENER FOR DRILLS. FRED K. HENDRICKSON, Worcester, Mass., assignor to Prentice Bros. Company, Worcester, Mass., a Corporation of Massachusetts. Filed Oct. 20, 1910. Serial No. 588,123. (Cl. 74—21.)

1. In an upright drill, the combination with a driving pulley on a horizontal axis, a drill spindle on a vertical axis, a driven pulley on the drill spindle, two connected pulleys, a belt extending from the puley on the horizontal axis to one of the connected pulleys, and a belt extending from the other of the connected pulleys to the pulley on the spindle, of a pivoted arm having bearings for supporting said connected pulleys and mounted so as to be free to swing on its pivot, a hand-lever, a rack to which said arm is pivoted, and a gear segment meshing with said rack and connected with said lever whereby as the hand lever is swung on its pivot the rack will be reciprocated and the position of the pivot of the arm changed.

2. In a drill, the combination of a goose-neck, an arm pivoted on the rear thereof and extending upwardly and outwardly from its pivot, a shaft supported by the outer end of said arm, two pulleys carried by said shaft, a driving pulley near the bottom of the goose-neck, a driven pulley near the top thereof, belts connecting said driving and driven pulleys with the two pulleys on said shaft, said arm being free to swing on its pivot to automatically equalize the belt tensions, a hand-lever mounted on said goose-neck, and means connected with said hand-lever for vertically adjusting the pivot of said arm and tightening the belts, said means comprising a vertically slidable rack to which the arm is pivoted, and a gear segment meshing therewith and connected with said lever.



1,019,640. OIL-BURNER. LEO MICHAEL HENNESSY, Providence, R. I. Filed Apr. 11, 1911. Serial No. 620,303. (Cl. 158—53.)



1. An annular casing constituting a vaporizing chamber, an air supply pipe supported in concentric relation thereto, a duct associated with the air supply pipe and having a valved branch connected with the vaporizing chamber and a second branch extending in a forward direction concentrically within said air pipe and carrying a cone-shaped nozzle, a cap having threaded engagement with the air pipe and provided with an aperture affording a seat for the cone-shaped nozzle, and means for adjusting the threaded cap upon the air supply pipe.

2. A cone-shaped barrel having inner and outer walls and a space between said walls constituting an annular vaporizing chamber having an air inlet and means for regulating the admission of air therethrough, a valved duct for conveying mixture from the chamber and including a nozzle for discharging said mixture axially through the barrel, a compressed-air pipe surrounding the nozzle, and means associated with said pipe and adjustable with reference to the nozzle and coöperating therewith to form an annular passage for a jet of compressed air issuing adjacent to and surrounding the nozzle.

3. In a device of the character described, a conical barrel constituting an annular vaporizing chamber and having a rearwardly extending flange, an air pipe provided with a collar having threaded engagement with said flange to support said air pipe within and in spaced relation to the flange, a duct associated with the air pipe and having external and internal branches, the external branch being connected with the vaporizing chamber and provided with a regulating valve, and the internal branch being supported axially within the air pipe and provided with a conical nozzle, a cap having threaded engagement with the air pipe and provided with an aperture affording a seat for the conical nozzle, means for adjusting the threaded cap, a valve duct connecting the air pipe with the vaporizing chamber, and means for supplying hydro-carbon to said chamber.

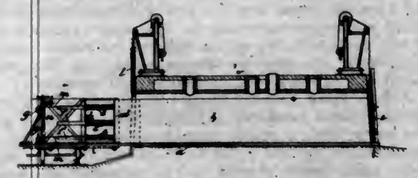
1,019,641. VOLTAGE-REDUCER. WALTER A. HESSE, Alameda, and JOHN T. SLAVEN, Oakland, Cal. Filed July 11, 1911. Serial No. 637,936. (Cl. 219—49.)



1. A device of the character described, comprising a casing, a spider in said casing having openings extending therethrough, certain of which openings are enlarged at one end to provide bores, internally and externally threaded sleeves extending into said bores, bolts extending through said openings, certain of which bolts are threaded at one end partially into said sleeves, and certain other of which bolts have contact pieces at their opposite ends, a winding upon said spider connected with the said contact pieces, spring contact members in engagement with said contact pieces, and contact bolts extending exteriorly of the casing and having their inner ends threaded into said sleeves whereby to electrically connect them with said first-named sleeve engaging bolts and to secure the spider in position within the casing.

2. A device of the character described, comprising a casing, a spider therein having a central opening and parallel openings upon opposite sides of said central openings, said central opening and one of said side openings having enlarged bores at one end, sleeves secured within said bores and internally threaded, bolts extending through the last-mentioned openings and having one of their ends threaded into and partially through said sleeves, the central bolt having a contact piece at its opposite end, a bolt extending through the other of said side openings and also having a contact piece at one end, spring contact members in engagement with said contact pieces, a winding mounted upon said spider and having its ends connected respectively to said bolts in the side openings, and contact bolts extending exteriorly of the casing and having their inner ends threaded into said sleeves whereby to electrically connect them with the said first-named sleeve engaging bolts and also to secure the spider within the casing.

1,019,642. CHARGING OF COKE-OVENS. WALTHER HIBY, Sandal, near Wakefield, England. Filed May 27, 1911. Serial No. 629,890. Cl. 202—5.)

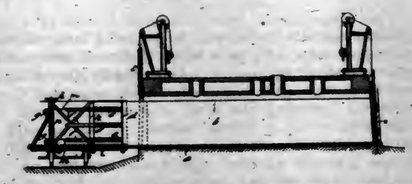


1. The method of charging a horizontal coke oven, which consists in compressing coal to form a mass of greater length than that of the oven chamber, then introducing the compressed mass into the chamber and causing the compressed mass to expand laterally to fill the chamber; substantially as described.

2. The method of charging a horizontal coke oven, which consists in compressing coal to form a mass of greater length than that of the oven chamber, then introducing the compressed charge through one end of the chamber, moving the charge by applying force to one end thereof until its other end is forced against the other end of the chamber, and continuing the application of the force until the whole of the mass is within the chamber; substantially as described.

3. The method of charging a horizontal coke oven, which consists in compressing coal to form a mass of greater length than that of the oven chamber, then introducing the compressed charge through one end of the chamber, moving the charge by applying force to one end thereof until its other end is forced against the other end of the chamber, breaking up the mass within the chamber, and continuing the application of the force until the whole of the mass is within the chamber; substantially as described.

1,019,643. APPARATUS FOR CHARGING COKE-OVENS. WALTHER HIBY, Sandal, near Wakefield, England. Filed Nov. 3, 1911. Serial No. 658,327. (Cl. 202—5.)



1. In a machine for charging a horizontal coke oven with a charge of a length greater than that of the oven chamber, the combination of a charging peel adapted to be pushed forward into and withdrawn from the chamber and a framework associated therewith, of side plates attached to the peel for supporting the charge protruding from the oven chamber, an end plate carried by the framework and adapted to slide between the slide plate and means adapted to maintain the end plate against the charge as the peel and the framework are withdrawn from the chamber.

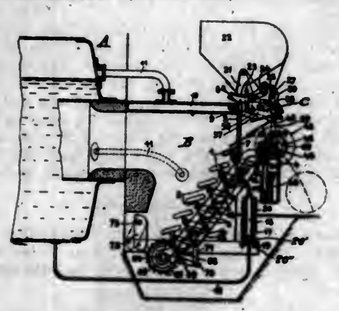
2. In a machine for charging a horizontal coke oven with a charge of a length greater than that of the oven chamber, the combination of a charging peel adapted to be pushed forward into and withdrawn from the chamber and a framework associated therewith, of side plates attached to the peel for supporting the charge protruding from the oven chamber, a guide plate carried by the framework, tubes each supported by and having one end passing through the guide plates, an end plate fixed to the other ends of the tubes, and a resilient medium interposed between the guide plate and the end plate as and for the purpose described.

3. In a machine for charging a horizontal coke oven with a charge of a length greater than that of the oven chamber, the combination of a charging peel adapted to be pushed forward into and withdrawn from the chamber, and a framework associated therewith, of side plates attached to the peel for supporting the charge protruding from the oven chamber, a guide plate carried by the framework, tubes each supported by and having one end passing through the guide plates, an end plate fixed to the other ends of the tubes and a helical spring embracing a portion of each tube intermediate of the guide and end plates.

4. In a machine for charging a horizontal coke oven with a charge of a length greater than that of the oven chamber, the combination of a charging peel adapted to be pushed forward into and withdrawn from the chamber, and a framework associated therewith, of side plates attached to the peel for supporting the charge protruding from the oven chamber, a guide plate carried by the framework, tubes each supported by and having one end passing through the guide plates, an end plate fixed to the

other ends of the tubes, a resilient medium interposed between the guide plate and the end plate, and means for adjusting the compression of the said resilient medium.

1,019,644. MECHANICAL STOKER. ALFRED EDWARD HOFMANN, Lucerne, Switzerland. Filed May 8, 1911. Serial No. 625,930. (Cl. 110—34.)



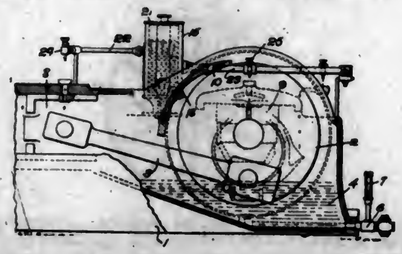
1. In a mechanical stoker, the combination of a grate structure including a plurality of pivotally mounted plates adapted to coact with each other to form a substantially uniform inclined surface, or to be swung in spaced stepped relation to each other, a rod operatively connected to said plates for actuating the same, a revoluble element provided with a lug, a hooked member carried by said rod and normally out of the path of movement of the said lug of said revoluble element, and means actionable at predetermined periods and independently of said revoluble element, for periodically positioning said hooked member in the path of movement of said lug, whereby said plates are actuated, through the engagement of the hooked member and lug, to remove slag or the like.

2. In a mechanical stoker, the combination with a boiler and furnace therefor, of a grate structure including a plurality of pivotally mounted plates adapted to coact with each other to form a substantially uniform inclined surface, or to be swung into spaced apart stepped relation to each other, means for imparting movement to said grate plates, a hooked member carried by said means, mechanism operatively connected to said means for actuation thereof to decrease or increase the space between said plates relative to the rise or fall of boiler pressure, a revoluble element provided with a lug adapted to engage said hooked member, mechanism for positioning said hooked member in the path of said lug whereupon said grate plates are actuated, and means operatively connected to said first mentioned means for regulating said second mentioned mechanism to position said hooked member in the path of said lug after variable periods, the intervals between action decreasing or increasing relative to the rise or fall of boiler pressure.

1,019,645. LUBRICATING DEVICE. FRED D. HOLDSWORTH, Claremont, N. H., assignor to Sullivan Machinery Company, Claremont, N. H., a Corporation of Maine. Filed June 21, 1911. Serial No. 634,415. (Cl. 184—11.)

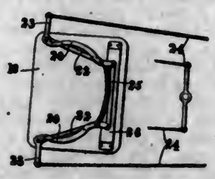
1. In a lubricating device, the combination with an oil chamber adapted to contain lubricant of a rotatable disk arranged to be partially immersed in the lubricant, a lubricant intercepter and deflector located with its mouth operatively related to the upper side of said disk and inclined toward said disk in a direction opposite to the rotation thereof to intercept the high velocity disk-adhering lubricant raised from the main lubricant body, and an oil distributing conduit, said intercepter and deflector having a deflecting wall to utilize the dynamic head of the moving disk-adhering lubricant and force the same into said oil distributing conduit.

2. In a lubricating device, the combination with an oil chamber adapted to contain lubricant, of a rotatable disk arranged to be partially immersed in the lubricant, a lubricant intercepter and deflector located with its mouth operatively related to the upper side of said disk and inclined toward said disk in a direction opposite to the rotation thereof to remove the lubricant therefrom, a supply pipe, said intercepter and deflector having a deflecting wall to utilize the dynamic head of the moving disk-adhering lubricant and force the same into said supply pipe a receiver connected with said supply pipe to hold a quantity of the lubricant under said dynamic head, and means for distributing the lubricant from said receiver.



3. In a lubricating device, the combination with a chamber adapted to contain lubricant, a rotatable disk arranged to be partly immersed in the lubricant, a lubricant intercepter and deflector located in operative relation to the surface of the disk and inclined toward said disk in a direction opposed to the direction of rotation thereof to intercept the high velocity disk-adhering lubricant raised from the main lubricant body, a supply pipe, said intercepter and deflector having a deflecting wall to utilize the dynamic head of the moving lubricant and force the same into the said supply pipe, a receiver connected with said supply pipe to hold a quantity of the lubricant under said dynamic head and means for distributing said lubricant from said receiver.

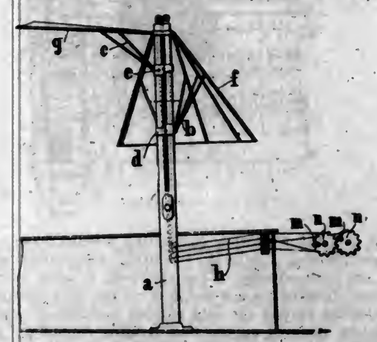
1,019,646. AERIAL AND OTHER VESSEL. ALEXANDER HORTON, Portsmouth, England. Filed Aug. 4, 1911. Serial No. 642,393. (Cl. 244—29.)



1. In a flying machine, the combination of a boat, supporting planes extending laterally from the upper portion of the boat, a rudder pivoted to the boat, a seat for the operator, a pair of right angle levers pivoted to the seat, the levers having one of their legs extending in the same direction and their other legs in opposite directions, a rod pivotally connecting the first mentioned legs of the levers, and means connecting the oppositely extending legs of the levers with the rudder whereby the rudder may be actuated by the operator leaning against the first mentioned legs of the levers, substantially as described.

2. In a flying machine, the combination of a boat, supporting planes extending laterally from the upper portion of the boat, a rudder pivoted to the boat, a seat for the operator, vertical supports projecting from the seat, right angle levers pivoted to the supports, the levers having one of their legs extending rearwardly and their other legs laterally in opposite directions, a brace pivotally connected to the supports and fixed to the rearwardly extending legs of the levers, a rod pivotally connecting the rearwardly extending legs of the levers, a rest slidably supporting the rod, and means connecting the laterally extending legs of the levers with the rudder whereby the rudder may be actuated by the operator leaning against the rearwardly extending legs of the levers, substantially as described.

1,019,647. DEVICE FOR USE ON AERIAL AND OTHER VESSELS. ALEXANDER HORTON, Portsmouth, England. Filed Aug. 4, 1911. Serial No. 642,394. (Cl. 244—21.)



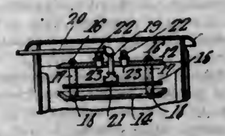
1. In an aerial vessel, the combination of a plurality of pivotally supported planes, a plurality of slidably mounted collars, ribs pivotally connecting each of the planes to one of the collars, and means for actuating one or both of said collars, substantially as described.

2. In an aerial vessel, the combination of a pole, a plurality of planes pivotally connected to the pole, a plurality of collars slidably mounted on the pole, ribs pivotally connecting each of the planes to one of the collars, and means for actuating said collars, substantially as described.

3. In an aerial vessel, the combination of a vertical pole, a plurality of planes pivotally connected to the pole, the pole being provided with a longitudinal slot, a plurality of collars slidably mounted on the pole, a pin fixed in each collar and sliding in said slot, ribs pivotally connecting each of the planes to one of the collars, and means for actuating said collars, substantially as described.

4. In an aerial vessel, the combination of a vertical pole, a plurality of planes pivotally connected to the pole, the pole being provided with a longitudinal slot, a plurality of collars slidably mounted on the pole, a pin fixed in each collar and sliding in said slot, ribs pivotally connecting each of the planes to one of the collars, a system of ropes and pulleys for actuating each collar, and means for coupling said systems whereby both collars will be operated at the same time, substantially as described.

1,019,648. FUEL-OIL BURNER. WILLIAM H. HOWARD, Wheatland, Okla. Filed Nov. 25, 1910. Serial No. 594,099. (Cl. 158—91.)

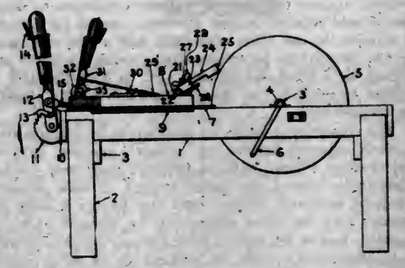


1. In a device of the class described, an open, imperforate receiving pan; a deflector of no greater lateral extent than the pan, located above the pan; a fuel oil supply pipe and a draft pipe, both having imperforate side walls, and both discharging through the deflector; one pair of securing elements, the members of which pair are located upon opposite sides of the pipes, and serve to unite the deflector with the receiving pan within the contour of the deflector and the pan; and collars surrounding the securing elements, and abutting against the deflector and the receiving pan.

2. In a device of the class described, a receiving pan; a deflector above and secured to the receiving pan; a drip plate located between and secured to the deflector and the receiving pan, the drip plate discharging peripherally into the receiving pan; a fuel-supply pipe extended through the deflector and terminated adjacent the drip plate; and a draft pipe extended through and rotatable in the deflector.

3. In a device of the class described, a receiving pan; a drip plate above the receiving pan; a deflector above the drip plate; securing devices uniting the deflector, the drip plate and the receiving pan; collars upon the securing devices, upon both sides of the drip plate, to hold the latter spaced from the receiving pan and the deflector; a fuel-supply pipe extended through the deflector; a T upon the end of the fuel-supply pipe, and resting upon the drip plate; and draft pipes extended through the deflector and discharging above and adjacent the extremities of the T.

1,019,649. MOWER-SICKLE GRINDER. JAMES H. IREY, Pelican Rapids, Minn. Filed Aug. 23, 1911. Serial No. 645,587. (Cl. 51—8.)



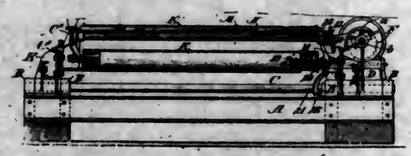
1. The combination with a frame, of a block slidable thereon, said block having an arcuate guide-way formed therein, an arcuate member slidable in the guide-way, means for locking the arcuate member in adjusted position, a grind stone supported by the frame adjacent the block, a clamping member pivotally connected to the arcuate member, a lever carried by the arcuate member, a plate secured to the clamping member, and a resilient connection between said plate and lever for holding an article clamped by the clamping member against the grind stone.

2. The combination with a frame, of a grind stone rotatably supported thereby, a block slidable on said frame, an arcuate guide-way formed therein, an arcuate member slidably mounted in said guide-way, a clamping member pivoted on the arcuate member, a lever mounted on the arcuate member, a spring having one end secured to the plate and its other end secured to a link carried by the lever, said lever being operable for swinging the clamp member on its pivot toward the grind stone, means carried by the lever to regulate the tension of said spring, and means for shifting the block and arcuate member relative to the grind stone.

3. The combination with a frame, of a grind stone rotatably supported thereby, a block slidable on the frame, means for securing the block in desired position relative to the grind stone, said block having an arcuate groove in the upper face thereof, an arcuate member slidably engaged in the groove, bearings rising from said member near the ends thereof, a clamp bar having its ends pivotally engaged in the bearings, a lever mounted on the arcuate member, a plate secured to the clamp member, and means connecting the plate and clamp bar, means for resiliently

swinging the clamp bar on its pivot toward the grind stone, and means for locking the arcuate member in adjusted position to control the angle of grinding by the grind stone of an article held by the clamp bar.

1,019,650. HEAD-MOTION FOR ORE-CONCENTRATORS. JOHN F. ISBELL, Salt Lake City, Utah, assignor to The Gallagher Machinery Co., Salt Lake City, Utah, a Corporation of Utah. Filed May 13, 1910. Serial No. 561,066. (Cl. 74—14.)



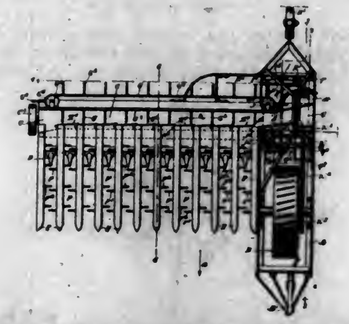
1. The combination with an element to be reciprocated, of means for imparting reciprocal movement to said element, said means comprising a single eccentric at the side of and exterior to the element to be reciprocated, a divided eccentric strap, a driving shaft upon which the eccentric is mounted, one of the parts of said strap being rigid with an outwardly extending short arm, said arm having its outer end curved and adapted to operate with a rocking movement against the element to be reciprocated, to thereby move said element in one direction, means for moving said element in the other direction, and a rod suspended from the element to be reciprocated having its lower end engaging the curved end of said arm to hold the arm in operative relation to the engaging portion of the element to be reciprocated.

2. The combination with an element to be reciprocated, of a shaft exterior thereto, an eccentric thereon, said eccentric having a strap with an integral short arm extending inwardly toward the outer surface of said element, the face of said arm being curved and having a loose engagement with the outer surface of the element to be reciprocated, means for maintaining the curved face of said arm in engagement with the element to be reciprocated, and means for holding the eccentric, its arm and the element to be reciprocated in operating relation, said last means comprising a spring beneath the element to be reciprocated and a lever fulcrumed at one end and having the opposite end loosely engaging the element to be reciprocated, said spring yieldingly bearing against an intermediate part of said lever in opposition to the eccentric.

3. The combination of an element to be reciprocated and means for imparting reciprocal movement thereto, said element provided with spreader bars having socket members on the outer ends, reciprocating devices and means for holding the element to be reciprocated in contact with said devices, said means comprising a lever having a fixed knife-edge fulcrumed at one end and having the opposite end provided with a head which engages a socket member, and a spring beneath the element to be reciprocated and bearing against the central part of said lever.

1,019,651. GRAIN-HARVESTER. CHARLES FRED JAHNS, Fox Lake, Wis. Filed May 22, 1911. Serial No. 628,641. (Cl. 56—124.)

1. A grain harvester, comprising a cutting mechanism, parallel spaced dividing and carrying means extending transversely over the said cutting mechanism for dividing the grain and carrying the cut grain while in upright position rearwardly beyond the cutting mechanism, conveying means extending sidewise and receiving the grain from the said dividing and carrying means and conveying it sidewise over the platform and while the grain is in upright position, means normally closing the said dividing and carrying means at the rear, and adapted to open under pressure to deliver the grain to said conveying means and an upright binder for binding the grain delivered by the said conveying means and while the grain is in vertical position.



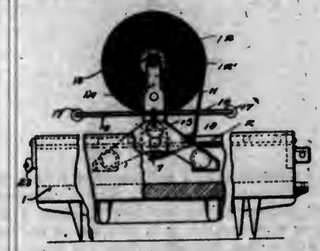
2. A grain harvester, comprising a main frame, a sidewise-extending platform, a cutting mechanism mounted on the forward edge of the platform, a series of parallel spaced dividing frames mounted on the said platform and projecting beyond the said cutting mechanism, transverse carriers mounted on the said dividing frames for holding the grain in upright position sidewise over the said platform, spring members at the rear ends of said dividing frames, one of said members being secured to each frame and bearing against the next adjacent frame in one direction, so as to normally close the space therebetween and an upright binder over the said platform adjacent the delivery end of the said sidewise conveyer for binding the grain while in upright position.

3. A grain harvester provided with a cutting mechanism and vertical dividing frames spaced apart and extending transversely over the cutting mechanism and projecting beyond the front and rear thereof, sidewise projecting carriers mounted to travel on the said dividing frames in a rearward direction to hold the grain in upright position while cutting it and conducting the cut grain rearwardly while in upright position, the carrier for each frame having tiers of driven endless chains, each tier comprising two oppositely movable chains, horizontal arms pivoted on the said chains, and means for holding the arms extended during their rearward travel and to hold the arms folded during their return movement.

4. A grain harvester provided with a cutting mechanism and vertical dividing frames spaced apart and extending transversely over the cutting mechanism and projecting beyond the front and rear thereof, sidewise projecting carriers mounted to travel on the said dividing frames in a rearward direction to hold the grain in upright position while cutting it and conducting the cut grain rearwardly while in upright position, the carrier for each frame having tiers of driven endless chains and arms, each tier having two endless chains traveling in opposite directions, and two sets of horizontal arms pivoted on the said chains, and means for holding the two sets of arms extended on opposite sides of the frame during their rearward movement and to fold the said arms during their return or forward movement.

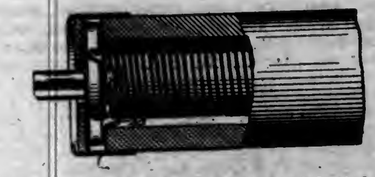
5. A grain harvester provided with a cutting mechanism and vertical dividing frames spaced apart and extending transversely over the cutting mechanism and projecting beyond the front and rear thereof, and sidewise projecting carriers mounted to travel on the said dividing frames in a rearward direction to hold the grain in upright position while cutting it and conducting the cut grain rearwardly while in upright position, the carrier for each frame having tiers of driven endless chains and arms, each tier having two endless chains, traveling in opposite directions, two sets of horizontal arms pivoted on the said chains, means for holding the two sets of arms extended on opposite sides of the frame during their rearward movement and to fold the side arms during their return or forward movement, and means for imparting simultaneous movement to the chains in the several frames.

1,019,652. HAND GALLEY-PROOFING PRESS. HENRY H. JENKINS, Morrison, Iowa. Filed Mar. 4, 1911. Serial No. 612,293. (Cl. 101—11.)



In a device of the kind described, a trough-shaped main frame, a track rail mounted on the inner side of each side of said main frame, and having a groove in its lower side, a carrier having rollers resting on the top of said track rails, and flanged rollers engaging the under side of said track rails and an adjustable impression roller mounted on said carrier and spaced above the bottom of the main frame, a paper roll mounted in the top of said carrier and means for drawing said carrier backward and forward on said rail.

1,019,653. WINDOW-SHADE ROLLER. ACHILLE KAISERMAN, Kankakee, Ill. Filed Mar. 1, 1911. Serial No. 611,548. (Cl. 156—29.)

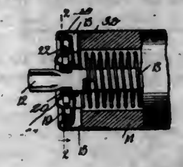


1. In combination with a tubular ended window shade roller having a holding recess formed in the end thereof, a plate removably mounted on said roller having a circular central opening and a pocket outwardly extending therefrom; a short supporting shaft for said roller extending through said opening and into the tubular end of said roller, said shaft being oblong in cross section; a disk permanently secured on said shaft having peripheral recesses to register with said pocket; a circular locking disk laterally disposed in said pocket to holdingly engage said pocket and each of said recesses when same are registered therewith; a clip to operatively engage said plate and said roller, said clip having formed therein eyelets; a double wound double ended spiral spring both ends whereof are disposed adjacent said clip, one end having a hook-like extension for engagement with said eyelets the other end being returned on itself to form a rectangular opening for said shaft; and a covering cap for said roller adapted to hold in position said plate and said locking disk.

2. In combination with a tubular ended window shade roller having a holding recess formed in the end thereof, a plate removably mounted on said roller having a circular central opening and a pocket outwardly extending therefrom; a short supporting shaft for said roller extending through said opening and into the tubular end of said roller, said shaft being oblong in cross section; a disk permanently secured on said shaft having peripheral recesses to register with said pocket; a circular locking disk laterally disposed in said pocket to holdingly engage said pocket and each of said recesses when same are registered therewith; a clip to operatively engage said plate and said roller, said clip having formed therein eyelets; a double wound double ended spiral spring both ends whereof are disposed adjacent said clip, one end having a hook-like extension for engagement with said eyelets and the other end being returned on itself to form a rectangular opening for said shaft; a transparent plate to cover said pocket and recess to prevent the removal of said disk; and a covering cap for said roller adapted to hold in position said plate and said locking disk.

3. In a window shade roller of the character described, the combination with a supporting shaft for said roller, said shaft being oblong in cross section, of a rewinding spring, said spring being wound in part upon itself to form a double layer and to approximate the ends of said spring, one of said ends being provided with a hook to operatively engage the said roller and the other of said ends being bent upon itself to form a loop to engage the said shaft and through which said shaft may be slid.

1,019,654. WINDOW-SHADE-ROLLER FITTING. ACHILLE KAISERMAN, Kankakee, Ill. Filed Aug. 3, 1911. Serial No. 642,150. (Cl. 156—36.)



1. In a window shade roller, the combination with an end covering plate provided with radially disposed pocket sections; of a cover for said plate, the separation between the walls of said plate and said cover being gradually increased to the center of said plate and cover.

2. In a window shade roller, the combination with an end covering plate provided with radially disposed pocket sections; of a cover for said plate, the separation between the walls of said plate and said cover being gradually increased to the center of said plate and cover, and said plate and cover being provided with reinforcing ridges formed near the center of said plate and cover, and concentric therewith.

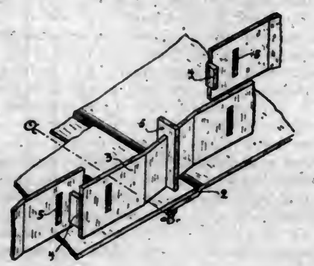
3. In a window shade roller, the combination with an end covering plate provided with radially disposed pocket sections; of a cover for said plate, the separation between the walls of said plate and said cover being gradually increased to the center of said plate and cover, and the walls of said cover being perpendicular to the axis of said roller.

4. In a window shade roller, the combination with a supporting shaft oblong in cross section; of a bearing cylinder mounted on said shaft and provided with a central perforation shaped to conform with said shaft to hold said cylinder and shaft in non-rotative relation; a covering plate for the end of said roller centrally perforated to form a bearing on said cylinder, said plate having a circular centrally located bearing pocket and pocket projections extended therefrom tangential to said pocket; a cover for said plate and for said projections, the walls of said projections being extended outward and the extension thereof being gradually increased toward the center of said cover; and a plurality of loose rolling locking devices to move in said projections toward the center of said plate whereby the said roller may be disposed vertically.

1,019,655. SUSPENDED BRIDGE. THOMAS KALLA, Oppeln, Germany. Filed Apr. 24, 1911. Serial No. 623,123. (Cl. 14—1.)

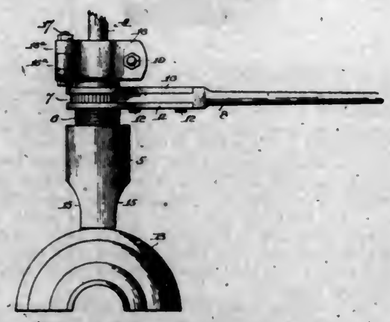
An improved flying bridge comprising in combination plates of sheet metal slightly curved and having transverse slots in the corners, the front end of each plate bent downward at right angles to form a flange, vertical piles placed through the registering slots of two superposed

plates and having a vertical slot at the upper end, a shoulder on said piles for supporting the plates, girders placed on edge upon said plates and engaging with said vertical slots of the piles, said girders having vertical



slots near their end, and arms at the ends of said girders bent at right angles and engaging with the slots of the consecutive girders, substantially as described and shown and for the purpose set forth.

1,019,656. SPOKE-PULLER. JOHN R. KELLY, Charleston, S. C. Filed Apr. 4, 1910. Serial No. 553,358. (Cl. 157—12.)



1. A spoke puller, comprising a tubular base the lower end of which is cut away at opposite sides to enter between spokes and rest upon the hub of the wheel, a screw threaded in said base and having an unobstructed central opening for the passage of a spoke through said screw, a clamping device for application to the spoke above the upper end of the screw to form an abutment for said screw, and means for rotating the screw, as and for the purpose set forth.

2. In a spoke puller, the combination, of a tubular base the lower end of which is cut away at opposite sides to enter between spokes and rest upon the hub of the wheel, a screw threaded in said base and having an unobstructed central opening for the passage of a spoke therethrough, a ratchet-wheel formed on said screw below the upper end thereof, a lever having collars arranged on the screw above and below the ratchet-wheel, and a spring-actuated pawl carried by the lever to engage the ratchet-wheel; together with a clamping device for application to the spoke to form a stop or abutment above the upper end of the screw, as and for the purpose set forth.

1,019,657. ATTACHING UMBRELLA OR CANE HANDLES. EDWARD KERR, Pittsburgh, Pa. Filed Sept. 6, 1911. Serial No. 647,995. (Cl. 135—46.)

1. The combination of a handle provided with an axial opening, and having a shoulder integral with the wall of said opening, a rod adapted to be inserted in said opening, means carried by the rod for engagement with an integral portion of the handle within the opening by a rotary movement of one part relative to the other, and a key extending in between the rod and the wall of the opening and engaging both parts to lock them as against independent rotation.



2. The combination of a rod provided with a shoulder, a handle having an axial opening for the reception of the shouldered portion of the rod and provided with means for engaging said shoulder by a rotation of the handle on the rod, and a key extending into the opening of the handle and engaging the handle and the shoulder on the rod and thereby locking the rod and handle as against independent rotation.

3. The combination of a handle having an axial opening provided with a groove having a portion parallel with and a portion at an angle to the axis of the handle, a rod provided with a shoulder adapted when the rod is inserted in the handle to pass along one portion of said groove and to be shifted by the rotation of the handle into the other portion of the groove, a key fitting in the first portion of said groove and extending across the other portion to prevent the independent rotation of the handle or rod, and a nut screwing onto the handle and locking the key in position.

1,019,658. ARM-REST. ALBERT EDWARD KING, Annandale, near Sydney, New South Wales, Australia. Filed July 26, 1911. Serial No. 640,598. (Cl. 155—26.)



In an arm rest for seats, the combination with a lower bracket having a socket, a support having its lower end fitted in the said socket of the bracket, a bar hinged to the support and adapted to be disposed in horizontal position and having its outer end bent downwardly and inwardly to form a seat provided with a stop intersecting the same, and a brace bar hinged at an intermediate point to the support and having its free end normally bent to removably engage the said seat and stop.

1,019,659. NON-REFILLABLE BOTTLE. ALBERT KLEIN, New York, N. Y. Filed July 5, 1911. Serial No. 637,012. (Cl. 215—112.)

1. A device of the class described including a receptacle having a neck adapted to receive an ordinary stopper and sealing means, a vertical guide tube formed integral with the receptacle and connected at the upper end to the lower end of the neck and forming a continuation of the same and having an outlet at the lower portion communicating with the interior of the receptacle, the tube and the neck being imperforate above the said outlet and the said tube being also provided with smooth guiding portions and having a longitudinal rib located between the guiding portions and provided with teeth shouldered at their lower ends, and a float slidable within the guide tube and provided with means for engaging the teeth of the said rib, the latter being removable through the neck when the stopper is withdrawn to permit the bottle to be refilled.



2. A device of the class described including a receptacle having a neck adapted to receive a stopper and sealing means, a vertical guide tube formed integral with the receptacle and connected at the upper end to the lower end of the neck and forming a continuation of the same and having an outlet at the lower portion communicating with the interior of the receptacle, said tube being also provided with smooth guiding portions and having longitudinal ribs located between the guiding portions and provided with teeth shouldered at their lower ends, and a float slidable within the guide tube along the smooth guiding portions thereof and provided with means for engaging the teeth of the ribs for normally locking the float against upward movement, said float being removable through the neck of the receptacle when the stopper is withdrawn for refilling the said receptacle.

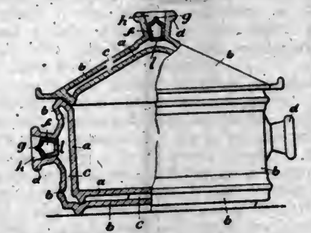
3. A device of the class described including a receptacle having an outlet and provided with an upright guide having opposite ratchet teeth, an indicating float slidable along the guide, upwardly diverging locking members hinged at their lower ends to the float, and crossed springs secured at their upper ends to the locking members and bearing at their lower ends against the float arranged to urge the locking members outwardly.

4. A device of the class described including a receptacle having an outlet and provided with an upright guide having ratchet teeth, an indicating float slidable along the guide, a band extending around the float and provided at its terminals with eyes arranged at the top of the float, a locking member engaging the teeth of the guide, and a pintle pivoting the locking member to the band and passing through the eyes thereof so as to connect the terminals of the same.

5. A device of the class described including a receptacle provided with a neck, a tubular guide of approximately the same diameter as the neck and depending from the lower ends of the same and forming a continuation of the walls thereof and having a lower end wall spaced from the bottom of the receptacle and provided with an opening, an indicating float contained within the guide and slidable along the same, and means for automatically locking the float against upward movement to cause the same to descend as the contents of the receptacle are consumed.

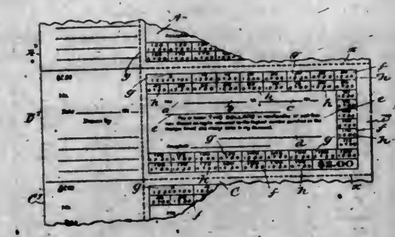
1,019,660. STOPPER FOR VACUUM-INSULATED VESSELS. HUGO KLETT, Ilmenau, Germany. Filed Mar. 9, 1910. Serial No. 548,238. (Cl. 49—92.)

1. A hollow stopper of fusible vitreous material for use in connection with double walled vessels having an air space between said walls, wherein a vacuum is to be created, said stopper being formed at its inner end with an opening communicating directly with said air space and at its outer end with a nipple adapted to be closed by melting after the creation of the vacuum in the air space has been completed.



2. A hollow open-ended glass stopper for use in connection with double walled vessels having an air space between said walls, wherein a vacuum is to be created, the outer end of said stopper being adapted to be closed by melting after the creation of the vacuum in the air space has been completed.

1,019,661. MONETARY DOCUMENT. GILBERT N. KNIGHT, Big Stone Gap, Va. Filed May 1, 1911. Serial No. 624,390. (Cl. 11—15.)



A monetary document comprising a sheet having a central portion provided with blank spaces for data, the margin of the sheet being divided up into a series of rectangular spaces, each space being provided with two rows of figures, the figures in the upper row representing numbers that are multiples of 5, and being printed in large type, and the figures in the lower row being printed in small type, those figures in the lower row under the numeral 5 comprising the digits from 1 to 9 with the exception of the numeral 5, the figures in the lower row under the multiples of 5 expressed by an even number, comprising the digits from 1 to 4, and the numerals in the lower row in the remaining spaces comprising the digits from 6 to 9.

1,019,662. CURTAIN-FIXTURE. JOHN KRODER, New York, N. Y. Filed May 31, 1911. Serial No. 630,319. (Cl. 156—19.)

1. A curtain fixture, comprising brackets each having a socket formed with an internal bead, and a rod formed of telescoping sections having their ends split and each formed with an external annular groove in the split end, the members of the split ends being bent inwardly toward each other to form rounded ends.

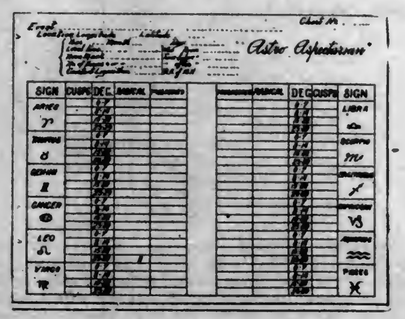
2. A curtain fixture, comprising a pair of brackets each having a socket provided with an interior annular bead, and a rod made in tubular telescoping sections terminating at their outer ends in angular arms, the terminals of which are split and the split members being bent

inward toward each other to form a rounded off end, each arm having an exterior annular groove immediately in the



rear of the rounded off end to be engaged by the said annular bead.

1,019,663. ASTROLOGICAL CHART AND INDICATOR THEREFOR. HUGO W. KUESTER, Denver, Colo. Filed May 19, 1911. Serial No. 628,296. (Cl. 35—3.)



1. An astrological chart of rectangular shape having columns vertically disposed on opposite sides of a central space, the columns on each side of the said space containing the signs of the sodiac and indications to designate the positions of the various planets in the sodiacal belt at any predetermined time, and a movable indicator adapted to occupy the central space of the chart, containing the well-known symbols of astronomy to indicate astrological distances in degrees of longitude, substantially as shown and described.

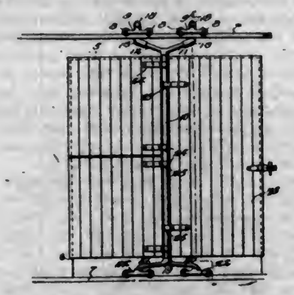
2. The combination with an astrological chart provided with columns in which are respectively located the signs of the sodiac and representations indicating the positions of various planets at a predetermined date, of a movable indicator containing the well-known symbols of astronomy for measuring the astrological distances in astronomy, the said symbols being arranged in reverse order on opposite sides of a central line on the face of the indicator, substantially as described.

3. The combination with an astrological chart containing columns in which are located the signs of the sodiac and other data to indicate the positions of the various planets in the sodiacal belt at a predetermined date, of a movable indicating strip containing the well-known symbols of astronomy to indicate degrees of longitude, and adapted for measuring the astrological distances between the planets as positioned upon the chart, substantially as described.

4. The combination with an astrological chart provided with columns containing the signs of the sodiac and other data for indicating the positions of various planets in the sodiacal belt at a predetermined date, of a movable indicator having symbols to indicate degrees of longitude on the face of the said indicator, there being a set of these symbols on each side of the said indicator arranged in reverse order from top to bottom, substantially as described.

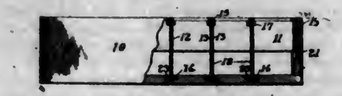
5. The combination with an astrological chart provided with columns subdivided into spaces containing the signs of the zodiac, and other columns containing data indicating the relative positions of the various planets in the sodiacal belt at a predetermined date, of an indicating strip adapted for measuring the astrological distances between the planets on the said chart, the said strip containing a centrally located index and two sets of astronomical symbols for indicating the degrees of longitude, above the said index and two other sets below the said index, the sets of symbols both above and below the index being located on opposite sides of the center line of the chart, the two sets both above and below the index on each side of the line being arranged in the same order both upwardly and downwardly from the index, and the two sets of symbols on the opposite sides of the dividing line being reversely arranged.

1,019,664. DOOR. LUDWICK LARSON, Brady Island, Nebr. Filed Jan. 25, 1911. Serial No. 604,645. (Cl. 20—19.)



A combined sliding and swinging door comprising a vertical hanger bifurcated at its upper end to provide offset portions, supporting rollers carried by the offset portions, the lower end of the hanger being bifurcated and provided with supporting rollers, a swinging door of a length equaling the length of the hanger pivoted to the hanger on one side, and a plurality of doors arranged oppositely upon the door just mentioned and being pivoted to the hanger, said doors being arranged one above the other and for independent swinging movement.

1,019,665. CRATE. ALFRED A. LE DOYEN, Augusta, Ga., assignor of one-fourth to William B. Toole, Augusta, Ga. Filed July 18, 1911. Serial No. 639,090. (Cl. 217—30.)



1. In a crate, a body including sides, ends, and a bottom, the ends being provided with vertical slots opening through their upper edges, the sides being provided with slots opening through their bottom edges, the said bottom being provided with transverse slots opening through the opposite longitudinal edges and the inner face thereof, and a nest having lock-joint flanges engaging in the slots in the sides, ends, and bottom.

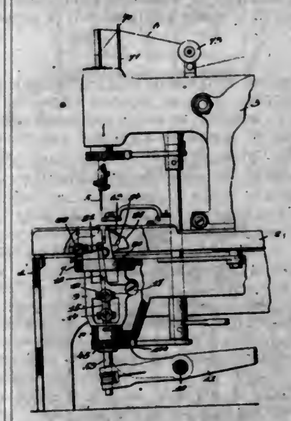
2. In a crate, a body including sides, ends, and a bottom, the ends being provided with vertical slots opening through their upper edges, the sides being provided with slots opening through their bottom edges, the said bottom being provided with transverse slots opening through the opposite longitudinal edges and the inner face thereof, longitudinal partitions having end flanges engaged in the slots in the end walls, and transverse partitions provided with end and bottom flanges engaged in the slots in the sides and bottom.

1,019,666. PAINT AND VARNISH BASE. RUDOLF LENDER and ALBERT KOCH, Neu-Babelsberg, Germany. Filed Nov. 17, 1911. Serial No. 660,899. (Cl. 134—81.)

1. Process of manufacturing a paint and varnish base, which comprises mixing Chinese wood oil (Tong oil) with a polymerization product of the cumarone and indene group of compounds at a temperature above 100° C.

2. A paint or varnish base comprising Chinese wood oil (Tong oil) and one or more of the polymerization products of the cumarone and indene group.

1,019,667. BUTTONHOLE-SEWING MACHINE. BERNARD T. LEVESQUE, Boston, Mass., assignor to The Reece Button Hole Machine Company, Boston, Mass., a Corporation of Maine. Filed May 11, 1911. Serial No. 626,456. (Cl. 112—4.)



1. In a buttonhole sewing machine, the combination with a needle for controlling the upper thread and means for operating it, of supplemental under thread-carrying mechanism comprising an oscillatory block, a needle for the under thread sustained by said block, a shaft extending axially of the block, means to give the shaft a longitudinal movement, means to operate the needle for the under thread by movement of the shaft, a looper also sustained by said block, and connections between said shaft and looper by which the latter is operated and its position is controlled positively at all times by the shaft.

2. In a buttonhole sewing machine, the combination with a needle for controlling the upper thread and means for operating it, of complemental under thread-carrying mechanism comprising an oscillatory block, a needle for the under thread sustained by said block, a looper also sustained by said block, and two cams movably sustained by said block, one operating to control positively at all times the movement of the looper in one direction and the other operating to control positively at all times the movement of the looper in another direction.

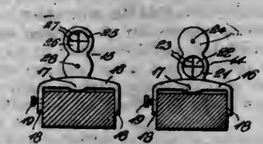
3. In a buttonhole sewing machine, the combination with a needle for controlling the upper thread and means for operating it, of complemental under thread-carrying mechanism comprising an oscillatory block, a needle for the under thread sustained by said block, a looper carried pivoted to the block and provided with a cam groove, a looper holder swiveled to said carrier, a looper sustained by the holder, a cam member connected to the looper holder, and a reciprocating stud operating in said cam groove and also operating said cam member thereby to give the looper its desired movement.

4. In a buttonhole sewing machine, the combination with a needle for controlling the upper thread, of a complemental under thread-carrying mechanism including an oscillatory block, a needle for the under thread, an oscillating looper carrier, a looper holder pivoted to the looper carrier and provided with a laterally-extending stud, a looper sustained by said holder, a cam member connected to said stud and mounted to turn about the axis of movement of the looper carrier, and means for operating the cam member thereby to oscillate the looper holder in the looper carrier.

5. In a buttonhole sewing machine, the combination with a needle for controlling the upper thread, of a complemental under thread-carrying mechanism including an oscillatory block, a needle for the under thread, an oscillating looper carrier, a looper holder pivoted to the looper carrier and provided with a laterally-extending stud, a looper sustained by said holder, a cam member connected to said stud and pivotally mounted to move about the axis of the looper carrier, and a shaft reciprocating in said block and provided with a stud engaging the cam member.

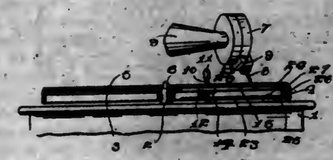
[Claims 6 to 12 not printed in the Gazette.]

1,019,668. COMBINED SQUARE AND LEVELING DEVICE. JAMES F. LEWIS, Uniontown, Pa. Filed Sept. 15, 1911. Serial No. 649,517. (Cl. 88—2.)



A square comprising right angular arms, a sighting device secured to each arm near the angle and also near the outer end, each sighting device adapted for use from either end of its arm, and each comprising a clip consisting of a main body, a central lug on the under side of the main body to rest on the arm, a flange at each end of the main body to embrace the sides of the arm, and a set screw through one of the flanges to engage the edge of the arm, whereby the sighting devices may be adjusted, laterally on the lug as a pivot.

1,019,669. AUTOMATIC PHONOGRAPH-STOP. MILTON E. LEWIS, Oakland, Cal. Filed June 10, 1911. Serial No. 632,455. (Cl. 181—3.)



1. In a sound producing machine of the kind described, a phonograph casing, a brake on the top of said casing, a revoluble plate on the top of said casing and above said brake and adapted to be engaged thereby, a block slidably mounted on said plate, a pin vertically movable in said block, means for holding said pin in elevated position,

means for automatically lowering said pin, and a transmitter having a projection adapted to engage said pin and cause it to be released and drawn downward into engagement with said brake.

2. In a sound producing machine of the kind described, a phonograph casing, a brake having a brake arm pivoted thereto, and a cam shaped brake head, a revoluble plate mounted on top of said phonograph casing above said brake and adapted to to be engaged thereby, a block slidably mounted on said plate, a pin vertically movable in said block, a catch for holding said pin in elevated position controlled by a spring, a second spring for drawing down said pin when released from said catch, and a transmitter having a projection adapted to engage said pin and release the same to be drawn down by said spring into connection with said brake.

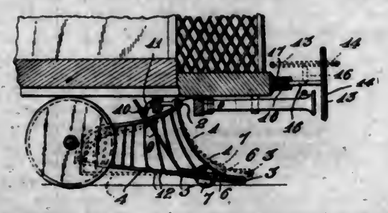
3. In a sound producing machine of the kind described, a phonograph casing, a spindle projecting through the top of the casing, a brake consisting of a lever arm pivoted to the top of said casing, and having one end located adjacent to said spindle, and a cam shaped brake head at its other end, a revoluble plate located above said brake having a depending flange adapted to be engaged thereby, a block slidably mounted in said revoluble plate and adjustable thereon and located adjacent to the central portion of the plate, a vertically movable pin located in said block, and having a reduced extension laterally movable in a hole in said block and provided with a notch on one side, and a spring on the other, a projection adapted to be engaged by said notch to hold said pin in elevated position, a lateral projection on said extension, a spring connected with said block engaging said projection and adapted to move said pin downward, and a transmitter having a projection adapted to engage said pin when the end of a record is reached, and release the same, and permit it to be drawn down by said spring into operative position to engage said brake arm.

1,019,670. PICTURE-FRAME SUPPORT. GEORGE A. L'HOMMEDIEU, Atlantic City, N. J. Filed May 13, 1910. Serial No. 561,118. (Cl. 40—145.1.)



A picture frame hanger adapted to be secured to a picture frame to support the same against a wall consisting of a disk formed of sheet metal and provided with opposite offset portions stamped out of said disk and forming a recess, and a prong member pivoted at one end to the offset portions and adapted to lie flat in the recess in an inoperative position.

1,019,671. CAR-FENDER. JAMES LICHETTI, Philadelphia, Pa. Filed July 3, 1911. Serial No. 636,773. (Cl. 33—253.)

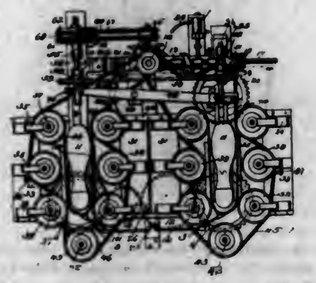


1. A car fender comprising a frame consisting of bars arranged and bent to form upper and lower cross bars and end portions, ribs arranged across said fender and connecting said bars of the frame, a brace bar connected to the opposite rearwardly extending ends of the lower cross bar, wheel supporting bars secured to said brace bar and lower cross bar of the frame, fender supporting and track engaging wheels revolubly mounted in said wheel supporting bars, a combined catch and guide bracket secured to the car, a catch bar pivotally connected to the brace bar of the fender, said catch bar having formed therein a notch adapted to engage said combined catch and guide bracket whereby when the fender is swung down to an operative position the same will be automatically locked in this position.

2. A car fender comprising a frame having upper and lower cross bars and laterally extending end portions, a series of ribs to connect said bars and end portions of the frame, means to pivotally connect said fender to the under side of the car, a supplemental fender comprising a frame, a series of ribs arranged across said frame, supporting brackets secured to the front end of the car, shafts secured to the ends of said fender frame and having a sliding engagement with said brackets, springs arranged in said brackets and adapted to yieldingly hold the fender in operative position, said shafts being formed in hingedly connected sections whereby the fender may be swung upwardly to an inoperative position to permit the coupling of the car to another car or draft device.

3. A car fender comprising a frame consisting of upper and lower cross bars, and rearwardly extending end portions adapted to form wheel guards, a series of ribs secured to said bars to form the body of the fender, a brace bar adapted to connect the rearwardly projecting portions of the lower cross bar, wheel supporting bars secured in the lower portion of said frame, supporting wheels revolubly mounted on said bars, means to pivotally connect the upper cross bar of the fender to the car, and means for normally and yieldingly maintaining the front of the fender in a raised position until it strikes an obstruction.

1,019,672. BOOT AND SHOE CLEANING AND POLISHING MACHINE. EDWARD EVANOUS LINEBACK, Winston Salem, N. C., assignor, by direct and mesne assignments, of one-sixth to Joseph E. Alexander and five-sixths to William D. Currin, Winston Salem, N. C. Filed May 2, 1905. Serial No. 258,565. (Cl. 15—61.)



1. A mechanism of the class described, comprising reciprocating supports, cam wheels for vertically moving said supports, and adjustable brushes contingnous to said supports.

2. In a mechanism of the class described, the combination with a framework, of a movable boot or shoe support carried by said framework, a horizontally adjustable brush carried by said framework contigngous to said support, a brush carried by said framework above said support, means for driving and means for periodically reversing the movement of said brush positioned above said support.

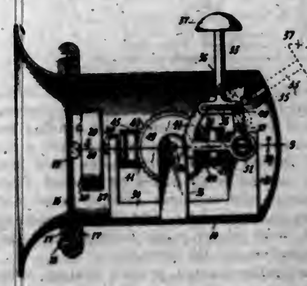
3. In a mechanism of the class described, the combination with a framework, of reciprocating shoe-supporting plates carried by said framework, means for vertically moving said plate, adjustable, rotatable brushes carried by said framework contiguous to said plates, rotatable, horizontal brushes carried by said framework above said plates, and means for periodically reversing the rotary movement of said horizontal brushes.

4. In a mechanism of the class described, the combination with a framework, of pairs of horizontal slide-supports, slides carried by said slide-supports, rotatable brushes carried by each of said slides, a horizontally and vertically movable support positioned between each pair of said slides and their brushes, and means for synchronously adjusting said slides.

5. In a mechanism of the class described, the combination of a movable boot or shoe support, slides positioned upon opposite sides of said support, a standard carried by each of said slides, a vertical shaft journaled upon said standard, a brush fixedly secured to said shaft, a pulley fixedly secured to said shaft, a belt connecting said pulleys, means for driving said belt, and means for synchronously adjusting said slides relative to said boot support.

[Claims 6 to 26 not printed in the Gazette.]

1,019,673. AUTOMOBILE-HORN. ROBERT E. LONG, New York, N. Y. Filed Jan. 9, 1911. Serial No. 601,612. (Cl. 116—19.)



1. An automobile horn, comprising a diaphragm; an elongated projection rigidly mounted on said diaphragm at near the center thereof; a rotary member having a plurality of extensions adapted to impinge upon said projection at different portions of the area thereof; and means for rotating said rotary member.

2. An automobile horn, comprising a diaphragm; an elongated projection rigidly mounted on said diaphragm at near the center thereof; a rotary wheel disposed adjacent said diaphragm; a plurality of extended tooth-like members adapted to impinge upon said projection at different sections of the length of said projection; and means for rotating said wheel.

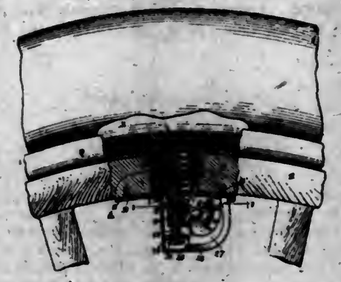
3. An automobile horn, comprising a diaphragm; an elongated projection rigidly mounted on said diaphragm at near the center thereof; a weighted wheel disposed adjacent said projection having a surface corresponding with said projection; a plurality of striker members mounted on said wheel at intervals circularly disposed, said striker members being arranged to impinge upon the said projection at different sections of its area; and means for rotating said wheel.

4. An automobile horn, comprising a diaphragm; an elongated projection rigidly mounted on said diaphragm at near the center thereof; a weighted disk disposed approximately parallel with said diaphragm and eccentric thereto; a plurality of striker members extending from the surface of said disk to impinge upon said projection, each of said striker members being arranged to impinge upon a different section of said projection; and means for rotating said disk.

5. An automobile horn, comprising a diaphragm; an elongated projection rigidly mounted on said diaphragm at near the center thereof; a weighted rotary disk disposed in parallel relation to said diaphragm and having a series of perforations formed therein at intervals thereon, said perforations being removed from the center of said disk and each at a different distance therefrom; a plurality of striker balls rotatively mounted in said perforations adapted to strike on said projection when said disk is rotated; a plurality of seat devices for said balls disposed in said perforations to hold the said balls in position; and means for rotating said disk.

[Claims 6 and 7 not printed in the Gazette.]

1,019,674. TIRE-INFLATION INDICATOR. ALAIR JOLY DE LOTBINIÈRE, Srinagar, India. Filed Mar. 22, 1911. Serial No. 616,112. (Cl. 73—111.)



1. In a tire inflation indicator a cylinder having a sleeve with an opening, a piston disposed in the cylinder and adapted to engage a pneumatic tire, a spring for holding the piston yieldingly in a predetermined position relatively to the cylinder, a piston rod having a threaded portion and secured to the piston and normally disposed with its threaded portion partially within and partially without the sleeve, a scale, a finger disposed through the opening in the sleeve, operable by the piston rod and coöperating with the scale to indicate the position of the piston relatively to the cylinder, and a nut engaging the thread on the piston rod, adapted to abut against the end of the sleeve for drawing the piston rod and the piston against the tension of the spring.

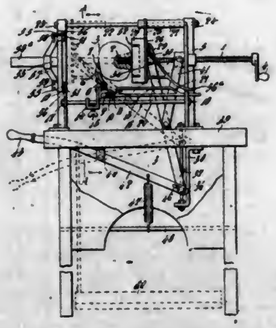
2. In a tire inflation indicator a cylinder having an inner shoulder between its ends, an outer flange at one end of the cylinder, a head with an opening secured to the said end of the cylinder, a sleeve secured to the head and registering with the opening, the sleeve having a lateral opening, a piston disposed in the cylinder adapted to abut against the shoulder, a piston rod having a recess secured to the piston and disposed in the sleeve, a spring disposed between the piston and the head, a scale, and a finger extending through the opening in the sleeve, and projecting in the recess in the piston rod for coöperating with the scale for indicating position of the piston in the cylinder.

3. In a tire inflation indicator a cylinder having at one end a head with an opening and a sleeve with a lateral opening in communication with the opening in the head, substantially parallel flanges connected with the head and adapted to be disposed against opposite sides of a rim, a piston disposed in the cylinder, a spring for holding the piston yieldingly in a predetermined position relatively to the cylinder, a piston rod secured to the piston and disposed in the sleeve, a scale, and a finger extending through the opening in the sleeve and operable by the piston rod for coöperating with the scale for indicating the position of the piston in the cylinder.

4. In a tire inflation indicator a cylinder having an inner shoulder between its ends, flanges connected with the cylinder and adapted to engage a rim of a wheel, a sleeve secured to the cylinder and provided with a lateral opening, a piston disposed in the cylinder adapted to abut against the shoulder for limiting the movement of the piston in one direction, relatively to the cylinder, a

piston rod having a threaded portion partially disposed within the sleeve and partially without the sleeve, there being a recess in the piston rod, resilient means for holding the piston yieldingly in a predetermined position relatively to the cylinder, a scale, a finger extending through the opening in the sleeve and projecting in the recess in the piston rod for coöperating with the scale for indicating the position of the piston in the cylinder, and a nut meshing with the thread on the piston rod adapted to abut against the end of the sleeve for drawing the piston rod and the piston against the tension of the spring.

1,019,675. APPLE PARING, CORING, AND SLICING MACHINE. AUGUST LYELL, Wellington, New Zealand. Filed Nov. 20, 1909. Serial No. 529,110. (Cl. 146—8.)

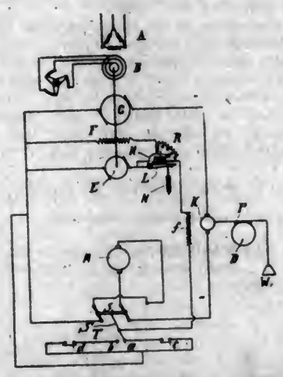


1. In a machine for paring, coring and cutting apples, the combination of a supporting frame, a paring knife carried by a holder mounted on the frame to rock about a horizontal axis, a coring and cutting device at one side of the knife, an apple supporting fork carried by a threaded shaft, means for rotating the shaft, a stripper movable longitudinally over the fork to and from the cutting and coring device, a pawl carried by the stripper and engaging the threaded shaft of the fork, whereby the fork is moved past the knife as it is rotated, and means connected with the stripper for positively rocking the paring knife support to carry the knife from the path of the stripper.

2. In a machine for paring, coring and cutting apples, the combination of an apple supporting fork, a cutting and coring device in alinement with said fork, a paring knife supported by a rocking frame having a member extending longitudinally of the fork, means for rotating the fork and moving it longitudinally to carry an apple supported thereby past the paring knife, and a stripper entirely surrounding the stem of the fork and movable over the fork head to and from the cutting and coring device, said stripper being adapted to engage the support of the paring knife and rock said knife from the path of the stripper.

3. In a machine of the character described, the combination of a frame, a cutting and coring device at one end of the frame, an apple supporting fork mounted in the frame in alinement with the cutting and coring device, a support for the paring knife mounted to rock about an axis extending parallel to the length of the apple fork and adjustable longitudinally to vary the distance between the knife supported thereby and the cutting and coring device, a stripper movable longitudinally of the fork, and an arm attached to the stripper and adapted to engage the paring knife support to rock the same and carry the knife from the path of the stripper as the latter is moved over the fork head to force an apple therefrom and through the cutting and coring device.

1,019,676. MEANS FOR CONTROLLING ELECTRICALLY-OPERATED DRIVING SYSTEMS. JAMES COLQUHOUN MACFARLANE and HARRY BURGE, Chelmsford, and ALAN WILLIAMS, London Wall, London, England, assignors to Crompton & Company, Limited, Chelmsford, England. Filed Dec. 22, 1911. Serial No. 667,367. (Cl. 172—152.)



1. An electrically-operated driving system comprising a driven generator, a driving motor, mains carrying current from said driven generator to said driving motor, a variable separate excitation to said generator, a mechanical brake, a direct current brake-motor, said brake being normally on and being pulled off by said direct current brake-motor, the armature of said brake motor being connected in series with said driven generator, the field of said brake motor being excited from the same source of excitation as said generator.

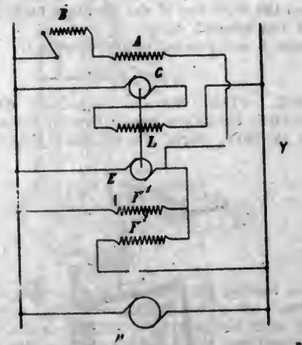
2. An electrically-operated driving system comprising a driven generator, a driving motor, mains carrying current from said driven generator to said driving motor, a variable separate excitation to said generator, a mechanical brake, a direct current break-motor, said brake being normally on and being pulled off by said direct current brake-motor, said brake motor having an armature and a field one of which elements is connected in series with the driven generator and the other element being connected to the said source of excitation for the generator.

3. An electrically-operated driving system comprising a driven generator, a driving motor, mains carrying current from said driven generator to said driving motor, a variable separate excitation to said generator, a mechanical brake, a direct current brake-motor, said brake being normally on and being pulled off by said direct current brake-motor, the armature to said direct current brake-motor being connected in series with said driven generator, the field to said direct current brake-motor being excited from the same source of excitation as said generator, an electro-magnet in series with said field of said direct current brake-motor, an operating handle, a voltage control lever, said electro-magnet connecting said operating handle to said voltage control lever, a pilot switch in series with the field of said direct current brake-motor, and overwinding switches also in series with the field of said direct current brake-motor.

4. An electrically-operated driving system comprising a driven generator, a driving motor, mains carrying current from said driven generator to said driving motor, a variable separate excitation to said generator, a mechanical brake, a direct current brake-motor, said brake being normally on and being pulled off by said direct current brake-motor, said direct current brake-motor having an armature and a field, one of said elements being excited from the same source of excitation as said generator, and the other element of the brake motor being connected in series with said driven generator, an electro-magnet in

series with one of said elements of said direct current brake-motor, an operating handle, a voltage control lever, said electromagnet connecting said operating handle to said voltage control lever, a pilot switch in series with the other element of said direct current brake-motor, and overwinding switches also in series with the armature of said direct current brake-motor.

1,019,677. MEANS FOR REGULATING ELECTRICALLY-OPERATED DRIVING SYSTEMS. JAMES COLQUHOUN MACFARLANE and HARRY BURGE, Chelmsford, and ALAN WILLIAMS, London Wall, London, England, assignors to Crompton & Company, Limited, Chelmsford, England. Filed Dec. 22, 1911. Serial No. 667,368. (Cl. 172—239.)



1. Electrically-operated driving apparatus of the class described comprising, in combination, a direct current generator, means for exciting the field thereof, a motor, means for connecting the armature thereof to said generator, and a field winding for said motor having its terminals connected to the positive poles of the generator and exciting means respectively.

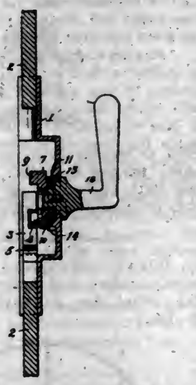
2. Electrically-operated driving apparatus of the class described comprising, in combination, a direct current generator having a field provided with means for varying the excitation thereof whereby said generator may deliver current at different voltages, means for exciting the field of said generator, a motor connected to receive current from said generator and having a constant excitation winding and also a field winding, the latter having its terminals connected to the poles of like polarity of said generator and exciting means respectively.

3. Electrically-operated driving apparatus of the class described comprising, in combination, a direct current generator, exciting means connected to the field of the generator, a motor connected to receive current from the generator and having a field winding connected to the poles of like polarity of the generator and said exciting means, and a de-magnetizing field winding for the generator connected in series between the generator and motor.

1,019,678. REVERSIBLE LOCKING-BOLT. GEORGE N. MASON, Reading, Pa., assignor to Reading Hardware Company, Reading, Pa., a Corporation of Pennsylvania. Filed Jan. 11, 1912. Serial No. 670,557. (Cl. 16—63.)

1. In a locking bolt a casing, a pair of bolts, a rotating member, an operating handle, said rotating member having a pair of bolt engaging lugs and a peripheral projection and a reversible stop ring having radial projections thereon, in combination with a slotted ridge in the casing adapted to so hold said ring as to determine the direction of movement of the operating handle.

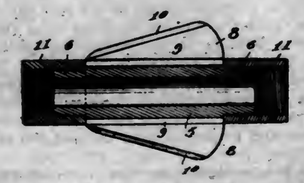
2. In a locking bolt a casing, a pair of bolts, means for operating the bolts in unison, a slotted ridge formed in the casing, a reversible stop ring adapted to fit in said slotted ridge so as to determine the direction of movement of the operating means and stops on said ring to limit the movement of the operating means.



3. In a reversible locking bolt comprising a casing, a pair of oppositely movable bolts and means for operating the bolts in unison, the combination therewith of a reversible, annular member formed with peripheral projections and a slotted ridge in the casing adapted to so receive the annular member as to determine the direction of movement of the operating means.

4. In a locking bolt, a casing, a pair of bolts, each of which is formed with a reduced inner end, a rotating member, an operating handle to which said member is secured, said member having a pair of bolt engaging lugs and a peripheral projection, a slotted ridge in the casing, and a reversible stop ring adapted to fit in said slotted ridge so as to determine the direction of movement of the handle, and stops on said ring to limit the movement of said rotating member.

1,019,679. REAMER. WILLIAM MCCOLGAN, Marshall, Minn. Filed June 23, 1911. Serial No. 634,844. (Cl. 166—6.)



1. A reamer, comprising a hub having reduced externally threaded opposite ends and also provided with substantially dove-tail shaped grooves in diametrically opposite sides thereof, cutting blades having dove-tailed shaped tongues detachably engaged in the grooves in said hub, and means detachably engaging opposite reduced ends of the hub for locking the blades fixed thereto.

2. A reamer, comprising a hub having reduced externally threaded opposite ends and also provided with substantially dove-tail shaped grooves in diametrically opposite sides thereof, cutting blades having dove-tail shaped tongues detachably engaged in the grooves in said hub, and coupling sleeves engaging the reduced externally threaded opposite ends of the hub for locking the blades connected to the latter.

1,019,680. NUT-LOCK. WILLIAM JOHN MCGAVOCK, Mexico, Mexico. Filed Mar. 6, 1911. Serial No. 612,687. (Cl. 151—54.)

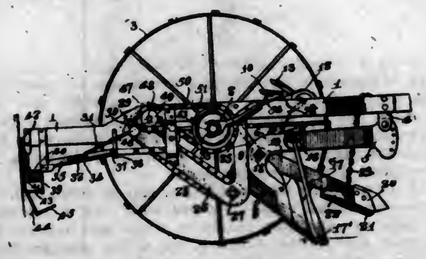
A nut lock comprising a base plate provided with openings and having one side portion bent to form a longi-

tudinally extending off-set strip, a locking plate having one side portion bent to form a longitudinally extending pocket to receive said strip and being provided with open-



ings adapted to register with the openings in said base plate, locking tongues extending from the openings in said locking plate, and means for removably securing the opposite side portions of said plates together.

1,019,681. POTATO-DIGGING MACHINE. MINEOLA MCILVEENE, Lueders, and LEWIS A. HAYES, Weatherford, Tex. Filed Apr. 25, 1911. Serial No. 623,241. (Cl. 55—134.)



1. In a potato digging machine, the combination of a wheeled frame, a shovel beam pivoted to the front end of said frame, a shovel carried by the rear end portion of said beam, collars adjustably mounted upon the sides of the beam in advance of the penetrating portion of the shovel, and a vine cutter arranged in advance of the colters and shovel, and movably mounted upon the beam of the shovel.

2. In a potato digging machine, the combination of a wheeled frame, a shovel beam pivoted to the front end of said frame, a shovel carried by the rear end portion of said beam, colters adjustably mounted upon the sides of the beam in advance of the penetrating portion of the shovel, a vine cutter arranged in advance of the colters and shovel and movably mounted upon the beam of the shovel, an adjustable connection between the front end of the vine cutter and the front end of the wheeled frame, and a lever arm projecting from the rear end of the vine cutter.

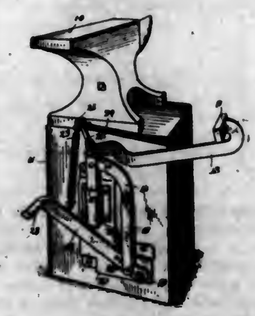
3. In a potato digging machine, the combination of a wheeled frame, a shovel beam pivoted at its front end to the front portion of said frame and comprising spaced rearwardly diverging members, a shovel carried by the rear ends of said diverging members, a cross piece connecting said divergent members, a lever operably connected to the cross piece for raising and lowering the shovel beam, a cross rod also connecting the divergent members, an auxiliary beam pivoted at its rear end to said cross rod, cutting knives carried by the front end of said auxiliary beam, and an adjustable connection between the front portion of said auxiliary beam and the frame.

4. In a potato digging machine, the combination of a wheeled frame, a shovel beam pivoted at its front end to the front portion of said frame and comprising spaced rearwardly diverging members, a shovel carried by the rear ends of said diverging members, a cross piece connecting said divergent members, a lever operably connected to the cross piece for raising and lowering the shovel beam, a cross rod also connecting the divergent members, an auxiliary beam pivoted at its rear end to said cross rod, cutting knives carried by the front end of said auxiliary beam, and an adjustable connection between the front portion of said auxiliary beam and the frame, the auxiliary beam also comprising spaced rear end portions, one of which is projected beyond the cross rod aforesaid to form a lever arm for movement of the auxiliary beam by an operator.

5. In a potato digging machine, the combination of a wheeled frame, a shovel beam pivoted at its front end to the front portion of the frame and comprising rearwardly diverging members extending downwardly at their rear ends, a shovel carried by the rear ends of said diverging members, a lever mounted on the frame and connected with the shovel beam for raising and lowering the same bodily, an auxiliary beam pivoted at its rear end to the rear portion of the shovel beam, cutting knives at the front end of the auxiliary beam and arranged in advance of the shovel beam, and an adjustable connection between the front end of the auxiliary beam and the front end of the wheeled frame.

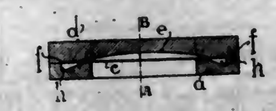
[Claim 6 not printed in the Gazette.]

1,019,682. VISE. THOMAS THEODORE MERRIMAN and BENJAMIN FRANKLIN PEART, Central Point, Oreg. Filed May 18, 1911. Serial No. 627,932. (Cl. 78—4.)



In a vise of the character described, a foot lever; a reciprocatory plunger; a socket for said plunger to guide the same; a link connecting said plunger and said lever, said link connected with said lever at near the fulcrum thereof; a swingable arm pivotally connected with said plunger to normally rest in a horizontal position; a spring operatively connected with said swingable arm and said lever said spring being connected with said lever at near the power application end thereof; and an arm pivotally connected to said plunger and said swingable arm at the junction thereof to hold said spring away from the pivot of said swingable arm and in operative position to move said swingable arm.

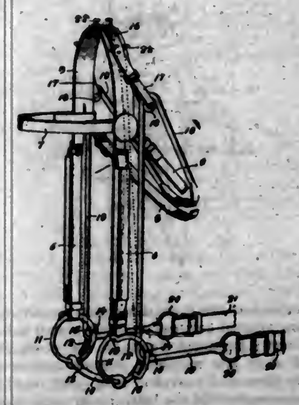
1,019,683. AUTOMATIC PLATE-VALVE. ROBERT MEYER, Mülheim-Ruhr, Germany. Filed Aug. 26, 1910. Serial No. 579,144. (Cl. 137—32.)



1. An automatic plate-valve of the type described, comprising in combination a valve-seat, having recesses with inclined faces, a thin elastic plate or strip extending into said recesses, and a cap or arrester having a recess of arc-shaped section holding the plate or strip on the valve seat and exactly determining the upward movement of the same.

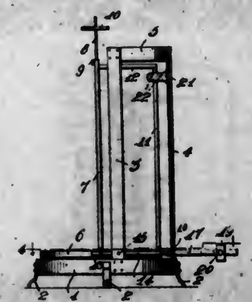
2. An automatic plate-valve of the type described, comprising in combination a valve-seat having two recesses with inclined faces, a thin elastic, oblong, metal plate extending into said recesses, and a cap having a curved recess and two recesses at the ends of the plate for holding the plate on the valve-seat and exactly determining the upward movement of the same, substantially as shown.

1,019,684. STRANGLER FOR HORSES. JAMES L. MICHAEL, Upton, Wyo. Filed Aug. 11, 1910. Serial No. 576,642. (Cl. 54—15.)



In combination, a pair of check straps and a crown strap connected thereto, rings secured to the lower ends of said check straps, a bit bar secured to said rings, pulleys journaled on said rings, a bracket strap positioned on the crown strap and having free ends adapted for swinging movement thereon, pulleys journaled on said free ends, a brow strap connected to said crown strap and a choke strap connectible to the driving reins of a harness and movable over the pulleys and connected to each other and adapted to bind against the neck of an animal when either one of the terminals of said strap is pulled.

1,019,685. COMBINED BAG-HOLDER AND WEIGHING-SCALE. DELL E. MILLARD, Galesburg, Kans. Filed May 8, 1911. Serial No. 625,907. (Cl. 73—38.)

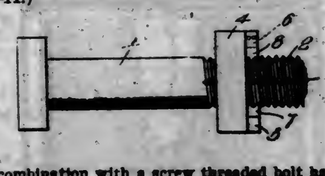


1. In a bag holding and weighing mechanism a supporting frame comprising a base ring and standards supported thereon, a bag receiving frame comprising a base plate and bag holding bars supported thereon, said bag receiving frame being movable vertically on the supporting frame, and a weighing beam pivotally connected to the base ring and to the base plate and projecting radially through one of the standards.

2. A combined bag holding and weighing mechanism comprising a supporting frame, said frame comprising a base ring having secured thereto a series of supporting feet, supporting standards secured to said ring, means to connect said standards together at their upper ends, a bag receiving and weighing frame comprising a base plate, adjustable bag holding bars secured at their lower ends to said plate, a guide bar also connected at its lower end to said plate, means to connect the upper ends of said bars together, and a pivotally mounted scale beam operatively connected to said bag receiving frame.

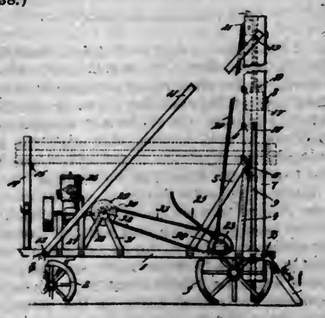
3. A combined bag holding and weighing mechanism comprising a supporting frame, a pair of guide rollers arranged in said frame, a weighing mechanism comprising a bail shaped frame pivotally mounted in said supporting frame, a scale beam secured to said bail shaped frame, a weight slidably mounted on said scale beam, a bag receiving frame comprising a base plate pivotally mounted in the outer ends of said bail shaped weighing frame, bag supporting bars secured to said base plate, said bars being formed in telescoping sections, bag engaging members arranged on the upper ends of the inner sections of said bars, set screws to hold said inner sections in their adjusted positions, and a guide bar secured to said base plate and having a sliding engagement with said guide rollers, said guide bar being connected to the upper ends of the outer members of said telescoping bars.

1,019,686. NUT-LOCK AND RELEASING DEVICE THEREFOR. ARLINGTON HORACE J. MILLER, Bangor, Pa. Filed Feb. 24, 1910. Serial No. 545,660. (Cl. 151—11.)



The combination with a screw threaded bolt having longitudinal grooves in its threads and a nut carrying oppositely arranged spring pawls to engage said grooves, of a cylindrical pawl releasing tube formed at one end with longitudinally disposed slits extending inwardly from said end and arranged at opposite points to receive said spring pawls, for releasing the latter when the tube is turned in one direction, radially projecting and longitudinally extending engaging ribs formed on the outer surface of said tube adjacent said slits and adapted to be engaged with the free ends of said spring pawls, whereby the bolt engaged ends of the pawls are adapted to be bent when the tube is turned in the opposite direction and a handle formed on the opposite end of said tube.

1,019,687. MACHINE FOR DRIVING POSTS AND WELL-TUBING. ALBERT A. MOUCHET, Youngsville, La. Filed June 19, 1911. Serial No. 634,035. (Cl. 61—38.)

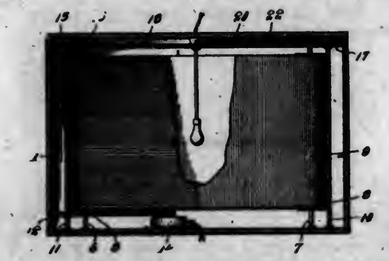


1. In a machine of the class described, the combination of a frame, spaced uprights projecting from the frame, a

mast formed of spaced side members pivotally connected to the uprights, braces extending from the frame and removably connected to the mast for holding it in a vertical position, a drop hammer slidably mounted between the side members, a sheave rotatably mounted between the side members at the upper ends thereof, a rope attached to the drop hammer and passing over said sheave, a drum rotatably mounted on the frame, means for rotating the drum, the rope passing around said drum and adapted to be held at its free end by an operator for raising the drop hammer, and means slidably mounted between said side members for holding a pipe in alinement with the drop hammer, substantially as described.

2. In a machine of the class described, the combination of a mast formed with spaced side members, guides on the inner faces of the side members, a drop hammer slidably mounted on the guides, means for raising the drop hammer, a clamp comprising a pair of members, and bolts adjustably securing said members together in sliding engagement with said guides and for holding a pipe in alinement with the drop hammer, substantially as described.

1,019,688. AUTOMATIC ADVERTISING DEVICE. WILLIAM A. MURPHEY, Dallas, Tex. Filed May 27, 1910. Serial No. 563,807. (Cl. 40—130.)



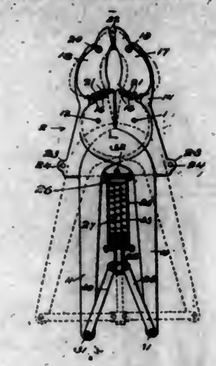
In an advertising device, a casing, a sign having transparent portions arranged in the casing, an endless transparent differently colored belt at one side of the sign, drums journaled in the casing and supporting the belt, a driving shaft journaled in the casing and supporting the belt, a driving shaft journaled in the casing and located adjacent one of said drums, an idler shaft journaled in the casing and located adjacent the other of said drums, a sprocket wheel carried by each of said shafts, a sprocket wheel carried by each of said drums, said last-named sprocket wheels being located out of the plane of said first-named wheels, an endless chain connecting said first-named wheels and inclosing said second named wheels, and means carried by the upper portion of said chain and adapted to engage said last-named sprocket wheels whereby to impart an intermittent rotary motion to said drums.

1,019,689. SHEARS. ANDREW NELSON, Sedalia, Mo. Filed Dec. 23, 1909. Serial No. 534,694. (Cl. 81—199.)

1. In a device of the class described, spaced side plates, jaw members pivoted between the plates, crossed handle members pivoted between the plates and intergeared with the jaw members in such manner that when the handles are spread apart the jaws are closed and means located between the handles for spreading the handles.

2. In a device of the class described, spaced side plates, jaw members pivoted between the side plates, handle members pivoed between the side plates and intergeared with the jaw members, a cylinder rigidly secured to the side plates, a piston slidable in the cylinder and links connecting the piston with the handle members in such manner that the handles are spread apart as the piston moves outwardly in the cylinder.

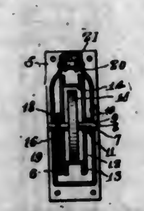
3. In a device of the class described, spaced side plates, jaw members pivoted between the side plates and provided with gear teeth formed upon an arc eccentric to the pivoting of the jaw members, lever members pivoted between the side plates and provided with gear teeth arranged upon an arc eccentric to the pivoting of the handle members and intergeared with the teeth of the jaw members and means to actuate the handle members.



4. In a device of the class described, spaced side plates, jaw members pivoted between the side plates and provided with gear teeth arranged upon an arc eccentric to the pivoting of such jaw members, handle members pivoted between the jaws and provided with gear teeth arranged upon an arc eccentric to the pivoting of such handle members and intergeared with the teeth of the jaw members, a cylinder carried rigidly by the side plates, a piston slidably mounted in the cylinder and means connecting the piston with the handle members whereby an outward movement of the piston closes the jaw members.

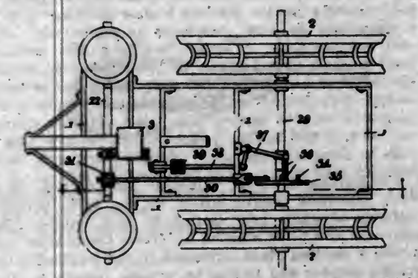
5. In a device of the class described, spaced side plates, jaw members pivoted between the side plates, gear teeth formed upon the jaw members arranged upon an arc eccentric to the pivoting of said jaw members, crossed handle members pivoted between the side plates and provided with gear teeth arranged upon an arc eccentric to the pivoting of said jaw members and intergeared with the teeth of the jaw members and mechanical means carried by the side plates for expanding the handle members.

1,019,690. SASH-LIFTER. FRANK J. ODERMATT, Tucson, Ariz. Filed July 21, 1911. Serial No. 639,772. (Cl. 16—148.)



A sash lifter, comprising a base plate, a casing secured to and rising from the base plate, an axle rotatably engaged in the sides of the casing, and having recesses formed in one of its ends, a pawl device for engaging the recessed end of the axle to hold the same against rotation in one direction, a shell winding drum including spokes mounted upon the axle, a spring coiled on the axle and having one end secured to the axle and the other to the drum, the rotation of the axle serving to adjust the tension of the said spring, a sash cord having one end secured to the winding drum, a cam washer rotatably mounted upon the axle adjacent one side of the drum and having inwardly extending beveled lugs adapted to grippingly engage the spokes of the drum upon rotation of the same in one direction, a spring for holding the cam washer in engagement with the drum, and a resilient brake having one end secured to the base portion and its other end engaging the periphery of the washer for resisting rotative movement thereof.

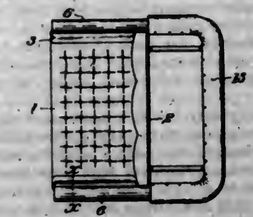
1,019,691. SEED-PLANTER. JAMES G. OLIVER, Alliance, Nebr. Filed Aug. 12, 1911. Serial No. 643,756. (Cl. 111—6.)



1. In a seed planter the combination with a vehicle, of a hopper carried thereby and provided with an outlet opening; a slide controlling said outlet opening; a pivotally mounted valve connected with said slide and adapter to hold the seed for dropping; an idler slide mounted adjacent the first named slide; means for actuating the idler slide through the travel of the vehicle; a resilient latch pivotally mounted to said controlling slide; and means on said idler slide adapted to engage with said latch to actuate said controlling slide, substantially as described.

2. In a seed planter the combination with a vehicle, of a hopper carried thereby and provided with an outlet opening; a slide controlling the passage of seed through said opening; a pivotally mounted valve adapted to hold the seed released by said slide; a resilient connection between said slide and valve to actuate the latter through the movement of the former; an idler slide mounted adjacent the first named slide; a retraction spring for the idler slide; a hinged latch carried by the first named slide; and a member on the idler slide adapted to engage said latch and effect the actuation of the first named slide, substantially as described.

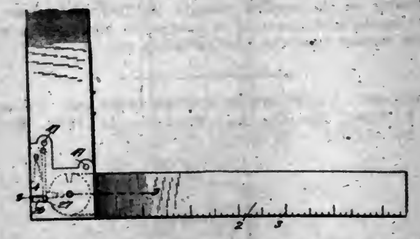
1,019,692. BUGGY-TOP. JOHN ARMSTRONG ORR, Westonia, Miss. Filed Dec. 1, 1910. Serial No. 595,065. (Cl. 21—62.)



In a vehicle, the combination, with a seat and a folding top, of a casing adapted to house the top when folded, laterally sliding curved covers for the portions of the casing arranged at the sides of the seat, said covers constituting the arms of the seat when closed and adapted to slide below the casing when opened, and a separate cover for the portion of the casing arranged behind the seat.

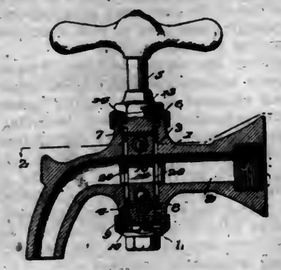
1,019,693. FOLDING SQUARE. JOSEPH O. OSTMAN, Hancock, Mich. Filed Mar. 17, 1910. Serial No. 549,824. (Cl. 73—116.)

1. A folding square comprising a plurality of sections, one of the said sections having a longitudinal slot in its side edge for receiving the other section said first named section having a recess at one end of the slot and the other section having a head pivoted in the recess, said head having spaced radial slots, a bar hinged at one end in the recess and having a catch at the opposite end for engaging the radial slots to hold the sections in adjusted position, and a spring pressing the bar toward the head, said bar having a lateral lug adjacent to the head, and the section having a slot through which the lug extends.



2. A folding square comprising a plurality of sections, one of the said sections having a longitudinal slot in its side edge for receiving the other section said first named section having a recess at one end of the slot and the other section having a head pivoted in the recess, said head having spaced radial slots, and a catch movable in the recess toward and from the head and engaging the slots to hold the sections in adjusted position, said catch having a lateral lug, and the section a slot through which the lug extends.

1,019,694. FAUCET. ADOLF R. E. PAUL, Brooklyn, N. Y. Filed Apr. 21, 1911. Serial No. 622,638. (Cl. 137—7.)

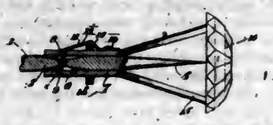


In a faucet, a body having a passage extending therethrough, and a bore intersecting the passage, a stem rotatably fitting in the bore and formed with an opening arranged to aline with the passage, a bushing comprising sections fitted about the stem and formed at their opposing edges with notches, the said notches registering, studs projecting from the stem and fitting in the registering notches thereby to hold the sections of the bushing for rotation with the stem, the said sections of the bushing being formed upon their inner sides with studs and the stem being formed with transverse openings receiving the said studs upon the sections of the bushing, the said studs upon the said bushing sections having reduced ends, and springs arranged in the openings in the stem and fitted at their ends over the said reduced ends of the studs, the said springs serving to expand the sections of the bushing against the wall of the bore.

1,019,695. COMBINED GUARD AND PROTECTOR FOR HAT-PINS. SARAH G. K. PAYNE, Greenport, N. Y. Filed Apr. 18, 1911. Serial No. 621,791. (Cl. 24—155.)

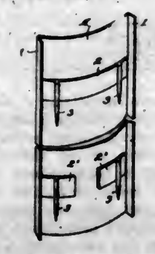
A pointed pin having an opening adjacent the point, a protector for the point of the pin embodying a member embracing the pointed end of the pin and provided with an opening therein, a spring having an inclined portion.

the said spring being secured to the member and having a pin engaging portion for engaging the pin to hold the same against disengagement from the member, and a ring



slidable on the member beneath the inclined portion of the spring and operating to release the pin-engaging portion thereof from the opening in the pin.

1,019,696. VENTILATOR AND DEFLECTOR. THOMAS T. PEDDY, Bienville, La. Filed Dec. 13, 1910. Serial No. 597,021. (Cl. 98—21.)



1. A railroad car having window frames, vertically disposed cleats adjacent to said frames, supporting members secured adjacent to and slightly spaced from the cleats, and a deflecting shield connected detachably with the supporting members and having a flange engaging the rear edge of one of the cleats and lying between and simultaneously engaging and held by such cleat and the proximate supporting members.

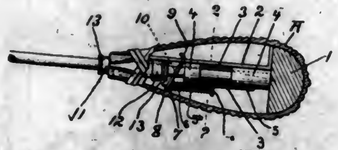
2. A railroad car having window frames, vertically disposed cleats adjacent to said frames, supporting members secured adjacent to and slightly spaced from the cleats, said supporting members including apertured plates or bracket members having curved front edges extending outwardly and rearwardly from the car body, and a deflecting shield provided upon the rear side thereof with members having downwardly extending fingers adapted to engage the apertured brackets, and said shield being provided with a flange engaging and securely held between the rear edge of one of the vertical cleats and the adjoining supporting members.

3. A railroad car having window frames, vertically disposed cleats adjacent to said frames, supporting devices adjacent to and spaced from the cleats, said supporting devices including apertured plates having upwardly and downwardly extending lugs provided with apertures for the passage of securing members, said plates being formed with edges curved to project outwardly from the body of the car, and a curved deflecting shield engaging the curved edges of the supporting plates and provided upon its rear side with fingers spaced from the rear face of the shield and adapted to engage the apertured supporting members.

1,019,697. HAT-PIN PROTECTOR. JOHN O. PELCHAT and HILAIRE PELCHAT, Central Falls, R. I. Filed Apr. 11, 1911. Serial No. 620,325. (Cl. 24—155.)

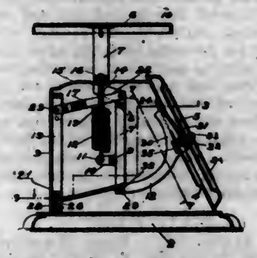
1. A hat pin guide comprising a hollow body portion, a stop at one end thereof, a member extending longitudinally of the body portion, a hat pin guide carried by said member, a tubular member movable within the body portion, and a pin locking member normally held in locking position between the tubular member and the pin guide and adapted to be moved into non-locking position by the tubular member when the latter is pressed against the same.

2. The combination with a hollow body portion, of a pin guide arranged therein comprising a grooved member and a plurality of guide eyes at each end of the grooved member, a tubular member movably mounted within the body portion, a perforated pin locking plate arranged between the tubular member and the pin guide, means normally holding said plate in locking position, said plate adapted to be moved into non-locking position when the tubular member is pressed against the same.



3. The combination with a tubular body portion, of a member extending longitudinally of the body portion, a plurality of guide eyes carried by said member, the member and eyes being adapted to receive the pointed end of a pin, a yielding plate connected to the longitudinally extending member and having an opening therein for the passage of the pin, a spring normally pressing said plate to hold the opening out of alinement with the eyes, and a tubular member movable within the body portion and adapted to bear against said plate to bring the opening therein into alinement with the eyes when the tubular member is pressed inward.

1,019,698. WEIGHING-SCALE. WILLIAM N. PELOUZE, Chicago, Ill. Filed Feb. 12, 1910. Serial No. 543,638. (Cl. 73—46.)



1. A weighing-scale having an inclined circular-scale plate, an index-hand adapted to sweep said plate and a spur gear adapted to move said hand in combination with a pivotally mounted scale-lever and a curved rack formed integrally therewith, the teeth of said rack having parallel side faces adapted to engage the teeth of said gear in parallel relation, to move said hand, substantially as described.

2. A weighing-scale having a scale-plate, an index hand adapted to sweep said plate and a pinion adapted to move said hand, in combination with a pivotally mounted scale-lever, a toothed-rack integral with said lever to engage said pinion to move said hand, and a spring acting on said lever to hold said pinion and said rack in operative engagement with each other with a yielding pressure, substantially as described.

3. A weighing-scale comprising a suitable frame in combination with a load-post, parallel link-members connecting said post and frame, counter-balancing means connected with said load-post, a curved rack formed up integrally from the free end of one of said link-members, an inclined scale-plate, an index-hand adapted to sweep said plate and a pinion adapted to be engaged by said rack to move said hand, and a spring acting against said link member for maintaining said rack in engagement with said pinion, substantially as described.

4. In a weighing-scale the combination with an inclined scale-plate, an index-hand adapted to sweep said plate and a spur-gear adapted to move said hand, of a frame, a load-post, parallel link-members connecting said frame and post, counter-balancing means connected to said load-post, a toothed curved rack integral with one of said link-members adapted to engage said gear to move said hand, and a compression spring between said load-post and said rack carrying link-member whereby said rack and said gear are yieldingly held in engagement with each other, substantially as described.

5. In a weighing-scale a suitable casing, a frame fixed within said casing, a load-post, parallel link-members connecting said post and frame, a balance-spring connected to said load-post, an inclined scale-plate, a hand adapted to sweep said plate, a gear adapted to move said hand, a curved laterally projecting toothed rack formed integrally with the lower link member adapted to engage said gear to move said hand, the teeth of said rack having parallel side faces adapted to engage the teeth of said gear in parallel relation, and having their axes disposed on lines radial to the pivotal center of said link, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,019,699. RUNAWAY-STOP. JOHN PETERSON, New York, N. Y. Filed Sept. 20, 1911. Serial No. 650,410. (Cl. 39—103.)



1. In combination with a roadway, a normally inoperative, movable barrier adapted when projected into an operative position to be engaged by a vehicle traveling along said roadway, and a normally inoperative controlling member for said barrier, said controlling member being adapted to be operated by the vehicle.

2. In combination with a roadway, a normally inoperative, movable barrier adapted when projected into an operative position to be engaged by a vehicle traveling along said roadway, a normally inoperative controlling member for said barrier, said controlling member being adapted to be operated by the vehicle, and means for rendering said last-mentioned member operative.

3. In combination with a roadway, two normally inoperative members adapted to be successively engaged by a vehicle traveling along said roadway, when said members are projected, one of said members controlling the other.

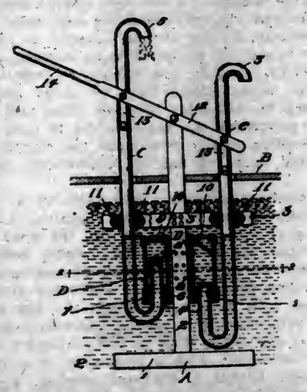
4. In combination with a roadway, two normally inoperative members adapted to be successively engaged by a vehicle traveling along said roadway, when said members are projected, one of said members controlling the other, said other member constituting a movable barrier, and means for controlling the movement of said barrier.

5. In combination with a roadway, a normally inoperative releasing member, means for setting said releasing member whereby it assumes an operative position, a normally inoperative, movable barrier, means for holding said barrier in a normal, inoperative position, and means connecting said releasing member and said last-mentioned means, whereby the engagement of said releasing member by a vehicle releases said barrier.

[Claims 6 to 14 not printed in the Gazette.]

1,019,700. PUMP. CHARLES F. PRESCOTT, Sunnyside, Wash. Filed Nov. 2, 1907. Serial No. 400,327. (Cl. 103—72.)

In a pump, a supporting post U-shaped straps mounted on the supporting post with their middle portions extending outwardly of said post and their terminals engaging the post, cylinders secured by the straps in vertical relation to each other and to the post, each of said cylinders being provided with inwardly directed extensions forming stops, flap valves hinged to the upper ends of the cylinders and adapted to engage the stops thereof, lifting elements having upturned intake ends disposed in the cylinders



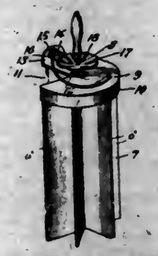
and adapted to engage the stops of said cylinders, flap valves carried by said intake ends, means for guiding the movement of the lifting elements, a lever mounted on the upright end of the supporting post and links pivotally connecting the lever with the lifting elements.

1,019,701. MOP-HEAD. ALBERT RANSOM, Chicago, Ill., assignor to Chicago Feather Duster Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 2, 1911. Serial No. 658,283. (Cl. 15—56.)



A mop head including a socket having one end compressed and the other adapted for attachment to a handle, a wire extending through the compressed portion to opposite sides of the socket and provided with a return bend at each end, the terminals of the wire extending within the socket.

1,019,702. MEASURING DEVICE FOR POWDER-BOXES. BEVERLY M. ROBINSON, Calgary, Alberta, Canada. Filed May 24, 1911. Serial No. 629,124. (Cl. 73—135.)



1. The combination with a receptacle, of a measuring device, comprising a partitioning element removably insertible in the receptacle, a revoluble cover connected with said element and adapted to close the receptacle, and having a discharge opening therein adapted to aline with the spaces formed by the partitioning element, a hinged flap carried by the cover and adapted to close the opening therein, means spaced from the cover and acting upon the

flap for sustaining the same closed and provided with slots permitting the flap to swing to open position on the revolving of the cover upon the receptacle.

2. The combination with a receptacle, of a measuring device, comprising a partitioning element removably insertible in the receptacle, a revoluble cover connected with said element and adapted to close the receptacle, and having a discharge opening therein adapted to aline with the spaces formed by the partitioning element, a hinged flap carried by the cover and adapted to close the opening therein, means spaced from the cover and acting upon the flap for sustaining the same closed and provided with slots permitting the flap to swing to open position on the revolving of the cover upon the receptacle, and means acting upon the flap to automatically open the same.

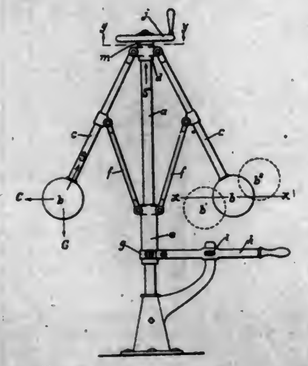
3. The combination with a receptacle, of a revoluble cover therefor having a discharge opening, a radially winged element loosely connected with the cover and insertible within the receptacle for forming independent compartments therein, a flap closing said opening and having a fin rising therefrom, and a stationary slotted element acting upon the fin to sustain the flap normally closed but permitting it to open on the alinement of the fin with any one of the slots in said stationary element.

4. The combination with a receptacle, of a revoluble cover therefor having a discharge opening, a radially winged element loosely connected with the cover and insertible within the receptacle for forming independent compartments therein, a flap closing said opening and having a fin rising therefrom, a stationary slotted element acting upon the fin to sustain the flap normally closed but permitting it to open on the alinement of the fin with any one of the slots in said stationary element, and a spring fixed to the cover and engaged with the fin to cause the automatic opening of the flap when the discharge opening in said cover alines with each compartment in the receptacle.

5. The combination including a receptacle, of a pocketed core, a valved cover coöperative with the core and engaged with the receptacle for closing the same, and means coöperative with the valve of the cover for preventing the opening of said valve.

[Claims 6 to 10 not printed in the Gazette.]

1,019,703. APPLIANCE FOR ILLUSTRATING THE SPECIFIC RELATION THAT EXISTS BETWEEN THE FACULTIES OF SENSATION AND EMOTION IN THE ANIMAL ORGANISM. SOCRATES SCHOLFIELD, Providence, R. I. Filed Nov. 4, 1909, Serial No. 526,298. Renewed Aug. 1, 1911. Serial No. 641,697. (Cl. 35—12.)



1. In a schematic appliance for illustrating the specific relation that exists between the faculties of sensation and emotion in the resilient controlling element of conscious sensibility in the animal organism, the combination of a stationary, upright spindle, a rotary pendulum governor supported for axial rotation upon said spindle, and having a rotary supporting collar, a sliding sleeve, arms jointed to the collar, balls carried by the arms, and connecting links between the arms and sliding sleeve, with means for imparting rotary movement to the supporting collar, and a hand operated lever connected with the sliding sleeve, whereby the balls of the governor may be optionally forced from their plane of rotary equilibrium and the resulting resilient sensibility of the governor be made manifest.

2. In a schematic appliance for illustrating the specific relation that exists between the faculties of sensation and emotion in the resilient controlling element of conscious sensibility in the animal organism, the combination of a stationary upright spindle, a rotary pendulum governor supported for axial rotation upon said spindle, and having a rotary supporting collar, a sliding sleeve, arms joined to the collar, balls carried by the arms, and connecting links between the arms and the sliding sleeve, with a mechanical engaging and releasing movement for imparting rotary motion to said governor in one direction and not in the other, and a hand operated lever connected with the sliding sleeve, whereby the balls of the governor may be optionally forced from their plane of rotary equilibrium, and the resilient sensibility of the governor be made manifest.

1,019,704. CHECKREIN-HOOK FOR HARNESS. FRANK B. SHAW, Middleville, Mich., assignor of one-half to Glenn D. Whitmore, Middleville, Mich. Filed Apr. 5, 1910. Serial No. 553,549. (Cl. 54—62.)



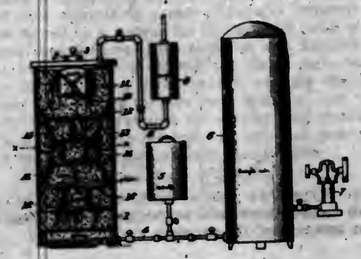
1. In a device of the class described, a rearwardly extended hook, a closure pivoted at one end to the hook and extending downward across the opening of the hook, and a spring formed of a wire looped around the closure and slidably engaging the same, said wire also being crossed beneath the hook and laterally engaging the same and also having its ends embracing the hook and oppositely inserted in a transverse opening in the hook.

2. In a device of the class described, a hook, a closure pivoted to the hook at one end and extending across the opening thereof, and a spring formed of a wire looped around the said closure and slidably traversing the same at one end of the loop and crossed at the other end of the loop and thence extended to embrace the hook and having inwardly turned ends pivotally inserted in an opening in the hook.

1,019,705. PROCESS OF MANUFACTURING CARBURETED HYDROGEN GAS. WILLIAM J. WATKINS, Fort Worth, Tex., assignor to O. G. Hurdleston, Fort Worth, Tex. Filed Dec. 7, 1911. Serial No. 664,434. (Cl. 48—199.)

1. The herein described process of manufacturing gas consisting of placing within an inclosure alternate layers of scraps of metal and fiber, arranging within said inclosure adjacent to said layers, a mixture of black oxid of manganese, carbonate of ammonia, hyposulfite of sodium, and sulfate of copper, saturating the entire mass with an acid, and then saturating the entire mass with a liquid hydrocarbon.

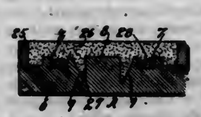
2. The herein described process of manufacturing gas consisting of placing within an inclosure alternate layers of scraps of metal and fiber, arranging within said inclosure and in communication with said layers a mixture of black oxid of manganese, carbonate of ammonia, hyposulfite of sodium, and sulfate of copper, treating the entire mass with an acid, supplying to the said entire mass a liquid hydro-carbon, and applying air under pressure to the entire contents of said inclosure.



3. The herein described process of manufacturing gas consisting of placing within an inclosure a layer of zinc scraps on the bottom of the inclosure, then alternate layers of fiber and iron scraps above the zinc scraps, and arranging about said layers within said inclosure a mixture of gas making chemicals, first saturating the entire mass with an acid and then with a liquid hydrocarbon, and applying air under pressure to the entire mass.

4. The herein described process of manufacturing gas consisting of placing within an inclosure a layer of zinc scraps on the bottom of the inclosure, then alternate layers of fiber and iron scraps above the zinc scraps, and arranging about said layers within said inclosure a mixture of black oxid of manganese, carbonate of ammonia, and hyposulfite of sodium, treating the entire mass first with an acid and then with a liquid hydrocarbon, and applying air-pressure to the entire mass.

1,019,706. METHOD OF MOLDING RAIL-JOINT CASTINGS. CHARLES A. WEEKS, Philadelphia, Pa., assignor to The Rail Joint Company, New York, N. Y., a Corporation of New York. Original application filed May 11, 1908, Serial No. 432,009. Divided and this application filed Aug. 25, 1909. Serial No. 514,595. (Cl. 22—197.)



The herein described method of preparing molds for rail joint bars consisting in separately and independently forming, by power ramming, the drag and cope sections of a sand mold from two complemental pattern forms having respectively the configuration of the outside and inside of the same rail joint bar, and, during the formation of one of said sections in producing from the body sand thereof, in variable positions and sizes, sand core projections for the bolt holes of the casting, and then assembling in superposed relation the said two mold sections.

1,019,707. SHELL FOR CORE-BARRELS FOR ROTARY DRILLS. RALPH WILCOX, Negaunee, Mich. Filed July 12, 1911. Serial No. 638,189. (Cl. 125—10.)

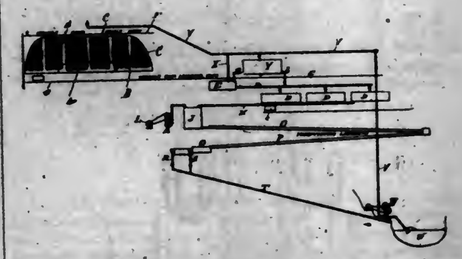
1. The combination with an inner and an outer tube core barrel and a bit, of a shell having recessed screw threaded ends in the bore thereof for connecting the outer tube of the core barrel and the bit to the shell, and the central portion of the bore of the shell provided with screw threads for connecting the inner tube of the core barrel to the shell.

2. The combination with an inner and an outer tube core barrel and a bit, of a shell having recessed ends in the bore thereof for the reception of the outer tube of



the core barrel and the bit, and the inner tube of the core barrel received at the central portion of the bore of the shell.

1,019,708. PROCESS OF TREATING COPPER ORES OR COPPER-ORE-MILL TAILINGS. JOHN W. BENNIE, Clifton, Ariz. Filed May 18, 1911. Serial No. 628,023. (Cl. 75—18.)



1. The process substantially as herein described of treating raw copper containing ores or copper ore mill tailings, which comprises covering a roast heap of iron sulfids or cuprous iron sulfids with raw copper containing ores or copper ore mill tailings, without roasting said raw ores or tailings, and permitting the gases generated in the roast heap to permeate the raw ores or tailings and react therewith in the presence of moisture, leaching the so treated copper containing ores or tailings with a suitable leaching solution, and precipitating the copper from the solution.

2. The process substantially as herein described of treating raw copper containing ores or copper ore mill tailings, which comprises covering a roast heap of iron sulfids or cuprous iron sulfids with raw copper containing ores or copper ore mill tailings, without roasting said raw ores or tailings, and permitting the gases generated in the roast heap to permeate the raw ores or tailings and react therewith in the presence of ferrous sulfate, leaching the so treated copper containing ores or tailings with a suitable leaching solution, precipitating the copper from the solution, and returning the effluent liquors after precipitation to a fresh quantity of the copper containing ores or tailings undergoing treatment.

3. The process substantially as herein described, of treating raw copper containing ores or copper ore mill

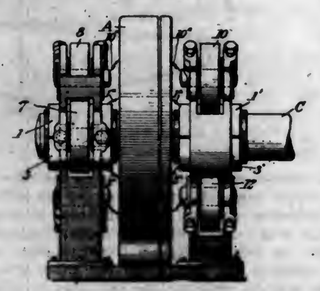
tailings, which comprises covering a roast heap of iron sulfids or cuprous iron sulfids with raw copper containing ores or copper ore mill tailings, without roasting said raw ores or tailings, and permitting the gases generated in the roast heap to permeate the raw ores or tailings and react therewith in the presence of ferrous sulfate and sodium chlorid, leaching the so treated copper containing ores or tailings with a suitable leaching solution, precipitating the copper from the solution, and returning the effluent liquors after precipitation to a fresh quantity of the copper containing ores or tailings undergoing treatment.

4. The process substantially as herein described, of treating raw copper containing ores or copper ore mill tailings, which comprises covering a roast heap of iron sulfids or cuprous iron sulfids with raw copper containing ores or copper ore mill tailings, without roasting said raw ores or tailings, and permitting the sulfurous and sulfuric oxids generated in the roast heap to permeate the raw ores or tailings and react therewith, thereby forming sulfites and sulfates of copper with the content of the copper ores or tailings, then leaching the so treated copper ores or tailings with a suitable leaching solution of dilute acid or ferric salts, to produce a solution of copper sulfate, and finally precipitating copper from the solution.

5. The process substantially as herein described, of treating raw copper containing ores or copper ore mill tailings, which comprises covering a roast heap of iron sulfids or cuprous iron sulfids with raw copper containing ores or copper ore mill tailings, without roasting said raw ores or tailings, and permitting the sulfurous and sulfuric oxids generated in the roast heap to permeate the raw ores or tailings and react therewith, thereby forming sulfids and sulfates of copper with the content of the copper ores or tailings.

[Claims 6 to 11 not printed in the Gazette.]

1,019,709. ELECTRIC MOTOR AND DYNAMO. FREDERICK J. B. CORDEIRO, U. S. Navy. Filed Mar. 6, 1911. Serial No. 612,719. (Cl. 172—36.)



A dynamo electric machine, comprising a stator and rotor, each having an even number of poles, wound with more than one circuit, equi-distant wheels forming electrodes, commutator segments on the axle of the rotor, bearing upon an equal number of said equi-distant wheels, opposite the poles of the stator, the said wheels serving as roller bearings for the shafts, and as electrodes permitting the successive automatic combination of the various circuits, to produce a continuous torque in one direction, upon the poles of the rotor, substantially as described and for the purpose specified.

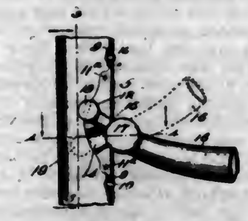
1,019,710. UNION SUIT. WILLIAM S. ELDER, Philadelphia, Pa., assignor to Julius Hirsh, Philadelphia, Pa. Filed Nov. 22, 1910. Serial No. 593,696. (Cl. 2—144.)

A three-part union suit composed of a seamless tubular body and oppositely flaring leg members united to said body member at the waist by a seam at the back and by reversely disposed diagonal seams at the front, the leg



members having below said seams overlapping flaps both at front and rear of the garment.

1,019,711. BOW-COUPLING FOR CARRIAGE-TOPS. FRED E. GILBERT, Jacksonville, Fla. Filed May 12, 1911. Serial No. 626,791. (Cl. 21—62.)



1. In a coupling for carriage bows, the combination of a suitably supported socket member comprising a spaced separable wall of a contour to form a concave seat with a slotted neck leading therefrom to an enlarged opening, and a ball member mounted at the end of a bow, said ball member comprising an abutment, a ball and a shank spacing said ball and abutment apart, and coöperating with said socket member to lock and release the end of the bow, substantially as described.

2. In a coupling for carriage bows, the combination of a suitably supported socket member comprising a wall having a spaced resilient central portion provided on its outer edge with a concave seat, a slotted neck connecting said concave seat with an enlarged opening, said neck and opening extending the depth of said wall, and a ball member mounted at the end of a bow having an abutment, a ball, and a shank spacing said ball and abutment apart, and coöperating with said socket member to lock or release the end of the bow, substantially as described.

3. In a coupling for carriage bows, the combination of a suitably supported socket member comprising a wall having a centrally disposed spaced resilient portion, a concave seat formed on the outer edges of said spaced wall, with a slotted neck portion leading from said concave seat to an enlarged opening, said neck portion and opening extending the full depth of said wall and said opening terminating in a second concave seat of larger diameter than said first seat, and a ball member at the end of a bow comprising an enlarged ball adapted to fit within said second-named seat and provided with a shank member terminating in a smaller ball adapted to fit in said first-named concave seat, whereby the smaller ball may be inserted through said enlarged opening, and the bow swung around causing said spaced wall to spread until said smaller ball is seated and locked in position, substantially as described.

4. In a carriage top, the combination of a hollow standard bow provided with a pair of socket members near its upper and lower ends secured therein in reversed positions, said socket members comprising a centrally spaced

resilient wall having concave seats formed at their outer edges and connected by slotted necks with openings having greater diameters than said concave seats, said necks and openings extending the full depth of said walls and said openings registering with apertures in said standard bow, and a detachable bow provided at its end with a ball member comprising a pair of balls of different diameter connected by a shank, the smaller ball being of lesser diameter than said enlarged openings and adapted to fit within said concave seat and the larger ball being of greater diameter than said openings, whereby the smaller ball may be inserted through said openings and the detachable bow swung around for seating said smaller ball and form an interlock between the ball and socket members of the coupling, substantially as described.

1,019,712. OFFSET-SHOE AND CAST-IRON OFFSET-SHOE GUIDE. ALBERT CLARENCE GRAHAM, Oilfields, Cal. Filed Dec. 12, 1910. Serial No. 596,778. (Cl. 166—8.)



1. In combination, a casing, a shoe guide attached to said casing, said shoe guide having a bore in communication with the bore of said casing, and a closure at the outer end of the shoe, closing said bores said closure adapted to be drilled out to open communication through said casing.

2. In a casing connection, a shoe guide having a curved offset, by means of which a connection may be made with a casing, by inserting the guide in the end of the casing, the end of the guide adapted to be inserted in the casing being closed.

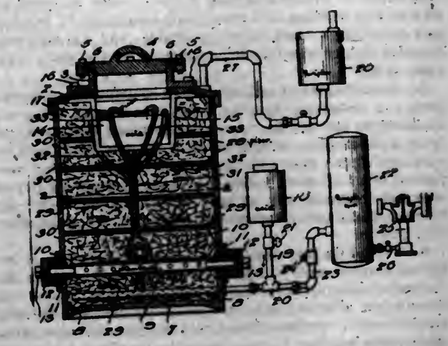
3. A shoe for use in a casing connection in the shape of an egg, having one end open and the other closed, said closed end adapted to be drilled open.

1,019,713. UNION OVERALL-GARMENT. LOUIS A. HAZARD, Baltimore, Md., assignor to Wise Brothers, New York, N. Y., a Firm. Filed Nov. 21, 1910. Serial No. 593,354. (Cl. 2—144.)



A union garment comprising a trousers part of two front and two back pieces of fabric,—the two front pieces being shorter than the two back pieces and each shorter front piece being united to a longer back piece of fabric by a side seam which terminates below the upper edge of the shorter front piece to leave a side slit, and the jacket part of the garment having two front pieces of fabric and a back fabric,—the latter being longer than the front pieces, the garment having a central front opening from the neck to the crotch,—one upper and one lower front piece of the garment being united by a cross-band which extends from the slit at one side to the central front opening and the other upper and lower front pieces of said garment being united by another cross-band which extends from the slit at the other side to said central front opening, and the inside of the back fabric having a loop to sustain a suspender attachment to engage the longer rear pieces of the trousers part.

1,019,714. APPARATUS FOR MAKING CARBURETED HYDROGEN GAS. JOSEPH R. HERNDON, Fort Worth, Tex., assignor to Oxine Gas Manufacturing Company, Fort Worth, Tex., a Corporation of Texas. Filed Jan. 22, 1912. Serial No. 672,740. (Cl. 48—117.)

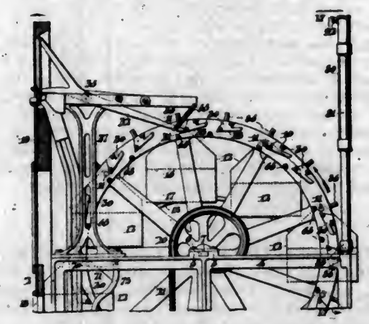


1. Apparatus for generating gas comprising a tank, alternate layers of metal scraps and of fiber, a central fiber stem coöperating with all of said layers of fiber for distributing liquids throughout said tank, perforated pipes in the lower part of said tank for containing chemicals, flanged nipples attached to said tank, flanged bushings screwed into said nipples and projecting in said tank, plugs screwed into said bushings and supporting said perforated pipes, a vessel for containing acid and a vessel for containing liquid hydrocarbon mounted in said tank, and means for forcing air into the lower part of said tank.

2. Apparatus for generating gas comprising a tank, alternate layers of metal scraps and of fiber mounted in said tank perforated pipes within said tank for containing chemicals, devices for mounting said pipes and making provision for removal of said pipes through the side of said tank, means for distributing acids and liquid hydrocarbons throughout said tank, and means for forcing air into said tank.

3. Apparatus for generating gas comprising a tank, alternate layers of metal scraps and of fiber mounted in said tank, perforated pipes in the lower part of said tank, devices for mounting said pipes and making provision for removal of said pipes through the sides of the tank, gas making chemicals in said pipes, a vessel for containing acid mounted in the upper part of said tank, fiber ropes for distributing acid from said vessel throughout said tank, a vessel mounted within said vessel for containing liquid hydrocarbon, means for distributing the hydrocarbon throughout said tank to said metal scraps and fiber, and means for forcing air into said tank under pressure.

1,019,715. VENDING-MACHINE. OTTO JAEGER, Norristown, Pa., assignor to The Underwriters Company, Philadelphia, Pa., a Corporation of Delaware. Filed Jan. 18, 1911. Serial No. 603,221. (Cl. 211—8.)



1. A vending machine including in combination, a casing having a delivering opening therein, a rotating carrier, supports mounted on said carrier, means for rotating said carrier to bring said supports in succession in front of said opening, a main stopping device, and an auxiliary stopping device operable independently of the main stopping device.

2. A vending machine including in combination, a casing having a delivering opening therein, a carrier, supports mounted on the carrier, means for rotating the carrier to bring said supports in succession in front of said opening, a main stopping device for holding said carrier with a support in front of said opening, an auxiliary stopping device operated independently of said main stopping device for holding said carrier temporarily between the main stopping pionts.

3. A vending machine including in combination a rotating carrier, and means for rotating said carrier including a cam, an operating member attached at one end to said cam and resting on the periphery thereof, whereby a pull on said member rotates said carrier, said cam being so disposed relative to the carrier as to afford a shifting leverage for the operating member so as to counterbalance the carrier as the same is unloaded.

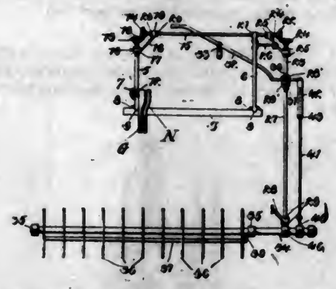
4. A vending machine including in combination, a rotating carrier and means for rotating the carrier including a cam member attached to the carrier and having a peripheral groove formed therein, a coiled spring attached to said cam member and freely resting in said groove, and means for placing said coiled spring under tension, said cam member being so disposed relative to the carrier so as to afford a shifting leverage for the coil spring so as to counterbalance the carrier as the same is unloaded.

5. A vending machine including in combination, a rotating carrier, and means for rotating said carrier, including a cam member attached to said carrier, and having a peripheral groove therein, a coiled spring attached at one end to said cam member and lying freely in said groove, and means attached to the other end of said coiled spring, for placing the same under tension, said cam member being formed on an increasing radius from the free side thereof, toward the attached end of the coiled spring, whereby as the carrier rotates, the leverage of the coiled spring, increases.

[Claims 6 to 12 not printed in the Gazette.]

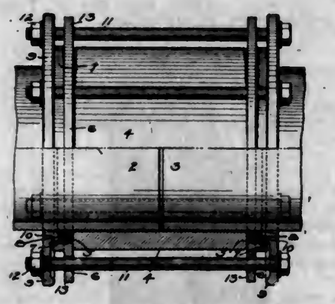
1,019,716. DISCHARGING MECHANISM FOR GRAIN-BINDING MACHINES. WALTER SCOTT KOONTZ, Adeline, Ill. Filed Feb. 1, 1911. Serial No. 605,892. (Cl. 56—120.)

1. The combination with a knotting mechanism of a grain binder including a shaft, of a movable receiver for the bound bundles arranged beneath the knotting mechanism, means normally acting to elevate said receiver into position to receive the bundles, a shaft, a plate fixed on said shaft, an arm carried by the receiver engaging said plate to normally hold the receiver in its elevated position under the cumulative weight of the bundles, power transmission means between the shaft of the knotting mechanism and said last named shaft, a clutch normally connecting the same to rotate said shaft and move the plate thereon out of engagement with the arm carried by the receiving mechanism whereby the receiver is moved to its discharging position under the weight of the bundles, and means for automatically operating the clutch in the latter movement of the receiver to momentarily discontinue the rotation of said shaft.



2. The combination with a knotting mechanism of a grain binder including a shaft, of a movable receiver for the bound bundles arranged beneath the knotting mechanism, means for normally holding the receiver in an elevated position, a vertically disposed shaft, a plate fixed on said shaft having a recess in its edge, an arm fixed to the receiver extending at its free end under said plate to maintian the receiver in its elevated position under the cumulative weight of the grain bundles, power transmission means mounted on the frame of the machine and geared to the shaft of the knotting mechanism, a clutch connecting said transmission means with said vertical shaft to normally rotate said shaft and move the notch in said plate into alinement with the arm of the receiver to permit the receiver to move to its discharging position under the weight of the grain bundles, and means connected to said receiver and to said clutch to automatically operate the clutch and momentarily discontinue the rotation of said shaft when the receiver moves to its discharging position.

1,019,717. CLAMPING DEVICE FOR PIPE-JOINTS. RAYMOND S. LOAD, Pittsburgh, Pa. Original application filed Sept. 20, 1909, Serial No. 518,641. Divided and this application filed Oct. 22, 1910. Serial No. 588,458. (Cl. 137—28.)

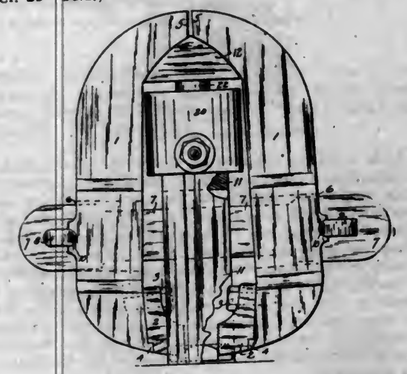


1. In a device of the character described, the combination with the pipe sections and sleeve portion receiving the meeting ends of the pipe sections, of a ring member in abutment with an end of the sleeve portion and provided with an annular flange disposed oppositely to the pipe wall, a packing ring interposed between the flange and pipe wall, and means for forcing the packing ring home between the flange and pipe wall.

2. In a device of the character described, the combination with the pipe sections and sleeve portion receiving the meeting ends of the pipe sections, of a ring member surrounding a pipe section and in abutment with an end of the sleeve portion and comprising a radial flanged portion and a flange portion lying parallel to the pipe wall, a packing ring interposed between the latter flange and the pipe wall, and means for forcing the packing ring home between the flange and pipe wall.

3. In a device of the character described, the combination with the pipe sections and sleeve portion receiving the meeting ends of the pipe sections, of ring members in abutment with the ends of the sleeve portion, packing rings interposed between the ring members and pipe walls, second ring members abutting against the packing rings, and clamping means for moving the latter ring members toward each other, the clamping means extending from one ring member to the other end engaging with the first named ring members.

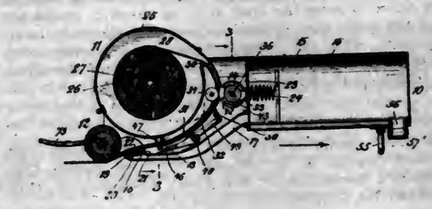
1,019,718. BOLT-EXTRACTOR. JOHN A. MAGNUSSON, Tacoma, Wash., assignor of one-half to Peter B. Tanzy, Tacoma, Wash. Filed Oct. 7, 1911. Serial No. 653,370. (Cl. 29—86.1.)



1. In a device of the class described, the combination of means for engaging the bolt to be extracted; means for engaging the frame from which the bolt is to be extracted; a cylinder containing a fluid and adapted to act on the frame engaging means; a piston therein, said piston having a shank extending through the cylinder and adapted to act on the bolt engaging means; a leather cup secured to said piston; a spring pressing outward on said cup to insure a tight contact between the leather cup and the cylinder walls at all times; a smaller cylinder containing a fluid and connected to said first cylinder below the piston; a plunger in said smaller cylinder; and means whereby said plunger may be moved whereby reaction is exerted between the large cylinder and the piston therein to extract the bolt.

2. In a device of the class described, the combination of means for engaging the bolt to be extracted; means for engaging the frame from which the bolt is to be extracted; a cylinder containing a fluid and adapted to act on the frame engaging means; a piston therein, said piston having a shank extending through the cylinder and adapted to act on the bolt engaging means; a smaller cylinder containing a fluid and connected to said first cylinder below the piston; a free plunger in said smaller cylinder; and a screw rod adapted to press against said plunger to move it in said smaller cylinder whereby reaction is exerted between the larger cylinder and the piston therein to extract the bolt.

1,019,719. MACHINE FOR APPLYING LABELS. HYLA F. MAYNES, Gaines, Pa. Filed June 16, 1910. Serial No. 567,125. (Cl. 216—29.)



1. A hand label-applying machine having a part constituting a handle by which it may be grasped for operating purposes, the said machine including a label applying element having a fixed axis, and adapted to be employed for applying a label by and in a complete movement of the whole machine, means for supporting a label strip, a reciprocating manual element located in proximity to the handle part, and means operated thereby for feeding a free end of the label strip to the said label applying element.

2. A hand label-applying machine having a part constituting a handle by which it may be grasped for operating purposes, the said machine including a label applying roller, a magazine for labels, a reciprocating manual operating element in proximity to the handle part, and means operated thereby for feeding a free end of the label to a point beneath the said label applying roller, the portion of the said machine directly beneath the said roller being unobstructed whereby the machine may be moved as a whole into position to cause the roller to press the label upon an object to be labeled, and the roller may thereafter be rotated, through its engagement with the labeled object, by a further movement of the machine parallel with the face of the object.

3. A hand label-applying machine having a part constituting a handle by which it may be grasped for operating purposes, the said machine including a freely mounted label applying roller, a magazine for labels, a reciprocating manual operating element in proximity to the handle part, a feeding device for the labels, and means directly connecting the said operating element with the said feeding device whereby a movement of the former will be transmitted to the latter to feed a free end of the label to a point beneath the label applying roller, the portion of the said machine directly beneath the said roller being unobstructed whereby the machine may be moved as a whole into position to cause the roller to press the label upon an object to be labeled, and the roller may thereafter be rotated, through its engagement with the labeled object, by a further movement of the machine parallel with the face of the object.

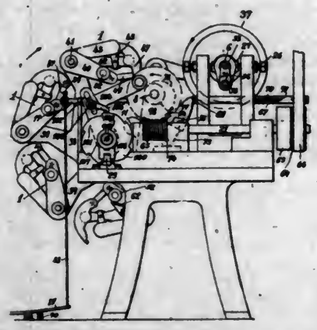
4. A hand label-applying machine having a part constituting a handle by which it may be grasped for operating purposes, the said machine including a label applying roller, a magazine for labels, a reciprocating manual operating element in proximity to the handle part, and means operated thereby, and wholly unconnected with the said label applying roller, for feeding a free end of the label to a point beneath the said label applying roller, the portion of the said machine directly beneath the said roller being unobstructed whereby the machine may be moved as a whole into position to cause the roller to press the label upon an object to be labeled, and the roller may thereafter be rotated, through its engagement with the labeled object, by a further movement of the machine parallel with the face of the object.

5. A hand label-applying machine having a part constituting a handle by which it may be grasped for operating purposes, the said machine including a label applying roller, a magazine for labels, a severing device arranged to the rear of the said roller, a reciprocating manual operating member in proximity to the handle part, and means operated thereby for feeding a free end of the label

from the said severing device to a point beneath the label applying roller, the portion of the said machine directly beneath the said roller being unobstructed whereby the machine may be moved as a whole into position to cause the roller to press the label upon an object to be labeled, and the roller may thereafter be rotated, through its engagement with the labeled object, by a further movement of the machine parallel with the face of the object.

[Claims 6 to 14 not printed in the Gazette.]

1,019,720. SAWING-MACHINE. THOMAS F. MORRISSEY, West Orange, N. J., assignor to United Button Company, a Corporation of New York. Filed July 25, 1910. Serial No. 573,799. (Cl. 143—57.)



1. In a sawing machine, a rotatable carrier, a saw rotating in a plane substantially parallel to the carrier, a plurality of workholders mounted on said carrier so as to be capable of having a movement on the carrier toward and away from the saw, means for intermittently rotating the carrier step by step to successively present the workholders adjacent to the saw, means for normally holding the workholders in a retracted position on the carrier out of the range of the saw, and means for successively moving the workholders outwardly on the carrier and into the range of the saw.

2. In a sawing machine, a rotatable carrier, a saw rotating in a plane substantially parallel to the carrier, a plurality of workholders mounted on said carrier so as to be capable of having a movement on the carrier toward and away from the saw, means for normally holding the workholders in their retracted position on the carrier out of the range of the saw, means for imparting an intermittent step by step movement to the carrier to successively present the workholders adjacent to the saw, and a cam making one revolution to each step by step movement of the carrier adapted to move a workholder outwardly on the carrier into the range of the saw.

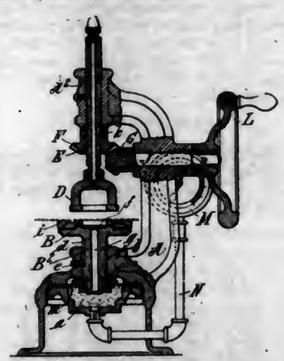
3. In a sawing machine, a saw rotating in one direction, a carrier, a workholder pivotally mounted on said carrier, and means for swinging said workholder around said pivot toward the saw in a direction opposite to that of the direction of rotation of the saw.

4. In a sawing machine, a saw rotating in one direction, a carrier arranged substantially parallel thereto and rotating in a convergingly curvilinear direction to the saw and in the same direction as the saw, a workholder pivotally mounted on said carrier, and means for swinging said workholder around said pivot toward the saw in a direction opposite to that of the direction of rotation of the saw and carrier.

5. In a sawing machine, a rotatable carrier, a saw rotating in a plane substantially parallel to the carrier, a plurality of workholders mounted on said carrier so as to be capable of having a movement on the carrier toward and away from the saw, means for normally holding the workholders in their retracted position on the carrier out of the range of the saw, a cam shaft, a drive shaft, a stopping and starting mechanism controlling said drive shaft, a latch for said stopping and starting mechanism, means for releasing said latch to cause rotation of the drive shaft, means for causing the drive shaft to impart one revolution to the cam shaft and to impart a movement to the carrier equal to the distance between adjacent workholders on the said carrier, a cam on said cam shaft adapted to move a workholder outwardly on the carrier into the range of the saw, and a restoring cam operated by said drive shaft for restoring the latch and for causing the drive shaft to stop.

[Claims 6 to 11 not printed in the Gazette.]

1,019,721. PAPER-TESTING MACHINE. CHARLES M. MUNSON, deceased, Chicopee, Mass., by Julia Munson, administratrix, Chicopee, Mass. Filed Oct. 14, 1911. Serial No. 654,734. (Cl. 73—51.)



1. In a testing machine of the character described, in combination, a liquid containing chamber, a platform, for supporting sheet material to be tested, vertically movable relatively to the chamber, a clamping member above and movable relatively to the platform, operative both to clamp the sheet material on the platform and to downwardly move the platform, an elastic diaphragm carried by the platform, and operable, by the displacement of the liquid in said chamber to exert a breaking action upon the sheet material, clamped on the platform, and means actuated by the descent of the platform for displacing said liquid for its action against and for the distention of the diaphragm.

2. In a testing machine, in combination, a frame constructed with a liquid containing chamber therein, and having a guide way through a portion thereof above the chamber, a platform having a hub-like stem with a passage endwise therethrough, which stem is fitted in said guide way with its lower end open to the chamber,—said platform having at its top an elastic diaphragm which closes the upper end of the passage, a clamp member above and movable relatively to the platform, operative both to clamp paper on the platform and to cause a downward movement of the platform whereby through means of its depending stem a displacement of the liquid in the chamber is caused for exerting a breaking action upon the paper, and a pressure indicator connected with the liquid chamber.

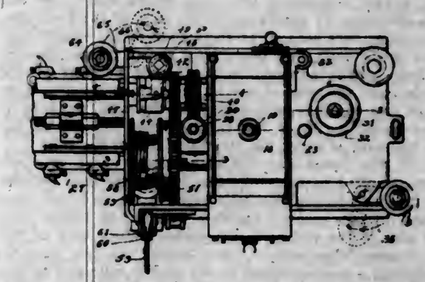
3. In a testing machine, in combination, a frame constructed with a liquid containing chamber therein and having a flexible diaphragm above the liquid which is in the chamber, and said frame having a guide way above said diaphragm and provided also with an overhanging head above the portion thereof which is provided with said guide way, a platform having a hub like stem with a passage endwise therethrough, which stem is fitted in said guide way with its lower end in communication with the liquid chamber, and said stem having at a lower portion thereof a connection with said diaphragm,—said platform having at its top an elastic diaphragm which closes the upper end of the passage, a shaft vertically movable in the upper overhanging head, having a clamp member at its bottom, and means for imparting vertical movements to said shaft.

4. In a testing machine, in combination, a liquid containing chamber having a flexible diaphragm above the liquid therein, a platform for supporting sheet material vertically movable relatively to the chamber, having a depending stem provided with a passage endwise therethrough, which stem has connection with said flexible diaphragm and the passage of which is in communication with the chamber below the diaphragm, said platform being also provided at its top with an elastic diaphragm forming a closure for the upper end of said passage, means for clamping paper on the platform, and an indicating pressure gage connected with the liquid containing chamber.

5. In a testing machine, in combination, a liquid containing chamber having a flexible diaphragm above the liquid therein, a platform for supporting sheet material vertically movable relatively to the chamber, having a depending stem provided with a passage endwise therethrough, which stem has connection with said flexible diaphragm, and the passage of which is in communication with the chamber below the diaphragm, said platform being also provided at its top with an elastic diaphragm forming a closure for the upper end of said passage, a member vertically movable relatively to the platform and operative both to clamp paper on the platform and to cause a descent of the platform, and means for imparting vertical movements to said member.

[Claims 6 to 8 not printed in the Gazette.]

1,019,722. MINING-MACHINE. RALPH E. NOBLE, Chicago, Ill., assignor to Morgan-Gardner Electric Company, Chicago, Ill. Filed Apr. 23, 1909. Serial No. 491,807. (Cl. 125—14.)



1. In a mining machine, the combination of a frame, a cutter bar projecting from one end of said frame, a winding drum mounted in said frame adjacent to said cutter bar, a cable engaging with said drum and adapted to be used for pulling said machine when the drum is turned, a capstan mounted at the opposite end of said frame, a rope adapted to be engaged by said capstan for pulling said machine, means for turning said drum and means for turning said capstan.

2. In a mining machine, the combination of a frame, a cutting device at one end of said frame, a winding drum mounted on said frame adjacent to the end carrying the cutting device, a cable engaging with said drum and adapted to be used for drawing the machine when the drum is turned, guide sheaves mounted on said frame for guiding said cable, a capstan mounted on the outer end of said frame, a rope for engagement with said capstan and adapted to move said machine when one end thereof is fixed and the other end drawn so that it will engage closely with the capstan, guide sheaves for said rope mounted on said frame, means for turning said winding drum and means for turning said capstan.

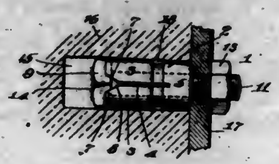
3. In a machine of the character described, the combination with the frame thereof, of means for applying power to the end of the frame adjacent to the cutting apparatus for feeding the machine forward, a guide rope having one end anchored behind the machine, and a snubbing post on the outer end of the frame, adapted to be engaged by said rope for controlling the movement of the machine.

4. A coal mining machine having a feeding mechanism for feeding the machine forward along the face of the wall, consisting in a forwardly projecting feeding cable and means on said machine for winding up said cable, and a controlling device comprising a guide rope having one end fixed at a point behind the machine and a snubbing post on the outer end of said machine, with which said rope is adapted to engage, the arrangement being such that the operator may hold the free end of the rope after it has been passed around the snubbing post while keeping adjacent to the machine.

5. In a mining machine, the combination of a frame, a chain support extending from one end of said frame, a motor mounted in said frame, a cutter chain engagingg with said support and driven by said motor, a winding drum mounted between said motor and the end of the frame carrying said chain support, gears for driving said drum from said motor, a clutch connected with said gears for controlling the movement of said drum, a cable engaging with said drum, means for holding the outer end of said cable so that the machine will move when the drum is turned, a capstan mounted on the opposite end of said frame from said drum, gears for driving said capstan from said motor, a rope, means for securing one end of said rope, whereby, when it is passed around the capstan and the free end drawn tight, the machine will be moved, and guide sheaves or rollers for said cable and rope.

[Claims 6 to 9 not printed in the Gazette.]

1,019,723. EXPANSION-BOLT. CARL PAULI, Roselle Park, N. J., assignor to Diamond Expansion Bolt Company, a Corporation of New York. Filed Oct. 4, 1910. Serial No. 585,262. (Cl. 85—2.)



1. A shield for an expansion bolt comprising an integral ring portion, a plurality of tapered arms or tines, each arm or tine being provided at its end with inclined surfaces on its edge forming substantially V-shaped slots and near its other end with a bending recess.

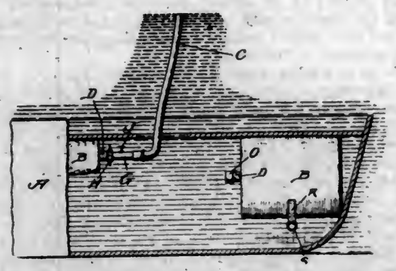
2. The combination of a shield having a series of longitudinal slots therein forming a plurality of longitudinally extending fingers, and a bolt having a polygonal head, and a polygonal nut, the sides of the head and of the nut being equal in number and also equal in number to the number of fingers and the angles of the head and of the nut being adapted to fit into the slots between the fingers of the shield for expanding the shield by the adjustment of the nut on the bolt.

3. The combination of a bolt provided with an angular head and an angular nut, a shield for an expansion bolt comprising an integral ring portion, a plurality of tapered arms or tines, enlarged segments on the edge of each arm or tine, each segment being provided on its edge with inclined surfaces forming substantially V-shaped slots, the angular head and angular nut being both removable and interchangeable to coöperate with the V-shaped slots to expand the shield.

4. The combination of a bolt provided with an angular head and an angular nut, a shield for an expansion bolt comprising an integral ring portion, a plurality of tapered arms or tines, enlarged segments on the end of each arm or tine, each segment being provided on its edge with inclined surfaces forming substantially V-shaped

slots, and further provided with an interior taper forming the shield with a flaring mouth, the angular head and angular nut both being removable and interchangeable to coöperate with the V-shaped slots and with the flaring mouth of the shield to expand it.

1,019,724. DEVICE FOR RAISING SUNKEN BODIES. JOSEPH POLIZZI and FRANCIS WARREN CALONGNE, New Orleans, La. Filed Feb. 2, 1911. Serial No. 606,195. (Cl. 114—54.)



1. The combination with an inflatable bag having a valve controlled inlet, of a supply pipe having a nozzle adapted to coöperate with said inlet, said nozzle being provided with an interior seat, a valve adapted to cooperate with said seat, a valve stem, springs encircling said stem, and adapted to hold said valve away from its seat, pivoted arms, a collar slidable upon said stem, one of said arms being pivotally connected to the stem and the other to the collar, and a screw pivotally connected to said arms and adapted to spread them apart for the purpose of forcing said valve to its seat against the pressure of said springs.

2. A nozzle for inflating bags comprising a body having a valve seat at one end and means for connecting the same to a bag, a spring actuated valve mounted in said nozzle, a screw working in a bore formed in said nozzle, a collar carried by said screw, and arms connected to said collar, one of said arms being connected to the valve stem and the other to a collar slidably mounted thereon.

1,019,725. CAR-PLATFORM. ERNEST H. SCHMIDT, Cleveland, Ohio, assignor to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of Ohio. Original application filed Sept. 8, 1908, Serial No. 451,795. Divided and this application filed June 21, 1909. Serial No. 503,421. (Cl. 213—42.)



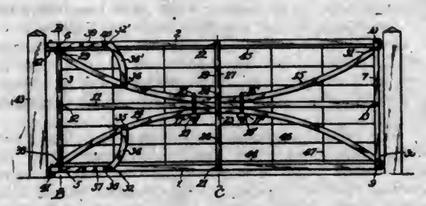
1. A car platform for radial draft gear having a buffing segment 15, and an end carry iron and bolster all integrally attached thereto.

2. A car platform for radial draft gear having a horizontally divided buffing segment integral therewith in the rear of the front face of the platform.

3. A platform for passenger cars having radial draft gears, said platform comprising an integral structure having downwardly extending webs forming forwardly diverging draft sills, the front end sill of the structure having carry-iron forming portions for a swinging buffer, and the structure having a divided buffer segment back of the end sill; substantially as described.

4. A platform for passenger cars having radial draft gears, the platform comprising an integral structure having its end sill formed with a carry-iron portion below its platform-forming portion, the front end of the end sill being curved, and the structure having a divided buffer segment back of the end sill; substantially as described.

1,019,726. FARM-GATE. WILLIAM M. SCOTTEN, Gregg township, Morgan county, Ind. Filed Dec. 8, 1911. Serial No. 664,656. (Cl. 39—100.)



1. A gate comprising two concavo-convexly curved spring trusses arranged with the middle portions of their convex sides in proximity one to the other, the end portions of each of the trusses being sprung away from the end portions of the other, a clamp connected to the middle portions of the two trusses, and a frame connected to the clamp and also to all the end portions of the trusses.

2. A gate comprising two rails spaced apart, two end bars connected at their ends to the ends of the two rails, two center bars secured at their ends to the middle portions of the two rails, two curved spring trusses secured at their middle portions to the middle portions of the two center bars, the ends of the two trusses being secured to the end bars adjacent the two rails respectively, and two yokes connected to the two trusses adjacent the two center bars.

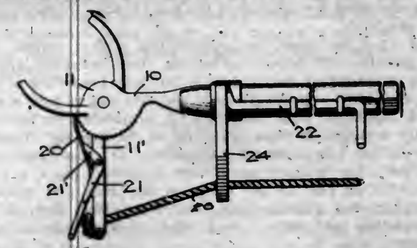
3. A gate comprising two rails spaced apart, two end bars connected at their ends to the ends of the two rails, two center bars secured at their ends to the middle portions of the rails, and two curved spring trusses secured at their middle portions to the middle portions of the center bars, the ends of one of the trusses being secured to the two end bars adjacent one of the rails, the ends of the remaining one of the trusses being secured to the two end bars adjacent the remaining one of the rails.

4. A gate comprising two rails spaced apart, two end bars connected to the two rails, two center bars secured together and to the two rails between the end bars, two curved trusses secured together and to the center bars and also to the end bars, the corresponding ends of the two trusses being sprung apart toward the two rails respectively, a brace secured to one of the rails and to one of the trusses, and a brace secured to the remaining one of the rails and to the remaining one of the trusses, the braces being in proximity to one of the end bars.

5. A gate comprising two rails spaced apart, two pairs of end bars secured to the two rails, a center rail midway between the two rails and secured to the two pairs of end bars, two curved trusses in contact at their middle portions with opposite sides of the middle portion of the center rail, the end portions of the two trusses extending substantially to the end portions of the two rails respectively and secured to the adjacent pairs of end bars, two center bars secured to the two trusses and also to the two rails and the center rail, and two yokes securing the two trusses to the center rail.

1,019,727. ANIMAL-HANDLING TOOL. WILLIAM A. STREETER, Concord, Ill.; Oscar C. Streeter administrator of said William A. Streeter, deceased. Filed Dec. 31, 1910, Serial No. 600,340. Renewed Dec. 21, 1911. Serial No. 667,210. (Cl. 119—154.)

An animal catching tool consisting of pivoted jaw members, one of said members being provided with a rack adapted to be engaged by a spring carried by the other member, a handle secured to one of said jaw members, a latch member pivotally supported by the spring carrying jaw member, said latch being provided with an outwardly extending portion adapted to contact with said spring, a rod arranged to reciprocate on said handle, said rod being provided with a spiral groove, a projection carried by said



handle adapted to enter said groove, the end portion of said rod terminating in a curved off-set, said off-set being provided with a cam surface which is arranged to engage said latch member to release said spring as said rod is reciprocated.

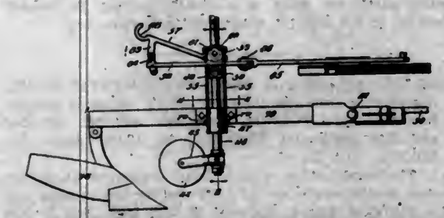
1,019,728. ROTARY CUTTER. AMBROSE S. VOSE, Brookline, Mass., assignor of one-half to Arthur F. Gray, Watertown, Mass. Filed May 6, 1911. Serial No. 625,642. (Cl. 12—94.)



1. A knife of the character described, comprising a metal blade provided with substantially parallel front and back faces and a backwardly inclined outer face extending from the front toward the back face and forming a cutting edge with said front face, the latter having in it below the cutting edge a plurality of holes arranged in close proximity to one another in a row extended transversely of the blade, and a recess at one side of the blade and extended to the front face thereof below the said holes, substantially as described.

2. A knife of the character described, comprising a metal blade provided with substantially parallel front and back faces and a backwardly inclined outer face extending from the front toward the back face and forming a cutting edge with said front face, the latter having in it below the cutting edge a plurality of holes arranged in close proximity to one another in a row extended transversely of the blade, substantially as described.

1,019,729. GAGE DEVICE FOR PLOWS. NICHOLAS WEILER, Canton, Ill., assignor of one-half to B. L. Shrader, Fort Collins, Colo. Original application filed Jan. 30, 1911, Serial No. 605,601. Divided and this application filed May 19, 1911. Serial No. 628,335. (Cl. 97—14.)



1. A wheeled gang plow comprising a frame, a plow having a forwardly extending, vertically swinging beam connected with the frame, a wedge device for raising and lowering the plow, a bar extending forwardly from said wedge device and positively actuated means connected with the forward end of said bar for shifting the latter forwardly and rearwardly.

2. In a gang plow, a frame, a plow having a forwardly extending, vertically swinging beam connected to the frame, a vertical post extending loosely through a bearing carried by the plow end of said beam and provided at its lower end with a wheel to travel on the unplowed ground, vertically separated bearing-elements carried by the beam and said post, a wedge device movable between said bearing elements and means for giving forward and rearward movement to the wedge device.

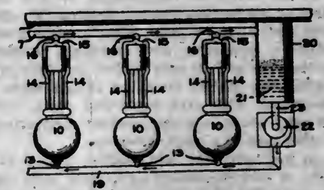
3. In a gang plow, a frame, a plow having a forwardly extending, vertically swinging beam connected to the frame, a vertical post extending loosely through a bearing carried by the plow end of said beam and provided with a gage wheel, members extending upwardly from the beam and having a sleeve through which the post loosely extends, a block fixed to the post below said sleeve, a forwardly and rearwardly moving wedge device movable between the sleeve and block and means for giving movement to the wedge device.

4. In a gang plow, a frame, a plow having a forwardly extending, vertically swinging beam connected to the frame, a vertical post extending loosely through a bearing carried by the plow end of said beam and provided at its lower end with a gage wheel, vertically separated bearing elements carried by the beam and said post, a wedge device movable between said bearing elements and means for giving positive forward and rearward movement to the wedge device, said wedge device comprising a horizontal member and an oblique member, with means for adjusting the inclination of the oblique member to the horizontal member.

5. In a gang plow, a frame, a plow having a forwardly extending, vertically swinging beam connected to the frame, a vertical post extending loosely through a bearing carried by the plow end of said beam and provided at its lower end with a gage wheel, vertically separated bearing rollers carried by said post and said beam, and a forwardly and rearwardly movable wedge device movable between said bearing rollers, said wedge device being provided at one limit of the movement thereof with recesses or sockets to receive the bearing rollers at one side thereof to lock the plows in their raised positions.

[Claims 6 and 7 not printed in the Gazette.]

1,019,730. INTERIOR ELECTRIC-LIGHTING SYSTEM. ANDRÉ BLONDEL, Paris, France, assignor, by mesne assignments, to General Electric Company, a Corporation of New York. Original application filed Sept. 9, 1904, Serial No. 223,899. Divided and this application filed Sept. 27, 1911. Serial No. 651,491. (Cl. 176—52.)



1. A system of electric interior lighting comprising a number of inclosed arc lamps, means for drawing the mixture of air and products of combustion simultaneously from all lamps, depriving the mixture of noxious matter at one point outside the lamps, and returning the purified air to the lamps.

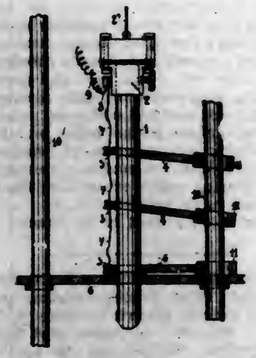
2. An electric interior lighting system comprising conduits extending through the region of lamp distribution, one or more inclosed arc lamps connected to the conduits, means for creating a circulating air and gas current through these conduits and lamps, and means located out-

side the lamps for depriving the products of combustion of the lamps of noxious matter.

3. In an interior electric lighting system the combination of one or more inclosed arc lamps, each provided with a definite air inlet and a definite outlet for the products of combustion, with a system of conduits extending through the region of lamp distribution, the lamp inlets and outlets being connected to said conduits, means for producing a circulation of the air and gas through the conduits and a purifying and condensing chamber included in said circulation.

4. In an electric interior lighting system the combination of one or more inclosed arc lamps, each provided with a definite air inlet and a definite outlet for the products of combustion, with a conduit extending near the tops of the lamps throughout the region of lamp distribution and to which the lamp outlets are connected, another conduit extending near the bottoms of the lamps throughout the region of lamp distribution connected with the lamp inlets, and means for drawing the products of combustion from the lamps into the first conduit, depositing the solidifiable products at one point outside the lamps and returning the purified air through the second conduit and to the lamps.

1,019,731. ELECTRIC-ARC LAMP. ANDRÉ BLONDEL and GAÉTAN DOBKEVITCH, Paris, France, assignors, by mesne assignments, to General Electric Company, a Corporation of New York. Original application filed Feb. 1, 1905, Serial No. 243,774. Divided and this application filed Dec. 16, 1905, Serial No. 291,982. Renewed Dec. 19, 1911. Serial No. 666,844. (Cl. 176—52.)



1. In an arc lamp, the combination, with a carbon, of a plurality of current-conducting devices arranged along the carbon and having a loose clamping engagement with said carbon, a protecting plate arranged in close proximity to the free end of said carbon for disengaging the current-collecting devices from the carbon when brought into engagement with said protecting plate, and means for electrically connecting said current conducting devices to each other and to a main conductor.

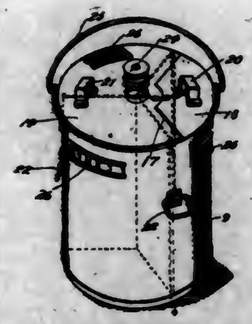
2. In an arc lamp, the combination, with a carbon, of a plurality of current-conducting devices each comprising a ring surrounding the carbon and carrying a weight, a horizontal projecting plate arranged in close proximity to the free end of said carbon for disengaging said current-conducting devices from the carbon when brought into engagement with said separating plate, and means for electrically connecting said current-conducting devices to each other and to a main conductor.

3. In an arc-lamp, a lamp frame having a vertical rod, in combination with a carbon, a plurality of current-conducting rings arranged along and surrounding the carbon, a laterally projecting stem on each ring, a weight at the free end of said stem, a horizontal protecting plate arranged in close proximity to the free end of said carbon, for automatically disengaging the rings from the carbon when the weights aforesaid are brought against the protecting plate, means for electrically connecting said rings to each other, and means for guiding said rings along the aforesaid vertical rod of the lamp frame, substantially as set forth.

4. In a arc lamp, the combination, with a carbon, of a plurality of current-conducting rings arranged along and surrounding the carbon, a laterally projecting stem on each ring, a guiding loop on the free end of each stem and insulated from the ring, a horizontal projecting plate arranged in close proximity to the free end of said carbon for automatically disengaging the rings from the carbon when brought against the protecting plate, a rod constituting part of the frame of the lamp and loosely engaging the guiding loops, and means for electrically connecting said rings to each other, substantially as set forth.

5. In an arc lamp, the combination, with a carbon, of a plurality of current-conducting rings arranged along and surrounding the carbon, a stem pivoted to and laterally projecting from each ring, a movable dog on each stem and engaging the carbon, a guiding loop or ring on the opposite end of the stem, a horizontal protecting plate arranged in close proximity to the free end of said carbon for automatically disengaging the rings from the carbon when brought against the protecting plate, a rod constituting part of the frame of the lamp and loosely engaging the guiding loops, and means for electrically connecting said rings to each other, substantially as set forth.

1,019,732. REFUSE-RECEPTACLE. MOSES AARON BOROCHOW, Brooklyn, N. Y. Filed Dec. 13, 1910. Serial No. 597,174. (Cl. 220—47.)



A device such as described, consisting of a cylindrical receptacle having radial partitions located therein dividing the receptacle into sector-shaped compartments, a lid having a handle by which it may be rotated, a sector-shaped opening cut inwardly from the periphery of said lid, conforming to the configuration but a little smaller than the sector-shaped compartments formed in the said receptacle, a closure engaging said sector-shaped opening, and a flange formed upon said closure, which engages the radial partitions when in a closed position to prevent rotation of the said lid, substantially as described.

1,019,733. MEANS FOR PROTECTING DENTAL WORK. ADDISON R. DU PASS, Columbia, S. C. Original application filed June 24, 1911, Serial No. 635,233. Divided and this application filed Sept. 14, 1911. Serial No. 649,334. (Cl. 32—7.)

1. The combination with a form shaped to fit in the human mouth over a row of teeth and having an open top, of a filling of plastic material in said form, and a thin layer of flexible water-proof material on the exposed surface of said plastic material.

2. The combination with a form shaped to fit in the human mouth over a row of teeth and having an open top, of a filling of plastic material in said form, and a thin layer of flexible water-proof material on the exposed surface of said plastic material, the side walls of said form being undercut and so constructed as to hold said material firmly therein and capable of removal from said material even when hardened without breaking said material.



3. In a device of the class described, a form adapted to contain plastic material having an open top and shaped to fit in the human mouth over a row of teeth without touching them, the side walls of said form extending up along the sides of the row of teeth, the side walls of said form being so constructed as to be capable of movement away from each other to permit removal from the plastic material when hardened.

4. In a device of the class described, a form adapted to contain plastic material having an open top and shaped to fit in the human mouth over a row of teeth without touching them, the side walls of said form extending up along the sides of the row of teeth, the said form being divided longitudinally between said sides, and means being provided for detachably securing the divided sections together.

5. In a device of the class described, a form adapted to contain plastic material having an open top and shaped to fit in the human mouth over a row of teeth without touching them, the side walls of said form being sufficiently high to extend beyond the exposed portions of the teeth when in position and being undercut along their inner top edges, and the said form being divided longitudinally between said side walls and the divided sections being detachably held together.

1,019,734. FEEDING-STUFF. CARLETON ELLIS, Larchmont, N. Y., assignor, by mesne assignments, to F. H. Bennett Biscuit Company, a Corporation of New York. Filed Dec. 26, 1908. Serial No. 469,299. (Cl. 99—11.)

1. A feeding stuff which comprises partially malted sugar beet and partially malted edible grain material.

2. A feeding stuff which comprises partially malted sugar beet, partially malted grain material and partially malted milk.

1,019,735. MOUNT FOR HOOKS, EYES, AND LOOPS. HARRY CLINTON GOODRICH, Palisade, N. J. Filed Mar. 20, 1911. Serial No. 615,500. (Cl. 211—34.)



1. A hook and eye and loop mount consisting of a support divided by separating means into three article supporting parts, the middle part being adapted to receive and detachably retain the hooks by their reduced throats but to permit the hooks to be intentionally sprung off therefrom, one end part being adapted to receive the eyes and the other end part being adapted to receive the loops, means being provided on these end parts to prevent accidental and permit intentional removal of the eyes and loops.

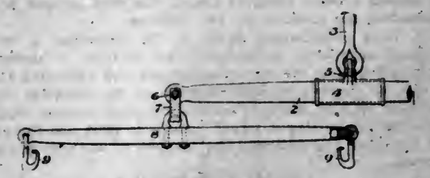
2. A hook any eye and loop mount comprising a wire support provided with coils for separating the three articles, the hooks being hooked over the middle portion of the support wire so that they may be unhooked therefrom and the eyes being strung upon one end portion of the support wire and the loops being strung upon the other end portion of the support wire, means being provided to prevent the loss of the eyes and the loops.

3. A hook and eye and loop mount comprising a support wire in the general shape of a horse-shoe and at two points intermediate of its ends having coils with contacting portions for separating the three articles, the hooks being hooked over the portion of the support wire between the coils and adapted to be unhooked from the support wire, and the eyes being strung upon the support wire at one of the portions beyond the coils, and the loops being strung thereon at the other portion beyond the coils, each of such eye-carrying and loop-carrying portions having a part in article-retaining relation with another part of the support wire to permit removal and to prevent loss of the eyes and loops.

4. A hook and eye and loop mount comprising a wire support provided with coils for separating the three articles, the hooks being hooked over the middle portion of the support wire so that they may be unhooked therefrom and the eyes being strung upon one end portion of the support wire and the loops being strung upon the other end portion of the support wire, means being provided to prevent the loss of the eyes and the loops, a card upon which the support is mounted, and means engaging the support coils and the card to attach the support to the card.

5. A hook and eye and loop mount comprising a support wire in the general shape of a horse-shoe and at two points intermediate of its ends having coils with contacting portions for separating the three articles, the hooks being hooked over the portion of the support wire between the coils and adapted to be unhooked from the support wire, and the eyes being strung upon the support wire at one of the portions beyond the coils, and the loops being strung thereon at the other portion beyond the coils, each of such eye-carrying and loop-carrying portions having a part in article-retaining relation with itself beyond the supported articles to prevent the loss of the articles but permit their intentional removal, a card upon which the support is mounted, and means engaging the support coils and the card to attach the support to the card.

1,019,736. METALLIC DRAFT MEMBER. WILLIAM D. HENRY, Pittsburgh, Pa. Filed Apr. 13, 1911. Serial No. 620,901. (Cl. 21—78.)

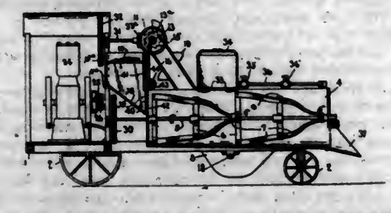


1. A metallic draft member having flattened and spread end portions with reinforces welded therein, a portion of the reinforces being also flattened and spread within the end portions of the draft member to thereby form an interlock between the reinforces and the ends of the draft member; substantially as described.

2. A metallic draft member having flattened and circular shaped end portions with reinforces welded therein, the circular shaped portion being of greater diameter than

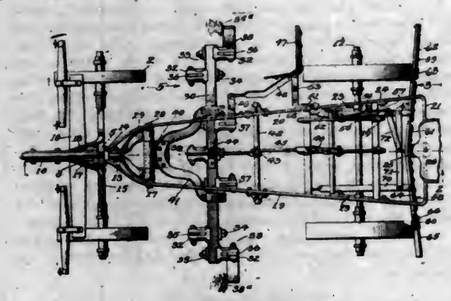
the diameter of the tube, a portion of said reinforces also being flattened to form an interlock with said end portions, the end portions having eyes formed therethrough and through the reinforces; substantially as described.

1,019,737. CONCRETE-MIXING MACHINE. CARL O. HOGLUND, Crookston, Minn. Filed June 29, 1911. Serial No. 635,935. (Cl. 83—73.)



A concrete mixing machine comprising a supporting frame with a trough arranged within the same and having a forwardly inclined bottom, a longitudinal shaft extending the length of the trough and having thereon sleeves or collars, and a series of transverse radially projecting curved blades arranged in pairs thereon, a plurality of longitudinal bars twisted in spiral form to provide blades, each pair of said longitudinal bars having one of their ends directly secured to said sleeves and their other ends secured to the curved blades, and means for operating the shaft.

1,019,738. COMBINATION-CULTIVATOR. JACOB ROPP, San Dimas, Cal., assignor to Ropp Manufacturing Company, Glendora, Cal. Filed Nov. 14, 1910. Serial No. 592,244. (Cl. 97—34.)

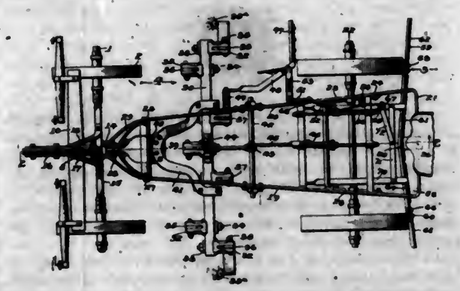


1. In a combination cultivator for irrigating, a furrowing apparatus for making two furrows, an angled scraper mounted behind the apparatus for making one furrow, and a second scraper mounted behind the first scraper and extending the width of the two furrows.

2. In a combination cultivator for irrigating, a furrowing apparatus for making two furrows, a scraper mounted behind the furrow apparatus and extending the width of the two furrows, and means for operating the scraper up and down intermittently, said scraper being adapted for cutting a trench cross-wise from one furrow to the other and damming the furrows on one side of the trench.

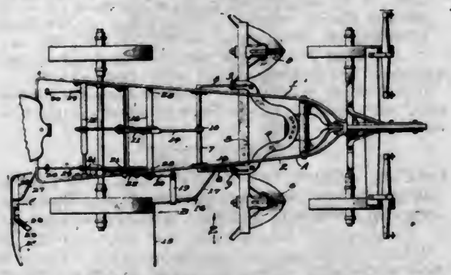
1,019,739. COMBINATION-CULTIVATOR. JACOB ROPP, San Dimas, Cal., assignor to Ropp Manufacturing Company, Glendora, Cal. Filed Jan. 17, 1911. Serial No. 603,099. (Cl. 97—34.)

1. In a combination cultivator an axle arched in its center, a bearing block rigidly mounted upon the center of the axle and extending upwardly, there being a slot extending downwardly into the bearing block longitudinally of the axle, a king bolt extending downwardly into the slot, a bolt extending through the bearing block and through the king bolt, a clevis mounted upon the king bolt and having an upper and lower bearing through which the king bolt extends, a bearing block mounted upon the king bolt between the upper and lower bearings of the clevis, a third bearing block mounted upon the king bolt above the clevis, and a cultivator frame connected to the third bearing block.



2. In a combination cultivator, a main frame having side bars, braces extending downwardly from the side bars, a pivot shaft mounted horizontally in said braces, braces extending forwardly from the pivot shaft, a bearing block rigidly connected to the forward ends of said braces, a king bolt extending vertically through the bearing block, a cultivator bar, a frame attached to the cultivator bar and to the pivot shaft, cultivator teeth carried by the cultivator bar, and a hand lever mechanism for raising and lowering the cultivator bar.

1,019,740. IRRIGATING-MACHINE. JACOB ROPP, San Dimas, Cal., assignor to Ropp Manufacturing Company, Glendora, Cal. Original application filed Nov, 14, 1910, Serial No. 592,244. Divided and this application filed June 20, 1911. Serial No. 634,363. (Cl. 97—12.)



1. In an irrigating machine a suitable carriage, a shovel carried by the carriage, a scraper mounted behind the shovel and extending one way from the center of the furrow, a second scraper behind the first scraper and extending across the furrow, and means for operating the scrapers simultaneously.

2. In an irrigating machine a suitable carriage, two shovels carried by the carriage in transverse alinement, a suitable distance apart, a scraper mounted behind one of the shovels and extending one way from the center of the furrow, a second scraper mounted behind the first scraper a distance equal to the distance between the shovels and extending across the furrow, and means for operating the scrapers simultaneously up and down.

3. In an irrigating machine a suitable carriage, a beam hingedly mounted transversely of the carriage, shovels carried by the ends of the beam, means for raising and lowering the beam, a scraper mounted behind one of the shovels and extending one way from the center of the furrow, a second scraper mounted behind the first scraper a distance equal to the distance between the shovels and extending across the furrow, and means for raising and lowering the scrapers simultaneously.

1,019,741. SAFETY GAS-BURNER. NATHAN WISS, New York, N. Y. Filed Feb. 11, 1907. Serial No. 356,748. (Cl. 67—116.)



1. In a burner, a valve, means for operating the valve to close it, a locking device for locking the valve operating means in inoperative position, an expansion device disconnected from the locking device and being free to expand unrestrained, said expansion device affording means for releasing said locking device in contracting.

2. In a burner, a valve, means for operating the valve to close the same, a spring actuated member for holding the valve operating means in inoperative position, and an expansion device having a free end, said free end being adapted to engage the spring actuated member but disconnected therewith.

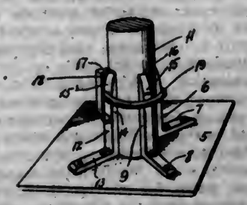
3. In a burner, a valve, means for operating the valve to close it, an expansion device having a free end, and a spring member for controlling the valve operating means said member being fixed at one end and having its free end adapted to be engaged by the free end of the expansion device, but disconnected therewith.

4. In a burner, in combination, an admission device, a member tending to close said admission device, a catch detaining said member from closing said admission device, an expansion strip having an unobstructed free end, lying beyond said catch when heated and adapted to disengage said catch in cooling.

5. In a burner, in combination, a cock comprising a rotatable plug adapted to admit gas through said burner, a plunger adapted to be raised by the turning of said plug toward its open position, an expansion device adapted to be heated by the flame, a catch tending to engage said plunger to hold the same raised, said expansion device affording means for holding said catch away from said plunger, and a spring actuating said plunger to return said plug to its closed position.

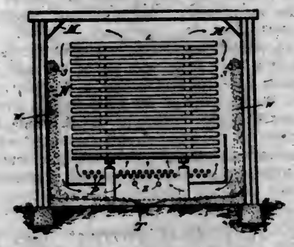
[Claims 6 to 8 not printed in the Gazette.]

1,019,742. TAMPER-HANDLE CLUTCH. THOMAS F. BOYLE, Los Angeles, Cal. Filed Sept. 13, 1910. Serial No. 581,879. (Cl. 94—6.)



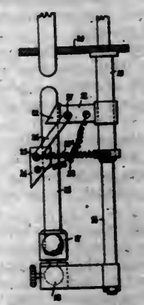
A tamping tool comprising a rectangular metallic tamping plate, a plurality of upwardly extending jaws secured at right angles to one face of said plate, said jaws being arranged circumferentially so as to form a handle socket, the upper ends of all of said jaws being tapered to form spurs, one of said jaws having an elongated eye or loop formed integrally therewith and extending substantially the length of the tapered portion of the spur for the reception of a clamping ring, a tool handle formed so as to enter said socket, and a clamping ring passing through said eye or loop and adapted to slide substantially the length of the loop, said ring engaging said jaws to hold said handle in rigid engagement with said tamping plate.

1,019,743. APPARATUS FOR DRYING TIMBER AND OTHER MOISTURE-BEARING SUBSTANCES. HARRY D. TIEMANN, Washington, D. C. Filed Mar. 15, 1910. Serial No. 549,572. (Dedicated to the public.) (Cl. 34—3.)



In a kiln, comprising a drying chamber provided with heating pipes and pipes for admitting free steam, baffle plates suitably arranged for preventing counter currents of air within said chamber, an exhaust chimney for creating a current of air lengthwise of the chamber, a series of perforated water pipes arranged to enter through the end walls of said chamber and supply water to the side walls at a temperature less than that of the air, a trough at the bottom of said chamber for receiving the water therefrom, water flowing from said pipes and running down the walls of said chamber for increasing the internal circulation of the air by causing the descending current of air to come in contact with said running water, which said kiln is adapted to dry lumber and other moisture-bearing substances, substantially as shown.

1,019,744. ELECTRIC-ARC LAMP. ANDRÉ BLONDEL and GAÉTAN DOBKEVITCH, Paris, France, assignors, by mesne assignments, to General Electric Company, a Corporation of New York. Filed Feb. 1, 1905. Serial No. 243,774. (Cl. 176—41.)



1. In an electric arc lamp, in combination with each electrode of a fixed guide for the same, a lever yieldingly biased toward contact with the electrode near its arcing end, a friction contact shoe mounted at the free end

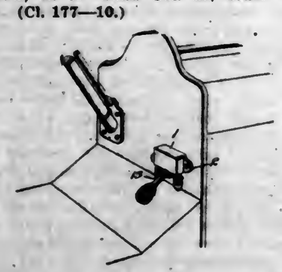
of the lever for contact with the electrode and holding it against the fixed guide, and flexible conductors in the lamp circuit connected with the contact shoes and guides, whereby the arc maintaining current is passed through a limited portion only of the electrodes.

2. In an electric arc lamp, in combination with each electrode of a lever yieldingly biased toward contact with the electrode near its arcing end, a friction contact shoe pivoted to the free end of the lever for independent movement in the plane of the swing of the lever, whereby its contact surface adapts itself to the surface of the electrode, and flexible conductors in the lamp circuit connected with the contact shoes.

3. In an electric arc lamp, in combination with each electrode of a fixed guide for the same, a lever yieldingly biased toward contact with the electrode, a pivoted friction contact shoe carried at the free end of the lever and bearing upon the electrode near its arcing end and thereby holding it against the fixed guide, and means for conveying the arc maintaining current between the contact shoes and the electrodes.

4. In an electric arc lamp, the combination with each electrode of a lever yieldingly biased toward contact with the electrode near its arcing end, a friction contact shoe pivoted to the free end of the lever formed with a contact surface matching the surface of the electrode, and a flexible conductor in the lamp circuit connected with the contact shoe, whereby the arc maintaining current is passed through a limited portion only of the electrodes.

1,019,745. FOOT-PEDAL SWITCH. JOHN HELSTROM, Morristown, N. J. Filed Oct. 24, 1911. Serial No. 656,546. (Cl. 177—10.)



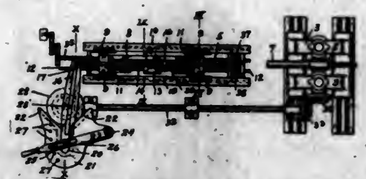
1. A switch of the character described, including a casing, switch blades mounted therein and providing overlapping ends normally spaced from each other, a spring actuated arm secured in the casing and extending across the overlapping ends of the switch blades, an insulating pad carried by said arm and designed for engagement with the overlapping ends of the switch blades, and a pedal fulcrumed on the casing and formed with a nose projecting therein into engagement with said actuating arm, for the purpose specified.

2. An electric switch of the character described, including a casing, switch blades mounted therein, and formed with overlapping ends normally spaced from each other, an actuating arm secured at one end of the casing and extending across the switch blades, a pad of insulating material carried by the said actuating arm and designed to press one switch blade against the other, and a pedal fulcrumed on the casing and projecting therein into engagement with the free end of the actuating arm, for the purpose specified.

3. An electrical switch of the character described, including switch blades formed with overlapping ends normally spaced from each other, an actuating member extending across the switch blades behind the same and resiliently held out of engagement with the switch blades, a pad of insulating material carried by said member and disposed between the actuating member and the adjacent switch blade, and a pivotally supported pedal having a nose projecting in a position behind said member and engaging therewith, for the purpose specified.

REISSUES.

13,377. SWAGING-MILL. GEORGE H. BLAXTER, New Brighton, Pa., assignor to Pittsburgh Seamless Tube Company, Beaver Falls, Pa., a Corporation of Pennsylvania. Filed Apr. 27, 1911. Serial No. 623,801. Original No. 816,146, dated Mar. 27, 1906, Serial No. 239,761. (Cl. 80—14.)



1. A horizontally-traveling mandrel-supporting carriage and a mandrel-bar supported therein, with means for advancing the carriage, and means engaging the mandrel-bar for advancing it and independently reciprocating it, substantially as set forth.

2. A horizontally-traveling mandrel-supporting carriage and a mandrel-bar supported therein, with means for advancing the carriage and means engaging the mandrel-bar for advancing it and independently reciprocating it, with means for varying the stroke of the mandrel-bar, substantially as set forth.

3. The combination with swaging-rolls and driving means therefor; of a horizontally-traveling mandrel-supporting carriage and a mandrel-bar supported therein, means for advancing the carriage, means for advancing the mandrel-bar, and means operating in correspondence with the rolls for reciprocating the mandrel-bar, substantially as set forth.

4. The combination with a carriage and a reciprocable mandrel-bar carried thereby; of a support for the carriage, a longitudinally-stationary feeding-screw arranged to propel the carriage, a screw arranged to reciprocate the mandrel-bar and to feed it in conformity with the travel of the carriage, means for reciprocating said screw, and means for turning both screws, substantially as set forth.

5. The combination with a carriage and a reciprocable mandrel-bar carried thereby; of a support for the carriage, a longitudinally stationary feeding-screw arranged to propel the carriage, a screw arranged to feed the mandrel-bar in conformity with the travel of the carriage, means for reciprocating said screw and mandrel-bar, means for turning both screws, and means for varying the reciprocable travel of the screw, substantially as set forth.

6. The combination with swaging-rolls and driving means therefor; of a horizontally-traveling mandrel-supporting carriage and a mandrel-bar supported therein, means for advancing the carriage, means for advancing the mandrel-bar, and means in driving engagement with the rolls for reciprocating the mandrel-bar, substantially as set forth.

7. The combination with a carriage and a reciprocable mandrel-bar carried thereby; of a support for the carriage, a longitudinally-stationary feeding-screw engaging a nut secured to the carriage, and a reciprocable screw engaging a nut connected with the mandrel-bar, with means for turning the screws together and means for independently actuating the reciprocating screw longitudinally, substantially as set forth.

8. The combination with swaging-rolls and driving mechanism therefor; of a supporting-frame, a carriage mounted thereon, a longitudinally-movable mandrel-bar mounted in said carriage, a longitudinally-stationary feeding-screw in operative engagement with the carriage, a reciprocable feeding-screw in operative engagement with the mandrel-bar, means for rotating the screws together, means for independently reciprocating the mandrel-bar-actuating screw, substantially as set forth.

9. The combination of a supporting frame, a carriage mounted thereon, a longitudinally-movable mandrel-bar mounted in said carriage, a longitudinally-stationary feeding-screw in operative engagement with the carriage, a reciprocable feeding-screw in operative engagement with the mandrel-bar, means for rotating the screws together, means for independently reciprocating the mandrel-bar-actuating screw, and means for varying the stroke thereof, substantially as set forth.

10. The combination of a supporting-frame, a carriage mounted thereon, a longitudinally-movable mandrel-bar mounted in said carriage, a longitudinally-stationary feeding-screw in operative engagement with the carriage, a reciprocable feeding-screw in operative engagement with the mandrel-bar, means for rotating the screws together, and an actuating-lever connected with the reciprocable screw, with means for varying the effective stroke of said lever, substantially as set forth.

11. The combination with swaging-rolls and driving means therefor; of a carriage and a mandrel-bar supported thereon, means for propelling the carriage and mandrel-bar, and means for independently and positively reciprocating the mandrel-bar in both directions, said means being connected with the roll-driving means, substantially as set forth.

12. The combination with swaging-rolls and driving means therefor; of a supporting-frame, a carriage mounted thereon, a longitudinally-movable mandrel-bar mounted in said carriage, a longitudinally-stationary feeding-screw in operative engagement with the carriage, a reciprocable feeding-screw in operative engagement with the mandrel-bar, means for rotating the screws together, an actuating-link connected with the reciprocable screw, means for varying the effective stroke of said link, and a crank device in operative engagement with said link, with means for actuating the crank device in driving engagement with the driving means for the swaging-rolls, substantially as set forth.

13. The combination with a horizontally-traveling mandrel-supporting carriage and a mandrel-bar supported therein, means for advancing the carriage, and means engaging the mandrel-bar for advancing it and independently reciprocating it; of a lever incorporated with said reciprocating means and adjusting devices arranged to vary the effective stroke thereof, substantially as set forth.

14. In a tube swaging mill, the combination with rotating swaging-rolls, of a mandrel, mechanism operated in unison with the rolls for reciprocating the mandrel and moving it into the rolls, and independent mechanism for slowly advancing the mandrel.

15. In a tube swaging mill, the combination with rotating swaging-rolls, of a mandrel, mechanism actuated from the rolls for reciprocating the mandrel and moving it into the rolls, and an independently actuated screw for slowly advancing the mandrel.

16. In a tube swaging mill, the combination with segmental swaging members, of actuating means therefor, a mandrel, and mechanism for reciprocating said mandrel comprising a driver moving in a circular path and operative connections therefrom to the mandrel, whereby the latter is given alternately fast and slow movement.

17. In a tube swaging mill, the combination with segmental swaging members, and actuating means therefor, of a mandrel, and mechanism operated in unison with the swaging members for reciprocating the mandrel, said mechanism being arranged to impart to the mandrel alternately fast and slow movement.

18. In a tube swaging mill, the combination with rotating segmental swaging rolls, of a mandrel, mechanism actuated from said rolls for reciprocating the mandrel, said mechanism including a driver moving in a circular path, and a lever actuated thereby and operatively connected to the mandrel whereby the latter is given a fast and slow movement.

19. The combination with segmental swaging rolls, of actuating means therefor, a work-carrying mandrel, and means for reciprocating said mandrel comprising, a driver mounted to rotate in a segmental path on an axis perpendicular to the direction of movement of the mandrel, operative connections therefrom to the mandrel, and connections between the driver and the rolls, the rolls and connections being so arranged that the mandrel is fed quickly into position between the rolls and with reduced speed at the time of engagement of the rolls with the work.

13,378. SOUND-AMPLIFIER FOR PHONOGRAPHS. VITO ETTORE D'URSO, New York, N. Y. Filed Oct. 24, 1911. Serial No. 656,553. Original No. 956,235, dated Apr. 26, 1910, Serial No. 521,247. (Cl. 181—8.)



1. A sound amplifier for phonographs or the like embodying a cover hinged to a main casing and having a portion thereof adapted to project inwardly into said casing when the cover is opened, a conduit arranged in the casing and opening toward the inwardly projecting portion of the cover, and a sound reproducer connected to the opposite end of said conduit.

2. In combination with a casing for a sound reproducing mechanism, a cover therefor hinged intermediate its ends, said cover having a portion adapted to project into the casing when the cover is in open position, a conduit extending through the casing and opening toward the inwardly projecting portion of the cover and a reproducer arm connecting with said conduit.

3. In combination with a sound reproducing mechanism, a casing comprising a main casing and a cover, said cover adapted when open to extend downwardly within said casing and project above said casing, a sound conveying conduit arranged in said casing and opening toward the downwardly projecting end of the cover, and a reproducer mechanism connecting with said conduit.

4. In combination with a sound producing mechanism having a casing, and a sound-conveying conduit with a compartment connecting with said conduit, a cover hinged above said compartment and adapted to be swung as to its lower end into said compartment connecting with the conduit and a reproducer mechanism connecting with said conduit.

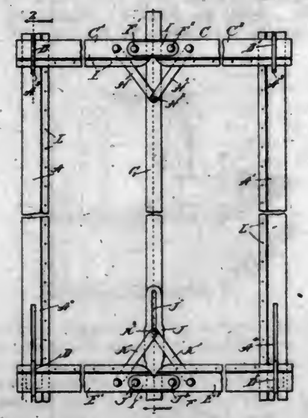
5. In a phonograph, the combination with a casing for a sound reproducing mechanism provided with an opening in its top portion, of a hollow reproducer supporting arm mounted thereon, a sound conducting channel communicating with said supporting arm and running through said casing toward the opening in the top of the same, and a cover adapted to project into said casing and operate as a deflector for the sound waves issuing from said sound conducting channel.

6. In a phonograph, the combination with a casing for a sound reproducing mechanism provided with an opening in its top portion, of a hollow reproducer supporting arm mounted thereon, a horn communicating with said supporting arm and running through said casing toward the opening in the top of the same, and a cover adapted to project into said casing and operate as a deflector for the sound waves issuing from said horn.

13,379. SELF-SQUARING CURTAIN-STRETCHER. JOHN OTTO HOLMQUIST, Chicago, Ill. Filed Nov. 27, 1911. Serial No. 662,782. Original No. 992,717, dated May 16, 1911, Serial No. 577,952. (Cl. 45—24.)

1. A curtain stretcher having oppositely disposed bars, each made in sections hingedly connected with each

other, guideways held on the said bars at the joints of their sections, a guide rod slidingly engaging the said guideways, links connecting the guide rod with the sections of one of the bars, links pivotally connected with the sections of the other bar and slidingly connected with the guideway located at the last mentioned bar, and a locking device on this guideway for locking the guide rod in position.



2. A curtain stretcher, comprising side bars, end bars made in sections, a guideway for each end bar extending across the joint of the sections of the end bar and pivotally connected with the sections, a guide rod engaging the said guideways, diverging links pivotally connecting the guide rod with the sections of one end bar, diverging links pivotally connected with the sections of the other end bar and slidingly connected with the guideway at the last mentioned end bar, and clamping loops held on the side bars and engaged by the free ends of the said end bars.

3. A curtain stretcher, comprising side bars provided with clamping loops, end bars slidingly engaging the said clamping loops and each made in sections, a guide rod in alinement with the joints of the sections of the said end bars, guideways extending across the joints of the sections of the end bars and pivotally connected with the said sections, one of the guideways having a slot and a clamping lever, the said guide rod slidingly engaging the said guideways and adapted to be locked in place by the said clamping lever, diverging links pivotally connecting the guide rod with the sections of one end bar, and diverging links pivotally connected with the sections of the other end bar and slidingly engaging the said slot.

4. A curtain stretcher provided with a side bar having a lengthwise-extending slot, a shoe slidable in the said slot, a clamping loop engaging the said shoe and provided with tightening means, and an end bar slidingly engaging the said loop and adapted to rest on the said shoe.

5. A curtain stretcher comprising a guide rod, a sectional bar at each end of the guide rod, one of the said bars being slidable on the rod, means for limiting the movement of the said bar, means for locking the sections of the bars in alined position, and a side bar at each side of the guide rod, each of said side bars being slidably connected to the adjacent sections of the end bars, and means for locking each section to the adjacent side bar.

6. A self-squaring curtain-stretcher, comprising a pair of oppositely "breaking" sectional bars, each of said bars composed of two alined sections, a guide-rod crossing the joints of said sectional bars, a guide-member having a head-portion pivotally joined to each section of one of said bars and having a rigidly carried inwardly extending stem, links having their outer ends pivotally joined to said last-mentioned sections, means adjustably connecting said links, stem and guide bar together, a guide-member pivotally connected with each of the sections of the other one of said bars, links pivotally connected at their outer ends with said last-named sections, and means pivotally connecting the inner ends of said last-named links to said guide-bar.

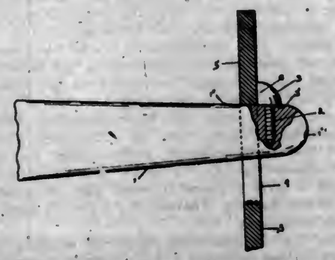
7. A self-squaring curtain-stretcher, comprising a pair of oppositely "breaking" sectional bars, each of said bars composed of a pair of alined abutting sections with rounded inner corners, a guide-member on the lower side of each sectional bar and pivotally joined to the sections thereof, one of said guide-members having an inwardly extending shank provided with means for embracing the edges of a guide-rod, a guide-rod beneath the plane of the frame and received by said guide-members, links pivotally connected at their outer ends to the sections of one of said bars, means adjustably connecting the inner ends of said links, said shank and said guide-rod together, and links pivotally connected at their outer ends to the sections of the other bar and pivotally connected at their inner ends to the adjacent portion of said guide-bar.

8. A self-squaring, adjustable-size curtain-stretcher, comprising a pair of sectional end-bars, each end-bar composed of two alined sections and a guide-member pivotally joined to the meeting ends of each section, the joint of each sectional end-bar adapted to "break" outwardly, a pair of links joined to the sections of each end-bar, the members of each pair converging inwardly, a guide-bar having its ends slidably received by said guides, pivotal connections between the inner ends of said links and said guide-bar near its ends, the guide-bar being longitudinally shiftable with relation to one set of links, side-bars, and adjustable connections between said side-bars and the free ends of the sectional end-bars, said last-named connections permitting the frame to be adjusted in both length and breadth.

9. A self-squaring curtain-stretcher, comprising a pair of oppositely disposed sectional bars, each composed of two alined sections, guide-members crossing the joint where the sections of each bar meet and pivotally joined to said sections, said sectional bars adapted to "break" outwardly, a guide-rod having its opposite ends received slidably by said guides, and a pair of links pivotally joined to said guide-rod near each end thereof, each pair of links having the outer ends of its members pivotally connected with the adjacent bar-sections, and the pivotal connection between one pair of said links and said guide-rod being adjustable.

10. A guide-bar connection for curtain-stretchers, comprising a T-form guide-member having a head adapted for pivotal connection with a pair of bar-sections at opposite sides of the joint and having, also, a shank flanged to receive the guide-bar and equipped with means for securing the guide-bar in adjusted relation.

13,380. WHIFFLETREE AND TRACE CONNECTION. WILLIAM A. STINSON, Greenwood, Miss. Filed Oct. 12, 1911. Serial No. 654,407. Original No. 955,613. dated Apr. 19, 1910, Serial No. 520,016. (Cl. 21—79.)



1. An attachment for whiffletrees consisting of a button having a relatively tall body portion which has one flat edge to form a shoulder, the opposite edges of the body portion merging into said flat edge, the bottom of the body portion being flat and having a reduced centrally disposed securing shank.

2. A trace holding stop fixedly mountable on the rear side of a whiffletree a short distance from the end thereof, comprising a rearwardly extending head portion on the side next the whiffletree end, said head portion terminating in an abrupt face extending to the whiffletree on the side remote from the whiffletree end, said face forming a trace abutment seat, and holding means for mounting the stop rigidly with a whiffletree.

3. A trace holding stop fixedly mountable on the rear side of a whiffletree a short distance from the end thereof comprising a whiffletree abutting seat, holding means for mounting the stop rigidly with the whiffletree, and a face extending rearwardly from the whiffletree abutting seat on the side of the stop remote from the adjacent end of the whiffletree, said face forming a trace abutment seat.

DESIGNS.

42,251. BOX. EDWARD F. CALDWELL, Larchmont, N. Y. Filed Dec. 14, 1911. Serial No. 665,819. Term of patent 3½ years.



The ornamental design for a box, as shown.

42,252. JEWELRY ORNAMENT. LESLIE H. FISHEL, New York, N. Y. Filed Sept. 2, 1911. Serial No. 647,452. Term of patent 7 years.



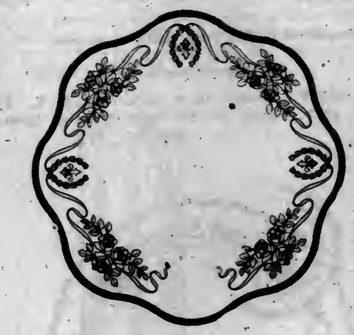
The ornamental design for a jewelry ornament as shown.

42,253. JEWELRY ORNAMENT. LESLIE H. FISHEL, New York, N. Y. Filed Sept. 2, 1911. Serial No. 647,453. Term of patent 7 years.



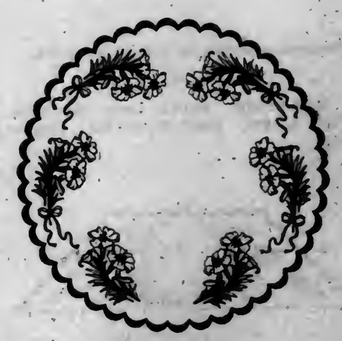
The ornamental design for a jewelry ornament as shown.

42,254. DOILY. ROBERT GAIR, New York, N. Y. Filed Dec. 8, 1911. Serial No. 664,661. Term of patent 7 years.



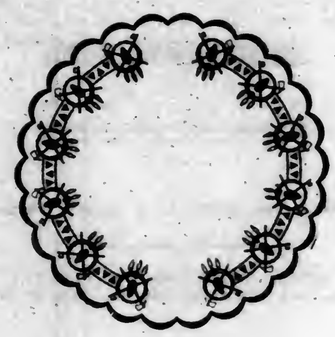
The ornamental design for a doily, as shown.

42,255. DOILY. ROBERT GAIR, New York, N. Y. Filed Dec. 8, 1911. Serial No. 664,662. Term of patent 7 years.



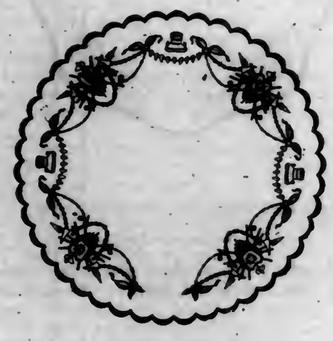
The ornamental design for a doily, as shown.

42,256. DOILY. ROBERT GAIR, New York, N. Y. Filed Dec. 8, 1911. Serial No. 664,663. Term of patent 7 years.



The ornamental design for a doily, as shown.

42,257. DOILY. ROBERT GAIR, New York, N. Y. Filed Dec. 8, 1911. Serial No. 664,664. Term of patent 7 years.



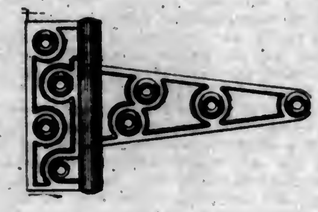
The ornamental design for a doily, as shown.

42,258. BOX-STRIP. ROBERT GAIR, New York, N. Y. Filed Dec. 8, 1911. Serial No. 664,665. Term of patent 7 years.



The ornamental design for a box-strip, as shown.

42,259. HINGE. JAMES P. MCKINNEY, Pittsburgh, Pa. Filed Aug. 26, 1911. Serial No. 646,291. Term of patent 14 years.



The ornamental design for a hinge as shown.

42,260. GLASS VESSEL. ANDREW J. SANFORD, Newark, Ohio. Filed Nov. 11, 1911. Serial No. 659,839. Term of patent 7 years.



The ornamental design for a glass vessel, as shown.

42,261. STATUETTE. CARL EMIL SCHULTZE, New York, N. Y. Filed Nov. 6, 1911. Serial No. 658,881. Term of patent 14 years.



The ornamental design for a statuette as shown.

42,262. STATUETTE. CARL EMIL SCHULTZE, New York, N. Y. Filed Nov. 6, 1911. Serial No. 658,882. Term of patent 14 years.



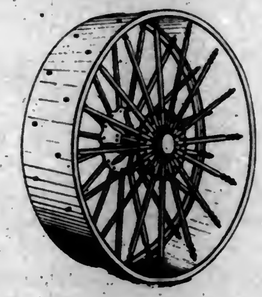
The ornamental design for a statuette as shown.

42,263. STREET-LAMP. FREDERICK H. WALLIS, Minneapolis, Minn. Filed Nov. 27, 1911. Serial No. 662,773. Term of patent 7 years.



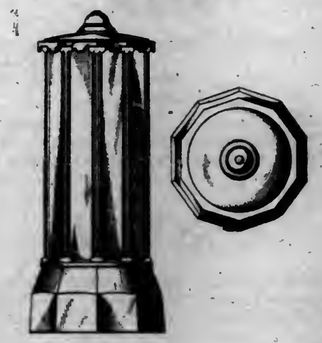
The ornamental design for a street lamp, as shown.

42,264. TRACTION-WHEEL. EDWIN M. WHEELOCK, Winona, Minn. Filed June 9, 1911. Serial No. 632,251. Term of patent 7 years.



The ornamental design for a traction wheel, as shown.

42,265. CABINET FOR VENDING-MACHINES. FREDERICK C. WHITMORE, New York, N. Y., assignor to Displaying Vending Co., a Corporation of New York. Continuation of application Serial No. 641,644, filed July 31, 1911. This application filed Nov. 28, 1911. Serial No. 662,921. Term of patent 14 years.



The ornamental design for a cabinet for vending machines, as shown.

TRADE-MARKS

PUBLISHED MARCH 5, 1912.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 3,553. (CLASS 39. CLOTHING.) EDSON, MOORE & Co., Detroit, Mich. Filed Apr. 29, 1905.



Particular description of goods.—Women's Shirt-Waists, Wrappers, and Skirts.
Claims use since the 1st day of November, 1898.

Ser. No. 32,331. (CLASS 47. WINES.) ANHEUSER & FEHRS, Creusnach, Prussia, Germany. Filed Jan. 20, 1908.



The words "Anheuser & Fehrs, Weinhandler & Weinproducenten" and the word "Creusnach" shown on the drawing being disclaimed.
Particular description of goods.—Effervescing and Non-Effervescing Wines.
Claims use since 1880.

Ser. No. 47,978. (CLASS 15. OILS AND GREASES.) INDIAN REFINING COMPANY, INC., Augusta, Me., and Cincinnati, Ohio. Filed Feb. 23, 1910.



Particular description of goods.—Lubricating-Oils.
Claims use since the 1st of January, 1910.

Ser. No. 50,297. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SOCIÉTÉ ANONYME LA MAYA BULGARE, Paris, France. Filed June 13, 1910.

"MAYA"

Particular description of goods.—Bulgarian Curdled Milk, (Yoghourt.)
Claims use since Feb. 28, 1910.

Ser. No. 52,026. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) REVERE RUBBER COMPANY, Chelsea, Mass. Filed Sept. 30, 1910.

1100

Particular description of goods.—Belting and Hose and Machinery Packing Composed of Metal, Rubber, Rubber Compositions, or Textile Fabrics or Combinations Thereof, Pneumatic Tires, and Solid Rubber Tires.
Claims use since Sept. 1, 1910.

Ser. No. 52,123. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE CONDUIT & CABLE MANUFACTURING COMPANY, Chelsea, Mass. Filed Oct. 5, 1910.

C

Particular description of goods.—Woven Conduits for Electric Wirings.
Claims use since July 6, 1910.

Ser. No. 52,930. (CLASS 2. RECEPTACLES.) THE REPUBLIC METALWARE COMPANY, Buffalo, N. Y. Filed Nov. 25, 1910.

SAVORY

Particular description of goods.—Bread-Boxes.
Claims use since about Oct. 19, 1910.

Ser. No. 53,520. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NAAMLOOZE VENNOOTSCHAP LYMEN GELATINEFABRIEK "DELFT," Delft, Holland. Filed Dec. 28, 1910.



Particular description of goods.—Gelatin as Ingredient of Food.
Claims use since Dec. 19, 1908.

Ser. No. 53,527. (CLASS 39. CLOTHING.) FILSINGER-BONITE SHOE CO., St. Louis, Mo. Filed Dec. 29, 1910.

"PURPLE COW"



Particular description of goods.—Shoes and Slippers Made of Textile Fabric.
Claims use since Oct. 15, 1910.

Ser. No. 53,988. (CLASS 37. PAPER AND STATIONERY.) THE UNITED NEWS & STATIONERY CO., Rochester, N. Y. Filed Jan. 20, 1911.

UNITED

Particular description of goods.—Pens, Pencils, Writing-Paper, and Writing-Tablets.
Claims use since Jan. 1, 1910.

Ser. No. 54,078. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SOCIÉTÉ PAR ACTIONS POUR LE COMMERCE DE THÉ K H C POPOFF FRÈRES MOSCOU. Moscow, Russia. Filed Jan. 25, 1911. Under ten-year proviso.



Particular description of goods.—Tea.
Claims use since 1841.

Ser. No. 54,231. (CLASS 39. CLOTHING.) BOSTON RUBBER SHOE COMPANY, Boston, Mass. Filed Feb. 1, 1911. Under ten-year proviso.

STORM

Particular description of goods.—Rubber Boots and Shoes.
Claims use since on or before Sept. 18, 1890.

Ser. No. 56,038. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PACIFIC CEREAL ASSOCIATION, San Francisco, Cal. Filed Apr. 29, 1911.



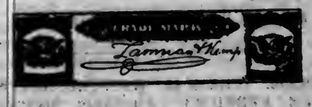
The upper and lower borders, the seal, and the stems of the flowers being green, the carnations being red.
Particular description of goods.—Rolled Oats, Flaked Wheat, and Granulated Wheat.
Claims use since 1896.

Ser. No. 56,632. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LANMAN & KEMP, New York, N. Y. Filed May 27, 1911.



Particular description of goods.—Toilet Waters, Florida Water; Liniment, Cod-Liver Oil, Porous Plasters, Absorbent Cotton for Medicinal Use, Witch-Hazel, Remedies for Expelling Worms from the System, Cathartics, Salve and Ointment of Witch-Hazel, Emollients, Sarsaparilla, Remedies for Coughs, Colds, Asthma, Bronchitis, and Pulmonary Affections, Hair-Tonic, and Sugar-Coated Cathartic Pills.
Claims use since the year 1832.

Ser. No. 56,633. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LANMAN & KEMP, New York, N. Y. Filed May 27, 1911. Under ten-year proviso.



Particular description of goods.—Florida Water; Liniment, Cod-Liver Oil, Porous Plasters, Absorbent Cotton for Medicinal Use, Witch-Hazel, Remedies for Expelling Worms from the System, Cathartics; Salve and Ointment of Witch-Hazel, Emollients, Sarsaparilla, Remedies for Coughs, Colds, Asthma, Bronchitis, and Pulmonary Affections, Hair-Tonic, and Sugar-Coated Cathartic Pills.
Claims use since the year 1845.

Ser. No. 56,703. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) MONYBAK MFG. COMPANY, INC., Hartford, Conn. Filed May 31, 1911.

Monybak

Particular description of goods.—Carbolized Soap Paste and Hand-Soap.
Claims use since May 1, 1911.

Ser. No. 57,022. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) AUTOGENWERK SIRIUS GESELLSCHAFT MIT BESCHRÄNKTER HAFTUNG, Dusseldorf, Germany. Filed June 14, 1911

SIRIUS

Particular description of goods.—Gas-Generators, Welding and Cutting Torches, Gas-Pressure Regulators for Metal Welding and Cutting Purposes.
Claims use since Aug. 15, 1907.

Ser. No. 57,257. (CLASS 34. HEATING, LIGHTING ANV VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) HERMANN BERNHARD GIESELER JOACHIM, Paris, France. Filed June 22, 1911.



Particular description of goods.—Lighting Apparatus for Gas-Lamps.
Claims use since Apr. 15, 1911.

Ser. No. 57,689. (CLASS 48. MALT EXTRACTS AND LIQUORS.) GOLDEN WEST BREWING COMPANY, INC., Oakland, Cal. Filed July 18, 1911.

Sunset

Particular description of goods.—Beer.
Claims use since June 24, 1911.

Ser. No. 57,900. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MARGOS MANOOGIAN, Philadelphia, Pa. Filed July 28, 1911.

Margos Manoogian

Consisting of a facsimile of my signature.
Particular description of goods.—Tooth-Powder.
Claims use since June 15, 1911.

Ser. No. 57,903. (CLASS 17. TOBACCO PRODUCTS.) UNITED CIGAR MANUFACTURERS COMPANY, New York, N. Y. Filed July 28, 1911.



Consisting of a portrait of the poet Robert Burns and a facsimile of his signature.

Particular description of goods.—Cigars.

Claims use since the latter part of the year 1857.

Ser. No. 58,048. (CLASS 39. CLOTHING.) BUCHSTAHL & LEWIS, New York, N. Y. Filed Aug. 5, 1911.



Applicants disclaim the use of the word "Caps" in the drawing, which word is not intended as part of the trade-mark.

Particular description of goods.—Hats and Caps for Men, Boys, and Children.

Claims use since June 1, 1908.

Ser. No. 58,061. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) EUREKA WATER HEATER Co., Chicago, Ill. Filed Aug. 7, 1911.

EUREKA

Particular description of goods.—Hot-Water Heaters and Gas-Burners for Heating Purposes.

Claims use since Apr. 22, 1908.

Ser. No. 58,111. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) H. W. JOHNS-MANVILLE COMPANY, New York, N. Y. Filed Aug. 9, 1911.



No claim being made to the words "Sea Rings."

Particular description of goods.—Piston-Packing Made of Textile Fabrics.

Claims use since the 18th day of July, 1911.

Ser. No. 58,596. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) AMOSKEAG MANUFACTURING COMPANY, Manchester, N. H., assignor to Charles W. Amory, Boston, Mass., Theophilus Parsons, Mattapoisett, Mass., Frank P. Carpenter, Manchester, N. H., Frederic C. Dumaine, Concord, Mass., T. Jefferson Coolidge and T. Jefferson Coolidge, Jr., Manchester, N. H., George Wigglesworth, Milton, Mass., William Amory and Philip Dexter, Boston, Mass., Galen L. Stone, Brookline, Mass., George von L. Meyer, Hamilton, Mass., and George A. Gardner, Boston, Mass., trustees. Filed Sept. 8, 1911. Under ten-year proviso.

Particular description of goods.—Cotton Piece Goods.

Claims use since the year 1844.

Ser. No. 58,598. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) AMOSKEAG MANUFACTURING COMPANY, Manchester, N. H., assignor to Charles W. Amory, Boston, Mass., Theophilus Parsons, Mattapoisett, Mass., Frank P. Carpenter, Manchester, N. H., Frederic C. Dumaine, Concord, Mass., T. Jefferson Coolidge and T. Jefferson Coolidge, Jr., Manchester, N. H., George Wigglesworth, Milton, Mass., William Amory and Philip Dexter, Boston, Mass., Galen L. Stone, Brookline, Mass., George von L. Meyer, Hamilton, Mass., and George A. Gardner, Boston, Mass., trustees. Filed Sept. 8, 1911. Under ten-year proviso.



Particular description of goods.—Cotton Piece Goods.

Claims use since Feb. 1, 1881.

Ser. No. 58,599. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) AMOSKEAG MANUFACTURING COMPANY, Manchester, N. H., assignor to Charles W. Amory, Boston, Mass., Theophilus Parsons, Mattapoisett, Mass., Frank P. Carpenter, Manchester, N. H., Frederic C. Dumaine, Concord, Mass., T. Jefferson Coolidge and T. Jefferson Coolidge, Jr., Manchester, N. H., George Wigglesworth, Milton, Mass., William Amory and Philip Dexter, Boston, Mass., Galen L. Stone, Brookline, Mass., George von L. Meyer, Hamilton, Mass., and George A. Gardner, Boston, Mass., trustees. Filed Sept. 8, 1911. Under ten-year proviso.



Particular description of goods.—Cotton Piece Goods.

Claims use since Sept. 16, 1881.

Ser. No. 58,845. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) EDWIN THOMPSON, Liverpool, England. Filed Sept. 25, 1911.

ZODIAC

Particular description of goods.—An Electrical Massaging Appliance.

Claims use since about Dec. 19, 1891.

Ser. No. 58,871. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) WILLIAM FREDERIK MERCIER, Amsterdam and Schiedam, the Netherlands. Filed Sept. 26, 1911.



Particular description of goods.—Straight Holland Gin.

Claims use since Jan. 1, 1825.

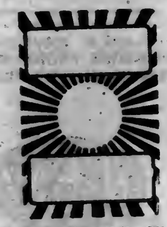
Ser. No. 59,098. (CLASS 39. CLOTHING.) BERTHA MFG. Co., South Norfolk, Va. Filed Oct. 11, 1911.

Sesrun

Particular description of goods.—Nurses' Uniforms—Namely, Shirt-Waists, Skirts, Aprons, and Caps.

Claims use since Sept. 1, 1911.

Ser. No. 59,141. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) ROSE MANUFACTURING Co., Philadelphia, Pa. Filed Oct. 13, 1911.



Particular description of goods.—Oil and Gas Lamps, Gas Generators, and Burners.

Claims use since November, 1906.

Ser. No. 59,230. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) GLOBE EAR-PHONE COMPANY, Boston, Mass. Filed Oct. 19, 1911.



Particular description of goods.—Audiphones.

Claims use since July, 1906.

Ser. No. 59,264. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) TUBULAR WOVEN FABRIC Co., Pawtucket, R. I. Filed Oct. 21, 1911.

DURADUOT

Particular description of goods.—Woven Tubes for Electrical Conductors.

Claims use since on or about Oct. 1, 1911.

Ser. No. 59,299. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) RICHMOND LACE WORKS, Portland, Me., and Alton, R. I. Filed Oct. 23, 1911.



Particular description of goods.—Cotton, Silk, Linen, and Mercerized Laces.
Claims use since June 16, 1911.

Ser. No. 59,320. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NEW-SKIN COMPANY, Brooklyn, N. Y. Filed Oct. 24, 1911.

NEW-SKIN

Particular description of goods.—Liquid Substitute for Court-Plaster.
Claims use since Jan. 1, 1901.

Ser. No. 59,369. (CLASS 8. SMOKERS' ARTICLES, NOT INCLUDING TOBACCO PRODUCTS.) METROPOLITAN TOBACCO CO., New York, N. Y. Filed Oct. 27, 1911.

N P W

The background being green.
Particular description of goods.—Tobacco-Pipes.
Claims use since the 1st day of October, 1900.

Ser. No. 59,370. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PINKO-LAXIN MEDICINE CO., St. Louis, Mo. Filed Oct. 27, 1911.



Particular description of goods.—Tablets, a Remedy for Constipation.
Claims use since Oct. 4, 1911.

Ser. No. 59,457. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) C. M. MCCLUNG & CO., Knoxville, Tenn. Filed Nov. 1, 1911.



Particular description of goods.—Brooms and Paint, Scrubbing, Artists', Shaving, Shoe, Sink, Stove, Varnish, Whitewash, Window-Cleaning, and Wire Brushes.
Claims use since about the year 1882.

Ser. No. 59,458. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) C. M. MCCLUNG & CO., Knoxville, Tenn. Filed Nov. 1, 1911.



Particular description of goods.—Brooms, Paint, Scrubbing, Artists', Shaving, Shoe, Sink, Stove, Varnish, Whitewash, Window-Cleaning, and Wire Brushes.
Claims use since about the year 1893.

Ser. No. 59,499. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HARRY M. SWARTLEY, Savannah, Ga. Filed Nov. 2, 1911.



Particular description of goods.—A Remedy for Kidney and Bladder Diseases.
Claims use since about Sept. 1, 1910.

Ser. No. 59,530. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) N. PALMER & CO., Bridgeport, Conn. Filed Nov. 3, 1911.

WATER-WITCH

Particular description of goods.—Leather Belting.
Claims use since Nov. 1, 1908.

Ser. No. 59,543. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE UNION NEWS COMPANY, New York, N. Y. Filed Nov. 4, 1911.



Particular description of goods.—Skin-Lotion.
Claims use since Oct. 1, 1911.

Ser. No. 59,553. (CLASS 39. CLOTHING.) LEWIS A. CROSSETT, INC., Portland, Me., and Boston, Mass. Filed Nov. 4, 1911. Under ten-year proviso.

ABINGTON

Particular description of goods.—Boots and Shoes of Leather or Tanned Skin.
Claims use since 1885.

Ser. No. 59,573. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) F. G. KLEIN CO., Burlington, Wis. Filed Nov. 6, 1911. Under ten-year proviso.



Particular description of goods.—Mineral Waters, Still Waters, Spring-Waters, and Non-Intoxicating Carbonated Tonic Beverages.
Claims use since Feb. 1, 1895.

Ser. No. 59,662. (CLASS 39. CLOTHING.) JOEL BAILY DAVIS COMPANY, Philadelphia, Pa. Filed Nov. 11, 1911. Under ten-year proviso.

PEERLESS

Particular description of goods.—Knitted and Textile Underwear—Namely, Undershirts, Undervests, and Underdrawers, Hosiery, and Gloves.
Claims use since about the year 1880.

Ser. No. 59,707. (CLASS 6. CHEMICAL, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DOROTHY D. WOOD, Kansas City, Mo. Filed Nov. 13, 1911.

Pickwick

Particular description of goods.—Hair-Tonic.
Claims use since Oct. 9, 1911.

Ser. No. 59,748. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SALAFIA PERMANENT EMBALMING METHOD CO., New York, N. Y. Filed Nov. 16, 1911.



The portrait being that of Alfredo Salafia.
Particular description of goods.—An Embalming Fluid.
Claims use since the 27th day of October, 1911.

Ser. No. 59,828. (CLASS 27. HOROLOGICAL INSTRUMENTS.) ADOLPHE BIEN, Paris, France. Filed Nov. 21, 1911.

Bien

Consisting of the word "Bien" in the facsimile handwriting of the applicant.
Particular description of goods.—Watches.
Claims use since Jan. 1, 1911.

Ser. No. 59,842. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ARISTIDE VÈVE, Paris, France. Filed Nov. 21, 1911.

Dr A. Vève

Consisting of a facsimile of my autograph signature.
Particular description of goods.—Dentifrice.
Claims use since about Oct. 1, 1903.

Ser. No. 60,022. (CLASS 17. TOBACCO PRODUCTS.) R. J. REYNOLDS TOBACCO COMPANY, Winston Salem, N. C. Filed Dec. 1, 1911.



Consisting of a portrait of the late King Edward VII of England.

Particular description of goods.—Smoking and Chewing Tobacco, Cigars, Cigarettes, and Snuff.

Claims use since Aug. 1, 1907.

Ser. No. 60,030. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) PITTSBURGH MANUFACTURERS SALES CO., Pittsburgh, Pa. Filed Dec. 1, 1911.

FLANOLA

Particular description of goods.—Polishing-Cloths.

Claims use since Aug. 29, 1911.

Ser. No. 60,225. (CLASS 7. CORDAGE.) MARSHALL & COMPANY, Kearney, N. J. Filed Dec. 14, 1911.

RELIANCE

Particular description of goods.—Twine.

Claims use since January, 1908.

Ser. No. 60,243. (CLASS 10. FERTILIZERS.) BOWKER FERTILIZER COMPANY, New York, N. Y. Filed Dec. 15, 1911. Under ten-year proviso.

NASSAU

Particular description of goods.—Fertilizers.

Claims use since May, 1881.

Ser. No. 60,248. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) FALL RIVER BLEACHERY, Fall River, Mass. Filed Dec. 15, 1911.



Particular description of goods.—Cotton Piece Goods.

Claims use since about Nov. 21, 1876.

Ser. No. 60,263. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) NEEL-ARMSTRONG COMPANY, Akron, Ohio. Filed Dec. 15, 1911.

OXYOLINE

Particular description of goods.—Machines for Generating or Producing a Medicated Ozone for Inhalation Purposes.

Claims use since the 1st of January, 1905.

Ser. No. 60,266. (CLASS 39. CLOTHING.) PARKER, STEARNS & COMPANY, New York and Brooklyn, N. Y. Filed Dec. 15, 1911.

"Spring Maid"

Particular description of goods.—Rubber Bathing-Caps.

Claims use since Dec. 6, 1911.

Ser. No. 60,267. (CLASS 39. CLOTHING.) PARKER, STEARNS & COMPANY, New York and Brooklyn, N. Y. Filed Dec. 15, 1911.

"Water Nymph"

Particular description of goods.—Rubber Bathing-Caps.

Claims use since Dec. 6, 1911.

Ser. No. 60,279. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) THE RUDOLPH WURLITZER CO., Cincinnati, Ohio. Filed Dec. 15, 1911. Under ten-year proviso.

KINGSTON

Particular description of goods.—Pianos.

Claims use since Feb. 10, 1895.

Ser. No. 60,284. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FREDERICK BRACKETT, Washington, D. C. Filed Dec. 16, 1911.

Witcheria

Particular description of goods.—A Lotion for Skin Diseases.

Claims use since Jan. 1, 1911.

Ser. No. 60,345. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) FRANZ BAUMGARDT, Spandau, Germany. Filed Dec. 19, 1911.

"Clofektor"

Particular description of goods.—Disinfecting Devices.

Claims use since 1st day of August, 1911.

Ser. No. 60,412. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ROBINSON BROS. & COMPANY, INCORPORATED, Portland, Me., and Malden, Mass. Filed Dec. 22, 1911.

PATUSAN

Particular description of goods.—Perfumes.

Claims use since Dec. 9, 1911.

Ser. No. 60,428. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MCCUSKER AND BARNES, Annapolis, Md. Filed Dec. 23, 1911.

MAC-BAR'S

Particular description of goods.—An Indigestion Remedy.

Claims use since Oct. 16, 1911.

Ser. No. 60,434. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JAMES J. CONVEY, New York, N. Y. Filed Dec. 26, 1911.

Old Capt. Jim's



The picture being fanciful.

Particular description of goods.—A Liniment.

Claims use since Dec. 2, 1911.

Ser. No. 60,451. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN W. TRENTMAN, Cleveland, Ohio. Filed Dec. 26, 1911.

Bisco

Particular description of goods.—Baking-Powder.

Claims use since Sept. 2, 1911.

Ser. No. 60,479. (CLASS 2. RECEPTACLES.) WILLIAM L. DEMING, Salem, Ohio. Filed Dec. 28, 1911.

AUTOILET

Particular description of goods.—Toilet-Cases.

Claims use since about the 15th day of November, 1911.

Ser. No. 60,505. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FRANCIS E. LESTER, Mesilla Park, N. Mex. Filed Dec. 29, 1911.

Meximol

Particular description of goods.—Hair-Tonic and Shampoo Preparations.

Claims use since on or about the 16th day of December, 1911.

Ser. No. 60,509. (CLASS 12. CONSTRUCTION MATERIALS.) NATIONAL FIRE PROOFING COMPANY, Pittsburgh, Pa. Filed Dec. 29, 1911.

TEX

Particular description of goods.—Structural Blocks, Bricks, and Tiles of Terra-Cotta and Clay.
Claims use since Dec. 4, 1911.

Ser. No. 60,524. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) JENKINS RUBBER CO., Elizabeth, N. J. Filed Dec. 30, 1911.

JENARCO

Particular description of goods.—Rubber Packing, Rubber Gaskets, Rubber Disks, Rubber Rings, and Rubber Washers.
Claims use since Nov. 15, 1911.

Ser. No. 60,533. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FARBENFABRIKEN OF ELBERFELD COMPANY, New York, N. Y. Filed Dec. 30, 1911.

ADAMON

Particular description of goods.—A Sedative.
Claims use since Nov. 28, 1911.

Ser. No. 60,536. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DOUGLAS CANDY CO., St. Joseph, Mo. Filed Jan. 2, 1912.

Miladi

Particular description of goods.—Chocolate Creams.
Claims use since Oct. 19, 1907.

Ser. No. 60,538. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ELMO SISTERS, Philadelphia, Pa. Filed Jan. 2, 1912.



Particular description of goods.—Massage-Creams, Rouges, Powder-Pastes, Hair-Tonics, Face-Powders.
Claims use since June 1, 1908.

Ser. No. 60,541. (CLASS 33. GLASSWARE.) HIRES TURNER GLASS CO., Philadelphia, Pa. Filed Jan. 2, 1912.



Particular description of goods.—Window-Glass.
Claims use since Aug. 14, 1911.

Ser. No. 60,562. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LEE B. SKINNER, Dunedin, Fla. Filed Jan. 2, 1912.



Particular description of goods.—Oranges, Lemons, Grape-Fruit, Tangerines, and Limes.
Claims use since Nov. 15, 1911.

Ser. No. 60,563. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LEE B. SKINNER, Dunedin, Fla. Filed Jan. 2, 1912.



Particular description of goods.—Oranges, Lemons, Grape-Fruit, Tangerines, and Limes.
Claims use since Nov. 18, 1911.

Ser. No. 60,564. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LEE B. SKINNER, Dunedin, Fla. Filed Jan. 2, 1912.



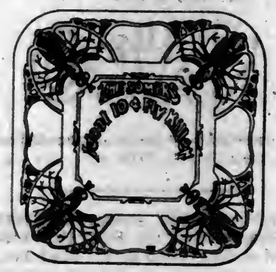
Particular description of goods.—Oranges, Lemons, Grape-Fruit, Tangerines, and Limes.
Claims use since Nov. 18, 1911.

Ser. No. 60,566. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ISLEWORTH GROVE COMPANY, Jacksonville, Fla. Filed Jan. 2, 1912.

ISLEWORTH

Particular description of goods.—Oranges, Grape-Fruit, and Tangerines.
Claims use since October, 1911.

Ser. No. 60,581. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HAROLD SOMERS, Brooklyn, N. Y. Filed Jan. 3, 1912.



The words "The Somers 10¢ Fly Killer" being hereby disclaimed.
Particular description of goods.—A Chemical Preparation and Devices for Killing Flies.
Claims use since Dec. 30, 1911.

Ser. No. 60,615. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) W. T. WELISCH & CO., San Francisco, Cal. Filed Jan. 4, 1912.

HONEY MOON

Particular description of goods.—Rice.
Claims use since Feb. 12, 1905.

Ser. No. 60,616. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE ATLANTIC MACARONI CO., Long Island City, N. Y. Filed Jan. 4, 1912.

TRIONFO

Particular description of goods.—Macaroni.
Claims use since about August, 1911.

Ser. No. 60,624. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) ROLLS-ROYCE LIMITED, Osmaston, Derby, England. Filed Jan. 4, 1912.

RR

Particular description of goods.—Motor-Cars and Chassis.
Claims use since the 9th day of April, 1907.

Ser. No. 60,685. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) NATIONAL COMMITTEE OF THE CONFEDERATED SUPPLY ASSOCIATIONS, New York, N. Y. Filed Jan. 8, 1912.

NACO

Particular description of goods.—Range-Boilers.
Claims use since July 1, 1910.

Ser. No. 60,692. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ERNEST MOLWITZ, New York, N. Y. Filed Jan. 9, 1912. Under ten-year proviso.

MOLWITZ' EMOLLIENT CERATE

Particular description of goods.—A Remedy for Boils, Carbuncles, Felons, Runarounds, Caked Breasts, and All Inflamed Protuberances.
Claims use since Jan. 1, 1895.

Ser. No. 60,704. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THEODORE H. FROEHLICH, New York, N. Y. Filed Jan. 9, 1912.

La CARESSE

Particular description of goods.—Toilet Powders.
Claims use since Sept. 1, 1911.

Ser. No. 60,713. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BREWSTER & MAGNER, New Orleans, La. Filed Jan. 10, 1912.

John A. Magner

Consisting of a facsimile of the signature of John A. Magner.
Particular description of goods.—A Salve, an External Remedy for Eczema, Itch, Ringworm, Barber's Itch, Skin Eruptions, Scales on Body and Head, Tetter, and Diseases of the Skin Generally.
Claims use since Oct. 1, 1911.

Ser. No. 60,734. (CLASS 47. WINES.) JULIUS WILE, SONS & CO., New York, N. Y. Filed Jan. 11, 1912.

GIRALDA

Particular description of goods.—Sherry-Wine.
Claims use since the 1st day of January, 1910.

Ser. No. 60,760. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) STEPHEN K. SASS, Chicago, Ill. Filed Jan. 12, 1912.

ANOLA

Particular description of goods.—Salves and Balms.
Claims use since Dec. 21, 1911.

Ser. No. 60,763. (CLASS 37. PAPER AND STATIONERY.) B. D. RISING PAPER COMPANY, Housatonic, Mass. Filed Jan. 12, 1912.

REFERENCE

Particular description of goods.—Writing-Paper.
Claims use since Apr. 13, 1911.

Ser. No. 60,771. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE MARSHALLTOWN MOTOR MATERIAL MFG. CO., Marshalltown, Iowa. Filed Jan. 12, 1912.

V-RAY

Particular description of goods.—Spark-Plugs.
Claims use since Apr. 29, 1911.

Ser. No. 60,774. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEORGE O. WELLMAN, Jr., Chicago, Ill. Filed Jan. 12, 1912.

"Pan Gow"

Particular description of goods.—Liniments.
Claims use since Feb. 25, 1910.

Ser. No. 60,837. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ROBINSON & DAVIS, San Antonio, Tex. Filed Jan. 16, 1912.

R & D

Particular description of goods.—A Medical Compound Used for the Treatment of Throat and Lung Troubles, Coughs, Bronchial Affections, La Grippe, Pneumonia, Loss of Voice, and Consumption, and Also for Nervous and General Debility, Night-Sweats, Anemia, and Loss of Flesh.
Claims use since Dec. 26, 1911.

Ser. No. 60,863. (CLASS 39. CLOTHING.) JOHN RUGHEIMER SONS, Charleston, S. C. Filed Jan. 17, 1912.

Rugheimer's

The trade-mark consists of the name "Rugheimer's" in the distinctive handwriting of August Rudolph Rugheimer, who is secretary and treasurer of said corporation.
Particular description of goods.—Overcoats, Coats, Waistcoats, and Trousers.
Claims use since the 5th day of August, 1905.

Ser. No. 60,883. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) GEO. B. CARPENTER & CO., Chicago, Ill. Filed Jan. 18, 1912. Under ten-year proviso.

LAKEWOOD

Particular description of goods.—Cotton Duck.
Claims use since about Jan. 1, 1895.

Ser. No. 60,893. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HENRY VON FRIELING, New York, N. Y. Filed Jan. 18, 1912.

Particular description of goods.—Salves.
Claims use since July, 1911.

Ser. No. 60,894. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) E. & Z. VAN RAALTE, New York, N. Y. Filed Jan. 18, 1912.

Beaumou

Particular description of goods.—Veilings.
Claims use since the 2d day of January, 1912.

Ser. No. 60,937. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BERNARD L. BRUN, Baltimore, Md. Filed Jan. 20, 1912. Under ten-year proviso.

ESTABLISHED 1810

Particular description of goods.—Hair-Tonic and Pomatum.
Claims use since on or about the month of May, 1810.

Ser. No. 60,946. (CLASS 39. CLOTHING.) AMERICAN LADY CORSET COMPANY, Detroit, Mich. Filed Jan. 20, 1912.

SOFRO

Particular description of goods.—Corsets.
Claims use since May 2, 1893.

Ser. No. 60,961. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EASTMAN KODAK COMPANY, Rochester, N. Y. Filed Jan. 22, 1912.

TOZOL

Particular description of goods.—Chemicals for Use in Treating Photographs.
Claims use since Dec. 21, 1911.

Ser. No. 61,019. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WM. GROSSMAN, Milwaukee, Wis. Filed Jan. 25, 1912.

PRINCE

Particular description of goods.—Laundry Starch.
Claims use since Dec. 1, 1902.

Ser. No. 61,141. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) W. & J. SLOANE, New York, N. Y. Filed Jan. 31, 1912.

DIXIE

Particular description of goods.—Woven Grass Rugs.
Claims use since Aug. 1, 1911.

Ser. No. 61,156. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) CHARLES A. CHILDS, New York, N. Y. Filed Jan. 31, 1912. Under ten-year proviso.

English Finishing Lead

Particular description of goods.—White Lead.
Claims use since 1887.

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TRADE-MARKS

REGISTERED MARCH 5, 1912.

85,637. PREPARED FOOD FOR INFANTS AND INVALIDS. ADA M. ALBERTY, Seattle, Wash.
Filed August 1, 1910. Serial No. 51,205. PUBLISHED DECEMBER 26, 1911.

85,638. SAFETY-PINS. AMERICAN PIN COMPANY, Waterbury, Conn.
Filed November 19, 1910. Serial No. 52,800. PUBLISHED JANUARY 2, 1912.

85,639. BARB-WIRE. THE AMERICAN STEEL & WIRE COMPANY OF NEW JERSEY, Hoboken, N. J.
Filed June 12, 1911. Serial No. 56,981. PUBLISHED JANUARY 2, 1912.

85,640. CHEWING-GUM. WM. W. BAGLEY, New York, N. Y.
Filed August 12, 1911. Serial No. 58,166. PUBLISHED DECEMBER 26, 1911.

85,641. THERMAL INSULATION. BANNER ROCK PRODUCTS COMPANY, Alexandria, Ind.
Filed May 7, 1910. Serial No. 49,575. PUBLISHED DECEMBER 26, 1911.

85,642. VELVET RUGS. BEATTIE MANUFACTURING COMPANY, Little Falls, N. J.
Filed August 9, 1911. Serial No. 58,101. PUBLISHED JANUARY 2, 1912.

85,643. WHEAT-FLOUR. THE BIG BEND MILLING CO., Davenport, Wash.
Filed December 29, 1909. Serial No. 46,776. PUBLISHED SEPTEMBER 12, 1911.

85,644. CHILDREN'S, MISSES', AND LADIES' CORSET-WAISTS AND UNDERWAISTS. RIMBACH-SOMMER CO., New York, N. Y.
Filed October 4, 1911. Serial No. 58,987. PUBLISHED JANUARY 2, 1912.

85,645. CERTAIN KINDS OF CORAL JEWELRY. BORRELLI & VITELLI, New York, N. Y.
Filed September 28, 1911. Serial No. 58,903. PUBLISHED DECEMBER 26, 1911.

85,646. PIANOS AND PLAYER-PIANOS. CABLE & SONS, New York, N. Y.
Filed November 22, 1911. Serial No. 59,348. PUBLISHED DECEMBER 26, 1911.

85,647. CANNED FRUITS. CENTRAL CALIFORNIA CANNERIES, San Francisco, Cal.
Filed July 23, 1909. Serial No. 43,726. PUBLISHED DECEMBER 26, 1911.

85,648. LEATHER AND CANVAS BOOTS AND SHOES. CLARK-HUTCHINSON COMPANY, Boston, Mass.
Filed September 16, 1911. Serial No. 58,693. PUBLISHED JANUARY 2, 1912.

85,649. ORANGES, LEMONS, GRAPE-FRUIT, TANGERINES, AND LIMES. THE COCOANUT GROVE CITRUS GROWER'S ASSOCIATION, Cocoanut Grove, Fla.
Filed July 17, 1911. Serial No. 57,660. PUBLISHED AUGUST 29, 1911.

85,650. WHEAT-FLOUR. J. G. DAVIS CO., Rochester, N. Y.
Filed November 28, 1910. Serial No. 52,991. PUBLISHED DECEMBER 26, 1911.

85,651. BREAD. LOUIS L. DOWNING, Cumberland, Md.
Filed October 18, 1910. Serial No. 52,312. PUBLISHED DECEMBER 26, 1911.

85,652. PIANOS. EILERS MUSIC COMPANY, San Francisco, Cal.
Filed November 23, 1911. Serial No. 59,380. PUBLISHED DECEMBER 26, 1911.

85,653. CANNED FRUITS AND CANNED VEGETABLES. FREDERICK CITY PACKING COMPANY, Frederick, Md.
Filed February 23, 1910. Serial No. 47,951. PUBLISHED MAY 17, 1910.

85,654. LIQUEURS. GAUTIER FRERES, Aigre, France.
Filed November 30, 1907. Serial No. 31,488. PUBLISHED MAY 26, 1908.

85,655. CARBURETERS, EXPLOSION-MOTOR RADIATORS, PUMPS, AND LUBRICATORS. M. GOUDARD AND MENNESSON, Paris, France.
Filed February 18, 1911. Serial No. 54,586. PUBLISHED JANUARY 2, 1912.

85,656. CORSETS. THE HAWES CORSET CO., Bridgeport, Conn.
Filed November 10, 1911. Serial No. 59,647. PUBLISHED JANUARY 2, 1912.

85,657. BLENDED COFFEE AND TEA. HEWLETT BROS. CO., Salt Lake City, Utah.
Filed August 3, 1911. Serial No. 58,009. PUBLISHED DECEMBER 26, 1911.

85,658. ROCK-DRILLS. INGERSOLL-RAND COMPANY, Phillipsburg, N. J., and New York, N. Y.
Filed November 22, 1911. Serial No. 59,346. PUBLISHED DECEMBER 26, 1911.

85,659. TOILET-PAPER. JAPANESE TISSUE MILLS, Holyoke, Mass.
Filed January 13, 1911. Serial No. 53,857. PUBLISHED JANUARY 2, 1912.

85,660. TOILET-PAPER. JAPANESE TISSUE MILLS, Holyoke, Mass.
Filed January 13, 1911. Serial No. 53,858. PUBLISHED JANUARY 2, 1912.

85,661. BLENDED COFFEES AND CERTAIN SPICES. JEWETT & SHERMAN COMPANY, Milwaukee, Wis.
Filed October 12, 1908. Serial No. 37,958. PUBLISHED SEPTEMBER 7, 1909.

85,662. POTATOES. W. C. KIRKMAN & SON, Stockton, Cal.
Filed July 24, 1911. Serial No. 57,806. PUBLISHED DECEMBER 26, 1911.

85,663. CERTAIN NON-ALCOHOLIC BEVERAGES. F. G. KLEIN CO., Burlington, Wis.
Filed November 6, 1911. Serial No. 59,572. PUBLISHED JANUARY 2, 1912.

85,664. VENDING-MACHINES. LIBERTY VENDING CO., New York, N. Y.
Filed November 22, 1911. Serial No. 59,352. PUBLISHED DECEMBER 26, 1911.

85,665. CANNED FRUITS, VEGETABLES, SALMON, DRIED CURRANTS, AND RAISINS. ALFRED LOWRY & BRO., Philadelphia, Pa.
Filed September 21, 1911. Serial No. 58,748. PUBLISHED DECEMBER 26, 1911.

85,666. MATZOS, BEING FLAT SQUARES OF UNLEAVENED BREAD. BEER MANISCHEWITZ, Cincinnati, Ohio.
Filed October 28, 1911. Serial No. 59,494. PUBLISHED DECEMBER 26, 1911.

85,667. MINCE-MEAT. THE W. H. MARVIN COMPANY, Urbana, Ohio.
Filed January 7, 1911. Serial No. 53,723. PUBLISHED FEBRUARY 14, 1911.

85,668. CERTAIN FOODS. MCCORD-BRADY COMPANY, Omaha, Nebr.
Filed February 23, 1911. Serial No. 54,692. PUBLISHED SEPTEMBER 5, 1911.

85,669. WHEAT-FLOUR. MCDONALD MILLING COMPANY, McDonald, Pa.
Filed October 28, 1911. Serial No. 59,405. PUBLISHED DECEMBER 26, 1911.

85,670. CORNMEAL. MCDONALD MILLING COMPANY, McDonald, Pa.
Filed October 28, 1911. Serial No. 59,406. PUBLISHED DECEMBER 26, 1911.

85,671. CARBON-BLACK. METEOR CARBON COMPANY, Charleston and Stonecoal, W. Va.
Filed December 8, 1910. Serial No. 53,175. PUBLISHED JANUARY 2, 1912.

85,672. WHEAT-FLOUR, CORNMEAL, AND GRAHAM FLOUR. MICHIGAN MILLING COMPANY, Ann Arbor, Mich.
Filed February 6, 1911. Serial No. 54,352. PUBLISHED JUNE 27, 1911.

85,673. MIXED SILK AND WORSTED PIECE GOODS. E. B. MOORE & Co., New York, N. Y.
Filed June 17, 1911. Serial No. 57,125. PUBLISHED JANUARY 2, 1912.

85,674. [WITHDRAWN.]

85,675. CERTAIN CUTTERS AND HOLDERS THEREFOR. THE O. K. TOOL HOLDER COMPANY, Shelton, Conn.
Filed May 9, 1910. Serial No. 49,619. PUBLISHED JANUARY 2, 1912.

85,676. TOILET-PINS AND SAFETY-PINS. OAKVILLE COMPANY, Waterbury, Conn.
Filed April 28, 1911. Serial No. 56,035. PUBLISHED AUGUST 29, 1911.

85,677. CANNED PEELED CHILLIES, CANNED CHILLI TOMATOES, AND CANNED TOMATOES. EMILE C. ORTEGA, Los Angeles, Cal.
Filed November 21, 1907. Serial No. 31,288. PUBLISHED DECEMBER 26, 1911.

85,678. CANNED PEELED CHILLIES, PIMENTOS, AND CHILLI SAUCE. E. C. ORTEGA, Los Angeles, Cal.
Filed January 22, 1908. Serial No. 32,377. PUBLISHED DECEMBER 26, 1911.

85,679. WORSTED CLOTHS. PERSEVERANCE WORSTED COMPANY, Woonsocket, R. I.
Filed November 2, 1911. Serial No. 59,515. PUBLISHED JANUARY 2, 1912.

85,680. FRESH CELERY. PRAIRIE SIDE CELERY CO., Tecumseh, Mich.
Filed September 1, 1911. Serial No. 58,502. PUBLISHED DECEMBER 26, 1911.

85,681. TEA. W. S. QUINBY COMPANY, Boston, Mass.
Filed December 28, 1909. Serial No. 46,756. PUBLISHED DECEMBER 26, 1911.

85,682. SILVER-PLATED FLAT WARE AND SILVER-PLATED HOLLOW WARE. PAUL REVERE SILVER COMPANY, Boston, Mass.
Filed October 12, 1911. Serial No. 59,173. PUBLISHED JANUARY 2, 1912.

85,683. CANNED FRUITS AND CANNED VEGETABLES. R. W. RICE, Wolfskill, Cal.
Filed June 14, 1911. Serial No. 57,017. PUBLISHED DECEMBER 26, 1911.

85,684. COTTON, LINEN, SILK, AND WOOLEN PIECE GOODS AND ADMIXTURES. E. ROSENFELD & COMPANY, Baltimore, Md.
Filed November 20, 1911. Serial No. 59,809. PUBLISHED JANUARY 2, 1912.

85,685. COFFEE, TEA, SPICES, AND FLAVORING EXTRACTS. ROTH-HOMEYER COFFEE CO., St. Louis, Mo.
Filed November 15, 1910. Serial No. 52,786. PUBLISHED JULY 4, 1911.

85,686. CLOCKS. THEODORE SCHISGALL, New York, N. Y.
Filed October 26, 1911. Serial No. 59,355. PUBLISHED JANUARY 2, 1912.

85,687. UMBRELLAS AND PARASOLS. KARL AUGUST SCHOTT & ROTH, Stuttgart, Germany.
Filed November 7, 1911. Serial No. 59,604. PUBLISHED JANUARY 2, 1912.

85,688. BLENDED COFFEE. WILLIAM S. SCULL COMPANY, Camden, N. J.
Filed February 9, 1910. Serial No. 47,678. PUBLISHED APRIL 4, 1911.

85,689. HAND SEED-SOWER. ARNOLD C. SHIVELEY, North Manchester, Ind.
Filed April 6, 1911. Serial No. 55,549. PUBLISHED JANUARY 2, 1912.

85,690. SALTED, SMOKED, PICKLED, AND CANNED FISH. SYLVANUS SMITH & CO., INC., Gloucester, Mass.
Filed September 22, 1908. Serial No. 37,540. PUBLISHED DECEMBER 8, 1908.

85,691. PIANOS. SOHMER & COMPANY, New York, N. Y.
Filed October 3, 1911. Serial No. 58,977. PUBLISHED DECEMBER 26, 1911.

85,692. CANNED FRUITS, CANNED VEGETABLES, AND CANNED FISH. SPRAGUE, WARNER & COMPANY, Chicago, Ill., assignor to James McCord Company, Fort Worth, Tex., a Corporation of Texas.
Filed June 22, 1911. Serial No. 57,259. PUBLISHED AUGUST 8, 1911.

85,693. ORANGES, LEMONS, TANGERINES, GRAPE-FRUIT, AND LIMES. WILLIAM C. TEMPLE, Winter Park, Fla.
Filed August 19, 1911. Serial No. 58,287. PUBLISHED DECEMBER 26, 1911.

85,694. LUBRICATING-OILS. THE TEXAS COMPANY, Houston and Port Arthur, Tex., and New York, N. Y.
Filed August 25, 1911. Serial No. 58,382. PUBLISHED JANUARY 2, 1912.

85,695. WHEAT-FLOUR. THE TWIN FALLS MILLING & ELEVATOR CO., Twin Falls, Idaho.
Filed September 21, 1911. Serial No. 58,753. PUBLISHED DECEMBER 26, 1911.

85,696. WRITING-PAPER, ENVELOPS, AND WRITING-TABLETS. UNITED DRUG COMPANY, Boston, Mass.
Filed December 15, 1909. Serial No. 46,535. PUBLISHED DECEMBER 26, 1911.

85,697. CANDY. F. B. WASHBURN & Co., Brockton, Mass.
Filed June 17, 1911. Serial No. 57,145. PUBLISHED DECEMBER 26, 1911.

85,698. CORSETS. WEINGARTEN BROS., INC., New York, N. Y.
Filed October 19, 1911. Serial No. 59,237. PUBLISHED JANUARY 2, 1912.

85,699. WHEAT-FLOUR. WESTERN FLOUR MILL COMPANY, Davenport, Iowa.
Filed May 21, 1910. Serial No. 49,846. PUBLISHED DECEMBER 26, 1911.

85,700. KNITTING-MACHINES, STOP-MOTION THEREFOR, AND CLOTH-CUTTING MACHINES. WILDMAN MFG. CO., Norristown, Pa.
Filed July 22, 1911. Serial No. 57,784. PUBLISHED JANUARY 2, 1912.

85,701. FACE-CREAMS. THOMAS C. BOOTH, New York, N. Y.
Filed November 3, 1911. Serial No. 59,522. PUBLISHED JANUARY 2, 1912.

85,702. CERTAIN CHEMICALS. BURKE & JAMES, Chicago, Ill., assignor to Burke & James, Inc., a Corporation of Delaware.
Filed November 29, 1910. Serial No. 53,018. PUBLISHED JANUARY 2, 1912.

85,703. REMEDIES FOR CATTLE. EZRA L. BURRESS, Anderson, S. C.
Filed April 4, 1911. Serial No. 55,520. PUBLISHED JANUARY 2, 1912.

85,704. DIGESTIVE-FERMENT PRODUCT. G. W. CARRICK COMPANY, New York, N. Y.
Filed November 11, 1911. Serial No. 59,666. PUBLISHED JANUARY 2, 1912.

85,705. OINTMENTS AND REMEDIES FOR CERTAIN DISEASES. PETER G. CHARBONNET, New Orleans, La.
Filed August 29, 1911. Serial No. 58,432. PUBLISHED JANUARY 2, 1912.

85,706. CANCER REMEDY. NEVILLE CORMIER, Crowley, La.
Filed October 11, 1911. Serial No. 59,103. PUBLISHED JANUARY 2, 1912.

85,707. REMEDY IN TABLET FORM FOR CERTAIN DISEASES. THE ENTERONOL COMPANY, Tempe, Ariz., and Oswego, N. Y.
Filed October 25, 1911. Serial No. 59,246. PUBLISHED JANUARY 2, 1912.

85,708. CERTAIN TOOLS. HELLER BROTHERS CO., Newark, N. J.
Filed May 1, 1911. Serial No. 56,080. PUBLISHED DECEMBER 26, 1911.

85,709. REMEDY FOR GONORRHEA, GLEET, AND BLADDER AFFECTIONS. HINKLE CAPSULE COMPANY, Mayfield, Ky.
Filed May 29, 1911. Serial No. 56,693. PUBLISHED JANUARY 2, 1912.

85,710. MEDICINE IN POWDER FORM FOR USE IN CERTAIN DISEASES. B. H. HOKE, Coalport, Pa.
Filed October 18, 1911. Serial No. 59,188. PUBLISHED JANUARY 2, 1912.

85,711. SKIN-STAIN REMOVERS. CARL H. LIPS, New York, N. Y.
Filed August 10, 1911. Serial No. 58,130. PUBLISHED JANUARY 2, 1912.

85,712. REMEDY FOR DISEASES OF THE SKIN. CORNEL PARTOS, New York, N. Y.
Filed August 14, 1911. Serial No. 58,202. PUBLISHED JANUARY 2, 1912.

85,713. PERFUMERY EXTRACTS, TOILET POWDERS, AND SACHET-POWDERS. L. T. PIVER & CIE., Paris, France.
Filed March 9, 1908. Serial No. 33,256. PUBLISHED JANUARY 2, 1912.

85,714. STARCH AND BLUE FOR LAUNDRY PURPOSES. RECKITT & SONS LTD., Hull, England.
Filed September 27, 1911. Serial No. 58,873. PUBLISHED JANUARY 2, 1912.

85,715. SALT. SAN FRANCISCO SALT REFINERY, San Francisco, Cal.
Filed October 26, 1911. Serial No. 59,366. PUBLISHED JANUARY 2, 1912.

85,716. WROUGHT-IRON. SLIGO IRON & STEEL CO., Connellsville, Pa.
Filed August 22, 1905. Serial No. 11,898. PUBLISHED JANUARY 2, 1912.

85,717. HAIR-TONIC. H. W. TAYLOR & Co., New York, N. Y.
Filed April 8, 1911. Serial No. 55,621. PUBLISHED JANUARY 2, 1912.

85,718. REMEDY FOR CERTAIN DISEASES. WILLIAMS REMEDY CO., Ty Ty, Ga.
Filed September 6, 1911. Serial No. 58,555. PUBLISHED JANUARY 2, 1912.

85,719. PILLS FOR CERTAIN DISEASES. CHAUNCEY F. YORK, Detroit, Mich.
Filed November 1, 1911. Serial No. 59,463. PUBLISHED JANUARY 2, 1912.

LABELS

REGISTERED MARCH 5, 1912.

16,209.—*Title:* "SUMORE BISCUIT." (For Biscuit.) WILLIAM P. BOTTOLFSON, Vancouver, British Columbia, Canada. Filed February 12, 1912.

16,210.—*Title:* "SUMORE FLOUR." (For Flour.) WILLIAM P. BOTTOLFSON, Vancouver, British Columbia, Canada. Filed February 12, 1912.

16,211.—*Title:* "ROUND TICKET STOCKING." (For Stockings.) BROWN DURRELL CO., New York, N. Y. Filed January 27, 1912.

16,212.—*Title:* "WHITE POPPY." (For Flour.) CHRISTIAN BREISCH AND CO., North Lansing, Mich. Filed February 3, 1912.

16,213.—*Title:* "BONNIE LASSIE." (For Shoes.) CLARK-HUTCHINSON COMPANY, Boston, Mass. Filed December 21, 1911.

16,214.—*Title:* "CUCUMELIS." (For a Lotion.) JOHN GREY MYERS CORDON, Clayton, N. C. Filed November 14, 1911.

16,215.—*Title:* "MONEYBACK." (For Flour.) H. C. DAVISON, Hutchinson, Kans. Filed February 10, 1912.

16,216.—*Title:* "DECKERMACLAIR." (For Salad-Dressing.) MAYBELLE C. DECKER, Atlanta, Ga. Filed December 26, 1911.

16,217.—*Title:* "MITIFINE FLOUR." (For Flour.) J. DOUGLAS DUNDAS, Vancouver, British Columbia, Canada. Filed January 11, 1912.

16,218.—*Title:* "VO-LANT." (For Cigars.) FOX BROS., Napoleon, Ohio. Filed February 12, 1912.

16,219.—*Title:* "MONTE CRISTO." (For Coffee.) MARTIN MARKS COFFEE CO., Portland, Oreg. Filed August 30, 1911.

16,220.—*Title:* "DONNA MANILA." (For Cigars.) THE MOEHLE LITHOGRAPHIC COMPANY, New York, N. Y. Filed February 12, 1912.

16,221.—*Title:* "SOLA ROSA." (For Cigars.) THE MOEHLE LITHOGRAPHIC COMPANY, New York, N. Y. Filed February 12, 1912.

16,222.—*Title:* "NORTON'S FIRST AID PULMONARY BALSAM." (For a Remedy.) JOHN J. NORTON, Ellicott City, Md. Filed January 11, 1912.

16,223.—*Title:* "TOMSON'S RED SEAL CLEANSER." (For a Cleanser.) P. C. TOMSON & CO., Philadelphia, Pa. Filed December 29, 1911.

16,224.—*Title:* "PECORA ASBESTOS FURNACE CEMENT." (For Asbestos Furnace-Cement.) PECORA PAINT COMPANY, Philadelphia, Pa. Filed February 7, 1912.

16,225.—*Title:* "SUNSET." (For Jar-Rings.) THE RUBBER PRODUCTS COMPANY, Barberton, Ohio. Filed February 13, 1912.

16,226.—*Title:* "CROWN." (For Jar-Rings.) THE RUBBER PRODUCTS COMPANY, Barberton, Ohio. Filed February 13, 1912.

16,227.—*Title:* "BLACKBIRD." (For Jar-Rings.) THE RUBBER PRODUCTS COMPANY, Barberton, Ohio. Filed February 13, 1912.

16,228.—*Title:* "LAUREL." (For Jar-Rings.) THE RUBBER PRODUCTS COMPANY, Barberton, Ohio. Filed February 13, 1912.

16,229.—*Title:* "DAISY." (For Jar-Rings.) THE RUBBER PRODUCTS COMPANY, Barberton, Ohio. Filed February 13, 1912.

16,230.—*Title:* "FAIR MAID." (For Complexion-Powder.) CLARA TETLOW, Philadelphia, Pa. Filed February 10, 1912.

16,231.—*Title:* "GLYROIN." (For Medicine or Pharmaceutical Preparation.) TOWNS & JAMES, New York, N. Y. Filed December 30, 1911.

16,232.—*Title:* "SERVICE." (For Fireless Cookers.) TRAVERSE CITY REFRIGERATOR CO., Traverse City, Mich. Filed January 29, 1912.

16,233.—*Title:* "SERVICE." (For Combined Refrigerators and Fireless Cookers.) TRAVERSE CITY REFRIGERATOR CO., Traverse City, Mich. Filed January 29, 1912.

PRINTS

REGISTERED MARCH 5, 1912.

2,967.—*Title:* "WHEN ORDERING COAL PLEASE MENTION THE SIZE REQUIRED." (For Coal.) CURTIS-BLAISDELL CO., New York, N. Y. Filed December 30, 1911.

2,968.—*Title:* "DERBYSHIRE LATHE LARGE AND SMALL CHUCKS AND DRAW-IN SPINDLE." (For Lathes, Large and Small Chucks, and Draw-in Spindles.) FREDERICK W. DERBYSHIRE, Waltham, Mass. Filed January 23, 1912.

2,969.—*Title:* "DR. CALDWELL'S SYRUP PEPSIN." (For Syrup Pepsin.) PEPSIN SYRUP COMPANY, Monticello, Ill. Filed February 8, 1912.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

IN RE DEERE & MANSUR COMPANY.

Decided December 8, 1911.

APPLICATION—ACCESS.

Where in connection with a petition for the institution of public-use proceedings it was stated that petitioner became aware that applications were pending for the invention alleged to have been in public use through the application of one W., to which it legitimately had access, *Held* that this affords no ground for giving one of the applicants involved in the public-use proceeding permission to inspect W.'s application, since it is in no way relied upon by the petitioner.

ON PETITION.

Mr. H. H. Bliss for Deere & Mansur Company and for Dooley.

Messrs. Pierce & Fisher for Michael.

Messrs. Dodge & Sons for Hult.

Messrs. Whitaker & Prevost for Buchanan.

Messrs. Staley & Bowman for Schrock and Schrock.

Messrs. Linthicum, Belt & Fuller for Weaver.

MOORE, *Commissioner:*

This case is before me for consideration of a petition and motion filed by the party Weaver.

In his petition Weaver requests that he be permitted to inspect and be furnished with copies of the patent application of Charles E. White.

As a basis for said request the petition states that the institution of the public-use proceeding was effected by the Deere & Mansur Company through knowledge acquired in reference to a number of interferences through the application of Charles E. White, No. * * *, which application was referred to in the brief filed by the Deere & Mansur Company at the hearing upon the question of instituting said public-use proceedings and was also referred to in the Commissioner's decision instituting the proceeding.

An examination of said brief of the Deere & Mansur Company shows that reference was made to the White application merely in explanation of how said company acquired its knowledge that applications claiming the invention involved in the public-use proceeding instituted were on file in the Patent Office.

The White application was referred to in the decision of the Commissioner denying a request by Weaver for a rehearing of the petition of the Deere & Mansur Company for an institution of a public-use proceeding in the following language:

Petitioner's statement that he had no knowledge prior to the disclosure of counsel for the Deere & Mansur Company at the hearing of the pendency of the White application and that he was taken by surprise as to how said company obtained knowledge that applications were pending for the invention in question, appear to furnish no good reason for granting a rehearing.

In answer to said statement it should be noted that this Office could not disclose the pendency of the White application to petitioner, that the record shows that the Deere & Mansur Company obtained said knowlege legitimately, and that as stated in the case of *ex parte Hartley*, (136 O. G., 1707,) "it is the practice to permit one of the general public to file a protest and to take testimony in behalf of the Patent Office upon this question."

The institution of the public-use proceeding was in no way based upon the White application. Reference to said application was made merely for the purpose of showing how the Deere & Mansur Company acquired its information, but this showing was entirely unnecessary. White is not a party to the public-use proceeding, and even if he was it would not be a proper ground in a public-use proceeding for permitting access by the other parties to his application.

The petition further states that White has given a deposition on behalf of Deere & Mansur Company in which he testifies regarding his application and that access to said application on the part of the petitioner is necessary in order to enable him to properly prepare his defense in the public-use proceeding. Petitioner should have referred to the portion of White's deposition mentioning his application, as by question and answer, so that this Office could readily verify petitioner's statement. The brief filed by the Deere & Mansur Company in opposition to this petition states that the testimony of White concerning his application was drawn out on cross-examination and over the objection of counsel for the Deere & Mansur Company.

It does not appear that the Deere & Mansur Company rely upon the White application for any purpose in the public-use proceeding. Had it desired to do so it would obviously have been necessary for it to introduce said application in evidence. Weaver appears to be no more entitled to access to the White application at the present time than he was at the time of my decision, noted above, in which I stated that this Office could not disclose the White application to the petitioner Weaver.

In his motion Weaver requests that the appli-

cant's time for taking testimony be extended so as to close January 1, 1912, and that the times for the taking of petitioner's rebuttal testimony and for filing printed copies of the testimony be correspondingly extended.

No showing has been made in support of this motion; but in view of the fact that the time of the Deere & Mansur Company has been extended several times upon stipulation the motion will be granted in the present instance. Any future requests by Weaver for extension of his time should be accompanied by a stipulation or by a proper showing.

EX PARTE ROSENBLUTH.

Decided February 16, 1912.

DRAWINGS—CANCELATION OF SUPERFLUOUS SHEETS.

Held that the Examiner properly required the cancelation of Sheets 1 and 4 of the drawings.

ON PETITION.

ACETYLENE-GAS GENERATOR.

Mr. Arthur E. Paige for the applicant.

MOORE, *Commissioner:*

This is a petition from the action of the Examiner requiring the cancelation of Sheets 1 and 4 of the drawings containing Figures I and XI.

These figures are side elevations of two forms of the generator. Their presence in the case is absolutely unnecessary to the full understanding thereof. Applicant states that not only would the changes in the drawings, which the Examiner states are necessary, have to be made, but that—

it would also be necessary to change the nominals of all the other figures of the drawings and rewrite the specification in accordance therewith.

He also states that claims 5 and 10 would not be readable upon any single figure of the drawing. As to the necessity of making the changes noted, this results merely from the unnecessary expense to which the applicant was subjected in having Figs. I and XI made. So far as claims 5 and 10 are concerned it is noted that at the present time they will not read upon any single feature of the drawing, since Fig. XI is an elevation and does not show the features of construction set out in these claims.

The petition is denied.

JOHN F. JELKE CO. *v.* EMIL FLEISCHL & SON.

Decided February 2, 1912.

TRADE-MARKS—GOODS OF THE SAME DESCRIPTIVE PROPERTIES—BUTTER AND OLEOMARGARIN.

Held that butter and oleomargarin are goods of the same descriptive properties within the meaning of the Trade-Mark Act.

APPEAL on motion.

TRADE-MARK FOR OLEOMARGARIN.

Messrs. Poole & Brown for John F. Jelke Co.

Mr. F. T. F. Johnson for Fleischl & Son.

BILLINGS, *First Assistant Commissioner:*

This is an appeal from the decision of the Examiner of Trade-Marks refusing to dissolve the interference upon a motion brought by Emil Fleischl & Son alleging that the mark used by the respective parties hereto is applied by them to goods of different descriptive properties. John F. Jelke Co., the junior party, also urge the dissolution.

It appears that the same mark is applied by one party to "Oleomargarin" and by the other to "Butter." It is the contention of both parties that the oleomargarin laws of August 2, 1886, (24 Stat., 209,) October 1, 1890, (26 Stat., 621,) and May 9, 1902, (32 Stat., 193,) have created a commercially-distinct article of oleomargarin and that whatever may have been the case before such laws were passed butter and oleomargarin must now be considered goods of different descriptive properties within the meaning of the Trade-Mark Act. They call attention to the provisions of the law which require oleomargarin to be so labeled and sold that the possibility of its being palmed off on a purchaser for butter is reduced to a minimum.

These very provisions of the law, the object of which is to prevent confusion between butter and oleomargarin, are to my mind a reason against permitting the same mark to be applied by these parties to their respective goods rather than a reason for dissolving the interference and granting separate registrations to each of them. It is believed that the Patent Office should not lend itself to such a use of the right of registration.

It may be said further that even assuming that the law has, as urged by appellant, thrown such restrictions around the sale of oleomargarin that it is now easy for the purchaser to distinguish it from butter as found on the market it does not follow from that alone that the goods are of different descriptive properties, nor is the case of *The Muralo Co. v. National Lead Company*, (165 O. G., 475; 36 App. D. C., 541,) cited by appellant, considered authority for such a holding. That case involved the question of similarity of marks as well as similarity of goods. A purchaser of the most limited intelligence would also be able to distinguish a pair of high patent-leather shoes from a pair of tan oxfords, and he could scarcely be induced to accept the one for the other by reason of any trade-mark they might bear. One is a substitute in use for the other in the same sense that butter and oleomargarin are substitutes for each other. Yet it would scarcely be contended by any one that these kinds of shoes are goods of different descriptive properties and that the Office might properly register the symbols "UNXLD" to one company as a trade-mark on high black shoes and the identical mark to another company for use on tan oxfords. To do so would obviously tend to defeat the very purpose for which trade-marks are used and in the interests of which they are registered—namely, to readily identify goods as those of a particular maker or those for which a certain person stands responsible.

The agreement of the parties to a dissolution cannot be permitted to control where the Office is clearly of the opinion that the separate marks should not both be registered. In this case I am clearly of the opinion that the goods were properly held to be of the same descriptive properties.

The decision of the Examiner of Trade-Marks is affirmed.

EX PARTE MORGAN.

Decided April 3, 1911.

1. PATENTABILITY—INCANDESCENT-LAMP-SECURING MEANS.

Claims for a device for fastening an incandescent lamp in its socket *Held* unpatentable in view of the prior art.

2. SAME—DOUBLE USE.

Where the locking device employed by applicant had been used for the same purpose in nut-locks, *Held* that applicant had made merely a double use of this old instrumentality when he employed it as a means for fastening an incandescent lamp in its socket.

INCANDESCENT-LAMP-SECURING MEANS.

Messrs. Chrystie & Wright for the applicant.

TENNANT, *Assistant Commissioner:*

This is an appeal from the decision of the Examiners-in-Chief affirming the action of the Primary Examiner in finally rejecting claims 1 to 6, inclusive, and 9 and 10, of which the following will serve as illustrations:

1. The herein described means for fastening against removal an incandescent lamp in its socket, comprising the lamp socket, a protective shell therefor, the lamp and its base, a helical spring having one end free, and covered by the protective shell when the lamp is in position.

3. The herein described means for fastening against removal an incandescent lamp in its socket, comprising the lamp socket, a protective shell therefor, the lamp and its base, a helical spring having one end free and covered by the protective shell when the lamp is in position, and a key adapted to enter behind the protective cover to render the clutch action of the helical spring inoperative.

The references cited are: Mitsch, December 9, 1890, No. 442,589; Kurz *et al.*, May 10, 1892, No. 474,667; Knowles, March 20, 1894, No. 516,824; Arnold, April 19, 1902, No. 473,373; Donally, August 18, 1903, No. 736,368; Libby, August 28, 1906, No. 829,501; Russell, August 20, 1907, No. 869,737; Russell, June 2, 1908, No. 889,812.

The claims were rejected by the Primary Examiner on the ground that it was common to provide an electric lamp with a coiled spring which locks the lamp against reverse movement, as shown in the patents to Knowles, Kurz, and Arnold; that it was common to provide a spiral wire inside the socket, as shown in Russell, and that it would require no invention to make one end of Russell's spring free or provide the socket in the devices of the other patents with a casing, in view of the fact that the device disclosed by applicant is an old and well-known form of lock-nut, as shown in the patents to Libby, Mitsch, and Donally.

The Examiners-in-Chief affirmed this action, pointing out that the locking device employed by applicant having been used for the same purpose in nut-locks he had made merely a double use of this old instrumentality when he employed it as a means for fastening an incandescent lamp in its socket.

In his brief filed on this appeal appellant contends that the nut-lock patents cited are from a non-cognate art. This contention is, however, believed to be not well founded. As pointed out by the Examiner, the base of the lamp corresponds to a bolt and the socket to a nut, and, as stated by the Examiners-in-Chief—

certain devices are common to the arts as a whole because they are adapted for use in many situations. A nut and a bolt are provided with co-acting screw threads and these also are features of an incandescent lamp and its socket. A locking device which is applicable to one of these devices is therefore equally applicable to the other.

To use the spiral wire shown in the nut-lock patents for conducting the current, as in the patents to Russell, Knowles, and Kurz, clearly would not require invention; nor can invention be predicated upon the fact that a key must be used in order to remove the lamp from its socket, in view of the common practice of using keys to unfasten any kind of a locking device, an illustration of which is shown in the patent to Libby, it being necessary to use a key to release the lock-nut shown therein.

The decision of the Examiners-in-Chief is affirmed.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

HEALEY *v.* INWOOD AND LAVENBERG.

Decided January 2, 1912.

1. INTERFERENCE—CONCURRENT DECISIONS OF PATENT OFFICE—ENTITLED TO GREAT WEIGHT.

"The concurrent decisions of the Office tribunals on questions of fact arising in interference cases are entitled to very great weight, and will not be disturbed except for manifest error, and, as was said in *Lindmark v. Hodgkinson*, (31 App. D. C., 612–614,) 'Especially is this true in a case like the present, which involves complicated construction, about which the experts of the Patent Office are less liable to err than ourselves.'"

2. SAME—PRIORITY.

The decision of the Commissioner of Patents holding that the device of I. and L. was not inoperative and awarding priority to them affirmed.

Mr. C. D. Davis and *Mr. Ira L. Fish* for the appellant.

Mr. F. M. Phelps for the appellee.

SHEPARD, *C. J.:*

This is an appeal from the decision of the Commissioner of Patents in an interference case.

The interference was declared between two applications of Inwood and Lavenberg, and one of Norman E. Brown for a patent for a machine for making wire-bound box-blanks. The wooden box-blanks are reinforced by parallel strands of wire which are stapled thereto. The machines of the respective parties are substantially the same save in this respect: Brown's machine has guides for supporting and holding the work-holder in position for movement in a straight line with a pair of toothed feeding-wheels engaging racks on the under side of the work-holder, while the machine of Inwood and Lavenberg has no guides, but the work-holder is advanced by a long grooved roller engaging racks on the under side of the same. The issue consists of twenty-two counts. During the progress of the case, Inwood and Lavenberg sought to amend by adding to their claims certain claims in Brown's application which include as an element the guideways for supporting the work-holder in position for movement in a straight line. The leave to amend was denied by the several tribunals of the Office. In deciding that application, the Examiners-in-Chief used this language, which is now relied on by the ap-

pellant in the argument of the question involved in this appeal:

It is urged that this language [means for holding said members to straight lines of travel, as used in certain of the proposed amended claims] is broad enough to read upon the grooved feed-roller for feeding the work-support. There are several reasons why this is an impossible construction of the language of the claims in question. In the first place, clearly the grooved feed-roller permits lateral motion of the work-supports so that they might so far as this roller is concerned travel forward in a curved or zigzag path. But were this objection not present the claims in question clearly call for additional guiding elements, and such are shown in the Brown application from which the claims are taken. It would obviously be improper to give the claims an interpretation in which they would not be predicable upon the structure disclosed in the application from which they were taken.

These additional claims being excluded, the case proceeded upon the issue containing counts not including these guides of Brown. It is unnecessary to set out the entire issue. The last two counts embraced in the motion to dissolve read as follows:

21. A portable carriage, forming an adjunct applicable to a blank-stitching machine, and comprising in combination cleat-supporting members and spacers operating to space the cleats endwise from each other.

22. A portable carriage, forming an adjunct applicable to a blank-stitching machine, and comprising in combination cleat-supporting bars and spacing-blocks for the cleats on the said bars.

Inwood and Lavenberg were the senior parties, and the burden of proving priority was upon Brown. He took no testimony, and upon the record Inwood and Lavenberg were entitled to the award of priority that was made to them, provided they were entitled to make the claims at all.

Brown moved to dissolve, claiming that Inwood and Lavenberg had no right to make the claims first, because counts 21 and 22 were not patentable, and—

second, that the machine shown and described in the said Inwood and Lavenberg application is not operative; that this machine will not properly carry the blank material through the machine, and is incapable of making wire-bound box-blanks in the manner described in said application; that the combination former and box-blank machine disclosed in this Inwood and Lavenberg application will not properly insert the staples in the box-blank and will not properly apply the binding-wires to said blank; and that the said machine is absolutely inoperative for any purpose whatever.

It is this second ground that is involved in the appeal.

The Primary Examiner, to whom the question was referred in the first instance, held that the machine was operative. In his decision, he refers to and discusses certain affidavits presented by the assignee of Brown on the question of operativeness. The Examiner of Interferences adopted this decision and awarded priority to Inwood and Lavenberg.

The Examiners-in-Chief in affirming this decision held that it was apparent that the blank-carrying carriage would be operative without the guides which Brown declared essential. On appeal to the Commissioner this decision was affirmed.

The appellant took no evidence in support of his motion on the question of operativeness, as suggested to him in the decision of the Primary Examiner, and we do not find in the record the *ex parte* affidavits referred to by him. The operativeness of the machine was first decided by the expert Primary Examiner when the application was allowed. Since then, upon the motion presenting the direct question, he has come to the same conclusion; and this conclusion has been affirmed in turn by the three tribunals of the Office acting judicially.

The concurrent decisions of the Office tribunals on questions of fact arising in interference cases are entitled to very great weight, and will not be disturbed except for manifest error, and, as was said in *Lindmark* v. *Hodgkinson*, (31 App. D. C., 612-614,)—

especially is this true in a case like the present, which involves complicated construction, about which the experts of the Patent Office are less liable to err than ourselves.

The weight of these concurring decisions is not impaired by the language used by the Examiners-in-Chief in passing upon Inwood and Lavenberg's motion to amend, which is quoted above. The question of operativeness was not then before them.

We cannot say, from an inspection of the drawings and specifications of the Inwood and Lavenberg application, which is all that is before us, that there was manifest error in holding that their machine was operative without guiding devices similar to Brown's.

It follows that the decision must be affirmed. It is so ordered and that this decision be certified to the Commissioner of Patents.

Affirmed.

ADJUDICATED PATENTS.

(U. S. C. C.) The Miller patent, No. 926,011, for a nipple, *Held* void for anticipation in the prior art. *Faultless Rubber Co.* v. *Star Rubber Co.*, 191 Fed. Rep., 982.

(U. S. C. C.) The Hoffman and Appleton patent, No. 848,994, for an extensible electrical outlet-box, *Held* void for lack of novelty and invention in view of the prior art. *Chicago Fuse Wire & Mfg. Co.* v. *Harvard Electric Co.*, 191 Fed. Rep., 985.

(U. S. C. C.) The Berliner patent, No. 534,543, for a gramophone, claims 5 and 35 *Held* infringed on motion for a preliminary injunction. *Victor Talking Mach. Co.* v. *Vitaphone Co.*, 191 Fed. Rep., 987.

Changes in Classification.

(ORDER No. 1,959.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 27, 1912.

The following correction in Classification Bulletin No. 27 is hereby directed:

On page 4, Order No. 1,940, class 2, Apparel, change the number of subclass—

Hand-coverings—
Guards—
96. Boxing gloves,

to—

Hand-coverings—
Guards—
196. Boxing gloves.

The following changes in the classification of inventions are hereby directed, to take effect immediately:

In Division XV, class 18, Plastics, establish the following subclasses and definitions:

Molding devices—
5.3. Sound record—
5.5. Casting or dipping,
5.6. Fluid pressure.

Processes—
48.3. Sound record—
48.5. Casting or dipping,

Processes—
Sound record—
48.4. Facing or uniting,
48.6. Fluid pressure.

5.3. MOLDING DEVICES, SOUND RECORD. Miscellaneous molding devices specially adapted for forming sound records (blanks, negatives, duplicates) by molding operations only.
Search Classes—
18—PLASTICS, subclass 48.3, Processes, Sound record, and the subclasses thereunder, for corresponding processes.
106—PLASTIC COMPOSITIONS, subclass 1.5, Sound record, for sound record compositions.
181—ACOUSTICS, for apparatus combining molding devices with other devices for the production, repair, or utilization of sound records.

5.5. MOLDING DEVICES, SOUND RECORD, CASTING OR DIPPING. Sound record molding devices, sometimes centrifugal, whereby to form the record by the congealing of a fluid upon or within a mold and without the application of pressure other than that of an elastic fluid.
Search Class—
18—PLASTICS, subclasses 24, Molding devices, Dipping; 26, Molding devices, Casting; 34, Molding devices, Molds, and 58, Processes, Molding, Casting and dipping, for related inventions not restricted to the production of sound records, and 48.5, Processes, Sound record, Casting or dipping, for corresponding sound record processes.

5.6. MOLDING DEVICES, SOUND RECORD, FLUID PRESSURE. Sound record molding devices whereby fluid pressure is applied directly to plastic material or to a locally yielding (rubberlike) member behind such material to press the latter into conformity with an opposing surface constituting the mold.
(Note.—The plastic material is ordinarily introduced into a cylindrical mold (matrix or negative) as a preformed cylinder, often of celluloid, which is softened and molded by the internal application of steam or the like under pressure.)
Search Class—
18—PLASTICS, subclasses 48.6, Processes, Sound record, Fluid pressure, for corresponding processes, and 56, Processes, Molding, Sheets, for analogous processes not restricted to the production of sound records.

8.3. PROCESSES, SOUND RECORD. Processes for forming sound records (blanks, negatives, duplicates) by molding operations only.
Search Classes—
18—PLASTICS, subclass 5.3, Molding devices, Sound record, for corresponding apparatus.
106—PLASTIC COMPOSITIONS, subclass 1.5, Sound record, for sound record compositions.
181—ACOUSTICS, subclasses 14, Graphophones, Tablets, Methods and machines for making, and 16, Graphophones, Tablets, Duplicating devices, for processes which combine molding with other steps.

48.4. PROCESSES, SOUND RECORD, FACING OR UNITING. Processes of molding sound records having different portions formed of different plastic materials or having non-plastic bodies (as labels or reinforcements) united therewith in molding.
Search Class—
18—PLASTICS, subclasses 5.3, Molding devices, Sound record, for corresponding apparatus, and 59, Processes, Molding, Uniting, and 60, Processes, Facing type, for related inventions not restricted to the production of sound records.

48.5. PROCESSES, SOUND RECORD, CASTING OR DIPPING. Processes, sometimes employing centrifugal action, of forming sound records by the congealing of a liquid within a mold and without the application of pressure other than that of an elastic fluid.
Search Class—
18—PLASTICS, subclasses 5.5, Molding devices, Sound record, Casting or dipping, for corresponding apparatus, and 58, Processes, Molding, Casting and dipping, for analogous processes not restricted to the production of sound records.

48.6. PROCESSES, SOUND RECORD, FLUID PRESSURE. Processes in which fluid pressure is applied direct to a plastic material or to a locally yielding (rubberlike) member behind such material to press the latter into conformity with an opposing surface constituting the mold.
Search Class—
18—PLASTICS, subclass 5.6, Molding devices, Sound record, Fluid pressure, for corresponding apparatus.

Most of the patents in the above established subclasses are taken from class 181, Acoustics, subclasses 14, Graphophones, Tablets, Methods and machines for making, and 16, Graphophones, Tablets, Duplicating devices.

In the same division, same class, change the titles of subclasses—

Processes—
Miscellaneous—
51. Pyroxylin,
49. Vulcanizable gums—
50. Caoutchouc,

to read—

Processes—
51. Pyroxylin,
49. Vulcanizable gums—
50. Caoutchouc.

In same division, same class, change the number of subclass—

Processes—
80.5. Imitating marble,

to—

Processes—
Imitating marble.

In Division XXXIII, class 72, Masonry and Concrete Structures, abolish subclass—

Arches—
Girders—
62. Attaching,

most of the patents formerly contained therein having been transferred to subclass 101, Bonding and tying, in the same class.

EDWARD B. MOORE,
Commissioner.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 29, 1912.

Goodwin & Co., their assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of The Standard Cigar Company, 1209 West South street, Canton, Ohio, for a trade-mark and registration No. 10,200, dated April 17, 1883, to Goodwin & Co., of New York, N. Y., and the notice of such declaration sent by registered mail to the said Goodwin & Co. at the address given has been returned by the post-office undelivered.

Notice is therefore hereby given to the said Goodwin & Co., their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 21, 1912.

Hutchens, Howe & Withington, their assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of Sigmund Rosenblatt & Son, Nos. 7 and 9 East Baltimore street, Baltimore, Md., for trade-mark registration and trade-mark registration No. 35,053, dated September 18, 1900, to Hutchens, Howe & Withington, Nos. 116 to 120 Michigan street, Chicago, Ill., and the notice of such declaration sent by registered mail to the said Hutchens, Howe & Withington at the address given has been returned by the post-office as undeliverable.

Notice is therefore hereby given to the said Hutchens, Howe & Withington, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 20, 1912.

Gabriel Codina Mir, his assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of the W. H. Crawford Co., 119 Commerce street, Baltimore, Md., for a trade-mark, registrations to Wilhelm Braune, of Quedlinburg, Kingdom of Prussia, and German Empire, J. Eugene Jordan, of Seattle, Wash., Leo Sommer, of New York, N. Y., Weeks & Potter, 360 Washington street, Boston, Mass., and Sam'l. E. Egerton & Co., of Baltimore, Md., and registration No. 18,346, dated August 26, 1890, to Gabriel Codina Mir, of Habana, Cuba, and the notice of such declaration sent by registered mail to the said Gabriel Codina Mir at the address given has been returned by the post-office undelivered.

Notice is therefore hereby given to the said Gabriel Codina Mir, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 12, 1912.

Silicon Wall Plaster and Manufacturing Company, its assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of McCormick Waterproof Portland Cement Company, Bank of Commerce Building, St. Louis,

Mo., for trade-mark registration and the trade-mark registration of Simpson Brothers Company, of Chicago, Ill., and trade-mark registration No. 19,086, dated June 26, 1894, to the Silicon Wall Plaster and Manufacturing Company, and the notice of such declaration sent by registered mail to the said Silicon Wall Plaster and Manufacturing Company at the address given has been returned by the post-office undeliverable.

Notice is therefore hereby given to the said Silicon Wall Plaster and Manufacturing Company, its assigns or legal representatives, that if said company or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 13, 1912.

Pedro Moreda, his assigns or legal representatives, take notice:

An interference has been declared by this Office between the applications of Bernardo Moreda y Deben, 85 San Miguel street, Habana, Cuba, and of Moreda & Co., of Habana, Cuba, for trade-mark registration and trade-mark registration No. 17,102, dated October 15, 1889, to Pedro Moreda, 51 Dragones street, Habana, Cuba, and the notice of such declaration sent by registered mail to the said Pedro Moreda at the address given has been returned by the post-office undeliverable.

Notice is therefore hereby given to the said Pedro Moreda, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 10, 1912.

Louis Kuhlmann & Bro., their assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of the Idaho Soap Company, Limited, 366 Sonna Building, Boise, Idaho, for registration of a trade-mark and trade-mark registration No. 12,024, dated March 17, 1885, to Louis Kuhlmann & Bro., 83 Himrod street, Brooklyn, N. Y., and the notice of such declaration sent by registered mail to the said Louis Kuhlmann & Bro. at the address given has been returned by the post-office undeliverable.

Notice is therefore hereby given to the said Louis Kuhlmann & Bro., their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 31, 1912.

Scollay Meat Packing Company, its assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of the Seldovia Salmon Company, of Seattle, Wash., for a trade-mark and registration No. 10,800, dated January 29, 1884, to the Scollay Meat Packing Company, of New York, N. Y., and the notice of such declaration sent by registered mail to the said Scollay Meat Packing Company at the address given has been returned by the post-office undelivered.

Notice is therefore hereby given to the said Scollay Meat Packing Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 7, 1912.

Harvey Manufacturing Co., its assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of The F. A. Weck Co., of San Francisco, Cal., for a trade-mark, a trade-mark registered to the Empire Cure Company, of Jersey City, N. J., and trade-mark registration No. 24,992, dated July 10, 1894, to the Harvey Manufacturing Co., 41 De Kalb avenue, Brooklyn, N. Y., and the notice of such declaration sent by registered mail to the said Harvey Manufacturing Co. at the address given has been returned by the post-office undelivered.

Notice is therefore hereby given to the said Harvey Manufacturing Co., its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 7, 1912.

Empire Cure Company, its assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of The F. A. Weck Co., of San Francisco, Cal., for a trade-mark, a trade-mark registered to the Harvey Manufacturing Co., 41 De Kalb avenue, Brooklyn, N. Y., and trade-mark registration No. 23,796, dated November 7, 1893, to the Empire Cure Company, of Jersey City, N. J., and the notice of such declaration sent by registered mail to the said Empire Cure Company at the address given has been returned by the post-office undelivered.

Notice is therefore hereby given to the said Empire Cure Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 5, 1912.

The Flaccus & Elliott Co., its assigns or legal representatives, take notice:

An interference has been declared by this Office between the application for registration of The Hoskin Spice Company, of Sixth, New, and Culvert streets, Cincinnati, Ohio, the registration of the Standard Import Co., Ltd., of 216–224 Tchoupitoulas street, New Orleans, La., dated February 4, 1908, No. 67,536, and the registration of The Flaccus & Elliott Co., of Wheeling, W. Va., dated August 3, 1897, No. 30,472, and the registry return receipt for the notice of such interference has been returned signed by "The E. C. Flaccus Co.," of Wheeling, W. Va., and the said The E. C. Flaccus Co. has failed to file evidence of successorship, as required by the Office.

Notice is therefore hereby given to the said The Flaccus & Elliott Co., its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 27, 1912.

Wm. D. Cleveland & Co., their assigns or legal representatives, take notice:

An interference has been declared by this Office between an application for registration by the Apex Fish Company, of Fifth and J streets, Anacortes, Wash., and the registration of Wm. D. Cleveland & Co., of Houston, Galveston, and Velasco, Tex., registered April 18, 1893, No. 22,831, and the registry return receipt of the notice of such declaration sent to the said Wm. D. Cleveland & Co. was returned signed by one "E. Stern" for "Wm. D. Cleveland & Sons," and the said Wm. D. Cleveland & Sons have failed to file evidence of successorship, as required.

Notice is therefore hereby given to the said Wm. D. Cleveland & Co., their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as though by default.

EDWARD B. MOORE, *Commissioner.*

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.

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Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

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Prints	1—No.	2,970.	
Reissues	4—No.	13,281 to No.	13,284, inclusive.
Total	776		

TO CITIZENS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	2		North Carolina	4	
Arizona	2		North Dakota	6	
Arkansas	3		Ohio	49	6
California	36	4	Oklahoma	4	
Colorado	12	3	Oregon	10	
Connecticut	10	2	Pennsylvania	51	8
Delaware	1		Rhode Island	4	
Florida	3		South Carolina	2	
Georgia			South Dakota	3	
Idaho	2	1	Tennessee	3	2
Illinois	61	4	Texas	15	
Indiana	25	1	Utah	1	
Iowa	11	4	Vermont	1	
Kansas	11		Virginia	9	
Kentucky	5		Washington	8	1
Louisiana	5		West Virginia	6	
Maine			Wisconsin	13	
Maryland	8	3	Wyoming	2	1
Massachusetts	36	5			
Michigan	26	1	Alaska, District of		
Minnesota	11	1	Canal Zone		
Mississippi	3		District of Columbia	5	
Missouri	28		Hawaii Territory	1	
Montana	7		Philippine Islands	1	
Nebraska	4		U. S. Army		
Nevada	1		U. S. Navy		
New Hampshire	1				
New Jersey	22	4	Total to citizens of the United States	618	70
New Mexico	1				
New York	70	19			

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Algeria	1		Mexico	1	
Argentina	1		Netherlands	1	1
Austria-Hungary	2	1	Newfoundland		
Belgium	1		New South Wales	1	
Brazil			New Zealand	1	
British West Indies			Norway		
Canada	12	1	Queensland		
Cape Colony			Roumania		
Chile			Russia	2	
China			Scotland	4	
Costa Rica			South Australia		
Cuba			Spain		
Denmark			Sweden		
Ecuador			Switzerland		
Egypt			Transvaal, South Africa	3	
England	17	2	Victoria		
France	5		Western Australia		
Germany	25	1			
Ireland					
Italy	1		Total to citizens of foreign countries	77	7
Japan		1			

Changes in Classification.

(ORDER No. 1,962.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 2, 1912.

The following change in the classification of inventions is hereby directed, to take effect immediately:

In Division XXXII, class 226, Packaging Liquids, establish subclass—

34. Fountain pen fillers,

most of the patents therein being taken from class 120, Stationery.

EDWARD B. MOORE,
Commissioner.

(ORDER No. 1,963.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 6, 1912.

The following change in the classification of inventions is hereby directed, to take effect immediately:

In Division XXIX, class 228, Ladders, establish subclass—

Propped—

32. Convertible.

EDWARD B. MOORE,
Commissioner.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business March 9, 1912.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
313	1. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Jan. 23	Jan. 18	526
128	2. Bee Culture; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Pneumatic Despatch; Pneumatics; Presses; Store-Service; Tobacco.	Jan. 11	Jan. 24	541
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Feb. 12	Feb. 26	150
232	4. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Metallic Building Structures.	Feb. 5	Feb. 5	330
167	5. Bookbinding; Harvesters; Jewelry; Music.	Jan. 13	Jan. 15	485
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilisers; Medicines; Preserving; Sugar and Salt.	Feb. 10	Feb. 10	262
312	7. Educational Appliances; Clutches; Games and Toys; Mechanical Motors; Nut and Bolt Locks; Optics; Velocipedes.	Dec. 14	Jan. 19	624
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Jan. 23	Feb. 9	433
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Pumps; Wind-Wheels.	Feb. 2	Feb. 10	286
238	10. Carriages and Wagons.....	Jan. 2	Jan. 24	600
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Jan. 12	Jan. 12	391
324	12. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Jan. 13	Jan. 10	648
320	13. Arms, Projectiles, and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven-Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Turning.	Jan. 6	Feb. 7	478
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Jan. 18	Jan. 29	370
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Liquid Coating Compositions; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastic Compositions; Plastics.	Jan. 19	Jan. 18	807
109	16. Telegraphy; Telephony.....	Feb. 2	Feb. 1	229
303	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	Feb. 2	Feb. 9	317
327	18. Injectors and Ejectors; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Boilers; Steam-Engines; Steam-Engine Valves.	Jan. 30	Feb. 5	262
236	19. Dampers, Automatic; Furnaces; Heat-Distributing Systems; Stoves and Furnaces.	Jan. 9	Jan. 17	469
170	20. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Feb. 1	Feb. 8	222
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Feb. 5	Feb. 5	325

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Dec. 22	Feb. 9	285
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Feb. 1	Jan. 31	402
144	24. Apparel; Apparel Apparatus; Sewing-Machines.	Jan. 22	Jan. 19	400
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Feb. 8	Feb. 13	193
106	26. Electricity, Generation; Motive Power.	Oct. 23	Nov. 11	489
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Feb. 1	Feb. 2	383
65	28. Internal-Combustion Engines..	Dec. 26	Dec. 26	822
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	Jan. 3	Feb. 7	417
182	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Jan. 3	Feb. 10	277
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	Feb. 1	Jan. 20	324
278	32. Carbonating Beverages; Curtains, Shades, and Screens; Dispensing Beverages; Dispensing-Cans; Ornamentation; Packaging Liquids; Refrigeration.	Dec. 29	Feb. 10	324
71	33. Cutlery; Domestic Cooking Vessels; Masonry and Concrete Structures; Paving; Tents, Canopies, Umbrellas, and Canes.	Jan. 4	Jan. 15	453
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	Jan. 26	Jan. 23	471
244	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	Feb. 7	Feb. 7	609
264	36. Drafting; Driers; Engraving; Measuring Instruments; Photography.	Jan. 18	Jan. 16	577
107	37. Electric Lighting; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Jan. 2	Feb. 9	457
378	38. Animal Husbandry; Artesian and Oil Wells; Fishing and Trapping; Stationery; Stone-Working.	Jan. 15	Jan. 5	614
321	39. Water Distribution.....	Dec. 19	Dec. 14	896
280	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Feb. 9	Feb. 17	414
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	Dec. 26	Jan. 20	863
279	42. Electric Railways; Electric Signaling; Railway Signaling; Signals.	Jan. 11	Jan. 3	863
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Jan. 25	Jan. 31	357

Oldest new case, Oct. 23; oldest amended, Nov. 11.

Total number of applications awaiting action 18,983

181	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks.....	Jan. 23	Jan. 27	1221
	Designs.....	Jan. 18	Feb. 6	224
	Labels and Prints.....	Mar. 2	Feb. 26	34

PATENTS

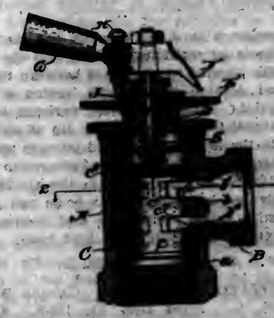
GRANTED MARCH 12, 1912.

1,019,745. FUEL COMPOSITION. BENJAMIN APPEL and SAMUEL S. GOLDMAN, St. Louis, Mo. Filed May 31, 1911. Serial No. 630,463. (Cl. 44—7.)

1. The composition of matter herein described, the same comprising water, alcohol, camphor, and rosin; substantially as described.

2. The composition of matter herein described, the same comprising water, alcohol, camphor, and rosin in the proportions approximately of one quarter pint of alcohol, once ounce of camphor, and one ounce of rosin to a gallon of water; substantially as described.

1,019,747. VALVE. WALTER E. BARNES, Malden, Mass. Filed May 11, 1910. Serial No. 560,542. (Cl. 137—7.)



In a valve of the class described, a valve casing having a passage provided with a plurality of openings, a rotatable cylindrical valve within said casing having a plurality of openings adapted to register with the openings of the casing, a valve stem upon said valve extending through said valve casing provided with a handle, a coil spring surrounding said valve stem and abutting at its ends against said valve and the wall of said casing, a track upon said valve casing partially surrounding the valve stem, and a screw passing through said handle and abutting against said track whereby the position of said valve may be adjusted in the direction of its axis with relation to the casing, and said valve is held in adjusted position by said screw and spring.

1,019,748. MINER'S LAMP. HARRY BECKER, Baltimore, Md. Filed Apr. 15, 1911. Serial No. 621,220. (Cl. 240—18.)

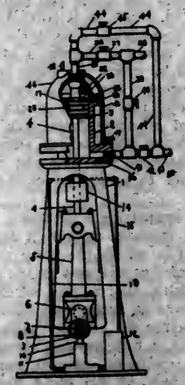


1. In an incandescent lamp for miners comprising an insulating supporting plate adapted to rest upon the visor of the miner's cap, means for detachably connecting the plate to the miner's cap, a contact projecting from said plate and in circuit with said connecting means, a reflector, supporting means for the reflector attached to said plate and in circuit with said reflector, a lamp mounted in and extending through said reflector and engaging with said contact and in circuit with said reflector, a binding post carried by the plate and in circuit with said supporting means, a binding post attached to and in circuit with said connecting means, and wires connected to one of said binding posts and the other to the other of said binding posts and adapted to communicate with a source of electrical energy.

2. In an incandescent lamp for the headgear of miners comprising an insulating supporting plate adapted to be arranged at the front of the headgear, resilient means secured to the rear of the plate for detachably connecting the plate to the headgear, a reflector forwardly of said plate, supporting means for the reflector attached to said plate and in circuit with said reflector, a lamp detachably connected to the reflector, and circuit forming means connected to said resilient means and to said plate and engaging said supporting means and adapted to communicate with a source of electrical energy carried by the miner.

3. In an incandescent lamp for miners' use comprising the combination with a cap formed with a supporting flap, of an insulating supporting plate, means carried by the rear of said plate and engaging with said flap for connecting the plate to the cap, a reflector, supporting means for the reflector attached to said plate and in circuit with said reflector, a contact projecting from said plate and in circuit with said connecting means, a lamp mounted in and extending through said reflector and engaging with said contact and in circuit with said reflector, and circuit forming wires electrically connected to said connecting means and with said supporting means and adapted to communicate with a source of electrical energy carried by the miner.

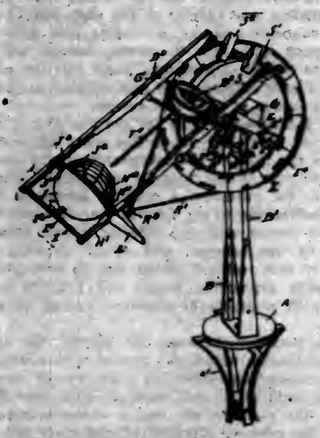
1,019,749. COMPRESSOR. JOHN B. BENDER, Toledo, Ohio, assignor to Carper W. Neilsen, trustee, Toledo, Ohio. Filed Sept. 12, 1910. Serial No. 581,520. (Cl. 230—32.)



The combination with a compressor comprising a cylinder having an inlet port and a separate outlet port,

and means for drawing gas into the cylinder through said inlet port and for expelling the same through said outlet port, of a receiving pipe extending to the inlet port, a discharge pipe extending from the outlet port, and connections permitting a reversal of said pipes with relation to said ports, said connections comprising a pair of cross-pipes connecting said receiving and discharge pipes, a valve in each cross pipe, a valve in the receiving pipe between the cross-pipes, and a valve in the discharge pipe between the cross-pipes.

1,019,750. TELLURIAN. ISAAC F. BODLE, South Eaton, Pa., assignor to S. Esther Lee Bodle, Jermyn, Pa. Filed Apr. 21, 1911. Serial No. 622,618. (Cl. 35—3.)



1. A tellurian comprising a revoluble, collapsible frame, a globe pivotally mounted therein, a night hood fastened to the frame and in which the globe rotates and having slots adapted to receive the axes of the globe as the night hood oscillates with the moving of the opposite sides of the frame toward or away from each other, and means for alternately oscillating the hood.

2. A tellurian comprising a revoluble, collapsible frame, a globe pivotally mounted therein, a night hood fastened to the frame and in which the globe rotates and having slots adapted to receive the axes of the globe as the night hood oscillates with the moving of the opposite sides of the frame toward or away from each other, means for alternately oscillating the hood, a stationary zone guide, connections between the latter and said globe adapted to cause the latter to rotate as it travels in its orbit.

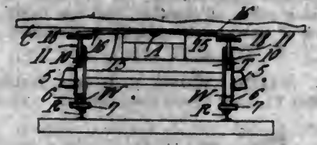
3. A tellurian comprising a revoluble, collapsible frame, a globe pivotally mounted therein, a night hood fastened to the frame and in which the globe rotates and having slots adapted to receive the axes of the globe as the night hood oscillates with the moving of the opposite sides of the frame toward or away from each other, means for alternately oscillating the hood, an adjustable zone guide, and connections between the same and globe and designed to cause the latter to rotate as its revolves through its orbit.

4. A tellurian comprising a revoluble, collapsible frame, a globe pivotally mounted therein, a night hood fastened to the frame and in which the globe rotates and having slots adapted to receive the axes of the globe as the night hood oscillates with the moving of the opposite sides of the frame toward or away from each other, means for alternately oscillating the hood, an adjustable zone guide, a rotatable pulley, a belt passing about said pulley and zone guide, and universal pivotal connections between said pulley and axis of the globe and forming means whereby the latter may be caused to rotate as it revolves through its orbit.

5. A tellurian comprising a revoluble, collapsible frame, a globe pivotally mounted therein, a night hood fastened to the frame and in which the globe rotates and having slots adapted to receive the axes of the globe as the night hood oscillates with the moving of the opposite sides of the frame toward or away from each other, means for alternately oscillating the hood, an adjustable zone guide, a rotatable shaft mounted in said frame, a pulley fixed to the shaft, a belt passing about said pulley and zone guide and forming means for rotating the shaft as the globe revolves in its orbit, said shaft having a head with a recess therein in which the lower axes of the globe has a universal movement, and a bearing in the frame for the other end of the axis.

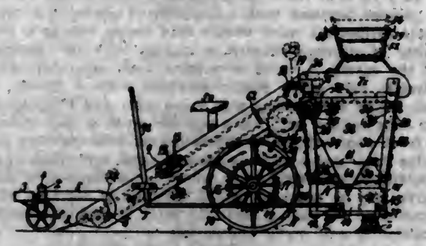
[Claims 6 to 26 not printed in the Gazette.]

1,019,751. DERAILMENT AIR-BRAKE. EUGENE N. BOTARSOSO, Platteville, Wis. Filed Apr. 1, 1911. Serial No. 618,360. (Cl. 188—2.)



The combination with a railway car and its air brake system, its wheels mounted in a truck, and the rails; of an upright guide carried by the truck between two of said wheels, a pawl pivoted thereto and having a weighted handle, an upright plunger movable through said guide and having ratchet teeth engaging the tip of said pawl, a shoe secured to the lower end of said plunger and extending across the rail, a flat weighted head secured to the upper end of said plunger, a relief valve in the air brake pipe, and a lever pivoted beneath the car body and connected at one extremity with said valve and having a knob at its other extremity resting upon said head.

1,019,752. POTATO-HARVESTER. GEORGE W. BRUCE, Larimore, N. D. Filed Dec. 11, 1909. Serial No. 532,611. (Cl. 55—51.)



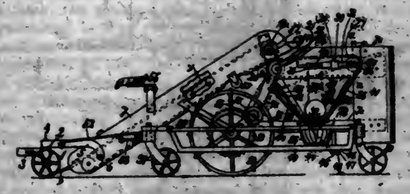
1. In a potato harvester, the combination with frame work and driving wheels thereof, of a shovel at the front end of the frame for digging the potatoes, means mounted in the frame rearward of the shovel and operatively connected with the driving wheels for separating the potatoes and the vines from the dirt and conveying them upward and rearward, and in the rear of said conveyer an endless carrier operatively connected with the driving wheels and having an upper substantially horizontal run adapted to carry the vines away rearward while the potatoes drop through the run, a hopper mounted below said run and having its lower end directed laterally beyond the lower run of the conveyer so as to drop the potatoes to one side of the machine, and means in the frame for guiding the lower run of the endless vine carrier out of contact with the hopper; a support mounted on the frame work and having below the spout of the hopper a middle portion adapted to support potatoes and near each end an aperture for the potatoes to drop through, a bottomless box slidably mounted on said support and having a partition dividing it into two compartments, a seat on the machine for a driver or other operator, a lever mounted near the seat, and a rod connecting said lever with the box, whereby the operator may while occupying the seat move the box with either of its compartments alternately over the middle portion of the support or over one of the apertures, for the purpose set forth.

2. In a potato harvester, the combination with frame work and driving wheels thereof, of a shovel at the front end of the frame for digging the potatoes, means mounted in the frame rearward of the shovel and operatively connected with the driving wheels for separating the potatoes and the vines from the dirt and conveying them upward and rearward, and in the rear of said conveyer an endless carrier operatively connected with the driving wheels and having an upper substantially horizontal run adapted to carry the vines away rearward while the potatoes drop through the run, a hopper mounted below said run and having its lower end directed laterally beyond the lower run of the conveyer so as to drop the potatoes to one side of the machine, and means in the frame for guiding the lower run of the endless vine carrier out of contact with the hopper; a support mounted on the frame work and having below the spout of the hopper a middle portion adapted to support potatoes, and near each end an aperture for the potatoes to drop through, a bottomless box slidably mounted on said support and having a partition dividing it into two compartments, a seat on the machine for a driver or other operator, a lever mounted near the seat, and a rod connecting said lever with the box, whereby the operator may while occupying the seat move the box with either of its compartments alternately over the middle portion of the support or over one of the apertures, for the purposes set forth; said middle portion of the support being of metal and the partition in the box carrying a metal scraper for cleaning said middle portion.

3. In a potato harvester, the combination with frame work and driving wheels thereof, of a shovel at the front end of the frame for digging the potatoes, means mounted in the frame rearward of the shovel and operatively connected with the driving wheels for separating the potatoes and the vines from the dirt and conveying them upward and rearward, and in the rear of said conveyer an endless carrier operatively connected with the driving wheels and having an upper substantially horizontal run adapted to carry the vines away rearward while the potatoes drop through the run, a hopper mounted below said run and having its lower end directed laterally beyond the lower run of the conveyer so as to drop the potatoes to one side of the machine, and means in the frame for guiding the lower run of the endless vine carrier out of contact with the hopper; a support mounted on the frame work and having below the spout of the hopper a middle portion adapted to support potatoes and near each end an aperture for the potatoes to drop through, a bottomless box slidably mounted on said support and having a partition dividing it into two compartments, a seat on the machine for a driver or other operator, a lever mounted near the seat, and a rod connecting said lever with the box, whereby the operator may while occupying the seat move the box with either of its compartments alternately over the middle portion of the support or over one of the apertures, said middle portion of the support being formed of parallel metal bars slightly spaced apart, and the partition in the box having at its lower edge a metallic scraper fitting upon and between the bars, for the purpose set forth.

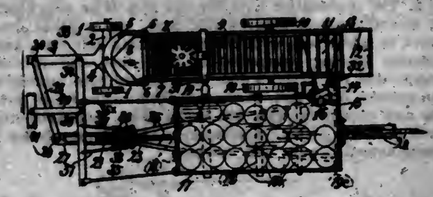
4. In a potato harvester, the combination with a frame work and driving wheels thereof, of a shovel at the front end of the frame for digging the potatoes, means mounted in the frame rearward of the shovel and operatively connected with the driving wheels for separating the potatoes and the vines from the dirt, conveying them upward and rearward, and in the rear of said conveyer an endless carrier operatively connected with the driving wheels and having an upper substantially horizontal run adapted to carry the vines away rearward while the potatoes drop through the run, a hopper mounted below said run and having its lower end directed laterally beyond the lower run of the conveyer so as to drop the potatoes to one side of the machine, and means in the frame for guiding the lower run of the endless vine carrier out of contact with the hopper; said hopper having at the outer side of its spout a hinged portion for the purposes set forth.

1,019,753. POTATO-HARVESTER. GEORGE W. BRUCE, Larimore, N. D. Filed Nov. 25, 1910. Serial No. 594,083. (Cl. 55—137.)



In a potato harvester, the combination with a mechanism adapted to separate the potatoes from the vines, of a hopper below said separating mechanism, said hopper being of flexible material to prevent injury to the potatoes dropped into it; and a yoke-shaped spring secured on the frame of the machine and engaging the discharge end of the hopper to hold the latter yieldingly in normal shape.

1,019,754. POTATO-HARVESTER WITH SIDE TRUCK. GEORGE W. BRUCE, Larimore, N. D. Filed May 29, 1911. Serial No. 630,215. (Cl. 55—51.)



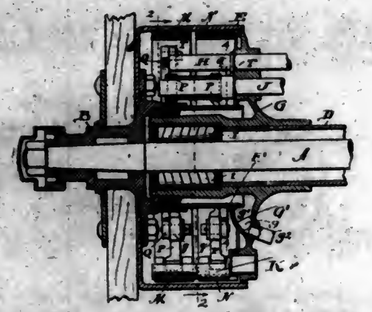
1. The combination with a wheel-supported harvester having a pole and front wheels steered by the pole, of a truck hingedly attached at the side of the harvester, said truck having a single rear caster and a single front wheel supporting it, a fork journaled at the front end of the truck and having said front wheel mounted between its downward arms, a forward tongue on said fork, and a link-rod connecting the tongue with the pole.

2. The combination with a wheel-supported harvester having a pole and front wheels steered by the pole, of a truck hingedly attached at two points to one side of the harvester; a caster supporting the rear end of the truck, a fork having an upward stem journaled to the front end of the truck, and downward arms with a supporting wheel having its shaft journaled therein, a forward tongue on the fork, and a link rod connecting said tongue with the pole; a transverse evener bar connected at one end with the pole and by rods to the front end of the truck, and means on the evener bar at the center of draft for hitching thereto motive power for drawing the harvester and its said side truck.

3. The combination with a harvester and a truck hingedly attached to one side thereof, of a transverse evener bar, means connecting said evener bar with the harvester, and means connecting it also with the truck, a fork having an upward stem journaled to the front end of the truck, a supporting wheel mounted between the

legs of the fork; the means connecting the truck with the evener bar involving rods extending on a slant upwardly and forwardly from the truck to the evener bar, and shorter rods connecting the stem of the fork with the evener bar, said shorter rods having means for varying their lengths, substantially as and for the purposes set forth.

1,019,755. BRAKE-DRUM PROTECTOR. ALANSON P. BRUSH, Flint, Mich. Filed Feb. 15, 1911. Serial No. 608,666. (Cl. 21—8.)



1. The combination of a rotating wheel, bearings for supporting the wheel, a brake drum carried by the wheel, a tube fixed to the wheel and within the brake drum, an annular oil pocket into which the end of the tube projects.

2. The combination of a rotating wheel, a live axle upon which the wheel is mounted, a non-rotatable sleeve surrounding the said live axle, and forming a bearing therefor, an oil channel associated with the said sleeve, a brake drum carried by the wheel, a tube mounted upon the hub of the wheel and within the drum, the end of the tube projecting into the said oil channel.

3. The combination with the live axle of an automobile, a rotatable wheel fixed to said axle, and a brake drum fixed to said wheel, with the non-rotating axle tube, antifriction bearings supported by said tube and in turn supporting the wheel, a disk fixed to said tube containing an annular oil pocket, and a tube fixed to the wheel within and concentric with the brake drum, and projecting into said oil pocket,—the interior of said tube being in communication with said bearings.

1,019,756. MATCH. WILLIAM M. BURTON, Chicago, Ill. Filed Feb. 11, 1911. Serial No. 607,994. (Cl. 52—5.)



1. In a match, the combination of an ignitible head, and a shank composed of a non-combustible outer shell open on a side at least for a portion of its length and a combustible material in said shell, substantially as described.

2. In a match, the combination of an ignitible head, and a shank composed of a substantially-non-combustible metal outer shell open on a side at least for a portion of its length and a combustible material in said shell, substantially as described.

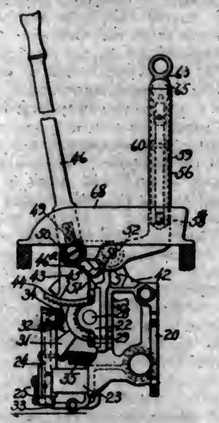
3. In a match, the combination of an ignitible head, and a shank composed of a substantially-non-combustible metal outer shell open on a side and a combustible material in said shell, substantially as described.

4. In a match, the combination of an ignitible head, and a shank having a non-combustible outer shell open on a side at least for a portion of its length and a fibrous filler in said shell impregnated with a combustible material, substantially as described.

5. In a match, the combination of an ignitible head, and a shank having a substantially-non-combustible metal outer shell open on a side at least for a portion of its length and inclosing a fibrous material impregnated with a combustible material, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,019,757. CONTROLLER FOR ELECTRIC MOTORS. VICTOR E. CHAMBERLIN, Indianapolis, Ind., assignor to The Waverley Company, Indianapolis, Ind., a Corporation of Indiana. Filed Nov. 23, 1908. Serial No. 464,022. (Cl. 172—179.)



1. A controller including controller and reverse members having suitable electrical connections, a controller lever and a reverse lever operatively connected with the controller and reverse members respectively, and a connection between said levers including a lock operatively connected with one lever and movable independently thereof to engage a keeper on the other lever, to permit movement of the reverse lever to a neutral position with the controller lever in any running position and to lock the reverse lever when it reaches the neutral position.

2. A controller including controller and reverse members having suitable electrical connections, a controller lever and a reverse lever operatively connected with the controller and reverse members respectively, connections between said levers including a lock operatively connected with one lever but movable independently thereof to engage a keeper on the other lever to permit movement of the reverse lever to the neutral point with the controller lever in any running position, but to lock the reverse lever when it reaches the neutral point, and means operated by the controller lever to release said lock when the controller lever reaches the off position.

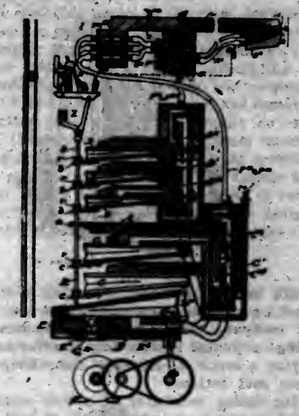
3. A controller including controller and reverse members having suitable electrical connections, a controller and a reverse lever operatively connected with the controller and reverse members respectively, and means operatively connected with one of said levers but movable independently thereof to engage a keeper on the other lever to lock the reverse cylinder in a neutral position only.

4. A controller including controller and reverse members having suitable electrical connections, a controller lever and a reverse lever operatively connected with the controller and reverse members respectively, and means operatively connected with one lever but movable independently thereof to automatically lock the reverse lever against movement in a predetermined position of the controller lever.

5. A controller including controller and reverse members having suitable electrical connections, a controller lever and a reverse lever operatively connected with the controller and reverse members, respectively, a pawl operatively connected with one of said levers arranged to engage a recess upon the opposite lever, and means for operating said pawl to lock the reverse lever against movement in a predetermined position of the controller lever.

[Claims 6 to 27 not printed in the Gazette.]

1,019,758. AUTOMATIC PIANO. MELVILLE CLARK, Chicago, Ill. Filed May 17, 1909. Serial No. 496,608. (Cl. 84—233.)



1. In an automatic piano, in combination with the hammer action, two pneumatic actions each comprising motor pneumatics for operating on the hammer mechanism; a table upon which both said pneumatic actions are supported one above and the other below the table; a pitman guide on the table for operating on the hammer action, positioned and connected for action thereon of the moving members of the corresponding motor pneumatics of both actions; a tracker having ducts connecting with the two pneumatic actions respectively, and means for producing different degrees of air tension in the chambers of said actions respectively.

2. In an automatic piano, in combination with the hammer action, two pneumatic actions, each comprising motor pneumatics for operating on the hammer action, said pneumatic actions being mounted one above the other with their corresponding motor pneumatics vertically alined; a table fixed with respect to the hammer action between the two pneumatic actions and affording support to both of the latter; a pitman for operating upon the hammer action carried and guided by the alined moving members of the motor pneumatics, said pitmen being free to move upwardly with respect to both the alined moving members; a tracker having different sets of ducts connecting with the two pneumatic actions respectively, and means for producing different degrees of air tension in the chambers of said two pneumatic actions.

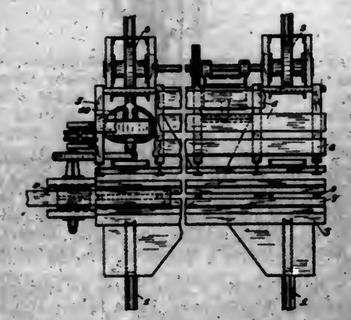
3. An automatic piano, in combination with a hammer action, two pneumatic actions; a tracker having separate sets of ducts communicating with said actions respectively; and means for producing different degrees of air tension in the chambers of said pneumatic actions respectively, said two pneumatic actions being positioned for operating upon the hammer action, having the moving members of their corresponding motor pneumatics vertically alined with each other; and pitmen carried by said alined moving members for operating upon the hammer action and free to move upwardly with respect to both said moving members.

4. In an automatic piano, in combination with the hammer action, two pneumatic actions for operating upon the hammer action; a tracker device and a controller sheet coöperating therewith, the ducts of the tracker and flexible tubes extending therefrom comprising three groups, one group connected with one of said pneumatic actions, a second group connected with the other of said pneumatic actions, and a third group having connections with both of said actions; valve bars interposed in the tube connections from the tracker to the pneumatic actions respectively for controlling the communication through the tubes of the second and third groups, and pneumatic devices for moving such valve bars, the tracker device having ducts connecting with said pneumatic devices, and the controller sheet having apertures for registering with said ducts.

5. In an automatic piano, in combination with the hammer action, two pneumatic actions for operating upon the hammer action; a tracker device having its ducts and the tubes leading therefrom consisting of three groups, the first group for connection with one of the pneumatic actions, the second group for connection with the other pneumatic action, and the third group branched for connection with both said pneumatic actions; a valve bar interposed in the tube connections from the tracker bar to said actions, having extending from it the entire number of tubes of the second and third groups, and mounted on the tracker duct board with range of movement for registration at one position of all the ducts of the second group and one branch of the third group, and non-registration of the other branches of the third group, and at a second position for registration of the last mentioned branches and non-registration of all the other tubes of the second and third groups, and at a third position for non-registration of all the tubes connected with it; a step-by-step feed device for actuating the valve bar; a pneumatic device for operating the step-by-step feed, and duct connections from said pneumatic device to the tracker bar, the controller sheet having perforations for registration with said duct connections of the tracker bar for giving step-by-step action to the feed device.

[Claims 6 and 7 not printed in the Gazette.]

1,019,759. MAGNETIC SKELP-CHARGING MACHINE. STEWART C. COEY, Youngstown, Ohio. Filed Dec. 29, 1911. Serial No. 668,578. (Cl. 214—23.)



1. The combination of a furnace, a charging table at one end thereof, and a magnet thereon having surface travel toward the furnace, the said surface being arranged to be engaged by linear magnetic materials, and to transfer the same to the furnace.

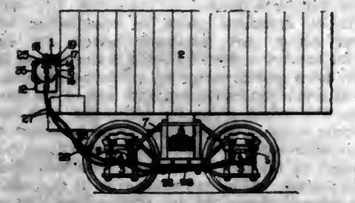
2. The combination of a furnace, a charging table at the end thereof, a rotary magnet having its axis of rotation transverse of the table and furnace, the magnet being arranged so that the part thereof which rotates toward the furnace may be engaged by linear magnetisable material.

3. The combination of a table and a rotary magnet supported thereon and having its magnetic circuit interrupted circumferentially so that the interrupted magnetic circuit may be bridged by magnetisable material to be conveyed by the magnet.

4. The combination of a table, a trough thereon, and

a rotary magnet supported by the table and having its axis of rotation transverse of the trough and one of its sides arranged to be engaged by magnetizable material in the trough.

1,019,760. APPARATUS FOR COOLING CAR-JOURNALS. FRANK HENRY COLLINS, Medina, N. Y., assignor of one-third to Bertram E. Harcourt and one-third to William P. O'Grady, Medina, N. Y. Filed Aug. 25, 1908. Serial No. 450,196. (Cl. 64—28.)



A car journal spraying nozzle comprising a perforated pipe having one portion axially parallel with the journal and another portion parallel with the end surface of said journal the perforations in the first said portion being diagonal and adapted to direct the spray toward the central and intermediate portion of the journal, the perforations in the second portion being diagonal and adapted to direct the liquid toward the axis of said journal for overcoming the centrifugal force and tending to form and maintain a sheet of water on the end surface of said journal while the same is rotating.

1,019,761. CASKET-HANDLE. HERBERT G. COLLINS, New Haven, Conn., assignor to Sargent & Company, New Haven, Conn., a Corporation of Connecticut. Filed Sept. 23, 1911. Serial No. 650,886. (Cl. 16—103.)



1. In a handle for caskets and similar articles, the combination with a socket plate having a slot; arms struck out therefrom and projecting into said slot; pivot lugs extending from said arms; and a pivotal arm adapted to be joined to the socket member and having integral perforated members engaging said pivot lugs, substantially as described.

2. In a casket handle, a plate having an aperture with arms projecting into the same, and a hanger arm having side flanges retained in proximity to the end walls of said aperture by pivot lugs projecting laterally from said arms and engaging perforations in said side flanges; substantially as described.

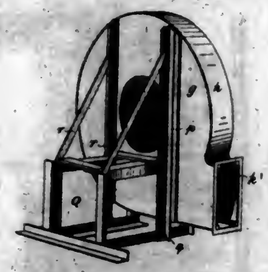
3. In a casket handle, a plate having an aperture and arms struck up from the plate and extending into the aperture, said arms having a recess between them so that they can be spread apart, and a member having side flanges retained between said arms and the end walls of said aperture; substantially as described.

4. In a casket handle, a plate having an aperture, an arm struck up from the plate and extending into the aperture, said arm defining between it and one end of the aperture a narrow slot, and being provided with a laterally extending pivot lug projecting into said slot, and a member having a flange or wall lying in said slot, said member being provided with a perforation engaged by said pivot lug; substantially as described.

5. In a casket handle, a plate having arms struck up therefrom, a hanger arm having side flanges, and abutments on the plate between which and the respective arms the respective flanges are pivoted; substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

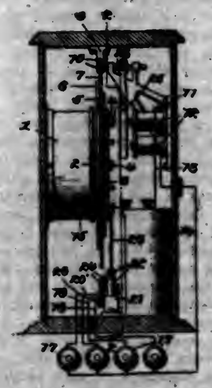
1,019,762. CASING FOR CENTRIFUGAL FANS AND PUMPS. LOUIS BERTRAM COUSANS, London, England. Filed Dec. 3, 1910. Serial No. 595,437. (Cl. 230—11.)



1. A fan casing consisting of a body comprising side plates and a peripheral plate, one of said side plates being made in sections, wooden battens positioned outside of said casing for joining said sections together and a bracket for carrying a motor, said bracket comprising angle irons supporting said battens.

2. A fan casing consisting of a body comprising side plates and a peripheral plate, both of said side plates being made in sections, wooden battens positioned outside of said casing at each side thereof for joining said sections together and a bracket for carrying a motor, said bracket comprising angle irons adjacent both sides of the casing for supporting said battens.

1,019,763. ELECTROMAGNETIC TIME-RECORDER. CHARLES H. CRAFTON, Staunton, Va. Filed May 23, 1911. Serial No. 628,968. (Cl. 234—37.5.)



1. In a time recording device, the combination with a revolving disk having a plurality of fingers thereon, said disk being also provided with a recording surface; of a current generating means having connection with said disk, an electro-magnet in circuit with the disk and generator, the armature of said magnet being provided on one end thereof with a puncturing finger disposed over the recording surface, a plurality of flexible contact posts also in the circuit and adapted to engage the fingers of the disk as the latter is rotated, and means to close said circuit.

2. In a recording device of the class described, the combination with a revolving disk having a plurality of laterally extending fingers and also provided with a recording surface thereon; of a current generating means having communication with said disk, an electro-magnet in circuit with said disk and generator, the armature of said magnet being provided with a puncturing finger on one end thereof disposed over the recording surface, a plurality of wires in the aforesaid circuit disposed in position to be engaged by the fingers as said disk is rotated, means to adjust the lengths of the last referred to wires, and means to close said circuit.

3. In a time recording device of the class described, the combination with a revolving disk having a plurality of laterally extending fingers and also provided with a recording surface thereon; of a current generating means having communication with said disk, an electro-magnet in the circuit with said disk and generator, the armature of which is provided with a puncturing finger on one end disposed over the recording surface, a plate carrying a plurality of sockets, wires mounted in said sockets and disposed in a position to contact with the fingers as said disk is rotated, means to adjust the lengths of said last referred to wires in the sockets, said wires being also in the aforesaid circuit, and means to close said circuit.

1,019,764. TROLLEY-WIRE-SUPPORTING DEVICE. GEORGE W. CRAVENS, Chicago, Ill., assignor to The Electric Service Supplies Company, Philadelphia, Pa., a Corporation of New Jersey. Filed Sept. 28, 1908. Serial No. 454,962. (Cl. 191—1.)



1. The combination with a support, of a pair of clamping members, one of said members being fulcrumed on the support and the other of said members being fulcrumed on the first member, and means for moving said members on their fulcrums to cause the same to grip the wire.

2. The combination with a support, of a pair of clamping members, one of said members being adjustably fulcrumed on the support, the other of said members being fulcrumed on the first member, and means for moving said members on their fulcrums to cause the same to grip the wire.

3. The combination with a supporting member, of a pair of clamping jaws each having a transverse extension, one of said extensions arranged to fulcrum on the support and the other extension arranged to fulcrum on the first extension, and means for moving said members on their fulcrums to cause the jaws to grip the wire.

4. The combination with a supporting member, of a pair of clamping jaws having overlapping extensions, the end of one of said extensions being arranged to swingingly bear upon the support and the end of the other extension being arranged to swingingly bear upon the opposite member, and means for moving said jaws on their bearing points to cause them to grip the wire.

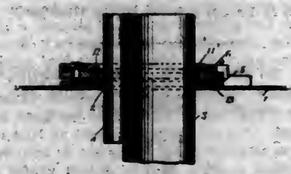
5. The combination with a pair of clamping jaws having overlapping transverse extensions provided with openings, a supporting rod extending through said openings, a head on the end of said rod, the end of one of said extensions being swingingly supported on said head and the end of the other extension being swingingly supported on the first extension, and means for moving said jaws to cause them to grip the wire.

1,019,765. ATTACHMENT FOR BED-SPRINGS. PETER FREDERICK CRIGHTON and PERCY D. HIVES, Saskatoon, Saskatchewan, Canada. Filed Feb. 4, 1911. Serial No. 606,576. (Cl. 5—39.)



The combination with bedsprings composed of head and foot straining beams carrying the usual wire or coil spring web, of brackets for adjustably attaching said straining beam to the head or foot of the bedstead, said brackets comprising a slotted arm carrying a screw attached to the straining beam and a side arm at right angles thereto turned inwardly at its end and carrying an outwardly bearing shoe or clutch with a horizontal slot adapted to engage with the inside edge of the horizontal portion of an angle iron side rail, substantially as hereinbefore described.

1,019,766. PACKING-JOINT. HARRISON TAYLOR CRONK, New York, N. Y. Filed May 13, 1911. Serial No. 627,014. (Cl. 220—120.)



1. The combination with a receptacle having an aperture therein adapted to receive a connector to connect an outside hopper with said receptacle, of a packing member connected to said receptacle in juxtaposition to said opening and having an opening therethrough corresponding to said first-mentioned opening, said packing member comprising a plurality of sections pivotally connected together, and a spring adapted to automatically close said sections so as to grip said connector and form a fluid-tight joint between said tank and said connector.

2. The combination with a receptacle having an aperture therein adapted to receive a connector to connect an outside hopper with said receptacle, of a packing member connected to said receptacle in juxtaposition to said opening and having an opening therethrough corresponding to said first-mentioned opening, said packing member comprising a plurality of sections pivotally connected together, a spring adapted to automatically close said sections so as to grip said connector and form a fluid-tight joint between said tank and said connector, and a resilient flange inset in said member and projecting inwardly into the opening in said member so as to conform to the contour of said opening and contact with said connector.

3. The combination with a receptacle having an aperture therein adapted to receive a connector to connect an outside hopper with said receptacle, of a packing member connected to said receptacle in juxtaposition to said opening and having an opening therethrough corresponding to said first-mentioned opening, said packing member comprising a plurality of sections pivotally connected together, and a spring adapted to automatically close said sections, so as to grip said connector and form a fluid-

tight joint between said tank and said connector, and spring latches for holding said sections in their closed position.

4. The combination with a receptacle having an aperture therein adapted to receive a connector to connect an outside hopper with said receptacle, of a packing member connected to said receptacle in juxtaposition to said opening and having an opening therethrough corresponding to said first-mentioned opening, said packing member comprising a plurality of sections pivotally connected together, a spring adapted to automatically close said sections so as to grip said connector and form a fluid-tight joint between said tank and said connector, and a resilient flange inset in said member and projecting inwardly into the opening in said member so as to conform to the contour of said opening and contact with said connector, and a resilient ring interposed between said member and said receptacle.

5. The combination with a receptacle having an aperture therein adapted to receive a connector to connect an outside hopper with said receptacle, of a packing member connected to said receptacle in juxtaposition to said opening and having an opening therethrough corresponding to said first-mentioned opening, said packing member comprising a plurality of sections pivotally connected together, a spring adapted to automatically close said sections so as to grip said connector and form a fluid-tight joint between said tank and said connector, and a resilient flange inset in said member and projecting inwardly into the opening in said member so as to conform to the contour of said opening and contact with said connector, a resilient ring interposed between said member and said receptacle, and a wedge lug arranged so as to overhang the sections of said member when closed and adapted to force said member down into engagement with said ring when said sections are in their closed positions.

[Claims 6 to 10 not printed in the Gazette.]

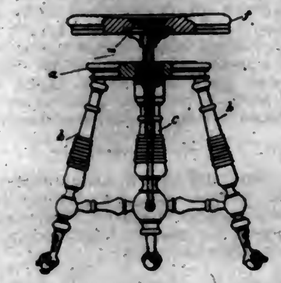
1,019,767. HYGROSCOPE. HENRY HARDINGE SAMUEL CUNYNGHAME, Nutfield, England. Filed Jan. 26, 1911. Serial No. 604,871. (Cl. 73—24.)



1. A hygroscope adapted to indicate by simple inspection, the presence of a specified degree of moisture in the air, comprising a dry thermometer adapted to indicate the temperature of the air and a wet thermometer adapted to indicate the temperature of evaporating liquid in the air, the movable element of the wet thermometer having a movement bearing a substantially fixed ratio, different from unity, to the movement of the movable element of the dry thermometer for each degree of variation of temperature, the movable elements of the two thermometers being arranged adjacent to each other and so that the free end of the movable element of the wet thermometer, corresponding to some specified degree of temperature, will coincide in position with that of the movable element of the dry thermometer when the specified degree of moisture in the air obtains, substantially as described for the purpose specified.

2. A hygroscope adapted for frost indication, comprising dry and wet bulb thermometers of which the liquid column of the wet bulb thermometer has a movement equal substantially to twice that of the dry bulb thermometer for each degree of variation of temperature, the stems of the two thermometers being arranged adjacent to each other and so that the level of the liquid column of the wet bulb thermometer corresponding to 40° F. will coincide with that of the liquid in the dry bulb thermometer corresponding to 44° F., substantially as described for the purpose set forth.

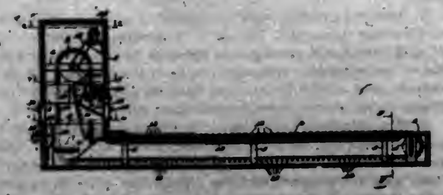
1,019,768. PIANO-STOOL. JOHN H. DALE, Newark, N. J. Filed Aug. 24, 1910. Serial No. 578,743. (Cl. 235—91.)



1. A piano stool comprising a seat having an opening, a center post, a screw shaft attached to the seat and working in a cavity in the center post, a shaft also carried by the seat passing centrally through the screw shaft and held against turning, gear devices turning on the upper end of the shaft within the opening in the seat, cooperating gear devices carried by the seat and also located in said opening, indicator devices operated by said gear devices and a transparent plate closing the opening in the seat and through which the indicator devices may be observed.

2. A piano stool comprising a seat having an opening, a screw shaft attached thereto, a shaft also attached thereto and located inside the screw shaft and of greater length than the latter, a center post having a cavity within which the screw shaft works, a non-rotatable plate located at the bottom of the cavity having in it an opening through which the shaft moves and that holds it against turning, a pinion fixed on the upper end of the shaft within the opening in the seat, a gear turning upon the end of the shaft above said pinion and carrying an indicator device, a coöperating gear meshing with said pinion and carried on a shaft having a bearing in the seat, a pinion turning with the last named gear and meshing with the first named gear and a transparent plate closing the opening in the seat and having indicator devices thereon.

1,019,769. SHOE-CLEANING DEVICE. THOMAS J. DALTON, Chicago, Ill. Filed Aug. 7, 1911. Serial No. 642,691. (Cl. 15—2.)



1. In a shoe cleaning device, the combination with a flexible endless belt, having bristles on one side thereof, of a bath through which said belt is adapted to pass for cleansing said bristles; and means for drying said bristles, substantially as described.

2. In a shoe cleaning device, the combination with a flexible endless belt, having bristles on one side thereof, of a bath through which said belt is adapted to pass for cleansing said bristles; and a heating element for effecting the drying of said bristles, substantially as described.

3. In a shoe cleaning device, the combination with a flexible endless belt; having bristles on one side thereof, of a bath through which said belt is adapted to pass for cleansing said bristles; and means for directing a current of hot air to impinge upon said belt for drying said bristles, substantially as described.

4. In a shoe cleaning device, the combination with a flexible endless belt having bristles on one side thereof, of a bath through which said belt is adapted to pass for cleansing said bristles; a rotary brush operating upon said bristles adapted to remove foreign matter therefrom and direct the same into said bath; and means for drying said bristles, substantially as described.

5. A shoe cleaning device, comprising a casing provided with slots or openings, a flexible endless belt having bristles on one side thereof, adapted to project through said openings; a bath through which said belt is adapted to pass for cleansing said bristles after passing beyond said openings; and means for drying said bristles, after passing from said bath and before exposure at said openings, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,019,770. AUTOMATIC SIGN. MARTIN J. DONER, Chicago, Ill., assignor of one-half to H. A. Peters, Chicago, Ill. Filed Nov. 2, 1908. Serial No. 460,641. (Cl. 40—33.)



1. In a changeable sign, the combination with a frame member, of a plurality of slats rotatably journaled therein, pinions carried by said slats, a reciprocatory rack-bar intermeshing with said pinions, a ratchet block connected to said rack-bar, a reversing pawl for operating said ratchet block, and means for actuating said reversing pawl.

2. In a changeable sign, the combination with a frame member, of a longitudinally extending row of slats rotatably journaled therein, a pinion carried by each slat, a reciprocatory rack bar intermeshing with said pinions, a step by step mechanism for actuating said rack bar, and means for actuating said step by step mechanism.

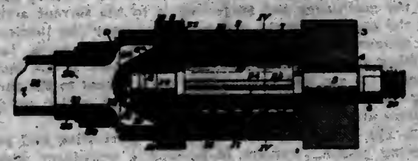
3. In a changeable sign, the combination with a stationary signboard, of a series of slats rotatably journaled each about its own axis in front of said signboard, step-by-step mechanism for synchronously and intermittently rotating said slats at oblique and right angles to said signboard, and means for actuating said step-by-step mechanism.

4. In a changeable sign, the combination with a frame member, of a changeable sign mounted thereon, a step-by-step mechanism for actuating said sign, means for automatically reversing the direction of movement of said step-by-step mechanism and means for operating said mechanism.

5. In a changeable sign, the combination of a stationary signboard, a row of slats upon each side of said stationary signboard, each slat being journaled to rotate about its own axis, a pinion carried by each slat, a rack-bar intermeshing with the pinions of each row of slats step-by step mechanism operatively connected to said rackbar, and means for operating said step-by-step mechanism.

[Claims 6 to 14 not printed in the Gazette.]

1,019,771. ROTARY MOTOR. WILLIAM S. ELLIOTT, EDWARD R. MILLS, and HARRIS B. HOLT, Pittsburgh, Pa., assignors to Liberty Manufacturing Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Dec. 8, 1908, Serial No. 466,503. Renewed July 29, 1911. Serial No. 641,381. (Cl. 121—78.)



1. In a rotary air motor, a rear head provided with a bearing for a piston shaft, and also provided with a chamber adjacent to and communicating with the bearing, and an escape passage communicating with the said chamber at its rear end, and thence leading through the cylinder wall and opening to the atmosphere at the front end portion of the motor, whereby oil and air escaping from said chamber are discharged forwardly and away from the operator; substantially as described.

2. In a rotary motor, a removable rear head provided with a rear bearing for a piston shaft, said head having an inclosed chamber at the rear end of said shaft, and an exhaust passage leading from said chamber to the exhaust port of the motor; substantially as described.

3. In a rotary motor, a cylinder having a longitudinally extending exhaust port, and a removable rear head, said head having a bearing for a piston shaft, and an inclosed chamber at the rear end of the piston shaft, said chamber communicating with the exhaust port by an exhaust passage; substantially as described.

4. In a rotary motor, a rear bearing for the motor shaft, an inclosed chamber at the end of the motor shaft, and an exhaust port or passage connecting said chamber with the exhaust port of the motor; substantially as described.

5. In a rotary motor, a rear head, a bushing seated therein and forming a bearing for the piston shaft, a groove or space surrounding said bushing, and a port or passage connecting the same with the exhaust port of the motor; substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,019,772. METHOD OF LUBRICATING PNEUMATIC MACHINERY. EDWIN A. EMERY, Cripple Creek, Colo., assignor to The Emery Pneumatic Lubricator Company, Denver, Colo., a Corporation of Colorado. Filed Sept. 30, 1907. Serial No. 395,287. (Cl. 184—55.)



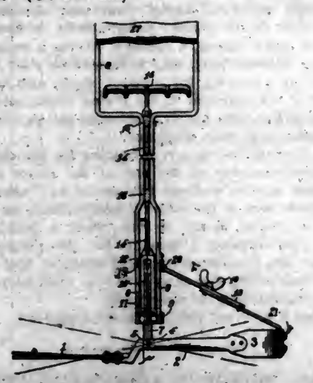
1. The method of lubricating pneumatic machinery which consists in applying a lubricant having a soluble ingredient in a position to be distributed by the moving

parts of the machinery and dissolving the soluble ingredient of the lubricant by the moisture in the motive air, distributing the lubricant by the action of the moving parts, thus exposing an extended surface of the lubricant to the moisture in the air, then subjecting the distributed lubricant to the action of the moisture in the motive air, and maintaining the distribution of the lubricant by the movements of the motive air.

2. The method herein described of lubricating packing leathers and bearing surfaces in pneumatic machinery which consists in applying a lubricant having a soluble ingredient in a position to be distributed by working parts of the machinery and subjecting it to the solvent action of the moisture in the motive air, whereby the lubricant is distributed by the action of the moving parts, then further subjecting the distributed lubricant to the moisture in the air, and then feeding the lubricant to the packing leathers and bearing surfaces by the action of the motive air.

3. The method herein described of lubricating and preserving packing leathers in pneumatic machinery which consists in applying a lubricant containing graphite and a soluble ingredient in a position to be distributed by the moving parts of the machinery, and subjecting it to the solvent action of the moisture in the motive air, whereby the lubricant is distributed by the action of the moving parts, further subjecting the distributed lubricant to the moisture in the motive air, and then forcing the graphite into the packing by the pressure of the motive air.

1,019,773. GARDEN IMPLEMENT. ALEXANDER EUCHENHOFER, Dayton, Ohio. Filed Jan. 18, 1911. Serial No. 603,230. (Cl. 30—13.)



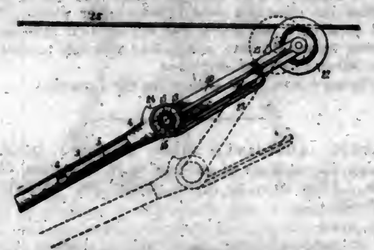
1. In a device of the type specified, the combination with a supporting member, of levers pivotally connected to said supporting member and having extended portions which normally lie across each other, a pair of blades attached to said levers and operated thereby, means maintaining said blades normally open, a yoke slidingly mounted in said supporting member, said yoke having a portion lying between the extensions of said levers and above the pivotal point of said levers and adapted to actuate said levers to operate the blades, and a handle connected to said yoke whereby said yoke is actuated, substantially as specified.

2. In a device of the type specified, the combination with a supporting member, and a pair of shears mounted at one end thereof, means for maintaining said shears normally open, of levers pivoted to one end of said supporting member, and attached to opposite sides of said shears, said levers having extensions which normally cross each other above their fulcrum, a yoke slidingly mounted on said supporting member and adapted to actuate said levers, by engaging said levers above the point of their fulcrum, and means for actuating said yoke to actuate said shears.

3. In a device of the type specified, the combination with a supporting member, a pair of shears mounted at one end thereof, and means for maintaining said shears normally open, of levers having extensions pivoted to said supporting member and attached to opposite sides of the shears, a yoke slidingly mounted on said supporting member and adapted to actuate said levers by engaging the extensions thereof, means for actuating said yoke to operate the shears, and an adjustable brace between said shears and said supporting member, whereby the position of the shears may be adjusted.

4. In a device of the type specified, the combination with a supporting member, a pair of shears pivoted thereto, and means for maintaining said shears normally open, of a pair of levers pivoted to said supporting member and connected to the opposite members of said shears, said levers having overlapping extensions which form an angle above their pivot, a reciprocating hand piece adapted to engage said levers within the angle above their pivot and to actuate said shears, and an adjustable brace member between said supporting member and said shears.

1,019,774. TROLLEY-RETAINER. ALFRED HEWLETT FLETCHER, New York, N. Y. Filed Oct. 8, 1910. Serial No. 586,006. (Cl. 191—37.)



1. A trolley pole, comprising a tubular inner section, a head having a stem removably secured in the outer end of the section, said head being provided with oppositely arranged and spaced casings, a central forwardly projecting rigid finger on its under side, and a central shoulder on its upper side forming a stop, a shaft mounted in the casings, springs surrounding the shaft in the casings and each having one end secured to the shaft and its other end to the casing, and an outer section fixedly secured to the shaft between the casings and carrying a trolley wheel at its free end, said outer section normally extending in alinement with the inner section and resting upon the said finger.

2. A trolley pole, comprising an inner section having at its outer end a head provided with oppositely arranged and spaced casings, a member projecting forwardly from its lower side, and a stop on its upper side, a spring actuated shaft mounted in the casings, and an outer section fixedly secured to the shaft between the casings and carrying a trolley wheel, said outer section normally extending in alinement with the inner section and resting upon the forwardly projecting member of the head of the inner section.

1,019,775. FOOT-REST FOR BATH-TUBS. FREDERICK FORSBERG, Chicago, Ill. Filed Feb. 24, 1911. Serial No. 610,496. (Cl. 4—2.)

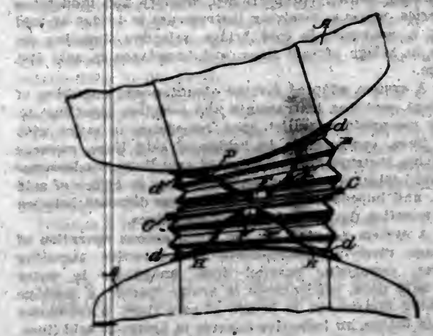


A device of the character described comprising a body formed of a single piece of flat metal, one end of said body being formed to embrace the upper edge of a conventional bath tub, the lower end of said body depending into the interior and against the inner side thereof, said lower end of said body being turned upwardly and then outwardly terminating in an inwardly extending substantially horizontally disposed supporting portion, said supporting portion being slightly concave in form and a rubber covering for the upper edge of said supporting portion, substantially as described.

1,019,776. COMPOSITION FOR ATTACHING INSULATION TO STEAM-BOILERS AND OTHER APPLIANCES. EDWARD FOSTER, Auckland, New Zealand. Filed Apr. 18, 1910. Serial No. 555,292. (Cl. 134—35.)

A composition for attaching insulation to steam boiler and other surfaces, consisting in a mixture of forty pounds of silicate of soda, two pounds of asbestos pulp, three quarters of a pound of oil, three quarters of a pound of an alkali and ten gallons of water, substantially as specified.

1,019,777. SPRING DEVICE FOR CAR-VESTIBULE DIAPHRAGMS. FRANK G. FOWLER, Altoona, Pa. Filed June 10, 1911. Serial No. 632,438. (Cl. 105—61.)

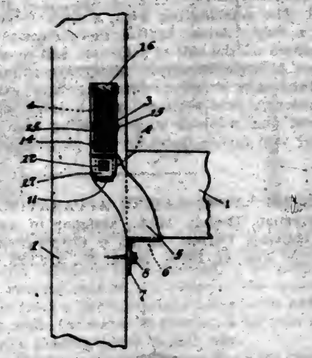


1. In combination with a face plate and diaphragm of a car vestibule, a bowed spring interposed between said face plate and the end of the car, the middle of which spring is rigidly attached to the face plate while the ends bear against the car, and retaining devices for the ends of the spring, said retaining devices and the ends of the spring being conformed so as to permit the ends of the spring to slip and so as to provide also an engagement between one extremity of the spring and its retaining device that becomes effective when the face plate is forced into an oblique position with respect to the car in rounding curves, or when it is caused to chafe by the uneven running of the car, which said engagement distorts the spring and thereby creates a stress on the face plate tending to return the same to normal position when the car body moves back to place.

2. In combination with the face plate and diaphragm of a car vestibule, a bowed spring interposed between said plate and the end of the car, the middle of which spring is rigidly attached to one of said elements while the ends thereof bear against the other, and retaining devices for the ends of the spring; said retaining devices and the ends of the spring being conformed so as to permit the ends of the spring to slip and so as to provide also an engagement between one extremity of the spring and its retaining device that becomes effective when the face plate is forced into an oblique position with respect to the car in rounding curves, or when it is caused to chafe by the uneven running of the car, which said engagement distorts the spring and thereby creates a stress on the face plate tending to return the same to its normal position when the car body moves back to place.

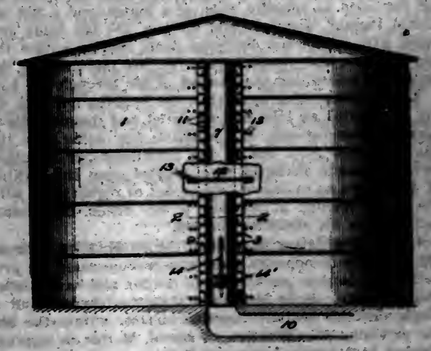
3. In combination with the face plate and diaphragm of a car vestibule, a bowed spring which is interposed between the face plate and the end of the car and rigidly secured at the middle to one of said elements with its ends bearing against the other, and keeper boxes through which the ends of said spring slidably extend, the ends of said spring being provided with stops adapted to engage with the keeper boxes, substantially as described.

1,019,778. JOIST AND GIRDER HANGER. JOHN FREDERICKSON, Chicago, Ill. Filed Sept. 13, 1911. Serial No. 649,187. (Cl. 20—94.)



A metallic girder hanger comprising a flat elongated seat, a perforated lug projecting downward from one edge of said seat, arms disposed at right angles to said seat and projecting upwardly from the ends thereof, said arms having a compound curve such that the free ends thereof lie in a vertical plane offset from said seat, there being bolt-holes in said free ends, joist hangers adapted to be bolted to said free ends of said arms, each joist hanger comprising a seat and flanges extending upwardly therefrom, and a joint-lug extending downwardly from said last named seat and having a bolt-hole for registration with a bolt-hole in one of said free ends, there being registering raised and depressed portions on said free ends and joint-lugs, substantially as described.

1,019,779. SAFETY APPLIANCE FOR OIL-TANKS. CHARLES G. GARDIS, Olney, Ill. Filed Mar. 16, 1911. Serial No. 614,925. (Cl. 220—121.)



1. The combination with a tank formed of sections adapted to hold oil; of a safety device applied thereto comprising a strip of fusible metal connecting said sections, and a shield mounted on said tank spanning said strip and providing a conduit for the purpose set forth.

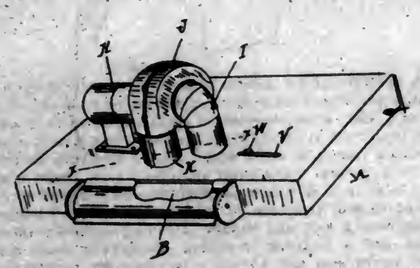
2. The combination with a tank adapted to hold a supply of liquid, of a safety device therefor comprising a

strip of fusible metal mounted on said tank; a conduit and a means surrounding said fusible metal adapted to convey the liquid to said conduit when said fusible metal is destroyed, as set forth.

3. The combination with a tank formed of sections, of a safety device applied thereto comprising; a shield mounted on the side of said tank and connecting said sections, a strip of fusible metal connecting said sections within said shield; reinforcing bars within said tank connecting said sections, and a means mounted on said shield adapted to destroy said fusible metal for the purpose set forth.

4. The combination with a tank formed of sections, of a safety device applied thereto comprising; a shield mounted on the side of said tank and connecting said sections, a strip of fusible metal connecting said sections within said shield; reinforcing bars within said tank connecting said sections; and a lever mounted on said shield and provided with a cutting edge adapted to destroy said fusible metal for the purpose set forth.

1,019,780. VENTILATING APPARATUS. CHARLES H. GIFFORD, Detroit, Mich., assignor to American Blower Company, Detroit, Mich., a Corporation of Michigan. Filed Aug. 11, 1909. Serial No. 512,325. (Cl. 98—31.)



1. In a ventilating apparatus, the combination with an air box open at opposite ends, of power-operated air propelling mechanism mounted upon the box and having inlet and discharge ducts leading within its interior, and a slide within the box formed with adjoining and oppositely-extending bends adapted to register with the ducts.

2. In a ventilating apparatus, the combination with an air box open at opposite ends, of a motor, and a fan operated thereby mounted upon the box, the fan being provided with intake and discharge ducts leading within the box interior, and means within the box intermediate the ducts for controlling the passage of air through the box.

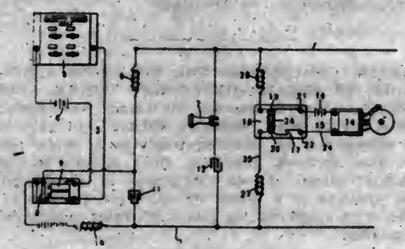
3. In a ventilating apparatus, the combination with an air box having an inlet and an outlet and complementary openings therebetween, of a rotatable fan casing upon the box connected with one of the complementary openings and carrying a discharge pipe adapted upon the rocking of the casing to be moved into or out of registration with the other opening of the box, a fan within the casing, and a motor for operating the fan.

4. In a ventilating apparatus, the combination with an air box open at opposite ends, of power operated air propelling mechanism mounted upon the box and having inlet and discharge ducts leading within its interior, and a single shiftable current directing member within the box for reversing the direction of travel of the air current through said box.

5. In a ventilating apparatus, the combination with an air box having inlet and outlet openings, guides within the box leading to one of said openings and having extensions projecting without the box, a fan operatively associated with the box, a motor for said fan, and a deflector plate pivoted between said extensions.

[Claims 6 to 9 not printed in the Gazette.]

1,019,781. SIGNALING SYSTEM. EDWIN R. GILL, Yonkers, N. Y., assignor, by mesne assignments, to Howard E. Merrell, New York, N. Y., and Orlo J. Hamlin, Smethport, Pa. Filed Mar. 18, 1909. Serial No. 483,314. (Cl. 179—84.)



1. A system adapted for the simultaneous operation of message receiving instruments and selective signaling devices, comprising parallel lines, impedance in series with said lines, a protective short circuit across said lines comprising suitably proportioned capacity and inductance in series, message receiving instruments in bridge of said lines, a condenser in said bridge, selective signaling devices in bridge of said lines, and impedance in said last bridge.

2. A system adapted for the simultaneous operation of message receiving instruments and selective signaling devices, comprising parallel lines, impedance in series with said lines, condensance in bridge of said lines, message receiving instruments in bridge of said lines, condensance in said bridge, selective signaling devices in bridge of said lines, and impedance in said last bridge disposed between said selective device and each of said lines.

3. A system adapted for the simultaneous operation of message receiving instruments and selective signaling devices, comprising parallel lines, impedance in series with said lines, condensance in bridge thereof, a message receiving instrument in bridge of said lines, a condenser in said bridge, an inductive selector in bridge of said lines, and a local circuit including a signal adapted to be controlled by said selector.

4. A system adapted for the simultaneous operation of message receiving instruments and selective signaling devices, comprising parallel lines, impedance in series with said lines, a condensance in bridge thereof, a message receiving instrument in bridge of said lines, condensance in said bridge, an inductive selector in bridge of said lines, impedance in said bridge and arranged between said selector and each of said lines, and a local circuit including an alarm device controlled by said selector.

5. In a system adapted for the simultaneous operation of telephones and selective signaling device, in combination, a circuit comprising parallel lines, means for impressing current on said lines, a key operated relay for controlling the impression of current upon said lines, a telephone in bridge of said lines, condensance in said bridge, an inductive selector in bridge of said lines, impedance in said bridge, a local signal comprising an alarm device, and a circuit for the local signal controlled by said selector.

[Claims 6 to 8 not printed in the Gazette.]

1,019,782. FLYING-MACHINE. JOSEPH A. GOODWIN, Berkley, Va. Filed June 26, 1911. Serial No. 635,710. (Cl. 244—29.)

1. In a flying machine, the combination with a fore-and-aft frame, of wings secured to the fore-and-aft frame and extending forwardly and upwardly from their inner to their outer ends, and at their outer ends positioned at a greater angle to the line of flight than at their inner, substantially as described.

2. In a flying machine, the combination with a fore-and-aft frame, of flexible wings secured at their inner ends to the fore-and-aft frame, and extending upwardly and forwardly from their inner to their outer ends, said wings positioned in a line, fore-and-aft, at a greater angle to the line of flight, at their outer ends, than at their inner ends, substantially as described.



3. In a flying machine, the combination with a fore-and-aft frame, of wings secured to the fore-and-aft frame and extending forwardly and upwardly from their inner to their outer ends, and at their outer ends positioned at a greater angle to the line of flight than at their inner, and means connecting the respective wings and constructed to change said angles of the wings, substantially as described.

4. In a flying machine, the combination with a fore-and-aft frame, of flexible wings secured at their inner ends to the fore-and-aft frame, and extending upwardly and forwardly from their inner to their outer ends, said wings positioned in a line, fore-and-aft, at a greater angle to the line of flight, at their outer ends, than at their inner ends, and means connecting the respective wings and constructed to change said angles of the wings, substantially as described.

5. In a flying machine, the combination with a fore-and-aft frame, of wings secured to the fore-and-aft frame, and extending forwardly and upwardly, the outer end of each wing having its forward edge higher than its rear edge, and the inner end of each wing having its forward edge lower than its rear edge, substantially as described.

[Claims 6 to 18 not printed in the Gazette.]

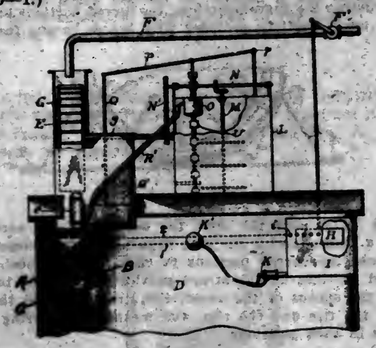
1,019,783. ENVELOP. FREDERICK GRAB, New York, N. Y. Filed Dec. 28, 1910. Serial No. 599,746. (Cl. 229—75.)



1. In an envelop, a body portion comprising a front and a back, the back consisting of a long and a short flap folded inwardly from opposite edges of the front and having overlapping gummed edges, a flap extending from one end of said front and overlapping and gummed to the adjacent ends of the back flap and a tongue extending from the opposite end of the short back flaps and folded to form a portion which is gummed to the end of the long back flap and a closing flap, and a tab projecting from the closing flap, substantially as described.

2. A blank for forming an envelop comprising a rectangular front forming portion, a long and a short back flap portion projecting from the opposite long sides of the front forming portion, an end flap extending from one of the short ends of the front forming portion and a tongue extending from one end of the short back flap portion in alinement with the adjacent end of the front portion and extending both above and below said end and with said short back flap extending the full width of the adjacent short end and a tab projecting from the outer edge of said tongue, substantially as described.

1,019,784. WATER-TREATING APPARATUS. WALTER H. GREEN, Chicago, Ill., assignor to Northern Water Softener Company, Madison, Wis., a Corporation of Maine. Filed Dec. 17, 1910. Serial No. 597,800. (Cl. 210—1.)



1. In a water treating apparatus, a reservoir for treated water, means governed by the water in the reservoir for causing water intended to be treated to be supplied at a gradually varying rate as the water in the reservoir rises to or falls from a predetermined lower level and at a constant rate while the water level remains between said lower level and a predetermined higher level.

2. In a water treating apparatus, a reservoir for treated water, and means governed by the water in the reservoir for causing water intended to be treated to be supplied at a gradually decreasing rate as the water in the reservoir rises to a predetermined level and at a constant rate as the water rises from said level to a predetermined higher level.

3. In a water treating apparatus: a reservoir for treated water; and means governed by the water in the reservoir for causing water intended to be treated to be supplied at a gradually decreasing rate as the water in the reservoir rises to a predetermined level and at a constant rate as the water rises from said level to a predetermined higher level, and for causing the supply to be shut off when the water in the reservoir reaches said higher level.

4. In a water treating apparatus, a reservoir for treated water, a supply pipe, a valve in said pipe, and a controller for said valve governed by the water in the reservoir for causing said valve to close gradually as the water in the reservoir rises to a predetermined level and thereafter maintain a uniform valve-opening as the water rises from said level to a predetermined higher level.

5. In a water treating apparatus: a reservoir for treated water; a supply pipe; a valve in said pipe; and means governed by the water in the reservoir for gradually closing the valve as the water rises in the reservoir to a predetermined level, maintaining a uniform valve opening while the water rises from said level to a predetermined higher level, and causing the valve to close when the water reaches said higher level.

[Claims 6 to 18 not printed in the Gazette.]

1,019,785. VEHICLE-CHOCK. WILLIAM GREENLEAF, Bay City, Mich. Filed Nov. 9, 1911. Serial No. 659,384. (Cl. 21—8.)

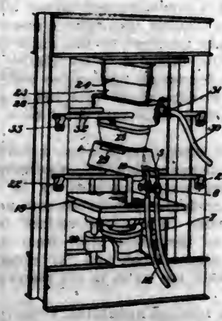
1. In combination, a pair of chock members, adapted to embrace the front and rear of a wheel, each member having a curved portion to embrace the annular and transverse curvatures of the wheel, the curved portions having extension members at their lower adjacent parts adapted to under lap the curved portions, the curved portions having their upper portions provided with braces having feet between which and the floor the extensions are secured after a pulling action has been imparted on the extensions to cause the curved portions to embrace the wheel.

2. In combination, a pair of check members, adapted to embrace the front and rear of a wheel, each member having a curved portion to embrace the annular and transverse curvatures of the wheel, the curved portions having extension members at their lower adjacent parts adapted to underlap the curved portions, the curved portions having their upper portions provided with braces having feet be-



tween which and the floor the extensions are secured after a pulling action has been imparted on the extensions to cause the curved portions to embrace the wheel, the curved portions having straps provided, with slots to receive the spokes of the wheel, the straps adapted to encircle the tire and the rim, and means for securing the straps in such positions.

1,019,786. PRESS FOR FORMING PULP ARTICLES. WALTER WHEELER GRENVILLE, Thorold, Ontario, Canada. Filed July 20, 1908, Serial No. 444,499. Renewed July 17, 1911. Serial No. 639,022. (Cl. 92—59.)



1. A pulp press having suitable dies and means for separately withdrawing the liquid from the sides and bottom of the article being pressed and means for separately controlling the amount of liquid withdrawn from said sides and bottom.

2. In a pulp press, a female die having an open bottom, a male die, means for effecting coöperative movement between the dies, a movable plate forming the sole closure of the bottom of the female die, and means for automatically moving the plate on the female die inwardly as the dies are separated.

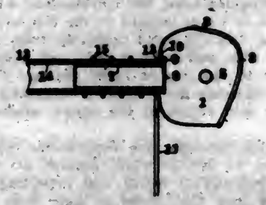
3. In a pulp press and in combination, a female die, a hopper fitting about the top of the same, but disconnected therefrom, a male die adapted to extend through the hopper into the female die, and means for producing relative movement between the hopper, the female die, and the male die, whereby when the dies are separated, the hopper will be disconnected from the female die and from the male die, and when closed the male die will extend through the hopper into the female die.

4. In a pulp press and in combination, a male die, an annular hopper disposed below the same and adapted to fit closely around the same, means for supporting the hopper in position, a female die disposed below the hopper, means for moving the female die upwardly and downwardly, and an inwardly movable bottom for the female die supported wholly therefrom, and means engaging the underside of the bottom of the female die, whereby, when the female die is in its lowest position, the bottom will be moved a distance inwardly, the operation of the female die being such that it successfully lifts the bottom and the hopper then comes into proper position with respect to the male die.

5. A pulp press having a female die with separate outlets for the liquids through the sides and bottom thereof, and means for separately controlling the amount of liquid passing through the said outlets.

[Claims 6 to 13 not printed in the Gazette.]

1,019,787. MOUTHPIECE FOR OZONE-MACHINES. ROBERT P. GUILEY, Akron, Ohio. Filed Mar. 14, 1910. Serial No. 549,238. (Cl. 128—131.)



A mouth-piece for ozone machines comprising a cup-shaped body-portion having its edge rounded and adapted to fit the face of the patient when the mouth-piece is used, said mouth-piece having a vertically-disposed flat outer wall, a tube extending in the mouth-piece centrally through said outer wall and projecting inwardly of the inner face of said outer wall and having its inner end constituting a valve seat, said tube open at its outer and at its inner end, a hinge secured to the inner face of the outer wall of the mouth-piece and projecting over the inner end of said tube, a valve secured to said hinge and extending across the inner end of the tube and permanently out of contact with the inner face of said outer wall, said valve capable of moving inwardly when the device is used, and said mouth-piece having each side provided with an outlet for exhalation.

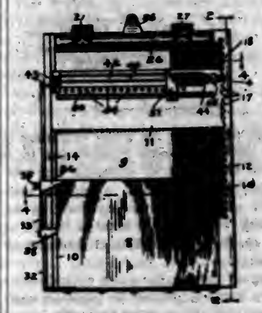
1,019,788. SAFETY ATTACHMENT FOR JEWELRY. ERNST H. HAHNEFELD, Baltimore, Md., assignor of one-half to Hans Stockmeir, Baltimore, Md. Filed July 10, 1911. Serial No. 637,838. (Cl. 24—155.)



1. A safety attachment for stickpins, comprising a plate adapted to be secured to the head of the pin and having a notch in one edge thereof adapted to be brought adjacent the edge of the head, an arm pivoted to the plate having a curved bill to swing under the stem of the pin and having a knob adapted to engage in the said notch to lock the bill when swung under the stem, and the said knob being arranged to be pressed by the fingers to release the same and swing the bill.

2. The combination with a head and a stem secured thereto, of a plate secured to the said head having a notch therein adjacent one edge and the said edge being arranged adjacent the edge of the head to bring the said notch adjacent the edge of the head, and an arm pivoted to the plate having a bill curved therefrom to swing under the said stem and having a knob on the outer side thereof adapted to engage the said notch when the bill is swung under the stem and to permit the knob to be pressed by the fingers to release same and swing the bill.

1,019,789. DEVICE FOR WRITING FOR THE USE OF THE BLIND. WILLIAM L. HEISKELL, Indianapolis, Ind. Filed Oct. 16, 1911. Serial No. 655,053. (Cl. 35—8.)



1. In a writing device for the use of the blind, a board upon which paper to be written on is held, a hand-plate extending transversely of the board above the paper and adjustable longitudinally of the board, said plate having a transverse slot through which a pencil is operated in writing on the paper, and a taut cord through the longitudinal middle of the slot to indicate the transverse line upon which the written characters should be formed.

2. In a writing device for the use of the blind, a board upon which paper to be written on is held, a hand-plate extending transversely of the board above the paper, and adjustable longitudinally of the board, resilient means for holding the adjustments of the plate, said plate having a transverse slot through which a pencil is operated in writing on the paper, a taut cord through the longitudinal middle of the slot to indicate the transverse line upon which the written characters should be formed, and an indicator crossing the slot to stop the pencil at the end of a line, said indicator being adjustable longitudinally of the slot.

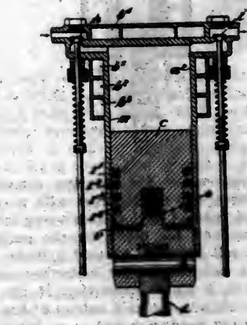
3. In a writing device for the use of the blind, a board upon which paper to be written on is held, a hand-plate extending transversely of the board above the paper and adjustable longitudinally of the board, said plate having a transverse slot through which a pencil is operated in writing on the paper and having a transverse row of physical characters to indicate the distance from the left edge of the sheet, and a taut cord through the longitudinal middle of the slot to indicate the transverse line upon which the written characters should be formed.

4. In a writing device for the use of the blind, a board upon which paper to be written on is held, a spring clip for holding the top edge of the paper comprising a semicylindrical bar with closed ends and spring hinges connecting the upper edge of the bar with the board, a hand-plate adjustable longitudinally of the board, means for holding a given adjustment of the hand-plate, and a taut cord through the longitudinal middle of the slot in the hand-plate to indicate the transverse line upon which the written characters should be formed.

5. In a writing device for the use of the blind, a board upon which paper to be written upon is held, a hand-plate extending transversely of the board above the paper and adjustable longitudinally of the board, said plate having a transverse slot through which a pencil is operated in writing on the paper, a taut cord through the longitudinal middle of the slot to indicate the transverse line upon which the written characters should be formed, and a stop to arrest the downward movement of the plate before the pencil reaches the bottom of the paper, said stop being adjustable longitudinally of the board.

[Claim 6 not printed in the Gazette.]

1,019,790. EXPANSION-ENGINE FOR PRODUCING LOW TEMPERATURES. CHRISTIAN WILHELM PAULUS HEYLANDT, Hamburg, Germany. Filed Jan. 29, 1910. Serial No. 540,900. (Cl. 62—18.)



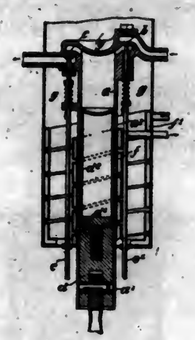
1. In an expansion engine of the class described, the combination with a cylinder having thin walls, of a piston, elastic rings in said piston adapted to so strongly press against the walls of said cylinder as to become heated by friction, whereby said piston is prevented from freezing-in, and a sleeve packing whereby any leaks in the piston are prevented.

2. In an expansion engine of the class described, the combination with a cylinder having thin walls, of a head for one end of said cylinder, an inlet valve, an outlet valve, a piston mounted in said cylinder to reciprocate, elastic rings in said piston adapted to so strongly press against the walls of said cylinder as to become heated by friction, whereby said piston is prevented from freezing-in, a sleeve packing covering one end of said piston, and a vacuum vessel surrounding a part of said cylinder adjacent to said end and adapted to serve as an insulation from outside heat.

3. In an expansion engine of the class described, the combination with a cylinder having thin walls, of a head for one end of said cylinder and an inlet valve and an outlet valve, a piston mounted in said cylinder to reciprocate, elastic rings in said piston adapted to so strongly press against the walls of said cylinder as to become heated by friction, whereby said piston is prevented from freezing-in, a sleeve packing on said piston, and a vacuum vessel surrounding a part of said cylinder adjacent to said end and adapted to serve as an insulation from outside heat, said vacuum vessel being divided by partitions into several air-tight compartments.

4. In an expansion engine of the class described, comprising in combination a cylinder having thin side walls, a cylinder head and inlet and exhaust valves for one end of the cylinder, a piston, and means for heating the piston and cylinder walls at points removed from said end to maintain heat in the lubricant of the piston, comprising elastic packing rings surrounding the said piston at points remote from the end of said piston which is toward said cylinder head and acting outward frictionally to generate heat only at points remote from said end, whereby heat is generated locally and is not materially conducted by the said thin walls to the protected end of the cylinder.

1,019,791. EXPANSION-ENGINE FOR REDUCING COMPRESSED GAS TO LOW TEMPERATURES. CHRISTIAN WILHELM PAULUS HEYLANDT, Hamburg, Germany. Filed Jan. 29, 1910. Serial No. 540,901. (Cl. 62—18.)



1. An expansion engine for reducing compressed gas to low temperatures, the combination with a cylinder of two valves for one end of said cylinder, one for the inlet of compressed gas and the other for the outlet of cold expanded gas, a coil surrounding said cylinder at points remote from said end adapted for collecting cold leaking through said walls, a piston consisting of two portions, of which one working in the cold sphere of the expanded gas is a bad heating conductor and is so fitted into said cylinder as to move without substantial friction and the other portion is fitted to slide in said cylinder, and a packing ring for said piston substantially as set forth.

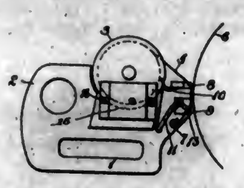
2. In an expansion engine for reducing compressed gas to low temperatures, the combination of a cylinder having thin walls, of two valves for one end of said cylinder, one for the inlet of compressed gas and the other for the outlet of cold expanded gas, a cold collection coil surrounding said cylinder, a piston consisting of two portions of which one working in the cold sphere of the expanding gas is adapted to form a bad heat conductor and is fitted within said cylinder so as to move without substantial friction and the other portion is adapted to slide in said cylinder, and a packing ring for the lower portion of said piston.

3. In an expansion engine for reducing compressed gas to low temperatures, the combination with a vertical cylinder of two valves for the top of said cylinder, one for the inlet of compressed gas and the other for the outlet of cold expanded gas, a cold absorbing coil surrounding said cylinder, a piston consisting of two portions, one working in the cold sphere of the expanding gas and adapted to form a poor heat conductor and fitting within said cylinder so as to move without substantial friction therewith, the other portion is fitted to slide in said cylinder and a packing ring between the two portions of said piston.

4. In an expansion engine for reducing compressed gas to low temperatures, the combination of a vertical cylinder having upright walls, of two valves for the top of said cylinder, one for the inlet of compressed gas and the other for the outlet of cold expanded gas, a cold absorbing coil surrounding said cylinder, a piston consisting of two portions, one forming a bad heat conductor adapted to move within said cylinder substantially without friction, the other being adapted to work within the first of said portions and within said cylinder, and a packing ring for said piston substantially as described and set forth.

5. In an expansion engine for reducing compressed gas to low temperature, the combination of a cylinder, inlet and outlet valves for one end of the cylinder, a piston having sliding contact with portions of said cylinder remote from said end, said piston having an extending portion which extends into the cold sphere of the cylinder and substantially insulates the sliding portion of the piston therefrom and means for transmitting cold from the portion of the cylinder with which said piston makes sliding contact.

1,019,792. CAPPING-OFF DEVICE. HARRY F. HITNER, Mount Vernon, Ohio, assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Dec. 19, 1908. Serial No. 468,275. (Cl. 49—50.)



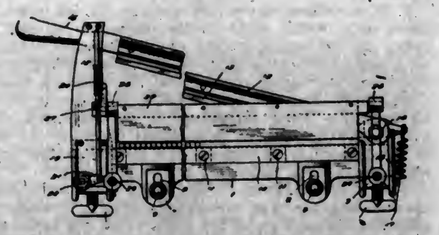
1. A capping off device for glass cylinders comprising a circle of wire having its ends crossed and in contact with the cylinder at the point of crossing but out of contact with each other at such point, a reel to which one end of the wire is attached, a spring tending to rotate the reel for holding the reel in tension when applied to a cylinder and means for sending a current of electricity through the wire.

2. A capping-off device for glass cylinders comprising a support, a wire secured thereto in position such that when in operative position the ends of the wire pass and overlap each other while yet in contact with the cylinder at such point of passing but maintain out of contact with each other, and connections for sending a current of electricity through the wire.

3. A capping-off device for cylinders comprising a handle, a pair of metallic contact blocks carried by the handle and spaced apart thereon, a wire engaging one of the blocks and passing around the cylinder and engaging the other block, and electrical connections to the two blocks whereby a current of electricity may be passed through the wire, the ends of the said wire passing each other in substantial parallelism and in contact with the cylinder at the point of passing but out of contact with each other.

4. A capping-off device for cylinders comprising a handle, a pair of metallic contact blocks carried by the handle and spaced apart thereon, a wire engaging one of the blocks and passing around the cylinder and engaging the other block, and electrical connections to the two blocks whereby a current of electricity may be passed through the wire, the ends of the said wire passing each other in substantial parallelism and in contact with the cylinder at the point of passing but out of contact with each other, and the blocks being mounted upon the handle in position to permit those portions of the wire intermediate the blocks to engage the cylinder.

1,019,793. CANDY-CUTTING MACHINE. ALFRED JACKSON, Philadelphia, Pa. Filed Oct. 30, 1909. Serial No. 525,576. (Cl. 107—21.)



1. In a candy cutting machine, a frame, a cutting member pivoted for operation thereon, a spring for holding the cutting member above the frame, and a resilient abutment rod for the cutting member.

2. In a candy cutting machine, a frame, a cutting member pivoted for action thereon, a rocking guide stop adjustable on the frame, and adjustable tray supporting means on the frame.

3. In a candy cutting machine, a frame, a cutting member pivoted for action on the frame, tray supporting arms formed with slats, means for adjustably holding the tray supporting arms on the frame, and a rocking stop guide secured on the frame.

4. In a candy cutting machine, a frame, means on the frame for securing the same to a table, a cutting member pivoted on the frame, spring means holding the cutting member above the frame, a spring buffer rod for the cutting member, supporting bearings on the frame, a stop guide journaled on the supporting bearings and a handle spring controlled on the stop guide.

5. In a candy machine, a frame, a knife working on the frame, a rod adapted to be engaged by the knife on reaching the limit of its upper stroke, a stop operating on the frame, and means connecting the rod to the frame.

[Claims 6 to 12 not printed in the Gazette.]

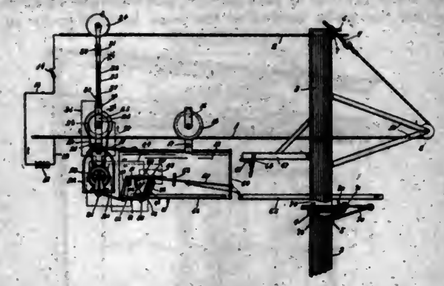
1,019,794. SWIVEL ROPE-SOCKET. HERBERT L. JARVIS, deceased, McKittrick, Cal., by Rose Louise Jarvis, administratrix, Bakersfield, Cal., assignor of one-third to John M. Sands, Los Angeles, Cal., and one-third to George W. Church, Bakersfield, Cal. Filed Nov. 2, 1910. Serial No. 590,255. (Cl. 166—3.)



A rope socket, comprising a hollow mandrel having a longitudinal bore, a rope clamp loosely arranged in said bore and having a substantially cylindrical portion projecting out of the mandrel at its upper end, the clamp comprising two halves each having a longitudinal groove enlarged at one end, the lower parts of each half being provided with longitudinal flanges, bolts passing through the said flanges to hold the clamp halves together, a ferrule surrounding the upper ends of the clamp halves, and a spring in the mandrel and pressing downwardly on the rope clamp.

1,019,795. RURAL-MAIL-DELIVERY DEVICE. AUGUST JENSON, Kenyon, Minn., assignor, by direct and mesne assignments, to Kenyon Electrical Manufacturing Company, Kenyon, Minn., a Corporation of Minnesota. Filed Apr. 7, 1910. Serial No. 554,007. (Cl. 104—146.)

1. In a mail delivery device, the combination with a track, of a truck including a mail box and wheels arranged to run on said track, said box having a hinged door, of an electrical motor carried by said truck and connected to one of the truck wheels for driving the same, a motor reversing switch carried by said truck, a device at one end of the line for setting said reversing switch in a neutral position, and a connection operated by the said mail box door for setting said switch in position to reverse the action of said motor.



2. In a mail delivery device, the combination with a track, of a truck mounted to travel thereon and having an engaging part, a motor on said truck for driving the same, a motor reversing device on said truck, a lock piece on said truck, a lock lug and a yielding stop at one end of the said track, the latter of which when engaged and moved by the part carried by said truck will permit engagement of the lock on said truck with said fixed lock lug, and a device at the same end of said track operative on said motor reversing device.

3. In a mail delivery device, the combination with upper and lower tracks, of a mail box provided with a pivoted motor supporting frame and a motor therein, truck wheels connected to said motor supporting frame and working one on each of said tracks, a third truck wheel connected to said mail box and working on one of said tracks, the said motor being connected to one of said truck wheels for driving the same, and means for reversing the action of said motor.

4. In a mail delivery device, the combination with a track, of a mail box having wheels adapted to travel on said track, a motor carried with said box and having connections for driving one of said wheels, a motor reversing device on said box, a device at one end of the line operative on said motor reversing device to set the same in a neutral position, said mail box having a hinged door, a push bar connected to said door and operative to reverse the action of said motor reversing device when said door is opened and then closed while said motor reversing device is in a neutral position.

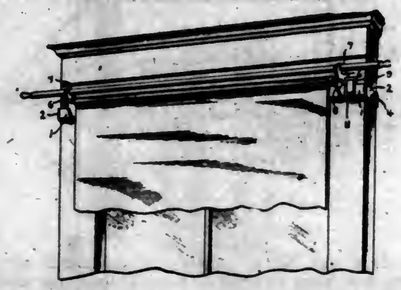
5. The combination with a track, of a mail box having an engaging part and having truck wheels arranged to run on said track, a motor carried with said box and connected to one of said truck wheels, said box having a hinged door, a motor reversing device carried by said box, a yielding lock also carried by said box, a push bar connected to said door and operative to reverse the action of said motor reversing device when said door is opened and closed while said motor reversing device is in a neutral position, and three devices at one end of the track, the first serving to set said motor reversing device in a neutral position, the second being a fixed lug for engagement with the lock device on said box and the third being a spring retracted stop engageable with the part carried by the box and serving when said lock device is released from said lug to impart a slight initial return movement to said box.

[Claim 6 not printed in the Gazette.]

1,019,796. COMBINATION SHADE AND CURTAIN FIXTURE FOR WINDOWS. JOHN A. JOHNSON, Oklahoma, Okla. Filed Oct. 19, 1910. Serial No. 587,852. (Cl. 156—23.)

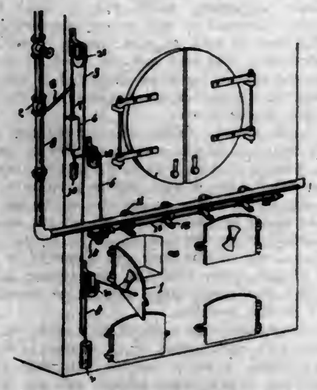
In a device of the class described a supporting bracket made of flat material and arranged to receive a curtain pole and shade spindle, a flat foot member disposed on the back portion of said bracket and at right angles thereto, said foot being spaced from said bracket at its lower portion so as to permit said bracket and member to engage

with the front and back surfaces of a holder secured to the frame of a window, and a flat spring rigidly secured at its upper portion to said member and enlarged so as to permit the lower portion of the same to frictionally en-



gage with the outer surface of the holder and additionally clamp said foot member thereto, said spring being disposed in the central portion of said member and away from the end thereof and said bracket.

1,019,797. SMOKE-BURNER. EDWARD C. JONES and CHARLES J. ARNOLD, Louisville, Ky. Filed June 23, 1911. Serial No. 634,948. (Cl. 110—55.)

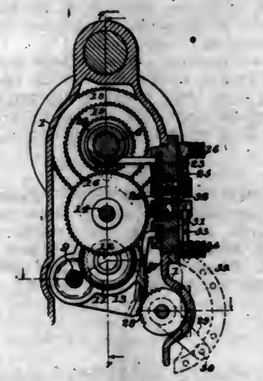


1. In a furnace, a steam-operated gas injecting mechanism comprising a steam admission valve and an actuating mechanism comprising a pulley, a flexible connector thereover, unequal weights connected thereby on opposite sides of said pulley, means for supporting the greater weight from the furnace door, a retarding mechanism between said lesser weight and said pulley, and a lever connected with said connector and adapted to open said steam valve on movement of the connector in one direction and to close said valve on movement in another.

2. In a furnace, a steam-operated gas-injecting mechanism comprising a steam-admission valve and an actuating mechanism comprising a pulley, a flexible connector thereover, unequal weights connected thereby on opposite sides of said pulley, a retarding mechanism between the lesser weight and the pulley, means operated by said connector for opening and closing said steam-admission valve, and a second pulley placed at approximately the altitude of the furnace door and a flexible connector thereover attached to said furnace door and variably supporting said greater weight.

3. In a furnace, a steam-operated gas-injecting mechanism comprising a steam-admission valve and an air-admission valve adapted to open by gravity, and an actuating mechanism comprising a pulley, a flexible connector thereover, unequal weights connected thereby on opposite sides of said pulley, a retarding mechanism between the lesser weight and the pulley, means operated by said connector for opening and closing said steam-admission valve, a second pulley placed at approximately the altitude of the furnace door, a flexible connector thereover attached to said furnace door and supporting said greater weight, a third pulley above said gas admission valve, a flexible connector thereover supporting said gas-admission valve and in connection with said lesser weight.

1,019,798. SPEED-CHANGING GEARING. EDWARD J. KEARNEY, Wauwatosa, and THEODORE TRECKER, West Allis, Wis. Filed July 25, 1908. Serial No. 445,433. (Cl. 74—58.)



1. The combination of parallel shafts, a gear fixed on one shaft, a gear shiftable endwise upon and rotatable with the other shaft, a gear support pivotally mounted upon and movable with said shiftable gear endwise of the second shaft and provided with gear teeth, a stepped cone gear carried by said support with one of its steps in mesh with said shiftable gear and movable to carry any of its steps into mesh with the fixed gear on the first shaft, and a wide faced pinion meshing with the gear teeth on said support and provided with a crank arm for changing the angular adjustment of said support, substantially as described.

2. The combination of parallel shafts, a gear fixed on one shaft, a gear shiftable endwise upon and rotatable with the other shaft, a gear support pivotally mounted upon and movable with said shiftable gear endwise of the second shaft, a stepped cone gear carried by said support with one of its steps in mesh with said shiftable gear and movable to carry any of its steps into mesh with the fixed gear on the first shaft, a rack movable parallel with said shafts and connected with said support, and a pinion meshing with said rack and provided with a crank arm for adjusting said support and stepped cone gear endwise, substantially as described.

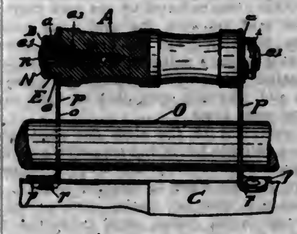
3. The combination of parallel shafts, gears of different sizes fixed on one shaft, a gear shiftable endwise upon and rotatable with the other shaft, a gear support pivotally mounted and movable endwise with said shiftable gear on the second shaft and provided with gear teeth, a stepped cone gear carried by said support with one of its steps in mesh with said shiftable gear and movable to carry any of its steps into mesh with any of the fixed gears on the first shaft, and a wide faced pinion meshing with the gear teeth on said support and provided with a crank arm for changing the angular adjustment of said support, substantially as described.

4. The combination of parallel shafts, gears of different sizes fixed on one shaft, a gear shiftable endwise upon and rotatable with the other shaft, a gear support pivotally mounted and movable endwise with said shiftable gear on the second shaft, a stepped cone gear carried by said support with one of its steps in mesh with said shiftable gear and movable to carry any of its steps into mesh with any of the fixed gears on the first shaft, a rack movable parallel with said shafts and connected with said support, and a pinion meshing with said rack and provided with a crank arm for adjusting said support and stepped cone gear endwise, substantially as described.

5. The combination of parallel shafts, a gear fixed on one shaft, a gear shiftable endwise upon and rotatable with the other shaft, a gear support pivotally mounted and movable endwise with said shiftable gear on the second shaft and provided with gear teeth, a stepped cone gear carried by said support with one of its steps in mesh with said shiftable gear and movable to carry any of its steps into mesh with the fixed gear on the first shaft, a wide faced pinion meshing with the gear teeth on said support and provided with a crank arm for changing the angular adjustment of said support, a rack movable parallel with said shafts and connected with said support, and a pinion meshing with said rack and provided with a crank arm for adjusting said support and stepped cone gear endwise, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

1,019,799. HANDLE. JAMES E. KEILY, Rochester, N. Y. Filed Nov. 2, 1909. Serial No. 525,959. (Cl. 220—30.)



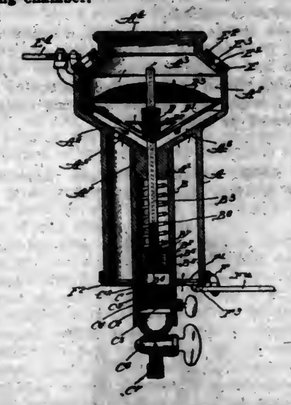
1. A handle comprising brackets provided with openings, a grip having ferrules threaded on its ends, the ferrules engaging the openings in the brackets, and screw-caps threaded on the ferrules outside of the brackets so as to inclose the ends of the grip and secure it removably and adjustably in place in the brackets.

2. A handle comprising brackets provided with openings, a grip having ferrules threaded on its ends, the ferrules being formed of thin metal corrugated to form corresponding internal and external threads, and screw-caps formed with threads adapted to engage the external threads of the ferrules, the ferrules engaging the openings in the brackets and the screw-caps being screwed on the ferrules outside of the brackets so as to inclose the ends of the grip and secure it removably and adjustably in place.

3. A handle comprising brackets provided with openings, a grip having ferrules threaded on its ends, the ferrules being in the form of caps and having central perforations, nails driven through said perforations into the grip, and screw-caps threaded upon the ferrules, the ferrules engaging the openings in the brackets and the screw-caps being screwed on the ferrules outside of the brackets so as to inclose the heads of the nails and secure the grip removably and adjustably in place.

1,019,800. CARBURETER. RICHARD KENNEDY, Chicago, Ill. Filed Aug. 25, 1910. Serial No. 578,903. (Cl. 48—154.1.)

1. A carbureter comprising a cylindrical air passage, a carbureting chamber, separated therefrom by a perforate conical wall, a cylindrical oil chamber concentric with said air passage, a conical valve plate in said carbureting chamber, perforations therethrough, a piston in said oil chamber and a piston rod connecting said piston and valve plate, a passage through said piston rod and a check valve in said piston, means for controlling the supply of oil to said chamber, means for controlling said air passage; and an auxiliary adjustable air supply to said carbureting chamber.



2. A carbureter comprising a cylindrical air passage, a carbureting chamber, separated therefrom by a perforate conical wall, a cylindrical oil chamber concentric with said air passage, a conical valve plate in said carbureting chamber, perforations therethrough, a piston in said oil chamber and a piston rod connecting said piston and valve plate, a passage through said piston rod and a check valve in said piston.

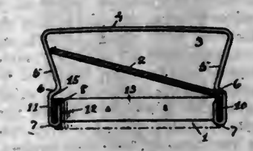
3. A carbureter comprising an air passage, a carbureting chamber, separated therefrom by a perforate wall, an oil chamber within said air passage, a perforate valve plate in said carbureting chamber, a piston in said oil chamber and a hollow piston rod connecting said piston and valve plate, a check valve in said piston.

4. A carbureter comprising an air passage, a carbureting chamber, separated therefrom by a perforate wall, an oil chamber within said air passage, a perforate valve plate in said carbureting chamber, a piston in said oil chamber and a hollow piston rod connecting said piston and valve plate, a check valve in said piston, means for controlling the supply of oil to said chamber, means for controlling said air passage; and an auxiliary adjustable air supply to said carbureting chamber.

5. A carbureter comprising a cylindrical air passage, a carbureting chamber, separated therefrom by a perforate conical wall, a cylindrical oil chamber concentric with said air passage, a conical valve plate in said carbureting chamber in opposition to said perforate wall, perforations therethrough, a piston in said oil chamber and a piston rod connecting said piston and valve plate, a passage through said piston rod and a check valve in said piston.

[Claims 6 to 8 not printed in the Gazette.]

1,019,801. BASKET HANDLE AND COVER-FASTENER. JOHN B. KENNY, Geneva, N. Y. Filed Dec. 27, 1910. Serial No. 599,612. (Cl. 317—125.)

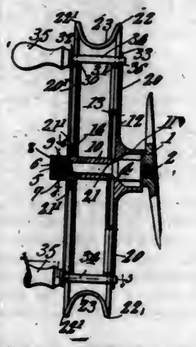


1. The combination with a fruit basket and cover therefor, of a handle and cover fastener formed of a single piece of resilient wire, comprising a transverse grip, downward extending lateral arms, outward extending shoulders, and terminal loops having upturned ends engaging the sides of the basket, said shoulders being separated from the top edge of the basket by intervals

and having toothed lower surfaces guarded by said arms, and adapted to automatically form a groove in the marginal top surface of said cover to hold the cover against endwise movement.

2. As a new article of manufacture, a handle and cover fastener for fruit baskets, formed of a single piece of resilient wire and comprising a transverse grip, downward extending lateral arms, outward extending shoulders and terminal loops, said shoulders having toothed lower surfaces guarded by said arms.

1,019,802. REEL. HENRY KENWARD, Jonesboro, Ark. Filed Nov. 5, 1910. Serial No. 590,877. (Cl. 43—15.)



In a fishing reel, the combination with a spindle and a hub journaled on the spindle having a wide inner flange with an extension and a narrower outer flange; of reel arms each consisting of a single piece of wire formed into two legs connected at their outer ends by a U-shaped bend with one leg passing radially through said extension, and the tips of both seated in sockets in the hub, two bands of L-shaped section pierced with holes through which the legs pass, and a handle, the spindle of which passes through the flanges of the L-shaped section and is itself pierced with transverse holes through which the legs of one of said arms pass.

1,019,803. CULTIVATOR. JOHN C. KIEL, Moline, Ill., assignor to Deere & Company, Moline, Ill., a Corporation of Illinois. Filed May 23, 1910. Serial No. 562,875. (Cl. 97—31.)



1. In a cultivator of the class described, the combination with a suitable frame and supporting devices therefor, of a transverse shaft rotatable with respect to the frame about an axis fixed in relation thereto, a locking hand lever, connections between the hand lever and the shaft, arms connected to the shaft and extending at angles thereto, soil working devices mounted upon the arms, a driver's seat vertically movable with respect to the frame, means for holding the seat against substantial horisontal movement with respect to the frame, other arms secured to the shaft and extending in directions opposite to the directions of the aforesaid arms, and a seat supporting connection between the said seat and the last said arms.

2. In a cultivator of the class described, the combination with a suitable frame and supporting devices therefor, of a transverse shaft rotatable with respect to the frame about an axis fixed in relation thereto, means for operating the shaft, oppositely extending arms rigidly connected with the shaft, soil working devices supported by one of said arms, and a driver's seat supported in part by the other of said arms, the seat being vertically movable with respect to the frame and held against substantial horisontal movement with respect to the frame.

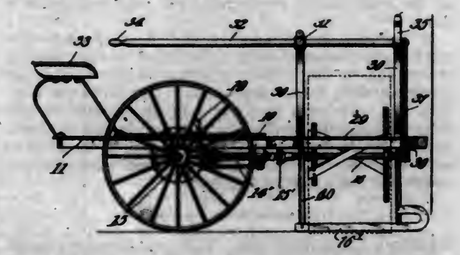
3. In a cultivator of the class described, the combination with a suitable frame and supporting devices therefor, of a transverse shaft rotatable with respect to the frame about an axis fixed in relation thereto, rearward extending arms connected with the shaft, soil working disks mounted upon the arms, forward extending arms also connected with the said shaft, an upward extending seat support pivotally connected at its lower end with the said forward extending arms, a vertically movable seat on the support, a brace between the upper end of the support and the frame for holding the seat against horisontal movement with respect to the frame, an adjusting lever, and connections between the lever and the shaft.

4. In a cultivator of the class set forth, the combination of a frame comprising two parallel ground-engaging runners, brackets extending upward from the said runners near their rear ends, a transverse rock-shaft mounted in the said brackets, arms on the rock-shaft extending at angles therefrom, soil working devices on the said arms, other arms mounted on the rock shaft at points adjacent the said brackets, the said arms extending in the opposite direction from the first said arms, a vertically movable driver's seat and elements supporting the seat held against substantial horisontal movement at their upper ends and pivotally connected at their lower ends with the last said arms.

5. In a cultivator of the class described, the combination with a suitable frame and supporting devices therefor, of a transverse shaft rotatable with respect to the frame about an axis fixed in relation thereto, arms extending from the shaft at angles thereto, soil working devices on the arms, other arms extending from the shaft in a direction opposite to that of the first said arms, a vertically movable driver's seat, bars connected at their upper ends with the seat and pivotally connected at their lower ends with the last said arms, a brace connected at one end with the frame and serving to prevent substantial horizontal movement of the seat, and means separate from said seat supporting bars and the said arms for operating the shaft.

[Claims 6 and 7 not printed in the Gazette.]

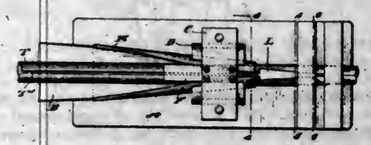
1,019,804. COTTON-CHOPPER. GEORGE KINNICK, Edna, Kans. Filed Aug. 18, 1911. Serial No. 644,856. (Cl. 97—46.)



1. In a cotton chopper, a frame, a drive shaft, a second shaft forming a continuation of said drive shaft and connected to same by a universal coupling, a cutting mechanism arranged on said second shaft, a plurality of arched supports arranged on the frame and overhanging said cutting mechanism, an arm mounted for movement on one of said supports, said arm resting upon the other of said supports, a curved bar arranged on the last mentioned support, said arm extending through said bar, and a link connection between said arm and the free end of the second mentioned shaft.

2. In a cotton chopper, a frame, a drive shaft, a second shaft forming a continuation of said drive shaft and connected to the same by a universal coupling, a cutting mechanism arranged on said second shaft, runners supporting said cutting mechanism, said runners being connected to said shaft by a plurality of radially extending struts, a plurality of arched supports arranged on the frame and overhanging said cutting mechanism, an arm mounted for movement on one of said supports, means arranged on the other support for limiting the movement of said arm and a link connection between said arm and said second shaft.

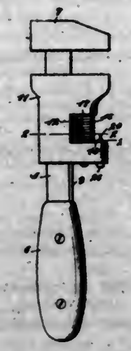
1,019,805. TUBE-DRAWING MACHINE. ROBERT KOENIG, Brooklyn, N. Y., assignor to Phenix Tube Company, Brooklyn, N. Y., a Corporation of New Jersey. Filed May 18, 1911. Serial No. 627,950. (Cl. 153—33.)



1. In a drawing machine for sheathing seamed tubes, the combination of a tube guide to extend through the seam of a tube to be sheathed, an edge-turning die to infold the edges of a tube sheath into the seam of a tube, a guide fin alined with the tube guide and midway of the edge turning die surfaces, and a constricting die.

2. In a drawing machine for sheathing seamed tubes, the combination of a bending funnel, a tube guide to extend through the seam of a tube to be sheathed, an edge-turning die to infold the edges of a tube sheath into the seam of a tube, a guide fin alined with the tube guide and midway of the edge turning die surfaces, and a constricting die.

1,019,806. WRENCH. HERMAN G. KREGER, Dodge City, Kans. Filed Nov. 18, 1911. Serial No. 661,017. (Cl. 81—137.)



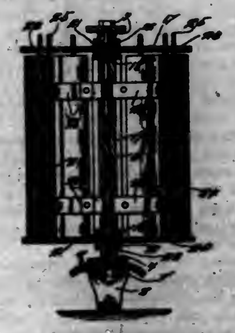
1. In combination, a shank having a stationary jaw formed on one end, a sliding jaw on said shank, a plate removably secured to the shank and having a threaded face, a semi-cylindrical locking member provided with threads for co-action with the threaded face of the plate, said member also having a flat unthreaded surface, means normally holding said flat surface of the locking member in opposed relation to the threaded face of the plate whereby said sliding jaw may be adjusted on the shank, and additional means to hold the threads of said member in engagement with the threads on said plate against the action of said first named means whereby the jaw is locked in its adjusted position on the shank.

2. In combination, a shank having a stationary jaw formed on one end, a sliding jaw adjustable on the shank, a plate removably secured to the shank and provided with a threaded face, a rotatable locking member mounted in the sliding jaw having a threaded portion to engage the threads upon said plate to lock the jaw in its adjusted position, said member also having a flattened unthreaded portion, a spring mounted in the jaw and normally holding the flattened face of said member in opposed relation to the threads on said plate whereby the sliding jaw may be moved on the shank, and means mounted in said jaw and co-acting with said locking member to hold the same in its locking position against the action of said spring.

3. In combination, a shank having a stationary jaw formed on one end, a sliding jaw adjustable on the shank, a plate longitudinally arranged on one face of the shank and secured thereto, said plate having a threaded face, a locking member rotatably mounted in the jaw and having a threaded portion to co-act with the threads on said plate whereby the jaw is locked in its adjusted position, said member also having a flat unthreaded portion, a spring mounted in the jaw and connected to said locking member to normally maintain the flat face thereof in opposed relation to the threads upon said plate, and means mounted in the jaw and automatically actuated in the movement of said locking member to its effective locking position to hold said member in such position against the action of said spring.

4. In combination, a shank having a stationary jaw formed on one end, a sliding jaw adjustable on said shank, a plate secured to one face of the shank and having a concave threaded face, a locking member rotatably mounted in the sliding jaw and having a threaded portion to engage the threads of said plate and lock the jaw in its adjusted position, said member also having a flat unthreaded portion, a spring arranged in the jaw and connected to said locking member to normally hold the flat portion thereof in opposed relation to the threaded face of said plate, a finger-piece laterally extending from one end of said locking member, and a spring held bolt having a head formed on one end normally projected by said bolt into the path of movement of said finger-piece, said head having a beveled face to be engaged by said finger-piece in the rotation of the locking member to its effective locking position, said finger-piece engaging the head on said bolt whereby the locking member is held against rotation under the action of the spring connected thereto.

1,019,807. DISPLAY DEVICE. DAVID L. LANFORD, Brownwood, Tex. Filed June 24, 1911. Serial No. 635,288. (Cl. 211—18.)



In combination, a revoluble rack, a stand therefor having a vertical post on which the rack is journaled, the rack comprising a tubular sleeve telescopically receiving the post, plates threaded on each end of the sleeve,

lock nuts threaded on the sleeve, one above and one below each of the plates, the plates having a plurality of annularly arranged apertures, removable rods having handles extending through the apertures constituting journals for rolls of fabric.

1,019,808. HAIR-DRYING APPARATUS. LOUIS T. LA PAUGH, Utica, N. Y. Filed Jan. 13, 1910. Serial No. 537,844. (Cl. 34—26.)

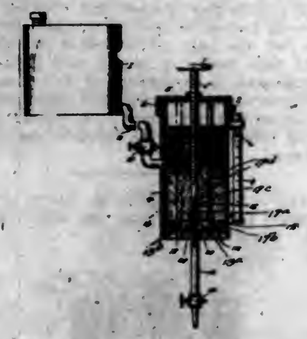


1. A device of the character described, comprising a plurality of hair supporting rings arranged in a single horizontal plane and having horizontally extended portions, substantially as described.

2. A device of the character described, comprising hair supporting rings lying in a single horizontal plane and formed with horizontal serrations whereby to loosen the hair and to hold it from the head, one of said rings forming a means supporting the device relative to the head, substantially as described.

3. In a hair drying device, a hair engaging and supporting member, made of wire or the like in the form of four broken circles, the two outer circles made by bending a strand of wire in serrations having alternate inner and outer portions forming spaced parts of two circles around the head and the two inner circles being likewise formed, the innermost circle being adapted by contact of portions thereof with the head to hold the device in serviceable position.

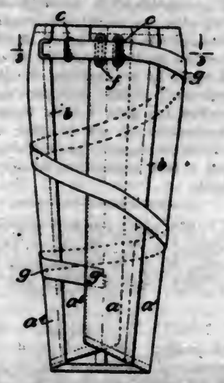
1,019,809. OIL-SEPARATOR. REGINALD W. LATHAM, San Benito, Tex. Filed Mar. 9, 1911. Serial No. 612,591. (Cl. 210—10.)



1. In a device as set forth, a separator tank having an inlet and outlet pipe, the outlet pipe being arranged above the point of the inlet pipe, a gage glass extending substantially the entire height of the separator tank, a vertically movable bottom in the separator tank and provided with a drain pipe having a valve, a hand screw threaded through the top of the separator tank, and a swivel connection between the lower ends of the hand screw and the bottom.

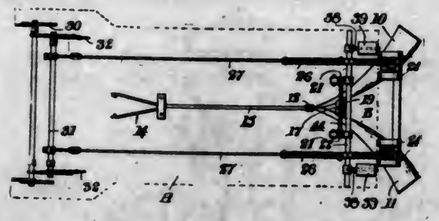
2. In a device as set forth, a separator tank having inlet and outlet pipes, a vertically movable bottom arranged in the separator tank, guides therefor, the bottom having a drain pipe provided with a valve, the bottom having an upper extension provided with opposite openings, through which the sediment passes in the drain pipe, a hand screw threaded through the top of the separator tank, and a swivel connection between the lower end of the hand screw and the extension.

1,019,810. LEGGING. RUBIN LESSELBAUM, New York, N. Y. Filed Apr. 20, 1910. Serial No. 556,538. (Cl. 36—2.)



A legging adapted to be wrapped about the leg of the wearer and comprising a plurality of longitudinal members secured together with wide lap seams, stiffeners inserted in said lap seams, a plurality of relatively immovable, rigid fastening loops secured to the underlapping member and inclined away from its edge, the overlapping member having a plurality of eyelets to engage said fastening loops and spaced unequally therewith, a strap secured at one end to the overlapping member and adapted to be wound spirally about the legging and to have its end passed through the projecting fastening loop, and guides for said strap secured to the outer surface of the legging.

1,019,811. FLANGER FOR RAILWAYS. NICHOLAS EDWARD LISTER, West St. John, New Brunswick, Canada, assignor of twenty-four one-hundredths to Joseph Sutton Clark, St. George, Canada, and twenty-four one-hundredths to George Hart Waring, St. John, Canada. Filed July 18, 1911. Serial No. 639,131. (Cl. 104—100.)



1. A device of the class described comprising a pair of diverging blades and jointed distensible links supporting the blades.

2. A device of the class described comprising diverging blades, shafts having arms thereon, jointed distensible links connecting the arms with the blades, and means for actuating the shafts.

3. A device of the class described comprising a flanging element, a plurality of jointed links supporting the same, shafts, arms on the shafts connected to the links, an operating lever, and connecting mechanism between the operating lever and the shafts, by which they may be oscillated to raise and lower the flanging element.

4. A rail flanger comprising a flanging element, slotted brackets thereon, links having means engaging the slots and springs on the links bearing against the brackets and normally forcing the flanging element to lowered position.

5. A flanger comprising flanging elements, including two

centrally meeting blades, a tie rod supporting the jointure of the blades, a plurality of longitudinally distensible spring supporting members connected to the blades.

[Claims 6 to 8 not printed in the Gazette.]

1,019,812. BACK FOR BRAKE-SHOES. WILLIAM H. MALOY, Suffern, N. Y., assignor to Edward H. Fallows, New York, N. Y. Filed Oct. 23, 1911. Serial No. 656,212. (Cl. 188—82.)



1. A blank for a back for a brake shoe having two side portions and a cross-piece extending between them whereby they are joined together, said blank having recesses adjacent the ends of said cross-piece and extending into said sides.

2. A blank for a back for a brake shoe having two similar side portions and a cross-piece extending between them whereby they are joined together, said blank having recesses adjacent the ends of said cross-piece and extending into said sides, and projections corresponding in outline with said recesses at the ends of said side portions.

3. A blank for a back for a brake shoe having two side portions and a cross-piece extending between them whereby they are joined together, said blank having two recesses adjacent one end of the cross-piece and located one upon either side of said cross-piece and extending into one of the sides aforesaid of said blank.

4. A back to be embedded in a brake shoe, the same comprising two side portions and a projecting loop or lug formed integrally with said sides and whereby they are connected with one another, the bases of the end portions of said lug joining with the side portions of said blank between the side edges thereof.

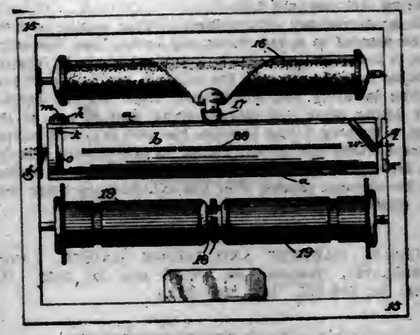
5. A back to be embedded in a brake shoe, the same being formed from a single piece of metal and comprising two side portions and a projecting loop or lug extending from one of said sides to the other, said lug springing from the middle portion of said sides and midway between the side edges thereof, the base portions of the ends of said lug extending longitudinally of the shoe.

[Claims 6 and 7 not printed in the Gazette.]

1,019,813. ADJUSTABLE MULTITRACKER FOR MECHANICAL MUSICAL-INSTRUMENT PLAYERS. RODNEY W. MARTIN, Dayton, Ohio. Filed Jan. 8, 1910. Serial No. 536,972. (Cl. 84—165.)

1. An adjustable multi-tracker for mechanical musical instrument players provided with a tracker-body formed with a deep concavity and having a movable stop, and air-passages therein; a cylinder adapted to rest and rotate in the concavity of said tracker-body, and provided with means for engaging the stop of said body, and having two rows of note-openings therein, one row extending a greater distance and having a less number of openings than the other, but both rows having their openings so constructed and arranged as to communicate in turn with the air-passages of said tracker-body when the cylinder is operated, and suitably geared mechanism at the end of the cylinder for shifting and rotating the same, substantially as described.

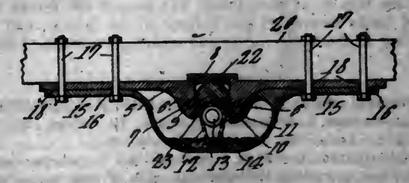
2. In an adjustable multi-tracker for pneumatically actuated music playing instruments, the combination of the carriage of said tracker having a concavity leaving sides extending sufficient distance over a tracker-cylinder resting and adapted to rotate therein, to cover the note openings of one row when those of another row are in operation, and having air-passages therein; the tracker-cylinder resting rotatably in the concavity of said carriage and having several rows of note openings therein, one row having the ends of the note openings extending radially and of a different size at the mouth from the note openings of another row, each row of openings, in the cylinder is so constructed and arranged as to communicate in turn with the air-passages of the tracker-body, and suitable mechanism at one end of said cylinder for rotating the same and for moving said tracker longitudinally; all substantially in the manner and for the purposes described.



3. In an adjustable multi-tracker for mechanical musical instrument players, the combination of a tracker-carriage having a concaved face and provided with a plurality of air-passages, a lever having a short leg and hinged to said carriage; a tracker-cylinder the convexed face of which is adapted to rest in the concaved face of said carriage, and formed with several rows of note openings differing in size, the row having the larger openings having a number of said note openings so radiating that when said row is brought on a line with the air-passages of the carriage, all of said note openings will register and form an open communication with the same number of air passages in said tracker-carriage, a groove and recess in the body adapted to receive said short leg of the hinged lever of said carriage; means for adjusting said tracker and for rotating said cylinder; all substantially as described.

4. The combination in a multi-tracker for player-pianos and mechanical players for pianos, of the body formed with a concavity and having air-passages therein, and provided with a lever; a tracker-cylinder located in the concavity of said body and having rows of note-openings so arranged and constructed as to communicate in turn with the air passages of the tracker-body, means on said cylinder for engaging the lever of said body; a smooth spindle at one end of the cylinder, a screw-threaded spindle at opposite end of said cylinder; and means whereby said cylinder and body can be shifted and said cylinder can be rotated as desired; all substantially as described.

1,019,814. LUBRICANT JOURNAL-BOX. CHARLES H. MCCLASKEY, Carneyville, Wyo. Filed July 18, 1911. Serial No. 639,212. (Cl. 64—24.)

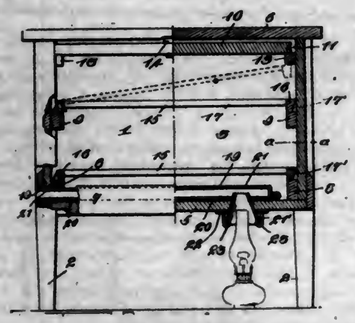


1. A journal box comprising an upper section adapted to be secured to a car frame and having two depending

lugs, a lower section constituting a cup, the sides of the cup having vertical axle openings and the said lugs depending into the cup at the sides of the openings, and a wall projecting inwardly and downwardly from one end of the cup within the sides thereof and fitting below the corresponding wall of one of the said lugs, a bushing fitting within the said openings in the cup and between the inner walls of the said lugs, the bushing having a lower transverse concaved recess, and flanges on the outer ends thereof and also having a channel in the said recess, an axle passing through the said openings and fitting in the said bushing, and an endless flexible elevator passing over the axle and through the said channel and depending into the said cup.

2. A journal box comprising an upper section adapted to be secured to a car frame and having two depending lugs, a lower section constituting a cup, the said lugs depending into the cup, and the said cup having a wall projecting inwardly and downwardly from one end thereof and fitting below the corresponding wall of one of the lugs, a bushing fitting between the said lugs and having a lower transverse concave recess, an axle passing through the said cup and fitting in the said bushing, and an endless flexible elevator passing over the axle and depending into the said cup.

1,019,815. CABINET AND DOUGH-RAISER. ANNA MCGARVEY, Westover, Pa. Filed Aug. 26, 1911. Serial No. 646,222. (Cl. 126—282.)

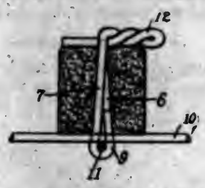


1. A cabinet of the class described provided near and above its bottom with a longitudinally disposed heating flue closed at one end and open at the opposite end, the open end of the flue extending through and being supported in an opening in one end wall of the cabinet and communicating with the outer air, an intake funnel extending through the bottom of the cabinet and communicating at its upper end with the flue, near and supporting the closed end of the flue.

2. A cabinet of the class described provided near and above its bottom with a longitudinally disposed heating flue closed at one end and open at the opposite end, the open end of the flue extending through and being supported in an opening in one end wall of the cabinet and communicating with the outer air, an intake funnel extending through the bottom of the cabinet and communicating at its upper end with the flue, near and supporting the closed end of the flue, a protecting plate on the under side of the bottom of the cabinet and around the intake flue and hooks secured to the bottom of the cabinet, and attached to the lower end of and securing the intake funnel.

1,019,816. FENCE-POST AND FENCE-FASTENING. ALEXANDER J. MCGAVICK, Chicago, Ill. Filed Jan. 13, 1911. Serial No. 602,528. (Cl. 39—12.)

The combination with a post having transverse tapering holes extending therethrough each of said holes being formed to admit a double wire at the face of said post and a single wire at the rear side, single tie wires looped at one end to encircle a bar, and to reënter the large end of said hole, the other ends of said wires being twisted and bent at right angles to the center line of said post,



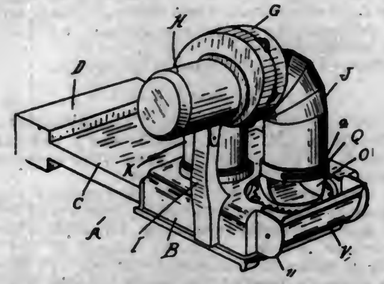
a bar held vertically in the said looped ends of said wires, whereby said bar and wires are adapted to hold fence wires against the face of said post as described.

1,019,817. FENCE POST AND FASTENING. ALEXANDER J. MCGAVICK, Chicago, Ill. Filed Jan. 13, 1911. Serial No. 602,529. (Cl. 39—12).



The combination with a post of the kind described having holes extending transversely therethrough each hole being adapted for the insertion of a single wire; of the tie wires extending through and fitting said holes, one end of each wire being coiled about and holding a horizontal fence wire securely in front of said post but not in contact therewith the other end of each of said wires being twisted and bent at right angles to the line of said holes whereby the coiled end of said wires are drawn firmly against the face of said post.

1,019,818. VENTILATING APPARATUS. FRANCIS JOSEPH MCMURDIE, Detroit, Mich., assignor to American Blower Company, Detroit, Mich., a Corporation of Michigan. Filed Oct. 21, 1909. Serial No. 523,851. (Cl. 98—31.)



1. In ventilating apparatus, the combination with a casing having inlet and outlet openings, of an air propelling device, intake and discharge ducts leading from said device to the casing interior, relatively movable members within the casing formed each with an air passage, the passages registering with the air ducts and leading in different directions, and means for shifting the members to change the position of the air passages and the direction of travel of the air current through the casing.

2. In ventilating apparatus, the combination with a casing having inlet and outlet openings, of an air propelling device, intake and discharge pipes leading from said device within the casing, relatively movable members within the casing formed each with an air passage, the passages registering with the air ducts and being substantially oppositely disposed, a drive connection between the members, and a single operating device for operating the members simultaneously.

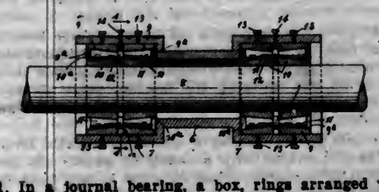
3. In ventilating apparatus, the combination with a casing provided with openings for the intake and discharge of air, of a blower, complementary air ducts leading from the blower to the casing interior, and rotatable cup members within the casing registering with the air ducts and formed each with a lateral discharge passage, the passages being substantially oppositely disposed.

4. In ventilating apparatus, the combination with a casing provided with intake and discharge openings, of a blower mounted upon the casing, intake and discharge pipes leading from the blower to the casing top and communicating with the casing interior, rotatable cups within the casing registering with the air ducts and formed each with a lateral discharge passage, the passages being oppositely disposed, a gear connection between the cups, and and actuating member operable from without the casing for shifting the cups.

5. In a ventilating apparatus, the combination with the air box open at opposite ends, of a fan casing positioned without the box, inlet and outlet conduits communicating at opposite ends respectively with the fan casing and the conduit, and rotatable means controlling the ends of said conduit communicating with the casing for reversing the direction of travel of the air current through the box.

[Claims 6 to 12 not printed in the Gazette.]

1,019,819. ROLLER-BEARING. NATE E. MERRILL and JOHN C. CAVENDER, Hobart, Ind. Filed Feb. 28, 1910. Serial No. 546,572. (Cl. 64—39.)



1. In a journal bearing, a box, rings arranged within said box and having their outer surfaces parallel with the inner walls of the box and their inner surfaces inclined inwardly from their outer edges, other rings having their outer surfaces reversely inclined to the inner surfaces of the first named rings and opposed thereto, and rollers arranged between said opposed rings, said rollers having convex annular hubs midway their ends and having their walls diverging from said hubs and adapted to frictionally engage the adjacent walls of the opposed rings.

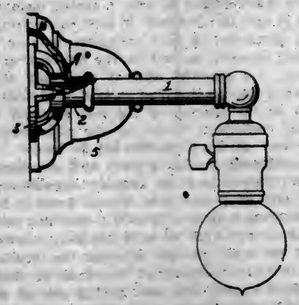
2. In a journal bearing, a box, a pair of rings non-rotatably and adjustably mounted in said box and having bearing surfaces inclined inwardly from their outer edges, and having their inner edges spaced apart, another pair of rings rotatably mounted in said box in opposition to said first named rings and having their bearing surfaces oppositely inclined from the opposed rings and having their inner edges spaced apart, rollers arranged between the bearing surfaces of said rings, each of said rollers having an annular projection at its midlength adapted to lie between the inner ends of both pairs of rings, said rollers having bearing surfaces adapted to frictionally engage the bearing surfaces of the said rings.

1,019,820. CROSS-STRAP CONNECTOR. CHARLES I. MILLAR, Providence, R. I. Filed Oct. 26, 1910. Serial No. 589,180. (Cl. 241—22.)

A cross strap connector consisting of a plate formed with two strap receiving slots spaced apart and extending in parallel relations, and two clamping fingers extending from the plate at its diagonally opposite corners and externally of the slots, said fingers being bent over the plate and projecting over the slots, whereby the portion of a strap bearing beneath the fingers is held thereby in contact with another portion of a strap when the same is threaded through the slots.



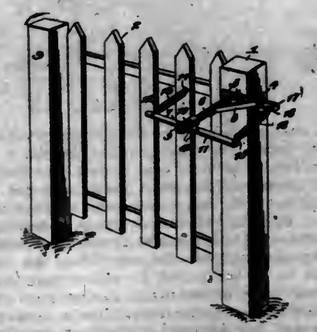
1,019,821. HICKEY. FREDERICK J. MILLER, Toledo, Ohio, assignor to The Western Gas Fixture Company, Toledo, Ohio, a Corporation of Ohio. Filed Nov. 25, 1911. Serial No. 662,525. (Cl. 240—85.)



1. A single-piece hickey having in opposite end portions threaded and provided intermediate its ends with a shoulder for limiting the threading of a fixture part to one end thereof, such end having a longitudinally extending wire-receiving slot therein which terminates at its inner end beyond said shoulder.

2. A single-piece hickey having its opposite ends threaded with at least one of such threads external and having a stop shoulder adjacent the inner end of the external thread, said externally threaded portion having a longitudinally extending slot which has its inner end enlarged and terminating beyond said shoulder.

1,019,822. SPRING FOR GATES, &c. FREDERICK W. MOCK, Milroy, Ind. Filed Nov. 15, 1911. Serial No. 660,352. (Cl. 16—9.)



1. The combination with a post and a swinging member carried thereon; of a bar secured to one face of said post, an arm carried with the bar and extending at right angles thereto, an additional arm pivotally and adjustably mounted on the free end of the first referred to arm, a pair of spring members carried on the ends of said additional arm, said spring members being also, respectively, en-

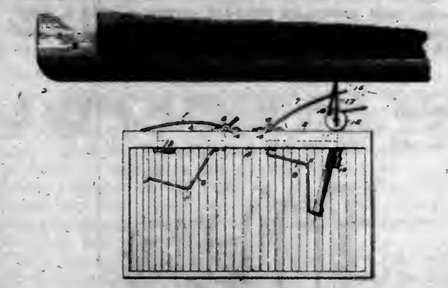
gaged with said swinging member and said bar, and means for the adjustment of the tension of one of said spring members.

2. The combination with a post, and a swinging member carried thereon; of a bar secured to said post, an arm carried by said bar, the free end of which is bifurcated, an additional arm pivotally mounted between the bifurcations of the last referred to arm, a pair of spring members carried on the ends of said last referred to pivoted arm, said spring members being also, respectively, connected to said swinging member and bar, and means for the adjustment of said pivotal arm on the first referred to arm.

3. The combination with a post, and a swinging member carried thereon; of a bar secured to said post, an arm carried on said bar, the free end of which is bifurcated, an additional arm pivotally carried between the bifurcations of the last referred to arm, a spring member carried at one end of said last referred to arm, said spring member being also connected to said swinging member, an additional spring member carried on the opposite end of said pivotal arm, the opposite end of said last referred to spring member being connected to said bar, means for the adjustment of the tension of the last referred to spring member, and additional means for the adjustment of said pivotal member on the first referred to arm.

4. The combination with a post, and a swinging member carried thereon; of an angular supporting bracket carried on said post, one arm of said bracket having its free end bifurcated, an arm pivotally mounted between the bifurcations of the arm of said bracket, means for th adjustment of said pivotal arm on the bracket, hook members pivotally mounted at the ends of said pivotal arm, a pair of spring members having one of their ends engaged with said hook members, the opposite ends of said spring members being, respectively, engaged with said swinging member and the opposite arm of the angular bracket, and means for the independent adjustmen of one of said spring members.

1,019,823. MAIL-BAG DELIVERER. GEORGE F. MORIN, Benson, Minn. Filed Nov. 29, 1911. Serial No. 663,055. (Cl. 105—231.)



1. In a mail bag deliverer of the kind described comprising a small house, two doors provided therein, a vertical rod held adjacent the inner edge of each door frame upon the outer surface of the small house, said rod held in bearings adjacent the upper and lower edges of the door opening, a plurality of curved prongs extending from each vertical rod at right-angles thereto, and means provided upon the mail car for suspending the mail bag in position to be intercepted by said prongs, said door of the small house automatically closing when the mail bag enters the small house through the door opening.

2. In a mail bag deliverer of the kind described comprising a small house, a pair of doors provided in said small house, one for receiving the mail bag from each direction, a vertical rod held adjacent the inner edge of each door from upon the outer face of the small house, said rods held in bearings, a plurality of inwardly curved prongs extending from each vertical rod approximately at right angles thereto, and means provided upon the mail car for suspending the mail bag in position to be intercepted by said prongs, said door of the small house automatically closing when the mail bag enters the small house through the door opening, said means consisting of an air spring.

3. In a mail bag deliverer comprising a small house, a pair of doors provided in said small house, one for receiving the mail bag from each direction, means to intercept a mail bag suspended from a passing train and cause it to pass or be shot into the small house through one of its doors and means to suspend a mail bag from a mail car in position to be intercepted, said last-named means comprising a vertical rod pivoted to the door frame of the car, a plurality of arms extending from the rod, the upper and lower of the arms equal in length to the width of the door of the car, the central pair of arms provided with elbows approximately centrally, said vertical rod adapted to swing outward so that the arms are at right angles to the car, the mail bag being secured to the upper and lower arms, its central portion resting against the outer extensions of the inner arms, and means consisting of rings to secure the bag to said upper and lower arms.

1,019,824. SAW-SET. GEORGE A. MORRIS, Inver Grove, Minn. Filed Aug. 14, 1911. Serial No. 643,912. (Cl. 76—64.)



1. A saw set comprising a set lever, a guide lever and a guide head provided with a shank to which said levers are pivotally connected, a reversible bearing plate in said head, means for changing the fulcrum point of the set lever and means for limiting the movement of the guide lever.

2. A saw set comprising a set lever, a guide lever, a guide head provided with a shank to which said levers are pivotally connected, a bearing plate in said head, a reversible journal block in said set lever, and means for limiting the movement of said levers.

3. In a device of the class described, a set lever, a guide lever and a guide head provided with a shank to which said levers are pivotally connected, a removable bearing plate for said head and an adjustable journal block in said set lever, whereby the point of application of pressure by said set lever against said plate may be varied with respect to the work.

4. A saw set comprising a set lever provided with a socket, a guide head having a shank to which said lever is pivotally connected, fulcrum changing means adapted to fit in said socket, a reversible bearing plate in said head having differently shaped faces adapted to be brought into coöperation with the fulcrum changing means, and guiding means adapted to hold a saw against said bearing plate.

5. A saw set comprising a set lever provided with a socket, a guide head having a shank to which said lever is pivotally connected, fulcrum-changing means adapted to fit in said socket, a reversible bearing plate in said head adapted to be brought into coöperation with the fulcrum-changing means and guiding means adapted to hold a saw against said bearing plate.

[Claims 6 and 7 not printed in the Gazette.]

1,019,825. RATCHET-WRENCH. FRANK MOSSBERG, Attleboro, Mass., assignor to Frank Mossberg Company, a Corporation of Rhode Island. Filed Nov. 2, 1911. Serial No. 658,169. (Cl. 81—58.)

1. In a ratchet wrench, the combination with a keeper provided with an opening in its side, of a nut engaging member comprising a cylindrical head portion mounted in the keeper, and a body portion extending below the keeper and provided with a shoulder abutting against the keeper, a plate fixed to the head portion overlapping the keeper, ears upon the keeper adjacent the opening a lever pivotally mounted in the ears and entering the opening and adapted to engage the head portion when the lever is vibrated, and a stop plate pivotally mounted upon the lever adapted to engage one of the ears when the lever is vibrated.

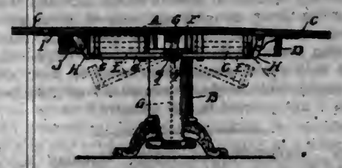


2. In a ratchet wrench, the combination with a keeper provided with an opening in its side, of a nut engaging member rotatably mounted in the keeper, ears upon the keeper above and below the opening, one of said ears being provided with interspaced shoulders, a lever pivotally mounted in the ears and entering the opening adapted to engage the nut engaging member when the lever is vibrated, and a stop plate pivotally mounted upon the lever provided with lateral shoulders adapted to alternately engage the first mentioned shoulders when the stop member is oscillated.

3. In a ratchet wrench, the combination with a keeper provided with an opening in its side, of a nut engaging member rotatably mounted in the keeper, journal ears upon the keeper adjacent the opening, one of said ears being provided with interspaced shoulders, a lever pivotally mounted in the ears and entering the opening adapted to engage the nut engaging member when the lever is vibrated, and a stop plate pivotally mounted upon the lever provided with lateral shoulders adapted to alternately engage the first mentioned shoulders when the stop plate is vibrated, an arm upon the stop plate, interspaced projections upon the stop plate, said lever being provided with recesses adapted to receive the projections.

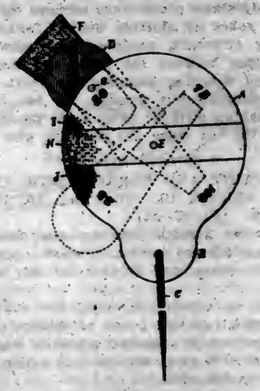
4. In a ratchet wrench, the combination with a keeper provided with an opening, of a cylindrical nut engaging member rotatably mounted in the keeper, ears upon the keeper adjacent the opening, a vibratory lever pivotally mounted in the ears and extending into the opening and provided upon its forward edge with interspaced concave faces eccentric to each other and corresponding in curvature to the curvature of the nut engaging member and adapted to alternately engage the periphery of the nut engaging member when the lever is vibrated.

1,019,826. ROUND-TOP EXTENSION-TABLE. CHARLES W. MUNZ, Detroit, Mich. Filed Apr. 2, 1906. Serial No. 309,535. (Cl. 45—9.)



The combination with a round stationary table top, of a series of leaves for surrounding the same and extending the diameter thereof, a central pedestal for supporting said stationary top, a cross-bar or bolster for bracing said top upon said pedestal, racks pivotally secured to said bolster at their inner ends and extending oppositely therefrom beneath said stationary top, said racks being adapted to receive all of said leaves, and means for locking the outer ends of said racks to the stationary top.

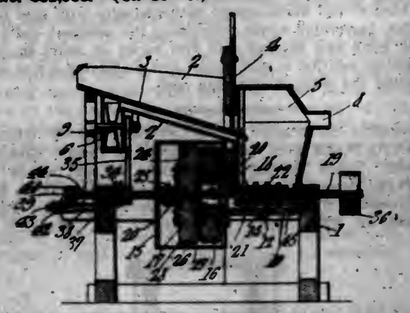
1,019,827. SIGNAL. CHARLES C. F. MIRSCHANG, Fort Wayne, Ind. Filed Sept. 1, 1911. Serial No. 647,174. (Cl. 116—31.)



1. In a device of the class described, a circular disk having upon its face a diametral stripe, and having an extended portion; a signal plate pivotally supported at the center of the disk and with one of its ends projecting beyond the perimeter thereof; and a secondary signal plate pivoted to the former plate on the rear side thereof, one end of which projects beyond the outer end of the former plate when in extended position.

2. In a device of the class described, a disk having a suitable means of support; a signal plate pivoted to the disk, one end of which extends beyond the perimeter thereof; and a secondary signal plate attached to the former signal plate upon the back thereof and adapted to be shifted so that one portion of its face will become projected beyond the outer end of the former signal-plate.

1,019,828. CRUSHING AND GRINDING MILL. GEORGE W. O'BRYAN, Cambria, Va. Filed Jan. 16, 1911. Serial No. 602,985. (Cl. 83—8.)



1. In a grinding mill, a revoluble grinding element, a band secured to and engaging the periphery of said element, elevating means secured to the band, and means outstanding from said elevating means for retarding movement of the ground material laterally beyond the periphery of said element.

2. In a grinding mill, the combination with a revoluble shaft, a fixed grinding element, and a grinding element movable with the shaft, of a cross bar constituting a thrust bearing for the shaft, yokes embracing the ends of the bar, adjustable conections between the ends of the bar and the yokes for shifting the bar toward the shaft, a supporting structure, and snapping pins constituting the sole connections between the yokes and the supporting structure.

3. In a grinding mill, the combination with a revoluble

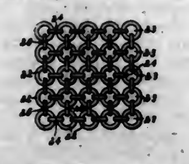
shaft, a fixed grinding element, and a grinding element movable with the shaft, of a cross bar constituting a thrust bearing for the shaft, yokes embracing the ends of the bar, adjustable connections between the ends of the bar and the yokes for shifting the bar toward the shaft, a supporting structure, snapping pins constituting the sole connections between the yokes and the supporting structure, and a spring engaging the shaft for shifting said shaft longitudinally against the bar to move the revoluble grinding element away from the fixed element and to shift the bar when the snapping pins are broken.

1,019,829. PAINT AND VARNISH REMOVER. JAMES S. PATTY, Chicago, Ill. Filed Oct. 16, 1911. Serial No. 655,032. (Cl. 87—5.)

1. A paint or varnish remover, the constituent ingredients of which are calcium phenate; palmitic acid; sugar of lead; benzol and another solvent, substantially as described.

2. A paint or varnish remover, the constituent ingredients of which are one pound of calcium phenate, one pound of palmitic acid; one-half pound of sugar of lead; one-half gallon of benzol; and one-half gallon of acetone, substantially as described.

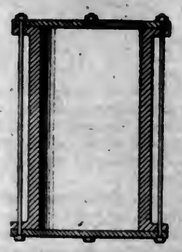
1,019,830. METALLIC LINK FABRIC. JOSEF PEJCHAR, New York, N. Y. Filed June 2, 1911. Serial No. 630,885. (Cl. 245—9.)



1. In a metallic fabric, the combination with a plurality of ring shaped units arranged in rows, of perforated strips connecting the adjacent units of each row, and perforated strips connecting the adjacent units of adjoining rows.

2. In a metallic fabric, the combination with a series of ring shaped units arranged in rows, of a second series of ring shaped units located concentrically with said first series, perforated strips connecting the adjacent units of said rows and holding said two series of units in concentrical relation to each other, and perforated strips connecting the units of adjoining rows.

1,019,831. PROCESS OF MANUFACTURING GRAIN INTO FORM FOR FOOD. HENRY D. PERKY, Glencoe, Md.; Laban Sparks, administrator of said Henry D. Perky, deceased, assignor, by mesne assignments, to The Shredded Wheat Company, Niagara Falls, N. Y. Filed Jan. 19, 1906. Serial No. 296,870. (Cl. 99—11.)



The process of producing a mass of filamentous food by reducing corn to ground form, cooking the ground corn with a small amount of water, as described, in an air-tight vessel, cooling the resultant until the particles of the mass are set together in solid and fixed relation as a cake within the vessel, forcing the cake of material through a perforated plate to change the relative positions of the particles of the mass and form filaments thereof, keeping these filaments separate and drying the same in loose and independent condition, and finally collecting the separate dried filaments together.

1,019,832. WHEEL. WESLEY PHILLIPS, Cape May, N. J., assignor, by mesne assignments, of one-half to Harry Phillips, Greenwich, Conn. Filed May 29, 1911. Serial No. 630,192. (Cl. 152—46.)



1. In a wheel, the combination with a hub, and an outer annular portion, of a pneumatic tube located between the hub and the outer portion, spiral metal inserts in the tube, and extended longitudinally and curved around within the tube in conformity with the shape of the tube, and devices securing said metal inserts to the hub and the outer portion respectively, substantially as described.

2. In a wheel, the combination with a hub and an outer annular portion, of a pneumatic tube located between the hub and the outer circular portion and secured to both, and spring metal spiral strips forming a part of the tube, and extended longitudinally and curved around within the tube in conformity with the shape of the tube, and connected to the hub and the outer annular portion, substantially as described.

3. In a wheel, the combination with a hub, an outer annular portion, and a pneumatic tube located between the hub and said outer portion, of metal blocks molded in the outer and inner faces of the tube, devices securing said blocks to the hub and outer portion respectively, and spring metal bands connecting the outer and inner blocks respectively, and extended longitudinally and curved around within the tube in conformity with the shape of the tube, substantially as described.

4. In a wheel, the combination with a hub, an outer annular portion, and a pneumatic tube located between the hub and said outer portion, of metal blocks molded in the outer and inner faces of the tube, devices securing said blocks to the hub and outer portion respectively, spring metal bands connecting the outer and inner blocks respectively, said spring bands molded in the tube, and extended longitudinally and curved around within the tube in conformity with the shape of the tube, substantially as described.

5. In a wheel, the combination with a hub, and an outer annular portion, of a pneumatic tube located between the hub and the outer portion, spiral metal inserts in the tube, and extended longitudinally and curved around within the tube in conformity with the shape of the tube, devices securing said metal inserts to the hub and the outer portion respectively, guard rings secured to the said first-mentioned ring and confining the pneumatic tube, said tube having beads at its inner and outer edges, and said hub and said guard rings constructed to form clencher rims to engage said beads, substantially as described.

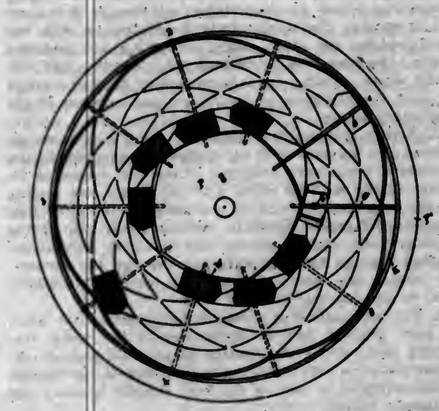
[Claim 6 not printed in the Gazette.]

1,019,833. PASTEBOARD BOX. MAURICE A. PLATT, New York, N. Y. Filed Mar. 18, 1911. Serial No. 615,237. (Cl. 217—69.)



The herein described reinforcing tab for pasteboard boxes, said tab being composed of sheet metal and being provided at one end with a point and at the opposite end with a projecting tongue which is adapted to be folded at right angles thereto and which when folded forms a recess in said end of the tab.

1,019,834. RAILWAY FOR PLEASURE AND SPORT. NORBERT POLLAK, Nordbahnhof, Vienna, Austria-Hungary. Filed Nov. 17, 1911. Serial No. 660,919. (Cl. 104—111.)



1. An amusement device comprising in combination, a central platform, a single trackway extending around the platform outwardly and then inwardly and intersecting its course at a plurality of points, a plurality of cars on said trackway, elements radially disposed with respect to the axis of said platform and slidably connected with said cars, and means for advancing said elements in a circle about the axis of said platform for propelling said cars along said trackway, substantially as described.

2. An amusement device comprising in combination, a central platform, a trackway extending around the platform outwardly and then inwardly in continuously curved lines and intersecting its course at a plurality of points, a plurality of cars mounted on said trackway, and elements movable in a circle of said platform and slidably connected with said cars for advancing the same on said trackway, substantially as described.

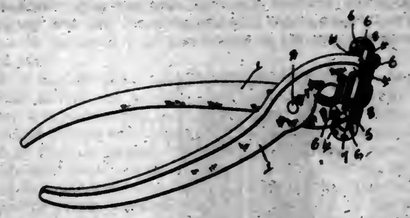
3. An amusement device comprising in combination, a central loading platform, a circumferential unloading platform surrounding said loading platform and spaced apart therefrom, a single trackway between said platforms having a starting point at the loading platform and a delivering point at the unloading platform and extending a plurality of laps about said loading platform and intersecting its course at a plurality of points, cars on said trackway and elements slidably connected with said cars and movable in a fixed circular path about said central platform, substantially as described.

4. An amusement device comprising in combination, a plurality of car propelling bars movable in a fixed circular path, cars slidably connected with said bars, and car guiding means for shifting said cars radially outwardly and inwardly with respect to said bars during propulsion of the cars thereby, substantially as described.

5. An amusement device comprising in combination, a plurality of car propelling bars movable in a fixed path, cars slidably connected with said bars, and car guiding means for shifting said cars with respect to said bars during propulsion of the cars thereby, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,019,835. TOOL FOR REMOVING INSULATION FROM WIRES. HENRY PEACE, Ottawa, Ill. Filed Aug. 26, 1911. Serial No. 646,257. (Cl. 81—9.5.)



1. In a tool for removing insulation from wires, a pair of pivotally connected jaws, each of said jaws comprising two parallel side bars having beveled inner edges; a central knife edged bar disposed parallel with said side bars and having its cutting edge disposed below the corresponding edges of said side bars; and end plates connecting said bars and having recesses provided centrally in the inner edges thereof, substantially as described.

2. In a tool for removing insulation from wires, a pair of pivotally connected jaws, each of said jaws comprising two parallel side bars having beveled inner edges; a central longitudinal knife edged bar disposed parallel with said side bars and having its cutting edge disposed below the corresponding edges of said side bars; and end plates connecting said bars, said end plates having knife edged inner edges having recesses provided centrally therein, said bars and plates being formed integral, substantially as described.

3. In a tool for removing insulation from wires, a pair of pivotally connected jaws, each of said jaws comprising two parallel side bars the inner sides of said bars at the inner edges thereof being beveled, a central longitudinal knife edged bar disposed parallel with said side bars and having its cutting edge disposed below the corresponding edges of said side bars; and substantially semi-circular end plates connecting corresponding ends of said bars, the inner edges of said end plates being sharpened, and provided with semi-circular recesses, the cutting edges of said medial bar being in registration with the bottoms of said recesses, there being interstices between said bars, substantially as described.

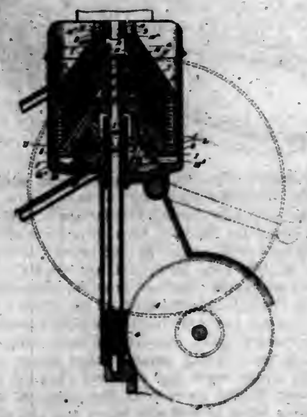
4. In a tool for removing insulation from wires, a pair of pivotally connected levers; registering jaws carried at corresponding ends of said levers, each of said jaws comprising two parallel side bars the inner sides of said bars at the inner edges thereof being beveled; a central knife edged bar disposed parallel with said side bars and having its corresponding edge disposed below the cutting edges of said side bars; and substantially semi-circular end plates connecting corresponding ends of said bars, the inner edges of said end plates being sharpened and provided centrally with semi-circular recesses, the cutting edges of said medial bar being in registration with the bottoms of said recesses, substantially as described.

1,019,836. CENTRIFUGAL SEPARATING-MACHINE. ALBAN H. REID, Philadelphia, Pa. Filed Oct. 20, 1909. Serial No. 523,618. (Cl. 127—20.)

1. In combination with a separating bowl provided with laterally discharging feed openings for the whole milk, a series of superposed liner plates surrounding said feed openings, with the spaces between the plates in position to receive the milk directly from the feed openings, said liner plates being provided with distributing holes arranged in substantial vertical alinement, and milk directing means situated between the liner plates inward of the distributing holes and between the same and the feed openings, and acting to prevent the milk issuing from the feed openings from flowing circumferentially between the plates before it reaches the distributing holes.

2. In combination with a rotary separating bowl provided with feed openings for the whole milk, a series of

superposed liner plates arranged therein with the spaces between them communicating with the feed openings, the said plates being formed with distributing holes, and vertical walls between the feed openings and distributing holes, forming closed passages to direct the milk from the openings outwardly to the holes.



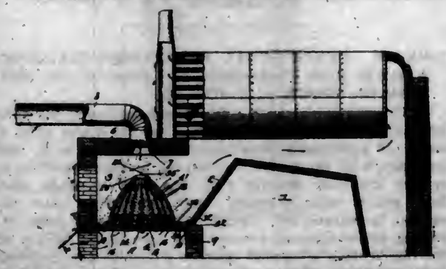
3. In combination with a bowl, a vertical neck therein provided with feeding openings, a series of superposed liner plates surrounding the neck, with the spaces between the plates communicating with the feeding openings, said plates being provided with vertically alined distributing openings, and vertical walls between the liner plates at the sides of the feeding openings and distributing holes.

4. A rotary separating bowl provided with a conical bottom having an opening therethrough for the discharge of the blue milk, said bowl having also a discharge for the cream, in combination with a series of superposed liner plates situated in the bowl and formed and disposed to have vertical passages for the cream and milk respectively at the inner and outer sides of the bowl, means for feeding the whole milk between the liner plates, and a plate fixed beneath the lowermost liner plate and spaced from the bowl bottom, said latter plate being sealed to the bowl at its inner edge.

5. In a centrifugal cream separator, a rotary separating bowl provided with a central depending annular flange forming an external central chamber at the base and having a milk discharge opening extending through the bottom of the bowl and through the depending flange, and communicating with said central chamber, in combination with means for feeding the whole milk to the bowl.

[Claims 6 to 8 not printed in the Gazette.]

1,019,837. GRATE. RALPH W. REVELL, Raymond, Wash. Filed Apr. 15, 1909. Serial No. 490,197. (Cl. 110—74.)



1. A conoidal grate body comprising a plurality of separate tapered sections having openings therethrough substantially throughout their area, means for securing the several sections one to the other, a perforated cap member for the small end of the grate body, means for supporting the wide end of the grate body, and fastening means extending from the cap member to the supporting means for the large end of the grate body for clamping the tapered sections between the cap member and the supporting means for the other end of the grate body.

2. A conoidal grate body consisting of a plurality of separate tapered sections each provided with a plurality of transverse perforations, means for connecting the sections together edge to edge, a perforated cap member for the small end of the conoidal grate body, a surrounding grate having an open portion provided with a marginal support for the large end of the conoidal grate body, supporting beams in underriding relation to the grate and traversing the intermediate space therein with one beam crossing the other, and a connecting and clamping member between the perforated cap member and the beams where crossing, the said connecting member traversing both the cap member and the crossed portion of the supporting beams.

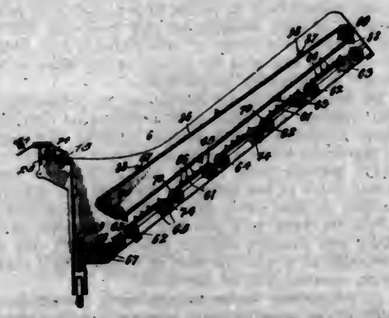
3. A grate comprising supporting beams, a ring resting thereon and provided with an upstanding marginal flange, a conoidal grate body composed of sections connected together at the meeting edges with the larger end resting on the ring and confined by the marginal flange of said ring, a perforated cap plate for the small end of the conoidal body, and a securing and clamping member extending through the cap plate and through the supporting beams, said connecting member being substantially axial to the conoidal body.

4. The combination of a conoidal perforated grate body, an open support for the lower end of the same, stationary perforated plates resting on the said support adjacent the outer side of the body, and rockable perforated plates arranged to rest on the said support between the stationary plates.

5. In a grate, the combination of a conoidal perforated grate body having an open lower end, stationary perforated plates arranged adjacent to and in the horizontal plane of the said lower end outside the said body, movable perforated plates arranged between the stationary plates and normally in the same horizontal plane therewith, and means for actuating said movable plates.

[Claims 6 to 19 not printed in the Gazette.]

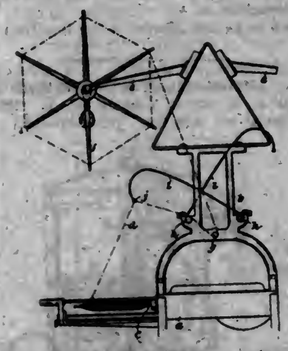
1,019,838. CORN-HUSKING MACHINE. JAMES RICKEL, St. Joseph, Mo. Filed Oct. 26, 1910. Serial No. 589,163. (Cl. 130—6.)



1. A husking machine comprising a longitudinally extended inclined conveyer trough, fixed spaced bottom plates extending transversely thereof, a series of pairs of husking rollers in the spaces between the bottom plates and disposed parallel with said bottom plates, means for moving ears of corn longitudinally and upwardly through the trough and over the said bottom plates and said pairs of husking rollers, and comprising an endless apron and means to actuate the same the said bottom plates and the said endless apron having spurs on their opposing sides and the lower lead of the endless apron being arranged above the husking rollers and the plates and to travel across the same toward the upper end of the trough and cause the rotation of the ears of corn on the bottom plates between the pairs of husking rollers and also cause the husked ears to be discharged from the upper end of the trough.

2. A husking machine comprising a hopper, husking rollers in the bottom of the hopper, a conveyer trough extending upwardly and downwardly from the hopper, fixed spaced bottom plates in the conveyer trough, extending across the same, a series of pairs of husking rollers in the space between the bottom plates and disposed parallel therewith, an endless apron extending longitudinally of the trough and means to support and to drive the endless apron so that the lower lead thereof travels upwardly through the trough and over and across the bottom plates and the pairs of husking rollers, said endless apron and said bottom plates having spurs on their opposing sides to cause the rotation of ears of corn on the bottom plates between the pairs of husking rollers and also to cause the husked ears to be discharged from the upper end of the trough.

1,019,839. QUILLING-MACHINE. JAMES RIDDY, Paterson, N. J. Filed July 8, 1909. Serial No. 506,502. (Cl. 242—45.)



The combination, with the frame, a rotary quill on which the thread is adapted to be wound and a rotary swift from which the thread is adapted to be unwound, the swift and quill being arranged one at a higher elevation than the other, of a substantially rigid thread guide and an elastic thread-guide, the latter being stationarily secured to the frame and the former and the thread-engaged portion of the elastic thread-guide being disposed at elevations situated between the elevations occupied by the swift and quill, and the rigid thread-guide being disposed at an elevation nearer the elevation occupied by the quill than the elevation occupied by the swift, substantially as described.

1,019,840. HAT-PIN GUARD. HARRY ROBERTS, Atlantic City, N. J. Filed Mar. 15, 1911. Serial No. 614,667. (Cl. 24—155.)

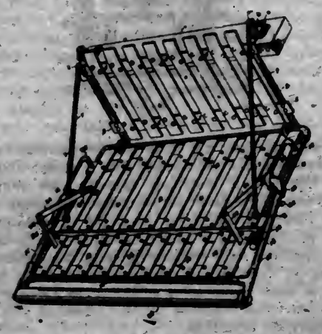


1. A hat pin guard comprising a frusto-conically shaped casing, a knob secured to the larger end of the casing, a plurality of frusto-conically shaped jaws slidably mounted in the casing, a presser knob mounted to extend into the smaller end of the said casing and adapted to engage the said jaws, a spring actuated casing mounted in the said knob and extending outwardly therefrom to engage the said jaws at the larger ends thereof to normally hold the said jaws in engaging position and a penetrable substance disposed in the said spring actuated casing and adapted to receive the pointed end of the hat pin when the same is extended into the casing to be gripped by the said jaws.

2. A hat pin guard comprising a frusto-conically shaped casing having the smaller end thereof bent inwardly to form a circular stop lug, a plurality of jaws slidably mounted in the said casing, a knob secured to the larger end of the said casing, a spring actuated casing mounted in the said knob and extending outwardly therefrom to engage the said jaws and normally position the jaws to engage the pin, a penetrable substance disposed in the said spring actuated casing and adapted to receive the pointed end of a hat pin and a presser knob mounted to extend into the smaller end of the said casing and adapted to engage the said jaws to disengage the same from the pin, the said stop lug formed on the casing being adapted to limit the outward movement of the said presser knob.

3. A hat pin guard comprising a tapered casing for receiving a hat pin and having the smaller end thereof bent inwardly to form a stop lug, a plurality of jaws slidably mounted in the said casing, a presser knob mounted to extend through the smaller end of the said casing and engaging the said jaws, means for pressing the jaws inwardly against the presser knob and into engagement with the pin, the said stop lug being adapted to limit the outward movement of the presser knob and a penetrable substance disposed in the said casing and adapted to receive the pointed end of the said pin.

1,019,841. FENDER FOR CARS. FRANCIS M. ROUSH, Canton, Ohio, assignor of one-half to Ruben C. Roush, Canton, Ohio. Filed July 12, 1911. Serial No. 638,167. (Cl. 105—127.)



1. In a car fender, a frame secured to the body of a car, carrying platforms, one of said platforms relatively fixed with reference to the frame and the other adapted to rock, a movable frame carried by the frame adapted to carry the relatively fixed platform, said movable frame provided with a roller, trip bars operatively connected to the movable frame, posts secured to the rocking platform and to the trip bars, and means for suspending the fender in substantially horizontal position, substantially as and for the purpose specified.

2. In a car fender, a frame secured to the body of a car, carrying platforms, one of said platforms relatively fixed with reference to the frame and the other adapted to rock, a movable frame carried by the frame adapted to carry the relatively fixed platform, said movable frame provided with a roller, trip bars operatively connected to the movable frame, and provided with elongated slots, posts secured to the rocking platform and to the trip bars, and means for suspending the fender in substantially horizontal position, substantially as and for the purpose specified.

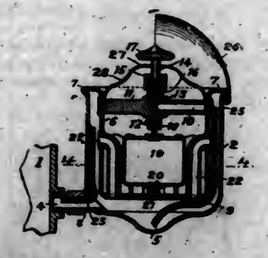
3. In a car fender, the combination of a relatively fixed frame, platforms carried by said frame, one of said platforms fixed and the other adapted to be rocked, a movable frame mounted upon the relatively fixed frame, said movable frame provided with a roller and means for rocking one of the platforms by the backward movement of the movable frame, substantially as and for the purpose specified.

4. In a car fender, the combination of a relatively fixed frame, platforms carried by said frame, one of said platforms fixed and the other adapted to be rocked, a movable frame mounted upon the relatively fixed frame, said movable frame provided with a roller and means for rocking one of the platforms by the backward movement of the movable frame, and means for limiting the downward movement of the movable frame, substantially as and for the purpose specified.

5. In a car fender of the class described, the combination of frames, one of said frames fixed and the other movable, the movable frame mounted upon rock arms, platforms carried by the fixed frame, one of said platforms pivotally mounted, pins secured to the fixed frame and adapted to support the movable frame in extended position, guide bars secured to the fixed frame, and means for rocking the pivoted platform, substantially as and for the purpose specified.

[Claim 6 not printed in the Gazette.]

1,019,842. AIR-MOISTENING DEVICE FOR HEATING APPARATUS. WILLIAM A. RUSSELL, Waterbury, Conn. Filed Feb. 24, 1906. Serial No. 302,723. (Cl. 237—19.)



1. In an automatic air moistening apparatus for steam heating systems, the combination of a closed steam condensing chamber, a receiving chamber, an evaporating chamber, and connections between said chambers whereby water of condensation is fed from the condensing chamber into the receiving chamber and thence into the evaporating chamber, said evaporating and condensing chambers being so arranged relatively to each other that the exterior of said evaporating chamber is exposed to and the contents thereof heated by the steam of the system, substantially as described.

2. In an automatic air moistening apparatus for steam heating systems, the combination of a closed steam condensing chamber, a receiving chamber, an evaporating chamber, and connections between said chambers whereby water of condensation is fed from the condensing chamber into the receiving chamber and thence into the evaporating chamber, said evaporating and condensing chambers being so arranged relatively to each other that the exterior of said evaporating chamber is exposed to and the contents thereof heated by the steam in the condensing chamber, substantially as described.

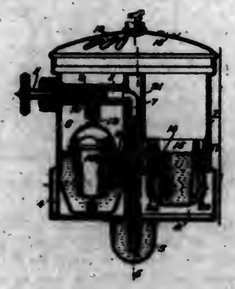
3. In an automatic air moistening apparatus for steam heating systems, the combination of a closed steam condensing chamber, a receiving chamber, an evaporating chamber, and connections between said chambers whereby water of condensation is fed from the condensing chamber into the receiving chamber and thence into the evaporating chamber, said evaporating and condensing chambers being so arranged relatively to each other that the exterior of said evaporating chamber is exposed to and the contents thereof heated by the steam of the system, and means for automatically regulating the feed from the receiving chamber to the evaporating chamber, substantially as described.

4. In an automatic air moistening apparatus for steam heating systems, the combination of a closed steam condensing chamber, a receiving chamber, an evaporating chamber, connections between said chambers whereby water of condensation is fed from the condensing chamber into the receiving chamber and thence into the evaporating chamber, said evaporating and condensing chambers being so arranged relatively to each other that the exterior of said evaporating chamber is exposed to and the contents thereof heated by the steam of the system, and means for automatically regulating the feed of the water of condensation, substantially as described.

5. In an automatic air moistening apparatus for steam heating systems, the combination of a closed steam condensing chamber, a receiving chamber, an evaporating chamber, connections between said chambers whereby water of condensation is fed from the condensing chamber into the receiving chamber and thence into the evaporating chamber, said evaporating and condensing chambers being so arranged relatively to each other that the exterior of said evaporating chamber is exposed to and the contents thereof heated by the steam of the system, and means for automatically regulating the feed from the condensing chamber to the receiving chamber, substantially as described.

[Claims 6 to 24 not printed in the Gazette.]

1,019,843. AUTOMATIC AIR-MOISTENING DEVICE. WILLIAM A. RUSSELL, Yonkers, N. Y. Filed Apr. 2. 1908. Serial No. 424,779. (Cl. 237—19.)



1. An air moistening attachment for steam heating apparatus comprising an evaporating chamber, means for connecting it with the heating apparatus so that the water of condensation therefrom will be fed to said evaporating chamber, tubular steam conducting means passing through said evaporating chamber and connected at its opposite ends with the condensation inlet whereby the contents of the evaporating chamber are heated by the steam without escape of the latter into said chamber, and means for automatically regulating the feed of the water of condensation to the evaporating chamber, substantially as described.

2. An air moistening attachment for steam heating apparatus comprising an evaporating chamber, means for connecting it with the heating apparatus so that the water of condensation therefrom will be fed to said evaporating chamber, tubular steam conducting means passing through said evaporating chamber and connected at its opposite ends with the condensation inlet whereby the contents of the evaporating chamber are heated by the steam without escape of the latter into said chamber, and means controlled by the water in the evaporating chamber for automatically regulating the feed thereto of the water of condensation, subetantially as described.

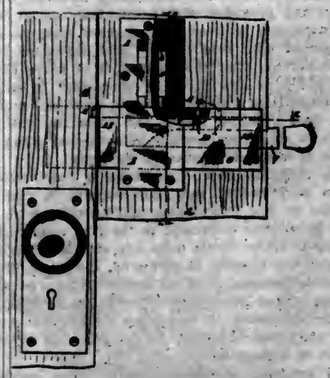
3. An air moistening attachment for steam heating apparatus comprising an evaporating chamber, means for connecting it with the heating apparatus so that the water of condensation therefrom will be fed to said evaporating chamber, tubular steam conducting means passing through said evaporating chamber and connected at its opposite ends with the condensation inlet whereby the contents of the evaporating chamber are heated by the steam without escape of the latter into said chamber, and a manually operated valve and also automatically controlled means for regulating the feed of the water of condensation to the evaporating chamber, substantially as described.

4. An air-moistening attachment for steam heating apparatus comprising an evaporating chamber and means for connecting it with the heating apparatus so that the contents of said chamber will be heated by the steam from the apparatus and said chamber be fed with the water of condensation therefrom, said chamber being provided with means for causing the water to circulate between its upper and lower ends.

5. An air-moistening attachment for steam heating apparatus comprising an evaporating chamber, a condenser chamber adapted for connection with the heating apparatus and inclosing said evaporating chamber so that the contents of the latter will be heated by the steam from the apparatus, connections between the two chambers whereby the evaporating chamber will be fed with water of condensation from the steam, and means controlled by the water in said chamber for automatically regulating the feed of the water of condensation.

[Claims 6 to 16 not printed in the Gazette.]

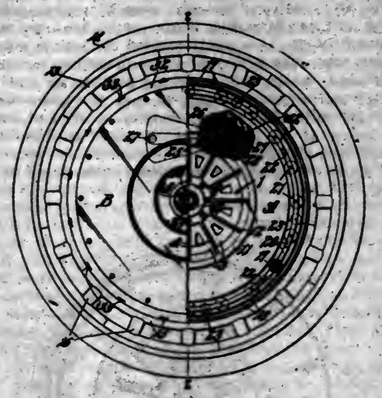
1,019,844. DOOR-LOCK. JOHN M. SAULEIKO, St. Charles, Ill. Filed Sept. 12, 1910. Serial No. 581,493. (Cl. 70—47.)



In a door lock, a casing provided with a transverse opening, a bolt bar slidable through said opening and provided with a longitudinal recess, a spring pressed tumbler in said casing adjacent said opening, a perforation in the bolt bar extending into said recess and adapted to receive the end of said tumbler, said tumbler being provided with a shoulder to engage said bolt bar and limit the inward movement of the same, a hand piece adapted to be inserted in said recess, and a pin on said hand piece adapted to enter said perforation to displace said tumbler and to engage the bolt bar whereby said bar may be moved by said hand piece, substantially as described.

1,019,845. VEHICLE-WHEEL. NICHOLAS SCHENK, St. Louis, Mo. Filed July 18, 1910. Serial No. 572,498. (Cl. 152—28.)

1. A wheel provided with relatively movable hub and rim sections arranged in the same vertical plane, a link pivotally connected to said sections at points approximately the same distance from the axis of the wheel for transmitting rotary movement from one section to the other, a cushion arranged between said sections, and a plurality of spaced bearing devices arranged between said cushion and said rim section so as to prevent said rim section from bearing throughout its entire length on said cushion.



2. A wheel provided with hub and rim sections that have vertically disposed telescoped portions which retain said sections in vertical alinement with each other, a link pivotally connected to said sections at points approximately the same distance from the axis of the wheel for transmitting rotary movement from one section to the other, a cushion interposed between said sections, and a plurality of spaced bearing devices arranged between said cushion and one of said sections and connected together in such a manner that they can travel or shift relatively to said cushion.

3. A wheel provided with a hub section and a rim section arranged in the same vertical plane, a member on one of said sections which telescopes between members on the other section and thus holds said sections in vertical alinement, one of said members being provided in its side face with a pocket, and a link arranged in said pocket between said telescoped members and pivotally connected to both of said sections for transmitting rotary movement from one section to the other.

4. A wheel comprising a hub section and a rim section that have telescoping portions, a cushion arranged between said sections, spaced bearing devices arranged between said cushion and rim section and connected together in such a manner that they can shift or travel around the cushion, a link arranged in a pocket formed in a telescoped part of one of said sections and provided with laterally projecting devices that extend into openings in the telescoped parts of said sections, and a yielding buffer coöperating with one of said laterally projecting devices for absorbing sudden shocks or strains.

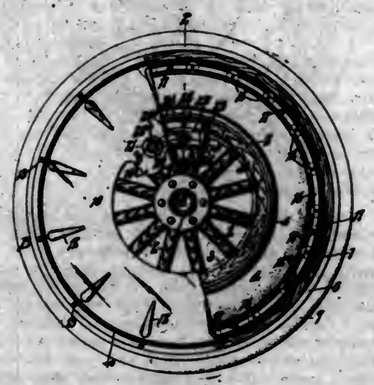
5. A wheel comprising a hub section provided at one side with a pocket having vertical side walls, a rim section having a ring-shaped member provided with a felly supporting means, a plate connected to one edge of said ring-shaped member that is slidingly mounted in the pocket of said hub section, a cushion mounted on the hub section, spaced bearing devices interposed between said cushion and the ring-shaped member of the rim section, and a removable cap detachably connected to the other edge of said ring-shaped member so as to completely hide the cushion and hub section from view and form the outer side wall of the wheel, the cushion being so arranged that it can be removed after said cap has been removed.

[Claims 6 to 8 not printed in the Gazette.]

1,019,846. RESILIENT WHEEL. NICHOLAS SCHENK, St. Louis, Mo. Filed Aug. 31, 1910. Serial No. 579,900. (Cl. 152—28.)

1. A resilient wheel having a hub section that consists of a hub, spokes and a felly connected together, a cushion mounted on said felly, a rim section having a felly that

surrounds said cushion, bearing devices interposed between said cushion and the felly of the rim section and connected together in such a manner that they can shift or travel relatively to said cushion, ring-shaped side plates on said rim section which project inwardly toward said hub section, a spacing member on said hub section arranged between said side plates in sliding engagement with same, means for preventing dirt, water and other foreign matter from working through the joints between said side plates and spacing member, a box connected to the spokes of the hub section, a buffer arranged inside of said box, and a link pivotally connected to one of the side plates of the rim section and coöperating with said buffer.



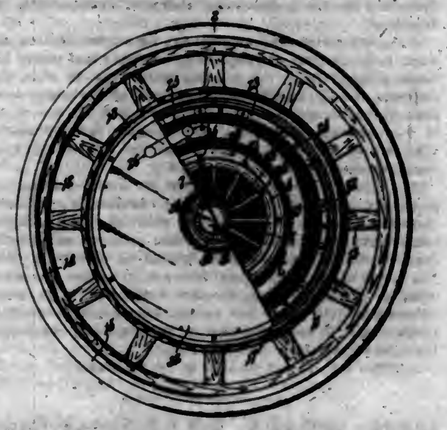
2. A resilient wheel having a hub section that consists of a hub, spokes and a felly connected together, a cushion mounted on said felly, a rim section consisting of a felly that surrounds said cushion and side plates which project inwardly toward the hub section, a member on said hub section arranged between said side plates so as to hold said plates spaced away from each other, a hollow member connected to the felly and to the spokes of said hub section, a buffer arranged inside of said hollow member, and a link provided at one end with a device that coöperates with said buffer and at its opposite end with a device that projects into an opening in one of the side plates of the rim section.

3. A resilient wheel comprising a hub section provided with a substantially flat ring, a rim section having inwardly projecting side plates whose inner faces are arranged in sliding engagement with the side edges of said ring, a cushion arranged between said hub section and rim section in the chamber which said side plates and ring form, packing rings arranged inside of the flat ring on said hub section and bearing against the inner faces of the side plates of the rim section, and yielding devices connected to the hub section for forcing said packing rings tightly against said flat ring and side plates.

1,019,847. RESILIENT WHEEL. NICHOLAS SCHENK, St. Louis, Mo. Filed Sept. 12, 1910. Serial No. 581,629. (Cl. 152—28.)

1. A resilient wheel comprising a hub section and a rim section that can move relatively to each other in a vertical plane, a link pivotally connected to said sections for transmitting rotary movement from one of said sections to the other, a rotatable rim arranged between said sections that is adapted to turn or move circumferentially relatively thereto, a cushion carried by said rim, friction-reducing devices that bear directly upon said cushion and rim section and spaced away from each other, and a freely movable cage in which said friction-reducing devices are mounted.

2. A resilient wheel comprising a hub section and a rim section that can move relatively to each other in a vertical plane, a rim rotatably mounted on said hub section and provided with a cushion, spaced bearing devices arranged in engagement with said cushion and rim section and connected together in such a manner that they can shift or move relatively to the cushion, and a link pivotally connected to one section and yieldingly connected to the other section for transmitting rotary movement from one section to the other.



3. A resilient wheel comprising a hub section and a rim section that can move relatively to each other in a vertical plane, a rotatable rim loosely mounted on said hub section and provided with a cushion, spaced bearing devices arranged between said cushion and rim section in engagement with said cushion and connected together in such a manner that they can shift or move relatively to the cushion, a link pivotally connected to said sections for transmitting rotary movement from one section to the other, and yielding means for absorbing the shocks or strains to which one section is subjected when the other section is stopped or started suddenly.

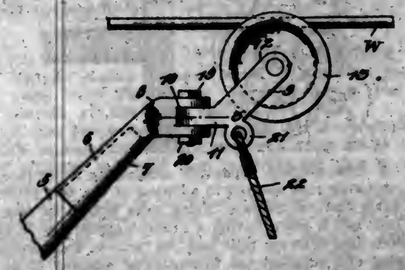
4. A resilient wheel comprising a hub section, a rim section surrounding said hub section, a rim rotatably mounted on said hub section and provided with a cushion which is securely connected to the rim, coöperating means on said sections which form one side wall of a chamber in which the cushion is arranged, spaced bearing devices interposed between said cushion and the rim section, removable means for retaining said rim in operative position, and a removable cap plate on the rim section that forms the other side wall of the chamber in which said cushion is arranged.

5. A resilient wheel comprising a hub section, a rim section surrounding said hub section, telescoping parts on said sections which hold them in vertical alinement with each other and also form one side wall of a chamber, a plate detachably connected to the rim section and forming the other side wall of said chamber, said plate being adapted to be moved whenever it is desired to gain access to said chamber, a rotatable rim arranged in said chamber and adapted to turn or move circumferentially relatively to said sections, a cushion connected to said rim, and spaced bearing devices interposed between said cushion and the rim section and bearing directly upon the cushion.

[Claims 6 and 7 not printed in the Gazette.]

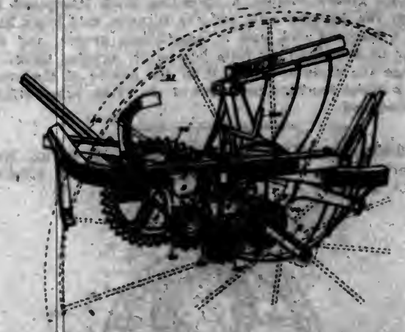
1,019,848. TROLLEY. PETER JACOB ADOLPH SCHNOOR, Holstein, Iowa. Filed Sept. 18, 1911. Serial No. 649,870. (Cl. 191—39.)

The combination with a trolley pole, of a supporting arm rigidly fixed to the upper end of said pole and including a horizontally disposed longitudinally bifurcated body portion, a harp having upwardly extending angularly disposed parallel wheel carrying arms, said harp also having a horizontally disposed body portion to be received in the bifurcated body of said supporting member, the end of the body of said harp and the inner wall of the bifurcation in said body member being respectively convex and concentrically disposed, a pivot bolt connecting the parallel arms formed by the bifurcation in the body member and extending through the horizontal portion of the harp, the body of said supporting member being further provided with a transversely extending arcuate recess having its end walls radially



disposed with relation to said pivot bolt, said recess opening into the space between the arms of said supporting member, the body of said harp having a stop lug integrally formed thereon and projecting into the recess of the supporting member, the side faces of said lug being radially disposed with relation to the pivot of the harp and adapted to coact with the end walls of said recess to limit the pivotal movement of the harp upon said supporting member.

1,019,849. FRAME-ADJUSTING MECHANISM FOR SIDE-DELIVERY RAKES. JAMES A. SHARP, Springfield, Ohio, assignor to International Harvester Company, a Corporation of New Jersey. Filed May 27, 1911. Serial No. 629,902. (Cl. 56—115.)



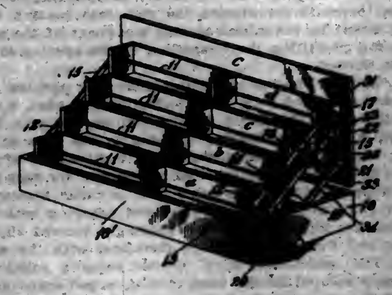
1. A side delivery hay rake including, in combination, a main frame having raking mechanism mounted thereon, means for transmitting motion to said raking mechanism, said means including a rotatable axle mounted in bearings carried by said frame, one of said bearings including a rearwardly extending swinging yoke having a stub axle at the rear end thereof, a carrying wheel journaled upon said stub axle and adapted to transmit motion to said rotatable axle, and means operative to swing said yoke about the axis thereof in a manner to raise or lower said main frame relative to the axis of said carrying wheel.

2. A side delivery hay rake including, in combination, a main frame having raking mechanism mounted thereon, means for transmitting motion to said raking mechanism, said means including a rotatable axle mounted in bearings carried by said main frame, one of said bearings including a rearwardly extending swinging yoke having a stub axle secured to the rear end thereof, a carrying wheel journaled upon said stub axle, and means whereby motion is transmitted from said carrying wheel to said rotatable axle, said means including a pinion loosely mounted upon said stub axle and provided with clutch mechanism adapted to engage with said carrying wheel, a pinion secured to said rotatable axle, an intermediate pinion mounted upon a stud carried by said yoke member and engaging with said first named pinions, and means operative to swing said yoke about the axis thereof in a manner to raise or lower said main frame relative to the axis of said carrying wheel.

3. A side delivery hay rake including, in combination, a main frame having raking mechanism mounted thereon, means for transmitting motion to said raking mechanism, said means including a rotatable axle mounted in bearings carried by said main frame, a rearwardly extending yoke adapted to rock about the axis of said rotatable axle, a stub axle secured to the rear end of said yoke, a carrying wheel journaled upon said stub axle and adapted to transmit motion to said rotatable axle, means adapted to swing said yoke about the axis thereof, said means including a vertically arranged threaded rod engaging with a nut carried by a fixed part of the machine, the lower end of said rod contacting with said yoke in a manner to rock it in a direction to raise said main frame or permit it to rock in an opposite direction to lower said main frame relative to the axis of said carrying wheel, depending upon the direction of rotation of said rod, and means for turning said rod.

4. A side delivery hay rake including, in combination, a main frame having raking mechanism mounted thereon, a bracket secured to said main frame, a rocking yoke having a sleeve portion at one end thereof, said sleeve being loosely received by an opening in said bracket, a motion transmitting shaft journaled in said sleeve, a stub axle secured to the opposite end of said yoke, a carrying wheel journaled upon said stub axle, means for rocking said yoke in a manner to adjust said main frame to a higher or lower plane relative to the axis of said carrying wheel, said means including a nut carried by said bracket and a threaded rod engaging with said nut, having a crank at its upper end and its lower end contacting with said yoke.

1,019,850. SHIPPING AND DISPLAY BOX. GEORGE W. SHUTES, Detroit, Mich. Filed June 17, 1911. Serial No. 633,754. (Cl. 206—45.)



1. The combination with a box, of a series of trays, means for raising said trays proportionately, an abutment on the box, a lip on the foremost tray adapted to engage said abutment to limit its rising movement, resilient means for locking said tray against descent, and independent means for holding the other trays in raised position.

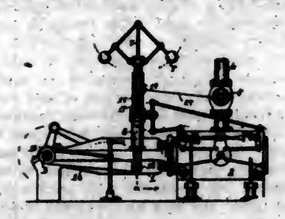
2. The combination with a box, of a series of trays, means for raising said trays proportionately, an abutment on the box, a lip on the foremost tray adapted to engage said abutment to limit its rising movement, a spring-latch on said tray and adapted to rest upon said abutment, and means for holding the other trays in raised position.

3. The combination with a box, of a series of trays, means for raising said trays proportionately, an abutment on the box, a lip on the foremost tray adapted to engage said abutment to limit its rising movement, a resilient latch on said tray adapted to yield during the upward movement of said tray and to spring outwardly over the abutment, and means for holding the other trays in raised position.

4. The combination with a box, of a series of trays, means for raising said trays proportionately, a stationary abutment on the box, a lip on the front tray adapted to engage the underside of said abutment, a latch pivoted on one of said trays and adapted to engage and disengage the upper side of said abutment, and means for automatically returning said latch to normal position.

5. The combination with a box, of a series of trays, means for raising said trays proportionately, a stationary abutment on the box, a lip on the front tray adapted to engage the underside of said abutment, a guide member for the front tray, a resilient latch pivoted on said tray adapted to engage and disengage the upper side of said abutment, a nose on said latch adapted to be in the path of said guide member in its disengaged position for automatically returning said latch to normal during the descending movement of said tray.

1,019,851. AUTOMATIC STOP AND OVERLOAD-CONTROLLER. LEONARD SINGLE, Hamilton, Ohio. Filed Mar. 6, 1911. Serial No. 612,484. (Cl. 121—112.)



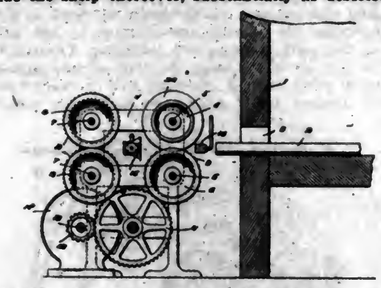
1. The combination of a movable machine part, a stop pivotally mounted at a fixed point, a spring for actuating the stop to intercept said part, means for limiting the opposite movement of the stop, a valve stem, a collar adjustably secured thereon, a lever fulcrumed at a fixed point and engaging with the collar, and yielding connections therewith for moving the stop into contact with said means by the initial opening movement of the stem and for permitting the completion of the opening movement thereof.

2. The combination of a movable machine part, an arm pivoted at a fixed point for intercepting said part, a supporting spring therefor, a positive stop pivoted at a fixed point, a spring for moving the stop in the path of the arm, means for limiting the opposite movement of the stop, automatic means actuated by the arm for removing the supporting spring, a valve stem, a collar thereon, a lever fulcrumed at a fixed point and engaging with the collar, an adjustable member yieldingly secured to the lever and tension connections therefrom with the stop.

3. The combination of a throttle valve, a collar adjustably secured on the stem thereof, a bell crank lever pivotally secured in fixed relation to the valve stem, with one arm in the path of the collar, a spring actuated member slidingly engaging with the other arm of the lever, a spring actuated stop pivotally secured in fixed relation to the lever, and actuating connections therewith from said member.

1,019,852. TUBE-WELDING APPARATUS. JOSEPH SNYDER and ABEL THOMAS, Conshohocken, Pa. Filed May 29, 1911. Serial No. 630,109. (Cl. 78—87.)

1. A tube welding apparatus comprising a furnace, a bell, drawing rolls located in advance of the bell between the same and the furnace, sizing rolls located in rear of the bell, and a block having a grooved upper face supported between said drawing rolls and the furnace, and having a rounded end adjacent the furnace and adapted to guide the skelp thereover, substantially as described.

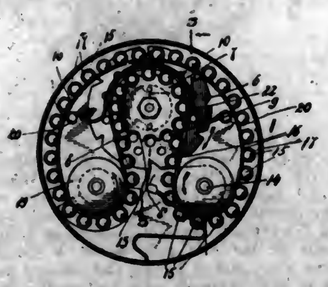


2. A tube welding apparatus comprising a furnace, a bell, drawing rolls located in advance of the bell between the same and the furnace, sizing rolls located in rear of the bell, and a block having a grooved upper face located between said drawing rolls and the furnace, and having a rounded end adjacent the furnace, and adapted to guide the skelp thereover, intermeshing gears secured to turn with the drawing rolls, intermeshing gears secured to turn with the sizing rolls, and a single driving gear meshing with one of the sizing roll gears and one of the drawing roll gears, substantially as described.

3. A tube welding apparatus comprising a bell, a furnace, drawing rolls interposed between the bell and the furnace, said drawing rolls having their edges shaped to grip the skelp and a spreading block interposed between the drawing rolls and the furnace, without touching the edges of the skelp, said block having a tapering end, and a longitudinal groove therein, substantially as described.

4. A tube welding apparatus comprising a bell, a furnace, and drawing rolls interposed between the bell and the furnace, one of said drawing rolls having a semicircular groove therein, a spreading block interposed between the drawing rolls and the furnace, said block having a tapering end, and a longitudinal groove, and the other of said drawing rolls having an annular flange to engage the skelp and bind it in the groove of the other roll without touching the edges of the skelp, substantially as described.

1,019,853. VIEWING DEVICE. KARL M. STAHL, New York, N. Y. Filed May 11, 1911. Serial No. 626,636. (Cl. 88—39.)



1. In a viewing device of the kind specified, the combination with a notched drum, of a disk connected thereto and having a circular series of perforations, manually operated means adapted to alternately engage said perforations so as to feed said disk and drum, lenses and an endless flexible band carrying said lenses and coöperating with said drum.

2. In a viewing device of the kind described, the combination with a notched drum, of a disk connected thereto and having a circular series of perforations, a spring actuated pin adapted to alternately engage said perforations so as to feed said disk and drum, lenses and an endless flexible band carrying said lenses and coöperating with said drum.

3. A viewing device of the kind specified, comprising a casing, a notched rotary drum therein, a disk having a circular series of perforations connected to said drum, a spring actuated crank pin pivoted in the casing and adapted to engage the perforations of said disk to feed the latter, lenses, and an endless lens carrier coöperating with said notched drum.

1,019,854. PROCESS OF UNHAIRING HIDES AND SKINS. LOUIS STERN, Newark, N. J. Filed Feb. 18, 1904, Serial No. 194,255. Renewed Apr. 1, 1908. Serial No. 424,536. (Cl. 149—2.)

1. The process of unhairing hides and skins which consists in rendering the hair extremely frangible by means of artificial cold, and then removing the hair by slight agitation.

2. The process of unhairing hides and skins which consists of applying artificial cold to the roots of the hair whereby the hair is made extremely frangible, and then breaking the hair away from the hide or skin.

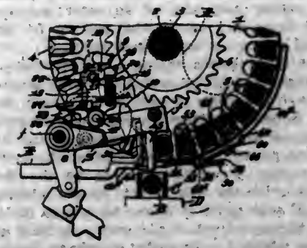
3. The process of unhairing hides and skins which consists in reducing the temperature of the hair upon the hide or skin by the application thereto of liquid air, and then removing such hair by means of agitation.

4. The process of unhairing hides and skins which consists in the application of liquefied gas to the hair at its roots, and thereafter breaking such hair away from the hide.

5. The process of removing any surface covering from hides or skins, which consists of reducing the temperature of such surface covering by means of the application of artificial cold, whereby such surface covering is rendered extremely frangible, and thereafter removing such surface covering from the hide or skin by means of agitation.

[Claim 6 not printed in the Gazette.]

1,019,855. HOPPER MECHANISM FOR AUTOMATIC LOOMS. EDWARD S. STIMPSON, Hopedale, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Apr. 5, 1911. Serial No. 619,063. (Cl. 139—85.)



1. A rotatable hopper having an attached ratchet and adapted to hold a circularly-arranged series of filling-carriers, a transferrer having a lateral hub, a pawl-carrier having an attached pivot stud mounted to rock in the hub, a spring coiled about the stud within said hub and connected at its ends with the stud and hub, respectively, to swing the pawl-carrier rearward, a feed-pawl pivotally mounted on the pawl-carrier and having a head normally maintained by said spring in operative engagement with the ratchet, a cushioning spring interposed between the pawl head and the pawl-carrier, to prevent shock when movement of the transferrer to normal position acts through the pawl-carrier to effect the feed-stroke of said pawl to advance the hopper, and a stop on the pawl-carrier, laterally extended under and to coöperate with the tail of the feed-pawl to limit movement thereof due to the cushioning spring.

2. A step-by-step rotatable hopper to hold a circularly-arranged series of filling-carriers, a ratchet rotatable therewith, and a transferrer to remove the filling-carriers one by one, combined with a detent pawl to coöperate with the ratchet and prevent retrograde movement of the hopper, a stationary fulcrum for said pawl, a feed-pawl having a ratchet-engaging head laterally extended behind the detent pawl, a pawl-carrier movable with and also relatively to the transferrer and on which carrier the feed-pawl is pivotally mounted, and a retracting extension on the pawl-carrier adapted to be manually engaged to retract said pawl-carrier and thereby disengage its head from the ratchet, the lateral extension of the head at such time coöperating with the detent pawl to disengage it from the ratchet.

3. A rotatable hopper adapted to hold a circularly-arranged series of filling-carriers, a transferrer, means mounted thereon to effect angular advance movement of the hopper after each operation of the transferrer, said means including a feed-pawl having a laterally extended head, a detent pawl for the hopper, mounted independently of the transferrer, the laterally extended head of the feed-pawl projecting behind the detent pawl, and a manually actuated device to retract and render inoperative the feed-pawl, the head thereof at such time engaging and rendering the detent pawl inoperative, the tail of the feed-pawl when retracted extending into the path of a filling-carrier in the hopper and serving to prevent contact with the hand of the operator when the hopper is turned backward.

4. A rotatable hopper adapted to hold a circularly-arranged series of filling-carriers, a transferrer, means mounted thereon to effect angular advance movement of the hopper after each operation of the transferrer, said means including a pawl-carrier having a frontwardly projecting retracting extension provided with a finger piece, a feed-pawl pivoted on the pawl-carrier and having a laterally extended head at its rear end and a tail at its front end having a cam surface, and a stop for the tail, on the pawl-carrier, a detent pawl for the hopper, mounted independently of the transferrer and located in front of the head of the feed-pawl, and a cushioning spring normally maintaining the pawl tail on the stop, manual depression of the retracting extension moving the pawl-carrier and feed-pawl bodily to render the head inoperative, the latter simultaneously engaging the detent pawl and rendering it inoperative, the cam surface of the pawl tail at such time being interposed in the path of a filling-carrier if the hopper is turned backward, engagement of such filling-carrier with the cam surface acting to stop movement of the hopper and to restore the feed and detent pawls to operative position.

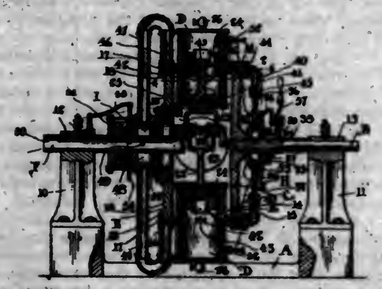
5. A rotatable hopper having an attached ratchet and adapted to hold a circularly-arranged series of filling-carriers, a transferrer to remove them one by one, a pawl-carrier pivoted on the transferrer and movable with and also relatively to it, a feed-pawl fulcrumed on the pawl-carrier and normally coöperating with the ratchet to advance the hopper one step after each operation of said transferrer, an independently mounted detent pawl to coöperate with the ratchet and prevent retrograde rotation of the hopper, a manually operated member on the pawl-carrier to retract it and the feed-pawl and disengage the latter from the ratchet, means to disengage the detent pawl from said ratchet by retraction of the feed-pawl, and means to cause said pawls to reëngage the ratchet by coöperation with a filling-carrier in the hopper when the latter is turned backward, the manual retraction of the pawl-carrier placing said latter means in the path of such a filling-carrier.

[Claims 6 to 11 not printed in the Gazette.]

1,019,856. ROTARY INTERNAL-COMBUSTION ENGINE. JAMES LOCKE STRICKLAND, Westport, Nova Scotia, Canada, assignor to Harry Richards McLellan, St. John, Canada. Filed Oct. 19, 1908, Serial No. 458,479. Renewed Nov. 15, 1911. Serial No. 660,470. (Cl. 123—43.)

1. In a rotary internal combustion engine and in combination, a fixed crank pin, a plurality of piston rods pivoted thereon having pistons on their extremities, substantially radially disposed cylinders inclosing the pistons and

being formed with a trunnion on each side, one of said trunnions on each cylinder being formed with an exhaust port opening through the trunnion toward the outer end of the cylinder, a rotatable element having bearings thereon adapted to journal those trunnions on the cylinders in which the exhaust ports are formed, said bearings having ports therethrough on the outer side adapted to register with the ports in the trunnions, whereby the centrifugal force will tend to hold the trunnions in tight contact on their outer side with the bearings, exhaust conduits in communication with the ports through the bearings, means for rotatably supporting the opposite side of each cylinder to that which said rotatable member supports, and means for supplying the cylinders with explosive fluid and igniting the same at the proper moment.



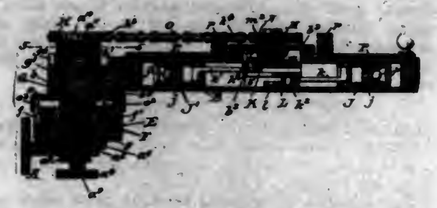
2. In a rotary internal combustion engine, the combination with the rotating cylinders and combustible supply pipes connected thereto, of a rotatable member having a plurality of compartments therein, each being placed in communication with one of the supply pipes and being provided with a suitable port in the side, a valve member spring held against the rotatable member having an elongated outlet port adapted to register with the ports in the compartments and having a suitable inlet port on the opposite side, and a supply pipe extending into the inlet port and having a flexible washer 39 thereon adjacent to the port.

3. In a rotary internal combustion engine, the combination with the rotating cylinders and combustible supply pipes connected thereto, of a rotatable member having a plurality of compartments therein, each being placed in communication with one of the supply pipes and being provided with a suitable port in the side, a valve member spring held against the rotatable member and formed on the face with an adjustable disk 29 having an arcuate port therein adapted to register, during certain parts of the revolution, with the ports in the compartments, and means for supplying the valve member with combustible fluid.

4. In a rotary internal combustion engine, and in combination, a plurality of rotatable cylinders, combustible supply pipes communicating with the cylinders and having telescopic packed joints intermediate of their lengths, a rotatable member formed with a plurality of chambers, with which the inner ends of the supply pipes communicate, the said chambers being each formed with an inlet port, and a combustible supply member having an elongated port therein adapted to communicate with the ports in the chambers, during certain parts of their revolution.

1,019,857. DOOR CLOSING AND CHECKING DEVICE. ADAM H. SULSER, Washington, D. C. Filed Oct. 13, 1911. Serial No. 654,556. (Cl. 16—88.)

1. In a door closing device, the combination of a supporting bracket, an arm pivotally connected thereto, a spring casing rotatably mounted on said bracket, a spring housed within said casing and having one end connected thereto to rotate the same, a rotatable element connected to the other end of said spring and adapted to be rotated thereby in an opposite direction, stops for limiting the rotation of said casing and said rotatable element by said spring, said arm being adapted to engage and rotate the casing against the tension of the spring when moved in one direction, and engage and rotate said rotatable element against the tension of the spring when moved in the opposite direction.



2. In a door closing device, the combination of a supporting bracket provided with a stud or spindle, of a spring casing rotatably mounted thereon, a sleeve rotatably mounted on said spindle, a spring housed within said casing having one end connected therewith and the other end connected with said sleeve, said spring tending to rotate said casing and sleeve in opposite directions, stops for limiting the rotative movements of said casing and sleeve, and an arm pivotally supported by said bracket and adapted to rotate said casing against the tension of said spring when moved in one direction, and to rotate said sleeve against the tension of the spring when moved in the opposite direction.

3. In a door closing device, the combination of a supporting bracket, a spring casing rotatably supported thereby and having a series of holes in its bottom wall, a spring housed within said casing adapted to rotate the same, an arm pivotally mounted on said bracket and adapted to rotate said casing against the action of said spring, and a stop adapted to be inserted in any one of said series of holes and engage said bracket for limiting the movement of said casing by said spring.

4. In a door closing device, the combination of a supporting bracket, a spring casing rotatably supported thereby and having a series of holes in its bottom wall, a spring housed within said casing adapted to rotate the same, an arm pivotally mounted on said bracket and adapted to rotate said casing against the action of said spring, and a stop pivotally mounted concentrically with the axis of said casing and adapted to enter any one of said series of holes and engage the bracket for limiting the movement of the casing by said spring.

5. In a door closing device, the combination of a supporting bracket, a spring casing rotatably supported thereby and having a series of holes in the bottom wall thereof, a spring housed within said casing and adapted to rotate the same, an arm pivotally mounted on the bracket and adapted to rotate said casing against the action of said spring, a stop pivotally suported by the bracket concentrically with the axis of said casing adapted to enter any one of said series of holes and engage the bracket for limiting the movement of the casing by said spring, said stop being adapted to be pulled outwardly away from said casing and moved on its pivotal support, and a spring for yieldingly holding said stop in engagement with said casing.

[Claims 6 to 13 not printed in the Gazette.]

1,019,858. PARACHUTE. JOSEPH JUNIUS TANNER, Clover, Utah. Filed Jan. 28, 1911. Serial No. 605,301. (Cl. 244—21.)

1. The combination with a shell open at its upper end and having an aperture in its lower end, and means for attaching the shell to an object, of a parachute normally stored within the upper portion of the shell, flexible means leading from the parachute and loosely through the shell and the aperture to the object to which the shell is connected, said means constituting the sole connection between the parachute and said object, a separable element mounted within the shell and beneath the parachute, said connection projecting through said separable element, means stored within the shell and below said element for ejecting the parachute and separable element, and means for releasing said ejecting means.



2. The combination with a shell having its upper end of greater diameter than its lower end, said upper end being open, and there being an aperture within the lower end, of a parachute normally folded and stored within the upper portion of the shell, a separable element mounted within the shell and below the parachute, a flexible connection between the parachute and the object to be supported, said connection extending loosely through the shell and separable element, and normally inactive ejecting means within the shell and below the separable element.

3. The combination with an upright shell of larger diameter at its upper than at its lower extremity and having its lower end closed except for a perforation, and connections for attaching said shell to an object; of a parachute adapted to be folded and stored within the upper portion of said shell, a rope leading from the parachute loosely throughout the shell and the perforation in its lower end and secured to the object to which the shell is connected, a plug made in separable sections and disposed within the shell beneath the parachute, the rope passing through said plug, an expansive agent within the shell between its lower end and said plug, and means for releasing said agent and causing its expansion.

4. The combination with an upright shell of larger diameter at its upper than at its lower extremity and having its lower end closed except for a perforation, and connections for attaching said shell to an object; of a parachute adapted to be folded and stored within the upper portion of said shell, a rope leading from the parachute loosely throughout the shell and the perforation in its lower end and secured to the object to which the shell is connected, a plug disposed within the shell beneath the parachute, the rope passing through said plug, an expansive agent within the shell between its lower end and said plug, and means for releasing said agent and causing its expansion.

5. The combination with an upright shell having its lower end closed except for a perforation, and connections for attaching said shell to an object; of a parachute adapted to be folded and stored within the upper portion of said shell, a rope leading from the parachute loosely throughout the shell and the perforation in its lower end and secured to the object to which the shell is connected, a plug made in separable sections and disposed within the shell beneath the parachute, the rope passing through said plug, an expansive agent within the shell between its lower end and said plug, and means for releasing said agent and causing its expansion.

[Claims 6 and 7 not printed in the Gazette.]

1,019,859. FIRE-EXTINGUISHER. JESSE B. THOMAS, Boston, Mass. Filed Dec. 23, 1911. Serial No. 667,461. (Cl. 220—64.)



1. In a fire-extinguisher, a canister having a neck, a cover having a peripheral flange, an annular lip on one and an opposed annular seat on the other of said members, a packing ring in the seat, to be engaged by the lip, a cap cooperating with the neck and adapted to engage directly the exterior face of the cover and force the lip and packing ring into sealing engagement, and an annular coupling member applied to and connected internally with the cap and having its inner edge of less diameter than and extended loosely beneath the peripheral flange of the cover, whereby the cap and cover are connected permanently while relative rotative and limited axial movements of said parts are permitted.

2. In a fire extinguisher, a canister having a neck, a cover having a peripheral flange, an annular lip on one and an opposed annular seat on the other of said members, a packing ring in the seat, to be engaged by the lip, an open-centered cap adapted for threaded engagement with the neck and to engage directly the external face of the cover, to force the lip and packing ring into sealing engagement, and an annular coupling member rectangular in cross-section applied to and connected internally with the cap and having its inner edge of less diameter than and extended loosely beneath the face of the peripheral flange of the cover, whereby the cap and cover are connected permanently while relative rotative and limited axial movements of said parts are permitted when opening or closing the canister.

3. In a fire-extinguisher, a canister having a neck, a cover having a peripheral groove, an annular lip on one and an opposed annular seat on the other of said members, a packing ring in the seat, to be engaged by the lip, a cap adapted for threaded engagement with the neck and having an annular portion to engage directly the external face of the cover adjacent its periphery and force the lip and packing ring into sealing engagement, the cap having an internal annular groove below said cover-engaging portion and opposite the groove in the cover, and an expansible coupling ring seated loosely in said groove and also seated loosely in the peripheral groove of the cover, to connect the cap and cover permanently while permitting rotative and limited axial movement of one of said parts relatively to the other.

4. In a fire-extinguisher, a canister having a neck, a cover having a peripheral flange, an annular lip on one and an opposed annular seat on the other of said members, a packing ring in the seat, to be engaged by the lip, said cover having a continuous groove in its periphery and a beveled edge above and adjacent the groove, a cap adapted for threaded engagement with the neck and having an inturned annular portion to project over and engage directly the external face of the cover and force the lip and packing ring into sealing engagement, said cap having an internal annular groove below said inturned annular portion thereof and opposite the groove in the cover, and a split, expansible coupling ring seated loosely in said grooves, to connect the cap and cover permanently, the beveled edge of the cover passing through and temporarily expanding the ring until the grooves of the cover and cap are opposed to each other when said parts are assembled, contraction of the ring thereupon to normal diameter causing it to cooperate simultaneously and loosely with the grooved parts of the cap and cover, the thickness of the ring being less than the width of the grooves, to per-

mit a limited relative movement of said cap and cover axially.

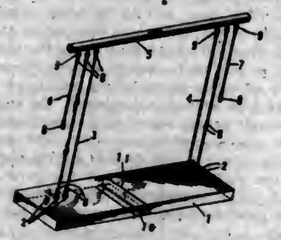
5. In a fire-extinguisher, a canister having a neck, a cover, coöperating sealing means on the cover and neck, respectively, an annular cap adapted for threaded engagement with the neck and having an annular portion in direct engagement with the exterior of the cover, the annular cap receiving loosely the periphery of the cover, opposed annular grooves in the latter and the cap, respectively, and a radially expansible coupling member seated loosely in the grooves to permanently connect the cap and cover while permitting relative rotative and limited axial movements of said parts.

1,019,860. RAILWAY-RAIL JOINT. WILLIAM R. THOMAS, Watertown, Wis. Filed Apr. 4, 1911. Serial No. 618,922. (Cl. 239—2.)



In a railway rail-joint, the combination of a chair provided with edge-notches and spike-holes, as well as with an underside tie-opposing transverse rib and a pair of parallel upwardly extending angular lips continuous longitudinally thereof, these lips being edge-notched in register with said spike-holes; rails in the chair, and fish-plates that are fastened to the rails and have foot-flanges fashioned to inclose the rail-flanges and rest on said chair under the lips thereof, said fish-plate flanges being provided with edge-notches that register with those of said lips and the spike-holes of the aforesaid chair.

1,019,861. EXERCISING APPARATUS. HENRY W. TITUS, New York, N. Y. Filed June 24, 1910. Serial No. 568,700. (Cl. 46—69.)



1. In an exercising apparatus, a platform, eyes secured to the platform near its ends and located in a row at substantially the central longitudinal line of the platform and disposed so as to leave between them a free space upon which the operator may stand or lie while exercising, a handle bar carrying eyes which are located near its ends, and extensible elastic connections uniting the bar and platform and connected with the said eyes.

2. In an exercising apparatus, a platform, eyes secured to the platform and disposed in a row along substantially the longitudinal central line of the platform and arranged in two groups with a plurality of eyes at each group, the groups being separated so as to leave between them a free space upon which the operator may stand or lie while exercising, a handle bar carrying eyes located near its ends and arranged in groups corresponding with the groups of eyes carried by the platform, and a set of extensible connections adapted to unite the platform and the bar and arranged to be connected at the pleasure of the operator with the said eyes.

3. In an exercising apparatus, a platform divided at its transverse center to form two parts, eyes secured to the platform near its ends and located in a row at substantially the central longitudinal line of the platform and disposed so as to leave between them a free space upon which the operator may stand or lie while exercising, a handle bar carrying eyes which are located near its ends, extensible elastic connections uniting the bar and platform and connected with the said eyes, and means for locking the parts of the platform in extended position.

1,019,862. BAKING-OVEN. FREDERIK VERMEULEN, Amsterdam, Netherlands, assignor to Maatschappij Holland Naamloose Vennootschap tot Installatie van Bakkerijen, Amsterdam, Netherlands. Filed June 22, 1911. Serial No. 634,774. (Cl. 107—55.)



1. In a baking oven, a plurality of superposed separately heated baking compartments, main heating ducts transverse to the compartments and consisting in part of pipes, and transverse branchings in the heating ducts adapted to independently and regulably heat the front and back halves of the compartments.

2. In a baking oven a plurality of superposed separately heated baking compartments, main heating ducts transverse to the compartments and consisting in part of pipes, transverse branchings in the heating ducts adapted to independently and regulably heat the front compartments, and a fire place in one branch.

3. In a baking oven a plurality of superposed separately heated baking compartments, main heating ducts transverse to the compartments and consisting in part of pipes, transverse branchings in the heating ducts adapted to independently and regulably heat the front and back halves of the compartments, and a fire place in one branch.

4. In a baking oven, a plurality of superposed separately heated baking compartments, main heating ducts transverse to the compartments and consisting in part of pipes, transverse branchings in the heating ducts adapted to independently and regulably heat the front and back halves of the compartments and an upper fire duct communicating at the center with the discharge duct and at each end with the pipe parts of the heating ducts, these pipe parts being downwardly inclined to the baking floor toward the outlet, in the direction of the flow, for the heating gases whereby these latter may be passed as desired through either the pipe parts and one half of the upper fire duct or through the other half only.

5. In a baking oven a plurality of superposed separately heated baking compartments, main heating ducts transverse to the compartments and consisting in part of pipes, transverse branchings in the heating ducts adapted to independently and regulably heat the front and back halves of the compartments, one or more fire places in the branches, and an upper fire duct communicating at the center with the discharge duct and at each end with the pipe parts of the heating ducts, these pipe parts being downwardly inclined to the baking floor toward the outlet for the heating gases whereby these latter may be passed as desired through either the pipe parts and one half of the upper fire duct or through the other half only.

[Claim 6 not printed in the Gazette.]

1,019,863. SHADE-FIXTURE. TORSTEN L. WALTER, New York, N. Y. Filed Oct. 24, 1910. Serial No. 588,881. (Cl. 156—27.)

1. In a shade fixture, the combination with vertical guides, of brackets slidable thereon, each of said brackets being formed of one piece of sheet metal bent to present a tubular slide around said guide and including two contiguous wings of uniform curvature extending from both ends of the slide outwardly from the middle thereof, the wings being suitably apertured to receive the end projection of the shade roller and operative cords attached directly to the brackets.



2. In a shade fixture, the combination with a vertical guide, of a bracket slidable thereon, said bracket comprising two contiguous wings of substantially the same curvature and including a tubular slide enveloping said guide for the entire length of the bracket, the wings being provided with an elongated aperture for the reception of the end projection of the shade roller, the long side of the aperture being parallel to the axis of the tubular guide, and a curved hook latch pivoted between the wings below the aperture adapted to hook over the shade roller end projection from the front of the bracket.

3. In a shade fixture, the combination with vertical guides of vertically slidable brackets thereon, each of said brackets having their extending portion evenly rounded from top to bottom whereby the draperies are prevented from catching thereon, said brackets being formed of one piece of sheet metal folded to present two contiguous wings and a tubular slide of proportionally greater length than the width of the bracket, said wings having registering apertures for the reception of the end projections of the shade roller.

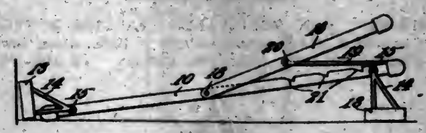
4. In a shade fixture, the combination with a vertical guide, of a vertically slidable bracket provided with an aperture for the reception of the end projection of the shade roller, and a pivoted latch housed within said bracket and coöperating with said aperture, said latch having a horn formed thereon for engagement by a suitable tool.

5. In a shade fixture, the combination with a vertical guide, of a vertically slidable bracket provided with an aperture for the reception of the end projection of the shade roller and comprising two contiguous wings, and a pivoted latch housed between said wings and coöperating with said aperture, said latch having a horn formed thereon for engagement by a suitable tool, the edge of one of said wings being cut away to afford access to said horn and the other wing including the horn within its outline.

[Claim 6 not printed in the Gazette.]

1,019,864. BED-REST. CHARLES W. WARLICK, Martinsburg, Pa. Filed Feb. 18, 1911. Serial No. 608,243. (Cl. 5—43.)

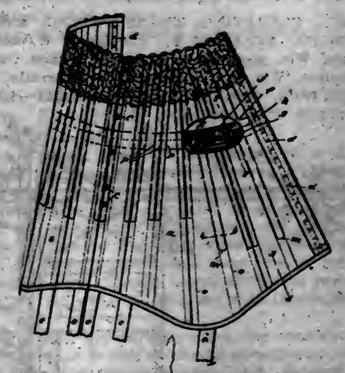
1. In a device of the class described, a main frame, two pairs of frames pivoted to the respective sides of the main frame, a base carried by the extreme ends of each pair of said pivoted frames and adapted when at right angles to the main frame to form supports therefor and when the pivoted frames are in substantially the same line with the body of the main frame to project the bases beyond the extreme ends of the main frame to provide handles for the device, and a frame pivoted to the sides of the main frame and forming a section of the main frame.



2. In a device of the class described, a main open frame rectangular in plan, a frame pivoted exteriorly to the four corners of the main frame, a foot rest attached to the respective pairs of pivoted frames and adapted to assume positions respectively at right angles to the main frame to form a support therefor or to aline therewith beyond the ends thereof to form a lifting handle therefor, a U-shaped frame having its terminals pivoted intermediate and exteriorly of the main frame, co-acting means carried by said pivoted frame and the main frame for retaining the pivoted frame at various angles relatively to the main frame and a flexible cover secured to one end of the main frame, and to the closed end of the pivoted frame.

3. In a device of the class described, a hollow rectangular frame, four angle frames, each connected to its respective end exteriorly of the main frame and of such a length as to describe an arc of a circle beyond the ends of the main frame, a rest carried by each pair of said frames and adapted when the frames are at right angles to the body of the main frame to form a support for the respective ends thereof, and when the frames thereof aline with the main frame to form lifting handles beyond the end of the main frame, a frame U-shaped in elevation having its free terminals pivoted exteriorly and intermediate of the ends of the main frame, the upper side of the main frame between one end and said pivots being notched, a brace pivoted intermediate the ends of the U-shaped frame and adapted to engage the notches of the main frame to retain the pivoted frame in various positions, and a sheet of flexible material connected to the main frame and to said pivoted frame.

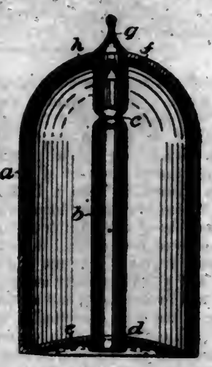
1,019,865. CORSET. DE VER H. WARNER, Bridgeport, Conn., assignor to The Warner Brothers Company, Bridgeport, Conn., a Corporation of Connecticut. Filed June 1, 1911. Serial No. 630,615. (Cl. 2—73.)



In a corset a single thickness of material from top to bottom of the corset, stiffening strips, a binding strip at the bottom of the corset, a second thickness of material extending from the waist-line down on the inside of the corset, said second thickness being connected to the body of the corset only by the binding strip at the bottom and

being unattached at the top except by vertical lines of stitching forming the pockets for the stiffening strips, and a tape covering the overlapping upper edges of the second thickness of material on the body of the corset.

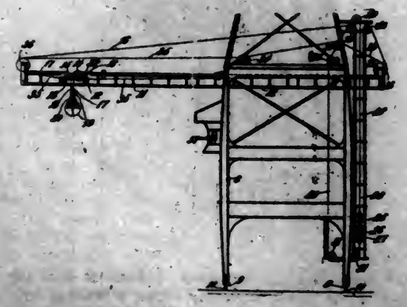
1,019,866. NON-REFILLABLE VACUUM-BOTTLE. CHARLES E. WARSAW and ARTHUR P. BALL, Ames, Iowa. Filed Jan. 21, 1911. Serial No. 603,884. (Cl. 215—70.)



1. The combination with a closed receptacle, of a tube passing therethrough and having both open ends projecting therefrom, a removable cap fitted over one end of said tube, the other end of said tube being fusible and adapted for being sealed when fused, the upper part of said tube having ports in communication with the receptacle, and means located with the tube immediately below said ports adapted to intercept and retain drippings oozing into the tube when the latter is inclined.

2. The combination with a closed receptacle, of a tube passing therethrough with air-tight connections, one end of the tube projecting therefrom, more frangible than the rest of the tube and adapted to be fused and sealed imperviously, a removable elastic pierceable cap fitted over the other end of the tube, ports in the upper part of said tube in communication with the receptacle, and an annular frustal hollow projection on the inside surface of said tube below said ports, and directed upwardly, adapted to catch and retain any drippings oozing inwardly through said ports from said receptacle when the latter is inclined.

1,019,867. ELEVATING, TRANSPORTING, AND DISCHARGING APPARATUS. THOMAS S. WATSON, Milwaukee, Wis., assignor to Thos. S. Watson Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Mar. 2, 1911. Serial No. 611,903. (Cl. 214—4.)



1. An apparatus for elevating, transporting and discharging material, comprising a track, a carriage provided with a material holding receptacle constructed to travel on the track, a cable connected to the carriage and to the receptacle and having a loop formed therein at relatively a fixed point, said cable adapted to open and close and raise and lower the receptacle, another cable connected to the loop of the first mentioned cable for controlling the length of said loop, and means for causing the travel of the carriage on the track.

2. An apparatus for elevating, transporting and discharging material, comprising a track, a carriage constructed to travel on the track and provided with cable drums, a cable wound on the drums and extending in the direction of the line of travel of the carriage and having a loop formed at a point relatively fixed with relation to the carriage, a material receptacle suspended from the carriage by said cable and also opened and closed by said cable, a means for extending and contracting the cable loop to raise and lower the receptacle, and means for traversing the carriage on the track.

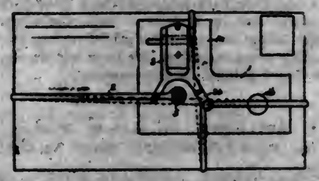
3. An apparatus for elevating, transporting and discharging material, comprising a track, a carriage constructed to travel on the track and provided with cable drums, a cable wound on the drums and extending in the direction of the line of travel of the carriage and having a loop formed at a point relatively fixed with relation to the carriage, a material receptacle suspended from the carriage by said cable, another cable connected to the loop of the first mentioned cable for extending and contracting the cable loop to raise and lower the receptacle and to open and close the receptacle, a motor for operating the cable connected to the loop, and means for traversing the carriage on the track.

4. An apparatus for elevating, transporting and discharging material, comprising a track, a carriage constructed to travel on the track, drums journaled on the carriage, a cable wound on the drums and extending in the direction of the line of travel of the carriage and having a loop formed at a point relatively fixed with relation to the carriage, a material receptacle suspended from the carriage by said cable, means for retarding the rotation of one of the drums to open and close the receptacle, another cable connected to the loop of the first mentioned cable for extending and contracting the loop to raise and lower and open and close the receptacle, and means for traversing the carriage on the track.

5. An apparatus for elevating, transporting and discharging material, comprising a track, a carriage constructed to travel on the track, drums journaled on the carriage, a cable wound on the drums and extending in the direction of the line of travel of the carriage and having a loop formed at a point relatively fixed with relation to the carriage, a material receptacle suspended from the carriage by said cable, means mounted on the carriage for retarding the rotation of one of the drums to open and close the receptacle, another cable connected to the loop of the first mentioned cable for extending and contracting the loop to raise and lower and open and close the receptacle, and means for traversing the carriage on the track.

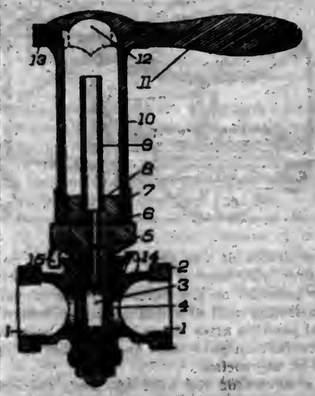
[Claims 6 to 11 not printed in the Gazette.]

1,019,868. PACKAGE-TIE. BENJAMIN DANIEL WEAVER, River Rouge, Mich. Filed Oct. 25, 1909. Serial No. 524,368. (Cl. 24—18.)



In a package tie of the class described, the combination with a base, of a back fixed to said base, said back formed with a diagonally projecting arm having a hook at its extremity, said back formed with a raised middle portion, a leaf spring secured to said back and overlapping said raised portion, a pivot removably secured to said base, said pivot located approximately in the middle of said base, and a thong, one end of which is loosely received on and swiveled to said pivot, for the purposes set forth.

1,019,869. REGULATING-VALVE. HOLLAND WHEELER, Lawrence, Kans. Filed Oct. 27, 1910. Serial No. 589,504. (Cl. 137—7.)

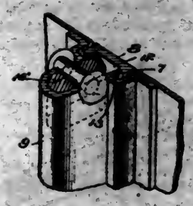


1. In a valve of the class described, the combination of a valve body having inlet and outlet chambers connected by a passage in which is fitted a rotatable key having a straightway opening, a port in said key at right angles to and connecting with the opening, opposite said port a stop section on the key, means for turning the key, a regulating plug or valve connected by a passage with the passage in the body of the valve and discharging out of it, all parts being so arranged that when said port of the key registers with the inlet chamber an operative passage will be formed to discharge the flow from the inlet chamber through the valve and out at the regulating plug or valve, or when the straightway opening in the key registers with the inlet and outlet chambers there will be a full straightway discharge through the valve, or the key being turned to cover the inlet chamber with the stop section all flow through the valve will be shut off, substantially as set forth.

2. In a valve of the class described, the combination of a valve body having inlet and outlet chambers connected by a passage in which is fitted a rotatable key having a straightway opening, a port in said key at right angles to and connecting with the opening, opposite said port a stop section on the key, means for turning the key, attached to said valve a vertical, cylindrical reservoir containing a vertical tube opening into it and connected by a passage with the passage in the body of the valve, a regulating plug or valve attached to said reservoir and discharging out of it, means for detaching the reservoir, all parts being so arranged that when the port of the key registers with the inlet chamber an operative passage will be formed to discharge the flow from the inlet chamber through the valve, the tube, the reservoir, and out at the regulating plug or valve, or when the straightway opening in the key registers with the inlet and outlet chambers there will be a full straightway discharge through the valve, or the key being turned to cover the inlet chamber with the stop section all flow through the valve will be shut off, substantially as set forth.

1,019,870. METAL FLUME. ANDREW J. WILEY, Boise, Idaho. Filed Apr. 19, 1911. Serial No. 622,063. (Cl. 61—6.)

1. In a flume for conveying water, the combination with the supporting structure, of a thin metal shell, consisting of independently curved sections with expansion joints on the exterior of said shell between each section.



2. In a flume for conveying water, the combination with the supporting structure, of a thin metal shell, consisting of independently curved sections having flanges of any desired shape fitting into and connected by a rib of curved shape on the exterior of said metal shell, said rib having threaded lugs attached thereto for securing the joint to the framework and being closed by a tongue of proper shape and material to completely fill the space between the flanges of the shell.

3. In a flume for conveying water, the combination with the supporting structure, of a thin metal shell, consisting of independently curved sections having flanges of any desired shape fitting into and connected by a rib of curved shape on the exterior of said metal shell, said ribs being closed by a tongue of proper shape and material to completely fill the space between the flanged ends of the shell.

4. In a flume for conveying water, the combination with the supporting structure, of a thin metal shell, consisting of independently curved sections having flanges of any desired shape fitting into and connected by a rib of curved shape on the exterior of said metal shell, said ribs being closed by a tongue of proper shape and material to completely fill the space between the flanged ends of the shell, said tongue or channel strip being rolled to the proper curvature to coincide with that of the said ribs.

5. In a flume for conveying water, the combination with the supporting structure, of a thin metal shell of independently curved sections having flanges of any desired shape fitting into and connected by a rib of curved shape to the exterior of the shell, a channel strip or tongue fitting in said rib, said rib having threaded lugs attached at each end whereby a joint is made through the medium of a locking nut or member secured to the supporting framework washers secured to said lugs and having ribs or projections on their bases against which rest the edges of the channel strip or tongue serving to close said ribs to completely fill the space between the flanged ends of the shell.

[Claims 6 to 8 not printed in the Gazette.]

1,019,871. METAL FLUME. ANDREW J. WILEY, Boise, Idaho. Filed June 9, 1911. Serial No. 632,289. (Cl. 61—9.)

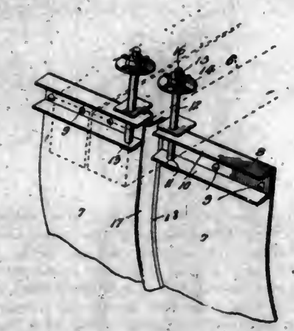
1. In a metal flume, the combination of a thin shell composed of metal sections curved in a semi-circular shape, metal plates or strips secured to the ends of the said sections, hangers connected to said strips, and a curved rib forming the joint between the sections.

2. In a flume for conveying water, the combination of a thin metal shell curved in a semi-circular shape with channeled strips attached longitudinally to each end to strengthen the shell and dispense with intermediate supports.

3. In a flume for carrying water, the combination of a thin metal shell having attached strengthening channeled strips along the horizontal ends, with hangers at each end for carrying the weight of the flume to the supporting structure.

4. In a flume for conveying water, the combination with the successive sections of curved metal suspended by hangers from a structure of interior centrally grooved metal joint members secured to the sections, and means

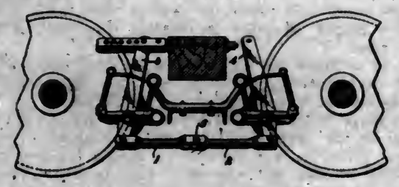
for securing said joint members and metal sections together.



5. In a flume for conveying water, the combination with the shell having the curved metal sections, of the channeled plates secured to the ends of the sections, the hangers connected to said plates, the joint members secured to the sections, and means for securing said joint members and metal sections together.

[Claims 6 to 10 not printed in the Gazette.]

1,019,872. ADJUSTABLE BRAKE-ROD. CHARLES H. WILLIAMS, Jr., Chicago, Ill., assignor to Chicago Railway Equipment Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 17, 1910. Serial No. 587,582. (Cl. 74—47.)



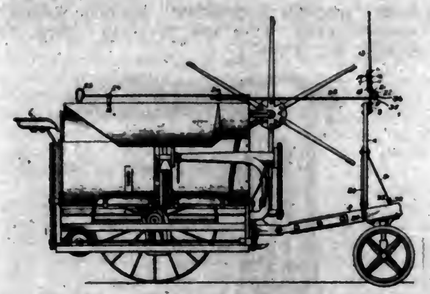
An adjustable brake rod composed of sections, one of which is provided with integral jaws for receiving the end of the contiguous section, the engaging faces of said sections being formed with transversely disposed interlocking projections, the contiguous section being provided with an elongated slot, a bolt passing through the integral jaws of the first section and through said slot, in such manner that said slot is covered by said integral jaws, substantially as described.

1,019,873. WHIP-HOLDER. LYNN J. WILSON, Lockport, Ill. Filed Oct. 17, 1910. Serial No. 587,382. (Cl. 21—129.)

1. The combination with the pivot wire bent at right angles as shown, of a whip holder pivotally mounted on the horizontal arm of said pivot, a spring encircling said horizontal arm and acting to return the holder after the whip which has been used, a notched disk receiving the bent end of the spring and rigid on said arm and determining the normal inclination of the whip, a support for the vertical arm of the pivot wire in which it may swivel and means for positioning and operating the whip holder.

2. In a device of the kind specified, the combination with a pivot wire bent at right angles, of a whip holder pivotally mounted on the horizontal arm of said wire, a keeper 9 adjustably secured to a stationary support, and in which keeper the vertical arm of said wire is swiveled, means for operating the whip, and a spring for returning it to normal position.

3. In a device of the kind specified, the combination with a pivot wire bent at right angles, of a whip holder pivotally mounted on the horizontal arm of said wire, a spring encircling said arm and acting to return the whip to normal position after it has been used, and means whereby said spring controls the normal inclination of the whip.



4. In a device of the kind specified, the combination with a pivot wire bent at right angles, of a whip holder pivotally mounted on the horizontal arm of said wire, a spring encircling said arm and acting to return the whip to normal position after it has been used, and the notched disk made fast on said wire and adapted to receive the bent end of the spring.

5. In a device of the kind specified, the combination with a pivot wire bent at right angles, of a whip holder pivotally mounted on the horizontal arm of said wire, a keeper 9 secured to a stationary support and in which the vertical arm of said wire is swiveled, said keeper being also adjustable upon its support, and means for operating the whip.

1,019,874. FOUNTAIN-PEN. JAMES THRUSTON WOLFE, Washington, D. C. Filed Oct. 18, 1910. Serial No. 587,744. (Cl. 120—50.)

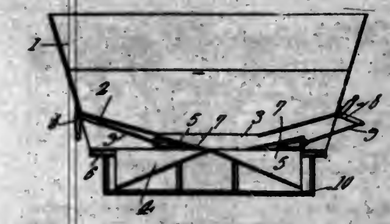


1. The combination in a fountain pen, of a reservoir and a foot-piece detachably connected and having their respective communicating passages separated by a partition of reticulated material whose openings are of such size that the diaphragm will support a liquid film between the parts when the pen is up-ended, while permitting free flow of ink therethrough from the reservoir when the pen is in use.

2. The combination with a fountain pen, of a reservoir and a foot-piece detachably connected and having their respective communicating passages separated by a diaphragm structure, the latter having a plurality of openings of such a size that the diaphragm will support a film of ink between the parts when the pen is up-ended, the ratio of the area of the openings to the area of the diaphragm structure being such as to permit capillarity and gravity to overcome surface tension, thereby permitting free flow of ink therethrough from the reservoir when the pen is in use.

3. The combination in a fountain pen having an ink reservoir and a pen nib, of a diaphragm structure, separating the reservoir and the pen nib, said diaphragm being provided with a plurality of openings of such proportion that the diaphragm will support films of ink in its interstices, and that the ratio of the area of the openings to the area of the diaphragm structure is such as to permit ink freely to pass therethrough in the act of writing.

1,019,875. SIDE-DELIVERY BODY. THOMAS WRIGHT, Jersey City, N. J. Filed Mar. 11, 1911. Serial No. 613,868. (Cl. 21—86.)



1. The combination with a body having an outlet opening in the bottom thereof and delivery chutes extending from the center of the opening to opposite sides of the body, of gates for closing communication between the body and the respective chutes, each gate when closed having its upper face inclined and parallel with the adjacent portion of the bottom of the body to direct the contents of the body onto the other closure or into the other chute and means for separately moving the gates laterally to open or close them, said means, when either gate is closed, constituting means for locking the gate against opening under the weight of the contents on the gate.

2. The combination with a wagon body having an outlet opening in the bottom thereof and chutes extending from the center of the opening to opposite sides of the body, of separately movable gates for closing communication between the body and the respective chutes, each gate having an inclined upper face for directing the contents of the body into the opposed chute when the gate is closed and mechanism for actuating each gate, said mechanism constituting means for locking the gate in closed position.

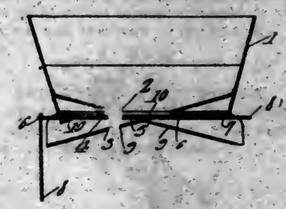
3. A delivery body having an outlet opening in the bottom thereof, chutes extending from the center of the opening toward opposite sides of the body, separately movable gates for closing communication between the body and the respective chutes, each gate when closed having its upper face parallel with the adjacent portion of the bottom of the body and inclined downwardly toward the bottom of the opposed chute, and mechanism for actuating each gate, said mechanism constituting means for locking the gate in closed position.

4. A side delivery body having an outlet opening in the bottom thereof, chutes inclined downwardly toward the respective sides of the body from the center of the opening, separately movable gates for closing communication between the body and the respective chutes, said gates, when closed, having downwardly converging upper faces parallel with the adjacent portions of the bottom of the body, each gate, when closed, constituting means for directing the contents of the body into the opposed chute when its gate is open, and means for separately actuating the gates, said means each including a bell crank lever one arm of which constitutes a handle, and a link connection between the other arm of the lever and the gate, said connection and arm being movable into alinement when the gate is closed to lock the gate against opening.

1,019,876. DOUBLE-SIDE-DELIVERY DOOR FOR BODIES. THOMAS WRIGHT, Jersey City, N. J. Filed May 9, 1911. Serial No. 626,136. (Cl. 21—86.)

1. A body having an outlet opening in the bottom thereof, chutes fixed relative to and extending from under the opening to the two sides of the body respectively, a closure for the opening, and means for sliding the closure toward either side of the body to uncover a portion of the opening and direct the contents of the body into the chute extending to the other side of the body.

2. A body having an outlet opening in the bottom thereof, chutes fixed relative to the body and diverging downwardly toward the sides of the body from a point under the opening, a closure for the opening, means for bodily sliding the closure toward either side of the body and to uncover a portion of the opening, and means upon the closure for directing the contents of the body from the opening into the chute extending to the other side of the body.



3. A body having an outlet opening in the bottom thereof, a slidable closure for the opening, chutes fixed relative to the body and extending downwardly toward opposite sides of the body from a point below the opening, combined deflecting and stop devices depending from the closure, and means for sliding the closure toward either side of the body to bring one of said devices against, and to uncover a portion of the opening and thereby direct the contents of the body into the chute extending to the other side of the body.

4. A body having an outlet opening in the bottom thereof, chutes diverging downwardly toward opposite sides of the body at a point below the opening, a slidable closure for the opening, means for sliding said closure toward either side of the body to uncover a portion of the opening, and means depending from the closure and movable against the respective chutes to limit the sliding movement of the closure, said means constituting deflectors for directing the contents of the body from the opening and into the chute delivering toward that side of the body remote from the closure.

5. A body having an outlet opening in the bottom thereof, guides supported along opposite sides of the opening, a closure slidably mounted upon the guides, means for sliding the closure toward either side of the body to uncover the opening, and means for directing toward the opposite side of the body the material discharged through the opening when the closure is shifted to open position.

1,019,877. TONGUE FOR SHOES OR THE LIKE. WILLIAM BRADFORD ARNOLD, Eaton Rapids, Mich. Filed May 6, 1911. Serial No. 625,556. (Cl. 36—54.)



The combination with a lace shoe, of a tongue having an extension integral with its upper end, said extension consisting of a laterally extending body portion and a narrow neck uniting the body portion with the end of the tongue, said extension being adapted to be engaged by the lacing to hold the tongue up in the shoe.

1,019,878. SHOE-SHAPING MACHINE. ORRELL ASHTON, Lawrence, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 19, 1908. Serial No. 463,382. (Cl. 12—51.)

1. A machine of the class described, having in combination, means for treating the bottom of a shoe, means for

resting the side of the shoe during the bottom treating operation, and actuating mechanism for said two means, said resting means being constructed and arranged to be operatively connected with its actuating means to beat the side of the shoe at the will of the workman without interrupting the operation of the machine in beating a shoe.



2. A machine of the class described, having in combination means for treating the bottom of a shoe and means occupying continuously an operative position for resting the side of the shoe during the bottom treating operation, said latter means comprising a rigid member and a yielding member arranged to be used at the will of the workman without causing any substantial change in the operation of the bottom treating means upon the shoe.

3. A machine of the class described, having in combination, means for treating the bottom of a shoe, and means for resting the side of the shoe during the bottom treating operation, said bottom treating means comprising a beating roll substantially longer than the width of the shoe to permit a shoe to be presented to different longitudinal portions thereof, and side resting means having different characteristics in the portions adapted to be engaged by the shoe in different positions on the roll.

4. A machine of the class described, having in combination means for treating the bottom of a shoe, and means for resting the side of the shoe during the bottom treating operation, said bottom treating means comprising a beating roll substantially larger than the width of the shoe to permit a shoe to be presented to different longitudinal portions thereof and side resting means having a stationary member to rest the shoe when the latter is presented to one portion of the roll and a vibratory member to beat the side of the shoe when it is presented to a different portion of the roll.

5. A machine of the class described, having in combination means for treating the bottom of a shoe, means for resting the side of the shoe during the bottom treating operation, and actuating mechanism for said two means, said resting means being constructed and arranged to be rendered operative or inoperative to beat the side of the shoe by varying the pressure of the shoe against it.

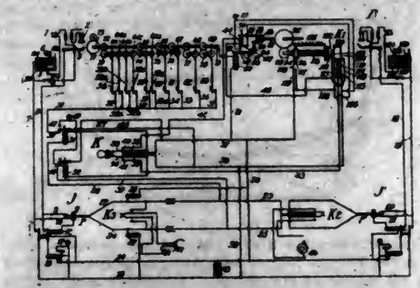
[Claims 6 to 15 not printed in the Gazette.]

1,019,879. TELEPHONE METERING SYSTEM. GARRISON BABCOCK, Rochester, N. Y., assignor to Telechronometer Company, Rochester, N. Y., a Corporation of New York. Filed June 6, 1910. Serial No. 565,192. (Cl. 179—10.)

1. In a telephone system, the combination of an exchange, substations connected by line conductors with the exchange, mechanism at the exchange for connecting the lines for conversation, and means associated with the connecting mechanism for registering at the exchange the charge for a conversation at a desired one of a plurality of rates.

2. In a telephone system, the combination of an exchange, and mechanism at the exchange for registering at such exchange the charge for a talking connection established at the exchange at a desired one of a plurality of rates.

3. In a telephone system, the combination of an exchange, substations connected by line conductors with the exchange, mechanism at the exchange for connecting the lines for conversation, means associated with the connecting mechanism for registering the charge for a conversation at a desired one of a plurality of rates, a meter at one of the substations, and means for transferring the charge from the exchange to the meter.



4. In a telephone system, the combination of an exchange, substations connected by line conductors with the exchange, mechanism at the exchange for connecting the lines for conversation, means associated with the connecting mechanism for registering the charge for a conversation at a desired one of a plurality of rates, a meter at one of the substations, and means for transferring the charge from the exchange to the meter more rapidly than the charge was registered at the exchange.

5. In a telephone system, the combination of an exchange, mechanism at the exchange for registering the charge for a talking connection established at the exchange at a desired one of a plurality of rates, and means for sending from the exchange over a desired connection the charge thus registered and for returning the registering mechanism to its normal or zero condition.

[Claims 6 to 42 not printed in the Gazette.]

1,019,880. HOSE-SUPPORTER. OLLIE F. BROWER, Eaton, Ohio. Filed July 14, 1911. Serial No. 638,519. (Cl. 24—248.)

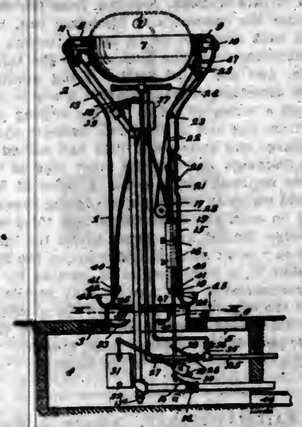


A hose supporter comprising a back constructed of a single strand of wire and bent to provide a lip, a front also constructed of a single strand of wire and comprising a connecting bar and arms, said arms being coiled to provide eyes which engage the upper portion of the back, the side members of the front being bent upwardly and inwardly to provide spring catches, a latch member also constructed of a single strand of wire, said latch member being substantially L-shaped in cross section to provide a body portion and a hook, said hook adapted to coact with said lip the juncture of the arms forming the body portion of the latch and the side arms of the hook being coiled to provide eyes which engage with the connecting bar of the front, the body portion adapted to be clamped by the catches in one position of the catch member, substantially as and for the purpose set forth.

1,019,881. SANITARY DRINKING-FOUNTAIN. ATVILL BYRD, Kansas City, Mo. Filed May 15, 1911. Serial No. 627,295. (Cl. 119—81.)

1. A drinking fountain, consisting of a basin operably-mounted, means to supply said basin with water, and automatic means to invert the basin and cut off the supply of water thereto.

2. A drinking fountain consisting of a basin operably-mounted, means to supply said basin with water, a cable to turn said basin to an operative or inoperative position, a valve to cut off the supply of water to said basin, and a connecting-rod connecting the cable and said valve.



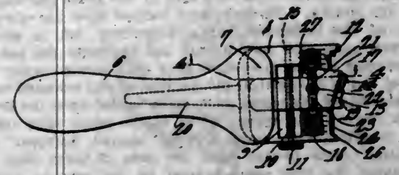
3. A drinking fountain consisting of a basin operably-mounted, means to supply said basin with water, a cable to turn said basin to an operative or inoperative position, a valve to cut off the supply of water, a connecting-rod connecting the cable and said valve, a handle on said connecting rod to move the same in one direction, and means to automatically move said connecting-rod in a reverse direction.

4. A drinking fountain, consisting of a casing having a compartment at the upper portion thereof, and troughs at the lower portion thereof, communicating with said compartment, a basin operably-mounted in the upper portion of said casing, means to supply said basin and the compartment with water, and means to automatically turn the basin to empty the water therein.

5. A drinking fountain, consisting of a basin, and heating means for sterilizing said basin.

[Claims 6 to 13 not printed in the Gazette.]

1,019,882. SHOEMAKER'S TOOL. PETER CARETTI, Connellsville, Pa. Filed Oct. 11, 1911. Serial No. 654,079. (Cl. 12—104.)

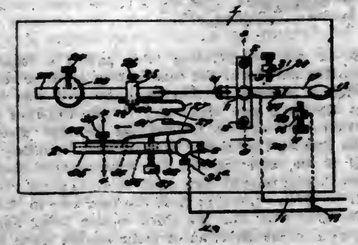


1. In a tool of the character described, a burnishing block having a series of graduated notches therein, a supplemental burnishing block adjustably mounted on the said block, a double leaf spring secured to the latter block and having the ends thereof pressed toward the notches to normally engage same, and means for raising the ends of the spring.

2. In a tool of the character described, a burnishing block having a series of graduated notches therein, a supplemental burnishing block adjustably mounted on the said block, a leaf spring secured to the latter block and having the ends thereof pressed toward the said notches to normally engage same, and the said spring having an elongated slot therein, and a rivet slidably arranged in the said slot and headed on each side of the spring and adapted to ride on the latter block to raise the end of the spring.

3. In a tool of the character described, a burnishing block having a series of graduated notches therein, a supplemental burnishing block adjustably mounted on the said block, a double leaf spring secured to the latter block and having the ends thereof pressed toward the said notches to normally engage same, and sliding members on the ends of the spring arranged to ride on the latter block to raise the ends of the spring.

1,019,883. TELEGRAPH-TRANSMITTER. JOHN A. COX and JEREMIAH H. KIDWELL, Parkersburg, W. Va.; said Cox assignor to said Kidwell. Filed Sept. 27, 1910. Serial No. 584,105. (Cl. 178—68.)



1. A transmitter including a key-lever having a contact point, a stationary member provided with a laterally extending arm, having an under cut recess, a spring conforming to and slidably seated in said recess the spring being provided with a contact point to coöperate with the first named contact point, and means extended through the spring to engage the bottom of the recess to hold the spring in adjusted positions.

2. A transmitter including a key-lever having a contact point, a stationary element and a spring one of which is dove-tailed into the other for sliding movement the spring being provided with a contact point to coöperate with the first named contact point, means extended through the spring to engage the bottom of the recess to hold the spring in adjusted positions, said stationary element having an adjusting member extending through it to engage said spring, to alter the position of the contact point of the spring, said member constituting means whereby the yielding action of the spring may be regulated.

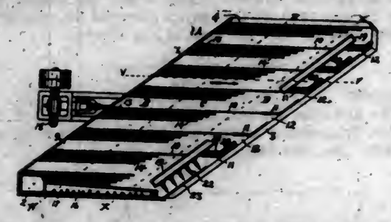
3. A transmitter including a rigid arm and a spring dove-tailed together for sliding movement, in one of which there is an adjustable element to engage the other; a key-lever provided with a contact; a contact upon the spring, adapted to engage the first named contact; and adjustable means in the arm, engaging the spring to alter the space between the contacts.

4. A device of the class described comprising a movable key member and a fixed supporting element; coöperating, contact-bearing springs slidably mounted upon the key member and upon the supporting element; an adjusting device in the supporting element, disposed at an acute angle to the spring which said element carries and bearing upon said spring, the adjusting device being movable transversely of said spring, and said spring being movable in opposite directions, transversely of the adjusting device.

1,019,884. ORE-CONCENTRATOR. EMIL DEISTER, Fort Wayne, Ind., assignor to The Deister Concentrator Company, a Corporation of Indiana. Filed Aug. 9, 1909. Serial No. 511,863. (Cl. 83—88.)

1. In an ore concentrating table having a transverse reciprocating movement the combination of three sections extending in parallel relation from the feed side to the tailings discharge side diagonally to the direction of reciprocation, and sloping toward the tailings discharge side, the first and second of said sections, counting from the end of the table opposite to the concentrates discharge.

sloping also toward each other so as to form a trough by the junction between them, and the third of said sections, being the section adjacent to the concentrates discharge end, approximately level in the direction of reciprocation when in operating position.



2. In an ore concentrating table having a transverse reciprocating movement the combination of three sections extending in parallel relation from the feed side to the tailings discharge side diagonally to the direction of reciprocation and sloping toward the tailings discharge side, the first and second of said sections, counting from the end of the table opposite the concentrates discharge end, also sloping toward each other so as to form a trough by their junction extending from the feed side to the tailings discharge side, and the third section being approximately level in the direction of reciprocation when in operating position, and a series of ridges having sloping sides and extending from the end of the table opposite the concentrates discharge end across said first and second sections at suitable distances apart to the inner edge of the third section.

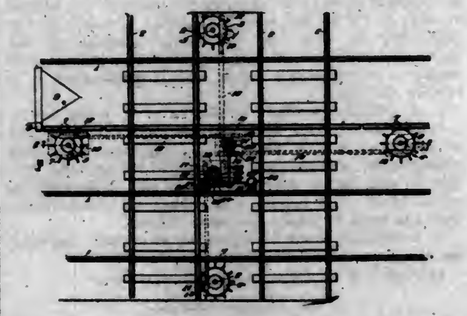
3. In an ore concentrating table having a reciprocating movement the combination of three sections extending in parallel relation from the feed side to the tailings discharge side diagonally to the direction of reciprocation and sloping alike toward the tailings discharge side, the first and second of said sections, counting from the end of the table opposite the concentrates discharge end, also sloping toward each other so as to form a trough by their junction extending from the feed side to the tailings discharge side, and the third of said sections being approximately level in the direction of reciprocation when in operating position, and a series of ridges having sloping sides and extending from the end of the table opposite the concentrates discharge end across said first and second sections at suitable distances apart to the inner edge of the third of said three sections, being the section adjacent to the concentrates discharge, and a series of riffles of like number with said series of ridges, one riffle being located on the crest of each ridge extending from the rear end to the forward end of the table.

4. In an ore concentrating table having a reciprocating movement and having a breastboard bordering the end of the table opposite the concentrates discharge end, the combination of three sections extending in parallel relation from the feed side to the tailings discharge side diagonally to the direction of reciprocation and sloping alike toward the tailings discharge side, the first and second of said sections, counting from the end of the table opposite the concentrates discharge end, also sloping toward each other so as form a trough by their junction extending from the feed side to the tailings discharge side, and the third of said sections being approximately level in the direction of reciprocation when in operating position, and a series of ridges having sloping sides and extending from the breastboard across said first and second sections at suitable intervals to the inner edge of the third of said three sections, and a series of riffles of like number with said series of ridges, one riffle being placed on the crest of each ridge and extending across said third section to the concentrates end of the table, and having a raised portion extending a suitable distance from the breastboard to prevent too great flow of water along that part of the table adjacent the breastboard.

5. In an ore concentrating table having a reciprocating movement the combination of three sections extending in parallel relation from the feed side to the tailings discharge side diagonally to the direction of reciprocation and sloping toward the tailings discharge side, the first and second of said sections, counting from the end of the table opposite the concentrates discharge end, also sloping toward each other so as to form a trough by their junction extending from the feed side to the tailings discharge side, and the third section being approximately level in the direction of reciprocation when in operating position, and a series of ridges having sloping sides and extending from the end of the table opposite the concentrates discharge end across said first and second sections at suitable distances apart to the inner edge of the third of said three sections, and a series of riffles of like number with said series of ridges placed on the crests of said ridges—one on each, extending across said third section to the outer edge thereof and thence along the outer edge of the table to a point suitably distant from the next similar riffle below it to leave a suitable opening for the discharge of concentrates, and having that portion thereof adjacent to the edge of the table and for a suitable distance back from said edge of suitably raised height to prevent overwash of the material being treated.

[Claims 6 and 7 not printed in the Gazette.]

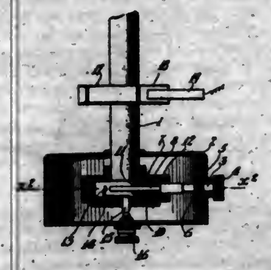
1,019,885. RAILWAY-SIGNAL. ANDREW C. ECHARD and GRANVILLE S. ALDERSON, Alderson, W. Va. Filed Nov. 22, 1910. Serial No. 593,690. (Cl. 246—48.)



The combination with a railway crossing, of a lantern located in a recess formed adjacent the said crossing, a horizontally disposed shaft mounted adjacent the recess, a crank arm formed upon one end of the shaft and engaging the lantern, a beveled pinion located upon the opposite end of the horizontal shaft, a vertical rod, a pinion formed upon said vertical rod and engaging the beforementioned beveled pinion, a spur gear located upon the lower end of the vertical rod, vertical shafts mounted upon either side of the recess, spur gears formed upon the lower ends thereof, trip wheels keyed to the upper ends thereof, longitudinally movable rods located adjacent the crossing, racks formed upon the ends of these rods for engaging the spur gears carried by the vertical shafts which support the trip wheels and also the opposite sides of the spur gear on the vertical rod located adjacent the lantern, whereby the said lantern will be successively raised out of and lowered into the recess upon the turning of the trip wheels, substantially as and for the purposes set forth.

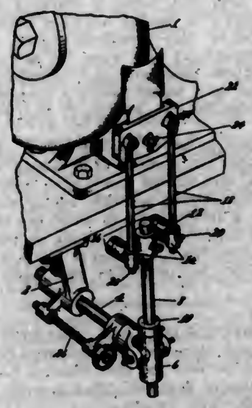
1,019,886. IGNITION TIMER AND DETECTOR. THOMAS C. FORBES, Los Angeles, Cal., assignor to Los Angeles Rotary Gas Engine Company, Los Angeles, Cal., a Corporation of California. Filed June 9, 1910. Serial No. 566,110. (Cl. 123—167.)

1. A shaft, a contact plunger slidable thereon and electrically grounded, a contact blade rotating with the shaft, a stationary terminal electrically connected with the contact blade, and a series of relatively stationary detector pins with which the contact plunger successively coacts and is moved thereby into electrical connection with said contact blade, each of said detector pins being movable out of the path of movement of the contact plunger to escape the same.



2. A case, a series of detector pins slidable in the case, means for yieldingly holding said detector pins inwardly, a shaft extending in the case, a block on the shaft, a contact plunger slidable radially of the shaft in said block, means for yieldingly holding the contact plunger extended to cause its end to engage with the respective detector pins and be moved inwardly, a contact blade carried by said block with which the contact plunger is moved into electrical connection by the detector pins, a stud rotating with the shaft and connected with the contact blade, a stationary binding post on said case having a stud in contact with the rotating stud.

1,019,887. GRINDING-MACHINE. ALFRED B. FOWLER, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 27, 1907, Serial No. 404,123. Renewed Jan. 18, 1912. Serial No. 671,884. (Cl. 51—7.)



1. A machine for grinding a concave edge upon a blade, having, in combination, a grinding wheel and means for guiding the blade across the face of the wheel in a path having an opposite curvature to that of the concave edge of the blade whereby the grinding action is effected at all times at a predetermined part of the path of the wheel, said means constructed to maintain the axis of the blade in a substantially parallel relation to the plane of movement of the wheel.

2. A machine for grinding a concave edge upon a cylindrically curved blade, having in combination, a grinding wheel arranged to be continuously actuated, means for receiving and sustaining a blade, said wheel and sustaining means being arranged for relative movement to subject different portions of the blade to the action of said wheel, and means for controlling said relative movement constructed to cause the action of said wheel upon the blade to be exerted at all times substantially longitudinally of the blade and to be effected at a predetermined part of the path of the wheel.

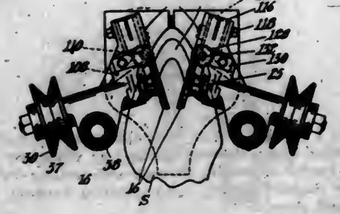
3. A machine for grinding a concave edge upon a cylindrically curved blade, having in combination, a grinding wheel, and a holder for guiding the blade across the face of the wheel arranged to maintain the axis of the blade in a substantially parallel relation to the plane of movement of the wheel and constructed to cause the grinding action to be effected at all times at a predetermined part of the path of the wheel.

4. A machine for grinding a concave edge upon a blade, having, in combination, a grinding wheel and means for guiding the blade across the face of the wheel in a path having an opposite curvature to that of the concave edge of the blade whereby the grinding action is effected at all times at a predetermined part of the path of the wheel, said means constructed to maintain the axis of the blade in a substantially parallel relation to the plane of movement of the wheel and to permit movement of said blade about a longitudinal axis.

5. A machine for grinding a concave edge upon a cylindrically curved blade, having in combination, a grinding wheel, a member arranged for movement about an axis parallel to that of the wheel and held from movement laterally of the wheel, a blade holder, and a plurality of parallel links pivotally mounted upon said member, pivotally connected to the holder and having a predetermined effective length.

[Claims 6 to 9 not printed in the Gazette.]

1,019,888. MACHINE FOR OPERATING UPON SOLES. FREDERICK M. FURBER, Revere, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Feb. 10, 1909. Serial No. 477,079. (Cl. 12—17.)



1. In a machine of the class described, the combination of a work rest, a relatively movable tool for operating upon work positioned by said rest, and means for actuating the tool continuously in both operative and inoperative positions, said tool being maintained normally in inoperative position with relation to the work but constructed and arranged to be moved automatically into operative position by the work as it is introduced into the machine and into inoperative position again as the work is withdrawn.

2. In a machine of the class described, the combination of a work rest, a tool, a tool carrier movable relatively to said rest for bringing the tool into operative relation with work positioned by said rest, and means upon said carrier constructed and arranged to be engaged and moved by the work and thereby to effect such relative movement of rest and carrier.

3. In a machine of the class described, the combination of a work rest, a tool, a tool carrier normally maintaining the tool in inoperative position with relation to work bearing against said rest, and means other than the tool carried by the tool carrier and constructed and arranged to be engaged and moved by the work as it is introduced into the machine to bring the tool into operative relation with the work.

4. In a machine of the class described, the combination of a substantially horizontal work table, a tool, means for

operating the tool continuously, a tool carrier normally maintaining the tool in inoperative position at a predetermined distance above the table and a stop connected with the carrier at the rear of the table constructed and arranged to be engaged and moved by the work as it is pushed over the table into the machine to bring the tool into operative relation with the work.

5. In a machine of the class described, the combination of a work rest, a relatively movable tool maintained normally in inoperative position with relation to work bearing against said rest, and means connected with but distinct from the tool and constructed and arranged to be moved to bring the tool into operative relation with work being introduced into the machine as soon as the edge of the work has reached a predetermined longitudinal position with relation to the tool and to maintain the tool in operative position until the edge of the work reaches such predetermined position as the work is being withdrawn.

[Claims 6 to 41 not printed in the Gazette.]

1,019,889. CHIMNEY CAP AND VENTILATOR. JOSEPH GEDDES, Rochester, N. Y. Filed Apr. 7, 1911. Serial No. 619,569. (Cl. 98—4.)



1. In a chimney cap or ventilator, the combination with a chamber into which the chimney or ventilator delivers, of an ejector extending through and entirely surrounded by the chamber having communication between its ends with said chamber.

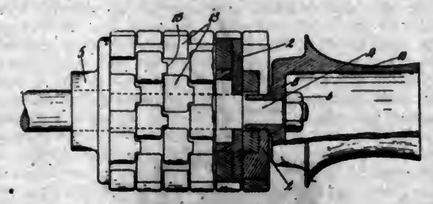
2. In a chimney cap or ventilator, the combination with a chamber into which the chimney or ventilator delivers, of an ejector connecting opposite walls of said chamber, extending through and entirely surrounded by the chamber and having communication between its ends with the said chamber.

3. In a chimney cap or ventilator, the combination with a chamber into which the chimney or ventilator delivers, of a pair of tubes alined with each other, spaced apart at the proximate ends and extending through the chamber to provide an ejector.

4. In a chimney cap or ventilator, the combination with a flue, of an enlarged chamber surmounting the flue, and an ejector formed by two alined tubes, one carried by the bottom wall and both of said tubes opening to the outside of the chamber, the inner proximate ends of the tubes being spaced apart to provide a communication with the interior of the chamber.

5. A chimney cap or ventilator comprising a flue, a flared portion at the upper end of the flue, a wall surmounting said flared portion and providing therewith a chamber, and two alined tubes, one carried by the flared portion and the other by the wall, said tubes opening to the exterior of the chamber and having their inner proximate ends spaced apart to provide communication with the chamber.

1,019,890. POUNDING-UP ROLL. JOSEPH GOULDBOURN, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Apr. 27, 1911. Serial No. 623,600. (Cl. 12—51.)



1. An apparatus of the class described having, in combination, a body roll, comprising a number of disks placed side by side, a plurality of beating members carried by each of the disks, the beaters being arranged to exert both a pounding-up and a smoothing action upon the surface of the material under theatment and means for driving the roll.

2. An apparatus of the class described having, in combination, a plurality of annular series of beating members, each of which members has a shank portion, a body roll comprising a cylindrical hub having a plurality of annular series of recesses or separate pockets for said shanks and in which the shanks are arranged to slide outwardly under the influence of centrifugal force when the roll is rotated, and means for limiting the outward movement of the beating members.

3. An apparatus of the class described having, in combination, a body roll having a plurality of recesses or slots, a plurality of annular series of beating members having shank portions adapted to slide outwardly therein under the influence of centrifugal force when the roll is rotated, the beating members in said annular series being arranged in staggered relation with one another.

4. An apparatus of the class described having, in combination, a body roll having a plurality of recesses or slots, a plurality of beating members having shank portions adapted to slide outwardly therein under the influence of centrifugal force when the roll is rotated, the beating members being arranged in annular series and staggered and each beater having a projection extending laterally across the line dividing it from the next annular series.

5. An apparatus of the class described having, in combination, a body roll made up of a number of disks placed side by side, each of the disks being provided with recesses or slots, beating members having shanks retained in said slots, a driving shaft to which one of said disks is secured, and interlocking projections on the beating elements compelling the other disks to rotate with the shaft.

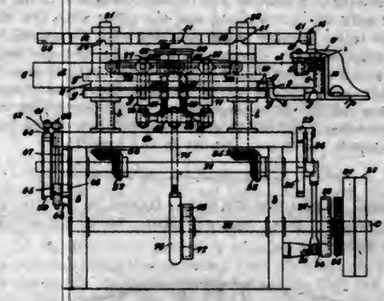
[Claims 6 to 8 not printed in the Gazette.]

1,019,891. MECHANISM FOR TRANSMITTING MOTION. JAMES HADCOCK, Whitkirk, near Leeds, England, assignor to Job Day and Sons Limited, Leeds, England, a Corporation of England. Filed Aug. 27, 1910. Serial No. 579,312. (Cl. 74—46.)

1. In a mechanism of the character described, a race therefor formed of an inner part having an outer vertical bearing face and a guiding groove in said face and an outer part spaced from the inner part and provided with parallel vertical bearing surfaces, means for connecting and retaining said parts of the race in proper relation to each other to form a rigid support and guide, and carriages adapted to travel on said race.

2. In a machine of the character described, an integral race way therefor comprising an outer part, an inner part spaced from the outer part, connecting means between said parts, said outer part having parallel vertical outer and inner bearing surfaces, and the inner part having a vertical face provided with a recess extending entirely around said part said race forming a rigid unitary support and guide, and carriages adapted to travel on said race.

3. A machine of the character described, comprising framework, a race formed of two connected spaced parts, one within the other and on different levels, said outer part having parallel vertical outer and inner surfaces and the inner part being provided with a continuous recess extending around the same formed in its outer vertical surface, a number of disconnected independent carriages embracing the outer part of the race and provided individually with means for retaining them on said race, an inwardly projecting arm on each carriage adapted to engage said recess in the inner part of the race for steadying the carriages as they are moved around said race, and means for imparting motion directly and individually to each carriage.



4. The combination of a race formed in two parts of different sizes provided with vertical faces and arranged one within the other, one of said parts having a perimetrical recess formed therein, arms for connecting the two parts of the race together, a plurality of independent carriages mounted on said race, each carriage adapted to contact with the adjacent carriage on opposite sides but disconnected therewith, and means for imparting motion directly and individually to each carriage for a portion of its travel, whereby all of said carriages through their contact with one another are caused to travel simultaneous around the race.

5. The combination of a race formed in two parts and having parallel vertical outer surfaces, a perimetrical recess being formed in the surface of one of said parts, and arms for connecting the two parts together, with a carriage mounted on said race adapted to embrace the race, and having upper and lower portions connected together by a vertical portion and provided with a part adapted to receive and support a tool, the lower portion of the carriage having a rearward extension, a runner mounted on said extension adapted to work in the perimetrical recess of the race, a number of vertical rollers mounted upon the carriage between its upper and lower portions and arranged to work against the outer vertical face of the larger part of the race, a roller mounted pendantly from the under surface of the upper portion of the carriage so as to work against the inner face of said larger part of the race, and a roller mounted vertically upon the upper portion of the carriage.

[Claims 6 to 13 not printed in the Gazette.]

1,019,892. RIFLING-MACHINE. BENGT M. W. HANSON, Hartford, Conn., assignor to Pratt & Whitney Company, Hartford, Conn., a Corporation of New Jersey. Filed Nov. 6, 1909. Serial No. 526,593. (Cl. 86—5.)



1. A tubular rifling rod provided with a rifling tool, a second rod inclosed in said tubular rod, means for intermittently operating the rifling tool whereby said tool will progressively deepen the groove, a taper controlling device coöperative with the tool and operative by said second rod, and means for pulling said second rod to cause the same to effect the action of said taper controlling device and thereby secure tapering of the groove.

2. A rifling rod provided with a rifling tool, a wedge acting against said tool to move the same radially of the rod, means for operating said wedge and thereby the tool to regulate the depth of cut, a second wedge active against the first wedge, means for moving the second wedge in the direction of the length of the rifling rod, and means for moving the tool in the opposite direction during the movement of the second wedge.

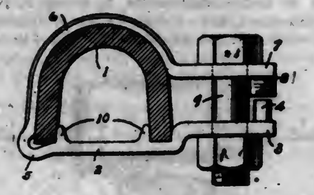
3. A rifling rod provided with a rifling tool, a wedge acting against said tool to move the same radially of the rod, a second wedge for also controlling the tool, means for moving the second wedge longitudinally of the rifling rod, and means for simultaneously moving the tool but in an opposite direction.

4. A rifling rod provided with a radially and longitudinally movable rifling tool, a movably mounted wedge for shifting said tool radially of the rod, spring operated means acting against the rifling tool and tending to move the same longitudinally of said rod, a second wedge controlling the position of the rifling tool, and means for imparting a movement to the second wedge in a direction opposite to the direction in which said spring operated means tends to move said rifling tool.

5. A tubular rifling rod having a slot, a rifling tool within said rod, the active portion of the tool being movable through said slot, a wedge active against said tool for moving the same radially to thereby govern the depth of cut, a second wedge directly active against the first wedge, means for drawing the second wedge away from the first wedge, and means for imparting a thrust to the rifling tool in a direction opposite to that of said draw.

[Claims 6 to 9 not printed in the Gazette.]

1,019,893. CLIP FOR GUARD-FINGERS. PHILIP B. HARRISON, Chicago, Ill., assignor to Chicago Railway Equipment Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 22, 1911. Serial No. 661,826. (Cl. 188—22.)



1. A brake beam clip for guard fingers and the like, having a refolded hinged portion connecting two walls thereof, said walls having registering lugs, stop projections on said lugs, and a fastening device passing through said lugs.

2. A brake beam clip for guard fingers, having a re-folded hinge portion connecting two walls thereof.

3. A brake beam clip, comprising a bottom wall provided with means for wedging the legs of the part of the brake beam on which the clip is mounted, and means for holding said clip in its wedged position.

4. A brake beam clip for guard fingers and the like, the same comprising two walls connected together by a hinge portion, said walls having outwardly extending projections, a fastening device passing through said projections, and means for wedging the part of the brake beam on which the clip is mounted into position.

1,019,894. ADJUSTABLE BRAKE-HEAD. PHILIP B. HARRISON, Chicago, Ill., assignor to Chicago Railway Equipment Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 22, 1911. Serial No. 661,827. (Cl. 188—28.)

1. The combination of a brake head having a circumferential opening in one wall thereof, a strap spanning said

opening and means in the form of a wedge key coöperating with the brake head and the end of said strap for clamping the head in position.

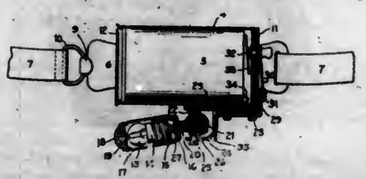


2. The combination of a brake head, a portion of whose rear wall is movable with respect to the remaining portions of said rear wall, and means, in the form of a wedge key, coöperating with the brake head and one end of said movable wall for forcing the latter inwardly against the part of the brake beam on which the head is mounted.

3. The combination of a brake head having a slot in one wall, a strap located in and spanning said slot, and means coöperating with both ends of the strap for moving the same with respect to the brake head.

4. The combination of a brake head having a slot in one wall, a strap spanning said slot, and means in the form of wedge keys coöperating with both ends of the strap for moving the same with respect to the brake head.

1,019,895. HEAD-LAMP. HAROLD M. HAYS, New York, and WILLIAM R. ROSENBAUM, Rochester, N. Y., assignors, by mesne assignments, to Frank S. Betz Company, Hammond, Ind., a Corporation of Illinois. Filed May 5, 1911. Serial No. 625,400. (Cl. 240—59.)



1. A head-lamp having, in combination, a battery-case provided with a head-piece adapted to rest against and conforming to the user's head, means for securing the battery-case in place on the head, and an electric lamp carried by the battery-case and connected therewith by a universal joint comprising both mechanical and electrical connections, whereby the lamp may be moved to vary the direction in which the light is projected.

2. A head-lamp having, in combination, a flat battery-case provided with a concave head-piece adapted to rest against and conform to the user's head, means for securing the battery-case upon the forehead, and an electric lamp provided with a condensing-lens and carried by the battery-case, the lamp being connected with the bottom of the case by a joint comprising both mechanical and electrical connections, so as to depend therefrom into a position between the eyes of the user, and being movable into position to direct the light in the line of vision.

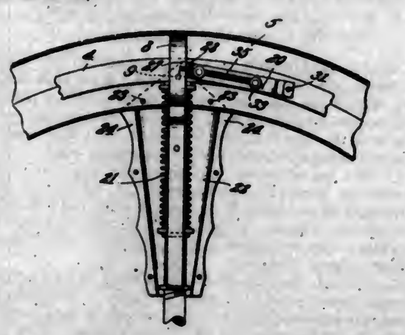
3. A head-lamp having, in combination, a flat, elongated battery-case, means for securing the battery-case upon the forehead of the user, and an electric lamp carried by the battery-case and connected therewith, at substantially the middle of the lower edge of the case, by means of a joint adapted to permit the lamp to be swung either into the plane of the battery-case or into a position normal to said plane.

4. A head-lamp having, in combination, a battery-case, means for securing the battery-case upon the head of the user, an electric lamp carried by the battery-case and connected therewith, at substantially the middle of the case, by a universal joint comprising both mechanical and electrical connections between the case and the lamp, and a switch at one end of the battery-case connected in series with the lamp through said joint.

5. A head-lamp having, in combination, a battery-case, an electric lamp, and a universal joint connecting the battery-case and the lamp and comprising coöperating ball-and-socket members, one of said members being connected with the battery-case and the other with the lamp, and the latter member being provided with a recessed surface substantially concentric with the ball-and-socket joint, and a resilient member fixed to the battery-case and engaging said surface so as to hold the ball-and-socket members resiliently in engagement while permitting relative movements thereof to adjust the position of the lamp.

[Claims 6 and 7 not printed in the Gazette.]

1,019,896. VEHICLE-WHEEL. HAYNS W. HENRY, Melvern, Kans. Filed Aug. 31, 1910. Serial No. 579,797. (Cl. 152—28.)



1. A wheel comprising a tire, a felly, a spoke secured to the felly, a yoke secured to the tire, a pair of collars on the spoke, a coiled spring on the spoke between the collars and means connecting the said collars to the yoke whereby the spring is compressed upon a radial movement of the tire.

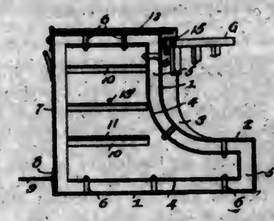
2. A wheel comprising a tire embodying a rim and a tread, a felly housed within but out of contact with the tire, spaced segmental filler blocks secured to the tire on each side of the felly, a yoke secured to the filler blocks, pairs of slide bars mounted on the spoke, a spring coacting with the slide bars, and bolts passing through the slide bars and the yoke whereby yielding of the tire will cause compression of the spring and thus the absorption of shocks.

3. A wheel comprising a tire, a felly, a spoke secured to the felly, a yoke secured to the tire, a pair of collars on the spoke, a coiled spring on the spoke between the collars, bars pivoted to the collars and having slots therein, and members passing through the said slots and engaging the yoke.

4. A wheel comprising a tire, a felly, a spoke secured to the felly, a yoke secured to the tire, a pair of collars on the spoke, a coiled spring on the spoke between the collars, adjustable members on the spoke to limit the movements of the respective collars, and means connecting the said collars to the yoke, whereby the spring is compressed upon a radial movement of the tire.

5. A wheel comprising a tire embodying a rim and a tread, a felly housed in but out of contact with the tire, spaced segmental filler blocks secured to the tire on each side of the felly, a yoke secured to the filler blocks and having an elongated opening in its bend, a spoke extending through said opening, pairs of slide bars arranged on each side of the spoke, a spring coacting with the slide bars, bolts passing through the slide bars and the yoke, and a housing around the yoke and secured in place by said bolts and by other bolts attaching to the rim.

1,019,897. OVEN. HENRY G. HOWELL, Anderson, S. C. Filed Mar. 25, 1911. Serial No. 616,823. (Cl. 126—274.)



1. The combination with a grate having a curved front, and a top bar, of an oven comprising an outer casing a chamber located therein and spaced apart therefrom, whereby an air space is formed between the walls of the chamber and casing, a slidable lid at the top of the oven adapted to be extended over the grate, and means for removably fastening the oven to the top bar of the grate, the rear of said oven being shaped to conform to the curved wall of the grate.

2. The combination with a grate, of an oven comprising an outer casing having the rear wall thereof shaped to conform to the contour of the grate, an inner chamber conforming in shape to the outer chamber but spaced apart therefrom, whereby a hot air space is formed between the walls of the casing and chamber, a roasting rod extending through the oven, a slidable lid mounted on top of the oven and adapted to be extended over the grate, a door for the oven, and means for removably securing the oven to the grate.

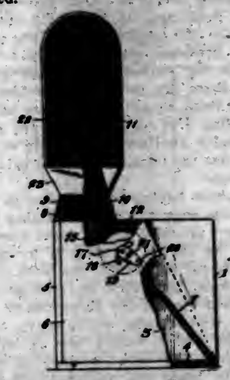
1,019,898. RESILIENT HEEL. LOUIS N. JACOBI, Chicago, Ill. Filed Feb. 24, 1911. Serial No. 610,510. (Cl. 36—35.)



A resilient heel, comprising upper and lower leather sections; an intermediate rubber section, said sections being of similar peripheral forms and sewed together adjacent their peripheries, said intermediate section being provided with a medial oblong opening; a metallic plate of the same form and fitted into the bottom of said opening upon said rigid section, said plate being provided with upwardly extending ears at its edges, and a coiled compression spring fastened upon said plate by means of said ears and having its upper end resting in engagement with the underside of said upper section, substantially as described.

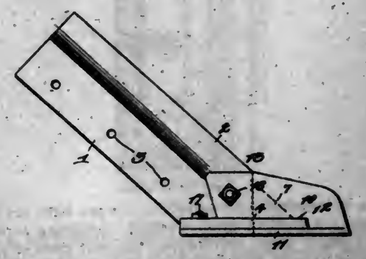
1,019,899. FLY-TRAP. JOHN E. JORDAN, Lott, Tex. Filed May 1, 1911. Serial No. 624,287. (Cl. 43—32.)

1. A fly trap, including a casing open at the top, a bar extending across the casing from one side to the other at the top and spaced from one side of the casing, a revoluble drum mounted in the casing, the casing being provided with an inclined wall leading upwardly and inwardly to the drum with its inner and upper edge spaced therefrom, the drum being located between the inner edge of the inclined wall and the side bar, an upwardly tapering entrance cage resting on the top of the box and having one side engaging said bar, means for rotating said drum, and a removable cage fitting detachably upon the entrance cage above the lower end of the latter, for the purpose specified.



2. A fly trap of the class described, including a casing open at the top and having an inwardly and upwardly inclined wall, a bar extending across the top and spaced from one side of the casing, a revoluble drum mounted in the casing between the inner edge of the inclined wall and the bar and spaced from said edge and bar, the distance between the drum and the edge of the wall being greater than the distance between the drum and the adjoining edge of the bar, means for rotating said drum, a pyramidal entrance cage supported at its lower end on said bar and the adjoining upper edges of the casing, and a detachable cage having a contracted lower end adapted to fit the entrance cage above the bottom of the latter, the detachable cage and entrance cage being provided with foraminous walls, the disposition of the detachable cage on the entrance cage exposing a portion of the foraminous walls of the latter below the detachable cage.

1,019,900. PLOW. WILLIAM H. KLINE, Herscher, Ill. Filed Nov. 8, 1911. Serial No. 659,118. (Cl. 97—22.)



1. A plow share having a sole-flange on its under side spaced from its landside edge, in combination with a point having a landside formed therewith and extending rearwardly therefrom to bear against the outer side of the sole-flange and under the projecting landside edge of the share.

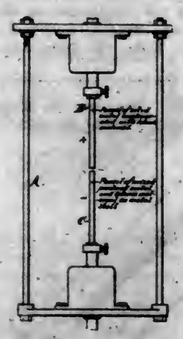
2. A plow share having a sole-flange on its under side spaced from its landside edge and also projecting from its front side, in combination with a point having a landside formed therewith and extending rearwardly therefrom to bear against the outer side of the sole-flange and under the projecting landside edge of the share, the

point being further provided with a slot in its under side to receive the projecting front portion of the sole-flange of the share.

3. A plow share having a sole-flange on its under side near its landside edge and also projecting from its front side and further provided with a front corner recessed on its upper side so that a shoulder is formed at the rear side of said recess, in combination with a point having a landside formed therewith and extending rearwardly therefrom to bear against the outer side of the sole-flange and under the landside edge of the share, the point being further provided with a vertical slot in its under side to receive the projecting front portion of the sole-flange of the share and being also provided with a recess to receive the front corner of the share and with a rearwardly extending arm to bear under the share, the rear edge of the point abutting against the said shoulder of the share so that the upper side of the point is flush with that of the share.

4. A plow share having a sole-flange on its under side near its landside edge and also projecting from its front side and further provided with a front corner recessed on its upper side so that a shoulder is formed at the rear side of said recess, in combination with a point having a landside formed therewith and extending rearwardly therefrom to bear against the outer side of the sole-flange and under the landside edge of the share, the point being further provided with a vertical slot in its under side to receive the projecting front portion of the sole-flange of the share and being also provided with a recess to receive the front corner of the share and with a rearwardly extending arm to bear under the share, the rear edge of the point abutting against the shoulder of said share so that the upper point of the shoulder is flush with that of the share and means to detachably connect the share and the point together.

1,019,901. APPARATUS FOR PRODUCING THE ARC-LIGHT. ISADOR LADOFF, Cleveland, Ohio, assignor of thirty one-hundredths to Philip C. Peck, New York, N. Y. Filed June 17, 1908. Serial No. 438,886. (Cl. 176—121.)



1. In an apparatus for producing the arc light the combination of a positive upper electrode consisting throughout of a single, solid, continuously coherent mass of metal containing therein homogeneously disseminated particles of titanic material, and a negative lower electrode composed essentially of an incoherent aggregation of powdered iron having therewith homogeneously conglomerated titanic material and contained in an attenuated metal shell.

2. In an apparatus for producing the arc light the combination of a positive upper electrode consisting throughout of a single solid continuously coherent mass of iron containing therein homogeneously disseminated particles of titanium oxid, and a negative lower electrode composed essentially of an incoherent aggregation of powdered iron having therewith homogeneously conglomerated titanium oxid and contained in an attenuated metal shell.

3. In an apparatus for producing the arc light the combination of a positive upper pencil consisting throughout of a single, solid, continuously coherent mass of metal containing therein homogeneously disseminated particles of titanic material, and a negative lower pencil composed essentially of an incoherent aggregation of powdered iron having therewith homogeneously conglomerated titanic material and contained in an attenuated metal shell, the diameter of said positive upper pencil being greater than the diameter of said lower negative pencil.

1,019,902. ELECTRICAL CONDUCTOR FOR LIGHTING PURPOSES. ISADOR LADOFF, Cleveland, Ohio, assignor, by direct and mesne assignments, of fifteen one-hundredths to Walter D. Edmonds, Boonville, N. Y., fifteen one-hundredths to Philip C. Peck, New York, N. Y., and seventy one-hundredths to Anna M. Ladoff. Original application filed Jan. 4, 1904, Serial No. 187,698. Divided and this application filed Feb. 10, 1909. Serial No. 477,204. (Cl. 176—136.)

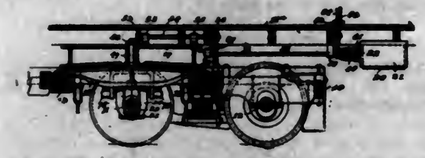
1. An arc light electrode consisting essentially of silica associated with metal and characterised as producing a flaming or luminous arc.

2. An arc light electrode consisting essentially of silica associated with iron and characterised as producing a flaming or luminous arc.

3. An arc light electrode containing at least 15 per cent. of silica mixed with metal and characterised as producing a flaming or luminous arc.

4. An arc light electrode containing at least 15 per cent. of silica mixed with iron and characterised as producing a flaming or luminous arc.

1,019,903. MEANS FOR TRANSMITTING POWER FROM AXLES TO BODIES OF RAILWAY-CARS. LOUIS T. MANN, Chicago, Ill. Filed June 3, 1907. Serial No. 376,963. (Cl. 105—238.)



1. In a mechanism of the character described, the combination with a car-body and a truck, of a dynamo located beneath the floor of the car-body, and power-transmitting mechanism extending from an axle of the truck to said dynamo and in part disposed substantially coincident with the vertical axis or center of relative movement of the truck and car-body, substantially as described.

2. In a mechanism of the character described, the combination with a car-body and a truck, of a dynamo located beneath the floor of the car-body, power-transmitting gearing connected to said dynamo and in part disposed substantially coincident with the vertical axis or center of relative movement of the truck and car-body, and means actuated by an axle of the truck for driving said power-transmitting gearing always in one direction irrespective of the direction of rotation of said axle, substantially as described.

3. In a mechanism of the character described, the combination with a car-body and a truck, of a dynamo located beneath the floor of the car-body, a power-transmitting shaft disposed substantially coincident with the vertical axis or center of relative movement of said truck and car-body, gearing connecting the upper end of said shaft with said dynamo, and gearing carried by an axle of the truck and connected to the lower end of said shaft, said last-named gearing being adapted to drive said shaft always in the same direction irrespective of the direction of rotation of said axle, substantially as described.

4. In a mechanism of the character described, the combination with a car-body and a truck, of a dynamo located beneath the floor of the car-body, a power-transmitting shaft disposed substantially coincident with the vertical axis or center of relative movement of said truck and car-body, gearing connecting the upper end of said shaft to said dynamo, a gear on the lower end of said shaft, a pair of gears on an axle of the truck in driving engagement with opposite sides of said last-named gear, and automatic oppositely acting clutch connections between said axle gears and the axle, substantially as described.

5. In a mechanism of the character described, the combination with a car-body and a truck, of a dynamo located beneath the floor of the car-body and having a substantially horizontal armature shaft arranged longitudinally of the car-body, a power-transmitting mechanism extending from an axle of the truck to said armature shaft, said power-transmitting mechanism including a part disposed substantially coincident with the vertical axis or center of relative movement of the truck and car-body, and a part extending beneath and longitudinally of the car-body and connected to said armature shaft, substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

1,019,904. GRIPPER. RONALD F. MCFEELY, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed June 7, 1910. Serial No. 565,628. (Cl. 12—11.1.)



1. A gripper having coöperating jaws, the gripping faces of which are provided with flutes which taper toward their lower edges from a maximum depth at the upper ends of the flutes.

2. A gripper comprising coöperating jaws, the gripping faces of which are provided with flutes which taper in depth and terminate near the lower edges of the jaws.

3. A gripper having coöperating jaws, the gripping faces of which are uninterrupted at their lower edges and fluted about said edges.

4. A gripper having coöperating jaws, the lower edges of which are formed to hold the gripped portion of upper which is adjacent to the edge of the last in a substantially smooth condition and which are formed above said lower edges to crimp the upper.

5. A gripper having curved sectional jaws adapted to seize a substantially continuous portion of upper extending from one side of the shoe around the toe to the other side and having their gripping faces formed to crimp the gripped portion of the upper.

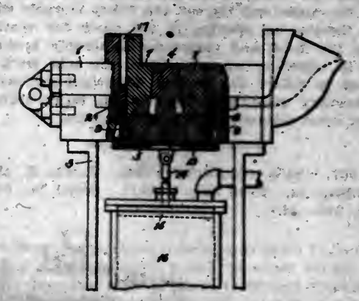
[Claims 6 to 11 not printed in the Gazette.]

1,019,905. CASTING APPARATUS. GEORGE F. MCKEE and WILLIAM F. SCHILLING, Aspinwall, Pa., assignors to McKee-Schilling Permanent Mold Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Mar. 10, 1909. Serial No. 482,511. Renewed Aug. 5, 1911. Serial No. 642,491. (Cl. 22—170.)

1. A collapsible core comprising in combination a central pin, a plurality of tapered sections arranged thereabout and lost motion connections between the central pin and the said sections.

2. A collapsible core comprising in combination a central pin, a plurality of core sections arranged thereabout and lost motion connections between the central pin and the said core sections adapted to permit successive movement of the core sections.

3. A collapsible core comprising in combination a central pin, a plurality of tapered core sections arranged thereabout, lost motion connections between the central pin and the said sections, and means for holding the sections against lateral displacement.

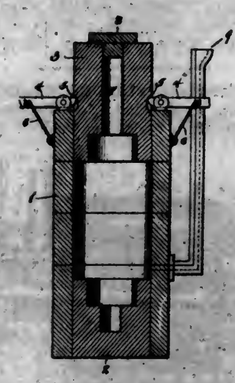


4. A collapsible core comprising in combination a central pin, sets of wedge sections arranged thereabout, and lost motion connections between the central pin and the said sections, whereby the sets of sections are moved successively.

5. In combination a collapsible core comprising a plurality of interlocking wedge sections movable longitudinally relatively within fixed limits, means for maintaining the sections against relative lateral displacement, and means secured to one of the sections for moving the sections to operative position.

[Claims 6 to 21 not printed in the Gazette.]

1,019,906. CASTING APPARATUS. GEORGE F. MCKEE and WILLIAM F. SCHILLING, Aspinwall, Pa., assignors to McKee-Schilling Permanent Mold Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Mar. 10, 1909. Serial No. 482,512. Renewed Aug. 5, 1911. Serial No. 642,492. (Cl. 22—147.)



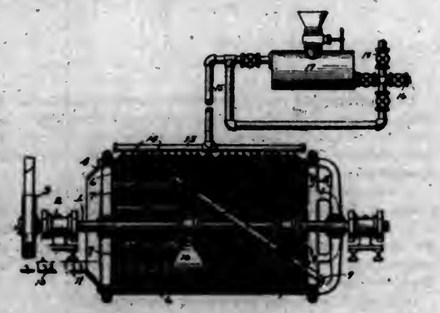
1. A permanent casting apparatus comprising in combination, a main mold portion, a supplemental mold portion mounted in the upper end thereof and freely movable with respect thereto, and means for detachably holding the supplemental mold portion in raised position, the said portion being adapted to follow the casting downward as the latter shrinks in cooling when the holding means is released.

2. A permanent casting apparatus comprising in combination a main metal mold portion, a heavy supplemental metal mold portion mounted in the upper end of the main mold portion and freely movable with respect thereto, and means for detachably holding the supplemental mold portion in raised or upper position, the said portion being

adapted to follow the casting downward and exert pressure thereon as it shrinks in cooling upon release of the holding means.

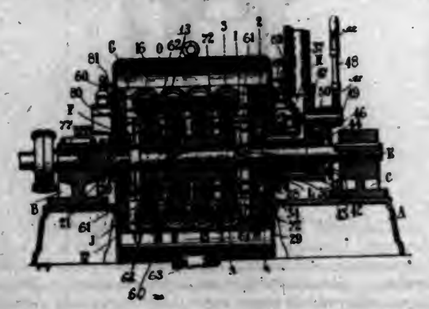
3. A permanent casting apparatus comprising in combination a main mold portion, a heavy metal block mounted in the upper end thereof and freely movable with respect thereto, an opening in the block for venting or gating the mold, and means for detachably holding the block in raised or upper position, the said block being adapted to follow the casting downward automatically and exerting pressure thereon as the latter shrinks in cooling upon release of the holding means.

1,019,907. SEWAGE-SEPARATOR. JAMES S. MILLER, Reading, Pa. Filed July 5, 1911. Serial No. 636,826. (Cl. 210—14.)



In a sewage separator, the combination of a cylinder made up of a pair of spiders, a series of longitudinal bars and wire screen sections connecting the bars; a power shaft on which the cylinder is mounted; a series of screw blades secured to the inside of the longitudinal bars; a series of wire mesh buckets secured to the inside of the cylinder; a central, inclined conveyer chute supported on the power shaft inside the cylinder; a counter balance for keeping the chute in normal position when the cylinder revolves and means comprising a series of spray nozzles for cleansing the screen sections in the cylinder.

1,019,908. ROTATING-CYLINDER ENGINE. WILLIAM EDGAR MINUE, Fredericton, New Brunswick, Canada. Filed Sept. 21, 1910. Serial No. 583,087. (Cl. 121—64.)



1. In an engine and in combination two rotary members mounted with freedom to rotate about eccentric axes, means for limiting the oscillatory movement of one rotary member with respect to the other, cylinders carried by one rotary member, pistons carried by the other rotary member, said pistons and cylinders being connected in such a way that they will cause the members to continuously rotate about their own axes and at the same time oscillate with respect to each other.

2. In an engine and in combination two rotary members eccentrically mounted with respect to each other and adapted to have a relative oscillatory movement, diametrically opposite tangential pistons all connected to one rotary member, cylinders for said pistons connected to the other rotary member, said cylinders and pistons being adapted to simultaneously exert a pressure between said members in the same direction on opposite sides of the center.

3. An engine having two rotary members one within the other and eccentrically mounted with freedom to rotate about eccentric axes, means for limiting the oscillatory movement of one rotary member with respect to the other and fluid pressure pistons carried by one member and cylinders carried by the other member, said pistons and cylinders being operatively connected between two members in such a way that they will cause the members to continuously rotate about their own axes and at the same time oscillate with respect to each other.

4. In an engine, and in combination, two rotary members eccentrically mounted with respect to each other and adapted to have a relative oscillatory movement, diametrically opposite and tangentially disposed pistons, on one member and cylinders on the other member, said pistons and cylinders extending between the rotary members and adapted to simultaneously exert a pressure on opposite sides of the center in the same direction.

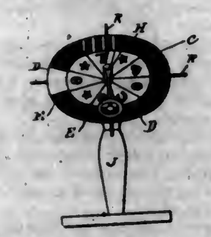
5. In an engine and in combination, two rotary members eccentrically mounted with respect to each other and adapted to have a relative oscillatory movement while rotating about their own axes, one of said members having a plurality of radial arms, tangentially arranged cylinders on the other member, pistons for the cylinders and links connecting the pistons with the arms.

[Claims 6 to 24 not printed in the Gazette.]

1,019,909. METHOD OF TREATING FABRICS. ALEXANDER T. MOORE, New Orleans, La. Filed Dec. 13, 1909. Serial No. 532,918. (Cl. 99—8.)

The method of treating fabrics consisting in saturating them with a saline solution composed of substantially five gallons of water and fifty pounds of sodium chlorid, removing the moisture from the fabric, and subsequently subjecting it to a bath of heated paraffin.

1,019,910. CHANCE DEVICE. ALLAN C. NELSON, Flushing, N. Y. Filed Aug. 13, 1909. Serial No. 512,732. (Cl. 46—63.)



1. A chance device or indicator comprising a revoluble disk having corrugations or indentations on its face, and a roller adapted to roll over said corrugations, the roller having an axle pivoted at the pivotal point of the disk.

2. A chance device or indicator comprising a revoluble disk inclined to the vertical and provided with corrugations or indentations on its upper face, and a roller hung from the center of the disk and adapted to roll over said corrugations when the disk is rotated.

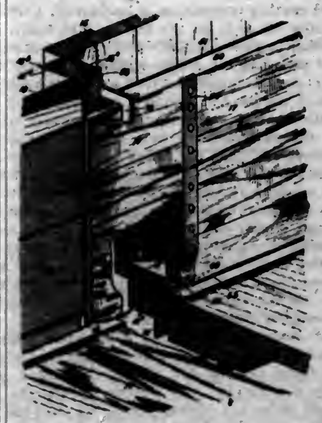
3. A chance device or indicator comprising a revoluble disk pivotally mounted at an angle and provided on its periphery with corrugations or indentations, and a roller loosely hung from the pivotal point of said disk and adapted to roll over said corrugations when the disk is rotated.

4. A chance device or indicator comprising a revoluble disk, a pivot for said disk inclined to the vertical, corrugations or indentations around the periphery of the upper face of said disk, a radial axle loosely pivoted on the pivot of said disk, and a wheel or roller loosely mounted at the outer end of said axle and adapted to roll over said corrugations when the disk is rotated.

5. A chance device or indicator comprising a revoluble disk inclined at an angle and having corrugations or indentations around the periphery of its upper face, a series of designations on the disk corresponding to the number of corrugations, and a roller pivotally mounted from the center of the disk and adapted to roll over said corrugations when the disk is rotated.

[Claim 6 not printed in the Gazette.]

1,019,911. CAR. SPENCER OTIS, Chicago, Ill., assignor to National Dump Car Company, Chicago, Ill., a Corporation of Maine. Filed July 13, 1909. Serial No. 507,339. (Cl. 105—14.)



1. In a car of the character described, a transverse sill of hollow form, a rack mounted in the interior thereof, and a drop door operating mechanism comprising a pinion engaging said rack.

2. In a car of the character described, transverse hollow sills provided with double vertical webs, a rack mounted on the interior face of one of said webs, drop doors adjacent said sills, and operating mechanism comprising a pinion engaging said rack.

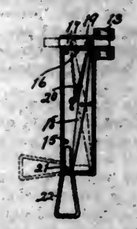
3. In a car of the character described, a transverse hollow sill provided with double vertical webs, a rack mounted on the interior face of one of said webs, drop doors adjacent to said transverse sill, a movable shaft beneath said doors, a pinion on said movable shaft meshing with said racks and operating mechanism connected with said movable shaft.

4. In a car of the character described, a side wall having a door opening with beveled edges, a door for said opening having beveled edges to match said door opening and comprising a metal plate provided with a wood backing, said door being pivoted to the base of the side wall and adapted to swing to a horizontal position to serve as an auxiliary floor member, in which position the said beveled edge acts as a connecting strip between the upper level of said door member and the main floor of said car.

5. In a car of the character described, a side wall supported by a side sill comprising an angle bar, said angle bar having its horizontal leg inwardly directed, and a water-tight joint construction comprising a metal reinforcing strip having a downwardly depending flange on its outer side, said flange fitting over said angle bar, said reinforcing strip having an upwardly extending rib, said rib being covered by a grooved wooden strip, the groove of which registers with the rib of said reinforcing strip.

[Claims 6 to 13 not printed in the Gazette.]

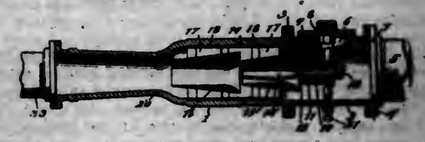
1,019,912. HANGER FOR SCREENS AND SASH. MARTIN C. PALMER, Des Moines, Iowa. Filed Mar. 1, 1911. Serial No. 612,108. Renewed Oct. 23, 1911. Serial No. 656,315. (Cl. 16—48.)



1. A hanger comprising a housing adapted to be mounted on the outer surface of a sash or screen frame, a bolt slidingly mounted in and adapted to project at either end from the upper end portion of said housing, a pivot clip adapted to be mounted on the outer surface of a frame and adapted to receive and pivot said bolt, a lever within said housing and fulcrumed intermediate of its ends to said housing, said bolt formed with a notch opening downwardly, the upper end portion of said lever extending loosely within the notch in the bolt, a spring within the housing impinging one end portion of said lever, a crank arm of a length adapted to extend through and journal in said sash or screen frame and having its laterally bent end portion within the housing and in engagement with the lower end portion of said lever, and a looped handle pivoted to the inner end portion of said crank arm and adapted to depend therefrom at times parallel with the inner face of the sash or screen frame.

2. A hanger, comprising a pivot clip, a housing, a bolt arranged for rectilinear reciprocation transversely of said housing and also arranged for pivotal connection with said clip, said bolt formed with a notch opening within the housing, a lever within the housing engaging the notch in said bolt, said lever spring-pressed in one direction, a crank arm extending within said housing and adapted to engage said lever, and a looped handle pivoted on the inner end of said crank arm and adapted for manual actuation to oscillate said lever against the spring pressure.

1,019,913. PRESSURE-TRANSFORMER. WILLIAM H. PEARCE, Chicago, Ill. Filed Nov. 7, 1910. Serial No. 590,982. (Cl. 162—1.)



1. In a device of the character described, the combination of a shell or housing having inlet and outlet openings adapted to be connected up in a low pressure fluid piping system, said housing being provided with a combining passage, and an annular inlet nozzle for high pressure fluid disposed between the inlet opening of the housing and said mixing passage, said nozzle being provided with a central opening in line with said inlet opening of the housing and said mixing passage.

2. In a device of the character described, the combination of a shell or housing having inlet and outlet openings adapted to be connected up in a low pressure fluid piping system, said housing being provided with a combining passage, and an annular inlet nozzle for high pressure fluid disposed between the inlet opening of the housing and said mixing passage, said nozzle being provided with a central opening in line with said inlet opening of the housing and said mixing passage, said central open-

ing being provided with a tubular extension projecting into said mixing passage.

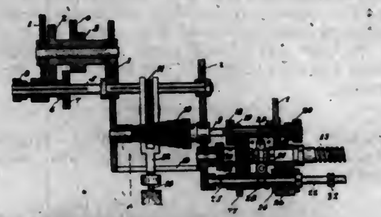
3. In a device of the character described, the combination of a housing open at each end, a combining tube in said housing in line with the end openings, an annular inlet nozzle for high pressure fluid disposed between said combining tube and one of said end openings, and a low pressure tube extending through said nozzle and combining tube and forming an annular combining passage.

4. In a device of the character described, the combination of a housing provided with inlet and outlet end openings and adapted to be connected in a low pressure piping system, an annular inlet nozzle for high pressure fluid disposed between said end openings, a combining tube disposed co-axially with and between said nozzle and outlet end opening, said tube being flared outwardly toward the high pressure inlet, and a tube for low pressure fluid extending through the annular nozzle and said mixing tube, the last said tube being largest adjacent the point at which the flared portion of said combining tube begins.

5. In a device of the character described, the combination of a housing provided with inlet and outlet end openings and adapted to be connected in a low pressure piping system, an annular inlet nozzle for high pressure fluid disposed between said end openings, a combining tube disposed co-axially with and between said nozzle and outlet end opening, said tube being flared outwardly toward the high pressure inlet, a tube for low pressure fluid extending through the annular nozzle and said mixing tube, the last said tube being largest adjacent the point at which the flared portion of said combining tube begins, and a second combining tube disposed between the first combining tube and the outlet end opening.

[Claims 6 to 8 not printed in the Gazette.]

1,019,914. FEED-GEARING. JOHN R. PERRINE, Cincinnati, Ohio, assignor to The Cincinnati Lathe & Tool Company, Cincinnati, Ohio. Filed July 26, 1911. Serial No. 640,613. (Cl. 82—26.)



1. Feed gearing comprising, a lead-screw, a first splined shaft, a cone of gears on the first splined shaft, a second splined shaft, a pinion splined on the second splined shaft, a tumbler engaging the second splined shaft and said pinion, an intermediate gear carried by the tumbler and engaging said pinion and adapted to engage any selected gear of the cone of gears, a pair of diversely sized gears fast to each other loose on the lead-screw, a pair of gears splined on the first-mentioned splined shaft and adapted to engage one or the other of the diversely sized gears on the lead-screw, and a clutch adapted to engage the lead-screw with the pair of diversely sized gears thereon, combined substantially as set forth.

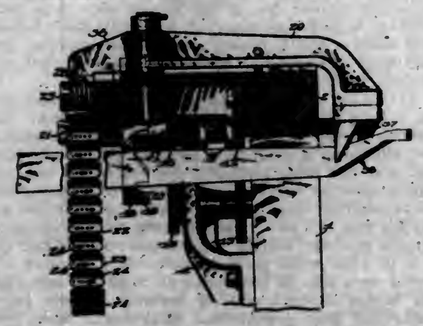
2. Feed gearing comprising, a feed-rod, a first splined shaft, a cone of gears on the first splined shaft, a second splined shaft, a pinion splined on the second splined shaft, a tumbler engaging the second splined shaft and said pinion, an intermediate gear carried by the tumbler and engaging said pinion and adapted to engage any selected gear of the cone of gears, a clutch adapted to lock the feed-rod to the gear thereon, a pair of diversely sized gears mounted for rotation between the feed-rod and the first splined shaft, a pair of gears splined on the first-mentioned splined shaft and adapted to engage one or the other of said diversely sized gears, and a gear fast with said pair of diversely sized gears and engaging the gear on the feed-rod, combined substantially as set forth.

3. Feed gearing comprising, a lead-screw, a first splined shaft, a cone of gears on the first splined shaft, a second splined shaft, a pinion splined on the second splined shaft, a tumbler engaging the second splined shaft and said pinion, an intermediate gear carried by the tumbler and engaging said pinion and adapted to engage any selected gear of the cone of gears, a pair of diversely sized gears loose on the lead-screw, a pair of gears splined on the first-mentioned splined shaft and adapted to engage one or the other of the diversely sized gears on the lead-screw, a clutch adapted to engage the lead-screw with the diversely sized gears thereon, a feed-rod, a gear loose on the feed-rod, a gear fast with the gears on the lead-screw and engaging the gear on the feed-rod, and a clutch adapted to lock the feed-rod to the gear thereon, combined substantially as set forth.

4. Feed gearing comprising, a lead-screw, a first splined shaft, a cone of gears on the first splined shaft, a second splined shaft, a pinion splined on the second splined shaft, a tumbler engaging the second splined shaft and said pinion, an intermediate gear carried by the tumbler and engaging said pinion and adapted to engage any selected gear of the cone of gears, a pair of diversely sized gears loose on the lead-screw, a pair of gears splined on the first-mentioned splined shaft and adapted to engage one or the other of the diversely sized gears on the lead-screw, a clutch adapted to engage the lead-screw with the diversely sized gears thereon, a feed-rod, a gear loose on the feed-rod, a gear fast with the gears on the lead-screw and engaging the gear on the feed-rod, a clutch adapted to lock the feed-rod to the gear thereon, and a double-armed lever engaging said two clutches and serving to release one of the clutches when the other clutch is engaged, combined substantially as set forth.

5. Feed gearing comprising, a feed-rod adapted for rotary and endwise motion, a gear loose on the feed-rod, selective speed gearing for turning said gear, a clutch carried by the feed-rod and serving to lock the feed-rod to the gear thereon, a spring urging the feed-rod endwise and holding said clutch normally in engagement, and a stop-collar adjustable lengthwise of the feed-rod and adapted to be engaged by a lathe carriage, combined substantially as set forth.

1,019,915. PATTERN-CONTROLLED MEANS FOR DISTRIBUTING HEDDLES OR THE LIKE. BURT A. PETERSON, Rockford, Ill., assignor, by mesne assignments, to Barber-Colman Company, Rockford, Ill., a Copartnership. Filed Feb. 17, 1908. Serial No. 416,205. (Cl. 139—87.)



1. The combination, with a pivoted switch arm, and means for swinging said arm, of a pattern chain, and means interposed between the pattern chain and the switch arm whereby the movement of the pattern chain will determine the extent of swinging movement of the switch arm.

2. The combination, with a switch arm, and means for moving said arm of a plurality of receiving elements movable by said switch arm, and means to limit the movement of said switch arm.

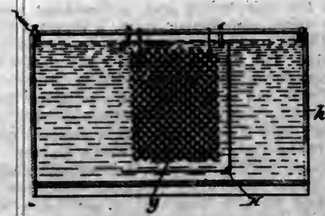
3. The combination, with a switch arm, of a plurality of receiving elements movable by said switch arm, and intermittently actuated stop arms for limiting the movement of the switch arm.

4. The combination, with a switch arm, of a plurality of receiving elements movable by said switch arm, a pattern chain, and means interposed between the pattern chain and the switch arm for limiting the movement of said switch arm.

5. The combination with a switch arm, of receiving elements movable by said switch arm, stop bars for limiting the movement of said switch arm, and a pattern chain having pins adapted to contact with said stop bars to determine which bar is to control the switch arm.

[Claims 6 to 16 not printed in the Gazette.]

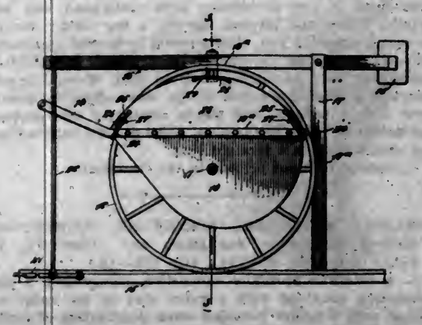
1,019,916. PROCESS FOR MAKING RADIATORS. JOSEPH PORZEL, Buffalo, N. Y. Filed July 8, 1910. Serial No. 571,002. (Cl. 22—188.)



1. The hereindescribed method of producing radiators comprising casting a matrix of fusible material in a mold having parts of flexible material, removing said matrix from the mold and electrolytically depositing thereon a radiator shell, and then removing the matrix from the shell by fusion.

2. The hereindescribed method of producing a cellular radiator comprising casting a matrix of metal fusible at a low temperature in a mold having its cell forming parts constructed of rubber, removing said matrix from the mold and electrolytically depositing thereon a shell of metal fusible at a higher temperature than the matrix, and then removing the matrix from the shell by fusion.

1,019,917. CONCRETE-MIXER. ARTHUR W. RANSOME, New York, N. Y. Filed Apr. 6, 1908. Serial No. 425,451. (Cl. 83—73.)



1. A device for mixing concrete comprising a cart body, an axle to which the body is fastened, cart wheels loose on the said axle, means for releasably holding the wheels against movement, a cover for the cart body arranged to move in and out of action, in unison with the means for holding the wheels and means for imparting rotation to the said axle, such means having releasable connection therewith.

2. A device for mixing concrete comprising a cart body, an axle to which the body is fastened and with which it may rotate, cart wheels loose on the said axle, means for releasably holding the wheels against movement, a cover for the cart body, means connecting the cover with the means for holding the wheels whereby to move the cover in and out of position in unison with such means for holding the wheels.

3. A device for mixing concrete comprising a cart body, an axle to which the body is fastened and with which it may rotate, cart wheels loose on the said axle, means for releasably holding the wheels against movement, a cover for the cart body, means connecting the cover with the means for holding the wheels whereby to move the cover in and out of position in unison with such means for holding the wheels, and releasable latches for securing the cover in position.

4. In a device for mixing concrete the combination of a wheeled cart, releasable means for holding the cart wheels against movement, releasable means independent of the cart for rotating the body of the cart while the wheels are stationary, and a cover for the cart body carried by said first-mentioned means when the latter is in inoperative position.

5. In a device for mixing concrete, the combination of a wheeled cart, releasable means for holding the cart wheels against movement, releasable means independent of the cart for rotating the body of the cart while the wheels are stationary, a cover for the cart body carried by said first-mentioned means when the latter is in inoperative position, and releasable means for fastening the cover in place on the body when said first-mentioned means is in operative position.

[Claims 6 to 16 not printed in the Gazette.]

1,019,918. PROCESS OF MAKING CONCRETE PIPE AND TILE. WILLIAM A. REYNOLDS and BLAKE O. REYNOLDS, Asheville, N. C., assignors of one-half to Paul H. Reynolds, Asheville, N. C. Filed July 19, 1911. Serial No. 639,402. (Cl. 106—45.)

1. The process of producing concrete pipe or tile from a composition including crushed stone, sand and cement, consisting in incorporating and mixing the crushed stone, sand and cement, adding sufficient moisture to partially hydrate the composition and produce sufficient consistency for molding same into forms without effecting the cohesion of the mass, molding same, then subjecting the molded composition to the action of steam in confinement under low pressure for a sufficient period to permit the moisture in suspension to permeate the pores of the molded forms and set up the cohesive process of the cement, and thereafter gradually increasing the degree of steam pressure to approximately 100 pounds for a sufficient period to compact the forms and complete the setting and hardening action of the composition, substantially as described.

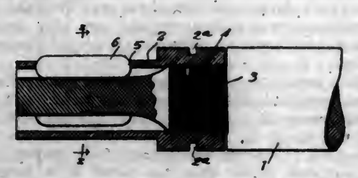
2. The process of producing concrete pipe or tile from a composition including crushed stone, sand and cement, consisting in incorporating and mixing the crushed stone, sand and cement, adding sufficient moisture to partially hydrate the composition and produce sufficient consistency for molding same into forms, without effecting the cohesion of the mass, molding same, then subjecting the molded composition to the action of steam in confinement under approximately one pound pressure for substantially five or six hours, by which the moisture in suspension permeates the pores of the molded forms and sets up the cohesive process of the cement, and thereafter gradually increases the degree of steam pressure to approximately 100 pounds for a period of approximately four hours which compacts the forms and completes the setting and hardening action of the composition, substantially as described.

1,019,919. METHOD OF MAKING HEEL-PLATES. JOSEPH RICHER, Waterbury, Conn., assignor of one-third to Nils A. Hilding and one-third to Nils F. Lundin, Waterbury, Conn. Filed May 23, 1911. Serial No. 628,912. (Cl. 29—148.)



The method of making heel plates comprising providing one face of a strip of metal with a flat surface and the opposite face with an angularly convexed surface tapering from the longitudinal median line to the edges, and finally blanking out the plates with the backs of the plates toward the middle or thickened portion of the strip.

1,019,920. EXPANDING MANDREL. ROBERT J. SAUM, Springfield, Ohio, assignor to The Western Tool and Manufacturing Company, Springfield, Ohio, a Corporation of Ohio. Filed Apr. 10, 1911. Serial No. 620,139. (Cl. 82—44.)



1. A device of the character described comprising a sleeve having a series of longitudinal slots, a radially movable gripping member rotatably mounted in each of said slots and held against lateral displacement, and a device rotatably mounted in said sleeve and having a series of cam surfaces arranged to engage the respective gripping members.

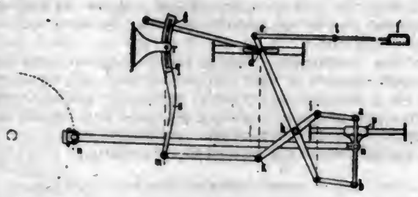
2. A device of the character described comprising a sleeve having a series of longitudinal slots, a radially movable gripping member rotatably mounted in each of said slots and held against lateral displacement, and a mandrel extending into said sleeve, having rotary movement relatively thereto and provided with a series of cam-surfaces adapted to engage the respective gripping members.

3. A device of the character described comprising a mandrel provided with a circumferential series of cam surfaces and having a screw-threaded portion, a sleeve extending about that portion of said mandrel having said cam surfaces, having one end screw-threaded to engage the screw-threaded portion of said mandrel and provided with a series of longitudinal slots, and an outwardly movable roller mounted in each of said slots and adapted to be actuated by the respective cam surface of said mandrel.

4. A device of the character described comprising a mandrel, a sleeve extending about a portion of said mandrel, capable of rotary movement relatively thereto and having a circumferential series of openings therein, gripping devices mounted in said sleeve and adapted to extend through the respective openings, and means carried by said mandrel within said sleeve for moving said gripping devices outward at substantially right angles to the longitudinal axis of the mandrel.

1,019,921. LINK DISTRIBUTING-GEAR. MICHAEL SAWELJEW, St. Petersburg, Russia, assignor to Alexis Siabloff, St. Petersburg, Russia. Filed May 22, 1911. Serial No. 628,849. (Cl. 121—98.)

1. In a link distributing gear, a cross-head adapted to actuate a steam distributing valve, a driving wheel for said cross-head, a rod connecting said cross-head and said driving wheel and pivoted thereto, a bar rigidly secured to said connecting rod, shears-levers in pivotal connection with each end of said bar, an oscillating link, connecting means between said shears-levers and said oscillating link, and connecting means between said steam valve and said shears-levers.



2. In a link distributing gear, a cross-head adapted to actuate a steam distributing valve, a driving wheel for said cross-head, a rod connecting said cross-head and said driving wheel and pivoted thereto, a bar rigidly secured to said connecting rod, shears-levers in pivotal connection with each end of said bar, an oscillating link, connecting means between said shears-levers and said oscillating link and said steam valve, and a pivotal connection of the valve actuating shears-lever with a support.

3. In a link distributing gear, a cross-head adapted to actuate a steam distributing valve, an oscillating link, a driving wheel for said cross-head, a rod connecting said cross-head and said driving wheel and pivoted thereto, a bar rigidly secured to said connecting rod, link- and valve-actuating levers in pivotal connection with each end of said bar, a pivotal connection of the valve-actuating lever with a support, means for connecting said oscillating link to each of said actuating levers, and means for connecting said valve-actuating lever to said valve.

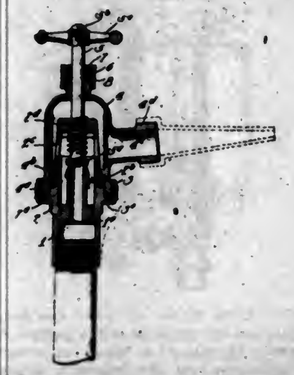
4. In a link distributing gear, a cross-head adapted to actuate a steam distributing valve, a driving wheel for said cross-head, a rod connecting said cross-head and said driving wheel and pivoted thereto, a bar rigidly secured to said connecting rod, shears-levers in pivotal connection with said bar, an oscillating link, means for pivotally connecting said oscillating link to each of said shears-levers, a pivotal connection of the valve-actuating shears-lever with a support, and means carried by said supporting device for positively guiding the pivot point of said valve-actuating shears lever.

5. In a link distributing gear, a cross-head adapted to actuate a steam distributing valve, a driving wheel for said cross-head, a rod connecting said cross-head and said driving wheel and pivoted thereto, a bar rigidly secured to said connecting rod, shears-levers in pivotal connection with said bar, an oscillating link, means for pivotally connecting said oscillating link to each of said shears-levers, a pivotal connection of the valve-actuating shears-lever with a support, and means carried by said supporting device for guiding the pivot point of said valve-actuating shears-lever in a straight line.

[Claims 6 to 9 not printed in the Gazette.]

1,019,922. ROTATABLE SPRINKLER CONNECTION. MINNIE SCHAFFNER, San Diego, Cal. Filed Oct. 17, 1911. Serial No. 655,194. (Cl. 137—18.)

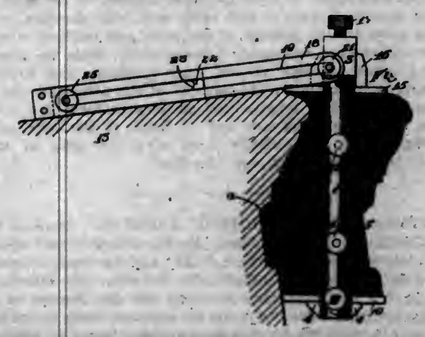
1. A rotatable sprinkler connection, comprising, a pipe connection provided with a valve seat on its upper extended end, a sleeve provided with a plurality of outlet ports screwed on to said pipe connection, an outer casing provided with a lateral opening adapted to fit over said sleeve, provided with a space for packing, a nut adapted to connect with said sleeve and screw on to said outer casing for compressing the packing, a valve stem adapted to screw into the upper end of said sleeve and on to said valve seat, and a stuffing box around said valve stem on the upper end of said outer casing, all substantially as set forth.



2. A rotatable sprinkler connection, comprising, an outer casing, a sleeve provided with a plurality of ports near its upper end adapted to fit into said casing, forming a space for packing and provided with a flange, a nut adapted to provide a rotatable bearing for the casing and to compress said packing, a pipe connection adapted to screw into the lower end of said casing and connect with the lower extended end of said sleeve, adapted to connect with a valve stem screwed into the upper end of said sleeve, and a stuffing box for closing the joint between said outer casing and said valve stem, all substantially as set forth.

3. A rotatable sprinkler connection, comprising an outer casing provided with a lateral outlet, a sleeve adapted to fit into said outer casing provided with a plurality of ports adapted to conform to the outlet in said outer casing, means for forming a liquid-tight but rotatable joint between said outer casing and said sleeve, means in connection with said sleeve for connection to any liquid conductor adapted for connection with a valve stem forming a valve seat in said sleeve, and means in said casing for forming a liquid-tight joint around said valve stem, all substantially as set forth.

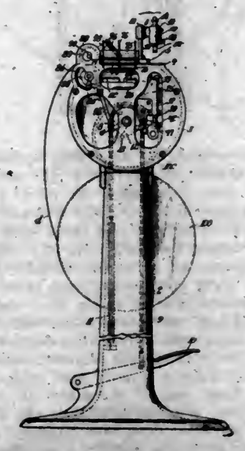
1,019,923. CONTOUR-GAGE. GEORGE G. SCHELTER, Rochester, N. Y. Filed Jan. 11, 1908. Serial No. 410,341. (Cl. 73—73.)



1. A contour gage comprising a holder embodying two spaced sections, a plurality of contacting gaging slides working between the sections, a stop slide arranged at one end of the plurality of slides and working between said sections, and means for locking the stop slide against movement, independently of the gaging slides.

2. A contour gage comprising a holder in the form of a hollow member having diametrically arranged longitudinal slots of widths less than the internal width of the hollow portion of the holder, a plurality of gage slides contacting with each other and guided by the walls of the slot, and means coöperating with said slides for compressing them in the direction of the lengths of the slots.

1,019,924. STAPLING MECHANISM FOR PIN-TICKETING MACHINES. BURTON W. SCOTT, Detroit, Mich., assignor, by mesne assignments, to Detroit Typomarker Company, Detroit, Mich., a Corporation of Michigan. Filed Feb. 19, 1906. Serial No. 301,814. (Cl. 1—2.)



1. In a machine of the character described the combination of complemental members movable toward and from each other and having confronting stapling portions and transposedly confronting actuator-portions, and an actuator in the nature of a spreader interposed between said latter portions; substantially as described.

2. In a machine of the character described the combination of complemental members movable toward and from each other and having confronting stapling portions and transposedly confronting actuator-portions, means yieldingly advancing said latter portions toward each other, and an actuator in the nature of a spreader interposed between said actuator portions and movable to separate the same and then by continued movement permit them to approach; substantially as described.

3. In a machine of the character described the combination of complemental members movable toward and from each other and having confronting stapling portions and transposedly confronting actuator-portions, means yieldingly advancing said latter portions toward each other, an actuator in the nature of a spreader interposed between said actuator portions and means for operating said spreader with provision for permitting continued movement thereof independent of the operating means; substantially as and for the purpose described.

4. In a machine of the character described the combination of complemental members slidable toward and from each other and having confronting stapling portions and transposedly confronting actuator-portions, and an actuator in the nature of a spreader interposed between said latter portions; substantially as described.

5. In a machine of the character described the combination of complemental members slidable toward and from each other and having confronting stapling portions and transposedly confronting actuator-portions, means yieldingly advancing said latter portions toward each other and an actuator in the nature of a spreader inter-

posed between said actuator-portions and movable to separate the same and then by continued movement permit them to approach; substantially as described.

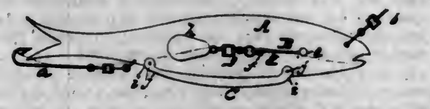
[Claims 6 to 38 not printed in the Gazette.]

1,019,925. BOX. HARVIE A. SNELLINGS, Norfolk, Va. Filed May 19, 1911. Serial No. 628,145. (Cl. 232—41.)



A box such as described comprising opposite end walls connected at their rear edges by a rear wall and at the terminals of their front edges by bars, a top closure pivoted to the upper end of the rear wall and engaging the upper ends of the end walls and upper sides of the upper bar, locking means provided upon the upper bar and hinged top closure, an outwardly movable front closure pivoted at its lower ends between the inner sides of the end walls in spaced relation to the lower end thereof and engaging the lower bar whereby the said front closure is limited in its inward movement, guides secured to the inner face of the front closure adjacent the opposite ends thereof, a plate slidable between said guides, a shelf secured to the lower end of the plate and extending inwardly therefrom, a flange secured to the lower face of the shelf and extending flush with the inner ends thereof, stops located within the box for engagement with the flange, coil springs secured to the plates and to the front closure and normally retaining the flange above the stops and permitting the same to be lowered for engagement with the stops when the shelf is weighted whereby the front closure will be locked in its closed position.

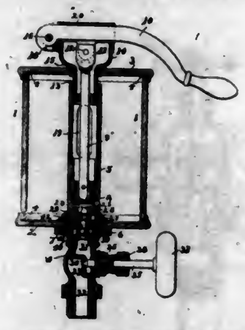
1,019,926. ARTIFICIAL BAIT. FRANK A. STAPLES, San Francisco, Cal. Filed July 13, 1911. Serial No. 638,404. (Cl. 43—30.)



The combination with an artificial fish and side lures, of the triangular member comprising the side bars having at their forward ends eyes, a transverse bar having at each end an eye, said transverse bar rigidly secured to the body of the artificial bait at its center and a pin passing through the eyes at the forward end of each side bar and the fish, said transverse bar and side bars and the eyes thereof, formed of a single piece, substantially as described.

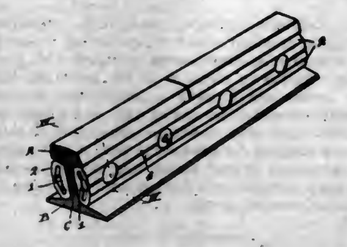
1,019,927. OIL-PUMP. FLOYD L. SWANBERG, Cincinnati, Ohio, assignor to The D. T. Williams Valve Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Mar. 7, 1908. Serial No. 419,732. (Cl. 184—28.)

1. In an oil pump of the character specified, the combination, with an oil reservoir and a pump cylinder and piston mounted therein, of a filling cup extending from the pump cylinder above the reservoir, a pump handle with the pump piston pivoted thereto, and a cover for the filling cup, with means for securing the cover firmly to the pump handle to completely inclose the filling cup when the pump is at rest substantially as described.



2. In an oil pump of the character specified, the combination, with an oil reservoir and a pump cylinder and piston mounted therein, of a filling cup extending from the pump cylinder above the reservoir, a pump handle with the pump piston pivoted thereto, and a sheet metal cover folded to tightly grasp the pump handle to completely inclose the filling cup when the pump is at rest, with a single pivot for the handle and cover at the upper edge of the filling cup substantially as described.

1,019,928. COMBINED RAIL-JOINT AND NUT-LOCK. GEORGE W. TRENT, Lansing, Kans. Filed June 7, 1910. Serial No. 565,634. (Cl. 239—9.)

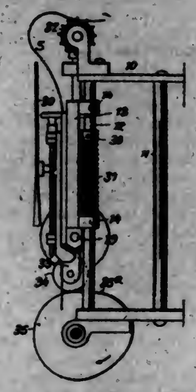


In combination, two rails, bolts extending therethrough, nuts engaging the threaded ends of said bolts, twin devices consisting of body portions adapted to fit against the balls and bases of said rails, said body portions having holes for the passage of the bolts, and resilient wings bent downward and upward, respectively, from the upper and lower portions of the body portions, and having marginal recesses for the passage of the bolts and tapering toward their longitudinal margins to form flat bearing surfaces for the nuts and the heads of the bolts, said wings being substantially flush with the sides of the rail balls, for the purpose described.

1,019,929. MOVING-PICTURE MACHINE. CHARLES R. UEBELMESSER, New York, N. Y., assignor, by mesne assignments, to Ludwig G. B. Erb and Joseph A. Golden. Filed Jan. 13, 1906. Serial No. 295,885. (Cl. 88—18.)

1. In a moving picture machine, the combination of a sprocket feed roller and a crown wheel, a shaft on which these are mounted, an elongated pinion adapted to revolve the shaft and means for causing the shaft to reciprocate.

2. In a moving picture machine, the combination of a sprocket feed roller and a crown wheel, a shaft on which these are mounted, an elongated pinion adapted to impart a continuous revolution to the shaft and means for causing the shaft to reciprocate.



3. In a moving picture machine, the combination of a reciprocating frame, cams for reciprocating the frame, film-feeding means mounted on the frame and adapted to rotate as said frame reciprocates, and means for rotating said film-feeding means.

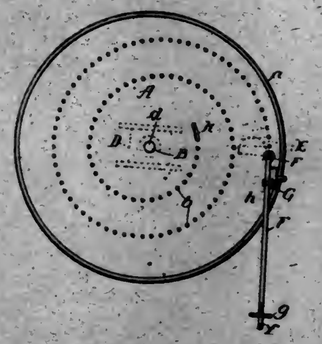
4. In a moving picture machine, the combination of a reciprocating frame, means for actuating the frame, a feed roller mounted on a shaft and carried by the frame and adapted to rotate as said frame reciprocates, a crown wheel on the shaft of the feed roller, an elongated pinion meshing with the crown wheel and means for driving the pinion.

1,019,930. FOUNTAIN-PEN. FRANCIS W. VAUGHN, Jr., West Medford, and HENRY J. UPTON, Somerville, Mass., assignors to Vaughn-Upton Company, Boston, Mass., a Corporation of Massachusetts. Filed June 16, 1911. Serial No. 633,488. (Cl. 120—46.)



The holder above described, made up of an outer open ended tubular member, having an internal shoulder at one end; an inner open ended tubular member interiorly screw threaded at both ends and apertured upon one side and of a diameter to pass the shoulder in the outer tubular member; a plug screwing into one end of the inner tubular member and of a diameter to fit the inner diameter of the outer tubular member but greater than the diameter of the shoulder therein and a point section screwing into the other end of the inner tubular member.

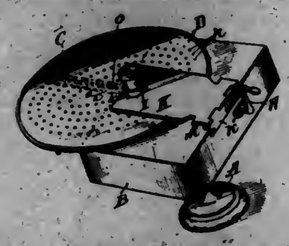
1,019,931. PHOTOGRAPHIC FILM FOR PICTURE-MACHINES. ALEXANDER FERDINAND VICTOR, Toledo, Ohio. Filed Jan. 28, 1910. Serial No. 540,541. (Cl. 88—19.5.)



1. A rotatable photographic film having a spirally arranged series of perforations therein terminating at one end thereof in an enlarged opening.

2. A rotatable photographic film, the axis of which is movable transversely and having a spirally arranged series of perforations therein terminating at one end thereof in a segmentally elongated slot.

1,019,932. PICTURE-DISPLAYING MACHINE. ALEXANDER FERDINAND VICTOR, Toledo, Ohio. Filed Feb. 23, 1910. Serial No. 545,427. (Cl. 88—16.)



1. A picture displaying machine comprising a suitable platen having an opening therein, a superimposed sight-tube, a rotatable film between said tube and platen, devices for rotating and moving said film laterally, and means projecting beyond said platen for centering said film and guiding the lateral movement thereof.

2. A picture displaying machine comprising a suitable platen having an opening therein, a superimposed sight-tube, means projecting beyond said platen for centering and guiding the lateral movement of the axis of a rotatable film, between said tube and opening and common devices that impart both an intermittent rotary movement to said film and simultaneously move said film laterally.

3. A picture displaying machine comprising a suitable platen having an opening therein, a supermimposed sight-tube, a rotatable film between said tube and platen, devices for rotating and moving said film laterally, and a bracket for centering said film and guiding the lateral movement thereof.

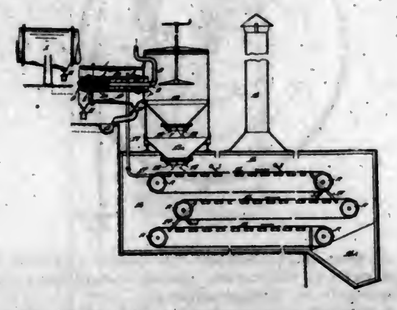
4. A picture displaying machine comprising a suitable platen having an opening therein, a superimposed sight-tube, a rotatable film between said tube and platen, devices for intermittently rotating and moving said film laterally, and means for centering said film and guiding the lateral movement thereof.

5. A picture displaying machine comprising a suitable platen having an opening therein, a superimposed sight

tube alining with said opening, a hinged bracket adapted to support and guide the lateral movement of the centering element of a rotatable picture film, and devices for rotating and moving the film laterally.

[Claims 6 to 18 not printed in the Gazette.]

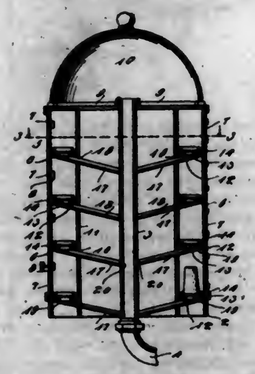
1,019,933. TREATMENT OF SEWAGE. JOE SMITH WADDINGTON, Bradford, England. Filed Aug. 19, 1911. Serial No. 644,968. (Cl. 71—1.)



1. In a liquid extracting apparatus an inclined casing encircling a revolving cage lined with cloth fabric, combined with a steam pipe having a series of jets adapted to impinge on the mud in said cage, substantially as described.

2. In a liquid extracting apparatus, a cistern inclosing a screen lined with cloth fabric, a compressed air pipe with jets within said screen, a revolving hollow shaft and cloth fabric lined circular cage, in combination with a steam pipe provided with a series of jets arranged within said cage, substantially as described.

1,019,934. DRINKING-CUP HOLDER. JAMES B. WALKER, Rush Springs, Okla. Filed Dec. 28, 1911. Serial No. 668,309. (Cl. 211—16.)

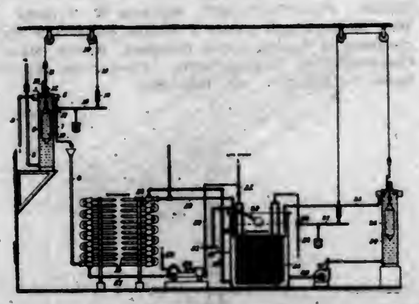


1. The herein described drinking cup holder consisting of an upright cylindrical shell pierced with a series of rectangular openings disposed in vertical and horizontal rows, a hinged door closing each opening and provided with an individual lock, a series of upright strips bent into U-shaped cross section with the edges of their leaves secured inside said shell at opposite sides of a tier of said openings, a series of shelves whereof each is secured within the bent strip thus formed and with its front edge secured within the shell just beneath a door and its body provided with an opening, means on each shelf for supporting an inverted drinking cup, and means communicating with each opening for conveying the drippings from said cup to a drain.

2. The herein described drinking cup holder consisting of an upright cylindrical shell pierced with a series of rectangular openings disposed in vertical and horizontal rows, a hinged door closing each opening and provided with an individual lock, a series of upright strips bent into U-shaped cross section with the edges of their leaves secured inside said shell at opposite sides of a tier of said openings, a series of shelves whereof each is secured within the bent strip thus formed and with its front edge secured within the shell just beneath a door and its body provided with an opening the bend of said strip being provided with slots disposed beneath the several shelves, troughs having upturned edges and with their bodies passing through said slots and their front ends secured beneath the shelf, and an upright drain pipe with which their inner ends communicate for the purpose set forth.

3. The herein described drinking cup holder consisting of a base, an upright shell mounted thereon and pierced with openings disposed in tiers, a door closing each opening and provided with an individual lock, a series of upright strips bent into U-shaped cross section with the leaves of each strip standing astride a tier of openings and the bend thereof provided with transverse slots disposed beneath the several door-openings, triangular troughs having their outer ends secured within the shell and their bodies inclined downward and inward and passing through said openings with their edges spaced apart for purposes of ventilation, means connecting their smaller inner ends with a drain, and means for removably supporting a drinking cup above the outer end of each trough and opposite a door.

1,019,935. REGULATING-CONCENTRATOR. BRUCE WALTER, Pittsburgh, Pa. Filed Sept. 19, 1910. Serial No. 582,620. (Cl. 127—9.)



1. Apparatus for continuously concentrating fluids comprising an evaporator and a regulator governing the action of the evaporator according to the density of the fluid being acted on.

2. Apparatus for concentrating fluids comprising an evaporator and a regulator for the rapidity of action of the evaporator governed by the density of the fluid delivered therefrom.

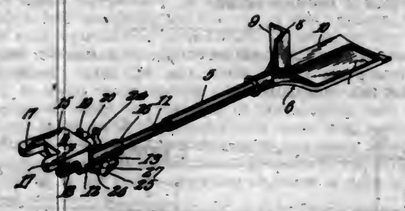
3. Apparatus for concentrating liquids comprising an evaporator, a hydrometer regulator, and a heating device governed by said regulator, whereby the heat is applied in regulated quantity according to the amount of evaporation necessary to reduce to a constant density.

4. Apparatus for concentrating liquids comprising a feeding device governing the amount of liquid introduced according to its density, a variably acting evaporator and an evaporator governor controlled by the density of the fluid in the evaporator.

5. Concentrating apparatus comprising an evaporator, a hydrometer regulator, a pump for supplying the latter from the evaporator, a heating device and means to regulate the heat, operated by said regulator.

[Claims 6 to 9 not printed in the Gazette.]

1,019,936. RAILWAY-TIE SURFACER AND TIE-PLATE GAGE. HENRY WARE, Springville, N. Y. Filed Dec. 19, 1911. Serial No. 666,710. (Cl. 104—16.)



1. In a railway tie surfacer and tie plate gage, a rod, a head mounted on one end thereof including a surfacer and a square for setting the tie plates, and a head mounted on the other end of the rod and adapted to engage the top and edge of the tread of a rail.

2. In a railway tie surfacer and tie plate gage, a rod, a head mounted on one end thereof and having a surfacer for leveling the ties and a square for setting the tie plates, and a head mounted on the other end of the rod having an angular portion to set on the tread of a rail and a portion depending therefrom to engage the edge of the tread.

3. In a railway tie surfacer and tie plate gage, a rod, a head mounted on one end thereof and having a surfacer for leveling the ties and a square for setting the tie plates, and a head mounted on the other end of the rod adapted to engage the top and edge of the tread of a rail, one of the heads being adjustable radially of the rod.

4. In a railway tie surfacer and tie plate gage, a rod, a head mounted on one end thereof and having a surfacer for leveling the ties and a square for setting the tie plates, and a head mounted on the other end of the rod adjustable radially and longitudinally of the rod and adapted to engage the top and edge of the tread of a rail.

5. In a railway tie surfacer and tie plate gage, a rod, a head mounted on one end thereof and having a surfacer for leveling the ties and a square for setting the tie plates, a member adjustably mounted on the other end of the rod, and a head carried by the said member and adjustable radially of the rod and adapted to engage the top and edge of the tread of a rail.

[Claim 6 not printed in the Gazette.]

1,019,937. AUTOMATIC FIREARM. WALTER H. WHITTEN, Grand Rapids, Mich. Filed May 15, 1911. Serial No. 627,177. (Cl. 42—3.)



1. An automatic firearm, comprising a barrel open at the breech, a reciprocable breech block to close the barrel, a plunger at the rear of the breech block connected thereto and movable therewith, a coiled spring engaged by the end of the plunger and compressed thereby, a pin in said spring also engaged by the end of the plunger when said spring is fully compressed and a stronger coiled spring directly engaging the rear end of the pin and compressed thereby.

2. An automatic firearm, comprising a barrel open at the breech, a breech block to close the barrel, a reciprocable carriage on which the breech block is mounted, end members supporting the carriage, a bearing attached to the barrel in which bearing the forward end member is slidable, a tube in which the rear end member is slidable, a spring in the tube engaging the rear end member, a pin within the rear of the spring and engaged by the rear end member and a second spring engaging the rear end of the pin.

3. An automatic firearm, comprising a barrel open at the breech, a movable breech block to close the barrel, a reciprocable carriage supporting the breech block, a base below the carriage, a magazine extending upward through the base and carriage and below the breech block when in forward position, a hammer pivoted on the base, a downward extension on the hammer having a hook on the end, a trigger having a catch to engage said end, an arm on the trigger having a hook, a pivoted catch to engage the said hook and hold the trigger from releasing the hammer, a laterally projecting member on the catch, the carriage having a groove to receive the said member and operate the catch.

4. An automatic firearm, comprising a reciprocable breech block, a hammer engaged by the breech block and moved thereby to cocked position, a trigger adapted to engage and hold the hammer in cocked position and to release the same, a hook on the trigger, a pivoted catch to engage the hook and hold the trigger, a pin on the catch, and a carriage supporting the breech block having a groove to receive the pin and hold the catch engaged with the hook during the travel of the carriage, and to disengage the catch when the carriage and breech block are in forward position.

5. In an automatic firearm, a barrel open at the breech, a movable breech block to close the barrel, a reciprocable carriage on which the breech block is mounted, a base on which the hammer mechanism is mounted, a lever forming a trigger guard pivoted in the base and extending into an elongated recess in the carriage to move the carriage rearward.

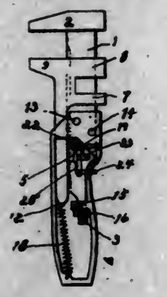
[Claim 6 not printed in the Gazette.]

1,019,938. HAT-PIN GUARD. ALBERT E. ALDRIDGE, Victoria, British Columbia, Canada. Filed Aug. 2, 1911. Serial No. 641,997. (Cl. 24—155.)



As a hat pin guard, the combination with a tubular member having a bore adapted to fit upon the pin, said tubular member having an enlargement through which a small slot is diametrically cut, opposed rollers in the slot one on each side of the pin bore, a conical sleeve slidably mounted on the tubular member inclosing the enlargement and its rollers, a casing secured to the tubular member at the end toward the smaller dimension of the conical sleeve, a coil spring between the smaller dimensions of the sleeve and the adjacent end of the casing, and a plunger fitting on the tubular member and projecting through the end of the casing said plunger having a stop for engaging said casing to limit the movement of the plunger under the influence of the spring said tubular member enlargement forming a shoulder against which said plunger engages when moved to compress said spring, said shoulder thereby forming a stop for said plunger when moved to its spring compressed position and means connecting said sleeve and said plunger whereby the plunger is put under the influence of said spring.

1,019,939. QUICK-RELEASE WRENCH. JOHN V. BELLUOMINI, Oakland, and ANGELO MARCUCCI, San Francisco, Cal., assignors of one-fourth to Oscar F. Breiling and one-fourth to Emil J. Breiling, Oakland, Cal. Filed Dec. 6, 1909, Serial No. 531,700. Renewed Sept. 2, 1911. Serial No. 647,438. (Cl. 81—139.)



1. A shank having a fixed jaw, a jaw slidable on said shank, and having a series of ratchet teeth thereon, a spring secured to said jaw, and to the handle of the wrench, a pawl seated in the shank, a spring adapted to press said pawl into contact with the teeth of the slidable jaw, a lever pivoted to said pawl, and a pin projecting from said handle and adapted to release the pawl, substantially as described.

2. In a wrench, a shank having a jaw, a jaw slidable on said shank and having a series of ratchet teeth, a pawl slidable in a notch in said shank, a spring adapted to press said pawl into contact with the teeth on the slidable jaw, a lever having one end pivoted to the pawl, and to the fixed shank, a pin pivoted to the free end of said lever and projecting from said shank, whereby the pawl may be operated to release the slidable jaw, and a spring adapted to retract the slidable jaw after the release thereof, as set forth.

3. In a wrench, a shank having a jaw, a jaw slidable on said shank, a handle secured on said shank, a nut on the end of the shank and bearing on said lug in the handle frame, a pair of cheek pieces on opposite sides of the handle frame, a bolt passing through each of the cheek pieces, and the lug on the handle as set forth.

1,019,940. SPRING-OPENING HINGE. CHARLES E. BERRY, Somerville, Mass. Filed Nov. 21, 1910. Serial No. 593,554. (Cl. 16—25.)



The combination with a door and door casing, of a hinge, composed of two members, one member being substantially L-shaped in edge elevation and provided with a recessed portion to be counter sunk within the door casing, and with bolt receiving knuckles, said member being attached to the corner of the casing, the other member being a long door engaging terminal and a right angled plate intermediate of its ends, to receive the portion of the door adjacent the casing, the terminal having the hinge knuckles being out of plane with the long terminal and pivoted to the knuckle of the other member of the hinge, a pintle projecting from the inner side of the said terminal, and a coiled spring mounted in the recessed portion and covered by the short terminal of the door carrying member of the hinge, its pintle retaining the outer end of the spring in place, the right angled plate of the door carrying member abutting, when the door is closed, the plate of the other member attached to the inner face of the door casing.

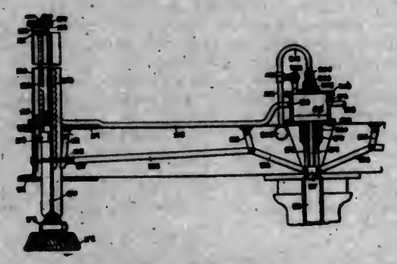
1,019,941. RAILROAD-SWITCH. JOSIAH W. BODIE, Greenwood, S. C. Filed Aug. 26, 1911. Serial No. 646,193. (Cl. 104—77.)



1. In combination with a main line track and a siding, blocks secured therebetween, each of said blocks having its ends inclined, and its top surface having a laterally-inclined portion on one side and its middle portion horizontal, substantially as shown and described.

2. In combination with a main line track, and a siding, blocks secured between the pairs of rails constituting the main line and siding tracks, said blocks having their ends inclined longitudinally, the portions of the blocks toward the outermost rails inclined laterally, and the middle portions of the blocks abutting the inner rails formed on horizontal planes, substantially as shown and described.

1,019,942. MEANS FOR IMPARTING TO AND MAINTAINING THE STABILITY OF BODIES SUCH AS SINGLE-TRACK VEHICLES OR VESSELS. LOUIS BRENNAN, Gillingham, England. Filed June 9, 1910. Serial No. 566,031. (Cl. 105—233.)



1. Lateral supporting means for single track vehicles comprising a member sliding in guides and provided with a universally jointed foot and a rack together with a pawl or detent and means to engage and disengage said detent with said rack.

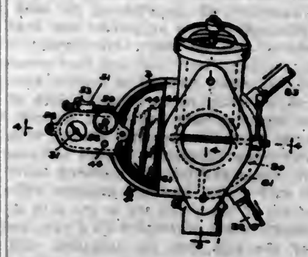
2. Lateral supporting means for single track vehicles comprising a member sliding in guides and provided with a universally jointed foot and a rack together with a pawl or detent and means to engage and disengage said detent with said rack and a projection upon the pawl or detent adapted to engage a projection upon the lateral support whereby the support is retained in its raised position.

3. Lateral supporting means for single track vehicles comprising in combination a member sliding in guides, a rack upon said member, a pawl or detent, means to engage and disengage said detent with said rack, a cylinder upon the vehicle, a piston or plunger on said sliding member adapted to work in said cylinder, valves controlling said cylinder, means including a cylinder and piston adapted to control said valves, duct means connecting said valve controlling cylinder to the fluid brake pipe of the vehicle, substantially as described.

4. Lateral supporting means for single track vehicles comprising in combination a member sliding in guides; a rack on said member, a pawl or detent carried by the vehicle, means to engage and disengage said detent with said rack comprising a cylinder upon the vehicle, plunger means in said cylinder, a cross-head carried by said plunger, a toggle between said cross-head and said detent, said toggle including a swinging link upon the vehicle body, a link connecting the free end of said swinging link and said cross-head, a second link connecting at one end to the free end of said swinging link and by a slot to said detent.

5. In single track vehicles a lateral support and means adapted to delay the lowering of the support until the vehicle has come to rest comprising a vessel with a spring loaded valve having a leak hole in it said vessel being so arranged that the drop or rise of pressure in the support actuating or the toggle operating cylinders or both is delayed.

1,019,943. ADJUSTABLE FLOAT-FEED. MARTIN C. BRIGHT, Indianapolis, Ind., assignor of one-half to Charles W. Meikel, Indianapolis, Ind. Filed Aug. 11, 1909. Serial No. 512,417. (Cl. 137—68.)



1. A float feed mechanism consisting of a movable float, a valve actuated by said float, a U-shaped support for supporting the float, said support being provided with threads on one of its free ends and the remaining end acting as a guide to prevent said support from turning, and means engaging the threads on the support for imparting vertical travel to the latter.

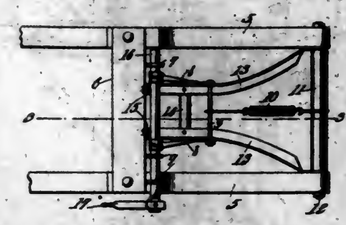
2. A float feed mechanism consisting of a movable float, a valve actuated by said float, a U-shaped support for supporting the float, said support being provided with threads on one of its free ends and the remaining end providing a guide to prevent said support from turning, a gear wheel engaging the threads on the support for imparting vertical travel to the latter and provided with teeth in its peripheral surface, and a screw-shaft for rotating said gear wheel.

3. A float feed mechanism consisting of a movable float, a valve actuated by said float, a U-shaped support for supporting the float, said support being provided with threads on one of its free ends and the remaining end providing a guide to prevent said support from turning, a gear wheel engaging the threads on the support for imparting vertical travel to the latter and provided with teeth in its peripheral surface, a screw-shaft for rotating said gear wheel, and means for locking said screw-shaft in position.

4. A float feed mechanism consisting of a movable float, a valve actuated by said float, a U-shaped support for supporting the float, said support being provided with threads on one of its free ends and the remaining end providing a guide to prevent said support from turning, a gear wheel engaging the threads on the support for imparting vertical travel to the latter and provided with teeth in its peripheral surface, a screw-shaft for rotating said gear wheel, means for locking said screw-shaft in position, and means to prevent said screw-shaft from moving longitudinally.

1,019,944. SLEIGH-BRAKE. GEORGE BAISSON, Norway, Mich. Filed Aug. 22, 1911. Serial No. 645,382. (Cl. 21—46.)

The combination with a pair of runners and a cross beam, of a rock shaft mounted on the said cross beam, a cross rod connecting the front ends of the said runners, a pair of levers pivoted on the said cross rod and extending rearwardly and having slots in their rear ends, a dog secured to the inner ends of the said levers, a contractile spring secured at one end to the cross beam and at the



other end to the rear end of one of the said levers, a pair of arms secured to the said rock shaft, a cross rod secured to the outer ends of the said arms and passing through the slots in the said levers, and a contractile spring connecting the latter cross rod with the former cross rod.

1,019,945. PROCESS OF PRODUCING LECITHIN. HEINRICH CARL BUER, Bonn, Germany. Filed Sept. 16, 1909. Serial No. 518,030. (Cl. 23—24.)

1. The process for obtaining lecithin from seeds of leguminous plants which consists in the prolonged boiling of the said seeds in 96% alcohol, then repeatedly concentrating the extract, causing the lecithin to precipitate after each concentration, separating the supernatant solution from each precipitate, and finally treating the precipitates for a short period with boiling alcohol, separating the solution containing the lecithin from the fatty residue and finally evaporating off the alcohol.

2. The process of obtaining lecithin which consists, first, in obtaining an extract from the seeds of leguminous plants by boiling the seeds in alcohol; second, concentrating the extract by about 10% of its original volume and thereafter allowing a solution comparatively rich in lecithin to precipitate; third, decanting the supernatant liquid from the precipitate solution and concentrating the same by about 20% of its volume and again allowing a solution which is comparatively rich in lecithin to precipitate; fourth, decanting the supernatant liquid from the precipitate solution and concentrating this decanted liquid by about 20% of its volume and again allowing a lecithin solution to precipitate; fifth, again decanting the supernatant liquid from the precipitate; and finally, causing or allowing the liquid to evaporate from the mass.

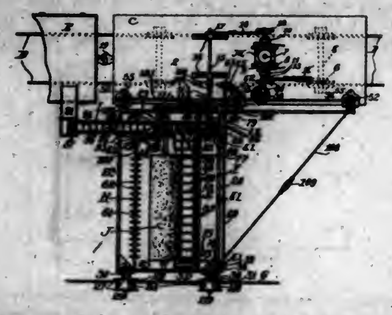
3. The process of obtaining lecithin from seeds of leguminous plants, which consists in boiling one cwt. of said seeds in 50 to 75 liters of alcohol and thereby producing a liquid extract, repeatedly concentrating the extract, causing or allowing a solution rich in lecithin to precipitate after each concentration, separating the supernatant solution from each precipitate, treating the precipitate with boiling alcohol and thereby separating the solution containing the lecithin from the fatty substance, and finally evaporating off the alcohol.

1,019,946. PEAT-MACHINE. ANDREW S. CAIRNCROSS, St. Paul, Minn. Filed May 9, 1911. Serial No. 626,077. (Cl. 37—25.)

1. A peat machine, comprising in combination, a support movable along the ground, a pulverizer on said support adapted to disintegrate the surface of the ground, a collector consisting of a rotary brush and a conveyer receiving material from said brush in connection with said support, and means mounted on said support for operating said pulverizer and collector.

2. A peat machine, comprising in combination, a supporting frame, a rotary pulverizer and a rotary brush journaled transversely thereon and means for rotating said pulverizer and brush in opposite directions whereby

said pulverizer tends to advance the frame while operating and said brush sweeps material forward.



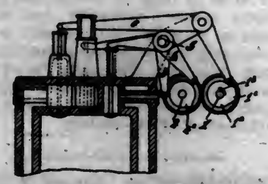
3. A peat machine, comprising, in combination, a frame, wheels supporting said frame, a rotary agitator journaled on said frame in contact with the ground to pulverize its surface and a rotary collector mounted in connection with said agitator to gather pulverized material from the ground.

4. A peat machine, comprising in combination, a supporting frame mounted on wheels, a rotary brush journaled on said frame transversely thereof and adapted to sweep pulverized peat from the surface of the ground, a tray coöperating with said brush to receive peat therefrom, and a conveyer operating on said tray to remove the peat therefrom and a pulverizer mounted on said frame and adapted to pulverize the ground surface cleared by said brush.

5. A peat machine, comprising in combination, a car adapted to be propelled along a track, a frame mounted on said car at the side thereof and supported at its outer end by wheels, said frame being vertically adjustable on said wheels and car, a conveyer mounted on said frame and adapted to convey loose material to a receptacle on said car track, a brush journaled on said frame and adapted to deliver material to said conveyer and a pulverizer revolving on said frame to pulverize material behind said brush.

[Claim 6 not printed in the Gazette.]

1,019,947. REVERSING-GEAR FOR INTERNAL-COMBUSTION MOTORS. GUSTAVE CARELS, Ghent, Belgium, assignor to Société Anonyme Carels Freres, Ghent, Belgium, and Messrs. Lewis Schneider & Co., Creusot, France. Filed Apr. 13, 1910. Serial No. 555,236. (Cl. 123—41.)



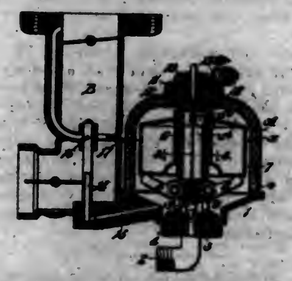
1. An engine comprising in combination, a cylinder provided with fuel and fluid pressure valved inlets, a valved exhaust outlet, an adjustable eccentric shaft, a fuel valve control lever mounted on the said shaft, a fluid pressure valve control lever mounted on the said shaft, a rotatable and longitudinally adjustable cam shaft, a plurality of sets of cams on said shaft adapted to operate said fuel valve control lever and said fluid pressure valve control lever, for either forward or reverse movement of the engine shaft, means shifting said eccentric shaft whereby both of said levers, the fluid pressure valve control lever, or neither of the levers are in the path of the said cams, a rotatable shaft provided with a cam, and a lever operative by the said cam for actuating said exhaust valve.

2. An engine comprising in combination, a cylinder provided with fuel and fluid pressure valved inlets, a valved exhaust outlet, an adjustable eccentric shaft, a fuel valve control lever mounted on said shaft, a fluid pressure valve control lever mounted on the said shaft, a rotatable and longitudinally adjustable cam shaft, a plurality of sets of cams on said shaft adapted to operate said fuel valve control lever and said fluid pressure valve control lever, for either forward or reverse movement of the engine shaft, when disposed in the path of said levers, means shifting said eccentric shaft whereby both of said levers, the fluid pressure valve control lever, or neither of the levers are in the path of said cams, and means for operating said exhaust valve.

3. An engine comprising in combination, a cylinder provided with fuel and fluid pressure valved inlets, a valved exhaust outlet, an adjustable eccentric shaft, a fuel valve control lever mounted on said shaft, a fluid pressure valve control lever mounted on the said shaft, a rotatable and longitudinally adjustable cam shaft, a plurality of sets of cams on said shaft adapted to operate said fuel valve control lever and said fluid pressure valve control lever for either forward or reverse movement of the engine shaft, when disposed in the path of said levers, means adjusting said cam shaft whereby the sets of cams may be located in operative relation to said levers to provide for either forward or reverse movement of the engine shaft, means shifting said eccentric shaft whereby both of the said levers, the fluid pressure valve control lever, or neither of the levers are in the path of the said cams, a rotatable shaft provided with a cam, and a lever operative by the said cam for actuating said exhaust valve.

4. An engine comprising in combination, a cylinder provided with fuel and fluid pressure valved inlets, a valved exhaust outlet, an adjustable eccentric shaft, a fuel valve control lever mounted on said shaft, a fluid pressure valve control lever mounted on the said shaft, a rotatable and longitudinally adjustable cam shaft, a plurality of sets of cams on said shaft adapted to operate said fuel valve control lever and said fluid pressure valve control lever for either forward or reverse movement of the engine shaft, when disposed in the path of said levers, means for adjusting said cam shaft whereby the sets of cams may be located in operative relation to said levers to provide for either forward or reverse movement of the engine shaft, means shifting said eccentric shaft whereby both of the said levers, the fluid pressure valve control lever, or neither of the levers are in the path of the said cams, and means for operating said exhaust valve.

1,019,948. FLOAT-TANK MECHANISM FOR CARBURETERS. WILLIAM C. CARTER, St. Louis, Mo. Filed Apr. 24, 1911. Serial No. 623,017. (Cl. 137—104.)



1. In a float tank mechanism for carbureters, a needle valve for controlling the supply of fuel to the float tank, a float, a pivotally mounted device for transferring movement from said float to said needle valve, and coöperating teeth on said device and valve which cause said device to shift relatively to the valve when the valve is rotated.

2. In a float tank mechanism for carbureters, a needle valve for controlling the supply of fuel to the float tank, a float, levers mounted on stationary fulcrums for transferring the movements of the float to said needle valve, coöperating means on said levers and needle valve for changing the normal position of said levers relatively to said valve when said valve is turned so as to vary the float level, and a device arranged outside of the float tank for turning the needle.

3. In a float tank mechanism for carbureters, a rotatable needle valve that controls the supply of liquid fuel to the float tank, a float, a pivotally mounted member for transferring the movements of said float to said needle valve, and a worm on said needle valve that cooperates with a toothed segment on said device.

4. In a float tank mechanism for carbureters, a needle valve provided with a worm gear, levers mounted on stationary fulcrums and provided with toothed sectors which coöperate with said worm gear, a float which is adapted to press upon the free ends of said levers, and means for turning said valve so as to change the position of said levers with reference to said valve and thus vary the fuel level.

5. In a float tank mechanism for carbureters, a fuel-controlling valve which can be rotated, a guide through which said valve passes, a pivotally mounted device carried by said guide, a float which bears on one end of said device, and coöperating means on the opposite end of said device and on said valve which causes said device to be shifted relatively to said valve when the valve is turned.

[Claims 6 to 14 not printed in the Gazette.]

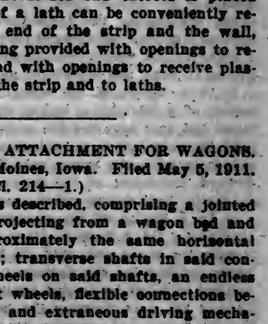
1,019,949. WHIFFLETREE-HOOK. GUY Z. CLARK, Billings, Mont. Filed June 23, 1911. Serial No. 634,876. (Cl. 21—70.)

1. The herein described whiffletree hook comprising an eye, means for mounting it rotatably on the extremity of a whiffletree, and a plurality of trace-engaging arms of different lengths projecting from different sides of said eye.

2. The herein described whiffletree hook comprising an eye having arms of different lengths projecting from its different sides, trace-engaging devices at the outer ends of said arms, and means for connecting said eye with a whiffletree so as to permit the rotation of one with respect to the other.

1,019,950. LINE-CONNECTING DEVICE FOR FLOATS AND SINKERS. JOHN W. COLLEY and EDWIN G. WALTER, Elkhart, Ind. Filed Aug. 25, 1910. Serial No. 578,871. (Cl. 43—4.)

A fishing tackle comprising a float with a line attachment therefor, consisting of a single length of wire having a straight shank adapted to be inserted in the end of the float, said wire bent S-shape at its intersection with the shank to provide a plurality of loops, the terminal of



the wire being bent across the loops and contacting therewith and projecting therefrom.

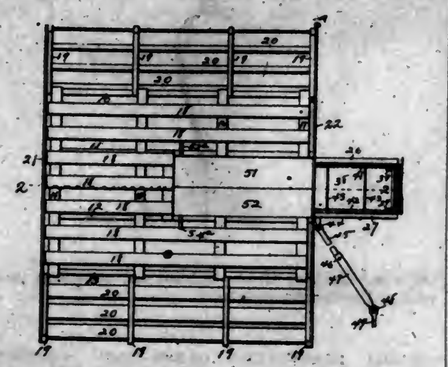
1,019,951. PLASTERER'S CORNER-STRIP. FRANCIS M. CONGILL, Des Moines, Iowa. Filed Nov. 5, 1910. Serial No. 590,903. (Cl. 72—121.)

A plasterer's corner strip formed of a single piece of sheet metal folded double at its central portion with the sides of said folded portion spaced slightly apart from each other to receive plaster between them, one end of said strip being bent at right angles to the other end and to said folded portion, the width of said folded portion being such, that when the folded end thereof is placed against a wall, an end of a lath can be conveniently received between the bent end of the strip and the wall, the ends of said strip being provided with openings to receive fastening devices and with openings to receive plaster for keying plaster to the strip and to laths.

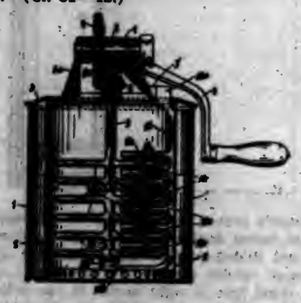
1,019,952. UNLOADING ATTACHMENT FOR WAGONS. ALVIN L. CREGER, Des Moines, Iowa. Filed May 5, 1911. Serial No. 625,279. (Cl. 214—1.)

1. A device of the class described, comprising a jointed conveyer frame in and projecting from a wagon bed and normally occupying approximately the same horizontal plane as said wagon bed; transverse shafts in said conveyer frame, sprocket wheels on said shafts, an endless conveyer on said sprocket wheels, flexible connections between one of said shafts and extraneous driving mechanism, and means for adjusting the inclination of the jointed portion of said conveyer frame, said means comprising a rod pivoted to one member of said frame and passing through and securable in a lug on the other member thereof.

2. In a device of the class described, the combination of a hay-rack, a jointed conveyer frame in and extending laterally from the bed thereof, and normally occupying approximately the same horizontal plane as said bed; horizontal shafts journaled transversely of said frame, the jointed portion of said frame articulating on an intermediate shaft, sprocket wheels on said shafts, a flexible conveyer on said sprocket wheels, means for adjusting the elevation of the outer end of said conveyer frame, means for elevating the entire conveyer frame independently of said adjusting means, and flexible connections with an extraneous source of power.



1,019,953. HOMOGENIZING APPARATUS. ALPHEUS FAY, Louisville, Ky. Filed Apr. 22, 1911. Serial No. 622,782. (Cl. 31—42.)



1. In a device of the character described, a vessel, a dasher with vertical axis, a lid to the vessel having an upper bearing for the dasher integral with said lid, said bearing limiting the upward movement of the dasher, and a brake in the vessel, held in position by said lid, and engaging to limit the downward movement of the dasher.

2. In a device of the character described, the combination of a lid with a socket, and a brake having a flattened end part entering the socket, a vessel, and a dasher held for rotation on a vertical axis in the vessel and to coöperate with the brake, said lid having a part to limit upward movement of the dasher, and said brake having a part to limit downward movement of said dasher.

3. In a device of the character described, the combination of a lid, a dasher with a pinion rigidly attached to it near its upper end, said lid having a part forming an upper bearing for the dasher so that it may rotate on a vertical axis but be limited against upward movement, the lid and the part forming the bearing being integral and the lid having an opening to allow the pinion to pass up through it in the journaling of said dasher, and a brake held by the lid and forming a second bearing for the dasher and preventing downward movement of the dasher.

4. In a device of the character described, the combination of an outer vessel, an inner vessel, a dasher, a brake, and a lid having, integrally formed, means for supporting the brake, means for holding said vessels against relative displacement, and means for journaling said dasher, the brake also supporting the dasher and being removable from the lid to allow separation of the dasher from the lid, substantially as and for the purposes set forth.

5. In a device of the character described, as a new and improved article of manufacture, a lid for a vessel having, integrally formed, a horizontal shaft bearing, a downwardly opening vertical shaft bearing, and a downwardly opening socket displaced laterally from the vertical shaft bearing, and having an opening below said vertical shaft bearing of greater extent than that of the vertical shaft bearing, substantially as and for the purposes set forth.

[Claims 6 to 10 not printed in the Gazette.]

1,019,954. MILK-STRAINER. EDWARD O. GARROW, Richmond, Vt. Filed June 26, 1911. Serial No. 635,856. (Cl. 210—16.)



1. A milk strainer comprising a body having a seat, a spout carried by said body, a lug carried by said spout and spaced from said seat, a strainer frame adapted to be arranged on said seat over said lug, and a pivoted locking member for engaging said strainer frame and holding the same in position therein.

2. A strainer formed of a body having a spout, said body being provided with an annular flange, a strainer frame adapted to engage said flange, a fixed member for holding said frame against said flange at one side, and a pivoted member arranged opposite to said fixed member for holding said frame.

3. A strainer comprising a body and spout, a detachable strainer frame mounted therein, a fixed member for supporting said frame, a pivoted locking member for engaging said frame, and a latch carried by said locking member co-acting with a pin carried by said spout.

4. A strainer comprising a frame having a grooved inner face, a strainer cloth arranged within said frame, and a retaining member for holding said cloth within said groove.

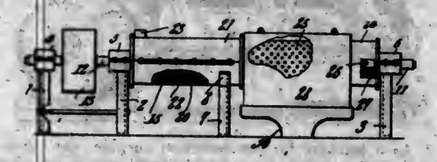
5. The combination with a body, of a detachable strainer arranged therein, a fixed member for engaging one edge of said strainer, and a pivoted member for engaging the opposite edge of said strainer, said pivoted member having a pivoted latch carried thereby for holding the same in locked position.

[Claims 6 and 7 not printed in the Gazette.]

1,019,955. COTTON-SEED DELINTER. CHARLES H. GOLLOHER, Gloster, Miss. Filed Feb. 23, 1910. Serial No. 545,478. (Cl. 18—10.)

1. A delinter, having a stationary cylindrical scouring shell, the forward portion of which is provided with an inlet and is imperforate, and the rear portion of which is perforated circumferentially, the imperforate portion of the shell having an abrasive lining, a lint receiving chamber surrounding only the perforated end of the shell, and a rotating scouring shell disposed within the stationary shell the full length thereof.

2. A delinter, having a stationary cylindrical scouring shell, said scouring shell being divided equally into a forward imperforated portion and a rear perforated portion, an abrasive lining for the imperforate portion of the shell, a lint receiving chamber surrounding the perforated portion of the shell, and into which said perforations enter, a rotating shell disposed longitudinally within the entire cylindrical scouring shell, and a spiral abrasive surface carried thereby.



3. A delinter having a stationary cylindrical scouring shell, said shell being provided with seed inlet and outlet ends, said shell being further provided with two equal sized portions, the inlet portion of which is imperforate and the outlet portion of which is circumferentially perforated, a lint receiving casing surrounding the perforated portion of the cylindrical shell and into which said perforations establish communication with the interior of the cylindrical stationary shell, a scouring shell rotatably mounted within the entire cylindrical stationary shell longitudinally and concentrically thereof, and spirally arranged projections and grooves forming an opposed abrasive surface upon the rotating shell carried by said rotating shell within the stationary shell.

4. A cotton seed delinter comprising a cylindrical casing having an imperforate entrance end portion lined with an abrading material and a perforated exit portion of approximately the same length as the imperforate entrance portion of the casing, a hood located over the perforated portion of the casing and spaced from the same and having a downwardly disposed outlet, said casing having in its side and beyond the perforated portion a valved outlet, a rotatable scouring shell journaled within the casing and traversing the imperforate and also the perforated portion thereof, and an abrasive surface carried thereby upon its periphery and forming a continuous spiral groove.

5. A delinter, having a stationary cylindrical scouring shell, the forward portion of which is provided with an inlet and is imperforate, and the rear portion of which is perforated to a point near its outlet end, the said outlet end portion being imperforate and provided with a feed outlet in communication with the cylinder, and at right angles to the inlet at the other end thereof, the imperforate portion of the shell being lined with an abrasive material, a lint receiving chamber surrounding only the perforated portion of the shell between the imperforated ends thereof, and a rotating scouring shell disposed within the stationary shell the full length thereof.

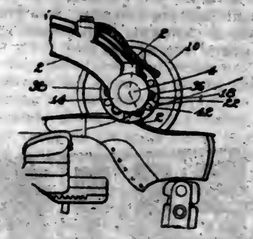
1,019,956. MACHINE FOR USE IN THE MANUFACTURE OF BOOTS AND SHOES. JOHN B. HADAWAY, Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Dec. 22, 1910. Serial No. 598,756. (Cl. 12—34.)

1. In a machine of the class described, a rotary tool comprising an annular series of rolls alternating with a series of yielding ribs.

2. In a machine of the class described, a rotary tool having a working surface comprising alternating rolls freely rotatable about their own axes, and rubbing members yieldably pressed out radially and restrained from turning movement.

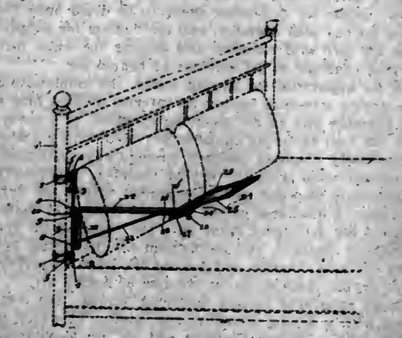
3. In a machine of the class described, a rotary carrier; longitudinal rubbing bars yieldably mounted in the said carrier; and, alternating with the said bars, longitudinal rolls mounted to be independently rotatable about their own axes.

4. A machine of the class described, having, in combination, a rotary carrier comprising end disks, a series of longitudinally curved rolls independently rotatable about their axes, and an alternate series of similarly curved spring-pressed ribs independently mounted in the said disks to permit them to yield inwardly in approximately radial lines when they engage the work, but restrained from tipping or turning about their axes.



5. A finishing tool comprising rubbing members and rolls, a hub with a flange at each end, notches in the flanges for the rubbing members, a disk formed to confine the rubbing members, and pivot bolts for the rolls, screwing into the flanges and holding the disk in place.

1,019,957. BED ATTACHMENT. FRANK HADLEY, Chicago, Ill. Filed Apr. 12, 1911. Serial No. 620,542. (Cl. 45—82.)

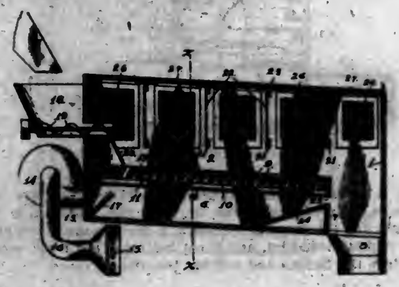


1. A tray attachment for beds comprising a vertical rod detachably secured in spaced relation to a bed post, a horizontally swinging arm hinged to said rod, means for vertically adjusting said arm, a tray support provided at the free extremity of said arm, a demountable tray provided on said tray support, and means for horizontal and angular adjustment of said tray comprising an extension of said arm, a transversely disposed slotted member hinged to the extremity of said arm, a screw passed through said extension and so arranged as to abut the under surface of said member for changing the angular adjustment thereof, an elongated slotted member mounted on said first-named slotted member so that the slots thereof are in registration, a bolt passed through said slots, and a tray mounted on said elongated slotted member, substantially as described.

2. The combination with a bed, of a vertical hinge-rod detachably connected with a post of the bed, a horizontally swinging arm hinged to said rod, means for vertically adjusting said arm, a short horizontally disposed slotted member hinged to the free extremity of said arm, an extension secured to said arm at the free extremity thereof and disposed under said slotted member, a screw having a knurled head passed through said extension and abutting said slotted member for securing an angular adjustment thereof, an elongated slotted member mounted on said short slotted member so that the slots thereof are in registration, a locking bolt passed through said slots, a

lip formed at each end of said elongated member, and a tray arranged on said elongated member so that opposite edges thereof engage said lips, substantially as described.

1,019,958. SUGAR-DRIER. WILLIAM H. HANNAM and WARREN E. MURRAY, San Francisco, Cal., assignors to Western Sugar Refining Company, San Francisco, Cal., a Corporation of California. Filed June 22, 1911. Serial No. 634,767. (Cl. 34—33.)



1. In an apparatus for drying sugar, the combination with a drying chamber provided with a discharge outlet, of an air receiving chamber, a cover for said chamber provided with a series of transversely disposed inclined passage-ways establishing communication with the drying chamber, means for delivering sugar to be dried onto the covering for the heat chamber, and mechanism for supplying hot air into said chamber and forcing the same into the drying chamber as jet streams of heated air.

2. In an apparatus for drying sugar, the combination with a drying structure having its interior divided into a drying chamber and an air receiving chamber, of a covering for the heat receiving chamber provided with a series of transversely disposed inclined passage-ways establishing communication with the drying chamber, a plurality of transversely disposed baffles suspended within the drying chamber, a discharge outlet extended from said chamber, means for delivering sugar onto the covering for the air receiving chamber, and mechanism for delivering hot air into the said chamber and forcing the same therefrom into the drying chamber as jet streams of heated air.

3. In an apparatus for the described purpose, the combination with a drying structure the interior of which is provided with a drying chamber and an air circulating chamber, of a grated covering for the heat circulating chamber, a feeder for delivering material to be dried within the drying chamber, means for delivering heated air under pressure into the air receiving chamber and forcing the same therefrom into the drying chamber through the grated covering in the form of air jets, and a discharge outlet extended from the drying chamber.

4. In an apparatus for the described purpose, the combination with a drying structure provided with a drying chamber and an air receiving chamber, the said heat receiving chamber being provided with an outlet opening, an incline extended from the floor of said chamber to the outlet opening thereof, of a transversely slotted covering for the air receiving chamber, a feeder for delivering material to be dried into the drying chamber, means for forcing heated air under pressure into the air receiving chamber and from said chamber into the drying chamber as jet streams, and a discharge outlet extended from the drying chamber for the dried material.

5. In an apparatus for the described purpose, the combination with a drying structure provided with a drying chamber and an air receiving chamber, of a transversely slotted covering for the air receiving chamber, a series of transversely disposed screened baffles suspended within the drying chamber, a feeder for delivering material to be dried into the drying chamber, and means for delivering heated air into the air receiving chamber.

[Claim 6 not printed in the Gazette.]

1,019,959. SUGAR-DRYING MACHINE. WILLIAM H. HANNAM and WARREN E. MURRAY, San Francisco, Cal., assignors to Western Sugar Refining Company, San Francisco, Cal., a Corporation of California. Filed June 22, 1911. Serial No. 634,768. (Cl. 34—13.)

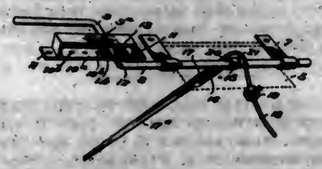


1. In a machine for the described purpose, the combination with a drying structure provided with an interior drying chamber and a receiving chamber, of a carrier working within the drying chamber consisting of endless traveling chains or belts carrying a plurality of spaced transverse cross-pieces or drags, a screen covering for the receiving chamber, a plurality of spaced transversely disposed spreader blades suspended within the drying chamber a given distance above the screen covering, means for forcing heated air into the receiving chamber, devices for imparting movement to the endless traveling conveyer, and means for delivering sugar to be dried onto the screen covering.

2. In a machine for the described purpose, the combination with a drying structure provided with a drying chamber and a receiving chamber, of means for supplying heated air to the last mentioned chamber, a screen covering for said chamber, a feeder for delivering sugar to be dried onto the surface of the screen covering, devices for propelling the sugar thereover, and a plurality of transversely disposed spaced spreader blades suspended within the drying chamber above the said screen covering.

3. In a machine for the described purpose, the combination with a drying structure provided with an interior drying chamber and a receiving chamber, of a screen covering for the last mentioned chamber, means for supplying heated air into said chamber, devices for propelling sugar to be dried over the surface of the screen covering for the receiving chamber, and means working within said chamber for removing fine sugar therefrom.

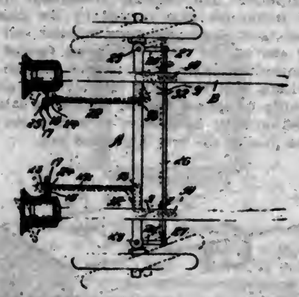
1,019,960. RETARDER FOR SELF-BINDING HARVESTERS. JOHN A. HILLENBRAND, Vanderburg county, Ind. Filed June 2, 1911. Serial No. 630,750. (Cl. 56—36.)



1. The combination with the chute of a self-binder, of a longitudinally movable shaft, a depending swinging retarder and adjuster carried by the shaft, said shaft being provided with an angled portion, a spring exerting pressure on the shaft to hold the angled portion on the chute, and means, including the spring for locking the shaft in different positions of longitudinal adjustments.

2. The combination with the chute of a self-binder, of a longitudinally movable shaft, a depending swinging retarder and adjuster carried by the shaft, said shaft having an angled portion, a frame provided with a series of engaging devices, a member carried by the angled portion adapted for engagement with any of said engaging devices, and a spring exerting pressure on said angled portion and holding the same in engagement with said members.

1,019,961. HEADLIGHT FOR AUTOMOBILES. JOSEPH M. HIXON, Attica, Ind. Filed May 1, 1911. Serial No. 624,278. (Cl. 240—62.)



1. A headlight comprising a stationary lamp portion provided with an attaching bracket, a disk carried thereby, a supporting plate revolubly mounted on the stationary lamp portion and arranged above said disk, a lamp casing carried by the plate, a reflector carried by and movable with the casing, retractile springs connecting the disk and plate, an arm extending from the casing, and means connected with said arm for turning the casing against the resistance of said springs.

2. A headlight comprising a fixedly mounted lamp member, a movable reflector thereon, an arm extending from the reflector, a member adjustable longitudinally on the arm, and actuating means operatively connected with the arm-carried-member and including relatively adjustable portions located at opposite sides of the said arm-carried-member.

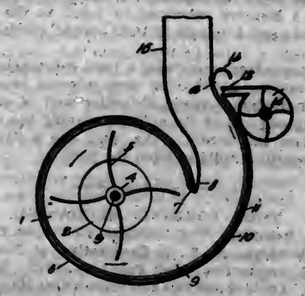
3. A headlight comprising a base member, a tube thereon, a support revolubly mounted on the tube, elastic means connecting the base member with the support to normally hold the former against movement on the latter, a reflector carried by the support, and means for moving the support against the tension of the elastic means.

4. A headlight comprising a base member, a revolubly mounted reflector thereon, a slotted arm secured to the reflector, and an actuating member extending through the slotted arm and adjustable longitudinally thereon and including relatively adjustable portions disposed at opposite sides of the arm.

5. A headlight including a revolubly mounted reflector, an arm thereon, a member mounted for longitudinal adjustment on the arm, an actuating rod slidable through the adjustable member, and relatively adjustable members on the actuating rod.

[Claim 6 not printed in the Gazette.]

1,019,962. GRAIN-SEPARATOR. HOMER F. HUTTON, Jeffers, Mont. Filed July 6, 1911. Serial No. 637,129. (Cl. 130—17.)



1. The combination with the fan and fan casing of a threshing machine, of a main conduit in communication with the fan casing, a slatted frame disposed in the wall adjacent the outlet of the fan casing, an auxiliary fan for separating the lighter material from the grain disposed at the upper end of the slatted frame, and means to convey the grain after passing the outlet of said auxiliary fan away from the main conduit.

2. The combination with the fan and fan casing of a threshing machine, of a main conduit in communication with said casing, the lower wall of said conduit being eccentrically disposed with relation to the wall of the fan casing, a grate mounted parallel to the entire curved wall of the fan casing and the outer wall of the main conduit to prevent the straw contacting the curved wall of the fan casing and the outer wall of the main conduit during its passage through the fan casing and conduit, and means for receiving the grain forced through the grate and propelled against the curved wall of the fan casing and the outer wall of the main conduit.

3. The combination with the fan and fan casing of a threshing machine, of a main conduit in communication with said casing, the lower wall of said conduit being eccentrically disposed with relation to the wall of the casing, a grate mounted in the main conduit and against which the straw is thrown by centrifugal force after leaving the fan casing, a fan disposed in the conduit at the upper end of the grate for separating the lighter particles from the grain, and means for receiving the grain after the light particles are separated therefrom.

4. The combination with a stacker fan and fan casing of a threshing machine, of a stacker conduit leading from said casing, a curved grate conforming to the shape of the adjacent wall of the conduit disposed in the stacker conduit and against which the straw ejected from the fan casing is projected thereagainst by centrifugal force, said stacker being provided with an aperture at the upper end of the grate to permit the grain to pass out of the stacker conduit, and a deflector disposed above said aperture to convey the grain away from said conduit as it leaves the stacker conduit.

5. The combination with a stacker fan and fan casing of a threshing machine, of a stacker conduit leading from the casing, a curved grate disposed in the stacker conduit and against which the straw ejected from the fan casing is projected thereagainst by centrifugal force, an auxiliary fan casing in communication with the stacker conduit at a point near the upper end of the grate, a fan therein for separating lighter particles of the grain as it passes between the grate and the outer wall of the conduit, said stacker being provided with an aperture in the wall thereof, beyond the inlet from the auxiliary fan casing to permit the grain to pass out of the stacker conduit, and a deflector to convey the grain away from said conduit as it leaves the stacker conduit.

[Claims 6 and 7 not printed in the Gazette.]

1,019,963. ANTICORROSIVE ALLOY OR METALLIC COMPOUND. GASTON JACQUINE, Belgravia, near Johannesburg, Transvaal. Filed Oct. 24, 1910. Serial No. 588,697. (Cl. 75—1.)

1. An anti-corrosive alloy or metallic compound consisting of aluminium, bismuth, copper and silicon, as set forth.

2. An anti-corrosive alloy or metallic compound consisting of approximately ninety-two per cent. of aluminium, two per cent. of bismuth, five per cent. of copper, and one per cent. of silicon, as set forth.

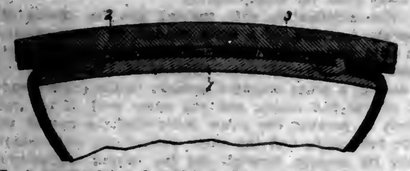
1,019,964. SHOE-FILLER COMPOSITION. JAMES P. KEENER, Brockton, Mass. Filed Dec. 27, 1909. Serial No. 535,111. (Cl. 106—3.)

1. A composition for filling shoes comprising a base of comminuted solid material and a binder comprising rosin, resin derived from a gum and oil.

2. A composition for filling shoes comprising a base of comminuted material and a binder comprising rosin, resin derived from a gum, oil and dextrin.

3. A composition for filling shoes comprising a base of comminuted solid material and a binder consisting of rosin, resin derived from a gum, rosin oil and dextrin.

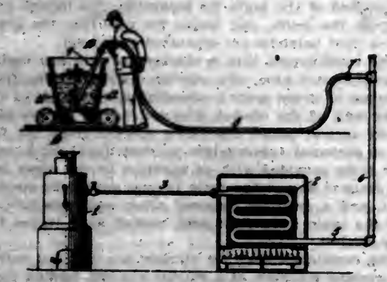
4. A composition for filling shoes, comprising a base of comminuted solid material and a binder consisting of rosin, 20%, resin derived from a gum 30%, rosin oil 20% and dextrin 20%.



5. A composition for filling shoes, comprising a base of comminuted solid material and a binder consisting of three parts of rosin, three parts of resin derived from a gum and two parts of rosin oil.

[Claims 6 and 7 not printed in the Gazette.]

1,019,965. TREATMENT OF METALS. WILLIAM H. KELLY, Los Angeles, Cal. Filed July 27, 1908. Serial No. 445,566. (Cl. 75—44.)



1. The herein described process of treating molten metal which consists in introducing into the mass of metal superheated steam containing nascent oxygen and hydrogen.

2. The herein described process of treating molten metal which consists in introducing into the mass of metal superheated steam containing nascent oxygen and hydrogen under comparatively low pressure.

3. The herein described process of treating molten metal which consists in introducing into the mass of metal superheated steam containing nascent oxygen and hydrogen at a temperature substantially the same as the temperature of the metal.

4. The herein described process of treating molten metal which consists in introducing into the mass of metal at different points superheated steam containing nascent oxygen and hydrogen and thereby causing the oxygen and hydrogen to thoroughly agitate the mass and to be commingled therewith.

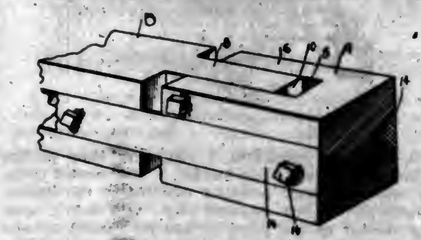
5. The herein described process of treating molten metal which consists in subjecting steam to a temperature above the point of dissociation into nascent oxygen and hydrogen and then introducing the same into a mass of molten metal and commingling it therewith.

[Claims 6 to 8 not printed in the Gazette.]

1,019,966. RAIL-JOINT. HENRY N. KENNEDY, Magnolia, Miss. Filed July 12, 1911. Serial No. 638,152. (Cl. 239—8.)

1. A rail joint including in combination, a pair of rails disposed end to end, the meeting end of one of the rails being formed with an inwardly extending longitudinal slot forming consequent fingers, a plurality of transverse pins carried by the fingers and projecting across the slot, the meeting end of the other rail being formed with a projecting tongue adapted for engagement within said slot, said tongue being slotted to form a plurality of hooks engageable with the transverse pins of the first mentioned rail.

2. A rail joint including in combination, a pair of rails disposed end to end, the meeting end of one of the rails being centrally formed with a vertical and inwardly extending longitudinal slot forming consequent fingers, a plurality of transverse pins carried by the fingers and projecting across the slot adjacent the outer end thereof, the meeting end of the other rail being formed with a centrally projecting longitudinal tongue adapted for engagement within said slot, said tongue being slotted to form a plurality of spaced fingers, certain of said fingers being recessed on their underfaces to form hooks adapted to engage the pins of the first mentioned rail.



3. A rail joint comprising in combination, a pair of rails disposed end to end, one of the rails being formed with a transversely disposed elongated slot, the meeting end of one of the rails being formed with an inwardly extending longitudinal slot forming consequent fingers, a plurality of transverse pins carried by the fingers and projecting across the slot, the meeting end of the other rail being formed with a projecting tongue adapted for engagement within said slot, said tongue being slotted to form a plurality of hooks engageable with the transverse pins of the first mentioned rail, fish-plates disposed on opposite sides of the rails, means for securing the fish-plates to one of the rails, and a bolt connecting the fish-plates and disposed within the elongated slot of the other rail.

1,019,967. DRIPLESS TEA-STRAINER. EDWARD FRANCIS KING, Attleboro, Mass. Filed July 27, 1911. Serial No. 640,793. (Cl. 210—16.)

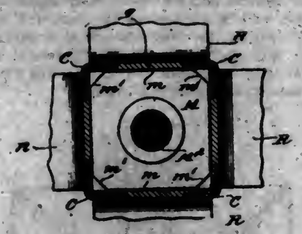


1. The herein described dripless tea strainer comprising a bowl substantially cylindrical in contour having deep beads formed in its walls near both its ends, one of the latter being open to form the mouth of the bowl, and wire gauze filling the other; a ferrule and legs secured upon one side of said bowl, the legs having feet at their outer ends separated a distance substantially equal to the diameter of the bowl; and a handle of light weight carried by said ferrule.

2. A tea strainer comprising a bowl substantially cylindrical in contour and having deep internal grooves near its ends, a strainer between the outer wall of one groove and closing one end of the cylinder leaving the other end open to form the mouth of the bowl, and a light weight handle projecting radially from the bowl.

1,019,968. TUBE-FORMING MECHANISM. ROBERT KOENIG, Brooklyn, N. Y., assignor to Phenix Tube Company, Brooklyn, N. Y., a Corporation of New Jersey. Original application filed July 27, 1910, Serial No. 574,076. Divided and this application filed Mar. 20, 1911. Serial No. 615,542. (Cl. 80—34.)

1. In a machine for making prismatic butt-seamed tubes, the combination of an internal mandrel and an external former both provided with clearances at the places where the salient angles of the tube are formed.



2. In a machine for making prismatic butt-seamed tubes, the combination of an internal mandrel chamfered at the corners and external rolls each coöperating with a side of the mandrel and affording external clearances corresponding in position to the chamfered corners of the mandrel.

1,019,969. ELECTROLYSIS OF METALLIC SOLUTIONS. FERNAND LACROIX, Paris, France. Filed Feb. 19, 1910. Serial No. 544,875. (Cl. 204—15.)



An electrolytic cell for separating metals from their impure solutions, comprising a rotating cathode, a stationary concentric anode dividing the cell into two parts and provided with a large number of small perforations through which the whole of the electrolyte passes and carries away the impurities produced at the anode, an inlet pipe for admitting electrolyte to the space inside the cathode and an outlet pipe for the same outside the cathode.

1,019,970. ELECTRICAL CONDUCTOR FOR LIGHTING PURPOSES. ISADOR LADOFF, Schenectady, N. Y., assignor, by direct and mesne assignments, of fifteen one-hundredths to Walter D. Edmonds, Boonville, N. Y., fifteen one-hundredths to Philip C. Peck, New York, N. Y., and seventy one-hundredths to Anna M. Ladoff, Schenectady, N. Y. Original application filed Dec. 2, 1903, Serial No. 183,528. Divided and this application filed June 18, 1904. Serial No. 213,065. (Cl. 176—136.)

1. A homogeneous electrode for arc lighting consisting of titanium oxid intimately mixed and conglomerated with a metal having greater conductivity than said oxid.

2. A homogeneous electrode for arc lighting consisting of titanium oxid intimately mixed and conglomerated with iron.

3. An arc light pencil comprising titanium oxid intimately mixed and conglomerated with a metal having greater conductivity than said oxid, substantially as and for the purposes described.

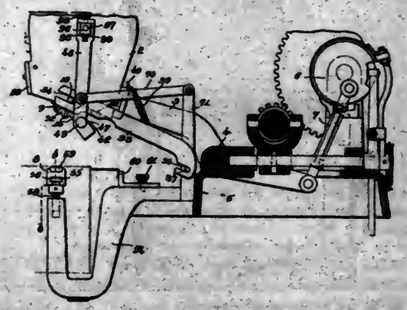
4. An arc light pencil comprising titanium oxid intimately mixed and conglomerated with iron, substantially as and for the purposes described.

5. An arc light electrode essentially metallic in composition, containing metallic iron and a titanium compound.

[Claims 6 to 22 not printed in the Gazette.]

1,019,971. CARTON-MARKER. GEORGE H. LANG, Boston, Mass. Filed July 14, 1909. Serial No. 507,521. (Cl. 101—83.)

1. In a device of the class described, the combination with a frame having a platen support, of a plurality of screws having screw-threaded engagement with said support, a platen resting on certain of said screws, one of said screws constituting a clamping screw and having a sliding swivel connection with the platen and operating to clamp the platen against the other screw, said clamping screw having a portion accessible between the support and platen by which it may be turned.



2. In a device of the class described, the combination with a frame having a platen support, of a plurality of screws having screw-threaded engagement with said support, a platen resting on certain of said screws, one of said screws constituting a clamping screw and having a sliding swivel connection with the platen and operating to clamp the platen against the other screw, each of the screws having a portion accessible between the support and platen by which it may be turned.

3. In a device of the class described, the combination with a frame having a platen support, of two leveling screws having screw threaded engagement with said support, a platen resting on the leveling screws, a clamping screw having an adjustable swivel connection with the platen and screw threaded into the support, said clamping screw having a portion by which it may be turned accessible between the support and the platen.

4. In a device of the class described, the combination with a platen support, of two leveling screws having screw threaded engagement with said support and provided with heads above the support by which they may be turned, a platen resting on said heads, and a clamping screw having an adjustable swivel connection with the platen and a screw threaded connection with said support.

5. In a device of the class described, the combination with a frame having a platen support, of two leveling screws having screw-threaded engagement with said support, a platen resting on said leveling screws, a clamping screw having a sliding swivel connection with the platen and screw-threaded into the support, said clamping screw having a portion accessible between the support and platen by which it may be turned.

[Claims 6 to 17 not printed in the Gazette.]

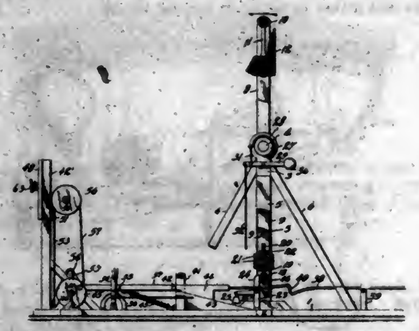
1,019,972. TARGET-CONTROLLED ROUNDABOUT. JOE LEBO, Dallas, Tex. Filed Mar. 2, 1911. Serial No. 611,742. (Cl. 46—27.)

1. In an amusement device, a base, a support mounted on the base, a revoluble member mounted on the support, a carriage attached to the member, a spring plunger adapted to engage the member, a device for setting the plunger under tension, and a target-operated releasing device coöperating with the setting device.

2. In an amusement device, the combination with a revolubly supported member, and an operating plunger adapted to engage the member, of a carriage hanger mounted in the member, and latching devices carried by the hanger and engaging with the member.

3. In an amusement device, a support, a revoluble member mounted on the support, a carriage mounted on the member, a counter-balancing weight carried by the member in diametrically opposed relation to the carriage, a reciprocating device disposed under the revoluble member, a spring connected to the device, a lever connected to

the plunger, a drum, a connection wound on the drum and attached to the lever, a device for rotating the drum, a latch member adapted to engage the drum, and a target carried by the latch.



4. In an amusement device, a support, an axle mounted in the support, revoluble hubs mounted on the axle, arms extending from the hubs in opposed relation and arranged in pairs, a carriage mounted between one pair of arms, counter-balancing weights mounted between the other pair of arms, stop devices coöperating with one of the pairs of arms, a brake mechanism associated with the axle, and a reciprocating device for swinging the arms.

5. In an amusement device, a support, a revoluble member mounted on the support and provided with opposed arms, a carriage mounted on the arms, counter-balancing weights mounted on the arms in opposed relation to the carriage, and a reciprocating operating member arranged to engage the revoluble member.

[Claims 6 and 7 not printed in the Gazette.]

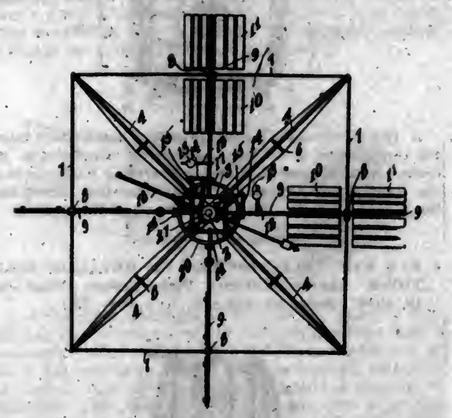
1,019,973. AUTOMOBILE-TIRE. JOHN F. LIEB, Philadelphia, Pa. Filed Feb. 6, 1911. Serial No. 606,966. (Cl. 152—8.)



In a spring tire, the combination of a casing having a metal shoe disposed therein, a coil spring arranged in the casing having one end secured to the shoe, the other end extending upwardly and provided with left hand screw threads, a clamping member slidably mounted on said upwardly extending end, said clamping member comprising a hollow stem having right hand threads formed on its exterior, a base for said stem, outwardly and downwardly extending flanges formed on said base, and a double acting nut engaged upon the stem of said clamping member and on the upwardly extending end of the spring to clamp the tire securely to the rim.

1,019,974. WINDMILL. JAMES OWEN LINDSEY, Hereford, Tex. Filed July 8, 1911. Serial No. 637,433. (Cl. 170—1.)

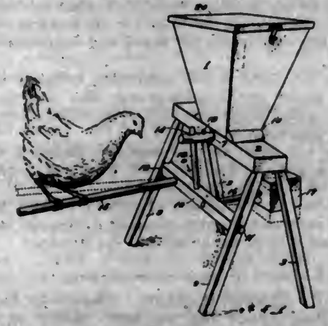
1. A windmill including a vane, a wheel, said vane and wheel being separately revoluble about a common axis, radially disposed shafts carried by the wheel, wings secured to the shafts and normally suspended vertically, an adjustable counter-balance upon each shaft, coöperating means upon each shaft and on the vane for rotating the shaft and shifting the wing thereon to a horizontal position when said shaft and wing are extended beyond one side of the vane, and means for locking the wheel against rotation independently of the vane.



2. A windmill including a vane, a wheel, said vane and wheel being revoluble about a common axis and independently of each other, an arcuate tripping rail extended beyond one side of and movable with the vane, said rail having an upstanding deflecting terminal portion, shafts arranged radially within the wheel, wings carried by the shafts and normally extended vertically, means carried by each shaft and coöperating with the tripping rail for rotating the shaft and holding the wing thereon in a horizontal position while the shaft is extended beyond one side of the vane, and means for locking the wheel against rotation independently of the vane.

3. A windmill including a vane, a wheel, said vane and wheel being separately revoluble about a common axis, wings carried by the wheel and normally vertical, coöperating means upon the wheel and vane for shifting the wings to horizontal positions when brought into place at one side of the vane, and means for locking the wheel and vane against independent rotation.

1,019,975. CHICKEN FEEDER AND EXERCISER. WILLIAM RICHARD LOGAN, Los Angeles, Cal., assignor of one-half to Robert Henry Ross, Los Angeles, Cal. Filed May 19, 1909. Serial No. 497,122. (Cl. 119—70.)

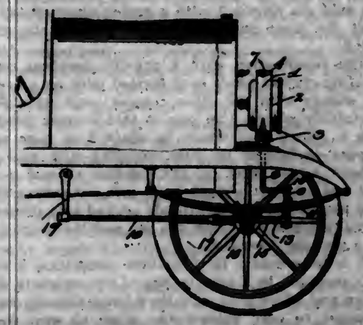


1. A chicken feeder comprising a receptacle having an outlet in its bottom, a valve to open and close the outlet to intermittently discharge feed from the receptacle, a fulcrum member below the level of the valve, means to hold the fulcrum member elevated, an arm extending from the fulcrum member to operate the valve, means to normally hold the fulcrum member in one position, and a perch fixed to and projecting away from the fulcrum member and the receptacle to operate the fulcrum member and the arm and being horizontal when the valve is closed.

2. A receptacle, legs on the base of the receptacle, a fulcrum member mounted on the legs, a valve to intermittently discharge feed from the receptacle, an arm extending from the fulcrum to operate the valve, means to normally hold the fulcrum member in one position, and a perch projecting from the fulcrum member to operate the arm, so that when the perch is occupied the valve will be held in one position, and when it is unoccupied the valve will be moved into another position for the purpose of discharging feed from the receptacle.

3. The combination with a receptacle, of a base provided with a valve-way, an outlet-port being provided between the receptacle and the valve-way and a discharge-port being provided from the valve way, said outlet-port and discharge-port being in staggered relation with each other, a valve in said valve-way provided with a chamber, to register alternately with the outlet-port and the discharge-port to carry feed from the outlet-port to the discharge-port, said valve being also provided with a mortise, a bell-crank lever, one of the arms of which is arranged in and is smaller than the mortise, and the other arm of which extends to form a perch; means to operate the bell-crank lever to normally hold the perch elevated and the valve in such position that the chamber registers with the outlet-port, the perch being adapted to be depressed to shift the valve to bring the chamber into register with the discharge-port, the arm in said mortise being smaller than the mortise to allow lost motion for the purpose of hammering the valve to start it in either direction.

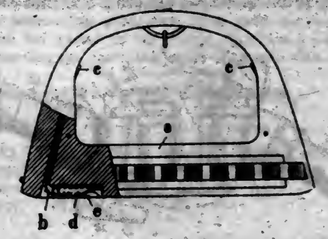
1,019,976. DIRIGIBLE HEADLIGHT. JAMES L. LOWE, Moore, Mont. Filed Nov. 29, 1910. Serial No. 594,626. (Cl. 240—62.)



A dirigible head light for vehicles comprising frames with lamps pivotally connected thereto, one of the lamps having a downwardly projecting arm bent forwardly at its lower end and having a socket in its terminal, a forked coupling member having its upper end pivoted to the socket, and also having one end of a rod hinged to its forks, a cross bar connected to the steering mechanism having one end of a forked coupling pivoted to its body portion, its forked end having the other end of the above mentioned rod hinged thereto, brackets on the rear faces of the lamps, and a rod having its opposite ends pivoted to the brackets whereby to operate the lamps simultaneously.

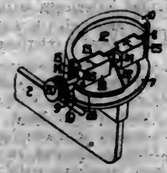
1,019,977. LOOM-SHUTTLE. EMIL LUBECK, Barmen, Germany. Filed Apr. 15, 1911. Serial No. 621,390. (Cl. 139—46.)

1. In a loom shuttle a device for attaching the ends of the tension springs comprising in combination a housing embedded in a recess of the shuttle body, a movable detent, slotted for the insertion of the end of the spring and a spring adapted to hold the detent in either a raised or a depressed position, all substantially as described.



2. In a loom shuttle a device for attaching the ends of the tension springs comprising in combination a housing embedded in a recess of the shuttle body, a movable detent with a slot for the insertion of the end of the spring, a spring adapted to hold the detent in either a raised or a depressed position and a stop for limiting the inward movement of the detent all substantially as described.

1,019,978. TYPE-WRITING MACHINE. CARL F. LUNDEBERG, Hartford, Conn., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of New Jersey. Filed Mar. 17, 1910. Serial No. 549,909. (Cl. 197—104.)



1. A key having a character-bearing device inclosed therewithin, and turning on an axis substantially parallel to the face of the key, and having a finger-piece exterior to the key whereby the character-bearing device may be rotated.

2. A key having a character-bearing device inclosed therewithin, and turning on an axis substantially parallel to the face of the key, and having a finger-piece exterior to the key whereby the character-bearing device may be rotated, and a detent to hold said device in adjusted position.

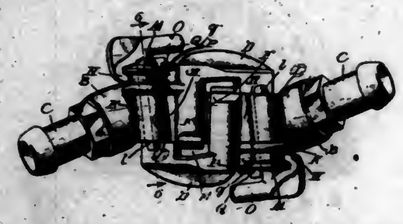
3. A key provided with a seat, a cap, a character-bearing device journaled in the cap, and turning on an axis substantially parallel with the face of the key, one end of said device extending through an aperture in the cap to facilitate turning, and a detent to hold the device in adjusted position.

4. A key comprising a cap, means for closing one end of the cap to form the face of the key, a character bearing device journaled within the cap and capable of movement toward and from the face of the key, the character-bearing device having flat faces carrying the characters, and a spring to normally press one or another of the flat faces against the face of the key to prevent accidental turning of the character-bearing device.

5. A key comprising a cap, means for closing one end of the cap to form the face of the key, a character-bearing device journaled within the cap and capable of movement toward and from the face of the key, the character-bearing device having flat faces carrying the characters, and a spring to normally press one or another of the flat faces against the face of the key to prevent accidental turning of the character-bearing device, one end of the character-bearing device extending through an opening in the cap and a finger-piece secured to such end to turn the device.

[Claims 6 to 21 not printed in the Gazette.]

1,019,979. HOSE-COUPLING. THOMAS H. MANCHESTER, Chicago, Ill., assignor to Chicago Car Heating Company, Chicago, Ill., a Corporation of Illinois. Filed Sept. 8, 1910. Serial No. 581,039. (Cl. 137—89.)



1. The combination with a gravity coupling comprising mating coupler heads provided with coengaging means, of a locking pin rotatably mounted in one of said coupler heads and adapted to bear against the other coupler head, the coupler head in which the pin is mounted being provided exteriorly with a spiral thread and said pin being provided with a handle and so formed as to engage with and take a frictional grip on said spiral thread; and a spring latch which is adapted to engage said pin and hold the same in retracted position.

2. The combination with a gravity coupling comprising mating coupler heads each formed with an arm adapted to engage with the other coupler head, of a locking pin rotatably mounted in one of said coupler heads and adapted to bear against the arm engaging therewith, said coupler head being provided exteriorly with a spiral thread and said pin being provided with a handle and formed so as to engage with and take a frictional grip upon said spiral thread.

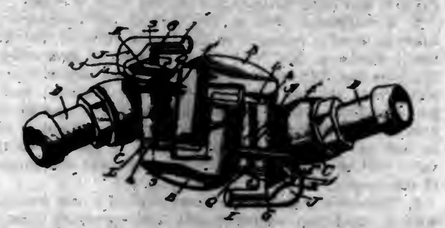
3. The combination with a gravity coupling comprising mating coupler heads each formed with an arm adapted to engage with the other coupler head, of a locking pin rotatably mounted in one of said coupler heads and having a conical end which is adapted to bear against the upper side of the arm engaging with said head; said head having cast on the exterior thereof a spiral thread and said pin being formed with a handle and with a wing notched so that it extends around said thread.

4. The combination with a gravity coupling comprising mating coupler heads each formed with an arm adapted to engage with the other coupler head, of a locking pin rotatably mounted in one of said coupler heads having one end tapered and bearing against the arm engaging with said coupler head, said last named coupler head being provided exteriorly with a spiral thread and said pin being provided with a handle and formed so as to engage with and take a frictional grip upon said spiral thread.

5. The combination with a gravity coupling comprising mating coupler heads, each formed with an arm adapted to engage with the other coupler head, of a locking pin rotatably mounted in one of said coupler heads having one end tapered eccentrically with respect to the axis of the pin and bearing against the arm engaging with said last named coupler head, said last named coupler head being provided exteriorly with a spiral thread and said pin being provided with a handle and formed so as to engage with and take a frictional grip upon said spiral thread.

1,019,980. HOSE-COUPLING. THOMAS H. MANCHESTER and EGBERT H. GOLD, Chicago, Ill.; said Manchester assignor to said Gold. Filed Jan. 24, 1911. Serial No. 604,347. (Cl. 137—89.)

1. The combination with a gravity coupling comprising mating coupler heads each formed with an arm adapted to engage with the other coupler head and at least one of the same with a bore, of a locking pin rotatably mounted in said bore and adapted to bear against the arm engaging said coupler head, said coupler head being provided exteriorly with a spiral thread and said pin being provided with a handle and formed so as to engage with and take a frictional grip upon said spiral thread, and a spring interposed between said pin and the surface constituted by the bore and adapted to resist without preventing the movement of said locking pin.



2. The combination with a gravity coupling comprising mating coupler heads each formed with an arm adapted to engage with the other coupler head and at least one of said coupler heads being formed with a transverse bore, of a locking pin rotatably mounted in said bore and adapted to bear against the upper surface of the arm which engages with said head; said coupler head being provided exteriorly with a spiral thread and said pin being provided with a handle and formed so as to engage with and take a frictional grip upon said thread; and a spring on the pin which bears against the inner surface of said bore, for the purpose specified.

3. The combination with a gravity coupling comprising mating coupler heads each formed with an arm adapted to engage with the other coupler head and at least one of said coupler heads being formed with a transverse bore, of a locking pin rotatably mounted in said bore and adapted to bear against the upper surface of the arm which engages with said head; said coupler head being provided exteriorly with a spiral thread and said pin being provided with a handle and formed so as to engage with and take a frictional grip upon said thread; a collar on said pin provided with a spring finger which bears against the inner surface of said bore, for the purpose specified.

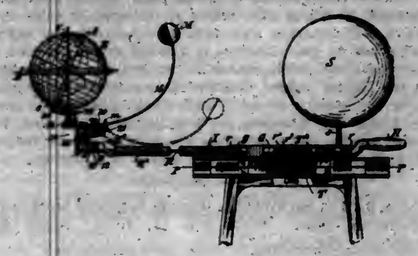
4. The combination with a gravity coupling comprising mating coupler heads each formed with an arm adapted to engage with the other coupler head, of a locking pin rotatably mounted in one of said coupler heads and having a conical end which is adapted to bear against the upper surface of the arm engaging with said head; said head having cast on the exterior thereof a spiral thread and said pin being formed with a handle and with a wing notched so that it extends around said thread, and a spring interposed between the pin and the coupler head, for the purpose described.

5. A locking device for couplings comprising a pin rotatably mounted in a bore in one of the members of said coupling and adapted to be shifted longitudinally so as to be brought to bear against the other of said coupling members, and a collar surrounding said pin provided with a spring finger adapted to bear against the side of the bore, for the purpose specified.

[Claims 6 to 9 not printed in the Gazette.]

1,019,981. TELLURIAN. ISAAC N. MATLICK, Portland, Oreg. Filed June 10, 1910. Serial No. 566,211. (Cl. 35—8.)

1. In a tellurian, in combination with a table carrying a globe representing the sun, actuating means consisting of a circumferentially movable shaft geared to and finding its pivot upon said table, a frame at the outer end of said shaft carrying globes representing the earth and moon, an adjustable inclined disk mounted on said frame, means permitting the moon globe to bear upon said inclined disk whereby the globe is caused to rise and fall from the plane of the ecliptic in its orbit, and means for simultaneously revolving said earth and moon globes and said inclined disk in such manner that the sun will appear in the nodal point of the moon's orbit at the proper decreasing period for each year.



2. In a tellurian, in combination with a table carrying a globe representing the sun, actuating means consisting of a circumferentially-movable shaft geared to and finding its pivot upon said table,—a frame at the outer end of said shaft carrying a vertical shaft, upon which is fixed a horizontal bar,—a crown-gear having an inclined upper surface, eccentrically mounted about said vertical shaft,—an earth-globe mounted upon one end of said horizontal bar,—a rod carrying a moon-globe pivotally secured to the other end thereof and having secured thereon a guide-wheel adapted to travel on the inclined surface of said crown-gear,—and means connected with the first mentioned shaft for operating said horizontal bar whereby the earth and moon-globes will be simultaneously revolved in their proper direction and the latter will be caused to regularly rise and fall from the plane of the ecliptic and the sun to appear in the nodal point of the moon's orbit at its proper decreasing period for each year.

3. In a tellurian, in combination with a table carrying a globe representing the sun, actuating means consisting of a circumferentially-movable shaft geared to and finding its pivot upon said table,—a frame at the outer end of said shaft carrying a vertical shaft upon which is fixed a horizontal bar,—a crown-gear having an inclined upper surface, eccentrically mounted about said vertical shaft,—means for operatively connecting the movable shaft with the crown-gear,—an earth-globe mounted upon one end of said horizontal bar,—a rod carrying a moon-globe pivotally secured to the other end thereof and having secured thereon a guide-wheel adapted to travel on the inclined surface of said crown-gear,—means connected with the first mentioned shaft for operating said horizontal bar whereby the earth and moon globes will be simultaneously revolved in their proper directions and the latter will be caused to regularly rise and fall from the plane of the ecliptic and the sun to appear in the nodal point of the moon's orbit at the proper decreasing period for each year,—and means for disengaging said operative mechanism.

4. In a tellurian, in combination with a table carrying a globe representing the sun, actuating means consisting of a circumferentially-movable shaft geared to and finding its pivot on said table,—a frame at the outer end of said shaft carrying a vertical shaft, to the upper end of which is fixed a transverse bar for supporting an earth-globe,—a hub mounted on said vertical shaft having oppositely disposed, upwardly curved arms,—a vertical band constituting a segment of a circle, secured to said arms and adapted to encircle the earth-globe at its center, oppositely disposed semicircular bands marked to indicate the time of day, pivotally secured to the sides of said vertical band and adapted to stand in the plane of the ecliptic,—and means connecting the operating shaft with said hub and earth-globe, whereby said vertical band will be maintained in a plane at right angles to the operating shaft.

5. In a tellurian, in combination with a table carrying a globe representing the sun, actuating means consisting of a circumferentially movable shaft geared to and finding its pivot on said table,—a frame at the outer end of said shaft carrying a vertically mounted shaft upon which is secured a horizontal bar, in the outer end of which is mounted a vertical shaft carrying a toothed disk,—a bar conforming to the surface of the earth-globe secured above said disk,—a rod carrying an earth-globe fixed to said bar at a point 23 1–2 degrees from its point of support,—gearing connecting said disk with said earth-globe for operating the latter in its proper direction,—and means for connecting the operating shaft with said disk, for operating it.

[Claims 6 and 7 not printed in the Gazette.]

1,019,982. LIFE-RAFT. CHARLES R. MCCOTTER, Jacksonville, Fla., assignor of one-half to George S. Phillips, Jacksonville, Fla. Filed Apr. 7, 1911. Serial No. 619,599. (Cl. 9—11.)



1. In a life raft, the combination with a body portion comprising a series of separate water-tight compartments made of non-corrodible metal, of a wooden casing around the sides and bottom of said body portion to protect the same, a lining of life preservers between said casing and body portion, and means for securing said compartments in place in said casing.

2. A life raft comprising a unitary body portion of non-corrodible metal having separated double walls at the bottom and sides forming water-tight compartments, a passageway being provided through said bottom for drainage purposes, water-tight partitions connecting said separated walls to form separated air chambers or compartments, and valved outlets from said side compartments for draining the same.

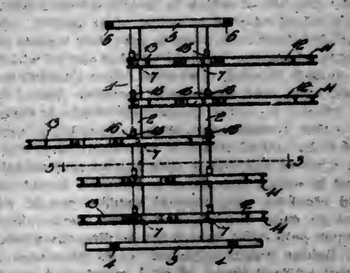
3. A life raft comprising a unitary body portion of non-corrodible metal having separated double walls throughout the bottom portion forming a water-tight air chamber the joints being brazed, and double side walls extending upwardly from said bottom forming air-tight chambers, means for draining said side compartments, and means for pumping water from said bottom compartment.

4. In a life raft the combination with a body portion of non-corrodible metal comprising a series of united water-tight compartments, of a removable box-like protecting casing fitting around the sides and bottom of said body portion, and means for securing said casing in place.

5. In a life raft the combination with a body portion of non-corrodible metal comprising a series of connected water-tight compartments, of a removable box-like protecting casing fitting around the sides and bottom of said body portion, a lining of buoyant material between said casing and body, and means for securing said casing in place.

[Claims 6 to 11 not printed in the Gazette.]

1,019,983. DISPLAY-RACK. ALONZO M. MCGAUGHEY, Russellville, Ind. Filed Apr. 24, 1911. Serial No. 623,110. (Cl. 211—14.)



1. A display rack of the character described, comprising a main supporting frame, series of supporting rollers revo-

lubly mounted on said main supporting frame, a series of rack frames slidably engaged with said rollers and adapted to be shifted laterally in either direction from the sides of said main frame, means to limit the lateral sliding movement of said rack frames, and means to relieve the rollers of strain when said rack frames are shifted laterally to display the goods thereon.

2. In a display rack, a main supporting frame comprising pairs of vertically disposed end standards connected at their lower end to a base frame and at their upper ends with a top frame, a series of flanged rollers revolubly mounted on the inner sides of said standards, rack frames slidably engaged with said rollers, said rack frames comprising channel iron side and end bars, said channel iron end bars having a sliding engagement with said rollers whereby said rack frames are adapted to be shifted laterally in either direction in said main frame, stop pins adapted to be engaged with said end bars of the rack frames thereby limiting the lateral shifting movement of said frames in either direction, stop plates pivotally connected to the standards of said main frame and adapted to engage the upper edges of the end bars of the rack frames, stop flanges formed on said plates, and diagonally arranged brace bars arranged between the end and side bars of said rack frames.

1,019,984. MAIL-BOX-TRANSMISSION SYSTEM. JOHN MCGEE, Quinlan, Tex. Filed Dec. 2, 1911. Serial No. 663,614. (Cl. 105—146.)



1. A cable transmission system comprising oppositely inclined rods, one of which is located at each end of the system, a wheel adapted to travel upon each of said rods, a bracket in which each wheel is mounted, a cable connecting said brackets, two unequal weights, one of which is attached to each bracket, a wheeled frame adapted to travel upon said cable, and means for holding the wheel which has the lighter weight attached to its correlated bracket, to prevent upward travel of said wheel.

2. A cable transmission system comprising oppositely inclined rods, one of which is located at each end of the system, a wheel adapted to travel upon each of said rods, a bracket in which each wheel is mounted, a cable connecting said brackets, two unequal weights, one of which is attached to each bracket, a wheeled frame adapted to travel upon said cable, means for holding the wheel which has the lighter weight attached to its correlated bracket to prevent upward travel of said wheel, and a manually operated means for releasing said wheel from the means for holding the same.

3. A cable transmission system comprising oppositely inclined rods, one of which is located at each end of the system, a wheel adapted to travel upon each of said rods, a bracket in which each wheel is mounted, a cable connecting said brackets, two unequal weights one of which is attached to each bracket, a wheeled frame adapted to travel upon said cable, and a manually operated means for raising the bracket to which the heavier weight is attached.

4. A cable transmission system comprising oppositely inclined rods, one of which is located at each end of the system, a wheel adapted to travel upon each of said rods, a bracket in which each wheel is mounted, a cable connecting said brackets, two unequal weights one of which is attached to each bracket, a wheeled frame adapted to travel upon said cable, means for holding the wheel which has the lighter weight attached to its correlated bracket to prevent upward travel of said wheel, and a manually operated means for raising the bracket to which the heavier weight is attached.

5. A cable transmission system comprising oppositely inclined rods, one of which is located at each end of the system, a wheel adapted to travel upon each of said rods, a bracket in which each wheel is mounted, a cable connecting said brackets, two unequal weights one of which is attached to each bracket, a wheeled frame adapted to travel upon said cable, means for holding the wheel which has the lighter weight attached to its correlated bracket to prevent upward travel of said wheel, a manually operated means for releasing the last named wheel from the holding means, and a manually operated means for raising the bracket to which the heavier weight is attached.

1,019,985. BANDAGE. OSCAR LEONARD MCMAHON, Columbia, Tenn. Filed Oct. 11, 1010. Serial No. 586,575. (Cl. 128—3.)



A bandage, comprising a coating of composition sensitive to heat and cold, said coating consisting of a sheet of gelatin, oxid of zinc, water, and glycerin, a strip of sheep skin engaging said coating, the wool of said sheep skin being embedded in said coating, a layer of gauze upon the coating and engaging the strip of sheep skin and a winding incasing the coating and the strip said winding being saturated with the composition for the purposes of preventing the displacement of said winding.

1,019,986. ARMORED WELL-SCREEN. CHARLES L. MICHOD, Los Angeles, Cal., assignor of one-half to Llewellyn Iron Works, Los Angeles, Cal., a Corporation of California. Filed Sept. 30, 1911. Serial No. 652,217. (Cl. 166—8.)



1. The combination of a perforated pipe, metal ribs secured on the outside of said pipe, and screen bars extending between said ribs on the outside of the pipe, said ribs having portions extending over said screen bars and said bars being held inwardly by said ribs and being held outwardly, independently of said ribs.

2. The combination of a perforated pipe, ribs extending over and secured to said pipe and having lateral extending flanges, and screen bars extending on the outside of the pipe between the said ribs, said screen bars extending beneath said flanges of said ribs and being held outwardly independently of said ribs.

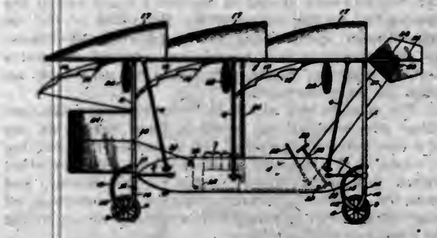
3. The combination of a perforated pipe, ribs extending over and secured to said pipe, screen bars extending on the outside of the pipe between the said ribs, said ribs having portions extending over said screen bars, and means separate from said ribs extending between said screen bars and pipe to space and support the screen bars from the pipe.

4. The combination of a perforated pipe, channel members in contact with said pipe and having upwardly extending flanges, said flanges being provided with a series of notches, ribs extending in the channel of said channel members, means engaging said ribs and channel members to secure the same to the pipe, and screen bars extending between said ribs and over the casing, and seated in said notches in said channel members, said screen bars extending under the flanges of said ribs and being spaced from the casing by said flanges of the channel members.

5. The combination with a perforated pipe, of ribs secured to said pipe, screen means extending between said ribs and supported so as to be held outwardly independently of said ribs, said ribs having portions extending over said screen means to hold the screen means inwardly toward the pipe.

[Claim 6 not printed in the Gazette.]

1,019,987. AEROPLANE. CLARENCE L. MOORE, Allenhurst, N. J. Filed Sept. 9, 1911. Serial No. 648,472. (Cl. 244—14.)



1. In a flying machine, a supporting surface comprising a plurality of hood-shaped aerofoils arranged in following order, and each having the form of a section of a cone.

2. In a flying machine, an aerofoil comprising a longitudinally extending, channeled, longitudinally tapering hood-shaped body, having the form of a section of a cone, said body being open to provide an air conduit of some depth and restricted width and having its top wall curved parabolically in a downward and rearward direction.

3. In a flying machine, a supporting surface comprising a plurality of tapered hood-shaped aerofoils arranged in following order, each aerofoil having the form of a section of a cone with its top surface curved parabolically downwardly and rearwardly, said aerofoils having their enlarged ends open and facing forwardly and each fore aerofoil having its reduced end partially projecting into the open front end of the succeeding aerofoil.

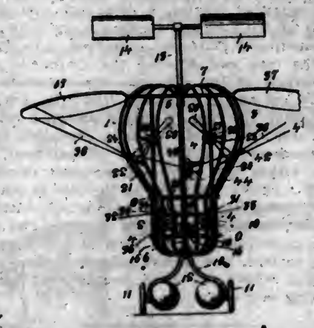
4. In a flying machine, a curved aerofoil having transverse corrugations forming a plurality of fore and aft reaction surfaces.

5. In a flying machine, a series of curved sustaining planes arranged one in rear of the other, each having its reaction side corrugated in a transverse direction to provide a plurality of fore and aft reaction surfaces.

[Claims 6 to 10 not printed in the Gazette.]

1,019,988. FLYING-MACHINE. VINE MULLENDORE, Denver, Colo. Filed Oct. 31, 1911. Serial No. 657,817. (Cl. 244—15.)

1. A flying machine comprising a cage formed of spaced rods or tubes and having a lower contracted portion and an upper expanded portion, a disk supported upon the upper ends of the rods and forming a central sustaining surface, superposed platforms supported upon the lower ends of the rods and dividing the contracted and expanded portions of the cage into compartments, a vertical shaft extending upwardly from the lower compartment above the cage, a lifting propeller carried by said cage, a pair of vertical shafts extending from the lower compartment into the upper compartment, driving propellers within the upper compartment driven from said shafts, wings projecting laterally from said disk or central sustaining surface, and motors supported upon the bottom platform within the lower compartment for respectively driving said shafts.



2. A flying machine comprising a cage formed of spaced rods or tubes and having a lower contracted portion and an upper expanded portion, a disk supported upon the upper ends of the rods and forming a central sustaining surface, superposed platforms supported upon the lower ends of the rods and dividing the contracted and expanded portions of the cage into compartments, a vertical shaft extending upwardly from the lower compartment above the cage, a lifting propeller carried by said cage, a pair of vertical shafts extending from the lower compartment into the upper compartment, fore and aft horizontal shafts within the upper compartment in gear with the respective vertical shafts, driving propellers within said upper compartment and carried by said horizontal shafts, wings projecting laterally from said disk or central sustaining surface, and motors supported upon the bottom platform within the lower compartment for respectively driving said shafts.

3. A flying machine comprising a cage formed of spaced rods or tubes and having a lower contracted portion and an upper expanded portion, a disk supported upon the upper ends of the rods and forming a central sustaining surface, superposed platforms supported upon the lower ends of the rods and dividing the contracted and expanded portions of the cage into compartments, a vertical shaft extending upwardly from the lower compartment above the cage, a lifting propeller carried by said cage, a pair of vertical shafts extending from the lower compartment into the upper compartment, driving propellers within the upper compartment respectively driven from said shafts, wings projecting laterally from said disk or central sustaining surface, a motor within the lower compartment in gear with the lifting propeller shaft, a horizontal transmission shaft in said lower compartment in gear with the pair of vertical shafts, and a second motor in said lower compartment in gear with said transmission shaft.

4. A flying machine comprising a cage formed of spaced rods or tubes and having a lower contracted portion and an upper expanded portion, a disk supported upon the upper ends of the rods and forming a central sustaining surface, superposed platforms supported upon the lower ends of the rods and dividing the contracted and expanded portions of the cage into compartments, a vertical shaft extending upwardly from the lower compartment above the cage, a lifting propeller carried by said cage, a pair of vertical shafts extending from the lower compartment into the upper compartment, fore and aft

horizontal shafts within the upper compartment in gear with the respective vertical shafts, driving propellers within said upper compartment and carried by said horizontal shafts, wings projecting laterally from said disk or central sustaining surface, a motor within the lower compartment in gear with the lifting propeller shaft, a horizontal transmission shaft in said lower compartment in gear with the pair of vertical shafts, and a second motor in said lower compartment in gear with said transmission shaft.

5. A flying machine comprising a cage formed of spaced rods or tubes and having a lower contracted portion and an upper expanded portion, a disk supported upon the upper ends of the rods and forming a central sustaining surface, superposed platforms supported upon the lower ends of the rods and dividing the contracted and expanded portions of the cage into compartments, a vertical shaft extending upwardly from the lower compartment above the cage, a lifting propeller carried by said cage, a pair of vertical shafts extending from the lower compartment into the upper compartment, driving propellers within the upper compartment driven from said shafts, a rudder supported by the cage in rear of the upper compartment, a controlling device within said compartment, connections between the same and the rudder, wings projecting laterally from said disk or central sustaining surface, and motors supported upon the bottom platform within the lower compartment for respectively driving said shafts.

1,019,989. COMPOSITION OF MATTER. JAMES F. NEWMAN, Greenville, Fla. Filed June 7, 1911. Serial No. 631,832. (Cl. 188—27.)

1. The herein described composition of matter consisting of burnt oyster shells, sulfur, cement and chalk in pewdered form combined in substantially the proportions stated.

2. The herein described composition of matter consisting of burnt oyster shells, sulfur, cement and chalk in powdered form combined in substantially the proportions stated with sufficient oil added thereto to form a paste.

1,019,990. FOB-HOLDER. GEORGE M. REES, Louisville, Ky. Filed May 29, 1911. Serial No. 630,021. (Cl. 63—21.)



1. The herein described fob holder comprising an upright flat body having recesses in its ends and a shoulder around its upper edge, a bail rising from the latter, a wire loop having its ends turned upward and inward into hooks adapted to be sprung into said recesses, and a metal band whose opening is of a width to receive the fob-ribbon and loop and to pass over said body, and of a length to pass outside the ends of said loop and hold them in said recesses, the upper edge of the band resting against said shoulder when in place and its lower edge depending over the ribbon.

2. The herein described fob holder comprising an upright flat body having recesses in its ends, means along its upper edge for attaching it to a watch chain, a wire loop having its ends turned upward and inward into hooks adapted to be sprung into said recesses, and a metal band whose opening is of a width to receive the fob-ribbon and loop and to pass over said body, and of a length to pass outside the ends of the loop.

3. The herein described fob holder comprising an upright flat body having recesses in its ends and means for attaching it to the watch chain, a loop whose extremities detachably engage said recesses, and a band adapted to inclose the fob-ribbon, the body, and the loop and to hold the ends of the latter within said recesses.

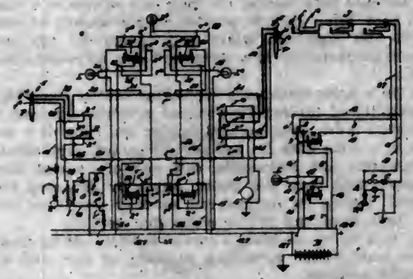
1,019,991. BAIL-RING FOR TENT-POLES. JOHN RENNER, Kansas City, Mo. Filed Sept. 23, 1909. Serial No. 519,233. (Cl. 135—15.)



1. A bail ring for tent poles comprising two semicircular members each having at one end a tenon and at the other end a mortise for receiving the tenon of the opposite member, spaces being provided between said members and encircling said tenons and adapted to receive suitable supporting means, and means for detachably securing the members together.

2. The combination with a bail ring for tent poles comprising two semicircular members, each having at one end a tenon and at the other end a mortise for receiving the tenon of the opposite member, spaces being provided between said members and encircling said tenons, and means for detachably securing together said members, of a supporting device having its ends respectively encircling said tenons in said spaces.

1,019,992. TELEPHONE SYSTEM. JOSEPH L. RUE and CLARENCE F. BROWN, Coshocton, Ohio. Filed Feb. 11, 1909. Serial No. 447,316. (Cl. 179—58.)



1. In a telephone system, a source of centralized energy, sub-station apparatus adapted to be connected therewith, a line relay, a line signal controlled by said line relay, a cut-off relay, a retardation relay and a three wire talking circuit connected to said retardation relay, and a ringing key connected to two of said wires, the third wire thereof adapted to conduct talking current through the cut-off relay continuously during connection.

2. In a telephone system, a source of current substation apparatus, a cord circuit, means for inter-connecting the same, a pair of retardation relays in the cord circuit, a pair of busy test relays, means operated by retardation relays for controlling the current from the source to said busy test relays, said busy test relays adapted to act as retardation relays when said retardation relays are inoperative, a busy signal for both ends of the cord circuit, and means controlled by said busy test relays for feeding circuit to the signal.

3. In a telephone system, a source of current, substation apparatus, a cord circuit, busy test relays connected to one side of the cord circuit, a signal adapted for both ends of the cord operated by said relays, and means connected to the opposite side of the cord circuit for controlling the current to said relays.

4. In a telephone system a source of current, a substation apparatus adapted to be connected therewith, a cord circuit for interconnecting said apparatus, a retardation relay in said cord circuit, a busy test relay, means operated by the retardation relay for controlling the current from the source of said busy test relay, said busy test relay adapted to act as a retardation relay when said retardation relay is inoperative, a three wire talking circuit, a line relay and a line signal, and a cut off relay therefor adapted to feed talking current to the line.

5. In a telephone system, a source of current, a substation apparatus adapted to be connected therewith, a cord circuit for interconnecting said apparatus comprising in part a three-wire talking circuit, a line relay and line signal, a cut-off relay therefor, and a ringing key connecting two of said wires, the third wire feeding talking current through the cut-off relay continuously during connection.

1,019,993. LET-OFF. HERMAN J. SATTLER, Easton, Pa. Filed May 10, 1911. Serial No. 626,198. (Cl. 139—58.)



1. The combination with a warp head having apertures, a shoe slidably mounted on the warp head, a tension device connected to the shoe, a lever carried by the shoe, and a latch carried by the lever and adapted to enter the apertures of the warp head.

2. The combination with a warp head, of a shoe slidably mounted thereon, a line passing around the warp head and the shoe and having one of its ends connected to the shoe, a tension device connected to the other end of the line, a lever carried by the shoe, and means carried by the lever for locking the shoe to the warp head.

3. The combination with a warp head, of a retarding element thereon movable alternately to opposite sides of the perpendicular center line thereof, means carried by said element for locking the same to the warp head, said means locking when the element is on one side of the aforesaid line and unlocking on the other side, and means for moving the element to the first mentioned side when unlocked.

4. The combination with a warp head, of a retarding element thereon movable alternately to opposite sides of the perpendicular center line thereof, a lever carried by said element, means carried by the lever for locking the element to the warp head, said lever placing the locking means in locking position when on one side of the aforesaid line and in unlocking position when on the other side, and means for moving the element to the first mentioned side when unlocked.

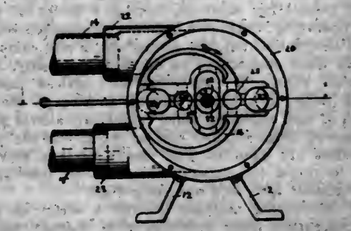
5. The combination with a warp head, of a retarding element therefor and movable relatively thereto, an oscillating member carried by said element, means carried by said member for locking the retarding element to the warp head, a locking action taking place when the member swings in one direction and an unlocking action when the member swings in the other direction, the swing of the member being produced by the movement of the retarding element, said element moving with the warp head when locked thereto and in the opposite direction when unlocked, and a tension device for moving the element in the last mentioned direction.

1,019,994. SWAGE-MACHINE. HEINRICH SCHWEITZER, New York, N. Y. Filed July 11, 1910. Serial No. 571,808. (Cl. 113—39.)



In combination a swage machine having a lever with pawl spring on its surface, said lever provided with a pivotally attached supporting process to act upon a plunger, a base part containing a cylindrical bore opening and means to adjust a bolt in the lower end of the bore opening and arch-wise arranged guide plates for guiding the lever, said guide plates provided with dented notches upon the larger arched periphery for locking the lever by the pawl of the lever, a cylindrical plunger moving in said bore opening, a strong spring to act on one end of the lever and thereby exert force upon the plunger, and means to attach said spring to the base part at one end and to the lever at the other end substantially as described and shown and for the purpose set forth.

1,019,995. ROTARY PUMP. JOHN THORSEN SHAMAN, Seattle, Wash. Filed June 27, 1911. Serial No. 635,693. (Cl. 230—30.)

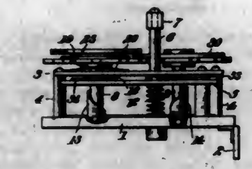


1. In a rotary pump of the class described, the combination with a rotary pump cylinder, whose circumferential wall is provided with an inlet passage for air and with an outlet passage for air mixed with liquid, of a hollow cylindrical rotor one end of which is open, said rotor being adapted to rotate within said cylinder and disposed therein with its axis parallel with the axis of the boring of said cylinder to restrict the passage of fluid between the periphery of said rotor and the circumferential wall of said outlet at a longitudinal line located between said inlet passage and said outlet passage, an inlet passage for liquid disposed in one of the heads of said pump cylinder to admit liquid into the open end of said rotor, a vane associated with said rotor and adapted to move endwise across said rotor's axis said vane being

provided with a slot in each of its ends, a roller of suitable material disposed in said slot of each of said ends of said vane, said vane being provided with longitudinal holes leading from the bottom of said slots to passages communicating with the interior of said rotor whereby liquid may find passage from said interior to said slots to force said roller to hug the circumferential wall of said cylinder during rotation of said rotor, and means for maintaining an equal distance between the axis of the boring of said cylinder and each end of said vane.

2. In a rotary pump of the class described, a cylinder having suitable inlet and outlet passages, a vane within said cylinder and associated with a driving shaft whereby it is adapted to revolve, said vane having yielding extensions on each of its ends which are adapted normally to hug the wall of said cylinder during the revolutions of said vane, a stop-cock which controls the flow of water into said cylinder through an inlet, in combination with automatic means associated with said stop-cock and said driving shaft whereby said stop-cock is operated in response to the starting and stopping of the operation of the pump.

1,019,996. CALCULATING-MACHINE. IRA D. SIEGFRIED, Cleveland, Ohio. Filed June 30, 1911. Serial No. 636,805. (Cl. 235—74.)



1. A calculating machine, having a series of successively operating dials, rotary shafts upon which these dials are fixed, successively operating dial-actuating means, rotary shafts upon which they are mounted, cams on all of the shafts, a cam-actuating plate in operative engagement with the several shafts, and means to move said plate lengthwise of the shafts so as to cause its cam-actuating element to act upon the cams on the shafts to reset the several shafts and their appurtenances after said shafts have been turned in making the calculation.

2. A calculating machine, having a series of successively operating dials with spurred or toothed elements located at different heights, rotary shafts and cams thereon, said dials adapted to be operated manually, a complemental series of dial-actuating devices, including spurred disks, and pawls thereon to engage the spurs or teeth of said operating dials, rotary cam shafts adapted to be moved longitudinally and on which the dial-actuating devices are mounted, and means to thus move said shafts to throw the dial-actuating devices into and out of engagement with said operating dials.

3. A calculating machine, having a series of successively operating dials provided with toothed elements, rotary shafts upon which the dials are fixed, a series of successively operating dial-actuating toothed disks carrying pawls, rotary shafts on which said disks are fixed and having longitudinal movements to bring their disks into and out of engagement with the toothed elements of the dials, cams on all of said shafts, and a movable plate in which the several shafts are arranged and having cam-actuating tongues.

4. A calculating machine, having a series of successively operating dials provided with toothed elements, rotary shafts upon which the dials are fixed, a series of successively operating dial-actuating toothed disks carrying pawls, rotary shafts on which said disks are fixed and having longitudinal movements to bring their disks into and out of engagement with the toothed elements of the dials, cams on all of said shafts, a movable plate in which the several shafts are arranged and having cam-actuating tongues, and springs normally holding said plate out of engagement with the cams.

5. A calculating machine, having a series of successively operating dials provided with toothed elements, rotary shafts upon which the dials are fixed, a series of successively operating dial-actuating toothed disks carrying pawls, rotary shafts on which said disks are fixed and having longitudinal movements to bring their disks into and out of engagement with the toothed elements of the dials, cams on all of said shafts, a movable plate in which the several shafts are arranged and having cam-actuating tongues, springs normally holding said plate out of engagement with the cams, and a bar secured to said plate by which pressure may be applied to the plate to first clear the dials from their actuating devices, and then engage the cams and reset the shafts, after which the springs are free to act to release the shafts for a fresh calculation.

[Claims 6 to 8 not printed in the Gazette.]

1,019,997. STONE-CRUSHING MACHINE. EDGAR B. SYMONS, Fort Wayne, Ind., assignor, by mesne assignments, to Smith and Post Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Feb. 26, 1904. Serial No. 195,459. (Cl. 83—10.)



1. In a crushing machine, the combination of an outer crushing shell having a spider arm bottom and a removable crown piece, a centrally located tie-shaft fixed to said bottom and crown piece, an eccentrically mounted crusher head movable on the shaft and means for operating said head.

2. In a crushing machine, the combination of an outer crushing shell with a crown piece fitted to said shell, a centrally located fixed shaft supported within such shell by bearings in the crown piece and in the shell, a collar of rollers surrounding said shaft as a roller bearing, a sleeve surrounding said rollers and a movable crusher head and means for operating said head.

3. In a crushing machine, the combination of a stationary crushing shell with a centrally located stationary shaft supported by suitable connections to said shell, a roller collar surrounding said shaft and comprising a series of rollers, a sleeve surrounding said roller collar, and means for turning said sleeve and a movable head and means containing said sleeve for operating said head.

4. In a crushing machine, the combination of a stationary outer crushing shell with a centrally located stationary shaft supported in such shell, a sleeve mounted on a roller bearing around said shaft, means for turning such sleeve, and a crushing head mounted on a roller collar comprising a series of rollers surrounding said sleeve.

5. In a crushing machine, the combination of a stationary outer crushing shell with a centrally located and substantially vertical stationary shaft held by connections to said shell, a sleeve mounted on a roller bearing around said shaft, a crushing head mounted on a roller bearing surrounding said sleeve, and means for turning said sleeve.

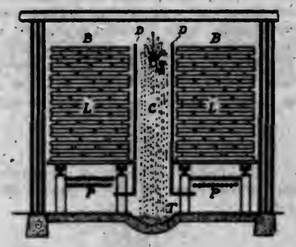
[Claims 6 to 26 not printed in the Gazette.]

1,019,998. REINFORCED AXLE. GARRISON C. THAYER, Bartlesville, Okla. Filed July 10, 1911. Serial No. 637,852. (Cl. 21—5.)



An axle comprising a wooden shell having a metal core extending from end to end thereof and composed of two correspondingly shaped plates arranged in contact with each other and having transversely extending registering grooves in their faces between their ends forming bolt receiving apertures, the ends of said plates having longitudinally extending grooves in their inner faces, the grooves in one plate registering with those in the other and threaded to form sockets to receive skein securing screws, ferrules encircling the ends of said shell to bind it to said core, means for securing said core and shell together between their ends, skeins on the ends of said axle and lag screws passing through said skeins and engaging the sockets in said core.

1,019,999. APPARATUS FOR DRYING TIMBER AND OTHER MOISTURE-BEARING SUBSTANCES. HARRY D. TIEMANN, Washington, D. C. Filed Mar. 15, 1910. Serial No. 549,571. (Dedicated to the public.) (Cl. 34—3.)

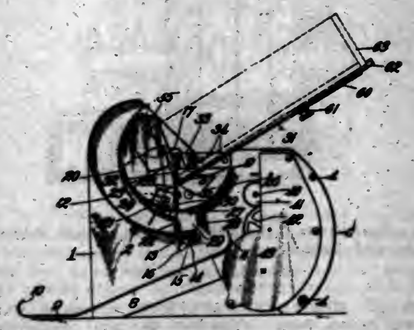


In a kiln comprising a pair of drying chambers provided with heating pipes, said chambers communicating at their upper and lower ends with each other, a condenser arranged between said chambers, said condenser consisting of a water spray at a temperature less than that of the air for producing greater circulation and regulating the humidity of the air by the temperature of the water.

1,020,000. COIN-CONTROLLED VENDING-MACHINE. GEORGE L. VAN BUREN, Kansas City, Mo., assignor, by mesne assignments, to Joseph M. Jones, Kansas City, Mo. Filed May 6, 1910. Serial No. 560,393. (Cl. 211—8.)

1. A vending machine, comprising a shelf, an oscillatory hopper above the same and provided with a pocket of which the shelf normally forms the bottom, a sweep movable with the hopper and forming the front wall of said pocket and adapted for sweeping the object or objects vended off the end of the shelf, a cut off within the hopper and disposed in substantially the same plane as the sweep when the hopper is at rest and adapted to prevent the contents of the hopper from entering the pocket when the hopper is at rest, and provided with an arm extending upwardly and rearwardly out of the hopper as a support for a box for charging the hopper with objects to be vended, and means for oscillating the hopper.

2. A vending machine, comprising a shelf, an oscillatory hopper above the same and provided with a pocket of which the shelf normally forms the bottom, a sweep movable with the hopper and forming the front wall of said pocket and adapted for sweeping the object or objects vended off the end of the shelf, a cut off within the hopper and disposed in substantially the same plane as the sweep when the hopper is at rest and adapted to prevent the contents of the hopper from entering the pocket when the hopper is at rest, and provided with an arm extending upwardly and rearwardly out of the hopper, means for clamping in rigid relation to and upon said arm a box for charging the hopper with objects to be vended, and means for oscillating the hopper.



3. In a vending machine, a shelf, an oscillatory hopper above the same and provided with a pocket of which the shelf normally forms the bottom, a sweep movable with the hopper and forming the front wall of said pocket and adapted for sweeping the object or objects vended off the end of the shelf, a cut-off within the hopper and disposed in substantially the same plane as the sweep when the hopper is at rest and adapted to prevent the contents of the hopper from entering the pocket when the hopper is at rest, parallel upright partitions within the hopper and bearing a rigid relation to the cut off, and means for oscillating the hopper.

4. A vending machine, comprising a shelf, an oscillatory hopper above the same and provided with a pocket of which the shelf normally forms the bottom, a sweep movable with the hopper and forming the front wall of said pocket and adapted for sweeping the object or objects vended off the end of the shelf, a cut-off within the hopper and disposed in substantially the same plane as the sweep when the hopper is at rest and adapted to prevent the contents of the hopper from entering the pocket when the hopper is at rest, brackets suitably supported and projecting into the upper central portion of the hopper at opposite ends of the cut-off, arms projecting upward from the ends of the cut-off and secured to said brackets to secure the former rigidly in position, and means for oscillating the hopper.

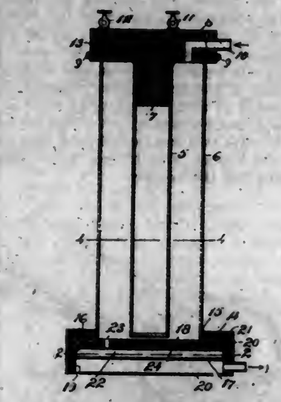
5. In a vending machine an oscillatory hopper comprising substantially semi-circular ends, and a segmental bottom consisting of two sections spaced apart to provide an opening between them and provided at their adjacent edges with depending flanges; the front portion of the bottom being capable of movement toward and from the center of the hopper.

[Claims 6 to 12 not printed in the Gazette.]

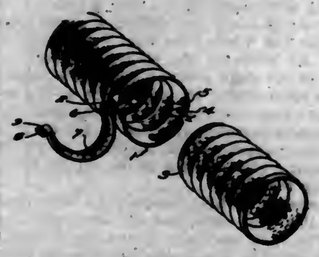
1,020,001. ELECTRIC WATER PURIFIER AND FILTER. ADA HENRY VAN PELT, Los Angeles, Cal. Filed Aug. 9, 1911. Serial No. 643,214. (Cl. 204—25.)

In a combined electrolytic purifier and filter, a pair of electrodes, a filtering chamber below the electrodes, comprising a base member adjustably secured to the lower

end of one of the electrodes, a shell surrounding said base member, and removably attached to said base member, a filter within the said chamber, and an inlet and outlet for said chamber.



1,020,002. CORRUGATED CULVERT. GEORGE W. WARNER, Topeka, Kans. Filed Nov. 23, 1911. Serial No. 662,044. (Cl. 61—9.)



1. A culvert comprising a pipe section adapted for receiving a mating section laterally, whereby said mating section may seat on the first named section, and means for clamping said sections together.

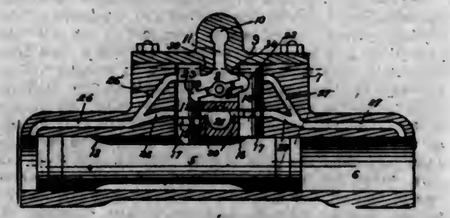
2. A culvert comprising a pipe section having slots in one end and a mating pipe section having its end projected into said slots with its lower portion resting on the bottom of the first section and its upper portion resting on the top of said section, and means for securing said sections together.

3. A culvert comprising a pipe section having slots in one end and a mating pipe section having its end projected into said slots with its lower portion resting on the bottom of the first section and its upper portion resting on the top of said section, and a strap fixed to the first section and encircling the overlapping part of the second section to secure said sections together.

4. A culvert comprising a pipe section having one end cut out to receive a mating section, and an abutting section having its end projected through the cut out part of said first section and seated in the bottom of said first section, a strap hinged to said first section and encircling the end of said second section, and means for attaching the free end of said strap to the opposite side of said first section.

5. A culvert comprising a pipe section having one end cut away to receive a mating section, a mating section seated in said first section, a strap hinged to said first section adjacent to the edge of a cut out portion and encircling the mating section, an ear on said first section opposite the hinged mounting of said strap, and an ear on said strap adapted to rest on and for attachment to said first named ear, for the purpose set forth.

1,020,003. VALVE MECHANISM. JAMES EDWARD WILLIAMS, Bessemer, Ala. Filed Aug. 15, 1911. Serial No. 644,236. (Cl. 121—10.)



In a valve mechanism of the type described, the combination with a cylinder, a piston therein provided with inclined faces, a fluid receiving chest, and inlet ports leading from the chamber in the chest to the cylinder at opposite ends of the piston, of a pair of valves mounted within the chamber of said chest and movable therein at right angles to the longitudinal axis of the cylinder, said valves having inclined inner ends projecting into the cylinder to be engaged by the inclined faces of said piston, said valves intermediate their ends having peripheral grooves and the chest wall having branch ports in constant communication with the inlet ports and with which the grooves are brought into registry as the valves are operated, a rocking lever mounted within the chamber of the chest and having its ends seated to work in recessed confronting faces of the valves, and a cover plate for the chest.

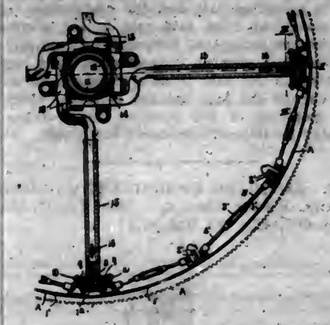
1,020,004. BREAD-PAN. LOUIS N. WISHMAN, Kansas City, Mo. Filed Mar. 7, 1911. Serial No. 612,886. (Cl. 53—6.)



1. A bread pan comprising side members and a bottom, and a partition within the pan, the sides of said partition being inclined toward an apex and having a down-set groove in its upper end, and a cover similar to said pan having a partition adapted to seat in said down-set groove, for the purpose set forth.

2. A bread pan comprising a pair of inclosing members, one having a partition provided with inclined sides, the upper end of said partition being below the plane of the open face of the pan and having a longitudinal groove therein, the opposite pan member having a partition, the sides of which are inclined and meet in an apex beyond the plane of the open face of the pan, the apex of one partition being adapted to seat in the groove in the opposite partition, substantially as and for the purpose set forth.

1,020,005. MOLD FOR MAKING CONCRETE CHIMNEYS. CHARLES H. WITTHOEFFT, St. Louis, Mo., assignor to Witthoefft Collapsible Concrete Forms Company, St. Louis, Mo., a Corporation. Filed Nov. 17, 1910. Serial No. 592,792. (Cl. 25—128.)



A mold of the character described, comprising main mold plates provided with guideways, a wedge interposed between said guideways, said wedge comprising a web having two pairs of flanges which extend into said guideways, said wedge being H-shaped in cross section, a narrow mold plate fixed to the web of said wedge and adapted to occupy a position between the main mold plates, an arm fixed to the web of said wedge, and means for operating said arm to slide the wedge in said guideways, thereby withdrawing said narrow mold plate from the space between the main mold plates and simultaneously moving said main mold plates toward each other.

1,020,006. SPARK-PLUG. GEORGE WRIGHT, Auburn, N. Y., assignor to Harriet J. Wright, Auburn, N. Y. Filed Oct. 1, 1910. Serial No. 584,873. (Cl. 123—69.)

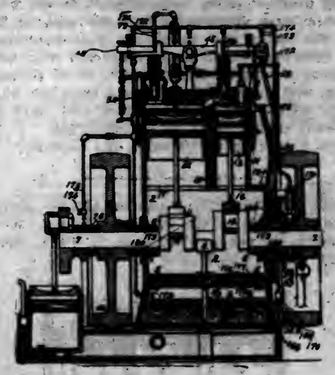


1. A spark-plug for internal combustion engines comprising a shell, and a bushing fitting within and having screw threaded connection with the shell, said screw threaded connection between the bushing and shell being partially cut away to provide an annular chamber, and said bushing having a plurality of passageways therein communicating with the chamber and adapted to direct the combustible mixture to said chamber for the purpose set forth.

2. A spark-plug for internal combustion engines comprising a shell having an internal screw threaded portion and a bushing having screw threads secured within said shell, said bushing having a circumferential groove formed within its screw threaded portion and providing a chamber with the shell, and passageways formed within the bushing and communicating with the chamber and adapted to direct the combustible mixture to said chamber for the purpose set forth.

3. A spark-plug for internal combustion engines comprising a shell, a bushing within said shell, said bushing having a circumferential groove formed between said shell and bushing, providing a chamber with said shell, and passageways formed in said bushing and communicating with said chamber, and adapted to direct the combustible mixture to said chamber, for the purpose set forth.

1,020,007. LUBRICATING SYSTEM FOR INTERNAL-COMBUSTION AND OTHER ENGINES. WILLIAM J. WRIGHT, Franklin, Pa. Filed June 7, 1910. Serial No. 565,518. (Cl. 121—15.)



1. In a lubricating system for engines, the combination with the cylinders, pistons, crank shaft and connecting rods between the crank shaft and the pistons; a closed crank case, an oil reservoir, means actuated by the movement of said pistons for filling said crank case with an oil spray for purposes of lubrication, a main duct for conveying oil from said reservoir and back to said reservoir, lateral ducts leading off from said main duct to the parts to be lubricated, an oil pump for forcing oil through said ducts and means for operating said oil pump.

2. In a lubricating system for engines, the combination with the cylinder, piston, crank shaft and connecting rod between the crank shaft and the piston; an oil reservoir, overflow pipes connecting said crank case with said oil reservoir, said engine having a set of external moving parts in contact with one another requiring lubrication, a main distributing duct mounted on the outside of said engine and having its ends connected with said oil reservoir, an oil pump connected with said duct for effecting a continuous circulation of oil through said duct from said reservoir back to said reservoir, and a set of valved lateral ducts leading from said main duct to the external engine parts to be lubricated.

3. In an oiling system for engines, said engines including a working cylinder, a piston, a closed crank case in communication with said cylinder, a crank shaft mounted in bearings in said crank case and having cranks operating in said crank case, a connecting rod between said crank and said piston, said crank shaft bearings having lubricating bores opening into said crank case; an oil reservoir, overflow pipes connecting said crank case with said oil reservoir, said engine having a set of external moving parts in contact with one another requiring lubrication, a main distributing duct mounted on the outside of said engine and having its ends connected with said oil reservoir, an oil pump connected with said duct for effecting a continual circulation of oil through said duct from said reservoir back to said reservoir, a set of valve laterals leading from said duct to the external parts to be lubricated, said overflow pipes between said crank case and said reservoir having a combined cross-sectional area less than that of said cylinder whereby the movement of said piston will effect uneven pressure in said crank case and in said oil reservoir to thereby cause the overflowing oil in said pipes to be sucked and sprayed into said crank case on one stroke of said piston, to lubricate the same.

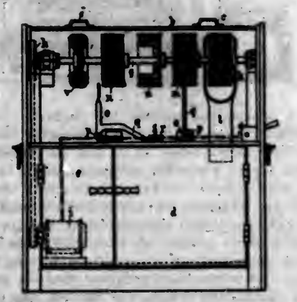
4. In a lubricating system for internal combustion engines and the like, a case, an oil reservoir, means actuated by the movement of the engine pistons for filling the case with an oil spray for purposes of lubrication, a main duct for conveying oil from said reservoir and delivering oil back into said reservoir, lateral ducts leading off from said main duct to the engine parts to be lubri-

cated, an oil pump for forcing oil through said ducts, and means for connecting said pump with a moving part of the engine for operating said pump.

5. In a lubricating system for engines, a case, an oil reservoir, overflow pipes connecting said case with said reservoir, a main distributing duct mounted on the outside of the engine and having its ends connected with said oil reservoir, an oil pump connected with said duct for effecting a continuous circulation of oil through said duct from said reservoir back to said reservoir, and a set of valved lateral ducts leading from said main duct to the external engine parts to be lubricated.

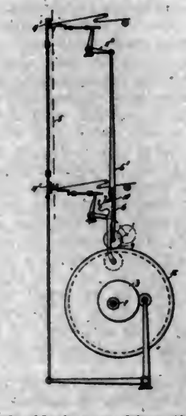
[Claims 6 to 11 not printed in the Gazette.]

1,020,008. APPARATUS FOR CLEANING AND POLISHING BOOTS AND SHOES. EUGEN WURMSER, Strassburg, Germany. Filed Sept. 27, 1911. Serial No. 651,622. (Cl. 15—61.)



A shoe polishing apparatus comprising in combination, a rotary brush for applying the dressing or polish to the shoe, a lever mounted to swing about vertical and horizontal axes, a receptacle for the material mounted on said lever and adapted to be shifted thereby into and out of proximity to said brush, and a rotary element mounted in said receptacle to engage the contents thereof and projecting from said receptacle to be engaged with said brush, substantially described.

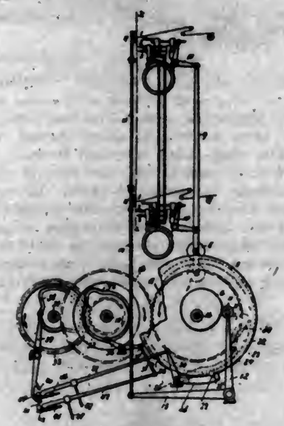
1,020,009. EMBROIDERY-MACHINE. ROBERT ZAHN, Plauen, Germany. Filed Feb. 7, 1911. Serial No. 607,141. (Cl. 112—7.)



1. In an embroidering machine, the combination with the needle operating cam and the mechanism for transmitting movement from said cam to the needles, of a tiltable member interposed between said cam and mechanism, and an adjustable locking device for such tiltable member, whereby during the operation of the machine, the working of the needles may be stopped outside of the design.

2. In an embroidering machine, the combination with the needle operating cam and the mechanism for transmitting movement from said cam to the needles, of a tiltable member interposed between said cam and mechanism, a notched member connected to said mechanism and a catch on the said tiltable member adapted to adjustably engage the said notched member, whereby during the operation of the machine, the working of the needles may be stopped outside of the design.

1,020,010. JACQUARD EMBROIDERY-MACHINE. ROBERT ZAHN, Plauen, Germany. Filed Feb. 7, 1911. Serial No. 607,142. (Cl. 112—7.)



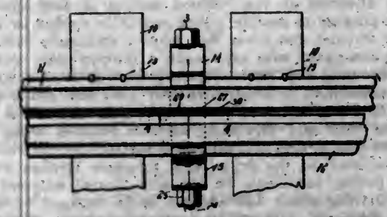
1. In a Jacquard embroidering machine, the combination with a driving part, of a driven part, needle and shuttle operating means operatively connected to said driven part, coupling means between said driving and driven parts, a Jacquard mechanism, and a Jacquard controlled means whereby the driven part is first set at rest and thereupon the needle and shuttle operating means are given a reciprocatory motion, allowing of the embroidering threads being easily pulled out from the shuttles and over the thread guides.

2. In a Jacquard embroidering machine, the combination with a driving part, of a driven part, needle and shuttle operating means operatively connected to said driven part, a Jacquard mechanism, Jacquard controlled coupling means between said driving and driven parts, Jacquard controlled means for setting the driven part at rest and Jacquard controlled means whereby upon first setting the driven part at rest, said needle and shuttle operating means are given a reciprocatory motion, allowing of the embroidering threads being easily pulled out from the shuttles and over the thread guides.

3. In a Jacquard embroidering machine, the combination with a driving part, of a driven part, needle and shuttle operating means operatively connected to said driven part, a Jacquard mechanism, a Jacquard controlled coupling means between the said driving and driven parts, Jacquard controlled braking means for the said driven part and Jacquard controlled means whereby upon first setting the driven part at rest, the said needle and shuttle operating means are given a reciprocatory motion, allowing of the embroidering threads being easily pulled out from the shuttles and over the thread guides.

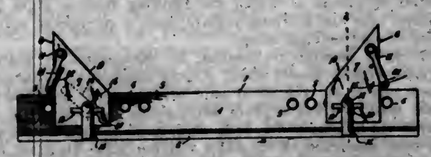
4. In a Jacquard embroidering machine, the combination with a driving shaft, of a driven shaft, cams fixed on said driving shaft, needle and shuttle operating means controlled from said cams, a Jacquard mechanism, Jacquard controlled motion transmitting means between said driving shaft and the driven shaft, a Jacquard controlled coupling means between said cams and the motion transmitting means, a Jacquard controlled braking means for the said driven part and Jacquard controlled means whereby upon first setting the driven part at rest, the said needle and shuttle operating means are given a reciprocatory motion, allowing of the embroidering threads being easily pulled out from the shuttles and over the thread guides.

1,020,011. GUARD-RAIL CLAMP. HARRY R. AKERS, Tyler, Tex. Filed Nov. 7, 1911. Serial No. 658,944. (Cl. 239—18.)



A guard rail clamp comprising a pair of coöperating clamping sections having interfitting inner ends, upwardly directed extensions on said sections having their inner faces conforming in superficial shape to the shape of the outer faces of the rails engaged thereby respectively, a block disposed between said extensions, a U-shaped member embracing said block and one of said clamping sections, a plate slidable on the arms of said U-shaped member for movement into engagement with the lower face of one of the clamping sections, nuts threaded on the ends of respective arms of the U-shaped member for forcing said plate into engagement with the lower face of said clamping section, and a draw bolt extending through said clamping sections whereby said sections may be drawn together to force the inner faces of their respective extensions against the sides of adjacent rails.

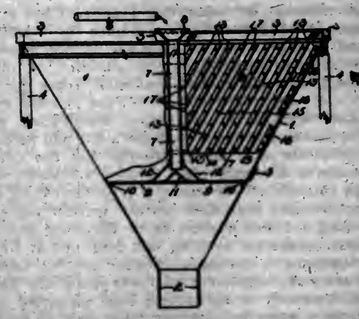
1,020,012. LOGGING-BUNK. PIUS A. ANLAUF and FRANZ J. ANLAUF, Curtin, Oreg. Filed Dec. 2, 1911. Serial No. 663,597. (Cl. 105—173.)



1. The combination with a bolster having a series of perforations formed therein, chock blocks slidably mounted on said bolster and provided with perforations adapted to register with the perforations of the bolster, U-shaped brackets secured to the blocks, a slot formed by said brackets, locking pins adapted to pass through the registered perforations, and means carried by the pins for engagement in said slots to prevent accidental removal of the locking pins.

2. The combination with a car or wagon, of a bolster comprising a base adapted to be secured to the car or wagon, a longitudinal web formed integral with said base, perforations formed in the opposite ends of the web, chock blocks provided with grooves adapted to receive the web, whereby said blocks are adapted for sliding movement toward or away from each other upon the web, perforations formed in the blocks and adapted to register with any one of the perforations of the web, U-shaped brackets secured to the blocks and having concaved recesses, slots formed between the brackets and blocks, locking pins adapted to pass through the registered perforations and rest in said recesses, the outer ends of said pins being bent at right angles to their shanks, projections carried by the shanks of the pins, said projections being normally positioned in the slots to prevent accidental displacement of the locking pins, said projections being operable to disengage with said slots to withdraw the locking pins.

1,020,013. SETTLING-TANK. ALEXANDER JOHN ARBUCKLE, Johannesburg, Transvaal. Filed Nov. 13, 1909. Serial No. 527,929. (Cl. 83—82.)



1. In a vessel for separating pulverized ore or other comminuted solid matter from liquid, the combination with the vessel of a plurality of inverted, truncated cones arranged inside the vessel, the upper surfaces of said cones providing settling areas upon which the solid particles settle and accumulate and ultimately slide off by gravity, the truncated lower ends of the several cones forming a central, vertical passage through all the cones, and means for supporting the cones in position inside the vessel, said means comprising a plurality of radial wing-plates fixed to the inside of the vessel, the cones being constructed in flanged sections and fixed to said radial wing-plates, as set forth.

2. In a vessel for separating pulverized ore or other comminuted solid matter from liquid, the combination with the vessel of a plurality of inverted, truncated cones arranged inside the vessel, the upper surfaces of said cones providing settling areas upon which the solid particles settle and accumulate and ultimately slide off by gravity, the truncated lower ends of the several cones forming a central, vertical passage through all the cones, means for supporting the cones inside the vessel comprising a plurality of long, radial wing-plates and a plurality of shorter intermediate wing-plates, the long wing-plates serving for carrying all the cones and the shorter wing-plates for carrying several of the outer cones, the cones being constructed in flanged segments fixed to the wing-plates, as set forth.

3. In a vessel for separating pulverized ore or other comminuted solid matter from liquid, the combination with the vessel of a plurality of inverted, truncated, equidistant and concentric cones positioned inside the vessel, the upper surfaces of said cones constituting settling areas upon which the solid particles settle and accumulate and ultimately slide off by gravity, the truncated lower ends of the several cones forming a central, vertical passage through all the cones, a pipe located in said central, vertical passage for introducing the feed mixture below the lower ends of all the cones, means for supporting the cones in position in the vessel, comprising a plurality of radial wing-plates fixed to the inside of the vessel, the cones being constructed in flanged sections and fixed to said radial wing-plates, as set forth.

4. In a vessel for separating pulverized ore or other comminuted solid matter from liquid, the combination with the vessel of a plurality of inverted, truncated, equidistant and concentric cones positioned inside the vessel, the upper surfaces of said cones constituting settling

areas upon which the solid particles settle and accumulate and ultimately slide off by gravity, the truncated lower ends of the several cones forming a central, vertical passage through all the cones, a pipe located in said central, vertical passage for introducing the feed mixture below the lower ends of all the cones, means for supporting the cones inside the vessel, comprising a plurality of long, radial wing-plates and a plurality of shorter intermediate wing-plates, the long wing-plates serving for carrying all the cones, and the shorter wing-plates for carrying several of the outer cones, the cones being constructed in flanged segments fixed to the wing-plates, as set forth.

5. In a vessel for separating pulverized ore or other comminuted solid matter from liquid, in combination, a vessel having an annular overflow or rim launder for the overflowing clear liquid, a plurality of inverted, truncated, equi-distant and concentric cones positioned inside said vessel below the level of the overflow launder, the upper surfaces of said cones constituting settling areas upon which the solid particles settle and accumulate and ultimately slide off by gravity, and the truncated lower ends of the inner cones forming a central, vertical passage through all the cones, a pipe located in and of smaller diameter than said central, vertical passage for introducing the feed mixture below the lower ends of all the cones, means for securing said feed pipe at its lower end comprising a horizontal member secured inside the vessel and stays connecting the lower end of the feed pipe with said member, a distributing cone supported by said horizontal member beneath the lower end of said pipe, means for introducing the feed mixture into the upper end of the feed pipe, means for supporting the settling cones in position inside the vessel, said means comprising a plurality of wide radial wing-plates and a plurality of narrow, intermediate wing-plates, the several wing-plates being secured at their outer ends to the inside of the vessel, the wide wing-plates serving for carrying all the cones and the narrow wing-plates for carrying several of the outer cones, all the cones being built up of flanged segments or sections fixed to the wing-plates, as set forth.

1,020,014. BRAKE FOR HOISTING MACHINERY. GEORGE A. ARMINGTON, Wickliffe, Ohio. Filed Oct. 19, 1910. Serial No. 587,822. (Cl. 57—116.)



1. In an automatic mechanical brake, the combination of a fixed friction plate, a shaft extending through said friction plate and having a cam at one end, a rotatable friction plate secured to said shaft at one side of the fixed friction plate, a rotatable friction plate sleeved on the shaft on the opposite side of the fixed friction plate, a cam carried by said rotatable friction plate and adapted to cooperate with the cam on the shaft, a driving wheel sleeved upon said shaft, and means provided in connection with said driving wheel, shaft, and rotatable friction plate by means of which the friction plates are released in hoisting, gripped when hoisting ceases, and partially released when lowering.

2. In a hoisting mechanism, in combination, a shaft, a cam secured to said shaft, a driving wheel loosely mounted upon said cam and having a lost motion driving connection therewith, a drum adapted to sustain a load and to be rotated by said shaft to raise and lower said load, a stationary friction plate associated with said shaft, a friction plate between said cam and said stationary friction plate and adapted to be rotated by the rotation of said shaft, said rotatable friction plate having a helical cam surface engaging with said first cam, the cam surfaces being arranged to force said rotatable friction plate away from said driving wheel against said stationary friction plate by the pulling of the load on the drum, and means adapted to be operated upon the retrograde motion of said driving wheel with respect to said cam for reducing the friction between said plates.

3. In a hoisting mechanism, in combination, a shaft, a cam secured to said shaft, a driving wheel loosely mounted upon said shaft and having a lost motion driving connection therewith, said driving wheel also having laterally extending abutments projecting therefrom in the same direction as the inclined surface of said cam, a drum adapted to sustain a load and to be rotated by said shaft to raise and lower said load, a stationary friction plate associated with said shaft, a friction plate loosely sleeved upon said shaft adjacent to said driving wheel and adapted to be rotated together with said shaft, said rotatable friction plate having a helical cam surface engaging with said first cam, the cam surfaces being arranged to grip said friction plates together by the pulling of the load on the drum, said rotatable friction plate also having abutments on the side thereof adjacent to said driving wheel and adapted to be engaged by said first abutment, whereby the rotating friction plate is moved over the stationary plate upon a retrograde rotation of said driving wheel.

4. In a hoisting mechanism, in combination, a shaft, a cam secured to said shaft, a driving wheel loosely mounted on said cam and having a lost motion driving engagement therewith in both directions, abutments carried by said wheel on the same side with the inclined surfaces of said cam, a drum adapted to sustain a load and to be rotated by said shaft to raise and lower said load, a stationary friction plate associated with said shaft, a rotatable friction plate between said stationary friction plate and said wheel and having a cam surface complementary to said first cam, engaging portions formed on said first cam and on said rotating friction plate, whereby said plate may be driven by said cam when said wheel is rotated in a direction to raise a load, the inclined surfaces of said cams being arranged to cause said rotating friction plate to approach the stationary friction plate upon a retrograde rotation of said shaft caused by said drum, and abutments on the rotating friction plate adapted to be engaged by the abutments on the driving wheel by means of which the rotating friction plate is moved over the stationary plate upon a retrograde rotation of said driving wheel.

5. In a hoisting mechanism, in combination, a shaft, a cam secured to said shaft, a drum adapted to sustain a load, and to be rotated by said shaft to raise and lower said load, a friction plate surrounding said shaft at a point intermediate its ends and held against rotation in both directions, a rotatable friction plate attached to said shaft at one side of the stationary plate, a second rotatable friction plate loosely sleeved upon said shaft at the other side of said stationary plate, one of said friction plates having a cam surface and abutments, and a driving wheel loosely sleeved upon the shaft and having abutments adapted to engage the abutments on said plate and positively drive the same upon retrograde rotation of said wheel, said driving wheel also having means adapted to engage said shaft and positively drive the same upon forward rotation thereof.

[Claims 6 to 9 not printed in the Gazette.]

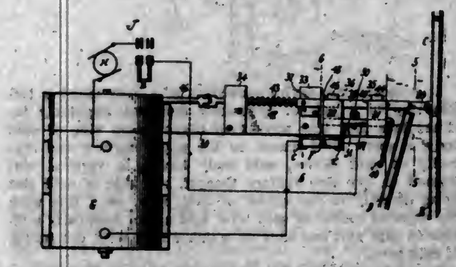
1,020,015. AIRSHIP. LOUIS C. BADEAU, New York, N. Y. Filed Sept. 28, 1908. Serial No. 455,144. Renewed Apr. 19, 1911. Serial No. 622,135. (Cl. 244—10.)

1. A frame-work for an air-ship, comprising a keel, a series of upwardly projecting rings secured thereto substantially at right angles, a second series of upwardly projecting rings of larger diameter secured to said keel eccentrically of the said other rings, whereby a space is formed within the larger rings but outside of the smaller rings to receive the gas-container.



2. In an air-ship of the nature described, the combination of a propeller-tunnel formed by a laminated keel and a plurality of upwardly projecting, substantially parallel rings secured thereto and joined at their periphery by a covering, with a gas container inclosing said tunnel.

1,020,016. ELECTRIC DELIVERY SYSTEM. JOHN BAILEY, Great Falls, Mont. Filed Mar. 22, 1910. Serial No. 550,837. (Cl. 104—155.)



1. In an electrically operated switch mechanism, the combination with a switch, of means constantly tending to move the switch to closed position, an electric motor, an electric circuit controlling said motor connections between said motor and switch whereby the movement of said motor will open said switch against said closing tendency, means for automatically locking said switch in open position independent of the stopping of the motor and means for breaking the circuit of the motor simultaneously with the locking of the switch.

2. In an electrically operated switch mechanism, the combination with a switch, of a frame, a bar slidably mounted in said frame and operatively connected with said switch, said bar being provided with a recess, means for moving said bar in one direction to close the switch, an electric motor, a circuit controlling said motor, connections between the motor and said bar whereby the actuation of the motor will move the bar in the opposite direction to open the switch, a pivoted arm mounted on the frame, and means for moving said arm into the recess of the bar whereby the switch is locked in open position, said movement of the arm to locking position being effected independently of the stopping of the motor.

3. In an electrically operated switch mechanism, the combination with a switch, of a frame, a bar slidably mounted in said frame and operatively connected with said switch, said bar being provided with a recess, means constantly tending to move said bar in one direction to close the switch, an electric motor, a circuit controlling said motor, connections between the motor and said bar whereby the actuation of the motor will move the bar in the opposite direction to open the switch, a pivoted arm mounted on the frame, means for moving said arm into the recess of the bar when said recess is disposed beneath the arm independent of the stopping of the motor whereby the switch is locked in open position and car operated means for moving said arm out of said recess to release the switch for movement to closed position.

4. In an electrically operated switch mechanism, the combination with a switch, of a frame, a bar slidably mounted in said frame and operatively connected with said switch, said bar being provided with a recess, means for moving said bar in one direction to close the switch, an electric motor, a circuit controlling said motor, connections between the motor and said bar whereby the actuation of the motor will move the bar in the opposite direction to open the switch, a pivoted arm mounted on the frame, means for moving said arm into the recess of the bar when said recess is disposed beneath the arm whereby the switch is locked in open position, and means actuated by the movement of said arm to locking position to break the motor controlling circuit.

5. In an electrically operated switch mechanism, the combination with a switch, of a frame, a bar slidably mounted in said frame and operatively connected with said switch, said bar being provided with a recess, means for moving said bar in one direction to close the switch, an electric motor, a circuit controlling said motor, connections between the motor and said bar whereby the actuation of the motor will move the bar in the opposite direction to open the switch, a pivoted arm mounted on the frame, means operated independently of the stopping of the motor for moving said arm into the recess of the bar when said recess is disposed beneath the arm whereby the switch is locked in open position, and a switch carried by said arm adapted to break the motor controlling circuit when said arm is moved to locking position.

1,020,017. STREET-CAR. ALBERT H. BATES, Cleveland, Ohio. Filed Dec. 14, 1908. Serial No. 467,441. (Cl. 105—205.)

1. In a street car, the combination of one permanently closed side, a long bench extending along the same within the car, a longitudinal aisle in front of said bench, a vestibule between said aisle and the other side of the car at an intermediate position, transverse seats in front of and behind said vestibule and between said aisle and the entrance side of the car, whereby a single seating compartment is provided throughout the main body of the car, a doorway from the inner side of the vestibule into such aisle, and two doorways in the outer side of the car leading to transverse spaces in front of and at the rear of said vestibule respectively.

2. In a car, the combination of a vestibule adjacent to one side at an intermediate position, a step leading from the outside into such vestibule, a door for closing the entrance from the step into the vestibule, a door for closing the entrance from the vestibule into the car, and transverse seats in front of the vestibule and behind it, aisles between the two groups of transverse seats and the front and rear walls of the vestibule respectively, direct exits from said aisles independent of the vestibule, and means controlling said exits.

3. In a car, the combination of a vestibule located within the car adjacent to the side, a doorway controlling the entrance from outside of the car into the vestibule, and a doorway for closing an exit from the car independently of the vestibule, such two doors being arranged to slide past each other into the same closing pocket in the vestibule wall.

4. In a car, the combination of a vestibule located in an intermediate portion of the car and having an outside en-

trance, and two passageways from the vestibule into the car located in the wall of the vestibule parallel with the outer side of the car.

5. In a car, the combination of a vestibule located in an intermediate portion of the car and having an outside entrance, two passageways from the vestibule into the car located in the wall of the vestibule parallel with the outer side of the car, and a cashier's window through such wall between such passageways.

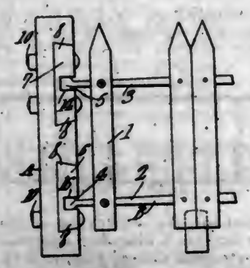
[Claims 6 to 14 not printed in the Gazette.]

1,020,018. DETACHABLE TOOTH-BRUSH. ALEXANDER LEBRONON BONIN, Montreal, Quebec, Canada. Filed Apr. 29, 1911. Serial No. 624,121. (Cl. 15—89.)



In a detachable tooth brush, the combination with a molded bristle-carrying head having an opening extending inwardly from the end thereof and at said end provided with a projection, of an internally screw-threaded member molded within the head and having its opening in line with the opening aforesaid, and a separable handle having a concavity adapted to receive said projection and a screw-threaded stem projecting centrally from within said concavity and adapted to pass into the opening and engage the threads of the member aforesaid.

1,020,019. GATE-HANGING. THOMAS M. BOONE, Kingwood, W. Va. Filed May 15, 1911. Serial No. 627,227. (Cl. 39—8.)



1. The combination with a gate and gate post, of ball and socket gate hangings having their axes located in rear of the outer face of the gate post.

2. The combination of a gate, a gate post having transverse slots therein, and ball and socket gate hanging means arranged in said transverse slots for the purpose described, the axes of the gate hanging means being located in rear of the face of the gate post.

3. The combination with a gate member and a gate post member, of upper and lower ball elements mounted on one of said members, upper and lower socket members mounted on the other of said members and adapted to receive said ball members, one of said socket members having an entrance slot to the socket portion thereof large enough to permit the introduction of the ball member to the socket member.

4. The combination of a gate post having upper and lower transversely extending dove tail slots therein, upper and lower socket members mounted in said dove tail slots, each of said socket members having a depression extending forwardly from the rear face thereof and a slot extending transversely across the front face thereof, said slot intersecting the forward portion of said depression, the lower socket member having a vertically extending slot intersecting said depression and serving as an entrance slot, a gate having upper and lower stems, said stems being provided with ball members, the upper ball member being mounted in the depression of the upper socket member, and the lower ball member being mounted in the depression of the lower socket member, the stems of said ball members being adapted to lie in the transverse slots of the said socket members when the gate is moved into open position.

1,020,020. DEVICE FOR MEASURING CIRCULAR BODIES. EDWARD BRAWLEY, Braddock, Pa. Filed May 28, 1910. Serial No. 563,964. (Cl. 73—150.)



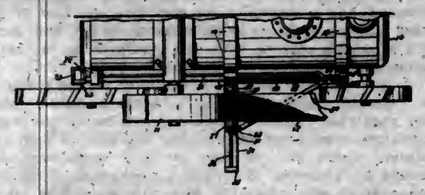
1. A measuring device consisting of a body member terminating in a pair of oppositely disposed, angularly inclined legs said legs projecting beyond each side of said body, a spirit level seated on the upper surface and centrally of said device, said body having a vertical slot formed on one side surface thereof, one side of said slot being directly in the center of said body, on a line with the exposed center of said level and a tool vertically slidable in said slot one edge of which alines with the center of said level.

2. A measuring device consisting of a body member terminating in a pair of oppositely disposed, angularly inclined legs, said legs projecting beyond each side of said body, a spirit level seated on the upper surface and centrally of said device, said body having a vertical slot formed on one side surface thereof, one side of said slot being directly in the center of said body, on a line with the exposed center of said level, a tool vertically slidable in said slot one edge of which alines with the center of said level, and means for locking said tool in a fixed vertical position in said slot.

3. A measuring device consisting of a body member terminating in a pair of oppositely disposed, angularly inclined legs, said legs projecting beyond each side of said body, a spirit level seated on the upper surface and centrally of said device, said body having a vertical slot formed on one side surface thereof, one side of said slot being directly in the center of said body, on a line with the exposed center of said level, a tool vertically slidable in said slot one edge of which alines with the center of said level, and means for locking said tool in a fixed vertical position in said slot, said tool terminating in a point at its edge aliming with said level.

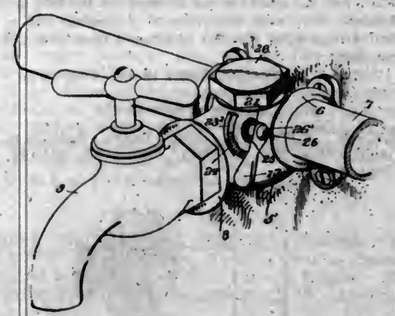
1,020,021. BELT-SHIFTER. STEPHEN W. BROWNE, Wilsonville, Nebr. Filed Apr. 13, 1911. Serial No. 620,822. (Cl. 64—4.)

A belt shifter comprising a bracket, a shifting member slidably mounted on said bracket, a rod fixed on the bracket and provided with a plurality of openings, a sleeve slidable on said rod, a second rod slidably mounted in the bracket and secured to said sleeve whereby the sliding of said second named rod in the bracket will slide said sleeve on the first named rod, a spring actuated locking pin carried by said sleeve and adapted to engage in the openings in the first named rod to lock the sleeve and second named



rod against sliding movement, and connections between the sleeve and the shifting member whereby the movement of the former will slide the latter.

1,020,022. SHUT-OFF T-VALVE. RICHARD H. BURKE, Lexington, Mass. Filed Apr. 29, 1911. Serial No. 624,174. (Cl. 137—4.)



1. A device of the class described including a casing having inlet and outlet ports and provided with exterior teeth, a transverse shaft journaled in the casing, a valve carried by the shaft and adapted to close the outlet port, a handle secured to one end of the shaft for moving the valve to open and closed positions, a tooth formed on the handle and adapted to engage the teeth on the casing for holding the valve in different positions of adjustment, and means mounted on the shaft and co-acting with the handle for forcing the tooth on said handle into engagement with the adjacent teeth on the casing.

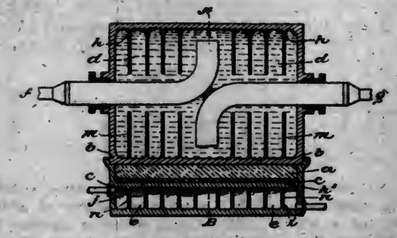
2. A device of the class described including a casing having inlet and outlet ports and provided with a lug having exterior teeth, a shaft journaled in the casing and having one end thereof projecting through the casing and provided with a threaded opening, an arm secured to the shaft, a valve mounted on the arm and adapted to close the outlet port, a handle mounted on the extended end of the shaft and provided with a tooth adapted to engage the teeth on the lug, a washer bearing against the handle and a screw threaded in the opening in the shaft and bearing against the washer for forcing the tooth on said handle into engagement with the adjacent teeth on the casing.

3. A device of the class described including a casing having oppositely disposed nipples for connection with a water supply pipe and provided with an outlet port, the interior walls of which are threaded, a collar engaging the threads of the outlet port and having its free end beveled to form a valve seat, a transverse shaft journaled in the valve casing and having one end thereof extended laterally beyond the exterior wall of the valve casing, an arm carried by the shaft, a valve mounted on the arm and having a soft metal face for contact with the valve seat, teeth extending laterally from one side of the casing and arranged in the arc of a circle, and an operating handle secured to the extended end of the shaft and provided with a tooth adapted to engage the teeth on the casing for holding the valve in different positions of adjustment.

4. A device of the class described including a casing having oppositely disposed nipples for connection with a water supply pipe and provided with an outlet port, there being an opening formed in the top of the casing between said nipples, the walls of said opening and outlet port being threaded, a collar engaging the threads of the outlet port and having its inner face beveled to form a valve seat, a cap forming a closure for said opening, a shaft journaled in the casing and having one end thereof extending laterally beyond the casing and provided with a threaded opening, an arm carried by the shaft, a valve mounted on the arm and provided with a soft metal face for contact with the valve seat, teeth formed on the exterior of the casing, an operating handle secured to the shaft and provided with a tooth adapted to engage the teeth on the casing, a washer bearing against the handle, a screw threaded in the opening in the end of the shaft and bearing against the washer for forcing the tooth of said handle in engagement with the adjacent tooth on said casing, and a spring catch arranged within the casing beneath the cap and adapted to engage the valve for normally holding said valve in open position.

5. A device of the class described including a casing having inlet and outlet ports and having one side wall thereof provided with a depression, the walls of which are threaded, there being a series of teeth formed on the exterior wall of the casing around the depression, a shaft journaled in the casing and provided with a collar seated in said depression, a valve seat disposed at the outlet port, a valve carried by the shaft and adapted to engage the valve seat, a packing seated in the depression and surrounding the collar, a plug engaging the threaded wall of said depression and bearing against the packing, a handle carried by the extended end of the shaft and provided with a tooth adapted to engage the teeth on the casing, and means mounted on the shaft for forcing the tooth on said handle into engagement with the teeth on the casing.

1,020,023. MACHINE FOR MOLDING PRINTING BLOCKS. PHILIPPE BUNAU-VARILLA, Paris, France. Filed Dec. 5, 1910. Serial No. 595,772. (Cl. 22—4.)



In a machine for casting printing plates, the combination of a horizontal revoluble cylindrical metal mold section, internal heat conducting ribs dividing said cylindrical section into transverse cooling chambers which communicate with each other through peripherally located openings in said ribs, and means for delivering a cooling liquid to the lower portion and for withdrawing the heated liquid from the upper portion of said section, and a lower mold section adjacent thereto having a cooling compartment, and perforated heat conducting ribs dividing said compartment into vertical chambers through which a cooling liquid is adapted to pass.

1,020,024. OIL-BURNER. WILLIAM T. CASEBOLT, Kansas City, Mo. Filed May 8, 1911. Serial No. 625,883. (Cl. 158—75.)

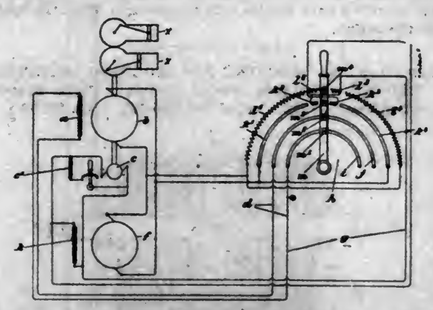
1. An oil burner, comprising a tip having a substantially flat upper face and a V-shaped series of orifices for discharging oil upwardly and upon said upper face, the apical opening of said series of orifices being nearest the front end of the tip, and a nozzle above the said tip and pro-

vided with a series of forwardly-converging and downwardly-inclined jet openings for discharging a fluid against oil issuing upward from said orifices.



2. An oil burner, comprising a support provided with a passage, a threaded sleeve extending slidingly through said passage, a pair of nuts engaging the sleeve and the opposite sides of the support, a steam supply pipe connected to the rear end of the sleeve, a pipe connected to the front end of the sleeve, an oil supply pipe secured to the support and extending parallel with the first-named pipes and sleeve, a hollow tip secured to the front end of the oil supply pipe, provided with a substantially flat upper face and with orifices for discharging oil upwardly and upon said face, a nozzle resting upon said tip and secured upon the front end of the pipe secured to the front end of the sleeve and provided with forwardly-converging and downwardly-inclined jet openings for discharging steam against the oil issuing upwardly from said orifices.

1,020,025. DISTRIBUTION OF ELECTROMOTIVE POWER. HENRY CHITTY, Kenley, FREDERICK M. T. LANGE, London, and GEORGE W. MASCORD, Barnes, England. Filed Aug. 26, 1907. Serial No. 390,152. (Cl. 172—239.)



1. An electric power transmission apparatus, consisting in combination with a mechanical source of motive power, of a wholly self-exciting generator having but one field winding common to both internal and external sources of energy and coupled to said source of motive power, an auxiliary dynamo for supplying a momentary current to reverse the residual magnetism of the field magnets of said generator, and a working motor electrically connected to said generator, substantially as described.

2. An electric power transmission apparatus, consisting in combination with a source of motive power, of a wholly self-exciting generator having but one field winding common to both internal and external sources of energy and connected to said source of motive power, an auxiliary dynamo for supplying a momentary current to reverse the residual magnetism of the field magnets of said generator, means for varying the excitations in the field of the said generator, a working motor, and means for supplying current from the generator to the motor armature, substantially as described.

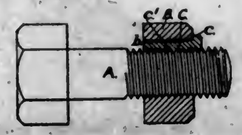
3. An electric power transmission apparatus, consisting in combination with a source of motive power, of a wholly self-exciting generator having but one field winding common to both internal and external sources of energy and connected to said source of motive power, means for reversing the residual magnetism of the field magnets of said generator, consisting of an auxiliary dynamo in the circuit of said field magnets, a rheostat for regulating the flow of current from said auxiliary dynamo, and a controller for reversing the flow of current through said circuit, a working motor, and means for supplying current from the generator to the motor armature, substantially as described.

4. The combination with a source of motive power, of a generator coupled thereto, a working motor, means for supplying current from the generator to the motor armature, means for self-exciting the field of said generator, means for varying the said excitations, and means for reversing the residual magnetism of the field magnets of said generator when the main field of the circuit is broken, consisting of an auxiliary dynamo in the circut of said field magnets.

5. The combination with a source of motive power, of a main generator coupled thereto, means for making and breaking the field circuit of the main generator, an auxiliary generator, means for transmitting the current therefrom through the field winding of the main generator, and determining the polarity of its field in either direction when said field circuit is broken, and a rheostat for regulating the flow of current from said auxiliary generator.

[Claims 6 to 14 not printed in the Gazette.]

1,020,026. NUT-LOCK. JOHN CLARK, Sydenham, England. Filed Jan. 23, 1911. Serial No. 604,187. (Cl. 151—23.)



1. The combination of two coöperating screw threaded members, one of such members being provided with a groove across the threads in parallelism with the axis of the member, a locking member adapted to be received in said groove and being bent longitudinally toward the other member and adapted to project out of said groove into the path of movement of the complementary screw threaded member.

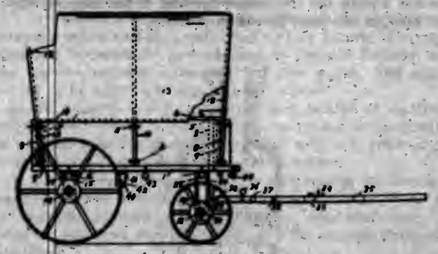
2. The combination of two coöperating screw threaded members, one of such members being provided with a groove across the threads in parallelism with the axis of the member, a locking member adapted to be received in said groove and being bent longitudinally toward the other member, said locking member being adapted to project out of said groove into the path of movement of the complementafy screw threaded member and having teeth to engage the threads of the said complementary member.

3. The combination of two coöperating screw threaded members, one of such members being provided with a dovetailed groove across the threads in parallelism with the axis of the member, a locking member adapted to be received in said groove and being bent longitudinally toward the other member and adapted to project out of said groove into the path of movement of the complementary screw threaded member.

1,020,027. CONVERTIBLE TOY VEHICLE. CHARLES J. DORSEY, Baltimore, Md. Filed Mar. 11, 1911. Serial No. 613,615. (Cl. 46—45.)

1. A convertible toy wagon comprising a body with removable sides, a removable cover, running gear, thills, two distinct connecting means on the thills, and two distinct coöperating connecting means on the wagon, as and for the purpose set forth.

2. A convertible vehicle comprising a body having removable sides whereby sides of a different type can be substituted, wheels, and thills, with a plurality of distinct means for connecting them to form vehicles, and a plurality of distinct coöperating means on other parts of the vehicle.



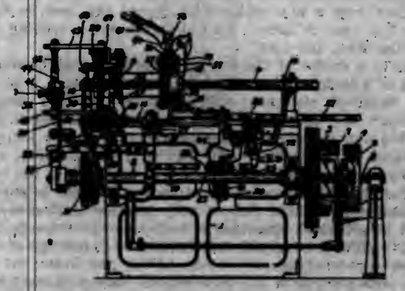
3. A convertible toy vehicle comprising a body, wheels, means for connecting the body to all or a part of the wheels as desired, thills, and means for connecting the parts to form vehicles of different types.

4. A toy device of the character described comprising a body bottom, thills, means on said bottom, and means on said thills, whereby they can be differently associated in different types of vehicles.

5. A toy device of the character described comprising a body bottom, wheels, axles, bolsters, thills, connecting means between said thills and bolster, means on said bottom and means on said thills whereby the parts can be differently associated, as set forth.

[Claims 6 to 9 not printed in the Gazette.]

1,020,028. MACHINE FOR FORMING CRIMPED PIPE-ELBOWS. JOHN DYMOND, Toronto, Ontario, Canada, assignor to Louis S. McMurray, Toronto, Canada. Filed Aug. 28, 1911. Serial No. 646,312. (Cl. 153—69.5.)



1. In a pipe crimping and bending machine the combination of a pipe mandrel; means for shifting a length of pipe endwise on said mandrel with a stepwise movement; crimping mechanism acting adjacent the end of the mandrel; means for actuating said crimping mechanism after each forward shift of the pipe; a single bending segment clamped to the end of the pipe and projecting in front thereof; a swinging frame pivoted on the frame of the machine at the front thereof and at one side; a vertical friction bar carried thereby adapted to engage the bending segment nearly tangentially; and means for moving said frame to cause the friction bar to strike the segment and slightly bend the pipe.

2. In a pipe crimping and bending machine the combination of a pipe mandrel; means for shifting a length of pipe endwise on said mandrel with a stepwise movement; crimping mechanism acting adjacent the end of the mandrel; means for actuating said crimping mechanism after each forward shift of the pipe; a single bending segment clamped to the end of the pipe and projecting in front thereof; a swinging frame pivoted vertically on the frame of the machine at the front thereof and at one side; a vertical friction bar carried thereby adapted to engage the bending segment nearly tangentially; and means for moving said frame to cause the friction bar to strike the segment and slightly bend the pipe.

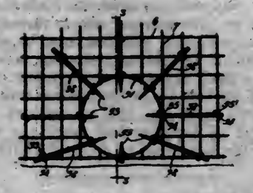
3. In a pipe crimping and bending machine the combination of a pipe mandrel; means for shifting a length of pipe endwise on said mandrel with a stepwise movement; crimping mechanism acting adjacent the end of the mandrel; means for actuating said crimping mechanism after each forward shift of the pipe; a single bending segment clamped to the end of the pipe and projecting in front thereof; a swinging frame pivoted on the frame of the machine; a friction bar carried thereby adapted to engage the segment; and means for moving said frame to cause the friction bar to strike the segment and slightly bend the pipe.

4. In a pipe crimping and bending machine the combination of means for holding a length of pipe; means for producing a series of crimps therein; means for slightly bending said pipe after the production of each crimp comprising a single bending segment clamped to the end of the pipe and projecting in front thereof; a swinging frame pivoted vertically on the frame of the machine at the front thereof and at one side; a vertical friction bar carried thereby adapted to engage the bending segment nearly tangentially; and means for moving said frame to cause the friction bar to strike the segment and slightly bend the pipe.

5. Bending mechanism for pipes comprising a segment adapted to be clamped to a pipe end; a swinging frame pivoted on the frame of the machine; a friction bar carried thereby adapted to engage the segment; a lever pivoted on the frame of the machine; a cam adapted to rock the lever; a pin on the lever; a notch link adapted to engage the pin; and a universal joint connection between the link and the friction bar.

[Claims 6 to 16 not printed in the Gazette.]

1,020,029. TRAP. LEE ECCLESTON and ROSS ECCLESTON, Gregson, Mont. Filed Apr. 6, 1911. Serial No. 619,365. (Cl. 43—24.)

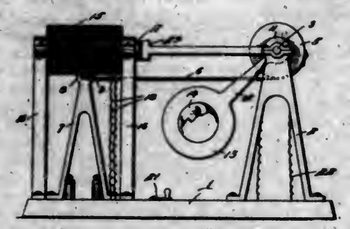


The combination with a mesh wire fence including longitudinal strands and vertical stays and having an enlarged opening formed therein, of a circular wire ring disposed within the opening and secured to the strands and stays of the fence, impaling spikes having their major portions disposed against the fence and each having one end sharpened and disposed at an angle and projecting through said opening, means for securing the major portions of the spikes to the strands and stays of the fence, and separate means for securing the spikes to the ring.

1,020,030. TOY. GALE S. ELLIOTT, San Marcial, N. Mex. Filed June 20, 1911. Serial No. 634,325. (Cl. 46—49.)

1. A toy, comprising a base, supports rising therefrom, an electromagnet supported by certain of the supports, a shaft rotatably secured to the other support, a plurality of arms projecting from one side of the shaft, a contact disk secured on the shaft, a contact brush carried by the supports for coaction with the disk to close

an electrical circuit, means for completing and breaking the circuit as the shaft rocks, a battery in said circuit, said circuit passing around the magnet, and resilient means for partially controlling the rotation of the shaft, one of the arms of the shaft forming an armature for the magnet to supplementally control the movement of the shaft.



2. A toy, comprising a pivotally supported weight, a resilient device for partially controlling the oscillation of the weight on its pivot, an electric circuit including an electromagnet for supplementing the controlling action of the resilient member, and means for intermittently making and breaking the circuit to control the energizing of the magnet as the weight oscillates.

3. A toy, comprising a pivotally supported pendulum, a resilient member for partially controlling the movement of the pendulum, an electric circuit including an electromagnet and a source of current supply, an armature adapted to swing with the pendulum and be controlled to the magnet, and means for automatically controlling the energizing of the magnet and the breaking of the electric circuit.

4. The combination with a pivotally supported pendulum, of an armature adapted to swing with the pendulum, a resilient member for controlling the movement of the pendulum, and an electrical controlling member for acting in conjunction with the pendulating armature to control the movement of the pendulum supplemental to the action of the resilient member.

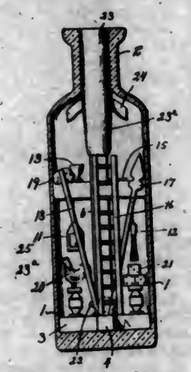
5. A toy, comprising supporting members, a shaft journaled therein, a pendulum and an armature secured to and projecting from said shaft, a drum secured on the shaft, a resilient connection having one end secured to the drum, a support engaging the other end of the resilient member, an electrical circuit including an electromagnet for attracting the armature supplemental to the contraction of the resilient member, a contact disk secured on the shaft and forming a part of the electrical circuit, and a contact brush included in the circuit and a lug projecting from the disk to serve in conjunction with the brush to complete and break the circuit upon movement of the pendulum in different directions.

1,020,031. BOTTLE-PUZZLE. FRANCIS XAVIER FAHNDRICH, Youngstown, Ohio, assignor to Edmund Fahndrich, Youngstown, Ohio. Filed Oct. 9, 1911. Serial No. 653,628. (Cl. 46—41.)

1. In a device of the character described, the combination of a container formed with a contracted mouth, a series of disjoined elements adapted to be inserted singly through the contracted mouth and thereafter assembled within the container into a connected group, and a stopper for closing the mouth of the container and holding the elements in position.

2. In a device of the character described, the combination of a container formed with a contracted mouth, a series of disjoined elements adapted to be inserted singly through the mouth of the container and thereafter assembled therein into a connected group, a stopper for closing the mouth of the container, and a key for retaining the stopper in position.

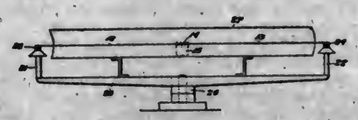
3. In a device of the character described, the combination of a container formed with a contracted neck, a series of disjoined elements adapted to be inserted singly through the contracted neck and thereafter assembled within the container into a connected group, a stopper formed with a transverse opening adapted to close the mouth of the container, a key and means for positioning the key within the transverse opening of the stopper after the stopper has been placed in position.



4. In a device of the character described, the combination of a container formed with a contracted neck, a series of disjoined elements adapted to be inserted singly through the contracted neck and thereafter assembled within the container into a connected group, a stopper adapted to be inserted in the mouth of the container so as to retain the elements in position, the said stopper being formed with intersecting longitudinal and transverse openings, a cord inserted through the longitudinal opening and extending through one end of the transverse opening, and a key having the end of the cord secured to an intermediate portion thereof and formed in one end thereof with a nick adapted to engage the cord so that the key can be drawn into the transverse opening by pulling upon the cord.

5. In a device of the character described, the combination of a container formed with a contracted neck, a series of disjoined elements adapted to be inserted singly through the contracted neck and thereafter assembled within the container into a connected group, a stopper adapted to be inserted in the mouth of the container and formed with an extension adapted to project into the container and engage one of the elements, the said extension of the stopper being formed with intersecting transverse and longitudinal openings, a cord inserted through the longitudinal opening and extending through one end of the transverse opening, and a key having the inner end of the cord secured to an intermediate portion thereof and formed in one end thereof with a nick for engaging the cord so that the key can be drawn into the transverse opening by pulling upon the cord.

1,020,032. SIGNALING BY ELECTROMAGNETIC WAVES. REGINALD A. FESSENDEN, Pittsburgh, Pa., assignor, by direct and mesne assignments, to The National Electric Signaling Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed July 27, 1903. Serial No. 167,242. (Cl. 178—319.)



1. Apparatus for sending or receiving energy by electromagnetic waves, comprising an antenna formed of wires of magnetic material extending horizontally in proximity to the ground and adapted to operate by directly utilizing the electromagnetic component of the waves.

2. Apparatus for the receipt and transmission of electromagnetic wave energy, comprising an antenna formed of a close bundle of wires, supported horizontally in proximity to the ground and adapted to directly utilize the electromagnetic component of the waves.

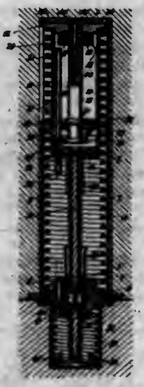
3. An antenna for transmission and receipt of electromagnetic wave energy, comprising a close bundle of wires arranged horizontally and adapted to operate directly by the electro-magnetic component of the waves, and supported to be rotated in a horizontal plane.

4. An antenna for transmission and receipt of electromagnetic wave energy, formed of wires placed horizontally in proximity to the ground, combined with a horizontally arranged reflector, substantially as described.

5. An antenna for transmission and receipt of electromagnetic wave energy, comprising a horizontal wire, a horizontally pivoted support therefor combined with a reflector mounted parallel with the wire, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,020,033. DOOR CHECK AND CLOSER. MICHAEL J. FLYNN, New Brunswick, N. J., assignor of one-half to Edward W. McCarty, New York, N. Y. Filed Apr. 30, 1910. Serial No. 558,027. (Cl. 16—88.)



1. In a door check, a receptacle adapted to be received in the jamb of a door, a spring in said receptacle, a checking device disposed within said spring, said device comprising a liquid-holding casing, a partition inside of said casing, said casing and partition being relatively movable with respect to each other, a valve cooperating with said partition, connections between said valve and the inner end of said receptacle, a flexible element connected to said casing, means for attaching a part of said element to the door whereby when the door is opened the casing is drawn outwardly and the liquid therein is forced from one side of the partition to the other, said spring being compressed by the movement of said casing and normally tending to close the door, a tube extending through the end of said casing adjacent the flexible element, and also extending through the partition, said tube being adapted to convey fluid from one side of the partition to the other when the door is being closed by the spring, and means for regulating the flow of fluid through said tube.

2. In a door check, a fluid holding casing, a valve therein, an apertured partition in said casing, said casing and partition being relatively movable with respect to each other, said partition being adapted to coöperate with said valve to allow fluid to pass through an aperture in the partition when movement occurs in one direction and to impede the flow of fluid therethrough when movement occurs in the opposite direction, a flexible connection between the door and one of the aforesaid movable parts for effecting movement of said part in the first mentioned direction when the door is opened, a spring for effecting movement in the second mentioned direction, a tube extending substantially parallel to a portion of said flexible element through said casing and also through said partition, said tube being adapted to convey fluid from one side of the partition to the other when the fluid flow is impeded as above, and means for regulating the flow of fluid through said tube.

3. In a door check, a fluid pressure checking appliance adapted to be attached to a door jamb and including a spring for normally closing the door, a flexible element adapted to be attached to the door and also to a part of said checking appliance, a friction reducing device cooperating with said flexible element and about which said element is adapted to bend, and means comprising a tubular member for preventing buckling of said element between said device and said appliance.

4. In a door check, a plurality of means coöperating to normally close a door, each of said means including a spring and parts connected to and actuated by said spring, said spring actuated parts each respectively comprising non-extensible elements, frames mounted on said jamb and door through which some of said elements are adapted to move, said frames being disposed side by side with a portion of one of the faces of one of said frames spaced from a corresponding portion of the opposed face of the other casing frame to form an opening therebetween when the door is in closed position, and separable means for securing portions of said elements together, accessible through said opening.

5. In combination a door check and closer adapted to normally close an opened door at substantially predetermined rates during various portions of its path of movement, comprising a fluid-holding casing, a partition therein in contact with the fluid in said casing, free movement of said partition being normally impeded by said fluid, a spring disposed around said casing, a valve which when closed impedes flow of the fluid and thereby of travel of said partition through said casing, said valve adapted to be opened when the door is being opened, and a second spring operable to allow an additional opening movement of said door after the partition has traversed its path of movement in said casing, said last mentioned means unrestrainedly tending to close said door a predetermined amount, and fluid conducting means of relatively small effective cross section as compared to that of the valve, said fluid conducting means coöperating with said valve to control the rapidity of flow of said fluid from one side of said partition to the other, the valve being closed and substantially all flow of the fluid taking place through said fluid conducting means.

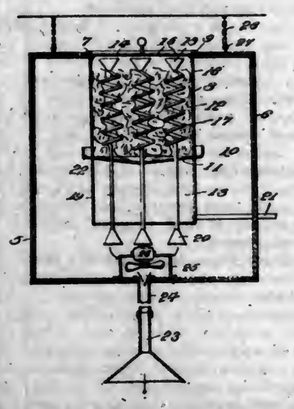
[Claims 6 to 8 not printed in the Gazette.]

1,020,034. AIR-COOLING APPARATUS. FELIX FRANK, Cleveland, Ohio. Filed Dec. 10, 1909. Serial No. 532,389. (Cl. 62—22.)

1. An air cooler including a closed outer receptacle, an inner receptacle suspended within and spaced from the interior walls of the outer receptacle to form an intermediate air chamber, said inner receptacle being perforated for a portion of the height thereof, a partition extending transversely across the inner receptacle beneath the perforated portion of the latter and defining superposed compartments, one of which is adapted to contain a cooling medium, a plurality of coils arranged within the cooling compartment and provided with oppositely disposed flared mouths, a perforated cover forming a closure for the upper end of the inner receptacle, a discharge pipe communicating with the air chamber beneath the bottom of the inner receptacle, and means for drawing air through the cooling chamber into the air chamber and forcing said air downwardly into the discharge pipe.

2. An air cooler including a closed outer receptacle, an inner receptacle suspended within the outer receptacle and having its upper end open and its lower closed and spaced from the bottom of the outer receptacle, the

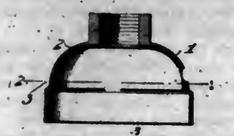
side walls of said inner receptacle being perforated for a portion of the height thereof and spaced from the adjacent side walls of the outer receptacle to form an intermediate air chamber, a partition extending transversely across the inner receptacle at the perforated walls thereof and defining superposed compartments, one of which is adapted to contain a quantity of ice and the other the liquid produced by the melting of said ice, a plurality of coils embedded in the ice and provided with oppositely disposed flared mouths, some of which extend through the bottom of the inner receptacle, a perforated cover forming a closure for the top of said inner receptacle, a discharge pipe communicating with the air chamber directly beneath the closed end of the inner receptacle, and means for drawing air through the inner receptacle into the air chamber and forcing said air downwardly into the discharge pipe.



3. An air cooler including a closed outer receptacle, an inner receptacle supported by and suspended within the outer receptacle and having its upper end open and its lower end closed and spaced from the bottom of said outer receptacle, the side walls of the inner receptacle being perforated for a portion of their length and spaced from the inner walls of the outer receptacle to form a circumferential air chamber, a partition extending transversely across the inner receptacle and defining superposed compartments, one of which is adapted to contain a cooling medium, a drain pipe communicating with the other compartment, a plurality of coils arranged within the cooling compartment and provided with flared mouths, each coil terminating in a straight portion extending through the lower compartment of the inner receptacle and provided with a flared mouth projecting below the bottom of said receptacle, a discharge pipe communicating with the interior of the air chamber beneath the bottom of the inner receptacle, a drip trough surrounding said inner receptacle at the transverse partition thereof, a perforated cover forming a closure for the top of the inner receptacle, and means for drawing air through the cooling chamber into the air chamber and forcing said air downwardly into the discharge pipe.

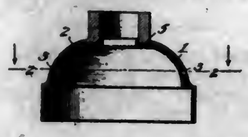
1,020,035. LINING-FASTENING FOR ELECTRICAL LAMP-SOCKETS. EDGAR H. FREEMAN, Trenton, N. J. Filed July 22, 1909. Serial No. 508,895. (Cl. 173—362.)

As an improvement in electrical lamp sockets, the combination of the socket casing having a sheet metal cap, and a non-yielding thin lining of insulating material initially and permanently having a close registering fit within and solidly against the inner surface of the cap and presenting a smooth and rigid insulating surface for the wiring to bear against, the said cap being provided in its metal wall with a series of spaced integral inwardly projecting prongs penetrating the fibrous rigid body of the lining and permanently locking the same against



movement or displacement in any direction after the locking-in operation.

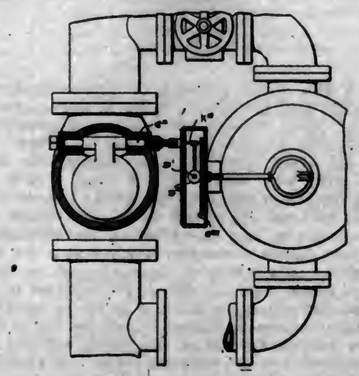
1,020,036. INSULATING-LINING FOR ELECTRICAL LAMP-SOCKETS. EDGAR H. FREEMAN, Trenton, N. J. Filed June 21, 1911. Serial No. 634,593. (Cl. 173—362.)



1. As an improvement in electrical lamp sockets, the combination of the socket casing having a sheet metal cap provided with introverted fractured prongs, and a lining of plastic insulating material permanently molded upon the inner surface of the cap and over said anchor elements.

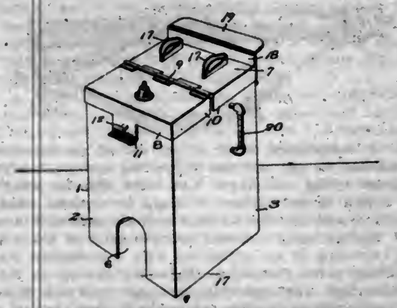
2. As an improvement in electrical lamp sockets, the combination of the socket casing having a sheet metal cap provided with introverted fractured prongs, and a lining of plastic insulating material permanently molded upon the inner surface of the cap and over and about said prongs.

1,020,037. WATER-METER. EDWARD V. FRENCH, Lynn, Mass. Filed Apr. 28, 1908. Serial No. 429,649. (Cl. 73—167.)



A water meter comprising a main passageway, a check-valve pivotally mounted in said passageway, the weight of the check-valve and connected parts being so distributed with respect to the pivotal axis of the check-valve as to secure a substantially constant moment during the movement of the check-valve, a by-pass around said check-valve, metering mechanism located in said by-pass for measuring the amount of flow therethrough, means driven by said metering mechanism for indicating the lapse of time, and means operated by the check-valve for indicating and recording thereon the positions of the check-valve while open.

1,020,038. RAZOR-STERILIZER. MARTIN GOLDSTEIN, Keystone, W. Va., assignor of one-half to Ebenezer H. Harper, Keystone, W. Va. Filed May 31, 1911. Serial No. 630,507. (Cl. 167—3.)



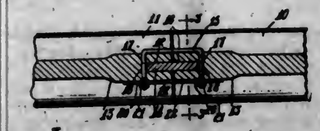
1. A sterilizer comprising a container having a cover, a blade-holder opening through and supported by the cover and depending into the container, and a handle support upon the cover in juxtaposition to the blade-holder.

2. A sterilizer comprising a container, a cover for the container comprising a relatively fixed section and a section hinged thereto, a blade-holder fitted through the fixed section of the cover and depending into the container, and a handle support upon the fixed section of the cover in juxtaposition to the blade-holder.

3. A sterilizer comprising a container having a cover for the container comprising a relatively fixed section and a section hinged thereto, and a blade-holder supported by the relatively fixed section of the cover and depending into the container, and having its throat presented at the top of the cover.

4. A sterilizer comprising a container, a cover for the container comprising a relatively fixed section and a section hinged thereto, the sections having flanges fitting the mouth of the container, one of the flanges having an extension bent to project above the plane of the cover to afford a handle support, and a blade-holder supported by the fixed section of the cover in juxtaposition to the said support and depending into the container.

1,020,039. RAIL-JOINT. LEXIE A. GORMAN, Germantown, Tenn. Filed June 6, 1911. Serial No. 631,639. (Cl. 239—9.)



1. A rail joint including in combination with two abutting rail ends having longitudinal alining orifices in their webs, and having transverse orifices opening through the web sides and communicating with said longitudinal orifices, of a pin having its opposite ends engaged in said longitudinal orifices, and a U-shaped coupling member having its bridge portion extending along the rail web sides and having its legs engaged through the transverse orifices in said webs and preventing creeping of the pin, a fish plate extending along the opposite rail web sides from the bridge portion of the coupling member and connecting the terminals of the coupling member, legs and retaining nuts upon said legs bearing against said fish plate.

2. A rail joint including in combination with two abutting rail ends having longitudinal alining orifices in their webs, and having transverse orifices opening through the web sides and communicating with said longitudinal orifices, a pin having its opposite ends engaged in said longitudinal orifices, and having openings registering with said transverse orifices, a U-shaped coupling member having its bridge portion extending along the rail web sides and having its legs engaged through the registering transverse openings in the pin and rail webs, a fish plate extending along the opposite rail web side and connecting the terminals of said legs, and retaining nuts upon said legs bearing against said fish plate.

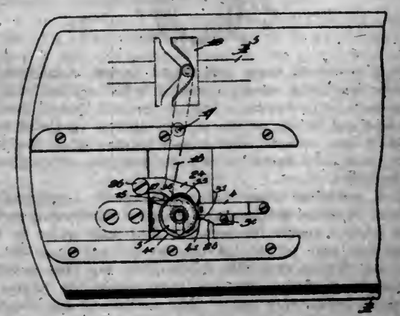
1,020,040. TOOL FOR LOCKING NUTS. WILLIAM M. JENKINS, Pittsburgh, Pa., and EDMUND R. WARD, Hartford, Conn. Filed June 23, 1911. Serial No. 634,976. (Cl. 81—10.)



1. A nut locking tool comprising a shank, a spur, and a guide wing extending laterally in the plane of the spur and having a guide edge adapted to bear against the inner periphery of the nut the distance between such edge and the spur being equal to the internal diameter of the nut plus the radial thickness of metal to be displaced.

2. A nut locking tool comprising a shank, a spur and a wedge shaped wing extending laterally in the plane of the spur and having a guide edge adapted to bear against the inner periphery of the nut the distance between such edge and the spur being equal to the internal diameter of the nut plus the radial thickness of metal to be displaced.

1,020,041. SEWING-MACHINE. JOHN KIRWICK, Hyde Park, Mass. Filed July 24, 1911. Serial No. 640,070. (Cl. 112—15.)



1. In a sewing machine, the combination with a looper-carrying shaft, of a horizontal shuttle support sustained by the shaft, means for holding said support stationary, a stationary shuttle resting on the support and provided with a shoulder on its upper edge, a horizontal finger to engage said shoulder and prevent the shuttle from turning, a needle, and a looper carried by the shaft and moved thereby in a path exterior to the shuttle and in a plane at right angles to the needle path.

2. In a sewing machine, the combination with a needle, of a stationary shuttle support, a stationary shuttle sustained on said support and provided on its upper edge with a shoulder, a looper, means to move the looper about the shuttle in a circular path thereby to carry a loop of needle thread around the shuttle, a hold-down for the shut-

tle to prevent it from rising and also to hold it from turning in one direction, and a finger engaging the shoulder of the shuttle and preventing it from turning in the other direction.

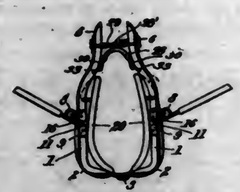
3. In a sewing machine, the combination with a stationary shuttle having two oppositely-disposed shoulders on its upper edge, of means for supporting the shuttle, a needle, a looper, means to move the looper in a circular path exteriorly to the shuttle thereby to carry a loop of needle thread thereabout, a hold-down to engage the upper edge of the shuttle and coöperating with one of said shoulders to prevent turning movement of the shuttle in one direction, and a finger coöperating with the other shoulder to prevent turning movement of the shuttle in the other direction.

4. In a sewing machine, the combination with a vertically-arranged shaft having an axial recess, a looper sustained by said shaft, a stationary platform provided with a stud entering said recess and positioned thereby, a shuttle on the platform and provided with a shoulder, a stationary hold-down to engage the top of the shuttle and prevent it from rising and to engage said shoulder to prevent the shuttle from turning, and a needle, said looper operating to take a loop of needle thread and carry it around the shuttle.

5. In a sewing machine, the combination with a needle, of a horizontal stationary platform adjacent the path of the needle, a stationary shuttle supported by the platform and provided with a shoulder, a hold-down engaging the top of the shuttle to hold the latter from rising and coöperating with said shoulder to hold said shuttle from turning, and a looper to take a loop of needle thread and carry it around the shuttle.

[Claims 6 to 10 not printed in the Gazette.]

1,020,042. HORSE-COLLAR AND HAMES. JOHN N. LANGUM, Barton, N. D. Filed Sept. 13, 1910. Serial No. 581,888. (Cl. 54—18.)



1. A combined horse collar and hames, consisting of hames; sectional collars provided with sockets; curved trace rods, each having a ball on the end thereof revolubly mounted in one of the sockets; plates retaining said balls in said sockets; and means for fastening the said rods around the hames in adjusted position, substantially as described.

2. A combined horse collar and hames, consisting of hames; sectional collars having sockets mounted thereon; stay plates; means for securing said stay plates to the collar sections; curved trace rods, each having a ball on the end thereof revolubly mounted in the said sockets; means for fastening the said rods around the hames in adjusted position; a collar pad; and means for securing said pad to the hames, substantially as described and set forth.

1,020,043. SUPPLEMENTARY SPRING ATTACHMENT AND SHOCK-ABSORBER FOR AUTOMOBILES. JOHN A. MAUCK, Princeton, Ind. Filed Aug. 9, 1911. Serial No. 643,165. (Cl. 21—105.)

1. In combination with the rear end of an automobile frame and its supporting springs, a supplementary spring attachment comprising a pair of coil springs arranged at opposite sides of the frame, said springs being arranged longitudinally of the frame and extending at a slight upward inclination with a horizontal plane, means for adjustably connecting the front or upper ends of the springs with the side pieces of the vehicle frame and means for connecting the opposite ends of the springs with the ends of the rear end spring of the frame, the coil springs being adapted to expand as the rear end spring is depressed, whereby the former coöperates with the latter to sustain the weight of the vehicle and to absorb shocks.



2. In combination with a rear end of an automobile frame, and its end and side supporting springs, a supplementary spring attachment and shock absorber comprising a pair of coil springs arranged at opposite sides of the frame and provided at their opposite ends with hooks, said springs being disposed longitudinally of the frame and extending at an inclination with a horizontal plane, attaching plates secured to the side pieces of the frame and provided with outwardly bent apertured ears or lugs, eye bolts connected with the upper hooked ends of the springs with their threaded ends passing through the aperture of said ears or lugs, nuts screwing on the threaded ends of the bolts against the ears or lugs of the attaching frame for adjusting the bolts and springs and clevises connected with the lower hooked ends of the springs and provided with hooked portions to engage or fit over the rear ends of the side springs.

1,020,044. SPORTSMAN'S APPLIANCE. MICHAEL G. MCGUIRE, Chicago, Ill. Filed July 13, 1910, Serial No. 571,771. Renewed Aug. 9, 1911. Serial No. 643,217. (Cl. 135—47.)



1. A combined cane, pipe and fishing rod comprising, in combination, a sheath, a detachable handle therefor composed of a pair of separably connected sections provided with dowels for interchangeable engagement in the upper end of the sheath, one of said sections constituting a pipe bowl, the other section having an article containing recess formed therein and having its dowel closely fitting in said bowl to reinforce the latter, and a disk detachably connected to the second-named section for closing said recess.

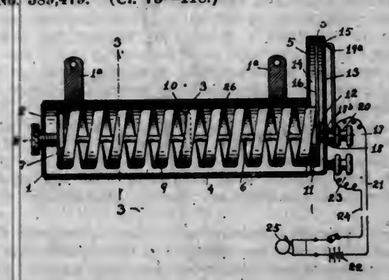
2. A combined cane, pipe and fishing rod comprising, in combination, a sheath, a detachable handle therefor composed of a pair of separably connected sections provided with dowels for interchangeable engagement in the upper end of the sheath, one of said sections having formed therein a recess of the same diameter as the dowel of the other section, in which recess the last-mentioned dowel closely fits throughout its entire extent, for reinforcing said recessed section.

3. A combined cane, pipe and fishing rod comprising, in combination, a sheath, a detachable handle therefor composed of a pair of separably connected sections provided with dowels for interchangeable engagement in the upper end of the sheath, each dowel having a socket formed therein, one of said sections being formed with a recess wherein the dowel of the other section closely fits, for reinforcing the recessed section, and a member disposed within said sheath and provided with means for interchangeable engagement in said sockets.

4. A combined cane, pipe and fishing rod comprising, in combination, a sheath, having its upper end interiorly threaded and its lower end formed with a threaded socket, a detachable handle for the sheath composed of a pair of separably connected sections provided with threaded dowels for interchangeable engagement in the upper end of the sheath, each dowel having a threaded socket formed therein, and a member disposed within said sheath and having a threaded end for interchangeable engagement in all of said sockets.

5. A combined cane, pipe and fishing rod comprising, in combination, a sheath having its upper end interiorly threaded and its lower end formed with a threaded socket, a detachable handle for the sheath composed of a pair of separably connected sections provided with threaded dowels for interchangeable engagement in the upper end of the sheath, each dowel having a threaded socket formed therein, one of said sections being formed with a recess wherein the dowel of the other section closely fits, for reinforcing the recessed section, and a member disposed within said sheath and having a threaded end for interchangeable engagement in all of said sockets.

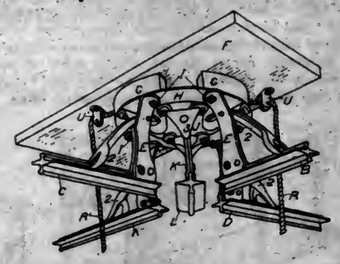
1,020,045. METALLIC THERMOMETER. CLARENCE E. MERRYMAN, Anderson, Ind. Filed Oct. 27, 1910. Serial No. 589,479. (Cl. 73—118.)



A metallic thermometer, comprising an incasement having at one end a graduated dial plate and an arcuate slot and at its opposite end a set-screw, a fixed disk upon said set-screw, a rod in said incasement in line with said set-screw and having at one end fixed connection therewith and at its opposite end a supporting bearing in said dial plate, a loose end disk upon said rod, an intermediate loose disk upon said rod, a thermostatic coil composed of inner and outer metal coils of different coefficients of expansion surrounding said rod and having at one end fixed connection with said fixed disk and at its opposite end fixed connection with said loose disk, said coil resting upon said intermediate disk, and a radial indicator having at one end a fixed connection with said loose disk to turn therewith and at its opposite end extending in register with said slot.

1,020,046. SUSPENDED TRACKS. ALBERT H. NELLER, Fairfield, Iowa, assignor to Louden Machinery Company, Fairfield, Iowa, a Corporation of Iowa. Filed Dec. 20, 1909. Serial No. 534,237. (Cl. 104—180.)

1. In a device of the character described the combination of a plank adapted to be secured to an overhead support, a movable plate secured to the under side of said plank, a series of converging track-sections centrally suspended by depending hangers secured to the plank and adapted to cross one another at a common point under said plate and to form two or more continuous track-ways, an open space at the point of intersection and a central track-section centrally secured to the movable plate by depending hangers and adapted to fill said space and aline with either of the series of track-sections to form a continuous track-way.



2. In a device of the character described the combination of a plank, adapted to be secured to an overhead support, a movable plate secured to the under side of said plank, a series of converging track-sections centrally suspended by depending hangers secured to the plank and adapted to cross one another at a common point under said plate and to form two or more continuous track-ways, an open space at the point of intersection, a central track-section secured to the movable plate by depending hangers and adapted to fill said space and aline with either of said series of track-sections, and means to move the plate whereby said central section will alternately aline with one of the series of track-sections to form a continuous track-way.

3. In a device of the character described the combination of a plank adapted to be secured to an overhead support, a movable plate secured to the under side of said plank, a series of converging track-sections centrally suspended by depending hangers secured to the plank and adapted to cross one another at a common point under said plate and to form two or more continuous track-ways, an open space at the point of intersection and a central track-section centrally secured to the movable plate by a depending hanger at each end and adapted to fill said space and aline with either of the series of track-sections to form a continuous track-way.

4. In a device of the character described the combination of a plank adapted to be secured to an overhead support, a movable plate secured to the under side of said plank, a series of converging track-sections adapted to cross one another at a common point under said plate and to form two or more continuous track-ways, an open space at the point of intersection, depending hangers secured to the plank to centrally support the inner ends of the converging track-sections and a central track-section centrally secured to the movable plate by depending hangers and adapted to fill said space and aline with the series of track sections to form a continuous track-way.

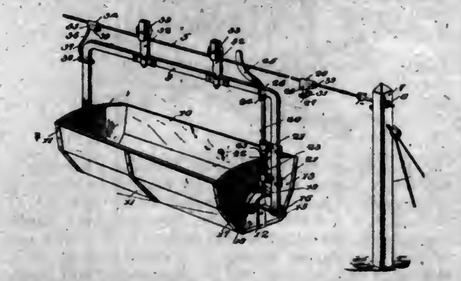
5. In a device of the character described, a central overhead support, hangers secured to said support and connected to a series of converging track-sections having a space between their inner ends, a body-plate secured to the support, and having a circular opening centrally above said space, an upwardly extended flange on the edge of said body plate, adjoining the opening, a movable-plate having upwardly extended offset lugs mounted and adapted to slide on said flange, hangers secured to the movable-plate, and a track-section supported by the hangers and adapted to aline with said converging track sections, and to be held in alinement therewith.

[Claims 6 to 12 not printed in the Gazette.]

1,020,047. OVERHEAD CARRIER. ADOLPHUS P. NELSON, Grantsburg, Wis. Filed Sept. 16, 1909. Serial No. 518,096. (Cl. 214—14.)

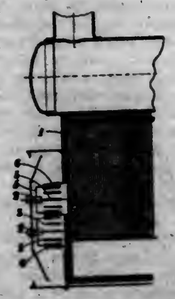
1. In an apparatus of the class described, a supporting cable, a trip dog adjustable longitudinally of the cable, an inverted U-shaped frame suspended from said cable, a

load receiving receptacle pivotally mounted on the frame, a locking rod carried by the frame and normally engaging the receptacle to hold the latter in load receiving position, and a single upright trip lever pivotally mounted on one side of the top bar of said frame near one end thereof and having its lower end extended below the lower longitudinal edge of said top bar and pivotally connected with the upper end of the locking rod, that portion of the trip lever above its pivotal point being curved inwardly and extended upwardly above the top of the cable to present a concave face for contact with the trip dog, thereby to tilt the trip lever and permit dumping of the load.



2. In an apparatus of the class described, a supporting cable, an inverted U-shaped frame suspended from the cable, hangers carried by the top bar of the frame and provided with sheaves bearing against the cable, a load receiving receptacle pivotally mounted for swinging movement on the open end of the frame, a perforated plate secured to one end of the receptacle, spaced guides rigidly secured to one end of the U-shaped frame, a locking rod slidably mounted for vertical movement in said guides and adapted to engage the perforations in the plate, relatively stationary and movable collars mounted on the locking rod, one of which is normally disposed in contact with the adjacent guide, a spring encircling the rod and bearing against said collars, a trip dog mounted on the cable, and a trip lever pivotally mounted on one side of the top bar of the frame and having its lower end pivotally connected with the upper end of the locking rod and its upper end curved inwardly and extended upwardly above the cable for contact with the trip dog.

1,020,048. SPRAY-BURNER. AUGUSTIN NORMAND, Le Havre, France. Filed Nov. 11, 1909. Serial No. 527,430. (Cl. 158—1.)



1. A spray burner comprising an atomizer, an open-ended sleeve-like air nozzle into which said atomizer discharges, and provided in its side-wall with a plurality of air admission apertures, and flanges disposed on opposite sides of each aperture, directed inwardly and outwardly respectively, to conduct the incoming air in a tangential direction with respect to the fuel jet.

2. The combination with an atomizer, of an air nozzle into which the same discharges and provided with a plurality of elongated slits in its side wall substantially parallel to the axis of said atomizer, and flanges extending along the opposite sides of each of said slits, the flanges of each slit being oppositely directed, as described.

3. In a spray burner, an air nozzle comprising a body with apertures therein, and a shell lying against the body and having oppositely directed flanges associated with each of said apertures.

4. In a spray burner, an air nozzle comprising a body with elongated longitudinal slits therein, and a shell inclosing said body and having openings overlying the aforesaid slits, said shell being provided with oppositely directed flanges at the sides of each of said openings.

1,020,049. WEED-DESTROYING COMPOSITION. INGOMAR F. ORTON, Galveston, Tex. Filed July 8, 1910. Serial No. 571,033. (Cl. 167—6.)

1. A grass and weed destroying compound resulting from the combination of substantially equal proportions of caustic soda, water and sulfur in the order named.

2. The herein-described process of producing a grass and weed destroying compound, which consists in first forming a saturated solution of caustic soda in water, and then adding sulfur equal in amount to the dissolved soda.

1,020,050. SAW-CARRYING CASE. BENJAMIN F. PADRICK, Portland, Oreg. Filed July 18, 1911. Serial No. 639,223. (Cl. 224—2.)



A case comprising inner and outer fabrics folded upon themselves and secured together along the lines of the folds only, thereby forming inner and outer compartments which are approximately co-equal in length, and a tip secured to the outermost fabric only and closing all of the compartments at one end of the case.

1,020,051. PUMP. GEORGE W. PAGE, Campbell, Cal. Filed June 20, 1911. Serial No. 634,327. (Cl. 103—80.)

1. A pump comprising a pump cylinder, a pump rod, a pair of spaced pistons on said pump rod, disposed in said cylinder, and adapted to be reciprocated therein, a discharge pipe, a casing connected to the discharge pipe and comprising inner and outer shells, a disk valve supported on the inner shell of the casing and arranged to normally close the pipe cylinder to the pipe, and a passage formed exterior to said cylinder and leading from the lower end thereof, the space between the shells of said casing forming a continuation of said passage and connecting the passage with the interior of the discharge pipe.

2. A pump comprising in combination a pump cylinder, a casing surrounding said cylinder and spaced therefrom to form a passage exterior of the casing, open ports leading from the lower end of said cylinder to the passage between the cylinder and the casing, a discharge pipe with which the passage and the pump cylinder communicate, a pump rod disposed in said cylinder, a pair of spaced, superposed pistons on said pump rod, a lift-valve in the uppermost of said pistons, a lift-valve between the pump cylinder and the discharge pipe, a lift-valve between the passage surrounding the pump cylinder and the discharge pipe, a foot-valve at the lower end of said pump cylinder, and open ports leading from the exterior of the casing to the interior of the cylinder between the superposed pistons.

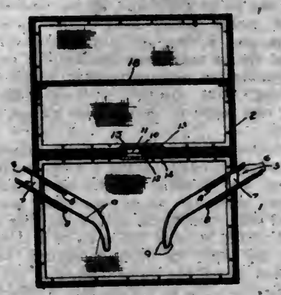


3. A pump comprising in combination, a pump cylinder, an inclosed passage surrounding said pump cylinder and communicating with the interior of the cylinder near its lower end through open ports, a foot-valve at the lower end of the pump cylinder, a lift-valve at the upper end of the pump cylinder, a lift-valve at the upper end of the passage, a piston-rod, a solid piston on the lower end thereof, a valve piston on the rod above said solid piston, said pistons arranged to reciprocate in the cylinder, ports opening from the interior of the cylinder between the pistons to the exterior of the walls of the passage, and a discharge pipe with which the pump cylinder and the passage communicate through the beforementioned foot-valves.

4. A pump comprising in combination, a discharge pipe, a tapered, tubular shell on the lower end thereof, a second tapered, tubular shell disposed within and concentric to said first named shell and spaced therefrom, a ring lift-valve seated on the upper edges of said shells to normally close the passage formed therebetween, a casing attached to the outermost of said shells, a pump cylinder attached to the innermost of said shells and spaced concentrically within the casing, a tapered foot-piece on the lower end of said casing, engaging the lower end of the pump cylinder, a foot-valve mounted in said foot-piece, open ports leading from the interior of the pump cylinder near its lower end to the space between the cylinder and the casing, and ports leading from the pump cylinder intermediate its length to the exterior of the casing.

5. A pump comprising in combination, a discharge pipe, a tapered, tubular shell on the lower end thereof, a second tapered, tubular shell disposed within and concentric to said first named shell and spaced therefrom, a ring lift-valve seated on the upper edges of said shells to normally close the passage formed therebetween, a casing attached to the outermost of said shells, a pump cylinder attached to the innermost of said shells and spaced concentrically within the casing, a tapered foot-piece on the lower end of said casing, engaging the lower end of the pump cylinder, a foot-valve mounted in said foot-piece, open ports leading from the interior of the pump cylinder near its lower end to the space between the cylinder and the casing, and ports leading from the pump cylinder intermediate its length to the exterior of the casing, a removable lift-valve at the upper end of the pump cylinder opening to the discharge pipe, a pump rod extending through said valve and entering the pump cylinder, a pair of spaced superposed pistons mounted on said rod within the pump cylinder, the lowermost of which pistons is solid while the uppermost piston is tubular, and a lift-valve mounted on the tubular piston.

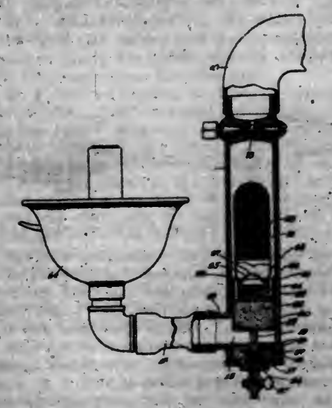
1,020,052. FLY-TRAP. HANS PASSIG, Lake Benton, Minn. Filed Feb. 24, 1911. Serial No. 610,564. (Cl. 43—22.)



1. In a trap, the combination with a cage having an entrance passage, of a pair of brushes spaced one above the other and forming a continuation of said entrance passage, the free inner edges of said brushes being curved downwardly, spaced one slightly in advance of the other, substantially as described.

2. In a trap, the combination with a cage having an entrance passage, of upper and lower laterally spaced plates projecting through said entrance passage, the projecting ends being detachably seated in seats formed in the opposite sides of said passage, and coöperating brushes secured to the inner edges of said plates to prevent exit through said entrance passage, substantially as described.

1,020,053. FILTER. JOSEPH D. RAMSEY, Boston, MASS. Filed Feb. 28, 1911. Serial No. 611,523. (Cl. 210—6.)



1. A device of the kind described, comprising a vertically arranged conduit having a supply connection at the top, and a delivery connection at its bottom portion, a removable closure for said conduit having mounted thereon an annular sediment pocket fitting the walls of said conduit, and a strainer cap mounted to be also removable with said closure with its straining portion entirely beyond the sediment pocket toward the water inlet, whereby water strained through said pocket may pass

through the central hole of said annular sediment pocket without disturbing the sediment therein.

2. A device of the kind described, comprising a closure adapted to be fitted to a supply conduit, an annular sediment pocket carried thereby to fit within the walls of the conduit, and a strainer cap fitted to said pocket with its entire straining portion beyond said pocket whereby water passing through said strainer may flow through the central hole of said annular pocket without disturbing the sediment in said pocket.

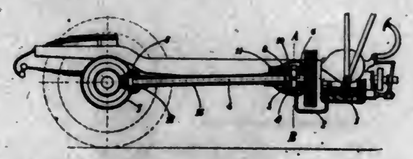
3. A device of the kind described, comprising a conduit, a removable closure therefor, having fixed thereon a filter cup to fit the walls of the conduit, an annular sediment pocket facing toward the water inlet from said cup, and a strainer extending toward the water inlet, and spaced apart from the walls of the conduit and wholly beyond the sediment pocket, whereby water passing through said strainer, flows through the central hole of said annular pocket and thence through said filter cup.

4. A device of the kind described, comprising a vertically arranged conduit having a water supply connection at its top, and a water delivery at its bottom portion, and water purifying means removably mounted in the bottom of said conduit, the same consisting of an annular sediment pocket fitted to the walls of said conduit, and a strainer cap with its strainer portion wholly beyond said pocket toward the water inlet, said cap being spaced away from the walls of the conduit, whereby water passing through said strainer flows through the central hole of said annular sediment pocket without stirring up the sediment therein, and the device as a whole may be removed for cleaning.

5. A device of the kind described, comprising a vertically arranged conduit having a controllable water supply to its top and a water delivery near its bottom, and water purifying means removably mounted in the bottom of said conduit, the same consisting of a cup filled with filtering material and fitting the interior walls of said conduit, a strainer cap removably fitted to said cup at the top thereof and spaced apart from the walls of said conduit, and an annular sediment pocket formed in the upper portion of said cup beneath said strainer cap.

[Claims 6 to 8 not printed in the Gazette.]

1,020,054. MEANS FOR LUBRICATING THE TRANSMISSION-GEAR OF MOTOR-VEHICLES. LOUIS RENAULT, Billancourt, France. Filed Apr. 9, 1910. Serial No. 554,548. (Cl. 184—6.)



1. In an automobile, the combination with the transmission shaft and the universal joint connected therewith, of a tube surrounding said shaft and leading backward from said joint to the rear axle, a case surrounding the universal joint, a change speed gear case in front of said last named case and adapted to hold a body of oil, and a flexible tube connecting said change speed case with the case around said universal joint.

2. In an automobile, the combination with the transmission shaft, the universal joint at the forward portion thereof, and the change speed gear located in front of said universal joint, of lubricant-containing cases inclosing the universal joint and the change speed gear respectively, a flexible tube connecting the lower portion of said cases, a tube surrounding the transmission shaft and leading backward from the universal joint to the rear axle, and a gutter in the upper part of the case for the universal joint into which the oil is thrown by the rotation of said joint, said gutter leading to the upper part of said transmission shaft tube.

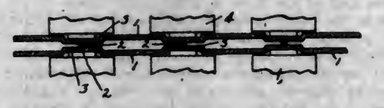
3. In an automobile, the combination with the transmission shaft, the universal joint at the forward portion thereof, and the change speed gear located adjacent to said universal joint, of lubricant containing cases inclosing the universal joint and change speed gear respectively, means to convey the oil from the first of said cases to the second, a tube surrounding the transmission shaft and leading backward from the universal joint to the rear axle, and means in the case for the universal joint to convey the oil from said case to the said transmission shaft tube.

1,020,055. KNIFE-GUARD. PHILIP RENNER, Cincinnati, Ohio. Filed June 29, 1911. Serial No. 635,957. (Cl. 30—9.)



In combination with a knife comprising a handle, blade and a blade shank extending into the handle, a knife guard comprising a spur member and a bifurcated shank member, said handle provided with recesses on opposite sides of the blade shank to receive the bifurcations of said guard shank, and means for securing the guard shanks in the handle.

1,020,056. COMPOSITE SHEET-METAL WORK. ADOLPH F. RIETZEL, Stonington, Conn., assignor, by mesne assignments, to Thomson Electric Welding Company, Lynn, Mass., a Corporation of Massachusetts. Filed Apr. 14, 1908. Serial No. 426,959. (Cl. 219—10.)



1. The method of securing two plates together with a space between them consisting in forming upon a plate a double projection one portion of which is smaller than and surmounts the other or base portion and constitutes a welding projection, assembling the plates face to face, passing a heating electric current from one to the other through said welding projection and forcing the plates together to first weld them by the welding projections and then bring the base portion into engagement thereby determining the space between the plates.

2. The method of securing two plates together with a space between them, consisting in forming a multiplicity of double projections, each comprising two parts, one of which forms a base portion and is very much larger than the other, while the latter projects farther from the plane of the plate than said larger portion, and securing the plates together by applying welding pressure within the base portion until the projection constituting the base portion engages an opposite surface and at the same time passing of heating electric current through the smaller portion of each projection, as and for the purpose described.

3. The method of forming a composite sheet metal structure comprising a number of plates electrically united at a number of distinct points of electrically welded union consisting in forming on the plate a projecting portion having a plane face surmounted by another projection of smaller size or area rising above said plane, arranging the plates together face to face, passing electric current from one to another through the smaller projections and forcing the plates together until the said plane face of the projection engages to determine the amount of space between the plates.

1,020,057. NEEDLE-BAR MECHANISM FOR SEWING-MACHINES. JOHN C. RINGE, Bridgeport, Conn., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed May 22, 1911. Serial No. 628,609. (Cl. 112—29.)



1. In a sewing machine, needle-actuating mechanism including a needle-bar, a needle-bar bearing in which said needle-bar is mounted to move in the direction of its length, a needle-bar-carrying shaft and a needle-bar-actuating link, the latter being provided with an opening through which said needle-bar passes freely and with a bearing in which said needle-bar-carrying shaft is journaled, the latter capable of adjustment in the direction of its length in said bearing to insure the free alinement of said needle-bar with respect to said needle-bar bearing.

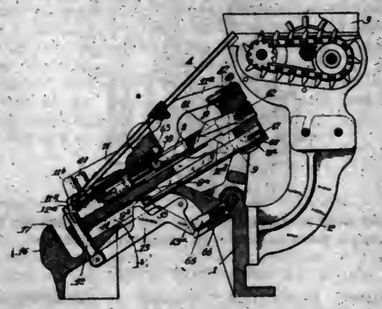
2. In a sewing machine, needle-actuating mechanism including a needle-bar provided with a tubular portion in which an oil distributing vehicle is housed, a needle-bar bearing in which said needle-bar is mounted to move in the direction of its length, a needle-bar-carrying shaft and a needle-bar-actuating link, the latter being provided with an opening through which said needle-bar passes freely and with a bearing in which said needle-bar-carrying shaft is journaled, the latter capable of adjustment in the direction of its length in said bearing to insure the free alinement of said needle-bar with respect to said needle-bar bearing.

3. In a sewing machine, needle-actuating mechanism including a needle-bar provided with an open-end tubular portion, a needle-bar bearing in which said needle-bar is mounted to move vertically, a needle-bar-carrying shaft provided with an opening in which said needle-bar is secured, and a needle-bar-actuating link, the latter being provided with an opening through which said needle-bar passes freely and with a bearing in which said needle-bar-carrying shaft is journaled, the latter capable of adjustment in the direction of its length in said bearing to insure the free vertical alinement of said needle-bar with respect to said needle-bar bearing.

1,020,058. BUTTON-SETTING MACHINE. DAVID C. SABSEMAN, River Forest, Ill., assignor to F. H. Smith Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 15, 1910. Serial No. 587,159. (Cl. 218—8.)

1. In a button-attaching machine, a button-holder; a button-delivery chute; a cross-head mounted for reciprocation; a button-controller arm mounted for reciprocation toward and from the holder and having a notched portion overhanging the end of the chute in position for engaging a button; an abutment on the cross-head positioned for engaging the controller arm and moving it toward the holder during the advance of the cross-head; means for feeding the button into the chute, and means for reciprocating the cross-head.

2. In a button-attaching machine, a button-holder; a button-delivering chute; a cross-head mounted for reciprocation toward and from the holder; a button-controller arm mounted for reciprocation toward and from the holder and fulcrumed between its ends; said arm having a notched portion overhanging the chute in position for engaging a button; an abutment on the cross-head positioned for engaging the controller arm at one end and moving it toward the holder during the advance of the cross-head, the other end of the arm being adapted for contact with the holder; means for retracting the holder; yielding means for causing the arm to follow the holder in its retraction and to tilt out of engagement with the abutment on the cross-head; means for feeding buttons into the chute, and means for reciprocating the cross-head.



3. In a button-attaching machine, a button-holder, a button-delivery chute; a cross-head mounted for reciprocation; a button controller arm fulcrumed between its ends and having one end notched for engaging a button and overhanging the chute in position for such engagement, said arm having a cam portion at the other end; a roller positioned on the cross-head for encounter with the cam end of the arm for depressing it and raising the notched end out of engagement with a button; means for feeding buttons to the chute, and means for reciprocating the cross-head.

4. In a button-attaching machine, a button-holder; a button-delivery chute; a cross-head mounted for reciprocation; a button controller arm mounted for reciprocation toward and from the holder and fulcrumed between its ends, said arm having one end notched for engaging a button and overhanging the chute in position for such engagement; said arm having a cam portion at the other end; an abutment on the cross-head positioned for engaging the controller arm for moving it toward the holder during the advance of the cross-head; a roller on the cross-head positioned for encounter with the cam end of the arm for depressing it and raising the notched end out of engagement with a button, the cam having a hollow in its coutour shaped for engagement of the roller for the retraction of the arm during the return of the cross-head; means for feeding buttons to the chute, and means for reciprocating the cross-head.

5. In a button-attaching machine, a button-holder; a button-delivery chute; a cross-head mounted for reciprocation; a button controller arm fulcrumed between its ends and having one end notched for engaging a button and overhanging the chute in position for such engagement, said arm having a cam portion at the other end; a roller positioned on the cross-head for encounter with the cam end of the arm for depressing it and raising the notched end out of engagement with a button; a spring yieldingly resisting such movement of the arm and adapted to return said arm to its button-engaging position; means for feeding buttons to the chute, and means for reciprocating the cross head.

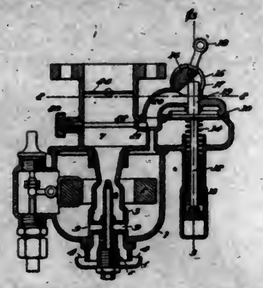
[Claims 6 to 12 not printed in the Gazette.]

1,020,059. CARBURETER. WALTER F. SCHULZ, New York, N. Y. Filed Nov. 11, 1910. Serial No. 591,751 (Cl. 48—155.2.)

1. A carbureter having a fuel receptacle, a secondary air admitting means, means for automatically controlling said secondary air supply, and means operated thereby for admitting air pressure to said fuel receptacle.

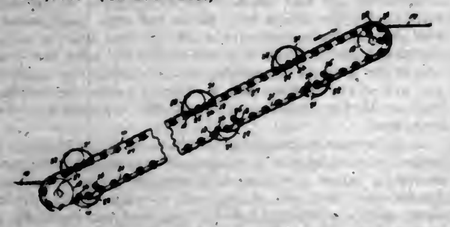
2. A carbureter having a fuel receptacle, an air pipe leading thereto, a valve governing the passage of air through said pipe, a secondary air admitting valve, and means for operating said former valve by said secondary air valve.

3. In a carbureter, a fuel receptacle having an air inlet passage, an axially adjustable plug valve in said passage



formed with a transverse port, and a secondary air valve carrying a post adapted to normally close said port.

1,020,060. CONVEYER. CHARLES D. SEEBERGER, New York, N. Y., assignor to Otis Elevator Company, a Corporation of New Jersey. Filed July 15, 1907, Serial No. 383,828. Renewed Aug. 19, 1910. Serial No. 577,995. (Cl. 104—165.)



1. In a device of the class described, a conveyer, a plurality of barriers thereon normally standing above the plane of the conveyer, and means at the terminal to lower the barriers.

2. In a device of the class described, a conveyer traveling in an inclined path or way between different levels, a plurality of barriers thereon normally standing above the plane of the conveyer, and means at the top of the incline to lower the barriers.

3. In a device of the class described, a conveyer consisting of a connected series of sections traveling in an inclined path or way between different levels, a series of barriers comprising pivoted sections, means to hold the barriers in elevation upon the incline, and means to lower the barriers when they reach the top of the incline.

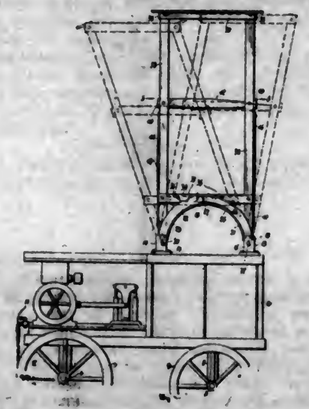
4. In a device of the class described, a conveyer consisting of a connected series of sections traveling in an inclined path between different levels, certain of the sections being pivotally mounted, means to elevate the pivoted sections above the plane of the other sections on the incline, and means to lower the pivoted sections into the path of the other sections at the top of the incline.

5. In a device of the class described, a conveyer traveling in an inclined path between different levels, a series of barriers pivotally mounted on the conveyer, means to elevate the barriers above the plane of the conveyer on the incline, and means to lower the sections into the path of the conveyer at the top of the incline.

[Claims 6 to 15 not printed in the Gazette.]

1,020,061. PORTABLE SPRAYING-TOWER. ASA A. SHEETZ, Woodstock, Va., and GEORGE A. COTTRELL, Milford, Mich. Filed Feb. 27, 1911. Serial No. 611,225. (Cl. 189—11.)

1. A spraying tower comprising attaching brackets, uprights pivotally connected with the corresponding brackets, arcuate plates connecting the brackets in pairs, a latch member carried by each arcuate plate, cross bars carried by the uprights and each adapted at intervals for coöperation with the latch member to hold the uprights at different points of their pivotal movements, and means carried by the uprights for sustaining an operator.



2. A spraying tower comprising attaching brackets, tower frame members journaled in the brackets, longitudinal members pivotally connected to the frame members and respectively provided with a plurality of openings, locking plates secured to the brackets and disposed adjacent said longitudinal members, and locking means carried by the plates for engagement with one of the openings of the longitudinal members for holding the frame in an adjusted position.

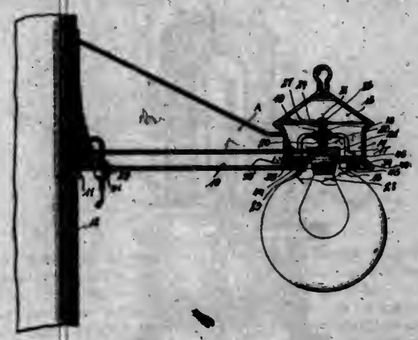
3. A spraying tower comprising attaching brackets, tower frame members journaled in said brackets, longitudinal members pivotally connected to the frame members and provided with a plurality of openings, arcuate plates disposed on either side of the tower and having their ends secured to the brackets, said plates being centrally provided with an opening adapted to register with one of the openings of the longitudinal members in one position of the tower, and a spring latch secured to each plate and provided with a pin adapted to project through the registering openings of the plate and member for holding said tower against movement.

4. In combination with a wheeled supported sprayer tank, of bearing brackets secured to the tank, a tower including frame members journaled in the bearing brackets, longitudinal members pivotally connected to the frame members and respectively provided with a plurality of openings, locking plates secured to the brackets and disposed adjacent said longitudinal members, and locking means carried by the plates for engagement with one of the openings of the longitudinal members for holding the frame in an adjusted position.

5. In combination with a wheeled supported sprayer tank, of bearing brackets secured to the tank, a tower including frame members journaled in said brackets, longitudinal members pivotally connected to the frame members and provided with a plurality of openings, arcuate plates disposed on either side of the tower and having their ends secured to the brackets, said plates being centrally provided with an opening adapted to register with one of the openings of the longitudinal members in one position of the tower, and a spring latch secured to each plate and provided with a pin adapted to project through the registering openings of the plate and member for holding said tower against movement.

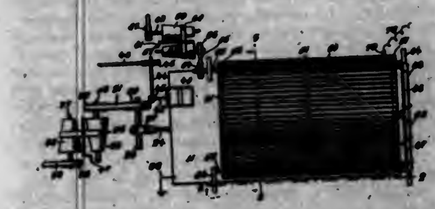
1,020,062. ELECTRIC-LAMP BRACKET. CLARENCE STRAND, Gary, Minn. Filed Apr. 3, 1911. Serial No. 618,594. (Cl. 240—90.)

An electric light bracket comprising a casing having one end provided with means for attachment to a fixed part and having an opening in its bottom at the other end thereof, a supporting bridge mounted in said casing and extending across said opening and provided with a central aperture, an electric lamp socket extending through said opening in the casing and provided with a longitudinally extending stem which projects through the



opening in the supporting bridge, a nut threaded on the free end of said stem, a spring encircling said stem and bearing against the upper side of said bridge and against the nut on the free end of said stem and a second spring encircling said stem and bearing against the lower side of said bridge and against said socket.

1,020,063. PROCESS OF ELECTROSTATIC SEPARATION. HENRY M. SUTTON, WALTER L. STEELE, and EDWIN G. STEELE, Dallas, Tex. Filed Jan. 30, 1909. Serial No. 475,297. (Cl. 83—49.)



1. A process of separating comminuted material consisting in imparting a normal movement of the material upon a support, establishing an electrostatic charge of varying strength upon the support across the line of normal movement to cause the different components to travel according to their susceptibilities upon the support in lines deviating from the line of normal movement.

2. The process of separating comminuted material consisting in establishing an extended electrostatic charge varying in density along its extent sufficient to deviate the more susceptible material from the normal line of movement into a travel in the direction of increase of density and feeding the material into the field of such charge in proximity to the region of weakest charge.

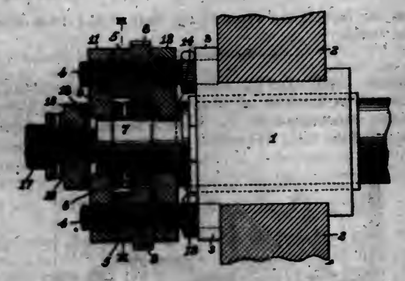
3. The process of separating comminuted material which consists in feeding said material into an electrostatic charge variating in charge density to a degree sufficient to deviate the susceptible particles, and feeding the material into the field of such charge in proximity to the region of the lowest charge of density and in a direction lateral to the normal path of the material, and separately collecting the particles thus separated.

4. The process of separating comminuted material consisting in imparting a traveling movement to the material upon a support, establishing upon the support an electrostatic field of density varying along the line of support in a line intersecting the normal path of travel and of strength sufficient to cause the susceptible material to travel upon the support in lines deviating from the normal line of travel and extending across said support and from a portion of said field of lesser density to a portion of greater density, and separately collecting the separated particles.

5. The process of separating comminuted material consisting in establishing upon a support an electrostatic field of varying density across the support and sufficient to impart a movement of the more susceptible particles along the surface in the direction of increase of stress, delivering comminuted material to be separated to the surface at the weaker portion of the field, and separately collecting the separated particles.

[Claims 6 to 22 not printed in the Gazette.]

1,020,064. ROLL-ADJUSTING MECHANISM. FRANK WACKERMANN, Carrick, and CHARLES ZABEL, Pittsburgh, Pa.; said Zabel assignor to Lewis Foundry & Machine Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Mar. 3, 1910. Serial No. 547,152. (Cl. 80—56.)



1. The combination with a housing, and a roll rotatably supported therein and provided with an extension, of abutments upon said roll-extension, a cross-head confined betwen said abutments, and means for shifting the cross-head relatively to the housing.

2. The combination with a housing, and a roll rotatably mounted therein and provided with an extension, of a non-rotatable cross-head adapted to engage said roll-extension, a plurality of threaded rods secured to the housing, nuts engaging said rods and rotatably connected to the cross-head, and means for simultaneously rotating the nuts and thereby moving the cross-head relatively to the housing.

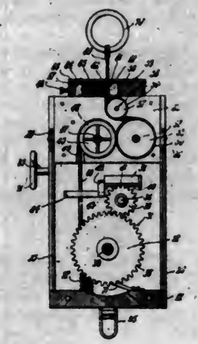
3. The combination with a housing, and a roll rotatably mounted therein and provided with an extension, of abutments upon said roll-extension, plates loosely mounted on the extension between the abutments, a pinion rotatably mounted on the extension between the plates, threaded rods connected to the housing, and nuts mounted on the rods between the plates and provided with teeth engaging the pinion.

1,020,065. FIRE-ESCAPE. EZRA C. WELSH, New Middletown, Ohio. Filed July 19, 1909. Serial No. 508,260. (Cl. 227—22.)

1. In a device of the kind described, a casing, a winding drum therein, a cable wound on said drum, a guide for said cable, and means to move said guide across the face of the drum as the cable is wound thereon, said means being arranged to traverse the face of the drum more rapidly at the ends than in the center.

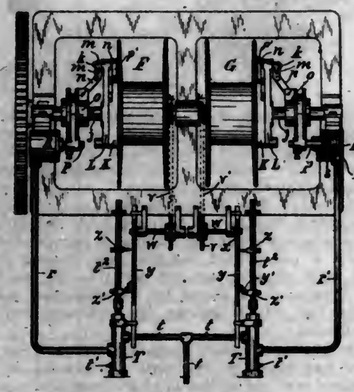
2. In a device of the kind described, a winding drum, a gear formed on said winding drum, a shaft mounted adjacent said winding drum, a pinion fixed on said shaft and meshing with said gear, a worm on said shaft, a worm wheel shaft mounted to rotate in a plane at right angles to the first mentioned shaft, a cable wound on said drum, and means to guide the cable on to

the drum during winding, said means being connected to the worm wheel shaft and arranged to move more rapidly



across the face of the drum at the ends of the drum than at the center.

1,020,066. DEVICE FOR AUTOMATICALLY CONTROLLING THE MOTION OF MACHINES. JAMES G. WESTBROOK, Ogdensburg, N. Y. Filed June 9, 1909. Serial No. 501,179. (Cl. 214—10.)

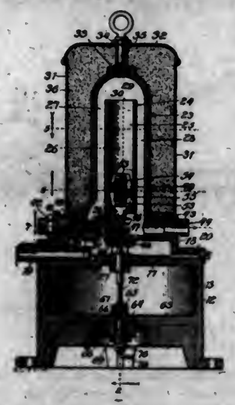


1. In apparatus for operating grain shovels the combination with a winding drum of a reciprocating rack operatively connected therewith, a friction device to control said winding drum, and a valve to control said friction device adapted to be actuated by said rack, substantially as described.

2. In apparatus for operating grain shovels the combination with a winding drum of a reciprocating rack operatively connected therewith, a friction device to control said winding drum, and a valve to control said friction device adapted to be actuated by said rack, and adjustable devices for regulating the connection of said rack with said valve, substantially as described.

3. In apparatus for operating shovels, the combination of a shovel, a cable for operating said shovel, a winding drum for winding said cable, a driving shaft for said winding drum, a friction device for connecting said winding drum with and disconnecting it from said shaft, a fluid motor for operating said friction device, a valve for controlling the operating fluid, and a reciprocating rack operatively connected with said winding drum for actuating said valve, substantially as described.

1,020,067. HEATER FOR MOTOR FLUIDS. MORRIS C. WHITE and OTHO C. DURYEA, Chicago, Ill., assignors to The Sterling Development Company, Chicago, Ill., a Corporation of South Dakota. Filed Feb. 15, 1911. Serial No. 608,849. (Cl. 60—36.)



1. The combination with a pneumatic pipe line, of a heating chamber connected to said pipe line, a fluid-fuel burner located in said chamber, means whereby the closing of the pipe line beyond the heater will stop the feed of fuel to the burner, an igniter located in the chamber, and means independent of the burner for maintaining said igniter at a fuel igniting temperature.

2. The combination with a pneumatic pipe line, of a heating device interposed in said line, having a main passage and a by-passage for the air traversing the pipe line, a combustion-chamber interposed in the by-passage and discharging into the main passage, a fluid fuel supplier in the path of and actuated by the by-passage-air flowing to said chamber, an igniter located in the chamber, means whereby the closing of the pipe line beyond the heater will stop the feed of fuel to the chamber, and means independent of the heat of combustion in the chamber for maintaining said igniter at a constant fuel igniting temperature to ignite the fuel as it passes into said chamber.

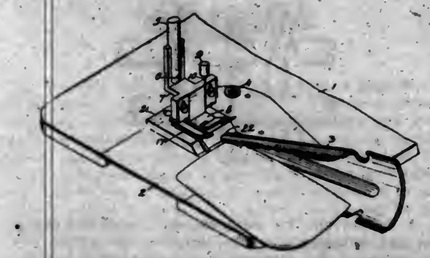
3. The combination with a pneumatic pipe line, of a heater interposed in the pipe line having a main pipe line passage and a by-passage for air communicating therewith, a combustion-chamber interposed in the by-passage, means for directing fluid-fuel into said chamber, means whereby the closing of the pipe line beyond the heater will stop the feed of fuel into the combustion chamber, an igniter located in the chamber, and means independent of the heat of combustion in the chamber for maintaining said igniter at a fuel igniting temperature.

4. The combination with a pneumatic pipe line, of a heater interposed in the pipe line having a main pipe line passage and a by-passage for air communicating therewith, a combustion-chamber interposed in the by-passage, means for varying the flow through the by-passage with reference to the flow through the main passage, means for directing fluid-fuel into said combustion chamber, an igniter located in the chamber, and means independent of the heat of combustion in the chamber for maintaining said igniter at a fuel igniting temperature.

5. The combination with a pneumatic pipe line, of a heater for the air traversing said line, having a main pipe line passage and a by-passage for air communicating therewith, a combustion chamber interposed in the by-passage, means for mixing fluid-fuel with the air passing into said chamber, means for varying the flow through the by-passage with reference to that through the main passage, an igniter located in the chamber, and means independent of the heat of combustion in the chamber for maintaining said igniter at a fuel igniting temperature.

[Claims 6 to 8 not printed in the Gazette.]

1,020,068. FEEDING MECHANISM FOR SEWING-MACHINES. FRANK S. WOODHEAD, Bridgeport, Conn., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Apr. 29, 1909. Serial No. 493,017. (Cl. 112—13.)



1. A feeding mechanism for sewing machines comprising a throat-plate, a feed-dog, a presser-bar, and a plurality of cloth-pressers carried by said presser-bar, said cloth-pressers being relatively adjustable to normally hold their effective surfaces in different horizontal planes, the central of said cloth-pressers comprising a rigid element, and the cloth-pressers arranged on opposite sides of said central cloth-presser being flexible to yield vertically for the purpose described.

2. A feeding mechanism for sewing machines comprising a throat-plate, a feed-dog, a presser-bar, and a plurality of cloth-pressers carried by said presser-bar, said cloth-pressers being relatively adjustable to normally hold their effective surfaces in different horizontal planes, the central of said cloth-pressers comprising a rigid element of substantially the combined width of the cloth-pressers arranged on opposite sides of said central cloth-presser, said oppositely arranged cloth-pressers being flexible to yield vertically for the purpose described.

3. A feeding mechanism for sewing machines comprising a throat-plate, a feed-dog, a presser-bar, a presser-bar bracket and a plurality of cloth-pressers carried by said bracket, said cloth-pressers being relatively adjustable to normally hold their effective surfaces in different horizontal planes, the central of said cloth-pressers comprising a rigid element and the cloth-pressers arranged on opposite sides of said central cloth-presser being flexible to yield vertically for the purpose described.

4. A feeding mechanism for sewing machines comprising a throat-plate having its upper surface stepped to better accommodate the feeding of superposed plies from the delivery end of a folding guide to the action of the stitch-forming mechanism, a feed-dog, a presser-bar and a plurality of cloth-pressers carried by said presser-bar, said cloth-pressers being relatively adjustable to normally hold their effective surfaces in different horizontal planes, the central of said cloth-pressers comprising a rigid element and the cloth-pressers arranged on opposite sides of said central cloth-presser being flexible to yield vertically for the purpose described.

1,020,069. WHEEL CONSTRUCTION. ROBERT B. WOODWORTH, Pittsburgh, Pa. Filed Nov. 16, 1910. Serial No. 592,700. (Cl. 64—17.)

1. A built up band and tug wheel comprising radially extending integral spokes formed of rolled metal shapes and connecting a wrought metal rim and hub portions, horizontally projecting rolled metal brackets on said spokes, and a tug wheel rim formed of rolled metal and secured in place on said brackets.

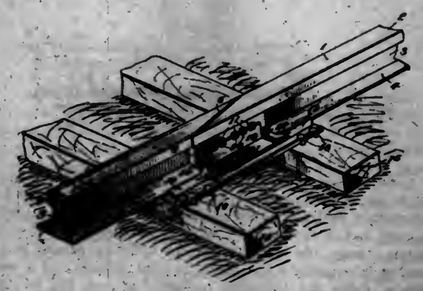
2. A band and tug wheel comprising a hub and rim and radially extending spokes formed of rolled metal shapes connecting the rim and hub portions, horizontally projecting brackets on said spokes, a rolled metal channel bent to the desired curvature fixed to said brackets, and a series of segmental wooden blocks secured in place on the metal channel rim of the tug wheel.

3. A band and tug wheel comprising a hub and rim and radially extending spokes formed of rolled metal shapes connecting the rim and hub portions, horizontally projecting brackets on said spokes, a rolled metal channel bent to the desired curvature fixed to said brackets, and a series of segmental wooden blocks secured in place on the metal channel rim of the tug wheel, the so-formed wooden rim having a peripheral V-shaped groove therein.



4. A band and tug wheel comprising a hub and rim and radially extending spokes formed of rolled metal shapes connecting the rim and hub portions, horizontally projecting brackets on said spokes, a rolled metal channel bent to the desired curvature fixed to said brackets, and a series of segmental wooden blocks secured in place on the metal channel rim of the tug wheel, the so-formed wooden rim having a plurality of peripheral V-shaped grooves therein.

1,020,070. RAIL-JOINT. JAMES YOUNGSTON, Bear Poplar, N. C. Filed June 3, 1911. Serial No. 631,156. (Cl. 239—6.)



In a rail joint, the combination with the meeting ends of a pair of companion rail sections having their base flanges cut away on both sides for a predetermined distance from the joint, of a chair embracing the cutaway portions of the rail sections and spanning the joint, the chair being formed at its opposite ends with longitudinally projecting basal extensions fitting under and supporting the ends of the base flanges of the rail sections.

1,020,071. UMBRELLA FOR THEATRICAL PURPOSES. HARRY ASKIN, Chicago, Ill. Filed Jan. 2, 1912. Serial No. 669,043. (Cl. 135—47.)

1. In combination with an umbrella, a pipe projecting at its upper end through the top of the umbrella, a spray nozzle secured to the upper end of said pipe, and a hollow compressible bulb of flexible, elastic material secured to the lower end of said pipe.

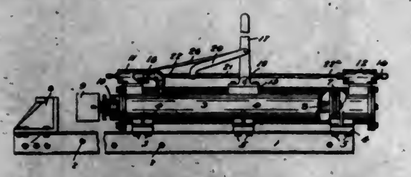
2. In combination with an umbrella having a folding top, a pipe projecting at its upper end through said umbrella top, at or near its center, said top being adapted to be folded down on said pipe, a spray nozzle secured to

the upper end of said pipe, and a hollow, compressible bulb of flexible, elastic material secured to the lower end of said pipe.



3. In combination with an umbrella comprising a rod and a top adapted to be folded down thereon, a pipe arranged parallel to said rod and rigidly connected thereto, the upper end of said pipe projecting through the top of said umbrella, a spray nozzle secured to the upper end of said pipe, and a hollow, compressible bulb of flexible, elastic material secured to the lower end of said pipe.

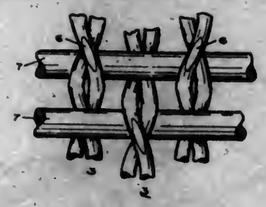
1,020,072. WOOD-SPLITTING MACHINE. FRANK BARNHART, Spokane, Wash. Filed Oct. 28, 1907. Serial No. 399,480. (Cl. 144—193.)



1. In a wood splitting engine, a pressure cylinder having a piston and a wedge-operating piston rod, valves for alternately controlling the admission of the pressure agent at each end of the cylinder and the exhaust port for each piston stroke, the exhaust for the splitting stroke being located intermediate the limits of said stroke, and a secondary valve for admitting pressure to one end of the cylinder, and means connecting said secondary valve operatively with the main valves whereby to open the secondary valve after the splitting stroke has started and before its completion and admit the pressure agent in opposition to the splitting stroke, and close said secondary valve before the opening of the valve for the return stroke, substantially as described.

2. In a wood splitting engine, a pressure cylinder having a piston and a wedge-operating piston rod, valves for alternately controlling the admission of the pressure agent at each end of the cylinder and the exhaust for each piston stroke, the exhaust for the splitting stroke being located intermediate the limits of said stroke, a lever for operating said valves, having a different position of movement in which to open and close each valve, and a secondary valve for admitting pressure to one end of the cylinder, adapted to be opened after the splitting stroke has started and before its completion whereby to admit the pressure agent in opposition to the splitting stroke, and to close with the closing of the valve for the splitting stroke and before the opening of the valve for the return stroke, substantially as described.

1,020,073. MAKING-WIRE FOR PAPER-MAKING. JOHN C. BELL, Harrison, N. J. Filed Oct. 5, 1910. Serial No. 585,377. (Cl. 245—2.)



1. A making-wire for paper-making, comprising warp-wires and filling-wires woven together, the warps each being composed of a plurality of strands twisted together and being flattened after such twisting, the sides of said flattened warp forming the outer surface of the fabric.

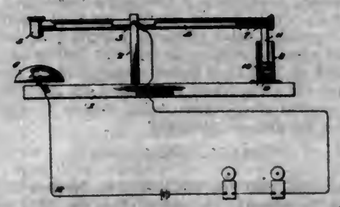
2. A making-wire for paper-making, comprising warp-wires and filling-wires woven together, the warps each being composed of two strands twisted together and being flattened after such twisting, the sides of said flattened warp forming the outer surface of the fabric.

3. A making-wire for paper making, comprising warp-wires and filling-wires woven together, the warps each being composed of two round strands twisted together and being flattened after such twisting, the sides of said flattened warp forming the outer surface of the fabric.

4. A making-wire for paper-making, comprising warp-wires and filling-wires woven together, the warps each being composed of two round strands twisted together and being flattened after such twisting to a thickness greater than the diameter of said strands, the sides of said flattened warp forming the outer surface of the fabric.

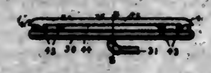
5. A making-wire for paper-making, comprising warp-wires and filling-wires woven together, the warps each being composed of two round strands twisted together and being flattened after such twisting at those points where the strands cross each other in a line perpendicular to the parallel planes of flattening, the sides of said flattened warp forming the outer surface of the fabric.

1,020,074. FIRE-ALARM. THOMAS BELL, Fall River, Mass., and EDWARD BROPHY, Tiverton, R. I. Filed July 3, 1911. Serial No. 636,759. (Cl. 177—302.)



In a fire alarm, the combination with a lever pivoted intermediate its ends, of one or more traveling objects carried thereby adapted to move from one side of the lever's fulcrum to the other side thereof, a mercury or other expansible liquid column stationarily mounted separate from the lever, a plunger resting on the mercury or liquid column and abutting against the lever whereby on the expansion of the column the lever will be tilted and the movable object or objects will travel to the other end of the lever, a mechanical gong which is sounded by the lever when the lever tilts, and an electric alarm whose circuit includes said gong and is closed by the contact of the lever therewith.

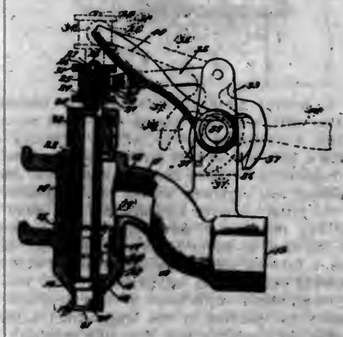
1,020,075. BURNER-IGNITER. WILLIAM J. BEST, Detroit, Mich. Filed May 22, 1911. Serial No. 628,730. (Cl. 158—115.)



1. In a gas stove, the combination with a plurality of burner tubes having gas openings, of a flame conductor extending above and across between the tubes and comprising a hollow tubular body having openings in its bottom at the points where it extends over openings in the burner tubes and means to position it above said tubes, said body having an opening intermediate its ends to permit the escape of air so as to permit the passage of gas from both of the burner tubes.

2. In a gas stove, the combination with a plurality of burner tubes having gas openings, of a flame conductor extending across between the tubes and comprising a bottom, sides and top, the top having downwardly inclined ends to form hoods over the tubes, the bottom ending short of the tubes to leave openings above the tube for the admission of gas from openings in the tubes, and the sides connecting the top and bottom and formed with feet to support the flame conductor, said conductor having an opening its bottom intermediate the ends to permit the escape of air so as to permit the passage of gas from both of the burner tubes.

1,020,076. FAUCET. ALLEN A. BOWSER, Fort Wayne, Ind., assignor to S. F. Bowser & Company, Incorporated, Fort Wayne, Ind., a Corporation of Indiana. Filed Apr. 15, 1907. Serial No. 368,137. (Cl. 137—4.)



1. In a faucet, the combination of a casing having an outlet and provided with a valve seat adjacent the outlet, a valve for closing the outlet, means for operating the valve, and a yielding connection outside of the casing between the valve and its operating means, said connection serving to seat and unseat the valve.

2. In a faucet the combination of a casing having an outlet and provided with a valve seat adjacent the outlet, means for operating the valve, a yielding connection outside of the casing between the valve and its operating means and means for varying the tension of said yielding means without operating the valve, said connection serving to seat and unseat the valve.

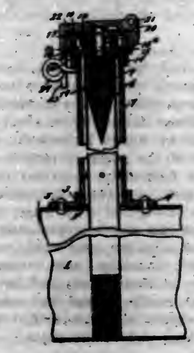
3. In a faucet, the combination of a casing having an outlet, a discharge nozzle communicating with the outlet, said nozzle being provided with a valve seat adjacent the outlet, a valve for closing the outlet, said valve being provided with a projection, means for operating the valve, and a yielding connection between the valve and its operating means, said projection being adapted to enter the nozzle as the valve is closed to wipe the liquid from the wall of the nozzle.

4. In a faucet the combination of a casing having a discharge outlet and a valve seat adjacent the outlet, a valve for closing the outlet, means for operating the valve, said means comprising a stem extending through the casing, a member yieldingly mounted on the stem, a pivotally supported lever, said lever having engagement with the said member, and means separate from the lever for rocking the latter.

5. In a faucet the combination of a casing having a discharge outlet and a valve seat adjacent the outlet, a valve for closing the outlet, means for operating the valve, said means comprising a stem extending beyond the casing, a member yieldingly secured to the stem, a bell crank lever pivotally supported between the ends, one arm of said lever having engagement with the member and means separate from the lever and adapted to engage the other arm for rocking the lever.

[Claims 6 to 16 not printed in the Gazette.]

1,020,077. FILL AND VENT FITTING DEVICE. HARRY M. BOWSER, Fort Wayne, Ind., assignor to S. F. Bowser & Co., Incorporated, Fort Wayne, Ind. Filed Mar. 14, 1910. Serial No. 549,360. (Cl. 220—121.)



1. In a device for the purpose described, the combination of a fill pipe having separate and distinct intake and outlet passages, the outer ends of said passages being screened, and a cap for said fill pipe provided with an automatic vent communicating with both of said passages.

2. In a device for the purpose described, the combination of a fill pipe provided with separate and distinct tubular passages for the intake of the hydro-carbon and the outlet for gas, a screen for each of said passages, and a cap for said pipe provided with a vent, said cap being constructed to provide a common air space above said passages in communication with said vent.

3. In a device for the purpose described, the combination of a fill pipe provided with separate and distinct tubular passages for the intake of the hydro-carbon and the outlet of gas, a screen for each of said passages, a cap for said pipe provided with a vent and providing a common air space above said passages in communication with said vent, and means for locking said cap on the fill pipe, said locking means being constructed and adapted to cover said vent and to provide an air passage from said vent to the atmosphere.

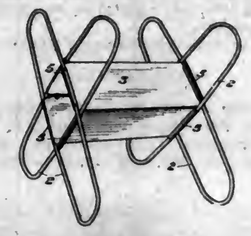
4. In a device of the character described, the combination of an outer pipe and an inner tube concentrically disposed with spaced walls, a cap for the outer pipe arranged to provide an air space above the upper ends of said pipe and tube, means for screening the upper ends of said pipe and tube, and a venting device mounted in the cap for placing said air space into communication with the atmosphere.

5. In a device for the purpose described, the combination of a fill pipe, an inner tube spaced therefrom to provide an annular passage, a screen for said tube, a screen for said annular passage, and a removable cap for

said pipe, said cap being provided with an automatic vent in communication with the space above each of said screens.

[Claims 6 to 11 not printed in the Gazette.]

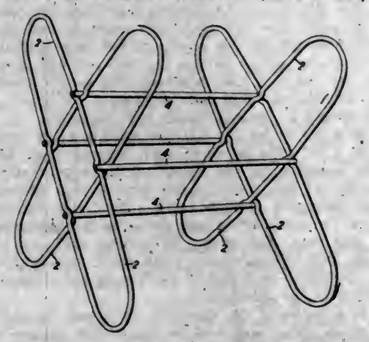
1,020,078. METALLIC REEL. EDWIN H. BRODEN, Edgewood Park, and JAMES G. MUSTIN, Wilkinsburg, Pa., assignors to The American Steel & Wire Company of New Jersey, Hoboken, N. J., a Corporation of New Jersey. Filed Sept. 22, 1911. Serial No. 650,787. (Cl. 242—77.)



1. A metallic reel comprising end members formed of an endless elongated wire ring and a hollow open ended cross member connecting said end members, said cross member being formed integrally of sheet metal, and having its end portions curled backwardly around the contacting portions of the rings to rigidly secure and hold the end members formed by the rings together in place.

2. A metallic reel comprising end members formed each of a plurality of elongated wire rings, the long axes of the rings of each end member extending at right angles to each other and a hollow open ended cross member connecting said end members, said cross member being formed integrally of sheet metal and having its end portions curled backwardly around the contacting portions of the rings to rigidly secure and hold the end members formed by the rings together in place.

1,020,079. REEL. EDWIN H. BRODEN, Edgewood Park, and JAMES G. MUSTIN, Wilkinsburg, Pa., assignors to The American Steel & Wire Company of New Jersey, Hoboken, N. J., a Corporation of New Jersey. Filed Nov. 4, 1911. Serial No. 658,590. (Cl. 242—77.)

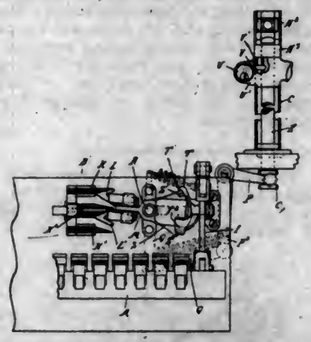


1. A reel formed of wire and comprising endless wire rings forming end members, said rings being bent into elongated form and a plurality of wire tie members extending between and uniting the rings forming the opposite end members, the ends of the tie members being welded to the intersecting surfaces of the end members to form a substantially unitary structure.

2. A reel formed of wire and comprising endless wire rings forming end members, said rings being bent into elongated form and having notches in the length thereof, and a plurality of wire tie members extending between and uniting the rings forming the end members, the tie members engaging with the notches in said end members, and the ends of the tie members being welded to the intersecting notched portions of the rings forming the end members to form a substantially unitary structure.

3. A reel formed of wire and comprising end members formed of a plurality of elongated endless wire rings having their long axes extending at right angles and having notches in the length thereof and wire tie members extending between and uniting the end members engaging with said notches on the end members, the ends of the tie members being welded to the contacting notched portions of the end members to form a substantially unitary structure.

1,020,080. CONTROL MECHANISM FOR ELECTRIC VEHICLES. CLYDE E. COCHRAN, Cleveland, Ohio, assignor to Anderson Electric Car Company, Detroit, Mich., a Corporation of Michigan. Filed July 28, 1911. Serial No. 640,993. (Cl. 172—179.)



1. In a control mechanism for electric motors, the combination with a circuit closing and speed controlling switch and a reversing switch, of an actuating device comprising a hollow stem and a rotatable stem positioned therein, connection between said rotatable stem and said circuit closing and reversing switch for progressively actuating the latter, a lever for rotating said stem pivotally attached thereto for movement in the longitudinal plane of the stem so as to be adjustable to different inclinations, a fulcrum bearing for said lever on said hollow stem whereby the vertical adjustment of the lever will cause a longitudinal adjustment of said rotatable stem, and connections operated by the longitudinal adjustment of said stem for operating said reversing switch.

2. In a control mechanism for electric motors, the combination with a circuit closing and speed controlling switch, and a reversing switch, of means for alternatively actuating said switches comprising a rotatable and longitudinally adjustable stem, a lever for actuating said stem in each of its directions of adjustment, two intermediate trains of mechanism between said stem and said switches and respectively operated by the longitudinal and the rotary adjustment of the stem, and interlocking means for preventing the adjustment of either of said switches when the other switch is not in proper relative position.

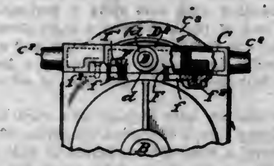
3. In a control mechanism for electric motors, the combination with a circuit closing and speed controlling switch and a reversing switch, of an operating device therefor comprising a rotatable stem, connections between said stem and said circuit closing and speed controlling switch for progressively operating the latter by the rotation of the same, a lever for rotating said stem adjustable into different planes of movement, and connections actuated by said latter adjustment for operating said reversing switch.

4. In a control mechanism for electric motors, the combination with a circuit closing and speed controlling switch and a reversing switch, of an actuating device comprising a rotatable stem, connections between said stem and said circuit closing and reversing switch for progressively actuating the latter, a lever for rotating said stem pivotally attached thereto for movement in the longitudinal plane of the stem so as to be adjustable to different inclinations, a fulcrum bearing for said lever whereby its vertical adjustment will cause a longitudinal adjustment of said stem, and connections operated by the vertical adjustment of said stem for operating said reversing switch.

5. In a control mechanism for electric motors, the combination with a circuit closing and speed controlling switch and a reversing switch, of a common actuating device therefor comprising a rotatable and longitudinal adjustment stem, a lever connected to said stem adjustable to different inclinations to avoid the vertical movement of the stem, connections between said stem and said circuit closing and speed controlling switch and said reversing switch whereby they are respectively adjusted by the rotary and vertical adjustment of said stem, and locking means for preventing the rotary adjustment of the stem during the vertical adjustment thereof, and the vertical adjustment during the rotary movement thereof.

[Claims 6 to 12 not printed in the Gazette.]

1,020,081. GAS-ENGINE. HARRY G. DAHL, Tarrytown, N. Y., assignor to Maxwell-Briscoe Motor Company, Tarrytown, N. Y., a Corporation of New York. Filed Aug. 22, 1911. Serial No. 645,385. (Cl. 123—56.)



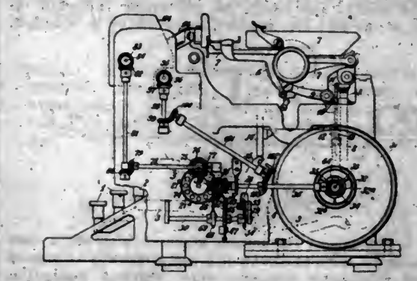
1. The combination with a crank-case having an opening therein, of a frame detachably secured over said opening and comprising two side-members provided with push-rod-carrying sleeves and with struts extending between and connecting said members, and a cam-shaft for operating said push-rods, said frame and the parts carried thereby being removable from said case independently of the cam-shaft, substantially as set forth.

2. The combination with a crank-case having an opening therein, of a frame detachably secured over said opening and provided with push-rod-carrying sleeves, a cam-shaft for operating said push-rods, detachable bearings on said crank-case for said cam-shaft, and means for precluding detachment of said bearings until after detachment and removal of said frame, substantially as set forth.

3. The combination with a crank-case having an opening therein, of a frame detachably secured over said opening and carrying push-rods, and a cam-shaft for operating said push-rods, the same having detachable bearings, said bearings being secured to said crank-case by means which are accessible only after removal of said frame, substantially as set forth.

1,020,082. COMBINED TYPE-WRITING AND COMPUTING MACHINE. GUSTAVE O. DEGENER, New York, N. Y., assignor to Underwood Computing Machine Company, New York, N. Y., a Corporation of New York. Filed Feb. 1, 1911. Serial No. 605,863. (Cl. 235—62.)

1. In a computing machine, the combination of a set of numeral keys, a gang of computing wheels, a master wheel or member, a normally stationary driver for said master wheel, a source of power normally incapable of exerting a driving force upon said stationary driver, and means under the control of said keys for causing said driver to be driven by said source of power only until it is turned to an extent which depends upon the key operated.



2. In a computing machine, the combination of a set of numeral keys, a gang of computing wheels, a master member, a normally stationary driver for said master member, a source of power, and means under the control of said keys for causing said driver to be connected to said source of power and disconnected therefrom, and for limiting the extent to which the driver is operated by said source of power.

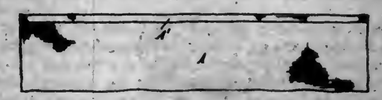
3. In a computing machine, the combination of a set of numeral keys, a gang of computing wheels, a master member, a normally stationary driver for said master member, a source of power, and a train of devices extending from said source of power to said driver, and including means under the control of said keys for operating said driver by means of said source of power; means being provided for enabling the keys to limit the stroke of the driver and for effecting automatic disconnection of said driver from said train.

4. In a computing machine, the combination with a set of keys, of a gang of computing wheels, a master wheel or member, a driver for said master wheel, a power-driven member, means, including a key-controlled clutch, for connecting said driver to said power-driven member, and means dependent on the keys for controlling the extent to which the driver is turned by means of said power-driven member.

5. In a computing machine, the combination with a set of keys, of a gang of computing wheels, a master wheel or member, a driver for said master wheel, a power-driven member, means, including a key-controlled clutch, for connecting said driver to said power-driven member, and means dependent on the keys for controlling the extent to which the driver is turned by means of said power-driven member; provision being made for automatic disconnection of the driver from said power-driven member at the completion of the stroke of the driver.

[Claims 6 to 75 not printed in the Gazette.]

1,020,083. VEIL. MARY DONALD, New York, N. Y. Filed May 19, 1911. Serial No. 628,237. (Cl. 2—118.)

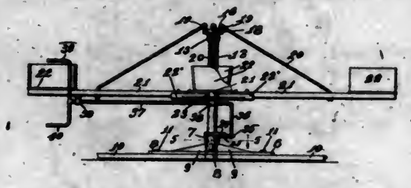


A veil having a border at one longitudinal edge, said edge at two points at a substantial distance from the center folded over upon itself and suitably secured at such folded points to provide lateral bordered edges, whereby a fullness at the point of the folds is provided, and fastening devices for securing said lateral edges together when on the wearer.

1,020,084. ROUNDABOUT. EDWARD DUNNING, St. Louis, Mo. Filed May 24, 1910. Serial No. 563,223. (Cl. 46—27.)

1. A roundabout comprising a center support; a base; a ball-bearing cap on the top of said center support; a

seat arm support around said support; a friction clutch resting on the base, a lever mechanism for operating the friction clutch, and means for preventing backward rotation of the seat arm support, substantially as specified.



2. A roundabout comprising a center support; a base to which the same is mounted; a seat arm support located around the center support; roller bearings located in tapered recesses on the interior of the seat arm support to contact with the center support and form a lock when revolved backward; a plurality of seat arms supported by the seat arm support and projecting laterally therefrom; seats mounted on the ends of said seat arm support; a ball-bearing cap located on the top of the center support; guy rods extending from the cap to the seat arms for supporting the same; a friction clutch and an operating lever for manipulating the friction clutch for rotating the seat arm supports around the central support, substantially as specified.

3. A roundabout comprising a center support; a plurality of seats located around the center support; a seat arm support placed over the center support and supporting the seats; the interior of the seat arm support provided with tapered recesses; roller bearings located in the tapered recesses and which contact with the center support when in position; a friction lever arranged to place the seats in operation; an operating rod communicating with the friction lever for manipulating the same by an operator in one of the seats, substantially as specified.

4. A device of the class described comprising a base; a center support rigidly secured in said base; a ball-bearing cap located on the center support; a seat arm support located around the center support approximately at the center thereof; roller bearings located in tapered recesses formed in the seat arm support, which contact with the center support preventing backward rotation; a plate located around the center support and supported on the base; a friction lever pivotally mounted on the plate and arranged to contact with the collar of the base; an operating rod for placing the friction lever in operation to contact with the collar and place the device in revolution, substantially as specified.

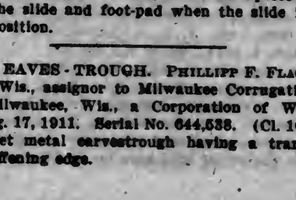
1,020,085. ANTISLIPPING DEVICE OR HEEL-PROTECTOR FOR SHOES. FRANK H. ELLIS, Chicago, Ill. Filed Oct. 2, 1911. Serial No. 652,265. (Cl. 36—66.)



1. A protector for the heels of shoes, comprising a base-plate of metal, said base-plate adapted to have bearing engagement against the bottom or tread surface of the heel, front and rear apertured holding members secured to said heel, front and rear upright resilient flanges formed integral with said base-plate and adapted for yielding engagement against said holding members, said flanges having inwardly projecting tongues adapted to engage within the apertures in the holding members, and said holding members having their lower edges flush with the bottom of the heel and each being substantially equal in height to the height of its associated flange.

2. A protector for the heels of shoes, comprising a base-plate of metal, said base-plate adapted to have bearing engagement against the bottom or tread surface of the heel, front and rear apertured holding members secured to said heel, front and rear upright resilient flanges formed integral with said base-plate and adapted for yielding engagement against said holding members, said flanges having inwardly projecting integral tongues adapted to engage within the apertures in the holding members, said tongues being cut from the body of the flanges and spaced inwardly from the lateral margins thereof, said holding members having their lower edges flush with the bottom of the heel and each being substantially equal in height to the height of its associated flange, and a cushion member permanently secured to said base-plate and to the front flange.

1,020,086. CHAIR. ANTON G. EYLES, Cedar Rapids, Iowa. Filed Mar. 22, 1911. Serial No. 616,168. (Cl. 155—9.)



1. The combination with a chair, of a slide, an actuating lever connected with said slide, a foot-piece carried by the front end of the slide, and a front-piece movably connected with the front end of the slide and adapted to be automatically elevated to the sheathing position in front of the foot-piece in the operation of retracting the foot-rest.

2. The combination with a chair, of a slide having forwardly projecting bars, a foot-piece supported on the front end of said bars, a front-piece adapted to hide said foot-piece and having a shank pivotally connected with said bars, and capable of limited movement independently of the foot-piece and means for actuating said slide.

3. The combination with a chair having a frame provided with a front cross-member equipped with bearings, a slide movably mounted on said bearings, a foot-piece mounted on the front-portion of said slide, a front-piece adapted to hide said foot-piece and having a shank pivotally connected with said slide near the rear portion of said foot-piece, and means on the frame for elevating said front-piece through the medium of its shank when the slide is retracted.

4. The combination with a chair, of a slide, actuating means therefor, a foot-piece detachably mounted on the front end of said slide, a front-piece adapted to hide said foot-piece and having a shank pivotally connected with said slide, and a stop serving to limit the drop of said front-piece with relation to said slide.

5. The combination with a chair having a frame provided with side-members equipped on their inner surfaces with longitudinal guides, said frame having a front cross-member provided at its upper portion with a guide, of a slide connected with said guide, a foot-pad detachably mounted on the front portion of said slide, a shank pivotally-connected with said slide beneath said foot-pad near the rear edge of the foot-pad, a front piece connected with the front portion of said shank and extending at substantially right-angles thereto, said front-piece adapted to shield the slide and foot-pad when the slide is in the retracted position.

1,020,087. EAVES-TROUGH. PHILLIPP F. FLAGGE, Milwaukee, Wis., assignor to Milwaukee Corrugating Company, Milwaukee, Wis., a Corporation of Wisconsin. Filed Aug. 17, 1911. Serial No. 644,538. (Cl. 108—28.)

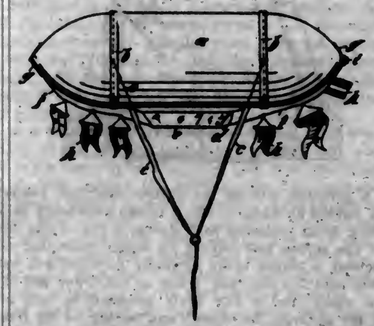
1. A sheet metal eavestrough having a transversely crimped stiffening edge.

2. A sheet metal eavestrough formed with transverse stiffening crimps extending downwardly from and terminating slightly below one edge thereof.



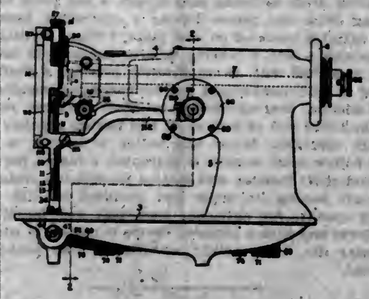
3. A sheet metal eavestrough having transversely crimped or fluted stiffening edges.

1,020,088. TOY AIRSHIP. GALLUS VON GLAUBITZ, Munich, Germany. Filed May 25, 1911. Serial No. 629,514. (Cl. 244—3.)



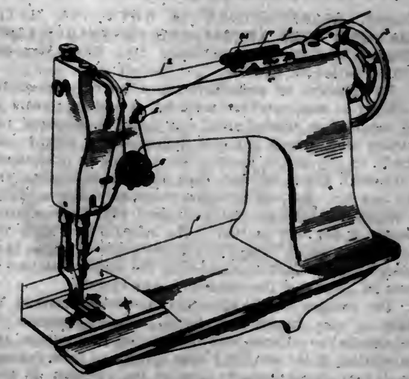
Toy air-ship, consisting of a gas-bag having the shape of a cigar when inflated, ring-shaped straps on said gas-bag, caps on the ends of the gas-bag and cords attached to said straps and caps respectively and carrying the car and bunting.

1,020,089. ZIGZAG-STITCH-SEWING MACHINE. CHARLES FREDERICK GRAY, Bridgeport, Conn., assignor, by mesne assignments, to The Singer Manufacturing Company, a Corporation of New Jersey. Filed May 1, 1906. Serial No. 314,671. (Cl. 112—4.)



In a sewing machine, a stitch-forming and cloth-feeding mechanism including a feed-dog, a needle-bar actuating shaft, an eccentric carried by said shaft, connections between said feed-dog and eccentric for giving feed-movements to said feed-dog, a vibrating frame, a needle-bar mounted in said frame, a cam-shaft mounted transverse to and operatively connected with said needle-bar actuating shaft and provided with an eccentric bearing, and connections between said eccentric bearing and said vibrating frame for giving to said needle-bar movements in directions transverse to the feed of the fabric.

1,020,090. THREAD-CONTROLLING MECHANISM FOR SEWING-MACHINES. CHARLES FREDERICK GRAY, Sierra Madre, Cal., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Apr. 7, 1911. Serial No. 619,463. (Cl. 112—39.)



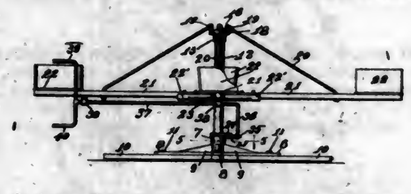
1. In a thread controlling and tensioning device for sewing machines, the combination of a base-plate mounted on the bracket arm of the sewing machine and provided with a tension pin plate carrying multiple thread-tension pins, a second tension pin plate mounted adjustable with respect to said first mentioned tension-pin plate and carrying multiple thread-tension pins, said tension pins coacting to guide the needle thread in a serpentine line as it passes from the receiving to the delivery end of said thread controlling and tensioning device, and a second thread-tension device carried by said bracket arm and located intermediate the point of stitch formation and the delivery end of said thread controlling and tensioning device.

2. In a thread controlling and tensioning device for sewing machines, the combination of a base-plate mounted on the bracket arm of the sewing machine and provided with a tension pin plate carrying multiple thread-tension pins, a second tension pin plate mounted adjustable with respect to said first mentioned tension pin plate and carrying multiple thread-tension pins, said tension pins having enlarged portions for directing the needle thread away from the free ends of the pins of the coöperating plate and coacting to guide the needle thread in a serpentine line as it passes from the receiving to the delivery end of said thread controlling and tensioning device, and a second thread-tensioning device carried by said bracket arm and located intermediate the point of stitch formation and the delivery end of said thread controlling and tensioning device.

3. In a thread controlling and tensioning device for sewing machines, the combination of a base-plate mounted on the bracket arm of the sewing machine and provided with a tension pin plate carrying multiple thread-tension pins, a second tension pin plate secured in hinged relationship with respect to said first mentioned tension pin plate and carrying multiple thread-tension pins, said tension pins coacting to guide the needle thread in a serpentine line as it passes from the receiving to the delivery end of said thread controlling and tensioning device, and a second thread-tension device carried by said bracket arm and located intermediate the point of stitch formation and the delivery end of said thread controlling and tensioning device.

4. In a thread controlling and tensioning device for sewing machines, the combination of a base-plate mounted on the bracket arm of the sewing machine and provided with a tension pin plate carrying multiple thread-tension

seat arm support around said support; a friction clutch resting on the base, a lever mechanism for operating the friction clutch, and means for preventing backward rotation of the seat arm support, substantially as specified.



2. A roundabout comprising a center support; a base to which the same is mounted; a seat arm support located around the center support; roller bearings located in tapered recesses on the interior of the seat arm support to contact with the center support and form a lock when revolved backward; a plurality of seat arms supported by the seat arm support and projecting laterally therefrom; seats mounted on the ends of said seat arm support; a ball-bearing cap located on the top of the center support; guy rods extending from the cap to the seat arms for supporting the same; a friction clutch and an operating lever for manipulating the friction clutch for rotating the seat arm supports around the central support, substantially as specified.

3. A roundabout comprising a center support; a plurality of seats located around the center support; a seat arm support placed over the center support and supporting the seats; the interior of the seat arm support provided with tapered recesses; roller bearings located in the tapered recesses and which contact with the center support when in position; a friction lever arranged to place the seats in operation; an operating rod communicating with the friction lever for manipulating the same by an operator in one of the seats, substantially as specified.

4. A device of the class described comprising a base; a center support rigidly secured in said base; a ball-bearing cap located on the center support; a seat arm support located around the center support approximately at the center thereof; roller bearings located in tapered recesses formed in the seat arm support, which contact with the center support preventing backward rotation; a plate located around the center support and supported on the base; a friction lever pivotally mounted on the plate and arranged to contact with the collar of the base; an operating rod for placing the friction lever in operation to contact with the collar and place the device in revolution, substantially as specified.

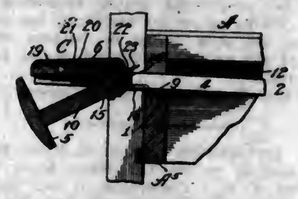
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1. A protector for the heels of shoes, comprising a base-plate of metal, said base-plate adapted to have bearing engagement against the bottom or tread surface of the heel, front and rear apertured holding members secured to said heel, front and rear upright resilient flanges formed integral with said base-plate and adapted for yielding engagement against said holding members, said flanges having inwardly projecting tongues adapted to engage within the apertures in the holding members, and said holding members having their lower edges flush with the bottom of the heel and each being substantially equal in height to the height of its associated flange.

2. A protector for the heels of shoes, comprising a base-plate of metal, said base-plate adapted to have bearing engagement against the bottom or tread surface of the heel, front and rear apertured holding members secured to said heel, front and rear upright resilient flanges formed integral with said base-plate and adapted for yielding engagement against said holding members, said flanges having inwardly projecting integral tongues adapted to engage within the apertures in the holding members, said tongues being cut from the body of the flanges and spaced inwardly from the lateral margins thereof, said holding members having their lower edges flush with the bottom of the heel and each being substantially equal in height to the height of its associated flange, and a cushion member permanently secured to said base-plate and to the front flange.

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1. The combination with a chair, of a slide, an actuating lever connected with said slide, a foot-piece carried by the front end of the slide, and a front-piece movably connected with the front end of the slide and adapted to be automatically elevated to the sheathing position in front of the foot-piece in the operation of retracting the foot-rest.

2. The combination with a chair, of a slide having forwardly projecting bars, a foot-piece supported on the front end of said bars, a front-piece adapted to hide said foot-piece and having a shank pivotally connected with said bars, and capable of limited movement independently of the foot-piece and means for actuating said slide.

3. The combination with a chair having a frame provided with a front cross-member equipped with bearings, a slide movably mounted on said bearings, a foot-piece mounted on the front-portion of said slide, a front-piece adapted to hide said foot-piece and having a shank pivotally connected with said slide near the rear portion of said foot-piece, and means on the frame for elevating said front-piece through the medium of its shank when the slide is retracted.

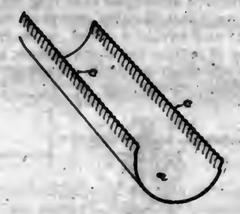
4. The combination with a chair, of a slide, actuating means therefor, a foot-piece detachably mounted on the front end of said slide, a front-piece adapted to hide said foot-piece and having a shank pivotally connected with said slide, and a stop serving to limit the drop of said front-piece with relation to said slide.

5. The combination with a chair having a frame provided with side-members equipped on their inner surfaces with longitudinal guides, said frame having a front cross-member provided at its upper portion with a guide, of a slide connected with said guide, a foot-pad detachably mounted on the front portion of said slide, a shank pivotally-connected with said slide beneath said foot-pad near the rear edge of the foot-pad, a front piece connected with the front portion of said shank and extending at substantially right-angles thereto, said front-piece adapted to shield the slide and foot-pad when the slide is in the retracted position.

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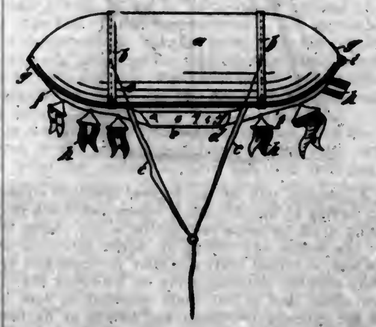
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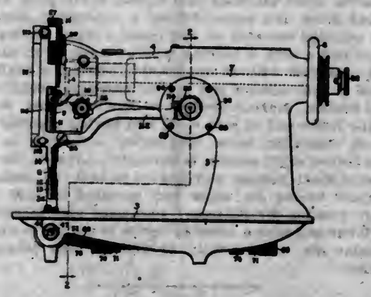
3. A sheet metal eavestrough having transversely crimped or fluted stiffening edges.

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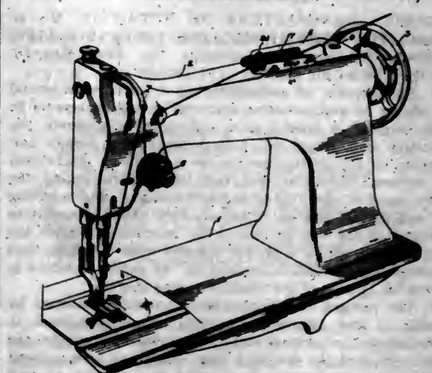
Toy air-ship, consisting of a gas-bag having the shape of a cigar when inflated, ring-shaped straps on said gas-bag, caps on the ends of the gas-bag and cords attached to said straps and caps respectively and carrying the car and bunting.

1,020,089. ZIGZAG-STITCH-SEWING MACHINE. CHARLES FREDERICK GRAY, Bridgeport, Conn., assignor, by mesne assignments, to The Singer Manufacturing Company, a Corporation of New Jersey. Filed May 1, 1906. Serial No. 314,671. (Cl. 112—4.)



In a sewing machine, a stitch-forming and cloth-feeding mechanism including a feed-dog, a needle-bar actuating shaft, an eccentric carried by said shaft, connections between said feed-dog and eccentric for giving feed-movements to said feed-dog, a vibrating frame, a needle-bar mounted in said frame, a cam-shaft mounted transverse to and operatively connected with said needle-bar actuating shaft and provided with an eccentric bearing, and connections between said eccentric bearing and said vibrating frame for giving to said needle-bar movements in directions transverse to the feed of the fabric.

1,020,090. THREAD-CONTROLLING MECHANISM FOR SEWING-MACHINES. CHARLES FREDERICK GRAY, Sierra Madre, Cal., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Apr. 7, 1911. Serial No. 619,463. (Cl. 112—39.)



1. In a thread controlling and tensioning device for sewing machines, the combination of a base-plate mounted on the bracket arm of the sewing machine and provided with a tension pin plate carrying multiple thread-tension pins, a second tension pin plate mounted adjustable with respect to said first mentioned tension-pin plate and carrying multiple thread-tension pins, said tension pins coacting to guide the needle thread in a serpentine line as it passes from the receiving to the delivery end of said thread controlling and tensioning device, and a second thread-tension device carried by said bracket arm and located intermediate the point of stitch formation and the delivery end of said thread controlling and tensioning device.

2. In a thread controlling and tensioning device for sewing machines, the combination of a base-plate mounted on the bracket arm of the sewing machine and provided with a tension pin plate carrying multiple thread-tension pins, a second tension pin plate mounted adjustable with respect to said first mentioned tension pin plate and carrying multiple thread-tension pins, said tension pins having enlarged portions for directing the needle thread away from the free ends of the pins of the coöperating plate and coacting to guide the needle thread in a serpentine line as it passes from the receiving to the delivery end of said thread controlling and tensioning device, and a second thread-tensioning device carried by said bracket arm and located intermediate the point of stitch formation and the delivery end of said thread controlling and tensioning device.

3. In a thread controlling and tensioning device for sewing machines, the combination of a base-plate mounted on the bracket arm of the sewing machine and provided with a tension pin plate carrying multiple thread-tension pins, a second tension pin plate secured in hinged relationship with respect to said first mentioned tension pin plate and carrying multiple thread-tension pins, said tension pins coacting to guide the needle thread in a serpentine line as it passes from the receiving to the delivery end of said thread controlling and tensioning device, and a second thread-tension device carried by said bracket arm and located intermediate the point of stitch formation and the delivery end of said thread controlling and tensioning device.

4. In a thread controlling and tensioning device for sewing machines, the combination of a base-plate mounted on the bracket arm of the sewing machine and provided with a tension pin plate carrying multiple thread-tension

pins, a second tension pin plate mounted adjustable with respect to said first mentioned tension pin plate and carrying multiple thread-tension pins, said tension pins coacting to guide the needle thread in a serpentine line as it passes from the receiving to the delivery end of said thread controlling and tensioning device, means for locking said pins in operative relationship, and a second thread-tension device carried by said bracket arm located intermediate the point of stitch formation and the delivery end of said thread controlling and tensioning device.

1,020,091. MANUFACTURE OF NUTRITIVE MATERIAL FOR BOTH ANIMAL AND VEGETABLE LIFE. MORRIS S. GREENBAUM, Chicago, Ill. Filed May 26, 1911. Serial No. 629,665. (Cl. 99—11.)

1. The process of manufacturing a nutritive material by adding to any nutritive material, including cereals in their original or altered state and cereal by-products, the distillery slop, which has been reduced to a syrupy consistency by any of the common or well known mechanical or chemical processes, and then thoroughly mixing the same together, and boiling same, thoroughly impregnating the substantial portion of the mixture with the nutritive elements of the fluid portion of the mixture, and after the said mixture, which is still in a moist state, has been thus rendered more or less homogeneous, the excess moisture is driven off by any of the common means therefor.

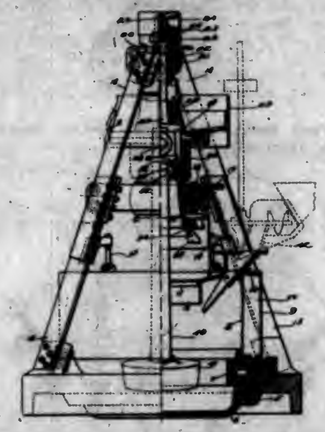
2. The process of manufacturing nutritive material by adding to any nutritive material, including cereals in their original or altered state and cereal by-products, the thin portion of the distillery slop which has been reduced to a syrupy consistency by any of the common or well known mechanical or chemical processes, and then thoroughly mixing the same together, and boiling same, thoroughly impregnating the substantial portion of the mixture with the nutritive elements of the fluid portion of the mixture, and after the said mixture, which is still in a moist state, has been thus rendered more or less homogeneous, the excess moisture is driven off by any of the common means therefor.

3. The process of manufacturing a nutritive material by adding to any nutritive material, including cereals in their original or altered state and cereal by-products, the thin portion of the distillery slop which has been reduced to a syrupy consistency by any of the common or well known mechanical or chemical processes, and then adding to that mixture the separated more substantial portion of the distillery slop; in any convenient or desired order of procedure and then thoroughly mixing the same together, and boiling same, thoroughly impregnating the substantial portion of the mixture with the nutritive elements of the fluid portion of the mixture, and after the said mixture, which is still in a moist state, has been rendered more or less homogeneous, the excess moisture is driven off by any of the common means therefor.

4. The process of manufacturing a nutritive material by adding to any nutritive material, including cereals in their original or altered state and cereal by-products, the thin portion of the distillery slop which has been reduced to a syrupy consistency by any of the common or well known mechanical or chemical processes, and then adding to that mixture the separated more substantial portion of the distillery slop; in any convenient or desired order of procedure, and then thoroughly mixing the same together, and thoroughly impregnating the substantial portion of the mixture with the nutritive elements of the fluid portion of the mixture, and after the said mixture, which is still in a moist state, has been rendered more or less homogeneous, the excess moisture is driven off by any of the common means therefor.

1,020,092. GRINDING-MILL. EDWIN C. GRIFFIN, Newton, Mass.; Lovina M. Griffin, executrix of said Edwin C. Griffin, deceased, assignor to Bradley Pulverizer Company, Boston, Mass., a Corporation of Maine. Filed July 25, 1911. Serial No. 640,413. (Cl. 83—45.)

1. A grinding mill of the nature described comprising a frame having at its upper end a concave seat, a bearing member having a globular periphery adjustable in said seat, a ring supported by said bearing member, a shaft journaled in said bearing member and having a nut at its upper end, antifriction devices on said ring for supporting said nut, a hollow shaft member mounted on the lower end of said shaft and having a pulley, a bearing in which the lower portion of said hollow shaft member is journaled, and a grinding roll shaft pivotally mounted within said hollow shaft member, as described.



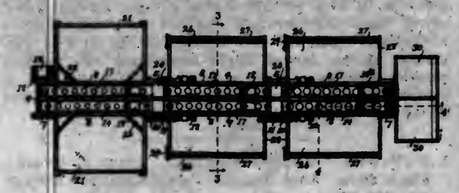
2. A grinding mill of the nature described comprising a pan having an annular die, a screen embracing said die, a casing drum inclosing said screen, a fan casing located above the screen and having an outlet extending within the screen, a hollow shaft rotatably mounted and extending into said fan chamber, a fan on the lower end of said hollow shaft, and a roll shaft mounted in said hollow shaft for gyratory movement and having at its free end a grinding roll adapted to coöperate with said annular die.

3. A grinding mill of the nature described comprising a pan having an annular die, a screen embracing said die, a casing drum inclosing said screen, a cap plate extending inward from said casing drum and having a contracted opening of less diameter than said screen and furnished with a depending collar, a fan chamber located on said cap plate, a fan rotatably mounted in said fan chamber, means for operating said fan, and a gyratory grinding device coöperating with said annular die, substantially as described.

4. A grinding mill of the nature described comprising a pan having an annular die, a screen embracing said die, a casing drum inclosing said screen, a cap plate for said casing drum and screen having a contracted opening, a fan chamber mounted on said plate, a frame having at its upper end a seat, a bearing member mounted in said seat and furnished with an antifriction bearing, a shaft journaled in said member and having means for engaging said anti-friction bearing, a hollow shaft member mounted at the lower end of said shaft and having a pulley and a mouth depending below said pulley, a bearing in which said hollow shaft member is journaled, a fan on the mouth of said shaft member and located in said fan casing, and a shaft having its upper end mounted in said hollow shaft member for universal movement and furnished at its lower end with a grinding device to coöperate with said annular die, substantially as and for the purpose described.

1,020,093. MACHINE FOR GRADING AND SORTING FRUIT. JAMES L. HAMILTON, Grand Junction, Colo. Filed Oct. 19, 1910, Serial No. 587,965. Renewed Jan. 8, 1912. Serial No. 670,094. (Cl. 130—32.)

1. In a machine for grading and sorting fruit the combination of an endless perforated carrier belt, parallel guide walls for supporting said belt, and retaining the fruit thereon, means for moving said belt between the guide walls, and means for rotating the fruit within the holes while being carried along on said belt.



2. In a machine for grading and sorting fruit the combination of an endless perforated carrier belt, parallel guide walls for supporting said belt and retaining the fruit thereon, means for moving said belt between the guide walls, inclined rotators underneath said belt and flexible obstructing devices located along the side walls, rotating and guiding the fruit while being carried along on said belt.

3. In a machine for grading and sorting fruit the combination of a plurality of endless perforated carrier belts, each belt having all of its perforations uniform in size and the perforations in each successive belt increasing in size by a desired unit, parallel guide walls for supporting said belts and retaining the fruit thereon, means for moving said belts between the guide walls, and means for rotating the fruit within the holes while being carried along on said belts.

4. In a machine for grading and sorting fruit the combination of an endless perforated carrier belt, parallel guide walls for supporting said belt and retaining the fruit thereon, means for moving said belt between the guide walls, hinged rotators normally inclined upward to the belt and adapted to turn the fruit when suspended in the perforation while being carried along on said belt.

5. In a machine for grading and sorting fruit the combination of a plurality of endless perforated carrier belts each belt having all of its perforations uniform in size, and the perforations in each successive belt increasing in size by a desired unit, parallel guide walls for supporting said belts and retaining the fruit thereon, means for moving said belt between the guide walls, means for rotating the fruit within the holes while being carried along on said belts, and suitable receptacles adapted to receive the several grades and sizes of the fruit.

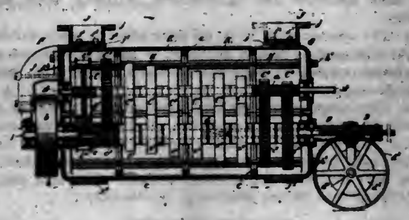
1,020,094. WEED-PULLER. WILLIAM H. HARRIS, Trinidad, Colo. Filed June 7, 1911. Serial No. 631,764. (Cl. 55—65.)



1. A weed puller comprising in combination a handle, a blade secured to said handle and having its lower edge relatively sharp, a shoulder disposed on said blade near said edge, a plate having a number of teeth on the upper end thereof and having its lower portion secured to said shoulder of said blade.

2. A weed puller comprising in combination a handle, a blade disposed on the lower end of said handle, and secured thereto and having its lower edge relatively sharp, a shoulder disposed on said blade adjacent to said edge, a plate having teeth on the upper end thereof and having its lower portion secured to said shoulder and said blade, a foot rest for pushing said blade into the ground, a bolt rigidly secured to said blade and arranged to restrict the outward movement of said plate.

1,020,095. CHANGE-GEAR MECHANISM. HENRY HESS, Philadelphia, Pa. Filed Mar. 24, 1911. Serial No. 616,738. (Cl. 74—59.)



1. A change gear mechanism comprising an extensible case made up of components including a plurality of identical intermediate case units, in combination with driving and driven shafts, a number of gear-sets intermediate said shafts and a selective means of putting said gear-sets into locked relation to the shafts.

2. A change gear mechanism comprising a longitudinally extensible case made up of components including a plurality of identical intermediate case units joined to each other at planes transverse to the driving or driven shafts, in combination with driving and driven shafts, a number of gear-sets intermediate said shafts and a selective means of putting said gear-sets into locked relation to the shafts.

3. A change gear mechanism comprising a longitudinally extensible case made up of components including a plurality of identical intermediate case units joined to each other at planes transverse to the driving or driven shafts, in combination with driving and driven shafts, a number of gear-sets intermediate said shafts a selective means of putting said gear-sets into locked relation to the shafts; and longitudinal binding members securing the several case units together.

4. A change gear mechanism comprising in combination the driving and driven shafts, a number of gear-sets intermediate said shafts, a selective device, and an extensible case made up of components including identical intermediate case units surrounding said shafts and gear-sets, with means for securing the whole together.

5. A change gear mechanism comprising in combination the driving and driven shafts, a number of gear-sets intermediate said shafts, a selective device, and an extensible case made up of end case units having shaft bearings and identical intermediate case units surrounding said shafts and gear-sets, with means for securing the whole together.

[Claims 6 to 16 not printed in the Gazette.]

1,020,096. RAILWAY-ROAD-BED CONSTRUCTION. CHARLES R. HOLDEN, Chicago, Ill. Filed July 28, 1910. Serial No. 574,365. (Cl. 238—2.)

1. The combination with an apertured tie-plate, of a spurred abutment located in the aperture of said plate and interlocking with said plate, with its spur-portion protruding beyond the under side of said plate.

2. The combination with an apertured tie-plate, of an abutment located in the aperture of said plate and interlocking with said plate, and having a spur extending be-

low the tie-plate and under the same and with the point of said spur in a line within the outer line of a railway-rail when placed on said tie-plate and against said abutment.



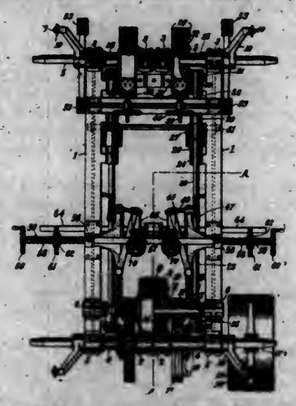
3. The combination with an apertured tie-plate formed with a depending flange adjacent to and parallel laterally with the aperture of said plate, of an abutment located in said aperture and interlocking laterally with said flange.

4. The combination with an apertured tie-plate formed with a depending flange adjacent to the aperture, of an abutment located in said aperture and interlocking with said flange.

5. The combination with an apertured tie-plate, of an abutment located in the aperture of said plate, and having a spur-portion extending through said aperture and below said plate and formed with a laterally deflected face, said abutment interlocking laterally with said plate.

[Claims 6 to 26 not printed in the Gazette.]

1,020,097. WINDING OR WRAPPING MACHINE. HOMER J. HOYT, Detroit, Mich., assignor to Morgan & Wright, Detroit, Mich., a Corporation of Michigan. Filed Jan. 14, 1910. Serial No. 538,037. (Cl. 242—7.)

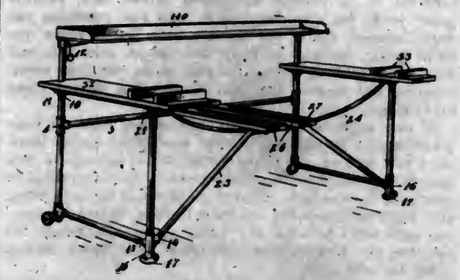


1. In a winding machine, the combination of a plurality of supporting shafts having outwardly projecting unobstructed ends, means for interchangeably fixing drums or molds on the ends of said shafts, a main driving shaft having fixed and loose clutch members thereon, gears connecting said movable clutch member with one of said supporting shafts, a band-brake on the second of said supporting shafts, means connecting the last named shaft with said loose clutch member for positively rotating said shaft and means for guiding the wire from one of said drums across the surface of the other of said drums.

2. In a winding machine, the combination of a plurality of supporting shafts having outwardly projecting unobstructed ends, means for interchangeably fixing drums or molds on the ends of said shafts, a main driving shaft having fixed and loose clutch members thereon, gears connecting said movable clutch member with one of said supporting shafts, a longitudinal shaft in two sections, gearing between said supporting shafts and said longitudinal shaft, a clutch for connecting the sections of said longitudinal shaft, a band-brake on the second of said supporting shafts and means for guiding the wire from one of said drums across the surface of the other of said drums.

3. In a winding machine the combination of a plurality of parallel centrally divided supporting shafts, means for detachably and interchangeably fixing drums or molds on the ends of each of said shafts, a main driving wheel, clutch members coöperating with said wheel and operative respectively upon the two sections of one of said supporting shafts, driving shafts connecting two opposite parallel sections of said supporting shafts, clutches in said driving shafts, and brakes for retarding the rotation of the last named sections of said supporting shafts.

1,020,098. MOLDER'S BENCH. JERRY M. HUDSON, Piqua, Ohio. Filed Aug. 17, 1907. Serial No. 389,030. (Cl. 22—90.)



1. In a molder's bench, the combination of a front frame member and a rear frame member, each comprising a pair of vertical legs, each leg being provided at its upper end with a bracket, braces connecting the brackets of said members, and a shelf supported at each side of said frame by the brackets thereat, substantially as specified.

2. A molder's bench comprising in combination a frame comprising legs, formed of piping, the opposite ends of which are threaded, castings into which the lower ends of said legs are threaded and forming feet, each of said castings being provided with a threaded nipple, braces threaded into the nipples of said castings, and thereby connecting said legs, a bench proper supported by said frame, upwardly inclined nipples formed on certain of said feet, and braces engaged with said nipples and with said bench proper, substantially as specified.

3. In a device of the character set forth, the combination of front and rear frame members, each having a pair of legs, brackets carried by the upper portions of the front and rear legs, shelves extending from front to back of the frame and supported by said brackets, a brace connecting the brackets carried by the front legs, and a bench extending from front to back of the frame and supported by said brace, substantially as specified.

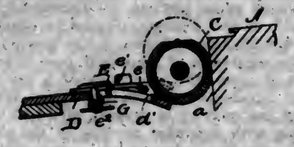
4. In a device of the character set forth, the combination of front and rear frame members, each having a pair of legs, brackets carried by the upper portions of the front and rear legs, a brace connecting the brackets carried by the front legs, a brace connecting the rear legs, and a bench extending from front to back of the frame and supported by said braces, substantially as specified.

5. In a molder's bench, the combination of a front frame member comprising a pair of legs each having at the upper portion thereof a bracket, shelves supported by said brackets, a bench proper arranged interiorly between said brackets, and a brace connecting said brackets and supporting said bench, substantially as specified.

[Claims 6 to 16 not printed in the Gazette.]

1,020,099. THROW-OUT DEVICE FOR RECIPROCATING-SHUTTLE SEWING-MACHINES. JOHN O. HUFFMAN and EMIL J. LAUFFER, Cleveland, Ohio, assignors to The White Sewing Machine Company, Cleveland, Ohio, a Corporation of Ohio. Filed Apr. 25, 1910. Serial No. 557,866. (Cl. 112—22.)

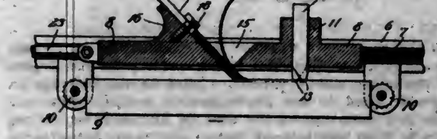
1. The combination of a reciprocating shuttle carrier having a seat for a shuttle, with a shuttle throw-out device movably mounted upon said shuttle carrier and normally occupying a position to one side of and out of contact with the shuttle, said throw-out device having a wedge shaped end which when the throw-out device is moved from its normal position will pass beneath the rear end of the shuttle and lift the same.



2. The combination of a reciprocating shuttle carrier having a seat for the shuttle, with a shuttle throw-out device movably mounted upon said shuttle carrier, and having a wedge shaped end adapted to be moved beneath the rear end of the shoulder to lift the same, a spring to retract said throw-out device, and a stop to limit the spring induced movement of the throw-out device whereby said throw-out device normally occupies a position to one side of and out of contact with a shuttle resting upn the shuttle seat.

3. The combination of a reciprocating shuttle carrier having a seat for a shuttle with a bell crank lever pivoted upon said carrier, one arm of the lever being formed as an inclined plane and adapted when moved to engage the underside of the shuttle with a wedging action to lift the shuttle, the other arm being formed with means adapted to be grasped in operating the lever, and means normally holding the bell crank lever out of engagement with the shuttle.

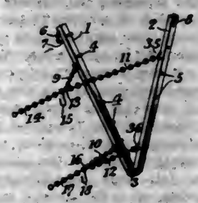
1,020,100. EXCELSIOR-MACHINE. JOHN W. KROGH, Chicago, Ill. Filed Jan. 5, 1912. Serial No. 669,615. (Cl. 144—186.)



In an excelsior-machine, the combination with a block-holder and cutter-frame, one movable with relation to the other, of an inclined planing-blade mounted in said frame having a beveled sharpened edge at its forward end lying in the plane of the cut, a series of grooves in the forward face of said blade having one wall normal to the plane of the blade and the other wall slightly inclined to said plane so as to form a series of cutting edges or planing-sections parallel with each other but inclined across the plane of the cut, and a plurality of scoring-cutters for coöperation with each of said planing-sections, mounted in said frame across the path of said planing-sections.

1,020,101. WIRE-STRETCHER. ALBERT J. KINSELLA, Pontiac, Ill. Filed Dec. 19, 1910. Serial No. 598,161. (Cl. 30—53.)

In a wire stretcher, in combination, uprights comprising two members hingedly connected together at their lower ends to allow the members to swing toward and away from each other, a chain connected to each of said members adjacent to both the upper and lower ends thereof, the upper chains adjustably connected to a common chain 14 and the lower chains adjustably connected to a common chain 17 whereby a side draft of said upright members is avoided, a link 19 to which the chains 14 and 17 are connected, said link 19 connected in turn to power means for making the stretch, said connection serving to keep the uprights in vertical position, and



means on said uprights for causing the same to engage the wire to be stretched.

1,020,102. PROCESS FOR THE PRODUCTION OF HYDROGEN FROM GAS MIXTURES CONTAINING HYDROGEN. CARL VON LINDE, Munich, Germany. Filed Oct. 10, 1910. Serial No. 586,325. (Cl. 62—18.)



1. In the production of practically pure hydrogen from a mixture of gases, the separation of a portion of the mixture by liquefaction in such a way that the incoming compressed gas mixture is brought into heat interchanging relation with separated portions of the gas mixture previously expanded, and is split up into a liquid portion composed principally of all other constituents and a gaseous portion composed principally of hydrogen and that then both these portions are individually expanded and are led in two separate streams in counter-current and heat interchanging relation to the incoming compressed gas mixture.

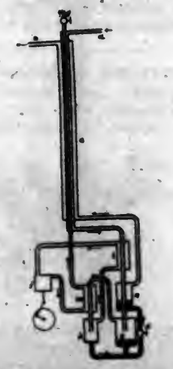
2. In the production of practically pure hydrogen from a mixture of gases, the separation of a portion of the mixture by liquefaction in such a way that the incoming compressed gas mixture is brought into heat interchanging relation with separated portions of the gas mixture which have been previously expanded and subsequently cooled by liquid air or liquid nitrogen, whereby the compressed gas mixture is split up into a liquid portion composed principally of all the other constituents and a gaseous portion composed principally of hydrogen, and that then both these portions are individually expanded and are led in two separate streams in counter-current and heat interchanging relation to the incoming gas.

3. In the production of practically pure hydrogen from a mixture of gases, the separation of a portion of the mixture by liquefaction in such a way that the incoming compressed gas mixture is brought into heat interchanging relation with separated portions of the gas mixture previously expanded and subsequently cooled by liquid air or liquid nitrogen under a reduced pressure, whereby the gas mixture is split up into a liquid portion composed principally of all the other constituents, and a gaseous portion composed principally of hydrogen, and

that then both of these portions are individually expanded and are led in two separate streams in heat interchanging relation to the incoming gas mixture.

4. In the production of practically pure hydrogen from a mixture of gases, the separation of a portion of the mixture by liquefaction in such a way that the incoming compressed gas mixture is brought into heat interchanging relation with separated portions of the gas mixture previously expanded, whereby the compressed gas mixture is split up into a liquid portion composed principally of all the other constituents and a gaseous portion composed principally of hydrogen, passing the gaseous portion prior to its expansion into heat interchanging relation with a separated portion of such gaseous portion previously expanded, and flowing counter-current thereto, whereby practically all the remaining constituents except the hydrogen are liquefied before expansion by the reduction of their temperature thus produced and are led away separately.

1,020,103. PROCESS FOR SEPARATION OF HYDROGEN FROM GASEOUS MIXTURES. CARL VON LINDE, Munich, Germany. Filed Oct. 23, 1911. Serial No. 656,002. (Cl. 62—18.)



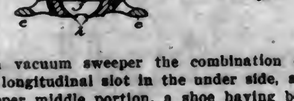
1. In the separation of practically pure hydrogen from a mixture of gases, the separation of a portion of the mixture by liquefaction in such a way that the incoming compressed gas mixture is brought into heat-interchanging relation with separated portions of the gas mixture previously expanded and is split up into a liquid portion composed principally of all other constituents and a gaseous portion composed principally of hydrogen and that the liquefied portion only is expanded, being led, together with the gaseous portion, in two separate streams in counter-current and heat-interchanging relation to the incoming compressed gas mixture, the gaseous portion leaving the apparatus at the same pressure as that at which the compressed mixture of gases is introduced.

2. In the separation of practically pure hydrogen from a mixture of gases, the separation of a portion of the mixture by liquefaction in such a way that the incoming compressed gas mixture is brought into heat-interchanging relation with separated portions of the gas mixture which have been previously expanded and subsequently cooled by liquid air or liquid nitrogen which is caused to evaporate at less than atmospheric pressure, whereby the compressed gas mixture is split up into a liquid portion composed principally of all the other constituents and a gaseous portion composed principally of hydrogen, and that then both these portions are individually expanded and after being cooled by liquid air or liquid nitrogen are led in two separate streams in counter-current and heat-interchanging relation to the incoming gas.

3. In the separation of practically pure hydrogen from a mixture of gases, the separation of a portion of the mixture by liquefaction in such a way that the incoming compressed gas mixture is brought into heat-interchanging relation with separated portions of the gas mixture of which the liquefied portion has been previously expanded while the gaseous portion is first cooled by liquid air or liquid nitrogen and is then expanded, whereby the compressed gas mixture is split up into a liquid portion composed principally of all the other constituents and a gaseous portion composed principally of hydrogen, and that then both these portions are individually expanded and are led in two separate streams in counter-current and heat-interchanging relation to the incoming gas.

4. In the separation of practically pure hydrogen from a mixture of gases, the separation of a portion of the mixture by liquefaction in such a way that the incoming compressed gas mixture is brought into heat-interchanging relation with separated portions of the gas mixture previously expanded, whereby the compressed gas mixture is split up into a liquid portion composed principally of all the other constituents and a gaseous portion composed principally of hydrogen, passing the gaseous portion prior to its expansion into heat inter-changing relation with such separated portion of such gaseous portion previously expanded, and flowing counter-current thereto, whereby practically all the remaining constituents except the hydrogen are liquefied before expansion by the reduction of their temperature thus produced, and that the separated gaseous portion before expansion is then raised in temperature by causing it to pass in counter-current and heat-interchanging relation to the compressed mixture of gases, and that then both the liquid and gaseous portions are individually expanded and are led in two separate streams in counter-current and heat-interchanging relation to the incoming compressed gas.

1,020,104. VACUUM-SWEEPER. FRANK J. MATCHETTE, Milwaukee, Wis. Filed June 12, 1909. Serial No. 501,707. (Cl. 15—60.)



1. In a vacuum sweeper the combination of a tube having a longitudinal slot in the under side, and a port in the upper middle portion, a shoe having bearings on opposite sides of and approximately parallel with said tube and connected at the ends by arches in which the tube is fitted and secured, and a tubular shank having a transverse concave bearing fitted to turn upon said tube and guided at the ends in said arches, with the passage in the shank in communication with the port in said tube.

2. In a vacuum sweeper the combination of a tube having closed ends, a longitudinal slot in the under side and a port in the upper middle portion, a shoe having bearings on opposite sides of said tube and approximately in the plane of said slot and connected at the ends by arches in which said tube is secured and which are formed in their inner sides with grooves concentric with the tube, and a tubular shank terminating at one end with a concave bearing which is fitted upon said tube over the port therein and has tongues at the ends fitting into and guided in the grooves in said arches.

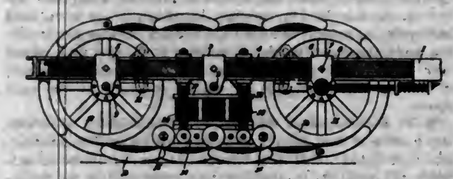
3. In a vacuum sweeper the combination of a shoe having bearing pieces connected by arches, a metal tube having a longitudinal slot in the under side, the edges of the metal next to the slot being flanged inwardly, a segmental reinforcing sleeve fitted over the middle portion of the tube and secured therewith in the arches of the shoe, and a tubular shank terminating at one end in a concave bearing which is fitted to turn on said sleeve and is guided concentric therewith in said arches, the tube and sleeve being formed with a port through which the passage in the shank communicates with the interior of the tube.

4. In a vacuum sweeper the combination of a shoe having bearing pieces connected by arches, a segmental sleeve fitted and secured in said arches, a metal tube fitted and secured in said sleeve and having a longitudinal slot in the under side, the edges of the metal next to the slot being flanged inwardly and forming with the adjacent sides of the tube cleaning lips which project below the adjacent edges of the sleeve, and a tubular shank terminating at one end in a transverse concave bearing which is fitted to turn on said sleeve and is guided concentric therewith in said arches.

5. In a vacuum sweeper the combination of an open frame or shoe having side bearing pieces connected at the ends by arches which are formed with grooves in their inner and opposing sides, a segmental sleeve fitted in said arches, a cylindrical tube fitted in and secured with said sleeve in the arches and between the bearing pieces of said shoe and having closed ends and a longitudinal slot with inturned edges along the under side, and a tubular shank terminating at one end in a laterally extended concave bearing fitted to turn on said sleeve and guided at the ends in the grooves of said arches, the tube and sleeve being formed with a port in position to communicate with the passage in said shank.

[Claims 6 and 7 not printed in the Gazette.]

1,020,105. MEANS FOR MOUNTING TRUCK MEMBERS ON ENDLESS-BAND WHEELS. WALTER C. MATTESON, San Jose, Cal. Original application filed Mar. 23, 1910, Serial No. 551,093. Divided and this application filed Aug. 30, 1911. Serial No. 646,930. (Cl. 21—144.)

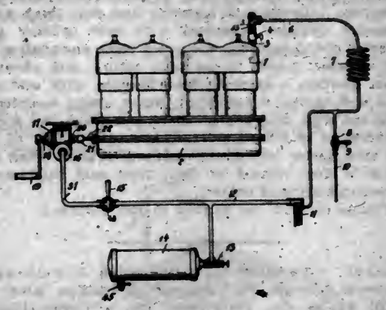


1. A flexible band wheel truck comprising a main frame having an axle and auxiliary frame mounted on said axle and provided with a flexible band wheel, an auxiliary truck mounted on said auxiliary frame and bearing against said band wheel, slotted yokes on said auxiliary frame, pins on said main frame projecting into said slotted yokes and means for retaining said pins in said yokes, as described.

2. A flexible band wheel truck comprising a frame, a central hub on said frame, two wheels on said truck frame, a flexible band disposed on said wheels, an auxiliary truck secured centrally of said truck frame and comprising a lower frame, rollers on said frame and bearing against said band, an upper frame, rods on said lower frame movable through said upper frame and resilient means disposed between said lower and upper frames.

1,020,106. AUTOMOBILE-STARTER. HIRAM PERCY MAXIM, Hartford, Conn. Filed Oct. 15, 1910. Serial No. 587,166. (Cl. 123—179.)

1. In automobile starters, a gas engine comprising an engine shaft, starting clutch, hand starting shaft and connected hand starting lever normally disengaged from said engine shaft, a ball check valve and cut-off valve connected to one of the cylinders of said engine, a reservoir provided with a needle valve reservoir shutoff and a connection between said check valve and said reservoir shutoff valve comprising an auxiliary check valve, a cooling coil in said connection, a tire valve and tire inflating connection adjacent said cooling coil, a cylinder pipe and three-way starter valve communicating with said connection adjacent said reservoir, a starter cylinder having a relief hole and a cylinder drain cock and connected to said cylinder pipe, a starter piston provided with wide rack teeth and with a piston aperture mounted within said cylinder, a piston spring in said piston aperture to normally return said piston to initial position, a starter pinion meshing with said rack teeth and having a connected pinion sleeve and hub loosely mounted on said hand starting shaft to allow the normal operation of said starting lever, a pinion clutch normally in engagement with the adjacent member of said starting clutch, a pinion cam secured to said pinion, a coöperating stationary disengaging cam and a pinion spring tending to hold said pinion cam in engagement and cause the engagement of said starting clutch when said pinion is first rotated by fluid pressure from said reservoir on operating said starter valve to thereupon start said engine.



2. In automobile starters, a gas engine comprising an engine shaft, starting clutch, hand starting shaft and connected starting lever normally disengaged from said engine shaft, a check valve connected to one of the cylinders of said engine, a reservoir provided with a reservoir shutoff valve and a connection between said check valve and said reservoir shutoff valve comprising a cooling coil, a cylinder pipe and starter valve communicating with said connection adjacent said reservoir, a starter cylinder having cushioning means and connected with said cylinder pipe, a starter piston provided with rack teeth and means to normally return said piston to initial position, a starter pinion meshing with said rack teeth and having a connected pinion sleeve loosely mounted on said hand starting shaft to allow the normal operation of the connected hand starting lever, a pinion clutch connected with said pinion and normally in engagement with the adjacent member of said starting clutch, a pinion cam secured to said pinion, a coöperating stationary disengaging cam and a pinion spring tending to hold said pinion cam in engagement and cause the engagement of said starting clutch when said pinion is first rotated by fluid from said reservoir to thereupon start said engine.

3. In automobile starters, a gas engine comprising an engine shaft, starting clutch, hand starting shaft and connected hand starting lever normally disengaged from said engine shaft, a reservoir provided with a reservoir shutoff valve, a connection comprising a check valve between said reservoir shutoff valve and one of the cylinders of said gas engine, a cylinder pipe and starter valve communicating with said connection between said check valve and said reservoir, a starter cylinder connected to said cylinder pipe, a starter piston provided with rack teeth and having a connected pinion sleeve mounted on said hand starting shaft to allow the normal operation of said hand starting lever and means coöperating with said pinion to cause the engagement of said starting clutch when said pinion is first rotated by fluid from said reservoir to thereupon start said engine.

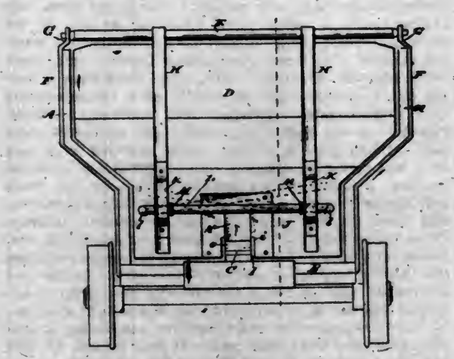
4. In automobile starters, a gas engine comprising an engine shaft, a starting clutch, hand starting shaft and connected hand starting lever normally disengaged from said engine shaft, a reservoir, a connection comprising a check valve between said reservoir and one of the cylinders of said gas engine, a cylinder pipe and starter valve communicating with said connection between said

reservoir and said check valve, a starter cylinder connected to said cylinder pipe, a starter piston within said cylinder, a starter member and connected sleeve operatively connected with said piston and mounted on said hand starting shaft to allow the normal operation of said starting lever and means coöperating with said starter member to cause the engagement of said starting clutch when said member is first operated by fluid from said reservoir to thereupon atart said engine.

5. In automobile starters, an engine comprising an engine shaft, starting clutch and hand starting lever normally disengaged from said engine shaft, a reservoir, a connnection comprising a check valve between said reservoir and one of the cylinders of said engine, a cylinder pipe and starter valve communicating with said connection between said reservoir and said check valve, a starter cylinder connected with said cylinder pipe, a starter piston provided with rack teeth mounted within said cylinder, means to normally return said piston to initial position, a starter pinion meshing with said rack teeth and having a connected pinion sleeve mounted to coöperate with said engine shaft and allow the normal operation of said hand starting lever and means to connect said starter pinion with said engine shaft when said pinion is first rotated by fluid from said reservoir to thereupon start said engine.

[Claims 6 to 21 not printed in the Gazette.]

1,020,107. CAR-DOOR LATCH. LOUIS J. MCCLOSKEY, Carrick borough, Pa., assignor to Phillips Mine and Mill Supply Co., Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Dec. 29, 1911. Serial No. 668,543. (Cl. 105—15.)

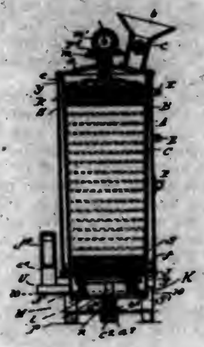


1. In a car door latch, the combination of a swinging door, guides carried by the door and a keeper arranged below the door, with a horizontally disposed vertically movable and rotatable rod arranged in said guides and a latch plate carried by said rod and adapted to engage said keeper.

2. In a car door latching device, the combination with guides carried by the door and a keeper carried by the car, of a horizontally disposed, vertically movable and rotatable rod, mounted in said guides and having outwardly bent ends and a latch plate carried by said rod and arranged at an angle to said outwardly bent ends and adapted to be brought to horizontal position to engage said keeper by a rocking movement of said rod.

3. In a car door latching device, the combination with guides carried by the door, a horisontally disposed rod loosely mounted in said guides, the ends of said rod extending toward each edge of the door, of a latch plate carried by the said rod, centrally thereof, a keeper carried by the car and adapted to be engaged by the latch plate, said rod and said guides being so constructed and arranged that the rod may be lifted at either end or the center to free the latch plate from engagement with the keeper.

1,020,108. COTTON-SEED DELINTER. JOHN HOWARD MCCORMICK, New Orleans, La. Filed Feb. 28, 1911. Serial No. 611,382. (Cl. 18—10.)



1. In a cotton seed delinter, the combination of a casing having a seed inlet and a seed outlet and a tangentially-disposed lint-discharge chute and being otherwise imperforate, a foraminous cylinder arranged in said casing and separated by an intervening space therefrom, which space is in communication with the lint-discharge chute, a rotatable brush drum disposed in the foraminous cylinder, an upright air reservoir located alongside the casing, a fan blower casing communicating with said reservoir, a rotary fan in said casing, means for rotating said fan, and conduits leading from the said reservoir to different points in the height and circumference of the casing to supply air under pressure to the said space.

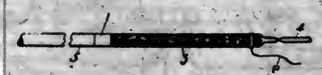
2. In a cotton seed delinter, the combination of a casing having a seed inlet and a seed outlet and a lint outlet, and being otherwise imperforate, a foraminous cylinder arranged in said casing and separated by an intervening space therefrom, which space is in communication with the lint outlet, a rotatable brush drum disposed in the foraminous cylinder, and means positioned to supply air under pressure to the said space between the casing and foraminous cylinder at different points in the height and circumference of the casing to cool the seed and discharge the lint through the said outlet of the casing.

3. In a cotton seed delinter, the combination of a casing having a seed outlet and a lint outlet, a foraminous cylinder arranged in said casing and separated by an intervening space therefrom, which space is in communication with the lint outlet, a seed discharge spout leading from said cylinder; the casing aside from the seed inlet, lint outlet and seed discharge spout being imperforate, a rotatable brush drum disposed in the foraminous cylinder, means for supplying air under pressure to the said space between the casing and foraminous cylinder, and a return conduit leading from the seed-discharge spout at an intermediate point thereof to the said intervening space.

4. In a cotton seed delinter, the combination of a casing having a seed inlet and a lint outlet, a foraminous cylinder arranged in said casing and separated by an intervening space therefrom, which space is in communication with the lint outlet, a seed discharge spout leading from said cylinder; the casing aside from the seed inlet, lint outlet and seed discharge spout being imperforate, a rotatable brush drum disposed in the foraminous cylinder, means for supplying air under pressure to the said space between the casing and foraminous cylinder, a return conduit leading from the seed-discharge spout at an intermediate point thereof to the said intervening space, and a dust box communicating with and adapted to receive dust from said conduit.

5. In a cotton seed delinter, the combination of a casing, a cylinder arranged in said casing, a ring fixed in the lower portion of the cylinder, a seed-discharge spout leading from said lower portion of the cylinder, a rotary ring mounted on the fixed ring and having a radial blade, anti-friction means interposed between the two rings, a rotatable brush drum arranged in the cylinder and feathered in said rotary ring and having a lower trunnion and an upper trunnion; the latter extending loosely through the top of the casing, a gear feathered on said upper trunnion, and means for adjusting the brush drum vertically through the medium of the lower trunnion thereof.

1,020,109. ELECTRICALLY-OPERATED VACUUM-TUBE. DANIEL MCFARLAN MOORE, Newark, N. J., assignor to Moore Electrical Co., New York, N. Y., a Corporation of New York. Filed Sept. 2, 1903. Serial No. 171,587. (Cl. 176—126.)



1. An electrically operated vacuum tube containing a solid compound of carbon disposed within the tube and in position to be decomposed by the action of the electric energy in its transfer from one to the other of the main or principal electrodes for said tube.

2. An electrically operated vacuum tube containing the product of the electrolysis of an organic substance.

3. An electrically operated vacuum tube containing the product of the electrolysis of a hydrocarbon.

4. An electrically operated vacuum tube containing the product of the electrolysis of a vegetable hydrocarbon.

5. An electrically operated vacuum tube containing the product of the electrolysis of an aromatic hydrocarbon.

[Claims 6 to 12 not printed in the Gazette.]

1,020,110. TERMINAL FOR GAS AND VAPOR ELECTRIC APPARATUS. DANIEL MCFARLAN MOORE, Newark, N. J., assignor to Moore Electrical Co., New York, N. Y., a Corporation of New York. Filed Dec. 26, 1906. Serial No. 349,548. (Cl. 176—126.)



1. In apparatus of the character described, the combination with a gas or vapor containing receptacle, of an electrode supported laterally from the side wall of the receptacle and having its forward end of lesser lateral dimensions to increase the space between the same and the side wall.

2. In an apparatus of the character described and having a gas or vapor containing receptacle, an electrode fitted into the receptacle so as to be supported laterally by the side wall and having its forward portion separated from the side wall by a free space, as and for the purpose described.

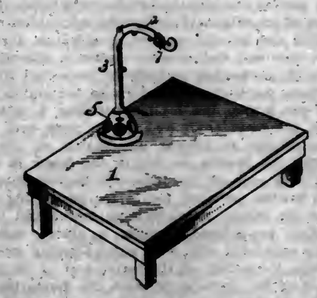
3. In apparatus of the character described, the combination with an energy-transferring electrode, of means for shielding the forward edge thereof from the direct attack of the electric discharge.

4. In a vacuum tube lamp, the combination with an internal electrode, of a shoulder or offset interposed between the forward end of the electrode and the main portion of the tube, the forward end of the electrode being located just to the rear of said obstruction whereby localization of the discharge and undue heating at such forward end is prevented.

5. In a vacuum tube lamp, a tube having its light-giving and electrode holding portions of different diameters to form a shoulder or off set in combination with an electrode whose forward edge is located immediately behind the shoulder or off-set, joining the said portions of the tube.

[Claims 6 to 12 not printed in the Gazette.]

1,020,111. TWINE CUTTER AND HOLDER. LAURA MANGER MYERS, Chicago, Ill. Filed Oct. 27, 1910. Serial No. 589,398. (Cl. 242—142.)



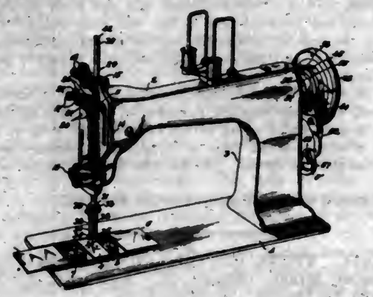
A twine cutter comprising a vertical standard, a laterally-disposed arm of substantially the same diameter throughout as said standard and having a socket in one end thereof and capable of being swung rearwardly with respect to the standard and in a same vertical plane therewith, projections upon the top of said standard, and an upward lug positioned therebetween, said projections provided with aliming perforations therethrough, said arm being hinged within said perforations, a hook-shaped knife secured to the other end of said arm and having a cutting edge in the same plane thereas, and guides upon said standard and said arm for guiding the twine to the knife, the standard and arm forming a substantially regular curve at their meeting ends when normally positioned for use.

1,020,112. SEWING-MACHINE. DONALD NOBLE, Bridgeport, Conn., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Sept. 2, 1910. Serial No. 580,147. (Cl. 112—7.)

1. In a sewing machine, means for permitting the manual feeding of the fabric, stitch-forming mechanism comprising a plurality of eye pointed needles, loop-takers, thread-tensioning devices and cloth-presser elements, manually controlled clutch mechanism operatively connected with the stitch-forming mechanism for determining the action and inaction of the latter, and means operatively connected with said stitch-forming mechanism and acting upon said thread-tensioning devices to release the tension on the needle threads when the needles are out of the fabric in the formation of each pair of synchronously formed stitches.

2. In a sewing machine, stitch-forming mechanism comprising a needle-bar, multiple eye pointed needles carried by said bar, multiple loop-takers, thread-tensioning devices and cloth-presser elements, the latter carried by a bar resiliently mounted in said needle-bar, manually controlled clutch mechanism operatively connected with said stitch-forming mechanism for determining the action and

inaction of the latter, and means operatively connected with the stitch-forming mechanism of the sewing machine and acting upon said thread-tensioning devices to release the tensions on the needle threads when the needles are out of the fabric in the formation of each pair of synchronously formed stitches.



3. In a sewing machine, means for permitting the manual feeding of the fabric stitch-forming mechanism comprising multiple eye pointed needles, loop-takers, thread-tensioning devices and cloth-presser elements, manually controlled clutch mechanism operatively connected with said stitch-forming mechanism to determine the action and inaction of the latter, and means including a rotary cam carried by the main shaft and acting upon said thread-tensioning devices to release the tension on the needle thread when the needles are out of the fabric in the formation of each pair of synchronously formed stitches.

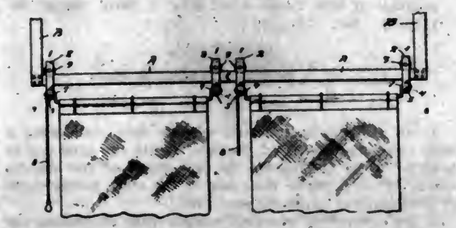
4. In a sewing machine, means for permitting manual feeding of the fabric, stitch-forming mechanism comprising multiple eye-pointed needles, a clutch mechanism operatively connected with said stitch-forming mechanism for arresting the action of the latter and to position the needles out of the material between the formation of the successively formed pairs of stitches, and a cloth-presser carrying bar provided with multiple cloth-pressers and operatively connected with said stitch-forming mechanism to bear upon the fabric at predetermined times to prevent said fabric from following the upward movements of said eye-pointed needles.

1,020,113. DOUBLE-ACTING PUMP. JOSEPH M. OUGH, Oakland, and WILLIAM E. HUBBARD, San Francisco, Cal. Filed May 22, 1911. Serial No. 628,616. (Cl. 103—70.)



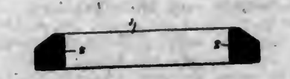
An improved double acting pump having in combination, a drop pipe, a barrel, an outwardly flared head secured to the upper end of the barrel, said head having an external, annular, undercut flange overhanging the exterior wall of the barrel, a barrel holder attached to the lower end of the drop-pipe, an inwardly tapered seat on said holder to receive said head, said holder having an internally projecting bead around its upper end to engage under the externally projecting flange of the barrel holder and thereby support the barrel, a central sleeve on the barrel holder, and a plunger working in said sleeve whereby when the plunger is pulled from the well the barrel and its holder may be drawn up through the drop-pipe.

1,020,114. DISPLAY-RACK. WILLIAM G. PEUGH, Aberdeen, Miss. Filed Dec. 16, 1911. Serial No. 666,107. (Cl. 211—22.)



A display rack comprising a grid of tracks, supporting members mounted on each track, each supporting member consisting of a frame having a trolley journaled therein and mounted on the track, a circular plate secured in the lower end of said frame, and a rod adapted to support an article for display having its ends formed with hooks removably engaging the plates in the frames of two supporting members mounted on a single track.

1,020,115. PACKING-RING. WILLIAM W. PRICE, Dayton, Ohio. Filed July 17, 1911. Serial No. 638,840. (Cl. 121—107.)



1. A packing comprising a soft core of fibrous material and an outer portion of woven asbestos fabric inclosing said core, whereby said core and said fabric combine to form a flexible body.

2. A packing ring comprising a core of fibrous material, and an outer portion of woven asbestos fabric inclosing said core and impregnated with a lubricating agent.

3. A packing ring comprising a core of fibrous material and an outer portion of woven asbestos fabric inclosing said core, said fabric being of a width substantially equal to the circumferential length of said ring.

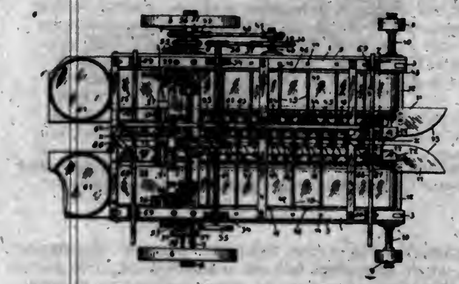
4. A packing ring comprising a core of fibrous material and an outer portion of woven asbestos fabric wrapped about said core at approximately right angles to the circumferential axis of said ring.

5. A packing ring comprising a core of asbestos fiber, and an outer portion of woven asbestos fabric of a width substantially equal to the circumferential length of said core extending about the same at substantially right angles to said length of said core and having its outer plies impregnated with a lubricating agent.

[Claims 6 to 9 not printed in the Gazette.]

1,020,116. COTTON-PICKER. EUGENE STILES SCHEBLE, Cleburne, and ELBERT ASCUE, Blum, Tex.; said Ascue assignor of four-fifths of his right to said Scheble. Filed May 8, 1911. Serial No. 625,684. (Cl. 56—6.)

1. In a cotton and insect picker, the combination with a wheeled frame, of a plurality of bars projecting inwardly from the sides of said frame, having a length slightly greater than half the width of the frame, a pair of adjacent cylindrical brushes, rotatably mounted in the central lower portion of the frame, longitudinal with the machine, a mechanism adapted to communicate rotation to said brushes, a conveyer belt adapted to travel adjacent to each brush, means actuating the travel of the belt, and receptacles adapted to receive the contents of the belts.



2. In a cotton and insect picker, the combination with a wheeled frame, of a pair of spaced guide-boards, longitudinal with the machine in the middle lower portion thereof, a pair of elongated bars adapted to oscillate transversely above the guide-boards, means adapted to communicate an oscillating motion to said bars, a pair of adjacent cylindrical brushes rotatably mounted above said bars, and parallel with the same, a mechanism adapted to communicate rotation to the brushes, a conveyer belt adapted to travel adjacent to each brush, means actuating the travel of the belt, and receptacles adapted to receive the contents of the belts.

3. In a cotton and insect picker, the combination with a wheeled frame, of a pair of spaced guide-boards, longitudinal with the machine in the middle lower portion thereof, a pair of elongated bars adapted to oscillate transversely above the guide-boards, means adapted to communicate an oscillating motion to said bars, a pair of adjacent cylindrical brushes rotatably mounted above said bars and parallel with the same, a mechanism adapted to communicate rotation to the brushes, a conveyer belt adapted to travel adjacent to each brush, means actuating the travel of the belt, receptacles adapted to receive the contents of the belt, and a plurality of bars projecting from the sides of said frame, having a length slightly greater than half the width of the frame.

4. In a cotton and insect picker, the combination with a wheeled frame, of a plurality of bars projecting inwardly from the sides of said frame, having a length slightly greater than the width of the frame, a pair of adjacent cylindrical brushes rotatably mounted in the central lower portion of the frame, longitudinal with the machine, a mechanism adapted to communicate rotation to said brushes, an elongated comb acting in conjunction with each brush to remove the lint therefrom, a conveyer belt adapted to travel adjacent to each brush, said belt being upwardly inclined to the rear of the brushes, a traveling belt mounted in the rear portion of the frame, having a portion of its surface contacting with the upwardly inclined portion with said conveyer belt, means actuating the travel of these two belts, and receptacles adapted to receive the contents of the belts.

5. In a cotton and insect picker, the combination with a wheeled frame, of a pair of spaced guide-boards, longitudinal with the machine in the middle lower portion thereof, a pair of elongated bars adapted to oscillate transversely above the guide-boards, means adapted to communicate an oscillating motion to said bars, a pair of adjacent cylindrical brushes rotatably mounted above said bars, and parallel with the same, a mechanism adapted to communicate rotation to the brushes, an elongated comb adjacent to each brush, and contacting therewith, a conveyer belt adapted to travel adjacent to each brush, said belt being upwardly inclined to the rear of said brushes, a traveling belt mounted in the rear portion of the frame, having a portion of its surface contacting with the inclined portion of the conveyer belt, means actuating the travel of the two belts, and receptacles at the rear of the machine adapted to receive the contents of the two belts.

1,020,117. PROCESS FOR IMPARTING LUSTER TO YARNS, FABRIC, AND THE LIKE. LUDWIG SCHREINER, Oehde, near Barmen, Germany, assignor to The Firm of J. P. Bemberg, Aktiengesellschaft, Barmen-Rittershausen, Germany. Filed Dec. 21, 1909. Serial No. 534,353. (Cl. 28—7.)

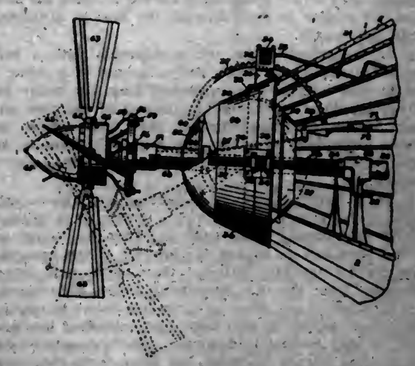
1. A process for imparting permanent luster to fabrics or the like made from vegetable fibers, consisting in making the goods quite wet, and then calendering them under high pressure, at so high a temperature as to produce Leydenfrost's phenomenon between the surfaces of the calendering agent and the moist goods, and with so high a speed that the goods are still moist after calendering them.

2. A process for imparting permanent luster to fabrics or the like made from vegetable fibers, consisting in making the goods quite wet, and then calendering them with friction under high pressure, at so high a temperature as to produce Leydenfrost's phenomenon between the surfaces of the calendering agent and the moist goods, and with so high a speed that the goods are still moist after calendering them.

3. A process for imparting permanent luster to fabrics or the like made from vegetable fibers, consisting in making the goods quite wet, and then calendering and embossing them under high pressure, at so high a temperature as to produce Leydenfrost's phenomenon between the surfaces of the calendering agent and the moist goods, and with so high a speed that the goods are still moist after calendering and embossing them.

4. A process for imparting permanent luster to fabrics or the like made from vegetable fibers, consisting in making the goods quite wet, and then calendering and embossing them with friction under high pressure, at so high a temperature as to produce Leydenfrost's phenomenon between the surfaces of the calendering agent and the moist goods, and with so high a speed that the goods are still moist after calendering and embossing them.

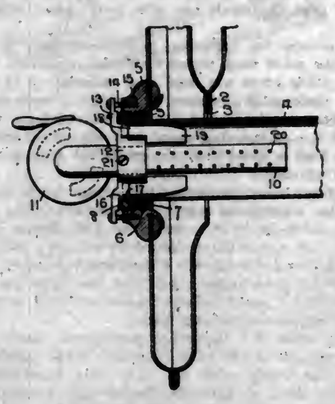
1,020,118. AIRSHIP. CHARLES H. TOLIVER, San Diego, Cal. Filed Aug. 16, 1910. Serial No. 577,392. (Cl. 244—6.)



1. In an air-ship, the combination of a driving shaft, a flexible shaft connected thereto, a rigid propeller shaft connected with the other end of the flexible shaft, a propeller thereon, a globular bearing for said propeller shaft, a socket for said globular bearing in which it can be rotated in any direction and means for turning said globular bearing in any direction in said socket, substantially as described.

2. In an air-ship, the combination of a driving shaft, a flexible shaft connected thereto, a rigid propeller shaft connected with the other end of the flexible shaft, a propeller thereon, a globular bearing for said propeller shaft, a socket for said globular bearing in which it can be rotated in any direction and means for turning said globular bearing in any direction in said socket comprising two worms secured on said socket at points thereon in axial planes at right angles to each other, quadrantal racks secured to said globular bearing and engaging said worms to be moved thereby, and means for rotating the worms, substantially as described.

1,020,119. HEATING DEVICE. CAROLINE M. WHEELOCK, Washington, D. C. Filed Aug. 21, 1911. Serial No. 645,058. (Cl. 158—118.)



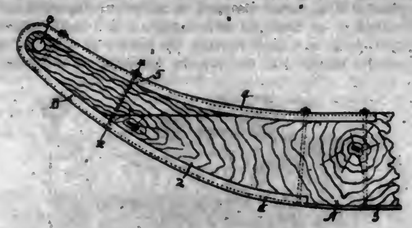
1. In a heating device the combination with a tube and supporting means therefor, of a burner entering said tube, a collar surrounding and positioning the burner in the tube, arms radiating from the collar and having shoulders to engage the interior of the tube, said shoulders having slots therein, means to attach the outer ends of the arms to the tube supporting means, and wings positioned around the burner and between the burner and tube and having one of their ends engaged with said slots, the opposite ends of the wings being curved to cause the flame from the burner to pass through the tube in a substantially spiral path.

2. In a heating device the combination with a tube, means to support the same, and a burner, of a collar to receive said burner, arms radiating from the collar and having shoulders to engage the interior of the tube, said arms having openings adjacent their outer ends, and screws extending from the tube supporting means and engaging said openings in the arms to secure the collar in position.

3. In a heating device the combination with a tube, means to support the same, and a burner, of a collar to receive said burner, arms radiating from the collar and having shoulders to engage the interior of the tube, said arms having openings adjacent their outer ends, screws extending from the tube supporting means and engaging said openings in the arms to secure the collar in position, and wings carried by said arms and extending longitudinally of and around said burner, the free ends of said wings being curved to cause the flame from the burner to pass through the tube in a substantially spiral path.

1,020,120. BOB-SLED RUNNER. JOHN H. ANDERSON, St. Paul, Minn. Filed Nov. 12, 1908. Serial No. 462,230. (Cl. 21—48.)

A runner provided on its forward end with an upcurved cut, a separate nose joined to the forward end of said runner, a channel iron passing lengthwise around said parts having its flanges overlapping their sides and



embracing the joint between said runner and nose, and means for fastening said channel iron to said runner.

1,020,121. CALCIUM SALT OF ACETYL SALICYLIC ACID AND PROCESS OF MAKING SAME. RUDOLPH BRAENDES, Elberfeld, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed May 17, 1911. Serial No. 627,811. (Cl. 23—24.)

1. The process of producing the calcium salt of acetyl salicylic acid which comprises treating a compound containing the radical of acetyl salicylic acid,

$$CH_3COOC_6H_4COO-,$$

with a calcium compound.

2. The process of producing the calcium salt of acetyl salicylic acid which comprises treating acetyl salicylic acid with a calcium compound.

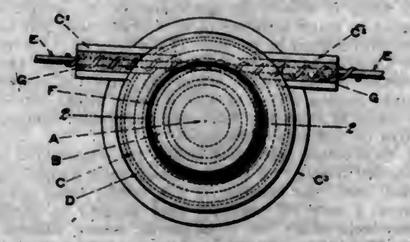
3. The herein-described process for producing the calcium salt of acetyl salicylic acid, which process consists in treating acetyl salicylic acid with a calcium salt, substantially as described.

4. The process of producing the calcium salt of acetyl salicylic acid which consists in dissolving calcium acetate in water, adding thereto a solution of acetyl salicylic acid in alcohol, and filtering off the calcium compound.

5. The process of producing the calcium salt of acetyl salicylic acid which consists in dissolving 80 parts of calcium acetate in 200 parts of water, adding thereto a solution of 180 parts of acetyl salicylic acid in 150 parts of methyl alcohol, and filtering off the calcium compound.

[Claim 6 not printed in the Gazette.]

1,020,122. ELECTRICAL INSULATOR. DANIEL G. BOLTON, Camden, N. J.; Annie C. E. Bolton, administratrix of said Daniel G. Bolton, deceased, assignor to Frank S. Diener, Camden, N. J. Filed May 28, 1910. Serial No. 563,980. (Cl. 173—313.)



1. An insulator comprising a bushing of insulating material, a wire attached to the bushing, an outer bushing around the first mentioned bushing, and a cover over said outer bushing.

2. An insulator comprising a bushing of insulating material, a wire secured thereto, an outer bushing surrounding the first mentioned bushing and spaced therefrom, and a filling of cement between said bushings and inclosing the wire.

3. An insulator comprising an inner bushing, a wire secured thereon, an outer bushing surrounding the first mentioned bushing and spaced therefrom, a wire receiving trough integral with said outer bushing, a wire in said outer trough and cement between said bushings and in said trough, inclosing said wires.

4. An insulator comprising an inner bushing, a wire secured thereon, an outer bushing surrounding the first mentioned bushing and spaced therefrom, a wire receiving trough integral with said outer bushing, a wire in said trough and cement between said bushings and in said trough inclosing said wires, and a cover over both of said bushings.

5. An insulator comprising a bushing of insulating material, a wire attached to said bushing, and means to seal the wire adjacent to the bushing and the attaching means aforesaid.

[Claims 6 and 7 not printed in the Gazette.]

1,020,123. CONDUIT-FITTING FOR ELECTRICAL AND OTHER PURPOSES. ARTHUR BRAMPTON, Birmingham, and FRED OSBORNE, Four Oaks, England. Filed Apr. 9, 1910. Serial No. 554,545. (Cl. 247—4.)



1. In a conduit fitting, the combination of two sheet metal half round parts together forming a tubular fitting and having perforated lugs and inwardly turned edge flanges, sleeves being pressed up from the sheet metal immediately surrounding the perforations of certain of the lugs, said sleeves being internally screw-threaded and providing a greater length of thread than the normal thickness of the metal sheet; screws in said perforations and engaging the threads of said sleeves; and means surrounding the screws between said lugs and protecting the screws against contact with cables in the fittings.

2. In a conduit fitting for electrical and other purposes two half round parts each pressed from sheet metal and adapted to be placed together to form a tubular fitting, lugs on each side of said parts, transverse screws passing through said lugs for securing the two parts together, and sleeves pressed up from said lugs into the interior of the fitting and internally screw-threaded for the purpose of receiving the securing screws and providing a greater length of screw thread than the thickness of the metal, said sleeves preventing rubbing of the cable on said screws; substantially as set forth.

3. In a conduit fitting for electrical and other purposes two half round parts each pressed from sheet metal and adapted to be placed together to form a tubular fitting, means for limiting the extent to which the tubes may be inserted in such fitting, lugs on each of said parts, transverse screws passing through said lugs for securing the two parts together, and sleeves pressed up from said lugs into the interior of the fitting and internally screwed for the purpose of receiving the securing screws and providing a greater length of screw thread than the thickness of the metal, said sleeves preventing rubbing of the cable on said screws; substantially as set forth.

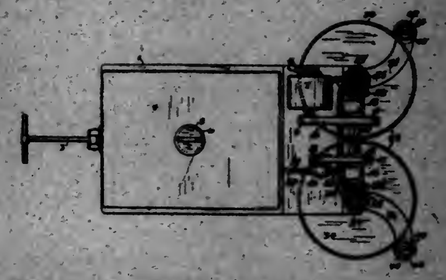
4. In a conduit fitting, for electrical and other purposes, two half round parts each pressed from sheet metal and adapted when placed together to form a tubular fitting, screws for securing the two parts together, mutually engaging sleeves pressed up from each of said fittings for the purpose of inclosing and surrounding the screws; all for the purpose specified and substantially as set forth.

1,020,124. HYDRAULIC CEMENT. FREDERICK W. BROWN, Florence, and GEORGE W. BARTHOLOMEW, Denver, Colo. Filed Dec. 22, 1908. Serial No. 468,740. (Cl. 106—25.)

1. A composition of matter resulting from the mixture of slag, cement, chlorate of calcium and sulfate of lime in the proportions substantially as specified.

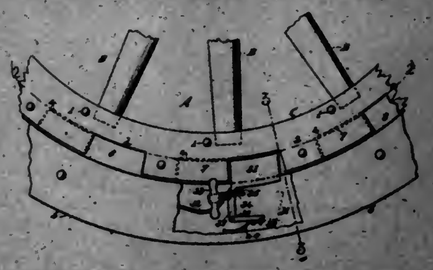
2. A composition of matter resulting from the mixture of chilled furnace slag, hydraulic cement, chlorate of calcium and sulfate of lime, in the proportions substantially as specified.

1,020,125. SCRUBBING-MACHINE. ARTHUR B. BUTTERWORTH, San Francisco, Cal. Filed Oct. 26, 1911. Serial No. 656,828. (Cl. 15—14.)



In combination, a main scrubbing brush, an auxiliary scrubbing brush in contact with said main brush, both brushes being revolnble about a vertical axis, and means for revolving said brushes in unison, the diameter of the auxiliary brush being so related to the diameter of the main brush, that the two external common tangential vertical planes meet substantially at right angles.

1,020,126. LOCKING DEVICE FOR DETACHABLY SECURING A RIM TO THE FELLY OF A WHEEL. HENRY N. CARRAGHER, Fall River, Mass. Filed Mar. 20, 1911. Serial No. 615,723. (Cl. 152—21.)

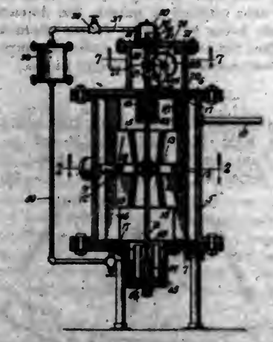


1. A wheel rim; a series of intermittent grooves in its outer circumference; openings leading from the side of the rim into said grooves; an auxiliary rim provided on its inner circumference with a series of bosses adapted to be moved through said openings and then twisted into locking engagement with said grooves; a stud formed to occupy the space vacated by one of said bosses when it is moved into engagement with its respective groove; said boss and said stud practically filling the latter groove and thus preventing circumferential slipping between the main rim and the auxiliary rim; a spring mounted in a cavity in the auxiliary rim and having the said stud connected therewith, said spring tending to move the stud out of the cavity and to hold the stud in locking engagement with its boss and the wheel rim; a lock arm to engage a shoulder on said stud, and lock the latter in locking position; a spring to hold the lock arm in locking position; said stud and said lock arm being designed to be operated by suitable means to disengage the lock arm from the

shoulder of the stud, and to force the stud out of said groove and into its cavity to permit the boss to be moved in said groove, circumferentially in relation to the rim, and then outwardly through the said side opening for said boss.

2. A wheel rim; an auxiliary rim; a series of intermittent grooves in the circumference of one of said rims, and openings leading from the side of the rim into the said grooves; a series of bosses in the circumference of the other of said rims, and adapted to be moved through said openings and then twisted into locking engagement with said grooves; a stud formed to occupy the space vacated by one of said bosses when it is moved into engagement with its respective groove; said boss and said stud practically filling the latter groove and thus preventing circumferential slipping between the main rim and the auxiliary rim; a spring mounted in a cavity in one of said rims and having the said stud connected therewith, said spring tending to move the stud out of the cavity and to hold the stud in locking engagement with its boss and groove; a lock arm to engage a shoulder on said stud and lock the latter in locking position; and a spring to hold the lock arm in locking position; said stud and said lock arm being designed to be operated by suitable means to disengage the lock arm from the shoulder of the stud and to force the stud out of said groove and into its cavity to permit the boss to be moved in said groove circumferentially and then outwardly through said side opening for said boss.

1,020,127. FLUID-METER. EDGAR P. COLEMAN, Buffalo, N. Y.; Robert H. Coleman administrator of said Edgar P. Coleman, deceased. Filed July 6, 1909. Serial No. 506,024. (Cl. 73—37.)



1. In an integrating fluid meter, the combination of a motor embracing a jet-nozzle through which is discharged the fluid to be measured and a rotor which is operated by the force due to the velocity of the fluid discharged through said nozzle, said nozzle having a uniformly converging, parallel-discharge jet-orifice affording a constant coefficient of discharge, a rotative resistance-member connected and turning with said rotor, and a registering device operated by the rotor.

2. In an integrating fluid meter, the combination of a motor embracing a jet-nozzle through which is discharged the fluid to be measured and a rotor which turns on a vertical axis and which is provided with rigidly attached blades or buckets, said rotor being operated by the force due to the velocity of the fluid discharged through said nozzle and said nozzle having a uniformly converging, parallel-discharge jet-orifice affording a constant co-efficient of discharge, a rotative resistance member rigidly attached to and turning with said rotor, and a flotation bearing for said rotor consisting of a body of liquid having greater density than the fluid to be measured, and a float rigidly connected with the rotor and resting in said body of dense liquid.

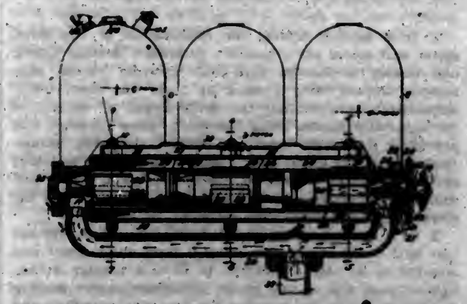
3. In an integrating fluid meter, the combination of a motor embracing a jet-nozzle through which is discharged the fluid to be measured and a rotor which turns on a vertical axis and is provided with rigidly attached blades or buckets, said rotor being operated by the impact against said blades or buckets of the fluid to be measured as it is discharged from said jet-nozzle, an upright shaft carrying said rotor, and a float bearing for said shaft embracing a body of liquid having greater density than the fluid to be measured, and a float attached to said shaft and resting in the said body of dense liquid.

4. In an integrating fluid meter, the combination of a casing, a motor within the casing embracing a rotor turning on a vertical axis, and a horizontally arranged jet-nozzle, said rotor being actuated by the discharge through said nozzle of the fluid to be measured, a resistance-member embracing a plurality of blades attached to and turning with said rotor, and a plurality of fixed blades surrounding the said rotor within the casing.

5. In an integrating fluid meter, the combination of a casing, a motor within the casing embracing a jet-nozzle and a rotor operated by the discharge of the fluid being measured through said jet-nozzle, an upright rotor-shaft, and a bearing for said shaft adapted to hold said shaft from lateral movement and to receive a lubricant, said bearing embracing a body of dense liquid forming a liquid-seal for isolating the lubricant from the liquid being measured, and a flotation device for sustaining the weight of said shaft and attached parts, embracing a float which rests in the said body of dense fluid.

[Claims 6 to 18 not printed in the Gazette.]

1,020,128. INTERNAL-COMBUSTION ENGINE. DAVID H. COLES, Brooklyn, N. Y., and FREDERICK CHARAVAY, Jersey City, N. J., assignors, by mesne assignments, to Requa Motor Company, a Corporation of New York. Filed May 13, 1910. Serial No. 561,035. (Cl. 123—59.)



1. In an internal combustion engine, the combination of a plurality of power cylinders and of pump cylinders, a stationary compression chamber communicating with each of said power cylinders, a valve casing within said chamber having ports opening into said chamber and into said pump cylinders and a rotary intake valve having ports adapted to register with the valve casing ports leading to said pump cylinders and having exterior channels for placing said pumps in communication with said chamber.

2. In an internal combustion engine, the combination of a plurality of power cylinders and of pump cylinders, a stationary compression chamber communicating with said power cylinders, a valve casing having ports opening into said chamber and into said pump cylinders, a rotary gas intake valve therein open at both ends to a gas supply and having ports and channels adapted to place each pump in communication with a gas supply and with said chamber during each revolution of the engine.

3. In an internal combustion engine, the combination of a plurality of power cylinders and of pump cylinders, a stationary compression chamber communicating with said pump cylinders, a valve casing having ports opening into said chamber and other ports opening into said pump cylinders, a rotary gas intake valve open to a gas supply at both ends and having ports adapted to place said pumps in communication with said intake valve and having channels adapted to place said pumps in communication with said chamber and packing rings intermediate the ends of said channels.

4. In an internal combustion engine, the combination of a plurality of power cylinders and of pump cylinders, a stationary compression chamber communicating with said power cylinders, a valve casing in said chamber having ports opening into said chamber and into said pump cylinders, a rotary gas intake valve therein having ports and channels adapted to place each pump in communication with a gas supply and with said chamber as the valve rotates, said valve being provided with packing rings intermediate said channels and a gas supply conduit opening into both ends of said valve.

5. In an internal combustion engine, the combination of a plurality of power cylinders and pump cylinders, a stationary compression chamber having communication with said cylinders and rotary gas intake valve means within said chamber for controlling supply of gas to said chamber through said pump cylinders.

[Claim 6 not printed in the Gazette.]

1,020,129. CLAMP. CHAUNCEY D. CRANDAL, deceased, St. Louis, Mo., by Nellie A. Crandal, administratrix. Filed Jan. 24, 1910. Serial No. 539,877. (Cl. 144—303.)

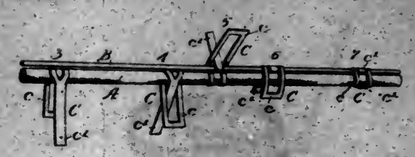


1. A clamp comprising a U-shaped frame formed of a single circular rod, a member rigidly secured to the open end thereof, a sliding member mounted between the side members of the frame and having bearing thereon at its front and rear ends only, a cam mounted on the sliding member, a contact plate slidably mounted in advance of the sliding member, a dog mounted on each side of the sliding member, and having an opening of a slightly greater diameter than the circular rod the edges of said opening adapted to bite the rod and firmly hold the sliding plate at any point on the frame, the springs for holding the dogs in frictional contact with the frame, and means whereby both dogs may be released simultaneously.

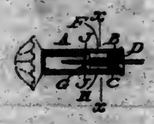
2. A clamp comprising a U-shaped frame formed of a single circular bar, a member rigidly secured at the open end thereof, a sliding member mounted between the parallel members of the frame, having bearing thereon at its front and rear ends, a contact plate slidably mounted in advance of the sliding member and having bearing on the side members of the frame both in front and at the rear of the front bearing of the sliding member, a pair of dogs mounted on the sliding member and having an opening slightly larger than the diameter of the circular bar through which the bar is passed, springs mounted on the bar between the dogs and the rear bearing of the sliding member for holding the dogs in frictional contact with the bar, the edges of the opening adapted to bite on opposite sides of the bar thereby firmly locking the sliding plate at any desired point on the frame and means whereby said dogs may be simultaneously released from contact with the bar, substantially as specified.

1,020,130. CABLE CLIP OR HANGER. CHARLES GRAYSON DAVIDSON, Waco, Tex. Filed Jan. 2, 1912. Serial No. 669,032. (Cl. 248—33.)

The combination with a cable and a supporting wire, of a clip or hanger which is bent around the cable and has a loop portion passed under and over the wire and then back upon itself around the cable, and a tongue portion which is passed through the loop under and over the wire and through the loop and then back around the cable, being interlocked at its end with the end of the loop.



1,020,131. HAT-PIN HOLDER AND SHEATH. HENRY S. DEANER, Sr., Philadelphia, Pa. Filed Mar. 9, 1911. Serial No. 613,322. (Cl. 24—155.)



1. In a pin holder of the character stated, a spring composed of a single plate having a plurality of radiating wings united near the center and all diverging from the inner bends of the several wings as a center and adapted to be expanded at said center by the entrance of a pin between the same, one of the wings being formed by the terminals of the plate, said terminals being separated at the outer extremity of the wing.

2. In a pin holder of the character stated, a sheath, and a spring received in said sheath and composed of a plate having a plurality of radiating wings united near the center and all diverging from the inner bends of the several wings as a center and adapted to be expanded at said center by the entrance of a pin between the same, one of the wings being formed by the terminals of the plate, said terminals being separated at the outer extremity of the wing, and one terminal being of less length than the other.

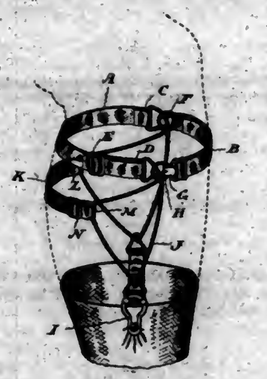
3. A pin holder composed of a sleeve, a tubular piece at the inlet thereof, a spring within said sleeve back of said piece, and a shoulder on the interior of the sleeve for the thrust of said spring in inward direction, said spring being formed of radiating wings with a passage centrally between the same, said passage being in communication with the bore of the inlet piece and the interior of said sleeve, said wings being adapted to grip the pin within the passage.

1,020,132. HOSE-SUPPORTER. JEROME CHAS. DIETRICH, Galt, Ontario, Canada. Filed Sept. 20, 1909. Serial No. 518,618. (Cl. 241—6.)

1. A hose supporter comprising a circular leg band divided into front and rear sections; a detachable connection between two adjacent ends of the front and rear sections; hose clasps, a half band intermediate said leg band and hose clasps, adapted to pass around the back of the leg over the bulge of the calf; and means for supporting said hose clasps from said leg band, said means being connected with the front ends of the rear section of the leg band and having a sliding connection with the rear ends of the front section of the leg band and with the ends of the half band.

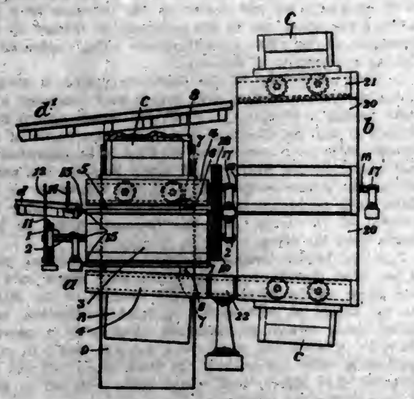
2. A hose supporter comprising a leg band formed in two parts, one of which parts is provided at each end with an eye; hose clasps; double cords connected to the clasps and to the leg band, each double cord being connected with an end of one part of the leg band and led

through an eye on an end of the other part of said leg band; and a supplemental half band passing around the



back of the leg and having one part of each of said double cords passing freely through an end thereof.

1,020,133. ROTARY TIPPLER FOR USE IN DISCHARGING COAL OR OTHER MINERAL FROM HUTCHES, CORVES, OR THE LIKE. JOSEPH DODDS, Glasgow, Scotland. Filed June 20, 1911. Serial No. 634,197. (Cl. 214—11.)



1. A rotary tippler comprising, in combination, a discharging device in which the hutches are turned downward so as to discharge the contents, and a righting device which is adapted to receive the discharged hutches and raise the same to a level higher than the level of entry of the loaded hutches into the discharging device.

2. A rotary tippler comprising, in combination, a discharging device in which the hutches are turned downward so as to discharge their contents, a righting device which is adapted to receive the discharged hutches and raise the same to a level higher than the level of entry of the loaded hutches into the discharging device and means for operating the righting device simultaneously with the discharging device.

3. A rotary tippler comprising, in combination, a discharging device in which the hutches are turned downward through a half revolution so as to discharge the contents and a righting device which is operated automatically from the discharging device and is adapted to receive the discharged hutches and raise the same to a level higher than the level of entry of the loaded hutches into the discharging device.

4. A rotary tippler comprising, in combination, a discharging device in which the hutches are turned downward through a half revolution so as to discharge the contents, a righting device which is adapted to receive the discharged hutches and raise the same to a level higher than the level of entry of the loaded hutches into the discharging device, and means whereby the righting device is operated automatically from, and simultaneously with, the discharging device.

5. A rotary tippler comprising, in combination, a discharging device, means in the discharging device for receiving the loaded hutches, means on the discharging device whereby the mineral discharged and the loaded hutches together cause the device to rotate and discharge the said mineral from the hutches, a righting device which is adapted to receive the discharged hutches and raise the same to a level higher than the level of entry of the loaded hutches into the discharging device, and gearing whereby the righting device is operated automatically from the discharging device.

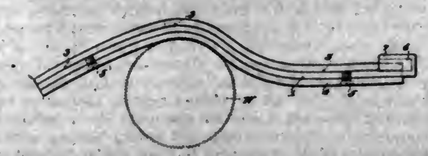
[Claims 6 to 10 not printed in the Gazette.]

1,020,134. CAN-LINING. TAKANOSHIN DOMOTO, San Francisco, Cal. Filed Nov. 15, 1911. Serial No. 660,416. (Cl. 99—8.)



The improvement in separating containers from the contents thereof, consisting in applying independent removable lining within the container, formed of bamboo leaves prepared and shaped to fit the interior of the container.

1,020,135. SOLE-HOLDING DEVICE. FRANK E. DROWN, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Dec. 18, 1911. Serial No. 666,427. (Cl. 12—17.)



1. As an article of manufacture, a rigid form for sole blanks having a substantially uniform thickness throughout and shaped to correspond to the molded shape of a sole blank whereby the form with a molded sole blank supported thereon may be readily fed through a machine while preserving the molded shape of the sole blank, substantially as described.

2. As an article of manufacture, a rigid form for sole blanks having a substantially uniform thickness throughout and provided upon its under side with a layer of frictional material whereby the form may be readily fed through a machine, substantially as described.

3. As an article of manufacture, a rigid form for sole blanks having a substantially uniform thickness throughout and provided at its heel end with a gage having overhanging ribs to position and retain a sole blank upon the form, substantially as described.

4. A sole holder consisting of a rigid metallic plate provided with upstanding spurs upon its upper surface and with a layer of frictional material upon its under surface, substantially as described.

1,020,136. NURSING-BOTTLE HOLDER. CHARLES A. PEELY and ANDREW F. HENNELLY, New York, N. Y. Filed May 3, 1910. Serial No. 559,120. (Cl. 215—116.)



A bottle holder of the character described, comprising longitudinal members with their outer portions converging toward each other and fixed to a ring of a diameter adapted to conform to the cross section of the tapered neck portion of the bottle, said longitudinal members having fixed thereto near their opposite ends substantially elliptical rings adapted to encompass the bottle near its bottom, one of said rings having fixed thereto an outstanding arm in alinement throughout its length with the axis of said ring, a supporting link pivoted to said arm, one of said longitudinal members having a pivoted transverse bottom member carrying a yielding disk for the support of the bottle at its bottom, said transverse pivoted member having means for its retention upon the opposite longitudinal member, a bridle member of curved outline fixed to said longitudinal members at a point to enable it to engage the bottle near the base of the tapering portion of the bottle, said bridle member also standing at an inclination to the axis of said longitudinal members to aid in frictionally engaging the bottle when the same is inverted as in pouring from the latter, to serve as a stop against outward endwise movement of the bottle, and means connected to the link for clamping and holding the device to a support.

1,020,137. ATTACHMENT FOR WOOD-STAVE CONDUITS. JULIUS W. FLINN, Golden, Colo. Filed Jan. 25, 1911. Serial No. 604,615. (Cl. 137—75.)

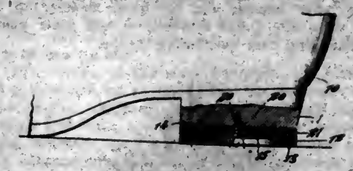


1. An attachment for wood-stave conduits comprising an article of T-shaped cross section composed of two connected sheet-metal plates of dissimilar lengths, the shorter one of which is adapted to be inserted from the interior of a conduit, between the ends of two abutting staves thereof, and the other plate being curved to conform with the interior surface of the said conduit.

2. The combination with a wood-stave conduit of an attachment of T-shaped cross-section composed of two connected plates of dissimilar length, the shorter one of which is disposed between the ends of two alined staves of the conduit, its outer edge being flush with the exterior surface of the same, and the other plate being curved in engagement with the interior surface of the conduit.

1,020,138. ADJUSTABLE HEEL FOR FOOTWEAR. HARRY B. FAY, New York, N. Y. Filed Apr. 20, 1911. Serial No. 622,821. (Cl. 36—39.)

1. A heel, a detachable wearing portion, a fastening element having arms provided with sharpened parts projecting through said wearing portion and entering the heel and a screw passing through the element and serving as a means for adjustably holding the wearing portion to the heel.



2. A heel, a rubber wearing portion, provided with a fabric portion, a fastening element having a body provided with a depressed part forming a central opening and arms projecting through said wearing portion and entering the heel and a screw passing through the central opening and serving as a means for adjustably holding the wearing portion to the heel and as a pivot to permit adjustment thereof.

3. An adjustable heel having its body formed of rubber with a fabric portion forming a part thereof and having a substantially central recess on the wearing face thereof, a fastening element having a body portion provided with a central depressed part and with arms having angularly formed ends adapted to pass through the body of the heel and to enter the heel of the article to which the adjustable heel is fastened, and a screw seated in the depressed central portion of the fastening element and adapted to engage the heel of the article to which the adjustable heel is secured and to serve as a pivot for said adjustable heel.

1,020,139. TONGS FOR SEPARATING SPINNING-CYLINDERS. ALFRED FURRER, Altstadt, near Tetschen, Austria-Hungary. Filed Apr. 19, 1911. Serial No. 621,972. (Cl. 29—85.)



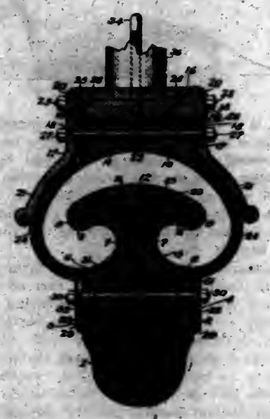
Tongs for separating spiked cylinders, comprising a block having a tapering recess, a pair of headed jaws having correspondingly flaring projections that snugly engage said recess, the heads of said jaws having a pair of alined flaring slots that decrease in width from top to bottom, whereby shafts of different diameters and carrying said spiked cylinders are adapted to be seated within said slots, a spindle with right and left threads journaled in the block and engaging the jaws, and means for operating the spindle.

1,020,140. REMOVABLE RIM FOR VEHICLE-WHEELS. CARROLL D. GALVIN, Merchantville, N. J., assignor of one-sixth to Amandus F. Jorss, one-sixth to Charles Jacobsen, and one-sixth to Eugene S. Cochran, Washington, D. C. Filed Dec. 6, 1911. Serial No. 664,139. (Cl. 152—33.)

1. A wheel rim comprising inner and outer annular members spaced apart, the outer member having annular recesses in its sides at intermediate points, cushioning means arranged in the annular space between said members and having portions directed toward each other and snugly occupying the recesses in the outer member, and annular protectors arranged at opposite sides of the cushioning means and extending between and connected with the inner member and the outer member.

2. A wheel rim comprising inner and outer annular members spaced apart, the outer member having annular recesses in its sides at intermediate points, cushioning means arranged in the annular space between said mem-

bers and having portions directed toward each other and snugly occupying the recesses in the outer member, and annular protectors arranged at opposite sides of the cushioning means and extending between and connected with the inner member and the outer member, in combination with side plates attached to said inner member and overhanging said cushioning means.



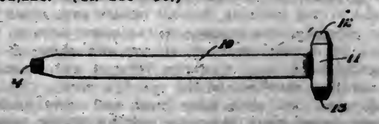
3. A wheel rim comprising an inner felly portion, an outer felly spaced from said inner felly portion, cushioning means interposed between said inner felly portion and said outer felly and having inflated portions extending on each side of the latter, flexible driving disks having terminals anchored to the inner felly portion and the outer felly, and disks secured at opposite sides of the inner felly and overhanging the cushioning means and extending beyond the inner circumferential plane of the outer felly.

4. A wheel rim, comprising an inner felly portion, an outer felly spaced from said inner felly portion and having outer and inner portions and an intermediate portion of decreased thickness, whereby recesses are afforded between said outer and inner portions, cushioning means interposed between the inner felly portion and said outer felly and having inflated portions directed toward each other and disposed in said recesses of the outer felly and driving disks anchored to the outer and inner felly.

5. A wheel rim, comprising an inner felly portion, an outer felly spaced from said inner felly portion and having outer and inner portions and an intermediate portion of decreased thickness, whereby recesses are afforded between said outer and inner portions, cushioning means interposed between the inner felly portion and said outer felly and having portions directed toward each other and disposed in said recesses of the outer felly, driving disks anchored to the outer and inner felly, and disks secured to opposite sides of the inner felly and overhanging the cushioning means.

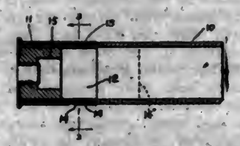
[Claims 6 to 8 not printed in the Gazette.]

1,020,141. SCREW-DRIVER. WALDO C. GORDON, Boston, Mass., assignor of one-half to Herbert J. Wilder, Norwood, Mass. Filed Nov. 14, 1910. Serial No. 592,228. (Cl. 145—50.)



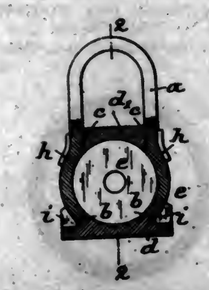
A screw driver, comprising a bar having at one end a bit-edge adapted to engage in the slot of a screw and extending perpendicular to the longitudinal dimension of the bar; having at the other end a head extending perpendicular to the longitudinal dimension of the bar, said head having two bit-edges on opposite sides of said bar, each in a plane parallel to said longitudinal dimension of the bar and both in a single plane making forty-five degrees angle with said longitudinal dimension of the bar; the said head lying in the last mentioned plane and forming a handle by which the said bit-edge may be turned.

1,020,142. PAPER SHOT-SHELL. FRANK O. HOAGLAND, Bridgeport, Conn., assignor to The Union Metallic Cartridge Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Oct. 10, 1911. Serial No. 653,906. (Cl. 102—17.)



A paper shot shell comprising a shell, a metallic head inclosing one end of said shell and provided with depressed exterior panels having raised portions, and an expanded steel lining within the shell and provided with a smooth exterior, portions of said shell being also expanded by said lining around said depressed panels and also into the raised portions of said panels whereby a double lock between the shell and head is effected.

1,020,143. MAGNET-FRAME FOR ELECTRIC IGNITION-MACHINES. GOTTLOB HONOLD, Stuttgart, Germany, assignor to The Firm of Robert Bosch, Stuttgart, Germany. Filed May 17, 1910. Serial No. 561,892. (Cl. 171—209.)



1. In an electric ignition machine for internal combustion motors, the combination with an armature housing having two fitting surfaces radial to the armature axis and two fitting surfaces parallel to the shanks of the magnet, of a steel magnet comprising shanks and outwardly bent pole shoes of cross section equal to that of the shanks, said shanks being provided with fitting surfaces corresponding to the said fitting surfaces of the armature housing; substantially as described.

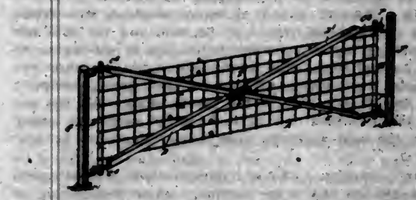
2. In an electric ignition machine for internal combustion motors, the combination with an armature housing provided with two fitting surfaces radial to the armature axis and two fitting surfaces parallel to the shanks of the magnet, of a permanent magnet comprising shanks and outwardly bent pole shoes of cross section equal to that of the shanks, said shanks being provided with corresponding fitting surfaces, and means for connecting up the magnet in the working assemblage; substantially as described.

3. In an electric ignition machine for internal combustion motors, the combination with an armature housing provided with radial fitting surfaces and parallel fitting surfaces, of a permanent magnet, comprising shanks and outwardly bent pole shoes of cross section equal to that of the shanks, the shanks being provided with corresponding fitting surfaces, and the armature housing being provided with lugs adapted, after the magnet has been inserted in its working position, to be upset about the edges thereof; substantially as described.

4. In an electric ignition machine for internal combustion motors, the combination with an armature housing having radial fitting surfaces and parallel fitting surfaces, of a permanent magnet consisting of a plurality of steel bars, comprising shanks and outwardly bent pole shoes of cross section equal to that of the shanks, said shanks being provided with corresponding fitting surfaces, and means for securing the magnet in the working assemblage; substantially as described.

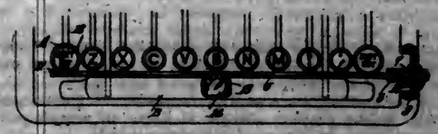
5. In an electric ignition machine for internal combustion motors, the combination with an armature housing provided with radial fitting surfaces and parallel fitting surfaces, of a permanent magnet comprising more than two bars each having shanks and outwardly bent pole shoes of cross section equal to that of the shanks and having corresponding fitting surfaces, the armature housing being provided with end plates having lugs adapted to be upset about the edges of the pole shoes, and the armature housing being likewise provided with a rib on its exterior surface, said rib having lugs which are adapted to be upset upon the edges of the adjacent pole shoes; substantially as described.

1,020,144. WIRE GATE. EPHRAIM HOWLAND, Pontiac, Mich. Filed Apr. 13, 1911. Serial No. 620,752. (Cl. 39—100.)



In a wire panel for gates, the combination of two vertical bars, a diagonal rigid bar non-slidably attached at one end to the upper end of one of said mentioned bars, and the lower end to the lower end of said second mentioned bar, two other diagonal bars, one end of one of which is connected to the upper end of one of said vertical bars, and one end of the other side bar is connected to the lower end of the opposite vertical bar, the two said diagonal bars equaling in lengths the rigid diagonal bar, the two interior ends of said divided bar being brought together and forced into a straight line as a toggle joint, and detachable means for fastening the ends of said bars together, a wire fabric connecting the two vertical bars and adapted to be stretched by the toggle joint action of the two halves of said diagonal divided bars, substantially as described.

1,020,145. TYPE-WRITER. ADA C. KENDRICK, Williamsburg, Kans. Filed Dec. 29, 1908, Serial No. 469,759. Renewed Mar. 13, 1911. Serial No. 614,155. (Cl. 197—78.)



1. In a device of the class described, the combination with a keyboard, of an oscillatory member attached at one end to the frame of the keyboard and engaged at its other end with one of the keys, and a finger-piece upon the member between its ends.

2. In a device of the class described, the combination with a keyboard, an oscillatory bar attached at one end to the frame of the keyboard and engaged at its other end with one of the keys, and a finger-piece upon the bar betweeen its ends.

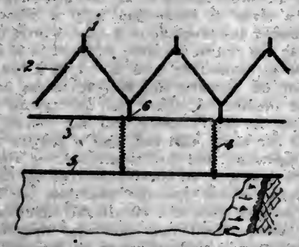
3. In a device of the class described, the combination with a keyboard, of an oscillatory bar pivotally attached at one end to the frame of the keyboard and engaged at its other end with one of the keys at the opposite side of the keyboard, and a finger-piece upon the bar at a point substantially midway of the sides of the keyboard frame.

4. In a device of the class described, the combination with a keyboard, of an oscillatory member attached at one end of the frame of the keyboard and provided at its other end with a finger having a lateral extension engaging with one of the keys, and a finger-piece upon the member between its ends.

5. In a device of the class described, the combination with a keyboard, of an oscillatory member attached at one end to the frame of the keyboard at one side thereof, the said member extending along beside the forward side of the key-board and engaged at its other end with one of the keys at the opposite side of the keyboard, and a finger-piece upon the member between its ends at a point substantially midway between the sides of the keyboard.

[Claims 6 to 8 not printed in the Gazette.]

1,020,146. LIFE-NET HOLDER. JOHN W. KYLE, San Diego, Cal. Filed Apr. 17, 1911. Serial No. 621,697. (Cl. 227—6.)



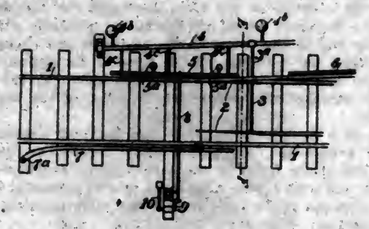
1. A life net holder comprising a rod securely attached to the one edge of a life net, a plurality of coiled springs attached at one of their ends to said rod, another rod attached to the other ends of said springs, a plurality of hooks securely fastened to the wall of a building, a cable adapted to be loosely supported by said hooks, a plurality of snaffle hooks connecting said cable with said last mentioned rod adapted to slide along said cable and rod to provide adjustment of said net to said wall or building, all substantially as set forth.

2. In combination with a life net, a life net holder comprising a rod securely attached to said life net, another rod parallel thereto and spaced apart therefrom, a plurality of springs connecting said rods, a cable adapted to be attached to and carry said last named rod, snaffle hook means slidably mounted on said cable adapted to facilitate its attachment to and removal from said rod and for adjusting said net relatively to said building, and a plurality of hooks securely mounted in the wall of a building and adapted to engage with said cable and support the same, all substantially as set forth.

1,020,147. AUTOMATIC SWITCH. THOMAS E. LEE, San Diego, Cal., assignor to Lee's Railway Switch Device Company, a Corporation of California. Filed May 1, 1911. Serial No. 624,577. (Cl. 104—77.)

1. In a device of the character described, the combination with a traveling vehicle of a shoe, means for raising

and lowering said shoe, a curved lever pivotally mounted near one rail of the track adapted to be operated by said shoe in connection with said rail, a bar tiltably mounted near the other rail, means connected to said lever adapted for tilting said bar against said rail; automatic means for releasing said bar, and means adapted to hold said bar above said rail, and to operate a railway switch, all substantially as set forth.



2. In a device of the character described, the combination with a traveling vehicle of a shoe, means for raising and lowering said shoe, a curved lever pivotally mounted near one rail of the track adapted to be operated by said shoe in connection with said rail, a bar tiltably mounted near the opposite rail thereof, means connected to said lever adapted to tilt said bar against said opposite rail, means for releasing said bar, means adapted to hold said bar above said rail, and to operate a railway switch, and another bar in connection with said track adapted to be held above the rail by the means before mentioned, all substantially as set forth.

3. In a device of the character described, the combination with a traveling vehicle of an inclined shoe adapted to operate a lever in connection with a railway rail, means for raising and lowering said shoe, a lever pivotally mounted near one rail in the track adapted to be operated by said shoe in connection with said rail, a bar tiltably mounted near the opposite rail thereof, means connected to said lever adapted for tilting said bar against said opposite rail, means for releasing said bar, means adapted to hold said bar above said rail, and a gravity actuated means for operating said last mentioned bar and to operate a railway switch, all substantially as set forth.

4. In a device of the character described, the combination with a railway train of a bar slidably mounted on the front end thereof, a bell-crank connected thereto, a vertical bar connected to said bell-crank on the said vehicle, an inclined member mounted on the lower extended end of said vertical bar, a means pivotally mounted outside of one of the rails provided with a curved surface near one end, and adapted to be shifted sidewise to and from said rail, a gravity actuated means connected thereto and extending across said track and adapted to operate a tiltably mounted bar on the other side of said track, a gravity actuated bar pivotally mounted on the opposite side of said track, means in connection with said gravity actuated bar for facilitating the raising and lowering of said tilting bar, and a means in connection with said gravity actuated bar for shifting the switch points in a railway track, all substantially as set forth.

5. In a device of the character described, the combination with a railway train of a bar slidably mounted on the front end thereof, a bell-crank connected thereto, a vertical bar connected to said bell-crank and slidably mounted on said vehicle, an inclined member mounted on the lower extended end of said vertical bar, means pivotally mounted outside of one of the rails of the track provided with a curved surface near its one end, and adapted to be shifted sidewise to and from said rail, a gravity actuated means connected thereto and extending across said track and adapted to operate a tiltably mounted bar on the other side of said track, a gravity actuated bar pivotally mounted on said opposite side of said track, means in connection with said gravity actuated bar for facilitating the raising and lowering of said tilting bar, means in connection with said gravity actuated bar for shifting the switch points in a railway track, and another bar in connection with said track mounted on said gravity actuated bar and adapted to be raised thereby, all substantially as set forth.

1,020,148. SNAP-BRACELET. PHILIP H. LETTER, Attleboro Falls, Mass. Filed Oct. 27, 1911. Serial No. 657,103. (Cl. 63—6.)



1. In a bracelet, a pair of hollow sections, one of the sections having an aperture in its side, and the other section having a leaf spring secured to and projecting from the end thereof into the end of the former section and having a catch engageable in the said aperture, and an ornamental piece secured to the former section having a yieldable portion over the said aperture for disengaging the catch.

2. In a bracelet, a pair of hollow sections, one section having a pair of apertures in its side, and the other section having leaf springs secured to and projecting from the ends thereof into the ends of the former section and having catches engageable in the said apertures, and an ornamental piece secured to the former section intermediate said apertures and having wings extending over the said apertures for disengaging the catches.

3. In a bracelet, a pair of hollow sections, one section having a contracted mouth at its end, and the said section also having an aperture in its side, a leaf spring secured to and projecting from the end of the other section into the former section, said leaf spring having a catch engaging in rear of the mouth piece when the sections are distended and having another catch for engaging in the said aperture when the sections are brought together.

4. In a bracelet, a pair of hollow sections, a mouth piece fitting into the end of one section, said section having an aperture in its side, a leaf spring secured to and projecting from the end of the other section into the former section, the said spring having a pair of slits in the end thereof forming three tongues, the outer tongues having catches on the outer edges thereof engaging in rear of the mouth piece when the sections are distended, and the inner tongue having a catch for engaging in the said aperture when the sections are brought together.

1,020,149. ELECTROLYTIC SEPARATOR AND PROCESS FOR MAKING THE SAME. PASCAL MARINO, London, England. Filed Dec. 24, 1910. Serial No. 599,107. (Cl. 204—29.)



1. An electrolytic separator consisting of fibrous material having superposed coatings thereon of silica and an organic substance.

2. An electrolytic separator consisting of fibrous material having coatings thereon of silica, an organic substance and a substance of bituminous origin.

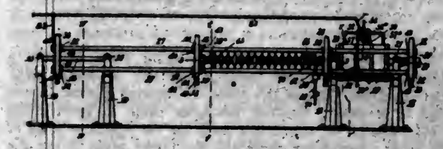
3. An electrolytic separator consisting of fibrous material having coatings thereon of silica and gutta percha.

4. An electrolytic separater consisting of fibrous material having coatings thereon of silica, gutta percha and paraffin wax.

5. The herein described process of making electrolytic separators which consists in treating fibrous material successively with an alkaline silicate, an acid and an organic substance.

[Claims 6 to 12 not printed in the Gazette.]

1,020,150. RADIATOR-ASSEMBLING MACHINE. WILLIAM C. MCKNOWN, Buffalo, N. Y., assignor to Buffalo Radiator Company, Buffalo, N. Y., a Corporation of New York. Filed Aug. 2, 1907. Serial No. 386,757. (Cl. 29—84.)



1. In a radiator assembling-machine, the combination with two pairs of standards, of a guide-rod supported on one pair of said standards, a support slidable and rotatable on said guide-rod, an abutment, a follower adjustable on said support and movable therewith, a cylinder supported by the other pair of standards, and a piston within said cylinder having connection with said support.

2. In a radiator assembling-machine, a support on which the radiator sections are laid, an abutment, and a follower adjustable longitudinally on said support; combined with a cylinder having pipes for the admission and discharge of a power-medium, a piston reciprocal within said cylinder and having connection with said support, a valve governing the admission to and discharge of the power medium from said cylinder, and a rod extending the full length of the support and connected to said valve.

3. In a radiator assembling-machine, the combination of a support comprising a plurality of bars and heads supported to allow a limited rotary movement, said heads having curved slots in which said bars are adjustably secured, an abutment and a follower movable toward and from said abutment and both located between said heads, said abutment and follower having slots through which said bars are passed, and which coincide with those of said heads, and a power-device for moving said follower toward and from said head.

4. In a radiator assembling-machine, the combination with a support comprising a plurality of parallel bars and supported heads at the ends of said bars capable of limited rotary motion, said heads having curved slots whose centers are coincident with the axis of said heads and in which slots the ends of said bars are adjustably secured, an abutment and a follower having curved slots through which said bars are passed and which coincide with those of the heads, means for adjusting and maintaining the follower in any adjusted position on said bars, and power-mechanism for moving said support lengthwise.

5. In a radiator assembling-machine, the combination with two pairs of standards, a cylinder supported on one pair of said standards, a power-actuated piston within said cylinder, and a guide-rod supported on the other pair of said standards, of a support comprising a plurality of parallel bars and heads connecting the ends of said bars, one of said heads being connected with said piston but being capable of rotation independent of the latter, and the other head being slidable and rotatable on said guide-rod, an abutment, and a follower adjustably secured to said parallel bars and between which and said abutment the radiator sections are placed to be connected on movement of said support with the piston.

[Claims 6 to 10 not printed in the Gazette.]

1,020,151. PHONOGRAPH. HARRY B. MCNULTY, East Cleveland, Ohio, assignor, by mesne assignments, to The United States Phonograph Company, Cleveland, Ohio, a Corporation of Ohio. Filed May 24, 1909. Serial No. 498,040. (Cl. 181—2.)



1. In mechanism of the class described, the combination of a record support; a movably mounted sound-box provided with a plurality of styluses respectively adapted to operate upon a record in different positions of said sound-box; means adapted variously to feed said record support and sound-box relatively to each other; and controlling means for said feed means adapted likewise to shift said reproducer to operatively position the desired stylus.

2. In mechanism of the class described, the combination of a record support; a slideway; a sound-box mounted on said slideway and provided with a plurality of styluses respectively adapted to operate upon a record in different positions of said sound-box; means adapted to feed said record-support and slideway relatively to each other at different rates of speed; and controlling means for said feed means adapted likewise to shift said sound-box in said slide-way to operatively position the desired stylus.

3. In mechanism of the class described, the combination of a mandrel for the record and a member relatively movable in a direction longitudinal of said mandrel, said member including a slideway extending transversely of said mandrel; a sound-box mounted on said slideway and provided with a plurality of styluses respectively adapted to operate upon a record in different positions of said sound-box; means adapted to feed said mandrel and member relatively to each other at different rates of speed; and controlling means for said feed means adapted likewise to shift said sound-box in said slideway.

4. In mechanism of the class described, the combination of a record support; a sound-box movably mounted and provided with a plurality of styluses respectively adapted to operate upon a record in different positions of said sound-box; means adapted to variously feed said record support and sound-box relatively to each other; and controlling means for said feed means adapted likewise to raise said styluses from a record and shift said sound-box.

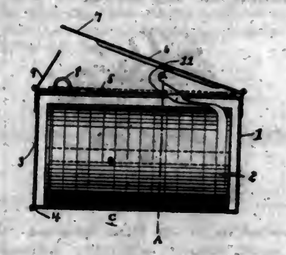
5. In mechanism of the class described, the combination of a record support; a slideway; a sound-box mounted on said slideway and including a weight and a plurality of styluses borne by said weight, said styluses being respectively adapted to operate upon a record in different positions of said sound-box; means adapted to feed said record support and slideway relatively to each other at different rates of speed; and controlling means for said feed means adapted likewise to raise said weight to render said styluses inoperative and to thereupon shift said sound-box in said slideway.

[Claims 6 to 44 not printed in the Gazette.]

1,020,152. TAPE-HOLDER. ALBERT MUSK, Rochester, N. Y. Filed Feb. 20, 1911. Serial No. 609,680. (Cl. 206—52.)

1. A holder of the class described comprising a casing having a longitudinally extending slot in the side thereof, a hinged closure at one end provided with a pivoted hasp adapted to lie on one side of the casing, an eye on the casing over which the hasp fits, and a slot cover pivoted to the end of the casing opposite the casing closure and fitting over the eye at its other end.

2. In a holder of the class described, a casing having a longitudinally disposed dispensing slot, a closure hinged to one end of said casing, a cover for said slot hinged at the diametrically opposite disposed corner of the cas-



ing, a hasp pivoted to the free end of the first-named closure, said hasp and the adjacent end of the slot-closure having openings adapted to coincide when in parallel relation, and means on the casing adapted to be received in said slots.

1,020,153. PROCESS OF MAKING FERTILIZER. SPENCER B. NEWBERRY and HARVEY N. BARRETT, Baybridge, Ohio. Filed Mar. 3, 1909. Serial No. 481,202. (Cl. 71—7.)

1. The process of making precipitated phosphate by dissolving natural phosphate of lime in hydrochloric acid with the addition of enough sulfuric acid to convert into sulfate the lime present as carbonate and approximately one-third the lime present as phosphate in the raw material, separating the solution from the insoluble residue, evaporating the solution to dryness, gently heating the residue of precipitated phosphate, and condensing the hydrochloric acid evolved.

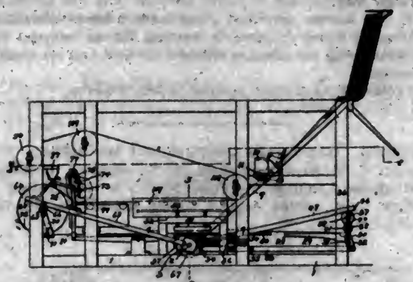
2. The process of making precipitated phosphate by dissolving natural phosphate in hydrochloric acid, filtering the solution from the insoluble residue, adding to the solution the amount of sulfuric acid necessary to precipitate as sulfate the lime present as carbonate and approximately one-third the lime present as phosphate in the raw material, filtering the solution from the precipitated sulfate of lime, evaporating the solution to dryness, gently heating the residue of precipitated phosphate, and recovering the hydrochloric acid evolved.

3. The process of making precipitated di-calcium phosphate by treating natural phosphate of lime with substantially enough sulfuric acid to convert into sulfate the lime present as carbonate and one-third the lime present as phosphate in the natural phosphate, separating the di-calcium phosphate formed from insoluble matter by the solvent action of hydrochloric acid, and recovering the di-calcium phosphate and hydrochloric acid by evaporating the solution and gently heating the residue.

1,020,154. MACHINE FOR JOINING SHEET-METAL PLATES. JOHN H. PALMER and EDWARD W. SALMON, Jr., Baltimore, Md. Filed July 20, 1911. Serial No. 639,491. (Cl. 113—54.)

1. In a machine of the character described the combination with means for bending one edge of each sheet to form a hook at said edge, of means for shifting the sheet; means for forming a hook on the opposite edge of the sheet after it has been shifted; means for engaging a hook of one sheet with a hook of another sheet; means for clamping the engaged hooks; means for applying solder to the engaged hooks while they are clamped and means for soldering the engaged and clamped hooks.

2. In a machine of the character described the combination with means for sustaining a sheet in an inclined position, of means for forming a hook on the lower edge of the inclined sheet; means for reversing the sheet to turn the opposite edge thereof down; means for forming a hook on said latter edge; means for engaging a hook of one sheet with a hook of another sheet and means for soldering the engaged hooks.



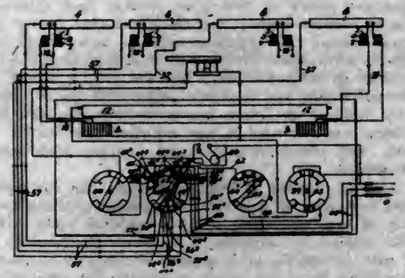
3. The combination with a swinging table to hold a sheet-metal plate in an inclined position, of means adjacent the lower edge of the table for forming a hook on one edge of a sheet; another swinging table to receive the sheet; means for forming a hook on the opposite edge of the sheet; means for operating the latter table to lay the hook-edge of one sheet in an overlapped position with the hook-edge of another sheet; means for closing the hooks together, and means for soldering the closed-together hooks.

4. The combination with means for sustaining a sheet-metal plate in an inclined position, of means for forming a hook on the lower edge of the inclined sheet; a swinging table to receive the sheet after the hook has been formed on one edge and to hold said sheet in an inclined position with the hook-edge uppermost; means for forming a hook on the opposite edge of the sheet; means for moving the table to overlap the hook-edges of two sheets; means for pressing the hooks on the overlapped sheets together and means for soldering the closed hooks.

5. The combination with an upper swinging table, of a lower swinging table; means in a horizontal plane between the two tables for forming a hook on one edge of a sheet metal plate; means adjacent the lower table for forming a hook on the opposite edge of the sheet-metal plate; means for engaging a hook of one sheet with the hook of another sheet and means for soldering the engaged hooks.

[Claims 6 to 9 not printed in the Gazette.]

1,020,155. ELECTRIC AUTOMUSICAL INSTRUMENT. THOMAS ERNEST RAYMOND PHILLIPS, Liverpool, England. Filed Oct. 21, 1908. Serial No. 458,890. (Cl. 84—174.)



1. In electrically operated musical instruments, the combination of groups of keys; magnets for operating the keys; a plurality of bus-bars, respectively connected with each group of keys; a source of electrical energy to give different voltages; a regulator comprising a plurality of series of contacts, and a plurality of switch contacts, the contacts of each series being connected with the bus-bars, and with the source to give currents of different voltages; a tracker bar device connected with the magnets of the keys; a music sheet, means for moving the music sheet over the tracker bar device; and electrical circuits connecting the various elements together.

2. In electrically operated musical instruments, the combination of a plurality of groups of keys; magnets for operating the keys; a corresponding plurality of bus-bars; electrical batteries for giving currents of different voltages; a regulator comprising a plurality of series of contacts, for regulating the connection of the batteries with each of the bus bars; a tracker bar device connected with the magnets of the keys; a music sheet; means for moving and controlling the travel of, and carrying the music sheet over the tracker bar device; and electrical circuits connecting the various elements together.

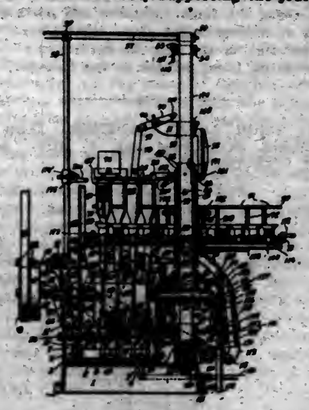
3. In electrically operated musical instruments, the combination of a plurality of groups of keys; magnets for operating the keys; a corresponding plurality of bus-bars; electrical batteries for giving currents of different voltages; a regulator comprising a plurality of series of contacts, and a plurality of switch contacts having handles, for regulating the connection of the batteries with each of the bus bars; a tracker bar device connected with the magnets, and comprising a plurality of metal plates separated by disks of insulated material, and a movable brush contact device; a music sheet; rolls for carrying the music sheet; means for operating and controlling the travel of the music sheet between the tracker bar device and the brush contact device; and electrical circuits connecting the various elements together.

4. In electrically operated musical instruments, the combination of a plurality of groups of keys; magnets for operating the keys; a corresponding plurality of bus-bars; electrical batteries for giving currents of different voltages; a regulator comprising a plurality of series of contacts, and a plurality of switch contacts having handles, for regulating the connection of the batteries with the bus-bars; a tracker bar device connected with the magnets, and comprising a plurality of metal plates separated by disks of insulating material and a movable brush contact device; a music sheet; rolls for carrying the music sheet; a motor for operating the music rolls and sheets; gearing connecting the motor and the rolls; means for controlling the travel of the music sheet, comprising a series of electrical resistances and a switch for varying the resistance in the motor circuit; and electrical circuits connecting the several elements together.

5. An electrically operated musical instrument; comprising a plurality of groups of keys; magnets for operating the keys; a corresponding plurality of bus-bars; a series of electrical batteries for giving currents of different voltages; a regulator for connecting the electrical batteries of different powers to the bus-bars, and comprising a plurality of series of contacts and switch contacts concentrically arranged relatively to each other; separate operating handles for the switch contacts, mounted on the same axis; concentrically arranged spindles for connecting the operating levers with the switch contacts; a tracker bar device connected with the magnets, and comprising a plurality of metal plates mounted on a sleeve of insulating material and separated from each other by disks of insulating material, and a spring-controlled movable contact brush; a music sheet which passes over the tracker bar device; rolls for carrying the music sheet, disposed one above and one below the device; an electric motor for operating the rolls; gearing connecting the motor and the rolls; a rheostat for varying and controlling the speed of the motor; means for reversing the direction of rotation of the music rolls for rewinding; electrical circuits connecting the several elements together; and a casing having two chambers, one containing the music sheet and rolls and tracker bar device, and the other the controlling and operating mechanism.

1,020,156. BOTTLE-CLEANING MACHINE. PAUL POLNISCH, Philadelphia, Pa., assignor to William C. Schwebel, Philadelphia, Pa. Filed Dec. 29, 1910. Serial No. 599,952. (Cl. 141—7.)

1. In a bottle cleaning machine, the combination of orificed brush-carrying spindles, journals mounted on the spindles below the orifices, a spindle trough provided with bearings for the journals, gears mounted on the journals under the spindle trough, a chest supporting the trough, a base supporting the chest and forming therewith a reservoir between the two, and nozzles mounted in and tapped onto the chest and revolubly supporting the journals.



2. In a bottle cleaning machine, the combination of orificed brush-carrying spindles, a spindle trough through which the spindles extend, gears for driving the spindles located below the trough, a chest inclosing the gears, and whose bottom forms the top of a reservoir beneath the gear chest, and means on said bottom connecting the spindles with the reservoir permitting them to rotate on their axes.

3. In a bottle washing machine, the combination of orificed brush-carrying spindles, a spindle trough through which said spindles extend, gears for driving the spindles located below the trough, a chest inclosing the gears and supporting the trough, a base supporting the chest and forming therewith a reservoir between the two, and nozzles mounted in and tapped onto the chest and revolubly supporting the journals.

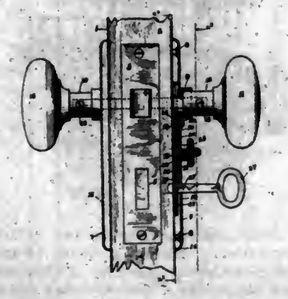
4. In a machine of the character described, the combination of spindles provided with orifices and with brushes above the orifices, journals mounted on the spindles below the orifices, a spindle trough provided with bearings for the journals, gears mounted on the journals under the spindle trough, a chest supporting the trough, a base supporting the chest and a reservoir between the chest and the base, nozzles mounted in the chest and tapped on its reservoir revolubly supporting the journals, a rinser trough above and at an angle with the spindle trough and provided with a reservoir, rinsers consisting of tubes provided with orifices mounted in the rinser trough and tapped on its reservoir, water supply pipes tapped on the reservoirs, a water main and a valve connecting the main with the supply pipes, a tray provided with apertures for the spindles to pass through and cylinders suspended from the tray under its apertures and provided with bearings for the spindles, and a table provided with apertures, a frame provided with apertures centrally above the table apertures and fixedly supported by posts above the table substantially as described and for the purposes set forth.

5. In a machine of the character described, the combination of spindles vertically supported along radial lines of a horizontal plane, journals mounted on the spindles, a spindle trough provided with bearings for the journals and gears of a train mounted on the journals for revolving the spindles, in a chest supporting the trough, a base under the chest and a reservoir between the base and the chest, nozzles tapped on the reservoir revolubly supporting the journals, a rinser trough supported at an angle with and above the spindle trough and provided with a reservoir, rinsers vertically mounted in said rinser trough and tapped on its reservoir along radial lines of a horizontal plane similar to that of the spindles, pipes tapped on the reservoirs, a main and a valve connecting the main with the

pipes, a tray provided with apertures along radial lines corresponding with the spindles, cylinders suspended from the tray around the apertures and provided with bearings for the spindles, a circular table provided with apertures along radial lines corresponding with those of the spindles radiating from its center, a frame provided with apertures centrally above the table apertures and posts supporting the frame at a fixed height above the table, substantially as described and for the purposes set forth.

[Claims 6 to 11 not printed in the Gazette.]

1,020,157. DOOR-LOCK FASTENER. JOHN POWERS, Los Angeles, Cal. Filed Aug. 7, 1911. Serial No. 642,871. (Cl. 70—84.)

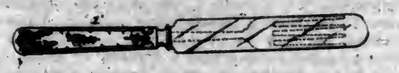


1. The combination with a lock having a square knob spindle, a bolt and an escutcheon plate provided with a key hole for receiving a key to operate said bolt, a key extending through said key hole and having a flattened portion, said escutcheon plate having upper and lower slots, a keeper plate sliding within said escutcheon plate and having studs extending through said slots, one of said studs being screw-threaded, a thumb nut on said screw-threaded stud on the outside of the escutcheon plate serving as handle and clamping means for the keeper plate, said keeper plate having slots in its upper and lower portions for engagement respectively with the knob spindle and with the flattened portion of the key to prevent rotation of the spindle and key.

2. The combination with a lock having a square knob spindle, a bolt and an escutcheon plate provided with a key hole for receiving a key to operate said bolt, a key extending through said key hole and having a flattened portion, said escutcheon plate having upper and lower slots, a keeper plate sliding within said escutcheon plate and having studs extending through said slots, one of said studs being screw-threaded, a thumb nut on said screw threaded stud on the outside of the escutcheon plate serving as handle and clamping means for the keeper plate, said keeper plate having slots in its upper and lower portions for engagement respectively with the knob spindle and with the flattened portion of the key to prevent rotation of the spindle and key, and a bow spring between the keeper and escutcheon plates, engaging said plates and said studs.

3. The combination with a lock having a square knob spindle, a bolt and an escutcheon plate provided with a key hole for receiving a key to operate said bolt, a key extending through said hole and having a flattened portion, said escutcheon plate having upper and lower slots, a keeper plate sliding vertically within said escutcheon plate and having studs extending through said slots for guiding said keeper plate, one of said studs being provided with means on the outside of the escutcheon plate serving as a handle for the keeper plate, said keeper plate having a slot at its upper end having vertically extending side walls for engaging with the knob spindle when the keeper plate is raised to prevent rotation of the knob spindle, and said keeper plate haivng a keyhole slot in its lower portion, the narrow portion of said keyhole slot having vertically extending side walls adapted to engage with the flattened portion of the key to prevent rotation of the key when the keeper plate is raised, and a spring between said keeper plate and escutcheon plate and frictionally engaging with the keeper plate for holding said keeper plate in raised or lowered position.

1,020,158. PROCESS OF MANUFACTURING EMBOSSED STEEL-HANDLED IMPLEMENTS OF STEEL. PATRICK W. POWERS, Northampton, Mass., assignor to William Wilson Lee, Northampton, Mass.; Helen Lee administratrix of said William Wilson Lee, deceased. Filed June 13, 1911. Serial No. 632,880. (Cl. 76—104.)



The process of making embossed steel-handled knives, forks and other implements of steel, consisting in electrically welding into one composite blank a handle-forming piece of substantially decarbonized steel and an implement-forming piece of hardenable steel; in converting said composite blank into the implement desired, leaving the handle-forming piece unhardened; and in embossing the handle in compression-embossing dies.

1,020,159. COMBINATION GATE AND BY-PASS VALVE. ALFRED PRICE, Los Angeles, Cal., assignor of one-half to Frank Rademacher, Los Angeles, Cal. Filed July 5, 1906. Serial No. 324,873. (Cl. 137—5.)



1. A valve body provided with a gateway, a valve-gate comprising two separate valve-disks mounted in said way and provided with ports and having by-pass valve-seats on their adjacent faces; two perforated by-pass valve-plates in said by-pass valve-seats for controlling the ports in said valve disks, and means for moving the valve-disks apart to tighten them in the way, and means to move the by-pass valve-plates to open and close the ports and the gate.

2. A valve-body provided with a gateway, a valve-gate comprising two valve-disks mounted in said way and provided with ports and having by-pass valve-seats on their adjacent faces; two perforated by-pass valve-plates in said by-pass valve-seats for controlling the ports in said valve-disks, and means for moving the by-pass valve-plates to open and close the ports and the gate, said means being adapted to spread the valve-plates apart.

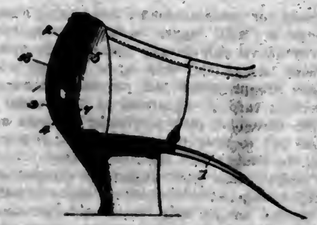
3. A valve-body provided with a gateway, a valve-gate comprising two valve-disks mounted in said way and provided with ports and having by-pass valve-seats on their adjacent faces; two perforated by-pass valve-plates in said by-pass valve-seats for controlling the ports in said valve-disks, means for moving the by-pass valve-plates to open and close the ports and the gate, said means being adapted to spread the valve-plates apart, and means for holding the spreading means inoperative during the movement of the valve-gate transversely of the valve-body.

4. A valve-body provided with a gateway, a valve-gate comprising two valve-disks mounted in said way and provided with ports and having by-pass valve-seats on their adjacent faces; two perforated by-pass valve-plates in said by-pass valve-seats for controlling the ports in said valve-disks; means for moving the by-pass valve-plates to open and close the ports and the gate, said means being adapted to spread the valve-plates apart, and resilient means for holding the spreading means inoperative during the movement of the valve-gate transversely of the valve-body.

5. A valve-gate comprising valve-plates having shoulders and also having ports and a valve-seat formed thereon; spring means carried by said plates; a by-pass valve operating between said plates and having ports arranged to register with said plate ports; and wedge means in operative relation to the valve-plates to uplift the same and arranged to engage said spring means for holding said plates down during the period between the release of the wedge and the uplifting of the valve plates.

[Claim 6 not printed in the Gazette.]

1,020,160. SHOE-PAD. LEWIS S. ROWE, Santa Barbara, Cal. Filed Sept. 30, 1911. Serial No. 652,076. (Cl. 36—71.)



1. The combination with a shoe, of a pad of yielding material having a central opening formed therein, said pad being shaped to conform to the inner surface of the heel counter of the shoe, and a facing strip of flexible material arranged upon the inner face of the pad and upon the wall of the opening therein, the edges of said strip extending beyond the edges of the pad and being secured to the heel counter to hold the pad in position.

2. The combination with a shoe, of a pad consisting of compressible material having a central opening therein and being gradually reduced in thickness from said opening to its edges, said pad being shaped to conform to the inner surface of the heel counter of the shoe, and a flexible facing strip arranged upon the inner face of the pad and extending into the opening thereof, portions of said strip being extended beyond the edges of the pad and secured to the shoe to hold the pad against displacement.

3. The combination with a shoe, of a felt pad of concavo-convex form provided with a central opening, a flexible backing secured to the convex face of the pad, and a flexible facing secured to the concave face of the pad and lying closely against the wall of the opening therein, the edges of said facing extending beyond the edges of the pad and being secured to the shoe to hold said pad against displacement.

1,020,161. PUMP-GANG. CHARLES W. SHARTLE, Middletown, Ohio. Filed Apr. 6, 1910. Serial No. 553,984. (Cl. 103—43.)



1. A fan-pump comprising, a casing-base, a casing-top secured thereto, there being a horizontal line of division between the top and base, an inlet and an outlet to the casing terminating on the plane of division between the top and base, a shaft passing through the casing in the plane of the joint between the top and the base, an impeller on the shaft within the casing, and a packing gland engaging the shaft at each side of the casing, combined substantially as set forth.

2. A fan-pump comprising, a casing-base, a casing-top secured thereto, there being a horizontal line of division between the top and base, an inlet and an outlet to the casing terminating on the plane of division between the top and base; a shaft passing through the casing in the plane of the joint between the top and the base, an impeller on the shaft within the casing, and a packing gland engaging the shaft at each side of the casing, said packing-glands being divided in the plane of the axis of the shaft, combined substantially as set forth.

3. A pump gang comprising a sole-structure, a plurality of pump casings secured thereto, a shaft extending through all the casings, driving means on the shaft, an impeller on the shaft within each casing, packing-glands on the shaft at each side of each casing, bearing-stands for the shaft, supported on the sole-structure and disposed on both sides of each pump casing, the pump casings, packing-glands and bearing-stands all being separable on a plane with the axis of the shaft, and inlet and outlets to the pump casing terminating also in the plane with the axis of the shaft.

1,020,162. CHURN. CLAUDE R. SIMMS, Pierce, Colo. Filed Dec. 16, 1911. Serial No. 666,121. (Cl. 31—43.)



1. In a churn of the class described, the combination with a supporting member, a pair of telescoping dasher shafts rotatably carried thereon and means to rotate said shafts; of a plurality of outwardly bent and irregularly curved spring arms, means to removably and simultaneously mount the inner ends of said arms on said supporting member, a clamping band secured to the outer ends of said spring arms, and means to adjustably secure said band on a receptacle.

2. In a churn of the class described, the combination with a supporting member, and a dasher shaft carried thereon; of means to mount said supporting member on a receptacle, comprising a collar clamped to said supporting member, a plurality of irregularly bent spring arms depending therefrom, a split band secured to the free ends of said spring arms, said band being provided with a plurality of slots contiguous with one end thereof and a portion formed on the other end of the same adapted to engage said slots to clamp the band on the outer periphery of a receptacle.

3. In a churn of the class described, the combination with a supporting member, and a dasher shaft carried thereon; of means to mount the supporting member on a receptacle comprising a clamping collar applied to said supporting member, a plurality of bent spring arms de-

pending therefrom, a split band secured to the free ends of said spring arms, said spring arms being curved compoundly contiguous with their free ends to form channel-ways between the band and portions of the springs, said channel-ways being adapted to receive the upper edges of a receptacle, and means to clamp said band on the outer periphery of a receptacle.

1,020,163. EXHAUST-MUFFLER. GEORGE F. SWAIN, Chicago, Ill. Filed Apr. 6, 1910. Serial No. 553,689. (Cl. 121—116.)



1. In an exhaust-muffler for internal combustion engines, the combination with a chamber for confining the exhaust gas, said chamber having an inlet and an outlet port, of a series of diaphragms fitting within said chamber transversely of the same, said diaphragms being provided alternately with a single large, central opening and with a plurality of smaller peripheral openings for the passage of the exhaust gas, said diaphragms being provided with open-ended flanges surrounding said openings on the inlet side of said diaphragms.

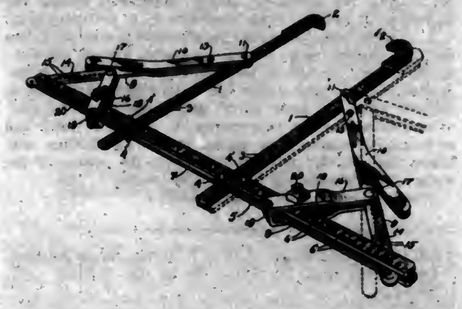
2. In an exhaust-muffler for internal combustion engines, the combination with a chamber for confining the exhaust-gas, said chamber having an inlet and an outlet port, of a series of diaphragms fitting within said chamber transversely of the same, said diaphragms being provided alternately with openings near their peripheries and their centers for the passage of the exhaust gas, said diaphragms being provided with open-ended flanges surrounding said openings on the inlet side of said diaphragms.

3. In an exhaust-muffler for internal combustion engines, the combination with a chamber for confining the exhaust-gas, said chamber having an inlet and an outlet port, of a series of cup-shaped diaphragms fitting within said chamber transversely of the same, the flanges of said diaphragms serving as spacing members for the diaphragms, and said diaphragms being provided with openings disposed so as to provide a tortuous path through said chamber for the exhaust-gas, said diaphragms being provided with open-ended flanges surrounding said openings on the inlet side of said diaphragms.

1,020,164. CLAMP FOR CONCRETE-FORMS. ARTHUR H. SYMONS, Kansas City, Kans. Filed Feb. 18, 1911. Serial No. 609,330. (Cl. 25—131.5.)

1. A clamp for concrete forms comprising hanger bars having ears at their upper ends for supporting said clamp from above, a two piece base bar carried by the hanger bars and having end portions projecting beyond the hangers, and tightening levers pivotally mounted on the hangers and adapted for adjustable connection with the base bar.

2. A clamp for concrete forms comprising hanger bars having ears at their upper ends for supporting said clamp from above and having apertures in their lower ends, a base bar having split ends through which the hanger bars are projected and provided with apertures, pins projecting through apertures in the hanger bars to support the base bar, and pins projecting through apertures in the base bar to keep the hanger bars.



3. A clamp for concrete forms comprising hanger bars having ears at their upper ends for supporting said clamp from above and having apertures in their lower ends, a base bar having split ends through which the hanger bars are projected and provided with apertures, pins projecting through apertures in the hanger bars to support the base bar, pins projecting through apertures in the base bar to keep the hanger bars, and levers for tightening the hanger bars against a form.

4. The combination with adjustable hanger and base bars, of tightening levers comprising levers pivotally connected with the hanger bars, yokes slidably mounted on the base bar, and arms having pivotal connection with the levers and yokes, substantially as and for the purpose set forth.

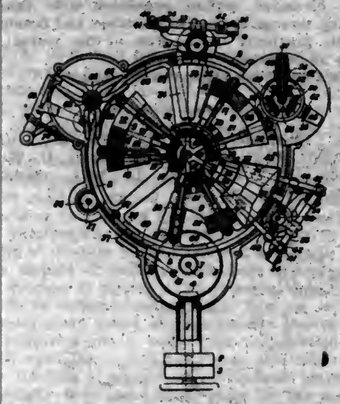
5. A clamp for concrete forms comprising hanger bars, a base bar, levers pivotally connected with said hanger bars, arms pivotally connected with said levers, each arm being provided with a plurality of apertures, and yokes adapted for supporting said base bar, each of said yokes having a pin pivotally projected therethrough and through an aperture in one of the lever arms.

[Claim 6 not printed in the Gazette.]

1,020,165. MACHINE FOR MAKING CONICAL PAPER TUBES. ELMER ZEBLEY TAYLOR, London, England, assignor, by mesne assignments, to American Mono Service Company, Atlantic City, N. J., a Corporation of New Jersey. Filed Mar. 5, 1910. Serial No. 547,563. (Cl. 93—79.)

1. A machine for the purpose described comprising in combination, a continuously rotating platen on which a pile of shaped blanks is placed, such platen being capable of rising automatically to accommodate itself to the decreasing height of the pile of blanks thereon, means for imparting rotary movement to such platen, means at the axis of rotation of said platen for automatically raising such platen during bodily rotation thereof, means for lowering such platen when necessary, means for positioning the blanks thereon, means for applying paste to such blanks, and means for rolling the pasted blanks to conical form, substantially as specified.

2. A machine for the purpose described comprising in combination, a continuously rotating platen on which piles of shaped blanks are placed, such platen being capable of rising automatically to accommodate itself to the decreasing height of the piles of blanks thereon, means for imparting rotary movement to such platen, means at the axis of rotation of said platen for automatically raising such platen during bodily rotation thereof, means for lowering such platen when necessary, means for positioning the piles of blanks thereon, a plurality of appliances for pasting such blanks, and a plurality of appliances for rolling up the pasted blanks to conical form, substantially as specified.



3. A machine for the purpose described comprising in combination a rotatable platen on which shaped blanks are placed, means for imparting rotary movement to such platen, a central screw, a slotted sleeve or column surrounding such screw, a nut engaging said screw and provided with wings engaging the slots in the sleeve or column to which wings the platen is secured, means for applying paste to the blanks and means for rolling the pasted blanks to conical form, substantially as specified.

4. A machine for the purpose described comprising in combination, a continuously rotating platen on which piles of shaped blanks are placed, such platen being capable of rising automatically to accommodate itself to the decreasing height of the piles of blanks thereon, a pinion and gear wheel for imparting a rotary movement to such platen, means for automatically raising such platen, means for lowering such platen when necessary, means for positioning the blanks thereon comprising a back support or fence and side guides adjustably carried by the gear wheel by which rotary movement is imparted to the platen, such side guides passing through slots in the platen, means for applying paste to the blanks, and means for rolling the pasted blanks to conical form, substantially as specified.

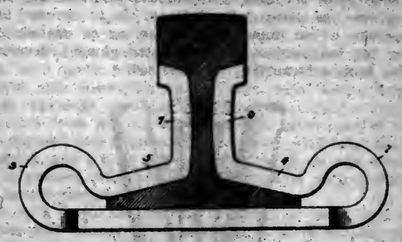
5. A machine for the purpose described comprising in combination a rotatable platen on which shaped blanks are placed, means for imparting rotary movement to such platen, means for positioning the blanks thereon, means for applying paste to such blanks comprising a conical pasting roller and a conical feed roller rotating in contact therewith, means for imparting continuous rotary motion to the pasting roller, a reservoir of paste or the like supported above such rollers and so formed that the open bottom thereof is closed by them, and means for rolling the pasted blanks to conical form, substantially as specified.

[Claims 6 to 16 not printed in the Gazette.]

1,020,166. RAIL-JOINT. FREDERICK MERRILL TIBBOTT, Norfolk, Va. Filed Sept. 6, 1911. Serial No. 647,990. (Cl. 239—6.)

1. A rail joint comprising a chair having a base plate adapted to be secured to the ties and to receive the lower faces of the ends of the rails to be joined, horizontally and vertically disposed members integral therewith, and spring portions interposed between said base plate and the horizontally disposed members whereby by spring pressure alone the chair may be forced into close contact with the under and upper faces of the bases and with the webs of the rails and hold said rails in position.

2. A rail joint comprising a chair having a base plate adapted to be secured to the ties and to be engaged by the entire lower faces of the ends of the rails to be joined, horizontally and vertically disposed members integral therewith, adapted to engage the upper faces of the bases, and with the webs respectively, of the ends of the said rail throughout the length of the chair, and spring portions interposed between said base plate and the horizontally disposed members whereby by spring pressure alone the chair may be forced into close contact with the under and upper faces of the bases and with the webs of the rails and hold said rails in position.



3. A rail chair comprising a base plate, horizontally and vertically disposed members and spring portions integral therewith, said spring portions tending normally to force the vertically disposed portions into contact with each other, and the horizontally disposed portions into contact with the base plate.

4. A rail joint comprising a chair having a base plate adapted to be secured to the ties and to be engaged by the entire lower faces of the ends of the rails to be joined, horizontally and vertically disposed members adapted to engage the upper faces of the bases and sides of the webs respectively and the under faces of the heads of the said rails throughout the length of the chair and spring portions interposed between said base plate and the horizontally disposed members whereby by spring pressure alone the chair may be forced into close contact with the under and upper faces of the bases and with the webs and under faces of the heads of the rails and hold said rails in position.

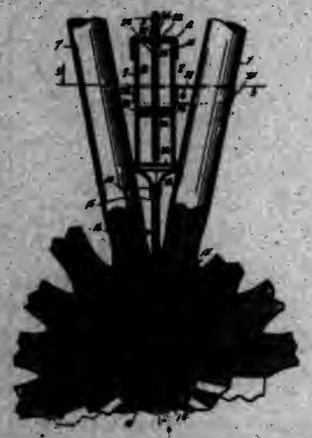
5. A rail chair comprising a base plate, horizontally and vertically disposed members and spring portions integral therewith, said spring portions tending normally to force the vertically disposed portions into contact with each other, and the horizontally disposed portions into contact with the base plate, said base plate being extended beyond the main body of the chair, said extended portion being provided with means for securing it to the ties, whereby the force of the spring pressure parts will not be affected by the means securing the chair to the ties.

1,020,167. JOURNAL-LUBRICATOR. RICHARD H. VAENY, Denver, Colo. Filed Feb. 9, 1911. Serial No. 607,577. (Cl. 184—38.)

1. In a lubricator, the combination with an outer shell equipped with a screw cap at one extremity and a relatively small discharge conduit at its opposite extremity, a lubricant-containing tube inserted in the shell and detachably connected therewith to lock the tube in place, a screw journaled in the lubricant receptacle and having a pivoted lever protruding beyond its outer extremity, which is closed, a plunger threaded on the screw within the lubricant receptacle and interlocked with the latter to prevent rotary action while allowing longitudinal movement, the screw cap applied to the outer extremity of the shell and having an opening through which the outer extremity of the screw protrudes, the said opening being large enough to receive the said lever when the latter is in longitudinal alinement with the screw.

2. A lubricator comprising a shell having a detachable cap at its outer extremity and a relatively small lubricant-discharge conduit at its opposite extremity, a lubricant-containing tube located within the shell and interlocked with the latter by means of a bayonet joint con-

nection, the shell being equipped with a transverse bar near its inner extremity for the purpose, a screw journaled in the tube and having a plunger threaded thereon and located within the tube, a tongue and groove connection between the tube and the plunger to prevent rotary movement of the plunger within the tube while allowing the plunger to travel in the direction of the axis of the tube, the cap of the shell having an opening and the screw having a pivoted lever protruding beyond the tube and adapted to pass through the opening in the top of the shell when the lever is in longitudinal alinement with the screw, the lever being adapted to be thrown into a position at an angle with the screw, to operate the latter for the purpose of causing the plunger to travel in the tube, substantially as described.



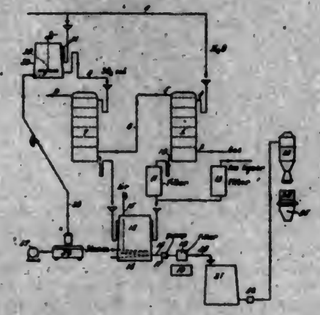
3. A lubricator comprising a relatively stationary shell having a detachable cap at its outer extremity, a lubricant-containing tube located within the shell, the same being open at its inner extremity and closed at its outer extremity, the said tube being interlocked with the shell, a screw journaled in the tube, a plunger threaded on the screw within the tube, the plunger being connected with the tube to permit longitudinal movement on the screw, but preventing rotary action within the tube, the screw having its outer extremity protruding beyond the tube and passing through an opening formed in the cap of the shell, the outer extremity of the tube having a hole, and the lever being bifurcated to straddle the said hole, whereby a nail may be inserted between the arms of the lever and into the hole for the purpose of turning the tube within the shell, for the purpose set forth.

4. The combination with a relatively stationary shell open at its outer extremity, of a lubricant-containing tube inserted therein and interlocked therewith by a bayonet joint connection, a screw journaled in the outer extremity of the tube, which is closed, the outer extremity of the screw protruding beyond the closure of the tube and having a bifurcated lever pivotally connected with its outer end, the closure of the tube having an opening near its outer edge, to receive a nail adapted to be inserted in the said hole between the arms of the lever to facilitate the turning of the tube within the shell, for the purpose set forth.

5. The combination with a vehicle wheel, of a lubricator comprising a shell interposed between two spokes of the wheel and suitably connected to maintain its position, a lubricant containing tube inserted in the shell and interlocked therein, a screw journaled in the tube and protruding beyond the outer extremity of the tube, a lever pivotally connected with the outer extremity of the screw, a follower threaded on the screw and interlocked with the tube to permit longitudinal movement of the screw but preventing rotary action, the outer extremity of the shell having an opening through which the outer extremity of the screw protrudes, the said opening being large enough to receive the lever when the latter is in longitudinal alinement with the screw, a lubricant discharge conduit connected with the shell and passing through the hub of the wheel and terminating in suitable proximity to the axle of the journal, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,020,168. PROCESS OF PURIFYING GAS AND RECOVERING BY-PRODUCTS. FREDERICK H. WAGNER, Baltimore, Md. Filed Oct. 24, 1911. Serial No. 656,233. (Cl. 23—10.)



1. In the purification of gas and the recovery of by-products, the process which comprises scrubbing gas containing hydrogen sulfid with a liquor consisting of a solution of sulfur dioxid in water.

2. In the purification of gas and the recovery of by-products, the process which comprises scrubbing the gas to remove ammonia and then scrubbing the gas with a solution of sulfurous acid to remove hydrogen sulfid.

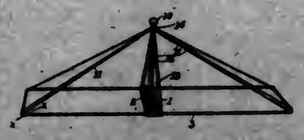
3. In the purification of gas and the recovery of by-products, the process which comprises scrubbing the gas to remove ammonia and then scrubbing the gas with a solution of sulfurous acid, uniting the wash liquors from the two scrubbing operations and treating to obtain ammonium sulfate.

4. In the purification of gas and the recovery of by-products, the process which comprises scrubbing gas containing hydrogen sulfid with a liquor consisting of a solution of sulfur dioxid in water to obtain a liquid comprising sulfurous acid in excess and treating said liquid in the presence of ammonia to obtain ammonium sulfate.

5. In the purification of gas and the recovery of by-products, the process which comprises removing cyanogen compounds and condensing out ammonia and scrubbing gas thus purified with a solution of sulfurous acid.

[Claims 6 to 12 not printed in the Gazette.]

1,020,169. CASKET-CANOPY. BENJAMIN C. WALLACE, Stockton, Cal. Filed Mar. 2, 1910. Serial No. 546,782. (Cl. 135—5.)



A casket canopy comprising two members hinged together in parallel relation, a projecting rectangular frame on each of said members, a tape extending from each end of each said parallel members to the opposite end of its adjacent member, a tape extending from each outer corner of each of said rectangular frames to the opposite corner of its adjacent frame, all of said tapes passing through a common ring, means binding all of said tapes together just below said ring, and a canopy draped over said tapes and frames.

1,020,170. METHOD OF BUILDING HEELS. ERASTUS E. WINKLEY, Lynn, Mass. Filed June 9, 1910. Serial No. 566,080. (Cl. 12—147.)

1. A method of building heels from dinked out lifts, which consists in dipping a lift in paste, then forming a heel pile by superposing additional lifts on said pasted lift, breast above breast, and successively dipping the partially completed pile in paste after the addition of each new lift until the desired height has been obtained, and then alining the lifts of the heel pile with their breasts all in substantially the same vertical plane by the application of pressure to the lateral surface of the pile.

2. A method of building heels from dinked out lifts, which consists in dipping a lift in paste, then forming a heel pile by superposing additional lifts on said pasted lift, breast above breast, and successively dipping the partially completed pile in paste after the addition of each new lift until the desired height has been obtained, then alining the lifts of the heel pile with their breasts all in substantially the same vertical plane by the application of pressure to the lateral surface of the pile, and then permanently securing the lifts together by driving a nail therethrough.

3. A method of building heels from dinked out lifts, which consists in forming a heel pile by taking a lift in the hand, dipping it in paste while taking another lift, superposing the second lift on the first, breast above breast, dipping the two lifts in paste while taking a third, and so on until the desired height of heel has been obtained, and then alining the lifts of the pile with their breasts all in substantially the same vertical plane by the application of pressure to the lateral surface of the pile.

4. A method of building heels from dinked out lifts, which consists in forming a heel pile by taking a lift in the hand, dipping it in paste while taking another lift, superposing the second lift on the first, breast above breast, dipping the two lifts in paste while taking a third, and so on until the desired height of heel has been obtained, and then alining the lifts of the pile with their breasts all in substantially the same vertical plane by the application of pressure to the lateral surface of the pile while the paste is still wet.

1,020,171. SELF-REGISTERING MEASURE. ABNER WOODWARD, near Marshallton, Del. Filed Apr. 7, 1911. Serial No. 619,492. (Cl. 73—120.)



1. In a device for showing the depth of liquid in a container and measuring its contents, a support separate from the liquid container and carrying scale markings, a flexible guide mounted on the support and parallel therewith and a float movable along the guide and adapted to be gripped against the support by flexure of the guide.

2. In a device for showing the depth of liquid in a container and measuring its contents, a scale support separate from the liquid container, a guide mounted upon the support, parallel therewith and in proximity thereto, and exposed so that it may be flexed by the hand of the operator, the support being provided with scale markings, and a float upon the guide adapted to be sprung against the support by lateral movement of the guide.

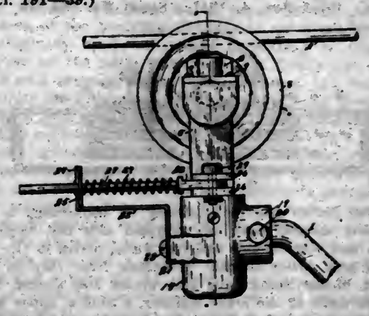
3. In a device for showing the depth of liquid in a container and measuring its contents, said device having scale markings separate from the container, a support separate from the liquid container, a laterally movable guide in proximity to the support, so that it may be flexed by the hand of the operator, and a float upon the guide.

4. In a device for showing the depth of liquid in a container and measuring its contents, said device having scale markings separate from the container, a support separate from the liquid container, a guide parallel with the support, the terminals of the guide being fixed against rotation, and a float movable upon the guide and adapted to be pressed into operative relation with scale markings by lateral movement of the guide.

5. In a device for showing the depth of liquid in a container and measuring its contents, a scale support separate from the liquid container, and a guide, parallel to each other and one of which members is flexible and in operative relation to the scale markings, in combination with a float upon the guide adapted to make contact with the support by reason of the flexing of the flexible member.

[Claim 6 not printed in the Gazette.]

1,020,172. TROLLEY-HEAD. HARRY J. WOOLSEY, Jackson, Mich., assignor of one-half to George E. Schuberg, Jackson, Mich. Filed Sept. 8, 1911. Serial No. 648,276. (Cl. 191—39.)



1. A trolley head comprising a forked wheel member provided with wheel bearings and with a central downwardly-projecting spindle having an annular groove therein, a pole member having a bearing therein for said spindle provided with a bearing surface at its upper end, said wheel member being provided with coacting bearing surfaces; a retaining screw on said pole member engaging said groove in said spindle; a rearwardly-projecting arm on said pole member having its outward end turned upwardly; a cross piece on the upturned end of said arm; pairs of laterally-projecting ears on said wheel member; rods having head portions arranged between said ears and pivotally connected thereto, said rods being slidably arranged through said cross piece at the outer end of said arm; and springs arranged on said rods, the other ends of the springs bearing against said arm and their inner ends against said head portions.

2. A trolley head comprising a forked wheel member provided with wheel bearings and with a central downwardly-projecting spindle, a pole member having a bearing therein for said spindle provided with a bearing surface at its upper end, said wheel member being provided with coacting bearing surfaces; a rearwardly-projecting arm on said pole member having its outer end turned upwardly; a cross piece on the upturned end of said arm; pairs of laterally-projecting ears on said wheel members;

rods having head portions arranged between said ears and pivotally connected thereto, said rods being slidably arranged through said cross piece at the outer end of said arm; and springs arranged on said rods, the outer ends of the springs bearing against said arm and their inner ends against said head portions.

3. A trolley head comprising a wheel member provided with wheel bearings and with a downwardly-projecting spindle; a pole member having a bearing therein for said spindle; a rearwardly-projecting arm on said pole member having a cross piece at its outer end; pairs of laterally-projecting ears on said wheel member; rods having head portions arranged between said ears and pivotally connected thereto, said rods being slidably arranged through said cross piece at the outer end of said arm; and springs arranged on said rods, the outer ends of the springs bearing against said arm and their inner ends against said head portions.

4. A trolley head comprising a wheel member provided with wheel bearings and with a downwardly-projecting spindle; a pole member having a bearing for said spindle; an arm on said pole member; rods pivotally connected to said wheel member and slidably associated with said arm; and springs arranged on said rods to act thereon, the outer ends of said springs being supported by said arm.

5. A trolley head comprising a wheel member provided with wheel bearings and with a downwardly-projecting spindle; a pole member having a bearing thereon for said spindle; rods pivotally connected with the sides of said wheel member and slidably associated with said pole member; and springs arranged on said rods to act thereon, the outer ends of said springs being supported by said pole member.

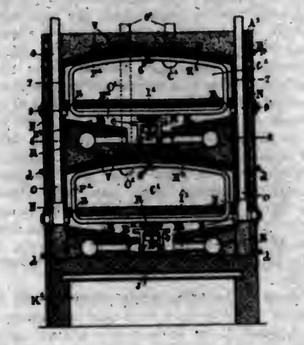
1,020,173. RAILWAY-TIE. JASON O. ABBOTT, Hebron, Ohio. Filed Nov. 4, 1911. Serial No. 658,548. (Cl. 238—5.)



1. The herein described railway tie comprising a hollow lower member open on its upper side and having a bottom and vertical side and end walls, plates in the bottom of said lower member extending from side to side thereof, blocks rising from said plates and spaced from the side walls of the lower member, a hollow upper member open on its lower side and comprising a top and depending vertical side and end walls disposed on the outer sides of and vertically movable on the side and end walls of the lower member, plates under the top of the upper member, spaced from the side walls thereof and corresponding in width with the space between the side walls of the lower member so that said plates fit between the sides of the lower member, and supporting springs in the lower member around the blocks thereof and bearing at their lower ends on the plates in the lower member and at their upper ends under the plates of the upper member.

2. The herein described railway tie comprising a hollow lower member open on its upper side and having a bottom and vertical side and end walls, plates in the bottom of said lower member extending from side to side thereof, blocks rising from said plates and spaced from the side walls of the lower member, a hollow upper member open on its lower side and comprising a top and depending vertical side and end walls disposed on the outer sides of and vertically movable on the side and end walls of the lower member, plates under the top of the upper member, spaced from the side walls thereof and corresponding in width with the space between the side walls of the lower member so that said plates fit between the sides of the lower member, supporting springs in the lower member around the blocks thereof and bearing at their lower ends on the plates in the lower member and at their upper ends under the plates of the upper member, pairs of rail clamping plates arranged on the top of the upper member and bolts securing said rail clamping plates and passing therethrough and also through the top of the upper member and the plates of the upper member.

1,020,174. PORTABLE OVEN. CHARLES ANDRÉ, Lyon, France. Filed Apr. 3, 1911. Serial No. 618,714. (Cl. 107—63.)



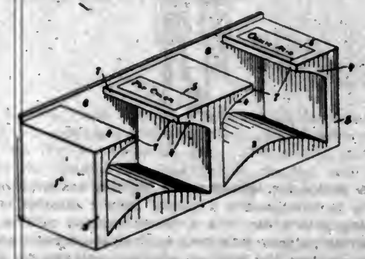
1. A portable oven comprising a sheet metal casing, a heating chamber formed within same, a plurality of independent closed liquid containing tubes extending across the floor of said chamber and up near the walls and roof thereof, a hearth within said chamber above the lower horizontal runs of tubes and dividing off the lower part of said chamber to constitute a combustion chamber below separated from an oven chamber above, a plurality of burners disposed in said combustion chamber below the lower runs of tubes, and means for discharging gases of combustion from said combustion chamber comprising collecting chambers and uptake conduits disposed in the lining of the oven casing, a chamber in each of said uptakes and a valve in each of said last mentioned chambers to prevent inlet of cold air thereto.

2. A portable oven comprising a sheet metal casing, a heating chamber formed within same, a plurality of independent closed liquid containing tubes extending across the floor of said chamber and up near the walls and roof thereof, a hearth within said chamber above the lower horizontal runs of tubes and dividing off the lower part of said chamber to constitute a combustion chamber below separated from an oven chamber above a plurality of burners disposed in said combustion chamber below the lower runs of tubes, means for supplying gas to said burners, igniting jets for the burners, and independent means of supply for feeding said jets with gas.

3. A portable oven comprising a sheet metal casing, a heating chamber formed within same, a plurality of independent closed liquid containing tubes extending across the floor of said chamber and up near the walls and roof thereof, a hearth within said chamber above the lower horizontal runs of tubes and dividing off the lower part of said chamber to constitute a combustion chamber below separated from an oven chamber above, and a plurality of burners disposed in said combustion chamber below the lower runs of tubes, said burners comprising a feed pipe and series of T shaped burner jets extending therefrom, the horizontal portions of which are parallel to the aforesaid tubes.

4. A portable oven comprising a sheet metal casing, a plurality of superposed heating chambers formed within said casing, a plurality of independent closed liquid containing tubes extending across the floor of said chamber and up near the walls and roof thereof, a hearth within said chamber above the lower horizontal runs of tubes and dividing off the lower part of said chamber to constitute a combustion chamber below separated from an oven chamber above, a plurality of burners disposed in each of said combustion spaces below the lower runs of tubes, means for supply of air to said combustion chambers comprising lateral conduits and branch pipes leading to opposite sides of said burners and controllable means for supplying fuel to said burners whereby the superposed heating and combustion chambers may be independently brought into and out of operation.

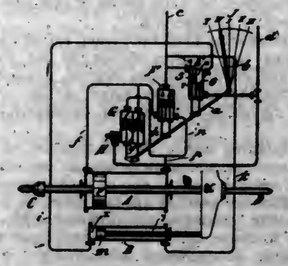
1,020,175. LABEL-HOLDER. JACOB F. ARNOLD, Massillon, Ohio, assignor to Hugh H. Hutchinson, Massillon, Ohio. Filed July 14, 1911. Serial No. 638,490. (Cl. 211—37.)



1. A cabinet including a plurality of label-holding blocks assembled end to end and side by side, there being a pocket in each block having a longitudinally convex bottom and overhanging flanges on the ends, the pocket being open on one side and having a wall closing the other side.

2. A label-holding block having a pocket therein with a longitudinally convex bottom and overhanging flanges on the ends, the pocket being open on one side and having a wall closing the other side.

1,020,176. HYDRAULIC PRESS. WILAND ASTFALCK, Tegel, near Berlin, Germany. Filed May 7, 1909. Serial No. 494,657. (Cl. 138—17.)



1. The combination of a press cylinder having a piston, a piston rod extending on both sides of said piston and provided with a die at each end, an auxiliary cylinder having a piston, a piston rod of large cross section relative to the cylindrical diameter of said auxiliary cylinder piston to provide unequal pressure surface on the front and back surfaces of the pistons, means affording communication between the chambers to either side of the pistons in their respective cylinders, a source of supply and an outlet for the cylinders, and means constructed to permit of the two chambers of the press cylinder to act alternately as a pressure space and a compress said cylinders being horizontally disposed.

2. The combination of a press cylinder having a piston, a piston rod extending on both sides of said piston and provided with a die at each end, an auxiliary cylinder having a piston, a piston rod of large cross section relative to the cylindrical diameter of said auxiliary cylinder piston to provide unequal pressure surface on the front and back surfaces of the pistons, means affording communication between the chambers to either side of the pistons in their respective cylinders, a source of supply and an outlet for the cylinders, means permitting of the two chambers of the auxiliary cylinder to act alternately as a preliminary compress, and means constructed to permit of the two chambers of the press cylinder to act alternately as a pressure space and a compress said cylinders being horizontally disposed.

3. The combination of a press cylinder having a piston, an auxiliary cylinder having a piston, a piston rod of large cross section relative to the cylindrical diameter of said auxiliary cylinder piston to provide unequal pressure surface on the front and back surfaces of the pistons, a conduit from a source of supply and an outlet for the cylinders, conduits affording communication between the chambers to either side of the pistons in their respective cylinders, valves in said conduits, and means for actuating said valves, said means effecting on a partial movement in one direction to bring the auxiliary cylinder into action as a preliminary compress and on continued movement in the same direction to bring the cylinder of the press piston into action as a compress, and on a like reverse movement thereof to effect the aforesaid cycle in opposite direction.

4. The combination of a press cylinder having a piston, a piston rod extending on both sides of said piston and provided with a die at each end, an auxiliary cylinder having a piston, a piston rod of large cross section relative to the cylindrical diameter of said auxiliary cylinder piston to provide unequal pressure surface on the front and back surfaces of the pistons, means affording communication between the chambers to either side of the pistons in their respective cylinders, a source of supply and an outlet for the cylinders, means permitting of the two chambers of the auxiliary cylinder to act alternately as a preliminary compress, means permitting of the two chambers of the press cylinder to act finally and alternately as a pressure space and a compress, and selective means for controlling the supply of fluid to and from said cylinders, said cylinders being horizontally disposed.

5. The combination of a press cylinder having a piston, auxiliary cylinders having pistons, said auxiliary cylinder pistons having piston rods of large cross section relative to the cylindrical diameter of said pistons to provide unequal pressure surface on the front and back surfaces of the several pistons, conduits affording communication between the chambers to either side of the pistons in their respective cylinders, a conduit from a source of pressure supply and outlets for the cylinders, a plurality of valves in said conduits constructed to permit of the opposed chambers of the auxiliary cylinders to act alternately as a preliminary compress, and permitting of the chambers of the press cylinder to act finally and alternately as a pressure space and a compress, and manually operable selective means for actuating said valves.

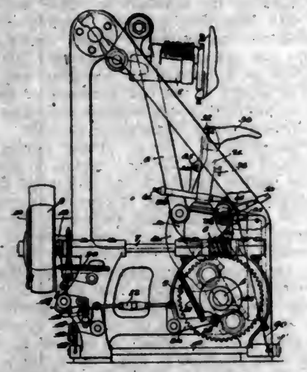
[Claims 6 to 10 not printed in the Gazette.]

1,020,177. MACHINE FOR OPERATING UPON SHOES. ARTHUR BATES, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Aug. 25, 1909. Serial No. 514,479. (Cl. 12—35.)

1. A machine for operating on shoes, having in combination a shoe supporting jack including an expansible last, means for operating on a shoe supported on the jack, mechanism connected to the last, a stop acting on said mechanism to contract the last when the jack moves to its position of presentation, a latch for holding the stop in operative position, and means for moving the latch.

2. A machine for operating upon shoes, having in combination a shoe supporting jack including an expansible last movable toward and from a position of presentation, mechanism connected to the last, a stop, a slidable latch for holding the stop in operative position to act on said mechanism to contract the last when the jack moves to

its position of presentation, and means under the control of the operator for actuating the latch and stop.



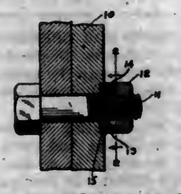
3. A machine for operating upon shoes, having in combination a shoe supporting jack including an expansible last movable toward and from a position of presentation, mechanism connected to the last, a pivoted arm provided with a stop, a slidable latch for holding the stop in operative position to act on said mechanism to contract the last when the jack moves to its position of presentation, and means for moving said latch and arm.

4. A machine for operating upon shoes, having in combination a shoe supporting jack including an expansible last movable toward and from a position of presentation, mechanism connected to the last, a pivoted arm provided with a stop, a latch slidably mounted in said arm, a handle connected to said latch and adapted to actuate the latch and move said stop into and out of operative position, said stop being adapted to actuate said mechanism to contract the last when the jack moves to its position of presentation, a treadle, and means operatively connected with the treadle for actuating the latch.

5. A machine for operating upon shoes, having in combination a shoe supporting jack including an expansible last movable toward and from a position of presentation, mechanism connected to the last, a stop, a latch for holding the stop in operative position to act on said mechanism to contract the last when the jack moves to its position of presentation, means for actuating the latch and moving the stop into and out of operative position, a cam for engaging the latch, a treadle, and means connected to the treadle for actuating the cam.

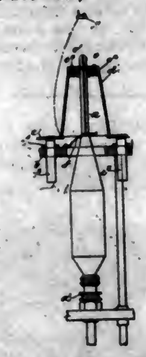
[Claims 6 to 9 not printed in the Gazette.]

1,020,178. LOCK-NUT. HAROLD T. BATTIN, Bridgeport, Conn. Filed Feb. 2, 1911. Serial No. 606,245. (Cl. 151—19.)



The combination with a member provided with a recess, of a nut having an angular head and an eccentric sleeve formed under said head, said sleeve and head being internally threaded to receive the threaded end of a bolt, and a locking collar having its outer surface flush with said head and adapted to fit in the recess in said member, said collar having an eccentric hole extending entirely therethrough, through which said sleeve passes whereby said collar may be forced against the wall of said recess to lock the nut.

1,020,179. DEVICE FOR SPINNING AND TWISTING YARN. VICTOR BÉLANGER, Marshfield, Mass., assignor to New Era Spinning Co., Boston, Mass., a Corporation of Massachusetts. Filed Dec. 2, 1910. Serial No. 595,187. (Cl. 118—29.)



1. A device for spinning and twisting textile fiber embracing in combination a rotary spindle member, a surrounding rotary cap and a rotary bearing member, the cap having support interiorly against the spindle and exteriorly against the bearing member, substantially as described.

2. In a spinning apparatus the combination with a rotary spindle member, of a surrounding positively driven rotary cap formed to have circumferential slipping engagement with the yarn so that the yarn may lag behind in its rotation about the spindle, and an external bearing member forming a support to sustain the axial thrust of the rotary cap, substantially as described.

3. In a spinning device the combination of a yarn-rotating and winding member, a cup-like yarn-engaging and yarn-rotating member having connection with said winding member by which it is driven, said cup-like member being formed with a yarn-engaging edge to assist the rotation of the yarn about its axis while allowing the yarn to slip or lag behind, and an anti-friction member arranged to support the axial thrust of said cup-like member, substantially as described.

4. The combination with the rotary spindle member of a surrounding cap member driven by its engagement therewith, and an anti-friction bearing member forming a support beneath the overhanging portion of the cap to sustain the weight of said cap, substantially as described.

5. In a spinning device the combination of a rotary spindle member, a surrounding rotary cap member engaging said spindle member one of said members having axial reciprocation relative to the other, and a rotary bearing element forming a supplemental support for the cap to keep it disengaged from clutching upon the rotary spindle member, substantially as described.

[Claims 6 to 29 not printed in the Gazette.]

1,020,180. DRIVE-CHAIN. WARREN J. BELCHER, Hartford, Conn., assignor to The Whitney Manufacturing Company, Hartford, Conn., a Corporation of Connecticut. Filed Jan. 31, 1911. Serial No. 605,680. (Cl. 74—32.)

1. A drive chain formed of a plurality of complete and operative unit-chains, each of which consists of fastened link members and pivot elements, and means for connecting the unit-chains at the pivot joints in parallel and operative relation.

2. A drive chain formed of a plurality of individual complete and operative unit-chains each consisting of fastened link members and pivot elements, separate side plates for the built-up chain, and means for connecting the unit-chains at the pivot joints and for securing in place the side plates.

3. A drive chain formed of independent complete and operative unit-chains, each unit-chain including sleeves and link members connecting the same, said sleeves including means for holding the link members thereon, and means for connecting the unit-chains in parallel and operative relation.



4. A drive chain formed of independent bands each of which is a complete operative chain and includes sleeves and link plates connecting them, said sleeves including means for holding the link plates thereon, and other means for connecting the chain bands in parallel and operative relation.

5. A drive chain comprising a plurality of independent complete and operative unit-chains each of which consists of sleeves and link members fastened thereon, the outside unit-chains having side plates, said side plates receiving the ends of the sleeves, and means to secure said unit-chains in parallel and operative relation comprising pins extending through the sleeves of the different unit-chains the entire width of the completed chain and side plates.

[Claim 6 not printed in the Gazette.]

1,020,181. PROCESS OF PRODUCING THE CALCIUM SALT OF ACETYL SALICYLIC ACID. RUDOLF BERENDES, Elberfeld, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Sept. 12, 1911. Serial No. 648,994. (Cl. 23—24.)

1. The process for producing the calcium salt of acetyl salicylic acid, which process consists in treating an alkaline salt of acetyl salicylic acid with a calcium salt, substantially as described.

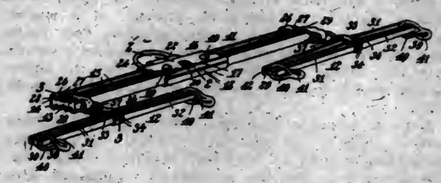
2. The herein described process for producing the calcium salt of acetyl salicylic acid, which process consists in treating an alkaline salt of acetyl salicylic acid with a calcium salt of an acid which yields with alkalis salts which are soluble in alcohols, substantially as described.

1,020,182. PROCESS FOR PRODUCING THE CALCIUM SALT OF ACETYL SALICYLIC ACID. RUDOLF BERENDES, Elberfeld, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Sept. 18, 1911. Serial No. 649,145. (Cl. 23—24.)

The herein described process for producing the calcium salt of acetyl salicylic acid, which process consists in treating acetyl salicylic acid with a calcium alcoholate, substantially as described.

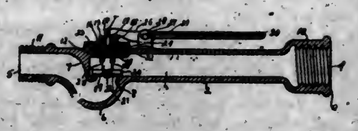
1,020,183. WHIFFLE AND DOUBLE TREE. PETER BLONDELL and JAMES E. ALLARD, Buffalo, N. Y., assignors to Blondell-Lane Concrete Bar Company, Buffalo, N. Y., a Corporation of Arizona. Filed Nov. 16, 1907. Serial No. 402,448. (Cl. 21—78.)

A double-tree comprising an evener having longitudinal marginal flanges and a similar intermediate flange, a clip formed of two strips of metal riveted to opposite sides of the evener at a point midlength and fashioned to provide reëntrant portions fitting between said flanges, said strips of metal having rearward extensions with opposed right-angled portions to form a pocket, a loop held



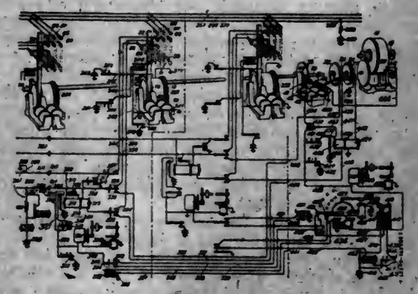
in said pocket, and whiffle-trees secured to the ends of said evener.

1,020,184. WATER-SAVING VALVE. JOHN W. BROADWATER, Philadelphia, Pa. Filed Sept. 19, 1911. Serial No. 650,228. (Cl. 137—4.)



A water saving valve for hose comprising a body having an off-set therein, and provided with a threaded opening adjacent the off-set, a valve seat formed at the entrance to the off-set, a threaded cap for said opening having a central opening, a portion of said central opening being enlarged to form a stuffing box, and packing in said stuffing box, a threaded plug having a central opening mounted in the enlarged central opening of the cap, a valve disk, a stem carried thereby passing through the central opening in the cap, a washer, means for holding said washer to the disk, a bracket, formed with the body, said bracket having slots therein, an operating lever having one end thereof pivoted to the valve stem, the handle portion of the operating lever being curved lateral to conform to the curvature of the body, a pin passing through the operating lever and journaled in the slots in the bracket for pivoting said operating lever to said bracket, and a helical spring engaging the cap and valve stem for normally holding said valve disk upon its seat.

1,020,185. CONTROLLING SYSTEM FOR AUTOMATIC SWITCHING APPARATUS. ALBERT M. BULLARD, deceased, by Marion R. Bullard, administratrix, Woodstock, and JOHN N. REYNOLDS, New York, N. Y., assignors to Western Electric Company, New York, N. Y., a Corporation of Illinois. Filed Apr. 1, 1910. Serial No. 552,883. (Cl. 179—27.)



1. In a telephone exchange system, the combination with a plurality of individual selectors, of a master driving mechanism for said selectors with which only one of said selectors can be associated at a time, and

means operating to associate said selectors severally with said master mechanism.

2. In a telephone exchange system, the combination with a plurality of individual selectors, of a master mechanism adapted to drive said selectors and means operating to associate said individual selectors severally with said master mechanism and to prevent the simultaneous associating of a plurality of said selectors therewith.

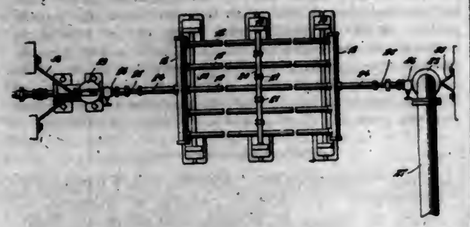
3. In a telephone exchange system, the combination with a plurality of individual selectors, of a master mechanism adapted to drive said selectors, a finder device arranged to associate said master mechanism with any of said selectors, and switching apparatus associated with each of said selectors to control said finder device.

4. In a telephone exchange system, the combination with a plurality of individual selectors, of a master mechanism adapted to drive said selectors, a sequence switch associated with each of said selectors, and a finder device arranged to associate said master mechanism with any one of said selectors through contacts of its associated sequence switch.

5. In a telephone exchange system, the combination with a plurality of individual selectors, of a master mechanism adapted to drive said selectors, a sequence switch individual to each of said selectors, and a finder device arranged to associate said master mechanism with any one of said selectors, said finder device being initially controlled by one of said sequence switches and thereafter controlling said sequence switch.

[Claims 6 to 11 not printed in the Gazette.]

1,020,186. BRICK-DRIER. EDWARD H. CALLAWAY, Westfield, N. J., assignor to The American Clay Machinery Company, Bucyrus, Ohio, a Corporation of Ohio. Filed Mar. 25, 1907, Serial No. 364,503. Renewed Jan. 8, 1912. Serial No. 670,128. (Cl. 237—18.)



1. In a brick drier, the combination with a series of drying shelves and their supports, each of said shelves consisting of a layer of steam drying pipes, of a clamping bar which rigidly grips the pipes at their middle portions whereby expansion and contraction is allowed upon opposite sides of said clamped portion, said clamping bar and supports being provided with registering open bolt-receiving side-slots, and locking bolts adapted to be entered into and removed sidewise from said slots.

2. In a brick drier, the combination with one or more shelves each of which is composed of a layer of steam drying pipes, of means for rigidly holding said pipes at their middle portions whereby expansion and contraction of the pipes is allowed upon opposite sides of the holding means, and means for loosely supporting the movable portions of said pipes.

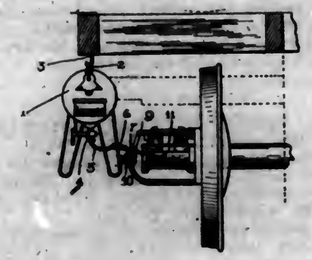
3. In a brick drier, the combination with a series of drying shelves each of which is composed of a layer of steam drying pipes, of a support for said pipes, said support being provided with a series of open bolt-receiving side-slots, a clamping bar having a corresponding series of open side-slots adapted to register with those in the pipe support, and a series of locking bolts adapted to pass sidewise into said slots, whereby said pipes are rigidly and collectively held by said bar on said support.

1,020,187. PAPER DRINKING-CUP. WALTER E. CLAUSSEN, Hartford, Conn. Filed Nov. 1, 1911. Serial No. 657,932. (Cl. 229—3.)



A paper drinking cup comprising a body, and a bottom fitted in said body, above the lower edge thereof, the body having several lugs punched therefrom below said bottom thereby leaving a corresponding number of holes in the body, said lugs fitting flatwise against and being adhesively united to the under surface of said bottom to thereby leave said holes wholly uncovered, whereby when the cup is inverted a fluid substance in the cavity in the lower part of the cup can freely pass through said holes.

1,020,188. JOURNAL-BOX COOLER. MILES P. COOK, Flint, Mich. Filed Apr. 24, 1911. Serial No. 623,125. (Cl. 64—28.)



1. The combination with a receptacle or reservoir adapted to be hung on a car, of a nozzle connected therewith and communicating therein, attaching means on said nozzle for engaging the journal box, and resilient means adjustably engaging the nozzle adapting the same to be held at any angle.

2. The combination with a receptacle or reservoir adapted to be hung on a car, of a nozzle connected therewith and communicating therein, attaching means on said nozzle for engaging the journal box, and resilient means adjustably engaging the nozzle on each side of the attaching means adapted to hold said nozzle at any angle.

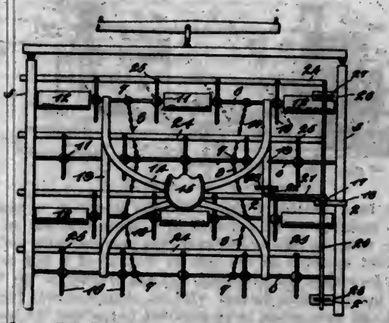
3. In a device of the class described a nozzle, a clamp loosely connected with the nozzle and adapted to engage the journal box, and a spring locking member connected with the clamp and positively engaging the nozzle and acting to firmly hold the nozzle in the journal box to direct its jet upwardly and forwardly beneath the lip of the cap and at about the middle of the journal.

4. In a device of the class described a nozzle, a clamp loosely connected with the nozzle and adapted to engage the journal box, and a reversible spring locking member connected with the clamp and positively engaging the nozzle and acting to hold the nozzle in the journal box to direct its jet upwardly and forwardly beneath the lip of the cap and at about the middle of the journal.

5. In a device of the class described a screw clamp, a hook engaged thereon, a sleeve on the hook, a nozzle slidable in the sleeve and curved at its discharge end, and a spring loosely connected with the hook acting to engage the nozzle with both its ends to clamp the same in the sleeve, said hook adapted to lie on either side the clamp when in operation to direct the nozzle against the rear or rising side of the journal and beneath the lip of the cap at about the middle of the journal.

[Claim 6 not printed in the Gazette.]

1,020,189. HARROW. GEORGE W. COPELAND, Ensley, Ala., assignor of one-half to James W. Karr, Ensley, Ala. Filed Nov. 8, 1911. Serial No. 659,129. (Cl. 55—30.)



1. In a disk harrow, a plurality of disk carrying rods each consisting of a plurality of jointed sections, a series of disks rotatably mounted on each of the rods and also bodily movable thereon to angular positions with relation to the longitudinal axis of the machine, and means for simultaneously moving all of the disks to such angular positions.

2. In a disk harrow, a plurality of transversely disposed disk carrying rods each consisting of a plurality of jointed sections, chains connecting adjacent rods at the joints of said sections, a plurality of disks rotatably mounted upon each of the rods and capable of bodily movement to angular positions with relation to the longitudinal axis of the harrow, a plurality of transversely movable bars coacting with the disks to normally prevent their angular movement, and manually operable means for simultaneously moving said transverse bars to angularly position the disks.

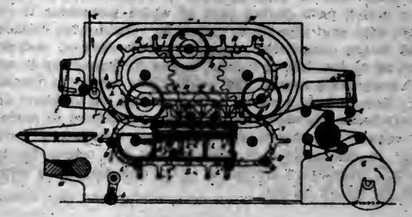
3. In a disk harrow, a plurality of transversely disposed spaced disk carrying rods, a series of disks rotatably mounted upon each of the rods and movable thereon to angular positions with relation to the longitudinal axis of the harrow, a longitudinally movable bar for each series of disks having notches in its ends to receive the edge portions of the disks, said bars normally preventing the angular movement of the disks, and manually operable means connected to said bars to simultaneously move the same and shift the disks to their angular positions.

4. In a disk harrow, a plurality of transversely disposed disk carrying rods, a series of disks rotatably mounted upon each of the rods and angularly movable thereon, a plurality of transversely disposed movable bars associated with said disks and normally preventing their angular movement, and a longitudinally disposed transversely movable bar connected to said transverse bars to simultaneously move the same and angularly position the disks.

5. In a disk harrow, a plurality of transversely disposed disk carrying rods, a series of disks rotatably mounted upon each of the rods and bodily movable thereon to angular positions with relation to the line of movement of the harrow, a transversely movable bar associated with each series of disks and having notches therein to receive the edge portions of the disks, a longitudinally disposed transversely movable bar connected to said transverse bars to simultaneously move the same, guides for said longitudinal bar to limit its transverse movement, and manually operable means connected to said longitudinal bar to actuate the same and simultaneously shift the disks to angular positions.

[Claim 6 not printed in the Gazette.]

1,020,190. PRINTING-MACHINE. THOMAS COSSAR, Otley, England. Filed Dec. 6, 1911. Serial No. 664,267. (Cl. 101—11.)



1. A web printing machine comprising, in combination, a stationary flat bed, a type form, an impression cylinder, means for imparting to said cylinder a translatory movement in a closed path during part of which movement it contacts with said type form, means for rotating the cylinder, said means comprising rack and pinion devices, web-supporting means, inking rollers, means for imparting to said web-supporting means and said inking rollers a translatory movement in a closed path extending partly above and partly below the said bed, and devices adapted to operate in unison the means for imparting translatory movement to the impression cylinder and the means for imparting translatory movement to the web-supporting means and the inking rollers.

2. A web printing machine comprising, in combination, a stationary flat bed, a movable bed fitted over the stationary flat bed, a type form carried by said movable bed, an impression cylinder, means for imparting to said cylinder a translatory movement in a closed path during part of which movement it contacts with said type form, means for rotating the cylinder, said means comprising rack and pinion devices, web-supporting means, inking rollers, means for imparting to said web-supporting means and said inking rollers a translatory movement in a closed path extending partly above and partly below the said beds, and devices adapted to operate in unison the means for imparting translatory movement to the impression cylinder and the means for imparting translatory movement to the web-supporting means and the inking rollers.

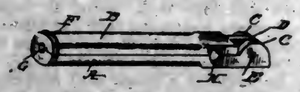
3. A web-printing machine comprising, in combination, a stationary flat bed the underside of which affords an ink distributing surface, a type form, an impression cylinder, means for imparting to said cylinder a translatory movement in a closed path during part of which movement it contacts with said type form, means for rotating the cylinder, said means comprising rack and pinion devices, web-supporting means, inking rollers, means for imparting to said web-supporting means and said inking rollers a translatory movement in a closed path extending partly above and partly below the said bed, and devices adapted to operate in unison the means for imparting translatory movement to the impression cylinder and the means for imparting translatory movement to the web-supporting means and the inking rollers.

4. A web printing machine comprising, in combination, a stationary flat bed, a type form, an impression cylinder, means for imparting to said cylinder a translatory movement in a closed path during part of which movement it contacts with said type form, means for rotating the cylinder, said means comprising rack and pinion devices, web-looping rollers connected to the means for imparting translatory movement to the impression cylinder, web-supporting means, inking rollers, means for imparting to said web-supporting means and said inking rollers a translatory movement in a closed path extending partly above and partly below the said bed, and devices adapted to operate in unison the means for imparting translatory movement to the impression cylinder and the means for for imparting translatory movement to the web-supporting means and the inking rollers.

5. A web-printing machine comprising, in combination, a stationary flat bed, a movable bed fitted over said sta-

tionary flat bed, a wedge device interposed between said stationary flat bed and said movable bed, a type form carried by said movable bed, an impression cylinder, means for imparting to said cylinder a translatory movement in a closed path during part of which movement it contacts with said type form, means for rotating the cylinder, said means comprising rack and pinion devices, web-supporting means, inking rollers, means for imparting to said web-supporting means and said inking rollers a translatory movement in a closed path extending partly above and partly below the said beds, and devices adapted to operate in unison the means for imparting translatory movement to the impression cylinder and the means for imparting translatory movement to the web-supporting means and the inking rollers.

1,020,191. WIRE-SPLICER. JOHN CRUMP, Loudonville, Ohio. Filed June 15, 1911. Serial No. 633,267. (Cl. 140—177.)



1. A device of the character specified, comprising a pair of similar sections, a rule joint connecting the sections, each section having its outer face rounded to form a handle when the sections are superposed, and having its inner face flat to fit the face of the other section, each of the said faces having a groove extending from its outer end longitudinally inward, and having a transverse groove at the inner end of the first named groove, said transverse groove being of greater cross section at one side of the longitudinal groove, and a loop pivoted to the outer end of one section, and fitting over the adjacent end of the other section to hold the said sections together.

2. A device of the character specified, comprising a pair of similar sections, a rule joint connecting the sections, each section having its outer face rounded to form a handle when the sections are superposed, and having its inner face flat to fit the face of the other section, each of said faces having a groove extending from its outer end longitudinally inward, and having a transverse groove at the inner end of the first named groove, said transverse groove being of greater cross section at one side of the longitudinal groove, and means for locking the sections together.

3. A device of the character specified, comprising a plurality of sections hinged together at one end, each section having its inner face provided with a transverse groove near its inner end, and a longitudinal groove extending from the outer end and intersecting the transverse groove, said transverse groove being of greater cross section at one end and means for holding the sections superposed.

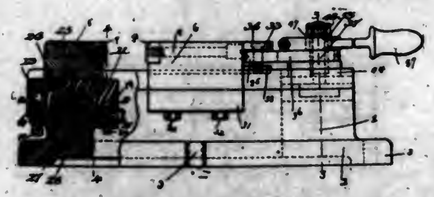
4. A device of the character specified, comprising a plurality of sections hinged together at one end, each section having its inner face provided with a transverse groove near its inner end, and a longitudinal groove extending from the outer end and intersecting the transverse groove, and means for holding the sections superposed.

5. A device of the character specified, comprising a plurality of sections hinged together at one end, each section having its inner face provided with a transverse groove near its inner end, and a longitudinal groove extending from the outer end and intersecting the transverse groove, said transverse groove being of greater cross section at one end.

[Claims 6 to 8 not printed in the Gazette.]

1,020,192. VISE. JOHN B. DADE, Frankfort, N. Y. Filed Apr. 22, 1911. Serial No. 622,706. (Cl. 81—26.)

1. In a device of the character described, the combination with a base of two jaws each adapted to be moved and fixed thereon, one of them having a toothed face on its lower surface, a bracket having teeth to engage with the said toothed face, the said bracket having portions depending below a fixed part of the base, a spring member acting to press the bracket upward from the base, means at one of the depending portions to adjust the bracket relatively to the base and lever means at the other depending portion to raise or lower the bracket, by the coöperation of which means to put the teeth of the bracket into or out of contact with the toothed face of the jaw.



2. In a device of the character described, a base, a jaw mounted to be adjusted to a given position on the base, said jaw having its lower face provided with teeth, a bracket mounted on the base by means of a bolt or the like forming a pivotal support of the bracket on the base, the bracket being formed with an elongated slot for the bolt and a set screw being provided to position the bolt in the slot, lever members mounted on the base and connected with the bracket to swing the bracket and spring means acting to keep the bracket with its teeth in contact with the toothed face of the jaw.

3. In a vise, the combination of a body, jaws adjustably held with reference to each other, a relatively fixed adjustable jaw, a jaw adapted to approach and recede from the first named jaw, means for actuating said last named jaw, said means comprising a disk controlled by a handle, and means for holding the actuated jaw at any given position within the limits of its movement, said means comprising shoulders connected with said eccentric adapted to engage with corresponding shoulders on a plate adjustably held along a groove in said body.

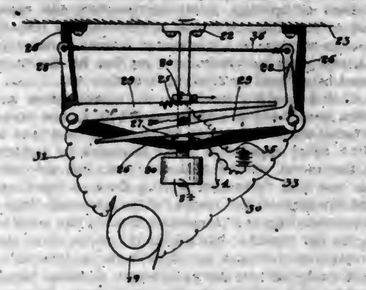
4. In a vise, the combination of jaws held adjustable with reference to each other, and means for actuating one of said jaws to and from the other, said means comprising a metallic strap pivotally mounted to said jaw and to a disk, a handle mounted on a sleeve integral with said disk, whereby to rotate the same, and a secondary disk secured to said disk and having shoulders adapted to engage with corresponding shoulders upon a plate, whereby to hold said disk at any point of its rotation, substantially as described.

5. In a vise, the combination of a body, jaws having detachable faces, slidingly mounted upon said body, means for giving one of said jaws a rectilinear movement, said means comprising a disk to which said jaw is connected by a metallic strap, a hub eccentrically disposed upon said disk, a handle secured to said hub, whereby the movement of said handle turns said hub and disk and moves said jaw in a rectilinear manner, and shoulders integral with said disk and adapted to engage with corresponding shoulders upon a plate adjustably held with reference to said disk, whereby said movable jaw may be held at any position within certain limits of its movement.

[Claims 6 to 9 not printed in the Gazette.]

1,020,193. REVERSING MECHANISM. THOMAS J. DALTON, Chicago, Ill., assignor of one-half to Helene F. Lundin, Chicago, Ill. Filed Sept. 7, 1911. Serial No. 648,197. (Cl. 172—239.)

1. A reversing electric switch comprising an insulating frame, a pair of bell-crank levers fulcrumed to said frame, each bell-crank lever comprising a long and a short arm, the long arms of said levers being arranged substantially parallel and adjacent to each other, the fulcrums of said levers being spaced apart a distance slightly greater than the length of said long arms, an insulating cord connecting the free ends of said short arms, a stop for limiting the oscillation of said bell-crank levers in one direction, an oscillatory lever disposed in a plane at right angles to the plane of movement of said bell-crank levers, resilient means for moving said oscillatory lever in one direction, and a roller provided at the other end of said oscillatory lever and adapted to traverse an operating medium, said bell-crank levers being actuated by contact with said oscillatory lever at the limit of its stroke in either direction, substantially as described.



2. An electric reversing switch comprising a frame formed of insulating material, two bell-crank levers fulcrumed to said frame and adapted to oscillate in the same plane, said bell-crank levers comprising short and long arms, the latter being arranged substantially in parallelism, the fulcrums of said bell crank levers being spaced apart a distance slightly greater than the length of said long arms, a stop for limiting the movement of said long arms in one direction, said stop being arranged on one side of said long arms, an oscillatory lever arranged on the other side of said long arms and disposed in a plane perpendicular to the plane of movement of said bell-crank levers, a traversing roller provided on one end of said oscillatory lever, a helical spring connected with the other end of said oscillatory lever and adapted to move the same in one direction, and a cord connecting the free ends of said bell-crank levers, the latter being actuated by contact with said oscillatory lever adjacent the limits of the strokes thereof, substantially as described.

3. An electric reversing switch comprising a substantially U-shaped insulating frame, a pair of bell-crank levers fulcrumed to said frame so as to move substantially in the same plane, said bell-crank levers comprising short and long arms, the latter being adapted to assume substantially parallel positions, the fulcrums of said levers being spaced apart a distance slightly greater than the length of said long arms, a stop arranged intermediate said fulcrums and on one side of said long arms, an oscillatory lever arranged on the other side of said long arms and adapted to have electric contact therewith, a traversing roller provided at one end of said oscillatory lever for oscillating the same in one direction, a tension helical spring provided at the other end of said oscillatory lever for oscillating the same in the other direction, and an insulating cord connecting the free ends of said short arms, said bell-crank levers being oscillated between said stop and said oscillatory lever by contact with the latter at the ends of its stroke in either direction, substantially as described.

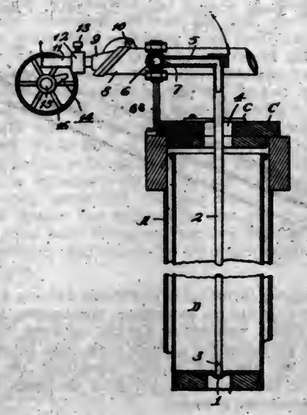
1,020,194. LETTER-BOX PLATE. FREDERICK FRANKLIN FIELD, Lakewood, R. I. Filed Feb. 7, 1911. Serial No. 607,150. (Cl. 232—46.)

A combined drop and name plate for letter box plates, said drop and name plate being formed from a sheet metal blank having a slot coinciding with the slot in the letter box plate, a strip of glass secured in place, by bending the edges of the blank over and back of the glass and around a rod at the top which is secured at each end to the letter box plate, thereby forming a hinge for the drop plate, a name card secured by forcing the edge of the card down between the turned over edge of the drop plate and the glass, and a weight consisting of a rod and a sheet metal casing formed around the rod and



having a lip, whereby the weight is secured to the drop plate, by forcing the lip on the weight down between the turned over edge of the drop plate and the name card.

1,020,195. APPARATUS FOR MAKING ARTIFICIAL ICE. GEORGE H. FISHER and PHILIP J. O'NEIL, Leavenworth, Kans. Filed Feb. 6, 1911. Serial No. 606,960. (Cl. 62—6.)



1. In combination with a congealing-can adapted to contain water, a tube removably arranged within said can and provided with ports so that the water can enter said tube to a level with the surrounding water in the can, a pipe having a port, a hollow coupling swiveled upon said pipe and adapted, when in operative position to communicate with the port therein and the upper open end of the tube, said coupling being further adapted, when swung to an inoperative position out of contact with the tube, to close the port in the pipe, and means for applying intermittent pressure through the pipe, the coupling, and the tube to the water in the latter to expel all, or a portion of said water into the can to agitate the water in the latter.

2. In combination with a plurality of congealing-cans adapted to contain water, tubes arranged within said cans and provided with ports so that the water can enter said tubes to a level with the surrounding water in the cans, a plurality of branch-pipes having ports therein, couplings connecting said branch-pipes and the upper open ends of the tubes, a header communicating with the branch-pipes, and means for intermittently opening said header.

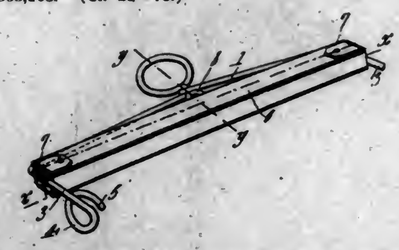
3. In combination with a plurality of congealing-cans adapted to contain water, tubes arranged within said cans and provided with ports so that the water can enter said tubes to a level with the surrounding water in the cans, a plurality of branch-pipes having ports therein, couplings connecting said branch-pipes and the upper open ends of the tubes, a header communicating with the branch-pipes, and a valve communicating with said header.

4. In combination with a plurality of congealing-cans adapted to contain water, tubes arranged within said

cans and provided with ports so that the water can enter said tubes to a level with the surrounding water in the cans, a plurality of branch-pipes having ports therein, couplings connecting said branch-pipes and the upper open ends of the tubes, a header communicating with the branch-pipes, a valve communicating with said header, and a cam to intermittently open said valve.

5. In combination with a brine-tank, and a cover therefor, having a central opening therethrough, a congealing-can adapted to contain water and be lowered into said brine-tank and having a central depression therein, a tube centered within said can by the depression therein, said tube being provided with ports so that the water can enter said tube to a level with the surrounding water in the can, pivotally-mounted lids on the cover to close the central opening therein and embrace the tube, and means for applying intermittent pressure to the water in the tube to expel all, or a portion thereof into the can to agitate the water in the same.

1,020,196. WHIFFLETREE. THOMAS FRANK GREGORY, Henning, Tenn. Filed Nov. 29, 1911. Serial No. 663,108. (Cl. 21—78.)



A whiffletree, including a stretching bar, an attaching member having lateral extensions terminating in trace-engaging hooks, themselves having recurved terminals, and means providing for slidable connection between said stretching bar and said lateral extensions, for the engagement of said stretching bar with the bends or backs of said trace-forming hooks.

1,020,197. LINK CHAIN. ALFRED GÜNZEL, Rochlitz, Germany, assignor to Arno Günzel, Altenburg, Germany. Filed Mar. 4, 1911. Serial No. 612,182. (Cl. 74—43.)



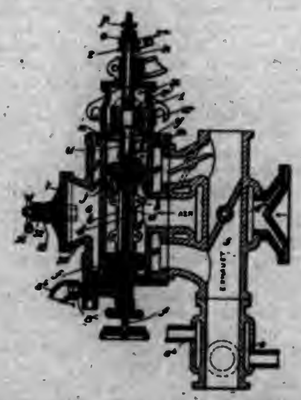
1. A link chain comprising, in combination, a series of links each having a transverse bolt at one end and a transverse segmental recess at the other end, the bolt of one link being capable of axial insertion in and removal from the recess of the adjacent link, the side members of the one link thereupon sliding through the transverse lateral opening of the recess in the adjacent link, and a bush surrounding the transverse bolt of the one link and fitting in the recess of the adjacent link so as to close the transverse lateral opening of said recess.

2. A link chain comprising, in combination, a series of links, each having a transverse bolt at one end and a transverse segmental recess at the other end, the bolt of one link being capable of axial insertion in and removal from the recess of the adjacent link, the side members of the one link thereupon sliding through the transverse lateral opening of the recess in the adjacent link, and a split bush surrounding the transverse bolt of the one link and fitting in the recess of the adjacent link so as to close the transverse lateral opening of said recess, said split bush forming a bearing for the transverse bolt.

3. A link chain comprising, in combination, a series of links, each having a transverse bolt at one end and a transverse segmental recess at the other end, the bolt of one link being capable of axial insertion in and removal from the recess of the adjacent link, the side members of the one link thereupon sliding through the transverse lateral opening of the recess in the adjacent link, and a split bush of springy metal surrounding the transverse bolt of the one link and fitting in the recess of the adjacent link so as to close the transverse lateral opening of said recess, said split bush forming a bearing for the transverse bolt and being held by friction in said recess.

4. A link chain comprising, in combination, a series of links, each having a transverse bolt at one end and a transverse segmental recess at the other end, the bolt of one link being capable of axial insertion in and removal from the recess of the adjacent link, the side members of the one link thereupon sliding through the transverse lateral opening of the recess in the adjacent link, and a bush surrounding the transverse bolt of the one link and fitting in the recess of the adjacent link so as to close the transverse lateral opening of said recess, the side members of each link extending a short distance beyond the transverse bolt carried thereby so that the side members of adjacent links fit closer together.

1,020,198. CARBURETER FOR INTERNAL-COMBUSTION ENGINES. WILLIAM WILSON HAMILL, Glasgow, Scotland. Filed Feb. 26, 1910. Serial No. 546,172. (Cl. 48—155.1.)



1. The combination, with a carbureter for internal combustion engines having a chamber, a fuel spraying nozzle arranged in said chamber, a double cone piston surrounding said nozzle and means for moving said piston longitudinally of said nozzle, of a sleeve movably fitted upon said nozzle for regulating the fuel supply, means for moving said sleeve in conjunction with said piston and means for stopping the movement of the sleeve while the piston continues to move, relative adjustment being thereby obtained between the piston and sleeve.

2. The combination, with a carbureter for internal combustion engines having a chamber, a fuel spraying nozzle arranged in said chamber, a double cone piston surrounding said nozzle and means for moving said piston longitudinally of said nozzle, of a sleeve movably fitted upon said nozzle for regulating the fuel supply, means for moving said sleeve in conjunction with said piston and means for stopping the movement of the sleeve in one direction and checking its movement in the other direction independently of the movement of the piston.

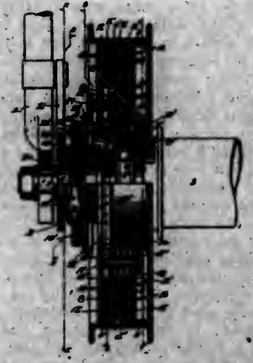
3. The combination, with a carbureter for internal combustion engines having a chamber, a fuel spraying nozzle arranged in said chamber, a double cone piston surrounding said nozzle and means for moving said piston longitudinally of said nozzle, of a sleeve movably fitted upon said nozzle for regulating the fuel supply, means for moving said sleeve in conjunction with said piston, means for stopping the movement of the sleeve in one direction and elastic means for checking its movement in the other direction independently of the movement of the piston.

4. The combination, with a carbureter for internal combustion engines having a carbureting chamber, a fuel spraying nozzle arranged in said carbureting chamber, a double cone piston surrounding said nozzle and means for moving said piston longitudinally of said nozzle, of an outer concentric and tapering sleeve movably fitted upon said nozzle for regulating the fuel supply, means for moving said sleeve in conjunction with said piston and means for stopping the movement of the sleeve while the piston continues to move, relative adjustment being thereby obtained between the piston and sleeve.

5. The combination, with a carbureter for internal combustion engines having a carbureting chamber, a fuel spraying nozzle arranged in said carbureting chamber, a double cone piston surrounding said nozzle and means for moving said piston longitudinally of said nozzle, of an outer concentric and tapering sleeve movably fitted upon said nozzle for regulating the fuel supply, means for moving said sleeve in conjunction with said piston and means for stopping the movement of the sleeve in one direction and checking its movement in the other direction independently of the movement of the piston.

[Claims 6 to 21 not printed in the Gazette.]

1,020,199. FRICTION-CLUTCH. WILLIAM S. HARLEY, Milwaukee, Wis. Filed Oct. 9, 1911. Serial No. 653,551. (Cl. 192—10.)



1. A clutch comprising a shaft, a hub revolubly mounted thereon, a clutch member carried by the hub, a spring-pressed gripping member in slidable union with the clutch member, a hub revolubly mounted upon the first named hub, a second clutch member carried thereby and interposed between the first clutch member and gripping member, a non-rotary threaded shell disposed about the shaft, a rotary nut in threaded union with the shell, and a spreader for the spring-pressed gripping member carried by the first named clutch member engageable with the nut.

2. A clutch comprising a shaft, a wheel-hub revolubly mounted thereon, an apertured clutch disk, a shell provided with a hub loosely mounted upon the wheel-hub, rings carried by the shell, gripping rings in slidable engagement with the disk, bolts extending from the disk, coiled springs carried by the bolts for controlling the gripping rings, a non-rotary exteriorly threaded sleeve carried by the shaft, a nut mounted upon the sleeve, a spreader-plate carried by said disk under control of the nut, and thrust pins carried by the spreader-plate for controlling movement of the gripping rings in one direction.

3. A clutch comprising a wheel hub, a clutch disk carried by the hub, a shell journaled upon the hub, a pair of rings in slidable engagement with the shell, a second pair of spring-controlled gripping rings interposed between the shell rings, supporting means connecting the gripping rings and disk, idle friction rings interposed between the disk, shell rings and gripping rings, slidable thrust pins carried by the gripping disk for controlling movement of the gripping rings in one direction, a spreader-plate connecting the thrust pins, a non-rotary exteriorly threaded sleeve in axial alinement with the wheel-hub, a nut carried by the sleeve for engagement with the spreader-plate, and a manually controlled actuating means for the nut.

4. A clutch comprising a shaft, a notched end barrel hub revolubly mounted upon the shaft, a collar fitted upon the end of the barrel hub having lugs engageable with the barrel hub notches, a flange extending from the collar, an apertured disk secured to the flange, a hub shell revolubly mounted upon the collar, clutch rings carried by the shell, the clutch rings being in slidable union therewith, a gripping ring having an apertured hub section alined with the shell rings, a second gripping ring carried by the first named gripping ring and in slidable union therewith, idle rings interposed between the disk, shell rings and gripping rings, lugs extending from said disk engageable with hub apertures of the first mentioned gripping ring, bolts carried by the aforesaid disk extending through other apertures of the gripping ring hub, coiled springs surrounding the bolts, straps in threaded union with pairs of said bolts whereby the tension of the coiled springs is regulated, thrust pins in slidable union with apertures of the disk having ends engageable with the gripping ring hub section, a spreader-plate connecting the thrust pins, a non-rotatory exteriorly threaded sleeve carried by the shaft, a flanged nut engageable with the sleeve threads, anti-friction balls interposed between the nut flange and spreader-plate, and manually controlled actuating means for the nut.

1,020,200. CALCULATING-MACHINE. WOLDEMAR REINHOLD HEINITZ, Chemnitz, Germany, assignor to The Firm of Schubert & Salzer Maschinenfabrik Aktiengesellschaft, Chemnitz, Germany. Filed Jan. 10, 1910. Serial No. 537,230. (Cl. 235—69.)



1. In a calculating machine, the combination with the setting elements, and registering elements adapted to be operated by the setting operation of the setting elements, of automatic means to lock the setting elements in set position, and hand actuated means adapted upon operation by the hand of the operator to throw said locking means out of operation.

2. In a calculating machine, the combination with the setting elements, and registering elements adapted to be operated by the setting operation of the setting elements, of spring actuated members adapted to lock the setting elements in set position, a rock shaft, arms on said rock shaft adapted to throw said members out of locking position, and a hand piece secured to said rock shaft and adapted when operated by the hand of the operator to rock said rock shaft and arms into position for throwing the locking members out of locking position.

3. In a calculating machine, the combination with the setting elements, and registering elements adapted to be operated by the setting operation of the setting elements, of automatic means to lock the setting elements in set position, and means adapted to be operated before setting said setting elements to lock said locking means in inoperative position.

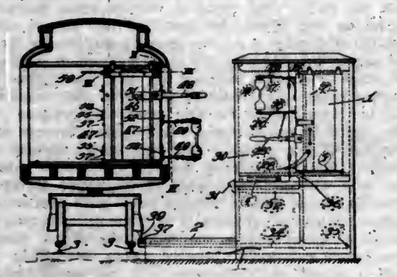
4. In a calculating machine, the combination with the setting elements, and registering elements adapted to be operated by the setting operation of the setting elements, of automatic means to lock the setting elements in set

position, means to throw said locking means out of operation, and normally inoperative means to lock said throwing means in operative position.

5. In a calculating machine, the combination with the setting elements, and registering elements adapted to be operated by the setting operation of the setting elements, of rocking levers one for each of said setting elements adapted to lock said setting elements in set position, means to normally hold said levers in locking position, and means adapted to be operated before setting said setting elements set to said rocking levers in non-locking position.

[Claims 6 to 13 not printed in the Gazette.]

1,020,201. MAIL RECEIVING AND DELIVERING APPARATUS. SAMUEL C. HENDRICKS and GEORGE E. BOWLES, Hannibal, Mo. Filed Sept. 21, 1911. Serial No. 650,600. (Cl. 105—231.)



1. In a device of the character described, the combination with a mail crane housing, of a closure therefor, means tending to open said closure, a latch for retaining said closure shut, and means carried by the mail train for operating said latch.

2. In a device of the character described, the combination with a mail crane housing, of a closure therefor, means tending to open said closure, a latch for retaining said closure shut, and means carried by the mail train for operating said latch; the last said means being disposed between the engine and the mail car.

3. In a device of the character described, the combination with a housing provided with a closure under normal tendency to open a mail crane movably mounted in said housing under normal tendency to move into operative position with respect to a passing mail train, means for holding said closure shut and said mail crane in inoperative position, and means carried by the mail train for operating the first said means.

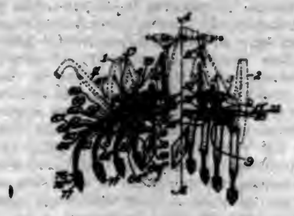
4. In a device of the character described, the combination with a mail crane slidable transversely of the track, of a latch normally holding said crane in position away from said track, said latch being provided with a tread shoe disposed adjacent the track, and a striker carried by the train for depressing said tread shoe to release said crane for movement toward the track.

5. In a device of the character described, the combination with a reciprocatable frame, of a pivotally mounted post carried by said frame, means carried by the post for supporting a mail bag, and means for automatically timing the movement of said frame with respect to a passing carrier.

[Claims 6 to 8 not printed in the Gazette.]

1,020,202. CULTIVATOR-TOOTH ATTACHMENT. WILLIAM LINDSAY HOLT, Vincennes, Ind., assignor to Hartman Manufacturing Company, Vincennes, Ind., a Corporation of Indiana. Filed Oct. 14, 1911. Serial No. 654,598. (Cl. 97—35.)

1. A cultivator tooth attachment including a beam having a bolt hole therein, a spring-tooth holder comprising a flat plate having a lip thereon and a flat shank having a lug thereon, the shank being at one side of the beam and having a bolt therein that is removably secured in the bolt hole, the lug engaging the top of the beam, and a bolt connected to the flat plate for securing a spring-tooth thereto in contact with the lip.



2. A cultivator tooth attachment including a horizontal crosshead having a horizontal socket and also a keyway in one end portion and a horizontal bolt in the opposite end portion thereof, a locking device in the keyway, and two universal interchangeable beams having each a spring-tooth holder thereon, one end of one of the beams being inserted in the horizontal socket and secured therein by the locking device, the corresponding end of the other beam being secured to the crosshead by the bolt, and two spring-teeth secured to the two spring-toothed holders respectively.

3. A cultivator tooth attachment including a beam having a bolt hole in one end portion thereof, two spring-tooth holders having each a flat shank arranged in contact with the beam, each shank having a lug thereon engaging the top of the beam, the two shanks being at opposite sides of the beam, one shank being at one end portion and the other shank at a distance from the opposite end of the beam away from said bolt hole, bolts securing the shanks to the beam, and bolts connected to the holders for securing spring-teeth thereto.

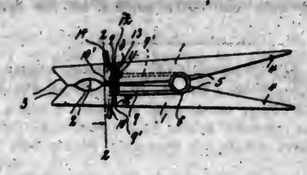
4. A cultivator tooth attachment including a horizontally arranged crosshead having two horizontal sockets and a vertical keyway in one end portion thereof, the opposite end portion of the crosshead having two vertical sockets and a horizontal keyway and also a bolt hole therein, the bolt hole extending horizontally in the outer wall of the outermost one of the vertical sockets, the sockets being adapted to receive the shanks of cultivating implements, the keyways being adapted to receive locking devices for securing the shanks in the sockets, the bolt hole being adapted to receive a bolt for securing a shank to the outer wall of the outer one of the sockets.

5. In a cultivator, the combination of a horizontally arranged cross head having two horizontal sockets and a vertical keyway in one end portion and two vertical sockets and a horizontal keyway and also a bolt hole in the opposite end portion thereof, two identically shaped interchangeable beams having each an aperture in one end portion thereof, the apertured end portion of one of the beams being inserted in one of the horizontal sockets, the apertured end portion of the other one of the beams being arranged on the end of the crosshead at said bolt hole, a bolt in said bolt hole and said aperture, a gib and a wedge-bolt in the vertical keyway securing the beam in the socket, and a plurality of identically shaped spring-tooth holders, two of the holders being secured to one of the beams, and two others of the holders secured to the remaining one of the beams.

[Claims 6 to 8 not printed in the Gazette.]

1,020,203. CLOTHES-PIN. SEVRIN P. HORNSETH, Renville, Minn. Filed May 10, 1911. Serial No. 626,326. (Cl. 24—253.)

As an article of manufacture, a clothes pin comprising a pair of jaws, and spring means interposed between said jaws for operating the latter, said spring means having its terminal portions each engaging about a respective jaw, one terminal portion of said spring being provided with an eye, the other terminal portion being



provided with a catch adapted for engagement in the eye of said first named terminal portion of said spring.

1,020,204. NON-REFILLABLE BOTTLE. FRANK A. JENCYK, Chicago, Ill. Filed Aug. 26, 1911. Serial No. 646,161. (Cl. 215—66.)



1. A non-refillable bottle, a cap secured to the bottle neck and provided with a port at one side; a housing covering said port; a tongue projecting from said cap at the lower edge of said port; and a lid having an opening engaging over said tongue to form a hinged connection, substantially as described.

2. In a non-refillable bottle, a metallic cap secured and sealed to the bottle neck, there being a space intervening between the opening of the bottle neck and the top of said cap, a removable cork provided for the opening of said bottle neck, means mounted in the top of said cap and connected to said cork for removing and inserting the same, there being a port provided in one side of said cap and disposed above the bottle opening, means arranged diametrically opposite said port for permitting the free ingress and egress of atmospheric air to and from said space, a triangular housing projecting from one side of said cap and formed integral therewith, the disposition of said housing being such as to cover said port, said housing being provided with an opening leading to atmosphere in one of the walls thereof, a tongue projecting from said cap at the lower edge of said port, a lid adapted to cover said port provided with an elongated opening for the reception of said tongue thus forming a hinged connection, said lid being disposed outside of said port, and means for limiting the oscillation of said lid, substantially as described.

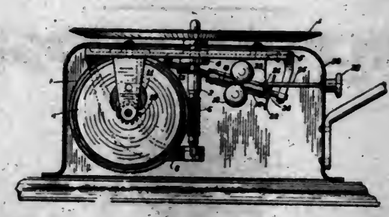
3. In a non-refillable bottle, a metallic cap secured and sealed to the bottle neck, there being a space intervening between the opening of the bottle neck and the top of said cap, a removable cork provided for the opening of said bottle neck, means mounted in the top of said cap and connected to said cork for removing and inserting the same, there being a port provided in one side of said cap and disposed above the bottle opening, means arranged diametrically opposite said port for permitting the free ingress and egress of atmospheric air to and from said space, a triangular housing projecting from one side of said cap and formed integral therewith, the disposition of said housing being such as to cover said port, said housing being provided with a triangular opening leading to atmosphere in one of the walls thereof, a curved tongue projecting from said cap at the lower edge of said port, a lid adapted to cover said port provided with an elongated opening for the reception of said tongue thus forming a hinged connection, said lid being disposed outside of said port, and means for limiting the oscillation of said lid, substantially as described.

1,020,205. WINDOW-LOCK. CARL J. JEVERT, Chicago, Ill. Filed May 5, 1911. Serial No. 625,305. (Cl. 16—146.)



The combination with the upper and lower sashes of a window, of two spring links pivotally connected together at one of their ends and the other end of one of said links being permanently pivoted to the meeting rail of the upper sash and the other end of the other link being provided with a key hole slot; and a stud secured to the meeting rail of the lower sash and provided with a locking lug adapted to pass through said slot when in one position and detachably pivot its link on said stud, said links being spread apart at the ends pivoted to said meeting rails and formed of spring metal, substantially as described.

1,020,206. MOTOR FOR TALKING-MACHINES. ELDRIDGE R. JOHNSON, Merion, Pa., assignor to Victor Talking Machine Company, a Corporation of New Jersey. Filed Nov. 12, 1904. Serial No. 232,390. (Cl. 185—37.)



1. In a motor the combination with a driving shaft, means to drive the same, a spindle, a governor and a governor shaft, and gearing between said driving shaft and said spindle and between said spindle and said governor shaft, all the gearing in said motor consisting of a gear wheel for the driving member of the gearing and a worm for the driven member of the gearing.

2. In a motor the combination with a driving shaft, means to drive the same and a gear wheel mounted on said shaft, of a spindle, a worm mounted on said spindle and meshing directly with said gear on said driving shaft and driven thereby, a gear on said spindle, a governor and a governor shaft, a worm mounted on said governor shaft and meshing directly with said gear on said spindle and driven thereby.

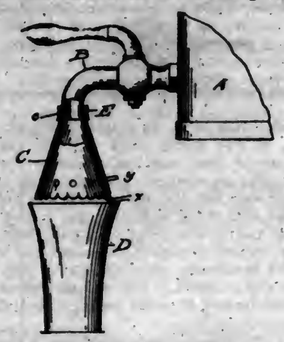
3. In a motor, the combination of a casing, a horizontal spring driven shaft, a vertical worm gear thereon, a vertical shaft suitably journaled in said casing and provided with a worm near its lower end and a spur gear at its upper end, a governor, an inclined governor shaft journaled in brackets depending from the top of said casing, and a worm on said governor shaft meshing with said spur gear.

4. In a motor the combination with a driving shaft, means to drive the same, a spindle, a governor and a governor shaft, and gearing between said driving shaft and said spindle and between said spindle and said governor shaft; the said gearing in said motor consisting of a gear wheel for the driving member of the gearing and a worm for the driven member of the gearing.

1,020,207. SANITARY ATTACHMENT FOR FAUCETS. CHARLES EDMUND KELLS, Jr., New Orleans, La. Filed Oct. 16, 1911. Serial No. 654,796. (Cl. 137—4.)

1. A sanitary shield adapted to be attached to the mouth of a faucet and to surround the water flowing

therefrom and provided with openings above its extreme lower edge to prevent water from rising to the top of the shield should the lower edge of the shield be brought into contact with the interior of a drinking vessel.



2. The combination with a faucet of a frustum shaped shield made of flexible material and which projects below the mouth of the faucet and is provided with openings above its extreme lower edge, and clamping devices attached to the faucet and firmly engaging the upper end of the shield.

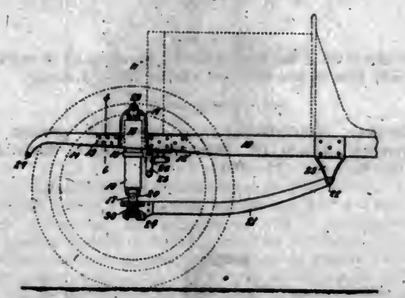
1,020,208. LOCK AND KEY. JUDSON LAUGHLIN, Ledyard, Iowa. Filed Sept. 28, 1910. Serial No. 584,295. (Cl. 70—47.)



1. The combination of a lock comprising a casing having an extension on one side thereof and being provided with a cylindrical bore, a cylindrical barrel disposed in said bore, said extension and barrel being provided with a series of bores arranged to register, a series of pins disposed in the bores in said barrel, a series of spring actuated plungers disposed in the bores in said casing and adapted to enter the bores of said barrel, said barrel being provided with a central bore intersecting the first mentioned bores, a cam plate secured to one end of said cylindrical barrel, said cam plate having an opening, a key having a cylindrical body portion, and cylindrical cam portions on said body portion arranged to engage the pins for operating said plungers, the key being provided with a reduced portion arranged to enter the opening in said cam plate.

2. In a lock, an exterior cylindrical casing, having an extension at one side thereof, said cylindrical casing being provided with a cylindrical bore, and said extension being provided with a plurality of cylindrical bores transverse of said main bore and communicating therewith, a cylindrical barrel disposed in the bore of said cylindrical casing, said cylindrical barrel being provided with radial bores adapted to register with the bores of said extension and having a central cylindrical bore communicating with said radial bores, a spring actuated plunger in each bore of the extension adapted to extend into one of the registering radial bores of the barrel, a separate plunger in each of the radial bores of the barrel, one end of each of said plungers being adapted to extend within the central bore in said barrel, a cam plate secured to one end of said barrel and being provided with an opening, and a key having cam surfaces arranged to enter the central bore of the barrel and having a rectangular end arranged to enter the opening in said cam member, a cam surface on said key being arranged to engage the ends of the plungers in the radial bores to force the ends of the plungers into registration with the outer surface of the cylindrical barrel.

1,020,209. SPRING-VEHICLE. RICHARD LIEBAU, Watervliet, N. Y. Filed July 27, 1910. Serial No. 574,159. (Cl. 21—105.)



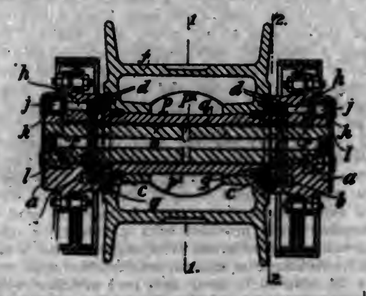
1. In a vehicle, a body having side members, running gear, interposed pneumatic cylinder supports, upper brackets for said cylinder supports secured to the ends of said side members in line therewith, and horns secured to said brackets and constituting extensions of said side members.

2. In a vehicle, a body having transversely severed side bars, running gear, pneumatic cylinder supports for supporting the body on the running gear, and upward projecting brackets for applying the weight of the body to the upper ends of said supports, being inserted between the sections of said side-bars and having forward and rearward attaching projections overlapping said sections and secured thereto.

3. In a vehicle, the combination with the body and running gear, and interposed pneumatic cylinder supports, of transversely severed body-side-bars, and upper seats for said pneumatic cylinder supports inserted between the sections of said severed side-bars.

4. In a vehicle, the combination with the body and running gear, and interposed pneumatic cylinder supports, of transversely severed body-side-bars, and upper seats for said pneumatic cylinder supports inserted between and extending above the sections of said severed side-bars, the points of application of the weight of the body to said supports being above said side bars and in the vertical plane of the axis of said bars.

1,020,210. LUBRICATING DEVICE. FRED LOBNITZ, Renfrew, Scotland. Filed Feb. 1, 1909. Serial No. 475,392. (Cl. 64—27.)



1. A device such as described comprising, in combination, fixed members each having a channel therein, a shaft carried by said members, a rotating member, a metal ring fitted movably in each channel, circumferential

packing rings on said metal rings, a pin connected with each metal ring means whereby said metal rings and pins can be lubricated and elastic means acting on each pin.

2. A device such as described, comprising, in combination, fixed members each having an annular channel therein, a shaft carried by said members, a rotating member, a metal ring fitted movably in each channel circumferential packing rings on said metal rings, a pin connected with each metal ring means whereby said metal rings and pins can be lubricated and elastic means acting on each pin.

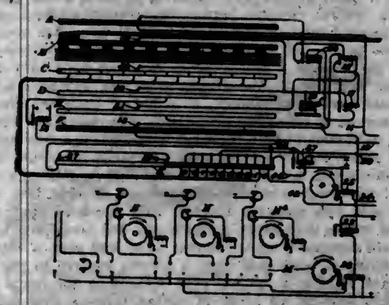
3. A device such as described comprising, in combination, fixed members each having a channel therein, a shaft carried by said members, a rotating member, a metal ring fitted movably in each channel circumferential packing rings on said metal rings, a pin connected with each metal ring, a cup on each pin, and springs bearing on the cups.

4. A device such as described comprising, in combination, fixed members each having a channel therein, a shaft carried by said members, a rotating member, a metal ring fitted movably in each channel, circumferential packing rings on said metal rings, a pin connected with each metal ring, a cup on each pin, springs bearing on the cups and means for retaining the springs in place.

5. In combination, fixed members each having an annular channel therein at one side thereof, a series of recesses at the opposite side thereof and openings connecting the aforesaid channel and recesses, annular bearing means arranged in the channel, a circumferential packing ring on said bearing means, elastic means in said recesses and acting on said bearing means, a shaft and a rotating member on the shaft.

[Claims 6 to 11 not printed in the Gazette.]

1,020,211. AUTOMATIC TELEPHONE-EXCHANGE. GEORGE W. LORIMER, Piqua, Ohio, assignor, by mesne assignments, to Western Electric Company, a Corporation of Illinois. Filed Apr. 24, 1907, Serial No. 370,047. Renewed Aug. 7, 1911. Serial No. 642,819. (Cl. 179—18.)



1. In an automatic telephone system, a movable conductor terminal, a plurality of fixed terminals, means for stopping said movable conductor terminal in connection with one of said fixed terminals and for holding said movable conductor terminal immovable, an electric circuit controlling said holding means, an automatic call-answering device and a relay in the central office and controlled by said call-answering device and adapted to break said circuit, substantially as described.

2. In an automatic telephone system, a movable conductor terminal, a plurality of fixed terminals, means for stopping said movable conductor terminal in connection with one of said fixed terminals and for holding said movable conductor terminal immovable, an electric circuit controlling said holding means, an auxiliary cycle-controlling commutator and brushes, and a relay having an armature back contact in said circuit and having its winding controlled by said cycle-controlling devices, substantially as described.

3. In an automatic telephone system, lines, a central office, a calling indicator having lines terminating therein and having traveling brushes and adapted to stop its brushes in connection with a calling line and adapted to hold electromagnetically its brushes in connection with the calling line, a source of current supplying energy to said calling indicator, an automatic connecting switch having terminating therein lines terminating also in said calling indicator, and a relay within the central office and controlled by said connecting switch and controlling the connection of said source of current and said calling indicator, substantially as described.

4. In an automatic telephone system, a central office, lines radiating therefrom, line terminals, brushes movable over said line terminals, means for stopping said brushes in register with the terminals of a calling line, an automatic call-answering device, and an electric circuit lying wholly within said central office and controlling starting means for said brushes and controlled by said automatic call-answering device, substantially as described.

5. In an automatic telephone system, a central office, line terminals, a brush movable over said line terminals, an electromagnetic clutch for stopping said brush, an automatic call-answering device comprising a main connecting switch and subsidiary controlling devices, and a relay within the central office and controlled by said automatic call-answering device to render said electromagnetic clutch inoperative, substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

1,020,212. BEER-TAP. EDWARD A. LUKOWSKI, Hammond, Ind. Filed Oct. 21, 1911. Serial No. 655,940. (Cl. 225—3.)



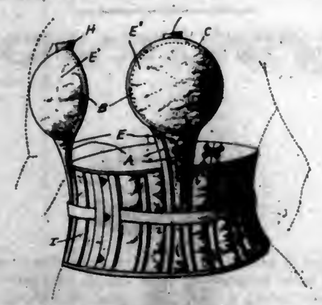
1. In a beer tap, the combination with a hollow, detachable tap body arranged to receive a hollow rod, and having one flanged end arranged to seat upon a bushing and beyond said flanged end a reduced neck encircled by an elastic washer, of a bushing arranged to be secured in a barrel, said bushing having inclined locking members, and having an upstanding neck forming a seat for said hollow body, and a tubular locking member surrounding and connected with said hollow tap body, and having means coöperating with said locking members of the bushing, for clamping said body upon said seat of the bushing with the elastic washer interposed therebetween.

2. In a beer tap, the combination with a hollow, detachable tap body having a flanged end, of a bushing arranged to be secured in a barrel, said bushing having an upstanding flanged neck, and inclined locking ribs, a sleeve surrounding said hollow tap body and having an inturned flange at its upper end and lugs on its lower end arranged to engage the underside of said locking ribs, and a coiled spring confined under compression between the inturned flange of said sleeve and said flanged end of the hollow tap body for holding said body upon the seat of the bushing.

3. In a beer tap, the combination with a hollow, detachable tap body arranged to receive a hollow rod, a sleeve surrounding said hollow body and having a pair of outwardly projecting lugs on its lower end and a coiled spring held under compression between said body and sleeve, of a bushing having an upturned neck forming a seat for the end of the hollow body, said bushing having a pair of oppositely disposed, inclined, locking members arranged to engage said lugs upon the sleeve to hold the spring in compression and seat the hollow body upon the neck of the bushing.

4. In a beer tap, the combination with a hollow, detachable tap body having a flanged end, a sleeve surrounding said body and formed with an inturned flange at its upper end and with outwardly projecting lugs on its lower end, and a coiled spring confined under compression between said flanged end of the tap body and the inturned flange on the sleeve, of a bushing arranged to be secured in a barrel, said bushing having an annular seat arranged to receive the flanged end of the tap body, and having inclined locking ribs arranged to engage the lugs of the sleeve to hold the said spring under compression and thereby seat the flanged end of the tap body upon the seat of the bushing.

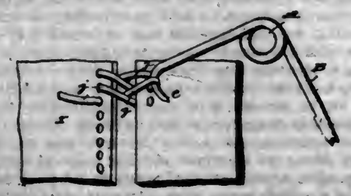
1,020,213. BUST-SUPPORTER. LYDIA MARTELL and EDWARD J. PAYNE, Seattle, Wash. Filed July 1, 1911. Serial No. 636,528. (Cl. 2—73.)



1. A bust supporter, comprising a corset girdle, bust supporting stays secured to said girdle, and projecting above the latter, a wire fixed to each bust supporting stay, the upper ends of said wires being spaced apart and a fabric covering the wires and bridging the space between the free ends of the latter, as set forth.

2. A bust supporter, comprising a corset girdle, bust supporting stays secured to said girdle, a clamping member secured to each stay, a wire fastened to each clamping member, the free ends of said wires being spaced apart, a fabric covering the stays and bridging the space between the free ends of said wires, as set forth.

1,020,214. BELT-LACING TOOL. CHARLES HENRY MEYZ, Spokane, Wash. Filed Dec. 2, 1908. Serial No. 465,697. (Cl. 24—40.)



The improved belt-lacing tool comprising a metal bar coiled upon itself, at the middle, to form a loop for the purpose specified, the two parts extending from the loop at a right angle to each other, and one of them terminating in a hook that curves inward toward the other part, which other part serves, together with the loop, as a handle in using the tool, as shown and described.

1,020,215. GAME APPARATUS. HERBERT JOHN MILLER, London, Ontario, Canada. Filed Apr. 20, 1910. Serial No. 556,521. (Cl. 46—56.)



1. A game apparatus comprising a board member having a central circular perforation therethrough, a cross bar secured beneath said board, a stationary disk secured to the bottom of said cross bar and positioned beneath said perforation, a post centrally mounted upon said disk having a longitudinal bore therethrough, a ball race provided around the bottom of said post, a revolving disk positioned within said perforation and lying flush with the upper surface of said board, rubber covered pins positioned upon said disk, a hub secured to said revolving disk and surrounding said post, anti-friction members positioned in said ball race and said hub mounted thereon, said revolving disk provided with a depression, a stationary dial positioned within said depression and mounted upon said post, a spindle extending through said post, a pointer secured to the top of said spindle, and means for rotating said pointer relatively to the dial upon the turning of the revolving disk.

2. A game apparatus comprising a board member having a central circular perforation therethrough, a cross bar secured beneath said board, a stationary disk secured to the bottom of said cross bar and positioned beneath said perforation, a hollow pillar mounted upon said disk, a post centrally mounted upon said disk having a longitudinal bore therethrough, a ball race provided around the bottom of said post, a revolving disk positioned within said perforation and lying flush with the upper surface of said board, rubber covered pins positioned upon said disk, a hub secured to said revolving disk and surrounding said post, anti-friction members positioned in said ball race and said hub mounted thereon, said revolving disk provided with a depression, a stationary dial positioned within said depression and mounted upon said post, a spindle extending through said post, a pointer secured to the top of said spindle, a toothed gear secured to the lower end of said spindle, an arbor extending through said hollow pillar, a pinion secured to the lower end of said arbor and said pinion in mesh with said gear, and means for turning said arbor and pointer upon a turning of the revolving disk.

3. A game apparatus comprising a board member having a central circular perforation therethrough, a cross bar secured beneath said board, a stationary disk secured to the bottom of said cross bar and positioned beneath said perforation, a hollow pillar mounted upon said disk, a post centrally mounted upon said disk having a longitudinal bore therethrough, a ball race provided around the bottom of said post, a revolving disk positioned within said perforation and lying flush with the upper surface of said board, rubber covered pins positioned upon said disk, a hub secured to said revolving disk and surrounding said post, anti-friction members positioned in said ball race and said hub mounted thereon, said revolving disk provided with a depression, a stationary dial positioned within said depression and mounted upon said post, a spindle extending through said post, a pointer secured to the top of said spindle, a toothed gear secured to the lower end of said spindle, an arbor extending through said hollow pillar, a pinion secured to the lower end of said arbor and said pinion in mesh with said gear, a wheel secured to the upper end of said arbor, arms provided upon said wheel, and means positioned upon said revolving disk adapted to be positioned for engagement with said arms upon the rotation of said disk for moving said pointer.

4. A game apparatus comprising a board member having a central circular perforation therethrough, a cross bar secured beneath said board, a stationary disk secured to the bottom of said cross bar and positioned beneath said perforation, a hollow pillar mounted upon said disk, a post centrally mounted upon said disk having a longitudinal bore therethrough, a ball race provided around the bottom of said post, a revolving disk positioned within said perforation and lying flush with the upper surface of said board, rubber covered pins positioned upon said disk, a hub secured to said revolving disk and surrounding said post, anti-friction members positioned in said ball race and said hub mounted thereon, said revolving disk provided with a depression, a stationary dial positioned within said depression and mounted upon said post, a spindle extending through said post, a pointer secured to the top of said spindle, a toothed gear secured to the lower end of said spindle, an arbor extending through said hollow pillar, a pinion secured to the lower end of said arbor and said pinion in mesh with said gear, a wheel secured to the upper end of said arbor, arms provided upon said wheel, means positioned upon said revolving disk adapted to be positioned for engagement with said arms upon the rotation of said disk for moving said pointer, a plurality of numerals positioned around the outer edge of said dial plate, and a lever projecting through said revolving disk for positioning said engaging means either in or out of contact with said arms.

1,020,216. DAMPER. WILLIAM S. MUMFORD, Philadelphia, Pa. Filed Apr. 6, 1911. Serial No. 619,385. (Cl. 126—297.)



1. The combination in a damper of a central disk having a centrally located opening therethrough, outer disks secured to and spaced from the central disk, two valve members pivotally carried by the central disk and adapted to cover said opening, the inner sides of said valve members being cut away to form, when closed, a centrally located opening, and means for moving said valve members toward or away from each other to vary the size of the opening formed therebetween.

2. The combination in a damper, of a central disk having an opening therethrough, imperforate disks on opposite sides of the central disk and spaced therefrom and of less diameter than the central disk, valve members mounted on the central disk and forming, when closed, a predetermined centrally located opening through which the furnace gases may pass, an actuating member operatively connected with said valve members, and means carried by said actuating member for registering the movement imparted to the valve members.

3. The combination in a damper, of a central disk having an opening therethrough, outer disks secured to and spaced from the central disk and of less diameter than the central disk, valve members movably carried by the central disk, a threaded rod connected to the valve members, a guide therefor, means for preventing rotation of the said rod, and devices coacting with said rod to move the latter and thereby control the valve members.

4. The combination in a damper, of a central disk having an opening therethrough and having a portion deflected to form a slotted guide, outer disks secured to the central disk and spaced therefrom valve members movably carried by the central disk to control the opening therein, a threaded rod connected with the valve members, indicating devices secured to the rod and extending through the guide opening, and means for causing the longitudinal movement of said rod.

5. The combination in a damper, of a central disk having an opening therethrough and having a portion deflected to form a slotted guide, valve members movably carried by the central disk to control the opening therein, a threaded rod connected with the valve members, indicating devices secured to the rod and extending through the guide opening, means for causing the longitudinal movement of said rod, and imperforate disks on opposite sides of the central disk and spaced therefrom and of less diameter than the central disk.

[Claims 6 to 8 not printed in the Gazette.]

1,020,217. CAR-RAISING DEVICE. ALVA A. NELSON, Needles, Cal. Filed Sept. 7, 1911. Serial No. 648,072. (Cl. 57—119.)



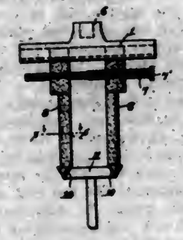
1. A device of the character described, comprising a compound hook having two integrally formed oppositely disposed hooks lying in the same plane, one of said hooks being U-shaped to engage with the side frame of a car truck and the other of said hooks being V-shaped to receive the link of a chain, the side common to both of said hooks being extended to bear against the outer face of said frame, the bight portion of said V-shaped hook being extended and provided with an aperture adapted for connection with a light chain, a heavy chain connected to the free end of said light chain, and a hook connected to the free end of said heavy chain and adapted to engage with tread portion of a car wheel.

2. A device of the character described, comprising a hook the bight portion of which conforms with the tread of a car wheel and is beveled to form an edge to engage with the same, said bight portion terminating at its free end in an eye which extends at right angles therefrom and is adapted to bear against the outer face of the wheel, a chain connected by one end to said eye, a second hook adapted to engage with the side frame of the car truck, and means carried by said second hook for adjustable engagement with said chain.

1,020,218. VALVE-GRINDING DEVICE. ADOLPH OKESON, Ishpeming, Mich. Original application filed Aug. 7, 1911, Serial No. 642,743. Divided and this application filed Oct. 28, 1911. Serial No. 657,281. (Cl. 51—4.)

1. A grinder of the class described, comprising a holder; grinding members having corresponding ends slidably mounted in said holder; and a screw engaging said grinding members for simultaneously moving said members toward and from each other, substantially as described.

2. A grinder of the class described, comprising a holder; grinding members having corresponding ends slidably mounted in said holder; a screw connecting said grinding members and having its opposite ends oppositely screw-threaded for engagement with said grinding members for simultaneously moving the same toward and from each other, and a head on said screw for rotating the same, substantially as described.



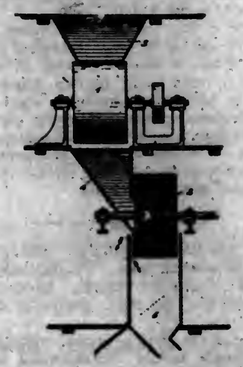
3. A grinder of the class described, comprising a channel holder; grinding members having corresponding ends slidably mounted in the channel of said holder; and a screw having oppositely threaded opposite ends for engagement with said grinding members for moving the same toward and from each other, the operative ends of said grinding members being substantially V-shaped in longitudinal section, substantially as described.

4. A grinder of the class described, comprising an elongated holder having a channel in one side thereof; grinding members having corresponding ends slidably mounted in said channel, there being grooves in the opposite sides of said grinding members for engagement with the flanged edges of said channel; and a screw having oppositely threaded opposite ends engaging said grinding members for moving the same toward and from each other, substantially as described.

5. A grinder of the class described, comprising a channel holder; grinding members having corresponding ends slidably mounted in said holder; and a screw for moving said grinding members toward and from each other, substantially as described.

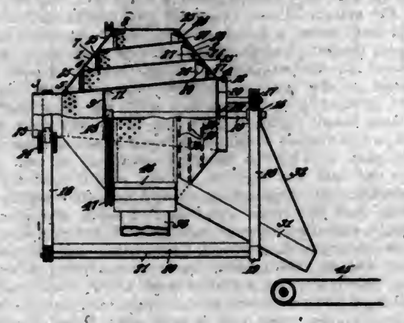
[Claims 6 and 7 not printed in the Gazette.]

1,020,219. PROCESS OF PURIFYING SUGAR. JUAN OST, Buenos Aires, Argentina. Filed Nov. 30, 1906. Serial No. 345,828. (Cl. 127—15.)



The process of purifying sugar crystals from adhering syrup, which consists in intimately mixing the crystals with bodies capable of absorbing the syrup by capillarity said bodies being of larger dimensions than the individual crystals, and thereafter effecting a separation between the purified crystals and said absorbent bodies by sifting.

1,020,220. CONCENTRATOR. ROBERT B. PATE, Oakland, Cal., and FRANK B. ROSE, Oneida, N. Y. Filed Feb. 2, 1911. Serial No. 606,194. (Cl. 83—54.)



1. A concentrator comprising a rotatable drum embodying a pair of funnel-shaped heads the mouths of which are opposed, a plurality of nested foraminous screens connecting the heads, dish-shaped baffles arranged at the discharge end of the drum and operating to prevent the escape of gold but to permit and accelerate the discharge of the tailings, and inward projecting fingers carried by the head of the discharge end of the drum to agitate the material and prevent clogging.

2. A concentrator comprising a rotatable drum embodying a pair of funnel-shaped heads the mouths of which are opposed, and each of which terminates at its smaller end in a neck, one of which constitutes a feed inlet and the other a discharge outlet, a plurality of nested foraminous screens connecting the heads, the openings in the inner screen being the largest, and those in the succeeding screens being gradually decreased in diameter, dish-shaped baffles arranged at the discharge end of the drum and operating to prevent the escape of the gold, but to permit and accelerate the discharge of the tailings, and means to agitate the materials at the discharge end to prevent clogging.

3. A concentrator comprising a rotatable drum embodying a pair of funnel-shaped heads the mouths of which are opposed, and each of which terminates at its smaller end in a neck, one of which constitutes a feed inlet and the other a discharge outlet, a plurality of nested foraminous screens connecting the heads, the openings in the inner screen being the largest, and those in the succeeding screens being gradually decreased in diameter, dish-shaped baffles arranged at the discharge end of the drum and operating to prevent the escape of the gold, but to permit and accelerate the discharge of the tailings, a screening chute communicating with the drum, and means to exert a suction upon the chute whereby to conserve the fine or flour gold that might otherwise escape.

1,020,221. FOUNTAIN-PEN. JOSEPH RAUCHENECKER, Chicago, Ill. Filed June 5, 1911. Serial No. 631,203. (Cl. 120—42.)

A fountain pen comprising a hollow handle; a head abutting the end of said handle; a feeder carried by said head and inserted in said handle; a pen point carried by said head in operative relation with said feeder; and a sleeve threaded to said handle and inclosing said head,



there being engaging shoulders provided on said head and in said sleeve, substantially as described.

1,020,222. MACHINE FOR MANUFACTURING GLASSWARE. ALVIN S. REICHEL, Point Marion, Pa., assignor of one-half to Point Marion Machine & Manufacturing Company, Point Marion, Pa., a Corporation of Pennsylvania. Filed Apr. 13, 1911. Serial No. 620,873. (Cl. 49—12.)



1. The combination of a horisontally movable carrier, an open bottom blank mold, suction means coöperating with the mold, and a support for the mold mounted to oscillate on the carrier on a horisontal axis.

2. The combination of a horisontally movable carrier, an open bottom blank mold supported by the carrier and movable vertically relatively thereto, suction means coöperating with the mold, and means made operative by the horisontal movement of the carrier for moving the mold vertically.

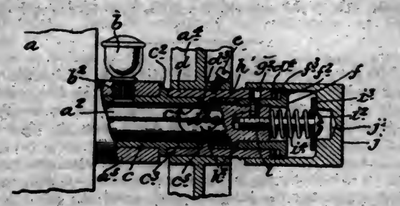
3. The combination of a horisontally movable carrier, an open bottom blank mold, suction means coöperating with the mold, supporting means for the mold mounted on the carrier to oscillate on a horisontal axis, and means made operative by the horisontal movement of the carrier for oscillating said support.

4. The combination of a horisontally movable carrier, a support mounted on and movable vertically relatively to the carrier, an arm mounted to rotate on the support with the axis of rotation disposed vertically, an open bottom blank mold moved by the free portion of the arm relatively to the carrier, suction means coöperating with the blank mold, a blow mold mounted on the carrier, and blowing means.

5. The combination of a horizontally movable carrier, a blank mold operative in different horisontal planes for filling with molten glass and for delivering the molded glass, vertically movable mold supporting means mounted on the carrier, and means actuated by the advancing movement of the horisontal carrier for moving the supporting means vertically.

[Claims 6 to 40 not printed in the Gazette.]

1,020,223. CLUTCH MECHANISM FOR MOTOR-SHAFTS. JOHN SABATINO, Richmond Hill, N. Y., assignor of one-half to Jesse Waldron, Morris Park, N. Y. Filed Sept. 23, 1911. Serial No. 650,870. (Cl. 192—9.)



1. A clutch mechanism for the ends of a motor shaft, said mechanism consisting of main stationary sleeves, supplemental sleeves screwed onto the ends of the shaft and provided with set screw keys, said supplemental sleeves being provided at their outer ends with outwardly directed flanges having inwardly directed clutch teeth, sliding sleeves mounted on said first-named sleeves and movable longitudinally thereon and provided between said sleeves with inwardly directed annular ribs having on their inner sides clutch teeth adapted to engage clutch devices on the outer ends of the main sleeves, said sliding sleeves being also provided on their outer ends with clutch teeth adapted to engage the teeth on the flanges of the supplemental sleeves, and said sliding sleeves being also provided with apertures through which the set screw keys of the supplemental sleeves are passed, and a cap screwed onto the outer ends of the sliding sleeves and inclosing the end of the shaft and the supplemental sleeve.

2. A clutch mechanism for the ends of a motor shaft comprising main stationary sleeves, supplemental sleeves screwed onto the ends of said shaft, sliding sleeves mounted on the main and supplemental sleeves, said main and sliding sleeves being provided with clutch devices and said sliding and supplemental sleeves being provided with clutch devices, means for keying the supplemental sleeves to the shaft and adapted to be operated through the sliding sleeves, spiral springs operating on the sliding sleeves and the inner ends of the supplemental sleeves, screws inserted into the ends of the shaft, spiral springs and washers mounted on said screws, and caps screwed on to the sliding sleeves and inclosing the ends of the shaft and the supplemental sleeves and adapted to operate in connection with the washers on the screws.

3. In a clutch mechanism for power shafts, a stationary sleeve, a supplemental sleeve screwed onto the end of the shaft, a sliding sleeve mounted on the adjacent end portions of the main supplemental sleeve, said sliding sleeve and said sleeve being provided with interoperative clutch devices, and said supplemental sleeve and said sliding sleeve being provided with inter-operative clutch devices, said supplemental sleeve being also provided with a set screw which is passed through an aperture in the sliding sleeve, a spiral spring placed at the inner end of the supplemental sleeve and operating to force the sliding sleeve inwardly, and a cap screwed onto the sliding sleeve and inclosing the end of the shaft and the supplemental sleeve.

4. In a clutch mechanism for power shafts, a stationary sleeve, a supplemental sleeve screwed onto the end of the

shaft, a sliding sleeve mounted on the adjacent end portions of the main supplemental sleeve, said sliding sleeve and said main sleeve being provided with interoperative clutch devices, and said supplemental sleeve and said sliding sleeve being also provided with inter-operative clutch devices, said supplemental sleeve being also provided with a set screw which is passed through an aperture in the sliding sleeve, a spiral spring placed at the inner end of the supplemental sleeve and operating to force the sliding sleeve inwardly, and a cap screwed onto the sliding sleeve and inclosing the end of the shaft and the supplemental sleeve, said end of the shaft being also provided with a screw on which is mounted a spiral spring, and a washer in connection with which said cap operates.

5. The combination with the end of a power shaft of a clutch sleeve movable longitudinally thereon, a cap screwed onto said sleeve, and means whereby the turning of said cap in one direction will lock said sleeve to said shaft, and in the opposite direction will release said sleeve.

1,020,224. PROCESS FOR RECOVERY OF VANADIUM. BERAMJI D. SAKLATWALLA, Bridgeville, Pa., assignor to The American Vanadium Co., Pittsburgh, Pa., a Corporation of New Jersey. Filed Dec. 22, 1910. Serial No. 598,817. (Cl. 75—13.)

1. A method of extracting vanadium from ore, consisting in dissolving the soluble constituents of the ore, and then subjecting the solution to an oxidizing agent to precipitate the vanadium, free from all other metals.

2. A method for recovering vanadium from material containing the same, consisting in dissolving the soluble constituents of said material, and then subjecting said solution to the action of an oxidizing agent to precipitate the vanadium free from all other metals.

3. A method for extracting vanadium from ores, which consists in subjecting the ore to the action of an acid to dissolve the soluble constituents and precipitating the vanadium free from all other metals out of this strongly acid solution by means of an oxidizing agent.

4. A method of extracting vanadium from ores, which consists in subjecting the ore to the action of a dissolving acid, neutralizing the resultant solution, and then precipitating the vanadium free from all other metals contained in the solution, with an oxidizing agent.

5. A method for extracting vanadium from ores, which consists in dissolving the soluble constituents of the ore, treating the solution thus made, with an oxy-acid compound of chlorin to precipitate the vanadium free from all other metals contained in said solution.

[Claim 6 not printed in the Gazette.]

1,020,225. ENGINE-GOVERNOR. JOHN W. SARGENT, Providence, R. I. Filed June 20, 1910, Serial No. 568,035. Renewed Oct. 27, 1911. Serial No. 657,186. (Cl. 121—112.)

2. In a governor, a pair of centrally recessed segmental weights having the preponderence of their mass at their adjacent sides, a spiral spring in tension connecting said weights, and having its ends secured within the recesses of said weights, whereby the centrifugal force of each weight will be resisted directly by the opposite weight, and a projecting arm extending from each weight to the other perpendicularly to the inner adjacent sides of the weights and serving to maintain the proper parallelism of the said weights.

3. In a governor, a pair of centrally recessed segmental weights having the preponderence of their mass at their adjacent sides, a spiral spring in tension connecting said weights, and having its ends secured within the recesses of said weights, whereby the centrifugal force of each weight will be resisted directly by the opposite weight and bell-crank levers jointed to the weights within the spring holding recess and upon which the weights are supported.

4. In a governor, a pair of centrally recessed, segmental inertia weights, having the preponderence of their mass at their adjacent sides, a spiral spring in tension connecting the said weights and having its ends held in the said central recesses of the weights, means for positively guiding the said weights parallel with each other in the same plane of rotation, the said weights being pivoted to bell-crank levers mounted on a revoluble sleeve on the governor shaft, which sleeve is controlled in its revolution by the movement of the weights, the said bell-crank levers being jointedly connected together through a revoluble and sliding sleeve, around the governor shaft, and a driving bracket having rigid connection with the governor shaft and jointedly connected to said weights.

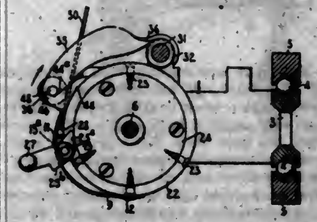
1,020,226. GEARING. HARRISON L. STALEY, Martinsville, Ind., assignor to Staley Manufacturing Company, Martinsville, Ind., a Corporation of Indiana. Filed June 28, 1909. Serial No. 504,682. (Cl. 74—50.)



1. Gearing including a support, an arm having a foot secured to the support and provided with a supporting base-plate that extends upon the support and has an upward-extending frame-plate thereon, a stud-axle secured horizontally to the upward-extending frame-plate, a pinion rotatable on the stud-axle, a shaft mounted rotatably

frame member, the rim having spur-teeth on the inner side thereof meshing with the spur-teeth wheel, a shield secured to said frame member and extending opposite and adjacent to said rim, and gearing connecting the driven shaft with the driving shaft.

1,020,227. TYPE-WRITING MACHINE. HERBERT H. STERLE, Marcellus, N. Y., assignor to The Monarch Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed Oct. 30, 1911. Serial No. 657,439. (Cl. 197—136.)



1. In a typewriting machine, the combination of a platen, paper stops, spring clamping tongues secured on the outer surface of the platen, and a camming shaft arranged in a space between the tongues and platen and operative to control the tongues.

2. In a front-strike typewriting machine, the combination of a platen, a platen frame, paper stops, spring clamping tongues secured on the outer surface of the platen, a camming shaft arranged in a space between the tongues and platen and operative to control the tongues, and pressure devices on the platen frame coöperating with the work sheet above the clamping tongues.

3. In a typewriting machine, the combination of a platen, a clamping plate mounted thereon and comprising a plurality of spring tongues integral with said plate, and hand operated means for moving said tongues away from the platen.

4. In a typewriting machine, the combination of a platen, a clamping device mounted thereon comprising a plurality of spring tongues coöperative with the platen, said tongues extending transversely of the platen, and a hand controlled cam arranged lengthwise of the platen and operative independently of movement of the platen to move said tongues relatively to the platen.

5. In a typewriting machine, the combination of a platen, a clamping device mounted thereon comprising a plurality of spring tongues coöperative with the platen, said tongues being disposed in parallelism transversely of the platen, a cam rod arranged between the platen and said tongues and extending lengthwise of the platen, and means for turning said cam rod.

[Claims 6 to 18 not printed in the Gazette.]

1,020,228. SWING. VICTOR SWANFELT, Elwood, Ind. Filed Oct. 6, 1910. Serial No. 585,653. (Cl. 155—36.)



2. In a device of the described class, the combination with supporting wheels, of a transverse bar, a series of draw bars having universal joint connection with said transverse bar, and a rake head connected with each of said draw bars and provided with rake teeth, each of said draw bars being formed in sections adjustably connected with each other.

3. In a device of the described class, the combination with supporting wheels, of a transverse bar, a handle rigidly connected therewith, a series of draw bars having universal joint connection with said transverse bar, a rake head connected with each of said draw bars and provided with rake teeth, and spacing links connecting said draw bars;—said rake heads and draw bars being automatically tiltable rotatively independently of the handle.

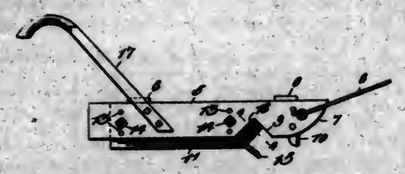
4. In a device of the described class, the combination with supporting wheels, of a transverse bar, a series of draw bars having universal joint connection with said transverse bar, a rake head connected with each of said draw bars and provided with rake teeth, a handle rigidly connected with the first mentioned bar, a lever connected with the handle, and means, connected with said lever, for simultaneously lifting the rake heads.

5. In a device of the described class, the combination with supporting wheels, of a transverse bar, a series of draw bars having universal joint connection with said transverse bar, a rake head connected with each of said draw bars and provided with rake teeth, a handle rigidly connected with the first mentioned bar, a cross bar supported from the handle connections, a lever also connected with the handle, and means connected with said lever for simultaneously lifting the rake heads, said lifting means comprising a shaft rotatably supported from said cross bar, pulleys mounted on said shaft, a flexible connection between said lever and one of the pulleys, and a flexible connection between each of said pulleys and the draw bars.

[Claims 6 to 8 not printed in the Gazette.]

pendent of the suspending means, each pivotally connected at one end with the rearwardly extended segments, and having means at their other ends for engaging an overhead support.

1,020,230. SOD-CUTTER. HERMAN S. URBAN, Richmond, Va. Filed July 12, 1911. Serial No. 638,094. (Cl. 97—28.)



A sod cutter comprising spaced parallel longitudinal bars and transverse bars connecting the same, depending sod cutting knives secured to the forward ends of said longitudinal bars, the forward ends of said bars having inverted V-shaped notches in their lower edges, the rear edges of said notches being outwardly beveled, a sod cutting plate arranged between said parallel bars and having its cutting edge disposed below the lower ends of said cutting knives, and means for vertically adjusting said plate to regulate the depth to which the sod is cut.

1,020,231. ELECTRIC SNAP-SWITCH. WALTER VAN PATTEN STEIGER, Bridgeport, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Dec. 3, 1908. Serial No. 465,755. (Cl. 175—287.)



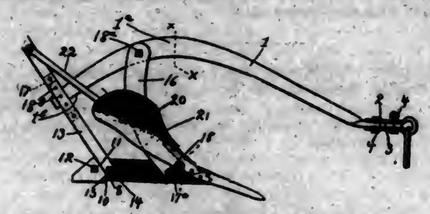
1. An electric switch mechanism, comprising a frame, an oscillating switch lever and two-legged spring in combination with a rotary operating spindle capable of continuous rotation in either direction, and having a cam to act on either leg of the spring and having also curved flanges to temporarily detain the lever.

2. An electric switch mechanism, comprising a frame, an oscillating switch lever having a finger and a projection and a two-legged spring to bear on the latter, in combination with a rotary operating spindle capable of continuous rotation in either direction, and having a cam to act on either leg of the spring and having also curved flanges to act upon the finger on the switch lever.

3. An electric snap switch, comprising a frame and an oscillating switch lever, in combination with spring means to act on the lever, and a rotary operating spindle capable of continuous rotation in either direction, said lever carrying a cam to act on the spring and detents to act on the lever, whereby rotary motion of the spindle is converted into an oscillating motion of the switch lever with snap action, substantially as described.

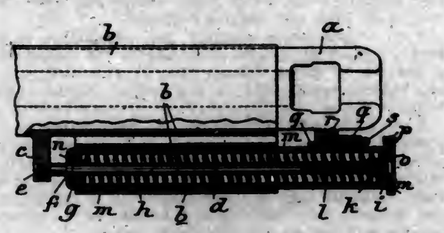
1,020,232. PLOW. ANGEL VARGAS, Iloilo, Philippine Islands. Filed July 22, 1910. Serial No. 573,345. (Cl. 97—21.)

1. In a plow, the combination with a plowshare and mold board, of a land side secured thereto and provided with a notched heel, a block provided with a groove adapted to engage said notched heel, and a bolt securing said block thereto, the said block being provided with an inclined face and a shoulder, a plow handle having its heel engaging said shoulder, and its rear face engaging the inclined face of said block, said handle being provided with a plurality of perforations, a plow beam, and a bolt adjustably connecting said handle to the heel of said plow beam, substantially as described.



2. In a plow, the combination with a plowshare and mold board, of a land side secured thereto and provided with a notched heel, a block provided with a groove adapted to engage said notched heel, and a bolt securing said block thereto, the said block being provided with an inclined face and a shoulder, a plow handle having its heel engaging said shoulder, and its rear face engaging the inclined face of said block, said handle being provided with a plurality of perforations, a plow beam, and a bolt adjustably connecting said handle to the heel of said plow beam, with a brace connecting the mold board and the plow handle, substantially as described.

1,020,233. GUN WITH RECOILING BARREL. KARL VÖLLER, Dusseldorf, Germany, assignor to Rheinische Metallwaaren- und Maschinenfabrik, Dusseldorf-Derendorf, Germany. Filed Nov. 14, 1910. Serial No. 592,303. (Cl. 89—44.)

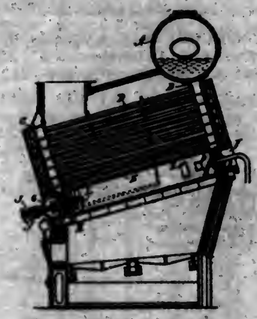


1. In a gun having a recoiling barrel and a return spring, a cradle, a rearwardly extending rod fixed to the cradle and surrounded by the spring, two disks adapted to slide on the said rod and to hold the said spring in compression between them and stops on the said rod adapted to prevent the spring in its normal state of compression from moving the disks farther apart from each other.

2. In a gun having a recoiling barrel and a return spring, a cradle, a rearwardly extending rod fixed to the said cradle and surrounded by the spring, two disks adapted to slide on the said rod and to hold the said spring in compression between them, a cylinder adapted to move with the barrel and surrounding the said spring, means for preventing one of the said disks from sharing any movement of the cylinder except a forward movement beyond the normal position and means for causing the other disk to share all movements of the cylinder except a forward movement beyond the normal position.

3. In a gun having a recoiling barrel and a return spring a cradle, a rearwardly extending rod surrounded by the spring, a bayonet joint connecting the said rod with the said cradle, a cylinder surrounding the said spring and a bayonet joint connecting the said cylinder with the barrel, the relative position of the engaging parts of the two bayonet joints being such that both joints are put into engagement by the same rotation of the cylinder on its axis.

1,020,234. WATER-TUBE BOILER. CHARLES WARD, Charleston, W. Va. Filed July 19, 1910, Serial No. 572,684. Renewed Dec. 27, 1911. Serial No. 668,098. (Cl. 122—380.)



1. In a boiler, the combination with headers, of a main circulating tube passing through the headers and having openings in communication with the headers near the ends of said tube, a shaft arranged to enter one end of the said main tube, and a wheel secured upon the shaft constructed and arranged to impel the water through the openings in said tube at the same end.

2. In a boiler, the combination with headers, of a main circulating tube passing through the headers and having openings near the ends in communication with the headers, a shaft arranged to enter one end of said main tube, and a propeller wheel upon the shaft arranged to impel the water through the said main tube.

3. In a boiler, the combination with headers, of a main circulating tube connecting the headers and having openings near the ends in communication with the headers, a shaft arranged to enter one end of said main tube, a propeller wheel secured to the shaft and arranged to impel the water through the said main tube, and a feed water pipe passing through the other end of said main tube.

4. In a boiler, the combination with upper and lower headers, of an inclined main circulating tube passing through the headers and having openings near the ends in communication with the headers, a shaft arranged to enter one end of said main tube, and a wheel secured upon the shaft constructed and arranged to impel the water through the openings in said main tube at the same end.

5. In a boiler, the combination with upper and lower headers, of an inclined main circulating tube passing through the headers and having openings near the ends in communication with the headers, a shaft arranged to enter one end of said main tube, and a propeller wheel upon the shaft arranged to impel the water through the said main tube.

[Claims 6 to 11 not printed in the Gazette.]

1,020,235. STAY FOR BOILER-PLATES. CHARLES WARD and CHARLES E. WARD, Charleston, W. Va. Filed Mar. 5, 1910, Serial No. 547,452. Renewed Dec. 27, 1911. Serial No. 668,099. (Cl. 122—493.)



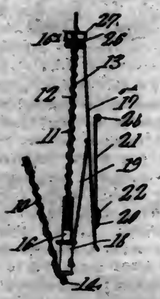
1. A stay for boiler plates, comprising the combination with opposed plates provided with retaining grooves, of a plurality of separately removable stays arranged one after another in the same grooves and having portions constructed to engage the grooves of the plates, and the said stays having portions constructed to permit the water to pass through from one side of a row of stays to the other side thereof.

2. A stay for boiler plates, comprising the combination with opposed plates provided with retaining grooves, of a plurality of separately removable stays arranged consecutively in the same groove and having portions fashioned to engage the grooves of the plates, the said stays being constructed and arranged with respect to each other whereby open spaces remain between adjacent stays through which the water may circulate.

3. A stay for boiler plates, comprising the combination with opposed plates provided with retaining grooves, of a plurality of separately removable stays arranged consecutively in the same groove and having portions constructed to engage the grooves of the plates, each of said stays having a middle and relatively narrowest portion and diverging portions extending from the middle, the outer edge portions of said diverging portions being fashioned to engage the grooves of the plates.

4. A stay for boiler plates, comprising the combination with opposed plates provided with retaining grooves, of a plurality of stays arranged consecutively in the same grooves and having portions fashioned to engage the grooves, and any two stays next to each other in the same grooves having portions between said plates separated from each other whereby open spaces remain between the stays through which the water may circulate.

1,020,236. FOLDING UMBRELLA. MATTIE B. WARD, Leesville, La. Filed Sept. 9, 1911. Serial No. 648,467. (Cl. 135—25.)



In a folding umbrella, a plurality of hingedly connected ribs arranged in an inner and outer series, each of the ribs of the inner series being bent upon itself, its terminal being looped to engage the body portion of the rib, said loop being disposed at right angles to said rib, the bent end of said rib adjacent said loop being bent inwardly to form a latch member, each rib of the outer series being looped about a rib of the inner series, its terminal being adapted to lie parallel with said inner rib and under said latch member when the ribs are in their extended positions.

1,020,237. FOUNTAIN-PEN. ALVIN L. WATTS, Chicago, Ill. Filed Apr. 4, 1911. Serial No. 618,905. (Cl. 120—46.)



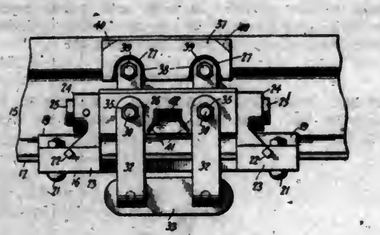
1. A self-filling fountain-pen comprising a barrel having a slot; a collapsible ink-reservoir in said barrel; a presser-bar having a rib projecting through said slot; and rotatable means mounted in said barrel and having

a cam surface contacting with said rib for forcing said rib lengthwise against one end of said slot, substantially as described.

2. A self-filling fountain-pen comprising a barrel having a slot; a collapsible ink-reservoir in said barrel; a presser-bar having a rib projecting through said slot; and a rotatable tube having a cam surface contacting with said rib and adapted to engage said rib whereby the latter may be moved lengthwise against one end of said slot, substantially as described.

3. A self-filling fountain-pen comprising a barrel having a slot; a collapsible ink-reservoir in said barrel; a presser-bar having a rib projecting through said slot; and a rotatable tube threaded in said barrel and having its inner extremity engaging one extremity of said rib, said extremity of said tube being inclined so that by rotating said tube said end may be forced into engagement with said rib to move the latter lengthwise against one end of said slot, substantially as described.

1,020,238. TRACK INSTRUMENT. EDWARD C. WEBB, Franklin, and HOWARD F. TANSEY, Dayton, Ohio. Filed Jan. 9, 1908. Serial No. 410,047. (Cl. 246—35.)



1. In an electric signal system, a track instrument including a rocker member, a contact element fixedly connected to said member, a shaft journaled transversely in said member, a contact element fixedly connected to said shaft, and a trip block connected to the shaft to oscillate the same to contact said elements.

2. In an electric signal system, a track instrument including a rocker member, a contact element fixedly connected to said member, a shaft journaled transversely in said member, a contact element fixedly connected to said shaft, a trip block connected to the shaft to oscillate the same to contact said elements, and means connected to the shaft for automatically returning the trip block and the member to their normal positions.

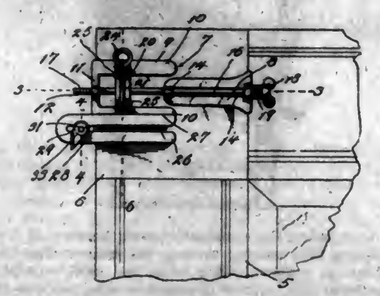
3. In an electric signal system, a track instrument including a rocker member, a contact element fixedly connected to said member, a shaft journaled transversely in said member, a contact element fixedly connected to the shaft, a trip block connected to the shaft to oscillate the same to contact said elements, an arm connected to the shaft and having one end extending under and beyond the rocker member, and a weight connected to the free end of the last mentioned arm to automatically return the trip block and the rocker member to their normal positions.

4. In an electric signal system, a track instrument including a rail clamp, bearings carried by the clamp, a rocker member journaled in said bearings and adapted to be disposed parallel with the rail, a shaft journaled transversely in said member, a contact element fixedly connected to said shaft, and a trip block connected to the shaft to oscillate the same to contact said elements.

5. In an electric signal system, a track instrument including a rocker member adapted to be disposed parallel to the rail, contact elements fixedly connected to said member, spaced shafts journaled transversely in said member, each shaft terminating at one end in a crank arm, a contact element fixedly connected to each shaft, and a trip block pivotally connected with the crank arms of the shaft to oscillate the latter to contact one of the elements of the shaft with the adjacent element of the member.

[Claim 6 not printed in the Gazette.]

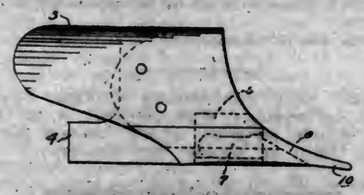
1,020,239. COMBINED POLE AND SHADE BRACKET. CHARLES WHIGHAM, McKeesport, Pa. Filed June 9, 1910. Serial No. 566,086. (Cl. 156—24.)



1. A combined shade and curtain pole support including a pair of relatively movable clamping jaws, one of which is substantially U-shaped, and the other of which is adapted to slide longitudinally between the branches of the U-shaped jaw, a screw pin having portions fitting in eyes carried by said jaw and operating to move the jaws toward and away from each other, and a substantially V-shaped curtain pole receiving bracket arranged at a right-angle to said U-shaped jaw and straddling said pin and said jaw, the terminals of said bracket being secured to the branches of said U-shaped jaw and reinforcing the jaw against distortion.

2. A combined shade and curtain pole support including a pair of relatively movable clamping jaws, one of which is substantially U-shaped, a screw pin connected to both jaws and operating to move the jaws toward and away from each other, said U-shaped jaw being formed on the outer edge of one branch with an integral off-set extension, said extension being of greater length than the jaw, and further being formed with a longitudinal slot of greater length than said jaw, and a shade roller receiving element adjustably mounted in said longitudinal slot.

1,020,240. PLOW. RUPERT E. WHITCHER, Keeler, Saskatchewan, Canada. Filed June 26, 1911. Serial No. 635,283. (Cl. 97—21.)

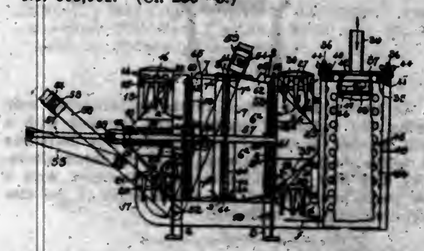


1. The combination with a frog having a plurality of apertures formed therein, of a share having depending lugs fitting in said apertures, said lugs having transverse openings formed therein, a lever pivoted to the frog, arms secured to the lever and adapted to fit in the apertures of the lugs when the lever is moved in one direction upon its pivot, and means for locking the lever in desired position.

2. The combination with the frog of a plow having apertures formed therein, of a plow share having depending lugs passing through the apertures, said lugs having transverse openings formed therein, a lever pivoted to the frog and having a hooked lower end for

engagement in the opening of one of the lugs, a J-shaped member pivoted to the lever above the point of pivotance of the lever, the arms of said J-shaped member being adapted to be engaged in the openings of the other lugs, and means for securing the lever in adjusted position to retain its end and J member in or out of engagement with the lugs as desired.

1,020,241. PUMP FOR VACUUM-CLEANERS. CHARLES G. WIBORG, Galesburg, Ill. Filed Jan. 27, 1911. Serial No. 605,001. (Cl. 230—5.)



1. A device of the character described comprising telescopic casing-sections, an eversible tube therein, one of its ends fixed approximately midlength of and to said casing, a disk closing its other end, means for reciprocating said disk through said tube, whereby it is everted, a removable, floating, simultaneously acting induction and a like eduction valve comprising a pair disposed at opposite ends of the casing, communicating therewith and actuable by reciprocations of said disk, and a second simultaneously acting removable, floating, induction and a like eduction valve comprising a pair disposed at opposite ends of the casing, said pairs working alternately.

2. A vacuum cleaner comprising a casing composed of telescopic sections and conical heads, a plurality of elbows in communication with each of said heads, a removable, floating, induction and a like eduction valve each connected with an elbow in each head, a pipe providing a means of air-communication between said heads, an apertured partition disposed at the junction of each head and the casing, an eversible exhaust-tube disposed within said casing and adapted to alternately actuate an induction and an eduction valve, and means for everting said tube.

1,020,242. COLLAR COUPLING OR FASTENER. WILLIAM WILSON, Birmingham, Mich. Filed Apr. 13, 1911. Serial No. 620,757. (Cl. 119—106.)



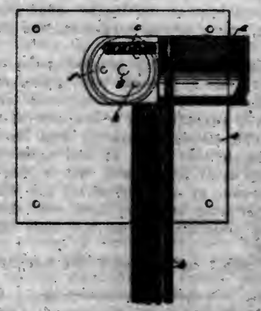
1. In a collar coupling, the collar, a latch case secured to one end of the collar, a swinging latch bar pivoted within the case provided with a hook portion at one end to engage the free end of the collar, the other end of the latch projecting through the wall of the case whereby it may be actuated, a ratchet face plate projecting from the free end of the collar adapted to enter the case to be engaged by the hooked end of the latch bar, a pair of springs housed within the case adapted to bear against the end plate, and a spring to force the hooked end of the latch bar in locking relation with the ratchet plate.

2. In a collar coupling, the collar, a latch case secured to one end of the collar, a swinging latch bar pivoted within the case provided with a hook portion at one end to engage the free end of the collar, the other end of the latch projecting through the wall of the case whereby it may be actuated, a spring band housed within the collar secured at one end to the case, its free end carrying a projecting ratchet face adapted to enter the case to be engaged by the hooked end of the latch bar, a pair of springs housed within the case adapted to bear against the end plate, and a spring to force the hooked end of the latch bar in locking relation with the ratchet plate.

3. In a collar coupling, the collar, a latch case secured to one end of the collar having partitions forming separate chambers their edges spaced from one of its walls for the passage of the free end of the collar, a swinging latch bar pivoted between the partition walls, having one end provided with a hook to engage the free end of the collar, the other end of the latch bar projecting through the case for manually operating the bar, a plate carried by the free end of the collar adapted for engagement by the hooked end of the latch bar, a pair of springs carrying bumper plates lodged between the walls of the case adapted to yieldingly bear against the end of said plate, and a spring for forcing the latch bar into locking relation with the plate.

4. In a collar coupling, the collar, a latch case secured to one end of the collar having partitions forming separate chambers their edges spaced from one of its walls for the passage of the free end of the collar, a swinging latch bar pivoted between the partition walls, having one end provided with a hook to engage the free end of the collar, a push button secured to the other end of the latch bar for manually operating it, a plate carried by the free end of the collar adapted for engagement by the hooked end of the latch bar, a pair of springs carrying bumper plates lodged between the walls of the case adapted to yieldingly bear against the end of said plate, and a spring for forcing the latch bar into locking relation with the plate.

1,020,243. RESONATING DEVICE. GUSTAV ADOLF WLOST, Schramberg, Germany. Filed June 17, 1910. Serial No. 567,430. (Cl. 116—33.)

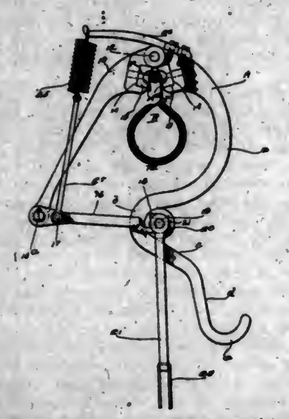


1. In combination with a casing portion, of a resonating device therefor comprising a plurality of rod-like members arranged in substantially parallel relation with respect to each other, and means supporting said members on the casing portion at an oblique angle thereto with one of said rod-like members in relatively close proximity to said casing portion.

2. In combination with a casing portion, of a resonating device therefor comprising a plurality of rod-like members arranged in substantial parallel relation with respect to each other, means for supporting said members on said casing portion at an angle thereto and with one of the rod-like members in relatively close proximity

to said casing portion, and a device for adjusting said means to dispose such closely related rod-like members in proper relation with respect to said casing portion.

1,020,244. TOOL FOR BENDING RINGS. JOHN W. WRIGHT, Philadelphia, Pa., assignor to American Telephone and Telegraph Company, Boston, Mass., a Corporation of New York. Filed Oct. 20, 1911. Serial No. 655,735. (Cl. 81—15.)



1. A ring bending tool comprising a pair of pivoted members having jaws, one of said members being provided with a cam surface and the other member having means contacting with the cam surface to actuate the members, the cam surface being inclined to move the jaws first rapidly toward one another and then more slowly.

2. A ring-bending tool comprising a pair of pivoted members having jaws, one of said members being provided with a cam surface and with a stop at the end of said surface and the other having means contacting with the cam surface and stop to limit movement of said jaws.

3. The combination with pivoted arms having jaws, one of which arms is provided with a cam surface and with an extension over the other arm, of a link pivoted to said other arm and having means coöperating with the cam surface, and a spring connecting the arm extension and link.

4. The combination with pivoted arms having jaws, one of which arms is provided with a cam surface which is first inclined abruptly from the other arm and then more gradually therefrom, of a link pivoted to said other arm and having means coöperating with the cam surface.

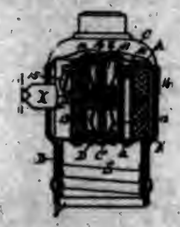
5. The combination with pivoted arms having jaws, one of which arms is provided with a cam surface and with a depression at each end of the cam surface, a link pivoted to the other arm, and a roll rotatable in the link and movable over the cam surface from one depression to the other.

[Claims 6 and 7 not printed in the Gazette.]

1,020,245. ELECTRIC-LAMP SOCKET. WALTER ABBE, Brooklyn, N. Y. Filed June 9, 1911. Serial No. 632,124. (Cl. 173—352.)

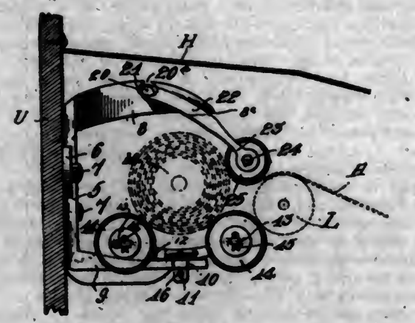
1. An electric lamp socket, having an insulating body carrying line and lamp terminals and provided with a switch chamber, in combination with a rotary insulating disk therein, having spacing hubs, one of which is made of cam form, transverse conductors in the disk, a spring to coöperate with the cam to produce a quick break and contacts to coöperate with the conductors.

2. An electric lamp socket, having an insulating body carrying line and lamp terminals and provided with a switch chamber, in combination with a rotary insulating disk therein, having transverse conductors, means whereby the disk may be rotated in either direction, with a quick break, and contacts on opposite sides of the disk coöperating with the conductors.



3. An electric lamp socket, having an insulating body carrying line and lamp terminals and provided with a switch chamber, in combination with a rotary insulating disk therein, having a transverse conductor, means whereby the disk may be rotated in either direction, with a quick break, and contacts on opposite sides of the disk coöperating with the conductor.

1,020,246. INTERMEDIATE AWNING-ROLLER SUPPORT. JACKSON BERNARD BAKER, Portland, Oreg. Filed Oct. 12, 1911. Serial No. 654,221. (Cl. 156—44.)

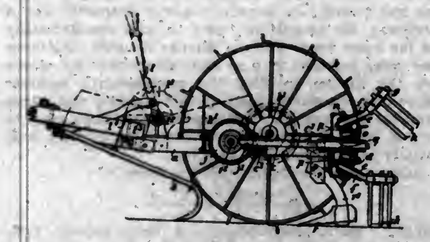


1. The herein described intermediate awning roller support comprising a casting secured to an upright and having upper and lower arms whereof the uppermost is notched in its upper edge and the lowermost has a vertical eye, a spider having a depending stub-shaft journaled in said eye and provided with laterally projecting spindles carrying a series of lower rollers spaced from each other, and a yoke whose center is removably mounted in said notch and whose extremities are connected by a bolt carrying an upper roller, a radius of the latter plus the length of said yoke being such that the upper roller may pass above the forward lower rollers and rest against the rearmost lower rollers.

2. The herein described intermediate awning roller support comprising a casting secured to an upright and having upper and lower arms whereof the uppermost is notched in its upper edge, a series of lower rollers carried by the lower arm, and a yoke whose center is removably mounted in said notch and whose extremities are connected by a bolt carrying an upper roller, a radius of the latter plus the length of said yoke being such that the upper roller may pass above the forward lower rollers and rest against the rearmost lower rollers.

3. The herein described intermediate awning roller support comprising a casting secured to an upright and having upper and lower arms whereof the uppermost has in its upper edge a transverse notch with a mouth opening out the top of this arm and of less width than the horizontal diameter of the notch, a series of lower rollers carried by the lower arm, an upper or pressure roller adapted to coact with said lower rollers to retain the main awning roller in place, a yoke having a fork at its lower end between whose arms the pressure roller is journaled, an oval cross bar at its upper end whose longest diameter stands lengthwise of the yoke and whose shortest diameter is less than the width of said mouth, and a slot in its body whose length from its inner end to said cross bar is less than the length of the upper casting-arm from its notch to its outer extremity, for the purpose set forth.

1,020,247. POTATO-DIGGING MACHINE. JOSEPH HAMFORD, Uttoxeter, England. Filed Oct. 18, 1909. Serial No. 523,200. (Cl. 55—56.)



1. In a potato digger, the combination with a main frame, of a rotatable part carried thereby, having its axis disposed parallel to the line of draft, a plurality of digging forks carried by said rotatable device having their shanks pivotally mounted therein and diverging angularly with respect to the axis of said rotatable part, means for driving said rotatable part, and mechanism operatively connected with said shanks for maintaining the forks in pendent position.

2. In a potato digger, the combination with a main frame, a rotatable part, and means for driving the same, of a plurality of rotatable shanks mounted in bearings in said rotatable part, and diverging angularly from the axis of rotation, and extending rearwardly from said rotatable part, digging forks secured to the rearward ends of said shanks, a rotatable controlling device, arranged on the forward side of said rotatable part, and connections from said controlling device to the forward ends of said diverging shanks for holding said shanks in a pendent position.

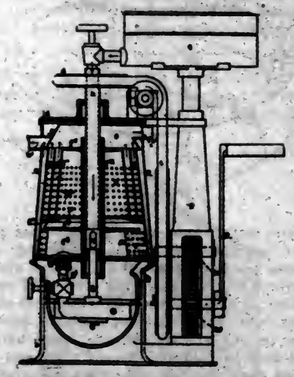
3. In a potato digger, the combination with a main frame, of a rotatable part carried thereby and means for driving said rotatable part, a plurality of digging forks each provided with a shank pivotally engaging said rotatable part, a pinion secured to each of said shanks and gearing operatively engaging said pinions for maintaining said forks in pendent position.

4. In a potato digger, the combination with a main frame, of a rotatable part carried thereby and means for driving said rotatable part, a plurality of digging forks each provided with a shank pivotally engaging said rotatable part, a pinion secured to each of said shanks, a stationary pinion secured to the main frame, and connecting gearing between the stationary pinion and the pinions on said shanks.

1,020,248. CENTRIFUGAL CREAM-SEPARATOR. WILLIAM PARIS BARCLAY, Chicago, Ill. Filed July 29, 1909. Serial No. 510,314. (Cl. 127—20.)

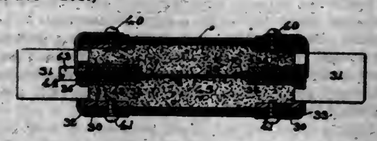
1. In a cream separator the combination within a casing of centrifugal bowl divided into a lower and an upper chamber, and provided with a tubular spindle formed with propulsion vanes, a cap plate covering the propulsion vanes, an intermediate annular base supporting an intermediate and an inner perforated shell, an upper dividing head formed with the tubular spindle, and a hood above the upper dividing head forming a cream chamber, substantially as shown and described.

2. The combination with a cream separator of a small centrifugal air blower with an extended spindle connecting directly to a centrifugal bowl spindle, and the discharge pipe of the air blower connected to force air into the centrifugal bowl to assist in the separation of the cream from the milk in its ascent through the centrifugal bowl.



3. In a centrifugal cream separator the combination of a small centrifugal air blower with a spindle extended from the cream separator bowl, an air discharge pipe with an air valve suitably connected between the air blower and the interior of the centrifugal bowl, so that air will be admitted to the centrifugal bowl to assist in the separation of the cream from the milk, substantially as described.

1,020,249. SAFETY-FUSE. IRVIN E. BARRICKLOW, Antioch, Cal. Filed July 18, 1911. Serial No. 639,166. (Cl. 175—278.)



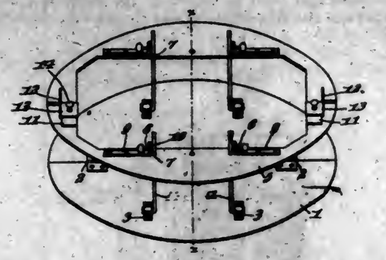
1. A safety fuse, comprising a tubular casing having open ends, removable caps detachably connected with the casing and closing said open ends, a refractory powder entirely filling the said casing, an inwardly extending boss formed centrally on one of the caps, an inwardly extending socketed member formed centrally on the other cap, a slidable plug fitted in the socketed member, a fusible element passed through the plug and the boss and secured at opposite ends exteriorly on the casing, and expansible means acting upon the plug to project the same on the melting of the fusible element.

2. A safety fuse, comprising a casing having removable caps at opposite ends, a refractory filling within the casing, a socket extension directed inwardly from one of the caps within the refractory filling, a slidable plug fitted within the socket extension, a fusible element passed through the plug, refractory filling and the other cap, means securing the ends of the fusible element exteriorly of the casing, and a coiled expansion spring confined within the socket extension and adapted to act upon the said plug to move the same outwardly of its socket on the breaking of the fusible element.

1,020,250. SKIRT-MARKER. LYDA BECKER, Indianapolis, Ind. Filed July 15, 1911. Serial No. 638,643. (Cl. 73—48.)

1. In a skirt marker a supporting structure, an indicator mounted upon the supporting structure and comprising sections formed with projecting tongues to overlap the joint formed between the meeting ends, said sections

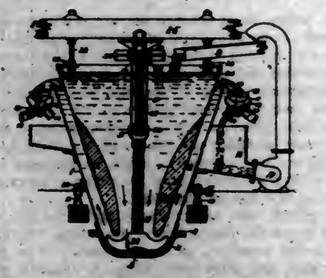
having slots at the sides of the tongues, slides mounted upon the tongues and adapted to engage the overlapping parts at the meeting ends of the sections, and means for securing the slides in the adjusted position.



2. In a skirt marker comprising a supporting structure, an indicator adjustable upon the supporting structure and comprising sections in which are formed openings to receive members of the supporting structure, upper and lower bars secured to the sections to stiffen and strengthen the same, the lower bars having openings to register with the openings in the sections and the upper bars having end portions bent in line with the openings and provided with threaded openings, and set screws mounted in said threaded openings to engage with the members of the supporting structure passing through the openings to hold the indicator in the adjusted position.

3. A skirt marker comprising a base formed of foldable parts, each of the parts having keepers, uprights having their lower ends bent and insertible in said keepers, an indicator formed of similar sections having their end portions formed with overlapping parts, said sections being adjustable upon the uprights, means for securing the indicator in the located position, and means applied to the overlapping parts of the indicator to secure the same when assembled.

1,020,251. APPARATUS FOR SUBDIVIDING STREAMS OF PULP AND OTHER LIQUIDS. HANS CHARLES BEHR and CHARLES FRIEDRICH EDUARD OSCAR SCHMITT, Johannesburg, Transvaal. Filed Feb. 13, 1911. Serial No. 608,363. (Cl. 73—21.)



1. Apparatus of the nature specified consisting of coaxial inner and outer conical vessels forming between them an annular chamber, and means for dividing liquid passed through the inner vessel and said annular chamber, substantially as described.

2. Apparatus of the nature specified comprising, coaxial inner and outer vessels providing between them a liquid chamber and a passageway; one of said vessels located above the other to provide for a hydrostatic head, and the lower vessel providing for an overflow; and means associated with said lower vessel for receiving and distributing the liquid overflow, substantially as described.

3. Apparatus of the nature specified consisting of inner and outer conical vessels forming between them an annular chamber and a liquid passageway communicating therewith each of said vessels being supported in a manner to permit adjustment vertically either relatively to one another or together, and means for separately withdrawing portions of the liquid passed through said chamber, substantially as described.

4. Apparatus of the nature specified consisting of a vertically disposed outer conical vessel, an inner conical vessel arranged in the outer vessel and forming an annular chamber therewith and a passageway for permitting liquid to pass symmetrically from the inner vessel into the annular chamber; the outer vessel being provided with an annular lip from which the liquid may flow, and means below the lip for splitting the overflow into separate streams and separately receiving said streams, substantially as described.

5. Apparatus of the nature specified consisting of a conical outer vessel, an inner conical vessel arranged in the outer and forming an annular chamber therewith and a passageway for permitting liquid to pass symmetrically from the inner vessel into the annular chamber; the outer vessel being provided with an annular overflow lip, means below the lip for splitting the overflow into separate streams and separately receiving said streams, and means controlling the individual streams whereby same may be conveyed to their destinations or diverted therefrom, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,020,252. BROODER. ARTHUR H. BELL, Denver, Colo. Filed Apr. 26, 1911. Serial No. 623,354. (Cl. 119—33.)



1. The combination with a brooder, of a disk, bars removably connected to the disk for supporting the disk at an elevation within the brooder, a heating medium supported upon the disk, a screen surrounding the heating medium, and means connected to the disk for supporting the screen.

2. The combination with a brooder, of a disk, bars for supporting the disk, a screen, means for supporting the screen upon the disk, a brooder cloth connected to the screen, and a heating receptacle supported by the disk.

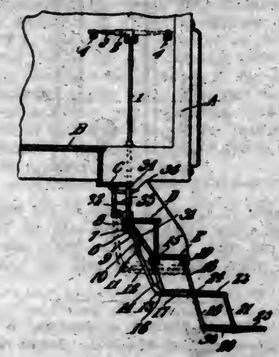
3. The combination with a brooder, a disk having an upturned flange at its outer edge, this flange slotted, bars secured to the disk and extending through the slots in the flange, the bars having hooks on their outer ends, and staples on the wall of the brooder to receive the hooks, of a can or receptacle supported on the disk to receive the heating element, an annular screen surrounding the flange on the disk, a brooder cloth or curtain depending from the lower edge of the screen, and a cover for the can or receptacle.

1,020,253. DRAFTING APPLIANCE. OLIVER C. BLAIR, Houston, Tex. Filed Dec. 13, 1911. Serial No. 665,469. (Cl. 33—14.)



A combined drawing board and T-square attachment comprising a grooved rail adapted to be secured to a drawing board, a T-square consisting of a head and an arm secured thereon, a bracket secured on said head over the arm, a pair of clamping arms sliding in the bracket between the same and opposite sides of the arm, said clamping arms having depending ends to engage the groove, a connection between said clamping arms, and a spring interposed between the connection and the bracket.

1,020,254. CAR-STEP. JOHN S. BLAKE, Charlotte, N. C. Filed June 12, 1911. Serial No. 632,698. (Cl. 105—86.)



1. The combination with a car platform and steps leading therefrom, of lazy tongs depending from the lower one of said steps, extension steps carried by the lazy tongs, an actuating element extending above the platform, means operated thereby for shifting the lazy tongs to move the extension steps toward or away from the fixed steps, means for automatically locking the extension steps when raised, and means located below the platform, for operating said locking means to release the steps.

2. The combination with a car platform and steps fixedly connected thereto, of lazy tongs depending from the lower one of said steps, extension steps carried by the lazy tongs, an actuating shaft extending above the platform, means operated thereby for shifting the lazy tongs to move the extension steps toward or away from the fixed steps, means for automatically locking the extension steps when raised, and means located below the platform, for operating said locking means to release the steps.

3. The combination with a car platform and steps fixedly connected thereto, of lazy tongs depending from the lower one of said steps, extension steps carried by the lazy tongs, arms mounted for rotation below one of the fixed steps, means extending above the platform for rotating said arms, a connection between the arms and the lazy tongs, means carried by one of the fixed steps for limiting the movement of the arms when shifted past the dead center to lock the tongs and extension steps in lowered positions, means for automatically locking the tongs and extension steps against movement when raised, and means located below the level of the platform for shifting said locking means to release the tongs and extension steps.

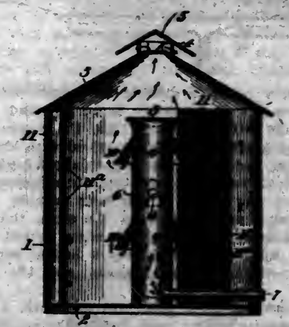
1,020,255. MANUFACTURE OF INCANDESCENCE BODIES FOR GAS-LIGHTING. CONRAD RICHARD BÖHM, Berlin, Germany. Filed July 16, 1910. Serial No. 572,263. (Cl. 67—99.)

1. In the process for the manufacture of incandescence bodies for gas lighting, the improvement which comprises impregnating the ground fabric with a solution of thorium acetate in formic acid, then drying the same and converting it to ashes substantially as described.

2. The process for the manufacture of incandescence bodies for gas lighting, which consists in treating the ground fabric with a solution of thorium acetate in formic acid, then treating it with a substance adapted to produce thorium hydroxid as a deposit on the fiber, then drying the fabric and converting it into ashes, substantially as described.

3. The process for the manufacture of incandescence bodies for gas lighting, which consists in treating the ground fabric with a solution of thorium acetate in formic acid, then treating it with hydrogen peroxid to separate out thorium peroxid on the fiber, then drying the fabric and converting it to ashes, substantially as described.

1,020,256. APPARATUS FOR DRYING GRAIN IN BINS OR GRANARIES. GEORGE W. BOLL, Wichita, Kans. Filed Apr. 1, 1910. Serial No. 552,839. (Cl. 98—26.)



1. The combination, with a grain bin having imperforate sides, and a roof having an opening therein, of a perforated air reservoir in said bin, means of communication between the lower end of said reservoir and the air on the exterior of the bin, a closure for the top of said reservoir, and perforated flues on the inner surface of the walls of the bin, said flues opening below the roof.

2. The combination, with a grain bin having imperforate sides, and a roof having an opening therein, of a perforated air reservoir arranged in said bin below and in line with the opening in the roof, means of communication between the lower end of said reservoir and the exterior of the bin, a closure for the top of said reservoir and perforated flues on the inner surface of the walls of said bins, said flues opening below the roof.

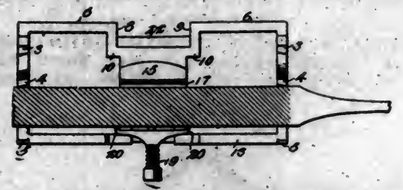
3. The combination, with a grain bin having imperforate sides, and a pitched roof provided with an opening in its apex, of a perforated air reservoir arranged in the bin below and in line with the opening in the roof and extending substantially the full height of the walls of the bin, means of communication between the lower end of said reservoir and the exterior of the bin, a closure for the top of said reservoir and perforated flues on the inner surface of the walls of said bins, said flues extending substantially the full height of the walls of the bin and opening below the roof.

4. The combination, with a grain bin having imperforate sides and a conical roof provided with an opening in its apex, of a perforated air reservoir arranged in the center of the bin immediately below the opening in the roof and extending substantially the full height of the walls of the bin, means of communication between the lower end of said reservoir and the exterior of the bin, a closure for the top of said reservoir, and perforated flues on the inner surface of the walls of said bin, said flues extending substantially the full height of the walls of the bin and opening below the roof whereby the air from the reservoir is obliged to percolate through the contents of the bin and pass up through said flues to reach the outlet in the roof.

1,020,257. SAW-TOOL. ALVIN B. BROWN, Riverside, Cal. Filed Mar. 18, 1911. Serial No. 615,362. (Cl. 76—36.)

1. In a saw jointer, a frame, said frame having its end walls provided upon one of their edges with a plurality

of lugs, the top and bottom walls of the frame being connected together through the medium of spaced webs, the said webs being integrally formed with a connecting member, this connecting member having its upper extremity enlarged, the upper face of the said enlargement being curved, and the connecting member being provided with a spring pressed engaging element, substantially as and for the purpose set forth.



2. In a saw joiner, a rectangular frame, the edges of the side members of the frame being provided upon one of their faces with projecting lugs, the central portion of the frame having a member provided with an enlarged upper portion, the top of the said enlarged portion being curved, a stem connected with the said member and projecting below the frame, a retaining member having a central opening positioned upon the stem, the said retaining member having its opposite edges formed with projections, a cap for the stem, and a helical spring upon the stem bearing between the cap and the retaining member.

3. In a saw joiner of the class set forth, a substantially rectangular frame, said frame having its central portion provided with depending webs connecting the top and the bottom of the frame, the webs having one of their faces integrally formed with a connecting portion, a raker toothed gage having its body portion positioned for vertical movement between the connecting webs, the upper members of the frame being provided with overlying ledges, the body of the gage being provided with a cut away portion having inclined walls, a gage sliding block also provided with inclined walls engaging the walls of the cut away portion of the body, and a headed threaded bolt arranged between the connecting webs and engaging the block for sliding the same and either of the webs to slide the gage.

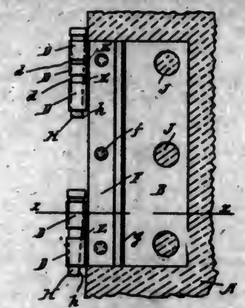
1,020,258. SWIVEL-JOINT HOSE-COUPLING. JESSE HARPER BUNDY, Greenfield, Ind. Filed Aug. 30, 1911. Serial No. 646,790. (Cl. 137—34.)



A device of the character described, comprising a nipple having a threaded portion at one end for engagement by a nozzle and having an annular rib intermediate its ends, a socket having one end reduced for engaging the hose, and being internally enlarged at the other end to fit over the nipple, said socket having an annular flange at the end adjacent to the rib and fitting against the said rib, a retaining sleeve fitting over the socket and having a lateral flange at its outer end, and oppositely arranged pins adjacent to the flange, a spring encircling the socket between the sleeve and the flange of the socket, and a locking sleeve fitting over the spring and having an internal flange engaging the rib on the opposite side from the socket flange, and having bayonet slots for engagement by the pins.

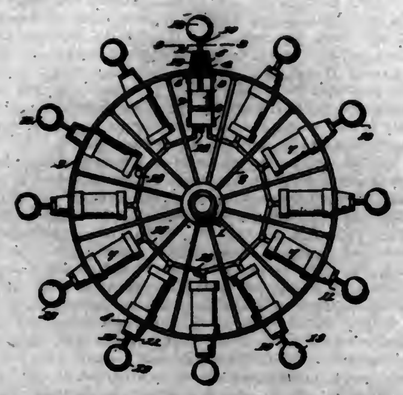
1,020,259. FENCE-WIRE FASTENER. MEINRAD J. BURKHART, Missouri Valley, Iowa. Filed May 15, 1911. Serial No. 627,340. (Cl. 39—12.)

The combination, with a fence post of plastic material, of a fence wire fastener comprising a central bar, a plate having tubular sockets at its middle part arranged beyond the front edge of the bar, said plate being folded over the said bar and having projections for engaging with the material of the post, stiffening plates secured one on each side of the folded plate with their front



edges arranged in the same plane as the front edge of the bar, and a pin which engages with the said sockets and jams the fence wire in the space between them against the front edges of the said bar and stiffening plates.

1,020,260. SPRING-WHEEL. ELISHA W. BURNER, Luray, Va. Filed May 22, 1911. Serial No. 628,677. (Cl. 152—28.)



In a spring wheel, a hub, spokes therefor, a rim provided with perforations, a plug having a reduced portion adapted to enter said perforation, each plug having a recess for the reception of lubricating material, a screw plug for compressing the lubricating material, a cap arranged to be screwed to the reduced portion of said recessed plug on the opposite side of the rim, said cap forming one end of a cylinder, a plunger within said cylinder, the stem of the plunger being arranged to pass through both of said plugs, a tread member secured to the outer end of the plunger, and a series of pipes establishing communication between the inner ends of all of the cylinders.

1,020,261. MECHANICAL MOVEMENT. GEORGE W. CAMPBELL, El Paso, Tex., assignor of one-half to Harold A. Hollister, Santa Barbara, Cal. Filed July 29, 1910. Serial No. 574,568. (Cl. 74—14.)

1. In a stroke changer, the combination with reciprocating driving and driven mechanism, of a lever, a fixed pivot for said lever, means for moving said lever about its pivot and for holding it in any desired position, an oscillating member comprising a substantially triangular

frame pivoted at one corner to said lever, and rods pivotally connecting the other two corners of said oscillating member with the driving and driven mechanism respectively, substantially as described.



2. In a mechanical movement, the combination with reciprocating driving and driven mechanism, of a lever arm pivoted at one end and provided at the other end with a sector, means for swinging said sector about the pivot of said lever and for locking it in any desired position, a triangular stroke changer pivoted to said lever arm between said pivot and said sector, and connecting rods pivoted to said triangular stroke changer and connected respectively to the driving and driven mechanism, substantially as described.

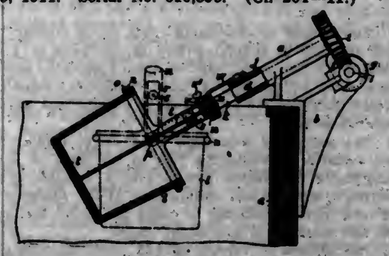
3. In a mechanical movement, the combination with reciprocating driving and driven mechanism, of a lever arm pivoted at one end and provided at the other end with a sector, means for swinging said sector about the pivot of said lever and for locking it in any desired position, a triangular stroke changer pivoted to said lever arm between said pivot and said sector, and connecting rods having their ends overlapping and pivoted to said triangular stroke changer and connected respectively to the driving and driven mechanism, substantially as described.

4. The combination with reciprocating driving and driven mechanism, of a stroke changer comprising a lever pivoted at one end with means for swinging said lever about its pivot and for holding it in any desired position, of a substantially triangular stroke changer pivoted to said lever, and connecting rods pivoted respectively to said triangular stroke changer and connected to the driving and driven mechanism, substantially as described.

5. The combination with reciprocating driving and driven mechanism, of a stroke changer comprising a lever pivoted at one end with means for swinging said lever about its pivot and for holding it in any desired position, of a substantially triangular stroke changer pivoted to said lever, and connecting rods having their ends overlapping and pivoted respectively to said triangular stroke changer and connected to the driving and driven mechanism, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,020,262. ELECTROPLATING APPARATUS. THOMAS RICHARD CANNING, Birmingham, England. Filed Feb. 23, 1911. Serial No. 610,396. (Cl. 204—11.)



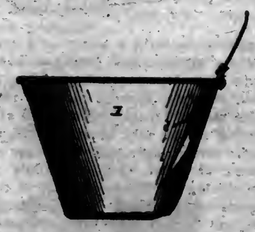
1. In an electro-plating apparatus the combination with an inclined spindle carried in a bearing adapted to be fixed to the wall of an electro-plating tank, of means for rotating said spindle, and of a receptacle mounted on the lower end of said spindle in such manner that it can be readily detached therefrom.

2. In an electro-plating apparatus the combination with an inclined spindle carried in a bearing adapted to be fixed to the wall of an electro-plating tank, of means for rotating said spindle, of arms secured to said spindle, of a ring pivoted to said arms, and of a receptacle carried by said ring in such manner that it can be readily detached therefrom.

3. In an electro-plating apparatus the combination with an inclined spindle, carried in a bearing adapted to be fixed to the wall of an electro-plating tank, of means for rotating said spindle, of arms secured to the lower end of said spindle, of a ring pivoted to said arms and capable of a relative movement thereto, and of a receptacle carried in said ring.

4. An electro-plating apparatus comprising a bracket provided with a plurality of bearings, a shaft provided with a worm mounted in one of said bearings, a spindle mounted in the other of said bearings, said spindle being provided with a worm wheel which meshes with said worm, arms secured to said spindle, a ring pivoted in said arms and capable of movement relative thereto, and a receptacle carried by said ring.

1,020,263. SPOON ATTACHMENT. CHARLES A. CARMENCKE, Olinghouse, Nev. Filed Sept. 24, 1909. Serial No. 519,355. (Cl. 65—65.)



A spoon holder comprising a pair of pivotal members formed of sheet metal and pivotally connected to each other, each of said members being formed with a curved spoon handle engaging portion, one of said members being formed with depending offset rim engaging fingers and the other member being formed with a lip adapted to lie in a position between said fingers, the free ends of said members being formed with oppositely disposed slots and adapted to interlock with each other to clamp a spoon handle.

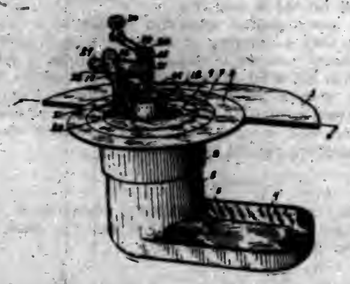
1,020,264. RAILWAY-RAIL-FASTENING DEVICE. GEORGE L. CHEADLE, Jr., Austin, Ill. Filed Oct. 12, 1910. Serial No. 586,691. (Cl. 238—4.)



In a railway rail fastener, a spike comprising a stock having a head overhanging at one side to engage with the flange of a rail, said stock being enlarged beneath the overhanging portion of the head and with an inclined shoulder between the body of the stock and the enlarge-

ment and with a transverse recess opposite to the shoulder and in the side of the spike opposite the rail engaging portion of the head, and a tie plate having an aperture to receive the shank and located opposite to the recess whereby the tie plate and spike are locked to the tie when the spike is driven into the same.

1,020,265. OIL-BURNER. GEORGE E. CLAPP, Kalamazoo, Mich. Filed July 14, 1910. Serial No. 571,880. (Cl. 158—91.)



1. The combination with a stove, of a generator chamber; connections between said generator chamber and the lid opening in said stove; a pan extending laterally from the generator chamber, opening into the same; a cup of a considerable mass of metal sufficient to store heat, centrally supported in the said generator chamber by radial arms or fingers resting upon suitable ledges or projections, said cup being provided with a shallow depression; a downwardly-opening air intake conduit at the top of said generator chamber; a damper arranged and structurally connected to control said air intake, composed of opposite slide members closing toward the center; a lever and connections for operating the said slide members simultaneously to regulate a central opening; a fuel supply pipe; a tubular spigot for said supply pipe open at top and bottom; and a pointed wire leading from said spigot for delivering a regulated amount of fuel down through the damper into the generator cup, coacting substantially as described and for the purpose specified.

2. The combination with a stove, of a generator chamber; a pan extending laterally from the generator chamber, opening into the same; a cup of a considerable mass of metal, sufficient to store heat, centrally supported in the said generator chamber, said cup being provided with a shallow depression; a downwardly-opening air intake conduit at the top of said generator chamber; a damper arranged and structurally connected to control said air intake, composed of opposite slide members closing toward the center; a lever and connections for operating said slide members simultaneously to regulate a central opening; a fuel supply pipe; a tubular spigot for said supply pipe open at top and bottom; and a pointed wire leading from said spigot for delivering a regulated amount of the fuel down through the damper into the generator cup, coacting substantially as described and for the purpose specified.

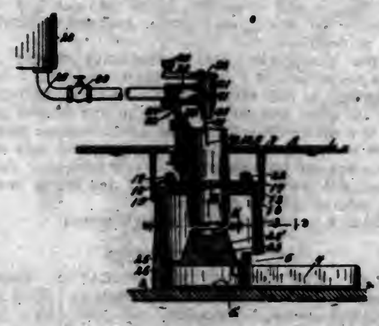
3. The combination with a stove, of a generator chamber; a pan extending laterally from the generator chamber, opening into the same; a cup of a considerable mass of metal, sufficient to store heat, centrally supported in the said generator chamber, said cup being provided with a shallow depression; a downwardly-opening air intake conduit at the top of said generator chamber; a damper arranged and structurally connected to control said air intake, composed of opposite slide members closing toward the center; a fuel supply pipe; a tubular spigot for said supply pipe, open at the top and bottom; and a pointed wire leading from said spigot for delivering a regulated amount of fuel down through the damper into the generator cup, coacting substantially as described and for the purpose specified.

4. The combination with a stove, of a generator chamber; a pan extending laterally from the generator chamber, opening into the same; a cup of a considerable mass of metal, sufficient to store heat, centrally supported in the said generator chamber by radial arms or fingers resting upon suitable ledges or projections, said cup being provided with a shallow depression; a downwardly-opening air intake conduit at the top of the said generator chamber; a damper arranged and structurally connected to control said air intake, composed of opposite slide members closing toward the center; a fuel supply pipe; a tubular spigot for said supply pipe, open at top and bottom; and a pointed wire leading from said spigot for delivering a regulated amount of fuel down through the damper into the generator cup, coacting substantially as described and for the purpose specified.

5. The combination with a stove, of a generator chamber; a pan extending laterally from the generator chamber, opening into the same; a cup of a considerable mass of metal, sufficient to store heat, centrally supported in the said generator chamber, said cup being provided with a shallow depression; a downwardly-opening air intake conduit at the top of said generator chamber; a damper arranged and structurally connected to control said air intake, composed of opposite slide members closing toward the center; a lever and connections for operating said slide members simultaneously to regulate a central opening; and a fuel supply pipe provided with means for delivering a regulated amount of fuel down through the damper into the generator cup, coacting substantially as described and for the purpose specified.

[Claims 6 to 11 not printed in the Gazette.]

1,020,266. PROCESS OF BURNING LIQUID FUEL. GEORGE E. CLAPP, Kalamazoo, Mich. Filed Nov. 14, 1910. Serial No. 592,294. (Cl. 158—117.5.)

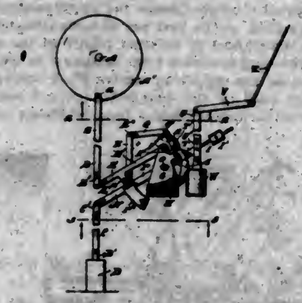


1. The method of vaporizing crude oil or similar fuels, which consists in supplying fuel in the form of a thin, substantially continuous stream upon a suitable receiving surface and maintaining at this surface a temperature sufficient to cause the liquid fuel to assume and maintain a spheroidal state.

2. The method of vaporizing crude oil or similar fuels, which consists in supplying fuel in the form of a thin, substantially continuous stream into a suitable shallow receiving receptacle and maintaining at the surface thereof a temperature sufficient to cause the liquid fuel to assume and maintain a spheroidal state.

3. The method of vaporizing and burning crude oil or similar fuels, which consists in supplying fuel in the form of a thin, substantially continuous stream into a suitable shallow receiving receptacle and maintaining at the surface thereof a temperature sufficient to cause the liquid fuel to assume and maintain a spheroidal state and delivering a current of air of sufficient volume to insure complete combustion of the fuel and maintain the temperature.

1,020,267. MECHANICAL MOVEMENT. JOHN W. DARLEY, Jr., Baltimore, Md., assignor to Harold A. Hollister, Santa Barbara, Cal. Filed Mar. 30, 1911. Serial No. 617,046. (Cl. 74—14.)



1. In a mechanical movement, the combination of a reciprocating member, means for imparting uniform length strokes to said member, a second reciprocating member; means connecting said members comprising a pair of fulcrumed levers, links connecting said levers; and automatically controlled means for changing the position of said links for varying the throw of the second member, substantially as described.

2. In a mechanical movement, the combination of a reciprocating member, means for imparting uniform length strokes to said member, a second reciprocating member; a pair of fulcrumed levers having connection with said members, means for maintaining said levers in parallel relation whereby to obtain a uniform length stroke between said reciprocating members, and automatically controlled means for maintaining said levers out of parallel relation whereby to change the length of stroke of the second reciprocating member, substantially as described.

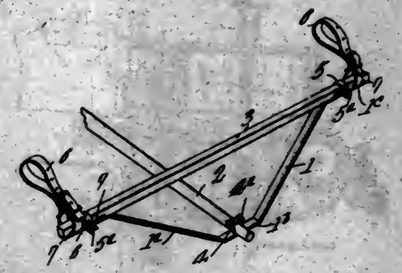
3. In a mechanical movement, the combination of a reciprocating member, means for imparting uniform length strokes to said member, a second reciprocating member, levers connected with said reciprocating members respectively, a support on which said levers are fulcrumed, a pair of connected links connecting said levers, and automatically controlled means for adjusting the position of said links whereby to vary the length of stroke of said second reciprocating members, substantially as described.

4. In a mechanical movement, the combination of a reciprocating member, means for imparting uniform length strokes to said member, a second reciprocating member, levers connected with said members respectively, a support on which said levers are fulcrumed, a pair of links having pivoted connection and pivotally connected with said levers, a member fulcrumed on said support, a link connection between said fulcrumed member and said links, and means for changing the position of said fulcrumed member for adjusting the position of said links whereby to vary the length of stroke of said second reciprocating member, substantially as described.

5. In a mechanical movement, the combination of a reciprocating member, means for imparting uniform length strokes to said member, a second reciprocating member, levers connected with said reciprocating members respectively, a support on which said levers are fulcrumed, an arm fulcrumed on said support, a link connection between said arm and said connecting levers, means automatically operable to change the position of said arm, means for holding said arm in adjusted position, and means for automatically releasing said holding means, substantially as described.

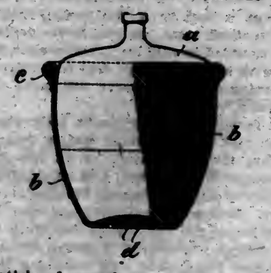
[Claims 6 to 8 not printed in the Gazette.]

1,020,268. NECK-YOKE OR TONGUE ATTACHMENT. JAMES BIRD DAVIS, Brady, Tex., assignor of one-half to James T. Mann, Brady, Tex. Filed July 24, 1911. Serial No. 640,168. (Cl. 21—77.)



A device of the character described, including a draft-bar, a neck-yoke forming member, and an inflexible bracket forming member between and connected to said draft-bar and said neck-yoke forming member and being of approximately semi-elliptical outline, said bracket member being adapted to hold said draft-bar fixed with respect to, and distant from said draft-bar.

1,020,269. PROTECTIVE ENVELOP FOR GLASS RECEPTACLES. OTTO DOMNICK, Aken, Germany. Filed Feb. 5, 1910. Serial No. 542,326. (Cl. 215—3.)



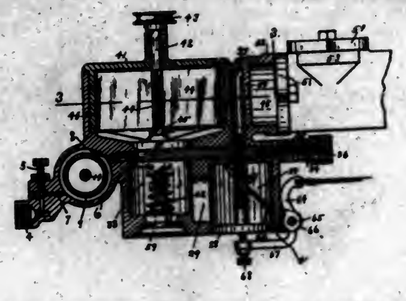
1. As an article of manufacture, an envelop for fragile receptacles formed of straw shaped to the receptacle, the lower edges of the straw being doubled on themselves and sewed together to form a flat closed lower end for the envelop and the upper edges of the straw being doubled on themselves, and a straw rope inserted through and secured in said doubled upper edges of the straw.

2. As an article of manufacture, an envelop for fragile receptacles formed of straw shaped to the receptacle and having a flat bottom portion, the straw forming the envelop being secured by stitching intermediate the upper edge and the flat bottom portion, the upper edge of the straw being doubled outwardly on itself and secured by stitching, and the lower edge of the straw being doubled on itself and secured together by stitching to close the bottom of the envelop.

1,020,270. CARBURETER. ROYAL J. DUNN, Port Huron, Mich. Filed Jan. 9, 1911. Serial No. 601,625. (Cl. 48—154.1.)

1. In a carbureter, the combination of a body, a fuel inlet, a valve controlling the flow of said fuel mounted for longitudinal movement, a spring to hold said valve on its seat, said body having a bore at right angles to said valve provided with a spiral slot, an air valve slidably mounted in said bore and having a pin movable in said slot to cause said air valve to revolve, and connections

between said air valve and said fuel valve whereby the rotary movement of the air valve causes a longitudinal movement of the fuel valve.



2. In a carbureter, the combination of a body having parallel bores forming a guide for the air valve and a carbureting chamber, a third bore for the fuel valve at right angles thereto, and a passage for the fuel; a fuel valve slidably mounted in its bore to normally close the fuel passage and provided with teeth intermediate its ends, an air valve slidably mounted in its bore, means to revolve said air valve, and a stem on said air valve provided with teeth engaging the teeth on the fuel valve whereby the movement of the air valve produces a longitudinal movement of the fuel valve proportionate to the revolution of the air valve.

3. In a carbureter, the combination of a body having a fuel passage, a fuel valve for closing said passage and having a toothed stem, an air valve longitudinally and revolubly mounted in said body, and a stem for said valve provided with teeth to engage said fuel valve stem, whereby the turning of the air valve will move the fuel valve longitudinally.

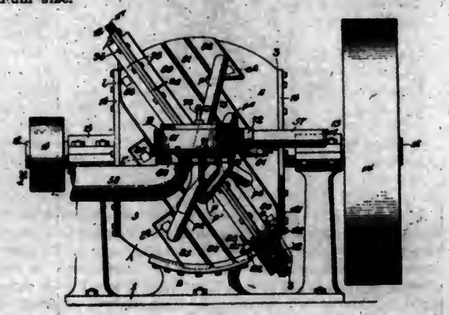
4. In a carbureter comprising a body provided with a mixing fan and an air passage leading from a valve seat to said fan, the combination of an air valve mounted in said passage for horizontal and longitudinal movement, a stem connected thereto having longitudinal teeth, and a fuel valve mounted transversely to said stem in said passage adjacent the fan and having teeth to engage the teeth on the air valve stem whereby the air valve may move the fuel valve, said body having a liquid-fuel passage opened and closed by said fuel valve.

5. In a carbureter, the combination of a body, a fuel heating device formed therein, an air valve mounted in said body for longitudinal and rotary movement, a fuel-oil valve positioned thereby, a spring for returning both valves to normal position, and a lever operatively engaging the air valve to move the same and thereby the fuel valve to permit the entrance of fuel.

1,020,271. ROTARY ENGINE. EDWIN ERICKSON, near Chancellor, S. D., and THEODORE ERICKSON, Judith Gap, Mont. Filed Sept. 12, 1910. Serial No. 581,553. (Cl. 121—93.)

1. In a rotary engine, the combination of a casing, a rotatable disk disposed in the casing obliquely to the axis of rotation, a plurality of spaced blades mounted with respect to the disk for relative lateral movement therethrough and coöperating with the disk to provide separate sets of compartments at opposite sides of the disk which increase from minimum to maximum size during different portions of a revolution, means for supplying motive fluid to the compartments at successive points in the revolution of each compartment, and means for rendering the supply means active during the initial part of or throughout the range of the increase of the compartments from minimum to maximum size.

2. In a rotary engine, the combination of a casing, a plurality of radially disposed blades mounted for rotation in the casing, a blade driven disk mounted obliquely to the axis of rotation and through which the blades have lateral movement, said blades and disk coöperating to form sets of live steam compartments on opposite sides of the disk at diagonally opposite points and sets of dead steam compartments on opposite sides of the disk at other diagonally opposite points, means for simultaneously supplying motive fluid to the first set of compartments, said means being distributed to different points in the path of increase of the compartments from minimum to maximum size, and means for supplying motive fluid through any predetermined ones of the distributed supply means on the increase of the compartments from minimum to maximum size.



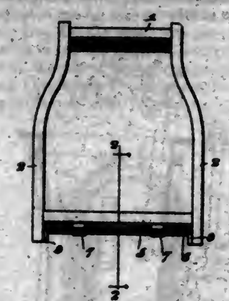
3. In a rotary engine, the combination of a casing, a plurality of rotatable blades disposed in radial relation thereto, a disk mounted to rotate on an axis coincident with the blades and disposed in a plane oblique to the axis of rotation, said blades being movable laterally through the disk and coöperating with the latter to provide separate sets of expanding and contracting compartments, fluid supply ports spaced around the casing and corresponding in number to the expanding compartments, exhaust ports spaced around the casing and corresponding in number to the contracting compartments, and means for controlling the admission of fluid through the first named ports to enter the successive compartments during the initial part of or throughout the range of their increase from minimum to maximum size, and for the exhaust of fluid from the second named ports.

4. In a rotary engine, the combination of a casing, a plurality of radial blades mounted for rotation therein, a disk mounted obliquely to the axis of rotation and through which the blades move laterally, said blades and disk coöperating to form compartments at each side of the disk successively increasing from minimum to maximum size during one-half the revolution and decreasing from the maximum to minimum size during the successive half revolution, conduits equal in number to the compartments and connected with the casing at spaced points for communication with said compartments, and a common valve controlling the passage of fluid through the conduits and constructed to admit fluid to those compartments increasing in size on both sides of the disk during a part, or throughout the period of increase in size and for connecting the compartments of decreasing size with the exhaust.

5. In a rotary engine, the combination of a blade-driven disk disposed obliquely to the axis of rotation, blade compartments at opposite sides of the disk, a counterpressure chamber extending around the casing in which the marginal portion of the disk moves, means for dividing the chamber at opposite sides of the disk into the same number of compartments as there are blade compartments, means for admitting fluid from the blade compartments at one side of the disk to the counterpressure compartments at the opposite side of the disk, and means for draining the water of condensation from the counterpressure compartments.

[Claims 6 to 46 not printed in the Gazette.]

1,020,272. SAFETY-STIRRUP. MILTON F. FERRELL, Cottonwood, Ariz. Filed June 24, 1911. Serial No. 636,120. (Cl. 54—49.)



A stirrup having its foot plate cut away and provided with a shoulder, a plate trunnioned to the sides of the stirrup and being provided with a lip adapted to normally engage with the said shoulder, the portion of the plate formed with the lip being heavier than the remainder of the plate, and stops upon the sides of the stirrup for limiting the swinging of the plate.

1,020,273. RAIL-TIE. JACOB D. FLOMERFELT, Taft, Fla. Filed May 26, 1911. Serial No. 629,533. (Cl. 238—5.)

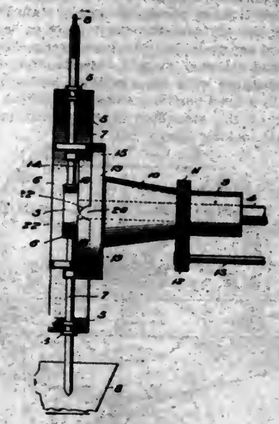


1. A tie comprising a pair of spaced members, each of the said members having their inner surfaces inclined downwardly and being spaced to provide a central, longitudinally disposed space, being open throughout, an inverted V-shaped member positioned within the said space, the said member being of a formation substantially in configuration with the said space, and extending full length of the said space, the said inverted V-shaped member being open throughout, so as to permit the introduction of sand or other suitable ballast, rail clamping means on the tie.

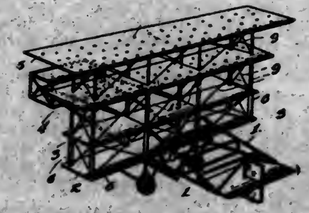
2. A tie comprising a pair of cushion members being spaced to provide a central longitudinally disposed space and being open throughout, an inverted V-shaped member being open throughout positioned within the said space, rail clamping means on the tie, the said means comprising a pair of substantially L-shaped rail plates, supported by the opposite ends of the said tie, the said plates being connected by a central longitudinally extending integral bar member disposed immediately above the said space, the said bar being provided with a plurality of alining passages adapted to permit the introduction of sand or other suitable material within the inverted V-shaped member, each of the said rail plates being formed to provide a pair of depending ears adapted to engage the opposite sides of the tie, a clamping bolt extended through the said tie in ears and adapted to retain the said clamping plates in an operative position on the tie.

1,020,274. FEATHERING PROPELLER-WHEEL. ALBERT S. FRAZIER, Amsterdam, N. Y. Filed Jan. 4, 1911. Serial No. 600,787. (Cl. 115—57.)

In a propelling wheel, the combination with a vessel, of a propeller shaft extending to the exterior thereof, a rotary propeller embodying feathering blades having stems journaled at their inner ends to and carried by said shaft, a housing or casing disposed exteriorly of the vessel and in which the stems are journaled, said housing being rotatable with the shaft, a head located within said housing adapted for coöperation with the blades to effect feathering thereof, a sleeve connected to the head and loose on the shaft, and means adapted for turning and setting at will the said sleeve and head.



1,020,275. FLYING-MACHINE. ERNESTO FUCHS, Guadalajara, Mexico. Filed May 10, 1911. Serial No. 626,208. (Cl. 244—12.)



1. In a flying machine, a plurality of superposed supporting surfaces, telescopic stanchions slidably connecting said surfaces to permit them to be collapsed or to spread open under air pressure, locking means for holding the elements of the stanchions in a fixed position, and means for releasing said locking means.

2. A flying machine provided with a plurality of superposed supporting surfaces, connecting braces adapted to fold between said surfaces, and telescopic stanchions slidably connecting the surfaces to permit them to be collapsed or to spread apart under air pressure, locking means for holding the surfaces in a fixed position, said means being operative to lock the sections of the telescopic stanchions together and means for releasing said locking means.

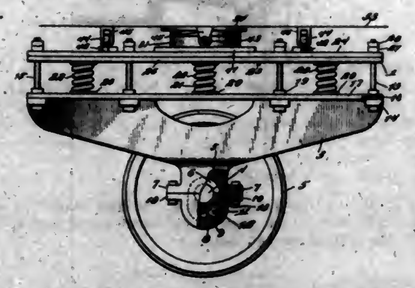
3. In a flying machine, a plurality of superposed supporting surfaces, telescopic stanchions slidably connecting said surfaces to permit them to be collapsed or to spread open under air pressure, stops upon said stanchions for limiting the opening movement thereof, locking means associated with the stanchions for holding the same in a fixed position, and means for releasing said locking means.

4. In a flying machine, a plurality of superposed supporting surfaces, certain of said surfaces being provided with openings throughout the area thereof for upflow of air, telescopic stanchions connecting said surfaces to permit them to be collapsed or to spread open under air pressure, stops associated with the stanchions for limit-

ing the opening movement of the sections thereof, locking means for holding the sections of the stanchions in a fixed position, and means for releasing said locking means.

5. A flying machine provided with a plurality of superposed supporting surfaces, telescopic stanchions slidably connecting the surfaces to permit them to be collapsed or to spread apart under air pressure, braces connecting said surfaces and adapted to fold between the same, locking means associated with the stanchion sections for holding the same in a fixed position, stops for limiting the outward movement of the stanchion sections, and means for releasing said locking means.

1,020,276. CAR-TRUCK. WALTER CALVIN GAMBREL, Tabor, Ill. Filed Aug. 30, 1911. Serial No. 646,847. (Cl. 105—32.)



1. A truck comprising spaced hangers, cross pieces secured to said hangers, springs mounted upon the upper surface of said cross pieces, a bearing plate, cross pieces secured to said bearing plate and engaging said springs, and means passing through said hangers, cross pieces, and bearing plate to insure the same against displacement, said means permitting movement of the bearing plate relative to the hangers.

2. A truck comprising spaced hangers, cross pieces secured to said hangers, springs mounted upon the upper surface of said cross pieces, a bearing plate, cross pieces secured to the under side of said bearing plate and engaging said springs, and bolts passing through said hangers, cross pieces and bearing plate to insure the same against displacement, said bolts permitting movement of the bearing plate relative to the hangers.

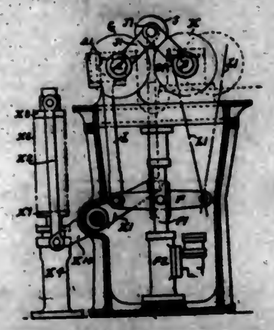
3. The combination with the bottom of a car, of a truck, a bearing plate secured to the truck, a bearing located centrally of said plate and projecting upwardly therefrom, a companion bearing arranged upon the bottom of the car and engaging the first-named bearing, and means connecting said companion bearings to permit forward movement of the car relative to the truck upon a sudden application of the brakes.

4. The combination with a car and a truck therefor, of companion bearing members carried by said car and truck respectively, a king pin composed of a plurality of sections connecting said companion bearing members and adapted to permit movement of the car relatively to the truck upon a sudden application of the brakes.

5. The combination with a car and a truck therefor, of companion bearing members carried by said car and truck respectively and adapted for relative movement, and a king pin composed of two sections and adapted to connect said companion bearing members to permit relative movement thereof whereby to allow movement of the car relatively to the truck upon a sudden application of the brakes.

1,020,277. VARIABLE-DELIVERY PUMP FOR HYDRAULIC TRANSMISSION SYSTEMS. WILLIAM GREGORY GIBBONS, Edinburgh, Scotland. Filed Oct. 12, 1911. Serial No. 654,356. (Cl. 103—35.)

1. In hydraulic transmission gearing, pump mechanism, comprising two parallel crank shafts, gearing interconnecting said crank shafts, said gearing being constructed and arranged to permit the relative positions of the cranks to be varied during operating, and a pump-unit operatively connected to the cranks.



2. In hydraulic transmission gearing, pump mechanism comprising two parallel crank shafts, means for moving them radially the one to the other, a pinion on each shaft, a third and intermediate pinion gearing with both said pinions, means for keeping said intermediate pinion in gear, means for moving it relatively to the shaft pinions and operative connection between the cranks and a pump unit.

3. In hydraulic transmission gearing, pump mechanism, comprising two parallel crank shafts, gearing interconnecting said crank shafts, said gearing being constructed and arranged to permit the relative positions of the cranks to be varied during operation, connecting rods on the cranks and a pump-unit operatively connected thereto.

4. In hydraulic transmission gearing, pump mechanism comprising two parallel crank shafts, means for moving them radially the one to the other, a pinion on each shaft, a third and intermediate pinion gearing with both said pinions, means for keeping said intermediate pinion in gear, means for moving it relatively to the shaft pinions, connecting rods on the cranks and a pump-unit operatively connected thereto.

5. In hydraulic transmission gearing, pump mechanism, comprising two parallel crank shafts, gearing interconnecting said crank shafts, said gearing being constructed and arranged to permit the relative positions of the cranks to be varied during operation, connecting rods on the cranks, a floating lever to the ends of which said connecting rods are attached, and a pump unit operatively connected to the center of the floating lever.

[Claims 6 and 7 not printed in the Gazette.]

1,020,278. STOVE. AUGUSTUS O. GIRARD, St. Louis, Mo. Filed Feb. 25, 1911. Serial No. 610,750. (Cl. 126—78.)

1. A stove including a fire-pot, an ash receptacle located beneath the fire-pot, means supporting the receptacle for movement to permit of its being disposed directly beneath the fire-pot or at one side thereof, a grate carried by the receptacle and closing the lower end of the fire-pot when the receptacle is in one position, and an agitator carried by the receptacle and adapted to either form a bottom therefor or to be extended into the fire-pot when the receptacle is in another position.

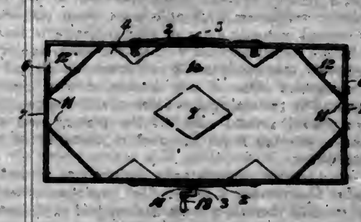
2. A stove including a frusto-conical fire-pot, a member movably mounted beneath the fire-pot and provided with an agitator adapted to be extended into the small end of the fire-pot when the movable member is in one position, the said small end of the fire-pot having its walls apertured so as to permit the ashes to be discharged through the apertures when said agitator is extended into the fire-pot, and a grate carried by the member and adapted to be wholly disposed beneath the fire-pot when the movable member is in another position.

3. A stove including a fire-pot having side ash-discharge passages therein, a receptacle adjustably mounted beneath the fire-pot, an agitator adapted to form the bottom of the receptacle when the receptacle is in one position and adapted to be moved vertically in the receptacle and into the fire-pot when the receptacle is in another position to cause the ashes to be discharged through the passages in the sides of the fire-pot, a rocking member supporting the agitator, and movable means supporting the receptacle and also supporting the said rocking member.



4. A stove including a fire-pot, a receptacle mounted for horizontal movement beneath the fire-pot and provided at its upper end with a horizontally disposed grate portion adapted to be extended beneath the lower end of the fire-pot when the receptacle is in one position, an agitator movably mounted in the receptacle, and means supporting the agitator and receptacle respectively and adapted to permit adjustments of the same to agitating and ash-receiving positions respectively.

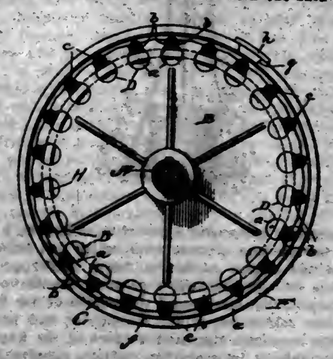
1,020,279. CONCRETE-MIXER. WILLIAM M. GOSS, Cheyenne, Wyo. Filed July 8, 1911. Serial No. 637,460. (Cl. 83—73.)



A concrete mixer comprising a support, a table pivotally mounted on said support, and means mounted on said support for oscillating the table; said table having raised sides and ends, hinged discharge gates at one end thereof, V-shaped baffle plates arranged on its sides and a double baffle plate on its central horizontal portion, all substantially as described.

1,020,280. PLANETARY-NAPPING-MACHINE DRUM. HARRY S. GREENE, Woonsocket, R. I. Filed Oct. 14, 1911. Serial No. 654,683. (Cl. 26—19.)

1. The combination of a suitably supported shaft, a head fixed on and adapted to turn with the shaft and having a lateral circular flange at its perimeter and also having in its major portion flange openings that extend radially outward to its perimeter, a plurality of rolls having journals carried by said head in the said openings thereof and adapted to be rotated about their axes when the head is rotated about its axis, a wheel loosely mounted on the shaft, alongside the head, a hoop carried by said wheel and surrounding and movable about the circular series of roll journals and against which said journals are caused to bear by the centrifugal action created by rotation of the head, and a wheel loosely mounted on the shaft, at a point intermediate the head and the first named wheel, and arranged between the flange of the head and the shaft and also arranged within the circular series of roll journals and against which the said journals bear when they are out of contact with the said hoop.



2. The combination of a suitably supported shaft, a head fixed on and adapted to turn with the shaft; said head having spaced bearings in the perimeter thereof, a plurality of rolls having journals carried by said head in said bearings and adapted to be rotated about their axes when the head is rotated about its axis, a wheel loosely mounted on the shaft, a hoop carried by said wheel and surrounding and movable about the circular series of roll journals and against which said journals are caused to bear by the centrifugal action created by rotation of the head, and a wheel loosely mounted on the shaft and arranged within the circular series of roll journals and against which the said journals bear when they are out of contact with the said hoop.

3. The combination of a rotatable body, a circular series of rolls carried by said body and adapted to be rotated about their axes incidental to rotation of the body about its axis, a suitably supported and centered hoop surrounding and movable about the circular series of rolls and against which the rolls are caused to bear by the centrifugal action created by rotation of the body, and suitably supported and centered circular bearing means adapted to turn independently of the body and the hoop and arranged within the circular series of rolls and opposed to said rolls so as to be turned by the rolls when the latter are out of contact with the hoop.

4. The combination of a rotatable body, a circular series of rolls carried by said body and adapted to be rotated about their axes when the body is rotated about its axis, a hoop surrounding and movable about the circular series of rolls and against which said rolls are caused to bear by the centrifugal action created by rotation of the body, and bearing means separate from the body and capable of turning independently of the body and the hoop and arranged within the circular series of rolls and opposed to said rolls so as to be turned by the rolls when the latter are out of contact with the hoop.

5. The combination of a rotatable body having spaced bearings therein, a circular series of rolls carried by said body in the said bearings thereof and adapted to be rotated about their axes when the body is rotated about its axis, a hoop surrounding and movable about the circular series of rolls and against which said rolls are caused to bear by the centrifugal action created by rotation of the body, and circular bearing means separate from the body and capable of turning independently of the body and the hoop and arranged within the circular series of rolls and opposed to said rolls so as to be turned by the rolls when the latter are out of contact with the hoop.

[Claims 6 to 16 not printed in the Gazette.]

1,020,281. SPECULUM. ELMER H. HALL, Chicago, Ill. Filed Apr. 20, 1911. Serial No. 622,840. (Cl. 128—24.)



1. A speculum comprising a plurality of fingers, a finger adjuster having cam grooves with which the inner terminals of the fingers engage, a finger carrier provided with means to hold the fingers properly spaced apart, a sleeve inclosing the carrier and the shanks of the fingers, a sight tube telescoped within the carrier and provided with a rim to engage the outer surface of the finger adjuster to retain it in operative position relative to the finger carrier, and a latch engaging orifices formed respectively in the sight tube, finger carrier and sleeve to maintain the parts detachably assembled.

2. A speculum comprising a plurality of fingers, a finger adjuster having cam grooves with which the inner terminals of the fingers engage, a finger carrier provided with means to hold the fingers properly spaced apart and having an inward projecting boss, a sleeve inclosing the carrier, a sight tube telescoped within the finger carrier and having a notch engaging the boss thereof and provided at its outer end with a flange to engage the finger adjuster, and a two-membered latch having means to engage orifices in the sight tube, finger carrier and sleeve, to hold the parts detachably assembled.

1,020,282. ATTACHMENT FOR PLOWS AND CULTIVATORS. WALTER E. HALLAWAY, Mist, Ark. Filed Jan. 2, 1912. Serial No. 668,905. (Cl. 55—64.)

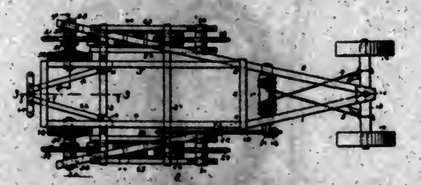


1. In a device of the character described, the combination of a vertically disposed bar adapted to be secured to a plow beam, said bar being twisted so that the lower end is disposed in a plane at right angles to the body portion, curved arms hinged to the lower end of said bar, cutter disks carried by said arms, and means carried by said arms to increase or decrease the space between them.

2. In a device of the character described, the combination of a vertically disposed bar adapted to be secured to a plow beam, arms hinged to the lower end of said bar and disposed upon opposite sides of the plow beam, shafts carried by the lower ends of said arms, cutter disks mounted on each end of said shafts, and means carried by said arms to increase or decrease the space between them.

3. In a device of the character described, the combination of a vertically disposed bar, said bar being twisted so that the lower end is disposed in a plane at right angles to the body portion, curved arms hinged to the lower end of said bar and disposed upon opposite sides of the bar, cutting disks carried by the lower ends of said arms, a rod mounted on said arms, having a head formed on one end and a nut threaded on the other end, and a coil spring mounted on said rod and disposed between said arms to force them apart when the nut is unscrewed.

1,020,283. AUTOTRACTOR "A" FRAME. PLINY E. HOLT, Stockton, Cal. Filed Nov. 3, 1909. Serial No. 525,979. (Cl. 21—114.)



1. An auto-tractor comprising a main frame formed of a triangular base frame, a rectangular superframe resting upon and secured thereto, the base beam of said triangular frame projecting laterally beyond the sides of said rectangular frame, traction trucks rigidly secured to the under side of the outer ends of said base beam, idlers mounted in the forward ends of said trucks, a driving pinion supported jointly by contiguous sections of said frame independently of said trucks, and traction belts passed around said driving pinion and said idlers.

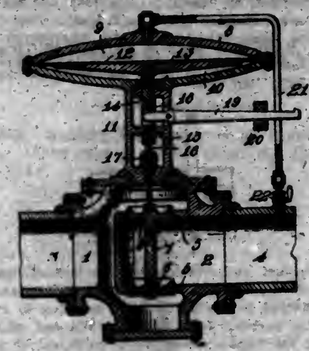
2. An auto-tractor comprising a main frame formed of a triangular base frame, a rectangular superframe resting upon and secured thereto, a cross bar secured to the under side of said triangular frame parallel to the base beam thereof, traction trucks rigidly secured to said base beam and cross bar, idlers mounted in said trucks driving pinions supported by the contiguous sides of said frame independently of said trucks, and traction belts passed around said driving pinions and said idlers.

3. An auto-tractor comprising a main frame formed of a rectangular base frame, a rectangular superframe resting upon and secured thereto, a cross bar secured to the under side of said triangular base frame parallel to the base beam thereof, said base beam and cross beam projecting laterally beyond opposite sides of said rectangular frame, traction trucks rigidly secured to said base beam and cross bar respectively, idlers mounted in said trucks and supported by the contiguous sides of said frames, driving pinions also supported by the contiguous sides of said frames, traction belts passed around said driving pinions and said idlers, and a steering truck mounted in the apex of said triangular frame.

4. An auto-tractor comprising a main frame formed of a triangular base frame, a rectangular superframe resting upon and secured thereto, a cross bar secured to the under side of said triangular frame parallel to the base beam thereof, said base beam and cross beam projecting laterally beyond opposite sides of said rectangular frame, traction trucks rigidly secured to the end of said base beam and cross bar, idlers mounted in said trucks, driving pinions supported by the contiguous sides of said frames independently of said trucks, and traction belts passed around said driving pinions and said idlers.

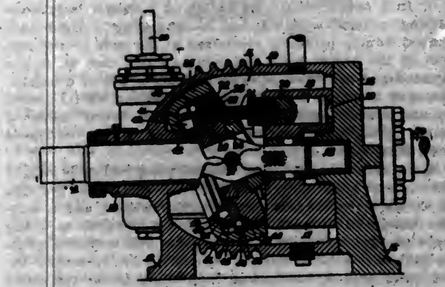
1,020,284. HIGH-PRESSURE REGULATOR AND CUT-OFF VALVE. JOHN E. JAMES, Worthington, Pa., assignor of one-half to Godfrey L. Cabot, Boston, Mass. Filed Apr. 21, 1910. Serial No. 556,775. (Cl. 137—53.)

The combination of a main, a valve casing therein provided with a horizontal valve seat, a diaphragm casing above the valve casing, a diaphragm in the casing, a hollow neck connecting the top of the valve casing and the bottom of the diaphragm casing, and having a vertical slot in one side, a downwardly opening valve in the valve seat, a valve-stem projecting through the neck into the diaphragm casing and secured to the bottom of the diaphragm, a lever pivoted in the slot in the neck engaging the valve-stem, a weight on the lever outside the neck



whereby the valve is held normally closed, and an uninterrupted communication between the high pressure side of the main and the diaphragm casing above the diaphragm.

1,020,285. ROTARY PUMP OR MOTOR. REYNOLD JANNEY, New York, N. Y. Filed May 7, 1910. Serial No. 560,060. (Cl. 103—44.)



1. The combination of a stationary member having ports for the passage of fluid; a rotary barrel having cylinders with ports adapted to register with those of said stationary member; pistons in said cylinders; a rotary inclined member connected with said pistons and provided in the face opposite said pistons with an annular grooved path; a support for said rotary inclined member also provided with a roller path; and conical rollers interposed between said paths; and restricted in their end movements by the walls of said grooved path to insure their travel in a perfectly concentric path co-axial with said rotary inclined member and said support.

2. The combination of a stationary member having ports for the passage of fluid; a rotary barrel having cylinders with ports adapted to register with those of said stationary member; pistons in said cylinders; a rotary inclined member connected with said pistons and provided with a roller path directly opposite said pistons; a support for said rotary inclined member also provided with a roller path; conical rollers interposed between said paths; and a flange on one of said roller paths to insure the travel of said rollers in a perfectly concentric path co-axial with said rotary inclined member and said support.

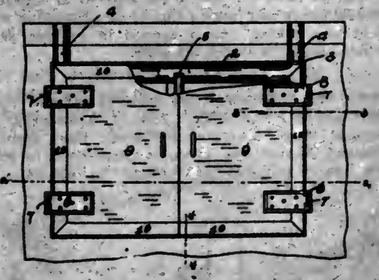
3. The combination of a stationary member having ports for the passage of fluid; a rotary barrel having cylinders with ports adapted to register with those of said stationary member; pistons in said cylinders; a rotary inclined member connected on one face with said pistons and provided on its opposite face with a roller path; a support for said rotary inclined member also provided with a roller path; conical rollers, each having a truncated end, interposed between said paths; and a flange on one of said roller paths having an inclined wall contacting with the truncated ends of said rollers to insure their travel in a perfectly concentric path co-axial with said rotary inclined member and said support.

4. The combination of a stationary member having ports for the passage of fluid; a rotary barrel having cylinders with ports adapted to register with those of said stationary member; pistons in said cylinders; a rotary inclined member connected on one face with said pistons and provided on its opposite face with a roller path; a support for said rotary inclined member also provided with a roller path; conical rollers having truncated ends interposed between said paths; flanges on one of said roller paths having inclined walls contacting with the truncated ends of said rollers to insure their travel in a perfectly concentric path; and a plurality of additional anti-friction members interposed between the periphery of said rotary member and the walls of the support therefor and retaining them in co-axial alinement.

5. The combination of a stationary member having ports for the passage of fluid; a rotary barrel having cylinders with ports adapted to register with those of said stationary member; pistons in said cylinders; a rotary inclined member connected on one face with said pistons and provided on its opposite face with a roller path; a support for said rotary inclined member also provided with a roller path; conical rollers having truncated ends interposed between said paths; and flanges on the roller paths of said rotating member having inclined walls contacting with the truncated ends of said rollers to insure their travel in a perfectly concentric path co-axial with said rotary inclined member and its support.

[Claims 6 to 10 not printed in the Gazette.]

1,020,286. SIDEWALK-ELEVATOR-DOOR FRAME. CARL G. JANSON, Oakland, Cal. Filed July 18, 1910. Serial No. 572,499. (Cl. 94—7.)



A frame formed of angle iron and comprising a side portion adapted to fit within a door opening, and an upper portion positioned at substantially right angles and curved to form a longitudinally extending trough, the edges of which being adapted to lie flush with the pavement, brackets connected with said strips, hinge ears carried by said brackets, and doors hinged to said hinge ears and adapted to rest upon said frame with the sides overhanging said trough.

1,020,287. WHEEL-HUB BOX. JOHN D. JONES, Walla Walla, Wash. Filed Sept. 14, 1910. Serial No. 582,104. (Cl. 64—26.)

A detachable rotatable packing box for wagon wheels comprising, a box proper tapering throughout its length and provided at its inner face with a circumferential groove of substantial area extending substantially equidistantly at both sides of the central portion of the box, the ends of said groove having overhanging flanges, a

packing tube of fibrous material arranged in said groove and wedged under said overhanging flanges, whereby said packing tube is held in said groove against displacement



during endwise thrust of the box in relation to an axle spindle, and means for feeding a lubricant to the packing tube in said groove.

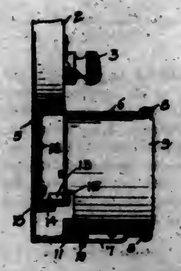
1,020,288. TIRE-TOOL. PATRICK E. KENNEY, Celina, Ohio. Filed Feb. 4, 1911. Serial No. 606,662. (Cl. 157—6.)



1. A tire tool comprising a pair of crossed and pivoted levers, one of which has the end thereof hooked inwardly to define a felly engaging tooth, and the other lever terminating in a short jaw having a crotch at the end thereof defining an outer and an inner bill, whereby when the said tooth is engaged with the felly of an automobile wheel the levers may be swung relative to the wheel and each other to bring the outer bill against the clenching ring to displace same inwardly, the shorter bill serving to carry the locking ring in position as the clenching ring is forced inwardly.

2. A tire tool comprising a pair of crossed and pivoted levers, one of which terminates in a felly engaging hook, and the other lever terminating in a short jaw having an outer and an inner bill which are adapted to engage the detachable flange and locking ring of an automobile wheel, whereby the locking ring is carried in position as the detachable flange is forced inwardly.

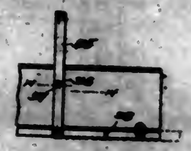
1,020,289. THERMOSTAT FOR ELECTRIC HEAT-REGULATING SYSTEMS. JOEL C. KERSTETTER, Minneapolis, Minn., assignor to Electric Heat Regulator Company, Minneapolis, Minn., a Corporation of Minnesota. Filed May 25, 1911. Serial No. 629,367. (Cl. 236—7.)



1. The combination with a thermostat and its adjusting mechanism, of a timer, mechanism actuated by the timer for shifting said adjusting mechanism, and means for pivotally supporting the timer at points adjacent the front face thereof, and in a plane passing centrally through the timer.

2. The combination with a thermostat and its adjusting mechanism, of a timer, mechanism actuated by the timer for shifting said adjusting mechanism, and means for pivotally supporting the timer at points adjacent the front face thereof, and in a plane passing centrally through the timer, and a yielding catch for locking said timer in normal position.

1,020,290. BASKET. JOHN N. KEYSER and GEORGE TOPHAM, Washington, D. C. Filed July 26, 1911. Serial No. 640,719. (Cl. 220—135.)



1. In a basket, the combination of a bottom, collapsible sides and ends connected thereto, a bail-like handle pivotally connected to the bottom and adapted to swing to an accessible position for use when collapsed, and means for locking the handle either in its collapsed or unfolded position for sustaining the bottom and sides.

2. In a folding basket, a bottom, sides and ends hinged thereto and adapted to be folded from an upright position to a relatively flat position over the bottom, and a pivoted bail-like handle pivoted to the bottom and adapted to swing from an upright position to a position substantially longitudinally of the bottom and exposed to be accessible for use when folded, and means for retaining the handle in its folded and unfolded positions.

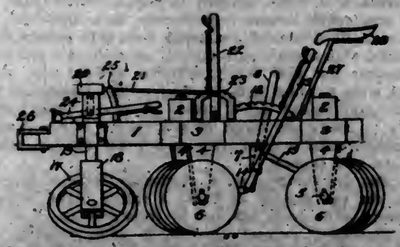
3. In a basket, the combination of a basket body comprising collapsible parts, and a substantially rigid bail-shaped handle pivotally connected at its ends to the bottom of the basket body and lying outside thereof, in position for at all times being accessible for use as a handle, the said handle being adapted to be swung on its pivots to and from a collapsed condition and when collapsed lying substantially within the planes of the collapsed body portion.

4. In a folding basket, a bottom, sides and ends hinged thereto and adapted to be folded from an upright position to a relatively flat position over the bottom, and a bail-like handle pivoted to the bottom and adapted to swing from an upright position to a position substantially longitudinal of the bottom and exposed to be accessible for use when folded, and means for locking all of the parts both in their folded and unfolded position.

5. In a folding basket, the combination of a bottom, sides and ends pivotally connected to collapse on the bottom, and a handle pivoted to the bottom outside of said collapsible parts and adapted to swing from a substantially upright position to a position substantially horizontal, means for detachably retaining the handle in its horizontal position, and means for detachably retaining the handle in its upright position.

[Claim 6 not printed in the Gazette.]

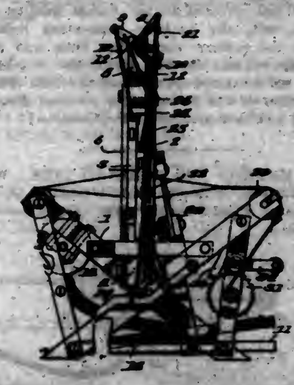
1,020,291. DISK HARROW. JOSEPH W. KINNEY, Goldcreek, Mont. Filed July 3, 1911. Serial No. 636,627. (Cl. 55—73.)



In a disk harrow, the combination of a frame, front and rear gangs comprising disk sections pivotally mounted

on the frame, a main operating lever, a stub shaft pivotally mounted on the frame, a key connecting said lever to the stub shaft, links connecting said lever with one of the front and rear disk sections, an auxiliary operating lever loosely mounted on the stub shaft movable into and out of engagement with the key aforesaid, and links connecting the auxiliary lever with the other of said front and rear disk sections.

1,020,292. HAND-LOOM. MERTON M. KINNEY, Cloquet, Minn. Filed May 6, 1911. Serial No. 625,483. (Cl. 139—12.)



1. In a loom of the character described, the combination of heddle frames, a rock shaft, connecting means between the rock shaft and heddle frames, pedals at opposite sides of the loom frame and connected with the rock shaft, and yieldable connecting means between the rock shaft and frame to exert a force upon the rock shaft in each of its extreme positions.

2. In a loom, the combination of heddle frames, a rock shaft, connecting means between the rock shaft and heddle frames, a rod having crank connection with the rock shaft, a lever, a second rod connected with the lever and having sliding connection with the first mentioned rod, a tension spring between the two rods, and means for holding the lever in the desired position.

3. In a loom, the combination of heddle frames, operating means for throwing the heddle frames including a rock shaft, a rod having crank connection with the rock shaft, a second rod having slidable connection with the first mentioned rod, and a spring connection between the two rods for carrying the rock shaft past a dead center in each direction and exerting a pressure to hold the heddle frames in the adjusted position.

1,020,293. PROCESS OF MAKING PHOSPHATES OF POTASH AND AMMONIA. CARL KLINGEMEL, Duisburg, Germany. Filed Jan. 20, 1911. Serial No. 603,737. (Cl. 23—13.)

1. The process for the manufacture of primary phosphates of potash or ammonia, which consists in decomposing primary sodium-phosphate by means of the chlorid of the corresponding base, substantially as described.

2. The process for the manufacture of potassium-phosphate, which consists in introducing potassium chlorid into a solution of acid sodium-phosphate, boiling down the solution so as to obtain a saturated solution of the sodium chlorid formed, then allowing the solution to cool, thereby causing a portion of the potassium phosphate to crystallize out, collecting the said phosphate, further boiling down the mother liquor, and separating the sodium chlorid from the remaining solution, substantially as described.

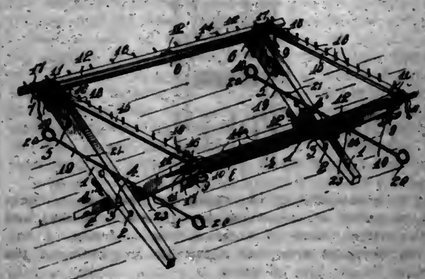
1,020,294. APPARATUS FOR TREATING COTTON FABRICS. STANISLAW MICHAILOWITSCH KNOROWSKI, St. Petersburg, Russia. Filed Aug. 16, 1911. Serial No. 644,247. (Cl. 8—15.)



1. In an apparatus for treating broad cotton fabrics in one uninterrupted operation, the combination, with a treating chamber always under pressure, of a charging chamber at the inlet end thereof and a discharging chamber at the outlet end thereof, the said charging chamber being normally connected with the atmosphere for holding a certain quantity of goods, and temporarily shut off from the atmosphere for delivering the goods to the said treating chamber, and being adapted to be placed at the same pressure as and connected with the treating chamber, while the said discharge chamber is normally connected with and is at the same pressure as the said treating chamber and is adapted to be closed and brought to atmospheric pressure, means for continuously conveying a web of fabric from the charging chamber into the treating chamber and into the discharging chamber, and means in the charging and discharging chambers for intermittently conveying the fabric.

2. In an apparatus for treating broad cotton fabrics in one uninterrupted operation, the combination, with a treating chamber, of a charging chamber at the inlet end thereof and adapted to be connected therewith, a discharging chamber at the outlet end of the said treating chamber and adapted to be connected therewith, means in the charging chamber for intermittently conveying a web of fabric extending through all the said chambers, means for continuously conveying the web of fabric through the said treating chamber, and means for intermittently conveying the web of fabric out of the said discharging chamber.

1,020,295. COMBINED QUILTING-FRAME AND CURTAIN-STRETCHER. THOMAS LEWIS and JESSE T. LEWIS, Smithfield, Pa. Filed May 8, 1911. Serial No. 625,776. (Cl. 45—24.)

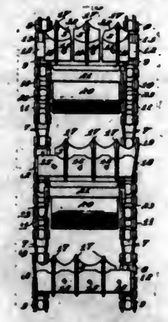


1. A combined quilting frame and curtain stretcher comprising two pairs of pivotally connected legs having bearing recesses in their upper ends, supporting bars having pins on their bodies and reduced cylindrical extremities journaled in said recesses and extending beyond the legs, other bars at right angles to the first-named bars and also carrying pins, means for connecting one pair of bars with the other, hook bolts passing through the legs and having adjusting nuts, and brace rods whose bodies are removably engaged by the hooks of said bolts and whose extremities have eyes adapted to engage the cylindrical ends of said supporting bars.

2. In a quilting frame, the combination with two supporting bars having longitudinal grooves, and means for supporting said bars in parallelism and spreading them apart; of an attaching bar for each supporting bar, said attaching bar made in two sections having notches at their meeting ends and pins projecting outwardly from their bodies, and a cleat in the groove of the supporting bar adapted to engage said notches when the attaching bar-sections rest in the groove.

3. A combined quilting frame and curtain stretcher comprising pairs of pivotally and adjustably connected legs, said legs having slitted outer ends provided with bearing recesses, clamping bolts arranged in said ends whereby the slitted portions of the same are drawn together, curtain and quilt supporting bars, said bars having cylindrical outer ends adapted to be engaged with said bearing recesses whereby the bars are revolubly supported and clamped in position in said bearing recesses, said bars having also formed therein longitudinally disposed grooves, curtain attaching bars arranged in said grooves, said bars having notched inner ends, cleats arranged on said supporting bars to receive said notched ends of the attaching bars, fastening rings arranged on said supporting and attaching bars whereby the latter are secured at their outer ends, curtain attaching pins arranged on said bars and adapted to receive the edges of the curtain whereby the latter may be stretched in one direction by spreading the upper ends of the leg members, end curtain stretching bars loosely engaged with said attaching bars, stretching cords connected to the outer ends of said attaching bars and having a sliding engagement with said stretching bars whereby the latter are adjusted to stretch the curtain in the opposite direction, said cords being secured to the ends of the attaching bars to hold said curtain in stretched position.

1,020,296. BELT EXCAVATOR. PETER J. LYBACK, Chicago, Ill. Original application filed Aug. 26, 1909, Serial No. 514,753. Divided and this application filed Mar. 21, 1910. Serial No. 550,735. (Cl. 37—23.)



1. In a machine of the character described, a chain belt, a series of transverse bars carried thereby, and earth cutters, each in cross section a series of forwardly convexed arcs, and adjustable longitudinally the bars.

2. In a machine of the character described, a chain belt, a series of transverse bars carried thereby, and earth cutters, each in cross section a series of forwardly convexed arcs having strengthening ribs terminating in pick points, and adjustable longitudinally the bars.

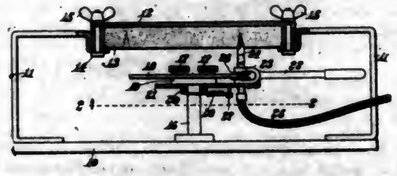
3. In a machine of the character described, a chain belt, and a series of batteries of two earth cutters adjustable longitudinally transverse bars carried by the chain belt, one cutter to a position to cut beyond one side of the belt and the other to a position to cut beyond the other side of the belt, said cutters presenting a combined continuous cutting line transverse to the direction of cutting.

4. In a machine of the character described, a chain belt, transverse bars carried thereby, and batteries of three earth cutters, each cutter in cross section a series of forwardly convexed arcs, two of the cutters being adjustable longitudinally their said bars to a position to cut a desired width, and the third cutter having separate arc members severally adjustable longitudinally their said bar to a position to cut intermediately the arcs of the other two cutters.

5. In a machine of the character described, a chain belt, earth cutters each pivotally mounted on a link of the belt and supported by a link pivoted to the cutter and to another link of the belt, and buckets each pivotally mounted below its cutter on a link of the belt and supported by a link pivoted to the bucket and to another link of the belt, the buckets' supporting links being longer than the cutters' supporting links and adjusted to throw the buckets farther outwardly in relation to the cutters on a curved portion of the belt than on a straight portion of the belt, for the purpose described.

[Claims 6 to 9 not printed in the Gazette.]

1,020,297. METHOD FOR FORMING DIES. WILLIAM J. MACFARLAND, Everett, and WILLIAM G. EATON, Boston, Mass. Filed June 19, 1908. Serial No. 439,468. (Cl. 22—24.)



1. The method of forming dies, which consists in supporting a plastic plate opposite a pattern plate, cutting a groove into said plastic material with a revoluble tool following the edge of said pattern plate, casting a pattern of soft metal in said groove, inserting said soft metal pattern in the sand of a mold, removing the soft metal pattern from said sand, and casting in the cavity formed thereby in the sand a continuous die with converging sides.

2. The method of forming dies, which consists in supporting a plate of fine-grained plaster opposite a pattern plate, cutting a groove into said plate of plaster with a tool following the edge of said pattern plate, said tool having a movement independent of its movement along the edge of said pattern plate, casting a pattern of soft metal in said groove, inserting said soft metal pattern in the sand of a mold, removing the soft metal pattern from said sand, and casting in the cavity formed thereby in the sand a continuous die with converging sides.

3. The method of molding uniform articles, which consists in first supporting a sheet of plastic material opposite a pattern plate, cutting into said sheet of material with a revoluble tool following said pattern plate to form a mold, then pouring type metal into said mold to form a pattern, then embedding said type metal pattern in suitable molding material to form a second mold, then removing intact said type metal pattern from said second mold, and pouring casting metal into the cavity formed by said type metal pattern in the second mold.

1,020,298. TRACK APPLIANCE. THOMAS MANEY, Louisville, Ky. Filed Dec. 21, 1910. Serial No. 598,524. (Cl. 239—18.)

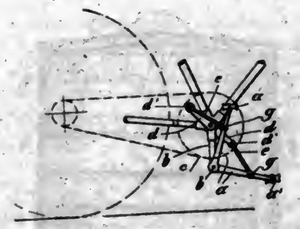
1. The combination with a main rail and guard rail, of a plurality of tie plates for connecting the guard rail to the main rail, means on the plates for allowing the guard rail to be moved toward the main rail, and wedges received beneath the base flange of the guard rail for holding the guard rail in its moved position, the wedges for the intermediate tie plates being of less thickness than the wedges for the other tie plates.

2. The combination with a tie plate having shoulders thereon, a clip located between the shoulders, passages formed between the shoulders and the clip for a main rail and a guard rail, of a rail seat received in the main rail passage for raising the main rail to a height equal to the



height of the guard rail, down-turned flanges on the rail seat engaging the base of the plate for locking the rail seat to the plate, and upturned flanges on the rail seat engaging the edges of the base flange of the main rail for holding the main rail in position.

1,020,299. PEDAL MECHANISM FOR BICYCLES. ARCANGELO MANGIAROTTI, Milan, Italy. Filed May 6, 1911. Serial No. 625,643. (Cl. 208—19.)

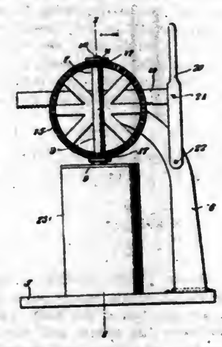


In a bicycle, the combination of a frame including a depending bracket, a shaft, a sprocket wheel mounted on the shaft, oppositely disposed cranks secured to the ends of the shaft, a pair of levers pivoted to the bracket, pedals on the ends of the levers, and connecting rods pivoted to the ends of the cranks and the levers, whereby the cranks are caused to rotate when the levers are vertically depressed.

1,020,300. ROTARY CHURN. HARRY T. MARTIN, Panhandle, Tex. Filed Aug. 26, 1911. Serial No. 646,095. (Cl. 31—17.)

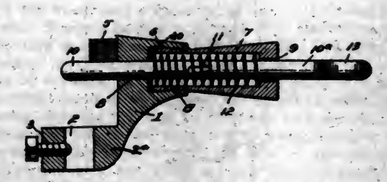
1. In a churn, a base, on which is adapted to be removably mounted a churn, a crane fixed to and rising from the base and having a head provided with laterally spaced bearings, a hollow dasher shaft journaled in one bearing, a solid dasher shaft extending through the hollow shaft and journaled in the other bearing, a dasher frame fixed to the lower end of the hollow shaft, dasher blades fixed to the frame and the said solid shaft, pinions fixed to the shafts respectively, a gear rotatably connected with the head and meshing with the said gear, a rack pinion formed on the gear, a reciprocating rack bar meshing with said rack pinion, and an oscillatory lever pivoted to the crane and the said rack bar.

2. In a churn, a base, on which is adapted to be removably mounted a churn, a crane fixed to and rising from the base and having a head provided with laterally spaced bearings, a hollow dasher shaft journaled in one bearing, a solid dasher shaft extending through the hollow shaft and journaled in the other bearing, a dasher frame fixed to the lower end of the hollow shaft, dasher blades fixed to the frame and the said solid shaft, pinions fixed to the shafts respectively, a gear rotatably connected with the head and meshing with the said gear, a rack pinion formed on the gear, a reciprocating rack bar meshing with said rack pinion, an oscillatory lever pivoted to the crane and the said rack bar, and means on the head and engaging



the rack bar to prevent the same from disengaging from the rack pinion.

1,020,301. PUMP-ROD COUPLING. LESLIE D. MCPHERON, Uniopolis, Ohio. Filed Mar. 19, 1909. Serial No. 484,422. (Cl. 74—17.)



1. In a pump rod coupling, a member adapted to be connected to a pump rod section and provided with an opening therein, a tubular member secured to the first member with its bore in alinement with the opening, a pin comprising two sections pivotally secured to each other and movable in the tubular member and the opening, said tubular member being adapted to receive the pivotally connected ends of the pin sections so as to hold said pin sections in lengthwise relation, the spring disposed in the tubular member and bearing at one end against said tubular member and adapted to hold one end of one of the pin sections outwardly of the opening in said first member, the other of said pin sections being adapted to be disposed across the tubular member to hold the first mentioned pin section inwardly in the tubular member.

2. In a pump coupling, an angular member having an arm provided with an opening adapted to receive a pump rod section, means for securing said arm to a pump rod, said member having a second arm provided with an opening extending at right angles to the opening of the first arm, a tubular member threaded on said second arm and provided with an end wall having an opening therein, a coupling member consisting of two rod sections movable in the tubular member and pivotally connected to each other, one of said sections being movable through the opening in said second arm and adapted to extend through a second pump rod section and the other section being movable through the opening in the end wall of said tubular member, said sections being pivotally connected to each other so that their engaging ends will normally lie within the tubular member whereby said sections will be maintained in lengthwise relation and a spring disposed in said tubular member and adapted to hold said coupling member in a locking position.

1,020,302. BELT-PUNCH. CHARLES H. METZ, Spokane, Wash. Filed Sept. 14, 1911. Serial No. 649,225. (Cl. 164—124.)



The improved tubular punch having a tapered body provided with a series of points whose outer sides are in line with the adjacent portion of the body, and flat outer bevels extending between the points and forming curved and sharp cutting edges, as shown and described.

1,020,303. SANITARY DRINKING-FOUNTAIN. JAMES LE ROY MILLEN, Lansing, Mich. Filed June 21, 1911. Serial No. 634,482. (Cl. 137—11.)



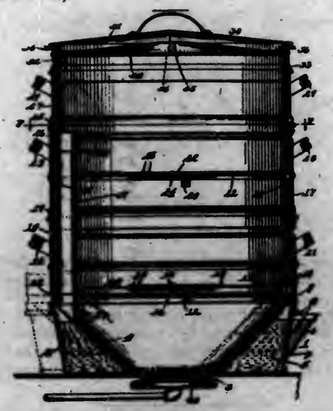
1. A drinking fountain, comprising an inner cup, an outer cup spaced apart from the inner cup, a supply pipe, a hose communicating with a supply pipe and the inner cup, a drainage hose communicating with the outer cup and means for movably suspending said cups normally below the level of the discharge end of the drainage hose whereby the supply water normally overflows both cups and automatically discharges through the drainage hose whenever the cups are raised above the level of said discharge end.

2. A drinking fountain, comprising a column, a supply pipe in the column, an outer cup, means for movably supporting the outer cup, a drainage hose communicating with the bottom of the outer cup at one end and with the interior of the column above the normal level of the said cup at the other end, a tube in the axis of the outer cup, a drinking cup on the upper end of the tube and a supply hose communicating with the tube at one end, extending within the drainage hose and communicating with the supply pipe at the other end.

3. A drinking fountain, comprising a hollow column, a funnel in the base of the column, a drain pipe connected to the funnel, an outer cup, a bracket near the top of the column, chains suspending the outer cup from the bracket, a drainage hose communicating with the bottom of the outer cup and with the interior of the column above the normal level of the top of said cup, an inner cup within the outer cup and spaced apart therefrom, a supply pipe in the column and a supply hose communicating with the inner cup at one end extending within the drainage hose and communicating with the supply pipe at the other end.

4. A drinking fountain, comprising a hollow column having on the outside a bracket near the top, a drainage receptacle near the middle and a trough near the bottom, chains suspended from the bracket, an outer cup supported by the chains, a drainage hose communicating with the bottom of the said cup at one end and communicating with the interior of the column above the normal level of the top of the said cup at the other end, an inner cup within the outer cup and spaced apart therefrom, a supply hose inside the drainage hose and communicating with the inner cup at one end and a supply pipe in the column communicating with the other end of the supply hose, a pipe communicating with the said receptacle and the trough, a funnel in the bottom of the column, said column also having an opening opposite the trough to discharge water therefrom into the funnel.

1,020,304. COOKING UTENSIL. ISAAC E. MILLER, Chicago, Ill. Filed Dec. 29, 1909. Serial No. 535,452. (Cl. 53—1.)

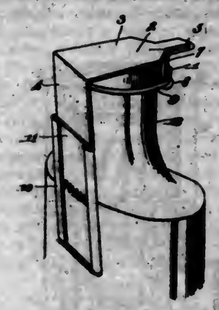


1. A base comprising a closed annular water container having a centrally disposed heat passage way, a section above said base in direct communication with said passage way, a receptacle above said section, said receptacle being closed at the bottom and open at the top, a closure for the top of said receptacle, and a tubular connection between said water container and said receptacle, substantially as described.

2. A cooking utensil comprising a base member open at the top and bottom and provided with an annular water container, a plurality of super-imposed open tubular sections having supports therein and communicating with each other and said base member, a receptacle arranged above said tubular sections, said receptacle being closed at the bottom and provided with a top closure, said closure being adapted to fit either of said tubular sections, a nipple on the bottom of said receptacle communicating with the interior thereof, a similar nipple on the upper face of said water container and a detachable pipe arranged within said sections and connecting said nipples, substantially as described.

1,020,305. LABEL. MICHAEL C. MORAN, Olyphant, Pa. Filed Feb. 18, 1911. Serial No. 609,324. (Cl. 40—11.)

A label holder including a strip of material reduced at one end to form a tongue, that portion of greater width being bent at right angles to provide a cover plate and a display plate, the tongue being arranged to form a finger-



piece and a projection from the finger-piece to form a support, and a connector loosely mounted in the support.

1,020,306. PROCESS OF MANUFACTURING DRIED YEAST. PETER DIEDRICH HINRICH OELMAYER, Sande, Germany. Filed Aug. 24, 1911. Serial No. 645,829. (Cl. 99—10.)

1. The herein described process of manufacturing dried yeast, which consists in subjecting the fresh yeast to a maturing treatment with water containing air for a sufficient time to transform the reserved albumin of the yeast cells into plasma albumin, and they drying such matured yeast.

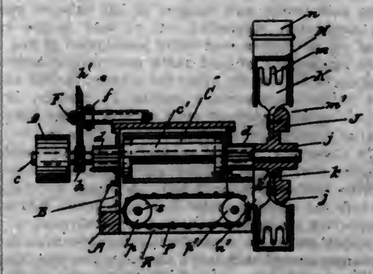
2. The herein described process of manufacturing dried yeast, which consists in subjecting the fresh yeast to a maturing treatment with aerated water and a carbo-hydrate, and then drying such matured yeast.

3. The herein described process of manufacturing dried yeast, which consists in subjecting the fresh yeast to a maturing treatment with aerated water and a product containing starch, and then drying such matured yeast.

4. The herein described process of manufacturing dried yeast, which consists in subjecting the fresh yeast to a maturing treatment with aerated water and an excess of a carbo-hydrate, and then drying such matured yeast and the excess carbo-hydrate.

5. The herein described process of manufacturing dried yeast having an augmented raising power, which consists in oxygenating the fresh yeast to transform the reserved albumin of the yeast cells into plasma albumin, continuing such treatment for storing oxygen in the oxydase of the yeast, and then drying the yeast.

1,020,307. CENTRIFUGAL DISCHARGE MECHANISM. CLARK H. PARKER, Beaver Dam, Wis. Filed Dec. 28, 1910. Serial No. 599,769. (Cl. 146—26.)



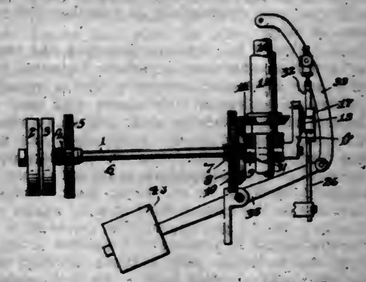
In a centrifugal discharger, the combination, with a driving shaft, and a disk fly-wheel secured thereon and having a beveled edge at the rear part of its periphery; of a discharger casing inclosing the fly-wheel and having an air-inlet opening in its rear side of substantially the same diameter as the fly-wheel, the rear side of the fly-wheel being arranged substantially in the same plane as the inner and adjacent side of the casing, and the said casing having also an inlet opening for the material in its front side; and discharger blades working in the said casing and provided with shanks which are secured against the front side of the fly-wheel.

1,020,308. KEY-TAG. EDWARD G. PATTERSON, Bismarck, N. D. Filed Jan. 17, 1911. Serial No. 603,128. (Cl. 40—2.)



A tag comprising a spherical shaped body having indicia placed thereon, having a central bore therethrough terminating in a curvature at one end, the said body being further provided with a socket spaced from the curved end of the bore, the curve of the bore being in a general direction inclined away from the socket, a hook-like pin passed through the bore in the body and secured to the latter, the bill of the hook-like pin being engaged in the socket, a ring engaged with the hook of the pin for the connection of a key with the body, the curvature of the bore and the said socket serving to securely hold the pin within the body.

1,020,309. GEARING DEVICE. PAUL POLNISCH, Philadelphia, Pa., assignor to William C. Schwebel, Philadelphia, Pa. Original application filed Jan. 24, 1910, Serial No. 539,852. Divided and this application filed Sept. 10, 1910. Serial No. 581,345. (Cl. 74—14.)



1. In a device of the character described, the combination of a main shaft, an intermediate shaft and a driving shaft, a driving gear mounted on the driving shaft and provided with teeth on a portion of its surface and a crank provided with a pin also mounted on the driving shaft, a driven shaft and a follower mounted thereon meshing with the driving gear and provided with teeth arranged in groups and interconnected by concave surfaces to revolve intermittently, a bar having a slot provided with a surface to be rolled over by the crank pin to be given a

harmonic motion, said surface consisting of a section bounded by a curve subtending an angle equal to the angle subtended by the teeth of the driving gear, of a straight section, of a section bounded by a curve equal and opposite to the first mentioned section and of a section equal and opposite to the straight section, substantially as described and for the purposes set forth.

2. In a device of the character described, a mutilated driving gear and a crank provided with a pin, a follower meshing with the driving gear to revolve periodically, a bar provided with a slot for the pin to move periodically with a harmonic motion substantially as described and for the purposes set forth.

3. In a device of the character described, the combination of a mutilated driving gear and a crank provided with a pin, a follower gear meshing with the mutilated gear to revolve periodically and a slotted bar engaged by the pin moving with a periodic harmonic motion comprising an interval of rest corresponding with the interval of motion of the follower, followed by an interval of motion to be succeeded by an interval of rest equal to the interval of motion of the follower, followed by an interval of motion thus describing a cycle of a period equal to the period of motion of the driving gear and consisting of an interval during which the follower gear is in motion and the bar is stationary, followed by an interval during which the bar is in motion and the follower gear is stationary, followed by an interval during which both are stationary, followed by an interval during which the bar is in motion in the opposite direction and the gear is stationary, substantially as described and for the purposes set forth.

4. In a device of the character described, the combination of a bar moving with a harmonic periodic motion and of a gear moving with a rotary periodic motion in a plane of an angle with the plane of the bar, a main shaft, a driving shaft and an intermediate shaft, means for transmitting the motion of the main shaft to the intermediate shaft and means for transmitting the motion of said intermediate shaft to the driving shaft, a mutilated driving gear mounted on the driving shaft for causing the movement of the periodically revolving gear and a crank also mounted on the driving shaft and provided with a pin for causing the periodic harmonic motion of the bar, said bar provided with a slot for the pin to travel in to cause the bar to descend during a part of the interval of rest of the periodically revolving gear, to cause the bar to remain stationary during a further interval of rest of said gear and equal to its interval of motion, to cause the bar to descend during a further interval of rest of said gear, and to cause the bar to remain stationary during the interval of motion of said gear the said bar and gear passing through a cycle of a period equal to that of the driving gear substantially as described and for the purposes set forth.

5. In a device of the character described, the combination of a bar moving with a periodic harmonic motion and of a gear moving intermittently with a periodic rotary motion in a plane at right angles with that of the bar, a main shaft, a driving shaft and an intermediate shaft, a gear mounted on the main shaft and a gear meshing therewith mounted on the intermediate shaft, a gear mounted on said intermediate shaft and a gear meshing therewith mounted on the driven shaft, a mutilated gear mounted on the driving shaft at right angles with a periodically revolving gear and meshing therewith to cause it to revolve during an interval of the period of the revolution of the mutilated gear, a crank mounted on the driving shaft and provided with a pin for causing the bar to move with a periodic harmonic motion, said bar provided with a slot for the pin to roll in and bounded by a surface consisting of sections interconnected in such a manner that the bar remains stationary during the interval of motion of the periodically revolving gear and descends, stops and ascends completing a cycle during a period equal to that of the mutilated gear, during the interval of rest of the periodically revolving gear, substantially as described and for the purposes set forth.

[Claims 6 to 14 not printed in the Gazette.]

1,020,310. VACUUM-CLEANER. WILLIAM H. RAKESTRAW, Bloomington, Ill., assignor to Automatic Vacuum Cleaner Company, Bloomington, Ill., a Corporation of Illinois. Filed Mar. 7, 1911. Serial No. 612,814. (Cl. 230—5.)



1. In a vacuum cleaning apparatus, the combination with a casing having a vacuum chamber, of vacuum creating means connected therewith and comprising a pair of diaphragm air pumps spaced apart and operative simultaneously and in unison both to draw in or to expel air, an electric motor located between and connected with each of the pumps to operate them in unison and simultaneously, hollow pillars supporting said pumps spaced apart and forming a plurality of air passages, one or more connecting the vacuum chamber with one of the pumps for the air intake and one or more different air passages connecting said pumps for the air exhaust, and a gravity seating valve for each of said pumps, one controlling the admission of air to both of the pumps and the other the exhaust of air from said pumps, the air passing from the vacuum chamber to one pump and from thence to the other pump and then into the casing.

2. In an exhaust chamber a vacuum cleaning apparatus, the combination of a vacuum chamber, a vacuum creating means connected with the vacuum chamber and comprising a pair of pumps spaced apart, driving means located within said exhaust chamber and between said pumps and operating the pumps in unison simultaneously to draw in or expel air, said pumps having a plurality of air passages one or more forming an air intake passage and one or more connecting said pumps and forming an air exhaust passage, and valve mechanism separating one of said pumps into a pair of compartments, the valve thereof seating by gravity.

3. In a vacuum cleaning apparatus, the combination of a vacuum chamber, a vacuum creating means connected therewith and comprising a pair of pumps spaced apart, driving means located between said pumps and operating the pumps in unison simultaneously to draw in or expel air, said pumps having a plurality of air passages one or more forming an air intake passage and one or more connecting said pumps and forming an air exhaust passage, valve mechanism separating one of said pumps into a pair of compartments, and valve mechanism in the other of said pumps, one of said valve mechanisms controlling the intake of air and the other the exhaust thereof and the valves of both mechanisms seating by gravity, the exhaust air passing through both of said pumps before its discharge from one of them.

4. In a vacuum cleaning apparatus, the combination of a vacuum chamber, a vacuum creating means connected therewith and comprising a pair of pumps spaced apart one above the other, a motor located between said pumps and operating the pumps in unison simultaneously to draw in or expel air, valve mechanism connected with each of said pumps, one of said valve mechanisms separating one of said pumps into a pair of compartments, an air passage or passages communicating with the vacuum chamber and with a compartment of one of said pumps, and an air passage or passages communicating with the other compartment of said pump and with the other pump.

5. In a vacuum cleaning apparatus, the combination of a vacuum chamber, a vacuum creating means connected therewith and comprising a pair of pumps spaced apart one above the other, a motor located between said pumps and operating the pumps in unison simultaneously to draw in or expel air, valve mechanism connected with each of said pumps, one of said valve mechanisms separating one of said pumps into a pair of compartments, an air passage or passages communicating with the vacuum chamber and with a compartment of one of said pumps, an air passage or passages communicating with the other compartment of said pump and with the other pump, and a valve connected with each of said pumps and respectively controlling the intake and exhaust of air, each of said valves seating by gravity.

[Claims 6 to 31 not printed in the Gazette.]

1,020,311. LATHE-CENTER. LYMAN S. RICH, Boston, Mass. Filed July 7, 1908. Serial No. 442,275. (Cl. 82—33.)



A lathe center consisting of a shank having terminal screw threads in one end, and a tip having a stem threaded in said screw threads and formed with a conical terminal and an oil duct extending from a point medial of the extremity of the conical terminal and the side of the said tip and having its entrance extending through said side and provided with an oil cup communicating with said entrance.

1,020,312. PROCESS FOR RECOVERY OF VANADIUM. ERAMJI D. SAKLATWALLA, Bridgeville, Pa., assignor to The American Vanadium Co., Pittsburgh, Pa., a Corporation of New Jersey. Filed Dec. 22, 1910. Serial No. 598,818. (Cl. 75—18.)

A process for extracting vanadium from complex ores, which consists in subjecting the ore to the action of a dissolving acid, and then treating the solution thus formed with ammonium persulfate to precipitate the vanadium as an oxid of vanadium free from all other metals contained in the solution.

1,020,313. TRANSFER-TABLE FOR ROLLING-MILLS. PAUL SCHEURE, McKeesport, Pa. Filed Nov. 28, 1910. Serial No. 594,529. (Cl. 80—47.)



1. A transfer table for rolling mills comprising a plurality of endless conveyers to transfer sheet material from one set of rolls to the other, means for driving the conveyers, means for mounting the conveyers to permit of the movement of the end portions of the conveyer relative to the intermediate portions thereof to dispose the same in an inoperative position, and additional means for directing the sheet material in the operative positions of the conveyers.

2. A transfer table for rolling mills comprising a plurality of endless conveyer belts and supporting means therefor, guides to direct and retain the sheet material upon said belts in its movement, means for driving the conveyer belts, means for permitting angular movement of portions of the conveyer belts to dispose the same in an inoperative position, and directing means arranged at opposite ends of the conveyer belts to direct the sheet material.

3. A transfer table for rolling mills comprising parallel supporting bars, bars adustable upon said supporting bars and adapted to be disposed at an angle with relation thereto, shafts mounted upon said bars, a drive shaft mounted on the supporting bars, an endless conveyer belt connecting said drive shaft to one of the shafts of said adjustable bars, other conveyer belts connecting the shafts carried by the latter bars, means arranged between said adjustable bars and the supporting bars to retain the material to be conveyed upon said belts, and means for securing the parallel adjustable bars in an elevated position to retain the end portions of the conveyer belts at an angle with relation to the intermediate portions thereof.

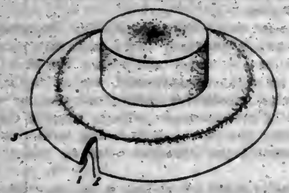
4. A transfer table for rolling mills comprising parallel longitudinal bars, a drive shaft rotatably mounted upon said bars, adjustable bars having their ends disposed upon the ends of said supporting bars, guide members arranged adjacent to the supporting bars having inclined end portions, tie rods to rigidly secure the supporting bars, adjustable bars and guide members together, shafts rotatably mounted in the ends of the adjustable bars, a plurality of band wheels mounted on the driving shaft and on the shafts carried by said bars, endless conveyer belts traversing said band wheels, directing fingers on the shafts mounted in the adjustable bars to direct the material upon the conveyer belts, said adjustable bars being adapted to be moved to a position at right angles to the supporting bars to dispose the conveyer belts in an inoperative position, substantially as and for the purpose specified.

5. A transfer table for rolling mills comprising supporting bars, parallel bars adjustably mounted upon the ends of the supporting bars, tie rods connecting the supporting bars and adjustable bars and having nuts thereon to secure the latter bars in their adjusted positions, a drive shaft mounted in the supporting bars, spaced shafts mounted in the outer ends of the adjustable bars, a plurality of conveyer belts traversing the drive shaft and one of the shafts mounted in each of the adjustable pairs of bars, guide fingers loosely mounted upon the latter shafts to direct sheet material upon the conveyer belts, pressure wheels fixed upon the other shaft mounted on said adjustable bars, disposed above the conveyer belts for engagement upon the material to be conveyed thereby, and guides to retain the sheet material upon the conveyer belts and prevent its transverse movement, said adjustable bars being adapted to be elevated and secured in position at an angle to the supporting bars to dispose the conveyer belts in an inoperative position, substantially as and for the purpose specified.

1,020,314. PROCESS OF MANUFACTURING HATS AND OTHER ARTICLES. LEON SCHMOULOUSKY, Matteawan, N. Y. Filed Feb. 8, 1911. Serial No. 607,226. (Cl. 18—47.5.)

The herein described process of manufacturing hats and other articles, which consists in first dipping the material in a stiffening paste composed of flour, water and linseed oil, wringing out the excess paste, forming the article on hot dies, pressing the same smoothly, again dipping the formed article in the paste and pressing the same, drying the article, coating the same with boiled linseed oil, then pouncing the article with pumice stone one or more times, again drying the same, pouncing the

article with sand paper, painting the surface of the article with a paint of the desired color, sprinkling the



painted surface with silk floss, and finally brushing the floss to a desired smoothness.

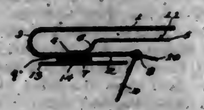
1,020,315. GAME APPARATUS. CHARLES SCHUTZ, New York, N. Y. Filed July 19, 1911. Serial No. 639,226. (Cl. 46—21.)



1. The combination of a frame having generally the form of a box and provided with an open end, an extension detachably connected with said frame and adapted to be moved into and out of registry therewith, and means for closing said open end when said extension is not in use.

2. The combination of a frame having the form of a box and provided with an open end, an extension having side walls thereon pivotally connected to one end of the said frame and adapted to be moved into and out of registry therewith, an end piece for closing the said end when the extension is not in use, together with clamps for holding the end piece secured in position.

1,020,316. TIE-CLASP. ANDREW SENATOR, Newark, N. J. Filed July 22, 1910. Serial No. 573,247. (Cl. 24—258.)



A tie clasp having a spring gripping member, the said clasp being of a substantially U-shaped formation and formed to provide spaced arms, the lower arm being formed to provide an elongated slot, the said gripping member having its free end disposed between the arms and provided with a downwardly and rearwardly extending portion opposite the free end whereby the said portion is brought in direct contact with the clasp, and having its extremity opposite its free end extending through the said slot and bent rearwardly and then upon itself to form a head, a design carrying member secured to the head, the said head forming a holder to securely retain the spring gripping member in position within the clasp.

1,020,317. RAIL-JOINT. ELISHA H. SHEPARD, Boyne City, Mich., assignor of one-half to Isaac N. Conrad and Annette C. Conrad, Boyne City, Mich. Filed June 15, 1911. Serial No. 633,269. (Cl. 238—11.)

1. A rail fastener comprising a bolt having a hooked end, and a cam having a detachable, pivotal connection with the hooked end of the bolt.

2. A rail fastening comprising a bolt having a hooked end, and a locking cam formed with a slot to receive the bill of the hook, and a journal to engage the recess of the hook, and provided with cam surfaces to bind against the fish-plate and draw the bolt into the clamping position.

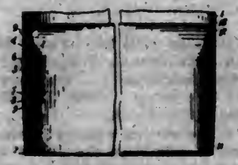


3. The combination with rails and fish-plates having openings therein, of bolts passing through said openings and having hooked ends, locking cams having a detachable pivotal connection with the hooked ends of the bolts.

4. The combination with rails and fish-plates having openings therein, of bolts passing through said openings and having hooked ends, bowed spring plates fitted on the hooked ends of the bolts and engaging the adjacent fish-plate, and locking cams having a detachable pivotal connection with the hooked ends of the bolts and bearing upon said spring plates.

5. The combination with rails and fish-plates having openings therein, of bolts passing through said openings and having hooked ends, bowed spring plates fitted upon the hooked ends of the bolts and bearing against the adjacent fish-plate, and cam devices having slots to receive the bills of the hooks and journals to engage and seat within the recesses of the hooks, whereby said cam devices are detachably and pivotally connected with the hooks, said cam devices being provided with cam surfaces binding upon and compressing the spring plates to hold the parts connected.

1,020,318. REVERSIBLE CUFF. NEAL P. SHULIN, Butte, Mont. Filed Apr. 12, 1910. Serial No. 554,998. (Cl. 2—122.)



A trousers leg, comprising an outer layer of material, a second layer folded along a crease line to form a plait with said outer layer, a third layer folded along a crease line to form a plait with said second layer, means for securing said third layer to said outer layer, said second layer being smooth intermediate said crease lines, a fourth layer divided from said third layer by a crease line and folded back parallel to said outer layer, and a protecting layer formed integral with said fourth layer and adapted to protect said second layer.

1,020,319. INCANDESCENT ELECTRIC LAMP. ROYAL HOWARD SINGLEY, Burnham, Pa. Filed Nov. 18, 1911. Serial No. 661,058. (Cl. 176—39.)

1. In an incandescent electric lamp, a glass globe having an inwardly extending tube formed on one end, a current conducting metal ring arranged in concentric relation to the inner end of the tube, a plurality of arms secured to said ring and fixed to the tube at their inner ends, the terminal wires of the lighting circuit extending through said tube and through the inner end thereof, one of said wires being connected to said ring, a current conductor to which the other of the terminal wires is connected, and a plurality of filaments connecting said arms with said current conductor.

2. In an incandescent electric lamp, a glass globe having an inwardly extending tube formed on one end and

and provided with a flange upon its inner end, a plurality of radial arms fixed in said flange, a metallic ring connecting said arms, a second tube formed upon the inner end of the first named tube and extending longitudinally therefrom, current conducting arms fixed to the inner end of the latter tube, a metallic connection between said arms, terminal wires extending through the first named



tube, one of said wires being connected to the ring connecting the first named series of arms, the other of said wires extending through the last mentioned tube and being connected to the metallic connection between the latter series of arms, and a plurality of filaments connecting the spaced series of arms at their outer ends.

1,020,320. END-GATE FOR WAGONS. CHARLES SKIDMORE, Homer, Nebr. Filed Feb. 25, 1911. Serial No. 610,880. (Cl. 21—21.)



An end gate for a wagon pivotally attached to the body of the wagon near its upper end and a catch plate secured to and forming its lower edge and provided with a finger projecting laterally beyond one side, in combination with a torsional spring rod transversely pivoted to the wagon body, a catch rod extending rearwardly at a right angle from one end of the spring rod, a catch finger on the outer end of the rod adapted to engage the catch plate, and means for bringing the torsional springing quality of the spring rod into play to maintain such engagement comprising a crank arm projecting downwardly from the other end of the spring rod, and a fastening bar attached to the end of the crank arm and provided with an opening to be engaged over the lateral finger of the catch plate.

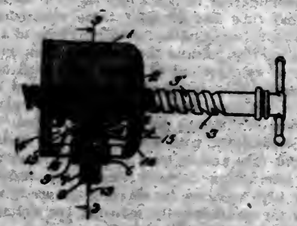
1,020,321. APPARATUS FOR DISCHARGING COLLAPSIBLE TUBES. ROY L. SMITH, Lexington, Ky. Filed Sept. 1, 1910. Serial No. 580,031. (Cl. 221—60.)

A tubular member having longitudinal slots in opposite sides thereof, a collapsible container within the tubular member, a collapsing device including a frame comprising approximately triangular side members which are curved to fit within the tubular member and having apertures near their upper ends, a pair of compression rollers supported for rotation at the lower ends of said side members, and key including a bifurcated shank adapted to engage the apertures of the side members through the slots in the tubular member and to straddle the collapsible container, said key being provided at one end with a fixed



head and at the other end with a detachable head threaded upon the bifurcated end of the key.

1,020,322. BENCH-SCREW. ANCHOR N. SORENSON, Gustave, S. D. Filed July 11, 1911. Serial No. 637,875. (Cl. 81—36.)



1. A bench screw comprising a block provided with an opening therethrough, a threaded member passing through said opening, a pawl yieldably mounted on said block and adapted to engage said threaded member, and means carried by said pawl and adapted to engage said block for positively locking the former in engagement with said threaded member.

2. In a bench screw, in combination, a block provided with an opening therethrough, a threaded member passing through said opening, a pawl yieldably mounted within said block for engaging said threaded member, and a latch carried by said pawl and adapted to engage said block for retaining the former in positive engagement with the threaded member.

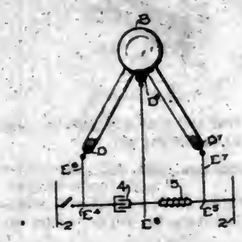
3. In a bench screw, a block provided with an opening therein and a recess communicating with said opening, a pawl yieldably mounted within said recess, a plurality of latches pivotally carried by said pawl adapted to engage said block for retaining the former in positive locking relation with the screw member, and means for disengaging said latches from said block.

4. In a bench screw, a block provided with a central opening therein and a recess communicating with said opening, a threaded member passing through said opening, a pawl yieldably mounted within said recess and normally engaging said threaded member, a depending shank formed on said pawl and provided with a central bore opening into a transverse slot, means mounted within said slot for engaging said block whereby said pawl is positively locked from disengagement with said threaded member, and means passing through said central bore for disengaging the first named means from said block whereby the pawl may be disengaged from the threaded member.

5. In a bench screw, a block provided with a central opening therein and a recess communicating with said opening, a threaded member passing through said opening, a pawl yieldably mounted within said recess and normally engaging said threaded member, a depending shank formed on said pawl and provided with a central bore opening into a transverse slot, a plurality of spring actuated latches mounted within said transverse slot and adapted to engage said block, and a flexible member passing through said bore for withdrawing said latches from engagement with the block and the pawl from engagement with said threaded member.

[Claim 6 not printed in the Gazette.]

1,020,323. ELECTRIC LIGHTING. CHARLES P. STEINMETZ, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Apr. 25, 1900. Serial No. 14,224. (Cl. 176—45.)



1. The combination with a vapor electric device having an exhausted tube and at least three electrodes therein affording a plurality of paths for current flow, of a source of alternating current, means for deriving from said source a plurality of voltages out of phase with each other, and means whereby said out-of-phase voltages are impressed upon said electrodes whereby coöperating currents are caused to flow in different paths in said device.

2. The combination with a vapor electric device having an exhausted tube and at least three electrodes therein, a source of alternating current, means for deriving from said source high voltages for starting the arc in said tube, and means for automatically reducing the voltage as the current in the tube increases.

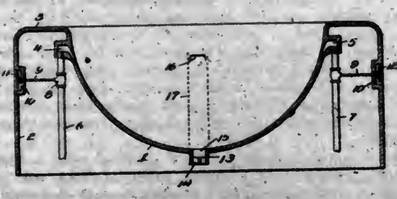
3. The combination with an exhausted tube provided with at least three electrodes whereby a plurality of paths for current in the tube is afforded, of impedances, and means for subjecting the tube at starting to high alternating voltages created by the interaction of said impedances.

4. The combination with an electric lamp of two impedances of different power factor connected in series across an alternating circuit, and means for supplying separate portions of the lamp with the voltages created by the resonant rise between said impedances.

5. The combination with an electric lamp which requires in starting a voltage greater than that required in normal operation, of a condenser and self-induction in series with each other across the circuit, connections from terminals of the lamp to the sides of the circuit, and a connection from an intermediate portion of the lamp to a point between the self-induction and the condenser.

[Claims 6 and 7 not printed in the Gazette.]

1,020,324. WASHBOWL. JOSEPH E. STEPHENSON, Youngstown, Ohio. Filed Mar. 1, 1910. Serial No. 546,691. (Cl. 4—1.)



In combination, a body of water proof material formed with a bowl, a horizontal table portion connected with the edge of the bowl and a depending flange surrounding the bowl, the wall of the bowl having downwardly inclined openings, water pipes connected with said openings, the depending flange of the body being formed with recesses, stems operating valves in said pipes and extending through said flange and terminating in the recesses thereof, handles secured to the outer ends of said stems and drain openings formed in said bowl.

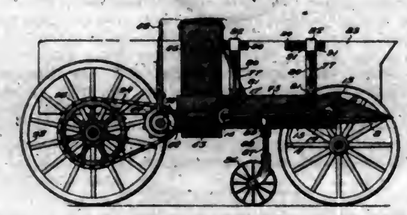
1,020,325. COMPOSITION OF MATTER. CONRAD O. STINEBAUGH, Seattle, Wash., assignor, by direct and mesne assignments, to General Charerete Company, Seattle, Wash., a Corporation of Washington. Filed July 11, 1911. Serial No. 638,082. (Cl. 106—24.)

1. A composition of matter, formed by mixing together cement, finely divided charcoal, and adding to said mixture blood, and allowing the same to set, substantially as described.

2. A composition of matter, consisting of substantially 8 parts by weight of cement, 3 parts by weight of charcoal to which is added before setting 2½ parts by weight of liquid comprising water and blood, substantially as described.

3. A composition of matter composed of a mixture of approximately 8 parts by weight of cement, 3 parts by weight of charcoal, to which is added before setting 1½ parts by weight of blood, and 1 part by weight of water, substantially as described.

1,020,326. CORN-HUSKING MACHINE. LAWRENCE E. STRENO, New Palestine, Ind. Filed July 23, 1910. Serial No. 573,452. (Cl. 56—112.)



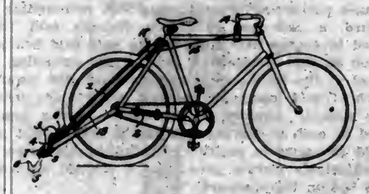
1. In a device of the character described, a frame including side members, front and rear cross bars and an intermediate cross bar, guard fingers extending forwardly from the front cross bar, a cutter bar supported adjacent to the front cross bar, husking rolls supported upon the front and intermediate cross bars and having intermeshing gears, a driven shaft 18 having a bevel pinion 19 and a sprocket wheel whereby it receives motion from a source of power, an idler shaft having a bevel pinion meshing with the pinion 18 and a gear wheel meshing with one of the intermeshing gears of the husking rolls, intermeshing bevel gears 12, 13, the former of which has a wrist pin and a pitman connecting said wrist pin with the cutter bar, a rod connecting the bevel gear 13 with the sprocket wheel upon the driven shaft 18, and means for mounting and supporting the frame upon the box of an ordinary farm wagon.

2. In a device of the character described, a rectangular frame comprising side members, front and rear cross bars and an intermediate cross bar, husking rolls supported upon the front and intermediate cross bars and having intermeshing gears, finger bars extending forwardly from the front cross bar, a cutter bar coöperating with the finger bars, longitudinally disposed shafts supported upon the rear and intermediate cross bars, an endless conveyer supported upon said shafts, roller-carrying shafts supported above and adjacent to the intermediate and front cross bars, an endless conveyer guided over said rollers with its lower lead in proximity to the husking rolls, an elevator supported adjacent to the inner cross bar of the frame to receive material discharged over the endless conveyer supported upon the shafts journaled upon the rear and intermediate cross bars of the frame, a driven shaft supported behind and adjacent to the rear cross bar, means for transmitting motion from one end of said shaft to the husking rolls and to the cutting apparatus, means for transmitting motion from the other end of said shaft to the elevator and from the latter to the endless conveyer disposed above and adjacent to the husking rolls, means for transmitting motion from an intermediate portion of the driven shaft to the transverse conveyer between the rear and intermediate cross pieces of the frame, means for supporting the frame upon the box of an ordinary farm wagon, and means for transmitting motion from a wheel of said wagon to the driven shaft.

3. In a device of the class described, a frame carrying stripping means, husking means and conveying means, brackets extending from said frame and having upstanding arms, upstanding brackets upon the outer side of the frame, braces connecting the upstanding arms with the upstanding brackets, hook members connected adjustably with the upstanding arms, and a cleat or scantling secured upon the hook members in longitudinal relation to the frame.

4. In a device of the character described, a frame equipped with stripping means, husking means and an elevator, brackets extending from the inner side of the frame and having upstanding arms, upstanding brackets upon the outer side of the frame, braces connecting the upstanding arms with the upstanding brackets, and hook members connected adjustably with the upstanding brackets; in combination with a wagon, the box of which is provided with plates secured upon the sideboard thereof, said plates having hook engaging ribs, and means for transmitting motion from a wagon wheel to the moving parts of the device.

1,020,327. BICYCLE-SUPPORT. CHARLES S. SWAIM, Lodi, Cal., assignor of one-half to Parley S. Pierce, Lodi, Cal. Filed Apr. 8, 1911. Serial No. 619,746. (Cl. 208—75.)



1. In means for holding a bicycle in upright position, a support mounted upon the frame of the bicycle to rotate in the same direction to alternately throw the support into and out of operative position, and means for automatically engaging the support and holding it against rotation when moved to either an operative or an inoperative position.

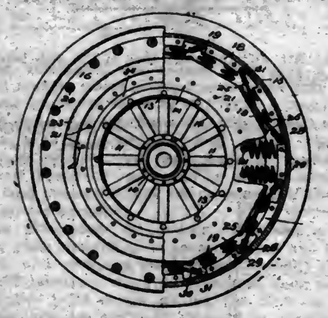
2. In means for holding a bicycle in upright position, a support mounted upon the frame of the bicycle to rotate in the same direction to alternately throw the support into and out of operative position, means for rotating the support in one direction, and means for engaging the support to hold it in either an operative or an inoperative position, said means being under control of the rider.

3. In means for holding a bicycle in operative position, a support mounted upon the frame of the bicycle to rotate in the same direction to alternately throw the support into and out of operative position, a spring having connection with the support and tending to rotate the same in one direction, means under control of the rider for subjecting the spring to tension, and means for automatically engaging the support to hold it either in or out of an operative position.

4. In means for holding a bicycle in upright position, a support rotatably mounted upon the frame of the bicycle, a spring for rotating the support in one direction, means under control of the rider for subjecting the spring to tension, a detent mechanism for holding the support either in operative or inoperative position, and means under control of the rider for releasing the detent mechanism.

5. In means for holding a bicycle in upright position, the combination of a shaft, supporting means carried by the shaft, a spring having one end connected with the shaft, a wheel having the opposite end of the spring connected therewith, means for rotating the wheel for winding the spring, a ratchet mechanism for preventing backward rotation of the wheel, a detent mechanism for holding the shaft support either in operative or inoperative position, and means under control of the rider for releasing the dentent mechanism to admit of automatic rotation of the shaft to throw the support into or out of operative position.

1,020,328. SPRING-WHEEL. AI J. SWARTS, Kent, Wash. Filed June 21, 1911. Serial No. 634,496. (Cl. 152—37.)



1. In a spring wheel, a hub member, a rim member, radial springs connecting the members, inclined braces extending from the hub member to the rim member, such braces being provided with slots at one end to permit free movement and at the opposite end with cushioning springs and positive stops.

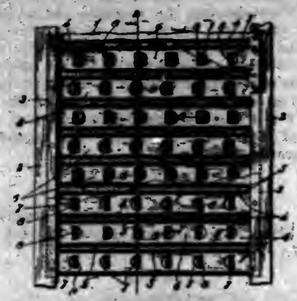
2. In a spring wheel, a hub member, a rim member, radial springs connecting the members and inclined braces extending from the hub member to the rim member, such braces being provided with slots at one end, pins inserted in the hub member and through the slots, brackets rigidly secured to the rim member and permitting a movement of the inclined braces relative to the rim member, and a spring interposed to cushion a pulling strain exerted upon said brace member.

3. In a resilient wheel, a hub member, pins spaced about the periphery of the hub member, a rim member, brackets spaced about the inner circle of the rim member and corresponding with the pins in the hub member, and pairs of inversely inclined brace members having slots at one end engaging upon the pins of the hub member and slidably and yieldingly engaged upon the brackets at their opposite ends.

1,020,329. LATH. GEORGE W. SWISHER, Clifton Forge, Va. Filed Aug. 16, 1910. Serial No. 577,473. (Cl. 72—116.)

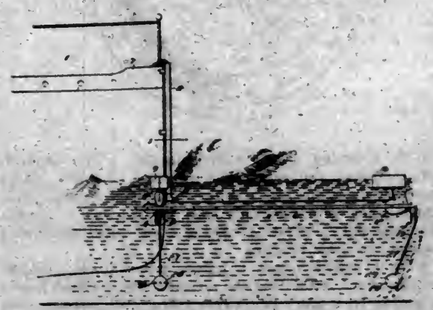
A sheet metal lath having flat side edge portions having right-angular reinforcing flanges and adapted to be connected to wall supports and formed with a plurality of transversely extending offset portions substantially rectangular in cross section and arranged in vertical spaced relation and having their upper and lower walls formed with outwardly extending conical projections and further formed with a series of semi-circular angularly disposed projections arranged in horizontal rows between the offset portions of the lath, the projections of each row extending in a direction opposite to the projections of the adjacent rows, the conical projections of the offset portions being formed with openings to permit the passage

of plaster material therethrough, said offset portions and said semi-circular projections extending from the inner



face of the lath and the outer face of the lath being uniform throughout.

1,020,330. DEVICE FOR PREVENTING COLLISIONS AT SEA. DANIEL H. TAYLOR, Palisades, Colo. Filed June 3, 1910. Serial No. 564,901. (Cl. 177—311.)



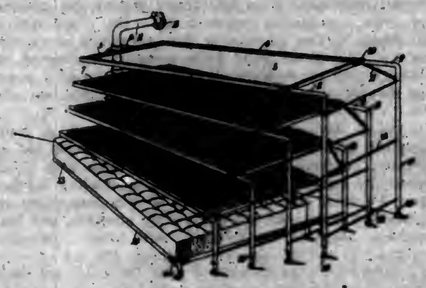
A protector for ships comprising a flexible conduit, alarm circuit wires carried therein, circuit closers connected to said wires and carried by the conduit, frames connected to the conduit, a propelling device carried by one of the frames and adapted to drive the conduit in a direction of the progress of the ship, propelling devices carried by the other frames and adapted to drive the ends of the conduit in a direction laterally of the progress of said ship, circuit closing devices depending from the frames, and flexible members adjustably connecting the lateral propelling devices with the ship.

1,020,331. DISPLAY MATTRESS-RACK. HOWARD MILTON TAYLOR, Baltimore, Md. Filed July 12, 1911. Serial No. 638,053. (Cl. 211—14.)

1. In a display rack for mattresses, a standard, a series of members, one disposed above the other and adapted to swing independently on said standard, and means extending from said members on the end opposite the standard, independently supporting each of said members from the floor whereby each member may be rolled on the floor, with the standard as a pivot.

2. A series of beds superposed one above the other, each bed comprising a framework, a spring attached to said framework, a pair of L-shaped legs extending from one end of each of said beds, and a support for said beds engaging the same at a point removed from the legs, the legs of each succeeding bed being positioned farther from the support than the legs of the bed next below whereby said beds may be moved relatively one to the other on said support.

3. In a display rack for mattresses, a series of beds disposed one above the other, unitary means supporting all of said beds, and means extending from each of said beds to the ground, to additionally support each of the beds independently of each other and means whereby the position of the beds on the support may be varied.



4. In a display rack for mattresses, a series of beds disposed one above the other, unitary means supporting all of said beds, means extending from each of said beds to the ground, to additionally support each of the beds independently of each other, and means for lengthening said last-mentioned means, whereby the distance between succeeding beds may be varied.

5. In a display rack for mattresses, a standard, a bed, said bed having a plate projecting from one end thereof, a ferrule positioned on said plate and surrounding said standard, a jam nut extending through said ferrule adapted to engage said standard, to hold said bed in its position on said standard, a pair of legs extending from the end of the bed opposite the standard, the lower end of each of said legs being recessed, a vertically movable caster slidably mounted in said recess, and a jam nut carried by each of said legs adapted to engage said caster to hold the same in position, said adjustable caster and said adjustable ferrule permitting a vertical adjustment of the bed on the standard.

1,020,332. MINER'S CANDLESTICK. ANTONIO VIERA, Ray, Ariz. Filed Mar. 20, 1911. Serial No. 616,048. (Cl. 67—26.)



1. In a device of the class described, the combination of a spike provided with a handle; a candle socket provided with a flat spring projection having a longitudinal slot therethrough; a hook member provided with a winged shank adapted to pass through said spike and through the opening in said socket projection to lock the socket to said spike; a slotted washer surrounding said shank in the same plane with the wings thereon; and means for retaining said washer in position.

2. In a device of the class described, the combination of a spike provided with a handle; a candle socket provided with a flat spring projection having a longitudinal slot therethrough; a member pivotally mounted in said spike and extending through said longitudinal opening; means for oscillating said member; projections on said oscillating member normally adapted to lock said socket to said spike; a washer fitting over said projections and in the same plane therewith; and means for retaining said washer in position.

1,020,333. PINCUSHION. GERHET VON DAAM, Scranton, Pa. Filed Aug. 29, 1911. Serial No. 646,880. (Cl. 132—37.)



A pincushion comprising a spring clamp member having a rib thereon, and a cushion tray having a groove removably receiving the said rib.

1,020,334. PERFUME-VENDING MACHINE. ALBERT FRANK VOECH, Benzonia, Mich., assignor, by direct and mesne assignments, of one-fourth to Wellington M. Powers, Benzonia, Mich., and one-half to Grand Rapids Tool & Stamping Company, Grand Rapids, Mich., a Corporation of Michigan. Filed Feb. 2, 1911. Serial No. 606,113. (Cl. 194—43.)



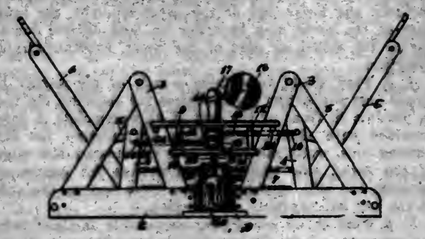
1. In a coin controlled mechanism, a slidable ratchet bar, means limiting the movement of said ratchet bar, said bar having a relatively deep notch formed centrally therein at the upper edge with the teeth of the bar oppositely arranged and inclining toward said notch, a double-ended pawl fulcrumed so that one end thereof will normally engage with said notch, and a coin slot having its lower opening disposed adjacent the free end of said pawl whereby the falling coin will raise one end of said pawl out of said notch, whereby said bar may be actuated.

2. In combination, a ratchet bar having teeth thereon, an actuating member rigidly connected therewith, and a pawl engaging said teeth, to lock the same in successive positions against retraction while said bar is advancing, said ratchet bar having a relatively deep notch intermediately arranged to receive the pawl and having teeth inclining inwardly at the opposite sides of the notch, and the pawl fulcrumed intermediate its length, with one arm relatively heavier than the other arm, said other arm constituting a coin-actuated arm.

1,020,335. SWING ATTACHMENT. JOHN THOMAS WALSTON, Springfield, Mo. Filed July 23, 1910. Serial No. 573,513. (Cl. 185—29.)

1. An attachment for swings comprising a pair of notched bearing plates adapted to be mounted upon and brace the uprights of the swing, means for connecting said plates together and holding them in separated relation, a shaft journaled in said bearing plates, and flexible belts operatively connected with the shaft and with the moving parts of the swing.

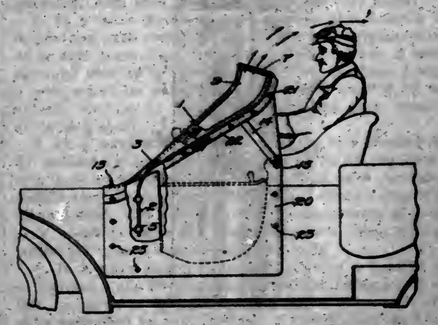
2. An attachment for swings comprising a pair of notched bearing plates adapted to be mounted upon and brace the uprights of the swing, a shaft journaled in said bearing plates, and flexible belts wound around the drum in opposite directions and adapted to be attached to the moving parts of the swing.



3. An attachment for swings comprising a pair of notched bearing plates adapted to be removably mounted upon and brace the uprights of a swing, means for connecting said plates together and holding them in separated relation, a shaft journaled in said bearing plates, flexible means wound around said shafts in opposite directions and removably connected to moving parts of the swing, and means to limit the movement of the bearing plates on the uprights.

4. An attachment for swings comprising a notched bearing plate adapted to be mounted upon and brace the uprights of a swing, a rotatable shaft bodily removable with said bearing plate, a drum secured upon said shaft, and flexible belts wound around the drum in opposite directions and adapted to be attached to moving parts of the swing.

1,020,336. WIND-SHIELD. HERBERT H. WHITE, Brookline, Mass., assignor to Auto Wind Shield Company, Cambridge, Mass., a Corporation of Massachusetts. Filed Jan. 3, 1910. Serial No. 536,128. (Cl. 21—81.)



1. A wind shield comprising rearwardly inclined supporting center and side rods, devices for securing the rods in position in front of the seat of an automobile, a pair of rods, one of which flexibly connects one side rod to the center rod at their upper ends, and the other of which flexibly connects the other side rod to the center rod at their upper ends, a cover provided with tubular side edges and center portion surrounding the supporting rods, and devices for securing the lower end of the cover, substantially as described.

2. A wind shield comprising rearwardly inclined supporting side rods, a rearwardly inclined supporting center rod, devices for securing the rods in position in front of the seat of an automobile, a cross rod extending from the upper end of one of the side rods and hinged to the center rod, a cover secured over the rods, and a knuckle joint in the side rod carrying the cross rod to allow the rod to be turned up, substantially as described.

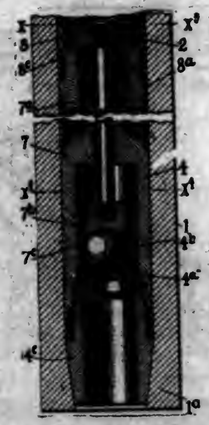
3. A wind shield for automobiles comprising rearwardly inclined supporting rods, devices for securing the rods in position in front of the seat of an automobile, cross rods connecting the upper ends of the supporting rods, a cover provided with a tubular upper edge surrounding the transverse rods and with tubular side edges and center portion surrounding the supporting rods, devices for detachably securing the lower end of the cover whereby the lower part of the cover may be roller up, and devices for securing the rolled up part of the cover, substantially as described.

4. A wind shield comprising a pair of rearwardly inclined side supporting rods, devices for securing the rods in position in front of the seat of an automobile, a cover provided with tubular side edges surrounding the supporting rods, welts extending from the tubular side edges of the cover, side curtains, and devices for detachably securing the side curtains to the welts and to the sides of the car, substantially as described.

5. A wind shield comprising rearwardly inclined tubular supporting rods, devices for securing the rods in position in front of the seat of an automobile, cross rods having their ends bent at right angles and inserted in the upper ends of the supporting rods, a cover provided with tubular upper and side edges surrounding the side and cross rods and with a tubular center portion surrounding the center rod, a knuckle joint in one or both of the side rods for allowing the rods to be turned up and devices for normally holding the parts of the rod in alinement, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,020,337. WELL-PUMP AND VALVE MECHANISM THEREFOR. THOMAS B. WILKINSON, Bakersfield, Cal. Filed Aug. 23, 1911. Serial No. 645,634. (Cl. 103—66.)



1. In a device of the character described, the combination with a plunger and a valve cage, of a connecting rod having one end movably disposed in the valve cage and normally engaging the valve member, the upper end of said connecting rod being disposed within the plunger and movable with respect to the same, and means on the upper end of the connecting rod to be engaged by the plunger whereby the valve cage may be removed from its operative position.

2. The combination with a pump plunger and a valve cage having a valve ball seated therein, of a connecting rod between the plunger and the valve cage, the lower end of said rod being disposed within the valve cage and bearing on the ball to normally retain the same on its seat, and means on the upper end of the connecting rod to be engaged by the plunger whereby the valve cage may be removed from its operative position.

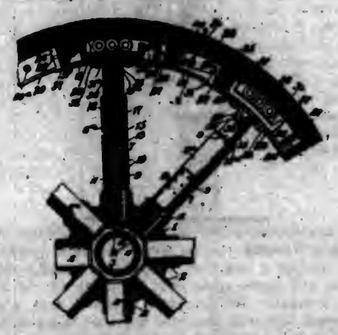
3. The combination with a pump plunger and a valve cage having a valve ball seated therein, of a rod connecting the plunger and cage, the lower end of said rod being enlarged and conically formed for engagement with the valve ball, said rod being movable in respect to the plunger and bearing upon the valve ball to normally retain the same in its seat and prevent said ball lodging between the walls of the cage, and means arranged on the upper end of said rod to be engaged by the plunger whereby the valve cage may be removed from its operative position.

4. The combination with a pump plunger and a valve cage having a valve ball seated therein, of a rod connecting the plunger and cage, the lower end of said rod being disposed within said cage and longitudinally movable therein, said lower end of the rod being enlarged and provided with a concave face for engagement upon the periphery of the ball, said rod being also movable with respect to the plunger, the weight of the connecting rod normally holding the ball upon its seat, a washer threaded in the lower end of the plunger and providing an annular shoulder therein, and a head rigidly fixed on the upper end of said rod having a plurality of arms for engagement upon said shoulder whereby the plunger, valve cage and its connecting rod may be removed from their operative positions.

5. In a device of the character described, the combination with a valve cage, of a valve therein, and a rod resting on the valve and capable of limited movement in respect to the valve cage, with means for lifting the said rod to withdraw the valve cage.

[Claims 6 to 8 not printed in the Gazette.]

1,020,338. VEHICLE-WHEEL. OTTO G. WORSLEY, Bangor, Mich. Filed May 25, 1911. Serial No. 629,455. (Cl. 152—48.)



1. A wheel comprising a hub provided with spoke sockets, outer tubular spoke members in said sockets, inner tubular members telescopingly mounted in said outer members, hollow shanks secured to the inner members, a rim connected to the shanks, follower plates in the inner telescoping members against the inner ends of the shanks, cushioning springs between the follower plates and the hub, and lighter expansion springs in the shanks bearing on the outer faces of the follower plates.

2. A wheel including a hub, spokes secured at their inner ends to the hub and composed of inner and outer telescopic members, bearing heads having tubular shanks fitted within the said tubular members and having longitudinal bores or openings extending from the inner ends of the shanks and terminating short of the bearing heads, follower plates fitted against the inner ends of the tubular shanks, cushioning springs housed within the spokes and bearing at their outer ends against the follower plates, expansible springs arranged within the tubular shanks and bearing against the follower plates for maintaining the same in contact with the said cushioning springs, and a rim connected with the bearing heads.

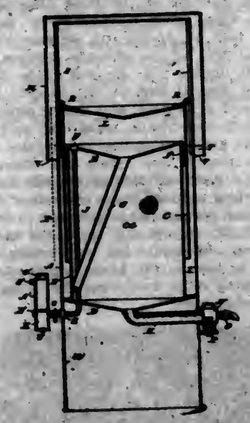
3. A wheel comprising a hollow rim having longitudinal slots in its inner wall, a spoke comprising a hollow tubular shank projected through each of said slots and provided with a transverse radially elongated slot, a bearing head inside the rim carried on the outer end of the shank, a collar on the shank inside of the inner wall of the rim, a plate carried by said collar bearing against the rim, a pin passing through the collar and through the slot in the shank with play in the latter, and a spring in the hollow of the shank pressing outward against the pin.

4. A wheel comprising a hub, a spoke having hollow telescoping sections, and a hollow shank in the inner telescoping section, a head on the outer end of the shank, a hollow rim in which said head is seated and provided with a longitudinal slot to receive the hollow shank, a plate mounted on the shank bearing on the inner side of the rim, a transverse pin loosely engaging the shank and connected to said plate, a follower plate in the hollow spoke, a cushioning spring bearing outwardly against said follower plate, and an expansion spring bearing inwardly against the follower plate to maintain it always in contact with the cushioning springs, and pressing outwardly against the pin carried by the plate mounted on the shank to maintain said plate always in contact with the rim.

5. A wheel including a hub, spokes connected at their inner ends with the hub and provided at their outer ends with bearing heads and having side grooves arranged adjacent to the bearing heads, means for pressing the bearing heads outward, a hollow rim composed of annular sections fitted together and provided at their meeting edges with recesses forming openings through which the spokes extend, the edges of the rim at the recesses fitting in the side grooves of the spokes, collars secured on the spokes and having projecting flanges, plates mounted on the spokes and secured to the flanges of the collars and arranged to cover the said openings, means to yieldingly press the plates into engagement with the rim, and anti-friction devices carried by the bearing heads and fitted against the rim.

[Claim 6 not printed in the Gazette.]

1,020,339. CONDENSER FOR GAS APPARATUS. EDMUND R. ANGELL, Derry, N. H. Filed Sept. 13, 1905. Serial No. 278,336. (Cl. 48—176.)

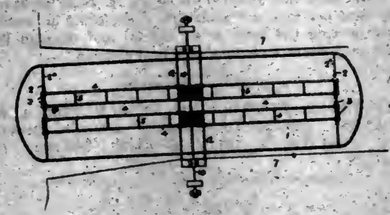


1. A condensing chamber in the gas passage from its source to the gasholder, formed by the inner cylindrical wall of the gasholder seal, a tunnel shaped cover with a broad flange shutting into the gasholder seal, and a tunnel shaped floor at the bottom of said wall, receiving the entry of gas near its central lowest point, in combination with the gas channel from the condensing chamber to the gasholder, consisting of a pipe open throughout, extending from the central lowest point of the roof, obliquely downward with its lower end at the side and near the floor of said condensing chamber.

2. A condensing chamber in gas apparatus, in the gas passage from its source to gasholder, formed by the inner cylindrical wall of the gasholder seal, a tunnel shaped cover with a broad flange shutting into the seal of the gasholder, and a tunnel shaped floor receiving near its central lowest point the gas entry pipe connected with a drip pocket and means for removing the condensation therefrom, in combination with the gas channel from the condensing chamber to the gasholder, consisting of a pipe open throughout, extending from the central lowest point of the roof obliquely downward with its lower end at the side and near the floor of said condensing chamber.

3. In gas apparatus, the combination of a gasholder floating in an annular space, a chamber within the inner wall of said annular space, a gas channel entering near the central lowest point of the floor of said chamber and continued from the side near the floor to the central lowest part of the roof thereof.

1,020,340. WAVE-MOTOR. JAMES FREDERICK BARKER, Philadelphia, Pa. Filed July 31, 1911. Serial No. 641,627. (Cl. 61—51.)



1. In a wave motor, the combination of a floating hull or pontoon, a carriage adapted to move on the deck of said hull or pontoon, rails mounted on said carriage, a second carriage adapted to said rails, a shaft, and means carried by said second carriage for actuating said shaft.

2. In a wave motor, the combination of a floating hull or pontoon, a carriage adapted to move on the deck of said hull or pontoon, rails mounted on said carriage, a second carriage adapted to said rails, a shaft, a gear wheel on said shaft, and a rack carried by said second carriage in engagement with said gear wheel to drive said shaft.

3. In a wave motor, the combination of a floating hull or pontoon, rails forming a track thereon, a carriage adapted to said track, rails mounted on said carriage, a second carriage adapted to the rails of the first carriage, a shaft, a gear wheel on said shaft, and a rack carried by said second carriage in engagement with the gear wheel to drive said shaft.

4. In a wave motor, the combination of a floating hull or pontoon, a carriage adapted to move on the deck of said hull or pontoon, rails supported by said carriage, a second carriage adapted to said rails, a shaft, a gear wheel on said shaft, and a movable rack in engagement with said gear wheel to drive the shaft, said rack being pivotally connected to said second carriage.

5. In a wave motor, the combination of a floating hull or pontoon, rails forming a track and extending across said hull, a carriage adapted to said rails, a second set of rails supported by said carriage, a second carriage adapted to said second set of rails, a shaft, a gear wheel on said shaft, and a movable rack pivotally connected to said second carriage and in engagement with said gear wheel to drive the shaft.

[Claims 6 to 22 not printed in the Gazette.]

1,020,341. ELECTRICALLY-OPERATED ANIMAL-TRAP. ROBERT L. BARNHART, Charleroi, Pa. Filed Apr. 19, 1911. Serial No. 622,137. (Cl. 43—34.)

1. An animal trap comprising a pair of trap doors movable independently of each other, and means for completing an electric circuit from one of said doors through the body of the animal to be trapped and through the other door.

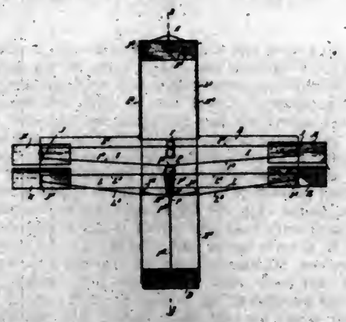
2. An animal trap comprising a trap door, a bait hook mounted thereupon and movable therewith for the pur-

pose of holding bait, another trap door disposed adjacent to said first-mentioned trap door, and means for completing an electric circuit through both of said trap doors and through the body of the animal to be trapped.



3. An animal trap comprising a trap door made of metal and provided with a portion extending downwardly, said portion being bent into arcuate form, another trap door provided with a portion extending toward the portion thus bent and adapted to swing in close proximity to the bent portion, and means for completing an electric circuit through the body of an animal and through both of said trap doors including said bent portion.

1,020,342. CONTROLLING DEVICE FOR AEROPLANES. ROBERT CHRISTOPHER BRANDT, Oroville, Cal. Filed Feb. 3, 1911. Serial No. 606,295. (Cl. 244—29.)



1. An aeroplane provided with a supporting plane, a framework for the same, an elevating plane mounted on the framework, a rudder mounted to swing on the said framework, a shaft, a drum mounted to turn with the shaft, and in which the shaft is free to slide longitudinally, a link connected with the elevating plane, a universal joint connection between the shaft and the link, to permit the shaft to turn relative to the link, ailerons mounted to swing on the sides of the supporting planes, and means for actuating the rudder and the said ailerons from the said drum.

2. An aeroplane, comprising a framework, a supporting plane fixed on the said framework, a seat pivotally supported from the said framework, an elevating plane mounted on the front of the framework, a rudder on the rear of the framework, two pairs of ailerons mounted to swing on the sides of the framework, a connection between one pair of ailerons and the said seat, an operating device for the said elevating plane and the said rudder, and a connection between the second pair of ailerons and the said operating means.

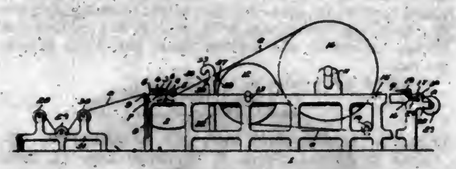
3. An aeroplane, comprising a framework, a supporting plane fixed on the said framework, a seat pivotally supported from the said framework, an elevating plane mounted on the front of the framework, a rudder on the rear of the framework, two pairs of ailerons mounted to swing on the sides of the framework, a connection between one pair of ailerons and the said seat, a shaft mounted to turn and to slide longitudinally, a connection between the said shaft and the said elevating plane to operate the latter on imparting a sliding motion to the shaft, a drum mounted to turn with the said shaft and in which drum the shaft is free to slide, and a rope winding on the said drum and connected with the said rudder and the second pair of ailerons to actuate the rudder and the said second pair of ailerons simultaneously on turning the said shaft.

4. An aeroplane, comprising a framework, a supporting plane fixed on the said framework, a seat, supporting rods for the said seat and pivoted on the said framework to rock sidewise, the said supporting rods being made in sections having tubular members pivotally connected with each other to allow the seat to rock forward and aft, and a rocking bolt mounted to slide in one of said tubular members and adapted to engage the other tubular member to lock the sections rigidly together.

5. An aeroplane, comprising a framework, a supporting plane fixed on the said framework, a seat, supporting rods for the said seat and pivoted on the said framework to rock sidewise, the said supporting rods being made in sections pivotally connected with each other to allow the seat to rock forward and aft, and manually-controlled means for locking the said rod sections together to hold the seat against swinging forward and aft.

[Claims 6 to 10 not printed in the Gazette.]

1,020,343. YARN-SIZING MACHINE. CHARLES E. CLARK, Durham, N. C. Filed Nov. 27, 1909. Serial No. 530,187. (Cl. 28—7.)

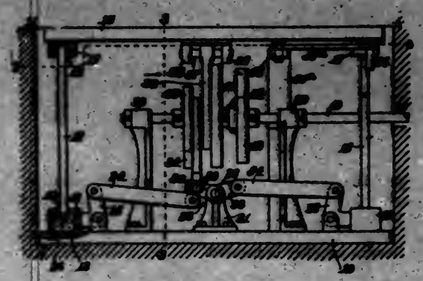


In a sizing machine of the class described, the combination of a sizing tank, a sizing roller movable vertically in the tank, a drying roll, squeeze rolls disposed in the line of feed of the threads between said sizing roller and the drying roll, grooved guide standards arranged in the line of feed of the threads between the squeeze rolls and drying roll and having offset supporting portions at their upper ends, transverse guide rolls journaled upon the guide standards on opposite sides of the guide grooves therein and below said offset supporting portions, and a weighted tension element normally held by said supporting portions above and out of contact with the threads and adapted when released to travel in the guide grooves and engage and carry the threads downwardly between and below the guide rolls, whereby to form a bight or loop in the yarns and tension the same to raise the sizing roller and cause the yarns to pass between the squeeze rolls.

1,020,344. AGITATING-PLATFORM. JOSEPH A. CLAUSON, Boston, Mass. Filed Jan. 18, 1911. Serial No. 603,394. (Cl. 52—41.)

1. In a device of the class described, a table with a horizontal surface and provided with sockets on its under face; a bed plate having upwardly extending guide members; a movable block in each guide member having a socket therein; a leg interposed between the socket in each movable block and each table socket; means for simultaneously imparting a vertical movement to said movable blocks; and means for imparting a horizontal movement to said table.

2. In a device of the class described, a table with a horizontal surface and provided with sockets on its under face; a bed plate having upwardly extending guide members; a movable block in each guide member having a socket therein; a leg interposed between the socket in each movable block and each table socket; means for simultaneously imparting a vertical movement to said movable blocks; and means for imparting reciprocating movements to said table in both a longitudinal and a transverse direction.



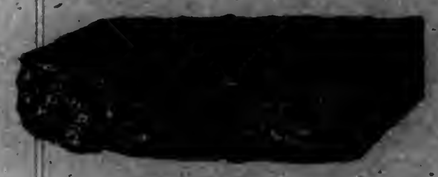
3. In a device of the class described, a table with a horizontal surface; movable supports therefor permitting horizontal movement of said table; means for raising and lowering said supports and table; a revoluble shaft; a cam thereon; a bell-crank lever operable thereby having a vertical pivot; and a link connecting one arm of said lever with said table and adapted to impart to said table a horizontal movement.

4. In a device of the class described, a table with a horizontal surface; movable supports therefor permitting horizontal movement of said table; means for raising and lowering said supports and table; a revoluble shaft; a cam thereon; and an arm pivotally secured to the under face of said table operable by said cam to impart a horizontal reciprocation to said table and provided with a slot through which said revoluble shaft extends.

5. In a device of the class described, a table with a horizontal surface and provided with sockets on its under face; a bed plate having upwardly extending guide members; a movable block in each guide member having a socket therein; a leg interposed between the socket in each movable block and each table socket; a rocker shaft; arms secured thereto; a bell-crank lever pivotally connected to each movable block; and a link connecting each bell-crank lever with one of said rocker shaft arms.

[Claim 6 not printed in the Gazette.]

1,020,345. METALLIFEROUS ORE PRODUCT. ARTHUR S. DWIGHT and RICHARD L. LLOYD, New York, N. Y., assignors, by mesne assignments, to Dwight & Lloyd Metallurgical Company, Jersey City, N. J., a Corporation of New Jersey. Filed Apr. 9, 1906. Serial No. 310,101. Renewed Dec. 8, 1910. Serial No. 596,375. (Cl. 75—65.)

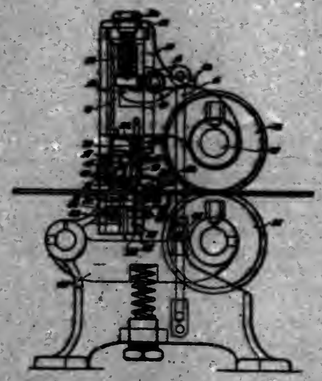


1. The herein described metalliferous product adapted for use in obtaining metals in a smelting furnace, the same being a block of sintered ore having normally smooth top and bottom surfaces and uniformly porous between the said surfaces, substantially as set forth.

2. The herein described metalliferous product adapted for use in obtaining metals in a smelting furnace, it consisting of a relatively thin block or cake of ore having its particles sintered together from the top surface to the bottom surface and being uniformly porous and permeable to gases at the said surfaces, and throughout the body between them, substantially as set forth.

3. The herein described metalliferous product adapted for use in obtaining metal in a smelting furnace or equivalent, it being a relatively thin block or cake of desulfurized, sintered ore with relatively smooth, upper and lower surfaces, and a body part between them, said surfaces and body being uniformly porous and permeable to gases, substantially as set forth.

1,020,346. WELT-PREPARING MACHINE. ANDREW EPPLER, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Original application filed July 20, 1906, Serial No. 326,970. Divided and this application filed June 20, 1908. Serial No. 439,487. (Cl. 12—67.)



1. A machine for preparing welts, having, in combination, means for supporting and guiding a welt strip, grooving and beveling knives, feeding mechanism for feeding a welt strip to the knives, and guides arranged to direct the strips of material removed by the knives away from the path of movement of the welt strip, substantially as described.

2. A machine for preparing welts, having, in combination, means including a yielding presser foot for supporting and guiding a welt strip, grooving and beveling knives, feed rolls for feeding the welt strip to the knives, and connected mechanism under the control of the operator for raising the presser foot and separating the feed rolls, substantially as described.

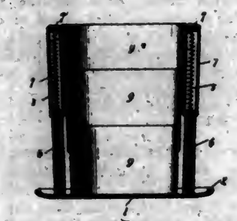
3. A machine for preparing welts, having, in combination, means including a yielding presser foot and a yielding side guide for supporting and guiding a welt strip, grooving and beveling knives, and connected mechanism under the control of the operator for raising the presser foot and retracting the yielding side guide, substantially as described.

4. A machine for preparing welts, having, in combination, means including a yielding presser foot and a yielding side guide for supporting and guiding a welt strip, grooving and beveling knives, feed rolls for feeding the welt strip to the knives, and connected mechanism under the control of the operator for raising the presser foot, separating the feed rolls, and retracting the yielding side guide, substantially as described.

5. A machine for preparing welts, having, in combination, means for supporting and guiding a welt strip, a grooving knife arranged to cut a groove in the surface of the welt near one edge, a yielding carrier in which the knife is mounted, and a presser foot adjustably mounted upon the carrier to vary the depth of groove cut, substantially as described.

[Claims 6 to 18 not printed in the Gazette.]

1,020,347. COLLAPSIBLE CUP. JENNIE L. FOLLETT, Adams, Mass. Filed Oct. 3, 1911. Serial No. 652,499. (Cl. 65—13.)



1. A collapsible drinking cup comprising a plurality of telescoping sections, spring means for distending said sections when the cup is needed for use, means comprising a casing or cover for collapsing said cup against the force of said springs without bringing the hands of the operator into contact with the body of said cup, and means for retaining the sections of said cup in collapsed relation.

2. A collapsible drinking cup comprising a plurality of telescoping sections, a rim projecting from the bottom of one of said sections, spring means engaging said rim and serving to distend said sections when the cup is needed for use, and a cover to be fitted over said sections and said spring means and having means for detachably engaging said rim to permit the cup to be collapsed against the force of said spring means without coming in contact with the hands of the user.

3. A collapsible drinking cup comprising a base, a plurality of telescoping sections mounted upon said base, spring means engaging said base and serving to distend said sections, a cover to fit over said cup, and interengaging means carried by said base and said cover to secure the cover detachably to the base, said cover being of less height than said cup, whereby, when the cover is applied, the cup can be collapsed and incased without being touched by the hands of the user.

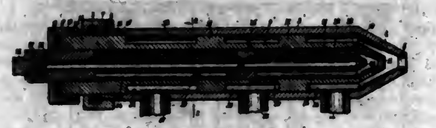
4. A collapsible drinking cup comprising a base, a plurality of telescoping sections mounted upon said base, a plurality of cylindrical extensions connected to said base beside said sections, a corresponding number of sleeves secured to one of said sections, said sleeves receiving said extensions, springs for distending said sleeves with respect to the said extensions to make the cup ready for use, and means detachably engaging said base for collapsing said cup against the force of said springs, without allowing the body of the cup to be touched by the hands of the user.

5. A collapsible drinking cup comprising a base having a rim, said rim having notches with laterally-extending grooves therein, a plurality of telescoping sections mounted upon said base, a plurality of hollow cylindrical extensions projecting upward from said base, a plurality of sleeves connected to one of said sections and receiving said extensions, spring means within said extensions and said sleeves for distending said sections, and a cover having projections from its rim in position to enter the notches and grooves in the rim of said base, said cover being of less height than the cup, whereby the cup can be collapsed against the force of said spring means when the cover is applied to the cup, without being touched by the hands of the user.

[Claim 6 not printed in the Gazette.]

1,020,348. BURNER. HARVEY W. GARDNER, Springfield, Mo. Filed Nov. 10, 1910. Serial No. 591,556. (Cl. 158—109.)

In a burner, the combination of a plurality of concentric barrels of substantially cylindrical form, one of said barrels being provided with a plurality of annular beads which engage the inner surface of another of said barrels thereby forming a number of annular compartments distinct from each other, the innermost of said barrels having a small passage extending throughout its entire length, and also having a thick portion of substantially cylindrical form, a closure member engaging one end of said thick portion for the purpose of closing the adjacent end of said passage, an annular packing encircling said thick portion of said innermost barrel and



engaging the end of the next barrel, and an annular cap encircling said innermost barrel and also engaging said next barrel, said annular packing and said cap being disposed adjacent to the end of said innermost barrel where said closure member is located.

1,020,349. DIRT-RECEPTACLE. ALBERT H. HAVARD, Urbana, Ill. Filed Apr. 8, 1911. Serial No. 619,785. (Cl. 21—20.)



1. The combination of a receptacle, eccentrically pivoted wheels at opposite sides thereof, rests having blocks thereon, against which the wheels bear, whereby the wheels are held against turning, together with means in engagement with the said rests and one end of the said receptacle, whereby the receptacle is held against tipping.

2. The combination of a receptacle, an axle thereon, said axle being to one side of the center thereof, wheels on the axles, the hubs of the said wheels being eccentric to the center thereof, a plurality of rests on which the wheels bear, and a chain engaging one end of the receptacle and each of the said rests, whereby the receptacle is held in position and against movement.

3. The combination of a suitable receptacle, an axle thereon, the said axle being to one side of the center thereof, wheels at each end of the axle, the point of support of the wheels being eccentric to the center thereof, a rest on which each of the wheels bears, blocks carried by each of the rests and engaging the said wheels, together with securing means extending from that end of the receptacle nearest the axle and each of the said rests, for holding the receptacle in position for filling and against turning on the said axle.

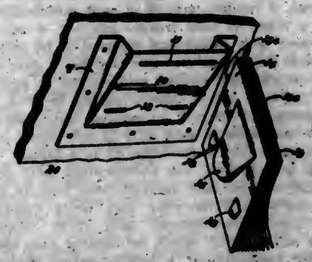
1,020,350. SPRING. WILLIAM W. HAWKES, Amesbury, Mass., assignor to The Charles Wing Company, Amesbury, Mass., a Corporation of Massachusetts. Filed May 15, 1911. Serial No. 627,188. (Cl. 5—21.)

1. In a spring, in combination, upper and lower coil-spring members, and the coupling device consisting of a sheet-metal plate having pressed therein opposite upwardly-formed crimps located in line opposite each other, and also opposite downwardly-formed crimps in a line at right angles with respect to the first pair of crimps, each of such crimps having transverse holes through the opposite side-walls thereof registering with each other, a portion of the wire composing the upper coil-member occupying the holes of both of the upwardly-formed crimps, and a portion of the wire composing the lower coil-member occupying the holes of both of the downwardly-formed crimps.



2. In a spring, in combination, upper and lower coil-spring members, and the coupling device consisting of a sheet-metal plate having a central opening and having upwardly-formed crimps located in line at opposite sides of the opening, and also downwardly-formed crimps located in line at opposite sides of the opening and at right angles with respect to the first pair of crimps, each of such crimps having transverse holes through the opposite side-walls thereof registering with each other, a portion of the wire composing the upper coil-member occupying the holes of both of the upwardly-formed crimps, and a portion of the wire composing the lower coil-member occupying the holes of both of the downwardly-formed crimps.

1,020,351. STREET-CAR ADVERTISING DEVICE. CHARLES VAN DYKE HILL, St. Louis, Mo. Filed Nov. 25, 1910. Serial No. 594,148. (Cl. 40—12.)



In an advertising device of the character described, the combination of an inclined wall or support, of a pad or block of detachable cards or leaflets and means for securing said cards or leaflets in position thereon whereby a portion of said cards or leaflets may swing away by gravity so as to be readily grasped and detached.

1,020,352. SCYTHE. WILHELM HOBERG, Schalksmühle, Germany. Filed July 7, 1911. Serial No. 637,302. (Cl. 56—27.)



In a scythe, of the character described, the combination with a scythe-blade having lips formed along its front edge, of an edge-blade having a bead on its rear-edge to be clamped between said lips, the latter allowing the blade to be slid longitudinally between them, and a tapering socket formed just behind the point of the edge-blade to receive and clamp the point of the other blade, substantially as and for the purpose set forth.

1,020,353. PROCESS OF TREATING AND SUBSEQUENTLY SEPARATING SULFID ORES, &c. EDWARD JAMES HORWOOD, Broken Hill, New South Wales, Australia. Filed Feb. 16, 1909. Serial No. 478,291. (Cl. 83—85.)

1. The process of separating zinc sulfid from other sulfids associated therewith which consists in superficially changing sulfids other than zinc sulfids by subjecting the mass to heat, and thereafter separating by flotation, the heat-affected particles from those unaffected.

2. The process of separating zinc sulfid from other sulfid material such as that comprising pyrites and lead sulfid, which consists in subjecting the mixture to a roasting to an intensity sufficient to at least superficially oxidize the sulfids other than zinc sulfid, while insufficient materially to affect the zinc sulfid, and thereafter separating the zinc sulfid from the other ingredients by flotation.

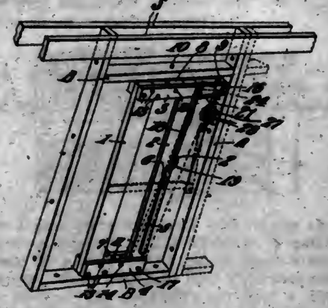
3. The process of separating zinc sulfid from other sulfid material such as that comprising pyrites and lead sulfid, which consists in subjecting the mixture to a roasting to an intensity sufficient to at least superficially oxidize the sulfids other than zinc sulfid, while insufficient materially to affect the zinc sulfid, and thereafter separating the zinc sulfid from the other ingredients by a liquid separation process dependent upon the superficial differentiation caused by said roasting.

4. The process of separating zinc sulfids from other sulfids associated therewith, which consists in superficially chemically changing sulfids other than zinc sulfids by subjecting the mass to heat and thereafter separating the heat treated mass by a liquid separation process dependent upon the superficial differentiation caused by said heat treatment.

5. The process of separating mixed metalliferous sulfids which consists in diversely superficially chemically changing some of the sulfids and thereafter separating by flotation the treated sulfid material.

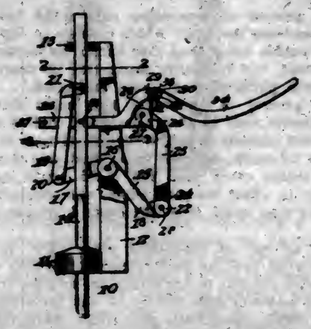
[Claims 6 to 14 not printed in the Gazette.]

1,020,354. CATTLE-STANCHION. EDWARD W. JOHNSON, Portville, N. Y., assignor to Smith Parish and B. T. Fairchild, Portville, N. Y. Filed Dec. 21, 1910. Serial No. 598,570. (Cl. 119—150.)



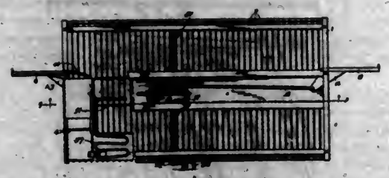
The combination with a supporting frame, of a stanchion pivotally supported thereby and comprising upper and lower arms, a stanchion post rigid therewith, a stanchion bar pivotally connected with the lower arm, a trigger carried by the stanchion bar, an approximately U-shaped shifter pivotally connected to the upper arm, a guide carried by the stanchion bar through which one member of the shifter projects, a keeper carried by the frame and arranged to be engaged by the guide to lock the stanchion against rotation, a link pivotally connected with the trigger and the shifter, the under side of the upper arm being provided with a recess to receive the upper end of the link and of the shifter member with which it coacts to lock the stanchion bar against lateral movement when the trigger is released.

1,020,385. PUMP. JOHN H. KANE, Wichita, Kans., assignor of one-half to Joseph B. Cramer, Wichita, Kans. Filed Jan. 27, 1910, Serial No. 540,365. Renewed Feb. 7, 1912. Serial No. 676,022. (Cl. 103—62.)



A pump comprising a stock, a reciprocatory pump rod parallel therewith, a compensating rod pivoted to the stock having its rear shorter portion bifurcated and straddling the rod and its longer front portion offset at its forward end, a handle pivoted to the pump rod above the fixed pivot of the compensating lever, a link having an offset upper end pivoted to the pump rod above and at a distance from the pivotal connection of the handle with the rod, its lower end being pivotally connected with the rear end of the compensating lever, a pivot carried by the handle at a much greater distance horizontally from the pump rod than that of the fixed pivot of the compensating lever, and a link pivotally connected at its upper end with the pivot carried by the handle and at its lower end to the offset front end of the compensating lever, the fulcrum pivot of the compensating lever being at all times an appreciable distance out of the line connecting the pivots connecting the front link with said lever and the handle.

1,020,356. TRAP. JAMES MOSLEY KELLOGG, Muscatine, Iowa. Filed Aug. 3, 1910. Serial No. 575,313. (Cl. 43—26.)



1. In an animal trap, the combination with a compartment having a triangular slot in the side thereof, of a door for said compartment, a shaft, means for operatively connecting said shaft with said door, means for operating said shaft, a lock for preventing the rotation of said shaft, a stop for said lock, a trip for said stop, and a tripper loosely hung in said triangular slot in the side of said compartment, adapted to release said trap.

2. In an animal trap, the combination with an outer compartment, of an inner compartment, and an intermediate compartment connecting said outer compartment with said inner compartment, said outer compartment being open at each end, doors for closing said open ends of said outer compartment, a supplementary door secured to one of said doors and adapted to cut off communication between said outer compartment and said intermediate compartment when said first-mentioned doors are open, a crank shaft having a plurality of cranks thereon, connected to said first-mentioned doors, a spring secured at one end of said crank shaft, and means for winding the opposite end of said spring.

3. In an animal trap, the combination with an outer compartment, of an inner compartment and an intermediate compartment connecting said outer compartment with said inner compartment, said outer compartment being open at each end, doors for closing said open ends of said outer compartment, a supplementary door secured to one of said doors and adapted to cut off communication between said outer compartment and said intermediate compartment when said first-mentioned doors are open, a crank shaft having a plurality of cranks thereon, connected to said first-mentioned doors, a spring secured at one end of said crank shaft, means for winding the opposite end of said spring, an inclined door pivoted at its upper end and located in juxtaposition to the point of communication between said intermediate compartment and said inner compartment, a treadle located in said intermediate compartment, a latch on said treadle adapted to secure said last-mentioned door closed and adapted to be released by the weight of an animal on said treadle, a pair of locks adapted to alternately engage said cranks to prevent the movement of said crank shaft, means located in said outer compartment adapted to release one of said locks, and means connected to said door in said inner compartment, adapted to release the other of said locks.

4. In an animal trap, the combination with an outer compartment, of an inner compartment and an intermediate compartment, said outer compartment being open at each end, doors for closing said open ends of said outer compartment, a supplementary door secured to one of said doors and adapted to cut off communication between said outer compartment and said intermediate compartment when said first-mentioned doors are open, a crank shaft having a plurality of cranks thereon, connected to said first-mentioned doors, a spring secured at one end of said crank shaft, means for winding the opposite end of said spring, an inclined door pivoted at its upper end and located in juxtaposition to the point of communication between said intermediate compartment and said inner compartment, a treadle located in said intermediate compartment, a latch on said treadle adapted to secure said last-mentioned door closed and adapted to be released by the weight of an animal on said treadle, a pair of locks adapted to alternately engage said cranks to prevent the movement of said crank shaft, means located in said outer compartment adapted to release one of said locks, and means connected to said door in said inner compartment, adapted to release the other of said locks.

5. In an animal trap, the combination with an outer compartment, of an inner compartment and an intermediate compartment connecting said outer compartment with said inner compartment, said outer compartment being open at each end, doors for closing said open ends of said outer compartment, a supplementary door secured to one of said doors and adapted to cut off communication between said outer compartment and said intermediate compartment when said first-mentioned doors are open, a crank shaft having a plurality of cranks thereon, connected to said first-mentioned doors, a spring secured at one end of said crank shaft, means for winding the opposite end of said spring, an inclined door pivoted at its upper end and located in juxtaposition to the point of communication between said intermediate compartment and said inner compartment, a treadle located in said intermediate compartment, a latch on said treadle adapted to secure said last-mentioned door closed and adapted to be released by the weight of an animal on said treadle, a pair of locks adapted to alternately engage said cranks to prevent the movement of said crank shaft, means for preventing the movement of one of said locks, a trip located in said outer compartment adapted to release said means, means for preventing the movement of the other of said locks, and a trip connected to said door in said inner compartment, adapted to release said last-mentioned means.

1,020,357. MATCH BOX AND IGNITER. HENRY K. KISO, New York, N. Y. Filed Jan. 17, 1911. Serial No. 603,041. (Cl. 206—34.)

A match box, comprising a pouch having oppositely-disposed parts facing each other, a layer of sand-paper upon the inside of each part, cardboard equalizers disposed on the outside of the pouch on the side opposite said sand-paper, the outer edge of each of said equalizers being beveled outwardly, and a band disposed about said pouch in line with said equalizers and said sand-papered



parts, whereby pressure upon any part of said equalizer will be distributed at every point along said sand-paper's surface, to ignite the matches as they are withdrawn from any part of the pouch.

1,020,358. BUILDER'S SCAFFOLD. OTTO KNOBLICH, Hammond, Ind., assignor to Champion Potato Machinery Company, Hammond, Ind., a Corporation of Indiana. Filed July 24, 1911. Serial No. 640,109. (Cl. 20—84.)

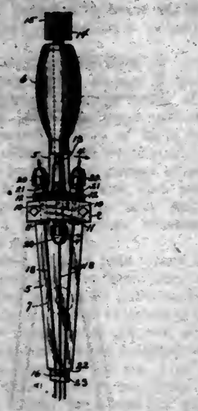


1. A metal bracket of the class described, comprising a horizontal angle iron bar, terminating at one end in a downturned hook for engagement with a sheathing board, an upright, downwardly projecting angle iron bar rigidly secured to said horizontal bar adjacent its hooked end, a diagonal brace, rigidly secured to said angle iron bars, and an anchor hook, having one hooked end for engagement with a studding located behind said sheathing board, and having its other end bent down through a hole in the horizontal angle bar, and there provided with means to prevent its accidental withdrawal, said hook being capable of lying in an operatively connected position in a horizontal plane, and of being swung into a vertical plane and moved down through the hole so as to lie within the space occupied by the other members of the bracket.

2. A metal bracket comprising two bracket members, one having a hook-like formation, whereby the bracket may be detachably secured upon the wall of a building, a steadying bar pivotally secured between its ends upon the other member in a plane at right angles to the plane of the bracket members, with its pivotal point located to one side of its center, and a stop secured to the bracket member upon which said bar is pivoted and acting to hold said bar in a horizontal position transverse to the plane of the bracket, and against the action of its heavier end and thereby form a wide bearing for the bracket, and capable of being moved into the same plane as the bracket members.

1,020,359. MULTIPLE DRILL. WALTER LANE, Chicago, Ill. Filed Oct. 20, 1904. Serial No. 229,314. (Cl. 144—110.)

1. In a device of the class described, a suitable frame provided at one end with a longitudinal slot, a lateral extension on said frame provided with a central perforation, a removable block attached by a thumb screw to the slotted end of said frame provided with a central perforation concentric with the perforation in said lateral extension, a handle at the other end of said frame provided with a longitudinal perforation concentric with said two former named perforations, a spindle rotatably mounted in said lateral extension perforation, a drill connected to said spindle rotatably mounted in said block perforation, and a shaft connected to said spindle rotatably mounted in said handle perforation.



2. In a device of the class described, a suitable frame provided at one end with a longitudinal slot, a lateral extension on said frame provided with a central perforation a removable block attached by a thumb screw to the slotted end of said frame provided with a central perforation concentric with the perforation in said lateral extension, a handle at the other end of said frame provided with a longitudinal perforation concentric with said two former named perforations, a spindle rotatably mounted in said lateral extension perforation, a drill connected to said spindle rotatably mounted in said block perforation, and a shaft connected to said spindle rotatably mounted in said handle perforation, a second perforation in said lateral extension, a second perforation in said block parallel to the first named block perforation, a spindle rotatably mounted in said second named lateral extension perforation, a second drill connected to said second named spindle rotatably mounted in said second block perforation and gear connection between said two spindles to cause them to rotate simultaneously.

1,020,360. COLLAR AND HOOD. ISRAEL N. LEVY, New York, N. Y. Filed July 27, 1911. Serial No. 640,844. (Cl. 2—118.)



As a new article of manufacture, a garment forming a combined sailor collar and hood, said garment comprising a doubled quadrangular collar portion provided with an extensible portion folded inwardly along the lower edge thereof, and means for retaining the extensible portion in folded position.

1,020,361. BOLT-HOLDING PINCERS. LEWIS PORTER MOORE, Weldon, Ill. Filed July 20, 1911. Serial No. 639,520. (Cl. 81—13.)

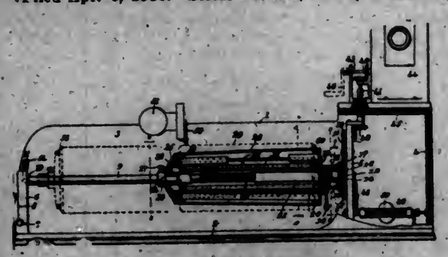
1. A bolt holding pincers comprising a pair of levers pivotally connected, having handles at one end and pincer

jaws at the opposite end, comprising parallel engaging surfaces sharply beveled upon their under sides, gripping surfaces beneath the pincer jaws and extending at an angle to the beveled portions thereof in position to engage the head of a bolt when the pincer jaws are in engagement with the shank of a bolt.



2. A bolt holding pincers comprising a pair of levers pivotally connected, having handles at one end and pincer jaws at the other, removable blocks formed to fit the underside of the pincer jaws and having a beveled gripping surface extending at an angle to the under surface of the pincer jaws, and having vertical corrugations extending across the gripping surfaces.

1,020,362. PHONOGRAPH ATTACHMENT FOR KINETOSCOPES. PETER JOHN MUKAUTZ, Kansas City, Mo. Filed Apr. 6, 1910. Serial No. 553,717. (Cl. 181—6.)

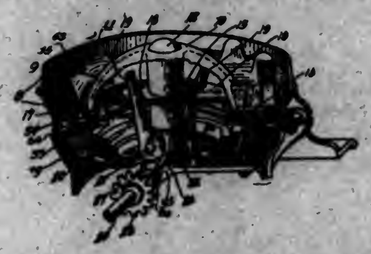


1. In a phonograph, in combination, a fixed shaft having screw threads formed thereupon, a head rotatably mounted on said shaft, a second head rotatably mounted on said shaft and carrying a sliding collar, links pivotally attached to said sliding collar and extending radially therefrom, clamping bars connecting said links with said first head, means for adjusting said sliding collar, a clutch attached to said first head and engaging said screw threads, and a cross head affording means for driving said first head and having bars adapted to engage the same as it progresses longitudinally of said shaft.

2. In a phonograph, in combination, a fixed shaft having screw threads formed thereupon, a head rotatably mounted on said shaft, a cross head opposite said head and rotatably mounted on said shaft, a collapsible spider connected with said cross head and having radially projecting arms, clamping bars connecting said arms with the first named head, tubular members connecting said cross head with said first head, a driving cross head having bars extending longitudinally of said shaft and disposed within said tubular members, means for driving said last cross head, and a clutch carried by said first head and adapted to engage said threads.

3. In a phonograph and in combination, a shaft, a head on the shaft, a movable cross head on the shaft, a collapsible spider connected with the cross head and having radially projecting arms, clamping bars connecting the arms with the first named head, a driving cross head, and a connection between the said driving cross head and the first-named head.

1,020,363. CORN-PLANTER. FRANK P. MURPHEY, Decatur, Ill. Filed July 30, 1910. Serial No. 574,659. (Cl. 111—6.)



1. In a corn planter, the combination with feeding mechanism, of an agitator, and intermittently actuated vibrating members operatively connected to be brought alternately into operative relation with said agitator for imparting a vibratory movement to the agitator, substantially as described.

2. In a corn planter, the combination with feeding mechanism, of an agitator, vibratory members for actuating the agitator, and means operatively connected for alternately bringing said members into engagement with said agitator, whereby a vibratory movement is imparted to the agitator, substantially as described.

3. In a corn planter, the combination with a feeding member, of means operatively connected for rotating the feeding member in one direction, an agitator, and means including vibratory members operatively connected to be brought alternately into engagement with said agitator and alternately move it in the same and reverse directions with respect to the feeding member, substantially as described.

4. In a corn planter, the combination with a feeding member, of means operatively connected for rotating the feeding member in one direction, an agitator, and means including vibratory members operatively connected to be brought alternately into engagement with said agitator and alternately move it in the same and reverse directions with respect to the feeding member, and a main driving shaft for operating the agitator and feeding mechanism, substantially as described.

5. In a corn planter, the combination with feeding mechanism, of an agitator, vibratory members disconnected from the agitator, and means operatively connected for intermittently actuating said members to bring them into operative relation with said agitator, the period of rest of one member occurring during the period of movement of the other, whereby a vibratory movement is imparted to the agitator, substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

1,020,364. HAND SPLITTING-MACHINE. MANSEL EAGLE NAYLOR, Cincinnati, Ohio. Filed Aug. 14, 1911. Serial No. 643,868. (Cl. 164—84.)

1. In a device of the character described, a stock, provided with a slot, a support pivotally connected to said stock and having a handle portion, handle guides arranged upon said stock to receive the handle portion therebetween, and a disk cutter rotatably mounted upon said support and disposed to enter said slot when the support is oscillated downwardly.

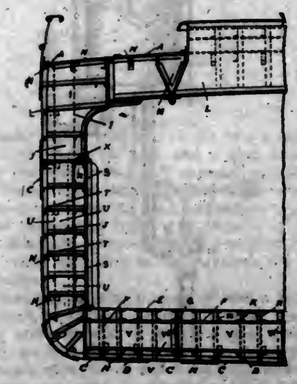


2. In a device of the character described, a stock, a disk cutter connected to said stock, a guide, connecting means between said guide and stock, and a clamping pin provided with peripheral grooves for locking said guide in a desired position upon said connecting means.

3. In a device of the character described, a stock, a disk cutter connected to said stock, connecting rods connected to said stock, a guide provided with transverse openings to slidably receive said connecting rods, said guide being provided with longitudinal openings having communication with said transverse openings, and a clamping pin provided with peripheral grooves to lock said guide in a desired position upon said connecting rods.

4. In a device of the character described, the combination with cutting mechanism, of a rod connected therewith, a guide having a transverse opening formed therethrough to receive the rod and further provided with a longitudinal opening, and an element adjustably mounted in the longitudinal opening for clamping engagement with the rod.

1,020,365. SHIP CONSTRUCTION. JOSEPH R. OLDHAM, Cleveland, Ohio. Filed Dec. 23, 1910. Serial No. 599,041. (Cl. 114—79.)



1. In a ship or vessel construction, transverse web plates having perforations near their outer margins, longitudinal frames or girders, notched at intervals adapted to be inserted in the perforations of the web plates, the uncut outer margins of the web plates and bars seated in the notches of the longitudinal frames, the edges of said frames or girders being brought to a position in contact with the shell or deck plating, or flush with the edges of the web plates; filling bars inserted in the perforations abreast of the notches in the longitudinal frames or girders, transverse angle bars and bracket plates for securing said parts together, substantially as and for the purpose set forth.

2. In ship construction, transverse web plates having perforations near their outer margins clear of the web frame bars, longitudinal girders, or frames, notched at their mid-length, adapted to be inserted in the perforations of the web plates, the uncut outer margins of the web plate and bars seated in the notches of the longitudinal frames or girders, the edges of said frames or girders being brought to a position flush with the edges of the web plates, or in contact with the skin and deck plating; filling bars inserted in the perforations abreast of the notches in the longitudinal frames or girders, transverse and vertical bars and bracket plates for securing said parts together substantially as and for the purpose specified.

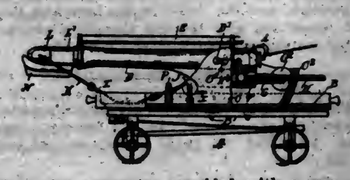
3. In a navigable vessel, a plurality of continuous, notched and abutted, longitudinal frames or girders, appropriately spaced transversely and vertically of the hull to support the shell and decks, transverse web plates and arched girder plates perforated clear of their angle bars near their upper and outer margins respectively, adapted for the reception of said longitudinal girders to bring them into direct contact with the shell and deck plating for riveting thereto, filling bars, angle bars and bracket plates for securing said parts together substantially as and for the purpose set forth.

4. In a bulk cargo vessel, without hold beams or pillars, the combination of transverse web frame bars with web plates having perforations near their outer margins, longitudinal frames or girders notched at intervals, adapted to be inserted in the perforations of the web plates with their bars seated in the notches of the longitudinal frames or girders, said girders being moved out over the bars and plate margins to secure direct connection with the shell and deck plating, filling bars inserted in the perforations abreast of the notches in the longitudinal frames or girders, unperforated, or solid, intermediate web frames, perforated transverse arched girders, brackets and knee plates and connecting angle bars substantially as shown and described.

5. In vessel construction, the combination of transverse arched girders and transverse web frames having perforations near their outer margins, longitudinal frames or girders notched at intervals adapted to be inserted in the perforations of the arched girders and web frames and being brought to a position in contact with the shell and deck plating; solid upper and inner longitudinal members supporting the upper bottom and the inner skin, filling bars, transverse and vertical angle bars and bracket plates for securing said parts together substantially as shown and described.

[Claims 6 to 10 not printed in the Gazette.]

1,020,366. LIFE-SAVING APPARATUS. MARTIN OLSEN, Eureka, Cal. Filed July 15, 1911. Serial No. 638,645. (Cl. 102—34.)



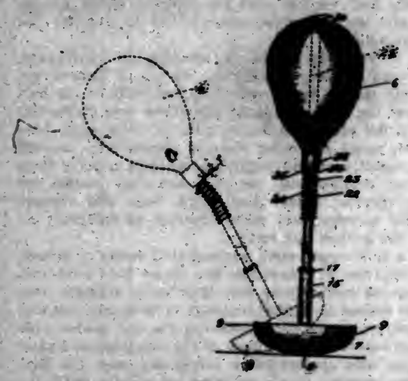
A life saving apparatus provided with a gun, a line carrier adapted to be detachably supported on the mussle of the gun, to receive a projectile therefrom, and having a portion thereof shaped like a boat whereby to buoy the carrier and projectile in water, and a line connected with said carrier.

1,020,367. EXERCISER. RICHARD B. PATTERSON, JR., Chicago, Ill. Filed Apr. 13, 1911. Serial No. 620,938. (Cl. 46—69.)

1. In an exerciser, the combination with a bag element, of a hollow base member therefor, having its lower surface of suitable curvature and being of suitable mass to normally restore the bag member to upright position when the base member stands on a substantially level floor, and a suitable liquid within the base member, substantially as described.

2. In an exerciser, the combination with a bag element of a rod extending through the same substantially to the

top thereof, and having its upper end outwardly flanged, a suitable washer on the rod and engaging the flange, and a suitable connection between the washer and the upper portion of the bag element, substantially as described.

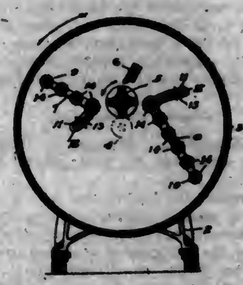


3. In an exerciser of the class described, a bag member comprising a longitudinal stiffening rod, a shell surrounding the same and formed of suitable material, suitable packing within the shell, means for securing the upper end of the shell to the upper end of the stiffening rod, and means for preventing longitudinal movement of the lower end of the shell on the rod, substantially as described.

4. In an exerciser of the class described, the combination of a shell of suitable material having its upper end completely inclosed, a longitudinal stiffening rod extending upwardly within the shell to the upper end thereof, suitable packing within the shell and surrounding the rod, means for drawing the lower end of the shell in tightly against the rod, and means for holding the said lower end against downward displacement on the rod, substantially as described.

5. In an exerciser, the combination of a bag element, a hollow base member therefor having its lower surface of such curvature and being of such mass as to tend to restore the bag element into upright position, a spring jointed connection between the bag element and the base member, and liquid within the base member, whereby the base member tends to restore the bag element into upright position, and the liquid in the base and the spring jointed connection give the bag element a characteristic restoring motion, substantially as described.

1,020,368. CHURN. JAMES M. PIERCE, Owatonna, Minn., assignor of one-half to Carl K. Bennett, Owatonna, Minn. Filed Oct. 20, 1911. Serial No. 655,783. (Cl. 31—25.)



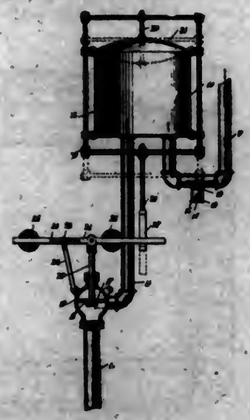
1. The combination, with a churn barrel, of a roll mounted therein, a frame mounted in said churn and extending from a point near said roll to a point near the wall of the churn, and anti-friction rolls mounted in said frame and over which the butter is delivered to said first named roll.

2. The combination, with a churn barrel, of a roll eccentrically mounted therein, a frame disposed between said roll and the wall of the barrel, and a series of idle rolls mounted in said frame and forming an anti-friction carrying surface between said first named roll and the wall of said barrel.

3. The combination, with a churn barrel, of frames pivoted at their outer ends in said barrel between said first named roll and the wall of the churn, means for adjusting and locking said frames to obtain the desired space between them and said first named roll, and a series of anti-friction rolls mounted in said frames and forming carrying surfaces over which the butter is delivered to the space between the inner roll of the series and said first named roll.

4. The combination, with a churn, of a roll eccentrically mounted therein, bars pivotally supported in the heads of the churn near the peripheries thereof, means for adjusting and locking said bars at the desired angle with respect to said roll, the bars on one side of said roll being longer than those on the other side thereof, and a series of corrugated rolls mounted in said bars and forming carrying surfaces over which the butter is delivered to said first named roll.

1,020,369. PRESSURE-REGULATOR. ISAAC J. RALSTON and JESSE A. ERICSON, Kane, Pa., assignors of one-third to Hugo J. Walter, Kane, Pa. Original application filed June 5, 1909, Serial No. 500,804. Divided and this application filed June 19, 1911. Serial No. 633,920. (Cl. 50—27.)



1. A pressure regulator, comprising a casing having a flexible diaphragm forming the top thereof and provided with supply and discharge pipes, a frame mounted to slide on the casing, a rod connecting the frame with the diaphragm, a valve casing interposed in the supply pipe, a valve in the valve casing and having its stem projecting through the top of the same, a counter balanced lever to which the valve stem is pivoted, a link pivoted to the casing and upon which the lever is adjustably fulcrumed and a rod depending from the sliding frame and having a slot in its lower end through which one end of the said lever projects.

2. A pressure regulator comprising a casing having a flexible diaphragm forming one wall thereof and provided with supply and discharge pipes, a frame mounted to slide on the casing and connected with the diaphragm, a valve casing in the supply pipe, a valve in said casing and having its stem projecting through the same, a counter-balanced lever adjustably mounted on the valve casing and to which

the valve stem is pivotally connected, and a rod carried by the sliding frame and provided with a slot through which the said lever projects.

3. A pressure regulator, comprising a casing having a diaphragm forming a wall thereof and provided with supply and discharge pipes, a sliding frame connected with the diaphragm, a valve casing in the supply pipe, a valve in the valve casing and having its stem projecting out through the same, a link pivoted to the casing, a counter-balanced lever adjustably fulcrumed on the link and to which the valve stem is pivotally connected, and a connection between the counter-balanced lever and the said sliding frame.

4. A pressure regulator, comprising a casing having a flexible diaphragm forming the top thereof and provided with supply and discharge pipes, a frame mounted to slide on the casing, a rod connecting the top of the frame with the diaphragm, a valve casing interposed in the supply pipe, a valve in the said casing having its stem projecting out through the same, a counter-balanced lever fulcrumed on the valve casing and with which the valve stem is pivotally connected, and a rod depending from the lower part of the frame and having at its end a slot through which the lever projects.

1,020,370. ANTICREEPER FOR RAILROAD-RAILS. CHARLES W. REINOEHL, Steelton, and BENT L. WEAVER, Middletown, Pa.; Helen B. Reinoehl, Steelton, Pa., executrix of said Charles W. Reinoehl, deceased. Filed June 14, 1910. Serial No. 566,710. (Cl. 238—4.)



1. The combination with a cross-tie, and a railroad rail having a head, a vertical web and a base flange, of an anticreeper provided with a part engaged with the bottom of the rail head and the top of the base flange in advance of its engagement with the rail head, and means engaged with the tie and preventing forward movement of the lower portion of said part whereby the tendency of the rail to creep will cause said part to bind against the rail head and base flange.

2. The combination with a cross-tie, and a railroad rail having a head, a vertical web and a base flange, of an anticreeper provided with a part engaged with the bottom of the rail head and the top of the base flange, and means engaged with the tie and preventing forward movement of said part, said part being pressed into engagement with the rail by the spring action of one of the parts of the anticreeper.

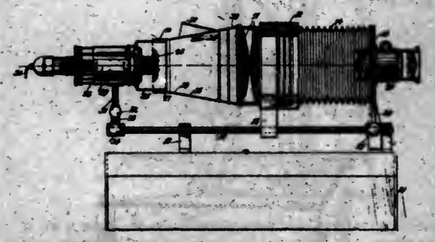
3. The combination with a cross-tie, and a railroad rail having a head, a vertical web and a base flange, of an anticreeper provided with a part engaged with the bottom of the rail head and the top of the base flange in advance of its engagement with the rail head, and means engaged with the tie and preventing forward movement of the lower portion of said part, said part being pressed forwardly against the rail head by the spring action of one of the parts of the anticreeper.

4. The combination with a cross-tie, and a railroad rail having a head, a vertical web and a base flange, of an anticreeper provided with a part engaged with the bottom of the rail head and the top of the base flange in advance of its engagement with the rail head, means engaged with the tie and preventing forward movement of the lower portion of said part whereby the tendency of the rail to creep will cause said part to bind against the rail head and base flange, and means preventing displacement of said part laterally from the rail.

5. The combination with a cross-tie, and a railroad rail having a head, a vertical web and a base flange, of an anticreeper provided with a part engaged with the bottom of the rail head and the top of the base flange, means engaged with the tie and preventing forward movement of said part, said part being pressed into engagement with the rail by the spring action of one of the parts of the anticreeper, and means preventing displacement of said part laterally from the rail.

[Claims 6 to 11 not printed in the Gazette.]

1,020,371. STEREOPTICON. FREDERICK SCHWANHÄUSSER, Jersey City, N. J., assignor to C. Beseler Co. Filed Sept. 21, 1911. Serial No. 650,564. (Cl. 88—26.)



1. In a stereopticon, a fixed collecting-lens, a projecting-lens movable relatively thereto in line with the same, a hood having one end the same diameter as the collecting-lens and the other end of smaller diameter, a fixed guide-rod, and a source of light supported by said rod at the axis of the smaller end of the hood, the source of light and projecting-lens being movable along the guide-rod and in operative position when placed at the opposite ends of the same.

2. In a stereopticon, a fixed collecting-lens, a projecting-lens movable relatively thereto in line with the same, a hood having one end the same diameter as the collecting-lens and the other end of smaller diameter and having a slotted lower portion, and an auxiliary hood at the upper portion, a fixed guide-rod, and a source of light supported by said rod at the axis of the smaller end of the hood, the source of light and projecting-lens being movable along the guide-rod and in operative position when placed at the opposite ends of the same.

1,020,372. MACHINE FOR MAKING BATS. CHARLES E. T. SCHIENER, North Adams, Mass., assignor to The James Hunter Machine Company, North Adams, Mass., a Corporation of Massachusetts. Filed Sept. 7, 1911. Serial No. 648,186. (Cl. 19—8.)



1. A machine for making bats comprising, in combination, means for forming and feeding a lap of fibrous material, means for folding the lap upon itself in elongated folds as it is fed along, and means for severing the lap in direction corresponding with the lines of fold into bat-lengths.

2. A machine for making bats comprising, in combination, means for feeding a lap of fibrous material, means for folding the lap upon itself on transverse lines into a folded bat, and means for severing the lap into bat-lengths.

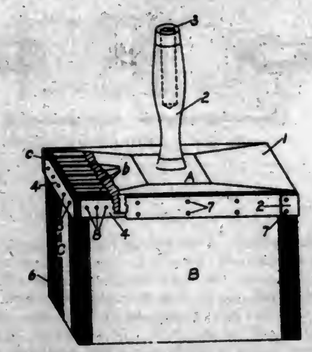
3. In combination, a moving conveyer, means for folding the material carried by the said conveyer back upon itself as it is advanced, and means for separating the material into lengths on its way to the folding means.

4. A machine for making bats, comprising, in combination, a conveyer to feed the lap, lap-severing devices, and a fly which folds the lap upon itself by turning the foremost portion thereof back upon that which follows.

5. In combination, a lap-conveyer, means for turning back the leading portion of the lap, and a support upon which such portion is received and from which it is delivered upon the succeeding portion on the conveyer.

[Claims 6 to 12 not printed in the Gazette.]

1,020,373. CALCIMINE-BRUSH. GEORGE E. SHADOYER, Wooster, Ohio. Filed May 16, 1911. Serial No. 627,554. (Cl. 15—36.)



1. A calcimine brush, comprising a block with handle thereto, said block provided with a series of longitudinal furrows cut along its under surface and a rabbet across each end thereof, a series of thin flat brushes, independently constructed, inserted and secured in said furrows respectively, a thin flat brush secured to said block cross-wise at each end thereof in said rabbets and adjacent the ends of said longitudinal series, a band or ferrule passed around said group of flat brushes, and secured against the same and to said block, substantially as set forth.

2. As an article of manufacture, a brush, having a block provided with a series of longitudinal furrows, each furrow wider at the bottom thereof than at the top, and a rabbet cut across each end of said block, a series of thin flat brushes, each having the outer margin of its head thickened to fit said widened bottom and secured therein, a thin flat brush secured to said block cross-wise adjacent the ends respectively of said longitudinal brushes in said rabbet, and a band or ferrule passed around the entire group of brushes and said block and secured solidly thereto, substantially as set forth and for the purpose specified.

1,020,374. VALVE. CHARLES H. SIMMONS, Chicago, Ill., assignor to The C. H. S. Company, Yorkville, Ill., a Corporation. Filed June 14, 1909. Serial No. 501,970. (Cl. 137—4.)

1. The combination with a valve casing, of a bonnet having the inner portion of its cavity enlarged for the insertion of a spring and spring support from the inner end of the bonnet and provided with an internal screw-thread for engagement with an externally threaded valve carrier, said cavity being further provided outwardly of said carrier thread with an internal screw-thread of less diameter for receiving a spring support, and outwardly of the last mentioned screwthread with an outwardly tapering packing seat, of an externally threaded spring support adapted to be inserted through the inner end of said cavity and secured in said supporting thread, a valve stem provided with a tapering portion fitting rotatably in said seat, and a spring resting on said support and pressing said stem outwardly, substantially as set forth.



2. The combination with a valve casing, of a bonnet having the inner portion of its cavity adapted for the insertion of a spring and spring support from the inner end of the bonnet and having an internal screwthread for the reception of such spring support and an outwardly tapering packing seat arranged outwardly of said screw-threaded portion, a valve stem provided with a tapering portion fitting rotatably in said seat, an annular spring support having an external screwthread engaging the internal thread of the bonnet, said threads being exposed and accessible at the inner end of the bonnet, and a spring resting on said support and pressing said stem outwardly, substantially as set forth.

3. In a valve, the combination with a valve stem having an angular shank, of a valve carrier having an angular socket, the sides of which are formed each by two inwardly converging faces for engagement with the sides of the shank, substantially as set forth.

1,020,375. AUTOMOBILE. ROBERT SYMMONDS, Jr., Kenosha, Wis., assignor to Thomas B. Jeffery, Kenosha, Wis.; Kate E. Jeffery, Charles T. Jeffery, and Harold W. Jeffery executors of said Thomas B. Jeffery, deceased. Filed Mar. 11, 1908. Serial No. 420,320. (Cl. 21—90.)



1. In an automobile, a frame, an axle, a gear casing surrounding the axle, a gear casing mounted on said frame so as to swing about an axis parallel with said axle, a transmission shaft projecting at its ends into said casings, each of said tubes having an external flange, and means for clamping said flanges together so as to prevent relative axial movements of the tubes and at the same time permitting them to rotate relatively to each other.

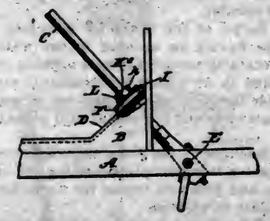
2. In an automobile, a frame, an axle, a gear casing surrounding said axle, a second gear casing supported from said frame, a transmission shaft having its ends projecting into said casings, a pair of telescoped tubes surrounding said shaft and each rigidly united at one end to one of said casings, each of said tubes having an external flange, and means for clamping said flanges together so as to lock the tubes against relative axial movements while permitting relative rotary movements.

3. In an automobile, a frame, an axle, a gear casing surrounding said axle, a transmission shaft projecting at one end into said casing, a second gear casing surrounding the other end of the shaft, hangers pivoted to said frame so as to swing about an axis parallel with said axle, means for pivotally supporting said second casing upon the free ends of said hangers so as to swing about an axis at right angles to said shaft, and a pair of telescoped tubes surrounding said shaft and each rigidly united at one end to one of said casings, the tubes being so proportioned that one is revoluble within the other.

4. In an automobile, a frame, an axle, a gear casing surrounding said axle, a transmission shaft projecting at one end into said casing, a second gear casing surrounding the other end of the shaft, hangers pivoted to said frame so as to swing about an axis parallel with said axle, means for pivotally supporting said second casing upon the free ends of said hangers so as to swing about an axis at right angles to said shaft, a pair of tubes surrounding said shaft and each rigidly united at one end to one of said casings and extending toward the casing, and means for connecting the free ends of said tubes so as to hold the tubes against relative axial movements while permitting relative rotary movements.

5. In an automobile, a frame, an axle, a gear casing surrounding said axle, a second gear casing, means for pivotally supporting said second casing from the frame so as to swing about two separated axes parallel with said axle, a transmission shaft arranged at right angles to said axle and projecting at its ends into said casing, two tubes surrounding said shaft and each rigidly united to one of the casings, and means for connecting said tubes to each other so as to permit relative rotary movements and prevent relative axial movements.

1,020,376. ADJUSTABLE STEERING-POST FOR AUTOMOBILES. ROBERT SYMMONDS, Jr., Kenosha, Wis., assignor to Thomas B. Jeffery, Kenosha, Wis.; Kate E. Jeffery, Charles T. Jeffery, and Harold W. Jeffery executors of said Thomas B. Jeffery, deceased. Filed July 22, 1909. Serial No. 508,937. (Cl. 21—90.)



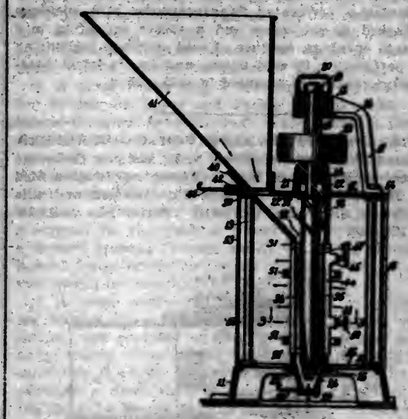
1. In an automobile, a steering post pivotally connected at its lower end to a part of the automobile structure, a toothed segment having an elongated slot through which the post passes, a coöperating toothed segment carried by the post, one of said segments having elongated bolt-receiving slots arranged parallel with the aforesaid slot, and bolts passing through said bolt-receiving slots and through the other segment.

2. In an automobile, a steering post pivotally connected at its lower end to a part of the automobile structure, a segment having an elongated slot through which the post passes, a coöperating segment carried by the post, one of said segments having elongated bolt-receiving slots arranged parallel with the aforesaid slot, and bolts passing through said bolt-receiving slots and through the other segment.

3. In an automobile, a steering post pivotally connected at its lower end to a part of the automobile structure, a segment having an elongated slot through which the post passes, a coöperating segment carried by the post, the latter segment being made in halves clamped about the post, one of said segments having elongated bolt-receiving slots arranged parallel with the aforesaid slot, and bolts passing through said bolt-receiving slots and into the other segment.

1,020,377. GRAIN-CLEANING MACHINE. HENRY HOWEN WALKER, Honolulu, Hawaii. Filed Sept. 28, 1910. Serial No. 584,260. (Cl. 83—34.)

1. In a machine of the class described, a vertical, cylindrical screen, a feed chamber above said screen and communicating therewith at the upper end of the same, said screen having at the lower end an outlet, and a rotary member partly within said screen and partly within said feed chamber and having helical ribs of different pitch, respectively, in said screen and said chamber.



2. In a machine of the class described, a vertical screen, a feed chamber at the upper end thereof and registering with said screen, a feed hopper associated with said chamber and having a controlling slide, said screen having at the lower end an outlet, a rotary member partly within said screen and partly within said chamber, and having helical ribs, said helical ribs within said feed chamber being of greater pitch than said ribs within said screen, and a retarding blade associated with said screen and extending into the same toward said rotary member.

1,020,378. DRUM-HEATER. CHARLES B. WANAMAKER, Indianapolis, Ind., assignor to Leedy Manufacturing Company, Indianapolis, Ind., a Corporation of Indiana. Filed May 11, 1911. Serial No. 626,535. (Cl. 219—19.)



1. A heating attachment for drums comprising a fitting plate adapted to be secured to the main body of the drum and having a threaded perforation and a vent perforation registering with a corresponding perforation in the body of the drum, and an electrical heating element carried by said fitting plate, said heating element having terminals for connection with an electric circuit and a threaded main body adapted to engage with the threaded portion of the fitting.

2. A heating attachment for drums comprising a fitting plate having a vented flange for attachment to the main body of the drum, and an electrical heating element carried by said fitting plate, said heating element having terminals for connection with an electric circuit.

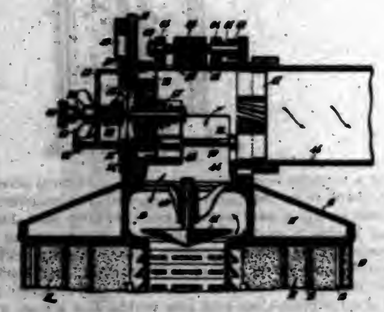
3. A heating attachment for drums comprising a fitting plate having a flange for removable attachment to the body of the drum and a socket for holding the heating element, one end of said socket being unflanged to permit its insertion into and removal from the drum body, and an electrical heating element removably mounted in said socket.

4. The combination with a drum having a perforated portion, of a heating attachment comprising a fitting plate

having a vented flange covering said perforated portion and attached to the drum and a socket extending through said perforated portion, and an electrical heating element removably mounted in said socket.

5. The combination with a drum having a plurality of openings, of a heating attachment comprising a fitting plate having a perforated flange covering said openings and attached to the drum and a socket extending into one of said openings, another of said openings registering with a perforation in said flange, and an electrical heating element removably mounted in said socket.

1,020,379. THROTTLE-VALVE FOR CARBURETERS. MATHIAS WENWODA, New York, N. Y., assignor to George W. Stevens, New York, N. Y. Original application filed Feb. 20, 1909, Serial No. 479,045. Divided and this application filed Feb. 15, 1910. Serial No. 543,913. (Cl. 123—98.)



1. A carbureter having a hollow, cylindrical, rotatable throttle valve having an explosive mixture inlet in one side thereof and an outlet at the end thereof, an auxiliary air inlet in the side of said valve opposite to said first-mentioned inlet, a casing surrounding said valve, a manually-controlled slide carried by said casing and controlling said last-mentioned aperture, and an automatic valve-controlled air inlet at the end of said throttle valve opposite to said outlet.

2. A carbureter having a hollow, cylindrical, rotatable throttle valve provided with an opening in one side thereof and a second opening at one end thereof, a slide within said valve adapted to rotate therewith and movable longitudinally thereof for controlling the admission of explosive mixture through said first-mentioned opening, a casing surrounding said valve, and means for operating said slide from the outside of said casing.

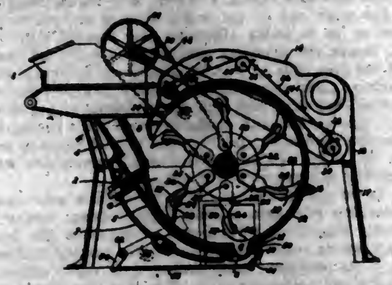
3. A carbureter having a hollow, cylindrical, rotatable throttle valve, a casing inclosing said valve, a spring-pressed auxiliary air inlet valve normally closing one end of said throttle valve, a hood inclosing the end of said casing and the last-mentioned end of said throttle valve and serving to deliver air to said air intake, and an arm extending out radially between said hood and the end of said casing, for rotating said throttle valve.

4. A carbureter provided with a hollow cylindrical throttle valve, one end of said valve having an opening leading to a conduit, and a plurality of radially disposed plates in said opening and disposed at a slight angle to the length of said opening, said plates giving a whirling motion to fluids passing from said valve through said opening.

5. In a carbureter, a casing having an outlet, a valve for controlling said outlet and having an auxiliary air inlet, a movable member for controlling said air inlet, a rotatable rod having threaded engagement with said member for moving the latter, said rod being also longitudinally movable with said member to control said air inlet, and a spring for normally preventing the longitudinal movement of said rod.

[Claim 6 not printed in the Gazette.]

1,020,380. CRUSHER AND PULVERIZER. MILTON F. WILLIAMS, St. Louis, Mo., assignor to Williams Patent Crusher and Pulverizer Company, St. Louis, Mo., a Corporation of Missouri. Filed Oct. 1, 1910. Serial No. 584,866. (Cl. 83—11.)



1. In a device of the character described, in combination, a cage having an opening in one wall, a series of hammers rotatably mounted in said cage, and a detector plate having a frangible portion fitted within said opening.

2. In a device of the character described, in combination, a cage having an opening in one wall, a series of hammers rotatably mounted in said cage, and a detector plate having frangible lips engaging one side of the wall of the opening, said plate being fitted within the opening.

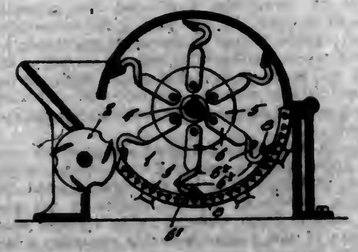
3. In a device of the character described, in combination, a cage having an opening in one wall, a series of hammers rotatably mounted in said cage, and a detector plate having oppositely positioned lips engaging one side of the wall of the opening.

4. In a device of the character described, in combination, a cage having an opening in one wall, a series of hammers rotatably mounted in said opening, and a detector plate adapted to fit within said opening, said plate having frangible lip portions engaging one side of the wall of the opening and means for moving said plate if the lips are broken.

5. In a machine of the class described, a cage provided with a pocket, a frangible plate forming one of the walls of said pocket and yieldable means for normally holding said frangible plate in position.

[Claims 6 to 11 not printed in the Gazette.]

1,020,381. SLICING-HAMMER. MILTON F. WILLIAMS, St. Louis, Mo., assignor to Williams Patent Crusher & Pulverizer Company, St. Louis, Mo., a Corporation of Missouri. Filed Aug. 28, 1911. Serial No. 646,532. (Cl. 83—11.)



1. A slicing hammer comprising a shank, one end of which is bent a quarter of a turn and refolded so that said end occupies a position substantially at right angles to the main body portion of said shank, and a blade fixed to the outside of the refolded portion with its cutting edge projecting in front of said refolded end portions.

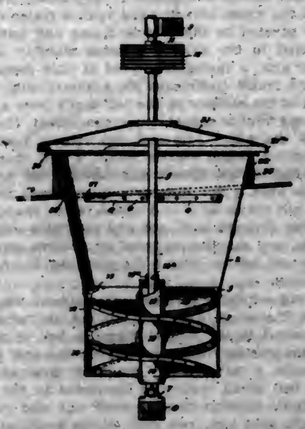
2. A slicing hammer comprising a shank adapted to be pivotally connected to a rotary member at one end, the opposite end of which shank occupies a position substantially at right angles to the plane occupied by the body of the shank, said last mentioned end of the shank being provided in its outer side with a recess, and a blade fixed to the end of the shank and positioned within the recess with its non-cutting edge positioned adjacent to the shoulder at the end of the recess.

3. A slicing hammer comprising a shank, one end of which is bent a quarter turn and re-folded to form a pocket for receiving the sliced material and a blade fixed to the outer side of the re-folded portion of the shank with its cutting edge projecting in front of the re-folded portion of said shank.

4. A slicing hammer comprising a shank provided with a quarter turn and a refolded portion forming a pocket to receive the sliced material the front end of which refolded portion is beveled and a cutting blade carried by the outer end of said hammer and having a beveled edge which combines with the beveled edge on the re-folded portion of the shank for forcing the material into said pocket.

5. The combination with a shank adapted to be pivotally connected to a rotating member at one end and provided with a pocket at its opposite end, of a blade applied to the end of the shank below the pocket with the cutting edge of said blade projecting in front of the end of the shank below the pocket.

1,020,382. PUMP. ORVILLE WILLARD ALPHA, Franklin, La., assignor of one-half to Arthur V. Wilson, Utica, Kans. Filed Sept. 20, 1909. Serial No. 519,548. (Cl. 103—43.)



1. A pump comprising a substantially cylindrical casing having a flaring upper end, said end increasing gradually in cross section from its inner to its outer end, and having at said outer end an annular lateral flange, a shaft coaxial with the casing, a spider in the flaring portion in which the shaft is clamped, a drum on the lower end of the shaft, spiral blades between the drum and the inner face of the cylinder and encircling the drum, said blades extending upwardly to the commencement of the flaring portion, a frame in which the shaft is journaled, an inclined trough on the frame, and having an upwardly flanged opening through which the flaring portion of the casing extends, the lateral flange of said flaring portion extending beyond the flange, a cover for the cylinder above the upper end thereof, and extending beyond the lateral flange, and means for rotating the shaft.

2. A pump comprising a substantially cylindrical casing having a flaring upper end, said end increasing gradually in cross section from its inner to its outer end, and having at said outer end an annular lateral flange, a shaft coaxial with the casing, a spider in the flaring portion in which the shaft is clamped, a drum on the lower end of the shaft, spiral blades between the drum and the inner face of the cylinder and encircling the drum, said blades extending upwardly to the commencement of the flaring portion, means for supporting the shaft, a cover for the cylinder arranged above the upper end thereof, the cover being secured to the frame and trough, and extending beyond the lateral flange, and an inclined trough having an opening through which the casing extends, the opening being flanged around the opening, the lateral flange extending over the flange of the opening.

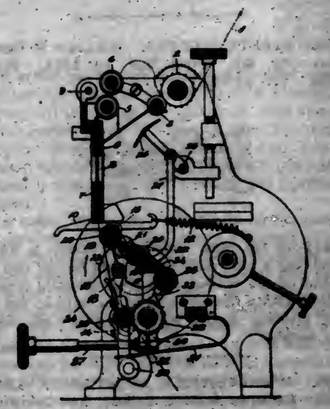
3. A pump comprising a substantially cylindrical casing having its upper end flaring, and provided with a lateral marginal flange, a shaft in the casing at the center thereof, spiral blades arranged between the lower end of the shaft and the lower end of the casing, and extending upwardly to the commencement of the flaring portion, a cover secured to the frame and trough above the casing, the edge of the cover extending beyond the lateral flange, a support for the shaft, a trough on the support having a flanged opening through which the casing extends, the lateral flange extending beyond the flange of the opening and means for rotating the shaft.

4. A pump comprising a substantially cylindrical casing having its upper end gradually increasing in cross section, and provided at its edge with a lateral marginal flange, spiral vanes in the lower end of the cylinder and extending upwardly to the commencement of the flaring portions, a cover above the casing and extending beyond the flange, a trough having an upwardly flanged opening through which passes the casing, and means for rotating the casing.

5. A pump comprising a substantially cylindrical casing having its upper end gradually increasing in cross section, and provided at its edge with a lateral marginal flange, spiral vanes in the lower end of the cylinder and extending upwardly to the commencement of the flaring portions, a cover above the casing and extending beyond the flange, an inclined trough having an opening through which the casing extends, and means for rotating the casing.

[Claim 6 not printed in the Gazette.]

1,020,383. MOVING-PICTURE MACHINE. JAMES A. CAMERON, New York, N. Y., assignor to Cameron Picture Machine Company, a Corporation of New York. Filed Nov. 21, 1910. Serial No. 593,333. (Cl. 88—18.)



1. In a moving picture machine having an exposure opening, a film retarding device, and film advancing means potentially capable of advancing a greater amount of film past the exposure opening during each cycle of the machine than the amount of film actually to be advanced, acting to produce a slack in the film after each film advancing movement, and then acting in opposition to said

film retarding device to remove said slack and irregularities in the film prior to the next film advancing movement.

2. In a moving picture machine having an exposure opening, the combination with a film, of a film retarding device and film advancing means, the latter potentially capable of advancing a greater amount of film past the exposure opening during each cycle of the machine than the amount of film actually to be advanced, said device and means acting upon said film to intermittently advance the same past the exposure opening, and to produce a slack section therein after the film is advanced and to remove said slack and irregularities in said film prior to the next advance of the film past the exposure opening.

3. In a moving picture machine having an exposure opening, the combination of a film retarding device, film advancing means potentially capable of advancing a greater amount of film past the exposure opening during each cycle of the machine than the amount of film actually to be advanced, and a film having a slack section between the retarding device and film advancing means during a portion of each cycle of the machine, said device and means acting upon said section to remove the slack and irregularities therein during one portion of the cycle of the machine and thereafter to advance the same during another portion of the same cycle of the machine.

4. In a moving picture machine provided with an exposure opening, the combination with film retarding and take-up devices, of a film advancing member, having a stroke potentially capable of advancing a greater amount of film past the exposure opening during each cycle of the machine than the amount of film actually to be advanced, and located intermediate the retarding and take-up devices, acting to take up the slack of and to remove irregularities in the film during the first part of its stroke and to advance the film past the exposure opening during the the second part of its stroke.

5. In a moving picture machine provided with an exposure opening, the combination with film retarding and take-up devices, of a film beater, having a stroke potentially capable of advancing a greater amount of film past the exposure opening during each cycle of the machine than the amount of film actually to be advanced, and located intermediate the retarding and take-up devices acting to take up the slack of and to remove irregularities in the film during the first part of its stroke and to advance the film past the exposure opening during the second part of its stroke.

[Claims 6 to 27 not printed in the Gazette.]

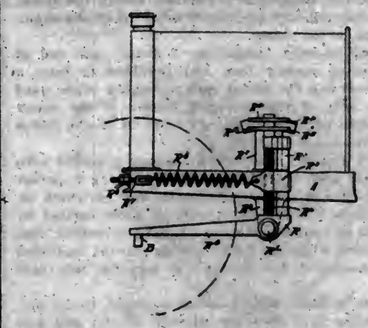
1,020,384. **SAFETY HAT-PIN.** WILLIAM S. CHILDRESS, Kansas City, Mo. Filed Mar. 10, 1911. Serial No. 613,554. (Cl. 24—155.)



A guard for hat pins, including a casing, a core therein and having a pin receiving opening in one end exposed in one end of the casing, a toothed gripping member fixedly seated within the core and in the path of the inserted pin, and yielding means for binding the pin upon said gripping member.

1,020,385. **ROAD-VEHICLE SUSPENSION ARRANGEMENT.** LEONARD EUGENE COWEY, Kew Gardens, England. Original application filed Feb. 6, 1909, Serial No. 476,561. Divided and this application filed Oct. 24, 1910. Serial No. 588,967. (Cl. 21—101.)

1. In a road vehicle suspension arrangement, the combination with the wheel axle and the vehicle frame, of a frame supporting lever interposed between the frame and the axle, a spring attached to the lever and means controlled by the relative movements of the frame and axle for moving the point of attachment of the spring along the lever to and from the fulcrum.



2. In a road vehicle suspension arrangement, the combination with the wheel axle and the vehicle frame, of a spring supporting the frame, a device for varying the supporting power of the said spring in either direction about a mean position, means for controlling the said varying device having two members adapted to move unidirectionally, and connections from the said members to the vehicle frame adapted to operate them one at a time by relative movements of the frame and axle on either side of a mean position.

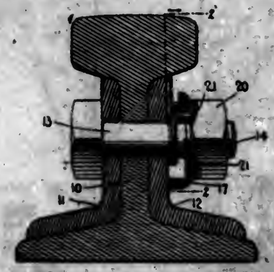
3. In a road vehicle suspension arrangement, the combination with the wheel axle and the vehicle frame of a bell crank lever pivoted to the vehicle frame and having one arm connected to the axle, a member slidably mounted on the other arm, a spring connected to such member and to the vehicle frame and means for automatically varying the position of the member on the bell crank lever arm.

4. In a road vehicle suspension arrangement, the combination with the wheel axle and the vehicle frame of a spring connected to the vehicle frame, a bell crank lever pivoted to the vehicle frame and having one arm connected to the axle, a nut slidably mounted upon the other arm of the bell crank lever and connected to the spring, a screw passing through such nut and rotatably carried by the said arm, and gearing actuated by relative movements of the axle and vehicle frame for rotating the screw in either direction.

5. In a road vehicle suspension arrangement, the combination with the wheel axle and the vehicle frame, of a spring connected to the vehicle frame, a bell crank lever pivoted to the vehicle frame and having one arm connected to the axle, a nut slidably mounted upon the other arm of the bell crank lever and connected to the spring, a screw spindle passing through such nut and rotatably carried by the said arm, two gear wheels mounted on the said screw spindle and adapted to turn it singly in opposite directions, and two fixed racks on the vehicle frame, concentric with the lever pivot and adapted to engage the said gear wheels alternately on either side of the mean position.

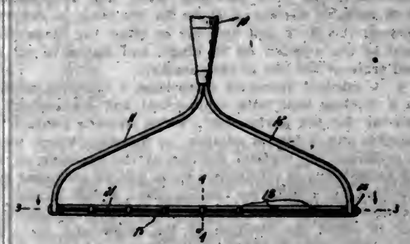
1,020,386. **NUT-LOCK.** ROBERT EMPY EBBS and JAMES ALEXANDER MCCULLER, Gurdon, Ark. Filed Sept. 19, 1910. Serial No. 582,645. (Cl. 151—39.)

In a nut lock, the combination with an apertured member provided with a lateral extension, of a bolt inserted through the aperture thereof, a nut on said bolt having a plurality of recesses in its inner face, a housing between the nut and the member through which the bolt extends, said housing being formed of a cylindrical tubular member having an inwardly directed flange on the end thereof adjacent the nut provided with a radial recess in its free edge, and further having a recess in the edge of its cylindrical side wall which is adjacent the apertured member, and a helicoidally coiled resilient washer surrounding the bolt and disposed within the housing, said washer having its forward end directed longitudinally of the bolt and projecting through the recess in the flange and engaging successively in the recesses in the inner face of the nut during the locking rotation of the latter, and further having its other end extended tangentially



to the convolutions of the coil through the recess in the side wall of the housing and engaging the lateral extension of the apertured member under tension whereby said washer and housing are held against rotation under the influence of the final locking rotation of the nut.

1,020,387. **RAKE.** LOUIS E. GREENE, Cleghorn, Iowa. Filed Dec. 21, 1911. Serial No. 667,144. (Cl. 55—10.)



A rake comprising a handle, diverging head supporting arms secured to one end of said handle and having their outer ends correspondingly bent, a head supported between the bent ends of said arms and provided with a plurality of tooth receiving openings, teeth removably disposed in said openings respectively, eyes formed on the upper ends of said teeth, and a locking bolt removably inserted through the bent ends of said arms and through the eyes of said teeth.

1,020,388. **LOOM.** WILLIAM HARRIS, Paterson, N. J. Filed Mar. 26, 1909. Serial No. 485,891. (Cl. 39—61.)



1. In a loom, the combination of the frame, means for guiding the warp and finished goods, a rotary warp-supply device and a rotary receiving device for the finished goods disposed with their axes parallel and off-set with relation to each other, the latter being driven rotatively from and in the reverse direction to the former, whereby to wind the goods on the receiving device as the warp is unwound from the supply device, substantially as described.

2. In a loom, the combination of the frame, means for guiding the warp and finished goods, a rotary warp-supply device and a rotary receiving device for the finished goods disposed with their axes parallel and off-set with relation to each other, the latter being driven rotatively from and in the reverse direction to the former, whereby to wind the goods on the receiving device as the warp is unwound from the supply device, substantially as described.

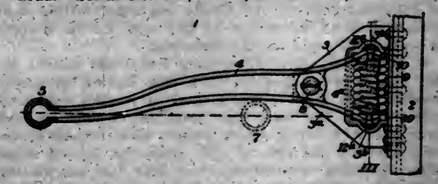
3. In a loom, the combination of the frame, means for guiding the warp and finished goods, a rotary warp-supply device and a rotary receiving device for the finished goods disposed with their axes offset with relation to each other, the latter being driven rotatively from the former, whereby to wind the goods on the receiving device as the warp is unwound from the supply device, substantially as described.

4. In a loom, the combination of the frame, means for guiding the warp and finished goods, two rotary members disposed with their axes offset with relation to each other, the latter being driven rotatively from and in the reverse direction to the former, and a rotary warp supply device and a rotary receiving device for the finished goods respectively arranged removably on said members, substantially as described.

5. In a loom, the combination of the frame, a rotary warp-supply device, a rotary receiving device for the finished goods, said devices being mutually coöperative, and means for guiding the warp and finished goods comprising a part advanceable in the frame in the direction of the length of the axis of the receiving device, said frame comprising supporting means for said part recessed to receive the same, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,020,389. **CENTERING DEVICE FOR RADIAL-DRAFT GEARS.** ERNEST H. SCHMIDT, Cleveland, Ohio, assignor to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed June 5, 1911. Serial No. 631,377. (Cl. 213—42.)



1. In a radial draft gear, a centering device comprising a single pivoted guiding arm forming a connection between the draft gear and the car truck, said arm having the portion thereof which is connected to the draft gear extending in the center line of the draft gear, and having that portion which is adjacent to the draft gear pivot pin offset laterally with respect to said pivot pin; substantially as described.

2. In a radial draft gear, a centering device comprising a single pivoted guiding arm forming a connection between the draft gear and the car truck, said arm having the portion thereof which is connected to the draft gear extending in the center line of the draft gear, and having that portion which is adjacent to the draft gear pivot pin offset laterally with respect to said pivot pin, and a spring device associated with said arm to tend to hold it in its normal central position; substantially as described.

3. In a radial draft gear, a centering device comprising a single pivoted guiding arm forming a connection between the draft gear and the car truck, said arm having the portion thereof which is connected to the draft gear extending in the center line of the draft gear, and having that portion which is adjacent to the draft gear pivot pin offset laterally with respect to said pivot pin, and centering springs connected to the offset portion of the arm; substantially as described.

film retarding device to remove said slack and irregularities in the film prior to the next film advancing movement.

2. In a moving picture machine having an exposure opening, the combination with a film, of a film retarding device and film advancing means, the latter potentially capable of advancing a greater amount of film past the exposure opening during each cycle of the machine than the amount of film actually to be advanced, said device and means acting upon said film to intermittently advance the same past the exposure opening, and to produce a slack section therein after the film is advanced and to remove said slack and irregularities in said film prior to the next advance of the film past the exposure opening.

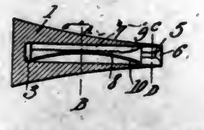
3. In a moving picture machine having an exposure opening, the combination of a film retarding device, film advancing means potentially capable of advancing a greater amount of film past the exposure opening during each cycle of the machine than the amount of film actually to be advanced, and a film having a slack section between the retarding device and film advancing means during a portion of each cycle of the machine, said device and means acting upon said section to remove the slack and irregularities therein during one portion of the cycle of the machine and thereafter to advance the same during another portion of the same cycle of the machine.

4. In a moving picture machine provided with an exposure opening, the combination with film retarding and take-up devices, of a film advancing member, having a stroke potentially capable of advancing a greater amount of film past the exposure opening during each cycle of the machine than the amount of film actually to be advanced, and located intermediate the retarding and take-up devices, acting to take up the slack of and to remove irregularities in the film during the first part of its stroke and to advance the film past the exposure opening during the the second part of its stroke.

5. In a moving picture machine provided with an exposure opening, the combination with film retarding and take-up devices, of a film beater, having a stroke potentially capable of advancing a greater amount of film past the exposure opening during each cycle of the machine than the amount of film actually to be advanced, and located intermediate the retarding and take-up devices acting to take up the slack of and to remove irregularities in the film during the first part of its stroke and to advance the film past the exposure opening during the second part of its stroke.

[Claims 6 to 27 not printed in the Gazette.]

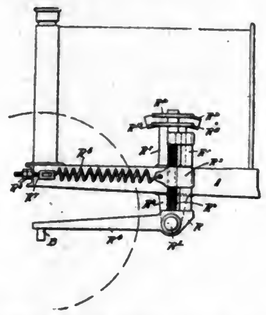
1,020,384. SAFETY HAT-PIN. WILLIAM S. CHILDRESS, Kansas City, Mo. Filed Mar. 10, 1911. Serial No. 613,554. (Cl. 24—155.)



A guard for hat pins, including a casing, a core therein and having a pin receiving opening in one end exposed in one end of the casing, a toothed gripping member fixedly seated within the core and in the path of the inserted pin, and yielding means for binding the pin upon said gripping member.

1,020,385. ROAD-VEHICLE SUSPENSION ARRANGEMENT. LEONARD EUGENE COWEY, Kew Gardens, England. Original application filed Feb. 6, 1909, Serial No. 476,551. Divided and this application filed Oct. 24, 1910. Serial No. 588,867. (Cl. 21—101.)

1. In a road vehicle suspension arrangement, the combination with the wheel axle and the vehicle frame, of a frame supporting lever interposed between the frame and the axle, a spring attached to the lever and means controlled by the relative movements of the frame and axle for moving the point of attachment of the spring along the lever to and from the fulcrum.



2. In a road vehicle suspension arrangement, the combination with the wheel axle and the vehicle frame, of a spring supporting the frame, a device for varying the supporting power of the said spring in either direction about a mean position, means for controlling the said varying device having two members adapted to move unidirectionally, and connections from the said members to the vehicle frame adapted to operate them one at a time by relative movements of the frame and axle on either side of a mean position.

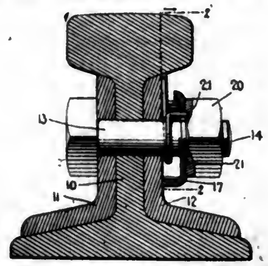
3. In a road vehicle suspension arrangement, the combination with the wheel axle and the vehicle frame of a bell crank lever pivoted to the vehicle frame and having one arm connected to the axle, a member slidably mounted on the other arm, a spring connected to such member and to the vehicle frame and means for automatically varying the position of the member on the bell crank lever arm.

4. In a road vehicle suspension arrangement, the combination with the wheel axle and the vehicle frame of a spring connected to the vehicle frame, a bell crank lever pivoted to the vehicle frame and having one arm connected to the axle, a nut slidably mounted upon the other arm of the bell crank lever and connected to the spring, a screw passing through such nut and rotatably carried by the said arm, and gearing actuated by relative movements of the axle and vehicle frame for rotating the screw in either direction.

5. In a road vehicle suspension arrangement, the combination with the wheel axle and the vehicle frame, of a spring connected to the vehicle frame, a bell crank lever pivoted to the vehicle frame and having one arm connected to the axle, a nut slidably mounted upon the other arm of the bell crank lever and connected to the spring, a screw spindle passing through such nut and rotatably carried by the said arm, two gear wheels mounted on the said screw spindle and adapted to turn it singly in opposite directions, and two fixed racks on the vehicle frame, concentric with the lever pivot and adapted to engage the said gear wheels alternately on either side of the mean position.

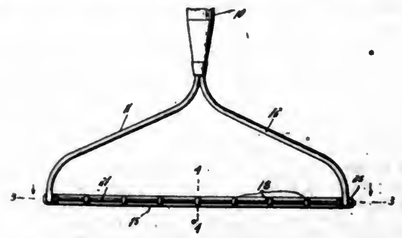
1,020,386. NUT-LOCK. ROBERT ESPY EBBS and JAMES ALEXANDER MCCULLER, Gurdon, Ark. Filed Sept. 19, 1910. Serial No. 582,645. (Cl. 151—39.)

In a nut lock, the combination with an apertured member provided with a lateral extension, of a bolt inserted through the aperture thereof, a nut on said bolt having a plurality of recesses in its inner face, a housing between the nut and the member through which the bolt extends, said housing being formed of a cylindrical tubular member having an inwardly directed flange on the end thereof adjacent the nut provided with a radial recess in its free edge, and further having a recess in the edge of its cylindrical side wall which is adjacent the apertured member, and a helicoidally coiled resilient washer surrounding the bolt and disposed within the housing, said washer having its forward end directed longitudinally of the bolt and projecting through the recess in the flange and engaging successively in the recesses in the inner face of the nut during the locking rotation of the latter, and further having its other end extended tangentially



to the convolutions of the coil through the recess in the side wall of the housing and engaging the lateral extension of the apertured member under tension whereby said washer and housing are held against rotation under the influence of the final locking rotation of the nut.

1,020,387. RAKE. LOUIS E. GREENE, Cleghorn, Iowa. Filed Dec. 21, 1911. Serial No. 667,144. (Cl. 55—10.)



A rake comprising a handle, diverging head supporting arms secured to one end of said handle and having their outer ends correspondingly bent, a head supported between the bent ends of said arms and provided with a plurality of tooth receiving openings, teeth removably disposed in said openings respectively, eyes formed on the upper ends of said teeth, and a locking bolt removably inserted through the bent ends of said arms and through the eyes of said teeth.

1,020,388. LOOM. WILLIAM HARRIS, Paterson, N. J. Filed Mar. 26, 1909. Serial No. 485,891. (Cl. 39—61.)



1. In a loom, the combination of the frame, means for guiding the warp and finished goods, a rotary warp-supply device and a rotary receiving device for the finished goods disposed with their axes off-set with relation to each other, the latter being driven rotatively from and in the reverse direction to the former, whereby to wind the goods on the receiving device as the warp is unwound from the supply device, substantially as described.

2. In a loom, the combination of the frame, means for guiding the warp and finished goods, a rotary warp-supply device and a rotary receiving device for the finished goods disposed with their axes parallel and off-set with relation to each other, the latter being driven rotatively from and in the reverse direction to the former, whereby to wind the goods on the receiving device as the warp is unwound from the supply device, substantially as described.

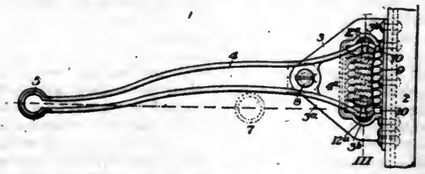
3. In a loom, the combination of the frame, means for guiding the warp and finished goods, a rotary warp-supply device and a rotary receiving device for the finished goods disposed with their axes offset with relation to each other, the latter being driven rotatively from the former, whereby to wind the goods on the receiving device as the warp is unwound from the supply device, substantially as described.

4. In a loom, the combination of the frame, means for guiding the warp and finished goods, two rotary members disposed with their axes offset with relation to each other, the latter being driven rotatively from and in the reverse direction to the former, and a rotary warp supply device and a rotary receiving device for the finished goods respectively arranged removably on said members, substantially as described.

5. In a loom, the combination of the frame, a rotary warp-supply device, a rotary receiving device for the finished goods, said devices being mutually coöperative, and means for guiding the warp and finished goods comprising a part advanceable in the frame in the direction of the length of the axis of the receiving device, said frame comprising supporting means for said part recessed to receive the same, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,020,389. CENTERING DEVICE FOR RADIAL-DRAFT GEARS. ERNEST H. SCHMIDT, Cleveland, Ohio, assignor to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed June 5, 1911. Serial No. 631,377. (Cl. 213—42.)

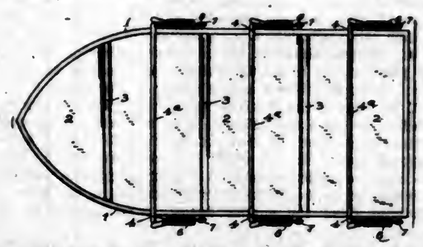


1. In a radial draft gear, a centering device comprising a single pivoted guiding arm forming a connection between the draft gear and the car truck, said arm having the portion thereof which is connected to the draft gear extending in the center line of the draft gear, and having that portion which is adjacent to the draft gear pivot pin offset laterally with respect to said pivot pin; substantially as described.

2. In a radial draft gear, a centering device comprising a single pivoted guiding arm forming a connection between the draft gear and the car truck, said arm having the portion thereof which is connected to the draft gear extending in the center line of the draft gear, and having that portion which is adjacent to the draft gear pivot pin offset laterally with respect to said pivot pin, and a spring device associated with said arm to tend to hold it in its normal central position; substantially as described.

3. In a radial draft gear, a centering device comprising a single pivoted guiding arm forming a connection between the draft gear and the car truck, said arm having the portion thereof which is connected to the draft gear extending in the center line of the draft gear, and having that portion which is adjacent to the draft gear pivot pin offset laterally with respect to said pivot pin, and centering springs connected to the offset portion of the arm; substantially as described.

1,020,390. COMBINED STAND, WAXING DEVICE, AND CLEANER FOR FLAT-IRONS. ROBERT T. BLAKELEY, Bridgeport, Conn., assignor to Heaton Wright, trustee, New Haven, Conn. Filed Apr. 18, 1911. Serial No. 621,838. (Cl. 68—27.)



1. A device of the character described, comprising a base, a waxing compound supported thereby and having transverse gutters, and spring actuated stand wires pivoted to said base and capable of being collapsed within said gutters.

2. A device of the character described, comprising a base, a waxing compound supported thereby and projecting above the upper horizontal plane thereof and provided with spaced transversely extending gutters, stand wires having depressed horizontal portions transversely disposed above said compound and downwardly extending end portions that are pivoted to opposite sides of said base, and springs for normally elevating said wires above said compound, whereby when said wires are collapsed with a flat iron resting thereon said depressed portions will enter said gutters and said iron brought into contact with said compound.

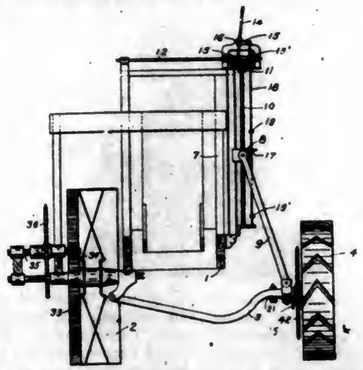
3. In a combined stand, waxing device and cleaner for flat irons, the combination of a base, a waxing compound sheet supported thereby and projecting thereabove and having formed therein spaced gutters which extend transversely across the face of said compound, and resiliently uplifted collapsible supports for the iron which supports in collapsed position are wholly contained within said gutters whereby the bottom of said iron will be brought in contact with said waxing compound.

4. In a combined stand, waxing device and cleaner for flat irons, the combination of a base having oppositely disposed slots in its sides, a sheet of waxing compound supported by said base and projecting thereabove and having formed therein spaced gutters which extend transversely across the face of said compound, spaced stand wires extending transversely above said base and having depressed central portions and with their end portions bent at right angles and pivoted to opposite sides of said base the extreme ends of said wires beyond the pivotal points bent and extended within said slots, and springs whose extremities are secured to pins extending from the sides of said base and to said wires whereby the latter are normally returned to elevated position with said extreme ends in abutment against the lower walls of said slots.

1,020,391. SIDEHILL-HARVESTER. CLARENCE LEO BEST, San Leandro, Cal., assignor to The Best Manufacturing Company, San Leandro, Cal., a Corporation of California. Filed July 2, 1909. Serial No. 505,741. (Cl. 56—29.)

1. A side-hill harvester comprising a thresher mounted on a leveling base with main-wheel and grain-wheel, an axle-bar for the grain wheel which extends beneath the thresher and is hinged adjacent to the main-wheel and intermediate the sides of the main wheel, means to maintain the vertical position of the thresher on hillsides consisting of mechanism adapted to effect the hinge movement of the axle-bar on its hinge, and means to cut and feed grain or the like to the thresher.

2. A side-hill harvester comprising a thresher mounted on a leveling base with a main-wheel and a grain-wheel, an axle-bar for the grain-wheel which extends beneath the thresher and is hinged adjacent to the main-wheel, means to maintain the vertical position of the thresher on side-hills consisting of a screw adapted to effect the hinge movement of the axle-bar on its hinge, and means to cut and feed grain or the like to the thresher.



3. A side-hill harvester comprising a thresher mounted on a leveling base with main-wheel and grain-wheel, an axle-bar for the grain-wheel which extends beneath the thresher and is hinged adjacent to the main-wheel, means to maintain the vertical position of the thresher on hillsides consisting of a rotatable screw and an abutment-block movable thereby, a guide for the block, a link-brace between the block and axle-bar to effect the hinge movement of the axle-bar on its hinge, and means to cut and feed grain or the like to the thresher.

4. A side-hill harvester comprising a thresher mounted on a leveling base with main-wheel and grain-wheel, an axle-bar for the grain-wheel, which extends beneath the thresher and is hinged adjacent to the main wheel, means to maintain the vertical position of the thresher on hillsides consisting of a rotatable screw and an abutment movable thereby, a guide for the abutment, a link between the abutment and axle-bar, power connections engageable at will to effect the rotation of the screw and the hinge movement of the axle-bar on its hinge, and means to cut and feed grain or the like to the thresher.

5. A side-hill harvester comprising, a thresher mounted on a frame, a main-wheel and a guide-wheel journaled on the frame, a grain-wheel journaled on an axle-bar which extends beneath the frame and is hinged thereto, a brace attached to the axle-bar and which extends forwardly to a hinge whereby it is connected to the frame, connections between the frame and axle-bar adapted to effect the hinge movement of the axle-bar on its hinge and maintain the position of the thresher, and means to cut and feed grain or the like to the thresher.

[Claims 6 to 16 not printed in the Gazette.]

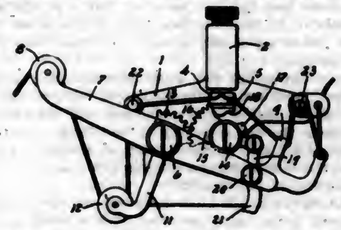
REISSUES.

13,381. THREAD TAKE-UP FOR SEWING-MACHINES. WILLIAM R. BLAIR, St. Louis, Mo., assignor to Landis Machine Company, St. Louis, Mo., a Corporation of Missouri. Filed Jan. 16, 1912. Serial No. 671,393. Original No. 978,832, dated Dec. 20, 1910, Serial No. 568,732. (Cl. 112—26.)

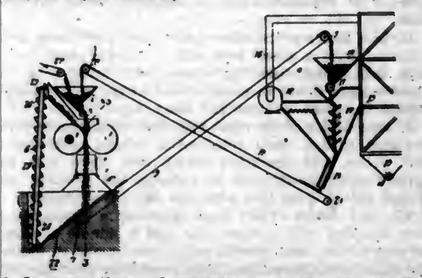
1. A take-up device, comprising a thread clamp, a lever with a thread engaging part at each end, means for operating the same, an auxiliary lever, and means connecting the two levers, whereby the auxiliary lever is operated in conjunction with the first lever, and having a portion adapted to operate the thread clamp.

2. A take-up device, comprising a pivoted lever, a second lever mounted on the same pivot as the first lever, and a gear connection between the two levers, whereby both levers may be actuated from the same means.

3. A take-up device comprising a lever with a thread engaging part, a second lever with a thread engaging part having a segmental gear attached, an independently mounted gear meshing with said segmental gear, and a link connecting the latter gear with the first mentioned lever.



13,382. CRUSHING AND SEPARATING FINE MATERIALS. THOMAS A. EDISON, Llewellyn Park, West Orange, N. J. Filed Feb. 3, 1912. Serial No. 675,973. Original No. 1,002,504, dated Sept. 5, 1911, Serial No. 476,488. (Cl. 83—54.)



1. In separating and crushing apparatus, in combination, crushing means, feeding means for the same, means for dividing the crushed material indiscriminately into two divisions bearing a definite ratio to each other, separating means, means for conveying one division of the crushed material to the separating means, means for conveying the tailings from the separating means back to the feed for the crushing means, and means for conveying the other division of the crushed material back to the feed for the crushing means, substantially as described.

2. In separating and crushing apparatus, in combination, crushing means, feeding means for the same, means for dividing the crushed material as it leaves the crushing means indiscriminately into two divisions bearing a definite ratio to each other, means for returning one division of the crushed material immediately to the feed for the crushing means, and means for conveying the other division of the crushed material to a separator, and said separator, substantially as described.

3. In separating and crushing apparatus, in combination, crushing means, feeding means for the same, adjustable means for dividing the crushed material as it leaves the crushing means indiscriminately into two divisions bearing a definite ratio to each other, and means for returning one division of the crushed material immediately to the feed for the crushing means, substantially as described.

4. In separating and crushing apparatus, in combination, crushing rolls, a hopper for the same, means for separating the crushed material indiscriminately into two parts, a continuously operating elevator for conveying one of said parts back to the hopper, and continuously operating means for conveying the other part to a separator, said separator, and means for returning the tailings of said separator to said hopper, substantially as described.

5. In separating and crushing apparatus, in combination, crushing rolls, a hopper for the same, adjustable means adjustable transversely to the direction of rotation of the rolls for separating the crushed material indiscriminately into two parts, a continuously operating elevator for conveying one of said parts back to the hopper, and continuously operating means for conveying the other part to a separator, said separator, and means for returning the tailings of said separator to said hopper, substantially as described.

6. In separating and crushing apparatus, in combination, crushing rolls, a hopper for the same, means for separating the crushed material indiscriminately into two parts, a continuously operating elevator for conveying one of said parts back to the hopper, and continuously operating means for conveying the other part to a separator, said separator including means for separately recovering the finer particles, means for conveying away said finer particles, and means for returning the tailings of said separator to said hopper, substantially as described.

7. In separating and crushing apparatus, in combination, crushing rolls, a hopper for the same, means for separating the crushed material indiscriminately into two parts, a continuously operating elevator for conveying one of said parts back to the hopper, a separator and continuously operating means for conveying the other part to said separator, said separator including a blower for separating the finer particles from the residue, and dust chambers for settling the particles so separated, and means for returning the residue from said separator to said hopper, substantially as described.

8. In separating and crushing apparatus, in combination, a plurality of crushing means, feeding means for the same, means for dividing the crushed material indiscriminately as it leaves the various crushing means, means for returning one division of the material crushed by each crushing means immediately to the feed for the said crushing means, means for conveying the other divisions of the crushed material to a separator, said separator, and means for returning the tailings of said separator to the various feeding means, substantially as described.

9. The process of crushing and separating fine material, consisting in continuously performing the following operations: crushing material, dividing the crushed material into two parts, returning one of said parts for recrushing, separating fine particles from the other part, returning the residue for recrushing and adding uncrushed material in sufficient amount to replace the fine particles removed, substantially as described.

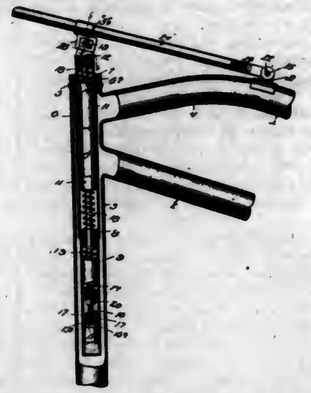
10. The process for crushing and separating fine material, consisting in continuously performing the following operations: crushing material, dividing the crushed material indiscriminately into two parts bearing a certain ratio, returning one of said parts for recrushing, separating fine particles from the other part, returning the residue for recrushing and adding uncrushed material in sufficient amount to replace the fine particles removed, substantially as described.

13,383. SPRING-SEAT POST. WILLIAM S. HARLEY, Milwaukee, Wis. Filed Dec. 26, 1911. Serial No. 667,997. Original No. 979,483, dated Dec. 27, 1910, Serial No. 558,598. (Cl. 208—61.)

1. In a vehicle frame having a horizontally disposed bar, a seat-mast in union with the horizontally disposed frame-bar, a spring-controlled seat-post in telescopic engagement with the seat-mast, and a seat-bar pivotally secured to said frame-bar; the combination of a grooved head extending from the seat-post, a pin carried by the head, a bearing-block loosely mounted upon the pin, and a slotted tongue carried by the seat-bar, the tongue being fitted within the seat-post head groove and having its slot in engagement with the bearing-block.

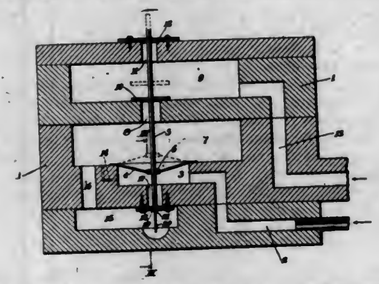
2. In a vehicle frame having a horizontally disposed bar, an oblique seat-mast in union with the frame-bar, a spring-controlled seat-post in telescopic engagement with the seat-mast, and a seat-bar pivotally secured to said frame-bar; the combination of a head secured to the seat-post, the head being longitudinally grooved and transversely apertured, a pin fitted in the head apertures, a bearing-block loosely mounted upon the pin within the head groove, and a tongue in connection with the saddle-bar, the tongue being provided with a slot engageable with

the bearing-block and arranged to have sliding fit within the seat-post head groove.



3. In a vehicle frame having a horizontally disposed bar, and an oblique seat-mast in union therewith, a spring-controlled seat-post in telescopic engagement with the seat-mast, a saddle-bar having one end pivotally secured to the horizontal frame-bar, the saddle-bar and seat-post head being in tongue and groove engagement, and a pin and slot hinge connection between the tongue and groove engaged parts.

13,384. PNEUMATIC APPARATUS. JOSEPH SCHWEARNER, New York, N. Y., assignor of one-third to John Aspinwall, Newburgh, N. Y., and one-third to Leopold F. A. H. Heerwagen, Hasbrouck Heights, N. J. Filed Aug. 17, 1911. Serial No. 644,921. Original No. 993,415, dated May 30, 1911, Serial No. 548,815. (Cl. 84—178.)



1. A device of the class described, provided with a bleed hole, a valve closure and a movable member controlling the valve closure, and means operating to keep the bleed hole clear controlled by said movable member, said means being also arranged to increase the effective cross section of the bleed hole when the valve is opened.

2. A device of the class described, provided with an operating spindle and membrane and a bleed hole leading to one side of the membrane, said spindle being arranged to operate within the bleed hole to keep the same clear, said spindle being also constructed to vary the effective size of the bleed hole as the device is operated.

3. A device of the class described, provided with an operating spindle and membrane and a bleed hole leading to one side of the membrane, said spindle being arranged to operate within the bleed hole to keep the same clear, said spindle being reduced in cross section adjacent the bleed hole to increase the effective size of the bleed hole when the device is opened.

4. A device of the class described, provided with an operating membrane and spindle, and a suitable framework having a suitable space above and below the membrane and a bleed hole leading to the space below the membrane, said bleed hole being formed in a metallic plate, said spindle being arranged to move up and down in said bleed hole to keep the same clear, and said spindle being reduced in cross section adjacent the bleed hole to increase the effective size of the bleed hole when the device is opened.

5. In a device of the class described, an operating membrane, said device being provided with a bleed hole leading to one side of said membrane and a spindle having portions thereof operating in said bleed hole to keep the same clear, said portions being of different cross section and the spindle being always in said bleed hole during the operation of the spindle.

6. In a device of the class described, an operating membrane, said device being provided with a bleed hole leading to one side of said membrane, and a spindle operating in said bleed hole to keep the same clear, said spindle having portions of different cross section, both of said portions being arranged to operate within said bleed hole.

7. In a device of the class described, an operating membrane, said device being provided with a bleed hole leading to one side of said membrane, and a spindle operating in said bleed hole to keep the same clear, said spindle being tapered at the part where it operates within the bleed hole.

8. In a device of the class described, a pneumatic action provided with a bleed hole, and a spindle controlled by said action and operating within said bleed hole, said spindle being varied in cross section at the part operating within the bleed to clean the bleed hole.

9. In a device of the class described, a pneumatic action provided with a bleed hole and a spindle controlled by said action and operating within said bleed hole, said spindle being constructed to increase the effective cross section of the bleed hole when the valve is operated.

10. In a device of the class described, a pneumatic action provided with a bleed hole and a spindle controlled by said action, said spindle being constructed to increase the effective cross-section of the bleed hole when the valve is operated to cause the action to more quickly return to its normal position.

11. The combination of a tracker board and tracker sheet with their apertures and operating mechanism controlled thereby, including a pneumatic action having a bleed hole and means for cleaning the bleed hole and increasing the effective cross-section of the bleed hole when the action is operated when an aperture in the tracker sheet registers with an aperture in the tracker board, said means embracing a spindle of varied cross-section operating in the bleed hole and controlled by the operating mechanism.

12. In a device of the class described, a pneumatic action, provided with a bleed hole and means for increasing the effective cross-section of said bleed hole when the action is operated pneumatically.

13. In a device of the class described a pneumatic action provided with a bleed hole, and a spindle controlled by said action and operating within said bleed hole, said spindle being reduced in cross-section at the part operating within the bleed to clean the bleed hole.

14. In a device of the class described, a pneumatic action provided with a bleed hole and a spindle controlled by said action, said spindle being constructed to increase the effective cross section of the bleed hole when the valve is operated, and to have a snug fit in the bleed hole when the valve is in the normal position except for slight leakage.

15. In a device of the class described, a pneumatic action provided with a bleed hole and an operating spindle and means rigid with the spindle arranged to push foreign matter out of said bleed hole.

16. In a device of the class described, a pneumatic action provided with a bleed hole and an operating spindle and means rigid with the spindle and having a surface at an angle to the movement of the spindle for pushing foreign matter out of the bleed hole.

17. In a device of the class described, a pneumatic action provided with a bleed hole and an operating spindle and means rigid with the spindle and having a surface which pushes dirt or foreign matter out of the bleed hole when the action is operated, said surface being constructed so that it comes out of the bleed hole when the action is operated.

18. In a device of the class described, a pneumatic action provided with a bleed hole and an operating spindle and means rigid with the spindle and having a surface at an angle to the movement of the spindle for pushing foreign matter out of the bleed hole, said surface being constructed so that it comes out of the bleed hole when the action is operated.

19. In a device of the class described, a pneumatic action having a bleed hole and an operating spindle, said spindle having a surface thereon at an angle to the line of movement of the spindle for pushing dirt and the like out of the bleed hole.

20. In a device of the class described, a pneumatic action having a bleed hole and an operating spindle, said spindle having a surface thereon at an angle to the line of movement of the spindle for pushing dirt and the like out of the bleed hole, said surface being arranged so that it comes out of the bleed hole when the action is operated.

21. A device of the class described provided with an operating membrane or the like, a bleed hole, and a slidably mounted cleaning member for said bleed hole, said member being moved by said membrane or the like and having a surface thereon at an angle to its line of movement to push dirt out of the bleed hole.

22. A device of the class described provided with an operating membrane or the like, a bleed hole therefor, a cleaning member for said bleed hole moved by said membrane, said member being provided with a surface at an angle to its line of movement to push dirt out of the bleed hole, and guiding means through which said member slides to keep it in alinement.

23. A device of the class described provided with an operating membrane or the like, a bleed hole, a cleaning member for the bleed hole moved by said membrane or the like, said member having a surface thereon at an angle to its line of movement to push dirt out of the bleed hole, and said member being always in said bleed hole during the operation of the membrane.

24. A device of the class described provided with an operating membrane or the like, a bleed hole and a slidably mounted cleaning member operating in said bleed hole, said member being moved by said membrane or the like and arranged to increase the effective cross section of the bleed hole when the membrane is pneumatically operated.

25. A pneumatic device of the class described provided with a bleed hole through which air is adapted to be sucked, and a slidably mounted member operated by the device and operating snugly in said hole, said member having a surface at an angle to its line of movement, and said surface being arranged to move entirely through said hole from one side to the other side of said hole.

26. A valve device provided with a hole through which air is adapted to be sucked, and a slidably mounted cleaning member operated by te device and operating in said hole, said member having a surface at an angle to its line of movement for pushing dirt out of the bleed hole, and said surface being arranged to move in and out of said hole, and said member being guided by said hole.

DESIGNS.

42,266. STAMPED-METAL FRAMED PICTURE. HARRY L. BEACH, Coshocton, Ohio, assignor to Charles E. Hires Co., Philadelphia, Pa. Filed Nov. 30, 1909. Serial No. 530,697. Term of patent 14 years.



The ornamental design for a stamped metal framed picture, as shown and described.

42,267. BADGE. RODNEY H. BRANDON, Anderson, Ind. Filed Nov. 28, 1911. Serial No. 662,923. Term of patent 3½ years.



The ornamental design for a badge as shown.

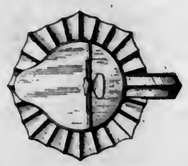
42,268. ICE-CHEST FOR LIQUID-DISPENSING APPARATUS. FRANK W. CALVERT, Narberth, Pa., assignor to The Charles E. Hires Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Aug. 19, 1908. Serial No. 449,387. Term of patent 14 years.



The ornamental design for an ice chest for liquid dispensing apparatus, as shown and described.

42,269. PITCHER OR CAN. ISAAC J. COLLINS, Lancaster, Ohio. Filed Sept. 25, 1911. Serial No. 651,303. Term of patent 7 years.





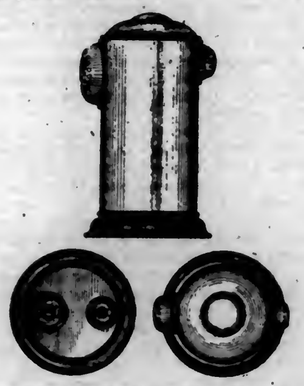
The ornamental design for a pitcher or can, as shown.

42,270. PITCHER OR CAN. ISAAC J. COLLINS, Lancaster, Ohio. Filed Sept. 25, 1911. Serial No. 651,304. Term of patent 7 years.



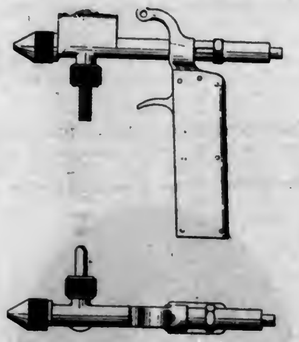
The ornamental design for a pitcher or can, as shown.

42,271. CONDIMENT-SHAKER. CHARLES A. CONGER, Oakland, Cal. Filed Dec. 7, 1911. Serial No. 664,490. Term of patent 14 years.



The ornamental design for a condiment shaker, as shown.

42,272. FRAME FOR AIR-BRUSHES. THOMAS A. DE VILBISS, Toledo, Ohio. Filed Sept. 28, 1911. Serial No. 651,869. Term of patent 14 years.



The ornamental design for a frame for air-brushes, as shown.

42,273. SPOON OR FORK. WILLIAM B. H. DOWSE, Newton, Mass. Filed May 31, 1910. Serial No. 564,332. Term of patent 14 years.



The ornamental design for a spoon or fork, as shown.

42,274. CARPET. WILLIAM A. ELLIOT, Yonkers, N. Y., assignor to Bigelow Carpet Company, a Corporation of Massachusetts. Filed Jan. 9, 1912. Serial No. 670,321. Term of patent 3½ years.



The ornamental design for a carpet, as shown.

42,275. CARPET. WILLIAM A. ELLIOT, Yonkers, N. Y., assignor to Bigelow Carpet Company, a Corporation of Massachusetts. Filed Jan. 9, 1912. Serial No. 670,322. Term of patent 3½ years.



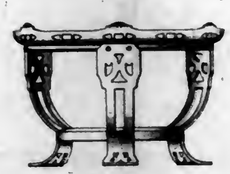
The ornamental design for a carpet, as shown.

42,276. AUTOMOBILE BOW-REST. JOSEPH ERRET, Cleveland, Ohio. Filed Apr. 12, 1911. Serial No. 620,703. Term of patent 14 years.



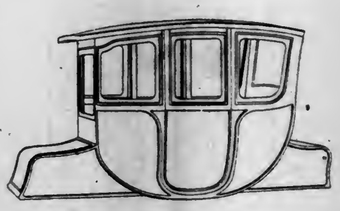
The ornamental design for an automobile bow rest, as shown and described.

42,277. CHAFING-DISH STAND. EDWARD A. FARR, Meriden, Conn., assignor to Manning, Bowman & Company, Meriden, Conn., a Corporation of Connecticut. Filed Dec. 26, 1911. Serial No. 668,002. Term of patent 7 years.



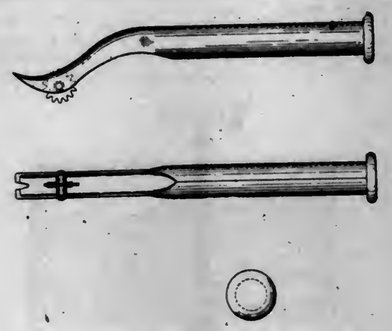
The ornamental design for a chafing dish stand as shown.

42,278. VEHICLE-BODY. OLIVER P. FRITCHLE, Denver, Colo., assignor to The Fritchle Automobile and Battery Co., Denver, Colo., a Corporation of Colorado. Filed Dec. 1, 1911. Serial No. 663,453. Term of patent 14 years.



The ornamental design for a vehicle body, as shown.

42,279. TACK-PULLER. ALEXIS F. GILLET, Omaha, Nebr. Filed Aug. 19, 1911. Serial No. 645,036. Term of patent 14 years.



The ornamental design for a tack puller as shown and described.

42,280. LAMP-POST. CHARLES EDWARD GRELLE, Portland, Oreg. Filed Jan. 2, 1912. Serial No. 669,109. Term of patent 7 years.



The ornamental design for a lamp-post, as shown.

42,281. LAMP-POST. CHARLES EDWARD GRELLE, Portland, Oreg. Filed Jan. 2, 1912. Serial No. 669,110. Term of patent 7 years.



The ornamental design for a lamp-post, as shown.

42,282. LAMP-POST. CHARLES EDWARD GRELLE, Portland, Oreg. Filed Jan. 2, 1912. Serial No. 669,111. Term of patent 7 years.



The ornamental design for a lamp-post, as shown.

42,283. LAMP-POST. CHARLES EDWARD GRELLE, Portland, Oreg. Filed Jan. 2, 1912. Serial No. 669,112. Term of patent 7 years.



The ornamental design for a lamp-post, as shown.

42,284. LAMP-POST. CHARLES EDWARD GRELLE, Portland, Oreg. Filed Jan. 2, 1912. Serial No. 669,113. Term of patent 7 years.



The ornamental design for a lamp-post, as shown.

42,285. LAMP-POST. CHARLES EDWARD GRELLE, Portland, Oreg. Filed Jan. 2, 1912. Serial No. 669,114. Term of patent 7 years.



The ornamental design for a lamp-post, as shown.

42,286. RING-SETTING FOR PRECIOUS STONES. BENJAMIN HUCHENBOME, Chicago, Ill. Filed Dec. 4, 1911. Serial No. 663,930. Term of patent 14 years.



The ornamental design for a ring setting for precious stones, as shown.

42,287. BOTTLE. FREDERICK F. INGRAM, Detroit, Mich., assignor to Frederick F. Ingram Company, Detroit, Mich., a Corporation of Michigan. Filed Dec. 28, 1911. Serial No. 667,549. Term of patent 14 years.



The ornamental design for a bottle, as shown.

42,288. RIBBON-BOW HOLDER. FRANK L. LEUBER, Chicago, Ill. Filed Nov. 28, 1911. Serial No. 662,922. Term of patent 3½ years.



The ornamental design for a ribbon bow holder as shown.

42,289. CARPET. MILTON R. LOUDON, Brooklyn, N. Y., assignor to Bigelow Carpet Company, a Corporation of Massachusetts. Filed Jan. 9, 1912. Serial No. 670,319. Term of patent 3½ years.



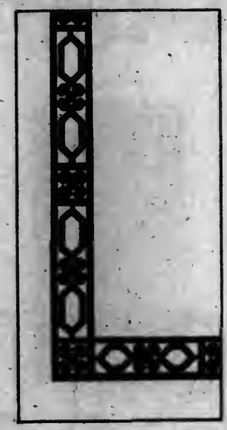
The ornamental design for a carpet, as shown.

42,290. WATCH DIAL. ROBERT JOHN GEORGE MCDONALD, Toronto, Ontario, Canada. Filed June 22, 1911. Serial No. 634,830. Term of patent 14 years.



The ornamental design for a watch dial as shown and described.

42,291. RUG. JOHN B. MOFFAT, Bronxville, N. Y., assignor to Bigelow Carpet Company, a Corporation of Massachusetts. Filed Jan. 9, 1912. Serial No. 670,303. Term of patent 7 years.



The ornamental design for a rug, as shown.

42,292. RUG. JOHN B. MOFFAT, Bronxville, N. Y., assignor to Bigelow Carpet Company, a Corporation of Massachusetts. Filed Jan. 9, 1912. Serial No. 670,804. Term of patent 7 years.



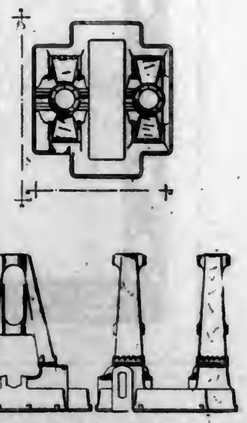
The ornamental design for a rug, as shown.

42,293. CARPET. JOHN B. MOFFAT, Bronxville, N. Y., assignor to Bigelow Carpet Company, a Corporation of Massachusetts. Filed Jan. 9, 1912. Serial No. 670,305. Term of patent 3½ years.



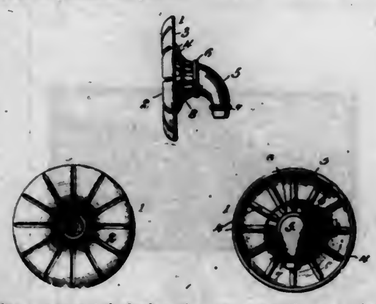
The ornamental design for a carpet, as shown.

42,294. MACHINE-FRAME. ERIK HERMAN ODERMAN, Waynesboro, Pa., assignor to Frick Company, Waynesboro, Pa., a Corporation. Filed Feb. 6, 1909. Serial No. 476,572. Term of patent 14 years.



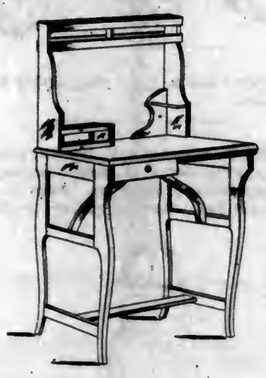
The ornamental design for a machine frame, substantially as shown.

42,295. ACOUSTIC EARPIECE. HERMAN G. PAPE, Buffalo, N. Y. Filed Dec. 28, 1908. Serial No. 469,735. Term of patent 14 years.



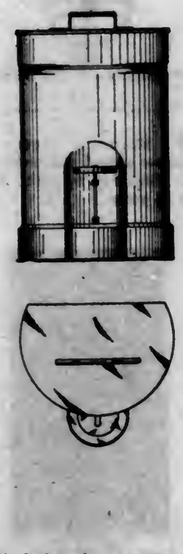
The ornamental design for an acoustic ear piece, as shown and described.

42,296. TYPE-WRITER TABLE. SIMON E. PEARSON and BERNARD D. GORMAN, Genoa, Nebr. Filed Nov. 8, 1911. Serial No. 659,254. Term of patent 7 years.



The ornamental design for a typewriter table, as shown.

42,297. GERM-EXTERMINATOR FOR DRINKING-RECEPTACLES. LOUIS G. PETERS and MORROW D. BROWN, Denver, Colo. Filed Sept. 30, 1911. Serial No. 652,081. Term of patent 7 years.



The ornamental design for a germ exterminator for drinking receptacles, as shown and described.

42,298. INSECT-TRAP. GEORGE RAINEY, Enid, Okla. Filed Oct. 11, 1911. Serial No. 654,160. Term of patent 14 years.



The ornamental design for an insect trap as shown.

42,299. RUG. WILLIAM G. REITH, New York, N. Y., assignor to Bigelow Carpet Company, a Corporation of Massachusetts. Filed Jan. 9, 1912. Serial No. 670,310. Term of patent 7 years.



The ornamental design for a rug, as shown.

42,300. CARPET. EMIL G. SAUER, Richmond Hill, N. Y., assignor to Bigelow Carpet Company, a Corporation of Massachusetts. Filed Jan. 9, 1912. Serial No. 670,311. Term of patent 3½ years.



The ornamental design for a carpet, as shown.

42,301. CARPET. EMIL G. SAUER, Richmond Hill, N. Y., assignor to Bigelow Carpet Company, a Corporation of Massachusetts. Filed Jan. 9, 1912. Serial No. 670,312. Term of patent 3½ years.



The ornamental design for a carpet, as shown.

42,302. CARPET. EMIL G. SAUER, Richmond Hill, N. Y., assignor to Bigelow Carpet Company, a Corporation of Massachusetts. Filed Jan. 9, 1912. Serial No. 670,313. Term of patent 3½ years.



The ornamental design for a carpet, as shown.

42,303. CARPET. EMIL G. SAUER, Richmond Hill, N. Y., assignor to Bigelow Carpet Company, a Corporation of Massachusetts. Filed Jan. 9, 1912. Serial No. 670,314. Term of patent 3½ years.



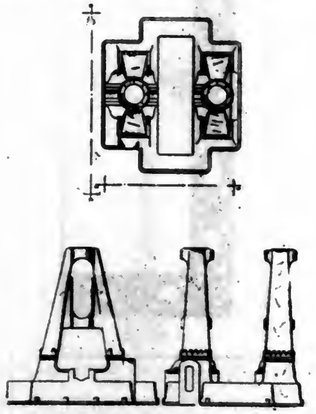
The ornamental design for a carpet, as shown.

42,293. CARPET. JOHN B. MOFFAT, Brookville, N. Y., assignor to Bigelow Carpet Company, a Corporation of Massachusetts. Filed Jan. 9, 1912. Serial No. 670,305. Term of patent 3½ years.



The ornamental design for a carpet, as shown.

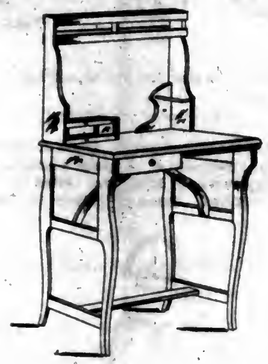
42,294. MACHINE-FRAME. ERIK HERMAN ODERMAN, Waynesboro, Pa., assignor to Frick Company, Waynesboro, Pa., a Corporation. Filed Feb. 6, 1909. Serial No. 476,572. Term of patent 14 years.



The ornamental design for a machine frame, substantially as shown.

42,295. ACOUSTIC EARPIECE. HERMAN G. PAPE, Buffalo, N. Y. Filed Dec. 28, 1908. Serial No. 469,735. Term of patent 14 years.

42,296. TYPE-WRITER TABLE. SIMON E. PEARSON and BERNARD D. GORMAN, Genoa, Nebr. Filed Nov. 8, 1911. Serial No. 659,254. Term of patent 7 years.



The ornamental design for a typewriter table, as shown.

42,297. GERM-EXTERMINATOR FOR DRINKING-RECEPTACLES. LOUIS G. PETERS and MORROW D. BROWN, Denver, Colo. Filed Sept. 30, 1911. Serial No. 652,081. Term of patent 7 years.



42,298. INSECT-TRAP. GEORGE RAINEY, Enid, Okla. Filed Oct. 11, 1911. Serial No. 654,160. Term of patent 14 years.



The ornamental design for an insect trap as shown.

42,299. RUG. WILLIAM G. REITH, New York, N. Y., assignor to Bigelow Carpet Company, a Corporation of Massachusetts. Filed Jan. 9, 1912. Serial No. 670,310. Term of patent 7 years.



The ornamental design for a rug, as shown.

42,300. CARPET. EMIL G. SAUER, Richmond Hill, N. Y., assignor to Bigelow Carpet Company, a Corporation of Massachusetts. Filed Jan. 9, 1912. Serial No. 670,311. Term of patent 3½ years.

42,301. CARPET. EMIL G. SAUER, Richmond Hill, N. Y., assignor to Bigelow Carpet Company, a Corporation of Massachusetts. Filed Jan. 9, 1912. Serial No. 670,312. Term of patent 3½ years.



The ornamental design for a carpet, as shown.

42,302. CARPET. EMIL G. SAUER, Richmond Hill, N. Y., assignor to Bigelow Carpet Company, a Corporation of Massachusetts. Filed Jan. 9, 1912. Serial No. 670,313. Term of patent 3½ years.



The ornamental design for a carpet, as shown.

42,303. CARPET. EMIL G. SAUER, Richmond Hill, N. Y., assignor to Bigelow Carpet Company, a Corporation of Massachusetts. Filed Jan. 9, 1912. Serial No. 670,314. Term of patent 3½ years.

42,304. RUG. EMIL G. SAUER, Richmond Hill, N. Y., assignor to Bigelow Carpet Company, a Corporation of Massachusetts. Filed Jan. 9, 1912. Serial No. 670,315. Term of patent 3½ years.



The ornamental design for a rug, as shown.

42,305. BOTTLE-OPENER. JOHN L. SOMMER, Newark, N. J., assignor to J. L. Sommer Mfg. Co., a Corporation of New Jersey. Filed Sept. 14, 1911. Serial No. 649,378. Term of patent 14 years.



The ornamental design for a bottle opener, as shown.

42,306. BOTTLE-OPENER. JOHN L. SOMMER, Newark, N. J., assignor to J. L. Sommer Mfg. Co., a Corporation of New Jersey. Filed Sept. 14, 1911. Serial No. 649,379. Term of patent 14 years.



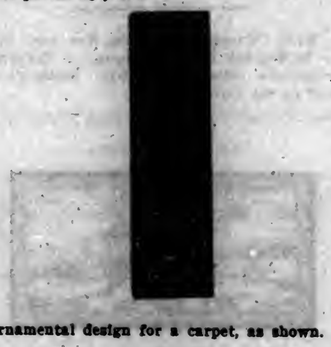
The ornamental design for a bottle opener, as shown.

42,307. CARPET. JOHN SPRING, New York, N. Y., assignor to Bigelow Carpet Company, a Corporation of Massachusetts. Filed Jan. 9, 1912. Serial No. 670,317. Term of patent 3½ years.



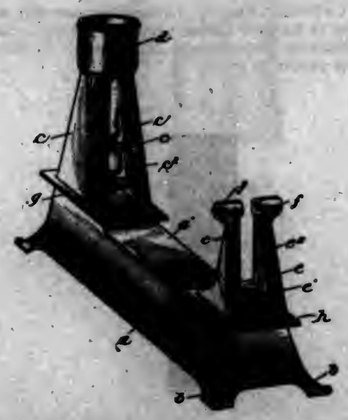
The ornamental design for a carpet, as shown.

42,308. CARPET. JOHN SPRING, New York, N. Y., assignor to Bigelow Carpet Company, a Corporation of Massachusetts. Filed Jan. 9, 1912. Serial No. 670,318. Term of patent 3½ years.



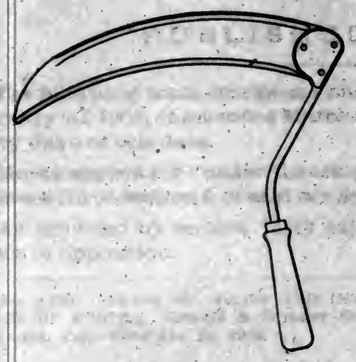
The ornamental design for a carpet, as shown.

42,309. CENTRIFUGAL-SEPARATOR FRAME. BENJAMIN STARCH and EMIL STARCH, La Crosse, Wis. Filed Nov. 29, 1911. Serial No. 663,040½. Term of patent 14 years.



The ornamental design for a centrifugal separator frame, as shown and described.

42,310. GRASS-HOOK. WALTER G. STEWART, Reading, Pa., assignor to Columbian Cutlery Company, Reading, Pa., a Corporation of Pennsylvania. Filed Mar. 26, 1910. Serial No. 551,809. Term of patent 14 years.



The ornamental design for a grass hook, as shown and described.

42,311. CARPET. ERNEST W. TRIK, Brooklyn, N. Y., assignor to Bigelow Carpet Company, a Corporation of Massachusetts. Filed Jan. 9, 1912. Serial No. 670,323. Term of patent 3½ years.



The ornamental design for a carpet, as shown.

42,312. CARPET. ERNEST W. TRIK, Brooklyn, N. Y., assignor to Bigelow Carpet Company, a Corporation of Massachusetts. Filed Jan. 9, 1912. Serial No. 670,324. Term of patent 3½ years.



The ornamental design for a carpet, as shown.

42,313. CARPET. ERNEST W. TRIK, Brooklyn, N. Y., assignor to Bigelow Carpet Company, a Corporation of Massachusetts. Filed Jan. 9, 1912. Serial No. 670,325. Term of patent 3½ years.



The ornamental design for a carpet, as shown.

42,314. VALVE. EDWARD B. WILFORD, Merion, Pa., assignor to Electro Dental Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Dec. 4, 1911. Serial No. 663,931. Term of patent 14 years.



The ornamental design for a valve, as shown.

TRADE-MARKS

PUBLISHED MARCH 12, 1912.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 2,820. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GREPSEN & SKELLEY CO., San Francisco, Cal. Filed Apr. 24, 1905.



Particular description of goods.—Seeded Raisins and Hermetically-Sealed Fruits.
Claims use since about 1900.

Ser. No. 6,911. (CLASS 17. TOBACCO PRODUCTS.) SANCHEZ & HAYA CO., Tampa, Fla. Filed May 29, 1905.



The picture shown being that of Shakespeare, the deceased poet and dramatist.
Particular description of goods.—Cigars.
Claims use since about 1872.

Ser. No. 6,912. (CLASS 17. TOBACCO PRODUCTS.) SANCHEZ & HAYA CO., Tampa, Fla. Filed May 29, 1905.



The picture shown being that of a deceased Duke of Veragua.
Particular description of goods.—Cigars.
Claims use since about 1893.

Ser. No. 6,915. (CLASS 17. TOBACCO PRODUCTS.) SANCHEZ & HAYA CO., Tampa, Fla. Filed May 29, 1905.



Particular description of goods.—Cigars.
Claims use since about 1874.

Ser. No. 19,767. (CLASS 17. TOBACCO PRODUCTS.) SANCHES & HAYA CO., Tampa, Fla. Filed May 22, 1906.



The portrait being that of the deceased actor, Salvini.
Particular description of goods.—Cigars.
Claims use since about 1865.

Ser. No. 31,536. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) PEERLESS RUBBER MANUFACTURING COMPANY, New York, N. Y. Filed Dec. 3, 1907.

COLONIAL

Particular description of goods.—Belting Composed of Rubber or Rubber and Fabric.
Claims use since January, 1888.

Ser. No. 39,487. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE S. HOWES COMPANY, Silver Creek, N. Y. Filed Dec. 22, 1908.



Particular description of goods.—Grain-Cleaners, Grain-Separators, Grain-Scourers, Grain-Polishers, Grain-Graders, Smut-Machines, Coffee and Rice Hullers, Separators, Polishers, and Graders, Flour Sifting, Mixing, and Blending Machines, Flour-Sampling Machines, Wheat Washing, Whizzing, and Drying Machines, Oat-Clipping Machines, Corn-Shellers, Grain-Aspirators, Bran and Middlings Dusters, and Dust-Collectors.
Claims use since Oct. 18, 1881.

Ser. No. 43,685. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FREDERICK WILLIAM HERTEL, Chicago, Ill. Filed July 22, 1909.

PURAPOUND

Particular description of goods.—Coffee, Tea, Cocoa, Sugar, Butter, Condensed Milk, Bread, Rice, Macaroni, Noodles, Prepared Cereal Breakfast Food, Prunes, Raisins, and Pepper.
Claims use since June, 1909.

Ser. No. 44,267. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CATHERINE HILL, Camden, N. J. Filed Aug. 21, 1909.

OIL-LENA

Particular description of goods.—A Preparation to be Used as a Hair-Tonic and for the Treatment of the Scalp.
Claims use since 1905.

Ser. No. 48,588. (CLASS 48. MALT EXTRACTS AND LIQUORS.) CREAM CITY BREWING COMPANY, Milwaukee, Wis. Filed Mar. 21, 1910.



Particular description of goods.—Beer.
Claims use since about Jan. 27, 1892.

Ser. No. 49,373. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) THE TOKHEIM MANUFACTURING COMPANY, Cedar Rapids, Iowa, assignor to John J. Tokheim, Cedar Rapids, Iowa. Filed Apr. 28, 1910.

VAC

Particular description of goods.—Liquid Measuring and Dispensing Machines.
Claims use since Mar. 23, 1910.

Ser. No. 51,740. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) THE SPIRELLA COMPANY, Meadville, Pa. Filed Sept. 9, 1910.

Spirella

Particular description of goods.—Surgical Bandages, Surgical Belts, Sanitary Belts, and Abdominal Belts.
Claims use since Sept. 1, 1907.

Ser. No. 52,452. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) EDWARD DONAHUE, Kenosha, Wis. Filed Oct. 26, 1910.

MAGIC

Particular description of goods.—Wood-Polish.
Claims use since Oct. 18, 1910.

Ser. No. 52,554. (CLASS 8. SMOKERS' ARTICLES, NOT INCLUDING TOBACCO PRODUCTS.) AMERICAN ANTI-CIGARETTE COMPANY, Roanoke, Va., and New York, N. Y. Filed Nov. 1, 1910.



Particular description of goods.—Receptacles for Cigaretts-Holders.
Claims use since Oct. 19, 1910.

Ser. No. 52,982. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE COLUMBIA TYPEWRITER MANUFACTURING COMPANY, New York, N. Y. Filed Nov. 25, 1910.

MASTER

Particular description of goods.—Type-Writers and Parts Thereof.
Claims use since on or about Jan. 1, 1910.

Ser. No. 53,077. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) THE NEW YORK AIR BRAKE COMPANY, New York and Watertown, N. Y. Filed Dec. 1, 1910.



Particular description of goods.—Air-Brakes and Parts Thereof.
Claims use since Jan. 15, 1906.

Ser. No. 53,124. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) RUSTICO, Wheeling, W. Va. Filed Dec. 3, 1910.

TIT TAT FINGER

Particular description of goods.—Games.
Claims use since Nov. 30, 1910.

Ser. No. 53,209. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE A. J. HARWI HARDWARE COMPANY, Atchison, Kans. Filed Dec. 10, 1910.



Particular description of goods.—Axes, Adzes, Hatchets, Grass-Hooks, Hammers, Handsaws, Wood-Saws, Auger-Bits, Auger-Bit Sets, Screw-Drivers, Chisels, Chisel Sets, Files, Rasps, (Wood,) Rasps, (Shoe,) Cold-Chisels, Machine-Punches, Lawn-Mowers, Corn-Knives, Spades, Shovels, Ax-Handles, Tinners' Snips, Pocket-Knives, Shears, Razors, Butcher-Knives, Paring-Knives, Ham-Slicers, Putty-Knives, Spatulas, and Carvers.
Claims use since Jan. 1, 1910.

Ser. No. 53,210. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE A. J. HARWI HARDWARE COMPANY, Atchison, Kans. Filed Dec. 10, 1910.



Particular description of goods.—Enameled Metal Ware; Galvanized Metal Ware; Tin Metal Ware; Japanned Metal Ware, and Carpet-Tacks.
Claims use since Jan. 1, 1910.

Ser. No. 54,322. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THOMAS F. RYAN, Oak Ridge, Va. Filed Dec. 16, 1910.



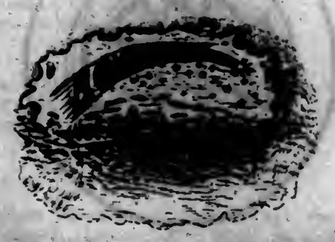
Particular description of goods.—Milk and Cream.
Claims use since Dec. 6, 1910.

Ser. No. 53,422. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE SOLVAY PROCESS COMPANY, Solvay, N. Y. Filed Dec. 22, 1910.



Particular description of goods.—Soda-Ash, Crystals of Soda, Caustic Soda, Monohydrate Crystals, and Calcium Chlorid.
Claims use since Jan. 10, 1884.

Ser. No. 54,090. (CLASS 17. TOBACCO PRODUCTS.) CARL INGENOHL, Antwerp, Belgium, and Manila, Philippine Islands. Filed Jan. 25, 1911.



Particular description of goods.—Cigars and Cigarettes.
Claims use since 1909.

Ser. No. 54,091. (CLASS 17. TOBACCO PRODUCTS.) CARL INGENOHL, Antwerp, Belgium, and Manila, Philippine Islands. Filed Jan. 25, 1911.

TORRE REAL

Particular description of goods.—Cigars and Cigarettes.
Claims use since 1909.

Ser. No. 54,093. (CLASS 17. TOBACCO PRODUCTS.) CARL INGENOHL, Antwerp, Belgium, and Manila, Philippine Islands. Filed Jan. 25, 1911.



Particular description of goods.—Cigars and Cigarettes.
Claims use since 1909.

Ser. No. 54,362. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) OTTO H. FOERSTER, Milwaukee, Wis. Filed Feb. 7, 1911.

RADIOLA

Particular description of goods.—Soaps and Cleansing Powders.
Claims use since Feb. 1, 1910.

Ser. No. 54,565. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) COLONIAL LEATHER COMPANY, Chicago, Ill. Filed Feb. 16, 1911.

Colonial

Particular description of goods.—Leather Belting.
Claims use since July, 1910.

Ser. No. 55,764. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) A. G. SPALDING & BROS., Jersey City, N. J., and New York, N. Y. Filed Apr. 14, 1911.

MIDGET

Particular description of goods.—Golf-Balls.
Claims use since Apr. 1, 1911.

Ser. No. 55,864. (CLASS 15. OILS AND GREASES.) THE TEXAS COMPANY, Houston and Port Arthur, Tex., and New York, N. Y. Filed Apr. 21, 1911.



Particular description of goods.—Kerosene.
Claims use since Jan. 26, 1911.

Ser. No. 55,867. (CLASS 15. OILS AND GREASES.) THE TEXAS COMPANY, Houston and Port Arthur, Tex., and New York, N. Y. Filed Apr. 21, 1911.

CARABAO

Particular description of goods.—Kerosene.
Claims use since January, 1911.

Ser. No. 55,868. (CLASS 15. OILS AND GREASES.) THE TEXAS COMPANY, Houston and Port Arthur, Tex., and New York, N. Y. Filed Apr. 21, 1911.



Particular description of goods.—Kerosene.
Claims use since Jan. 25, 1911.

Ser. No. 55,967. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) AMERICAN IRON AND STEEL MANUFACTURING COMPANY, Lebanon and Reading, Pa. Filed Apr. 25, 1911.

A

Particular description of goods.—Threaded Bolts, Machine-Bolt Blanks, Bolt Ends, Metal Screws; Railway-Spikes; Dock-Spikes; Wharf-Spikes; Boat-Spikes; Rivets, Metal Nuts, Metal Washers, Threaded Rods, and Structural Rods.
Claims use since October, 1899.

Ser. No. 55,994. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) GEELONG OIL & PAINT CO., LTD., Melbourne, Victoria, Australia. Filed Apr. 27, 1911.

OXYMEL

Particular description of goods.—Anticorrosive Paint.
Claims use since July 8, 1909.

Ser. No. 56,356. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE KROGER GROCERY & BAKING CO., Cincinnati, Ohio. Filed May 13, 1911.

COUNTRY CLUB

Particular description of goods.—Corn-Flakes, Bread, Creamery-Butter, Olive-Oil, Lard, Fruit Preserves, Cakes, Honey, Macaroons, Jelly, and Olives.
Claims use since Jan. 1, 1901.

Ser. No. 56,977. (CLASS 17. TOBACCO PRODUCTS.) OGDEN, HILL & CO., Winston Salem, N. C. Filed June 12, 1911. Under ten-year proviso.



Particular description of goods.—Chewing-Tobacco.
Claims use since 1883.

Ser. No. 57,010. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JAMES G. DODSON, Americus, Ga. Filed June 14, 1911. Under ten-year proviso.

SiverTone

Particular description of goods.—A Remedy for Diseases of the Liver.
Claims use since July 6, 1894.

Ser. No. 57,437. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) PEORIA ELECTRIC FIXTURE CO., Peoria, Ill. Filed July 1, 1911.

"PEFCO"

Particular description of goods.—Electroliers and Electrolier-Bodies and Electric Brackets, "End Caps" for the Same, Electric Wire, Metal Tubing for Electrolier and Electric Brackets, Metal Shades, Electric Heaters, Electric Irons, Electric Lamps, Electric-Lamp Sockets.
Claims use since about Apr. 1, 1911.

Ser. No. 57,582. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) KOLBERGER ANSTALTEN FÜR EXTERIKULTUR WILH. ANHALT G. M. B. H., Ostseebad Kolberg, Prussia, Germany. Filed July 11, 1911.

Laxifix

Particular description of goods.—Laxatives.
Claims use since March, 1910.

Ser. No. 57,614. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) UNIVERSAL OPTICAL CORPORATION, Providence, R. I. Filed July 13, 1911.

UNIVERSAL

Particular description of goods.—Eyeglasses and Eyeglass Mountings or Frames and Parts Thereof.
Claims use since April, 1911.

Ser. No. 57,620. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) E. S. BURNHAM COMPANY, New York, N. Y. Filed July 14, 1911.

BOVIM

Particular description of goods.—Bouillon-Cubes.
Claims use since May 1, 1911.

Ser. No. 57,770. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) STOLLWERCK BROTHERS, INC., Stamford, Conn., and New York, N. Y. Filed July 21, 1911.



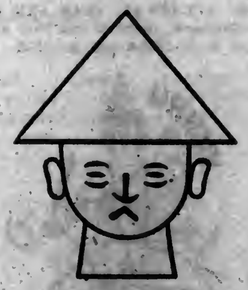
In which the representation of the child is fanciful.
Particular description of goods.—Chocolates and Cocoa.
Claims use since Apr. 15, 1911.

Ser. No. 57,912. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) ARNOLD OTTO MEYER, Hamburg, Germany. Filed July 28, 1911.



Particular description of goods.—Woven, Knit, and Printed Piece Goods of Cotton, Wool, Silk, and Linen; Plain, Bleached, Unbleached, Colored, Dyed, Printed, Brocaded, Mercerized, White, and Gray Piece Goods, Sarongs, Cambayas, Sayas, Trouserings, Shirtings, Drills, Cambrics, Ducks, Khaki, Shawls, and Handkerchiefs of Cotton, Wool, Silk, and Linen.
Claims use since Sept. 30, 1908.

Ser. No. 57,914. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) ARNOLD OTTO MEYER, Hamburg, Germany. Filed July 28, 1911.



Particular description of goods.—Pocket-Knives, Kitchen-Knives, Steel Table-Knives, Razors, and Scissors and Shears.
Claims use since Sept. 30, 1908.

Ser. No. 57,998. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LOUIS PFAHLER & SONS, Chicago, Ill. Filed Aug. 2, 1911.

SUN BRAND

Particular description of goods.—Bacon, Ham, Lard, and Sausage.
Claims use since May 2, 1911.

Ser. No. 58,211. (CLASS 37. PAPER AND STATIONERY.) A. W. FABER, Stein, near Nuremberg and Berlin, Germany. Filed Aug. 15, 1911.



No claim is herein made to the name "A. W. Faber."
Particular description of goods.—Pencil-Holders, Lead-Pencils, Screw-Pencils, Lead-Pencil Files, Colored Pencils, Crayon-Pencils, Artists' Crayons, Copying-Pencils, Fountain-Pens, Chalk, Chalk-Holders, Writing-Slates, Slate-Pencils, Rubber Erasers, Note-Books, Rubber Bands, Cross-Section Paper, Paper-Cutters, Penholders, Hand-Blotters, Artists' Stumps, and Rulers.
Claims use since Dec. 3, 1910.

Ser. No. 58,267. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DICKEY & DICKEY, Dinuba, Cal. Filed Aug. 18, 1911.



The representation of the fruit shown in the drawing forming no part of the trade-mark.
Particular description of goods.—Fresh Grapes, Peaches, and Oranges.
Claims use since the 22d day of July, 1911.

Ser. No. 58,395. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LEDEBOER & VAN DER HELD, Rotterdam, the Netherlands. Filed Aug. 25, 1911.

PULL HARD

Particular description of goods.—Wheat-Flour.
Claims use since about the year 1908.

Ser. No. 58,590. (CLASS 39. CLOTHING.) THE DEMPSTER & PLACE COMPANY, Gloversville, N. Y. Filed Sept. 8, 1911. Under ten-year proviso.

DEMPSTER & PLACE

Particular description of goods.—Gloves and Mittens.
Claims use since 1886.

Ser. No. 58,628. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE LETTERGRAPH COMPANY, Baltimore, Md. Filed Sept. 11, 1911.

LETTERGRAPH

Particular description of goods.—Printing or Duplicating Machines.
Claims use since June 1, 1911.

Ser. No. 58,659. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EDWARD ZIEGLER, Jersey City, N. J. Filed Sept. 13, 1911. Under ten-year proviso.

ANTI-CHAP

Particular description of goods.—A Preparation or Remedy for Chapped Hands, Face, Lips, or Any Roughness of the Skin, Sunburn, Scald or Burn, and Chafing.
Claims use since Oct. 18, 1886.

Ser. No. 58,660. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EDWARD ZIEGLER, Jersey City, N. J. Filed Sept. 13, 1911. Under ten-year proviso.



Particular description of goods.—A Liquid Remedy for Corns, Bunions, and Warts.
Claims use since June 20, 1880.

Ser. No. 58,859. (CLASS 39. CLOTHING.) ABE BLOCH & COMPANY, Cincinnati, Ohio. Filed Sept. 20, 1911.



Particular description of goods.—Men's Outer Suits.
Claims use since Aug. 15, 1911.

Ser. No. 58,904. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GENBA TANAKA, Kajogori, Chiba-Ken, Japan. Filed Sept. 28, 1911. Under ten-year proviso.



Particular description of goods.—Sauce, (Soy).
Claims use since 1616.

Ser. No. 58,906. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WEST DISINFECTING COMPANY, New York, N. Y. Filed Sept. 28, 1911.

CHLORO NAPTHOLEUM

Particular description of goods.—Deodorizers and Disinfectants.
Claims use since Jan. 1, 1895.

Ser. No. 59,025. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) WM. E. PRATT, Chicago, Ill. Filed Oct. 6, 1911. Under ten-year proviso.

PERFECTION

Particular description of goods.—Hog and Pig Rings and Ringers.
Claims use since 1894.

Ser. No. 59,051. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE DOLAN MERCANTILE COMPANY, Atchison, Kans. Filed Oct. 7, 1911.

SUN FLOWER



Particular description of goods.—Salt.
Claims use since December, 1906.

Ser. No. 59,084. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) GAS TRACTION COMPANY, Minneapolis, Minn. Filed Oct. 9, 1911.



Particular description of goods.—Gas Traction-Engines.
Claims use since Dec. 1, 1910.

Ser. No. 59,161. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) B. F. STURTEVANT COMPANY, Boston, Mass. Filed Oct. 14, 1911. Under ten-year proviso.

Sturtevant

Particular description of goods.—Machine Fans and Blowers, Vacuum-Cleaners; Fuel-Economizers; Steam-Engines, Turbines; Forges; Dust-Collectors, Pneumatic Separators, and Parts Thereof.
Claims use since Oct. 1, 1872.

Ser. No. 59,196. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) COOMBS MANUFACTURING COMPANY, Clyde, Ill. Filed Oct. 17, 1911.



ROCO BRAND

No claim being made to the word "Brand."
Particular description of goods.—Tin, Galvanized, and Enameled Washboilers, Galvanized Cups, Galvanized Dippers, Galvanized Pans, Aluminum Pots and Pans, Enameled Pots, Pans, Basins, Boilers, Kettles, Cups, Plates, Pails, Dippers, Ladles, Spoons, Funnels, and Roasters.
Claims use since Jan. 1, 1911.

Ser. No. 59,217. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE ENTERPRISE ENAMEL CO., Bellaire, Ohio. Filed Oct. 18, 1911.

WHITE STAR

Particular description of goods.—Enameled Metal Kitchen-Ware.
Claims use since Aug. 20, 1911.

Ser. No. 59,227. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) ROSENBERG & ROTHSCHILD, New York, N. Y. Filed Oct. 19, 1911.

B & R

Particular description of goods.—Metal Drinking-Cups.
Claims use since about Sept. 1, 1911.

Ser. No. 59,270. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NEW ENGLAND CEREAL CO., South Norwalk, Conn. Filed Oct. 21, 1911.



The words "Wheat," "Rice," and "Barley" being disclaimed.
Particular description of goods.—Food Compound Composed of Various Cereals.
Claims use since July 29, 1910.

Ser. No. 59,282. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) WALTER L. PYLE, Philadelphia, Pa. Filed Oct. 27, 1911.

COLORATUER

Particular description of goods.—Printed Advertising Devices.
Claims use since Oct. 23, 1911.

Ser. No. 59,299. (CLASS 32. FURNITURE AND UPHOLSTERY.) FRENCH & HEALD CO., Milford, N. H. Filed Oct. 28, 1911.



Particular description of goods.—Dressers, Chiffoniers, Commodes, Buffets, and Tables.
Claims use since December, 1903.

Ser. No. 59,403. (CLASS 12. CONSTRUCTION MATERIALS.) THE KLEIN MANUFACTURING COMPANY, Cleveland, Ohio. Filed Oct. 28, 1911.

Metalcrete

Particular description of goods.—A Compound of Metal for Hardening and Filling the Pores of Concrete and Rendering it Waterproof.
Claims use since August, 1911.

Ser. No. 59,546. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) EDWARD J. BURNS, Chicago, Ill. Filed Nov. 4, 1911.

JEWEL

Particular description of goods.—Gas-Pressure Regulators.
Claims use since Oct. 1, 1911.

Ser. No. 59,576. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) ONEIDA COMMUNITY, LIMITED, Oneida, N. Y. Filed Nov. 6, 1911.



Comprising a likeness of S. Newhouse, deceased, arranged within two concentric circles, and the words "Newhouse Knew How."
Particular description of goods.—Steel Traps.
Claims use since Aug. 1, 1911.

Ser. No. 59,619. (CLASS 12. CONSTRUCTION MATERIALS.) TIDEWATER PORTLAND CEMENT COMPANY, Union Bridge, Md., and New York, N. Y. Filed Nov. 9, 1911.

TIDEWATER

Particular description of goods.—Lime and Construction Cement.
Claims use since June 1, 1909.

Ser. No. 59,620. (CLASS 12. CONSTRUCTION MATERIALS.) ARMSTRONG CORK COMPANY, Pittsburgh, Pa. Filed Nov. 9, 1911.



Particular description of goods.—Heat-Insulating Materials for Insulating Heated Surfaces.
Claims use since Nov. 3, 1911.

Ser. No. 59,682. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BABCOCK, HURD & Co., Cleveland, Ohio. Filed Nov. 13, 1911.

"APPIMENTO"

Particular description of goods.—Whole-Milk Cheese.
Claims use since July, 1911.

Ser. No. 59,700. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) CARBON PRODUCTS COMPANY, Charleston, W. Va. Filed Nov. 13, 1911.

Chieftain

Particular description of goods.—Stove, Shoe, and Metal Polishes.
Claims use since Oct. 8, 1911.

Ser. No. 59,815. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) KEYSTONE VARNISH CO., Brooklyn, N. Y. Filed Nov. 20, 1911.

DINNAPALE

Particular description of goods.—Enamel Paint.
Claims use since Nov. 13, 1911.

Ser. No. 59,854. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) JESSE H. DOLBY, Elgin, Ill. Filed Nov. 22, 1911.

THE FOXY GRANDPA

Particular description of goods.—Photographic Cameras.
Claims use since Feb. 1, 1911.

Ser. No. 59,856. (CLASS 32. FURNITURE AND UPHOLSTERY.) THE GENERAL FIREPROOFING CO., Youngstown, Ohio. Filed Nov. 22, 1911.

Allsteel U-NETTES

No claim being made to the word "Allsteel."
Particular description of goods.—Metallic Filing-Cabinets.
Claims use since Sept. 16, 1909.

Ser. No. 59,891. (CLASS 32. FURNITURE AND UPHOLSTERY.) JOHN HOFMAN Co., Rochester, N. Y. Filed Nov. 28, 1911.



Particular description of goods.—Show-Cases, Wardrobes, Window Backs, Mirrors, and Counters.
Claims use since Sept. 14, 1910.

Ser. No. 59,895. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) ADESA & Co., London, England. Filed Nov. 24, 1911.

ADESA

Particular description of goods.—An Alkaline Preparation, Being a Detergent for Use in Cleaning Silver, Plate, and Jewelry.
Claims use since Mar. 11, 1911.

Ser. No. 60,003. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) HATFIELD-BERNHARD CO. INC., Seattle, Wash. Filed Nov. 29, 1911.

SUN SET

Particular description of goods.—Varnishes and Stains.
Claims use since Apr. 24, 1909.

Ser. No. 60,062. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE PENNSYLVANIA SOAP COMPANY, Lancaster, Pa. Filed Dec. 4, 1911.

SWEET ALICE

Particular description of goods.—Toilet and other Soap.
Claims use since November, 1909.

Ser. No. 60,101. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) RUSSELL & PROELL, Keene, N. H. Filed Dec. 6, 1911.



Particular description of goods.—Sticky Adhesive Substances to Spread Around the Trunks of Trees and Plants as a Mechanical Insect-Catcher.
Claims use since on or about Nov. 1, 1910.

Ser. No. 60,125. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHNSON BISCUIT COMPANY, Sioux City, Iowa. Filed Dec. 8, 1911.

JONQVIL

Particular description of goods.—Candy.
Claims use since Dec. 1, 1911.

Ser. No. 60,165. (CLASS 31. FILTERS AND REFRIGERATORS.) THE DANA MANUFACTURING COMPANY, Norwood, Ohio. Filed Dec. 11, 1911.

"Icemont"

Particular description of goods.—Ice-Cream Freezers.
Claims use since Jan. 30, 1901.

Ser. No. 60,346. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) CHARLES A. DANIEL, Philadelphia, Pa. Filed Dec. 19, 1911. Under ten-year proviso.

QUAKER CITY

Particular description of goods.—Rubber Hose and Fabric Hose, Rubber Belting, Rubber Sheet-Packing, Fabric Sheet-Packing, Rubber Rod-Packing, Fabric Rod-Packing, Metallic Rod-Packing, Rubber Piston-Packing, Fabric Piston-Packing, Metallic Piston-Packing, and Rubber Gaskets.
Claims use since about December, 1885.

Ser. No. 60,398. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE JOHNSON-LOCKE MERCANTILE CO., San Francisco, Cal. Filed Dec. 21, 1911.

ROUGH RIDER

Particular description of goods.—Canned Fruits.
Claims use since Nov. 23, 1911.

Ser. No. 60,416. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) E. WERTHEIMER & CIE., Paris, France. Filed Dec. 22, 1911.

ASHES OF ROSES

Particular description of goods.—All Kinds of Perfumes, Face-Paints, and Rouges.
Claims use since Oct. 9, 1909.

Ser. No. 60,478. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ANTONIO DELLAMANO, Boston, Mass. Filed Dec. 28, 1911.

ALBIGA

Particular description of goods.—Seasoning Sauce.
Claims use since on or about the 25th day of November, 1911.

Ser. No. 60,491. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SANDWICH FREEZER CO., Sandwich, Mass. Filed Dec. 28, 1911.

SCORTON

Particular description of goods.—Frozen Fish.
Claims use since Dec. 20, 1911.

Ser. No. 60,498. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) RUUD MANUFACTURING COMPANY, Pittsburgh, Pa. Filed Dec. 28, 1911.

COTTAGE

Particular description of goods.—Water-Heaters.
Claims use since Oct. 15, 1911.

Ser. No. 60,501. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) ISAAC FULD, Baltimore, Md. Filed Dec. 29, 1911.

ORIOLE

Particular description of goods.—Toy Pool-Tables.
Claims use since December, 1904.

Ser. No. 60,510. (CLASS 39. CLOTHING.) TALIAFERRO & SHERWOOD, New York, N. Y. Filed Dec. 29, 1911.

FAIRY

Particular description of goods.—Children's and Infants' Hosiery.
Claims use since November, 1910.

Ser. No. 60,535. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DOOLEY, SMITH & COMPANY, New York, N. Y. Filed Jan. 2, 1912.

El Vaquero



The picture of the boy shows being fanciful.
Particular description of goods.—Canned Pears.
Claims use since Nov. 18, 1911.

Ser. No. 60,895. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) DICKERSHOFF, RATTLOSS & Co., New York, N. Y. Filed Jan. 18, 1912.

PHOEBE SNOW



Comprising the words "Phoebe Snow" and a representation of Phoebe Snow, both wording and representation being fanciful.
Particular description of goods.—Elastic Lisle Webbing.
Claims use since about October, 1911.

Ser. No. No. 60,940. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) MOSES L. BLACK, Philadelphia, Pa. Filed Jan. 20, 1912.

CRADLE

Particular description of goods.—Go-Carts and Baby-Carriages.
Claims use since Nov. 17, 1911.

Ser. No. 60,955. (CLASS 31. FILTERS AND REFRIGERATORS.) CORUS D. STOUT, Kansas City, Mo. Filed Jan. 20, 1912.

4-IN-ONE

Particular description of goods.—Refrigerators.
Claims use since June 1, 1910.

Ser. No. 61,006. (CLASS 38. PRINTS AND PUBLICATIONS.) OPPENHEIMER & TREBITSCH COMPANY, New York, N. Y. Filed Jan. 24, 1912.

The Leader in Styles

Particular description of goods.—A Weekly Trade Magazine.
Claims use since Jan. 2, 1906.

Ser. No. 61,131. (CLASS 39. CLOTHING.) ELY & WALKER DRY GOODS Co., St. Louis, Mo. Filed Jan. 30, 1912.

BIG BUCK

Particular description of goods.—Work Shirts and Trousers.
Claims use since about July 1, 1906.

Ser. No. 61,163. (CLASS 39. CLOTHING.) BIRDSEY-SOMERS Co., New York, N. Y. Filed Jan. 31, 1912.

Elso

Particular description of goods.—Corsets.
Claims use since Jan. 29, 1912.

Ser. No. 61,194. (CLASS 39. CLOTHING.) BALTIMORE BARGAIN HOUSE, Baltimore, Md. Filed Feb. 1, 1912.

Vicuna

Particular description of goods.—Hosiery.
Claims use since about January, 1899.

Ser. No. 61,195. (CLASS 39. CLOTHING.) BALTIMORE BARGAIN HOUSE, Baltimore, Md. Filed Feb. 1, 1912.

MINIMAX

Particular description of goods.—Hosiery.
Claims use since about January, 1911.

Ser. No. 61,228. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) I. B. KLEINERT RUBBER COMPANY, New York, N. Y. Filed Feb. 2, 1912.



Particular description of goods.—Dress-Shields.
Claims use since about Dec. 1, 1911.

Ser. No. 61,232. (CLASS 39. CLOTHING.) F. M. HOYT SHOE COMPANY, Manchester, N. H. Filed Feb. 3, 1912. Under ten-year proviso.

Hoyt's

Particular description of goods.—Leather Boots and Shoes.
Claims use since 1893.

Ser. No. 61,271 (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE SMITH & EGGE MFG. CO., Bridgeport, Conn. Filed Feb. 5, 1912.



Particular description of goods.—Sheet-Metal Chains.
Claims use since Jan. 15, 1912.

TRADE-MARKS

REGISTERED MARCH 12, 1912.

85,720. CANNED SALMON. ALASKA PACKERS ASSOCIATION, San Francisco, Cal.
Filed June 15, 1909. Serial No. 43,061. PUBLISHED JUNE 20, 1911.

85,721. PAPER BAGS AND DRINKING-CUPS. THE AMERICAN PAPER GOODS COMPANY, Montclair, N. J., and Kensington, Conn.
Filed March 24, 1911. Serial No. 55,290. PUBLISHED JANUARY 2, 1912.

85,722. SHOVELS, SPADES, SCOOPS, AND DRAINAGE-TOOLS. AMES SHOVEL AND TOOL COMPANY, Jersey City, N. J., and Boston, Mass.
Filed June 30, 1911. Serial No. 57,410. PUBLISHED JANUARY 9, 1912.

85,723. SHOVELS, SPADES, SCOOPS, AND DRAINAGE-TOOLS. AMES SHOVEL AND TOOL COMPANY, Jersey City, N. J., and Boston, Mass.
Filed June 30, 1911. Serial No. 57,411. PUBLISHED JANUARY 9, 1912.

85,724. CANNED TOMATOES. A. ASCIONE & COMPANY, New York, N. Y.
Filed October 28, 1911. Serial No. 59,392. PUBLISHED JANUARY 9, 1912.

85,725. RAW SHUCKED OYSTERS IN CANS. THE ATLANTIC PACKING CO., Baltimore, Md.
Filed August 14, 1911. Serial No. 58,188. PUBLISHED JANUARY 2, 1912.

85,726. PLAYING-CARDS. THE BALLKARDS COMPANY, Cleveland, Ohio.
Filed April 15, 1909. Serial No. 41,795. PUBLISHED JANUARY 9, 1912.

85,727. COTTON CONVERTED GOODS. TITUS BLATTER & CO., New York, N. Y.
Filed September 27, 1911. Serial No. 58,870. PUBLISHED JANUARY 9, 1912.

85,728. SWEETENED POPCORN. CAMP CHOCOLATE CO., McKeesport, Pa.
Filed November 15, 1909. Serial No. 45,896. PUBLISHED JANUARY 2, 1912.

85,729. CANNED FRUITS. CENTRAL CALIFORNIA CANNERIES, San Francisco, Cal.
Filed July 23, 1909. Serial No. 43,722. PUBLISHED JANUARY 9, 1912.

85,730. COMBINED BRUSH, SCRAPER, MOP, AND WRINGER. CLARK & DUPEE WRINGER MOP CO., Worcester, Mass.
Filed June 30, 1911. Serial No. 57,197. PUBLISHED JANUARY 9, 1912.

85,731. FLOUR. THE CLEVELAND MILLING CO., Cleveland, Ohio.
Filed May 26, 1910. Serial No. 49,922. PUBLISHED JANUARY 2, 1912.

85,732. STEAM-VALVES. THE COLLIN VALVE COMPANY, Bridgeport, Conn.
Filed July 20, 1911. Serial No. 57,728. PUBLISHED JANUARY 9, 1912.

85,733. STOVE-POLISH. THE F. F. DALLEY CO., OF HAMILTON, LIMITED, Hamilton, Ontario, Canada.
Filed September 7, 1911. Serial No. 58,573. PUBLISHED JANUARY 2, 1912.

85,734. HARNESS, SADDLE, AND SOLE LEATHER. EAGLE TANNERY, San Francisco, Cal.
Filed August 22, 1911. Serial No. 58,315. PUBLISHED JANUARY 9, 1912.

85,735. FERTILIZER. JACOB A. ENGEL, Syracuse, N. Y.
Filed July 8, 1911. Serial No. 57,530. PUBLISHED JANUARY 2, 1912.

85,736. LEATHER BOOTS AND SHOES. FRED F. FIELD COMPANY, Brockton, Mass.
Filed June 16, 1911. Serial No. 57,089. PUBLISHED JANUARY 2, 1912.

85,737. WASHING COMPOUND. EDWIN G. FRANK, Philadelphia, Pa.
Filed July 18, 1911. Serial No. 57,695. PUBLISHED JANUARY 9, 1912.

85,738. AUTOMATIC PUMPS AND PARTS THEREOF. GEARLESS AUTOMATIC PUMP CO., Rock Island, Ill.
Filed July 17, 1911. Serial No. 57,681. PUBLISHED JANUARY 9, 1912.

85,739. TOILET-BRUSHES. GEO. B. GIBSON CO., New York, N. Y.
Filed July 28, 1911. Serial No. 57,911. PUBLISHED JANUARY 2, 1912.

85,740. LAGER-BEER. GOTTFRIED BREWING COMPANY, Chicago, Ill.
Filed July 20, 1911. Serial No. 57,755. PUBLISHED OCTOBER 24, 1911.

85,741. CRACKERS. THE GREEN & GREEN COMPANY, Dayton, Ohio.
Filed November 16, 1911. Serial No. 59,758. PUBLISHED JANUARY 9, 1912.

85,742. CREAM-CHEESE. GROVE, PRAGER & MILLER, Baltimore, Md.
Filed May 21, 1910. Serial No. 49,851. PUBLISHED OCTOBER 17, 1911.

85,743. ASBESTOS AND CEMENT GRIDDLES. HALL & CARPENTER, Philadelphia, Pa.
Filed September 12, 1910. Serial No. 51,766. PUBLISHED JANUARY 2, 1912.

85,744. AMERICAN SPARKLING WINE. HAMMONDSPORT WINE COMPANY, Hammondsport, N. Y.
Filed August 14, 1908. Serial No. 36,733. PUBLISHED JANUARY 9, 1912.

85,745. CEREAL BREAKFAST FOODS. DAVID A. HARRISON, Los Angeles, Cal.
Filed October 3, 1910. Serial No. 52,061. PUBLISHED JANUARY 9, 1912.

85,746. CANNED SALMON. HAWK FISH COMPANY, Seattle, Wash.
Filed November 13, 1911. Serial No. 59,696. PUBLISHED JANUARY 9, 1912.

85,747. PINEAPPLE-JACK. WILLIAM H. HELLER, Uniontown, Pa.
Filed October 25, 1911. Serial No. 59,340. PUBLISHED JANUARY 9, 1912.

85,748. LUBRICATING-OILS. THE HOLT MANUFACTURING COMPANY, Stockton, Cal.
Filed August 19, 1911. Serial No. 58,278. PUBLISHED JANUARY 9, 1912.

85,749. TOILET SOAPS. THE ANDREW JERGENS CO., New York, N. Y., and Cincinnati, Ohio.
Filed September 12, 1911. Serial No. 58,638. PUBLISHED JANUARY 9, 1912.

85,750. CHEWING-GUM. ROBERT L. JOHNSTONE, New York, N. Y.
Filed November 13, 1911. Serial No. 59,697. PUBLISHED JANUARY 9, 1912.

85,751. ASPHALT PREPARED ROOFING. KELLEY-HOW-THOMSON CO., Duluth, Minn.
Filed June 20, 1911. Serial No. 57,189. PUBLISHED JANUARY 2, 1912.

85,752. MATTRESSES. SAMUEL G. KRUPKA, Bridgeport, Conn.
Filed April 12, 1911. Serial No. 53,703. PUBLISHED JANUARY 2, 1912.

85,753. LIQUID TONIC FOR PRESERVING AND BEAUTIFYING THE HAIR. LANMAN & KEMP, New York, N. Y.
Filed May 27, 1911. Serial No. 56,629. PUBLISHED JANUARY 2, 1912.

85,754. TENNIS-RACKETS. HARRY C. LEE & CO., New York, N. Y.
Filed November 15, 1911. Serial No. 59,731. PUBLISHED JANUARY 2, 1912.

85,755. CERTAIN TOOLS. H. G. LIPSCOMB & CO., Nashville, Tenn.
Filed September 7, 1910. Serial No. 51,705. PUBLISHED JANUARY 9, 1912.

85,756. SUGAR CANDY KNOWN AS "HOPJES." MAATSCHAPPIJ TOT EXPLOITATIE VAN RADEMAKER'S KONINKLIJKE CACAO & CHOCOLADEFABRIEKEN, The Hague, Netherlands.
Filed January 8, 1910. Serial No. 47,008. PUBLISHED JANUARY 9, 1912.

85,757. GOLF-BALLS. MARTINS-BIRMINGHAM LIMITED, Birmingham, England.
Filed November 14, 1911. Serial No. 59,720. PUBLISHED JANUARY 2, 1912.

85,758. GOLF-BALLS. MARTINS-BIRMINGHAM LIMITED, Birmingham, England.
Filed November 20, 1911. Serial No. 59,814. PUBLISHED JANUARY 2, 1912.

85,759. HAND-OPERATED CAR-MOVERS AND CAR-PUSHERS. WM. MCLEISH, Appleton, Wis.
Filed June 12, 1911. Serial No. 56,988. PUBLISHED OCTOBER 24, 1911.

85,760. REMEDY FOR CERTAIN DISEASES. H. A. METZ & CO., New York, N. Y.
Filed July 12, 1911. Serial No. 57,597. PUBLISHED JANUARY 2, 1912.

85,761. PNEUMATIC TIRES FOR AUTOMOBILES. MICHELIN TIRE COMPANY, Milltown, N. J.
Filed March 8, 1909. Serial No. 40,986. PUBLISHED JANUARY 2, 1912.

85,762. WHEAT-FLOUR. MICHIGAN MILLING COMPANY, Ann Arbor, Mich.
Filed September 21, 1911. Serial No. 58,755. PUBLISHED JANUARY 2, 1912.

85,763. BREAKFAST CEREALS MADE OF OATS. MORROW-LAWTON COMPANY, New York, N. Y.
Filed November 13, 1911. Serial No. 59,681. PUBLISHED JANUARY 9, 1912.

85,764. FLOORING, EDGE-STRIPS FOR FLOORS, AND WOOD FLOORING-SQUARES. NASHVILLE HARDWOOD FLOORING COMPANY, West Nashville, Tenn.
Filed February 27, 1911. Serial No. 54,761. PUBLISHED JANUARY 2, 1912.

85,765. WATERPROOFING AND PROTECTIVE PAINT. NATIONAL INSULATOR CO., Boston, Mass.
Filed March 27, 1911. Serial No. 55,353. PUBLISHED JANUARY 9, 1912.

85,766. VACUUM-CLEANERS. THE PREMIER VACUUM CLEANER CO., Cleveland, Ohio.
Filed September 15, 1911. Serial No. 58,688. PUBLISHED JANUARY 9, 1912.

85,767. WHEAT-FLOUR. WILLIAM C. ROBERSON, New York, N. Y.
Filed October 31, 1911. Serial No. 59,452. Renewal of 8805. PUBLISHED JANUARY 2, 1912.

85,768. COTTON PIECE GOODS. MORRIS ROSENSTEIN, New York, N. Y.
Filed November 25, 1911. Serial No. 59,926. PUBLISHED JANUARY 9, 1912.

85,769. ELECTRIC VIBRATORS. THE ROYAL SPECIALTY COMPANY, Cleveland, Ohio.
Filed November 1, 1911. Serial No. 59,470. PUBLISHED JANUARY 9, 1912.

85,770. ELECTRIC HAIR-DRIERS AND ELECTRIC VIBRATORS. THE ROYAL SPECIALTY COMPANY, Cleveland, Ohio.
Filed November 1, 1911. Serial No. 59,471. PUBLISHED JANUARY 9, 1912.

85,771. GRAPHITE. SARATOGA GRAPHITE COMPANY, Saratoga Springs, N. Y.
Filed September 29, 1911. Serial No. 58,940. PUBLISHED JANUARY 9, 1912.

85,772. PORTABLE LAMPS USING ACETYLENE GAS. SCRANTON ACETYLENE LAMP COMPANY, Scranton, Pa.
Filed November 2, 1911. Serial No. 59,495. PUBLISHED JANUARY 9, 1912.

85,773. JAPANESE SAKE. HON KANO SHOTEN, Mikage Town, Japan.
Filed December 22, 1909. Serial No. 46,658. PUBLISHED JANUARY 9, 1912.

85,774. VANITY-BOX. SMITH, KLINE & FRENCH COMPANY, Philadelphia, Pa.
Filed October 24, 1911. Serial No. 59,317. PUBLISHED JANUARY 2, 1912.

87,775. MATCHES. "SOLO" ZÜNDWAREN- UND WICHSE-FABRIKEN ACT. GES., Vienna, Austria-Hungary.
Filed October 2, 1911. Serial No. 58,964. PUBLISHED JANUARY 9, 1912.

85,776. PINEAPPLES, ORANGES, GRAPE-FRUIT, AND LEMONS. THE STANDARD FRUIT CO., Pulaski, Pa.
Filed November 13, 1911. Serial No. 59,685. PUBLISHED JANUARY 9, 1912.

85,777. GASOLENE-OPERATED TORCHES AND PAINT-BREAMERS. THE TURNER BRASS WORKS, Sycamore and Chicago, Ill.
Filed October 15, 1910. Serial No. 52,270. PUBLISHED JANUARY 2, 1912.

85,778. WHEAT-FLOUR. THE TWIN FALLS MILLING & ELEVATOR CO., Twin Falls, Idaho.
Filed September 21, 1911. Serial No. 58,754. PUBLISHED JANUARY 2, 1912.

85,779. CERTAIN SPORTING GOODS. VICTOR SPORTING GOODS COMPANY, Springfield, Mass.
Filed March 26, 1910. Serial No. 48,675. PUBLISHED JANUARY 2, 1912.

85,780. BITUMINOUS CEMENTS AND PAVEMENTS. WARREN BROTHERS COMPANY, Boston, Mass.
Filed August 3, 1911. Serial No. 58,014. PUBLISHED JANUARY 2, 1912.

85,781. PAPER BAGS. WAYNE PAPER GOODS COMPANY, Fort Wayne, Ind.
Filed November 13, 1911. Serial No. 59,696. PUBLISHED JANUARY 9, 1912.

85,782. TEA. HAROLD WEDDLE, New York, N. Y.
Filed September 21, 1911. Serial No. 58,798. PUBLISHED JANUARY 2, 1912.

85,783. METAL-POLISH. WILSON & WENEMAN, Auburn, Ill.
Filed December 19, 1910. Serial No. 53,352. PUBLISHED JANUARY 9, 1912.

85,784. CANDY. WINDSOR CHOCOLATE COMPANY, Philadelphia, Pa.
Filed June 29, 1911. Serial No. 57,365. PUBLISHED JANUARY 2, 1912.

85,785. PERIODICAL PUBLICATION. J. EARLY WOOD, New York, N. Y.
Filed May 16, 1911. Serial No. 56,287. PUBLISHED JANUARY 2, 1912.

85,786. CERTAIN PREPARED FORM OF MILK. JOHANN A. WÜLFING, Berlin, Germany.
Filed June 24, 1911. Serial No. 57,280. PUBLISHED NOVEMBER 21, 1911.

85,787. STRAIGHT RYE WHISKY. THE WIENKE-RAUHENSCHMIDT CO., OF BALTO. CITY, Baltimore, Md.
Filed May 22, 1905. Serial No. 6,249. PUBLISHED JANUARY 9, 1912.

LABELS

REGISTERED MARCH 12, 1912.

16,234.—*Title:* "IMBRIANI." (For Macaroni.) W. C. EGERTON, Brooklyn, N. Y. Filed February 21, 1912.

16,235.—*Title:* "ATTENTION BRAND." (For Sweet Corn.) THE HAMPTON-KELLEY CANNING COMPANY, Hampton, Iowa. Filed February 21, 1912.

16,236.—*Title:* "OVER-ALL CLUB." (For Sweet Corn.) THE HAMPTON-KELLEY CANNING COMPANY, Hampton, Iowa. Filed February 21, 1912.

16,237.—*Title:* "HARVEST INN." (For Sweet Corn.) THE HAMPTON-KELLEY CANNING COMPANY, Hampton, Iowa. Filed February 21, 1912.

16,238.—*Title:* "IOWA CLUSTER." (For Sweet Corn.) THE HAMPTON-KELLEY CANNING COMPANY, Hampton, Iowa. Filed February 21, 1912.

16,239.—*Title:* "INEEDA." (For a Remedy.) SARATOGA TOILET CO., Saratoga Springs, N. Y. Filed January 19, 1912.

16,240.—*Title:* "ELBERTA BEST PEACH ON EARTH." (For Elberta Peaches.) THE UNION FRUIT COMPANY, Paonia, Colo. Filed November 21, 1911.

16,241.—*Title:* "PAONIA MOUNTAIN APPLES." (For Apples.) THE UNION FRUIT COMPANY, Paonia, Colo. Filed November 21, 1911.

PRINTS

REGISTERED MARCH 12, 1912.

2,970.—*Title:* "WILBUR'S COCOA CAN PUZZLE AND SCENIC PICTURE." (For Cocoa.) THE SEITER & KAPPES LITHOGRAPHING CO., New York, N. Y. Filed November 28, 1911.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

EX PARTE PHELPS.

Decided November 27, 1911.

1. INTERFERENCE—PRIORITY—JUDGMENT BAR TO CLAIMS OF LOSING PARTY.

After the termination of an interference on its merits it is the judgment that the losing party is not the first inventor rather than the application of his opponent that stands as a bar to the allowance of his claims to the invention, although reference may be made to the file of the successful party to determine the scope of the judgment.

2. SAME—SAME—SAME—UNAFFECTED BY THE ABANDONMENT OF APPLICATION OF SUCCESSFUL PARTY.

Where an interference was decided in favor of the senior party because of the failure of the junior party to present testimony in support of the allegation of his preliminary statement, *Held* that the fact that the senior party's application was allowed to become finally abandoned constitutes no ground for allowing claims corresponding to the issue of the interference to the junior party.

ON PETITION.

ELECTRIC LAMP AND CONTROLLING-SWITCH THEREFOR.

Messrs. Peirce & Fisher and *Mr. Percy B. Hills* for the applicant.

MOORE, *Commissioner:*

Applicant has petitioned that this case, now on appeal before the Examiners-in-Chief, be restored to the jurisdiction of the Primary Examiner for the purpose of considering certain claims presented in connection with the petition.

The claims presented correspond to the six counts of interference No. 26,530, which was between this application and an application of Wormley. In that interference priority was awarded to Wormley, the senior party, upon the record, because Phelps, the junior party, failed to take any testimony in support of his preliminary statement. After the interference Phelps canceled the claims in issue, and the Examiner finally rejected certain others, using the application of Wormley as prior art. When the case was before the Examiners-in-Chief on appeal from this rejection, it was discovered that Wormley's application had become finally abandoned through failure to pay the final fee within six months or to renew it within two years after the notice of allowance.

The petitioner urges that under these circumstances the Wormley application is not evidence of reduction to practice, but nothing more than an abandoned experiment, and should not prevent the allowance of any claims whatsoever to him.

The result of this contention, if sustained, would be in effect to reverse the judgment rendered in an interference merely because of the subsequent abandonment, accidental or otherwise, of the application of the winning party. The subsequent condition of the prevailing party's case, however, is believed to have no effect upon the loser's right to a patent for the invention in controversy.

After the termination of an interference on its merits it is, strictly speaking, the judgment that the losing party is not the first inventor rather than the application of his opponent that stands as a bar to the allowance of his claims to the invention. The interference record and, in fact, the applicant's own file show that he is not the first inventor of the subject-matter in dispute, and while reference may properly be made to the file of the winning party to determine the scope of the judgment, since it affects all matter which not only was, but might have been adjudicated, (*Blackford v. Wilder*, 127 O. G., 1255; 28 App. D. C., 535,) nevertheless it is not this application itself nor its standing in the Office which constitutes this bar. The right of the unsuccessful party to the invention in issue is *res adjudicata* by reason of the judgment which stands of record against him.

Since, therefore, it must be held that the petitioner is barred from obtaining a patent containing the claims submitted, it would be useless to remand the case to the Primary Examiner for a consideration of them.

The petition is denied.

IN RE LEWTHWAITE.

Decided January 11, 1912.

PUBLIC USE—PRIMA FACIE CASE—INSUFFICIENCY OF AFFIDAVITS.

Where in support of a petition for the institution of public-use proceedings only a single affidavit is filed, unaccompanied by a print, drawing, or photograph of the devices alleged to have been in public use or a detailed description of the same, and merely alleging a conclusion that devices like the one claimed by the applicant have been in public use, *Held* that a *prima facie* case of public use has not been made out.

ON PETITION.

Messrs. Shepherd & Campbell for Lewthwaite.

MOORE, *Commissioner:*

This is a petition that a public-use proceeding be instituted for the purpose of establishing a bar to the grant of a patent upon an alleged application by one Frederick H. Fuller.

In support of the petition is the single affidavit of the petitioner. Said affidavit is to the effect that petitioner is informed that Frederick H. Fuller alleges himself to be the inventer of a certain device, that devices like those claimed by the said Fuller to be his invention have long been in public use, citing three instances of alleged use, and that the devices above referred to embody every essential feature alleged by Fuller to constitute his invention.

This showing is manifestly insufficient to constitute a *prima facie* showing of public use. The showing is not accompanied by any print, drawing, or photograph of the devices alleged to have been in use nor any detailed description of the same. It merely alleges a conclusion of affiant that devices like that claimed by Fuller and embodying the essential features alleged to constitute Fuller's invention have been in public use; but it does not disclose the construction of said devices, so that the Office can judge for itself whether they constitute a *prima facie* showing of the existence of a statutory bar to the grant of any pending application.

It is further noted that the petition is not accompanied by proof of service upon the alleged applicant. (*Siebert* v. *Bloomberg*, 124 O. G., 628; *Booth Brothers*, 128 O. G., 1291.)

The petition is denied.

HEWITT *v.* HOLZ *v.* HEWITT.

Decided February 2, 1912.

INTERFERENCE—MOTION TO DISSOLVE—VAGUENESS OR INDEFINITENESS OF THE COUNTS.

Where the claims in issue are perfectly clear when read upon the structures disclosed in the applications directly involved in an interference, *Held* that these claims are not indefinite because perchance it may be difficult to determine whether or not some other structure satisfies them.

APPEAL on motion.

VAPOR ELECTRIC APPARATUS.

Mr. Charles A. Terry for Hewitt.

Mr. Albert G. Davis for Holz.

BILLINGS, *First Assistant Commissioner:*

This is an appeal by Holz from a decision of the Primary Examiner refusing to dissolve the above-entitled interference as to counts 2, 3, and 12 thereof.

The motion was made to dissolve the interference as to these counts on the ground that there has been irregularity in the declaration, the counts being vague and indefinite. There is no contention by either party to the interference that the language of the counts is indefinite when applied to the structures disclosed in the interfering applications. In fact, there does not appear to be any ground for such contention had it been made. Holz contends, however, that the language used in the counts causes them to be vague and indefinite, for the reason that it is—

difficult to tell just what kind of a structure will or will not satisfy these counts.

Inasmuch as there is no question that the structures disclosed in the interfering applications satisfy these counts, it cannot be held that the claims are indefinite because perchance it may be difficult to determine whether or not some other structure satisfies these counts, which structure may or may not be proved. The principle cannot be laid down that a claim of an application or patent which is perfectly clear when read upon the structure disclosed therein becomes vague just so soon as some other structure is alleged either to embody the invention disclosed in the application or to infringe the patent, and the question thus presented is found difficult to determine. As the claims are perfectly clear when read upon the structures disclosed in the applications directly involved in the interefence, there is no reason for dissolving the interference upon the ground of informality in its declaration.

The decision of the Primary Examiner is affirmed.

EX PARTE TEMPLE AND GOODRUM.

Decided November 11, 1911.

1. RES ADJUDICATA.

The doctrine of *res adjudicata* is applied by the courts for the salutary purpose of preventing a successful party to litigation being vexed with subsequent litigations by the same party who contested the prior suit or by those in privity with him over the same cause of action.

2. PATENTABILITY—ADVERSE DECISION IN INTERFERENCE—RES ADJUDICATA.

In an interference involving applications of A., B., and C. judgment was rendered against A. on the record. After the termination of the interference claims were made by A. which were readable upon all three applications. *Held* that the question of A.'s right to a patent containing such claims was *res adjudicata*, notwithstanding the fact that these claims could not have been added to the issue of the three-party interference in view of a decision adverse to B. in another interference.

3. SAME—SAME—SAME—ASSIGNEES.

Where after the termination of an interference the assignee of the losing party placed the claims in issue in another application owned by said assignee at the time the interference was declared, *Held* that these claims were properly refused on the ground that the right of the assignee to a patent containing the same was *res adjudicata* by reason of the adverse decision in the interference.

APPEAL from Examiners-in-Chief.

TELEPHONE SYSTEM.

Mr. Charles C. Bulkley for the applicants.

TENNANT, *Assistant Commissioner:*

This is an appeal from the decision of the Examiners-in-Chief affirming the decision of the Primary Examiner finally rejecting claims 38, 39, 40, and 44 to 64, inclusive.

The rejection was based on the following state of facts which appear of record in this Office:

June 23, 1903, an interference, No. 22,795, *Schellenger* v. *Dunbar* v. *Clausen*, was declared, and on

April 5, 1904, judgment on the record was rendered against Clausen, who took no testimony. Subsequently a final award in favor of Schellenger was rendered. Clausen was involved in this interference on application Serial No. 80,207.

June 23, 1903, an interference, No. 22,797, *Schellenger* v. *Clausen*, was declared and was on June 1, 1904, decided in favor of Schellenger. Clausen was also involved in this interference on application Serial No. 80,207.

March 5, 1906, an interference, No. 24,500, *Temple and Goodrum* v. *Clausen* v. *Dean*, was declared, and on April 20, 1905, judgment against Temple and Goodrum, who failed to file any preliminary statement, was rendered. Clausen was involved in this interference on application Serial No. 106,943.

On May 5, 1908, an interference, No. 28,867, *Temple and Goodrum* v. *Schellenger*, was declared, the applications involved therein being the same as those involved in the above-mentioned interferences and the counts of interference No. 28,867 being the same as the counts of interference No. 22,795.

The applications of Temple and Goodrum and Clausen were all assigned to the same company. Schellenger moved to dissolve interference No. 28,867 on the ground that Temple and Goodrum were estopped to make the claims in issue therein by reason of the fact that these claims could have been made by all the parties to interference No. 24,500, which was decided adversely to them. The Primary Examiner denied this motion on the ground that these claims could not have been included in interference No. 24,500 by reason of the fact that Clausen had been defeated by Schellenger in the prior interference and therefore could not be allowed any claims which could be made by Schellenger. He obtained jurisdiction of the interference, however, for the purpose of considering the effect of the prior adjudication in interference No. 22,795, in which judgment had been rendered against Clausen, whose application was owned by the assignee of the Temple and Goodrum application, and dissolved the interference, holding that the common assignee was the real party in interest and that the question of its right to obtain a patent containing the claims in issue in the later interference, which had also been in issue in the earlier interference, was *res adjudicata*. His decision was affirmed on appeal by the Examiners-in-Chief and by the Commissioner. An appeal to the court of appeals was dismissed for want of prosecution.

In my decision rendered February 24, 1910, it was stated that it was unnecessary to decide at that time whether in all cases an assignee who had contested an interference upon the application of one assignor would be estopped to later contest the subject-matter of that interference upon the application of another assignor. It was pointed out that in the present case the relations of the parties in the two interferences Nos. 24,500 and 22,795 were such that the American Electric Telegraph Company, the common assignee of Temple and Goodrum and Clausen, was clearly in privity with these parties, and therefore bound by the judgment in the prior interferences.

Following the dissolution of interference No. 28,867 the Primary Examiner rejected the appealed claims, which include the three corresponding to the issue of that interference. The grounds of the rejection were (1) that claims 38, 39, and 40, which are identical with the counts of interference No. 28,867, are not patentable to Temple and Goodrum, for the reasons stated in the decisions dissolving that interference; (2) that the remaining claims appealed are either identical with claims 38, 39, and 40 or not patentable thereover. Of the second group of claims he held (a) that claims 44, 45, 46, 48 to 54, inclusive, and 61 to 64, inclusive, might have been included in interference No. 22,795 and that as this interference was decided adversely to Clausen the common assignee of Clausen and Temple and Goodrum was under the doctrine of *res adjudicata* estopped to prosecute these claims in Temple and Goodrum's application and (b) that claims 47 and 55 to 60, inclusive, are not patentable over the disclosure in the Schellenger application in view of the disclosure in the application of Dean and the application of Clausen, No. 103,943, all of which had become prior art to Temple and Goodrum by reason of the decisions in the above-mentioned interferences. He also held that the judgment adverse to Temple and Goodrum in interference No. 24,500 was not conclusive against them as to any claims which Schellenger could make, which includes all the claims involved herein, since such claims were not patentable to Clausen by reason of the fact that he had been defeated by Schellenger in the prior interferences.

The Examiners-in-Chief affirmed the action of the Examiner, but in reference to claims 47 and 55 to 60, inclusive, which the Examiner had stated were readable upon the construction disclosed in the applications involved in interference No. 24,500, said:

When the Primary Examiner noted the fact last mentioned, he need have gone no further, for as judgment was rendered against Temple and Goodrum in interference No. 24,500, in which interference they might have had included as counts appealed claims 47 and 55 to 60, inclusive, it is manifest that by virtue of the application of the doctrine of *res adjudicata*, said claims have now become unpatentable to them. * * * But we note again that in rejecting appealed claims 47 and 55 to 60, inclusive, it is unnecessary to resort to interference No. 22,795, or the Schellenger application, and that the question of the patentability of said claims to Temple and Goodrum is *res adjudicata* by virtue of the fact that said claims might have been included as counts in interference No. 24,500.

The reasons for the appeal allege no specific error on the part of the Examiners-in-Chief except as to the applicability of the doctrine of *res adjudicata* to the present case, and that is the only question discussed in the brief. It is therefore taken, as admitted by applicants, that if the doctrine of *res adjudicata* is applicable to the case the rejection of all the appealed claims was proper.

It is believed that there was no error in the holding of the Examiners-in-Chief. This doctrine of *res adjudicata* is applied by the courts for the salutary purpose of preventing a successful party to litigation being vexed with subsequent litigations by the same party who contested the prior suit or by those in privity with him over the same cause of action.

In the present case the assignee of Clausen had

contested with Schellenger the right to a patent containing certain claims. It has no more right to recontest the question with Schellenger upon the application of Temple and Goodrum, which was owned and controlled by it at the time the prior interference was declared, than upon the application of Clausen. Applicants have argued that Clausen was not a mere nominal party to the first interference, but the real party thereto, and that the fact that his application was assigned does not make the assignee the real party in interest. They further argue that, assuming that the assignee is bound as in privity with Clausen, it cannot be bound to any greater extent than the latter, and the judgment against Clausen is only that he was not the inventor of the subject-matter in issue in the interference in which he was involved.

Unquestionably the judgment against Clausen precludes him from again contesting with Schellenger not only what was included in the prior interference but what might have been decided therein, (*Blackford* v. *Wilder*, 127 O. G., 1255; 28 App. D. C., 535,) whether on the same or another application, and Clausen's assignee is bound to the same extent. Since said assignee was the owner of the Clausen and the Temple and Goodrum applications at the time this interference was declared, it had as such entire control of the prosecution of these applications. When it was notified that such interference would be declared either by suggestion of claims or by notification that the Clausen claims had been suggested to another party, the assignee could have asked to have both the Clausen and the Temple and Goodrum claims placed in the interference, or after the declaration of the interference it could have made the claims in the Temple and Goodrum application and asked that it be included in the interference. (Rule 103 provides that if any of the applications involved in an interference has been assigned notice of the declaration of the interference must be sent to the assignee.) Having thus control of these applications, it must be held that the assignee, whether regarded as the real party in interest or in privity with the actual party thereto, is estopped to further contest with the moving party the subject-matter of such interference or what might have been decided therein. (See *Mower* v. *Duell*, 88 O. G., 191; 15 App. D. C., 144.)

Moreover, as pointed out in my decision of February 24, 1910, in view of the various interferences in which these parties have been involved there was clearly such a privity between Clausen, Temple and Goodrum, and their common assignee that the latter is estopped to prosecute in the Temple and Goodrum application the claims as to which judgment was rendered adverse to Clausen in the interference with Schellenger.

It is also argued that the "claim or demand" in the interference between Temple and Goodrum and Schellenger is not the same as that in the interference between Clausen and Schellenger. It is stated that the test of identity of cause of action is the identity of facts essential to maintain them, and it is pointed out that proof that Temple and Goodrum were the first inventors would not have altered the result in the interference between Clausen and Schellenger, since proof that a third party, a stranger to the proceeding, made the invention is not admissible for any purpose.

But the "claim or demand" in the earlier interference was a patent containing the claims in issue, and if the assignee of Temple and Goodrum had caused their application to be placed in the interference the testimony as to their invention would have been material.

The conclusion of the Examiners-in-Chief that the judgment in interference No. 24,500, adverse to Temple and Goodrum, precludes them from contending for any claim readable upon the structures disclosed in the applications involved therein is, in my opinion, right. The Examiners-in-Chief referred to this only in considering claims 47 and 55 to 60, inclusive; but it is applicable to all the appealed claims, for the Examiner points out that all these claims are broader than the issue of that interference.

As stated above, the Examiner held this judgment not a bar, because these claims would not have been patentable to Clausen in view of the decision in the prior interference adverse to him; but the three-party interference, *Temple and Goodrum* v. *Clausen* v. *Dean*, was, in effect, three interferences, *Temple and Goodrum* v. *Clausen*, *Temple and Goodrum* v. *Dean*, and *Clausen* v. *Dean*, which were treated as one as a matter of convenience.

Temple and Goodrum filed no preliminary statement in that interference, and the judgment was therefore that they were subsequent both to Clausen and to Dean. They could have contested the claims now appealed with Dean, if not with Clausen, and they are now estopped to claim this subject-matter. (*Blackford* v. *Wilder*, *supra*; *Horine* v. *Wende*, 129 O. G., 2858; 29 App. D. C., 415.) It is true that at the time interference No. 24,500 was declared Rule 109 provided only for adding claims already made by the other party or parties to the interference; but under the practice announced in *Churchward* v. *Douglas* v. *Cutler* (106 O. G., 2016) an applicant could present claims not made by the other parties for the purpose of having them suggested to said parties and included in the issue. The fact that Clausen could not have made these claims is immaterial, since it would have merely resulted in declaring an additional interference between Dean and Temple and Goodrum, which could have been considered concurrently with the three-party interference.

The decision of the Examiners-in-Chief is affirmed.

ADJUDICATED PATENTS.

(U. S. C. C. A.) The Parsons patent, No. 723,299, for a chain tire-grip, *Held* not anticipated, valid, and infringed. *Excelsior Supply Co.* v. *Weed Chain Tire Grip Co.*, 192 Fed. Rep., 35.

(U. S. C. C. A.) The Palmer patent, No. 878,995, for an apparatus for inverting tubular fabrics, *Held* infringed by the apparatus of the Jordan patent, No. 960,227, as to claim 1 and not infringed as to claims 7 and 8. *Palmer* v. *Jordan Mach. Co.*, 192 Fed. Rep. 42.

Disclaimer.

838,455.—*Richard H. Rice*, Lynn, Mass. COMBINED EMERGENCY AND THROTTLE VALVE. Patent dated December 11, 1906. Disclaimer filed March 2, 1912, by the assignee, *General Electric Company*.

Enters this disclaimer—

"To that part of the claims which is identified as follows, to wit:

"33. The combination of a casing, a valve within the casing, a stem for said valve having its ends extending through the walls of the casing, the diameter of the portion of the stem extending through one wall being less than the diameter of the portion extending through the opposite wall, the difference in area exposed to the fluid rendering the valve when opened unbalanced with a tendency to close, a device for holding said valve open against unbalanced pressure, and a means for releasing said device to close the valve.

"34. The combination of a casing, a main valve within the casing which is held against its seat by the fluid-pressure when closed, a relay-valve seated on the main valve and controlling a passage through which the fluid may flow from one side of the main valve to the other, to substantially equalize the pressure on opposite sides of said valve, a means for opening and closing the main and relay valves which opens the relay in precedence to the main valve, including a valve-stem extending through the walls of the casing, the diameter of the portion of the stem extending through one wall being less than the diameter of the portion extending through the opposite wall, the difference in area exposed to the fluid rendering said main valve unbalanced when open so that it has a tendency to close, a device for holding said valve open against the unbalanced pressure, and a means for releasing said device to close the valve."

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 2, 1912.

Arabella G. Starke, her assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of Starke's Dixie Plow Works, Incorporated, 7 South Fifteenth street, Richmond, Va., for trade-mark registration and trade-mark registration No. 11,025, dated March 18, 1884, to Arabella G. Starke, of Richmond, Va., and the notice of such declaration sent by registered mail to the said Arabella G. Starke at the address given has been returned by the post-office as undeliverable.

Notice is therefore hereby given to the said Arabella G. Starke, her assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner*.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 2, 1912.

Arabella G. Starke, her assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of Starke's Dixie Plow Works, Incorporated, 7 South Fifteenth street, Richmond, Va., for trade-mark registration and trade-mark registration No. 11,541, dated September 20, 1884, to Arabella G. Starke, of Richmond, Va., and the notice of such declaration sent by registered mail to the said Arabella G. Starke at the address given has been returned by the post-office as undeliverable.

Notice is therefore hereby given to the said Arabella G. Starke, her assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner*.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 20, 1912.

Goodwin & Co., their assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of The Standard Cigar Company, 1200 West South street, Canton, Ohio, for a trade-mark and registration No. 10,200, dated April 17, 1883, to Goodwin & Co., of New York, N. Y., and the notice of such declaration sent by registered mail to the said Goodwin & Co. at the address given has been returned by the post-office undelivered.

Notice is therefore hereby given to the said Goodwin & Co., their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner*.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 21, 1912.

Hutchens, Howe & Withington, their assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of Sigmund Rosenblatt & Son, Nos. 7 and 9 East Baltimore street, Baltimore, Md., for trade-mark registration and trade-mark registration No. 25,053, dated September 18, 1900, to Hutchens, Howe & Withington, Nos. 116 to 120 Michigan street, Chicago, Ill., and the notice of such declaration sent by registered mail to the said Hutchens, Howe & Withington at the address given has been returned by the post-office as undeliverable.

Notice is therefore hereby given to the said Hutchens, Howe & Withington, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner*.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 20, 1912.

Gabriel Codina Mir, his assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of the W. H. Crawford Co., 119 Commerce street, Baltimore, Md., for a trade-mark, registrations to Wilhelm Brauns, of Quedlinburg, Kingdom of Prussia, and German Empire, J. Eugene Jordan, of Seattle, Wash., Leo Sommer, of New York, N. Y., Weeks & Potter, 360 Washington street, Boston, Mass., and Sam'l. E. Egerton & Co., of Baltimore, Md., and registration No. 18,346, dated August 26, 1890, to Gabriel Codina Mir, of Habana, Cuba, and the notice of such declaration sent by registered mail to the said Gabriel Codina Mir at the address given has been returned by the post-office undelivered.

Notice is therefore hereby given to the said Gabriel Codina Mir, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner*.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 21, 1912.

Silicon Wall Plaster and Manufacturing Company, its assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of McCormick Waterproof Portland Cement Company, Bank of Commerce Building, St. Louis, Mo., for trade-mark registration and the trade-mark registration of Simpson Brothers Company, of Chicago, Ill., and trade-mark registration No. 19,086, dated June 26, 1894, to the Silicon Wall Plaster and Manufacturing Company, and the notice of such declaration sent by registered mail to the said Silicon Wall Plaster and Manufacturing Company at the address given has been returned by the post-office undeliverable.

Notice is therefore hereby given to the said Silicon Wall Plaster and Manufacturing Company, its assigns or legal representatives, that if said company or any of them de-

sire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 21, 1912.

Pedro Moreda, his assigns or legal representatives, take notice:

An interference has been declared by this Office between the applications of Bernardo Moreda y Deben, 85 San Miguel street, Habana, Cuba, and of Moreda & Co., of Habana, Cuba, for trade-mark registration and trade-mark registration No. 17,102, dated October 15, 1889, to Pedro Moreda, 51 Dragones street, Habana, Cuba, and the notice of such declaration sent by registered mail to the said Pedro Moreda at the address given has been returned by the post-office undeliverable.

Notice is therefore hereby given to the said Pedro Moreda, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 20, 1912.

Louis Kuhlmann & Bro., their assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of the Idaho Soap Company, Limited, 306 Gessa Building, Boise, Idaho, for registration of a trade-mark and trade-mark registration No. 12,024, dated March 17, 1896, to Louis Kuhlmann & Bro., 88 Hamrod street, Brooklyn, N. Y., and the notice of such declaration sent by registered mail to the said Louis Kuhlmann & Bro. at the address given has been returned by the post-office undeliverable.

Notice is therefore hereby given to the said Louis Kuhlmann & Bro., their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 7, 1912.

Harvey Manufacturing Co., its assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of The F. A. Week Co., of San Francisco, Cal., for a trade-mark, a trade-mark registered to the Empire Cure Company, of Jersey City, N. J., and trade-mark registration No. 44,892, dated July 10, 1894, to the Harvey Manufacturing Co., 41 De Kalb avenue, Brooklyn, N. Y., and the notice of such declaration sent by registered mail to the said Harvey Manufacturing Co. at the address given has been returned by the post-office undelivered.

Notice is therefore hereby given to the said Harvey Manufacturing Co., its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 7, 1912.

Empire Cure Company, its assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of The F. A. Week Co., of San Francisco, Cal., for a trade-mark, a trade-mark registered to the Harvey Manufacturing Co., 41 De Kalb avenue, Brooklyn, N. Y., and trade-mark registration No. 23,790, dated November 7, 1899, to the Empire Cure Company, of Jersey City, N. J., and the notice of such declaration sent by registered mail to the said Empire Cure Company at the address given has been returned by the post-office undelivered.

Notice is therefore hereby given to the said Empire Cure Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 5, 1912.

The Fiaccus & Elliott Co., its assigns or legal representatives, take notice:

An interference has been declared by this Office between the application for registration of The Hoskin Spice Company, of Sixth, New, and Culvert streets, Cincinnati, Ohio, the registration of the Standard Import Co. Ltd., of 210-224 Tchoupitoulas street, New Orleans, La., dated February 4, 1908, No. 67,536, and the registration of The Fiaccus & Elliott Co., of Wheeling, W. Va., dated August 3, 1897, No. 30,472, and the registry return receipt for the notice of such interference has been returned signed by "The E. C. Fiaccus Co.," of Wheeling, W. Va., and the said The E. C. Fiaccus Co. has failed to file evidence of succession, as required by the Office.

Notice is therefore hereby given to the said The Fiaccus & Elliott Co., its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 31, 1912.

Scollay Meat Packing Company, its assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of the Seldovia Salmon Company, of Seattle, Wash., for a trade-mark and registration No. 10,890, dated January 29, 1884, to the Scollay Meat Packing Company, of New York, N. Y., and the notice of such declaration sent by registered mail to the said Scollay Meat Packing Company at the address given has been returned by the post-office undelivered.

Notice is therefore hereby given to the said Scollay Meat Packing Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., January 27, 1912.

Wm. D. Cleveland & Co., their assigns or legal representatives, take notice:

An interference has been declared by this Office between an application for registration by the Apex Fish Company, of Fifth and J streets, Anacortes, Wash., and the registration of Wm. D. Cleveland & Co., of Houston, Galveston, and Velasco, Tex., registered April 14, 1903, No. 22,831, and the registry return receipt of the notice of such declaration sent to the said Wm. D. Cleveland & Co. was returned signed by one "H. Stern" for "Wm. D. Cleveland & Sons," and the said Wm. D. Cleveland & Sons have failed to file evidence of successorship, as required.

Notice is therefore hereby given to the said Wm. D. Cleveland & Co., their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as though by default.

EDWARD B. MOORE, *Commissioner.*

THE OFFICIAL GAZETTE OF THE United States Patent Office.

Vol. 176—No. 3. TUESDAY, MARCH 19, 1912. Price—$5 per year.

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ISSUE OF MARCH 19, 1912.

Patents	464—No.	1,020,892 to No. 1,020,955, inclusive.
Designs	31—No.	42,815 to No. 42,845, inclusive.
Trade-Marks	65—No.	85,783 to No. 85,847, inclusive.
Labels	10—No.	16,242 to No. 16,251, inclusive.
Prints	6—No.	2,871 to No. 2,876, inclusive.
Reissues	4—No.	12,825 to No. 12,828, inclusive.
Total	570	

TO CITIZENS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	1	.....	North Carolina	3	1
Arizona	3	.....	North Dakota	4	.....
Arkansas	2	.....	Ohio	20	4
California	13	1	Oklahoma	6	.....
Colorado	2	.....	Oregon	4	.....
Connecticut	10	.....	Pennsylvania	48	3
Delaware	.....	.....	Rhode Island	3	.....
Florida	3	.....	South Carolina	.....	.....
Georgia	4	1	South Dakota	1	.....
Idaho	2	.....	Tennessee	7	2
Illinois	42	10	Texas	6	.....
Indiana	15	1	Utah	.....	.....
Iowa	10	1	Vermont	4	.....
Kansas	15	.....	Virginia	3	1
Kentucky	6	.....	Washington	11	2
Louisiana	1	.....	West Virginia	4	.....
Maine	1	.....	Wisconsin	19	.....
Maryland	4	2	Wyoming	1	.....
Massachusetts	47	5			
Michigan	21	2	Alaska, District of	.....	.....
Minnesota	6	1	Canal Zone	1	.....
Mississippi	2	.....	District of Columbia	3	.....
Missouri	26	2	Hawaii Territory	2	.....
Montana	2	.....	Philippine Islands	.....	.....
Nebraska	6	1	Porto Rico	.....	.....
Nevada	.....	.....	U. S. Army	.....	.....
New Hampshire	1	.....	U. S. Navy	.....	.....
New Jersey	34	6			
New Mexico	.....	.....	Total to citizens of the United States	531	63
New York	80	17			

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Algeria	.....	.....	Netherlands	.....	.....
Argentina	.....	.....	Newfoundland	.....	.....
Austria-Hungary	2	.....	New South Wales	1	.....
Belgium	2	1	New Zealand	1	.....
Brazil	.....	.....	Norway	.....	.....
British West Indies	.....	.....	Queensland	.....	.....
Canada	5	.....	Roumania	.....	.....
Cape Colony	.....	.....	Russia	1	.....
Chile	.....	.....	Scotland	.....	.....
China	1	.....	South Australia	.....	.....
Costa Rica	.....	.....	Spain	1	.....
Cuba	.....	.....	Sweden	.....	.....
Denmark	.....	.....	Switzerland	2	.....
Ecuador	.....	.....	Transvaal, South Africa	1	.....
England	10	3	Victoria	1	.....
France	3	.....	Western Australia	.....	.....
Germany	25	4			
Ireland	.....	.....	Total to citizens of foreign countries	64	5
Italy	1	.....			
Japan	1	.....			
Mexico	1	.....			

Drawings.

RULE 23.

23. When there are drawings, the description will refer to the different views by figures and to the different parts by letters or numerals, (preferably the latter.)

RULE 52—REDRAFT.

(6) The different views should be consecutively numbered. Letters and figures of reference must be carefully formed. They should, if possible, measure at least one-eighth of an inch in height, so that they may bear reduction to one twenty-fourth of an inch; and they may be much larger when there is sufficient room. They must be so placed in the close and complex parts of drawings as not to interfere with a thorough comprehension of the same, and therefore should rarely cross or mingle with the lines. When necessarily grouped around a certain part, they should be placed at a little distance, where there is available space, and connected by short broken lines with the parts to which they refer. They must never appear upon shaded surfaces, and when it is difficult to avoid this, a blank space must be left in the shading where the letter occurs, so that it shall appear perfectly distinct and separate from the work. If the same part of an invention appear in more than one view of the drawing it must always be represented by the same character, and the same character must never be used to designate different parts.

It is suggested that numerals or letters be used without exponents.

Delivery of Patent.

RULE 160. The patent will be delivered or mailed on the day of its date to the attorney of record, if there be one; if not, to the patentee; or, if the attorney so request, to the patentee or assignee of an interest therein.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business March 16, 1912.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
313	1. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Jan. 20	Jan. 26	533
128	2. Bee Culture; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Pneumatic Despatch; Pneumatics; Presses; Store-Service; Tobacco.	Jan. 19	Feb. 2	530
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Feb. 19	Mar. 4	173
232	4. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Metalic Building Structures.	Feb. 6	Feb. 16	337
167	5. Bookbinding; Harvesters; Jewelry; Music.	Jan. 13	Jan. 22	470
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	Feb. 16	Feb. 17	267
312	7. Educational Appliances; Clutches; Games and Toys; Mechanical Motors; Nut and Bolt Locks; Optics; Velocipedes.	Dec. 14	Jan. 24	642
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Feb. 1	Feb. 13	512
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Pumps; Wind-Wheels.	Feb. 10	Feb. 17	286
225	10. Carriages and Wagons.....	Jan. 17	Feb. 1	664
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Jan. 18	Jan. 22	419
234	12. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Jan. 24	Jan. 18	888
229	13. Arms, Projectiles, and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Turning.	Jan. 9	Feb. 9	464
207	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Jan. 27	Feb. 3	385
208	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Liquid Coating Compositions; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastic Compositions; Plastics.	Jan. 24	Jan. 22	841
109	16. Telegraphy; Telephony.....	Feb. 6	Feb. 3	226
308	17. Metrix-Making; Paper Manufactures; Printing; Type-Bar Making.	Feb. 16	Feb. 16	317
227	18. Injectors and Ejectors; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Boilers; Steam-Engines; Steam-Engine Valves.	Jan. 20	Feb. 5	262
236	19. Dampers, Automatic; Furnaces; Heat-Distributing Systems; Stoves and Furnaces.	Jan. 9	Jan. 24	435
179	20. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Feb. 1	Feb. 16	223
119	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Feb. 10	Feb. 10	313

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Jan. 8	Feb. 16	296
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Feb. 7	Feb. 12	386
144	24. Apparel; Apparel Apparatus; Sewing-Machines.	Jan. 20	Jan. 20	442
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Feb. 15	Feb. 20	206
105	26. Electricity Generation Motive Power.	Oct. 27	Nov. 16	805
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Feb. 10	Feb. 10	396
65	28. Internal-Combustion Engines..	Jan. 3	Dec. 28	814
147	29. Coopering; Fire-Escapes; Ladders; Rods; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Wood-working; Woodworking-Tools.	Jan. 15	Feb. 16	446
182	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Jan. 3	Feb. 14	269
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	Feb. 1	Jan. 20	313
278	32. Carbonating Beverages; Curtains, Shades, and Screens; Dispensing Beverages; Dispensing-Cans; Ornamentation; Packaging Liquids; Refrigeration.	Dec. 29	Feb. 17	317
71	33. Cutlery; Domestic Cooking Vessels; Masonry and Concrete Structures; Paving; Tents, Canopies, Umbrellas, and Canes.	Jan. 9	Jan. 15	461
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	Jan. 26	Jan. 25	522
244	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	Feb. 14	Feb. 16	662
264	36. Drafting; Driers; Engraving; Measuring Instruments; Photography.	Feb. 2	Feb. 3	585
107	37. Electric Lighting; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Jan. 5	Feb. 16	419
373	38. Animal Husbandry; Artesian and Oil Wells; Fishing and Trapping; Stationary; Stone-Working.	Jan. 17	Jan. 22	614
221	39. Water Distribution.....	Dec. 19	Dec. 14	621
220	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Feb. 16	Feb. 24	375
126	41. Railway Draft Appliances; Resilient Tires and Wheels.	Jan. 8	Feb. 7	531
270	42. Electric Railways; Electric Signaling; Railway Signaling; Signals.	Jan. 19	Jan. 15	530
282	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Feb. 10	Feb. 8	338

Oldest new case, Oct. 27; oldest amended, Nov. 16.

Total number of applications awaiting action 19,080

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks.....	Feb. 1	Feb. 2	1165
	Designs.....	Jan. 18	Feb. 9	230
	Labels and Prints.....	Mar. 11	Mar. 9	28

PATENTS

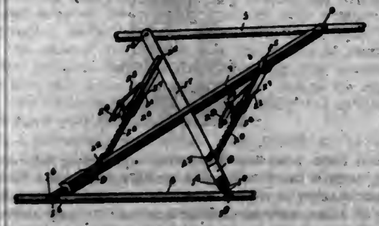
GRANTED MARCH 19, 1912.

1,020,392. METALLIC TIE AND RAIL-FASTENER. JOHN ADAMS, Congo, Ohio. Filed Dec. 4, 1911. Serial No. 663,764. (Cl. 238—5.)



In a metallic tie and rail fastener, the combination with rails, of a flat metallic plate for supporting said rails, longitudinal depending ribs carried by the under side of said plate, inner rail fasteners formed integral with the top of said plate for engaging the inner base flanges of said rails, longitudinal parallel guides carried by the ends of said plate and providing dovetailed grooves, outer fasteners having depending dovetailed tongues engaging in said grooves with said fasteners extending over the outer base flanges of said rails, said outer fasteners having transverse grooves formed therein, locking plates arranged in said grooves and having depending ends engaging the side edges of said fasteners, screw bolts extending through said outer fasteners into sockets provided therefor in said plate, and rectangular heads carried by said screw bolts and adapted to be held within said locking plates.

1,020,393. EQUALIZING TRAILING COUPLING DEVICE. LOUIS ALMGREEN, San Diego, Cal. Filed Oct. 16, 1911. Serial No. 654,894. (Cl. 21—114.)



1. In a device of the character described the combination with the front and rear axles of separate vehicles of a pair of crossed bars pivotally connected at their ends to said axles, and locking means for locking said bars against movement with relation to each other.

2. In a device of the character described the combination with the front and rear axles of separate vehicles of a pair of crossed bars pivotally connected at their ends to said axles, telescopic members extending between said bars and pivotally connected thereto, and latch members for locking the pairs of the telescopic members against movement with relation to each other.

3. In a device of the character described the combination with the front and rear axles of separate vehicles of a pair of crossed bars pivotally connected at their ends to said axles, telescopic members extending between said bars and pivotally connected thereto, and latch members for locking the pairs of the telescopic members against movement with relation to each other, said bars having spring buffers disposed within their length.

4. In a device of the character described the combination with the front and rear axles of separate vehicles of a pair of crossed bars pivotally connected at their ends to said axles, telescopic members extending between said bars and pivotally connected thereto, and latch members for locking the pairs of the telescopic members against movement with relation to each other, said bars having spring buffers disposed within their length, each acting in both directions.

5. In a device of the character described the combination with the front and rear axles of separate vehicles of a double bar having a hollow head at one end, a plunger rod extending from said hollow head, and springs for resisting the movement of the plunger rod with relation to said hollow head, means for pivoting the double bar at one of its ends to one of said axles, means for pivoting the plunger rod at the other end of the double bar to the other of said axles, a single bar passing obliquely through the double bar and being connected at one of its ends to one of said axles, a hollow head at the other end of the single bar, a plunger rod extending from the hollow head, a spring for resisting the movement of said second plunger member in said hollow head, means for pivoting the said second plunger rod to one of the said axles, telescopic bars extending between said bars and latch members for locking the portions of the telescopic bars against movement with relation to each other.

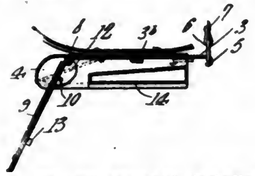
[Claim 6 not printed in the Gazette.]

1,020,394. HAT-PIN-POINT PROTECTOR. GEORGE BALOG, Perth Amboy, N. J. Filed Nov. 10, 1911. Serial No. 659,656. (Cl. 24—155.)



In a hat pin-point protector, a guard comprising sections having flat adjoining faces provided with recesses, one of said sections having an opening formed therein in communication with said recesses, a piece of yieldable material arranged in one of said recesses, a lever pivotally mounted in another of said recesses and having one end thereof notched to engage said pin and hold said pin in engagement with said piece of yieldable material and the opposite end thereof bent to extend into the opening of said section, a push button arranged in the opening of said section upon the end of said lever, a coiled spring arranged in another of said recesses and having one end thereof anchored in one of said sections and the other end connected to the bent end of said lever, and means for connecting said sections together.

1,020,395. LOCK AND TAG-HOLDER FOR MAIL-POUCHES. FREDERIC J. BECK, Poplar, Mont. Filed Nov. 3, 1911. Serial No. 658,397. (Cl. 70—2.)



1. A lock of the type described, including a slidable hasp having a hook-ended terminal, means adapted for connection with said hook-ended terminal and for effecting the closing of the open end of a pouch, said hasp including two hinged together members, one member having pivotally connected thereto a tag-holder member, itself being pivoted in position, said tag-holder member having a keeper adapted for coöperation with the locking mechanism.

2. A mail pouch lock, including a slidable hasp having a hook-ended terminal, a closure-forming strap having one end provided with a loop for engaging said hook-ended terminal, the opposite end of said strap being secured to said pouch, a headed stud on the lock-casing, said hasp having a slot receiving said headed stud, said tag-holder member having pivoted connection with said hasp, and itself pivoted upon said lock-casing, and having a keeper adapted to pass through a wall of said lock-casing and to have engagement with the tumbler of the locking mechanism.

3. A mail pouch lock, including a slidable hasp having a hook-ended terminal, means for forming a closure for the open end of said pouch, said closure forming means being connected to said hook-ended terminal and to said pouch, a tag-holder having pivotal connection with said hasp and provided near its connection with said hasp with outstanding extensions, and a pivoting member for said tag-holder received by apertures in said outstanding extensions and secured to the lateral portions of the lock-casing, said tag-holder having a keeper adapted to pass through a wall of the lock-casing for engagement with a tumbler of the lock.

4. A mail pouch lock comprising a slidable hasp including two hinged-together members, one member being adapted for the attachment thereto of a pouch or closure-forming strap, the other hasp-member having pivotally connected thereto an actuating member itself pivoted in position.

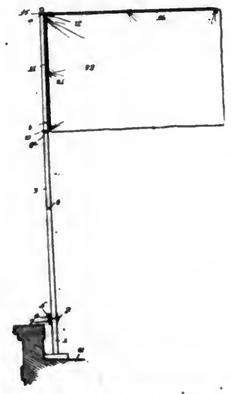
1,020,396. FLAG HOLDING AND STRETCHING DEVICE. GEORGE W. BLANK, Wilkinsburg, Pa. Filed Feb. 1, 1911. Serial No. 606,056. (Cl. 116—12.)

1. In a flag holder, a pole, a rod having looped ends movably mounted upon said pole, a looped member carried by the upper end of said rod and having notches in one side thereof, and an arm having a looped end adjustably connected to said member and adapted to engage in said notches, and a flag attached to said rod and to said arm.

2. In a flag holder a pole, a rod connected with the pole and bent at a point above its lower end to provide a loop disposed in a vertical plane, an arm adjustably connected with the loop of said rod, said rod provided with means for supporting said arm in its adjusted position, and a flag attached to the rod and to said arm.

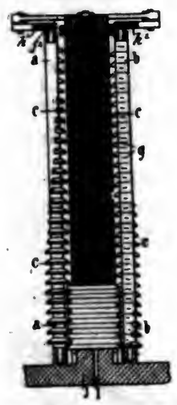
3. In a flag holder, a pole, a rod adapted to be connected with the pole and having a looped upper end, said loop having notches in one side thereof, and an arm connected to the upper end of the rod and adapted to engage in said notches, and a flag attached to said rod and said arm.

4. A flag holder comprising a vertically-disposed rod adapted to be connected to a pole, said rod having its upper portion bent to provide a loop disposed in a vertical plane said loop being free of the pole, an arm connected with the looped upper portion of said rod, a flag attached to said rod and to said arm, and means whereby



said arm can be supported from the looped end of said rod at various inclinations.

1,020,397. APPARATUS FOR COUNTING MONEY. FRANÇOIS EMILE BOURCK, Paris, France. Filed Oct. 21, 1909. Serial No. 523,852. (Cl. 133—8.)



1. A coin counting apparatus comprising in combination, means for retaining a plurality of coins in superposed relation in a pile, counting mechanism adjacent the pile of coins, and devices for successively and alternately engaging and supporting the coins of the pile from the bottom to the top of said pile to support the same in counting relation with respect to said mechanism.

2. A coin counting apparatus comprising in combination, means for retaining a plurality of coins in superposed relation in a pile, counting mechanism adjacent said pile, and devices for successively and alternately engaging the coins to dispose and support the same when piled in counting relation with respect to said counting mechanism.

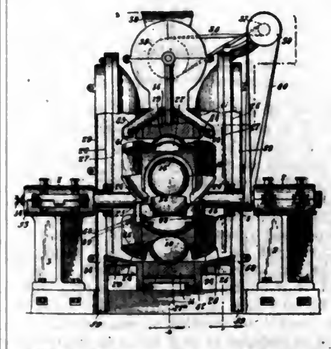
3. A coin counting apparatus comprising in combination, means for retaining a plurality of coins in superposed relation in a pile, counting mechanism adjacent said pile, and devices for successively engaging the coins to support the same in counting relation with respect to said mechanism.

4. A coin counting apparatus comprising in combination, means for retaining a plurality of coins in superposed relation in a pile, counting mechanism adjacent said pile, devices for alternately engaging and supporting the coins of the pile to dispose the same in counting relation with respect to said mechanism.

5. A coin counting apparatus comprising in combination, means for retaining a plurality of coins in superposed relation in a pile, counting mechanism adjacent said pile, and devices for successively engaging the coins from the bottom to the top of said pile and supporting the same in counting relation with respect to said mechanism.

[Claims 6 to 14 not printed in the Gazette.]

1,020,398. PULVERIZING-MILL. BENJAMIN C. BRADLEY, Canton, Ohio. Filed Dec. 6, 1909. Serial No. 531,637. (Cl. 83—9.)



1. In a pulverizing mill, the combination of a shaft, a carrier mounted upon said shaft, said carrier provided with grinding balls, pushers located behind the grinding balls and adapted for contact with the rear surfaces of said grinding balls, said pushers pivoted at a point between the axes of the carrier and the points of contact with the grinding balls, a fixed grinding ring provided with a ball race upon its inner periphery and means for holding the grinding ring in fixed position.

2. In a pulverizing mill, the combination of a shaft, a carrier mounted upon said shaft, said carrier provided with grinding balls, pushers located behind the grinding balls and adapted for contact with the rear surface of said grinding balls, said pushers pivoted at a point between the axes of the carrier and the points of contact with the grinding balls, a fixed grinding ring provided with a ball race upon its inner periphery, means for cushioning the pushers, and means for holding the grinding ring in fixed position.

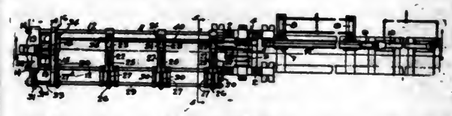
3. In a pulverizing mill of the class described, the combination of a shaft, a carrier mounted upon said shaft, said carrier provided with grinding elements, pushers pivoted at a point between the axes of the carrier and the points of contact with the grinding elements, said grinding elements adapted to yield opposite to the line of travel and said pushers adapted to yield in substantial unison with the yielding movement of the grinding elements and the pushers adapted for contact with the rear surfaces of the grinding elements, springs adapted to normally hold the pushers in contact with the rear surfaces of the grinding element and a fixed grinding ring.

4. In a pulverizing mill, the combination of a shaft, a carrier mounted upon said shaft, said carrier provided upon its periphery with grinding elements, deflecting blades extended from the vertical faces of the carrier, said blades flared outward and backward from the faces of the carrier and flanges located at the rear of the deflecting blades and inclined in opposite directions from the blades, the carrier provided with openings, said openings located at the bases of the flanges, and a fixed grinding ring, substantially as and for the purpose specified.

5. In a pulverizing mill, the combination of a shaft, a carrier mounted upon said shaft, said carrier provided upon its periphery with grinding balls, pushers adapted for contact with the grinding balls, flanges located upon the faces of the carrier, said carrier provided with openings located at the bases of the flanges, and a fixed grinding ring and means for cushioning the pushers, said pushers located at the rear of the grinding balls, substantially as and for the purpose specified.

[Claim 6 not printed in the Gazette.]

1,020,399. TUBE-ROLLING APPARATUS. RICHARD E. BROCK and WILLIAM M. SELKIRK, Monessen, Pa., assignors to Pittsburgh Steel Products Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Dec. 30, 1910. Serial No. 600,081. (Cl. 80—11.)



1. In apparatus for rolling tubing, the combination of power-driven rolls having a working-pass and a dummy-pass, a mandrel-bar to receive the tube, means for withdrawing the mandrel-bar, and means for moving the mandrel-bar and the tubular-blank carried thereby transversely into line with the dummy-pass.

2. In apparatus for rolling tubing, the combination of power-driven rolls having a working-pass and a dummy-pass, a mandrel-bar supported in line with the working-pass, and means for successively withdrawing said mandrel-bar and moving the same transversely together with the tubular-blank supported thereby into line with the dummy-pass.

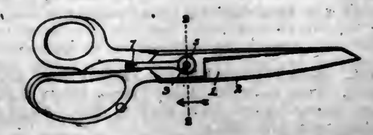
3. In apparatus for rolling tubing, the combination of power-driven rolls having a working-pass and a dummy pass, a mandrel-bar, a movable back-stop for said mandrel-bar, a transversely movable support for said mandrel-bar, and mechanism for moving said transversely movable support to bring said mandrel-bar and the tubular-blank supported thereby into line with the dummy-pass.

4. In tube rolling apparatus, the combination of power-driven rolls having a working-pass and a dummy-pass, a mandrel bar, a movable back-stop for said mandrel-bar, a transversely movable anchor on said back-stop with which said mandrel-bar engages, and mechanism for moving said anchor to bring said mandrel-bar and the tubular-blank supported thereby into line with the dummy-pass.

5. In apparatus for rolling tubing, the combination with power-driven rolls having a working-pass and a dummy-pass, a mandrel-bar, a movable back-stop, a transversely movable anchor on said back-stop with which said mandrel-bar engages, transversely movable mandrel-bar supports at intervals, and mechanism for moving said anchor-bar and supports simultaneously to bring said mandrel-bar and tubular-blank carried thereby into line with the dummy-pass.

[Claims 6 to 8 not printed in the Gazette.]

1,020,400. TENSION ATTACHMENT FOR SHEARS. HENRIE CLAUSS, Fremont, Ohio. Filed May 27, 1909. Serial No. 498,704. (Cl. 30—13.)

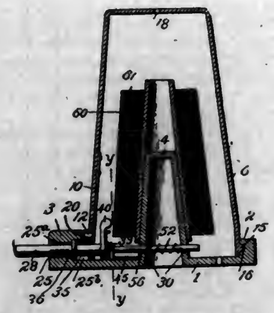


1. A tension attachment for shears comprising a looped spring member embracing the blades, a bolt passing freely through the blades, said bolt at one end being rivoted to one terminal of said spring member to permanently and rigidly attach it thereto, the other end of said bolt passing

freely through the other terminal of said member, and a nut upon said bolt to force the free terminal of the looped member against the face of the shear blade.

2. A tension attachment for shears, the combination with the blades, of a looped member embracing the blades, said blades being apertured and one of them having a counterbore therein, a pivot bolt passing freely through the apertured blades, said bolt near one end having an annular concentric shoulder which lies in said counterbore in one of said blades, one terminal of the looped member lying against the outer face of said shoulder and having an aperture in which the projecting end of the pivot bolt is riveted, the opposite end of the pivot bolt passing through the other terminal of the looped member, and a nut upon said bolt to bind the terminal of the looped member against the face of the shear blade.

1,020,401. SPOOL-HOLDER. WILLIAM A. COURTLAND, New York, N. Y. Filed May 24, 1911. Serial No. 629,141. (Cl. 242—137.)



1. In a device of the character described, a spool holder, a cover for said spool holder, means for locking said holder and cover together, and means for releasing said locking means controlled by the contents of the spool.

2. In a device of the character described, a spool holder, a cover for said spool holder, means capable of automatically latching said holder and cover together, and means capable of unlatching said cover and holder after the contents of the spool have been removed.

3. In a device of the character described, a spool holder, a cover for said spool holder, means for automatically latching said cover to the holder, and means for releasing the latching means from the holder after the contents of the spool have been removed.

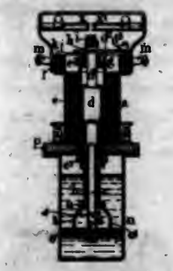
4. In a device of the character described, means for holding a spool, means for covering the spool, means for automatically latching said spool holding and covering means together, and means controlled by the contents of the spool for preventing the latching means from being operated.

5. In a device of the character described, means for holding a spool, means for covering a spool, means contained within said cover for automatically latching said spool holder and cover together, and means contained within the holder for releasing the latching means in said cover.

[Claims 6 to 16 not printed in the Gazette.]

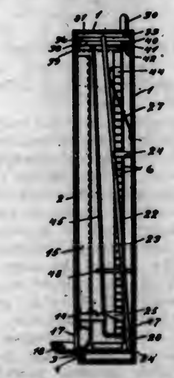
1,020,402. ELECTROMAGNETIC RECEIVING APPARATUS. JEAN BAPTISTE MARIE PIERRE HENRY ROSLIN D'IVRY, Paris, France. Filed Sept. 5, 1907. Serial No. 391,466. (Cl. 175—281.)

1. In an electric telemechanic transmitting and receiving device, a tube provided with teeth at each end, a coil surrounding said tube, electrical connections to said coil, a cylinder *d* in said tube, studs *f*, *j*, at each end of said cylinder adapted to engage with the teeth on the tube whereby the cylinder will be rotated, a contact key on the cylinder, contacts *k* adapted to be engaged by said key, a tubular core *b* adapted to have movement within the cylinder *d* and adapted to be raised when the coil is energized so as to raise the cylinder, and means for retarding the lowering of said core when once raised.



2. A device of the class described comprising a tube *e* having teeth at each end, a coil *a* surrounding said tube, a cylinder *d* within the tube, studs *f*, *j*, at each end of the cylinder adapted to engage with the teeth to rotate the cylinder, a tubular core *b* placed below the cylinder *d* and having movement therein when the coil is energized, a guiding tube *c* on which the tube *b* is guided, a receptacle surrounding said tubes *b* and *c* and adapted to contain a fluid, a support for the guide tube *c* within the receptacle, a contact carried by said support, a valve at the lower end of the tube *c* adapted to control the entrance of fluid to said tube *c*, an adjustable outlet from said tube *c*, a contact key carried by the cylinder *d*, contacts adapted to be engaged by said key, and means for energizing the coil whereby the tube *b* will be raised, which in its turn raises the cylinder *d*, which by means of the studs and teeth is caused to rotate, and liquid flowing into the tube *c* retards the return to normal position of the tube *b*, and contacts on said tube *b* adapted to engage with the contact on the support for the tube *c*.

1,020,403. VENDING-MACHINE. MARTIN ELZAS, New York, N. Y., assignor to Liberty Vending Co., New York, N. Y., a Corporation of New York. Filed Apr. 22, 1911. Serial No. 622,663. (Cl. 211—8.)

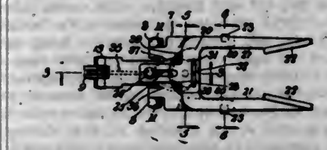


1. In a machine of the character described, a casing having one side thereof formed open, a movable door for normally closing the open side and having an opening formed therethrough to permit of the discharge of the articles from the machine, means for discharging the articles from the machine including a pivoted operating lever, a movable door for controlling the passage of articles through the opening formed in the first named door, means to move the second named door including a pivoted lever connected therewith and having a lateral extension at one end, and a beveled lug connected with the operating lever for engaging said extension to depress the same.

2. In a machine of the character described, a casing having one side thereof formed open, a swinging door having its lower end pivotally connected with the corresponding end of the casing, means mounted upon the swinging door for holding articles to be vended, said swinging door being provided with a discharge opening adjacent the means to permit the articles to pass therethrough, a movable element for controlling the passage of the articles through the discharge opening, a lever pivoted intermediate its ends upon the swinging door and having one end thereof connected with said element and the opposite end provided with a lateral extension, and common means for discharging the articles from the machine and moving said extension of the pivoted lever.

3. In a machine of the character described, a casing having one side thereof formed open, a door pivotally connected at its lower end with said casing to swing in a vertical plane and be moved to a horizontal position, a receptacle for holding articles to be vended rigidly mounted upon the door, an operating lever pivotally mounted within the casing to swing in a vertical plane and having its lower end bent to form a horizontal portion extending at right angles to the direction of travel of said operating lever to be positioned behind the articles, a vertically movable door slidably mounted upon the first named door, a lever pivoted intermediate its ends with the first named door and having pivotal connection at one end with said vertically movable door, said second named lever carrying at its other end a horizontal extension, and a lug carried by said operating lever and having a beveled face engaging the free end of said horizontal extension.

1,020,404. RIBBON-THROW MECHANISM FOR TYPE-WRITING MACHINES. ARTHUR F. ENGEL, New York, N. Y., assignor to The Oliver Typewriter Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 25, 1911. Serial No. 623,294. (Cl. 197—158.)



1. A ribbon throw device embracing a base-plate, a main vibratory member, oscillating supporting links connected with said base-plate and with the main vibratory member, a shiftable member mounted on the main member provided with ribbon guides, and means affording a driving connection between the main member and the shiftable member operated through the vibratory movement of the supporting links relatively to the main member, and acting on the shiftable member to give forward and backward shifting movement to said shiftable member on the main member.

2. A ribbon throw device embracing a base-plate, a main vibratory member, oscillating supporting links connected with said base-plate and with the main vibratory member, a shiftable member mounted on the main member provided with ribbon guides, a member rotatively mounted on said main member, a driving connection between said rotative member and the shiftable member, affording forward and backward shifting movement of the shiftable member on the main member, as said rotative member revolves, and means operated through the vibratory movement of the supporting links relatively to the main member for actuating said rotative member.

3. A ribbon throw device embracing a main vibrating member, a shiftable member mounted on said main member and provided with ribbon guides, a ratchet wheel mounted on the main member, a driving connection between said ratchet wheel and the shiftable member, affording backward and forward shifting movement in the shiftable member as the ratchet wheel revolves, and a pawl-member actuated through the vibratory movement of the main member and provided with pawl arms that extend at opposite sides of the ratchet wheel and have yielding connections with each other; one of said arms having a holding tooth acting on the teeth of the ratchet wheel in the rearward movement of the pawl-member, and the other of said arms having a shoulder acting on said teeth in the forward movement of said pawl-member.

4. A ribbon throw device embracing a base-plate, a main vibratory member, oscillating supporting links connected with said base plate and with the main member, a shiftable member mounted on said main member, and provided with ribbon guides, a ratchet wheel mounted on the main member, driving means connecting said ratchet wheel and the shiftable member, giving shifting movement to said shiftable member during the vibratory movement of said main member both toward and from the printing point in the rotation of said ratchet wheel, and a pawl-member connected with one of said supporting links and acting on said ratchet wheel.

5. A ribbon throw device embracing a base-plate, a main vibratory member, oscillating supporting links connected with said base-plate and with the main vibratory member, a shiftable member mounted on the main member provided with ribbon guides and with a transverse slot, a ratchet wheel mounted on the main member and provided with a crank-pin engaged with said slot, and a pawl-member connected with one of said links acting on said ratchet wheel to give forward and backward shifting movement to the shiftable member on the main member in the rotation of said ratchet wheel.

1,020,405. BUBBLE-CUP NOZZLE. AUGUST ENGEL, Milwaukee, Wis., assignor to Milwaukee Brass Manufacturing Company, Milwaukee, Wis. Filed Nov. 24, 1911. Serial No. 662,140. (Cl. 137—11.)



1. In a bubble-cup nozzle, a shell attachable at its lower end to a water-supply pipe and provided with a central hollow horizontally partitioned stem having ports on opposite sides of its partition, the upper outlet end of the stem being extended through the mouth of the shell clear of the same.

2. In a bubble-cup nozzle, a shell attachable at its lower end to a water-supply pipe and provided with a central hollow horizontally partitioned stem having ports on opposite sides of its partition, the upper outlet end of the stem being semi-spherical and extended through the mouth of the shell clear of the same.

3. In a bubble-cup nozzle, a shell attachable at its lower end to a water-supply pipe and having an apertured rim beyond a contracted mouth thereof, together with a central hollow horizontally partitioned stem having ports on opposite sides of its partition, the upper outlet end of the stem being extended through the mouth of the shell clear of the same but terminating within the confines of said rim.

4. In a bubble-cup nozzle, the combination of a water-supply pipe having a restricted outlet, a shell attachable at its lower end to the outlet end of said pipe, and a hollow horizontally partitioned stem in the shell central of the same having ports on opposite sides of its partition, the upper outlet end of the stem being extended through the mouth of the shell clear of the same.

5. In a bubble-cup nozzle, the combination of a water-supply pipe, a plug in the outlet end of the pipe having longitudinal grooves at intervals of its periphery, a shell attachable at its lower end to the outlet end of said pipe, and a hollow horizontally partitioned stem in the shell central of the same provided with ports on opposite sides of its partition, the upper outlet end of the stem being extended through the mouth of the shell clear of the same.

[Claims 6 and 7 not printed in the Gazette.]

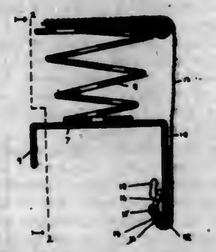
1,020,406. TIE AND RAIL-FASTENER. MARCIN FLAK, Port Jefferson, N. Y. Filed Dec. 29, 1911. Serial No. 668,540. (Cl. 238—3.)



1. In a tie and rail fastener, the combination with a concrete tie, a metallic casing inclosing the top and side walls of said ties, and rails, of saddles of insulation arranged upon said ties and having side and end pieces, a longitudinal yoke arranged upon said saddle and having the depending ends thereof locked relatively to the end pieces of said saddle, transverse yokes arranged upon said longitudinal yokes and having the depending ends thereof locked relatively to the side pieces of said saddle, said transverse yokes being cut away to provide clearance for said longitudinal yoke, and fastener members secured to said transverse yoke and adapted to retain said rails upon said longitudinal yokes.

2. In a tie and rail fastener the combination with a concrete tie, and rails, of saddles of insulation arranged upon said tie at the ends thereof, said saddles of insulation having side pieces engaging the sides of said ties, and end pieces engaging the ends of said ties, a longitudinal yoke arranged upon said saddle and adapted to support said rail, said yoke having the depending ends thereof in proximity to the end pieces of said saddle, screws arranged in the ends of said longitudinal yoke and engaging the end pieces of said saddles, transverse yokes arranged upon said longitudinal yokes adjacent to said rails, said transverse yoke having the depending ends thereof extending in proximity to the side pieces of said saddle, set screws locking said transverse yoke relatively to said saddle, and fastener members secured to said transverse yoke and engaging the base flanges of said rail.

1,020,407. DETACHABLE FASTENER FOR UPHOLSTERY. WILLIAM S. FOSTER, Utica, N. Y., assignor to Foster Brothers Manufacturing Co., a Corporation of New York. Filed May 19, 1911. Serial No. 628,266. (Cl. 5—22.)



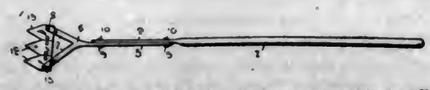
1. A fastening of the class described consisting of a covering under tension and having a downwardly extending edge, a downwardly extending side rail around the lower edge of which said covering is passed, a stiff rod secured to said downwardly extending edge, and means on the inside of said rail and integral therewith for holding said rod by means of said tension and adapted to allow the removal of said rod therefrom upon temporary removal of said tension.

2. A fastening of the class described consisting of a covering under tension and having a hem in its downwardly extended edge, a downwardly extending side rail around the lower edge of which said covering is passed, a stiff rod in said hem and means on the inside of said rail and integral therewith for holding said rod by means of said tension and adapted to allow removal of the said rod therefrom upon temporary removal of said tension.

3. In a fastening for the covering of an upholstered article the combination of a downwardly extending side rail, a covering under tension extending around the lower edge of said side rail and upwardly on the inner side thereof, a stiff rod removably secured to the edge of said covering and means on the inside of said side rail and integral therewith for holding said rod by means of said tension and adapted to allow removal of said rod therefrom upon temporary removal of said tension.

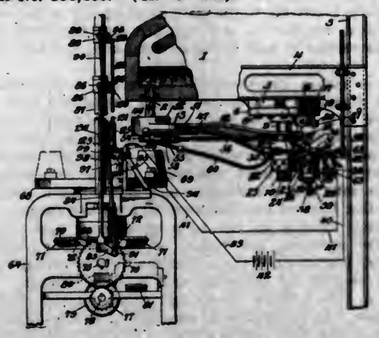
4. In a fastening for the covering of an upholstered article, the combination of a downwardly extending side rail, a covering under tension extending around the lower edge of the said side rail and upwardly on the inner side thereof and having on its edge a hem, a stiff rod in said hem removable endwise therefrom and means on the inside of said side rail and integral therewith for holding said rod by means of said tension and adapted to allow removal of the said rod therefrom upon temporary removal of the said tension.

1,020,408. BEAN-PULLER. ROBERT E. FREEMAN, Maple City, Mich. Filed Mar. 18, 1911. Serial No. 615,286. (Cl. 55—101.)



A bean puller comprising a hollow adjustable handle having its lower portion flattened and provided with longitudinally spaced apertures, a connecting member flattened at one end and provided with spaced apertures adapted to register with the apertures in the handle, the opposite end of said connecting member being split to form two arms, said arms being cut away near their outer ends to form recesses, said arms being apertured at their extremities, a bar having blades secured thereto and adapted to be secured at the opposite ends within said recesses and means adapted to pass through the registering apertures in said handle and connecting member for locking the same.

1,020,409. SHEAR AND INTERRUPTING DEVICE FOR CONTINUOUS-FLOW GLASS-TANKS. IRA HAZLETT FRENSH, Clarksburg, W. Va. Filed Nov. 2, 1910. Serial No. 590,400. (Cl. 49—55.)



1. An attachment for continuous flow glass tanks comprising a receptacle introducible into the path of the flow of glass issuing from the tank, between the latter and a mold, said receptacle having a constantly open receiving end for a non-interrupted flow of gas thereinto from the tank, a support for said receptacle provided with means for securing said support to the glass tank, and means carried by the support for intermittently opening the receptacle for the escape therefrom of accumulated glass.

2. An attachment for continuous flow glass tanks comprising a receptacle adapted to be introduced into the path of flow of gas from a tank, between the latter and a mold, said receptacle having a constantly open receiving end for a non-interrupted flow of gas thereinto from the tank, said receptacle having a bottom member carried by said receptacle and movable to open and close said receptacle, the movement of the bottom member being in shearing relation to said receptacle.

3. An attachment for continuous flow glass tanks comprising a receptacle adapted to be introduced into the path of flow of glass from a tank between the latter and a mold, said receptacle having a constantly open receiving end for a non-interrupted flow of glass thereinto from the tank and provided with a passage therethrough for the stream of glass, said passage widening toward the discharge end, a gate carried by the receptacle in shearing relation to the discharge end of the passage and constituting the bottom member of the receptacle, and supporting means for the receptacle adapted to be secured to the glass tank.

4. An attachment for continuous flow glass tanks comprising a receptacle adapted to be placed in the path of flow of glass from a tank, between the latter and a mold, said receptacle having a constantly open receiving end for a non-interrupted flow of glass thereinto from the tank, a supporting arm for said receptacle, a pivot support for the arm about which it is movable in a direction transverse to the direction of flow of the glass, said pivot support having means for the attachment thereof to the glass tank, and locking means carried by the pivot support for engaging and holding the arm in a position to maintain the receptacle in the path of the flowing glass.

5. An attachment for continuous flow glass tanks comprising a receptacle adapted to be placed in the path of the flowing glass, said receptacle carrying a gate in shearing relation to the discharge end of the receptacle, an arm for supporting the receptacle with the gate thereon, a pivot support for the arm having means for attaching it to a glass tank, means for adjustment of the arm on the pivot support in the direction of the length thereof, a lock carried by the pivot support for positioning the arm with the receptacle in the path of the flowing glass, and means carried by the arm for operating the gate.

[Claims 6 to 28 not printed in the Gazette.]

1,020,410. BRACE FOR BOLSTERS AND THE LIKE. ALEXANDER FULK, Mount Airy, N. C. Filed June 17, 1911. Serial No. 633,364. (Cl. 21—39.)



In combination, a bolster having a shoulder extending longitudinally of its sides and provided with recesses at each end forming shoulders inclined upwardly and outwardly, a metallic endless strap embracing the bolster above the shoulder and in contact therewith, the inner surface of the strap at each end thereof being correspondingly shaped with relation to the inclined shoulders, plugs engaging between the inclined shoulders and the inclined inner surfaces at the ends of the strap, the strap having spurs turned inwardly of the strap and in engagement with the plugs, the shoulders of the sides of the bolster acting to prevent downward movement of the strap while the inclined shoulders, the plugs and the spurs prevent upward displacement of the strap.

1,020,411. TROLLEY-POLE. JOSEPH GAITS, Jeannette, Pa. Filed May 28, 1910. Serial No. 563,958. (Cl. 191—39.)



In combination with a tubular trolley pole a trolley head having a rod depending therefrom, said rod being screw threaded, a cap on said trolley pole, an opening in said cap, nuts on said head on each side of said cap, and a trolley wheel mounted on said head.

1,020,412. CONCRETE FENCE-POST. JOHN A. GRIFFIN, Los Angeles, Cal. Filed Aug. 21, 1911. Serial No. 645,306. (Cl. 39—12.)



1. A fence post having an upper and a lower pair of eyes secured thereto, a board arranged between said pairs of eyes, and a U-shaped rod threaded through all of the eyes and having its free ends bent at right angles to engage beneath one of the pairs of eyes.

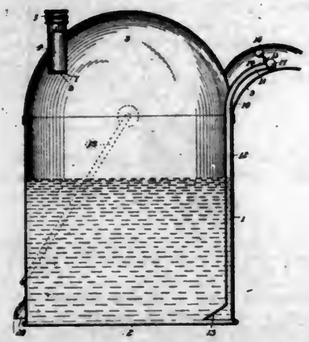
2. A fence post having an upper and a lower pair of eyes secured thereto, a board engaged between said pairs of eyes, a U-shaped rod threaded through all of the eyes and engaging across the face of the board, and staples straddling the legs of the U-shaped rod and driven into the board.

3. A fence post having an upper and lower pair of eyes secured thereto, a pair of boards having their ends in abutting engagement and located between the eyes, a U-shaped rod threaded through all of the eyes and having one leg engaging across the end of one board and its other leg engaging across the other board, and staples straddling said legs and driven into the respective board ends.

1,020,413. OIL-CAN. LEWIS W. GRUVER, Pittsburgh, Pa. Filed Aug. 7, 1911. Serial No. 642,715. (Cl. 221—13.)

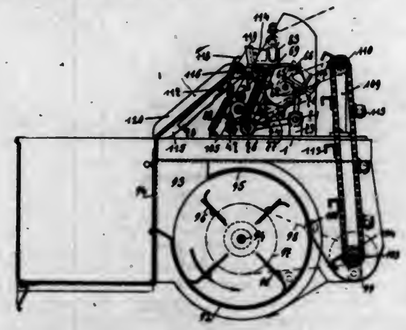
In an oil can, the combination with the outlet spout having an auxiliary spout within the same, of a bearing mounted upon the top of the outer end of said auxiliary spout, a valve stem pivoted in said bearing, a globular

valve carried by said stem and normally engaging the outer terminus of the auxiliary spout for closing it, and a



weight carried by said stem for facilitating the open movement of the valve when the can is tilted for discharge.

1,020,414. SPOOLING-MACHINE. FRIEDRICH ABRAHAM GÜLICHER, Barmen-Rittershausen, Germany. Filed Apr. 4, 1910. Serial No. 553,405. (Cl. 242—17.)



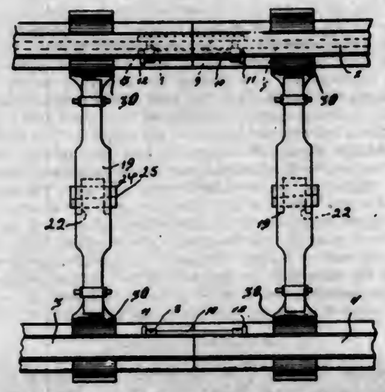
1. A spooling machine comprising, a receiver for empty spools, means for arranging said spools in order therein, spool holders, means for rotating the latter, a device for feeding said spools to said holders, a conveyer for supplying spools to said device, comprising an endless chain provided with spool-receiving hooks adapted to discharge empty spools in succession into the spool-feeding device, means for imparting up and down and forward and backward movements to the said spool-feeding device, means for releasing each spool from said holders when it is fully wound, means for discharging said fully wound spool and a receiver into which the latter is discharged.

2. A spooling machine comprising, a receiver for empty spools, means for arranging said spools in order therein, spool holders, a device for feeding said spools to said holders, a conveyer for moving said spools to said device, comprising an endless chain provided with spool-receiving hooks adapted to discharge empty spools in succession into the spool-feeding device, means for imparting up and down and forward and backward movements to the said spool-feeding device, means for rotating said holders, means for stopping said holders and for releasing each spool when it is fully wound, means for re-starting said holders when a fresh spool is inserted, means for removing the fully wound spool and a receiver into which the latter is removed.

3. A spooling machine comprising, a receiver for empty spools, means for arranging said spools in order therein, spool holders, a device for feeding said spools to said holders, a conveyer for moving said spools to said device, comprising an endless chain provided with spool-receiving hooks adapted to discharge empty spools in succession into the spool-feeding device, means for imparting up and down and forward and backward movements to the said spool-feeding device, means for rotating said holders, means for stopping said holders and for cutting the thread and for releasing each spool when it is fully wound, means for re-starting said holders when a fresh spool is inserted, means for removing the fully wound spool and a receiver into which the latter is removed.

4. A spooling machine comprising, a receiver for empty spools, means for arranging said spools in order therein, spool holders, means for rotating said holders to wind a spool, mechanism operating to stop said holders when said spool is fully wound, an exchanging device operated when said holders are stopped and comprising a spool feed device to eject a wound spool from said holders and to place an empty spool therein, a thread holder, means for cutting the thread of the wound spool, means for restarting the spool holders, means for conveying the spools from the receiver to the exchanging device, comprising an endless chain provided with spool-receiving hooks adapted to discharge empty spools in succession into the spool-feeding device, means for imparting up and down and forward and backward movements to the said spool-feeding device, a receiver for the fully wound spools and means for conveying the latter thereto.

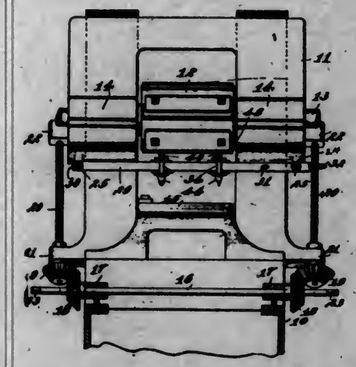
1,020,415. METALLIC TIE AND JOINT. JOSEPH HAJDÚ, Pricedale, and STEPHEN NÉMETH, Grindstone, Pa. Filed May 14, 1910. Serial No. 561,283. (Cl. 238—5.)



1. In combination, a tie consisting of a pair of sections, each having its outer end provided with an inwardly and upwardly disposed clamp for engagement with the outer side of the base of a rail section, one of said sections having its inner end provided with a fork of greater thickness than the remaining portion of the section thereby providing a transversely extending shoulder, the inner end of the other section extending between the arms of the fork of the first mentioned section and provided with a slot, the arms of the fork provided with longitudinally extending slots, alining with said first mentioned slot, oppositely disposed wedges extending through said slots for coupling the sections together, rail fasteners mounted upon the said sections and abutting against said shoulders and further having ends upturned and engaging the inner sides of the base of the rail sections and associated with said clamps, whereby the rails are maintained in position, and means for connecting the rail fasteners to said sections.

2. In combination, a tie consisting of a pair of sections, each having its outer end provided with an inwardly and upwardly disposed clamp for engagement with the outer side of the base of a rail section, one of said sections having its inner end provided with a fork of greater thickness than the remaining portion of the section thereby providing a transversely extending shoulder, the inner end of the other section extending between the arms of the fork of the last mentioned section and provided with a slot, the arms of the fork provided with longitudinally extending slots, alining with said first mentioned slot, oppositely disposed wedges extending through said slots for coupling the sections together, rail fasteners mounted upon the said sections and abutting against said shoulders and further having the outer ends upturned and engaging the inner sides of the base of the rail sections and associated with said clamps, whereby the rails are maintained in position, means for connecting the rail fasteners to said sections, a retaining member seated upon said forks extending upon said rail fasteners, bands surrounding said member, fasteners and sections, and wedges for clamping the band in position, said last mentioned wedges having angular ends.

1,020,416. PLANER-KNIFE-ADJUSTING MECHANISM. WILLIAM HARPER, Beloit, Wis., assignor to The Berlin Machine Works, Beloit, Wis., a Corporation of Wisconsin. Filed Sept. 18, 1908. Serial No. 453,626. (Cl. 73—139.)



1. In a planer, the combination of a platen, a cylinder equipped with knives, a pair of rollers, means for detachably mounting said rollers on the frame of the planer near opposite ends of the knives of the cylinder in a plane parallel with the planer-platen, said rollers adapted when the cylinder is rotated to engage the edges of the loosely held knives while in planing position and force them back into position, whereby the edges of all the knives when in planing position will be at the same distance from the planer-platen, substantially as described.

2. In a planer, the combination of a platen, a cylinder equipped with knives, and a pair of rollers, supports therefor mounted on the frame of the planer near opposite ends of the knives of the cylinder, said rollers being adjustable toward and from said knives parallel with the plane of the platen, and adapted when the cylinder-head is rotated to engage the edges of the loosely-held knives while in planing position and force them back into position whereby the edges of all the knives when in planing position will be at the same distance from the planer-platen, substantially as described.

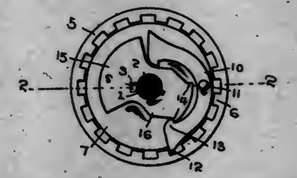
3. In a planer, the combination of a platen, a cylinder equipped with knives, a pair of studs connected to the frame of the planer, a bar detachably mounted on said studs, and a pair of rollers mounted on said bar in a plane parallel with the plane of the platen and adapted when the cylinder is rotated to engage the edges of the loosely-held knives near their opposite ends when the knives are in planing position and force them back into position, whereby the edges of all the knives while in planing position will be at the same distance from the planer-platen, substantially as described.

4. In a planer, the combination of a platen, a cylinder equipped with knives, a pair of studs connected to the frame of the planer, a bar detachably mounted on said studs, a pair of brackets slidable on said bar, and a roller mounted on each of said brackets, said rollers being disposed in a plane parallel with the plane of the platen and adapted when the cylinder is rotated to engage the edges of the loosely-held knives near their opposite ends when the knives are in planing position and force them back into position whereby lumber of uniform thickness may be produced, substantially as described.

5. The combination of a planer, its platen, and cylinder equipped with knives, a pair of studs connected to the frame of the planer, a supporting bar detachably mounted on said studs, a pair of brackets slidable on said bar, a roller on each of said brackets and adjustable toward and from the cylinder, and a screw to adjust each of said rollers into operative position in a plane parallel with the plane of the platen, the rollers being adapted when the cylinder is rotated to engage the edges of the loosely-held knives near their opposite ends when the knives are in planing position and force them back into position whereby lumber of uniform thickness may be produced, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,020,417. DIFFERENTIAL GEAR. GUY M. HARTLEY, Dighton, Mich. Filed Mar. 18, 1911. Serial No. 615,287. (Cl. 21—90.)



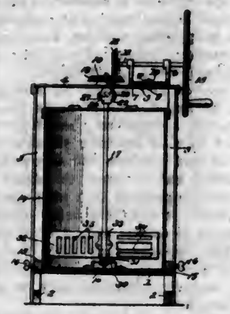
1. A differential gear comprising a hollow axle, wheels and flange drums upon the opposite ends of said axle, a disk loosely mounted upon said axle at each end thereof and within said drums, a double pawl carried by each disk, an actuator carried by said axle adjacent each disk and adapted to actuate the double pawl pivotally carried by said disk, cogs carried by said drum adapted to be engaged by said pawls, said actuators being adapted to force said pawls in engagement with the cogs, a connecting rod carried within said hollow axle and extending from end to end, and means carried by said rod and projecting through said axle near the ends thereof and connecting the disks within the drums to control the rotation of the wheels upon said axle.

2. A differential gear comprising a hollow axle, wheels and flange drums upon the opposite ends of said axle, a concave disk loosely mounted upon said axle at each end thereof and within said drums, a pawl carried by each disk, an actuator carried by said axle adjacent each disk and adapted to actuate the pawl carried by the adjacent disk, cogs carried by said drums and adapted to be engaged by said pawls, said actuators being adapted to force said pawls in engagement with said cogs, a connecting rod carried within said hollow axle and extending from end to end, and pins carried by said rod and projecting through said axle near the ends thereof to connect the disks within the drums to control the rotation of the wheels upon said axle.

1,020,418. CHANGE-SPEED GEARING. JERRY J. HAYES, Elkhart, Ind. Filed May 16, 1911. Serial No. 627,491. (Cl. 74—58.)

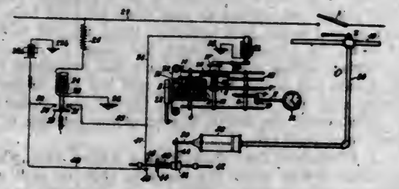
1. A device as described comprising a bar provided with notches, a bracket adjustably mounted upon the bar and having lugs adapted to enter the notches, means for se-

curing said bracket in an adjusted position upon the bar, a shaft journaled in the bracket, a gear wheel fixed to the shaft, a shaft journaled in the bar, and a gear wheel fixed to the last mentioned shaft and having two sets of gear teeth of different diameter and nested one within the other, the first mentioned gear wheel adapted to be placed in mesh with either set of teeth upon the last mentioned gear wheel.



2. A device as described comprising a bar having notches, a bracket adjustably mounted upon the bar and having lugs adapted to enter the notches, means for securing the bracket in an adjusted position upon the bar, a shaft journaled in the bracket, a gear wheel carried by the shaft, a shaft journaled in the bar, a gear wheel fixed to the last mentioned shaft and resting upon the bar and supporting the shaft, the last mentioned gear wheel having two sets of gear teeth of different diameter and nested one within the other, the first mentioned gear wheel being adapted to be placed in mesh with either set of teeth upon the last mentioned gear wheel, and a collar carried by the second mentioned shaft and located below the bar.

1,020,419. TIME-RECORDING DEVICE FOR ELECTRIC TRAINS. FRANK HEDLEY, Yonkers, and JAMES S. DOYLE, New York, N. Y. Filed May 17, 1910. Serial No. 561,798. (Cl. 234—1.5.)



1. The combination with the motor- and brake-controlling instrumentalities of an electrically propelled vehicle, of a recording device having clock-driven mechanism for making time-records, and means associated with said controlling instrumentalities for setting said mechanism in operation whenever current is supplied to the propelling motor of the vehicle or the brakes are applied, whereby the said recording mechanism will sum up the periods of acceleration and deceleration of the vehicle.

2. The combination with the motor- and brake-controlling instrumentalities of an electrically propelled vehicle, of a recording device having clock-driven mechanism for making time records, and electromagnetic means under the control of said controlling instrumentalities for putting the said clock-driven mechanism in operation whenever current is supplied to the propelling motor of the vehicle or the brakes are applied.

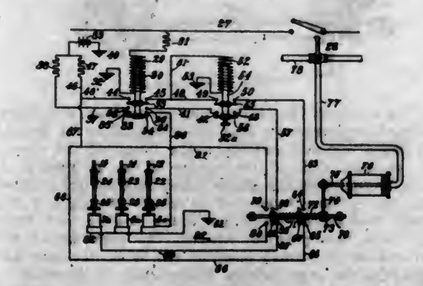
3. The combination with the motor-controller and the brake-controller of an electrically propelled vehicle, of a time-recording device, an armature controlling the time-recording device, an electromagnet arranged to actuate the armature to set the time-recording device in operation, and parallel circuits for the electromagnet to energize the same, one circuit being controlled by the motor-controller and the other by the brake-controller.

4. The combination with a conductor for supplying current to a vehicle motor, of a controller in circuit with said conductor to open and close the circuit therethrough, a solenoid connected to said conductor so as to be energized thereby when the circuit thereof is closed, a circuit controlled by said solenoid, an electromagnet in the circuit controlled by the solenoid, a time-recording device arranged to be set in operation whenever the electromagnet is energized, a brake-controller, and means, dependent for operation upon manipulation of the brake-controller to throw on the brakes, for energizing the said electromagnet to set the time-recording device in operation independently of the said solenoid.

5. The combination with the motor- and brake-controllers of an electrically propelled vehicle, of a time-recording device, an electromagnet arranged to set the time-recording device in operation when the electromagnet is energized, a circuit for the electromagnet, having separated contacts, a solenoid under the control of the motor-controller, means actuated by the solenoid for closing said circuit through the said contacts, and means, dependent for operation upon manipulation of the brake-controller to throw on the brakes, for establishing a shunt circuit around the said contacts and through the electromagnet; whereby the electromagnet will be energized and the time-recording device set in operation whenever the motor-controller is manipulated to deliver current for propelling the vehicle, and whenever the brake-controller is manipulated to throw on the brakes.

[Claim 6 not printed in the Gazette.]

1,020,420. TIME-RECORDING DEVICE FOR ELECTRIC TRAINS. FRANK HEDLEY, Yonkers, and JAMES S. DOYLE, New York, N. Y. Filed May 17, 1910. Serial No. 561,799. (Cl. 234—1.5.)



1. The combination with the motor- and brake-controllers of an electrically propelled vehicle; of a plurality of independently operable time-printing devices; means under the control of the motor-controller for setting one of said time-printing devices in operation whenever current is delivered to the driving motor of the vehicle; means under the control of the brake-controller for setting another of said time-printing devices in operation whenever the brakes are applied; and means operating when the current is thrown off while the brakes are off, to set another of said time-printing devices in operation; whereby separate records may be made of the total time of current on, the total time of brakes on, and the total time of brakes and current off.

2. The combination with the motor- and brake-controllers of an electrically propelled vehicle; of a plurality of independently operable time-printing devices; an electromagnetic mechanism for each of said devices to start and arrest the same; independent energizing circuits for the electromagnetic mechanisms; electromagnetic

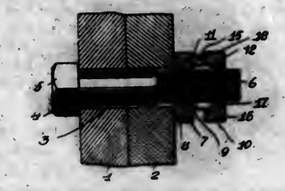
means, dependent for operation upon manipulation of the motor-controller to deliver current to the driving motor of the vehicle, for controlling one of said circuits whereby one of said time-printing devices may record the time of current on; means, dependent for operation upon manipulation of the brake-controller to apply the brakes, for controlling another of said circuits independently of the said electromagnetic circuit-controlling means, whereby another of said time-printing devices may record the time of brakes on; and means controlling another of said circuits to cause actuation of the associated electromagnetic mechanism when the current is thrown off while the brakes are off, whereby said associated electromagnetic mechanism will set in operation another of the time-printing devices to record the time of current and brakes off.

3. The combination with the motor- and brake-controllers of an electrically propelled vehicle; of a plurality of time-printing devices; an electromagnetic mechanism for each of said devices to start and arrest the same; a coasting circuit for one of said mechanisms to maintain its associated time-printing device in operation as long as said circuit is closed; a circuit for another of the electro-magnetic mechanisms under the control of the motor-controller, whereby manipulation of the motor-controller to deliver current to the driving motor of the vehicle will close the last named circuit and start its associated time-printing device; means, actuated by the closing of the last named circuit, to open the coasting circuit; a brake-controlled circuit for another of the electromagnetic mechanisms, under the control of the brake-controller, whereby manipulation of the brake-controller to apply the brakes will close the last named circuit and start its associated time-printing device; means, actuated by the closing of said brake-controlled circuit, for opening the said coasting circuit and means for closing the coasting circuit to start the associated time-printing device when the current is thrown off the motor while the brakes are off.

4. The combination with the motor- and brake-controllers of an electrically propelled vehicle; of a time-printing device for recording the time during which the current and brakes are both off; a controlling circuit permitting the said time-printing device to operate; a second time-printing device for recording time during which current is on the driving motor of the vehicle, and a controlling circuit normally preventing the operation of the second time-printing device; a third time-printing device for recording the time during which the brakes are on, and a controlling circuit normally preventing the operation of the third time-printing device; means, dependent for operation upon manipulation of the motor-controller, for making and breaking the second controlling circuit; means, dependent for operation upon manipulation of the brake-controller, for making and breaking the third controlling circuit; and making and breaking means in the first controlling circuit, operating through the instrumentality of said first controlling circuit to arrest the first time-printing means whenever the motor-controller is manipulated to deliver current to the driving motor of the vehicle or the brake controller is manipulated to apply the brakes.

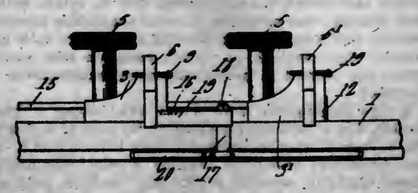
5. The combination with the motor- and brake-controllers of an electrically propelled vehicle; of a continuously clock-driven time-printing device for recording the total time of a trip; clock-driven time-printing devices capable of intermittent operation, for recording separately the total time of current-on, the total time of brakes-on, and the total time of current and brakes off; means, under the control of the motor-controller, for setting the current-on time-printing device in operation whenever the motor-controller is manipulated to deliver current to the driving motor of the vehicle; means, under the control of the brake-controller, for setting the brakes-on time-printing device in operation whenever the brake-controller is manipulated to apply the brakes; and means for setting in operation the remaining time-printing device when the motor controller is manipulated to cut off the current from the driving motor while the brakes are off.

1,020,421. NUT-LOCK. AUGUST W. HELSING and HARRY A. DONALDSON, Fair Oaks, Pa. Filed Dec. 16, 1910. Serial No. 597,652. (Cl. 151—19.)



In a nut lock a threaded bolt, a nut adapted to be threaded thereon and having an extension externally threaded and split longitudinally, a locking member pivotally mounted in said nut and having a laterally-extending spring tongue, and an auxiliary nut adapted to be threaded on said extension and having teeth adapted to be engaged by said tongue to lock the nut, said nuts being disengaged by rocking the tongue on its pivot.

1,020,422. TENON-MACHINE GAGE. HENRY E. HEASLEE and FRED W. EAST, Muscatine, Iowa. Filed Mar. 13, 1911. Serial No. 614,113. (Cl. 73—141.)



1. In a device of the class described, a base; carrying members slidable longitudinally of the base; and stops having movement transversely of the base, in inclined seats fashioned in the carrying members, to effect an elevation and depression of the stops.

2. In a device of the class described, a base; carrying members slidable longitudinally of the base; stops slidable transversely of the base, in inclined seats fashioned in the carrying members, for elevation and depression; spring means for depressing the stops; and a positive, step-by-step means for limiting the depression of the stops.

3. In a device of the class described, a base; carrying members slidable upon the base; stops secured to the carrying members transversely thereof and gravitationally movable in inclined seats in the carrying members into depressed positions; and adjustable means engaging the stops and the carrying members, to limit the depression of the stops.

4. In a device of the class described, a base; coöperating elements including a carrying member slidable upon the base longitudinally of the same, and a stop slidable in the carrying member, transversely of the base, one of which elements is provided with an inclined surface, disposed transversely of the base, and engageable by the other of said elements, to effect a raising and lowering of the stop, when the stop is moved transversely of the base; and means for holding the stop in adjusted positions.

5. In a device of the class described, a base; carrying members slidable longitudinally of the base; stops mounted for sliding movement in the carrying members, transversely of the same, and the stops and the carrying members having relatively inclined faces whereby the stops will be elevated and depressed in their sliding movement; and an auxiliary stop member removably connected with one of the stops, and adapted to extend beneath the other stop.

[Claims 6 to 8 not printed in the Gazette.]

1,020,423. CAR-AXLE JOURNAL-BOX. HERBERT H. HEWITT, Buffalo, N. Y. Filed Mar. 7, 1910. Serial No. 547,862. (Cl. 64—10.)



1. The combination with a car axle having a wheel thereon and a projecting journal at its end, of a journal box having a cylindrical chamber therein, a cylindrical bearing sleeve rotatably mounted within said chamber, said projecting end journal being rotatable within said sleeve, and a support whereon said journal box is mounted to shift universally with said axle to thereby maintain said bearing sleeve and journal in proper alinement, substantially as described.

2. The combination with a car axle having a wheel thereon and a projecting journal at its end, of a journal box having a cylindrical chamber therein, a one-piece cylindrical bearing sleeve removably mounted on said projecting end journal and removably mounted within the chamber of said journal box, said journal being rotatable within said sleeve and said sleeve free to rotate within said chamber, and vertically movable supporting members wherein said journal box is movably mounted to shift universally with said axle to thereby maintain said bearing sleeve and journal in proper alinement, substantially as described.

3. The combination with a car axle having a wheel thereon and a projecting journal at its end, of a journal box having an annular, spherical body portion and a central, transverse cylindrical chamber, a cylindrical bearing sleeve rotatably mounted within said chamber, said projecting end journal being rotatable within said sleeve, and supporting members or keepers having spherical concave faces engaging said journal box, the latter being free to shift universally within said supporting members or keepers to thereby maintain said bearing sleeve and journal in proper alinement, substantially as described.

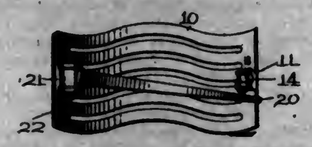
4. The combination with a car axle having a wheel thereon and a projecting journal at its end, of a journal box having an annular, spherical body portion and a central, transverse cylindrical chamber closed at its outer end, a one-piece cylindrical bearing sleeve removably mounted upon said journal and removably mounted within the chamber of said journal box, said journal being rotatable within said sleeve and said sleeve free to rotate within said journal box, and vertically movable supporting members or keepers having spherical concave faces forming a seat for said journal box and wherein the same is universally shiftable to thereby permit the free, transverse, rotating movement of said axle and maintain said sleeve and journal in alinement, substantially as described.

5. The combination with a car axle having a wheel fixed thereto and a projecting journal at its end, of a journal box having an annular, spherical body portion and a central, transverse cylindrical chamber, a cylindrical bearing sleeve for said journal arranged in said chamber, said sleeve being free to rotate upon said journal and within said chamber and supporting members or keepers having spherical concave faces forming a seat for said journal box wherein the same is free to rotate or creep and to shift universally with the axle, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

1,020,424. HAIR ORNAMENT. WILLIAM J. HINES, Leominster, Mass., assignor to Puritan Comb Company, Leominster, Mass., a Corporation of Massachusetts. Filed Nov. 12, 1910. Serial No. 591,993. (Cl. 132—22.)

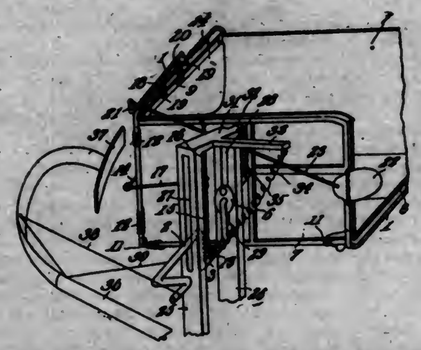
1. As an article of manufacture, a hair ornament having a piece of non-metallic material secured to the surface thereof, said piece of non-metallic material being provided with a groove in the surface thereof which is secured to the surface of the hair ornament, and a piece of metal extending along and entirely filling said groove and rigidly secured to the hair ornament by the piece of non-metallic material and projecting therefrom transversely at both ends, whereby the metal piece is secured in position.



2. As an article of manufacture, a celluloid hair ornament having a plane surface, a piece of celluloid secured thereon and having a groove extending along the surface thereof which is in contact with the hair ornament, said groove having an off-set portion at one edge, and a piece of metal extending along said groove and bent at the end to extend into the off-set portion and projecting from said piece of celluloid at the opposite edge thereof.

3. As an article of manufacture, a barrette having a celluloid plate cemented to the back thereof, and a metal tongue extending over said plate and bent reversely and extending between the plate and the surface of the barrette and secured to the barrette by the plate, the outer porion of said tongue being bent inwardly near the end toward the plate and the plate having a projecting portion in registration with said inward bend and a groove beyond said projecting portion for retaining a pin or tongue.

1,020,425. SHOCKER ATTACHMENT. JAMES FORREST HUNTER, Sioux Rapids, Iowa. Filed Apr. 18, 1911. Serial No. 621,018. (Cl. 56—121.)



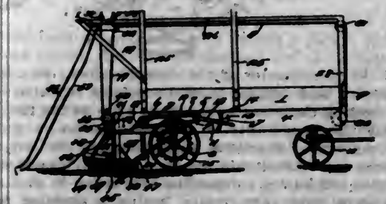
1. A shocker attachment comprising standards adapted to be mounted upon the frame of a harvester, a receptacle resiliently supported upon said standards, means for tilting said receptacle when it arrives at a lowermost position, hinged panels forming the bottom and an end for the receptacle, means for resiliently holding the panels in closed positions, a trip arm pivotally mounted upon the receptacle, a locking device operatively connected with the trip arm and engaging the hinged panels, means operatively connecting the panels together to cause them to swing to open positions simultaneously.

2. A shocker attachment comprising standards, a receptacle resiliently supported upon the standards, means for tilting the receptacle when it assumes a lowered position, hinged panels forming the bottom and an end of the receptacle, means connecting said panels together to cause them to open and close simultaneously, a trip arm pivotally mounted upon the receptacle and a locking device operatively connected with said trip arm and engaging the panels to hold them closed.

3. A shocker attachment comprising standards, a receptacle resiliently supported upon the standards, means for tilting the receptacle when it assumes a lowered position, hinged panels forming the bottom and an end of the receptacle, means operatively connecting the panels together to cause them to open and close simultaneously, a trip arm pivotally mounted upon the receptacle, a locking device operatively connected with the trip arm and engaging the panels to hold them in closed positions, and a resiliently supported apron pivoted in the receptacle against the inner sides of the end panels.

4. A shocker attachment comprising standards adapted to be applied to the frame of a harvester, a receptacle resiliently supported upon the standards, means for tilting the receptacle as it assumes a lowered position, hinged panels forming the bottom and an end of the receptacle, means operatively connecting the panels together to cause them to open and close simultaneously, a trip arm pivoted upon the receptacle, a locking device mounted upon the receptacle and operatively connected with the trip arm and adapted to engage the panels to hold the same in closed positions, a resilient arm supported upon the attachment and having a buffer plate disposed toward the delivery side of the receptacle and means for moving the said arm and plate toward the delivery side of the receptacle when the receptacle assumes a lowered position.

1,020,426. BEET AND VEGETABLE LOADER. LARS CHRISTEN JENSEN, Cowley, Wyo. Filed June 3, 1911. Serial No. 631,188. (Cl. 214—10.)



1. In a sugar beet loader, a wagon body having a fork vertically movable and suspended from the rear portion of the wagon body, and means for hoisting and moving the fork forwardly of the wagon body, and guide angle irons for vertically guiding the fork as it is hoisted.

2. In a sugar beet loader, a wagon body having a fork vertically movable and suspended from the rear portion of the wagon body, and means of hoisting and moving the fork forwardly of the wagon body, and guide angle irons for vertically guiding the fork as it is hoisted, and means connecting between the guide angle irons and the wagon body for insuring rigidity for the angle iron and the fork.

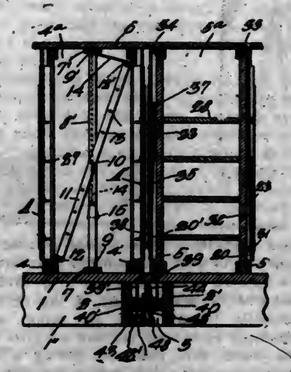
3. In a sugar beet loader, a wagon body having a fork vertically movable and suspended from the rear portion of the wagon body, and means for hoisting and moving the fork forwardly of the wagon body, and means for releasing the fork to permit it to dump after being hoisted and moved forward, and means for throwing the fork hoisting and forwardly moving means out of gear to permit the fork to be returned to its initial position.

4. In a sugar beet loader, a wagon body having a fork vertically movable and suspended from the rear portion of the wagon body, and means for hoisting and moving the fork forwardly of the wagon body, and means for releasing the fork to permit it to dump after being hoisted and moved forward, means for throwing the fork hoisting and forwardly moving means out of gear to permit the fork to be returned to its initial position, guide angle irons for vertically guiding the fork as it is hoisted, a guide track suspended over the wagon body, and a carriage on the track, between which and the fork the hoisting and moving means coöperates.

5. In a sugar beet loader, a wagon body having a fork vertically movable and suspended from the rear portion of the wagon body, and means for hoisting and moving the fork forwardly of the wagon body, and means for releasing the fork to permit it to dump after being hoisted and moved forward, means for throwing the fork hoisting and forwardly moving means out of gear to permit the fork to be returned to its initial position, guide angle irons for vertically guiding the fork as it is hoisted, a guide track suspended over the wagon body, and a carriage on the track, between which and the fork the hoisting and moving means coöperates, and means connecting between the guide angle iron and the wagon body for insuring rigidity for the angle irons and the fork.

[Claim 6 not printed in the Gazette.]

1,020,427. STORE-FIXTURE. MAURICE E. KELLOGG, Milan, Kans. Filed July 8, 1911. Serial No. 637,569. (Cl. 211—27.)



1. In a device of this character, the combination of a frame, vertical shelf supports arranged in pairs and for vertical movement within the frame, a series of transversely slidable shelf rods carried by each support, a shelf for each pair of alined rods of said supports, coacting means carried by the shelves and rods for removably attaching the shelves to the supports, and means for moving the supports and shelves vertically and in unison.

2. In a device of this character, the combination of a frame, vertical shelf supports arranged in pairs and mounted for vertical movement within the frame, a series of shelves removably attached to said supports, co-acting means carried by the shelves and supports for permitting the release of the shelves from the supports, and means for moving the supports and shelves vertically and in unison.

3. In a device of this character, the combination of a frame, vertical shelf supports arranged in pairs and mounted for vertical movement within the frame, a series of shelves removably attached to said supports, coacting means carried by the shelves and supports for permitting the release of the shelves from the supports, flexible cables connecting both members of the supports, and a manually operated drum connected to said flexible cables for moving said supports and shelves in unison.

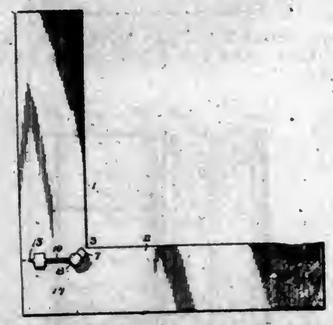
4. In a device of this character, the combination of a frame, vertical shelf supports arranged in pairs and mounted for vertical movement within the frame, a series of shelves removably attached to said supports, co-acting means carried by the shelves and supports for permitting the release of the shelves from the supports, flexible cables connecting both members of the supports, a manually operated drum connected to said flexible cables for moving said supports and shelves in unison, and means for locking said manually operated means to retain the supports and shelves in the desired position.

5. In a device of this character, the combination of a frame, said frame being divided into vertically disposed compartments, a shelf support vertically mounted in each wall of the compartment, two supports to each compartment, a series of shelves removably supported between the supports within the compartment, co-acting means carried by the shelves and supports for removably at-

taching the shelves to the supports, and means connecting each pair of supports together for vertical and simultaneous movement.

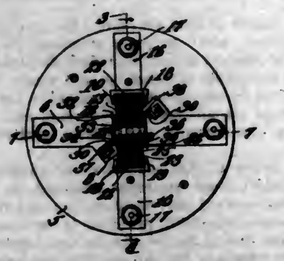
[Claims 6 to 11 not printed in the Gazette.]

1,020,428. SQUARE. BODNÁR LÁSZLÓ, Youngstown, Ohio. Filed Nov. 23, 1910. Serial No. 593,817. (Cl. 73—47.)



A square comprising arms, a post detachably mounted at the juncture of said arms and in proximity to the inner angle thereof, a bearing carried by said post, a set screw mounted in said bearing, a lug carried by said square directly beneath said set screw, an indicator loosely mounted upon said lug and adapted to be swung upon said arms, said indicator having a seat formed therein to receive the end of said screw whereby said indicator can be fixed relatively to said arms, substantially as and for the purpose herein described.

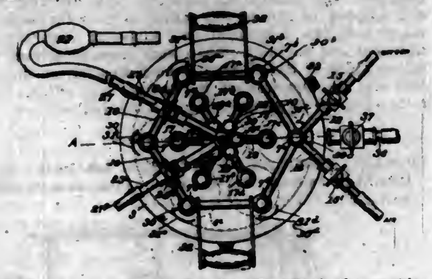
1,020,429. LIGHTNING-ARRESTER. LESTER T. LINBERGER, Gastonia, N. C. Filed Mar. 23, 1911. Serial No. 616,484. (Cl. 175—30.)



1. In a lightning arrester, the combination with a base, a ground carbon rotatably supported by said base and having rounded ends, and line carbons carried by said base and having dished inner faces separated from said ends so as to leave air gaps between them; of knives fixedly carried by said base and positioned to scrape the ends of said ground carbon when the latter is turned, other knives carried by said ground carbon and so positioned with respect to its axis that they shall scrape the inner faces of said line carbons when the ground carbon is turned, two spaced pins rising from the base, a stop projecting from said ground carbon and adapted to play between said pins, and yielding means for holding said stop normally in contact with one of said pins when the ground carbon is in alinement with the line carbons.

2. In a lightning arrester, the combination with a base, a ground carbon rotatably supported by said base and having rounded ends, and line carbons carried by said base and having dished inner faces separated from said ends so as to leave air gaps between them; of knives fixedly carried by said base and positioned to scrape the ends of said ground carbon when the latter is turned, other knives carried by said ground carbon and so positioned with respect to its axis that they shall scrape the inner faces of said line carbons when the ground carbon is turned, straps alongside said ground carbon and carrying its knives, one of them having a stop, a strip inclosing said carbon and connecting said straps, pins rising from said base and between which said stop plays, and a coiled spring connected at one end to the base and at the other end to the pivot of said carbon for holding it normally with its stop in contact with one of said pins so that the carbon shall stand in alinement with said line carbons.

1,020,430. VAPORIZER. EDWARD MADDEN, Amsterdam, N. Y. Filed Jan. 6, 1911. Serial No. 601,229. (Cl. 128—2.)

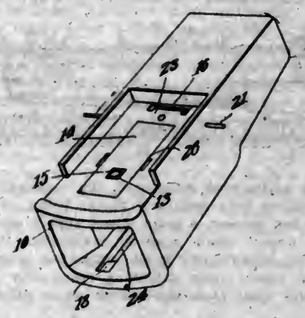


1. In an apparatus of the class described, the combination of a tank adapted to hold a volume of water, means for heating the water in the tank, a top on the tank, said top having a plurality of depending flanges, a plurality of vaporizing chambers supported by the depending flanges and extending in the tank, a casing provided with a valve and having a depending pipe fitting in each of the chambers, said valve casing having a chamber formed therein above the seat with which the valve coöperates, all of said latter casings being connected by pipes, a pipe communicating with one of the aforesaid valve chambers for supplying oxygen thereto, a pipe connected to the same valve chamber for supplying air pressure thereto, a second valve communicating with each of the said vaporizing chambers, each of said valves having a pipe leading therefrom and communicating with the central one of said chambers and terminating near the bottom of the latter, an exit pipe leading from the central chamber, and distributing pipes leading from the exit pipe.

2. In an apparatus of the class described, the combination of a tank adapted to hold a volume of water, means for heating the water, a top for said tank, said top having a series of annular flanges, a series of vaporizing chambers supported by said flanges, a pipe leading from each of said chambers and terminating near the bottom thereof, a valve in each of said pipes, said valves having chambers therein, a system of pipes connecting all of said valves, means for supplying said valves with a supply of air, means for supplying said pipes with a supply of oxygen, a mixing chamber supported on one of the annular flanges on the top, a series of pipes corresponding to the number of vaporizing chambers extending through the top and into the mixing chamber, the lower end of said pipes being turned inwardly toward each other, a valve for each of the latter pipes, an exit pipe leading from the mixing chamber, and a series of distributing pipes connected with the bulb.

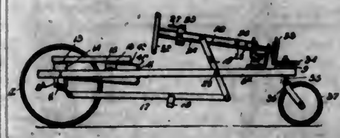
3. In an apparatus of the class described, the combination with a tank adapted to contain water, means for heating the water, a top for the tank, a series of depending flanges on the top a series of chambers supported by the flanges and extending in the tank, each of said chambers having a pipe terminating near the bottom, a valve in each pipe, a second valve for each of said chambers, a mixing chamber centrally located with reference to the aforesaid chambers and supported by one of the depending flanges, pipes depending in the mixing chamber and connected with the second mentioned valves, the lower ends of said pipes being turned inwardly toward each other and means for supplying the first mentioned valves with a supply of air or oxygen, an outlet pipe extending from the mixing chamber, and a bulb on the outlet pipe.

1,020,431. COUPLING. JOHN O. MARTIN and HENRY WILLIAM SCHEILBE, Lincoln, Ill., assignors of one-third to Albert A. Ahrens, Lincoln, Ill. Filed Aug. 28, 1911. Serial No. 646,805. (Cl. 213—45.)



A draw-head comprising a body having a socket in the outer end thereof, having a longitudinal slot in the bottom thereof and an opening in the top thereof, a lip at the outer end of the said slot across the lower edges thereof, a ridge within the draw-head at the rear end of the said opening, and a cross-piece over the said ridge, an L-shaped catch pivoted intermediate the ends of the said slot and having the long arm thereof adapted to normally rest on the said lip to bring the short arm in an upright position within the draw-head, and a latch pivoted between the said ridge and cross-piece having the rear end thereof projecting beyond the said cross-piece and having an opening in the forward end thereof arranged to engage the free end of the long arm of the catch upon the same being raised, and a shaft journaled through the draw-head and having a crank within the draw-head resting on the inner end of the said latch whereby upon the shaft being rotated the inner end of the latch is depressed.

1,020,432. VELOCIPEDE. WADE H. MCBARNES, Decatur, Ind. Filed Feb. 21, 1911. Serial No. 610,073. (Cl. 208—114.)



1. In a velocipede, a frame, a crank shaft, on which the frame is mounted, traction wheels on the crank shaft, a pitman for rotating the crank shaft, a lever pivoted to the frame and to said pitman, a collar operatively connected with the lever, a rotatable sleeve around which the collar is seated, means for locking the collar against reciprocation on the sleeve, and a shaft on the frame extending into the sleeve, said shaft being rotatable relative to the frame and nonrotatable relative to the sleeve.

2. In a velocipede, a frame, a crank shaft on which the frame is mounted, traction wheels connected to the crank shaft, an oscillatory lever pivoted on the frame, a pitman connecting the lever and crank shaft, a shaft journaled longitudinally of the frame, a sleeve rotatable with the shaft and having movement longitudinally of the shaft independent thereof, a collar on the sleeve pivotally connected to the oscillatory lever, means for locking the collar and adjusting the position of the collar on the sleeve, manually operatable means for reciprocating the sleeve whereby the velocipede is propelled through the medium of the foregoing elements, and steering mechanism operatively connected with the shaft.

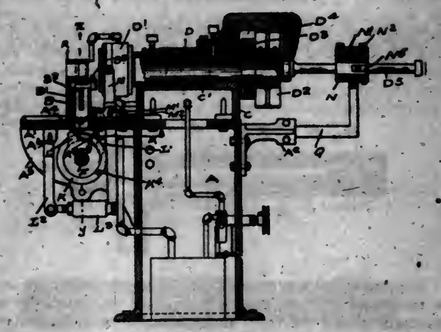
3. In a velocipede, a frame, a crank shaft, on which the frame is mounted, traction wheels operatively connected to the crank shaft, a lever pivoted on the frame, a pitman connecting the lever and crank shaft, a rotatable shaft journaled on the frame, a sleeve rotatable with the shaft and having movement longitudinally of the shaft independent thereof, a collar on the sleeve, means for locking the sleeve and collar together, means connecting the lever to the collar, manually operatable means for reciprocating the sleeve for propelling the velocipede, a gear wheel on the shaft and steering mechanism operatively associated with the gear wheel.

4. In a velocipede, a frame, a crank shaft on which the frame is mounted, traction wheels connected to the crank shaft, a lever pivoted on the frame, a pitman connecting the lever and crank shaft, a rotatable shaft journaled longitudinally of the frame, a sleeve rotatable with the shaft and having movement longitudinally of the shaft independent thereof, a collar on the sleeve, means for locking the collar against longitudinal movement on the sleeve, means connecting the collar to the lever, a gear wheel on said shaft, a vertical shaft rotatable with relation to the frame, a gear wheel on the vertical shaft meshing with the first mentioned gear wheel, a forked bearing carried by the vertical shaft, and a steering wheel journaled in the forked bearing.

5. In a velocipede, a frame, a crank shaft on which the frame is mounted, traction wheels operatively connected to the crank shaft, a lever pivoted on the frame, a pitman operatively connecting the lever and crank shaft, an actuating shaft journaled on the frame, a sleeve rotatable with the shaft and having movement longitudinally of the shaft independent thereof, a collar longitudinally movable on the sleeve, means for locking the collar against longitudinal movement on the sleeve, means connecting the collar to the lever, a gear wheel on the shaft, a vertical shaft rotatable with relation to the frame, a gear wheel on the vertical shaft meshing with the first mentioned gear wheel, a bearing connected to the vertical shaft and a steering wheel journaled in the said bearing.

[Claims 6 and 7 not printed in the Gazette.]

1,020,433. AUTOMATIC MACHINE FOR CUTTING OFF TUBES. JOHN THOMAS MCGRATH, Battle Creek, Mich. Filed Sept. 25, 1909, Serial No. 519,553. Renewed Feb. 3, 1912. Serial No. 675,341. (Cl. 82—20.)



1. In an automatic machine for cutting off tubes, the combination with the rotatable stationary chuck, of a suitably supported tool and tool holder, means for automatically and alternately feeding and withdrawing the tool from the tube, means for opening the stationary chuck after each withdrawal of the tool, means for then feeding the tube through the stationary chuck, and means for reg-

ulating the length of feed of the tube, as and for the purpose specified.

2. In a device of the class described, the combination with the main frame of the machine, a vertical guide forming part of the main frame and a holder mounted therein having its lower end projecting through the bottom of the vertical guide, of a cam shaft located below the projecting end of the tool holder, a peripheral cam mounted therein upon which the lower end of the tool holder is designed to rest, and spring means designed to insure the return of the tool holder after each cut, as and for the purpose specified.

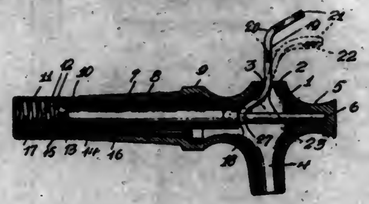
3. In a device of the class described, the combination with the main frame, of a vertical guide forming part of the main frame and having an open lower end, a tool holder capable of vertical movement within the guide provided with laterally extending pins, spring extending between such pins and the upper end of the guideway, a cam mechanism journaled in a suitable portion of the frame beneath the tool holder, a cam wheel mounted upon the cam shaft, and a segmental cam piece pivotally connected at one end to the cam wheel and adjustably connected at the other end to the cam wheel, as and for the purpose specified.

4. In a device of the class described, the combination with the rotatable stationary chuck provided with a depending operating lever and the main frame supporting the chuck, of a link depending from a suitable portion of the main frame, a cam shaft journaled in the main frame and located between the link and the lower depending end of the stationary chuck lever, a link connecting the lower end of the link and the chuck lever, and cams mounted upon the cam shaft and designed to alternately operate against the opposing edges of the depending link and the depending lower end of the chuck operating lever, as and for the purpose specified.

5. In an automatic machine for cutting off tubes, the combination with the main frame and a rotatable stationary chuck supported in the main frame, of a vertical guide-way forming part of the main frame and having an open lower end, a tool holder supported in the vertical guide-way, a cam shaft and peripheral cam located on the shaft and designed to operate the tool holder, a depending chuck operating lever located at one side of the cam shaft, a depending link located at the opposite side of the cam shaft, a link connecting the depending link with the depending end of the chuck operating lever, and a cam located to each side of the tool operating cam, said cams being designed to alternately engage with the opposing edges of the depending link and depending chuck operating lever, as and for the purposes specified.

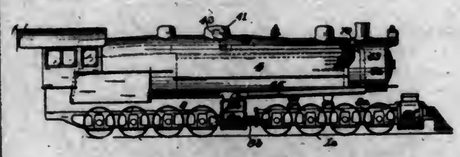
[Claims 6 to 18 not printed in the Gazette.]

1,020,434. FAUCET. JOHN A. MCKENNA, Crafton, Pa. Filed Apr. 29, 1910. Serial No. 558,386. (Cl. 137—4.)



The combination with a faucet having a valve-seat and a reciprocating valve and valve stem spring-supported to normally retain the valve on its seat, the valve body having an opening, said stem having a shoulder inwardly of and facing said opening, of a key insertible through said opening and adapted to engage said shoulder, the inner end of said key being bifurcated, the legs provided by said bifurcation being adapted to straddle the stem and being curved in the direction of length of the key on an arc which will place the point of contact of key and shoulder on approximately diametrically opposite sides of the stem and intermediate the ends of the curved face of the legs when the valve is closed, said curved face of the legs riding over said shoulder and applying valve-opening pressure to said shoulder during the inward movement of the key, the point of pressure application remaining substantially the same during such valve movement, whereby lateral pressure on the valve stem is avoided.

1,020,435. STEAM-PIPE FOR ARTICULATED LOCOMOTIVES. CARL J. MELLIN, Schnectady, N. Y. Filed Jan. 2, 1912. Serial No. 669,017. (Cl. 121—14.)

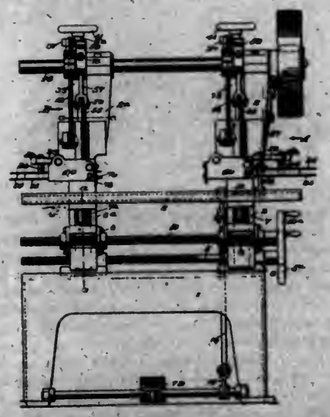


1. In an articulated locomotive, the combination of a boiler, cylinders fixed relatively to the boiler, in rear of the smoke box thereof, a main steam supply pipe within the boiler, branch steam pipes communicating therewith, and extending downwardly in the smoke box of the boiler, and lateral steam pipes extending rearwardly adjacent to the boiler shell from the branch steam pipes to the cylinders.

2. In an articulated locomotive, the combination of a boiler, cylinders fixed relatively to the boiler, in rear of the smoke box thereof, a main steam supply pipe within the boiler, branch steam pipes communicating therewith and extending downwardly in the smoke box of the boiler, lateral steam pipes extending rearwardly adjacent to the boiler shell from the branch pipes to the cylinders, and expansion joints in said lateral steam pipes.

3. In an articulated locomotive, the combination of a boiler, cylinders fixed relatively to the boiler, in rear of the smoke box thereof, a main steam supply pipe within the boiler, a superheater connected thereto, branch steam pipes communicating with said superheater and extending downwardly in the smoke box of the boiler, and lateral steam pipes extending rearwardly adjacent to the boiler shell from the branch steam pipes to the cylinders.

1,020,436. NAILING-MACHINE. HENRY W. MORGAN, Rochester, N. Y. Filed May 13, 1909. Serial No. 495,818. (Cl. 1—9.)



1. The combination with a work support, of a chuck movable toward and from the same, a hammer operating to remove a nail therefrom, a cutter carried by the chuck and movable relatively thereto, and means for effecting the cutting movement of the cutter by the movement of the chuck toward the work.

2. The combination with a work support, of a chuck movable toward and from the same, a hammer operating to remove a nail therefrom, a cutter movable transversely of the line of movement of the hammer, and means for effecting the cutting movement of the cutter by the movement of the chuck toward the work.

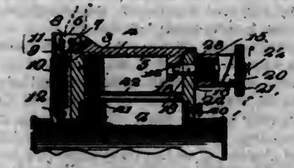
3. The combination with a work support, of a chuck movable toward and from the same, a hammer operating to remove a nail therefrom, a cutter movable on the chuck, and a link connected to the cutter and to a part of the machine to which the chuck moves relatively.

4. The combination with a support and a chuck movable thereon, of a hammer operating to remove a nail therefrom, a member movable on the chuck in a line transverse to the line of movement of the hammer, a cutter on the member, and a link secured to the support and to said member.

5. The combination with a support and a chuck movable thereon, of a hammer operating to remove a nail therefrom, a slide movable on the chuck in a line transverse to the line of movement of the hammer, a cutter, a yielding clamp carried by the slide to hold a nail in the chuck, and a link connected to the support and to the slide.

[Claims 6 to 15 not printed in the Gazette.]

1,020,437. RADIATOR-CAP FOR AUTOMOBILES. EDMUND B. NELSON, Cadiz, Ohio. Filed Feb. 10, 1910. Serial No. 543,143. (Cl. 220—124.)



1. A cap of the character described comprising a cylindrical wall, a lid fitting the upper end of the wall and hinged thereto, and formed with a downwardly extending perforated lug, the face of said lug being rounded, a spring acting to throw the lid open, a cylindrical casing mounted on the wall of the cap and extending radially outward therefrom, the end of said casing being formed with an inclined cam face, a longitudinally movable locking pin disposed within said casing extending through the wall of the cap and having a tapered end adapted to engage in the perforated lug of the lid, a spring housed within the cylindrical casing and acting to force the pin inward, and a head mounted on the pin and rotatable therewith, said head having a cam face mating with the cam face on the end of the cylindrical casing whereby the head when turned will act to move the pin outward from its engagement with the said lug.

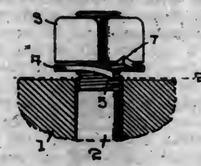
2. A cap for the purpose described comprising a cylindrical wall having a spring casing formed on the exterior thereof and extending parallel with the axis of the wall, a spring located within the said casing, a lid pivoted on the wall and closing against the same and provided with a projecting portion at its rear end and beyond the hinge with which the spring engages, the free end of the lid being formed with an inwardly projecting lug having a curved face, a cylindrical casing on the wall of the cap extending radially out therefrom, the outer end of said casing being formed with a plurality of cam faces, a pin disposed within the casing and having a tapered end projecting through the wall of the cap and engaging the perforated lug of the lid, and a head on the outer end of the pin having a tubular inwardly projecting hub the same size as the cylindrical casing and formed with corresponding cam faces.

3. A cap of the character described, comprising a cylindrical wall, a lid hinged to the upper end of the wall, a spring-actuated, radially movable, rotatable locking pin mounted on the wall and passing therethrough and engaging said lid to hold it closed, a housing surrounding the pin and provided with means engaging the pin for causing a retraction of the pin when the pin is rotated.

4. A cap of the character described, comprising an annular wall, a lid pivoted on the wall and closing against the same, a spring urging the lid to an open position, a keeper on the lid, a casing formed on said wall and extending radially out therefrom, the outer end of said casing being formed with a cam face, a spring-actuated pin disposed within the casing and projecting through said wall and engaging said keeper, a head on the outer end of the pin having an inwardly projecting hub formed with a cam face corresponding to the cam face on the cylindrical casing.

5. A cap of the character described, comprising an annular wall, a lid hinged upon the upper end of the wall, a vertically disposed housing formed upon the wall, a vertically disposed spring located within the housing and engaging said lid to force it open, a keeper on the lid, a radially extending casing formed upon said wall, a spring-actuated pin mounted in said casing and projecting through the wall and engaging said keeper, and a head on the end of the pin, the extremity of the said casing and the opposed face of the head being formed with corresponding cam faces whereby the pin may be retracted upon a rotation of the head.

1,020,438. NUT-LOCK. OLOF A. NORLUND, Williamsport, Pa. Filed Sept. 9, 1910. Serial No. 581,137. (Cl. 151—36.)



1. A nut lock, comprising a spiral spring washer, the outer edge of said washer being substantially of the same thickness throughout its length, the inner edge of the outermost ends at the split of said washer being thinned, and locking members formed on the ends of said washer and extending in opposite directions.

2. A nut lock, comprising a substantially spiral arranged spring washer, the outer periphery of said washer being substantially of the same thickness throughout its length, the inner periphery of the ends of said washer being thinned, said ends of the washer being swaged and tapered sharply from the outer periphery to the thinned portion thereof, the tapering surface being in a plane oblique to the face of said washer and substantially tangential to the inner periphery thereof.

1,020,439. ELECTRIC SINGEING INSTRUMENT. HARRY Y. NORWOOD, Rochester, N. Y. Filed Apr. 10, 1911. Serial No. 621,992. (Cl. 219—31.)



1. An electric instrument comprising a body portion of refractory material having a handle, a resistance element surrounding a part of the body portion and having one end inclosed by the body portion, a conductor connected to the opposite end of the resistance element, con-

tacts connected respectively to the conductor and to the first mentioned end of the resistance element, and a cementitious covering surrounding a portion of the resistance element, and forming the exterior of the instrument.

2. An electric instrument comprising a hollow body portion of refractory material having a handle, a resistance element extending through the hollow body portion and surrounding a part of the body portion, contacts connected to the ends of the resistance element and a cementitious covering surrounding a portion of the resistance element, and forming the exterior of the instrument.

3. An electric instrument comprising a hollow body portion of refractory material having a handle a resistance element extending through the hollow body portion and surrounding a part of the body portion, a conductor connected to one end of the resistance element, contacts connected respectively to the conductor and to the opposite end of the resistance element, and a cementitious covering surrounding a portion of the resistance element, and forming the exterior of the instrument.

4. An electric instrument comprising a hollow body portion of refractory material having a handle, a resistance element extending through the hollow body portion and extended around the outside of a part of the body portion, a flat conducting strip connected to one end of the resistance element and extending longitudinally of the body portion, a contact sleeve secured to one end of the body portion, and connected to the conducting strip, a contact connected to the opposite end of the resistance element, and a cementitious covering surrounding a portion of the resistance element and the adjacent end of the body portion, and forming the exterior of the instrument.

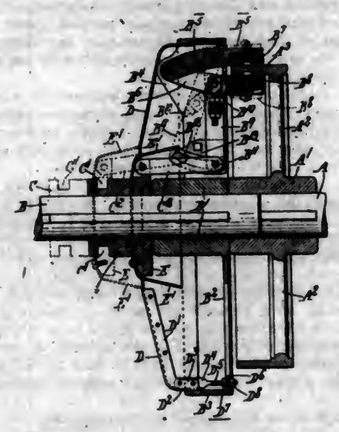
1,020,440. REEL FOR CLOTHES-LINES. CHARLES W. OTT, Pittsburg, Kans. Filed Feb. 28, 1911. Serial No. 611,336. (Cl. 242—100.)



1. A reel and support comprising forked portions and a body portion having a passage therethrough, a bracket adapted to be secured to a support, said bracket having an outwardly extending portion adapted to receive the said reel, means for preventing the reel from working off of said bracket, means carried by the forked portions of the reel for engagement with a rope being wound thereupon to prevent rotation of said reel in one direction, a bearing plate between said reel and said bracket, spacing rollers spacing said plate from said reel, and means for securing said plate and said rollers in position.

2. A reel and support comprising in combination forked, straight, pointed legs extending from a central body portion, said forked portions having V-shaped slots therebetween adapted to receive the end of a line, bearing plates upon opposite sides of said body portion, one of said plates being spaced from said body portion, means for spacing said plate from said body portion, a passage through said body portion at right angles to said V-shaped slots, communicating passages through said plates communicating with said passage through said body portion, a bracket adapted to support said reel, said bracket consisting of a plate secured to a stationary support, a pin secured to said plate and extending outwardly therefrom, said pin being adapted to be engaged through said passages, one of the plates serving to prevent the reel from working off of said pin when a line is wound upon said reel, and means carried by said legs of the reel upon their faces toward the spaced plate to engage said line at each half revolution of said reel to prevent backward movement of the latter.

1,020,441. CASING FOR FRICTION-CLUTCHES. STAUNTON B. PECK, Chicago, Ill., assignor to Link-Belt Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 6, 1911. Serial No. 658,821. (Cl. 192—1.)

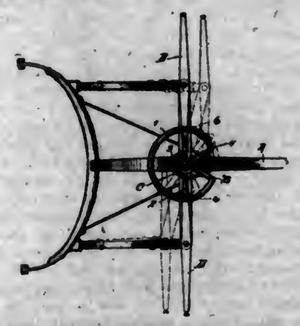


1. The combination of a friction clutch with a two-part casing comprising a dish-shaped smooth surfaced outer cover attached to and rotating with the clutch and perforated about the shaft and an inner cover for the clutch portions about the shaft and adapted to move longitudinally therealong and within the aperture of the outer cover body and secured to the clutch so as to rotate and move longitudinally therewith.

2. The combination of a friction clutch having an exterior ring with a two-part casing comprising a smooth surfaced outer cover provided with a central aperture and means for attaching the same to the ring so that it will rotate therewith and an inner cover for the clutch portions surrounding the shaft and clutch controlling parts and secured thereto so as to rotate therewith and adapted to move longitudinally along the shaft and within the aperture in the outer cover.

3. The combination of a friction clutch having a rotating clutch portion and a longitudinally moving and rotating clutch portion with a two-part smooth surfaced cover therefor the outer part secured to the rotating portion of the clutch and inwardly perforated and the inner cover for the clutch portions secured to the rotating and longitudinally movable portion of the clutch and movable within the aperture.

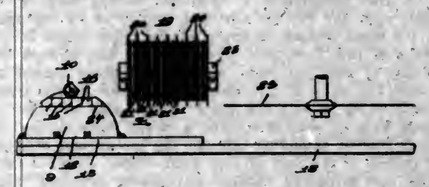
1,020,442. WHIFFLETREE ATTACHMENT. GEORGE J. PEPIN, Bottineau, N. D. Filed Oct. 20, 1910. Serial No. 588,120. (Cl. 21—78.)



1. In combination with a draft appliance comprising a double-tree and whiffletrees pivotally secured to its ends, a circular frame, a cross-bar secured to said frame, means to pivotally secure the cross-bar to the double-tree, and means mounted on said frame to engage the inner ends of the whiffletrees.

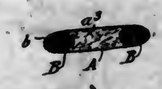
2. In combination with a draft appliance comprising a double-tree pivotally mounted on a suitable pin, and whiffletrees pivotally secured to the ends of the double trees, a stud post pivotally secured to the double-tree pin, a frame secured to said stud post, and circular loops swivelly secured to said frame and engaging the inner ends of the whiffletrees.

1,020,443. PROCESS OF MAKING CLOTHES-PINS OR SIMILAR ARTICLES. FREDERICK H. PERRY, Beverly, Mass. Filed July 19, 1909. Serial No. 508,261. (Cl. 144—309.)



The process of making clothes pins, each of which is formed of two similar halves having interlocking grooves on their inner faces, which consists in first cutting a length from a log equal to the length of the clothes pin, giving one face of said length a shape in the direction of the grain of the wood similar to that of the inner face of the clothes pin member, forming separating slits in said face in the direction of the grain and with a depth to the thickness of the clothes pin member and at a distance apart equal to the width of said members and simultaneously forming the interlocking grooves and subsequently cutting said block in the plane of the bottom of the separating slits.

1,020,444. PILLOW. SAMUEL L. PLATT, Dallas, Tex., assignor of one-half to Hallet M. Porter, New York, N. Y. Filed Jan. 27, 1911. Serial No. 605,009. (Cl. 5—15.)

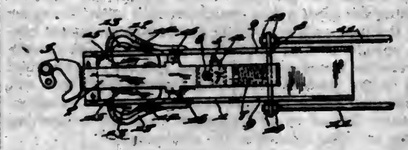


1. In a pillow, a cover, pockets on the inside of said cover at the edges of said pillow, and a filling of solid, compressible material for said cover and pockets, the filling material in said pockets being packed tighter than the mass of material in said cover, said pockets being attached to said cover at its edge portions only, whereby the filling material of said cover may overlap the sides of said pockets so that the pillow may gradually increase in softness from its edges toward its middle.

2. In a pillow, a cover, pockets on the inside of said cover at the edges of said pillow, and a filling of solid, compressible material for said cover and pockets, the filling material in said pockets being packed tighter than the mass of material in said cover, said cover and pockets being formed of two superposed layers of material, marginal portions of which are stitched together to form said pockets, whereby said pockets are connected to said cover at the edge portions thereof, said connection being the only point of connection between said cover and pockets, whereby the filling material of said cover may overlap the sides of said pockets so that the pillow may gradually increase in softness over said pockets and toward its middle.

3. In a pillow, a cover, pockets on the inside of said cover at the edges of said pillow, and a filling of solid, compressible material for said cover and pockets, the filling material in said pockets being packed tighter than the mass of material in said cover, said cover and pockets being formed of a single piece of material folded upon itself, marginal portions of which are stitched together to form said pockets, whereby said pockets are connected to said cover at the edge portions thereof, said connection being the only point of connection between said cover and pockets, whereby the filling material of said cover may over-lap the sides of said pockets so that the pillow may gradually increase in softness over said pockets and toward its middle.

1,020,445. DRAFT-RIGGING. WILLIAM H. POTTER, Philadelphia, Pa. Filed Sept. 6, 1911. Serial No. 647,953. (Cl. 213—41.)

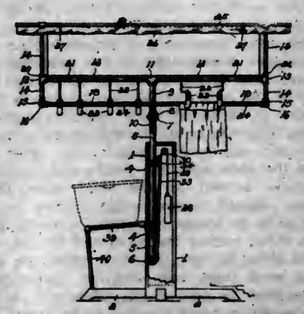


1. In a draft rigging, the combination with a channel, of a coupling mounted longitudinally in the channel, and a spring-pressed block bearing against the side of the draw bar of the coupling, and said coupling having a shoulder in rear of said block adapted to engage the end of the block when the coupling becomes detached from its rigging, and prevent the coupling from being drawn out of the channel, substantially as described.

2. In a draft rigging, the combination with a channel, of a car coupling having its draw bar positioned centrally in the channel, pockets in the opposite sides of the channel, blocks in said pockets, springs pressing said blocks against the sides of the draw bar, and shoulders on said draw bar in rear of the blocks adapted to engage the ends of the blocks when the coupling becomes detached from its rigging, and prevent the coupling from being drawn out of the channel, substantially as described.

3. In a draft rigging, the combination with a channel having pockets in its sides, of a coupling having its draw bar positioned centrally in the channel, blocks in said pockets having flat faces bearing against the opposite sides of the draw bar, springs in said pockets pressing said blocks against the draw bar, enlargements on the sides of the draw bar normally spaced from the blocks, and adapted when the coupling becomes detached from its rigging to engage said blocks and prevent the coupling from being drawn out of the channel, substantially as described.

1,020,446. CLOTHES-REEL. FRANCIS S. POWERS, Detroit, Mich., assignor to Charles Schmittke and John Schmittke, Detroit, Mich. Filed Sept. 26, 1910. Serial No. 583,748. (Cl. 68—34.)



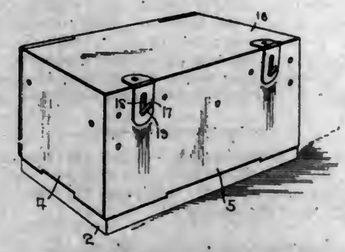
1. A device of the character described comprising a hollow pedestal, a post in the pedestal movable vertically in guides therein, a reel head on the upper end of the post, a weight in the pedestal, a pulley in the pedestal near the

upper end thereof, a cable attached at one end to the weight and passed over the pulley and attached to the lower end of the post projections on opposite sides of the pedestal extending laterally therefrom, hand levers pivotally attached at one end to the outer ends of said projections to turn thereon in a vertical plane, ropes secured to the hand levers intermediate their ends, and pulleys on the pedestal near its upper end over which the ropes extend into the pedestal and attached, one to the lower end of the post and the other to said weight to raise and lower the post, said ropes exerting a pull upon said hand levers when the same are turned downwardly to hold said levers against the sides of said pedestal.

2. A clothes reel comprising a hollow pedestal, a post slidable within the pedestal, means within the pedestal for raising the post, a reel head, mounted upon the upper end of the post and comprising a rectangular frame having an upright post at each corner, a clothes line extending across the frame in parallel runs, and supporting wires carried by the upwardly extending posts parallel with and at a distance above the several runs of the clothesline, and means carried by and slidable upon the supporting wires for securing clothes to the clothesline.

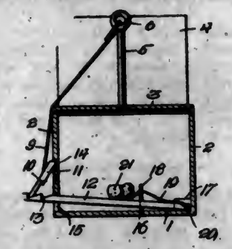
3. A device of the character described comprising a hollow supporting pedestal, guides within the pedestal, a hollow post movable vertically within said guides and provided with a flanged upper end, a short post section having a flanged lower end to engage the flanged upper end of the post, a rectangular frame secured to the upper end of the short post, a member carried by the short post and extending downward within the hollow post to pivotally connect said posts, a rope attached to the lower end of said hollow post within the pedestal, a pulley within the upper end of the pedestal over which the rope extends, a counter-balance weight attached to the rope, other ropes attached to the post and weight and extending outward through the sides of the pedestal, and levers pivotally attached to the outer sides of the pedestal and to which said ropes are secured.

1,020,447. FOLDING SHIPPING-CRATE. RANDEL PRIEST, Ames, Colo. Filed Aug. 7, 1911. Serial No. 642,700. (Cl. 220—17.)



A folding crate comprising a bottom having upturned edges, sides and ends hinged to the upturned edges of said bottom, right angle extensions projecting from the side edges of the ends and adapted to receive the edges of the sides thereagainst, hook receiving loops carried by the sides upon the inside thereof, hooks carried by the extensions for engagement within the loops, tongues carried by the ends upon the inside thereof, tongue receiving plates carried by the sides upon the inside thereof and adapted to receive the tongues to hold the sides and ends in proper positions, a cover hinged to one of the sides, locking means carried by the cover and one of the sides to lock the cover upon the sides and ends when said sides and ends are connected, and a partition carried by one of the sides, said ends, sides, cover and partition being adapted to be folded upon the bottom, one of said sides being provided with slots for the accommodation of the locking means carried by the other side to allow the parts to be folded against one another.

1,020,448. ANIMAL-TRAP. JOSEF RECKO, Bridgeport, Conn. Filed Nov. 6, 1911. Serial No. 658,648. (Cl. 43—19.)



A trap comprising a receptacle having both of its ends open and further having a portion of its top open, a top plate located centrally of the upper edges of the walls of said receptacle, a vertical eye bolt located centrally of said top plate, angle-shaped doors hinged between the walls of said receptacle adjacent to the transverse edges of said top plate and adapted to close the open ends of said receptacle, a looped cable having the ends thereof extending through the eye of said bolt and attached to the tops of said angle-shaped doors, a shiftable rod extending through an opening provided therefor in one of the side walls of said receptacle and having the opposite end thereof movably held adjacent to the other side wall of said receptacle, a prop having the ends thereof engaged by the outer ends of said bar and the side wall of said receptacle for holding the looped end of said cable, a guide for said bar carried by the bottom plate of said receptacle and having the top thereof provided with an eye, and a cable extending through the eye of said guide and having one end attached to the inner end of said shiftable bar and the opposite end thereof provided with a suitable bait so that a pull upon the bait will shift said bar outwardly to release said prop, cables, and the doors connected thereto.

1,020,449. VALVE. HENRY H. RIGGIN, Altoona, Pa. Filed Nov. 21, 1911. Serial No. 661,501. (Cl. 137—5.)



1. In a valve of the kind described, the combination of a casing formed with a valve chamber and having an aperture at one side and a guide surface at the opposite side of said chamber, a valve seat member removably secured in said aperture and formed with a port surrounded at its inner end by a valve seat, said guide surface being inclined to said valve seat, and a valve movable transversely to said port into and out of position in which it wedges between said surface and seat and closes said port, said valve comprising two separable parts, one engaging said seat but removable through said aperture when said seat member is removed, and the

second part engaging said surface, and provisions holding said parts together in normal operation while permitting said two parts to adjust themselves to said surface and seat.

2. In a valve of the kind described, the combination of a casing formed with a valve chamber and having an aperture at one side of said chamber and a guide surface at the opposite side, a valve seat member removably secured in said aperture and formed with a port surrounded at its inner end by a valve seat, said guide surface being inclined to said valve seat, and a valve movable transversely to said port into and out of position in which it wedges between said surface and seat and closes said port, said valve comprising two separable parts one engaging said seat but removable through said aperture when said seat member is removed, and the second part engaging said surface, one of said parts being formed with a projection extending transversely to said seat and the other with a socket receiving said projection whereby said parts are held together in normal operation while permitted freedom for relative adjustment and whereby said one part may be readily removed through said aperture when said valve seat member is removed.

3. In a valve of the kind described, the combination of a casing formed with a valve chamber and having an aperture at one side and a port at the opposite side of said chamber surrounded by a valve seat, a valve seat member removably secured in said aperture and formed with a port surrounded at its inner end by a valve seat, said valve seats being inclined to each other, and a valve movable transversely to said ports into and out of position in which it wedges between said seats and closes said ports, said valve comprising two separable parts, one engaging each seat and each removable through said aperture when said seat member is removed.

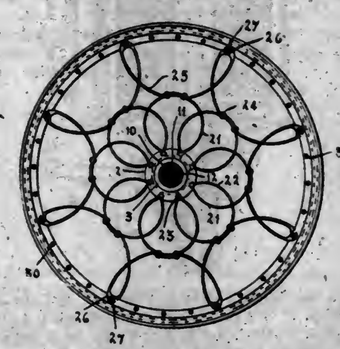
4. In a valve of the kind described, the combination of a casing formed with a valve chamber having an aperture at one side and a port at the opposite side of said chamber and surrounded by a valve seat, a valve seat member removably secured in said aperture and formed with a port surrounded at its inner end by a valve seat, said valve seats being inclined to each other, and a valve movable transversely to said ports into and out of a position in which it wedges between said seats and closes said ports, said valve comprising two separable parts one engaging each seat and each removable through said aperture when said seat member is removed, provisions holding said parts together in normal operation while permitting said two parts to adjust themselves to said surface and seat.

5. In a valve of the kind described, the combination of a casing formed with a valve chamber and having an aperture at one side and a guide surface at the opposite side of said chamber, a valve seat member removably secured in said aperture and formed with a port surrounded at its inner end by a valve seat, said guide surface being inclined to said valve seat, and a valve movable transversely to said port into and out of a position in which it wedges between said surface and seat and closes said port, said valve comprising two separable parts one engaging said seat but removable through said apertures when said seat member is removed, and a second part engaging said surface, said parts having provisions holding them together in normal operation while permitting freedom for relative adjustment, and permitting said one part to separate from the other when said valve seat is removed.

[Claims 6 to 8 not printed in the Gazette.]

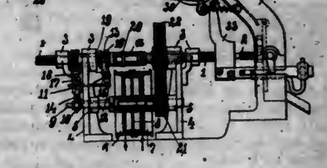
1,020,450. VEHICLE-WHEEL. CHARLES J. SANDRIK, East Pittsburgh, Pa. Filed Sept. 7, 1910. Serial No. 580,825. (Cl. 152—28.)

A spring wheel comprising a hub having an annular flange at each end, a rim having a centrally disposed inwardly extending annular flange, a circumferentially extending series of split annular inwardly inclined resilient members having their ends secured to the inner face of one of the flanges of the hub, a circumferentially extending series of split resilient inwardly inclined annular members having their ends secured to the inner face of the other of the flanges of the hub, the members of one series inclining toward the members of the other series, each of the members of one series opposing the portions of a pair of the members of the other series, band springs having the intermediate portion thereof secured to the outer portion of the periphery of the



members of one series and having their ends secured to one side of the flange of the rim, said band springs extending inwardly at an inclination, and band springs having the intermediate portion thereof secured to the outer portion of the periphery of the members of the other series and secured to the other face of the flange of the rim, said last mentioned band springs extending inwardly at an inclination.

1,020,451. AUTOMATIC NUT-TAPPING MACHINE. OTTO PAUL SCHIEMENTZ, Chemnitz, Germany. Filed Mar. 4, 1911. Serial No. 612,354. (Cl. 10—129.)



In a nut tapping machine a spindle having connection with the power, a feed trough arranged to feed nut blanks to the spindle, a reciprocating driver on said spindle, a sliding push rod fixed on said driver, an adjustable cross arm on said push rod and a curved rod carried on said cross arm having a horizontal portion which reciprocates across the channel in the trough, as specified.

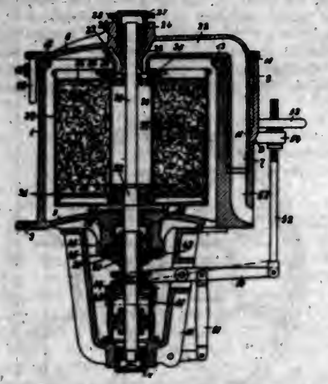
1,020,452. MACHINE FOR DYEING, BLEACHING, AND THE LIKE. AUGUST SCHIFFERS, Aix-la-Chapelle, Germany. Filed Nov. 26, 1910. Serial No. 594,313. (Cl. 8—18.)

1. In a machine for dyeing, bleaching and the like of textile-fibers a dye-vat cover provided with a tubular shaped pivot.

2. In a machine for dyeing, bleaching and the like of textile-fibers a dye-vat cover provided with a tubular shaped pivot, and a channel as continuation of the hollow pivot running out into the middle of the said cover.

3. In a machine for dyeing, bleaching and the like of textile-fibers a dye-vat cover provided with a tubular shaped pivot and an annular feather designed to engage

with a corresponding slot for the air and water tight closing of the said cover.

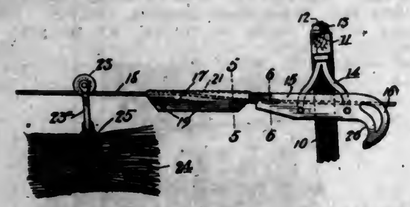


4. In a machine for dyeing, bleaching and the like of textile-fibers a dye-vat cover provided with a tubular shaped pivot which latter is surrounded by a shell carrying a rack engaging with a gear-wheel.

5. In a machine for dyeing, bleaching and the like of textile-fibers a dye vat cover provided with a tubular shaped pivot which latter is seated air tight in a tubular projection of the dye-vat.

[Claims 6 to 16 not printed in the Gazette.]

1,020,453. SWITCH FOR TROLLEY-CONVEYERS. HERMAN KEELING SCHOLEFIELD, Kailua, Hawaii. Filed Dec. 4, 1911. Serial No. 663,678. (Cl. 214—8.)



1. A dumping or throwing switch for trolley conveyer systems comprising a switch plate having means to substantially invert the trolley and thereby dump the load, the load and trolley being so thrown as to fall at a distance from each other.

2. A dumping or throwing switch for trolley conveyer systems comprising a cable way, and a switch plate onto which the trolley runs from said cable way, said switch plate having a down-turned portion to invert the trolley and throw it off at a tangent.

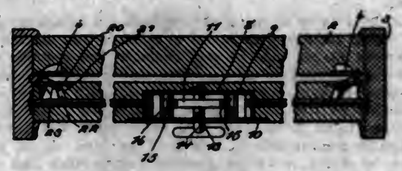
3. In a trolley conveyer system, the combination of a trolley wire or cable, a switch plate onto which the trolley runs from said trolley wire or cable, and an abutment on said switch plate to arrest and invert the trolley and thereby dump the load, the load and trolley being thrown in opposite directions.

4. In a trolley conveyer system, a switch comprising a switch plate having a downturned laterally directed terminal portion, and a trolley to travel over said plate, comprising a hook arrested by said terminal portion in such a manner as to invert the trolley and thereby dump the load, the trolley being guided laterally by said terminal portion and thrown off from the switch plate in a lateral direction.

5. A switch such as described, comprising a plate having a pointed extremity at one end and a down-turned laterally bent extremity at the opposite end.

[Claim 6 not printed in the Gazette.]

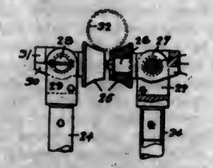
1,020,454. SASH-LOCK. GROVER F. SNIDENBECKER, Chicago, Ill. Filed Nov. 4, 1910. Serial No. 590,701. (Cl. 16—51.)



1. A sash fastener of the character described for locking together an upper and a lower sash comprising a pair of locking rods transversely movable within a lower window sash, said rods being adapted to extend beyond the side edges of the said sash, the casing for the said sash being provided with a plurality of openings for the reception of the said transversely movable locking rods to lock the said sash against movement, a locking lever in engagement with each of said locking rods, said locking lever being pivoted to the said sash and movable therewith, one arm of said locking lever extending through the face of said sash, a plate carried on the face of an upper sash contiguous to the said locking lever, said plate being provided with a plurality of openings to receive the said locking lever mounted in the lower sash, means for forcing the said locking rods outwardly for engagement with the said openings in the casing for the said sash to lock the said sash against movement and to simultaneously move said locking lever into engagement with the said plate on the said upper sash to lock the two sash together, substantially as described and for the purposes set forth.

2. A sash fastener of the character described for locking together an upper and a lower window sash comprising a pair of locking rods transversely movable within a lower window sash, the ends of said locking rods being adapted to pass through the side eges of the sash, means on the casing for the said sash to receive said transversely movable locking rods to lock the said sash against movement, locking levers pivoted in and carried with said sash, said locking levers being in engagement with said transversely movable rods and operated thereby, means on an upper sash for receiving said locking levers upon movement of said locking rods to securely lock the said sash together, substantially as described and for the purposes set forth.

1,020,455. MECHANISM FOR ROLLING TUBING. WILLIAM M. SELKIRK, Monessen, Pa., assignor to Pittsburgh Steel Products Co., Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Apr. 18, 1911. Serial No. 621,948. (Cl. 80—11.)



1. In apparatus for rolling tubing, the combination of the rolls, a mandrel-bar supported in proper position with reference to the pass of the rolls, means for withdrawing the mandrel-bar when the tube has been delivered to same, and mechanism for lifting the tube.

2. In apparatus for rolling tubes, the combination of the rolls, a mandrel-bar supported in proper position with reference to the pass of the rolls, means for withdrawing the mandrel-bar, and mechanism for lifting the tube, said last named mechanism adapted to clear the mandrel-bar on its descent.

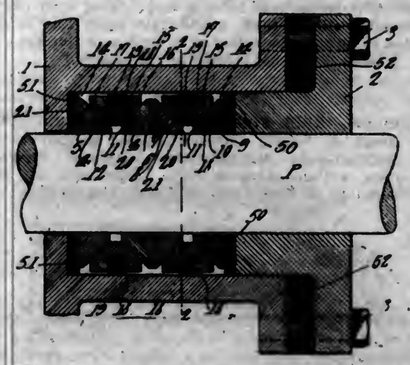
3. In apparatus for rolling tubing, the combination of the rolls, a mandrel-bar supported in proper position with reference to the pass of the rolls, means for withdrawing the mandrel bar when the tube has been delivered thereto, vertically movable supports adapted to engage the tube, said vertically movable supports adapted to clear the mandrel-bar on their descent.

4. An apparatus for rolling tubing, the combination of the rolls, a mandrel-bar supported in proper position with reference to the pass of the rolls, means for withdrawing the mandrel bar after the tube has been delivered thereto, and vertically movable yielding supports adapted to lift the tube, said supports in their descent coming in contact with the mandrel-bar.

5. In an apparatus for rolling tubing, the combination of the rolls, a mandrel-bar supported in proper position with reference to a pass of the rolls, means for withdrawing the mandrel-bar after the tubing has been delivered thereto, and vertically movable yielding rollers adapted to lift said tube, said rollers in their descent coming in contact with said mandrel-bar.

[Claims 6 to 12 not printed in the Gazette.]

1,020,456. METALLIC PACKING. JOSEPH A. SIMON, Memphis, Tenn. Filed June 20, 1911. Serial No. 634,349. (Cl. 121—100.)



1. The combination with a gland, a stuffing box and a sliding rod, of rings abutting against the gland and against the end of the stuffing box, the rings each being of equal thickness throughout, and being fashioned from refractory, heat-insulating material; pentagonal, wedge-shaped primary rings, the bases of all of the primary rings being disposed toward the rod, one pair of primary rings being disposed back to back, and another pair of primary rings being disposed with their backs against the refractory rings, whereby the wedge faces of the pairs of rings will be positioned opposite each other to define grooves; hexagonal, wedge shaped secondary rings seated in the grooves; the secondary rings being equipped with peripheral grooves having depressed seats; packings located in the peripheral grooves of the secondary rings; and springs located in the seats, and bearing against the packings, to actuate the packing outwardly against the stuffing box.

2. The combination with a gland, a stuffing box, and a sliding rod, of pentagonal, wedge-shaped primary rings, the bases of all of the primary rings being disposed toward the rod, one pair of primary rings being disposed back to back, and another pair of primary rings being disposed with their backs toward the gland and toward the end of the stuffing box, respectively, whereby the wedge faces of the pairs of rings will be positioned opposite each other, to define grooves; hexagonal, wedge-shaped secondary rings seated in the grooves; and spring means for advancing the secondary rings against the primary rings.

3. The combination with a gland, a stuffing box, and a sliding rod, of primary, wedge-shaped rings, the bases of all of the rings being disposed toward the rod, one pair of primary rings being disposed back to back, and another pair of primary rings being disposed with their backs toward the gland and toward the end of the stuffing box, respectively, whereby the wedge faces of the pairs of rings will be positioned opposite each other, to define grooves; wedge-shaped secondary rings seated in the grooves; and refractory rings interposed between the last named pair of primary rings and the gland and the end of the stuffing box, respectively.

1,020,457. UNIVERSAL BINDING-POST. AUGUSTUS KELLOGG SLOAN, Jr., Brooklyn, N. Y. Filed Feb. 27, 1911. Serial No. 611,265. (Cl. 173—259.)



1. A binding post having in combination a base piece, a continuous integral conductor extending through and seated in the said base piece and provided with an enlargement that extends beyond the exposed face of the base piece, and a clamping member surrounding the enlargement and adjustable thereover arranged to clamp a terminal conductor that may engage with the enlargement against the end face of the base piece.

2. A binding post having in combination a base piece, a continuous integral conductor extending therethrough and provided with a transversely perforated enlargement extending beyond the face of the base piece, and a member surrounding the said enlargement and adjustable thereover for clamping a terminal conductor seated in the said perforation through the enlargement against the end face of the base.

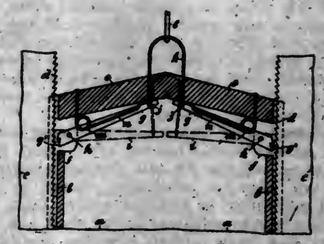
3. A binding post comprising in combination with a support, a continuous conductor having an angular enlargement, a clamping washer encircling and fitting over said enlargement, and a nut connected with and controlling the position of said clamping washer.

4. A binding post comprising in combination with a base piece or support, a continuous conductor having a perforated enlargement, a clamping washer encircling said enlargement, and a nut mounted upon the said conductor connected with and arranged to move, and controlling the position of said clamping washer.

5. A binding post comprising in combination with a support, a continuous conductor having an enlargement, a non-rotatable clamping washer longitudinally movable over the said enlargement and having grooves on its clamping face, and a nut controlling the position of and arranged to move said clamping washer.

[Claims 6 to 10 not printed in the Gazette.]

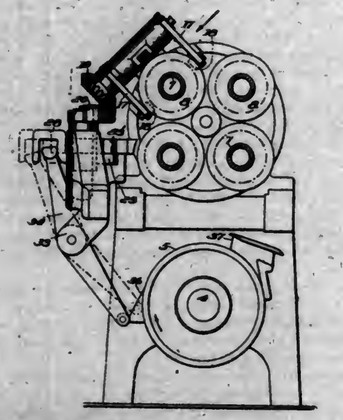
1,020,458. ELEVATOR. JOSEPH F. SMITH, Ancaster, Ontario, Canada. Filed Aug. 28, 1911. Serial No. 646,837. (Cl. 187—82.)



In a device of the character described, the combination with an elevator car comprising a transverse top member,

of a toothed guide member located upon each side thereof, a pair of transversely disposed fall dogs located entirely beneath said top member and pivoted to said car adjacent their outer ends, said dogs having teeth formed at their outer ends adapted to engage with the teeth of the guides when the inner ends of the dogs move downwardly with relation to the car, the inner ends of said dogs terminating short of each other, springs bearing between the upper portions of the dogs and the transverse top member and normally tending to move the inner portions thereof downwardly, and a suspension yoke of inverted U shape, the legs of which pass through separate tapered openings formed in the transverse top member and are pivotally connected at their extremities to the inner ends of said fall dogs, the longer ends of the tapered openings being at the bottom.

1,020,459. FRICTION-CLUTCH-OPERATING MECHANISM. OSCAR A. SMITH, Cleveland, Ohio, assignor to The National-Acme Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed July 14, 1910. Serial No. 571,955. (Cl. 29—37.)



1. The combination with a rotatable turret and a plurality of rotatable spindles carried thereby, and a clutch for each spindle, of an actuator for said clutches adapted to be brought into operative relationship thereto by the indexing of said turret, a shaft journaled in stationary bearings and on which said actuator is mounted, a shaft at an angle to said first-mentioned shaft and gearing connecting said shafts, a shaft extending parallel to the axis of the turret, and operative connections between said last-mentioned shaft and the second-mentioned shaft whereby said second-mentioned shaft may be rocked to operate the actuator to shift said clutches.

2. The combination with a rotatable turret and a plurality of spindles carried thereby, and a clutch for each spindle, of an actuator for said clutches adapted to be brought into operative relationship thereto by the indexing of said turret, an actuator carrying shaft, a shaft at an angle to said actuator-carrying shaft and gearing connecting said shafts, a shaft extending parallel to the axis of the turret, and operative connections between said last-mentioned shaft and the second-mentioned shaft, whereby the latter shaft may be operated to operate the actuator to shift said clutches.

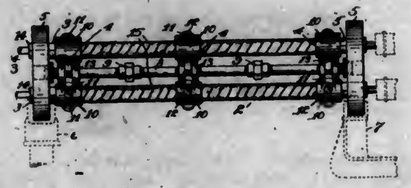
3. The combination with a rotatable turret and a plurality of spindles carried thereby, and a clutch for each spindle, of an actuator for said clutches adapted to be brought into operative relationship thereto by the indexing of said turret, an actuator-carrying shaft, a shaft at an angle to said actuator-carrying shaft and gearing connecting said shafts, a shaft extending parallel to the axis of the turret, and operating connections between said last-mentioned shaft and the second-mentioned shaft whereby the latter shaft may be operated to operate the actuator to shift said clutches, said connections comprising a cam-engaging lever carried by said second mentioned shaft and a cam slide adapted to engage said lever, said slide having a recessed part and also having a locking surface for locking the lever and thereby the actuator in a certain position.

4. The combination with a rotatable turret and a plurality of spindles carried thereby, and a clutch for each spindle, of an actuator for said clutches adapted to be brought into operative relationship thereto by the indexing of said turret, an actuator-carrying shaft, a shaft at an angle to said actuator-carrying shaft, means for imparting motion from one shaft to the other, a shaft extending parallel to the axis of the turret, and operative connections between said last-mentioned shaft and the actuator-carrying shaft whereby said actuator-carrying shaft may be rocked to operate the actuator to shift said clutches.

5. The combination with a rotatable turret and a plurality of spindles carried thereby, and a clutch for each spindle, of an actuator for said clutches adapted to be brought into operative relationship thereto by the indexing of said turret, an actuator-carrying shaft, a shaft located at an angle to said actuator-carrying shaft, driving connections between said shafts, a driving shaft, and operative connections between said driving shaft and the second-mentioned shaft whereby the latter may be actuated to operate the actuator to shift said clutches.

[Claims 6 to 9 not printed in the Gazette.]

1,020,460. REEL FOR METAL-WORKING MACHINES. OSCAR A. SMITH, Cleveland, Ohio, assignor to The National-Acme Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Mar. 21, 1911. Serial No. 615,971. (Cl. 29—37.)



1. A reel for metal working machines, comprising a tube formed of a non-metallic material and covered with a soft material.

2. A reel for metal working machines, comprising a tube formed of a non-metallic material and made in sections connected together and covered with a softer material.

3. A reel for metal working machines, comprising a tube formed of a non-metallic material and made in sections connected together and having a fabric located exteriorly thereof around and along the same.

4. A reel for metal working machines, comprising a tube formed of a non-metallic material and made in sections connected together and having a fabric wound exteriorly thereon and comprising tape.

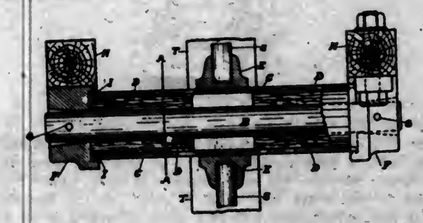
5. A reel for metal working machines, comprising a plurality of tubes, each consisting of wood having tape wound exteriorly thereon.

[Claims 6 to 11 not printed in the Gazette.]

1,020,461. WHEELBARROW. THOMAS L. SMITH, Milwaukee, Wis. Filed Nov. 12, 1908. Serial No. 462,194. (Cl. 21—69.)

1. A vehicle wheel having a metal hub with outwardly tapering openings at each end, wood bushings forced into the hub from each end, and extending slightly beyond the hub, whereby the end wear on the hub is taken on the wood.

2. A vehicle wheel having a metal hub, an enlargement at each end of said hub, a wood bushing forced in each end of the hub and projecting slightly therefrom, a space in the hub between the bushings, the portions of the bushings in the enlargements of the hub being uncompressed, whereby the bushings are maintained in place in the hub.



3. In a wheelbarrow, a traction wheel having a metal tire, spokes, and hub, said hub comprising a relatively long piece of rough pipe connected to the spokes, and bearing surfaces in each end of the pipe consisting of hardwood bushings pressed into the pipe and secured thereto by the interior irregularities of the rough pipe seating themselves in the wood.

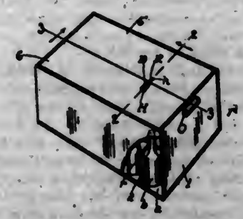
1,020,462. HANDLE-BAR GRIP. THOMAS W. SNOW, Alexandria, Ind. Filed Dec. 30, 1911. Serial No. 668,780. (Cl. 208—126.)



1. The combination, with a handle bar or the like, of a yoke overlying the open end and having arms extending longitudinally on opposite sides thereof, means to clamp the arms to the bar, a grip provided with oppositely arranged interior grooves to receive the yoke arms, and means to secure the grip to the yoke against longitudinal movement.

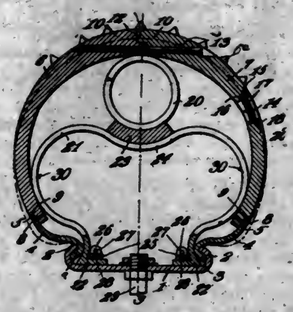
2. The combination, with a handle bar or the like, of a yoke overlying the open end and having arms extending longitudinally on opposite sides thereof, a screw threaded pin transfixing the yoke arms to clamp the same to the bar, a grip having an axially bored closed end and provided with oppositely arranged interior grooves to receive the yoke arms, and a screw journaled in the axial bore of the grip and threaded into the head of the yoke to secure the grip and yoke against longitudinal movement.

1,020,463. PACKING AND SHIPPING CASE. RUDOLPH A. STLUKA, St. Louis, Mo. Filed Aug. 17, 1911. Serial No. 644,494. (Cl. 217—59.)



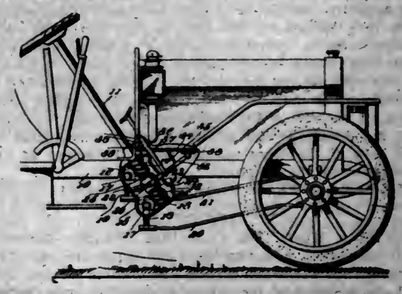
In combination with a case having an open top and four vertical walls, a pair of lids, interiorly projecting studs on two opposite walls disposed on axes removed a distance from the contiguous walls, plates on the lids provided with elongated slots for the play of the studs therethrough, the outer ends of the slots inclining toward the lids, the inner terminals of the plates on one lid being provided wtih locking hooks, merging with the edge of the plate along a sloping curve, ledges on the case walls for supporting the lids in their closed position, and keepers on said ledges for engaging the hooks on the plates, the free edges of the lids coming in contiguous relation for a closed position of the lids.

1,020,464. AUTOMOBILE-TIRE. WINFIELD SCOTT TEMPLE, Sidney, Ill. Filed Sept. 28, 1910. Serial No. 584,347. (Cl. 152—8.)



In a device of the class described, a rim; a tire casing thereon; and a resilient structure within the casing, said structure having a three-point engagement with the tire casing, the tire casing being out of engagement with said structure, saving at the engaged points; said structure embodying transversely arched springs, centrally depressed, and supported by the rim, a concavo-convex band resting in the depressed portions of the springs, and a helical spring resting in the band, the helical spring being of relatively small diameter, compared with the diameter of the tire casing; the transverse springs engaging the tire casing along its sides, and the helical spring engaging the tire casing along its tread.

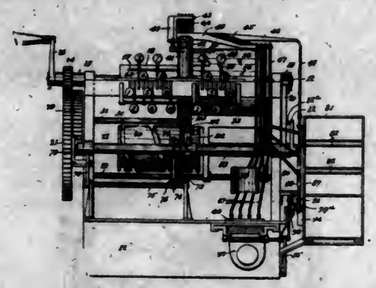
1,020,465. AUXILIARY STEERING DEVICE. JOHN M. TOPPER and GEORGE H. CHAPLAIN, Leavenworth, Kans. Filed Apr. 9, 1910, Serial No. 554,571. Renewed Aug. 1, 1911. Serial No. 641,698. (Cl. 21—90.)



A steering device including a frame, a post carried by the frame, spaced actuating members upon the post, separate steering devices connected to the actuating members, a sliding clutch keyed to the post between said actuating members, a shifting lever carried by the frame for moving the clutch alternately into engagement with said actuating members, a yoke formed upon the lower end of the

shifting lever and engaged with said clutch, a foot lever hinged to the shifting lever and extending upwardly through the frame, teeth formed upon the edge of said foot-lever and a stop carried by the frame for engagement with said teeth to lock the foot-lever in a depressed position.

1,020,466. CHANGE-MAKING MACHINE. CHARLES ULMER, Lisbon, N. D. Filed Mar. 24, 1911. Serial No. 616,622. (Cl. 133—2.)



1. In a machine of the character set forth, the combination with a selector having a cylindrical surface and movable both angularly and axially, of two corresponding separate sets of keys each set comprising a plurality of independent keys with means whereby the keys of one set determine the angular movement, and the keys of the other set determine the axial movement of the selector.

2. In a machine of the character set forth, the combination with a selector having a cylindrical surface and movable both angularly and axially, of deposit and purchase key controlled means, one for determining the angular and the other for determining the axial movement of the selector.

3. In a machine of the character set forth, the combination with a cylindrical selector movable both angularly and axially, of two corresponding separate sets of keys each set comprising a plurality of independent keys with means whereby the keys of one set determine the extent of angular movement and the keys of the other set determine the extent of axial movement of the selector.

4. In a machine of the character set forth, the combination with a cylindrical selector movable both angularly and axially, an operating handle and connections intermediate the handle and selector whereby the movements of the selector are effected, of two corresponding sets of keys each set comprising a plurality of independent keys, with means whereby the keys of one set determine the extent of angular movement and the keys of the other set determine the extent of axial movement of the selector.

5. In a machine of the character set forth, the combination with a cylindrical selector movable both angularly and axially, money discharging mechanism controlled by the selector and an operating handle for effecting the movements of the selector and money discharging mechanism, of two sets of keys with means whereby the keys of one set determine the extent of angular movement and the keys of the other set determine the extent of axial movement of the selector.

[Claims 6 to 27 not printed in the Gazette.]

1,020,467. HOOD OR CAP FOR PILES. JAMES N. WARRINGTON, Los Angeles, Cal. Filed Aug. 31, 1911. Serial No. 646,958. (Cl. 61—37.)

1. In a device of the character described, the combination with a hood having means to secure it to the guide for the hammer of a pile driver and provided with an open space to receive a portion of a pile, of an impact plate movably located in said space, and a buffer supported on the hook below said plate.

2. In a device of the character described, the combination with a hood having means to detachably secure it to the guide for the hammer of a pile driver and provided with an open space to receive a portion of a pile, of inward extensions on the lower portion of the hood, an impact plate movably located in said space, and a buffer supported on said inward extensions.



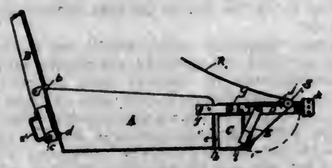
3. In a device of the character described, the combination with a hood consisting of a plurality of members, of means for securing said members at their upper portions to the lower portion of a guide for the hammer of a pile driver, said members being arranged so as to provide an open space therebetween, an impact plate movably located in said space, and a buffer supported on the hood below said plate.

4. In a device of the character described, the combination with a hood consisting of a plurality of members, of means for securing said members at their upper portion to the lower portion of a guide for the hammer of a pile driver, said members being arranged so as to provide an open space therebetween to receive the upper portion of a pile, inward extensions on the lower portion of said members, yielding material located on the upper surface of said extensions, and an impact plate movably located in said space.

5. In a device of the character described, the combination with a hood consisting of a pair of members arranged so as to provide an open space therebetween to receive the upper portion of a pile, of means for securing said members at their upper portions to the lower portion of a guide for the hammer of a pile driver, an impact plate movably located in said space, and a buffer supported on the hood below said plate.

[Claims 6 to 10 not printed in the Gazette.]

1,020,468. TRENCHING IMPLEMENT. BURT WERMUTH and WILLARD M. BROWN, Detroit, Mich. Filed Oct. 29, 1910. Serial No. 589,768. (Cl. 37—40.)



1. In a trenching implement, the combination of a carrier, a soil cutter located in advance of the carrier and pivotally connected thereto, the pivot being located at a distance above and in advance of the front edge of the carrier, and a draft device connected to the cutter.

2. In a trenching implement, the combination of a scoop, a draft frame connected thereto, and a plate pivoted to and depending below the draft frame, and adapted to swing forwardly and upwardly to position under the draft frame, or downwardly and backwardly to position in front of the scoop.

3. In a trenching implement, the combination of a scooped shaped carrier, a pivoted U-shaped draft frame connected at its opposite ends to the opposite sides of the carrier, and a cutter fixed to the draft frame and adapted to swing therewith and depending in front of the carrier and shaped to deliver material thereto.

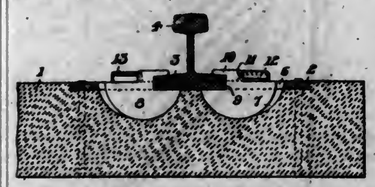
4. A trenching implement, having a scoop, and a handle pivoted to the rear wall of the scoop to swing transversely with respect to the scoop, and a catch pivoted to the handle and adapted to engage the rear wall of the scoop and hold the handle in rigid relation thereto.

1,020,469. ENVELOP. JAMES A. WOOLSLAER, Pittsburgh, Pa. Filed Dec. 29, 1910. Serial No. 599,879. (Cl. 229—84.)



In a safety envelop, a body portion, and end, bottom, and sealing flaps, the end and bottom flaps having slots adapted to register when folded upon each other, said sealing flap having an element adapted to pass through the alined slots to close the envelop, said element comprising a central portion and an inwardly-projecting tongue on each side of and extending in the plane of the central portion when the envelop is unsealed, said tongues having their inner ends spaced from the central portion, the greatest distance between the outer planes of said tongues being greater than the length of the flap slots, the configuration of the tongues permitting them to yield toward the central portion to permit entrance of the element into the slots, said central portion being of a length to cause the inner ends of the tongues to be positioned spaced from the plane of the slots when in sealing position, this relation of tongues and slots permitting the sealing flap to be raised after the tongues have been inserted and locked without affecting the remainder of the envelop, whereby said central portion may be prepared for sealing after the sealing flap has been locked to the remaining flaps.

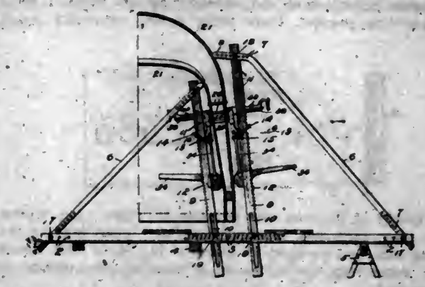
1,020,470. TIE AND RAIL-FASTENER. JACOB J. ZIPPEL, Loleta, Pa. Filed Dec. 18, 1911. Serial No. 666,372. (Cl. 238—3.)



In a tie and rail fastener, the combination with a concrete body having semi-circular recesses formed therein, of a rail plate counter sunk in the upper surface of said tie adjacent to the ends thereof and adapted to support the base flanges of a rail, said rail plate having openings formed therein registering with the recesses of said concrete body, semi-circular fastener bodies arranged in the recesses of said concrete body and extending under said rail plate, flanges carried by said fastener bodies and engaging the base flanges of said rail, parallel staples carried by said rail plate at the sides of the openings thereof, and flat tapering keys driven through said staples and engaging in said fastener bodies to retain said bodies in engagement with the base flanges of said rails.

1,020,471. POWER-HAMMER-SUPPORTING DEVICE AND ADJUSTABLE FRAME FOR THE SAME. ERNEST J. ALLEN, Vilas, Pa., assignor of one-half to William R. Downs, Antes Fort, Pa. Filed Feb. 3, 1911. Serial No. 606,393. (Cl. 78—46.)

1. An adjustable frame for supporting power hammers, comprising in combination, two base irons having series of holes at their ends and at their middle portions, four braces each having at each end a series of holes, four vertical bars each provided at the upper end with a series of holes and at its lower end with an opening and having means for supporting a bracket, bolts for adjustably attaching the braces, vertical bars and base irons together, two fulcrum bars, and brackets engaging the vertical bars and supporting the fulcrum bars.



2. An adjustable frame for supporting power hammers, comprising in combination, two base irons having series of holes at their ends and at their middle portions, four braces each having at each end a series of holes, four vertical bars each provided at the upper end with a series of holes and at the lower end with means for adjustably supporting the bar relative to a base iron and each bar also provided with notches for a bracket, bolts for adjustably attaching the braces, vertical bars and base irons together, two fulcrum bars, and brackets engaging the notches in the vertical bars, the free ends of the brackets clamping the fulcrum bars to the vertical bars.

3. An adjustable frame for supporting power hammers, comprising in combination two base irons having series of holes at their ends and at their middle portions, four braces each having at each end a series of holes and the ends of two of said bars being bent, four vertical bars each provided at the upper end with a series of holes and at its lower end with an opening and having means for supporting a bracket, bolts for adjustably attaching the braces, vertical bars and base irons together, two fulcrum bars, and brackets engaging the vertical bars.

4. An adjustable frame for supporting a power hammer, comprising two base irons each having two series of holes; two braces with holes at their ends; two vertical bars each with a series of holes at one end and an opening at the opposite end; bolts for adjustably uniting the base irons, braces and vertical bars; a fulcrum bar; and brackets adapted to be attached to the vertical bars and to support the fulcrum bar.

5. An adjustable frame for supporting a power hammer, comprising two base irons each having two series of holes; two braces with holes at their ends; two vertical bars each with a series of holes at one end and an opening at the opposite end; bolts for adjustably uniting the base irons, braces and vertical bars; a fulcrum bar; and brackets; the edges of the vertical bars being notched, each bracket surrounding a bar and engaging a notch and having its ends disposed at an angle to the body of the bracket whereby the fulcrum bar may be clamped between the ends of the bracket and the vertical bar.

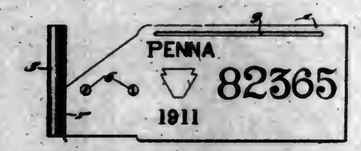
[Claims 6 to 11 not printed in the Gazette.]

1,020,472. LICENSE-TAG FOR MOTOR-VEHICLES. WILLIAM G. ANDERTON and CLAUDE S. JARVIS, Philadelphia, Pa. Filed Sept. 20, 1910. Serial No. 582,830. (Cl. 40—131.)

1. In an article of the class described, a strip of material bent to form a long and a short side having rigid relation with each other, the long side constituting a license tag, and the short side bearing a lamp-supporting journal integral therewith, there being a slot adjacent the upper edge of said long side to receive securing means for attaching other tags, and means for supporting the said device on a vehicle, substantially as described.

2. In a device of the class described, a strip of sheet material bent to form a long and a short side having rigid

relation with each other, the long side constituting a license tag, said short arm being reduced in height for the greater part of its length and terminating in an end of greater height, said end constituting an integral lamp supporting journal, there being a slot extending longi-



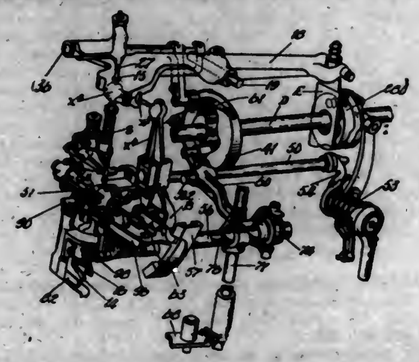
tudinally of the long side adjacent its upper edge, whereby other tags may be secured to the upper edge of the long side and dropped in front of the same, and means for supporting the device on a vehicle, substantially as described.

1,020,473. SPRING ATTACHMENT FOR APPAREL-SUPPORTS. AUGUST C. F. BARTZ, Keystone, Wis. Filed Dec. 20, 1910. Serial No. 598,456. (Cl. 241—21.)



A device of the character described, comprising a strand of spring wire having a horizontal portion bent at its ends to extend upwardly in the form of coils having their free ends disposed lowermost and extended in diagonal directions to cross and terminate in eyes disposed adjacent the upper sides of said coils, a buckle comprising a horizontal member upon which the eyes are slidably mounted, and a tab disposed upon said horizontal portion and having a button-hole opening formed therein.

1,020,474. LASTING-MACHINE. ARTHUR BATES, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Mar. 13, 1911. Serial No. 614,154. (Cl. 12—2.)



1. A lasting machine having, in combination, pincers, actuating mechanism for the pincers including means under control of the operator for imparting upper plaiting movements thereto, and shoe feeding means arranged to be automatically controlled simultaneously with the plaiting means.

2. A lasting machine having, in combination, pincers, a shoe feeding device adapted for continuous engagement with the shoe, and actuating mechanism for the pincers, said mechanism including both means for imparting upper plaiting movements to said pincers and also means for imparting feeding movements to said feeding device.

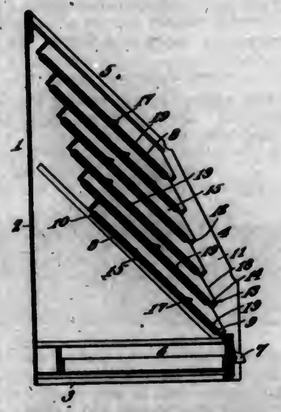
3. In a lasting machine, the combination of lasting pincers, actuating mechanism therefor, including means for imparting plaiting movements to the pincers, a work feeding means adapted to be actuated to feed the shoe past the pincers and connections therefrom with the plaiting means arranged to cause the plaiting movement of the pincers and the feeding movement of the work feeding means to be automatically interdependent.

4. A lasting machine having, in combination, pincers, actuating mechanism therefor including means for imparting upper plaiting movements to the pincers, and shoe feeding means having direct operative connection with an element of the plaiting means.

5. A lasting machine, having the combination of lasting pincers, a shoe feeding member, a cam, and mechanism adapted to be actuated by the cam for operating said lasting pincers and said shoe feeding member, said mechanism comprising means adapted to impart plaiting movements to the pincers and means adapted to impart feeding movement to the feeding member.

[Claims 6 to 21 not printed in the Gazette.]

1,020,475. TYPE-WRITER RIBBON-CABINET. FRED G. BEBO, Enid, Okla., assignor of one-half to Merle B. Horney, Enid, Okla. Filed Jan. 10, 1912. Serial No. 670,494. (Cl. 211—7.)

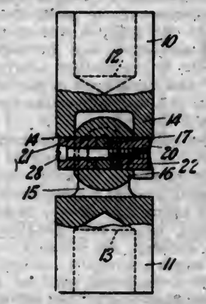


A device of the type described, including a compartment-casing and sloping traveling belts adapted to receive and move successive articles placed thereon as a preceding article is removed, said traveling belts being each equipped with a limiting member to prevent its casual displacement.

1,020,476. UNIVERSAL JOINT. FRANK E. BOCORSELSKI, Springfield, Mass. Filed Aug. 4, 1910. Serial No. 575,478. (Cl. 74—19.)

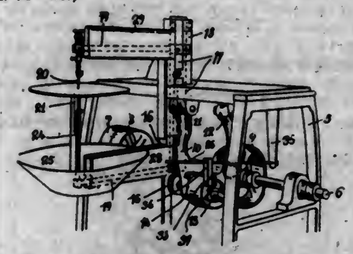
A universal joint comprising shaft sections, each having a pair of opposed jaws, those of one section being arranged at right angles to those of the other, and the jaws of each pair having partially circular trunnion receiving sockets, with the openings thereinto oppositely disposed, a transmission block, the sides of which are at right angles to each other being embraced by both pair of said jaws, and having bores extending therethrough at right angles to each other and terminating at their jaw-embraced sides, a pivot pin extending through one of the bores of the transmission block, having its ends projecting beyond the opposite faces of such block to form trunnions engaging in the partially circular recesses of one pair of the jaws, said pin having opposite recesses in the middle portion thereof which is within the transmission block,

a pair of trunnion blocks which the other pair of partially circularly recessed jaws engage, entered into the other bore of the transmission block, and having tenon like projections at their inner ends, in engagement in the said



opposite recesses in the middle of the pivot pin, and a headed screw, the shank of which is loosely extended through one of the trunnion blocks, and has a screw engagement with the other trunnion block.

1,020,477. GEARING. JULIUS BRENZINGER, Mount Vernon, N. Y. Filed Aug. 13, 1908. Serial No. 448,385. (Cl. 74—26.)

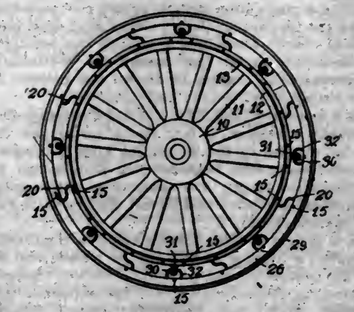


In a power driven machine, transmission mechanism comprising a friction driving pulley, a swinging frame and shaft mounted therein, a friction pulley and driving mechanism upon said shaft, retaining means adjacent to said frame provided with a recess, said retaining means being adapted to be shifted by hand in such a manner that when shifted in one direction said frame hangs loosely with reference to said retaining means and when shifted in the other direction said frame is moved by said retaining means and shifts said friction pulley against said driving friction pulley.

1,020,478. WHEEL-RIM. ISRAEL J. CARPENTER, Marlboro, Mass. Filed Apr. 4, 1911. Serial No. 618,686. (Cl. 152—28.)

1. In a device of the character described, the combination with an inner rim and outer tire having opposite flanges at their edges at the same distance apart, said flanges of the rim extending toward the flanges of the tire, a series of flat transverse blocks contained between each pair of flanges and spaced from the rim and tire respectively, a series of transverse bolts each extending longitudinally through one of said blocks and projecting through the flanges at their opposite ends, and a series of springs held at their opposite ends to the rim and tire respectively under said blocks.

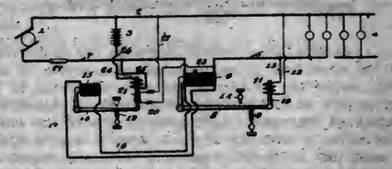
2. In a device of the character described, the combination with an inner rim and outer tire having opposite flanges at their edges at the same distance apart, said flanges of the rim extending toward the flanges of the tire, a series of transverse flat blocks contained between each pair of flanges extending entirely across from one flange to the other, abutting against them at their ends, and secured rigidly thereto and spaced from the rim and tire respectively, and a series of springs rigidly secured at their opposite ends to the rim and tire respectively under said blocks.



3. In a device of the character described, the combination with an inner rim and outer tire having opposite flanges at their edges at the same distance apart, said flanges of the rim extending toward the flanges of the tire, a series of blocks contained between each pair of flanges and secured thereto and spaced from the rim and tire respectively, and a series of springs held at their opposite ends to the rim and tire respectively by said blocks, said springs having perforations therethrough and said blocks having projections entering said perforations.

4. In a device of the character described, the combination with an inner rim and outer tire having opposite flanges at their edges, of a series of blocks contained between each pair of flanges and secured thereto and spaced from the rim and tire respectively, and a series of springs held at their opposite ends to the rim and tire respectively by said blocks, said springs each consisting of three pieces, two flat members secured to the inner rim at a distance apart and converging toward each other, and a third heart-shaped member secured to both of said members where they come into contact and secured at its apex to the outer tire.

1,020,479. ELECTRIC REGULATION. JOHN L. CHEVELING, New York, N. Y., assignor to Safety Car Heating and Lighting Company, a Corporation of New Jersey. Filed Oct. 11, 1910. Serial No. 586,482. (Cl. 171—313.)



1. In a system of electrical distribution comprehending a dynamo and storage battery, means for controlling an electric circuit comprehending a circuit controlling element, means for operating the same, circuit controlling means coöperating with the circuit controlling element in the control of said circuit and means for controlling said last mentioned means dependent upon the current to and from the storage battery.

2. In a system of electrical distribution comprehending a generator, a storage battery and a translation circuit, means for governing the translation circuit comprehending circuit controlling means, means for operating the same responsive to fluctuations in the translation circuit, circuit controlling means coöperating with the first-mentioned circuit controlling means to regulate the translation circuit and means for controlling the same responsive to current changes in the battery circuit.

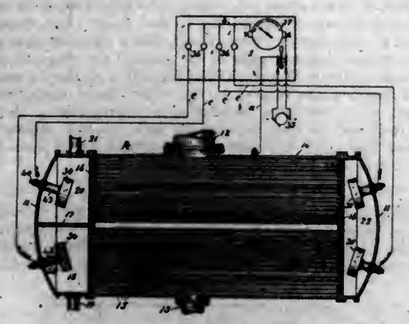
3. In a system of electrical distribution comprehending a generator, a storage battery and a translation circuit, means for governing the translation circuit comprehending a circuit controlling means affecting the translation circuit, means for operating the same responsive to fluctuations in the translation circuit, circuit controlling means affecting the translation circuit coöperating with the first-mentioned circuit controlling means in the regulation of the translation circuit and means for controlling the same responsive to changes in current and polarity in the battery circuit.

4. In a system of electrical distribution comprehending a generator, a storage battery and a translation circuit, means for controlling the translation circuit, comprehending controlling means responsive to fluctuations in the said translation circuit and controlling means coöperating therewith to control said circuit responsive to changes in the battery circuit.

5. In a system of electrical distribution comprehending a generator, a storage battery and a translation circuit, means for controlling the translation circuit, comprehending controlling means responsive to fluctuations in the said translation circuit and controlling means coöperating therewith to control said circuit responsive to changes in current in the battery circuit.

[Claims 6 to 13 not printed in the Gazette.]

1,020,480. MEANS FOR PREVENTING CORROSION OF SURFACE CONDENSERS AND OTHER METAL STRUCTURES. PEREGRINE ELLIOTT GLOUCESTER CUMBERLAND, St. Kilda, Victoria, Australia, assignor to Alexander Markell, Sydney, Australia. Filed Apr. 27, 1911. Serial No. 623,609. (Cl. 204—1.)



1. In a system for preventing corrosion, the combination, with the apparatus to be protected, of a source of electricity, means for connecting the said apparatus to the negative pole of said source of electricity, a plurality of branch lines connected to the positive side of the source of electricity, a plurality of anode devices located within the apparatus to be protected and insulated therefrom, each anode device being connected to one branch line only, and means for controlling and determining the voltage impressed on each anode device independently of the voltage on any other anode device.

2. The combination with a surface condenser, of means for preventing corrosion of parts thereof in contact with the injection water comprising a plurality of anodes mounted within the condenser casing and insulated therefrom, a source of electrical energy, means electrically connecting the parts of the condenser to be protected with the negative side of the source of electrical energy, a separate branch line connection leading from each anode to the positive side of the source of electrical energy, and a resistance in each of said branch lines for controlling and determining the amount of current supplied through each anode.

3. The combination with a surface condenser having water chambers at the ends of the tubes including an inlet chamber and a discharge chamber, of means for preventing corrosion of parts of the condenser in contact with the injection water comprising a plurality of anodes mounted one or more in each of the water chambers and insulated from the condenser, a source of electrical energy, means electrically connecting the parts of the condenser to be protected with the negative side of the source of electrical energy, a separate branch line connection leading from each anode to the positive side of the source of electrical energy, and a resistance in each of said branch lines for controlling and determining the amount of current supplied through each anode.

4. The combination with a surface condenser, of means for preventing corrosion of parts thereof in contact with the injection water comprising an anode mounted within the condenser casing, a support for the anode formed of a metal bar extending through an opening in and secured to the condenser casing, means for insulating said metal bar from the shell and from the water, a source of electrical energy, and means electrically connecting the parts of the condenser to be protected with the negative side of the source of electrical energy and the anode support with the positive side of the source of electrical energy.

5. The combination with a surface condenser, of means for preventing corrosion of parts thereof, in contact with the injection water, comprising a plurality of anodes mounted within the condenser casing and insulated therefrom, a source of electrical energy, means electrically connecting the parts of the condenser to be protected with the negative side of the source of electrical energy, connections from the anodes to the positive side of the source of electrical energy, and indicating means for each anode arranged to indicate the time for renewal of said anode.

[Claims 6 to 18 not printed in the Gazette.]

1,020,481. EDIBLE CAKE AND METHOD OF MAKING SAME. WALTER W. DE BEVOISE, Brooklyn, N. Y. Filed Aug. 29, 1911. Serial No. 646,681. (Cl. 127—4.)



1. As a new article of manufacture, an edible cake composed of a cocoa vehicle or binder and intermixed nut fragments, a surface of said cake being shaped in imitation of the whole kernels of the nut.

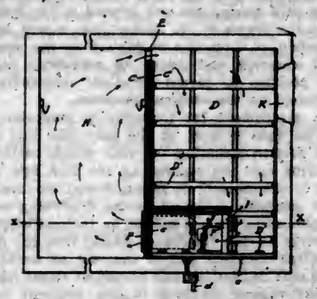
2. As a new article of manufacture, an edible cake composed of a cocoa vehicle or binder and intermixed fragmentary peanut meats, the vehicle or binder at the surface of said cake being shaped artificially in imitation of peanut meats.

3. As a new article of manufacture, an edible cake composed of a digestible vehicle or binder having a surface shaped artificially in imitation of a plurality of nut meats, and intermixed nut ingredients, said nut ingredients lying wholly within the body of the vehicle and away from the artificially shaped surface so as to leave said shaped surface smooth and unbroken by protruding nut ingredients.

4. As a new article of manufacture, an edible cake composed of a digestible vehicle or binder and intermixed nut ingredients, a surface of said cake being shaped artificially in imitation of a plurality of unbroken meats.

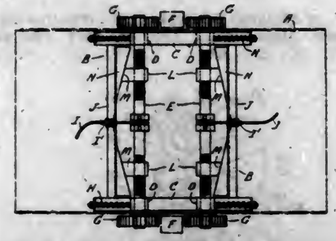
5. The method of making nut candies, which consists in first intermixing nut ingredients with a vehicle or binder of greater specific gravity, and then shaping artificially the vehicle or binder at the surface of the cake in imitation of the nut ingredients and quickly cooling the under-surface of the batch; whereby an unbroken finishing surface of the binder material will be secured.

1,020,482. REFRIGERATOR. ALBERT W. DE NEEN, St. Joseph, Mo. Filed Aug. 4, 1910. Serial No. 576,506. (Cl. 62—10.)



The herein described refrigerator comprising a casing having a vertical partition dividing the casing into an ice chamber and a storage chamber, said partition having ports at its upper side and openings in its lower side, inner chambers in the lower portion of the ice chamber, extending from the partition, opposite the lower openings thereof, and having air inlet ports at their inner ends, drawers in said inner chambers, removable therefrom through the lower openings of the partition and each having an open ended tube extending through its front side and a fan at the rear end of said tube.

1,020,483. SAFETY APPARATUS FOR SUPPORTING MINE-CAGES OR THE LIKE. CHARLES DICKIE, FREDERICK LAMBERT, and RICHARD STABLES, Kimberley, South Africa. Filed Dec. 9, 1911. Serial No. 664,792. (Cl. 187—86.)



1. The combination with a vertically movable cage, of a hoisting rope for said cage, vertical slides between which said cage is movable, a frame carried by said cage, bearings slidable laterally in said frame, shafts journaled in said bearings on opposite sides of said slides, wheels on said shafts, means serving normally to hold said wheels away from said slides, and means including springs and wedge devices operable by said shafts for causing said wheels to engage positively with said slides.

2. The combination with a vertically movable cage, of a hoisting rope for said cage, vertical slides between which said cage is movable, a frame carried by said cage, bearings slidable laterally in said frame, shafts journaled in said bearings, wheels on said shafts, means serving normally to hold said wheels away from said slides, means tending to move said wheels toward said slides, and means including nuts adapted to travel on said shafts and members coöperating with said nuts for causing the wheels to engage positively with said slides.

3. The combination with a cage, of a hoisting rope, slides between which said cage is movable, a frame carried by said cage, bearings slidable laterally in said frame, screw-threaded shafts journaled in said bearings, wheels on said shafts, means serving normally to hold said wheels away from said slides, springs tending to move said wheels toward said slides, nuts in screw-threaded engagement with said shafts, and wedge devices coöperating with said nuts for causing the wheels to engage positively with said slides and preventing rotation of said shafts.

1,020,484. AERIAL VESSEL. GUSTAV DÜSTERLOH, Sprockhövel, Germany. Filed Oct. 11, 1910. Serial No. 586,467. (Cl. 244—6.)



1. An aerial vessel consisting of a central bar, a plurality of separated ballonnets made of soft material and in life-buoy shape and arranged upon said central bar so that a continuous channel exists in the direction of the length of the vessel; means for driving the vessel and means for carrying passengers by the vessel.

2. An aerial vessel consisting of a central bar, a plurality of separated ballonnets made of soft material and in life-buoy shape and arranged upon said central bar so that a continuous channel exists in the direction of the length of the vessel; a smooth sheath covering said ballonnets; means for driving the vessel; and means for carrying passengers by the vessel.

3. An aerial vessel consisting of a central bar, a plurality of separated ballonnets made of soft material and in life-buoy shape and arranged upon said central bar so that a continuous channel exists in the direction of the length of the vessel; truss-rings between said ballonets braced in the manner of a cycle wheel and fitted upon said central bar; means for carrying passengers by the vessel; and means for driving the vessel.

4. An aerial vessel consisting of a central bar, a plurality of separated ballonnets made of soft material and in life-buoy shape and arranged upon said central bar so that a continuous channel exists in the direction of the length of the vessel; a smooth sheath covering said ballonnets; truss-rings between said ballonnets braced in the manner of a cycle wheel and fitted upon said central bar; means for driving the vessel; and means for carrying passengers by the vessel.

5. An aerial vessel consisting of a central bar, a plurality of separated ballonnets made of soft material and in life-buoy shape and arranged upon said central bar so that a continuous channel exists in the direction of the length of the vessel; a propeller; an engine for driving said propeller; a rigid engine-room inserted between said ballonnets; and means for carrying passengers by the vessel.

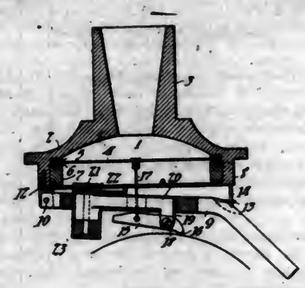
[Claims 6 to 12 not printed in the Gazette.]

1,020,485. PHONOGRAPH-REPRODUCER. THOMAS A. EDISON, Llewellyn Park, West Orange, N. J., assignor to Thomas A. Edison, Incorporated, West Orange, N. J., a Corporation of New Jersey. Filed Dec. 29, 1908, Serial No. 469,886. Renewed Dec. 7, 1911. Serial No. 664,493. (Cl. 181—10.)

1. In a phonograph reproducer, the combination with a diaphragm, of a floating weight, an elongated member mounted at one end on said floating weight and free to turn relatively to the same in a plane nearly parallel with the plane of said diaphragm, a stylus lever connected to said diaphragm and pivotally mounted upon the opposite end of said member to rock in a direction crossing the plane of said diaphragm, said diaphragm connection being intermediate said member and lever pivots, and yielding means connected to said weight and member for normally holding said member in a position parallel with the axis of the record groove and returning it to such position after the cessation of any force tending to move it therefrom, substantially as described.

2. In a phonograph reproducer, the combination with a diaphragm, of a floating weight, an elongated member

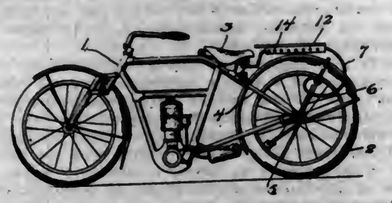
pivoted at one end on said floating weight and free to turn relatively to the same in a plane nearly parallel with the plane of said diaphragm, a stylus lever connected to said diaphragm and pivotally mounted upon the opposite end of said member to rock in a direction crossing the plane of said diaphragm, said diaphragm connection being intermediate said member and lever pivots, and a spring connected to said member and weight for normally holding said member in a position axial of said weight and being under stress as the said member is moved either to one side or the other of said normal position, substantially as described.



3. In a phonograph reproducer, the combination with a sound box having a diaphragm mounted therein, of a floating weight mounted on said sound box, a member mounted on said floating weight free to turn relatively to the same in a plane nearly parallel with the plane of the diaphragm, a stylus lever connected to said diaphragm and pivotally mounted on said member, and yielding means connected to said weight and member for normally holding said member in a position parallel with the axis of the record groove and returning it to such position after the cessation of any force tending to move it therefrom, substantially as described.

4. In a phonograph reproducer, the combination with a sound box having a diaphragm mounted therein, of a floating weight mounted on said sound box, a member mounted on said floating weight, free to turn relatively to the same in a plane nearly parallel with the plane of the diaphragm, a stylus lever connected to said diaphragm and pivotally mounted on said member, a link secured to said member and yielding means connected to said link and weight and normally in alinement with said link, said means normally holding said member in a position parallel with the axis of the record groove and returning it to such position after the cessation of any force tending to move it therefrom, substantially as described.

1,020,486. SEAT AND CARRIER FOR MOTOR-CYCLES. CLARENCE J. EMBREE, Tacoma, Wash. Filed Aug. 8, 1910. Serial No. 576,123. (Cl. 208—24.)



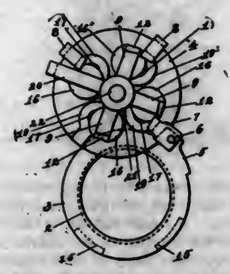
1. An attachment for motorcycles, including a fork secured to the rear axle and spanning the rear wheel, resilient members having one end secured to said fork and the other secured to the motorcycle frame, braces connecting said resilient members, a seat having depending flanges spanning the said resilient members, and means for detachably securing the said seat in position.

2. An attachment for motorcycles, comprising a fork having its ends secured to the rear axle and having its intermediate portion spanning the rear wheel, resilient members each having one end secured to the fork and the other to the frame of the motorcycle, a seat having depending flanges extending downward at the sides of the resilient members, and means for resiliently holding the seat in position to permit of slight longitudinal movement thereof on the resilient members.

3. An attachment for motorcycles, comprising a fork having its ends secured to the rear axle and its intermediate portion spanning the rear wheel, resilient members having one end secured to the fork and the other secured to the motorcycle frame, a seat mounted on said resilient members, said seat having depending socket portions, upstanding sockets carried by the resilient members, and springs having their ends fitting into the sockets of the resilient members and of the seat to resiliently support the seat in position and permit of slight longitudinal movement thereof relative to the resilient supporting members.

4. The combination with a motorcycle, of a fork having its ends secured to the rear axle and its intermediate portion spanning the rear wheel, resilient members having one end secured to the fork and the other secured to the rear portion of the motorcycle frame, said resilient members having integral upstanding socket portions, a seat member mounted upon said resilient members and having side flanges depending over the resilient members, set screws carried by said depending flanges and adapted to be forced under the resilient members to prevent upward movement of the seat, said seat having depending socket members disposed inwardly of the socket members of the resilient supports, and springs having one end fitting into the sockets of the seat and the other end fitting into the sockets of the resilient support to yieldingly resist longitudinal movement of the seat relative to the resilient member.

1,020,487. CAN AND BOTTLE TOP. THOMAS FEBERT, Lancaster, Mass. Filed Apr. 10, 1911. Serial No. 620,175. (Cl. 220—62.)

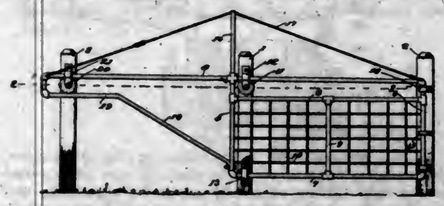


1. The combination with a receptacle; of a closure therefor, said closure comprising a flanged member secured thereto, a cover plate pivotally mounted thereon and having screen cover means therein, to permit ventilation of the contents of the receptacle, means for opening or closing the same as desired and means for locking said last named means in position.

2. The combination with a receptacle, of a closure, said closure comprising a flanged member, and a cover plate pivotally mounted thereon, and having screen members therein, means for opening and closing said screens, said flanged member having beveled surfaces on the under side thereof, and integrally dependent hook members adapted to engage the said beveled surfaces provided on the flanged member, to form a locking means for locking the said cover plate in position.

3. The combination with a receptacle, of a closure, said closure comprising a flanged member, a cover plate pivotally mounted thereon and having screen members therein, means for opening and closing said screen members, said means comprising a member pivoted to the said cover plate, lugs provided on the screen closing member, said lugs having beveled surfaces, lugs provided on the cover plate said lugs having corresponding beveled edges, and a means for bringing the beveled edges provided on the screen closing member into engagement with the beveled edges of the lugs provided on the cover plate.

1,020,488. GATE. GEORGE J. FRIEND, Kingsley, Oreg. Filed July 6, 1911. Serial No. 637,194. (Cl. 30—7.)



In combination with a supporting and a guiding post, each having a journaled roller thereon, a gate comprising a top rail having end portions in anticlinal relation, a gate frame depending from one of said end portions, a brace connected at one end with the lower portion of the gate frame and at its other end with the outer end of the other end portion of the top rail and having an outer portion extending approximately parallel with the adjacent end portion of the top rail, the top rail resting upon the rollers and the inner end of the gate located between the rollers, a standard mounted upon the top rail, over the inner end of the gate, and a truss member connected at its ends with the ends of the top rail and passing over the upper end of the standard.

1,020,489. ANTISKID-GRIP. LEONARD B. GAYLOR, Stamford, Conn. Filed Oct. 17, 1911. Serial No. 655,234. (Cl. 152—2.)



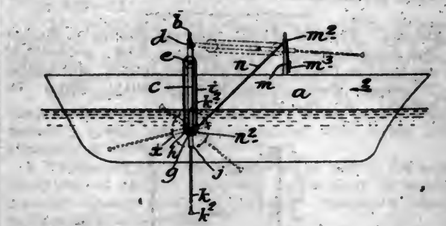
1. A tire grip comprising a series of rigid, individual grip irons, each comprising a central part longer than the width of the tire and side members integral therewith at substantially right angles thereto and wholly in the same plane as the central part, and universally flexible link-like connections alternately uniting the adjacent ends of adjacent side members on opposite sides of the wheel.

2. A tire grip comprising a series of rigid, individual grip irons, each comprising a central part longer than the width of the tire and side members integral therewith at substantially right angles thereto and wholly in the same plane as the central part, flexible connections alternately uniting the adjacent ends of adjacent side members on opposite sides of the wheel, and means on the outside of the wheel to draw together and hold the free ends of the tire grip.

3. A tire grip comprising a series of rigid, individual grip irons, each comprising a central part adapted to span across the face of the tire and side members integral therewith at substantially right angles thereto and wholly in the same plane as the central part, the free ends of which side members are bent toward each other, and universally flexible connecting devices uniting the ends of adjoining side members.

4. In a tire grip, a series of rigid, U-shaped grip irons, comprising a central part and side members all wholly in the same plane, alternating with flexible connecting devices, so as to constitute a single, straight, chain-like structure, and means for adjustably connecting its free ends together.

1,020,490. SOUNDING APPARATUS FOR SHIPS. SAMUEL ELLIS GLADDING, Jersey City, N. J. Filed Nov. 11, 1911. Serial No. 659,718. (Cl. 73—5.)



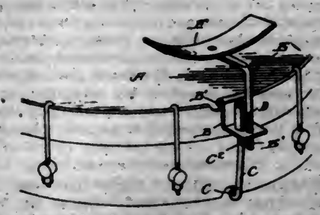
1. A sounding apparatus for ships adapted to be suspended from a davit and comprising a bar or support provided adjacent to one end portion thereof with a shaft having a gear wheel and at the other end portion with a shaft having another gear wheel, a drive chain mounted on said gear wheels, and said last-named shaft being also provided on the opposite side of said bar or support with a tubular keeper, and a longitudinally movable rod mounted in said keeper.

2. A sounder for ships comprising a keeper adapted to be supported at one side of the ship and to rotate through a complete circle in a vertical plane parallel with the central longitudinal plane of the ship and provided with a sounder rod which is movable longitudinally therethrough in both directions and in said plane.

3. A sounder for ships, comprising a support adapted to be suspended at one side of the ship and to swing in a vertical plane parallel with the central longitudinal plane of the ship and provided with a rotatable keeper adapted to turn through a complete circle parallel with said plane and a sounder rod which is movable longitudinally through said keeper in both directions and in the plane of said circle.

4. A sounder for ships, comprising a support adapted to be suspended at one side of the ship and to swing in a vertical plane parallel with the central longitudinal plane of the ship and provided with a rotatable keeper adapted to turn through a complete circle parallel with said plane, a sounder rod which is movable longitudinally through said keeper in both directions and in the plane of said circle, means for rotating said keeper, and means for raising said support and holding it and said keeper and rod in a horizontal position.

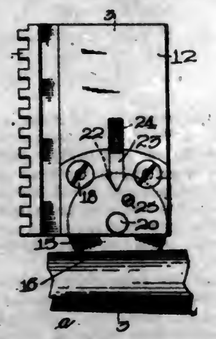
1,020,491. ARM-REST FOR MUSICAL INSTRUMENTS. HAROLD O. GOUGH, Sunnybank, Va. Filed Feb. 28, 1910. Serial No. 546,533. (Cl. 84—121.)



As a new article of manufacture, an arm rest for musical instruments comprising a clamp consisting of an angular plate, the upper end of which is bent and adapted

to engage the rim of an instrument, the horizontal portion of said angular plate having two openings, one being threaded, a clamping bolt passing through the non-threaded opening of the plate, the lower end of which is hooked to engage the lower edge of the rim of an instrument, the upper end being threaded, a nut adapted to engage the threaded end of the bolt and bear upon the horizontal portion of the angular plate, an angular bracket arm having the lower end of its vertical member threaded, which threaded end is adapted to engage the threaded opening in the angular plate, and a curved supporting plate pivotally connected to the outer end of the horizontal member of the angular bracket arm.

1,020,492. CHUCK-JAW. GEORGE FRANKLIN GRIGGS and JOHN A. HENDERSON, Fitchburg, Mass., assignors of one-third to Daniel F. Sullivan and John F. McNamara, Fitchburg, Mass. Filed May 16, 1911. Serial No. 627,521. (Cl. 29—126.)



1. As an article of manufacture, a clutch jaw having a segmental seat therein opening out of the edge and constituting more than a half circle, and a segment shaped grip of the same radius as said seat but constituting a larger part of the circle fitting said seat and free to turn therein, its straight side being outside of said seat and forming a gripping surface.

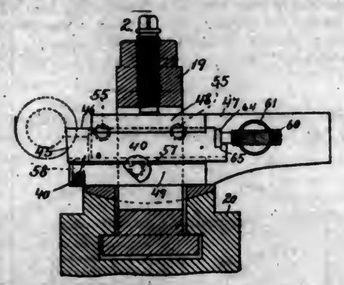
2. In a device of the character described, the combination with a main jaw having a concave seat therein opening out of one edge of the jaw and of a circular form, a grip of the same diameter as said seat located therein and projecting from it at the open edge and adapted to turn freely in the seat and to rest against the rear concave wall thereof, and yielding means for holding said grip in central position.

3. In a device of the character described, the combination with a main jaw having a concave seat therein opening out of one edge of the jaw and of a form, a grip of the same diameter as said seat located therein and projecting from it at the open edge and adapted to turn freely in the seat and to rest against the rear concave wall thereof, and positive means for holding said grip in central position.

4. In a device of the character described, the combination with a main jaw having a concave segmental seat therein opening out of one edge of the jaw, a grip of similar shape located therein and projecting from the seat at the open edge and adapted to turn freely in the seat and to rest against the rear concave wall thereof, and yielding means for holding said grip in central position, comprising a spring-pressed plunger having a tapering end movable radially with respect to said grip, the grip being provided with a V-shaped opening in its rear edge for said plunger.

1,020,493. TURNING-TOOL. JAMES HARTNESS, Springfield, Vt. Filed Dec. 16, 1907. Serial No. 406,588. (Cl. 29—96.)

1. In a metal-cutting tool, a cutter having an inner face and a top slope at an acute angle to each other and terminating in a cutting edge, and a support for said cutter, the cutter being held in said support to oscillate about an axis lying in the plane of the inner face.



2. In a metal-cutting tool, a cutter having at its operative end two faces at an acute angle to each other terminating in a cutting edge, and means for supporting said cutter so as to permit it to move about a line substantially coincident with said edge.

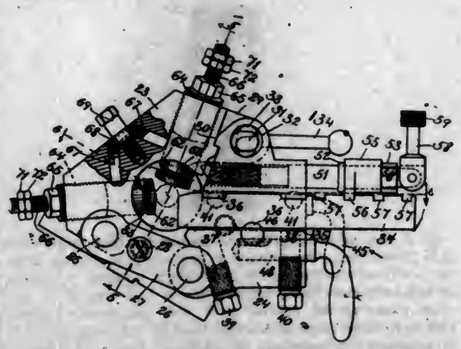
3. In a metal-cutting tool, a cutter having at its operative end two faces at an acute angle to each other terminating in a cutting edge, and means for movably mounting said cutter to move about an axis to which the inner face of the cutter is substantially radial.

4. In a metal-cutting tool, a cutter having an inner face and a top slope at an angle and terminating in a cutting edge, and means for mounting said cutter so that it is free to move more or less about an axis longitudinal of said cutting edge, and in a plane of the said inner face.

5. In a tool for metal-working machines, a cutter, a support for the cutter, and a pivot for said support substantially coincident with the cutting edge about which said cutter may laterally swing.

[Claims 6 to 10 not printed in the Gazette.]

1,020,494. TURNING-TOOL. JAMES HARTNESS, Springfield, Vt. Filed Sept. 9, 1908. Serial No. 452,300. (Cl. 82—35.)



1. In a metal-turning tool, a rotatable work-rest having a work-engaging face transverse to its axis of rotation, and means for mounting said work-rest to rotate.

2. In a metal-turning tool, a cutter, a plurality of freely rotatable work-rests, and means for mounting them with their axes of rotation substantially radially of a common axis.

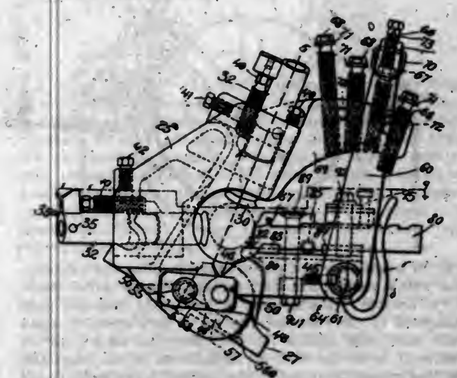
3. In a metal-turning tool, a rotatable work-rest having at its end a work-engaging beveled face at an angle to its axis of rotation, and means for mounting said work-rest to rotate.

4. In a metal-turning tool, a rotatable work-rest having at its end a beveled work-engaging face, and a cylindrical peripheral work-engaging face adjacent the beveled end face.

5. In a metal-turning tool, a rotatable work-rest, and a support on which said work-rest is rotatively mounted, with its axis inclined longitudinally of a line with which the axis of the work coincides when the tool is in operation and tangential to a circle circumscribed about said line, said rest having on its transverse end a work-engaging face.

[Claims 6 to 26 not printed in the Gazette.]

1,020,495. METAL-TURNING TOOL. JAMES HARTNESS, Springfield, Vt. Filed Mar. 13, 1909. Serial No. 483,163. (Cl. 82—35.)



1. A turning tool comprising a body, a cutter carrier, means for positioning the cutter carrier in any one of several predetermined positions, and a compensating adjustment for adjusting the carrier after being located in any one of said positions.

2. A turning tool comprising a body, a cutter, a cutter carrier, a plurality of abutments for locating the cutter in any one of several positions, and means for adjusting the cutter carrier to compensate for wear of the cutter without disturbing said abutments.

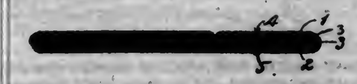
3. A turning tool comprising a body, a cutter carrier pivoted thereto, a plurality of abutments, a supporting arm for the free end of the cutter carrier adapted to be engaged with said abutments, and means for adjusting said arm relatively to said abutments.

4. A turning tool comprising a body, a cutter, a cutter carrier and a pivot for the cutter carrier whose axis is at an inclination so that, when the cutter carrier is oscillated about said axis, the cutting edge is moved transversely of the work and also longitudinally thereof.

5. A turning tool comprising a body, work rests supported by said body, a cutter, a cutter carrier, a pintle on which the cutter carrier is pivoted, and means for adjusting said cutter carrier longitudinally of said pintle and relatively to said work rests.

[Claims 6 to 13 not printed in the Gazette.]

1,020,496. DRIVING-BELT. MATTHEW HAWK, Pelham Manor, N. Y. Filed Oct. 7, 1911. Serial No. 653,319. (Cl. 74—63.)



1. In a driving belt, a plurality of plies of fabric arranged surface to surface, a binding of vulcanized rubber between the adjacent surfaces of said plies, the exposed surface of one of the outside plies being free from said binding material, and balata impregnating the said exposed surface of said belt.

2. In a driving belt, a plurality of plies of fabric arranged surface to surface, a binder of vulcanized rubber between the adjacent surfaces of said plies, the exposed surface of each of the outside plies being free from said binding material, and balata impregnating both of said exposed surfaces of said belt.

1,020,497. COMPOSITION OF MATTER. ALBERT H. HENDERSON, Baltimore, Md., assignor to The Henderson Rubber Company, Baltimore, Md., a Corporation of Maryland. Filed Apr. 6, 1911. Serial No. 619,404. (Cl. 106—23.)

1. The herein described composition of matter, the same consisting of rawhide expanded to the form of a permanently spongy substance to the ports or interstices of which rubber is admitted, substantially as described.

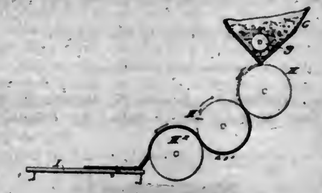
2. The herein described composition of matter, the same consisting of rawhide expanded to the form of a permanently spongy substance permeated with rubber, substantially as described.

3. The herein described composition of matter, the same consisting of rawhide expanded to the form of a permanently spongy substance filled with vulcanized rubber, substantially as described.

4. The herein described composition of matter, the same consisting of fragments of rawhide brought to a spongy condition, permeated with rubber, and formed into a mass, substantially as described.

5. The herein described composition of matter, the same consisting of fragments of rawhide brought to a spongy condition the pores of which are filled with vulcanized rubber, substantially as described.

1,020,498. TREATMENT OF RAWHIDE. ALBERT H. HENDERSON, Baltimore, Md., assignor to The Henderson Rubber Company, Baltimore, Md., a Corporation of Maryland. Filed Apr. 6, 1911. Serial No. 619,405. (Cl. 106—23.)



1. The herein described method which consists in swelling and expanding rawhide substantially to the character of a permanently spongy substance, practically removing the swelling agent and introducing rubber to the substance, substantially as set forth.

2. The herein described method which consists in swelling and expanding rawhide substantially to the character of a permanently spongy substance by subjecting it to an agent miscible with either oil or water, practically removing this agent by means of a solvent, removing the solvent, drying the substance, and introducing rubber thereto, substantially as set forth.

3. The herein described method which consists in swelling and expanding rawhide substantially to the character of a permanently spongy substance by subjecting it to a bath of oil, practically removing the oil by means of a solvent, removing the latter by draining and evaporation, and introducing into the spongy substance rubber in the form of a solution, substantially as set forth.

4. The herein described method which consists in swelling and expanding rawhide substantially to the character of a permanently spongy substance by subjecting it to a bath of oil, practically removing the oil by means of a solvent, removing the latter by draining and evaporation, and introducing into the spongy substance rubber in the form of a heated fluid, substantially as set forth.

5. The herein described method which consists in reducing rawhide to fragmentary form, introducing a swelling agent to the fragments whereby they are brought to a permanently spongy condition, practically removing the swelling agent, and introducing rubber to the swollen fragments, substantially as set forth.

[Claims 6 to 10 not printed in the Gazette.].

1,020,499. FABRIC OR CLOTH. ALBERT H. HENDERSON, Baltimore, Md., assignor to The Henderson Rubber Company, Baltimore, Md., a Corporation of Maryland. Filed Apr. 12, 1911. Serial No. 620,709. (Cl. 91—68.)

1. The herein described method of treating fabrics from which the oils, waxes and resins have been removed by mercerization, consisting in filling the interiors of the fibers and the interstices existing between the juxtaposed fibers with a solution of rubber.

2. The herein described method of treating fabrics from which the oils, waxes and resins have been removed by mercerization, consisting in filling the interiors of the fibers and the interstices existing between the juxtaposed fibers with a solution of rubber and thereafter coating the surfaces of such fabrics with rubber.

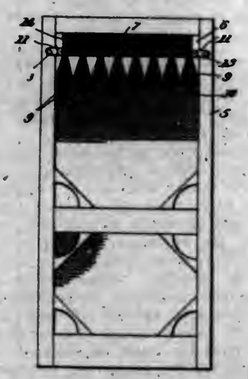
3. The herein described method of treating fabrics from which the oils, waxes and resins have been removed by mercerization, consisting in filling the interiors of the fibers and the interstices existing between the juxtaposed fibers with a solution of rubber and thereafter coating the surfaces of such fabrics with rubber under the influences of heat and pressure.

4. The herein described method of treating fabrics from which the oils, waxes and resins have been removed by mercerization, consisting in filling the interiors of the fibers and the interstices existing between the juxtaposed fibers with a solution of rubber, and vulcanizing the latter.

5. The herein described method of treating fabrics from which the oils, waxes and resins have been removed by mercerization, consisting in filling the interiors of the fibers and the interstices existing between the juxtaposed fibers with a solution of rubber and thereafter coating the surfaces of such fabrics with rubber, and vulcanizing the latter.

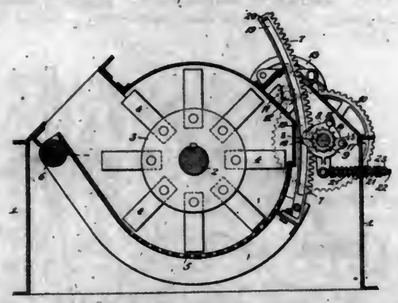
[Claims 6 to 22 not printed in the Gazette.]

1,020,500. FLY-TRAP. JAMES W. HILDRETH, Marion, Ohio. Filed May 10, 1911. Serial No. 626,140. (Cl. 43—22.)



A fly trap comprising a non-transparent, rigid back having its forward edge beveled, a cage secured to the back member with the forward edge of the cage terminating substantially mid-way of the front and rear of the back member, and semi-conical shaped passages leading from said beveled edge to the back member and into the forward edge of said cage and communicating with the latter with said back member forming a part of each of said passages and a surface on which the flies may crawl from said beveled edge in a direct course to said cage, the cage and said passages being confined within the edges of said back member.

1,020,501. CRUSHING AND PULVERIZING MACHINE. JOSEPH L. HILLER, Mattapoisett, Mass. Filed Jan. 13, 1912. Serial No. 671,076. (Cl. 83—11.)



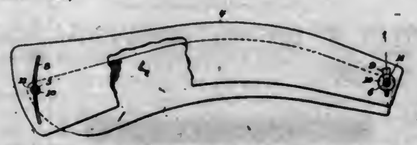
1. In a crushing and pulverizing machine, the combination with a casing, hammers arranged for operation therein, a pivoted grinding-cage, a vertically disposed rack connected to the free end thereof, a rack-wheel in mesh with said rack, means for operating the rack-wheel to positively move the rack for adjustment of the cage, and yielding means arranged in the path of movement of said rack for limiting the movement thereof.

2. In a crushing and pulverizing machine, the combination with a casing, hammers arranged for operation therein, a pivoted grinding-cage, a rack pivotally carried by the free end thereof, a rack-wheel in mesh with said rack, and means for holding said rack in mesh with said rack-wheel.

3. In a crushing and pulverizing machine, the combination with a casing, hammers arranged for operation therein, of a pivoted grinding-cage, a rack connected to the free end of said cage and provided with abutments, a rack-wheel meshing with said rack, and a shock-receiver and shock-absorber having parts to engage said abutments.

4. In a crushing and pulverizing machine, the combination with a casing, hammers arranged for operation therein, of a pivoted grinding cage, a rack connected to the free end of said cage and provided with longitudinal grooves, the ends of which constitute abutments for limiting the degree of adjustment of said cage, a shaft carrying a rack-wheel in mesh with said rack, a shock-receiver loosely mounted on said shaft and having fingers engaging the longitudinal grooves of the rack, and a shock absorber combined with said shock-receiver.

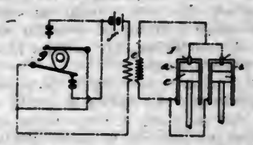
1,020,502. SLEEVE-FORM. ANNA HINKEL, Milwaukee, Wis. Filed Mar. 14, 1911. Serial No. 614,385. (Cl. 223—18.)



An adjustable form upon which to spread a sleeve-lining to facilitate the draping of the sleeve itself thereon, and which consists of a pair of flat lapping sections of sleeve contour, a pair of bolts fixed in one of the form-sections at the ends thereof adjacent to one edge of the same, the other section being provided with curved wall bolt-engaged slots one of which slots has its walls concentric and of suitable radius from a center intermediate of the

bolts, the other slot being somewhat triangular due to the walls thereof being respectively centered adjacent to the extremities of the slot first aforesaid, and clamp-nuts run on said bolts.

1,020,503. IGNITION DEVICE. DELOS HOLDEN, Upper Montclair, N. J. Filed June 20, 1907. Serial No. 379,825. (Cl. 123—148.)



1. In an internal combustion engine, the combination of a plurality of jump-spark ignition plugs, each of which is adapted to be fixedly applied to a combustion chamber, a source of high potential current to which said plugs are connected in multiple, the spark gap within each of said plugs being normally too great for the passage of current, and means for successively shortening the spark gaps of said plugs to such an extent as to permit the passage of current in the form of a jump-spark, substantially as set forth.

2. In an ignition system, the combination of a plurality of jump-spark ignition plugs, each of which is adapted to be fixedly applied to a combustion chamber and comprises a member capable of being moved to shorten the spark gap within the plug, means for moving said members successively and a source of high potential current to which the plugs are connected in multiple, substantially as set forth.

3. A jump spark ignition plug adapted to be fixedly applied to a combustion chamber, comprising a fixed conductor, a conductor normally remote therefrom and free to move into nearness thereto, and means for restraining said movable conductor when in a position adjacent but out of contact with said fixed conductor.

4. A jump spark ignition plug adapted to be fixedly applied to a combustion chamber and comprising a fixed conductor and a conductor normally remote and insulated therefrom, and having a projection free to move into nearness to said fixed conductor without contacting therewith, and means for restraining said movable conductor when said projection is in a position adjacent but out of contact with said fixed conductor.

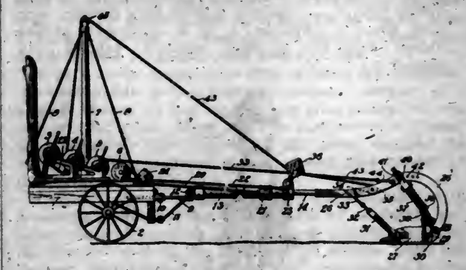
5. A jump spark ignition plug adapted to be fixedly applied to a combustion chamber and comprising a fixed conductor and a conductor normally remote therefrom and free to be moved into proximity thereto by pressure in the combustion chamber to which the device is applied, and means for restraining said movable conductor when in a position adjacent but out of contact with said fixed conductor.

[Claims 6 to 14 not printed in the Gazette.]

1,020,504. EXCAVATING-MACHINE. JOHN HOOD, Detroit, Mich., assignor of one-half to James Pitton, Detroit, Mich. Filed Apr. 22, 1911. Serial No. 622,662. (Cl. 37—16.)

1. In an excavating machine, the combination of an extension boom adapted to turn upon its longitudinal axis, a downwardly curved goose-neck on the outer end of said boom, a shovel attached to the end of said goose-neck at one side of the longitudinal axis of the boom and adapted to be swung laterally by turning the boom, means for holding the boom in the position to which it is turned, and means for actuating the boom to operate the shovel.

2. In an excavating machine, the combination with a truck, power winding mechanism carried by said truck, a vertical mast on the truck, a member pivotally carried by the truck to turn upon a vertical axis, an extensible boom pivotally attached to said member, a goose-neck on the outer end of the boom, a shovel pivotally attached at its rear end to the goose-neck with its forward end toward the truck, a line for turning the shovel leading to the winding mechanism, a spring for turning the shovel against the action of said line, and lines attached to the boom and leading to the winding mechanism for projecting and retracting the boom.



3. In an excavating machine, the combination of a truck, a boom pivotally attached at one end to the truck, a shovel pivotally attached at its rear end to the boom, a line attached to the forward end of the shovel to swing the same upwardly on its pivot, and a spring carried by the boom and acting upon the shovel to turn the same upon its pivot in a direction opposite to that in which it is turned by the line.

4. In an excavating machine, the combination of a boom, a goose-neck secured to the outer end of the boom, a shovel pivotally attached at its rear end to the end of the goose-neck, a bail pivotally attached to the forward end of the shovel, a line attached to the bail to turn the shovel upon its pivot in one direction, a rod pivotally attached to the shovel near its rear end and adjustably connected to the goose-neck at its opposite end, and a spring sleeved on the rod exerting a force to turn the shovel upon its pivot.

5. In an excavating machine, the combination of a boom, a goose-neck on the outer end of the boom, a shovel pivotally attached at its rear end to the end of the goose-neck, a line attached to the forward end of the shovel to turn the same upon its pivot, a rod pivotally attached to the rear end of the shovel and provided with a head, a yoke through which the rod is adapted to slide, said yoke being adjustably attached to the goose-neck, and a coiled spring sleeved upon the rod between the yoke and the head on the rod.

[Claims 6 to 8 not printed in the Gazette.]

1,020,505. AUTOMATIC STOCK AND POULTRY FEEDER. SAMUEL D. HUFF, Wichita, Kans. Filed June 20, 1911. Serial No. 634,379. (Cl. 119—53.)



A feeder comprising a cylindrical receptacle mounted upon a bottom and spaced at its lower edge therefrom, a ring surrounding the receptacle, links pivoted at their upper ends to the receptacle and at their lower ends to the

ring, a slotted link pivoted at its lower end to the ring, a stud carried by the receptacle and passing through the slot in the last mentioned link, and a nut threaded upon said stud.

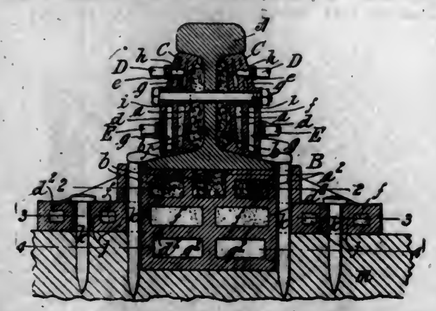
1,020,506. SIPHON-BOTTLE. CHARLES L. HUSTED, Jersey City, N. J., assignor to New York Bottlers' Supplies Mfg. Co., Hoboken, N. J., a Corporation of New Jersey. Filed Feb. 12, 1910. Serial No. 543,596. (Cl. 215—114.)



1. In a siphon bottle, a siphon tube consisting of a rigid head, having a seat adjacent to the bottom and interiorly thereof and an opening surrounded by said seat, a tube, an elastic packing having a shoulder thereon adapted to engage said seat and said head and a reduced portion adapted to project through, and seal the lower edge of, said opening, said packing closely encircling said tube and having a close driving fit within said head, whereby said tube is permanently supported from said head and a gas-tight joint is formed about said tube and within said head.

2. In a siphon bottle, a siphon tube consisting of a rigid head, having a seat formed interiorly and adjacent to the bottom thereof, and a cylindrical portion extending downwardly below said seat, a tube projecting downwardly from said head and elastic packing having an opening extending axially therethrough, whereby it is adapted to closely encircle said tube, the lower portion of said packing being of a smaller diameter than the upper portion, whereby a flange is formed, adapted to engage the seat in said head, and the upper and lower portions thereof are adapted respectively to have a close driving fit with the interior of said head and said cylindrical portion.

1,020,507. SILENCER FOR RAILWAYS. WILLIAM G. KNIGHT, Springfield, Mass. Filed Dec. 26, 1911. Serial No. 667,913. (Cl. 104—3.)



1. A rail silencer consisting of an appliance to lie in contact against the rail having a cavity in its side adjacent the rail, and provided with a compressible material in such cavity, and having an inclosed chamber within its thickness, in which a granular filling is provided.

2. A rail silencer consisting of an appliance, to lie in contact against the rail, having an inclosed chamber in which a vacuum is maintained.

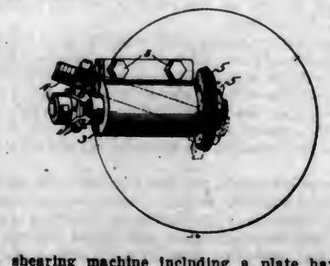
3. A rail silencer consisting of an appliance to lie in contact against the rail having a cavity in its side, provided with a filling therein of compressible material and having an inclosed chamber in which a vacuum is maintained.

4. A rail silencer consisting of an appliance to lie in contact against the rail, having an inclosed chamber therein, in which a filling of granular material is provided and also having another inclosed chamber in which a vacuum is maintained.

5. A rail silencer consisting of an appliance to lie in contact against the rail having a cavity in its side adjacent the rail in which a compressible material is provided, having an inclosed chamber within its thickness in which a granular filling is provided and also having an inclosed vacuum chamber.

[Claims 6 to 14 not printed in the Gazette.]

1,020,508. SHEARING-MACHINE. TALBOT LENNOX, Chicago, Ill. Filed June 15, 1911. Serial No. 633,394. (Cl. 164—60.)



1. A shearing machine including a plate having one of its faces of helical formation and its other face adapted to support the material operated upon; bearings upon opposite sides of and connected with the plate; and co-acting roller cutters rotatable upon said bearings and having their peripheries in close proximity at the material supporting face of the plate, the axes of rotation of the cutters lying in non-coincident and intersecting planes, the plate being provided with a guiding surface for directing material operated upon from the material supporting face to said face of helical formation.

2. A shearing machine including a plate having one of its faces of helical formation and its other face adapted to support the material operated upon; bearings upon opposite sides of and connected with the plate; and co-acting roller cutters rotatable upon said bearings and having their peripheries in close proximity at the material supporting face of the plate, the plate being provided with a guiding surface for directing material operated upon from the material supporting face to said face of helical formation.

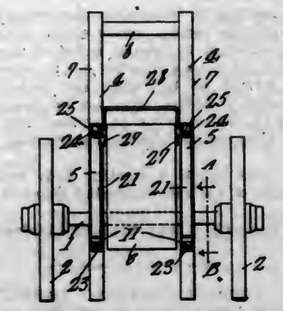
3. A shearing machine including a plate; bearings upon opposite sides of and connected with the plate; and co-acting roller cutters rotatable upon said bearings and having their peripheries in close proximity at one face of the plate, the axes of rotation of the cutters lying in non-coincident and intersecting planes, the plate being formed to have its opposite faces in close proximity, where the peripheries of the roller cutters are in close proximity, the plate being provided with a guiding surface for directing material operated upon from one side of the plate to the other.

4. A shearing machine including a plate having one of its faces adapted to support material operated upon; bearings upon opposite sides of and connected with the plate; and co-acting roller cutters rotatable upon said bearings and having their peripheries in close proximity at the material supporting face of the plate, the plate being formed to have its opposite faces in close proximity where the peripheries of the roller cutters are in close proximity, the plate being provided with a guiding surface for directing material operated upon from one side of the plate to the other.

5. A shearing machine including a plate having one of its faces adapted to support material operated upon; bearings upon opposite sides of and connected with the plate; and co-acting roller cutters rotatable upon said bearings and having their peripheries in close proximity at the material supporting face of the plate, the axes of rotation of the cutters lying in non-coincident and intersecting planes, the plate being provided with a guiding surface for directing material operated upon from one side of the plate to the other.

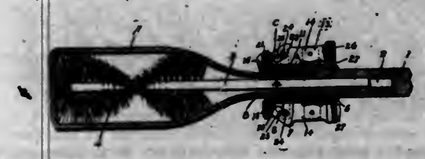
[Claims 6 to 13 not printed in the Gazette.]

1,020,509. GUM-TRUCK. JOHN W. MCDANIEL, Holley, Fla. Filed May 15, 1911. Serial No. 629,411. (Cl. 21—119.)



A device of the class described comprising a wheel-mounted axle; bearings mounted upon the axle; a frame comprising straight bars to which the bearings are secured, the bars being of sufficient length to engage the ground in front of the wheels, and to extend in rearwardly inclined positions, across and to the rear of the axle; angle brackets secured to the forward edges of the bars, and having depressed seats in their upper edges, adjacent their outer ends, the seats being located above the axle, when the lower ends of the bars are in engagement with the ground; and a receptacle having oppositely disposed trunnions, adapted to rest in the seats, the receptacle being spaced from the axle, when the bars are in engagement with the ground, to permit a rearward tilting of the bars, without disturbing the vertical position of the receptacle.

1,020,510. BOTTLE-CLEANING DEVICE. EGNAZ FITZ, East St. Louis, Ill., assignor of one-third to Frank J. Kurrus and one-third to Charles G. Kurrus, East St. Louis, Ill. Filed July 10, 1911. Serial No. 637,595. (Cl. 141—7.)



1. In a bottle cleaning machine the combination with a head adapted to be rotated, of a collar arranged to slide on the head, a face plate connected to said collar so as to slide therewith and rotate independently thereof, a spring-held member fulcrumed on the head, connections between the collar and said member whereby the forward end of the member is moved inwardly when the plate is engaged with pressure by a bottle to be cleaned, a transversely disposed arcuate plate carried by the forward end of the fulcrumed member and a series of spring pressed pins carried by the arcuate head.

2. In a bottle cleaning device of the class described, the combination with a rotatably mounted member, of a plate fulcrumed on said member, a transversely disposed head on the forward end of said plate in which head is formed a series of openings and spring pressed pins seated in and projecting from said openings.

3. In a bottle cleaning machine of the class described, the combination with a rotatably mounted member, of a plate fulcrumed on said member, an arcuate head on one end of said plate, which head is inclined with respect to a plane at right angles to the plane occupied by the plate and a series of spring pressed pins carried by the arcuate head.

4. In a bottle cleaning machine the combination with a rotatably mounted head, of a pair of oppositely disposed plates fulcrumed on said head, arcuate heads on the forward ends of the plates, which arcuate heads are inclined with respect to a plane at right angles to the axis of the rotatably mounted head, a series of spring pressed pins arranged in each arcuate head and means connected to the plates and adapted to be engaged by the end of the bottle to be cleaned for simultaneously swinging the plates upon their fulcrums to move the arcuate pin carrying heads toward the head of the bottle.

5. In a bottle cleaning machine the combination with a rotatably mounted head, of a pair of plates fulcrumed on said head, spring pressed pins seated in the rear ends of said plates, the outer ends of which pins bear upon the head, an inclined arcuate head carried by the forward end of each plate, a series of spring pressed fingers arranged in each arcuate head, a collar arranged to slide lengthwise upon and rotate with the rotatably mounted members, ears projecting from said collar, pins carried by said ears, which pins pass through the inclined slots formed in the plates, and a face plate carried by and arranged to rotate independently of the collar.

1,020,511. SHOE-FASTENER. ABSALON W. RICKS, Rexburg, Idaho. Filed Sept. 5, 1911. Serial No. 647,710. (Cl. 24—207.)



1. A shoe fastener comprising strips, detachable sections slidably engaging the lower ends thereof, hooks mounted for sliding movement along the strips and sections, and a lace threaded through the hooks.

2. A shoe fastener comprising strips, detachable sections slidably engaging the lower ends thereof, hooks mounted for sliding movement along the strips and sections, a lace threaded through the hooks, and a lever

operated mechanism carried by each section for locking the same upon the strip.

3. A shoe fastener comprising strips having relatively long recesses at their lower ends which are provided in their bottoms with relatively short recesses, sections arranged to slide over the lower ends of the strips, a lever fulcrumed in each section, a block connected with one end of the lever and adapted to move along the long recess and enter the short recess, a tappet secured to the other end of the lever and projecting through the side of the section, hooks arranged to slide along the stripe and sections, and a lace threaded through the hooks.

1,020,512. ZINC AND METHOD OF PURIFYING AND IMPROVING THE SAME. AUGUSTE J. ROSSI, Niagara Falls, N. Y., assignor to The Titanium Alloy Manufacturing Company, New York, N. Y., a Corporation of Maine. Filed Jan. 6, 1911. Serial No. 601,162. (Cl. 75—153.)

1. The method of improving the properties of zinc which consists in adding thereto while molten titanium in amount sufficient to result in a final product containing titanium not to exceed 1%.

2. The method of improving the properties of zinc which consists in adding thereto while molten an alloy containing titanium in amount sufficient to result in a final product containing titanium not to exceed 1%.

3. The method of improving the properties of zinc which consists in adding thereto while molten an alloy containing zinc and titanium in amount sufficient to result in a final product containing titanium not to exceed 1%.

4. As a new article a metallic body composed preponderatingly of zinc and containing titanium not to exceed 1%.

5. As a new article zinc containing titanium not to exceed 1%.

1,020,513. NICKEL AND METHOD OF PURIFYING AND IMPROVING THE SAME. AUGUSTE J. ROSSI, Niagara Falls, N. Y., assignor to The Titanium Alloy Manufacturing Company, New York, N. Y., a Corporation of Maine. Filed Jan. 6, 1911. Serial No. 601,163. (Cl. 75—66.)

1. The method of improving the properties of nickel which consists in adding thereto while molten titanium in amount sufficient to result in a final product containing titanium not to exceed 1%.

2. The method of improving the properties of nickel which consists in adding thereto while molten an alloy containing titanium in amount sufficient to result in a final product containing titanium not to exceed 1%.

3. The method of improving the properties of nickel which consists in adding thereto while molten an alloy containing nickel and titanium in amount sufficient to result in a final product containing titanium not to exceed 1%.

4. As a new article a metallic body composed preponderatingly of nickel and containing titanium not to exceed 1%.

5. As a new article nickel containing titanium not to exceed 1%.

1,020,514. LEAD AND METHOD OF PURIFYING AND IMPROVING THE SAME. AUGUSTE J. ROSSI, Niagara Falls, N. Y., assignor to The Titanium Alloy Manufacturing Company, New York, N. Y., a Corporation of Maine. Filed Jan. 6, 1911. Serial No. 601,164. (Cl. 75—15.)

1. The method of improving the properties of lead which consists in adding thereto while molten titanium in amount sufficient to result in a final product containing titanium not to exceed 1%.

2. The method of improving the properties of lead which consists in adding thereto while molten an alloy containing titanium in amount sufficient to result in a final product containing titanium not to exceed 1%.

3. The method of improving the properties of lead which consists in adding thereto while molten an alloy containing lead and titanium in amount sufficient to result in a final product containing titanium not to exceed 1%.

4. As a new article a metallic body composed preponderatingly of lead and containing titanium not to exceed 1%.

5. As a new article lead containing titanium not to exceed 1%.

1,020,515. TIN AND METHOD OF PURIFYING AND IMPROVING THE SAME. AUGUSTE J. ROSSI, Niagara Falls, N. Y., assignor to The Titanium Alloy Manufacturing Company, New York, N. Y., a Corporation of Maine. Filed Jan. 6, 1911. Serial No. 601,166. (Cl. 75—17.)

1. The method of improving the properties of tin which consists in adding thereto while molten titanium in amount sufficient to result in a final product containing titanium not to exceed 1%.

2. The method of improving the properties of tin which consists in adding thereto while molten an alloy containing titanium in amount sufficient to result in a final product containing titanium not to exceed 1%.

3. The method of improving the properties of tin which consists in adding thereto while molten an alloy containing tin and titanium in amount sufficient to result in a final product containing titanium not to exceed 1%.

4. As a new article a metallic body composed preponderatingly of tin and containing titanium not to exceed 1%.

5. As a new article tin containing titanium not to exceed 1%.

1,020,516. ARTICLE COMPOSED ESSENTIALLY OF TITANIUM AND LEAD AND METHOD OF PRODUCING THE SAME. AUGUSTE J. ROSSI, Niagara Falls, N. Y., assignor to The Titanium Alloy Manufacturing Company, New York, N. Y., a Corporation of Maine. Filed Jan. 6, 1911. Serial No. 601,167. (Cl 75—17.)

1. As a new article an alloy of titanium with lead.

2. The method of producing an alloy of titanium with lead which comprises incorporating titanic acid into a bath of molten lead in presence of a reducing agent, subjecting the bath to a temperature sufficient to insure reduction of said titanic acid by said agent, and withdrawing and cooling the resulting metallic product.

3. The process of producing an alloy of titanium with lead which comprises incorporating titanic acid into a bath comprising molten lead and molten aluminium, subjecting the bath to a temperature sufficient to insure reduction of said titanic acid by said aluminium and withdrawing and cooling the resulting metallic product.

4. The method of producing an alloy of titanium with lead, which comprises bringing into each other's presence plumbic material, titanic acid and aluminium, and subjecting them to a temperature sufficient to melt the aluminium, and also to produce the said alloy under the conditions stated.

5. The method of producing an alloy of titanium with lead, which comprises bringing into each other's presence oxid of lead, titanic acid, and aluminium, and subjecting them to a temperature sufficient to melt the aluminium, and also to produce the said alloy under the conditions stated.

1,020,517. METHOD OF PRODUCING THE BINARY ALLOY OF TITANIUM AND ALUMINUM. AUGUSTE J. ROSSI, Niagara Falls, N. Y., assignor to The Titanium Alloy Manufacturing Company, New York, N. Y., a Corporation of Maine. Filed Apr. 25, 1911. Serial No. 623,215. (Cl. 75—17.)

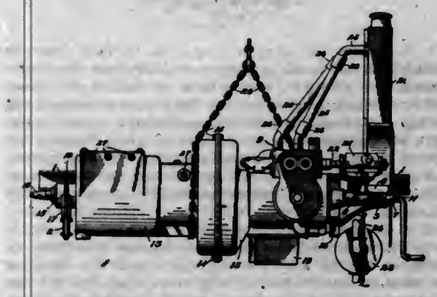
1. The method of producing the binary alloy of aluminum and titanium which consists in preliminarily producing a bath of molten aluminum, next adding thereto oxid of titanium proportioned to impart to the resulting alloy the desired content of titanium, and meanwhile raising and maintaining the temperature of the bath to at least the point at which the aluminum reduces the titanium oxid until all of said oxid has been reduced.

2. The method of producing the binary alloy of aluminum and titanium which consists in preliminarily producing a bath of molten aluminum, next adding thereto oxid of titanium in successive charges until the requisite content of titanium has been imparted, and meanwhile raising and maintaining the temperature of the bath to at least the point at which the aluminum reduces the titanium oxid until all of said oxid has been reduced.

3. The method of producing a binary alloy of aluminum and titanium which consists in preliminarily producing a bath of molten aluminum, next adding thereto solid aluminum and oxid of titanium proportioned to impart to the resulting alloy the desired content of titanium, and meanwhile raising and maintaining the temperature of the bath to at least the point at which the aluminum reduces the titanium oxid until all of said oxid has been reduced.

4. The method of producing the binary alloy of aluminum and titanium which consists in preliminarily producing a bath of molten aluminum, next adding thereto solid aluminum and oxid of titanium in successive charges until the requisite content of titanium has been imparted, and meanwhile raising and maintaining the temperature of the bath to at least the point at which the aluminum reduces the titanium oxid until all of said oxid has been reduced.

1,020,518. MOTOR-VEHICLE. ERIC S. SANDGREN and CHARLES F. CASE, Detroit, Mich., assignors to Oliver Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Sept. 30, 1910. Serial No. 584,673. (Cl. 21—90.)



1. The combination of a chassis having a pair of side members permanently connected at an interval from their forward ends by a cross bar, with a cross member adapted to be detachably secured to the forward ends of the chassis side members and having a central bearing, a motor secured to the rear side of the cross members, a starting shaft for the motor extending through said bearing in the cross member, a transmission casing secured to the motor with its free end detachably and rotatably mounted on the cross bar, a radiator for the motor supported on the member and an electric generator for the ignition system of the motor on the cross member.

2. The combination of a chassis having a pair of side members permanently connected at an interval from their forward ends by a cross bar, of a cross member adapted to be secured detachably to the forward ends of the chassis side members, a bearing on the cross member, a motor secured to the rear side of the cross member, a starting shaft for the motor journaled in the cross member bearing, a transmission casing secured to the rear side of the motor with its free end detachably and rotatably secured on the cross bar, a radiator resting on the cross member, an electric generator for the ignition system of the motor mounted on the cross member, and a muffler for the motor suspended from the motor.

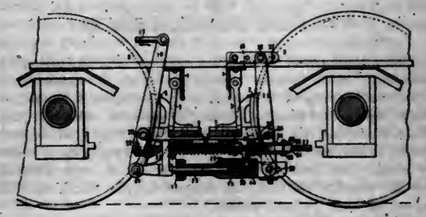
3. The combination of a chassis having a pair of side members permanently secured at an interval from their forward ends by a cross bar, with a cross member adapted to be detachably secured to the forward ends of the side members, a motor secured to the rear face of the said member and provided with a transmission casing whose free end is detachably supported on the cross bar, a starting shaft for the motor rotatably mounted on the cross member, a radiator supported on the cross member and provided with a lower central opening, a generator for the motor ignition system secured on the cross member within the radiator opening, and a muffler below the cross member secured to the motor.

4. The combination of a chassis having a pair of side members permanently connected at an interval from their forward ends by a cross bar, with a cross member adapted to be detachably secured at its extremities to the forward ends of the side members and provided with a central bearing, a motor secured to the rear face of the cross member and provided with a starting shaft journaled in said bearing, a rearwardly extending transmission casing secured to the motor, a cylindrical boss on the rear end of the casing, a saddle block on the cross bar of the chassis in which the transmission casing boss rests, a clip detachably securing the boss and saddle block on the cross bar, a radiator on the cross member, an electric generator for the motor ignition system on the cross member, and a muffler suspended from the motor.

5. The combination of a chassis having a pair of side members permanently connected at an interval from their forward ends by a cross bar, with a cross member whose ends are adapted to be detachably secured to the forward ends of the chassis side members and provided with a central opening, a bearing formed integrally on the cross member in advance of the opening by arms spanning the opening, a pair of forwardly extending brackets on the member, a radiator secured on the brackets, a motor secured against the rear side of the member with its starting shaft journaled in the bearing of the member, a radiator supported on the brackets and provided with an opening over the central portion of the member, an electric generator for the ignition system of the motor mounted on the member within the radiator opening, a transmission casing secured to the rear end of the motor, a cylindrical boss on the rear end of the casing, a saddle block on the cross bar of the chassis on which the boss rests, a U-clip securing the boss on the block and the block on the bar, and a muffler beneath the cross member suspended from the motor.

[Claims 6 and 7 not printed in the Gazette.]

1,020,519. SLACK-ADJUSTER FOR RAILWAY-BRAKES. WILLIAM H. SAUVAGE, New York, N. Y. Filed Dec. 27, 1910. Serial No. 599,512. (Cl. 188—49.)



1. In an apparatus of the character described, in combination a live lever, a dead lever, a two part push bar connecting said levers, a plurality of shims associated with said bar adapted to drop down between the effective ends thereof as the length of said bar is altered, one of the parts of said push bar being so constructed as to permit its rotation to return the shims to their original relative position from between the effective ends of the parts of said push bar.

2. In an apparatus of the character described, in combination, a live lever, a dead lever, a two-part extensible coupling member therebetween, and shims adapted to be interposed between the effective ends of said parts as the length thereof is changed to take up the slack due to wear of the brake shoes, one of said parts being rotatable relatively to the other whereby the bar may be returned to its original length, and the shims returned to normal position.

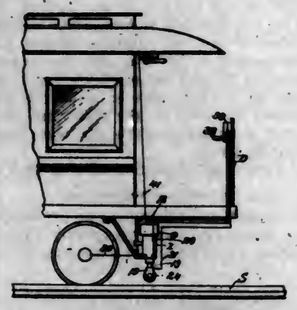
3. In an apparatus of the character described, in combination, a live lever, a dead lever, an adjusting bar adapted temporarily to take up the slack due to the wear of the brake shoes, and a two-part push bar connecting said levers adapted permanently to take up said slack, one of the parts of said push bar being rotatable relatively to the other whereby said push bar is restored to its original effective length.

4. In an apparatus of the character described, in combination, a live lever, a dead lever, a two-part push bar connected therewith, a second connection between said levers for temporarily taking up the slack, means connecting said second connection with one of the parts of said push bar whereby the same is actuated permanently to take up the slack, a plurality of shims adapted to be carried on one of the parts of said push bar and adapted to be interposed between the adjacent effective ends permanently to hold the slack taken up, and a water-tight casing inclosing said shims.

5. In an apparatus of the character described, in combination, a live lever, a dead lever, a connection therebetween comprising a telescopic push bar, means for changing the position of the parts of said push bar for the purpose of permanently taking up the slack, a plurality of shims adapted to be interposed between the adjacent effective ends of said push bar, and a water-tight shim box inclosing said shims.

[Claims 6 to 38 not printed in the Gazette.]

1,020,520. CIRCUIT-CLOSING APPARATUS. HARRY W. SHEEHY, Akron, Ohio. Filed May 25, 1910. Serial No. 563,419. (Cl. 104—155.)



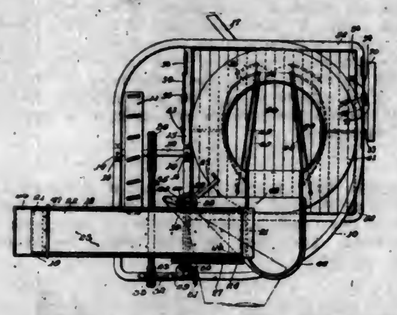
1. In an electrically actuated railway switch operating mechanism, an actuating circuit including a conductor, a contact-bar arranged to engage said conductor to close the circuit, an electro-magnet having a movable core carrying said contact-bar, an electric circuit in which the electro-magnet is included, and a switch-handle arranged to close the circuit for the electro-magnet prior to and distinct from the closing of the first named circuit which is also effected by said switch-handle.

2. In an electrically actuated railway switch operating mechanism, a circuit closing apparatus including a conductor, a contact-bar arranged to engage said conductor to close the switch actuating circuit, said circuit including a terminal, an electro-magnet having a movable core carrying said contact-bar, an electric circuit for said magnet including a terminal, and an electric switch embodying a handle movable in a definite plane and arranged to engage the last named terminal prior to the first named terminal for the purpose specified.

3. In an electrically actuated railway switch operating mechanism, an actuating circuit including a conductor, means for engaging said conductor to close said circuit, an electro-magnet having a movable core carrying said conductor engaging means, an electric circuit in which the electro-magnet is included, and means for first closing the circuit of the electro-magnet and for subsequently closing a circuit through the conductor and conductor engaging means after the latter has been moved into engagement with the conductor by the electro-magnet.

4. In an electrically actuated railway switch operating mechanism, a conductor, a contact bar arranged to engage said conductor, an electro-magnet having a movable core carrying said contact bar, and means controlling a circuit through the electro-magnet arranged to effect the engagement of the contact bar with the conductor and to subsequently close a circuit in which the conductor and contact bar are included.

1,020,521. GRAIN-SHOCKER. JOHN H. SLEEPER and THOMAS E. MCGOFFIN, Weatherford, Okla. Filed Sept. 9, 1909. Serial No. 516,893. (Cl. 56—121.)



1. A shocker including a frame, an inclined conveyer mounted on the frame, a hopper disposed upon the frame beneath the conveyer, a receptacle carried by the frame and having communication with the hopper, the receptacle having a releasable bottom, springs located in said receptacle for engagement with bundles of grain, latch-levers carried by said receptacle and engaging with the bottom, and push-rods carried by said latch-levers for engagement with said springs to release said latch-levers upon the expansion of the springs.

2. A shocker including a frame, an inclined conveyer arranged upon the frame to receive bundles therefrom, an abutment located upon the receiving end of the conveyer for turning the bundles, a hopper arranged beneath the delivery end of the conveyer to receive bundles therefrom, a receptacle mounted on said frame and having communication with the hopper, the receptacle having a releasable bottom, a packer-arm mounted in said hopper for feeding bundles from the same to said receptacle, latch-levers carried by said receptacle for engagement with the bottom, push-rods carried by the latch-levers and extending inwardly through the sides of the receptacle, springs arranged in the receptacle for engagement with the push-rods to withdraw the latch-levers from engagement with the bottom, standards mounted on said frame, arms upwardly projecting from the opposite sides of the bottom of said receptacle, bell-crank levers pivoted in the upper ends of said standards and connected to said arms, and springs disposed between the frame and said bell-crank levers for raising the bottom of the receptacle.

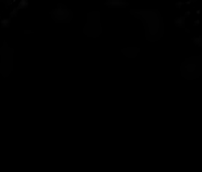
3. A grain shocker including a main frame, a receptacle located on said main frame having a releasable bottom normally located therein, releasing means connected to the bottom to drop the same from the receptacle, springs carried by said main frame for normally restoring the bottom to normal position, the bottom of said receptacle comprising slats rotatably mounted in the sides of the receptacle, intermeshing gears carried by the slats, and racks carried by the main frame engaging with the gears to rotate the slats upon the movement of the bottom.

4. A shocker including a main frame, a traction wheel mounted upon the frame, a conveyer carried by the frame, a train of gears disposed between the traction wheel and the conveyer for actuating the latter, a vertical shaft journaled in the frame and having connection to the train of gears, a disk carried upon the shaft, a wrist-pin mounted in the disk, a packer-arm carried by the frame and engaging with the wrist-pin for the reciprocation of the packer-arm, a hopper carried by the frame beneath the delivery end of the conveyer and having an opening in the lower end thereof to receive the packer-arm, a receptacle arranged upon the frame and having communication at its upper end with the hopper, and depositing means arranged within the receptacle to release shocks of predetermined size.

5. A shocker including a frame, a receptacle carried on the frame to receive bundles and having a bottom locked therein, releasing means disposed in the frame for the bottom to drop the same and adapted to be engaged by the bundles, the bottom having a plurality of slats, and opening means carried by the frame to open the slats by the movement of the bottom.

[Claims 6 to 10 not printed in the Gazette.]

1,020,522. CIRCUIT MAKING AND BREAKING DEVICE. WINTHROP A. STILES, Philadelphia, Pa. Filed Oct. 11, 1909. Serial No. 522,145. (Cl. 123—166.)



1. A circuit making and breaking device having, in combination, a driving element, an element driven by said driving element in one direction and released therefrom at a certain point, a spring connected to said driven element and adapted to return the same to its initial position after being released, a pair of coöperating contact points carried by said driven element, and means coöperating with said driven element on its return movement to move one of said contact points into contact with the other.

2. A circuit making and breaking device having, in combination, driving means, means driven by said driving means in one direction and released therefrom at a certain point, a spring connected to said driven means and adapted to return the same to its initial position after being released, said driven means including a pair of coöperating contact points, and means coöperating with said driven means on the return movement thereof to move one of said contact points into contact with the other.

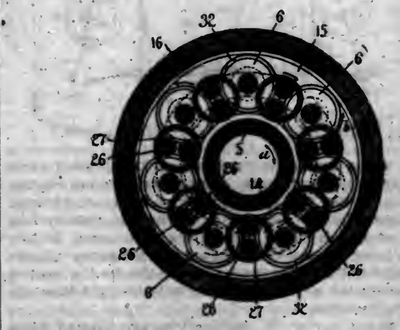
3. A circuit making and breaking device having, in combination, driving means, means driven by said driving means in one direction and released at a certain point, said driven means including two coöperating contact points, a spring connected to said driven means and adapted to return the same to its initial position after being released, and means coöperating with said driven means on the return movement thereof to move one of said contact points into contact with the other.

4. A circuit making and breaking device having, in combination, driving means, means driven by said driving means in one direction and released at a certain point, a spring connected to said driven means and adapted to return the same to its initial position after being released, said driven means having two relatively movable parts carrying coöperating contact points, and means to engage one of said parts during its return movement thereby to move the said contact point carried thereby into contact with the other.

5. A circuit making and breaking device having, in combination, driving means, means driven by said driving means in one direction and released at a certain point, a spring connected to said driven means and adapted to return the same to its initial position after being released, said driven means including two relatively movable parts one of which is resilient, said parts having thereon two coöperating contact points, and means acting on said resilient part during its return movement thereby to move the contact point carried thereby into contact with the other.

[Claim 6 not printed in the Gazette.]

1,020,523. ROLLER-BEARING. ERNEST J. TAYLOR, Highlandville, Mass. Filed May 17, 1907, Serial No. 374,305. Renewed Aug. 7, 1911. Serial No. 642,820. (Cl. 64—61.)



1. In a roller bearing, a series of supporting rollers, a pair of separating rollers between each pair of adjacent supporting rollers, and a retaining ring extending around each of said pairs of separating rollers and projecting into annular grooves provided in said adjacent supporting rollers.

2. In a roller bearing, a casing, a series of supporting rollers each having oppositely inclined conical peripreries at opposite ends thereof, respectively, bearing rings having conical faces adapted to bear against said conical peripheries, and means to adjust said bearing rings longitudinally of said rollers, a pair of separating rollers between each pair of adjacent supporting rollers, and a retaining ring extending around said pair of separating rollers and projecting into annular grooves provided in said adjacent supporting rollers.

3. In a roller bearing, a series of supporting rollers, a pair of separating rollers between each pair of adjacent supporting rollers, each of said separating rollers having two annular ribs upon its periphery, and a retaining ring extending around each of said pairs of separating rollers between said annular ribs and projecting into annular grooves provided in said adjacent supporting rollers.

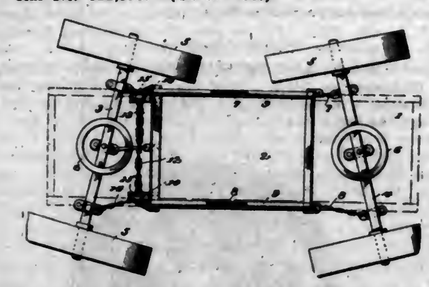
4. In a roller bearing, a series of supporting rollers, a pair of separating rollers between each pair of adjacent supporting rollers, each of said separating rollers having two annular ribs upon its periphery, and a retaining ring extending around each of said pairs of separating rollers between said annular ribs and projecting into annular grooves provided in said adjacent supporting rollers, said annular ribs being adapted to bear against the opposite side walls of said annular grooves.

5. In a roller bearing, a sleeve, two bearing rings thereon having oppositely inclined conical faces, respectively, and means to adjust one of said rings longitudinally on said sleeve, an annular casing, two bearing rings therein having oppositely inclined conical faces, respectively, and means to adjust one of said rings longitudinally in said casing, a series of supporting rollers each having oppositely inclined conical peripheries at opposite ends thereof, respectively, adapted to bear against the corresponding conical faces on said bearing rings, a pair

of separating rollers between each pair of adjacent supporting rollers, and a retaining ring extending around each of said pairs of separating rollers and projecting into annular grooves provided in said adjacent suppoting rollers.

[Claims 6 to 28 not printed in the Gazette.]

1,020,524. DUMP-WAGON. MARQUIS J. TODD, Buffalo, N. Y., assignor to Buffalo Pitts Company, Buffalo, N. Y., a Corporation of New York. Filed Apr. 17, 1911. Serial No. 621,525. (Cl. 21—93.)



1. A wagon having, in combination, two pivoted axles and carrying wheels thereon, a body, flexible cross reaches connected to the two axles and extended in substantial parallelism with the sides of said body and transversely thereof at a point near one of the axles, such flexible reaches being connected to both axles at points on opposite sides of the pivots thereof, and guides for the reaches for directing the latter on substantially straight lines adjacent to the axles.

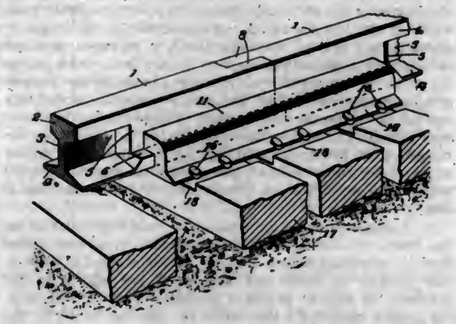
2. A wagon having, in combination, two pivoted axles and carrying wheels thereon, a body, flexible cross reaches connected to both of the axles and extended in parallelism with the sides of said body and rollers carried by the body and with which the reaches engage on opposite sides of the body, said rollers being approximately in line with the connections of the reaches with the axles.

3. A wagon having, in combination, two pivoted axles and carrying wheels thereon, a body having opposite parallel portions, guides extending along said portions, reach chains carried by said guides and connected to both the axles on opposite sides of the pivots thereof and extended transversely of the body, and rollers carried by the body with which said chains engage at the points where they are extended transversely of the body, said rollers being approximately in line with the connections of the chains with the axles.

4. A wagon having, in combination, two pivoted axles and carrying wheels thereon, a body, chains connected to one of the axles on opposite sides of the pivot thereof and extended parallel with the sides of said body, and thence transversely of the body, said chains being connected together, opposite vertically disposed rollers with which said chains engage, said rollers being located at one end of each side of the body, said chains extending transversely of the body and connected together, a second set of chains connected to the other axle on opposite sides of the pivot thereof and extended transversely of the body, and connected to the first mentioned chains, and a second set of opposite vertically disposed rollers with which said second chains engage, said latter rollers being located adjacent to the first mentioned rollers.

1,020,525. RAIL-JOINT. EDWARD A. TOLGEN, Minot, N. D. Filed July 6, 1911. Serial No. 637,142. (Cl. 239—6.)

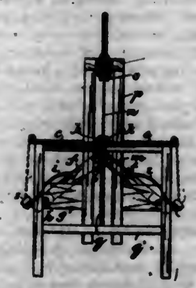
1. In a rail joint, the combination with a pair of companion rail sections having their webs thickened at their meeting ends flush with both sides of their heads, and also having their base flanges thickened coextensive to said thickened webs to provide upwardly facing square shoulders, of a chair comprising a base plate supporting the meeting ends of the rail sections, and co-acting cheeks upstanding from the base plate and overhanging the square shoulders and abutting against the faces of the thickened webs.



2. In a rail joint, the combination with a pair of companion rail sections having their webs thickened at their meeting ends flush with both sides of their heads, and also having their base flanges thickened coextensive to said thickened webs to provide upwardly facing square shoulders, of a chair comprising a base plate supporting the meeting ends of the rail sections, and coacting cheeks upstanding from the base plate and overhanging the square shoulders and abutting against the faces of the thickened webs, the cheek on one side of the rail being extended upwardly above the other cheek to obtain a broad bearing on the rail sections, as and for the purpose specified.

3. In a rail joint, the combination of a pair of companion rail sections having their webs thickened at their meeting ends flush with both sides of their heads, and also having their base flanges thickened on each side of said thickened webs to provide upwardly facing square shoulders, the thickened ends of the rail sections being recessed on opposite sides of the rail to provide mating longitudinal tongues overlapping to form a scarf joint, of a chair comprising a base plate supporting the meeting ends of the rail sections, and coacting cheeks upstanding from the base plate and formed in their inner faces with longitudinal grooves receiving said thickened portions of the base flanges, the upper portions of the cheeks overhanging the grooves and bearing upon the upwardly facing square shoulders and also abutting against the faces of the thickened webs.

1,020,526. DIP-TANK WITH AUTOMATIC COVER. FREDERICK B. WAIBEL, Newark, N. J. Filed Oct. 18, 1911. Serial No. 655,446. (Cl. 220—121.)



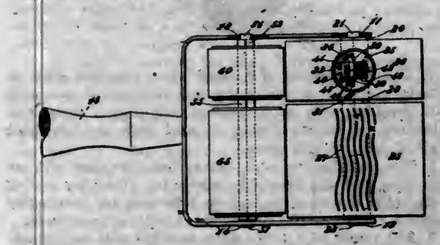
1. An apparatus of the class described, comprising a supporting stand for the tank, spring-actuated covers secured to said stand, holding means secured to the stand for holding said covers in open and locked position, means for releasing said holding means interposed between the stand and said holding means and a fusible connection between said holding means rendered inoperative by heat to release the cover and close the tank.

2. An apparatus of the class described, comprising a supporting stand for the tank, spring-actuated covers secured to the stand, a pair of levers secured to the ends of the stand pivotally connected and provided with means for holding said covers in open and locked position, uprights fastened to the end of the stand in which are secured pulleys, and a chain provided with fusible links passing over said pulleys, the ends of said chain being secured to said levers, the fusible links being rendered inoperative by heat to release the covers and close the tanks.

3. An apparatus of the class described, comprising a supporting stand for the tank, spring-actuated covers secured to the sides of the stand, holding means secured to the ends of the stand provided with pivotally arranged spring-pressed catches for holding said covers in open and locked position, a spring secured to the stand and to said holding means and a fusible connection between said holding means rendered inoperative by heat to release the cover and close the tank.

4. An apparatus of the class described, comprising a supporting stand for the tank, spring-actuated covers secured to said stand, holding means secured to the stand for holding said covers in open and locked position, a spring, one end of which is secured to said holding means and the other end of which is secured to the stand and a fusible connection between said holding means rendered inoperative by heat to release the cover and close the tank.

1,020,527. ROTARY HAND-STAMP. DENNY EDMUND WALSHE, Grand Saline, Tex. Filed June 16, 1911. Serial No. 633,626. (Cl. 101—62.)



1. A roller hand stamp comprising a frame, a handle secured thereto, a die shaft journaled in said frame, a printing cylinder fixed on said die shaft and provided with canceling or other printing surfaces, a separate printing cylinder fixed on said shaft independent of said canceling cylinder and provided with a sunken radial cylindrical socket open at the periphery and with a die adjustable in said socket and having type arranged to print in unison with the printing surfaces of the other printing cylinder, and means for inking said cylinders.

2. A roller hand stamp comprising a frame, a handle secured thereto, a die shaft journaled in said frame, a printing cylinder fixed on said die shaft and provided with canceling or other printing surfaces, a separate printing cylinder fixed on said shaft and removable therefrom independent of said canceling printing cylinder and provided with a sunken screwthreaded radial socket opening at the periphery and with a cylindrical die bodily adjustable in said socket and provided with movable type, and means for inking said cylinders.

3. A printing cylinder for a roller hand stamp provided with a sunken radial screw-threaded socket opening through the periphery of said cylinder, a screwthreaded cylindrical die radially adjustable in said socket and provided with a type socket, movable type and means for clamping said movable type within said type socket.

4. A printing cylinder for a roller hand stamp provided with a sunken radial screw-threaded socket opening through the periphery of said cylinder, a screwthreaded cylindrical die radially adjustable in said socket and provided with a convex face, a type socket, movable type and means for clamping said movable type within said type socket.

5. A printing cylinder for a roller hand stamp provided with a sunken radial screwthreaded socket opening through the periphery of said cylinder, a screwthreaded cylindrical die radially adjustable in said socket and provided with a type socket, movable type, means for clamping said movable type within said type socket and said die having wrench holes in its outer face.

[Claims 6 and 7 not printed in the Gazette.]

1,020,528. WINDOW-SHADE BRACKET. ANDREW H. WEIR and CHRIS H. SMITH, Eaton, Ohio. Filed July 11, 1911. Serial No. 637,873. (Cl. 156—24.)

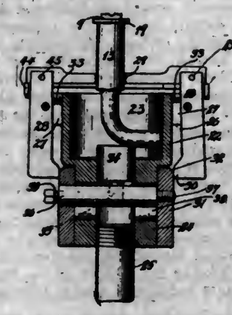


1. A device of the class described comprising a plurality of members slidably disposed and curved transversely, the curvature of the plates being of the same radial lengths, means for connecting said members to a window, a curtain roller support, and clamping means operating through said members and through said curtain roller support.

2. A device of the class described comprising plates slidably engaged and adapted to be connected to a window, a curtain roller support including a lateral base, said plates and lateral base being curved transversely with the same radial length, and clamping means operating through said plates and base.

3. A device of the class described comprising plates slidably engaged and adapted to be connected to a window, a curtain roller support including a lateral base, a curtain pole support including a vertical base, said plates, lateral base and vertical base being curved transversely with the same radial length, and clamping means operating through said plates and lateral base and vertical base.

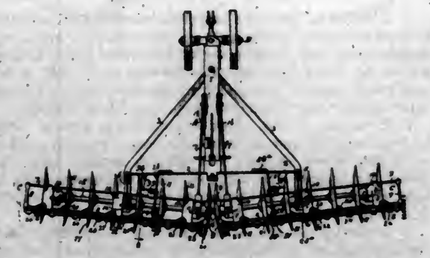
1,020,529. MACHINE FOR THREADING PIPE-FITTINGS. CHARLES WESTEN, Chicago, Ill., assignor to Northern Brass Manufacturing Company, Waukegan, Ill., a Corporation of Illinois. Filed July 27, 1909. Serial No. 509,930. (Cl. 10—98.)



In an automatic threading machine, the combination of a fixed body portion having an upper cup-shaped portion adapted to receive an L-shaped piece of work, a stem merging therefrom, arms carrying screw-threading dies pivotally mounted between lugs and radially extending from the cup-shaped portion, a spring bearing against said arms at a point above their pivotal center, whereby the dies are held normally outward from the center of the cup-shaped portion, said stem having a vertically extending

bore therein communicating with the interior of the cup-shaped section at a point centrally thereof, said bore being of a reduced diameter from the chamber in the cup-shaped section, a plunger within the bore against which the work rests, said plunger extending when projected into the well and lying when fully depressed flush with the bottom of the well, whereby the bottom of the well forms a stop to limit the action of the dies on the work, a slidable collar surrounding the stem, a bevel face on the upper portion of the collar against which the arms carrying the threading dies normally rest, a cross pin fixedly secured to the slidable collar, the stem of said body portion having a slot formed therein in which said cross pin travels, a screwthreaded stem on the plunger entering the cross pin, a handle pivotally mounted on the collar for returning said collar to normal position, said stem having a slot in which the inner end of the handle lies, substantially as described.

1,020,530. HARROW. CHARLES E. WHITE, Moline, Ill., assignor to Deere & Mansur Company, Moline, Ill., a Corporation of Illinois. Filed June 14, 1907. Serial No. 378,979. (Cl. 55—81.)



1. In a disk harrow, the combination with a gang frame and a gang of disks mounted therein, of scrapers for the disks adapted to be moved from points near the axis toward and from the peripheries of the disks, means for pressing the scrapers toward the disks and means for positively holding the scrapers out of contact with the disks against the action of the pressing devices, substantially as set forth.

2. In a disk harrow, the combination with a gang frame and a gang of disks mounted therein, of scrapers for the disks adapted to be moved from points near the axis toward and from the peripheries of the disks, means for pressing the scrapers toward the disks and means operable at will for positively holding the scrapers against the action of the pressing devices, substantially as set forth.

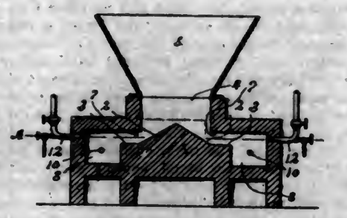
3. In a disk harrow, the combination with a gang frame and a gang of disks mounted therein, of scrapers adapted to have their operative parts moved from points near the axis toward and from the peripheries of the disks, a spring for pressing the scrapers toward the surfaces of the disks, and means for holding the scrapers away from the disks against the action of the spring, substantially as set forth.

4. In a disk harrow, the combination with a frame and a disk carried thereby, of a scraper, a scraper-carrier means for moving the scraper from points near the axis toward and from the periphery of the disk, means for automatically moving the scraper toward the concave side of the disk, and means for holding the scraper off the disk against the action of the said automatic means, substantially as set forth.

5. In a disk harrow, the combination of a frame, a disk carried thereby, a scraper support, a scraper adjustable relative to the said support and to the disk, means for moving the scraper from the axis toward and from the periphery of the disk, a spring for moving the scraper bodily toward the disk, and means for resisting at will the action of the spring in its pressure of the scraper upon the disk, substantially as set forth.

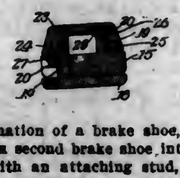
[Claims 6 to 31 not printed in the Gazette.]

1,020,531. FURNACE FOR OBTAINING METAL FROM ORE OR MATTE. JAMES J. ANDERSON, Vancouver, British Columbia, Canada. Filed Feb. 9, 1911. Serial No. 607,581. (Cl. 75—57.)



A furnace for obtaining metal from ore or matte, said furnace comprising a hopper having a bottom downwardly inclined toward a restricted lateral inlet to a combustion chamber, a horizontal ledge at the base of the incline at the said inlet and means for projecting a reducing blast across the combustion chamber against the exposed face of the ore at the inlet from the hopper and on the ledge.

1,020,532. BRAKE-SHOE. CHARLES W. ARMBRUST, Crystal Lake, Ill., assignor of one-half to Harriet W. Armbrust, North Crystal Lake, Ill. Filed May 29, 1911. Serial No. 630,148. (Cl. 188—28.)



1. The combination of a brake shoe, provided with an attaching stud, a second brake shoe interlocked therewith and provided with an attaching stud, and a detachable attaching lug interlockingly engaged with the attaching studs of both of said shoes.

2. The combination of a brake shoe provided with an attaching stud and shaped to receive the attaching stud of a similarly shaped shoe, and an attaching lug detachably engaged with the attaching studs of both of said shoes.

3. The recess of a brake shoe provided with an attaching stud and having a recess to receive the attaching stud of a similarly shaped shoe, a second shoe engaged with said first shoe and having its attaching stud disposed in said recess, and an attaching lug detachably engaging both of said studs.

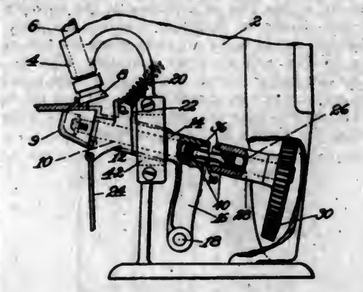
4. A brake shoe provided with locking lugs and a locking stud and having locking recesses on its face, a second shoe having locking lugs engaged in the locking recesses of said first shoe and also provided with a locking stud, and a detachable attaching lug interlockingly engaged with the studs of both of said shoes.

5. The combination of a brake shoe provided with a centrally disposed attaching stud and locking lugs disposed on each side thereof, a second shoe interlockingly engaged with said first shoe and having an attaching stud projecting through said first shoe and disposed within the perimeter thereof, and an attaching lug detachably engaged with the attaching studs of both of said shoes.

[Claims 6 to 20 not printed in the Gazette.]

1,020,533. MACHINE FOR OPERATING UPON SOLES. ARTHUR BATES, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Oct. 16, 1909. Serial No. 523,049. (Cl. 12—30.)

1. A channel opening machine having, in combination, a rotary channel opening tool arranged to enter the channel and to receive the sole with the edge thereof beneath said tool, a work support, one of said members having a stationary axis, and a pivot about which the other member may be swung in a direction substantially the same as that in which the channel extends into the sole positioned upon the work support.

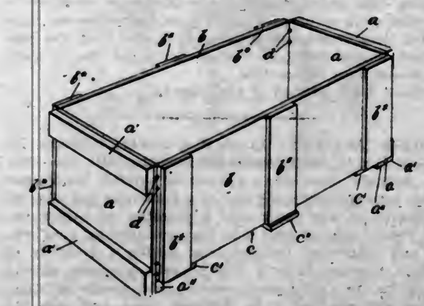


2. A channel opening machine having, in combination, a rotary wiper provided with a sole engaging face, said wiper being arranged to extend in the channel and to receive the sole with the edge thereof beneath said tool, a work support, and a pivot about which one of said members may be swung in a direction substantially parallel with said face for effecting pressure of a sole against said wiper.

3. A channel opening machine, having in combination, a channel opening tool comprising a rotary wiper and a work support for pressing a sole into engagement with the wiper, the said work support being mounted for swinging movement in a vertical plane about a pivot arranged approximately in line with the axis of the wiper whereby the sole supported upon the work support is pressed toward the wiper in a direction substantially parallel with the circular sole engaging face of the wiper.

4. A channel opening machine, having in combination, a channel opening tool comprising a rotary wiper and a rotary work supporting roll for pressing the sole into engagement with the tool, and actuating mechanism for said roll substantially in alinement with the axis thereof, the said roll being mounted for swinging movement in a vertical plane about a pivot arranged below said axis and at the rear of the roll whereby the sole supported upon the roll is pressed toward the wiper in the direction in which the channel extends into the sole, and connections permitting co-axial movement of said roll relatively to said actuating mechanism.

1,020,534. BOX. HENRY M. BRANHAM, Fort Valley, Ga. Filed Dec. 7, 1910. Serial No. 595,993. (Cl. 217—16.)



1. A box having closed end walls and side walls, one of the latter being yielding and having a vertically-extending, centrally-disposed cleat and the former being provided with inwardly-extending ledges; and a removable wall the length of which is greater than the distance between said ledges and which is provided with a cross-strip having projecting ends and a length greater than the distance between said side-walls; said removable wall when in position resting on said ledges, which prevent its outward movement, and the projecting ends of said cross-strip lying under the lower longitudinal edges of said side-walls, which prevents the inward displacement of said removable wall; one of said projecting ends lying under the lower end of said cleat.

2. A box having closed end walls and side walls, one of the latter being yielding and having a vertically-extending, centrally disposed cleat and the former being provided with inwardly-extending ledges; and a removable wall the length of which is greater than the distance between said ledges and which is provided with a pair of end cross-strips and a middle cross-strip which is longer than the latter and the ends of which project, as do also the ends of said end cross-strips; said removable wall, when in position, resting on said ledges, which prevent its outward displacement, and the projecting ends of said cross-strips lying under the longitudinal edges of said side-walls and thereby preventing the inward displacement of said removable wall; one of said projecting ends lying under the lower end of said cleat.

3. A box having end walls and side walls, one of the latter being yielding and having a vertically-extending, centrally disposed cleat and the former being provided with inwardly-extending ledges; and a removable wall the length of which is greater than the distance between said ledges and which is provided with a pair of end cross-strips and a middle cross-strip which is longer than the end cross-strips and one end of which lies under the lower end of said cleat when said removable wall is in place, the ends of said cross-strips projecting beyond the edges of the removable wall, which rests, when in place, upon said ledges, and the projecting ends of the cross-strips of which lie under the longitudinal edges of said side-walls and thereby prevent the inward displacement of said removable wall; said ledges preventing the outward displacement thereof.

4. A box having end walls and side walls, one of the latter being yielding and having a vertically-extending, centrally-disposed cleat and the former being provided with inwardly-extending ledges; and a removable wall the length of which is greater than the distance between said ledges and which is provided with a pair of end cross-strips and a middle cross-strip which is longer than the end cross-strips and one end of which lies under the lower end of said cleat when said removable wall is in place, the ends of said cross-strips projecting beyond the edges of the removable wall, which rests, when in place, upon said ledges with its end cross-strips closely adjacent to the same, and the projecting ends of the cross-strips of which lie under the longitudinal edges of said side-walls and thereby prevent the inward displacement of said removable wall; said ledges preventing the outward displacement thereof and in conjunction with said end cross-strips preventing shifting thereof back and forth.

1,020,535. SECTIONAL VALVE FOR GAS-ENGINES. LUPU WILLIAM BRENNER, Dayton, Ohio. Filed May 26, 1911. Serial No. 629,639. (Cl. 137—32.)

1. In a valve construction, a valve seat, a valve member divided into sections, means for initially operating one of the valve sections independent of the other, a valve stem for said initial section, a collar carried by said valve stem, a retracting spring engaging said collar, a fixed abutment for said spring, a second spring also engaging the collar and engaging at its opposite end the second valve section, said second spring being compressed by the movement of the initial valve section and adapted by its expansion to move the second valve section, substantially as specified.

2. In a valve construction, a valve seat, a valve member divided into sections, means for successively operating the valve sections independent of each other, and a retracting spring common to all the sections adapted to simultaneously return the valve sections to the seat, substantially as specified.

3. In a valve construction, a valve seat, a valve member seated thereon, a tubular stem for said valve member, a second valve seat formed in the valve member, a second

valve member engaging the seat in the first valve member, a valve stem for the second valve member extending through the tubular stem of the first valve member, valve operating means engaging the stem of the second valve member adapted to reciprocate said stem to unseat the valve, engaging means carried by the stem of the second valve member adapted to cause the reciprocation of the tubular stem of the first valve member to unseat the first valve when the second valve has been shifted through a preliminary movement independent thereof, and a retracting spring placed under tension by the operation of said second valve and adapted to return the second valve upon its release to its original position, said first mentioned valve being returned to closed position by the engagement of the second valve with said first valve, substantially as specified.



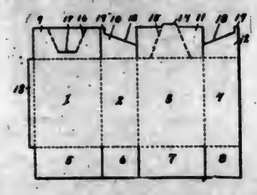
4. In a valve construction, a plurality of concentric valve members seated one upon the other, and adapted to be independently operated, a stem upon the central valve member, a spring engaging means carried by said stem, a spring interposed between said spring means and each of the concentric valve members other than the said central member, springs being placed under tension by the operation of the central valve member whereby the said springs will subsequently operate the remaining concentric valve members, and a retracting spring interposed between said spring engaging means and a fixed abutment adapted to simultaneously return all of said valve members to normal, substantially as specified.

5. In a valve construction, a valve seat, a valve member seated thereon, a tubular stem for said valve member, a second valve seat formed in the valve member, a second valve member engaging the seat in the first valve member, a valve stem for the second valve member extending through the tubular stem of the first valve member, a collar carried by the stem of the second valve, a spring interposed between the said collar and the tubular stem of the first valve, operating means for unseating the second mentioned valve, and thereby placing the spring under tension, whereby the second valve will be subsequently unseated by the expansion of the spring and a second spring interposed between said collar and a fixed abutment placed under tension by the unseating of the second mentioned valve member adapted to simultaneously return both valve members to normal upon their release by the operating means.

[Claims 6 and 7 not printed in the Gazette.]

1,020,536. BOX OR CARTON. JOHN F. BYRNE, Battle Creek, Mich., assignor to Kellogg Toasted Corn Flake Company, Battle Creek, Mich. Filed Nov. 6, 1911. Serial No. 658,639. (Cl. 229—17.)

1. A carton or box, the end of which is closed by shortened inner flaps and overlapping outer flaps sealed together by a suitable adhesive, the outermost flap of which has a tongue projecting beyond its outer edge, a slit in the underlying flap in position corresponding to the base of the tongue and closed thereby, and severing scoring lines in the outer overlying flaps extending from the base of said tongue and the ends of said slit obliquely and transversely to the fold of said flap at the opposite side of the said carton to facilitate opening the same, the shortened inner flaps being cut away along the line of said severing scoring, and an inner container with an open mouth for extension through the opening thus formed so that the package can be opened and closed and the tongue inserted in the slit for retaining the same in the closed position after the sealing is broken, as specified.



2. A carton or box, the end of which is closed by shortened inner flaps and overlapping outer flaps sealed together by a suitable adhesive, the outermost flap of which has a tongue projecting beyond its outer edge, a slit in the underlying flap in position corresponding to the base of the tongue and closed thereby, and severing scoring lines in the outer overlying flaps extending from the base of said tongue and the ends of said slit obliquely and transversely to the fold of said flap at the opposite side of the said carton to facilitate opening the same, the shortened inner flaps being cut away along the line of said severing scoring, so that the package can be opened and closed and the tongue inserted in the slit for retaining the same in the closed position after the sealing is broken, as specified.

3. A carton or box, the end of which is closed by overlapping flaps sealed together, the outermost of which is provided with a tongue and the said overlapping flaps being scored by lines of severing scorings transverse to the line of folding of said flaps, the inner flaps being partially cut away to weaken the lid on said scoring lines for opening, as specified.

4. A carton or box, the end of which is closed by overlapping flaps sealed together by a suitable adhesive, the outermost flap of which is provided with a tongue projecting beyond its edge, and a slit in the underlying flap corresponding to the base of the tongue, so that the package can be opened and closed and the tongue inserted in the slit for retaining the same in closed position after the sealing is broken, as specified.

5. A carton or box, the end of which is closed by overlapping flaps sealed together, the outermost of which is provided with a tongue, and the said overlapping flaps having lines of severing scorings extending from the base of said tongue obliquely transverse to the line of folding of said flaps, as specified.

[Claim 6 not printed in the Gazette.]

1,020,537. WALLET. JAMES R. CARDWELL, Chicago, Ill. Filed Apr. 11, 1910. Serial No. 554,628. (Cl. 150—35.)

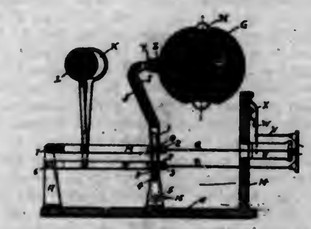
1. A wallet comprising a sheet of suitable wallet material, approximating the size of a bank-note and adapted to receive on the upper side a plurality of bank-notes, said sheet being divided into four quarters by longitudinal and transverse folding lines, having a plurality of pockets disposed beneath one of said quarters, closing means for the said pockets, one of said means being extended and adapted to be disposed above and onto the upper side of said main portion and bank-notes that may be laid thereon, said pockets being embraced and surrounded by the main portion when the main portion is folded upon the said folding lines.

2. A wallet comprising a sheet of suitable wallet material having a main portion approximately the size of a bank-note divided into four quarters by longitudinal and transverse folding lines, said main portion having a pocket beneath one of the said quarters, the opening of the said pocket being adjacent the outer longer edge of the said quarter of the main portion, and having the lower side of the said pocket extended and adapted to be folded above and over the main portion and the bank-notes that may be disposed thereon, a second pocket disposed beneath the outer wall of the first named pocket, and having the opening parallel to and adjacent the bottom of the first named pocket, and means closing the second pocket, the main body portion being adapted to fold on the said longitudinal and transverse folding lines to surround both pockets, and means holding wallet in folded position.



3. A wallet comprising a sheet of suitable wallet material of approximately the size of a bank-note, adapted to be folded longitudinally and transversely on predetermined lines to substantially one-fourth of its original size, a coin-receiving pocket arranged on one section of said sheet to open along the outer edge of said section, a second pocket also arranged on said section to open along the folded edge of the section, and flaps normally covering the mouths of both of said pockets, said flaps lying between and retained in place by the superposed sections of the folded wallet.

1,020,538. ADVERTISING-DISPLAY APPARATUS. CHARLES J. COOKE, Hongkong, China. Filed July 29, 1911. Serial No. 641,357. (Cl. 88—24.)



1. A means for automatically causing a spot of light to travel along a darkened surface in a predetermined manner, comprising a mirror; a means for mounting said mirror so that it may be moved in a horizontal and in a vertical plane; a means for causing said mirror to be moved horizontally and vertically, comprising a series of cams; a shaft upon which they are mounted; cam levers engaging said cams; rods connecting said cam levers with said mirror.

2. A device for causing a spot of light to travel in a predetermined manner along a darkened surface, comprising a mirror; a means attached thereto for moving said mirror in a vertical and horizontal plane; a means for causing said attaching means to impart a motion to said mirror, substantially as described.

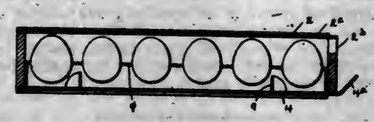
3. A device for causing a spot of light to travel in a predetermined manner along a darkened surface, comprising a reflector; a means for mounting the reflector so that it may move in a horizontal or vertical plane; a series of cams; a shaft upon which the cams are mounted; a means connected with said reflector operated by said cams for moving the reflector in a horizontal and vertical plane.

4. In a device for causing a spot of light to travel in a predetermined manner on a darkened surface, a mirror; a means for mounting the mirror so that it may be moved; a series of cams; a shaft for mounting the same; a means connected with said mirror and operated upon by said cams for moving the mirror.

5. A device for causing a spot of light to travel in a predetermined manner on a darkened surface; a mirror; a means for mounting the same; a means for moving the mirror in a predetermined manner; with a means for interrupting the normal action of said moving means, substantially as described.

[Claim 6 not printed in the Gazette.]

1,020,539. DELIVERY-RECEPTACLE. ARTHUR B. COWLES, Rochester, N. Y. Filed May 8, 1911. Serial No. 625,840. (Cl. 217—18.)



1. In a delivery receptacle, the combination with a case having a discharge opening at its bottom and an intake opening at its top, of a celled tray in said case adapted to be passed through the intake opening and to drop through said discharge opening, and a movable support for said tray.

2. In a delivery receptacle, the combination with a case having a discharge opening in its bottom and an intake opening at its top, of a tray in said case adapted to drop through said discharge opening, and a support for the tray slidable on the casing out of supporting position.

3. In a delivery receptacle, the combination with a case having an intake opening at its top and a sliding bottom, of a tray loosely arranged in the case and adapted to be passed through the intake openings and to drop from the case as the bottom is removed.

4. In a delivery receptacle, the combination with a case open at its top and its bottom, of a celled tray constructed to pass through the opening in the top and the bottom, and a movable support engaging the under side of the tray to hold the latter in the case.

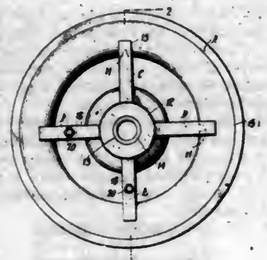
5. In a delivery receptacle, the combination with a case at its top and its bottom, of a celled tray constructed to pass through the opening in the top and the bottom, and a slide closing the opening in the bottom and supporting the tray within the case.

[Claims 6 to 10 not printed in the Gazette.]

1,020,540. TROLLEY-WHEEL. FRANK M. CUMMINGS, Byesville, Ohio. Filed Mar. 16, 1911. Serial No. 614,892. (Cl. 64—17.)

1. A trolley-wheel comprising a rim provided with spaced lugs, a hub having a plurality of spokes, certain of said spokes being formed of one piece integral with the hub and having forked outer ends loosely embracing the rim, and provided with recesses in their forked outer ends in which the lugs on the rim respectively seat whereby the hub and rim are locked against relative rotation, and the remainder of said spokes being provided with laterally and radially opening recesses in their outer ends respectively in which the rim seats, and detachable clamping means for holding the rim against movement out of the recesses in the second named spokes.

2. A trolley-wheel comprising a rim, a hub, a plurality of spokes connecting the hub and rim, certain of said spokes being formed of one piece integral with the hub and having forked outer ends embracing the rim, and each of the remainder of said spokes being formed of a pair of radially-disposed sections one of which is rigidly



secured to the hub and bears against one side of the rim at its outer end, the other of said sections having a longitudinal groove in its inner face and bearing at its outer end against the other side of the rim, a tongue on the inner face of the first named section seating in the groove in the second named section, and means for detachably securing said sections together.

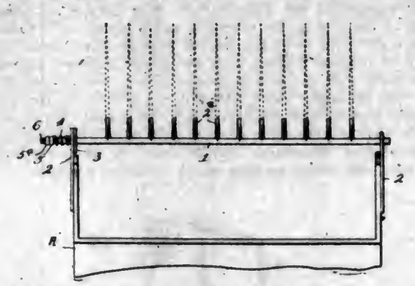
1,020,541. INSTRUMENT FOR TESTING BATTERIES. CHARLES J. DAVIDSON, Hackensack, N. J., assignor to American Telephone and Telegraph Company, a Corporation of New York. Filed Dec. 14, 1909. Serial No. 533,057. (Cl. 175—183.)



An instrument for testing batteries which are in use with apparatus having a definite resistance, comprising a casing, an indicating member movably mounted therein, and an actuating coil the resistance of which renders the resistance of the instrument substantially equal that of the apparatus associated with the batteries to be tested.

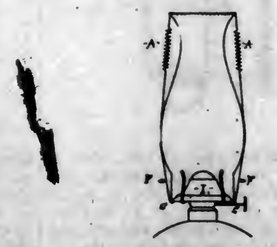
1,020,542. ELEVATOR-HOOD. ERNEST O. DROEGEMEIER, Ellsworth, Kans. Filed Feb. 6, 1911. Serial No. 606,961. (Cl. 198—14.)

In combination, with a header elevator, a bearing extending upwardly from each side of said elevator, one of the bearings having a head, a shaft having its ends journaled in said bearings, a disk between the bearings rigidly mounted on said shaft for engagement with the inner face of said head of said bearing, a nut on said shaft, a coil spring surrounding the shaft having one end abutting said head of said bearing and its opposite



end abutting said nut and a series of tines on said shaft.

1,020,543. LAMP-CHIMNEY HOLDER. DANA DUDLEY, Wakefield, Mass. Filed Feb. 1, 1911. Serial No. 606,049. (Cl. 240—97.)



A lamp-chimney holder formed of a single piece of wire bent to fit against the sides and across the top of a lamp-chimney, and having spiral springs and finger loops in the sides thereof, and hooks on the ends thereof to engage with a lamp burner.

1,020,544. DRILL AND SOCKET CONSTRUCTION. FRANCIS G. ECHOLS, Hartford, Conn., assignor to Pratt & Whitney Company, Hartford, Conn., a Corporation of New Jersey. Filed Dec. 14, 1910. Serial No. 597,296. (Cl. 77—71.)

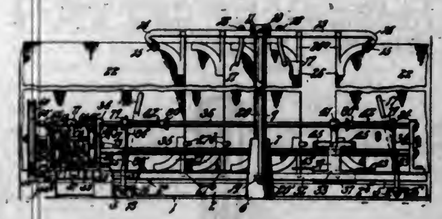


1. The combination of an internally tapered socket, and a drill having a correspondingly tapered, spiral portion in the socket, the latter having a projection coöperative with said spiral portion to draw the tapered portion of the drill into the socket on the relative rotative motion of the drill and socket, the pitch of said spiral portion being such as to permit withdrawal of the drill from the socket on the application of forward endwise thrust thereto.

2. The combination of an internally tapered socket, and a drill having a correspondingly tapered, spiral portion in the socket, the tapered portion of said drill being spirally grooved and the socket having projecting means therein extending into said spiral groove to thereby draw the tapered portion of the drill into the socket on relative rotative motion of the drill and socket, the pitch of the groove being such as to permit the shank being driven from the socket while said projecting means is in operative position.

3. The combination of an internally tapered drill socket, and a drill having a correspondingly tapered spiral portion in the socket, the latter having internally fixed projecting means coöperating with said spiral portion, to draw the tapered portion of the drill into the socket on relative rotative motion of the drill and socket.

1,020,545. DISPLAY-RACK. LOUIS FELDMANN, Jr., and THEODORE E. CRECELIUS, St. Louis, Mo., assignors to Multiplex Display Fixture Company, St. Louis, Mo., a Corporation of Missouri. Filed Oct. 10, 1910. Serial No. 586,248. (Cl. 40—104.)



1. The combination, a display-rack, with an upstanding frame having upper and lower cross-bars, of a series of wings swingably supported by said cross-bars, a carriage-guide-way on said frame in the rear, and extending transversely to the axes, of said wings, a threaded rod rotatably mounted on said frame transversely to the axes of said wings and in operative relation to said guide-way, a pair of driven pulleys loosely mounted on said rod, means adapted to oppositely rotate said driven pulleys, a clutch-member shiftable on said rod adapted to be shifted into operative engagement with one or the other of said driven pulleys to rotate said rod in one or the other direction, a carriage arranged to travel on said guide-way, said carriage having threaded engagement with said rod and being adapted thereby, on the rotation of said rod in one or the other direction, to be caused to travel on said guide-way in one or the other direction, to be caused to travel in one or the other direction, a second rod transversely to the axes of said wings and having operative engagement with said clutch-member, levers adapted to releasably lock said second rod in shifted positions and to be automatically released from locking engagement with said rod by said carriage when said carriage reaches the end of its travel in one or the other direction, resilient rod-shifting members mounted on said second rod in the path of said carriage adapted to be engaged and actuated directly by said carriage and to automatically shift said second rod when said locking-means is released from locking engagement therewith, whereby said clutch-member will be shifted into operative engagement with the other of said driven pulleys, said threaded rod reversely rotated, and said carriage caused to travel in the opposite direction, and means on said carriage adapted to automatically swing the wings of said series in one or the other direction as said carriage is caused to travel in one or the other direction; substantially as described.

2. The combination, in a display rack, with an upstanding frame having upper and lower cross-bars, of a series of wings swingably supported by said cross-bars, a carriage-guide-way on said frame in the rear, and extending transversely to the axes, of said wings, a threaded rod rotatably mounted on said frame transversely to the axes of said wings and in operative relation to said guide-way, a pair of driven pulleys loosely mounted on said rod, means adapted to oppositely rotate said pulleys, a clutch-member on said rod adapted to be shifted into operative engagement with one or the other of said pulleys to rotate said rod in one or the other direction, a carriage arranged to travel on said guideway, said carriage having threaded engagement with said rod and being adapted thereby, on the rotation of said rod in one or the other direction, to be caused to travel on said guideway in one or the other direction, a second rod shiftably mounted on said frame and having operative engagement with said clutch-member, levers adapted alternately to releasably lock said second rod in shifted positions, means on said carriage adapted to trip said levers, respectively, out of locking engagement with said second rod when said carriage reaches the end of its travel in one direction or the other, resilient means actuated directly by said carriage adapted to automatically shift said second rod when said respective lever is released from locking engagement therewith, whereby said clutch-member will be shifted into operative engagement with the other of said pulleys, said threaded rod reversely rotated, and said carriage caused to travel in the opposite direction, and means on said carriage adapted to automatically swing the wings of said series in one or the other direction as said carriage is caused to travel in one or the other direction; substantially as described.

3. The combination, in a display rack, with an upstanding frame having upper and lower cross-bars, of a series of wings swingably supported by said cross-bars, a guide-way on said frame in the rear, and extending transversely to the axes, of said wings, a threaded rod rotatably mounted on said frame transversely to the axes of said wings and in operative position relative to said guideway, a pair of pulleys loosely mounted on said rod, means adapted to oppositely rotate said pulleys, a clutch-member on said rod adapted to be shifted into operative engagement with one or the other of said pulleys to rotate said rod in one or the other direction, a carriage arranged to travel on said guideway, said carriage having threaded engagement with said rod and being adapted thereby, on the rotation of said rod in one or the other direction, to be caused to travel on said guide-way in one or the other direction, a second rod shiftably mounted on said frame and having operative engagement with said clutch-member, spring-pressed levers pivotally mounted on said frame adjacent the opposite ends of said second rod, said levers being adapted alternately to releasably engage with said second rod to lock the same in shifted positions and to be alternately automatically released from locking engagement therewith by said carriage when said carriage reaches the end of its travel in one direction or the other, coiled springs on said second rod adjacent its opposite ends adapted to be alternately compressed by said carriage as the same nears the end of its travel in one direction or the other and to automatically shift said second rod when said respective lever is released from locking engagement therewith, whereby said clutch-member is shifted into operative engagement with the other of said pulleys, said threaded rod reversely rotated, and said carriage caused to travel in the other direction, and means on said carriage adapted to automatically swing the wings of said series in one direction or the other as said carriage is caused to travel in one or the other direction; substantially as described.

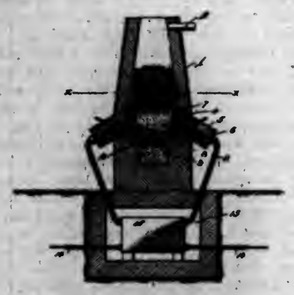
4. A display-rack comprising an upstanding frame having upper and lower cross-bars, a series of wings swingably supported by said cross-bars, each of said wings being provided with a rearwardly-extending stud, a carriage-guide-way on said frame in the rear, and extending transversely to the axes of said wings, a threaded rod rotatably mounted on said frame transversely to the axes of said wings and in operative position relative to said guide-way, means adapted to rotate said rod in one direction or the other, a carriage arranged to travel on said guide-way, said carriage having threaded engagement with

said rod and being adapted thereby, on the rotation of said rod in one direction or the other, to be caused to travel on said guide-way in one or the other direction, means adapted to be automatically actuated by said carriage when it reaches the end of its travel in one direction to cause said rotating means to reversely rotate said rod to cause said carriage to travel in the other direction, and a pair of oppositely-disposed spring-pressed pawls on, and normally extending forwardly on the same plane from, said carriage, one of said pawls being adapted to operatively engage with said studs to automatically swing the wings of said series in one direction and the other of said pawls being adapted to operatively engage with said studs to automatically swing the wings of said series in the other direction as said carriage is caused to travel in one or the other direction; substantially as described.

5. The combination with a display-rack comprising a series of swingable wings, each of said wings being provided with a rearwardly-extending stud, of a carriage adapted to travel transversely to the axes of said wings, and a pair of oppositely-disposed spring-pressed pawls pivotally mounted on, and normally extending forwardly on the same plane from, said carriage, one of said pawls being adapted to operatively engage with said studs to swing the wings of said series in one direction and the other of said pawls being adapted to operatively engage with said studs to swing the wings of said series in the other direction as said carriage travels in one or the other direction transversely to the axes of said wings; substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,020,546. PROCESS OF SMELTING ORES AND APPARATUS THEREFOR. RICHARD FLEMING, Westfield, N. J. Filed May 23, 1910. Serial No. 562,938. (Cl. 204—64.)



1. In the smelting of ores, the process which comprises passing a charge comprising an oxidized ore and carbon downward through a vertical furnace chamber having a constricted portion and at the constricted portion passing a heating current transversely therethrough from a plurality of electrodes spaced away from the charge and arranged to allow the building up of false electrodes of limited length from products of the charge.

2. In the smelting of ores, the process which comprises passing heating currents transversely through a body of ore at a place of constriction from a plurality of electrodes connected to a source of polyphase current, such electrodes being spaced away from the charge and arranged to allow the building up of false electrodes of limited length from products of the charge.

3. In the manufacture of ferrometals, the process which comprises forming a charge comprising an oxidized iron ore and carbonaceous reducing material, passing such charge downward through a vertical furnace chamber having a constricted portion and passing a heating current transversely therethrough from a plurality of electrodes spaced away from the charge and arranged to allow the building up of false electrodes of limited length from reduced metal.

4. In the manufacture of ferrometals, the process which comprises forming a charge comprising an oxidized iron ore and carbaceous reducing material, passing such charge downward through a vertical furnace chamber of the blast furnace type and having a constricted portion and passing heating currents therethrough from a plurality of electrodes connected to a source of polyphase current and out of direct contact with said charge.

5. In the manufacture of ferrometals, the process which comprises forming a charge comprising an iron ore and reducing material, passing such charge downward through a vertical furnace chamber having a constricted portion and passing heating currents therethrough from a plurality of electrodes connected to a source of polyphase current, such electrodes being arranged to allow the building up of false electrodes of limited length from products of the charge.

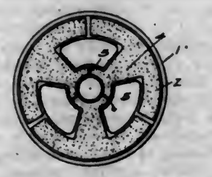
[Claims 6 to 17 not printed in the Gazette.]

1,020,547. BAG-FASTENER. FRANZ A. FULLER, Newark, N. J., assignor to J. E. Mergott Company, Newark, N. J., a Corporation of New Jersey. Filed Oct. 26, 1910. Serial No. 589,123. (Cl. 70—116.)



In a bag or purse frame, the combination with a pair of hinged frame sections, bearing secured in alinement upon one of said frame sections, and a spring-actuated catch in pivotal engagement with said bearings, and in normal retaining contact with one of said frame members, said spring-actuated catch being provided with holding lugs, the spring being secured in said holding lugs and so arranged against rotation in the catch, and on the frame section to which the catch is secured, that the lower rear edge of the catch strikes the spring at that point where, it is secured to the frame section, when the catch is raised, so as to limit the upward movement of the same.

1,020,548. ABRADING-WHEEL AND MOUNTING THEREFOR. ROLAND GARDNER, Cleveland, Ohio. Filed Feb. 13, 1911. Serial No. 608,359. (Cl. 51—1.)



1. In an abrading wheel, the combination of an annular member; a plate removably seated therein; an abrading block secured to said plate by a cementitious substance and comprising two concentric substantially annular portions; and a second member adapted to clamp said plate in said first member.

2. In an abrading wheel, the combination of an annular member; a plate removably seated therein; an abrading block secured to said plate by a cementitious substance and comprising two concentric substantially annular portions; and a second member adapted to clamp said plate in said first member.

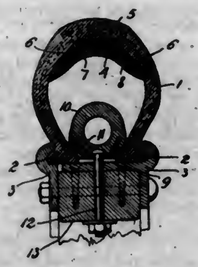
3. In an abrading wheel, the combination of an annular member; a plate removably seated therein; an abrading block secured to said plate by a cementitious substance and comprising a plurality of similar members; each member being formed with two concentric arc-shaped portions and with a portion extending radially from substantially the middle of the inner arc-shaped portion to substantially the middle of the outer one, and a second member adapted to clamp said plate in said first member.

4. In an abrading wheel, the combination of an annular member; a plate removably seated therein; an abrading block secured to said plate by a cementitious substance; and a second member adapted to clamp said plate in said first member.

5. In an abrading wheel, the combination of an annular member provided interiorly with a beveled surface and with inwardly extending projections above its upper surface; a plate provided with a beveled edge seating against the beveled surface of said member; an abrading block secured to said plate by a cementitious substance; and a second member resting on said plate and provided with ridges adapted to wedge against said projections.

[Claim 6 not printed in the Gazette.]

1,020,549. VEHICLE-TIRE. RUDOLPH GLABAZNYA, Chicago, Ill. Filed June 24, 1911. Serial No. 635,162. (Cl. 152—8.)

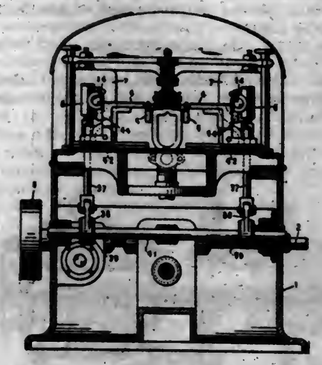


A removable stiffener for vehicle tires comprising a plurality of superimposed annular resilient bands, a plurality of annular resilient rods at each side of and spaced inwardly from said bands, conforming substantially to the contour of the tread portion of a tire, and plates connecting said bands and rods at intervals, said plates being arranged in pairs having oppositely directed recesses to receive the rods, each pair being riveted together on opposite sides of the rods, and said bands, rods and plates being embedded in an annular member of resilient material adapted to fit the inside of the tread portion of a tire, substantially as described.

1,020,550. NOTCHING MECHANISM FOR CAN-BODY BLANKS. CHARLES W. GRAHAM, Rome, N. Y., assignor, by mesne assignments, to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Jan. 28, 1910. Serial No. 540,558. (Cl. 164—64.)

1. In a device of the kind described, a casing, a rock shaft mounted in the casing, a die secured to the casing and forming a part thereof, a notching device upon said shaft within the casing coöperative with the die, said die and notching device having interengaging and mutually guiding portions and means for rocking the shaft.

2. In a device of the kind described, a casing, a rock shaft mounted in the casing, a die secured to the casing and having a portion in which the rock shaft has a bearing, and a notching device operated by the shaft within the casing coöperative with the die, said die and notching device having interengaging and mutually guiding portions and means for rocking the shaft.



3. In a device of the kind described, a casing, a rock shaft mounted in the casing, a die secured to the casing and having spaced portions in which the shaft rotates, and a notching device operated by the shaft coöperative with the die and moving between said spaced portions of the die, said die and notching device having interengaging and mutually guiding portions and means for rocking the shaft.

4. In a device of the kind described, a casing, a rock shaft mounted in the casing, a die secured to the casing and having a portion in which the rock shaft has a bearing, and a notching device operated by the shaft within the casing coöperative with the die, said die and notching device having interengaging and mutually guiding portions and a means for driving the pinion.

5. In a device of the kind described, a casing, a rock shaft mounted in the casing, a die secured to the casing and having spaced portions in which the shaft rotates, and a notching device operated by the shaft coöperative with the die and moving between said spaced portions of the die, and means for rocking the shaft, said means including a pinion upon the shaft, said die and notching device having interengaging and mutually guiding portions and a means for driving the pinion.

[Claims 6 to 53 not printed in the Gazette.]

1,020,551. EXERCISING AND STRENGTH-TESTING APPLIANCE. JOACHIM HARANIA, Frankfort-on-the-Main, Germany. Filed Aug. 29, 1911. Serial No. 646,663. (Cl. 46—69.)



1. An appliance of the character described, comprising a holder, a sliding member carried thereby, and a relatively heavy freely moving member carried by the holder behind the sliding member and adapted to propel the latter when a thrust is made with the apparatus.

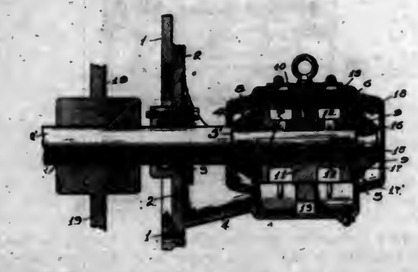
2. An appliance of the character described, comprising a holder, a sliding member carried thereby, means for retarding the motion of the said member, and a relatively heavy freely moving member carried by the holder behind the sliding member and adapted to propel the latter when a thrust is made with the apparatus.

3. An appliance of the character described, comprising a holder, a sliding member carried thereby, means for retarding the motion of the said member and means for restricting the extent of its motion, and a relatively heavy freely moving member carried by the holder behind the sliding

member and adapted to propel the latter when a thrust is made with the apparatus.

4. An appliance of the character described, comprising a longitudinally chambered holder, a member sliding therein, and a freely moving weight located within the chamber back of the slide.

1,020,552. THRUST-BEARING. GEORGE J. HENRY, Jr., San Francisco, Cal. Filed Aug. 7, 1911. Serial No. 642,694. (Cl. 64—25.)



1. In a thrust bearing for the described purpose, the combination with a sustaining shaft, of separable bearing blocks held thereon, a solid thrust bearing collar slidably mounted on said shaft and against which the inner end of the bearing blocks bear, a separable thrust bearing collar keyed to the outer end of the sustaining shaft, and a lock ring interposed between the inner face of the said collar and the outer end of the bearing blocks, said ring interlocking with the separable thrust bearing collar for holding the same in position relative to the sustaining shaft.

2. In a thrust bearing for the described purpose, the combination with a sustaining shaft, of bearing blocks detachably held thereto, a separable thrust bearing collar keyed to the outer end of the shaft, a lock ring interposed between the said collar and the outer end of the bearing blocks and slidable on the sustaining shaft, the said lock-ring carrying means for moving into locked engagement with the separable thrust bearing collar.

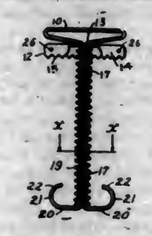
3. In a thrust bearing for the described purpose, the combination with an outer separable thrust bearing collar provided with a series of peripheral seats, of a lock ring provided with a plurality of laterally projecting lugs for moving into locked engagement with the mentioned seats of the thrust bearing collar, the said lock ring when in locked engagement with the bearing collar forming an inner bearing surface therefor.

4. In a thrust bearing for the described purpose, the combination with a separable thrust bearing collar provided with a plurality of circumferentially disposed seats, of a lock ring provided with a plurality of laterally projecting lugs for engagement with the mentioned seats of the thrust collar, the said lock ring when in locked engagement with the bearing collar forming an inner bearing surface therefor.

5. In a thrust bearing for the described purpose, the combination with a bearing casing provided with a removable cover or cap section, of a sustaining shaft having a reduced portion extended through the casing and provided in its outer end with an annular groove, an inner thrust bearing collar slidable on the shaft within the casing, a separable thrust bearing collar fitted in the said annular groove of the sustaining shaft and secured thereto, the said collar being provided with a plurality of circumferentially disposed seats, a lock-ring slidable on the sustaining shaft and provided with means for engaging with the seats of the separable thrust bearing collar for holding the same in position relative to the shaft, the said lock ring forming an inner wear surface for the mentioned collar, and separable bearing blocks held to the shaft within the bearing casing, the said blocks holding the thrust bearing collars spaced apart.

[Claims 6 and 7 not printed in the Gazette.]

1,020,553. ELASTIC TENSION DEVICE. JAMES C. HODGES, Attleboro, Mass., assignor to Sidney O. Bigney. Filed Aug. 11, 1911. Serial No. 643,490. (Cl. 74—74.)



1. A tension device of the type set forth, comprising a post, an engaging member upon one end of the post, a spiral spring upon the post, means upon the other end of the post for supporting the spring, tubular members slidably mounted upon the post wholly within the spring, and a casing slidably mounted upon the post and engaging the upper end of the spring to compress the same.

2. A tension device of the type set forth, comprising a post, a spiral spring upon the post, means upon the post for supporting the spring, tubular members slidably mounted upon the post within the spring, and a casing slidably mounted upon the post and engaging the upper end of the spring to compress the same.

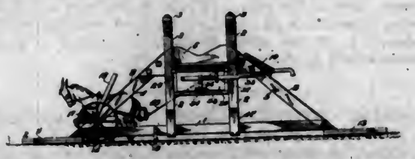
3. A tension device of the type set forth, comprising a post, an engaging member upon the upper end of the post, a spiral spring upon the post below the engaging member, interspaced tubular members slidably mounted upon the post within the spring, and a casing slidably mounted upon the post and engaging the upper end of the spring to compress the same.

4. A tension device of the type set forth, comprising a post, an engaging member upon one end of the post, means upon the other end of the post for supporting the spring, a spiral spring upon the post, tubular members slidably mounted upon the post and engaging the spring, and a casing slidably mounted upon the post and engaging the upper end of the spring to compress the same.

5. A tension device of the type set forth, comprising a post, an engaging member upon the upper end of the post, a spiral spring upon the post, means upon the post for supporting the spring, interspaced metallic tubular members loosely mounted upon the post and engaging intermediate portions of the spring, and a casing slidably mounted upon the post and engaging the upper end of the spring to compress the same.

[Claims 6 to 12 not printed in the Gazette.]

1,020,554. LOADING APPARATUS. PRESTON L. HOLCOMB, Birmingham, Ala. Filed Aug. 18, 1911. Serial No. 644,777. (Cl. 214—10.)



1. An unloading apparatus comprising a frame-work, two oppositely disposed and reversely inclined ways supported by said frame-work, a load carrying receptacle adapted to ride up said ways from either direction, and dumping means to engage and dump said receptacle as it passes in either direction from one to the other inclined way.

2. In an unloading apparatus of the character described, reversely inclined ways over which a loaded receptacle is adapted to be moved in making a continuous passage through said apparatus, a receptacle adapted to ride up said ways, means to dump said receptacle in its elevated position, a hopper into which the contents of said receptacle are adapted to be dumped, means to support said hopper in an elevated position to discharge its contents sidewise of the apparatus into wagons, and draft means which pass centrally lengthwise through said apparatus which lifts the receptacle above the line of draft to dumping position.

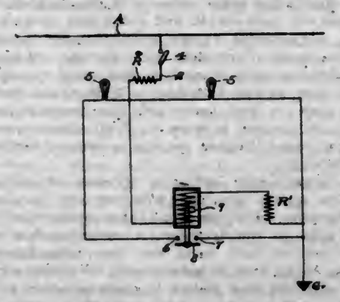
3. In an apparatus of the character described, a framework comprising uprights, a pair of oppositely disposed and reversely inclined ways which lead from the ground up to said uprights, dumping means disposed at the top of said inclined ways, a hopper also supported by said uprights and adapted to receive the contents from conveyers which are dumped thereinto in passing by said dumping means, door means to retain the material in said hopper which is disposed in elevated position to discharge into a wagon, and a haulage connection to said conveyers adapted to pass down between said ways and below said hopper as it passes lengthwise through the apparatus, substantially as described.

4. In an apparatus of the character described, a dumping structure comprising oppositely disposed and reversely inclined ways, a receptacle adapted to be drawn up said ways, a pair of inclined hoppers disposed on each side of said ways near the upper ends thereof, and means to engage said receptacle and dump its contents partially into each of said hoppers, substantially as described.

5. An apparatus of the character described comprising uprights, inclined ways leading in reverse directions from the upper ends of said uprights, reversely inclined hoppers supported in elevated position and disposed to each side of said ways, a receptacle adapted to be moved up one way and down the other, and means to dump the contents of said receptacle into said hoppers, substantially as described.

[Claims 6 to 15 not printed in the Gazette.]

1,020,555. SIGNAL. ALBERT J. HORTON, White Plains, N. Y., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis., a Corporation of Wisconsin. Filed Feb. 1, 1900. Serial No. 475,367. (Cl. 175—279.)



1. The combination with a supply circuit, of an electroresponsive device connected across said supply circuit, a normally deënergized electroresponsive device, and means for energizing said last mentioned device upon failure of said first mentioned device to respond.

2. The combination with a supply circuit, of an electroresponsive device connected across said circuit, a normally deënergized electroresponsive device, and electroresponsive means for energizing said second mentioned device upon failure of said first mentioned device to respond.

3. The combination with a supply circuit, of an electroresponsive device connected across said circuit, a normally deënergized electroresponsive device, an electroresponsive relay switch for connecting said second mentioned device in circuit and means rendering the response of said switch dependent upon the failure of said first mentioned device to respond.

4. The combination with a supply circuit of an electroresponsive device connected across said circuit, a second electroresponsive device adapted to be connected across said circuit, an electroresponsive switch adapted upon responding to connect said second device in circuit, and means necessitating deënergization of said first mentioned device prior to response of said switch.

5. The combination with a supply circuit, of an electroresponsive device connected across said supply circuit, an electroresponsive switch having its operating winding connected in parallel with said device, a common voltage regulating means connected in series with said device and the operating winding of said switch, said switch being adapted to respond only upon interruption of the parallel circuit including said device and a second electroresponsive device arranged to be energized when said switch responds.

[Claims 6 to 9 not printed in the Gazette.]

1,020,556. GAS-LAMP. FREDERICK J. HUMPHREY and HUBERT H. HUMPHREY, Kalamazoo, Mich., assignors to General Gas Light Company, Kalamazoo, Mich. Filed Feb. 15, 1911. Serial No. 608,692. (Cl. 67—94.)



1. In a gas lamp, the combination with a horizontally-disposed gas supply pipe, of a burner; a chimney; a supply valve casing mounted on said gas supply pipe; a chimney supporting bracket on said valve casing and having a delivery passage communicating with the passage of said valve casing and leading upwardly therefrom; a gas delivery nozzle member arranged through said bracket above said valve casing and communicating with said bracket passage; a delivery nozzle on the inner end of said nozzle member; a mixing tube arranged on said bracket and adapted to serve as a burner supporting member; a pilot burner; a coupling member for said pilot threaded into said bracket; and a delivery tube threaded into said valve casing and coupling member.

2. In a gas lamp, the combination with a horizontally-disposed gas supply pipe, of a burner; a chimney; a supply valve casing mounted on said gas supply pipe; a chimney supporting bracket on said valve casing and having a delivery passage communicating with the passage of said valve casing and leading upwardly therefrom; a gas delivery nozzle member arranged through said bracket above said valve casing and communicating with said bracket passage; a delivery nozzle on the inner end of said nozzle member; and a mixing tube arranged on said bracket and adapted to serve as a burner supporting member.

3. In a gas lamp, the combination with a horizontally-disposed gas supply pipe, of a burner; a chimney; a supply valve casing mounted on said gas supply pipe; a chimney supporting bracket on said valve casing and having a delivery passage communicating with the passage of said valve casing; a pilot burner; a coupling

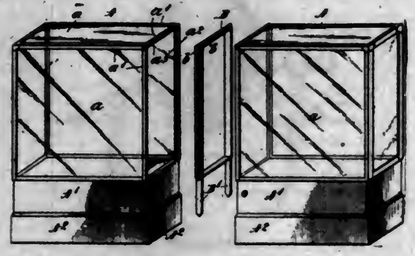
member for said pilot threaded into said bracket; and a delivery tube threaded into said valve casing and coupling member.

4. In a gas lamp, the combination with a horizontally-disposed gas supply pipe, of a burner; a chimney; a supply valve casing mounted on said gas supply pipe; and a chimney supporting bracket having curved arms embracing the side of the chimney and secured thereto, said bracket being mounted on said valve casing and having a delivery passage communicating with the passage of said valve casing.

5. In a gas lamp, the combination with a gas supply pipe, of a burner; a chimney; a supply valve casing mounted on said gas supply pipe and having a chimney bracket thereon provided with a delivery passage communicating with the passage of said casing; a gas delivery nozzle member arranged through said bracket and communicating with said bracket passage; a delivery nozzle on the inner end of said nozzle member; a burner tube arranged on said bracket and adapted to serve as a burner supporting member; a pilot burner; a coupling member for said pilot carried by said bracket; and a delivery pipe connecting said valve casing and coupling member.

[Claims 6 to 12 not printed in the Gazette.]

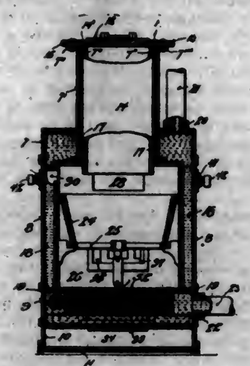
1,020,557. EXPANSIBLE CABINET. DAVID E. HUNTER, Cambridge, Mass., assignor to Library Bureau, Boston, Mass., a Corporation of New Jersey. Filed Sept 7, 1909. Serial No. 516,530. (Cl. 211—25.)



1. An expansible museum cabinet or case comprising a plurality of cabinet sections identical in one vertical plane dimension, the juxtaposed ends of the sections being open and unobstructed, a base for each section also identical and of irregular contour in one vertical plane to permit a portion of adjacent bases to contact and provide an intervening space between the remainder of the bases and the sections, a separator between adjacent cabinet sections corresponding in contour with the identical plane contours of the cabinet sections and consisting of a margin frame between the ends of the walls of the cabinet sections, said frame being open and unobstructed in the center and having portions adapted to fit the space between the bases, whereby a clear and unobstructed space is provided through and through from one section to another when the sections are juxtaposed with the separator between them, and means to bind said sections and their intervening separator together.

2. An expansible museum cabinet or case comprising a plurality of cabinet sections identical in one vertical plane dimension, the juxtaposed ends of the sections being open and unobstructed, a separator between adjacent cabinet sections corresponding in contour with the identical plane contours of the cabinet sections and consisting of a margin frame between the ends of the walls of the cabinet sections, said frame being open and unobstructed in the center, whereby a clear and unobstructed space is provided through and through from one section to another when the sections are juxtaposed with the separator between them, the opposing ends of the sections having grooves or depressions, the separator having a complemental tongue for each groove or depression, whereby the sections will be held against relative transverse movement by the separator, and means for removably securing the sections and separator together.

1,020,558. WATER-HEATER. FREDERICK C. JAENEKE, Milwaukee, Wis. Filed Sept. 28, 1911. Serial No. 651,744. (Cl. 122—368.)



1. A water-heater having a smoke-trunk therein below the ashpit thereof in communication with a base-compartment that is open to a draft-flue, there being ducts leading from the fire-chamber of the heater to the smoke-trunk, and water circulating space above said fire-chamber, around the same and said ashpit, and about said smoke-trunk.

2. A water-heater provided with an upper fuel-magazine and having a smoke-trunk therein below the ashpit thereof in communication with a base-compartment that is open to a draft-flue, there being ducts leading from the fire-chamber of the heater to the smoke-trunk, and water circulating space above said fire-chamber, around the same and said ashpit, and about said smoke-trunk.

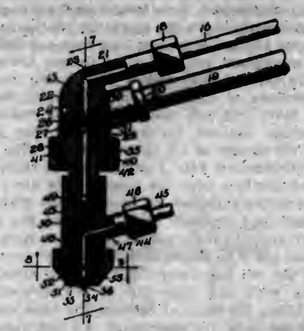
3. A water-heater having a fire-chamber, ashpit and draft-flue section provided with vertical channels and ducts between walls thereof; a base-compartment of the heater open to the draft-flue, a smoke-trunk under the ashpit open to said ducts and base-compartment, said channels being open to space about the smoke-trunk; and an upper water-chamber section in communication with said channels.

4. A water-heater having a fire-chamber, ashpit and draft-flue section provided with vertical channels and ducts between walls thereof; a base-compartment of the heater open to the draft-flue, a smoke-trunk under the ashpit open to said ducts and base-compartment, said channels being open to space about the smoke-trunk; an upper water-chamber section in communication with said channels, and a fuel-magazine suspended within an upward extension of said water-chamber section.

5. A water-heater having a fire-chamber, ashpit and draft-flue section provided with vertical channels and ducts between walls thereof; a base-compartment of the heater open to the draft-flue, a Y-shaped smoke-trunk under the ashpit having its branches open to said ducts and its stem open to the base-compartment, said channels being open to space about the smoke-trunk; and an upper water-chamber section in communication with said chamber.

1,020,559. ACETYLENE-TORCH. CARL JOHNSON, Chicago, Ill. Filed Apr. 18, 1911. Serial No. 621,911. (Cl. 158—13.5.)

1. In a device of the class described, a head comprising a one-piece metal member having two ducts drilled therein, one of said ducts extending axially, said member having an annular chamber cut therein around the axial duct and connected to the other duct, and said member having converging ducts drilled therein connecting the said annular chamber to the axial duct.



2. In a device of the class described, a head comprising a one-piece metal member having ducts for oxygen and acetylene drilled therein and also having an annular channel cut in one face of the metal member around the oxygen duct and connected to the acetylene duct, thus forming a boss in said face of the metal member, said boss being surrounded by said channel, said oxygen duct leading axially through said boss, and said boss having a countersink on its face at the end of said oxygen duct, said boss also having converging ducts drilled therein from the annular channel to the said countersink, in combination with a tip having a duct therein, said tip being adapted to be fastened securely against the face of the boss so as to cover and close said annular channel and have its duct connecting to the said countersink.

3. In a device of the class described, a head having a socket in its end to receive a tip and having an annular channel cut at the bottom of said socket and located so as to leave a shoulder outside the channel as well as a boss inside thereof, in combination with a tip adapted to fill said socket and lie closely against the end of the boss and against said shoulder, said tip having a duct therein.

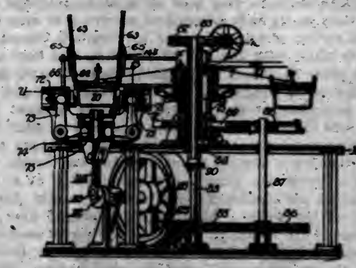
4. In a device of the class described, a head comprising a one-piece metal member, oxygen and acetylene supply pipes connected thereto, said metal member having ducts drilled therein leading from said pipes, the duct from the oxygen pipe being constricted near its end remote from the corresponding supply pipe and opening thence on a face of the metal member, said metal member also having a countersink where said oxygen duct opens and having a deep annular channel cut around said countersink and connected to the acetylene duct and having converging ducts from said channel to said countersink, in combination with a tip having a duct therethrough connecting with said countersink.

5. In a device of the class described, a head comprising a one-piece metal member, oxygen and acetylene supply pipes connected thereto, said metal member having ducts drilled therein connecting with the respective pipes, the duct from the oxygen pipe being constricted near its end remote from said pipe and opening thence on the face of the metal member, said metal member also having a countersink where said duct opens on the face of the metal member and having a deep annular channel cut around said countersink and connected to the acetylee duct, in combination with a tip fitting closely over said annular channel and thereby closing the same, said tip having an axial duct extending therethrough from said countersink.

[Claims 6 to 8 not printed in the Gazette.]

1,020,560. SHEET-METAL-VESSEL-MAKING MACHINE. JOHN KROHN, Chicago, Ill., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Nov. 28, 1910. Serial No. 594,425. (Cl. 113—7.)

1. In a sheet metal vessel making machine, the combination with a body blank feeder, of edge folders, an intermittently moving carrier having a plurality of body former horns thereon, body formers for bending the body blank about the horn, a plurality of pair of body blank clamping and edge fold closing dies, one pair for each horn, feed chutes for heads, a pair of seam forming dies between and into registry with which the horns are successively brought, and a pair of seam closing dies between and into registry with which the horns are brought successively by the carrier, substantially as specified.



2. In a sheet metal vessel making machine, the combination with a body blank feeder, of edge folders, an intermittently moving carrier having a plurality of body former horns thereon, body formers for bending the body blank about the horn, a plurality of pairs of body blank clamping and edge fold closing dies, one pair for each horn, feed chutes for heads, a pair of seam forming dies between and into registry with which the horns are successively brought, and a pair of seam closing dies between and into registry with which the horns are brought successively by the carrier, substantially as specified.

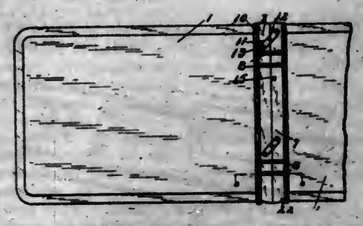
3. The combination with a body blank and a head feeding means and an intermittently rotating carrier having a plurality of radially arranged horns, of a pair of seam forming dies between and into registry with which the horns are successively brought by the carrier, substantially as specified.

4. The combination with a body blank and a head feeding means and an intermittently rotating carrier having a plurality of radially arranged horns, of a pair of seam forming dies between and into registry with which the horns are successively brought by the carrier, and a pair of seam closing dies between and into registry with which the horns are bronght successively by the carrier, substantially as specified.

5. The combination with a body blank and a head feeding means and an intermittently rotating carrier having a plurality of radially arranged body former horns, of body formers, and a pair of seam forming dies between and into registry with which the horns are brought successively by the carrier, substantially as specified.

[Claims 6 to 41 not printed in the Gazette.]

1,020,561. TEMPORARY BINDER OR LOOSE-SHEET HOLDER. REINHOLD KRUMMING, Milwaukee, Wis. Filed Sept. 5, 1911. Serial No. 647,745. (Cl. 120—9.)



1. In a temporary binder, the combination of a back plate having a longitudinal opening therein and rearwardly projecting lugs at its edges, a flexible cover arranged

over said back plate, a transversely curved back member arranged upon and secured to said back plate by said lugs to clamp said cover thereon, said back member being provided with seats for said lugs, a pair of facing binding member bars having binder members disposed thereon in coacting pairs, supporting links for said bars pivotally mounted on said back plate, said bars being pivotally mounted on said links, stop lugs at opposite ends of said binding member bars, said back plate being provided with curved slots in its ends adapted to receive said stop lugs, a coiled spring arranged in said longitudinal opening in said back plate, with one end connected to said back plate and the other to one of said binding member bars, and a catch pivoted on the rear side of said back plate and projecting forwardly at the end thereof to be engaged with one of said binding member bars, the end of said back plate being notched to receive said catch, said back member constituting a housing for said spring and catch.

2. In a temporary binder, the combination of a back plate having an opening therein and rearwardly projecting lugs at its edges, a flexible cover arranged over said back plate, a back member arranged upon and secured to said back plate by said lugs to clamp said cover thereon, a pair of facing binding member bars having binding members disposed thereon in coacting pairs, supporting links for said bars pivotally mounted on said back plate, said bars being pivotally mounted on said links, stops for said binding member bars, a coiled spring arranged in said opening in said back plate, with one end connected to said back plate and the other to one of said binding member bars, and a catch pivoted on said back plate for one of said binding member bars.

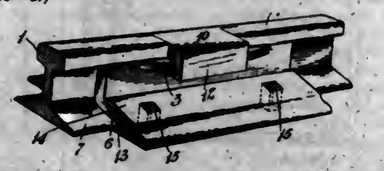
3. In a temporary binder, the combination of a back plate having rearwardly projecting lugs at its edges, a flexible cover arranged over said back plate, a back member arranged upon and secured to said back plate by said lugs to clamp said cover thereon, a pair of facing binding member bars having binder members disposed thereon in coacting pairs, supporting links for said bars pivotally mounted on said back plate, said bars being pivotally mounted on said links, a spring connected to said back plate and to one of said binding member bars, and a catch mounted on said back plate to be engaged with one of said binding member bars, said back member constituting a housing for said spring and catch.

4. In a temporary binder, the combination of a back plate having rearwardly projecting lugs at its edges arranged in opposed pairs, a flexible cover member arranged over said back plate, a back member arranged upon and secured to said back plate by said lugs to clamp said cover thereon, said back member being provided with seats in its edges for said lugs, said seats being depressed so that the lugs are below the surface of the back member, and binding members mounted on said back plate.

5. In a temporary binder, the combination of a back plate having rearwardly projecting lugs at its edges, a flexible cover member arranged over said back plate, a back member arranged upon and secured to said back plate by said lugs to clamp said cover thereon, the edges of said back member being notched to receive said lugs and provided with depressed seats therefor, and binding members mounted on said back plate.

[Claims 6 to 23 not printed in the Gazette.]

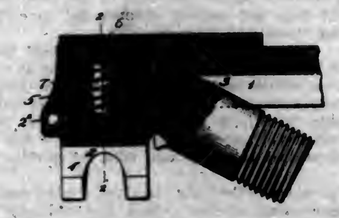
1,020,562. RAIL-JOINT. CHARLES LAKOSKY, Cooks Mills, Mich. Filed Nov. 15, 1911. Serial No. 660,328. (Cl. 239—3.)



1. The combination with a pair of alined railroad rails, of an outer fish plate having a foot flange that overlaps the margins of the rail base flange and an upper marginal lip, an inner fish plate having a foot flange that overlaps the margins of the rail base flanges and an upper tread portion interlocking with the upper lip of the companion fish plate and filling the interval between the ends of the rails, the superposed rail and plate flanges having registering marginal notches, and a rail cradle supporting the end portions of the rails and embracing the superposed fish plate and rail base flanges, the cradle having spike openings adapted to register with the marginal notches of the flanges of the plates and the rails.

2. The combination with a pair of alined railroad rails whose tread portions near the ends thereof are cut away and correspondingly gained, of an outer fish plate having a foot flange that overlaps the margins of the rail base flanges and an outwardly projecting upper marginal lip, an inner fish plate having a foot flange that overlaps the margins of the rail base flanges and an upper tread portion interlocking with the upper lip of the companion fish plate and filling the interval between the ends and gained portions of the rails, the superposed rail and plate flanges having registering marginal notches, and a rail cradle supporting the end portions of the rails and having longitudinal flanges embracing the superposed fish plate and rail base flanges, the cradle having openings through the flanges and the body thereof adapted to register with the marginal notches of the flanges of the plates and the rails.

1,020,563. BRAKE-BEAM. ERNEST A. LE BEAU, Chicago, Ill., assignor to Chicago Railway Equipment Company, Chicago, Ill., a Corporation of Illinois. Filed Aug. 11, 1909. Serial No. 512,414. (Cl. 188—22.)



1. In a brake beam, the combination with a compression member, of a thrust member against which said compression member is seated, a tension rod connected to said thrust member, a brake head removably mounted on said thrust member beyond said compression and tension members, and a spring pressed locking block mounted in said thrust member and coöperating with said brake head.

2. A thrust block for a brake beam comprising a casting having a seat for a compression member and means for the attachment of a tension member thereto, said casting extending outwardly beyond the points where the said compression and tension members are attached to provide for a brake head, and said mount being chambered to receive a locking block.

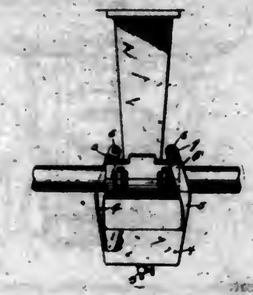
1,020,564. OIL-CATCHER. JOSEPH E. LEBERMAN, Sheboygan, Wis. Filed June 23, 1911. Serial No. 635,031. (Cl. 184—106.)

1. An oil-catcher consisting of a cup having upwardly extending fender-arms inwardly bent at their upper ends and engageable with the ends of a shaft-hanger astraddle of the same.

2. An oil-catcher consisting of a cup having upwardly extending and upwardly forked fender-arms, their forked ends being inwardly bent, and means for fastening the fork-branches of each arm together astraddle of a shaft-hanger.

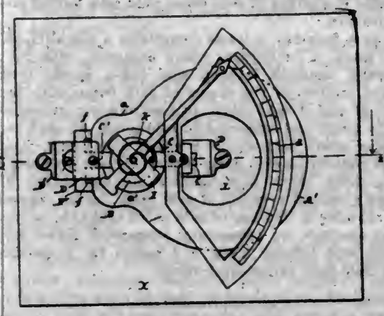
3. An oil-catcher consisting of an angular cup having upwardly continued and divergent concavo-convex ends forked and inwardly extended at a predetermined distance above the cup, and means for fastening the branches of each arm together astraddle of the ends of a shaft-hanger.

4. An oil-catcher consisting of an angular cup having upwardly continued and divergent concavo-convex ends forked and inwardly bent at a predetermined distance above the cup, and bolts and nuts by which to fasten each pair of fork-branches together astraddle of a shaft-hanger.



5. An oil-catcher consisting of a cup having a suitably controlled bottom drain opening and provided with upwardly extending fender-arms engageable with the ends of a shaft-hanger astraddle of the same.

1,020,565. METER FOR MEASURING ELECTRICAL CURRENTS. ALFRED LOEWENBERG, Chicago, Ill. Filed Mar. 22, 1909. Serial No. 484,846. (Cl. 171—95.)



1. The combination with a permanent magnet having inserting field-pieces, of a soft iron core mounted axially between said field-pieces, brass keepers supporting and centering said core, tie plates holding said keepers from displacement, a back-board to which one of said plates is attached, and a current transmitting coil and coil-frame pivotally connected with the core, axially thereof.

2. The combination with a permanent magnet having inserting field-pieces integral therewith and all formed without joints or perforations, of a soft iron core mounted axially between said field-pieces, an oscillatory coil and coil frame hung upon said core, to oscillate thereon, brass keepers supporting and centering said core, and tie plates attached to the ends of said keepers to tie them together and prevent them from moving or springing apart.

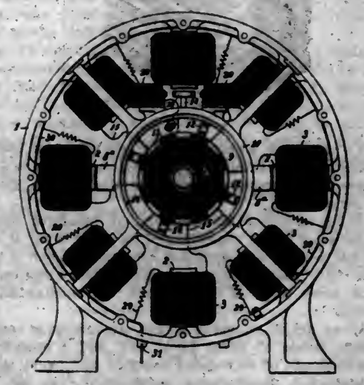
3. The combination with a permanent magnet having inserting field-pieces integral therewith and all formed of integral laminated plates, of a soft iron core mounted axially between said field-pieces, brass keepers supporting and centering said core, and tie plates attached to the ends of said keepers to hold the laminations together and prevent the keepers from moving.

4. The combination with a permanent magnet having inserting field-pieces, of a soft iron core mounted axially between said field-pieces, brass keepers supporting and centering said core, tie plates tying said keepers together and holding them from moving, an oscillatory current transmitting coil and coil-frame axially pivoted to the core, and non-magnetic caps secured to said tie plates and covering and shielding the core, coil and field-pieces.

5. The combination with a permanent magnet having inserting field-pieces integral therewith and all formed of integral laminated plates, of a soft iron core mounted axially between said field-pieces keepers supporting and centering the core, tie plates binding the laminations together and holding said keepers from moving, a current transmitting coil with coil-frame axially hung upon the core, and non-magnetic caps secured to said tie plates and covering and shielding the core, coil and field-pieces.

[Claims 6 and 7 not printed in the Gazette.]

1,020,566. ELECTRIC-MOTOR. JAMES F. MCKINZIE, ROBERT E. MCKINZIE and JOHN B. CLARK, La Salle, Ill. Filed May 3, 1911. Serial No. 624,691. (Cl. 172—36.)



1. An electric motor, comprising a motor-casing carrying field magnets, a rocking commutator having oppositely arranged segments in circuit with the windings of diametrically opposite magnets, means for supporting said rocking commutator, a rotatable armature having diametrically opposite poles, a rotatable brush in contact with said commutator, a circuit carrying ring, and a stationary brush in contact with said ring.

2. In an electric motor, a plurality of field magnets, an armature having opposed poles, a rocking commutator having opposed segments in connection with the windings of opposed field magnets, and a rotatable brush adapted to make contact with said commutator-segments whereby a current is successively introduced into opposed field magnets to establish the polarities thereof in advance of said armature poles, and means for rocking said commutator.

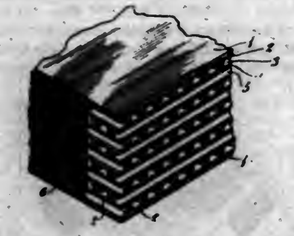
3. An electric motor, comprising a motor casing carrying a plurality of field magnets, a shaft carrying an armature having opposed poles, a rocking commutator having segments connected with the windings of said field magnets, a brush carried by said shaft and adapted to make contact with said segments whereby opposed field magnets are energized and denergized in sequential order and the magnetic field maintained in advance of said armature poles, a stationary brush, and a current carrying ring in contact with said brushes.

4. An electric motor, comprising a motor casing carrying a plurality of field magnets, a rotatable shaft provided with an armature having opposed poles, a rocking commutator having segments electrically connected with said field magnets, a current carrying ring, a brush carried by said shaft in contact with said commutator segment, a stationary brush in contact with said ring, reversing magnets, and an armature on said commutator in coöperative relation to said reversing magnets whereby said commutator may be shifted to reverse the travel of said armature.

5. In an electric motor, a stationary supporting ring, a commutator supporting ring movably carried thereby, a commutator insulator carried by said last mentioned ring and provided with a plurality of spaced commutator seg-

ments, an armture shaft provided with a current carrying ring, a brush on said shaft adapted to make contact with said segments, and a stationary brush in contact with said current carrying ring.

1,020,567. INSULATOR-COVERING. WILLIAM J. MOELLER, Wyoming, Ohio, assignor to The Philip Carey Manufacturing Company, Lockland, Ohio, a Corporation of Ohio. Filed June 6, 1910. Serial No. 565,322. (Cl. 154—55.)



1. As an article of manufacture, an insulator comprising outer layers of water proof felt, and inner layers of superposed corrugated asbestos and woolen felt, substantially as set forth.

2. As an article of manufacture, an insulator comprising a series of layers consisting of an outer layer of water proof felt, a layer of corrugated asbestos, a layer of heavy woolen felt, another layer of corrugated asbestos, and another outer layer of water proof felt, substantially as set forth.

3. As an article of manufacture, an insulator comprising outer layers of water proof felt, and a plurality of alternate sheets of corrugated asbestos and heavy woolen felt interposed therebetween, substantially as set forth and for the purposes specified.

4. As an article of manufacture, an insulator comprising outer layers of water proof felt, and inner alternate layers of woolen felt, and corrugated asbestos, the corrugations in each alternate layer of asbestos being disposed transversely to the corrugations of the other layers of asbestos, substantially as set forth.

5. As an article of manufacture, an insulator comprising outer layers of water proof felt, and inner layers of superposed corrugated asbestos and woolen felt covered with water proof asphalt compound, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

1,020,568. ALKALINE BATTERY. WILLIAM MORRISON, Des Moines, Iowa. Filed Nov. 14, 1910. Serial No. 592,336. (Cl. 204—29.)

1. A positive-pole electrode for reversible galvanic batteries, comprising a conductor or support, and a mechanically applied intimate mixture containing finely divided compounds of copper and mercury.

2. A positive-pole electrode for reversible galvanic batteries, comprising a conductor or support, and a mechanically applied intimate mixture containing finely divided compounds of copper, silver and mercury.

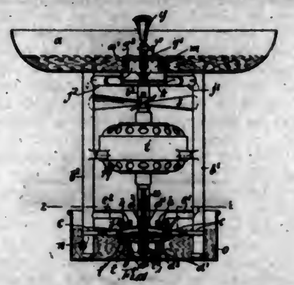
3. A positive-pole electrode for reversible alkaline batteries, comprising a conductor or support, and a mechanically applied intimate mixture containing finely divided oxids of copper and mercury on said support.

4. A positive-pole electrode for reversible alkaline batteries, comprising a conductor or support, and a mechanically applied intimate mixture containing finely divided oxids of copper, silver and mercury on said support.

5. A positive-pole electrode for reversible alkaline batteries, comprising a conductor or support, and a mechanically applied intimate mixture containing finely divided oxids of copper and mercury on said support, the proportion of the mercury oxid in the mixture being relatively large.

[Claims 6 to 14 not printed in the Gazette.]

1,020,569. FOUNTAIN AND CENTRIFUGAL PUMP FOR USE THEREWITH. ARTHUR JOSEPH NEEDHAM and WALTER CECIL NEEDHAM, London, England. Filed June 10, 1911. Serial No. 632,374. (Cl. 137—11.)



1. In a fountain, a frame comprising a plurality of vertical tubes, a centrifugal pump arranged with its axis vertically mounted between said tubes, means connecting the interior of the casing of said pump with the interior of one of said tubes, an electro-motor arranged coaxially above and connected to said pump, an open topped chamber above said motor, a nozzle above said chamber, means connecting said pump-connected tube with said nozzle, a basin above said chamber, an upstanding flange around a central aperture of said basin and means connecting said chamber to another of said tubes, said tube having an outlet aperture.

2. In a fountain, a frame comprising a plurality of vertical tubes, a centrifugal pump arranged with its axis vertically mounted between said tubes, means connecting the interior of the casing of said pump with the interior of one of said tubes, an electro-motor arranged coaxially above and connected to said pump, an open topped chamber above said motor, a nozzle above said chamber, means connecting said pump-connected tube with said nozzle, a basin above said chamber, an upstanding flange around a central aperture of said basin, means connecting said chamber to another of said tubes said tube having an outlet aperture, an ornamental suspension frame secured around said tubular frame and means for suspending a bowl from said ornamental frame.

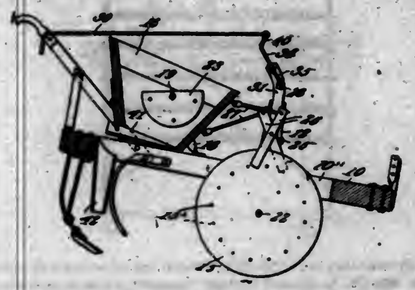
1,020,570. ELEVATED RAILROAD. JÉRÔME ORLAY, Temsche, Belgium. Filed Dec. 1, 1909. Serial No. 530,773. (Cl. 104—4.)



A device of the character described, comprising two rows of inclined poles, interposed inclined live trees to which the poles are connected, an elevated track carried by the poles, props engaging the poles, and arched braces engaging the tracks.

1,020,571. FERTILIZER-DISTRIBUTER. GROVER C. PATE, Daingerfield, Tex. Filed June 23, 1911. Serial No. 634,675. (Cl. 111—38.)

1. In a fertilizer distributer, a rocking hopper, a drive wheel arranged to impart movement to said hopper, a shaft arranged above said drive wheel, a plurality of vertically extending supports, said supports being slotted to receive the end portions of said shaft, arms arranged on said shaft in the path of tappets positioned on said wheel, said arms having a link connection with said hopper and means for imparting vertical movement to said shaft to render said hopper inactive.

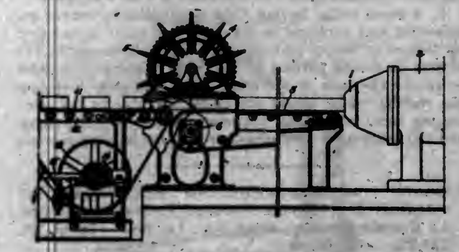


2. In a fertilizer distributer, a rocking hopper, a drive wheel for imparting movement to said hopper, a plurality of uprights, a shaft supported for vertical movement by said uprights, arms arranged on said shaft, said arms having a link connection with said hopper, a curved standard secured to each of said uprights, a shaft supported by said standards, a connection between said shaft and the first mentioned shaft and means for rotating the second mentioned shaft to impart vertical movement to the first mentioned shaft.

3. In a fertilizer distributer, a rocking hopper, means for imparting movement to said hopper, a plurality of vertically extending supports, a shaft supported for vertical movement by said supports, arms arranged on said shaft, said arms having a link connection with said hopper, a curved standard secured to each support, a shaft supported by said standards, a lever pivotally supported by said shaft, a link connection between said lever and the first mentioned shaft, and means for rocking the first mentioned shaft to impart vertical movement to the second mentioned shaft.

4. In a fertilizer distributer, a rocking hopper, a drive wheel for imparting movement to said hopper, a plurality of vertically extending supports, said supports being slotted to receive the end portions of the shaft, an upright secured to each of said supports, said uprights being formed with slots in alinement with the first mentioned slots, a shaft supported by aid uprights, a lever arranged to impart movement to said shaft, and a link connection between said lever and the first mentioned shaft whereby the first mentioned shaft may be vertically adjusted through the rocking of the second mentioned shaft.

1,020,572. APPARATUS FOR HACKING BRICKS. RAYMOND C. PENFIELD, New York, N. Y. Filed Oct. 10, 1910. Serial No. 586,412. (Cl. 25—2.)



1. In an apparatus of the kind described, a conveyer system adapted to receive a continuous line of bricks, and means for imparting differential movements to different portions of said system to separate the bricks into rows with a time interval between the delivery of successive rows.

2. In an apparatus of the kind described, a conveyer system comprising receiving and delivering sections adapted to receive different speed movements, means for moving said sections simultaneously, one to receive a continuous line of bricks, and the other more swiftly to deliver the bricks, and means for transferring the bricks in rows with a time interval between the rows, from the former to the latter section.

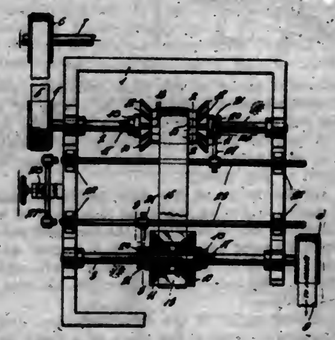
3. In an apparatus of the kind described, a conveyer system comprising receiving and delivering sections adapted to receive different speed movements, means for moving said sections simultaneously, one to receive a continuous line of bricks, and the other more swiftly to deliver the bricks, and a section having provision to receive variable speed for transferring the bricks in rows with a time interval between the rows, from said receiving to the delivering section.

4. In an apparatus of the kind described, a conveyer system comprising a section adapted to be moved in time with a line of bricks fed thereto, a separately movable section, and means for alternately moving the latter section at a rate similar to that of the former section for loading, and at an accelerated rate to create a time interval between the row of bricks thereon and the succeeding line.

5. A brick backing apparatus, comprising a conveyer system adapted to receive a continuous line of bricks and constructed to deliver the bricks in backing rows with a time interval between rows, and means for bodily transferring the rows from the conveyer to build up a stack.

[Claims 6 to 74 not printed in the Gazette.]

1,020,573. VARIABLE-SPEED MECHANISM. JACOB RANZ, St. Louis, Mo. Filed Dec. 12, 1910. Serial No. 596,953. (Cl. 64—8.)



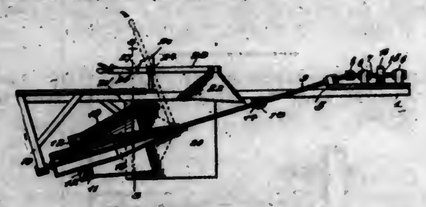
1. In an apparatus of the class described, the combination with a shaft, of an expansible pulley comprising a pair of conical members, one of which is mounted to rotate with and slide upon the shaft, means on the shaft for adjusting the opposite conical member toward the first mentioned conical member, both of which conical members are provided with radially-arranged grooves in their faces, which grooves are T-shaped in cross section, a series of radially-arranged plates between the pair of members, the ends of which plates are T-shaped and mounted for sliding movement in the T-shaped grooves, and a segment fixed to each plate, the ends of all of which segments are beveled and bear against the corresponding beveled faces of the conical members.

2. In a machine of the class described, a pair of shafts, portions of which are threaded, a pair of conical members on each shaft, certain of which members are mounted to rotate and slide upon the shafts, means located on the shafts for adjusting the opposite conical members toward the sliding and rotating members, all of which conical members are provided with radially-arranged gropves

in their beveled faces, which grooves are T-shaped in cross section, a series of radially-arranged plates arranged between each pair of conical members, the ends of which plates are T-shaped and are arranged to slide in the T-shaped grooves in the conical members, segmental blocks fixed to the radially-arranged plates, the ends of which segmental blocks are beveled, and bear upon the inclined faces of the conical members, a belt connecting the two sets of segmental blocks, and means for simultaneously imparting uniform movement to the sliding and rotating conical members, whereby the belt is maintained in a straight line position between the two pulleys formed by the conical members and segmental blocks.

3. In an apparatus of the class described, the combination of a shaft, a pair of conical members mounted to slide upon and rotate with said shaft, means for moving one of the conical members toward or away from the other, a nut mounted on a threaded portion of the shaft, and bearing against the rear side of the opposite conical member for adjusting the position thereof, with respect to the other conical member, which conical members are provided with grooves in their inclined faces, which grooves are T-shaped in cross section, plates having T-shaped ends mounted for sliding movement in said grooves, and segmental blocks fixed to the radially-arranged plates.

1,020,574. CURRENT-MOTOR. CHARLES E. REDFIELD, Okanogan, Wash., assignor of one-half to George F. Rigby, Jr., Carlton, Mont. Filed Nov. 29, 1911. Serial No. 663,128. (Cl. 138—3.)



1. A current motor of the class described, comprising a float, means to anchor the same in a body of water, a rotatable shaft extending longitudinally of the float and having a portion thereof therebelow, a turbine wheel carried on the shaft below the float, and means to direct the current to said wheel.

2. A current motor of the class described, comprising a float, means to anchor the same in a body of water, a shaft extending longitudinally of the float and having one end thereof disposed below the float, a turbine wheel carried on the last referred to end of said shaft, and means to provide a buoyancy for the shaft at the end having the wheel thereon.

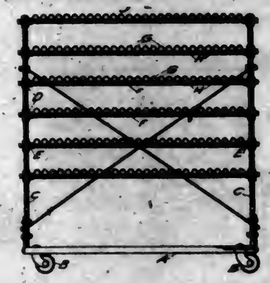
3. A current motor of the class described, comprising a float, means to anchor the same in a body of water, a shaft extending longitudinally of the float and having one end thereof disposed below the float, a turbine wheel carried on the last referred to end of said shaft, means to provide a buoyancy for the shaft at the end having the wheel thereon, and means to concentrate the current on the wheel.

4. A device of the class described, comprising a float, means to anchor the same in a body of water, a rotatable shaft extending longitudinally of the float and having one end thereof disposed therebelow, a turbine wheel carried on the last referred to end of said shaft, an air-tight jacket also formed on the shaft at the end thereof carrying said wheel, and means to direct a current to the wheel.

5. The combination with a float, and means to anchor the same in a body of water; of a rotatable shaft extending longitudinally of the float and having one end thereof disposed therebelow, a turbine wheel carried on the last referred to end of said shaft, means to direct a current to said wheel, and means carried on the float to stop the flow of the current to said wheel.

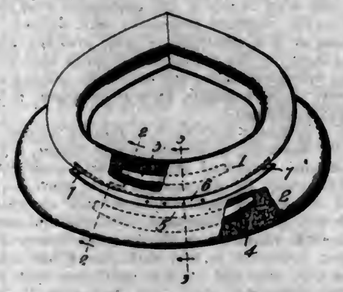
[Claims 6 to 14 not printed in the Gazette.]

1,020,575. POULTRY-COOLING RACK. MARY E. PENNINGTON, Philadelphia, Pa., and HOWARD C. PIERCE, Worcester, Mass. Filed Jan. 11, 1912. Serial No. 670,724. (Dedicated to the public.) (Cl. 211—14.)



A movable poultry rack, consisting of a base mounted on wheels, V-shaped upright supports rigidly secured to said base, a plurality of parallel piped bars provided with openings in the sides thereof, a series of T-shaped slidable sleeves adjustably arranged on said V-shaped supports and provided with projections, said projections adapted to enter and support said parallel bars, a continuous row of spring steel wire fingers having pointed ends, said fingers extending horizontally from said parallel bars, clamps for entering the openings in said bars and rigidly securing said fingers thereto, substantially as specified.

1,020,576. REINFORCING MEANS FOR COLLARS. CHRISTIAN SCHENCK, Weston, Ill. Filed Mar. 3, 1910. Serial No. 547,004. (Cl. 54—19.)



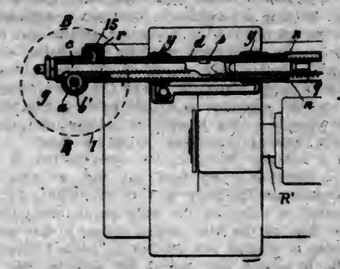
1. A horse collar having rigid longitudinally curved reinforcing bars arranged in the outer and inner portions of its bottom or throat portion, and a spring arranged at the bottom or throat portion of the collar tending to expand or spread apart the ends of the collar and thereby overcome the rigidity which would otherwise exist due to the reinforcing bars.

2. A horse collar having rigid longitudinally curved reinforcing bars arranged in the outer and inner portions of its bottom or throat portion, and a spring arranged at the bottom or throat portion of the collar tending to expand or spread the ends of the collar apart and thus overcome the rigidity which would otherwise exist due to the reinforcing bars, said spring comprising a flat central portion and end portions of approximately V-shape in cross section.

1,020,577. BREECH-OPERATING MECHANISM OF ORDNANCE. CHARLES PROSPER EUGÈNE SCHNEIDER, Le Creuzot, France. Filed Nov. 14, 1905. Serial No. 287,377. (Cl. 89—4.)

1. The combination with a gun, of a spring, automatic means actuated by energy due to the recoil of said gun for compressing said spring, an automatic device independent of the breech mechanism for locking said spring in its compressed position, a device for releasing the same, means

actuated alternately by the energy of recoil and by said spring for respectively opening and closing the breech of said gun automatically, and devices for opening and closing said breech manually independent of said recoil and said spring.



2. The combination with a gun, of a spring, automatic means actuated by energy due to the recoil of said gun for compressing said spring, an automatic device independent of the breech mechanism for locking said spring in its compressed position, a device for releasing the same, means actuated alternately by the energy of recoil and by said spring for respectively opening and closing the breech of said gun automatically, devices for opening and closing said breech manually independent of said recoil and said spring, and means for throwing said automatically-operating means out of gear and said manually-operating devices into gear and vice versa.

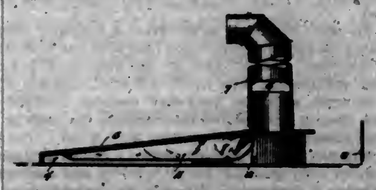
3. The combination with a gun and its breech block, a pivot for said block, a gear carried by said pivot, a countershaft actuating said gear, means for manually operating said countershaft, and additional means for automatically operating said countershaft consisting of a rack carried by the gun and co-acting with said countershaft, automatic means for locking said rack independently of the gun to hold it in the rearward position given by the recoil of the gun, a spring connected with said rack and compressed by the counter recoil of the gun, and means for releasing said rack whereby said spring will actuate the rack and thereby the breech-block.

4. The combination with a gun and a stationary support therefor, of a tube detachably locked upon said gun, a rack bar and a compression spring in said tube, a gear engaging said rack bar and carried upon the gun, and means operating to compress said spring on counter recoil and to automatically actuate the gear to operate the breech-block.

5. The combination with a gun and a stationary support therefor, upon which the former has relative movement during its recoil and its return to battery, a spring and a rack bar interposed between said parts, said rack bar engaging a gear that operates the breech-block, and said spring being compressed by the counter recoil of the gun, means for locking said rack bar in its rearward position, and means for permitting prior or subsequent movement of the gun without compressing said spring.

[Claims 6 to 9 not printed in the Gazette.]

1,020,578. CLOTHES-BOILER ATTACHMENT. EDWARD J. SCHOWALTER, Racine, Wis. Filed Mar. 7, 1911. Serial No. 612,877. (Cl. 68—30.)



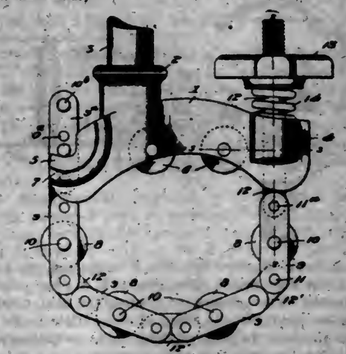
A clothes-boiler fountain attachment comprising an approximately triangular shell narrowest at its forward end and having a sloping top descending toward the end aforesaid, the top being provided at its greatest elevation with a central upwardly extending outlet and the ends of the shell-wall lapped at the rear to provide a passage; stops in the passage, a gravity gate hung in said passage to close outwardly against the stops under pressure within said shell, and ribs depending from the shell-top in such disposition that the intervening spaces are convergent toward said outlet with which they communicate, the depth of the ribs being less than that of said wall.

1,020,579. ELASTIC CONNECTING DEVICE. CYRIL A. SMITH, Attleboro, Mass., assignor to Sidney O. Bigney, Attleboro, Mass. Filed June 17, 1911. Serial No. 633,752. (Cl. 74—73.)



A connection between two strap members comprising a metallic wire body having a U-shaped portion and a cross-head portion at the ends of the legs, a spiral spring coiled loosely around the legs of the U-shaped portion, a plurality of beads strung upon the legs of said U-shaped portion at intervals apart from each other within the coiled spring, a slidable cross member seated upon the ends of said spring and through which the legs of the U-shaped portion extend, said slidable cross member being connected with one of said strap members, the said cross-head portion being connected with the other of said strap members.

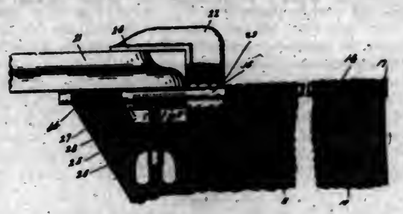
1,020,580. PIPE-CUTTER. JAMES R. SMITH, Mechanicsville, N. Y. Filed Dec. 24, 1910. Serial No. 599,148. (Cl. 81—102.)



In a pipe cutter, the combination with a head and handle, said head having a bifurcated part, of a chain of cutters, the links of which are adapted for reception in the bifurcated part and have projections adapted to be engaged with the head at the bifurcated part thereof, thus permitting quick attachment thereto or detachment therefrom, a screw-threaded bolt connected to the other end

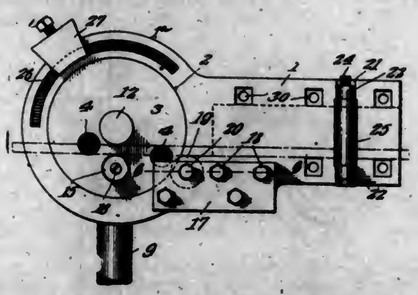
of the series of cutters and passing loosely through the head, an adjusting nut or wheel engaged with the screw threads on said bolt, and a coil spring interposed between the nut or wheel and the head, the bolt permanently connecting the cutters to the head, the series of cutters being adapted to be quickly opened out to surround the pipe and substantially initially adjusted and thereafter brought into firm contact with the pipe by turning the nut or hand wheel.

1,020,581. WORK-HOLDER FOR SEWING-MACHINES. NELLIE VAN DEVENTER-SMITH, Indianapolis, and JAMES E. VAN DEVENTER, Anderson, Ind. Filed May 3, 1911. Serial No. 624,859. (Cl. 45—75.)



A work-holder comprising a bag of flexible material having two opposite portions of its mouth formed into casings, each of said casings being formed in two parts with a space between said two parts, a rod extending through each of said casings and across the space between the two parts thereof, a shoe for engaging that part of each rod which is between the two parts of its associated casing, said rods being slidable longitudinally of said shoes, a main clamp body having a clamping finger spaced from the clamping shoe and substantially parallel with the rod, and means for moving said shoes and said rods transversely to said body, whereby a supporting board may be clamped between the clamping finger of each main body and the adjacent rod, and one of the casing members of the bag also clamped between the rod and supporting board.

1,020,582. WIRE-BENDING TOOL. JOSEPH H. STRAUS, Jr., Baltimore, Md., assignor of one-half to Raymond H. Williams, Baltimore, Md. Filed Dec. 5, 1911. Serial No. 663,996. (Cl. 153—46.)



1. In a bending machine, the combination of a body having a circular recess near one end, a disk rotatably seated in said recess, means for turning the disk, means on the disk for engaging the sides of the article to be bent, means on the body to prevent the article rising therefrom, and a block adjustable in a path concentric with the recess and disk to determine the extent of rotation of the disk.

2. In a bending machine, the combination with a body provided with a circular recess near one end and with a curved groove outside of and concentric with said recess, of a disk seated in the recess, means for rotating the disk, means on the disk for engaging the sides of the article to be bent, means on the body for holding the article in position projecting over and beyond the disk, a block provided with a lug slidably engaged in the curved concentric groove, and means for securing the block at any desired adjustment in the groove.

3. In a bending machine, the combination with a body having a circular recess near one end, means on the body for holding an article to be bent, a disk seated in said recess provided with a central socket and a series of eccentrically positioned sockets at varying distances from the central socket, a pin in the central socket, a pin adapted to be placed in one of the eccentrically positioned sockets, whereby an article held on the body may pass between the pins, means for rotating the disk, and means for limiting the extent of the rotation.

4. In a bending machine, the combination of a body having a circular recess near one end, a roller adjustably mounted on the body to vary its distance from the face thereof, a roller on the body on an axis at a right angle to that of the first named roller, a disk seated in the recess, a central pin projecting beyond the face of the disk, a second pin, means for securing the second pin to the disk at eccentrically located points at varying distances from the center pin, means for rotating the disk, and a block adjustable around the disk in a path concentric therewith.

1,020,583. EASEL. GEORGE B. STREIT, Detroit, Mich. Filed June 9, 1911. Serial No. 632,104. (Cl. 40—150.)



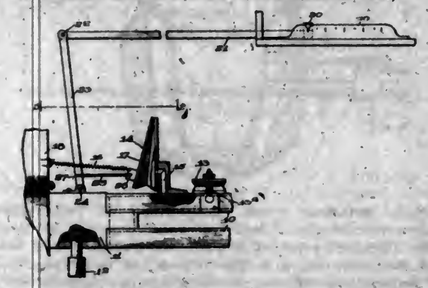
1. An easel, having in combination a back-stay member, having on one edge a projection provided with a knob, a locking-tongue connected with the opposite edge of said back-stay member and having a tendency to normally lie at the base of said back stay member and provided with a lobe having an eyelet, the said locking-tongue being adapted to be straightened so that the said eyelet will fit over the projection and its knob and the tongue, having a tendency to resume its normal position, will draw the substance of the lobe surrounding the eyelet below the knob of said projection, substantially as described.

2. An easel, having in combination a back-stay member provided on one edge with a notch having opposed faces, and a locking-tongue connected with the opposite edge of said track-stay member and having a tendency to normally lie at the base of said back-stay member and provided with a lobe engaging between the opposing faces of the notch, the said engagement being enhanced by the drawing tendency of said locking tongue, substantially as described.

3. An easel, having in combination a back-stay member, a locking-tongue integral at one end with one edge of the said back-stay member, and at the other end having a locking engagement with said back-stay member, a rib-stay integral with the back-stay member foldable with respect thereto and located intermediate the ends of said tongue, substantially as described.

4. An easel, having in combination a back-stay member, a bendable locking-tongue connected with one edge thereof and having a tendency to normally lie at the base of said back stay member, and at its other end engaging against the opposite edge of said back-stay member, said back-stay member being provided with an edge portion angularly rising from said last mentioned edge, and a lobe on said tongue so located as to just fit over the said rising edge portion by straightening the tongue, and adapted to be drawn up into close engagement with said edge portion when the said tongue is allowed to resume its normal tendency substantially as described.

1,020,584. WIND-CHEST-TENSION INDICATOR FOR PIANO-PLAYING ATTACHMENTS. EUGENE T. TURNEY, Rock Island, Ill., assignor to Artista Piano Player Company, Milan, Ill., a Corporation of Illinois. Filed Apr. 23, 1908. Serial No. 428,783. (Cl. 84—48.)



1. A device of the character described including in combination an air duct, means whereby said duct may be exhausted, an indicator, a pneumatic, and an operative connection between the pneumatic and the indicator whereby the action of the pneumatic will operate the indicator, said pneumatic having communication with the air duct whereby the suction in said duct will operate the pneumatic.

2. A device of the class described including in combination an air duct, means whereby said duct may be exhausted, an indicator, a pneumatic, means tending normally to expand the pneumatic, an operative connection between the pneumatic and the indicator whereby the action of the pneumatic will operate the indicator, and means whereby the suction in the said duct will tend to collapse the pneumatic against the tension of the second said means.

3. A device of the character described including in combination an air duct, means whereby said duct may be exhausted, an indicator, a pneumatic including a movable member, an elastic member, one end of which is connected to the movable member, a fixed member to which the other end of the elastic member is secured, said member being adapted to normally expand the pneumatic, and an operative connection between the indicator and the movable member of the pneumatic whereby the operation of said pneumatic will adjust the indicator, said pneumatic having communication with the air duct whereby the suction in said duct will collapse the pneumatic against the tension of the said elastic means.

4. In an automatic pneumatic piano player, the combination with the usual air chamber, and means under the control of the operator for governing the pressure therein, of an expression indicating device including a pointer, a pneumatic separate from but in communication with said chamber, said pneumatic comprising fixed and movable members, and an operative connection between said movable member and said pointer, whereby variations of the pressure in said chamber will operate the pneumatic, and cause the movable member thereof to shift said indicator.

1,020,585. PINCE-NEZ. ALFRED RICHARD WALTER, Ealing, London, England. Filed May 19, 1911. Serial No. 628,223. (Cl. 88—41.)

1. In a pince-nez of the kind referred to, the combination of a bridge, a lens-carrier on said bridge, a lens carried by said lens-carrier, a separate claw located intermediate of the ends of said lens-carrier and arranged to exert pressure on one face of said lens, and fastening means common to said bridge, lens-carrier and claw for securing these elements together.

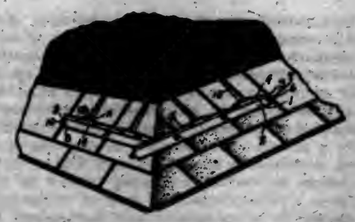


2. In pince-nez of the kind referred to, the combination of a bridge, a lens-carrier on said bridge, a lens, and adjustable claws located at the extremities of said lens-carrier and each comprising a screw-threaded pin arranged to screw into said lens-carrier and provided with a head adapted to bear against said lens.

3. In pince-nez of the kind referred to, the combination of a bridge, a lens, a lens-carrier on said bridge and located entirely within the periphery of said lens and clamping means on said lens-carrier for exerting a pressure on the one face of said lens toward said lens-carrier.

4. In pince-nez of the kind referred to, the combination of a bridge, a lens-carrier on said bridge, a lens, clamping means movably mounted on said carrier adjacent to each end thereof for securing lenses of different thickness on said carrier and resilient means located on said carrier intermediate of said clamping means and engaging said lens.

1,020,586. SHINGLE-MOLD. EDGAR M. WALTON, Kansas City, Mo. Filed Apr. 4, 1911. Serial No. 618,873. (Cl. 25—43.)



1. A shingle mold comprising a base part having an upturned flange and a lip, and an arm having a body adapted for sliding on the front face of said flange, and a hooked part adapted for projection under said lip, for the purpose set forth.

2. A shingle mold comprising a base part having an upturned flange and a back turned lip; and an arm having a head adapted for sliding adjustment on the flange; said head having a flange adapted for engagement with the front face of the base flange, and a body portion adapted for extension over said lip and having a hooked part adapted for sliding travel under the lip, substantially as set forth.

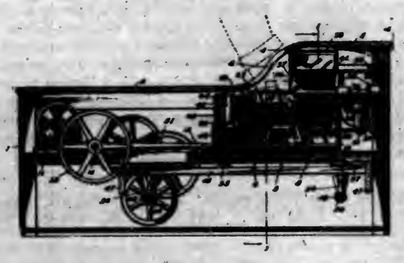
3. A shingle mold comprising a base portion having a flat body provided with an upwardly turned flange at its front edge, said flange having a backwardly and downwardly turned lip thereon, the downturned part of said lip being spaced from the flange to form a recess therebetween, and an arm having a head provided with a front flange adapted to slide on the front face of said base flange and with a downwardly turned body having an upturned hooked part adapted for coöperation with the base flange and lip, substantially as set forth.

4. A shingle mold comprising a base having a body portion and an upturned flange at one edge, a lip on the upper edge of and set in from the ends of said flange, said lip having a downturned part spaced from the face of the flange to provide a recess therebetween, and an arm comprising a head having a front part adapted to slide on the front face if the base flange and having a backwardly

spaced body provided with an upturned hook part, said body being adapted to slide on the back face of the base lip and the hooked part to travel in the space between the base flange and lip.

5. A shingle mold comprising a base section, having a transverse slot at one end, and a cap struck up from the base at the inner side of the slot; a tongue projecting from the opposite end of said base section and having a raised part; and a lip at the outer end of said raised part, extending in the plane of the base section, said lip being adapted for projection into the cap of an adjacent section, and the raised part to lie on the portion of said section at the outer side of said slot; said body having a flange at one edge projected beyond the tongued end of said base; and an arm adjustably mounted on said base, substantially as and for the purpose set forth.

1,020,587. SHOE-POLISHING MACHINE. ALFRED D. WASHINGTON, Detroit, Mich. Filed Nov. 4, 1910. Serial No. 590,624. (Cl. 15—61.)



1. In a polishing machine, the combination of a shoe support, reciprocable brushes at each side of said support, means for reciprocating said brushes, a horizontally disposed rotatable brush supported above the toe portion of said support to engage the upper side of a toe of a shoe and to engage the reciprocable brushes, and means for depositing blacking upon said rotatable brush.

2. In a polishing machine, the combination of a shoe support, reciprocable brushes at each side of said support, means for reciprocating said brushes in opposite directions, a brush rotatable upon a horizontal axis and adapted to be engaged by said reciprocable brushes at one end of their movement, and means for rotating said brush and reversing the direction of its rotation in timed relation to the movement of said reciprocating brushes.

3. In a polishing machine, the combination of a shoe support, reciprocable brushes at each side of said support, means for reciprocating said brushes, means for supplying blacking to said brushes, and means for automatically moving the supplying means into and out of operative position in timed relation to the movement of the brushes.

4. In a shoe polishing machine, the combination of a shoe support, reciprocable brushes at each side of said support, means for reciprocating said brushes, a horizontally disposed rotatable brush supported in the path of the reciprocable brushes to engage the same, means for rotating said brush, means for supplying blacking to the rotatable brush, and means for automatically moving said blacking supplying means into and out of operative position in timed relation to the movements of the brushes.

5. In a polishing machine, the combination of a shoe support, reciprocable brushes, means for reciprocating said brushes, a brush rotatable upon a vertical axis adapted to be engaged by the reciprocable brushes, means for rotating said brush actuated by the reciprocation of the brushes and operating to reverse the direction of rotation thereof in timed relation to the movement of the reciprocable brushes, a member for supplying blacking to the rotatable brush movable into and out of operative relation thereto, and means for automatically moving said member in timed relation to the actuation of the brushes.

[Claims 6 to 11 not printed in the Gazette.]

1,020,588. JOCK-STRAP. LAUREL C. WEST, Milwaukee, Wis. Filed Feb. 21, 1910. Serial No. 544,985. (Cl. 128—38.)



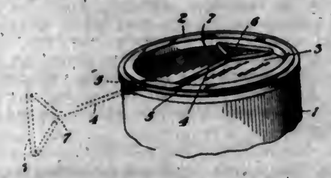
1. A jock-strap pouch, comprising two rectangular pieces of non-elastic material sewed together at their side edges and provided at their lower ends with a bottom formation and a pocket between the two thicknesses of material, one of said pieces of material provided with an opening in communication with the pocket, and a line of stitches extending across the material, just below the opening and connecting the two pieces together.

2. A jock-strap, comprising a waist band, a member connected to and depending from the waist band, said member formed of two pieces of material sewed together at their side edges and medially transversely to form a pouch and a pocket within the pouch and above the medial line of stitches, the entrance to said pocket positioned within the pouch, and high bands connected to the member below the medial line of stitches and to the waist band.

3. A jock strap, comprising a waist band, and a pouch secured to and depending from the waist band and having a pocket in the upper portion of the pouch which is provided with an opening within the circle of the band and also provided with a penis opening within the pouch.

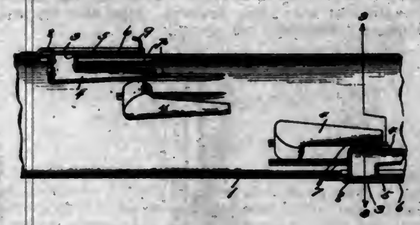
4. A jock strap, comprising a waist band, a member connected to and depending from the waist band, said member formed of an inner and an outer piece of material sewed together at their side edges and medially transversely to form a pouch and a pocket within the pouch and above the medial line of stitches, said pocket having a medial opening within the pouch and another opening within the circle of the waist band, and thigh bands connected to the member below the medial line of stitches and to opposite sides of the waist band.

1,020,589. ATTACHMENT TO FRICTION-TOP CANS. HENRY J. WICKMAN, Howell, Mich., assignor of one-half to Charles E. Van Keuren, Howell, Mich. Filed Feb. 14, 1911. Serial No. 608,587. (Cl. 220—65.)



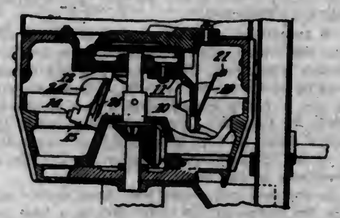
As an attachment to friction top can with recessed top, a key formed of a piece of stiff wire with a shank portion and a substantially triangular handle portion adapted to permit the key of being flexed as a whole at one corner of the handle to be contracted within the recess of the top of the can, the key being normally of a size to fit a circle of greater radius than that of the recess and the end of the shank being flattened in a plane at right angles to that of the handle.

1,020,590. STOVEPIPE-VENTILATOR. JOHN W. WILLIAMS, Monmouth, Ill. Filed June 6, 1911. Serial No. 631,629. (Cl. 126—312.)



In combination, a stove pipe having a plurality of ventilating openings, a plurality of conical shaped elbows extending from the openings and arranged in a plane substantially parallel with the side of the stove pipe and upon the interior, dampers for controlling the openings, guides for the dampers, clips for limiting the dampers in their movements in one direction, and dovetailed tongue and groove connections between the dampers and the stove pipe for reinforcing the dampers with regard to the stove pipe.

1,020,591. SELECTOR FOR CORN-DROPPERS. JOHN ALBERT ANDERSON, Geneseo, Ill. Filed Aug. 21, 1911. Serial No. 645,123. (Cl. 111—6.)

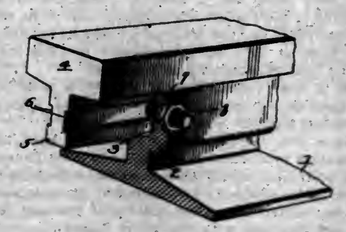


1. A seed selector comprising a back plate, an arm pivoted thereto, a plate hinged upon said arm and being held in engagement with the back plate under spring tension, and end plates transversely disposed with relation to the first mentioned plate and hingedly connected to one and slidably engaging the other, said transversely disposed plate being provided with an overhanging portion arranged to form a cover for the hinge joint of the first mentioned plate.

2. A seed selector comprising a back plate, an arm pivoted thereto, a plate hinged upon said arm and being held in engagement with the back under spring tension, an end plate transversely disposed with relation to the first mentioned plate and hingedly connected to one, and slidably engaging the other, and a hood secured to said transversely disposed plate, said hood extending outwardly and downwardly from its secured point.

3. A seed selector comprising a backing plate an arm pivoted thereto, a plate hinged upon said arm and being held in engagement with the backing plate under spring tension, an end plate transversely disposed with relation to the first mentioned plate and hingedly connected to one and slidably engaging the other, and a hood secured to the upper edge of said transversely disposed plate, a rod supported by said backing plate, and arranged parallel with the edge portion of said plate, said transversely disposed plate being guided in its movement by said rod and a hood secured to the upper edge of said transversely disposed plate, said hood being formed with a sloping top portion and sloping side walls.

1,020,592. RAILROAD-RAIL. DANIEL ALBURTIS AUMAN and GEORGE CLARENCE AUMAN, Reading, Pa., assignors of one-third to George Milton Stern, Reading, Pa. Filed May 24, 1911. Serial No. 629,158. (Cl. 238—16.)



A compound rail, comprising a base section longitudinally grooved, a tread section having a web adapted to fit into the groove of the base section, said web having longitudinal grooves upon its opposite side faces, and set screws carried by each side of the base section and engaging the upper sections in the horizontal plane of said grooves, as and for the purpose set forth.

1,020,593. PHENOLIC CONDENSATION PRODUCT AND METHOD OF PREPARING SAME. JONAS W. AYLSWORTH, East Orange, N. J., assignor of one-half to Frank L. Dyer, Montclair, N. J. Filed Feb. 11, 1910. Serial No. 543,238. (Cl. 106—22.)

1. The process of forming a hard infusible insoluble final condensation product which consists in incorporating with a fusible phenolic condensation product a condensation product of ammonia and formaldehyde or polymer thereof, and heating the mass sufficiently to cause the ingredients to combine and the mass accordingly to be transformed into said hard infusible insoluble product, substantially as described.

2. The process of forming a hard infusible insoluble final condensation product which consists in incorporating with a fusible phenolic condensation product hexamethylene-tetra-amin of quantity at least sufficient to combine with all of the fusible condensation products and any free phenol which may be associated therewith on application of sufficient heat, and heating the mass sufficiently to cause the ingredients to combine and the mass accordingly to be transformed into said hard infusible insoluble product, substantially as described.

3. The process of forming a hard infusible insoluble final condensation product which consists in forming a fusible phenolaldehyde condensation product having no free aldehyde, incorporating therewith hexamethylene-tetra-amin, and heating the mass to render the same hard insoluble and infusible, substantially as described.

4. The process of forming a hard infusible insoluble final condensation product which consists in forming a fusible anhydrous phenol-aldehyde condensation product having no free aldehyde, incorporating therewith anhydrous hexamethylene-tetra-amin, and heating the mass to render the same hard insoluble and infusible, substantially as described.

5. The process of forming a hard condensation product which consists in incorporating a fusible phenolic condensation product with hexa-methylene-tetra-amin, and heating the same sufficiently to harden the mass, substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

1,020,594. PLASTIC PHENOLIC CONDENSATION PRODUCT AND PROCESS OF FORMING SAME. JONAS W. AYLSWORTH, East Orange, N. J., assignor of one-half to Frank L. Dyer, Montclair, N. J. Continuation of application Serial No. 496,060, filed May 14, 1909. This application filed June 2, 1911. Serial No. 630,803. (Cl. 160—22.)

1. As a new composition of matter, a solid solution of a phenol-formaldehyde condensation product, and phthalic acid or anhydrid.

2. As a new composition of matter, a solid body which is infusible but readily plastic at from 240° F. to 350° F. which body comprises a phenolic condensation product containing in solid solution an organic acid or its anhydrid which anhydrid has the property of combining with water in the mass at elevated temperatures to form the corresponding acid substantially as described.

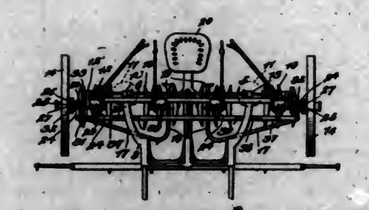
3. As a new composition of matter, a solid solution of a phenolic ultimate infusible insoluble condensation product and phthalic acid or anhydrid.

4. As a new composition of matter, a hard infusible condensation product of a fusible anhydrous phenol resin and an anhydrous methylene containing substance in solid solution with an organic acid anhydrid which is soluble in the mass, renders the latter plastic at elevated temperatures, and combines with any water present or evolved at such temperatures to form an organic acid.

5. The process of forming an anhydrous plastic composition which consists in incorporating together fusible phenol resin, a methylene-containing hardening agent therefor and a suitable amount of phthalic anhydrid, and heating the mass sufficiently to cause a hardening reaction to ensue, whereby any water evolved combines with the anhydrid and the mass is rendered infusible.

[Claims 6 to 8 not printed in the Gazette.]

1,020,595. GEARING. JOHN E. BINNS, Jr., Nashville, Tenn. Filed Apr. 15, 1911. Serial No. 621,432. (Cl. 111—18.)



1. The combination with a frame having a vertical depending tubular leg integrally formed therewith, of a vertical rod rotatably mounted in said leg and extending above and below the same, a foot bar having a vertical tubular arm to receive the lower end of said rod, a nut threaded on the lower end of the rod to rigidly secure said foot bar thereon, a drive wheel journaled upon said vertical arm, a bell crank lever fixed upon the upper end of said vertical rod, a sprocket rotatably mounted on said lever, a driven shaft mounted in the frame, gearing connecting said driven shaft and the sprocket, said connection including means whereby said sprocket may be angularly disposed with relation to the longitudinal axis of the driven shaft when said vertical rod is rotated by pressure upon the foot bar, and a flexible driving connection between said sprocket and the drive wheel.

2. The combination with a frame having a vertical depending tubular leg integrally formed therewith, of a vertical rod rotatably mounted in said leg and extending above and below the same, a foot bar having a tubular arm to receive the lower end of said rod, a nut threaded on the lower end of said rod to removably secure said foot bar thereto, a drive wheel journaled on said arm, a bell crank lever arranged on the upper end of the rod, a nut threaded upon the upper end of said rod to rigidly secure said lever thereon, a sprocket mounted upon said lever, a driven shaft mounted in the frame, gearing connecting said driven shaft and the sprocket whereby said sprocket may be angularly disposed with relation to the driven shaft upon the rotation of said vertical rod, and a drive chain connecting said sprocket and the drive wheel.

1,020,596. AUTOMATIC FIREARM WITH FIXED BARREL AND BREECH-ACTION. KARL AUGUST BRÄUNING, Herstal, near Liege, Belgium. Filed Nov. 17, 1911. Serial No. 660,891. (Cl. 42—3.)



1. In automatic fire-arms with fixed barrels and breech-action, the breech-action controlled by a lock rotating in a movable breech bolt, the combination of a firing-pin with a rotating lock centered by the cylindrical part of the firing-pin, means by which the firing-pin is displaced backward, means by which the rotating lock is acted upon by the firing-pin and a sear pivoted to the firing-pin, substantially as described.

2. In automatic fire-arms with fixed barrels and breech-action, the breech-action controlled by a lock rotating in a movable breech bolt, the combination of a firing-pin with a rotating lock centered by the cylindrical part of the firing pin, a piston acting upon a jaw of the firing pin, openings for the gases to reach the fore-end of the piston, means by which the lock is rotated by a longitudinal movement of the firing-pin and a sear pivoted to the firing-pin, substantially as described.

3. In automatic fire-arms with fixed barrels and breech action, the breech action controlled by a lock rotating in a movable breech bolt, the combination of a firing-pin with a rotating lock centered by the cylindrical part of the firing-pin, a piston acting upon the firing-pin, an annular groove at the fore-part of the movable breech bolt, a passage for the gases to reach the fore-end of the piston, means by which the lock is rotated by a longitudinal movement of the firing-pin and a sear pivoted to the firing-pin, substantially as described.

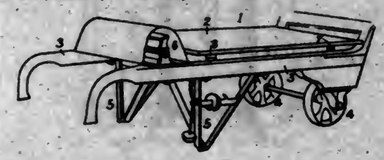
4. In automatic fire-arms with fixed barrels and breech action, the breech-action controlled by a lock rotating in a movable breech bolt, the combination of a firing-pin with a rotating lock centered by the cylindrical part of the firing-pin, a piston acting upon the firing-pin, openings through which the gases from the barrel at the fore-end of the cartridge-shell are led to the fore-end of the piston, means by which the lock is rotated by a longitudinal movement of the firing-pin and a sear pivoted to the firing pin, substantially as described.

5. In automatic fire-arms with fixed barrels and breech-action, the breech-action controlled by a lock rotating in a movable breech, the combination of a firing-pin with a rotating lock centered by the cylindrical part of the firing pin, a piston acting upon the firing-pin, openings through which the gases from the barrel at the fore-end of the cartridge-shell are led to the fore-end of the piston, a valve regulating the opening area for the gases led from the barrel to the fore-end of the piston, means by

which the lock is rotated by a longitudinal movement of the firing-pin and a sear pivoted to the firing-pin, substantially as described.

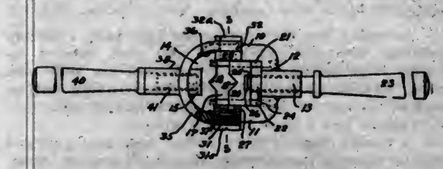
[Claim 6 not printed in the Gazette.]

1,020,597. WEIGHING-TRUCK. THOMAS A. BRUNT, Renfrew, Ontario, Canada, assignor to Michael J. O'Brien, Renfrew, Canada. Filed May 17, 1911. Serial No. 627,824. (Cl. 73—8.)



A weighing truck comprising a truck frame, a weighing scale having a beam mounted thereon, a pair of forked centrally fulcrumed levers suspended in said frame, a central longitudinal extension integral with one of said levers, two cross bars secured to the under part of said frame and near each end thereof respectively, two link supports suspended from each end respectively of said cross-bars, curved bearings fitting into said links and a lug in each leg of said levers, near the outer ends thereof, fitting in said links and working on said bearings, in combination with a pin in each leg of said levers between the lug and the crotch, a platform, two cross bars on the lower face of the platform, near each end thereof respectively, four supporting legs attached to said platform cross bars, one near each end of each cross bar, and engaging said pins to support said platform and operate said levers, bearings in the lower part of said legs and a link connecting said extension and said scale beam.

1,020,598. TAP-WRENCH. HENRIK H. EDSTROM, Pearl River, N. Y. Filed Mar. 23, 1911. Serial No. 616,416. (Cl. 10—149.)



1. A wrench of the class described comprising a frame body, a fixed jaw formed therewith, a movable jaw slidable within said frame body, a revoluble handle attached to said frame body, means combined therewith for actuating said movable jaw and a swinging handle oppositely disposed to said revoluble handle, having its pivotal point central of the frame body, and above the plane of said jaws.

2. A wrench of the class described comprising a frame body having a fixed jaw, a movable jaw slidably contained in said frame body, means for actuating said movable jaw, a bifurcated member adapted to tightly embrace said frame body, means for clamping said bifurcated member to said frame body and oppositely disposed rotatable handles attached respectively to said frame body and to said bifurcated member.

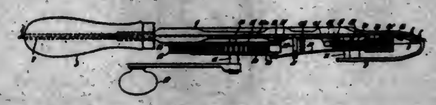
3. A wrench of the class described, comprising a frame-body having a stationary jaw, a slidable jaw contained in said frame-body, a handle mounted rotatably in said frame-body adapted to actuate said slidable jaw, a pivoted bifurcated member tightly embracing said frame body, and a handle oppositely disposed to the first named handle, extending through said bifurcated member and connecting with said frame-body to clamp said bifurcated member thereto.

4. A wrench of the class described comprising a frame body, a jaw formed therewith, a slidable jaw therein, removable guides for said slidable jaw, oppositely disposed handles connected to said frame body, means combined with one of said handles adapted to actuate said movable jaw, means combined with the other handle whereby it may be partly withdrawn from said frame and other means combined therewith whereby the last named handle may be folded over upon the first named handle while still connected to the frame.

5. A wrench of the class described comprising a frame body, jaws operatively combined therewith, means for actuating one of said jaws, a handle fixed relatively to the plane of the frame at one end thereof and revoluble therein, a second revoluble handle oppositely disposed to, and in alinement with the first named handle when in an extended position, means for clamping the last named handle directly to the said frame body and means combined therewith whereby the last named handle may be folded over upon the first named handle parallel therewith.

[Claims 6 to 8 not printed in the Gazette.]

1,020,599. WIRE-WRAPPING MACHINE. DONALD ELDER, Onehunga, New Zealand. Filed Jan. 18, 1911. Serial No. 603,356. (Cl. 140—115.)



1. A machine for the purpose indicated, comprising in combination a frame, a handle thereon, a pair of geared feed rollers, a pinion connected to one of said rollers, a hand wheel having a segment of teeth engaging said pinion, means for revolving the hand wheel, a lever, a cutter at one end thereof, a cam for operating the lever, a die through which the binding wire passes, a jaw in the frame, a gap wheel having gear teeth, a pin projecting from the gap wheel, a pinion in gear with the gap wheel, a tooth wheel upon said hand wheel, gears for driving the pinion therefrom, a lever on which the gap wheel is rotatably mounted, and a ring cam upon the face of the hand wheel for operating said lever, substantially as specified.

2. In a machine for the purpose indicated, the means for coiling the binding wire comprising in combination the gap wheel, a pin projecting laterally therefrom, a pinion in gear with the gap wheel, a projection from the pinion adapted to engage the gap in the gap wheel, means for rotating the pinion, a lever on which the gap wheel is rotatably mounted, a ring cam operating said lever, with means for rotating said cam, substantially as specified.

3. In a machine for the purpose described, the combination with means for feeding a binding wire, of means for coiling such wire around the wires to be bound together, and a cutter for severing the binding wire.

4. In a machine for the purpose described, the combination of a support for two wires, means for feeding a binding wire transversely of the first said wires, means for coiling the binding wire about the first said wires, and a hand device for actuating both said feeding and coiling means.

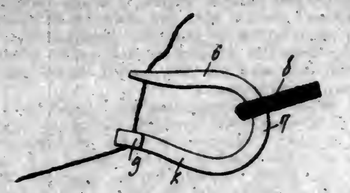
5. In a machine for the purpose described, the combination of means for engaging two wires to be bound together, means for supporting a binding wire and feeding the same longitudinally, means for coiling the binding wire about the first said wires, a cutter for severing the binding wire, and a driving wheel adapted to actuate the feeding, coiling and cutting means.

[Claims 6 to 8 not printed in the Gazette.]

1,020,600. WIRE-GRIP. JESSE THOMAS FERGUSON, Hickory, Miss. Filed Nov. 7, 1910. Serial No. 591,051. (Cl. 39—119.)

The combination with a tension member having an eye in one end, of a U-shaped wire grip threaded through the eye and adapted to slide therein, the grip having enlarge-

ments at its ends, one of which is provided in its end with a V-shaped notch, the other of which enlargements, is a



hook, forming a V-shaped notch with the body portion of the grip.

1,020,601. WINDOW-SCREEN CONSTRUCTION. RALPH E. HAMILTON, Middlebury township, Shiawassee county, Mich. Filed Jan. 22, 1906. Serial No. 297,097. (Cl. 156—14.)

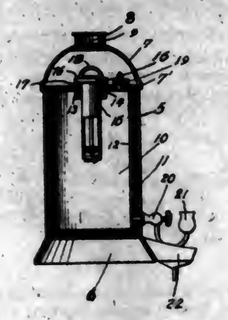


1. In a window-screen construction, the combination of the casing having the usual sash stops, of guiding strips on opposite sides of the casing exterior to the window sash extending inwardly beyond the plane of the sash stops, a screen frame adapted to be entered from the inside and to lie between said strips, confining pieces exterior to the guiding strips extending inwardly beyond the face of said strips to engage the outer face of the screen frame, the stiles of the screen frame at their upper ends being beveled to permit of the placing of the frame in position from the inside, and means for retaining the bottom of the screen frame when in position.

2. In a window screen construction, the combination with the window casing having fixed blind stops, of vertical guide strips on opposite sides of the casing, mounted on said blind stops, said strips having bearing faces which lie inside of the plane of the sash stops of the casing and having inwardly projecting confining flanges exterior to their bearing faces only, a screen frame fitted between the bearing faces of the guide strips to slide vertically, the outer face of the screen frame being engaged by said inwardly projecting confining flanges, to retain the screen frame in place and close the opening between said frame and said guide strips.

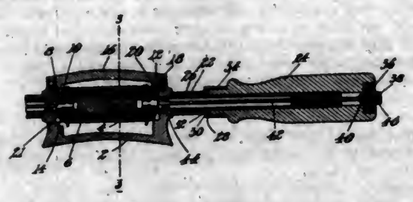
1,020,602. FORCE-FEED RESERVOIR. PORTER S. HAMRICK, Wausau, Wis. Filed Dec. 2, 1911. Serial No. 663,560. (Cl. 137—11.)

A tank or reservoir of the character described comprising inner and outer concentrically arranged shells, said inner shell being closed at its top and bottom and centrally provided with an inwardly extending threaded annular flange, a pump removably secured in the flange of said top, a dome-shaped cover for the upper end of the outer shell having a central opening and a threaded neck surrounding said opening, said cover being adapted to be inverted to engage the threaded neck thereof in the threaded flange of the top wall of said inner vessel to facilitate the filling of said inner vessel, and a fountain supply pipe extending



through the walls of said inner and outer vessels at their lower ends.

1,020,603. ELECTRICALLY-HEATED TOOL. JOHN S. HANSEN, Brockton, Mass., assignor to O. A. Miller Treeing Machine Company, Portland, Me., a Corporation of Maine. Filed May 7, 1908. Serial No. 431,359. (Cl. 219—21.)



1. A treeing iron having a hollow body part, a heating resistance arranged within said body part, handles extending from opposite sides of said part, the body part having an opening through which the resistance may be inserted or removed while the handles are in their normal position and a cover for said opening.

2. A treeing iron having a hollow body part provided with an opening intermediate its ends, a heating resistance removably supported in said part, handles extending from the ends of said part, a contact arranged in an exposed position upon each of the handles and electrical connections leading from said contacts to the resistance.

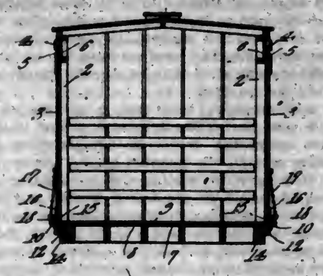
3. A treeing iron provided with a hollow body part and a heating resistance arranged within said part, a stem secured to said part, a handle rotatably adjustable upon said stem, a contact arranged in an exposed position upon the handle and a conductor leading from said contact to the resistance and constructed to permit free rotary movement of the handle upon said stem.

4. A treeing iron having a body part provided with an internal cavity, a heating resistance removably supported in said cavity, two handles extending in opposite directions from said body part, contacts arranged in exposed positions upon the two handles, and electrical connections leading from said contacts to the resistance, said body part having an opening intermediate of the handles through which said heating resistance may be removed.

5. A treeing iron provided with a hollow body part and with detachable handles extending from said part, a heating resistance arranged within the body part and constructed to be removed from said part independently of said handles, and means for holding said heating resistance in working position within said body part.

[Claims 6 to 11 not printed in the Gazette.]

1,020,604. BOX-CAR-DOOR FASTENER. PINKIE D. HOOTON, Hughes Springs, Tex. Filed Dec. 9, 1911. Serial No. 664,830. (Cl. 70—102.)



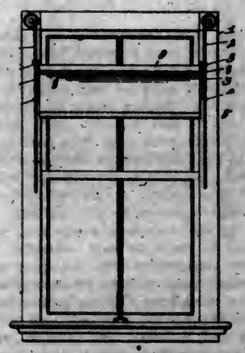
1. In a device of the class described, a supporting structure having oppositely disposed doorways; doors for the doorways; a tie extended in a single length across the supporting structure and through the doors; and means upon the outside of the doors to engage with the tie.

2. In a device of the class described, a supporting structure including a floor and oppositely disposed doorways; doors for the doorways; and a tie secured to the floor and extended through both doors, the exposed ends of the tie having openings to receive a locking device.

3. In a device of the class described, a supporting structure including a floor and oppositely disposed doorways; doors for the doorways; plates applied to the outer faces of the doors; a bar resting upon the floor, and provided adjacent its ends with prongs adapted to enter the floor, the ends of the bar protruding through the doors and through the plates, the protruding ends of the bar being provided with openings adapted to receive locking means.

4. As an article of manufacture, a tie member adapted to unite a pair of opposed doors, the tie consisting of a bar having openings adjacent its ends, the bar being provided, adjacent the openings, with support-engaging prongs.

1,020,605. WINDOW-SHADE ADJUSTER. CALVIN HOTALING, Chanute, Kans. Filed Sept. 5, 1911. Serial No. 647,615. (Cl. 156—27.)



1. In a device of the character described, the combination with a guide rod, of a supporting member formed from a single length of wire having a hook on one end to engage said guide rod and bent upon itself at its other end to provide a closed ring or loop which encircles said guide rod, and an open supporting loop formed on the extremity of said wire adjacent to said closed loop and disposed at an inclination with relation to the longitudinal axis of said guide rod.

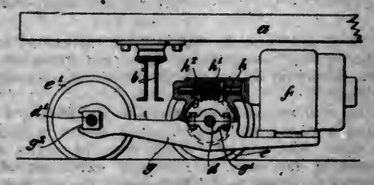
2. In a device of the character described, the combination with a guide rod, of a vertically adjustable supporting member consisting of a single length of wire having a hook on one end to engage said guide rod, the other end of said wire being disposed at an obtuse angle and having a closed ring or loop formed therein to encircle said guide rod, the engagement of the hooked end of the wire with the guide rod tending to force said loop outwardly into binding engagement with the rod to hold the supporting member in its adjusted position, the extremity of said wire being bent upon itself to form an open loop disposed in a plane substantially parallel with the obtusely inclined portion of the wire, said open loop being adapted to receive the member to be supported, the weight of which causes additional binding pressure of the closed ring or loop upon said guide rod.

1,020,606. ELECTRIC DAMPER CONTROL. FRANK HUFF, Napa, Cal. Filed Dec. 7, 1910. Serial No. 596,112. (Cl. 236—4.)



The herein described electric damper controlling mechanism embodying a base having a vertical standard rising therefrom at one side, an electromagnet having the lower end of its core secured on the base, a horizontally disposed bracket comprising a pair of arms arranged at right angles to each other, one arm of the said bracket being secured to the upper end of the standard and the other arm thereof being disposed at one side of the electromagnet, a balancing beam pivotally mounted on the last mentioned arm of the bracket, said balancing beam being provided with an armature and also with a pair of oppositely extending arms, a damper device suspended and carried by one arm of the balancing beam and a shiftable weight carried by the other.

1,020,607. MOTOR-TRUCK. CHARLES W. HUNT, New York, N. Y.; Katharine H. Hunt, Charles Wallace Hunt, and George S. Humphrey executors of said Charles W. Hunt, deceased. Filed Dec. 30, 1910. Serial No. 600,008. (Cl. 105—223.)



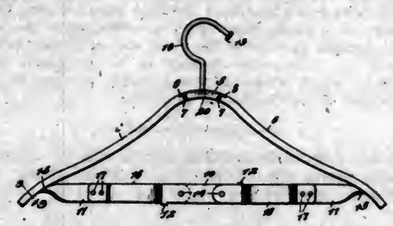
A motor truck comprising a driving axle and wheels, a carrying axle and wheels, a truck frame, a single motor frame independent of said truck frame having a two point bearing on the driving axle and a one point bearing on the carrying axle and extended beyond the driving axle away from the carrying axle, a motor mounted upon the extension whereby the weight of the motor acts upon the driving axle with a maximum leverage, said motor being geared to the driving axle.

1,020,608. GARMENT-HANGER. GEORGE G. HUNT, Plano, Ill. Filed July 19, 1911. Serial No. 639,411. (Cl. 211—13.)

1. In a garment hanger, the combination with a backpiece having oppositely extending resilient arms, of a garment supporting bar disposed between said arms, the

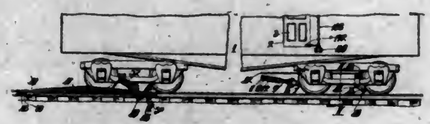
extremities of said bar frictionally engaging said arms and forcing the same apart, the resiliency of said arms maintaining the supporting bar in position therebetween.

2. In a garment hanger, the combination with a back piece having oppositely extending resilient arms, of a garment supporting bar having spring plates formed upon its ends to engage said arms and force the same apart, said plates being unconnected to the arms and retained in position therebetween by the resilient action of said arms.



3. In a garment hanger, the combination with a backpiece consisting of a central section, oppositely extending resilient arms pivotally connected to said central section and having limited movement in one direction, said arms being of channel form in cross section and closed at their free ends, of a garment supporting bar consisting of a plurality of bar sections pivotally connected and foldable upon each other, the end sections of said supporting bar having their extremities twisted and disposed in a plane at right angles to the body of the bar to provide spring plates thereon, said plates being downwardly curved and adapted for engagement in the channels of the arms of the backpiece, said supporting bar being adapted for arrangement between said arms to maintain the same in separated relation, the resiliency of said arms acting to rigidly hold the supporting bar in position therebetween and prevent the collapse of the bar sections.

1,020,609. MAIL-EXCHANGE SYSTEM. ALBERT HUPP, Kansas City, Mo. Filed Apr. 19, 1910. Serial No. 556,443. (Cl. 105—261.)



1. In a mail exchange apparatus, a car having a door opening, a door controlling the same, and means actuated by the revolution of the axle of the car, for opening the said door.

2. In mail exchange apparatus, a car having a door opening, a door controlling the same, means to close the door when unopposed, periodically-operated means, means actuated by the early part of each movement of said periodically-operated means for opening the car door, and means to disengage the periodically-operated means and the door opening means before the movement of the former ceases.

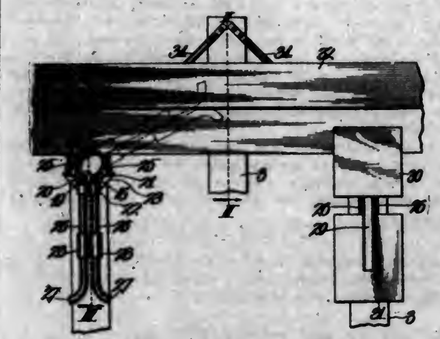
3. In mail exchange apparatus, a car having a door opening, a door controlling the same, means to close the door when unopposed, periodically-operated means, means actuated by the early part of each movement of said periodically-operated means for opening the car door, means to disengage the periodically-operated means and the door opening means before the movement of the former ceases, and means to secure the door against closing movement as such disengagement occurs.

4. In mail exchange apparatus, a car having a door opening, a door controlling the same, means to close the door when unopposed, driven means carried by the car, means to be periodically operated by the driven means, a movable stop normally holding the periodically operated means out of gear with the driven means, a trip on the roadbed over which the car travels, means to be operated by the trip to withdraw said stop to permit the driven means to operate said periodically operated means, means to restore the stop to its original position after said trip is passed to arrest the periodically operated means at a predetermined time, and means actuated by the early part of the movement of said periodically operated means for opening the car door.

5. In mail exchange apparatus, a car having a door opening, a door controlling the same, means to close the door when unopposed, driven means carried by the car, means to be periodically operated by the driven means, a movable stop normally holding the periodically operated means out of gear with the driven means, a trip on the roadbed over which the car travels, means to be operated by the trip to withdraw said stop to permit the driven means to operate said periodically operated means, means to restore the stop to its original position after said trip is passed to arrest the periodically operated means at a predetermined time, means actuated by the early part of the movement of said periodically operated means for opening the car door, and means to disengage the periodically operated means and the door opening means before the movement of the former ceases.

[Claims 6 to 47 not printed in the Gazette.]

1,020,610. MAIL-BAG STATION-CRANE. ALBERT HUPP, Kansas City, Mo. Filed Oct. 31, 1910. Serial No. 590,043. (Cl. 105—232.)



1. A mail bag crane, comprising a standard, a frame arranged to turn on said standard, embodying a pair of jaws for engagement with the upper part of a mail bag and a similar pair of jaws for engagement with the lower part of the mail bag, yielding means for closing said jaws, a fixed part and a part movable with said frame and adapted to coöperate with said fixed part in holding the frame with its said jaws projecting in a predetermined direction against accidental movement; said fixed and movable parts also having a relative vertical movement during the rotatable movement of the frame.

2. A mail bag station crane, comprising a standard, a frame arranged to turn on said standard embodying a pair of jaws for engagement with the upper part of a mail bag and a similar pair of jaws for engagement with the lower part of a mail bag, yielding means for closing the jaws, a part rigid with the standard and provided with a shallow notch and a deep notch, and a catch rotatable with said frame, provided with a tooth for engagement with the shallow notch to hold the bag in operative position and for engagement with the other notch when a bag is being secured between the jaws.

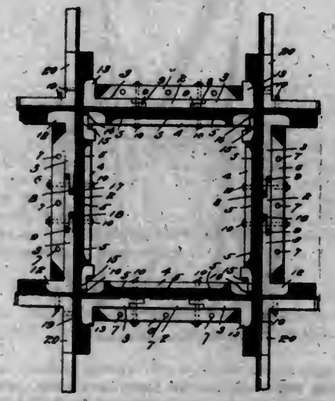
3. A mail bag station crane, comprising a standard, a frame arranged to turn on said standard embodying a pair of jaws for engagement with the upper part of a mail bag and a similar pair of jaws for engagement with the lower part of a mail bag, yielding means for closing the jaws, a head rigidly secured to the upper end of the standard and provided forward of its center with a shallow notch and at opposite sides of its center with V-shaped notches, and a catch rigidly secured to the upper part of the said frame and provided with a tooth overhanging said head and adapted for engagement with the shallow notch or with either of said V-shaped notches.

4. A mail bag station crane, comprising a standard, a frame arranged to turn on said standard embodying a pair of jaws for engagement with the upper part of a mail bag and a similar pair of jaws for engagement with the lower part of a mail bag, yielding means for closing the jaws, a head rigidly secured to the upper end of the standard and provided forward of its center with a shallow notch and at opposite sides of its center with V-shaped notches, a catch rigidly secured to the upper part of the said frame and provided with a tooth overhanging said head and adapted for engagement with the shallow notch or with either of said V-shaped notches, a bracket secured to the catch, a plate secured to the bracket and overlying said head and catch, and a cover carried by said bracket and overlying the free or outer ends of said jaws when the same are closed.

5. A mail bag station crane, comprising a standard, a sleeve arranged to turn and slide thereon, a horizontally bifurcated bracket secured to each end of the sleeve, a pair of bell cranks pivoted in the bifurcation of each bracket, springs bearing at their opposite ends against the brackets and the bell cranks to hold adjacent arms of the latter together, jaws secured to said last-named arms, a part rigid with the standard and provided forward of the center of the latter with a notch and at opposite sides of the center with deeper V-shaped notches, and a catch secured to one of said brackets and provided with a tooth overlying the said part and engaging either of the notches thereof.

[Claims 6 to 8 not printed in the Gazette.]

1,020,611. RAILWAY-CROSSING. HIRAM A. LANE and JOHN E. GEORGE, Oakwood, Ill. Filed Sept. 14, 1911. Serial No. 649,340. (Cl. 104—116.)



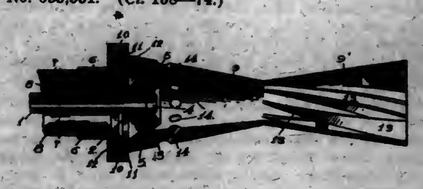
1. A railway crossing of the class described comprising track rails consisting of inner stationary sections and outer longitudinally movable sections, intersecting cross-heads at the outer ends of the movable sections operable by the flanges of the car wheels and coil springs for normally holding the cross heads closed.

2. A railway crossing of the class described comprising track rails consisting of inner stationary sections and outer longitudinally movable sections, intersecting cross heads at the outer ends of the movable sections operable by the flanges of the car wheels, coil springs for normally holding the cross heads closed, guard rails and braces for the inside of the track rails and braces for the outside of the rails.

3. A railway crossing of the class described comprising a bed plate, track rails consisting of inner stationary sections and outer movable sections, intersecting and interlocking cross heads at the outer ends of the movable sections, operable by the flanges of the car wheels, and coil springs between the inner stationary and outer movable sections of the track rails for normally maintaining the cross heads closed.

4. A railway crossing of the class described comprising a bed plate, track rails consisting of stationary sections provided in opposite ends with recesses and outer movable sections provided at the inner ends with tongues fitting in the recess of the inner sections, interlocking and intersecting cross heads at the outer ends of the outer sections operable by the flanges of the car wheels, and coil springs to normally hold the cross heads closed.

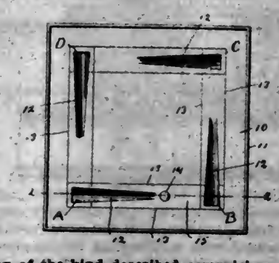
1,020,612. HYDROCARBON-BURNER. ROBERT W. LAWTON, San Francisco, Cal. Filed June 27, 1911. Serial No. 635,551. (Cl. 158—74.)



1. The combination with an oil pipe, of a conical nozzle provided with a central outlet orifice to which said pipe is secured, a steam pipe secured to said nozzle and surrounding the oil pipe, a circumferential series of inwardly inclined passageways in the nozzle for the discharge of the steam, a bonnet or hood provided in its inner end portion with a series of circumferentially disposed inclined air inlets, means for uniting the bonnet or hood to the nozzle, the said bonnet or hood being inwardly inclined for a portion of its length from its inner end and outwardly inclined toward its discharge end, and provided in the interior wall of its outwardly inclined section with a series of spirally arranged grooves.

2. In a hydrocarbon burner the combination with a nozzle thereof, provided with a central discharge orifice, of an oil pipe secured to said nozzle, a steam pipe secured to the nozzle and surrounding the oil pipe, the said nozzle being provided with a plurality of outlets for the flow of steam therethrough, the bonnet or hood attached to the said nozzle and provided at its inner end portion with a series of air inlet ports, the said bonnet or hood being inwardly inclined for a portion of its length from the inner end thereof, and thence outwardly inclined to the discharge end, the interior wall of the outwardly inclined portion of the said bonnet or hood being provided with a series of spirally arranged grooves.

1,020,613. TOY. ALBERT E. LENZ, Perth Amboy, N. J. Filed Dec. 14, 1911. Serial No. 665,688. (Cl. 46—61.)



1. A toy of the kind described comprising a board having grooves on the surface thereof, said grooves arranged

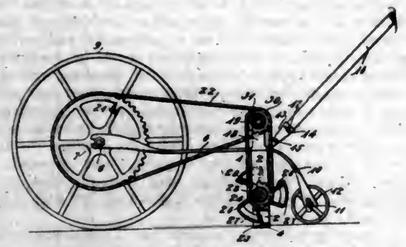
at angles to each other and each groove sloping longitudinally from one end up to the surface of the board and a ball of a size to roll freely within the grooves.

2. A toy of the kind described comprising a board having grooves in the surface thereof, each groove sloping longitudinally from one end up to the surface of the board, the surface of the board having lines drawn thereon on each side of each groove and essentially parallel with the groove and a ball of a size to roll freely within the grooves.

3. A toy of the kind described comprising a board having grooves in the surface thereof, said grooves being arranged at angles to each other, each groove sloping longitudinally from one end up to the surface of the board, the surface of the board having lines thereon essentially parallel to the grooves and on each side thereof, and a ball of a size to roll freely within the grooves.

4. A toy of the kind described comprising a board, the surface of the board having a series of parallel lines drawn thereon, each of said series of parallel lines intersecting with another of the series, the surface of the board having longitudinally extending grooves between each of the series of parallel lines, each groove sloping longitudinally from one end up to the surface of the board at a point distant from the intersection of the parallel lines, a ball of a size to roll freely within the groove, and a flange extending above the surface of the board at its outer edge.

1,020,614. WEED-DESTROYER. LOUIS LUCKHOFF, Canton, Ohio. Filed Oct. 5, 1911. Serial No. 653,085. (Cl. 55—61.)



In a weed destroying machine, a cutter supporting frame, a stationary cutting blade secured in the lower end of said frame, wheel supporting bars secured to the upper end of the frame, an operating wheel revolubly mounted in said bars, rear supporting wheel bars secured to and projecting rearwardly from said frame, a rear supporting wheel revolubly mounted in said bars, a drive shaft revolubly mounted in said frame and geared to said operating wheel whereby said shaft is driven, a rotary cutter revolubly mounted in said frame and geared to said drive shaft whereby the cutter is driven, and operating handles connected with said frame.

1,020,615. HOSE-COUPLING. AXEL B. MAGNUSON, Cambridge, Mass. Filed July 19, 1911. Serial No. 639,301. (Cl. 137—28.)



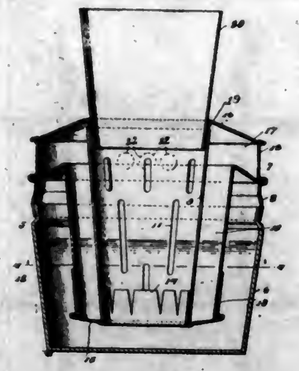
1. A hose coupling of the class described, comprising a male and a female section, said female section having its free end provided with a plurality of slots, interlocking means between said sections, a clamping ring secured intermediate of its ends to said female section, and a cam pivotally carried between the ends of said clamping ring and adapted to be forced through one of the slots of said female section and into engagement with the male section, whereby said female section will be tightly clamped around said male section.

2. A hose coupling of the class described, comprising a male and a female section, the free ends of said female section being slotted, interlocking means between said sections, a clamping ring secured on said female section, a cam pivotally carried between the ends of said clamping ring and adapted to be forced through one slot of said female section and into engagement with said male section, and means on the cam to prevent the casual displacement of the same when effectively positioned.

3. A coupling of the class described, comprising a male and a female section, the free end of said female section being slotted, interlocking means between said sections to prevent longitudinal separation thereof, a clamping ring carried on said female section, a cam pivotally carried between the ends of said clamping ring and adapted to be forced through a slot in said female section into engagement with the outer periphery of the male section, and shoulders formed on the faces of said cam for engagement with the outer periphery of said female section when said cam is moved to its effective position.

4. A hose coupling of the class described, comprising a male and a female section, the female section having its free end slotted, interlocking means between said sections, a clamping ring secured midway of its ends to said female section, said ring being provided with slots intermediate of its ends and securing point, pins carried on said female section extending through said slots, and a cam lever pivotally mounted between the free ends of said ring and adapted to be forced into engagement with the male section to clamp the female section tightly around said male section.

1,020,616. OIL-BURNER. HENRY A. MARKS, Winterhaven, Fla. Filed Sept. 2, 1910. Serial No. 580,251. (Cl. 126—59.5.)



1. The combination with an oil container, of a burner suspended within the container and including inner and outer tubular members spaced apart to form an intermediate air passage, the zone of flame being confined within the lines of the inner tubular member, and a cover forming a closure for the upper portion of the air passage and provided with means for admitting air through said cover and passage to the surface of the oil at the zone of flame.

2. The combination with an oil container, of a burner suspended within the container and including an outer member, an inner member spaced from the outer member to form a circumferential air passage, means for admitting air through said passage to the surface of the oil within the inner member, and a flue forming a continuation of said inner member.

3. The combination with an oil container, of a burner suspended within the container and including inner and outer tubular members spaced apart to form an intermediate air passage, the inner member having its lower end open and its side walls provided with slots, and a perforated cup-shaped member connecting the lower ends of the inner and outer members.

4. The combination with an oil container, of a burner suspended with the container and including spaced tubular members, one of which is perforated and the other spaced from the interior walls of the container to form an intermediate oil reservoir, said members being spaced apart to produce a circumferential draft passage, a cover provided with an air chamber communicating with the draft passage, there being openings formed in the cover for admitting air through the chamber and draft passage to the surface of the oil confined within the inner tubular member.

5. The combination with an oil container, of an outer tubular member suspended within the container and having its upper end provided with a laterally extending flange, a cover having an air chamber and provided with a depending supporting rim for engagement with said container, an inner perforated tubular member spaced from the outer tubular member to form a draft passage communicating with the air chamber, a closure connecting said members and having slots formed in the bottom thereof, said inner tubular member having its lower end open and communicating with the oil in the container.

[Claims 6 to 12 not printed in the Gazette.]

1,020,617. COLLAPSIBLE DRINKING-CUP. WALTER S. MATTHEWS, Pascagoula, Miss. Filed July 6, 1911. Serial No. 637,217. (Cl. 229—1.)



A blank for forming a container having three sets of parallel side edges, the said blank having exserted portions at two of its side edges which intersect each other, the blank being foldable so that the exserted portions hold opposite side portions of the blank together, the said blank also being foldable so that the free ends of the exserted portions may be secured.

1,020,618. WASHING-MACHINE. ELI J. MILLER, York, Pa. Filed July 12, 1911. Serial No. 638,165. (Cl. 68—18.)

1. In a washing machine the combination, with a tank, of a drum rotatably mounted in said tank, and having a plurality of external pockets whose outer walls are perforated at the center, said pockets having water compartments at each side, said drum having a plurality of internal pockets alternating with the external pockets, the outer walls of the internal pockets being closed and the inner wall of each such pocket perforated at one side only of the center of the pocket.

2. In a washing machine, the combination, with a tank, of a drum rotatably mounted therein, and having a plurality of external pockets open to the interior of the drum and having their outer walls provided with perforations, said pockets having water-carrying compartments at each side, said drum also having a plurality of internal pockets opening only to the interior of the drum and each having a water-carrying compartment at one side, each internal pocket being arranged adjacent to one external pocket.

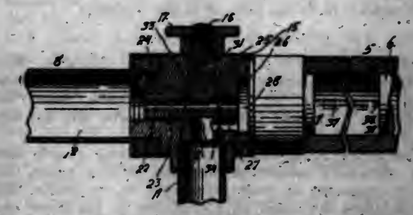


3. In a washing machine, the combination, with a tank, of a drum rotatably mounted therein, said drum having a plurality of external pockets communicating freely with the interior of the drum and having centrally arranged perforations in the outer walls, said drum being provided also with a plurality of internal pockets each of which is arranged adjacent to an external pocket and provided with an arched inner wall, one portion of which is corrugated to form a wash-board surface and another portion perforated, said internal pockets being closed at the back.

4. In a washing machine, the combination, with a tank, of a drum rotatably mounted therein, said drum having a plurality of external pockets communicating freely with the interior of the drum, to permit access of clothes to said pockets, said drum being provided also with a plurality of internal pockets, each of which is arranged adjacent to an external pocket and provided with an inwardly arched perforated and corrugated inner wall.

5. In a washing machine, the combination, with a tank, of a drum rotatably mounted therein, said drum comprising two heads, a plurality of concentric segmental peripheral portions spaced apart and secured to said heads, to form a drum with openings and a continuous sheet of metal bent to form the wall of an external pocket projecting through the space between a pair of segmental peripheral portions and also to form an inner arched wall located radially inward from one of said peripheral portions, and forming therewith a water-carrying pocket.

1,020,619. VALVE MECHANISM FOR PNEUMATIC TOOLS. VINCENT J. O'BRIEN and ROMEO C. AWKERMAN, Denver, Colo., assignors to The Standard Rock Drill Company, Denver, Colo., a Corporation of Colorado. Filed Aug. 27, 1910. Serial No. 579,332. (Cl. 125—10.)



1. In a pneumatic tool equipped with a feed bar casing, a piston movable therein and a motor, the combination of a head block having a relatively large chamber in communication with the motor and feed bar casing for constantly supplying motive fluid in common to both the said casing and said motor when the latter is in operation, and means for delivering and throttling the motive fluid

on its way from the source of supply to said chamber, the latter being located on the opposite side of the throttling means from the feed bar casing, the head block having a passage leading from the said chamber to the said casing.

2. In a hammer drill equipped with a feed bar casing and an engine, the combination of a head block interposed between the feed bar casing and said engine and having a relatively large chamber in communication with the engine and feed bar casing, the said chamber being arranged to constantly supply motive fluid in common to both the said casing and said engine when the latter is in operation, the head block having a passage leading from said chamber to the feed bar casing, and means located between the said chamber and said casing for delivering and throttling the motive fluid on its way to the said chamber.

3. In a hammer drill equipped with a feed bar casing and an engine, the combination of a head block interposed between the feed bar casing and said engine and having a relatively large chamber in communication with the engine and the feed bar casing, the said chamber being arranged to constantly supply motive fluid in common to both the said casing and said engine when the latter is in operation, the valve and head block having passages leading from the said chamber to the said casing, and a throttle valve located in the head block for controlling the motive fluid on its way to the said chamber, the latter being located between the said valve and the engine.

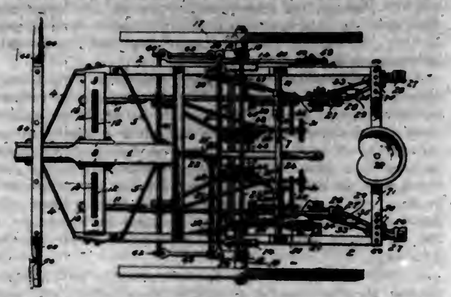
4. In a tool of the class described equipped with a feed bar casing and a drilling engine, the combination of a block interposed between said casing and said engine and having a relatively large chamber in communication with the engine and feed bar casing, said chamber arranged to constantly supply motive fluid in common to both the feed bar casing and said engine when the latter is in operation, a valve journaled in said block for throttling the motive fluid on its way to said chamber, the latter being located between the said valve and the said engine.

5. In a tool of the class described equipped with a feed bar casing and an engine, the combination of a head block interposed between the said casing and said engine, a throttle valve mounted in said block, the latter being provided with passages located on opposite sides of the valve, and a relatively large chamber in communication with the engine and feed bar casing, the said chamber being arranged to constantly supply motive fluid in common to both the feed bar casing and engine when the latter is in operation, the said chamber being located between the throttle valve and the engine, one of said passages in the head block extending toward the engine and communicating with the said motive fluid supply chamber while the other passage is located on the opposite side of the valve and in communication with the feed bar casing, the valve and head block having a passage for the supply of motive fluid to the said chamber, the valve having a passage adapted to register with the passages in the head block on opposite sides of the valve when the engine is in operation.

[Claims 6 to 12 not printed in the Gazette.]

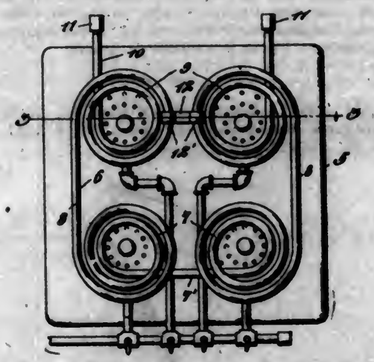
1,020,620. CULTIVATOR. JOHN W. OSBORNE, Winchester, Ill., assignor of two-thirds to James B. Davis, Jr., Winchester, Ill. Filed Feb. 3, 1910, Serial No. 541,694. Renewed Oct. 5, 1911. Serial No. 653,050. (Cl. 97—35.)

The combination with a frame consisting of side bars and cross bars connecting the same, of plow beams pivotally connected at their front ends to the frame, bell crank levers fulcrumed on a cross bar of the frame and having their opposite arms extending respectively forwardly and downwardly from said cross bar, coiled springs secured to the downwardly extending arms and to the frame in advance of the same, links connecting the plow beams with the ends of the forwardly extending arms, a rock shaft on the frame in advance of the bell-crank levers, guides rigid with the rock-shaft, arms offset from and rigid with the plow beams, standards rising from said offset arms and yieldably connected to the



guides, and means on the frame for oscillating the rock shaft.

1,020,621. WATER-HEATER. BELLE REID, St. Louis, Mo. Filed Nov. 1, 1911. Serial No. 658,001. (Cl. 122—19.)

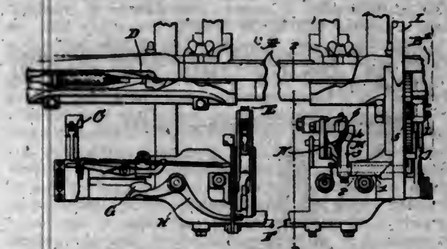


1. The herein described water heater comprising a pipe bent to form parallel inlet and outlet end portions, a pair of end coils and a pair of intermediate coils, each of said coils being spiral, the said end portions of the pipe being connected to the smallest convolutions of the end coils and passing under the large convolutions thereof, said pipe having parallel connecting portions between the largest convolutions of the end and intermediate coils and a connecting portion between the smallest convolutions of the intermediate coils and passing under the larger convolutions thereof.

2. The herein described water heater comprising a pipe bent to form parallel inlet and outlet end portions, a pair of end coils and a pair of intermediate coils, each of said coils being spiral, the said end portions of the pipe being connected to the smallest convolutions of the end coils, and passing under the larger convolutions thereof, said pipe having parallel connecting portions between the largest convolutions of the end and intermediate coils, and a connecting portion between the smallest convolutions of the intermediate coils and passing under the larger convolutions thereof, and a bar connecting the largest convolutions of the end coils.

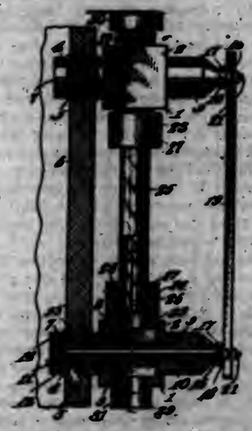
1,020,622. CONTROLLING MECHANISM FOR AUTOMATIC FEELER-LOOMS. ALONZO E. RHOADES, Hopedale, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Nov. 9, 1911. Serial No. 659,287. (Cl. 139—35.)

In a loom, in combination, filling-replenishing mechanism having a hopper to contain a plurality of filling-carriers, and a transferrer to transfer them singly to the shuttle prior to complete exhaustion of the filling therein, a thread-parting mechanism normally operating to part the old filling when the operation of the replenishing mechanism is called for, a swinging support for said thread-parting mechanism, provided with a shoulder, and means, maintained inactive by or through coöperation with a filling carrier positioned for transfer, to prevent the operation of the thread-parting mechanism if no filling-carrier is in transferring position, said means comprising a rock-shaft mounted on a fixed part of the hopper, a detent member having a hooked end adapted to engage the shoulder of the swinging support, and a de-



tector, both fixedly attached to said rock shaft, the detector being extended rearwardly to rest upon the butt of a filling-carrier is transferable position and being thereby upheld to maintain the hooked end of the detent member out of engagement with the shoulder on the swinging support, absence of a filling-carrier in transferring position permitting the detector to descend and turn said rock shaft and thereby lower the hooked end of and operatively position the detent member; the rear end of the detector being upcurved to enable the butts of successive filling carriers to move easily thereunder and upheld the detector as said filling carriers are positioned for transfer.

1,020,623. WATER-GLASS FIXTURE FOR STEAM-BOILERS. HARRY B. ROBINSON, Muskegon, Mich. Filed Oct. 25, 1911. Serial No. 656,657. (Cl. 73—54.)



1. A gage tube holder comprising a body having a chamber, there being a boiler-engaging nipple upon one side of the body, and a tubular bearing within the body and extended across the chamber, the body having a tube-receiving opening, communicating with the chamber; the valve including a stem rotatably mounted in the bearing and in the nipple, and a head upon the stem, journaled in the end of the nipple, there being an opening through the nipple into the chamber, and an opening through the head, adapted to be alined with the opening in the nipple; and means for operating the valve.

2. A gage tube holder comprising a body having a chamber, there being a boiler-engaging nipple upon one side of the body, and a tubular bearing within the body and extended across the chamber; a valve rotatable in the bearing and in the nipple, to cut off the supply to the chamber, the nipple being smooth at its boiler-inclosed end, and being threaded inwardly from said end; and means for securing a gage tube to the body.

3. A gage tube holder comprising a body having a chamber, there being boiler-engaging means upon one side of the body, and a tubular bearing within the body and extended across the chamber; a valve rotatable in the bearing and adapted to cut off the supply to the chamber; the body having a projecting socket, communicating with the chamber, the socket being equipped with an inwardly projecting shoulder, adapted to receive one end of a gage tube; a cap nut threaded upon the socket; and a packing interposed between the cap nut and the socket.

4. A gage tube holder comprising a body having a chamber, there being a drainage tube and a gage glass socket projecting from opposite sides of the body and communicating with the chamber, the body having a boiler-engaging nipple, and a bearing projecting in alinement with the nipple, and disposed at right angles to the socket and to the drainage tube, the bearing being extended across the interior of the chamber; a valve including a stem journaled in the bearing and in the nipple, and a head carried by the stem and rotatable in the boiler-inclosed end of the nipple, there being an opening through the nipple, communicating with the chamber, and an opening in the head, adapted to be alined with the opening through the nipple.

1,020,624. PROCESS FOR THE MANUFACTURE OF DISINFECTANT SUBSTANCES AND PRODUCTS PRODUCED THEREBY. KURT RÜLKE, Berlin, Germany. Filed Dec. 7, 1911. Serial No. 664,377. (Cl. 87—5.)

1. A process for the manufacture of disinfectant fat-solvent substances consisting in treating fenchone with soaps.

2. A process for the manufacture of disinfectant fat-solvent substances consisting in treating fenchone with liquid soaps.

3. A process for the manufacture of disinfectant fat-solvent substances consisting in treating fenchone with the component materials of soaps.

4. A process for the manufacture of disinfectant fat-solvent substances consisting in treating fenchone with the component materials of liquid soaps.

5. Disinfectant fat-solvent soap having a fenchone content of more than 10% of the soap content.

1,020,625. TREATMENT OF VEGETABLE FIBERS AND MATERIALS. WLADIMIR SCHEWELIN, Moscow, Russia, assignor to La Société Anonyme Wolokno Schewelin, Moscow, Russia. Filed June 22, 1911. Serial No. 634,759. (Cl. 8—2.)

1. A process for cleansing and softening flax, hemp, cotton and like fiber and products formed therefrom in which the materials are boiled in an alkaline solution containing a mixture of an alcohol and naphthenic acid.

2. A process for cleansing and softening flax, hemp, cotton and like fiber and products formed therefrom in which the materials are boiled in an alkaline solution containing a mixture of an alcohol and naphthenic and stearic acids.

3. A process for cleansing and softening flax, hemp, cotton and like fiber and products formed therefrom in which the materials are boiled in an alkaline solution containing a mixture of an alcohol and naphthenic acid and a fatty acid containing 18 carbon atoms.

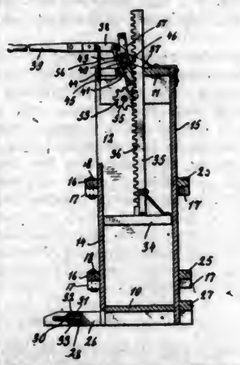
4. A process for cleansing and softening flax, hemp, cotton and like fiber and products formed therefrom in which the materials are boiled in an alkaline solution

containing a mixture of an alcohol and naphthenic acid, the solution being then removed and the materials treated with warmed alcohol.

5. A process for cleansing and softening flax, hemp, cotton, and like fiber and products formed therefrom in which the materials are boiled in an alkaline solution containing a mixture of an alcohol and naphthenic acid, the solution being then removed and the materials treated with warmed alcohol and naphthenic acid.

[Claims 6 to 19 not printed in the Gazette.]

1,020,626. BALING-PRESS. WILHELM SPLITTGERBER, Clintonville, Wis., assignor to Clintonville Baler Company, Clintonville, Wis., a Corporation of Wisconsin. Filed July 11, 1911. Serial No. 638,003. (Cl. 100—5.)

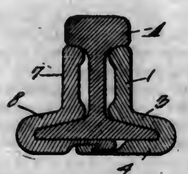


1. In a baling press, a press box, sills on which said box is mounted, one of said sills and the wall of the box connected thereto being loose, a cross bar connecting the sills, said cross bar having a tenon passing loosely through the loose sill, a lever pivoted to the cross bar, and a connection between the lever and the loose sill.

2. In a baling press, a press box, a reciprocatory plunger working therein, a stem on the plunger, a rack on the plunger stem, a lever, a pivoted pawl carried by the lever and engageable with the rack, a detent engageable with the rack, pivoted rods engageable respectively with the pawl and detent, and springs connected to the free ends of the rods.

3. In a baling press, a press box, a reciprocatory plunger working therein, a stem on the plunger, a rack on the plunger stem, a lever, a pivoted pawl carried by the lever and engageable with the rack, a detent engageable with the rack, pivoted rods engageable respectively with the pawl and detent, a connection between the rods, and springs connected to the free ends of the rods.

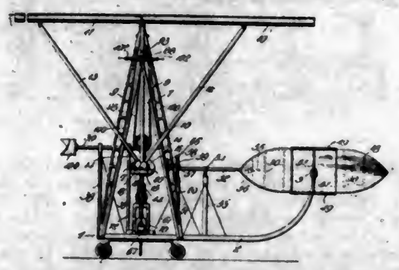
1,020,627. RAIL-JOINT. JABEZ M. SMITH, Malvern, Ark. Filed July 17, 1911. Serial No. 638,921. (Cl. 239—6.)



1. A rail joint including opposed fish plates having base flanges, a series of spaced similar tongues on one base flange, engaging means upon the tops of said tongues, a series of spaced similar tongues on the other base flange, engaging means upon the bottoms thereof, the tongues of either series being insertible between the tongues of the other series and shiftable longitudinally of the bases to bring the engaging means thereon into engagement with the engaging means on the other tongues, said means cooperating to draw the fish plates toward each other during such longitudinal movement.

2. A rail joint including opposed fish plates having base flanges, a series of tongues extending from and under each of said flanges, said tongues being spaced apart distances slightly greater than the width of the tongues, obliquely disposed cleats upon one face of the tongues of one series, corresponding cleats upon the opposed face of the tongues of the other series, all of said cleats coöperating during the longitudinal movement of one of the cleats relative to the other cleats, to draw said plates toward each other.

1,020,628. FLYING-MACHINE. REUBEN B. SWANK, Dayton, Ohio. Filed June 1, 1911. Serial No. 630,671. (Cl. 244—15.)



1. A main frame, a pair of planes pivoted at their inner edges to the main frame, a pair of shafts journaled in the main frame parallel with the pivots of the planes, a gear on each of said parallel shafts, a rack bar pivoted to each plane and engaging one of said gears, and means for rotating the shafts to longitudinally move the rack bars to adjust the planes on their pivots.

2. In a flying machine, a main supporting frame, a pair of plane supporting standards secured to and projecting upwardly above said frame, means to connect and brace the upper ends of said standards, horizontal sustaining planes hingedly connected at their inner ends to said standards, operating bars pivotally connected at their upper ends to said planes, rack teeth formed on the lower ends of said bars, a pair of plane adjusting shafts, revolubly mounted in suitable bearings on said standards, gears fixedly mounted on the outer ends of said shafts and adapted to engage the teeth of said plane adjusting bars whereby the latter are actuated to swing the outer ends of the planes upwardly or downwardly, means whereby said shafts are revolved to independently adjust said planes, and means to operatively connect said shafts together whereby the movement of one shaft will be imparted to the other and said shafts thus moved in unison to simultaneously adjust said planes.

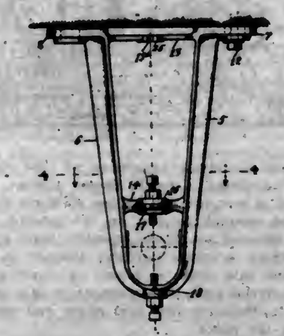
3. In a flying machine, a main supporting frame, a pair of plane supporting standards secured and projecting upwardly above said frame, means to connect and brace the upper ends of said standards, horizontally sustaining planes hingedly connected at their inner ends to said standards, operating bars pivotally connected at their upper ends to said planes, rack teeth formed on the lower ends of said bars, a pair of plane adjusting shafts revolubly mounted in suitable bearings on said standards, gears fixedly mounted on the outer ends of said shafts and adapted to engage the teeth of said plane adjusting bars whereby the latter are actuated to swing the outer ends of the planes upwardly or downwardly, crank disks fixedly mounted on said shafts, stationary locking disks arranged on said shafts, said disks having formed therein annular series of recesses, handles arranged on said crank disks, spring projected locking pins carried by said disks and adapted to be engaged with the recess in said locking disks whereby said crank disks and said shafts are locked when operated and to adjust said planes thereby holding the planes in their adjusted positions and means to hold said locking pins in a retracted or released position.

4. In a flying machine, a main supporting frame, a pair of plane supporting standards secured and projecting upwardly above said frame, means to connect and brace the upper ends of said standards, horizontal sustaining planes hingedly connected at their inner ends to said standards, operating bars pivotally connected at their upper ends to said planes, rack teeth formed on the lower ends of said bars, a pair of plane adjusting shafts, revolubly mounted in suitable bearings on said standards, gears fixedly mounted on the outer ends of said shafts and adapted to engage the teeth of said plane adjusting bars whereby the latter are actuated to swing the outer ends of the planes upwardly or downwardly, means to independently operate said shafts and thereby adjust said planes, a shaft connecting gear fixedly mounted on one of said shafts, a similar gear loosely mounted on the other shaft, and engaged with said fixed gear, a clutch mechanism adapted to lock said loose gear into engagement with its shaft whereby said shafts are geared together and adapted to move in unison, thus simultaneously adjusting said planes.

5. In a flying machine, a main supporting frame, horizontally disposed sustaining planes adjustably connected to said frame, a motor arranged on said frame, a rotary propeller operatively connected with said motor, means to throw said propeller into and out of operation, a steering mechanism, said mechanism comprising a horizontally disposed shaft, a pair of parallel vertically disposed steering planes mounted on said shaft, a pair of horizontally disposed steering planes arranged above and below said vertical planes midway between their ends, said horizontal planes being connected with and supported by said shaft, a plane operating rod having a loose sliding connection at its outer end with the rear ends of said vertical planes, a bar supporting standard, a universal joint connection between said bar and said standard, a plane securing bar loosely connected to the inner end of said operating bar, a supporting frame having recessed end bars with which the outer ends of said securing bar are slidably engaged, spring clamping plates secured to said end bars, clamps adjustably engaged with the recessed end bars of the supporting frame and with said spring clamping plates whereby the latter are actuated to clamp the ends of the plane securing bar thereby fastening said plane operating bar and steering planes in their adjusted position.

[Claims 6 to 9 not printed in the Gazette.]

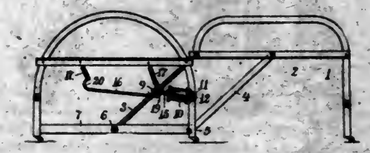
1,020,629. SHAFT-HANGER. PERRY J. WALLER, Los Angeles, Cal. Filed Mar. 21, 1910. Serial No. 550,706. (Cl. 64—14.)



1. A hanger having a base brace provided with lugs projecting at the sides thereof terminating in notches, said notches being in the vertical plane which passes through the center of the shaft longitudinally when the shaft and hanger are positioned for use, and a boxing brace having outwardly projecting lugs on the sides thereof, said lugs terminating in points lying in the same plane which passes through the notches.

2. A hanger having a base brace provided with lugs projecting at the sides thereof terminating in notches, said notches being in the vertical plane which passes through the center of the shaft longitudinally when the shaft and hanger are positioned for use, and having at the other end thereof projecting lugs terminating in points which lie in the same plane as the notches.

1,020,630. COUCH-BED. CLARENCE H. YOUNG, Boston, Mass. Filed Dec. 16, 1911. Serial No. 666,294. (Cl. 5—46.)



1. The combination with a couch bed comprising a stationary section, a movable section, and a swinging frame carried by the stationary section and supporting the movable section, of means actuated by the movable section near the termination of a downward movement for forcing a fluid through a limited space.

2. The combination with a couch bed comprising a stationary section, a movable section and a swinging frame carried by the stationary section and supporting the movable section, of a cylinder having a plunger movable therein, one of said members having a restricted passage through it whereby the movement of said plunger forces a fluid through said passage, and connections whereby the movements of said movable section reciprocates said plunger within said cylinder.

3. The combination with a couch bed comprising a stationary section, a movable section, and a swinging frame carried by the stationary section and connected with the movable section, of a cylinder suitably anchored, a plunger therein, one of said parts having a restricted passage, whereby the movement of said plunger forces a fluid through said passage, a member having widely separated stops and connected with said plunger, and a member carried by said swinging frame and adapted near the ends of the latter's oscillations to engage said stops and move said plunger.

4. The combination with a couch bed comprising a stationary section, a movable section, and a swinging frame carried by the stationary section and connected with the movable section, said stationary section having a side rail and said swinging frame having a spreader bar, of a cylinder loosely held by said side rail and having a plunger and piston rod, a restricted passage being provided for the passage of a fluid displaced by said plunger, and a member having widely separated stops adapted to be engaged by said spreader bar and to operate said piston and plunger.

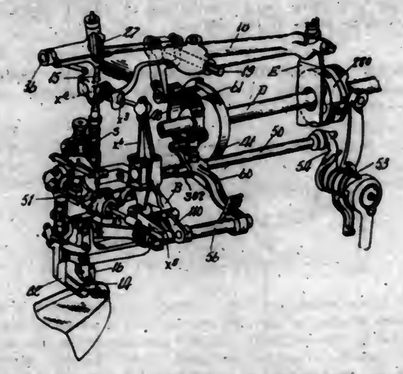
5. The combination with a couch bed comprising a stationary section, having a side rail, a movable section, and a swinging frame embracing a spreader bar, of a cylinder loosely held by said side rail, a plunger in said cylinder, one end thereof having a passage for the slow movement of a fluid displaced by said plunger, and a member consisting of an elongated loop within which is said spreader bar, said member being connected with said plunger and adapted to be reciprocated by the movements of said swinging frame and bar.

[Claims 6 and 7 not printed in the Gazette.]

1,020,631. LASTING-MACHINE. ARTHUR BATES, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Original application filed Mar. 13, 1911, Serial No. 614,154. Divided and this application filed June 6, 1911. Serial No. 631,938. (Cl. 12—2.)

1. A lasting machine having, in combination, pincers, actuating mechanism therefor including means for im-

parting upper plaiting movements to the pincers, a device arranged to be moved by engagement with the work and operative connections therefrom with an element of the plaiting means.



2. A lasting machine having, in combination, pincers, actuating mechanism therefor including means for imparting upper plaiting movements to the pincers, a device arranged to be moved by engagement with the work, and connections between said device and said plaiting means arranged to cause movement of said device to control simultaneously the operation of the plaiting means.

3. A lasting machine having, in combination, plaiting pincers, a device arranged to be moved by engagement with the work, operating means for the pincers, and connecting devices between the said device and the plaiting means arranged to cause movement of said device to control the operation of the plaiting means.

4. A lasting machine having, in combination, pincers, actuating mechanism therefor including means for imparting plaiting movements to the pincers, a part adapted for movement to control the operation of the plaiting means, a device arranged to be moved by engagement with the work, and connections therefrom with said movable part arranged to cause movement of said device to operate said movable part.

5. A lasting machine having, in combination, plaiting, pincers, a device arranged to be moved by engagement with the work, and operating means for the pincers arranged to permit manually effected movement of the said device to control the direction and extent of movement of the plaiting means.

[Claims 6 to 15 not printed in the Gazette.]

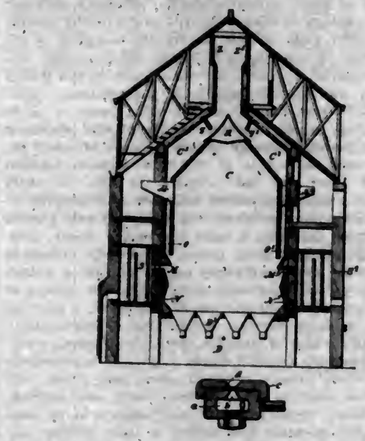
1,020,632. DESICCATING PROCESS. PAUL BÉVENOT, Paris, and EDWARD DE NEVEU, Asnières, France. Filed May 10, 1906. Serial No. 316,115. (Cl. 99—5.)

1. The process of desiccating liquids containing organic elements which consists in subjecting the liquid to high pressure, in ejecting the liquid at high velocity by such pressure through a minute orifice in the form of a finely divided mist and into a current of heated air, and in imparting to the ejected mist a rotary motion.

2. The process of desiccating liquids containing organic elements which consists in subjecting the liquid to high pressure, and in ejecting the liquid at high velocity by such pressure through a minute orifice in the form of a finely divided mist and into a current of heated air.

3. The process of desiccating liquids containing organic elements which consists in subjecting the liquid to a pressure in the neighborhood of one hundred and fifty atmospheres, in ejecting the liquid by such pressure in the form of a finely divided mist through a minute orifice a fraction of a millimeter in diameter and into a current of heated air, and in imparting to the ejected mist a rotary motion.

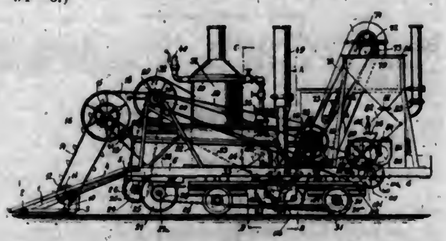
4. The process of desiccating liquids containing organic elements which consists in subjecting the liquid to a pressure in the neighborhood of one hundred and fifty atmospheres, and in ejecting the liquid by such pressure in the form of a finely divided mist through a minute orifice a fraction of a millimeter in diameter and into a current of heated air.



5. The process of desiccating organic liquids, such as milk, which consists in spraying the liquid into a current of moisture-absorbing dry air, and in imparting to the sprayed liquid a whirling motion.

[Claim 6 not printed in the Gazette.]

1,020,633. SELF-CONTAINED MACHINE FOR PREPARING ROAD WEARING-SURFACES. PAUL CARRINGTON BRENNAN, New York, N. Y., assignor, by mesne assignments, to The United States Asphalt Refining Company, New York, N. Y., a Corporation of South Dakota. Filed Dec. 22, 1908. Serial No. 468,761. (Cl. 94—6.)



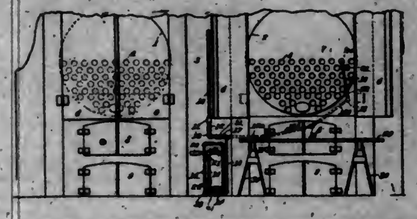
1. A self-contained apparatus of the character described comprising a truck, means thereon for causing the travel of said truck, a folding platform hinged to said truck and adapted to rest on the ground, a drier, an elevator adapted to convey material from said platform to said drier, a screw conveyer adapted to receive material from said drier, a mixer, an elevator adapted to convey material from said conveyer to said mixer, a tank adapted to discharge into said mixer and mechanism for operating the parts.

2. In an apparatus of the character described, a truck, a platform adapted to rest on the ground and movably secured to said truck, a main shaft, a drier, an elevator adapted to discharge material from said platform into said drier, a screw conveyer adapted to receive material from said drier, a mixer, an elevator adapted to convey material from said conveyer to said mixer, means for actuating said mixer and connections from said main shaft adapted to actuate said operating means.

1,020,634. LIQUID WAX FINISH. JOSEPH D. BRYANT, Columbus, Ohio. Original application filed May 10, 1909, Serial No. 495,015. Divided and this application filed Aug. 1, 1910. Serial No. 574,852. (Cl. 134—24.)

A liquid wax finish compound consisting of the following ingredients in approximately the following proportions by weight, to-wit: sixty-nine parts of wax that is characterized by hardness and high melting point, thirty-one parts of stearic acid, and seven times their combined weight of turpentine prepared substantially as described.

1,020,635. TUBE-CLEANER CONNECTION FOR BOILERS. HUGH CASSIDY, Brooklyn, N. Y. Filed Dec. 12, 1911. Serial No. 665,232. (Cl. 122—391.)



1. A pair of boilers having tubes in combination with a fixed pipe, an extension-pipe, a swivel coupling connecting said extension-pipe with said fixed pipe, said tubular extension pipe having swivel couplings adapted to permit extending the members thereof and a nozzle carried by said extension-pipe and adapted to be applied to the said boiler-tubes.

2. A pair of boilers having tubes, in combination with a fixed steam pipe disposed between said boilers, an extension-pipe having swivel connections and flexibly connected with said fixed steam pipe, and a nozzle carried by said extension-pipe and adapted to be applied to said boiler-tubes.

3. A boiler having tubes in combination with an extensible pipe frame consisting of a plurality of radius tubes, a plurality of movable cross pipes connecting the ends of said radius tubes, said cross pipes having swivel connections therein, a swivel connection for supporting said extensible pipe frame at one end, a nozzle and a swivel connection connecting said nozzle with said frame at the other end, adapted to be applied to the boiler tubes.

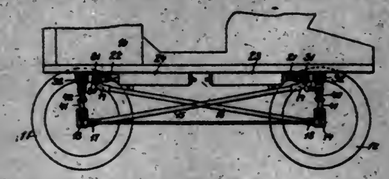
4. A boiler having tubes, in combination with an extensible pipe-frame having swivel joints therein, a swivel connection for supporting one end of said pipe-frame and for supplying steam thereto, said frame being formed of members normally lying in substantially parallel planes, said members being progressively shorter than each other, and a nozzle having a swivel connection with one end of said pipe-frame and adapted to be applied to said tubes.

5. A boiler having a plurality of horizontal tubes, a fixed steam supply pipe adjacent said boiler, an elbow having a swivel connection on the axis of said pipe and having an arm adapted to swing in a plane substantially at right angles to the plane of the ends of said radius tubes, a plurality of tubes jointed together forming an extensible tubular frame and including cross pipes constantly parallel with said arm, a swivel connection connecting the same with said arm, and a nozzle jointed to the outer end of said tubular frame and adapted to be applied to the boiler tubes.

[Claims 6 and 7 not printed in the Gazette.]

1,020,636. VEHICLE. JOHN CHARTER, Whitman, Mass. Filed May 2, 1910. Serial No. 558,962. (Cl. 21—97.)

A vehicle comprising a running frame; a pair of longitudinally-extending struts at each side thereof, one strut of each pair being pivotally connected to the forward part of the running frame and inclining upwardly toward the rear, the other struts being pivotally connected to the rear part of the running frame and inclining upwardly toward the front and crossing those connected to the front; two transversely extending struts pivotally connected to one side of the running frame at the front and rear respectively and inclining upwardly toward the other side; two transversely-extending struts pivotally connected to the other side of the running frame at the front and rear respectively and inclining upwardly in the opposite direc-



tion so as to cross the first-mentioned transverse struts; the free ends of said longitudinal struts being close to the free ends of said transverse struts over the corners of the running frame; spring-tension means acting on said struts for keeping their free ends up; and a body resting on said free ends but otherwise unsupported.

1,020,637. SASH-LOCK. FRANCIS W. CHAUSSE, Portland, Oreg. Filed Mar. 31, 1909, Serial No. 486,896. Renewed Aug. 12, 1911. Serial No. 643,785. (Cl. 16—119.)



1. A sash lock comprising a casing for attachment to a window sash, and formed with a threaded opening and a slot having an angular portion, a plunger operating in the casing, a threaded stem extending from the plunger, a projection on the plunger which operates in the slot, and a strip for attachment to the companion sash, said strip having a series of seats with which the plunger engages, the threaded portion of the stem being located so as to engage the threaded opening in the casing after the projection has passed the end of the slot to lock the two sashes together.

2. A sash lock comprising a casing for attachment to a window sash and formed with a threaded opening, a plunger operating in the casing, a stem extending from the plunger and formed with a threaded portion to engage the threaded opening in the casing when the plunger is projected beyond said casing, a spring interposed between the casing and the plunger to normally project the latter and a strip for attachment to the companion sash and formed with seats to receive the plunger, the threaded connection between the stem and the casing binding the two sashes together.

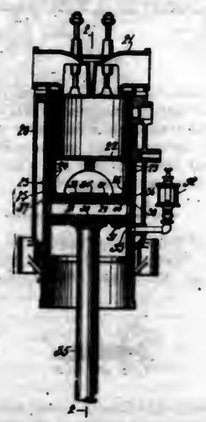
3. A sash lock comprising a casing for attachment to a window sash and formed with a threaded opening, a plunger operating in the casing, a stem extending from the plunger and formed with a threaded portion to engage the threaded opening in the casing when the plunger is projected beyond said casing, a spring interposed between the casing and the plunger to normally project the latter, and means for holding the plunger withdrawn in the casing.

4. A sash lock comprising a casing for attachment to a window sash and formed with a threaded opening, a plunger operating in the casing, a stem extending from the plunger and formed with a threaded portion to engage the threaded opening in the casing when the plunger is projected beyond the casing, a spring interposed between the casing and the plunger to normally project the latter, and means including a slot for guiding the plunger in the casing when said plunger is withdrawn and locking the latter in withdrawn position after the threaded stem is disengaged from the threaded opening.

5. In a locking device of the character described, comprising a casing formed at one end with a threaded open-

ing and open at its opposite end, a plunger operating in the casing, a stem connected to the plunger and having a threaded stem, passing through the opening in the casing, said threads on the stem being located to engage the threads in the opening when the end of the plunger is projected beyond the open end of the casing to lock said plunger in its projected position, and a spring for normally projecting the plunger.

1,020,638. LUBRICATING MEANS FOR WRIST-PINS. JAMES CRAIG, New Rochelle, N. Y. Filed July 7, 1910. Serial No. 570,755. (Cl. 121—115.)



1. In a lubricating device the combination of a piston having an annular cavity, means to feed a lubricant to said cavity, a wrist pin supported in the piston and having a groove formed on the outer surface thereof, a piston end supported on the wrist pin, a port in the piston connecting said annular cavity with said groove to lubricate the wrist pin on the upper surface thereof and to lubricate the bearing surface of the piston end.

2. In a lubricating device the combination of a piston having an annular cavity, means to feed a lubricant to said cavity, a wrist pin having a chamber therein supported in the piston, a piston end supported on the wrist pin, a port through the upper portion of the shell of the wrist pin, a port through the lower portion of the shell of the wrist pin, and a port in the piston connecting the annular cavity therein with the port through the upper portion of the shell of the wrist pin.

3. In a lubricating device the combination of a wrist pin having a chamber, a groove formed on the outer surface of the pin, means to conduct a lubricant to said groove to lubricate the upper surface of the wrist pin, a port connecting the upper surface of the wrist pin with the chamber therein and a port connecting the said chamber of the wrist pin with the lower surface thereof, the two latter ports providing means to lubricate the lower surface of said pin.

4. In a lubricating device the combination of a piston, an annular groove chamber in the cylindrical surface of the piston, a pair of ports in the piston extending from said groove chamber, a wrist pin having a chamber supported in the piston, a groove formed on the wrist pin registering with one of the ports of the piston, a port in the wrist pin leading from the chamber therein to the other port in the piston, and a port connecting the chamber of the wrist pin with the other surface thereof.

5. In a lubricating device the combination of a piston, an annular groove chamber in the cylindrical surface of the piston, an annular cavity extending from said chamber, a packing ring in the groove chamber, a pair of ports in the piston extending from the cavity thereof, a wrist pin having a chamber supported in the piston, a groove formed on the upper surface of the wrist pin registering with one of the ports in the piston, a port in the upper portion of the wrist pin connecting the chamber thereof with the second port in the piston, a second port in the wrist pin connecting its chamber wtih the lower surface thereof, and the piston end of a connecting rod supported on the wrist pin.

[Claims 6 and 7 not printed in the Gazette.]

1020,639. HANDLE FOR TEXTILE BAGS. FRANK P. CURRAN, New York, N. Y. Filed Jan. 19, 1911. Serial No. 603,540. (Cl. 150—1.)



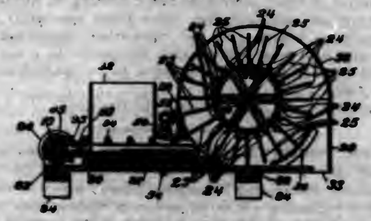
1. A textile bag of the character described having a filled body portion terminating as a filled fabric at approximately the upper edge of the bag body, and a handle therefor comprising a series of courses from the bag body extended upward from the mouth of the bag, spaced around the latter at frequent intervals and gathered into a handle loop, substantially as described.

2. A textile bag of the character described having a body portion comprising longitudinal courses and interposed cross courses forming a filling between the same terminating as such at approximately the upper edge of the bag body, in combination with a handle comprising longitudinal courses of the bag body extended beyond the upper edge of the bag body and gathered into a handle loop, the cross courses of the bag body being carried into the handle loop as longitudinal courses, substantially as described.

3. A textile bag of the character described, having a body portion comprising longitudinal courses and interposed cross courses forming a filling between the same terminating as such at approximately the upper edge of the bag body, in combination with a handle comprising longitudinal courses of the bag body extended beyond the upper edge of the bag body and their free ends overlapped to form a handle loop, the cross courses of the bag body being carried into the handle loop as longitudinal courses, substantially as described.

4. A textile bag having a filled body portion, in combination with a handle for said bag comprising on each side of the bag, a series of courses from the bag body spaced at frequent intervals along the length of each side, extended upward from the mouth of the bag and gathered into a handle loop, the loops so formed on the opposite sides of the bag registering and combining to form a handle when the bag is closed.

1,020,640. ROAD-BINDER-MIXING MACHINE. WILLIAM F. DAVIS, Kansas City, Kans. Filed Mar. 16, 1910. Serial No. 549,815. (Cl. 94—6.)



1. In a road binder mixing machine, the combination with a frame having ground engaging supports and provided with journal bearings, of a rotary scraper journaled in said bearings and constructed with a periphery presenting plural scraping edges, said scraper being arranged to scrape road material from a conveyer, a conveyer arranged approximately transverse to the axis of said scraper and located lower than the top of said scraper and constructed to force road material within the sweep of said scraping edges, and binder serving devices arranged to discharge binder in close proximity to the scraper whereby the binder and the scrapings are at once associated and discharged from the scraper.

2. In a road binder mixing machine, the combination with a frame having ground engaging supports and provided with journal bearings, of a rotary scraper journaled in said bearings and constructed with a periphery presenting yielding plural scraping edges, said scraper being arranged to scrape road material from a conveyer, a conveyer arranged approximately transverse to the axis of said scraper and located lower than the top of said scraper and constructed to force road material within the sweep of said scraping edges, and binder serving devices arranged to discharge binder in close proximity to the said scraper whereby the binder and the scrapings are at once associated and discharged from the scraper.

3. In a road binder mixing machine, the combination with a frame having ground engaging supports and provided with journal bearings, of a rotary scraper journaled in said bearings and constructed with radial elastic blades, said scraper being arranged to scrape road material as said material is forced against it by a conveyer, a conveyer arranged and located lower than the top of said scraper and constructed to force road material against said scraper, a hopper located above said conveyer and communicating therewith, and binder serving devices arranged to spread binder upon said blades whereby the binder and the scrapings are at once associated and discharged from the scraper.

4. In a road binder mixing machine, the combination with a frame having ground engaging supports and provided with journal bearings, of a rotary scraper journaled in said bearings and constructed with a periphery presenting plural scraping edges, said scraper being arranged to scrape road material from a conveyer, a conveyer arranged and located lower than the top of said scraper and constructed to force road material against said scraper, a curved grating arranged contiguously to the periphery of said scraper whereby the scrapings are rubbed through the grating by the operation of the scraper, and binder serving devices arranged to spread binder upon the scraper whereby the binder and the scrapings are at once associated and discharged from the scraper.

5. In road binder mixing machines, the combination with a frame having ground engaging supports and provided with journal bearings, of an orbitally traveling scraper suitably connected to journals journaled in said bearings, said scraper being constructed and arranged to scrape road material from a conveyer, a conveyer arranged approximately transverse to the axis of said scraper and located lower than the top of the orbit of said scraper and constructed to force road material within said orbit, a hopper located above said conveyer and communicating therewith, and binder serving devices arranged to discharge binder in close proximity to the scraper whereby the binder and the scrapings are at once associated and discharged from the scraper.

1,020,641. PRESSURE-CONTROLLING DEVICE. ALBERT J. DRONSFIELD, Providence, R. I. Original application filed Dec. 27, 1910, Serial No. 599,465. Divided and this application filed Apr. 13, 1911. Serial No. 620,780. (Cl. 137—53.)

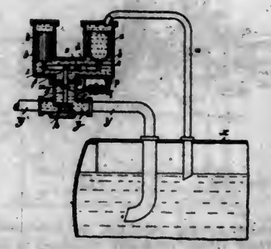
1. As a new article of manufacture, a pressure controlling device comprising a casing having an inlet and an outlet and a passage uniting said inlet and outlet and a reciprocating closing agent in the casing controlling said passage and adapted to be moved in one direction only by fluid pressure, said closing agent being wholly exposed to the pressure in the inlet to open, yielding means which the action of the fluid pressure does not supplement in closing and single means for limiting the movement of the piston and at the same time preventing escape of fluid exteriorly past the piston.



2. As a new article of manufacture, a pressure controlling device comprising a casing having an inlet and an outlet and a passage uniting said inlet and outlet, a reciprocating closing agent in the casing controlling said passage and adapted to be moved in one direction only by fluid pressure, said closing agent being wholly exposed solely and directly to the pressure in the inlet to open, spring means acting on said closing agent for moving it in the opposite direction said spring means being not supplemented by the fluid pressure in closing of the valve, and single means for limiting the movement of the piston and at the same time preventing escape of fluid exteriorly past the piston.

3. As a new article of manufacture, a pressure controlling device comprising a casing having a lateral extension, a plug closing the outer end of said extension and having a vent hole, said casing being provided with an outlet and with an inlet and a piston chamber extending into said extension and opening into the inlet and outlet through openings, a piston mounted in said extension with its rear end normally interspaced from the forward end of said plug, a spring in the plug and piston chamber pressing against the piston to close the same, said piston being exposed to pressure upon the inlet side to be moved only in one direction by such pressure.

1,020,642. FEED-WATER REGULATOR. MARTIN ELKOFER, Leipzig, Germany. Filed Jan. 11, 1911. Serial No. 601,995. (Cl. 137—101.)



1. In a feed-water regulator the combination of a feed-conduit, a feed-valve, float mechanism controlling said feed-valve, said float mechanism comprising a float chamber having a discharge orifice leading to said feed-conduit, and a second valve operative in conjunction with the feed-valve so that said second valve closes said discharge-orifice when the feed valve is opened.

2. In a feed-water regulator the combination of a feed-conduit, a feed-valve having a rod, a feed-valve casing communicating with said feed-conduit, float mechanism controlling said feed-valve and comprising a float-chamber having a discharge-orifice which leads into said casing and through which said valve rod extends into said float chamber, and a second valve on said rod positioned to close said discharge orifice when the feed valve is open.

3. In a feed-water regulator the combination of a feed-valve, a feed-conduit, float-mechanism controlling said feed-valve, said float-mechanism comprising a float-chamber having an inlet orifice and a discharge orifice leading

to said feed-conduit, an anti-return valve permitting flow of water from said feed-conduit through said inlet orifice, and a valve operative in conjunction with the feed valve to close said discharge orifice when the feed-valve is open.

1,020,643. PRESERVED WOOD AND PROCESS OF MAKING SAME. CARLETON ELLIS, Montclair, N. J., assignor to Copper Oil Products Company, New York, N. Y. Filed Nov. 9, 1911. Serial No. 659,281. (Cl. 99—12.)

1. The herein described process of preserving railroad ties and other fibrous material consisting in injecting thereinto at least a fiber-coating amount of a vulcanized asphalt oil carrying antiseptic material, the said antiseptic material being present in a predetermined amount, whereby the preservative action substantially coincides with the life of the tie, and in causing at least a major portion of the interior fibers of said tie or other fibrous material to be coated with said oil.

2. The process of treating wood comprising subjecting same to a vulcanized asphalt oil under pressure, said oil containing an excess of sulfur.

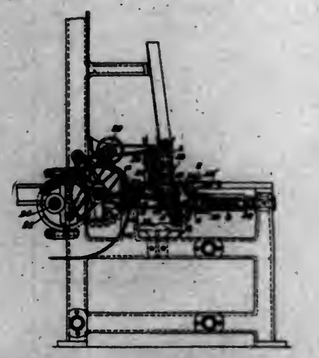
3. The process of treating wood comprising subjecting same to a vulcanized asphalt oil under pressure, said oil containing an excess of sulfur, removing the oil and subjecting the wood to a higher pressure of a gaseous body.

4. As a new article of manufacture wood fiber-coated with vulcanized asphalt oil carrying an excess of sulfur.

5. As a new article of manufacture wood impregnated with an oily medium comprising vulcanized asphalt oil carrying an excess of sulfur.

[Claims 6 and 7 not printed in the Gazette.]

1,020,644. MATCH-MAKING MACHINE. HENRY ALFRED GSELL, Paris, France. Filed July 15, 1911. Serial No. 638,765. (Cl. 144—64.)



1. In a match-making machine, the combination of two grooved delivery slides, normally arranged in substantially the same horizontal plane, one behind the other, and means for bringing one slide above the other during the forward stroke of same, substantially as set forth.

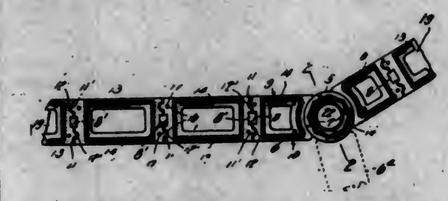
2. In a match-making machine, the combination of two grooved delivery slides, normally arranged in substantially the same horizontal plane one behind the other, guide-ways for the front slide, inclines on said guide-ways whereby said slide is lowered after it is moved forwardly to a certain distance so that the second slide will be moved above said front slide, substantially as set forth.

3. In a match-making machine, the combination of two grooved delivery slides, normally arranged in the same plane one behind the other, guide-ways for guiding the front slide and provided with an incline, whereby the front slide is lowered after it has moved forwardly to a certain distance, and means for moving the second-slide above the front slide after the front slide has been lowered.

4. In a match making machine, the combination of two delivery-slides normally arranged in substantially the same horizontal plane, one behind the other, and provided with grooves, the rear slide forming an abutment for the splints in the front slide, a vertically movable plate at the rear of the rear slide, means for raising and lowering said plate at suitable intervals, means for moving the slides forwardly at certain intervals, and means for lowering the front slide after the slides have moved a certain distance so that the rear slide may pass over the front slide.

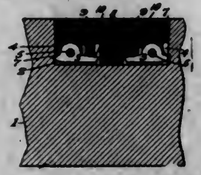
5. In a match-making machine, the combination of two grooved slides, normally arranged in substantially the same horizontal plane, one behind the other, means for reciprocating the rear slide, connections between the slides whereby the front slide is pushed forwardly and backwardly by the rear slide, means for lowering the front slide after it has moved forwardly a certain distance, whereby the rear slide may pass over and above the front slide, said last means serving to again raise the front-slide on the backward movement.

1,020,645. CONCRETE STRUCTURE. CHARLES R. HALL, Seabeck, Wash. Filed Mar. 8, 1911. Serial No. 613,165. (Cl. 72—42.)



A wall including horizontal rows of blocks, the opposing ends of the blocks formed with symmetrically arranged protuberances and grooves to provide interfitting connections between the adjacent blocks of each horizontal row, the opposing ends of the blocks further provided with opposing dove-tail grooves for the reception of a filling of cement to constitute a binder between the ends of the blocks, and vertically extending rods projecting through the ends of each of the blocks.

1,020,646. PIN-SPOT FOR BOWLING-ALLEYS. FRANCIS C. HOBBS, New York, N. Y., assignor to The Brunswick-Balke-Collender Company of New York, New York, N. Y., a Corporation of New York. Filed June 9, 1909. Serial No. 501,069. (Cl. 46—66.)



1. A pin spot for bowling alleys, said spot having a locking device permanently secured to and carried thereby.

2. A pin spot for bowling alleys, said spot having a locking device secured to and carried thereby, said device when in operative position projecting beyond the body of the spot.

3. A pin spot for bowling alleys, said spot having a plurality of locking members arranged to be contained within the body of the spot as the same is inserted into the alley bed, and means for causing said locking members to project beyond the wall of the spot when the spot is in position.

4. A pin spot for bowling alleys, said spot having a plurality of pivoted locking members lying within the body of the spot as the same is inserted into the alley bed, and means for turning the locking members on their pivots to cause them to project beyond the body of the spot so that they may enter the wall of the socket in which the spot is located.

5. A pin spot for bowling alleys, said spot having a plurality of pivoted locking dogs mounted therein said dogs having noses constructed to penetrate the wall of the socket in the alley bed when the spot is inserted, and means for acting on the tails of the dogs to force the dogs into locking position.

[Claim 6 not printed in the Gazette.]

1,020,647. COMBINATION ATOMIZER AND NEBULIZER. JAMES J. HOLLAND, Philadelphia, Pa., and WILLIAM DISCHER, Toledo, Ohio. Filed May 11, 1911. Serial No. 626,473. (Cl. 128—2.)



1. In a device of the character described, the combination of a container, concentric tubes passing out thereof, a spray tip on the outer ends thereof having a forward outlet aperture, and a muffling tip having a bore therethrough through which the outer tube passes and a forward counter-bore of larger diameter than the said spray tip, the forward end of said muffling tip having an inwardly projecting lip partially closing the opening therein formed by the said counter-bore and the said muffling tip being slidable on the said outer tube to slide over the spray tip and away therefrom.

2. In a device of the character described, the combination of a container, concentric tubes passing out thereof, a spray tip on the outer ends thereof having a forward outlet aperture, and having an outward taper and a muffling tip having a bore therethrough through which the outer tube passes and a forward counter-bore of larger diameter than the said spray tip, the forward end of said muffling tip having an inwardly projecting lip partially closing the opening therein formed by the said counter-bore and the said muffling tip being slidable on the said outer tube to slide over the spray tip and away therefrom.

1,020,648. PIN. CHARLES AUGUSTUS JOHNSON, Middletown, Cal. Filed May 5, 1911. Serial No. 625,167. (Cl. 24—155.)



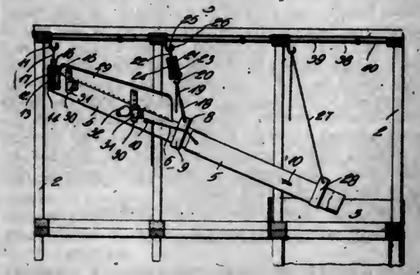
1. A device of the character described, including a pin having a point of elliptical contour in transverse section and tapered longitudinally toward its forward end, said point having shoulders formed in its lateral edges at the rear end, a hollow-head having an entrance-opening of approximately the contour of the pin-point, and a resilient member within said hollow-head having opposed parallel portions mounted in position to act in a plane substantially the same as that determined by the longer diameter of said entrance-opening, whereby the pin-point, as it is inserted into said head and received between said lateral spring portions will be moved into a flatwise position with respect thereto and the shoulders of said pin-point caused to engage the inner surface of said head.

2. A device of the character described, including a pin having a flat point-forming portion, provided at its rear end with shoulders, and a hollow-head having its entrance opening of approximately the contour of said point forming portion equipped with a resilient member having parallel clasp-forming portions receiving therebetween said flat point-forming portion, said shoulders being adapted to engage the inner surface of said head, said resilient member being mounted in position to cause said clasp-forming portions to act in a plane substantially the same as that determined by the longer diameter of said entrance opening.

3. A device of the character described, including a pin having a point-forming portion approximately elliptical in cross sectional contour, with vanishing lateral edges, said point-forming portion having shoulders at its rear end, and a hollow-head having an approximately elliptical entrance-opening, and a resilient member or spring having clasp-forming terminals between which is received said point-forming portion, said resilient member being mounted in position to cause said clasp-forming terminals to act in a plane substantially the same as that determined by the longer diameter of said entrance opening, said shoulders adapted to engage the inner wall of said head as said pin-point assumes a flatwise position with respect to said terminals.

4. A device of the character described, including a pin having an elliptical point-forming portion having shoulders at the rear end thereof, and a hollow-head having an elliptical entrance-opening and a resilient member arranged therein and having parallel clasp-forming members receiving said point-forming portion therebetween, said resilient member being mounted in position to cause said clasp-forming portions to act in a plane substantially the same as that determined by the longer diameter of said entrance opening, said shoulders adapted to engage the inner wall of said head as said pin-point assumes a flatwise position with respect to said clasp-forming members, and said resilient member having a transverse partition-forming portion adapted to receive and limit the insertion thereinto of said point-forming portion, said point-forming portion being of corresponding dimensions in cross-section as the general outline of said entrance-opening.

1,020,649. MINING APPARATUS. ELMO FINLEY KELLUM, Don Luis, Ariz. Filed Aug. 24, 1911. Serial No. 645,096. (Cl. 57—37.)



1. In a mining apparatus a supporting frame, a chute arranged therein, a slide having its lower end arranged to discharge into said chute, said slide being formed of a plurality of sections, the lower end of one section fitting into the upper end of the adjoining section, stirrups secured to the lower end of one section, and having formed thereon laterally extending flanges provided with guide apertures, means detachably and adjustably connecting the adjacent ends of adjoining sections and passing through the guide apertures in said flanges, and means to yieldingly and adjustably connect the slides with the upper frame.

2. In a mining apparatus a supporting frame, a slide arranged therein, said slide being formed of upper and lower sections, means to secure said sections together, spring casings secured to the upper end of the upper section, spring retracted rods arranged in said casing, hanger

chains secured to the upper ends of said rods, hangers secured to the upper beams or joists of the frame and adapted to receive said chains, a stirrup secured to the lower end of the upper section, a bail secured to said stirrup, a hanger secured to the joists above said lower end of the upper slide section, a spring casing, a spring retracted rod arranged in said casing and having its outer end engaged with said hanger, a hook on the lower end of said casing, a chain secured to said bail and adapted to be adjustably engaged with said hook, whereby the lower end of the upper section and the upper end of the lower section of the slide are supported and hanger chains secured to the lower end of the lower section of the slide, whereby said end is adjustably supported.

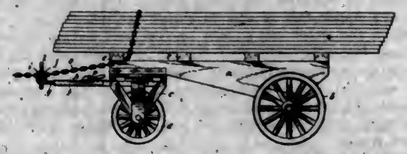
3. In a mining apparatus a supporting frame comprising sills, a series of uprights secured to said sills, joists to connect the upper ends of said uprights, a series of hangers engaged with said joists, hanger fastening devices, said devices comprising hingedly connected bars, prongs formed on the outer end of one of said bars, a point formed on the outer end of the other bar, said pointed and pronged ends of the bars being adapted to be engaged with the joists or beams with which said hangers are engaged with the said prongs strengthening the hangers whereby when the bars are straightened out the points and prongs on the outer ends thereof will be forced into the joists thus securing said bars and the hangers in place, a chute arranged in said frame, a slide positioned to discharge into said chute, said slide being formed in a plurality of separable sections, means to detachably connect said sections together and means to yieldingly and adjustably connect the same with said hangers.

4. In a mining apparatus a supporting frame, a chute arranged therein, a slide positioned to discharge into said chute, said slide being formed in a plurality of separable sections, the engaging end of one of which over-laps or fits into the adjoining end of the other section, a flanged head formed in the engaging end of one of said sections, a hanger secured to the end of the adjacent section, a seat arranged in said hanger and adapted to receive the head of the other section, a latch adapted to secure said head in engagement with said seat and means to yieldingly and adjustably secure said sections of the slides into the frame.

5. In a mining apparatus, a supporting frame, a slide arranged therein and formed of a plurality of detachably connected sections, hanger stirrups secured to one end of each of said sections, apertured flanges formed on said hangers, hooks secured to the sides of the sections, connecting chains secured to one section and passing through the apertures in said flanges and engaging with the hooks on the adjacent section, whereby said sections are detachably secured together, means for adjustably securing said sections to said supporting frame, an inclined deflecting plate, and means for detachably securing said plate to one side of a slide section.

[Claims 6 and 7 not printed in the Gazette.]

1,020,650. LOAD-BINDER. FREDERICK A. KENNEY, Portland, Oreg., assignor to The Kenney Truck Company, Portland, Oreg., a Corporation of Oregon. Filed Apr. 30, 1910. Serial No. 558,724. (Cl. 214—5.)

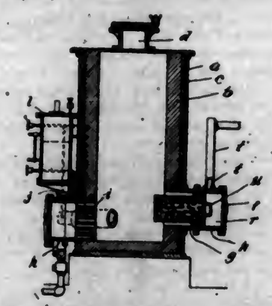


1. In a load binder, the combination of a hollow tongue, a bar slidably mounted in the hollow tongue and provided at its outer free end with inwardly turned alined hooks to form a chain guide, said hooks being spaced apart to form a seat, a latch bar pivoted to the slidably mounted bar having a notch which when the latch bar is thrown into the space formed between the two hooks, is in alinement with the centers of said hooks to engage and lock a tying chain, and means on the hollow tongue to hold the slidable bar in adjusted position.

2. In a load binder the combination of a hollow tongue, a bar slidably mounted in said hollow tongue and provided on its face with ratchet teeth, a dog mounted on the hollow tongue to coöperate with the ratchet teeth, the slidably mounted bar having hooks arranged transversely parallel to each other and spaced apart, a chain passing through the hooks and adapted to engage and hold a pile of lumber, and means secured to the outer end of the slidable bar to engage with the links of the chain intermediate the hooks to hold the chain in fixed position.

3. In a load binder, the combination of a hollow tongue a bar slidably mounted in said tongue and provided on one face with ratchet teeth, a dog arranged to engage with the ratchet teeth, hooks on the outer end of the slidable bar, said hooks arranged transversely parallel to each other and spaced apart, a chain adapted to engage and hold a pile of lumber, one end of said chain passing through the hooks, and a latch bar secured to said slidable bar and comprising an eye at one end to removably engage one of the hooks, said latch bar having a recess to engage the links of the chain between the hooks.

1,020,651. GAS-GENERATOR. ERNEST LORIN, Doulaincourt, France. Filed Mar. 29, 1907. Serial No. 365,370. (Cl. 48—63.)



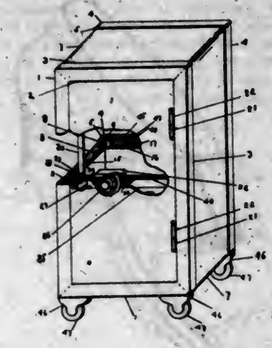
The combination with a furnace, of a gas outlet therefor comprising a perforated box of refractory material therein, a removable perforated cover for said box, a sleeve arranged in the furnace wall, and within which sleeve the said box is arranged, and a second sleeve secured to the first sleeve, and a door for said second sleeve, a settling tank, and a connection between the latter and the said second sleeve for the passage of gas.

1,020,652. SAFE-CABINET. CHARLES F. MEILINK, Toledo, Ohio. Filed Jan. 23, 1911. Serial No. 604,019. (Cl. 109—2.)

1. The combination with a pair of opposing endless angle safe frames, one of which frames is provided with threaded lugs and the other with brackets, of a safe housing member to space the frames, and bolts of less length than the housing member and engaging the lugs and brackets to mount the housing assembled as to the frames.

2. A sheet metal safe comprising a pair of endless wrought angle frames, each having an inwardly extending leg portion remote from the other to form the corners of the safe, an endless housing member spacing the angles by abutting said inwardly extending leg portions, opposing seat means within said angles, and bolts of less length than the housing member and coacting with the seat means to lock the frames and housing member assembled.

3. The combination with an endless wrought channel safe frame, an opposing endless wrought angle safe frame, and an endless sheet metal housing member spacing said frames, of seat means within said frames, and bolts of less length than the housing member and coacting with the seat means to lock the frame and housing assembled.

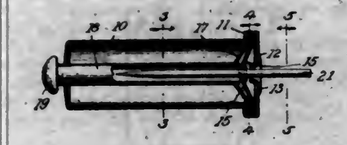


4. A safe door comprising a pair of endless wrought interengaging angle frames, one within the other having a leg portion of one frame overlapping a leg portion of the other frame, and a cover plate for each side of the door, one plate coacting with each frame.

5. A sheet metal safe door characterized by an endless frame, a transverse reinforcing bar for the door frame, a bolt for the door, a bolt throw spindle and a lock spindle for the bolt, said spindles mounted in the reinforcing bar.

[Claims 6 to 15 not printed in the Gazette.]

1,020,653. HAT-PIN GUARD. AUGUST MUELLER, New York, N. Y. Filed July 10, 1911. Serial No. 637,611. (Cl. 24—155.)



A hat pin guard comprising a tubular casing flanged at one end, a centrally apertured coniform plate, a divided additional plate having a pair of opposed spring-arms, a pin guide interlocked with the casing-flange, and securing the coniform plate and the divided plate to the casing, and a tubular plunger adapted to receive the pointed end of a hat pin, said plunger extending outside the casing at the end opposite the pin guide and being engaged by the spring-arms, while the coniform plate constitutes a bearing for the plunger and also a check for limiting the inward play of the spring-arms.

1,020,654. FURNITURE-CASTER. JOSEPH FRANCIS O'BRIEN, Brockton, Mass. Filed Dec. 5, 1911. Serial No. 663,974. (Cl. 16—73.)

A caster socket comprising two sections semicircular in cross section, an inwardly extending annular flange formed on the lower end thereof, resilient angular locking members arranged in opposed relation, having one of their ends secured to the inner walls of each section of the socket, and their free ends disposed at right angles to the walls of said sections, in combination with a caster pintle having an annular groove formed therein to receive



the free ends of said locking members to hold said pintle in place when inserted in the socket.

1,020,655. GLUE AND METHOD OF MAKING THE SAME. FRANK G. PERKINS, South Bend, Ind.; Gertrude S. Perkins, executrix of said Frank G. Perkins, deceased, assignor to Perkins Glue Company, a Corporation of Pennsylvania. Filed Nov. 2, 1908. Serial No. 460,737. (Cl. 87—17.)

1. The process of making a glue base which consists in agitating cassava carbohydrate with water and a starch converting agent whereby the polymerisation of the carbohydrate is altered to a point such that when dissolved it will form a viscous semi-fluid unjellified product adapted to be applied by machinery.

2. The process of making wood glue which consists in taking suitable carbohydrate material and properly proportioning the viscosity, cohesiveness and adhesiveness of the carbohydrate material resulting when it is dissolved to form glue applicable by machinery and then dissolving the carbohydrate material with a solvent of cellulose to put it into solution to form glue.

3. The process of making a glue base which consists in agitating a starchy carbohydrate with water and a starch converting agent to decrease the water absorptive properties of the carbohydrate to properly proportion the viscosity, adhesiveness and cohesiveness resulting when the base is dissolved to form glue properly for the application of the glue by machinery.

4. The process of making a glue base which consists in agitating a starchy carbohydrate with water and suitable chemicals below the bursting temperature of the starch to proportion the viscosity, adhesiveness and cohesiveness resulting when the base is dissolved to form glue applicable by machinery.

5. In the making of adhesives, treating cassava flour with substantially an equal weight of water, heating the same to about 130° F. and adding about 2% or 3% by weight of strong acid slowly and with agitation, without rendering the flour materially soluble in water, then neutralizing the acid with an alkali after from 4 to 6 hours agitation.

[Claims 6 to 38 not printed in the Gazette.]

1,020,656. PROCESS FOR MAKING GLUE. FRANK G. PERKINS, South Bend, Ind.; Gertrude S. Perkins, executrix of said Frank G. Perkins, deceased, assignor to Perkins Glue Company, a Corporation of Pennsylvania. Filed Nov. 2, 1908. Serial No. 460,738. (Cl. 87—17.)

1. The process of making a glue base which consists in agitating cassava carbohydrate with water, sodium peroxid, and caustic soda whereby the polymerization of the carbohydrate is altered.

2. The process of making a glue base which consists in treating a starchy carbohydrate or its equivalent with water and an alkaline digesting agent until the water absorptive properties of the carbohydrate are decreased and

the viscosity, adhesiveness and cohesiveness resulting when the base is dissolved to form glue are properly proportioned for application of the glue by machinery.

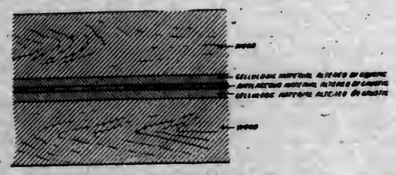
3. In the manufacture of adhesives from carbohydrates, the treating of cassava starch with water, then adding peroxid of soda in the form of a solution, and also simultaneously treating it with a solution of caustic and agitating the same.

4. In the manufacture of glue from carbohydrates, the treating of cassava carbohydrate with water, containing from ¼% to 1% by weight of peroxid of soda in the form of a solution of substantially 20 parts of water to one part of peroxid by weight and also treating it with from ¼% to ½% of a caustic alkali in the form of a solution of substantially 10 parts of water to one part of alkali by weight.

5. In the making of glue, the treating of starch with sodium peroxid and caustic in water, then neutralizing the caustic, then drying and finally treating with a solution of caustic to form an alkaline glue.

[Claims 6 to 9 not printed in the Gazette.]

1,020,657. GLUE JOINT. FRANK G. PERKINS, deceased, Lansdale, Pa., by Gertrude S. Perkins, executrix, South Bend, Ind., assignor to Perkins Glue Company, a Corporation of Pennsylvania. Filed Nov. 7, 1911. Serial No. 659,043. (Cl. 154—43.)



1. An article of manufacture consisting of two pieces of cellulosic material joined by a layer having a strength superior to the mean lateral strength of wood, which layer consists chiefly of amylaceous matter and alkali metal carbonate, bicarbonate and acetate, the total amount of said compounds calculated as sodium hydroxid being between 3 and 14 per cent. by weight of amylaceous matter.

2. An article of manufacture embracing cellulosic material joined by a layer having a strength superior to the mean lateral strength of wood, which layer contains starch and products of interaction between free caustic metal alkali and the material being joined.

3. An article of manufacture embracing cellulosic material joined by a layer having a strength superior to the mean lateral strength of wood, which layer is made from a vegetable carbohydrate glue containing free caustic, in which the caustic has combined to form a carbonate or bicarbonate and an acetate.

4. An article of manufacture embracing cellulosic material joined by a layer having a strength superior to the mean lateral strength of wood which layer contains chiefly starchy material, water and alkaline metal acetate and an alkaline metal carbonate or bicarbonate, the amount of said compounds calculated as sodium hydroxid being between three and fourteen per cent. by weight of starchy material.

5. An article of manufacture consisting of two pieces of wood joined by a layer having a strength superior to the mean lateral strength of the wood which layer consists chiefly of amylaceous matter.

[Claims 6 to 9 not printed in the Gazette.]

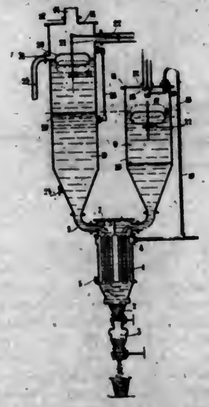
1,020,658. SHOE-FASTENING DEVICE. WILLIAM H. POWELL, Chicago, Ill. Filed Oct. 10, 1910. Serial No. 586,329. (Cl. 24—207.)

In a shoe, the combination of the adjacent front edges of the shoe upper, with a plate secured to each edge and having outwardly turned flanges extending the full length of their inner edges, a third plate having downwardly converging edges and provided with inwardly turned flanges along said edges to engage the flanges of the first said plates, whereby upward movement of the third plate will draw said edges together, the plates on



the shoe edges and said third plate being coextensive in length, and a pad secured to the under side of said third plate at its lower end and adapted to extend under the lower edges of said flanges when engaged, substantially as described.

1,020,659. EVAPORATING APPARATUS. CHARLES LOUIS PRACHE, Paris, France, assignor to La Société d'Exploitation de Procédés Evaporatoires, Système Prache et Bouillon, Paris, France. Filed June 19, 1911. Serial No. 634,118. (Cl. 127—9.)



1. In combination a pair of stationary reservoirs, a connection between said reservoirs, a heater to heat said connection, and means to cause an alternating flow of liquid from one reservoir to the other.

2. In combination a pair of stationary reservoirs, a connection between said reservoirs, means to cause an alternating flow of liquid from one reservoir to the other and a heater adapted to heat said liquid during its flow from one reservoir to the other.

3. In combination a pair of stationary reservoirs, a connection between said reservoirs, a heater to heat said connection, means to cause an alternating flow of liquid from one reservoir to the other and means to remove deposits from said liquid.

4. In combination a pair of stationary reservoirs, a connection between said reservoirs, means to cause an alternating flow of liquid from one reservoir to the other, a heater adapted to heat said liquid during its flow from one reservoir to the other and means to remove deposits from said liquid.

5. In combination, a pair of reservoirs, a connection between said reservoirs, a heater to heat said connection, and means to subject the liquid contents of said reservoirs to a fluid at a pressure higher than the normal exhaust pressure for intermittent alternating periods.

[Claims 6 to 11 not printed in the Gazette.]

1,020,660. SPINNING-TOP. FREDERICK W. PREYER, Canton, Ohio. Filed Nov. 17, 1911. Serial No. 660,875. (Cl. 46—32.)



1. In combination, a spinning top having an axial peg thereon, and a conical spring made of elastic wire having one end extended and formed as a cylindric socket and clamped around the axial peg, and having the other end shaped as a spinning point at the apex of the spring eccentric to the axis of the top.

2. In combination, a spinning top having an axial peg thereon, and a conical spring made of elastic wire having one end extended and formed as a cylindric socket and clamped around the axial peg, and having the other end shaped as a spinning point at the apex of the spring.

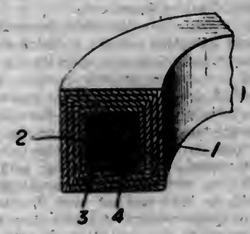
3. In combination, a spinning top having an axial peg thereon, and a coiled spring made of elastic wire having one end extended and formed as a cylindric socket and clamped around the axial peg.

4. In a top, a conical spring formed of elastic wire having one end extended and formed as a cylindric socket at the base of the spring, and having the other end shaped as a spinning point at the apex of the spring eccentric to the axis of the socket.

5. In a top, a conical spring formed of elastic wire having one end extended and formed as a cylindric socket at the base of the spring, and having the other end shaped as a spinning point at the apex of the spring.

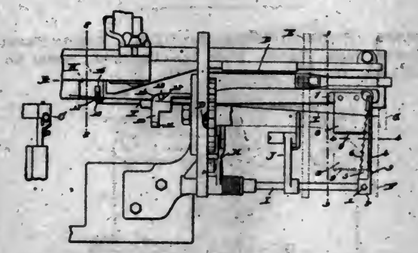
[Claims 6 to 10 not printed in the Gazette.]

1,020,661. PACKING. JULES RESTEIN, Philadelphia, Pa., assignor to Clement Restein, Philadelphia, Pa. Filed Jan. 17, 1911. Serial No. 603,101. (Cl. 121—107.)



A packing comprising the combination of a hollow strip of packing material square in cross-section and having through it a lengthwise ranging opening of square cross-section, a pair of complemental wedge strips arranged in the opening, and a lubricator applied to the wedge strips and retained by the hollow strip.

1,020,662. THREAD-COLLECTING MEANS FOR AUTOMATIC LOOMS. ALONZO E. RHOADES, Hopedale, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Dec. 13, 1911. Serial No. 665,423. (Cl. 139—85.)



1. In a loom provided with automatic filling-replenishing mechanism including a filling-feeder having an attached filling-end holder, a lay, and means to sever the fresh filling-end between the cloth and the feeder, in combination, a stationary retainer extended rearwardly below and between the filling-end holder and the feeder, to catch and retain a severed filling-end, and means on the lay to engage such filling-end and push it frontward along the retainer on the beat-up of the lay, successive severed filling-ends being thereby massed together and held by the retainer away from the lay and out of the shuttle path.

2. In a loom provided with automatic filling-replenishing mechanism including a filling-feeder having an attached filling-end holder, a lay, and means to sever the fresh filling-end between the cloth and the feeder, in combination, a stationary retainer extended rearwardly below the filling-end holder and having a toothed edge, to catch and retain a severed filling-end depending from the end holder, and means on the lay moving adjacent the retainer to engage the severed filling-end and push it frontward along the retainer on the beat-up of the lay, successive severed filling-ends being massed together on the retainer and held thereby out of reach of the shuttle.

3. In an automatic filling replenishing loom, a rotary hopper, a filling-end holder at the outer end thereof, and means to sever the filling-end after filling replenishment, in combination, a stationary, rearwardly extended thread-retainer at the replenishing side of the loom, to engage and sustain a severed filling-end, means on the retainer to prevent movement of a filling-end toward the lay, and a device carried by the lay and movable adjacent the retainer, to engage a severed filling-end hanging over the retainer and push such filling-end frontward on the beat-up of the lay.

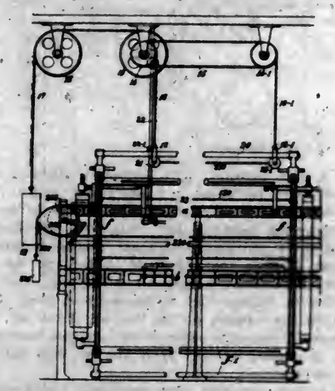
4. In an automatic filling replenishing loom, a hopper, a holder for the filling-ends of the bobbins contained by the hopper, means to sever the filling adjacent the cloth after filling replenishment, and a lay having a shuttle-box at the hopper side of the loom, combined with thread directing means on the lay adjacent the mouth of the box to direct the filling-end frontward out of the shuttle path after replenishment, a stationary thread retainer extended rearward above the lay path between the hopper and the filling-end holder, to support a severed filling-end, and means on the lay to engage such a filling-end and push it forward along the retainer and away from the shuttle path.

5. In an automatic filling replenishing loom, a hopper, a holder for the filling-ends of the bobbins contained by the hopper, means to sever the filling adjacent the cloth after filling replenishment, and a lay having a shuttle-box at the hopper side of the loom, combined with a stationary, toothed retainer extended rearwardly across the said shuttle-box on the beat-up and beneath the filling-end of a bobbin removed from the hopper upon replenishment, to uphold such filling-end when severed, and a pusher on the lay and moving adjacent the retainer, to

push the severed filling-end frontward thereon as the lay beats up, the teeth of the retainer preventing rearward movement of a filling-end thereon.

[Claims 6 to 10 not printed in the Gazette.]

1,020,663. EMBROIDERING-MACHINE. MARTIN HENRI RUMPF, Paris, France. Filed June 23, 1906. Serial No. 323,166. (Cl. 112—7.)



1. In an embroidering machine, a pantograph, needles, needle-holders, a needle-holder bar mounted to be moved toward and from the work and laterally relatively thereto, a bobbin-holding plate mounted on the machine parallel to said bar and movable in a parallel direction to the lateral movement of the bar, bobbin-holders mounted thereon, a work-supporting frame, means independent of the stitch forming elements of the machine for supporting said frame, means connected to said frame for counterbalancing the varying weighting effect of the pantograph in its different positions and operating means for the needles, needle-bar and bobbin-holding plate, substantially as described.

2. In an embroidering machine, needles, needle-holders, a needle-holder bar mounted to be moved toward and from the work and laterally relative thereto, a reciprocating carriage having a slot, a plate passing through said slot and attached to said needle-holder bar, means for giving said carriage movement toward and from the work, and means for imparting lateral movement to said plate, substantially as described.

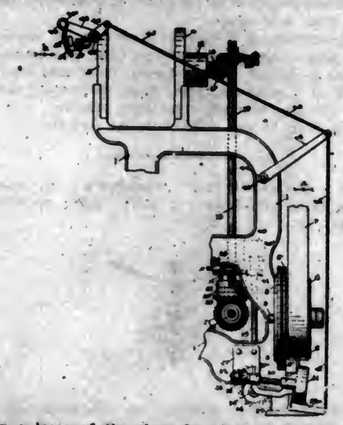
3. In an embriodering machine, needles, needle-holders, a reciprocating carriage mounted to be moved toward and from the work and having a slot, a sliding plate carried by said slot, a needle-holder bar carried by said plate, a revoluble disk carrying an eccentrically mounted wrist pin engaging a slot in said carriage, means for revolving said disk, and means for imparting lateral movement to said plate, substantially as described.

4. An embroidering machine comprising needles, bobbin-holders and needle holders; in combination with a needle holder bar mounted for both back and forth and longitudinal movement, a reciprocating carriage having a slot, means for moving said carriage toward and from the work, a sliding plate carried in said slot and attached to said needle holder bar, a rack on said plate and a toothed sector engaging said rack for producing longitudinal movement of said needle carrier bar, substantially as described.

5. An embroidering machine comprising needles, bobbin-holders and needle holders; in combination with a needle holder bar mounted for longitudinal movement, means for moving said bar longitudinally, a bobbin carrier plate mounted parallel to said needle holder bar so as to be movable longitudinally and thread grippers near said bobbin holders provided with arms (75) for separating the various threads from each other, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,020,664. LOOM. EPPA H. RYON, Worcester, Mass., assignor to Crompton & Knowles Loom Works, a Corporation of Massachusetts. Filed Jan. 31, 1910. Serial No. 540,969. (Cl. 139—79.)



1. In a loom of the class described, harness operating mechanism, pattern mechanism, including a chain shaft to control the operation of the same, driving mechanism, including clutch devices for said pattern chain shaft, a constant driving member, a friction device to coöperate with said constant driving member for the normal operation of the loom, a pivotally mounted shaft having a pulley fast thereon, adapted to coöperate with said constant driving member, connections from said shaft to said harness operating mechanism, to drive the same when the loom is stopped, a manually operated shipper, connections from said shipper to said pulley, whereby the movement of said shipper in one direction will cause the rotation of said pulley, connections from said shipper to said clutch device, whereby the movement of said shipper in another direction will operate said clutch device, and cause said chain shaft to run in a forward or backward direction.

2. In a loom of the class described, harness operating mechanism, pattern devices therefor, including a chain shaft, a driving member, and devices to coöperate with said member to cause the normal operation of the loom, separate mechanism to coöperate with said driving member to automatically operate the harnesses when the loom is stopped, a manually operated shipper rod, and a device movable in a longitudinal direction, and having connections therefrom to the pattern devices, said shipper rod also manually movable transversely of its length, and having connections to said separate mechanism, whereby the harnesses and pattern mechanisms may be automatically operated, and said pattern device caused to move in a forward or reverse direction when the loom is stopped, all under control of said shipper rod.

3. In a loom of the class described, harness operating mechanism, means including a shaft, a clutch device thereon, a bevel gear, connections for operating said harness mechanism, and a constant driving member for driving the loom, a toothed gear on said clutch device, a second shaft having a pinion thereon normally disconnected from said toothed gear, means operated manually to disconnect said gear from its driving means, and to connect the same with said pinion, connections from said pinion to said constant driving member, said connections including a pulley adapted to bear against said driving member, manual means to cause contact of said pulley and a belt, and said belt, to cause the operation of said harnesses, when the loom is stopped.

1,020,665. AUTOVEHICLE DUMP-BOX. FRED T. SHERMAN and HERMAN GOETZ, Seattle, Wash. Filed Mar. 7, 1911. Serial No. 612,968. (Cl. 21—20.)

1. A dumping vehicle comprising the combination with the body thereof, of a pair of longitudinally-extending rails supported upon said body and having the rear ends thereof curved downwardly, a shiftable receptacle having its bottom formed of a plurality of doors hinged at their forward ends to the receptacle and having their rear ends provided with rollers traveling upon said tracks, a pair of longitudinally-extending guides fixed to the sides of said receptacle and provided with channels, brackets supported by the vehicle body and carrying guide rollers extending in the channels of said guides, said doors dropping to open position when the rollers thereof are clear of said track on a rearward movement of said receptacle, and means connected to the receptacle for pulling the same forward upon said track thereby restoring the doors to closed position.



2. A dumping vehicle comprising the combination with a vehicle body, of a pair of longitudinally-extending inclined tracks supported from said body and having the rear ends thereof curving downwardly, a shiftable receptacle having its bottom formed of a series of doors hinged at their forward ends to said receptacle and provided at their rear ends with collars traveling upon said tracks, guiding means for said receptacle, said doors automatically shifting to open position when the receptacle is moved rearwardly and the rollers of the doors are clear of the tracks, and means for pulling the receptacle forwardly on the tracks causing the rollers to engage the tracks and the moving of the doors to closed position.

3. A dumping vehicle comprising the combination with the body thereof, of a pair of longitudinally-extending rails supported upon said body and having the rear ends thereof curved downwardly, a shiftable receptacle having its bottom formed of a plurality of doors hinged at their forward ends to the receptacle and having their rear ends provided with rollers traveling upon said tracks, a pair of longitudinally-extending guides fixed to the sides of said receptacle and provided with channels, brackets supported by the vehicle body and carrying guide rollers extending in the channels of said guides, said doors dropping to open position when the rollers thereof are clear of said track on a rearward movement of said receptacle, means connected to the receptacle for pulling the same forward upon said track thereby restoring the doors to closed position, and traction rollers carried by said guides and traveling upon said tracks forwardly of said receptacle.

4. A dumping vehicle comprising the combination with a vehicle body, of a pair of longitudinally-extending inclined tracks supported from said body and having the rear ends thereof curving downwardly, a shiftable receptacle having its bottom formed of a series of doors hinged at their forward ends to said receptacle and provided at their rear ends with collars traveling upon said tracks, guiding means for said receptacle, said doors automatically shifting to open position when the receptacle is moved rearwardly and the rollers of the doors are clear of the tracks, means for pulling the receptacle forwardly on the tracks causing the rollers to engage the tracks and the moving of the doors to closed position, and traction rollers carried by said guiding means forwardly of said receptacle and traveling upon said tracks.

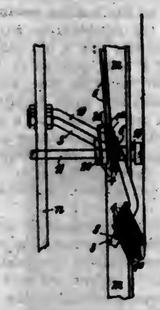
1,020,666. BODY-HARNESS AND UMBRELLA-SUPPORT. THEODULE SIMARD, Winooski, Vt. Filed July 15, 1911. Serial No. 638,779. (Cl. 135—12.)

In a device of the kind described, a harness comprising a metallic belt having metallic socket projections on its rear and front, said socket projections being divergent upwardly and having their lower ends close together, and flexible metallic clips, said clips having their inner ends abutting against the lower ends of one pair of the socket projections, a pair of shoulder straps detachably and adjustably mounted in said socket projections, pins in said



socket projections detachably and adjustably engaging said shoulder straps, a pin engaging said clips on the belt, a cross strap connected to said shoulder straps having a pair of spring clips.

1,020,667. VENDING-MACHINE. OSKAR STOLTZE, Altona, Germany, assignor to Otto Friedrich Christian Gosch, Hamburg, Germany. Filed Nov. 8, 1910. Serial No. 591,338. (Cl. 211—8.)



1. A vending machine comprising a pair of pins having downwardly inclined ends, gravity plates movable along said pins, means for locking the plates to the pins, and means for sliding the plates at right angles to the pins, whereby the plates become unlocked and descend along the pins by gravity.

2. A vending machine comprising a pair of pins having downwardly inclined ends, gravity plates having recessed apertures adapted to receive the pins, and means for sliding said plates at right angles to the pins.

3. A vending machine comprising a pair of pins having downwardly inclined ends, gravity plates having apertures adapted to receive the pins, stops engaging the foremost plate, a movable member adapted to slide said plate at right angles to the pins, and means for actuating said member.

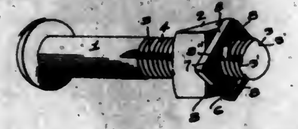
4. A vending machine comprising a pair of pins having downwardly inclined ends, apertured gravity plates mounted upon the pins, stops engaging the foremost plate, a cam likewise engaging said plate and adapted to slide the same at right angles to the pins, and a weighted lever operatively connected to the cam.

5. A vending machine comprising a pair of pins having downwardly inclined ends, apertured gravity plates mounted upon said pins, stops engaging the foremost plate, a

movable member likewise engaging said plate, a lever operatively connected to the movable member, and means on the rearmost plate for locking said member.

[Claim 6 not printed in the Gazette.]

1,020,668. NUT-LOCK. CHARLES A. THOMPSON, Irwin, Pa. Filed Mar. 9, 1911. Serial No. 613,330. (Cl. 151—15.)



1. In nut locks, the combination with a bolt having a thread, a longitudinal slot therein and a nut thereon, of a separately movable locking member comprising a body portion having a circular hole and provided with a helical marginal wall around said hole forming a complete thread of nearly one circumference interthreading with said bolt thread, and a spring arm bearing on the bolt thread and adapted to interlock with said groove to prevent backward movement of the locking nut.

2. In nut locks, the combination with a bolt having a thread, a longitudinal groove therein, and a nut thereon, of a separately movable locking member comprising a body portion having a hole to receive the bolt and having its margin around said hole adapted to interthreadably engage with said bolt thread, and an integral spring arm bearing on the bolt thread and extending normally at a backward incline to within the margin of said hole, and adapted to interengage with said groove and prevent retrogressive movement of the locking member.

3. In nut locks, the combination with a bolt having a thread, a groove therein and a nut thereon, of a locking member comprising a body portion of thin pressed metal provided with a bolt receiving hole, and having a helical marginal wall around the same forming a thread interthreading with said bolt thread, and a spring arm integral with said body portion and extending normally at a backward incline to bear on the bolt thread when the locking member is turned forwardly and to engage with said groove to prevent retrogressive movement of the locking member.

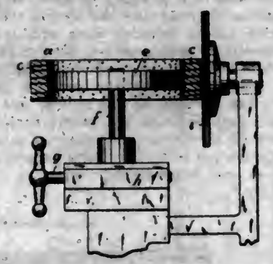
4. In locking nuts, the combination with a bolt having a thread and a longitudinally extending groove, of a locking member of thin pressed metal comprising a body portion provided with a hole to receive the bolt and a slot extending transversely therefrom and having its marginal wall around said bolt receiving hole pressed to form a thread terminating at said transverse slot, and a plurality of spring arms integral with said body portion and extending normally at a backward incline to within the margin of said hole and adapted thereby to interengage with said groove and prevent retrogressive movement of the locking member.

5. In nut locks, the combination with a bolt having a longitudinal groove and a nut on said bolt, of a separately movable locking member comprising a resilient body portion having an opening to receive the bolt and a helical marginal wall about the same forming a thread interthreading with the bolt thread, and a plurality of inwardly extending and backwardly inclined spring arms bearing on said bolt and adapted to interlock with said groove, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,020,669. MANUFACTURE OF CORK FILM. HEINRICH GERHARD VINCKE and JUAN MIQUEL, San Feliu de Guixols, Spain. Filed July 21, 1911. Serial No. 639,785. (Cl. 144—309.)

The method of manufacturing cork film which consists in bending a strip of cork bark to form a closed hoop, uniting the ends of said strip with cement, rotating said hoop by means of a suitable support, the periphery of the hoop being in contact with a stationary knife, and imparting a feed motion to said support, so that a cut is effected sub-

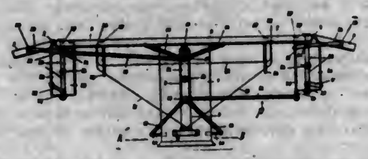


stantially at right angles to the pore passages and a continuous band of cork film is obtained.

1,020,670. DISAZO DYE AND PROCESS OF MAKING THE SAME. PAUL VOLKMANN, Elberfeld, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Feb. 4, 1910. Serial No. 542,119. (Cl. 8—1.)

The herein-described new azo dyestuffs, obtainable from diamins, 2.2-dinaphthylamin-5.5-dioxy-7.7-disulfo acid and azo-coupling substances which after drying and pulverizing are dark powders, soluble in water with blue color, insoluble in cold concentrated hydrochloric acid, soluble in cold sulfuric acid of 66° Bé. with greenish blue color from which solution they are precipitated as bluish flakes by the addition of water, which dyestuffs can be rediazotized on the fiber and when developed with para-nitranilin produce fast shades varying from red to violet to blue, and which dyestuff can be discharged on the fiber to a pure white by means of hydrosulfite, substantially as described.

1,020,671. AUTOMATIC SAFETY CONTROLLING DEVICE FOR AERIAL MACHINES, ESPECIALLY AEROPLANES. JOSEPH WETTERWALD, Lucerne, Switzerland. Filed Nov. 23, 1910. Serial No. 593,850. (Cl. 244—29.)



Automatic safety controlling mechanism for aerial craft comprising in combination, supporting surfaces, horizontal rudder members at their ends adapted to move according to the conditions of wind, said members being connected to similar vertical members arranged beneath the supporting surface, a pendulum connected to the frame, means for connecting said rudder-elements to said pendulum, a transverse rudder member connected to said pendulum, all said members adapted to act dependently of the wind conditions and automatically, substantially as described and shown and for the purpose specified.

1,020,672. CONDUIT. JAMES S. WILSON, Chelsea, Mass. Filed Dec. 27, 1909. Serial No. 535,100. (Cl. 247—23).



1. A conduit and a longitudinally extending fish member located within the conduit and engaged with the wall of the conduit to prevent accidental longitudinal displacement of the fish member, and permit its endwise movement by the application of force.

2. A conduit and a longitudinally extending fish member located within the conduit, and having a sinuous form whereby it engages the wall of the conduit.

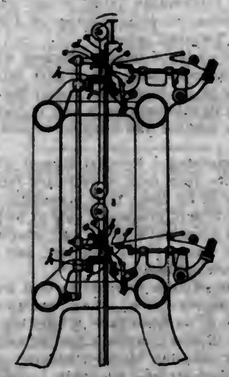
1,020,673. METHOD OF SEPARATING THE SOLID CONSTITUENTS FROM THE LIQUID CONSTITUENTS OF FATS OR FATTY SUBSTANCES. FRITZ WINTERSTEIN and STANISLAUS NITSCH, Pressburg, Austria-Hungary. Filed Oct. 19, 1908. Serial No. 458,493. (Cl. 196—24.)



1. The process of separating the constituents of fats and fatty mixtures, which consists in melting the material to be separated and producing a spray of said material by means of a water jet whose temperature is slightly below the congealing temperature of the constituent having the highest solidification point while above that of the others, thereby congealing a portion of the material and maintaining the remainder molten and separating the molten and solid constituents.

2. The process of separating the constituents of fats and fatty substances, particularly paraffin from its mixtures, which consists in melting the material and discharging a jet thereof simultaneously with a concentric jet of water whose temperature is between the melting points of the constituents of the molten material to be separated.

1,020,674. SHUTTLE EMBROIDERING-MACHINE. ROBERT ZAHN, Plauen, Germany. Filed Mar. 18, 1910. Serial No. 550,185. (Cl. 112—7.)



1. In shuttle embroidering machines, the combination with a needle mechanism, of a shuttle board, a plurality of shuttle guides upon said board arranged according to a determined pattern repeat, each second and third shuttle guide being arranged together on a removable piece of said shuttle board, whereby for each of these removable pieces a substitute member with one single shuttle guide and a suitably arranged dead part may be substituted therefor so that the shuttle arrangement may be of another determined pattern repeat, substantially as and for the purpose described.

2. In shuttle embroidering machines, the combination with a needle mechanism, of a shuttle board, a plurality of shuttle guides upon said board arranged according to a determined pattern repeat, each second and third shuttle guide being arranged together on a removable piece of said shuttle board, whereby for each of these removable pieces a substitute member with one single shuttle guide and a suitably arranged dead part may be substituted therefor, so that the shuttle arrangement may be of another determined pattern repeat, shuttle drivers, and means whereby the position of said shuttle drivers may be changed according to the desired pattern repeat, substantially as and for the purpose described.

3. In shuttle embroidering machines, the combination with a needle mechanism, of a shuttle board, a plurality of shuttle guides upon said board arranged according to a determined pattern repeat, each second and third shuttle guide being arranged together on a removable piece of said shuttle board, whereby for each of these removable pieces a substitute member with one single shuttle guide and a suitably arranged dead part may be substituted therefor, so that the shuttle arrangement may be of another determined pattern repeat, and material pressing members adapted for both said pattern repeat conditions, substantially as and for the purpose described.

4. In shuttle embroidering machines, the combination with a needle mechanism, of a shuttle board, a plurality of shuttle guides upon said board arranged according to a determined pattern repeat, each second and third shuttle guide being arranged together on a removable piece of said shuttle board, whereby for each of these removable pieces a substitute member with one single shuttle guide and a suitably arranged dead part may be substituted therefor, so that the shuttle arrangement may be of another determined pattern repeat, and scalloping members arranged for both said pattern repeat conditions, substantially as and for the purpose described.

1,020,675. STEAM CONDENSER AND PURIFIER. JOHN L. ZEIGLER, Los Angeles, Cal., assignor, by direct and mesne assignments, to Vertical Condenser Company, a Corporation of California. Filed Dec. 14, 1909. Serial No. 533,098. (Cl. 62—30.)



1. A steam condenser and purifier comprising a vertical shell provided with a conical bottom with a bottom flue sheet above said conical bottom forming a water chamber, a top flue sheet and a flange above said top flue sheet forming an open topped chamber above the top flue sheet, flues extending vertically in the shell between the bottom and top flue sheets and establishing communication between the water chamber at the bottom and the open topped water chamber at the top of the shell, means for supplying water to the water chamber at the bottom, overflow means for leading water from the water chamber at the top, drainage means near the bottom of the shell above the bottom flue sheet, a steam supply pipe opening into the lower portion of the shell at the side thereof at a point above the flue sheet, and a vapor outlet from the upper portion of the shell below the top flue sheet.

2. A steam condenser and purifier comprising a vertical shell provided with a conical bottom with a bottom flue sheet

above said conical bottom forming a water chamber, a top flue sheet and a flange above said top flue sheet forming an open topped chamber above the top flue sheet, flues extending vertically in the shell between the bottom and top flue sheets and establishing communication between the water chamber at the bottom and the open topped water chamber at the top of the shell, means for supplying water to the water chamber at the bottom, overflow means for leading water from the water chamber at the top, drainage means near the bottom of the shell above the bottom flue sheet, a steam supply pipe opening into the lower portion of the shell at the side thereof at a point above the flue sheet, and a vapor outlet from the upper portion of the shell below the top flue sheet, said vapor outlet means being provided with a relief valve maintaining definite pressure in the interior of the shell.

3. A steam condenser and purifier comprising a vertical shell provided with a conical bottom with a bottom flue sheet above said conical bottom forming a water chamber, a top flue sheet and a flange above said top flue sheet forming an open topped chamber above the top flue sheet, flues extending vertically in the shell between the bottom and top flue sheets and establishing communication between the water chamber at the bottom and the open topped water chamber at the top of the shell, means for supplying water to the water chamber at the bottom, overflow means for leading water from the water chamber at the top, drainage means near the bottom of the shell above the bottom flue sheet, a steam supply pipe opening into the lower portion of the shell at the side thereof, and a vapor outlet from the upper portion of the shell below the top flue sheet, said steam supply means being provided with a hollow member formed with internal flanges extending spirally to cause whirling motion of the steam as it enters the shell.

4. A steam condenser and purifier comprising a vertical shell provided with a conical bottom with a bottom flue sheet above said conical bottom forming a water chamber, a top flue sheet and a flange above said top flue sheet forming an open topped chamber above the top flue sheet, flues extending vertically in the shell between the bottom and top flue sheets and establishing communication between the water chamber at the bottom and the open topped water chamber at the top of the shell, means for supplying water to the water chamber at the bottom, overflow means for leading water from the water chamber at the top, drainage means near the bottom of the shell above the bottom flue sheet, a steam supply pipe opening into the lower portion of the shell at the side thereof, and a vapor outlet from the upper portion of the shell below the top flue sheet, and heat insulating means around the upper portion of the fines.

1,020,676. DRAW-BAR FOR CONCRETE STRUCTURES. CHARLES C. ALLEN, Nebraska City, Nebr. Filed May 16, 1911. Serial No. 627,553. (Cl. 72—114.)



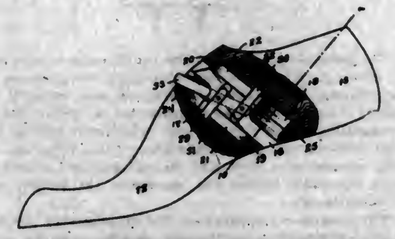
1. The combination with draw bar members having overlapped looped terminals, of connecting means consisting of wedge washers inserted through the overlapped terminals and provided with flanged heads bearing against the terminals, the washers having shanks with contiguous wedging faces, and a bolt inserted through and secured in the washers.

2. The combination with draw bar members having overlapped looped terminals, of coöperating wedging washers having shanks inserted through the overlapped terminals and provided with wedging faces, and a bolt inserted through the washers and terminals and operating to set up a wedging action between said wedging faces.

3. The combination with draw bar members having overlapped looped terminals, of connecting means consisting of washers having flanged heads and hollow shanks with engaging wedging faces, the shanks being inserted through the opposing looped terminals and the flanged heads bearing on the outer portions of said terminals, and a bolt inserted through the washers and securing the flanged heads and the looped terminals by wedging action.

4. The combination with draw bar members having overlapping looped terminals, of connecting washers having flanged heads and semi-elliptical shanks with inner opposing wedging faces, the washers being inserted through the outer portions of the overlapped terminals and the semi-elliptical shanks conjointly forming an elliptical shank when associated, and a securing bolt inserted through the washers and drawing the flanged heads tightly against the looped terminals of the bar members.

1,020,677. LAST. HARRIE A. BALLARD, Boston, Mass., assignor to The Boylston Manufacturing Company, South Boston, Mass., a Corporation of New Jersey. Filed Mar. 12, 1909. Serial No. 482,903. (Cl. 12—135.)



1. A last comprising two confronting members, namely, a forepart, and a heel-part, parallel undercut grooves formed in the confronting portions of the two parts, and a sliding coupling member formed with flanged portions adapted to fit in the undercut portions of the grooves, and an intermediate web portion joining said flanged portions.

2. A last comprising two confronting members, namely, a forepart, and a heel-part, parallel T-shaped grooves formed in the confronting faces of the two parts, and an elongated sliding coupling member of I-shaped section occupying said T-shaped grooves.

3. A last comprising a forepart formed with an undercut groove in its rear face, a heel-part formed with an undercut groove in its front face, a coupling member having a sliding fit in said grooves, a pair of locking members by the coupling member and adapted to lock it with both of said parts.

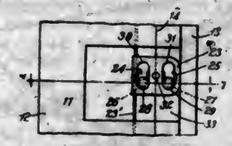
4. A last comprising a forepart formed with an undercut groove in its rear face, a heel-part formed with an undercut groove in its front face, a coupling member having a sliding fit in said grooves, a pair of locking members carried by said coupling member and adapted to engage respectively the forepart and heel-part, and a handle for actuating the locking members.

5. A last comprising a forepart formed with an undercut groove in its rear face, a heel-part formed with an undercut groove in its front face, a coupling member having a sliding fit in said grooves, a pair of locking members carried by said coupling member adapted to engage respectively the forepart and heel-part, recesses formed in the forepart and heel-part for the reception of the locking members, and a lever for actuating the locking members.

[Claims 6 to 13 not printed in the Gazette.]

1,020,678. WHEEL-RIM. FREDERIC RUTHERFORD BARKER, Boston, Mass. Filed Mar. 21, 1911. Serial No. 615,916. (Cl. 152—21.)

1. The combination of a permanent rim, a demountable rim composed of a plurality of rings mounted upon said permanent rim, and means to secure said rings to each other comprising a plurality of plates provided with slots extending circumferentially of said rings, and projections on said rings, respectively, located in said slots and provided with heads larger than the width of the portions of said slots in which said pins are normally located, said slots having enlarged portions through which said heads may be withdrawn, and said slots being widened along their outer edges from their smaller ends toward said enlarged portions.



2. The combination of a permanent rim, a demountable rim composed of a plurality of rings mounted upon said permanent rim and provided with a plurality of recesses formed partly in each of said rings, and means located in said recesses for securing said rings to each other, said means comprising a plurality of plates located in said recesses, respectively, and provided with slots, and projections on said rings, respectively, located in said slots, and pivots fast to one of said rings upon which said plates are pivotally and slidably mounted.

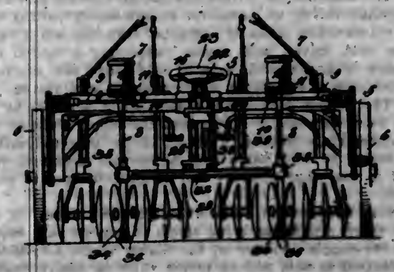
1,020,679. PROCESS OF MAKING COPIES OF CERTAIN OBJECTS IN SOLID MATERIAL. WEBSTER BARROWS, Malden, and HECTOR L. MORRAU, Boston, Mass. Filed May 24, 1911. Serial No. 629,225. (Cl. 18—55.)

1. The process of obtaining a cast of an irregular body, consisting of applying to the body a coating of paraffin, then a coating of some material of a stronger or more tenacious nature which will unite with the paraffin and then covering the two with a coating of plaster or other material which will combine all three into one solid mass; the removal of this combination and the making therein a cast of the body substantially as described.

2. The process of making molds for casting of irregular bodies, consisting in applying to the object to be duplicated a coat of paraffin, then a coat of liquid composition of wax and rosin and then a coat of plastic material, substantially as described.

3. The product obtained by the herein described process, comprising an interior layer of paraffin, a middle layer of combined wax and rosin and an external layer of plastic material, all united into one composite mold for the purpose specified and substantially as described.

1,020,680. SEED-PLANTER. JOHN E. BINNS, Jr., Nashville, Tenn. Original application filed Apr. 10, 1911, Serial No. 620,066. Divided and this application filed Apr. 15, 1911. Serial No. 621,431. (Cl. 111—18.)



1. In a seed planter, a main frame and a seed hopper mounted thereon, a depending frame centrally secured to the main frame and having spaced guide-ways, a block movable in said guide-ways, a beam pivotally mounted upon said block for vertical oscillatory movement, means yieldingly holding said beam against movement, a seed depositing spout carried by the beam, a flexible connection between said spout and the seed hopper, and means mounted upon the depending frame and connected to said block for raising and lowering the same.

2. In a seed planter, a wheel supported frame and seed hoppers mounted thereon, a transversely disposed beam pivotally mounted in said frame for vertical sliding and oscillatory movement, seed depositing spouts carried by said beam, flexible connections between the spouts and the seed hoppers, and means for adjusting said beam vertically in the frame.

3. In a seed planter, a frame having seed hoppers arranged thereon, a block vertically slidable in said frame, a transversely disposed beam pivotally mounted intermediate of its ends upon said block, seed depositing spouts carried by said beam, flexible connections between said spouts and the seed hoppers, and manually operable means mounted on the frame and connected to said block to slide the same and vertically adjust the beam.

4. In a seed planter, a wheel supported frame having a seed hopper mounted thereon, a plate rigidly fixed to said frame, a depending frame having means formed thereon for interlocking engagement with corresponding means formed on said plate whereby said frame may be detachably connected to the plate, a vertically oscillatory beam bodily movable in a vertical plane upon said frame, a seed depositing spout carried by the beam, a flexible connection between said spout and the seed hopper, and means for raising and lowering the beam.

5. In a seed planter, a main frame having seed hoppers arranged thereon, a depending frame centrally secured to the main frame, a block mounted in said depending frame, a beam pivotally mounted on said block, means arranged between the beam and said block to yieldingly hold the beam against pivotal movement, seed depositing spouts carried by the beam, and flexible connections between said spouts and the seed hoppers.

[Claims 6 to 9 not printed in the Gazette.]

1,020,681. COVERING-WHEEL FOR GRAIN-DRILLS. JOHN E. BINNS, Jr., Nashville, Tenn. Original application filed Apr. 15, 1911, Serial No. 621,431. Divided and this application filed July 10, 1911. Serial No. 637,606. (Cl. 111—18.)

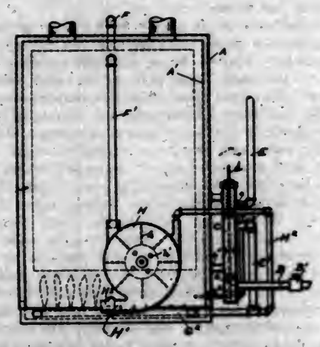


1. The combination with a grain drill including a frame having depositing spouts mounted therein, of a transverse bar fixed in said frame, rectangular sleeves longitudinally adjustable upon said bar, set screws carried by said sleeves to rigidly fix the same in their adjusted positions, vertical bearings formed on said sleeves, a pivot bolt rotatably mounted in each of the bearings, wheel supporting arms pivoted to the lower end of said bolt, and a spring connected to said arms adjacent their pivoted ends and to the adjustable sleeve to yieldingly hold the wheel in engagement with the ground.

2. The combination with a grain drill including a frame having depositing spouts mounted therein, of a transverse bar fixed in said frame, a rectangular sleeve longitudinally adjustable on the bar, a vertical bearing formed on one face of said sleeve, a pivot bolt rotatably mounted in said bearing and extending below the same, spaced wheel supporting arms pivotally mounted on the

lower end of said bolt and having rearwardly extending portions, and a spring connected to said rearwardly extending portions of the arms and to the adjustable sleeve to yieldingly hold the wheel in engagement with the ground.

1,020,682. WATER-HEATER. MORRIS BORSODI, Scranton, Pa., assignor of one-half to Leo Kleinmann, Brooklyn, N. Y. Filed Aug. 28, 1909. Serial No. 515,115. (Cl. 126—351.)

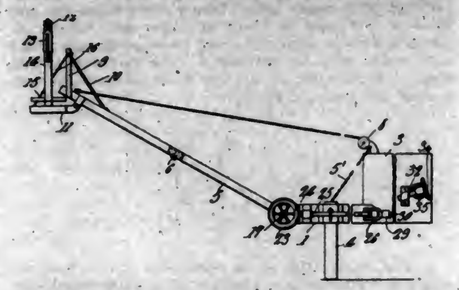


1. In a device of the class described, a casing to form a water jacket, an inlet pipe for the same, an outlet pipe therefor, a water receptacle connected therewith and contained therein, an outlet pipe therefor, a burner located beneath the said receptacle, a gas supply pipe therefor, a cylinder having two ports at the upper portion thereof for the gas supply, and two ports at the lower portion for the water supply, means to control the supply of the water and the gas consisting of a spring controlled piston to stop the flow of gas, and of another piston to stop the flow of water when the apparatus is not in use, the movement of the said pistons being controlled by the pressure of the water in the said inlet pipe, and means located exterior of the casing to afford a forced draft to the burner by the direct action of the water falling from the outlet of the water receptacle, in combination with means to admit water under pressure into the said inlet pipe.

2. In a device of the class described, a casing to form a water jacket, an inlet pipe for the same, an outlet pipe therefor, a water receptacle connected therewith and contained therein, an outlet pipe therefor, a burner located beneath said receptacle, a gas supply pipe therefor, in combination with an air pipe communicating with the burner and a combined rotary water motor and air blower communicating with the water receptacle, the blades of which motor are adapted to be moved by the water and to serve to force air under pressure through the said air pipe, a casing for the combined water motor and air blower having ports to allow water to fall at one side thereof and from the said blades, and also having orifices to allow air to rise at the other side thereof from the said blades, and means to control the supply of the water and the gas, and with means to admit water under pressure into the said inlet pipe.

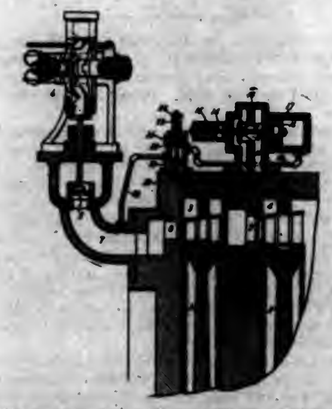
1,020,683. BALE-HANDLING APPARATUS. ARTHUR BRUNELLE, North Yakima, Wash., assignor of one-half to Noe Cuillerier, one-fourth to Paul Patnode, and one-fourth to Herman Patnode, North Yakima, Wash. Filed Aug. 29, 1910. Serial No. 579,483. (Cl. 73—46.)

In a bale handling apparatus, a conveyer frame, an endless carrier mounted for movement along the conveyer frame, arms pivoted to the delivery end of the frame, means for securing the said arms in an adjusted position, a yoke connecting the said arms together, a scale connected with the intermediate portion of the yoke, a yoke connected to the said scale, and a platform supported by



the latter yoke located below the delivery end of the frame.

1,020,684. CONTROL OF STAGE-VALVES. CLARENCE P. CRISSEY, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Sept. 8, 1910. Serial No. 581,043. (Cl. 121—118.)



1. The combination with a multistage turbine provided with admission valves and stage valves and having a stage from which steam is extracted, of means for simultaneously opening an admission valve and a valve between said stage and the next lower stage, and means responsive to the pressure in the stage from which the steam is extracted for also controlling the stage valve without affecting the admission valve.

2. The combination with a multistage turbine provided with stage valves, of means for automatically cutting off said valves when steam is extracted from the stage supplying said valves, said means comprising a device responsive to pressure changes in said stage and controlling the flow of the steam which actuates said valves.

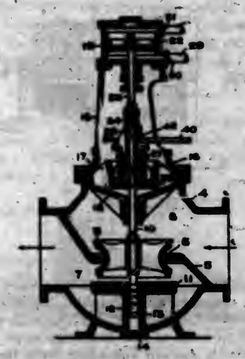
3. The combination with a multistage turbine, of a stage valve actuated by steam from the supply chamber of the higher stage nozzles, a cut-off in the pipe conveying said steam to said valve, and a movable abutment exposed to the stage pressure and adapted to operate said cut-off.

4. The combination with a multistage turbine, of a stage valve, a pipe conveying steam to actuate said valve from the supply chamber of the higher stage, a cylinder interpolated in said pipe, a piston valve in said cylinder controlling said pipe, and a duct conveying the higher stage pressure to the under side of said piston valve to hold it open under normal conditions of operation.

5. In a multistage turbine having a stage from which steam is extracted, the combination of a stage valve between the extraction stage and a lower stage, means for controlling the stage valve that is actuated by steam from a region of the turbine preceding the extraction stage, and means responsive to the pressure in the extraction stage for also controlling said valve.

[Claim 6 not printed in the Gazette.]

1,020,685. COMBINED EMERGENCY AND THROTTLE VALVE. LUDWIG CUBELIC, Charlottenburg, Germany, assignor to General Electric Company, a Corporation of New York. Filed July 7, 1910. Serial No. 570,761. (Cl. 136—11.)



1. In combination, a valve, a divided stem for the valve, the ends of two adjacent parts of the stem being in sliding engagement with each other, abutments on said parts, spring means arranged between the abutments which tend to separate the parts of the stem, a device for normally locking the parts of the stem together, means for moving the stem to normally open and close the valve without varying the tension of the spring, and means for actuating said device under certain conditions to release the parts of the stem and permit the spring means to move the valve toward its closed position.

2. In combination, a valve having a tendency to close, a casing for the valve, a divided stem for the valve, one part of the stem carrying the valve and being arranged in the casing with both of its ends projecting through the walls of the casing, one end of said part being in sliding engagement with the end of the adjacent part of the stem, abutments on said parts outside of the casing, spring means arranged between the abutments which normally tends to separate the parts of the stem, a device for locking the parts together in opposition to the action of the spring means, mechanism for normally moving the stem axially to open and close the valve, and means for actuating said device to release the part of the stem carrying the valve from the other part, thereby permitting said spring means to move the valve toward its seat.

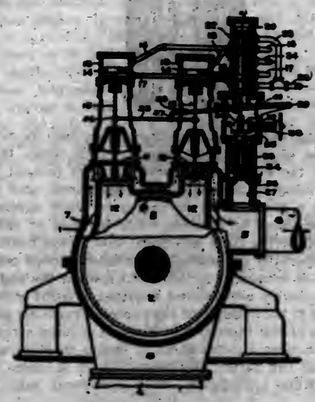
3. In combination, a valve, a divided stem for the valve, there being abutments on two adjacent parts of the stem, a spring arranged between the abutments which tends to separate said parts of the stem, means for coupling the parts together, and a device acting on said means to release the parts of the stem and permit the spring to separate them.

4. In combination, a valve, a stem for the valve formed in two parts and having abutments on said parts, there being a sleeve on the end of one part with the interior of which the end of the second part is in sliding engagement, a spring surrounding the stem and arranged between the abutments which tends to separate the parts of said stem, a device for locking the sleeve and the second part of the stem together, means for normally opening and closing the valve without varying the tension of the spring, and means for actuating said device to release the second part of the stem from the sleeve to permit the spring to separate the parts of said stem and close the valve under certain conditions.

5. In combination, a valve, a casing for the valve, a stem for the valve formed in two parts, one of the parts having an abutment thereon and the other part carrying the valve and having a piston thereon, a cylinder on the casing in which the piston is arranged to slide, a spring arranged between the abutment and the piston which tends to separate the parts of the stem, a device for locking the parts of the stem together under normal conditions in opposition to the action of the spring, means for normally opening and closing the valve, and means for actuating said device to release the parts of the stem and close the valve suddenly under emergency conditions, said piston and cylinder acting as a dash-pot to retard the sudden movement of the valve before seating.

[Claims 6 to 9 not printed in the Gazette.]

1,020,686. GOVERNING MECHANISM FOR TURBINES. LUDWIG CUBELIC, Charlottenburg, Germany, assignor to General Electric Company, a Corporation of New York. Filed June 13, 1911. Serial No. 632,922. (Cl. 121—118.)



1. In combination, a turbine that is divided into stages, a conduit for conveying steam from the turbine between certain of its stages, a valve controlling the passage of fluid from one stage to another, a means sensitive to the steam pressure in the conduit for controlling the action of the valve, and a device actuated by the valve for modifying the action of said means.

2. In combination, a turbine that is divided into stages, a conduit for conveying steam from the turbine between certain of its stages, a valve controlling the passage of fluid from one stage to another, a motor for actuating the valve, means sensitive to the pressure of the steam in the conduit for controlling the action of the motor, and means for preventing overtravel of the motor and valve.

3. In combination, a turbine that is devided into stages, a conduit for conveying steam from the turbine between certain of its stages, a valve controlling the passage of fluid from one stage to another, a fluid motor for actuating the valve, a pilot valve controlling the motor, a means sensitive to pressure in the conduit for controlling the movements of the pilot valve, a ported member that coöperates with the pilot valve, and means actuated by the movements of the valve for adjusting said member with respect to the pilot valve.

4. In combination, a turbine wherein the pressure of the fluid decreases as it flows therethrough, a valve controlling the passage of fluid through the turbine at some intermediate region, a conduit that receives steam from said region on the side of the valve of higher pressure, a

device responsive to the pressure existing in said region which controls the action of the valve, and a means movable with the valve that modifies the action of the device and prevents overtravel of said valve.

5. In combination, a turbine wherein the pressure of the motive fluid decreases as it flows therethrough, a valve regulating the passage of fluid through the turbine at some intermediate point, a motor for actuating the valve, a controller for controlling the action of the motor, a conduit receiving fluid from a region in the turbine adjacent the controlling valve, and a means sensitive to pressure in said region that is connected to and moves the controller.

[Claims 6 to 12 not printed in the Gazette.]

1,020,687. APPARATUS FOR ASSEMBLING VENEER BARRELS. WALTER C. CUMMINGS, Boston, Mass., assignor to Nathan Heard, trustee, Newton, Mass. Filed July 20, 1911. Serial No. 639,573. (Cl. 147—1.)



1. An apparatus for assembling veneer barrels comprising a series of connected formers which when the end members of the series are secured together present a surface conforming to the exterior of the barrel, and means for holding a gored sheet of veneer in place against the faces of the series of formers when in open or extended position and during their movement into closed position.

2. An apparatus for assembling veneer barrels comprising a series of connected formers which when the end members of the series are secured together present a surface conforming to the exterior of the barrel, transverse grooves in the faces of the formers for supporting hoop strips, and means for holding a gored sheet of veneer in place against the faces of the series of formers when in open or extended position and during their movement into closed position.

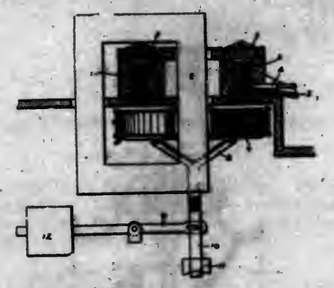
3. An apparatus for assembling veneer barrels comprising a series of connected formers which when the end members of the series are secured together present a surface conforming to the exterior of the barrel, transverse grooves in the faces of the formers for supporting hoop strips, means for holding a gored sheet of veneer in place against the faces of the series of formers when in open or extended position and during their movement into closed position, and means for supporting the ends of the hoop strips for fastening when in closed position.

4. An apparatus for assembling veneer barrels comprising a series of connected formers which when the end members of the series are secured together present a surface conforming to the exterior of the barrel, transverse grooves in the faces of the formers for supporting hoop strips, means for holding a gored sheet of veneer in place against the faces of the series of formers when in open or extended position and during their movement into closed position, and closing blocks having faces conforming to the barrel exterior for connecting the end members of the series when in closed position and leaving a space therebetween to expose the ends of the hoop strips to be fastened.

5. An apparatus for assembling veneer barrels comprising a series of connected formers which when the end members of the series are secured together present a surface conforming to the exterior of the barrel, means for holding a gored sheet of veneer in place against the faces of the series of formers when in open or extended position and during their movement into closed position, and lazy-tongs having one edge series of pivots mounted in the several formers and the other edge series of pivots slidingly mounted in the several formers whereby a simultaneous and uniform movement of the several formers is secured.

[Claims 6 to 15 not printed in the Gazette.]

1,020,688. INDUCTION-FURNACE. RICHARD FLEMING, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Oct. 10, 1907. Serial No. 396,726. (Cl. 204—64.)



1. An electric furnace comprising a magnetic core, a charge-receiving chamber, and a winding in inductive proximity to said chamber and movable along said core.

2. An electric furnace of the induction type having its primary coil movable toward and away from the crucibles.

3. An electric furnace of the induction type having its primary coil movable, and a weight urging said coil yieldingly toward the crucible.

4. An electric furnace of the induction type, comprising an annular crucible, a magnetic core, a primary coil, a support for said coil placed in inductive relation to said crucible, a lever carrying said support, and a counterweight on said lever.

5. An electric furnace comprising a magnetic core, a winding magnetically related thereto, a charge-receiving crucible in inductive proximity to said winding and means for automatically varying the relative position of said elements in accordance with the variations in the resistance of the charge of the crucible.

[Claims 6 and 7 not printed in the Gazette.]

1,020,689. SHADE-HOLDER. EDWIN E. FREDERICK, Bridgeville borough, Pa., assignor to The Frederick-Elder Company, Bridgeville, Pa., a Corporation of Pennsylvania. Filed Dec. 22, 1911. Serial No. 667,273. (Cl. 240—115.)



1. In combination with a shade having a flaring flange, a holder mountable on the light fixture, an inclosed flange on said holder, an open annulus of resilient material mounted in said last mentioned flange, one end of said annulus being fixed to said last mentioned flange while the other end thereof extends outwardly without said flange to form an operative catch, and inwardly extending projections on said annulus.

2. In combination with a shade having a flaring flange, a holder mountable on the light fixture and provided with an inclosed flange, an open annulus of resilient material mounted in said flange, inwardly extending projections on said annulus, one end of said annulus being fixed to said holder while the other end thereof is first bent inwardly to form a spring finger to coöperate with said projections to grasp the waist of said shade flange and then bent outwardly to pass without said holder and form an operative catch.

3. In combination with a shade having a flaring flange, a holder mountable on the light fixture and provided with an inclosed flange, said flange being provided with a circumferential seat and a slot, an open annulus of resilient material mounted in said seat, inwardly extending projections on said annulus, one end of said annulus being fixed to said holder while the other end thereof is first bent inwardly to form a spring finger to coöperate with said projections to grasp the waist of said shade flange and then bent outwardly to pass through said slot and form an operative catch.

1,020,690. VERMIN-TRAP. JOHN E. FREY, Pittsburgh, Pa., assignor of one-half to Benjamin A. Laws, Pittsburgh, Pa. Filed May 26, 1911. Serial No. 629,845. (Cl. 43—24.)



1. A vermin trap having a death chamber, means for getting the animal into said chamber, and means set in operation by the entrance of the animal to said chamber for then producing a rarefaction of the air in said chamber; substantially as described.

2. A vermin trap having a death chamber, means for getting the animal into said chamber, and means for then producing a rarefaction of the air in said chamber, together with means set in operation by the entrance of the animal into said chamber for subsequently ejecting the dead animal from said chamber; substantially as described.

3. A vermin trap having a death chamber, means for getting the animal into said chamber, means actuated by the animal for then closing the chamber, and for subsequently producing a rarefaction of the air in said chamber; substantially as described.

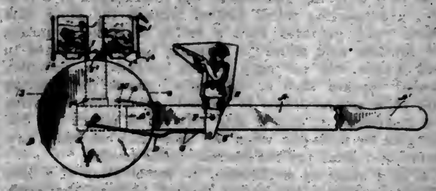
4. A vermin trap having a death chamber, means for getting the animal into and inclosing it within the chamber, a piston therein to effect a rarefaction of the air in said chamber, a motor for actuating the piston, and means actuated by the animal for actuating the motor; substantially as described.

5. A vermin trap having a death chamber, a trap space adjacent to said chamber, means for getting the animal into said space, a closure for the chamber, trip mechanism actuated by the animal when in said space for causing the entrance of the animal to the chamber and the closure thereof, means for effecting a rarefaction of air in said chamber, a motive device for said means, and means for automatically actuating the motive device to produce a rarefaction of the air within said chamber; substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

1,020,691. MECHANICAL TOY. THEODORE GUNDLER, Portland, Oreg., assignor of one-half to John W. Hurley, Portland, Oreg. Filed Apr. 20, 1911. Serial No. 624,559. (Cl. 46—45.)

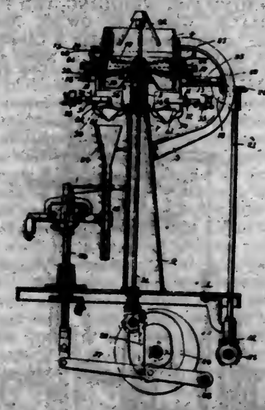
1. A mechanical toy, comprising a handled bar, a traction wheel journaled on the forward end of said bar and provided with a crank pin at one face, a figure fulcrumed on the bar, a pitman connecting the said crank pin with the said figure, an upwardly extending shaft on the forward end of the bar, and a disk provided with supports for picture cards and having a hub mounted to turn on said shaft, the said hub being provided with a friction pinion engaging the traction wheel.



2. A mechanical toy, comprising a handled bar, a traction wheel journaled on the forward end of the said bar and provided with a crank pin at one face and a spring-actuating pin at the other face, a figure fulcrumed on the bar near the forward end thereof, a pitman connecting the said crank pin with the said figure, a flat spring secured to the said bar and adapted to be engaged and released by the said actuating pin, a shaft on the said bar at the forward end thereof, a disk having a hub provided with a friction pinion in engagement with the said traction wheel to rotate the said disk, supports on the said disk, and picture cards held on the said supports.

3. A mechanical toy, comprising a handled bar, a traction wheel journaled on the forward end of the said bar, a disk having a hub journaled on the front end of the said bar, the hub having a friction pinion in engagement with a face of the said traction wheel, supports on the said disk, and picture cards removably held on the said supports.

1,020,692. AUTOMATIC WEIGHING MECHANISM. GEORGE W. GWINN, New York, N. Y., assignor to Automatic Packing & Labeling Company, Durham, N. C., a Corporation of North Carolina. Filed July 8, 1909. Serial No. 506,580. (Cl. 73—173.)



1. In a weighing mechanism, the combination of a hopper; a supporting frame located below said hopper; a plurality of scale-pans suspended from said supporting frame; means carried by the frame for feeding the material to be weighed from the hopper to the pans; means for rotating said frame; and connections intermediate the hopper and the feeding means to cause the feeding means to function as the supporting frame is rotated.

2. In a weighing mechanism, the combination of a fixed hopper; a supporting frame located beneath the hopper; means for rotating said frame; a plurality of scale-pans located beneath the frame; a plurality of feed-rolls carried by the frame adapted to feed the material to be

weighed from the hopper to the pans; connections intermediate the hopper and the rolls, to cause the same to rotate as the frame is rotated; means for arresting the movement of any particular roll when its scale-pan has received the requisite amount of material; and means for automatically opening said pan to discharge the material.

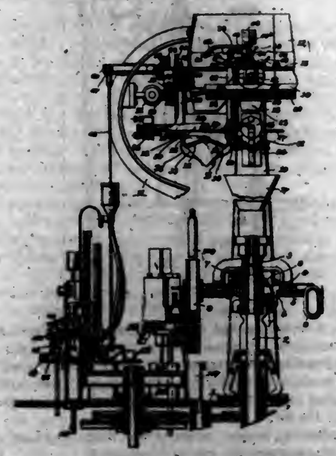
3. In a weighing mechanism, the combination of a hopper; a supporting frame located beneath the same, said frame being provided with a series of pockets; means for rotating said frame; a plurality of rolls mounted in said frame, one for each of the pockets; a scale-pan located beneath each of said rolls; means for rotating said rolls as the frame is rotated; means for arresting the movement of one of said rolls; and means for discharging its scale-pan when the frame has reached a predetermined point and the feed-roll comes to rest.

4. In a weighing mechanism, the combination of a fixed hopper; a supporting frame located beneath the same, said frame being provided with a series of pockets; means for rotating said frame; a plurality of rolls carried by said frame, each of said rolls working in one of the pockets or chambers formed in said frame; a scale-pan located below each of said pockets and adapted to receive the material discharged by the roll; means for driving said rolls as the frame is rotated; means actuated by the pan to arrest the movement of the roll when the pan has received a definite charge; and means for opening said pan when the frame reaches a predetermined point in the path of its travel.

5. In a weighing mechanism, the combination of a hopper; a supporting frame located beneath the same and provided with a series of pockets; means for rotating said frame; a plurality of feed-rolls carried by the frame, one roll working in each pocket; a scale-pan situated beneath each of said rolls, adapted to receive the charge of material fed downwardly by said roll; means for arresting the movement of each of said rolls when its pan has received a definite charge; and means for quickly opening and closing said pan a number of times as it passes a predetermined point in the path of travel of the frame.

[Claims 6 to 22 not printed in the Gazette.]

1,020,693. MACHINE FOR WEIGHING AND PACKAGING MATERIALS. GEORGE W. GWINN, New York, N. Y., assignor to Automatic Packing & Labeling Company, Durham, N. C., a Corporation of North Carolina. Filed July 22, 1909. Serial No. 509,052. (Cl. 73—173.)



1. In a machine for packaging materials, the combination of weighing mechanism, stamp-presenting mechanism; and connections intermediate said weighing mechanism and the stamp-presenting mechanism, whereby when an insufficient charge of material is fed to the weighing mechanism the stamp-presenting mechanism will be thrown out of operation.

2. In a machine for packaging materials, the combination of suitable weighing mechanism; a normally-operative stamp-presenting mechanism; and means for throwing said mechanism out of operation when a short-weight package comes into alinement with the stamp-presenting mechanism.

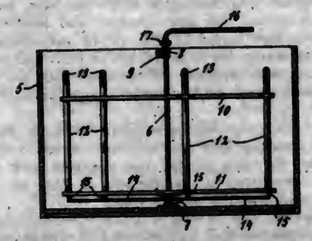
3. In a machine for packaging materials, the combination of means for weighing the material to be packaged; a stamp-presenting mechanism; and means operatively connected with the weighing means and the stamp-presenting mechanism and serving, when the proper weight of material has been obtained, to arrest the further feeding of the material to the weighing means, and when an insufficient amount has been fed to said means to throw the stamp-presenting mechanism out of operation.

4. In a machine for packaging materials, the combination of a scale-pan; a feed-roll for feeding the material thereto; a stamp-presenting mechanism adapted to present a stamp to the package into which the charge of material is discharged from the scale-pan; means for throwing the stamp-presenting mechanism out of operation; and means operated by the scale-pan for stopping the feed of material to the pan or, when insufficient material is fed to the pan, throwing the stamp-presenting mechanism out of operation.

5. In a machine for packaging materials, the combination of a scale-pan; means for feeding a charge of material thereto; means operated by the descent of the pan for arresting the movement of said feeding means; a stamp-presenting mechanism; and means operated by the feed-arresting means for throwing the stamp-presenting mechanism out of operation when insufficient material has been fed to the scale-pan.

[Claims 6 to 14 not printed in the Gazette.]

1,020,694. PULP-AGITATOR. CHARLES CLAUDIUS HAFER, Phoenix, Ariz. Filed June 15, 1911. Serial No. 633,324. (Cl. 75—86.)



1. The combination of a receptacle, a rotary agitator therein which is hollow to permit flow of the contents of the receptacle therethrough the inlet being at the bottom and the outlet at the top, and said agitator being impelled by the reaction due to the discharge therefrom of the contents of the tank, and means for producing suction in the agitator to induce the flow through and the discharge therefrom of said contents.

2. The combination of a receptacle, a rotary agitator therein which is hollow to permit flow of the contents of the receptacle therethrough the inlet being at the bottom and the outlet at the top, and said agitator being impelled by the reaction due to the discharge therefrom of the contents of the tank, and means for discharging air through the agitator to produce suction therein to induce the flow through and the discharge therefrom of the contents of the tank.

3. The combination of a receptacle, a rotary agitator therein, said agitator comprising vertically arranged pipes through which the contents of the receptacle can flow and discharge back into the receptacle, said agitator being impelled by the reaction due to the discharge therefrom of the contents of the tank, and means for producing suction in the pipes to induce the flow through and the discharge therefrom of said contents, the inlet being at the lower ends of the pipes and the outlet at the upper ends thereof.

4. The combination of a receptacle, a hollow vertical shaft mounted therein and connected to a source of compressed air, vertically arranged pipes carried by the shaft and radially spaced therefrom, said pipes being open at their lower ends and having laterally extending discharge nozzles at their upper ends, and pipes connected to the aforesaid shaft and discharging into the lower ends of the first-mentioned pipes, to produce suction therein to induce the flow through and the discharge therefrom of the contents of the tank.

1,020,695. DRIER. FRANKLIN P. HESS, Lynn, Mass., assignor, by mesne assignments, to Hess Manufacturing Co., Boston, Mass., a Corporation of Massachusetts. Filed May 6, 1909, Serial No. 494,300. Renewed Nov. 17, 1911. Serial No. 661,421. (Cl. 34—5.)



1. In a clothes drier, the combination of a casing; a drier cylinder rotatably supported therein and provided with a plurality of compartments each of which is provided with means for the admission of air thereto; an air supply pipe provided with a plurality of outlets therefrom, one opposite to each compartment; and means for expelling air from said drier.

2. In a clothes drier, the combination of a casing; a drier cylinder rotatably supported therein and provided with a plurality of compartments each of which is provided with means for the admission of air thereto; a series of air supply pipes each provided with a plurality of outlets therefrom, one opposite to each compartment; and means for expelling air from said drier.

3. In a clothes drier, the combination of a casing having a series of parallel openings in its wall; a series of air supply pipes communicating with said openings; a fan for forcing air through said pipes; a drier cylinder rotatable within said casing and provided with a perforated jacket; means for rotating said cylinder; and means for exhausting air from said casing.

4. In a clothes drier, the combination of a casing having a series of parallel openings in its wall; a series of air supply pipes communicating with said openings; a fan for forcing air through said pipes; a drier cylinder rotatable within said casing and provided with a wire screen jacket; means for rotating said cylinder; and means for exhausting air from said casing.

5. In a clothes drier, the combination of a casing having a series of parallel openings in its wall; a series of air supply pipes communicating with said openings; a fan for forcing air through said pipes; a drier cylinder rotatable within said casing and provided with a wire screen jacket; means for rotating said cylinder; and an exhaust fan for exhausting air from said casing.

[Claims 6 to 34 not printed in the Gazette.]

1,020,696. WELL-CASING. FRANK F. HILL, Los Angeles, Cal. Filed Oct. 20, 1910. Serial No. 588,214. (Cl. 137—75.)

1. A well casing comprising cylindrical segments, having flanges along their vertical walls, said segments being arranged in a plurality of vertical series with their ends abutting the walls of said segments between said flanges, and including the joints, being of uniform thickness, said series being disposed with their vertical flanges in contact to form a cylindrical casing, the vertical flange of each segment overlapping, at its upper and lower ends, the vertical flanges of the segments above and below the same, and means securing each vertical flange to the adjacent and overlapping flanges of the adjacent segments.

2. A well casing comprising a plurality of sections arranged in vertical series, each section comprising a plurality of segments having vertical flanges along their vertical edges, with their ends abutting, the walls of said segments, between the said flanges, being of uniform thickness throughout, including the portion thereof adjacent to the joints between each section and the sections above and below the same, the segments of each section extending at different heights, so that their flanges overlap with the flanges of the adjacent sections, means securing the flanges of the segments in each section together, and means securing the flanges of each of the segments in each section to the overlapping flanges of the segments of the adjacent sections above and below the same.



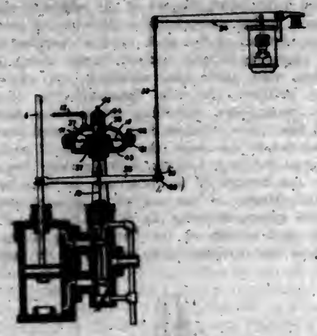
3. A well casing comprising a plurality of sections arranged in vertical series, each section comprising a plurality of segments having vertical flanges along their vertical edges, the segments of each section extending at different heights, so that their flanges overlap with the flanges of the adjacent section, means securing the flanges of the segments in each section together, and means securing the flanges of each of the segments in each section to the overlapping flanges of the segments of the adjacent sections above and below the same, each segment being of uniform thickness from top to bottom, and making a butt joint at its upper and lower ends with the adjacent segments of adjacent sections so that the wall of the casing is of uniform thickness from top to bottom.

4. A well casing composed of inner and outer members, each member comprising a vertical series of sections formed of sheet metal cylindrical segments having vertical flanges along their vertical edges, said flanges of the inner and outer casing members extending side by side, with the flanges of the inner member extending between the flanges of the outer member, means extending through the adjacent flanges, securing the flanges of the inner and outer members together in each section.

5. A well casing composed of inner and outer members, each member comprising a vertical series of sections formed of sheet metal cylindrical segments having vertical flanges along their vertical edges, said flanges of the inner and outer casing members extending side by side, with the flanges of the inner member extending between the flanges of the outer member, means extending through the adjacent flanges, securing the flanges of the inner and outer members together in each section, the segments of each member being of uniform thickness throughout from top to bottom and abutting at their ends to form a double casing of uniform thickness from top to bottom.

[Claim 6 not printed in the Gazette.]

1,020,697. GOVERNING MECHANISM FOR MIXED-PRESSURE TURBINES. OSCAR JUNGGREN and EDGAR D. DICKINSON, Schenectady, N. Y., assignors to General Electric Company, a Corporation of New York. Filed Oct. 18, 1910. Serial No. 586,906. (Cl. 121—118.)



1. The combination with a mixed pressure turbine having a low pressure supply conduit, a high pressure supply conduit, and valves controlling the same, of a motor for actuating said valves, a pilot valve for the motor having a stem, a speed responsive device controlling said valve and motor, and means responsive to the pressure in the low pressure conduit that engages said stem and controls said valve and motor independently of the speed responsive device under certain conditions.

2. The combination with a mixed pressure turbine having a low pressure supply conduit, a high pressure main, and valves controlling the same, of a motor for actuating said valves, a pilot valve admitting fluid pressure to said motor, a speed governor for operating said pilot valve, a diaphragm exposed on one side to the low pressure steam and on the other to the atmosphere, and operative connections between said diaphragm and said pilot valve.

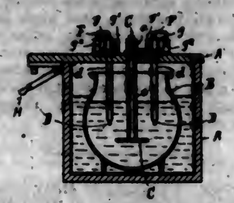
3. The combination with a mixed pressure turbine having a low pressure supply conduit, a high pressure main, and valves controlling the same, of a motor for actuating said valves, a pilot valve admitting fluid pressure to said motor, a speed governor for operating said pilot valve, a diaphragm exposed on one side to the low pressure steam and on the other to the atmosphere, operative connections between said diaphragm and said pilot valve, and means for adjusting the pull of said diaphragm.

4. The combination with a mixed pressure turbine having a low pressure supply conduit, a high pressure main, and valves controlling the same, of a motor for actuating said valves, a pilot valve admitting fluid pressure to said motor, a speed governor for operating said pilot valve, a diaphragm exposed on one side to the low pressure steam and on the other to the atmosphere, a lever connected to said diaphragm and to said pilot valve, and means for adjusting the point of connection of said diaphragm with said lever.

5. The combination with a mixed pressure turbine having a low pressure supply conduit, a high pressure main, and valves controlling the same, of a motor for actuating said valves, a pilot valve admitting fluid pressure to said motor, a speed governor for operating said pilot valve, a diaphragm exposed on one side to the low pressure steam and on the other to the atmosphere, a frame on which said diaphragm is adjustably mounted, a lever pivoted to said frame and to the stem of said pilot valve, and a stem attached to said diaphragm and provided with a block slidable along said lever.

1,020,698. ELECTROLYTIC INTERRUPTER. JOHN ROSSER KELLEY, Covington, Ky. Filed Apr. 21, 1911. Serial No. 622,447. (Cl. 172—281.)

1. In an electrolytic interrupter, an interrupting electrode comprising a stem of non-conducting material, an electrode sealed into said stem and exposing a limited surface to an electrolyte, and means to protect the material of said stem from disintegration due to the passage of a current.



2. In an electrolytic interrupter, an interrupting electrode comprising a stem of non-conducting material, an electrode sealed into said stem and exposing a limited surface to an electrolyte, and means to protect said stem in close proximity to said electrode from disintegration due to the passage of a current.

3. In an electrolytic interrupter, an interrupter electrode comprising a hollow supporting member of non-conducting material, an electrode sealed into the wall of said supporting member and exposing a limited surface to an electrolyte, an electrical conductor leading through said supporting member and in electrical contact with said electrode within said supporting member, and a cap encircling said electrode outside of said supporting member to protect said supporting member from disintegration due to the passage of a current.

4. In an electrolytic interrupter, an interrupter electrode comprising a hollow supporting member of non-conducting material, an electrode sealed into the wall of said supporting member and projecting at opposite sides of said wall, means to pass a current to the end of said electrode within said supporting member, and a detachable member of conducting material encircling said electrode outside of said supporting member and closely fitting the outer face of said supporting member.

5. In an electrolytic interrupter, a cell having an opening at the top and an opening through the bottom, a depending electrode having electrical connection through the top opening of said cell, a supporting member of non-conducting material seated in and closing the opening through the bottom of said cell and projecting into the electrolyte of said cell, and an interrupter electrode projecting through the wall of said supporting member at its upper end and exposing a limited area to the electrolyte of said cell.

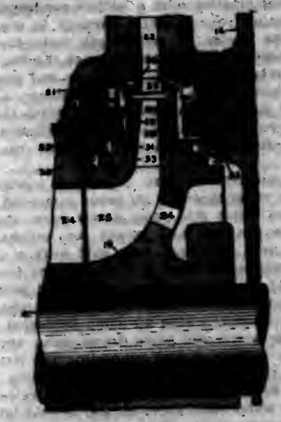
[Claims 6 to 13 not printed in the Gazette.]

1,020,699. CENTRIFUGAL PUMP. WALTER KIESER, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed Jan. 12, 1909. Serial No. 471,978. (Cl. 103—43.)

1. A centrifugal pump having an impeller provided with a stepped series of perpendicular and circumferential surfaces of revolution, and stationary elements having opposed surfaces arranged to give clearance spaces communicating on each side of the outlet with the delivery of the impeller so that the spaces between perpendicular surfaces will vary in width with the axial shifting of the impeller, and the balancing pressure in said spaces will vary inversely with their width.

2. A centrifugal pump having an impeller provided with smooth lips on each side of its discharge portion, and having also steps on each side of said portion, a diffuser having a receiving portion entering between said lips, and stationary elements having grooved steps corresponding with the steps on the impeller.

3. A centrifugal pump comprising a casing having inlet and discharge ports, an impeller located therein which receives the fluid to be pumped from one side, a port in the body of the impeller to approximately balance the pressures exerted thereon, an auxiliary balancing means comprising parts located on each side of the impeller and having opposed perpendicular and circumferential surfaces of revolution arranged in a stepped series, the said surfaces being separated by clearance spaces to which the fluid at the discharge pressure of the impeller has access, and a driving shaft.



4. A centrifugal pump having an impeller provided with perpendicular and cylindrical surfaces of revolution, and stationary elements having opposed surfaces that communicate with the delivery of the impeller so that the clearance spaces between perpendicular surfaces will vary in width with axial shifting of the impeller, the said cylindrical clearance spaces on one side of the impeller being greater than on the other.

1,020,700. CENTRIFUGAL PUMPING APPARATUS. WALTER KIESER, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed Sept. 2, 1909. Serial No. 515,904. (Cl. 230—14.)



1. A combined condensation and air pump comprising a casing, a shaft, a throwing water impeller for the air pump mounted on the shaft, an impeller for the condensation pump mounted on the shaft in spaced relation to the first impeller, means for supplying air and water of condensation to the region between the impellers from which region said fluids pass to their respective impellers, an outlet conduit for the throwing water and air, a delivery conduit leading from the outer side of the condensation pump impeller, and a conduit supplying throwing water to the outer side of the air pump impeller.

2. A combined condensation and air pump comprising a casing, a shaft, a throwing water impeller for the air pump mounted on the shaft, an impeller for the condensation pump mounted on the shaft, a centrally arranged chamber located between the impellers and in communication with the inlet of the condensation pump impeller, means for supplying water of condensation to said chamber, a second chamber outside the first and in communication with the throwing air pump, means for supplying air to the second chamber, an outlet conduit for the throwing water and air, a delivery conduit leading from the outer side of the condensation pump impeller, and a conduit supplying throwing water to the outer side of the air pump impeller.

3. A combined condensation and air pump comprising a casing, a shaft, a throwing water impeller for the air pump mounted on the shaft, an impeller for the condensation pump mounted on the shaft, an inlet conduit for the casing which receives air and water of condensation from a condenser, a chamber arranged around the shaft between the impellers and in communication with the inlet of the condensation pump impeller, means for supplying water of condensation from said conduit to the chamber, a second chamber outside the first and in communication with the throwing air pump, means for supplying air from said conduit to the second chamber, an outlet conduit for the throwing water and air, a delivery conduit leading from the outer side of the condensation pump impeller, and a conduit supplying throwing water to the outer side of the air pump impeller.

4. A combined condensation and air pump comprising a casing, a throwing air pump arranged at one side of the casing, a condensation pump arranged at the opposite side of the casing, a shaft on which the impellers of the pumps are mounted, there being a gap between the air pump impeller and its surrounding directing member, an inlet conduit on the upper portion of the casing that receives air and water of condensation from a condenser, a chamber arranged around the shaft between the impellers and in communication with the inlet of the condensation pump, a conduit for conveying water of condensation from the inlet conduit to said chamber, a second chamber outside the first and in communication with the gap of the air pump, a conduit for conveying air from the inlet conduit to the second chamber, means in said inlet conduit for separating the water of condensation from the air and directing them to their respective conduits an outlet conduit for the throwing water and air, a delivery conduit leading from the condensation pump, and a conduit supplying throwing water to the air pump.

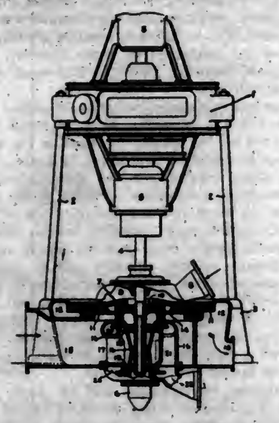
5. A combined condensation and air pump comprising a casing, a shaft, a throwing water impeller for the air pump mounted on the shaft, a directing member within which said impeller rotates, there being a gap between the impeller and said member, an impeller for the condensation pump mounted on the shaft, an inlet conduit on the upper portion of the casing which receives air and water of condensation from a condenser, a chamber arranged around the shaft between the impellers and in communication with the inlet of the condensation pump impeller, a conduit leading from the inlet conduit to the chamber and conveying water of condensation to it, a second chamber surrounding the first and in communication with the gap of the throwing air pump, a conduit leading from said inlet conduit to the second chamber and conveying air to it, a dam in the inlet conduit for preventing the water of condensation from flowing into the conduit leading to the second chamber, an outlet conduit for the throwing water and air, a delivery conduit leading from the outer side of the condensation pump, and a conduit supplying throwing water to the outer side of the air pump.

[Claims 6 to 14 not printed in the Gazette.]

1,020,701. CENTRIFUGAL PUMP FOR ABSTRACTING AIR AND WATER FROM SURFACE CONDENSERS. WALTER KIESER, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed Sept. 2, 1909. Serial No. 515,905. (Cl. 230—14.)

1. The combination with a centrifugal air pump, of a rotary water pump, said pumps having a common vertical axis, and a common horizontal conduit for supplying air to the air pump and water to the water pump, said air pump being located adjacent the upper portion of conduit and receiving air therefrom and the water pump being

located adjacent the lower portion of conduit and receiving water therefrom.



2. The combination with a centrifugal air-pump, of a rotary water pump located below the air-pump, and a common conduit supplying water to the lower pump and air to the upper pump.

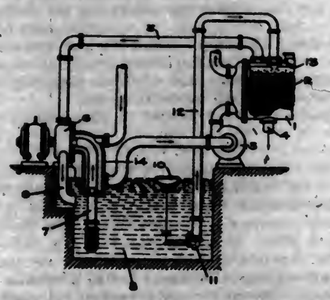
3. The combination with a centrifugal water-throwing runner, of a guiding means concentric therewith, a rotary water pump below said runner, and a common conduit communicating at its upper part with the gap between the runner and the guiding means, and at its lower part with the water pump.

4. In combination, a horizontal conduit conveying air and water of condensation, said conduit serving to separate the air and water, the air collecting at the top of the conduit and the water at the lower portion of said conduit, a centrifugal air pump mounted on the top of the conduit to draw air therefrom, and a centrifugal water pump connected to the lower portion of the conduit for removing water therefrom.

5. In combination, a centrifugal air pump having its axis vertical, a centrifugal water pump in line with the air pump and arranged below it, and a horizontal conduit conveying air and water of condensation whose outlet end enters the region between said pumps, the conduit serving to separate the air and water and deliver air to the air pump and water to the water pump.

[Claims 6 to 9 not printed in the Gazette.]

1,020,702. SURFACE CONDENSER. WALTER KIESER, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed Sept. 8, 1909. Serial No. 516,778. (Cl. 62—26.)



1. The combination with a surface condenser, of means for circulating cooling water through it, an outlet for condensation water, a centrifugal water-throwing air-pump connected with the steam space therein, said pump acting to raise the pressure of air and gas received from the condenser to atmospheric pressure, and means for automatically returning to said steam space the water resulting from the condensation of steam drawn off by said pump with the air and other uncondensed gases.

2. The combination with a surface condenser, of means for circulating cooling water through it, an outlet for condensation water, a centrifugal water-throwing air-pump connected with the steam space therein, said pump acting to raise the pressure of the air and gases received from the condenser to atmospheric pressure, a tank from which said pump draws water and to which the discharge therefrom returns, and means for automatically returning water from said tank to the steam space of said condenser.

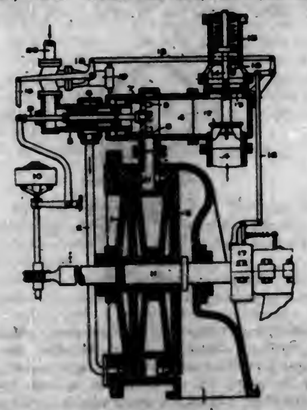
3. The combination with a surface condenser, of a centrifugal water-throwing air-pump connected therewith, a tank from which said pump draws water and to which its overflow returns, and means for automatically returning to said condenser from said tank a quantity of water approximately equal to that resulting from the condensation of the steam drawn off by said pump.

4. The combination with a surface condenser, of a centrifugal water-throwing air-pump connected therewith, a tank from which said pump draws water and to which its overflow returns, a pipe connecting the water in said tank with the condenser, a valve controlling said pipe, and means for automatically opening said valve when the level of the water rises above normal in said tank.

5. The combination with a surface condenser, of a centrifugal water-throwing air-pump connected therewith, a tank from which said pump draws water and to which its overflow returns, a pipe connecting the water in said tank with the condenser, a valve controlling said pipe, and a float directly connected to said valve to open the same when the water level rises above normal.

[Claims 6 to 8 not printed in the Gazette.]

1,020,703. PROTECTIVE DEVICE FOR TURBINES. WALTER KIESER, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed Sept. 30, 1909. Serial No. 520,358. (Cl. 121—118.)



1. The combination with a turbine supplied with steam from a suitable source, of a valve for shutting off the supply, a hammer adapted to close and hold said valve closed against the pressure of the supply, and an emergency governor for said turbine adapted to release said hammer.

2. The combination with a turbine supplied with low pressure steam from a suitable source, of a valve for shutting off said supply, a spring-actuated rod in line with said valve, a latch locking said rod in an inoperative position, and an emergency governor for tripping said latch.

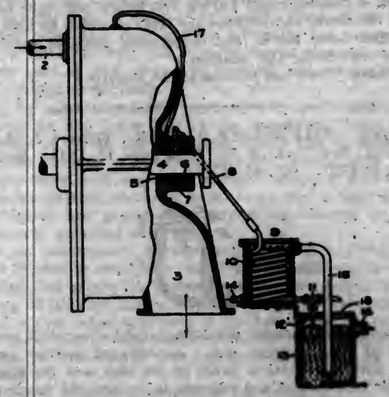
3. The combination with a turbine supplied with live steam and also with exhaust steam, of a quick-closing valve in the live steam pipe, a check valve in the exhaust steam conduit, an emergency governor, and operative connections whereby said governor effects the closing of both valves when the turbine races.

4. The combination with a turbine supplied with exhaust steam from a suitable source, of a check valve in the exhaust steam supply conduit adapted to be closed automatically by atmospheric pressure when the steam pressure falls below that of the atmosphere, and means for automatically closing said valve when the turbine races comprising a spring actuated rod arranged in line with the valve, a latch that normally holds the rod out of engagement with the valve, and an emergency governor that releases the latch and permits the rod to engage the valve to close it.

5. In combination, a turbine, a conduit for supplying high pressure steam to the turbine, a conduit for supplying low pressure steam to the turbine, a valve for regulating the admission of high pressure steam from the first conduit to the turbine, a valve for regulating the admission of steam from the low pressure conduit to the turbine, and a valve in the low pressure conduit adapted to be closed automatically by atmospheric pressure when the pressure of the low pressure steam falls below atmospheric.

[Claims 6 and 7 not printed in the Gazette.]

1,020,704. UTILIZING WASTE STEAM. WALTER KIESER, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed Oct. 12, 1910. Serial No. 586,797. (Cl. 121—58.)



1. The combination with a steam turbine having a stuffing box permitting the leakage of steam, of means for utilizing such steam after it leaves said stuffing box, and a device for indicating flow of steam from the stuffing box to said means.

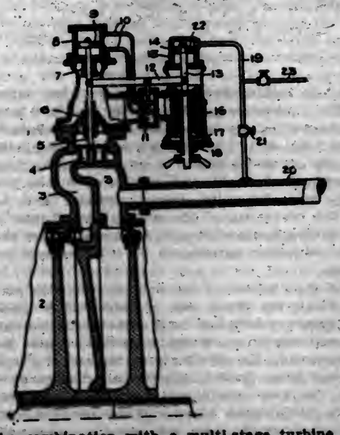
2. The combination with a steam turbine having a stuffing box permitting a leakage of steam, of a pipe for conveying away the waste steam, means for condensing said steam, and a device for indicating the quantity of water of condensation.

3. The combination with a steam turbine having a stuffing box permitting a leakage of steam, of a pipe for conveying away the waste steam, means for conserving the heat of said steam consisting of a feed water heater containing a coil of pipe connected to said waste steam pipe, and a device for observing the flow of the water resulting from the condensation of the steam in the coil.

4. The combination with a steam turbine having a stuffing box permitting a leakage of steam, of a pipe for conveying away the waste steam, means for condensing the steam in said pipe, and means whereby the water of condensation serves to indicate the condition of said stuffing box as to operativeness.

5. The combination with a turbine having a steam stuffing box, of a pipe for conveying away the waste steam, a feed water heater through which the pipe passes, a tank receiving feed water from the heater, and means for visibly discharging the water of condensation from the pipe into the tank.

1,020,705. STAGE-VALVE FOR TURBINES. WALTER KIESER, Charlottenburg, Germany, assignor to General Electric Company, a Corporation of New York. Filed Sept. 13, 1911. Serial No. 649,009. (Cl. 121—118.)



1. The combination with a multi-stage turbine having a conduit leading from an intermediate stage for supplying auxiliary devices, of an automatic stage valve responsive to pressure changes in said conduit and comprising a movable abutment, a pipe conveying pressure from said conduit to said abutment, and pressure-reducing means connected with said pipe.

2. The combination with a multi-stage turbine, of a conduit conveying steam from between certain of said stages, a valve controlling the passage of steam from one stage to another, a motor for actuating the valve, a spring-actuated abutment controlling said motor, a pipe conveying pressure from said conduit to said abutment, and a throttling device in said pipe.

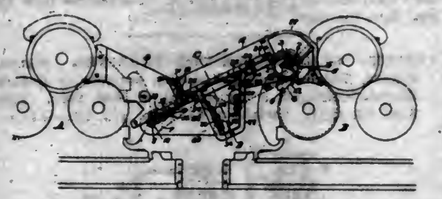
3. The combination with a multi-stage turbine, of a conduit conveying steam from between certain of said stages, a valve controlling the passage of steam from one stage to another, a motor for actuating the valve, a spring-actuated abutment controlling said motor, a pipe conveying pressure from said conduit to said abutment, a throttling device in said pipe, and means for relieving said pipe to prevent an accumulation of pressure fluid.

4. The combination with a multi-stage turbine, of a conduit conveying steam from between certain of said stages, a valve controlling the passage of steam from one stage to another, a motor for actuating the valve, a spring-actuated abutment controlling said motor, a pipe conveying pressure from said conduit to said abutment, a throttling device in said pipe, and openings to the atmosphere for relieving said pipe of an accumulation of pressure.

1,020,706. INTERMEDIATE BELT CONVEYER FOR SUGAR-CANE MILLS. IRWIN P. KIMBALL and ROBERT J. PRATT, Honolulu, Hawaii, assignors to Honolulu Iron Works Company, Honolulu, Hawaii, a Corporation of Hawaii. Filed July 30, 1909. Serial No. 510,436. (Cl. 198—4.)

1. In an intermediate belt conveyer for sugar cane mills, the combination of an endless conveyer belt, main drums supporting the same, side plates between which

the upper run of the belt passes, a frame comprising U-shaped side members depending from said side plates and supported solely thereby, and tensioning drums carried by said frame members and adjustable thereon in opposite directions, the lower run of the belt being passed between said tensioning drums.



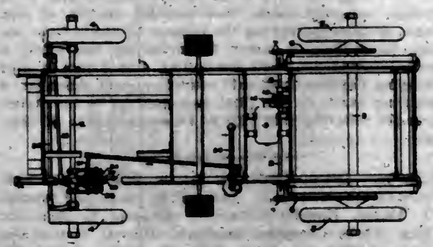
2. In an intermediate belt conveyer for sugar cane mills, the combination of an endless conveyer belt, main drums supporting the same, side members between which the upper run of the belt passes, a frame comprising opposite side members bolted to and depending from said side members aforesaid, and tensioning drums journaled between said depending frame members and between which the lower run of the belt is passed, one of said drums having bearing boxes with means to give the same positive adjusting movements on the respective frame members.

3. The combination of an endless belt, side plates between which the upper run of said belt is guided, U-shaped members bolted to and depending from said side plates, and tensioning drums journaled in said members and mounted on the side portions thereof, the lower run of the belt being passed between said tensioning drums.

4. In an intermediate belt conveyer for sugar cane mills, the combination of an endless conveyer belt, main drums supporting the same, side plates between which the upper run of the belt passes, a depending frame applied to said side plates and comprising angle bars bent into U-shape and bolted at their ends to the respective side plates, a distance bolt connecting the lower intermediate portions of said bars, and tensioning drums for the belt having boxes adjustable along the side portions of said U-shaped bars, said drums extending across said depending frame and coöperating with the lower run of the belt.

5. The combination of an endless belt, side members between which the belt is guided, depending frames carried by said side members, boxes applied to said depending frames, and tensioning drums journaled in said boxes and extending between said frames, to tension the belt at one run of the same, the boxes of at least one of said tensioning drums being reversible on the respective frames.

1,020,707. STEERING DEVICE FOR AUTOMOBILES. HERMANN LEMP, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Nov. 9, 1905. Serial No. 286,489. (Cl. 21—90.)



1. In an automobile, the combination with two independent driving wheels, of a motor for operating them, electromagnetic clutches for connecting the motor with the driving wheels, steering mechanism including two levers movable about a common center and having a limited movement relative to each other, and devices for controlling the clutches that are carried by the levers and actuated by said relative movement when the steering mechanism is operated.

2. In an automobile, the combination with two independent driving wheels, of a motor for operating them, electro-magnetic clutches for connecting the motor with the respective driving wheels, a switch controlling each clutch circuit, and steering mechanism including two levers movable about a common center which controls both switches, there being a lost motion connection between said levers.

3. In an automobile, the combination with two independent driving wheels, of a motor for operating them, electro-magnetic clutches for connecting the motor with the respective driving wheels, a switch controlling each clutch circuit, and steering mechanism including two levers movable relatively to each other about a common center, which by their relative movement open and close said switches alternately as said mechanism is operated to direct the automobile toward one side or the other of a straight course.

4. In an automobile, the combination with two independent driving wheels, of a motor for operating them, electro-magnetic clutches for connecting the motor with the respective driving wheels, steering mechanism comprising two levers having a limited movement relative to each other about a common center, and switches controlling said clutches and operated by the relative movement of the levers.

5. In an automobile, the combination with two independent driving wheels, of a motor for operating them, electro-magnetic clutches for connecting the motor with the respective driving wheels, steering mechanism comprising a steering check having two levers, one lever having a bifurcated end between the forks of which an arm of the other lever moves, and coöperating contacts on said levers controlling the clutches.

[Claims 6 to 9 not printed in the Gazette.]

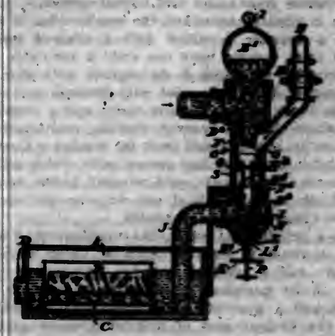
1,020,708. SOAP-BUBBLE BLOWER. THOMAS J. MARSHALL, New York, N. Y. Filed June 10, 1911. Serial No. 632,357. (Cl. 46—31.)



A soap bubble blower consisting of a hollow shell composed of two members, one a cone-shaped member provided with a cylindrical flange on its edge, and the other member disk-shaped and adapted to fit into the flange of the conical member, the conical member being provided with an orifice in the apex and another orifice intermediate the base, and the apex, the disk member being provided with a plurality of orifices.

1,020,709. ASPIRATOR. CHARLES WESLEY NANCE, London, England. Filed Apr. 1, 1910, Serial No. 552,870. Renewed Feb. 6, 1912. Serial No. 675,911. (Cl. 230—13.)

1. In aspirators, the combination of a refrigerated water chamber, a chamber open to the gases to be aspirated, a passage connecting said chambers, a parallel perforated nozzle terminating the passage into the second chamber, and much smaller in diameter than the average width of the passage between the two chambers, and adapted to divide the exhausting liquid into a series of parallel solid jets of liquid separated by vacant spaces, and projected out into a wide chamber open to the gases to be aspirated, and a conical receiver on a line with the axis of the nozzle of much greater width at its wide end than the nozzle, but narrowing to about the diameter of the nozzle at a distance of about three or more diameters therefrom, and means for adjusting the relative position of the rose and receiver on the same axis on the outside of the aspirator while it is at work.



2. In an aspirator, in combination, a casing in close proximity to the lower end of the exhausting tube, a perforated rose mounted in said casing and adapted to receive or discharge a liquid under pressure in a series of parallel streams, a receiver adjustably mounted below said rose in the axial line of the rose, and having a downward tapering passage and means for varying the position of said receiver in relation to said rose to vary the action of the device while apparatus is in action.

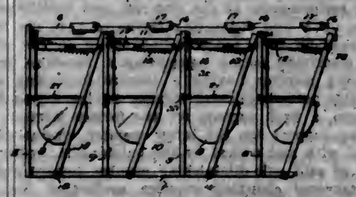
3. In combination in aspirators, a casing, a rose provided with parallel perforations at the end of the exhausting tube, dividing the exhausting liquid into a series of parallel jets, a receiver adjustably mounted on said casing below said rose, and an internally and externally screw threaded check-nut engaging screw threads on the lower part of said adjustable receiver, and the inside of said casing respectively.

4. In combination, in aspirators, a perforated rose located at the lower end of the exhausting tube, and adapted to divide the exhausting liquid into a series of parallel streams, a receiver adjustably mounted in said casing below said rose, said receiver having a downward tapering passage and nicks in its lower end, a hand wheel and shaft, and projections mounted on the end of said shaft for engaging said nicks.

5. In combination, an aspirator, a casing, a perforated rose located at the lower end of the exhaust tube in that casing, and adapted to divide the exhausting liquid into a series of parallel jets, a receiver adjustably mounted on said casing below said rose, a check-nut screwed around the lower end of said receiver, and into said casing, and means for unscrewing said nut from the outside of said casing.

[Claims 6 to 9 not printed in the Gazette.]

1,020,710. STANCHION AND TRIP-LEVER. JOSEPH RAU, Fayette, Iowa, assignor of one-half to Frank Rau, Fayette, Iowa. Original application filed Jan. 7, 1911, Serial No. 601,358. Divided and this application filed Mar. 13, 1911. Serial No. 614,100. (Cl. 119—147.)



1. A device of the class described including a frame, a stanchion secured to the frame and including relatively stationary and movable members, a latch bar normally engaging the movable member, a spring forming a connection between the stationary and movable members of the stanchion, a rod depending from one end of the latch bar, a trip lever pivotally mounted on the stationary member and operatively connected with the rod, said trip lever being actuated by contact with the neck of an animal to release the latch bar, and a locking device pivotally mounted on the frame for holding the movable member of the stanchion in closed position.

2. A device of the class described including a frame, a stanchion mounted on the frame and including relatively movable and stationary members, a pin extending laterally from the movable member, a spring forming a connection between said members, a latch bar engaging the pin of the movable member for normally holding the latter in open position, a rod depending from the latch bar and formed of pivotally united sections, a trip lever pivotally mounted on the stationary member of the stanchion and operatively connected with the lower section of the rod, the free end of the trip lever being actuated by contact with the neck of an animal to release the latch bar, a locking member pivotally mounted on the frame and adapted to engage and hold the movable member of the stanchion in closed position, and a pin extending laterally from the locking member and adapted to engage said frame for holding the locking member in normal position.

3. A device of the class described comprising a frame including upper and lower longitudinal bars, stanchions mounted on the longitudinal bars of the frame and each including stationary and movable members, a pin projecting laterally from the outer face of the movable member at the upper end thereof, a latch bar pivotally mounted on the upper longitudinal bar of the frame at each stanchion and adapted to engage the pin of the movable member of the adjacent stanchion for holding the latter in open position, means operatively connected with one end of each latch bar and actuated by contact with the neck of an animal to release said latch bar, and a locking member disposed above each latch bar and adapted to engage the movable member of the adjacent stanchion for locking said movable member in closed position.

4. A device of the class described including a frame, a stanchion mounted on the frame and including stationary and movable members, a pin projecting laterally from the outer face of the movable member, a latch bar pivotally mounted on the frame and having its free end provided with a notch adapted to engage the pin of the movable member of the stanchion, a spring forming a connection between the stationary and movable members of the stanchion, a sectional rod depending from the pivoted end of the latch bar, a trip lever connected with the lower section of the rod and having one end thereof pivotally mounted on the stationary member of the stanchion and its other end bent inwardly, said trip lever being actuated by contact with the neck of an animal to release the latch bar, and a locking member pivotally mounted on the frame and adapted to engage the movable member of the stanchion for holding the latter in closed position.

1,020,711. ELECTRIC-LAMP FIXTURE. FRANK LAWRENCE RAYNOR, Southampton, N. Y. Filed Oct. 3, 1911. Serial No. 652,574. (Cl. 240—78.)

1. An electric lamp fixture, having an intermediate series of flexible wire conduits, two wires passing therethrough, and means connected to the respective terminals of said wires to hold said wires taut, whereby the series are held relatively to each other by the tautness of the respective conducting wires.

2. An electric lamp fixture, having a supporting member, a socket member, and an intermediate series of flexible wire conduits held relatively to each other by means of the tautness of the respective conductor wires, said wires being connected to the respective supporting and socket member of the fixture.

3. An electric lamp fixture, having a pair of conductor wires threaded therethrough, a supporting member at one end, a socket member at the other end, and a series of intermediate tubular links held together by the ten-

ductor wires which are connected to the respective members of the fixtures.

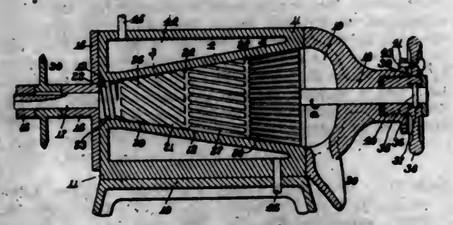


4. An electric lamp fixture having a pair of conductor wires threaded therethrough, a socket member, means disposed therein for connecting the conductor wires to said member, a socket member at the lower end of the fixture, and a series of intermediate tubular links disposed in pairs and connected to the members of the fixture, the conductor wires being threaded through said links and connected to the socket member to retain the intermediate links in frictional contact with one another.

5. An electric lamp fixture having a supporting member, conductor wires threaded therethrough, a plurality of pairs of parallel disposed tubes flexibly connected together, a lamp carrying socket carried at the lower end of the said tubes, and means for connecting the conductor wires to the supporting member and to the socket whereby the tubes are held in frictional contact yet flexibly together by the conductor wires.

[Claim 6 not printed in the Gazette.]

1,020,712. GRINDING-MILL. CORNELIUS J. REGAN, Quincy, Mass. Filed Apr. 5, 1911. Serial No. 619,440. (Cl. 83—13.)



1. In a grinder and mixer, the combination of a casing having a chamber the wall of which is provided with a plurality of longitudinal grooves; a revoluble member the periphery of which is in contact with the wall of said chamber and is provided with a plurality of annular grooves and a plurality of angular grooves between each pair of said annular grooves, said sets of angular grooves being each at a different angle to said longitudinal grooves; and means for admitting material to the end of said chamber.

2. In a grinder and mixer, the combination of a casing having a tapered chamber with a cylindrical extension thereon; a revoluble tapered member within said chamber and provided with helical grinding grooves coacting with the wall of said chamber; a cylindrical extension to said revoluble member at its smaller end fitting the cylindrical extension of said chamber and provided with a shallow worm groove; and a shallow annular groove communicating therewith between said worm groove and grinding surfaces and having the same depth as said worm groove and said helical grooves.

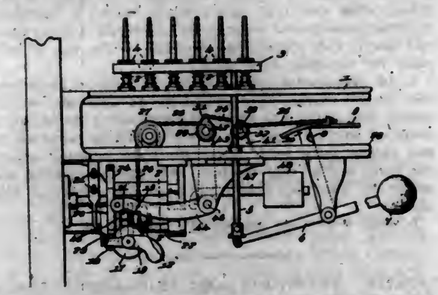
3. In a grinder and mixer, the combination of a casing having a chamber provided with a grooved inner wall and an inlet thereto near one end; a revoluble member the periphery of which is in contact with the wall of said chamber and is provided with grooves at a different angle to those in the chamber wall; and a member having shallow helical grooves therein positioned within said chamber opposite said inlet for forcing material from said inlet into an annular groove with which said angular grooves communicate, said annular groove having the same depth as said helical and angular grooves at the point of communication therewith.

4. In a grinder and mixer, the combination of a casing having a chamber provided with an inlet thereto near one end; and a revoluble member within said chamber having in its periphery a plurality of sets of angular grooves and a plurality of annular mixing grooves between the various sets of angular grooves each corresponding in depth to that of the angular grooves communicating therewith.

5. In a grinder and mixer, the combination of a casing having a chamber provided with an inlet thereto near one end; and a revoluble member within said chamber having in its periphery a plurality of sets of angular grooves and a plurality of annular mixing grooves between the various sets of angular grooves each corresponding in depth to that of the angular grooves communicating therewith, each set of angular grooves diminishing in angularity, width, and depth from the smaller end of said revoluble member to its larger end.

[Claims 6 to 9 not printed in the Gazette.]

1,020,713. TRAVERSE-MOTION FOR YARN-SPINNING APPARATUS. ALONZO E. RHOADES, Hopedale, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Oct. 26, 1911. Serial No. 656,977. (Cl. 118—1.)



1. In apparatus of the class described, an oscillating builder-arm having a constant stroke, a winding mechanism thereon, a reciprocating ring-rail, flexible connecting means between it and said winding mechanism, to effect reciprocation of the ring-rail, and modifying means acting upon said connecting means to vary the traverse and gain up to a predetermined point in the winding, said modifying means comprising a rotatable traverse-changing member having a traverse-increasing cam, a rotatable gain-diminishing member having a gain-decreasing cam, a fixed support for the former member, and a rocking support for the latter member, operatively connected with and rocked by the builder-arm, bodily movement of said gain-diminishing member toward and from the traverse-changing member oscillating the latter, the winding mechanism causing intermittent angular advances of the gain-changing member to effect, through its cam, angular and gradually diminishing advances of the traverse-changing member, to decrease the gain, such advances of said traverse-changing member acting through its cam to gradually increase the traverse, until both cams cease to act, the angular advance of each of said members being thereafter equal and uniform and governed wholly by the winding mechanism, to impart uniform gain and traverse to the reciprocation of the ring-rail.

2. In apparatus of the class described, a builder-motion including an oscillating builder-arm having a constant stroke, and a winding barrel thereon to let off the chain intermittingly, a reciprocating ring-rail, a two-part chain connection between it and the winding barrel, to effect reciprocation of the ring-rail, and modifying means connected with and acting through the chain to vary the traverse and gain up to a predetermined point in the winding, said means comprising a rotatable traverse-changing drum having a cam portion to act temporarily upon the chain and gradually increase the traverse, a second gain-diminishing drum rotatable and also movable bodily toward and from the first drum and having a cam portion to act temporarily upon the chain and gradually diminish the gain, a fixed support for the first drum, a rocking support for the second drum, and a positive connection between the builder-arm and said support to rock the latter, the part of the chain attached to the winding barrel being wound about the bodily movable drum and leading from its cam portion to the traverse-changing drum, to which it is attached, the other part of the chain being wound upon the latter drum and being at first acted upon by its cam portion, bodily movement of the gain-diminishing drum oscillating the traverse-changing drum upon its support, the winding barrel causing intermittent angular advances of the first-named drum to effect through its cam gradually diminishing angular advances, in the same direction, of the traverse-changing drum, to decrease the gain, such advances of the traverse-changing drum acting through its cam portion upon the second part of the chain to gradually increase the traverse, until the cam portions of both drums cease to act upon the chain, the parts of the latter thereafter leaving the two drums at equal distances from their axes, to impart uniform gain and traverse to the reciprocation of the ring-rail.

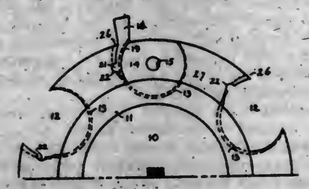
3. In apparatus of the class described, a reciprocating ring-rail, means, including a cylindrical drum, having a traverse-increasing cam at one end, and a chain between the drum and ring-rail, to effect a gradually increasing traverse when said cam and chain are coöperating and thereafter to impart a uniform traverse when said chain and the cylindrical drum coöperate, a second cylindrical drum having a cam to govern the gain, a chain connecting the second drum with the first drum and attached to the latter at one side of its cam, said chain when coöperating with the gain governing cam acting to gradually diminish the gain and thereafter imparting a uniform gain to the traverse when the chain coöperates with the cylindrical drum, means, including an oscillating builder-arm, to impart a bodily movement of the latter toward and from the first-named drum, to effect oscillation of the latter, and other means to effect intermittent angular advances of the gain-controlling drum, both of said drums being mounted independently of the builder-arm.

4. In apparatus of the class described, a reciprocating ring-rail, traverse-controlling means including a rotatable member having a traverse-increasing cam, a rotatable gain-controlling member having a gain-diminishing cam, an oscillating builder-arm having a constant stroke, an intermittingly rotated winding barrel thereon, and a flexible connection between said barrel and the ring-rail, to effect reciprocation thereof, combined with means to move the gain-controlling member toward and from the traverse-controlling member, the coöperation of the cams with the flexible connection effecting a gradually increasing traverse and a gradually diminishing gain to the reciprocations of the ring-rail, the bodily movement of the gain-controlling member imparting oscillatory motion to the traverse-controlling member and angular advances of the latter being effected by angular advances of the gain-controlling member due to the operation of the winding barrel.

5. In apparatus of the class described, a reciprocating ring-rail, an oscillating builder-arm having a constant stroke, an intermittingly rotated winding barrel thereon, and a flexible connection between said barrel and the ring-rail, combined with rotatable traverse-controlling and gain-controlling members, each having a cam portion and a cylindrical portion, to coöperate successively with the flexible connection, the cam portions acting therethrough to impart a gradually increasing traverse and gradually diminishing gain to the reciprocations of the ring-rail, the cylindrical portions of said members acting through said connection to impart uniform traverse and gain, and means to impart bodily movement of the gain-controlling member toward and from the traverse-controlling member, to oscillate the latter, the uniform angular advances of the gain-controlling member, governed by the winding barrel, acting through the cam portion of said member, to impart gradually diminishing angular advances to the traverse-controlling member.

[Claim 6 not printed in the Gazette.]

1,020,714. THRESHING-CYLINDER. HARRISON W. RICH and CHARLES E. GATES, Spokane, Wash., assignors to Olympic Inserted Tooth Cylinder Company, Spokane, Wash., a Corporation. Filed Nov. 8, 1911. Serial No. 659,266. (Cl. 130—27.)



1. A threshing cylinder comprising teeth having a tongue on a convex surface and groove on a concave surface, a lug reaching from the convex surface interrupting the tongue and extending beyond the same, coöperating with circular disks entering into the construction of the cylinder and having concave openings provided with grooves and surfaces adapted to fit the tongue and lugs of the teeth, together with keys adapted also to fit into said concave openings and rest against the teeth on one side and engage the surface of the openings the remainder of the way around.

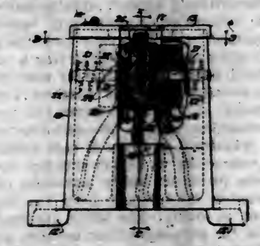
2. A threshing cylinder comprising circular disks having outwardly extending rims provided with concave surfaces having grooves and openings in which are snugly inserted teeth having tongues and outwardly extending lugs interrupting the tongues, and keys provided with tongues engaging the teeth on one side and the remainder of the concave surface in the rims of the disks.

1,020,715. LUBRICATOR FOR ELEVATOR-GUIDES. CHARLES SCHENCK, Chicago, Ill., assignor to Elevator Supply & Repair Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 1, 1910. Serial No. 595,094. (Cl. 184—22.)

1. A lubricator for elevator guides, comprising an oil receptacle adapted to be fixed to the car, a shoe movably mounted on said receptacle, said shoe being formed of non-abrasive material and having a flat face arranged to slidably engage the surface of the elevator guide, a wick leading from said receptacle and fixed at one end to said shoe for feeding oil to the guide engaging surface thereof, and a spring for pressing said shoe into engagement with the guide, substantially as described.

2. A lubricator for elevator guides adapted to be carried by the car and comprising an oil receptacle, a movable shoe formed of non-abrasive material and arranged above

the oil level of said receptacle, a spring for pressing said shoe into engagement with the surface of the elevator guide, and a wick leading from said receptacle to said shoe for feeding oil by capillary attraction to the guide engaging surface of the shoe, substantially as described.



3. A lubricator for elevator guides adapted to be carried by the car and comprising a lubricant receptacle, a wick leading from said receptacle, a movable wick-holding shoe formed of non-abrasive material and having a face arranged to slidably engage the elevator guide, said shoe having a plurality of transverse grooves in its guide engaging surface through which said wick extends, and a spring for pressing said shoe toward the elevator guide, substantially as described.

4. A lubricator for elevator guides comprising an oil receptacle adapted to be fixed to the car, a relatively movable shoe formed of fiber and having a flat surface arranged to engage the surface of the elevator guide, a spring for pressing said shoe into engagement with the guide, and a wick extending from said receptacle to said shoe for feeding oil to the guide engaging surface of the shoe, substantially as described.

5. A lubricator for elevator guides comprising an oil receptacle adapted to be carried by the car, a movable shoe formed of fiber and having a flat surface arranged to engage the surface of the elevator guide, said shoe being arranged above the level of the level of the oil in said receptacle, a spring for pressing said shoe into engagement with the guide and a wick leading from said receptacle to said shoe for feeding oil by capillary attraction to the guide engaging surface of the shoe, substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

1,020,716. YEAST WASHING AND AERATING APPARATUS. FREDERICK SCHIMPER, Union, N. J., assignor of one-half to Alfred H. Koeller, Ridgefield Park, N. J. Filed Oct. 12, 1911. Serial No. 654,355. (Cl. 195—17.)

1. A device of the character described, comprising a vessel, a cock-controlled water pipe and a cock-controlled air pipe entering the lower end thereof, a shield within the vessel, arranged at a distance above the ingress opening of said pipes, a stand pipe extending upwardly from said shield, and a rose at the upper end of said stand pipe.

2. A device of the character described, comprising a vessel, means for admitting water and air to the lower part thereof, a belled shield within the vessel that forms a lower chamber above the ingress opening of the water and air, a pipe extending upwardly from the shield and communicating with said lower chamber, and a plurality of discharge orifices communicating with the upper end of the pipe.

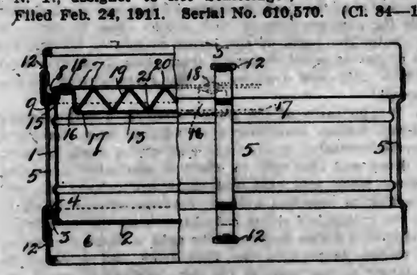
3. A device of the character described, comprising a vessel, means for admitting water and air to the lower part thereof, a foraminated mixing head within the vessel adapted to receive said water and air, a belled shield forming a lower chamber within the vessel above the mixing head, a pipe extending upwardly from the shield and communicating with said lower chamber, and a plurality of discharge orifices communicating with the upper end of the pipe.

4. A device of the character described, comprising a vessel, an inlet pipe for water and air entering the bottom thereof, a foraminated mixing head within the vessel that communicates with said pipe, a chamber above said mixing head, a stand pipe that communicates with said chamber, and a rose carried by the upper end of said stand pipe.

5. A device of the character described, comprising a vessel, an inlet pipe for water and air entering the bottom thereof, a foraminated mixing head within the vessel that communicates with said pipe, a chamber above said mixing head, a stand pipe that communicates with said chamber, a rose carried by the upper end of said last named pipe, and an overflow pipe that leads from the upper part of the vessel.

[Claims 6 and 7 not printed in the Gazette.]

1,020,717. TOY DRUM. ISAAC SCHLESINGER, New York, N. Y., assignor to Leo Schlesinger, New York, N. Y. Filed Feb. 24, 1911. Serial No. 610,570. (Cl. 84—10.)



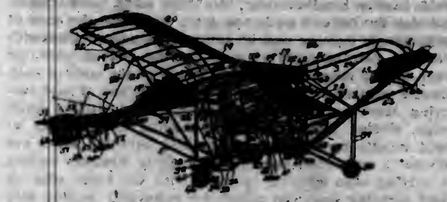
1. A toy drum comprising a body, a corrugated head therefor, and means for loosely attaching the said head to the body whereby the head will be free to vibrate relatively to its supporting means.

2. A toy drum comprising a body, a corrugated head therefor having parallel straight corrugations for the purpose set forth, and means for loosely holding the said head, whereby the latter will be free to vibrate relatively to its supporting means.

3. A toy drum, comprising a body, an annular ring, straps secured to the said ring and extending across the drum, a head having corrugations for the purpose set forth, said head being loosely supported between said straps, and ring, and arranged to vibrate freely, and means for securing said annular ring to the body.

1,020,718. FLYING-MACHINE. CHARLES A. SCHOONMAKER, Syracuse, N. Y., assignor, by direct and mesne assignments, of one-half to Edward J. Ryan, Syracuse, N. Y. Filed Apr. 24, 1911. Serial No. 622,885. (Cl. 244—14.)

1. In a flying machine, a frame comprising top and bottom laminated wooden rails, laminated wooden posts connecting the top and bottom rails, a main plane mounted on top of the frame having a laminated wooden frame and like wooden ribs, a pair of laminated wooden braces for connecting the lateral portions of the said plane to each of the bottom rails, and splice-joints in said rails and also in the frame of the main plane for rendering said parts sectional.



2. In combination, an elongated open frame comprising top and bottom rails built-up of laminated wood, and a series of like wooden posts for connecting the middle portions of said rails, a rigid main plane supported by the top rails of the frame, a pair of braces for connecting the lateral portions of the plane to the bottom rails of the frame, means for controlling the head of the frame, and a plurality of splice-joints for rendering the top and bottom rails and also the main plane sectional for storing and shipping.

3. In combination, an elongated frame comprising top and bottom rails, a series of posts for connecting the corresponding top and bottom rails, cross braces for connecting the top, and also, the bottom rails, a main plane mounted upon the top rails of the frame, an elevator plane pivoted to the head of the frame, a pair of tiltable tail planes, all of said planes being normally disposed and held substantially in a common horizontal position, means for manually operating the elevator plane, and means for releasing said tail planes for permitting the automatic tilting thereof at the end of each flight.

4. In combination, an elongated frame, a single main plane rigidly mounted upon the frame midway between the head and tail thereof, an elevator plane pivoted to the head of the frame, a pair of oppositely disposed tilting planes mounted on the tail of the frame, all of said planes being normally disposed in a substantially common horizontal plane, means for rocking said elevator plane, means for holding said tilting planes in horizontal position while the machine is in flight, and means for releasing said tilting planes for allowing the tail of the frame to approach the ground in advance of the head.

5. A flying machine, comprising an elongated frame, consisting of parallel top and bottom sections, front and rear wheels for supporting the frame on the ground, a main plane mounted transversely upon the top sections of the frame substantially midway in the length of said sections, an elevator plane pivotally disposed at the head of the machine at the juncture of the top and bottom sections, means for operating said elevator plane, a pair of tilting tail planes capable of being rigidly held in horizontal position upon the top sections of the frame while the machine is in flight, and adapted to be tilted by air pressure when released as the machine approaches the ground for allowing the rear wheels to engage the earth in advance of the front wheel, and a motor supported by the bottom sections of the frame for propelling the machine.

[Claims 6 to 9 not printed in the Gazette.]

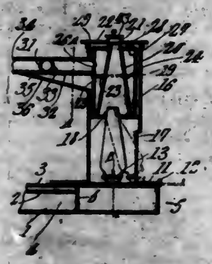
1,020,719. REFRIGERATING-COVER FOR MILK-CANS. SAMUEL SHAPIRO, Philadelphia, Pa. Filed July 3, 1911. Serial No. 637,802. (Cl. 31—82.)

1. A cover of the character described, comprising inner and outer walls parallel with each other, the inner wall shorter than the outer wall, a plate connecting the upper edge of the inner wall, a cylindrical extension on said plate adapted to project into and snugly fit the neck of a can, an inclined bottom connecting the lower edges of the inner and the outer walls, a top plate connecting the upper edge of the outer wall and having an opening therein, and a cover normally closing said opening, substantially as described.



2. A cover of the character described, comprising inner and outer walls parallel with each other, the inner wall shorter than the outer wall, a plate connecting the upper edge of the inner wall, a cylindrical extension on said plate adapted to project into the neck of the can, an inclined bottom connecting the lower edges of the inner and the outer walls, a top plate connecting the upper edges of the outer wall and having an opening therein, a cover normally closing said opening, said cover of a diameter approximately the same as the diameter of the milk can, and said inner wall constituting a chamber of greater diameter than the diameter of an ordinary milk can neck, whereby a refrigerating compartment is formed around said neck, substantially as described.

1,020,720. INCUBATOR. WALTER ERNEST SMITH, Clay Center, Kans. Filed Nov. 15, 1910. Serial No. 592,528. (Cl. 267—23.)



1. A heater for incubators and the like including an oil reservoir, a trough therein and communicating therewith, a boiler fixedly supported above the reservoir, and a burner slidable longitudinally of the trough and into and out of position below the boiler, the wick of this burner being adapted to extend constantly into the trough.

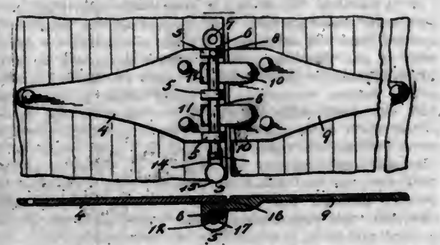
2. In a heater, a reservoir having an elongated wick-receiving trough communicating therewith, a boiler supported thereabove, a longitudinally movable closure upon the trough, and a burner carried by the closure and slidable therewith into or out of position below the boiler, the wick being movable longitudinally of the trough and constantly at the same depth during such movement of the closure.

3. A heater including a fuel reservoir having a wick-receiving trough opening thereinto, a boiler supported above the reservoir, a trough closure, a burner thereon, said closure being slidable to move the burner into or out of position under the boiler, a chimney movably connected to the burner, and means upon the boiler and cooperating with the chimney for tilting said chimney to expose the burner when said burner is moved from under the boiler.

4. The combination with a fuel reservoir, a housing upstanding therefrom, and a boiler within the housing, said housing having an opening, of a trough within and communicating with the reservoir, a closure movably mounted above the trough, a burner thereon, the wick of said burner being extended into the trough, said closure being slidable to bring the burner through the opening in the housing, a chimney movably connected to the burner, and means coöperating therewith for tilting the chimney and exposing the burner when slid outwardly through the opening in the housing.

5. In a heater, an oil reservoir having an elongated opening, a boiler supported above said reservoir, a burner movable longitudinally of the opening and into or out of position below the boiler, the wick of the burner being movable with the burner and in the reservoir and constantly at the same depth during such movement.

1,020,721. LOCK FOR CAR-DOORS. FRANK SNYDER, Council Bluffs, Iowa. Filed Nov. 9, 1911. Serial No. 659,315. (Cl. 70—102.)



In a sliding door lock, a plate, having apertured ears formed thereon, a bolt adapted to slide in the apertures of said ears and beveled surfaces between the ears and adjacent to the edge of the plate; a plate having shouldered lugs formed thereon said lugs adapted to lie between said ears in frictional engagement with said camming surfaces and engage said bolt.

1,020,722. BUNDLE-CARRIER. THOMAS E. SOMERVILLE, Glenellyn, Ill. Filed May 8, 1911. Serial No. 625,685. (Cl. 224—57.)



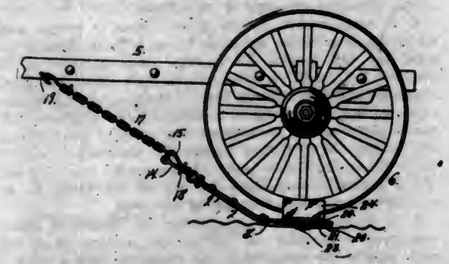
1. A bundle carrier comprising an elongated rounded handle consisting of separable, recessed elongated handle members dividing said handle longitudinally into two parts, and carrying arms having hooked ends, there being a pair of carrying arms for each handle member, each carrying arm being pivotally connected at the end of its associated handle member and being adapted to be swung into the recess therein, and means for removably locking said handle members together.

2. A bundle carrier comprising an elongated tubular handle consisting of separable, elongated handle members dividing said handle longitudinally into two parts, each handle member having end walls and a top wall, and the ends of said handle member and its top wall being provided with slots, a pair of carrying arms having hooked ends for each handle member, pivoted to swing at the ends of each handle member in the plane of said slots, slotted bearing members secured in the ends of said handle members to which said carrying arms are pivotally connected, and means for removably locking said handle members together with the top walls in engagement.

3. A bundle carrier comprising an elongated tubular handle consisting of elongated handle members dividing said handle longitudinally into two parts, each handle member having end walls and a top wall, and the ends of said handle member and its top wall being provided with slots, a pair of carrying arms having hooked ends for each handle member, pivoted to swing at the ends of each handle member in the plane of said slots, one of said carrying arms having a projection provided with a knife edge, slotted bearing members secured in the ends of said handle members to which said carrying arms are pivotally connected, one of said bearing members having a cutting edge adapted to coact with the knife edge on said carrying arm, and means for removably locking said handle members together with the top walls in engagement.

4. A bundle carrier comprising an elongated half-round recessed handle member and a pair of carrying arms having hooked ends, said handle member having end walls and a top wall, and the ends of said handle member and its top wall being provided with slots, each of said carrying arms being pivoted to swing at the ends of said handle member in the plane of said slots, slotted bearing members secured in the ends of said handle member to which said carrying arms are pivotally connected, and one of said bearing members having a cutting edge adapted to coact with the carrying arm pivoted thereto for cutting string and the like.

1,020,723. PIVOTED SUPPORT FOR VEHICLE-WHEELS. JOHN B. SPURR, Denver, Colo. Filed Dec. 27, 1910. Serial No. 599,441. (Cl. 21—8.)



1. The combination with a vehicle, of a plate composed of a horizontally disposed member and an upwardly inclined forward extension, suitable means for connecting the forward extremity of the said plate with the framework of the vehicle, a base plate below the first named plate, and a third plate above the first named plate and pivotally connected with the two lower plates, the third plate having upwardly projecting side parts adapted to engage the rim of a rear wheel of the vehicle, for the purpose set forth.

2. The combination with a vehicle, of a plate having a horizontally disposed member and a forward extension inclined upwardly, a flexible device connected at one extremity with the vehicle frame, a pivoted hook connecting the forward extremity of the said plate with the said chain, means for holding the pivoted hook in interlocking relation with the plate and the chain, a base plate below the first named plate, and a member pivotally connected with the horizontal member of the said plate and with the base plate and adapted to turn with the rear wheel of the vehicle on an axis passing through the vertical center of the wheel, substantially as described.

3. A device of the class described, comprising a base plate, a top plate, and an intermediate plate, the intermediate plate and the top plate being pivotally connected with the bottom plate, and a suitable connection between the intermediate plate and the frame-work of the vehicle, the top plate being adapted to be engaged by one of the wheels of the vehicle, for the purpose set forth.

1,020,724. THERAPEUTIC DEVICE FOR THE TREATMENT OF THE EYES OR EARS. ANNIE W. STEPHENS, New York, N. Y. Filed Dec. 24, 1910, Serial No. 599,114. Renewed Dec. 4, 1911. Serial No. 663,835. (Cl. 128—11.)



1. A therapeutic device for the treatment of the eyes or ears, comprising a foundation of suitable material, means for connecting and holding the same to the head, a circular wall upon one surface of said foundation forming a cup-shaped part and a tubular part surrounding the cup-shaped part and also on the same surface of the said foundation.

2. A therapeutic device for the treatment of the eyes or ears, comprising a foundation of suitable material, means for connecting and holding the same to the head, a circular wall upon one surface of said foundation forming a cup-shaped part and a tubular part surrounding the cup-shaped part and also on the same surface of the said foundation, and a filling for the cup-shaped part of suitable material adapted to absorb or hold the treating material in suspension.

3. A therapeutic device for the treatment of the eyes or ears, comprising a foundation of suitable flexible material, a circular wall or cup-shaped part also of flexible material formed integral therewith and upon one surface thereof and a tubular part also of flexible material surrounding the cup-shaped part and formed integral therewith and with the foundation and means for holding said parts in position upon the head.

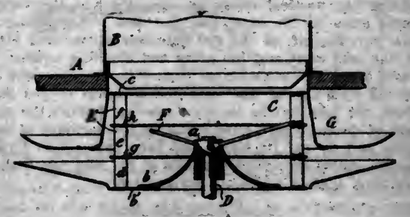
4. A therapeutic device for the treatment of the eyes or ears, comprising a foundation of suitable flexible material, a circular wall or cup-shaped part also of flexible material formed integral therewith and upon one surface thereof and a tubular part also of flexible material surrounding the cup-shaped part and formed integral therewith and with the foundation, means for holding said parts in position upon the head, and the edge or rim of the cup-shaped part thickened or enlarged and of less diameter than the base of the cup-shaped part, so as to hold therein a material to be moistened.

5. A therapeutic device for the treatment of the eyes or ears, comprising a foundation of suitable flexible material, two spaced apart cup-shaped parts on one surface thereof, two tubular parts each surrounding a cup-shaped part and means connected to the foundation of suitable material for securing the same in position upon the head over the eyes.

[Claim 6 not printed in the Gazette.]

1,020,725. CENTRIFUGAL FAN. FREDERICK R. STILL, Detroit, Mich., assignor to American Blower Company, Green Island, N. Y., a Corporation of New York. Filed Jan. 14, 1910. Serial No. 537,987. (Cl. 230—11.)

1. A centrifugal fan having a hub or disk and numerous elongated blades arranged in drum form to inclose within them a relatively large intake chamber, said blades attached at one end to said disk, and a ring to which their opposite ends are attached, said blades subdivided into sections with intervening rings to which they are fastened, and stays connecting said hub to the inner portion of an intervening ring, said stays having their outer ends entering the spaces between successive blades and riveted to the ring.



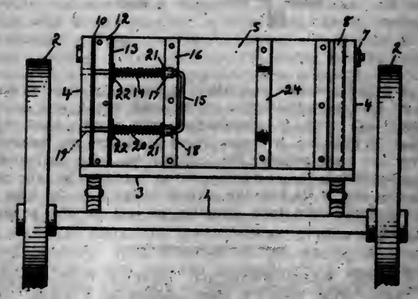
2. In a centrifugal fan of the multi-blade drum type wherein the blades are divided into sections with an intervening ring, the blades having ears riveted to said ring, the combination therewith of stays for resisting centrifugal stress, having their outer ends entering the spaces between adjacent blades, overlying the ears of a blade, having holes coinciding therewith, and rivets passing through said holes for fastening both the blade and stay.

3. In a centrifugal fan of the multi-blade drum type wherein the blades are curved forwardly and are divided into sections with an intervening ring, the combination therewith of stays for resisting centrifugal stress, having their outer ends flattened and entering the spaces between adjacent blades, and curved to approximately conform to such spaces, and rivets fastening said flattened ends to said ring.

4. In a centrifugal fan of the multi-blade drum type wherein the blades are curved forwardly and are fastened to a ring at one end and a ring or disk at the other, the combination therewith of stays for resisting centrifugal stress, having their outer ends flattened and entering the spaces between adjacent blades, and rivets fastening such flattened ends to the ring.

5. In a centrifugal fan of the multi-blade drum type wherein the blades are curved forwardly and are fastened to a ring at one end and a ring or disk at the other, the blades having ears riveted to said ring, the combination therewith of stays for resisting centrifugal stress, having their outer ends entering the spaces between adjacent blades, overlying the ears of a blade, having holes coinciding therewith, and rivets passing through said holes for fastening both the blade and stay.

1,020,726. END-GATE. RILEY M. STURDEVANT, Falls City, Nebr. Filed Dec. 2, 1910. Serial No. 595,297. (Cl. 21—21.)

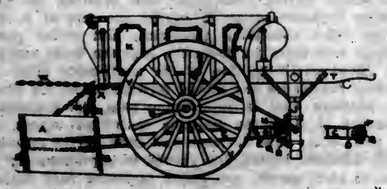


1. The end gate herein shown and described, consisting in combination with the wagon body, having the cleats to receive one end of the gate and the angle plate to receive the other end of the gate, said angle plate having open-

ings, of the end gate fitting between the cleats and against the angle plate, the guide strips secured to the end gate, the yoke having its closed end fitting in one of the strips and its pair of arms passing through the other strip and adapted to enter the openings of the angle plate to secure the end gate, a handle formed on the yoke, springs around the arms of the yoke, and a handle on the end gate.

2. In an end gate, the combination with the wagon body having the vertical cleats on one side and the vertical angle plate on the other side provided with openings in one wall thereof, of the end gate having one end fitting in the said cleat and the other and abutting against the angle plate, the guide strips secured to the end gate and having openings in line with the openings of the angle plate, the yoke having its arms passing through the openings of the guide strips and engaging the openings of angle plate and having its closed end bent outward to form a handle, coiled springs on the arms of the yoke and washers and pins against which the springs bear.

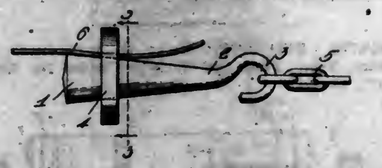
1,020,727. SNOW-PLOW. SAMUEL SUTCLIFFE, Mytholmroyd, England. Filed Dec. 14, 1910. Serial No. 597,338. (Cl. 37—7.)



1. A snow plow comprising a plow share, a frame supporting the same, a swiveling stud connected to the frame, a cross bar connected to the stud and traction means connected to the cross bar, a bar supporting the frame and chains extending between the bar and the plow.

2. A snow plow comprising a plow share, a frame supporting the same, a swiveling stud connected to the frame, a cross bar connected to the stud and traction means connected to the cross bar, a bar supporting the frame and chains extending between the bar and the plow share.

1,020,728. GRIP FOR WIRE-STRETCHERS. ROLLIE JAMES TALBOT, Whiteclay, Nebr. Filed Oct. 22, 1910. Serial No. 588,567. (Cl. 39—119.)



A grip for a wire comprising a gradually tapering cone body member terminating at its smaller end into an integral eye hook, in combination with a split steel rigid ring rectangular in cross section adapted to telescope over the body member for gripping the wire against the approximately larger portion of the body member, the ring having one of its annular corners biting into the wire to prevent the wire from slipping, as and for the purpose specified.

1,020,729. BALL-BEARING. GUSTAVO VINCON, Turin, Italy. Filed Feb. 16, 1909. Serial No. 478,145. (Cl. 64—69.)

As an article of manufacture, a ball bearing comprising bearing rings having grooves forming a raceway, balls in said raceway, and means disposed between said bearings for maintaining seperation of said balls and serving as a lubricant container, said means comprising two U-shaped channeled rings having registering notches forming pockets to contain said balls, the channels intermediate



said balls forming lubricant containing recesses opening into said pockets, said rings being in contact with said balls at the sides of said pockets, and fastenings for connecting and holding said rings together.

1,020,730. SHAFT-RETAINING MEANS. JOHN H. VINTON, Jamaica Plain, Mass., assignor to Trimont Manufacturing Company, Boston, Mass., a Corporation of Maine. Filed June 30, 1911. Serial No. 636,222. (Cl. 64—17.)

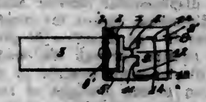


1. In a device of the character described a frame having a bearing therein and a groove in the face of said frame adjacent said bearing, a pivot shaft in said bearing, a pin extending from said shaft and fitting said groove, and a retaining plate pivoted to said frame on an axis parallel to the said shaft, said plate having an aperture at its free end to fit over the shaft and upon said pin to retain the shaft against rotary and longitudinal movements.

2. In a device of the character described a frame having a bearing therein and a groove in the face of said frame adjacent said bearing, a pivot shaft in said bearing a pin extending from said shaft and fitting said groove, and a spring retaining plate pivoted to said frame on an axis parallel to the said shaft, said plate having an aperture at its free end to fit over the shaft and upon said pin to retain the shaft against rotary and longitudinal movements.

3. In a device of the character described, a frame, a pivot shaft removably mounted therein and projecting at one end beyond the frame, a plate pivotally mounted on the face of the frame and apertured to embrace the projecting end of the shaft, the frame being provided with a stop independent of the shaft, and means on the projecting end of the shaft adjacent the frame to engage the stop and prevent rotation of the shaft, said means also cooperating with the plate at the outside of the frame when the apertured portion of said plate embraces the shaft end, to prevent endwise movement of the shaft in the frame.

1,020,731. BUCKLE. CHARLES A. WHEELAN, Buena Vista, Colo. Filed Feb. 2, 1911. Serial No. 606,141. (Cl. 24—168.)



A buckle comprising a body plate provided with a transverse slot and a transverse end bar parallel with the slot, and a strap-engaging plate resting on the body plate and having its free edge adjacent and parallel with the transverse end bar leaving a space to receive a strap, the opposite end of the strap-engaging plate being provided with tongues passing through the slot and bent to lie parallel with the bottom of the body plate, and alternating tongues projecting across and beyond the slot and lying adjacent the top of the body plate, the last named tongues being at a slight angle to the top of the body plate and serving to limit the movement of the plate and thus limit the width of the strap-receiving opening.

1,020,732. REVERSIBLE LAMP-BASE. THEODORE A. WILLARD, Cleveland, Ohio. Filed June 6, 1910. Serial No. 565,886. (Cl. 173—328.)



1. In a reversible lamp base, in combination a shell, an insulating block therein, contact plungers arranged in pairs therein, the plungers in each pair being arranged parallel and side by side, and projecting from opposite sides of said support, means for electrically connecting said plungers, and actuating springs therefor arranged within said support, and means for attaching a lamp to one end of the base, and an attachment plug to the other end.

2. In a reversible lamp base, in combination a shell, supporting and insulating block therein, sleeves therein in pairs, each pair electrically connected, a pair of plungers in each pair of sleeves one plunger in each pair projecting at one end of said supporting block and the other plunger projecting through the other end of said supporting block, operating springs for said plungers in said sleeves, a lamp electrically connected with one set of plungers, and an attachment plug connected with the other set of plungers.

3. In a reversible lamp base, an insulating block therein, and plungers arranged therein, in pairs, one plunger in each pair projecting beyond one end of said block and the other plunger projecting beyond the other end thereof, an inclosing sleeve for each plunger, each pair of sleeves electrically connected, and a spring for each plunger.

1,020,733. LEVEL. VIRGIL A. WILSON, East Point, Ga. Filed Apr. 19, 1911. Serial No. 622,089. (Cl. 73—71.)

1. A level, comprising a stock having a central opening therethrough, plates provided with sight openings and secured upon each side of said central opening; a depending pointer formed integral with the plates, and a weighted dial rotatably swung upon said plates and adapted to be observed through said sight openings in the plates.

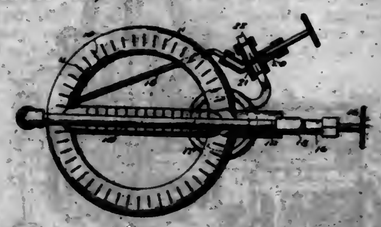
2. A level, comprising a stock provided with a central opening therethrough, a rotating weighted dial mounted in said opening, plates secured upon the sides of the opening and having sight openings therein whereby said weighted dial may be observed, and a pointer depending from said plates and operating in conjunction with said dial.



3. A level, comprising a stock provided with a central opening therethrough, plates having sight openings secured upon each side of the opening, a pin in said plates, a weighted dial mounted on said pin, and an indicator formed on the plates and operating in conjunction with the dial.

4. A level, comprising a stock having a central opening therethrough, plates having sight openings secured upon each side of said central opening, depending indicators formed integral therewith, a pin secured between said plates, twin disks secured to said pin, a weight secured to said disks and pin, and dials secured upon said disks, said dials having indications thereon adapted to be observed through said sight openings in said plates.

1,020,734. OIL-BURNER. WILLIAM THOMAS WOOD, Nashville, Tenn. Filed May 3, 1911. Serial No. 624,799. (Cl. 158—29.)



1. The combination in a burner, of a casing, a mixing chamber communicating therewith, a vaporizing coil beneath said chamber, a vaporizing tube extended over the burner casing, a feed tube connecting the vaporizing coil and vaporizing tube, an inlet pipe communicating with the vaporizing coil and the feed tube, an oil feed pipe communicating with the vaporizing tube and the inlet pipe, and a controlling means provided with transverse ports for regulating the passage of fluid to said oil feed pipe.

2. The combination in a burner, of a casing, a mixing chamber communicating therewith, a vaporizing coil beneath said mixing chamber, a vaporizing tube extending diametrically across the burner casing, a feed tube disposed vertically with reference to the mixing chamber and connecting said coil and vaporizing tube, a second tube located in parallel opposite relation to the vertical feed tube and connected therewith by the vaporizing tube, an oil feed pipe connected to said second tube, an inlet pipe communicating with the oil feed pipe, and means for controlling the passage of fluid to said oil feed pipe.

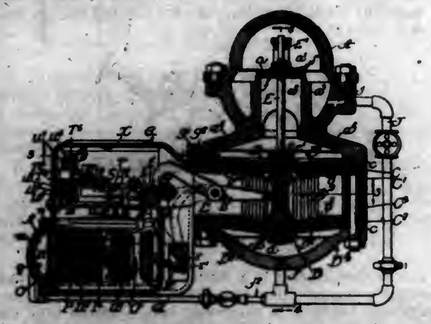
3. The combination in a burner, of a casing, a mixing chamber communicating therewith, a vaporizing coil beneath said mixing chamber, a vaporizing tube extending diametrically across the burner casing, a feed tube disposed vertically with reference to the mixing chamber and connecting said coil and vaporizing tube, means for controlling the admission of the vaporized fluid from the vaporizing coil to the feed tube, a second tube located in parallel opposite relation to the vertical feed tube and connected therewith by the vaporizer tube, an oil feed pipe connected to said second tube, an inlet pipe communicating with the oil feed pipe and the vaporizing coil, and

means for controlling the passage of fluid to said oil feed pipe.

4. The combination in a burner, of a casing, a mixing chamber communicating therewith, a vaporizing coil beneath said mixing chamber, means for supplying fuel to said coil, a vaporizing tube extending across the burner casing, a feed tube disposed vertically with reference to the mixing chamber and connecting said coil and vaporizing tube, a second tube located in parallel opposite relation to the vertical feed tube and connected therewith by the vaporizing tube, an oil feed pipe connected to said second tube, an inlet pipe communicating with the oil feed pipe and the vaporizing coil, and means for controlling the passage of fluid to said oil feed pipe.

5. The combination of a casing, a mixing chamber communicating therewith, a vaporizing coil beneath said mixing chamber, a vaporizing tube extending across the burner casing, a feed tube disposed vertically with reference to the mixing chamber, a second tube located in parallel opposite relation to the vertical feed tube and connected therewith by the vaporizing tube, an oil feed pipe connected to said second tube, an inlet pipe communicating with the oil feed pipe and the vaporizing coil, and a rotatable valve mounted at the juncture of the oil feed pipe and the inlet pipe and provided with a plurality of transverse ports for regulating the passage of fluid through said oil feed pipe.

1,020,785. INTEGRATING FLUID-METER. ARTHUR G. ALEXANDER, Chicago, Ill. Filed Aug. 14, 1909. Serial No. 512,825. (Cl. 73—167.)



1. In an integrating fluid meter, in combination with a fluid conduit, a meter member, means adapted for moving said meter member through a predetermined path at regular predetermined time intervals, means controlled by the density of the fluid passing through the conduit acting to determine the length of the path of said meter member, a counter-operating member, and means controlled by said meter member adapted for moving said counter-operating member proportionately to the movement of said meter member.

2. In an integrating fluid meter, in combination with a fluid conduit, a meter member, means adapted for moving said meter member through a predetermined path at regular predetermined time intervals, mechanism intermediate said meter member and the conduit for determining the length of travel of said meter member at each time interval in accordance with the density of the fluid passing through the conduit, a counter-operating member, and means actuated by said meter member for moving said counter-operating member proportionately to the movement of said meter member.

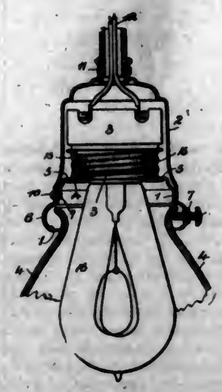
3. In an integrating fluid meter, in combination with a fluid conduit, a meter member, means for causing said meter member to traverse a predetermined path at regular time intervals, means controlled by the density of the fluid passing through the conduit acting to determine the length of said path, a counter, and means controlled by said meter member for operating said counter to register units in proportion to the lineal units in the length of path of successive movements of said meter member.

4. In an integrating fluid meter, in combination with a fluid conduit, a displacement member adapted to be displaced in two directions, means for displacing said displacement member in one direction in proportion to the volume of fluid passing through the conduit, means for displacing said displacement member in the other direction in proportion to the pressure of the fluid passing through the conduit, means for automatically measuring the resultant displacement of said displacement member at predetermined time intervals, and a register mechanism operated by said measuring means to register units in proportion to the units measured by said measuring means.

5. In an integrating fluid meter, in combination with a fluid conduit, a displacement member having a two-fold displacement, means for controlling one part of said displacement by the volume and means for controlling the other by the pressure of the fluid passing through the conduit, a meter member for measuring said two-fold displacement of said displacement member at predetermined time intervals, means for actuating said meter member, a register mechanism, and means operated by said meter member for operating said register mechanism, said register mechanism registering units in proportion to the units measured by said meter member.

[Claims 6 to 65 not printed in the Gazette.]

1,020,736. COMBINED ELECTRIC SOCKET AND SHADE-HOLDER AND SOCKET-COVER. LAURITZ W. ANDERSEN, Waterbury, Conn., assignor to The Plume & Atwood Manufacturing Company, Waterbury, Conn., a Corporation of Connecticut. Filed Oct. 14, 1911. Serial No. 654,655. (Cl. 240—114.)



1. In combination with an electric lamp receptacle, a holder provided at one end with an inturned flange and having its other end formed as a shade holder, adapted to receive and hold a shade, a ring surrounding a portion of the receptacle and having an annular out-turned flange contacting with the inner surface of the said inturned flange on the holder, a second ring surrounding the first named ring, means for holding the said rings together, a cover for the receptacle and means for securing the cover to the holder.

2. In combination with an electric lamp receptacle, a holder provided at one end with an inturned flange and having its other end formed as a shade holder, a screw-threaded ring for attachment to the receptacle, said screw-threaded ring having an annular out-turned flange contacting with the inner surface of the said inturned flange on the holder, a screw-threaded collar adapted to screw over the outer surface of said screw-threaded ring and clamp it to the holder, a cover for the receptacle and means for securing the cover to the holder.

1,020,737. FRICTION-CLUTCH HAVING REMOVABLE WEARING-SURFACES. HERBERT AUSTIN, Barnt Green, near Birmingham, England. Filed June 1, 1909. Serial No. 499,430. (Cl. 192—8.)



1. In a friction clutch of the conical type, a clutch member, a second clutch member movable axially in relation to said first named clutch member and adapted when moved in one direction to make frictional contact with such other member and when moved in the opposite direction to release such other member, and a plurality of devices located between said clutch members and adapted to constitute a friction or wearing surface, and securing means adapted to removably secure said devices to one of the clutch members.

2. In a friction clutch of the conical type, a clutch member, a second clutch member movable axially in relation to said first named clutch member and adapted when moved in one direction to make frictional contact with such other member and when moved in the opposite direction to release such other member, a plurality of devices located between said clutch members and adapted to constitute a friction or wearing surface, and securing means adapted to removably secure said devices to one of the clutch members, said devices each comprising a plate of uniform thickness throughout provided with an outer facing of comparatively soft wearing material.

3. In a friction clutch of the conical type, a clutch member, a second clutch member movable axially in relation to said first named clutch member and adapted when moved in one direction to make frictional contact with such other member and when moved in the opposite direction to release such other member, a plurality of devices located between said clutch members and adapted to constitute a friction or wearing surface, and securing means adapted to removably secure said devices to one of the clutch members, said devices comprising plates each provided with an outer facing of comparatively soft material, and said clutch member to which the plates are secured having transverse guides along which said plates may slide.

4. In a friction clutch of the conical type, the combination with an outer clutch member, and an inner clutch member, one of said members being provided with transverse grooves; of a plurality of devices each comprising a plate provided with an outer surface of comparatively soft material adapted to constitute a friction or wearing surface, the ends of such plates being adapted to slide into the said transverse grooves of said clutch member.

5. In a friction clutch of the conical type, the combination with an outer clutch member, and an inner clutch member, one of said members being provided with transverse grooves; of a plurality of devices each comprising a plate provided with an outer surface of comparatively soft material adapted to constitute a friction or wearing surface, said plate being adapted to spring outward at its middle portion; and means for securing each of said plates to a clutch member.

[Claims 6 to 8 not printed in the Gazette.]

1,020,738. LOCKING-WASHER. CHARLES BAUER, London, England. Filed Jan. 22, 1908. Serial No. 412,141. (Cl. 151—38.)



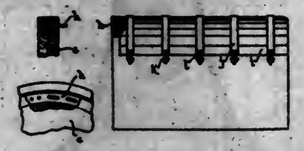
1. Means to prevent loosening of nuts by vibration, comprising a non-metallic washer-like member of fibrous material to some extent elastic and having a large co-efficient of friction with metal and having exposed opposite faces adapted to engage directly the inner face of the nut and the outer face of the bolt-supporting object, respectively, and means of less width than the thickness of the washer-like member to engage the periphery of and prevent lateral derangement of said member.

2. A centrally apertured locking washer of non-metallic material to some extent elastic and having a large co-efficient of friction when contacting with metal and having its opposite faces completely exposed, a metallic ring tightly fitting and permanently secured in said aperture, a separate non-extensible binder tightly embracing the periphery of the washer, and a nut having a depression in its seating face to engage and contact directly with the exposed adjacent face of the washer.

3. Means to prevent loosening of nuts by vibration, comprising a centrally apertured wooden washer having its opposite faces completely exposed, a metallic ring tightly fitting and permanently secured in said aperture, and a separate non-extensible binder tightly embracing and permanently attached to the periphery of the washer, the completely exposed opposite faces of the washer being interposed between and directly engaging the inner face of the nut and the outer face of the bolt-supporting object.

4. A locking washer of relatively soft and moderately elastic, non-metallic fibrous material having a large co-efficient of friction with metal, a non-extensible binder tightly embracing and permanently attached to the periphery of the washer, leaving its faces completely exposed, and a nut to seat on the washer and having a depression in its seating or contacting face, to engage directly the exposed face of the washer.

1,020,739. RECEPTACLE FOR WINE AND SIMILAR LIQUIDS. EMANUEL BERGER, Tapolcza, Austria-Hungary, assignor to The Firm of Jos. Frisch & Sohn, Tapolcza, Austria-Hungary. Filed Feb. 7, 1910. Serial No. 542,649. (Cl. 72—13.)



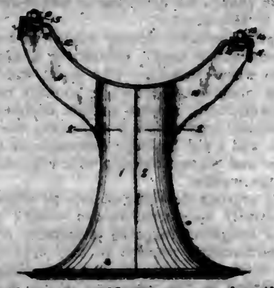
An improved cask or receptacle for wine and similar liquids, comprising a lower part the side and rear walls of which are made of reinforced cement, the front wall of said lower part made of wood and having a bunghole, and the upper part made of wooden staves, open frames of U-iron partially embedded in the cement walls at the front ends thereof with the open portions of the frames facing the interior of the cask and engaging the wooden walls and serving as guides therefor, hoops of band iron which maintain the staves of the upper part in position, the lower ends of said hoops bent at right angles to the body of the staves, angle irons embedded in the side walls and bolts for fixing the ends of the hoops to said angle irons, substantially as described and shown and for the purpose set forth.

1,020,740. PEDESTAL. EDWARD G. BUDD, Philadelphia, Pa., assignor, by mesne assignments, to Hale and Kilburn Company, Philadelphia, Pa., a Corporation of Delaware. Filed July 18, 1906. Serial No. 326,719. (Cl. 155—2.)

1. The combination of a pedestal having outwardly-extending flanged portions at its upper end, a rail bearing on each of said portions, and means securing each of said rails to the flanged portion on which it bears comprising a bolt extending through an opening in said rail and a spacer engaged by said bolt and having the portion thereof on one side of the bolt engaging the flange of the pedestal, substantially as set forth.

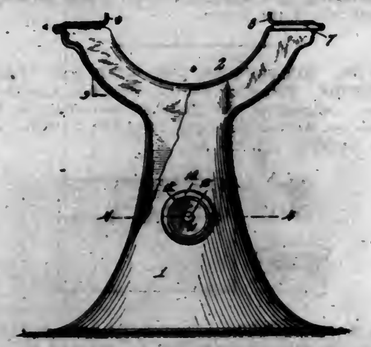
2. The combination of a pedestal having outwardly-

extending flanged portions at its upper end, a rail bearing on each of said portions, and means securing each of said rails to the flanged portion on which it bears comprising a spacer and a bolt extending through openings in said



rail and said spacer, said spacer engaging the flange on said outwardly-extending portion at one edge of the spacer and the rail at the opposite edge, substantially as set forth.

1,020,741. PEDESTAL. EDWARD G. BUDD, Philadelphia, Pa., assignor, by mesne assignments, to Hale and Kilburn Company, Philadelphia, Pa., a Corporation of Delaware. Filed Oct. 24, 1906. Serial No. 340,333. (Cl. 155—2.)



1. A pedestal having a base portion of oval cross-section and flaring at its lower end and arms of U-shaped cross-section extending in opposite directions from the upper end of said base portion, said pedestal consisting of two sheet-metal plates pressed into form and secured together with their edges abutting and each of said plates constituting substantially one-half of said base portion and of each of said arms, and strips of metal within said pedestal secured to said plates and overlying the joint between them, substantially as described.

2. In a pedestal, a yoke having flanges at the ends of the arms thereof, and sheet-metal plates having integral flanges coacting with those on said yoke to secure the plates on the ends of said arms and openings therethrough to receive devices for securing an overlying structure to said plates, substantially as described.

3. In a pedestal, a yoke having arms of U-shaped cross-section and flanges at the edges thereof, and sheet-metal plates having integral flanges extending under the flanges on said arms and openings therethrough to receive devices for securing an overlying structure to said plates, substantially as described.

4. A pedestal formed of sheet-metal and having a base portion, arms of U-shaped cross-section extending in opposite directions from the upper end thereof, outwardly turned flanges at the sides and ends of said arms, and plates having integral flanges turned under the flanges on said arms to secure the plates on the ends of the arms, substantially as described.

1,020,742. METALLIC DOOR. EDWARD G. BUDD, Philadelphia, Pa., assignor, by mesne assignments, to Hale and Kilburn Company, Philadelphia, Pa., a Corporation of Delaware. Filed Aug. 10, 1910. Serial No. 576,537. (Cl. 189—46.)



1. The combination of a door which is hollow adjacent to one edge thereof and which has an opening in said edge, a lock-part movable through said opening and movable within the door away from said opening, a second lock-part movable through said opening and means for holding said lock parts in position within the door with said second lock-part closing the said opening through the edge of the door, substantially as set forth.

2. The combination of a door consisting of hollow sheet-metal rails and panels secured thereto, one of said rails having an opening in the edge thereof, a key-lock movable through said opening and movable within the rail in the direction of the length of the rail and away from said opening, a latch-lock movable through said opening and means for securing said locks in position within the rail with said latch-lock closing the said opening in the edge of the rail, substantially as set forth.

3. The combination of a door having a hollow sheet-metal rail at one edge thereof and an opening in the edge of the rail, a frame secured within the rail adjacent to said opening, a lock movable through said opening and movable within the rail and frame in the direction of the length of the rail and away from said opening, a second lock movable through said opening and means for securing said locks in position within said frame with said second lock closing the opening in the edge of the door, said first lock, when released by said securing means, being capable of movement into contact with the second lock, substantially as set forth.

1,020,743. ASH-DISCHARGER. WILLIAM BURLINGHAM, Elizabeth City county, and FREDERICK P. PALEN, Newport News, Va. Filed May 16, 1911. Serial No. 627,636. (Cl. 214—186.)



1. In an ash discharger of the hydraulic type, the combination of an ash pipe, the discharge end of which is externally enlarged to produce a tapering form, a spheroidal shaped casing inclosing the enlarged end of the ash pipe, a discharge pipe leading from the casing and ash pipe, thereby forming an annular passage and producing a converging hydraulic jet after passing the enlarged portion of said ash pipe, and means in the ash pipe for controlling the feed of the ashes to the discharge pipe, said discharge

pipe being tapered inward toward its center and outward toward its discharge end.

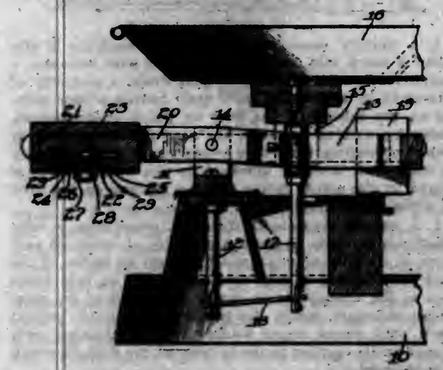
2. In an ash discharger of the hydraulic type, an ash pipe the discharge end of which is externally enlarged to produce a tapering form, a spheroidal shape casing inclosing the enlarged end of the ash pipe, thereby forming an annular passage for producing a converging hydraulic jet, and a discharge pipe leading from the casing, said discharge pipe being tapered inward toward its center and outward toward its discharge end.

3. In an ash discharger of the hydraulic type, an ash pipe the discharge end of which is externally enlarged to produce a tapering form, a spheroidal shape casing inclosing the enlarged end of the ash pipe, thereby forming an annular passage for producing a converging hydraulic jet, and a discharge pipe leading from the casing, said discharge pipe being tapered inward toward its center and outward toward its discharge end, and means in the ash pipe for controlling the feed of the ashes.

4. In combination with a vessel, an ash discharger mounted in said vessel and comprising a vertical ash pipe with a horizontally disposed nozzle, the exterior of which is enlarged to produce a tapering form, a spheroidal shape casing inclosing the enlarged end of the ash pipe, thereby forming an annular passage for producing converging hydraulic jet, and a discharge pipe leading from the casing, said discharge pipe being tapered inward toward its center and outward toward its discharge end, and means in the ash pipe for controlling the feed of the ashes and a hydraulic pump for producing a pressure for operating the hydraulic jet.

5. In combination with a vessel, an ash discharger mounted in said vessel and comprising a vertical ash pipe, the end of which is enlarged to form a tapering exterior, a spheroidal shape casing inclosing the enlarged end of the ash pipe, thereby forming an annular passage for producing a converging hydraulic jet, and a discharge pipe leading from the casing, said discharge pipe being tapered inward toward its center and outward toward its discharge end, and means in the ash pipe for controlling the feed of the ashes and a hydraulic pump for producing a pressure for operating the hydraulic jet.

1,020,744. WEIGHING-SCALE. JOSEPH E. COCHRAN, Chicago, Ill. Filed Oct. 22, 1906. Serial No. 339,902. (Cl. 73—56.)



1. In a scale, the combination of a pivoted beam, a counterbalancing weight for the beam, a supplemental weight housed within and protected by the first said weight, and means for supporting said supplemental weight for adjustment transversely with relation to the pivot of the beam.

2. In a scale, the combination of a pivoted beam, a counterbalancing weight for the beam, and a supplemental weight housed within the first said weight and adjustable with relation thereto for changing the center of gravity of the beam, said supplemental weight being adjustable with relation to the pivot of the beam in a transverse direction with relation to the pivot of the beam.

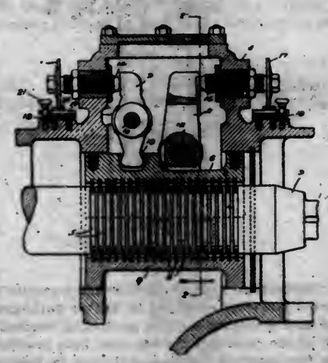
3. In a scale, the combination of a pivoted beam, a counterbalance weight for the beam, said weight being provided with a recess in the lower face thereof, and a supplemental weight adjustably seated in the recess, said supplemental weight being adjustable in a transverse direction with relation to the pivot of the beam and toward and away from the bottom of the recess.

4. In a scale, the combination of a pivoted beam, a counterbalance weight for the beam, said weight being provided with a recess in its lower face, a supplemental weight in said recess, means for adjustably supporting the last said weight, said supplemental weight being adjustable transversely with relation to the pivot of the beam.

5. In a scale, the combination of a pivoted beam, a counterbalancing weight for the beam, said weight being provided with a recess in its lower face, a supplemental weight within the recess, means for supporting the supplemental weight for adjustment transversely with relation to the pivot of the beam, and means for retaining said weight in its adjusted position.

[Claims 6 to 11 not printed in the Gazette.]

1,020,745. THRUST-BLOCK. VICTOR A. DEANE, Wilkinsburg, Pa., assignor, by mesne assignments, to The Colonial Trust Company, trustee, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Aug. 8, 1910. Serial No. 576,043. (Cl. 64—25.)



1. In combination with a rotatable shaft, capable of longitudinal adjustment, two longitudinally movable adjusting blocks engaging said shaft, a lever engaging one of said blocks, means contacting with said lever for actuating said block, a second lever engaging the other block, and means contacting with said second lever for operating the second mentioned block, said means being located adjacent to said first mentioned means.

2. In combination with a rotatable shaft, capable of longitudinal adjustment, blocks engaging said shaft, a lever engaging one of said blocks, a screw contacting with said lever for actuating said block, a second lever engaging the other block and a second screw contacting with said second lever for actuating the second mentioned block, said screws being located on the same side of said shaft.

3. In combination with a rotatable shaft, capable of longitudinal adjustment, a casing around said shaft, adjusting blocks within said casing and engaging said shaft and movable longitudinally thereof, levers contacting with said blocks and projecting above said shaft, and means contacting with the upper end of said levers for actuating said blocks.

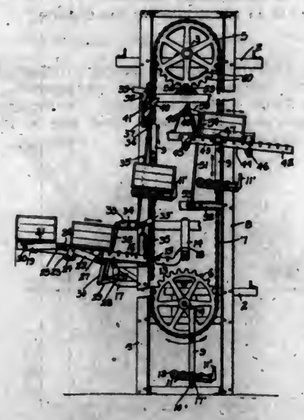
4. In combination with a rotatable shaft, capable of longitudinal adjustment, a casing around the shaft, adjusting blocks within said casing located above and below said shaft and movable longitudinally thereof, a lever

fulcrumed on said casing and engaging one of said blocks, a second lever fulcrumed on the same side of said shaft on said casing and engaging lugs provided on the other block, and means extending through said casing and contacting with said levers for moving said blocks longitudinally of said shaft.

5. In combination with a rotatable shaft, capable of longitudinal adjustment, a casing around the shaft, longitudinally movable adjusting blocks located within said casing above and below said shaft, a lever fulcrumed on said casing and engaging one of said blocks, a second lever fulcrumed on said casing bifurcated to straddle said first mentioned block and to engage the other block, and means contacting with said levers for moving said blocks longitudinally to adjust the position of said shaft.

[Claim 6 not printed in the Gazette.]

1,020,746. ELEVATOR. ALBERT S. DEHLER, Minneapolis, Minn., assignor to Mathews Gravity Carrier Company, St. Paul, Minn., a Corporation of Minnesota. Filed Apr. 10, 1909. Serial No. 489,102. (Cl. 193—8.)



1. The combination, with an elevator and a carrier therefor, of a gravity carrier arranged to deliver packages into the path of said elevating carrier, oscillating toothed bars in the path of the packages moving over said gravity carrier, means for normally holding said bars in position to engage the bottoms of the packages and check the movement of said packages, and means actuated by the movement of said carrier for tilting said toothed bars at a predetermined point in the movement of said carrier and allowing a package to move into the path of an elevating carrier.

2. The combination, with an elevator, including a belt, a carrier supported thereon, of a gravity carrier arranged to deliver packages into the path of said elevating carrier, toothed bars arranged to engage the bottom of an incoming package and arrest movement of the same, means pivotally connected with said toothed bars and including stops adapted to move into the path of the packages and hold them temporarily after passing said toothed bars, and means actuated by the movement of the elevator belt for withdrawing said toothed bars out of engagement with the package and moving said stops into the path of the package.

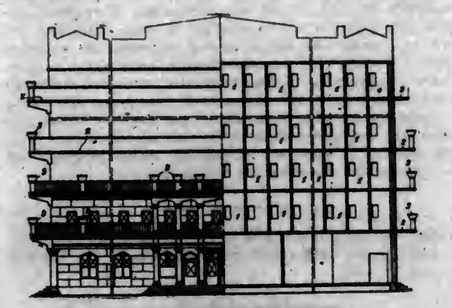
3. The combination, with an elevator, including a belt and a carrier supported thereby, of a gravity carrier arranged to deliver packages into the path of said belt, a device including toothed bars, and a yoke pivotally connected therewith and provided with stops normally below the level of the upper surface of said gravity carrier, the teeth of said bars normally projecting into position to engage the bottom of the incoming package to check movement of the same, and means actuated by the movement of said elevating carrier for tilting said bars and yoke to release the packages, substantially as described.

4. The combination, with an elevator, including a belt and a package carrier supported thereon, a gravity carrier arranged to deliver packages into the path of said elevating carrier, means for checking the movement of an incoming package, a weighted lever pivotally connected with said checking means, a locking device connected with said lever, and a latch arranged in the path of said elevating carrier and actuated by the movement thereof to trip said lock device.

5. The combination, with an elevator, including an elevating belt and a carrier therefor, of a gravity carrier arranged to deliver packages into the path of said elevating carrier, means engaging the bottoms of the packages for temporarily retarding the packages on said gravity carrier, means actuated by said elevating carrier during its initial movement after picking up a package from said gravity carrier for operating said retarding means to release the foremost package, and means actuated by the further movement of said elevating carrier for returning said retarding means to its normal arresting position, substantially as described.

[Claims 6 to 17 not printed in the Gazette.]

1,020,747. MAUSOLEUM CONSTRUCTION. VALENTINE DIETZ, Jr., Yonkers, and CHARLES F. DIETZ, New York, N. Y. Filed Oct. 13, 1911. Serial No. 654,527. (Cl. 72—7.)

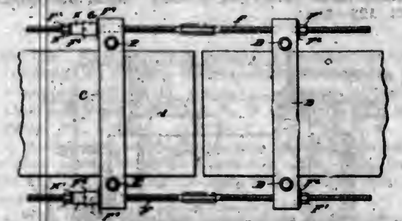


1. A unitary mausoleum structure, comprising a plurality of floors, said floors being provided with balconies, a plurality of vaults disposed on said floors, a plurality of catacombs in said vaults, each vault having a door opening on the balcony of the floor on which it is disposed, means for gaining access to the several floors, means on each floor leading from said access means to the balcony on such floor, whereby approach to the desired vault is gained by the access means and the balcony on the floor on which the desired vault is located.

2. A unitary mausoleum structure, comprising in combination a plurality of floors, a plurality of vaults on said floors, a plurality of catacombs for receiving bodies of the dead and disposed in said vaults, balconies on said floors open to the atmosphere on one or more sides of the mausoleum structure, means for gaining access to the several floors, said access means leading to the balconies, each of said vaults opening to the balcony on the floor on which it is disposed.

3. A unitary mausoleum structure, comprising in combination, a plurality of floors, a plurality of separate vaults on said floors, said vaults having doors, catacombs for receiving the remains of the dead, said catacombs being disposed in said vaults, means within the structure for gaining access to the floors, and a common approachway adjacent an outside wall of the structure on each of said floors leading from said access means to the doors of the vaults on such floor, and providing the sole means of passage from one of said vaults to another.

1,020,748. BELT-CLAMP. WILLIAM J. M. DOBSON, New York, N. Y. Filed May 4, 1911. Serial No. 625,053. (Cl. 67—128.)



In a device of the character set forth, a pair of clamps for engaging a belt, screws connecting said clamps, a cylindrical cup on each screw bearing against the adjacent clamp, a shell of smaller diameter coöperating with each cup to slide telescopically therein, nuts on said screws bearing against said shell, each shell having a scale readable relatively to the cup, means limiting the outward movement of the shell relatively to the cups, springs within said cups and shells tending normally to distend the same, and nuts on the screws bearing against the outer face of the other clamp.

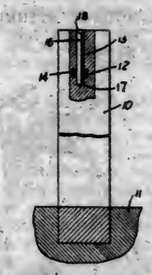
1,020,749. ROPE OR STRAP FASTENING DEVICE. ISAAC MONTGOMERY FISHER, Seattle, Wash. Filed Apr. 24, 1906. Serial No. 313,518. (Cl. 24—126.)



1. In a rope or strap fastening device, a fastener piece extended to form apertured projections to receive a link and having a hollow center part converging from said projections, a loose wedge piece conforming to the general shape of the hollow center part and sufficiently small to permit the rope or strap to be wedged between said loose wedge piece and the surface of the hollow center part when a pulling strain is exerted on the rope or strap, a retaining piece engaging said hollow center part and fitting therein so as to be prevented from lateral movement by the walls thereof and prevented from longitudinal movement by the link secured to said rope or strap fastener.

2. In a rope or strap fastener, a fastener piece having tapered inner walls, a wedge piece adapted to hold a rope or strap against the inner walls when a strain is applied on said rope or strap, said fastener piece being provided with apertured extensions, a pin engaging said apertures, a link engaging said pin and a retainer piece engaging the inner walls of said fastener piece and removable only by the removal of said pin and said link.

1,020,750. BLADE-MOUNTING. WARREN B. FLANDERS, Pittsburgh, Pa., assignor to The Westinghouse Machine Company, a Corporation of Pennsylvania. Filed Aug. 12, 1911. Serial No. 643,790. (Cl. 121—57.)



1. A blade, a strip passing through an opening in said blade and a pin engaging the strip and the blade.

2. A blade, a strip passing through an opening in said blade and a pin carried by the blade and engaging the strip.

3. A plurality of blades provided with alined slots and each blade having longitudinal openings intersecting its slot, a lashing strip passing through the slots and a locking pin in a longitudinal opening and passing through the lashing strip.

4. A plurality of blades having alining slots, a lashing strip passing through said slots, a pin longitudinally of each blade and passing through the lashing strip and a distorting portion on each blade for holding each pin in place.

1,020,751. SASH-CORD FASTENER. ORLANDO V. FLORA, Madison, Ind. Filed July 5, 1911. Serial No. 636,861. (Cl. 16—16.)



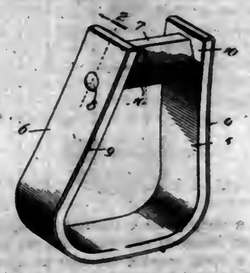
1. In a device for fastening, in a sash-groove, the end of a flexible, sash-suspending medium, the combination of an elongated channel-piece fitting in said groove and connected with the sash, a lever pivoted at its upper end in the upper end portion of the channel-piece, to extend with its long arm downwardly, and provided adjacent to its pivot with a clamping-jaw coöperating with the base of the channel-piece, for the purpose set forth.

2. In a device for fastening, in a sash-groove, the end of a flexible, sash-suspending medium, the combination of an elongated channel-piece fitting in said groove and connected with the sash, a lever pivoted at its upper end in the upper end-portion of the channel-piece, to extend with its long arm downwardly, and provided adjacent to its pivot with a clamping-jaw, and a shoulder in the base of the channel-piece, adjacent to said pivot, coöperating with said clamping-jaw, for the purpose set forth.

3. In a fastener of the class described, the combination of a channel-piece, having a base provided toward one end with a stud-engaging opening and toward its opposite end with a shoulder, a reversible clamping lever provided at one end with a straight-edged chain-engaging jaw and at its opposite end with a serrated cord-engag-

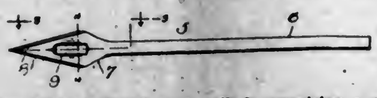
ing jaw, and a separable pin and socket connection for each end of said lever adapted to connect said lever with the channel-piece adjacent to said shoulder, for the purpose set forth.

1,020,752. METAL-BOUND STIRRUP. ORLANDO V. FLORA, Madison, Ind. Filed Nov. 20, 1911. Serial No. 661,399. (Cl. 54—47.)



A stirrup comprising, in combination, a strip of wood of suitable loop-shape, a sheet-metal strip forming a covering for the outer surface of the wooden strip and bent around opposite ends thereof, the opposite edges of the sheet-metal strip being turned under to lie upon the surface of the wooden strip and present smooth and dull edges, a spacer-block having chamfered ends, conforming to and fitting the inner surfaces of the opposite end portions of the loop, and having a groove in its under side, and a bolt in said groove securing the loop against opposite ends of the block to hold the latter in place and clamp down the ends of the metal strip, substantially as and for the purpose set forth.

1,020,753. MEDICINAL NEEDLE. GRANT G. FORD, Speed, Kans. Filed Aug. 26, 1911. Serial No. 646,160. (Cl. 128—27.)



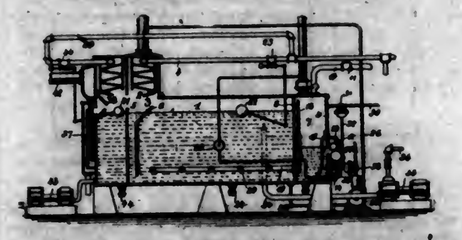
A needle of the class described comprising a shank, an angularly extending curved diamond shaped head formed thereon, the said shank being formed with beveled edges producing cutting surfaces and a relatively sharp point, and an opening located centrally of the head and formed with beveled edges, the said opening producing a pocket.

1,020,754. DETACHABLE HAT-PIN HEAD. WILLIAM LLOYD FRIEDMAN, Oakland, Cal. Filed Jan. 24, 1911. Serial No. 604,491. (Cl. 24—155.)



In a removable hatpin head, an ornamented member, a sleeve adapted to receive the pin and having a notch cut in one side thereof, the inner end of the sleeve being housed in the member, a bar extending at right angles to said sleeve and securing the latter to the ornamented member, a spring secured to said bar and having one end thereof projecting into the notch in the sleeve and being adapted to contact with a pin slidable in said sleeve to hold the same therein, and a pin connected with said spring and extending through said bar to move said spring longitudinally of said sleeve to release the pin, substantially as described.

1,020,755. WATER-HEATING SYSTEM. JOSEPH W. GAMBLE, Philadelphia, Pa., assignor to Harrison Safety Boiler Works, Philadelphia, Pa., a Copartnership of Pennsylvania. Filed Oct. 2, 1909. Serial No. 520,629. (Cl. 122—396.)



1. In a system for supplying water to locomotive boilers, the combination of a water storage tank, means for supplying water thereto, a heater, means for carrying steam blown off from a boiler to the heater, means for circulating water from said tank through the heater, means for automatically controlling said water circulation in accordance with changes of temperature of the water in said tank, and means for supplying water from said tank to the locomotive boiler, substantially as set forth.

2. In a system for supplying water to locomotive boilers, the combination of a water storage tank, means for supplying water thereto, means for carrying steam blown-off from a locomotive to the tank, a heater having a series of trays therein and a water chamber below said trays, a steam connection from the upper portion of said tank to said heater, a connection from the water chamber of said heater to said tank, a pump, connections to said pump for drawing water from the lower portion of said tank to said heater, means for automatically controlling the operation of said pump in accordance with changes of temperature of the water in the tank, and means for supplying water from said tank to the locomotive boiler, substantially as set forth.

3. In a system for supplying water to locomotive boilers, the combination of a water storage tank, a heater having a series of trays therein and a water chamber below said trays, a steam connection from the upper portion of said tank to said heater, a connection from the water chamber of said heater to said tank, a pump, connections to said pump for drawing water from the lower portion of said tank and carrying it to said trays of the heater, a thermostat extending within said tank and controlling the operation of said pump, a pipe for carrying water to said trays of the heater, a valve in said pipe, a float in said tank operating said valve, means for supplying water from said tank to a boiler, and means for supplying steam to said tank, substantially as set forth.

4. In a system for supplying water to locomotive boilers, the combination of a tank, a heater, a blow-off chamber, means for discharging the contents of a boiler into said chamber, a pipe for carrying steam from said chamber to the lower portion of said tank, means for carrying steam from the upper portion of said tank to said heater, means for circulating water from said tank through said heater, means for automatically controlling said circulation in accordance with changes of temperature of the water in said tank, and means for supplying water to a boiler from said tank, substantially as set forth.

5. In a system for supplying water to locomotive boilers, the combination of a tank, a blow-off chamber, means for connecting said chamber to a locomotive, a steam connection from the upper portion of said chamber to the lower portion of said tank, a heater having a plurality of trays therein and a water chamber below said trays, a steam connection between the upper portion of said tank and said heater, a water connection between said water chamber and the tank, a pump, connections to said pump for circulating water from said tank through said heater, a water supply pipe connected to said heater, a thermostat within said tank and controlling the operation of said pump, and means for supplying water from said tank to a boiler, substantially as set forth.

[Claims 6 to 11 not printed in the Gazette.]

1,020,756. NEW COTTON DYESTUFFS AND PROCESS OF MAKING SAME. RICHARD GAST, Fechenheim, near Frankfort-on-the-Main, Germany, assignor to Cassella Color Company, New York, N. Y. Filed June 24, 1910. Serial No. 568,640. (Cl. 8—1.)

1. The process of producing azo coloring matters by treating arylaminonaphthol sulfonic acids with formic acid and combining the products thus obtained with diazoazo compounds.

2. The coloring matter derived from a diazoazo compound and formylarylaminonaphtholsulfonic acid 2.5.7 which is easily soluble in water with claret to purple shades dyeing from such solution unmordanted cotton violet to bluish shades, which yields on being reduced by zinc dust and acids formylaryldiaminonaphthol sulfonic acid and which does not react with nitrous acid, substantially as described.

1,020,757. METALLIC ALLOY. GEZA HARTMANN, San Francisco, and REINHARDT J. BUSCH, Los Angeles, Cal. Filed Nov. 21, 1911. Serial No. 661,466. (Cl. 75—1.)

1. A metallic alloy of vanadium, aluminum, antimony, bismuth, magnesium and tin, compounded substantially in the proportion stated and for the purpose specified.

2. A metallic alloy compounded of fifteen and one half (15½) per cent. of commercially pure aluminum; seven (7) per cent. of commercially pure antimony; nine (9) per cent. of commercially pure bismuth; one fourth of one (¼ of 1) per cent. of commercially pure vanadium; two and one fourth (2 and ¼) per cent. of commercially pure magnesium and sixty-six (66) per cent. of commercially pure tin.

3. The process of compounding the hereinbefore described metallic alloy, consisting (1) in melting vanadium in a covered graphite crucible; (2) adding to the molten vanadium the bismuth, aluminum, antimony and magnesium, in the order given, and stirring thoroughly as each metal is added; (3) covering the metals in the crucible with charcoal powder; (4) when the above metals are thoroughly melted and mixed, adding the tin; (5) keeping at a uniform heat until the mass assumes an orange color, then removing the scum and charcoal and pouring into the proper molds.

1,020,758. LIQUID-SOAP FOUNTAIN. NEWTON S. HILLYARD, St. Joseph, Mo. Filed Nov. 18, 1911. Serial No. 661,077. (Cl. 73—159.)



1. In a liquid soap fountain the combination with a supporting bracket, of a fountain having a threaded portion to engage with said bracket and a lower threaded portion at its base, an elongated vertical conductor open at its base and provided with vertical slots, a cross slot and a perforation, a spiral spring in said conductor, a threaded cap integral with the base of said conductor engaging with the lower threaded portion of the base of said fountain, a piston having incuts of different sizes forming recesses, a pin rigid therein and revoluble with said piston through said cross slot, said recesses being adapted to receive liquid soap from the fountain through said perforation when the piston is elevated and a recess engages therewith and to discharge said soap when said piston is driven down by the spiral spring and a recess is below said cap.

2. In a device of the character described the combination with a fountain and a supporting bracket therefor, of a vertical elongated circular conductor forming a chamber having a stop at the top, open at the bottom and provided with vertical slots, a cross slot and a single perforation, a cap integral with the bottom of said conductor and engaging with the base of the fountain closing the same, a piston provided midway thereon with recesses of different sizes incut therein, a pin rigid at the periphery of the top end of said piston, a spiral spring seated on said piston permitting said piston to be pressed up said chamber to receive a supply of liquid soap through said perforation into a recess and to be driven down below said cap by said spring to permit said recess to discharge its supply.

3. In a liquid soap fountain the combination of a conductor having an open bottom and a perforation for the ingress of a liquid soap supply from the fountain, duplicate vertical spaced slots and a connecting cross slot in the sides thereof, a spiral spring member in the upper part of said conductor, a piston member in the lower part of said conductor provided with duplicate recesses of different sizes, a stationary pin near the top of said conductor periphery, said pin being carried by said piston through said slots as the piston is operated regulating the stoppage of one of said recesses at said perforation as it is pressed up and preventing its escape from the conductor when the recesses in the piston are driven below said conductor.

4. In a liquid soap fountain, a conductor provided with a supply receiving aperture, vertical slots and a connecting cross slot in its sides, a piston having discharge recesses of differing sizes and a spiral spring to force the piston down when pressure from beneath has been removed.

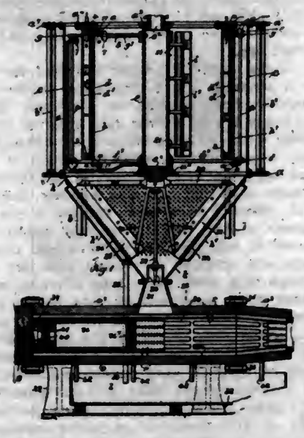
5. In a device of the kind described, a cylindrical conductor member having in its sides a supply receiving aperture, vertically cut slots and a connecting horizontally cut slot, a piston member having recesses of different sizes adjustable to said aperture to receive a supply and discharge the same when the piston descends, and means to retain said piston member in said conductor member and operate the device.

1,020,759. ICE-MACHINE. DANIEL L. HOLDEN, New York, N. Y. Filed Aug. 18, 1911. Serial No. 644,767. (Cl. 62—6.)

1. In an ice making machine and in combination, a stationary cylindrical vessel adapted to contain a refrigerant, revoluble devices turning axially therein for spraying water for the formation of ice therein and for progressively removing the same, a hopper beneath the same receiving the ice, and means for removing any water therefrom, and an ice compressor and former below the hopper receiving the ice, and compressing the same into a continuously ejected mass.

2. In an ice making machine and in combination, a stationary cylindrical vessel adapted to contain a refrigerant, revoluble devices turning axially therein and comprising a receptacle for water, means for delivering and spraying the same upon the surface of said cylindrical vessel for the formation of ice, devices for loosening and scraping the ice from the surface of said cylindrical vessel, a hopper beneath the same receiving the ice removed, a jacket formed with said hopper for draining away the water from said ice, devices within said hopper for moving the ice to free the water and for causing it to descend to the bottom of the hopper, and an ice compressor and former below the hop-

per receiving the ice, and a throat connected with the same, whereby the ice is delivered from the hopper into the ice compressor and former, for compressing and consolidating the ice into a solid mass and delivering the same.



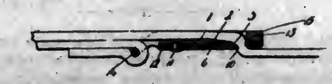
3. In an ice making machine an ice forming member comprising a stationary cylindrical vessel and suitable supports therefor, a revoluble hollow axial cylinder receiving the water, one or more water pipes and sprinklers connected with said cylinder for spraying water upon the surface of said cylindrical vessel, so as to form ice on the surface thereof, cylindrical ice breakers and suitable supports therefor from the hollow axial cylinder, suitable scraping devices and supports therefrom, also from the hollow axial cylinder, and means for revolving said hollow axial cylinder and the parts connected therewith.

4. In an ice making machine an ice forming member, comprising a stationary cylindrical vessel and suitable supports therefor, a revoluble hollow axial cylinder receiving the water, one or more water pipes and sprinklers connected with said cylinder for spraying water upon the surface of said cylindrical vessel so as to form ice on the surface thereof, cylindrical ice breakers and suitable supports therefor from the hollow axial cylinder, suitable scraping devices and supports therefrom, also from the hollow axial cylinder, and means for revolving said hollow axial cylinder and the parts connected therewith, and other devices extending from the hollow axial cylinder to the outer surface of the aforesaid cylindrical vessel for spraying water against the outer surface of the cylindrical vessel containing a refrigerant for the formation of ice thereon, cylindrical breakers and suitable scraping devices bearing against the outer surface of aforesaid cylindrical vessel, and the said parts also revoluble with the aforesaid parts and hollow axial cylinder.

5. In an ice making machine and in combination, parallel fixed rings, supporting columns between and connected to said rings, other supports beneath the lower ring to a foundation for carrying the structure, a cylindrical casing extending between and secured to said rings, a conical hopper at its large upper end secured to the under surface of the lowest of said rings substantially in line with the inner surface of the cylindrical casing, a jacket for water surrounding the conical hopper, a delivery throat from the lower end of the hopper, and revoluble liquid spraying devices within said cylindrical casing and hopper whereby ice is formed and progressed downward by gravity and the water removed therefrom and the ice particles delivered from the hopper for after treatment.

[Claims 6 to 9 not printed in the Gazette.]

1,020,760. BUCKLE. GEORGE M. HUBBARD, New Haven, Conn., assignor to the W. & E. T. Fitch Co., New Haven, Conn., a Corporation. Filed June 4, 1910. Serial No. 565,110. (Cl. 24—194.)



1. The combination with a frame comprising side bars, a front bar, a rear bar and a transverse bar, of a sheet-metal plate having its outer end wider than the main portion, the wider end portion adapted to rest upon the said side bars and the main portion extend between the side bars, the rear end of the said plate rigidly secured to said transverse bar, said plate formed in its outer end with a transverse slot corresponding in length substantially to the space between the said side bars, and a slide shorter than the plate and slidably secured thereto and made wider at its outer end than the main portion, a slot in the wider end corresponding to the slot in the plate, the parts being so arranged that the slots will stand adjacent to the front bar of the frame.

2. A buckle comprising a sheet metal plate having its outer end wider than the main portion to provide a shoulder at each side, and formed in its outer end with a transverse slot, a slide shorter than the plate and formed with extensions on opposite sides of the forward end which are folded over the sides of the outer end of the plate and on opposite sides provided with fingers which are folded onto the narrow portion of the body of the plate, said slide formed with a transverse slot in its outer end, combined with a frame having a front bar, rear bar and transverse bar, the rear end of the said plate rigidly secured to the transverse bar, the parts being arranged so that the said slots will stand adjacent to the front bar of the frame, and the fingers adapted to abut against said shoulders to limit the outward movement of the slide which is limited in its rearward movement by the said transverse bar.

1,020,761. TUBERCULO-TOXOIDIN. TORU ISHIGAMI, Osaka, Japan. Filed Jan. 7, 1907. Serial No. 351,128. (Cl. 167—7.)

1. In the manufacture of tuberculo-toxoidin, the process which consists in dissolving in water the soluble portions of a mass of tubercle bacilli, then washing and drying the residue, then dissolving the dried residue in acid, and finally precipitating the acid solution.

2. In the manufacture of tuberculo-toxoidin, the process which consists in triturating tubercle bacilli, then washing the triturated mass in water to extract and remove the soluble constituents thereof, then dissolving the residue with mineral acid, then precipitating the solution, and finally washing and dissolving the precipitate.

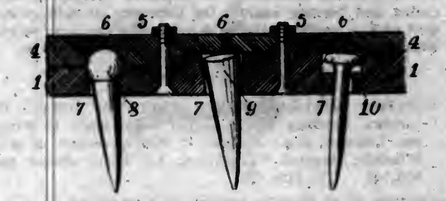
3. In the manufacture of tuberculo-toxoidin, the process which consists in triturating tubercle bacilli, then washing the triturated mass in water to extract and remove the soluble constituents thereof, then dissolving the residue with sulfuric acid, then precipitating the solution, and finally washing and dissolving the precipitate.

4. In the manufacture of tuberculo-toxoidin, the process which consists in triturating tubercle bacilli, then washing the triturated mass in water to extract and remove the soluble constituents thereof, then dissolving the residue with a mineral acid, then precipitating the solution, then washing the precipitate and finally dissolving the precipitate in a weak aqueous alkaline solution.

5. In the manufacture of tuberculo-toxoidin, the process which consists in triturating tubercle bacilli, then steeping the triturated mass in water to extract and remove the soluble portions thereof, then washing and drying the residue, then dissolving the residue in acid, and precipitating the solution, to remove the acid, then washing and dissolving the precipitate, then neutralising the resulting solution and finally adding an antiseptic thereto.

[Claim 6 not printed in the Gazette.]

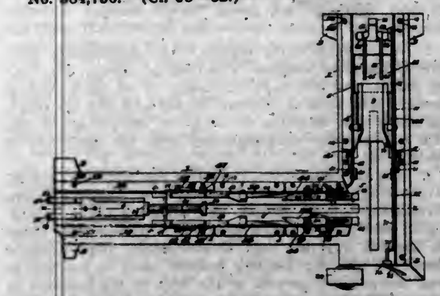
1,020,762. MACHINE FOR PICKING, BREAKING, AND OPERATING ON ICE, COAL, ORES, AND OTHER SUBSTANCES. ADONIRAM B. JUDSON, New York, N. Y. Filed Oct. 9, 1911. Serial No. 653,615. (Cl. 83—62.)



1. In a device of the class described, breaking elements, a head formed with apertures having walls for securing said breaking elements to said head against lateral removal, said apertures being formed to permit limited movement of said breaking element in all planes common to the normal axis of said elements.

2. In a device of the class described, breaking elements, a head comprising a base block and a cap, said base block having an aperture, and means for securing the cap to the base block, said breaking means being held by walls of said aperture and cap against lateral removal but admitting limited movement to said breaking elements in all planes common to the normal axis of said element.

1,020,763. PAPER-BOX-MAKING MACHINE. HARRY G. KERR, Philadelphia, Pa. Filed July 20, 1907. Serial No. 384,756. (Cl. 93—52.)



1. In a box making machine, a bed upon which a box blank is placed and moves, supports therefor, a plurality of carriers upon said bed connected to move a box blank at right angles by successive movements to bring all the side edges of the blank into contact with bending devices which are arranged in pairs each pair at right angles to the other, said bending devices, and means connected to move the carriers, substantially as described.

2. In a box making machine, a bed upon which a box blank is placed and moves, supports therefor, guides upon said bed to guide successive movements of a box blank said guides arranged in pairs and each pair extending at right angles to the other pair, a plurality of carriers connected to be moved and to move a box blank by successive movements each movement in direction at right angles to the other, and bending devices arranged in pairs each pair extending at right angles to the other to engage with and bend the opposite side edges of a box blank when said blank is moved into engagement therewith by the carriers, substantially as described.

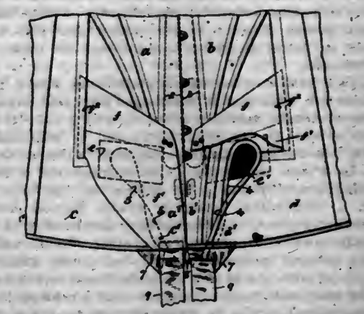
3. In a box making machine, a bed upon which a box blank is placed and moves, supports therefor, guides arranged in pairs upon said bed each pair at right angles to the other to guide successive movements of a box blank each movement at right angles to the other, bending devices connected to said guides to bend the opposite edges of said box blank when the blank is moved forward, a plurality of carriers connected to be moved at right angles each to the other, and mechanism to simultaneously reciprocate said carriers to bring opposite side edges of a box blank into engagement with the bending devices, substantially as described.

4. In a box making machine, a bed upon which a box blank is placed and moves, guides upon said bed arranged in pairs each pair connected to guide blanks at right angles to the other in the successive movements of the blanks, a plurality of carriers to be reciprocated and to move a box blank forward and the side edges of said blank into contact with bending devices which are arranged in pairs each pair at right angles to the other pair, said bending devices, and means to prevent the backward movement of the box blank when the carriers are moved backward, substantially as described.

5. In a box making machine, a bed upon which a box blank is placed and moves, supports therefor, a plurality of carriers to move a box blank into successive engagement with edge bending devices arranged at right angles each to the other, said edge bending devices mechanism to reciprocate said carriers, and connections between said reciprocating mechanism and an actuating medium, substantially as described.

[Claims 6 to 25 not printed in the Gazette.]

1,020,764. APPAREL-CORSET. DANIEL KOPS, New York, N. Y. Filed Aug. 11, 1911. Serial No. 643,480. (Cl. 2—73.)



1. In an apparel corset and in each half thereof at the front, three depending fabric members extending to the lower edge of the corset and separated from one another, and one of which overlies a division between the other two, and said members united by a common connection at their lower ends and adapted for abdominal support.

2. In an apparel corset and in each half thereof, a skirt extending over the thigh and across the front and having an incision extending through and from the lower edge at the front up almost to the boning of the corset, forming a skirt division, and a fabric part depending from the corset at the front and overlying said skirt division and the lower free ends of said parts united by a common connection, whereby a spreading or yielding action and abdominal support is provided.

3. In an apparel corset and in each half thereof having a skirt divided at the front and from the lower edge up almost to the boning of the corset so as to produce in the skirt a part extending down below the front steels, and a part of the skirt extending forward to meet the same, an inclined strap and a prolongation thereof at the front of the corset overlapping the corset skirt divisions, and a hose supporter below the lower front portion of the corset, and branching strips or parts connecting the same at their upper ends with the separate parts aforesaid at the front of the corset for the purpose of applying simultaneous tension.

4. In an apparel corset and in each half thereof having a skirt divided at the front and from the lower edge up almost to the boning of the corset so as to produce in

the skirt a part extending down below the front steels and a part of the skirt extending forward to meet the same, an inclined strap at the front of the corset overlapping the skirt divisions, an elastic strip extending across the divided upper portion of the skirt and secured at the respective ends, a hose supporter below the lower front portion of the corset, and branching stripe or parts connecting the same at the upper end with the separate parts aforesaid at their lower ends and at the front of the corset for the purpose of applying simultaneous tension.

1,020,765. TANK-CAR. CHARLES A. LINDSTRÖM, Pittsburgh, Pa., assignor to Pressed Steel Car Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Original application filed Jan. 7, 1909, Serial No. 471,078. Divided and this application filed June 16, 1909. Serial No. 502,579. (Cl. 105—264.)



1. In a tank car, a tank supported at or near its ends on the car underframe to permit expansion or contraction of its metal, and a pair of saddles rigidly secured to said tank and the underframe approximately at the longitudinal center of the car.

2. In a tank car having an underframe and a tank, a saddle or cradle member riveted directly to said tank and means riveted directly to the underframe and to said saddle or crane member for securing the tank to the underframe.

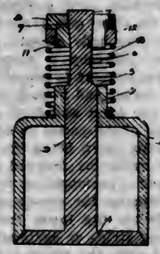
3. In a tank car having an underframe and a tank in combination with means for supporting said tank, of a saddle or cradle member riveted directly to the tank and means riveted to the underframe and to said saddle or cradle member for anchoring the tank to the underframe.

4. In a tank car having an underframe and a tank, in combination with means for supporting the tank at its ends, a longitudinal saddle or cradle member having a depending portion, and longitudinal means riveted to the underframe and the depending portion of said saddle or cradle member for anchoring the tank to the underframe.

5. In a tank car having an underframe and a tank, in combination with means for supporting a tank on its ends, a longitudinal saddle or cradle member having a depending portion and a longitudinal angle member rivited to the underframe and to the depending portion of said saddle or cradle member for anchoring the tank to the underframe.

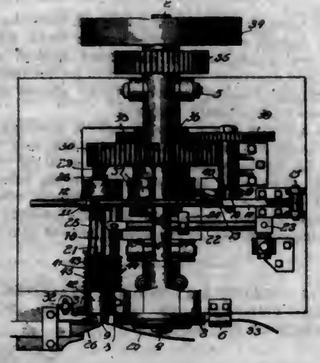
[Claims 6 to 10 not printed in the Gazette.]

1,020,766. VALVE-STEM AND HEAD THEREFOR. LEVI E. LOWE, Columbus, Ohio. Filed Oct. 8, 1910. Serial No. 585,936. (Cl. 137—32.)



The combination with a valve casing having an extended bearing, of a valve construction combining a valve, a stem extending through said bearing, a shoulder on said stem, a reduced cylindrical portion extending from said shoulder, an outwardly flared extension on said portion, a nut having a cut-out portion a depending neck on said nut, said nut and neck having an outwardly flared bore for wedging on said extension, a bearing collar embracing said neck and covering the said cut-out portion, and a coiled spring embracing the extended bearing of said casing and bearing against the underside of said collar, said neck extending below said collar and into said spring whereby the spring is maintained in centered position.

1,020,767. SPRING-FORMING MACHINE. AUGUST H. LUEBKE, Kenosha, Wis., assignor to Benjamin F. Windsor, Kenosha, Wis.; William F. White executor of said Windsor, deceased. Filed Aug. 12, 1911. Serial No. 643,703. (Cl. 140—79.)



1. In a spring-coiling machine, the combination with intermittently-interrupted wire-feeding means, wire-coiling means, and wire-shearing means, of an independently mounted wire-bending member located adjacent the shearing-means and co-acting to bend the end-portion of the wire substantially simultaneously with the severance of the formed coil.

2. In a machine of the character set forth, the combination with intermittently-interrupted wire-feeding means, convolution-forming means, and shearing-means including an oscillating shear-member, of a wire-bending member located adjacent said shear-member and oscillated therewith, said wire-bending member being in position to bend the advance portion of the wire in the machine at substantially the moment of severance of the formed coil.

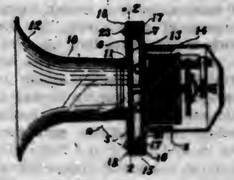
3. In a machine of the character set forth, the combination of intermittently interrupted wire-feeding means, convolution-forming means, a stationary shear-member provided with a beveled wire-bearing surface, a movable shear-member, and a wire-bending member actuated by the movable shear-member and adapted to strike the wire against the bearing-surface of said stationary shear-member.

4. In a machine of the character set forth, the combination with intermittently-interrupted wire-feeding means, convolution-forming means, and shearing-means including a stationary shear-member and an oscillatory shear-member, the oscillatory shear-member being recessed above its shearing-surface, of a wire-striking member extending into the recessed portion of the oscillatory shear-member and adapted to be actuated by said oscillatory shear-member.

5. In a machine of the character set forth, the combination of intermittently-interrupted wire-feeding means, an automatically-oscillated wire-coiling member, a stationary shear-member equipped above its shearing edge with a beveled wire-bearing surface, a plunger having its end-portion provided with a shear-member and above said shear-member with a recess, and a wire-striking member extending into said recess and adapted to be actuated by said plunger.

[Claims 6 to 10 not printed in the Gazette.]

1,020,768. ALARM-SIGNAL DEVICE. RAY H. MANSON, Elyria, Ohio, assignor to The Dean Electric Company, Elyria, Ohio, a Corporation of Ohio. Filed May 10, 1911. Serial No. 626,216. (Cl. 177—7.)



1. In an alarm signal device adapted to be used upon conveyances, a plurality of parts forming the walls of a chamber, one of said parts having its edges folded over the edge of another of said parts leaving a channel between said edges which communicates with said chamber for the passage of foreign matter through said chamber, said channel leading to the exterior of said signal device, a vibratile diaphragm in said chamber adapted when actuated to produce sound, means for actuating said diaphragm, the forward wall of said chamber being provided with an opening for the passage of sound waves.

2. In an alarm signal device adapted to be used upon conveyances, a plurality of parts forming the walls of a chamber, one of said parts having its edges folded over the edges of another of said parts leaving a channel between said edges, which provides an opening in said chamber for the passage of foreign matter through said chamber to the exterior, means for regulating said opening, a vibratile diaphragm in said chamber adapted when actuated to produce sound, means for actuating said diaphragm, the forward wall of said chamber being provided with an opening for the passage of sound waves.

3. In an alarm signal device, adapted to be used upon conveyances, a plurality of parts forming the walls of a chamber, one of said parts being a rear wall part, another of said parts being a front wall part and having its edge folded over the edge of said rear wall part leaving a rearwardly directed channel between said parts to permit the creation of a draft through the chamber for the passage of foreign matter through said chamber to the exterior thereof, a plurality of draft regulating members mounted in said channel leaving openings therebetween, said chamber having an opening in the front wall for the passage of sound waves, a vibratile diaphragm in said chamber adapted when actuated to initiate sound and means in said chamber to actuate said diaphragm.

4. In an alarm signal device adapted to be used upon conveyances, a rear chamber wall, a front chamber wall having its edges folded over the edge of the rear chamber wall leaving a channel therebetween to permit a draft through said chamber for the passage of foreign matter through said chamber to the exterior, draft regulating members mounted between said rear wall and said front wall leaving draft openings therebetween, a vibratile diaphragm in said chamber adapted when vibrated to initiate sound and means to actuate said diaphragm.

5. In an alarm signal device adapted to be used upon conveyances, a plurality of parts forming the walls of a chamber, one of said parts being provided with an opening for the passage of sound waves, a forwardly directed resonator mounted in said opening, another of said parts constituting a second wall part for said chamber, the edge of the first named wall part being folded over the edge of the second named part and spaced therefrom to create a channel between said parts, whereby a draft may be allowed to flow through the chamber to the exterior thereof for the passage of dirt, moisture, etc., therethrough, draft regulating members mounted between said parts in said channel leaving openings in said channel, a vibratile diaphragm in said chamber adapted when actuated to initiate sound and means to actuate said diaphragm.

[Claims 6 to 8 not printed in the Gazette.]

1,020,769. STEM WINDING AND SETTING WATCH. HENRY W. MATALENE, New York, N. Y. Filed Apr. 29, 1909. Serial No. 492,879. (Cl. 58—95.)



1. In a stem winding and setting watch, the combination of a watch case provided in the upper portion of its rim with a perforation leading inward to a recess which is of greater diameter than said perforation and opens at its outer end beneath the edge of the cover of the case, a winding terminal movable inward and outward in said recess and having an outwardly-facing shoulder exposed through the opening therein for engagement by the edge of said cover, and means connected to the winding terminal and passing outward through said perforation for manipulating said terminal.

2. In a stem winding and setting watch, the combination of a watch case comprising a center having a recess formed therein, said recess being located wholly between the periphery of the case and the contained watch movement, a winding terminal movable inward and outward in said recess, an annular bow spring surrounding the terminal in its recess and arranged to press said terminal inward, and a winding stem secured to said terminal.

3. In a stem winding and setting watch, the combination with the watch case of a winding terminal mounted to rotate and to move longitudinally in the periphery thereof, a spring arranged to press said terminal inward, a winding stem secured to said terminal, and means carried by the outer end of terminal for suspending the watch.

4. In a stem winding and setting watch, the combination of a watch case comprising a center having at the top of the case an inwardly-projecting hub of greater width than said center, said hub being provided with a recess passing through the top of the hub on one side of said center, a winding terminal mounted to rotate and to move longitudinally in said recess and provided with a shoulder located on a level with the top of said hub when said terminal is in its innermost position, whereby said shoulder is adapted to be engaged by the cover of the case when closed, a winding stem connected to said terminal, and means carried by the outer end of the terminal for suspending the watch.

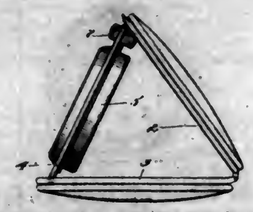
5. In a stem winding and setting watch, the combination of a watch case comprising a center having a recess extending laterally through its upper portion, a winding terminal mounted to rotate and to move longitudinally in said recess and provided with a shoulder adapted to project beyond the center into position to be engaged by the cover of the case, when closed, an annular spring surrounding said terminal in its recess and bearing simultaneously on a shoulder formed therein and on a laterally-extending inner portion of the terminal, and a winding stem secured to said terminal.

[Claim 6 not printed in the Gazette.]

1,020,770. FOLDING WATCHCASE. HENRY W. MATALENE, New York, N. Y. Filed June 10, 1911. Serial No. 632,313. (Cl. 58—56.)

1. A folding case for watches comprising two leaves hinged together and forming covers for the case when closed, one of said leaves being adapted to serve as a supporting base when the case is extended, an intermediate leaf hinged at its lower edge to the front portion of the last-mentioned cover leaf and provided with a recess to

receive a watch having its crown located at the top of the same, and with a supplementary recess to receive said crown and expose the same on both sides of said intermediate leaf, and means for detachably connecting the free edge of the other cover leaf with the free edge of the intermediate leaf.

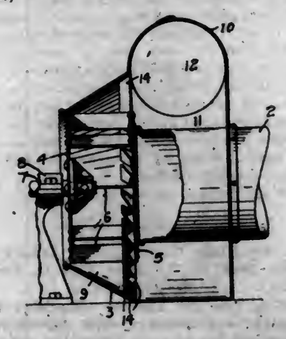


2. A folding case for watches comprising two cover leaves hinged together, one of said leaves serving as a supporting base when the case is extended, an intermediate leaf hinged at its lower edge to the front portion of the base leaf, a watch secured to the intermediate leaf in position to face the top cover leaf when the case is folded, with the bottom of the watch adjacent to the hinged edge of the intermediate leaf and the crown of the watch located at its top and exposed for manipulation on both sides of said intermediate leaf, adjacent to the free edge of the latter, and means for detachably connecting the free edges of the top cover leaf and the intermediate leaf.

3. A folding case for watches comprising two cover leaves hinged together at one edge, an intermediate leaf hinged at one edge to the free edge of one of the cover leaves and adapted to be folded in between the latter, a catch for holding the cover leaves in closed position, and a watch carried by the intermediate leaf and having a recessed crown located at the top of the watch and adapted to receive one member of said catch to hold the parts of the case in extended position.

4. A folding watch case comprising two cover leaves hinged together and provided with a spring catch to hold the same in closed position, an intermediate leaf hinged at one edge to the free edge of one of the cover leaves and adapted to be folded in between the latter, and a watch carried by the intermediate leaf and having its crown located at the top of the watch and provided at its outer end with a recess, said recess having under-cut walls adapted to engage the hook member of said spring catch to hold the parts of the case in extended position.

1,020,771. CENTRIFUGAL FAN. DANIEL B. MINOR, St. Paul, Minn., assignor to L. S. Hackney, St. Paul, Minn. Filed Sept. 18, 1911. Serial No. 650,028. (Cl. 230—11.)



1. A centrifugal fan having a casing provided with a central intake opening, fan heads mounted in said casing and having fan blades between them, a series of circumferential blades mounted on one of said fan heads and projecting outwardly therefrom, said circumferential blades accelerating the flow of air through said casing and said casing having an annular discharge chamber into which the air is directed by said blades.

2. The combination, with a casing having intake and discharge openings, of a revolving fan located therein, said fan having blades extending parallel substantially with its axis and also having a series of blades lying in a plane at right angles substantially to the axis of said fan and projecting outwardly beyond said blades.

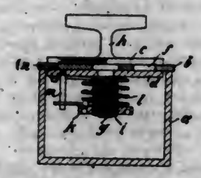
3. The combination, with a casing having intake and discharge openings and provided with flaring walls, of a fan journaled in said casing and inclosed by said flaring wall and comprising heads and blades between said heads, one of said heads being contiguous to said flaring wall and the other being disposed a considerable distance from said wall, an annular chamber being formed between said blades and said flaring wall, a series of blades carried by said last named head and projecting outwardly toward said flaring wall and between said outlet opening and said chamber and operating to accelerate the flow of the air currents through said chamber toward said outlet opening.

4. The combination, with a fan casing having a central intake opening and flaring walls and an annular chamber terminating in a discharge opening, of a fan located within said casing at one side of said annular chamber and inclosed by said flaring walls, said fan having a series of primary blades, there being an annular chamber formed between said blades and said flaring walls, and a series of secondary blades carried by said fan and disposed between said first and second named annular chambers and operating to accelerate the currents of air through said fan and into said first named annular chamber.

5. The combination, with a fan casing having an air intake and discharge opening, of a centrifugal fan mounted therein and provided with heads, and a series of plates arranged at intervals between said heads and a series of fan blades projecting outwardly from one of said heads and presenting inclined surfaces to the air currents and operating to accelerate the currents of air through said fan toward said discharge opening.

[Claims 6 and 7 not printed in the Gazette.]

1,020,772. SLIDE-CLOSURE FOR VESSELS. AUGUST MLITZ, Charlottenburg, Germany. Filed Dec. 22, 1909. Serial No. 534,458. (Cl. 184—93.)

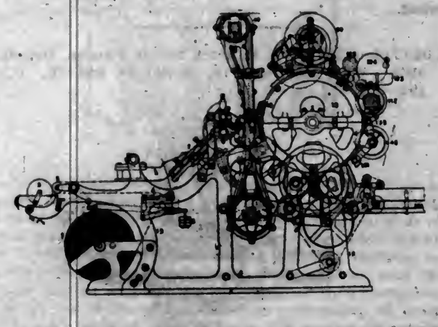


1. In an oil cup closure, the combination of an oil cup cover provided with an oil inlet opening and a pivot opening for the closure, a closure slide above the cover having a screwthreaded shank extending through the pivot opening, a lower slide member beneath the cover positively connected to the shank portion, a sleeve screw threaded to the shank to hold the closure slide in operative position, a disk screw-threaded to the sleeve member, a spring surrounding the sleeve member between the lower closure slide and disk adapted to be compressed by the latter said spring having its ends operatively connected respectively to the cover and closure whereby the closure is automatically returned to normal position, and the slides held closely against the cover.

2. In an oil cup closure, the combination of an oil cup cover provided with an oil inlet opening and a pivot opening for the closure, a closure slide above the cover having a screwthreaded shank extending through the pivot opening, a lower slide member beneath the cover positively connected to the shank portion, a sleeve screw threaded to the shank to hold the closure slides in operative position.

3. In an oil cup closure, the combination of an oil cup cover provided with an oil inlet opening and a pivot opening for the closure, a closure slide above the cover having a screwthreaded shank extending through the pivot opening, a lower slide member beneath the cover positively connected to the shank portion, means to hold the closure slides in operative position and means to effect automatic return of the closure slides to normal position.

1,020,773. PAPER-BAG MACHINE. EDUARD FELIX MÜLLER, Leipsig-Lindenau, Germany. Filed Feb. 16, 1910. Serial No. 544,295. (Cl. 93—16.)



1. In a paper bag machine, in combination, means for feeding a strip of paper from a suitable source of supply, means for forming the strip into tubular form with lateral folds therein, means for cutting the formed paper into blanks, a drum, gripping means carried thereby for gripping the blanks, tongues carried by said drum for imparting a box shape to one end of the blanks, vertically movable tongues positioned in the path of the folds and interposed between said forming means and said drum for engaging and spreading the folds, and other tongues positioned in the path of the folds and in proximity to the circumference of said drum for engaging and maintaining said folds in spread condition, whereby said first mentioned tongues carried by said drum may engage therewith.

2. In a paper bag machine, in combination, means for feeding a strip of paper from a suitable source of supply, means for forming the strip into tubular form having lateral folds therein, means for cutting the formed paper into blanks, a drum, gripping means carried thereby for gripping the blanks, tongues carried by said drum for imparting a box shape to one end of the blanks, vertically movable and laterally adjustable tongues positioned in the path of the folds and interposed between said forming means and said drum for engaging and spreading the folds, and laterally adjustable tongues positioned in the path of the folds and in proximity to the circumference of said drum for engaging and maintaining the folds in a spread condition, whereby said first mentioned tongues carried by said drum may engage therewith.

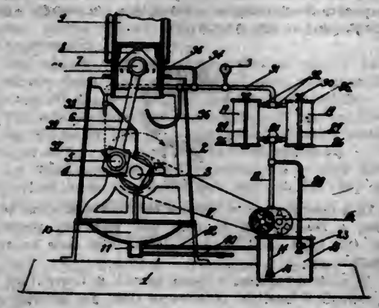
3. In a paper bag machine, in combination, means for feeding a strip of paper from a suitable source of supply, means for forming the strip into tubular form having lateral folds therein, means for cutting the formed paper into blanks, a drum, gripping means carried thereby for gripping the blanks, tongues carried by said drum for imparting a box shape to one end of the blanks, a vertically movable plate interposed between said forming means and said drum, laterally adjustable tongues supported thereon and adapted to engage the folds, whereby as the plate is moved in a vertical direction the folds will be spread apart, and laterally adjustable tongues positioned in proximity to said drum for engaging said folds and maintaining them in spread condition, whereby said first mentioned tongues carried by said drum may engage therewith.

4. In a paper bag machine, in combination, means for feeding a strip of paper from a suitable source of supply, means for forming the strip into tubular form having lateral folds therein, means for cutting the formed paper into blanks, a drum, gripping members supported thereby for gripping the blanks, tongues slidingly supported upon said drum for engaging the folds of the blanks, abutments having inclined surfaces co-acting with said tongues to cause sliding movement of the same, means for adjusting said abutments relatively to said tongues whereby the period of time that they operatively coact with said tongues may be varied, means for rotating certain of said tongues, means controlled by said rotating means for causing certain others of said tongues to move away from the circumference of the drum, and means for urging said other tongues to retain their normal positions.

5. In a paper bag machine, in combination, a drum, gripping means carried thereby, means for feeding tubular blanks of paper provided with lateral folds to said gripping means, means upon said drum for engaging the folds and imparting a box shape to one end of the blanks, a rock shaft positioned adjacent said drum, a finger carried by said rock shaft, means to rock said shaft to cause said finger to enter the box shaped end to expand the same, and means for forming and cutting the blank adapted to be inserted within the expanded box-shaped end thereof.

[Claims 6 to 13 not printed in the Gazette.]

1,020,774. OIL-FEEDING MECHANISM. LARS G. NILSON, Hoboken, N. J., assignor of one-half to William B. Strang, New York, N. Y. Filed Feb. 25, 1907. Serial No. 359,268. (Cl. 184—6.)



1. In an oil feeding system for a combustion engine, the combination with a hollow piston having oil passages therethrough, of an oil force pump and a stationary distributing nozzle leading from said pump and discharging a jet of oil into the hollow of said piston to fill the passages, whereby to oil the connecting rod and the interior of the cylinder.

2. In an oil feeding system for a combustion engine, the combination with a piston, a connecting rod, and a crank shaft, of means for oiling the crank pin continuously while the engine is running comprising a drain for collecting oil, a pump, and a distributing pipe from the pump having a stationary nozzle located to discharge a jet of oil toward the crank.

3. The combination with the cylinder and piston of a combustion engine, of a drain for collecting oil, a distributing pipe having a stationary nozzle, a hollow piston surrounding said nozzle at one position, passages through said piston to the sides, and a pump driven by the engine and supplying an excess of oil to the interior of the piston whereby to cool as well as oil the piston while the engine is running.

1,020,775. AERIAL TOY. EDMUND J. OGDEN, Springfield, Ill. Filed Oct. 8, 1910. Serial No. 586,005. (Cl. 244—4.)



1. In a device of the class described, a gas containing envelop having an opening in its forward end, a plug arranged in the said opening and having spaced flanges between which edges of the opening of the envelop are secured, and a portion projecting beyond the outermost flange, a spinner loosely mounted on the said projecting portion of the plug, a cap for holding the spinner on the plug, a rudder at the opposite end of the envelop, and means for holding the device captive.

2. In a device of the class described, a buoyant body, a spinner located at the forward end of said body, said body having an opening at the end remote from said spinner, a plug partially arranged within said opening, a sleeve adapted to be carried by said plug, an arm removably associated with said sleeve, and a rudder carried by said arm and serving to keep said buoyant body headed into the wind.

1,020,776. DOOR-HANGER. ST. CLAIR PARRY and THOMAS H. PARRY, Indianapolis, Ind., assignors to Parry Manufacturing Company, Indianapolis, Ind., a Corporation of Indiana. Filed Jan. 25, 1912. Serial No. 673,401. (Cl. 16—91.)

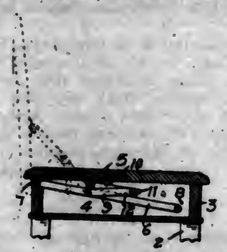


1. In a door-hanger, a stem, a head on said stem having a hole, a bearing-ball in said hole partially projecting below the head, and a plug closing the hole to retain the ball.

2. In a door-hanger, a head having a lower face beveled toward a medical transverse line, an integral stem on one side of the head and a flange on the other side, both flange and stem having their adjacent faces beveled toward a medial vertical line, said head having a hole transversely of the head and partly below the medial line of the bevel of its lower face and extending nearly through the head, a bearing-ball in the hole and a plug closing the hole to retain the ball.

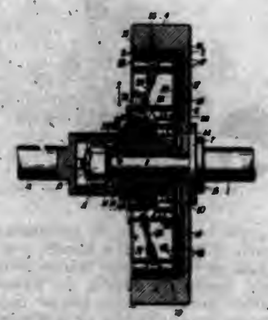
1,020,777. MUSIC-BENCH. JOHN PETERSON, Faribault, Minn. Filed July 26, 1909. Serial No. 509,709. (Cl. 155—22.)

A music bench comprising a box having a bottom and side and end walls and supporting legs, a cover therefor, links pivotally connecting one of the longitudinal edges of said cover on the underside thereof with the end walls of the box beneath and near the opposite longitudinal edge of said cover and within the box and near the bottom thereof, the pivotal connections of said links with the walls of the box allowing said cover to contact with and rest upon said walls, said links allowing said cover to be lifted and supported in a plane parallel substantially with the bottom of said box and also allowing said cover to be lifted to a substantially vertical position, and links pivotally connecting the middle portion of said cover with



the corresponding portions of said links and operating to limit the backward movement of said cover when it is raised.

1,020,778. CLUTCH. MAURICE NOWAL PRANGE, Detroit, Mich. Filed Aug. 26, 1911. Serial No. 646,136. (Cl. 192—11.)



1. In combination, a clutch member having clutch faces disposed at right angles to each other, a clutch member having independently movable clutch faces for engaging the clutch faces of the first clutch member, a constantly acting yielding mechanism for connecting the clutch faces of both clutch members, a positively operating mechanism for connecting one pair of the clutch faces, and a common means for disconnecting both pairs of clutch faces.

2. In combination, a driving clutch member, a driven clutch member, comprising a sliding disk for connecting the driving and driven clutch members, a spring for normally forcing said members into contact, a shifting ring, intermediate connections acting on said spring for releasing said clutch members, and means for actuating said shifting ring.

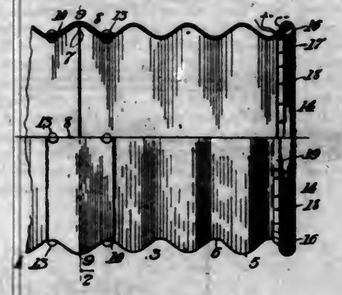
3. In combination, a driving clutch member and a driven clutch member, independent contacts carried by the driven clutch member adapted to engage the driving clutch member, a spring for throwing said contacts into operation, a cam for positively throwing one of said contacts into operation, and mechanism for withdrawing both of said contacts.

4. In combination, a driving clutch member having clutch faces disposed at right angles to each other, independently movable clutch members for engaging the clutch faces of the driving clutch member, a spring and mechanism for yieldingly causing the engagement of the clutch members, means for positively engaging one of the movable clutch members, and the driving clutch member, and means for overcoming the yielding engagement of the clutch members.

5. In combination, a clutch member comprising a fly wheel, a disk clutch adapted to engage the web of the fly wheel, a web mounted within the flange of the fly wheel, means for connecting said web to said disk clutch radially acting clutch shoes mounted on said web, yielding mechanism for throwing the disk clutch and the shoes in contact with the fly wheel, means for positively moving the clutch shoes into contact with the flange of the fly wheel, and means to disengage both clutches.

[Claims 6 and 7 not printed in the Gazette.]

1,020,779. CULVERT-PIPE. HERBERT S. PUTNEY and FIRMAN L. CARSWELL, Topeka, Kans. Filed July 17, 1911. Serial No. 638,933. (Cl. 61—9.)



1. The combination with a plurality of sections of corrugated iron culvert pipe, the ribs and valleys extending transversely of the length of the pipe, the adjacent ends of each section and the terminal end of the pipe ending at a rib; of a splice for securing adjacent sections together comprising a band corresponding in shape with the outer sides of adjacent ribs and the respective contiguous valleys, one of the ends of said band overlapping the other end, and a series of rivets securing said band to the respective sections in the respective valleys: and a protective covering for the end of the pipe comprising a band embracing both sides of said end and formed with a round bead covering the extreme end of the pipe.

2. The combination of two sections of corrugated iron culvert pipe, the ribs and valleys extending transversely of the length of the pipe, and the adjacent ends terminating at a rib and abutting together, of a splice for securing said sections together comprising a band corresponding in shape with the outer sides of said butting ribs and the respective next adjacent valleys, one of the ends of said band overlapping the other, and a series of rivets passing through said band and the respective valleys.

3. The combination with the end portion of a corrugated iron culvert pipe whose ribs and valleys extend transversely of the length of the pipe, said end terminating with an outwardly flaring portion; of a protecting band therefor comprising a strip which is substantially circular in cross section and having edges which embrace opposite sides of the end, said end extending through the circular portion and abutting against the opposite side thereof, and said edges having a series of prick-punches extending into the pipe metal for securing it in place thereon.

4. The combination with an iron culvert pipe, of an end protecting strip embracing both sides and the end of the pipe metal and secured thereon by means of prick-punches.

5. The combination with an iron culvert pipe, of an end protecting strip embracing both sides and the end of the pipe metal.

1,020,780. PACKING-GLAND. EDWARD D. TAYLOR, Harper, W. Va. Filed Sept. 9, 1911. Serial No. 648,516. (Cl. 121—100.)

1. A packing gland of the character described consisting of two sections of substantially semicircular form in cross section and each provided with a flange on one end, said gland sections being adapted for arrangement upon a shaft to engage therewith throughout their length, said flanges of the gland sections having faces which abut at a point substantially in alinement with the transverse axis of the shaft, each of said gland sections having spaced tongues and recesses on its longitudinal edges for interlocking engagement upon opposite sides of the shaft, said tongues and recesses extending an equal distance in opposite directions with respect to the abutting faces of said flanges.



2. A packing gland of the character described consisting of two similar sections each of concavo-convex form in cross section and having an attaching flange integrally formed on one end, the longitudinal edges of each of said sections being provided with spaced tongues forming recesses between them, one of said sections having tongues formed upon the end opposite to that provided with the attaching flange which are of less depth than the first mentioned tongues, the complementary section having corresponding recesses to receive said end tongues, the first mentioned tongues on one of said sections fitting into the grooves between the tongues on the other section to prevent relative longitudinal movement of said sections.

1,020,781. ALUMINOUS COMPOSITION. EDWIN TAYLOR, Brooklyn, N. Y., assignor to Union Clay Products Company, New York, N. Y., a Corporation of New Jersey. Filed May 6, 1909. Serial No. 494,487. (Cl. 106—23.)

1. The within described composition of matter having clay for its basis, the same consisting of clay, cocoanut fiber and vulcanized oil.

2. An aluminous composition consisting of clay, cocoanut fiber, sulfur and oil, the clay being in excess of the other ingredients.

3. The within described composition of matter having clay for its basis, and consisting of clay, cocoanut fiber, sulfur and oil, the oil being vulcanized by the sulfur.

4. The within described composition of matter having clay for its basis, the same consisting of clay, having a content of sulfur, cocoanut fiber and vulcanized oil.

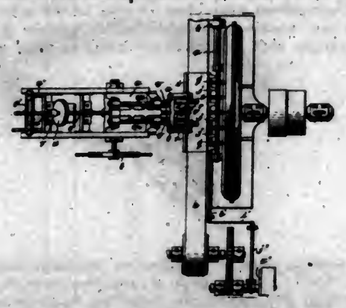
5. An aluminous composition consisting of clay having a content of sulfur, cocoanut fiber and oil, the clay being in excess of the other ingredients.

1,020,782. GAS-FILTER. WILLIAM JOHNSTON TINKER, Pierce City, Mo. Filed Apr. 15, 1911. Serial No. 621,266. (Cl. 48—137.)



A device of the class described comprising a cylinder made up of two parts, one of the parts having one end thereof tapered and counter-bored, the end of the other of the said parts being tapered whereby it is adapted to enter the said counter-bored portion and be held frictionally in position therein, a projecting portion from opposite ends of the cylinder, each adapted to receive one end of a suitable piece of tubing, each of the said portions extending within the cylinder for a suitable distance, a screen and a plurality of disks having registering openings therein seated at the bottom of the said counter-bored portion and held in position transversely of the cylinder by reason of the engagement of the two parts thereof, the screen being positioned between the disks.

1,020,783. PULP-WOOD BARKER. PHILIP C. ULMEN and ALEXANDER JOHNSON, Niagara, Wis. Filed Dec. 29, 1911. Serial No. 668,452. (Cl. 144—208.)



1. In a barking machine, the combination with a rotating cutter, of means for holding the log against the cutter embodying a rotating worm supporting the log.

2. In a barking machine, the combination with a rotating cutter, of means for holding the log against the cutter embodying a rotating worm supporting the log, this worm being provided with spikes.

3. In a barking machine, the combination with a rotating cutter head, of means for holding the log against the cutters embodying a series of rotating worm spike wheels and also a pair of upper spike wheels adapted to press down on the log the spikes on these upper wheels being arranged spirally.

4. In combination with a barker cutter, of means for holding the log against the cutter and rotating it embodying a frame, a sliding head thereon, spike wheels supported on said head, means for rotating these spike wheels, means for manually sliding said head back and forth, a belt conveyer and means for driving it, and means whereby the act of shifting the said head automatically stops and starts the conveyer.

5. In a barking machine, the combination with a rotating cutter head, of means for supporting and rotating the log, said means embodying a sliding cross head and means for sliding the same back and forth, a belt conveyer and means for driving it, means whereby the act of shifting said cross head automatically stops and starts the conveyer, said mechanism embodying a driving belt, a notched wheel driven by said driving belt, and a lever adapted to engage in any one of the notches of said wheel.

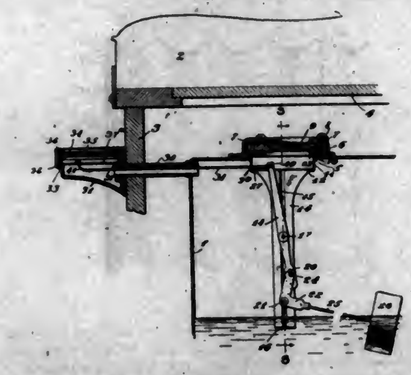
[Claim 6 not printed in the Gazette.]

1,020,784. HAT-PIN GUARD. JOHN JAY VALLIER, Chicago, Ill. Filed May 16, 1911. Serial No. 627,407. (Cl. 24—155.)



A hat pin guard comprising an extended body member having a slot in the side wall thereof and having one end closed, the said closed end being provided with an opening adapted to receive the pointed end of a hat pin, the other end of the body member having an opening extending therethrough into which the said pin is adapted to be inserted, a transversely extending member intermediate the ends of the body member and having an opening through which the pin is adapted to pass, the upper portion of the said member being provided with an opening, a resilient catch having one end thereof secured to the body member on the inner side thereof and adjacent the said transversely extending member, the opposite end of the catch being offset and extending through the opening in the upper portion of the said transversely extending member and exteriorly through the said slot in the said body member, the said catch being provided with an opening through which the pin is adapted to pass when the end thereof is inserted in the holder, the side walls of the opening in the catch being adapted to grip the said pin, thereby keeping the guard secured thereon.

1,020,785. TANK-GAGE. WILLIAM F. WARDEN, Akron, Ohio, assignor to Perry E. Tanner, Akron, Ohio. Filed May 5, 1911. Serial No. 625,263. (Cl. 73—82.)



1. The combination, with a tank, of a supporting member therewith and secured to one of the walls thereof, a lever pivoted to said supporting member, a bell-crank lever pivoted to said supporting member upon an axis parallel to the axis of said first lever and having one of its arms operatively connected to an arm of said first lever, a float secured to the other arm of said bell-crank lever and adapted to move the same upon changes in the level of liquid in said tank, a dial, and a pointer operatively connected with said first lever and coöperating with said dial.

2. The combination, with a tank, of a cup-shaped member therewithin and secured to one of the walls thereof and having a slot in its bottom portion, a supporting member carried by said cup-shaped member and projecting into the tank, a lever pivoted to said supporting member and having its outer end projecting through said slot, the inner end of said lever being slotted; a second lever pivoted to said supporting member and having a pin in one of its arms engaging in the slot of said first lever, a float secured to the other arm of said second lever and adapted to move the same upon changes of the level of liquid in said tank, a dial in said cup adjacent to said slot, and a pointer carried by the outer end of said first lever and coöperating with said dial.

3. The combination, with a tank, of a supporting member therewithin and secured to one of the walls thereof, a lever pivoted to said supporting member, a bell-crank lever pivoted to said supporting member and having one of its arms operatively connected to an arm of said first lever, a float secured to the other arm of said bell-crank lever and adapted to move the same upon changes of the level of liquid in said tank, a tube extending laterally from said tank, a fitting secured to the outer end of said tube and provided with a dial, a pointer coöperating with said dial, and a connecting member extending through said tube and operatively connecting said lever and said pointer.

4. The combination, with a tank, of a supporting member secured to one of the walls thereof, and projecting inwardly into said tank, a lever pivoted to said supporting member, a bell-crank lever pivoted to said supporting member and having one of its arms articulated to an arm of the said first lever, a float connected to the other arm of said bell-crank lever, a tube secured to the wall of said tank opposite the other end of said first lever and projecting outwardly, a fitting secured to the end of said tube and having a dial and a crystal covering said dial and spaced therefrom, a wire articulated to the end of said first lever and projecting through said tube, and a pointer attached to the outer end of said wire and coöperating with said dial.

5. The combination, with a tank having an aperture in one of its walls, of a cup shaped supporting member secured in said aperture, said member having a slot in its bottom and a bracket projecting inwardly into said tank, a lever pivoted to said bracket and having an end projecting through said slot, a second lever pivoted to said supporting member and having one of its arms operatively connected to an arm of said first lever, a float secured to the other arm of said second lever, a tube secured to the wall of said tank opposite said cup and projecting outwardly, said cup having a perforation in its wall opposite said tube, a fitting secured to the end of said tube and having a dial, and a crystal covering said dial and spaced therefrom, a wire articulated to the end of said first lever and projecting through said perforation and said tube, and a pointer attached to the outer end of said wire and coöperating with said dial.

[Claims 6 to 16 not printed in the Gazette.]

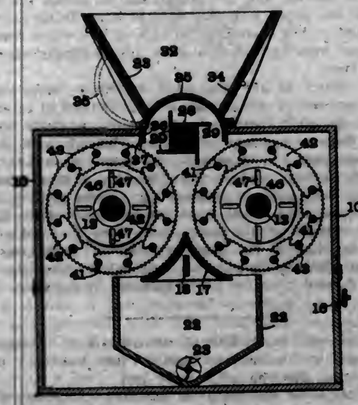
1,020,786. COLLAR FOUNDATION. AARON M. WEBER, New York, N. Y. Filed June 20, 1910. Serial No. 567,974. (Cl. 2—91.)



1. A collar foundation comprising a body portion having its edges bound, the binding at the ends of the body portion being extended beyond the end edges thereof sufficiently to permit the insertion of collar fastening pins therethrough.

2. A collar foundation comprising a body portion having its edges bound, the binding projecting beyond all the edges of the foundation sufficiently to permit the basting or stitching of a collar thereto without causing the threads to pass through the body portion of the foundation.

1,020,787. COTTON-SEED DELINTER AND GIN. PETER WHITE and JOHN SHEPARD WHITE, St. Louis, Mo. Filed Mar. 6, 1911. Serial No. 612,510. (Cl. 13—10.)



1. In a cotton seed delinter or the like, the combination with a pair of toothed rolls, of means for adjusting said rolls toward and away from each other, a toothed double concave coöperating with the said rolls to allow the passage of the seed, and means for adjusting said concave.

2. In a cotton seed delinter or the like, the combination with a pair of toothed rolls, of means for feeding material in a direction at right angles to the axis of said rolls, and other means for feeding material in the direction of the axis of said rolls.

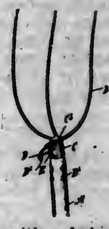
3. In a cotton seed delinter or the like, the combination with a pair of toothed rolls, of a chute adapted to deliver the cotton to said rolls in a direction at right angles to the axis of the rolls, a second chute adapted to deliver the cotton to said rolls in the direction of the axis of the rolls, and a cover for closing said first-named chute.

4. In a cotton seed delinter or the like, the combination with a pair of toothed rolls, of a float shaft for presenting the cotton to said rolls, a hopper for feeding the cotton to said float shaft, a chute, a worm for feeding the cottom from said chute in the direction of the axis of said float shaft, and a cover for closing said hopper.

5. In a cotton seed delinter or the like, the combination with a pair of toothed rolls, of a double concave arranged at one side of said rolls and coöperating therewith to allow the passage of the seed, and a float shaft arranged at the other side of said rolls.

[Claims 6 to 12 not printed in the Gazette.]

1,020,788. TWINE-CUTTER. JOHN J. ANDERSON, Franklin, Minn. Filed Sept. 18, 1911. Serial No. 649,798. (Cl. 30—14.)



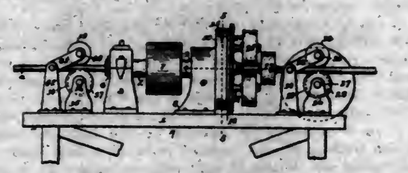
1. The combination with a fork, of a ferrule attached to the handle adjacent to the prongs thereof and provided with parallel flanges, and a cutter pivoted between the flanges of the ferrule to project at right angles from the handle with the cutting edge of its blade in direction of the outer end of the said handle, the heel of the blade having a straight portion engaging the handle to hold the blade in operative position and a rounded portion concentric with the pivot to permit the cutter to be folded longitudinally of the handle into inoperative position.

2. In combination, a forked handle, prongs attached to the handle, a ferrule engaging the handle at the inner end thereof, the ferrule being made in sections hinged together and provided at their free ends with parallel flanges, a hook-shaped cutter provided with a heel having a straight portion and a rounded portion and extending between the flanges with its straight portion abutting against the handle and the blade projecting therefrom with its cutting edge in direction of the outer end of the handle, and a bolt passing through the flanges and heel of the cutter, the rounded portion of the heel being concentric to the pivot to permit the cutter to be folded to lie longitudinally of the handle out of operative position.

1,020,789. CLEANING-MACHINE. ULYSSES S. ARMSTRONG, New Kensington, Pa. Filed Oct. 7, 1911. Serial No. 653,431. (Cl. 51—4.)

1. An apparatus for cleaning pipe or rods comprising a stationary circular rack, a revolubie disk carrying pinions for engaging with said rack to rotate the same, cleaning means connected to said pinions, and means for feeding the pipe or rod between said cleaning means to clean the same.

2. An apparatus for cleaning pipe or rods comprising a stationary circular rack, a revoluble disk having spindles through the same, pinions on one end of said spindles for engaging with said rack to rotate said spindles, cleaning means on the other end of said spindles, and means for feeding said pipe or rod between said cleaning means to clean the same.

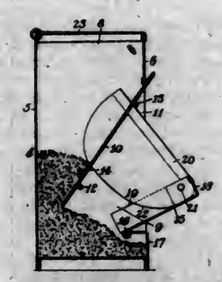


3. An apparatus for cleaning pipe or rods comprising a stationary circular rack, a revoluble disk carrying pinions for engaging with said rack to rotate the same, cleaning means connected to said pinions, means for feeding the pipe or rod between said cleaning means to clean the same, and means for adjusting the position of said cleaning means.

4. An apparatus for cleaning pipe or rods comprising a stationary circular rack, a revoluble disk carrying pinions for engaging with said rack, revoluble plates on said disk and carrying cleaning means thereon, and means for feeding the pipe or rod between said cleaning means to clean the same.

5. An apparatus for cleaning pipe or rods comprising a stationary circular rack, a revoluble disk carrying a series of adjustable plates thereon, said plates having spindles through the same and adapted to carry a gear at one end of the same for engaging with said rack to rotate said spindles, cleaning means on the other end of said spindles, and means for feeding the pipe or rod between said cleaning means to clean the same.

1,020,790. POULTRY-FEEDER. ANDREW H. BAKER, Brockton, Mass. Filed Oct. 21, 1911. Serial No. 655,838. (Cl. 119—53.)



1. A poultry feeder, having, in combination, a feed receptacle having an upper storage chamber and a lower feed chamber into which said storage chamber discharges, said feed chamber being provided with a lateral opening, and a combined tray and closure for said opening pivoted on an axis above the bottom of and within said feed chamber, said tray and closure, when in closed position, being disposed within the outer face of said receptacle and when lowered into open position projecting laterally through said opening.

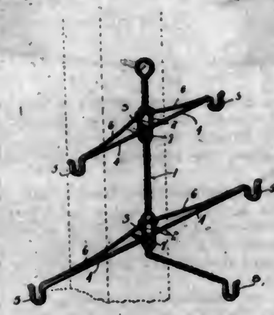
2. A poultry feeder having, in combination, a feed receptacle having an inclined partition dividing the same into an upper storage chamber and a lower feed chamber into which said storage chamber discharges, said feed chamber being provided with a lateral opening, and a combined tray and closure for said opening pivoted on an axis above the bottom of and within said feed chamber, said tray and closure, when in closed position, being disposed within the outer face of said receptacle and against said inclined wall, and when lowered into open position, projecting laterally through said opening.

3. A poultry feeder having, in combination, a feed receptacle having an upper storage chamber and a lower feed chamber into which said storage chamber discharges said feed chamber being provided with a lateral opening, and an upwardly and outwardly inclined tray pivoted at its inner portion projecting laterally from said opening and provided with an upwardly projecting marginal flange.

4. A poultry feeder having, in combination, a feed receptacle having an upper storage chamber and a lower feed chamber into which said storage chamber discharges, said feed chamber being provided with a lateral opening, a tray pivoted at its inner portion and projecting laterally from said opening and a pair of walls pivoted to the ends of said tray and extending into said feed chamber adjacent to the end walls thereof.

5. A poultry feeder having, in combination, a feed receptacle having an upper storage chamber and a lower feed chamber into which said storage chamber discharges, said feed chamber being provided with a lateral opening, a pivoted tray projecting laterally from said opening, a pair of walls pivoted to the ends of said tray and extending into said feed chamber adjacent to the end walls thereof, and means to guide said walls and rock the same on their pivots as said tray is swung from a lowered to a raised position.

1,020,791. COMBINED COAT AND HAT RACK. LUCY E. BALDWIN, Bridgman, Mich. Filed Mar. 4, 1911. Serial No. 612,373. (Cl. 45—13.)



1. A device of the character described, comprising a stem composed of two strands of twisted wires, separated at intervals along their lengths, arms forming a part of the stem and composed of two members separated from one another and providing terminal hooks, the other ends of the upper members of said arms being movably connected to the separated strands of the wires forming the stem, whereby the said arms are yieldingly attached to the stem.

2. A device of the character described comprising a stem composed of two strands of wire twisted at intervals throughout their lengths and bent to produce spaced loops, fastening means extending through said loops, arms composed of two strands, the lower of said strands being twisted to engage the fastening means whereby they are held against displacement, hooks formed upon the terminal ends of the arms, the terminals of the upper of said strands of the arms being bent to loosely surround the sides of the loops, whereby the said arms are rendered yielding throughout their entire structure, and a hook formed upon the lower terminal of the stem.

1,020,792. SUPPLEMENTAL HORSESHOE. ABRAHAM BERNSTEIN, Cincinnati, Ohio. Filed Feb. 25, 1911. Serial No. 610,896. (Cl. 168—30.)

1. A device of the character specified comprising a toe piece, a shoulder piece, arms pivotally mounted in said shoulder piece and adapted to abut against the front sides of the heel calks of a shoe, and means expansively to connect said toe piece and said shoulder piece.



2. A device of the character specified comprising a toe piece, a shoulder piece, arms pivotally mounted in said shoulder piece and adapted to abut against the front sides of the heel calks of a shoe, means expansively to connect said toe piece and said shoulder piece and for locking said toe piece and said shoulder piece in any desired relation.

3. A device of the character specified comprising a toe piece, a shoulder piece, arms pivotally mounted in said shoulder piece and adapted to abut against the front sides of the heel calks of a shoe, calks in said toe piece and said arms, and means expansively to connect said toe piece and said shoulder piece.

4. A device of the character specified comprising a toe piece, a shoulder piece, arms pivotally mounted in said shoulder piece, means expansively to connect said toe piece and said shoulder piece, and adapted to abut against the heel calks of a shoe, and laterally projecting arms on said shoulder piece.

5. A device of the character specified comprising a toe piece, a shoulder piece, arms pivotally mounted in said shoulder piece, auxiliary arms pivotally mounted on the upper side of said shoulder piece, and means expansively to connect said toe piece and said shoulder piece.

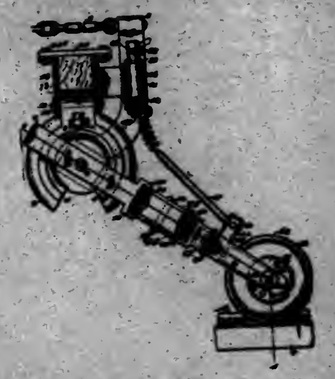
[Claims 6 to 11 not printed in the Gazette.]

1,020,793. SELF-LOCKING MAST-STEP AND FOOT-BLOCK. RICHARD HUDSON BLACKBURN, Jersey City, N. J. Filed Sept. 28, 1911. Serial No. 651,766. (Cl. 212—10.)

1. A device of the character described comprising a foot block provided with a knob having flattened portions, and a mast step provided with a compartment for receiving said knob and farther provided with edges partially overhanging said compartment, said edges being disposed oppositely to each other and spaced apart sufficiently to permit the entrance or removal of said knob relatively to said compartment when said mast step and said foot block are turned into a definite position only relatively to each other.

2. A device of the character described comprising a mast step provided with a substantially hemispherical compartment and with overhanging edges disposed upon opposite sides of said compartment, and a foot block provided with a knob, said knob being of such shape as to readily enter or leave said compartment when said mast step is turned into a definite position only in relation to said foot block.

1,020,794. TROLLEY. CHARLES A. BLUHM, Michigan City, Ind. Filed Mar. 3, 1909. Serial No. 481,067. (Cl. 191—32.)



1. A trolley comprising a support, a hollow annular rim provided with a central portion, a trolley harp and an extension on said harp, a lever connected with the extension, by the air of which the trolley harp is raised and lowered, said extension and lever pivotally secured to the central portion of the hollow annular rim, and the trolley harp extension guided in its movement up and down by the sides of the rim, the rim having an extension pivotally secured and housed in the support, and a spring housed within the hollow annular rim and pressing against a follower-head of the trolley harp.

2. A trolley comprising a support and a trolley harp pivotally connected to the support, said harp being guided by said support toward and away from the electrical conductor upon which the trolley moves and spring-actuated in one direction, the harp composed of two sections, and a spring joint pivotally connecting said sections together in a plane at right angles to the plane of movement of the trolley harp as a whole, with respect to the support, whereby the trolley is capable of universal movement, namely a rocking movement, up and down, and sidewise.

3. In a trolley the combination with a support and a hollow annular rim provided with a central portion hinged to the support, of a trolley harp pivotally connected with and guided vertically by the hollow annular rim and a spring carried by the hollow annular rim and acting upon the harp.

4. In a trolley the combination with a support and a hollow annular rim provided with a central portion hinged to the support, of a trolley harp pivotally connected with the hollow annular rim, a spring carried by the hollow annular rim and acting upon the harp, a lever secured to the harp and means secured to the lever within the control of the motorman for raising and lowering said trolley harp at will.

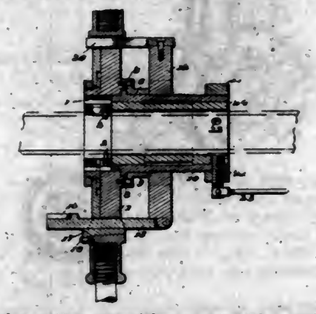
5. In a trolley the combination with a support and a hollow annular rim provided with a central portion hinged to the support, of a trolley harp pivotally connected with the hollow annular rim, a spring carried by the hollow annular rim and acting upon the harp, a lever secured to the harp, means within the control of the motorman for raising and lowering said trolley harp at will, said means comprising a lifting rod, a connection extending therefrom to the lever, a crank, and means for automatically locking the lifting rod as it is turned.

[Claims 6 to 12 not printed in the Gazette.]

1,020,795. PIPE-CUTTING TOOL. BRADFORD BORDEN, Toronto, Ontario, Canada, assignor to The Borden Company, Warren, Ohio, a Corporation of Ohio. Filed Dec. 19, 1910. Serial No. 598,007. (Cl. 81—191.)

1. A pipe cutter comprising a rotatable carrier, a series of inwardly movable pipe cutters mounted in such

carrier, a single element for simultaneously moving all of the cutters inwardly, such single element being movable with and independently of the carrier, and means rotatable with the cutter carrier and having a longitudinal movement relatively thereto for causing the independent movement of said single element to simultaneously move all the cutters inwardly toward the center of the carrier.



2. A pipe cutter comprising a rotatable carrier, a series of inwardly movable pipe cutters mounted in such carrier, a single element for simultaneously moving all of the cutters inwardly, such single element being movable with and independently of the carrier, and means for causing the independent movement of said single element to simultaneously move all the cutters inwardly, such means comprising a member having a longitudinal movement relatively to the carrier and rotatable with the latter, such member having an interlocking engagement with said single element.

3. A pipe cutter comprising a bearing designed to be fixedly secured to a pipe, a carrier rotatably mounted on said bearing, a series of radially arranged pipe cutters mounted in said carrier, a cam plate rotatable with and also relatively to said carrier for simultaneously moving all of the cutters inwardly, a member rotatable with said carrier for causing the independent rotation of said cam plate, and a support for said member rotatable on and movable longitudinally of said bearing.

4. A pipe cutter comprising a bearing designed to be fixedly secured to the pipe to be cut, a carrier rotatable on said bearing, a series of radially-arranged cutters mounted in such carrier, means for controlling the cutters, such means being rotatable with and having a movement relative to the carrier during such rotation, and a support for said controlling means, which support encircles, and is designed to travel longitudinally of, said bearing when the carrier is rotated.

5. A pipe cutter comprising a bearing designed to be fixedly secured to the pipe to be cut and having an external screw thread, a carrier rotatable on said bearing, a series of radially-arranged cutters mounted in said carrier, means for controlling the cutters, such means being rotatable with the carrier and having a movement relative thereto during such rotation, and a support for said controlling means comprising an internally threaded collar which is designed to travel on said screw thread when the carrier is rotated.

[Claims 6 to 10 not printed in the Gazette.]

1,020,796. SAFETY-RAZOR. BENNETT C. BUCK, Beardstown, Ill. Filed July 18, 1911. Serial No. 639,083. (Cl. 30—12.)



A razor comprising a head, dove-tailed ribs formed on the upper side of said head, and extending longitudinally thereof, and a double edge blade having dove-tailed grooves formed centrally in the inner side thereof, said grooves extending longitudinally of said blade and opening out through the side edges of the blade, said grooves receiving said ribs to secure the blade to the head.

1,020,797. VEHICLE WHEEL-RIM. HEINRICH BÜSSING, Brunswick, Germany. Filed Mar. 18, 1911. Serial No. 615,400. (Cl. 152—21.)



1. In a wheel, the combination with the felly, and a rim made in annular sections, one of which is adapted to be moved from said felly in the direction of the axis of the wheel, of clamping means, screw bolts passing through said felly and clamping means, and fitting plates made in conterminous sections and disposed between said clamping means and felly, the sections of the fitting plates having their outer circumferential edges adjacent the inner sides of said bolts.

2. In a wheel, the combination with the felly, and a rim made in sections one of which is adapted to be removed from said felly in the direction of the axis of the wheel, of clamping means, screw bolts passing through said felly and clamping means, sectional fitting plates disposed between said clamping means and felly the sections of the fitting plates being provided with substantially radial abutting ends and having substantially semicircular cut-out portions formed in their outer margins and coöperative with the inner sides of said bolts.

3. In a wheel the combination with the felly, and a rim made in annular sections, one of which is adapted to be removed from the felly in the direction of the axis of the wheel, of clamping plates arranged at each side of the felly, screw bolts passing through the felly and the clamping plates and fitting plates interposed between the felly and the clamping plates, the fitting plates being provided with interengaging recesses and projections and being made in sections which have radial abutting ends.

1,020,798. HUB-BRAKE. ALBERT CARLSON, Preston, Wash. Filed July 29, 1911. Serial No. 641,260. (Cl. 208—57.)



1. The combination with an axle, of a hub rotatable thereon and having a conical bore, a guide sleeve threaded on one end of the axle, a wedging cone within the hub and slidably connected with the guide sleeve for engagement in the bore in the hub, and a turning sleeve loose on the axle and having threaded connection with the wedging cone for engaging the same with and disengaging it from the wall of the conical bore in the hub.

2. The combination with an axle, of a hub rotatable thereon and having a conical bore, a guide sleeve threaded on one end of the axle, a wedging cone within the hub and slidably connected with the guide sleeve for engagement in the bore in the hub, a turning sleeve loose on the axle and having threaded connection with the wedging cone for engaging the same with and disengaging it from the wall of the conical bore in the hub, and means for holding the guide sleeve against rotation on the axle.

3. The combination with an axle, of a hub rotatable thereon and having a conical bore, a guide sleeve threaded on one end of the axle, a wedging cone within the hub and slidably connected with the guide sleeve for engagement in the bore in the hub, a turning sleeve loose on the axle and having threaded connection with the wedging cone for engaging the same with and disengaging it from the wall of the conical bore in the hub, means for holding the guide sleeve against rotation on the axle, and bearings interposed between the hub and said sleeves.

4. The combination with an axle, of a hub rotatable thereon and having a conical bore, a guide sleeve threaded on one end of the axle, a wedging cone within the hub and slidably connected with the guide sleeve for engagement in the bore in the hub, a turning sleeve loose on the axle and having threaded connection with the wedging cone for engaging the same with and disengaging it from the wall of the conical bore in the hub, means for holding the guide sleeve against rotation on the axle, bearings interposed between the hub and said sleeves, and manually controlled means operating the turning sleeve.

5. The combination with the front axle of a velocipede, of a hub rotatable thereon and having a conical bore, a guide sleeve threaded on one end of the axle, a wedging cone within the hub and slidably connected with the guide sleeve for engagement in the bore in the hub, a turning sleeve loose on the axle and having threaded connection with the wedging cone for engaging the same with and disengaging it from the wall of the conical bore in the hub, means for holding the guide sleeve against rotation on the axle, bearings interposed between the hub and said sleeves, manually controlled means operating the turning sleeve, and means locking the axle fixed in the front fork of such velocipede.

1,020,799. SAFETY-CRANK FOR EXPLOSION-ENGINES. WILLIAM R. CLARK, Muncie, Ind. Filed Dec. 10, 1910. Serial No. 596,571. (Cl. 123—185.)



1. In a safety crank for explosion engines, the combination with a crank shaft provided with clutch teeth, of a stub shaft having clutch teeth thereon for detachably engaging the clutch teeth of the crank shaft, the stub shaft being rotatably supported and having a cylindrical flange-like projection thereon, a collar supported to rotate about the stub shaft, means for enabling the projection to rotate the collar in one direction, means for preventing the collar from rotating in the opposite direction, a sleeve rotatable on the stub shaft and having a flange thereon, means enabling the flange to rotate the projection in one direction, and a hand crank secured to the sleeve.

2. In a safety crank for explosion engines, the combination with a crank shaft, of a coupling member having a socket in one end portion receiving the end of the crank shaft, said member having an external groove extending circumferentially in the opposite end portion thereof, said opposite end portion having a smooth bore and provided therein with clutch teeth, a collar rotatably mounted on said opposite end portion and covering said groove, said collar having ratchet teeth on its periphery, a guide pin screwed into said collar and extending into said groove, clutch teeth on the outer face of said collar, a support fixed adjacent to said collar, a dog mounted movably in said support, a spring seated in said support and pressing said dog into engagement with said ratchet teeth, a stub shaft extending into said bore and having a flange-like projection thereon, clutch teeth on said projection to engage the clutch teeth on the face of said collar, clutch teeth on said stub shaft for engaging the clutch teeth of said coupling member, and a hand crank for rotating said stub shaft.

3. In a safety crank for explosion engines, the combination with a fixedly supported bracket, and a coupling member rotative adjacent the bracket and provided with clutch teeth and also a smooth bore, the coupling member being adapted for connection with a crank shaft, of a collar guided rotatably on said member and having ratchet teeth thereon, a dog movably supported by said bracket adjacent said collar, a spring supported by said bracket and pressing said dog into engagement with said ratchet teeth, clutch teeth on one side of said collar, a stub shaft having a cylindrical flange-like projection thereon, said shaft extending into said bore, clutch teeth on the inner end of said shaft to engage the teeth with which said coupling member is provided, clutch teeth on the inner side of said projection opposed to the teeth on said collar, clutch teeth on the outer side of said projection, a sleeve rotative on said shaft and having a flange on one end thereof, clutch teeth on said flange opposed to the teeth on the outer side of said projection, and a hand crank secured to the opposite end portion of said sleeve.

4. In a safety crank for explosion engines, the combination with a rotatable crank shaft, and a fixed support, of a stub shaft provided with clutch devices and having a cylindrical flange-like projection thereon provided with two series of oppositely facing ratchet type clutch teeth, said teeth having flattened extremities, a coupling member connected to the crank shaft and having a bore therein receiving one end of said stub shaft, said member being provided with clutch devices to be engaged by the clutch devices on the stub shaft, a collar rotatable on said coupling member, a device coöperating with said support and said collar for detachably connecting said collar to said support, ratchet type clutch teeth on said collar having flattened extremities and opposed to one of the series of clutch teeth on said projection, a sleeve rotatable on said shaft and having a flange on one end thereof, ratchet type clutch teeth on said flange opposed to the other of the two series of teeth on said projection, and a hand crank secured to said sleeve.

1,020,800. REPAIR-HEEL. GEORGE D. COATES, Torrington, Conn. Filed Nov. 11, 1910. Serial No. 591,837. (Cl. 36—73.)



A repair attachment for overshoes comprising a tread portion gradually tapering from one end to the other to form a thin attaching edge, a counter integral with the tread portion, a reinforcing band on the counter extending from the tread portion to a point midway of the height of the counter and merging into the latter, said counter having a thin attaching edge and said band tapering at its ends to merge into the counter, and a reinforcement joined to the counter and tread inside the form and tapering at its inner side edges and ends so as to merge into the tread and into the tread attaching edge.

1,020,801. COATING COMPOUND. THOMAS EDWARD CONWAY, Galena, Kans. Filed Aug. 3, 1910. Serial No. 575,876. (Cl. 134—51.)

The herein-described composition of matter for coating and filling the pores of conduits, pipes, mains or the like, consisting of iron sesquioxid 2.57%; lead carbonate 10.74%; zinc oxid 8.86%; copper oxid 8.12%; and ordinary commercial pitch 70.21%, forming a water, acid and alkali-proof, electric-insulating compound thick and incapable of being spread at normal temperature, adapted

to be thinned at high temperature and of a consistence and degree of refractability requiring both it and the article to be heated in the coating process, substantially as described.

1,020,802. MOVEMENT-RETARDING DEVICE FOR RAILS. AUGUST COSTA, Wyncote, Pa., assignor to William Wharton, Jr., & Company, Incorporated, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Nov. 23, 1908. Serial No. 464,154. (Cl. 104—12.)



1. The combination in a switch structure of a movable rail; a spring placed to allow the rail to move and capable of returning it to its normal position; a cylinder containing liquid; a piston therein connected to the rail, there being ports so arranged that the piston is capable of moving freely from either end of the cylinder to substantially the middle thereof, is capable of moving freely in one direction from the middle of the cylinder toward one end thereof, and is retarded when moved in the opposite direction from substantially the middle of the cylinder toward the other end thereof.

2. The combination in a track structure, of a movable rail, a spring for returning the rail to its normal position, a cylinder, a piston in the cylinder, a rod connected to the piston and extending through the cylinder, with means for connecting the piston with the movable rail, a by-pass in the casing of the cylinder, a valve in the by-pass, a port in the piston, a valve adapted to close said port, so that on movement in one direction the liquid will flow through the port in the piston, and on movement in the opposite direction it will flow through the by-pass, retarding the return movement of the rail.

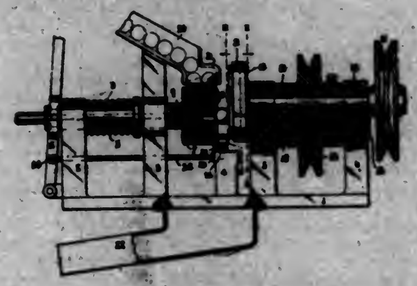
3. The combination in a switch of two movable switch rails; means for shifting said rails; a spring for normally holding the rails in a predetermined position; two cylinders containing liquid; a piston having a port in each cylinder; piston rods respectively connecting the movable rails to the pistons; valves for the ports of the pistons; there being a by-pass extending from the rear end of each cylinder to a point near the opposite end thereof; and valves for said by-passes; said parts being arranged so that one cylinder and its associated parts retards movement of the switch points from their middle positions in one direction, and the other cylinder and its associated parts retards movement of said switch points from the middle position in the other direction.

4. The combination in a switch structure, of two fixed rails, two movable rails, a spring for returning the movable rails to their normal position against either one of the fixed rails, two fixed cylinders, a piston in each cylinder, a piston rod for each piston, said piston rods being connected to the movable switch rails, each cylinder having a by-pass and a valve in the by-pass, and each cylinder having longitudinal channels at its forward end, the pistons having ports therein and valves closing the ports, ports being so arranged that the liquid in both cylinders will flow freely when the pistons are moved in one direction and when the pistons are moved in the opposite direction the liquid will be wire drawn in one cylinder and will freely flow in the other cylinder.

5. The combination in a switch structure of a movable rail; a spring placed to allow the rail to move from and capable of returning it to its normal position; a cylinder containing liquid; a piston therein connected to the rail; there being ports to permit passage of the liquid from one part of the cylinder to the other; and flow controlling means for the ports arranged to permit the piston to move freely from either end of the cylinder to substantially the middle thereof and retard said piston when it is moved in one direction from the middle of the cylinder toward one end thereof.

[Claims 6 and 7 not printed in the Gazette.]

1,020,803. MACHINE FOR GRINDING BALLS OR SPHERES. LOUIS J. CRECELIUS, St. Louis, Mo., assignor to Charles A. Thompson, St. Louis, Mo. Filed Oct. 24, 1910, Serial No. 588,612. Renewed Aug. 17, 1911. Serial No. 644,715. (Cl. 51—4.)



1. In a ball grinding machine, a grinding member, and means whereby a ball to be ground has a universal movement automatically imparted to it while held in contact at a fixed point with said grinding member.

2. In a ball grinding machine, a stationary grinding member, and rotatable means whereby a ball to be ground has a universal movement automatically imparted to it while held in contact at a fixed point with said grinding member.

3. In a ball grinding machine, a grinding member, and means for holding a ball to be ground against said grinding member at a fixed point and automatically imparting a universal movement to the ball while it is so held.

4. In a ball grinding machine, a grinding member on which a ball to be ground is held, and a presser member for holding the ball at a fixed point relative to the face of said grinding member; said presser member being rotatably mounted to provide for a gyratory movement thereof relative to the point at which the ball is held.

5. In a ball grinding machine, a grinding member adapted to hold a ball to be ground, a rotatable presser member opposing said grinding member and adapted to engage said ball, means for rotating said presser member, and means for moving said presser member whereby its axis may be moved around the point at which the ball is supported.

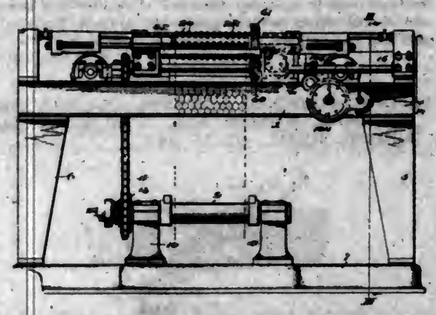
[Claims 6 to 11 not printed in the Gazette.]

1,020,804. TIRE. SAMUEL A. DEATHERAGE, Richmond, Ky. Filed Mar. 29, 1911. Serial No. 617,709. (Cl. 152—8.)



A tire comprising a plurality of sections having overlapping ends connected to the felly of a wheel, the said sections being bent to form a peripherally extending groove and terminating in diverging flanges, a tread for attachment to the said sections and positioned in the said groove, a band mounted to engage the said diverging flanges, a bumper secured to the said band, a second bumper secured adjacent the overlapping ends of the said sections, a spring having its ends encircling the said bumpers and a second spring secured to the first mentioned bumper and extended therefrom with the free end thereof in engagement with the said second mentioned bumper.

1,020,805. MACHINE FOR MAKING WIRE-NETTING. HARRY A. DEUEL, Pueblo, Colo. Filed Mar. 3, 1911. Serial No. 612,064. (Cl. 140—6.)



1. A machine for weaving wire mesh fabric, comprising a rotary weaving head or drum, a plurality of longitudinal rows of coilers carried by said drum and equally spaced about the periphery thereof, a stationary cross-head parallel with the axis of said drum, twister heads mounted in bearings in said cross-head in staggered relation with said coilers, each twister having a pair of diverging tubular guide fingers which feed wire strands to the adjacent coiler upon either side, means for rotating said drum at a uniform rate, and means for simultaneously rotating said coilers and said twister heads upon their axes intermittently.

2. A machine for weaving wire mesh fabric, comprising a rotary weaving head or drum, a plurality of longitudinal rows of coilers carried by said drum and equally spaced about the periphery thereof, a stationary cross-head parallel with the axis of said drum, twister heads mounted in bearings in said cross-head in staggered relation with said coilers, each twister having a pair of diverging tubular guide fingers which feed wire strands to the adjacent coiler upon either side, said coilers and said twisters being provided with pinions, means for rotating said drum at a uniform rate, rack-bars reciprocable within said drum and said cross-head respectively and in mesh with said pinions, and means for intermittently operating said rack-bars in unison.

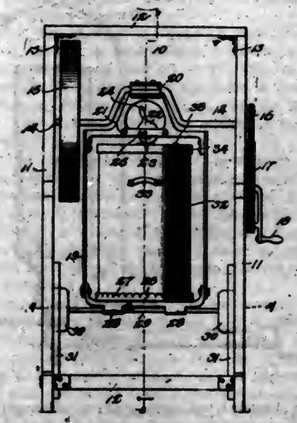
3. A machine for weaving wire netting or fabric, comprising a plurality of twisters carried by a stationary cross-head, a plurality of slotted coilers located in advance of the twisters, means for intermittently and simultaneously rotating the twisters and the coilers upon their axes, and means for continuously advancing the fabric at a uniform rate.

4. A machine for weaving wire netting or fabric, comprising a plurality of twisters carried by a stationary cross-head, a plurality of slotted coilers located in advance of the twisters and in staggered relation thereto, means for axially rotating the twisters, means for axially rotating the coilers simultaneously with the twisters, and means for continuously advancing the fabric at a uniform rate.

5. A machine for weaving wire netting or fabric, comprising a plurality of twisters, a plurality of slotted coilers located in advance of the twisters, a stationary cross-head for mounting the twisters, a revoluble weaving head carrying the coilers, separate means for axially rotating the twisters and the coilers in unison, and means for continuously advancing the fabric at a uniform rate.

[Claims 6 to 9 not printed in the Gazette.]

1,020,806. CHURN. WALTER J. DEVINE, Monument, Kans. Filed Mar. 25, 1911. Serial No. 616,914. (Cl. 31—18.)



1. In a churn the combination of a churn frame, a can frame mounted on the churn frame, a corrugated base on the can frame, a can mounted on the said base, a cover for removable attachment to the said can, a plate secured to the upper side of the said cover and adapted to be engaged by the said can to hold the said can in position on the said can frame and means mounted on the said churn frame for imparting a reciprocating movement to the said can frame.

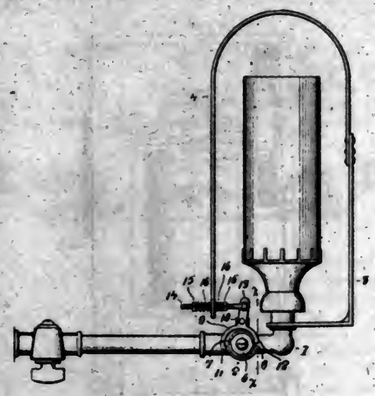
2. A churn comprising a churn frame, a crank shaft mounted on the said churn frame, a fly wheel keyed to one end of the said crank shaft, a can frame dependingly mounted on the said crank shaft, guides formed on the said churn frame, a plurality of slides extended from the lower end of the said can frame and adapted to slide in the guides of the said churn frame, a corrugated base formed on the said can frame, a can mounted to rest on the said base, a cover for the said can, a plate secured to the said cover and adapted to extend into the said can for receiving the deposit thereof, a cam mounted on the said can frame and engaging the said cover to hold the said can in position on the said can frame and means for connection with the said crank shaft to impart a reciprocating movement to the said can frame.

1,020,807. SAFETY GAS-COCK. BERNARD DEVLIN, Jersey City, N. J. Filed Sept. 30, 1911. Serial No. 652,949. (Cl. 67—117.)

1. A safety gas cock comprising a body, a plug valve rotatably mounted in the body for controlling the flow of gas therethrough, a spring normally exerting a pressure upon the plug valve to hold the same in closed position, a controlling disk connected with the plug valve to turn therewith and provided at opposite points with stops, a lever having pallets to engage the stops of the controlling disk, a thermostat arranged to be heated by the flame resulting from burning the gas controlled in its flow by the said gas cock, a threaded rod having pivotal connection with the lever and passing loosely through an opening of the thermostat, and set nuts mounted upon the threaded rod upon opposite sides of the thermostat.

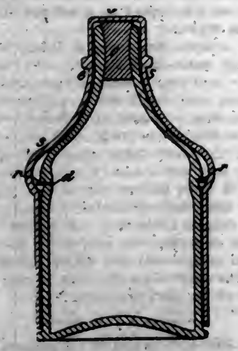
2. A safety gas cock comprising a body, a plug valve rotatably mounted in the body for controlling the flow of gas therethrough, a spring normally exerting a pressure upon the plug valve to hold the same in closed position, a controlling disk connected with the plug valve to turn therewith and provided at opposite points with stops, a lever having pallets to engage the stops of the controlling disk, a thermostat arranged to be heated by the flame resulting from burning the gas controlled in

its flow by the said gas cock, a threaded rod having pivotal connection with the lever and passing loosely through an opening of the thermostat, set nuts mounted



upon the threaded rod upon opposite sides of the thermostat, and springs mounted upon the threaded rod and interposed between the set nuts and the thermostat.

1,020,808. BOTTLE AND STOPPER. FREDERICK WILLIAM DUPWA, Mexico, Mexico. Filed Apr. 27, 1910. Serial No. 557,907. (Cl. 215—12.)



1. In combination, a bottle, a groove on said bottle having an opening to the interior thereof, a breakable cap arranged over said groove, and means fitted in the groove to prevent removal of the cap in one piece, whereby an attempt to destroy the retaining means by chemicals will result in destruction of the contents of the bottle.

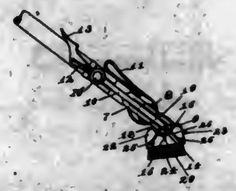
2. In combination, a bottle, a groove on said bottle having an opening to the interior thereof, a stopper for said bottle, a breakable cap arranged over said stopper and said groove, and means fitted in said groove to prevent removal of said cap in one piece.

3. In combination, a bottle, a stopper therefor, a horizontal groove on said bottle, a horizontal concave zone on said bottle below said groove, an elastic ring retained in said groove, and a breakable cap positioned over said stopper and said groove, said elastic ring being adapted to be deflected downwardly in the concave zone to allow the positioning of the cap and also being adapted to prevent the removal of the cap in one piece after the cap is once in position.

4. In combination, a bottle, a stopper therefor, a horizontal groove on said bottle, a horizontal concave zone on said bottle below said groove, an elastic ring retained in said groove, a breakable cap arranged over said stopper and said groove, an enlarged internal zone in said cap arranged to inclose said groove, and a horizontal zone on said bottle below said concave zone and of substantially the same diameter as the internal diameter of the cap, said elastic ring being adapted to be deflected downwardly in the concave zone to allow the positioning of the cap and also being adapted to prevent the removal of the cap in one piece after the cap is once in position.

5. In combination, a bottle, a stopper therefor, a groove on said bottle having an opening to the interior thereof, a breakable cap arranged over said stopper, an enlarged internal zone in said cap arranged to inclose said groove, and means fitted in said groove to prevent removal of said cap in one piece.

1,020,809. COMBINED SCRUBBER AND MOP. WILFRED DUPRÉ, Worcester, Mass. Filed Mar. 4, 1911. Serial No. 612,333. (Cl. 15—44.)

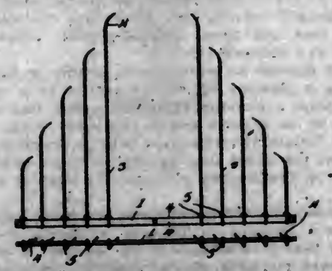


1. In combination with a mop holder and mop, wringer rollers, a frame having bearings for the rollers, a plate having flanges, a brush having a slot to receive one of the flanges, said bearings being engaged by certain other of said flanges, and means coacting with the brush engaging flange for holding the brush in operative relation to the frame.

2. In a scrubbing device, a frame, said frame carrying a mop and having rollers for wringing the mop, a flanged plate secured to the frame, a brush having a head provided with a recess in which the plate and one of the rollers are seated, the said head having a slot in which one of the flanges is seated, and means for holding the brush and the plate in united relation.

3. In a scrubbing device, a frame, said frame carrying a mop and rollers for wringing the mop, a plate secured to the frame, said plate having its ends turned at an angle to its intermediate portion, flanges on the turned ends of the plate adapted to engage the frame, flanges on the intermediate portion of the plate, a brush having a slot to receive one of the intermediate flanges, and means for detachably securing the brush in fixed relation to the brush-engaging flange.

1,020,810. WINDROW ATTACHMENT FOR MOWING-MACHINES. PHEBE A. EARLES, Roosevelt, Okla. Filed Dec. 27, 1910. Serial No. 599,331. (Cl. 56—128.)



1. A windrow attachment for mowing machines consisting of a straight bar of rectangular cross section, a plurality of drag arms connected therewith, said drag arms consisting of substantially straight rods provided at their front ends with loops twisted around and engaging the bar, and said arms provided at their rear ends with terminal upturned obliquely disposed teeth.

2. A windrow attachment for mowing machines consisting of a bar of rectangular cross section adapted to be connected with the sickle bar, and two sets of rearwardly extending substantially straight drag arms so placed as to form a space between the sets; said sets being secured respectively adjacent to the ends of said bar, said arms being provided at their front ends with loops twisted around the rectangular bar and thereby held against vertical displacement, and said arms being provided at their rear ends with upturned obliquely disposed teeth extending inwardly in the direction of the space intermediate the two sets of arms.

1,020,811. BUCKLE-GUARD. ELMER J. ELM, Funk, Nebr., assignor of one-half to Gustavus A. Nelson, Axtell, Nebr. Filed June 23, 1911. Serial No. 634,852. (Cl. 24—175.)

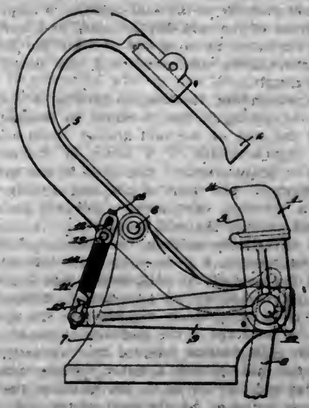


1. A buckle guard for harness straps, comprising two members intermediately and longitudinally hinged whereby to turn one on the other and provided at their ends with sectional loops adapted to open to engage the strap on opposite ends of the buckle, and to close to hold the guard in position on the strap and over the buckle.

2. A buckle guard for harness straps, comprising two members having longitudinal hinged portions for the members to swing into open and closed position, sectional loops on the ends of the members for engagement with the strap, and a spaced guard portion at each end for receiving the point of the buckle tongue and connecting the ends of the hinged portions with the said loops.

3. A buckle guard made of two pieces of spring wire twisted together at the middle to form a longitudinal hinge, spaced parallel guard members at the ends of the hinge for receiving between them the point of the buckle tongue, and sectional loops on the ends of the guard members and adapted to open and close for engagement with and removal from the buckle straps.

1,020,812. SHOE-TURNING MACHINE. ANDREW EPPLER, Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Jan. 29, 1910. Serial No. 540,752. (Cl. 12—57.)



1. A machine for turning the rear or counter portion of a turn shoe, having, in combination, a hollow form over which the shoe is turned, and a plunger movable into and out of the form, said form being yieldingly movable laterally away from the plunger as it passes within the form during the turning operation to relieve the strain on the upper, substantially as described.

2. A machine for turning the rear or counter portion of a turn shoe, having, in combination, a pivotally mounted support, a form thereon over which the shoe is turned, a plunger movable into and out of the form, a lever upon which the plunger is mounted, and a yielding link connecting the lever and the pivotally mounted form support, substantially as described.

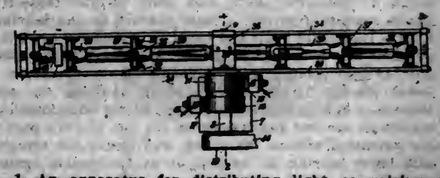
3. A machine for turning the rear or counter portion of a turn shoe, having, in combination, a pivotally mounted support, a form thereon over which the shoe it turned, a plunger movable into and out of the form, a lever upon which the plunger is mounted, a yielding link connecting the lever and the pivotally mounted form support, and means to limit the amount of yielding movement, substantially as described.

4. A machine for turning the rear or counter portion of a turn shoe, having, in combination, a pivotally mounted support, a form mounted thereon over which the shoe is turned, a plunger movable into and out of the form, an operating lever for the plunger, and a link pivotally connected at one end to the form support and loosely connected at its other end to the operating lever, and yielding means normally holding the link in a position relative to the operating lever to at times permit a movement of the form away from the plunger, substantially as described.

5. A machine for turning the rear or counter portion of a turn shoe, having, in combination, a hollow form and a plunger coöperating with the walls thereof to turn the shoe, and means permitting a yielding, relative, lateral, bodily movement between the form as a whole and plunger, normally inactive and brought into operation only by a binding of the work upon the form, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,020,813. MECHANISM FOR DIFFUSING LIGHT. VICTOR EMANUEL ESLON, Tacoma, Wash., assignor of one-half to Carl Olsen, Tacoma, Wash. Filed Aug. 2, 1911. Serial No. 641,894. (Cl. 240—49.)



1. An apparatus for distributing light comprising a revoluble frame, and a plurality of lamps carried thereby, said lamps being so spaced from the center of rotation as to form illuminated zones merging into each other so as to form a continuous illuminating surface.

2. A mechanism for diffusing light comprising a revoluble frame, and a plurality of elongated illuminating members mounted thereupon, each of said illuminating members extending in a direction crossing its general direction of rotation for the purpose of producing apparently an illuminating zone of considerable width, said illuminating members being so distributed as to cause one zone to merge into another, thus producing a continuous illuminating surface.

3. A mechanism for diffusing light comprising a plurality of arms arranged in pairs and spaced apart, means for connecting said arms together in the form of a framework, mechanism for turning said framework, a plurality of plates disposed between different pairs of said arms and thus caused to brace said framework, lamp receptacles mounted upon said plates, incandescent lamp bulbs mounted within said receptacles, and means for supplying current to said lamp receptacles and said bulbs.

4. An apparatus for diffusing light comprising a revoluble framework, lamps mounted thereupon, the said lamps being spaced at unequal distances from the center of rotation and arranged to form illuminating zones merging into each other, and a weight carried by said framework and adjustable relatively thereto for the purpose of steadying the rotation thereof.

5. A mechanism for diffusing light, comprising a revoluble framework, a plurality of lamp sockets carried thereby, a weight fitted into one of said lamp sockets, electric lamp bulbs mounted in the other lamp sockets, the lamps being located at unequal distances from the center of rotation of said framework, and the said weight balancing said lamps and thus steadying the rotation of said framework, means for distributing currents to the lamp sockets carrying the lamp bulbs while said framework is turned, and means for turning said framework.

[Claim 6 not printed in the Gazette.]

1,020,814. CREAM-SEPARATOR AND CHURN. ALPHEUS FAY, Louisville, Ky. Filed Dec. 26, 1911. Serial No. 667,781. (Cl. 31—42.)



1. In a device of the character described, an upright shaft, a transverse shaft, and gears on the respective shafts meshing together, a main bracket having bearings for the transverse shaft and having a downward extension adjacent to the upright shaft and a bearing for the upper part of said upright shaft, a shank on the extension, a lower bearing for the upright shaft, abutting the gear thereon, a hub on said lower bearing fitting on said shank, removable spacing means between the hub and the part of the extension around the shank, and means for securing said lower bearing, by its hub, on said extension against said spacing means, substantially as and for the purposes set forth.

2. In a device of the character described, a bracket, an extension thereon and a shank on the extension of circular cross-section, a detachable bearing comprising a hub with an opening to fit on the shank, removable spacing means between the hub and the extension around the shank, a straight-faced lug on the extension, and an extension on the hub having a straight face to engage with the lug and prevent turning of the detachable bearing, and means for securing said bearing and said bracket together.

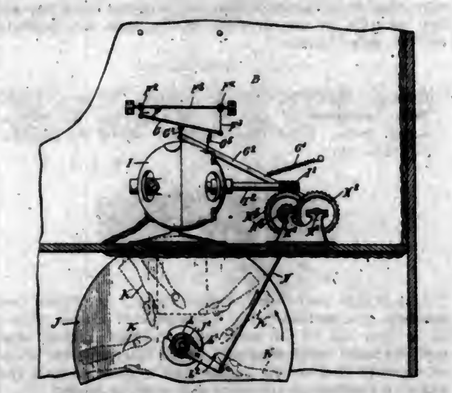
3. In a device of the character described, as a new article of manufacture, a detachable bearing comprising the bearing proper, a hub with an opening of circular cross-section, an arm joining the bearing proper and the hub, and an extension on the hub having a straight face toward the opening, for the purposes set forth.

4. In a device of the character described, a hollow agitator with a plane top and a plane bottom, alternating closed and open sides, and means for adjusting the distance between the top and bottom, thereby adjusting the areas of said open and closed sides, for the purposes described.

5. In a device of the character described, a hollow agitator comprising a plane top and a plane bottom, and alternating closed and open sides between said top and bottom, the openings of said open sides being polygonal.

[Claims 6 to 18 not printed in the Gazette.]

1,020,815. ADVERTISING MEDIUM. GEORGE T. FIELDING, Jr., New York, N. Y. Filed Aug. 4, 1911. Serial No. 642,406. (Cl. 46—37.)



1. An advertising medium, comprising coacting members, of which one is provided with a representation of a series of different articles to be successively displayed, the second member having a movable part normally covering the reperesentation to be displayed at a time and adapted to be moved to uncover the said representation to display the same, the said representation when uncovered forming with the second member a unit.

2. An advertising medium, comprising coacting members, of which one rotates intermittently and is provided with a representation of a series of different articles to be successively displayed, the second member having a reciprocating part alternately covering and uncovering the representation in display position at a time, the said representation when uncovered forming with the second member a unit.

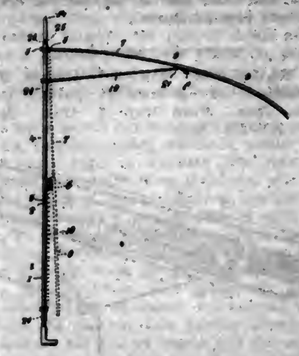
3. An advertising medium, comprising a display board having an opening, an intermittently moving member in the rear of the said display board and provided with a representation of a series of different articles adapted to appear successively in the said opening, a display member on the front of the said display board and having a movable part adapted to cover and uncover the said opening, the representation uncovered and the display member forming a unit.

4. An advertising medium, comprising a display board having an opening, a disk mounted to intermittently revolve at the rear of the said display board and provided with a representation of a series of different articles adapted to be successively displayed in the said opening, and a figure on the front of the said display board and having a movable skirt portion adapted to alternately cover and uncover the said opening.

5. An advertising medium, comprising a display board having an opening, a disk mounted to intermittently revolve at the rear of the said display board and provided with a representation of a series of different articles adapted to be successively displayed in the said opening, a figure on the front of the said display board and having a movable skirt portion adapted to alternately cover and uncover the said opening, a motor, means actuated by the said motor and controlling the movement of the said skirt, and means actuated by the said motor and controlling the intermittent revolving motion of the disk.

[Claims 6 to 10 not printed in the Gazette.]

1,020,816. UMBRELLA. ELBA F. FINK, Niles, Mich. Filed May 10, 1911. Serial No. 626,152. (Cl. 135—26.)



1. In an umbrella, the combination with a stick and a runner thereon, of a notched collar or ring carried by the stick, a plurality of upper rib members connected to said ring or collar, each upper rib member having a recess therein, a plurality of lower tubular rib sections semi-cylindrical in form and adapted to telescope the first-mentioned rib sections, each of said lower rib sections having an opening therein adapted to be brought into alinement with the recess with the companion of the upper rib section, a catch pivotally mounted on each lower rib section, said catch comprising a body portion formed to a plate carrying a stud adapted to pass through the opening in the lower rib section and into the recess in the alining rib section, the plate of the catch having a grooved member formed integral and at an angle therewith, a spring normally pressing against the grooved member to force the pin into locking engagement with the rib sections, and braces extending from the runner on the stick and connected to the lower rib sections adapted to contact with the grooved members of the catches to throw the latter out of locking engagement.

2. In an umbrella, the combination with a stick and a runner thereon, of a lower rib section having an opening therein and an upper rib section telescoping in the lower rib section, the upper rib section having a recess therein adapted to be brought into alinement with the opening in the lower rib section, a brace rod connected to the runner and to the lower rib section, and means for locking the two rib sections together comprising a catch pivoted to the lower rib section and having a plate provided with a locking member adapted to project through the opening in the lower rib section and into the recess in the upper rib section and locking the two sections together, a semi-cylindrical hollow member carried by the plate on the opposite side from the locking member and adapted to be contacted with by the brace to release the rib sections from locking engagement, and tension means normally holding the catch in locking position.

1,020,817. SHADE-ROLLER APPLIANCE. HARVEY FORNELIUS, Athenia, N. J. Filed Aug. 10, 1911. Serial No. 643,333. (Cl. 156—34.)

1. In combination with a roller and a spring for winding it up, a looped cord in engagement with the spindle of the roller, there being a spring in engagement with one end of the cord for holding it close to the spindle, and other means engaging the spring whereby movement of the spring will release the tension on the cord, thereby permitting the roller to turn.

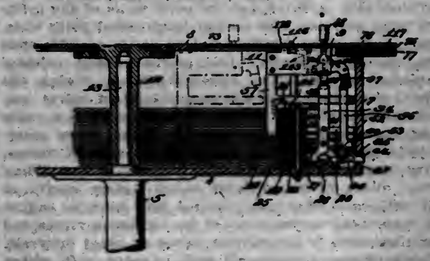
2. In combination with a roller and a spring for winding it, another spring having a cord secured thereto and engaging the spindle of the roller for holding it against rotation in any position, and a cord engaging the spring for moving it in order to permit the first cord to be loosened thereon, whereby the roller may turn.

3. As a new article of manufacture, a casing having a spindle therein, the spindle being adapted for engagement with a shade roller, a spring engaging the casing and also the spindle whereby the roller may be wound up, together with a cord within the casing and engaging the spindle for holding the spindle against turning.



4. As a new article of manufacture, a casing containing a spindle rotatably mounted therein, the spindle being adapted for connection with a shade roller, a spring within the casing and engaging the spindle and adapted to wind up the roller, a cord having a portion thereof wrapped around the spindle in order to hold it against rotation in any position, resilient means maintaining the cord in such engagement, and other means for moving the resilient means whereby the cord may be released and the spindle may turn.

1,020,818. ELECTRICAL SWITCH MEANS. HARRY L. FURR, Harrisonburg, Va. Filed Mar. 25, 1909. Serial No. 485,701. (Cl. 179—91.)



1. A switch means involving a multiple contact means comprising a plurality of superposed conducting elements, electrical connections, and a carrier movable adjacent to said multiple contact means and holding a plurality of independently shiftable circuit making elements which are movable outwardly from the carrier to engage with the multiple contact means and electrical connections and inwardly into the carrier when not in use, the said elements being arranged as coöperating dual groups, and each dual group caused to engage the same conducting elements of the multiple contact means.

2. A switch means involving pairs of conducting elements having electrical devices coöperating therewith, and a carrier movable with relation to the said conducting elements and electrical devices and having a plurality of circuit making elements independently shiftable outwardly from the carrier and operable in dual groups, each group engaging the same conducting elements, the dual groups of the circuit making elements varying in proportions to cause them to engage different conducting elements.

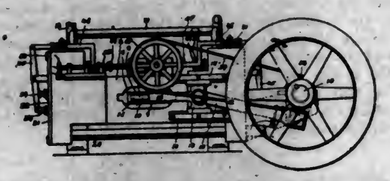
3. A switch means involving pairs of superposed conducting elements having corresponding electrical devices coöperating therewith, and a carrier freely movable with relation to said conducting elements and electrical devices and having a plurality of shiftable circuit making elements arranged in dual groups of different proportions and movable outwardly from the carrier, each dual group of circuit making elements engaging the same pair of conducting elements and corresponding electrical devices.

4. A switch means involving multiple contact means embodying a plurality of conducting elements and a movable carrier having a plurality of shiftable circuit making elements freely movable to clear the carrier and operable to electrically connect the same in dual groups, each independent group always engaging the same pair of conducting elements of said multiple contact means.

5. A switch means involving a movable support, a plurality of shiftable circuit making elements carried by the support and movable clear of the latter, and a multiple contact means having superposed longitudinally extending pairs of contact members over which the circuit making elements are shiftable to permit pairs of the said elements to engage the same pairs of members.

[Claims 6 to 48 not printed in the Gazette.]

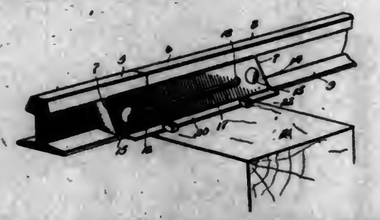
1,020,819. EXPLOSIVE-ENGINE. ANDERS HANSON, Butler, S. D. Filed Dec. 17, 1910. Serial No. 597,806. (Cl. 123—57.)



1. An engine of the character described embodying a pair of parallel cylinders separated by an intervening partition, said partition and the outer walls of the cylinders being provided with central longitudinal guide slots, each cylinder being further provided at its opposite ends with explosion chambers and admission and exhaust chambers communicating therewith, heads closing the ends of the cylinders, admission and exhaust valves controlling communication between the cylinders and the sets of admission and exhaust chambers, sliding stems carrying said valves, operating stems for the exhaust valves, levers connecting said operating stems with the sliding carrier stems of the exhaust valves, rotary shafts in gear with each other and provided with cams to engage and operate the carrier stems of the admission valves and operating stems of the exhaust valves at timed intervals, a double piston operating in each cylinder, each piston comprising a pair of heads and a connecting stem, guides upon the outer sides of the cylinders, a crank shaft, a bar carried by the piston stems and extending through the said guide slots in the partition and outer walls of the cylinders, cross heads movable in said guides in the outer sides of the cylinders, connecting rods between the cross heads and crank shaft, and connections between the cross heads and the projecting ends of the bar.

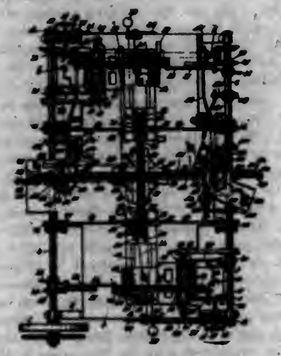
2. An engine of the character described comprising a pair of cylinders having explosion chambers at each end thereof, duplex pistons operating in said cylinders and connected for movement in unison, admission valves at the ends of the cylinders, operating stems directly connected with said valves, exhaust valves at the ends of the cylinders, levers connected with said exhaust valves, operating stems connected with the levers, springs acting upon the operating stems of the admission and exhaust valves for normally holding said valves closed, a pair of parallel shafts geared to rotate in unison, cams carried by the respective shafts for shifting the operating rods of the valves at the opposite ends of the cylinders to open said valves against the resistance of their springs, a crank shaft, connections between the pistons and the crank shaft, and drive gearing between the crank shaft and one of said parallel shafts.

1,020,820. RAIL-JOINT. SAMUEL L. HARRIS, Knoxville, Tenn., assignor of one-third to Nathan Dunsmore, Knoxville, Tenn. Filed May 17, 1911. Serial No. 627,733. (Cl. 239—8.)



In a rail joint, the combination of the meeting rail ends having portions of their webs thickened so that the outer faces of the thickened portions are coincident with the edges of the treads and base flanges one of said ends being reduced in height and recessed, and the other undercut and adapted to be received by the recessed portion of the first-named end, fish plates on the opposite faces of the thickened portions, and U-shaped bolts passing through said fish plates and thickened portions.

1,020,821. MACHINE FOR AUTOMATICALLY MAKING PAPER PACKETS. OTTO HESSER, Stuttgart-Cannstatt, Germany. Filed May 6, 1909. Serial No. 494,395. (Cl. 93—12.)



1. In a machine for automatically making packets open at one end, rotating folding mandrels, means for feeding sheets of paper lying in separate piles from two sides simultaneously to said folding mandrels, said means for feeding the sheets of paper separately, comprising a pasting apparatus having a pasting member with means for operating it to engage a sheet, and a carriage for conveying the sheets to the mandrels, folding devices which first fold from the first sheet the inner packet on one of the mandrels, then fold over this packet the second sheet for the outer packet, and an ejector for ejecting the finished packet from the mandrel.

2. In a machine for automatically making packets open at one end, rotating folding mandrels, means for feeding sheets of paper lying in separate piles from two sides simultaneously to said folding mandrels, said means for feeding the sheets of paper separately, comprising a pasting apparatus having a pasting member with means for operating it to engage a sheet, a carriage for conveying the sheets to the mandrels, folding devices which

first fold from the first sheet the inner packet on one of the mandrels, then fold over this packet the second sheet for the outer packet, an ejector for ejecting the finishing packet from the mandrel, said pasting member being arranged between the pile of sheets and the carriage, and a pasting roller over which the pasting member passes on its return to the sheet pile, and means for covering said roller during the outward passage of said member.

3. In a machine for automatically making packets open at one end, rotating folding mandrels, means for feeding sheets of paper lying in separate piles from two sides simultaneously to said folding mandrels, said means for feeding the sheets of paper separately, comprising a pasting apparatus having a pasting member with means for operating it to engage a sheet, a carriage for conveying the sheets to the mandrels, folding devices which first fold from the first sheet the inner packet on one of the mandrels, then fold over this packet the second sheet for the outer packet, an ejector for ejecting the finished packet from the mandrel, said pasting member being arranged between the pile of sheets and the carriage, and a pasting roller over which the pasting member passes on its return to the sheet pile, and a bar arranged on an axis parallel to the pasting roller, and means for rocking said bar to cover the pasting roller during the outward passage of the pasting member.

4. In a machine for automatically making packets open at one end, rotating folding mandrels, means for feeding sheets of paper lying in separate piles from two sides simultaneously to said folding mandrels, said means for feeding the sheets of paper separately, comprising a pasting apparatus having a pasting member with means for operating it to engage a sheet, a carriage for conveying the sheets to the mandrels, folding devices which first fold from the first sheet the inner packet on one of the mandrels, then fold over this packet the second sheet for the outer packet, an ejector for ejecting the finished packet from the mandrel, and a rising folding box, the folding devices being directly mounted thereon.

5. In a machine for automatically making packets open at one end, rotating folding mandrels, means for feeding sheets of paper lying in separate piles from two sides simultaneously to said folding mandrels, said means for feeding the sheets of paper separately, comprising a pasting apparatus having a pasting member with means for operating it to engage a sheet, a carriage for conveying the sheets to the mandrels, folding devices which first fold from the first sheet the inner packet on one of the mandrels, then fold over this packet the second sheet for the outer packet, an ejector for ejecting the finished packet from the mandrel, a rising folding box, the folding devices being directly mounted thereon, and means for causing the action of the folding devices only when the box is completely raised.

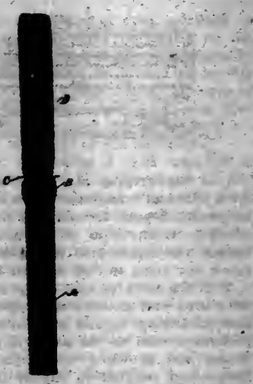
[Claims 6 and 7 not printed in the Gazette.]

1,020,822. STOCKING. MAX ANTON HEYDE, New York, N. Y., assignor to Solon E. Summerfield, New York, N. Y. Filed Apr. 27, 1911. Serial No. 623,591. (Cl. 66—4.)

1. A knitted tubular fabric, comprising a body, a body welt at the upper end of the said body, a top welt, and barrier stitches uniting the said body and top welts with each other, the said barrier stitches being interlooped with the top stitches of the body welt and with the lower courses of the top welt.

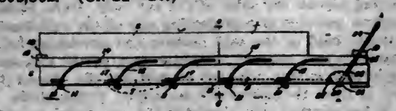
2. A knitted tubular fabric, comprising a narrow body welt at the upper end of the said body, a wide top welt, and barrier stitches uniting the said body welt with the said top welt, the said barrier stitches being interlooped with the top course of stitches of the said narrow body welt and with the lowermost front and rear stitches of the said wide top welt.

3. A knitted stocking, comprising a body, a narrow body welt at the upper end of the body, a wide top welt, and a course of barrier stitches uniting the said welts, the stitches being interlooped with one course of stitches of one of the said welts and with a plurality of courses of stitches of the other welt.



4. A knitted stocking, comprising a body, a narrow body welt at the upper end of the body and united therewith by a course of stitches interlooped with two courses of stitches of the said body, a wide top welt, and a course of barrier stitches uniting the said welts, the barrier stitches being interlooped with one course of stitches of one of the said welts and with a plurality of courses of stitches of the other welt.

1,020,823. DUMPING-WAGON. GEORGE W. HOLLAND, Tombstone, Ariz. Filed Feb. 4, 1911. Serial No. 606,562. (Cl. 21—20.)

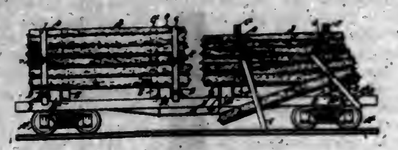


1. A dumping wagon comprising a box, a fixed frame mounted thereon, a plurality of movable gates carried by the fixed frame and normally closing the bottom of the box, a movable gate-controlling frame wholly contacting with the fixed frame on open or closed positions of the gates, operative connections between the movable frame and the gates for mounting the gates on movement of the movable frame, and a controlling lever connecting the fixed frame with the movable frame.

2. A dumping wagon comprising a box, a fixed frame mounted thereon, a plurality of movable gates carried by the fixed frame and normally closing the bottom of the box, a movable gate-controlling frame contacting with the fixed frame in open or closed postion of the gates, operative connections between the movable frame and the gates for moving the gates on movement of the movable frame, a substantially U-shaped member pivoted to the fixed frame, connections between said member and movable frame and a controlling lever for operating said member to move the movable frame to open or close the gates.

3. A dumping wagon comprising a box, a fixed frame mounted thereon, a plurality of movable gates carried by the fixed frame and normally closing the bottom of the box, a movable gate-controlling frame contacting with the fixed frame in open or closed position of the gates, a substantially U-shaped member pivotally connected to the under side of the fixed frame, one end of said member forming a trunnion for supporting the movable frame, a controlling lever formed upon the opposite end of said member, and means carried by the movable frame and engaging said controlling lever, said last-named means and said trunnion serving to move the movable frame in the operation of the lever.

1,020,824. LOG-CARRYING CAR. WILLIAM ARTHUR HOLT, Oconto, Wis. Filed Oct. 18, 1911. Serial No. 655,291. (Cl. 105—173.)



1. A log-carrying car, comprising a car body, provided with sills and transverse beams for the logs to rest on and projecting beyond the sides of the car body, stake pockets pivoted on one side of the projecting end of the said beams, and stakes held in the said pockets and extending below the same to rest against the outer face of the sill.

2. A log-carrying car, comprising a car body, provided with sills and transverse beams for the logs to rest on and projecting beyond the sides of the car body, stake pockets pivoted on one side of a projecting end of the said beams and provided with eyes, hooks pivoted on the beams and adapted to engage the said eyes, and stakes held in the said pockets and extending below the same to abut against the outer face of the sill.

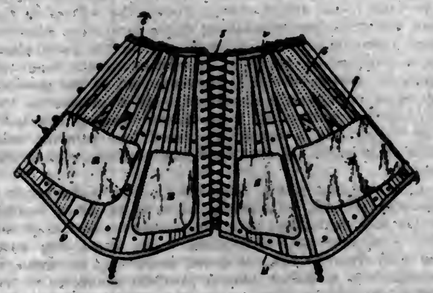
3. A log-carrying car, comprising a car body, provided with sills and transverse beams for the logs to rest on and projecting beyond the sides of the car body, stake pockets pivoted on one side of a projecting end of the said beams and provided with eyes and retaining hooks, hooks on the said beams engaging the said eyes, retaining plates on the beams and engaged by the said retaining hooks, and stakes held in the said pockets and extending below the same to abut against the outer face of the sill.

4. A log-carrying car, comprising a car body provided with sills and transverse beams for the logs to rest on and projecting beyond the sides of the car body, stake pockets pivoted on one side of a projecting end of the said beams, and stakes held in the said pockets and extending below the same to rest against the outer face of the sill, each stake having a stop adapted to rest on the top of the pocket to limit the downward movement of the stake.

5. A log-carrying car comprising a car body provided with a transverse beam, projecting beyond the sides of the car body, a stake, and a stake pocket pivoted at one side of a projecting end of the beam to swing transversely to lay the stake flat onto the car body.

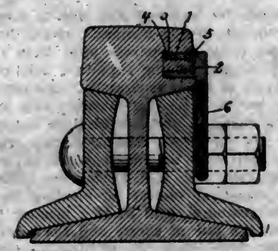
[Claims 6 and 7 not printed in the Gazette.]

1,020,825. REDUCING-CORSET. HENRY JACOBS, New York, N. Y. Filed May 5, 1911. Serial No. 625,126. (Cl. 2—73.)



A corset having two lines of air vents, one about the waist and the other about the lower edge of the skirt of the corset, and a series of separate pads composed of rubberized fabric fastened to the underside of said corset and disposed between said lines of vents, whereby ventilation will be afforded adjacent the pads, said pads comprising a pair of front pads adapted to fit the abdomen and a pair of rear pads adapted to fit the buttock, said pads separated from each other, to render the lower part of the corset flexible.

1,020,826. RAIL-BOND. FRANK E. JOHNSON, Chicago, Ill. Filed July 24, 1911. Serial No. 640,095. (Cl. 173—280.)



1. An electrical connection comprising two pieces to be connected, each provided with a receiving opening, a post surrounded by each receiving opening and integral with the piece with which it is associated, a conductor connecting said pieces and provided with contact terminals having openings for said posts, said terminals fitting into said receiving openings so as to surround said posts.

2. An electrical connection comprising two pieces to be connected, each provided with a receiving opening, posts integral with said pieces and surrounded by said receiving openings, a conductor connecting said pieces and provided with contact terminals having openings for said posts, said openings closed at their outer ends, said terminals fitting into said receiving openings in said pieces so as to surround said posts.

3. An electrical connection comprising two pieces to be connected, each provided with a receiving opening, a post integral with each of said pieces and surrounded by said receiving openings, a conductor connecting said pieces and provided with contact terminals having openings for said posts, said terminals fitting into said receiving openings so as to surround said posts, the portions of said contact terminals outside of said posts being sealed so as to entirely cover and protect said posts.

4. An electrical connection comprising two pieces to be connected each provided with a receiving opening, a post surrounded by each receiving opening and integral with the piece with which it is associated, a conductor connecting said pieces and provided with contact terminals having openings for said posts, said terminals fitting into said receiving openings, indentations in said posts and means for forcing the material of said terminals into said indentations.

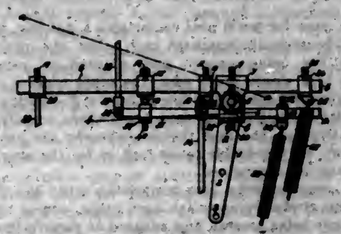
5. An electrical contact comprising a piece provided with a receiving opening, a post integral with said piece and surrounded by said receiving opening, a contact terminal provided with an opening for said post, said contact terminal confined within said receiving opening so as to surround the post and making contact with the post and with the wall of the opening surrounding the post.

[Claims 6 to 9 not printed in the Gazette.]

1,020,827. SAFETY-GUARD FOR STAMPING-PRESSES. JAMES MELVIN JONES, Hamilton, Ontario, Canada. Filed Nov. 10, 1911. Serial No. 659,599. (Cl. 164—107.)

1. In a safety guard attachment of the character set forth, the combination with a guard carrying member, of a manually operable member, connected to the guard carrying member and a latch releasing member, said guard carrying member being independently movable with relation to the latch releasing member until the guard is moved substantially to its protective position, additional movement of the guard carrying member serving to actuate the latch releasing member.

2. In a device of the character described, the combination with a guard carrying member of a latch releasing member, a manually operable member connected to the guard carrying member, and a member carried by the guard carrying member and adapted to engage the latch releasing member only at the termination of the movement of the guard carrying member to protective position, to thereby move the latch carrying member to release the latch.



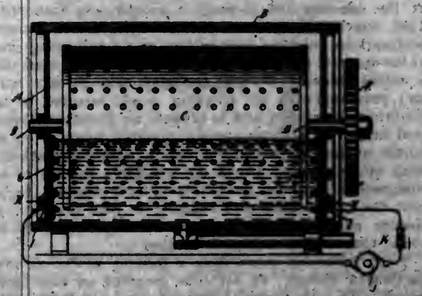
3. In a device of the character described, the combination with a pivoted latch releasing member of a pivoted guard carrying lever located thereabove and movable independently of the latch releasing lever, and a yieldable contact member carried by the guard carrying lever and arranged to contact with the latch releasing lever at the termination of the downward movement of the guard carrying lever to protective position to thereby depress the latch releasing lever to release the latch.

4. In a device of the character described, the combination with a supporting stud of a guard carrying lever pivotally mounted thereon, a latch releasing lever likewise pivotally mounted upon said stud, a manually operable member engaged with the guard carrying lever, and a spring plunger carried by the guard carrying lever and adapted to contact with the latch releasing lever at the termination of the downward movement of the guard carrying lever to protective position, as and for the purposes set forth.

5. In a device of the character described, the combination with a supporting stud of a spring actuated guard carrying lever pivotally mounted thereon, a latch releasing lever likewise pivotally mounted upon said stud, a manually operable member engaged with the guard carrying lever, and a spring plunger carried by the guard carrying lever and adapted to contact with the latch releasing lever at the termination of the downward movement of the guard carrying lever to protective position, as and for the purposes set forth.

[Claims 6 to 14 not printed in the Gazette.]

1,020,828. ELECTRIC WASHING-MACHINE. WILLIAM D. JONES, New York, N. Y., assignor of one-third to William A. Rees and one-third to Richard L. Rees, New York, N. Y. Filed Dec. 11, 1911. Serial No. 665,029. (Cl. 204—5.)



1. A washing machine, comprising a tank adapted to contain a liquid, a perforated revoluble receptacle in the said tank, electrodes, and plates of insulating material carrying the said electrodes and attached to the said tank at the inside thereof, the said insulating plates being provided with members projecting beyond the faces of the said electrodes.

2. A washing machine, comprising a tank adapted to contain a fluid, a perforated revoluble receptacle in the said tank, insulating plates attached to the inner faces of the ends of the tanks and provided with lugs projecting from the faces of the plates, and electrodes in the form of plates overlying the said insulating plates, the said electrodes being provided with apertures through which extend the said lugs beyond the faces of the electrodes.

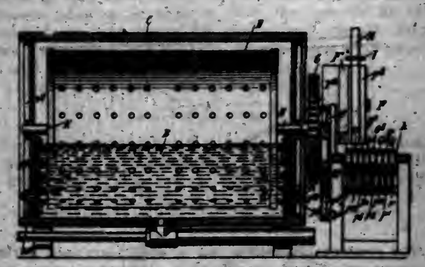
3. A washing machine, comprising a tank adapted to contain a fluid, a perforated revoluble receptacle in the said tank, insulating plates attached to the inner faces of the ends of the said tanks and provided with marginal overhanging flanges, and electrodes in the form of plates overlying the said insulating plates and fitting at their edges under the said overhanging flanges.

4. A washing machine, comprising a tank adapted to contain a fluid, a perforated revoluble receptacle in the said tank, insulating plates attached to the inner faces of the ends of the said tanks and provided with marginal overhanging flanges and with integral lugs projecting from the faces of the said plates, and electrodes in the form of plates overlying the said insulating plates and fitting at their edges under the said overhanging flanges, the said electrodes having spaced ribs and apertures between adjacent ribs and said lugs projecting through the said apertures.

5. An electric washing machine provided with electrodes in the form of plates having apertures, and supporting plates for the said electrodes and made of insulating material, the said supporting plates having integral lugs passing through the said apertures and projecting beyond the faces of the electrodes.

[Claim 6 not printed in the Gazette.]

1,020,829. ELECTRIC WASHING-MACHINE. WILLIAM D. JONES, New York, N. Y., assignor of one-third to William A. Rees and one-third to Richard L. Rees, New York, N. Y. Filed Dec. 11, 1911. Serial No. 665,030. (Cl. 204—5.)



1. An electric washing machine, comprising a tank adapted to contain a liquid, a perforated revoluble receptacle in the said tank, oppositely-disposed sets of electrodes within the tank, and means for connecting the electrodes in the sets with each other in rotation to cause electrical currents to pass through the liquid in different planes.

2. An electric washing machine, comprising a tank adapted to contain a liquid, a perforated revoluble receptacle in the said tank, oppositely-disposed sets of electrodes within the tank, and a commutator rotating in unison with the said receptacle and electrically connected with the said electrodes.

3. An electric washing machine, comprising a tank adapted to contain a liquid, a perforated revoluble receptacle in the said tank, oppositely-disposed sets of electrodes within the tank, a commutator rotating in unison with the said receptacle and electrically connected with the said electrodes, a switch for the commutator, and manu-

ally-controlled means for controlling the said switch and for stopping and starting the said revoluble receptacle.

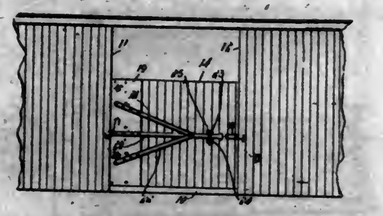
4. In combination with a tank adapted to contain a liquid, opposite sets of electrodes in the said tank, and a commutator connecting the electrodes in the sets with each other in rotation to cause electric currents to pass through the liquid in different planes.

1,020,830. INSECT-ESCAPE FOR SCREENS. JOHN R. KUNKELMAN, Gordon, Wis. Filed Jan. 14, 1911. Serial No. 602,545. (Cl. 156—37.)



In a device of the class described, a frame, a screen secured to the frame, strips extending across the frame and secured to the ends thereof, the said strips being on one side of the screen, a plurality of apertures within the screen and between the said strips, a closure member hinged on the said frame, the screen being positioned between the strips and the closure member, the said member in normal position lying closely adjacent the said strips whereby the openings in the screen are covered, a spring catch carried by the said frame and remote from the said closure member whereby the said member may be moved on its hinges to uncover the openings in the screen and may be held in such position by engagement with the spring catch.

1,020,831. GRAIN-DOOR. CHARLES A. LARSEN, Colgate, N. D. Filed Sept. 9, 1910. Serial No. 581,320. (Cl. 20—30.)



The combination with a pair of door posts each having a recess, of a door comprising a relatively narrow section and a relatively wide section hingedly connected at one side, a catch carried by the wide section and engageable with the recess of the adjacent post, a locking arm fixedly intermediate its ends to the narrow section, one end of the arm terminating in a catch engageable with the recess of the other post and the other end extending over the wide section, and means for locking the extended end of the rod to said wider section.

1,020,832. JEWELER'S GAGE. LEWIS K. MALVERN, Elgin, Ill., assignor to Elgin National Watch Company, Elgin, Ill., a Corporation of Illinois. Filed Feb. 23, 1911. Serial No. 610,379. (Cl. 73—144.)

1. A gage for jewel pins comprising a flat bar, the sides of which gradually approach each other, one of the edges of the bar having equally spaced notches thereon to receive the central tongue of a double roller fork, said bar having equally spaced graduations on one face thereof whereby the proper size jewel pin for the fork may be determined.



2. A gage for jewel pins comprising a flat bar, the sides of which gradually approach each other, one of the edges of the bar being smooth and adapted to receive the prongs of a single roller fork, the other edge of said bar having equally spaced notches to receive the central tongue of a double roller fork, said bar having equally spaced graduations on one face thereof, whereby the proper size jewel pin for the double roller fork or for the single roller fork may be determined.

3. A gage for jewel pins comprising a flat bar, the sides of which gradually approach each other, one of the edges of the bar being smooth and adapted to receive the prongs of a single roller fork, the other edge of said bar having equally spaced notches to receive the central tongue of a double roller fork, said bar having equally spaced graduations on one face thereof whereby the proper size jewel pin for the double roller fork or for the single roller fork may be determined, the walls of said notches being flat and inclined to each other so that the adjacent walls of the notches will intersect.

1,020,833. ATOMIZER. ELMER JASPER MANNING, Janesville, Wis. Filed Apr. 15, 1911. Serial No. 621,268. (Cl. 128—2.)



1. An atomizer, comprising a tubular holder having a perforated bottom; an air tube mounted on said bottom alined with said perforation and having a delivery orifice at the opposite end thereof; a second tube mounted in fixed relation to the said air tube and having receiving perforations near the said bottom and a delivering orifice at the opposite end alined with the orifices in said air tube; a hollow cylinder plunger inclosing said tubular holder and provided with air trapping means adapted to take air into said cylinder and to exhaust air therefrom through said tubes; an air compression chamber mounted on said holder at the lower end thereof in open communication with said air tube; means for admitting the air to said compression chamber from said plunger adapted to prevent the egress from said chamber to said plunger; and closure means for said tubular holder adapted to surround the delivery end of said tubes.

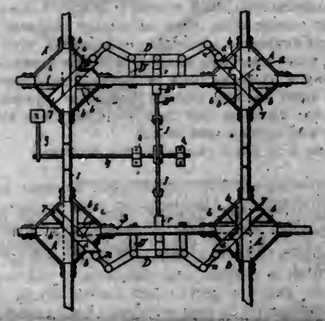
2. An atomizer, comprising a tubular holder having a perforated bottom; an air tube mounted on said bottom alined with said perforation and having a delivery orifice at the opposite end thereof; a second tube mounted in fixed relation to the said air tube and having receiving perforations near the said bottom and a delivering orifice

at the opposite end alined with the orifices in said air tube; a hollow cylinder plunger inclosing said tubular holder and provided with air trapping means adapted to take air into said cylinder and to exhaust air therefrom through said tubes; an air compression chamber mounted on said holder at the lower end thereof in open communication with said air tube; a pressure closed valve opening into said chamber from said plunger adapted to trap the air when delivered in said chamber; and closure means for said tubular holder adapted to surround the delivery end of said tubes.

3. An atomizer, comprising a tubular holder having a perforated bottom; an air tube mounted on said bottom alined with said perforation and having a delivery orifice at the opposite end thereof; a second tube mounted in fixed relation to the said air tube and having receiving perforations near the said bottom and a delivering orifice at the opposite end alined with the orifice in said air tube; a hollow cylinder plunger inclosing said tubular holder and provided with air trapping means adapted to take air into said cylinder and to exhaust air therefrom through said tubes; an air compression chamber mounted on said holder at the lower end thereof in open communication with said air tube; a pressure closed valve opening into said chamber from said plunger adapted to trap the air when delivered in said chamber; and a closure member for said tubular holder, said member having a tubular extension to infold the said second tube and to extend within the body of said tubular holder.

4. An atomizer, comprising a tubular holder having a perforated bottom; an air tube mounted on said bottom alined with said perforation and having a delivery orifice at the opposite end thereof; a second tube mounted in fixed relation to the said air tube and having receiving perforations near the said bottom and a delivering orifice at the opposite end alined with the orifices in said air tube; a hollow cylinder plunger inclosing said tubular holder and provided with air trapping means adapted to take air into said cylinder and to exhaust air therefrom through said tubes; an air compression chamber mounted on said holder at the lower end thereof in open communication with said air tube; means for admitting the air to said compression chamber from said plunger adapted to prevent the egress from said chamber to said plunger; a screw threaded cap adapted for mounting in said tubular holder to close the same, said cap being provided with a tubular extension adapted to infold the said second tube, and a suitable packing between the said holder and said cap to form a water tight joint.

1,020,834. RAILWAY-CROSSING. ROBERT MARSHALL and ALBERT NORBURY, Bloomington, Ill. Filed July 28, 1910. Serial No. 574,323. (Cl. 104—116.)



1. In a railway crossing, grooved tread blocks connecting the rails thereof, the grooves of said tread blocks arranged on a line with the flange side of the tread portions of oppositely disposed rails, said tread blocks also provided with guide-ways, movable members positioned in said guideways, said movable members provided with grooves adapted to register with the grooves in said tread blocks, and means for shifting said movable members to register the grooves therein with the grooves in said tread blocks.

2. In a railway crossing, grooved tread blocks connecting the rails thereof, the grooves of said tread blocks arranged on a line with the flange side of the tread portions of oppositely disposed rails, said tread blocks also provided with slots diagonally disposed with relation to said grooves, movable members positioned in said slots, said movable members provided with grooves adapted to register with the grooves in said tread blocks, and means for shifting said movable members to register the slots therein with the grooves in said tread blocks.

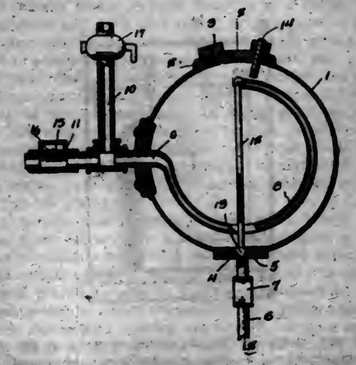
3. In a railway crossing, grooved tread blocks connecting the rails thereof, the grooves of said tread blocks arranged on a line with the flange side of the tread portions of oppositely disposed rails, said tread blocks also provided with slots diagonally disposed with relation to said grooves, said slots provided with undercut portions, movable members provided with lugs extending into said undercut portions positioned in said slots, the tops of said movable members being flush with the top of the tread portions of said blocks, said movable members provided with grooves adapted to alternately register with the grooves in said tread blocks, and means for moving said movable members to register the grooves therein with the grooves in said tread blocks.

4. In a railway crossing, tread blocks connecting the rails thereof, said tread blocks provided with flange receiving grooves, said grooves of each tread block intersecting, said tread blocks also provided with slots diagonally disposed with relation to said flange receiving grooves, movable members positioned in said slots, said movable members provided with intersecting grooves adapted to register with the intersecting grooves in said tread blocks, and means for shifting said movable members to alternately register the grooves therein with the grooves in said tread blocks.

5. In a railway crossing, grooved tread blocks, connecting the rails thereof, the grooves of each tread block intersecting, said grooved tread blocks also provided with slots diagonally arranged with respect to said grooves and intersecting them, movable members positioned in said slots, said movable members provided with grooves adapted to register with the grooves in said tread blocks, and means for moving said movable members to register the grooves therein with the grooves in said tread blocks.

[Claims 6 to 12 not printed in the Gazette.]

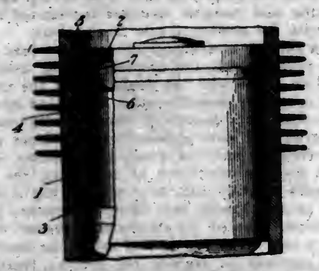
1,020,835. AUTOMATIC OILER. ANDREW J. MCARTHUR and JAMES ROBERT TUCKER, Springfield, Ga. Filed Aug. 3, 1910. Serial No. 575,231. (Cl. 184—76.)



An automatic lubricator comprising an oil reservoir, formed with a valved outlet, a valve controlling said outlet, a steam receiving valve actuator arranged within the

actuator maintains the fluidity of the lubricant, and a reservoir, whereby the heat from the steam within the set screw carried by said reservoir for regulating the movement of the valve.

1,020,836. PISTON FOR EXPANSION-ENGINES. ROBERT S. MOORE, Washington, D. C., assignor to Gyro Motor Company, Washington, D. C., a Corporation of the District of Columbia. Filed Sept. 7, 1911. Serial No. 648,222. (Cl. 123—193.)

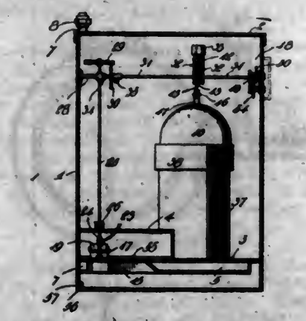


1. A piston having a head and a circumferential wall, the outer face of which at the edge adjacent the head is in contact with the wall of the cylinder, said piston having an annular groove formed in the head thereof in line with said wall, and extending to a depth therein slightly greater than the thickness of the head.

2. A piston having a head and a circumferential wall the outer face of which at the edge adjacent the head is in contact with the wall of the cylinder, said piston having an annular groove formed in the head thereof in line with said wall, and extending to a depth therein slightly greater than the thickness of the head, said wall having an annular groove therein adjacent the bottom of the annular groove in the head.

3. A piston having a head and a circumferential wall the outer face of which at the edge adjacent the head is in contact with the wall of the cylinder, said piston having an annular groove formed in the head thereof in line with said wall, and extending to a depth therein slightly greater than the thickness of the head, said wall having an annular groove therein adjacent the bottom of the annular groove in the piston head, and a packing ring seated in said annular groove in said wall.

1,020,837. GAS-METER. ARTHUR HENRY MORGAN, Cambridge, Mass. Filed Jan. 9, 1911. Serial No. 601,591. (Cl. 73—1.)



1. A gas meter having arranged therein, a gas receiving compartment, a drip compartment arranged below the latter into which the gas is directly introduced whereby the water and drip settling from the gas in said receiving compartment are caught, and a gas measuring mechanism adapted to receive and measure the gas after the said impurities have been removed therefrom.

2. A gas meter having arranged in its lower end a false bottom adapted to form a catch basin and into which the gas is directly introduced, said bottom having formed therein a drip passage, a gas receiving chamber arranged on said false bottom over the drip passage therein, a gas inlet tube connected with said chamber whereby the gas entering the same will be caught and held while the water and drip settle therefrom and pass through said drip passage into said catch basin, and a gas measuring mechanism adapted to receive and measure the gas after the same has been purified in said chamber and catch basin.

3. A gas meter having arranged therein a gas purifying mechanism adapted to receive the gas entering the meter, expansible gas measuring tanks arranged in said meter and adapted to be automatically operated by the entrance and discharge of the gas, valves adapted to control the flow of gas from said purifying mechanism to said measuring tanks, and means operated by the vertical movement of said tanks to open and close said valves at the proper time.

4. A gas meter having arranged therein a gas purifying mechanism comprising a receiving chamber and a catch basin, gas measuring tanks arranged in said meter, gas bells operatively engaged with said tanks and adapted to be raised and lowered by the pressure of the gas passing into and out of said tanks, gas controlling valves arranged in said gas receiving chamber and adapted to control the flow of gas from said chamber to said measuring tanks, an adjustable valve operating mechanism actuated by the movement of said gas bells whereby said valves are opened and closed at the proper time for admitting a fresh supply of gas to first one and then the other of said tanks, and a registering mechanism actuated by the movement of said gas bells.

5. A gas meter having arranged therein a gas purifying mechanism comprising a receiving and settling chamber and a catch basin adapted to receive the water and impurities settling from the gas in said chamber, said chamber having formed therein gas inlet and discharge ports, valve seats arranged over said ports, said seats being elevated a suitable distance above the bottom of the chamber whereby the water and drip from the gas are prevented from entering said ports, valves slidably mounted on said seats and adapted to open and close said ports, gas measuring tanks arranged in the meter, gas bells slidably mounted in said tanks and having a gas tight engagement therewith, said bells being adapted to rise and fall when the gas is let into and discharged from said tank, gas conducting tubes to connect said tanks with the gas discharge ports in said gas receiving chamber, a valve operating shaft revolubly mounted in said chamber, means to operatively connect said shaft with said valves, a gear fixedly mounted on the upper end of said shaft, a power transmitting shaft revolubly mounted in said meter, a power transmitting gear adjustably mounted on said shaft and having an adjustable engagement with the gear on said valve operating shaft and means operated by the movement of said gas bells to oscillate said power transmitting shaft thereby turning said valve operating shaft first in one direction and then the other thus alternately opening and closing said valves.

[Claims 6 to 8 not printed in the Gazette.]

1,020,838. COTTON-PICKER. IRA E. NEER, Edinburg, Ill., assignor of one-half to Frederick A. Neer, Custer, Ill. Filed Jan. 31, 1911. Serial No. 605,699. (Cl. 56—117.)



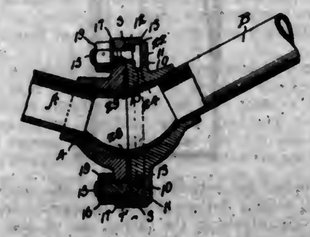
1. In a cotton picker, a tubular picking implement having a pistol grip handle, means for setting up suction in the tubular implement, a valve normally positioned to obstruct the passage of air therethrough, a cylinder communicating with the tubular member, a piston in said cylinder having a rod connected with the obstructing valve to actuate the latter, a valve to obstruct communication between one end of the cylinder and the suction means, and means for actuating said last mentioned valve including a spring actuated cam and a trigger having a tongue engaging the cam, said trigger being positioned in front of the pistol grip constituting the handle.

2. In a cotton picker, a picking implement comprising a tubular member, a suitably guided slide valve adapted to obstruct the passage therethrough, means for setting up suction in such tubular member behind the valve, a cylinder communicating with the tubular member, a piston in said cylinder, connecting means between said piston and the slide valve, a valve to obstruct communication between one end of the cylinder and the suction means, and means for actuating the last mentioned valve, said means including a spring actuated cam and a trigger having a tongue engaging the cam.

3. In a cotton picker, a picking implement comprising a tube, a valve adapted to obstruct the passage therethrough, a cylinder, a piston operating in said cylinder and connected with the valve to actuate the latter, ports connecting the cylinder with the tubular picking member, means for setting up suction in the tubular member behind the valve, a valve coöperating with the ports to obstruct communication between one end of the cylinder and the suction means, and means for actuating said valve including a spring actuated cam and a trigger having a tongue engaging the cam.

4. In a cotton picker, a picking implement comprising a tubular member, a suitably guided valve adapted to obstruct the passage therethrough, means for setting up suction in the tubular member behind the valve, a cylinder communicating with the tubular member, a piston in said cylinder, a piston rod connecting said piston with the valve, a handle upon the tubular member, said handle being longitudinally apertured to provide guiding means for the piston rod, and valve means to obstruct communication between one end of the cylinder and the suction means.

1,020,839. UNIVERSAL PIPE-COUPLING. MICHAEL H. NIELSEN and HUBERT NIELSEN, Kaukauna, Wis. Filed Mar. 21, 1911. Serial No. 615,845. (Cl. 137—34.)



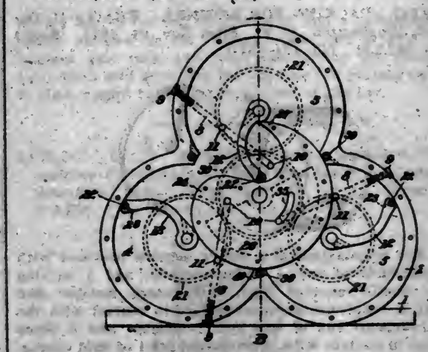
A pipe coupling comprising relatively adjustable contacting members each provided with a socket portion, the contacting portion of one member having a groove therein, the contacting portion of the other member having a passage therein, the groove being formed to provide spaced shoulders, and a clamping bolt having a head portion mounted in the groove and having a shank portion extending through the passage, a part of the opposite lateral edges of the said head portion being curved to provide inner and outer concaved and convexed surfaces respectively, contacting with the corresponding walls of the groove, the said head being further provided with curved surfaces which are arranged in opposite relation with respect to the shoulders.

1,020,840. RIBBON-CLIP FOR BELT-BUCKLES. ELISE R. NORWOOD, San Francisco, Cal. Filed June 22, 1909. Serial No. 503,766. (Cl. 24—265.)



The combination with a belt buckle having a cross bar for fastening a ribbon belt thereto, of a clip in the form of a flattened tube, the free edges of which stand opposite each other, one free edge being formed with teeth adapted to engage with a belt and the other free edge being formed into tongues, a plurality of such tongues being arranged to engage with the cross bar of the belt, and other of the tongues being bent out of line with those that engage with the cross bar and arranged to press against the back of the buckle to serve as a spring to hold the clip in place upon the bar.

1,020,841. ROTARY STEAM-ENGINE. WILLIAM H. OGDEN, Binghamton, N. Y. Filed May 16, 1911. Serial No. 627,579. (Cl. 121—51.)



1. A rotary steam engine, having a cluster of cylinders, a steam chest common to the several cylinders, means to admit steam into said steam chest, and a steam outlet port opening out of said chest, a revolving piston in each cylinder, independent steam ports for the several cylinders, and means to turn the steam chest and the pistons in unison, said steam chest serving to deliver its contained steam to the cylinders and to control the steam ports leading into the several cylinders and as an abutment for said pistons.

2. A rotary steam engine, comprising a single casing having three cylinders in a trefoil arrangement, a hinged leaf rotary piston in each cylinder, a rotary steam chest, means to admit steam into said steam chest, and a steam outlet port opening out of said chest, gears connecting the pistons and steam chest to turn in unison, the pistons turning in one direction and the steam chest in the reverse direction, and steam ports leading separately into the several cylinders and through which the steam supply from the steam chest to the cylinders is controlled by the steam chest, said steam chest serving also as an abutment for the pistons.

3. A rotary steam engine, comprising a single casing having three cylinders in a trefoil arrangement, a hinged leaf rotary piston in each cylinder, a rotary steam chest and abutment mounted centrally between the three cylinders and geared to turn in the opposite direction to the pistons, means to admit steam into said steam chest, and a steam outlet port opening out of said chest, a separate steam channel opening into each cylinder and having its intake in the path of movement of the steam chest, the said steam chest successively admitting its live steam to the several cylinders through said channels, so that while live steam is entering one cylinder, steam previously

admitted into the next successive cylinder in the direction of movement of the steam chest will be expanding, and the next succeeding cylinder will be exhausting.

4. A rotary steam engine, having a cluster of cylinders, a revolving piston in each cylinder, a steam chest of volute shape in cross-section arranged between the several cylinders and in steam-tight contact at all times with the several pistons, a casing common to said cylinders and steam chest, means to turn the pistons and steam chest in unison but in opposite directions, and independent steam inlets for the several cylinders, the steam chest serving to control said inlets successively.

5. A rotary steam engine, having a cluster of cylinders, a revolving piston in each cylinder, a rotary steam chest mounted between the several pistons and in steam-tight contact at all times with said pistons either through their knuckles or their free ends during the cycle of movement of each, independent steam inlets for each cylinder, independent exhausts for each cylinder, and a casing common to all these parts, the steam chest rotating within the casing and serving as a valve to control the admission of steam successively to the cylinders.

[Claim 6 not printed in the Gazette.]

1,020,842. PACKING FOR ENGINES. WILLIAM H. OGDEN, Binghamton, N. Y. Filed Nov. 24, 1911. Serial No. 662,232. (Cl. 121—51.)



1. The combination of a rotary member provided with a spiral-surfaced end, a casing therefor, and a packing plate loosely mounted upon said rotary member and having a complemental spiral surface in contact with the spiral-surfaced end of said rotary member and a plane surface in contact with the adjacent wall of said casing.

2. A packing, comprising a rotary member and a casing therefor, said rotary member provided with a spiral-surfaced end terminating in a shoulder, a packing plate loosely mounted upon said rotary member and having a complemental spiral surface contacting with the spiral-surfaced end of the rotary member and terminating in a shoulder adjacent to the shoulder on the rotary member and a plane surface contacting with the wall of said casing, and a spring interposed between said shoulders for forcing said packing plate in the direction of rotation of said rotary member and maintaining a yielding contact between said packing plate and the wall of the casing.

3. A packing, comprising a cylindrical rotary member, a shaft therefor, and a casing in which said member is mounted, said cylindrical rotary member having its opposite ends provided with spiral surfaces terminating in shoulders, packing plates loosely mounted upon said shaft at the ends of said rotary member and having complemental spiral surfaces adjacent to the spiral surfaces of said ends and terminating in shoulders adjacent to the shoulders on said rotary member, and plane outer surfaces to contact with the walls of said casing, and springs interposed between said shoulders to force said spiral-surfaced packing plates in the direction of rotation of the rotary member and maintain a yielding contact between said packing plates and the walls of the casing.

4. In a rotary engine, the combination with the cylinder and pistons thereof, of a rotary abutment for said pistons, having spiral surfaces, a supporting shaft, and packing plates loosely and yieldingly mounted upon said shaft adjacent to said spiral surfaces and having complemental spiral surfaces in movable contact with the spiral surfaces first named, and plane outer surfaces yieldingly contacting with the inner walls of the cylinder.

5. In a rotary engine, the combination with the cylinder and pistons thereof, of a combined abutment and compression chest, comprising a rotary member of volute form having spiral-surfaced ends, a shaft upon which said rotary member is mounted in said cylinder, and volute packing plates loosely and yieldingly mounted upon said shaft and having complemental spiral surfaces adapted to contact with the spiral-surfaced ends of said rotary member, and plane outer surfaces adapted to yieldingly contact with the inner walls of the cylinder heads.

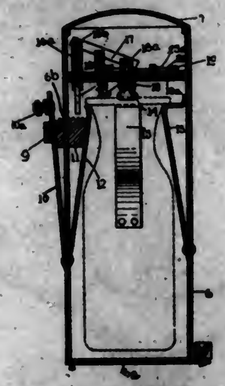
[Claims 6 and 7 not printed in the Gazette.]

1,020,843. GAMBREL-STICK. FREDERIK C. PETERSEN, Lindsay, Nebr. Filed June 22, 1911. Serial No. 634,683. (Cl. 17—30.)



A gambrel stick comprising a core including two oppositely threaded end portions and a hand piece intermediate thereof, sleeves adjustably mounted on the end portions of the core and having their inside portions threaded oppositely so that they will act with said end portions of the core, hooks carried by the sleeves, links pivotally connected to the sleeves and a suspending eye pivotally connected with the links.

1,020,844. MILK-BOTTLE HOLDER. WILLIAM E. PHILLIPS, Cleveland, Ohio. Filed May 24, 1911. Serial No. 629,188. (Cl. 232—41.)



1. In a holder for bottles or the like, the combination of a casing, holding devices therein engageable below the rim of a bottle placed in the casing, one of said devices being movable laterally to release the bottle, a catch engageable with said movable device to prevent such release, a yielding member located in the casing in position to be struck by the bottle stopper when a bottle is inserted in the casing, the said member being connected to the catch to engage the same with said movable device, and means to release the catch.

2. In a holder for bottles or the like, the combination of a casing open at the bottom to receive a bottle, holding devices at the side of the casing, engageable with the side of the bottle neck to hold the bottle, one of said devices being movable laterally to release the bottle, a catch engageable with said movable device to prevent such release, a spring pressed pin mounted in the casing in position to be struck and operated by the stopper of a full bottle or pass into the mouth of an empty bottle, said pin being operatively connected to the catch to engage the same when a full bottle is inserted, and means to release the catch.

3. In a holder for bottles or the like, the combination of a casing open at the bottom and closed at the top, holding devices attached to the sides of the casing and engageable with the neck of a bottle inserted in the casing, one of said devices being movable laterally to release the bottle, a pin slidably mounted in the upper part of the casing and movable up and down therein and having a head at its lower end adapted to be struck and lifted by the stopper of a bottle, a catch engageable with said movable holding device to hold the same against release, said catch being operatively connected to the pin, and a lock in the upper part of the casing, having a member engaging the pin when the latter is lifted.

4. In a holder for bottles or the like, the combination of a casing open at one end to receive a bottle therein, holding devices located within the casing and engageable with the bottle, one of said devices being movable to release the bottle and having a notched plate connected thereto, a pin mounted in the casing and slidable lengthwise therein and located in position to be struck by the stopper of a bottle when the latter is inserted in the casing, a lever connected to the pin, a catch connected to the lever and movable thereby into engagement with the notched plate, and a lock having a spring actuated member engageable with the sliding pin to prevent movement thereof until the lock is operated.

1,020,845. VAULT-COVER. JAMES W. POTTS, St. Joseph, Mo., assignor of one-half to William T. Kessels, St. Joseph, Mo. Filed Mar. 25, 1911. Serial No. 616,905. (Cl. 94—7.)



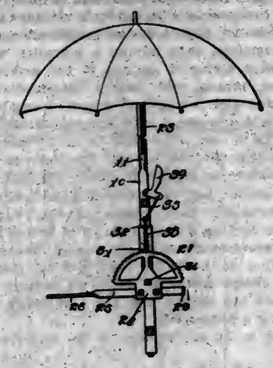
1. In a device of the class described, the combination with a base plate having an opening therein, of a casing secured to the base plate and having an opening, quadrant ribs secured to the casing and passing through the opening in the casing, a door, and quadrant arms on the door adapted to rest on said ribs and work through said opening.

2. In a device of the class described, the combination with a base plate having an opening therein, of quadrant shaped ribs secured to the base plate, a door fitting the opening in the base plate, quadrant shaped arms carried thereby and sliding over the ribs, means for preventing disengagement of the quadrant shaped arms when the door is closed, a cross pin carried by the base plate, and a combined locking and adjusting rack pivoted to the door for coacting with the pin to hold the door in adjusted position and to lock the same in closed position.

3. In a device of the class described, the combination with a base plate, of quadrant shaped ribs secured thereto, a door, quadrant shaped arms secured to the door and adapted to operate over the ribs, a rack member pivoted to the door, means adapted to engage the rack member to hold the door in adjusted elevated position, a tooth on the rack member adapted to hold the door in locked position, and means on the rack member for preventing the door from being thrown entirely over.

1,020,846. UMBRELLA-HOLDER. OTTO RAUCH, Truscot, Tex. Filed Sept. 25, 1911. Serial No. 651,203. (Cl. 135—18.)

A holder of the character described comprising a rack having a reduced lower end, a vertical lever pivotally connected with the reduced lower end of said rack, the lower end of said lever being bent outwardly, a latch carried by said lever and adapted to engage said rack, clamps carried by said lever and extending above the outwardly bent lower end of said lever, and a horizontal bar rigidly secured to the reduced lower end of said rack between said rack and lever and having one end bent away from said lever and the opposite end portion twisted at right angles to the major portion of the bar.



1,020,847. LOCK. REINHOLD SCHOELL, Stamford, Conn., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Filed Sept. 22, 1911. Serial No. 650,835. (Cl. 70—71.)



1. In a master key lock, the combination of a bolt, a series of tumblers each having a plurality of gatings, a fence for each series of gatings in the several tumblers, bolt locking means, and devices intermediate the several fences and the bolt locking means whereby when any series of gatings is brought into alinement with its fence, the intermediate device will yield and permit the bolt locking means to release the bolt.

2. In a master key lock, the combination of a bolt, a series of tumblers each having a gating for each key to be used with the lock, a fence for each series of gatings in the several tumblers, bolt locking means, and devices intermediate the several fences and the bolt locking means, whereby when any one of the series of gatings in the several tumblers is brought into alinement with its fence, the intermediate devices will yield and permit the bolt locking means to move in a direction to release the bolt.

3. In a master key lock, the combination of a bolt, a series of tumblers each having a reserved space for each of the several different keys, a gating within each key space, a fence for each series of gatings in the several

tumblers, bolt locking means, and devices intermediate the several fences and the bolt locking means whereby when the gatings of any one series in the several tumblers are brought into alinement with their fence, the intermediate device and said fence will yield, and permit the bolt locking means to move in a direction to release the bolt.

4. In a master key lock, the combination of a bolt, a series of tumblers, each having a plurality of gatings, a fence for each series of gatings in the several tumblers, bolt locking means and finders intermediate the bolt locking means and the several fences, whereby when any one fence is in alinement with any one series of gating in the tumblers, it will be forced by said finder or finders into its gatings in the several tumblers to permit the locking means to be moved to release the bolt.

5. In a master key lock, the combination of a bolt, a series of tumblers, each tumbler having a plurality of gatings, bolt locking means, a series of fences and a series of finders intermediate the bolt locking means and fences and operating to hold the bolt locking means against movement, except when one series of gatings in the several tumblers has been moved into alinement with one of the fences by a proper key.

[Claims 6 to 21 not printed in the Gazette.]

1,020,848. ROTARY ENGINE. STRAWTHER SISSON, Hazel, Ky. Filed June 10, 1911. Serial No. 632,385. (Cl. 121—75.)



In a rotary engine, the combination of a base, a segmental ring having oppositely disposed supporting lugs to engage the base, said ring having oppositely disposed blocks, one of which is a valve casing having two admission ducts leading to the inner side of the ring while the other of which has an exhaust duct, a valve mounted in the casing to control the respective ducts leading therefrom, a rotatable shaft, a rotor keyed to said shaft and provided with two circumferential ridges forming a pressure fluid acting chamber between the periphery of the rotor and the inner face of the ring, said rotor being provided with an open ended chamber in the body thereof, and having a series of radial slots leading into the pressure fluid acting chamber therefrom, a series of pistons disposed for radial movement in said slots, a stem to each piston projecting into the chamber of the rotor, levers pivoted to the inner wall of said rotor chamber and having their outer ends engaging the stems of the pistons, a stud carried by each lever and projecting outwardly, a disk closing the chamber of the rotor and provided with a cam groove into which the studs of all said levers ride, and means for holding the disk in a stationary position whereby the rotation of the rotor and the co-action of the studs with the groove of the disk will cause the pistons to be projected and retracted relatively to the pressure fluid chamber of the engine.

1,020,849. BREECH MECHANISM FOR ORDNANCE. GEORGE L. SMITH and DORSEY F. ASBURY, Washington, D. C. Filed May 31, 1911. Serial No. 630,851. (Cl. 89—20.)



1. In a breech mechanism for ordnance, the combination with a rotatable breech plug, of a crank shaft for rotating the same, said crank shaft being in dead center position when the breech plug is in locked position and being rotatable on an axis extending toward the axis of the gun.

2. In a breech mechanism for ordnance, the combination with a rotatable breech plug, of a crank shaft for rotating the same, said crank shaft being rotatable in one direction to cause an unlocking rotation of the breech plug when the mechanism is assembled for a right handed mount and being rotatable in the opposite direction to cause an unlocking rotation of the breech plug when the mechanism is assembled for a left handed mount.

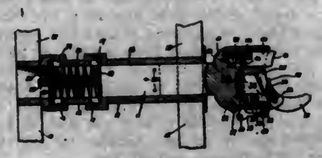
3. In a breech mechanism for ordnance, the combination with a movable breech plug, of a crank shaft for actuating the same, said crank shaft being rotatable in one direction to cause an unlocking movement of the plug when the mechanism is assembled for a right handed mount and being rotatable in the opposite direction to cause an unlocking movement of the breech plug when the mechanism is assembled for a left handed mount.

4. In a breech mechanism for ordnance, the combination with a rotatable breech plug, of a crosshead slidably and rotatably mounted thereon, a crank shaft having a crank pin which engages said cross-head, and means for rotating said crank shaft.

5. In a breech mechanism for ordnance, the combination with a swinging carrier, of a breech plug movably mounted thereon, a crank shaft mounted on said carrier and adapted to actuate said breech plug, and a lever for rotating said crank shaft, said lever being rotatable in a plurality of planes and serving as means for swinging said carrier.

[Claims 6 to 51 not printed in the Gazette.]

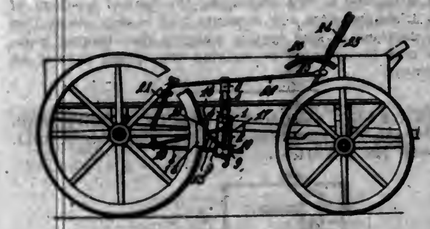
1,020,850. CAR-COUPLING. SAMUEL L. SMITH, Spokane, Wash. Filed July 6, 1909. Serial No. 506,187. (Cl. 213—10.)



1. A coupler, comprising a draw head provided with an intermediate recess, a bolt guide way, bores communicating with said recess and a longitudinal slot communicating with said guide way, a bell crank lever having one arm rotatably and slidably mounted in one of said bores, a lock seated in said recess and secured to and rotatable and slidable with said lever arm, a spring pressed bolt seated in said guide way and provided with a longitudinal slot, a second bell crank lever rotatably secured to said draw head and with one arm passed through the slot of the draw head and engaging the slot of the bolt, a rod connecting the free arms of said levers, manually actuated means for operating said levers, a knuckle mounted to swing in said head, a tail carried by said knuckle and adapted to be engaged by the lock when in closed position, a spring carried by the head and bearing against said tail to normally maintain the same in open position, and a pin slidable in said second bore, one end of said pin bearing against the lock and the other end bearing against said spring.

2. In a coupler, the combination with a draw head having a lock movable therein of a bell crank lever having one arm rotatably and reciprocally mounted in said head and secured to said lock, thereby adapting it to actuate the same, a pin reciprocally mounted in said head with its inner end resting against said lock, a spring carried by said head and bearing against the outer end of said pin, and means for manually actuating said lever to move the lock against the action of said spring and pin.

1,020,861. WAGON-BRAKE. ELMER SPIERS, Oklahoma, Okla. Filed Mar. 10, 1910, Serial No. 548,882. Renewed July 21, 1911. Serial No. 639,865. (Cl. 21—8.)

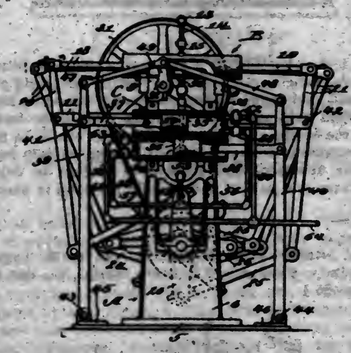


The combination with the running gear of a wagon, of an upper cross-bar secured thereon, a lower cross-bar suspended from said upper cross-bar, and having a channel therein, fastening rods secured to the axle of the running gear and having their forward ends rigidly secured to said lower cross-bar, a pair of brake shafts adapted to rotate in said channel and having upwardly extending arms at opposite ends, a crank shaft having a horisontal portion provided with links to which are attached the upper ends of the inner arms of said brake shafts, brake shoes on said outer arms of said brake shafts, and a rod connected to the brake shaft having a lever connected therewith.

1,020,852. APPARATUS FOR COMPRESSING AIR AND OTHER FLUIDS. WALTER B. SWINDELL, Raleigh, N. C., assignor of one-half to John B. Carr, Atlanta, Ga. Filed Nov. 5, 1910. Serial No. 590,897. (Cl. 230—32.)

1. In a compressor, the combination of a frame; a pump mounted therein and comprising a plurality of parallel cylinders provided with individual fluid inlets and outlets; a pair of separate pistons working in each cylinder; a drive shaft having a plurality of two-armed cranks arranged at an angle to each other; and a separate lever system for operating each pair of pistons, to reciprocate the same simultaneously in opposite directions, each system including a pair of levers fulcrumed intermediate their ends and connected at one end with adjacent pistons, and at the other end with the arms of the adjacent crank.

2. In a compressor, the combination of a frame; a main pump mounted therein and comprising a plurality of parallel cylinders provided with individual fluid inlets and outlets; a pair of separate pistons working in each cylinder; a drive shaft having a plurality of two-armed cranks arranged at an angle to each other; a separate lever system for operating each pair of pistons, to reciprocate the same simultaneously in opposite directions, each system including a pair of levers fulcrumed intermediate their ends and connected at one end with the adjacent pistons, and at the other end with the arms of the adjacent crank; an auxiliary pump in communication with the main pump, for re-compressing the fluid initially compressed in the latter; and means for operating the auxiliary pump.



3. In a compressor, the combination of a frame; a main pump mounted therein; a main drive shaft; connections between the main drive shaft and the main pump for operating the latter from the former; an auxiliary drive shaft; driving connections between said shafts; an auxiliary pump mounted in said frame and comprising a pair of cylinders provided with individual fluid inlets in communication with the main pump, and with individual fluid outlets; a piston working in each cylinder; a lever system for simultaneously reciprocating said pistons in opposite directions, said system comprising a pair of levers arranged upon opposite sides of said cylinders and connected with the adjacent pistons, and operating connections between said levers and said auxiliary shaft; and a delivery pipe with which both fluid outlets communicate.

4. In a compressor, the combination of a frame; a main pump mounted therein; a main drive shaft; connections between the main drive shaft and the main pump for operating the latter from the former; an auxiliary drive shaft; driving connections between said shafts; an auxiliary pump mounted in said frame and comprising a pair of cylinders provided with individual fluid inlets in communication with the main pump, and with individual fluid outlets; a piston working in each cylinder; a lever system for simultaneously reciprocating said pistons in opposite directions, said system comprising a pair of levers arranged upon opposite sides of said cylinders and fulcrumed at their lower ends upon the base of the frame, a crank secured to the adjacent end of said auxiliary drive shaft, connections between the upper ends of said levers and said crank, and additional connections between said levers adjacent the upper ends of the latter, and the adjacent pistons; and a delivery pipe with which both fluid outlets communicate.

5. In a compressor, the combination of a frame; a main pump mounted in the frame and comprising a plurality of parallel cylinders each having a pair of separate pistons working therein; a main drive shaft; connections between said shaft and said pistons for reciprocating the pistons in each cylinder simultaneously in opposite directions; an auxiliary drive shaft; driving connections between said main and auxiliary shafts; and auxiliary pump mounted in said frame and comprising a pair of cylinders provided with individual fluid inlets in communication with the main pump, and with individual fluid outlets; a piston working in each second-named cylinder; connections between the auxiliary drive shaft and the second-named pistons for simultaneously reciprocating the latter in opposite directions; and a delivery pipe with which both second-named fluid outlets communicate.

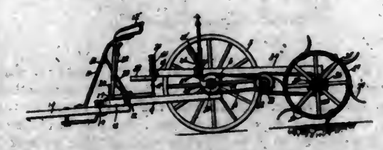
[Claims 6 to 11 not printed in the Gazette.]

1,020,853. NUT-LOCK. TIMOTHY E. TAYLOR, Thompson, Conn. Filed May 13, 1911. Serial No. 626,896. (Cl. 151—62.)



A nut lock comprising a plate having one side bent to form an overhanging flange, a strip resting upon said plate and beneath said flange, and an outwardly extending flange formed upon said strip and provided with slits formed adjacent the center and leading toward the center to form tongues extending from the central portion of said flange in opposite directions and adapted to be bent to engage the side faces of a pair of nuts to hold the strip in place.

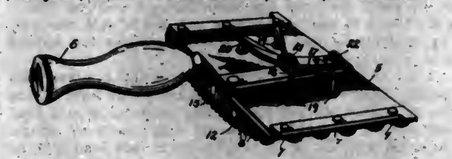
1,020,854. REVOLVING HARROW. ALVIS P. TENTER, Berne, Ind. Filed Jan. 12, 1911. Serial No. 602,250. (Cl. 55—85.)



1. In an agricultural implement, a lower U-shaped frame, a tongue secured to the closed end of the frame and extending forwardly thereof, a brace between the sides of the frame to which the rear end of the tongue is secured, an axle journaled in bearings extending upwardly from the rear ends of the frame, wheels on the ends of the axle to rotate therewith, an upper U-shaped frame similar to the aforesaid frame and having depending bearings rearwardly of its brace member and pivoted to the axle, an implement carried by depending rear ends of the upper frame, means carried upon the brace member of the upper frame for controlling the operation of the implement, connecting members between the front portion and cross bar on the lower frame and disposed upon opposite sides of the tongue, a rock shaft journaled at its ends upon said connecting members and having rearwardly extended arms adjacent its ends, rods pivotally connected with the rear ends of the arms and disposed vertically through the forward end of the upper frame, springs mounted upon the rods between the frame and upper ends of the rods and resiliently supporting the upper frame and an adjustable throw lever at one end of the rock shaft for shifting the arms and upper frame upon its pivots.

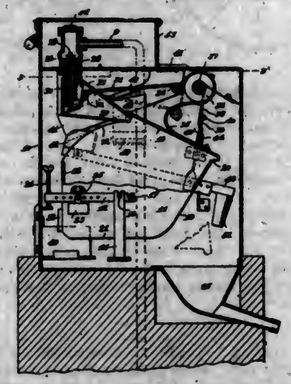
2. In a harrow, a lower frame disposed in a horizontal position, a draft member connected to the forward portion of the frame, a seat supported centrally of the said portion of the frame, an axle rotatably journaled in bearings extending upwardly from the rear end of the frame, wheels mounted on the ends of the axle to impart rotation thereto in one direction, an upper frame having depending bearings rearwardly of its forward portion and pivotally engaged with the axle inwardly of the adjacent bearings of the lower frame, a rotatable harrow member journaled in the rear end of the upper frame, a central longitudinal bar carried by the upper frame and rotatably receiving the harrow member at its rear end, the forward end of the bar being weighted to counterbalance the weight of said member, driven connections between the axle and the harrow member for rotating the latter, means carried by the upper frame for controlling the operation of the driven connections, a shaft pivotally supported transversely of the forward portion of the lower frame, an integral vertical lever formed at one end of the shaft, arms formed adjacent the ends of the shaft and projecting rearwardly, vertical rods pivoted to the rear ends of the arms and engaged through the forward portion of the upper frame, means carried by the rods to cushion movement of the upper frame at its forward portion and means coacting with the lever to hold it in and adjusted position when shifted to raise or lower the harrow member.

1,020,855. CLEANING ATTACHMENT FOR CURRY-COMBS. ARNOLD J. THELEN, St. Johns, Mich. Filed May 17, 1910. Serial No. 561,915. (Cl. 119—88.)



A self cleaning currycomb comprising a back plate, U-shaped members formed with comb teeth mounted upon one face of said plate, U-shaped cleaning members movable against said teeth, end plates movable against the outer teeth, transverse rods movable through said teeth and connecting said cleaner members, a spring mounted at one end on said plate, U-shaped wire rod members disposed on opposite sides of said spring and slidably extending through said plate and having terminals around said rods, and a ring embracing the central portions of said U-shaped wire rod members and loosely connecting said portions to said spring, whereby the cleaning members may be operated by striking the spring against an abutment.

1,020,856. AUTOMATIC GASOLENE-DISPENSER. RICHARD TOENNES, Boonville, Mo. Filed Feb. 8, 1911. Serial No. 606,441. (Cl. 73—177.)



1. A dispensing apparatus, embodying a pivoted automatic dumping receptacle, an inlet valve, gravity operated means movable independently of said receptacle for opening said valve, a lock for said gravity operated means, a counter-balanced lever for unlocking said lock, and means connected to the dumping receptacle for locking said lock.

2. A dispensing apparatus, embodying a pivoted automatic dumping receptacle, a pivoted support therefor, an inlet valve, gravity operated means movable independently of said receptacle for opening said valve, a lock for said gravity operated means, means for unlocking said lock, and means connected to the dumping receptacle for locking said lock.

3. A dispensing apparatus, embodying a pivoted automatic dumping receptacle having a mouth concentric with its pivots, an inlet valve, a spout from said valve projecting into the mouth of said receptacle, means for opening said valve, and means operated by the dumping

of the receptacle for operating the valve opening means to allow said valve to close.

4. A dispensing apparatus, embodying a pivoted automatic dumping receptacle, a pivoted yoke in which said receptacle is pivoted, means on the yoke to regulate the quantity of liquid to dump the receptacle, an inlet valve, means for opening said valve, and means connected to and operated by the dumping of the receptacle for operating the valve opening means to allow said valve to close.

5. A dispensing apparatus, embodying an inlet valve, means provided with a lock for opening said valve, and a pivoted automatic dumping receptacle adapted to operate said opening means to a locked position to allow said valve to close.

[Claim 6 not printed in the Gazette.]

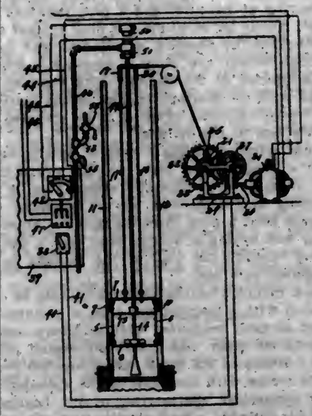
1,020,857. WATERPROOFING AND PRESERVING COMPOSITION. ANDREW J. TUCKER, Sedalia, Mo. Filed Apr. 15, 1910. Serial No. 555,563. (Cl. 134—53.)

1. A composition for treating materials comprising Japan wax, sulfate of iron, crude petroleum, and Japanese wood oil.

2. A composition for treating materials comprising Japan wax, ceresin, sulfate of iron, crude petroleum, and Japanese wood oil.

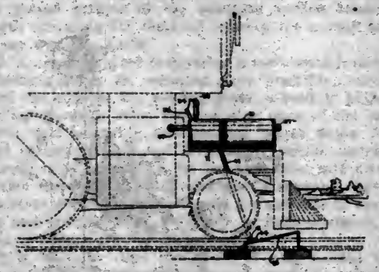
3. A composition for treating material comprising Japan wax, ceresin, sulfate of iron, crude petroleum, Japanese wood oil combined in the proportions specified and united in a homogenous mass by heating to a boiling point.

1,020,858. GLASS-DRAWING APPARATUS. ANDREW TUITE, Vincennes, Ind., assignor to John J. Tuite, Vincennes, Ind. Filed Sept. 27, 1909. Serial No. 519,717. (Cl. 49—17.1.)



The combination in a glass drawing apparatus, of a base, spaced guides extending vertically therefrom, a frame slidable upon said guides, said frame consisting of vertical and longitudinal bars, a drawing tube slidable through the frame, a sleeve formed upon one of said bars and surrounding the drawing tube, said sleeve being greater in diameter than the opening in the bar which surrounds the drawing tube, a stop adjustable upon the drawing tube for engagement with the shouldered lower end of the sleeve, cables secured to opposite ends of the frame upon opposite sides of the drawing tube, guide sheaves engaging the cables and a winding drum for the cables, a telescoping tube engaging the upper end of the drawing tube, the interior of said tube being provided with circular recesses, a pipe extending from one of said recesses and a vacuum attachment for the pipe.

1,020,859. WHISTLING-MACHINE. EDWARD VANDERALI and JOSEPH LITMER, Adrian, Minn. Filed Apr. 29, 1911. Serial No. 624,130. (Cl. 246—14.)



1. An automatically-operating signal for railway vehicles comprising a pressure cylinder having supply pipes communicating with its ends, a whistle carried by one of said pipes, controlling valves for said pipes, a piston in said cylinder provided with a piston rod, a slidable rack operated by said piston, a track cam, mechanism operated by said cam for controlling the operations of one set of valves, mechanism operated by said rack for operating the other set of valves, and whistle sounding mechanism operated by said rack.

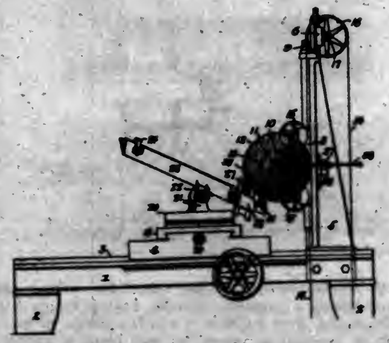
2. A signal for railway vehicles comprising a pressure cylinder carried by the pilot of a locomotive, pressure supply pipes communicating with the ends of said cylinder, controlling valves in said pipes, a piston and piston rod for said cylinder, a slidable rack connected to said rod, mechanism actuated by said rack for controlling the operation of one set of valves, a tripping rod, mechanism actuated by said tripping rod for controlling the other set of valves, a whistle carried by one of the supply pipes, and mechanism actuated by said rack for sounding said whistle.

3. A signal for railway vehicles comprising a base, a rack slidable thereon, a transverse shaft carried by said base, a gear thereon meshing with said rack, a cam disk loose on said shaft provided with a cam abutment, a locking arm pivotally connected to said shaft on an axis transverse to the shaft and adapted to engage said abutment, a whistle, a whistle-operating lever pivotally connected to said base and engaging the cam portion of said disk, a track cam, and mechanism thrown into operation by said track cam, for operating said rack.

4. A railway signal comprising a pressure cylinder, a main supply pipe communicating with one end thereof, a whistle pipe carried by the supply pipe, a whistle carried thereby, controlling valves in said pipes, a branch supply pipe communicating with the opposite end of said cylinder, an exhaust valve and a controlling valve in said branch pipe, a piston and piston rod in said cylinder, means carried by said piston rod for controlling the valves of the main supply pipe, a track cam, mechanism for controlling the valves of the branch pipe, a tripping rod adapted to engage said cam to operate said mechanism, and operating mechanism for said whistle controlled by the means carried by the piston rod.

5. A railway signal comprising a casing, a pressure cylinder therein, a pressure supply pipe communicating with one end of said cylinder and having a branch pipe communicating with the opposite end of the cylinder, a whistle pipe carrier by the supply pipe, a valve therein, a whistle carried by the whistle pipe, a controlling valve in the supply pipe, an exhaust valve and a controlling valve in the branch pipe, a piston in said cylinder, a piston rod therefor, means actuated by said piston rod for simultaneously operating the whistle pipe valve and the supply pipe valve in opposite directions, independent means for simultaneously operating the exhaust valve and the branch pipe valve in opposite directions, and whistle operating means actuated by the means actuated by said piston rod.

1,020,860. DRILL-GRINDER. ANDREW C. VAUCLAIN, Philadelphia, Pa. Filed Dec. 16, 1911. Serial No. 666,274. (Cl. 51—7.)

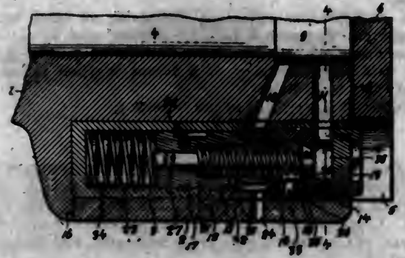


1. The combination in a drill grinding machine, of a base frame; a standard; a vertically adjustable carriage mounted on the standard; a shaft on the carriage; a grinding disk on the shaft; means for driving the shaft; a carriage on the base frame; a slide; means for adjusting the slide transversely on the carriage; a disk-carrier on the slide having a trough pivotally mounted on said disk-carrier; the parts being arranged that the trough can be universally adjusted with respect to the grinding disk; and means for retaining the drill in the trough.

2. The combination in a drill grinding machine, of a base frame; a standard; a carriage adjustably mounted on the standard; a shaft on the carriage; a grinding disk mounted on the shaft; means for driving the shaft; a carriage mounted on the base frame; means for moving the carriage; a transversely movable slide; a disk-carrier mounted on the slide; said disk carrier having lugs; a trough having projections adjustably secured to the lugs; the parts being so arranged that the trough can be universally adjusted with respect to the grinding disk; an adjustable stop mounted in the trough for the rear end of the drill; an adjustable guide plate at the opposite end of the trough and means for universally adjusting the said guide plate.

3. The combination in a drill grinding machine, of a base frame; a standard; a carriage vertically adjustable on the standard; a shaft on the carriage; a grinding disk on the shaft; means for driving the shaft; a carriage mounted on the base frame, a transversely adjustable slide on the carriage; a disk-carrier on the slide; means for retaining the disk carrier and the slide in position to which they are adjusted; a trough pivotally mounted at the center of the disk carrier; an adjustable stop on the trough for the rear end of the drill; a slide-way on the forward end of the trough; a head pivoted to the slide-way; means for adjusting said head; a shaft mounted in largement; said guide plate having a projection at its end to engage the drill and to hold it in the proper position while the grinding disk is acting.

1,020,861. AUTOMATIC DRAIN-VALVE FOR STEAM-CYLINDERS. FRANCIS W. WALRAVEN, Las Cascadas, Canal Zone. Filed Sept. 13, 1911. Serial No. 649,083. (Cl. 121—117.)



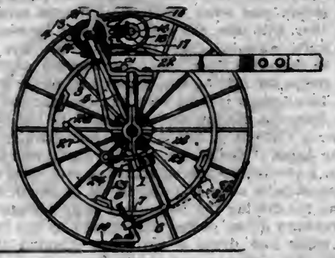
1. A steam cylinder having an integral enlargement provided with a longitudinal bore, a housing seated in the bore and having threaded connection therewith, said housing having a plug at its outer end, ducts connecting the interior of the housing with the bore of the cylinder, an outlet duct connecting the interior of the housing with the atmosphere, a spring actuated valve member slidable in the housing and having an annular recess, said valve member including a cap having an axial port and a radial port, the latter adapted to register with the outlet, a spring seated valve obstructing the axial port, and means for preventing the valve member from turning about its axis.

2. A steam cylinder having an enlargement or boss provided with a longitudinal bore, a housing seated in the bore and having at its outer end a plug provided with a wrench seat, means for securing said plug against rotation with reference to the housing, a cylinder head having a notch through which the plug is accessible, ducts connecting the interior of the housing with the bore of the cylinder and with the atmosphere, and spring seated valve means within the housing adapted to be actuated by the pressure of steam in the cylinder.

3. A steam cylinder having a boss or enlargement provided with a longitudinal bore, a vent connecting the inner end of said bore with the atmosphere, a tightly fitting housing seated in and having threaded connection with said bore, a plug threaded into the outer end of the housing and having a wrench seat, and a pin engaging the plug through the wall of the housing to secure the plug against rotation.

4. A steam cylinder having an integral boss or enlargement provided with a longitudinal bore, a housing tightly fitted in and securely connected with said bore, said housing having at its outer end a securely seated plug provided with a recess in its inner end, a vertical duct con-

1,020,862. COTTON-CHOPPING ATTACHMENT FOR CULTIVATORS. JOHN WALTHALL and OLIVER C. CARTER, North Fort Worth, Tex. Filed July 22, 1911. Serial No. 639,966. (Cl. 97—47.)



1. A cotton chopping attachment for cultivators comprising a yoke and a plurality of uprights, a U-shaped bridge piece connecting two of said uprights, bearings upon the yoke and the U-shaped bridge piece, a chopper carrying shaft mounted slidably in said bearing, and means for driving the chopper carrying shaft including a shaft supported for rotation upon some of the uprights, a bevel gear upon said shaft and a bevel pinion feathered upon the chopper carrying shaft and meshing with said bevel gear, said bevel pinion being confined between the arms of the U-shaped bridge piece to permit the chopper carrying shaft to slide therethrough.

2. In a cotton chopping attachment for cultivators, a yoke, a plurality of uprights, a U-shaped bridge piece connecting two of the uprights, a chopper carrying shaft slidably supported for rotation upon the yoke and the U-shaped bridge piece, a bell crank fulcrumed upon the yoke and having a bifurcated arm straddling the chopper carrying shaft, and a collar upon said shaft engaged by the bifurcated arm of the bell crank.

3. In a cotton chopping attachment for cultivators, a yoke, a plurality of uprights, a U-shaped bridge piece connecting two of the uprights, bearings upon the U-shaped bridge piece and upon the yoke, a chopper carrying shaft supported slidably in said bearings, a bevel pinion slidably mounted upon the chopper carrying shaft and confined between the arms of the U-shaped bridge piece, a counter shaft supported upon some of the uprights and having a bevel gear meshing with the pinion upon the chopper carrying shaft, a frame pivoted upon the counter shaft, a shaft journaled upon the frame and carrying a friction pulley, means for transmitting motion from the latter shaft to the counter shaft, a friction wheel engaged by the friction pulley, and means for sustaining the frame having the friction pulley carrying shaft in various positions with relation to the friction wheel.

1,020,863. CONVEYER-CLEAT. WENZEL WEICHSELDORFER, Potlatch, Idaho. Filed Nov. 5, 1908. Serial No. 461,237. (Cl. 193—8.)

sitely curved surfaces to engage a link of the conveyer chain, the curved surfaces of the engaging plate being arranged in spaced relation transverse of the plate and the curved surface of the clamping section being of a length exceeding the distance between the curved surface of the engaging plate.

2. A conveyer cleat comprising a main section including a bearing plate, an engaging plate projecting upwardly from one edge of the bearing plate, a holding plate projecting upwardly from the opposing edge of the bearing plate, said engaging and holding plates being formed with curved portions, and a clamping section designed to be removably secured to the bearing plate, said clamping section having a block formed on its forward edge with a surface curved in opposition to the surfaces of the bearing and holding plates, whereby to form a curved aperture extending transverse the cleat.

3. A conveyer cleat comprising a main section including a bearing plate, an engaging plate projecting upwardly from one edge of the bearing plate, a holding plate projecting upwardly from the opposing edge of the bearing plate, said engaging and holding plates being formed with curved portions, and a clamping section designed to be removably secured to the bearing plate, said clamping section having a block formed on its forward edge with a surface curved in opposition to the surfaces of the bearing and holding plates, said block bridging the space between the engaging and holding plates, whereby to form a link gripping aperture transverse the cleat.

1,020,864. CIGARETTE. BEZ H. WHITMORE, New York, N. Y. Filed June 13, 1911. Serial No. 632,826. (Cl. 131—52.)

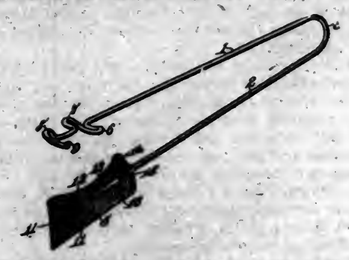


A cigarette consisting of a wrapper of asbestos fibers finely ground and starch intimately mixed together and a filling of tobacco, said wrapper coöperating in such a manner with the ignited tobacco that continuous and intimate communication is maintained between the ignited tobacco in the inner part of the wrapper and the atmosphere exterior to the wrapper.

1,020,865. CUTTER. GEORGE WIENER, Syracuse, N. Y. Filed Sept. 28, 1910. Serial No. 584,284. (Cl. 146—7.)



1,020,866. COMBINATION DISH MOP AND SCRAPER. LILLA BOYD WILLIS, Louisville, Ky. Filed Jan. 5, 1911. Serial No. 601,044. (Cl. 65—12.)



A device of the type set forth consisting of a handle having two adjacent substantially co-extensive legs connected at adjacent ends thereof and having their other ends free, one of the legs having projections at its free end to facilitate the attachment of a mop thereto, a scraper consisting of a sheet metal blade rigidly fitted on the free end portion of the other leg and disposed axially thereof and in the plane of the handle, and a connection between the adjacent free end portions of the legs to secure the proper operative relation thereof, the connection being operable to enable the legs to move away from one another.

1,020,867. COTTON-PICKER. BRUCE WORTHINGTON, Winchester, Va., assignor to Worthington Cotton Harvester Company, a Corporation of Delaware. Filed Mar. 22, 1911. Serial No. 616,209. (Cl. 56—6.)



1. A cotton-picker having in combination, an unyielding, rigidly fixed cam having a substantially cylindrical surface, a portion of said surface being cut away, a rotatable drum journaled on the cam, picker-pins carried by the drum and arranged to be engaged by the cylindrical surface of the cam, and means for rotating the drum so as to cause said cylindrical surface to force the picker-pins into rigidly-extended positions.

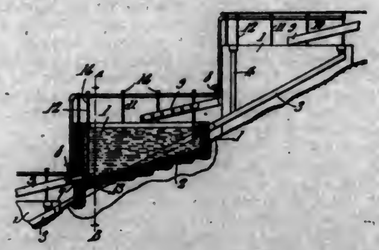
2. A cotton-picker having in combination, an unyielding, rigidly fixed cam having a substantially cylindrical surface, a portion of said surface being cut away, a rotatable drum journaled on the cam and provided with a plurality of rows of recesses or slots, picker-pins pivoted within said recesses and arranged to swing freely and collapse within the cut away portion of the cam when the drum is rotated, and means for rotating said drum.

3. A cotton-picker having in combination, an unyielding, rigidly fixed cam having a substantially cylindrical surface, a portion of said surface being cut away, a rotatable drum journaled on the cam, collapsible picker-pins carried by the drum and arranged to be engaged by the cylindrical surface of the cam, to force them into rigidly extended positions, and to swing freely within the cut away portion of the cam, and means for rotating the drum to cause the picker-pins to be alternately extended and collapsed.

4. In a cotton picking tool, the combination of a suitable frame, a carrier formed of a plurality of belts arranged side by side in close proximity to each other, a revoluble body suitably supported at the front end of the frame and having rockably secured thereto a plurality of picker pins adapted to be extended into the cotton to be picked, a solid surface cam within said revoluble body, adapted to be engaged by the picker-pins to hold them stationarily extended while in picking position, said cam having a cut away portion so as to permit the pins to be rocked after they have passed the picking position, said picker pins being so arranged on the revoluble body that they will pass through the spaces between the carrier belts, whereby, after the cotton has been picked, it will be deposited upon the upper surface of the carrier, and means for driving the carrier and picker pins.

5. In a cotton picking tool, the combination of a suitable frame, a driving drum mounted in the rear of the frame, a stationary, solid-surface cam suitably supported in the front of the frame, and having its rear portion cut away, a revoluble drum surrounding said cam, a plurality of spaced belts adapted to be driven by the driving drum, means for driving the rear drum and, through the belts, the forward drum, picker pins carried by the front drum, and when said drum is revolved, engaging the surface of the cam, whereby the picker pins will be maintained rigidly in picking position, but will be permitted to collapse when they pass from picking position to the cut away portion of the cam, and a suitable chute mounted upon the upper part of the body above the belts, and having open front and rear ends and adapted to guide the picked cotton in its movement from the front to the rear of the tool.

1,020,868. SAND-WASHING APPARATUS. WILLIAM YEO, Dunbar, Pa. Filed Jan. 5, 1911. Serial No. 600,910. (Cl. 83—82.)

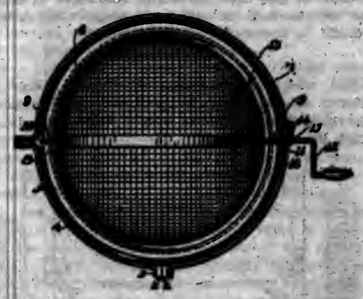


1. Sand washing apparatus including a tank having its bottom stepped downwardly from one end to the other, there being a valved outlet at the lower end of the bottom, means for feeding sand and water to the tank, and separate means at different distances from the outlet for washing the sand over the stepped bottom to the outlet.

2. Sand washing apparatus including a tank having its bottom stepped downwardly from one end to the other, there being a valved outlet at the lower end of the bottom, the side walls of the tank converging toward the outlet end of the tank, means for feeding sand and water into the tank, and separate means at different distances from the outlet for washing the sand over the stepped bottom and into the narrow portion of the tank to the outlet.

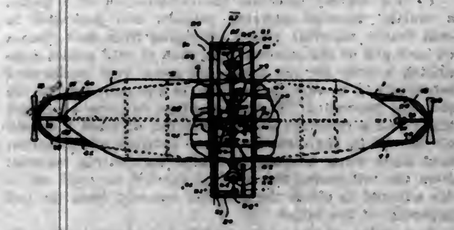
1,020,869. STRAINER. WILLIS E. AKERS, Fairfax, Okla. Filed Aug. 5, 1910. Serial No. 575,761. (Cl. 146—9.)

The combination with a strainer having a peripheral grooved portion; of a split supporting ring of angle iron form having a base flange portion removably fitting in the groove of the strainer, means for holding the ends of the said split ring closed against each other, the said ring having a vertical groove therein at one end and being provided at its opposite side with a pivoted socket member, an agitating shaft having one end removably fitted in the socket member and having its opposite end extending between the walls of the said groove and formed immediately at one side of the groove to provide a stop collar which engages the ring to hold the shaft against displacement from the socket member, and a keeper mounted on the ring and extending across the agitating shaft immediately at one side of the said stop member



and operating to hold the shaft against displacement from the groove.

1,020,870. AIRSHIP. IRA ALLEN, Dansville, N. Y. Filed May 6, 1909. Serial No. 494,230. (Cl. 244—6.)



In a flying machine, a body portion, a sectional shaft extending through said body, each section being independently rotatable a yoke at the outer end of each of the sections of said shaft, a propeller shaft carried by each of said yokes, a skeleton frame surrounding each of said yokes, driven shafts carried by said frames, means connecting said driven shafts with said propeller shafts, and driving means connected with said driven shafts.

1,020,871. TYPE-WRITING MACHINE. FRANCIS D. AMMEN, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Feb. 2, 1911. Serial No. 606,108. (Cl. 197—157.)



1. In a typewriting machine, in combination, a ribbon holder, a lever pivoted thereto, an actuator, a universal bar, a guide for said actuator on said universal bar, a connection between said lever and said actuator normally affording means at one point for moving said lever when said actuator moves, and means for holding said actuator at another point in said guide at which said connection is inoperative.

2. In a typewriting machine having a universal bar, a ribbon lever pivotally mounted adjacent thereto and having an actuating arm, the combination of a vibrator attached to said lever, an actuator guided on said universal bar, said actuator having a free connection with said arm, and being adapted to rock said lever by a lateral movement, said arm having a form at one point permitting the independent lateral movement of said actuator when in a mid position, and means for controlling the position of said actuator.

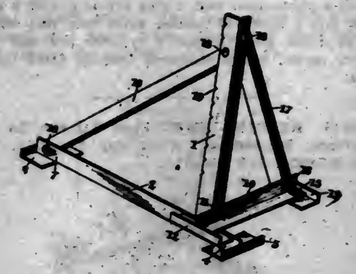
3. In a typewriting machine, in combination, a vibrator, a lever connected therewith for actuating the same, a universal bar, said lever having an elongated slot therein, with a laterally projecting gap at the side thereof, an actuator mounted on said universal bar and adapted to be raised or lowered thereupon, said actuator having a wrist running in said slot, said wrist affording means for normally moving said lever, said gap affording means for permitting the movement of said wrist without actuating said lever.

4. In a typewriting machine, in combination, a member adapted to raise and lower the ribbon, a universal bar actuated by the type bars, an actuator adjustably mounted on said universal bar, and a connection between said actuator and said member comprising a pin on one constantly riding in a slot on the other, said slot of said connection having a lateral extension in which said pin may ride idly.

5. In a typewriting machine, in combination, a vibrator, a lever pivotally connected therewith and having an arm with a slot therein, a universal bar, an actuator on said bar, said actuator having a pin running in said slot, and said slot having a laterally disposed gap which may receive said pin, enabling said actuator to move with said universal bar without actuating said lever, and a cam for shifting said actuator up and down on said universal bar.

[Claims 6 to 9 not printed in the Gazette.]

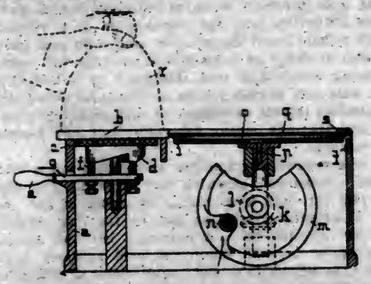
1,020,872. FENCE-POST. GILES G. ANDERSON, Enid, Okla. Filed Sept. 13, 1911. Serial No. 649,052. (Cl. 29—123.)



1. A device of the class described comprising a vertical post formed of angle iron, two horisontally extending base or anchoring members also formed of angle iron and secured to the bottom of the vertical post, the ends of said members crossing each other at right angles and extending beyond the post, and brace bars connecting the post and the horisontal anchoring members.

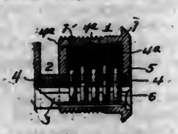
2. A device of the class described comprising a main post of angle iron to which the wires of the fence are to be secured, horisontally disposed members formed of angle iron and connected to the bottom of the main post, anchoring heads carried at the ends of the members, said heads being formed of short sections of angle iron, and inclined braces of angle iron extending between the horisontally disposed anchoring members and the post.

1,020,873. ROTATING DISK CUTTING-MACHINE. LEO ANSCHEL, Dortmund, Germany. Filed Sept. 10, 1909. Serial No. 517,149. (Cl. 17—24.)



In a meat cutting machine the combination with a rotating annular cutter having an outer cutting edge of a central disk being loosely pivoted on the cutter and arranged flush with the surface of the latter, substantially as set forth.

1,020,874. PIN-TUMBLER LOCK. PETER F. AUGENBRAUN, Stamford, Conn., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Filed Dec. 28, 1911. Serial No. 668,277. (Cl. 70—47.)



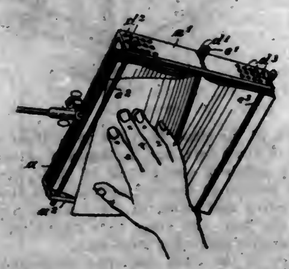
1. In a pin tumbler lock, the combination of a cylinder and plug, hard steel recessed bearings inserted in both of said parts, and pin tumblers mounted to move in said bearings.

2. In a pin tumbler lock, the combination of a cylinder and plug each having alined recesses, a hard metal bushing in each of said recesses, and pin tumblers located and moving within said bushings.

3. In a pin tumbler lock, a plug provided with a tumbler recess, and a hardened bushing fitted into said recess.

4. In a pin tumbler lock, a cylinder provided with a tumbler recess, and a hardened bushing fitted into said recess.

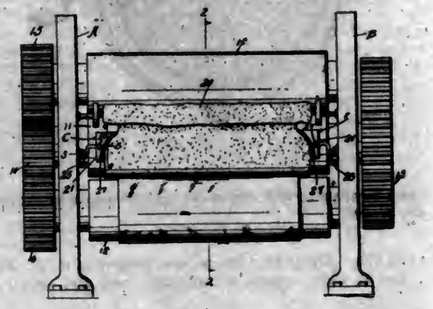
1,020,875. READING-DESK. PAUL BAILLOD, La Chaux-de-Fonds, Switzerland. Filed May 15, 1911. Serial No. 627,289. (Cl. 45—61.)



1. In a reading desk of the type set forth, a back plate, leaf holding rods arranged parallel to the back of the book, top and bottom vertical edges on the back plate, rows of holes adapted to receive the holding rods at the ends and middle of these edges, and means for supporting the back plate.

2. In a reading desk of the type set forth, the combination of a back plate having angularly disposed top and bottom edges; said angular edges having a plurality of holes therein; and three leaf holding rods disposed parallel with said back plate; one of said rods located at the middle of the back plate and the other of said rods located at the ends of said back plate, substantially as described.

1,020,876. GUIDE. CLARENCE E. BAUER, Akron, Ohio, assignor of one-fourth to Fred Bauer and one-fourth to Arthur Cisler, Akron, Ohio. Filed Oct. 19, 1911. Serial No. 655,469. (Cl. 18—10.)



1. In a coating machine, the combination of a frame, a coating material carrying calender roll journaled in said frame, material guides supported from said frames at each end of the calender roll, each of said guides comprising a body portion having its lower face conforming substantially in superficial shape to the periphery of the roll and reduced at its inner portion to form a scraper blade and a resultant curved shoulder directed inwardly of the roll in the direction of the rotation of the latter, said blade being adapted to scrape the coating material from the roll during the rotation thereof and said shoulder adapted to direct the material removed from the roll inwardly of the latter.

2. A guide of the class described, comprising a body portion provided with means for attachment to the frame of a coating machine to dispose the guide in proximity to one of the calender rolls of the machine, said guide comprising a body portion having its lower face conforming substantially in superficial shape to the periphery of a calender roll and reduced at its inner portion to form a scraper blade and a resultant curved shoulder, and a flange on said body portion having one side thereof in registration with said resultant shoulder.

1,020,877. COMBINATION BEER-COCK. HERBERT BELL, East Boston, Mass. Filed July 2, 1909. Serial No. 505,716. (Cl. 225—6.)

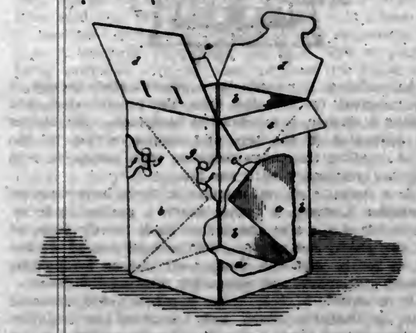


1. A combination beer cock comprising a connection having a closed end and a central partition, pipes formed therewith and communicating with separate passages formed by said partition, a casing having a threaded portion exterior thereof and an adjacent shoulder, a nut threaded thereon for securing the casing to a support, a collar detachably connecting the connection to the casing, said casing being provided with a similar partition in line with the first named partition to form separate passages, said casing being further provided with a portion enlarged upwardly and downwardly and terminating in a reduced outlet, said enlarged portion having a vertical bore, and

a turning plug operable therein and having a pair of spaced slots forming an intermediate partition adapted to aline with the adjacent partition when the valve is opened, said passages in the casing being restricted to aline with the slots in the plug which open into an enlarged circular chamber vertically disposed at the outlet side of the plug.

2. In a beer cock, a casing having a central enlarged portion and an outlet passage extending from said central enlarged portion and being provided with a bore extending transversely of the enlarged portion, a mixing chamber communicating with the bore and with the passage and having curved walls, the space between the curved walls being greater than the diameter of the bore, said casing being further provided with a divided inlet passage, the partition dividing said inlet passage terminating near the bore of the casing, a valve fitted in the bore of the centrally enlarged portion of the casing and provided with two independent passages adapted to shape a liquid flowing through the valve into relatively thin sheets, said valve being so arranged in the casing that one of said sheets will contact with one of the curved walls of the mixing chamber and be deflected thereby across the mixing chamber to intermingle with the other sheet, whereby the two sheets will be intimately mixed.

1,020,878. COLLAPSIBLE BOX OR PACKAGE. ARTHUR E. BENDELARI, Joplin, Mo. Filed Aug. 16, 1911. Serial No. 644,362. (Cl. 229—27.)



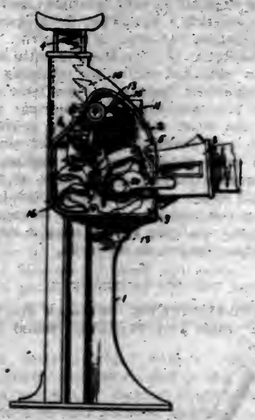
The improved rectangular collapsible box formed of a pasteboard blank whose adjacent triangular sections *c*, *c*, are folded inward and thus form vertical triangular sections within the chamber of the box which meet at the center thereof, the sides of the box having respectively T-shaped tongues and slits adapted to receive the same, the tongues overlapping, as shown and described.

1,020,879. LIFTING-JACK. GLEN RUSSELL BOOTH, Chana, Ill. Filed Apr. 1, 1911. Serial No. 618,398. (Cl. 57—100.)

1. In a jack, the combination of a standard comprising a box, a lifting rack, a lifting pawl, an operating handle on which the lifting pawl is pivoted, a holding pawl pivoted intermediate its ends to said standard, a pawl-controlling lever pivoted to the standard, a yielding connection between said pawl-controlling lever and said holding pawl, said connection with the holding pawl being on the other side of the pivot from the rack-engaging end, and a locking and unlocking dog for said lever also pivoted to said standard.

2. In a jack, the combination of a standard comprising a box, a lifting rack, a lifting pawl, an operating handle to which the lifting pawl is pivoted, a holding pawl pivoted to said standard, a pawl-controlling lever pivoted to the standard, and a locking and unlocking dog for said lever also pivoted to said standard, said dog being supported on an extension of the handle pivot.

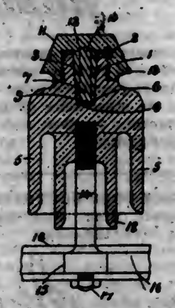
3. A jack comprising a standard having a box, a partial partition dividing said box, a lifting rack, a lifting pawl, a holding pawl, and a handle, all mounted behind said partition; a pawl-controlling lever, a spring acting thereon, said lifting pawl having an extension beyond the partition into coöperative relation with the pawl-controlling lever, and said holding pawl being operatively connected at its end remote from said rack to the pawl-controlling lever, and a lever-adjusting dog in front of said partition.



4. In a jack, the combination with a lifting rack, a lifting pawl, and a holding pawl, of a single spring held by the holding pawl pivot at an intermediate point, the tension of said spring being applied by both of said pawls.

5. In a jack, the combination with a lifting rack, a lifting pawl, and a holding pawl centrally pivoted, a post thereon opposite the rack-engaging end, of a pawl-controlling-lever, a link connected to said pawl-controlling-lever and having an elongated opening through which said post projects, whereby in one adjustment of the link the post is free to move in the opening and in another adjustment it is not.

1,020,880. INSULATOR. ALEXANDER MORRISON BOURKE, Maitland, New South Wales, Australia. Filed July 26, 1910. Serial No. 573,837. (Cl. 173—314.)

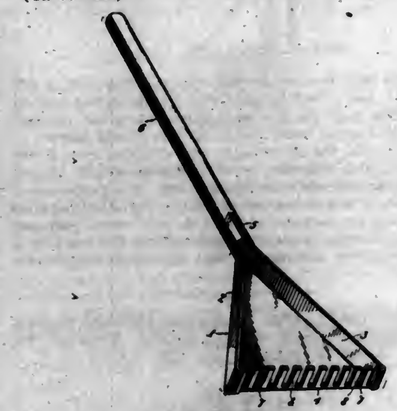


1. In an insulator, the combination with a wire of a body portion, provided with a diametrical slot for receiving said wire, said slot being provided with a wider portion extending partially the length of said slot, the walls of said wider portion being provided with a plurality of recesses, of a wedge member adapted to fit in said wider portion, a plurality of lugs carried by said wedge member adapted to engage in said recesses, and a cap member adapted to fit over a portion of said body member and force said wedge member downward upon said wire for clamping, as set forth.

2. In an insulator, a body member provided with external screw threads and having a diametrical slot therein for the reception of a wire, said recess being provided with a broadened portion running partially the length thereof, and having recesses formed in the opposite walls of said broadened portion, a wedge member adapted to fit in said broadened portion, a plurality of oppositely extending lug members carried by said wedge member and adapted to be received in said recesses, and a cap member adapted to be engaged by said external screw threads for retaining and exerting a downward force upon said wedge member for clamping the wire, as set forth.

3. In an insulator, the combination with a supporting member, of an insulator, means for retaining said insulator on said supporting member, said insulator comprising a body portion provided with a diametrical slot for the reception of the wire, said slot being provided with a wider portion, and having a plurality of recesses in the walls of said wider portion, a wedge member adapted to fit in said broader portion, a plurality of lug members carried by said wedge member and adapted to fit in said recesses, and a cap member adapted to be engaged by said body member for retaining and exerting a clamping force upon said wedge member, as set forth.

1,020,881. BERRY-PICKER. WILLIAM BRANDON, Woodbine, Iowa. Filed July 17, 1911. Serial No. 638,986. (Cl. 56—99.)



A berry picker, comprising a substantially triangular shaped receptacle formed from a single piece of sheet metal, one side of said receptacle being slitted to form a plurality of teeth, the other sides of said receptacle being extended and brought together, and a handle secured to said extended side portions.

1,020,882. FURNACE-DOOR MOUTHPIECE. FREDERICK W. BROOKS, Virginia, Minn. Filed Mar. 25, 1911. Serial No. 616,923. (Cl. 122—500.)



The combination with a furnace having the wall thereof composed of two sheets whereof the outermost is provided with a door opening and the innermost arount said door opening defines an ogee bend toward the outermost sheet, rivets connecting said sheets immediately around said door opening and forming a seam, of a protector consisting of a single piece of material having a flange around the inner end of its body beveled at its periphery to engage against said ogee bend and a sleeve at the outer end of its body projecting through the opening in said wall, a face plate whose periphery is larger than the size of the door opening in the outer sheet of the wall, and rivets connecting the face plate with the sleeve of the said protector to clamp the periphery of the body against the inner sheet beyond the seam.

1,020,883. CHURN. FRED BUEHLER and ABBOT PORTER GOFF, St. Joseph, Mo. Filed Aug. 26, 1911. Serial No. 646,087. (Cl. 31—42.)



1. In a churn, a receptacle, a pivotal stud therein, a churn mounted for rotation upon the pivotal stud, and including a dasher, a top for the receptacle, said dasher being journaled in the top, and means carried by the top for rotating the churn together with means to hold the dasher stationary with the top.

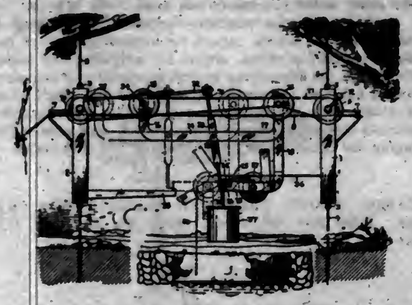
2. In a churn, a pivotal member, a churn body mounted for rotation thereon, a dasher shaft, a dasher blade secured to the shaft, a second dasher blade loosely mounted upon the shaft, means for causing said second dasher blade to rotate with the churn body, means for holding the shaft stationary, and means for rotating the churn.

3. In a churn, a receptaclee, a pivotal stud mounted therein, a floatable churn body mounted for rotation upon the pivotal stud, a top for the churn body, a top for the receptacle, a dasher shaft journaled in the churn top, means to secure the dasher shaft to the receptacle top, a stationary dasher blade carried by the shaft, a second dasher blade journaled upon the shaft, rods projecting from the churn body for engaging said second dasher blade to cause the rotation thereof with the churn body, a gear carried by the churn top and surrounding the dasher shaft, and means carried by the receptacle top for operating said gear to rotate the churn body, said receptacle adapted to receive a liquid to float the churn.

1,020,884. WATER-CARRIER. JOHN A. CAMPBELL, Harmony, Ark. Filed Aug. 17, 1911. Serial No. 644,701. (Cl. 214—14.)

1. A conveyer comprising end bars, a suspension cable connecting said bars, a conveying cable adapted to travel between said bars, a carriage mounted upon said suspension cable, a trip pivotally mounted upon said carriage, a latch lever pivotally mounted upon said carriage and adapted to engage said trip, means for automatically rocking said latch lever to release said trip, and means for engaging said trip to hold said carriage at one end of said suspension cable.

2. A conveyer comprising end bars, a suspension cable connecting said end bars, a conveying cable adapted to travel between said bars, a carriage mounted upon said suspension cable and connected with said conveying cable, a trip pivotally connected with said carriage, a pulley wheel mounted between the arms of said trip, a latch lever adapted to engage said trip, means for rocking said latch lever to release said trip, and means for engaging the released trip for holding said carraige at one end of said suspension cable.



3. A conveyer comprising end bars, a suspension cable connecting said bars, a conveying cable adapted to travel between said bars, a carriage mounted upon said suspension cable and engaging said conveying cable, an arm depending from said carriage and having its lower portion bent parallel with said carriage, a trip pivotally connected with the lower end of said arm, a pulley wheel carried by said trip, a latch lever adapted to engage said trip, means for automatically releasing said latch lever, from said trip, and means for engaging said released trip to hold said carriage at one end of said suspension cable.

4. A conveyer comprising end bars, one of said bars being provided with a recess adjacent its upper end, a suspension cable connecting said bars, a conveying cable adapted to travel between said bars, a carriage mounted upon said suspension cable and engaging said conveying cable, an arm depending from said carriage and having its lower portion bent substantially parallel with said carriage, a strip connected with said arm and having its major portion positioned in spaced relation thereto to form a housing, a trip pivotally mounted in said housing, a pulley wheel mounted in said housing and inclosed by said trip, a latch lever pivotally connected with said carriage and adapted to engage said trip, a rod connected with said lever and extending beyond said carriage, said rod contacting with the inner wall of said recess to move said rod and rock said lever to release said trip.

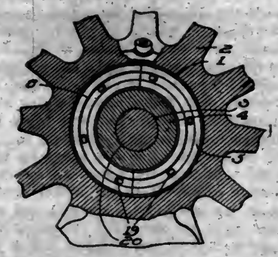
5. A conveyer comprising end bars, a suspension cable connecting said bars, a conveying cable adapted to travel between said bars, a carriage mounted upon said suspension cable and engaging said conveying cable, a hook carried by one of said bars, a trip pivotally connected with said carriage, a latch lever pivotally mounted upon said carriage and adapted to engage said trip, and a rod for rocking said lever to release said trip, said trip adapted to be engaged by said hook to hold said carriage upon one end of said suspension cable.

[Claims 6 and 7 not printed in the Gazette.]

1,020,885. WHEEL-HUB PLATE. MATTHIAS CHRISTMAN, Springfield, Mo., assignor of one-third to Harry L. Bissett and one-third to George A. McLaughlin, Springfield, Mo. Filed Oct. 31, 1911. Serial No. 657,737. (Cl. 105—146.)

1. A wheel provided with an annular recess, a hub plate mounted within said recess, said hub plate provided with a reduced inner end and with annular grooves formed therein to form seats, locking rings positioned within said seats to hold said plate within said recess, and means for locking said plate against rotation within said recess.

2. A wheel provided with an annular recess, a hub plate mounted within said recess, said hub plate formed of a plurality of arcuate sections, interlocking joints formed upon the abutting ends of said sections, the inner portions of said sections being provided with annular grooves forming seats, and locking bands mounted within said seats and adapted to secure said sections together and hold said plate within said recess.



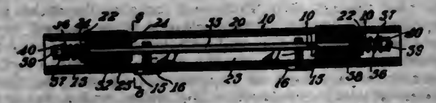
3. A wheel provided with an annular recess, a hub plate mounted within said recess, said hub plate formed of a plurality of sections, common means for holding said sections together, and for holding said hub plate within said recess, and common means for preventing the rotation of said plate within said recess and for permitting the passage of a lubricant through said plate.

4. A hub plate comprising arcuate sections provided with grooves near their inner ends and liner bands positioned within said grooves and holding said sections together.

5. A hub plate provided with a reduced inner end and with annular grooves formed in the reduced end and constituting seats, and locking rings positioned within said seats to hold said plate in position.

[Claims 6 to 12 not printed in the Gazette.]

1,020,886. CROSS-TIE. JAMES H. COLLINS, Harrisburg, Pa. Filed Sept. 21, 1911. Serial No. 650,493. (Cl. 238—5.)



1. The combination of a pair of spaced rails with resilient means local to each rail and operative to force said rails together, and means connecting said resilient means to equalize the respective tensions thereupon.

2. The combination of a pair of spaced rails with resilient means local to each rail and operative to force said rails together, means to limit the relative approach of said rails, and means connecting said resilient means to equalize the respective tensions thereupon.

3. The combination of a pair of spaced rails with a cross tie comprising a pair of spaced blocks to which said rails are respectively secured, and resilient means operative to force said blocks together.

4. The combination of a pair of spaced rails with a cross tie comprising a pair of spaced blocks to which said rails are respectively secured, resilient means operative to force said blocks together, and means to limit the relative approach of said blocks.

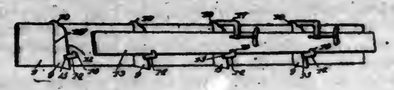
5. The combination of a pair of spaced rails with a cross tie comprising a pair of spaced blocks to which said rails are respectively secured, resilient means operative to force said blocks together, means to limit the relative approach of said blocks, and means extending between said resilient means to equalize the respective pressures thereupon.

[Claims 6 to 17 not printed in the Gazette.]

1,020,887. CURBING, &c. STEPHEN N. CORNWALL, Springfield, Mo. Filed Sept. 18, 1911. Serial No. 649,081. (Cl. 25—118.)

1. A device of the character specified, comprising a plurality of series of plates or boards, the members of each series being laid in longitudinal alinement and in

laterally spaced relation to the other series, each plate or board having one end provided with a substantially V-shaped groove and the side edges of the other end being beveled to fit the groove of the adjacent plate or board, an open frame at each end of the plates or boards of one series, a bolt passing through the plate or board adjacent to each frame, each frame having a threaded opening for engagement by the bolt, a stake passing through each frame for holding the plates or boards upright, a set screw threaded through each frame and engaging the stake, a plurality of templets having their side edges inclined toward each other and arranged between the series and substantially perpendicular to the plates or boards, each templet having a hook at its upper end for engaging the plates or boards connected to the stakes, and a hanger bar pivoted at one end to each templet and provided at the other end with an upwardly extending lug for engaging the outer face of the adjacent board or plate of the other series, and clamps engaging the opposite members of the series for pressing them toward each other.



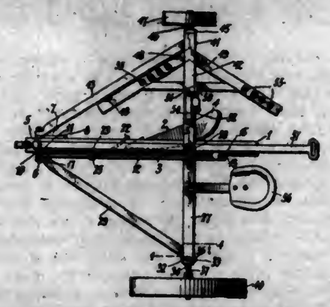
2. A device of the character specified, comprising a plurality of series of plates or boards, the members of each series being laid in longitudinal alinement and in laterally spaced relation to the other series, each plate or board having one end provided with a substantially V-shaped groove and the side edges of the other end beveled to fit the groove of the adjacent plate or board, an open frame at each end of the plates or boards of one series, a bolt passing through the plate or board adjacent to each frame, each frame having a threaded opening for engagement by a bolt, a stake passing through each frame for holding the plates or boards upright, a set screw threaded through each frame and engaging the stake, a plurality of templets having their side edges inclined toward each other and arranged between the series and substantially perpendicular to the plates or boards, each templet having a hook at its upper end for engaging the plates or boards connected to the stakes, and a hanger bar pivoted at one end to each templet and provided at the other end with an upwardly extending lug for engaging the outer face of the adjacent board or plate of the other series.

3. A device of the character specified, comprising a plurality of series of plates or boards, the members of each series being laid in longitudinal alinement and in laterally spaced relation to the other series, each plate or board having one end provided with a substantially V-shaped groove and the side edges of the other end beveled to fit the groove of the adjacent plate or board, an open frame at each end of the plates or boards of one series, a bolt passing through the plate or board adjacent to each frame, each frame having a threaded opening for engagement by a bolt, a stake passing through each frame for holding the plates or boards upright, a set screw threaded through each frame and engaging the stake, a plurality of templets having their side edges inclined toward each other and arranged between the series and substantially perpendicular to the plates or boards, each templet having means for engaging the plates or boards connected with the stakes to support said templet, and having means for engaging the adjacent board or plate of the other series to support the same.

4. A device of the character specified, comprising a plurality of series of plates or boards, the members of each series being laid in longitudinal alinement and in laterally spaced relation to the other series, an open frame at each end of the plates or boards of one series, a bolt passing through the plate or board adjacent to each frame, each frame having a threaded opening for engagement by a bolt, a stake passing through each frame for holding the plates or boards upright, a set screw threaded through each frame and engaging the stake, a plurality of templets having their side edges inclined toward each other and arranged between the series and substantially perpendicular to the plates or boards, each templet having means for engaging the plates or boards connected with the stakes to support said templet, and having means for engaging the adjacent board or plate of the other series to support the same.

5. A device of the character specified, comprising a parallel series of boards, means for supporting one of the series in upright position, means for adjusting the series vertically on the supporting means, a plurality of templets arranged between the series for spacing them apart from each other, each templet having means for engaging the supported series to support the templet, and means for engaging the other series for supporting the said series.

1,020,888. PLOW. FREMONT B. CRAVEN, Golden City, Mo. Filed Nov. 10, 1910. Serial No. 591,611. (Cl. 97—44.)



1. In a machine of the class described, in combination, a plow beam and a plow secured thereto, a bearing wheel frame extending outwardly over the landside, a bearing wheel secured in said frame, a harrow supporting frame detachably secured to said plow beam and extending outwardly over the mold side, a second bearing wheel carried by the outward extremity of said harrow supporting frame, a harrow frame pivotally secured to said harrow supporting frame forward and rear sets of teeth secured in said harrow frame, and means carried by said harrow supporting frame whereby the rear set of teeth may be raised from the ground while the forward set is still in active position.

2. In a machine of the class described, in combination, a plow beam and a plow secured thereto, a harrow supporting frame detachably secured to said plow beam, a bearing wheel carried on the outward extremity of said harrow supporting frame, links depending from said harrow supporting frame, a harrow frame hingedly connected by its forward portion to said links, a hand lever pivoted in said harrow supporting frame, and a link connecting said hand lever with the unsupported end of said harrow frame, whereby the same may be adjusted angularly with respect to the harrow supporting frame.

3. In a machine of the class described, in combination, a plow beam and a plow secured thereto, a transverse member attached to said plow beam and extending outwardly over the mold side of the plow, a strap connecting the outward extremities of said transverse member with the forward end of the plow beam, a bearing wheel carried by the outward extremity of said transverse member, a harrow frame hingedly secured to said strap intermediate its length, a hand lever pivoted on said transverse member, and a link connecting said lever with the unsupported portion of said harrow frame.

1,020,889. MOTOR-CONTROLLING MECHANISM FOR SELF-PROPELLED VEHICLES. ALFRED H. DAEHLER, Los Angeles, Cal. Filed Aug. 30, 1907. Serial No. 390,805. (Cl. 74—89.)

1. The combination with a hollow steering rod and a steering wheel, of a hollow tube extending through said rod, a lug on said tube, a seat for said lug to prevent the rotation of said tube, a sleeve provided with a diagonal slot, said lug being arranged to extend in the pathway of said slot, a spark-timer controlling lever on said sleeve, a stem extending through said tube, a throttle regulating lever on said stem, and means for operating said tube and stem simultaneously or independently of each other.



2. The combination with a hollow steering rod, and a steering wheel; a spark timing controlling tube; a stem in said tube; a throttle regulating lever on said stem; a governing arm pivotally attached to said stem and provided with an apertured ball; a spherical body inclosing the pivotal joint of said arm and stem, said body being provided with a circular guide way to accommodate said ball, and means whereby a vertically reciprocating movement of said arm imparts a rotary motion to said spark timing lever, and a circular movement of said arm imparts a rotary motion to said stem and throttle regulating lever.

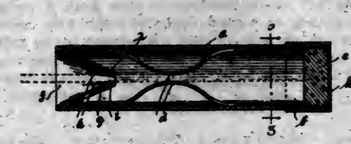
3. A tube, a lug on said tube to prevent rotation thereof, a motor controlling element, having a slot to accommodate said lug, a motor controlling stem extending through said tube, and a single lever having a reciprocatory movement to rotate said element and an oscillatory movement to oscillate said stem.

4. The combination with a hollow steering rod and a hand wheel secured thereto, of a tube extending through said rod, a lug on said tube, a motor controlling element operatively connected with and rotatable by the vertical movement of said lug, a stem extending through said tube, another motor controlling element connected with said stem, and a lever connected with said stem to oscillate the same, said tube being also operatively connected with said lever to reciprocate said tube.

5. The combination with a hollow steering rod and a steering wheel secured thereto, of a tube extending through said rod and provided with a lug, means engaging said lug to hold said tube against rotation, a motor controlling connection operatively connected with said lug, a stem extending through said tube, another motor controlling element connected with said stem, and a lever pivotally connected with said stem to rotate the same, said tube being also operatively connected with said lever and movable in but one direction therewith.

1,020,890. HAT-PIN GUARD. EDWARD DOUCET, Manchester, N. H. Filed Sept. 14, 1910. Serial No. 582,081. (Cl. 24—155.)

A hat pin guard, comprising a cylindrical body member closed at one end, and means inclosed in said body for three point engagement with the shaft of a pin, said means consisting of a cork buffer positioned in the closed end of said body, a pair of confronting bowed springs secured in said body intermediate its length and a frusto-conical receiver extending into the open end of said body,



the inner end of said cone being slitted longitudinally to form terminal springs.

1,020,891. PADLOCK. ARTHUR W. DOWE, Camden, N. J., assignor to Miller Lock Co., Philadelphia, Pa., a Corporation of Pennsylvania. Filed June 27, 1911. Serial No. 635,536. (Cl. 70—108.)



1. The combination in a lock, of a casing; a shackle; an opening in the casing for the reception of the short leg of the shackle; a bolt; a tumbler carried thereby; said bolt being arranged to engage the long leg of the shackle; a stump arranged in line with the tumbler; and a screw for confining said stump to the casing; said screw being on a line with the opening in the casing for the short leg of the shackle.

2. The combination in a padlock, of a casing; a shackle; a bolt; tumblers carried thereby and having projections at one end; laterally adjustable stumps notched at one end and arranged to be moved out of line with one another; means for holding the stumps in position to which they are adjusted; said tumblers being capable of being shifted by a key to aline with the stumps.

3. The combination in a padlock, of a casing; a shackle swiveled therein and having a long and a short leg; a bolt; a key plug and a key plate; the long leg of the shackle being arranged to receive the key plate and the bolt; tumblers carried by the bolt; stumps adjustably secured to the casing and having notches; the tumblers having projections adapted to the notches; said stumps being laterally adjustable; with means for securing the stumps in the positions to which they are adjusted; the key plate acting as a guide for the key and also as a means to limit the outward movement of the shackle.

4. The combination in a padlock, of a casing; a shackle; having a long and a short leg and adapted to the casing; a spring under the long leg of the shackle for lifting the shackle; a bolt; a key plate mounted between the bolt and a shoulder on the casing; said shackle being notched to receive the bolt and key plate; said plate having an extension; a series of tumblers mounted in the bolt and confined so that they will only have a lateral movement therein independently of the bolt; a projection on each tumbler; a series of stumps having recesses alining with the projections on the tumblers; each of said stumps being slotted laterally; and a screw confining the stumps to the casing; said screw being accessible through the opening in the casing for the short leg of the shackle.

1,020,892. KEY. FRED C. ECKERT, Waukesha, Wis. Filed July 28, 1911. Serial No. 641,047. (Cl. 70—9.)

1. A key comprising a shank; a guard pivoted intermediate its ends in the shank; and a tiltable member in

the guard, adapted to engage with the shank, to maintain the guard in angular relation with respect to the shank.



2. A device of the class described comprising a shank; a guard pivoted intermediate its ends in the shank; and a ring pivoted in the guard and adapted to engage the shank, to maintain the guard in angular relation with respect to the shank, the ring being adapted to be swung over one end of the guard, there being a projection upon said end of the guard, adapted to receive the ring, to maintain the same alined with the guard.

3. A device of the class described comprising a shank bifurcated to form spaced arms and provided with a slot opening between the arms; a guard pivoted between the arms and adapted to move freely beneath the arms, and to register at one end in the slot; the guard having outstanding friction ribs, adapted to engage with the shank, to maintain the guard alined with the shank; and a tiltable member carried by the guard, and adapted to engage the shank, to hold the guard at an angle to the shank.

4. In a device of the class described, a shank; a guard pivoted between its ends in the shank; a ring pivoted in the guard and adapted to be swung into engagement with the shank to maintain the guard at an angle to the shank; the ring having a flat side engageable by the end of the shank, to hold the ring alined with the shank.

5. In a device of the class described, a shank; a guard pivoted between its ends in the shank; a ring pivoted in the guard and adapted to be swung into engagement with the shank to maintain the guard at an angle to the shank; the ring having a flat side engageable by the end of the shank, to hold the ring alined with the shank; there being a projection upon the end of the guard to receive the ring, when the ring is alined with the shank.

1,020,893. SOLID LUBRICATING COMPOUND FOR COMPRESSED-AIR APPARATUS. EDWIN A. EMERY, Denver, Colo., assignor to The Emery Pneumatic Lubricator Company, a Corporation of Colorado. Filed June 23, 1909. Serial No. 503,929. (Cl. 87—9.)

1. A solid lubricant having a moisture soluble surface and adapted to be transported to pneumatic machinery by air currents containing moisture, comprising moisture soluble solid soap, glycerin in quantity to render the product non-refrigerant and non-drying, lubricating oil to render said product resisting to penetration of moisture and a powdered mineral lubricant for the purpose specified.

2. A solid lubricant having a moisture soluble surface and adapted to be transported to pneumatic machinery by air currents containing moisture, comprising moisture soluble solid soap, glycerin in quantity to render the product non-refrigerant and non-drying, mineral lubricating oil to render said product resisting to penetration of moisture and graphite for the purpose specified.

1,020,894. SPINDLE-BEARING. THOMAS J. FEGLEY, Philadelphia, Pa., assignor to North Bro's Mf'g Co., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Sept. 15, 1909. Serial No. 517,819. (Cl. 64—25.)

The combination of a frame having bearings, a spindle mounted in the bearings and having a longitudinal slot and an annular groove near one end, means for turning the spindle, having a key extending into the slot in the spindle, one bearing having a recess, a collar mounted in the recess and extending into the groove of the spindle preventing the spindle moving in one direction, a plug secured to the bearing and resting against the end of the spindle, the key and slot connection allowing the spindle to move longitudinally in the bearings to project the



collar so that it can be removed from the spindle, after which the spindle can be withdrawn.

1,020,895. CHILD'S WAGON. HANNIBAL D. FIELDS, Loughman, Fla. Filed Sept. 12, 1910. Serial No. 581,575. (Cl. 208—38.)

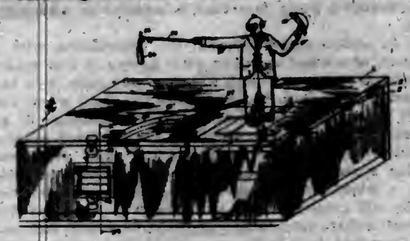


1. The combination with a wheeled frame having its rear axle provided with a gear, of a pair of standards supported by the frame, a pair of hangers depending from the frame, a shaft journaled in the standards, a teeter pivotally mounted upon the shaft, seats carried by the teeter, semi-circular braces secured at their ends to the frame of the teeter, a second shaft arranged intermediate the ends of the braces, a shaft journaled in the said hangers carrying a gear meshing with that of the rear axle and having cranks at the ends thereof, and a rod connecting each crank of the said shaft with the said second shaft.

2. The combination with a wheeled frame having its rear axle provided with a gear, of a pair of standards supported by the frame, a pair of hangers depending from the frame and having rearwardly projecting arms through which the rear axle is journaled, a shaft journaled in the said standards, a teeter pivotally mounted upon the shaft, seats carried by the teeter, semi-circular braces secured at their upper ends to the frame of the teeter, a second shaft arranged intermediate the ends of the braces, a shaft journaled in the said hangers carrying a gear meshing with that of the rear axle and having cranks at the ends thereof, and a rod connecting each crank of the said shaft with the said second shaft.

1,020,896. DISPLAY APPARATUS. MARLEY FISHER, Lindsay, Cal. Filed Oct. 26, 1911. Serial No. 657,008. (Cl. 211—20.)

1. A display apparatus comprising a carrier provided with means for removably supporting articles to be displayed, a movable member provided with means for picking up the articles from the carrier and means for moving said member to carry the articles away from the carrier, and returning the articles to the carrier.



2. A display apparatus comprising a carrier provided with means for removably supporting a plurality of articles, means for moving said carrier to bring the article succeeding to a given position, a member provided with means for picking up the articles when in said given position, and means for removing the article from the same and returning said articles to the carrier.

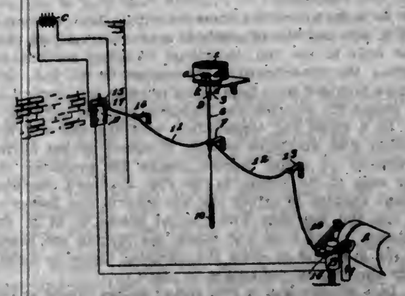
3. A display apparatus comprising a casing having an opening, means for removably supporting articles within the casing, a member movably mounted in the casing to pass through said opening and provided with means for picking up said articles from, and depositing them on, the said supporting means, and means for operating said member.

4. A display apparatus comprising a casing having an opening, means for removably supporting articles within the casing, a member movably mounted in the casing to pass through said opening and provided with means for picking up said articles from, and depositing them on, the said supporting means, and means for operating said member, a closure for said opening and means for opening said closure as said movable member passes therethrough.

5. A display apparatus comprising a rotatable carrier provided with hooks for removably supporting articles, a member mounted to swing on a vertical axis, an arm pivotally mounted in said member to turn on a horisontal axis, said arm having a hook and a motor connected to operate said member to swing the same, means operated by said motor to rotate the carrier, and means operated by the swinging movement of said member to raise and lower said arm.

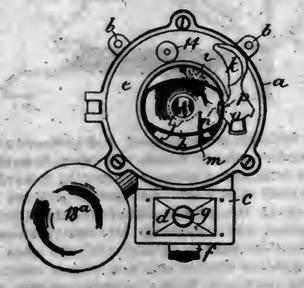
[Claims 6 to 9 not printed in the Gazette.]

1,020,897. AUTOMATIC TIME-CONTROLLED REGULATOR FOR GAS-ENGINES. WALTER CALVIN GAMBRILL, Tabor, Ill. Filed July 27, 1911. Serial No. 640,819. (Cl. 161—7.)



An engine stopper comprising flexible connections having looped ends adapted to be extended over the throttle lever and the movable switch piece of the sparking device respectively of the engine, means for guiding the connections in their sliding movements and for limiting the sliding movements of said connections, a gravitating member for moving the first connections to operative positions, a flexible connection connected with the said gravitating member, a fixed member disposed above the gravitating member, and time-controlled means on the flexible connection of the gravitating member and adapted for removable engagement with the said fixed member whereby the said gravitating member is held against movement in one direction.

1,020,898. TELEPHONIC APPARATUS. EDWARD ALFRED GRAHAM, Brockley, England. Filed July 28, 1910. Serial No. 574,359. (Cl. 179—129.)



1. A loud speaking telephone instrument, comprising a casing having a stationary mouth piece, a transmitter and a receiver in such casing, a revoluble rear electrode coöperating with the transmitter diaphragm, a switch for connecting the transmitter in circuit when conversation is desired, means operated by the switch and adapted, while the switch is being closed, to rotate the rear electrode but only while the switch is being closed, a "buzzer" inside the casing and a push operated from without the casing for connecting the "buzzer" in a call circuit.

2. In a telephone instrument, a transmitter and receiver adapted at one end to be connected respectively to separate electric supply mains and at the other end to separate line wires for connection to a separate instrument, a distinctive calling device comprising an automatic circuit maker and breaker adapted to be connected to one of said line wires and a switch device for connecting said device to a supply main.

3. In a telephone instrument, a transmitter and receiver adapted at one end to be connected respectively to separate electric supply mains and at the other end to separate line wires for connection to a separate instrument, a distinctive calling device comprising an automatic circuit maker and breaker adapted to be connected to one of said line wires, a resistance connected in shunt to said device, and a switch device for connecting said device to a supply main.

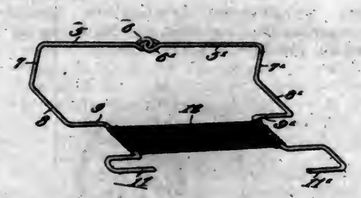
4. A telephone instrument comprising a transmitter and receiver adapted at one side to be connected to separate line wires, a resistance connecting the other or second sides of said transmitter and receiver, a switch for connecting the second side of the transmitter to one of the supply mains of an inductive circuit, the second side of the receiver being adapted to be connected to another electric supply main of said circuit, a second resistance connected to said second side of said receiver, a distinctive calling device adapted to be connected on one side to the line wire for connection with the telephonic receiver of a distant instrument and a switch for connecting the other side of the said device to the supply main to which the second side of said transmitter is connected and to the second resistance.

5. In a telephone instrument, a casing, a transmitter and receiver therein the transmitter having a revoluble electrode, a mouthpiece behind which the transmitter is disposed, a movable shutter plate, formed with a grating, between the mouthpiece and transmitter and a switch, for connecting the transmitter and receiver in circuit,

adapted to simultaneously rotate the transmitter electrode and move the shutter plate so as to bring its grating into register with the mouthpiece.

[Claims 6 to 8 not printed in the Gazette.]

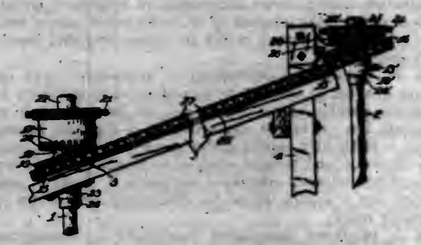
1,020,899. COMB-CLEANER. SAMUEL L. GUY, Tangipahoa, La. Filed Nov. 13, 1911. Serial No. 660,050. (Cl. 132—17.)



1. In a foldable comb cleaner, a frame comprising a pair of parallel spaced members having inwardly projecting bent arms and a member projecting inwardly from one end of each of the said members in a plane parallel to the plane of the said members and bent arms and hooked together, and a plurality of cleaning strands connected at their extremities to the said bent arms.

2. In a foldable comb cleaner, a frame comprising a pair of wire members having spaced parallel portions each having an inwardly projecting bent arm on one end, the terminals of the wires being bent inwardly from the free ends of the said bent arms and spaced therefrom to form fingers, the wires being bent downwardly from the other end of the said parallel portions and bent inwardly to project toward each other, the extremities of the latter portions being bent into loops which engage each other, and a plurality of cleaning strands connected at their extremities to the said bent arms.

1,020,900. OBLIQUE-ANGLED GEARING. ARTEMUS N. HADLEY, Indianapolis, Ind. Filed June 20, 1910. Serial No. 567,757. (Cl. 74—21.)



1. In oblique-angled gearing, a wheel and shaft guide having a side guide face and an axial guide extending from the side guide face, said wheel and shaft guide having a bore extending therethrough at an oblique angle to the axis of the axial guide.

2. In oblique-angled gearing, a wheel and shaft guide having a side guide face and an axial guide extending from the side guide face, said wheel and shaft guide having a bore extending therethrough at an oblique angle to the axial guide, in combination with a guiding device fixedly supported adjacent the axial guide and having a guide face that is parallel to said side guide face.

3. In oblique-angled gearing, the combination of a wheel and shaft guide having a side guide face and an axial guide extending from said face, said wheel and shaft guide having a cylindrical portion extending from the end of said axial guide at an oblique angle thereto, said wheel and shaft guide having also a bore extending therethrough at an oblique angle to the axial guide and in alinement with said cylindrical portion, and a collar fixedly secured on said cylindrical portion and having an oblique-angled guide face that is parallel to said guide face.

4. In oblique-angled gearing, the combination with a support, of a wheel and shaft guide having an arm fixedly secured to the support and having a side guide face and an axial guide extending from said face, said wheel and shaft guide having a bore extending therethrough at an oblique angle to the axial guide, an apertured guiding device fixedly supported adjacent the axial guide and having a guide face that is parallel to said side guide face, a wheel rotatably mounted on said axial guide between said guide faces and having gear teeth on one side thereof, a shaft extending rotatably through said bore and the apertured guiding device, and a second wheel fixedly secured to said shaft and having gear teeth on one side thereof meshing with the gear teeth of said first mentioned wheel.

5. In oblique-angled gearing, the combination of a beam having a guide face, a wheel and shaft guide fixedly connected with the beam and having a side guide face and an axial guide extending from said face, said wheel and shaft guide having a bore extending therethrough at an oblique angle to the axial guide, an apertured guiding device fixedly supported adjacent the axial guide and having a guide face that in parallel to said guide face, a power transmission wheel rotatably mounted on said axial guide between said guide faces and having gear teeth on one side thereof, a shaft extending rotatably through said bore and the apertured guiding device, a gear wheel fixedly secured to said shaft and having gear teeth on one side thereof meshing with the gear teeth of said power-transmission wheel, a power-transmission wheel rotatably supported adjacent said beam, and an endless chain extending about said power-transmission wheels and along the guide face of said beam.

[Claim 6 not printed in the Gazette.]

1,020,901. WHEEL. PIERRE HARRST, Chicago, Ill. Filed July 1, 1907. Serial No. 381,603. (Cl. 152—28.)

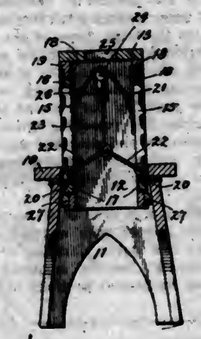


1. In a device of the class described the combination with a hub and rim of resilient spokes engaged at their outer ends to the rim, individual clamping sections for securing the inner ends of the spokes to the hub, said sections provided with interfitting recesses and projections and means for securing the clamping sections in place.

2. In a wheel the combination with the rim and hub provided with apertures therein, of spring spokes having a plurality of bends therein, means for attaching the outer ends of the spokes to the rim, U-shaped clamping sections adapted to attach the hub ends of the spokes to the hub and provided with conical bosses to fit in the apertures in the hubs and means for forcing the bosses into the apertures to draw the clamping plates to rigidly secure the ends of the spokes in place.

3. In a wheel a hub, a rim, spring spokes curved at one end to conform to the hub and directed outwardly having a plurality of curves between the hub ends and rim ends, clamping members, each notched at one end to receive the outwardly directed end of one of the spokes therein and provided with a projection on the opposite end to fit in the recess in an adjacent clamping member.

1,020,902. CHAIR-STOOL. FRANCIS CADWALADER HALL, Kansas City, Mo. Filed Jan. 18, 1912. Serial No. 671,951. (Cl. 155—39.)



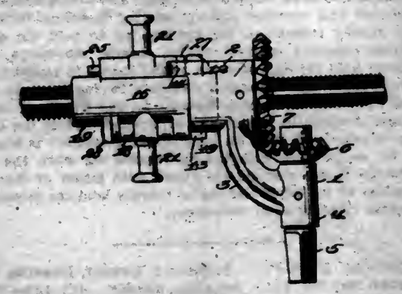
1. In an article of furniture of the class described, the combination of a base member, a seat-carrying member vertically movable through an opening in the base member, oppositely disposed ratchet bars connected in pairs, a pivotal connection between each pair of connected ratchet bars and the seat-carrying frame from which said ratchet bars extend downwardly, projections on the base members to coöperate with the teeth of the ratchet bars, means to disengage the ratchet bars from said projections comprising a handle accessible through an opening in the seat, and operative connections between said handle and the ratchet bars.

2. In an article of furniture of the class described, a base member, a seat carrying member vertically movable through an opening in the base member, oppositely disposed toothed rack bars pivoted at their upper ends to the seat carrying member, projections on the base member with which the toothed bars may engage, spring members between the toothed bars, holding them normally in engagement with the projections on the base member, an opening in the seat, a handle disposed within said opening, and links connecting said handle with the rack-bars, whereby the rack bars may be disengaged from the projections upon the base member.

3. In an article of furniture of the class described, a base member, a seat carrying member vertically movable through an opening in the base member, a pair of toothed rack bars pivotally connected at their upper ends to opposite sides of the seat carrying member, means connecting each pair of rack bars so that they move in unison, projections upon the base member with which said rack bars may engage, means acting between opposite pairs of rack bars to hold them normally in engagement with said projections, and means connecting opposite pairs of rack bars whereby they may be disengaged from said projections.

1,020,903. ROTATING AND FEEDING MECHANISM FOR DRILL-BARS. LESTER C. HARDSOCG, Ottumwa, Iowa, assignor to Hardsocg Manufacturing Company, Ottumwa, Iowa, a Corporation of Iowa. Filed June 17, 1909. Serial No. 502,783. (Cl. 125—10.)

1. In a rotating and feeding mechanism for drill bars, the combination with a gear carrying member and a threaded boxing constituting companion elements and adapted for telescoping association, the boxing comprising hingedly connected half sections, of apertured extensions provided on the elements and arranged to be brought into alining relation, a longitudinally disposed and movable locking key for insertion through the extensions, the key serving to hold the companion elements against relative turning movement and also to hold the half sections of the boxing in closed relation, and means for holding the companion elements against relative axial movement, the companion elements being adapted by relative partial rotation to provide for the operation of the means and to bring the apertured extensions into alinement.



2. In a rotating and feeding mechanism for drill bars, the combination with a gear carrying member and a threaded boxing constituting companion elements and adapted for telescoping association, the boxing comprising hingedly connected half sections, of apertured extensions provided on the elements and arranged to be brought into alining relation, a longitudinally disposed and movable locking key for insertion through the extensions, the key serving to hold the companion elements against relative turning movement and also to hold the half sections of the boxing in closed relation, a recessed lug provided on one of the elements and a lug provided on the other element for engagement in the recess of the first lug when the extensions are in alining relation to thereby hold the elements against relative axial movement.

3. In a rotating and feeding mechanism for drill bars, the combination with a socket and a threaded boxing constituting companion elements, the boxing comprising hingedly connected half sections and being telescopically fitted into the socket, of apertured extensions provided on the elements and arranged to be brought into alining relation, and a longitudinally disposed and movable locking key for insertion through the extensions, the key serving to hold the companion elements against relative turning movement and also to hold the half sections of the boxing in closed relation, the socket having an overhanging recessed lug and the boxing having a lug which is engaged in the recess of the first lug by a relative turning movement of the elements such as brings the extensions into alining relation, and which when so engaged holds the elements against relative axial movement.

4. In a rotating and feeding mechanism for drill bars, the combination with a socket and a threaded boxing constituting companion elements, the boxing comprising hingedly connected half sections and being telescopically fitted into the socket, of a pair of apertured extensions provided at opposite sides of the socket and alining extensions provided on the boxing and adapted to be alined with either of the extensions on the socket, and a longitudinally disposed and movable locking key for insertion through the extensions on the boxing and that particular extension on the socket which is alined with the extensions on the boxing, the key serving to hold the companion elements against relative turning movement and also to hold the half sections of the boxing in closed relation, the socket having an overhanging recessed lug and the boxing having a pair of lugs located at opposite sides and ends thereof and either of which, in accordance with which end of the boxing is fitted in the socket, may be engaged in the recess of the first lug, to thereby hold the companion elements against relative axial movement.

5. In a rotating and feeding mechanism for drill bars, in combination, a gear carrying member and a threaded boxing constituting companion elements, the boxing comprising hingedly connected half sections and being adapted for telescoping association with the gear carrying member, one of the companion elements having apertured

extensions at both sides thereof and the other companion element having apertured extensions at only one side thereof which may be alined with either of the extensions of the first-named companion element and a longitudinally disposed and movable locking key for insertion through the alining extensions, the key serving to hold the companion elements against relative turning movement and also to hold the half sections of the boxing in closed relation, one of the companion elements having a single lug and the other companion element having a pair of lugs, either of which in accordance with which end of the boxing is associated with the gear carrying member is adapted for coöperation with the first-named lug when the extensions of one element are alined with either of the extensions of the other element to thereby hold the elements against relative axial movement.

1,020,904. HAIR-PIN. FREDERICK HERBST, Danville, Ill. Filed May 20, 1911. Serial No. 628,508. (Cl. 132—22.)



1. A device of the class described comprising a pair of U-shaped hair pins having inner and outer heads connected together and their legs crossed, the legs of the outer head lying within the legs of the inner head.

2. A device of the class described comprising a pair of U-shaped hair pins having inner and outer heads connected together and their legs crossed and contacting at separated points through the length, the legs of the outer head lying within the legs of the inner head.

3. A device of the class described comprising a pair of substantially yoke-shaped hair pins having their heads connected together, the legs of the pins being crossed so that the legs of the outer head lie within the legs of the inner head, said legs being provided with a plurality of long and short waves throughout their lengths, said waves producing contacting crests, the crests on the inner legs abutting those on the outer legs and forming hair receiving spaces, said legs having inherent resiliency, and the outer head adapted to be contracted so as to bring the inner legs together to separate them from the outer legs.

1,020,905. FLUME. GEORGE L. HESS, Denver, Colo., assignor to Hess Flume Company, Denver, Colo., a Corporation. Filed Oct. 20, 1911. Serial No. 655,732. (Cl. 61—5.)



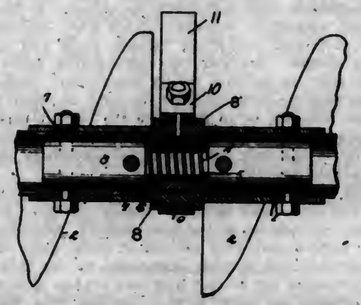
1. The combination of a pair of flume sections having their adjacent ends formed with angular and horizontal portions and their adjacent terminal edges disposed in spaced relation, and inner and outer clamping bars having angular and horizontal bearing surfaces corresponding to the angular and horizontal portions of the flume section ends.

2. The combination of a pair of flume sections having their adjacent ends formed with angular and horizontal portions and their adjacent terminal edges disposed in spaced relation, and inner and outer clamping bars having angular and horizontal bearing surfaces corresponding to the angular and horizontal portions of the flume section ends, said inner clamping bar having its inner face in registration with the inner faces of the flume sections.

3. The combination of a pair of flume sections, fastening means securing the adjacent ends of said sections together, said fastening means including inner and outer clamping members receiving the ends of the sections between them, a carrier bar extending contiguous with the outer clamping member and disposed against the outer face of the latter, and means for locking the clamping bar against lateral movement relatively to the outer clamping member.

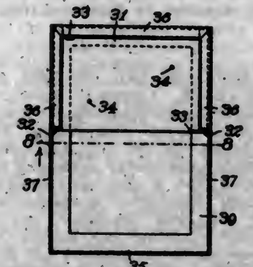
4. The combination of a pair of flume sections having their adjacent ends formed with angular and horizontal portions and inner and outer clamping members having angular and horizontal bearing surfaces corresponding to the angular and horizontal portions of the flume section ends.

1,020,906. GUDGEON. OWEN H. HESS, Nazareth, Pa. Filed Dec. 21, 1909. Serial No. 534,335. (Cl. 193—13.)



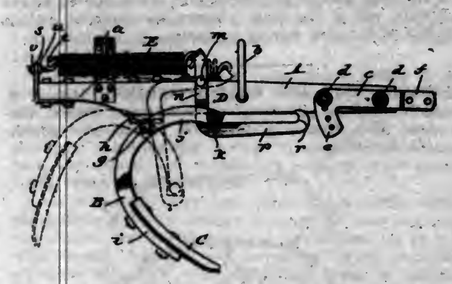
A gudgeon for conveyer sections, comprising a coupling rod circumferentially reduced intermediate its ends, said reduced portion being formed with spiral projections, and a bearing section of chilled material cast on the reduced portion to increase the diameter thereof in accordance with the maximum diameter of the rod, said projections serving to fix the bearing section on the rod against independent rotation.

1,020,907. SUPPORT FOR CARDS AND THE LIKE. HERBERT O. HIBBARD, Worcester, Mass., assignor to Worcester Novelty Company, Worcester, Mass., a Copartnership. Filed Apr. 12, 1911. Serial No. 620,583. (Cl. 40—45.1.)



As an article of manufacture, a holder for cards, pictures, and the like comprising two members, one adapted to be secured to a wall, and provided with offset flanges at its ends, the other having inwardly extending flanges on the back adapted to fit behind the offset flanges and having a continuous inwardly extending flange on the front provided with an opening therein, and having the flange on the back discontinued for a distance sufficient to permit the second member to be applied to the first member.

1,020,908. PLOW-STOCK. FRANCIS M. JOHNSON, Bowersville, Ga. Filed Oct. 5, 1911. Serial No. 652,901. (Cl. 97—11.)



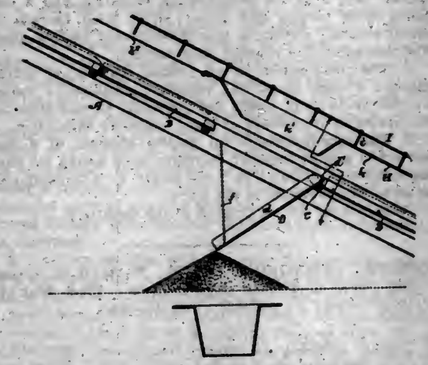
1. The combination of a plow stock body, a bearing fixed to the under side of said body, a curved shank having a narrow loop at its lower end for the connection of a plow share or cultivator blade and also having upper side portions disposed at opposite sides of the body and at opposite sides of said bearing, a transverse bolt extending through the side portions of the shank and the bearing and pivotally connecting the former to the latter, an anti-friction roller connected with and arranged between the forward ends of said side portions and disposed below the body, a lever having a loop that straddles and extends above and below the body and that also has arms extending forward from the lower ends of the loop and terminate in hooks, means pivotally connecting the loop of the lever to the body, and a tractile spring disposed above the body and connected at one end to the loop of the lever and at its opposite end with the body at a point in rear of the lever loop.

2. The combination of a plow stock body, a shank pivotally connected with said body and arranged to swing vertically and having upper side portions and a transverse device disposed between the forward ends of said portions and also disposed under the body, a vertically swinging lever having a loop that straddles and is pivoted to the body and also having arms that extend forward from the ends of the loop and under the said transverse device and are provided at their forward ends with stops, and a tractile spring disposed above the body and connected with the loop of the lever and also connected with the body at a point in rear of said loop.

3. The combination of a plow stock body, a vertically swinging shank pivotally connected therewith and adapted for the connection of a plow share or cultivator blade, a transversely disposed device carried by the upper and forward portion of said shank and arranged under the body, a vertically swinging lever pivotally connected with the body and having a portion that extends above the body and also having a forwardly extending portion disposed below said transversely disposed device and provided with a stop, and a spring connected with said upwardly extending portion of the lever and also connected with the body at a point in rear of said upwardly extending portion.

4. The combination of a plow stock body, a vertically swinging shank pivotally connected therewith and adapted for the connection of a plow share or cultivator blade, a transversely disposed device carried by the upper and forward portion of said shank and arranged under the body, a vertically swinging lever pivotally connected with the body and having a forwardly extending portion disposed below said transversely disposed device and provided with a stop, and a spring connected with said lever and the body.

1,020,909. ROOF-HATCH FOR STORAGE-BUILDINGS. ARTHUR C. JOHNSTON, Philadelphia, Pa., assignor to The J. M. Dodge Company, Naugatuck, Conn., a Corporation of Connecticut. Filed Jan. 18, 1910. Serial No. 537,941. (Cl. 57—37.)



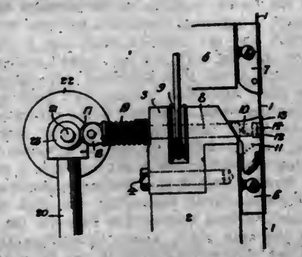
1. The combination of a roof for storage buildings having an opening; with a series of doors closing said opening, each of said doors being pivoted at one end to the roof and forming when open, a chute for material to be discharged through the opening into the building.

2. The combination of a roof of a storage building having an extended opening therein, a series of doors closing the opening, each of said doors being pivoted at one end to the roof and overlapping another door, said doors when open forming chutes for material discharged through the opening into the building.

3. The combination of a roof of a storage building having an elongated opening therein, a series of pivoted hatch doors closing said opening, one hatch door overlapping another, each hatch door having side flanges, each of said doors when open forming a chute over which the material being discharged into the building will flow, the flanges acting as the sides of the chutes.

4. The combination of a roof for storage buildings having an elongated aperture formed therein, doors closing the aperture and provided with laterally extending flanges, said doors when open forming chutes for material to be discharged through the opening, the said flanges acting as the sides of the chutes.

1,020,910. FEEDING DEVICE FOR INSEAM-TRIMMERS. WILLIAM BOTTOMLEY KEIGHLEY, Vineland, N. J., assignor to The Keighley Company, Vineland, N. J., a Corporation of New Jersey. Filed Nov. 5, 1910. Serial No. 590,888. (Cl. 12—82.)



1. The combination in an inseam trimming machine of a cutter; a work support therefor on one side of said cutter and extending across the plane of the same so as to form a beater adjacent the cutter; with means for vibrating said work support.

2. The combination of a cutter; a supporting structure; a longitudinally movable bar mounted therein; an inde-

pendently movable work-supporting head on said bar projecting adjacent the cutter and across the plane thereof; means for vibrating said bar; and means for moving said head to feed the work to said knife.

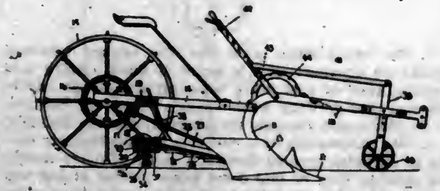
3. The combination in an inseam trimmer of cutting means; and a device including an eccentric, and a combined work feeding and work beating head thereon for simultaneously feeding a shoe toward said cutting means and flattening the channel edge thereof.

4. The combination in an inseam trimmer of cutting means; a work supporting structure mounted to coöperate therewith; and means for imparting to said structure movement in two planes at right angles to each other.

5. The combination in an inseam trimmer of a band knife and a work support therefor; with means for causing said work support to move bodily in a circular path so as to feed material to the knife.

[Claims 6 to 17 not printed in the Gazette.]

1,020,911. DITCHING-MACHINE. WILLIAM L. COMBS, and JOHN A. KERBER, Belfry, Mont. Filed Sept. 14, 1910. Serial No. 582,049. (Cl. 37—48.)



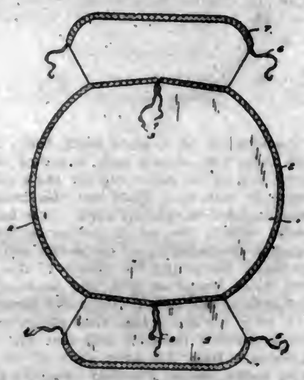
1. A ditching machine comprising a beam, a ditching plow supported thereby, a traction wheel connected to the beam at its rear end, an endless elevator having its forward end disposed adjacent to the plow, an inverted L-shaped hanger arranged at the forward end of the elevator, a bracket secured to the mold-board of the plow upon which the hanger is slidable, driven connections between the traction wheel and the elevator and a lever mechanism connected adjacent the rear end of the elevator whereby it may be swung at varying angles relative to the longitudinal extent of the beam.

2. A ditching machine comprising a beam, a plow at the rear end of the beam, a forked frame extending rearwardly from the beam, a supporting wheel rotatably mounted in the frame, a gear carried by said wheel, an elevator frame, a support carried by the plow upon which the elevator frame is slidable laterally, means for swinging the rear end of the elevator frame at various angles relative to the plow beam in a lateral position, a shaft rotatably mounted in an inclined position, a pinion at the rear end of the shaft engaging with the gear, an endless belt in the elevator frame, shafts upon which the endless belt rotates in the frame, a pinion at the forward end of the inclined shaft, a universal connection between the forward elevator shaft and the inclined shaft and a pinion carried thereby engaged with the last named pinion.

3. A machine of the class described comprising a beam, a ditching plow supported thereby and having a mold-board, a traction wheel, a forked frame pivotally secured at its forward end to the plow beam and rotatably receiving the traction wheel, an endless elevator connected with the plow for sliding movement laterally, a shaft upon which the forward end of the elevator is mounted, a stub shaft, a universal point connecting the stub shaft and elevator shaft, driven connections between the traction wheel and the stub shaft, means connecting the forked frame and the elevator for shifting the same at various angles relative to the longitudinal extent of the beam and a caster wheel depending from the rear end of the elevator.

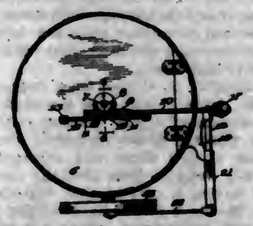
4. A machine of the class described comprising a beam, a ditching plow supported thereby and having a mold-board, a traction wheel, a forked frame pivotally secured at its forward end to the plow beam and rotatably receiving the traction wheel, an endless elevator connected with the plow for sliding movement laterally, a shaft upon which the forward end of the elevator is mounted, a stub shaft, a universal joint connecting the stub shaft and elevator shaft, driven connections between the traction wheel and the stub shaft, means connecting the forked frame and the elevator for shifting the same at various angles relative to the longitudinal extent of the beam, a bracket secured to the rear end of the elevator, a fork swiveled to the bracket, a caster wheel rotatably mounted in the fork, and an adjustable gage wheel carried at the forward end of the beam whereby the depth of cutting action of the plow may be regulated.

1,020,912. HAT AND HEAD COVERING. JENNIE M. KUHN, Chicago, Ill., assignor to Anthony Walick, Chicago, Ill. Filed Apr. 28, 1910. Serial No. 557,301. (Cl. 2—108.)



A transparent waterproof covering for hats consisting of a very full top portion adapted to completely cover a hat, draw strings for closing said top portion around the hat, front and back flaps dependable from said top portion, draw string guides between said top portion and said flaps and draw strings adapted to hold said flaps closely around the neck of a wearer.

1,020,913. GEARING. ALBERT S. KIBBY, Perry, Iowa. Filed Aug. 13, 1910. Serial No. 577,093. (Cl. 74—50.)



1. A mechanical movement comprising a rotary reciprocal shaft, a pinion thereon, a reciprocal rack engaging said pinion and provided with a longitudinal rib on one side and an overhanging lip that rests upon said pinion, supporting means alongside said rack upon which the same is slidably mounted, anti-friction rollers arranged between the rib on said rack and said means, a lever operatively connected to said rack, a balance-wheel and a link that transmits the motion of said lever to said balance-wheel.

2. A mechanical movement comprising a rotary reciprocal shaft, a pinion thereon, a reciprocal rack engaging said pinion and provided with a longitudinal rib, a rod upon which said rack is slidably mounted, anti-friction rollers arranged between the rib on said rack and said rod, a lever operatively connected to said rack, a balance-wheel, and a link that transmits the motion of said lever to said balance-wheel.

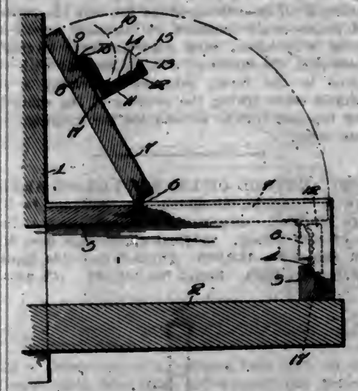
3. A mechanical movement comprising a rotary reciprocal shaft, a pinion thereon, a reciprocal rack engaging said pinion and provided with a longitudinal rib, a rod upon which said rack is slidably mounted, anti-friction rollers arranged between the rib on said rack and said rod, and having their sides concaved to fit said parts, a lever operatively connected to said rack, a balance-wheel, and a link that transmits the motion of said lever to said balance-wheel.

4. A mechanical movement comprising a rotary reciprocal shaft, a pinion thereon, a reciprocal rack engaging said pinion, longitudinally extending means arranged alongside said rack upon which said rack is slidably mounted, anti-frictional devices arranged between said rack and means, and a manually actuated lever operatively connected to said rack.

5. A mechanical movement comprising a rotary reciprocal shaft, a pinion thereon, a reciprocal rack engaging said pinion, and provided with a longitudinal rib on the side thereof, longitudinally extending means arranged alongside said rack upon which said rack is slidably mounted, anti-frictional devices arranged between said rib and means, and a lever operatively connected to said rack.

[Claim 6 not printed in the Gazette.]

1,020,914. COMBINED FALL-COVER AND MUSIC-RACK FOR PIANO OR ORGAN CASINGS. ERNEST J. KNABE, Jr., Cincinnati, Ohio. Filed Aug. 19, 1911. Serial No. 645,047. (Cl. 84—118.)



1. The combination with a casing for pianos or organs of a combined fall cover and music rack therefor comprising, a lid, two sections hingedly connected together, and hinges connecting one of said sections with the lid; said sections forming the front of the fall cover when the lid is lowered, and movable, when the lid is raised, to a position to serve as a music rack, substantially as described.

2. The combination with a casing for pianos or organs of a combined fall cover and music rack therefor comprising, a lid, a section having loose hinged connections with the lid; and a section having stiff hinged connections with the first named section; said sections forming the front of the fall cover when the lid is lowered and movable, when the lid is raised, to provide a music rack, substantially as described.

3. The combination with a casing for pianos or organs of a combined fall cover and music rack therefor comprising, a lid, a bar hingedly connected to said lid, a section hingedly connected to said bar at a position removed from the edge of the section and leaving an extended portion, said section and bar forming the front of the fall cover when the lid is lowered; and movable, when the lid is raised, to provide a music rack; said section extended portion adapted to overlap the bar edge and be braced thereby when forming the music rack, substantially as described.

4. The combination with a casing for pianos or organs of a combined fall cover and music rack therefor comprising, a lid, a bar hingedly connected to said lid and having a recess along the hinged edge thereof, a section hingedly connected to said bar at a position removed from the opposite edge of the section and leaving an extended portion, said section having a flange on its free edge for retaining sheets of music, and adapted to engage within the recess of said bar; said section and bar adapted to be folded and provide a front for the fall cover when the lid is lowered, and adapted to be opened and provide a music supporting rack when the lid is raised, said section extended portion adapted to overlap the bar edge and be braced thereby when forming the music rack, substantially as described.

5. The combination with a casing for pianos or organs of a combined fall cover and music rack therefor comprising, a lid, a bar hingedly connected to said lid and having a recess along the hinged edge thereof, a section hingedly connected to said bar at a position removed from the opposite edge thereof and leaving an extended portion on said section, said section having a flange, and grooves in its surface for retaining sheets of music; the flange of said section adapted to engage within the recess of said bar; said bar and section adapted to be folded and provide a front for the fall cover when the lid is lowered, and adapted to be opened and provide a music supporting rack when the lid is raised; the extended portion of said section adapted to engage with the edge of the bar and hold said section in music supporting position, substantially as described.

1,020,915. FLOAT-FEED CARBURETER. ELDEN P. LAMB, Camden, Me., assignor to Camden Anchor-Rockland Machine Company, Rockland, Me., a Corporation. Original application filed Aug. 30, 1909, Serial No. 515,239. Divided and this application filed June 15, 1910. Serial No. 567,042. (Cl. 158—38.)



In a float feed carbureter, a casing, a float within said casing, a lever carrying said float, and a rotatable pivot pin passing through the float lever and journaled in the casing, said pivot pin being constructed with the part which passes through the lever eccentric to the part journaled in the casing whereby rotation of the pin effects adjustment of the lever.

1,020,916. ARTICLE-HOLDER. GEORGE A. LANIER, Petersburg, Va., assignor of one-half to William Braverman, Richmond, Va. Filed May 12, 1911. Serial No. 626,867. (Cl. 24—81.)



An article holder formed from a blank of flat resilient metal comprising a fastening arm having one end turned under and at the other end an enlarged bifurcated extension bent downwardly at a right angle thereto, said extension having an intermediate short tongue bent inwardly toward the bent end of said horizontal arm, and said bifurcated extension being bent upon itself to form upwardly and downwardly opening resilient pockets, substantially as described.

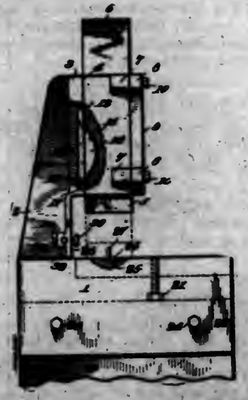
1,020,917. HYDRANT-OUTLET. MURRAY OWEN LINSCOTT and WILLIAM ALEXANDER MCINTOSH, Beverly, Mass. Filed Feb. 28, 1911. Serial No. 611,465. (Cl. 137—30.)



1. The combination with a valve casing having its rear end provided with outlet ports, a transverse bar arranged within the casing and provided with an opening, there being an opening formed in the rear end of the casing and arranged in alinement with the first mentioned opening, a valve having a stem on one end thereof slidably mounted in the opening in the transverse bar and provided at its other end with a rod extending into the opening in the rear end of the casing, a spring disposed between the rear end of the casing and the valve for normally holding the latter in closed position, and a hose coupling having an impact rod secured thereto and adapted to engage the adjacent end of the valve stem for opening the valve when the coupling is connected with said casing.

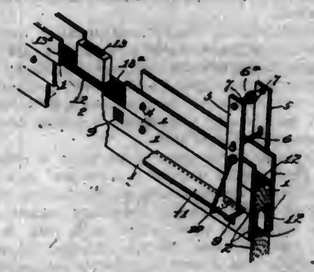
2. The combination with a fire-plug including a casing having a cover, of a standpipe arranged within the casing, a valve casing threaded in an opening in the standpipe and having its inner end provided with outlet ports and its outer end exteriorly threaded, a transverse bar disposed within the casing near the outer end thereof and provided with an opening, there being an opening formed in the rear wall of the valve casing, a valve arranged within the casing and having one end thereof provided with a stem extending through the opening in the bar and its other end provided with a rod seated in the opening in the rear end of the casing, there being an annular shoulder formed within the casing and constituting a valve seat, and a spring interposed between the rear end of the casing and valve for normally holding the latter in closed position, the outer end of the valve casing being housed within the cover when said cover is closed.

1,020,918. RIVETING-MACHINE. HENRY LLOYD, Lexington, Ky. Filed June 17, 1911. Serial No. 633,675. (Cl. 78—46.)



In a riveting machine, a frame comprising a base and a standard, a die on the base having on its upper face a pair of spaced depressions for receiving the heads of a pair of rivets, a plunger slidable on the standard toward and from the die and having openings coaxial with the depressions of the die for receiving the stems of the rivets, laterally movable gages on the standard for properly positioning the article with respect to the depressions and the openings, and means for securing the gages in adjusted position.

1,020,919. HOLLOW CONCRETE WALL. WILMOT LAKE, Washington, D. C. Filed Dec. 23, 1910. Serial No. 598,971. (Cl. 72—48.)



1. A cored monolithic wall composed of alternate layers of concrete and fabric mesh, the cored opening and the partitions of the wall alternating vertically with the mesh intervening therebetween so as to permit communication between the openings.

2. A cored monolithic wall composed of alternate layers of concrete and wire mesh, and having openings alternating with vertical partitions so as to form communication between all of such openings through the mesh.

3. A hollow wall composed of alternate layers of concrete and wire mesh, each concrete layer having openings vertically therethrough which alternate with vertical partitions in the layer, said mesh forming a support for suitable cores during the pouring of the concrete and forming top and bottom screens for the openings of each concrete layer.

1,020,920. METHOD OF DRAWING GLASS ARTICLES. JOHN H. LUBBERS, Allegheny, Pa., assignor to Window Glass Machine Company, Pittsburgh, Pa., a Corporation of New Jersey. Original application filed May 21, 1903, Serial No. 158,069. Divided and this application filed Jan. 10, 1906. Serial No. 295,369. (Cl. 49—83.1.)



1. The method of drawing hollow glass articles, consisting in attaching a drawing device to a bath of molten glass, drawing a hollow article upwardly therefrom, and supplying air downwardly through the drawing device at substantially the same level relative to the bath during the drawing operation, substantially as described.

2. The method of drawing hollow glass articles, consisting in attaching a drawing device to a bath of molten glass, drawing a hollow article upwardly therefrom, supplying air through the drawing device at substantially the same level relative to the bath during the drawing operation, and continuously permitting the air to escape from within the article during the drawing thereof after the neck has been formed to regulate the air pressure therein; substantially as described.

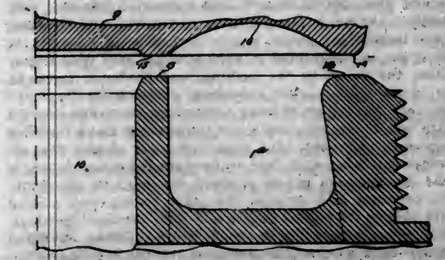
3. The method of drawing hollow glass articles, consisting in forming a neck, then enlarging and drawing the article upwardly from a bath of molten glass, supplying air to the interior of the article and opening a small air outlet as the drawing of the article proceeds; substantially as described.

4. The method of forming glass articles consisting in drawing the hollow glass article upwardly from a bath of molten glass, supplying air to the same level within the article through the drawing operation, automatically regulating the air supply to hold the article of the desired diameter and permitting a part of the air to escape during drawing; substantially as described.

5. The method of drawing hollow glass articles, consisting in drawing the glass upwardly from a bath of molten glass and supplying air downwardly upon the surface of the bath within the article at the same level through the drawing operation, thus allowing the heated air to rise within the article and assist in annealing its upper portions; substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,020,921. SAFETY-VALVE. EDWARD F. MILLER, Newton, Mass., assignor to Crosby Steam Gage and Valve Company, Boston, Mass., a Corporation of Massachusetts. Filed Oct. 27, 1910. Serial No. 589,424. (Cl. 137—53.)



1. In a safety valve, a tubular base and an annular valve seat; said seat being of conventionel interior diameter; the upper inner face of the wall of said base comprising a smooth curve terminating approximately at the inner edge of said seat without altering said interior diameter of the seat.

2. In a safety valve, a tubular base and an annular valve seat; said seat being of conventional interior diameter; the upper inner face of the wall of said base comprising a smooth curve terminating approximately at the inner edge of said seat and tangentially thereto without altering said interior diameter of the seat.

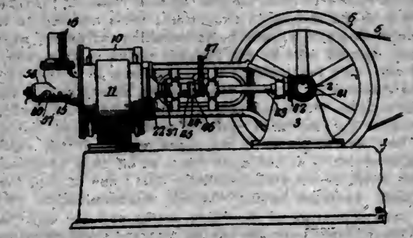
3. In a safety valve, a tubular base having an annular valve seat and with the upper inner face of its wall comprising a smooth curve of a mean radius substantially equal to the lift of the valve and terminating substantially at the inner edge of and tangentially to said seat; and with the upper outer face of its wall comprising a smooth curve of a mean radius not less than the lift of the valve and terminating substantially at the outer edge of and tangentially to said seat.

4. In a safety valve, a disk concaved on its under-side and having an annular seating portion thereon, such concavity terminating substantially at the inner edge of and tangentially to said seating portion with a reverse smooth curve of a mean radius substantially equal to the lift of the valve.

5. In a safety valve, a disk concaved on its under-side and having an annular seating portion thereon, such concavity terminating substantially at the inner edge of and tangentially to said seating portion with a reverse smooth curve of a mean radius substantially equal to the lift of the valve; the peripheral face of said disk having a smooth curve of a mean radius not less than the lift of said valve and terminating substantially at the outer edge of and tangentially to said seat.

[Claims 6 and 7 not printed in the Gazette.]

1,020,922. VALVE. ALBERT E. MOORHEAD, Chicago, Ill., assignor, by mesne assignments, to American Rotary Valve Company, Chicago, Ill., a Corporation of Illinois. Original application filed Oct. 28, 1908, Serial No. 459,945. Divided and this application filed Apr. 25, 1911. Serial No. 623,293. (Cl. 230—34.)



1. The combination of a cylinder, a piston in the said cylinder, a valve casing provided at its ends with ports communicating with the opposite ends of the cylinder and with a central port, a rotative valve member, and means for turning the valve member a half rotation at each stroke of the piston, said valve member being provided at each of its ends with two lateral ports located at opposite sides thereof, and adapted for communication with the cylinder ports in alternation in the rotation of said valve member, in its central part with a lateral port adapted for communication with the central port of the valve casing, and in at least one of its ends with an end port, the said valve member being provided with two passages connecting in one instance the central lateral port with two of the lateral end ports at opposite sides of the valve member and in the other instance the end port with the other two lateral end ports at the opposite sides of said valve member.

2. The combination of a cylinder, a piston in the said cylinder, a valve casing provided at its ends with ports communicating with the opposite ends of the cylinder and with a central port, a rotative valve member, and means for turning the valve member a half rotation at each stroke of the piston, said valve member consisting of a cylindric shell provided with a transverse web forming two longitudinal passages therein and also provided at each of its ends with two lateral ports located one at each side of the adjacent end of the web, and adapted for communication with their associated cylinder port in alternation in the rotation of the valve member, each of said lateral ports being connected by one of said longitudinal passages with the lateral port at the opposite end and side of the valve member, and said valve member having a central lateral port opening from one of said longitudinal passages and adapted for communication with the central port of the valve casing at times when either of the lateral end ports is in communication with its associated cylinder port, and said valve member also having in at least one of its ends an end port opening from the other of said longitudinal passages.

3. The combination of a cylinder, a piston in the said cylinder, a valve casing provided at its ends with ports communicating with the opposite ends of the cylinder and with a central port, a rotative valve member, and means

for turning the valve member a half rotation at each stroke of the piston, said valve member consisting of a cylindric shell provided with a transverse longitudinal web, the end portions of which are in the same plane and the central portion of which is twisted a half turn so as to form two longitudinal, spiral passages in said valve member, and provided also, at each of its ends, with two lateral ports located at opposite sides of the adjacent end of the web, each of said lateral ports being connected by one of said spiral, longitudinal passages with the lateral port at the opposite end and side of the valve member, and said valve member having a central lateral port opening from one of said longitudinal passages, and also having in at least one of its ends an end port opening from the other of said longitudinal passages.

4. The combination of a cylinder, a piston in said cylinder, a valve casing provided with a cylindric valve chamber and with two cylinder ports each leading to one end of the cylinder, and having central and end passages each of which is to be brought by the action of the valve alternately into communication with each end of the cylinder, a cylindric valve member in said chamber provided at each of its ends with two lateral ports adapted to be brought alternately into communication with the associated cylinder port by the turning of the valve member, and with two longitudinal passages, each of which connects that one of the two lateral ports at one end of the valve member which, at any one time, is in communication with its associated cylinder port, with that one of the two lateral ports at the opposite end of the valve member which is at the same time cut off from communication with its associated cylinder port; one of said longitudinal passages having constant communication with the central passage of the valve casing and the other of said longitudinal passages having constant communication with the end passage of the valve casing, and means for turning said valve member to bring the two lateral ports at each end thereof alternately into communication with the cylinder port associated therewith.

5. The combination of a valve casing having a cylindric valve chamber, a rotative cylindric valve member, circumferential packing rings surrounding the valve member and packing bars extending longitudinally of the valve member exterior to said packing rings.

[Claim 6 not printed in the Gazette.]

1,020,923. SANITARY DRINKING-FOUNTAIN. PHILIP MUELLER and ANTON C. SCHUERMANN, Decatur, Ill., assignors to The H. Mueller Manufacturing Company, Decatur, Ill., a Corporation of Illinois. Filed Mar. 28, 1911. Serial No. 617,475. (Cl. 137—11.)



1. A drinking fountain comprising a nozzle having a hollow body with a plurality of radial tubular fingers, an upwardly directed opening in each finger at its outer end, a nipple having an outlet for a drinking stream extending downwardly through an opening in the upper end of said body, a bushing extending upwardly into said body and connected thereto, said bushing having passageways therein for water, and means connecting said bushing and nipple through which means water passes from one of said passageways to the outlet in the nipple, and from the other passageway around said connecting means to the tubular fingers where it flows through their terminal openings in streams above said nipple to form a curtain for the same.

2. A drinking fountain comprising a hollow nozzle, having a hollow body with a plurality of radial tubular fingers, an upwardly directed opening in each finger at its outer end, a nipple having an opening for a drinking stream extending upwardly through an opening in the upper end of said body, a bushing extending upwardly into said body and connected thereto, said bushing having passageways therein for water, means connecting said bushing and nipple through which means water passes from one of said passageways to the outlet in the nipple, and from the other passageway around said means to the tubular fingers, and out through their terminal openings, each passageway being provided with a separate means for regulating the flow of water therethrough.

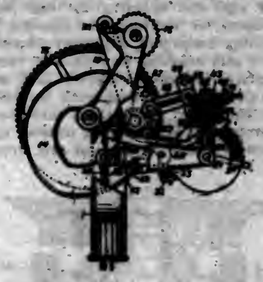
3. A drinking fountain comprising a hollow nozzle, having a hollow body with a plurality of radial tubular fingers, an upwardly directed opening in each finger at its outer end, a nipple having an outlet for a drinking stream of water extending downwardly through an opening in the upper end of said body, said outlet being above the plane of the terminal openings in the fingers, a bushing extending upwardly into said body and connected thereto, said bushing having passageways therein for water, and means connecting said bushing and nipple through which means water passes from one of said passageways to the outlet in the nipple and from the other passageway around said means to the tubular fingers where it flows through their terminal openings in streams above said nipple to form a curtain surrounding the same, adjustable regulating means in each of said passageways, and means for deflecting the streams between said passageways and their outlets.

4. A drinking fountain comprising a nozzle having hollow body with a plurality or radial tubular fingers, an upwardly directed opening in each finger at its outer end, a nipple having an outlet for a drinking stream extending downwardly through an opening in the upper end of said body, a bushing extending upwardly into said body beyond the tubular fingers and connected thereto, said bushing having a recess in its upper end and passageways therein for water, a plug formed with a cavity in its upper end connected to said bushing, said plug nearly filling the recess in the bushing, and having a recess in its under side, a stem extending downwardly from the plug and having an opening connecting the cavity therein with one of the passageways in the bushing, and a threaded connection between said plug and said nipple, the arrangement being such that water entering through one of said passageways passes through the plug to the drinking fountain and through the other passageway around said plug to the hollow fingers and their terminal openings.

5. A drinking fountain comprising a nozzle having a hollow body with a plurality of radial tubular fingers, an upwardly directed opening in each finger at its outer end, a nipple having an outlet for a drinking stream of water extending downwardly through an opening in the upper end of said body, said outlet being on a higher plane than the openings in the tubular fingers, a bushing extending upwardly into the body beyond the tubular fingers and threaded into said body, said bushing having a recess in its upper end, a plug formed with a cavity in its upper end and of slightly less diameter than said recess inserted therein, a stem extending downwardly from said plug and threaded into an opening in the bushing, the underside of the plug being formed with an annular chamber opening downwardly near the bottom of the recess in the bushing, a nut threaded in the cavity in said plug and having a centrally threaded opening for the threaded lower end of the nipple, a hollow baffling member seated in the cavity in the plug and held in place by said nut, said baffling member having slots in the edges thereof, a passageway in the nozzle for conveying water to the nipple to form the drinking stream, a second passageway separate from the first through which water passes to the tubular fingers, and means in each passageway for regulating the flow of water therethrough.

[Claim 6 not printed in the Gazette.]

1,020,924. WINDMILL. MOSES C. NIXON, Peru, Ind. Filed Jan. 23, 1904. Serial No. 190,278. (Cl. 170—3.)



1. In a wind-mill having a driving mechanism; an oscillating lever comprising a plurality of parts and having suitable connection with said mechanism to be actuated thereby; and a safety device arranged to normally hold the parts of said lever in working connection and adapted to relieve the strain when abnormal resistance occurs.

2. In a wind-mill having a driving mechanism; an oscillating lever comprising a plurality of parts and having suitable connection with said mechanism to be actuated thereby; and a safety device arranged to normally hold the parts of said lever in working connection and release the same when under abnormal strain.

3. A wind mill comprising a driving mechanism; a lever having connection with said mechanism to be actuated thereby; a piece attached to said lever; a safety device arranged to normally hold said lever and piece in working connection; and a pump-rod in connection with said piece.

4. In a wind mill, a main frame movably mounted and carrying a wind-wheel and vane; a stud extending from said frame; an arm movably mounted upon said stud and having a connection with said vane; a tension device adjustably mounted upon said stud; a spring in connection with said arm and tension device; and an anchor plate fixed upon said stud and having in connection therewith means to engage and hold said tension device when adjusted.

5. In a wind mill, a main frame movably mounted and carrying a wind wheel and vane; a movable arm mounted on the frame and having a rod connection with said vane; a tension device in connection with the frame; and a spring connecting said arm and tension device.

[Claims 6 to 15 not printed in the Gazette.]

1,020,925. BUCKLE. CHARLES P. NUTTER, Boston, Mass. Filed Mar. 17, 1911. Serial No. 615,090. (Cl. 24—206.)



1. An article of the class described, comprising two complemental members, one being elongated with a plurality of engaging portions at intervals along its length, and the other having an opening to receive said elongated member and a projection to engage one of said engaging portions positioned between said opening and the free end of said receiving member.

2. An article of the class described, comprising two complemental members, one being elongated with a plurality of slots therein at intervals along its length, and the other having an opening adapted to receive said slotted member, and a narrower opening extending toward its free end and terminating in a projection adapted to engage one of said slots.

3. An article of the class described, comprising two complemental members, one being elongated with a plurality of slots therein at intervals along its length, and the other having an opening to receive said slotted member the end of which forms a fulcrum for said slotted member; a projection on the latter member intermediate its end and said fulcrum adapted to engage one of said slots; and a spring having an end narrower than said slotted member adapted to bear upon the under face of said slotted member intermediate said fulcrum and said projection.

1,020,926. PROCESS OF MAKING A COMPOSITION OF MATTER FOR THE TREATMENT OF LEATHER, FABRICS, AND THE LIKE. DANIEL O'KEEFE, St. Louis, Mo. Filed Mar. 13, 1911. Serial No. 614,008. (Cl. 134—80.)

1. The herein described process of preparing a composition of matter for the treatment of leathers, fabrics, and the like, which consists, first, in taking fish oil and Venice turpentine and mixing the same together so as to reduce the consistency of the Venice turpentine to practically that of the fish oil and allowing said mixture to stand for a limited time; second: taking the cedar, bay and mirbane oils and mixing the same together in a separate vessel and passing said mixture through a body of coke; third: taking the mixture of fish oil and Venice turpentine and passing it through the body of coke through which the mixture of cedar, bay and mirbane oils has been passed; fourth: passing through said body of coke a mixture of petroleum, mustard and asalea oils; thus combining the eight mentioned ingredients of the composition and fifth: taking the combined above mixtures and passing them again through said body of coke; and lastly: passing said mixture through a body of charcoal.

2. The herein described process of preparing a composition of matter for the treatment of leathers, fabrics, and the like, which consists, first, in taking fish oil and Venice turpentine and mixing the same together so as to reduce the consistency of the Venice turpentine to practically that of the fish oil and allowing said mixture to stand for a limited time; second, taking the cedar, bay and mirbane oils and mixing the same together in a separate vessel and passing said mixture through a body of coke; third: taking the mixture of fish oil and Venice turpentine and passing it through the body of coke through which the mixture of cedar, bay and mirbane oils has been passed; and fourth: passing through said body of coke a mixture of petroleum, mustard and asalea oils, thus combining the various ingredients of the composition.

3. The herein described process of preparing a composition of matter for the treatment of leathers, hides, pelts, fabrics and the like, which consists first in taking fish oil and Venice turpentine and mixing the same together so as to reduce the consistency of the Venice turpentine to practically that of the fish oil and allowing said mixture to stand for a limited time; second: taking the cedar, mirbane and petroleum oils and mixing them together in a separate vessel and passing said mixture through a body of coke; third: taking the mixture of fish oil and Venice turpentine and passing it through the body of coke through which the mixture of mirbane, cedar and petroleum oils has been previously passed, thus combining the petroleum oil, fish oil, cedar oil, mirbane oil and Venice turpentine; fourth: passing the total mass of the composition back through the body of coke again; and lastly: passing said mixture through a body of charcoal.

1,020,927. COMPOSITION OF MATTER FOR THE TREATMENT OF LEATHER, FABRICS, AND THE LIKE. DANIEL O'KEEFE, St. Louis, Mo. Filed Mar. 13, 1911. Serial No. 614,009. (Cl. 134—7.)

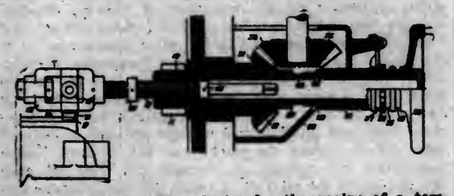
1. The herein described composition of matter, consisting of petroleum oil, fish oil, bay oil, cedar oil, mirbane oil, mustard oil and Venice turpentine.

2. The herein described composition of matter, consisting of petroleum oil, fish oil, bay oil, cedar oil, mirbane oil, mustard oil, Venice turpentine and azalea oil.

3. The herein described composition of matter for rendering leather, fabrics, and the like, impervious to moisture, consisting of petroleum oil, about 37%; fish oil, about 30%; bay oil, about 2%; cedar oil, about 3%; mirbane oil, about 6%; mustard oil, about 3%; Venice turpentine, about 18%; and azalea oil, about 1%.

4. The herein described composition of matter, consisting of petroleum oil, fish oil, cedar oil, mirbane oil and Venice turpentine.

1,020,928. TOWING-MACHINE. ROBERT S. RILEY, Providence, R. I., assignor, by mesne assignments, to American Engineering Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Nov. 19, 1910. Serial No. 593,167. (Cl. 115—10.)



1. A valve controlling device for the engine of a towing machine consisting of a screw connected to the winding drum; a swivel connected between said screw and the engine valve; a pawl mounted on said swivel; and a guiding device slidably engaged by said pawl to normally prevent revolution of the swivel; there being spaces at the ends of the guide in positions to permit revolution of the pawl.

2. The combination with a towing machine of valve controlling mechanism therefor consisting of a longitudinally movable member capable of turning; a swivel connected between said member and the engine valve of the machine; a pawl on the swivel; a guiding device placed to engage the pawl to normally prevent the same from turning but having portions at its ends arranged to permit the pawl to turn in one direction while preventing said turning in an opposite direction; with means whereby the swivel is caused to revolve with the pawl at the ends of its path of movement.

3. The combination with a towing machine of valve controlling mechanism therefor including a longitudinally movable member capable of turning; a swivel connecting said member with the engine valve; a longitudinally movable pawl mounted on said swivel and having a slot; a stationary rib having oppositely inclined end portions and placed to be normally engaged by the slotted end of the pawl; with means whereby the swivel is caused to turn at either end of its path of movement.

4. The combination with a towing machine, of a valve-controlling mechanism therefor consisting of a longitudinally movable rod connected to the valve; two co-acting threaded members for actuating said rod; a driving member connected to the winding drum of the machine and in line with said two threaded members; a hand operated device for actuating the valve operating rod; and means for coupling said device with the driving member at will to cause the rod to be actuated.

5. The combination with a towing machine of valve controlling mechanism therefor including a valve rod; a hand operated device for longitudinally moving said rod at will; a member driven from the winding drum of the machine; and means including two sleeves having their adjacent ends toothed for coupling said member at will to the hand operated device.

[Claims 6 to 14 not printed in the Gazette.]

1,020,929. PIPE-JOINT AND THE LIKE. REUBEN R. ROW, Jersey City, N. J., assignor to The Griscom-Spencer Company, a Corporation of New Jersey. Filed Jan. 23, 1911. Serial No. 604,273. (Cl. 137—28.)

1. A joint comprising in combination a pipe, a wedge ring thereon, the end of said pipe being turned back on itself over said ring, an opposed fitting having a beveled socket to receive said pipe end, a coupling member surrounding said pipe and engaging the rear side of said wedge ring, means for securing said coupling member to the opposed fitting comprising oppositely disposed recesses at each side of said coupling member, said recesses being partially chamfered to form shoulders at their mouths, and stud bolts having retaining nuts with beveled faces for engaging said chamfered slots behind said shoulders and for in turn forcing the said coupling member against said wedge ring and said pipe end against said fitting.



2. A quickly detachable and replaceable pipe joint comprising a fitting having a beveled socket, a pipe having its end turned back upon itself to form a flange having the shape of a cone-frustum and being of such diameter that its forward edge, when forced into wedging engagement with the socket, contacts the side walls thereof intermediate the ends of the beveled portion to form a tight packless joint, and a follower adapted to force the said forward edge lengthwise of the pipe into such wedging engagement, substantially as described.

3. A quickly detachable and replaceable pipe joint, comprising a fitting having a beveled socket, a pipe, a tubular cone-frustum surrounding the pipe, the end of the pipe being turned back to embrace the cone-frustum and hold it in fixed relation to the end of the pipe and being adapted upon being forced into wedging engagement with the socket to make a tight packless joint, and a follower adapted to force the turned-over end portion into wedging engagement with the socket, substantially as described.

4. A quickly detachable and replaceable pipe joint, comprising a fitting having a beveled socket, a pipe, a tubular cone-frustum surrounding the pipe, the base portion of said cone-frustum being of greater internal diameter than the thin edge portion, the end of the pipe being turned back over the thin edge of the cone-frustum, and adapted upon being forced into wedging engagement with the socket to make a tight packless joint, and a follower surrounding and freely rotatable with respect to the pipe and adapted to force the turned-over end thereof into such wedging engagemet with the socket; substantially as described.

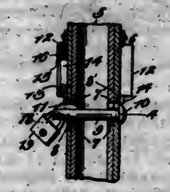
5. A quickly detachable and replaceable pipe joint, comprising a fitting having a beveled socket, a pipe having its end turned back upon itself to form a flange having the shape of a cone-frustum the sides of which subtend a less angle than the sides of the socket, the flanged end of the pipe being of such diameter that its forward edge, when forced into wedging engagement with the socket, contacts the side walls thereof intermediate the ends of the beveled portion to form a tight packless joint without requiring exact alinement of the pipe and socket, and a follower adapted to force said forward edge into such wedging engagement with the socket, substantially as described.

[Claim 6 not printed in the Gazette.]

1,020,930. LOCKING DEVICE. CHARLES L. SEELEY, La Junta, Colo. Filed May 13, 1911. Serial No. 627,047. (Cl. 70—90.)

1. In a lock of the character described, the combination with a steering post and its casing having openings therein at diametrically opposite points, of a locking pin adapted to be inserted through said openings, and means movably mounted on the post casing adapted to coact with means formed on the pin to prevent rotative movement of the pin in the post.

2. In a lock of the character described, the combination with a steering post and its casing having openings therein at diametrically opposite points, of a locking pin adapted to be inserted through said openings, spring pressed plates longitudinally movable on the post casing, said pin carrying means co-acting with said plates to prevent rotative movement of the pin in the post.



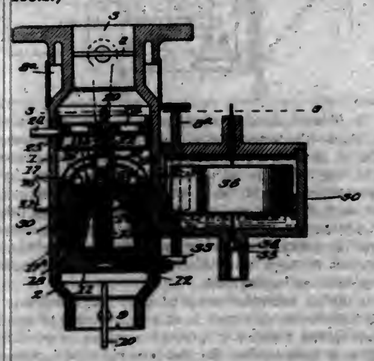
3. In a lock of the character described, the combination with a steering post and its casing having openings therein at diametrically opposite points, of a locking pin adapted to be inserted through said openings, a plate slidable upon the casing of the post co-acting with said pin to hold the same against rotative movement, and additional means removably engaged with one end of said pin and co-acting with the casing of the post to prevent longitudinal movement of the pin.

4. In a lock of the character described, the combination with a steering post and its casing having openings therein at diametrically opposite points, of a locking pin having a head on one end adapted to be inserted through said openings, spring pressed plates slidably mounted on the casing of the post, said pin having a longitudinal rib formed thereon to be engaged by said plates to prevent rotative movement of the pin in the post, and a padlock removably engaged in the end of said pin and co-acting with the post casing to prevent longitudinal movement of the pin.

5. In a lock of the character described, the combination with a steering post and its casing having openings therein at diametrically opposite points, of a locking pin having a head on one end and adapted to be inserted through said openings, said pin having a rib formed on its other end, spring pressed plates arranged on the post casing normally covering the openings thereof adapted to be engaged by said rib to prevent rotative movement of the pin, and means removably engaged with said pin and co-acting with the post casing to prevent longitudinal movement of the pin.

[Claim 6 not printed in the Gazette.]

1,020,931. CARBURETER. CLEMENT SMITH, Topeka, Kans. Filed Nov. 3, 1910. Serial No. 590,490. (Cl. 48—155.1.)



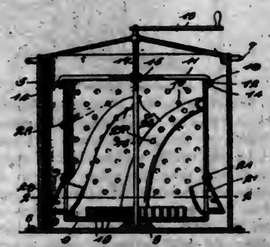
1. In a carbureter, the combination of a carbureting chamber adapted at one end for the admission of air and having its opposite end contracted, a suction-controlled, rectilinearly-movable valve arranged in the intermediate portion of the chamber and having an interior tapered toward the said contracted end of the chamber, means adjustably connected to the chamber at a point between the contracted end thereof and the valve and movable toward and from the valve, a spring interposed between said adjustable means and the valve, whereby the adjustable means is enabled to regulate the pressure which the spring exerts upon the valve, and fuel-supply means located within the valve.

2. In a carbureter, the combination of a carbureting chamber adapted at one end for the admission of air and having its opposite end contracted, a suction-controlled, rectilinearly-movable valve arranged in the intermediate portion of the chamber and having an interior tapered toward the said contracted end of the chamber, means adjustably connected to the chamber at a point between the contracted end thereof and the valve and movable toward and from the valve, a spring interposed between said adjustable means and the valve for yieldingly pressing the valve in a direction away from said contracted end, whereby the adjustable means is enabled to regulate the pressure which the spring exerts upon the valve, a spring for pressing the valve in the opposite direction, and fuel-supply means located within the valve.

3. In a carbureter, the combination of a carbureting chamber, a spray device arranged in said chamber, a stem on said spray device, an adjusting nut threaded in said chamber and loosely receiving said stem and having a portion extending without the chamber, a suction-controlled rectilinearly-movable valve arranged in the chamber and surrounding the spray device and having an interior tapered toward the adjusting nut and also having a cross-bar loosely surrounding said stem, a coiled spring surrounding the stem and interposed between adjusting nut and valve, and a coiled spring surrounding the stem and interposed between the spray device and the cross-bar of the valve.

4. In a carbureter, the combination of a carbureting chamber having a shelf, a float chamber movable bodily at one side of the carbureting chamber and having a portion embracing the latter, a flexible conduit intermediate the float chamber and the carbureting chamber, and an adjusting screw threaded in one side of said embracing portion and bearing on said shelf.

1,020,932. DISH-WASHING MACHINE. HENRY F. SMITH, Pittsburg, Kans. Filed Dec. 6, 1911. Serial No. 664,254. (Cl. 141—9.)



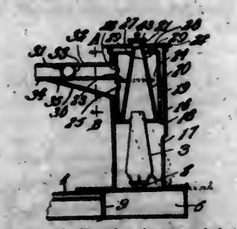
1. In a dish washing machine, a water containing vessel, a receptacle for the dishes rotatably mounted in said vessel, the annular wall of said receptacle having a plurality of openings adjacent to its lower edge, tubes spirally arranged upon the inner face of said wall and having their lower ends disposed over said openings, the upper ends of said tubes being open to discharge water upon the contents of the receptacle, and means movably mounted upon the outer face of said annular wall and moved by the pressure of water thereagainst to forcibly direct the water into the lower ends of said tubes.

2. In a dish washing machine, a water containing vessel, a receptacle to receive the dishes rotatably mounted in said vessel, the annular wall of said vessel having a

plurality of openings adjacent to its lower edge, tubes spirally arranged upon the inner face of said annular wall and having their lower ends disposed over the openings thereof, the upper ends of said tubes being open to discharge the water upon the contents of said receptacle, means arranged upon the outer face of said annular wall over each of the openings therein to forcibly direct the water into the lower ends of said tubes, said means consisting of an outwardly and downwardly inclined plate, and movable directing plates mounted between the ends of said inclined plate and the wall of the receptacle and movable by the pressure of water against the same to direct the water into the lower ends of said tubes when the receptacle is rotated in either direction.

3. In a dish washing machine, a water containing vessel, a receptacle rotatably mounted within said vessel to receive the dishes, means secured upon the base of said receptacle to support the dishes in an upright position and in separated relation, the annular wall of said receptacle being provided with openings adjacent its lower end, tubes arranged upon the inner face of said annular wall and having their lower ends disposed over the face of said openings, the upper ends of said tubes being open to discharge water upon the contents of the receptacle, said tubes each being further provided with a longitudinal series of openings to discharge the water in jets between the dishes, and means arranged upon the outer face of the annular wall of said receptacle to forcibly direct the water into the lower ends of said tubes, said means consisting of an outwardly and downwardly inclined plate, inwardly projecting pins secured to said plate adjacent each of its ends, and directing plates pivotally mounted between the ends of said inclined plate and the wall of the receptacle and adapted to be supported in an inclined position by said pins whereby the water is forcibly directed into the lower ends of said tubes in the rotation of the receptacle in either direction.

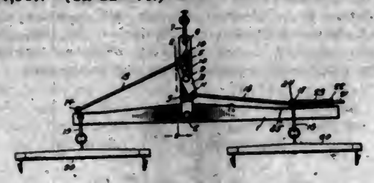
1,020,933. HEAT-DISTRIBUTING SYSTEM. WALTER ERNEST SMITH, Clay Center, Kans. Original application filed Nov. 15, 1910, Serial No. 592,528. Divided and this application filed Mar. 30, 1911. Serial No. 617,861. (Cl. 237—28.)



1. In a heater, a boiler having an inlet port and an outlet port, a radiator consisting of communicating side and end tubes, a distributing tube extending from the outlet port to one of the end tubes and opening into said end tube, a return tube extending between and secured to the end tubes and opening into the other one of said end tubes, and a hollow reinforcing extension secured under the meeting portions of the distributing tube, the return tube and end tube, said extension communicating with the return tube and with the interior of the boiler through the inlet port.

2. In a heater, the combination with a boiler having an outlet port and an inlet port, of a radiator consisting of communicating side and end tubes, one of said end tubes having an opening, a distributing tube connecting the apertured end tube with the outlet port, a return tube extending from the other end tube and secured between both of said tubes and in alinement with the distributing tube, and a hollow reinforcing extension secured to the distributing and return tubes and establishing communication between said return tube and the inlet port, said extension projecting transversely under the apertured end tube.

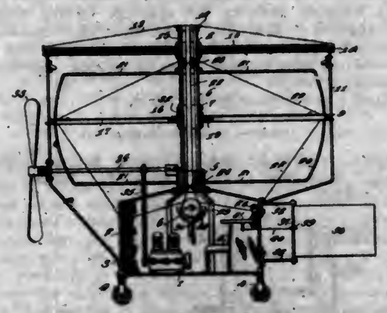
1,020,934. DRAFT-EQUALIZER. DAVID P. SWIGER, Chambersburg, Pa. Filed July 8, 1911. Serial No. 637,547. (Cl. 21—76.)



1. A draft-equalizer, comprising a double-tree, a bracket pivotally secured thereto at a point between the ends thereof, a rocker pivotally carried by said bracket, a link pivoted, at one end, to one end of said rocker and, at the other end, to one end of said double-tree, a second link pivoted, at one end, to the other end of said rocker, a traveling clevis secured to the other end of said second link and slidable on said double-tree, a projection carried by that end of the double-tree nearest to said traveling clevis, and a coiled spring interposed between the end of said second link and said projection.

2. A draft-equalizer, comprising a double-tree, a bracket pivotally secured thereto at a point between the ends thereof, a rocker pivotally carried by said bracket, a link pivoted, at one end, to one end of said rocker and, at the other end, to one end of said double-tree, a second link pivoted, at one end, to the other end of said rocker, a traveling clevis secured to the other end of said second link and slidable on said double-tree, a projection carried by that end of the double-tree nearest to said traveling clevis, said second link carrying a lateral extension projecting through said projection, and a coiled spring encircling said extension and interposed between the end of said second link and said projection.

1,020,935. FLYING-MACHINE. GEORGE W. TATE and CHARLES W. RICE, Chappell, Nebr. Filed May 10, 1911, Serial No. 626,157. Renewed Dec. 14, 1911. Serial No. 665,802. (Cl. 244—14.)



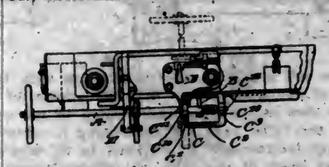
1. A flying machine comprising a car formed of an open work platform and a cage supported thereby and having a reticulated covering, said cage being provided with a top portion, a tubular head supported by said top portion, a tubular mast rising from the head, a head frame supported by the mast and cage, a supporting surface carried by the mast and having movable portions, controlling devices for said movable portions extending downward through the tubular mast and head, and suitable propelling mechanism.

2. A flying machine comprising a car, a tubular mast rising therefrom, an upper fixed plane carried by the mast, a lower plane formed of pivoted sections carried by the mast, and connections for controlling said pivoted sections extending downwardly to the car through said mast.

3. A flying machine comprising a car, a tubular mast extending upwardly therefrom, a head frame secured to the car and mast, an upper main plane supported by the mast and head frame, a lower main plane supported by the mast within the head frame and comprising a series of pivoted sections, guides supported by the mast for the free edges of said sections, and controlling connections for said pivoted sections of the lower plane extending downwardly into the car through said tubular mast.

4. In a flying machine, a support having openings forming an air vent, a substantially circular plane comprising a series of segmental sections pivoted to said support, said sections being movable upwardly and downwardly from a normal horizontal position, guiding means for said sections, and controlling devices for adjusting the pivoted sections, said sections being adapted when simultaneously adjusted downwardly to form a parachute.

1,020,936. CAR-BRAKE. LEWIS L. TYLER, Tacoma, Wash. Filed July 1, 1911. Serial No. 636,358. (Cl. 188—52.)



1. The combination of a brake staff, a carrier therefor pivoted at its upper end and made in the form of an open frame having a top bar, a bottom bar and side bars, the brake staff extending between the top bar and bottom bar and entirely across the opening in the frame and projecting through the bottom bar to a point beyond the same, substantially as set forth.

2. The combination of a brake staff and a carrier therefor pivoted at its upper end and made in the form of an open frame with the brake staff extending entirely across the opening in the frame, substantially as set forth.

1,020,937. SPRAY. EARL CLARENCE WARWICK, Kansas City, Mo. Filed Apr. 8, 1911. Serial No. 619,875. (Cl. 137—57.)



1. In a device of the character described, the combination with a water pipe, a hollow head formed on the upper end thereof and a top plate removably engaged with said head and provided therein with a central restricted opening; of a funnel designed member through which said pipe extends terminating at its lower end in a drain pipe, the upper or flared portion of said funnel member being provided with a perforated basin encircling said head, and a deflector carried by said basin having a portion thereof disposed over the restricted opening in said plate.

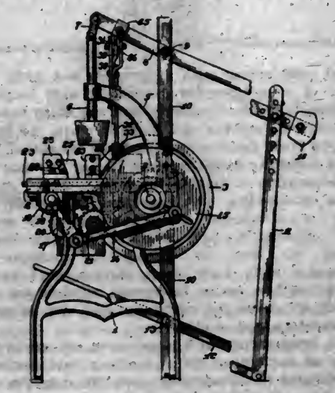
2. In a device of the class described, the combination with a water pipe, a hollow head formed at the upper end thereof, said head having a shoulder and an externally threaded portion thereon, and a top plate provided with a shoulder and an internally threaded portion engaged with the threaded portion of said head, said plate being also provided with a restricted central opening; of a funnel-shaped member surrounding said head and plate, said funnel member terminating in a drain pipe and provided with an opening immediately adjacent said drain pipe, a perforated basin member mounted in said funnel member and provided with a central opening through which said water pipe extends, and a deflector carried by the funnel member and disposed above the opening in said top plate, said water pipe being also disposed through the opening in said funnel member, whereby the latter may be moved longitudinally of the water pipe when desired.

1,020,938. SAFETY HAT-PIN. CARL B. F. WEIDLOG, Shelton, Conn., assignor to Thelka Weidlog, Derby, Conn. Filed Feb. 2, 1911. Serial No. 606,125. (Cl. 24—155.)



In a safety hat pin, the combination with the pin proper, of a head formed with a concentric socket leading into it from its outer face and having an annular protecting flange, a safety or guard button having a split tubular stem to receive the point of the pin proper when the hat pin is in use and adapted to be entered into the said concentric socket in the said head when the hat pin is not in use, the said flange of the head being adapted in size to provide the clearance required for gripping the guard for its removal from the head.

1,020,939. MACHINE FOR FOLDING THE CORNERS OF METAL PANS. EMILE J. WITTEBOLLE, Camden, N. J., assignor to C. B. Porter & Co., Philadelphia, Pa., a Firm. Filed Dec. 16, 1911. Serial No. 666,248. (Cl. 153—13.)



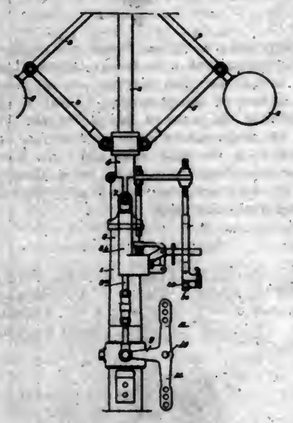
1. In a machine for folding the corners of metal pans, in combination, a table, stops carried by said table for engaging the outer sides of the pan, a movable plunger for engaging the inner part of the pan, blades for engaging and folding the corners of the pan, carriers carried by said table for carrying said blades, racks secured to said carriers, a train of gearing for reciprocating opposite blades toward and away from one another, and means for reciprocally actuating said gears.

2. In a machine for folding the corners of metal pans, in combination, a table, stops carried by said table for engaging the outer sides of the pan, a movable plunger for engaging the interior of the pan, two pairs of oppositely arranged blades for engaging and folding the corners of the pan, carriers carried by said table for carrying said blades, racks secured to the carriers carry-

ing the oppositely arranged blades, gears for reciprocating said racks toward and away from one another, and means for rocking said gears.

3. In a machine of the character described, in combination, a main driving shaft, a loose pulley for driving said shaft, a clutch for connecting said shaft and pulley, oppositely arranged folding blades, means for carrying said blades, means actuated by the rotation of said main shaft for reciprocating said folding blades, a plunger, means actuated by the operator for lowering said plunger, means connected with said plunger operating means for operatively connecting said clutch, and means for automatically disconnecting said clutch when said shaft has performed a complete revolution.

1,020,940. AUTOMATIC ENGINE-STOP. JAMES K. WRIGHT, New York, N. Y. Filed Aug. 21, 1911. Serial No. 645,256. (Cl. 121—103.)



1. The combination with a governor rod made in two sections, of a member for connecting said sections; a lever connected to said member; and two stops for actuating the lever to operate said member when the governor balls move from their normal paths of operation, one of the stops including means whereby it may be made temporarily inoperative to actuate the lever.

2. The combination with a governor rod made in two sections, of a member for connecting said sections; a lever connected to said member; and two stops for actuating the lever to operate the member when the governor balls move from their normal paths of operation; with a device interposed between one of the stops and the lever for rendering said stop inoperative under predetermined conditions.

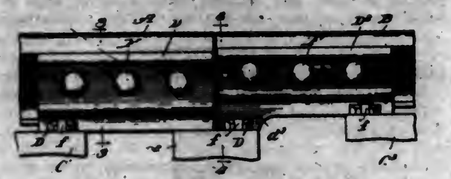
3. The combination with a governor rod made in two sections, of a member for connecting said sections; a lever connected to said member; and two stops for actuating the lever to operate the member when the governor balls move from their normal paths of operation; a device interposed between one of the stops and the lever and adjustable to render said stop inoperative under predetermined conditions; and means for automatically resetting said device after it has once prevented actuation of the lever.

4. The combination with a governor rod made in two sections of a member for connecting said sections; a lever connected to said member; and two stops independently operative on the lever for actuating the member; one of the stops including a latch adjustable at will to cause the lever to be operated or not by said stop as may be desired.

5. The combination with a governor rod made in two sections, of a member for connecting said sections; a lever connected to said member; two stops independently operative on the lever for actuating the member; one of the stops including a latch adjustable at will to cause the lever to be operated or not by said stop as may be desired; with means on the lever for automatically resetting the latch after it has been placed in position to prevent actuation of the lever.

[Claims 6 to 10 not printed in the Gazette.]

1,020,941. RAIL-JOINT. JOHN H. ALLEN, East Orange, N. J., assignor to Quincy, Manchester, Sargent Company, Chicago, Ill., a Corporation of New Jersey. Filed Apr. 1, 1907. Serial No. 365,825. (Cl. 239—6.)



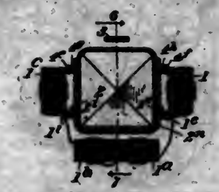
1. In a rail step-joint, the combination with the end portions of adjoining rails of different heights, of a pair of splice bars over-lapping and secured to the opposite sides of the rails, each bar comprising a vertical web stepped up intermediate of its ends to fit between the heads and bases of the rails, an outwardly and downwardly projecting flange stepped up intermediate of its ends to engage the bases of the rails and a flange extending inwardly from the lower edge of said outwardly and downwardly projecting flange stepped up intermediate of its ends to support the bases of the rails at different levels to bring their treads into alinement, and laterally projecting feet near the ends and at the center of each of said splice bars.

2. In a rail step joint, the combination with the adjacent end portions of rails of different cross-sections, of a pair of splice bars over-lapping and secured to the opposite sides of the rails, each bar comprising a vertical web stepped up intermediate of its ends to fit between the heads and the bases of the rails, an outwardly and downwardly projecting flange stepped up intermediate of its ends to engage the bases of the rails, the one of said flanges on the outer bar being also stepped inwardly to bring the inner sides of the rail treads into alinement, and a flange extending inwardly from the lower edge of said downwardly and outwardly projecting flange stepped up intermediate of its ends to support the bases of the rails at different levels to bring their treads into horizontal alinement, and laterally projecting feet near the ends and at the center of each of said splice bars.

3. In a rail step joint, the combination with the end portions of adjoining rails of different heights, and the underlying supporting ties, of a pair of splice bars overlapping the opposite sides of the rails and over-lying three ties, each bar comprising a vertical web stepped up intermediate of its ends to fit between the heads and bases of the rails, an outwardly and downwardly projecting flange stepped up intermediate of its ends to engage the bases of the rails and a flange extending inwardly from the lower edge of said outwardly and downwardly projecting flange stepped up intermediate of its ends and above the tie immediately below the ends of the rails to support the bases of the rails at different levels to horizontally aline their treads, the stepped up portion of said inwardly extending flange being formed with a reinforcement beneath the end thereof alining with the under-surface of the adjoining lower portion of said flange to form a seat resting upon the intermediate tie.

4. In a rail step joint, the combination with the end portions of rails of different cross-sections and the underlying supporting ties, of a pair of splice bars over-lapping the opposite sides of the rails and overlying three ties, each bar comprising a vertical web stepped up intermediate of its ends to fit between the heads and bases of the rails, an outwardly and downwardly projecting flange stepped up intermediate of its ends to engage the bases of the rails, the one of said flanges on the outer bar being also stepped inwardly to bring the inner sides of the rail heads into vertical alinement and a flange extending inwardly from the lower edges of said outwardly and downwardly projecting flange stepped up intermediate of its ends and above the intermediate tie to support the bases of the rails at different levels to horisontally aline their treads, the stepped up portion of said inwardly extending flange being formed with a reinforcement beneath its inner end aliming with the under-surface of the adjacent portion of said flange to form a seat resting upon the intermediate tie.

1,020,942. LEVITATING TRANSMITTING APPARATUS. EMILE BACHELET, Mount Vernon, N. Y. Filed Apr. 2, 1910, Serial No. 553,134. Renewed June 12, 1911. Serial No. 632,771. (Cl. 191—22.)



1. Transmitting apparatus comprising a non-magnetic carrier of conducting material, means for producing a periodic magnetic field to levitate the carrier, and means for moving said carrier while levitated.

2. In transmitting apparatus, the combination of means for establishing a periodic electro-magnetic field, a carrier of non-magnetic metal adapted to levitate when introduced into such field, and means for moving the carrier in said field when levitated.

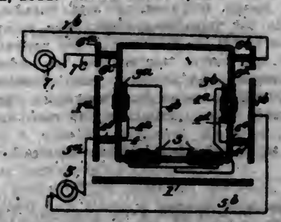
3. Transmitting apparatus comprising means for producing a lineal periodic electro-magnetic field, a carrier of non-magnetic conducting material adapted to be levitated when introduced into such field, and means for causing such carrier to traverse said field while levitated.

4. Transmitting apparatus, comprising a line of electro-magnets, means for periodically energising such magnets, a non-magnetic carrier adapted to be levitated when introduced into the magnetic field created by said magnets, and means for causing the carrier to traverse the magnetic field when levitated.

5. Transmitting apparatus, comprising lineally disposed series of electro-magnets, a carrier of non-magnetic conducting material adapted to be levitated when placed in the magnetic-field produced by the magnets, means for periodically energising the magnets to create a magnetic field around the carrier, and means for impelling the carrier along the series when levitated.

[Claims 6 to 12 not printed in the Gazette.]

1,020,943. LEVITATING TRANSMITTING APPARATUS. EMILE BACHELET, Mount Vernon, N. Y. Filed Apr. 21, 1910, Serial No. 556,712. Renewed June 12, 1911. Serial No. 632,772. (Cl. 191—22.)



1. Transmitting apparatus, comprising a guide-way of non-magnetic conducting material, a carrier provided with electro-magnets, and means to periodically energise such magnets when introduced into such way whereby the carrier is levitated, and means for causing the carrier to traverse said way when levitated.

2. In transmitting apparatus, the combination of a guide-way of non-magnetic conductive material, a carrier, electro-magnets on the carrier, means for periodically energising such magnets to establish an electro-magnetic field to levitate the carrier when in such way, and means for moving the carrier along said way when levitated.

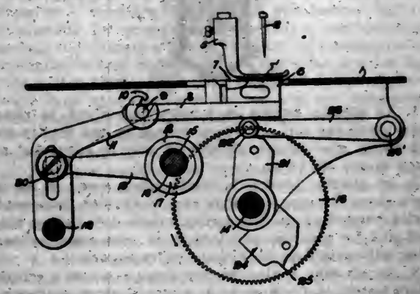
3. Transmitting apparatus, comprising a line or guide-way of non-magnetic conductive material, a carrier provided with a series of electro-magnets, means for periodically energising the magnets to create a magnetic field around the carrier whereby the carrier is levitated when placed in the line and means for impelling the carrier along the line when levitated.

4. Thansmitting apparatus, comprising an aluminum guide-way, a carrier, a series of electro-magnets thereon, means to periodically energise such magnets to cause them to levitate the carrier when placed in the said guide-way, and means for impelling the carrier along the way while levitated.

5. In transmitting apparatus, the combination of an aluminum guide-way, a carrier adapted to traverse said guide-way, a series of electro-magnets on the carrier, means for periodically energising the magnets to levitate the carrier when placed in the said guide-way, and electro-magnetic means to impel the carrier along the way while levitated.

[Claims 6 to 8 not printed in the Gazette.]

1,020,944. BORDER-FORMING MECHANISM FOR FABRICS. WILLIAM H. CARTER, Needham Heights, Mass., assignor to Springfield Knitting Co., Springfield, Mass., a Corporation of Massachusetts. Filed Mar. 29, 1911. Serial No. 617,628. (Cl. 112—24.)



1. Border forming mechanism for fabrics comprising in combination means to feed the fabric step-by-step in one direction, means periodically to reverse the feed of said fabric, means to cause each of a series of stitches to penetrate said fabric and to position said stitches in a general shell or cluster formation and including means to cause certain of said stitches less than the whole number thereof to penetrate the fabric at substantially a common point, and means to cause an additional number of said stitches to penetrate the fabric at a point slightly spaced therefrom.

2. Border forming mechanism for fabrics comprising in combination means to feed the fabric step-by-step in one direction, means periodically to reverse the feed of the fabric, stitch forming mechanism including means to cause each of a series of stitches to penetrate the fabric and to position said stitches in a general shell or cluster formation, and means timed to co-act with said feeding means to effect the said stitch-penetration of the fabric at a plurality of points.

3. Border forming mechanism for fabrics comprising in combination, means to form a series of stitches, each penetrating said fabric and extending in a general shell or cluster formation, means to feed the fabric in one direc-

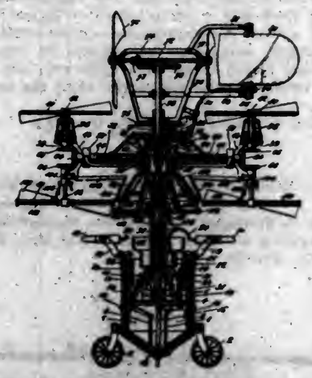
tion, and means to reverse the feed of the fabric between the penetration of the first and last stitches of said series, thereby to cause said stitch penetration to occur at a plurality of spaced points.

4. Border forming mechanism for fabrics comprising in combination means to position a series of stitches in a general shell or cluster formation, a fabric feed slide and an eccentric for imparting opposed feeding movements thereto.

5. Border forming mechanism for fabrics comprising in combination means to position a series of stitches in a general shell or cluster formation, a fabric feed slide having oppositely positioned sets of feeding teeth and an eccentric to impart opposed feeding movements to said slide.

[Claims 6 to 18 not printed in the Gazette.]

1,020,945. SAFETY FLYING-MACHINE. MILTON CHASE, Haverhill, Mass., assignor of eleven-twentieths to Ira J. Webster and two-twentieths to J. Frank Batchelder, Haverhill, Mass. Filed Apr. 30, 1910. Serial No. 558,727. (Cl. 244—25.)



1. An airship, having, in combination, a car, a framework above the car, propellers carried by the framework, and means whereby said framework may be tilted and rotated in any direction.

2. An airship, having, in combination, a car, a framework above the car, propellers carried by said framework, a ring carried by the framework, means coöperating with said ring for rotating said framework, and means coöperating with said ring for tilting the framework.

3. An air ship, having, in combination, a car, a central tubular stem, a framework, a universal joint connecting said stem and framework, a plurality of propellers carried by said framework and means for tilting said framework about said universal joint.

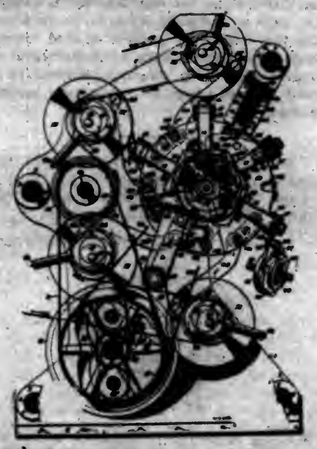
4. An air ship, having, in combination, a car, a central tubular stem, a framework, a universal joint connecting said stem and framework, a plurality of propellers carried by said framework, and means for turning said framework in any direction.

5. An air ship, having, in combination a car, a main framework connected to said car, a universal joint within the framework, superposed propellers carried by the framework, an auxiliary framework mounted to rotate, propellers carried by said auxiliary framework, a rudder on said auxiliary framework, and means for rotating said framework.

[Claims 6 to 11 not printed in the Gazette.]

1,020,946. POLISHING-MACHINE. OLIVER L. DOSCH, Elizabeth, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Sept. 15, 1910. Serial No. 582,170. (Cl. 51—4.)

1. A machine of the class described comprising a rotary turret, a plurality of radially arranged chucks carried thereby, a plurality of abrading wheels arranged concentric with the axis of motion of said turret, means for simultaneously adjusting said abrading wheels toward and from said turret, pulleys connected with said abrading wheels, and a common belt connection from the source of power embracing said pulleys for imparting rotary motion to the abrading wheels.



2. A machine of the class described comprising a rotary turret, a plurality of radially arranged chucks carried thereby, a plurality of abrading wheels arranged concentric with the axis of motion of said turret, means for independently adjusting said abrading wheels toward and from said turret, means for simultaneously adjusting said abrading wheels relatively to said turret, pulleys connected with said abrading wheels, and a common belt connection from the source of power embracing said pulleys for imparting rotary motion to the abrading wheels.

3. A machine of the class described comprising a rotary turret, a plurality of radially arranged chucks carried thereby, feeding means for imparting step-by-step rotary movements to said turret, a plurality of abrading wheels arranged concentric with the axis of motion of said turret, pulleys connected with said abrading wheels and with the turret feeding means, and a common belt connection from the source of power embracing said pulleys.

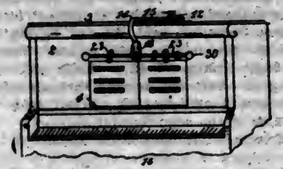
4. A machine of the class described comprising a rotary turret, a plurality of radially arranged chucks carried thereby, feeding means for imparting step-by-step rotary movements to said turret, means for imparting rotating movements to said chucks independently of the movements of the turret, a plurality of abrading wheels arranged concentric with the axis of motion of said turret, pulleys connected with said abrading wheels and with the turret feeding means, and a common belt connection from the source of power embracing said pulleys.

5. A machine of the class described comprising a rotary turret, a plurality of radially arranged chucks carried by said turret, an abrading wheel arranged adjacent said turret, means for rotating said abrading wheel, feeding means for imparting step-by-step rotary movements to said turret, locking means for restraining the movement of said turret intermediate the actuations of said feeding means, and releasing means independent of the turret actuating means for disengaging the locking means from said turret preparatory to each advance of the latter.

[Claims 6 to 10 not printed in the Gazette.]

1,020,947. MUSIC-HOLDER FOR PIANOS. CASPER H. GRINDE, Waterloo, Iowa. Filed May 19, 1911. Serial No. 628,288. (Cl. 84—17.)

1. In a device of the character described, a weighted member adapted to rest upon the top and engage the rear of a piano, a bent arm adjustably secured to the weighted member, a sleeve secured to said arm, carrying rods removably engaging the sleeve and provided with clasps adapted to engage the leaves of a sheet of music.



2. In a device of the character described, a weighted member provided with a padding on its base, a bent arm, means for adjustably and removably securing the bent arm to the weighted member, a sleeve secured to the bent arm, carrying rods removably secured in the sleeve and adapted to be swung from side to side, and a clasp for each carrying rod adapted to engage a leaf of the music sheet.

3. In a device of the character described, a weighted member provided with a pad and adapted to engage the top and rear of the piano, a bent arm, means for adjustably securing the arm to the weighted member, a sleeve provided with lugs, a plate secured to the lugs, carrying rods engaging the inner side of the sleeve and resting on said plate and adapted to have a swinging movement, and clasps on the carrying rods for grasping the leaves of the music sheet.

4. In a device of the character described, a weighted member provided with a pad, a lug at one end of the member, a bent arm, means for adjustably securing the bent arm to the weighted member, a sleeve secured to the bent arm, a plate attached to the sleeve, carrying rods provided with balls at their ends removably engaging the inside of the sleeve over the plate and adapted to be swung from side to side, and means attached to the carrying rods for grasping the leaves of the music sheet.

5. In a device of the character described, a weighted member provided with a pad and adapted to be moved to any part of the top of the piano or removed from the piano, a lug provided with an opening on said weighted member, a bent rod, means for adjustably and removably securing said rod to the weighted member through said lug and preventing said rod from coming in contact with the piano, a sleeve secured to said bent rod and provided with lugs at its base, a plate secured to said bent arm beneath the sleeve, carrying rods each bent at one end and adapted to engage the inner side of the sleeve and rest on said plate, and a clasp attached to the carrying rods for grasping the leaf of the music.

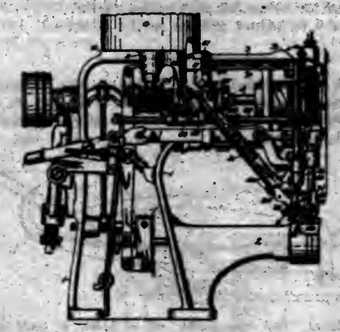
1,020,948. LOOSE-LEAF BOOK. LEE D. HAMACHER, Kansas City, Mo., assignor to Hamacher-Hawkins Manufacturing Company, a Corporation of Missouri. Filed Sept. 15, 1909. Serial No. 517,822. (Cl. 129—24.)



1. In a device of the character described, a frame, hook-carrying members rockingly-mounted therein and provided with inwardly-extending notches at their adjacent edges, and a plurality of slotted U-shaped members extending through the notches and overlapping and underlapping the hook-carrying members.

2. In a device of the character described, a frame, a cover to which said frame is secured, hook-carrying members operably-mounted in the frame and provided with notches at their adjacent edges, and a slotted resilient member extending through the notches and overlapping and underlapping the hook-carrying members.

1,020,949. BUTTON-SEWING MACHINE. CHARLES M. HORTON, Elizabeth, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed May 7, 1909. Serial No. 494,584. (Cl. 112—32.)



1. In a button-fastening machine, the combination with button-fastening devices, a button-hopper, and means for supporting and guiding the buttons in their travel from the hopper to fastening position, of a button-feeder having a button-shank engaging member movable relatively to said button-supporting and guiding means and having upon one extremity a shoulder adapted for engagement with a button-shank for propulsion of the button into fastening position.

2. In a button-fastening machine, the combination with button-fastening devices, a button-hopper, and means for supporting and guiding the buttons in their travel from the hopper to fastening position, of a button-feeder having a button-shank engaging member movable relatively to said button-supporting and guiding means and having upon one extremity a shoulder adapted for engagement with a button-shank for propulsion of the button into fastening position, and actuating means whereby said button-feeder is operated to feed the button into fastening position and is thereafter disengaged from the button before the end of each cycle of operation of the machine and subsequent to the beginning of a button-fastening operation.

3. In a button-fastening machine, the combination with button-fastening devices, a button-hopper, and means for supporting and guiding the buttons in their travel from the hopper to fastening position, of a button-feeder having a button-shank engaging member movable relatively to said button-supporting and guiding means and having upon one extremity a shoulder adapted for engagement with a button-shank for propulsion of the button into fastening position, and actuating means acting automatically in each cycle of operation of the machine for successively operating the feeder to propel the button into fastening position before the action of the fastening means and to retract the feeder from engagement with the button after the beginning of the button-fastening action.

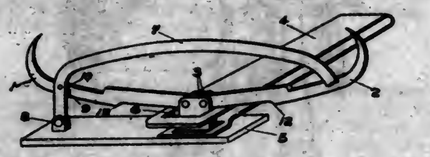
4. In a button feeding mechanism, the combination with a button-chute provided with a button-shank guiding raceway and an adjacent button-head guiding raceway and having a lateral notch extending into the button head guiding raceway and transversely to the button-shank guiding raceway, of a feeder provided with a button-head receiving recess open at one side and a laterally disposed button-shank engaging member adapted to enter the button-head raceway through said notch for engagement with the shank of a button within said chute.

5. In a button feeding mechanism, the combination with the button-chute provided with a button-shank guiding raceway and an adjacent button-head guiding raceway, and having a lateral notch extending into the button head guiding raceway, of a button-holding member formed with button-shank and button-head guiding raceways in register with the adjacent portions of the corresponding raceways of the button-chute, a button-feeder provided with a laterally closed button-head receiving recess and with a button-shank engaging member adapted to enter the

button-head raceway of the chute through said notch for engagement with the button-shank and to move into the button-head raceway of the holder for transferring the button-shank into button fastening position in the latter, and means for actuating said button-feeder.

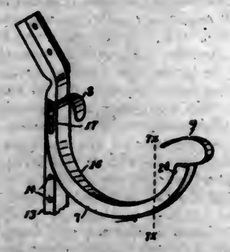
[Claims 6 to 14 not printed in the Gazette.]

1,020,950. ANIMAL-TRAP. WILLIAM G. MCQUISTON, Oil City, Pa., assignor of one-half to Hiram T. Rose, Jr., Rouseville, Pa. Filed Aug. 4, 1911. Serial No. 642,253. (Cl. 43—23.)



An animal trap consisting of a base, a pair of oppositely-swinging jaws each pivoted at one point to said base, one of said jaws being provided adjacent to its free end with a laterally-extending pin, a spring arranged to close said jaws and a set-lever hinged at one end to said base, and provided with a laterally-extending pin arranged to engage said first-mentioned pin for the purpose set forth.

1,020,951. EAVES-TROUGH HANGER. WILLIAM E. PATCHIN, Rochester, N. Y., assignor to Lilian B. Hodge, Rochester, N. Y. Filed June 22, 1911. Serial No. 634,747. (Cl. 108—29.)



1. In an eaves trough hanger, the combination of a semi-circular support comprising a channel formed up of a single sheet of metal and having a flexible finger extending from the middle surface of the channel at each end of the circle.

2. In an eaves trough hanger, the combination of a semi-circular support formed of a single sheet of metal bent laterally to the form of a channel and bent longitudinally to the form of a semi-circle, perforations through the sides thereof, a supporting plate therefor having a channel formed therein, perforations through the side of said channel, perforations through the semi-circular support being adapted to register with the perforations in the channel of said supporting plate.

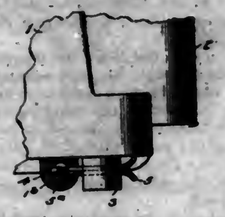
3. In an eaves trough hanger, the combination of a semi-circular support formed of a single sheet of metal bent laterally to the form of a channel and bent longitudinally to the form of a semi-circle, elongated slots through the channeled sides thereof, a supporting plate therefor having a channel formed therein, perforations through the side of said channel, a bolt passing through the slots in the semi-circular support and the perforations in the supporting plate, permitting a limited longitudinal adjustment of said semi-circular support on said bolt and said supporting plate, said bolt serving to clamp the semi-circular support to the supporting plate.

4. In an eaves trough hanger, the combination of a semi-circular support comprising a channel formed up of a single sheet of metal and having a flexible finger extending from the middle surface of the channel at each end of the semi-circle, an eaves trough supported in said semi-circular support, said fingers being bent around and engaging with the edges of said eaves trough for the purpose of holding it in place.

5. In an eaves trough hanger, the combination of a semi-circular support comprising a channel formed up of a single sheet of metal, said channel having a slot extending across the middle side thereof near the end thereof, a finger composed of a single piece of flexible metal having an offset end passing through said slot and engaging therewith and bearing against both the inside and the outside of the semi-circular support.

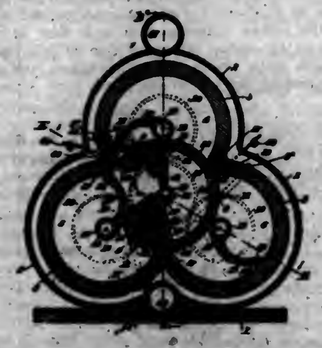
[Claims 6 to 8 not printed in the Gazette.]

1,020,952. KNUCKLE-PIN RETAINER. JOSEPH KELSO, Pittsburgh, Pa., assignor to McConway & Torley Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Apr. 14, 1911. Serial No. 621,067. (Cl. 213—13.)



In a knuckle pin retainer for car couplers, the combination with the coupler head, knuckle and knuckle pin, said head being provided on its under face with a perforated lug and said knuckle pin being provided with a transversely extending aperture in its lower end, of a longitudinally split key formed with an eye and extending into the aperture of the knuckle pin, and a longitudinally split headed pin extending through the eye in said key and through the perforation in the said lug on the under face of the coupler head.

1,020,953. INTERNAL-COMBUSTION ENGINE. WILLIAM H. OGDEN, Binghamton, N. Y. Filed June 20, 1911. Serial No. 634,385. (Cl. 123—13.)



1. An internal combustion engine, having a cluster of cylinders, a combined abutment and compression chest, a compressing piston in said compression chest, a revolving piston in each cylinder, independent gas ports for the several cylinders, means to rotate the combined abutment and compression chest and the pistons in unison, and means to oscillate the compressing piston during the rotation of the abutment and compression chest, said abutment and compression chest serving to control the gas ports leading into the several cylinders.

2. An internal combustion engine, comprising a casing having three cylinders in a trefoil arrangement, a hinged leaf rotary piston in each cylinder, a rotary abutment and compression chest, gears connecting the pistons and abutment and compression chest to turn in unison, the pistons turning in one direction and the abutment and compression chest in the reverse direction, a compressing piston in said compression chest, means for oscillating said compressing piston during the rotation of the abutment and compression chest, and gas ports leading separately into the several cylinders and through which the compressed gas from the compression chest to the cylinders is controlled by the abutment and compression chest.

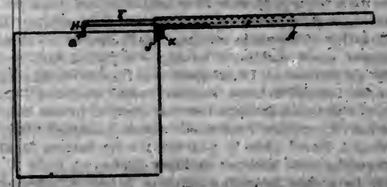
3. An internal combustion engine, comprising a casing having three cylinders in a trefoil arrangement, a hinged leaf rotary piston in each cylinder, a rotary abutment and compression chest mounted centrally between the three cylinders and geared to turn in the opposite direction to the pistons, a separate gas channel opening into each cylinder and having its intake in the path of movement of the rotary abutment and compression chest, a compressing piston in the compression chest, and means for oscillating said compressing piston during the rotation of the abutment and compression chest, the said abutment and compression chest successively admitting compressed gas to the several cylinders through said channels, so that while the gas is being compressed and exploded in one cylinder, the ignited gas in the preceding cylinder in the direction of movement of the abutment and compression chest will be expanding, and the remaining cylinder will be exhausting.

4. An internal combustion engine, having a cluster of cylinders, a revolving piston in each cylinder, a combined abutment and compression chest of volute shape in cross-section arranged between the several cylinders and in gas-tight contact at all times with the several pistons, a casing common to said cylinders and said combined abutment and compression chest, means to rotate the pistons and abutment and compression chest in unison but in opposite directions, a compressing piston in said compression chest, means to oscillate said compressing piston during the rotation of the abutment and compression chest, and independent gas inlets for the several cylinders, the abutment and compression chest serving to control said inlets successively.

5. An internal combustion engine, having a cluster of cylinders, a revolving piston in each cylinder, a combined rotary abutment and compression chest mounted between the several pistons and in gas-tight contact at all times with said pistons either through their knuckles or their free ends during the cycle of movement of each, a compressing piston in said compression chest, means for oscillating said compressing piston during the rotation of the abutment and compression chest, independent gas inlets for each cylinder, independent exhausts for each cylinder, a casing common to all of these parts, the combined abutment and compression chest rotating within the casing and serving as a valve to control the admission of compressed gas successively to the cylinders, and a valve for controlling the supply of gas to the compression chest.

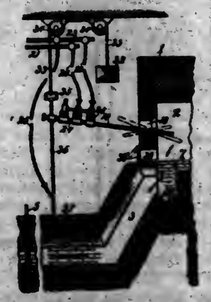
[Claims 6 to 11 not printed in the Gazette.]

1,020,954. CAN-OPENER. WILLIAM SCHWAB, Fremont, Ohio, assignor to John R. Wents, Fremont, Ohio. Filed Nov. 7, 1910. Serial No. 591,163. (Cl. 30—3.)



A can opener comprising a handle having a longitudinally disposed open-sided channel angular in cross section, said handle having at its end and in one side a recess through which said channel passes, a lever fitting snugly and slidably in said channel, a face plate fitting in said recess with its end abutting against the end wall of the recess and carrying at its other end a cutter, and devices securing the plate to the handle at points between the ends of the plate.

1,020,955. SPRAY-BURNER. ALEXANDER H. DAVIDSON, Colma, and SEVERUS SUNDELIUS, San Francisco, Cal. Original application filed Apr. 12, 1909, Serial No. 489,529. Divided and this application filed May 15, 1911. Serial No. 627,816. (Cl. 158—73.)



1. A burner comprising a movable blast nozzle adapted to inject flame into a furnace, flexible fuel-feeding pipes connecting the nozzle with fuel supply means, a prop for supporting an end of said nozzle, said prop having a hand-grasp thereon, for manipulating the prop and thereby changing the direction of the nozzle, and flexible means connected to the hand-grasp for retaining the prop normally in vertical position.

2. In a burner, a blast nozzle adapted to inject a flame into a furnace, said nozzle having a liquid supply pipe and an air supply pipe connected therewith, a movable prop having a hand-grasp connected thereto whereby the outer end of the nozzle is supported and whereby the same may be manipulated for directing the flame to any part of the furnace at will of the operator.

3. In a burner, a nozzle adapted to project into a furnace and having fluid supply means connected therewith, a substantially vertical prop secured rigidly to the burner, and means for normally retaining the prop in vertical position, said prop having thereon a hand-grasp whereby the nozzle may be manually manipulated against the action of the retaining means for directing the flame to any and all parts of the furnace at the will of the operator thereof.

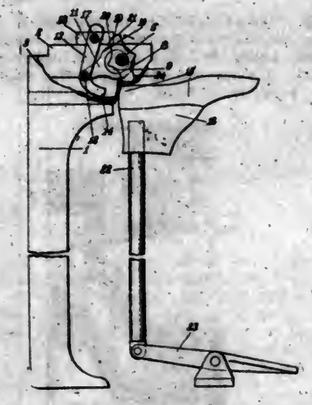
REISSUES.

13,385. ROTARY HEEL-SEAT MAKER AND COUNTER-POUNDER. IRA E. FLETCHER, Montello, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Feb. 26, 1909. Serial No. 480,289. Original No. 872,617, dated Dec. 3, 1907, Serial No. 336,279. (Cl. 12—51.)

1. A heel-seat maker, comprising a heel rest, a rotary hammer above said heel rest for delivering a series of swinging blows to form the heel-seat, combined with a swinging side pounder in the same vertical plane with said hammer below and back of the hammer for simultaneously pounding the counter immediately next to the portion of the heel-seat being crushed down by the hammer, said hammer and pounder being constructed and arranged to strike the leather in directions tending to work the leather forward in the same direction over the edge of the last and inwardly on the heel-seat.

2. A heel-seat maker, comprising a rotary hammer having a plurality of striking ends extending radially in

different directions from the axis of rotation, a work rest for maintaining the shoe in position to receive a series of rapid blows from said hammer at the heel-seat region, combined with a side pounder for engaging the counter adjacent the heel-seat and means for operating said side pounder to deliver a slower series of blows than said rotary hammer.



3. A heel-seat maker, comprising a rotary hammer for delivering a series of swinging blows to form the heel-seat, a swinging hammer adjacent said rotary hammer for simultaneously pounding the counter adjacent said heel-seat, and a connection from said rotary hammer to said swinging hammer for operating the latter by the former.

4. A heel-seat maker, having an angular heel rest to position the heel of a shoe, a transverse rotary shaft mounted approximately vertically above said heel rest, a radially extending hammer mounted to revolve with said rotary shaft, said radial hammer having the front edge of its outer end beveled and at such a distance from the shaft that when a shoe is in place in said heel rest the beveled end of the hammer first strikes a light blow which is followed by a forward horizontal, sliding, crushing pressure of the back portion of said outer end of the hammer on the heel-seat of the shoe, an eccentric on said shaft, a laterally movable hammer having its striking end opposite the lower portion of said heel rest to strike against the counter of the shoe, and an eccentric strap from said eccentric to said hammer, arranged to move the latter at each revolution of said shaft to strike a blow against the counter of the shoe.

5. A heel-seat maker, comprising a heel rest, a shaft mounted transversely above said rest, a radial hammer fast on said shaft and arranged to swing across said heel rest for giving a long sliding blow and rubbing pressure across the heel-seat of the shoe, a swinging hammer pivotally mounted above said shaft, having its lower end curved forwardly toward said heel rest, and operating means extending from said shaft to said swinging hammer for simultaneously swinging the latter hammer as the first mentioned hammer rotates.

6. In a rotary shoe pounding machine the combination with a rotary shoe bottom beater and means for actuating it to deliver inwardly directed blows on the shoe bottom adto deliver inwardly directed blows on the shoe bottom adjacent to its edge in rapid succession, of means arranged to beat the side of the shoe adjacent to the point of operation of the bottom beater while the upper is being acted upon by the bottom beater.

7. In a rotary shoe pounding machine the combination with a rotary shoe bottom beater having an annular series of striking members spaced apart to strike distinct blows directed inwardly from the edge of the shoe bottom, of means arranged to beat the side of the shoe adjacent to its edge while the shoe is in position to receive the action of the rotary beater upon its bottom.

8. In a rotary shoe pounding machine the combination with a rotary shoe bottom beater having a plurality of striking members spaced apart to deliver separte blows directed inwardly from the edge of the shoe, of a reciprocatory side beater arranged relatively to the rotary beater to block the side of the shoe while the bottom is being pounded, and connected mechanism for actuating the two beaters.

9. In a rotary shoe pounding machine the combination with a rotary beater for treating the bottom of a shoe, and means for actuating said beater about an axis substantially parallel with the shoe bottom, of a reciprocatory side beater, and means for unyieldingly actuating the side beater forward to a predetermined relation with the bottom beater.

10. In a rotary shoe pounding machine the combination with a rotary beater for treating the bottom of a shoe, of a reciprocatory side beater, and means for unyieldingly actuating the side beater forward to a predetermined relation with the bottom beater, and a shoe side rest apertured to permit the enlargement of the shoe with the side beater.

11. In a machine of the class described, the combination with a shoe bottom pounder, of a shoe side pounder arranged in the same vertical plane, and means for imparting continuous rotary motion to one pounder about an axis substantially parallel with the surface of the shoe on which it acts, and reciprocatory motion to the other pounder from and toward the surface on which it acts.

12. In a shoe pounding machine the combination with a rotary pounder, of a reciprocatory pounder movable in the same vertical plane and in a path substantially tangential to the path of the rotary pounder, and means for actuating the two pounders to beat the side and bottom of a shoe adjacent to its edge.

13. In a shoe pounding machine the combination with a rotary pounder, of a reciprocatory pounder movable in the same plane and in a path substantially tangential to the path of the rotary pounder, and means for actuating the two pounders to beat the side and bottom of a shoe adjacent to its edge, said machine having provision for relatively adjusting the two pounders.

14. In a shoe pounding machine the combination with a shoe bottom pounder, of a shoe side pounder and means for imparting continuous rotary motion to one pounder and reciprocatory motion to the other pounder, said machine having provision for adjustment to vary the relative angular directions of the blows of the two pounders.

15. In a shoe pounding machine the combination with a shoe bottom pounder, of a shoe side pounder, and means for actuating said two pounders to beat the side and bottom of a shoe adjacent to its edge, said machine having provision for adjustment to change the relative angular directions of the blows delivered by the two pounders.

16. In a shoe pounding machine the combination with a shoe bottom pounder, of a shoe side pounder, means to assist the operator in positioning the shoe to receive the action of the side and bottom pounders, and means for imparting continuous rotary motion to one pounder in a plane perpendicular to the surface being treated by it and reciprocating motion to the other pounder.

17. In a shoe pounding machine the combination with a rotary pounder arranged to draw the upper inwardly from the shoe edge, of a reciprocatory side pounder to beat the side of the shoe, and operating mechanism arranged to cause the reciprocatory pounder to strike the shoe with every alternate blow of the rotary pounder.

18. In a shoe pounding machine a rotary hammer having a plurality of separate striking heads spaced a substantial distance apart and each having a striking face eccentrically curved as at 19 so that the forward engaging portion 20 thereof is at a shorter radial distance from the axis of the hammer than the rear portion of the face combined with treadle controlled means arranged for firmly holding a lasted shoe in position for its bottom face to be engaged by said hammer striking faces.

19. In a shoe pounding machine a rotary hammer having a plurality of unyielding striking ends spaced a substantial distance apart and each having a striking face formed to deliver a light initial blow followed by a smoothing movement and then by a hard crushing blow, combined with a work rest to sustain the shoe under the hammer, arranged to cause said crushing blows to be directed downwardly and inwardly against the shoe bottom, substantially as and for the purpose described.

20. In a shoe pounding machine the combination with a rotary hammer comprising a radially projecting arm having a striking face formed and arranged to deliver a light initial blow to bend down and smooth the upper on a shoe bottom followed by a hard crushing blow to set the upper, of a rest arranged with relation to said striking face for engaging a lasted shoe and supporting it with its bottom tangential to the path of said striking face.

21. In a shoe pounding machine the combination with a rotary pounder, of a reciprocatory pounder movable in the same plane, means for actuating the two pounders to beat the side and bottom of a shoe adjacent to its edge, and a rest having a formation to engage the bottom and the side of the shoe adjacent to the paths of the pounders and position the shoe with relation to both the pounders.

22. In a shoe pounding machine the combination with a rotary pounder for beating the upper on the shoe bottom inwardly, of a shoe positioning means of angular formation having a portion arranged to overlie the shoe bottom adjacent to the pounder and a portion arranged to engage the side of the shoe, a work rest, and means to actuate said work rest for clamping the shoe upwardly against the overlying portion of the positioning means to maintain the shoe against forward displacement by the pounder.

23. In a shoe pounding machine the combination with a rotary shoe bottom pounder, of a reciprocating shoe side pounder, a work rest, and means for relatively moving the pounders and the work rest to cause the shoe on the rest to receive the action of the two pounders.

24. A shoe pounding machine having, in combination, a shaft, a rotary bottom beater upon the shaft, an eccentric on said shaft adjacent to said beater, an oscillatory side beater located behind the bottom beater and an eccentric strap connecting the side beater and the eccentric.

25. A shoe pounding machine having, in combination, a frame, a guide having an opening through which a portion of a shoe is presented for treatment of the shoe bottom, said guide presenting an angle for the reception of the edge of the shoe, a bottom beater operating through the opening at one side of the angle, a side beater operating through the opening at the other side of the angle, and means for actuating the two beaters.

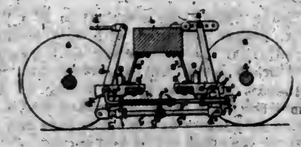
26. A shoe pounding machine having, in combination, a rotary shoe beater and a second beater arranged relatively thereto to treat the side of the shoe while the shoe bottom is being treated by the rotary beater, and a rest for the bottom and side of the shoe arranged relatively to the two beaters to position the work for the action of both beaters simultaneously.

27. A shoe pounding machine having, in combination, a rotary beater having a striking face arranged to engage the bottom of the shoe with a wiping action directed from the shoe edge inwardly, and a reciprocating beater arranged to deliver blows against the side of the shoe at its edge together with actuating mechanism arranged to cause said beaters to strike the shoe substantially simultaneously.

28. A shoe pounding machine having, in combination, a rotary beater having two striking faces arranged to engage the bottom of the shoe with a wiping action directed from the shoe edge inwardly, and a reciprocating beater arranged to deliver blows against the side of the shoe at its edge together with actuating mechanism arranged to cause the blows of the side beater to register substantially with the action of one of said striking faces to shape the edge of the shoe and to cause the action of the other striking face to alternate with the blows of the side beater.

29. A shoe pounding machine having, in combination, a rotary beater having a striking face arranged to engage the bottom of the shoe with a wiping action directed from the shoe edge inwardly, and a reciprocating beater arranged to deliver blows against the side of the shoe at its edge together with actuating mechanism for the two beaters arranged to cause a blow from the reciprocating beater against the side of the shoe to alternate with a wipe of said striking face.

13,386. BRAKE-RIGGING. WILLIAM H. SAUVAGE, New York, N. Y. Filed Feb. 6, 1911. Serial No. 607,007. Original No. 968,947, dated July 12, 1910, Serial No. 520,861. (Cl. 188—49.)



1. In a brake rigging, the combination of a live lever, a dead lever, an automatically extensible push bar connecting said levers, an adjusting bar connecting said levers, said adjusting bar comprising two relatively movable members having frictional engagement with each other, and a release spring connecting said live lever with the part of said adjusting bar adjacent thereto for returning the parts to normal position.

2. In a brake rigging, the combination of a live lever, a dead lever, an adjustable coupling bar connecting said levers and an adjusting bar connecting said levers, said adjusting bar comprising two relatively movable members, one of said members being received in a longitudinal channel in the other member and said other member having a flat friction spring and means to hold the same upon the first named member.

3. In a brake rigging, the combination of a live lever, a dead lever, an adjustable push bar connecting said levers, an adjusting bar connecting said levers, said adjusting bar comprising two relatively movable members having frictional engagement with each other, one of said members having a lost motion connection with one of said levers, and a spring connecting said member with the live lever adapted to act upon the latter whereby said push bar is extended permanently to take up and hold the slack due to the wear of the parts.

4. In a brake rigging, the combination of a live lever, a dead lever, an adjusting bar connecting said levers, a coupling bar connecting said levers, a release spring adapted to be compressed upon application of the brakes, an abutment on the adjusting bar for one end of said spring, and an abutment connected to the live lever for the other end of said spring.

5. In a brake rigging, the combination of a live lever, a dead lever, brakes connected with the levers respectively, an adjusting bar connecting said levers in the plane of the brake fulcra, a coupling bar connecting said levers, a release spring interposed between the live lever and the adjacent part of said adjusting bar, an abutment on the adjusting bar for one end of said spring and an abutment connected to the live lever for the other end of said spring.

6. In a brake rigging, the combination of a live lever, a dead lever, an adjusting bar connecting said levers, a coupling bar connecting said levers, and a release spring acting between an abutment on the adjusting bar and an abutment on the coupling bar.

7. In a brake rigging, the combination of a live lever, a dead lever, brakes connected with the levers respectively, an adjusting bar connecting said levers in the plane of the brake fulcra, a coupling bar connecting said levers at their free ends, and a release spring acting between an abutment on the adjusting bar and an abutment on the coupling bar.

8. In a brake rigging, the combination of a live lever, a dead lever, brakes connected with said levers respectively, an adjusting bar connecting said levers in the plane of the brake fulcra, a coupling bar connecting said levers at their free ends, a coil release spring mounted

on the adjusting bar and bearing against a relatively fixed abutment thereon, and a second abutment for said spring mounted on the coupling bar.

9. In a brake rigging, the combination of a live lever, a dead lever, brakes connected with said levers respectively, an adjusting bar connecting said levers in the plane of the brake fulcra, a coupling bar connecting said levers at their free ends, a coil release spring mounted on the adjusting bar and bearing against a relatively fixed abutment thereon, and a yoke mounted loosely on the coupling bar and forming an abutment for the other end of the release spring.

10. In a brake rigging, the combination of a live lever, a dead lever, brakes connected with said levers respectively, an adjusting bar connecting said levers in the plane of the brake fulcra and comprising two relatively movable members, a release spring having an abutment on one of said relatively movable members and a coupling bar connecting said levers at their free ends and carrying an abutment for the other end of said spring.

11. In a brake rigging, the combination of a live lever, a dead lever, brakes connected with said levers respectively, an adjusting bar connecting said levers in the plane of the brake fulcra, an adjustable coupling bar connecting said levers at their free ends and comprising two relatively movable members and a release spring having one abutment on the adjusting bar and the other abutment on one of the members of the coupling bar.

12. In a brake rigging, the combination of a live lever, a dead lever, brakes connected with said levers respectively, an adjusting bar connecting said levers in the plane of the brake fulcra and comprising two relatively movable members having frictional engagement with each other, an adjustable coupling bar connecting said levers at their free ends and comprising two relatively movable members and a release spring having one abutment on one of the members of the adjusting bar and the other abutment on one of the members of the coupling bar.

13. In a brake rigging, the combination with a truck, a live lever and a dead lever, of a coupling bar connecting said levers and comprising two telescoping members, one of said members being screw threaded, a freely rotatable nut carried by the other of said members, devices to prevent rotation of the nut in one direction, and means extended to the side of the truck to release said devices.

14. In a brake rigging, the combination with a truck, a live lever and a dead lever, of a coupling bar connecting said levers and comprising two telescoping members, one of said members being screw threaded, a freely rotatable nut carried by the other of said members, a spring-pressed pawl or dog engaging said nut to prevent rotation thereof in one direction and means extended to the side of the truck to disengage said pawl or dog from said nut.

15. In a brake rigging, the combination of a live lever, a dead lever, a connection between said levers adapted to have its effective length changed permanently to hold the slack taken up due to the wear of the parts, and a release spring directly connected therewith adapted to return the parts to normal position and change the effective length of said connection as the brakes are released.

16. In a brake rigging, the combination of a live lever, a dead lever, a telescopic coupling bar therebetween, and a release spring interposed between said live lever and the adjacent part of said bar adapted to change the effective length of the bar positively to hold the excess slack taken up thereby.

17. In a brake rigging, the combination of a live lever, a dead lever, brakes actuated thereby, an extensible coupling bar therebetween, and a release spring adapted to be compressed on application of the brakes tending to lengthen said bar permanently to hold the excess slack taken up thereby as the brakes are released.

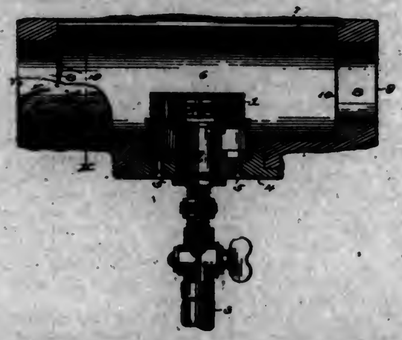
18. In a brake rigging, the combination of a live lever, a dead lever, brakes actuated thereby, connecting means therebetween adapted temporarily to take up the excess movement thereof due to wear of the brakes, a coupling bar between said levers, and spring actuated means between the live lever and the coupling bar adapted to return the live lever to normal position and change the effective length of said bar permanently to hold the slack taken up by said connecting means.

19. In a brake rigging, the combination of a live lever, a dead lever, brakes actuated thereby, connecting means adapted temporarily to take up the excess movement thereof due to wear of the brakes, a coupling bar between said levers, and a release spring associated with one of the parts of said connecting means and said coupling bar adapted to extend said coupling bar as the brakes are released permanently to hold the slack taken up by said connecting means.

20. In a brake rigging, in combination, a live lever, a dead lever, an extensible coupling member connecting said levers permanently to hold the slack taken up thereby, an adjusting bar extending between said levers near their fulcrum points, and a friction clamp securing said bar to one of said levers permitting movement of said bar in either direction.

21. In a brake rigging, in combination, a live lever, a dead lever, an extensible coupling member connecting said levers near their lower ends adapted to have its length changed in one direction only, an adjusting bar connecting said levers, and a friction clamp forming one of the means of connection adapted to permit movement of said adjusting bar therethrough in either direction.

13,387. GAS-BURNER. EDWIN G. VAN ZANDT, St. Louis, Mo. Filed Nov. 4, 1909. Serial No. 526,309. Original No. 876,507, dated Jan. 14, 1908, Serial No. 364,590. (Cl. 158—99.)



1. In a gas-burner, the combination of an initial burner and a surrounding elongated shell provided with restricted end openings, and with a burner opening at its upper part, the products of combustion from the initial burner being retained within the shell and burned at the exterior of the shell immediately at said burner opening.

2. In a gas-burner, the combination of an initial burner with a surrounding shell having flanges extending inwardly forming restricted lateral openings to the shell, and a burner opening at its upper part, the products of combustion from the initial burner being retained within the shell and burned at the exterior of the shell immediately at the burner opening.

3. In a gas-burner, a horizontally disposed cylindrical shell having a longitudinal top-vent of V-shaped cross-section and flanges forming restricted end-vents, and an initial burner within said shell, the area of the top-vent being restricted so that a part of the products of combustion is forced to pass out at the end-vents.

4. In a gas-burner, the combination of an initial burner, and a surrounding shell having end-vents constricted in respect to the shell, and a top-vent having outwardly-flaring sides, restricted whereby part of the products of combustion is caused to pass through the end-vents, said initial burner being within the shell.

5. In a gas-burner having an initial burner, an inclosure surrounding the initial burner having a restricted top-vent, opening directly into the free air, and constricted lateral vents substantially in horizontal line with the initial burner, said top-vent being restricted so as to cause part of the products of combustion to pass through the lateral vents.

6. A gas-burner comprising an initial burner, and a shell surrounding the same and having at each end a single restricted end-vent, and having in the top-wall an elongated opening, said opening being restricted.

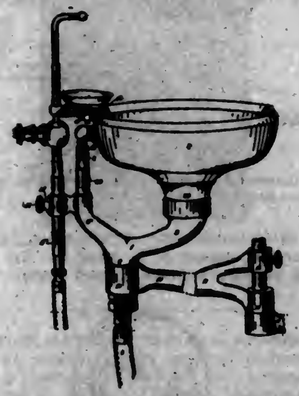
7. A gas-burner, comprising an initial burner, and a shell surrounding said initial burner having internal flanges at its ends providing restricted end-vents and having a V-shaped vent in the upper portion of its wall extending longitudinally of the shell and terminating at its internal flanges, substantially as set forth.

8. In a gas-burner, the combination of an initial burner and a shell surrounding it, having a restricted top-vent and constricted lateral vents, the former being at the uppermost part of the shell and free to the atmosphere, and air inlet openings at the bottom.

9. In a gas-burner, the combination of an initial burner and a horizontally arranged tubular shell surrounding said burner, said shell having a restricted top-vent and constricted vents at either end, the former being at the uppermost part of the shell and free to the atmosphere, and air inlet openings at the bottom.

10. In a gas-burner, the combination of an inner initial burner and an outer shell surrounding said initial burner and provided with a restricted top vent and restricted lateral vents below said top vent, said outer shell being operative to hold or retard gases unconsumed by said initial burner, and said top-vent permitting said unconsumed gases to escape from said shell directly to the outer air and serving as a burner orifice therefor.

13,388. CUSPIDOR. HENRY E. WEBER, Canton, Ohio, assignor to The Weber Dental Manufacturing Company, Canton, Ohio, a Corporation of Ohio. Filed Aug. 12, 1911. Serial No. 643,803. Original No. 970,148, dated Sept. 13, 1910, Serial No. 509,488. (Cl. 4—40.)



1. A support, a bracket having an axial stem and two diverging branches, the stem being swiveled in the support, a cuspidor bowl mounted on one branch and a supply pipe secured to and an outlet pipe communicating with the other branch, there being waste and overflow channels in the branches and an outlet channel in the stem of the cuspidor bracket.

2. A support, a bracket having an axial stem and two diametrically diverging branches, the stem being swiveled in the support, a cuspidor bowl mounted on one branch and an outlet pipe communicating with the other branch, there being waste and overflow channels in the branches and an outlet channel in the stem of the cuspidor bracket.

3. A support, a bracket having an axial stem and two branches diametrically diverging upward, the stem being swiveled in the support, a cuspidor bowl mounted on one branch and a supply pipe secured to the other branch, there being a waste channel in the one branch of the cuspidor bracket.

4. A bracket, a cuspidor bowl mounted thereon, a vertical bearing on the bracket adjacent to the bowl, and a supply pipe having a slide section secured in the bearing and a discharge end normally extending over the rim of the bowl, the slide section being endwise-adjustable in the bearing downward to bring the discharge end in operative position and upward to elevate the discharge end freely above the bowl.

5. A bracket provided with an overflow channel having a countersink in its opening, a bowl mounted on the bracket and having an overflow pipe depending from the bowl and a tube telescoped in the countersink and on the lower end of the pipe and adapted to slide upward on the pipe out of the countersink.

6. A cuspidor bowl provided with an aperture in its wall, a pipe extended through the aperture and having adjustable nuts thereon inside and outside the wall, and washers with inclined faces and rim flanges and intervening packing rings between the nuts and the wall.

7. A bracket, an elastic collar having an inturned flange on its inner end secured to the bracket and having its upper end flared outward, there being an annular series of inward protrusions on the collar adjacent to its lower end, and a bowl having a flared neck on its lower side adapted to rest on the rim portion only of the flared end of the collar, there being an annular rib around the end of the neck adapted to be clamped on its upper side by the protrusions when the bowl rests on the collar.

8. A bracket, an elastic collar secured by its lower end to the bracket and having its upper end flared outward, there being an annular series of inward protrusions in the collar adjacent to its lower end, and a bowl having a flared neck on its lower side adapted to impinge the flared end of the collar, there being an annular rib around the end of the neck adapted to be clamped on its upper side by the protrusions when the bowl impinges the collar.

9. A connection between a bracket and a bowl having a flared neck on its under side comprising an elastic collar connected to the bracket and adapted to receive the bowl neck, there being an annular rib around the end of the neck, and inward protrusions around the lower portion of the collar adapted to engage the rib to clamp the bowl neck in the collar.

10. A bracket, a flexible collar secured to the bracket and having its upper end flared outward, and a bowl having a flared neck on its lower side adapted to rest on the rim portion only of the flared end of the collar.

11. A swinging support, a Y-shaped cuspidor bracket having its stem swiveled in the free end of the swinging support and its two branches diverging upward, a cuspidor bowl mounted on one branch and a supply pipe secured to and an outlet pipe communicating with the other branch, there being drainage channels in the branches and an outlet channel in the stem of the cuspidor bracket.

12. A swinging support, a Y-shaped cuspidor bracket having its stem swiveled in the free end of the swinging support and its two branches diverging upward, a cuspidor bowl mounted on one branch and an outlet pipe communicating with the other branch, there being drainage channels in the branches and an outlet channel in the stem of the cuspidor bracket.

13. A swinging support, a Y-shaped cuspidor bracket having its stem swiveled in the free end of the swinging support and its two branches diverging upward, a cuspidor bowl mounted on one branch and a supply pipe secured to the other branch, there being a drainage channel in the one branch of the cuspidor bracket.

14. A support, a Y-shaped bracket having its stem swiveled in the support and its two branches diverging upward, a cuspidor bowl mounted on one branch and a supply pipe secured to and an outlet pipe communicating with the other branch, there being drainage channels in the branches and an outlet channel in the stem of the bracket.

15. A support, a Y-shaped bracket having its stem swiveled in the support and its two branches diverging upward, a cuspidor bowl mounted on one branch and an outlet pipe communicating with the other branch, there

being drainage channels in the branches and an outlet channel in the stem of the bracket.

16. A support, a Y-shaped bracket having its stem swiveled in the support and its two branches diverging upward, a cuspidor bowl mounted on one branch and a supply pipe secured to the other branch, there being a drainage channel in the one branch of the cuspidor.

17. A swinging support, a cuspidor bracket having a stem and two branches diametrically diverging upward, the stem being swiveled in the free end of the swinging support, a cuspidor bowl mounted on one branch and a supply pipe secured to the other branch of the cuspidor bracket.

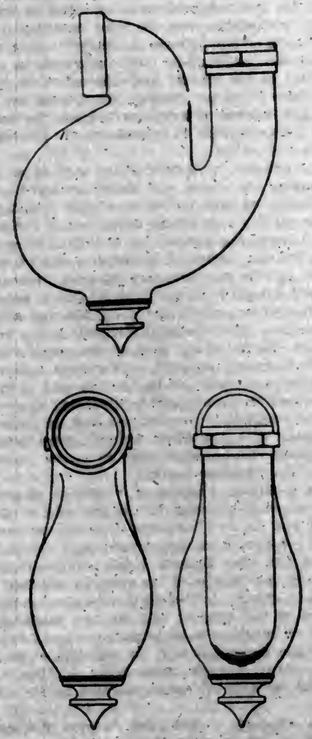
18. A support, a bracket having an axial stem and two branches diametrically diverging upward, the stem being swiveled in the support, a cuspidor bowl mounted on one branch and a supply pipe secured to the other branch.

19. A swinging support, a Y-shaped cuspidor bracket having its stem swiveled in the free end of the swinging support and its two branches diverging upward, a cuspidor bowl mounted on one branch and a supply pipe secured to the other branch of the cuspidor bracket.

20. A support, a Y-shaped bracket having its stem swiveled in the support and its two branches diverging upward, a cuspidor bowl mounted on one branch and a supply pipe secured to the other branch of the bracket.

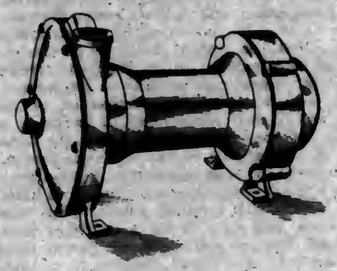
DESIGNS.

42,315. PLUMBER'S TRAP. GEORGE CODY, New York, N. Y. Filed Nov. 24, 1911. Serial No. 662,246. Term of patent 14 years.



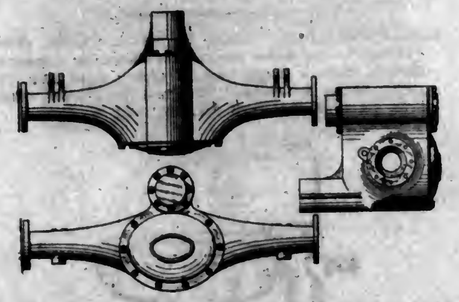
The ornamental design for a plumber's trap, substantially as shown.

42,316. CASING FOR MOTORS AND GENERATORS. CHARLES W. DAKE and JOHN E. KILKER, Chicago, Ill., assignors to Pyle National Electric Headlight Company, Chicago, Ill., a Corporation of New Jersey. Filed Oct. 12, 1911. Serial No. 654,409. Term of patent 14 years.



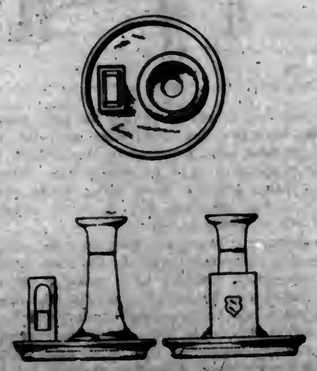
The ornamental design for a casing for a motor and generator as shown.

42,317. FRONT-AXLE HOUSING FOR VEHICLES. WILLIAM H. DOUGLAS, Belleville, N. J. Filed Oct. 10, 1911. Serial No. 653,959. Term of patent 7 years.



The ornamental design for a front axle housing for vehicles, as shown.

42,318. MATCH-BOX AND CANDLE-HOLDER. HUGH C. EDMISTON, Orange, N. J. Filed Dec. 11, 1911. Serial No. 665,159. Term of patent 7 years.



The ornamental design for a match box and candle holder as shown.

42,319. LAMP-SHADE. JOHN O. ESKRIDGE, Wellsburg, W. Va., assignor to Jefferson Glass Company, Follansbee, W. Va. Filed Sept. 27, 1911. Serial No. 651,643. Term of patent 7 years.



The ornamental design for a lamp shade, as shown.

42,320. WOVEN RUG. GUSTAVE M. FAUSER, New York, N. Y. Filed June 1, 1911. Serial No. 630,690. Term of patent 3½ years.



The ornamental design for a woven rug as shown and described.

42,321. TOOL-HANDLE. EDMUND D. GILBERT, Philadelphia, Pa., assignor to The S. S. White Dental Manufacturing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Dec. 13, 1911. Serial No. 665,567. Term of patent 14 years.



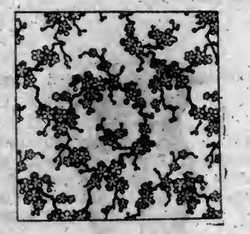
The ornamental design for a tool handle, as shown.

42,322. BOOT. JONATHAN PRESCOTT GROSVENOR, Worcester, Mass. Filed Aug. 10, 1910. Serial No. 576,608. Term of patent 14 years.



The ornamental design for a boot, as shown.

42,323. TEXTILE FABRIC OR WALL-PAPER. ERNEST HOCH, New York, N. Y., assignor to Pacific Mills, Boston, Mass., a Corporation of Massachusetts. Filed Jan. 10, 1912. Serial No. 670,506. Term of patent 3½ years.



The ornamental design for a textile fabric or wall paper as shown.

42,324. DOLL. EDWARD I. HORSMAN, Jr., New York, N. Y., assignor to E. I. Horsman Co., New York, N. Y., a Corporation of New York. Filed Jan. 12, 1912. Serial No. 670,949. Term of patent 3½ years.



The ornamental design for a doll as shown and described.

42,325. DOLL. EDWARD I. HORSMAN, Jr., New York, N. Y., assignor to E. I. Horsman Co., New York, N. Y., a Corporation of New York. Filed Jan. 12, 1912. Serial No. 670,950. Term of patent 3½ years.



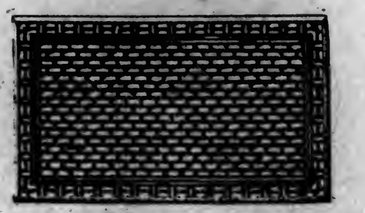
The ornamental design for a doll as shown and described.

42,326. DRINKING-CUP. STEVEN HORVATH, Baxter, W. Va. Filed Dec. 9, 1911. Serial No. 664,879. Term of patent 3½ years.



The ornamental design for a drinking cup, as shown.

42,327. RUBBER MAT. EDWARD H. HUXLEY, Bristol, R. I., assignor to National India Rubber Company, Bristol, R. I., a Corporation of Rhode Island. Filed July 22, 1911. Serial No. 640,088. Term of patent 14 years.



The ornamental design for a rubber mat, as shown.

42,328. FLUSHING-TANK FOR WATER-CLOSETS. JOHN F. KELLY, Trenton, N. J., assignor to Thomas Maddock's Sons Company, Trenton, N. J., a Corporation of New Jersey. Original application filed Dec. 11, 1909, Serial No. 532,716. Divided and this application filed Dec. 11, 1911. Serial No. 665,158. Term of patent 14 years.



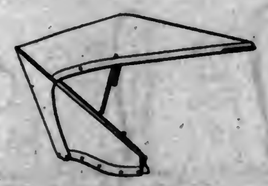
The ornamental design for a flushing tank for water closets, as shown.

42,329. STOVE. THOMAS R. KENNEDY and EDWARD J. KING, Rochester, N. Y., assignors to Cooperative Foundry Company, Rochester, N. Y., a Corporation of New York. Filed Dec. 18, 1911. Serial No. 666,610. Term of patent 7 years.



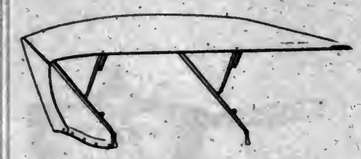
The ornamental design for a stove as herein shown.

42,330. AUTOMOBILE-TOP. CHARLES W. LINK, Los Angeles, Cal. Filed Dec. 26, 1911. Serial No. 667,998. Term of patent 7 years.



The ornamental design for an automobile top, as shown.

42,331. AUTOMOBILE-TOP. CHARLES W. LINK, Los Angeles, Cal. Filed Dec. 26, 1911. Serial No. 667,999. Term of patent 7 years.



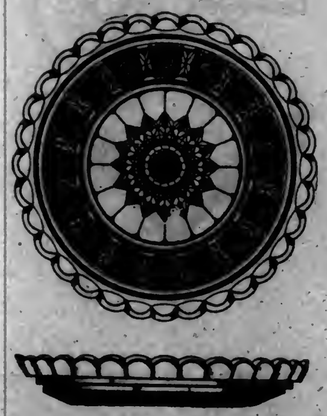
The ornamental design for an automobile top, as shown.

42,332. GLASS VESSEL. HENRY R. LUCKOCK, Newark, N. J., assignor to Jewel Cut Glass Company, Newark, N. J., a Corporation of New Jersey. Filed Dec. 7, 1911. Serial No. 664,516. Term of patent 7 years.



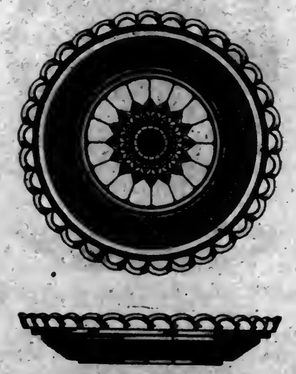
The ornamental design for a glass vessel as shown.

42,333. GLASS VESSEL. HENRY R. LUCKOCK and CHARLES H. TAYLOR, Newark, N. J., assignors to Jewel Cut Glass Company, Newark, N. J., a Corporation of New Jersey. Filed Dec. 7, 1911. Serial No. 664,517. Term of patent 7 years.



The ornamental design for a glass vessel as shown.

42,334. GLASS VESSEL. HENRY R. LUCKOCK and CHARLES H. TAYLOR, Newark, N. J., assignors to Jewel Cut Glass Company, Newark, N. J., a Corporation of New Jersey. Filed Dec. 7, 1911. Serial No. 664,518. Term of patent 7 years.



The ornamental design for a glass vessel as shown.

42,335. GLASS VESSEL. HENRY R. LUCKOCK and CHARLES H. TAYLOR, Newark, N. J., assignors to Jewel Cut Glass Company, Newark, N. J., a Corporation of New Jersey. Filed Dec. 7, 1911. Serial No. 664,519. Term of patent 7 years.



The ornamental design for a glass vessel as shown

42,336. GLASS VESSEL. HENRY R. LUCKOCK and CHARLES H. TAYLOR, Newark, N. J., assignors to Jewel Cut Glass Company, Newark, N. J., a Corporation of New Jersey. Filed Dec. 7, 1911. Serial No. 664,520. Term of patent 7 years.



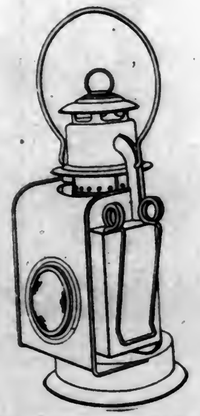
The ornamental design for a glass vessel as shown.

42,337. TEXTILE FABRIC OR WALL-PAPER. EMILE MUNIER, Jersey City, N. J., assignor to Pacific Mills, Boston, Mass., a Corporation of Massachusetts. Filed Jan. 19, 1912. Serial No. 672,239. Term of patent 3½ years.



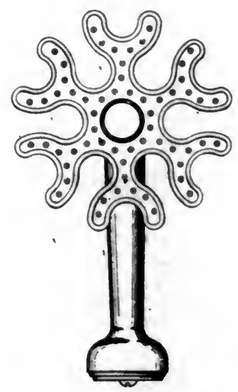
The ornamental design for a textile fabric or wall paper as shown.

42,338. LANTERN. ALBERT R. PRITCHARD, Rochester, N. Y. Filed Dec. 20, 1910. Serial No. 598,475. Term of patent 7 years.



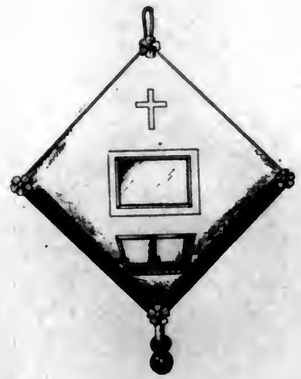
The ornamental design for a lantern, as shown.

42,339. GAS-BURNER. ALVIN G. SHERMAN, Detroit, Mich. Filed Nov. 8, 1911. Serial No. 659,256. Term of patent 14 years.



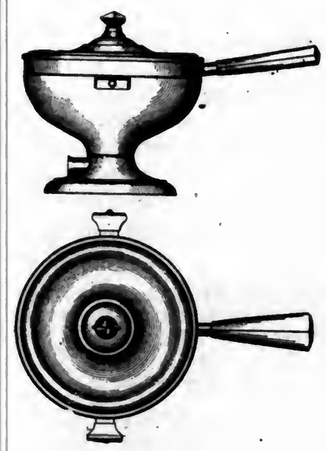
The ornamental design for a gas burner, as shown.

42,340. PINCUSHION. ELSIE STEWART, Germania, Iowa. Filed Jan. 15, 1912. Serial No. 671,363. Term of patent 3½ years.



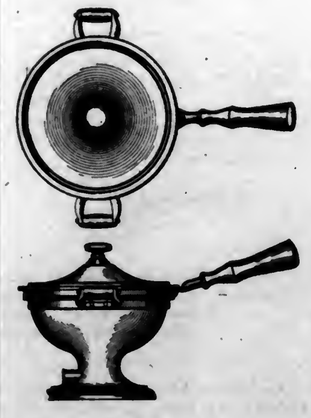
The ornamental design for a pincushion, as shown.

42,341. CHAFING-DISH. ALFRED H. S. SWAN, Rochester, N. Y., assignor to Rochester Stamping Company, Rochester, N. Y., a Corporation of New York. Filed Nov. 4, 1911. Serial No. 658,581. Term of patent 14 years.



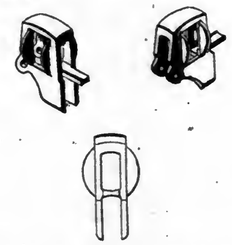
The ornamental design for a chafing dish as herein shown.

42,342. CHAFING-DISH. ALFRED H. S. SWAN, Rochester, N. Y., assignor to Rochester Stamping Company, Rochester, N. Y., a Corporation of New York. Filed Nov. 4, 1911. Serial No. 658,582. Term of patent 14 years.



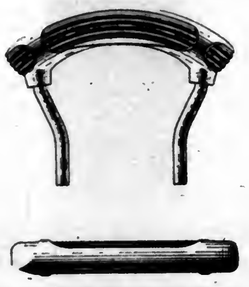
The ornamental design for a chafing dish as herein shown.

42,343. HOUSING FOR WRENCHES. JOHN H. VINTON, Jamaica Plain, Mass., assignor to Trimont Manufacturing Company, Boston, Mass., a Corporation of Maine. Filed Oct. 30, 1911. Serial No. 657,614. Term of patent 14 years.



The ornamental design for a housing for wrenches, as shown.

42,344. SAD-IRON HANDLE. GEORGE E. WAIT and JAMES R. WHITE, Chagrin Falls, Ohio, assignors to The Ober Manufacturing Company, Chagrin Falls, Ohio, a Corporation of Ohio. Filed Jan. 16, 1911. Serial No. 603,023. Term of patent 7 years.



The ornamental design for a sad iron handle as shown.

42,345. STOVE. WILLIAM W. WOODS, Springfield, Mo., assignor to Woods-Evertz Stove Co., Springfield, Mo. Filed Dec. 19, 1911. Serial No. 666,848. Term of patent 3½ years.



The ornamental design for a stove, as shown.

TRADE-MARKS

PUBLISHED MARCH 19, 1912.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 43,642. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ELIZABETH MARGARET GRANT GREER, London, England. Filed July 20, 1909.



Particular description of goods.—Bitters, Being Non-Alcoholic, Non-Aerated, and Non-Medicated.
Claims use since the year 1900.

Ser. No. 44,144. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SAVILLE, SOMES & Co., Boston, Mass. Filed Aug. 14, 1909.



Particular description of goods.—Canned Fruits, Vegetables, Canned Fish, Corn-Starch, Dried Fruits, Mustard, Peanut-Butter, Spices, and Vinegar.
Claims use since May 1, 1904.

Ser. No. 45,268. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FOGG & HIBBS COMPANY, Salem, N. J. Filed Oct. 12, 1909.

SALEM BEAUTY

Particular description of goods.—Canned Vegetables.
Claims use since January, 1906.

Ser. No. 47,199. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE INTERSTATE MEDICAL COMPANY, Kingsley, Iowa. Filed Jan. 17, 1910.



Particular description of goods.—Antiseptic and Germicidal Ointments.
Claims use since Sept. 15, 1909.

Ser. No. 47,563. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) THE SELIGMAN DISTILLERY COMPANY, Cincinnati, Ohio. Filed Feb. 3, 1910.

LORD BALTIMORE



Particular description of goods.—Rye Whisky.
Claims use since Sept. 1, 1898.

Ser. No. 48,684. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BAUER & CIE., Berlin, Germany. Filed Mar. 26, 1910.

A. Wulfing & Co.

The mark consists of the name of A. Wulfing & Co., appearing as written by Johann Abraham von Wülfing, a partner of the firm of Bauer & Cie. in Berlin and the sole owner of the firm of A. Wulfing & Co. in London, England, and of the Bauer Chemical Co. in New York.
Particular description of goods.—Dietetic Preparations Composed of Milk-Sugar and Formaldehyde.
Claims use since Oct. 28, 1909.

Ser. No. 49,296. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) PETZOLD & MISER, JULIUS AMBRONN, NACHF, Chemnitz, Germany. Filed Apr. 25, 1910.



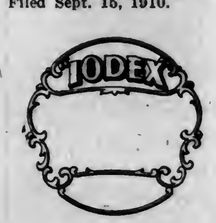
Particular description of goods.—Spring Button-Fasteners for Dresses and Gloves.
Claims use since Feb. 1, 1907.

Ser. No. 50,204. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) RHEINISCHE GLASHÜTTEN-AKTIEN-GESELLSCHAFT, Cologne-Ehrenfeld, Germany. Filed June 9, 1910.

Rhenag

Particular description of goods.—Glass Tubes for Water-Gages.
Claims use since Apr. 1, 1909.

Ser. No. 51,846. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MENLEY & JAMES, LIMITED, New York, N. Y., and London, England. Filed Sept. 15, 1910.



Particular description of goods.—An Ointment for the External Application of Iodin.
Claims use since June 18, 1910.

Ser. No. 51,956. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) OTTO B. JAFNEL, Liberty, N. Y. Filed Sept. 26, 1910.

"Procapillo"

Particular description of goods.—A Remedy for the Scalp.
Claims use since about March, 1910.

Ser. No. 52,354. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) HERMAN HARRIS, Hartford, Conn. Filed Oct. 21, 1910.

MIROLITE

Particular description of goods.—A Metal-Polishing Compound.
Claims use since Sept. 2, 1910.

Ser. No. 52,785. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM R. DU MOND, New York, N. Y. Filed Nov. 15, 1910.

SOLVENTINE

Particular description of goods.—A Water-Purifying and Boiler-Cleaning Compound for Use in Steam-Boilers.
Claims use since Jan. 1, 1899.

Ser. No. 52,959. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) WALDES & CIE., Prag-Urschowitz, Austria. Filed Nov. 26, 1910.



Particular description of goods.—Snap-Buttons Used as Garment-Fasteners.
Claims use since July, 1902.

Ser. No. 53,171. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) DANIEL F. BASH, Indianapolis, Ind. Filed Dec. 7, 1910.



No claim being made to the words "Bash's Tstedseed Brand," "Bash's Tested Seed Brand," the picture included therein being a fanciful picture.
Particular description of goods.—Agricultural, Field, Flower, Vegetable, Garden, and Lawn Seeds, Bulbs, and Plants, Also for Holly, Mistletoe, Laurel, and Christmas Cedars and Trees.
Claims use since Oct. 20, 1910.

Ser. No. 53,355. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SPRATT'S PATENT, LIMITED, London, England. Filed Dec. 19, 1910.



Particular description of goods.—Biscuits and Ship's Bread.
Claims use since 1867.

Ser. No. 53,870. (CLASS 39. CLOTHING.) THOMAS G. PLANT COMPANY, Montclair, N. J. Filed Jan. 14, 1911.

"WONDER"

Particular description of goods.—Leather Welt-Shoes.
Claims use since Apr. 1, 1901.

Ser. No. 53,979. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE OHIO VARNISH COMPANY, Cleveland, Ohio. Filed Jan. 20, 1911.



Particular description of goods.—Ready-Mixed Paints, Varnishes, Stains, Graining Compositions, and Wall-Finishing Paints.
Claims use since about the year 1904.

Ser. No. 54,988. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) ROTHSCHILD, MEYERS & Co., New York, N. Y. Filed Mar. 10, 1911.



Particular description of goods.—Saucepans, Stew-Pans, Milk-Pans, Pudding-Pans, Refrigerator-Pans, Jelly-Cake Pans, Bread-Pans, Cake-Pans, Dish-Pans, Roasting-Pans, Egg-Pans, Omelette-Pans, Fry-Pans, Stove-Pans, Preserving-Kettles, Austria Kettles, Dresden Kettles, Berlin Kettles, Convex Kettles, Fish-Kettles, Milk-Kettles, Cooking-Kettles, Stove-Kettles, Tea-Kettles, Sauce-Pots, Mustard-Pots, Stew-Pots, Cooking-Pots, Stock-Pots, Stove-Pots, Milk-Pots, Coffee-Pots, Sugar-Bowls, Mixing-Bowls, Cereal-Bowls, Kneading-Bowls, Pudding-Bowls, Custard-Bowls, Bread-Raisers, Food-Cups, Pudding-Cups, Drinking-Cups, Tea-Steepers, Coffee-Biggins, Coffee-Boilers, Rice-Boilers, Double Boilers, Corn-Boilers, Asparagus-Boilers, Ham-Boilers, Cream-Pitchers, Water-Pitchers, Ewers, Washbasins, Vegetable-Dishes, Soup-Dishes, Pie-Plates, Soup-Plates, Dinner-Plates, Baking-Plates, Dish or Pan Racks, Trays, Platters, Coffee-Pot Stands, Timbale-Molds, Scoops, Funnels, Toilet-Jars, Vegetable-Steamers, Foot-Bath Tubs, Colanders, Strainers, Dippers, Spoons, Skimmers, Cake or Fish Turners, Ladles, Sink-Drainers, Graters, Drainers for Ham-Boilers, Spittoons, Cuspidors, Mugs, Saucers, Tumblers, Soup-Tureens, Chambers, Vegetable-Inserts, Gravy-Inserts, Urn-Cylinders, Dish-Covers, and Vessel-Covers.
Claims use since Jan. 1, 1890.

Ser. No. 55,268. (CLASS 39. CLOTHING.) B. H. GLADDING DRY GOODS CO., Providence, R. I. Filed Mar. 23, 1911. Under ten-year proviso.



No claim being made for the circles and the word "Quality."
Particular description of goods.—Men's, Women's, and Children's Hosiery; Gloves and Mittens; Textile and Knitted Underdrawers, Undershirts, and Union Suits; Bath-Robes; Bathing-Suits; Leather, Canvas, Cloth, and Rubber Boots, Bootees, Shoes, Slippers, Sandals, Moccasins, Leggings, and Overshoes; Nightgowns and Pajamas; Sweaters; Men's, Youths', and Boys' Coats, Vests, Trousers, and Overcoats; Straw, Felt, and Textile Hats and Caps; Outer Shirts; Textile Collars, Cuffs; Overalls; Women's, Misses', and Children's Coats, Cloaks, Wraps, and Rain-Coats; Gowns and Dresses; Inner and Outer Suits; Outer Skirts; Trimmed and Untrimmed Hats, Caps, and Bonnets for Women, Misses, and Children; Fur Coats, Jackets, Muffs, Capes; Neckwear of Fur and Textile Fabrics; Cuffs for Women; Aprons; Shirt-Waists; Underskirts, Corsets, Corset and Slip Waists, and Brassières; Kimonos, Wrappers, and Negligées; Chemises, Drawers, Corset-Covers, Combination Garments, and Princesse Slips; Bands and Diapers; Rompers; Serviettes; Sanitary Belts, and Napkins.
Claims use since 1807.

Ser. No. 55,472. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) HENRY C. SCOTT, Cleveland, Ohio. Filed Apr. 1, 1911.



The picture being fanciful.
Particular description of goods.—Cleaning and Polishing Compound for Household Purposes.
Claims use since Jan. 1, 1902.

Ser. No. 49,296. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) PETZOLD & MÄSER, JULIUS AMBRONN, NACHF, Chemnitz, Germany. Filed Apr. 25, 1910.



Particular description of goods.—Spring Button-Fasteners for Dresses and Gloves.
Claims use since Feb. 1, 1907.

Ser. No. 50,204. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) RHEINISCHE GLASHÜTTEN-AKTIEN-GESELLSCHAFT, Cologne-Ehrenfeld, Germany. Filed June 9, 1910.

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Particular description of goods.—Glass Tubes for Water-Gages.
Claims use since Apr. 1, 1909.

Ser. No. 51,846. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MENLEY & JAMES, LIMITED, New York, N. Y., and London, England. Filed Sept. 15, 1910.



Particular description of goods.—An Ointment for the External Application of Iodin.
Claims use since June 18, 1910.

Ser. No. 51,956. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) OTTO B. JAFNEL, Liberty, N. Y. Filed Sept. 26, 1910.

"Procapillo"

Particular description of goods.—A Remedy for the Scalp.
Claims use since about March, 1910.

Ser. No. 52,354. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) HERMAN HARRIS, Hartford, Conn. Filed Oct. 21, 1910.

MIROLITE

Particular description of goods.—A Metal-Polishing Compound.
Claims use since Sept. 2, 1910.

Ser. No. 52,785. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM R. DU MOND, New York, N. Y. Filed Nov. 15, 1910.

SOLVENTINE

Particular description of goods.—A Water-Purifying and Boiler-Cleaning Compound for Use in Steam-Boilers.
Claims use since Jan. 1, 1899.

Ser. No. 52,959. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) WALDES & CIE., Prag-Urschowitz, Austria. Filed Nov. 26, 1910.



Particular description of goods.—Snap-Buttons Used as Garment-Fasteners.
Claims use since July, 1902.

Ser. No. 53,171. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) DANIEL F. BASH, Indianapolis, Ind. Filed Dec. 7, 1910.



No claim being made to the words "Bash's Tstedseed Brand," "Bash's Tested Seed Brand," the picture included therein being a fanciful picture.
Particular description of goods.—Agricultural, Field, Flower, Vegetable, Garden, and Lawn Seeds, Bulbs, and Plants, Also for Holly, Mistletoe, Laurel, and Christmas Cedars and Trees.
Claims use since Oct. 20, 1910.

Ser. No. 53,355. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SPRATT'S PATENT, LIMITED, London, England. Filed Dec. 19, 1910.



Particular description of goods.—Biscuits and Ship's Bread.
Claims use since 1867.

Ser. No. 53,870. (CLASS 39. CLOTHING.) THOMAS G. PLANT COMPANY, Montclair, N. J. Filed Jan. 14, 1911.

WONDER

Particular description of goods.—Leather Welt-Shoes.
Claims use since Apr. 1, 1901.

Ser. No. 53,979. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE OHIO VARNISH COMPANY, Cleveland, Ohio. Filed Jan. 20, 1911.



Particular description of goods.—Ready-Mixed Paints, Varnishes, Stains, Graining Compositions, and Wall-Finishing Paints.
Claims use since about the year 1904.

Ser. No. 54,088. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) ROTHSCHILD, MEYERS & Co., New York, N. Y. Filed Mar. 10, 1911.



Particular description of goods.—Saucepans, Stew-Pans, Milk-Pans, Pudding-Pans, Refrigerator-Pans, Jelly-Cake Pans, Bread-Pans, Cake-Pans, Dish-Pans, Roasting-Pans, Egg-Pans, Omelette-Pans, Fry-Pans, Stove-Pans, Preserving-Kettles, Austria Kettles, Dresden Kettles, Berlin Kettles, Convex Kettles, Fish-Kettles, Milk-Kettles, Cooking-Kettles, Stove-Kettles, Tea-Kettles, Sauce-Pots, Mustard-Pots, Stew-Pots, Cooking-Pots, Stock-Pots, Stove-Pots, Milk-Pots, Coffee-Pots, Sugar-Bowls, Mixing-Bowls, Cereal-Bowls, Kneading-Bowls, Pudding-Bowls, Custard-Bowls, Bread-Raisers, Food-Cups, Pudding-Cups, Drinking-Cups, Tea-Steepers, Coffee-Biggins, Coffee-Boilers, Rice-Boilers, Double Boilers, Corn-Boilers, Asparagus-Boilers, Ham-Boilers, Cream-Pitchers, Water-Pitchers, Ewers, Washbasins, Vegetable-Dishes, Soup-Dishes, Pie-Plates, Soup-Plates, Dinner-Plates, Baking-Plates, Dish or Pan Racks, Trays, Platters, Coffee-Pot Stands, Timbale-Molds, Scoops, Funnels, Toilet-Jars, Vegetable-Steamers, Foot-Bath Tubs, Colanders, Strainers, Dippers, Spoons, Skimmers, Cake or Fish Turners, Ladles, Sink-Drainers, Graters, Drainers for Ham-Boilers, Spittoons, Cuspidors, Mugs, Saucers, Tumblers, Soup-Tureens, Chambers, Vegetable-Insets, Gravy-Insets, Urn-Cylinders, Dish-Covers, and Vessel-Covers.
Claims use since Jan. 1, 1890.

Ser. No. 55,268. (CLASS 39. CLOTHING.) B. H. GLADDING DRY GOODS CO., Providence, R. I. Filed Mar. 23, 1911. Under ten-year proviso.



No claim being made for the circles and the word "Quality."
Particular description of goods.—Men's, Women's, and Children's Hosiery; Gloves and Mittens; Textile and Knitted Underdrawers, Undershirts, and Union Suits; Bath-Robes; Bathing-Suits; Leather, Canvas, Cloth, and Rubber Boots, Bootees, Shoes, Slippers, Sandals, Moccasins, Leggings, and Overshoes; Nightgowns and Pajamas; Sweaters; Men's, Youths', and Boys' Coats, Vests, Trousers, and Overcoats; Straw, Felt, and Textile Hats and Caps; Outer Shirts; Textile Collars, Cuffs; Overalls; Women's, Misses', and Children's Coats, Cloaks, Wraps, and Rain-Coats; Gowns and Dresses; Inner and Outer Suits; Outer Skirts; Trimmed and Untrimmed Hats, Caps, and Bonnets for Women, Misses, and Children; Fur Coats, Jackets, Muffs, Capes; Neckwear of Fur and Textile Fabrics; Cuffs for Women; Aprons; Shirt-Waists; Underskirts, Corsets, Corset and Slip Waists, and Brassières; Kimonos, Wrappers, and Negligées; Chemises, Drawers, Corset-Covers, Combination Garments, and Princesse Slips; Bands and Diapers; Rompers; Serviettes; Sanitary Belts, and Napkins.
Claims use since 1807.

Ser. No. 55,472. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) HENRY C. SCOTT, Cleveland, Ohio. Filed Apr. 1, 1911.



The picture being fanciful.
Particular description of goods.—Cleaning and Polishing Compound for Household Purposes.
Claims use since Jan. 1, 1902.

Ser. No. 55,516. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) DEUTSCHE MASCHINEN-VERTRIEBS-GESELLSCHAFT M. B. H., Berlin, Germany. Filed Apr. 4, 1911.

VICTORIA

Particular description of goods.—Copying-Machines and Envelop-Closing Machines.
Claims use since Apr. 1, 1907.

Ser. No. 56,793. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) BERRYMAN AND SCHLEGELMILCH, Philadelphia, Pa. Filed June 2, 1911.



No claim being made for the words "Ozonized Hygienic Ice Water."
Particular description of goods.—Ozonized Hygienic Water.
Claims use since Mar. 15, 1911.

Ser. No. 56,864. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) COMPAGNIE FERMIÈRE DE L'ETABLISSEMENT THERMAL DE VICHY, Paris, France. Filed June 6, 1911.



Particular description of goods.—Natural Mineral Waters.
Claims use since the 15th day of December, 1907.

Ser. No. 56,930. (CLASS 37. PAPER AND STATIONERY.) JAMES SPICER & SONS, LIMITED, London, England. Filed June 9, 1911.

Kookera

Particular description of goods.—Cooking-Paper.
Claims use since Dec. 13, 1901.

Ser. No. 57,832. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SOCIETE ANONYME DES USINES REMY, Wijgmael, Belgium. Filed June 27, 1911. Under ten-year proviso.



Particular description of goods.—Starch for Laundry and other Purposes.
Claims use since Oct. 3, 1879.

Ser. No. 57,824. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN H. BROWER, New York, N. Y. Filed July 26, 1911.

LA ESCOTIDA

Particular description of goods.—Wheat-Flour.
Claims use since June 7, 1876.

Ser. No. 57,856. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ROSENBERG BROS. & Co., San Francisco, Cal. Filed July 27, 1911.

ENSIGN

Particular description of goods.—Dried Apricots, Dried Nectarines, Dried Peaches, Dried Pears, Dried Plums, Dried Prunes, Dried Apples, and Dried Raisins.
Claims use since Jan. 1, 1896.

Ser. No. 57,859. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ROSENBERG BROS. & Co., San Francisco, Cal. Filed July 27, 1911.

IRIS

Particular description of goods.—Dried Apricots, Dried Nectarines, Dried Pears, Dried Peaches, Dried Plums, Dried Prunes, and Dried Raisins.
Claims use since Jan. 1, 1896.

Ser. No. 57,920. (CLASS 39. CLOTHING.) SHEAHAN, KOHN & Co., Chicago, Ill. Filed July 28, 1911.



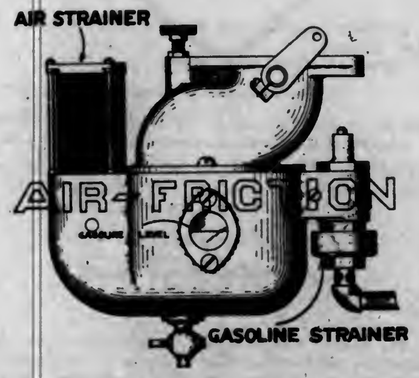
The words "Sheahan, Kohn & Co." being hereby disclaimed.
Particular description of goods.—Men's and Boys' Outer Suits and Overcoats.
Claims use since on or about Mar. 1, 1911.

Ser. No. 57,986. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ENOS M. MORRISON, San Francisco, Cal. Filed Aug. 2, 1911.



Particular description of goods.—Coffee Substitute.
Claims use since July 1, 1910.

Ser. No. 58,782. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE AIR FRICTION CARBURETOR COMPANY, Dayton, Ohio. Filed Sept. 21, 1911.



No claim being made to the words "Air Strainer," "Gasoline Level," "Gasoline Strainer," and the representation of a carbureter.
Particular description of goods.—Carbureters and Parts Thereof.
Claims use since Aug. 22, 1911.

Ser. No. 58,880. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) KOPF NURSERY & REALTY CO., INC., New Haven, Conn. Filed Sept. 27, 1911.



Particular description of goods.—Fresh Pineapples.
Claims use since Apr. 15, 1911.

Ser. No. 58,917. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE VARNISH OIL COMPANY, Buffalo, N. Y. Filed Sept. 29, 1911.

Varno

Particular description of goods.—Paint-Oil.
Claims use since Aug. 15, 1911.

Ser. No. 59,021. (CLASS 38. PRINTS AND PUBLICATIONS.) HENRY M. CROUSE, Chicago, Ill. Filed Oct. 6, 1911.

Making Good

Particular description of goods.—A Magazine.
Claims use since Oct. 2, 1911.

Ser. No. 59,038. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) KEYSTONE STEEL & WIRE COMPANY, Peoria, Ill. Filed Oct. 7, 1911.

Samson

Particular description of goods.—Wire, Barb-Wire, and Wire-Fence Stretchers.
Claims use since about Dec. 1, 1901.

Ser. No. 59,066. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THORNTON & CHESTER MILLING Co., Buffalo, N. Y. Filed Oct. 9, 1911.



Particular description of goods.—Wheat-Flour.
Claims use since Sept. 22, 1911.

Ser. No. 59,190. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) WACLARK TITANITE EXPLOSIVE COMPANY, Corry, Pa. Filed Oct. 16, 1911.

TITANITE

Particular description of goods.—A High-Explosive Powder for Blasting Purposes.
Claims use since July, 1909.

Ser. No. 59,201. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) WILLIAM LINK COMPANY, Newark, N. J. Filed Oct. 17, 1911.



Particular description of goods.—Jewelry for Personal Wear and Hollow Ware, Flat Ware, Knives, Forks, and Spoons Made of Precious Metal.
Claims use since Oct. 10, 1911.

Ser. No. 59,265. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) VICTOR-BALATA & TEXTILE BELTING Co., Easton, Pa.; New York, N. Y., and Chicago, Ill. Filed Oct. 21, 1911.

AXONELAT

Particular description of goods.—A Special Car-Lighting Belting Composed of Woven Duck Impregnated with Pure Balata Gum.
Claims use since Oct. 16, 1911.

Ser. No. 59,505. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) DAVID RAUH, Nuremberg, Germany, and New York, N. Y. Filed Nov. 2, 1911.

Durit

Particular description of goods.—A Preparation of Pitch for Insulation of Beer from Metal, Wood, Concrete, Slate, Marble, Glass, &c.
Claims use since about July, 1907.

Ser. No. 59,741. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) WESTERN OPTICAL MANUFACTURING COMPANY, St. Louis, Mo. Filed Nov. 15, 1911.

WOMCO

Particular description of goods.—Eyeglasses and Spectacles and Parts of Eyeglasses and Spectacles.
Claims use since on or about June 1, 1901.

Ser. No. 59,752. (CLASS 15. OILS AND GREASES.) MARSHALL OIL COMPANY OF IOWA, Marshalltown, Iowa. Filed Nov. 16, 1911.

MOCO

Particular description of goods.—Cylinder-Oil, Cup and Axle Greases.
Claims use since April, 1909.

Ser. No. 59,835. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ADOLPH L. MOCK, New York, N. Y. Filed Nov. 21, 1911.

Phoebe Snow

The name "Phoebe Snow" being fanciful and being shown in the facsimile handwriting of the applicant.
Particular description of goods.—Ammonia, Baking-Powder, Baking-Soda, Bay-Rum, Borax, Beeswax, Cream of Tartar, Cold-Cream, Dyes and Disinfectants, Face-Lotion, Face-Powder, Face-Cream, Hair-Tonic, Headache-Tablets, Hydrogen Peroxid, Insecticides, Laundry Bluing, Laundry Starch, Laundry Wax, Perfumes, Petroleum-Jelly, Potash, Table-Salt, Talcum Powder, Toilet Water, Tooth-Paste, and Toothache-Wax.
Claims use since Nov. 1, 1911.

Ser. No. 59,862. (CLASS 17. TOBACCO PRODUCTS.) WM. A. STICKNEY CIGAR Co., St. Louis, Mo. Filed Nov. 22, 1911.



Particular description of goods.—Cigars.
Claims use since Oct. 14, 1910.

Ser. No. 59,915. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) ROBERTO VLAHOV, Zara, Austria. Filed Nov. 25, 1911. Under ten-year proviso.

VLAHOV

Particular description of goods.—Liqueur.
Claims use since the year 1861.

Ser. No. 59,916. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) ROBERTO VLAHOV, Zara, Austria. Filed Nov. 25, 1911.



Particular description of goods.—Liqueur.
Claims use since Feb. 5, 1887.

Ser. No. 59,917. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) ROBERTO VLAHOV, Zara, Austria. Filed Nov. 25, 1911.



Particular description of goods.—Liqueur.
Claims use since the 14th day of February, 1910.

Ser. No. 60,012. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE UNIVERSAL STENOTYPE Co., Owensboro, Ky. Filed Dec. 1, 1911.



Particular description of goods.—Type-Writing Machines.
Claims use since June 27, 1910.

Ser. No. 60,019. (CLASS 15. OILS AND GREASES.) WM. C. ROBINSON & SON, Co., Baltimore, Md., and Coraopolis, Pa. Filed Dec. 1, 1911.

No-6

Particular description of goods.—Cylinder-Oil.
Claims use since 1896.

Ser. No. 60,054. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) A. F. YOUNG & Co., New York, N. Y.; Pittsburgh, Pa., and Boston, Mass. Filed Dec. 2, 1911.

OSCEOLA



Particular description of goods.—Oranges.
Claims use since Nov. 17, 1911.

Ser. No. 60,071. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) AMERICAN MILK COMPANY, Chicago, Ill. Filed Dec. 4, 1911.

Comet

Particular description of goods.—Condensed Skimmed Milk.
Claims use since Nov. 15, 1911.

Ser. No. 60,134. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE H. B. CHALMERS CO., Schenectady, N. Y. Filed Dec. 9, 1911.

CHALCO

Particular description of goods.—Varnish and Paint Remover.
Claims use since Nov. 1, 1911.

Ser. No. 60,168. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) KEYSTONE VARNISH CO., New York, N. Y. Filed Dec. 11, 1911.

PREVENTO

Particular description of goods.—Cement-Filler.
Claims use since Nov. 15, 1911.

Ser. No. 60,171. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) MASSACHUSETTS NET COMPANY, Boston, Mass. Filed Dec. 11, 1911.



Particular description of goods.—Fishing-Nets.
Claims use since Nov. 4, 1911.

Ser. No. 60,187. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) JOHN LYNCH, Washington, D. C. Filed Dec. 12, 1911. Under ten-year proviso.

ROCKBRIDGE

Particular description of goods.—Blended Whisky.
Claims use since 1889.

Ser. No. 60,203. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE CROWELL FRUIT JUICE CO., Belfast, N. Y. Filed Dec. 13, 1911.

TRADE MARK
Sincerity
THE MEMORY LINGERS

Particular description of goods.—Grape and Cranberry Juices.
Claims use since Nov. 7, 1911.

Ser. No. 60,218. (CLASS 12. CONSTRUCTION MATERIALS.) AMERICAN ENCAUSTIC TILING CO. LTD., New York, N. Y. Filed Dec. 14, 1911.

Gobelin

Particular description of goods.—Tiles, and More Particularly Mosaic Tiles.
Claims use since Nov. 10, 1911.

Ser. No. 60,261. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) T. MARTIN & BRO. MFG. CO., Chelsea, Mass. Filed Dec. 15, 1911.



Particular description of goods.—Elastic Webs.
Claims use since June 1, 1879.

Ser. No. 60,394. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HUMPHREYS, CANNON & CO., Memphis, Tenn. Filed Dec. 21, 1911.

OLE BECK



Particular description of goods.—A Coffee Blend Composed of Coffee, Cereals, and Chicory.
Claims use since June 1, 1911.

Ser. No. 60,517. (CLASS 38. PRINTS AND PUBLICATIONS.) MCBRIDE, NAST & CO., New York, N. Y. Filed Dec. 29, 1911.

House & Garden

Particular description of goods.—A Monthly Magazine.
Claims use since 1901.

Ser. No. 60,572. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) ROYAL WORCESTER CORSET CO., Worcester, Mass. Filed Jan. 2, 1912.

"WUNDABOHN"

Particular description of goods.—Steels or Bones for Corsets.
Claims use since Dec. 28, 1911.

Ser. No. 60,630. (CLASS 38. PRINTS AND PUBLICATIONS.) RODE & BRAND, New York, N. Y. Filed Jan. 4, 1912.

ZINDA

Particular description of goods.—Labels.
Claims use since Dec. 25, 1911.

Ser. No. 60,701. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) STANDARD OIL LEATHER DRESSING COMPANY, Trenton, N. J. Filed Jan. 9, 1912.

SOLDCO.

Particular description of goods.—A Leather Preserving and Waterproofing Composition or Dressing Composed of Oils and Greases.
Claims use since Dec. 1, 1911.

Ser. No. 60,732. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) THE SOUTHWESTERN BROOM & WAREHOUSE CO., Wichita, Kans. Filed Jan. 11, 1912.

PLEZER

Particular description of goods.—Brooms.
Claims use since Dec. 1, 1911.

Ser. No. 60,777. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) SUMMERS BROWN, London, England. Filed Jan. 12, 1912.

RAKAFORCE

Particular description of goods.—Games.
Claims use since Aug. 30, 1911.

Ser. No. 60,803. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) B. HELLER & CO., Chicago, Ill. Filed Jan. 15, 1912.

ICE-BERG

Particular description of goods.—A Preparation for Improving Body and Texture of Ice-Cream.
Claims use since Feb. 25, 1908.

Ser. No. 60,811. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) UNION ROLLER MILLING CO., Pocahontas, Mo. Filed Jan. 15, 1912.

FORGET-ME-NOT

Particular description of goods.—Self-Rising Flour.
Claims use since Dec. 29, 1911.

Ser. No. 60,814. (CLASS 38. PRINTS AND PUBLICATIONS.) SYMPHONY PUB. CO., Pittsburgh, Pa. Filed Jan. 15, 1912.

SYMPHONY

Particular description of goods.—Periodicals in the Form of a Journal Published Monthly.
Claims use since Jan. 1, 1911.

Ser. No. 60,826. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) ANGLO-AMERICAN INCANDESCENT LIGHT CO., Pittsburgh, Pa. Filed Jan. 15, 1912.



Particular description of goods.—Incandescent Mantles.
Claims use since Nov. 1, 1911.

Ser. No. 60,828. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE B. & C. BAKING CO., Dayton, Ohio. Filed Jan. 15, 1912.



Particular description of goods.—Cakes.
Claims use since June, 1911.

Ser. No. 60,831. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SERV-US PURE FOOD CO., INC., Chicago, Ill. Filed Jan. 15, 1912.

KAN-SERV

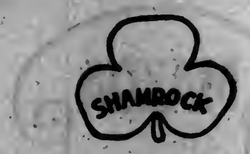
Particular description of goods.—Wheat-Flour.
Claims use since Dec. 26, 1911.

Ser. No. 60,835. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MARION FITZHUGH MCDONALD, South Lake Weir, Fla. Filed Jan. 15, 1912.



Particular description of goods.—Oranges.
Claims use since Nov. 1, 1911.

Ser. No. 60,839. (CLASS 38. PRINTS AND PUBLICATIONS.) MAX BANG, Philadelphia, Pa. Filed Jan. 16, 1912.



Particular description of goods.—Premium-Stamps.
Claims use since Dec. 1, 1911.

Ser. No. 60,858. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) WILLIAM A. GREER, Passaic, N. J. Filed Jan. 17, 1912.

EDELWEISS

Particular description of goods.—Cotton Textile Piece Goods.
Claims use since March, 1910.

Ser. No. 60,859. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) FRANK W. HOWARD, New York, N. Y. Filed Jan. 17, 1912.

2 in 1

Particular description of goods.—Syringes.
Claims use since Dec. 29, 1911.

Ser. No. 60,867. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) UNITED BIPOCAL CO., New York, N. Y. Filed Jan. 17, 1912.

UNITO

Particular description of goods.—Lenses.
Claims use since June, 1911.

Ser. No. 60,891. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL GROCER COMPANY, Detroit, Mich. Filed Jan. 18, 1912.

TABLE TALK

Particular description of goods.—Coffee.
Claims use since about Mar. 6, 1906.

Ser. No. 60,914. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) U. S. HAME COMPANY, Buffalo, N. Y. Filed Jan. 19, 1912.

USHCO

Particular description of goods.—Hames.
Claims use since Jan. 2, 1912.

Ser. No. 60,925. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BREYER ICE CREAM CO., Philadelphia, Pa. Filed Jan. 19, 1912.



Particular description of goods.—Ice-Cream.
Claims use since April, 1906.

Ser. No. 60,957. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) JOHN C. PAUL, Chicago, Ill. Filed Jan. 22, 1912.



Particular description of goods.—A Metal-Polish.
Claims use since about Nov. 1, 1911.

Ser. No. 60,967. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE WASHINGTON CHEMICAL CO. LTD., Washington Station, Durham, England. Filed Jan. 22, 1912.

PATESIA

Particular description of goods.—Magnesia in All Forms Used in Medicine and Pharmacy.
Claims use since Jan. 11, 1901.

Ser. No. 60,968. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE ARTHUR COURTIN COMPANY, New York, N. Y. Filed Jan. 22, 1912.

D. O. R.

Particular description of goods.—Dominica Limes.
Claims use since September, 1896.

Ser. No. 61,001. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) WM. R. GRATZ IMPORT CO., New York, N. Y. Filed Jan. 24, 1912.

DREADNOUGHT

Particular description of goods.—Strings for Violin, 'Cello, Double-Bass, and Kindred Stringed Musical Instruments.
Claims use since about Dec. 14, 1911.

Ser. No. 61,023. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) AMERICAN OPTICAL COMPANY, Southbridge, Mass. Filed Jan. 25, 1912.

COLMASCOPE

Particular description of goods.—Lens Examining and Testing Instruments.
Claims use since Dec. 4, 1911.

Ser. No. 61,046. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHRISTIE-COLLAR MFG. CO., Muskegon, Mich. Filed Jan. 26, 1912.

MUSGO

Particular description of goods.—Baking-Powder.
Claims use since Oct. 13, 1911.

Ser. No. 61,076. (CLASS 37. PAPER AND STATIONERY.) A. W. FABER, Stein, near Nuremberg, and Berlin, Germany. Filed Jan. 27, 1912.

Black flyer

Particular description of goods.—Lead-Pencils, Colored Pencils, Copying-Pencils, and Ink-Pencils.
Claims use since Sept. 20, 1911.

Ser. No. 61,085. (CLASS 37. PAPER AND STATIONERY.) GEORGE A. WHITING PAPER COMPANY, Menasha, Wis. Filed Jan. 27, 1912.

University

Particular description of goods.—Book-Paper.
Claims use since 1905.

Ser. No. 61,088. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) THE COLUMBUS PIANO CO., Columbus, Ohio. Filed Jan. 27, 1912.

Convertola

Particular description of goods.—Pianos and Player-Pianos.
Claims use since Jan. 1, 1912.

Ser. No. 61,108. (CLASS 39. CLOTHING.) THE CHADDOCK-KUBE REVERSIBLE GLOVE CO., Cleveland, Ohio. Filed Jan. 29, 1912.

CK

Particular description of goods.—Mittens and Gloves.
Claims use since Oct. 15, 1910.

Ser. No. 61,110. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN T. MORTON, Lynchburg, Va. Filed Jan. 29, 1912. Under ten-year proviso.

CHAP STICK

Particular description of goods.—A Medicinal Preparation for Chapped Skin, Sunburn, and Hangnails.
Claims use since Jan. 1, 1890.

Ser. No. 61,112. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) A. M. MCPHAIL PIANO CO., Boston, Mass. Filed Jan. 29, 1912.

MINSTRELO

Particular description of goods.—Player-Pianos.
Claims use since December, 1911.

Ser. No. 61,133. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HOMER L. WEBBER & COMPANY, Wenona, Ill. Filed Jan. 30, 1912.



Particular description of goods.—Shampoo-Paste.
Claims use since Dec. 1, 1911.

Ser. No. 61,148. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) OAKES MANUFACTURING COMPANY, Long Island City, N. Y., and Boston, Mass. Filed Jan. 31, 1912.

BURCOL

Particular description of goods.—Speck-Dye, a Material for Coloring Specks of Vegetable Matter that Happen to be Present in the Process of Manufacturing Woolen and Worsted Fabrics.
Claims use since July, 1911.

Ser. No. 61,159. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HERMAN C. CLEVELAND, Buffalo, N. Y. Filed Jan. 31, 1912.



Particular description of goods.—Tablets for Treating Diseases of the Reproductive Organs.
Claims use since about July 1, 1897.

Ser. No. 61,235. (CLASS 26. JEWELRY AND PRECIOUS-METAL WARE.) THE GEO. L. VOSE MFG. CO., Saco, Me. Filed Feb. 3, 1912.



Particular description of goods.—Jewelry for Personal Adornment.
Claims use since Jan. 8, 1912.

Ser. No. 61,262. (CLASS 27. HOROLOGICAL INSTRUMENTS.) HARDINGE BROTHERS, Chicago, Ill. Filed Feb. 5, 1912.

ALERT

Particular description of goods.—Watchmen's Clocks.
Claims use since Jan. 12, 1912.

Ser. No. 61,270. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE SIMPLEX ELECTRICAL CO., Boston, Mass. Filed Feb. 5, 1912.

SIMCORE

Particular description of goods.—Insulated Wire.
Claims use since Jan. 1, 1912.

Ser. No. 61,401. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) THE STIMPSON SCALE & ELECTRIC CO., Northville, Mich. Filed Feb. 10, 1912.

CYCLO

Particular description of goods.—Platform-Scales.
Claims use since about July, 1900.

Ser. No. 61,402. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) THE STIMPSON SCALE & ELECTRIC CO., Northville, Mich. Filed Feb. 10, 1912.

EN-CLO

Particular description of goods.—Platform-Scales.
Claims use since about July, 1900.

Ser. No. 61,416. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) A. MARTIN, INC., New York, N. Y. Filed Feb. 12, 1912.

Asulikit

Particular description of goods.—Eyeglass and Spectacle Lenses.
Claims use since Jan. 1, 1912.

TRADE-MARKS

REGISTERED MARCH 19, 1912.

85,788. FOLDING GO-CARTS. ALWIN MANUFACTURING COMPANY, Chicago, Ill.
Filed December 12, 1908. Serial No. 39,271. PUBLISHED OCTOBER 31, 1911.

85,789. SHOVELS, SPADES, SCOOPS, AND DRAINAGE-TOOLS. AMES SHOVEL AND TOOL COMPANY, Jersey City, N. J., and Boston, Mass.
Filed June 30, 1911. Serial No. 57,406. PUBLISHED JANUARY 16, 1912.

85,790. SHOVELS, SPADES, SCOOPS, AND DRAINAGE-TOOLS. AMES SHOVEL AND TOOL COMPANY, Jersey City, N. J., and Boston, Mass.
Filed June 30, 1911. Serial No. 57,409. PUBLISHED JANUARY 16, 1912.

85,791. PREPARATION FOR MAKING BOUILLON. GUSTAV BANTHIEN, Hamburg, Germany.
Filed June 27, 1911. Serial No. 57,327. PUBLISHED JANUARY 16, 1912.

85,792. DISINFECTANTS CONTAINING COAL-TAR PRODUCTS. BARRETT MANUFACTURING COMPANY, New York, N. Y.
Filed October 21, 1911. Serial No. 59,260. PUBLISHED JANUARY 9, 1912.

85,793. LUNCH-BOXES. BRYANT BOX COMPANY, Westfield, Mass.
Filed October 30, 1911. Serial No. 59,439. PUBLISHED JANUARY 16, 1912.

85,794. REMEDIES FOR CERTAIN AILMENTS. CAPMETONE CHEMICAL CO., Suffolk, Va.
Filed June 21, 1911. Serial No. 57,232. PUBLISHED JANUARY 16, 1912.

85,795. MEDICATED WINE. "CELROX" LTD, London, England.
Filed February 6, 1909. Serial No. 40,386. PUBLISHED JANUARY 16, 1912.

85,796. BOOTS AND SHOES MADE OF LEATHER. CENTURY SHOE CO., LTD., Macungie, Pa.
Filed December 30, 1910. Serial No. 53,567. PUBLISHED AUGUST 8, 1911.

85,797. CANNED VEGETABLES. THE COLT AND DIXON PACKING AND MANUFACTURING COMPANY OF FREDERICK, MARYLAND, Frederick, Md.
Filed March 8, 1911. Serial No. 54,942. PUBLISHED JANUARY 16, 1912.

85,798. PICKLES. CROSSE & BLACKWELL, LIMITED, London, England.
Filed July 10, 1911. Serial No. 57,569. PUBLISHED JANUARY 16, 1912.

85,799. LUBRICATING COMPOUND. JOSEPH DIXON CRUCIBLE COMPANY, Jersey City, N. J.
Filed April 11, 1908. Serial No. 34,026. PUBLISHED SEPTEMBER 21, 1909.

85,800. LUBRICATING-GREASE. JOSEPH DIXON CRUCIBLE CO., Jersey City, N. J.
Filed March 7, 1911. Serial No. 54,923. PUBLISHED JANUARY 16, 1912.

85,801. UNDERSHIRTS. EARNSHAW KNITTING COMPANY, Chicago, Ill.
Filed June 22, 1911. Serial No. 57,241. PUBLISHED JANUARY 16, 1912.

85,802. CALFSKINS. WALDEMAR EITINGON, New York, N. Y.
Filed October 24, 1910. Serial No. 52,394. PUBLISHED JANUARY 16, 1912.

85,803. BELT-DRESSING. THE GANDY BELTING COMPANY OF BALTIMORE CITY, Baltimore, Md.
Filed January 3, 1911. Serial No. 53,638. PUBLISHED DECEMBER 12, 1911.

85,804. SHOE-COUNTERS. GARDINER, BEARDSELL & COMPANY, Boston, Mass.
Filed November 28, 1911. Serial No. 59,972. PUBLISHED JANUARY 16, 1912.

85,805. SHOE-COUNTERS. GARDINER, BEARDSELL & COMPANY, Boston, Mass.
Filed November 28, 1911. Serial No. 59,973. PUBLISHED JANUARY 16, 1912.

85,806. CERTAIN GLASSWARE. GILL BROTHERS COMPANY, Steubenville, Ohio.
Filed October 31, 1911. Serial No. 59,450. PUBLISHED JANUARY 16, 1912.

85,807. DYED COTTON PIECE GOODS. OTTO GOSTER CO., New York, N. Y.
Filed October 7, 1911. Serial No. 59,033. PUBLISHED JANUARY 16, 1912.

85,808. WOMEN'S AND CHILDREN'S SILK AND COTTON DRESSES. GOLDMAN COSTUME COMPANY, New York, N. Y.
Filed May 27, 1911. Serial No. 56,659. PUBLISHED JANUARY 16, 1912.

85,809. BLEND OF STRAIGHT RYE WHISKIES AND CORDIALS. GOSSLER BROS., New York, N. Y.
Filed May 14, 1909. Serial No. 42,428. PUBLISHED JANUARY 16, 1912.

85,810. REMEDY FOR THE ALLEVIATION OF AFFECTIONS OF THE BOWELS. HALTIWANGER-TAYLOR DRUG CO., Atlanta, Ga.
Filed November 1, 1911. Serial No. 59,483. PUBLISHED JANUARY 16, 1912.

85,811. SALVE. HAMMOND & GRAY, Attica, Ind., assignors to Pi-Ki Pile Remedy Co., Attica, Ind., a Partnership.
Filed November 8, 1910. Serial No. 52,661. PUBLISHED JANUARY 9, 1912.

85,812. GRAVY-SALT. HERBERT HARPER, New Bedford, Mass.
Filed June 21, 1911. Serial No. 57,205. PUBLISHED JANUARY 9, 1912.

85,813. IRON AND STEEL BARS AND HOOPS. ROBERT HEATH & SONS LIMITED, Stoke-upon-Trent, England.
Filed August 21, 1911. Serial No. 58,291. PUBLISHED JANUARY 16, 1912.

85,814. OXIDIZABLE VEGETABLE OILS. HIRST & BEGLEY LINSEED CO., Chicago, Ill.
Filed July 21, 1911. Serial No. 57,772. PUBLISHED JANUARY 16, 1912.

85,815. MEDICINAL PLASTERS. HOLLAND MEDICINE COMPANY, Scranton, Pa., assignor to Oprechte Haarlemmer Olie Fabriek (Voorheen onder de firma G. de Koning Tilly), Haarlem, Netherlands, a Corporation of the Netherlands.
Filed November 27, 1908. Serial No. 38,953. PUBLISHED NOVEMBER 14, 1911.

85,816. GASOLENE, STEAM, AND TRACTION ENGINES, HARVESTERS, AND ROAD-WORKING MACHINES. THE HOLT MANUFACTURING COMPANY, Stockton, Cal.
Filed November 18, 1910. Serial No. 52,847. PUBLISHED NOVEMBER 28, 1911.

85,817. POISONOUS FLY-PAPER. ALVAH W. HOLWAY, Boston, Mass., assignor to I. X. L. Poison Fly Paper Company, Boston, Mass., a Corporation of Massachusetts.
Filed February 25, 1911. Serial No. 54,781. PUBLISHED JANUARY 9, 1912.

85,818. FIRE-WAGONS, STATIONARY MELTING-KETTLES, AND PORTABLE MELTING-KETTLES. IROQUOIS IRON WORKS, Buffalo, N. Y.
Filed November 22, 1905. Serial No. 14,893. PUBLISHED JANUARY 16, 1912.

85,819. CARD GAME. PETER D. KEIM, Kalamazoo, Mich.
Filed October 31, 1911. Serial No. 59,447. PUBLISHED JANUARY 16, 1912.

85,820. GIN. KENTUCKY SUPPLY CO., Memphis, Tenn.
Filed December 1, 1911. Serial No. 60,086. PUBLISHED JANUARY 16, 1912.

85,821. MEDICINAL TONIC. AUGUST KOEBEL, Chicago, Ill.
Filed January 28, 1911. Serial No. 54,198. PUBLISHED JANUARY 16, 1912.

85,822. TALKING-MACHINES, PHONOGRAPHS, AND CERTAIN PARTS THEREOF. CARL LINDSTRÖM AKTIEN GESELLSCHAFT, Berlin, Germany.
Filed November 26, 1910. Serial No. 52,957. PUBLISHED DECEMBER 26, 1911.

85,823. MACHINES FOR PUNCHING AND SHEARING IRON. LITTLE GIANT PUNCH & SHEAR CO., Sparta, Ill.
Filed August 23, 1910. Serial No. 51,506. PUBLISHED JANUARY 16, 1912.

85,824. SELF-RISING PANCAKE AND BUCKWHEAT FLOUR AND FLAVORING EXTRACTS. EMANUEL F. LOMMLINO, Springfield, Ill.
Filed July 3, 1911. Serial No. 57,498. PUBLISHED NOVEMBER 7, 1911.

85,825. TOILET PREPARATION FOR THE SKIN. MADAM MARIE, Chicago, Ill.
Filed October 28, 1911. Serial No. 59,393. PUBLISHED JANUARY 16, 1912.

85,826. OLIVE-OIL DILUTED WITH COTTON-SEED SALAD-OIL. SPYROS A. MICROUTSICOS, New York, N. Y.
Filed August 23, 1911. Serial No. 58,351. PUBLISHED JANUARY 16, 1912.

85,827. WHEAT-FLOUR. NASHVILLE ROLLER MILLS, Nashville, Tenn.
Filed October 11, 1911. Serial No. 59,114. PUBLISHED DECEMBER 5, 1911.

85,828. CERTAIN KINDS OF MACHINERY PACKING. NEW YORK BELTING & PACKING CO. LTD., New York, N. Y., and Passaic, N. J.
Filed May 1, 1911. Serial No. 56,065. PUBLISHED NOVEMBER 21, 1911.

85,829. REMEDIES FOR SORE THROAT AND BRONCHIAL AILMENTS. NUERA PHARMACAL CO., Detroit, Mich.
Filed November 5, 1910. Serial No. 52,630. PUBLISHED JANUARY 9, 1912.

85,830. CERTAIN KINDS OF MACHINES. FREDERICK OSANN COMPANY, New York, N. Y.
Filed April 12, 1911. Serial No. 55,719. PUBLISHED JANUARY 16, 1912.

85,831. INFANTS' AND CHILDREN'S BOOTS AND SHOES. PAUL BROTHERS, INC., Philadelphia, Pa.
Filed June 10, 1911. Serial No. 56,959. PUBLISHED AUGUST 15, 1911.

85,832. COFFEE AND BLENDED COFFEE. WILLIAM S. SCULL COMPANY, Camden, N. J.
Filed July 11, 1910. Serial No. 50,791. PUBLISHED JANUARY 16, 1912.

85,833. TOBACCO-PIPES. SEARS, ROEBUCK AND CO., Chicago, Ill.
Filed October 7, 1911. Serial No. 59,028. PUBLISHED JANUARY 16, 1912.

85,834. STILL WINES AND SPARKLING WINES. HRCH. STUMPF ERBEN, Flonheim, near Bingen-on-the-Rhine, Germany.
Filed July 29, 1911. Serial No. 57,981. PUBLISHED JANUARY 16, 1912.

85,835. WEEKLY PERIODICAL. TEXTILE PUBLISHING COMPANY, New York, N. Y.
Filed May 31, 1911. Serial No. 56,714. PUBLISHED AUGUST 22, 1911.

85,836. COTTON AND LINEN PIECE GOODS. TRIPPE, BARKER & CO., New York, N. Y.
Filed October 17, 1911. Serial No. 59,206. PUBLISHED JANUARY 16, 1912.

85,837. STRAIGHT MALT WHISKY. THE ULLMAN COMPANY, Cincinnati, Ohio.
Filed October 28, 1910. Serial No. 52,502. PUBLISHED JANUARY 16, 1912.

85,838. BITTERS. HUBERT UNDERBERG, Rheinberg, Germany.
Filed October 24, 1911. Serial No. 59,327. PUBLISHED JANUARY 16, 1912.

85,839. NECKTIES. UNITED RIBBON CO., New York, N. Y.
Filed July 13, 1911. Serial No. 57,609. PUBLISHED JANUARY 16, 1912.

85,840. WHEAT-FLOUR. AMIEL J. VERNIER, Chicago, Ill.
Filed January 28, 1910. Serial No. 47,429. PUBLISHED MARCH 14, 1911.

85,841. CANDIED FRUITS AND PEELS. P. & F. VINCENTELLI & COMPANY, Antwerp, Belgium.
Filed July 17, 1911. Serial No. 57,661. PUBLISHED JANUARY 16, 1912.

85,842. CANDY. LILLIE B. WORRELL, Dayton, Ohio.
Filed June 17, 1910. Serial No. 50,416. PUBLISHED SEPTEMBER 5, 1911.

LABELS

REGISTERED MARCH 19, 1912.

16,242.—*Title:* "STEWART'S LIQUID COMPOUND OF SULPHUR." (For a Remedy.) THE C. M. C. STEWART SULPHUR COMPANY, Seattle, Wash. Filed February 7, 1912.

16,243.—*Title:* "SULPHURRO A REMEDY." (For a Remedy.) THE C. M. C. STEWART SULPHUR COMPANY, Seattle, Wash. Filed February 7, 1912.

16,244.—*Title:* "FERNET-L-BRANCA, DI LEONE BRANCA E. COMP." (For Bitters and Cordials.) THE CORDIAL PANNA COMPANY, Cleveland, Ohio. Filed November 6, 1911.

16,245.—*Title:* "EAGLE MIKADO PENCILS." (For Lead-Pencils.) EAGLE PENCIL COMPANY, New York, N. Y. Filed September 22, 1911.

16,246.—*Title:* "PAY DAY." (For Coffee.) THE ENNIS-HANLY-BLACKBURN COFFEE CO., Kansas City, Mo. Filed September 11, 1911.

16,247.—*Title:* "BARONDALE." (For Whisky.) GUERNSEY & MURRAY GROCER COMPANY, Kansas City, Mo. Filed January 27, 1912.

16,248.—*Title:* "OUR EFFORT BRAND." (For Sweet Corn.) THE HAMPTON-KELLEY CANNING COMPANY, Hampton, Iowa. Filed February 21, 1912.

16,249.—*Title:* "PEPSI." (For Beverage.) PEPSI COLA CO., Newbern, N. C. Filed November 22, 1911.

16,250.—*Title:* "R. R. V." (For Cigars.) ERNEST POTRETZKE, Ada, Minn. Filed Feb. 28, 1912.

16,251.—*Title:* "DON ALBERTO." (For Cigars.) WILLIAM E. RIGGS, Hastings, Nebr. Filed January 30, 1912.

PRINTS

REGISTERED MARCH 19, 1912.

2,971.—*Title:* "SIPHON JET COMBINATION NO. 2." (For Water-Closets.) COCHRAN, DRUGAN & CO., Hamilton township, Mercer county, N. J. Filed February 12, 1912.

2,972.—*Title:* "THAT'S WHAT YOU WILL GET IF YOU TAKE ONE HOME." (For Sprayers.) MOSES GOLDMAN, New York, N. Y. Filed January 11, 1912.

2,973.—*Title:* "NO-HUMP." (For Collar-Buttons.) EDWIN B. HAFERTEPEN, Rochester, N. Y. Filed February 26, 1912.

2,974.—*Title:* "HERCULES CLOAKS." (For Misses', Children's, and Infants' Cloaks.) MICHAEL BROS., New York, N. Y. Filed February 21, 1912.

2,975.—*Title:* "MAGIC YEAST." (For Magic Yeast.) NORTHWESTERN YEAST CO., Chicago, Ill. Filed February 23, 1912.

2,976.—*Title:* "THE RIGHT WAY THE WRONG WAY." (For Hosiery.) O'CALLAGHAN & FEDDEN, New York, N. Y. Filed September 8, 1911.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

EX PARTE THADDEUS DAVIDS CO.

Decided March 1, 1913.

TRADE-MARKS—"SIGNATURE" FOR INKS—DESCRIPTIVE.

The word "Signature" *Held* not registrable as a trade-mark for writing-inks, since it is descriptive of a characteristic or quality of the goods.

ON APPEAL.

TRADE-MARK FOR INKS.

Mr. W. P. Preble, Jr., for the applicant.

MOORE, *Commissioner:*

This is an appeal from the decision of the Examiner of Trade-Marks refusing to register the word "Signature" printed in script type as a trade-mark for writing-inks.

Registration was refused upon the ground that the mark is descriptive of the ink to which it is applied within the meaning of section 5 of the Trade-Mark Act, since it indicates that the ink is intended for use in writing signatures. In support of his holding the Examiner cites the case of *Ducosp Chemical Co.*, (104 MS. Dec., 91,) in which the word "Household" was held descriptive as applied to peroxid of hydrogen for family use.

Applicant's label filed with the present application bears these words:

> This fluid is made especially for signatures, it being permanent and non-copying. Can be used with fountain, stylographic or steel pens. Flows freely and never clogs.

In view of this statement it is believed that there can be no doubt that the mark is descriptive. Any other manufacturer who desires to do so should be privileged to prepare an ink especially for signatures and to call it signature-ink.

The decision of the Examiner of Trade-Marks is affirmed.

EX PARTE BAYLES.

Decided March 7, 1913.

1. REISSUE—DIVISIONAL APPLICATIONS—AUTHORITY OF THE EXAMINER.

Where divisional applications are filed for the reissue of a patent and a patent is issued upon one of them, the Examiner has no authority to consider the other divisional applications unless ordered to do so by the Commissioner.

2. SAME—SAME—AUTHORITY OF COMMISSIONER.

Where divisional applications for the reissue of a patent are copending, the fact that a patent is issued upon one of them does not deprive the Commissioner of authority to subsequently issue patents upon the others.

ON PETITION.

METHOD OF OPERATING VALVE-MOTIONS FOR ROCK-DRILLS.

Messrs. Prindle & Wright for the applicant.

MOORE, *Commissioner:*

This is a petition that the Examiner be directed to act upon a divisional reissue application of petitioner.

The record shows that on August 31, 1911, petitioner filed an application for the reissue of his original patent, said application containing both method and apparatus claims. Subsequently the applicant filed an amendment canceling the method claims, in which he stated that said claims were canceled for the purpose of presenting them in a divisional application. Said divisional reissue application embodying the method claims was filed three days prior to the issuance of a patent on the parent reissue application.

The Examiner declined to act upon the divisional application unless directed to do so by the Commissioner, basing his action upon the following provision of Rule 89:

> Unless otherwise ordered by the Commissioner, all the divisions of a reissue will issue simultaneously; if there be any controversy as to one division, the others will be withheld from issue until the controversy is ended, unless the Commissioner shall otherwise order.

The Examiner was clearly right in his action, since under the above rule he was without authority to act upon or allow a divisional application, in view of the issuance of the patent upon the parent reissue application, unless ordered to do so by the Commissioner.

In the case of *ex parte Greaves* (18 O. G., 628; 1880 C. D., 213; 16 Op. Atty. Gen., p. 560) the question of the authority of the Commissioner of Patents to issue—

> a patent for one or more of the divisions of a reissue application, and subsequently issue a patent to the applicant for the remaining divisions, if it be held that otherwise he is entitled to them—

was submitted to the Department of Justice. In an opinion rendered August 31, 1880, Acting Attorney-General Phillips held that the Commissioner

had such authority. In his opinion the Acting Attorney-General referred to the decision of Chief Justice Cartter of the Supreme Court of the District of Columbia, mentioned in the decision of Commissioner Fisher in *ex parte Whiteley*, (1869, C. D., 70,) upon this question, also to the fact that the former rule which provided that—

all the divisions of a reissue will issue simultaneously; if there be any controversy as to one division, the others will be withheld from issue until the controversy is ended—

had been superseded by the present rule, (89,) which contains the provision quoted above, placing the matter within the discretion of the Commissioner. The Acting Attorney General then said:

The former rule went beyond the principle laid down by Chief Justice Cartter, quoted in the papers. The reason assigned by him for refusing to issue a subsequent division was that with the issue of the preceding division the original patent had necessarily expired, and that, such original being *functus officio*, it could no longer form a basis for reissues. The principle covers the case of applications for a division made after the reissue had been granted, as it is only by such grant, and not by the mere application, that the original patent is surrendered and loses vitality.

The good sense of the maxim *pendente lite nihil innovetur* is as applicable to proceedings in the Patent Office as elsewhere. Until an application is ended in all its divisions the vitality of the original patent continues so far as required to support that portion of the application which remains undecided.

Since the repeal of the above rule, suggested by the decisions in Whiteley's case, &c., it therefore appears that there has been nothing to prevent the Commissioner of Patents from issuing the several divisions of a reissue, in case the applications therefor have been made while the original patent is in existence.

In the present case the reissue applications were copending, and under the above decision there appears to be no good reason for refusing applicant a patent upon his divisional application because of the fact that it will not issue simultaneously with that issued upon his first reissue application.

The Examiner is therefore directed to act upon the merits of the present application and to pass the same to issue when otherwise found allowable.

The petition is granted.

IN RE PITTSBURG BRAKE SHOE COMPANY.

Decided January 24, 1912.

1. PUBLIC-USE PROCEEDINGS—PETITION FOR BROUGHT AFTER TERMINATION OF INTERFERENCE.

The question of priority is the only one involved in an interference proceeding, and the question of public use may properly be raised after the termination thereof.

2. SAME—QUESTION OF PUBLIC USE NOT RES ADJUDICATA BY REASON OF DECISION IN INTERFERENCE.

A final decision in an interference renders the question of priority *res adjudicata;* but it does not render the right of the successful party to a patent *res adjudicata,* (citing *Guenniffet, Benoit, and Nicault* v. *Wictorsohn*, 134 O. G., 255; 134 O. G., 779; 30 App. D. C., 432.)

3. SAME—STRUCTURE ALLEGED TO HAVE BEEN IN PUBLIC USE NOT IDENTICAL WITH THAT DISCLOSED IN APPLICATION.

It is not necessary to the institution of public-use proceedings that the structure alleged to have been in public use be identical with that disclosed in the application; but it is sufficient if certain claims of the application read upon that structure.

ON PETITION.

Mr. J. N. Cooke for the Pittsburg Brake Shoe Company.

Mr. Paul Carpenter for Dickinson.

BILLINGS, *First Assistant Commissioner:*

This is a petition by the Pittsburg Brake Shoe Company, assignee of the application of John J. Kinzer, against whom a judgment of priority was rendered by the Examiner of Interferences in the interference *Kinzer* v. *Dickinson*, that a public use proceeding be instituted for the purpose of showing that the issue of said interference was in public use and on sale for more than two years prior to the filing date of the application of Dickinson involved in said interference.

The granting of the petition is opposed by Dickinson upon the following three grounds:

A. That it was not presented in due season;

B. That as far as the present petitioner is concerned the issue in controversy is *res adjudicata*.

C. That the alleged prior use structure is not the exact invention claimed by the respondent, nor by the petitioner's assignor.

Upon the first ground of opposition Dickinson contends that the matter should have been raised before final judgment in the interference.

It is well settled that the question of public use is a different matter from that of priority, which is the only question involved in an interference proceeding, and that the question of public use may be properly raised after the termination of the interference proceeding. (*Sarfert* v. *Meyer*, 98 O. G., 793; *Perrault* v. *Pierce*, 106 O. G., 2146, and *Burson* v. *Vogel*, 131 O. G., 942; 29 App. D. C., 388.)

Under the second ground mentioned by Dickinson, it is true that the issue of priority, by reason of the interference proceedings, is *res adjudicata* so far as Kinzer is concerned.

The question of Dickinson's right to a patent, however, is not *res adjudicata* and is open for further consideration after the termination of the interference proceeding. (See Commissioner's decision in *Guenniffet, Benoit, and Nicault* v. *Wictorsohn*, 134 O. G., 255, and the Court of Appeals decision in the same case, 134 O. G., 779; 30 App. D. C., 432.)

Concerning Dickinson's third ground, it is sufficient to state that it is not necessary that the structure alleged to have been in public use be identical with that disclosed in the application, but merely that the claims read upon said structure.

The petition was referred to the Primary Examiner in accordance with the usual practice, who reports that in his opinion a *prima facie* case of the existence of a statutory bar to the allowance of a claim corresponding to the issue of said interference is established.

The affidavits and exhibits have been considered, and the opinion of the Primary Examiner concerning the same is believed to be right.

The petition is accompanied by proof of service upon the party Dickinson and by the offer of petitioner to produce the evidence relied upon and to pay the expense of the proceeding.

The petition being in proper form and having made out a *prima facie* case is accordingly granted and a public-use proceeding is hereby instituted.

EX PARTE WEAVER.

Decided January 8, 1912.

APPLICATION—PROSECUTION—ELECTION—GROUND FOR REJECTION.

Where the Examiner is of the opinion that an amendment contains claims for an invention separate and distinct from that previously claimed, he should require the cancelation of such claims. From such action appeal lies to the Examiners-in-Chief.

ON PETITION.

Messrs. Beeler & Robb for the applicant.

TENNANT, *Assistant Commissioner:*

This is a petition that the Examiner be directed to act on the merits of certain claims submitted by the amendment of March 31, 1911.

In her amendment of November 5, 1910, next preceding that above mentioned, applicant presented four claims, two of which were drawn to the combination of a draining-sink and a plate-rack, the construction of the latter being set forth in detail, and the other two of which were drawn to the combination of a draining-sink, a plate-rack, and a cup-rack, each of the two latter elements being described in detail.

The Examiner rejected the first two of these claims on references and the last two as covering aggregations. The applicant then canceled all of the claims and substituted the two upon which she now desires action, which cover the combination of a draining-sink and a dish-rack, which is so described in the claims as to identify it as the plate-rack referred to in claims 3 and 4 of the preceding amendment. The Examiner refused to act on the merits of these two claims, on the ground that they covered an invention separate and distinct from that covered by claims 1 and 2 of the amendment of November 5, 1910, above referred to.

The question of the independence of the inventions as previously and as now claimed is one which will not be gone into on a petition of the present kind. The Examiner was in error in advising the applicant to proceed under Rule 145. If he was of the opinion that applicant had shifted her ground from one invention to another, his proper action was a requirement to cancel the new claims. The correctness of such action would be reviewed on appeal to the Examiners-in-Chief in the same manner as a requirement for division, and not upon petition. (*Ex parte Selle*, 110 O. G., 1723; *ex parte Tuttle*, 113 O. G., 1967; *ex parte Barnes*, 115 O. G., 247; *ex parte Bullock*, 127 O. G., 1580.)

The present petition appears to seek an action upon the questions of novelty and of invention involved in the present claims. Such an action of course cannot be given until it is decided whether these claims cover an invention distinct from that presented in claims 1 and 2 of the amendment of November 5, 1910, upon which an action of this kind was given. Since, however, the requirement of the Examiner that the present claims be canceled, if made, would have been an action on the merits in the sense that it amounts to a rejection and would have been reviewable by the Examiners-in-Chief, the applicant is, strictly speaking, right in requesting an action on the merits. The Examiner is therefore directed to act upon the merits by requiring the cancelation of the claims on the ground of prior election if he desires to adhere to the conclusions heretofore expressed or to examine the novelty of the claims if he recedes from that position.

The petition is granted to the extent indicated.

DECISIONS OF THE U. S. COURTS.

Supreme Court of the United States.

HENRY *et al. v.* A. B. DICK COMPANY.

Decided March 11, 1912.

1. PATENTS—SUITS FOR VIOLATION OF LICENSES—JURISDICTION OF FEDERAL COURT.

In determining whether a suit is one arising under the patent law and cognizable only in a court of the United States or one upon a contract between the patentee and his assignees or licensees and cognizable only in a State court unless there be diversity of citizenship the test of jurisdiction is: Does the complainant "set up some right, title or interest under the patent laws of the United States, or make it appear that some right or privilege will be defeated by one construction, or sustained by another, of those laws?"

2. SAME—RIGHTS THEREUNDER.

The property right in the materials composing a patented machine and the right to use for the purpose and in the manner pointed out by the patent are separable rights.

3. SAME—SAME.

The property right to a patented machine may pass to a purchaser with no right of use or with only the right of use in a specified way or at a specified place or for a specified purpose. The unlimited right or exclusive use which is possessed by and guaranteed to the patentee will be granted if the sale be unconditional; but if the right of use be confined by specific restrictions the use not permitted is necessarily reserved to the patentee.

4. SAME—SAME—LIMITATION THEREOF.

There are certain limitations upon the right of vending and using a patented machine. If the thing patented belongs to a class of things which on account of their inherent danger to the public safety or health cannot be sold or used because prohibited by an exertion of the police power of a State, they will not be immune to such law because patented.

5. SAME—VIOLATION OF AGREEMENTS—INFRINGEMENT.

Any reasonable stipulation not inherently violative of some substantive law imposed by a patentee as part of a sale of a patented machine is valid and enforceable. If the stipulation is one which qualifies the right of use in a machine sold subject thereto, so that a breach would give rise to a right of action upon the contract, it would at the same time be an act of infringement, giving to the patentee his choice of remedies.

6. SAME—CONTRIBUTORY INFRINGEMENT—DEFINITION.

"Contributory infringement," says Judge Townsend in *Thomson-Houston Co.* v. *Kelsey Co.*, (72 Fed. Rep., 1018,) "has been well defined as the intentional aiding of one person by another in the unlawful making, or selling or using of the patented invention."

7. SAME—SAME.

Where a patented machine was sold by complainant with a license agreement that it was to be used only with ink made by complainant, and defendant, with knowledge of such license agreement, sold to the owner of such machine ink not made by complainant, with the

expectation that this ink was to be used in connection with such machine, *Held* that the acts of defendant constituted contributory infringement of complainant's patent.

Mr. Arthur v. Briesen and *Mr. Antonio Knauth* for Henry *et al.*

Mr. S. O. Edmonds and *Mr. Frederick P. Fish* for A. B. Dick Company.

Mr. Justice LURTON delivered the opinion of the Court.

This cause comes to this Court upon a certificate under the sixth section of the Court of Appeals Act of March 31, 1891.

The facts and the questions certified, omitting the terms of the injunction awarded by the circuit court, are these:

This action was brought by the complainant, an Illinois corporation, for the infringement of two Letters Patent, owned by the complainant, covering a stencil-duplicating machine known as the "Rotary Mimeograph." The defendants are doing business as copartners in the city of New York. The complainants sold to one Christina B. Skou, of New York, a rotary mimeograph embodying the invention described and claimed in said patents under license which was attached to said machine, as follows:

LICENSE RESTRICTION.

This machine is sold by the A. B. Dick Co. with the license restriction that it may be used only with the stencil paper, ink and other supplies made by A. B. Dick Company, Chicago, U. S. A.

The defendant, Sidney Henry, sold to Miss Skou a can of ink suitable for use upon said mimeograph with knowledge of the said license agreement and with the expectation that it would be used in connection with said mimeograph. The ink sold to Miss Skou was not covered by the claims of said patent.

QUESTION CERTIFIED.

Upon the facts above set forth the question concerning which this court desires the instruction of the Supreme Court is:

Did the acts of the defendants constitute contributory infringement of the complainant's patents?

There could have been no contributory infringement by the defendants, unless the use of Miss Skou's machine with ink not made by the complainants would have been a direct infringement. It is not denied that she accepted the machine with notice of the conditions under which the patentee consented to its use. Nor is it denied that thereby she agreed not to use the machine otherwise. What defendants say is that this agreement was collateral, and that its validity depended upon principles of general law, and that if valid the only remedy is such as is afforded by general principles of law. Therefore, they say that the suit is not one arising under the patent law, and one not cognizable in a Federal court, unless diversity of citizenship exists.

But before coming to the question whether this is a suit of which the circuit court had jurisdiction as a suit arising under the patent law, it may be well to notice an argument against jurisdiction based upon the suggestion that if a breach of such a license restriction will support a suit for infringement, direful results will follow. Chief among the results suggested are, an encroachment upon the authority of the State courts and an extension of the jurisdiction of the Federal courts. And to swell the grievance it is said that if it be held that a breach of such a restriction will support a suit for infringement, parties will be deprived of the right to have the validity and import of the license restriction determined by the general law, and be compelled to have their rights determined by the patent law.

We are unable to assent to these suggestions. We do not prescribe the jurisdiction of courts, Federal or State, but only give effect to it as fixed by law. If a bill asserts a right under the patent law to sell a patented machine subject to restrictions as to its use, and alleges a use in violation of the restrictions as an infringement of the patent, it presents a question of the extent of the patentee's privilege, which, if determined one way, brings the prohibited use within the provisions of the patent law, or, if determined the other way, brings into operation only principles of general law. Obviously, a suit for infringement, which must turn upon the scope of the monopoly or privilege secured to a patentee, presents a case arising under the patent law. The jurisdiction of the circuit court over such cases has, for more than a century, been *exclusive*, by the express terms of the statute, although, for the most part, its jurisdiction over other kinds of suits arising under the Constitution and laws of the United States is only concurrent with that of the State courts.

The suggestion, therefore, that we should refrain from ruling that a patentee may sell a patented machine subject to restrictions as to its use, and may predicate infringement upon a use in violation of the restrictions lest such a ruling may draw to the Federal courts cases which otherwise would not come to them, cannot be sustained without placing our decision upon considerations which are quite apart from the law. This, of course, we may not do. In determining questions of jurisdiction, this Court has never shirked the responsibility of maintaining the lines of separation defined in the Constitution and the laws made in pursuance thereof, but, on the contrary, has been ever watchful to maintain those lines as obligatory alike upon all courts and all suitors.

We come, then, to the question, whether a suit for infringement is here presented.

That the license agreement constitutes a contract not to use the machine in a prohibited manner, is plain. That defendants might be sued upon the broken contract, or for its enforcement or for the forfeiture of the license, is likewise plain. But if by the use of the machine in a prohibited way Miss Skou infringed the patent, then she is also liable to an action under the patent law for infringement. Now that is primarily what the bill alleged, and this suit is one brought to restrain the defendants as aiders and abettors to her proposed infringing use.

That the patentee may waive the tort and sue upon the broken contract, or *in assumpsit*, is elementary. (Rob. on Pats., secs. 1225, 1260, and notes; *Steam Cutter Co.* v. *Sheldon*, 15 Fed., 608; *Pope Co.* v. *Owsley*, 27 Fed., 100; *Button Fastener Cases*, 77 Fed., 288, 201; *Wilson* v. *Sandford*, 10 How., 99.) But if the patentee elect to waive the tort and sue upon the covenants or for a breach of contract, the suit would not be one dependent upon or arising out of the patent law, and a Federal court would have no jurisdiction unless diversity of citizenship existed. (Rob. on Pats., sec. 1250; *Magic Ruffle Co.* v. *Elm City Co.*, 13 Blatchf., 151; *Goodyear* v. *Union Rubber Co.*, 4 Blatchf., 63; *Goodyear* v. *Congress Rubber Co.*, 3 Blatchf., 449.) This would be so although the damages for a breach would be measured by the loss resulting from the infringement. (*Magic Ruffle Co.* v. *Elm City Co.*, 13 Blatchf., 151.) After such a recovery *in assumpsit*, no further damages for the infringement can be claimed. (*Steam Cutter Co.* v. *Sheldon*, 15 Fed., 608.)

The remedy which the complainant seeks may often determine whether the suit is one arising under the patent law and cognizable only in a court of the United States, or one upon a contract between the patentee and his assigns or licensees, and, therefore, cognizable only in a State court, unless there be diversity of citizenship. Thus, a bill to enforce a contract concerning the title to a patent, or an interest therein, or to declare a forfeiture of an assignment of an interest in a patent, or even a license to make, sell or use the patented thing, or an action to recover damages for a breach of a contract relating to a patent or a license thereunder, would not, because of the character of remedy or relief sought, be a suit cognizable in a United States court, although the facts stated might have justified a suit for infringement in a United States court, if the complainant had elected that remedy. To sustain the contention that a breach of the implied agreement not to use the machine in question except in a particular way might have supported a suit to forfeit the license, or an action for damages upon the broken contract, counsel have cited and commented at great length upon the cases of *Wilson* v. *Sandford*, (10 How., 99;) *Dale Tile Co.* v. *Hyatt*, (125 U. S., 46;) *Albright* v. *Teas*, (106 U. S., 613;) *Hartell* v. *Tilghman*, (99 U. S., 547;) *Pratt* v. *Paris Light Co.*, (168 U. S., 255;) *Keeler* v. *Standard Folding Bed Co.*, (157 U. S., 659,) and *Bement* v. *National Harrow Co.*, (186 U. S., 70;) but an examination of these cases will disclose that while in some of them a suit for infringement might have been brought, the complainants had in fact brought suits to set aside or enforce contracts relating to patents, or licenses under patents. They were, therefore, not "patent cases," but cases determinable upon principles of general law. In *Excelsior Co.* v. *Pacific Bridge Co.* (185 U. S., 282) Mr. Justice Brown reviews the cases and shows so plainly why they were not patent cases that we shall only refer to that opinion.

To support their contention that the only remedy for a violation of the license under which Miss Skou acquired her machine is one in the State courts, counsel quote a paragraph from the same opinion in these words:

Now, it may be freely conceded that if the licensee had failed to observe any one of the three conditions of the license, the licensor would have been obliged to resort to the State courts, either to recover the royalties or to procure a revocation of the license. Such suit would not involve any question under the patent law.

But the three conditions of the license there referred to were: first, to pay royalties; second, that the transferee would not transfer or assign the license without consent of the licensor; third, that the failure to use the license in the manufacture of pipe should operate to revoke it. It is evident that the licensee would not have infringed the patent by either failing to pay royalties, by assigning the license, or by neglecting to use his privilege. The licensor would clearly have been compelled to rely wholly upon his contract, as such, in any suit for the violation of any of the conditions named.

The test of jurisdiction is this: Does the complainant—

set up some right, title or interest under the patent laws of the United States, or make it appear that some right or privilege will be defeated by one construction, or sustained by another, of those laws? (*Excelsior Co.* v. *Pacific Bridge Co.*, 185 U. S., 282; *Pratt* v. *Paris Light Co.*, 168 U. S., 255, 259; *White* v. *Rankin*, 144 U. S., 628.)

The bill alleges that the complainant's patent has been infringed by the breach of the conditions upon which the patented machine was sold. The remedy it seeks is an injunction against indirect infringement by the defendants. The facts stated upon the face of the bill may be insufficient to show an infringement of the patent; but the right to treat the conduct of the defendants as an indirect infringement is a right which the complainant sets up as arising under the patent law. One construction of the scope of the grant will sustain the rights asserted, if the facts be as alleged, and another will defeat those rights.

Whether a patentee may lawfully impose such restrictions, and whether their violation constitutes an infringement, are obviously questions arising under the patent law. In *Littlefield* v. *Perry* (21 Wall., 205, 222) this Court said:

An action which raises a question of infringement is an action arising "under the law," and one who has the right to sue for the infringement may sue in the circuit court. Such a suit may involve the construction of a contract as well as the patent, but that will not oust the court of its jurisdiction. If the patent is involved, it carries with it the whole case.

Although the complainant might have sued upon the broken contract, or brought a bill to declare a forfeiture of the licensee's rights for breach of the implied covenant to operate it only in connection with materials supplied by it, it has elected to sue for infringement. To quote from Judge Shipman's opinion in *Magic Ruffle Co.* v. *Elm City Co.*, (13 Blatchf., 151:)

It was competent for the complainants to take either one of the two remedies. * * * They could bring a bill alleging injuries to their exclusive rights under the laws of the United States, or, as the residence of the parties gave this court jurisdiction, could bring a bill setting up a breach of the contract as the gravamen of their action.

That a patentee may effectually restrict the time, place or manner of using a patented machine, so that a prohibited use will constitute an infringement of the patent, is fully conceded. Thus, in the printed brief counsel for defendants say:

Aside from such special contracts, an agreement that the article shall be used only in a certain manner, can be made only by way of lease of the article, terminating the lease upon condition broken, or by way of conditional sale, by breach of which the title reverts to the seller.

In either such case, counsel say—

a use of the article in violation of the condition may terminate the lease or sale of the article (which) would become the property of the patentee again, and a use thereof by the lessee or purchaser may constitute a violation of the patent, for which an infringement may lie. * * * He cannot make a sale with the condition at-

tached that the article shall be used or disposed of in a certain manner, leaving the title, however, in the purchaser in case of a breach of the condition.

The books abound in cases upholding the right of a patentee owner of a machine to license another to use it subject to any qualification in respect of time, place, manner or purpose of use which the licensee agrees to accept. Any use in excess of the license would obviously be an infringing use and the license would be no defense. (Rob. on Pats., secs. 915, 916, and notes.) This is so elementary we shall not stop to cite cases.

The contention is not that a patentee may not permit the use of a patented thing with such qualifications as he sees fit to impose, and that a prohibited use will be an infringing one, but that he can only keep the article within the control of the patent by retaining the title. To put the contention in another form—it is, that any transfer of the patentee's property right in a patented machine carries with it the right to use the entire invention so long as the identity of the machine is preserved, irrespective of any restrictions placed by the patentee upon the use of the article and accepted by the buyer. It is said that by such a sale the patentee—

disposes of all his rights under his patent, and thereby removes the article from the operation of the patent law.

If he attempts to sell the machine for specified uses only and prohibit all others, the restriction is disposed of as constituting a collateral agreement such as any vender of personal property might impose, and enforceable, if valid at all, only as a collateral contract.

The issue is a plain one. If it be sound, it concludes the case, and our response should be a negative one, since the violation of a mere collateral contract, which is not also an infringement of the patent would not be a case arising under the patent law. But is it true that where a patentee sells his patented machine for a specific and limited use, he does not thereby reserve to himself, as patentee, the exclusive right to all unpermitted uses which may be made of his invention as embodied in the machine sold? Obviously, this is a question arising under the patent law. By a sale of a patented article subject to no conditions the purchaser undeniably acquires the right to use the article for all the purposes of the patent so long as it endures. He may use it where, when, and how he pleases, and may dispose of the same unlimited right to another. This has long been the settled doctrine of this and all patent courts. (*Mitchell* v. *Hawley*, 16 Wall., 544; *Livingston* v. *Woodworth*, 14 How., 546, 550; *Adams* v. *Burke*, 17 Wall., 453, 456; *Folding Bed Cases*, 157 U. S., 659, 666.) By such an unconditional sale of the thing patented it is said to be—

no longer within the limits of the monopoly. It passes outside of it, and is no longer under the protection of the act of Congress.

In the cases cited above, as well as in the leading case of *Bloomer* v. *McQuewan*, (14 How., 539,) the statement that a purchaser of a patented machine has an unlimited right to use it for all the purposes of the invention, so long as the identity of the machine is preserved, was made of one who bought unconditionally, that is, subject to no specified limitation upon his right of use. The question of the effect of limitations upon the right of use arose, however, in *Mitchell* v. *Hawley*, and there we find the distinction was deemed material and the effect declared.

In that case one Taylor was the patentee, under a grant for a term of fourteen years, for a machine for felting hats. By what Mr. Justice Clifford calls "a conveyance or license, subject to certain restrictions or limitations," one Bayley was given the—

exclusive right to make and use and to license to others the right to use the said machines in the States of Massachusetts and New Hampshire, during the remainder of the original term of said Letters Patent,

subject to a stipulation that—

the licensee shall not in any way, or form, dispose or sell or grant any license to use the said machines beyond the expiration of the original term.

There was also a provision that if the term of the patent should be extended Bayley should have the right to control the same in those two States, upon paying a reasonable compensation, etc.

Bayley, as such licensee, made and sold four machines to the appellant Mitchell, with the right to use them for felting hats in the town of Haverhill, Mass., "under Taylor's patent bearing date May 3, 1864." Before the patent expired it was extended for the further term of seven years, the benefits of which extension for the said two States were assigned to the appellee Hawley. Hawley then filed his bill to restrain Mitchell from using the four identical machines which had been sold to him by Bayley. From a decree restraining their further use Mitchell appealed. Mr. Justice Clifford, before stating the facts upon which the judgment must rest as to the right of Mitchell as the purchaser of the machines to continue their use after the expiration of the original term of Taylor's patent, and after directing attention to what he termed—

the well-grounded distinction between the grant of the right to make and vend the patented machine and the grant of the right to use it,

which, he says—

was first satisfactorily pointed out by the late Chief Justice Taney, with his accustomed clearness and precision,

says:

Purchasers of the exclusive privilege of making or vending the patented machine hold the whole or a portion of the franchise which the patent secures, depending upon the nature of the conveyance, and, of course, the interest which the purchaser acquires terminates at the time limited for its continuance by the law which created the franchise, unless it be expressly stipulated to the contrary. But the purchaser of the implement or machine for the purpose of using it in the ordinary pursuits of life stands on different grounds, as he does not acquire any right to construct another machine either for his own use or to be vended to another for any purpose. Complete title to the implement or machine purchased becomes vested in the vendee by the sale and purchase, but he acquires no portion of the franchise, as the machine, when it rightfully passes from the patentee to the purchaser, ceases to be within the limits of the monopoly.

In the succeeding paragraph he, in effect, limits what was above said to unconditional sales of such patented machines by adding this:

Patented implements or machines sold to be used in the ordinary pursuits of life become the private individual property of the purchasers, and are no longer specifically protected by the patent laws of the State where the implements or machines are owned and used. Sales of the kind may be made by the patentee with or without conditions, as in other cases, but where the sale is absolute, and without any conditions, the rule is well settled that the purchaser may continue to use the implement or machine purchased until it is worn out, or he may repair it or improve upon it as he pleases, in same manner as if dealing with property of any other kind.

The force and bearing of this opinion cannot be escaped by suggesting that the court was referring to mere common-law contractual conditions, for the suit was to restrain infringement by the use of four machines which had been sold, *not leased*.

That the bill was one alleging and seeking to enjoin further use as an infringement of the patent is shown by the statement that "they," referring to the purchaser Mitchell and those associated with him—

appeared to the suits and filed an answer setting up as a defense to the charge of infringement that they are by law authorized to continue the use of the four machines just the same under the extended Letters Patent as they had the right to do under the original patent, when the purchase was made by those under whom they claim, which is the only question in the case.

The question argued, as shown by the brief, as set out in the report, was there, as here, that by a sale of the machines—

they were taken out of the reach of the patent law altogether, and that as long as the machines themselves lasted, the owner could use them.

For the patentee it was urged that—

the right to make and use and to license others to use was expressly limited by apt words, showing clearly an intent that it should not survive the original term of the patent.

This latter was the argument which prevailed. Mr. Justice Clifford, after referring to the principle of law that one cannot convey a better title or right than he has, said, touching the restriction imposed by Bayley on the machines sold by him to Mitchell:

The form of the license which he gave to the purchaser shows conclusively that he understood that he was not empowered to give a license which should extend beyond that limitation.

Later, referring to this sale with license to use, the learned Justice says:

The terms of the license which the seller gave to the purchasers were sufficient to put them upon inquiry, and it is quite obvious that the means of knowledge were at hand, and that if they had made the least inquiry they would have ascertained that their grantor could not give them any title to use the machine beyond the period of fourteen years from the date of the original Letters Patent, as he was only a licensee and never had any power to sell a machine so as to withdraw it indefinitely from the operation of the protection secured by the patent.

The distinction between the sale of a machine free from specific restrictions upon the right of use and a sale subject to such limitations becomes the more evident, in view of the fact that but for the license to use only for the remainder of the original patent term the purchaser would have acquired the right to continue the use during an extended term of the same patent. This was the express holding in the two prior cases of *Wilson* v. *Rousseau* (4 How., 646) and *Bloomer* v. *McQuewan*, (14 How., 539,) where the unlimited right of use by an unconditional purchaser was laid down in the strongest terms, and which cases are now relied upon by counsel in this case as equally applicable to a sale subject to a restricted use.

It is obvious that if Taylor, the patentee, could authorize Bayley to make and sell the patented machines, subject to the restriction that he should not sell for use beyond the terms of the original patent, and that a purchaser of the machines so made and sold by Bayley, with notice, would infringe the extended patent by a use after the original term had expired, it is because the exclusive right of the patentee embraces the right to make and sell patented machines subject to restrictions upon the right of use, which, if not observed, will support an action for infringement.

An absolute and unconditional sale operates to pass the patented thing outside the boundaries of the patent, because such a sale implies that the patentee consents that the purchaser may use the machine so long as its identity is preserved. This implication arises, first, because a sale without reservation, of a machine whose value consists in its use, for a consideration, carries with it the presumption that the right to use the particular machine is to pass with it. The rule and its reason is thus stated in *Robinson on Patents*, (sec. 824:)

The sale must furthermore be unconditional. Not only may the patentee impose conditions limiting the use of the patented article, upon his grantees and express licensees, but any person having the right to sell may at the time of sale restrict the use of his vendee within specific boundaries of time or place or method, and these will then become the measure of the implied license arising from the sale.

The argument for the defendants ignores the distinction between the property right in the materials composing a patented machine, and the right to use for the purpose and in the manner pointed out by the patent. The latter may be and often is the greater element of value, and the buyer may desire it only to apply to some or all of the uses included in the invention. But the two things are separable rights. If sold unreservedly the right to the entire use of the invention passes, because that is the implied intent; but this right to use is nothing more nor less than an unrestricted license presumed from an unconditional sale. A license is not an assignment of any interest in the patent. It is a mere permission granted by the patentee. It may be a license to make, sell and use, or it may be limited to any one of these separable rights. If it be a license to use, it operates only as a right to use without being liable as an infringer. If a licensee be sued, he can escape liability to the patentee for the use of his invention by showing that the use is within his license. But if his use be one prohibited by the license, the latter is of no avail as a defense. As a license passes no interest in the monopoly, it has been described as a mere waiver of the right to sue by the patentee. (Rob. on Pats., secs. 806, 808.)

We repeat. The property right to a patented machine may pass to a purchaser with no right of use, or with only the right to use in a specified way, or at a specified place, or for a specified purpose. The unlimited right of exclusive use which is possessed by and guaranteed to the patentee will be granted if the sale be unconditional. But if the right of use be confined by specific restriction, the use not permitted is necessarily reserved to the patentee. If that reserved control of use of the machine be violated, the patent is thereby invaded. This right

to sever ownership and use is deducible from the nature of a patent monopoly and is recognized in the cases.

In *Sowin* v. *Gulld* (1 Gall., 485) Mr. Justice Story, as far back as 1813, recognized the distinction by holding that a sale of patented machines under an execution against the patentee did not render the sheriff liable under a statute which made any person liable who should sell a patented device without consent of the patentee, because the sheriff had merely sold the materials and had not undertaken to pass any right of use. But in *Wilder* v. *Kent* (15 Fed., 217) it was held that under such an execution sale there passed whatever right of use the debtor had if the sale was unconditional.

Judge Lowell, in *Porter Needle Co.* v. *National Needle Co.*, (17 Fed., 536,) after saying that an absolute and unqualified sale of a patented machine carried with it the right of use, said:

> But the mere value of a patented machine is often, as is proved to be in this case, insignificant in comparison with the value of its use; and the courts have permitted a severance of ownership and right of use, if the patentee has chosen to dissever them and if his intent is not doubtful.

It is plain from the power of the patentee to subdivide his exclusive right of use that when he makes and sells a patented device that the extent of the license to use which is carried by the sale must depend upon whether any restriction was placed upon the use and brought home to the person acquiring the article.

That here the patentee did not intend to sell the machine made by it subject to an unrestricted use is of course undeniable from the words upon the machine, viz:

> LICENSE RESTRICTION.
>
> This machine is sold by the A. B. Dick Co., with the license restriction that it may be used only with the stencil, paper, ink and other supplies made by A. B. Dick Co.

The meaning and purpose of this restriction was that while the property in the machine was to pass to the purchaser, the right to use the invention was restricted to use with other articles required in its practical operation, supplied by the patentee. It was stated at the bar, and appears fully in the opinion of Judge Ray, (149 Fed., 424,) who decided the case in the circuit court, that the patentee sold its machines at cost, or less, and depended upon the profit realized from the sale of other non-patented articles adapted to be used with the machine, and that it had put out many thousands of such machines under the same license restriction. Such a sale, while transferring the property right in the machine, carries with it only the right to use it for practicing the invention according to the terms of the license. To no other or greater extent does the patentee consent to the use of the machine. When the purchaser is sued for infringement by using the device, he may defend by pleading, not the general and unlimited license which is carried by an unconditional sale, but the limited license indicated by the metal tablet annexed to the machine. If the use is not one permitted, it is plainly an infringing use.

If, then, we assume that the violation of restrictions upon the use of a machine made and sold by the patentee may be treated as infringement, we come to the question of the kind of limitation which may be lawfully imposed upon a purchaser.

To begin with, the purchaser must have notice that he buys with only a qualified right of use. He has a right to assume, in the absence of knowledge, that the seller passes an unconditional title to the machine, with no limitations upon the use. Where, then, is the line between a lawful and an unlawful qualification upon the use? This is a question of statutory construction. But with what eye shall we read a meaning into it? It is a statute creating and protecting a monopoly. It is a true monopoly, one having its origin in the ultimate authority, the Constitution. Shall we deal with the statute creating and guaranteeing the exclusive right which is granted to the inventor with the narrow scrutiny proper when a statutory right is asserted to uphold a claim which is lacking in those moral elements which appeal to the normal man? Or shall we approach it as a monopoly granted to subserve a broad public policy, by which large ends are to be attained, and, therefore, to be construed so as to give effect to a wise and beneficial purpose? That we must neither transcend the statute, nor cut down its clear meaning, is plain. In *Bement* v. *National Harrow Co.* (186 U. S., 70, 89, 90, 91, and 92) this Court quoted with approval the language of Chief Justice Marshall in *Grant* v. *Raymond*, (6 Peters, 218, 241.) Concerning the favorable view which the law takes as to the protection extended to the exclusive right, the Court, through Chief Justice Marshall, said:

> It is the reward stipulated for the advantages derived by the public for the exertions of the individual, and is intended as a stimulus to those exertions. The laws which are passed to give effect to this purpose ought, we think, to be construed in the spirit in which they have been made; and to execute the contract fairly on the part of the United States, where the full benefit has been actually received; if this can be done without transcending the intention of the statute, or countenancing acts which are fraudulent or may prove mischievous. The public yields nothing which it has not agreed to yield, it receives all which it has contracted to receive. The full benefit of the discovery, after its enjoyment by the discoverer for fourteen years, is preserved; and for his exclusive enjoyment of it during that time the public faith is pledged.

If the patent be for a machine, the monopoly extends to the right of making, selling and using, and these are separable and substantial rights. In *Bloomer* v. *McQuewan* (14 How., 538, 547) it is said that the grant is of—

> the right to exclude every one from making, using or vending the thing without the permission of the owner.

In *Bement* v. *National Harrow Co.* (186 U. S., 70, 90) there was involved the legality of certain contracts between patentees of and dealers in patented harrows. The purpose and effect of the combination and of the contracts between the parties was to fix and keep up the prices at which licensees might sell the patented harrows. It was claimed that the combination and contracts were obnoxious to the Sherman Act; but, upon the other side, it was said that as the contracts concerned only the sale of patented articles that that act did not apply. The character of the monopoly granted under the patent act was therefore involved. Touching the right of the patentee to exclude all others from the

use of his invention, the Court quoted with approval what was said in the *Button Fastener Cases*, (77 Fed. Rep., 288,) as follows:

> If he see fit, he may reserve to himself the exclusive use of his invention or discovery. If he will neither use his device nor permit others to use it, he has but suppressed his own. That the grant is made upon the reasonable expectation that he will either put his invention to practical use or permit others to avail themselves of it upon reasonable terms, is doubtless true. This expectation is based alone upon the supposition that the patentee's interest will induce him to use, or let others use, his invention. The public has retained no other security to enforce such expectations. A suppression can endure but for the life of the patent, and the disclosure he has made will enable all to enjoy the fruit of his genius. His title is exclusive, and so clearly within the constitutional provisions in respect of private property that he is neither bound to use his discovery himself nor permit others to use it.

In the *Paper Bag Cases* (210 U. S., 405) this right to exclude others from all use of the invention was held to be so comprehensive that a patentee was allowed to restrain, by injunction, one who was infringing his patent, although he had, during a long term of years, neither used his invention himself, nor allowed others to use it.

That there are limitations upon the right of vending and using a patented machine may be conceded. Thus, if the thing patented belong to a class of things which on account of their inherent danger to the public safety or health cannot be sold or used because prohibited by an exertion of the police power of a State, they will not be immune to such a law because patented. Upon this ground a patent for "an improved burning-oil," was held not to take the article without the operation of a State statute forbidding the sale of oil which was unsafe for illuminating purposes. (*Patterson* v. *Kentucky*, 97 U. S., 501.) And so in the Bement case, the Court said of this exclusive grant of privilege:

> It is true that in certain circumstances the sale of articles manufactured under Letters Patent may be prevented when the use of such article may be subject, within the several States, to the control which they may respectively impose in the legitimate exercise of their powers over their purely domestic affairs, whether of internal commerce or of police regulation.

In that case the question was not one of infringement, but one arising in a suit to enforce certain contracts directly restraining commerce in patented articles which were claimed to violate the Sherman law, although the agreements covered only patented articles. The Court, after referring to the exceptions to the patentee's monopoly resulting from conflict with the police power of the State, said:

> Notwithstanding these exceptions, the general rule is absolute freedom in the use or sale of rights under the patent laws of the United States. The very object of these laws is monopoly, and the rule is, with few exceptions, that any conditions which are not in their very nature illegal with regard to this kind of property, imposed by the patentee and agreed to by the licensee for the right to manufacture or use or sell the article, will be upheld by the courts. The fact that the conditions in the contracts keep up the monopoly or fix prices does not render them illegal.

Now, if this was a suit to recover damages upon the contract not to use the machine except in connection with other articles proper in its use made by the patentee, the only possible defense would be that the agreement was one contrary to public policy in that it affected freedom in the sale of such articles to the user of such machines. But that was the nature of the defense made to the suit to enforce the agreements under consideration in the Bement case. The Court in that case found that the contracts did include interstate commerce within their provisions and restrained interstate trade, but with reference to the Sherman Act said:

> But that statute clearly does not refer to that kind of a restraint of interstate commerce which may arise from reasonable and legal conditions imposed upon the assignee or licensee of a patent by the owner thereof, restricting the terms upon which the article may be used and the price to be demanded therefor. Such a construction of the act, we have no doubt, was never contemplated by its framers.

As to whether the restrictions upon sales imposed by the agreements were "legal and reasonable conditions," the Court said:

> The provision in regard to the price at which the licensor would sell the article manufactured under the license was also an appropriate and reasonable condition. It tended to keep up the price of the implements manufactured and sold, but that was only recognizing the nature of the property dealt in, and providing for its value so far as possible. This the parties were legally entitled to do. The owner of a patented article can, of course, charge such price as he may choose, and the owner of a patent may assign it or sell the right to manufacture and sell the article patented upon the condition that the assignee shall charge a certain amount for such article.

If the stipulation in an agreement between patentees and dealers in patented articles, which, among other things, fixed a price below which the patented articles should not be sold, would be a reasonable and valid condition, it must follow that any other reasonable stipulation, not inherently violative of some substantive law, imposed by a patentee as part of a sale of a patented machine, would be equally valid and enforceable. It must also follow, that if the stipulation be one which qualifies the right of use in a machine sold subject thereto, so that a breach would give rise to a right of action upon the contract, it would be at the same time an act of infringement, giving to the patentee his choice of remedies.

But it has been very earnestly said that a condition restricting the buyer to use it only in connection with ink made by the patentee is one of a character which gives to a patentee the power to extend his monopoly so as to cause it to embrace any subject, not within the patent, which he chooses to require that the invention shall be used in connection with. Of course the argument does not mean that the effect of such a condition is to cause things to become patented which were not so without the requirement. The stencil, the paper and the ink made by the patentee will continue to be unpatented. Any one will be as free to make, sell and use like articles as they would be without this restriction, save in one particular—namely, they may not be sold to a user of one of the patentee's machines with intent that they shall be used in violation of the license. To that extent competition in the sale of such articles, for use with the machine, will be affected; for sale to such users for infringing purposes will constitute contributory infringement. But the same consequence results from the sale of any article to one who proposes to associate it with other articles to infringe a patent, when such purpose is known to the seller. But could it be said that the doctrine of contributory infringement operates to extend the monopoly of the patent over subjects not within it because one subjects

himself to the penalties of the law when he sells unpatented things for an infringing use? If a patentee says, "I may suppress my patent if I will. I may make and have made devices under my patent, but I will neither sell nor permit any one to use the patented things," he is within his right and none can complain. But if he says, "I will sell with the right to use only with other things proper for using with the machines, and I will sell at the actual cost of the machines to me, provided you will agree to use only such articles as are made by me in connection therewith," if he chooses to take his profit in this way, instead of taking it by a higher price for the machines, has he exceeded his exclusive right to make, sell and use his patented machines? The market for the sale of such articles to the users of his machine, which, by such a condition, he takes to himself, was a market which he alone created by the making and selling of a new invention. Had he kept his invention to himself, no ink could have been sold by others for use upon machines embodying that invention. By selling it subject to the restriction he took nothing from others and in no wise restricted their legitimate market.

A like objection has been made against injunctions restraining the sale for infringing purposes of a single element in a patent combination. It was said that to enjoin such sales, although the thing sold was intended to be used with other elements to complete an infringing combination, was to extend the scope of the patent so as to give to the patentee the same advantage as if the element had been claimed alone. But in *Davis Electrical Co.* v. *Edison Co.* (60 Fed. Rep., 276, 280) Judge Putnam answered this, saying:

> Neither in such instances, nor in the case at bar, is the course of the law to be turned aside because the practical result may be to give a patentee for the time being more than the Patent Office contemplated, nor is the patentee to be deprived of his just rights because under some circumstances he gets incidental advantages beyond what he expressly bargained for. We do not in terms give the patentee the benefit of the claim for the filament alone, nor prohibit its use in some other combination than that set out in the second claim, if some ingenious way of making such other combination is ever discovered.

In *Thomson-Houston Co.* v. *Kelsey Co.* (72 Fed. Rep., 1016) the language was adopted by Judge Townsend.

Neither can we see that the liability of the defendants for aiding and abetting an infringing use by Miss Skou would be different whether she had made her machine in open defiance of the rights of the patentee or had bought it under conditions limiting her right of use. If she had made it, she would have been liable to an action for infringement for making; and if she used it, she would become liable for such infringing use. But if the defendants knew of the patent and that she had unlawfully made the patented article, and then sold her ink or other supplies without which she could not operate the machine, *with the intent and purpose that she should use the infringing article by means of the ink supplied by them*, they would assist in her infringing use.

Contributory infringement—

says Judge Townsend in *Thomson-Houston Co.* v. *Kelsey Co.*, (72 Fed. Rep., 1016)—

> has been well defined as the intentional aiding of one person by another in the unlawful making, or selling or using of the patented invention.

To the same effect are *Wallace* v. *Holmes*, (29 Fed. Cas., 79;) *Risdon* v. *Trent*, (92 Fed. Rep., 375;) *Thomson-Houston Co.* v. *Ohio Brass Works*, (80 Fed. Rep., 721;) *American Graphophone Co.* v. *Hawthorne*, (92 Fed. Rep., 516.)

In the Risdon case, a member of the firm which made the plans for the construction of certain mining machinery to be made in the owner's shop, and then superintended its erection at the mine, was held to be guilty of infringement, though he neither personally made nor used the machines which were found to be an infringement of valid patents. In *American Graphophone Co.* v. *Hawthorne*, one who sold a machine with knowledge that it was to be used to produce an infringing article was held to be liable as an infringer.

For the purpose of testing the consequence of a ruling which will support the lawfulness of a sale of a patented machine for use only in connection with supplies necessary for its operation bought from the patentee, many fanciful suggestions of conditions which might be imposed by a patentee have been pressed upon us. Thus it is said that a patentee of a coffee-pot might sell on condition that it be used only with coffee bought from him, or, if the article be a circular saw, that it might be sold on condition that it be used only in sawing logs procured from him. These and other illustrations are used to indicate that this method of marketing a patented article may be carried to such an extent as to inconvenience the public and involve innocent people in unwitting infringements. But these illustrations all fail of their purpose, because the public is always free to take or refuse the patented article on the terms imposed. If they be too onerous or not in keeping with the benefits, the patented article will not find a market. The public, by permitting the invention to go unused, loses nothing which it had before, and when the patent expires will be free to use the invention without compensation or restriction. This was pointed out in the *Paper Bag Case*, where the inventor would neither use himself nor allow others to use, and yet was held entitled to restrain infringement, because he had the exclusive right to keep all others from using during the life of the patent. This larger right embraces the lesser of permitting others to use upon such terms as the patentee chooses to prescribe. It must not be forgotten that we are dealing with a constitutional and statutory monopoly. An attack upon the rights under a patent because it secures a monopoly to make, to sell and to use, is an attack upon the whole patent system. We are not at liberty to say that the Constitution has unwisely provided for granting a monopolistic right to inventors, or that Congress has unwisely failed to impose limitations upon the inventor's exclusive right of use. And if it be that the ingenuity of patentees in devising ways in which to reap the benefit of their discoveries requires to be restrained, Congress alone has the power to determine what restraints shall be imposed. As the law now stands it contains none, and the duty which rests upon this and upon every other court is to expound the law as it is written. Arguments based upon suggestions of public policy not recognized in the patent laws are not relevant. The field to which we are invited by such arguments is legislative, not judicial. The decisions of this Court, as we have construed them, do not so limit the privilege of the patentee, and we could not so restrict a patent grant without overruling the long line of judicial decisions from circuit courts and circuit courts of appeal, heretofore cited, thus inflicting disastrous results upon individuals who have made large investments in reliance upon them.

The conclusion we reach is that there is no difference, in principle, between a sale subject to specific restrictions as to the time, place or purpose of use and restrictions requiring a use only with other things necessary to the use of the patented article purchased from the patentee. If the violation of the one kind is an infringement, the other is also. That a violation of any such restriction annexed to a sale by one with notice constitutes an infringing use has been decided by a great majority of the circuit courts and circuit courts of appeal, and has come to be a well-recognized principle in the patent law, in accordance with which vast transactions in respect to patented articles have been conducted. But it is now said that the numerous decisions by the lower courts have been erroneous in respect to the proper construction of the limit of the monopoly conferred by a patent, and that they should now be overruled. To these courts has been committed the duty of interpreting and administering the patent law. There is no power in this Court to review their judgments, except upon a writ of certiorari, or to direct their decisions, save through a certified interrogatory for direction upon a question of law. This power to review by certiorari is one which has been seldom exercised in patent cases. A line of decisions, which has come to be something like a rule of property, under which large businesses have been conducted, should at least not be overruled except upon reasons so clear as to make any other construction of the patent law inadmissible.

The earliest of the reported cases in which the precise question here presented arose were cases arising in suits for the infringement of a patent upon an iron band connected by a buckle, intended for binding cotton-bales. The band and this buckle were of iron. The buckle was so adjusted as that the band could be removed from the bale only by cutting. Upon the buckle were stamped the words: "Licensed to use only once." When cut from the bale the band and buckle were sold to persons, who used the buckles either upon a new band, or one repaired, and these bands were sold to planters to be used again in baling cotton. The question arose in a number of cases as to whether such second use of the buckles by one with notice, was an infringing use. In *American Cotton Tie Co.* v. *Simmons* (3 Ban. & A., 320) Judge Shepley dismissed the bill. The case, upon appeal to this Court, was reversed, upon the ground that that which had been done after the first use was a reconstruction, and not a repair, and was, therefore, an infringement. (106 U. S., 89.) The Court did not pass upon the question whether a second use of the buckles would be an infringing use. Another case arising under the same patent was that of *American Cotton Tie Supply Co.* v. *Bullard*, (4 Ban. & A., 520,) decided by Judge Blatchford, who gave the question great consideration.

It is manifest—

says Judge Blatchford—

> that the owner of the patents intended, by the stamp upon the buckles and the imprints on the bill-heads, to grant a restricted license for the use of the ties and the buckles, and that the intended restriction was to a use of them once only as a baling-tie. The words, "Licensed to use once only," stamped on each buckle, was a notice to every one who handled it that there was attached to it a restriction in the shape of a license and of a license to use only once. This was a lawful restriction.

Concerning the question of the effect of this restriction upon subsequent buyers of the cotton with its bands and buckles, the Court said:

> It is difficult to see how, in view of the facts of the case, the owner of these patents can properly be said to have sold the buckles for the purpose of allowing them to be used in the ordinary pursuits of life and to pass into the markets of the country as an ordinary article of commerce. * * * The original license is fairly a license to have the buckle and the band confine a bale until the consumer needs to confine the bale no longer, and a license for no longer time. There is no purchase of buckle and band by a purchaser of the baled cotton, except as he purchases them confining the cotton and to confine it until it reaches the consumer, and such purchase of buckle and band is, in effect, only a purchase of them subject to such original license. It is quite as reasonable to say that the purchaser of the cotton buys subject to such license as it is to say that the licensor, having imposed the restricted license, permits it to be instantly destroyed. The former view is consistent with the original intention, and the latter view is inconsistent with it.

As indicating the trend of judicial opinion that such license restrictions annexed to patented articles, when sold, constitute licenses under the patent, and that their violation by persons having notice constitutes an infringement of the patent, we here set out in the margin a number of the reported cases.*

It would lengthen this opinion unreasonably to make quotations from these opinions to show either the grounds upon which they go or their applicability. Some of them concern sales subject to a restriction upon the price upon resale, and others relate to a requirement that the article sold shall be used only in connection with certain other things

* *Dickerson* v. *Matheson*, (57 Fed., 524, Second Circuit Court of Appeals;) *Heaton-Peninsular Co.* v. *Eureka Specialty Co.*, (77 Fed., 288, Sixth Circuit Court of Appeals;) *Tubular Rivet Co.* v. *O'Brien*, (93 Fed., 200;) *Cortelyou* v. *Lowe*, (111 Fed., 1005, Second Circuit Court of Appeals;) *Edison Phonograph Co.* v. *Kaufman*, (105 Fed., 960;) *Edison Phonograph Co.* v. *Pike*, (116 Fed., 863;) *Victor Talking Machine Co.* v. *The Fair*, (122 Fed., 424, Seventh Circuit Court of Appeals;) *National Phonograph Co.* v. *Schlegel*, (128 Fed., 745;) *The Fair* v. *Dover Mfg. Co.*, (136 Fed., 117;) *Bobbs Co.* v. *Jolley Co.*, (155 Fed., 119, Second Circuit Court of Appeals;) *A. B. Dick Co.* v. *Milwaukee Co.*, (168 Fed., 966, Seventh Circuit Court of Appeals;) *Cork Crown and Seal Co.* v. *Brooklyn Co.*, (172 Fed., 225;) *Rupp* v. *Elliott*, (181 Fed., 730, Sixth Circuit Court of Appeals;) *Commercial Co.* v. *Asiatic Co.*, (181 Fed., 367;) *Bench* v. *Graff*, (138 U. S., 697,) where articles made in Germany under a German patent, and imported to this country, were held to infringe a United States patent for the same article; and *Dickerson* v. *Tinling*, (84 Fed. Rep., 192,) where it was held that one purchasing a patented article in Germany from the owners of a United States patent, having marked on it a condition that it should not be imported into the United States, was held guilty of infringement by bringing it into the United States.

See also *Curtis on Patents*, (secs. 218–218a;) *Walker on Patents*, (secs. 300, 301, 302;) *Wilson* v. *Sherman*, (1 Blatchf., 536.)

to be bought from the patentee. We deem it well, however, to refer to the opinion of the Circuit Court of Appeals of the Eighth Circuit, delivered by Judge (now Mr. Justice) Van Devanter in *National Phonograph Co.* v. *Schlegel*, cited above, because it draws so clearly the distinction between a conditional and an unconditional sale of a patented article. Speaking for the court, Judge Van Devanter said:

An unconditional or unrestricted sale by the patentee, or by a licensee authorized to make such sale, of an article embodying the patented invention or discovery, passes the article without the limits of the monopoly, and authorizes the buyer to use or sell it without restriction; but to the extent that the sale is subject to any restriction upon the use or future sale the article has not been released from the monopoly, but is within its limits, and as against all who have notice of the restriction, is subject to the control of whoever retains the monopoly. This results from the fact that the monopoly is a substantial property right conferred by law as an inducement or stimulus to useful invention and discovery, and that it rests with the owner to say what part of this property he will reserve to himself and what part he will transfer to others, and upon what terms he will make the transfer.

There is no collision between the rule against restrictions upon the alienation or use of chattles not made under the protection of a patent and the right of the patentee through his control over his invention. The distinction is pointed out by Mr. Justice Hughes in *Miles Medical Co.* v. *Park & Sons*, (220 U. S., 373, 401.)

The English patent law, like our own, grants to the patentee the exclusive right to make, to sell and to use. The decisions of the English courts upon the subject are, therefore, worthy of examination, and weight should be attached not only because of the respect due by reason of the similarity of statutes, but because many English patentees take out American patents and the converse. The English opinions which we shall refer to have to do with the sale of patented articles with restrictions upon the use.

The cases of *Incandescent Gas Light Co.* v. *Cantelo*, (12 Pat. Law Repa., 262,) decided in 1895, and *Incandescent Gas Light Co.* v. *Brogden*, (16 Pat. Law Repa., 179,) decided in 1899, were actions for the infringement of the Welsbach mantle patent for incandescent gas-lighting. The mantles were sold subject to a license restriction, printed on the box containing them, that they should be used in connection with burners or apparatus sold or supplied by the patentee. In the Cantelo case Mr. Justice Wills said:

The sale of a patented article carries with it the right to use it in any way that the purchaser chooses to use it, unless he knows of restrictions. Of course, if he knows of restrictions and they are brought to his mind at the time of the sale, he is bound by them. He is bound by them on this principle: The patentee has the sole right of using and selling the articles, and he may prevent anybody from dealing with them at all. Inasmuch as he has the right to prevent people from using them or dealing in them at all, he has the right to do the lesser thing; that is to say, to impose his own conditions. It does not matter how unreasonable or how absurd the conditions are. It does not matter what they are, if he says at the time when the purchaser proposes to buy or the person to take a license: "Mind, I only give you this license on this condition," and the purchaser is free to take it or leave it as he likes. If he takes it, he must be bound by the condition. It seems to be common sense, and not to depend upon any patent law or any other particular law.

Upon the evidence it was held that Cantelo not having bought direct, he did not have actual knowledge of the restriction, and he was given judgment for costs upon that defense.

In the subsequent case against Brogden, the complainants were give an injunction against future infringement, and an accounting for damages for past infringement, upon the second point in the claim, namely, that the defendant had sold, being a dealer, with notice of the restriction, for use upon a burner not made or supplied by the patentee. As to the effect of the sale subject to the license restriction as to the use, Lord Justice Kennedy said:

A patentee has a right, not merely by sale without reserve, to give an unlimited right to the purchaser to use, and thereby to make a grant from which he cannot derogate, but may attach to it conditions, and if these conditions are broken then there is no license, because the license is bound up with the observance of the conditions.

In *British Mutoscope and Biograph Company* v. *Homer*, (17 Times Law Repa., 218,) decided in 1901, it was held that the purchaser of a mutoscope under a rent distress warrant obtained no greater right to the use of the patented machine than that which pertained to the execution debtor, and that if the debtor had no right other than a strictly personal right to use, the purchaser obtained no right to the use. Mr. Justice Farwell, who delivered the opinion, cited and quoted with approval from the case of the *Incandescent Gaslight Co.* v. *Brogden*, (16 Pat. Law Repa., 179,) where it was said that a purchaser who buys with knowledge of the conditions under which his vender is authorized to use a patented invention is bound by such conditions, and that such conditions are not contractual, but are incident to and a limitation of the grant of the licensee to use, so that if the conditions are broken there is no grant at all.

In *McGruther* v. *Pitcher* (20 Times Law Repa., 652,) it is held that the purchaser of an article made under a patent and sold originally subject to restrictions as to place or method of use is not bound by such restrictions unless he buys with notice of them, as such restrictions do not run with the goods and are obligatory only upon those persons who take the article with knowledge of the conditions.

In the very late case of the *National Phonograph Co.* v. *Menck*, decided in 1911 by the Judicial Committee of the Privy Council, and reported in 27 Times Law Reporter, 289, the cases were cited and reviewed. Referring to the distinction between the principles applicable to sales of unpatented and patented articles, Lord Shaw, in delivering the opinion of the court said:

To begin with, the general principle applicable to ordinary goods bought and sold is not here in question. The owner may use and dispose of them as he sees fit. He may have made a certain contract with the person from whom he bought, and to such a contract he must answer. Simply, however, in his capacity as owner, he is not bound by any restrictions in regard to the use or sale of the goods, and it is out of the question to suggest that restrictive conditions run with the goods. * * *

Referring to former cases, he proceeds:

All that is affirmed is that the general doctrine of absolute freedom of disposal of chattels of an ordinary kind is, in the case of patented chattels, subject to the restriction that the person purchasing them, and in the knowledge of the conditions attached by the patentee, which knowledge is clearly brought home to himself at the time of sale, shall be bound by that knowledge and accept the situation of ownership subject to the limitations. These limitations are merely the respect paid and the effect given to those conditions of transfer of the

patented article which the law, laid down by statute, gave the original patentee a power to impose. Whether the law on this head should be changed and the power of sale sub modo should be withdrawn or limited is not a question for a court. It may be added that where a patented article has been acquired by sale, much, if not all, may be implied as to the consent of the licensee to an undisturbed and unrestricted use thereof. In short such a sale negatives in the ordinary case the imposition of conditions and the bringing home to the knowledge of the owner of the patented goods that restrictions are laid upon him.

Lord Shaw then referred to the case of the *Incandescent Light Co.* v. *Cantelo*, cited above, saying that—

the judgment in that case by Mr. Justice Wills forms undoubtedly a leading authority in the law of England.

The passage above set out is then quoted in full.

The precise question here involved has never been decided by this Court. It was raised in the *Cotton Tie Case*, (106 U. S., 89,) but was passed by and the case decided upon the single ground that the defendants had infringed by a reconstruction of the bands after they had been cut. It was again presented in *Cortelyou* v. *Johnson*, (207 U. S., 199,) but was not decided, because it did not appear that the defendants, charged as contributory infringers as in the present case, had notice of the restriction upon the use of the patented machine.

In *Bobbs-Merrill Co.* v. *Straus* (210 U. S., 345) it was urged that the analogy between the right of one under the copyright statute to fix the price at which a copyrighted book might be sold by retailers by a mere notice accompanying the book, and the right of one selling a patented article subject to a condition that it should not be sold at less than a prescribed minimum price, was such as to entitle the owner of the copyright to treat a sale contrary to the notice as an infringing sale. But this Court declined to consider the rule applicable to restrictive licenses accompanying the sale of a patented article, saying:

If we were to follow the course taken in the argument, and discuss the rights of a patentee, under Letters Patent, and then, by analogy, apply the conclusions to copyrights, we might greatly embarrass the consideration of a case under Letters Patent, when one of that character shall be presented to this Court.

We may say in passing, disclaiming any intention to indicate our views as to what would be the rights of parties in circumstances similar to the present case under the patent laws, that there are differences between the patent and copyright statutes in the extent of the protection granted by them. This was recognized by Judge Lurton, who wrote a leading case on the subject in the Federal courts, (*The Button Fastener Case*, 77 Fed. Rep., 288,) for he said in the subsequent case of *Park & Sons* v. *Hartman*, (153 Fed. Rep., 24:)

"There are such wide differences between the right of multiplying and vending copies of a production protected by the copyright statute and the rights secured to an inventor under the patent statutes, that the cases which relate to the one subject are not altogether controlling as to the other."

Touching the question there involved, the Court said:

The precise question, therefore, in this case is, does the sole right to vend (named in section 4952), secure to the owner of the copyright the right, after the sale of the book to a purchaser, to restrict future sales of the book at retail, to the right to sell it at a certain price per copy, because of a notice in the book that a sale at a different price will be treated as an infringement, which notice has been brought home to one undertaking to sell for less than the named sum? We do not think the statute can be given such a construction, and it is to be remembered that this is purely a question of statutory construction. There is no claim in this case of contract limitation, nor license agreement controlling the subsequent sales of the book.

In our view the copyright statutes, while protecting the owner of the copyright in his right to multiply and sell his production, do not create the right to impose, by notice, such as is disclosed in this case, a limitation at which the book shall be sold at retail by future purchasers, with whom there is no privity of contract. This conclusion is reached in view of the language of the statute, read in the light of its main purpose to secure the right of multiplying copies of the work, a right which is the special creation of the statute. True, the statute also secures, to make this right of multiplication effectual, the sole right to vend copies of the book, the production of the author's thought and conception. The owner of the copyright in this case did sell copies of the book in quantities and at a price satisfactory to it. It has exercised the right to vend. What the complainant contends for embraces not only the right to sell the copies, but to qualify the title of a future purchaser by the reservation of the right to have the remedies of the statute against an infringer because of the printed notice of its purpose so to do unless the purchaser sells at a price fixed in the notice. To add to the right of exclusive sale, the authority to control all future retail sales, by a notice that such sales must be made at a fixed sum, would give a right not included in the terms of the statute, and, in our view, extend its operation, by construction, beyond its meaning, when interpreted with a view to ascertaining the legislative intent in its enactment.

Though the Constitution gives to Congress power to promote "science and useful arts," by securing for a limited time to writers and inventors "the exclusive right to their respective writings and discoveries," the legislation for this purpose had to be adapted to the difference between a "discovery" and a "writing." To secure to the author an exclusive right to his "writings" Congress provided that he should have—

the sole liberty of printing, reprinting, publishing, completing, copying, executing, finishing and vending the same. (Rev. Stats., 4952.)

This is, in short, the sole right to multiply and vend copies of his production. While there are resemblances between the right of the author to "vend" his copyrighted production, and of the patentee to "vend" the patented thing, the inherent difference between the production of an author, be it a book, music or a picture, and that of an inventor, be it a machine, a process or an article, is so manifest that the exclusive right of one to multiply and sell was declared sufficient to give him that exclusive right to his writings purposed by the Constitution. To the inventor, by section 4884, Revised Statutes, there is granted—

the exclusive right to make, use and vend the invention or discovery.

This grant, as defined in *Bloomer* v. *McQuewan*, (14 How., 549)—

consists altogether in the right to exclude every one from making, using or vending the thing patented.

Thus, there are several substantive rights, and each is the subject of subdivision, so that one person may be permitted to make, but neither to sell nor use the patented thing. To another may be conveyed the right to sell, but within a limited area, or for a particular use, while to another the patentee may grant only the right to make and use, or to use only for specific purposes. (*Adams* v. *Burke*, 17 Wall., 453; *Mitchell* v. *Hawley*, 16 Wall., 544; *Rubber Co.* v. *Goodyear*, 9 Wall., 788, 798.) Thus, in the case last cited the license was—

to use the said Goodyear gum-elastic composition for coating cloth for the purpose of japanning, marbling, and variegate japanning, at his own establishment, but not to be disposed of to others for that purpose without the consent of the said Charles Goodyear, * * * the right and license hereby conferred being limited to the United States, and not extending to any foreign country, and not being intended to convey any right to make any contract with the Government of the United States.

Of this license, this Court said:

It authorizes Chaffee to use it himself. It gave him no right to authorize others to use it in conjunction with

himself, or otherwise, without the consent of Goodyear, which is not shown, and not to be presumed. It was to be used at his own establishment, and not at one occupied by himself and others. Looking at the terms of the instrument, and the testimony in the record, we are satisfied that its true meaning and purpose were to authorize the licensee to make and sell India-rubber cloth, to be used in the place, and for the purposes, of patent or japanned leather. In our judgment it conveyed authority to this extent and nothing more.

The licensees were held to have infringed the license by uses not permitted.

We have already pointed out that in the Bement case (186 U. S., 91) it was said in respect of the power of a patentee that, in the sale of rights under a patent—

with few exceptions any conditions which are not in their nature illegal with regard to this kind of property, imposed by the patentee and agreed to by the licensee, for the right to manufacture, *or use, or sell the article* will be upheld by the courts. [Italics ours.]

The question, as was said in reference to the copyright, is one of statutory construction. The kinds of property rights sought to be guaranteed and the terms of the two statutes are so different that very different constructions have been placed upon them. There is no collision whatever between the decision in the Bobbs-Merrill case and the present opinion. Each rests upon a construction of the applicable statute, and the special facts of the cases.

The *Paper Roll Case* (152 U. S., 425) has been relied upon by the defendants. We do not question that case, nor anything it decides. But it has no application to the question here presented. This is manifest when that case is attentively examined. First, because here the ink and other supplies used in the operation of the complainant's rotary mimeograph patent were not made elements of the patent, as in the *Paper Roll Case;* and second, the toilet-paper fixture in the *Paper Roll Case* was not sold with the license restriction that it was not to be used except in connection with paper supplied by the patentee. There was some evidence of a practice to sell the fixture only to those who used the patentee's paper; but this was far from proof of a specific license annexed to the sale of the fixtures that they were sold only to be used with paper supplied by the patentee. One who bought subject to no such restriction acquired the right to use the fixture with any paper. The opinion in that case is considered and analyzed in all of its aspects in the *Button Fastener Case*, (77 Fed., 288, 298-9.)

We come then to the question as to whether—

the acts of the defendants constitute contributory infringement of the complainants' patent.

The facts upon which our answer must be made are somewhat meager. It has been urged that we should make a negative reply to the interrogatory as certified, because the intent to have the ink sold to the licensee used in an infringing way is not sufficiently made out. Undoubtedly a bare supposition that by a sale of an article which though adapted to an infringing use is also adapted to other and lawful uses, is not enough to make the seller a contributory infringer. Such a rule would block the wheels of commerce. There must be an intent and purpose that the article sold will be so used. Such a presumption arises when the article so sold is only adapted to an infringing use. (*Rupp* v. *Elliott*, 131 Fed., 730.) It may also be inferred where its most conspicuous use is one which will coöperate in an infringement when sale to such user is invoked by advertisement. (*Kelom Co.* v. *Harper Brothers*, decided at this term and not yet reported.)

These defendants are, in the facts certified, stated to have made a direct sale to the user of the patented article, with knowledge that under the license from the patentee she could not use the ink, sold by them directly to her, in connection with the licensed machine, without infringement of the monopoly of the patent. It is not open to them to say that it might be used in a non-infringing way, for the certified fact is that they made the sale—

with the expectation that it would be used in connection with said mimeograph.

The fair interpretation of the facts stated is that the sale was with the purpose and intent that it would be so used.

So understanding the import of the question in connection with the facts certified, we must answer the question certified affirmatively.

Mr. Justice DAY did not hear the argument and took no part in the decision of this case.

Mr. Chief Justice WHITE, with whom concurred Mr. Justice HUGHES and Mr. Justice LAMAR, dissenting.

My reluctance to dissent is overcome in this case: first, because the ruling now made has a much wider scope than the mere interest of the parties to this record, since, in my opinion, the effect of that ruling is to destroy, in a very large measure, the judicial authority of the States by unwarrantedly extending the Federal judicial power. Second, because the result just stated, by the inevitable development of the principle announced, may not be confined to sporadic or isolated cases, but will be as broad as society itself, affecting a multitude of people and capable of operation upon every conceivable subject of human contract, interest or activity, however intensely local and exclusively within State authority they otherwise might be. Third, because the gravity of the consequences which would ordinarily arise from such a result is greatly aggravated by the ruling now made, since that ruling not only vastly extends the Federal judicial power, as above stated, but as to all the innumerable subjects to which the ruling may be made to apply, makes it the duty of the courts of the United States to test the rights and obligations of the parties, not by the general law of the land, in accord with the Conformity Act, but by the provisions of the patent law, even although the subjects considered may not be within the embrace of that law, thus disregarding the State law, overthrowing, it may be, the settled public policy of the State, and injuriously affecting a multitude of persons. Lastly, I am led to express the reasons which constrain me to dissent, because of the hope that if my forebodings as to the evil consequences to result from the application of the construction now given to the patent statute be well founded,

the statement of my reasons may serve a twofold purpose: first, to suggest that the application in future cases of the construction now given be confined within the narrowest limits, and, second, to serve to make it clear that if evils arise their continuance will not be caused by the interpretation now given to the statute, but will result from the inaction of the legislative department in failing to amend the statute so as to avoid such evils.

Let me briefly recapitulate the facts and the rulings based thereon. A machine styled a rotary mimeograph was covered by a patent. The claims of the patent, however, did not embrace the ink or other materials used in working the machine, nor were they covered by independent patents. The Dick Company, owner of the patent, sold one of the machines to a Miss Skou. The entire title was parted with; in other words, there was no condition imposed affecting the title or the uses to which the machine might be applied or the duration of the use. Upon the machine, however, was inscribed a notice, styled a license restriction, reciting that the machine—

may be used only with the stencil-paper, ink and other supplies made by the A. B. Dick Company, Chicago, U. S. A.

The Henry Company, dealers in ink, sold to Miss Skou, for use in working her machine, ink not made by the Dick Company. The Court now decides that a use of such ink by Miss Skou would have been "a use of the machine in a prohibited way," and would have rendered her "liable to an action under the patent law for infringement," and that the seller of the ink was liable as an infringer of the patent on the machine because of the aiding and abetting a proposed infringing use.

I cannot bring my mind to assent to the conclusion referred to, and shall state in the light of reason and authority why I cannot do so. As I have said, the ink was not covered by the patent; indeed, it is stated in argument and not denied that a prior patent which covered the ink had expired before the sale in question. It, therefore, results that a claim for the ink could not have been lawfully embraced in the patent, and if it had been by inadvertence allowed such claim would not have been enforceable. This curious anomaly then results, that that which was not embraced by the patent, which could not have been embraced therein and which if mistakenly allowed and included in an express claim would have been inefficacious, is now by the effect of a contract held to be embraced by the patent and covered by the patent law. This inevitably causes the contentions now upheld to come to this, that a patentee in selling the machine covered by his patent has power by contract to extend the patent so as to cause it to embrace things which it does not include; in other words, to exercise legislative power of a far-reaching and dangerous character. Looking at it from another point of view and testing the contention by a consideration of the rights protected by the patent law and the rights which an inventor who obtains a patent takes under that law, the proposition reduces itself to the same conclusion. The natural right of any one to make, vend and use his invention which but for the patent law might be invaded by others, is by that law made exclusive, and hence the power is conferred to exclude others from making, using or vending the patented invention. (*Paper Bag Case*, 210 U. S., 424-425, and cases cited.)

The exclusive right of use of the invention embodied in the machine which the patent protected was a right to use it anywhere and everywhere for all and every purpose of which the machine as embraced by the patent was susceptible. The patent was solely upon the mechanism which when operated was capable of producing certain results. A patent for this mechanism was not concerned in any way with the materials to be used in operating the machine, and certainly the right protected by the patent was not a right to use the mechanism with any particular ink or other operative materials. Of course as the owner of the machine possessed the ordinary right of an owner of property to use such materials as he pleased in operating his patented machine and had the power in selling his machine to impose such conditions in the nature of covenants not contrary to public policy as he saw fit, I shall assume that he had the power to exact that the purchaser should use only a particular character of materials. But as the right to employ any desired operative materials in using the patented machine was not a right derived from or protected by the patent law, but was a mere right arising from the ownership of property, it cannot be said that the restriction concerning the use of the materials was a restriction upon the use of the machine protected by the patent law. When I say it cannot be said I mean that it cannot be so done in reason, since the inevitable result of so doing would be to declare that the patent protected a use which it did not embrace. And this after all serves to demonstrate that it is a misconception to qualify the restriction as one on the use of the machine, when in truth both in form and substance it was but a restriction upon the use of materials capable of being employed in operating the machine. In other words, every use which the patent protected was transferred to Miss Skou, and the very existence of the particular restriction under consideration presupposes such right of complete enjoyment, and because of its possession there was engrafted a contract restriction, not upon the use of the machine, but upon the materials. And these considerations are equally applicable to the exercise of the exclusive right to vend protected by the patent unless it can be said that by the act of selling a patented machine and disposing of all the use of which it is capable a patentee is endowed with the power to amplify his patent by causing it to cover in the future things which at the time of the sale it did not embrace.

But the result of this analysis serves at once again to establish, from another point of view, that the ruling now made in effect is that the patentee has the power, by contract, to extend his patent rights so as to bring within the claims of his patent things which are not embraced therein, thus virtually legis-

lating by causing the patent laws to cover subjects to which without the exercise of the right of contract they could not reach, the result being not only to multiply monopolies at the will of an interested party, but also to destroy the jurisdiction of the State courts over subjects which from the beginning have been within their authority.

The vast extent to which the results just stated may be carried will be at once apparent by considering the facts of this case and bearing in mind that this is not the suit of a patentee against one with whom he has contracted to enforce as against such person an act done in violation of a contract as an infringement, but it is against a third person who happened to deal in an ordinary commodity of general use with a person with whom the patentee had contracted. And this statement shows that the effect of the ruling is to make the virtual legislative authority of the owner of a patented machine extend to every human being in society without reference to their privity to any contract existing between the patentee and the one to whom he has sold the patented machine. It is worthy of observation that the vast power which the ruling confers upon the holders of patented inventions does not alone cause controversies which otherwise would be subject to the State jurisdiction to become matters of exclusive Federal cognizance, but subjects the rights of the parties when in the Federal forum to the patent law to the exclusion of the State law which otherwise would apply and it may be to the overthrow of the settled public policy of the State wherein the dealings involved take place. All these results are in a measure comprehensively portrayed by the decree of the circuit court. They are, moreover, vividly shown by a reference made by the court to and the putting aside as inapplicable of a previous decision of this Court, (*Miles Medical Co.* v. *Park & Sons Co.*, 220 U. S., 373,) which if here applied would cause the alleged license to be held void as against public policy. As the theory upon which the Miles Medical Co. case is treated as inapplicable is that this case is one governed by the patent laws and therefore not within the rule of public policy which the Miles case applied, it is made indubitably clear that the ruling now announced endows the patentee with a right by contract not only to produce the fundamental change as to jurisdiction of the State and Federal courts to which I have referred, but also to bring about the overthrow of the public policy both of the State and nation, which I at the outset indicated was a consequence of the ruling now made.

I do not think it necessary to stop to point out the innumerable subjects which will be susceptible of being removed from the operation of State judicial power and the fundamental and radical character of the change which must come as a result of the principle decided. But nevertheless let me give a few illustrations:

Take a patentee selling a patented engine. He will now have the right by contract to bring under the patent laws all contracts for coal or electrical energy used to afford power to work the machine or even the lubricants employed in its operation. Take a patented carpenter's plane. The power now exists in the patentee by contract to validly confine a carpenter purchasing one of the planes to the use of lumber sawed from trees grown on the land of a particular person or sawed by a particular mill. Take a patented cooking utensil. The power is now recognised in the patentee to bind by contract one who buys the utensil to use in connection with it no other food supply but that sold or made by the patentee. Take the invention of a patented window frame. It is now the law that the seller of the frame may stipulate that no other material shall be used in a house in which the window frames are placed except such as may be bought from the patentee and seller of the frame. Take an illustration which goes home to every one—a patented sewing-machine. It is now established that by putting on the machine, in addition to the notice of patent required by law, a notice called a license restriction, the right is acquired, as against the whole world, to control the purchase by users of the machine of thread, needles and oil lubricants or other materials convenient or necessary for operation of the machine. The illustrations might be multiplied indefinitely. That they are not imaginary is now a matter of common knowledge, for, as the result of a case decided some years ago by one of the circuit courts of appeal, which has been followed by cases in other circuit courts of appeal, to which reference will hereafter be made, what prior to the first of those decisions on a sale of a patented article was designated a condition of sale, governed by the general principles of law, has come in practice to be denominated a license restriction, thus, by the change of form, under the doctrine announced in the cases referred to, bringing the matters covered by the restriction within the exclusive sway of the patent law. As the transformation has come about in practice since the decisions in question, the conclusion is that it is attributable as an effect caused by the doctrine of those cases. And, as I have previously stated, it is a matter of common knowledge that the change has been frequently resorted to for the purpose of bringing numerous articles of common use within the monopoly of a patent when otherwise they would not have been embraced therein, thereby tending to subject the whole of society to a widespread and irksome monopolistic control.

But I need not reason further, since, in my opinion, many adjudications of this Court directly refute the existence of a supposed right of extension by contract of the patent laws, and are therefore, as I understand them, in conflict with the ruling now made. In *Wilson* v. *Sandford* (1850, 10 How., 99) the facts were these: Wilson granted to Sandford and the other defendants the right to use a patented planing-machine, the consideration to be paid in instalments. Each note contained a provision that the title should revert in case of non-payment. Upon the theory that the refusal to pay an instalment forfeited the rights of the licensees, Wilson sued to restrain the further use of the ma-

chine on the ground that such use was an infringement of his patent rights. It was, however, decided that the matter in controversy arose upon contract, and that the requisite jurisdictional value was not involved. The claim that jurisdiction could be exercised because the case arose under the patent laws, was thus disposed of, (p. 101:)

> Now, the dispute in this case does not arise under any act of Congress; nor does the decision depend upon the construction of any law in relation to patents. It arises out of the contract stated in the bill, and there is no act of Congress providing for or regulating contracts of this kind. The rights of the parties depend altogether upon common law and equity principles. The object of the bill is to have this contract set aside and declared to be forfeited; and the prayer is, "that the appellant's reinvestiture of title to the license granted to the appellees, by reason of the forfeiture of the contract, may be sanctioned by the court," and for an injunction. But the injunction he seeks for is to be the consequence of the decree of the court sanctioning the forfeiture. He alleges no ground for an injunction except the contract be set aside. And if the case made in the bill were fit even for relief in equity, it is very clear that whether the contract ought to be annulled or not is a matter of chancery, depending altogether upon the rules and principles of equity, and in no degree dependent upon any act of Congress concerning patent rights. And whenever a contract is made in relation to them which is not provided for and regulated by Congress, the parties, if any dispute arises, stand upon the same ground with other litigants as to the right of appeal; and the decree of the circuit court cannot be revised here, unless the matter in dispute exceeds two thousand dollars.

The foregoing views were reiterated in *Bloomer* v. *McQuewan*, (1852, 14 How., 539.)

In *Horlshorn* v. *Day* (1856, 19 How., 211) the court, in commenting upon the effect upon a license, of the non-performance, by the licensee of a patent right, of covenants made by him, and speaking in particular of a covenant to pay an annuity to one Chaffee, the patentee, said, (p. 222:)

> The payment of the annuity was not a condition to the vesting of the interest in the patent in Judson, and of course * * * the omission or refusal to pay did not give to Chaffee a right to rescind the contract, nor have the effect to remit him to his interest as patentee. The right to the annuity rested in covenant. * * * The remedy for the breach could rest only upon the personal obligation of the covenantor.

The cases just referred to and others in accord with them were reviewed in the opinion in *Albright* v. *Teas*, (106 U. S., 613,) decided in 1883. The case was this: A patentee sold and assigned all his title and interest in the invention covered by his patents, and the purchasers covenanted to use their best efforts to introduce the invention, to pay specified royalties for the use of the patented improvements, etc. The assignor sued in a State court for a discovery and account and a decree for the amount of royalties found due and for general relief. On the application of the defendants the cause was removed into a circuit court, upon the theory that the suit was one arising under the patent laws of the United States, and, in consequence, exclusively within the cognisance of the courts of the United States. On final hearing, however, the circuit court remanded the cause as being one for the settlement of controversies under a contract, of which the State court had full cognisance. This court held that as the transfer of title was absolute, no rights secured by the patent under any act of Congress remained in the patentee, and that the case arose solely upon the contract and not upon the patent laws of the United States.

The prior cases on the subject were again reviewed by Mr. Justice Gray in *Dale Tile Mfg. Co.* v. *Hyatt*, (1888, 125 U. S., 46.) The plaintiff sued in a State court to recover from one, who had been licensed by a patentee to make and use certain patented articles, to recover royalties due under the contract. The defendant contended in the State court that the subject-matter was one exclusively cognisable in the courts of the United States because the case was one arising under the patent laws, citing Revised Statutes, (sec. 629, cl. 9; sec. 711, cl. 5.) The contention was held untenable, and in the course of the opinion the Court said, (p. 52:)

> It has been decided that a bill in equity in a circuit court of the United States by the owner of Letters Patent, to enforce a contract for the use of the patent right, or to set aside such a contract because the defendant has not complied with its terms, is not within the acts of Congress, by which an appeal to this Court is allowable in cases arising under the patent laws, without regard to the value of the matter in controversy. (Act of July 4, 1836, c. 357, sec. 17; 5 Stat., 124; Rev. Stat., sec. 699; *Wilson* v. *Sandford*, 10 How., 99; *Brown* v. *Shannon*, 20 How., 55.)

Reviewing the decisions in *Hartell* v. *Tilghmen* (99 U. S., 547) and *Albright* v. *Teas*, *supra*, the Court said, (p. 53:)

> It was said by Chief Justice Taney in *Wilson* v. *Sandford* and repeated by the Court in *Hartell* v. *Tilghmen* and in *Albright* v. *Teas*: "The dispute in this case does not arise under any act of Congress; nor does the decision depend upon the construction of any law in relation to patents. It arises out of the contract stated in the bill, and there is no act of Congress providing for or regulating contracts of this kind. The rights of the parties depend altogether upon common law and equity principles." (10 How., 101, 102; 99 U. S., 552; 106 U. S., 619.)
>
> Those words are equally applicable to the present case, except that, as it is an action at law, the principles of equity have no bearing. This action, therefore, was within the jurisdiction, and, the parties being citizens of the same State, within the exclusive jurisdiction of the State courts; and the only Federal question in the case was rightly decided.

The case of *Keeler* v. *Standard Folding Bed Co.* (157 U. S., 659) touches upon the precise question before us. In the course of the opinion, the Court said—italics mine—(p. 666:)

> Upon the doctrine of these cases we think it follows that one who buys patented articles of manufacture from one authorised to sell them becomes possessed of an absolute property in such articles, unrestricted in time or place. Whether a patentee may protect himself and his assignees by special contracts brought home to the purchaser is not a question before us, and upon which we express no opinion. *It is, however, obvious that such a question would arise as a question of contract, and not as one under the inherent meaning and effect of the patent laws.*

A reference to the foregoing and other decided cases is contained in the opinion in *Excelsior Wooden Pipe Co.* v. *Pacific Bridge Co.*, (185 U. S., 282.) The suit was by a licensee authorized to manufacture and sell wooden pipe under certain Letters Patent, against two defendants, one of whom was the licensor and owner of the patent. The covenants of the licensee were, (1) to pay a license fee or royalty; (2) not to transfer or assign the license without the consent of the patentee; and (3) that the license might be revoked for failure to manufacture. While, because of peculiar conditions present in the case, the suit was held to be one arising under the patent laws, the Court yet observed, (p. 290:)

> Now, it may be freely conceded that if the licensee had failed to observe any one of the three conditions of the license, the licensor would have been obliged to resort to the State courts either to recover the royalties or to procure a revocation of the license. Such suit would not involve any question under the patent law.

The Court, after reciting the facts in the case of *Pratt* v. *Paris Gaslight & Coke Co.*, (168 U. S., 255,) said, (pp. 286, 287:)

> It was held that the action was not one arising under the patent laws of the United States, and that to constitute

such a cause the plaintiff must set up some right, title or interest under the patent laws, or at least make it appear that some right or privilege will be defeated by one construction or sustained by the opposite construction of those laws. That "section 711 does not deprive the State courts of the power to determine *questions* arising under the patent laws, but only of assuming jurisdiction of *cases* arising under those laws. There is a complete distinction between a case and a question arising under the patent laws. The former arises when the plaintiff in his opening pleadings—be it a bill, complaint or declaration—sets up a right under the patent laws as ground for a recovery. Of such the State courts have no jurisdiction. The latter may appear in the plea or answer or in the testimony. The determination of such question is not beyond the competency of the State tribunals."

The case of *Bement* v. *National Harrow Co.*, decided at the same term as the *Wooden Pipe Case*, illustrates the doctrine. In that case the National Harrow Company, the patentee, commenced the action in a State court of New York to recover damages for the violation of license contracts pertaining to the manufacture and sale of a patent harrow and also sought to restrain the future violation of the contracts and compel their specific performance. If in consequence of the subject-matter the case was one arising under the patent laws, as it would have been if the question of infringement of the patent was involved, the jurisdiction of the courts of the United States was exclusive. The case was disposed of on its merits in the State courts and came to this Court by writ of error upon the question as to whether the agreements between the licensor and licensee violated the Federal antitrust law, and jurisdiction was entertained and the Federal question was passed upon.

Finally, it seems to me the rulings made in the *Morgan Envelope Case* (152 U. S., 475) are so apposite here as practically in reason to forclose all controversy on the question. In that case suit was brought on three patents, one for an oval roll of paper, the other two for apparatus for holding the paper. The patentee sold the fixtures or apparatus only to purchasers of his paper, with the understanding that the paper would be subsequently purchased of the plaintiff company. It was held that the patent for the roll of paper was invalid, but the validity of the apparatus claims, or at least of some of them, was not challenged. The defendant sold the paper with full knowledge of the restriction imposed by the patentee. Mr. Justice Brown, after quoting from *Chaffee* v. *Boston Belting Co.*, (22 How., 217, 223,) says, (p. 482:)

> The real question in this case is, whether, conceding the combination of the oval roll with the fixture to be a valid combination, the sale of one element of such combination, with the intent that it shall be used with the other element, is an infringement. We are of opinion that it is not. * * * Of course, if the product itself is the subject of a valid patent, it would be an infringement of that patent to purchase such product of another than the patentee; but if the product be unpatentable, it is giving to the patentee of the machine the benefit of a patent upon the product, by requiring such product to be bought of him.

Earlier in the opinion it was said, (p. 481:)

> The first defense raises the question whether, when a machine is designed to manufacture, distribute or serve out to users a certain article, the article so dealt with can be said to be a part of the combination of which the machine itself is another part. If this be so, then it would seem to follow that the log which is sawed in the mill, the wheat which is ground by the rollers, the pin which is produced by the patented machine, the paper which is folded and delivered by the printing-press, may be claimed as an element of a combination of which the mechanism doing the work is another element. The motion of the hand necessary to turn the roll and withdraw the paper is analogous to the motive power which operates the machinery in the other instances.

Nor when accurately appreciated is there any conflict between the principles so long and firmly established by the cases to which I have just referred and the doctrine upheld in the *Goodyear Rubber Case* (9 Wall., 788) and *Mitchell* v. *Hawley*, (16 Wall., 544.) In the Goodyear case the facts were these: The right was conferred upon one Chaffee by license—

> to use the said Goodyear's gum-elastic composition for coating cloth for the purpose of japanning, marbling, and variegate japanning, at his own establishment, but not to be disposed of to others for that purpose without the consent of the said Charles Goodyear; * * * the right and license hereby conferred being limited to the United States, and not extending to any foreign country, and not being intended to convey any right to make any contract with the Government of the United States.

Looking at the terms of the license and the testimony in the record, the Court considered the instrument only—

> to authorize the licensee to make and sell india-rubber cloth, to be used in the place, and for the purpose, of patent or japanned leather.

The patent was held to be infringed because a right of use of the invention not granted to the licensee but reserved by the patentee or his assignee to himself, viz:

> the exclusive right to manufacture and sell army and navy equipments made of vulcanized india-rubber, etc.,

had been invaded by the defendants.

In *Mitchell* v. *Hawley* this was the controversy: A patentee of certain machines, whose original patent had still between six and seven years to run, conveyed to another person the—

> right to make and use and to license to others the right to make and use four of the machines—

in two States—

> during the remainder of the original term of the Letters Patent, *provided*, that the said grantee shall not in any way or form dispose of, sell, or grant any license to use the said machines *beyond* the said term.

The licensee constructed and sold four machines to persons who, as found by the Court, had knowledge of the limited title of the licensee. After the patent had expired, and during an extended term of the patent, the persons to whom the licensee had transferred the machines made use of the machines in violation of the limitation, and the owner of the patent sued to prevent the infringement, and his right to do so was upheld. Stating it to be unquestioned that a patentee who had absolutely parted with the title to the machine and with the use which the patent protected must be understood to have parted with all his exclusive right, and hence ceased to have any interest in the machine protected by the patent law, the Court maintained the contentions of the complainant, on the ground that the rule just stated did not apply where the patentee did not grant the entire right covered by the patent, but retained a part thereof in himself, and therefore a violation of such reserved right was in conflict with a right still protected by the patent and an infringement of the patent. The difference between the rule applied in that case and the doctrine of the many other cases which we have cited and which also exists between the controversy presented in *Mitchell* v. *Hawley* and the one here under consideration was simply as follows:

(a) that which exists between the conveyance of all one's rights covered by a patent and a transfer of only a part of such rights; (b) that which obtains between the ability of a patentee to protect the right which he enjoys under the patent law from infringement and his want of power on parting with all his rights under the patent to contract so as to secure rights never embraced in his patent, and to bring such newly-acquired contract rights under the protection of the patent law. That the sale here in question was one of all the rights which the patent protected has, it seems to me, at the outset been demonstrated beyond reasonable dispute. I mean, of course, within the limit of my powers of understanding, since, looking at the so-called license restriction again and again with a purpose if possible to bring my mind to assent to the view which the Court takes of it, I find it impossible to do so. And in this connection it is to be observed that the real nature of the transaction is, in the argument of counsel for the Dick Company, stated to be directly the opposite of that which the Court now holds it to be. Thus counsel say:

> In the license plan in issue, the licensor, by limiting the market at which supplies may be purchased, is merely insuring to himself a royalty based upon the output of the machine. The licensor, by requiring the purchase of ink of him, in fact exacting a royalty (infinitesimal in amount) for every copy of the original produced by the mimeograph. The very nature of the work of these machines forbids the use of a fixed money royalty upon the work produced, since the money value is so small that the expense of the accounting would be prohibitive of such a method.

A construction of the restriction which, by speaking of license and licensor, obscures the fact that the restriction itself states the transaction to have been a sale of the machine and its right of use, yet by the very force of the nature of the so-called restriction describes it as being in essence and effect but a consideration for the rights parted with, and thus brings the case within the doctrine of *Wilson* v. *Sandford*, *Albright* v. *Teas*, and other cases which I have referred to.

The distinction between the two rules and the absolute harmony and coöperation between them had been pointed out before the decision in *Mitchell* v. *Hawley*, and has been since so clearly indicated as to my mind to leave no room for contention or evasion. Let me quote from some of the cases. In one of the early cases, *Bloomer* v. *McQuewan*, (14 How., 539,) after referring to previous cases which had marked the distinction between the grant of the right to make and vend a patented machine and the grant of the right to use it, the Court said, (p. 549:)

> The distinction is a plain one. The franchise which the patent grants consists altogether in the right to exclude every one from making, using, or vending the thing patented, without the permission of the patentee. This is all that he obtained by the patent. And when he sells the exclusive privilege of making or vending it for use in a particular place, the purchaser buys a portion of the franchise which the patent confers. He obtains a share of the monopoly, and that monopoly is derived from, and exercised under, the protection of the United States. * * *
>
> But the purchaser of the implement or machine for the purpose of using it in the ordinary pursuits of life, stands on different ground. In using it, he exercises no rights created by the act of Congress, nor does he derive title to it by virtue of the franchise or exclusive privilege granted to the patentee. The inventor might lawfully sell it to him, whether he had a patent or not, if no other patentee stood in his way. And when the machine passes to the hands of the purchaser, it is no longer within the limits of the monopoly. It passes outside of it, and is no longer under the protection of the act of Congress. And if his right to the implement or machine is infringed, he must seek redress in the courts of the State, according to the laws of the State, and not in the courts of the United States, nor under the law of Congress granting the patent. The implement or machine becomes his private, individual property, not protected by the laws of the United States, but by the laws of the State in which it is situated. Contracts in relation to it are regulated by the laws of the State, and are subject to State jurisdiction.

Likewise in *Adams* v. *Burke* (17 Wall., 453) the Court, speaking through Mr. Justice Miller said, (p. 456:)

> In the essential nature of things, when the patentee, or the person having his rights, sells a machine or instrument whose sole value is in its use, he receives the consideration for its use and he parts with the right to restrict that use. The article, in the language of the court, passes without the limit of the monopoly. That is to say, the patentee or his assignee having, in the act of sale, received all the royalty or consideration which he claims for the use of his invention in that particular machine or instrument, it is open to the use of the purchaser without further restriction on account of the monopoly of the patentee.

Yet, again, in the *Folding Bed Company Case* (157 U. S., 666) this Court, reiterating the doctrine, said:

> Upon the doctrine of these cases we think it follows that one who buys patented articles of manufacture from one authorized to sell them becomes possessed of an absolute property in such articles, unrestricted in time or place. Whether a patentee may protect himself and his assignees by special contracts brought home to the purchasers is not a question before us, and upon which we express no opinion. It is, however, obvious that such a question would arise as a question of contract, and not as one under the inherent meaning and effect of the patent laws.
>
> The conclusion reached does not deprive a patentee of his just rights, because no article can be unfettered from the claim of his monopoly without paying its tribute. The inconvenience and annoyance to the public that an opposite conclusion would occasion are too obvious to require illustration.

In view of the settled rule of this Court, established by so many decisions, I might well refrain from referring to the English cases and the decisions of lower Federal courts relied on as persuasively supporting the doctrine now announced. But, nevertheless, I shall briefly notice the cases.

I pass by the English decisions relied upon with the remark that it is not perceived how they can have any persuasive influence on the subject in hand in view of the distinction between State and national power which here prevails and the consequent necessity, if our institutions are to be preserved, of forbidding a use of the patent laws which serves to destroy the lawful authority of the States and their public policy. I fail also to see the application of English cases in view of the possible difference between the public policy of Great Britain concerning the right, irrespective of the patent law, to make contracts with the monopolistic restriction which the one here recognized embodies and the public policy of the United States on that subject as established, after great consideration, by this Court in *Miles Medical Co.* v. *Park & Sons Co.*, (220 U. S., 373.) See especially on this subject the grounds for dissent in that case expressed by Mr. Justice Holmes, referring to the English law, on page 413.

So far as the various decisions of circuit courts of appeal which the Court refers to are concerned, as they conflict with the many adjudications of this Court to which I have referred, it seems to me they ought not to be followed, but should be

overruled. It is undoubted that the leading one of the cases which all the others but follow and reiterate is the *Button Fastener Case* to which I have previously referred. I shall not undertake to review that case elaborately, because in substance and effect the theory upon which it proceeds is in absolute conflict with the many adjudications of this Court to which I have referred, and the reasoning which was employed in the case, in my opinion, in its ultimate aspect rests upon a failure to distinguish between the principle announced in *Wilson* v. *Sandford*, and followed and applied in the many cases which I have reviewed, and the doctrine announced and applied in *Mitchell* v. *Hawley*. In other words, the *Button Fastener Case* and the confusion which has followed the application of the ruling made in that case was but the consequence of failing to observe the difference between the rights of a patentee which were protected by the patent and those which arose from contract and therefore were subject alone to the general law. In addition it may be well to observe that the very groundwork upon which the case proceeded has been since authoritatively declared by this Court to be without foundation. For instance, it will become apparent from an analysis of the opinion in the case that it proceeded upon the theory that the doctrine upheld had been virtually sanctioned in previous adjudications of this Court. Since the decision, however, this Court, in *Bobbs-Merrill Co.* v. *Straus* (210 U. S., 345) has expressly declared that the doctrine had never been upheld by this Court. Moreover, also, in the Bobbs-Merrill case this Court, in considering one of the cases principally relied upon, in the opinion in the *Button Fastener Case*—the *Cotton Tie Case*—expressly pointed out that that case had been misconceived in the opinion in the *Button Fastener Case*, and did not have the significance which had there been attributed to it.

But even if I were to put aside everything I have said and were to concede for the sake of argument that the power existed in a patentee, by contract, to accomplish the results which it is now held may be effected, I nevertheless would be unable to give my assent to the ruling now made. If it be that so extraordinary a power of contract is vested in a patentee, I cannot escape the conclusion that its exercise, like every other power, should be subject to the law of the land. To conclude otherwise would be but to say that there was a vast zone of contract lying between rights under a patent and the law of the land, where lawlessness prevailed and wherein contracts could be made whose effect and operation would not be confined to the area described, but would be operative and effective beyond that area, so as to dominate and limit rights of every one in society, the law of the land to the contrary notwithstanding.

Again, a curious anomaly would result from the doctrine. The law in allowing the grant of a patent to the inventor does not fail to protect the rights of society; on the contrary, it safeguards them. The power to issue a patent is made to depend upon considerations of the novelty and utility of the invention and the presence of these prerequisites must be ascertained and sanctioned by public authority, and although this authority has been favorably exerted, yet when the rights of individuals are concerned the judicial power is then open to be invoked to determine whether the fundamental conditions essential to the issue of the patent existed. Under the view now maintained of the right of a patentee by contract to extend the scope of the claims of this patent it would follow that the incidental right would become greater than the principal one, since by the mere will of the party rights by contract could be created, protected by the patent law, without any of the precautions for the benefit of the public which limit the right to obtain a patent.

I have already indicated how, since the decision in the *Button Fastener Case*, the attempt to increase the scope of the monopoly granted by a patent has become common by resorting to the device of license restrictions manifested in various forms, all of which tend to increase monopoly and to burden the public in the exercise of their common rights. My mind cannot shake off the dread of the vast extension of such practices which must come from the decision of the Court now rendered. Who, I submit, can put a limit upon the extent of monopoly and wrongful restriction which will arise, especially if by such a power a contract which otherwise would be void as against public policy may be successfully maintained?

What could more cogently serve to point to the reality and conclusiveness of these suggestions than do the facts of this case? It is admitted that the use of the ink to work the patented machine was not embraced in the patent and yet it is now held that by contract the use of materials not acquired from a designated source has become an infringement of the patent, and exactly the same law is applied as though the patent in express terms covered the use of ink and other operative materials. It is not, as I understand it, denied, and if it were, in the face of the decision in the Miles Medical Co. case *supra*, in reason it cannot be denied that the particular contract which operates this result if tested by the general law would be void as against public policy. The contract, therefore, can only be maintained upon the assumption that the patent law and the issue of a patent is the generating source of an authority to contract to procure rights under the patent law not otherwise within that law, and which could not be enjoyed under the general law of the land. But here, as upon the main features of the case, it seems to me this Court has spoken so authoritatively as to leave no room for such a view. In *Pope Manufacturing Company* v. *Gormully* (144 U. S., 224) the validity of certain stipulations contained in a license to use patented inventions came under consideration. It was decided that contracts of that character, like all others, were to be measured by the law of the land and were non-enforcible if they were contrary to general rules of public policy. And it was further

held that even if contracts of that character were not void as against general principles of public policy, the aid of a court of equity would not be given to their enforcement if the stipulations were unconscionable and oppressive, as are, in my judgment, aside from the rule of public policy, the stipulations of the contract here involved.

Indeed, when the decree rendered by the lower court which is now affirmed and which is excerpted in the margin* is considered, it seems to me the conclusion cannot be escaped that although in the mental process by which it was held that relief under the patent law could be afforded the contract was treated as a restriction upon the use of the machine covered by the patent, so inexorable was the contrary result of the contract that in framing the decree it became necessary to give relief upon the theory that the gravamen of the suit was the violation of a contract stipulation in regard to unpatented materials.

For these reasons I, therefore, dissent.

ADJUDICATED PATENTS.

(U. S. C. C.) The Gale patent No. 635,823, for a polishing-machine, claims 1 and 8 *Held* valid, but not infringed. *Moore Carving Mach. Co.* v. *Clemons Mach. Co.*, 192 Fed. Rep., 122.

(U. S. C. C.) The Yarnell patent, No. 743,608, for a polishing-machine, claim 7 *Held* valid and infringed. *Moore Carving Mach. Co.* v. *Clemons Mach. Co.*, 192 Fed. Rep., 122.

(U. S. C. C.) The Rosenberg and Clark patent, No. 961,897, for a mail-box, *Held* infringed on a motion for preliminary injunction. *Climax Lock & Ventilator Co.* v. *Ajax Hardware Mfg. Co.*, 192 Fed. Rep., 126.

(U. S. C. C.) The Benson patent, No. 818,608, for a door-hanger, claims 5, 6, 7, 16, and 17 *Held* valid and infringed. *National Mfg. Co.* v. *Sharon Hardware Mfg. Co.*, 192 Fed. Rep., 130.

*The circuit court granted a decree in favor of the complainant for an accounting of profits and damages and for an injunction restraining the defendants from infringing upon the said Letters Patent and "from directly or indirectly procuring or attempting to procure, inducing or attempting to induce or causing any breach or violation of the covenant, condition or obligation now existing or which may hereafter exist on the part of vendees or licensees of said patented and restricted rotary mimeographs to the complainant by reason of the license restrictions hereinbefore set out and particularly from directly or indirectly making or causing to be made, or selling or causing to be sold, or offering or causing to be offered, to any person or concern whatsoever, any supplies adapted for use or capable of being used on said patented or restricted mimeographs with design or intent that the same shall be so used in violation of such license restriction; from directly or indirectly persuading or inducing such persons or concerns to purchase any such supplies not of the complainant's manufacture and sale, designed or adapted for use in such machines for use thereon in violation of such license; from advertising or causing to be advertised in any manner any supplies intended or designed for use in said rotary mimeographs in violation of such license; from publishing or causing to be published any offer, promise or inducement designed or intended to procure licensees or vendees of the said patented and restricted rotary mimeographs to use or purchase for use in such machine supplies not of the manufacture of the complainant in violation of such license, and from doing and performing any and all other acts or things designed or intended to persuade or induce said licensees or vendees to violate the condition or covenant binding upon them with respect to the use of said rotary mimeograph and from in any way further interfering with the business of the said complainant of marketing said machines and supplies therefor under license restrictions limiting such machines to use only in conjunction with supplies made by or procured from said complainant.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 2, 1912.

Arabella G. Starke, her assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of Starke's Dixie Plow Works, Incorporated, 7 South Fifteenth street, Richmond, Va., for trade-mark registration and trade-mark registration No. 11,026, dated March 13, 1884, to Arabella G. Starke, of Richmond, Va., and the notice of such declaration sent by registered mail to the said Arabella G. Starke at the address given has been returned by the post-office as undeliverable.

Notice is therefore hereby given to the said Arabella G. Starke, her assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 2, 1912.

Arabella G. Starke, her assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of Starke's Dixie Plow Works, Incorporated, 7 South Fifteenth street, Richmond, Va., for trade-mark registration and trade-mark registration No. 11,541, dated September 30, 1884, to Arabella G. Starke, of Richmond, Va., and the notice of such declaration sent by registered mail to the said Arabella G. Starke at the address given has been returned by the post-office as undeliverable.

Notice is therefore hereby given to the said Arabella G. Starke, her assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 29, 1912.

Goodwin & Co., their assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of The Standard Cigar Company, 1200 West South street, Canton, Ohio, for a trade-mark and registration No. 10,200, dated April 17, 1883, to Goodwin & Co., of New York, N. Y., and the notice of such declaration sent by registered mail to the said Goodwin & Co. at the address given has been returned by the post-office undelivered.

Notice is therefore hereby given to the said Goodwin & Co., their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 21, 1912.

Hutchens, Howe & Withington, their assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of Sigmund Rosenblatt & Son, Nos. 7 and 9 East Baltimore street, Baltimore, Md., for trade-mark registration and trade-mark registration No. 33,033, dated September 18, 1900, to Hutchens, Howe & Withington, Nos. 116 to 120 Michigan street, Chicago, Ill., and the notice of such declaration sent by registered mail to the said Hutchens, Howe & Withington at the address given has been returned by the post-office as undeliverable.

Notice is therefore hereby given to the said Hutchens, Howe & Withington, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 26, 1912.

Gabriel Codina Mir, his assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of the W. H. Crawford Co., 119 Commerce street, Baltimore, Md., for a trade-mark, registrations to Wilhelm Brunon, of Quedlinberg, Kingdom of Prussia, and German Empire, J. Eugene Jordan, of Seattle, Wash., Leo Senzmer, of New York, N. Y., Weeks & Potter, 360 Washington street, Boston, Mass., and Sam'l. H. Reerten & Co., of Baltimore, Md., and registration No. 18,346, dated August 26, 1890, to Gabriel Codina Mir, of Habana, Cuba, and the notice of such declaration sent by registered mail to the said Gabriel Codina Mir at the address given has been returned by the post-office undelivered.

Notice is therefore hereby given to the said Gabriel Codina Mir, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 12, 1912.

Silicon Wall Plaster and Manufacturing Company, its assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of McCormick Waterproof Portland Cement Company, Bank of Commerce Building, St. Louis, Mo., for trade-mark registration and the trade-mark registration of Simpson Brothers Company, of Chicago, Ill., and trade-mark registration No. 19,066, dated June 26, 1894, to the Silicon Wall Plaster and Manufacturing Company, and the notice of such declaration sent by registered mail to the said Silicon Wall Plaster and Manufacturing Company at the address given has been returned by the post-office undeliverable.

Notice is therefore hereby given to the said Silicon Wall Plaster and Manufacturing Company, its assigns or legal representatives, that if said company or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 13, 1912.

Pedro Moreda, his assigns or legal representatives, take notice:

An interference has been declared by this Office between the applications of Bernardo Moreda y Deben, 35 San Miguel street, Habana, Cuba, and of Moreda & Co., of Habana, Cuba, for trade-mark registration and trade-mark registration No. 17,102, dated October 15, 1889, to Pedro Moreda, 51 Dragones street, Habana, Cuba, and the notice of such declaration sent by registered mail to the said Pedro Moreda at the address given has been returned by the post-office undeliverable.

Notice is therefore hereby given to the said Pedro Moreda, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 19, 1912.

Louis Kuhlmann & Bro., their assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of the Idaho Soap Company, Limited, 306 Boume Building, Boise, Idaho, for registration of a trade-mark and trade-mark registration No. 12,624, dated March 17, 1886, to Louis Kuhlmann & Bro., 33 Hamrod street, Brooklyn, N. Y., and the notice of such declaration sent by registered mail to the said Louis Kuhlmann & Bro. at the address given has been returned by the post-office undeliverable.

Notice is therefore hereby given to the said Louis Kuhlmann & Bro., their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 7, 1912.

Harvey Manufacturing Co., its assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of The F. A. Week Co., of San Francisco, Cal., for a trade-mark, a trade-mark registered to the Empire Cure Company, of Jersey City, N. J., and trade-mark registration No. 24,902, dated July 10, 1894, to the Harvey Manufacturing Co., 41 De Kalb avenue, Brooklyn, N. Y., and the notice of such declaration sent by registered mail to the said Harvey Manufacturing Co. at the address given has been returned by the post-office undelivered.

Notice is therefore hereby given to the said Harvey Manufacturing Co., its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 7, 1912.

Empire Cure Company, its assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of The F. A. Week Co., of San Francisco, Cal., for a trade-mark, a trade-mark registered to the Harvey Manufacturing Co., 41 De Kalb avenue, Brooklyn, N. Y., and trade-mark registration No. 23,706, dated November 7, 1893, to the Empire Cure Company, of Jersey City, N. J., and the notice of such declaration sent by registered mail to the said Empire Cure Company at the address given has been returned by the post-office undelivered.

Notice is therefore hereby given to the said Empire Cure Company, its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 5, 1912.

The Flaccus & Elliott Co., its assigns or legal representatives, take notice:

An interference has been declared by this Office between the application for registration of The Heskin Spice Company, of Sixth, New, and Calvert streets, Cincinnati, Ohio, the registration of the Standard Import Co., Ltd., of 216-224 Tchoupitoulas street, New Orleans, La., dated February 4, 1908, No. 67,526, and the registration of The Flaccus & Elliott Co., of Wheeling, W. Va., dated August 5, 1907, No. 30,472, and the registry return receipt for the notice of such interference has been returned signed by "The E. C. Flaccus Co." of Wheeling, W. Va., and the said The E. C. Flaccus Co. has failed to file evidence of successorship, as required by the Office.

Notice is therefore hereby given to the said The Flaccus & Elliott Co., its assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.

Vol. 176—No. 4. TUESDAY, MARCH 26, 1912. Price—$5 per year.

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Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

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ISSUE OF MARCH 26, 1912.

Patents	800—No.	1,020,956 to No. 1,021,755,	inclusive.
Designs	33—No.	42,246 to No. 42,278,	inclusive.
Trade-Marks	92—No.	84,843 to No. 84,934,	inclusive.
Labels	9—No.	16,252 to No. 16,260,	inclusive.
Prints	4—No.	2,977 to No. 2,980,	inclusive.
Reissues	2—No.	13,389 to No. 13,391,	inclusive.
Total	940		

TO CITIZENS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	3	2	North Carolina	1	.....
Arizona	.....	.....	North Dakota	2	.....
Arkansas	2	.....	Ohio	49	3
California	31	4	Oklahoma	3	.....
Colorado	14	1	Oregon	4	.....
Connecticut	18	2	Pennsylvania	94	3
Delaware	.....	1	Rhode Island	12	1
Florida	.....	2	South Carolina	2	.....
Georgia	3	2	South Dakota	8	.....
Idaho	.....	.....	Tennessee	3	.....
Illinois	57	10	Texas	11	6
Indiana	27	2	Utah	3	.....
Iowa	19	3	Vermont	3	.....
Kansas	11	1	Virginia	8	1
Kentucky	5	.....	Washington	17	3
Louisiana	4	.....	West Virginia	5	.....
Maine	1	.....	Wisconsin	13	1
Maryland	9	.....	Wyoming	.....	.....
Massachusetts	51	9			
Michigan	9	2	Alaska, District of	.....	.....
Minnesota	9	3	Canal Zone	1	.....
Mississippi	2	.....	District of Columbia	3	1
Missouri	45	3	Hawaii Territory	1	.....
Montana	.....	.....	Philippine Islands	.....	.....
Nebraska	12	1	Porto Rico	.....	.....
Nevada	.....	.....	U. S. Army	.....	.....
New Hampshire	5	.....	U. S. Navy	.....	.....
New Jersey	36	6			
New Mexico	.....	.....	Total to citizens of the United States	735	97
New York	108	23			

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Algeria	.....	.....	Netherlands	1	.....
Argentina	.....	.....	Newfoundland	.....	.....
Austria-Hungary	1	.....	New South Wales	.....	.....
Belgium	.....	.....	New Zealand	.....	.....
Brazil	.....	.....	Norway	1	.....
British West Indies	.....	.....	Peru	1	.....
Canada	24	1	Roumania	.....	.....
Cape Colony	.....	.....	Russia	1	.....
Chile	.....	.....	Scotland	4	.....
China	.....	.....	South Australia	.....	.....
Costa Rica	.....	.....	Spain	.....	.....
Cuba	.....	.....	Sweden	3	.....
Denmark	.....	.....	Switzerland	1	.....
Ecuador	.....	.....	Turkey	1	.....
England	20	2	Transvaal, South Africa	.....	.....
France	3	1	Victoria	1	.....
Germany	29	2			
Ireland	.....	.....			
Italy	1	.....	Total to citizens of foreign countries	98	6
Jamaica	1	.....			
Mexico	.....	.....			

Disclaimer.

878,724.—*Paul Guenther*, Dover, N. J. SECTIONAL PLAITING DEVICE for STRAIGHT-KNITTING MACHINES. Patent dated February 11, 1908. Disclaimer filed March 15, 1912, by the patentee.

Enters this disclaimer—

"To claims 1, 3, and 6—

"In so far as the auxiliary shogging bar specified as an element in each of said enumerated claims may be construed to relate to that shogging bar whose lining thread carrier is located at the outer edge of the fabric or so far as the same relates to a structure other than that in which the lining thread carrier of the auxiliary shogging bar specified in each of said claims is that which is overtaken by the main thread carrier; i. e., is the one which is stationary at an intermediate portion of the fabric until overtaken and passed by the main thread carrier."

Further enters this disclaimer—

"To claims 2, 4, and 7—

"In so far as the lining thread carrier specified as an element in each of said enumerated claims may be construed to relate to that lining thread carrier which is located at the outer edge of the fabric, or so far as the same relates to a structure other than that in which the said lining thread carrier specified in each of said claims is that one overtaken by the main thread carrier; i. e., is the one which is stationary at an intermediate portion of the fabric until overtaken and passed by the main thread carrier."

Delivery of Patent.

RULE 169. The patent will be delivered or mailed on the day of its date to the attorney of record, if there be one; if not, to the patentee; or, if the attorney so request, to the patentee or assignee of an interest therein.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business March 23, 1912.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
313	1. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Jan. 20	Feb. 1	532
126	2. Bee Culture; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Pneumatic Despatch; Pneumatics; Presses; Store-Service; Tobacco.	Jan. 19	Feb. 6	518
176	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Feb. 27	Mar. 11	109
252	4. Bridges; Conveyors; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Metallic Building Structures.	Feb. 23	Feb. 23	338
167	5. Bookbinding; Harvesters; Jewelry; Music.	Jan. 16	Jan. 29	473
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	Feb. 24	Feb. 27	280
312	7. Educational Appliances; Clutches; Games and Toys; Mechanical Motors; Nut and Bolt Locks; Optics; Velocipedes.	Dec. 18	Feb. 6	664
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Stove Furniture; Supports.	Feb. 20	Feb. 23	417
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Pumps; Wind-Wheels.	Feb. 24	Feb. 17	312
295	10. Carriages and Wagons.....	Jan. 20	Feb. 1	671
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Feb. 1	Jan. 26	482
234	12. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Feb. 2	Jan. 23	508
320	13. Arms, Projectiles, and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Turning.	Jan. 12	Feb. 20	489
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Feb. 3	Feb. 16	378
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Liquid Coating Compositions; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastic Compositions; Plastics.	Jan. 24	Jan. 26	840
100	16. Telegraphy; Telephony.....	Feb. 6	Feb. 3	229
303	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	Feb. 23	Feb. 23	299
327	18. Injectors and Ejectors; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Boilers; Steam-Engines; Steam-Engine Valves.	Jan. 30	Feb. 15	271
236	19. Dampers, Automatic; Furnaces; Heat-Distributing Systems; Stoves and Furnaces.	Jan. 30	Jan. 27	472
179	20. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Feb. 5	Feb. 27	218
113	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Feb. 15	Feb. 21	275

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Jan. 23	Feb. 21	307
379	23. Accounting; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Feb. 12	Feb. 14	417
144	24. Apparel; Apparel Apparatus; Sewing-Machines.	Feb. 7	Feb. 5	450
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Feb. 15	Feb. 26	195
186	26. Electricity, Generation; Motive Power.	Oct. 23	Nov. 23	513
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Feb. 12	Feb. 10	401
65	28. Internal-Combustion Engines..	Jan. 5	Jan. 10	791
147	29. Coopering; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Wood-working; Woodworking-Tools.	Jan. 15	Feb. 23	444
189	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Jan. 3	Feb. 24	280
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	Feb. 3	Feb. 1	314
278	32. Carbonating Beverages; Curtains, Shades, and Screens; Dispensing Beverages; Dispensing-Cans; Ornamentation; Packaging Liquids; Refrigeration.	Jan. 2	Feb. 24	305
71	33. Cutlery; Domestic Cooking Vessels; Masonry and Concrete Structures; Paving; Tents Canopies, Umbrellas, and Canes.	Jan. 13	Jan. 26	446
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	Feb. 3	Jan. 25	510
244	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	Feb. 19	Feb. 20	737
264	36. Drafting; Driers; Engraving; Measuring Instruments; Photography.	Feb. 14	Feb. 7	503
107	37. Electric Lighting; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Jan. 10	Feb. 23	438
378	38. Animal Husbandry; Artesian and Oil Wells; Fishing and Trapping; Stationery; Stone-Working.	Jan. 17	Feb. 8	569
321	39. Water Distribution.....	Dec. 26	Dec. 18	653
220	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package- and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Feb. 21	Feb. 20	382
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	Jan. 19	Feb. 10	328
279	42. Electric Railways; Electric Signaling; Railway Signaling; Signals.	Jan. 20	Jan. 17	550
332	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Beverage; Surgery; Water Purification.	Feb. 14	Feb. 13	330

Oldest new case, Oct. 23; oldest amended, Nov. 23.

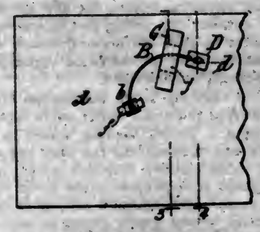
Total number of applications awaiting action 19,063

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks.....	Feb. 8	Feb. 2	1186
	Designs.....	Jan. 13	Feb. 9	387
	Labels and Prints.....	Mar. 11	Mar. 16	46

PATENTS

GRANTED MARCH 26, 1912.

1,020,956. ADVERTISING DEVICE. HENRY C. AVERY, Holyoke, Mass., assignor of one-half to John Lewis Perkins, Holyoke, Mass. Filed Sept. 12, 1911. Serial No. 648,903. (Cl. 46—40.)



1. In an advertising device, a card or plate having a delineation thereon of a living creature and provided with an aperture at the location of a feature thereof, and a resilient piece supported on the rear side of the plate and carrying a feature member visible through said aperture and so operative that under the vibration of the resilient piece the feature member will be also vibrated at said aperture.

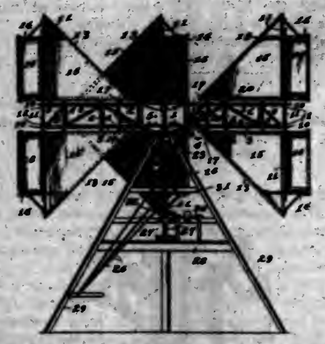
2. In an advertising device, a card or plate having a delineation thereon of a living creature and provided with an aperture at the location of a feature thereof, and a spring wire having one end portion thereof engaged on the rear side of the plate, and carrying at its free end a feature member visible through said aperture.

3. In an advertising device, a card or plate having a delineation thereon of a living creature and provided with an aperture at the location of a feature thereof, a spring wire having one end portion thereof engaged on the rear side of the plate and carrying at its free end a feature member visible through said aperture and means on the rear side of the plate with which such spring wire is loosely engaged for restraining the latter in close relation to the rear surface of the plate.

4. In an advertising device, a card or plate having a delineation thereon of a human face and provided with an aperture at the location of one of the eyes thereof, a spring wire having one end portion thereof connected at the back of the plate, and having its other end portion free to vibrate in carrying a flat surfaced piece positioned at the aperture and having the representation of an eye in the front side thereof and a yoke secured on the rear surface of the plate between the free and secured portions of the wire for restraining the wire against rearward displacement from its position in proximity alongside the plate.

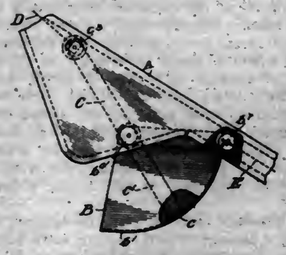
1,020,957. WINDMILL. JOHN H. BAXTER, Berthoud, Colo. Filed July 1, 1911. Serial No. 636,490. (Cl. 170—1.)

In a wind mill of the character described, a wheel comprising upper and lower hub members and radial arms associated therewith, said arms being each composed of top and bottom bars and suitable spacing and connecting means, truss wires including turn buckles connecting the several arms, a vertical shaft associated for rotation with each radial arm, said vertical shafts having sail carrying frames, relatively large main sails and relatively small back sails supported by said frames, said main sails and back sails being disposed at opposite sides of the axes of the vertical shafts, slidably supported stop members carried by the radial arms and adapted to be projected in the path of the main sail carrying portions of the sail



carrying frames, spring actuated disks supported for rotation and connected pivotally with the stop members, means connected with said disks to rotate them against the tension of the springs to retract the stop members, and means for actuating the retracting means.

1,020,958. CLEAN-OUT FOR EXCAVATOR-BUCKETS. HANS J. BENTSON, Winthrop Harbor, Ill., assignor to Frederick C. Austin, Chicago, Ill. Filed Feb. 23, 1909. Serial No. 479,323. (Cl. 37—39.)



1. A traveling bucket, a runway, wheels on the bucket engaging the runaway, a scraper for the interior of the bucket, pivoted on the sides of the bucket, wheels on one end of said scraper engaging the runway, and means on said runway for causing the bucket to tilt and the scraper to move across the interior thereof.

2. In an excavator, a traveling bucket, a bail-shaped scraper for the interior thereof, adapted to travel with the bucket, and means for automatically operating said scraper to dump the load, said scraper being pivoted to swing downward in the direction of discharge from said bucket.

3. In an excavator, a traveling bucket, a runway, wheels on the bucket engaging the runway, a scraper for the in-

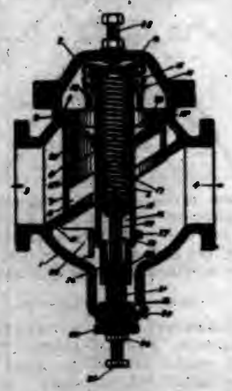
terior of the bucket, pivoted on the sides of the bucket, wheels on one end of said scraper engaging the runway, and means on said runway for causing the bucket to tilt and the scraper to move across the interior thereof, said scraper being pivoted to swing downward in the direction of discharge from said bucket.

4. The combination, in a machine of the character set forth, of a traveling bucket, an automatic scraper for the inner surface thereof, a runway upon which the bucket travels back and forth, and means on the runway for tilting the bucket and operating the scraper to discharge the load.

5. The combination, in a machine of the character set forth, of a traveling bucket, a scraper for the interior thereof, adapted to travel with the bucket, means for tilting the bucket and thereby causing the scraper to move across the inner surface of the bucket, a runway upon which the bucket travels back and forth, means on the runway for tilting the bucket and operating the scraper to discharge the load, and means connected with the scraper for drawing the bucket forward.

[Claims 6 to 15 not printed in the Gazette.]

1,020,959. PRESSURE-REDUCING VALVE. EDWIN J. BEST, Ensley, Ala. Filed July 7, 1911. Serial No. 637,389. (Cl. 50—15.)



1. In a valve of the character described, a valve casing having a passage therethrough, a valve member disposed within said casing for controlling said passage and which comprises a hollow sleeve surrounded at an intermediate point by an annular valve face, a spring means in the casing which enters said sleeve and tends to move the valve member to open said passage, means to admit the lower pressure in the casing above the valve member, and means to expose the valve to a pressure lower than the pressure in the casing to unbalance the valve and permit it to move in opposition to said spring, substantially as described.

2. In a pressure reducing valve mechanism, a valve casing having a passage therethrough, a valve member within the casing comprising an annular valve face, a spring housing and means to connect said valve face to an intermediate point of said housing, there being pressure equalizing ports between the valve and housing, an elongated coiled spring disposed in said housing, means to expose the valve member to atmospheric pressure to unbalance it and permit it to move in opposition to said spring, and means operable from the outside of the casing to adjust the spring tension, substantially as described.

3. In a pressure reducing valve, a casing having inlet and outlet ports and a partition, which intercepts the flow of fluid through the casing, comprising an inclined diaphragm wall and a bushing having one or more ports disposed diagonally to the line of flow of the fluid and extending around the bushing, a valve member surrounded at an intermediate point by an inclined annular valve face which slides in the bushing and closes said port or ports, said valve member being automatically adjustable between the lower pressure in the casing and a force tending to open the valve and having only its valve face in sliding contact with said bushing, and means to guide and center said valve member, substantially as described.

4. A pressure reducing valve mechanism comprising a casing having inlet and outlet ports separated by a diaphragm which divides the casing into high and low pressure sides, a cylindrical ported bushing seated in an opening in the diaphragm, a valve member exposed at each end to the lower pressure and comprising a central tubular sleeve and a ring valve face disposed substantially midway about said sleeve and which makes sliding contact with the bushing and is adapted to close the ports therein, a guide for said tubular sleeve, a spring which works in said sleeve and is surrounded by said valve which it tends to open, a tension adjusting means for the spring which is operable from without the casing, and means to unbalance the valve member so that the lower pressure will tend to move the same to close the valve in opposition to said spring, substantially as described.

5. A pressure reducing valve mechanism comprising a valve casing having inlet and outlet ports separated by a ported diaphragm, a ported bushing seated in the casing and diaphragm and intersecting the high pressure end of the casing, a valve member disposed wholly within said casing and exposed at both ends to the lower pressure and comprising a valve which makes a sliding fit in the bushing and a central hollow sleeve closed at one end, means to guide the other end of said sleeve, packing means to prevent leakage of pressure past said guide means into said sleeve, means to expose the interior of said sleeve to atmospheric pressure to unbalance said valve member, and adjustable spring means housed within the tubular sleeve and adapted to oppose the tendency of the valve to move responsive to its unbalanced condition, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

1,020,960. CAR-TRUCK CONSTRUCTION. JOSEPH W. BETTENDORF, Bettendorf, Iowa. Filed June 17, 1911. Serial No. 633,694. (Cl. 105—105.)



1. In a car truck, a side frame having a bolster opening therein, a bearing movably supported within said opening, and a bolster having a limited rotative connection with said bearing.

2. In a car truck, side frames, a movable bearing, a bolster held in said frames by said bearing, and means for permitting rotation of said bolster relative to said side frames.

3. In a car truck, a bolster, side frames, bearings held therein, bolster springs supporting said bearings, and means for supporting said bolster within said bearings, so that said bolster is capable of rotation with respect to said side frames.

4. In a car truck, side frames, movable bearings held within said side frames, a bolster, and means for supporting said bolster within said bearings, so that said bolster is capable of rotation but is held against any longitudinal movement with respect to said side frames.

5. In a car truck, a bolster, side frames having bolster openings therein, movable bearings provided with flanges bearing against the sides of said openings, and means for permitting rotation of said bolster relative to said side frames.

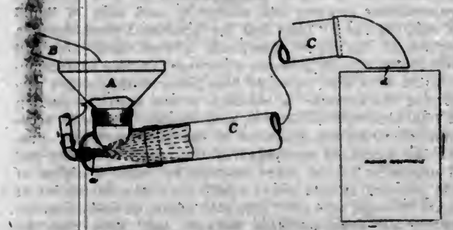
[Claims 6 and 7 not printed in the Gazette.]

1,020,961. TRUCK-HANDLE CLAMP. JAMES W. BUTCHER, Jr., Washington, D. C. Filed July 22, 1910. Serial No. 573,834. (Cl. 24—257.)



In a device for the purpose set forth, a housing said housing being provided with an open face and having two of its sides, and one of its ends provided with lugs, the opposite end of the housing being provided with a substantially V-shaped projection and the central portion of the housing being also provided with a curved projection of non-circular contour, a clamp constructed of a single strand of resilient material, said clamp comprising a looped portion having longitudinally extending arms, one overlapping the other, and having their extremities curved outwardly to provide a flaring mouth, the loop of the clamp adapted to engage the centrally curved projection of the said housing whereby with the coöperation of the lugs on the two sides, and one end of the housing a means is provided to securely hold the clamp within the housing and the V-shaped projection of the said housing adapted to be contacted by the opposite arms to retain the said arms in spaced relation with each other.

1,020,962. CONVEYING AND PACKING MATERIALS. CORNELIUS CABLE, Elkhart, Ind. Filed Feb. 18, 1911. Serial No. 609,457. (Cl. 193—10.)



In combination, in an apparatus for conveying and packing pulverized material, a conveyer pipe C, means for conveying pulverized material thereto through an opening in the side of said pipe and a steam pipe arranged to discharge steam into the end of said pipe C, said steam pipe having a nozzle as a arranged to discharge across the material as it falls into the pipe C, said nozzle being flaring and having, upon its inner flaring surface, rifiings, substantially as described.

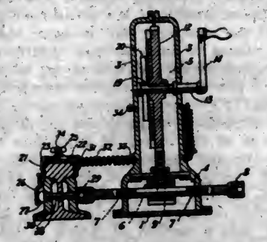
1,020,963. PACKAGE-TIE. HORACE M. CAKE, Washington, D. C. Filed Jan. 14, 1911. Serial No. 602,591. (Cl. 24—18.)



1. A package tie comprising a body portion having two adjacent terminal members at one side thereof, one of said terminal members being provided with means for securing a cord, the other of said terminal members having a smooth concave inner edge and a wedge slot adjacent thereto, and the body portion being provided with a smooth curved inner edge substantially opposite the terminal members.

2. A package tie comprising a body portion having two adjacent terminal members at one side thereof, said terminal members being provided with smooth concave inner edges, wedge slots adjacent said edges, the body portion being provided with an opening in the side opposite the terminal members and having a smooth curved inner edge along said opening facing the concave edges of the terminal members.

1,020,964. NUT-ROTATING DEVICE. WILLIAM CORLIS CASWELL, Wellsville, Ohio. Filed Apr. 21, 1911. Serial No. 622,553. (Cl. 81—56.)



1. A device for rotating nuts comprising a casing having its lower portion formed with openings with the walls thereof threaded, a threaded wrench extending through said openings and having its threads engaging with the threads of said wall, a relatively wide gear wheel fixed to said wrench and adapted when rotated to longitudinally shift the wrench, a pair of gear wheels arranged above said relatively wide gear wheel and journaled in said casing and adapted when operated to revolve said relatively wide gear wheel and rotate said wrench during the longitudinal movement thereof, and means journaled in said casing and engaging with said pair of gears for revolving them.

2. A device for rotating nuts comprising a support adapted to be positioned to have either side oppose the nut to be rotated, a wrench having its shank mounted in and projecting from each side of said support and having each of its projecting ends provided with a nut engaging means, means carried by said support for rotating and longitudinally shifting said wrench in either direction, and means for detachably connecting either side of said support in position to oppose the nut in whichever direction the wrench is shifted.

3. A device for rotating nuts comprising a support adapted to be positioned to have either side oppose the nut to be rotated, a wrench having its shank mounted in and projecting from each side of said support and having each of its projecting ends provided with a nut engaging means, means carried by said support for rotating and longitudinally shifting said wrench in either direction, and resilient means carried by each side of said support for detachably connecting either side thereof in position to oppose the nut depending in whichever direction the wrench is shifted.

1,020,965. METHOD OF PUMPING LIQUIDS. HENRY M. CHANCE and THOMAS M. CHANCE, Philadelphia, Pa. Filed Nov. 5, 1910. Serial No. 590,790. (Cl. 103—67.)



1. The hereinbefore described method of pumping liquids by means of the energy of a medium having high

initial pressure and expansive force; which consists in causing said medium to impart pressure and movement to a body of liquid, a portion of which is interposed between a pump chamber and a relatively low pressure accumulator and a portion of which is interposed between an inlet for liquid and a region of relatively high pressure discharge, the respective portions of said liquid being of such dimensions as substantially to retard the expansion of said medium; transmitting pressure and energy by means of said body of liquid to said regions of high and low pressure; discharging a portion of the liquid interposed between said inlet and said region of high pressure discharge; cutting off communication with said region of high pressure discharge and permitting the actuating pressure to continue to act upon the portion of liquid interposed between the pump chamber and said accumulator during the expansion of the prime medium; whereby a portion of the relatively high pressure energy of said medium is utilized to pump against relatively high pressure and the balance of available energy of said medium is utilized to perform work against relatively low pressure.

2. The hereinbefore described method of pumping liquids by means of the energy of a medium having high initial pressure and expansive force, which consists in causing said medium to impart pressure and movement to a body of liquid, a portion of which is interposed between a pump chamber and a relatively low pressure accumulator, and a portion of which is interposed between an inlet for liquid and a region of relatively high pressure discharge; the respective portions of said liquid being of such dimensions as substantially to retard the expansion of said medium; transmitting pressure and energy by means of said body of liquid to said regions of high and low pressure; discharging a portion of the liquid interposed between said inlet and said region of high pressure discharge; cutting off communication with said region of high pressure discharge; permitting the actuating pressure to continue to act upon the portion of liquid interposed between the pump chamber and said accumulator during the expansion of the prime medium; causing the continued movement of the liquid to create a region of low pressure at said inlet; admitting a new increment of liquid through said inlet into said region of low pressure; cutting off communication between said inlet and the source of supply of liquid to be pumped and in causing the accumulator to react upon that portion of liquid interposed between said pump chamber and said accumulator to effect the return stroke thereof in preparation for the next out stroke thereof.

3. The hereinbefore described method of pumping liquids by means of the energy of a medium having high initial pressure and expansive force, which consists in causing said medium to impart pressure and movement to a body of liquid, a portion of which is interposed between a pump chamber and a relatively low pressure accumulator and a portion of which is interposed between an inlet for liquid and a region of relatively high pressure discharge; the respective portions of said liquid being of such dimensions as substantially to retard the expansion of said medium; transmitting pressure and energy by means of said body of liquid to said regions of high and low pressure; discharging a portion of the liquid interposed between said inlet and said region of high pressure discharge; cutting off communication with said region of high pressure discharge; permitting the actuating pressure to continue to act upon the portion of liquid interposed between the pump chamber and said accumulator during the expansion of the prime medium; causing the continued movement of the liquid to create a region of low pressure at said inlet; admitting a new increment of liquid through said inlet into said region of low pressure; cutting off communication between said inlet and the source of supply of liquid to be pumped and in causing the accumulator to react upon that portion of liquid interposed between said pump chamber and said accumulator to effect the return stroke thereof and to compress the prime medium in preparation for the next out stroke thereof.

4. The hereinbefore described method of pumping liquid by means of the energy of a medium having high initial pressure and expansive force, which consists in causing an actuator directly driven by said medium to impart pressure and movement to a body of liquid, a portion of which is interposed between said actuator and a relatively low pressure accumulator and a portion of which is interposed between an inlet for liquid and a region of relatively high pressure discharge, the respective portions of said liquid being of such dimensions as substantially to retard the expansion of said medium; transmitting pressure and energy by said body of liquid to said regions of high and low pressure; discharging a portion of the liquid interposed between said inlet and said region of high pressure discharge; cutting off communication with said region of high pressure discharge; and permitting the actuator to continue to act upon the portion of liquid interposed between said actuator and said accumulator during the expansion of the prime medium; whereby a portion of the relatively high pressure energy of said medium is utilized to pump liquid against relatively high pressure and the balance of available energy of said medium is utilized to perform work against relatively low pressure.

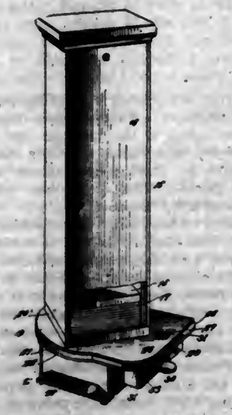
5. The hereinbefore described method of pumping liquids by means of the energy of a medium having high initial pressure and expansive force, which consists in causing an actuator directly driven by said medium to impart pressure and movement to a body of liquid, a portion of which is interposed between said actuator and a relatively low pressure accumulator and a portion of which is interposed between an inlet for liquid and a region of relatively high pressure discharge, the respective portions of said liquid being of such dimensions as substantially to retard the expansion of said medium; transmitting pressure and energy by said body of liquid to said regions of high and low pressure; discharging a portion of the liquid interposed between said inlet and said region of high pressure discharge; cutting off communication with said region of high pressure discharge; permitting the actuator to continue to act upon the portion of liquid interposed between said actuator and said accumulator during the expansion of the prime medium; causing the continued movement of the liquid after the end of expansion of the prime medium to create a region of low pressure at said inlet; admitting a new increment of liquid through said inlet into said region of low pressure; cutting off communication between said inlet and the source of supply of liquid to be pumped and causing the accumulator to react upon that portion of liquid interposed between said actuator and said accumulator to effect the return stroke thereof in preparation of the next out stroke thereof.

[Claims 6 to 8 not printed in the Gazette.]

1,020,966. COIN-CONTROLLED VENDING-MACHINE. CLEMENT C. CLAWSON, Flagtown, N. J. Filed July 12, 1910. Serial No. 571,573. (Cl. 194—92.)

1. In a coin-controlled vending machine, a rotary horizontal disk-plate goods-ejector having an exposed laterally extending operating handle, a laterally extending stop-shoulder integral therewith and an opening to receive a coin flatwise, a horizontal plate over said ejector containing a coin-opening corresponding with the coin-opening in the ejector, and a plate below said ejector having a segmental coin-runway and at the outer end thereof an escape opening for the coin, combined with a transverse stop-bar (40) crossing the path of said stop-shoulder and having an upwardly projecting part in the path of the coin-opening in the ejector and adapted to enter the same, and a spring normally acting to move said bar into the path of said stop-shoulder and its said upwardly projecting part against said ejector to enter the coin-opening therein; substantially as set forth.

2. A coin-controlled vending machine, a rotary horizontal disk-plate goods-ejector having an exposed laterally extending operating handle, a laterally extending stop-shoulder integral therewith and an opening to receive a coin flatwise, a horizontal plate over said ejector containing a coin-opening corresponding with the coin-opening in the ejector, and a plate below said ejector having a segmental coin-runway and at the outer end thereof an escape opening for the coin, combined with a transverse stop-bar (40) crossing the path of said stop-shoulder and having a wheel thereon in the path of the coin-opening in the ejector and adapted to enter the same when the ejector is operated without a proper coin in said opening, and a spring normally acting to move said bar into the path of said stop-shoulder and its said wheel against the ejector to enter said opening therein; substantially as set forth.



3. In a coin-controlled vending machine, a rotary horizontal disk-plate goods-ejector having an exposed laterally extending operating handle, a laterally extending stop-shoulder integral therewith and an opening to receive a coin flatwise, a plate over said ejector containing a coin-opening corresponding with the coin-opening in the ejector, and a plate below said ejector having a segmental coin-runway and at the outer end thereof an escape opening for the coin, combined with a transverse stop-bar (40) crossing the path of said stop-shoulder and having a pivotal support at one end adjacent to said runway and provided near said end with an upwardly projecting part in the path of the coin-opening in the ejector to enter the same in the absence of a proper coin therein, and a spring normally acting against said bar to turn the same upwardly on its pivotal support, whereby with slight movement at the pivotal end of the bar the other end of said bar is given an effective projection into the path of said stop-shoulder; substantially as set forth.

4. In a coin-controlled vending machine, a rotary horizontal disk-plate goods-ejector having an exposed laterally extending operating handle, a laterally extending stop-shoulder integral therewith and an opening to receive a coin flatwise, a plate over said ejector containing a coin-opening corresponding with a coin-opening in the ejector, and a plate below said ejector having a segmental coin-runway and at the outer end thereof an escape opening for the coin, combined with a transverse stop-bar (40) crossing the path of said stop-shoulder and having a pivotal support at one end adjacent to said runway and having near said end a wheel in the path of the coin-opening in the ejector to enter the same in the absence of a proper coin therein, and a spring normally acting against said bar to turn the same upwardly on its pivotal support, whereby with slight movement at the pivotal end of the bar the other end of said bar is given an effective projection into the path of said stop-shoulder; substantially as set forth.

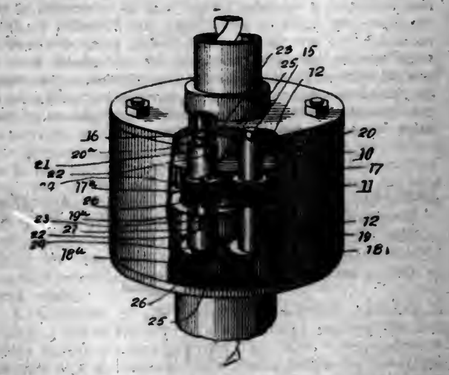
5. In a coin-controlled vending-machine, a rotary horizontal disk-plate goods-ejector having an exposed laterally extending operating handle, a laterally extending stop-shoulder integral therewith and an opening to receive a coin flatwise, a plate over said ejector containing a coin-opening corresponding with the coin-opening in the ejector, and a plate below said ejector having a segmental coin-runway and at the outer end thereof an escape opening for the coin and in advance thereof an opening through which a coin deficient in diameter may fall, combined with a transverse stop-bar crossing the path of said stop-shoulder and having an upwardly projecting part in the path of the coin-opening in the ejector and adapted to enter the same, and a spring normally acting to move said bar into the path of said stop-shoulder and its said upwardly projecting part against said ejector to enter the coin-opening therein; substantially as set forth.

1,020,967. STARTING MECHANISM FOR HYDROCARBON-ENGINES. FRED DETTMAN, West Dundee, Ill. Filed Dec. 13, 1911. Serial No. 665,453. (Cl. 123—185.)



In a cranking mechanism for hydrocarbon engines the combination with a clutch member fast on the engine shaft, of a rotatably mounted endwise movable starting shaft carrying a coöperative clutch member, a stationary bearing sleeve in which the cranking shaft is mounted, a ring surrounding the sleeve, clutching mechanism adapted to lock the ring from rotation on the sleeve in one direction only, clutch teeth formed on the ring, a second ring loosely mounted on the cranking shaft, said ring being provided with clutch teeth adapted to engage the clutch teeth of the first ring, a spring surrounding the cranking shaft and adapted to normally hold the teeth of the clutch rings in engagement with each other, a collar fast on the crank shaft and said collar and second-mentioned ring being provided with coöperating clutch members, for the purpose described.

1,020,968. MECHANICAL MOVEMENT. EDWARD A. DEWALD, Leetsdale, and AARON ROSENSON, Ambridge, Pa. Filed June 3, 1911. Serial No. 631,045. (Cl. 74—54.)



1. In a mechanical movement for converting oscillatory motion to a continuous rotary motion, an oscillatory power gear, a shaft adapted to be connected to the work, a supplemental shaft, two pinions carried by each of said shafts, said pinions being correspondingly positioned, one pinion of each shaft being in constant mesh with a pinion of the other shaft, the remaining pinions being in constant mesh with the power gear and out of mesh with each other, and means on the work shaft for operatively connecting either of its pinions thereto.

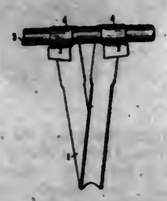
2. In a mechanical movement for converting oscillatory motion to a continuous rotary motion, an oscillatory

power gear, a shaft adapted to be connected to the work, a supplemental shaft, two pinions carried by each of said shafts, said pinions being correspondingly positioned, one pinion of each shaft being in constant mesh with a pinion of the other shaft, the remaining pinions being in constant mesh with the power gear and out of mesh with each other, and means on the work shaft for operatively connecting either of its pinions thereto, said means comprising a sleeve carried by and moving with said work shaft and movable axially thereon, said sleeve and its pinion having complemental means for operatively connecting or disconnecting them together depending upon the direction of movement of the pinion.

3. In a mechanical movement for converting oscillatory motion to a continuous rotary motion, an oscillatory power gear, a shaft adapted to be connected to the work, a supplemental shaft, two pinions carried by each of said shafts, said pinions being correspondingly positioned, one pinion of each shaft being in constant mesh with a pinion of the other shaft, the remaining pinions being in constant mesh with the power gear and out of mesh with each other, and means on the work shaft for operatively connecting either of its pinions thereto, said means comprising a sleeve carried by and moving with said work shaft and movable axially thereon, said sleeve and its pinion having complemental means for operatively connecting or disconnecting them together depending upon the direction of movement of the pinion, said latter means embodying a pin carried by the pinion and a cam face formed on the end of the sleeve, said face being adapted to form a shoulder in the path of movement of the pin in one direction.

4. In a mechanical movement, an oscillatory gear, a pair of shafts external of said gear, one of said shafts being adapted to be operatively connected to the work, pinions carried by said shafts, each of said shafts having a pinion in constant mesh with said gear and out of mesh with each other, and each shaft also having a pinion in constant mesh with the pinion of the other shaft, the pinions of the work shaft being loosely mounted on said shaft, the pinions of the other shaft being secured to move in unison with said shaft, each of the pinions of the work shaft having a pin extending in parallelism with the shaft axis and projecting laterally from the side thereof, said work shaft having an independent sleeve for each of its pinions, said sleeves being movable axially and each having a cam face on its edge adjacent its pinion, said cam face providing a shoulder in the path of movement of the pin when the latter is movable in one direction to drive the shaft, the cam faces of said sleeves being arranged in such manner that the movement of said power gear in one direction will cause one of the pinions of the work shaft to drive said shaft while a movement of said gear in the opposite direction will cause the other pinion of that shaft to provide the drive operation.

1,020,969. CABLE-SUPPORT. THEODORE AUGUSTINE DISSEL, Boston, Mass. Filed July 15, 1911. Serial No. 638,772. (Cl. 248—33.)



In combination with a supporting span wire, a device of the character described comprising an integral piece of sheet metal bent in the form of a helical loop, the ends of which are provided with hook portions formed to receive the wire below the open ends thereof, said hook portions facing in the same direction toward the interior of the loop whereby the supporting wire may be held in place until clamped by the ends of the hooks in final position, the body portion of said loop contacting with the cable adapted to be supported thereby, being curved to prevent wear.

1,020,970. WINDOW-VENTILATOR. JAMES W. DOWNS, Alameda, Cal. Filed Apr. 25, 1911. Serial No. 623,282. (Cl. 98—31.)



1. A ventilator comprising a parallelepiped body having openings, shutters arranged upon the body at the upper and lower edges of the openings, the outer shutters converging toward each other at their inner edges and adapted to serve as draft concentrators, and the inner shutters lying parallel with each other with their outer edge portions upwardly disposed.

2. A ventilator comprising a parallelepiped body, a section slidably mounted at the end of the body, a return spring connected with said section and the body, a shaft journaled in the body, a handle attached to the shaft and housed in the recess provided at the side of the bory, a cam carried by said shaft and engaging the section, shutters located at the upper and lower edges of the openings, the outer shutters having their inner edge portions converging toward each other and adapted to serve as draft concentrators, the inner shutters lying parallel with each other and having their outer edge portions upwardly disposed.

1,020,971. SOLDERING-IRON. NATHAN I. DRYFOOS, Cleveland, Ohio. Filed Apr. 26, 1911. Serial No. 623,381. (Cl. 118—109.)



1. A soldering tool, comprising a head provided with a chamber, said chamber being air-tight during operation of said tool, and a longitudinally grooved pin secured in said head and leading from said chamber to the exterior of said head.

2. A soldering tool, comprising a head provided with a chamber, said chamber being air-tight during operation of said tool, and a tinned copper pin secured in said head and leading from said chamber to the exterior of said head, said pin being longitudinally grooved.

3. A soldering tool, comprising a head provided with a chamber, said chamber being air-tight during operation of said tool, a longitudinally grooved pin secured in said head and leading from said chamber to the exterior of said head, and a tubular handle opening into said chamber.

4. A soldering tool, comprising a head provided with a chamber, said chamber being air-tight during operation of said tool, a longitudinally grooved pin secured in said head and leading from said chamber to the exterior of said head, means for allowing longitudinal movement of said pin, and a tubular handle opening into said chamber.

5. A soldering tool, comprising a head provided with a chamber, said chamber being air-tight during operation of said tool, a longitudinally grooved pin secured in said head and leading from said chamber to the exterior of said head, a set screw adapted alternatively to fixedly secure said pin or to allow limited longitudinal movement thereof, and a tubular handle opening into said chamber.

[Claim 6 not printed in the Gazette.]

1,020,972. RAIL-JOINT. GEORGE P. BUSTIS, Washington, D. C. Filed Jan. 11, 1911. Serial No. 602,116. (Cl. 238—8.)



1. A rail joint comprising the bisected ends of two rails the webs of such ends being offset and overlapped and provided with elongated holes, combined with offset fish plates the outer member of each of which is rigidly attached to the main portion of the web of one rail, and the inner member of each of which has elongated holes corresponding to those in the offset webs, and bolts completing the union of said inner member and the offset webs, whereby expansion and contraction at the central portion of the joint is provided for, substantially as set forth.

2. A rail joint comprising two rails an end of each of which has a part of the length of its web offset and a part of the head and also a portion of the base removed, and the offset lengths of the two rails being provided with elongated bolt openings, combined with offset fish plates the inner ends of which have holes corresponding to those of the offset lengths of the two rails, and the outer ends of which fish plates have non-elongated holes corresponding to bolt holes in the main parts of the webs of the two rails whereby, when the joint is assembled and bolted up, expansion and contraction are allowed at the offset and overlapped union of the rails and the inner ends of the embracing fish plates, substantially as set forth.

1,020,973. CONCRETE RAILWAY CROSS-TIE. WILLIAM W. FRISHOLM, Leadville, Colo. Filed Apr. 3, 1911. Serial No. 618,667. (Cl. 238—3.)



1. In concrete railway ties, a truss comprising a group of interlaced, longitudinally arranged bars, so arranged as to have an enlarged central portion by bending the center portions of their length outwardly to form with oppositely and similarly bent bars diamond shaped forms and having their ends converging to end portions smaller than their central portion and having rectangular shaped box portions extending from said smaller end portions, said central group of bars being extended to and connected to some portion of said end box shaped members.

2. In concrete railway ties, a truss comprising a group of interlaced, longitudinally arranged bars, so arranged as to have an enlarged central portion by bending the center portions of their length outwardly to form with oppositely and similarly bent bars diamond shaped forms and having their ends converging to end portions smaller than their central portion and having rectangular shaped box portions extending from said smaller end portions, said central group of bars being extended to and connected to some portion of said end box shaped members, said concrete railway tie being provided with a rail receiving plate arranged to secure rails in operative positions to said concrete tie.

3. In concrete railway ties, the combination of the interlaced truss composed of twisted concrete reinforcing bars connected together, said truss comprising a plurality of bars adapted to form the longitudinal core of the central body portion of the concrete tie and arranged to comprise a central group of bars that are bent to form a center portion of larger size than its portions that are at equal distances from its central portion, said small portions of this central longitudinal body portion being bent at right angles to their lengths and extending in oppositely diverging lines to the corners of cross bars to which they are secured, said cross bars being arranged to form rectangular box shaped ends at the ends of said truss, said box shaped ends being provided with diagonally arranged bars extending from each outward corner of said box form of ends to the opposite outer ends of the opposite box form of end portion of said truss, and means for securing rails to said concrete tie, the said ends of said concrete ties being arranged to be placed in abutting side edge relation on the road bed of a railway so as to form a continuous concrete road bed at their box shaped ends with apertures between the central longitudinal portions, said tie being provided with channels extending transversely across the box portions of said tie adapted to receive said rail securing means, and said concrete ties being provided with tubular apertures transversely through the ends of said concrete ties adapted to receive electric current wires.

1,020,974. VALVE HEAD-GATE. WILLIAM F. GARBE, Fort Collins, Colo. Filed June 3, 1911. Serial No. 631,190. (Cl. 137—5.)



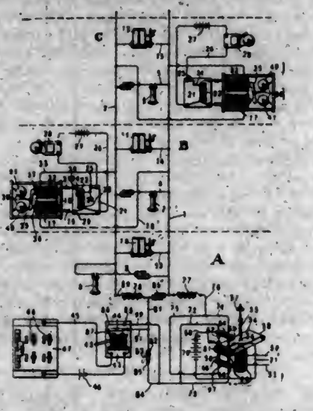
1. A device of the character described, including a valve rectangular in general outline and slightly tapered downwardly; a casing comprising a lower member and an upper member in continuation of said lower member, said valve being received by said casing, said lower member having two straightaway ports and a third port facing in a direction at right angles to that of the facing-direction of the aforesaid ports, a retaining member for said valve having a wedge-like formation, with a perpendicular surface and an inclined surface, and means for actuating said wedge-like member, said wedge-like member being let into said valve-casing with its perpendicular surface presented to said valve and its inclined surface to said casing.

2. A device of the character described including a valve, a casing therefor and a retaining member for said valve having a wedge-like formation, with a perpendicular surface and an inclined surface and means for actuating said wedge-like member, said wedge-like member being let into said valve-casing with its perpendicular surface presented to said valve and its inclined surface to said casing.

1,020,975. SELECTIVE SIGNALING SYSTEM. EDWIN R. GILL, Yonkers, N. Y., assignor, by mesne assignments, to Howard E. Merrell, New York, N. Y., and Orlo J. Hamlin, Smethport, Pa. Filed Dec. 8, 1909. Serial No. 532,052. (Cl. 179—86.)

1. In a signaling system, in combination, a telephone line, a polarized signaling device in bridge of said line,

current supplying means in said line, a telegraph line, and means actuated by impulses impressed upon said telegraph line for applying said current supplying means to said telephone line so that the current will flow therethrough alternately in opposite directions.



2. In a signaling system, in combination, a telephone line, a polarized signaling device in bridge of said line, a battery adapted to be applied to said telephone line, a telegraph line, and a current reversing relay actuated by impulses impressed upon the telegraph line for applying said battery to said telephone line whereby said signaling device will be actuated in consonance with the impulses impressed upon the telegraph line.

3. In a signaling system, in combination, a telephone line, a polarized signaling device in bridge of the same, current supplying means adapted to be connected with said telephone line, a telegraph line, and means actuated by impulses impressed upon the telegraph line for applying said current supplying means to the telephone line and for changing the polarity thereof with respect to said line whereby said polarized signaling devices will be operated.

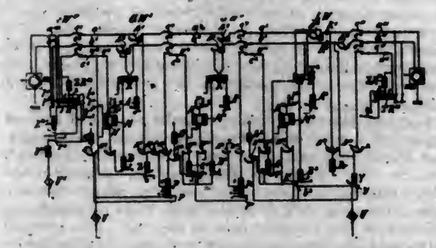
4. In a signaling system, in combination, a telephone line, a polarized signaling device in bridge of said line, a battery adapted to be applied to said line, a telegraph line, and a pole changing relay actuated by impulses impressed upon the telegraph line for applying said battery to said telephone line.

5. In a signaling system, in combination, a telephone line, a polarized signaling device in bridge of said line, a selector in said bridge, a local circuit including a battery and a signaling device adapted to be closed by said selector, a battery adapted to be applied to said telephone line, a relay adapted to apply the battery to said line, a local circuit incinding a sender key for operating said relay, a telegraph line, a relay actuated by impulses impressed upon the telegraph line for applying said battery to said line and for alternately reversing the polarity of said battery with respect to the line, and means for rendering said first mentioned relay ineffective.

[Claims 6 to 17 not printed in the Gazette.]

1,020,976. APPARATUS FOR METERING CONVERSATIONS IN AUTOMATIC TELEPHONE-EXCHANGES. GEORG GRABE, Nikolassee, near Berlin, Germany, assignor to Siemens & Halske A. G., Berlin, Germany, a Corporation of Germany. Filed July 28, 1910. Serial No. 574,257. (Cl. 179—11.)

1. In an automatic telephone system, the combination, with subscribers' stations, a telephone and switching means in each subscriber's station, an exchange, lines for connecting the subscribers' stations with the exchange, selectors and connectors for connecting a calling with a called station and testing branches for connecting the selectors with each other, releasing relays at the selectors and connectors, a meter for each subscriber's station, and means for connecting and for starting the meter through the testing branch, of relays at the connector controlling the calling and called lines, switching devices at a selector for making a circuit for the meter of the calling subscriber at the end of a conversation, switch armatures at said relays at the connector which are moved when the telephone is replaced at a subscriber's station, means for imparting the switching movements of said armatures to the switching devices at the selectors, and means at the switching devices for closing the circuits for the releasing relays of the selectors and connectors after the meter circuits have been made.



2. In an automatic telephone system, the combination, with subscribers' stations, a telephone and switching means in each subscriber's station, an exchange, lines for connecting the subscribers' stations with the exchange, a calling device in the exchange for each subscriber, selectors and connectors for connecting a calling with a called station and testing branches for connecting the selectors with each other, a controlling switch at each selector and connector for bringing about the stepwise change over of the selector circuits requisite for operating the selectors, releasing relays at the selectors and connectors, a meter for each subscriber, and means for connecting and for starting the meter through the testing branch, of relays at the connector controlling the calling and called lines, switching devices at a selector for making a circuit for the meter of the calling subscriber at the end of a conversation, switch armatures at said relays at the connector which are moved when the telephone is replaced at a subscriber's station, means for imparting the switching movements of said armatures to the switching devices at the selectors, and means at the switching devices for closing the circuits for the releasing relays of the selectors and connectors after the meter circuits have been made.

3. In an automatic telephone system, the combination, with subscribers' stations, a telephone and switching means in each subscriber's station, an exchange, lines for connecting the subscribers' stations with the exchange, a calling device in the exchange for each subscriber, selectors and connectors for connecting a calling with a called station and testing branches for connecting the selectors with each other, a controlling switch at each selector and connector for bringing about the stepwise change over of the selector circuits requisite for operating the selectors, releasing relays at the selectors and connectors, a meter for each subscriber, and means for connecting and for starting the meter through the testing branch, of relays at the connector controlling the calling and called lines, switching devices at a selector for making a circuit for the meter of the calling subscriber at the end of a conversation, switch armatures at said relays at the connector which are moved when the telephone is replaced at a subscriber's station, means comprising switch arms at the controlling switches of the selectors for imparting the switching movements of said armatures to the switching devices at the selectors, and means at the switching devices for closing the circuits for the releasing relays of the selectors and connectors after the meter circuits have been made.

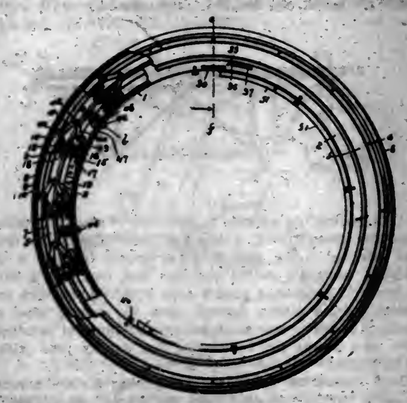
4. In an automatic telephone system, the combination, with subscriber's stations, a telephone and switching means in each subscriber's station, an exchange, lines for connecting the subscribers' stations with the exchange, a calling device in the exchange for each subscriber, selectors and connectors for connecting a calling with a called station and testing branches for connecting the selectors with each other, a controlling switch at each selector and connector for bringing about the stepwise change over of the selector circuits requisite for operating the selectors, releasing relays at the selectors and connectors, a meter for each subscriber, and means for connecting and for starting the meter through the testing branch, of relays at the connector controlling the calling and called lines, switching devices at the first selector in the row for making a circuit for the meter of the calling subscriber at the end of a conversation, switch armatures at said relays at the connector which are moved when the telephone is replaced at a subscriber's station, means comprising switch arms at the controlling switches of the selectors for imparting the switching movements of said armatures to the switching devices at the selectors, means at each connector and at each first selector in the row for moving the controlling switches another step in succession after the termination of a conversation, means at the remaining selectors for locking their controlling switches until metering has taken place, means at the selectors and at each connector for releasing the latter locked controlling switches after the meter circuits have been made, and means at the switching devices for closing the circuits for the releasing relays of the selectors and connectors after the meter circuits have been made.

5. In an automatic telephone system, the combination, with subscribers' stations, a telephone and switching means in each subscriber's station, an exchange, lines for connecting the subscribers' stations with the exchange, a calling device in the exchange for each subscriber, selectors and connectors for connecting a calling with a called station, testing lines and testing relays for connecting the selectors with one another, with the connector and with the subscribers' stations, a controlling switch at each selector and connector for bringing about the stepwise change over of the selector circuits requisite for operating the selectors, releasing relays at the selectors and connectors, a meter for each subscriber, and means for connecting and for starting the meter through the testing branch, of relays at the connector controlling the calling and called lines, switching devices at the first selector in the row for making a circuit for the meter of the calling subscriber at the end of a conversation, switch armatures at said relays at the connector which are moved when the telephone is replaced at a subscriber's station, means comprising switch arms at the controlling switches of the selectors for imparting the switching movements of said armatures to the switching devices at the selectors, an auxiliary relay at each connector and at each selector, with the exception of the first selector in a row, in series with the testing line and the testing relay of the previous selector, switching means controlling the testing lines, testing relays and auxiliary relays for moving the controlling switches another step in succession after the termination of a conversation, means at the remaining selectors for locking their controlling switches until metering has taken place, means at the selectors and at each connector for releasing the latter locked controlling switches after the meter circuits have been made, and means at the switching devices for closing the circuits for the releasing relays of the selectors and connectors after the meter circuits have been made.

[Claims 6 to 9 not printed in the Gazette.]

1,020,977. VEHICLE-WHEEL. LUTHER L. GREGG, Jr., Lonejack, Mo. Filed Dec. 5, 1910. Serial No. 595,715. (Cl. 152—28.)

1. In a vehicle wheel, an inner rim and an outer rim movable toward and from each other, a radial stud secured to one rim, a sleeve supporting the other rim and having telescopic connection with said stud, a screw threaded member rotatively mounted on said stud, a nut mounted on said screw threaded member, and a spring supported by said nut and supporting said sleeve.



2. In a vehicle wheel, an inner rim and an outer rim movable toward and from each other, a gear wheel rotatively mounted on one of said rims and having a screw threaded hub rotative on a radial axis, a nut mounted on the threaded portion of said hub, and a spring supported by the nut and supporting the other of said rims.

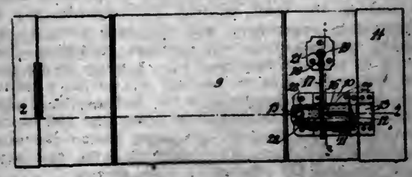
3. In a vehicle wheel, an inner rim and an outer rim movable toward and from each other, a spring supporting one of said rims, a nut supporting said spring, a gear wheel rotative on the other rim around a radial axis and having a screw threaded hub on which the nut is fitted, and a revoluble circular rack engaging said gear wheel.

4. In a vehicle wheel, an inner rim and an outer rim movable toward and from each other, a circular rack revoluble on the inner rim, a gear wheel engaging said rack and rotatively mounted on a radial axis on the inner rim, and having a screw threaded hub, a nut mounted on said hub, and a coil spring supported on said nut and supporting the outer rim.

5. In a vehicle wheel, an inner rim and an outer rim, a stud mounted radially on the inner rim, a sleeve slidable on the stud and supporting the outer rim, a gear wheel rotative on said stud and having a screw threaded hub, a nut mounted on said hub, and a spring supported by said nut and supporting said sleeve, and a circular rack revoluble on the inner rim and engaging said gear wheel.

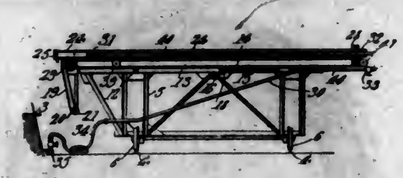
[Claims 6 to 12 not printed in the Gazette.]

1,020,978. LOCK. EMIL HAHN, New York, N. Y. Filed Dec. 12, 1911. Serial No. 665,212. (Cl. 70—14.)



A lock, comprising a bolt-housing, a keeper, a bolt slidable in the housing and adapted to engage the keeper, said housing having a longitudinal slot, an operating-pin projecting laterally from the bolt through said slot to the outside of the housing, an inwardly-tapering handle on said bolt, extending laterally therefrom at the same side with the operating-pin, beyond the housing, an operating-rod, means for supporting the same at a point above the housing and inwardly from the outer edge of the same and between the forward position of the handle and the rearmost position of the operating-pin, and means for awinging said operating-rod from the outside of the door.

1,020,979. COKE-SPRINKLING APPARATUS. ROBERT HAY, PERCY B. RULE, and DAVID HAY, Mount Pleasant township, Westmoreland county, Pa. Filed Jan. 13, 1911. Serial No. 602,454. (Cl. 202—5.)



1. A sprinkling apparatus for coke ovens comprising a wheel mounted frame, a carriage located upon the frame and adapted to be shifted transversely thereof, a pipe slidably mounted on the carriage and carrying a series of sprinkling pipes, a supply pipe entering the first mentioned pipe, a piston located upon the supply pipe and closing the transverse sectional area of the first mentioned pipe, and means for connecting the supply pipe with a water supply.

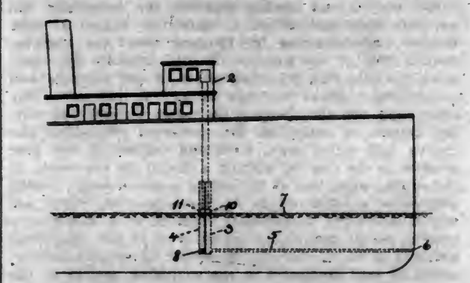
2. A sprinkling apparatus comprising a wheel mounted frame, a carriage located upon the frame and adapted to be shifted transversely thereof, a pipe slidably mounted upon the carriage, a series of pipes connected at intervals with the first mentioned pipe, each of the sprinkling pipes being provided with outlet openings, a supply pipe fixed with relation to the carriage and having a section concentrically located within the first mentioned pipe, a piston mounted upon the supply pipe and located within the first mentioned pipe and closing the same, and means for connecting the supply pipe with a water service.

3. A sprinkling apparatus comprising a wheel mounted frame, a carriage mounted for transverse movement on said frame, said carriage including spaced I beams, a grooved roller journaled between the inner ends of the I beams, a pipe resting at its inner end portion upon the said groove roller and carrying a series of spaced sprinkling pipes, a bracket secured to the first mentioned pipe, rollers journaled to said bracket and arranged to travel upon the inner portions of the base flanges of the I beams, a supply pipe attached to the carriage and having a section concentrically positioned within the first mentioned pipe, a piston attached to the supply pipe and located within the first mentioned pipe and closing the same transversely, means for shifting the first mentioned pipe transversely of the carriage, and means for connecting the supply pipe with a water service.

4. A sprinkling apparatus comprising a wheel mounted frame, a carriage mounted for transverse movement upon said frame, a bracket depending from the inner end of said carriage, a shaft journaled at the lower end of said bracket, and extending fixed to said shaft, said shaft being adapted to rest upon the floor of an oven, means for turning the shaft whereby the eccentric may be brought into engagement with the said floor, a pipe slidably mounted upon said carriage, sprinkling pipes carried by the first mentioned pipe, a water supply pipe fixed with relation to the carriage and having a section concentrically positioned within the first mentioned pipe, a piston carried by the said water supply pipe and located within the first mentioned pipe and closing the same transversely, and means for connecting the first mentioned water supply pipe with a water service.

1,020,980. SHIP-SPEED INDICATOR. LEWIN J. HEATHCORN, Baltimore, Md. Filed Apr. 28, 1911. Serial No. 623,841. (Cl. 73—122.)

1. In a ship speed indicating device the combination with a receptacle having a water inlet, a pipe extending from the lower end of the receptacle and opening through the hull of the ship and pointing in the direction in which the ship is moving to vary the height of water in the receptacle according to the speed of the vessel; an indicator device, means for supporting said indicator device and means for adjustably securing the indicator device with respect to its support and also with respect to the height of the water in the receptacle while the ship is at rest and its draft is determined.



2. In a ship speed indicator the combination with a receptacle having a water inlet near its bottom and below the water line, of a float in said receptacle; a pipe extending from the said inlet to the exterior of the ship and below the water line; an indicator device; means for supporting said indicator device; connections between the float and indicator device and means for adjustably securing the indicator device with respect to its support and also with respect to the float.

3. In a ship speed indicator the combination with a receptacle having a comparatively small water inlet from below the water line of the ship, of a float in said receptacle, an indicator support; an indicator carried by said support and having two elements one of which is movable as the speed of the ship varies; connections between the float and said movable element of the indicator to move said movable element as the float is moved in the receptacle and means for adjustably securing the other element of the indicator with respect to its support and according to the position of the float in the receptacle when the ship is at rest.

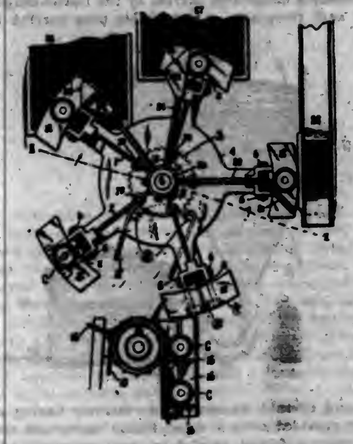
4. In a ship speed indicator the combination with a receptacle having a comparatively small water inlet at a point below the water line of the ship, of a float in said receptacle; an indicator having an element movable according to the speed of the ship and another element that is movable according to the draft of the ship; connections between the float and the movable speed element of the indicator and means for moving the other element of the indicator as the draft of the ship changes.

5. In a ship speed indicator the combination with two receptacles, of a float in each receptacle; a pipe extending from one receptacle to the exterior of the ship and below the water line and opening in the direction in which the ship is to move; a pipe from the other receptacle and opening at the side of the ship below the water line; an indicator having a movable scale; a movable arm for the indicator; connections between one of said floats and said arm and connections between the other of said floats and the movable indicator scale.

[Claims 6 and 7 not printed in the Gazette.]

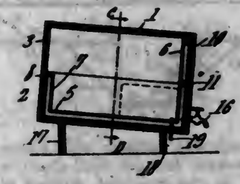
1,020,981. ASSORTING-MACHINE. WILLIAM F. HEBRANK, Highland, Ill. Filed Apr. 7, 1910. Serial No. 553,907. (Cl. 73—3.)

In an assorting machine, the combination with a central support, of a radial arm rotatably mounted on said support and provided with a vertically projecting portion or post at one extremity, a scale beam fulcrumed on the upper end of said support and provided with a pivotally mounted support at its outer end, the last named support being provided with a depending portion, a guide link connecting said depending end to the upwardly projecting end of said rotatable arm, said link being adapted to hold the last said support in vertical position during the vibratory movement of the scale beam, a supporting plate or table surrounding the upper end of said vertical support, and means carried by the first said



central support for removing an article from said table plate.

1,020,982. WATER-COOLER. WILLIAM HEPPINGER, Tilden, Nebr. Filed Feb. 17, 1911. Serial No. 609,127. (Cl. 62—13.)

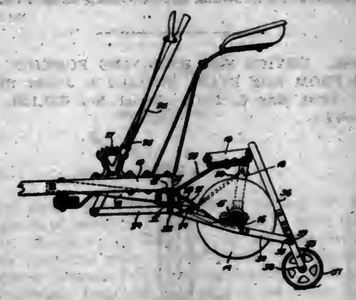


1. In a device of the class described, a casing; a tank therein constituting at once a container for the liquid to be cooled, and a support for the cooling agent, the tank being depressed along its longitudinal center, and being inclined from its inlet end toward its discharge end to cause the liquid and the cooling agent to gravitate toward the discharge end; the tank having an upright extension at its outlet end, through which the liquid circulates, and against which the cooling agent rests.

2. In a device of the class described, a casing; a tank therein constituting at once a container for the liquid to be cooled and a support for the cooling agent; the tank being depressed along its longitudinal center and being inclined from its inlet end toward its discharge end to cause the liquid and the cooling agent to gravitate toward the discharge end; the tank having an upright extension at its discharge end, through which the liquid circulates and against which the cooling agent rests; there being ribs in the tank and in its extension, defining a sinuous passage through the tank.

3. In a device of the class described, a casing; a tank therein, the tank and the casing being depressed along their longitudinal centers, the tank having an upright extension at its outlet end, through which the liquid circulates; there being ribs in the tank and in the extension, defining a sinuous passage through the tank, means for draining the liquid from the tank, adjacent the extension; and means for supplying liquid to the tank at a point remote from the extension.

1,020,983. TRANSPORTATION-TRUCK FOR DISK HARROWS. EDWARD M. HEYLMAN, Janesville, Wis., assignor to The Janesville Machine Company, Janesville, Wis., a Corporation. Filed Nov. 8, 1909. Serial No. 526,870. (Cl. 21—120.)



1. A transportation truck for disk harrows comprising a supporting bar adapted to extend beneath and engage the disk gang and having means at its forward end for detachably engaging the harrow frame, a lever bar pivoted adjacent its lower end to the rear end of said supporting bar, and a wheel journaled on the lower end of said lever bar below its point of connection with said supporting bar, the upper end of said lever bar being arranged to engage the frame of the disk gang, substantially as described.

2. A transportation truck for disk harrows comprising a bent supporting bar for the disk gang having a reversible frame engaging device at its forward end, a lever bar pivoted to the rear end of said supporting bar and a wheel on the lower end of said lever bar, substantially as described.

3. The combination with a harrow frame and disk gangs connected thereto, of supporting bars extending beneath and engaging the hubs of the disk gangs, and having means at their forward ends detachably engaging the harrow frame, lever bars pivoted to the rear ends of said supporting bars and having wheels journaled on the lower ends, the upper ends of said lever bars engaging the frames of the disk gangs, substantially as described.

4. The combination with a harrow frame and disk gangs connected thereto, of supporting bars extending beneath and engaging the hubs of the disk gangs, and having pivoted hooks detachably engaging the harrow frame, lever bars pivoted adjacent their lower ends to the rear ends of said supporting bars, and wheels journaled on the lower ends of said lever bars, the upper ends of said lever bars engaging the frames of the disk gangs and inclining downwardly and rearwardly therefrom, substantially as described.

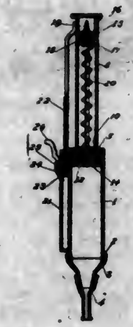
1,020,984. METALLIC TIE AND RAIL-FASTENER. JACOB JENDRAL, Barnesboro, Pa. Filed Dec. 9, 1911. Serial No. 664,904. (Cl. 238—5.)



In a metallic tie and rail fastener, an oblong metallic body V-shaped in cross section and having rail seats adjacent to the ends thereof and fastener seats at the sides of said rail seats, enlargements at the outer sides of said fastener seats and having semi-circular walls provided with angularly disposed sockets, fasteners swiveled upon said fastener seats and adapted to retain rails upon said

rail seats, spring pressed locking pins arranged in the outer ends of said fasteners and adapted to engage in said sockets, and guide rods movably arranged in said fasteners and extending through said locking pins for withdrawing said locking pins from said sockets when said fasteners can be swung upon the seats of said tie.

1,020,985. DEVICE FOR REMOVING FOREIGN MATTER FROM THE EYES. WILLIAM A. JONES, Sharon, Pa. Filed May 5, 1911. Serial No. 625,159. (Cl. 128—11.)



1. A device of the type described comprising a cylinder, a nipple carried by the lower end thereof, a slotted tubular piston rod movably arranged in said cylinder, a piston head carried by the lower end thereof, a compression spring arranged within said piston rod upon the upper end of said cylinder, a casing carried by said cylinder, a rack movable with said piston rod and adapted to slide in said casing, and a dog carried by said casing and adapted to retain said rack in a lowered position within said casing.

2. A device of the character described comprising a cylinder provided at one end with a nipple and at its other end formed with a transversely-extending web, a piston, a spring controlled slotted piston rod straddling said web and operating in said cylinder, and means for arresting movement of said piston.

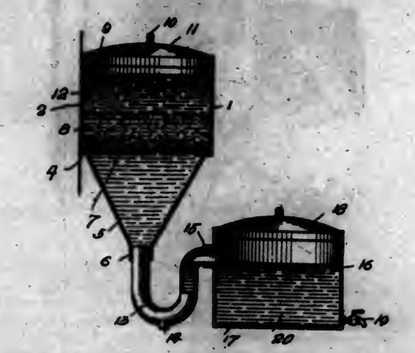
3. A device for removing foreign matter from the eyes comprising a cylinder provided at one end with a nipple and at its other end with an inwardly-extending annular flange having a transverse web integral therewith, a piston, and a spring controlled slotted piston rod straddling said web and operating within said cylinder.

4. A device for removing foreign matter from the eyes comprising a cylinder provided at one end with a nipple and at its other end with an inwardly-extending annular flange having a transverse web integral therewith, a piston, a spring controlled slotted piston rod straddling said web and operating within said cylinder, and means for arresting movement of said piston.

5. A device for removing foreign matter from the eye comprising a cylinder provided at one end with a nipple and at its other end with a transversely-extending web constituting a guide, a piston, a piston rod straddling said guide and having a head operating within said cylinder, a spring for shifting the piston rearwardly, and means for arresting outward movement of a piston.

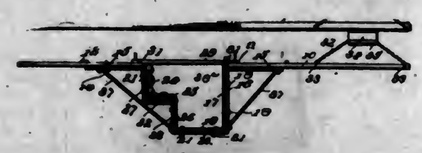
1,020,986. FILTERING APPARATUS. BLANÁR JÓZSEF, Buffalo, N. Y. Filed Dec. 4, 1911. Serial No. 663,668. (Cl. 210—12.)

A filtering apparatus comprising a receptacle having a flat wall adapted to be secured to a suitable support, an annular inwardly projecting shoulder carried by the lower end of said receptacle and having a funnel-shaped outlet, a perforated plate arranged within said receptacle upon said shoulder, filtering material supported by said perforated plate, a cover fitted upon the upper edges of said receptacle and provided with an air inlet opening, a cleaning gooseneck connection carried by the funnel-shaped outlet of said receptacle, a detachable plug carried by the



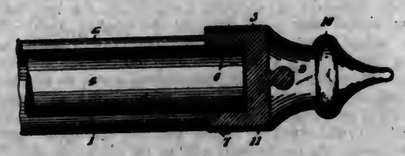
lower end of said connection, a reservoir having a wall thereof provided with a spout fitting upon said cleaning connection, a faucet carried by said reservoir adjacent to the bottom thereof, and a cover snugly fitted upon the upper edges of said reservoir.

1,020,987. SEDAN. DAVID P. KELSO, Slater, Wash. Filed Nov. 23, 1910. Serial No. 593,919. (Cl. 21—80.)



A sedan comprising metallic side strips having depressed intermediate portions and alined end portions, a body nested in the depressed portions of the strips, braces interposed between the end portions and depressed portions of the strips, said body having a hinged side which extends from the rear to the front side thereof, and shafts attached at their inner portions to the alined end portions of the strips and abutting at their inner ends against the sides of the body.

1,020,988. CURTAIN-POLE. ARPATH KISH and JOHN A. HENRY, Port Vue, Pa. Filed Sept. 1, 1911. Serial No. 647,144. (Cl. 156—19.)



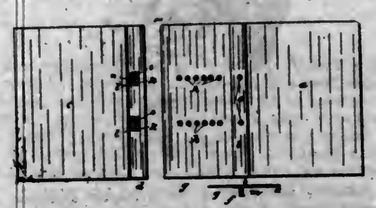
A curtain pole comprising a cylindrical slotted casing, heads fitted in the ends of said casing and having their outer faces flush therewith, a rod supported concentrically of said casing by said heads and capable of supporting the upper portion of curtains, covered collars mounted upon said rod and inclosed by the upper portions of the curtains supported by the rod, and clamping members maintaining the curtains in engagement with said collars whereby the curtains are retained in position.

1,020,989. ROLLER-SKATE. EDWARD C. KOHLER, Oak Park, Ill. Filed May 2, 1911. Serial No. 624,631. (Cl. 46—51.)



In a roller-skate, the combination of a foot-plate, a U-shaped bracket secured at its side-sections to said foot-plate and depending therefrom, said bracket being provided at one end, intermediate said side-sections, with an integral depending apertured lug, a laterally-flanged plate on the under side of said bracket and held against lateral movement, a plate below said bracket and spaced therefrom and provided at one end with an upwardly-extending pivot-lug integral therewith and projecting into the aperture in said bracket-lug and containing an opening in its opposite end, a block of resilient material interposed between said plates, means extending through the opening in said last-named plate, and transversely through said bracket and said first-named plate for holding together said plates, bracket and block, and rollers operatively connected with said last-named plate, for the purpose set forth.

1,020,990. ARRANGEMENT FOR FILING LOOSE LEAVES. ALEXANDER KRAUTHEIM, Frankfort-on-the-Main, Germany. Filed June 27, 1910. Serial No. 569,233. (Cl. 129—13.)



1. A loose leaf binder comprising in combination, a cover having a hinged strip provided with bayonet stud receiving openings, a second cover provided with a hinged strip having studs thereon adapted to be inserted in said openings and provided with a flexible flap connected with said strip and adapted to cover the backs of the leaves and lie between the top thereof and said first named cover, said flap having a plurality of openings adapted for engagement with said studs at points thereon between the leaves and said first named cover, substantially as described.

2. A loose leaf binder comprising in combination, a cover provided with a hinged strip having studs thereon, a flexible flap connected with said strip provided with means for adjustable engagement with said studs to hold the flap abreast of the backs of the leaves and upon the tops thereof, and a second cover provided with means for engaging the ends of the studs and arranged to lie upon said flap and the upper loose leaves of the binder, substantially as described.

1,020,991. PROCESS OF ELECTRIC WELDING. LAURENCE S. LACHMAN, New York, N. Y. Filed May 8, 1907. Serial No. 372,506. (Cl. 219—10.)

1. The herein described method of forming a localised weld between the meeting portions of superposed plates of metal consisting in assembling the plates in the desired relation, superposing a welding piece on the assembled plates and in position over the place of desired union, and applying pressure to said piece and passing heating current into the same and through the plates to localise the flow of current and heating in the engaged surfaces of the plates.



2. The herein described method of uniting two superposed pieces of metal by a weld localized in their meeting surfaces, consisting in applying an external heat and pressure localising piece to said pieces, compressing the three pieces between two welding electrodes, and passing electric current from one electrode to the other through the three pieces.

3. The method of uniting metal plates face to face by a localized weld in their meeting surfaces, consisting of superposing the plates and pressing them together between two electrodes and an exterior welding piece applied at the back of a plate and located in position over the point at which it is desired to localize the weld and passing welding current from one electrode to the other.

4. The method of uniting two pieces of metal face to face by a union localized in the material of their meeting faces consisting of superposing them in the desired relation, applying welding pieces at the back of said plates in line with the portion of their meeting surfaces at which it is desired to form said weld, and compressing the pieces while passing electric current through them all in the line of the welding pressure and locality of the weld.

5. The process of producing welds which consists in providing a body of metal with a protuberance proximating said body of metal with another body of metal with a protuberance, placing at least one weld piece of relatively small cross-section in contact with at least one of said metal bodies at the point where the protuberances are formed, and passing a welding current from a pair of poles through such assemblage of metal and weld piece until the metal and weld piece coalesce to form a spot weld.

[Claim 6 not printed in the Gazette.]

1,020,992. WEATHER-STRIP. ALFRED M. LANE, St. Louis, Mo., assignor to Monarch Metal Weather Strip Company, St. Louis, Mo., a Corporation of Missouri. Filed Mar. 6, 1911. Serial No. 612,580. (Cl. 20—67.)



1. A weather strip comprising a resilient metal strip secured at one edge to the edge of a door or the like and adapted to bear normally against the door, the door having a longitudinal groove of substantially rectangular cross section in its edge, a flat bar of substantially rec-

tangular cross section fitted loosely in said groove, and means for rocking the bar in said groove when the door is closed, so that diagonally opposite corners of the bar respectively engage the bottom of the groove and inner face of the resilient strip, whereby the resilient strip is moved against the door frame.

2. A weather strip comprising a resilient metal strip secured along one marginal portion to the bottom edge of the door and adapted to bear normally against the door and also adapted to be moved into contact with the threshold plate, the door having a longitudinal groove of substantially rectangular cross section in its edge, a flat bar of substantially rectangular cross section fitted loosely in said groove and resting normally flatwise on said resilient strip, a projection on the upper side of said bar, and a cam device adapted to engage said projection when the door is closed, whereby the bar is rocked in the groove and the resilient strip is moved into contact with the threshold plate.

3. A weather strip comprising a resilient strip secured at one edge to the edge portion of a door or the like and adapted to bear normally against the door, the door having a longitudinal groove of substantially rectangular cross section in its edge, a flat bar fitted loosely in said groove, said bar being of a thickness and width approximately the same as the depth and width, respectively, of the groove and having semi-circular side faces, and means for rocking the bar in said groove when the door is closed, so that diagonally opposite corners of the bar respectively engage the bottom of the groove and inner face of the resilient strip, whereby the free edge portion of said resilient strip is moved away from the door.

1,020,993. METAL WEATHER-STRIP. ALFRED M. LANE, St. Louis, Mo. Filed Aug. 25, 1911. Serial No. 646,021. (Cl. 20—69.)



1. A weather strip comprising two metal strips, the one secured to the window frame and the other to the window sash, one of said strips being relatively rigid and having a longitudinally grooved portion and the other strip having a longitudinally ribbed portion fitted in the grooved portion of the other strip so as to slide lengthwise therein but interlocked against lateral movement with respect thereto, said second mentioned strip having a flexible rebent portion throughout its length adjoining the ribbed portion whereby the coöperating ribbed and grooved portions of the two strips are permitted joint lateral movement independent of the base portion of said strip provided with the flexible rebent portion.

2. A weather strip comprising two metal strips, the one secured to the window frame and the other to the window sash, one of said strips being relatively rigid and having an undercut groove extending lengthwise thereof and the other strip being relatively flexible and having an undercut rib extending lengthwise thereof and slidably fitted in said undercut groove in the other strip, said flexible strip having a rebent portion extending lengthwise thereof adjacent to the rib.

3. A weather strip comprising a relatively flexible metal strip having a flat base portion adapted to be fastened throughout its length and an intermediate rebent portion extending lengthwise of said strip, the sides of said rebent portion being spaced apart, said strip having an outwardly offset free marginal portion at the side of said rebent portion opposite to the base portion, said free marginal portion having an outwardly projecting undercut rib extending lengthwise thereof, and a second metal strip which is relatively rigid and adapted to be secured throughout its length near one margin, the opposite marginal portion of said strip having an outwardly projecting undercut grooved portion extending lengthwise thereof and slidably fitted over the rib on said first mentioned strip.

4. A weather strip comprising a relatively flexible metal strip having a flat base portion adapted to be fastened throughout its length and an intermediate rebent portion extending lengthwise of said strip, the sides of said rebent portion being spaced apart, said strip having a free marginal portion at the side of said rebent portion opposite to the base portion, said free marginal portion having an outwardly projecting rib extending lengthwise thereof and being offset outwardly with respect to said base portion, and a second metal strip which is relatively rigid and adapted to be secured throughout its length near one margin, the opposite marginal portion of said strip being offset outwardly and having a groove extending lengthwise thereof and slidably fitted over the rib on said first mentioned strip.

5. A weather strip comprising two coöperating metal strips, the one secured at its margin to the window sash and the other likewise to the window frame, one of said strips being resilient and the other relatively rigid, the cooperating free marginal portions of the two strips being slidably connected to move longitudinally with respect to each other but being otherwise interlocked against separation, the intermediate portion of said resilient strip being free and rebent longitudinally throughout its length so that the engaged portions of the two strips are permitted joint lateral movement independent of the base portion of said resilient strip.

[Claim 6 not printed in the Gazette.]

1,020,994. PROTECTOR OR GOGGLES. JAMES W. LEASURE, Bradford, Pa. Filed May 20, 1911. Serial No. 628,480. (Cl. 2—149.)



A guard or protector of the character described comprising a single rectangular sheet of flexible material bent into curved form, a piece or strip of dust filtering material having a curved edge connected with the lower edge of said sheet and lying in a plane to which said sheet is perpendicular, and means for holding the device in place upon the face of the wearer with the free edge of said shield pressed against the upper lip below the nostrils.

1,020,995. TEMPORARY BINDER. MORRIS E. LEEDS, Philadelphia, Pa. Filed July 19, 1911. Serial No. 639,398. (Cl. 129—40.)

1. A U-shaped clip having one leg adapted to enter a crease or fold and the other leg having a transverse notch adapted to receive a holding device between said legs.

2. A U-shaped clip having one leg adapted to enter a crease or fold and the other leg having a transverse notch adapted to engage a holding device between said legs, the legs of said clip being resilient.

3. A U-shaped clip stamped out of resilient sheet material having one leg adapted to enter a crease or fold and the other leg having a transverse notch adapted to engage a holding device between said legs.

4. A U-shaped clip having legs one of which has a projection approaching the other leg, said projection having a notch adapted to receive a holding device.

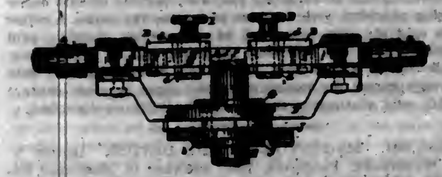
5. In a binder, the combination with a holding device, of a folder or the like having a crease or fold, a clip having a leg entering said crease or fold, and a second leg



having a notch embracing said holding device between said legs.

[Claims 6 to 9 not printed in the Gazette.]

1,020,996. DIES FOR CUTTING THREADS. MILTON H. LUKENS, Marblehead, Mass. Filed June 20, 1911. Serial No. 634,374. (Cl. 10—115.)



1. The combination of two rotatable thread cutting dies centrally pivoted to sliding blocks placed opposite each other, said dies adapted to cut two or more threads of different pitches, and having two or more keyways cut around their central holes, pivot pins for pivoting said dies and having tapering keys fixed thereto and adapted to enter said keyways, with sliding blocks one portion of which is above and one portion below said dies, and having two or more keyways cut around the central hole and adapted to receive said pivot pins and their taper keys, and a frame adapted to receive and support said sliding blocks and to adjust them to and from each other by threaded handles forming a part thereof, substantially as described and for the purposes set forth.

2. In a thread cutting device adapted to be operated by hand or power, and consisting essentially of two rotatable thread cutting dies centrally pivoted to sliding blocks placed opposite each other, the combination of two or more tapering keyways cut around their central holes, pivot pins for pivoting said dies and having tapering keys fixed thereto and adapted to enter said keyways, and a frame adapted to receive and support said sliding blocks and to adjust them to and from each other, substantially as and for the purpose described.

1,020,997. NON-REFILLABLE BOTTLE. CHARLES MATSON, Elizabeth, N. J. Filed Dec. 9, 1911. Serial No. 664,702. (Cl. 215—65.)

1. A bottle or similar vessel having a neck, and a dome-shaped attachment adapted to be inserted into and secured in said neck, said attachment being provided with an annularly enlarged base which closely fits the inner walls of the neck and above which is an annular space or chamber formed by the body of the attachment, and the walls of the neck, said base being provided with ports or passages forming a communication between said space or chamber and the interior of the vessel and the top of said base being provided with an annular groove adapted to receive an annular ring or gasket of elastic material which, when in position, closes said ports or passages, the central part of the attachment being also provided with a valve chamber, a valve adapted to close a port between said chamber and the interior of the vessel, and the top part of the attachment being provided with a curved passage which communicates with said valve chamber and which opens into said annular space or chamber through one side of the attachment, and said valve chamber being also provided with means to prevent the valve from closing said curved passage.



2. A bottle or similar vessel having a neck provided with a dome-shaped attachment adapted to be inserted thereinto and to be secured therein, said attachment being provided with an enlarged annular base above which is an annular space or chamber formed by the body of the attachment and the walls of the neck, said base being provided with ports or passages forming a communication between said space or chamber and the interior of the vessel, said base being also provided in the top walls thereof with an annular groove adapted to receive an elastic ring or gasket which, when in position, closes said ports or passages, and said attachment being also provided with means whereby when the vessel is inverted the contents thereof may flow out through said attachment, which means are also adapted to prevent the refilling of the vessel.

1,020,998. PORTABLE COT. HENRY MATTES, New York, N. Y. Filed Mar. 27, 1911. Serial No. 617,046. (Cl. 5—5.)



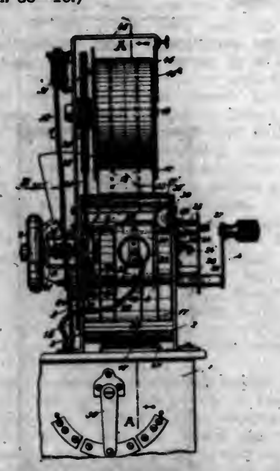
1. In a cot frame of the character designated, the combination of an end post a, formed with a fixed socket a', and with annular shoulders a^4, a^5, a movable socket a^3, formed with a sleeve a^2, fitting on the end post a, and between said annular shoulders a^4, a^5, a transverse end tube b, fitting in the end post a, and formed with a

socket b', a side extension tube c, fitting in the transverse end tube b, and formed with the screw thread c', and an intermediate tubular section d, fitting in the side extension tube c, and formed with the threaded socket d'', and shouldered end d^2, as and for the purpose described.

2. In a cot frame of the character designated, the combination of an end post a, formed with a fixed socket a', and with annular shoulders a^4, a^4, a plug s', fitting in the upper end of said end post a, and formed with a socket s, a movable socket a^3, formed with a sleeve a^3, fitting on the end post a, and between the annular shoulders a^4, a^4, thereon, a transverse end tube b, fitting in the end post a, and formed with a socket b', a side extension tube c, fitting in the transverse end tube b, and formed with the screw thread c', an intermediate tubular section d, fitting in the side extension tube c, and formed with a threaded socket d'', and shouldered end d^2, and a canopy rod r, fitting in the intermediate tubular section d, and adapted to engage the socket s, in the plug s', as and for the purpose described.

3. A cot frame of the character designated, comprising end corner posts a, each formed with a fixed socket a', and with annular shoulders a^4, a^4, movable sockets a^3, a^3, each formed with a sleeve a^3, fitting on an end post a, and between the annular shoulders a^4, a^4, transverse end tubes b, adapted to nest within the end posts a, and to engage each other and the fixed sockets a', on the end posts a, side extension tubes c, adapted to nest within the transverse end tubes b, and to engage with the movable sockets a^3, intermediate tubular sections d, adapted to nest within the side extension tubes c, and formed with sockets engaging with the ends thereof and also formed to engage end to end with each other, and a hammock H, formed with corner loops h, h, fitting over the corner end posts a, and resting on the fixed sockets a', and with intermediate end loops h', engaging with the transverse end sections b, b, for the purpose and as shown and described.

1,020,999. TOY KINEMATOGRAPH. OSKAR MESSTER, Berlin, Germany. Filed Oct. 22, 1909. Serial No. 523,944. (Cl. 88—18.)



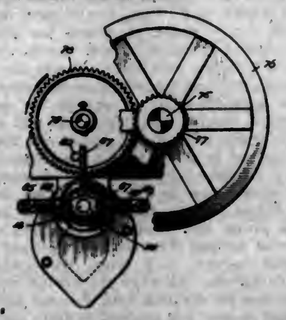
In a kinematograph the combination with means for carrying and moving a film having a number of longitudinally-juxtaposed rows of pictures, of an objective, an illuminating device, means for connecting this objective and the illuminating device rigidly together, means slidably carrying the objective and illuminating device so that the two latter can be adjusted transversely of the film, a gear for such adjustment, a thumb-piece for operating the said gear, notches in the said thumb-piece, and a spring-catch adapted to engage any one of such notches, substantially as set forth.

1,021,000. MEAT-CHOPPER. WILLIAM W. MITCHELL, Chicago, Ill. Filed Apr. 12, 1911. Serial No. 620,538. (Cl. 17—20.)



The combination with a casing having a hopper, of a feed screw journaled at the feed end in said casing, an axial rod threaded at one end and extending through said feed screw, said screw being provided with a bore to receive said rod, said bore being threaded at one end to engage the threaded portion of said rod and said rod projecting from both ends of said casing, a stationary cutter provided with a central aperture in which one end of said rod is journaled, a rotary cutter on said rod between said stationary cutter and the adjacent end of said screw, a helical spring surrounding said rod, the end of said screw being provided with a recess to receive the same, a collar on said rod, the inner end of said spring abutting said collar and a cap inclosing the other end of said spring, telescoping within said recess and bearing against said rotary cutter for maintaining the same in close contact with said stationary cutter, substantially as described.

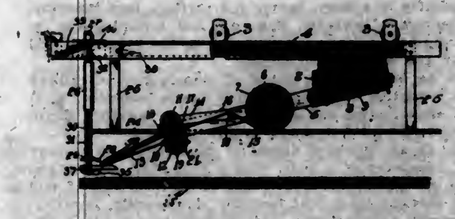
1,021,001. MAGNETO-ELECTRIC DEVICE. HOMER N. MOTSINGER, Pendleton, Ind., assignor to Motsinger Device Manufacturing Company, Pendleton, Ind., a Corporation of Indiana. Filed Oct. 18, 1910. Serial No. 587,706. (Cl. 123—149.)



In a machine of the class described, a field magnet, a frame, an armature rotatably associated with said magnet, a two armed structure secured to said armature, carrying on each end hardened studs longitudinally grooved, other similar studs secured to the frame, stirrups having inwardly-turned knife edges engaging the grooves of said hardened studs, springs having their extremities secured to the confronting ends of said adjacent stirrups, and a stem for rotatively displacing said armature against the resistance of said springs.

1,021,002. APPARATUS FOR PILING CLOTH. JOHN Z. POLLARD and GEORGE J. LEDERER, Chicago, Ill. Filed Oct. 18, 1909. Serial No. 523,217. (Cl. 223—5.)

1. An apparatus for piling cloth, comprising a table, a carriage movable along said table, a frame carried by said carriage and pivotally mounted thereon on an axis disposed longitudinally with respect to the path of the carriage, means for supporting a roll of cloth on said frame, feed rollers mounted on said frame and adapted to automatically unwind cloth from said roll and lay it on the table during the movement of the carriage in one direction, said frame being adapted to be inverted on said carriage whereby different layers of cloth fed to the table will be respectively face down and face up.



2. An apparatus for piling cloth, comprising a table, a carriage movable along said table, a frame carried by said carriage and pivotally mounted thereon on an axis disposed longitudinally with respect to the path of the carriage, means for supporting a roll of cloth on said frame, feed rollers mounted on said frame and adapted to automatically unwind cloth from said roll and lay it on the table during the movement of the carriage in one direction, said frame being adapted to be inverted on said carriage whereby different layers of cloth fed to the table will be respectively face down and face up, and mechanism adapted to cause said feed rollers to deliver the cloth when said frame is in either of said positions on said carriage.

3. In an apparatus for piling cloth, the combination of a table, a carriage movable along said table, a frame invertibly mounted on said carriage to turn on an axis extending horizontally thereof, means on said frame for supporting a roll of cloth, a pair of feed rollers adapted to engage opposite sides of the cloth and journaled on horizontal axes, a shaft journaled on said carriage and adapted to rotate one of said feed rollers, said shaft being extended beyond opposite ends of said feed rollers, toothed wheels mounted at respectively opposite ends of said shaft and equally distant from the axis of said frame, each of said wheels having ratchet connection with said shaft, and each being adapted to rotate said shaft in one direction only, a suspended rack extending along the path of said carriage and adapted to engage the lower part of one of said toothed wheels when said frame is in one position, and to engage the upper part of the other of said toothed wheels when the frame is in its inverted position, said ratchet connections being such that the cloth will be fed from said frame only during the passage of said carriage in one direction regardless of whether said frame be inverted or not.

4. An apparatus for piling cloth, comprising a table, a carriage movable along said table, a frame carried by said carriage and pivotally mounted thereon on an axis disposed longitudinally with respect to the path of the carriage, means for supporting a roll of cloth on said frame, feed rollers mounted on said frame and adapted to automatically unwind cloth from said roll and lay it on the table during the movement of the carriage in one direction, said frame being adapted to be inverted on said carriage whereby different layers of cloth fed to the table will be respectively face down and face up, a guide member for guiding the cloth in its passage between said feed rollers and the table, said member being pivoted to said carriage on an axis transverse to the pivotal axis of said frame, and stops on said frame adapted to support said member at a certain predetermined level above the table when said frame is in either of its positions on said carriage.

5. In an apparatus for piling cloth, the combination of a table, a clamping device at one end of said table adapted to automatically grip an advancing end of cloth, a cloth piling carriage movable along said table and adapted to lay a plurality of superimposed layers of cloth upon said table, means on said carriage for feeding the cloth therefrom during the movement of said carriage away from said clamping device, and cloth supporting means mounted on said frame to turn about an axis extending lengthwise of the table and adapted to be inverted about such axis after the carriage has completed its trip away from said clamp so as to cause successive layers of cloth to face in opposite directions.

[Claim 6 not printed in the Gazette.]

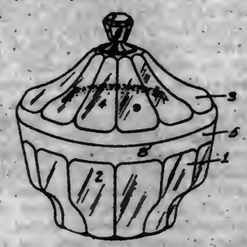
1,021,003. SAFETY-RAZOR. REUBEN RUBENS, Liverpool, England. Filed Apr. 25, 1910. Serial No. 557,523. (Cl. 30—12.)



1. In safety razors of the type herein described, in combination a guard plate, a cover plate rotatable relatively thereto, a razor-blade between these two plates and with an aperture, said cover plate and said blade-aperture being of such sizes to cause said blade to be locked or unlocked on the partial rotation of said cover plate to bring said aperture and cover plate into or out of register with each other; a hollow handle attached to the guard plate and provided with an internal shoulder; a spindle rigidly attached to the cover plate; a collar on said spindle, and a spring disposed around said spindle between said shoulder and said collar.

2. In safety razors of the type herein described, in combination a guard plate, a cover plate, a razor-blade provided with an aperture, said cover plate and said aperture being of such shape that said blade is locked or unlocked on the partial rotation of said cover plate to bring said aperture and cover plate into or out of register with each other; a hollow handle attached to the guard plate and provided with an internal shoulder; a spindle secured to the cover plate; a collar on said spindle; a spring disposed around said spindle between said shoulder and said collar, and means for rotating said spindle and cover plate relatively to the guard plate.

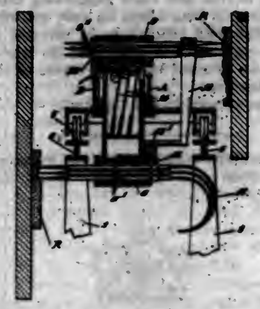
1,021,004. BOWL. ANDREW J. SANFORD, Newark, Ohio, assignor to A. H. Heisey & Co., Inc., Newark, Ohio, a Corporation of West Virginia. Filed Aug. 16, 1910. Serial No. 577,494. (Cl. 65—59.)



1. A bowl of the class described having a body portion with a circular and horizontal top edge, and below the edge a ledge portion extending inwardly from the body and at an upward incline and forming a spoon support and scraper within the bowl.

2. A bowl of the class described having a body portion with a circular and horizontal top edge, and below the edge a ledge portion extending inwardly from the body and at an upward incline and forming a spoon support and scraper within the bowl, said ledge having an aperture formed therein for the support of the spoon and drainage of the space back of the ledge.

1,021,005. MACHINE FOR REPRODUCING THE CONFIGURATION OF OBJECTS. TONY SELMERSHEIM, Paris, France. Filed July 2, 1910. Serial No. 570,182. (Cl. 159—4.)



1. A machine for reproducing the configuration of objects, comprising a carriage movable horisontally in front of a model to be reproduced and a panel to be carved, a row of axially-movable rotary tools arranged on said carriage at such an inclination to the direction of movement thereof as to cause the several tools to operate in lines separated by approximately the operative diameter of the tools, a row of guides similarly arranged on the carriage and each adapted for axial movement, means for connecting each tool with a corresponding guide to transmit the axial movement of one to the other, and means for pressing each guide against the model.

2. In a machine for reproducing the configuration of objects, the combination of a carriage movable horisontally, a row of axially-movable tools arranged thereon at an inclination to the direction of movement of the carriage, a row of axially-movable guides similarly arranged on the carriage, a member movable longitudinally with each guide and having a bearing in which the guide rotates, a member movable longitudinally with each tool and having a sleeve in which the tool rotates, and connections between said members.

3. In a machine for reproducing the configuration of objects, the combination of a carriage movable horisontally, a row of axially-movable tools and a row of guides thereon, one guide for each tool, said guides being movable toward and away from the model independently of one another, connections between each guide and the corresponding tool, a spring connected to each guide and tool to move the latter in one direction, and means for moving the tools collectively in the opposite direction.

4. In a machine for reproducing the configuration of objects, the combination of a carriage movable horisontally, a row of axially-movable tools arranged thereon at an inclination to the direction of movement of the carriage, a guide corresponding to each tool and connected thereto, said guides being movable toward and away from the model independently of one another, and a flexible transmission device for rotating each tool.

5. In a machine for reproducing the configuration of objects, the combination of a carriage movable horisontally, a row of axially-movable tools arranged thereon at an inclination to the direction of movement of the carriage, a row of independently movable guides, one for each tool, connections between each guide and the corresponding tool, a common operating drum parallel with the direction of movement of the carriage, and a transmission device mounted on the carriage and including a flexible transmission for each tool.

[Claims 6 to 8 not printed in the Gazette.]

1,021,006. METALLIC RAILWAY-TIE. SAMUEL SHOEMAKER, Philadelphia, Pa., assignor to The Pennsylvania Steel Railway Tie Company, Philadelphia, Pa., a Corporation of Delaware. Filed Dec. 14, 1911. Serial No. 665,752. (Cl. 238—5.)

1. A railway tie comprising a body having end portions bent inwardly, away from the body, in the direction of the length of the body, toward the body and inwardly, the last-named inwardly bent portions contacting with the body and being riveted thereto.



2. As an improved article of manufacture, a railway tie, consisting of a body, having end portions bent inwardly, downwardly, inwardly, upwardly and inwardly, the inwardly bent portions contacting with the bottom of said body and being riveted thereto.

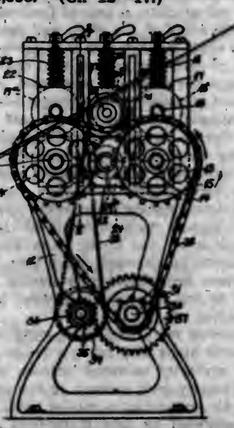
3. As an improved article of manufacture, a railway tie, consisting of a body, having flanges projecting from the sides thereof and end portions bent inwardly, downwardly, inwardly, upwardly and inwardly.

4. As an improved article of manufacture, a railway tie, consisting of a body, having projecting side flanges, and end portions narrowed and corrugated, each of said end portions being bent inwardly, downwardly, inwardly, upwardly and inwardly, said inwardly bent portions contacting with the under side of said body being secured thereto.

5. As an improved article of manufacture, a railway tie consisting of a body portion, provided with projecting side flanges, and having its end portions bent inwardly, downwardly, inwardly, upwardly and then inwardly, the juxtaposed bent portions contacting with the bottom of the tie body being riveted thereto, and said portions bent downwardly, inwardly and upwardly, in the sequence named, being corrugated.

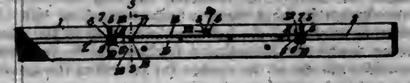
[Claims 6 to 12 not printed in the Gazette.]

1,021,007. MACHINE FOR BRUSHING AND CLEANING LEATHER. WILLIAM R. SMITH, Buffalo, N. Y., assignor to Buffalo Leather Co., Buffalo, N. Y., a Corporation of West Virginia. Filed Jan. 30, 1911. Serial No. 606,558. (Cl. 12—17.)



A machine of the character specified, comprising a pair of receiving feed rolls, a pair of delivering feed rolls spaced from the receiving rolls, a pair of rotary brushes located between the receiving and the delivering rolls, the lower feed roll of each pair being provided with a relatively large sprocket wheel and each brush being provided with a smaller pulley, a sprocket shaft having a sprocket wheel of smaller diameter than the feed roll sprocket wheels, a drive chain engaged with the driving shaft sprocket wheel, and with the feed roll sprocket wheels, a driving shaft geared to the sprocket shaft and having a driving pulley, and a belt engaged with the driving shaft pulley and with the brush pulleys, the upper feed rolls being pressed yieldingly toward the lower feed rolls, and the upper brush being yieldingly pressed toward the lower brush.

1,021,008. BOLTING-CLOTH CLEANER. SIMON SNYDER, Muncy, Pa., assignor to Sprout, Waldron & Company, Muncy, Pa., a Corporation of Pennsylvania. Filed Mar. 21, 1911. Serial No. 616,038. (Cl. 83—38.)



1. The combination with a pair of brushes, of connecting bars having their ends secured to the brushes, a rack bar arranged between the said connecting bars, securing bolts inserted through the connecting bars and the rack bar, spacers around the said bolts between the rack bar and the connecting bars, and means acting on the rack bar to cause reciprocation of the brushes.

2. The combination with slidably mounted brush holders having stirrups at their ends, of brush heads fitted in said stirrups, springs bearing against the brush heads and the bases of the stirrups, means for limiting the movement of the brushes under the influence of said springs, connections between the brush holders, and means whereby the brush holders will be reciprocated.

3. The combination of slidably mounted brush holders having stirrups at their ends, brushes having their ends engaging said stirrups, means for yieldingly supporting the brushes in said stirrups, stops on the brush holders overhanging the brushes, and means for imparting motion to the brush holders.

4. The combination with a sieve having longitudinal rails on its inner sides, of brush holders fitted between the said rails, hangers at the ends of the brush holders projecting angularly from one side thereof, and constructed to ride upon the tops of the rails and bear against the sides of the same, brushes carried by the holders, connections between the holders, and means whereby the movement of the sieve will actuate the brush holders.

5. The combination with a sieve, of a brushing member slidably mounted therein, a rack bar on said brushing member, a transverse rod secured in the sieve, a reversible pawl hung on said rod and engaging the rack bar, said pawl having a slot in its head disposed transverse to said rod, and a stop on the rod engaging said slot.

[Claims 6 and 7 not printed in the Gazette.]

1,021,009. SAND-WASHING APPARATUS. LOUIS M. STRAUS, Pacific, Mo., assignor of one-half to Noah Q. Speer, Berkeley Springs, W. Va. Filed May 14, 1910. Serial No. 561,300. (Cl. 83—82.)



A sand washing apparatus comprising contiguous basins with a common partition wall, a ninety degree bend conduit having an inlet opening on a horizontal axis through said partition into one basin, and an outlet on a vertical axis approximately at the center of the other basin, and below the surface of the liquid therein, and means for injecting water and sand in a horizontal direction into said inlet opening.

1,021,010. CLEANING-TOOL. IRA H. SPENCER, Hartford, Conn., assignor to The Spencer Turbine Cleaner Company, Hartford, Conn., a Corporation of Connecticut. Filed Jan. 27, 1908. Serial No. 412,710. (Cl. 15—60.)

1. A head having a chamber and a projection extending from the side of the head and having an opening into said chamber, a flange surrounding the lower side of the head, a support projecting from within said flange, and a mouth-piece secured within said flange and extending about said support.



2. A head having a chamber with an outlet therefrom and an intake opening thereto, a shoulder formed upon the head and having a recess, a brush base located within said recess and with bristles extending therefrom, a mouth-piece located within an opening in the brush base, and a support for the mouth-piece projecting from the head within said mouth-piece but terminating short of the edge thereof.

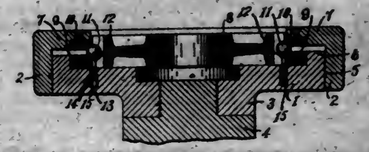
3. A head having a chamber with an outlet therefrom and an intake opening thereto, a shoulder formed upon the head and having a recess, a support integrally formed with said head and projecting through said recess, a mouth-piece surrounding said support and with its edge projecting beyond the edge of the support, and a brush base having bristles and located within said recess.

4. A head having a chamber with an outlet therefrom and an intake opening, a support extending about said intake opening, a flange extending about the head at a distance from the support and forming a recess, a mouth-piece of flexible fibrous material located against said support and projecting beyond its edge, and a brush removably secured within said recess between the mouth-piece and flange.

5. A head having a chamber and a projection extending from the side of the head said projection having an opening into said chamber, a flange extending around the lower side of the head, a support projecting from the head within said flange, a mouth-piece removably secured within the flange and about said support, and a brush secured between the mouth-piece and the flange, said brush and mouth-piece being frictionally held in place.

[Claim 6 not printed in the Gazette.]

1,021,011. CHUCK FOR HOLDING AND CENTERING GEARS. GEORGE W. SPONABLE, Syracuse, N. Y., assignor to The Brown-Lipe Gear Company, Syracuse, N. Y., a Corporation of New York. Filed Mar. 2, 1908. Serial No. 418,696. (Cl. 29—138.)



1. In a chuck for centering and holding gears, clamping members for entering between and engaging opposing faces of teeth of the gear held by the chuck, the clamping members being spaced apart and movable radially relatively to the axis of the chuck and also at an angle to the direction of their radial movement, means for supporting the clamping members and maintaining their relative positions to each other and means for simultaneously forcing the clamping members radially, substantially as and for the purpose set forth.

2. In a chuck for centering and holding gears, a body having a gear-receiving recess, independently movable clamping members, means for holding said members in

their initial position with portions thereof projecting into said recess in position to enter the spaces between the teeth of the gear as the same is moved into the gear-receiving recess, and means for forcing the clamping members toward the axis of the gear-receiving recess into engagement with opposing faces of said teeth, substantially as and for the purpose specified.

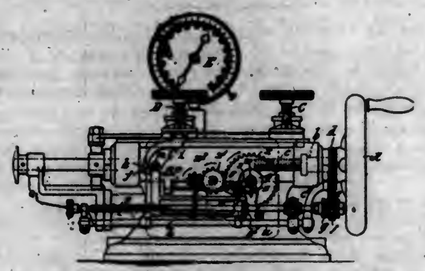
3. In a chuck for centering and holding gears, a body having a gear-receiving recess extending inwardly from one end thereof and formed with a circumferential wall having a cylindrical inner face, independently movable clamping members, means for holding said members in their initial position with portions thereof projecting beyond the cylindrical face into the recess in position to enter the spaces between the teeth of the gear as the same is moved axially into the gear-receiving recess, and means for simultaneously forcing the clamping members toward the axis of the gear receiving recess into engagement with opposing faces of said teeth, substantially as and for the purpose set forth.

4. In a chuck for centering and holding gears, a body having a gear-receiving recess, independently movable clamping members, yielding means for holding said members with portions thereof projecting into said recess in position to enter the spaces between the teeth of the gear as the same is moved axially into the gear-receiving recess, and means for simultaneously forcing the clamping members toward the axis of the gear-receiving recess into engagement with opposing faces of said teeth, substantially as and for the purpose described.

5. In a chuck for centering and holding gears, a body having a gear-receiving recess and a plurality of sockets opening from the recess, independently movable clamping members, means removably mounted in the sockets and holding said members in their initial position with portions thereof projecting into said recess in position to enter the spaces between the teeth of the gear as the same is movable into the gear-receiving recess, and means for forcing the clamping members toward the axis of the gear-receiving recess into engagement with opposing faces of said teeth, substantially as and for the purpose specified.

[Claims 6 to 11 not printed in the Gazette.]

1,021,012. STRENGTH-TESTING APPARATUS. JOHN O. STANLEY and JOHN LEWIS PERKINS, Holyoke, Mass., assignors to B. F. Perkins & Son, Incorporated, Holyoke, Mass., a Corporation of Massachusetts. Filed July 20, 1910. Serial No. 572,907. (Cl. 73—51.)



1. In testing apparatus of the character set forth, the combination with a stationary article clamp, of a movable article clamp, means for moving the latter clamp to cause the articles to be broken, including a driving device, a shaft, operative connections between the driving device and the shaft, a reciprocatory frame having connection with the shaft and operable therewith, and indicator means connected to the frame and operable to indicate the amount the article is stretched.

2. In testing apparatus of the character set forth, the combination with a stationary article-clamp, of a movable article-clamp, means for operating the same, including a driving device, a screw shaft geared to the driving device, a frame having a threaded engagement with the shaft, and indicator means connected to the movable frame.

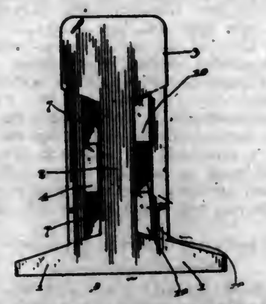
3. In testing apparatus of the character set forth, the combination with relatively movable article-holding clamps, of means for relatively moving the same to cause the article held thereby to be broken, an indicator, operating means for the indicator connected to the clamp-moving means and including a friction clutch, and means movable with one of the clamps for retarding the speed of the operating means.

4. In testing apparatus of the character set forth, the combination with a stationary article clamp, of a movable article clamp, means for moving the latter clamp, including a rotary driving device, a shaft, gearing connected to the driving device and having a friction clutch connection with the shaft, a reciprocatory frame having a threaded engagement with the shaft, rotary indicating devices geared together, and a belt connected to one of the devices and to the frame.

5. In testing apparatus of the character set forth, the combination with relatively movable clamps, of means for relatively moving the same, an abutment carried by one of the clamps, an indicator, operating means for the indicator actuated by the clamp moving means, and means to detachably hold said operating means against the abutment.

[Claim 6 not printed in the Gazette.]

1,021,013. RAIL-JOINT. MAHLON A. STRIPE, Geneva, Ill. Filed May 17, 1911. Serial No. 627,657. (Cl. 239—4.)



1. In a rail-joint, a member comprising a finger and two finger-sockets welded to one side of a rail end, and a member comprising two fingers and a finger-socket welded to the opposite side of said rail end, substantially as described.

2. In a rail-joint, a member comprising a finger and two finger-sockets electrically welded to one side of a rail end, and a member comprising two fingers and a finger-socket electrically welded to the opposite side of said rail end, substantially as described.

3. In a rail-joint, a member having a finger, two sockets, and two bevel edges fitted and welded to a side of a rail at the end thereof, and a second member having two fingers, one socket, and two beveled edges fitted and welded to the other side of the rail end, substantially as described.

4. In a rail point, a member having a finger, two sockets, and two bevel edges fitted and welded to a side of a rail at the end thereof, and a second member having two fingers, one socket, and two bevel edges fitted and welded to the other side of the rail end, said sockets being disposed substantially opposite said fingers, substantially as described.

1,021,014. FABRIC HAVING LAYERS OF VARIABLE EXTENSIBILITY. LAWRENCE A. SUBERS, Cleveland, Ohio. Filed June 28, 1911. Serial No. 634,983. (Cl. 154—52.)

1. The combination in a tubular fabric composed of layers of fabric, each layer comprising a laminated-cohesive-interwound formation of parallel fibrous bands crossing each other at an angle, the angle at which the bands cross each other in the inner layer being wider relatively to the edge and axis of the fabric than the angle of winding of the bands comprising the outer layers.

2. The combination in a tubular fabric composed of separate superimposed fabric layers, each layer formed of laminated-cohesive-interwound parallel members crossing each other at an angle, the angle at which the said members cross each other in each layer being predetermined, and lessening in width from the inner to the outer layer, the variation in the respective angles governing the relative ratios of expansibility of the several layers.



3. In a tubular fabric, an inner lining, an outer covering, an inner layer composed of bands the fibrous elements of which cross each other at a predetermined angle and consist of parallel lying yarns of predetermined diameter and number, and said bands cross each other at a predetermined angle, an intermediate layer composed of spirally laid bands, the fibrous elements of which cross each other at a less angle than in the bands of said first layer, and an outer layer composed of bands, the fibrous elements of which cross each other at a smaller angle than in the bands of either of the previously mentioned layers.

4. In a fabric, a layer constructed of laminated interwound parallel cohesive members, and layers superimposed thereon of laminated interwound parallel cohesive members, the angles at which the members of the inner layer are wound being wider than the angle of winding the next succeeding layer, and the angle of winding each succeeding layer being a predetermined less angle.

5. A fabric tube composed of layers of interwound laminated cohesive bands, each band in each layer composed of laminated interwound cohesive members, the members of the bands in the inner layer being wound at a wider angle than in the succeeding layers.

[Claim 6 not printed in the Gazette.]

1,021,015. POURING-POT. WILLIAM P. TARRANT, Saratoga Springs, N. Y. Filed Mar. 15, 1911. Serial No. 614,620. (Cl. 137—17.)



1. In a pouring pot, a nozzle comprising a flat trough of sheet metal and an inverted flat trough, the sides of said troughs being adjacent to one another and relatively movable, and means for clamping said sides together in different relative positions.

2. In a pouring pot, a nozzle comprising a flat trough of sheet metal and an inverted flat trough, said inverted trough being within the first trough with its side adjacent to the side of the first trough and movable relatively thereto, and means for holding said sides together in different relative positions.

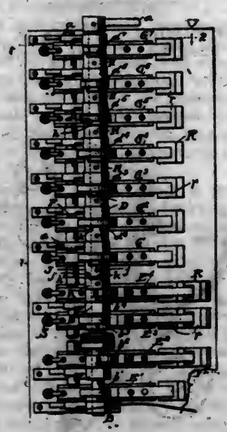
3. A pouring pot constructed of sheet metal, a flat horizontal slot-like nozzle also constructed of sheet metal having a pair of straight lips and vertical side members back of said lips, and means for clamping said side members together to hold the lips a desired distance apart.

4. In a pouring pot, a slot-like nozzle comprising a flat trough having vertical sides, the forward end of that portion of the trough between its sides being bent down transversely to form the lower lip of the nozzle, and an inverted flat trough having vertical sides within and adjustable to the sides of said trough and movable relatively thereto, the forward end of that portion of the inverted trough between its sides being bent up transversely along the line above said lower lip to form the upper lip of the nozzle, and means for holding said sides together in different relative positions.

5. In a pouring pot, a slot-like nozzle comprising a flat trough of sheet metal having upwardly projecting vertical sides, the forward end of that portion of the trough between its sides being bent down transversely to form the lower lip of the nozzle, and an inverted flat trough of sheet metal having downwardly projecting vertical sides within and adjacent to the sides of said first trough, and movable relatively thereto, the forward end of that portion of the inverted trough between its sides being bent up transversely along a line above said lower lip to form the upper lip of the nozzle, means for stiffening said lips, and means for holding said sides in different relative positions.

[Claim 6 not printed in the Gazette.]

1,021,016. QUICK-BREAKING ELECTRIC-SWITCH MECHANISM. THOMAS WARREN THOMAS, Cleveland, Ohio, assignor of ninety one-hundredths to Holley G. Wellman, Cleveland, Ohio. Filed Feb. 4, 1910, Serial No. 542,106. Renewed Jan. 29, 1912. Serial No. 674,200. (Cl. 172—179.)



1. In a quick breaking electric switch, the combination of a rotatable operating shaft, a switch lever pivotally supported independently of said shaft and adjacent thereto, a spring for moving the lever in one direction, a cam rotatably mounted on said shaft for actuating said lever to close the switch, and a torque-transmitting mechanism intermediate of said shaft and cam, which permits a limited rotary movement of the cam on the shaft.

2. In a quick breaking electric switch, the combination of a rotatable operating shaft, a switch lever pivotally supported independently of said shaft but adjacent thereto, a spring for moving the lever in one direction to close the switch, a cam rotatably mounted on said shaft for moving the lever in the opposite direction to close the switch, and a collar fixed to said shaft, the approximate faces of said collar and the hub of the cam having respectively a recess, and a jaw which enters said recess, the length of the jaw being less than the distance between the ends of the recess, whereby the cam has a limited rotary movement on the shaft.

3. In a quick breaking electric switch, the combination of a rotatable operating shaft and an alined shaft, to-

gether with a torque-transmitting mechanism between said shafts which permits a limited rotary movement of the alined shaft relative to the operating shaft, a series of cams on said operating shaft having switch closing portions of different arcuate lengths, a series of switch levers arranged adjacent said cams and adapted to be operated successively thereby, a plurality of cams on said alined shaft and having switch closing portions of equal arcuate lengths, and switch levers arranged adjacent said last named cams and adapted to be operated simultaneously thereby.

4. In a quick breaking electric switch mechanism, the combination of two electric switch levers, springs for moving the same in one direction, a rotatable operating shaft, an alined rotatable shaft composed of two parts rigidly connected but insulated from each other, two cams respectively fixed to the two parts of said shaft for operating the two switch levers, and a torque-transmitting mechanism intermediate of said shafts which permits a limited rotary movement of the cam-bearing shaft relative to the operating shaft.

5. In an electric controller, the combination of an operating shaft, a plurality of cams loosely mounted thereon, torque-transmitting mechanisms intermediate of said shaft and cams, which mechanisms permit independent movement of the cams short arcual distances relative to said shaft, a plurality of switch levers adapted to be respectively operated by said cams, springs for moving said levers in one direction, and fixed contact plates adapted to be engaged by the several switch levers.

[Claims 6 to 8 not printed in the Gazette.]

1,021,017. GRAIN-DRILL. WILLIAM S. R. THRUSH, Carlisle, Pa. Filed Mar. 22, 1911. Serial No. 616,161. (Cl. 111—11.)



1. A grain drill comprising a boot having a shovel at its forward end of a greater width than the boot, a series of deflectors arranged within the boot, and a grain tube extending into said boot having a distributer at its lower end.

2. A grain drill comprising a boot, a distributer extending into said boot, deflectors arranged within the boot and below the plane of the distributer, and a shovel secured upon the front side of the boot, the said shovel and the deflectors being held in place by common securing means.

3. A device of the kind described comprising a boot, a distributer extending downwardly into the boot, oppositely arranged deflectors secured at the lower end of the boot, a semi-spherical deflector secured within and upon the front side of the boot midway the deflectors first mentioned and the lower end of the distributer, and a shovel secured upon the front side of the boot and extending below the lower end of the boot.

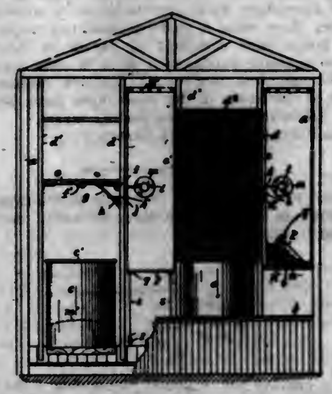
1,021,018. SUSPENDER-BUCKLE. ABRAM VAN BRUNT, Bridgeport, Conn. Filed Oct. 12, 1910. Serial No. 586,686. (Cl. 24—191.)



1. A buckle comprising a frame member having two looped portions one of which is adapted to receive the webbing, a substantially rectangular locking member having a lip adapted to project within the other of the looped portions of the frame member and to receive the webbing, and a lever member pivotally held to the frame member and connected to the locking member to cause the same to have an inward and upward movement to draw and force the webbing within the loop of the frame member through which the lip passes.

2. A buckle comprising a frame member having a narrow elongated eye portion at one end, a lever having its intermediate part hinged to the other end of the frame, and a locking member having a loop portion projecting through the said eye of the frame member, the locking member being hinged to one end of the lever whereby upon swinging the lever on the frame the loop will be drawn back in the eye to cause a band of fabric to be pressed against the margins of the eye and locked by the loop portion.

1,021,019. AMUSEMENT APPARATUS CALLED INDIAN TRIP. BENJAMIN F. VAN KANNEL, New York, N. Y. Filed May 23, 1911. Serial No. 629,015. (Cl. 46—70.)



1. In an amusement apparatus, the combination, with a ball-alley, of a seat near one end of the alley, a toggle-brace arranged to support the same, and a target with connection to such toggle-brace to drop the seat when the target is hit.

2. In an amusement apparatus, the combination, with a post, of a seat projected transverse to the line of view at one side of the post, a target projected transverse to the line of view at the opposite side of the post, and a toggle-brace arranged to support the seat, with connection to the target for dropping the seat when the target is hit.

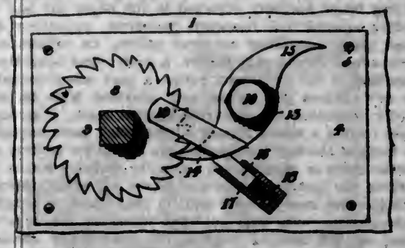
3. In an amusement apparatus, the combination, with a post, of a seat projected transverse to the line of view at one side of the post, a cleat beneath the seat with hinge connecting the seat upon the forward side of the cleat, a toggle connecting the post and seat and adapted to fold under the cleat, a target projected from the opposite side of the post and a connection from the target to the toggle-brace to drop the seat.

4. In an amusement apparatus, the combination, with a post, of a seat projected at one side of the same, a toggle-brace connecting the under side of the seat with the side of the post, a trip-rod extended from the toggle-brace through the post, a bearing for a target-arm upon the opposite side of the post with a target having its arm hinged therein and a crank-connection to the said trip-rod, whereby a blow upon the target starts the bending of the toggle and causes the dropping of the seat.

5. In an amusement apparatus, the combination, with a post, of a seat projected at one side of the same, a toggle-brace connecting the under side of the seat with the side of the post, a trip-rod extended from the toggle-brace through the post, and provided with a button upon its end, a vertical bearing for a target-arm upon the opposite side of the post with a target-spindle journaled therein and having an arm with a target thereon, and a crank with loose eye embracing the trip-rod beneath the button, as and for the purpose set forth.

[Claims 6 to 10 not printed in the Gazette.]

1,021,020. BRAKE-LOCKING DEVICE. GEORGE E. VAUSS and CHARLES S. CLEMMENS, Pittsburgh, Pa. Filed Sept. 28, 1911. Serial No. 651,702. (Cl. 188—58.)



1. In a brake locking device, a base plate provided with a depending boss, a support into which said boss extends and upon which said plate is mounted, a brake staff extending through said plate and boss, a ratchet wheel carried by said staff and spaced from said plate, a dog pivoted upon said plate and having one end capable of engaging said ratchet wheel to prevent movement of the staff and having its outer end forming a toe-piece whereby the dog can be shifted by the foot clear of the ratchet wheel, an inclined housing carried by said plate, a spring controlled inclined plunger mounted in the housing and permanently engaging one side of said dog and for normally tending to force the dog into engagement with said wheel, and an inclined flat extension integral with the upper face of that end of said dog which engages with said wheel and permanently projecting over said wheel to prevent vertical displacement of the latter.

2. In a brake locking device, a base plate, a brake staff extending through said plate and provided with a collar engaging the upper surface of the plate, a ratchet wheel carried by said staff and positioned against said collar, a dog pivoted upon said plate and having one end engaging said ratchet wheel to prevent movement of said staff and having its other end forming a toe-piece whereby the dog can be shifted from engagement with the ratchet wheel, a housing carried by said plate, a spring controlled plunger mounted in said housing and permanently engaging one side of said dog for normally maintaining the dog in engagement with the teeth of said wheel, and a flat extension integral with the upper face of that end of said dog which engages with said wheel and permanently projecting over said wheel to prevent vertical displacement of the latter.

1,021,021. ROW-GAGE ATTACHMENT FOR PLOWS. ROBERT J. VIBBERT, Ambrose, Ga. Filed Oct. 18, 1911. Serial No. 655,403. (Cl. 111—24.)



1. In a row gaging device, a plow beam, a member hingedly carried thereby, and a yieldably spring actuated beam pivoted to the member and provided with a gravitating row gaging arm.

2. In a row gaging device, a plow beam, a member hingedly carried thereby, and a yieldably spring actuated beam pivoted to the member and provided with a gravitating row gaging arm, the member and the beam adapted to be adjusted so as to project from either side of the plow beam, while the row gaging arm is adapted to be flipped upon either side of the beam.

3. In a row gaging device, a plow beam, a yieldably spring actuated beam connected thereto including an extensible extension beam, means for permitting the extension beam to be adjusted, the extension beam having the gravitating row gaging member adapted to be flipped upon either side of the extension beam.

4. In a row gaging device, a plow beam, a beam movably projecting from the plow beam, the movable beam being U-shaped in cross section, and extension beam U-shaped in cross section telescopically received by the movable beam, means for holding the extension beam in adjusted positions, and angular member carried adjacent the free end of the extension beam and provided with a gravitating row gaging arm, adapted to be flipped upon either side of the extension beam.

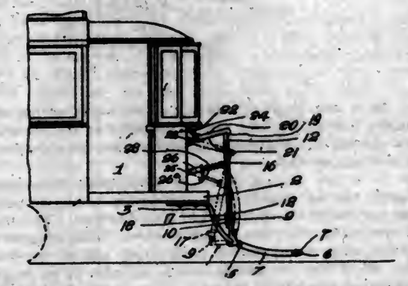
5. In combination, a plow beam, a member hingedly connected thereto terminating at its outer end into a U-shaped portion, a beam pivoted in the outer U-shaped portion, means for limiting the pivoted beam to a substantially horizontal position with relation to the hinge member, means for allowing the pivoted beam to yield, and extension beam telescopically received by the pivoted beam, means for holding the extension beam adjusted with relation to the pivoted beam, an angular bracket carried at the outer end of the extension beam, a row gaging gravitating arm pivoted to the bracket and adapted to be flipped upon either side of the extension beam, the hinged member, the pivoted beam including the extension beam adapted to be flipped upon either side of the plow beam.

1,021,022. CAR-FENDER. JOSEPH O. VOGEL, Pittsburgh, Pa., assignor of one-half to O. A. Stehle, Pittsburgh, Pa. Filed Nov. 6, 1911. Serial No. 658,718. (Cl. 105—252.)

1. In a car fender, the combination with a car, of a hanger carried thereby, a curved frame pivotally mounted upon said hanger, a vertical frame pivotally connected to said curved frame, pins for maintaining rigid connection between said frames, said vertical frame embodying side rails, locking bars pivotally connected to said car and engaging the upper ends of said side rails, springs interposed between said car and said locking bars for holding the latter in engagement with said side rails, sockets carried by said car, rods pivotally connected to said side rails and entering said sockets, and springs surrounding said rods for cushioning the rearward movement of said vertical frame.

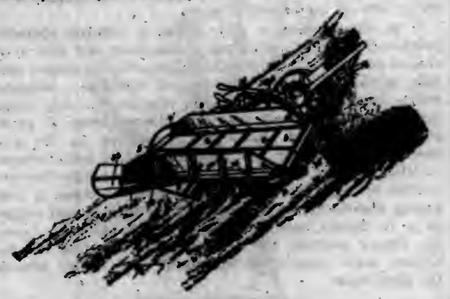
2. The combination with a car, of a curved frame pivotally supported thereby, a vertical frame pivotally con-

nected with said curved frame, pins for maintaining a rigid connection between said frames, said vertical frame embodying side rails, rods pivotally connected with said side rails, sockets carried by said car for receiving said rods, springs surrounding said rods for cushioning said vertical frame, pivoted lock bars carried by said car and engaging the upper ends of said side rails, and means for normally holding said bars in engagement with said rails.



3. The combination with a car, of a curved frame pivotally supported thereby, a vertical frame pivotally connected with said curved frame, pins for maintaining rigid connection between said frames, means carried by said car for cushioning the rearward movement of said vertical frame, and spring pressed lock bars carried by said car for holding the upper edge of said vertical frame.

1,021,023. ELEVATING AND BUNCHING ATTACHMENT FOR MOWING-MACHINES. RALPH WALKER, Westhope, N. D. Filed Jan. 24, 1911. Serial No. 604,456. (Cl. 56—68.)



1. The combination with a mowing machine including a traction wheel and a finger bar, of a supporting frame hingedly connected to the finger bar, a caster wheel mounted beneath the middle of the frame for free rotation in a horizontal plane, an upwardly inclined floor carried by the frame and extending at right angles to the finger bar, conveyer rollers disposed at the upper and lower ends of the floor, elevator belts passing over said rollers, the belts being connected by transverse members, a transversely extending, downwardly inclined chute downwardly widening toward its lower end and supported beneath the upper end of the elevator floor, a plurality of fingers extending down into the chute at the lower end thereof, a rock shaft extending across the lower end of the chute to which said fingers are attached, an operating rod rigidly connected to said fingers and extending forward whereby the fingers may be raised, gearing operatively connecting the uppermost of the elevator rollers to the traction wheel of the mowing machine, and means for throwing said gearing into or out of engagement with said traction wheel.

2. In a mowing machine attachment of the character described, an upwardly inclined wheeled frame, an endless conveyer mounted upon said frame, a transversely extending downwardly inclined chute supported at the rear end of the endless conveyer, said chute being semicircular in cross section and widening toward its lower end, a circular support for the lower end of the chute disposed upon the frame and encircling the chute, a transverse rock shaft passing through the upper margins of the side walls of the chute at the lower end thereof, a plurality of depending fingers attached to said rock shaft, and a rigid operating rod attached to said fingers and extending forward.

3. The combination with a mowing machine including a traction wheel and a finger bar, of a supporting frame hingedly connected to the finger bar and extending upward and rearward therefrom parallel to the traction wheel of the machine, a caster wheel mounted beneath the frame for movement in a horizontal plane, said caster wheel being disposed between the axial center of the frame and the mowing machine, an endless conveyer supported upon the frame, a chute supported at the upper end of the frame extending transversely thereof below the upper end of the endless conveyer, pivoted fingers normally closing the lower end of the chute, and means whereby the fingers may be lifted to permit the contents of the chute to be dumped.

4. The combination with a mowing machine having traction wheels, a finger bar and a sprocket wheel operatively connected to the traction wheels, of a wheeled supporting frame hingedly attached to the finger bar and extending upward and rearward therefrom, oppositely disposed upper and lower conveyer rollers, an endless conveyer supported on said rollers, a gear wheel operatively connected to the uppermost roller, a gear wheel engaging the first named gear wheel and provided with an outwardly extending sleeve having ratchet teeth, a sprocket wheel having a sleeve formed with ratchet teeth engaging the teeth of the first named sleeve, a spring for holding the ratchet teeth in engagement, manually operated means for shifting the sprocket wheel and sleeve out of engagement with the first named sleeve and its gear wheel, a sprocket chain passing over said sprocket wheel to the sprocket wheel on the mowing machine, a transversely disposed chute mounted immediately beneath the rear end of the conveyer, said chute being downwardly inclined toward the rear of the mowing machine, pivoted fingers depending into the lower end of the chute, and a rod extending from said fingers whereby they may be operated independently of the gear disengaging means.

1,021,024. PLOW. IRA A. WEAVER, Springfield, Ill., assignor to Racine-Sattley Company, Springfield, Ill., a Corporation of Illinois. Filed Apr. 2, 1910. Serial No. 553,033. (Cl. 97—33.)



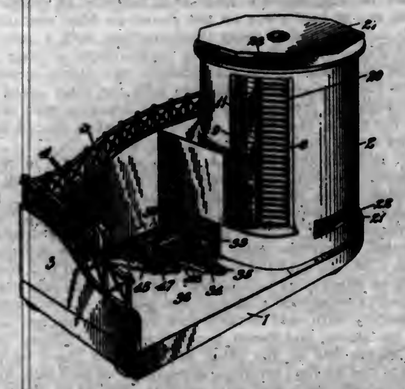
1. In a plow, the combination with a plow beam and furrow turning parts, of a furrow slice supporting device having an attaching portion of angle formation adapted to be attached to said beam, said device gradually converging from said angular attaching portion into a flat plate having a helical twist corresponding to the shape of the plow mold board whereby the furrow slice is supported on said device and evenly delivered thereby.

2. In a plow, the combination with a plow beam and furrow turning means, of a furrow slice supporting device comprising a metal angle member flattened throughout a portion of its length to form a supporting plate, said flattened portion being twisted to conform to the shape of the furrow slice being turned, the angle end of said device being upturned and provided with perforations whereby said device is secured to the plow beam and projects therefrom in substantial parallelism with the mold board of the plow.

3. In a plow, the combination with a plow beam and furrow turning parts, of a furrow slice supporting device having an attaching portion adapted to be attached to said beam, said device being formed beyond the said attaching portion into a flat plate having a helical twist corresponding to the shape of a plow mold board whereby the furrow slice is supported on said device and evenly delivered thereby.

4. A furrow slice supporting device comprising a member formed at one end for attachment to the beam of a plow and being flattened throughout a portion of its length to form a supporting plate, said flattened portion being twisted to conform to the shape of the furrow slice being turned, said device being adapted when secured to a plow beam to project therefrom substantially parallel with the mold board of the plow.

1,021,025. FILING-CABINET. LELAND S. WEAVER, Fremont, Mich., and WILLIAM F. ALTENBAUGH, Seattle, Wash.; said Weaver assignor to William F. Altenbaugh, Jr., Seattle, Wash. Filed Aug. 19, 1911. Serial No. 644,948. (Cl. 45—2.)



1. In a filing cabinet, the combination of a drum rotatable upon a vertical axis and provided with a series of vertical rows of radially extending pockets open at their outer ends, a casing inclosing the drum and provided with an opening in one side of a size to disclose one of the vertical rows of pockets in the drum at a time, and a member for turning the drum attached to the upper end thereof outside said casing and provided with index markings to indicate the corresponding vertical rows of pockets in the drum.

2. In a filing cabinet, the combination of a drum rotatable upon a vertical axis and provided with a series of vertical rows of radially extending pockets open at their outer ends, holders in the pockets, means on the drum between the pockets for engaging and holding the holders within their pockets, a casing having an opening, and a hand wheel above the upper end of the casing connected to the drum for turning the same and provided with index markings upon its periphery to indicate the corresponding vertical rows of pockets in the drum.

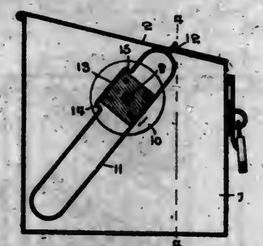
3. In a filing cabinet the combination of a casing having an opening in one side, a drum within said casing provided with rows of pockets adapted to be successively brought into alinement with the openings in the casing by turning the drum, a friction member for stopping the drum and means on the drum for operating the member by the turning of the drum.

4. In a filing cabinet, the combination of a casing having an opening in one side, a drum within said casing provided with rows of pockets adapted to be successively brought into alinement with the opening in the casing by turning the drum, members on the drum corresponding in number to the number of rows of pockets in the drum and having different paths of travel when the drum is turned, a member adapted to be turned into the path of travel of any of said members, and a brake operated by said member to stop the drum.

5. In a filing cabinet, the combination of a casing having an opening in one side, a drum in said casing provided with rows of pockets adapted to be brought successively into alinement with the opening in the casing by turning the drum, a member for frictionally engaging and holding the drum, a lever for operating said member, a member adjustable upon said lever and means on the drum to engage said adjustable member when the drum is turned.

[Claims 6 to 9 not printed in the Gazette.]

1,021,026. SIGNAL FOR MAIL-BOXES. MARION F. WELCH, Hollis, Kans. Filed Nov. 15, 1910. Serial No. 592,424. (Cl. 232—35.)



A mail box signal comprising a horizontal shaft journaled in a wall of the mail box and having a plate secured thereto and a prismatic member carried on the inner end thereof, an elongated loop of springy material encompassing the prismatic member and adapted to hold the same in one of several alternative positions, said loop having a widened portion in which the prismatic member normally rests and a relatively narrow portion into which the prismatic member is admissible by the lateral expansion of the loop, a shoulder at the junction of the widened and relatively narrow portions, said loop being hinged to the cover of the mail box and adapted to be raised and lowered thereby and to effect engagement of the shoulder with a corner of the prismatic member for rotating the shaft when the cover is raised.

1,021,027. GAS-HEATING SAD-IRON. LOUIS WENTZ, Philadelphia, Pa. Filed Apr. 27, 1911. Serial No. 623,621. (Cl. 158—28.1.)

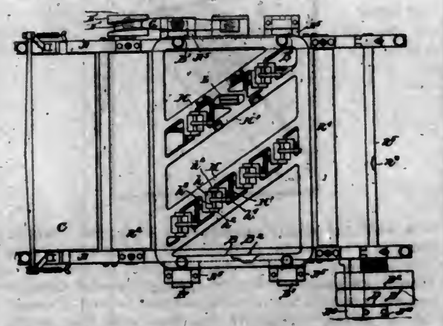


1. A gas heating sad iron comprising a hollow body, a bottom on said body, a top on said body, longitudinally extending opposed flanges integral with the body, and located approximately midway the top and bottom of the body, a bridge piece connecting said flanges, a gas pipe extending longitudinally of the body and located between said flanges, means securing said pipe to the bridge piece, and said pipe having burner orifices in its lower face, substantially as described.

2. A gas heating sad iron comprising a hollow body, a bottom on said body, a top on said body, longitudinally extending opposed flanges integral with the body and located approximately midway the top and bottom of the body, a bridge piece connecting said flanges, a gas pipe extending longitudinally of the body and located between said flanges, a screw passing through the bridge piece and holding the pipe in place, and said pipe having burner orifices in its lower face, substantially as described.

3. A gas heating sad iron comprising a hollow body, a bottom on said body, a top plate on said body, longitudinally extending opposed flanges integral with the body and located approximately midway the top and bottom of the body, a gas pipe extending longitudinally of the body and located between said flanges, said pipe having burner orifices in its lower face, said body having openings at its upper and lower edges, a screw connecting said top plate and gas pipe, an integral bridge piece connecting said flanges and having an opening through which said screw projects, and a jam nut on said screw against said bridge piece, substantially as described.

1,021,028. CUTTING-MACHINE. WILLIAM BURTON WESCOTT, Roxbury, Mass. Filed Jan. 2, 1912. Serial No. 668,886. (Cl. 164—65.)



1. In a cutting machine, the combination with means to feed a sheet to be cut, of cutting devices spaced transversely across the sheet and comprising means to produce similar cyclically recurrent curved cuts, progressively out of phase with each other, as referred to the line of feed of the sheet.

2. In a cutting machine, the combination with means to feed a sheet to be cut, of cutting devices arranged in echelon across the sheet, and means to move the cutters transversely to the line of feed of the sheet, to produce similar cyclically recurrent curved cuts progressively out of phase with each other as referred to the line of feed of the sheet.

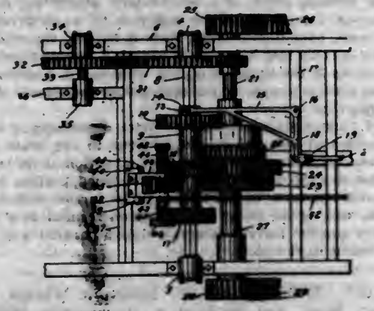
3. In a cutting machine, the combination with means to feed a sheet to be cut, of cutting devices arranged in echelon across the sheet, and means to move the cutters transversely to the line of feed of the sheet, to produce similar cyclically recurrent curved cuts progressively out of phase with each other as referred to the line of feed of the sheet, and winding arbors to receive the strips severed by the said curved cuts, said arbors arranged in such manner that adjacent strips are wound on different arbors.

4. In a cutting machine, the combination with means to feed a sheet to be cut, of cutting devices arranged in echelon across the sheet, and means to move the cutters transversely to the line of feed of the sheet, to produce similar cyclically recurrent curved cuts progressively out of phase with each other as referred to the line of feed of the sheet, and winding arbors to receive alternate strips severed by the said curved cuts.

5. In a cutting machine, the combination with means to feed a sheet to be cut, of a cutter frame, cutters mounted on the cutter frame in echelon across the sheet, a pattern cam, means to drive the pattern cam as the sheet is fed, and connections from the pattern cam to the cutter frame, to move it transversely to the line of feed of the sheet.

[Claims 6 and 7 not printed in the Gazette.]

1,021,029. REVERSING-GEARING. EDWIN M. WHEELOCK, Winona, Minn. Filed June 9, 1911. Serial No. 632,275. (Cl. 74—58.)



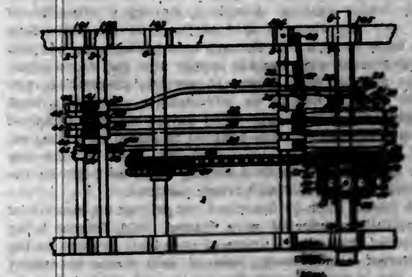
1. In a traction engine, a driven shaft, a sleeve slidable on said shaft, a plurality of gears on said sleeve spaced one from the other, a countershaft, a grouped series of gears on said counter shaft each adapted to coöperate with one of said gears on the sleeve, an idler gear movable into position to mesh simultaneously with a gear on said sleeve and a gear on said countershaft to effect reverse movement of the countershaft, and means movable with the idler gear to coöperate with the other gears on the sleeve to prevent said idler gear engaging said gears on the sleeve and on the countershaft when any of said gears are in mesh for direct driving action.

2. In a traction engine, a driven shaft square in cross section, a sleeve fitting said square shaft and slidable thereon, three different sized gears on said shaft, the intermediate gear being the smallest, a countershaft, three correspondingly different-sized gears on said countershaft grouped in reverse order and each adapted to coöperate with a gear on said sleeve, an idler gear pivoted to a frame member opposite an outside gear of the group on said shaft, means to swing said idler gear into position to mesh simultaneously with said outside gear and said smallest gear on the sleeve, and means movable with said pivoted gear to engage one or the other of the larger gears on the sleeve and prevent reversing engagement of said idler with said outside gear and said smallest gear when either of said larger gears is in mesh with a gear on the shaft.

3. In a traction engine, a driven shaft, a sleeve slidable on said shaft, three different-sized gears spaced apart on the sleeve the intermediate gear being the smallest, a countershaft, a grouped series of gears on the countershaft, a pair of pivoted arms, a shaft carried by said arms, a gear on said shaft between the arms in the plane of a gear on the countershaft, disks on the shaft outside of said arms, and means to swing the arms to bring the gear therebetween simultaneously into mesh with said opposite gear and said smallest gear on the sleeve, the disks operating to engage a gear on the shaft and prevent such simultaneous meshing when the gears on the sleeve and shaft are connected for direct driving action.

1,021,030. POWER-TRANSMISSION DEVICE. DALTON K. WILSON, Waterloo, Iowa, assignor to William Galloway Company, Waterloo, Iowa. Filed Aug. 26, 1910. Serial No. 579,061. (Cl. 74—34.)

1. A power transmission device, comprising, in combination, a frame, a rotary shaft mounted in said frame, a disk mounted on said shaft, a sprocket-rim rotatably mounted about said disk and having an internal-gear, a plurality of gear-wheels arranged about said shaft and rotatably mounted on stud-shafts projecting from one face of said disk and in mesh with said internal-gear of said sprocket-rim, each of said gear-wheels having an integral coaxial pinion rotatable with it on the same stud-shaft, a hollow friction-drum having an internal gear-wheel integral therewith and in mesh with said plurality of pinions, a second hollow friction-drum having an integral gear-wheel in mesh with said plurality of pinions, a third friction-drum rotatably mounted on said shaft and having an integral pinion in mesh with said plurality of gear-wheels, friction-heads pivoted to the third friction-drum and engaging the inner periphery of said second friction-drum, means for shifting said friction-heads in and out of frictional contact with said second drum, a band-brake about each of said first, second and third friction-drums, and means for independently tightening said band-brakes upon said drums.



2. A power transmission device, comprising, in combination, a frame, a rotary shaft mounted in said frame, a disk operatively mounted on said shaft, a sprocket-rim rotatably mounted about said disk and having an internal-gear, a plurality of gear-wheels arranged about said shaft and rotatably mounted on stud-shafts projecting from one face of said disk and in mesh with said internal-gear, each of said gear-wheels having an integral coaxial pinion, and a plurality of drums arranged side-by-side on said shaft rotatably, and respectively geared with said plurality of gear-wheels and pinions independently, a movable brake adapted to independently frictionally contact with the outer periphery of each of said drums, to separately stop the rotation of either as desired, and a friction-head pivotally connected to one of said drums and adapted to frictionally engage another of said drums to connect the two drums together.

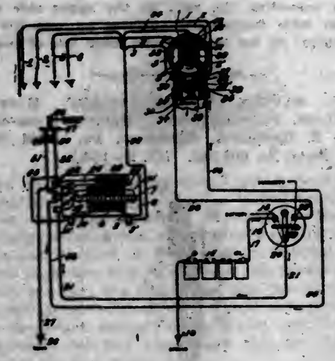
3. A power transmission device, comprising, in combination, a frame, a rotary shaft mounted in said frame, a sprocket- or gear-rim rotatably mounted about and spaced away from said shaft concentrically, said rim having an internal-gear, a plurality of gear-wheels rotatable on shafts, the latter fixed in relation to said first-mentioned shaft, and said wheels having integral coaxial pinions, a gear-wheel rotatable on said shaft and meshed with all of said plurality of gear-wheels, means for holding the last-mentioned gear-wheel fixed when desired, an internal-gear wheel in mesh with said plurality of pinions, means for holding the last-mentioned internal-gear wheel fixed when desired, a gear-rim concentric with said first-mentioned shaft and rotatable about it and in mesh with said plurality of pinions, and means for holding said last mentioned gear-rim fixed when desired.

4. A power transmission device, comprising, in combination, a frame, a rotary shaft mounted in said frame, a sprocket- or gear-rim rotatably mounted about and spaced away from said shaft concentrically, said rim having an internal-gear, a plurality of gear-wheels rotatable on shafts, the latter fixed in relation to said first-mentioned shaft, and said wheels having integral coaxial pinions, a gear-wheel rotatable on said shaft and meshed with all of said plurality of gear-wheels, means for holding the last-mentioned gear-wheel fixed when desired, an internal-gear wheel in mesh with said plurality of pinions, means for holding the last-mentioned internal-gear wheel fixed when desired, a gear-rim concentric with said first-mentioned shaft and rotatable about it and in mesh with said plurality of pinions, means for holding the last-mentioned gear-rim fixed when desired, and independent means for connecting together both the gear-wheel in mesh with said plurality of gear-wheels and the gear-wheels in mesh with said plurality of pinions.

5. A power transmission device, comprising, in combination, a frame, a rotary shaft mounted in said frame, a sprocket- or gear-rim rotatably mounted about and spaced away from said shaft concentrically, said rim having internal-gear shafts, a plurality of gear-wheels rotatable on said shafts, the latter fixed in relation to said first-mentioned shaft, and said wheels having integral coaxial pinions, a gear-wheel rotatable on said shaft and meshed with said plurality of gear-wheels, means for holding said last-mentioned gear-wheel immovable when desired, an internal-gear wheel in mesh with said plurality of pinions, and means for holding said internal-gear wheel immovable when desired.

[Claim 6 not printed in the Gazette.]

1,021,031. IGNITING MECHANISM FOR EXPLOSIVE-ENGINES. ALEXANDER WINTON and HAROLD B. ANDERSON, Cleveland, Ohio, assignors to The Winton Motor Carriage Company, Cleveland, Ohio. Filed Apr. 4, 1905. Serial No. 253,742. (Cl. 123—148.)



1. A sparking mechanism for multiple cylinder engines, comprising a non-vibrating primary-coil, a secondary coil therefor, a generator circuit including said primary coil, an engine operated generator in said circuit, a circuit interrupter in said generator circuit operated by the engine, a battery circuit independent of the generator circuit, a battery within the battery circuit, a secondary circuit for said secondary coil, sparking points in said secondary circuit, a manually operated circuit making and breaking device in the battery circuit, and an engine operated distributer in the secondary circuit automatically selecting the proper spark gap when the engine is at rest and the battery circuit is opened and closed by the said manually operated make and break device independently of the engine operated circuit interrupter, for the purpose described.

2. The combination with a multiple cylinder explosive engine, of a sparking mechanism including a non-vibrating primary coil, a secondary coil, a battery, a magneto, a battery and a magneto circuit each including said primary coil, an interrupter in both said battery and magneto circuits, the interrupter and magneto operated by the engine, a secondary circuit including the secondary coil and also sparking points for the engine cylinders, a distributer for the secondary circuit connected with the magneto armature, a circuit switch common to the battery and magneto circuits, and an electric make and break device in the battery circuit independent of the engine interrupter.

1,021,032. COMBINED SHOE SHANK AND FILLER. WILLIAM H. WOOD, Rochester, N. Y. Filed Aug. 11, 1911. Serial No. 643,506. (Cl. 36—76.)



1. A shoe shank stiffener and filler formed from sheet material, arched between its ends and bent to provide, on the under side of the arch, a central longitudinally extending rib, and longitudinally extending projections on opposite sides of the longitudinally extending rib of less height than the latter.

2. A shoe shank stiffener and filler formed from sheet material, arched between its ends and bent to provide, on the under side of the arch, a central longitudinally extending rib, and longitudinally extending projections on opposite sides of the central rib, the latter extending below the said longitudinally extending projections, and the upper side of the arch of the shank having wide foot-resting portions between the central rib and the longitudinally extending projections.

3. A shoe shank stiffener and filler formed from sheet material, having flattened portions at its ends, arched between its ends, and bent between the flattened portions to provide, on the under side of the arch, a central longitudinally extending rib, and, on the upper side of the arch, two wide foot-resting surfaces on opposite sides of the central rib for engaging the inner sole of the shoe.

1,021,033. SAFETY WATCH-POCKET. HARRY A. WOOLSLAER, Pittsburgh, Pa., assignor of one-half to George B. Henderson, Pittsburgh, Pa. Filed Feb. 1, 1911. Serial No. 605,949. (Cl. 2—153.)



1. A watch retaining device, comprising plates movably connected together, and coiled springs arranged between said plates and having ends thereof secured to said plates and the opposite ends thereof bent to provide retaining arms adapted to engage the stem of a watch.

2. A watch retaining device for pockets comprising a pair of spaced plates disposed in the same plane, longitudinally-extending means engaging with the plates, for movably connecting them together, and resilient means interposed between and connected with said plates and including retaining arms adapted to engage the stem of the watch to prevent the removal of the watch from the pocket.

3. A watch retaining device for pockets comprising a pair of plates, flat springs for movably connecting the plates together, and coiled springs arranged between said plates and having one end thereof secured to the plates and the opposite end bent to provide retaining arms adapted to engage the stem of the watch for maintaining it in the pocket.

1,021,034. FENDER FOR GAS-STOVE VALVES. CURT ZADIG and FREDERICK H. KAISER, New York, N. Y. Filed May 9, 1911. Serial No. 626,187. (Cl. 126—42.)

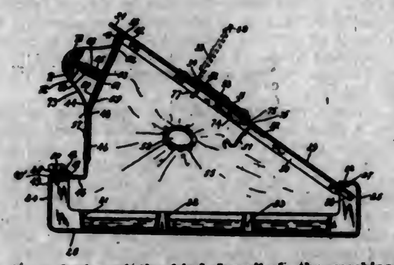
1. A fender of the character described, having a plurality of frame sections, each of said sections being shaped to form side extensions and a hook at each side, said hook to engage the gas supply pipe and stove structure to support said sections in vertical disposition, one of said sections having an intermediate supporting hook to engage the said guard rail; and guides rigidly connected with each of said sections adapted to infold in sliding relation the structural members of the other of said sections.



2. A fender such as described, having a plurality of frame sections, each of said sections having extensions and a hook at each side thereof, said hooks being adapted for engagement with the gas supply pipe and stove structure to support said fender in vertical disposition, one of said sections having an intermediate supporting hook to engage the said supply pipe; guides rigidly connected with each of said sections adapted to infold in sliding relation the structural members of the other of said sections; and an open meshed netting extended between the structural members of said frame sections.

3. A fender such as described comprising a plurality of telescopically connected wire frames, said frames being constructed from single pieces of wire bent to form at the end thereof alined hooks, one of said hooks to extend under the stove top and the other said hook being arranged to infold the gas supply pipe of a gas stove, and the wire frame of one of said sections being bent to form a supporting hook to infold said supply pipe intermediate the end hooks for infolding said pipe.

1,021,035. PHOTOGRAPHIC-PLATE DEVELOPING, WASHING, AND FIXING APPARATUS. ANDREW BENKÖ, New York, N. Y. Filed Nov. 11, 1911. Serial No. 659,852. (Cl. 95—91.)



1. In a device of the kind described, the combination with a casing consisting of a trough-shaped base, a cover pivoted thereto, a front hinged to the front end of said cover, and two sides made of flexible light proof fabric having holes for the insertion of the hands of the operator, said front being provided with an opening, an apertured plate within said opening, a flexible fabric holding said plate shiftably in said opening, shutters hinged to said plate for closing the aperture therein, and a mechanism for operating said shutters, substantially as and for the purpose specified.

2. In a device of the kind described, the combination with a casing consisting of a trough-shaped base, a cover pivoted thereto, a front hinged to the front end of said cover, and two sides made of flexible light proof fabric having holes for the insertion of the hands of the operator, said front being provided with an opening, an apertured plate within said opening, a flexible fabric holding said plate shiftably in said opening, shutters hinged to said plate for closing the aperture therein, arms fulcrumed to said plate bearing against said shutters, spring pressed pins slidably arranged upon said plate adapted to bear against said arms, an apertured bridge connecting said pins, and a flexible light proof fabric attached to said bridge and said front, substantially as and for the purpose specified.

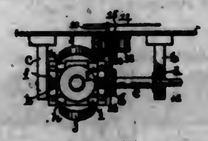
3. In a device of the kind described, the combination with a closed casing having an opening in one of its walls, of an apertured plate within said opening, a flexible fabric holding said plate shiftably in said opening, shutters hinged to said plate for closing the aperture therein, and a mechanism for operating said shutters, substantially as and for the purpose specified.

4. In a device of the kind described, the combination with a closed casing having an opening in one of its walls, of an apertured plate within said opening, a flexible fabric holding said plate shiftably in said opening, shutters hinged to said plate for closing the aperture therein, arms fulcrumed to said plate bearing against said shutters, spring pressed pins slidably arranged upon said plate adapted to bear against said arms, an apertured bridge connecting said pins, and a flexible light proof fabric attached to said bridge and said front, substantialy as and for the purpose specified.

5. In a device of the kind described, the combination with a casing consisting of a trough-shaped base, a cover pivoted thereto, a front hinged to the front end of said cover, and two sides made of flexible light proof fabric having holes for the insertion of the hands of the operator, said front being provided with an opening, an apertured plate within said opening, a flexible fabric holding said plate shiftably in said opening, shutters hinged to said plate for closing the aperture therein, a mechanism for operating said shutters, said cover being provided with an opening, and a frame resting upon said cover and holding a colored glass plate to exclude the actinic rays of light from the opening in said cover, substantially as and for the purpose specified.

[Claims 6 to 9 not printed in the Gazette.]

1,021,036. SPEEDOMETER. LEON E. BLANCHARD, Boston, Mass., assignor to Reliance Speedometer Company, Boston, Mass., a Corporation of Maine. Filed Feb. 24, 1910. Serial No. 545,685. (Cl. 73—128.)



1. In an instrument of the class described, in combination, a pointer or index, a shaft on which said pointer is mounted, a pinion on said shaft, a segmental gear meshing with said pinion, a centrifugally operated governor provided with a collar having an annular groove, a pin extended into said groove, a slide bar carrying said pin and provided with a longitudinally extended slot, a post on said segmental gear having a threaded socket, a screw extended through said slot and into said socket to secure said slide bar in fixed relation to said post, and a screw extended transversely of said post and engaging said slide bar, substantially as described.

2. In an instrument of the class described, in combination, a pointer or index, a shaft on which said pointer is mounted, a pinion on said shaft, a segmental gear meshing with said pinion, a centrifugally operated governor provided with a collar, a pin engaging said collar, a slide bar carrying said pin, means for securing said slide bar in fixed relation to said segmental gear, and means for adjusting said slide bar and pin with relation to said collar, substantially as described.

3. In an instrument of the class described, in combination, a dial provided with graduations, a pointer or index, a shaft on which said pointer is mounted substantially concentric with relation to said dial, toothed gearing to rotate said shaft, a centrifugally operated governor, a slide bar carried by said gearing, a device on said slide bar coöperating with said governor, and means to secure said slide bar in fixed relation to said gearing, substantially as described.

4. In an instrument of the class described, in combination, a pointer or index, a shaft on which said pointer is mounted, a pinion on said shaft, a gear in mesh with said pinion, a centrifugally operated governor having a movable collar, a device carried by and secured in fixed relation to said gear and engaging with said collar, said device being adjustable on said gear, for the purpose specified.

5. In an instrument of the class described, in combination, a pointer or index, a shaft on which said pointer is mounted, gearing to oscillate said shaft, a centrifugally operated governor, a device carried by and secured in fixed relation to said gearing to move therewith and coöperating with said governor, said device being adjustable on said gearing, for the purpose specified.

[Claim 6 not printed in the Gazette.]

1,021,037. OIL-CAN HOLDER. FRANK WASHBURN BUFFUM, Louisiana, Mo. Filed Nov. 25, 1911. Serial No. 662,342. (Cl. 248—41.)



1. An oil-can holder comprising a base portion provided with stationary jaws which are so formed that they lap over the lower edge portion of the oil font of the oil-can, a pivotally mounted jaw arranged in a slot in said base portion and mounted on a horizontally disposed pivot, a laterally projecting arm on the lower end of said pivotally mounted jaw that lies underneath said base portion, and a leaf spring on the under side of said base portion that exerts downward pressure on said arm and thus forces said movable jaw into engagement with the lower edge portion of the font of the oil-can.

2. An oil-can holder comprising a base portion provided with stationary jaws, said base portion having a notch formed in the periphery thereof, lugs depending from the under side of said base portion on opposite sides of said notch, a movable jaw arranged in said notch and pivotally connected to said lugs by a horizontally disposed pivot, a laterally projecting arm on said movable jaw which extends under said base portion, and a leaf spring on the under side of said base portion that exerts downward pressure on said arm and thus holds the movable jaw in engagement with the font of the oil-can.

3. An oil-can holder consisting of a cast metal base portion provided with integral jaws and having an integral boss and depending lugs on the under side of same, a movable jaw arranged in a slot or notch in the periphery of said base portion and pivotally connected to said lugs, a laterally projecting arm on said movable jaw, a leaf spring detachably connected to the boss on the under side of said base portion for exerting downward pressure on said arm, and a notch in said movable jaw for receiving a bead on the lower edge of the font of the oil-can, the upper end of said movable jaw being flared or curved outwardly.

4. An oil-can holder consisting of a cast metal base portion provided with integral jaws and having an integral boss and depending lugs on the under side of same, a movable jaw arranged in a slot or notch in the periphery of said base portion and pivotally connected to said lugs, a laterally projecting arm on said movable jaw, a leaf spring detachably connected to the boss on the under side

of said base portion for exerting downward pressure on said arm, a notch in said movable jaw for receiving a bead on the lower edge of the font of the oil-can, the upper end of said movable jaw being flared or curved outwardly, and a vertically disposed attaching plate integrally connected to said base portion and provided with openings for receiving fastening devices that secure said plate to a supporting structure.

1,021,038. METHOD OF PUMPING LIQUIDS. THOMAS M. CHANCE, Philadelphia, Pa. Filed Aug. 5, 1910. Serial No. 575,069. (Cl. 103—67.)



1. The herein-before described method of pumping liquid, which consists in transmitting pressure to a confined body of liquid of greater length than diameter, by means of an actuator driven directly by a primary medium having high initial pressure and subsequent expansive force, whereby a power stroke of relatively high velocity is imparted to said body of liquid while the pressure of said medium is relatively high; controlling the quantity of said medium to permit the expansion thereof down to relatively low pressure at the end of the power stroke, while permitting the body of liquid to maintain relatively high velocity during said stroke; permitting the body of liquid to continue in motion after the actuator has come to rest and thereby creating a region of low pressure in the vicinity of the actuator; discharging a portion of said body of liquid; and drawing in at said region of low pressure a new increment of liquid, substantially as set forth.

2. The hereinbefore described method of pumping liquid, which consists in transmitting pressure to a confined body of liquid of greater length than diameter, by means of an actuator driven directly by a primary medium having high initial pressure and subsequent expansive force, whereby a power stroke of relatively high velocity is imparted to said body of liquid while the pressure of said medium is relatively high; controlling the quantity of said medium to permit the expansion thereof down to relatively low pressure at the end of the power stroke, while permitting the body of liquid to maintain relatively high velocity, during said stroke; permitting the body of liquid to continue in motion after the actuator has come to rest and thereby creating a region of low pressure in the vicinity of the actuator; discharging a portion of said body of liquid; drawing in at said region of low pressure a new increment of liquid; causing the power stored up by said body of liquid during the power stroke to react upon the actuator and to compress a succeeding new increment of the primary medium in preparation for the next stroke thereof, substantially as set forth.

3. The hereinbefore described method of pumping liquid, which consists in imparting motion of relatively high velocity to a body of liquid interposed between an actuator and an accumulator, said actuator being driven by means of a prime medium having high initial pressure and subsequent expansive force; controlling the quantity of said medium to permit the expansion thereof to relatively low pressure during the outstroke of said actuator; causing the outstroke and continued travel of said body of liquid to discharge liquid and to store energy in said accumulator; permitting the body of liquid to continue in motion after the end of the power stroke of said actuator and thereby creating a region of low pressure in the vicinity of said actuator; drawing in a new increment of liquid at said region of low pressure; causing the energy stored in said accumulator to react upon said actuator and upon the prime medium in preparation for the next power stroke of said actuator; and controlling the quantity of energy transmitted by the return stroke of said actuator in correspondence with the amount of power required for performing useful work upon said prime medium.

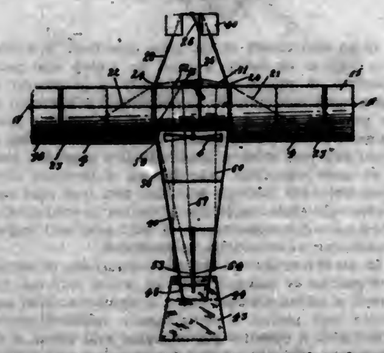
1,021,039. CARBURETER FOR INTERNAL-COMBUSTION ENGINES. GOGU CONSTANTINESCU, Bloomsbury, London, England. Filed Aug. 21, 1911. Serial No. 645,260. (Cl. 48—148.)



1. A carbureter comprising a horisontal motor exhaust conduit, a carbureting chamber surrounding said conduit and closed, at one end, by junction of its wall to the wall of said conduit, non-absorbent heat conducting bodies disposed in said chamber with interstices between them adequate for the passage of the air to be carbureted, a horizontal perforated fuel feed pipe extending into said chamber so as to afford a series of fuel delivery orifices distributed along the length of the chamber, and an air pipe extending into said chamber and terminating with its delivery orifice near said closed end of the chamber, the inlets of air, fuel and exhaust gas being all at the opposite end of the apparatus.

2. A carbureter comprising a horisontal motor exhaust conduit, a carbureting chamber surrounding said conduit and closed, at one end, by junction of its wall to the wall of said conduit, non-absorbent heat conducting bodies disposed in said chamber with interstices between them adequate for the passage of the air to be carbureted, a horizontal perforated fuel feed pipe extending into said chamber so as to afford a series of fuel delivery orifices distributed along the length of the chamber, an air pipe extending into said chamber and terminating with its delivery orifice near said closed end of the chamber, the inlets of air, fuel and exhaust gas being all at the opposite end of the apparatus, an external casing, and a hollow cylinder closed at one end and open at the other interposed between said casing and said carbureting chamber so that the exhaust gases must take a zig-zag path from the exhaust conduit through the said cylinder and then through the casing.

1,021,040. AEROPLANE. HALVOR O. EIANE, San Diego, Cal. Filed Apr. 20, 1911. Serial No. 622,263. (Cl. 244—29.)



1. An aeroplane comprising main supporting planes and adjustable tip wings, a vertically arranged vane mounted centrally of the machine and having pivoted swinging supports near its front and rear ends, capable of holding the vane in vertical position at all times but permitting it to move from side to side under the action of air currents, and means connecting the said vertical vane with the movable tip planes for facilitating the automatic righting of the aeroplane.

2. An aeroplane comprising main supporting planes and side tipping planes, and a vertically arranged vane capable of movement to parallel positions, carried by the said aeroplane, and connected with the tipping wings for controlling their angle of presentation to the air in accordance with the pressure upon said vertical plane.

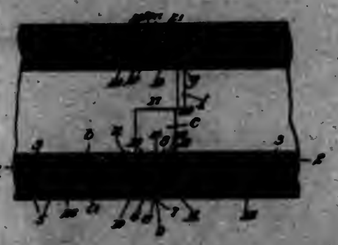
3. An aeroplane comprising a framing having main supporting planes, side tipping planes pivotally mounted on said frame, an automatically operating vane carried by the said frame, and having hinged connections at its front and rear end portions whereby it may move in approximately parallel planes under air pressure and means for connecting said vane with the tipping wings for preventing the tipping or skidding of the aeroplane.

4. An aeroplane comprising a frame having main supporting planes, and outer tipping planes, a vertical moving vane mounted upon said frame, a pivoted yoke carrying the front end of said vane, and means for connecting the vane at an intermediate point with the tipping wings or planes, the tipping wings being thus automatically controlled by the movement of the automatic vane under the side pressure exerted thereon.

5. An aeroplane having upper and lower supporting planes, upper tipping planes, said tipping planes being pivoted forward of their centers, means for pulling downwardly the rear portions of said planes, to vary the movement of the aeroplane, and tip planes pivoted forward of their central portions, cables for drawing down their rear ends, a vertical vane mounted upon the frame and connected with said cables, a pivoted yoke, carrying the front end of the vane, a pivoted arm having a slot therein, for supporting the rear end of the planes, cushion springs mounted in said slot, and tending to cushion the action of said plane.

[Claim 6 not printed in the Gazette.]

1,021,041. CONDUIT. WILLIAM G. FARGO, Jackson, Mich. Filed Aug. 16, 1909. Serial No. 513,180. (Cl. 72—53.)



1. The combination with a reinforced concrete conduit, of metallic cylinders embedded in the walls of the conduit, each cylinder having its ends provided with inwardly and outwardly directed flanges, the inwardly and outwardly directed flanges of adjacent cylinders being disposed in abutting relation, means for expansively locking the abutting inwardly directed flanges together, and means for expansively locking the outwardly directed flanged ends together.

2. The combination with a reinforced concrete conduit embodying sections, of a metallic cylinder embedded in the walls of each conduit section, each metallic cylinder having inwardly and outwardly turned flanges, means for locking the outwardly turned flanges together, and means for locking the inwardly turned flanges together, said cylinder being peripherally corrugated intermediate its ends only.

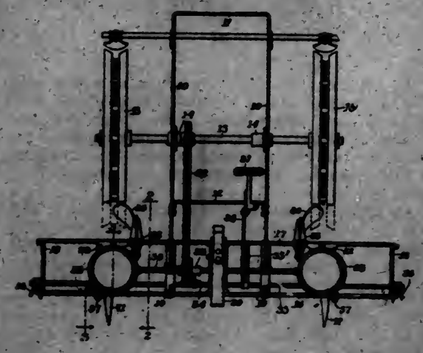
3. The combination with a reinforced concrete conduit embodying sections, of a metallic cylinder embedded in each section of the conduit, each metallic cylinder having inwardly and outwardly turned flanges, the inwardly directed flanges of one cylinder abutting with the inwardly turned flanges of the adjacent cylinder, the outwardly turned flanges of one cylinder abutting with the outwardly turned flanges of the adjacent cylinder, means for locking the abutting outwardly turned flanges together, and means for locking the abutting inwardly turned flanges together, the locking means of the inwardly turned flanges being operable from within the conduit.

4. The combination with reinforced concrete conduit sections, of a thin metallic cylinder embedded in the walls of each section, each cylinder being slitted at its ends, the part upon one side of each slit being formed into an inwardly directed flange and the part on the opposite side of the corresponding slit being formed into an outwardly directed flange, and means for sealing or locking the flanged ends of abutting cylinders together.

5. The combination with a concrete conduit, of a plurality of metallic cylinders embedded in the walls of the conduit, each cylinder being bisected at its ends with its bisected portions upon opposite sides of its bisections being formed into flanges, one flange of each end being directed outwardly and the other flange being directed inwardly, and a sealing or locking strip secured to adjacent flanged ends of the cylinders to secure them together and to permit of slight longitudinal movement of the cylinders.

[Claims 6 to 14 not printed in the Gazette.]

1,021,042. CORN-PLANTER. EDWARD M. HEYLMAN, Janesville, Wis., assignor to The Janesville Machine Company, Janesville, Wis., a Corporation. Filed Aug. 29, 1908. Serial No. 450,876. (Cl. 111—6.)



1. A corn-planter having a boot provided with a seed delivery chute, a combined disk support and shield detachably secured to said boot and a rotatable, concavo-convex, furrow opening disk mounted at an incline to the line of draft upon said combined support and shield with its convex side engaging the same.

2. In a corn planter, the combination with a boot having a seed delivery chute, of a rotatable, concavo-convex, furrow opening disk and a combined disk support and shield detachably connected at its rear end to the lower end of said boot, said disk being mounted in inclined position upon the forward end of said combined support and shield with the convex side engaging the same.

3. In a corn-planter, the combination with a boot having a seed delivery chute, of a disk support detachably connected at its rear end to the lower end of said boot and having an upturned forward end, a furrow opening disk rotatably mounted at an incline to the line of draft upon the forward end of said support with the convex side engaging the same and a brace bar connected to the forward end of said support.

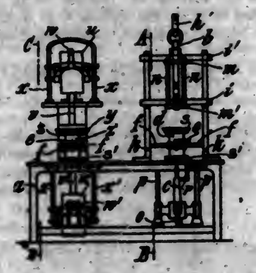
4. In a corn-planter, the combination with a boot having a delivery chute, of a combined disk support and shield detachably connected at its rear end to the lower end of said boot and a concavo-convex furrow opening disk rotatably mounted in inclined position at an angle to the line of draft upon the forward end of said com-

bined support and shield with the convex side against the same.

5. In a corn-planter the combination with a runner frame, a boot having a seed delivery chute mounted on said frame, of a combined disk support and shield detachably connected at its rear end to the lower end of said boot and having an upturned forward end, a brace bar connecting the forward end of said disk support and shield to said frame, and a concavo-convex furrow opening disk rotatably mounted upon the forward end of said support and shield with its convex side against the same.

[Claims 6 to 12 not printed in the Gazette.]

1,021,043. PROCESS AND APPARATUS FOR THE MANUFACTURE OF GLASS DRUMS AND OTHER HOLLOW BODIES. RUDOLF HOFFMANN, Köpenick, near Berlin, Germany. Filed Feb. 2, 1910. Serial No. 541,621. (Cl. 49—9.)



1. An apparatus for the manufacture of hollow glass bodies, the combination of a primary mold, a pair of interengaging cores, and a blowing mold of greater diameter than the primary mold, one of said cores being provided at the engaging end with an axial bore, the other core being provided with a reduced end adapted to be received by said bore.

2. An apparatus for the manufacture of hollow glass bodies, the combination of a primary mold, a pair of interengaging cores, and a blowing mold of greater diameter than the primary mold, one of said cores being provided at the engaging end with an axial bore, the other core being provided with a reduced end adapted to be received by said bore, the engaging ends of the unreduced part of the cores being approximately midway of the mold receiving the cores.

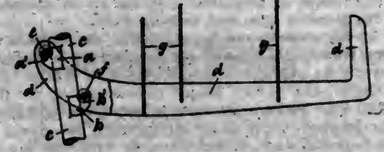
3. A process for the manufacture of hollow glass bodies, said process consisting in introducing a core upwardly into a primary mold, pouring glass into the mold, introducing a second core downwardly into the mold until the cores interengage, whereupon the glass body so formed is placed in a second mold of greater width and blown.

4. A process for the manufacture of glass drums and other hollow bodies, said process consisting in introducing a core upwardly into a mold, placing glass into the mold, introducing a second core downwardly into the mold until the cores engage, removing the mold to a blowing device, removing the mold and cores, inclosing the glass body with a second mold of greater diameter than the first mold, and blowing the glass for its full length against the second mold.

5. An apparatus for manufacturing hollow glass bodies, comprising a primary mold open at both ends, covers for said ends and having apertures, a pair of vertically disposed and vertically movable cores passed through said apertures and engaging each other in said mold, a second mold of greater width than the primary mold, apertured covers for the second mold, and means communicating with the apertures of the covers of the second mold for blowing a hollow glass body therein, said covers of the second mold being adapted to engage the ends of said body at the apertures of the covers.

[Claims 6 to 8 not printed in the Gazette.]

1,021,044. LUGGAGE AND LIKE CARRIER FOR CYCLES. GEORGE EDWIN HORNBERY, Northwich, England. Filed Feb. 18, 1910. Serial No. 544,657. (Cl. 208—45.)

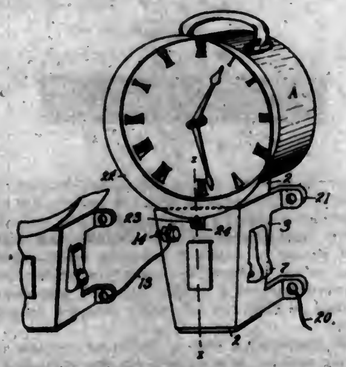


1. In combination, a "carrier" consisting of side members having apertures one above the other, one end of each of said side members being turned upwardly; supporting elements having apertures attached to a cycle head; bolts passing through the apertures in said side members and supporting elements; and means for preventing disengagement of said bolts from said side members and supporting elements; the arrangement being such that the upper point of attachment of said side members is behind the head and the lower point of attachment in the front thereof.

2. In combination, lugs at the front and rear of a cycle head, grooves in said lugs, carrier side members having holes therein, and bolts passed through said holes in said side members and adapted to rest within the grooves in said lugs, and nuts on said bolts.

3. In a carrier the combination with the head of a cycle, of supporting elements attached to the head in front and rear thereof, side members having an upturned end and provided with apertures one above the other in said end, bolts passing through apertures in said side members and engaging the supporting elements, the upper point of engagement of the side members being behind the head and the lower point of engagement in front thereof whereby the side members are supported in cantilver form.

1,021,045. SECONDARY ELECTRIC CLOCK. ERNEST A. HUMMEL, St. Paul, Minn., assignor to Albert L. Haman, St. Paul, Minn. Filed July 31, 1907. Serial No. 386,427. (Cl. 58—4.)

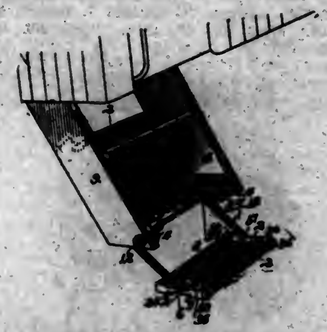


1. In combination a plurality of clocks each provided with a hollow projecting shank, brackets formed with sockets to receive said shanks, a time wire connected with said brackets, and means connecting said time wire with said shanks when said clocks are supported by said brackets.

2. In combination a plurality of clocks each provided with a hollow downwardly projecting shank, brackets formed with sockets to receive said shanks, a time wire connected with said brackets, means connecting said wire with said shanks when said clocks are supported by said brackets, and key actuated means for locking said clocks in said brackets.

3. In combination, a clock provided with an extension, a bracket constructed to removably receive said extension, a time wire in series with and constituting a circuit through said bracket, means for locking said extension in said bracket, means for electrically connecting said extension and bracket, a removable face for said bracket, and means for interlocking said clock face in the bracket to prevent said clock face being opened.

1,021,046. CAR-STEP. JAMES JACKSON, Unadella township, Livingston county, Mich. Filed Dec. 30, 1911. Serial No. 668,768. (Cl. 105—86.)



1. An extendible step for car steps, the latter including a pair of fixedly held tread members, and a pair of hanger irons pivotally suspended from the lowermost one of the said tread members to drop to and be held at a predetermined position, an auxiliary step pivotally mounted between the lower ends of the hanger irons, the said hanger irons being shaped to swing up over the tread member from which they are suspended, the auxiliary step having radial movement upon its pivots whereby to swing to a vertical position under the fixedly held tread member when the said hanger irons are swung upwardly, and means on the auxiliary step for engaging the hanger irons whereby to hold the said auxiliary step against tilting downwardly when it has been dropped to its extended position.

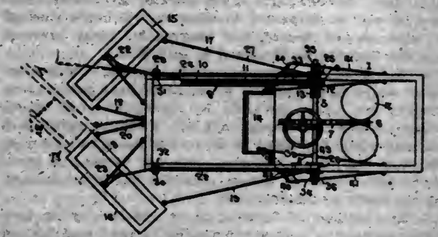
2. An attachment for car steps in which is included a set of steps, brackets pendent from the lower one of the said set of steps, an auxiliary step, metallic end members secured to said auxiliary step having recesses and stud pivots, hanger irons pivotally hung at their upper ends from the lowermost one of the fixedly held steps, and means on the auxiliary step for locking the said step from tilting downward when it has been dropped to its extended position.

3. An attachment for car steps which includes a set of tread members, brackets secured beneath the lower tread member, an auxiliary tread member, edge members secured to the said auxiliary tread member and having recesses, bearing blocks coöperatively mounted in the said recesses, hanger irons pivoted at their ends to the said bearing blocks and to said brackets, said hanger irons having substantially U-shaped upper ends to rest beneath the lower tread member and hold said auxiliary tread member in position when extended, said U-shaped portions of said irons receiving the front edge of said lower fixed tread member when said auxiliary tread member is in its folded position.

4. An attachment for car steps, which comprises in combination with a set of fixedly held tread members and pendent brackets on the lowermost one of said steps, said brackets being longitudinally recessed on their under faces; of a pair of hanger irons pivotally supported in the recessed brackets and having stop portions for engaging the said brackets for holding the hanger irons to a predetermined pendent position, an auxiliary tread member pivotally hung between the lower ends of the said hanger irons and adapted to swing inwardly to a vertical position, and means on the said auxiliary tread member for engaging the said hanger irons and holding the said auxiliary step from tilting downwardly when the said step is at its down or extended position.

5. An attachment for car steps comprising a pair of pendent hanger irons, the upper ends of which are shaped to lie flatwise against the fixedly held step member, means for pivotally supporting the said hanger irons on the said fixedly held step member, an auxiliary step member support between the lower ends of the opposite hanger irons, a bearing block mounted on each end of the auxiliary step, said bearing blocks having pivot studs, a cap plate for each end of the auxiliary step member that extends over the bearing blocks, and hanger irons having apertures at their lower ends for receiving the pivot studs, the cap plates having portions acting as keepers for holding the said hanger irons on the said steps, and lugs on the hanger blocks for engaging the lower ends of the hanger irons for holding the auxiliary steps against tilting forwardly and downwardly when at its lowermost position.

1,021,047. GRADING-MACHINE. EUGENE C. JEWETT, Eagle Grove, Iowa. Filed June 15, 1911. Serial No. 633,258. (Cl. 37—7.)



In a grading machine the combination with a frame having openings formed in the sides thereof, cutting blades movably secured centrally of said frame, means for raising and lowering said blades and means for limiting the downward movement thereof, of a pair of adjustable drags, a pair of short rods connecting the inner ends of said drags to the rear of said frame, a pair of long rods movably secured at one end to the outer ends of said drags and having their opposite ends bent for engagement with the openings in said frame, brace rods to hold the drags against swinging movement and means to raise said drags simultaneously or independently of each other.

1,021,048. METHOD OF MAKING BLOWN-GLASS ARTICLES. AUGUST KADOW, Toledo, Ohio, assignor to The Westlake Machine Company, Toledo, Ohio, a Corporation of Ohio. Filed July 6, 1910. Serial No. 570,620. (Cl. 49—80.)



1. The method of forming hollow glass articles, which consists in forming a blank by gathering a definite quantity of metal directly from a mass of molten glass into the blank forming means, shearing the metal thus

gathered from the mass from which it is gathered, delivering the blank bodily from the forming means so as to have the sheared end in engagement with a blowing means, leaving the body free, and then blowing the blank to form.

2. The process of manufacturing glass articles, which comprises gathering the metal in blank forming molds by developing a partial vacuum in said molds and thereby forming a blank provided with a supporting flange, destroying said partial vacuum when said blank has been formed, delivering said blank from said molds to a working mechanism by causing said molds to disengage the flange on said blank, sealing the plastic blank in the working mechanism by compressing said flange between parts of the working mechanism, and then developing the blank to desired form by the operations of the working mechanism.

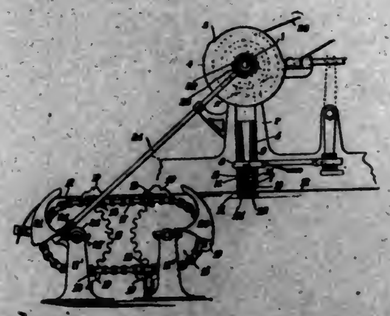
3. The process of manufacturing glass articles, which comprises gathering the metal in blank forming molds by means of a partial vacuum in said molds and thereby forming a blank provided with a supporting flange, destroying said partial vacuum when said blank has been formed, delivering said blank from said molds to a working mechanism by removing the supporting means engaging the flange on said blank, detachably sealing the plastic blank in the working mechanism by compressing said flange between parts of the working mechanism, then mechanically developing a chamber in said blank through the sheared end thereof, and blowing air under pressure into the chamber so developed in said blank.

4. The method of forming glass articles, which comprises supporting a plastic blank in vertical position, expanding the blank upwardly by successive puffs of air under pressure, relieving said air pressure after each puff and while the blank is in vertical position, whereby the expanded portions of the blank are allowed to settle downwardly between successive puffs, and then developing the blank to desired form.

5. The method of forming glass articles, which comprises supporting a plastic blank in vertical position, expanding the blank upwardly by successive puffs of air under pressure and of successively larger volume, relieving the air pressure after each puff and while the blank is in vertical position, whereby the expanded portions of the blank are allowed to settle downwardly between successive puffs, and then blowing the blank to form.

[Claims 6 to 12 not printed in the Gazette.]

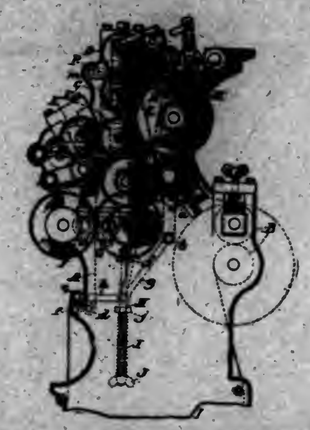
1,021,049. MACHINE FOR MAKING PERFORATED MUSIC-SHEETS. GEORGE B. KELLY, Jamaica Plain, Mass. Filed Aug. 1, 1911. Serial No. 641,725. (Cl. 164—114.)



1. In a machine for making perforated music sheets, the combination with a vertically reciprocating punch head, means for operating the same, punches in said head, and a die plate, of means for drawing the paper constantly and without interruption between the punches and die, a presser head above the die and between the punch head and die, and means for continuously pressing said presser head upon the paper on the die, substantially as set forth.

2. In a machine for making perforated music sheets, the combination with a vertically reciprocating punch head, means for operating the same, punches in said head, and a die plate, of means for drawing the paper constantly and without interruption between the punches and die, a presser head above the die and between the punch head and die, and springs acting upon said presser head to press the same continuously downward and upon the paper on the die, substantially as set forth.

1,021,050. PRINTING-PRESS. FRANK B. LA BARR, Los Angeles, Cal., assignor to England J. Barker, Morgan Park, Ill. Filed May 27, 1908. Serial No. 435,277. (Cl. 101—126.)



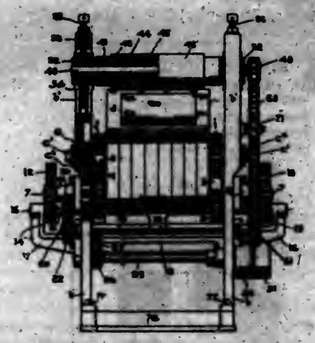
1. In a printing press the combination with the printing cylinders, of a take-up roller bodily reciprocal at right angles to its axis across the path of the continuous web of paper before it reaches said cylinders, a similar take-up roller simultaneously bodily reciprocal at right angles to its axis across the path of said web after it leaves said cylinders, vertically reciprocal bars having arms projecting therefrom in which said take-up rollers are journaled, cams on the shaft of one of said cylinders, levers engaged by said cams, and pitmen connecting said levers and bars.

2. In a printing press the combination with the printing cylinders, of a take-up roller bodily reciprocal at right angles to its axis across the path of the continuous web of paper before it reaches said cylinders, a similar take-up roller simultaneously bodily reciprocal at right angles to its axis across the path of said web after it leaves said cylinders, vertically reciprocal bars having arms projecting therefrom in which said take-up rollers are journaled, cams on the shaft of one of said cylinders, levers having longitudinal slots therein engaged by said cams, and pitmen connecting said levers and bars and having a longitudinal adjustable connection in the slots of the former.

3. In a printing press the combination with the printing cylinders, of a take-up roller bodily reciprocable at right angles to its axis across the path of the continuous web of paper before it reaches said cylinders, a similar take-up roller bodily reciprocable at right-angles to its axis across the path of said web after it leaves said cylinders, common supporting means in which said rollers are journaled, a lever directly actuated by said cylinders, and a pitman connecting said lever and means the pivotal connection of the pitman with said lever is adjustable longitudinally on the latter.

4. In a printing press the combination with the printing cylinders, of a take-up roller bodily reciprocable at right-angles to its axis across the path of the continuous web of paper before it reaches said cylinders, a similar take-up roller bodily reciprocable at right-angles to its axis across the path of said web after it leaves said cylinders, a reciprocable frame in which said rollers are journaled, a lever directly actuated by said cylinders, and a pitman connecting said lever and frame the pivotal connection of the pitman with said lever is adjustable longitudinally on the latter.

1,021,051. PRINTING-MACHINE. MYRON A. LATHEY, Ottawa, Ontario, Canada, assignor to Jeffrey H. Burland, Montreal, Canada. Filed Dec. 29, 1910. Serial No. 599,922. (Cl. 101—104.)



1. In a printing machine, the combination with a supporting frame and an impression member, of a printing cylinder all circumferential parts whereof are of fixed radius, such cylinder comprising a pair of independently circumferentially movable printing members adapted to coact with the impression member, and means for operating the said printing members alternately, such means being constructed and arranged to cause each printing member to alternately move and remain stationary for a brief period.

2. In a printing machine, the combination with an impression member, of a cylinder composed of a plurality of series of independently movable carrier members, a plurality of beds carried respectively by the different series of the said carrier members and adapted to coact with the said impression member, and means for operating the different series of carrier members alternately.

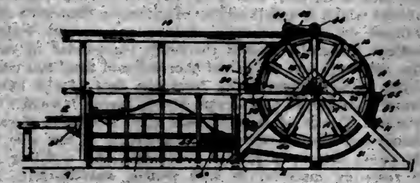
3. In a printing machine, the combination with an impression cylinder and a fixed shaft, of two alternating series of circular webs mounted rotatably upon the shaft; a pair of plate carrying beds curved concentrically to the shaft; means rigidly securing the beds to the respective series of webs; and means intermittently revolving the said respective series of webs alternately.

4. In a printing machine, the combination with a supporting frame, an impression cylinder mounted therein, and a driving shaft, of a pair of curved plate carrying beds; means independently movably supporting the beds within the frame in concentric relation; means alternately intermittently rotatively connecting the driving shaft to the said respective bed supporting means; and means rotatively connecting the said driving shaft to the said impression cylinder.

5. In a printing machine the combination with a supporting frame, an impression cylinder mounted therein, and a driving shaft, of a pair of curved plate-carrying beds; means independently movably supporting the beds within the frame in concentric relation; a pair of intermittent gears in operative relation and operatively connected to the supporting means of one of the said beds; a train of gears connecting the said intermittent gears to the said driving shaft; a second pair of intermittent gears in operative relation and operatively connected to the supporting means of the other of the said beds; a second train of gears connecting the said second pair of intermittent gears to the driving shaft; and means operatively connecting the driving shaft to the impression cylinder.

[Claim 6 not printed in the Gazette.]

1,021,052. CONVEYER APPARATUS. WILLIAM C. LAWSON, Roanoke, Va. Filed Feb. 1, 1911. Serial No. 606,065. (Cl. 198—7.)



1. In apparatus of the character set forth, the combination with a rotatable inverting drum having spaced annular and continuous rails, of rails extending to the upper side of the drum in alinement with the annular rails thereof, rails leading from beneath the drum and also alined with the rails thereof, cars that move along the upper rails on to the rails of the drum, said cars being inverted by the drum and traveling therefrom, after inversion, on the lower rails, means for driving the drum, a cable connected to the cars and passing around the drum, and means for automatically clutching the cable to the drum.

2. In apparatus of the character set forth, the combination with an endless series of conveyer members, of a cable connecting the same, an inverting drum about which the cable and members pass, spaced annular tracks mounted on the drum on which the members rest during their movement around the drum, means for rotating the drum, and clamps located between the tracks and automatically engaging the cable to clamp the same to the drum and thereby transmit movement from the drum to the cable.

3. In apparatus of the character set forth, the combination with upper and lower tracks, of a rotary conveyer drum located at one end of the tracks and having an endless track thereon, alined with said tracks, a series of conveyer cars having wheels that run upon the tracks, and rest upon the track of the drum, a cable connecting the cars and extending around the drum, and means for clamping the cable to the drum.

1,021,053. METALLIC DOOR. JOHN I. LEMPERA, Chicago, Ill. Filed June 12, 1911. Serial No. 632,712. (Cl. 189—46.)



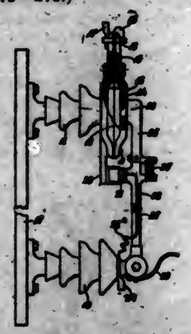
1. A metallic door comprising a pair of hollow stiles, a plurality of hollow rails connecting said stiles and disposed perpendicular thereto, there being inwardly turned U-shaped channels at the inner edges of said stiles and correspondingly formed flanges formed at the ends of said rails, hollow panels connecting said stiles and rails, and hollow metallic moldings reinforcing the connection of said panels with said stiles and rails comprising a portion extending from the face of the panel toward a corner of one of said stiles, thence inwardly in a channel, thence

after being bent upon itself out of said channel and around the same terminating in one side of said panel which is formed integral therewith, substantially as described.

2. A metallic door comprising a pair of elongated hollow stiles formed of sheet metal, a strip of fire resisting material extending the entire length of each of said stiles and arranged diagonally therein, a plurality of hollow rails formed of sheet metal and connecting said stiles, each rail being provided with a strip of fire resisting material which is substantially co-extensive therewith and arranged diagonally therein, hollow panels and hollow moldings integrally formed therewith surrounded by said stiles and rails and connected thereto, said moldings comprising a portion extending from the face of the panel toward a corner of one of said stiles, thence inwardly in a channel, thence after being bent upon itself out of said channel and around the same terminating in one side of said panel integrally formed therewith, and a filling of fire resisting material in said panels, substantially as described.

3. A metallic door comprising a pair of elongated hollow stiles formed of sheet metal, a strip of fire resisting material extending the entire length of each of said stiles and arranged diagonally therein, a plurality of hollow rails formed of sheet metal and connecting said stiles, each rail being provided with a strip of fire resisting material which is substantially co-extensive therewith and arranged diagonally therein, hollow panels and hollow moldings integrally formed therewith surrounded by said stiles and rails and connected thereto, said moldings comprising a portion extending from the face of the panel toward a corner of one of said stiles, thence inwardly in a channel, thence after being bent upon itself out of said channel and around the same terminating in one side of said panel integrally formed therewith, and a filling of asbestos in said panels, substantially as described.

1,021,054. EXPULSION-FUSE CIRCUIT-BREAKER. WILLIAM J. LIETKENMAYER, Webster, N. Y., assignor to Allis-Chalmers Company, a Corporation of New Jersey, and The Bullock Electric Manufacturing Company, a Corporation of Ohio. Filed Apr. 15, 1907. Serial No. 368,184. (Cl. 175—273.)



1. In combination, a fuse, a casing inclosing said fuse and provided with an outlet, and a pivoted switch arm so mounted relatively to said casing that when the arm is in one position said outlet is closed and the switch arm is movable from such position to another position by pressure generated in the casing upon the blowing of the fuse.

2. In combination, a fuse, a casing therefor provided with an outlet, and a switch arm outside of said casing and provided with a part which closes said outlet when said arm is in a closed position.

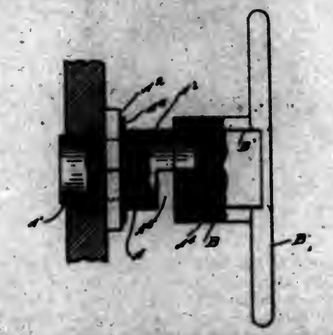
3. In combination, a fuse, a casing in which said fuse is mounted, said casing being provided with an outlet, and a pivoted switch arm in series with the fuse and so mounted that when it is in a closed position said outlet is closed by a portion of said arm and the switch arm will be blown to open position by the pressure generated in said casing upon the fusing of said fuse.

4. In an overload protective device, a fuse, a casing therefor provided with an outlet, and a switch arm outside of said casing and connected in series with said fuse, said switch arm being mounted so that said outlet is closed thereby when the switch arm is in a closed position.

5. In combination, a switch arm, a latch for holding said switch arm in closed position, a casing provided with an opening which is closed by said latch when the latter holds the switch arm in closed position, and a fuse in said casing, said fuse when it blows generating pressure which alone releases said latch and forces said switch arm to open position.

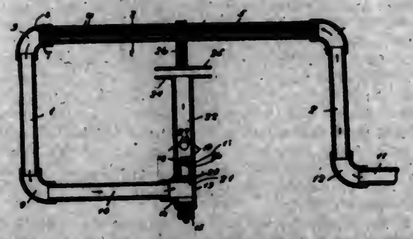
[Claims 6 to 10 not printed in the Gazette.]

1,021,055. SPIGOT. GEORGE A. LOWAY, Boston, Mass. Filed Apr. 18, 1911. Serial No. 621,758. (Cl. 137—4.)



The combination of a spigot, tubular in form, provided with an inner portion adapted to securement to a liquid containing vessel, an outer portion having a lateral opening, near the end thereof, said outer portion screw threaded throughout substantially its entire length, and an internally threaded cap to screw on said outer portion of the spigot, covering said opening and such a substantial extent of the screw threaded portion of the spigot behind the opening when screwed home as to enable capillary adhesion of liquid to the threaded portion to effect complete closure of the containing vessel.

1,021,056. BURNER. DANIEL H. LYNDS, Rockham, S. D. Filed May 18, 1911. Serial No. 628,002. (Cl. 158—64.)



In a burner of the character described, a main casing having its opposite ends formed open and internally screw-threaded, a supply pipe leading into said casing intermediate the ends thereof, a screw-threaded plug removably mounted in the lower end of the main casing, said main casing being provided near and spaced from its upper end with a horizontal annular inwardly extending flange, a strainer device supported by said flange, an externally screw-threaded shell fitting in the upper end of the main casing and clamping the strainer device against said flange, said shell having its lower end formed entirely open and its upper end closed and provided with a tip, and a perforated pipe having its lower end screw-threaded to engage the externally screw-threaded shell and adapted to serve as a locking device to prevent improper rotation of said shell.

1,021,057. SPRING-ROLLER. ALLISON M. MACFARLAND, Newark, N. J., assignor to The Kinnear Manufacturing Company, Columbus, Ohio, a Corporation of West Virginia. Filed Dec. 15, 1911. Serial No. 665,914. (Cl. 160—68.)



1. In a rolling shutter, the combination with a shutter-receiving member, of a normally operable tension member therefor, a supplementary tension member and means whereby the two tension members are rendered jointly operable to lessen the resistance of the normally operable tension member.

2. In a rolling shutter, the combination with a rotatable shutter-receiving member, a normally operable tension member therefor, a supplementary tension member connected with the shutter-receiving member, a device to which the two tension members are connected and means releasable by a dangerous rise of temperature for connecting said device with the shutter-receiving member.

3. In a rolling shutter, the combination with a shutter-receiving member, of a normally operable tension member therefor, a supplementary tension member connected with the shutter-receiving means, a device about which the supplementary member is wound and connected, and fusible means for connecting the same with shutter receiving member, said normally operable tension member being connected with the means about which the supplementary tension member is wound.

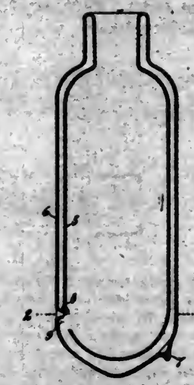
4. In a rolling shutter, the combination with a rotating shutter receiving member and a stationary supporting shaft for the same, of a normally operable tension member connected with the shaft, a supplementary tension member connected with the shutter-receiving member and the first named tension member, and means releasable by a dangerous rise of temperature for holding said supplementary tension member inert during the normal operation of the shutter.

5. In a rolling shutter, the combination with a rotatable shutter receiving member and a stationary supporting shaft for the same, of a normally operable tension member connected with the shaft, a supplementary tension member connected with the first named tension member, a spool about which the supplementary tension member is wound, the two tension members engaging said spool and the supplementary tension member connected with the shutter receiving member, and means fusible by a dangerous rise of temperature for connecting said spool with the shutter receiving member.

1,021,058. HEAT-INSULATING VESSEL. ROBERT MACHLETT, New York, N. Y. Filed May 4, 1909. Serial No. 493,868. (Cl. 62—23.)

1. A heat insulating vessel comprising spaced walls joined at the mouth of the vessel and inclosing a vacuum space between them, and a rigid supporting column integral with one wall and extending substantially across the distance between the walls and terminating in a tip in close proximity to the other wall.

2. A heat insulating vessel comprising spaced walls joined at the mouth of the vessel and inclosing a vacuum space between them, a rigid supporting column integral with one wall and extending substantially across the distance between the walls and terminating in a tip in close proximity to the other wall, and a thin pad of soft material interposed between the tip of the column and the last mentioned wall.



3. A heat insulating vessel comprising spaced walls joined at the mouth of the vessel and inclosing a vacuum space between them, and a rigid supporting column integral with the outer wall and extending substantially across the distance between the walls and terminating in a tip in close proximity to the inner wall.

4. A heat insulating vessel comprising spaced walls joined at the mouth of the vessel and inclosing a vacuum space between them, a rigid supporting column integral with the outer wall and extending substantially across the distance between the walls and terminating in a tip in close proximity to the inner wall, and a thin pad of soft material interposed between the tip of the column and the last mentioned wall.

5. A heat insulating vessel comprising spaced walls joined at the mouth of the vessel and inclosing a vacuum space between them, a rigid supporting column integral with the outer wall and extending substantially across the distance between the walls and terminating in a tip in close proximity to the inner wall, the inner wall being provided with a pocket, and a thin pad of soft material in the pocket and interposed between the tip of the column and the inner wall.

[Claims 6 and 7 not printed in the Gazette.]

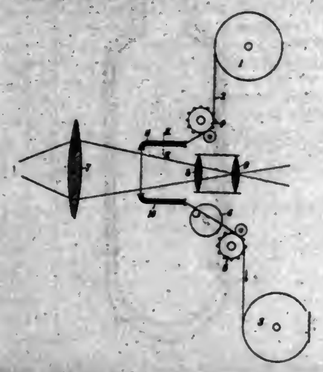
1,021,059. INSULATOR. WILLIS R. MARKLEY, Findlay, Ohio. Filed Jan. 4, 1911. Serial No. 600,767. (Cl. 173—314.)



An insulator of the type described, including complemental members, each having an inclined face and diagonally opposite flat horizontal surfaces at the upper and lower terminals of said inclined face, respectively, said flat surfaces having therein transverse substantially V-shaped grooves, with roughened walls, said inclined faces also having at diagonally opposite points crescent-shaped recesses and also correspondingly shaped bosses, said complemental members having alined bore-forming openings

therethrough, and securing means insertible through said bore, said crescent-shaped bosses and recesses being relatively offset through to the opposite sides of the axis of said bore.

1,021,060. ANIMATED-PICTURE APPARATUS. HARRY N. MARVIN, Canastota, N. Y., assignor, by mesne assignments, to Biograph Company, New York, N. Y., a Corporation of New Jersey. Filed Mar. 7, 1904. Serial No. 196,820. (Cl. 88—17.)



1. The combination with film-transmitting means and illuminating means for the film, of fire extinguishing means for said film, comprising solely a casing having an open ended passageway of sufficient size to permit the free passage of the film but sufficiently constricted to extinguish the flames of a burning film that enters the same.

2. The combination with film-transmitting means, and means for illuminating the film at a predetermined point, of fire extinguishing means for said film located on opposite sides of such point, said means each comprising solely a film-surrounding casing having an open-ended passageway of sufficient size to permit the free movement therethrough of the film, said passageway being sufficiently constricted to extinguish the flames of a burning film that enters the same.

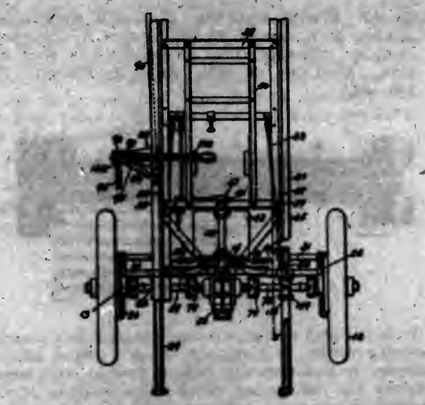
3. As an article of manufacture, a flame-extinguisher for picture-producing films, comprising exclusively, a fireproof film-surrounding casing having an open-ended passage way of sufficient size to permit the free movement of the film therethrough, but sufficiently constricted to automatically extinguish the flames of a burning film that extends into said passageway.

4. As an article of manufacture, a flame-extinguisher for picture-producing films, comprising solely a fireproof film-surrounding casing having an open-ended passage way of sufficient size to permit the free movement of the film therethrough, but sufficiently constricted to automatically extinguish the flames of a burning film that extends into the passage way, said casing having one of its sides hinged to permit ready insertion of the film.

1,021,061. MOTOR-VEHICLE. HIRAM P. MAXIM, Hartford, Conn., assignor to The Waverley Company, Indianapolis, Ind., a Corporation of Indiana. Filed Feb. 27, 1908. Serial No. 418,056. (Cl. 21—90.)

1. A vehicle including traction wheels and a frame carried by said wheels, a gear casing and a motor casing rigidly connected as a unit, one of said casings being supported by the frame and wholly supporting the other casing, and driving mechanism mounted within the casing and operatively connected with the motor and including intermeshing gears, the axis of one of said gears being located transversely to the axis of the motor shaft and operatively connected with the traction wheels.

2. A vehicle including traction wheels and a frame carried by said wheels, a gear casing and a motor casing rigidly connected as a unit and one supporting the other, one of said casings being mounted for adjustment laterally of the frame, means for securing said adjustment, a motor mounted within the motor casing, and driving mechanism mounted within the gear casing and operatively connected with the motor and including intermeshing gears connected with the traction wheels.



3. A vehicle including traction wheels and a spring supported frame carried by said wheels, a motor casing and gear casing connected as a unit and supported by said frame, a motor located within the casing, means for adjustably moving the casing with respect to the frame and for rigidly holding it in such position, driving mechanism located within the casing, and connected with the motor, and operative connections between the driving mechanism and traction wheels.

4. A vehicle including traction wheels and a frame carried thereby, a gear casing and a motor casing connected as a unit and movably supported on said frame, means for adjustably moving the casing with respect to the frame and for retaining it rigidly in such position, a motor located in the motor casing, driving mechanism located in the gear casing and operatively connected with the motor, the axis of one of the driving members being practically in line with the axis of the traction wheels, and operative connections between the driving mechanism and traction wheels to drive the latter.

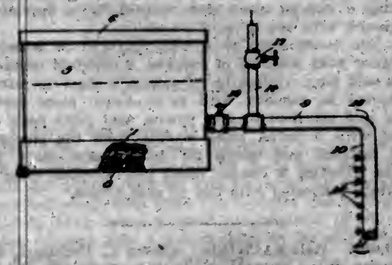
5. In a vehicle including traction wheels and a frame carried thereby, a motor casing mounted on the frame, a motor mounted in the casing, a removable plate closing the opening into the motor casing, a sectional gear casing secured to said plate and divided on a vertical diametrical line across said plate, said gear casing including a tubular portion with its axis in line with the motor shaft and a circular portion located thereunder, a helical gear mounted in the tubular portion and with its shaft connected with the motor shaft, a helix wheel mounted in the circular portion and meshing with said gear, and connections between said helix wheel and traction wheels to drive the latter.

[Claims 6 to 14 not printed in the Gazette.]

1,021,062. DEVICE FOR APPLYING GREASE TO ROLLS. PATRICK A. MCGOWAN, Newport, Ky. Filed Mar. 4, 1910. Serial No. 547,826. (Cl. 184—56.)

1. Device of the class described including a tank adapted to contain a lubricant, means for heating the exterior of the tank, a supply pipe having one end thereof communicating with the interior of the tank and its other end perforated, and a fluid pressure heating device centered within the supply pipe and terminating short of the perforated end thereof, said fluid pressure device also serving to discharge the lubricant through the perforations in the supply pipe.

2. A device of the class described including a tank adapted to contain a lubricant, a supply pipe having one end thereof communicating with the interior of the tank and its other end perforated, means for heating the exterior of the tank to liquefy the lubricant contained therein, and fluid pressure means independent of said tank for heating the lubricant during its passage through the supply pipe to the perforations, said fluid pressure means also serving to discharge the lubricant through the perforations in said supply pipe.



3. A device of the class described including a tank adapted to contain a lubricant, a supply pipe having one end thereof communicating with the interior of the tank and its other end perforated, means for heating the exterior of the tank, fluid pressure means independent of the tank and tank heating means for heating the lubricant during its passage through the supply pipe from the tank to the perforations in said supply pipe, and means for controlling the flow of lubricant through the supply pipe.

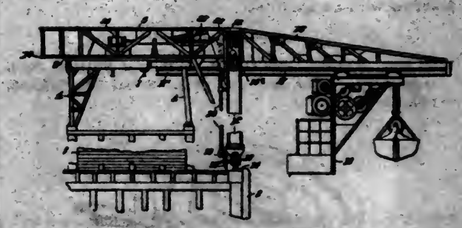
4. A device of the class described including a tank adapted to contain a lubricant, a supply pipe having one end thereof communicating with the interior of the tank and its other end perforated, means for heating the exterior of the tank, a nozzle independent of the tank disposed within and spaced from the walls of the supply pipe to form a circumferential chamber terminating short of the perforations in said supply pipe, and a source of fluid pressure independent of the tank communicating with the nozzle for heating the lubricant during its passage through the chamber, said fluid pressure means also serving to discharge the lubricant through the perforations in the supply pipe.

5. A device of the class described including a tank adapted to contain a lubricant, means for heating the exterior of the tank, a supply pipe having one end thereof communicating with the interior of the tank and its other end closed, there being perforations formed in the walls of the supply pipe at the closed end thereof, a nozzle independent of the tank disposed within and spaced from the interior wall of the supply pipe to form a circumferential chamber terminating short of the perforations in said supply pipe, a pipe communicating with the nozzle for admitting fluid under pressure to said nozzle to heat the lubricant within the chamber, and a valve for controlling the passage of lubricant through the supply pipe.

1,021,063. APPARATUS FOR ELEVATING, TRANSPORTING, AND DISCHARGING MATERIAL. ERNEST B. MILLER, Baltimore, Md. Filed July 17, 1911. Serial No. 639,075. (Cl. 214—14.)

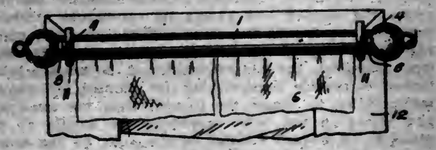
1. In an apparatus for elevating, transporting, and discharging material, the combination of a stationary frame provided with a cage or carriage carrying rail, a movable frame extending transversely of the stationary frame and adapted to be moved along the same; and a vertically-swinging boom or jib pivoted to said movable frame at one side thereof, said boom or jib having a rail on its underside adapted when the boom is in a horizontal position to register with the cage or carriage carrying rail of the stationary frame.

2. In an apparatus for elevating, transporting, and discharging material, the combination of a stationary frame provided at one side with a track or way, and provided also with a cage or carriage carrying rail, a movable frame extending transversely of the stationary frame and provided at one end with wheels adapted to travel on said track or way and at the other end with a vertically-depending extension adapted to travel on a second track or way at a lower level than the first named track, and a vertically-swinging boom or jib pivoted to said vertically-depending extension, said boom or jib having a rail adapted when the boom is in a horizontal position to register with the cage or carriage-carrying rail.



3. In an apparatus for elevating, transporting, and discharging material, the combination of a stationary frame having at one side a series of openings or breaks, said frame being provided with a cage or carriage carrying rail, a movable frame extending transversely of the stationary frame and adapted to be moved along the same, and a vertically-swinging boom or jib pivoted to said movable frame, the inner end of the boom when swung to a horizontal position being adapted to extend into any one of said series of openings or breaks when the boom is brought opposite the same and to be clear of said opening and of the stationary frame when the boom is swung to a vertical position, said boom or jib having a rail adapted when the boom is in a horizontal position to register with the cage or carriage carrying rail.

1,021,064. CURTAIN-POLE. EDWARD MOLENCKI, Detroit, Mich. Filed July 27, 1911. Serial No. 640,870. (Cl. 156—19.)



A curtain pole comprising a hollow cylindrical portion having each end provided with inwardly extending notches to form a series of tongues, caps having the periphery at the inner portion thereof provided with recesses for the reception of the tongues at the ends of said body portion, whereby said caps will extend into each end of said body portion, the periphery at the inner portion of said caps being flush with the periphery of said body portions when said tongues are mounted in said recesses, and rod centering pins carried by the caps and projecting into said body portion at each end thereof.

1,021,065. GUARD FOR DENTAL INSTRUMENTS. JAMES NEIL, Jr., New York, N. Y. Filed Mar. 15, 1911. Serial No. 614,787. (Cl. 32—10.)

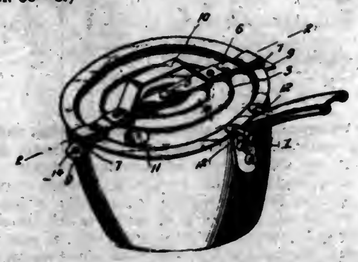


1. In combination, a grinding stone, a guard therefor comprising a disk like member having a circumferential annular flange and provided with a segmental cutaway

portion, the disk like member having a recess provided with overhanging walls, adapted to contain a wad of moist fiber for moistening the grinding stone, thus preventing the same from becoming too hot, the overhanging walls constituting means to prevent accidental displacement of the moist wad of fiber.

2. In combination with a hand piece of a dental engine, a stone guard detachably connected thereto and provided with a recess having overhanging walls adapted to contain a wad of moist fiber to keep the stone moist so as to prevent the same becoming too hot said recess being provided with an aperture.

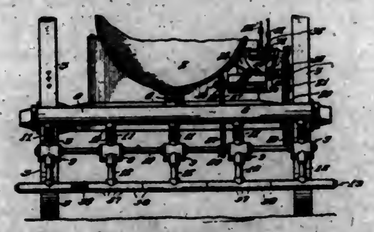
1,021,066. SAUCEPAN-COVER. WILLIAM NOAKES, Portland, Oreg. Filed Mar. 14, 1911. Serial No. 614,353. (Cl. 53—8.)



1. A saucepan including a cover therefor provided with a drain opening, a rotatably mounted member movable across the opening and having integral movable extremities extended beneath a portion of the cover and engaging the upper edge of the saucepan to hold the cover against displacement therefrom, the said extremities of the member being formed to provide manipulating lips adapted for manual manipulation to release the member from the saucepan, and means for holding the cover against rotation on the saucepan.

2. A saucepan having a handle thereon, a cover closing the open end of the saucepan and provided with a drain opening therein, a rotatably mounted member movable across the opening and having its extremities extended beneath a portion of the cover and engaging the upper edge of the saucepan to hold the cover against displacement therefrom, the said extremities of the member being formed to provide manipulating lips adapted for manual manipulation to release the member from the saucepan, and means on the cover straddling the handle of the saucepan to prevent rotation of the cover on the saucepan on rotation of the member.

1,021,067. SPRINKLING APPARATUS. GEORGE D. PARKER, Riverside, Cal. Filed July 1, 1911. Serial No. 636,511. (Cl. 137—63.)

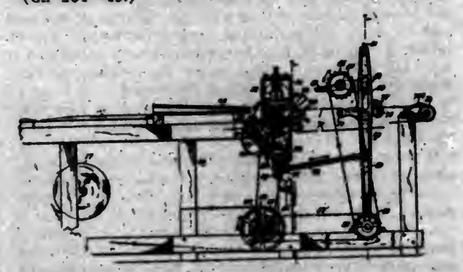


1. The combination of a tank mounted on wheels, a sprinkler head, a manifold connected with said tank, a plurality of rotary pumps, a shaft operatively connected in common with said rotary pumps, pipes leading from said manifold to said rotary pumps, said pipes each provided with a valve, pipes leading from the rotary pumps to the sprinkler head, and means for driving said shaft, said means including a change speed gear adapted to be operatively connected with one of said wheels.

2. The combination of a tank mounted on wheels, a sprinkler head made up of sections, a manifold connected with said tank, a shaft, a plurality of rotary pumps mounted on said shaft, pipes leading from said manifold to said rotary pumps, said pipes each provided with a valve, pipes leading from the rotary pumps to said sections, and means for driving said shaft, said means including a change speed gear adapted to be operatively connected with one of said wheels.

3. The combination of a tank mounted on wheels, a sprinkler head made up of sections, a manifold connected with said tank, a plurality of pumps, a shaft operatively connected in common with said pumps, pipes leading from said manifold to said pumps, said pipes each provided with a valve, pipes leading from the pumps to said sections, and means for driving said shaft, said means including a change speed gear adapted to be operatively connected with one of said wheels.

1,021,068. PAD-MACHINE. ALBERT C. PETERSON, Sheboygan, Wis. Filed Mar. 27, 1911. Serial No. 617,116. (Cl. 164—49.)



1. In a pad machine having a pair of compression feed rollers for the pad stock, one or more longitudinally disposed endless tapes located adjacent to the discharge side of the feed rollers, front and rear supporting rollers for the tapes, an oscillatory yoke through which the tapes are adapted to pass, a series of guide rollers for the tapes carried by the yoke, a shear-plate secured to said yoke, a reciprocative cutting blade mounted upon the aforesaid yoke for engagement with the shear-plate, a ratchet-wheel revoluble with one of the guide-rollers, a pawl carried by the yoke for engagement with the ratchet-wheel, and a stop-pawl-and-ratchet-wheel mechanism in connection with one of the tape supporting rolls.

2. In a pad machine having a pair of compression feed rollers for the pad stock, a rotatory arbor, a yoke supported about the arbor axis, the yoke being located at the discharge side of the feed rollers, a shear-plate secured to the yoke, a reciprocative knife-carrying cross-head guided upon said yoke, springs connecting the cross-head and yoke, a rotary shaft mounted in bearings carried by the yoke, tappet-arms secured to the shaft for engagement with the cross-head, and driving-gears connecting the shaft and arbor.

3. In a pad machine having a pair of compression feed rollers for the pad stock, one or more intermittently movable longitudinally disposed endless tapes located adjacent to the discharge side of the feed rollers, an oscillatory yoke through which the tapes are adapted to pass, a shear-plate carried by the yoke, a spring-controlled knife-carrying cross-head mounted upon said yoke, the knife being adapted to engage the shear-plate, a rotatory shaft carried by the aforesaid yoke, and tappet-arms secured to the shaft for engagement with the cross-head.

4. In a pad machine having a pair of compression feed rollers for the pad stock, a spring-controlled knife-carrying cross-head, a shear-blade disposed under the cross-head, with which the cross-head knife is adapted to frictionally engage, a tappet mechanism for actuating the cross-head in opposition to its spring-control, and a trip-cam release mechanism for the cross-head engageable with the tappet.

1,021,069. DEVICE FOR HOLDING INSERTS. ANDREW H. REID, Toronto, Ontario, Canada. Filed June 14, 1911. Serial No. 633,124. (Cl. 22—124.)



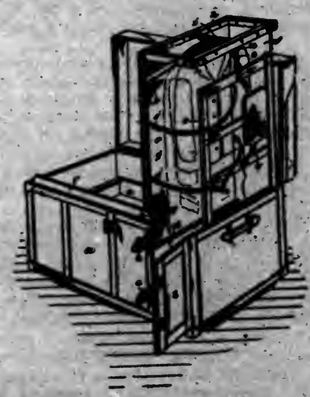
1. A device for holding inserts to be permanently associated with a casting and comprising a block shaped to fit at either end of the opening made by a pattern in a mold and having its inner face fashioned for detachable supporting engagement with the adjacent end of the insert, said block being adapted to coöperate in its supporting function with a similar block at the other end of said opening.

2. A device for holding inserts to be permanently associated with a casting and comprising a block shaped to fit at either end of the opening made by a pattern in a mold, and having means for detachable supporting engagement with the adjacent end of the insert, said block being adapted to coöperate in its supporting function with a similar block at the other end of said opening.

3. A device for holding inserts to be permanently associated with a brake shoe casting and comprising a block having the general cross sectional outline of a parallelogram and having its inner face fashioned for detachable supporting engagement with the adjacent end of the insert.

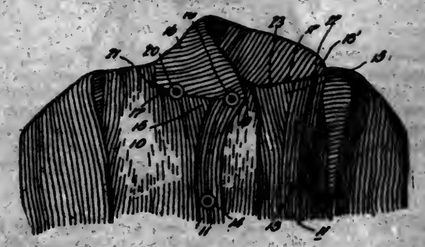
4. A device for holding tubular inserts to be permanently associated with a brake shoe casting and comprising a block having the general cross sectional outline of a parallelogram and having its inner face provided with one or more conical bosses and with stems projecting axially from said bosses.

1,021,070. WARDROBE-TRUNK. HENRY W. ROUNTREE, Richmond, Va., assignor of one-half to Henry W. Cottrell, Richmond, Va. Filed Feb. 10, 1911. Serial No. 607,860. (Cl. 190—13.)



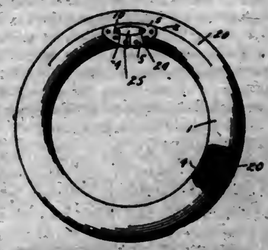
In combination with a trunk, of a wardrobe tray pivoted at its lower end within the trunk and adapted to fold down into the trunk, said tray consisting of a top frame carrying a transverse hanger bar, a back wall, and a rear edge wall, the front edge of the tray being open, and a wall or strip r attached to the front wall of the trunk and projecting above the same, whereby when the wardrobe section is folded down into the trunk said strip or wall r will constitute one of the side walls of the wardrobe section.

1,021,071. KNITTED COLLAR FOR GARMENTS. GEORGE O. SANBORN, Seattle, Wash. Filed Dec. 29, 1910. Serial No. 599,989. (Cl. 2—67.)



In a coat sweater, a knitted ribbed body-portion, border ribs of the same length and on the respective edges of the opening of the body-portion, widening wales interposed between the ribs of the body-portion and said border ribs, a collar co-extensively joined by a seam with the top of said body-portion and having the ends thereof secured to the upper ends of the border ribs, each end of said collar in connection with the upper portion of a border rib forming a lapel extending laterally toward and adapted to overlap the opposite portion of the body, buttons on one side of the body and secured to the fabric at said seam, one of said buttons being positioned at the upper end of said border ribs and the other of said buttons spaced from the first-named button toward the proximate shoulder of the coat, button holes formed in said seam upon the opposite side of the body, one of said button holes positioned at the top of the other border rib, and the other of said button holes spaced from the first-mentioned button hole toward the proximate shoulder of the coat, a button connected to one of the border ribs and the other of said border ribs provided with a button hole adapted to engage the last-mentioned button.

1,021,072. VEHICLE-TIRE. CHARLES ADAM SCHENKEL, Wabash, Ind. Filed Sept. 3, 1910. Serial No. 580,291. (Cl. 152—8.)

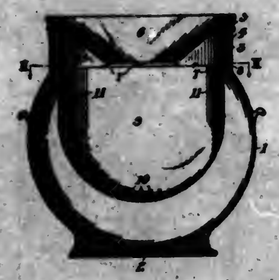


The combination with a tube of two hollow resilient collars, each collar having oppositely disposed inwardly directed indentations, a screw-eye secured within each indentation, a draw bolt passing through said screw-eyes, one of said collars having a flange and the other collar having a groove for co-action with said flange, and a tread partly secured to said tube.

1,021,073. CUSPIDOR. HENRY G. SCHOLL, Hoboken, Pa. Filed Dec. 26, 1911. Serial No. 667,752. (Cl. 4—38.)

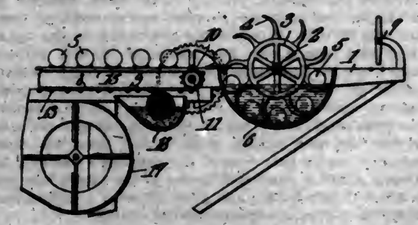
A cuspidor comprising an outer spherical receptacle having a flat bottom, a cylindrical neck carried by the top

of said receptacle and having the upper edges thereof screw-threaded, a funnel-shaped mouthpiece screwed upon the upper edges of said neck and extending therein, a plurality of circumferentially arranged and inwardly projecting hooks carried by the lower edges of said neck,



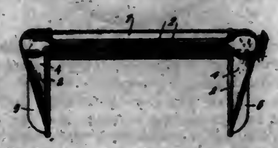
an inner receptacle suspended upon said hooks, said receptacle having the bottom thereof perforated, and oppositely disposed inwardly projecting handles carried by said inner receptacle to facilitate its removal from said outer receptacle.

1,021,074. MACHINE FOR LACQUERING CANS. ARTHUR Y. SEELY, Blaine, Wash. Original application filed Nov. 21, 1908, Serial No. 463,831. Divided and this application filed Jan. 22, 1910. Serial No. 539,453. (Cl. 193—8.)



A lacquering machine conveyer comprising a pair of parallel endless chains, each having a plurality of links provided with upwardly curved and inwardly directed spindles, each of said links having a projecting portion extending inwardly beyond the curved portion of the adjacent spindle, tubular cross pieces engaging the inwardly directed ends of oppositely disposed spindles, each of said cross pieces having a pinion at each end thereof, the outer face of each pinion being adapted to engage the inwardly projecting portion of the adjacent link to limit outward movement of the cross piece, and a pair of parallel racks engaging the pinions of said cross pieces.

1,021,075. TUBULAR HANDLE. JOHN AUGUSTUS SIMONS, Chatham, Ontario, Canada, assignor of one-half to Frederick J. Westlake, Chatham, Canada. Filed May 15, 1911. Serial No. 627,318. (Cl. 220—30.)



1. A handle formed of a single section of sheet-metal, comprising a tubular body portion, and arms at the ends of said tubular body portion, said arms arranged at an angle to the tubular body portion and having their edges bent about the ends of the body portion, whereby portions of the arms overlap said ends of said tubular body portion.

2. A handle formed of a single section of sheet-metal, comprising a tubular body portion split longitudinally to provide adjacent longitudinal edges, and arms at the ends of said tubular body portion, said arms arranged at an angle to said tubular body portion and formed of bent portions of said longitudinal edges, said bent portions extending in opposite directions about the ends of the body portion, whereby portions of said arms overlap the ends of said body portion, said arms being curved in cross-section and having their convex surfaces arranged outermost.

3. A handle formed of a section of sheet-metal, comprising a tubular body portion, and arms at the ends thereof, said arms arranged at an angle to the tubular body portion and having their edges, at points near and spaced inwardly from the ends of the body portion, bent in opposite directions about said ends of said body portion, whereby portions of the arms overlap said ends of said body portion.

1,021,076. FILTER. JOHN NELSON SISLEY, Connellsville, Pa. Filed Sept. 16, 1911. Serial No. 649,682. (Cl. 210—7.)



1. In a filter, a faucet having a depending nipple below the valve plug thereof and in permanent communication with the inlet of the faucet and closed to the outlet by the valve of the latter, a pet cock having an annular bead secured to said nipple, and a disk of filtering material seated in the head and abutting against the lower edge of the nipple.

2. In a filter, a faucet having a depending nipple in permanent communication with the inlet of the faucet and closed to the outlet of the faucet by the valve of the latter, a pet cock having an enlarged head engaging with the periphery of the nipple, and a disk of filtering material seated in the head and abutting against said nipple.

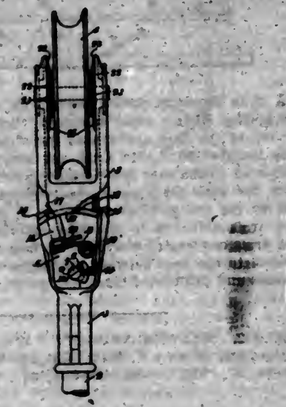
3. In a filter, a faucet including a nozzle and a valve seat and further including an annular nipple depending below the valve seat, said nipple in permanent communication with the inlet of the faucet and closed to the outlet of the faucet by the valve of the latter, a pet cock having an enlarged head engaging the periphery of said nipple, said head having a flattened portion to provide a seat, and a disk of filtering material mounted upon said seat and abutting against said nipple.

4. In a filter, a faucet provided in proximity to its nozzle with a depending nipple in permanent communication with the inlet of the faucet and closed to the outlet of the faucet by the valve of the latter, a pet cock having an enlarged head secured to said nipple, and a disk of filtering material interposed between the head and the nipple.

1,021,077. TROLLEY-HARP. OSCAR W. SMITH, Springfield, Ohio. Filed June 23, 1910. Serial No. 568,521. (Cl. 191—39.)

1. A trolley harp comprising a base attached to a pole, and a detachable fork, said members having interlocking parts connecting the same one to the other and adapted to be moved into and out of alinement, said fork being movable transversely to the length of said pole

to move said parts out of alinement and permit said fork to be detached from said base, and means for rigidly holding said fork normally against movement relatively to said base.



2. A trolley harp comprising a base attached to a pole, and a detachable fork, said members having interlocking parts connecting the same one to the other and adapted to be moved into and out of alinement, said fork being movable about an axis extending at an angle to the axis of the pole to move said parts out of alinement and permit said fork to be detached from said base, and positive means for holding said fork normally against movement about its axis.

3. A trolley harp comprising a base attached to the pole, and a detachable fork, one of said members being provided with a stud having a lateral projection and the other of said members having an opening to receive said stud and provided with an extension normally out of alinement with said projection, said fork being movable transversely to the length of said pole to bring said extension and the projection on said stud into alinement and permit said fork to be detached from said base, and a fastening device to rigidly hold said fork normally against movement relatively to said base.

4. A trolley harp comprising a base and a detachable fork, said parts having overlapping portions, one of said overlapping portions having an aperture with a lateral extension and the other of said overlapping portions having a stud with a laterally extending lip, the lateral extension of said opening and the lip of said stud being arranged at different angles to the length of said harp, whereby they can only be brought into alinement by the movement of one of said parts about the axis of said stud, and means to rigidly secure said parts in their normal positions.

5. A trolley harp comprising a base, and a detachable fork, said parts having overlapping portions, the overlapping portion of said fork having a stud extending outwardly therefrom and provided with a laterally extending lip, the overlapping portion of said base having an opening therein with a lateral extension, the lateral extension of said opening and the lip of said stud being arranged at different angles to the length of said harp, a stop carried by the overlapping portion of said base and adapted to engage one side of said fork, and a spring-pressed pin slidably mounted on the overlapping portion of said base and adapted to engage the other side of said fork to hold the same normally against movement relatively to said base.

[Claim 6 not printed in the Gazette.]

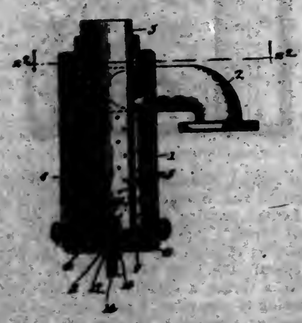
1,021,078. BOW-TIE SHIELD. JAMES F. SPALDING, Kansas City, Mo. Filed July 10, 1911. Serial No. 637,616. (Cl. 2—84.)

1. In combination with a tie, a shield therefor, means for securing said shield in position on a collar, adjustable slotted holding members for removably securing the tie to the shield, a screw extending through the slotted portions of said holding members to secure them in any of their adjusted positions, and a nut coacting with said screw.



2. In combination with a tie, a shield therefor, means for securing said shield in position on a collar, adjustable slotted holding members for removably securing the tie to the shield, a screw extending through the slotted portions of said holding members to secure them in any of their adjusted positions, a nut coacting with said screw, and a member to lock the nut from turning.

1,021,079. MIXING ATTACHMENT FOR CARBURETERS. ALFRED C. STEWART, Los Angeles, Cal. Filed Oct. 31, 1910. Serial No. 590,040. (Cl. 123—119.)



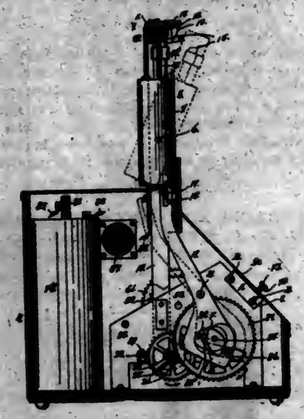
1. A mixing device for carbureters, comprising a case formed with an inlet chamber and with inlet means for said chamber adapted for connection to a carburetor for supplying oil and air thereto, an outlet chamber extending within the aforesaid chamber and provided with openings for passage of air and vapor from the inlet chamber to said outlet chamber, means for collecting oil in the bottom of said inlet chamber an injector means communicating with said oil collecting means and with said outlet chamber and a pressure pipe connected to said injector means to produce a blast of elastic fluid through said injector means into said outlet chamber, thereby atomizing the oil from said oil collecting means into said outlet chamber.

2. A mixing attachment for carbureters, comprising a case provided with an inlet chamber, inlet means adapted for connection to a carbureter and communicating tangentially with said inlet chamber, an outlet chamber extending within said inlet chamber in the central portion thereof, and provided with perforations establishing communication between said inlet and outlet chambers, means for collecting oil in the lower portion of said inlet chamber, injector means connected with said oil collecting means and having an outlet communicating with said outlet chamber and an elastic fluid supply pipe connected to said injector to discharge a blast of elastic fluid through the injector and through the outlet thereof, to supply the atomized oil from the oil collecting means into the outlet chamber.

1,021,080. COMBINED CIGAR TIP-CUTTER AND LIGHTER. DAVID A. THOMAS, Denver, Colo. Filed Mar. 21, 1910. Serial No. 550,775. (Cl. 175—236.)

1. A cigar lighter, comprising a torch mounted to oscillate for lighting and extinguishing purposes, an operating lever connected in jointed relation with the torch for operating purposes, the said lever having a cam-opening.

a rotatable wheel having a pin located beyond the center of the wheel and passing through the said opening of the slot, whereby the lever is actuated by the movement of the wheel, a motor connected in operative relation with the said wheel, means for normally locking the wheel against rotation in response to the stress of the motor, and means for releasing the said wheel to allow the latter to rotate for torch-operating purposes, substantially as described.



2. A cigar lighter, comprising a torch mounted to oscillate for lighting and extinguishing purposes, a lever connected in jointed relation with the torch for operating purposes and having a cam-opening, a rotatable wheel having a pin passing through the opening of the slot and arranged to operate the lever to actuate the torch as the wheel rotates, a spring, a spindle with which one extremity of the spring is connected, a gear loose on the spindle, and an operative connection between the said gear and the rotatable wheel, means for normally locking the wheel against movement, and means for releasing the said wheel to permit the latter to rotate for torch-operating purposes, substantially as described.

3. A cigar lighter, comprising a torch mounted to oscillate for lighting and extinguishing purposes, an operating lever connected with the torch for operating purposes, said lever having a cam opening, a rotatable wheel having a pin secured to the wheel at a distance from the center of the wheel and passing through the said opening, whereby the lever is actuated by the movement of the wheel, and means for actuating the said wheel, for the purpose set forth.

4. A cigar lighter, comprising a torch mounted to oscillate for lighting and extinguishing purposes, an operating lever connected in jointed relation with the torch for operating purposes, said lever having a cam, a rotatable wheel having means engaging the said cam, whereby the lever is actuated by the movement of the wheel, and means for operating the said wheel, for the purposes set forth.

5. A cigar lighter, consisting of a torch mounted to oscillate, a wheel connected in operative relation with the said torch, a motor in operative relation with the said wheel, whereby the said wheel is normally under stress, a spindle upon which the wheel is mounted, having a relatively short spring-actuated lever, means normally in the path of the said lever to prevent the wheel from rotating, a push button plunger arranged to be actuated to release the spindle arm therefrom and allow the wheel to rotate for actuating the torch, and an arm carried by the spindle and adapted to come into contact with the push button plunger when the same is in the depressed position after the spindle has turned a predetermined distance, for the purpose set forth.

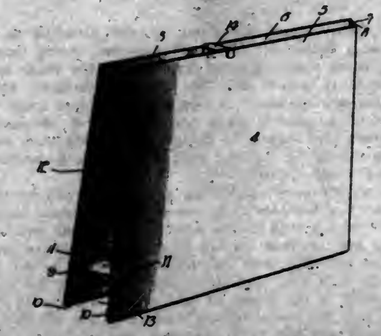
[Claims 6 to 8 not printed in the Gazette.]

1,021,061. SHOE BRUSHING AND SCRAPING DEVICE. CHARLES SIMS WILLIAMS, Carthage, Mo. Filed May 24, 1910. Serial No. 563,151. (Cl. 15—2.)



A shoe cleaning device comprising a flat base, brush supporting spring arms mounted thereon parallel with the top of the base and spaced therefrom at one end by a yoke integral with said arms and comprising a cross-bar connected to the base and uprights uniting the ends of the cross bar with the arms, oppositely arranged brushes carried by the free ends of said arms, a supporting yoke for said arms attached to the base intermediate their ends, said arms converging toward their free ends, and a scraper secured to the base between said supporting yoke and the brushes and positioned below the plane of said arms.

1,021,082. EXPANSION-JOINT. WILLIAM WRIGHT, Chicago, and HARRIS F. HALL, Chicago Heights, Ill. Filed Sept. 27, 1911. Serial No. 651,564. (Cl. 94—1.)



1. An expansion joint of the class described, comprising a casing having a main cavity for the filling material and a contiguous expansion cavity, and a yieldable member separating said cavities.

2. An expansion joint of the class described, comprising a casing having a main cavity for the filling material, open at one side, and an expansion cavity distant from said open side, and a member separating said cavities and adapted to yield to permit the movement of said filling material.

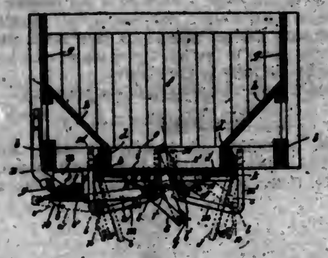
3. An expansion joint of the class described, comprising a casing having a main cavity for the filling material, open at one side, and an expansion cavity distant from said open side, and a member separating said cavities and adapted to yield to permit the movement of said filling material, said main cavity being contracted at said open side and having its side walls diverging toward said expansion cavity.

4. An expansion joint of the class described, comprising a casing formed of sheet material, being open at the top, and having its side walls inclined so as to diverge downwardly, a member subdividing the interior of said casing so as to provide a main chamber for the filling material and an expansion chamber, said member being adapted to yield into said expansion chamber through pressure on said filing material.

5. An expansion joint of the class described, comprising a casing formed of sheet material, being open at the top, and having its side walls inclined so as to diverge downwardly, means in the lower part of said casing adapted to support a filling material in the upper part and to provide an expansion space below said filling material, whereby said filling material may move downwardly.

[Claims 6 to 14 not printed in the Gazette.]

1,021,083. DUMP-CAR. ROBERT MONTAGUE ZIMMERMAN, Montreal, Quebec, Canada, assignor to National Dump Car Company, Chicago, Ill., a Corporation of Maine. Filed July 30, 1910. Serial No. 574,681. (Cl. 104—185.)



1. In a dump car, the combination with a pair of doors, of door operating mechanism comprising a lever, a pair of laterally movable shafts upon which the doors rest freely, links operatively connecting the shafts to the lever, means through which the shafts act upon the doors, and reciprocatory means operatively connected to one of the said shafts.

2. In a dump car, the combination with a pair of doors, of door operating mechanism comprising a lever fulcrumed between its ends, a pair of laterally movable door supporting members upon which the doors rest freely, links operatively connecting the opposite ends of the lever to the members, means through which the members act upon the doors and reciprocatory means operatively connected to one of the said members.

3. In a dump car, the combination with a pair of doors, of door operating mechanism comprising a lever fulcrumed below the level of the abutting edges of the doors when the latter are closed and out of the path of such doors; a pair of laterally movable shafts supporting the doors; links operatively connecting the opposite ends of the lever to the shafts, and means whereby the said mechanism is operated.

4. In a dump car, the combination with a pair of doors, of door operating mechanism comprising a lever fulcrumed below the level of the abutting edges of the doors when the latter are closed and out of the path of such doors, a pair of laterally movable shafts supporting the doors, links operatively connecting the opposite ends of the lever to the shafts, reciprocatory operating mechanism, and a pitman connecting the reciprocatory mechanism to one of the shafts.

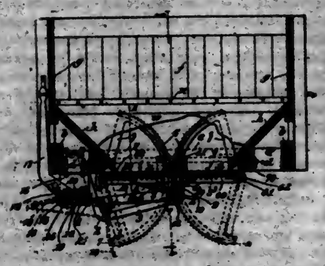
5. In a dump car, the combination with a pair of doors, of door operating mechanism comprising a lever fulcrumed below the level of the abutting edges of the doors when the latter are closed and out of the path of such doors; a pair of laterally movable shafts supporting the doors; links operatively connecting the opposite ends of the lever to the shafts, an oscillatory shaft; a crank arm rigidly mounted on the last mentioned shaft, and a pitman operatively connecting the crank arm to one of the said laterally movable shafts.

[Claims 6 to 12 not printed in the Gazette.]

1,021,084. DUMP-CAR. ROBERT MONTAGUE ZIMMERMAN, Montreal, Quebec, Canada, assignor to National Dump Car Company, Chicago, Ill., a Corporation of Maine. Filed Aug. 19, 1910. Serial No. 578,039. (Cl. 105—185.)

1. In a dump car, the combination with the sides of a discharge opening, of a pair of dump doors having rigid thereon intermeshing gears whereby they are caused to operate in unison, such doors being hinged at opposite edges to the sides of the discharge opening, operating mechanism applied to one door, and means whereby the other door may be held in closed position independently of the gear thereon.

2. In a dump car, the combination with the sides of a discharge opening, of a pair of dump doors having rigid thereon intermeshing gears whereby they are caused to operate in unison, such doors being hinged at opposite edges to the edges of the discharge opening, operating mechanism applied to one door, and means whereby the other door may be held in closed position independently of the gear thereon, including a member carried by the first mentioned door and projecting under the other door when the doors are in closed position.



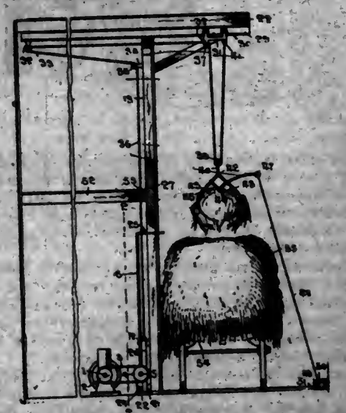
3. In a dump car, the combination with a pair of hinged doors, of means for operating such doors, including a single pair of intermeshing segmental gears secured one to each of the doors substantially midway between the ends thereof.

4. The combination with a dump car having a discharge opening and a pair of doors closing such opening, of a pair of intermeshing segmental gears secured to the doors between the ends of the latter, and a housing extending transversely across the discharge opening and inclosing such segmental gears.

5. In a dump car, the combination with the hinged doors *i* and *j* and operating mechanism applied to one of the doors of the segmental gears *s* and *s'*, and the rollers 50 engaging such segmental gears to hold them in operative relation with each other.

[Claim 6 not printed in the Gazette.]

1,021,085. HAY-HANDLING APPLIANCE. WILLIAM A. BAILEY, Sioux Falls, S. D. Filed Oct. 26, 1911. Serial No. 656,909. (Cl. 214—2.)

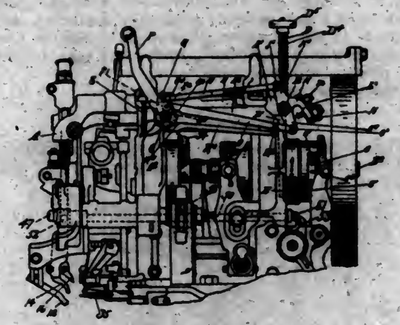


1. A device of the class described comprising a main shaft, spools mounted upon said shaft and spaced from one another, means for alternately locking the spools for rotation with the shaft, a rope secured to one of the spools and adapted to be wound thereabout during the rotation of said spool with the shaft, a cord connected to and adapted to be wound around the other spool during the rotation thereof with the shaft, a carriage, a track

for the carriage, said rope being connected to the carriage, a lifting and carrying fork carried upon said rope, a trip lever connected to said fork and adapted when operated to open said fork, said rope being adapted when wound upon its spool to draw the fork against the carriage and move the carriage with the fork thereagainst along its track, said cord being connected to the trip lever and adapted to operate the latter to open the fork when said cord is wound upon its spool, and means for rotating said shaft.

2. A device of the class described comprising a rotary shaft, spools loosely mounted upon opposite ends of said shaft and spaced from one another, means to lock either spool to said shaft, a longitudinal track, a carriage movable upon the track, a rope having one end connected to one of the spools and its opposite end to the carriage, means to guide the rope, said rope being adapted to be wound around its spool, lifting and carrying means suspended in said rope beneath the carriage, said rope when wound around its spool being adapted to draw the lifting and carrying means against the carriage and move said carriage and lifting and carrying means along the track, a cord having one end connected to the other spool and its opposite end connected with the lifting and carrying means, said second spool being adapted when locked with the shaft to wind the cord thereupon, said cord when wound upon its spool being adapted to return the carriage and the lifting and carrying means to their initial positions, and means for rotating the shaft.

1,021,086. LASTING-MACHINE. ARTHUR BATES, Leicester, England, assignor to United Shoe Machinery Company, Boston, Mass., a Corporation of New Jersey. Filed Apr. 3, 1902, Serial No. 101,190. Renewed Dec. 20, 1910. Serial No. 598,451. (Cl. 12—2.)



1. In a lasting machine having pincers for holding the upper, a cam having connection with the pincers to impart a downward movement thereto, an auxiliary cam, and means for rendering said auxiliary cam operative at times to impart downward movement to the pincers, substantially as described.

2. In a lasting machine having pincers for holding the upper, a dual cam comprising an internal cam having connection with the pincers to impart a downward movement thereto and an auxiliary peripheral cam arranged to have connection with the pincers to impart a different movement thereto substantially as described.

3. In a lasting machine having pincers for holding the upper, a dual cam comprising a peripheral cam surface and an internal cam surface, and connections therefrom for actuating the pincers, in combination with means for rendering one of the cam surfaces inoperative, substantially as described.

4. In a lasting machine, pincers for engaging the upper and actuating mechanism for the pincers including a dual cam comprising an internal cam surface for imparting a downward movement to the pincers, and a peripheral cam surface, combined with means for rendering the latter cam surface operative or inoperative for imparting movement to the pincers.

5. In a lasting machine having pincers for holding the upper, and a lever for actuating the pincers the combination of an eccentrically bored sleeve journaled in the pincers actuating lever, a fixed pivot pin passing through the bore of said sleeve, and means for adjusting said sleeve whereby the position of the lever with relation to the fulcrum may be varied for changing the movement imparted by the lever to the pincers.

[Claims 6 to 36 not printed in the Gazette.]

1,021,087. PROCESS OF MANUFACTURING MINERAL WATERS. JOHANN BIENZ, Berne, Switzerland. Filed Dec. 28, 1910. Serial No. 599,641. (Cl. 225—26.)



The process of manufacturing mineral water, which consists in first disintegrating a tablet, composed of one or more mineral salts, outside of the receptacle adapted to hold the mineral water, and then forcing water, containing preferably carbonic acid gas, past the disintegrated tablet, so as to dissolve the same before the mineral water thereby produced enters the receptacle.

1,021,088. BUCKLE. ROYL A. BROWN, Ashland, Ohio. Filed Oct. 27, 1909. Serial No. 524,932. (Cl. 24—170.)

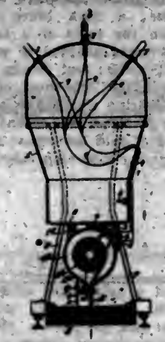


In buckles, a sheet metal body having three cross-bars, a keeper and a clamping member, respectively, mounted on two adjacent bars and the third cross-bar constructed to come into clamping relation with said clamping member and depressed below the adjacent portions of the sides of the buckle, and the sides of the buckle having flanges terminating at said third cross bar.

1,021,089. SUBMARINE CONTACT-MINE. FRITZ BRÜCK, Osnabrück, Germany. Filed Sept. 16, 1910. Serial No. 582,280. (Cl. 102—8.)

1. In a submarine mine of the class described having a casing provided with an ignition circuit, an anchor and an extensible connecting cable, the combination of a circuit closing device in said ignition circuit a reel to carry said cable, said reel being movable relatively to said casing and means uniting said reel to said casing and arranged to engage said circuit closing device, said

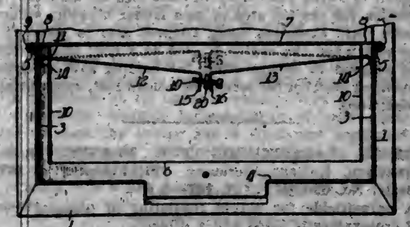
means being adapted to change its position with reference to the casing with change of tension in the cable so as to actuate said circuit closing device.



2. In a submarine mine of the class described having a casing provided with an ignition circuit, an anchor and an extensible connecting cable, the combination of a circuit closing device in said ignition circuit, a reel to carry said cable, said reel being movable relatively to said casing, springs between and engaging both said reel and said casing, and means operatively connected both with said reel and said casing to actuate said circuit closing device when the relative position of reel and casing is changed.

3. In a submarine mine of the class described having a casing provided with an ignition circuit, an anchor and an extensible connecting cable, the combination of a circuit closing device in said ignition circuit, a reel to carry said cable, said reel being movable relatively to said casing, springs between and engaging with said reel and said casing, means operatively connected to both said reel and said casing to actuate said circuit closing device when the relative position of reel and casing is changed, and braking means for retarding the rate at which said relative position is changed.

1,021,090. FILING-CASE. WILLIAM T. CALLAGHAN, Chicago, Ill. Filed Aug. 31, 1910. Serial No. 579,860. (Cl. 129—27.)



1. The combination of a filing receptacle having side walls and end walls, a follower movable horizontally therein and engaging one side of each of the two opposite walls of said receptacle, and two members supported near their outer ends by the side portions of the follower for sliding movement and to swing in a vertical plane adjacent to the rear face of the follower, the inner end of each of said members being arranged to exert pressure against the inner end of the other member when said members are swung to project their outer ends against the sides of the receptacle opposite those engaged by the follower.

2. The combination of a filing receptacle; a follower movably mounted in said receptacle; a pair of members swingingly supported near their outer ends by said follower, the outer ends of said members being adapted to engage opposite walls of said receptacle; and adjustable means connecting the inner ends of said members, said members being adapted to be swung into position to carry said outer ends into engagement with said walls.

3. The combination of a filing receptacle; a follower movably mounted in said receptacle; a pair of members movably carried by said follower; the outer ends of said members being adapted to engage opposite walls of said receptacle; a screw threaded in the inner end of one of said members and extending loosely through the inner end of the other member; and a nut threaded on said screw between said inner ends, said nut bearing against the inner end of the second mentioned member and determining the space between said members.

4. The combination of a filing receptacle having side walls and end walls, a follower movable horizontally in said receptacle, and two members supported near their outer ends by the follower for swinging movement in a vertical plane adjacent to the rear face of the follower, the outer ends of said members being arranged to engage the walls of the receptacle, and the inner ends of said members being opposed to one another and connected together and arranged to exert pressure one against the other, said members being adapted to be swung to carry their connected ends into alinement with their outer ends.

5. The combination of a filing receptacle having side walls and end walls, a follower movable horizontally in said receptacle, and two members each adapted to engage one wall of the receptacle, both of said members being carried by the follower and each arranged to exert pressure against the other to press it against the adjacent receptacle wall, one of said members being mounted on the follower to swing in a vertical plane adjacent to the rear face of the follower, so that said member may be swung into alinement with the other member.

[Claims 6 to 9 not printed in the Gazette.]

1,021,091. COUCH-BED, &c. ANTON G. EYLES, Cedar Rapids, Iowa, assignor to A. G. Eyles Chair Company, Cedar Rapids, Iowa. Filed Apr. 1, 1911. Serial No. 618,431. (Cl. 5—49.)



1. In a structure of the character set forth, the combination of a main-frame, bed-carrying links mounted thereon, a folded bed comprising a rear bed-section mounted on said links, an intermediate bed-section pivotally connected with said rear bed-section, and a front bed-section pivotally connected with said intermediate bed-section, legs pivotally connected with the front portion of the front bed-section and linked to one of the other bed-sections, legs pivotally connected with the folding bed-frame structure near the junction of the front and intermediate bed-sections, and links connecting the front legs with the rear legs.

2. In a structure of the character set forth, the combination of a main-frame, bed-carrying links mounted thereon and adapted to swing forwardly and upwardly, a rear bed-section pivotally connected to said links, the front links having extensions, an intermediate bed-section pivotally connected with the rear bed-section and linked to said extensions, a front bed-section pivotally connected with the intermediate bed-section and equipped with pivotally mounted legs provided with extensions, links connecting said leg-extensions to said intermediate bed-section, legs pivotally connected with the folding bed-structure at the juncture of the front and intermediate bed-sections, and links connecting said leg-extensions with said last-named legs.

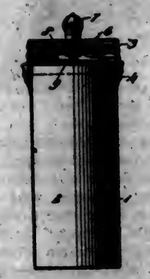
1,021,092. STOVEPIPE-JOINT. WAYNE D. FITZPATRICK, Glenhayes, W. Va. Filed Jan. 17, 1911. Serial No. 603,158. (Cl. 126—308.)



1. A pipe section formed from a single sheet of metal, the edges of which overlap each other, the outer of said edges having longitudinal slots terminating in enlarged openings, studs carried by the inner edge section adapted to engage the slots and lock the edges of the pipe sections together and the inner edge being extended beyond the slots in the outer edge and redoubled upon itself to form an outwardly extending guard adapted to press against the inner side of the pipe section to form a seal.

2. A pipe section formed from a single sheet of metal, the edges of which overlap each other, the outer of said edges having slots terminating in enlarged openings, said outer edge having additional slots inwardly of said first mentioned slots, studs carried by the inner edge adapted to engage the slots to lock the edges together, a guard on the inner edge adapted to press against the outer edge inwardly of the slots and the outer edge bent inwardly upon itself to reinforce said edge.

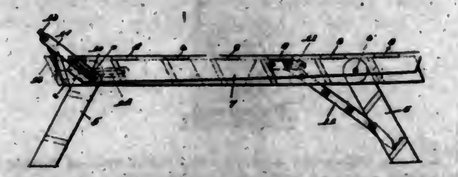
1,021,093. LAMP. JOSEPH FORSHEIM, New York, N. Y. Filed Apr. 12, 1909. Serial No. 489,499. (Cl. 176—336.)



An article of the character described comprising a casing, a lamp in electric connection therewith, a battery cell within the casing and in electric connection therewith, devices on the casing having a removable engagement with the cell for holding it against longitudinal movement within the casing, and means for bringing the lamp positively into and out of electric connection with the cell.

1,021,094. COMBINATION STEP-LADDER AND BENCH. CHARLES GOETTER, Chicago, Ill. Filed May 24, 1911. Serial No. 629,163. (Cl. 228—32.)

1. In a device of the class described, a ladder portion comprising a pair of side standards and a plurality of steps; short auxiliary ladder sections pivotally mounted between said standards adjacent the respective ends thereof; means on said standards forming stops for the free ends of said auxiliary ladder members when the device is used as a ladder; a back brace portion constituting in one position the table of a bench, said auxiliary ladder sections being adapted to swing outwardly to form legs for said bench; and means connected with said brace member and the lowermost of said auxiliary ladder portions for limiting the degree of separation of said ladder and brace portions, said means serving also to maintain the free end of said lowermost auxiliary ladder section in position against said stop means, substantially as described.



2. In a device of the class described, a ladder portion comprising a pair of side standards and a plurality of steps; short auxiliary ladder sections pivotally mounted between said standards adjacent the respective ends thereof; means on said standards forming stops for the free ends of said auxiliary ladder members when the devices is used as a ladder; a back brace portion constituting in one position the table of a bench, said auxiliary ladder sections being adapted to swing outwardly to form legs for said bench; and foldable means connected with said brace member and the free end of the lowermost of said auxiliary ladder sections for limiting the degree of separation of said ladder and brace portions, said means serving also to maintain said lowermost auxiliary ladder sections in position for service as a ladder, substantially as described.

3. In a device of the class described, a ladder portion comprising a pair of side standards and a plurality of steps; short auxiliary ladder sections pivotally mounted between said standards adjacent the respective ends thereof; means on said standards forming stops for the free ends of said auxiliary ladder members when used as a ladder; a back brace portion pivotally secured to said ladder portion and adapted in one position to constitute the top of a cot, said auxiliary ladder sections being adapted to swing outwardly to form legs for said cot; an extension for the top step of said ladder hingedly secured thereto, said extension being adapted also to serve as a head rest when the device is used as a cot; and notched bars adapted to engage studs for holding said extension in inclined position for service as a head rest, substantially as described.

1,021,095. PARASITICIDE FOR PLANTS. GUSTAV GRETHER, Koblenz, Germany. Filed Sept. 18, 1911. Serial No. 650,043. (Cl. 167—6.)

A parasiticide for plants consisting of phenoxylacetic and cresoxylacetic acids and a diluent.

1,021,096. PROCESS OF SMELTING SULFID ORES. AUGUST HAGGENMILLER, Tarica, Peru. Filed Mar. 3, 1910. Serial No. 547,144. (Cl. 75—17.)

1. The process of treating pyritic and other sulfid ores, which consists in smelting the ore in a blast furnace with the aid of an air blast of high velocity due to an over-pressure of one or more atmospheres according to the energy of dissociation of the sulfids in the smelting zone of the furnace.

2. The improvement in the art of smelting pyritic and other sulfid ores, which consists in subjecting the ore in a blast furnace to the action of an air blast of high velocity due to an over-pressure of one or more atmospheres, the process being continuous.

1,021,097. ELECTRICALLY-HEATED TOOL. JOHN S. HANSEN, Brockton, Mass., assignor to O. A. Miller Treeing Machine Company, Portland, Me., a Corporation of Maine. Filed Nov. 19, 1910. Serial No. 593,220. (Cl. 219—20.)



1. A treeing iron comprising a body having a cavity therein extending longitudinally thereof to receive a heating resistance, a cover for said cavity, said cover and body having coöperating means enabling the cover to be turned about an axis to close or open the cavity and a handle for said iron supported by the cover.

2. A treeing iron comprising a body, said body having a cavity formed therein to receive a heating resistance provided with terminals, a cover for said cavity movable about an axis to close or open the cavity, and an electrical conductor supported by the cover to make electrical connection with a terminal of the resistance when the cover is in closed position.

3. A treeing iron comprising a body, said body having a cavity formed therein to receive a resistance unit provided with terminals, a cover for said cavity movable about an axis to close or open the cavity, a handle for said iron supported by the cover and a conductor extending through the handle and cover and making contact with a terminal of said resistance unit when the cover is in closed position.

4. A treeing iron comprising a body having a cavity formed therein to receive a resistance unit provided with terminals, a cover for said cavity mounted to swing into closed or open position, means for holding the cover in closed position, a handle for said iron rigidly supported on said cover, an electrical contact mounted in exposed position on the handle, a conductor extending from said contact through said handle and cover into the cavity in position to make contact with a terminal of said resistance when the cover is in closed position, said conductor being mounted to yield relative to the handle and cover.

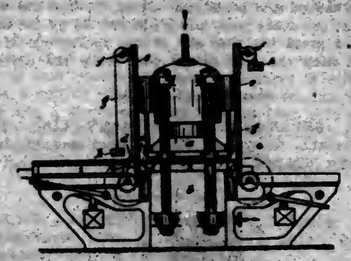
5. A treeing iron comprising a body having a cavity formed therethrough to receive a resistance unit provided with terminals at its opposite ends, covers for the ends of the cavity movable independently of each other to close or open the cavity and a conductor supported by each cover to make electrical connection with the terminals of said resistance.

[Claims 6 to 9 not printed in the Gazette.]

1,021,098. MACHINE FOR PRESSING PASTY MASSES, MORE PARTICULARLY MIXTURES OF ASBESTOS AND CEMENT. FRANZ HLOCH, Mährisch-Schönberg, Austria-Hungary. Filed Dec. 2, 1911. Serial No. 663,509. (Cl. 25—54.)

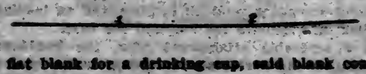
1. In a machine for pressing pasty masses, more particularly mixtures of asbestos and cement, the combination with movable molds and a plunger for effecting the pressing, of a press-cloth forming a tight joint between the mold and plunger, means for fixing the press-cloth at one of its ends to the inner edge of the mold which is pushed beneath the plunger, and means for subjecting the other end of the press cloth to a constant traction, whereby the removal of the press-cloth from the mold is automatically effected when the latter is moved out of the press.

2. In a machine for pressing pasty masses, and more particularly mixtures of asbestos and cement, the combination with movable molds and a press-plunger of a press-cloth forming a tight joint between the mold and plunger, a crossbar on the mold to which one edge of the press-cloth is fixed, and means for subjecting the free end of the press-cloth to a constant traction.



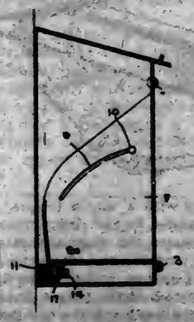
3. A machine for pressing pasty masses and more particularly mixtures of asbestos and cement, comprising, in combination, movable molds, a press-plunger, a press-cloth to form a tight joint between the mold and plunger, a crossbar on the mold to which the inner edge of the press-cloth is attached, a roller over which the free end of the press-cloth is carried, and weights for loading the said free end.

1,021,099. SANITARY-DRINKING-CUP BLANK. GEORGE F. HOGAN, Chicago, Ill. Filed Apr. 22, 1911. Serial No. 622,884. (Cl. 229—1.)



A flat blank for a drinking cup, said blank consisting of stiff waterproof paper cut to sectoral form and having two radial scorings which divide said blank into three equal portions of uniform shape, said portions being so disposed that when either side portion is folded over the intermediate portion, the entire edge of said side portion will rest on the opposite scoring, said blank also having an embossed transverse score which extends in a straight line across all three portions of the unfolded blank adjacent to the lower corner of the sector, said transverse score being so positioned on the intermediate portion of the blank as to serve as a line for folding, and being so positioned on the side portions as to pucker said side portions when said blank is folded up squarely at its lower corner to form a cup.

1,021,100. COMBINATION MAIL-BOX AND SIGNALING MECHANISM. SOLOMON S. HOPKINS, Waynesboro, Va. Filed Apr. 1, 1910. Serial No. 552,862. (Cl. 177—301.)



The combination of a mail box, comprising a casing and a cover therefor, a pocket formed on the inner face

of the cover for receiving mail-matter, said cover being normally actuated by gravity to close the cover from its extreme open, or any intermediate position, means for limiting the opening movement of the cover, an electric circuit, an alarm in the circuit, a circuit closer in the circuit comprising a pair of posts located in the bottom of the casing and beneath said pocket and a spring attached to one of said posts and having its free end bearing against the other post, and a pin carried by the cover adapted to press the free end of the spring out of engagement with the last named post when the cover is closed.

1,021,101. SEPARABLE ATTACHMENT-PLUG. HARVEY HUBBELL, Bridgeport, Conn. Filed May 11, 1911. Serial No. 626,567. (Cl. 173—343.)

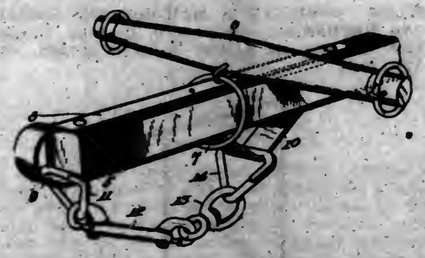


1. A separable attachment plug comprising a cap having binding screws and contact posts, a base having a screw shell, contacts in said base, brackets by which said contacts are carried, one of said brackets being retained in place by the screw shell and the second bracket serving as a center contact with a socket, a screw by which said second bracket is retained in place and an insulating guard disk intermediate the cap and the base.

2. In a separable attachment plug, the combination with a cap having a recess and binding screws and contact posts secured therein, of an insulating guard disk covering the recess and detachably secured to the contact posts.

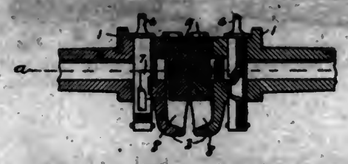
3. In a separable attachment plug, the combination with a cap having a recess and binding screws and contact posts secured therein, of an insulating guard disk covering the recess and provided with spring clamping plates through which the contact posts pass and by which the guard disk is secured to the cap.

1,021,102. NECK-YOKE FASTENER. GEORGE W. HURST, Lake Arthur, La. Filed Aug. 29, 1911. Serial No. 646,757. (Cl. 21—77.)



The combination with a wagon tongue, a ring thereon, and a neck-yoke carried by the ring; of a strap secured to the top and bottom of the tongue, said strap extending in a bend in front of the tip of the tongue and spaced therefrom, to form an eye, and that portion of the strap which is on the bottom of the tongue having a downward bend, between which bend and the eye the ring is mounted, and a separable connection between the eye and the bend.

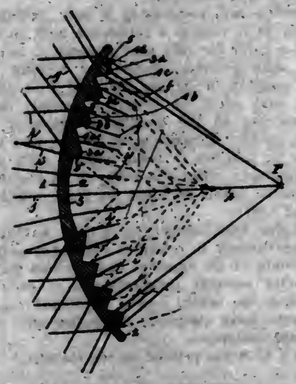
1,021,103. CAR-COUPLING. MATTHEW C. IRONSIDE, Kansas City, Kans., assignor of two-ninths to James Cummings, Kansas City, Kans., and two-ninths to Patrick J. Horan and two-ninths to David McDonnell, Kansas City, Mo. Original application filed Sept. 26, 1908, Serial No. 454,872. Divided and this application filed Oct. 26, 1909. Serial No. 524,611. (Cl. 213—13.)



1. In a car coupler, the combination with a coupler head, of a coupler hook pivoted thereto, the coupler head having a safety guard having a horizontal lip and a side wall which extends to the forward edge of the lip and has its inner side inclining upwardly and laterally from the upper side of the lip.

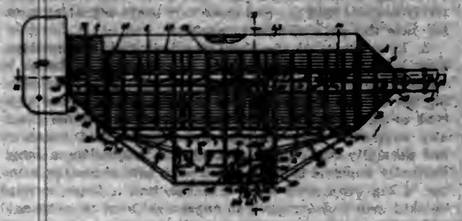
2. In a car coupler, the combination with a coupler head, of a coupler hook pivoted thereto, the coupler head having a safety guard having a horizontal lip and a side wall which extends to the forward edge of the lip and has its inner side inclining upwardly and laterally from the upper side of the lip, the side wall having its front edge inclining forwardly and upwardly from the upper side of the lip.

1,021,104. LENS. GUSTAV A. H. KELLNER, Rochester, N. Y., assignor to Bausch & Lomb Optical Company, Rochester, N. Y., a Corporation of New York. Filed Oct. 10, 1910. Serial No. 586,139. (Cl. 240—106.)



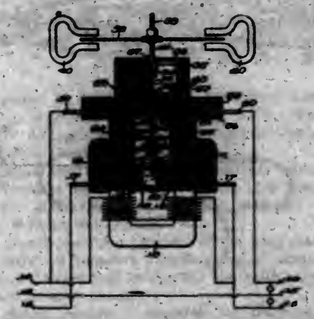
A circular headlight lens having an incident concave surface of one curvature with a small central section of greater curvature, refracting prismatic extensions on the surface between the central section and the periphery of the lens, and a common emergent surface for the lens of convex curvature, the surfaces having a common focal point, the inner faces of the prismatic extensions cooperating with the convex emergent surface to refract incident rays into emergent rays substantially parallel with the axis to illuminate at a distance from the lens, the base surfaces of the extensions coöperating with the emergent surface to refract incident rays into divergent rays for illuminating at a short distance in front of the lens, and the central convex concave section refracting incident rays into rays of small divergence for illuminating at an intermediate distance in front of the lens, said lens being of substantially uniform thickness.

1,021,105. AIR-CRAFT. JESSE B. LAINSON and GEORGE J. YERGER, Kansas City, Mo. Filed Feb. 14, 1910. Serial No. 543,773. (Cl. 244—6.)



In an air craft, a pair of frames, one superimposed above the other and spaced therefrom to provide an air passage therebetween, gas bags contained within said frames, a cage suspended from the lower frame, the portion of said lower frame above said cage being open to provide for the passage of shafting and operating ropes therethrough, a horizontal rudder located at one end of the craft and extending on each side thereof, a vertical rudder located at the opposite end of the craft and extending above said upper frame, controlling ropes connected with said rudders and extending to said cage, propellers located at one end of the craft, a motor carried in said cage and transmission mechanism connecting said propellers with said motors.

1,021,106. THREE-WIRE MERCURY-METER. ROBERT C. LANPHIER, Springfield, Ill., assignor to Sangamo Electric Company, Springfield, Ill., a Corporation of Illinois. Filed Mar. 22, 1911. Serial No. 616,203. (Cl. 171—265.)



1. In a meter, the combination of an armature, an electro-magnet with its poles in close proximity to said armature, pole pieces extending close to said armature opposite said magnet poles, a second armature mounted close to the other ends of said pole pieces and adapted to rotate in unison with said first armature, and a return plate in close proximity to the ends of said pole pieces on the opposite side of said second armature.

2. In a mercury meter, the combination of a casing, a mercury chamber therein, a bottom plate closing the lower side of said chamber, a bearing mounted in said bottom plate, a spindle extending through said bearing, and an armature mounted on said spindle above said bearing, said bearing being raised above the plane of the bottom plate proper.

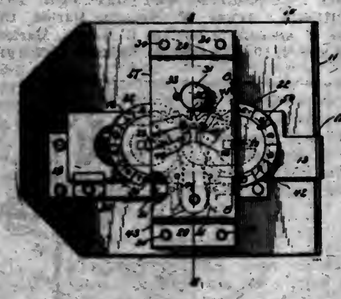
3. In a mercury meter, the combination of a casing, a mercury chamber therein, a bottom plate closing the lower side of said chamber, a bearing mounted in said bottom plate, a spindle extending through said bearing, and an armature mounted on said spindle above said bearing but below the surface of the mercury, the armature proper being below the bearing, said bearing being raised above the plane of the bottom plate proper.

4. In a mercury meter, the combination of a casing, a mercury chamber therein, a bottom plate closing the lower side of said chamber, a sleeve extending upward from said bottom plate, a bearing mounted in the upper end of said sleeve, a spindle extending through said bearing, and an armature mounted on said spindle above said bearing, the armature proper being below the bearing.

5. In a mercury meter, the combination of a casing, a mercury chamber therein, a bottom plate closing the lower side of said chamber, a bearing mounted in said bottom plate, a spindle extending through said bearing, an armature, and a sleeve extending upward from said armature and mounted on said spindle above said bearing, the armature proper being below said bearing.

[Claims 6 to 10 not printed in the Gazette.]

1,021,107. PERMUTATION-LOCK. VIGILIO MATTEVI, Cedarhurst, Colo. Filed Sept. 11, 1911. Serial No. 648,804. (Cl. 70—53.)



1. A lock comprising a bolt, a rotary tumbler coöperating with the bolt, a tumbler actuating member, a key having a bit for actuating the bolt and a bit for imparting a step-by-step movement to said member to actuate the tumbler, and means for determining the number of steps the actuating member is from the position it has when it places the tumbler in release position.

2. A lock comprising a bolt, a rotary tumbler coöperating with the bolt, a ratchet wheel carried by the tumbler, a key having a bit for actuating the bolt and a bit for actuating the ratchet wheel to impart a step-by-step rotary movement to the tumbler, and means for determining the number of steps the tumbler is from release position.

3. A lock comprising a bolt, a rotary tumbler coöperating with the bolt, a ratchet wheel carried by the tumbler, an adjustable dial carried by the tumbler and having a stop, an index coöperating with the dial, a swinging member having a lug adapted to be moved into and out of the path of the stop, and means for actuating the ratchet wheel to impart a step-by-step rotary movement to the tumbler.

4. A lock comprising a bolt, a rotary tumbler coöperating with the bolt, a ratchet wheel carried by the tumbler, an adjustable dial carried by the tumbler and having a stop, an index coöperating with the dial, a swinging member having a lug adapted to be moved into and out of the path of the stop, and a key having a bit to actuate the bolt and the swinging member, and a bit to actuate the ratchet wheel to impart a step-by-step rotary movement to the tumbler.

1,021,108. DRESS-FORM. JEAN J. MCHATTIE and ARLO D. LYLE, Kansas City, Mo. Filed Feb. 14, 1911. Serial No. 608,645. (Cl. 223—18.)

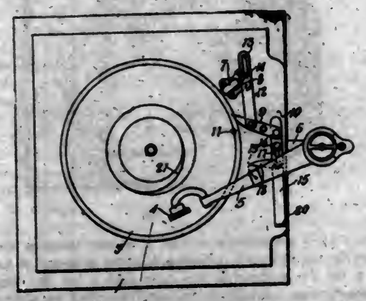
The method of producing dress forms consisting of applying a garment, having tape secured thereto, to the body of a model, applying a plastic composition to the garment, removing the tape with the plastic material thereon to expose parts of the garment, cutting the garment at

the exposed parts to reduce the form to sections, removing the sections, reuniting the plastic covered sections and



permanently securing the edges thereof together, and coating the reunited form.

1,021,109. AUTOMATIC CUT-OFF FOR TALKING-MACHINES. JAMES W. NELSON, Marion, Ohio, assignor of one-half to Delphos C. Nelson, Marion, Ohio. Filed Mar. 4, 1911. Serial No. 612,290. (Cl. 181—3.)



1. In a device of the character described, the combination, with a movable support for a record, a device to control the movement of said support, and a sound-reproducing device supported adjacent to said record-support and movable relatively thereto, of an actuating member operatively connected to said controlling device, a part carried by said record-support to engage said actuating member, a movable member connected with said actuating member, and a device positively actuated by the movement of said reproducing device to impart movement to said movable member and move said actuating member into a position to be engaged by said part on said record-support.

2. In a device of the character described, the combination, with a turntable having a projection, a brake to control the movement of said turntable, a sound-reproducing device, and a movable arm to support said device adjacent to said turntable, of an actuating member supported normally out of the path of the projection on said turntable, and means positively actuated by the movement of said arm to move said actuating member into the path of said projection.

3. In a device of the character described, the combination, with a turntable having a projection, a brake to control the movement of said turntable, a sound-reproducing device, and a movable arm to support said device adjacent to said turntable, of a brake-actuating member pivotally supported with one end adjacent to said turntable but normally out of the path of said projection, and means positively actuated by the movement of said arm to move said actuating member about its pivotal center and into the path of said projection.

4. In a device of the character described, the combination, with a turntable having a projection, a brake to control the movement of said turntable, a sound-reproducing device, and a movable arm to support said device adjacent to said turntable, of a brake-actuating member supported normally out of the path of the projection on said turntable, a movable bar operatively connected with said actuating member, and a part carried by said arm to positively actuate said bar and move said brake-actuating member into the path of said projection.

5. In a device of the character described, the combination, with a turntable having a projection, a brake to control the movement of said turntable, a sound-reproducing device, and a movable arm to support said device adjacent to said turntable, of a brake-actuating member pivotally supported with one end adjacent to said turntable but normally out of the path of said projection, a longitudinally movable bar connected with said actuating member, a lug projecting from said bar, and a finger carried by said arm and arranged to engage said lug to move said actuating member into the path of the projection on said turntable.

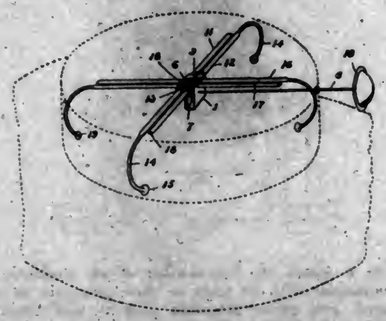
[Claims 6 and 7 not printed in the Gazette.]

1,021,110. NUT-LOCK. JOHN NIEWOHNER, Cleveland, Ohio. Filed Sept. 18, 1911. Serial No. 649,997. (Cl. 151—30.)



In nut-locks, a nut having a hole transversely through the same, a two-section hinged lock for said nut having a thread reverse to the thread of the nut and means to interlock said lock and nut, in combination with a bolt having a threaded portion of the same cross section, whereby the nut can be locked in any position on the screw, whether tight or loose.

1,021,111. HAT-FASTENER. JAMES PAYER, Toronto, Ontario, Canada. Filed Aug. 12, 1910. Serial No. 576,903. (Cl. 132—25.)



1. In a hat fastener, a casing adapted to be secured within the crown of the hat and having a plurality of radially extending tubular members projecting therefrom and formed with inturned outer ends, pin members slidably arranged within said tubular members and adapted to be protruded from the ends of said tubular members to engage the hair, and means supported within the said casing and whereby said pins may be moved inwardly and outwardly.

2. In a hat fastener, a casing formed of sheet metal having a pair of vertically arranged journal bearings and a pair of horizontally arranged journal bearings, a spur pinion journaled within said casing in said vertically arranged bearings, a spindle supported in said horizontally arranged bearings and adapted to extend outwardly through the crown of the hat, a flanged spur gear secured to said spindle within said casing and meshing with said pinion, a pair of tubular members extending through and secured in said casing and having openings cut in their inner walls adjacent to said pinion, toothed members arranged on each side of said pinion and slidably arranged within said tubes, and flexible pin members secured to the ends of said slidable toothed members and adapted to be moved on the turning of said pinion into engagement with the hair.

3. In a hat fastener, a casing adapted to be secured within the hat, a gear and pinion journaled in said casing and mutually engaging, means adapted to extend through the side of the hat for operating said gear and pinion, a pair of flat tubular members arranged parallel to each other and extending through said casing, one of each of said pair having a round tubular end bent downwardly and inwardly, toothed members slidably arranged in said tubular members in engagement with said pinion and having flexible pin ends adapted to extend around the curved tubular ends thereof and to project outwardly from the ends to engage the hair.

4. In a hat fastener, a casing adapted to be secured within the hat, a plurality of parallel pairs of tubular members rigidly secured to said casing, said pairs being secured in angular relation to each other and having openings in their inner side walls within said casing, a spur pinion journaled in said casing and extending between the members of each of said pairs of tubes, slidable toothed members arranged within said tubular members and having flexible pin ends adapted to be projected inwardly to engage the hair on the turning of said pinion, and means for rotating said pinion.

1,021,112. PENCIL. HERMANN REICHE, Millstone, N. J. Filed Aug. 7, 1909. Serial No. 511,712. (Cl. 120—42.)

1. A pencil having a coil of flexible marking material therein.



2. A pencil having a chamber, a delivery nozzle, a coil of flexible marking material within said chamber; and means for delivering said flexible marking material from said chamber through said nozzle.

3. A pencil having a chamber, a delivery nozzle, a semi-plastic marking material coiled within said chamber; and means for delivering said marking material from said chamber through said nozzle.

4. A pencil having a chamber for a semi-plastic marking material, a separate chamber for a moistening material, and independent means for controlling the delivery from each of said chambers.

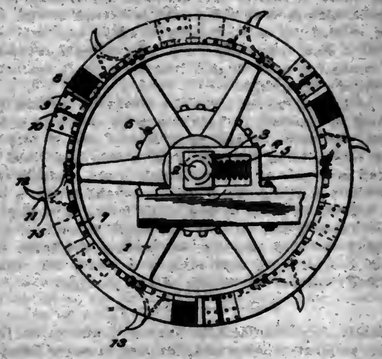
5. A pencil having a chamber for marking material, a separate chamber for a moistening liquid, and means for independently controlling the delivery from either of said chambers.

[Claims 6 to 16 not printed in the Gazette.]

1,021,113. EXCAVATOR-WHEEL. ARTHUR ROBERTS, Streator, Ill. Filed Apr. 6, 1911. Serial No. 619,414. (Cl. 37—17.)

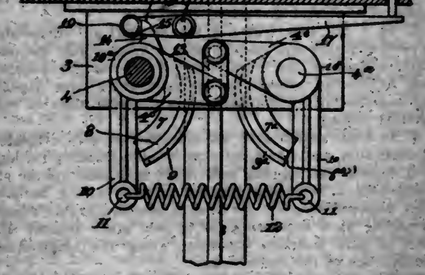
1. An excavator wheel, comprising a spider, plates located at the opposite sides of the periphery thereof, the plates at each side of the spider being spaced from each other at their ends forming openings, said plates having outwardly disposed portions at the said openings, and shovels attached to the periphery of the spider and located between the plates and projecting beyond the edges thereof, said shovels having portions which project over the edges of the plates beyond the outer sides thereof.

2. An excavator wheel, comprising a spider, plates located at the edges of the periphery thereof, concaved shovels secured at their edge portions to the periphery of the spider and lying between the plates, said shovels having arcuate cutting edge portions which project beyond the peripheries of the plates, said shovels also having portions which extend over the edges of the plates and project beyond the outer sides thereof.



3. An excavator, comprising a spider, plates located at the sides of the periphery thereof, concaved shovels secured at their edge portions to the periphery of the spider and lying between the plates, said shovels having arcuate cutting edge portions which project beyond the peripheries of the plates, said projecting portions also extending laterally over the edges of the plates and beyond the outer sides thereof, and braces fixed at their outer ends to the backs of the shovels and at their inner ends to the periphery of the spider.

1,021,114. EMERGENCY-BRAKE FOR ELEVATORS. PRESTON C. SLOWN, Philadelphia, Pa. Filed July 23, 1906. Serial No. 327,436. (Cl. 187—93.)



1. In an emergency brake for elevators, a post or rail, a pair of brake levers provided with brake shoes, a pair of bell-crank levers one of which is provided with a stop lug, links connecting said bell-crank levers, a lever for engaging said lug for holding the brake shoes out of contact with said post or rail, and a spring for applying the brake shoes to said post or rail when released by said lever.

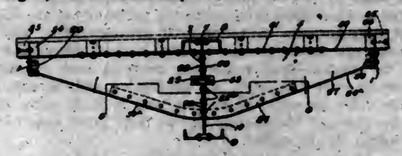
2. In an emergency brake for elevators, a pair of posts or rails, a pair of brake levers on each side of the elevator car, one of said brake levers being provided with a stop lug, links connecting each pair of said bell-crank levers, a shaft to which two of said brake levers are fixed, a lever for engaging said stop lug, a spring connecting each pair of bell-crank levers, and means for rotating said shaft against the tension of the springs.

3. In an emergency brake, the combination of posts or rails on the sides of the elevator shaft, hangers depending from the floor of the elevator car, a transverse shaft jour-

naled in said hangers, brake levers secured to said shaft, eccentrically disposed brake shoes integral with said levers, one of said levers being provided with a stop lug, a lever for engaging said stop lug, stub-shafts, coacting brake levers carried by said stub-shafts journaled in said hangers, springs connecting said bell-crank levers, crank arms carried by said transverse shaft and said stub-shafts, a link connecting each pair of said crank-arms and means for rotating said transverse shaft against the tension of said springs.

4. In an emergency brake for elevators, vertical posts or rails, in combination with two pairs of eccentric brake levers, two pairs of bell-crank levers, one of said bell-crank levers being provided with a stop lug, links connecting each pair of said bell-crank levers, a single transverse shaft carrying two of said bell-crank levers, a brake shoe carried by each of the brake levers, a spring connected to each pair of said bell-crank levers, means for engaging the said stop lug for holding the brake shoes out of contact with said rails, and means for rotating said shaft against the tension of said springs.

1,021,115. UNDERFRAME. VICTOR M. SUMMA, St. Louis, Mo., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed Aug. 1, 1911. Serial No. 641,821. (Cl. 105—76.)



1. In a car underframe, the combination with a bolster, of draft sills extending thereinto, and a center sill lapping the draft sills and comprising an I section and a channel section, said channel section being fixed to said I section and to the draft sills within the bolster.

2. In a car underframe, the combination with spaced draft sills, of a composite single center sill comprising a horizontally disposed flanged member fixed to each of said draft sills, and a vertically disposed member fixed to the under side of said horizontal member.

3. In a car underframe, a longitudinal sill comprising a vertically disposed member and a horizontally disposed member fixed to the upper edge of said vertical member, said horizontal member having marginal flanges depending substantially equidistant upon opposite sides of said vertical member.

4. In a car underframe, the combination with a bolster, of draft sills, and a composite center sill extending through said bolster and lapping said draft sills, said center sill comprising a vertically disposed member and a horizontally disposed member, one of said members having flanges extending upon opposite sides of said other member and each of said members extending along the longitudinal median line of the underframe.

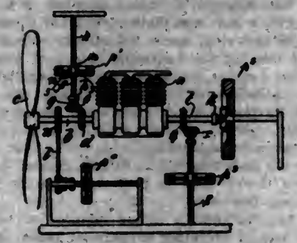
5. In a car underframe, the combination with a bolster, and a single composite center sill comprising a rolled section with top and bottom flanges, and vertical web centrally disposed, said section extending through said bolster and lapping said draft sills, said center sill comprising also a plurality of superposed flanged members extending along the longitudinal median line of the underframe, and connected to said draft sills.

[Claims 6 to 37 not printed in the Gazette.]

1,021,116. AERIAL AND OTHER VESSEL AND VEHICLE. JOHN FRANCIS FREDERICK WHALE URE, Chelsea, London, England. Filed Nov. 14, 1910. Serial No. 592,209. (Cl. 114—122.)

1. The combination with an aeroplane structure, of a power driven shaft, a fly-wheel slidably mounted thereon, means positioning said wheel on said shaft loosely for rotation in a predetermined plane, and means transmitting motion from said shaft to said wheel.

2. The combination with an aeroplane structure, of a main drive shaft, a shaft perpendicular thereto adapted to be rotated by said shaft, fly-wheels slidably mounted on said shafts, means positioning said wheels on said shafts loosely for rotation in predetermined planes, and means transmitting motion from said shafts to said wheels, substantially as described and for the purpose set forth.



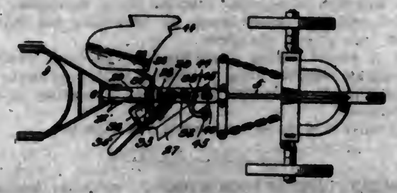
3. The combination with an aeroplane structure, of a power driven shaft, shafts perpendicular thereto, a shaft parallel to the power driven shaft, means transmitting motion from said drive shaft to said shafts, a fly-wheel slidably mounted on each shaft, means positioning said wheel on said shaft loosely for rotation in a predetermined plane, and means transmitting motion from said shaft to said wheel, substantially as described and for the purpose set forth.

4. The combination with an aeroplane structure, a power driven shaft, a shaft parallel thereto, means transmitting motion from said drive shaft to said parallel shaft, a fly-wheel mounted on each shaft, means positioning said wheel on said shaft loosely for rotation in a predetermined plane, and means transmitting motion from said shaft to said wheel, substantially as described and for the purpose set forth.

5. The combination with an aeroplane structure, of a plurality of horizontal shafts, a plurality of vertical shafts, means transmitting motion to said shafts, a fly-wheel slidably mounted on each shaft, means positioning said wheels on said shafts loosely for rotation in predetermined planes, and means transmitting motion from said shafts to said wheels, substantially as described and for the purpose set forth.

[Claim 6 not printed in the Gazette.]

1,021,117. PLOW. THEODORE VAN EGEREN, Glenburnie, Md. Filed Mar. 29, 1911. Serial No. 617,613. (Cl. 97—37.)



1. In a machine of the character described, the combination with a beam, of a plow point carried thereby, mold boards arranged on said beam on opposite sides of the plow point and adapted to engage closely therewith, a shaft rotatably mounted on the beam, a bar connecting the mold boards fixed to said shaft, a lever for rotating said shaft, a vertically disposed bar movably mounted in the beam having its lower end disposed adjacent to the plow point, and means carried by the shaft and adjustable with relation thereto to engage said bar in the movement of the mold boards and position its lower end with relation to the plow point.

2. In a machine of the character described, the combination with a beam, of a plow point carried thereby, mold boards arranged on said beam on opposite sides of the plow point, a shaft rotatably mounted on the beam, a bar connecting the mold boards fixed to one end of said shaft, a lever for rotating said shaft, a vertically disposed transversely oscillatory bar mounted in the beam having its lower end disposed adjacent to the plow point and adapted to be located adjacent one edge thereof in its operative position, a rod fixed to the other end of said shaft and disposed transversely of the beam, and adjustable studs mounted in the ends of said rod to engage said vertical bar and oscillate the same in the beam to position the bar with relation to the plow point.

1,021,118. REGISTER. OLEE P. VROOM, Linneus, Mo., assignor of one-half to Jasper P. Fell, Linneus, Mo. Filed May 1, 1911. Serial No. 624,336. (Cl. 40—75.)



1. In a device of the class described, a rotatably mounted drum; display elements slidably housed in the drum and successively movable beyond the contour of the drum; a carrier for restoring said elements to the drum; primary and secondary pivotally mounted arms, the primary arm being operatively connected with the carrier; a pawl upon the secondary arm, adapted to engage the drum; the primary arm having an arcuate guide, and the pawl having a projection adapted to move in the guide, and to engage with one end of the guide.

2. In a device of the class described, a rotatably mounted drum; display elements slidably housed in the drum and successively movable beyond the contour of the drum; a carrier for restoring said elements to the drum; primary and secondary pivotally mounted arms, the primary arm being operatively connected with the carrier; a pawl upon the secondary arm, adapted to engage the drum; the primary arm having an arcuate guide, and the pawl having a projection adapted to ride in the guide, and to engage one end of the guide; a spring supported at its ends, along which spring the secondary arm is adapted to move in either direction, the spring having a seat for engagement with the secondary arm, and the spring constituting a means for restoring the secondary arm to initial position, after the secondary arm has been tilted through the engagement between the guide and the pawl.

3. A device of the class described comprising a supporting structure; a drum mounted for rotation therein; display elements slidably housed in the drum and successively movable beyond the contour of the drum; a carrier slidably mounted in the supporting structure, and adapted to restore said display elements to the drum; a pivotally mounted primary arm; a flexible element connecting the primary arm with the carrier; an anti-friction device upon the supporting structure, over which device the flexible element is adapted to move; a pivotally supported secondary arm; a pawl pivoted upon the secondary arm, and adapted to engage the drum to rotate the same; and means for permanently connecting the primary arm with the pawl, for loose movement with respect thereto.

1,021,119. TREATMENT OF GERM OF WHEAT. JAMES WALLIS, Beddington, England, assignor of one-half to J. & T. H. Wallis, Limited, Beddington, England. Filed May 15, 1911. Serial No. 627,305. (Cl. 99—10.)

1. The process for the treatment of germ of wheat, consisting in roasting the germ of wheat at a temperature of about 460° Fahrenheit, allowing same to cool, and then finally grinding the roasted germ into a medium meal.

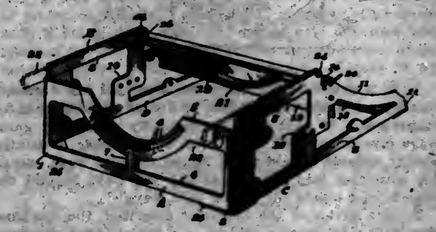
2. The dry process for the treatment of germ of wheat, consisting in roasting the germ of wheat at a high temperature, allowing same to cool and then grinding the roasted germ into a medium meal, and finally mixing a proportion of the material thus obtained with flour and wheat-meal.

3. A preparation for use with flour and wheat-meal, comprising germ of wheat roasted at a temperature of about 460° Fahrenheit and formed into a medium meal.

4. A preparation for bread-making, comprising germ of wheat roasted at a temperature of about 460° Fahrenheit, ground to a medium meal and mixed with flour and wheat-meal, the flour and wheat-meal being in excess of the germ of wheat.

5. A food product, comprising mixed raw ground wheat and ground wheat-germs roasted at a temperature of about 460° Fahrenheit.

1,021,120. TYPE-WRITING MACHINE. JAMES A. WHITCOMB, McAlester, Okla. Filed July 14, 1910. Serial No. 571,902. (Cl. 197—186.)



1. A typewriting machine frame comprising a back portion formed with a base bar, an upper bar provided with a segment adapted to receive type bar hangers, a connecting bar extending between said base bar and said upper bar; side portions formed with top bars, base bars, forwardly extending curved struts, connecting bars connecting said top bars and said base bars; a front board extending between said side portions and attached thereto, and a front cross bar.

2. In a typewriting machine frame the combination of a back portion, side portions connected to said back portion in such manner as to form corners, triangular brace members attached to said back and said side portions at each of said corners, said triangular brace members being adapted to hold cushion feet, a front cross bar extending between said side portions and adapted to hold cushion feet.

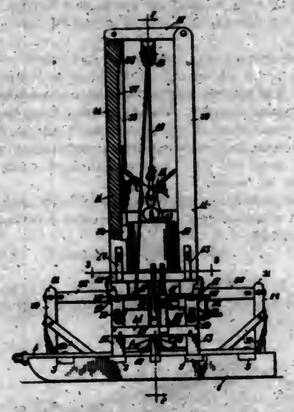
3. In a typewriting machine frame the combination of a back portion, side portions attached to said back portion in such manner as to form corners, brace members attached to said back portion and said side portions at each of said corners and adapted to receive cushion feet, a front board extending between said side portions and attached thereto, a front cross bar attached beneath the forward portion of said side portions, said side portions being formed of braces arranged in such manner as to substantially comprise a rectangular portion and a triangular portion forward of said rectangular portion.

4. A typewriting machine frame comprising a back portion, side portions formed from a single piece of sheet metal, said back portion and said side portions being cut away in such manner as to leave a skeleton frame of substantially the outline of the outside boundary lines of said machine frame, said frame including in the back portion a segment adapted to receive type bar hangers.

5. A typewriting machine frame comprising a back portion, side portions formed from a single piece of sheet metal, having portions thereof cut away to form a skeleton frame work and a segment for receiving bar hangers, and bracing means adapted to hold cushion feet and to connect the sides of said frame.

[Claim 6 not printed in the Gazette.]

1,021,121. POST-DRIVER. BANISTER L. WILLIS, Milan, Mo. Filed July 20, 1911. Serial No. 639,583. (Cl. 61—38.)



1. In a device of the character described the combination with a supporting vehicle, of a yoke slidably mounted transversely of said vehicle, upwardly extending guide ways pivoted by their lower ends to said yoke, a driving weight slidable in said ways, braces for said ways, means for actuating said yoke to extend the ways beyond the vehicle, and means for tilting said ways.

2. In a device of the character described, the combination with a supporting vehicle, of a yoke slidably mounted transversely of said vehicle, upwardly extending guide ways pivoted by their lower ends to said yoke, a driving weight slidable in said ways, vertically extending slotted posts secured to said vehicle, arms pivotally secured by one end to the guide ways intermediate their length and with their other ends slidably mounted through the slots of the posts, means for reciprocating said arms in said slots to tilt the ways, means for bracing said arms against lateral movement, and means for actuating said yoke to extend the ways beyond the vehicle.

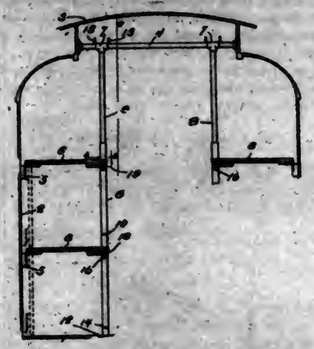
1,021,122. COLLAPSIBLE SHELVING. VICTOR WILLOUGHBY, Jeffersonville, Ind., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed July 19, 1910. Serial No. 572,756. (Cl. 45—54.)

1. The combination of a swinging shelf, supports therefor, a pivot for each of said supports above said shelf, means for sustaining said supports above said shelf, and means for preventing accidental lowering of said supports, said last mentioned means serving also to prevent longitudinal movement of said supports along said pivot.

2. In a device of the class described, a series of horizontal rods, shelf supporting posts pivoted upon said rods, shelves adapted to engage said posts, and means carried upon one of said rods for at times holding the posts of another rod in a horizontal position.

3. In a device of the class described, a post comprising telescoping sections, means between the sections for preventing rotation of one of said sections relative to the other, a swinging shelf adapted for engaging said post, means upon said shelf for straddling said post, and detachable means upon said post for engaging said straddling means.

4. In a device of the class described, the combination, with a support, of a post pivotally sustained thereby, said post comprising telescoping sections, and a collapsible shelf adapted to be sustained by said post.



5. In a device of the class described, the combination, with a support, of a post pivoted thereto at the upper end of the post and adapted to swing on its pivot from a vertical to a horizontal position, said post comprising telescoping sections, and a collapsible shelf adapted to be sustained by said post.

[Claims 6 and 7 not printed in the Gazette.]

1,021,123. CAR-UNDERFRAME. HERBERT W. WOLFF, St. Louis, Mo., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed Apr. 9, 1909. Serial No. 488,912. (Cl. 105—76.)



1. In a car underframe, the combination comprising end sills, a single rolled center sill extending from end sill to end sill, vertically flanged side connecting members in the planes of the center sill, a bolster comprising a pair of spaced members upon each side of said center sill extending from the web of the center sill to the side connecting members and being fixed to said center sill and to said side connecting members, and diagonal braces connecting the end sills with the webs of said side connecting members being fixed to said end sills intermediate said center sill and side connecting members.

2. In a car underframe, the combination comprising end sills, a single rolled center sill in the median line of said underframe and side connection members each extending from end sill to end sill, built up bolsters, cross bearers comprising top and bottom angles passing through said center sill, and means upon opposite sides of said center sill for connecting said top and bottom angles, said connecting means being joined together by rivets through said center sill.

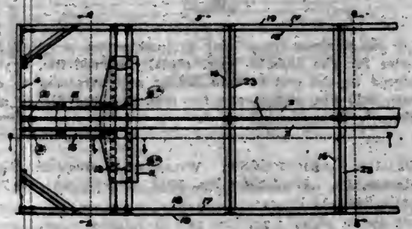
3. In a car underframe, the combination comprising end sills, a single rolled and flanged center sill extending longitudinally of said underframe along the median line thereof, side connection members extending from end sill to end sill, cross bearers comprising upper and lower angles extending through the web of said center sill, and flanged connection plates upon opposite sides of said center sill riveted together through said center sill and fixed to a flange of each of said angles.

4. In a car underframe, the combination comprising end sills, a single rolled and flanged center sill, side connection members extending from end sill to end sill, cross bearers comprising upper and lower angles extending through the web of said center sill, and means connecting said angles with the center sill web, said angles being lapped and connected together at their ends.

5. In a car underframe, the combination comprising end sills, a single rolled and flanged center sill, side connection members extending from end sill to end sill, and cross bearers comprising upper and lower angles extending through the web of said center sill, said angles being lapped and riveted together at their opposite ends.

[Claims 6 to 19 not printed in the Gazette.]

1,021,124. CAR-UNDERFRAME. HERBERT W. WOLFF, St. Louis, Mo., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed May 25, 1909. Serial No. 498,318. (Cl. 105—76.)



1. In a car underframe, the combination comprising continuous bolsters, a single plate girder center sill, the web of which terminates in the vicinity of said bolsters, and the compression flange of which extends beyond said bolsters.

2. In a car underframe, the combination comprising continuous body bolsters, a single plate girder center sill the web and tension flange of which terminate in the vicinity of said bolsters and are connected therewith, the compression flange of said sill extending over and beyond said bolsters.

3. In a car underframe, end sills, a single center sill part of which extends from end sill to end sill, a continuous body bolster comprising channel shaped diaphragm members, and interposed channel members connecting said diaphragm members.

4. In a car underframe, the combination comprising a single plate girder center sill, inner bolster diaphragms connected therewith, separated draft sills out of alinement with said center sill, outer bolster diaphragms connected with said draft sills, said bolster diaphragms extending continuously substantially the width of the car, means connecting said inner and outer diaphragms in alinement with said draft sills and cover plates connecting said diaphragms and said draft sills, the web of the center sill terminating in the vicinity of the bolster and having a recess into which a portion of the bolster extends.

5. In a car underframe, the combination comprising a longitudinally disposed plate girder center sill and draft sill members placed in different positions with relation to the longitudinal axis of said underframe, a body bolster comprising inner and outer relatively vertical members of channel form extending continuously between said center sill and draft sills, and means for connecting said vertical bolster members together and to said sills, the web of the center sill terminating in the vicinity of the bolster and having a recess into which a portion of the bolster extends.

[Claims 6 to 34 not printed in the Gazette.]

1,021,125. SIDE FRAME FOR TRUCKS. JOHN MCE. AMES, Dungan Hills, N. Y., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed Dec. 9, 1910. Serial No. 596,542. (Cl. 105—213.)

1. A side frame structure for trucks comprising a pair of juxtaposed flanged members and each of said members being shaped to form separated compression and tension chords.



2. A side frame structure for trucks comprising a pair of juxtaposed pressed flanged members extending continuously from end to end of the structure, and each of said members being shaped to form separated compression and tension chords.

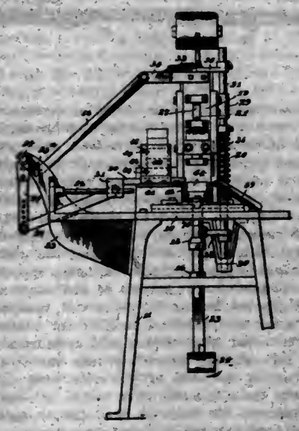
3. A side frame structure for trucks comprising a pair of juxtaposed members, and each of said members being provided with an opening adapted to receive the truck bolster.

4. A side frame structure for trucks comprising a pair of juxtaposed members, and each of said members being provided with an opening adapted to receive the truck bolster and bolster guides secured to one of said members.

5. A side frame structure for trucks comprising a pair of juxtaposed members, one of said members being formed with a plurality of openings, one of said openings being adapted to receive the truck bolster and the other of said members being formed with an opening adapted to surround all of the openings in said first member.

[Claims 6 to 63 not printed in the Gazette.]

1,021,126. SOAP-PRESS. BENJAMIN H. BECKER and JOHN CIESLA, Chicago, Ill., assignors to James S. Kirk & Co., Chicago, Ill., a Corporation of Illinois. Filed July 5, 1910. Serial No. 570,425. (Cl. 25—10.)



1. In a soap-press, the combination with a matrix and upper and lower die-members, of a reciprocating cross-head carrying said upper die-member, means for positively actuating said cross-head in both directions, means for raising the lower die-member after the stamping operation to expel the stamped cake from the matrix, a feed-chute for the blanks, a pusher operating across said feed-chute,

means for actuating said pusher, a pair of pivoted spring-actuated centering arms mounted above said matrix, and a spreader for said arms carried by said cross-head, substantially as described.

2. In a soap-press, the combination with a matrix and upper and lower die-members, of a reciprocating cross-head carrying said upper die-member, means for positively actuating said cross-head in both directions, a depending stem on said lower die-member, a collar on said stem, a vertically reciprocating rod having an arm adapted to liftingly engage said collar, a spring normally tending to draw said arm toward the stem of said die-member, means for disengaging said arm from said collar after said stem and lower die-member have been raised, a feed-chute for the blanks, a pusher operating across said feed-chute, and means connected with said cross-head for actuating said pusher in timed relation to the movements of said die-members, substantially as described.

3. In a soap-press, the combination with a matrix and upper and lower die-members, of a reciprocating cross-head carrying said upper die-member, means for positively actuating said cross-head in both directions, a depending stem on said lower die-member, a collar on said stem, a vertically reciprocating rod operating in unison with said cross-head and having an arm adapted to liftingly engage said collar, a spring normally tending to draw said arm toward the stem of said die-member, means for disengaging said arm from said collar after said stem and lower die-member have been raised, a feed-chute for the blanks, a pusher operating across said feed-chute, and lever and link connections between said cross-head and said pusher for actuating the latter in timed relation to the movements of said die-members, substantially as described.

1,021,127. HOSE-COUPLING. AARON BOYER, Swissvale, Pa. Filed Jan. 16, 1911. Serial No. 602,896. (Cl. 137—28.)



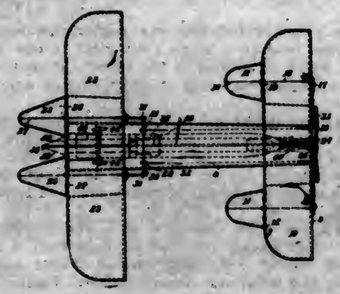
A hose coupling comprising a tubular member for connection to one end of a hose section and having its inner end formed of two different diameters, that portion of large diameter providing a socket, with the wall thereof for a portion of its length formed with oppositely disposed relatively wide longitudinally extending slots providing a pair of arms, said arms segment-shaped in cross section and each having its inner face formed with a grooved curve of a length less than half the width of its respective arm, the groove of one arm being oppositely disposed with respect to the groove of the other arm and each of the grooves having its outer end terminating at one of the slots, a cylindrical member for connection to one end of the other hose section, said cylindrical member having its forward end extending into said socket and projecting beyond the ends of the slots, said cylindrical member of the same diameter from end to end and having its inner diameter the same as the smaller diameter of the inner end of the tubular member, diametrically opposed pins carried by said cylindrical member and engaging in the grooves of said arms whereby the cylindrical member, when shifted, will be drawn into said socket by the walls of the grooves as the pins enter these latter, and a gasket interposed between one end of the cylindrical member and the inner wall of the socket, and pressed when the cylindrical member is drawn into the socket by the pins.

1,021,128. CUE-TRIMMER. FRANK BRECKER, Shenandoah, Pa. Filed Nov. 18, 1911. Serial No. 660,996. (Cl. 145—27.)



A cue trimmer comprising in combination a cylindrical holder for cue ends, a longitudinally curved file, a yoke secured to the end of said holder and arranged to embrace said file, and means for fastening the file to said yoke.

1,021,129. AEROPLANE. WILLIAM A. BREWER, Pittsburgh, Pa. Filed Sept. 22, 1911. Serial No. 650,702. (Cl. 244—12.)



1. An air craft comprising front and rear W-shaped frames, intermediate inverted V-shaped frames, longitudinal rods connecting said frames, sustaining planes supported by said front and rear frames, and sub-planes carried by the rear edges of said sustaining planes.

2. An air craft comprising front and rear W-shaped frames, intermediate inverted V-shaped frames, longitudinal rods connecting said frames, sustaining planes supported by said front and rear frames, sub-planes carried by the rear edges of said sustaining planes, trucks arranged below said front and rear planes, and a boat-shaped body suspended beneath said front, rear and intermediate frames.

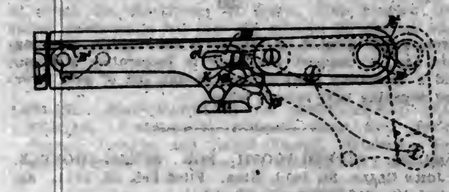
3. An aeroplane comprising front and rear W-shaped frames, intermediate inverted V-shaped frames, longitudinal rods connecting all of said frames, main sustaining planes carried by said front and rear frames, adjustable sub-planes carried by the rear edges of said main planes, means located adjacent to said rear frames for adjusting said sub-planes, a boat-shaped body suspended below said intermediate frames, a rudder carried by said rear planes, and means arranged in said body for adjusting said rudder.

4. An aeroplane comprising front and rear W-shaped frames, intermediate inverted V-shaped frames, longitudinal rods connecting said frames, curved main sustaining planes mounted upon said front and rear frames, adjustable sub-planes carried by the rear edges of said main sustaining planes, a boat shaped body suspended beneath said intermediate frames, means at the upper edge of said body for adjusting said sub-planes, a rudder carried by one of said rear frames, means extending into the bottom of said body for adjusting said rudder, trucks carried by said forward and rear frames, means supported by said trucks for cushioning said forward and rear frames, and means carried by said forward frames for propelling said aeroplane.

5. An aeroplane comprising a frame including W-shaped end portions and a V-shaped intermediate portion.

[Claims 6 to 12 not printed in the Gazette.]

1,021,130. BREECH MECHANISM FOR AUTOMATIC RECOIL-OPERATED GUNS. RICHARD J. W. BROWN, London, England. Filed Apr. 26, 1910. Serial No. 557,832. (Cl. 42—4.)



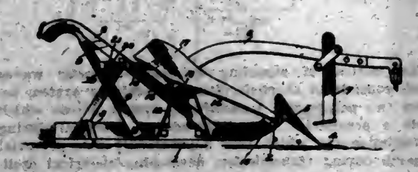
1. In automatic recoil-operated guns, the combination of non-recoil members; a receiver slidable therebetween; a breech-block slidable in the receiver; toggle levers pivoted to each other and to the receiver and the breech-block; a projection carried by a toggle lever; stationary means for holding the projection against downward displacement during a portion of its movement; and a pivoted tumbler adapted to be engaged and rocked by the receiver and, when thus rocked, to engage and push downwardly said projection and, with it, the toggle levers.

2. In automatic recoil-operated guns, the combination of non-recoil members; a barrel receiver slidable therebetween; a breech-block slidable in said receiver; toggle levers pivoted to each other and to the breech-block and the rear part of said receiver; laterally projecting studs carried by certain of the toggle levers; ribs on the non-recoil members and over which said studs are adapted to slide respectively; and tumblers pivoted to said non-recoil members and adapted to be engaged and rocked by the receiver and adapted when thus rocked to engage and push downwardly said studs.

3. In automatic recoil-operated guns, the combination of a pair of non-recoil side members provided with recesses; a gun barrel; a barrel-holding receiver slidable between the non-recoil side members and screwed to, and in line with, the gun barrel and provided with recesses; a breech-block slidable in said receiver and also in line with the gun barrel; recoil-levers pivoted at their rear ends to the rear end of the receiver; bolt-levers pivoted at their front and rear ends with the front ends of the breech-block and the front ends of the recoil-levers respectively; laterally projecting studs on said bolt levers; tumblers pivoted to the non-recoil members and having studs received in said recesses of the receiver, and a cam adapted to engage the laterally projecting studs of the bolt-levers to throw the bolt-levers downward; ribs on the non-recoil members and on which the laterally projecting studs are adapted to ride; and catches on the receiver, adapted to engage in said recesses of the non-recoil members and to be released by the breech-block.

4. In automatic recoil-operated guns, the combination of a stationary part comprising a pair of non-recoil members provided with recesses; a barrel-holding receiver slidable between said members and provided with recesses; a gun-barrel secured to the receiver and in line with the path of movement thereof; a breech-block slidable in said receiver; a firing-pin in the breech-block, a spring for retracting the firing-pin; a hammer adapted to strike the firing-pin and to be cocked by the recoil of the breech-block; recoil-levers pivoted at their rear ends to the rear end of the receiver; bolt-levers pivoted at their front and rear ends to the front end of the breech-block and the front ends of the recoil-levers respectively; laterally projecting studs on the bolt-levers; tumblers pivoted to the non-recoil members and provided with studs received in said recesses of the receiver, and a cam adapted to engage the laterally projecting studs of the bolt levers, to throw the bolt and recoil-levers downwardly; ribs on the non-recoil members and on which the laterally projecting studs are adapted to ride; and catches on the receiver, adapted to engage in said recesses of the non-recoil members and to be released by contact of the breech-block.

1,021,131. DITCHING-PLOW. THEODORE F. BRUENING, Raywood, Tex. Filed June 8, 1911. Serial No. 632,066. (Cl. 97—12.)



1. A ditch plow comprising parallel spaced runners connected together, a beam connected with the runners, a cutting share mounted at the forward ends of the runners, a forwardly and downwardly inclined chute having its forward end pivoted behind the share, handles connected with the runners, and a bracing arm attached to the chute and adjustably connected with the handles.

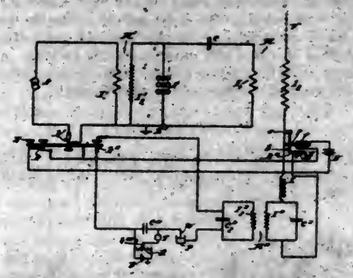
2. A ditching plow comprising spaced parallel runners connected together, a beam connected with the runners, a cutting share located at the forward ends of the runners, vertically disposed cutters located at the forward ends and outer sides of the runners, handles connected with the runners, a forwardly and downwardly inclined chute pivotally mounted at its forward portion behind the cutting share, and a bracing arm attached at its forward end to the chute and adjustably connected at its rear end with the handles.

3. A ditching plow comprising spaced runners connected together, a cutting share supported at the forward ends thereof, a beam connected with the runners, handles connected with the runners, a forwardly and downwardly inclined chute pivotally mounted at its forward portion behind the rear edge of the share, said chute having at one side an upstanding flange which at its rear portion is curved laterally, and a bracing arm connected at its forward end with the chute and adjustably connected at its rear end with the handles.

4. A ditching plow comprising spaced runners connected together, a share supported at the forward ends thereof, a beam connected with the runners, handles connected with the runners, a bracket mounted upon one of the runners, a cross bar connecting said bracket with the intermediate portion of the beam, a forwardly and downwardly inclined chute pivotally mounted at its forward portion behind the rear edge of the share, a clip carried by the chute, said clip surrounding the cross bar, and an arm attached at its forward end to the chute and adjustably connected with the handles.

5. A ditching plow comprising spaced runners connected together, a share mounted at the forward ends thereof, a beam connected with the runners, handles connected with the runners, the share having an arcuate rear edge, a forwardly and downwardly inclined chute having an arcuate forward edge, the forward edge portion of the chute being pivotally mounted behind the rear edge of the share with the arcuate edges of the share and chute in close proximity, and an arm attached at its forward end to the chute and pivotally connected at its rear end with the handles.

1,021,132. SPACE TELEGRAPHY. SEWALL CABOT, Brookline, Mass. Original application filed Nov. 18, 1905, Serial No. 288,032. Divided and this application filed July 20, 1906, Serial No. 326,985. Renewed Jan. 2, 1912. Serial No. 669,130. (Cl. 178—319.)



The method of signaling by electromagnetic waves which consists in short-circuiting a receiving system between two points of a transmitting system across which exists a practically zero difference of potential during transmission and which have a practically zero potential to earth during transmission, developing electrical oscillations in said transmitting system, and then stopping the development of said electrical oscillations and opening said short circuit during the transmission of each signal element.

1,021,133. SUPPLEMENTAL BOTTOM FOR POTS AND PANS. FRANK CHALOUD, Jr., Brownlee, Nebr. Filed June 19, 1907. Serial No. 379,780. (Cl. 53—8.)

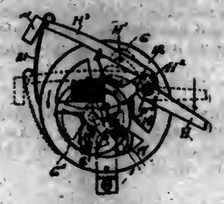


The combination in a cooking utensil, with a disk formed with a central perforation, and a plurality of surrounding perforations, truncated conical collars struck downwardly from the disk around certain of the surrounding perforations, depending studs of truncated conical formation having their smaller ends fitted in the said collars and held therein against lateral movement by the same, heads formed upon the studs by flattening the smaller ends thereof to engage the upper side of the disk opposite the one from which the collars project, the said heads preventing the studs from working in one direction and the tapered formation of the studs and collars preventing the studs from working in the opposite direction, whereby the studs are held rigidly in spaced relation, said depending studs constituting supports for the disk, a truncated collar struck upwardly from the central perforation, an upwardly extending stud of truncated conical formation having its smaller end located in the upwardly extending collar, and a head formed upon this stud and engaging the lower face of the disk, said last mentioned stud constituting a finger grip, substantially as and for the purposes set forth.

1,021,134. WEIGHING-MACHINE. JAMES M. CHAPPEL, New York, N. Y., assignor to Charles S. Marsh, Winchester, Mass. Filed Dec. 27, 1910. Serial No. 599,571. (Cl. 194—35.)

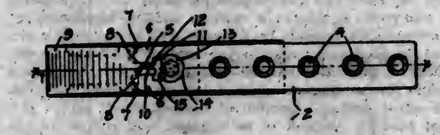
1. In a coin controlled apparatus, a ratchet wheel, speed governing mechanism connected therewith, a coin controlled lever pivotally mounted adjacent said ratchet wheel, a locking pawl, means carried by said lever for directly engaging said pawl to support the latter in inoperative position, and a second pawl carried by said lever and engaging said ratchet wheel.

2. In a coin controlled apparatus, a ratchet wheel, speed governing mechanism connected therewith, a coin controlled lever pivotally mounted adjacent said ratchet wheel, a locking pawl mounted in alinement with said



lever, means carried by said lever for directly engaging said pawl to support the latter in inoperative position, and a depending pawl carried by one end of said lever and engaging said ratchet wheel.

1,021,135. DIPPER-TOOTH FOR STEAM-SHOVELS. JOHN CLARK, St. Paul, Minn. Filed Feb. 25, 1911. Serial No. 610,887. (Cl. 37—16.)



1. A shovel tooth having a vertical socket in its end and jaws formed on each side of said socket and provided with vertically tapering end faces, the inner opposing side faces of said jaws having shoulders formed therein and provided with straight bearing surfaces, a point having a T-shaped tongue to enter said socket, the lateral end extensions or projections of the head of said tongue having straight faces to bear on the surfaces of said shoulders, said point also having surfaces on each side of said tongue oppositely inclined from the end surfaces of said jaws and bearing thereon when the parts are assembled, the engagement of said tapered surfaces with one another drawing the head of said tongue firmly against the shoulders of said jaws, for the purpose specified.

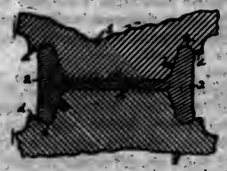
2. A shovel tooth having a vertical socket in its end and jaws formed on each side of said socket and provided with vertically tapering end faces, the inner opposing side faces of said jaws having shoulders formed therein and provided with straight bearing surfaces, a point having a T-shaped tongue to enter said socket, the lateral end extensions or projections of the head of said tongue having straight faces to bear on the surfaces of said shoulders, said point also having surfaces on each side of said tongue oppositely inclined from the end surfaces of said jaws and bearing thereon when the parts are assembled, the engagement of said tapered surfaces with one another drawing the head of said tongue firmly against the shoulders of said jaws, and means for locking said tongue in said socket.

3. A shovel tooth having a vertical socket in its end and jaws formed on each side of said socket and provided with vertically tapering end faces, the inner opposing side faces of said jaws having shoulders formed therein and provided with straight bearing surfaces, a point having a T-shaped tongue to enter said socket, the lateral end extensions or projections of the head of said tongue having straight faces to bear on the surfaces of said shoulders, said point also having surfaces on each side of said tongue oppositely inclined from the end surfaces of said jaws and bearing thereon when the parts are assembled, the engagement of said tapered surfaces with one another drawing the head of said tongue firmly against the shoulders of said jaws, and a wedge having a tapered flat face adapted to engage the end of the tongue for locking said tongue in the socket, and means for holding said wedge in the socket.

1,021,136. METHOD OF MAKING CALCIMINE. LLOYD WILLIAM COLLISTER, Farmington, Iowa. Filed Mar. 23, 1911. Serial No. 616,513. (Cl. 134—90.)

The method of preparing a calcimine wash which consists in thoroughly mixing together fourteen parts of bolted whiting and one part of ground glue in dry form, then separately dissolving one part of starch in two parts of lukewarm water, then adding five parts of boiling water to the starch, and cooking to a smooth paste of about the consistency of cream, then pouring the starch paste while hot into the mixture of whiting and glue, and finally stirring continuously until the glue is dissolved.

1,021,137. MANUFACTURE OF STRUCTURAL MATERIAL. CHARLES E. DUNCAN, Sault Ste. Marie, Ontario, Canada, and Joseph Fawell, Pittsburgh, Pa. Filed Mar. 9, 1911. Serial No. 613,247. (Cl. 80—66.)



1. The method herein described of manufacturing structural material as beams, etc., which consists in forcing chilled portions of the article back into hotter metal, and then in a subsequent pass restoring the shape of the part deformed in rolling-in.

2. The method herein described of manufacturing structural material, such as beams, etc., which consists in effecting a transverse reduction of the article, forcing chilled portions of the article into hotter metal during such reduction, and in a subsequent pass restoring the shape of the part deformed in rolling-in.

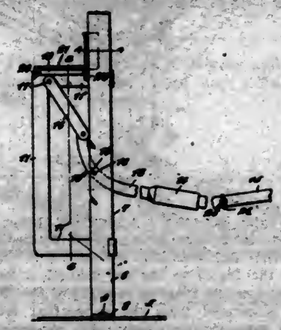
3. In a universal mill for manufacturing structural material such as beams, etc., the combination of vertical rolls, and horizontal rolls having collars adapted to effect transverse reduction of the article and provided with collars adapted to roll-in the chilled corners of the flange portions of the article.

4. In a universal mill for rolling structural material such as beams, etc., the combination of vertical rolls and horizontal rolls adapted to effect a transverse reduction of the article, the horizontal rolls being provided with collars having operative faces which when in contact with the metal will be at acute angles to the portions of the faces of the vertical rolls also in contact with the metal.

1,021,138. LIFTING-JACK. CHARLES DUNLAP, Edgewood, Cal. Filed Aug. 2, 1911. Serial No. 641,995. (Cl. 57—101.)

1. A lifting jack comprising a vertical U-shaped standard, a lifting frame having upper and lower parallel arms, the extremities of said arms being slidably engaged upon the respective parallel bars, a lifting lever adjustably and pivotally mounted upon the standard, movable connections between said lever and the lifting frame, a saddle plate mounted upon said frame and engaged upon the upper horizontal arm thereof, and means mounted upon said frame and extending between the parallel bars of the standard, said latter means being maintained in its operative position by said saddle plate.

2. A lifting jack comprising a vertical U-shaped standard, a lifting frame having upper and lower horizontal arms extending between the bars of the standard, the extremities of said arms being slidably engaged upon the corresponding edges of the respective standard bars, a lifting lever pivotally and adjustably mounted in the standard, a pair of links connecting said lever to the frame whereby said frame is elevated on the standard, said links having binding engagement upon the standard to maintain the frame in its elevated position under the weight of the object supported thereby, means mounted upon said lifting frame and disposed between the standard bars to brace the same, and additional means for maintaining said last named means in its operative position.



3. A lifting jack comprising a vertical U-shaped standard, a lifting frame vertically movable upon the standard, means mounted in the standard and connected to the frame to raise the same, a pair of guard plates movably mounted upon the lifting frame, one of said guard plates acting to maintain the other of said plates in its operative position.

4. A lifting jack comprising a vertical U-shaped standard, a substantially U-shaped lifting frame vertically movable upon the standard, the parallel bars of said frame being horizontally disposed and extending between the bars of the standard, means mounted upon said standard and connected to the frame to raise the same, a saddle plate pivoted at one end upon the frame and engaged upon the upper edge of the upper horizontal arm of the lifting frame, a guard plate pivotally mounted upon said arm and vertically disposed when in its operative position, said saddle plate engaging the guard plate to support the same in its vertical position, said guard plate having a longitudinal U-shaped channel formed therein disposed between the parallel bars of the standard to brace the same.

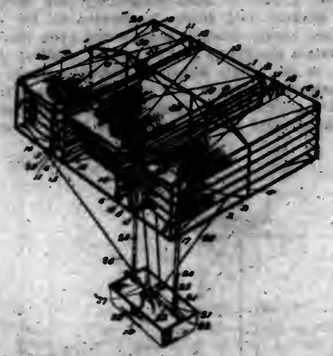
1,021,139. AIRSHIP. LEROY A. FISH, Cloquet, Minn. Filed Dec. 18, 1908. Serial No. 468,170. (Cl. 244—12.)

1. In a flying machine, a supporting frame, a lifting plane carried by the supporting frame, a weight pivotally connected with said supporting frame, a governor plane arranged on one of the transverse edges of the lifting plane and having free corners, and a connection between the weight and the free corners of the governor plane for automatically deflecting said governor plane upon longitudinal or lateral dipping of the supporting frame.

2. In a flying machine, a supporting frame having relatively stationary and movable planes, a weight, a pivotal connection between the weight and supporting frame, means connecting the weight with the forward free corners of the movable planes for deflecting the latter upon longitudinal or lateral dipping of the supporting frame, and means for manually deflecting said movable planes.

3. In a flying machine, a supporting frame, stationary and movable planes carried by the supporting frame, a weight, parallel links forming a pivotal connection between the weight and supporting frame, a connection between the weight and forward free corners of the mov-

able planes for deflecting said movable planes upon longitudinal and lateral dipping of the supporting frame, and springs connected with the movable planes for returning the latter to normal position.



4. In a flying machine, a supporting frame, a plurality of relatively stationary lifting planes carried by the supporting frame and gradually increasing in size from the bottom of the frame to the top thereof, governor planes disposed on opposite transverse edges of the lifting planes, a weight suspended from the supporting frame, and a connection between the weight and governor planes for automatically deflecting the latter upon longitudinal or lateral dipping of the supporting frame.

5. In a flying machine, a supporting frame, a relatively stationary downwardly inclined lifting plane carried by the supporting frame, governor planes disposed on opposite transverse edges of the lifting plane, each having its rear longitudinal edge rigidly secured to the supporting frame and its forward corners free to move vertically, means for normally and yieldably supporting the governor planes in horizontal position, a weight suspended from the supporting frame, and cables forming a connection between the weight and the corners of said governor planes for automatically deflecting the governor planes upon longitudinal or lateral dipping of the supporting frame.

[Claims 6 to 14 not printed in the Gazette.]

1,021,140. CONCRETE FENCE-POST. ROBERT H. FORSYTH, Curranville, Kans. Filed July 27, 1911. Serial No. 640,867. (Cl. 39—76.)



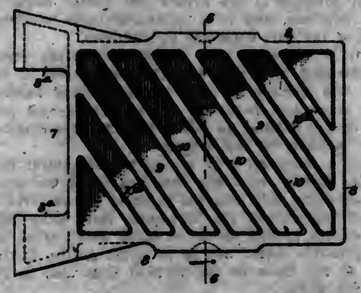
1. A fence post comprising in combination, a plastic body, a plurality of metal inserts molded in said body, each insert having its outer face flush with the outer face of the body and having a recess formed in its inner face and a transverse opening communicating with said recess, a clamping bar associated with said body, and T-bolts having their heads disposed within the recesses of the inserts and their shanks engageable with the bar to clamp said bar to the post.

2. A fence post comprising in combination, a plastic body, a plurality of metal inserts molded in said body, each insert having its outer face flush with the outer face of the body and having a recess formed in its inner face and a transverse opening communicating with said recess, opposed lateral wings extending from each insert and disposed in the same plane as the recesses of said insert, a clamping bar associated with said body, and T-bolts having their heads disposed within the recesses of the inserts and their shanks engageable with the bar to clamp said bar to the post.

3. A fence post comprising in combination, a plastic body, a plurality of metal inserts molded in said body, each insert having its outer face flush with the outer face of the body and having a recess formed in its outer face and a transverse opening communicating with said recess, the outer edges of the recesses being respectively rabbeted, closure elements seated within said rabbeted edges, opposed lateral wings extending from each insert and disposed in the same plane as the recesses of said insert, a clamping bar associated with said body, and T-bolts having their heads disposed within the recesses of the inserts and their shanks engageable with the bar to clamp said bar to the post.

4. A metal insert for concrete fence posts consisting of a body having opposed lateral wings extending from the inner face thereof, said body having a recess formed in its inner face, the outer edges of the recess being rabbeted, a closure element seated within said rabbeted edges of the recess, said body being further formed with a vertical transverse opening communicating with the outer face of the body and with the recess thereof.

1,021,141. JOURNAL-BEARING WEDGE. ROBERT E. FRAME, St. Louis, Mo., assignor, by direct and mesne assignments, to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed Sept. 3, 1907. Serial No. 391,159. (Cl. 64—20.)



1. A wedge comprising a body provided with obliquely disposed integral ribs upon opposite sides, some of the ribs on one side extending entirely across said wedge and some of said ribs extending only across the median line of said wedge.

2. A journal bearing wedge, comprising a body with relatively thin web portion and having obliquely disposed integral ribs upon opposite sides, and a plurality of the ribs upon one side crossing a plurality of ribs upon the opposite side, at both sides of the median line.

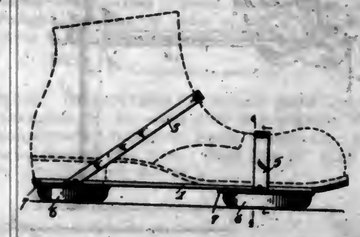
3. A journal bearing wedge, comprising a relatively thin web or body portion provided with a plurality of separated strengthening ribs, said ribs having central portions and integral end portions, the end portions positioned substantially parallel to the transverse axis of the wedge and the central portions formed at an angle to the end portions, all of said ribs extending from the side of said wedge substantially to the median line.

4. A wedge of malleable iron having a series of substantially parallel diagonal ribs extending substantially across each of its two opposite faces and crossing on the median line and at each side thereof.

5. A journal bearing wedge of malleable iron comprising a relatively thin web or body provided with sets of obliquely disposed transverse ribs formed upon opposite sides thereof, some of the ribs of one set crossing ribs of the other set at each side of the median line.

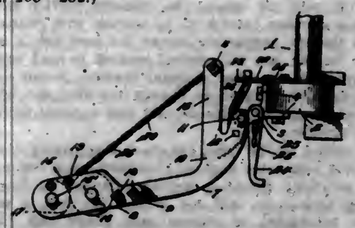
[Claims 6 to 13 not printed in the Gazette.]

1,021,142. PNEUMATIC WALKING ATTACHMENT. MALCOLM W. FREEMAN, Millington, Mass. Filed Apr. 25, 1911. Serial No. 623,194. (Cl. 36—29.)



A pneumatic walking attachment comprising a plate having a sole section and a heel section, a rubber cup secured to each of the said sections, an annular flange formed upon each cup, each cup being provided with a thickened tread, said cups when secured forming air chambers, a convolute spring mounted in each air chamber, said springs having their greater convolutions resting upon the bottom of the heel and sole sections and their lesser convolutions embedded in the inner faces of the treads, and means for securing the said plate to a boot or shoe.

1,021,143. CAR-FENDER. WILLIAM T. GARRISON, Los Angeles, Cal., assignor to Katherine Kearney, Los Angeles, Cal. Filed May 5, 1911. Serial No. 625,299. (Cl. 105—252.)

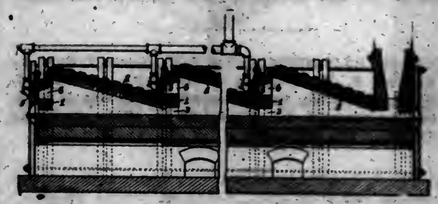


1. In a fender, the combination with a car end of supports connected thereto, a frame pivotally connected to said supports, a second frame hinged thereto, a net connected to said frames, a chain for holding the said second frame in an extended position, a rod pivotally mounted in said supports, a hook on each end of said rod, lugs on the said second frame, said hooks engaging said lugs to hold the said second frame in a closed or folded position and a handle secured to said rod for operating said hooks substantially as described.

2. In a fender, the combination with a car end of supports mounted thereon, a frame pivotally mounted on said supports, a second frame pivotally mounted on the first said frame, a net connected to each of said frames, upwardly extending lugs provided on the first said frame, spring pressed hooks mounted on the said car for engaging said lugs and means for operating said hooks substantially as described.

3. In a fender, the combination with a car end of supports connected thereto, a frame pivotally connected to said supports, a second frame hinged to said first named frame, a nut connected to said frames, lugs extending from the first mentioned frame, hooks mounted on the said car, a rod connecting said hooks, a foot engaging member extending from one of said hooks, a leaf spring engaging said foot engaging member for normally holding said hooks into engagement with said lugs, arms extending upwardly from the sides of the first mentioned frame, chains connecting said arms with the second mentioned frame for holding said frame in a lowered position and hooks pivotally mounted in said supports adapted to engage the last mentioned frame for holding the same in a closed position, substantially as and for the purpose set forth.

1,021,144. FURNACE. PETER J. GORDON and RALPH T. PRALL, Youngstown, Ohio. Filed Dec. 4, 1911. Serial No. 663,850. (Cl. 75—40.)



1. A furnace having a roof provided with a series of portions inclined downwardly in combination with burners discharging directly into the furnace between inclined portions whereby the normal flow of the products of combustion, etc. are deflected toward the hearth.

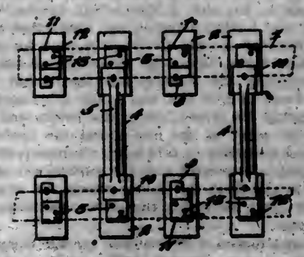
2. A furnace having a roof provided with a series of portions inclined downwardly and a series of burners arranged to direct the flame, etc. at an acute angle against such inclined portions.

3. A furnace having a roof consisting of a series of substantially vertical cross walls and a series of inclined top sections intermediate the vertical walls in combination with burners discharging into the furnace intermediate the vertical walls.

4. A furnace having a roof consisting of a series of substantially vertical cross walls and a series of intermediate downwardly inclined top sections in combination with a series of burners arranged to direct the flame and products of combustion at an acute angle against the inclined top sections.

5. A furnace having a roof consisting of a series of substantially vertical cross walls provided with openings and a series of intermediate downwardly inclined top sections in combination with burners arranged in line with openings in the cross walls and to direct the flame, etc. against the inclined sections.

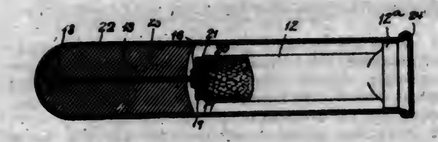
1,021,145. RAILROAD CROSS-TIE AND SUPPORTING-PLATE. JOHN GORMAN, Peru, Ind. Filed Dec. 13, 1911. Serial No. 665,518. (Cl. 238—5.)



In combination with railroad rails, supporting plates having portions of their outer edges bent upwardly to

form lips and tongues for embracing the outer edge of the web of said rails, said plates having their inner portions reduced in area where they project beyond the other edge of the webs and having a hole therein, said plates having one of their edges turned upwardly and the portions having these bent edges and the projecting portions being depressed in a lower plane than that of the rest of the plates, a plurality of sleepers arranged to receive said plates, means for securing said plates to said sleepers, tie-plates adapted to rest on said depressed portions and span the intervening space between the rails and having a rib formed in their middle portions and the longitudinal edge portions bent downwardly and arranged to be disposed between a pair of sleepers so that the same cannot move transversely inward, said tie-plates having holes in their outer portions arranged to correspond with holes in the projecting portions of said supporting plates when the same are in position, and means disposed in said holes for securing the rail and said plates to said sleeper.

1,021,146. HYPODERMIC SYRINGE. JAMES T. GREELEY, Nashua, N. H., assignor of one-fourth to Luella L. Goold, Pittsburgh, Pa., and one-fourth to Guy H. Greeley, Merrimac, N. H. Filed July 14, 1911. Serial No. 638,551. (Cl. 128—25.)



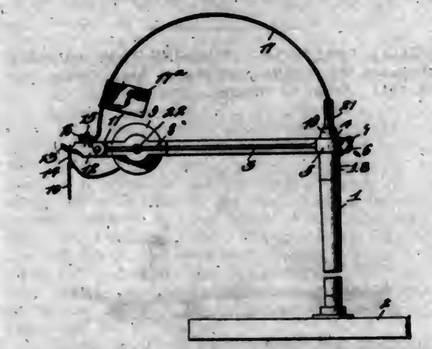
1. A hypodermic syringe composed of a collapsible capsule charged with liquid and having a breast at one end and a neck integral with said breast, said capsule, breast and neck being composed of ductile material, a hypodermic needle inserted in said neck and secured therein by the compression of the material of the neck around the needle, the neck being provided at its inner end with a cavity, the bottom of which surrounds the inner end of the needle, a stylet inserted as a plug in the lumen of the needle, and a liquid-proof filling occupying said cavity and interposed between the needle and the contents of the capsule, said filling constituting a hermetic seal around the stylet.

2. A hypodermic syringe composed of a collapsible capsule charged with liquid and having a breast at one end and a neck integral with said breast, said capsule, breast and neck being composed of ductile material, a hypodermic needle inserted in said neck and secured thereto by the compression of the material of the neck around the needle, and a rigid ring embracing and closely fitting said neck and constituting a continuous non-collapsible grip member.

3. In combination, a hypodermic syringe composed of a collapsible capsule charged with liquid and having an integral neck at one end, a hypodermic needle inserted in said neck and having a permanent connection therewith, a stylet inserted in said needle as a plug for the lumen thereof, said stylet having an anchor at its outer end, a holder inclosing the capsule and needle and having a closed end and an open end, and a body of protective material occupying the closed end of the holder and adhering thereto, the point of the needle and the anchor of the stylet being embedded in said body, whereby rusting of the needle point is prevented and the withdrawal of the capsule and needle from the holder causes the separation of the needle from the stylet, the latter remaining anchored in said body.

4. In combination a hypodermic syringe composed of a collapsible capsule charged with liquid, a hypodermic needle having a permanent connection with the capsule, a holder inclosing the capsule and needle and having a closed end and an open end, and a body of protective material occupying the closed end of the holder and adhering thereto, the point of the needle being embedded in said body.

1,021,147. AUTOMATIC FISHING-POLE. ARTHUR A. GREEN, Schenectady, N. Y. Filed Mar. 1, 1911. Serial No. 611,588. (Cl. 43—31.)



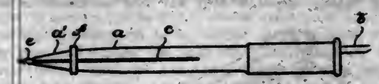
1. A fishing device of the character described, comprising a rod, a supporting means therefor, a reel revolubly mounted on said rod, a line carried by said reel having a portion extended therefrom, a pivoted member on said rod adapted to have engagement with the extended portion of said line, a leaf spring having one end thereof mounted in said supporting means and carrying a signaling means, and an adjusting screw carried by said pivoted member adapted to receive in engagement the free end of said spring, whereby when said pivoted member has been tripped, said spring will be released to indicate the same.

2. A fishing device of the class described, comprising a rod having a portion thereof enlarged and slotted, a reel rotatably mounted in said slotted portion, a shank formed on said rod beyond the enlarged portion thereof, a setting member bifurcated to receive said shank and pivoted thereto, supporting means for said rod, a spring member having one end thereof secured to said supporting means and carrying a signal thereon, means on the setting member adapted to engage the free end of said spring member, and a line on said reel engaged with said setting member.

3. A device of the class described, comprising a standard, a rod removably engaged therewith, said rod having a reel rotatably mounted thereon adjacent its free end, a shank formed on said rod beyond the reel, a setting member bifurcated to receive said shank and pivoted thereto, said setting member being also provided with an adjusting screw, a leaf spring having one end thereof engaged with said standard and carrying a signal, the free end of said spring being adapted for engagement with the adjusting screw of said setting member, and a line carried on said reel and engaged with said setting member.

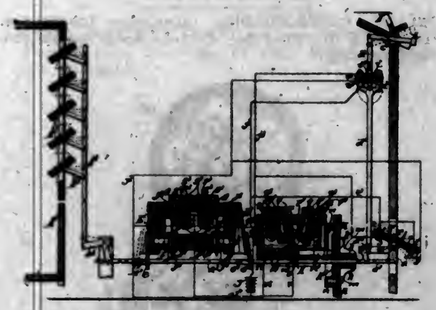
4. A device of the class described, comprising a rod, supporting means therefor, said rod being enlarged adjacent one end thereof and slotted, a reel pivotally mounted in said slotted portion, a shank formed on the rod beyond said slotted portion, a setting member bifurcated to receive said shank and pivoted thereto, said setting member being also provided with an upstanding lug, an adjusting screw carried in said lug, a leaf spring having one end thereof engaged with said supporting means and carrying a signal, the free end of said leaf spring being adapted for engagement with the free end of said adjusting screw, and a line carried on the reel adapted to be engaged with said setting member.

1,021,148. PENCIL. ARTHUR W. HARRISON, Providence, R. I., assignor to Ubert K. Pettingill, Boston, Mass. Filed Feb. 11, 1911. Serial No. 608,120. (Cl. 120—38.)



A pencil holder comprising a solid body having one end provided with a longitudinal slit portion to receive a lead, the walls of said slit portion being separated by a uniform space throughout their length, and a rubber clasp mounted upon the slitted portion, said clasp having its radial cross section angular, whereby it is necessary to stretch said clasp in order to roll it back and forth to clamp and unclamp the lead.

1,021,149. ORGAN-SWELL. ROBERT HOPE-JONES, North Tonawanda, N. Y., assignor to The Rudolph Wurlitzer Manufacturing Company, North Tonawanda, N. Y., a Corporation of New York. Filed July 28, 1910. Serial No. 574,248. (Cl. 84—95.)



1. In an organ, the combination of a swell-box, its shutters, means for operating the shutters, and an indicator controlled by the shutter operating means to indicate the position of the shutters.

2. In an organ, the combination of a swell-box, its shutters, means for operating the shutters, and an indicator operatively connected with the shutter operating means.

3. In an organ, the combination of the key boards, a swell-box, its shutters, operating mechanism for the shutters, a visual indicator arranged above the key-boards, and means for operatively connecting the indicator with the shutter-operating mechanism.

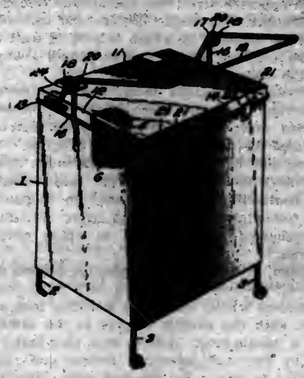
4. In an organ, the combination of the key-boards, a swell-box, its shutters, operating mechanism for the shutters, a vertically swinging indicator lever arranged above the key boards, and means for operatively connecting said lever with the shutter-operating mechanism.

5. In an organ, the combination of a swell-box, its shutters, a motor for operating the shutters, and a combined indicator and controller operatively connected with the shutters and controlling said motor.

[Claims 6 to 10 not printed in the Gazette.]

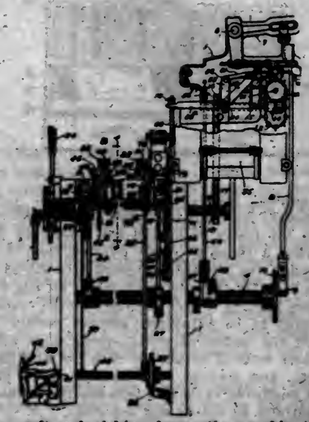
1,021,150. GARBAGE-STRAINER. HARRY E. HORNER, Syracuse, N. Y. Filed Mar. 8, 1911. Serial No. 613,001. (Cl. 220—115.)

In a device of the class described, a casing, a strainer receptacle mounted in the casing, a cover hinged to the casing having overhanging slotted sides, pivotal members carried by the casing, a pair of connected bell crank levers pivotally mounted upon said members and adapted to be operated by the receptacle to be dumped, said bell



crank levers adapted to enter the slots and raise the door, and supports for the bell crank lever when operated.

1,021,151. PICK-FINDER DEVICE FOR LOOMS. SIMEON SCHOON JACKSON, Readville, Mass., assignor to The Stafford Company, Readville, Mass., a Corporation of New Jersey. Filed May 9, 1910. Serial No. 560,322. (Cl. 139—85.)



1. In a weft-replenishing loom, the combination with detecting devices operative to detect weft-absence for picks in both directions, weft-replenishing instrumentalities controlled by the said devices, effecting replenishment at one side of the loom, a shedding mechanism employing a pattern-carrier having successive lines of pattern-indicators, and pick-finder devices controlling the said shedding mechanism to reopen for the first pick following replenishment the shed in which weft-absence first occurred in which ever direction of pick the said weft-absence occurred.

2. In a loom, in combination, detecting devices operative to detect weft-absence for picks in both directions, loom-stopping devices which bring the weaving instrumentalities to rest with the shuttle always at the same side of the loom, a shedding mechanism employing a pattern-carrier having successive lines of pattern-indicators, and pick-finder devices controlling the said shedding mechanism to reopen for the first pick after restarting the shed in which weft-absence first occurred.

3. In a loom, in combination, a shedding mechanism employing a pattern-carrier having successive lines of

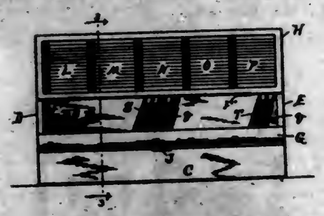
pattern-indicators, and differential resetting devices for the said pattern-carrier, and weft-detecting devices for the picks in opposite directions operatively combined with the said differential resetting devices and controlling the latter to cause the shed in which failure of weft occurred in either direction of pick to be reopened, always for a pick from the same side of the loom.

4. In a weft-replenishing loom, the combination with detecting-devices operative to detect weft-absence for picks in both directions, weft-replenishing instrumentalities controlled by the said devices, effecting replenishment at one side of the loom, a single-index dobby, and pick-finder devices controlled by the said detaching devices and controlling the said dobby to reopen for the first pick following replenishment after weft-failure in either direction of pick the shed in which weft-absence first occurred.

5. In a loom, in combination, detecting-devices operative to detect weft-absence for picks in both directions, loom-stopping devices which bring the weaving instrumentalities to rest with the shuttle always at the same side of the loom, a single-index dobby, and pick-finder devices controlled by the said detecting devices and controlling the said dobby to reopen for the first pick after restarting the shed in which weft-absence first occurred in a pick in either direction.

[Claims 6 to 17 not printed in the Gazette.]

1,021,152. ACCOUNT-REGISTER. ARCHIE L. JOHNSON and KELLY JOHNSON, Losantville, Ind. Filed Aug. 5, 1911. Serial No. 642,549. (Cl. 129—16.)

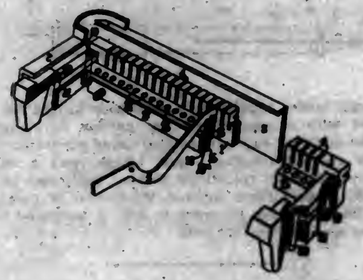


1. An account register including a case, a series of cards numbered from one progressively, a series of spaces located on the inside of the lid and numbered from one progressively, a series of cards lettered from A progressively through the alphabet, an angularly disposed frame forming a back for the numbered cards, an angularly disposed frame forming a back for the lettered cards, spring clips adapted to be adjustably secured within the case for holding the numbered cards, spring clips adapted to be adjustably secured within the case for holding the lettered cards, and account slips adapted to be placed between the numbered cards and between the lettered cards, all substantially as shown and described.

2. In an account register, the combination with a box-like inclosure having a lid, a plurality of cards S adapted to be located in said inclosure and each card having a distinctive number thereon, lines dividing the inner face of the lid into spaces and each space having a number corresponding to one of the numbers on said cards, the cards T also located in said inclosure and each having a distinctive letter thereof, a frame located across in the central portion of said inclosure and dividing the two sets of cards from each other, and a plurality of spring retaining keys adapted to be adjustably located across inside the inclosure, all substantially as shown and described and for the purposes set forth.

1,021,153. TYPE-WRITING MACHINE. ALFRED G. F. KUBOWSKI, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of New Jersey. Filed Mar. 5, 1910. Serial No. 547,405. (Cl. 197—33.)

In a typewriting machine, in combination, a frame, a bridge mounted therein, a plurality of key levers fulcrumed on said bridge, and having nibs on the lower edges thereof, a transverse bar extending under said levers at said nibs, coil springs seating at their lower ends in said bar and at their upper ends on said nibs, adjusting screws passing loosely through said bar and mounted in said



frame for adjusting said bar up and down, said bar having laterally extending arms at the ends thereof, and guiding means on said frame engaging said arms to prevent lateral movement of said bar and preserve the alinement of said springs with said nibs.

1,021,154. PAPER-HOLDER. ALEXANDER LESPERANCE, Laconia, N. H. Filed Dec. 4, 1911. Serial No. 663,720. (Cl. 211—32.)



1. In a device of the character described, the combination of a rotatable paper roll, supporting rollers for said paper roll, a paper directing roller rotatably mounted beneath said supporting rolls and in vertical alinement with the paper roller, and a guide tape connecting said supporting rollers and embracing the directing roller at its central portion.

2. In a device of the character described, the combination of a rotatable paper roll, spaced supporting rollers arranged beneath said paper roll, a gravity movable member arranged within the paper roll and acting to maintain the same in engagement with said supporting rollers, a paper directing roller rotatably mounted beneath the supporting rollers and having its rotative axis disposed in vertical alinement with the axis of the paper rolls, and a guide tape for the paper connected at its ends to the supporting rollers and embracing the directing roller at its central portion.

3. In a device of the character described, the combination of spaced supports having guide-ways on their opposed faces, a rotatable paper roll arranged between said supports, a gravity member loosely arranged within said paper roll and having studs movable in said guide-ways, spaced supporting rollers arranged beneath the paper roll, said gravity member maintaining the paper roll in position on said supporting roller, a paper directing roller arranged beneath said supporting rollers, and a guide tape for the paper connected at its ends to the supporting rollers and embracing the directing roller at its central portion.

4. In a device of the character described, the combination of spaced supports, a paper roll rotatably mounted between the same, a shaft journaled in said supports, said supports having projecting portions upon their inner faces eccentrically disposed with relation to said shaft, a paper directing roller fixed on said shaft and provided with a longitudinal chamber, a cutting blade movably arranged within said chamber, and means fixed upon the ends of said blade and coacting with the eccentric projections of the supports to project the cutting edge of the blade beyond the periphery of the roller as the same is rotated and sever the paper.

5. In a device of the character described, the combination of spaced supports, a paper roll rotatably mounted between the same, guide and supporting rolls for the paper roll, a paper directing roll journaled in the supports beneath said guide rolls, a tape connecting the guide rolls and embracing the directing roller intermediate of its ends, said directing roller having a longitudinally extending chamber, a cutting blade radially movable in said chamber and having a central recess in its cutting edge to receive said tape, and means for projecting the cutting edge of the blade beyond the periphery of the roller in its rotation to sever the paper in uniform lengths.

[Claim 6 not printed in the Gazette.]

1,021,155. RATCHET DIE-STOCK. LAWRENCE H. LOUIS, Alamosa, Colo. Filed Jan. 19, 1911. Serial No. 603,534. (Cl. 10—124.)

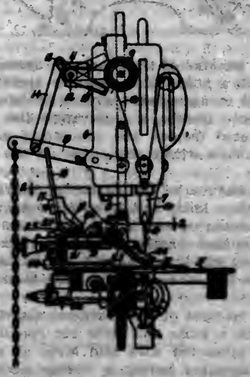


1. A tool of the character described comprising a body member, a threading die removably arranged in said member, said die having a plurality of peripheral notches, one face of the body member being recessed, said body being provided with additional recesses, a pair of pivotally mounted pawls and operating means therefor arranged in the latter recesses, a cover plate arranged in the first named recess of said body member, and retaining means for said plate, said pawl operating means including finger pieces movably disposed through said cover plate.

2. A tool of the character described comprising an operating member, a die rotatably arranged in said member provided with a plurality of spaced notches in its periphery, one face of said member being recessed, a plate countersunk in the face of said member and covering said recess, said plate engaging upon the end of the die to prevent its longitudinal movement in said member, a fastening screw for said plate, a pair of pawls pivoted at one of their ends upon said screw, the other end of said pawls being adapted for engagement in the notches in said die, links pivoted to the free ends of the pawls, and springs arranged in the recessed face of said member engaging said links to normally force the pawls into the notches of said die and lock the die in said member for unitary movement therewith in either direction of movement of the body bar.

3. A device of the character described comprising an operating member, a die removably arranged in said member and rotatable therein, one face of said member being provided with a plurality of angularly extending communicating recesses, said die having a plurality of spaced notches in its periphery, a pair of pawls arranged in one of the recesses in said member to engage in the notches of said die and lock the die in the member for unitary movement therewith in either direction of movement of the body bar, links connected to the free ends of said pawls and disposed in the remaining recesses of said member, springs arranged in said recesses normally forcing the pawls into the notches of said die, a cover plate countersunk in the face of said member disposed over said pawls and engaging with one end of the die to prevent its longitudinal movement in said member, said plate having a pair of L-shaped slots therein, and finger-pieces fixed to said links extending through said slots and movable in the same to retract the pawls and hold the same out of engagement in the notches of the die.

1,021,156. THREAD-CUTTING DEVICE FOR SEWING-MACHINES. ROBERT L. LYONS, Boston, Mass., assignor to himself, and Charles J. Sibbald, Rochester, N. Y. Filed Dec. 28, 1907. Serial No. 407,617. (Cl. 112—33.)



1. A thread cutting device for sewing machines comprising a button clamp pivotally mounted means for moving the same, a cutter arm pivotally mounted on said button clamp and having a blade, a thread engaging arm pivotally mounted on said button clamp and adapted to engage and move the cutter arm, and means for effecting the movement of said thread engaging arm.

2. A thread cutting device for sewing machines comprising a thread engaging arm and a thread cutter movably mounted to swing in opposite directions, means for swinging the same, a thread tension, and means for releasing said tension during the swinging of the thread engaging arm.

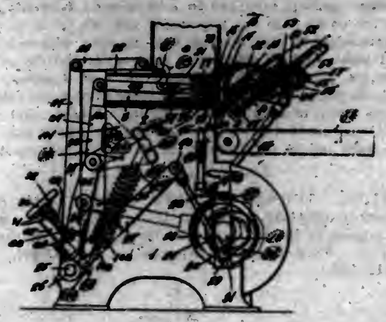
3. A thread cutter for sewing machines comprising a button clamp pivotally mounted means for effecting the movement thereof, a thread cutter arm pivoted on said button clamp and having a cutter, a thread engaging arm pivoted on the button clamp and designed to engage and move said cutter arm, and means for effecting the movement of the thread engaging arm during the upward movement of the button clamp.

4. A thread cutter for sewing machines comprising a button clamp pivotally mounted, means for moving the same, a thread engaging arm pivotally mounted on the button clamp, means actuated by the button clamp moving means for moving said arm, a tension device, and means connected with the button clamp moving means for releasing said tension during the movement of the thread engaging arm.

1,021,157. DOUGH-DIVIDER. THEODORE MASSE, St. Louis, Mo., assignor to American Baker's Machinery Company, St. Louis, Mo. Filed Apr. 7, 1911. Serial No. 619,586. (Cl. 107—15.)

1. In a dough divider having a hopper and a chamber beneath the hopper, the combination with a knife oper-

ating between the hopper and the chamber, and means for operating said knife comprising a disk having a cam groove, a coöperating disk and connecting means extending from said latter disk within the groove in the first mentioned disk.



2. In a machine of the character described, the combination with a knife, of a lever for operating said knife, a means for actuating said lever comprising a disk having a cam groove therein, a coöperative disk having a slide block mounted thereon and connecting means extending from said block within the groove in the first mentioned disk.

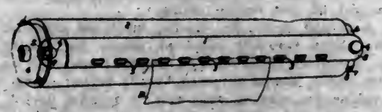
3. In a machine of the character described, the combination with a knife and lever for operating said knife, of a link connected with said lever at one end, a disk rotatably mounted having a sliding block fitted therein connected to said link, a second disk having a cam groove and means for connecting the said block with the said cam groove.

4. In a machine of the character described, the combination with a knife and lever for operating said knife, of a link connected with said lever at one end, a disk rotatably mounted having a sliding block fitted therein connected to said link, a second disk having a cam groove with a portion concentric with the disk and a portion concentric with the link in one position thereof and means for connecting the said block with the said cam groove.

5. The herein described dough divider provided with a hopper, and chamber beneath the hopper, the combination with an oscillatory head having a dough receiving chamber, of means for oscillating said head comprising a rotating disk, a coöperating disk having a cam groove therein and means connecting said rotating disk with said cam groove.

[Claims 6 to 16 not printed in the Gazette.]

1,021,158. TYPE-WRITING MACHINE. JOHN C. MCLAUGHLIN, Jersey City, N. J., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Sept. 24, 1910. Serial No. 583,549. (Cl. 197—136.)



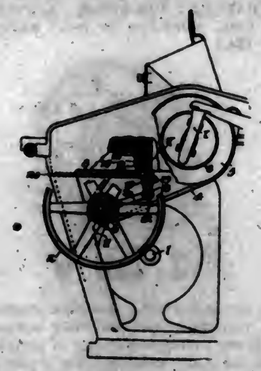
1. In a typewriting machine, in combination, a rotatable platen having a row of fastening devices at one end thereof, a second row of fastening devices at the other end of said platen, the members of one row being opposite the members of the other row, a detachable card-holder strip having fasteners coöperating with said fastening devices to secure the same to said platen, said fastening devices being separated circumferentially on the face of said platen whereby successive applications of said strip will occur by chance at different points on the periphery of said platen and distribute the strokes of the type throughout the entire circumference thereof.

2. In a typewriting machine, a rotatable platen in combination with a detachable card-holder strip extending longitudinally on the face of said platen, and a plurality of devices spaced apart circumferentially on said platen for attaching said strip at a plurality of different predetermined points on the periphery thereof, said strip being adapted for holding a card.

3. In a typewriting machine, in combination, a platen having heads at the ends thereof, a card holder strip adapted to lie against the face of said platen, a plurality of fastening devices carried by said heads separated circumferentially, and fastening devices on said card-holder and adapted to snap onto said first fastening devices to secure said card-holder on said platen.

4. In a typewriting machine, in combination, a platen having heads with a plurality of fastening devices arranged circumferentially thereupon, a card-holder strip extending along the face of said platen and projecting beyond the said heads, and snap-fasteners carried by said strip coöperating with said fastening devices.

1,021,159. POWER-TRANSMISSION MECHANISM. GERRY A. MORGAN, Goffstown, N. H., assignor to Boston Automatic Machine Company, Boston, Mass., a Corporation of Massachusetts. Filed Jan. 2, 1912. Serial No. 669,027. (Cl. 74—26.)



1. A driving mechanism comprising contacting rotary frictional elements, means holding one of said elements in a manner permitting the same to move at the same time toward the other element and around the axis of the same, resilient constantly acting means to apply force to said member in a direction tending to give both of the described movements to it, and a belt engaged with and driven by said member and arranged to limit its movement about the axis of the other member.

2. A driving mechanism comprising a rotary driver, a rotary driven member peripherally in frictional contact with said driver, an articulated frame holding said driven member, and including pivotally connected and pivotally mounted arms, a yielding actuator connected with one of said arms eccentric to the pivot thereof, and a belt engaged with the driven member and disposed so as to limit the movement of the driven member in the direction in which the applied force acts.

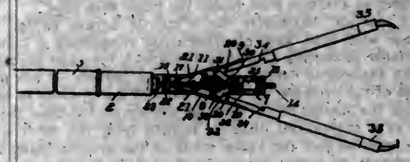
3. A driving mechanism including a rotary driver, a rotary driven member in frictional contact with the driver, said driven member being freely movable toward and from the driver and also around the axis of the same, a yielding actuator arranged to apply force to the driven member, and a belt engaged with the driven member and reacting against the force applied by the yielding actuator so as to produce a resultant pressure of the driven member against the driver.

4. In a driving mechanism the combination of a swinging arm, a second arm pivoted thereto, a combined wheel and pulley mounted upon said second arm, a lug or finger projecting from said second arm eccentric to the pivot thereof, a spring applied upon said lug, a driving shaft frictionally engaging the periphery of the wheel at the opposite side of said pivot from the point of connection of the spring to the lug, a belt surrounding the pulley, and a second pulley surrounded and driven by said belt, the spring being arranged to act in a direction opposed to the pull of the belt, whereby to co-act with the shaft in maintaining friction between the wheel and shaft.

5. The combination with coöperating friction wheels and a belt engaged with one of them, of an articulated, pivotally movable holder for the belt-engaged wheel, and a resilient, automatically movable actuator engaged with the holder and arranged to apply force thereto in a direction opposed to the pull of the belt.

[Claims 6 and 7 not printed in the Gazette.]

1,021,160. COMBINED PENCIL AND COMPASSES. PERCY D. MORGAN, Portland, Oreg. Filed Apr. 5, 1911. Serial No. 619,150. (Cl. 33—1.)



1. A pair of compasses including a body, a base connected to and projecting from the body, a leg pivoted to the base, a traveler movable along the base, a link connecting the traveler with the leg, and a screw threaded shaft mounted on the base and connected to the traveler, said shaft being provided with a knurled head.

2. A pair of compasses including a body, an elongated slotted base connected to and projecting from the body, oppositely disposed legs pivoted to the base, a traveler movable along the base and having a lug projecting into the slot of the base, oppositely disposed crossed links pivotally connected to the traveler and to the legs, and a screw threaded shaft mounted in bearings upon the base and having a knurled head, said shaft engaging the traveler.

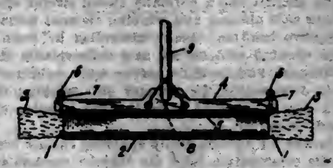
3. A pair of compasses including a body, a longitudinally slotted base plate connected to the body and projecting therefrom, oppositely disposed legs having a common pivotal attachment to the base plate, a traveler movable along the base, oppositely disposed crossed links pivotally connected at their ends to the traveler and to the legs, a screw threaded shaft mounted in bearings projecting from the face of the base plate and having a knurled head, and an outer tubular case fitting the body into which case the legs are insertible.

4. A pair of compasses including a body, an elongated base plate connected to and projecting from the body, said base plate being longitudinally slotted, a traveler having a lug projecting into the slot and movable along the base plate, oppositely disposed legs pivoted at their inner ends to the base plate, crossed links pivotally connecting the traveler and the legs, a screw threaded shaft mounted in bearings upon the face of the base plate and having a screw threaded engagement with the traveler, said shaft having a knurled head, and a spring mounted upon the base plate, the two arms of the springs engaging the legs to resist movement thereof.

5. The combination with a compass leg having a tubular clip formed therewith, of a lead and point holder comprising a tubular body portion contracted at one end and provided with interior screw threads, a shank carrying at one end a point, the other end of the shank being bifurcated to engage a lead, said shank being provided intermediate its length with exterior screw threads engaging the interior screw threads on the body.

[Claim 6 not printed in the Gazette.]

1,021,161. SWEEPER. JAMES P. O'CONNELL, Crompton, R. I., assignor of one-half to Edgar L. Merrow, Malden, Mass. Filed July 26, 1909. Serial No. 509,481. (Cl. 15—28.)



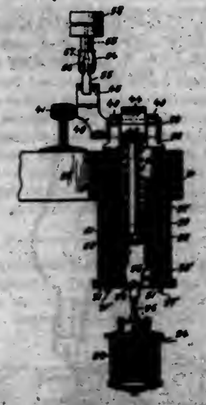
1. An article of the character described comprising a head portion, a casing of fabric open at each end secured to said head portion, and a quantity of waste securely held within said casing by friction.

2. An article of the character described comprising a head portion, a casing of fabric removably secured to said head portion and a quantity of waste held within said casing and projecting beyond each end of the casing.

3. An article of the character described comprising a head portion provided with a clamping device, a casing consisting of a piece of folded fabric and having the folded edges thereof clamped upon the head portion by the clamping device, and a quantity of waste held in said casing and having a portion thereof projecting beyond each end of said casing.

4. An article of the character described comprising a head portion provided with a suitable handle, a clamping rod extending along the under side of said head portion and having its end portions extending through said head portion, means for adjusting said clamping rod, a circular fabric casing containing a quantity of waste, a portion of said waste projecting beyond the ends of said casing, and a piece of fabric folded around said casing and having the folded edges thereof clamped between the head portion and the clamping rod.

1,021,162. AUTOMATIC TRAIN-CONTROLLING DEVICE. HARRY L. RIDER, Oil City, Pa. Filed Mar. 1, 1909. Serial No. 480,506. (Cl. 246—59.)



1. In means for automatically applying the air brakes of a train, a track-instrument comprising a cylinder, a plunger arranged in said cylinder, a shaft journaled in the upper end of said plunger and carrying a tripping-element, means for normally holding the plunger in a retracted position and the tripping-element in an inoperative position, and means arranged within the cylinder and acting against said plunger to move the tripping element to operative position when the plunger is released.

2. In means for automatically applying the air brakes of a train, a track-instrument located adjacent one of

the rails of a track and embodying a vertically movable plunger, a shaft journaled in the upper end of said plunger and carrying a tripping element adapted when in operative position to project above the said track-rail, a controlling magnet and a normally closed circuit operating to maintain said plunger and tripping element normally in an inoperative position, means controlled by train movements for opening said circuit and deënergizing the controlling magnet, and means whereby when said governing magnet is deënergized the plunger and tripping element are automatically elevated to project the tripping element above said track-rail.

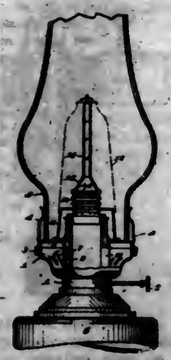
3. In means for automatically applying the air brakes of a train, the combination with air exhaust mechanism carried by the train, of a track-instrument arranged in the track for actuating said air exhaust mechanism, said track-instrument embodying a cylinder, a plunger movable vertically therein, a tripping element carried by the upper end of said plunger and having a rocking movement, means for normally holding the tripping element out of the way of a passing train, and means for moving the tripping element to operative position immediately upon its being released.

4. A track-instrument mechanism for automatically applying the air brakes of a train comprising a cylinder, a plunger movable vertically in said cylinder, a tripping element carried by said plunger, means for normally holding the plunger retracted and the tripping element in an inoperative position, and means whereby when released the plunger is elevated in its cylinder and the tripping element moved to operative position.

5. A track-instrument mechanism for automatically applying the brakes of a train comprising a cylinder, a plunger mounted to move within said cylinder, a shaft carried by said plunger, and having partial rotary movement therein, a tripping element carried by the shaft, said tripping element when in operative position projecting above and close to one rail of the track in position to be engaged by the wheels of a passing train, and means whereby said tripping element after being moved by the wheels of a passing train is automatically returned to its operative position.

[Claims 6 to 8 not printed in the Gazette.]

1,021,163. MANTLE-BURNER FOR KEROSENE-LAMPS. HERBERT E. RIDER, Brooklyn, N. Y., assignor to William Ottmann, New York, N. Y. Filed June 27, 1910. Serial No. 568,986. (Cl. 67—38.)



1. A lamp burner comprising, in combination with an inner and an outer wick tube, a cap for the inner wick tube projecting upwardly from the top thereof with the outer side of its side wall substantially in vertical alinement therewith and having a substantially horizontal groove on the outer side of the upwardly projecting wall and also having a series of perforations in the groove, such groove having an imperforate upper wall forming an air-deflecting surface above and outwardly from the perforations.

2. A lamp burner comprising, in combination with an inner and an outer wick tube, a cap for the inner wick tube having a side wall projecting upwardly from the top of the inner wick tube and having a series of substantially horizontal grooves at the outer side of the upwardly projecting wall and having perforations through the wall in the grooves, the grooves having imperforate upper walls forming air-deflecting surfaces above and outwardly from the perforations.

3. A lamp burner comprising, in combination with an inner and an outer wick tube, a cap for the inner wick tube provided with a series of annular upwardly and outwardly sloping imperforate air-deflecting surfaces, the cap having air outlets for supplying air from inside the inner wick tube to such air-deflecting surfaces.

4. A lamp burner comprising, in combination with an inner and an outer wick tube, a cap for the inner wick tube provided with a substantially vertically alined series of annular upwardly and outwardly sloping imperforate air-deflecting surfaces arranged above the inner wick tube, the cap having air outlets for supplying air to such air-deflecting surfaces from inside the inner wick tube.

5. An air distributer for a mantle burner having an inner wick tube, such air distributer comprising a hollow cylinder projecting above the inner wick tube and provided with transverse corrugations forming grooves at the outside of the cylinder, the lower walls of the grooves as seen from the outside of the cylinder having perforations therein at a substantial distance inward from the mouths of the grooves and the upper walls of the grooves being imperforate, to deflect outwardly the air issuing through the perforations.

[Claims 6 to 15 not printed in the Gazette.]

1,021,164. CAR-BOLSTER. JOHN M. ROHLFING, St. Louis, Mo., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed June 1, 1911. Serial No. 630,780. (Cl. 105—106.)



1. In a car bolster, a compression member comprising a channel section disposed with its flanges upstanding, a pair of web plates fixed to each of the flanges of said compression member, splice plates connecting the respective pairs of web plates, reinforcing members connected to said splice plates and to said web plates, and a tension member fixed to and connecting all of said web plates.

2. In a car bolster, a compression member comprising a channel section disposed with its flanges upstanding, a pair of web plates fixed to each of the flanges of said compression member, splice plates connecting the respective pairs of web plates, reinforcing members extending transversely of the bolster and connected to said splice plates, and to both pairs of web plates, and a tension member fixed to and connecting all of said web plates.

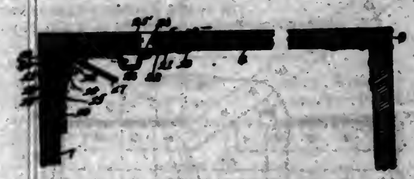
3. In a car bolster, a compression member comprising a channel section disposed with its flanges upstanding, a pair of web plates fixed to each of the flanges of said compression member, splice plates connecting the respective pairs of web plates, reinforcing members connected to said splice plates and to said web plates and to said compression member, and a tension member fixed to and connecting all of said web plates.

4. In a car bolster, a compression member comprising a channel section disposed with its flanges upstanding, a pair of web plates fixed to each of the flanges of said compression member, splice plates connecting the respective pairs of web plates, reinforcing members connected to said splice plates and to said web plates, other reinforcing members connected to said web plates adjacent said first mentioned reinforcing members and a tension member fixed to and connecting all of said web plates.

5. A car bolster comprising a compression member and a tension member, and a Z-section disposed between end portions of said members having its opposite flanges fixed to said members.

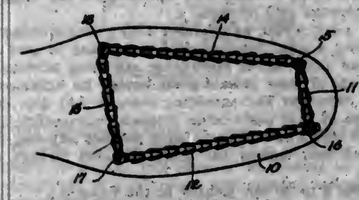
[Claims 6 to 9 not printed in the Gazette.]

1,021,165. SEAL-LOCK FOR BOXES. JOHN SEHRT, St. Louis, Mo. Filed Apr. 22, 1911. Serial No. 622,713. (Cl. 70—80.)



A device of the class described comprising a fastener composed of two members, one of said members secured to the box body, a tooth formed on said member, a spring guard carried by said member and straddling the tooth, the other member secured to the under side of the cover, a locking loop and trigger mounted on said member, the locking loop arranged to contact with the tooth of the other member and lodge beneath the same, a card inserted between the box cover and the locking member and located beneath an opening formed in the cover, and a device for holding the card in position, substantially as specified.

1,021,166. ATHLETIC SHOE. CHARLES E. SIMPSON, Winthrop, Mass. Filed Apr. 15, 1911. Serial No. 621,345. (Cl. 36—59.)



1. In combination, a sole, and a flexible non-slipping member held taut between separated points thereon, said non-slipping member being formed so as to present a relatively smooth tread in normal position but having sharp biting edges adapted to be brought into action as transverse thrusts are imparted thereto in use.

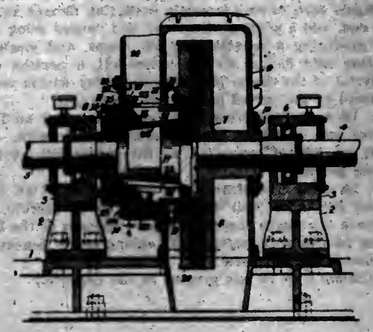
2. In combination, a sole, and a flexible non-slipping member held taut over the outer surface thereof between separated points to extend in an oblique direction generally lengthwise of the sole, said non-slipping member being formed to present a relatively smooth tread in normal position but having sharp biting edges adapted to be brought into action as thrusts are imparted crosswise of said member.

3. In combination, a sole, and a chain held taut between separated points to extend over the sole in an oblique direction generally lengthwise of the sole and also crosswise of the sole, said chain having links formed to present a relatively smooth tread in normal position but having sharp biting edges adapted to come into action as thrusts are imparted tending to twist the chain.

4. In combination, a sole and a chain held taut between separated points thereof, said chain consisting of a series of links formed of flat stock folded over so as to present a relatively smooth tread in normal position but having sharp biting portions adapted to come into action as the chain is twisted.

5. In combination, a sole, and a chain fixed to the outer surface thereof to extend obliquely and generally lengthwise, said chain consisting of links formed of flat stock with sharp edges folded over so as to present a relatively smooth tread in normal position and a sharp biting tread as the chain is twisted, said chain being held taut between separated points on the sole.

1,021,167. ATTRITION-MILL. JOHN S. SORENSEN, Muncy, Pa., assignor to Sprout, Waldron & Company, Muncy, Pa., a Corporation of Pennsylvania. Filed Apr. 7, 1911. Serial No. 619,622. (Cl. 83—8.)



1. A runner head for attrition mills having an open unobstructed eye in one end and having receiving openings in its side, substantially as and for the purposes set forth.

2. A runner head for attrition mills consisting essentially of a pair of annular bands having a common axis and spaced apart along said axis, and feeders connecting said bands and disposed substantially parallel with the axis thereof.

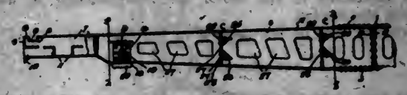
3. A runner head for attrition mills consisting essentially of a pair of annular bands spaced apart along a common axis, and feeders extending substantially parallel with the axis of and connecting said bands, said feeders being beveled on their inner opposed faces whereby said faces diverge toward one of the bands.

4. A runner head for attrition mills consisting essentially of a pair of annular bands spaced apart along a common axis, and feeders extending substantially parallel with the axis of and connecting said bands, said feeders having their side faces beveled to converge inwardly.

5. A runner head for attrition mills comprising a pair of annular bands spaced apart along a common axis, and feeders disposed substantially parallel with the axis of said bands to extend between and connect the same, said feeders having their inner opposed faces beveled to diverge toward one of the bands and the side faces of each feeder being beveled to converge inwardly.

[Claims 6 to 17 not printed in the Gazette.]

1,021,168. CAR-UNDERFRAME. VICTOR M. SUMMA, St. Louis, Mo., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed Mar. 31, 1910. Serial No. 552,508. (Cl. 105—76.)



1. In a car underframe, the combination of a center sill and a bolster connected thereto intermediate the length of the sill, said bolster comprising outstanding diaphragms fixed at their inner ends to the center sill and having curved flanges at their inner ends forming a king pin recess, a portion of the center sill being cut away within the inclosure of said curved flanges.

2. In a car underframe, the combination of a center sill and a bolster connected thereto, and comprising flanged

diaphragms and a top cover plate connecting said diaphragms, means connecting the flanges of the diaphragms to the center sill, some of the flanges of the diaphragms being curved for producing a king pin recess between the diaphragms and a portion of the material of the center sill being cut away in the area inclosed by said curved flanges.

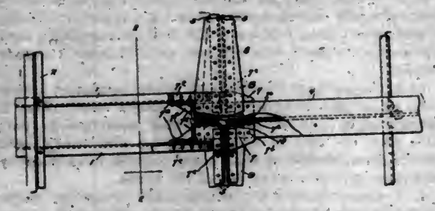
3. In a car underframe, the combination of an I beam center sill and a bolster connected thereto, intermediate the length thereof, and comprising outstanding diaphragms each having laterally extending flanges at its inner end, and a portion of each of said flanges being curved for producing a central king pin recess, and means connecting said flanges to the center sill, a portion of the material of the center sill being cut away within the area inclosed by the curved portions of the flanges.

4. In a car underframe, the combination of an I beam center sill, a center bearing integral therewith, and a built up bolster connected to the center sill above the center bearing.

5. In a car underframe, the combination of an I beam center sill and a built up bolster connected thereto, intermediate the length thereof, the lower flanges of the I beam being formed with outstanding enlargements beneath and connected to the bolster.

[Claims 6 to 16 not printed in the Gazette.]

1,021,169. CAR-UNDERFRAME. VICTOR M. SUMMA, St. Louis, Mo., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed June 6, 1910. Serial No. 565,406. (Cl. 105—76.)



1. In a car underframe, a bolster, a single center sill of commercial shape, draft sills, and bolster filler blocks fixed to opposite sides of said center sill connecting the center sill and draft sills.

2. In a car underframe, a bolster, a single center sill of commercial shape, draft sills, and bolster filler blocks fixed to opposite sides of said center sill connecting the draft sills and the bolster to the center sill.

3. In a car underframe, a bolster, a single I section center sill extending through said bolster, draft sills, and means within the bolster connecting the center sill and draft sills.

4. In a car underframe, a bolster, draft sills, a single center sill extending through said bolster, and diagonal connectors between the center and draft sills.

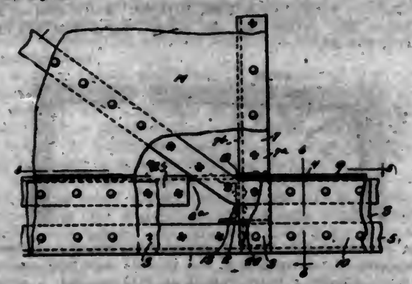
5. In a car underframe, a bolster, a single center sill of commercial shape extending therethrough, and draft sills connected to the center sill independently of and within the bolster.

[Claims 6 to 54 not printed in the Gazette.]

1,021,170. STEEL BOX-CAR. VICTOR M. SUMMA, St. Louis, Mo., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed Oct. 18, 1911. Serial No. 655,312. (Cl. 105—192.)

1. In a car, a side wall formed with a door opening and comprising a side plate, vertical posts fixed to said side plate, and a continuous tension bar of constant cross section extending between the upper ends of some of said posts having its intermediate portion depressed and extending beneath said door opening.

2. In a car, a side wall formed with a door opening and comprising a side plate, vertical posts fixed to said side plate, and a continuous tension bar extending between the upper ends of some of said posts having its intermediate portion depressed and extending beneath said door opening, and said depressed portion being fixed to others of said posts.



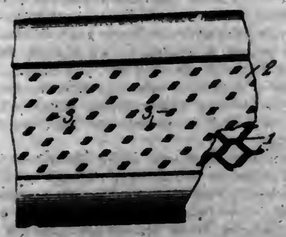
3. In a car, a side wall formed with a door opening and comprising a side plate, vertical posts fixed to said side plate, and a continuous tension bar extending between the upper ends of some of said posts having its intermediate portion depressed and extending beneath said door opening, and some of said posts being formed with recesses and the depressed portion of said tension bar being received in said recesses.

4. In a car, a side wall formed with a door-opening and comprising a side plate, vertical posts fixed to said side plate, and a continuous tension bar extending between the upper ends of some of said posts having its intermediate portion depressed and extending beneath said door opening, said posts being recessed and said tension bar being extended through said recesses.

5. In a car, a side wall formed with a door opening and comprising a side plate, vertical posts fixed to said side plate, and a continuous tension bar extending between the upper ends of some of said posts having its intermediate portion depressed and extending beneath said door opening, some of said posts being recessed intermediate their ends and others of said posts being recessed adjacent their ends, and said tension bar being extended through said recesses.

[Claims 6 to 39 not printed in the Gazette.]

1,021,171. TREAD FOR PNEUMATIC TIRES. FREDERICK G. WARD, Pittsburgh, Pa., assignor of one-third to Harry Davis, Pittsburgh, Pa. Filed Apr. 19, 1907. Serial No. 369,140. (Cl. 152—14.)



1. A tire of resilient material having embedded in the tread portion thereof a plurality of helices so disposed that portions thereof are flush with the road-engaging surface of the tire.

2. A tire of resilient material having embedded in the tread portion thereof a plurality of metallic helices having portions thereof flush with the road-engaging surface of the tire and having their axes disposed in planes parallel to the road-engaging face of the tire.

3. A tire of resilient material having embedded in the tread portion thereof a metallic helix having portions

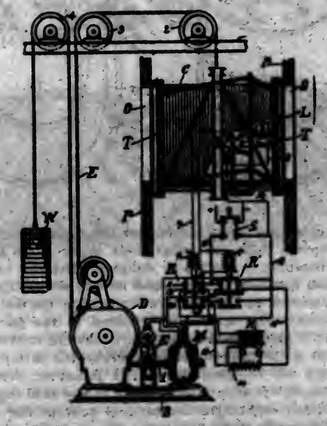
thereof flush with the road-engaging surface of the tire and being disposed circumferentially of the tire.

4. A tire of resilient material having embedded in the resilient material thereof a structure comprising a plurality of layers of metallic coils, portions of the bent rods or wires of the outer layer being flush with the road-engaging surface of the tire.

5. A tire of resilient material provided in its tread with a plurality of interlaced helices embedded in the resilient material and having portions of each helix flush with the road-engaging surface of the tire.

[Claims 6 to 11 not printed in the Gazette.]

1,021,172. ELEVATOR. FREDERICK WIDMANN and HARRY S. WELLS, St. Louis, Mo., assignors to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Feb. 17, 1910. Serial No. 544,458. (Cl. 187—1.)



1. The combination with an elevator car and a hatchway therefor provided with an opening, of means movable relatively to the car into position to prevent or obstruct the circulation of air through said opening and hatchway without obstructing said opening.

2. The combination with an elevator car and a hatchway provided with a door opening in the wall of the hatchway, of means carried by the car and surrounding said opening to impede or prevent the escape of air through said opening to the hatchway when the car is opposite the opening.

3. The combination with a car and hatchway, of means carried by the car for forming a substantially air-tight joint between the car and hatchway, and mechanism for operating said means.

4. The combination with a car and hatchway, of means movable relatively to the car into position to form a practically air-tight joint between the car and hatchway.

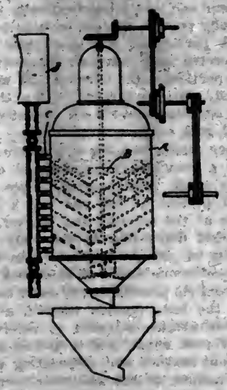
5. The combination with an elevator car, of a hatchway provided with an opening, means movable into and out of position to form a closure between the car and hatchway, said closure surrounding said opening when the car is opposite the opening.

[Claims 6 to 22 not printed in the Gazette.]

1,021,173. PROCESS OF REFINING SUGAR. HERMANN WIMMER, Wallaceburg, Ontario, Canada. Filed Jan. 9, 1912. Serial No. 670,169. (Cl. 127—17.)

1. The process of extracting sugar from juice or syrup which consists in graining successive drafts of the juice or syrup in a vacuum pan to a density of under 94% of dry substance, and in then continuing the concentration while the mass is still in the vacuum pan by forced circulation to a density from 94 to 96%.

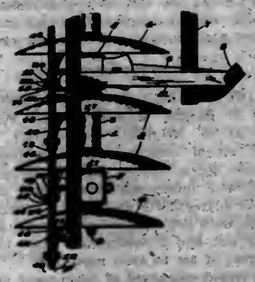
2. The process of extracting sugar from juice or syrup which consists in concentrating and graining successive drafts of syrup in a vacuum pan to a density of under 94% in dry substance, and in then further concentrating the entire mass under higher vacuum and forced circulation to a density of from 94 to 96.5%.



3. The process of extracting sugar from juice or syrup which consists in concentrating and graining successive drafts of the syrup or juice in a vacuum pan at a temperature between 72 and 80° C., varying according to purity of the syrup and highest at the lowest purity, in then continuing the concentration under reduced temperature and increased vacuum until the limit of natural circulation of the mass is attained, in then mechanically agitating the mass while still in the vacuum pan and further reducing the temperature until a concentration of from 94 to 96.5% dry substance is obtained.

4. The process of extracting sugar from juice or syrup which consists in concentrating and graining successive drafts of the juice or syrup in a vacuum pan to a degree of under 94% dry substance, in then continuing the concentration of the whole mass under increased vacuum and lower temperature until the limit of natural circulation is reached, in then further continuing the concentration under forced circulation, and in then cooling and continuing the forced circulation or agitation, all of said operations being performed in the vacuum pan.

1,021,174. DISK HARROW. GEORGE W. WILLIS, Auburn, N. Y., assignor to International Harvester Company, a Corporation of New Jersey. Filed Nov. 4, 1911. Serial No. 658,469. (Cl. 55—30.)



1. A scraper mechanism for disk harrows including, in combination, a rock shaft angular in cross section, a scraper blade made from a single piece of sheet metal having a flat lower end and a longitudinally arranged depression in the body portion thereof terminating in a laterally turned shank portion at the upper end thereof that is

adapted to receive said angular rock shaft, a transversely arranged rib portion at the outer end of said shank raised above the body portion thereof, and means for securing said shank to said rock shaft.

2. A scraper mechanism for disk harrows including, in combination, a rock shaft angular in cross section, a scraper blade made from a single piece of sheet metal having a flat lower end and a longitudinally arranged depression in the body portion thereof terminating in a laterally turned shank portion at the upper end thereof that is adapted to receive said angular rock shaft, a transversely arranged rib portion at the outer end of said shank raised above the body portion thereof, and a U-bolt having its head portion adjacent said rib and operative to secure said shank to said rock shaft.

3. A scraper mechanism for disk harrows including, in combination, a rock shaft angular in cross section, a scraper blade made from a single piece of sheet metal having a flat portion at one end and a laterally turned shank portion at the opposite end thereof, and a longitudinally arranged depression in the body portion thereof terminating in an angular depression in said shank and adapted to receive one angle of said rock shaft, a transversely arranged rib portion at the outer end of said shank raised above the body portion thereof, a saddle member having angular notches adapted to receive the opposite angle of said rock shaft, and a U-bolt having its head portion adjacent said rib and coöperating with said saddle member in a manner to automatically secure said scraper to said rock shaft.

1,021,175. EYE-SHIELD SPECTACLES. FREDERICK WILLSON and NUMA BOURQUIN, Reading, Pa., assignors to T. A. Willson & Co., Incorporated, Reading, Pa., a Corporation of Pennsylvania. Filed Nov. 28, 1911. Serial No. 662,897. (Cl. 88—41.)



1. A pair of framed eye lenses having flexible eye-shields clamped between the frame-eyes and the outside edges of the respective lenses.

2. A pair of framed eye lenses having sheet-metal eye-shield strips clamped between the frame-eyes and the outside edges of the respective lenses, and eye-shields of flexible material attached to said strips.

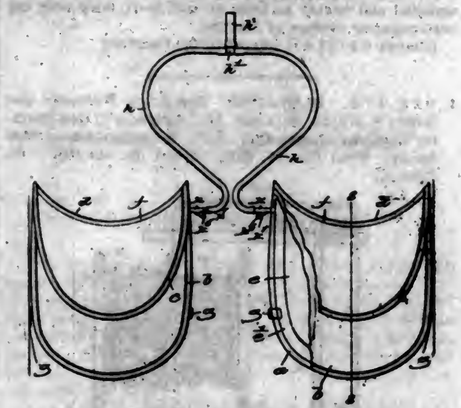
3. Framed spectacles provided with flexible eye-shields of approximately triangular shape, each of said shields being clamped along one edge thereof between a frame-eye and the outside edge of a lens and having an inwardly extending corner portion engaging a temple wire.

1,021,176. INFLATABLE DRESS OR SHIRT SHIELD. FRANKLIN P. BAKER, Malden, Mass. Filed May 31, 1910. Serial No. 564,073. (Cl. 9—20.)

1. A dress shield composed of superposed flaps connected at their upper, curved edges, a normally deflated airtight receptacle interposed between the flaps and attached thereto adjacent its upper edge, a flexible inflating tube connected with the receptacle, whereby the latter may be filled with air, and a controlling valve to govern the exit and ingress of air to such receptacle.

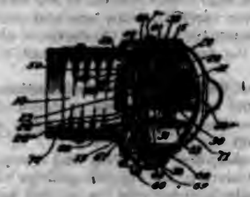
2. A dress shield composed of superposed and connected flaps, a flexible, normally deflated air-tight receptacle interposed between and covered by the flaps, a flexible inflating tube connected with said receptacle, to fill the latter with air, and straps connecting the front and rear edges of the covering flaps, to limit separation thereof when the receptacle is inflated.

3. A combined dress shield and life preserver composed of superposed flaps curved at their upper edges and connected together, a normally deflated air-tight receptacle interposed between the flaps and curved at its upper edge and connected to the flaps whereby the device may be worn beneath the arms and attached to the garment of the wearer in concealed position, a flexible inflating tube connected with the receptacle whereby the latter may be filled with air to constitute a life preserver.



4. A combined dress shield and life preserver composed of superposed flaps curved at their upper edges and connected together, a normally deflated air-tight receptacle interposed between the flaps and curved at its upper edge and connected to the flaps whereby the device may be worn beneath the arms and attached to the garment of the wearer in concealed position, a flexible inflating tube connected with the receptacle whereby the latter may be filled with air to constitute a life preserver, and straps connecting the front and rear edges of the said superposed flaps to limit separation thereof and prevent the bursting of the receptacle when inflated.

1,021,177. SWITCH-SOCKET. REUBEN B. BENJAMIN, Chicago, Ill., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 10, 1909. Serial No. 489,138. (Cl. 173—354.)

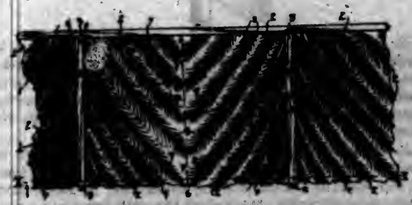


1. The combination with an insulating base, of a stem secured thereto, a switch blade rockably mounted on said stem, a tumbler rockably mounted on said stem, means for normally holding said switch blade and said tumbler together, a longitudinally movable slide having means thereon for engaging and operating said tumbler when said slide is removed, said slide having a member adapted to engage said switch blade but to become disengaged when said slide is moved, and said slide having an upward projection, a guide having a slot therein for receiving the upward projection of said slide and guiding the same, and a return spring engaging said projection.

2. The combination with an insulating base, of a stem secured thereto, a switch blade rockably mounted on said stem, a tumbler rockably mounted on said stem, resilient means for normally holding said switch blade and said tumbler together, a longitudinally movable slide having a member adapted to engage said switch blade but to become disengaged therefrom when said slide is moved, an operating tongue carried by said guide and adapted to engage and move said tumbler when said slide is moved, a return spring for said slide, and a guide for said slide, said guide having projections adapted to be engaged by said tongue when said slide is returned by said spring.

3. The combination with stationary contacts, of a contact arm pivoted to oscillate, an oscillating arm having a V shaped projection, a spring for connecting said arms, a reciprocating member, a pivoted projection on said member adapted to engage alternately on each side of said V shaped projection, stationary stops against which said pivoted projection engages when retracted, to move the same to normal position, and means for holding said contact arm until the spring has been placed under sufficient tension to operate the same.

1,021,178. AEROPLANE. FRANK BIBERSTEIN, Milwaukee, Wis. Filed Jan. 8, 1912. Serial No. 669,972. (Cl. 244—31.)



1. In a device of the described class, the combination with a plane having a smooth upper surface, of a plurality of parallel bars extending from the front to the rear of its lower surface, two series of blades located between each pair of said parallel bars, the blades of the respective series converging rearwardly and terminating on a central line between said parallel bars, and means for securing said blades and bars to the lower surface of said plane.

2. In a device of the described class, the combination with a concavo-convex aeroplane having a smooth upper surface, of a plurality of parallel bars extending from the front to the rear of its lower concave surface, two series of blades located between each pair of said parallel bars, the blades of the respective series converging rearwardly and terminating on a central line between said parallel bars, and means for securing said blades and bars to the lower surface of said plane.

3. In a device of the described class, the combination with a plane having a smooth upper surface, of a plurality of parallel bars extending from the front to the rear of its lower surface, two series of blades located between each pair of said parallel bars, the blades of the respective series converging rearwardly and terminating on a central line between said parallel bars, the front ends of said blades being of a width corresponding with the width of said parallel bars and converging upwardly toward their rear or opposite ends, two series of rearwardly converging smaller blades interposed between each pair of said first named blades, and means for securing all of said blades and bars to the lower surface of said aeroplane, all substantially as and for the purpose specified.

1,021,179. TAPPING ATTACHMENT. ROBERT S. BLAKE, Chicago, Ill., assignor to Benjamin Electric Manufacturing Company, a Corporation of Illinois. Filed June 2, 1910. Serial No. 564,717. (Cl. 173—356.)

1. In combination, a plug member, and a casing member for said plug member rotatably mounted with respect thereto, one of said members being provided with means enabling said members to be locked together to permit the plug member to be rotated.

2. In combination, a plug, and an outer casing for said plug rotatably mounted with respect thereto, said casing being provided with means enabling it to be locked to the plug to permit the latter to be rotated.



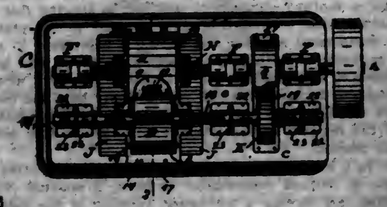
3. In combination, a plug, an outer casing rotatably mounted upon said plug and covering the portion thereof which is exposed when said plug is inserted into a socket, and means for locking said casing to said plug to permit the latter to be rotated.

4. In combination, a plug, an outer casing rotatably mounted upon said plug and covering the portion thereof which is exposed when said plug is inserted into a socket, and key-operated means for locking said casing to said plug to permit the latter to be rotated.

5. In combination, a base, a lamp terminal receiving contact mounted to rotate with respect to said base, a second lamp contact, a casing surrounding said lamp terminal receiving contact and normally locked against movement to disclose the same, and means enabling said casing to be released so that it may be moved to disclose said lamp terminal receiving contact.

[Claims 6 to 10 not printed in the Gazette.]

1,021,180. CONSTRUCTION OF ROTARY BLOWERS AND PUMPS. ARCHER E. CLIFTON, Connersville, Ind. Filed Jan. 19, 1911. Serial No. 603,434. (Cl. 230—30.)

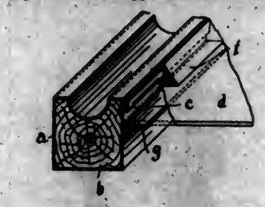


In the construction of rotary pumps, the combination of parallel shafts, interacting impellers and intermeshing gears mounted on them for simultaneous rotation, an inclosure for the impellers, an inclosure for the gears, bearings for the shafts one for each of them located between impellers and gears and one at each end of each shaft, so that each shaft is supported on each side of the gears, oil-chambers provided one below each bearing, and a bed-frame containing integrally formed in it the lower half of the inclosure for the impellers and of the inclosure for the gear-chamber, also the lower half of all the shaft-bearings and the oil-chambers connected therewith whereby perfect parallelism of the shafts and alinement of their bearings is obtained by a rigid, one-piece supporting structure.

1,021,181. WINDOW-FRAME. ADOLF MÜLLER DEUTSCHMANN, Eltville, Germany. Filed May 31, 1911. Serial No. 630,849. (Cl. 108—16.)

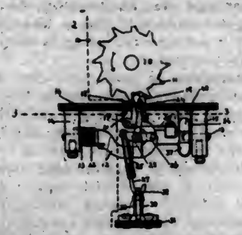
Window and like frames composed of wooden laths covered entirely by metal plate, said plates being bent to

form ledges for the reception of the glass panes, the edges of the plate being lapped, the seam being disposed



so as to be covered by the putty which secures the panes to the frame, substantially as set forth.

1,021,182. TYPE-WRITER ESCAPEMENT. LOUIS P. DISS, Ilion, N. Y. Filed Sept. 3, 1910. Serial No. 580,389. (Cl. 197—88.)



1. In a typewriting machine, a letter spacing escapement having a toothed escapement member, a spacing dog, a holding dog arranged to move in the path of the escapement member and having a movement to effect its engagement with said escapement member and means connecting the said holding dog with the finger keys whereby any movement of said escapement member from printing position is continuously prevented during depression of the finger keys.

2. In a letter spacing escapement for a typewriting machine, a toothed escapement member, a spacing dog, and a holding dog, arranged to move parallel to the plane of the escapement member and having a movement to effect its engagement with said escapement member, and means connecting said holding dog with the finger keys whereby a pressure on said keys will continuously hold the escapement member from any movement from printing position and the removal of the pressure will release said escapement member.

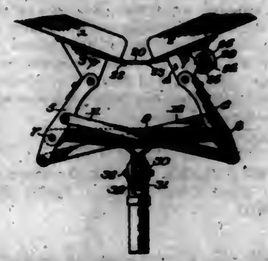
3. In a letter spacing escapement for a typewriting machine, a toothed escapement member, a spacing dog, a holding dog having a movement parallel to the plane of the escapement member and having a movement to effect its engagement with said escapement member, the said movements being actuated by means directly connecting the finger keys and the holding dog, whereby the escapement member will be held from any movement from printing position until the final release thereof begins.

4. In a typewriting machine, a letter spacing escapement having a toothed escapement member, a spacing and a holding dog, the holding dog being arranged to swing parallel to the plane of the toothed escapement member, and having a movement to effect its engagement with said toothed escapement member, and having an arm connected to the finger keys, whereby the movements may be controlled and the escapement member held continuously until the finger pressure is released.

5. In a typewriting machine, a letter spacing escapement having a toothed escapement member, a spacing dog and a holding dog to alternately engage the said toothed escapement member, the holding dog being adapted to hold the escapement member continuously from any movement from printing position during pressure upon the finger keys and arranged to move with and in the path of said escapement member instantaneously with the removal of pressure on the finger keys and means to bring said holding dog into such engagement with said toothed escapement member and for so moving said dog from the path of said escapement member.

[Claims 6 to 26 not printed in the Gazette.]

1,021,183. BOOK-HOLDER. GEORGE J. FLANAGAN, Chicago, Ill. Filed Aug. 31, 1910. Serial No. 579,950. (Cl. 45—85.)



1. In a book holder; the combination of a cross bar, book supporting arms pivoted midway of their length to the ends of the cross bars, and a plurality of links having their ends pivotally attached to the said arms respectively above and below their point of attachment to the cross bars.

2. In a book holder; the combination of a cross bar, book supporting arms pivoted midway of their length to the ends of the cross bars, a plurality of links having their ends pivotally attached to the said arms respectively above and below their point of attachment to the cross bars, book cover supports on the said arms, and flexible means for securing the book cover supports to each other.

3. In a book holder; the combination of a cross bar, book supporting arms pivoted midway of their length to the ends of the cross bars, a plurality of links having their ends pivotally attached to the said arms respectively above and below their point of attachment to the cross bars, book cover supports on the said arms, and flexible means for adjustably securing the book cover supports to each other.

4. In a book holder the combination of cover supports, an equalizing device to connect said supports, flexible devices for adjustably limiting their outward movement, and an adjustable stop to limit the angular movement of said supports.

5. In a book holder; the combination of a plurality of cover supports having downwardly turned adjacent edges, flexible slings to connect the said cover supports, and means for adjusting the length of said slings.

[Claims 6 and 7 not printed in the Gazette.]

1,021,184. WALL-PAPER REMOVER. JAMES H. FOSTER, Cleveland, Ohio, assignor to The Hydraulic Pressed Steel Company, Cleveland, Ohio, a Corporation of Ohio. Filed Dec. 8, 1910. Serial No. 596,181. (Cl. 216—8.)

1. A device of the character set forth comprising in combination a box-like structure having an open front, the side walls thereof having their front portions bent to form a dovetail channel, and a strip of yielding material fitted to said channel and projecting forwardly beyond the edges of said walls.

2. In a device of the character specified, the combination of an open fronted box having a back and forwardly projecting sheet metal sides, said sides being flared outwardly adjacent to their front edges and the metal of which said sides are composed being bent rearwardly, outwardly, and forwardly to form a dove-tailed channel one wall of which is in substantial contact with the outwardly flared portions of the sides, and a strip of flexible or yielding material mounted in said channel and conforming to the shape thereof the forward edge thereof projecting beyond the edges of said sides.

3. In a device of the character specified, the combination of a box-like structure having forwardly projecting sides and a strip of hollow, yielding material applied to said sides, near their front portions, together with means for supplying a heating agent to the interior of said box.

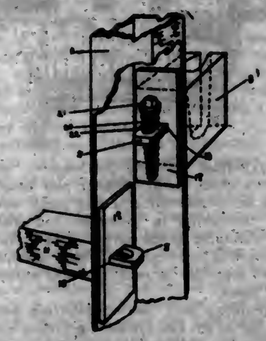


4. In a device of the character specified, the combination of a box-like structure having forwardly projecting sides and a channel extending around the front edge portions of such sides, and a strip of flexible, yielding material applied to said channel, said strip having its inner portion substantially cylindrical in section and provided with a bore extending therethrough, together with means for supplying a heating agent to the interior of said box.

5. A device of the character specified comprising a box-like structure having a downwardly directed trough or receptacle extending from the bottom thereof, and means for supplying condensable vapor to the interior of said structure.

[Claims 6 to 9 not printed in the Gazette.]

1,021,185. CORNER-FASTENING FOR BEDSTEADS. WILLIAM B. FOSTER, Utica, N. Y., assignor to Foster Brothers Manufacturing Company, a Corporation of New York. Filed May 13, 1911, Serial No. 626,983. Renewed Feb. 15, 1912. Serial No. 677,859. (Cl. 5—55.)



1. In a corner fastener for bedsteads, a member having an aperture in its side, a second member having a shoulder adapted to fit against said first member and a projecting tongue extending through said aperture, a recess in said tongue and a tapering screw adapted to be inserted in said recess and bear against the inside of said apertured member on each side of said tongue and draw said shoulder against said first member upon rotation of said screw.

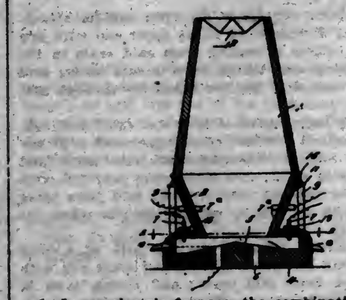
2. In a corner fastening for bedsteads, a post having an aperture in its side, a horizontal member having an eyed tongue projecting from its end through said aperture, a shoulder upon the ends of the horizontal member adapted to fit against said post, and a tapering screw adapted to be inserted in said eye and bear against the inside of said apertured member and draw the horizontal member toward the post upon rotation of said screw.

1,021,186. HYDROCARBON-BURNER. JOHN R. GREEN, Kansas City, Mo. Filed Jan. 31, 1911. Serial No. 605,761. (Cl. 158—75.)



In a hydro-carbon burner, a body having a goose neck portion and a portion with a plane deflecting surface, the body having extending through the goose neck portion an oil duct the discharge end of which is downwardly inclined and substantially perpendicular to and is adapted to discharge a jet against said plane surface, the body having in the portion having the plane surface and in the goose neck portion a steam passage, the discharge end of which discharges into the oil duct toward the discharge end thereof.

1,021,187. ELECTRIC FURNACE. ALBERT E. GREENE, Pueblo, Colo. Filed Apr. 1, 1908. Serial No. 424,507. (Cl. 204—64.)



1. In an electric furnace, the combination with a heating chamber, of a shaft having a bosh at the lower end thereof communicating with said heating chamber through the top thereof, said chamber being organized to provide a free space between the charge and the top of said heating chamber when the charge is introduced into the lower portion of the shaft and into said heating chamber, and electrodes extending through the wall of said chamber into said free space.

2. An electric furnace comprising a shaft the lower end of which is constricted to form a bosh, a heating chamber in which said bosh terminates centrally of said chamber, said chamber having roof walls extending outwardly from said bosh, whereby the charge is prevented from filling said chamber, and electrodes extending through said roof into the free space within said chamber.

3. In an electric furnace, the combination with a shaft having a bosh at the lower end thereof, a heating chamber into which said bosh opens, said heating chamber having a roof extending outwardly as a flange about the lower end of said bosh to provide a free space between the charge and said roof and electrodes extending downwardly through the roof into said free space, whereby the heat generated by the current from the electrodes may be transmitted directly to the charge in the shaft.

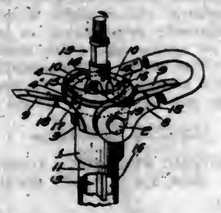
4. An electric furnace comprising an electric smelting chamber provided with electrodes and a shaft arranged on the said chamber and communicating with the same, the shaft being formed to expand upward and the smelting chamber to expand downward from the part through which said chamber and the shaft communicate with each

other, the interior of the smelting chamber being so formed that free space always exists between the walls of said chamber and the charge, and the electrodes being arranged to project from the walls of said chamber through said free space.

5. In an electric furnace, the combination of a shaft having a bosh at the lower end thereof, a smelting chamber beneath the bosh, electrodes in the walls of the smelting chamber, a hearth upwardly inclined toward the center and an annular electrode in its upwardly inclined portion, means for protecting the electrodes from contact with the unsmelted charge and means for maintaining the level of the slag bath in the smelting chamber.

[Claims 6 and 7 not printed in the Gazette.]

1,021,188. PUMP-FITTING. JOHN HAHN, Los Angeles, Cal. Filed June 20, 1910. Serial No. 568,033. (Cl. 166—7.)



1. A head-coupling adapted at its lower end for attachment with tubing and provided at its upper end with jaw seats and with orifices extending from said seats in the rim of the coupling, and tilting jaws in said seats; said jaws being provided with handles extending through said orifices.

2. A head-coupling adapted at its lower end for attachment with tubing and provided at its upper end with jaw seats and with orifices extending from said seats, and tilting jaws in said seats; said jaws being provided with handles extending through said orifices; said jaws being also provided with notches to engage the rim when the jaws are tilted up.

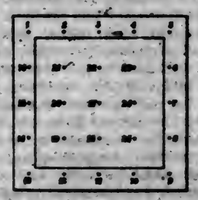
3. The combination with an elevator bail, of a head pivoted to said bail and provided with jaw seats and with orifices extending from said seats; and tilting jaws in said seats; said jaws being provided with handles extending through said orifices.

4. In a pump provided with a sucker rod, the combination with a tubing-head coupling, of an elevator bail pivoted to the head-coupling, and jaws pivotally mounted on the head coupling and adapted to engage the sucker rod to hold the same and to serve as a wrench therefor.

5. The wrench jaw set forth provided with a slot to engage a ribbed sucker rod and also provided with a projection; and a head provided with a seat for said jaw and for said projection.

[Claim 6 not printed in the Gazette.]

1,021,189. ALPHABETICAL SYMBOLS. IRVING HILL, Wallace, Cal. Filed Nov. 18, 1909. Serial No. 528,656. (Cl. 35—13.)



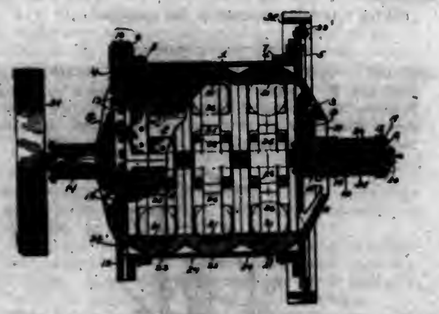
A designating basic form for making symbols for numerals or letters, comprising a square divided into a plurality of points and lines projected to all aligned points, as described.

1,021,190. LUBRICATOR FOR ELEVATOR-GUIDES. JOSEPH H. HIRZ, Milwaukee, Wis. Filed Mar. 27, 1911. Serial No. 617,016. (Cl. 184—22.)



In a device of the described class, the combination with a movable lubricating pad, and a pad inclosing frame, of a resistance member formed of hard fibrous material located at an angle to the vertical within said frame, having its exposed surface substantially flush with the exposed surface of said pad, means for conducting a fluid lubricant to said pad, means for moving said pad over the bearing surface against which said pad rests, and means for yieldingly retaining said pad and resistance member in yielding contact with such opposing surface, substantially as described.

1,021,191. GRINDING-MILL. JAMES B. HOOP, Portland, Colo., assignor of one-half to Whitney Newton, Denver, Colo. Filed Apr. 19, 1910. Serial No. 556,422. (Cl. 83—9.)

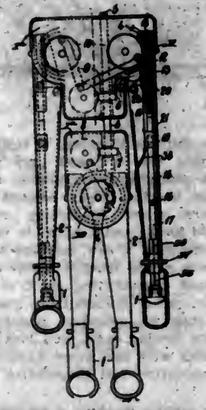


1. In a grinding mill the combination with a drum consisting of a sheet metal cylinder and detachable heads and a series of cylindrical grinding rings having grooves successively increasing in diameter and diminishing in radius from the inlet to the outlet of the mill, or rotating arms, and grinding balls carried by said arms, and adapted to operate on material in said grinding grooves, substantially as set forth.

2. In a grinding mill, the combination with a rotary cylinder, a series of independent grinding rings secured side by side in the cylinder, the grinding grooves of said rings successively increasing in diameter and decreasing in radius from the inlet to the outlet of the mill, and the adjacent faces of said grooves forming flat partitions over which the material passes from one groove to the other, of a rotary shaft, a series of arms secured to said shaft, and grinding balls carried by said arms, substantially as set forth.

3. In a grinding mill, the combination with a rotary cylinder provided at one end with a head having an inlet chute formed therein, and at the opposite end with a head having discharge grooves formed therein, a series of grinding rings secured side by side within the cylinder, the inner faces of said ring being on a plane with the inlet and discharge passages of the cylinder, said rings being provided with grinding grooves of increasing diameter from the inlet to the discharge outlets of the mill, of a rotary shaft, a series of arms secured to the shaft and grinding balls carried by said arms, substantially as set forth.

1,021,192. MILKING-MACHINE. KARL WILHELM JOHANSSON, Kneippbaden, Sweden. Filed Apr. 25, 1911. Serial No. 623,238. (Cl. 31—96.)



1. In a milking machine, the combination with a stationary shield and a movable milking shield for coaction therewith, of means for producing a forward and receding movement to said movable shield with respect to said stationary shield, such means including a toothed sector, means imparting oscillatory movement to said sector, a rack intermeshing with said toothed sector, and a connecting rod structure operatively connecting said toothed sector and said movable milking shield.

2. In a milking machine, the combination with a stationary shield, and a movable milking shield for coaction therewith, of means for producing a forward and receding movement to said second mentioned shield with respect to said stationary shield, such means including a toothed sector, means imparting oscillatory movement to said sector, a casing, a rack carried by said casing and intermeshing with said toothed sector, a spiral spring carried by said casing, and a connecting rod structure operatively connected to said movable milking shield and adapted to receive yieldable movement from the said rack through the resiliency of said spring.

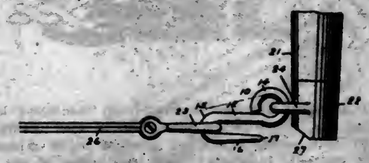
3. In a milking machine, the combination with a stationary shield and a movable milking shield for coaction therewith, of means for producing a forward and receding movement to said second mentioned shield with respect to said stationary shield, such means including a toothed sector, means imparting oscillatory movement to said sector, a casing, a rack carried by said casing and intermeshing with said toothed sector, a spiral spring carried by said casing, a connecting rod structure operatively connected to said movable milking shield, and adapted to receive yieldable movement from the said rack through the resiliency of said spring and means for disalining said connecting rod structure with respect to said spiral spring whereby the former is rendered inactive.

4. In a milking machine, the combination with a stationary shield, and a movable milking shield coacting therewith, of a toothed sector, means imparting oscillatory movement to said sector, a casing, a rack carried by said casing and intermeshing with said toothed sector, a compression spring carried by said casing, adjustable means confining said spring within said casing, at one end thereof, a jointed connecting rod operatively connected to said movable shield, and alined with said compression spring, at the free end thereof, to receive yieldable movement from said rack, a movable bearing for said connecting rod, adjacent the free end of said spring, and means for actuating said bearing laterally, whereby said connecting rod is disalined with respect to said spiral spring for rendering the said rod inactive.

5. In a milking machine, the combination with a stationary shield and a movable milking shield coacting therewith, of a toothed sector, means imparting oscillatory movement to said sector, a casing, a rack carried by said casing and intermeshing with said toothed sector, a compression spring carried by said casing, means confining said spring within said casing, at one end thereof, a jointed connecting rod operatively connected to said movable shield and alined with said compression spring, at the free end thereof, to receive yieldable movement from said rack, a movable bearing for said connecting rod, adjacent the free end of said spring, and means for actuating said bearing laterally whereby said connecting rod is disalined with respect to said spiral spring for rendering the said rod inactive.

[Claims 6 to 13 not printed in the Gazette.]

1,021,193. WHIFFLETREE-HOOK. CHARLES E. JONES, Windsor, Mo. Filed Mar. 14, 1911. Serial No. 614,464. (Cl. 21—79.)



A whiffletree hook having its free end and shank extending horizontally and in parallel planes, a downward extension of said free end of the hook adapted to form a fin, the rear surface of which fin is inwardly curved and its forward surface positioned in rear of the line of the neck of the hook and extended upwardly in a vertical plane.

1,021,194. CIGARETTE-PACKER. MANASSE KARGER, New Orleans, La. Filed May 8, 1911. Serial No. 625,927. (Cl. 131—11.)



1. In an implement for packing cigarettes consisting of a body having a groove therein, the side walls of which are flared upwardly, the said side walls having longitudinally disposed recesses forming seats for the cigarettes, the said side walls partially converging at the end of the body, a bridge extending across the groove at the end of the body, and means for forcing the cigarettes longitudinally of the body.

2. In an implement for packing cigarettes, a body having a groove therein, the side walls of which are provided with recesses forming seats for the cigarettes, the said side walls converging at the end of the recess and the bottom of the recess being inclined at the end thereof forming a restricted opening in the end as compared with the rear of the recess intermediate its length, a confining member above the recess at the end of the body, and means for forcing the cigarettes longitudinally of the recess.

3. In an implement for packing cigarettes, a body having a groove therein, the side walls of which are provided with recesses forming seats for the cigarettes, the said

side walls converging at the end of the recess and the bottom of the recess being inclined at the end thereof forming a restricted opening in the end as compared with the rear of the recess at the end of the body, a plunger having corrugations conforming to the grooves in the side walls of the recess for forcing the cigarettes longitudinally of the body.

4. In an implement for packing cigarettes consisting of a body having a groove therein, the side walls of which are flared upwardly, the said side walls having longitudinally disposed recesses forming seats for the cigarettes, the said side walls partially converging at the end of the body, a bridge extending across the groove at the end of the body, a funnel at an end of and registering with the groove and adapted to deliver the cigarettes into a wrapper, and means for forcing the cigarettes longitudinally of the groove and into the funnel.

1,021,195. SOCKET FOR ELECTRIC LAMPS. GEORGE C. KNAUFF, Chicago, Ill. Filed Oct. 16, 1911. Serial No. 655,049. (Cl. 173—349.)



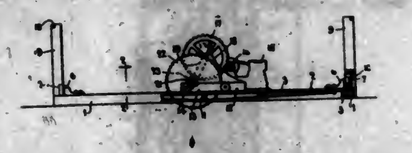
1. In a socket for electric lamps, an insulating body, a casing for the same extended beyond said insulating body at both ends, a pair of parallel bores extending through the said insulating body lengthwise of the casing, each of said bores having a spring-actuated plunger projecting from each end of its bore, means for securing a lamp at one end of the casing in such relation to the insulating body that the lamp terminals will contact with the plungers at one end of the said insulating body, and means for securing a wire-terminal plug to the other end of the casing, the said plug being rotatable so as to bring its terminals into or out of contact with the plungers at that end of the insulating body.

2. In a socket for electric lamps, a cylindrical casing having means at one end for interlocking with the base of a lamp and means at the other end for interlocking with a terminal plug for a pair of wires, in combination with a pair of compressible contact members insulating from each other and from the casing, each of the said contact members being adapted to contact at its opposite ends with a lamp terminal and a plug terminal respectively, the said terminal plug being rotatable so as to bring the plug terminals out of contact with said compressible contacts when the plug is rotated.

3. In a socket for electric lamps, a plug of insulating material, a pair of contacts carried thereby, means for securing the ends of two wires to these contacts respecthe slots in the said casing so as to allow said plug to be to receive the said plug, the said plug interlocking with the slots in the said casing as to allow said plug to be held in either one of two positions, substantially at right angles to each other, the said cylinder having slots at the other end adapted to interlock with projections on the base of a lamp, in combination with a pair of compressible contact members mounted within the casing, one end of the said contact members contacting with the terminals of the lamp base, and the other end of the said contact members contacting with the insulating body of the plug or with the terminals of the plug, according as the plug is in either one of two positions between which it is rotatable.

1,021,196. ICE-SAWING MACHINE. JOSEPH P. KOPETKA, Bloomfield, Nebr. Filed June 15, 1911. Serial No. 633,223. (Cl. 62—8.)

1. In an ice cutting machine a main supporting frame having outer bars forming two sets of tracks at right angles to each other, segmental tracks adapted to be secured in opposite corners of the frame, a wheeled truck mounted on the tracks whereby it may be shifted over the segmental tracks from one set of tracks to the other and adjusted to any desired angle, a wheeled carriage mounted on the truck, saws on said carriage, and a motor on the carriage for operating the saws.



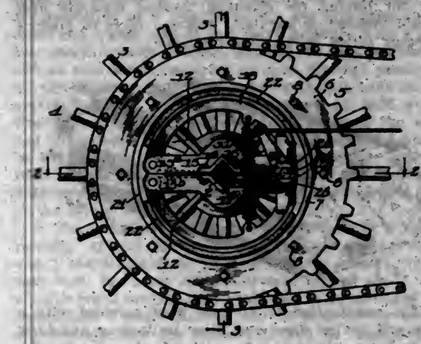
2. In an ice cutting machine, a rectangular supporting frame having side and end bars adapted to form tracks, a truck comprising longitudinal side bars adapted to form tracks, bearing blocks secured to the ends of said truck bars, truck supporting rollers revolubly mounted on said blocks and adapted to travel on the said supporting frame bars, a saw carriage adapted to travel on the track bars of the truck, a motor arranged on said carriage, a power transmitting shaft revolubly mounted on the carriage, power transmitting gears fixed on said shaft and having an operative engagement with the motor shaft, ice cutting saws, and means to operatively connect said saws with said gears whereby the saws may be swung to operative and inoperative position on the carriage.

3. In an ice sawing machine a rectangular supporting frame comprising side and end bars adapted to form tracks, segmental track bars adapted to be removably engaged with the corners of said supporting frame, truss braces connected to said frame, a truck comprising longitudinal supporting bars adapted to form tracks, cross bars connected to the ends of said longitudinal bars whereby the latter are held in parallel spaced relation, guide bars secured to the ends of said longitudinal bars, truss braces secured to the lower sides of said longitudinal bars, truck supporting rollers revolubly mounted on the ends of said truck bars and adapted to engage and travel on the side and end bars of said supporting frame and on said segmental track bars whereby the truck is adapted to be shifted in different directions, a carriage slidably mounted on said truck bars, said carriage comprising side bars, supporting rollers revolubly mounted thereon and adapted to engage the track bars, bearing standards secured to the carriage, a motor arranged on the latter, a power transmitting shaft revolubly mounted on said bearing standards, gears fixedly mounted on said shaft and having an operative engagement with the shaft of the motor, saw supporting bars pivotally connected at their inner ends to said power transmitting shaft whereby said bars may be swung upwardly to inoperative positions, a saw supporting shaft revolubly mounted on the outer ends of said bars and operatively connected with said gears and saws fixedly mounted on said shaft.

1,021,197. VEHICLE DRIVING AND BRAKING MEANS. ALVARO S. KROTZ, Chicago, Ill., assignor to Sears, Roebuck & Company, Chicago, Ill., a Corporation of New York. Filed Dec. 16, 1908. Serial No. 467,864. (Cl. 21—8.)

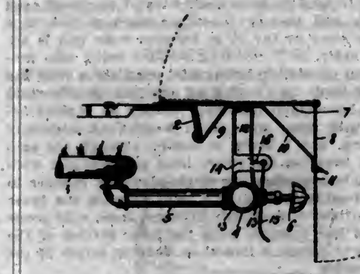
The combination, with a vehicle wheel and an axle, of a braking mechanism for said wheel comprising a brake drum fixed to said wheel, a support consisting of two similar complementary sections forming between them a socket for the axle, means for securing said sections together and clamping them upon the axle, two brake shoes each hinged at one end to one end of one of said sections and adapted to bear against the inner surface of said drum, a shaft mounted in a socket formed between the ends of said sections opposite to the ends

bearing the shoes, a cam on said shaft adapted to engage said shoes to move them into contact with the drum,



means for rocking said shaft, and means for moving said shoes out of contact with the drum.

1,021,198. VALVE-GUARD FOR STOVES. MARIE A. KNUD, Chicago, Ill. Filed June 7, 1911. Serial No. 631,680. (Cl. 126—42.)



1. A valve guard for stoves, comprising a plate, a clamp on the plate adapted to grip the gas pipe and hold the plate in position, a depending shield hinged to the forward edge of the plate, and a catch projecting through the shield from the rear thereof adapted to lock the shield in its lowered position.

2. A valve guard for stoves, comprising a plate, a bracket on the plate adapted to hook beneath the front edge of the stove top, a clamp on the plate adapted to grip the feed pipe for the stove, a shield hinged the plate and adapted to project beneath the valves for the feed pipe, and resilient catches on the plate adapted to engage the shield and hold it in operative position.

3. A valve guard for stoves comprising a plate, a pair of resilient arms extending downwardly from the plate and adapted to grip the gas feed pipe of the stove, a lever pivotally connected to one of said arms and adapted to force the arms toward each other to grip said pipe, an apertured shield hinged to the front of the plate, and a resilient catch supported on said plate and adapted to engage in the apertures in the shield and hold the shield in operative position.

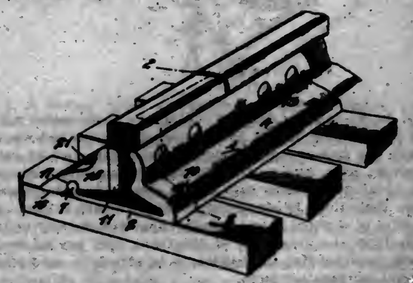
4. A valve guard for stoves, comprising a plate, brackets on the under side of the plate adapted to engage beneath the stove top, resilient arms on the under side of the plate adapted to grip the gas pipe for the stove, means adapted to throw said arms into gripping engagement, a shield hinged to the front edge of the plate and extending beneath said pipe, and means adapted to lock the shield in operative position.

1,021,199. SHUTTLE-BRAKE. JEAN LAFORET, Valence, France. Filed July 15, 1907. Serial No. 383,936. (Cl. 139—29.)



In shuttle brake mechanism for looms the combination of a shuttle box having a slot in its rear side, a movable brake tongue in said slot, an oscillatory arm, a roller carried by said arm, and a spring having an inclined surface between said roller and tongue whereby displacement of the roller increases or reduces the pressure of the tongue in the shuttle box.

1,021,200. RAILWAY-RAIL JOINT. CHARLES P. LANCASTER, Marion, Ind., assignor of one-fourth to William M. Cory and one-fourth to Otis L. Harris, Marion, Ind. Filed Oct. 30, 1911. Serial No. 657,477. (Cl. 239—6.)



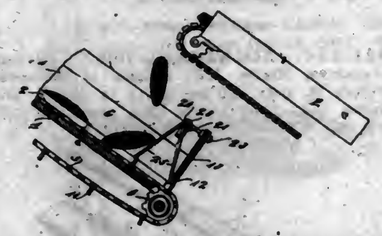
1. A rail joint comprising a chair or stationary member having a base plate of sufficient width to project beyond the opposite side of the base of the rail from that with which the chair member is engaged, a swinging member having a hinged connection with the outer edge of said base plate, said swinging member having formed therein nut receiving recesses and fastening bolts arranged through said chair member and adjacent portions of the rail, said bolts having clamping nuts arranged thereon and engaged by the recesses in said hinged member whereby said nuts are covered and locked.

2. In a rail joint, a stationary or chair member comprising a rail engaging portion and a base plate, said base plate being of sufficient width to project beyond the side of the rail, a fish plate arranged on the opposite side of the rails from the rail engaging portion of the joint, rail fastening bolts arranged through the rails and the fish plate and stationary member of the joint, fastening nuts arranged on said bolts, a swinging member hingedly connected to the base plate of said stationary member and adapted to be swung into engagement with the adjacent rail flange and fish plate, said swinging member having formed therein recesses adapted to engage the nuts on said bolts whereby said nuts are covered and locked.

3. A rail joint comprising a stationary member having a trussed rail engaging portion and a base plate, said member having formed therein spike holes, a fish plate engaged with the opposite side of the rail from the rail engaging portion of said stationary joint member, rail fastening bolts arranged through the rail engaging portion of said member, said fish plate and the web of the rail, fastening nuts arranged on the bolts, an upwardly projecting longitudinally disposed rib formed on the outer edge of said base plate, said rib forming one member of a hinged connection, a locking stud formed on said rib, a swinging joint member comprising a base portion having formed therein a longitudinal groove, and a transverse

notch adapted to be engaged with said rib and stud on the base plate of the chair member of the joint whereby said swinging member is hingedly connected to said chair member, a rail engaging portion formed on said hinged member, said portion being adapted to be swung into engagement with said rail flange and the outer side of said fish plate and having formed therein recesses adapted to fit over the nuts of said rail fastening bolts whereby said nuts are covered and locked, said rail engaging portion having formed therein spike holes adapted to register with similar holes formed in the base plate of the chair member whereby said members may be spiked to the ties.

1,021,201. CHUTE ATTACHMENT FOR CORN-SHELLERS. NELS L. LARSON, Villisca, Iowa. Filed Nov. 13, 1911. Serial No. 659,954. (Cl. 193—14.)



1. In an agitator for feed chutes, the combination with the trunk whose bottom has a series of grooves and whose lower end has an opening across the lower ends of said grooves; of a series of chains moving upward through the opening and along said groove and having pins rising from their links in staggered relation to each other, and a series of shifting bars pivotally supported at their upper ends from the lower end of the trunk and having their lower ends hanging in position to be struck by said pins, for the purpose set forth.

2. In an agitator for the feed chutes of corn shelling machines, the combination with an elevator; of a chute to which said elevator delivers, said chute having closed sides and lower end and a corrugated bottom, and said lower end having an opening opposite the grooves in said corrugations, sprocket wheels across the extremities of said chute, endless chains passing around said wheels and along the grooves of the corrugations and having pins rising from their links in staggered relation to each other, a pivotal support carried by the trunk of the chute at its lower end, a series of collars thereon, and a series of shifting bars having eyes at their upper ends mounted on said support between said collars and flat bodies hanging from the eyes and adapted to be struck by said pins, for the purpose set forth.

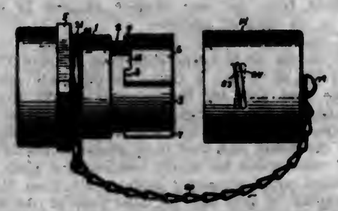
1,021,202. CUTTER-HEAD. CALVIN D. MARSH, Williamsport, Pa.; Frank F. Stryker, administrator of said Marsh, deceased, assignor to Hermance Machine Co., Williamsport, Pa., a Corporation of Pennsylvania. Filed Mar. 31, 1910. Serial No. 552,720. (Cl. 144—230.)

1. The combination of a cutter head provided with a groove having spaced inner and outer inclined or angularly related faces at one side wall of the groove and provided with a blade receiving face at the opposite side wall of the groove, a blade arranged within the groove and fitted against the said blade receiving face, a clamping member arranged in the groove and having one of its faces conforming to the configuration of and fitted against the blade, its other side face being provided with inner and outer spaced inclined or angularly disposed portions engaging the inclined or angularly disposed faces of the cutter head and adapted to produce a clamping action on both the inner and outer portions of the blade and to cause the inner portion of the clamping member to tend to force itself back of the inner edge of the blade and constitute more or less of a stop for the same as the blade becomes worn and is adjusted outwardly, and a screw for forcing the clamping member inwardly over the said inclined or angularly disposed faces to produce a wedging action in clamping the blade.



2. The combination of a cutter head provided with a groove and having inner and outer inclined or angularly related faces at one side wall of the groove, the opposite side wall of the groove having a continuous blade receiving face, a blade fitted against the wall having the blade receiving face, a clamping member arranged in the groove and having inner and outer tapered or wedge-shaped portions presenting inclined or angularly related faces to the inclined or angularly related faces of the cutter head and arranged to produce a clamping action at both the inner and outer portions of the blade and to cause the inner portion of the clamping member to tend to force itself back of the inner edge of the blade and thereby constitute more or less of a stop for the same as the blade becomes worn and is adjusted outwardly, said clamping member being also provided with an opening in substantial parallelism with the plane of the blade and having an enlarged outer portion forming an intermediate shoulder located at a point between the said inner and outer inclined or angularly disposed faces, and a screw extending through the said opening and engaging the cutter head and provided with a head engaging the shoulder of the clamping member to produce a pressure thereon at a point between the inner and outer inclined or angularly disposed faces, said screw being also of less diameter than the inner portion of the said opening to permit a lateral or wedging action of the clamping member.

1,021,203. CLOSURE FOR VACUUM SERVICE-INLETS. FRANK J. MATCHETTE, Milwaukee, Wis. Filed May 2, 1910. Serial No. 558,889. (Cl. 137—76.)

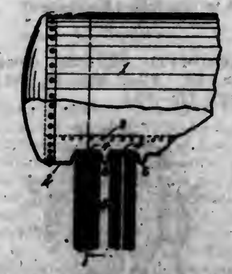


1. The combination with the service inlet of a vacuum cleaning system provided with lugs and recesses to comprise one member of a pipe coupling, of a closure therefor consisting of a member having one end open and its other end closed, said closure being provided with a packing member inside thereof, adapted to seat against the end of said inlet, and with internal projections on the interior thereof to coact with the lugs on said service inlet to prevent displacement of said closure when the pressures on opposite sides of the closed end thereof are equalised, said closure being adapted to be slipped over the end of the service inlet to seal said inlet and to be more effective as a seal the greater the difference between the pressures on the opposite sides of the closed end thereof.

2. The combination with the service inlet of a vacuum cleaning system provided with lugs and recesses to comprise one member of a pipe coupling, of a closure therefor consisting of a member having one end open and its other end closed, said closure being provided with a packing member inside thereof, adapted to seat against the end of said inlet, and with inclined internal projections on the interior thereof to coact with the lugs on said service inlet to prevent displacement of said closure when the pressures on the opposite sides of the closed end thereof are equalized, said closure being adapted to be slipped over the end of the service inlet to seal said inlet and to be more effective as a seal the greater the difference between the pressures on the opposite sides of the closed end thereof.

3. The combination with the service inlet of a vacuum cleaning system provided with the upstanding lugs 6 and 7 and longitudinal recesses 3 and 4 located between said lugs, the outer surface of said lugs 6 and 7 being of cylindrical contour and said lugs being provided with projections 8 and 9 and 10 and 11 respectively between which projections are recesses 12 and 13 respectively in lugs 6 and 7, of a closure for said service inlet consisting of a member having one end open and its other end closed and a packing member inside of said closure adapted to seat against the end of said inlet, the said closure being provided with internal projections on the interior thereof disposed at an angle as shown and described, the said closure being adapted to be slipped over the end of the service inlet with the projections on the interior thereof passing between the lugs 6 and 7 and adapted to be partially rotated to bring the projections on the interior thereof against the aforesaid projections on the said lugs to prevent accidental displacement of said closure.

1,021,204. MEANS FOR ATTACHING WATER-TUBES TO WATER-TUBE BOILER AND OTHER DRUMS. WILLIAM D. MCNAULL, Toledo, Ohio. Filed July 31, 1911. Serial No. 641,615. (Cl. 122—27.)

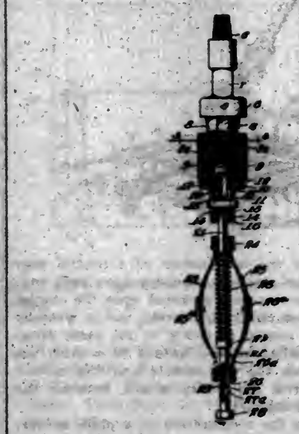


1. In a device of the described character, a drum having, at intervals, along one side, flattened portions having holes for the reception of the ends of tubular members, the wall of the drum being transversely crimped between the neighboring flattened portions, said crimps being U-shaped in transverse section and arched longitudinally in an arc—substantially—of the transverse outline of the drum.

2. In a device of the described character, a drum having, at intervals along one side, transverse flattened portions in which are groups of holes, said drum being outwardly and transversely crimped between the neighboring flattened portions in substantially an arc of the transverse outline of the drum, and tubes connected with said holes.

1,021,205. DRIVE-DOWN-CASING SPEAR. EDWARD L. MILLS, Los Angeles, Cal. Filed May 28, 1911. Serial No. 629,004. (Cl. 166—7.)

1. A casing spear, comprising a mandrel having downwardly converging ways thereon, slips adapted to move longitudinally on the ways, a cylindrical member depending from the lower end of the mandrel, a sleeve slidably mounted on said member and having a flange on its upper end on which the slips rest, and means for frictionally engaging with the casing to move the sleeve on the cylindrical member.



2. A casing spear, comprising an upper mandrel provided with ways thereon converging downwardly toward each other, slips adapted to move longitudinally on the ways, a cylindrical member depending from the lower end of the upper mandrel and having a transverse slot therethrough and having a vertical bore therein, a sleeve of some vertical extent slidably mounted around the cylindrical member and having a flange on its upper end on which the slips rest, a lower mandrel having its upper end in the bore in the cylindrical member and extending downwardly therefrom, a key engaging tightly with both the sleeve and the lower mandrel and passing through the slot in the cylindrical member, a resiliently expansible member slidably mounted on the lower mandrel, and means to lock said member in place on the lower mandrel.

3. A casing spear, comprising an upper mandrel having ways thereon converging downwardly toward each other, casing engaging slips adapted to move longitudinally on the ways, a cylindrical stud projecting downwardly from the lower end of the mandrel and having a transverse slot and a longitudinal vertical bore therein, and having an enlarged head on its lower end, a lower mandrel having its upper end loosely entered into the said longitudinal bore, a transverse key passing tightly through the sleeve and the upper end of the lower mandrel and through the transverse slot in the stud, a resiliently expansible member loosely mounted on the lower mandrel, spring means for supporting said member on the mandrel, and catch means for locking the expansible member from upward movement.

1,021,206. TROLLEY-POLES FOR ELECTRIC TRACTION SYSTEMS. EDWARD MAY MUNRO, London, England, assignor of one-half to The R. E. T. Construction Company, Limited, London, England. Filed Apr. 20, 1911. Serial No. 624,075. (Cl. 191—40.)

1. In a trolley-base the combination of a central support, a plate or carrier pivotally mounted upon such support, a plurality of pole-sockets mounted upon the carrier and capable of rotation relatively thereto and means whereby said pole-sockets are caused to rotate in the same direction and through similar angles.

2. In a trolley-base the combination of a central support, a plate or carrier pivotally mounted upon such support, a plurality of pole-sockets mounted upon the carrier and capable of rotation relatively thereto, means whereby said pole-sockets are caused to rotate in the

same direction and through similar angles and springs to control the rotary motion between the pole-sockets and the carrier.



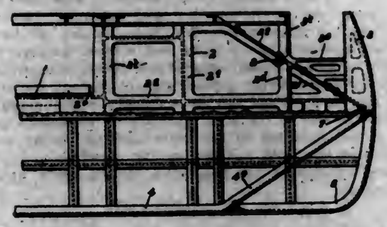
3. In a trolley-base the combination of a central support, a plate or carrier pivotally mounted upon such support, a plurality of pole-sockets mounted upon the carrier and capable of rotation relatively thereto, means whereby said pole-sockets are caused to rotate in the same direction and through similar angles, springs to control the rotary motion between the pole-sockets and the carrier and a spring to control the rotary motion between the carrier and the fixed support.

4. In a trolley-base the combination of a plate or carrier, a plurality of pole-sockets mounted upon the carrier and capable of rotation relatively thereto and gearing connecting the pole-sockets so that they rotate in the same direction and through similar angles.

5. In a trolley-base the combination of a plate or carrier, a plurality of pole-sockets mounted upon the carrier and capable of rotation relatively thereto, springs mounted upon the carrier so that they do not rotate with the sockets, operative connections between the springs and the sockets so that they tend to raise the poles carried by said sockets and gearing connecting the pole-sockets so that they rotate in the same direction and through similar angles.

[Claims 6 to 9 not printed in the Gazette.]

1,021,207. CAR CONSTRUCTION. HARRY M. PFLAGER, St. Louis, Mo. Filed Apr. 3, 1911. Serial No. 618,619. (Cl. 105—69.)



1. An underframe casting having a centrally arranged triangular projection extending under the platform, and castings forming a portion of a buffer beam and platform, said castings being secured on each side of said extension.

2. An underframe casting having a centrally arranged triangular projection extending under the platform, said casting having a transverse member forming a section of an end sill, and castings secured on each side of said first mentioned casting and forming continuations of said end sill, platform castings and a buffer beam.

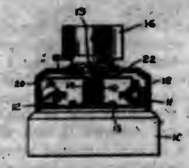
3. In car construction an underframe comprising an apical member, and a sectional buffer beam secured to the apex thereof.

4. An underframe casting having a centrally arranged triangular projection extending under the platform, a sectional buffer beam secured to each side of the extremity of said casting, a platform section integral with said buffer beam, and draft sills integral with said triangular casting.

5. A roof structure having apical ends, and corner members secured thereto and preserving the contour of the roof.

[Claims 6 to 11 not printed in the Gazette.]

1,021,208. ROTARY SNAP-SWITCH. CLARENCE D. PLATT, Bridgeport, Conn. Filed Oct. 27, 1911. Serial No. 657,118. (Cl. 175—290.)

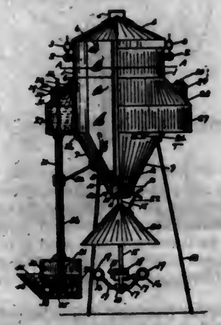


1. In a switch of the character described, the combination with a slotted spindle and a clip engaging said spindle and carried thereby, of a dial having projections engaging the clip and means for holding the parts in engagement.

2. In a switch of the character described, the combination with a spindle and a clip rigidly engaging said spindle and having parallel sides, of a dial resting on the clip and having projections engaging the sides of the clip and means for retaining the parts in engagement, the clip acting to retain the dial against rotation independently of the spindle and the projections on the dial preventing the clip from spreading.

3. In a switch of the character described, the combination with a spindle threaded at its upper end and having slots on opposite sides and a clip engaging said slots, of a dial resting on the clip and having projections engaging the sides of the clip and a nut on the spindle whereby the parts are held in interlocked engagement.

1,021,209. AUTOMATIC FEEDER. THOMAS M. PLATT, Philadelphia, Pa. Filed Mar. 31, 1911. Serial No. 618,064. (Cl. 119—70.)



1. In apparatus of the character described, a hopper having a feed discharge opening, a valve seat approximate said opening, a substantially spherically shaped valve member having an aperture and having universal movement on said seat, a member supported by and hung from said valve member for oscillating said valve member, whereby said aperture is brought into communication with said discharge opening, and a tempter device whereby said member may be actuated.

2. In apparatus of the character described, a hopper having a plurality of compartments and a feed discharge opening, a pendulum valve member having a plurality of passages controlling communication between said discharge opening and said compartments, and a tempter device whereby said valve member may be actuated.

3. In apparatus of the character described, a hopper having a plurality of compartments and a feed discharge opening, a pendulum valve member having a plurality of passages controlling communication between said discharge opening and said compartments, a tempter device whereby said valve member may be actuated, and a perforated diaphragm intervening between each of said compartments and said valve member.

4. In apparatus of the character described, the combination with a hopper having a feed discharge opening, of a feed controlling diaphragm in said hopper above said discharge opening, a valve member disposed between said diaphragm and said discharge opening, a pendulum rod depending from and supported by said valve member, and a tempter device whereby said rod may be actuated.

5. In apparatus of the character described, the combination with a hopper having a feed discharge opening, of a pendulum valve member controlling said opening, a pendulum rod depending from and supported by said valve member, a tempter device whereby said rod may be actuated, and a deflector movable with said rod.

[Claims 6 to 16 not printed in the Gazette.]

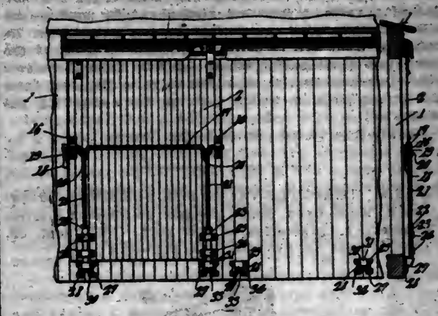
1,021,210. GLOVE. PETER P. REISENHUS and VICTOR SUTHERLAND, Chicago, Ill., assignors to The American Glove Company, Chicago, Ill. Filed June 30, 1910. Serial No. 569,797. (Cl. 2—9.)



In a glove, the combination of a blank having a narrow thumb opening, the edges of which lie in the plane of the palm, a thumb piece, and outer and inner reinforcing members each having on one side triangular cuts, the arrangement of the parts being such that the apices of the triangular cuts of the outer and inner reinforcing members and the crotch of the thumb coincide at a common point, the bifurcated portion of the outer reinforcing member formed by the triangular cut is disposed on the inside of the glove, whereby three thicknesses of material are disposed over the ball of the thumb, and the inner reinforcing member is disposed on the inside of the glove above the thumb and connected on either side to the bifurcated portion of the outer reinforcing member.

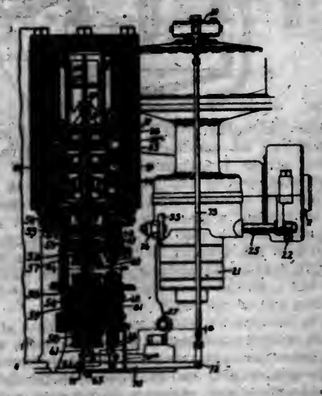
1,021,211. CAR-DOOR FASTENER. ROBERT J. RENFIE, Moores Forks, N. Y., assignor of one-half to William F. Kennedy, Champlain, N. Y. Filed Feb. 20, 1911. Serial No. 609,747. (Cl. 70—102.)

The combination with a car having a doorway, and a vertically swinging, sliding door, of a projection upon the car, at one side of the doorway, the projection being engageable by the door, to aline the door approximately with the doorway, when the door is slid, the projection having an opening adapted to receive locking means, bearings upon the door adjacent its edges, one bearing being opposite the projection, to reinforce the door and at its point of engagement with the projection; a shaft journaled for rotation in the bearings; a lever upon one end of the shaft, having an opening adapted to receive the projection, thereby to hold the shaft against rotation; a bolt slidable upon the door; means upon the car to receive the



bolt; and an operative connection between the bolt and the shaft.

1,021,212. GOVERNING MEANS FOR ELASTIC-FLUID TURBINES. RICHARD H. RICE, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Sept. 20, 1907. Serial No. 393,806. (Cl. 121—118.)



1. In a governing mechanism for turbines, the combination of a plurality of individual valves, a stem common thereto, a lost motion connection between the valves and the stem, the amount of lost motion between them progressively increasing toward one end of the stem, and means responsive to load changes which actuates the stem to move the valves successively.

2. In a governing mechanism for turbines, the combination of a plurality of individual valves, a stem upon which the valves are loosely mounted, means on the stem for moving the valves one after the other, a motor for actuating the stem, and a load responsive device for controlling the motor.

3. In a governing mechanism for turbines, the combination of a plurality of individual valves, seats therefor, a stem upon which the valves are loosely mounted, abutments on the valve stem which have different spacing than the valve seats to cause successive opening and closing of the valves, a fluid actuated motor for moving the stem, a pilot valve controlling the motor, and a governor controlling the valve.

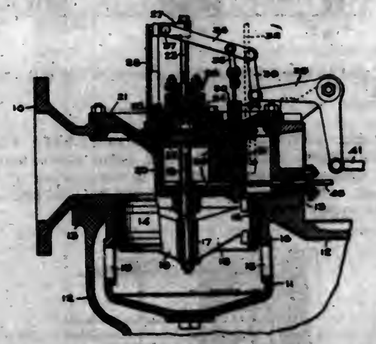
4. In a governing mechanism for turbines, the combination of a plurality of individual valves, a stem upon which the valves are loosely mounted, means on the stem for moving the valves one after the other, a motor for actuating the stem, a load responsive device for controlling the

motor, and a follow-up device for preventing over-travel of the motor and the valves.

5. In a governing mechanism for turbines, the combination of a valve, a fluid actuated motor for moving the valve, a pilot valve controlling the motor which in its initial position admits motive fluid to both sides of the motor piston, means for exhausting fluid from the motor which becomes effective when the valve is displaced from said initial position, and a governor for controlling the valve.

[Claims 6 to 19 not printed in the Gazette.]

1,021,213. THROTTLE-VALVE FOR TURBINES. RICHARD H. RICH, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Sept. 22, 1909. Serial No. 518,926. (Cl. 121—118.)



1. The combination with a turbine having a steam chest provided with an opening, of a throttle valve, a casing therefor having a cylindrical lower portion depending through said opening and provided with ports, a tubular valve movable in said casing, a lid for the casing, a cylinder on the lid, a piston in the cylinder, a piston rod which also forms a stem for the valve and projects outwardly from the cylinder, a valve controlling the supply of motive fluid to the cylinder, a lever for operating said valve, and a pivotal connection between the lever and the projecting end of the rod.

2. The combination with a turbine having a steam chest provided with an opening, of a throttle valve, and a casing therefor having a cylindrical lower portion depending through said opening and provided with ports, a tubular valve movable in said casing, a lid for said casing, a cylinder carried by the lid, a piston in said cylinder, and a stem connecting said piston and valve, said valve having a certain amount of lateral play on said stem.

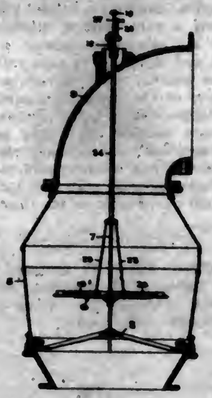
3. The combination with a low pressure turbine, of a throttle valve for controlling the admission of motive fluid to the turbine, a casing for the valve, a cylinder carried by the casing, a piston in the cylinder, a piston rod which is also connected to the turbine valve and forms a stem for the latter, a source of high pressure steam, a valve for controlling the supply of high pressure steam from said source to the cylinder to operate the piston, a lever for operating said cylinder valve, a speed responsive device connected to the lever, and a pivotal connection between the lever and the piston rod.

4. The combination with a turbine, of a throttle valve therefor, a casing for the valve, a cylinder carried by the casing, a piston in the cylinder for operating said valve, a piston rod which also forms a stem for the valve, a pilot valve for controlling the admission of steam to the cylinder to operate said piston, a speed responsive device for operating the pilot valve, and follow-up connections between the pilot valve and the piston rod.

5. The combination with a casing having a flanged nozzle and a cylindrical lower portion provided with ports, of a tubular valve controlling said ports, a lid for said casing having an integral cylinder, a piston in said cylinder connected with said valve, a piston rod, a floating lever pivoted to said rod, a pilot valve for said cylinder connected with said lever, and a bellcrank lever mounted on the casing and pivotally connected with said floating lever.

[Claim 6 not printed in the Gazette.]

1,021,214. GOVERNOR FOR AIR-COMPRESSORS. RICHARD H. RICH, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Sept. 18, 1911. Serial No. 649,907. (Cl. 230—24.)



1. The combination with an air compressor, of governing mechanism therefor comprising a float which rides upon the body of fluid passing through said compressor, and means for varying the effective area of said float.

2. The combination with an air compressor, of governing mechanism therefor comprising a float which rides upon the body of fluid passing through said compressor, said float consisting of a disk, and means for increasing and decreasing the surface of said disk.

3. The combination with an air compressor, of governing mechanism therefor comprising a float located in a conduit through which air passes, comprising a disk, and means for expanding and contracting the same.

4. The combination with an air compressor having an air carrying conduit, of governing mechanism therefor comprising a float located in the conduit and comprising a main disk, an auxiliary disk of normally larger area than the main disk, and means for decreasing the size of said auxiliary disk.

5. The combination with an air compressor, of governing mechanism therefor comprising a float in a conduit of the compressor which comprises a main disk, an auxiliary disk composed of sectors, and means for shutting and opening said sectors.

[Claims 6 to 10 not printed in the Gazette.]

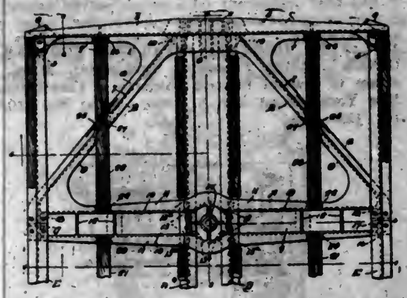
1,021,215. UNDERFRAME. JOHN M. ROHLFING, St. Louis, Mo., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed Aug. 10, 1910. Serial No. 576,577. (Cl. 105—76.)

1. In a car underframe, a unitary structure comprising a bolster, braces cast integral therewith and provided with stringer pockets, an end sill cast integral with the braces and a separately formed center sill connecting the bolster to the end sill.

2. In a car underframe, a unitary structure comprising a bolster, braces cast integral therewith and provided with stringer pockets, an end sill cast integral with the braces, and separately formed center sills extending through the bolster and connecting the same to the end sill.

3. In a car underframe, a unitary structure comprising a bolster, braces cast integral therewith and provided

with stringer pockets, an end sill cast integral with the braces, and separately formed center sills extending beyond the bolster and abutting against the end sill and connecting the bolster to the end sill.

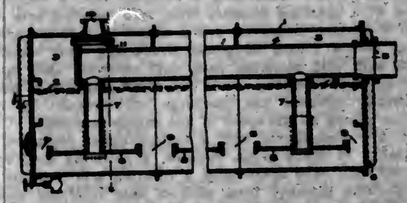


4. In a car underframe, a unitary structure comprising a cast bolster, braces cast integral therewith and provided with stringer pockets, a cast end sill cast integral with the braces, and rolled center sills extending through the bolster and connected to the bolster and end sill.

5. In a car underframe, a unitary structure comprising a cast bolster, braces cast integral therewith, a cast end sill cast integral with said braces and provided with stringer pockets, and separately formed side and center sills extending beyond the bolster and abutting against the end sill.

[Claims 6 to 19 not printed in the Gazette.]

1,021,216. HEAT-ACCUMULATOR FOR LOW-PRESSURE FLUID. FREDERICK SAMUELSON, Rugby, England, assignor to General Electric Company, a Corporation of New York. Filed Dec. 14, 1908. Serial No. 467,508. (Cl. 121—95.)



1. A heat accumulator for supplying low-pressure motive fluid comprising a casing having a conduit located within it which receives the vapor supplied to the accumulator from some suitable source, a second conduit delivering vapor from the first conduit into a body of liquid in the casing, means adjacent the outlet of the second conduit for mixing the vapor and liquid and for preventing said vapor from rising directly to secure an effective interchange of energy between them, and means for conveying motive fluid from the casing.

2. A heat accumulator for supplying low-pressure motive fluid comprising a casing having a conduit arranged in the vapor space thereof and receiving the vapor which is supplied to the accumulator from some suitable source, a plurality of conduits leading downward from the first conduit to deliver said vapor into a body of liquid in the casing, means adjacent the lower ends of the second conduits for mixing the vapor and liquid and for preventing said vapor from rising directly to secure an effective interchange of heat between them, and means for conveying motive fluid from the casing.

3. A heat accumulator for supplying low-pressure motive fluid comprising a cylindrical casing having a horizontal conduit arranged in the vapor space thereof and receiving the vapor supplied to the accumulator from some suitable source, a plurality of vertical conduits leading downward from the horizontal conduit to deliver said vapor into a body of liquid in the casing, perforate means adjacent the lower ends of said vertical conduits for mixing the vapor and the liquid and for preventing said vapor from rising directly to facilitate the interchange of heat between them, and means for conveying motive fluid from the casing.

4. A heat accumulator for supplying low-pressure fluid comprising a casing having a horizontal conduit situated in the vapor space in the upper portion thereof and receiving vapor from a suitable source, such as the exhaust of a prime mover, a plurality of vertical conduits spaced apart and leading downward from the horizontal conduit which deliver all the vapor from it into a body of liquid contained in the casing, perforated plates surrounding the outlets of said vertical conduits which cause the vapor to spread laterally and mix with the liquid, thereby facilitating the interchange of heat, and means for conveying motive fluid from the vapor space of the casing.

5. A heat accumulator for supplying low-pressure fluid comprising a casing containing water and steam spaces and having a horizontal conduit arranged in the steam space in the upper portion of the casing and receiving steam from a suitable source, such as the exhaust of a prime mover, said conduit being closed to the steam space, a plurality of horizontal perforated plates extending across the lower portion of the water space of the casing which spread the vapor laterally before it can rise, there being spaces between adjacent transverse edges of the plates to provide openings for circulation, vertical conduits leading downward from the horizontal conduit which deliver all the steam from said conduit through the center of said plates to the region below, and means communicating with the steam space for conveying motive fluid from the casing.

1,021,217. CANOPY FOR DRAFT-ANIMALS. FREDRICK H. CROCKER and PRIMROSE EVANS SHERIDAN, Cambridge, Mass. Filed Sept. 9, 1911. Serial No. 648,454. (Cl. 54—80.)



1. In a canopy for draft animals, an articulating body frame constructed with two-part side pieces and a two-part middle piece; the parts of each side piece being hinged together at the upper side of their inner ends, so as to fold upwardly and unfold downwardly and having fastening means on the underside of their inner ends for securing them in extended position, and arched cross ribs pivoted to the side pieces; the parts of the middle piece being hinged together at the upper side of their inner ends, so as to fold upwardly and unfold downwardly, and hinged on the underside to the arched cross ribs for securing them in extended position.

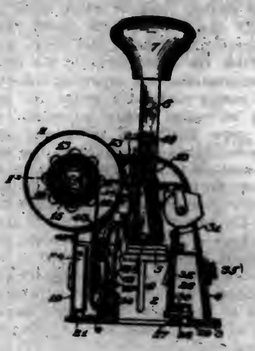
2. In a canopy for draft animals, an articulating body frame constructed with side pieces, a pair of overhanging supports on the forward extremities of the fore parts of the side pieces, a neck and head frame having an arched bracket pivoted to its inner end and means for suspending the neck and head frame by the arched bracket from the overhanging supports.

3. In a canopy for draft animals, a neck and head frame constructed with side bars, an arched bracket pivoted to the inner end of the side bars, arched cross ribs pivoted to the side bars and a forwardly extending strip secured to the side bars.

4. In a canopy for draft animals, a neck and head frame constructed with side bars, an arched bracket pivoted to the inner end of the side bars, arched cross ribs pivoted to the side bars, a forwardly extending strip secured to the side bars, and means for securing the neck and head frame to the head of the animal.

5. In a canopy for draft animals, the combination of a body frame, a neck and head frame constructed with side bars, an arched bracket pivoted to the inner end of the side bars, arched cross ribs pivoted to the side bars, a forwardly extending strip secured to the side bars, and means for suspending the neck and head frame by the arched bracket from the body frame.

1,021,218. STAMP-AFFIXER. BENNETT D. STRAIGHT, Rochester, N. Y., assignor to Multipost Company, Rochester, N. Y., a Corporation of New York. Filed Aug. 15, 1911. Serial No. 644,238. (Cl. 216—28.)



1. In a stamp affixer, the combination with a stamp guideway and mechanism for feeding a stamp strip along said way and affixing it to an article, of arresting means coöperating with the stamp strip and adapted to be actuated thereby to lock the feeding mechanism when said stamp strip is displaced in the guideway.

2. In a stamp affixer, the combination with a stamp guideway and a reciprocatory feeding and affixing mechanism for advancing a stamp strip along the guideway into affixing position, of a locking mechanism coöperating with the stamp strip adapted to be set into operative position to lock the feeding and affixing mechanism by a pull exerted on the projected end of the stamp strip.

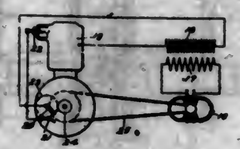
3. In a stamp affixer, the combination with a stamp container, a stamp feeding mechanism, an affixing mechanism and means for directing a stamp strip from the container while it is advanced by the feeding mechanism into a position to be engaged by the affixing member, of means for locking the feeding mechanism, said means coöperating with the stamp strip and adapted to be moved into operative position by tension applied to the stamp strip by pulling its free end projected into affixing position.

4. In a stamp affixer, the combination with a holder adapted to contain a strip of stamps, a stamp feeding device and an affixing member reciprocating together, and means for guiding the stamp strip into operative position to be engaged by the feeding device and when advanced thereby to project its extremity into the path of the affixing member, of means for preventing movement of the feeding device and affixing member, said means coöperating with the stamp strip and adapted to be adjusted into operative position by movement of the stamp strip caused by tension imparted thereto when an attempt is made to draw it forwardly by pulling on its free end.

5. In a machine for affixing stamps to articles, the combination with a reciprocating affixing member and a feeding device movable therewith adapted to advance a stamp strip step by step and project its free end into affixing position, of means for supporting a stamp strip in operative position relatively to the feeding device and directing its free end into the path of the affixing member, said supporting means being so arranged to guide the stamp strip that a tension applied to the free end of the stamp strip will displace it relatively to its normal position, and an arresting mechanism adapted to be actuated by the stamp strip when so displaced to limit the movement of the feeding device.

[Claims 6 to 35 not printed in the Gazette.]

1,021,219. IGNITING APPARATUS FOR GAS-ENGINES. ELIHU THOMSON, Swampscott, Mass., assignor to General Electric Company, a Corporation of New York. Filed Apr. 5, 1906. Serial No. 310,034. (Cl. 123—148.)



1. The combination with an explosive engine, of sparking terminals for igniting the explosive charge of said engine, means for developing electrical energy for supplying said sparking terminals, and means for determining the instant at which said energy is delivered to said terminals and for automatically advancing the discharge with respect to the engine piston as the speed of the engine increases including a rotating arm and a receiving shoe, said shoe being curved away from the arc of the rotating arm.

2. The combination of an explosive engine, a dynamo for developing energy to explode the charge of said engine, and automatic means for advancing the time of explosion as the speed of the engine increases including a rotating arm and a movable receiving shoe, said shoe being curved away from the arc of the rotating arm and at a sparking distance therefrom.

3. In an igniting system for explosive engines, a current distributer comprising a rotating arm, a receiving shoe at a sparking distance from said rotating arm but out of contact therewith, and a circuit including a spark plug and a source of power connecting said rotating arm with said receiving shoe, said receiving shoe being curved away from the arc of the rotating arm as to automatically advance the discharge with respect to the engine piston as the speed of the engine increases.

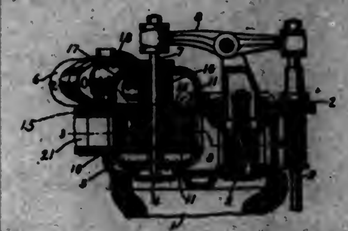
4. The combination with a multi-cylinder engine, of a plurality of spark plugs therefor, a receiving shoe connected with each spark plug, a rotating arm movable to a sparking distance from each of said receiving shoes, and a source of electrical energy for causing current to jump from said rotating arm to each of said shoes in succession, said receiving shoes being curved away from the arc of the rotating arm so as to automatically advance the discharge with respect to the engine piston as the speed of the engine increases.

5. The combination with an explosive engine, of a source of electrical energy delivering a peaked current wave, and a circuit connected therewith including a spark plug, a rotating arm and a receiving shoe at a sparking distance away from said arm, said shoe being curved away from the arc of the rotating arm so as to automatically advance the discharge with respect to the engine piston as the speed of the engine increases.

1,021,220. VAPORIZER FOR INTERNAL-COMBUSTION ENGINES. ELIHU THOMSON, Swampscott, Mass., assignor to General Electric Company, a Corporation of New York. Filed July 14, 1906. Serial No. 326,171. (Cl. 48—102.)

1. An internal combustion engine, in combination with a vaporiser for the motive fluid having a plurality of passages of different sizes through which the exhaust gases may flow, and a means for controlling the flow through said passages to regulate the temperature of the incoming charge of motive fluid.

2. In an engine, an exhaust chamber, a valve seat at one end of the chamber, an exhaust valve engaging said seat and having its stem extending centrally through the chamber, a heater or vaporiser surrounding the stem in the chamber having passages for the motive fluid and exhaust gases respectively, including a by-pass through which the exhaust gases may flow, and a means for controlling the flow through said by-pass to regulate the temperature of the incoming charge of motive fluid.

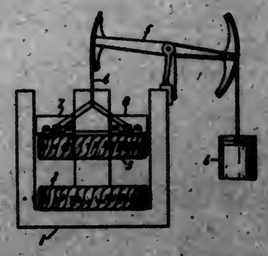


3. A vaporizer for the motive fluid of an engine having a body portion, perforated heads extending across the body portion, a series of hollow members connecting the heads to form exhaust passages through the vaporizer from the perforations of one head to those of another, a cylindrical projection on one head, a rotary damper mounted on the projection to move over the surface of said head to open and close the passages to control the flow of the exhaust therethrough, and means for operating said damper.

4. A vaporizer for the motive fluid of an engine having upper and lower heads, a series of tubes secured in the heads and extending from the outer surface of one head to the outer surface of the other, radial partitions extending between the heads to form with suitable openings in said heads, a sector-shaped passage parallel to the tubular portion of said vaporiser, a sector-shaped damper of sufficient size to close said passage rotatably mounted to move over the surface of one of the heads to open and close the sector-shaped passage and to open and close the passages through the tubes, and means to operate said damper.

5. A vaporiser for the fuel charge of an internal combustion engine having a relatively large hollow member and a series of smaller hollow members through the interior passages of which the exhaust gases may flow, the body of said vaporizer having openings for the entrance and exit of the fuel charge which is vaporised by contact with the outer surfaces of the hollow members, and a means for opening and closing the passages through said hollow members which as it opens the larger passage closes a portion of the series of smaller passages and vice versa.

1,021,221. TRANSFORMER. MATTHEW O. TROY, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Apr. 28, 1908. Serial No. 429,648. (Cl. 171—119.)



1. In a constant current transformer, a magnetic core, a stationary and a movable coil surrounding a portion of said core and in inductive relation to each other so that the core forms a magnetic circuit for the coils, and means for varying the reluctance of the magnetic circuit inversely with the transformer load.

2. In a constant-current transformer, a magnetic core, a stationary and a movable coil surrounding a portion of said core and in inductive relation to each other so that the core forms a magnetic circuit for the coils, and means for varying the length of the magnetic circuit inversely with the transformer load.

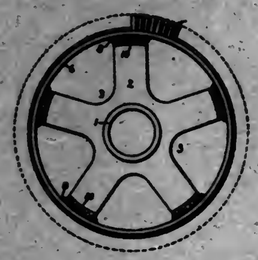
3. In a constant current transformer, a magnetic core, a stationary and a movable coil surrounding a portion of said core and in inductive relation to each other so that the core forms a magnetic circuit for the coils, and means for decreasing the leakage flux of the movable coil for an increasing load on the transformer.

4. In a constant current transformer, a magnetic core, a stationary and a movable coil surrounding a portion of said core and in inductive relation to each other so that the core forms a magnetic circuit for the coils, and means for decreasing the core loss for an increasing load.

5. In a constant-current transformer, a stationary coil, a movable coil, a core and a movable magnetic member decreasing the length of the magnetic circuit for an increased transformer load.

[Claims 6 to 9 not printed in the Gazette.]

1,021,222. BUCKET-WHEEL. PAUL WAGNER, Charlottenburg, Germany, assignor to General Electric Company, a Corporation of New York. Filed Nov. 10, 1910. Serial No. 591,607. (Cl. 121—87.)



1. A bucket wheel for an elastic-fluid turbine having a web and a rim separate from each other, and keys secured in the web that are in movable engagement with the rim so that the parts of the wheel are capable of relative movement in a radial direction.

2. In a bucket wheel for turbines, the combination of a rim having a plurality of inwardly projecting longitudinal ribs provided with transverse grooves, a web having a plurality of arms provided with channels at their outer ends that receive the ribs, and keys secured in the ends of the arms that extend across the channels and are in sliding engagement with the grooves in the ribs so as to permit the rim to move in a radial direction while causing the web and the rim to rotate together.

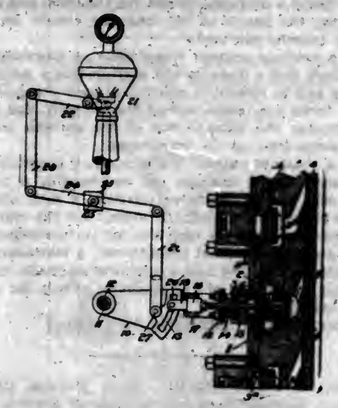
3. A bucket wheel for an elastic-fluid turbine having a web and a rim provided with interengaging channels and ribs lying in planes of revolution and having a certain radial clearance between them.

4. A bucket wheel for an elastic-fluid turbine having a web and a bucket-carrying rim provided with interengaging channels and ribs, and transverse locking devices for transmitting the torque of the rim to the web.

5. A bucket wheel for an elastic-fluid turbine having a notched web provided with channels in its periphery and having grooves transverse to said channels, a bucket-carrying rim having longitudinal ribs engaging the channels and provided with transverse grooves, and keys adapted to fit in said grooves and transmit the torque of the rim to said web.

[Claims 6 and 7 not printed in the Gazette.]

1,021,223. CONTROLLER MECHANISM FOR TURBINES. WILLIAM H. WHICKER, Providence, R. I., assignor, by mesne assignments, to General Electric Company, Schenectady, N. Y., a Corporation of New York. Filed Dec. 27, 1906, Serial No. 349,703. Renewed Sept. 11, 1911. Serial No. 648,593. (Cl. 121—118.)



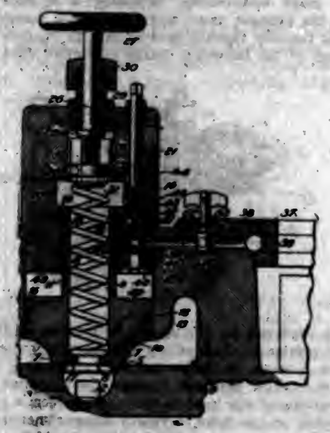
1. In a fluid pressure controller mechanism for turbines, an oscillatory jet controller device, a stationary fluid conduit with which said jet device coöperates, a constantly rotating eccentric, and means to transmit uniform oscillatory movements from said eccentric to said jet device, comprising a slotted link and a slide block movable in the slot in said link, guide means to restrict the angular movements of said block, and speed responsive means to adjust said jet device relative to said eccentric by adjusting said slide block to different positions in said slot, said device having vibrations of constant amplitude while the region of vibration relative to said fixed conduit is varied by said controller mechanism.

2. In a fluid-pressure controller mechanism for turbines, fluid operated supply valves, an oscillatory controller device acting with injector and ejector effect on a relay fluid-pressure which controls the operation of said turbine supply valves, a fixed conduit for said relay fluid pressure which coöperates with said device, an eccentric actuator, and transmission means between the actuator and device, said means comprising a pivoted rocking member with a curved surface, a slide block coacting with said surface, and speed responsive means connected to said member to adjust said member and block relatively to vary the effective length of the transmission means while maintaining the amplitude of the vibrations uniform, substantially as described.

3. In a fluid pressure controller mechanism for turbines, an oscillatory fluid jet controller device, a fixed fluid conduit with which said device coöperates, an eccentric actuator therefor, and transmission means between the actuator and device comprising a rocking member pivotally mounted at one end on said eccentric and at the other end provided with an arcuate slot struck from a center eccentric to the pivot point of said member, a steam for the controller device, a slide block pivoted to said stem and adapted to work in said slot, and speed responsive means to rock said member and adjust said block to different positions in said slot, as and for the purposes described.

1,021,224. TURBINE VALVE MECHANISM, JAMES WILKINSON, Providence, R. I., assignor, by mesne assignments, to General Electric Company, a Corporation of New York. Filed Oct. 19, 1906, Serial No. 339,720. Renewed Sept. 22, 1911. Serial No. 650,982. (Cl. 121—118.)

1. In an elastic fluid turbine, a reciprocatory supply valve formed as part of a hollow cylindrical shell, an annular piston around said shell, a cylinder for said piston, a passage to equalize the end pressures acting on said shell, and means to admit a governed fluid pressure against said position responsive to which it moves to fully open or close the valve.



2. In an elastic fluid turbine, a nozzle passage, a reciprocatory puppet valve therefor, a pressure equalizing passage which leads through said valve which is cut off from the high pressure supply when the valve is closed, a spring therein which tends to move said valve to close said nozzle, and speed responsive means to open and close said valve without intermediate operating positions.

3. In a controller mechanism for an elastic fluid turbine, a motor fluid supply port, a reciprocatory valve element, and fluid means to move said element to fully open and close said port without assuming intermediate operating positions, said element comprising a puppet valve, a piston, and a conduit which opens above and below said valve to substantially equalize the end pressure acting on the valve as it opens and closes and which is cut off from the high pressure when the valve is closed.

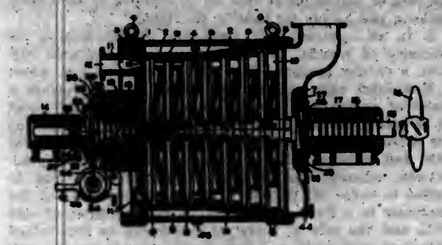
4. In a controller mechanism for a turbine, a motor fluid port, a rotatable element acted upon by the motor fluid flowing through said port, a valve controlling the flow of said fluid and adapted to open and close without assuming intermediate operating positions, a fluid motor for said valve which comprises a cylinder, a piston therein connected to said valve, ports through which oppositely acting fluid pressures enter said cylinder, and means to substantially counteract the tendency of the valve to unbalance itself endwise as it opens or closes.

5. In a turbine, a valve chamber, a supply port leading therefrom, a differential cylinder which opens into said chamber above said port, a reciprocatory valve, a valve operating piston which fits pressure tight in the inner enlarged end of said cylinder, a guide carried by said piston and which fits pressure tight in the outer end of said cylinder, governor controlled means to vary the pressure above the piston, a spring tending to close said valve, and a passage to equalize the pressure above the guide and below the valve.

[Claims 6 to 24 not printed in the Gazette.]

1,021,225. PACKING FOR ELASTIC-FLUID TURBINES. JAMES WILKINSON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Oct. 12, 1911. Serial No. 654,383. (Cl. 121—58.)

1. In an elastic fluid turbine, a casing, a rotatable element driven by the motive fluid therein, and a high pressure packing for said rotatable element comprising an adjustable element which moves independent of the rotor and responsive to variations in pressure at or near the low pressure end of said packing and governs the leakage of fluid through said packing.



2. In a turbine, a high pressure head therefor provided with a shaft opening, a shaft extending through said opening, and a compound throttling packing for the clearance between said shaft and head, said packing comprising an element adjustably connected to the head and movable responsive to the pressure of the leakage fluid to throttle said fluid at different points in the packing.

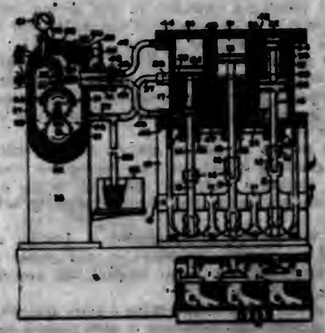
3. In a turbine, a casing, rotatable parts therein, a shaft supporting said parts and passing through said casing, means to prevent leakage of high pressure fluid between said shaft and casing comprising a rotary and a stationary element forming a tortuous passage, and a fluid motor movable responsive to pressure variations at or near the low pressure end of said packing, which adjusts said stationary element.

4. In a turbine, a supply head, a shaft extending through an opening in said head, packing rings rotatable with the shaft, a bushing supported by the head, internal ring projections in said bushing which are interposed between the projections rotatable with said shaft, and a fluid motor controlled by the leakage fluid and adapted to adjust said bushing axially of the shaft, for the purposes described.

5. In a turbine, a casing, rotatable parts acted upon by the motor fluid therein, a compound throttling packing between said casing and parts at the high pressure end of the turbine and comprising inner and outer members, passages leading from said packing to different points in the turbine, and an automatic pressure controlled means to adjust said outer member to govern the distribution of leakage fluid through said passages into the turbine.

[Claims 6 to 16 not printed in the Gazette.]

1,021,226. CONTROLLER MECHANISM FOR TURBINES. JAMES WILKINSON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Oct. 12, 1911. Serial No. 654,384. (Cl. 121—118.)



1. In a governing mechanism for turbines, the combination of a plurality of pistons operatively connected to turbine valves, serially connected cylinders therefor, means to conduct fluid under pressure from a controller chamber to both ends of said cylinders, and a controller nozzle for said fluid pressure coöperating with said means and acting to vary the pressure in said cylinders.

2. In a governing mechanism for turbines, the combination of a plurality of pistons operatively connected to turbine valves, cylinders for said pistons, conduits serially connecting the corresponding ends of said cylinders, and a fluid pressure controller means which regulates the pressure in both ends of said cylinders and thereby controls the movements of the pistons therein.

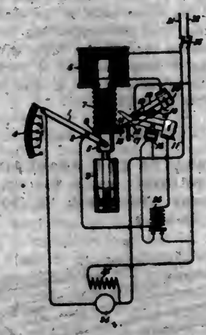
3. In a governing mechanism for turbines, the combination of a plurality of pistons operatively connected to turbine valves, cylinders for said pistons which are serially connected at their corresponding ends by passages, and a fluid pressure controller mechanism which raises the pressure in one end of the cylinders through one series of passages while it lowers the pressure in the opposite end of the cylinders through the other series of passages.

4. In a turbine, the combination of a nozzle acting to direct fluid pressure against a bucket carrying element, a valve for said nozzle, a fluid actuated motor for said valve, and a controller mechanism utilizing a liquid under pressure to operate said motor which comprises a force pump, a controller nozzle, and means to conduct said liquid under pressure to said motor.

5. A governing mechanism for turbine valves comprising a pressure chamber, a pump to force liquid therein, a movable nozzle to discharge a liquid jet from said chamber, one or more conduits into which said jet may be discharged, and means for operating turbine valves that communicate with said conduit or conduits.

[Claims 6 to 15 not printed in the Gazette.]

1,021,227. AUTOMATIC MOTOR-STARTING RHEOSTAT. PAUL ZIMMER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Feb. 10, 1905. Serial No. 245,014. (Cl. 172—288.)



1. An automatic rheostat comprising an arm movable to vary the resistance in circuit, means for moving the arm to cut out the resistance, an electro-magnetic device to automatically set the arm in position for starting and put said means in an operative position, and means for deenergising said device when the actuating means has been put into operative position.

2. An automatic rheostat comprising an arm movable to vary the resistance in circuit, a spring to move the arm in a direction to cut the resistance out of circuit, an electromagnetic device for putting the spring under tension, and means for deenergising said device when the spring has been put under tension.

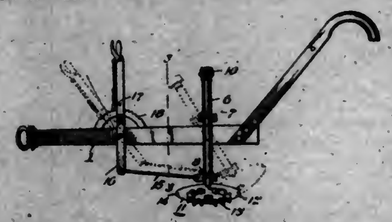
3. An automatic rheostat comprising an arm movable to vary the resistance in circuit, a spring to move the arm in a direction to cut the resistance out of circuit, means to retard movement of the arm in that direction, a solenoid for putting the spring under tension, and means to cut the solenoid out of circuit to deenergize the same when the spring has been put under tension.

4. An automatic rheostat comprising an arm movable to vary the resistance in circuit, a spring to move the arm in a direction to cut the resistance out of circuit, an electromagnetic device for putting the spring under tension, and means for effecting a quick break of the circuit of said device to demergize the same when the spring has been put under tension.

5. An automatic rheostat comprising an arm movable to vary the resistance in circuit, a spring to move the arm in a direction to cut the resistance out of circuit, means to retard movement of the arm in this direction, electrically controlled devices for putting the spring under tension, and means for rendering said devices inoperative when the spring has been put under tension.

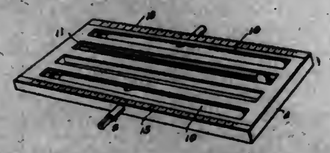
[Claims 6 to 15 not printed in the Gazette.]

1,021,228. COTTON-CHOPPER. JOHN H. AYERS, Commerce, Ga. Filed June 27, 1911. Serial No. 635,527. (Cl. 97—47.)



In a cotton chopper, a beam, a frame pivoted upon said beam, said frame including a yoke straddling the beam and a cross bar connected with the lower ends of the side members of said yoke, upwardly converging inclined bearing members associated with said frame, shafts supported for rotation in the bearing members and having intermeshing bevel gears at their upper ends, earth engaging chopping disks at the lower ends of the shafts, and means for tilting the frame and for supporting it at various adjustments, said means including a lever pivoted upon the frame and having a stop member, a rack segment engaged by said stop member, and a link connecting the lever with the tiltable frame.

1,021,229. APPARATUS FOR MEASURING THE VISCOSITY OF LIQUIDS. ANTON BALDUS, Frankfort-on-the-Main, Germany. Filed Sept. 19, 1910. Serial No. 582,744. (Cl. 73—51.)



1. In an apparatus for measuring or determining the viscosity of liquids, the combination of a tube like container for the liquid to be tested having a transparent side wall, and a carrier for said tube adapted to rock about an axis extending transversely of the length of the container and having a graduated section extending longitudinally of said tube, whereby the latter can be positioned to cause air therein to move longitudinally thereof and along said graduated section of the carrier in a form visible through said transparent side wall.

2. In an apparatus for measuring or determining the viscosity of liquids, the combination of a tube like container for the liquid to be tested having a transparent side wall, a carrier adapted to support the container and to rock about an axis extending transversely of the length thereof, and having adjacent the container a series of graduations, whereby the container can be positioned to cause air therein to move longitudinally of the container in a form visible through said transparent side wall, and the rate of movement of said air determined by said graduations, and means for heating the liquid.

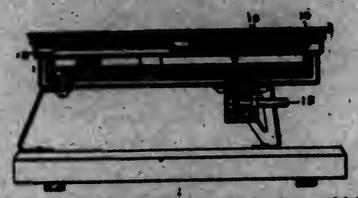
3. In an apparatus for measuring or determining the viscosity of liquids, the combination of a suitable support, a carrier mounted upon said support to rock about a horisontal axis, and having formed on one surface a series of graduations, a tube like container for the liquid to be tested, having a transparent side wall, mounted on the carrier and extending across the aforesaid horisontal axis, and longitudinally of the scale formed by said graduations, whereby the position of said container can be varied to cause air therein to move longitudinally of the container in a form visible through said transparent side wall, and the rate of travel of which can be determined by aid of said scale, a thermometer on said carrier, and means for heating the liquid.

4. In an apparatus for measuring or determining the viscosity of liquids, the combination of a suitable support, a carrier plate mounted on said support to rock about a horisontal axis, and provided on its upper surface with a series of graduations, and a tube like container for the liquid to be tested, having a transparent side wall, and adapted to be mounted on the carrier plate adjacent the graduations thereon, whereby the container can be positioned to cause air therein to move longitudinally of the container past the graduations on the carrier plate.

5. In an apparatus for measuring or determining the viscosity of liquids, the combination of a hollow casing, a plate mounted to turn about a horisontal transverse axis at the top of the casing and having in its upper surface a longitudinally extending groove or recess, a tube like container for the liquid to be tested having a transparent side wall and adapted to be supported within said groove or recess, and means for holding said plate in an inclined position, for the purpose described.

[Claims 6 and 7 not printed in the Gazette.]

1,021,230. ELECTRIC HEATER. HENRY PRICE BALL, Pittsfield, Mass., assignor to General Electric Company, a Corporation of New York. Filed Feb. 16, 1910. Serial No. 544,238. (Cl. 219—42.)



1. The process of making electric heaters, which consists in forming a groove in a metallic body to be heated, placing a resistance conductor in said groove, and bending the metal forming the side of the groove over the conductor to hold it securely in place.

2. The process of making electric heaters, which consists in forming a spiral groove in a metallic body to be heated, placing a resistance conductor in said groove and bending the metal forming the side of the groove over the conductor to hold it in place.

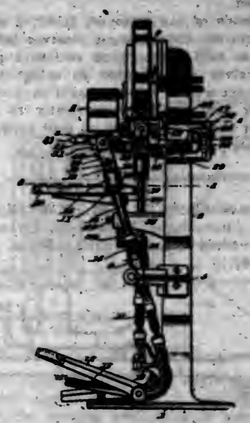
3. The process of making electric heaters, which consists in grooving a metallic plate throughout one of its surfaces, placing a resistance conductor in the grooving and bending the metal over the conductor to hold it in place.

4. An electric heater comprising a grooved metallic body and a resistance conductor in said groove and insulated therefrom, the metal forming the groove being bent over the conductor.

5. An electric heater comprising a plate grooved on one side and a resistance conductor in said grooves and insulated therefrom, the metal forming one side of the groove being bent over the conductor.

[Claim 6 not printed in the Gazette.]

1,021,231. CUFF-PRESS. WILLIAM BARTHOLOMEW, Chicago, Ill., assignor to Troy Laundry Machinery Company, Limited, Chicago, Ill., a Corporation of New York. Filed Feb. 25, 1911. Serial No. 610,760. (Cl. 68—9.)



1. In a cuff press, the combination with a pressing head, of a co-acting goods support, an oscillating and reciprocating member for operating said goods support, means for guiding the goods support parallel to the pressing head during its vertical and horisontal movement, and a treadle for reciprocating said member.

2. In a cuff press, a pressing head, a goods support coöperating therewith, an oscillating and reciprocating member for operating said goods support, means for pivotally mounting said member, and means for guiding said goods support parallel to said head during its vertical and horisontal movement.

3. In a cuff press, a pressing head, a pivotally mounted bearing sleeve, a reciprocating member slidably mounted in said bearing sleeve, a goods support pivotally mounted upon the upper end of said reciprocating member and adapted to co-act with the pressing head, means for operating said reciprocating member, and means for guiding the goods support parallel to the pressing head during its vertical and horisontal movement.

4. In a cuff press, the combination with a pressing head, of a pivotally mounted reciprocating member, a goods support adjustably mounted vertically and transversely upon said reciprocating member, and means for guiding said goods support parallel to said head in its vertical and horisontal movement.

5. In a cuff press, a standard, a pressing head thereon, a reciprocating member, a goods support adjustably mounted on said reciprocating member, a cam guide carried by said standard, and an arm carried by said goods support provided with a roller working in said cam guide.

[Claims 6 to 16 not printed in the Gazette.]

1,021,232. STRAW-DISPENSER. HARRY L. BEACH, Coshocton, Ohio. Filed Jan. 6, 1911. Serial No. 601,231. (Cl. 211—8.)



A dispensing apparatus comprising a container made up of side and end members rigidly connected, the end members being extended to form legs, said container being open at the top and bottom, and provided with a cover for the top, and a hopper-like bottom for the container composed of two angularly disposed strips connected by end plates, the lower edges of the strips terminating short of the center line to leave a space, and a grooved drum fitting in said space, the length of the said strips with the thickness of the end pieces added thereto being such as to cause said parts to fit snugly in the bottom of the container, a shaft traversing the drum and passing through and having its ends journaled in the ends of the container, thereby constituting the sole sustaining means for said bottom, the extended ends of the shaft being provided with manipulating means exterior to the end walls of the container, and spaced hangers connected at their upper ends to one of the strips and carried by the same below the drum and between the said legs, the latter forming end stops for the articles.

1,021,233. GEARING. OSCAR C. BEACH, Los Angeles, and ARTHUR J. HODGE, Pasadena, Cal., assignors to F. W. Braun, Los Angeles, Cal. Filed Feb. 1, 1911. Serial No. 606,027. (Cl. 74—35.)



1. A shaft, a revoluble hub having an eccentric bore in which the shaft is journaled, a driving disk eccentrically secured to the shaft and having a bodily eccentric movement therewith, a non-revoluble pinion journaled on the driving disk and having a bodily eccentric movement therewith, an internal gear meshing with said pinion and slowly rotated by the bodily movement of said pinion, said internal gear being secured to said hub and revolving the latter slowly.

2. A shaft, a revoluble hub having an eccentric bore in which the shaft is journaled, a driving disk eccentrically secured to the shaft and having a bodily eccentric movement therewith, a driving pulley, a link connecting the driving pulley and the driving disk, a non-revoluble pinion journaled on the driving disk and having a bodily eccentric movement therewith, an internal gear meshing with said pinion and slowly rotated by the bodily movement of said pinion, said internal gear being secured to said hub and revolving the latter slowly.

3. A shaft, a revoluble hub having an eccentric bore in which the shaft is journaled, a driving disk eccentrically secured to the shaft and having a bodily eccentric movement therewith, a non-revoluble pinion journaled on the driving disk and having a bodily eccentric movement therewith, a stationary bracket, a link connecting the bracket and non-revoluble pinion, an internal gear meshing with said pinion and slowly rotated by the bodily movement of said pinion, said internal gear being secured to said hub and revolving the latter slowly.

4. A shaft, a revoluble hub having an eccentric bore in which the shaft is journaled, a driving disk eccentrically secured to the shaft and having a bodily eccentric movement therewith, a driving pulley, a link connecting the driving pulley and the driving disk, a non-revoluble pinion journaled on the driving disk and having a bodily eccentric movement therewith, a stationary bracket, a link connecting the bracket and non-revoluble pinion, an internal gear meshing with said pinion and slowly rotated by the bodily movement of said pinion, said internal gear being secured to said hub and revolving the latter slowly.

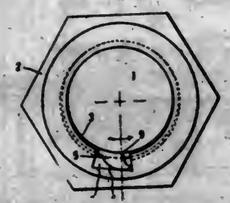
5. A shaft, a revoluble hub having an eccentric bore in which the shaft is journaled, a driving disk eccentrically secured to the shaft and having a bodily eccentric movement therewith, a non-revoluble pinion with triangular teeth journaled on the driving disk and having a bodily

eccentric movement therewith, an internal gear with triangular teeth of Babbitt metal meshing with said pinion and slowly rotated by the bodily movement of said pinion, said internal gear being secured to said hub and revolving the latter slowly.

1,021,234. PROCESS OF MANUFACTURING PURE NITRIC OXID. RUDOLF MÜLLER VON BERNECK, MARTIN MOMBT, and HUGO GRAF, Höchst-on-the-Main, Germany, assignors to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany, a Corporation of Germany. Filed May 10, 1911. Serial No. 626,191. (Cl. 204—9.)

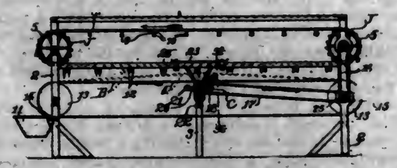
The process of preparing pure nitric oxid (NO) by electrolysis, which consists in subjecting nitric acid containing nitrous acid to electrolysis at a cathode capable of resisting attack by nitric acid.

1,021,235. LOCK-NUT. LEON S. BEACH, New York, N. Y. Filed Apr. 6, 1910. Serial No. 553,804. (Cl. 151—25.)



In a device of the kind described, a bolt, a nut loosely fitting thereon, and an oscillatory locking member carried by the nut and extending inwardly beyond the line of the threads of the nut at all times to engage the bolt whereby a stress is maintained at all times between the nut, bolt, and locking member.

1,021,236. DRIP-REMOVER FOR PASTRY-MACHINES. ANDREW S. CAIRNCROSS, St. Paul, Minn. Filed May 20, 1911. Serial No. 628,353. (Cl. 91—2.)



1. A device of the class set forth, comprising in combination, a traveling support, means on said support for the attachment of cookies to drain, a belt beneath said support to receive the drip therefrom, and means for bringing said belt into contact with said cookies to completely remove the drip therefrom.

2. A device of the class set forth, comprising, in combination, a support for a cooky to drain dip therefrom, a receiver below said support to receive said drainage, and means for bringing said receiver into repeated contact with a cooky on said support to remove the drainage strings therefrom.

3. A device of the class set forth, comprising, in combination, a traveling carrier belt, a hook on said belt to secure a cooky thereon for drainage, a drip belt traveling in an opposite direction to said carrier belt, and means for bringing said drip belt repeatedly into contact with the cookies suspended on said carrier belt.

4. In a device of the class set forth, a support for a cooky to drain dip therefrom, a receiver below said support to receive said drainage, an oscillator positioned below said receiver and comprising a rotating shaft, arms fixed to said shaft to rotate therewith, rollers journaled on said arms and adapted to coöperate with said receiver to bring it into repeated contact with said suspended cooky, whereby the dip draining therefrom may be entirely removed.

5. In a device of the class set forth, a support for a cooky to drain dip therefrom, a receiver below said support to receive said drainage, an oscillator positioned below said receiver and adapted to bring the same into repeated contact with a cooky on said support, and means for adjusting said oscillator vertically to accommodate it to different shapes of cookies on said support.

[Claim 6 not printed in the Gazette.]

1,021,237. APPARATUS FOR PUMPING LIQUIDS. HENRY M. CHANCE and THOMAS M. CHANCE, Philadelphia, Pa. Filed Jan. 10, 1912. Serial No. 670,356. (Cl. 103—67.)



1. An apparatus for pumping liquids comprising in combination a pump chamber, an accumulator adapted to be operated at relatively low pressure, an extension of said pump chamber forming a conduit connecting said pump chamber with said accumulator and establishing free communication between said pump chamber and said accumulator, a connection from said conduit and pump chamber to a discharge outlet adapted to discharge liquid against a relatively high pressure, a discharge valve, an inlet for the admission of liquid to said apparatus and an inlet valve, said inlet being connected with said conduit and pump chamber at a point in said apparatus relatively remote from said high pressure discharge outlet.

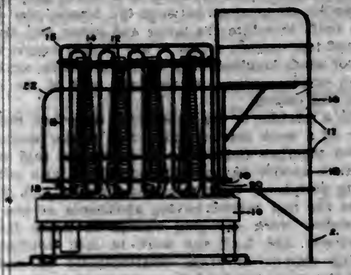
2. An apparatus for pumping liquids comprising in combination a pump chamber, an accumulator adapted to be operated at relatively low pressure, an extension of said pump chamber forming a conduit connecting said pump chamber with said accumulator and establishing free communication between said pump chamber and said accumulator, a connection from said conduit and pump chamber to a discharge outlet adapted to discharge liquid against a relatively high pressure, a relatively high pressure accumulator connected to and in communication with said discharge outlet, a discharge valve, an inlet for the admission of liquid to said apparatus and an inlet valve, said inlet being connected with said conduit and pump chamber at a point in said apparatus relatively remote from said high pressure discharge outlet.

1,021,238. WORKING-GLOVE. JAMES CHURCHILL, Centralia, Wash. Filed Oct. 3, 1910. Serial No. 585,050. (Cl. 2—9.)



A glove having its finger portions formed of front and back sections, the finger tips being united by an inside seam extending a short distance inward along the sides of the finger portions, and the seam in the crotch of the fingers formed upon the outside and extending outwardly along the sides of the finger portions to the seam upon the inside.

1,021,239. ELECTRIC TOASTER. ARCHIBALD S. CURTIT, Pittsfield, Mass., assignor to General Electric Company, a Corporation of New York. Filed Nov. 17, 1909. Serial No. 528,486. (Cl. 219—19.)



1. An electric toaster comprising a plurality of electric heating devices, and a plurality of toasting frames pivoted between the devices and movable into and out of proximity thereto.

2. An electric toaster comprising a plurality of electric heating devices, and a plurality of pivoted toasting frames each between adjacent devices and movable into and out of proximity thereto.

3. An electric toaster comprising a plurality of heating devices arranged in parallel planes and a plurality of toasting frames pivotally mounted between adjacent heating devices and movable into and out of proximity thereto.

4. An electric toaster comprising a plurality of heating devices arranged in parallel vertical planes, a plurality of toasting frames pivotally mounted for movement parallel therewith, each frame being movable independently of the others into and out of a position between the devices.

5. An electric toaster comprising a plurality of heating devices arranged in parallel vertical planes, a plurality of toasting frames alternating therewith and pivotally mounted for movement independently of each other into and out of position between the devices, and a projection on each frame forming a handle for moving the same and acting to support the frame in its outer position.

1,021,240. PNEUMATIC HUB FOR VEHICLE-WHEELS. THOMANUS DUYSENS, Maastricht, Netherlands. Filed Apr. 20, 1911. Serial No. 622,208. (Cl. 152—41.)



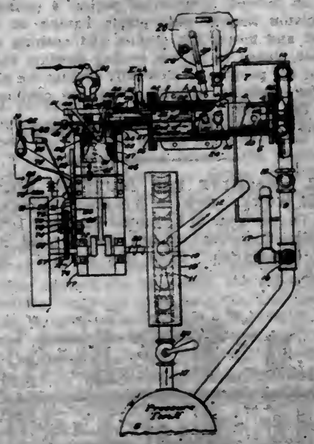
1. A pneumatic vehicle wheel comprising in combination, a hub center part and a peripheral wheel portion surrounding the same, and a plurality of pneumatic cylinders interposed between said center part and wheel portion to yieldingly sustain the former in normal concentric relation with respect to the latter, said cylinders being arranged with their longitudinal axes disposed parallel with the axle bore of said center part, the opposing faces of the hub part and peripheral portions being curved in the plane of the wheel to form opposing concave seats engaging opposite peripheral portions of the cylinders, said seats being oppositely arched transversely with respect to the planes of wheel with the crowns of the arches disposed centrally of the plane of the wheel and engaging opposite longitudinal central portions of the cylinders, the lateral arched portions diverging away and extending inwardly and outwardly out of engagement with said cylinders, substantially described.

2. A pneumatic vehicle wheel comprising in combination, a hub center part and a peripheral wheel portion surrounding said center part, and a plurality of elongated pneumatic members interposed between said center part and wheel portions to yieldingly sustain the former in normal concentric relation within and with respect to the latter, said members being arranged with their longitudinal axes disposed parallel with the axle bore of said center part, the opposing faces of the hub part and peripheral portions being curved to form seats engaging the members, said seats being oppositely arched transversely with respect to the plane of the wheel with the crowns of the arches disposed centrally of the plane of the wheel and engaging opposite longitudinal central portions of the members.

3. A pneumatic vehicle wheel comprising in combination, a hub center part provided with transversely arched seats, a peripheral wheel portion surrounding said part and provided with transversely arched seats, pneumatic cylinders disposed in said seats, means restraining longitudinal pressure of said cylinders and means restraining radial pressure of said cylinders.

4. A pneumatic vehicle wheel comprising in combination, a hub center part provided with cylinder seats, a peripheral wheel portion surrounding said part and provided with cylinder seats, pneumatic cylinders disposed in said seats, means for restraining longitudinal pressure of said cylinders, and means for restraining radial pressure of said cylinders, substantially described.

1,021,241. POWER APPARATUS. LEANDER E. FISH, Los Angeles, Cal. Filed Nov. 10, 1910. Serial No. 591,708. (Cl. 123—5.)



1. A free piston element constituting a piston and a plunger and being provided with a plunger face and two opposed piston faces; means forming separate chambers for said faces, respectively; a circulating pressure system connected with the plunger chamber and including means whereby power may be transmitted through a medium to operate power mechanism; such medium; such power mechanism arranged in said circulating system; means to supply fuel to the one piston face under sufficient

pressure to move the element and operate the plunger in opposition to the pressure of said system; means to ignite the fuel after the element has begun to move in opposition to the system pressure, thus to complete the power stroke of the plunger; and means to apply pressure to the other piston face to return the element and to operate the plunger on its suction stroke.

2. A free piston element constituting a piston and a plunger provided with a plunger face and with two piston faces, the latter being opposed to each other; a cylinder forming separate chambers for the faces, respectively; means to admit fluid to the plunger chamber at the advance of the element; means to discharge fluid under a determined pressure from the plunger chamber at the return of the element; means to apply fuel to one of said chambers under a pressure sufficient to start the element to discharge the fluid under said determined pressure; means to ignite the fuel after the piston has started, and means to apply pressure to the other piston face to return the piston.

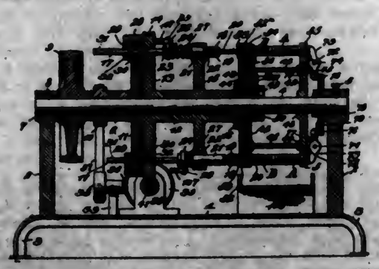
3. A hollow free piston element constituting a piston and a plunger provided with a plunger face and with two piston faces, the latter being opposed to each other; a cylinder forming separate chambers for the faces, respectively; means to admit fluid to the plunger chamber at the advance of the element; means to discharge fluid under a determined pressure from the plunger chamber at the return of the element; means to apply fuel to one of said chambers under a pressure sufficient to start the element to discharge the fluid under said determined pressure; means to ignite the fuel after the piston has started; means to apply pressure to the other piston face to return the piston; means to open a passage through the element after the completion of the advance stroke, and means to force air through such element.

4. A hollow free piston, provided with an inlet and an outlet, and with opposed piston faces and a plunger face, a cylinder forming separate chambers for the faces respectively, means to apply power to one of the piston faces to advance the piston, means to close the piston inlet while such power is being applied, means to apply power to the other piston face to return the piston, and means to open the piston inlet and outlet on return of the piston.

5. In an internal combustion engine, a cylinder and a hollow piston therein, said piston having an inlet and an outlet and means for closing and opening said inlet and outlet, means to force a cooling medium through the piston for the purpose of internally cooling the piston, and means for applying pressure from the cooling medium to move the piston.

[Claims 6 to 13 not printed in the Gazette.]

1,021,242. MACHINE FOR DRILLING BOLTS AND OTHER WORK. EDWARD WINBURN FISHBURNE, Richmond, Va., assignor to Richmond Stay-Bolt Drilling Machine Manufacturing Company, Incorporated, Richmond, Va., a Corporation. Filed May 6, 1911. Serial No. 625,533. (Cl. 77—23.)



1. In a machine of the class described, the combination of a work carrier and a tool carrier mounted for simultaneous rotation, said tool carrier comprising heads, one of which is also a worm gear and is provided on its outer side with an arm, a sleeve mounted in the other head for longitudinal movement, a spring to move the sleeve longitudinally in one direction, a tappet carried by the sleeve, a tool shaft mounted for rotation in the sleeve, connected thereto for longitudinal movement therewith, and also extending through and movable in the worm gear and the arm of said worm gear, a pinion splined on the tool shaft and bearing between the worm gear and its arm, a master gear engaging the pinion of the tool shaft, a shaft having a worm engaging said worm gear to rotate the carrier, connections between the master gear and the worm shaft to rotate the latter and hence also the worm gear and tool carrier, a cam to act on said tappet to move the tool shaft longitudinally in one direction against the tension of the spring, and during a part of the rotation of the tool carrier.

2. In a machine of the class herein described, the combination of a work carrier and a tool carrier mounted for rotation together and means to rotate the said carriers, said work carrier having heads provided with outwardly opening peripheral work receiving notches, and the head nearest the tool carrier having abutments at one end of its notches, work engaging clamps to grasp the work transversely and hold the work in said notches, work engaging clamps to press longitudinally on the outer end of the work and hold the work in the notches of the other head and also against the abutments of the said head nearest the tool carrier, said clamps being carried by the work carrier, and means to automatically operate the said clamps and cause them to release the work at a predetermined point in the rotation of the carriers.

3. In a machine of the class described, the combination of a work carrier mounted for rotation and comprising heads having peripheral work receiving notches, a clamp carried by one of the heads to engage one side of the work, a clamp carried by the other head to engage one end of the work, and means to operate the clamps.

4. In a machine of the class described, the combination of a fixed shaft, a work carrier mounted for rotation on the said shaft and having a head provided with a work receiving notch, a work engaging clamp pivoted on said head, a jaw pivotally connected to and movable with the clamp to engage the work and press the latter against one side of the notch, a cushioning spring for the jaw, between the latter and the clamp, a tappet carried by the clamp, a cam fixed on the shaft and engaged by the tappet to coact therewith and automatically operate the clamp, a tensioning screw for the said cushioning spring and extending through the clamp, and an adjusting screw for the jaw, the said adjusting screw being carried by the clamp.

5. In combination with a work carrier and a tool carrier mounted for simultaneous rotation, said work carrier comprising heads having peripheral work receiving notches, one of said heads comprising a pair of members, one of which is adjustable angularly with respect to the other, the last mentioned member having a centering opening for the bit of the tool, and a work engaging clamp carried by said angularly adjustable member.

[Claim 6 not printed in the Gazette.]

1,021,243. CAP-LINING FASTENER FOR ELECTRICAL LAMP-SOCKETS. EDGAR H. FREEMAN, Trenton, N. J. Filed Sept. 8, 1911. Serial No. 648,314. (Cl. 172—362.)



1. In a lining fastening for lamp socket caps, the combination of a cap, a lining of insulating material fitting within the cap, and a locking element having engagement with the cap at spaced points and arranged to engage beneath one edge of the lining to support the latter in position.

2. In a lining fastening for lamp socket caps, the combination of a cap, a lining of insulating material fitting within the cap, and a spring locking ring having catch engagement with the cap at a plurality of spaced points, said ring being arranged to engage beneath one edge of the lining supported in position.

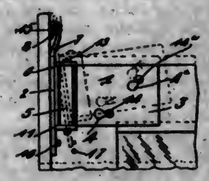
3. In a lining fastening for lamp socket caps, the combination of the cap having a plurality of keeper slots in its wall, a lining of insulating material fitting within the cap, and a spring locking ring arranged beneath an edge of the lining and having a plurality of catch projections for engagement in said slots.

1,021,244. CAR-SEAL. EMIL G. GEBAUER, Chicago, Ill. Filed Apr. 17, 1911. Serial No. 621,611. (Cl. 70—99.)



A seal lock comprising a strip one end of which has a recess, and its other end having a head provided with recesses on opposite sides, and a neck joining said head to the strip, said neck being formed by bending the edges of the strip outwardly, said bent up edges being shaped to form catches which are adapted to enter the first-mentioned recess, and a cap inclosing the neck and head of the strip, said cap having indentations which enter the recesses of the head, and the strip having a tongue which fits over the edge of the cap at one side of the mouth thereof.

1,021,245. DETACHABLE HINGE FOR WINDOWS. MORTON ARTHUR GEORGE, Bishop, Cal. Filed Feb. 16, 1911. Serial No. 608,896. (Cl. 20—46.)



1. In a hinge of the character described, the combination with two screws and a stop pin in the face of the window sash; of a hinge consisting of two members connected by an upright pivot and whereof one is provided with key-hole slots, the parts being so shaped and disposed that when the round ends of said slots engage said screws in the sash the frame member may be turned on its pivot so that its lower extremity passes over said stop, and means on the window frame for detachably connecting its hinge member therewith.

2. In a window hinge of the character described, the combination with two screws and a stop pin in the face of the sash, and a supporting screw and catch pin in vertical alinement in the frame; of a hinge consisting of two members connected by an upright pivot and whereof one is provided with key-hole slots, the parts being so shaped and disposed that when the round ends of said slots engage the screws in the sash the frame member may be turned on its pivot so that its lower extremity passes over said stop, a downturned hook at one end of the frame member provided with an open-ended notch, the other end of this member being provided with an upright slot, said notch and slot being positioned to simultaneously engage the screw and catch pin in the frame.

3. In a window hinge of the character described, the combination with two screws and a stop pin in the face of the sash, and a headed screw and a headless pin in the frame; of a hinge consisting of two members connected by an upright pivot and whereof one is provided with key-hole slots, the parts being so shaped and disposed that when the round ends of said slots engage the screws in the sash the frame member may be turned on its pivot so that its lower extremity passes over said stop, the frame member including an upright bar having an incline at its upper portion and above the incline a downturned hook with an open-ended notch in its bill and the lower end of the bar having an upright slot, the latter engaging said pin when the notch engages the screw in the frame but said slot disengaging the pin when the incline engages the screw.

1,021,246. VEHICLE-TIRE. WILHELM A. GIERMANN, Blencoe, Iowa. Filed Oct. 11, 1911. Serial No. 654,145. (Cl. 152—8.)



1. In a device of the class described, a felly; a rim comprising separable parts each including a base adapted to rest upon the felly and having an outstanding shoulder provided with a lip extended toward the median plane of the wheel, the lip having a flange extended away from the median plane of the wheel; arched tread springs resting against the flanges; links pivoted to the ends of the springs and resting against the lips; connecting members comprising primary arms resting upon the bases of the tread parts and upstanding secondary arms resting against the shoulders, the secondary arms being pivotally connected with the links, and the ends of the primary arms being overlapped and beveled; a securing element uniting the base of one rim part with the felly; and a securing element uniting the bases of the rim parts; and a strap engaged over the primary arms of the connecting members and fitting against the secondary arms of the connecting members.

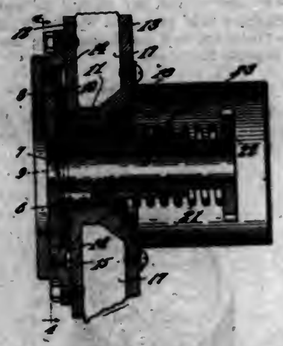
2. In a device of the class described, a trough-shaped rim; connecting members resting upon the rim; arched tread springs resting upon the rim; links uniting the connecting members with the springs and normally resting against the rim; and a strap extended across the connecting members to bind the same upon the rim.

3. In a device of the class described, a rim comprising separable parts; connecting members located within the rim and having overlapped, beveled ends; tread springs supported by the rim; links uniting the tread springs with the connecting members; and a securing element ex-

tended through the parts of the rim, to draw said parts together and to cause the beveled ends of the connecting members to co-act, whereby each connecting member will move, adjacent its beveled ends, into contact with an adjoining connecting member.

4. In a device of the class described, a rim comprising separable parts; connecting members extended transversely of the rim, the connecting members having beveled, overlapped ends; a tire united with the connecting members; and means for drawing the parts of the rim together, whereby the beveled faces of the connecting members will cause said ends to move circumferentially of the tire into engagement with the beveled ends of other, adjacent, like connecting members.

1,021,247. WHEEL-HUB. FRIEDRICH WM. J. GOSSECH, Cleveland, Ohio. Filed Jan. 16, 1911. Serial No. 602,929. (Cl. 152—28.)



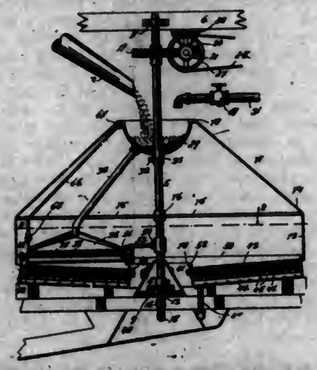
1. In a wheel hub, a body member formed with a conical socket, a sleeve member loosely fitted to the body member and having a head slidably resting against one face of the body member, a nut adjustably mounted upon the inner end of the sleeve, and a spring pressed cone carried by the sleeve member between the nut and socket and bearing in the socket.

2. In a wheel hub, a body member formed with a conical socket, the member being formed in the outer face with radially alined grooves, a sleeve member fitted through the body member and arranged to have play therein, an annular head formed at one end of the sleeve member and formed in one face with radially alined grooves, a slide plate fitted between the head upon the sleeve, and a body member and having lugs upon its opposite faces working in the grooves in the said end of the sleeve member and the said face of the body member, a cone carried by the sleeve adjacent the socket of the body member, a nut adjustably mounted upon the other end of the sleeve, and a spring surrounding the sleeve between the nut and cone to exert a spring tension upon the cone and retain the head cushionedly in contact with the outer face of the body member.

1,021,248. APPARATUS FOR THE TREATMENT OF ORE. JOHN GROSS and LOUIS COHEN, Denver, Colo. Filed Feb. 3, 1911. Serial No. 606,315. (Cl. 75—86.)

1. In apparatus of the class described, the combination of a rotary shaft, an ore receptacle surrounding the said shaft and having a central opening, the receptacle being downwardly inclined from its outer edge, the inner side wall of the receptacle having closable openings for the discharge of the waste or tailings from the receptacle, a feeder arranged to travel around the ore receptacle while delivering material thereto, the said receptacle being equipped with a water pipe in communication with the rotary shaft, the latter being formed hollow for the purpose, means for delivering water to said shaft, a rabbling device also carried by the feeder, and means for normally supporting the said device out of operative relation with the receptacle, for the purpose set forth.

2. The herein described ore treating apparatus, comprising a receptacle for the ore, a feeder and distributer, means for causing the latter to travel over the receptacle and above the same, the receptacle having a filter bed adapted to receive the ore, suction-producing means connected in operative relation with said bed, and a suitable cover for the receptacle to prevent the escape of gas employed in connection with the treatment, substantially as described.



3. In an ore treating apparatus, the combination of a circular ore receptacle downwardly inclined toward the center from its outer edge, whereby there is a tendency for the ore to travel toward the center of the receptacle, the said receptacle having a central opening, a feeder mounted to travel around the receptacle, means for actuating the feeder, means for delivering material thereto, the inner wall of the receptacle having closable openings for removing the ore from the receptacle, the receptacle having a filter bed upon which the ore is deposited, and a vacuum chamber below the said bed, substantially as described.

4. In an ore treating apparatus, the combination of a receptacle downwardly inclined toward the center from its outer edge, whereby there is a tendency for the ore to travel toward the center, the said receptacle having a central opening, a feeder mounted to travel over the receptacle, means for actuating the feeder, means for delivering material thereto, and means for treating the material within the receptacle; the inner wall of the receptacle having closable openings for removing ore therefrom, substantially as described.

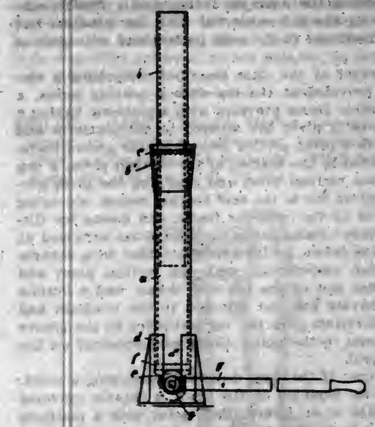
5. The herein described ore treating apparatus, comprising a circular receptacle for ore, a feeder or distributer, means for causing the latter to travel over the receptacle and above the same, a rabbling device carried by the feeder, and a water supply conduit also carried by the feeder, and means for supplying water to the said conduit, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

1,021,249. PROP FOR MINES. OTTO GRÜNEWALD and MAX GORICH, Ehrenfeld, near Cologne, Germany. Filed Feb. 18, 1911. Serial No. 609,527. (Cl. 57—97.)

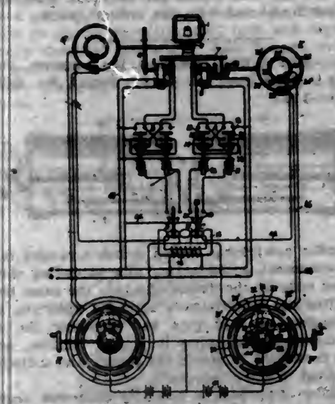
In a prop, the combination, with a base adapted to rest on the ground and having a tubular guide provided with slots in its sides, of a shaft adapted to be dropped into the said slots and to revolve in their bottom ends, said shaft having an eccentric on its middle part and a rectangular

projection to one end, a removable operating lever for engaging with the said projection, and a prop section slid-



able in the said guide and adapted to be raised and clamped in position by the said eccentric.

1,021,250. CONTROL SYSTEM FOR PROJECTORS AND THE LIKE. JOHN L. HALL, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Apr. 7, 1910. Serial No. 553,994. (Cl. 172—239.)



1. The combination with a projector or the like, of means for training the same comprising an electric motor for driving the projector, a circuit controller therefor driven by said motor and arranged to break the motor circuit after a predetermined movement, and a second controller for closing a circuit through said motor and the first controller in various positions through the same conductor.

2. The combination with a projector or the like, of means for training the same comprising an electric motor for driving the projector, a circuit controller therefor driven by said motor and arranged to intermittently break the circuit after predetermined movements, a second controller, a pair of conductors connecting said controllers, and connections whereby the motor circuit is consecutively closed by the second controller through said conductors alternately.

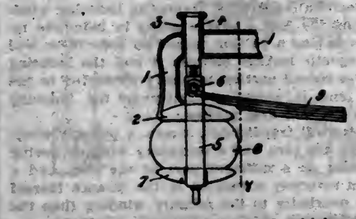
3. The combination with a projector or the like, of means for training the same comprising an electric motor, a pair of circuit controlling devices operated by said motor and arranged to alternately break the motor circuit after predetermined movements, and an independently actuated circuit controlling device for continuously closing the motor circuit through the motor operated devices alternately.

4. The combination with a projector or the like, of means for training the same comprising an electric motor, and controlling means therefor, said means including independently operated controlling devices, one of which is driven by the motor, and a pair of conductors connecting said devices in series, said devices being arranged to alternately make and break the motor circuit first through one conductor and then through the other conductor.

5. The combination with a projector or the like, of means for training the same comprising an electric motor, a circuit controller therefor driven by said motor having two sets of contacts operating alternately to break the motor circuit, and a manually operated circuit controller having corresponding contacts which consecutively close the motor circuit first through a contact of one set and then through a contact of the other set.

[Claims 6 to 11 not printed in the Gazette.]

1,021,251. SPRING SUSPENSION FOR ROAD-VEHICLES. LEONARD HARRIS, London, England. Filed June 17, 1911. Serial No. 634,182. (Cl. 21—97.)



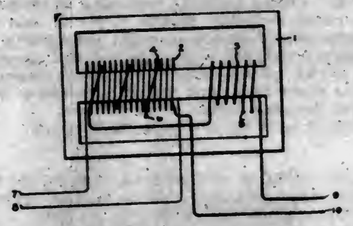
1. In spring suspension for road vehicles; the combination of a frame member, an inverted cup rigidly connected therewith, a lower opposed cup, a pneumatic cushion of approximately spherical form located between said cups, a stirrup fixed to said lower cup and having upwardly extending arms passing around and above the upper cup but not in contact therewith, a vehicle spring, and means for connecting the end of said vehicle spring to said lower cup including a pivot at the upper extremity of said stirrup forming a horizontal axis about which said lower cup is free to swing independently of the motion of the upper cup and vehicle spring to render said lower cup self-adjusting, said frame member being provided with means for vertically guiding said pivot.

2. In spring suspension for road vehicles; the combination of a frame member, an inverted cup rigidly connected therewith, a lower opposed cup, a pneumatic cushion of approximately spherical form located between said cups, a stirrup fixed to said lower cup and having upwardly extending arms passing around and above the upper cup but not in contact therewith, a vehicle spring, and means for connecting the end of said vehicle spring to said lower cup including a pivot pin transverse with reference to said vehicle spring at the upper extremity of said stirrup, forming a horizontal axis about which said lower cup is free to swing independently of the motion of the upper cup and vehicle spring to render said lower cup self-adjusting; said frame member being provided with means for guiding said pivot pin in a vertical direction, and said pivot pin extending through the upper ends of said stirrup and through the customary eye of said vehicle spring.

3. In spring suspension for road vehicles; the combination of a frame member, an inverted cup rigidly connected therewith, a lower opposed cup, a pneumatic cushion of approximately spherical form located between said cups, a stirrup fixed to said lower cup and having upwardly extending arms passing around and above the upper cup but not in contact therewith, a vertically movable plunger, a pivot pin passing through the extremities of the

upwardly extending arms of said stirrup and through the lower end of said plunger, said frame member having a vertical guideway for said plunger, and a vehicle spring having an eye at its end through which said pivot pin passes, whereby said pivot pin is restricted to vertical motions while said stirrup is free to swing about said pivot pin to accommodate itself to the pneumatic cushion, and the efficiency of the latter is more fully utilized.

1,021,252. BELL-RINGING TRANSFORMER. SVEND E. JOHANNESEN, Pittsfield, Mass., assignor to General Electric Company, a Corporation of New York. Filed Aug. 14, 1909. Serial No. 512,814. (Cl. 171—124.)



1. In an electrical apparatus, a core, an inducing winding surrounding the core, and a winding in inductive relation thereto having a portion wound so that there will be a large magnetic leakage between it and the inducing winding, and a second portion reversely connected to the first portion and in closer proximity to the inducing winding than the said first portion.

2. In an electrical transformer, a core, a primary winding surrounding the core, and a secondary winding having a portion wound on a different part of the core, and a second portion reversely connected to the balance thereof and in closer proximity to the primary winding than the said first portion.

3. In an electrical transformer, a core, a primary winding surrounding the core, and a secondary winding having a portion wound upon a different part of the core and a portion reversely connected to the balance thereof and upon the same part of the core as the primary winding.

4. In an electrical transformer, a core, a primary winding surrounding the core, and a secondary winding having a portion provided with taps wound upon a different part of the core and a second portion reversely connected to the balance thereof and upon the same part of the core as the primary winding.

5. In an electrical transformer, a core, a primary winding surrounding the core, and a secondary winding having a portion wound upon a different part of the core and provided with taps, and a second portion reversely connected to the first portion, wound upon the same part of the core as the primary winding and provided with taps.

1,021,253. CONVEYER. MARION ALFRED KING, New Caney, Tex. Filed July 5, 1911. Serial No. 637,023. (Cl. 198—3.)



1. A conveyer of the class described comprising a vertical pivot, means for mounting the same, a tiltable conveyer frame having a horizontal pivot mounted on and carried by the vertical pivot, conveying mechanism carried by the conveyer frame, and means for tilting the latter including a windlass arranged at one end of the conveyer frame, pulleys connected, respectively, with the pivot and the other end of the conveyer frame, and a flexible connection having one end connected with the windlass and extending therefrom to the said pulleys and arranged on the same.

2. A conveyer of the class described comprising a vertical pivot provided at the top with a bearing recess, a tiltable conveyer frame provided with a platform having a central groove, a pivot bar secured to the platform and provided with a pivot portion located at the groove thereof and mounted in the bearing of the vertical pivot, a cap secured to the vertical pivot and retaining the pivot portion of the pivot bar in the said bearing recess, conveying means carried by the conveyer frame, and means for tilting the conveyer frame including a windlass arranged at one end of the frame, pulley blocks provided with sheaves and connected, respectively, with the vertical pivot and with the other end of the conveyer frame, and a flexible connection having one end attached to the windlass and extending therefrom over the vertical pivot at the groove of the platform to the pulley blocks and arranged on the sheaves thereof.

3. A conveyer of the class described comprising a truck, a vertical pivot mounted on the truck, a tiltable conveyer frame provided at an intermediate point with a platform and having a horizontal transverse pivot mounted on and carried by the said vertical pivot, conveying means mounted on the conveyer frame, and means for tilting the platform including a windlass located between the conveyer frame and extending across the same at one end thereof, said windlass being provided at one side of the frame with operating means and having a drum located at the other side of the frame, a rope arranged on the drum and extending therefrom over the central pivot, and pulleys receiving the rope and connected with the other end of the conveyer frame and with the vertical pivot.

1,021,254. MUFFLER. HERMAN H. LARKINS, Princeton, Ky. Filed Sept. 2, 1911. Serial No. 647,811. (Cl. 121—116.)



1. A muffler comprising spaced drums arranged in longitudinal alinement, a conducting pipe extending through the opposed ends of the drums and into the same beyond their longitudinal centers, nuts threaded upon the intermediate portion of said pipe and engaging the drum heads to maintain the drums in spaced relation, an exhaust pipe connected to one of the drums, and a discharge pipe connected to the other drum.

2. A muffler comprising a plurality of drums arranged in longitudinal alinement and in spaced relation, a conducting pipe connecting adjacent drums and extending through the opposed end walls thereof and into the respective drums beyond their longitudinal centers, nuts threaded upon the intermediate portion of the conducting pipe and engaging the drum heads to maintain the drums in spaced relation, an exhaust pipe extending through the opposite end wall of one of the drums and in parallel relation to the conducting pipe, and a discharge pipe extending into the other drum in longitudinal alinement with said exhaust pipe, said exhaust and discharge pipes extending beyond the ends of the conducting pipe and terminating at points adjacent the connected ends of the respective drums.

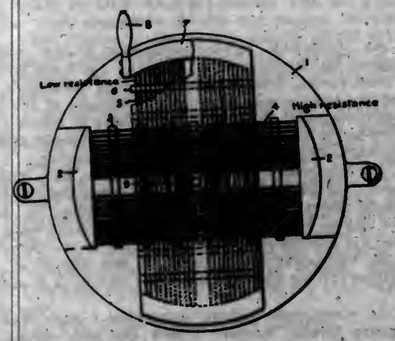
3. A muffler comprising a plurality of drums arranged in longitudinal alinement, a conducting pipe eccentrically disposed through the opposed end walls of adjacent drums, said pipe extending into the respective drums beyond their longitudinal centers, nuts threaded upon the intermediate portion of said pipe to engage the opposed end walls of the drums to maintain the drums in spaced relation, an exhaust pipe concentrically disposed through the other end wall of one of the drums, a discharge pipe concentrically disposed through the corresponding end wall of the other drum, said exhaust and discharge pipes overlapping the conducting pipes and terminating within their respective drums at points adjacent to the connected ends thereof.

1,021,255. GAGE. ELIJAH MCCOY, Detroit, Mich., assignor to Ypsilanti Lubricator Company, Ypsilanti, Mich., a Corporation of Michigan. Filed June 2, 1906. Serial No. 319,844. (Cl. 73—54.)



The combination with a transparent tube, of fittings for the opposite ends of said tube, one of said fittings being constructed to permit the insertion of the tube therethrough, each of said fittings having an externally threaded portion, and a pair of internally threaded packing nuts or glands encircling said tube and engaging the externally threaded portions of said fittings, said glands being provided with integral tubular extensions telescopically engaging each other and forming a shield for said tube.

1,021,256. RESISTANCE. ROBERT MILLER, Jr., Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Jan. 7, 1910. Serial No. 536,790. (Cl. 219—48.)



1. In an adjustable resistance, the combination with longitudinal high resistance wires, of transverse heat conducting wires adjustably mounted in good thermal relation to said longitudinal wires to form a network and to be adjustable to vary the angle between said longitudinal wires and said transverse wires.

2. An adjustable resistance comprising wires arranged to form a network in which the wires may at will be adjusted with reference to one another.

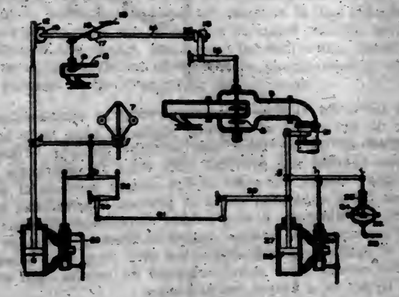
3. An adjustable resistance comprising longitudinal wires, supports for said longitudinal wires, and transverse wires loosely arranged with reference to said longitudinal wires to form a network in which the angle between each transverse wire and the longitudinal wires may be varied at will.

4. An adjustable resistance comprising wires of different metals arranged to slide over each other and to form a network in which the wires are relatively adjustable.

5. In an adjustable resistance, the combination with longitudinal wires, of transverse wires mounted in sliding engagement with said longitudinal wires to form a network and to be adjustable with reference to said longitudinal wires whereby the angle between said transverse and said longitudinal wires may be varied at will.

[Claims 6 to 8 not printed in the Gazette.]

1,021,257. AUTOMATIC REGULATION OF MIXED-PRESSURE TURBINES. EDGAR W. MIX, Paris, France, assignor to General Electric Company, a Corporation of New York. Filed Dec. 14, 1910. Serial No. 597,261. (Cl. 121—118.)



1. Means for regulating a mixed pressure turbine, comprising a valve admitting low-pressure steam, a valve admitting high-pressure steam, means including a device responsive to the speed of the turbine for opening said valves in successive order, a throttle valve for the low-pressure steam, and means for actuating said throttle valve responsive to variations in the pressure of the low-pressure steam.

2. Means for regulating a mixed pressure turbine, comprising a valve admitting low-pressure steam, a valve admitting high-pressure steam, a throttle valve for the low-pressure steam, means for actuating said throttle valve responsive to variations in the pressure of the low-pressure steam, and means whereby said low-pressure responsive means also controls both admission valves.

3. Means for regulating a mixed pressure turbine, comprising a valve admitting high-pressure steam, a valve admitting low-pressure steam, a speed responsive device controlling both of said valves, a throttle valve for the low-pressure steam, means for actuating said throttle valve responsive to a drop in pressure of the low-pressure steam, and means whereby said low-pressure responsive means also controls both admission valves independently of the speed-responsive device.

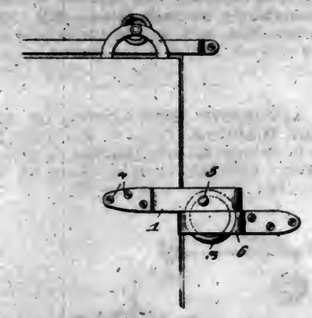
4. Means for regulating a mixed pressure turbine, consisting of a valve admitting low-pressure steam, a valve admitting high-pressure steam, a motor for operating both valves in succession, a speed-responsive device controlling said motor, a valve for controlling the communication between the first valve and its source of supply, and a device responsive to variations in the low-pressure steam for controlling the last valve and also exerting a control of said motor independently of the speed-responsive device.

5. Means for governing a mixed pressure turbine, comprising a valve for regulating the admission of high-pressure steam, a valve for regulating the admission of low-pressure steam, a speed responsive device that controls both valves, a valve for controlling the communication between the low-pressure valve and its source of

supply, a device responsive to the pressure of the low-pressure steam from said source for controlling the last valve, and means whereby said pressure responsive device also controls the two admission valves.

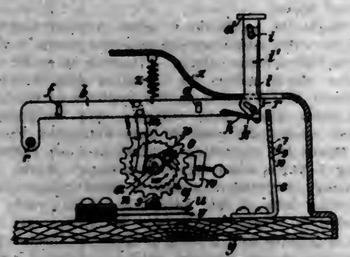
[Claims 6 and 7 not printed in the Gazette.]

1,021,258. LATCH. WILHELM MOSER, Parkston, S. D. Filed June 5, 1911. Serial No. 631,245. (Cl. 70—102.)



A latch for sliding gates comprising in combination a pair of flat pieces of material similarly bent back upon themselves, having their end portions brought adjacent to one another and provided with holes therethrough for fastening means, the sides of the central portions of said pieces being separated so as to provide longitudinal passages therethrough, a ring loosely disposed within one of said passages, and means rigidly secured to the sides of one of said pieces, for supporting said ring, said passage in the second piece being arranged to receive said ring and to act as a keeper for the same.

1,021,259. IMPULSE-TRANSMITTER. EDWIN NEUHOLD, Friedenau, near Berlin, Germany, assignor to The Firma Deutsche Telephonwerke G. M. B. H., Berlin, Germany. Filed Apr. 22, 1910. Serial No. 557,092. (Cl. 179—90.)



1. An impulse transmitter of the character described, comprising a movable member, a contact mechanism to be operated by said member, a plurality of keys for moving said member and adapted to move relatively with respect to it, and a plurality of stops coöperating with said keys, substantially as and for the purpose set forth.

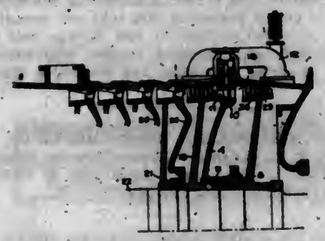
2. An impulse transmitter of the character described, comprising a movable member, a spring to be tensioned by the movement of said member into its working position and to return said member after release into its position of rest, a contact mechanism to be operated by said member, a plurality of keys for moving said member and adapted to move relatively with respect to it, and a plurality of stops coöperating with said keys, substantially as and for the purpose set forth.

3. An impulse transmitter of the character described, comprising a movable member, a spring to be tensioned by the movement of said member into its working position and to return said member after release into its position of rest, a contact mechanism to be operated by said member, so as to close its circuit only on the return movement of said member, a plurality of keys for moving said member and adapted to move relatively with respect to it, and a plurality of stops coöperating with said keys, substantially as and for the purpose set forth.

4. An impulse transmitter of the character described, comprising a pivotally mounted frame, a contact mechanism to be operated by said frame, a plurality of keys provided on said frame and adapted to move relatively with respect to it, springs to counteract the relative movement of said keys, projections on said keys and a plurality of stops limiting the movement of said frame by standing in the way of the respective pressed key, substantially as and for the purpose set forth.

5. An impulse transmitter of the character described, comprising a pivotally mounted frame, a toothed sector on said frame, a spindle provided with a pinion gearing with said sector and a spring to be tensioned by the movement of said frame into its working position and to return said frame into its position of rest, a contact mechanism to be operated by said spindle so as to close its circuit only on the return movement of said frame, a plurality of keys provided on said frame and adapted to move relatively with respect to its springs to counteract the relative movement of said keys, projections on said keys and a plurality of stops limiting the movement of said frame by standing in the way of the respective pressed key, substantially as and for the purpose set forth.

1,021,260. ELASTIC-FLUID TURBINE. STEPHEN J. PIGOTT, St. Ann's, Helensburgh, Scotland, assignor to General Electric Company, a Corporation of New York. Filed Aug. 18, 1911. Serial No. 644,801. (Cl. 121—58.)



1. An elastic-fluid turbine comprising a high- and a low-power turbine mounted on the same shaft and within the same casing, with a valve controlled connection between the low-power turbine casing and one of the low pressure stages of the high-power turbine to insure that the low-power turbine will rotate in a low pressure atmosphere when the high-power turbine is in operation.

2. An elastic-fluid turbine comprising a high- and a low-power turbine mounted upon the same shaft within the same casing, but separated from each other, the low-power turbine being connected to a low pressure stage of the high-power turbine when the latter is in operation and the high-power turbine receiving the exhaust of the low-power turbine when the low-power turbine is in operation.

3. An elastic-fluid turbine comprising a high- and a low-power turbine mounted within the same casing, a shaft common thereto, valves arranged to control the passage of exhaust fluid from the low-power turbine to the first stage of the high-power turbine, and an automatic valve arranged to by-pass the exhaust steam to the high-power turbine from the low-power turbine in the event of the failure of the first named valves to open.

4. An elastic-fluid turbine comprising a high- and a low-power turbine mounted within the same casing, a shaft common thereto, valves arranged to control the passage of exhaust fluid from the low-power turbine to the first stage of the high-power turbine, and an automatic valve arranged to by-pass the exhaust steam to the high-power turbine from the low-power turbine in the event of the failure of the first named valves to open, and a signal device which operates when the pressure in the low-power turbine rises above a predetermined value.

5. An elastic-fluid turbine comprising a high-power multi-stage turbine and a low-power turbine, a casing common to both turbines, a shaft also common to both, a conduit connecting the low-power turbine with one of the low pressure stages of the high-power turbine, a valve in said conduit, and an admission valve that alternately admits motive fluid to the said turbines.

[Claims 6 to 9 not printed in the Gazette.]

1,021,261. AUTOMATIC TRAIN-PIPE COUPLING. ALBERT M. PORTER, Amsterdam, Mo. Filed Sept. 14, 1911. Serial No. 649,343. (Cl. 188—18.)



1. An automatic air brake or train pipe coupling including a hollow coupling head provided with outwardly projecting arms, and a slidable member mounted in the hollow coupling head and guided by the arms thereof and provided with a passage.

2. An automatic air brake or train pipe coupling including a hollow coupling head provided at one side with spaced arms and having a single arm at the opposite side, the spaced arms being provided with longitudinal grooves, and a slidable member mounted in the coupling head and guided between the arms thereof and fitting in the said grooves and having a passage.

3. An automatic air brake or train pipe coupling including a hollow coupling head, a yieldably mounted member slidable in the coupling head and having a passage, means for connecting the passage with the pipe of a train, and valve mechanism for the said passage located in rear of the slidable member and exteriorly of the hollow coupling head and operated by the sliding movement of the said member.

4. An automatic air brake or train pipe coupling including a hollow coupling head, a yieldably mounted member slidable in the coupling head and having a passage, means for connecting the passage with the pipe of a train, valve mechanism for the said passage located in rear of the slidable member and exteriorly of the hollow coupling head and operated by the sliding movement of the said member, and an exteriorly arranged locking device for holding the valve in one position.

5. An automatic air brake or train pipe coupling including a coupling head, a slidable member movable through the coupling head and having a passage, means for connecting the passage with the pipe of a train, valve mechanism for the said passage located in the rear of the slidable member and exteriorly of the coupling head and operated by the sliding movement of the said member, a spring for urging the slidable member outwardly and for closing the valve mechanism, and an exteriorly arranged locking device for holding the slidable member against outward movement to maintain the valve mechanism open.

[Claims 6 to 16 not printed in the Gazette.]

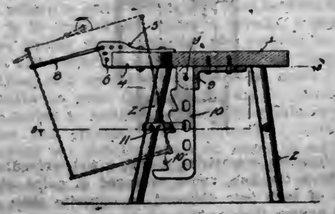
1,021,262. HYDROCARBON-GAS TURBINE. ISAAC N. REED, Jersey City, N. J., assignor of one-half to Harry Morris, Jersey City, N. J. Filed Dec. 6, 1910. Serial No. 595,873. (Cl. 123—9.)

1. The combination of a turbine including sets of revolving buckets, and oppositely discharging nozzles disposed between the said sets for delivering fluid to both simultaneously, said nozzles having a common throat, with a combustion chamber adjacent the said throat, a valve for closing the throat for interrupting communication between the chamber and nozzles, means for delivering a compressed charge of explosive mixture to the chamber, means for guiding the mixture in the chamber, and means for opening the said valve in timed relation to the ignition of the charge.



2. The combination of a turbine including sets of revolving buckets, and oppositely discharging nozzles disposed between the said sets for delivering fluid to both simultaneously, said nozzles having a common throat, with a combustion chamber adjacent the said throat, a valve for closing the throat for interrupting communication between the chamber and nozzles, means for delivering a compressed charge of explosive mixture to the chamber, means for guiding the mixture in the chamber, means for opening the said valve in timed relation to the ignition of the charge, and means through which liquid is delivered to the throat of the nozzles simultaneously with the passage of the fired gases therethrough.

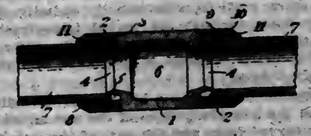
1,021,263. MILKING-STOOL. NICHOLAS REITER, Racine, Wis. Filed Dec. 12, 1911. Serial No. 665,824. (Cl. 31—13.)



1. A milking stool comprising a leg-supported seat having forwardly projecting arms, ears carried by the arms, a pail-supporting bail in pivotal connection with the ears, and a vertical rack-leg disposed under the stool intermediate of the forwardly projecting seat arms.

2. A milking stool comprising a seat having its forward end provided with a recess, the side walls of the recess constituting forwardly projecting arms, apertured ears secured to the seat arms, a bail having shanks for engagement with the ear apertures, supporting legs for the seat, and a rack-leg depending from said seat adapted to support a pail bottom.

1,021,264. PIPE-COUPLING. FRANK E. REUSSER, Pittsburgh, Pa. Filed Apr. 29, 1909. Serial No. 492,958. (Cl. 137—28.)



A pipe coupling including the adjacent ends of pipe sections, a cylindrical sleeve formed with reduced end sections exteriorly threaded, said sleeve being further formed with V-shaped recesses, oppositely tapering nipples integrally formed at the ends of the sleeves and having tapering bores, the outer surface of said tapering nipples forming the inner inclined faces of the said recesses whereby to form a liquid-tight joint between the coupling and the ends of said pipe sections by reason of the

wedging action of said inclined faces of the recesses, said sleeve having an enlarged bore intermediate its ends and of a greater diameter than the greatest diameter of the tapering bores of said nipples, annular rings secured exteriorly with relation to and spaced from the ends of said pipe sections, and interiorly threaded collars movably secured upon said pipe sections and formed to provide interior flanges at their outer ends whereby to engage with said annular rings, said collars adapted for engagement with the reduced end sections of said sleeve and of a diameter equal to the greatest diameter of said sleeve whereby to provide a smooth exterior for the entire length of said coupling.

1,021,265. IMPELLER FOR CENTRIFUGAL APPARATUS. RICHARD H. RICE, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed July 9, 1909. Serial No. 506,749. (Cl. 230—11.)



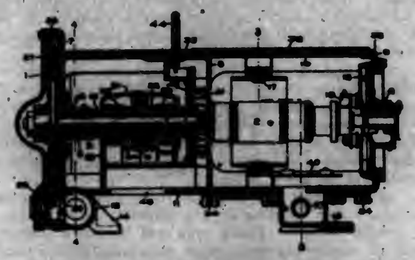
1. An impeller comprising a hub, a web extending outwardly from the hub, vanes arranged in pairs with the members of each pair disposed on opposite sides of the web and having their ends projecting beyond the periphery of the web, the outer portions of the vanes being radially arranged and the inner portions curved transversely with respect to the outer portions, flanges on the inner lateral edges of said members or vanes that are attached to the web and to each other beyond the periphery of the web, flanges on the outer lateral edges of the curved portions of the vanes adjacent the hub, and rings secured to said flanges.

2. An impeller comprising a hub, an integral web extending outwardly from the hub, the portion of the web adjoining the hub having curved faces for directing the fluid to the impeller blades or vanes, and the part of the web between said portion and its periphery having oppositely inclined faces, vanes having their inner lateral edges attached to said inclined faces and to each other beyond the periphery of the web, the outer lateral edges of the vanes being parallel to said faces, said vanes also having their outer portions substantially radially disposed while their inner portions are curved transversely with respect to the outer portions, flanges on the outer lateral edges of the curved portions of the vanes, and rings secured to said flanges.

3. An impeller comprising a hub, a web extending outwardly from the hub, the portion of the web adjoining the hub having curved faces and the part of the web between said portion and its periphery having oppositely inclined faces, vanes having flanged inner lateral edges that are attached to the inclined faces of said web with their outer ends projecting beyond the periphery of the web into engagement with each other, the outer portions of the vanes being radially disposed and the inner portions curved transversely with respect to said outer portions, flanges on the outer lateral edges of the curved portions of the vanes, and rings secured to said flanges.

4. An impeller comprising a hub, a web extending outwardly from the hub, the portion of the web adjacent the hub having curved faces and the part of the web between said portion and the periphery having oppositely inclined converging faces, vanes mounted in pairs on said inclined faces with their outer ends projecting beyond the periphery of the web, the members of each pair being disposed on opposite sides of the web, said vanes having outer radially arranged portions and inner curved portions, integral flanges formed on the inner lateral edges of the vanes which engage said inclined faces and project beyond them into engagement with each other, rivets which pass through the web and each pair of flanges and secure the vanes to said web, rivets which pass through the projecting portions of the flanges and secure them together, integral flanges formed on the outer lateral edges of the curved portions of the vanes, flat rings arranged at each side of the web in engagement with the last mentioned flanges, and rivets for securing the rings to said flanges.

1,021,266. TURBO-GENERATOR. RICHARD H. RICE, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Sept. 22, 1909. Serial No. 518,924. (Cl. 171—252.)



1. A turbo-generator set comprising longitudinally extending channel beams, transverse annular heads formed integral with said beams, a shaft, a bucket wheel and rotor mounted thereon, a cover for the wheel that is supported by one of the heads, a bearing for the shaft carried by another head, a stator located between and carried by the beams, and a second bearing for the shaft carried by one of the beams.

2. A turbo-generator set comprising longitudinally extending channel beams, located one above the other, parallel annular heads that unite the beams, a single foot for supporting the frame at one end, a pair of feet for supporting the frame at the other end, a shaft, a bucket wheel carried by the shaft, and located in one of the heads, a rotor driven by the shaft, and a removable stator engaging the said beams and supported thereby, said stator being removable through one of said heads.

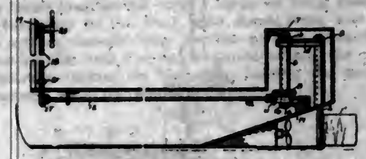
3. A turbo-generator set having a frame comprising three parallel annular heads united by longitudinal channel beams, a turbine wheel adjacent to the head at one end, a generator between the other end head and the middle head, and a ventilating fan in the plane of said middle head.

4. A turbo-generator set having a frame composed of three annular heads and longitudinal beams, a turbine adjacent to one of the end heads, a generator between the middle head and the other end head, a cover inclosing said generator, a hollow foot having air inlets, and a fan in the middle head for drawing air through said generator.

5. A turbo-generator set comprising relatively narrow and longitudinally extending channel beams located one above the other, heads for uniting the beams, a shaft, a rotor mounted thereon, a stator supported by the inner and opposed faces of the beams, a sheet metal cover which is wrapped around the beams and engages them top and bottom and also engages the heads at its ends, and detachable fastenings for the edges of the cover.

[Claims 6 to 12 not printed in the Gazette.]

1,021,267. STEERING DEVICE FOR MOTOR-BOATS. NATHANIEL ROE, Patchogue, N. Y. Filed Nov. 1, 1910. Serial No. 590,225. (Cl. 114—159.)

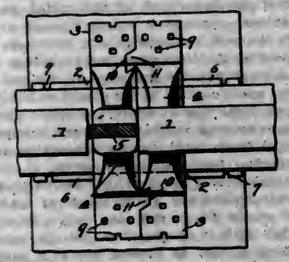


1. In a steering device, a bracket, a bearing mounted on said bracket and provided with an upwardly projecting shaft, a longitudinally extending shaft journaled in said bearing, a barrel journaled on the first named shaft, and provided with a gearing connection with the second named shaft, a rudder provided with a post, a quadrant carried by said post, and a pinion carried by the barrel and meshing with said quadrant.

2. A steering device including a rudder provided with a post, a toothed quadrant carried by the post and formed at its ends with projections, for the purpose specified, a pinion meshing with said quadrant, a vertically disposed barrel carrying said pinion, a bevel pinion secured to said barrel, a vertically disposed shaft on which said barrel is journaled, a bearing carrying said shaft, a support for said bearing, a longitudinally extending shaft journaled in said bearing and provided with a bevel pinion meshing with the first named bevel pinion.

3. A steering device including a rudder provided with a post, a toothed quadrant carried by said post and formed at its ends with projections, for the purpose specified, a pinion meshing with said quadrant, a barrel carrying said pinion, a bearing provided with an upwardly projecting shaft on which said barrel is journaled, a bracket supporting said bearing, a longitudinally extending shaft journaled at one end of said bearing, meshing pinions carried by said shaft and barrel respectively, a support for the other end of the longitudinally extending shaft, a sprocket wheel carried by said shaft, a steering wheel provided with a sprocket and a chain extending around said sprockets substantially as described.

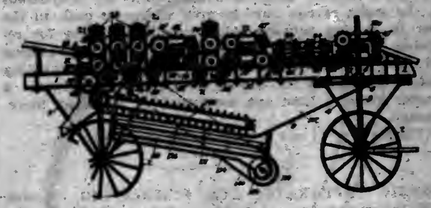
1,021,268. INDEPENDENT RAIL BRACE AND LOCK. RUFUS H. SANDERS, Sacramento, Cal. Filed Sept. 26, 1911. Serial No. 651,443. (Cl. 239—6.)



1. In a device of the kind described, two parallel plates, a chair carried by each plate, each chair being adapted to receive the end portion of a rail, a lug carried by each plate and each plate having a recess formed in its side, the lug of one plate engaging the recess of the other.

2. A device of the kind described comprising a pair of plates, rail receiving chairs carried by said plates, central side extensions carried by said plates, said extensions extending longitudinally beneath the rails, and being notched to receive spikes, each plate being provided with a recess upon the side opposite said extensions, and a lug integral with each plate and adapted to enter the recess of the other plate.

1,021,269. APPARATUS FOR TREATMENT OF FIBER-BEARING AND OTHER PLANTS. GEORGE WILLIAM SCHLICHTEN, Los Angeles, Cal. Filed July 11, 1910. Serial No. 571,484. (Cl. 19—21.)



1. In a machine for separating fibers from fiber bearing stalks, the combination of means for subjecting the stalks to a rolling pressure to crush and flatten the stalks and cause loosening of the outer portion from the inner portion thereof without breaking the inner portion, means receiving the stalk from said first named means and acting thereon to split the outer portion or skin of the stalk containing the fiber without breaking the inner portion thereof, and means receiving the stalk from said splitting means and adapted to subject the stalk to longitudinal bending action sufficient to break the inner or woody portion of the stalk longitudinally.

2. In a machine for separating fibers from stalks containing the same, the combination of smooth rollers adapted to receive the stalks between them, means for rotating said rollers to cause the stalk to pass between the rollers and to be crushed and flattened thereby, a second set of rollers having circumferential ribs adapted to engage and split and limber the stalks containing the fiber, means for rotating said second set of rollers to cause the flattened stalks to pass therebetween, and a third set of rollers adapted to receive the stalks from said second set of rollers and provided with longitudinal currugations intermeshing but sufficiently spaced apart to enable passage of the stalk between them and to bend the limbered stalks during such passage so as to break the inner or woody portion of the stalks.

3. In a machine for separating fibers from stalks, the combination with means for feeding and breaking the stalks, scutching, stripping and combing means adapted to receive the stalks from the said breaking means, and provided with stalk or fiber engaging members having V-shaped notches for receiving the fiber and projections between said notches, means for receiving the fibers from said scutching means and holding said fibers taut during the scutching operation, and means for driving the scutching means at at greater rate of speed that the movement of the stalks from the feeding and breaking means.

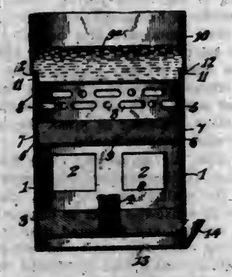
4. A machine for separating fibers from stalks, the combination with means for feeding and breaking the stalks, of scutching, stripping and combing means adapted to receive the stalks from the aforesaid breaking means, and comprising upper and lower flexible carriers, rotary means for supporting and operating said carriers, said carriers provided with transverse bars having V-shaped notches and projections between the notches, said notches being adapted to receive the fibers, the projections on the bars of the upper carrier being directed downwardly and the projections on the bars on the lower carrier being directed upwardly, means for receiving the fiber from said scutching means and holding the fiber taut in its movement through the scutching means, and means for driving the scutching means at a greater velocity than the movement of the fiber therethrough.

5. In a machine for separating fibers from stalks, the combination with means for feeding and breaking the stalks, of scutching, stripping and combing means adapted to receive the stalks or fiber from the aforesaid breaking means, and comprising upper and lower flexible carriers, rotary means for supporting and operating said carriers, said carriers provided with transverse bars having V-shaped notches and projections between the notches,

said notches being adapted to receive the fibers, the projections on the bars of the upper carrier being directed downwardly and the projections on the bars on the lower carrier being directed upwardly, and the projections of the upper carrier bars extending below the projections on the lower carrier bars to give a sinuous path to the fiber in passing between said projections, means for receiving the fiber from said scutching means and holding the fiber taut in its movement through the scutching means, and means for driving the scutching means at a greater velocity than the movement of the fiber therethrough.

[Claims 6 to 11 not printed in the Gazette.]

1,021,270. APPARATUS FOR FUMIGATING. JAMES W. SCOTT and CHARLES A. SCOTT, Kokomo, Ind.; Charles A. Scott administrator of said James W. Scott, deceased. Filed Aug. 29, 1911. Serial No. 646,749. (Cl. 167—3.)

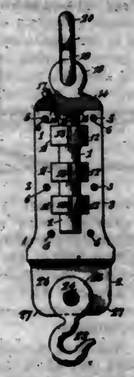


1. An apparatus for fumigating, comprising a heating chamber, a chamber for the reception of a disinfectant provided with outlets for the discharge of vapor or gas and adapted to rest on and be supported by the heating chamber, and a chamber for the reception of water adapted to rest on and be supported by the chamber for the disinfectant, the water chamber being of a size to serve as a cover and closure for the disinfectant chamber and its outlets when inverted and applied thereto.

2. An apparatus for fumigating comprising a chamber having one end open and adapted to receive a heating element, another chamber adapted to rest on and having a closed end of a size to nest in the open end of the heating chamber, said second chamber being adapted to receive a disinfectant and provided with a series of perforations between the ends of the chamber, and a third chamber having one end closed and contracted to rest on and nest in the open end of the disinfectant chamber, said third named chamber being of a size and length to inclose the perforated portion of the second named chamber when inverted thereover and applied thereto.

3. An apparatus for fumigating, comprising a substantially cylindrical chamber closed at one end and open at the other and provided with intermediate passages through its walls, said chamber being adapted to receive a heating element, another substantially cylindrical chamber open at one end and at the other end contracted in diameter and closed and of a size to have its contracted end nest in the open end of the first chamber with the second chamber resting on the walls of the first chamber, said second chamber being adapted to receive disinfectant and having a series of perforations through its walls between the open end and the portion designed to receive the disinfectant, and a third chamber of substantially cylindrical form with one end closed and contracted in diameter, said third chamber having its main portion of a greater diameter than the diameter of the main portion of the second chamber, said third chamber having its contracted portion of a diameter to nest in the open end of the second chamber and to contain water, said third chamber being adapted when inverted to inclose the open end and perforated portion of the second chamber.

1,021,271. SWIVEL. JOHN SHARP, San Bernardino, Cal. Filed Nov. 29, 1911. Serial No. 663,096. (Cl. 59—95.)



1. A swivel of the class described including a casing open at the top and closed at the bottom and provided at intervals with annular grooves, said casing being adapted to receive and contain a lubricant, and a stem provided at intervals with annular collars fitting in the annular grooves of the casing and provided with lubricant channels extending from the upper to the lower edges of the collars and adapted to permit the lubricant to pass from the top to the bottom of the casing.

2. A swivel of the class described including a casing open at the top and closed at the bottom and provided at intervals with interiorly arranged annular grooves, said casing being composed of longitudinal sections secured together, a gasket or packing interposed between the sections of the casing, and a stem provided at intervals with annular collars fitting in the grooves of the casing and having lubricant passages extending from the upper to the lower edges of the collars to permit the lubricant to pass from the top to the bottom of the casing.

3. A swivel of the class described including a casing closed at the bottom and open at the top and provided at intervals with annular grooves, the opening of the casing being enlarged at the upper end to form a lubricant receiving groove or recess, and a stem fitting in the casing and provided at intervals with annular collars arranged in the grooves and having lubricant passages, said stem being also provided at the top with a head fitted against the upper end of the casing and provided with a lubricant passage extending from the exterior of the head to the said lubricant groove or recess.

4. A swivel of the class described including a sectional casing split longitudinally and open at one end and closed at the other and provided at its closed end with integral projecting portions spaced apart to form a slot or bifurcation, a stem secured in the casing, and a supporting device arranged in the said slot or bifurcation and secured to the projecting portions of the casing.

5. A swivel of the class described including a sectional approximately cylindrical casing open at its upper end and closed at its lower end, the latter being enlarged and provided with depending integral extensions spaced apart to form a slot or bifurcation and having alined openings, a stem secured in the casing, a supporting device having an eye fitted in the slot or bifurcation between the said extensions, and a fastening device passing through the openings of the extensions and through the eye of the supporting device.

1,021,272. WRENCH. ABNER SHIRK, De Kalb, Ill. Filed Mar. 25, 1911. Serial No. 616,927. (Cl. 81—166.)

1. A wrench of the class described including a stock having a jaw at its outer end and provided at its inner longitudinal edge with a tooth and having a fulcruming lug at the said edge in spaced relation with the said tooth, a casing carried by the stock and extending from the same at the inner longitudinal edge thereof adjacent to the tooth and the fulcruming lug, a relatively adjustable jaw coöperating with the said jaw and provided with a shank extending through the casing and having at its inner longitudinal edge a series of teeth co-acting with the teeth of the stock, said shank being also provided with a smooth inner portion to bear against the fulcruming lug, and a spring mounted within the casing and bearing against the shank for holding the same in engagement with the stock.

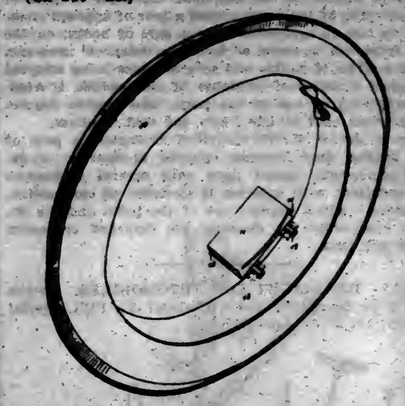


2. A wrench of the class described including a stock provided at its outer end with a jaw having an inclined engaging face arranged at an acute angle to the stock, the latter being also provided at its inner longitudinal edge with a tooth, a casing carried by the stock, a relatively adjustable jaw provided with a shank extending through the casing and having teeth to co-act with the teeth of the stock, said adjustable jaw being provided with an angularly disposed engaging face also arranged at an acute angle to the stock and diverging outwardly from the engaging face of the jaw of the stock, said inclined or angularly disposed engaging faces of the jaws producing a lateral pull or strain on the shank and maintaining the teeth in engagement when the wrench is operating on a pipe or nut, and a spring arranged within the casing and bearing against the shank for holding the same normally in engagement with the stock.

3. A wrench of the class described including a stock provided at its outer end with a jaw having an inclined engaging face arranged at an acute angle to the stock, the latter being also provided at its inner longitudinal edge with a tooth and having a fulcruming lug at the said edge in spaced relation with the tooth, a casing carried by the stock, a relatively adjustable jaw provided with a shank extending through the casing and having at its inner edge a series of teeth to co-act with the tooth of the stock and provided with a smooth inner portion to bear against the fulcruming lug, said adjustable jaw having an angularly disposed engaging face arranged at an acute angle to the stock and diverging outwardly from the engaging face of the jaw of the stock, said inclined or angularly disposed face producing a lateral pull or strain on the shank and maintaining the teeth in engagement when the wrench is operated on a pipe or nut, the shank and the stock being in substantial parallelism when the teeth are in engagement and the lug is in contact with the smooth surface of the shank to maintain the engaging faces of the jaws in their angular or inclined positions, and means for normally maintaining the shank and the stock in parallel relation.

4. A wrench of the class described including a stock provided at its outer end with a jaw having an inclined engaging face arranged at an acute angle to the stock, the latter being also provided at its inner longitudinal edge with a plurality of teeth located at the outer end of the stock, a casing carried by the stock, a relatively adjustable jaw provided with a shank extending through the casing and having at its inner edge a series of teeth to co-act with the teeth of the stock and engaging each of the same, whereby the adjustable jaw is prevented from rocking and is maintained stationary in its adjustment, said adjustable jaw having an angularly disposed engaging face arranged at an acute angle to the stock and diverging outwardly from the engaging face of the jaw of the stock, and said inclined or angularly disposed face producing a lateral pull or strain on the shank and maintaining the teeth in engagement when the wrench is operated on a pipe or nut, and means for normally holding the teeth in engagement with each other.

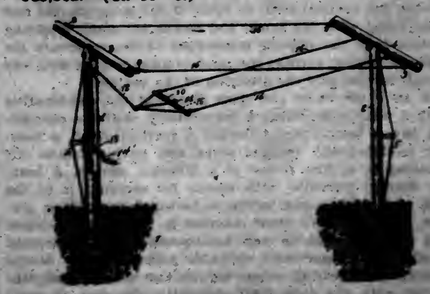
1,021,273. MATCH-HOLDER. FRED C. STARKS, New Sharon, Iowa. Filed Oct. 9, 1911. Serial No. 653,613. (Cl. 206—20.)



1. The combination of a hat with a match holder, comprising a box, a spring actuated lid thereon, two sections being cut from the bottom of said box with one end remaining attached thereto and being folded over adjacent to the said bottom and having slots cut in their free ends leaving three tongues, said match holder being attached to the sweat band of said hat with the outer pair of each three tongues on one side of said band and the inner one of each three tongues on the other side of said sweat band, the free ends of said middle tongues being inserted through said sweat band and folded back toward said match holder.

2. The combination of a hat having a sweat band having two perforations therein with a match holder comprising a box, and spring actuated lid thereon, said box having two sections cut from its bottom, with one end of each of said sections attached to said bottom, each of said sections being folded over adjacent to said bottom and having parallel, longitudinal slots cut therein, whereby three tongues are formed, said match holder being secured to said sweat band with the two outside tongues of each section on one side of said sweat band and the middle tongue of each section on the other side of said sweat band, the ends of said middle tongues being inserted through the perforations in said sweat band and folded back toward said match holder.

1,021,274. CLOTHES-LINE SUPPORT. PETER S. STANCLIFF, Toledo, Ohio. Filed Oct. 5, 1910. Serial No. 585,362. (Cl. 68—3.)



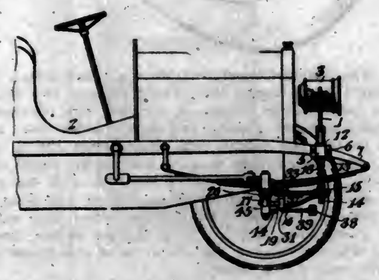
1. In a device of the described character, a pair of posts carrying opposed fixed cross-arms, a detached cross-arm, a windlass supported by one of said posts, connections between the detached arm and said windlass, and a clothes-line leading from one fixed cross-arm to the

other, and thence to the detached arm, substantially as described.

2. In a device of the described character, a pair of posts carrying at their upper ends a pair of opposed cross-arms, on one of said cross-arms a pair of hooks, on the other cross-arm a series of hooks, a detached cross-arm having a series of hooks, said several hooks being adapted to support a series of stretches of clothes-line, a windlass supported by one of the posts, and flexible connections between said detached arm and said windlass.

3. In a device of the described character, a pair of posts having fixed thereon opposed cross-arms, a detached cross-arm, means upon said several cross-arms for engagement with a series of stretches of clothes-line, and means,—which connect one of the posts and the detached cross-arm,—for drawing the detached cross-arm toward said post.

1,021,275. HEADLIGHT FOR AUTOMOBILES. ANTON STEPANEK, Newcastle, Ind. Filed Oct. 31, 1911. Serial No. 657,787. (Cl. 240—62.)



1. In a device of the class described, the combination with a wheeled vehicle including an axle having pivoted spindles, and a transversely shiftable bar connected with the spindles, of a lamp bracket having a stem or pivot mounted on the frame of the vehicle in advance of the said axle, a bearing bracket secured to the axle and extending forwardly therefrom and having an opening through which the stem or pivot passes, gearing supported by the bearing bracket and slidably receiving the stem or pivot of the lamp bracket to permit vertical movement of the latter, and means for communicating motion from the shiftable bar to the gearing for causing the lamp bracket to turn with the pivoted spindles.

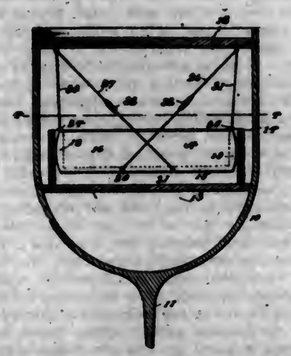
2. A device of the class described including a lamp bracket having a vertical stem or pivot, a bearing receiving the stem or pivot and provided with means for securing it to the frame of a wheeled vehicle, a bearing bracket having means for securing it to the axle of the vehicle, gearing supported by the bearing bracket and slidably receiving the vertical stem or pivot of the lamp bracket and interlocked with the same, and means for communicating motion from the steering mechanism of the vehicle to the said gearing for causing the lamp bracket to turn with the wheels in changing the direction of the vehicle.

3. In a device of the class described the combination with a vehicle including a transversely shiftable connecting bar, a lamp bracket having a vertical pivot, a bearing receiving the vertical pivot and having means for securing it to the frame of a wheeled vehicle, a bearing bracket provided with means for securing it to the axle of a vehicle and having a forwardly extending portion, a vertical rock shaft mounted in the bearing bracket and provided with an arm having means for connecting it with the transversely shiftable connecting bar of the vehicle, and gearing supported by the bracket and connected with the rock shaft and with the stem or pivot of the lamp bracket.

4. In a device of the class described the combination with a vehicle including a transversely shiftable connecting bar, a lamp bracket having a vertical pivot, a bearing receiving the vertical pivot and having means for securing it to the frame of a wheeled vehicle, a bearing bracket provided with means for securing it to the axle of a vehicle and having a forwardly extending portion, a vertical rock shaft mounted in the bearing bracket and provided with an arm having means for connecting it with the transversely shiftable connecting bar of the vehicle, gearing supported by the bracket and connected with the rock shaft and with the stem or pivot of the lamp bracket and slidably receiving the same, and a coiled spring mounted on the stem or pivot above the gearing and bearing against the latter.

5. In a device of the class described the combination with a vehicle including a transversely shiftable connecting rod or bar, a lamp bracket having a depending vertical stem or pivot, a bearing receiving the stem or pivot and having means for securing it to the frame of a wheeled vehicle, a bearing bracket including a vertical tubular portion and forwardly and rearwardly extending arms, the forwardly extending arm having an opening through which the stem or pivot passes, a collar provided with means for securing it to an axle and having a lug or portion receiving and supporting the rearwardly extending arm of the bearing bracket, a vertical rock shaft mounted in the tubular portion of the bracket and provided with a forwardly extending arm, a rear sprocket gear connected with the rock shaft and supported by the bearing bracket, a front sprocket wheel seated upon the forwardly extending arm and slidably receiving the stem or pivot, a sprocket chain arranged on the sprocket wheels, a coiled spring disposed on the stem or pivot and bearing against the front sprocket wheel, and means for connecting the arm of the rock shaft with the transversely shiftable connecting rod or bar of the vehicle.

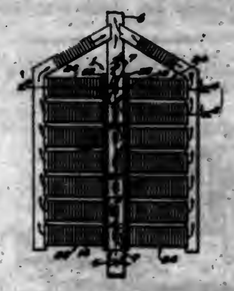
1,021,276. BALANCING DEVICE. JOHN W. STOKER, Marion, Ind. Filed July 15, 1911. Serial No. 638,717. (Cl. 114—124.)



The combination with a lateral tiltable body, of a carrier, casings supported by said carrier and having their longitudinal axes disposed transversely of the tiltable body, each of which has stored therein a predetermined quantity of fluid, connections supporting said carrier and its contents normally in equilibrium from said body, said connections having their upper and lower ends secured to the body and carrier respectively on opposite sides of the longitudinal axis of the body, whereby the lateral tilting of said body will shift the preponderance of weight of the fluid in the casings upon the connections attached to the high side of the tiltable body.

1,021,277. AMALGAMATING-FLUME TABLE. EARL H. TATE, Los Angeles, Cal. Filed Sept. 9, 1909. Serial No. 516,955. (Cl. 83—67.)

1. An amalgamator comprising a flume, a series of transverse troughs along the floor of the flume to contain mercury and undercurrent plates across the flume to direct the current into such troughs; said undercurrent plates being provided with supplementary mercury troughs, and means to cause a flow of material thereacross.



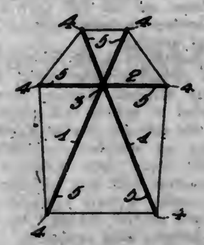
2. The combination with a flume of transverse plates extending across the flume, troughs on said plates adapted to contain mercury and supplementary undercurrent plates in said troughs, said transverse plates being provided with openings above the bottoms, of the troughs to allow liquid to pass therethrough.

3. The combination with a flume, of a transverse plate therein provided with an opening, a trough on said plate adapted to contain mercury and an undercurrent plate in the trough to direct the current down upon the mercury.

4. The combination with a flume, of a transverse plate therein provided with an opening, a trough on said plate adapted to contain mercury and a detachable undercurrent plate in the trough to direct the current down upon the mercury.

5. The combination with a flume, of a transverse plate in said flume the same being provided with openings arranged at different levels, troughs adapted to contain mercury arranged on one side of said plate to deliver liquid to said openings, and means to direct the current onto the mercury in said troughs.

1,021,278. KITE. EVERETT E. THAYER, Jackson, Mich. Filed June 5, 1911. Serial No. 631,259. (Cl. 244—22.)



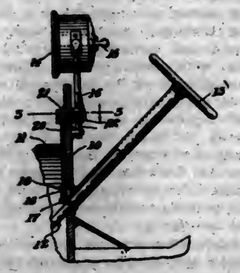
1. A kite frame comprising longitudinal bars bent in an angle and secured intermediate their ends whereby said bars diverge to form top and bottom frame members, and a transverse bar interlockingly engaged with the secured portion of the longitudinal bars.

2. A kite frame comprising longitudinal bars bent laterally at a point beyond the center thereof, said bent portion of the bars being suitably secured and a transverse bar having formed therein a loop adapted to fit over and engage the secured connected portions of the longitudinal bars.

3. A kite frame comprising longitudinal bars bent at an angle and secured intermediate their ends and diverging to form the top and bottom portions of the frame, a transverse bar interlockingly engaged with the connected portions of the longitudinal bars, and means for securing the parts in their relative position in respect to one another.

4. A kite frame comprising longitudinal bars bent intermediate their ends and bent at an angle and closely assembled adjacent to their bent portions, a transverse bar formed to interlockingly engage with the connected end portions of the longitudinal bars, a disk having an opening formed therein for the reception of the bent portion of the transverse bar, said disk having grooves formed therein for the reception of the transverse bar on either side of the opening formed therein.

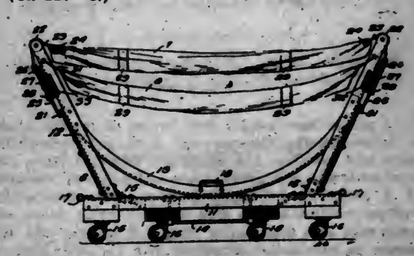
1,021,279. HEADLIGHT-CONTROLLER. FRANCIS E. THOMPSON, Arlington, Mass. Filed Mar. 2, 1911. Serial No. 611,782. (Cl. 240—62.)



1. A device for mounting and controlling headlights, comprising a steering shaft; a vertical lamp shifting shaft; connections between the steering shaft and the lamp shifting shaft; a second vertical shaft carrying the lamp above and in alinement with the lamp shifting shaft; a one point separable connection between the two shafts, and manually operated means to disconnect and swing the lamp carrying shaft at will and reëstablish the original connection.

2. A device for mounting and controlling headlights, comprising connections between the headlight and the car steering wheel, said connections including a pair of elliptical gears in mesh, one of which is actuated by the steering wheel and has a smaller radius than the driven gear at normal position, progressively increasing as the gear is turned, to cause the lamp to be turned slowly at the outset and rapidly as the steering wheel is turned for a large angled turn of the car.

1,021,280. LIFE-SAVING NET. MARTIN UNGÄR, Chicago, Ill. Filed June 30, 1911. Serial No. 636,259. (Cl. 227—6.)



1. A life saving net comprising in combination, a plurality of U-shaped structures, a sheave carried at the upper end of each of said U-shaped structures, a net, and means forming resilient connections between each of said U-shaped structures and said net, said means comprising a bracket carried by said upright member, a plunger directed by said bracket and having a collar, a compression spring confined between said collar and said bracket, and a flexible connection between said plunger and said net, and trained over said sheave to direct said plunger in the line of pull of said connection.

2. A life saving net comprising in combination, a plurality of U-shaped structures, a sheave carried at the upper end of each of said U-shaped structures, a net, means forming a resilient connection between each of said U-shaped structures and said net and including a bracket carried by each of said U-shaped structures, a plunger directed by said bracket and having a collar, a compression spring confined between said collar and said bracket, and a flexible connection between said plunger and said net, and trained over said sheave to direct the plunger in the line of pull of said connection, and means for retaining said U-shaped structures in close proximity to each other with the said net in a folded position, or for separating and retaining said structures one from another to draw the said net.

3. A life saving net comprising, a base including a plurality of U-shaped structures, each structure being rigidly formed and arranged in parallel alined relation to each other with respect to their planes, a net carried by said base adjacent to the upper ends of said U-shaped structures, lazy-tong levers operatively connected to said U-shaped structures for positioning the same in relative close proximity, with said net in a folded position to contract the base, or for separating said U-shaped structures one from another for expanding the base and drawing the net, and means for retaining said base in a contracted or expanded position, combined substantially as and for the purpose set forth.

4. In a life saving net, the combination with a base structure and a net therefor, of means, forming a resilient connection between said base structure and net, including a sheave carried by said base structure, a bracket rigidly secured to said base structure, a plunger guided by said bracket, a flexible connection between said net and plunger and trained over said sheave to direct the line of pull upon said flexible connection subjected to forces acting upon said net, and resilient means for normally retaining said plunger in a position permitting movement thereof subject to pull upon said flexible connection to yieldably counteract the forces upon said net.

1,021,281. PUZZLE. CLARENCE C. VESSELS, Kansas City, Mo., assignor of one-half to J. A. Kurt, Kansas City, Mo. Filed Mar. 3, 1911. Serial No. 611,983. (Cl. 46—41.)



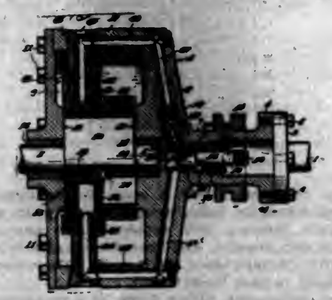
1. A puzzle comprising a body having an interior chamber, tubes opening through said body and terminating within said chamber, and tortuously arranged tubes connected with said first named tubes and with said chamber.

2. A puzzle comprising a chamber, tubes terminating in off-set relation within said chamber, other tubes connected with said first named tubes and opening into said chamber in substantial alinement with the inner ends of said first named tubes, and a body inclosing said chamber and tubes, except their outer mouths of the first named tubes, substantially as described.

3. A puzzle comprising a body, a chamber located within said body, tubes opening through said body and terminating in offset relation within said chamber, said tubes having elbows therein, other tubes opening from said first named tubes, inwardly from and near said elbowed portion and terminating in the chamber in substantial alinement with the mouths of said first named tubes, for the purpose set forth.

4. In a puzzle, an opaque body, tortuously arranged tubes located within the body and having indirect communication therein, and a key word or the like on the exterior of the opaque body, substantially as described.

1,021,282. FLUID-CLUTCH. PAUL WEEKS, Los Angeles, Cal. Filed Mar. 20, 1911. Serial No. 615,784. (Cl. 192—18.)



1. A driving member, a driven member, a plurality of cylinders on one of said members, connections between said cylinders to form a liquid confining space, pistons in said cylinders, an eccentric on the other member for causing a movement between the pistons and cylinders to cause the liquid to circulate from one cylinder to the other, and means for controlling the circulation of said liquid, said means consisting of a valve sleeve having ports therein registering with the connections between said cylinders, and a plunger longitudinally slidable in said sleeve to cover and uncover said ports.

2. A driving member, a driven member, a plurality of cylinders on one of said members, connections between said cylinders to form a liquid confining space, pistons in said cylinders, an eccentric on the other member for causing a movement between the pistons and cylinders to cause the liquid to circulate from one cylinder to the other, means for controlling the circulation of said liquid, means for replenishing said liquid, said means comprising a reservoir, a piston in said reservoir, a spring between said piston and the end wall of said reservoir, said reservoir having an inlet opening and means for closing said inlet opening.

3. A driving member, a casing secured to said driving member, pistons carried by said casing, a pair of yokes having oppositely disposed bearing faces, cylinders on said yokes adapted to receive said pistons, an eccentric block engaging the opposite bearing faces of said yokes, a driven member, an eccentric on said driven member in said eccentric block, said casing having passages therein communicating with said cylinders and a central chamber in the casing to form a liquid confining space, and means in said central chamber for controlling the communication between said passages.

4. A driving member, a casing secured to said driving member, hollow pistons extending inwardly from said casing, a pair of yokes having oppositely disposed bearing faces, cylinders carried on said yokes adapted to receive said pistons, an eccentric block engaging the opposite bearing faces of said yokes, a driven member, an eccentric on said driven member in said block, said casing having passages therein communicating with the cylinders through said pistons and communicating with a central chamber to form a liquid confining space, and means in the central chamber for controlling the flow of liquid through said passages.

5. A driving member, a casing secured to said driving member, hollow pistons extending inwardly from said casing, a pair of yokes having oppositely disposed bearing faces, cylinders carried on said yokes adapted to receive said pistons, an eccentric block engaging the opposite bearing faces of said yokes, a driven member, an eccentric on said driven member in said block, said casing having passages therein communicating with the cylinders through said pistons and communicating with a central chamber to form a liquid confining space, and means in the central chamber for controlling the flow of liquid through said passages, said means consisting of a valve sleeve having ports therein registering with the passages, a plunger slidable in said sleeve over said ports, and means for operating said plunger.

[Claims 6 to 8 not printed in the Gazette.]

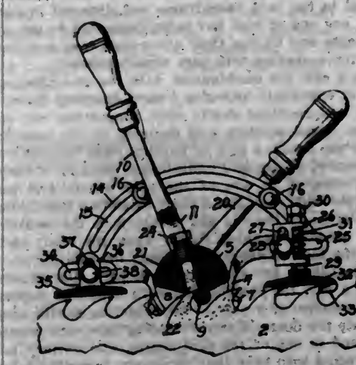
1,021,283. COLLAR. NATHAN JAMES WHITAKER, Amsterdam, N. Y. Filed Jan. 16, 1911. Serial No. 602,882. (Cl. 2—67.)



1. A collar composed of inner and outer sections constituting plies, the outer section having a slot in its band portion at the center below the upper edge, the inner section having an integral tongue extending outwardly through the slot and depending therefrom, said tongue being backed up by the adjacent portion of the outer section and terminating short of the bottom edge of the collar, and having a buttonhole for attaching the collar to a shirt.

2. A turndown collar formed of a plurality of sections constituting plies, each section being of the same contour and having a band portion and an integrally connected turned down portion, said sections being placed one upon the other and stitched together around all the edges, the outer section having a slot in its band portion at the center below the top edge, and a tongue provided with a button hole for attaching the collar to a shirt, said tongue being provided on an inner section and passed through said slot and depending therefrom but terminating short of the bottom edge of the collar.

1,021,284. SAW-SWAGE. ALBERT E. WHITE, Eau Claire, Wis. Filed Nov. 4, 1908. Serial No. 461,055. (Cl. 76—54.)



1. In a saw swage, the combination with a block or head having a slot to receive the saw teeth, of a die mounted in said head and adjustable lengthwise therein across said slot, said die consisting of a straight bar, of uniform shape in cross section throughout its length, with its outer surface formed of two partial cylinders eccentrically arranged in relation to each other, and intersecting on straight lines, the lines of intersection forming working edges extending from end to end of the die on each side of the center thereof, said die being reversible end for end to bring either edge into working position, and means for operating said die.

2. In a saw swage, the combination with a block or head having a slot to receive the saw teeth, of a die mounted in said head and adjustable lengthwise therein across said slot, said die consisting of a straight bar of uniform shape in cross section throughout its length, a portion of its outer surface being formed of a partial cylinder, with a working edge, on each side of the center, extending from end to end of the die, said die being reversible, end for end, to bring either working edge into operating position, and means for operating said die.

3. In a saw swage, a block or head having a slot to receive the saw teeth, a die mounted in said head and adjustable therein across said slot, one side of said die being milled off to a true radius and the other side of said die forming a bearing surface in the block, the meeting points of said milled surface and said bearing surface forming like working edges extending from end to end of the die on each side of the center thereof, whereby said die is adapted to be removed from said head when one side is worn and turned end for end to bring the other side into working position, an operating lever having a forked end, the arms of said fork having split hubs thereon to receive said die, and clamping screws for securing said hubs on said die, the inner ends of said hubs contacting with said head and holding said die against longitudinal movement during the swaging operation.

4. In a saw swage, the combination with a block or head having a slot to receive the saw teeth, of a die mounted in said head and adjustable lengthwise therein across said slot, said die consisting of a straight bar of uniform shape in cross section throughout its length, with a working edge on each side of the center, both of said working edges being alike and said die being reversible, end for end to bring either working edge into operating position, and means for operating said die.

5. In a saw swage, the combination with a block or head having a slot to receive the saw teeth, of a die mounted in said head and adjustable lengthwise therein across said slot, said die consisting of a straight bar of uniform shape in cross section throughout its length, with a portion of its surface formed of a partial cylinder, and the remaining portion flattened, whereby a working edge is provided on each side of the center of the die extending from end to end thereof, both of said working edges being alike and said die being reversible to bring either working edge into operating position, and means for operating said die.

[Claims 6 and 7 not printed in the Gazette.]

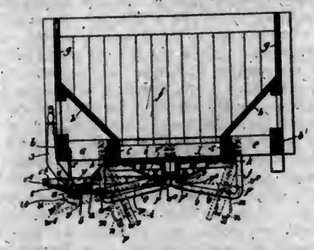
1,021,285. IRONING-TABLE. ANSEL WILLIAMS, Fulton, Mo. Filed Sept. 7, 1911. Serial No. 648,038. (Cl. 45—47.)



The combination with a support, of a leaf pivotally connected thereto and arranged to swing out therefrom, a vertically disposed sleeve secured to and depending from the support and formed with upper and lower segmental recesses, a bracket including upper and lower arms and a connecting bar, said arms being received in said segmental recesses, a pivot pin mounted to turn in said sleeve and secured to said arms, a leaf supporting arm pivotally connected to said bracket to swing in a plane at right angles to the plane of movement of said bracket and formed with an offset end adapted to engage the leaf, said supporting arm being formed at its lower edge with a keeper, and a brace bar pivotally connected to the

bracket underneath the pivotal connection of the supporting arm, the brace bar being pivoted to swing in a plane at right angles to the plane of movement of the bracket and having its free end arranged for engagement in said keeper, whereby to directly support the supporting arm and to assist in supporting the leaf.

1,021,286. DUMP-CAR. ROBERT MONTAGUE ZIMMERMAN, Montreal, Quebec, Canada, assignor to National Dump Car Company, Chicago, Ill., a Corporation of Maine. Filed June 9, 1910. Serial No. 566,090. (Cl. 105—185.)



1. In a car having a discharge opening, the combination with a pair of doors controlling the said discharge opening, of a pair of oscillatory members movable on a common axis, means whereby the said members are oscillated, reciprocatory members operated by the said oscillatory members, and means operatively connecting the said reciprocatory members to the doors, including a pair of laterally movable shafts, a plurality of rails supporting the shafts, and a plurality of rails carried by the doors and inclined thereto and adapted to be engaged by the said shafts.

2. In a car having a discharge opening, the combination with a pair of doors controlling the said discharge opening, of a pair of oscillatory members, means whereby the said members are oscillated, reciprocatory members operated by the said oscillatory members, and means operatively connecting the said reciprocatory members to the doors, including a pair of laterally movable shafts, a plurality of inclined rails supporting the shafts, and a plurality of rails carried by the doors and each having a pair of rail surfaces inclining in opposite directions toward the doors and adapted to be successively engaged by the said reciprocatory members, for the purpose set forth.

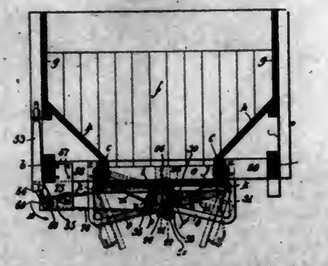
3. In a car having a discharge opening, the combination with a pair of doors controlling the said discharge opening and adapted to open away from each other, of operating mechanism for such doors, including a pair of laterally reciprocating shafts, a plurality of rails supporting each of the shafts, and a plurality of rails carried by the doors and inclined thereto and adapted to be engaged by the said shafts.

4. In a car having a discharge opening in its bottom, the combination with a pair of doors hinged at the side edges of the said opening and having their free edges meeting when the doors are closed, of an oscillatory shaft at one side of the opening; bearing plates supporting the said shaft; inclined shaft supporting rails located below the level of the doors; inclined rails upon the under side of the doors; a pair of laterally movable shafts resting upon the said supporting rails and having the rails upon the doors bearing thereon; two pairs of arms carried by the oscillatory shaft; pitmen of different lengths pivotally connected at their opposite ends to the said arms and laterally movable shafts; and means for oscillating the said oscillatory shaft.

5. A car comprising side sills, end sills, intermediate longitudinal and transverse sills forming a frame, hopper walls supported with their lower edges connected to the frame, a pair of doors hinged to the said longitudinal intermediate sills and having their free edges meeting when the doors are closed, of an oscillatory longitudinal shaft at one side of the said frame; bearing plates suspended from the transverse sills and supporting the said shaft; inclined shaft supporting rails suspended from the sills and located below the level of the doors; inclined rails upon the underside of the doors; a pair of laterally movable shafts resting upon the said supporting rails and having the rails upon the doors bearing thereon; two pairs of arms carried by the oscillatory shaft; pitmen of different lengths pivotally connected at their opposite ends to the said arms and laterally movable shafts; and means for oscillating the said oscillatory shaft.

[Claims 6 and 7 not printed in the Gazette.]

1,021,287. DUMP-CAR. ROBERT MONTAGUE ZIMMERMAN, Montreal, Quebec, Canada, assignor to National Dump Car Company, Chicago, Ill., a Corporation of Maine. Filed June 9, 1910. Serial No. 566,091. (Cl. 105—185.)



1. In a car, the combination with the underframe, and a pair of oppositely swinging hinged dumping doors, of a pair of reciprocating shafts each supporting one of the doors, a pair of sliding bars mounted in the said underframe and each connected to one of the said shafts, and unitary means for operating both bars simultaneously.

2. In a car, the combination with the underframe, and a pair of oppositely swinging hinged dumping doors, of a pair of reciprocating shafts each supporting one of the doors, a pair of toothed sliding bars mounted in the said underframe and each connected to one of the said shafts, a unitary rotatable device operatively engaging each of the toothed sliding bars, and means for rotating the said device.

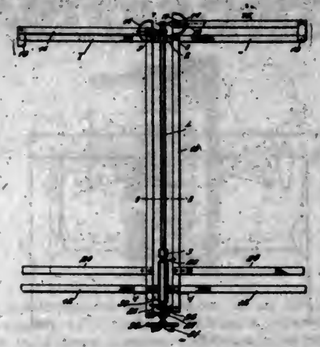
3. In a car, the combination with the underframe, and a pair of oppositely swinging hinged dumping doors, of a pair of reciprocating shafts each supporting one of the doors in closed position and mounted in the underframe beneath the doors, a pair of parallel rigid sliding bars mounted in the said underframe and disposed in parallel planes, one end of each bar being connected to one of the said shafts and having their other ends free, and unitary means for operating both bars simultaneously.

4. In a car, the combination with the underframe, and a pair of oppositely swinging hinged dumping doors, of a pair of reciprocating shafts each supporting one of the doors in closed position and mounted in the underframe beneath the doors, a pair of parallel rigid toothed sliding bars mounted in the said underframe, one end of each bar being connected to one of the said shafts and having their other ends free, and a shaft extending longitudinally with relation to the car and mounted in the underframe thereof, pinions mounted rigidly upon the shaft and engaging the toothed racks, and means for rotating the last mentioned shaft for operating both bars simultaneously.

5. In a car, the combination with a pair of oppositely swinging doors, of a pair of reciprocating shafts adapted to operate the doors, a pair of sliding bars each connected at one end to one of the said shafts, and unitary means for operating both bars simultaneously, including a rotary member in operative relation with the sliding bars, a second rotary member rigidly connected to the first mentioned rotary member, a main shaft, means for operating the main shaft, and means operatively connecting the main shaft and second rotary member.

[Claims 6 to 10 not printed in the Gazette.]

1,021,288. LEAF-TURNER. BERT M. ADAMS, Detroit, Mich. Filed Jan. 10, 1911. Serial No. 601,798. (Cl. 84—135.)



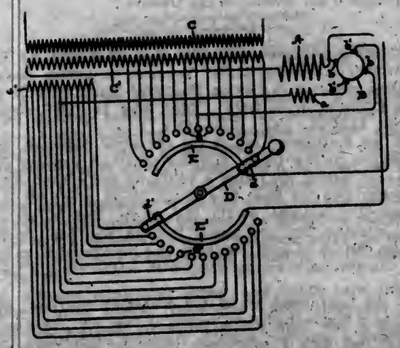
1. In a device of the class described, the combination with a shaft, of a plurality of leaf turners mounted thereon, a pivoted sheet holding arm carried by each turner, means to hold said arm in position to engage variable sized sheets, and a pivoting sheet holding device carried by each turner.

2. In a device of the class described, the combination with a shaft, of a sheet turning member mounted thereon, a ratchet segment carried by said member, a sheet holding arm adapted to operate over said segment, means carried by said arm to frictionally engage the segment and hold the arm in operative position, and a sheet clamp on the outer end of said arm.

3. In a device of the class described, the combination with a shaft, of a leaf turning bar pivotally mounted thereon, a sheet supporting arm pivotally mounted upon the bar, means to adjustably hold said sheet supporting arm in operative position, an arm pivotally mounted upon the bar, and a sheet clamping finger carried by said arm.

4. In a music leaf turner, a shaft, a leaf turning bar pivotally mounted thereon, means to frictionally engage a sheet of music at the bottom thereof, an arm pivoted for horizontal movement on the shaft, said arm being movable in a vertical plane and having a slot, a segment on the bar, and means carried by the arm and passed through the slot therein for engaging the segment to hold the arm in adjusted position.

1,021,289. SINGLE-PHASE MOTOR. ERNST F. W. ALEXANDERSON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Sept. 2, 1909. Serial No. 515,771. (Cl. 172—276.)



1. A single phase motor of the commutator type having an inducing winding on the stator, connections forming with the rotor winding a circuit in inductive relation to said inducing winding, a source of variable voltage included in said circuit, a second set of connections establishing a circuit through the rotor winding displaced approximately 90 electrical degrees from the first mentioned rotor circuit, an auxiliary winding on the stator in inductive relation to the inducing winding included in said second circuit, and a source of voltage external to the motor also included in said second circuit, said voltage being in phase with the voltage at the motor terminals and variable independently of the motor current.

2. A single phase motor of the commutator type having an inducing winding on the stator, a set of commutator brushes displaced by a small angle from the line of magnetization of said inducing winding, a source of variable voltage connected to said brushes, a second set of brushes displaced approximately 90 electrical degrees from the first set, an auxiliary winding on the stator in inductive relation to said inducing winding connected in series with said second set of brushes, and a source of variable voltage external to the motor in series with said auxiliary winding and second set of brushes.

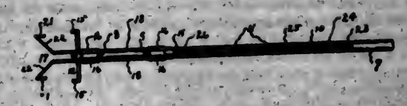
3. A single phase motor of the commutator type having an inducing winding on the stator, connections forming with the rotor winding a circuit in inductive relation to said inducing winding, a source of variable and reversible voltage included in said circuit, a second set of connections establishing a circuit through the rotor winding displaced approximately 90 electrical degrees from the first mentioned rotor circuit, an auxiliary winding on the stator in inductive relation to the inducing winding included in said second circuit, and a source of variable and reversible voltage external to the motor also included in said second circuit.

4. A single phase motor of the commutator type having an inducing winding on the stator, a set of commutator brushes displaced by a small angle from the line of magnetization of said inducing winding, a source of variable and reversible voltage connected to said brushes, a second set of brushes displaced approximately 90 electrical degrees from the first set, an auxiliary winding on the stator in inductive relation to said inducing winding connected in series with said second set of brushes, and a source of variable and reversible voltage external to the motor in series with said auxiliary winding and second set of brushes.

5. A single-phase motor of the commutator type having an inducing winding on the stator, a set of commutator brushes displaced by a small angle from the line of magnetization of said inducing winding, a source of variable voltage connected to said brushes, a second set of brushes displaced approximately 90 electrical degrees from the first set, an auxiliary winding on the stator in inductive relation to said inducing winding connected in series with said second set of brushes, and a source of voltage external to the motor in series with said auxiliary winding and said second set of brushes, said voltage being in phase with the voltage at the motor terminals and variable independently of the motor current.

[Claims 6 and 7 not printed in the Gazette.]

1,021,290. CLINKER-TONGS. JOHN G. ALTHOUSE, Omaha, Nebr. Filed Dec. 1, 1911. Serial No. 663,207. (Cl. 126—321.)



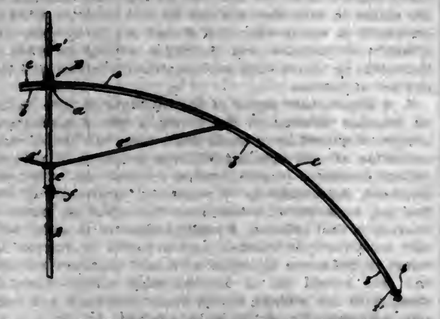
1. A clinker tongs, comprising, in combination with a handle bar provided at one of its terminals with a fork projecting transversely therefrom and provided near its opposite terminal with a rack bar; sleeve-members mounted in alinement upon the handle bar; a gripping-member consisting of a rod bent at its middle to form a terminal loop and forming a pair of shifting-arms for

mounting in said sleeve-members, and bent near its free ends to provide transverse prongs to be disposed outwardly of said fork; an operating handle provided with segmentally arranged teeth for engagement with the rack bar; and a connecting rod mounted upon the handle bar and having pivotal connections with the operating-handle and the loop of said shifting-arms.

2. A climbar tongs, comprising, in combination with a handle bar provided at one of its terminals with a fork projecting transversely therefrom and provided near its opposite terminal with a rack bar; collars formed with sleeves and mounted upon the handle bar with their sleeves in alinement; a gripping-member consisting of a rod bent at its middle to form a terminal loop and providing parallel, adjacent arms for mounting in said sleeves, and bent substantially at right angles near its free ends to provide prongs to be disposed outwardly of said fork; an operating handle provided with segmentally arranged teeth adapted to engage said rack bar; and a connecting-rod mounted upon the handle bar and having a pivotal connection with the handle bar and said terminal loop.

3. In combination, a handle bar provided at longitudinal intervals with guides arranged in pairs, said bar being provided at one of its terminals with a transverse fork and near its opposite terminal with a rack-bar; a gripping-member formed with parallel arms bent near their terminals to form transverse prongs, said gripping-member being disposed with its arms parallel with the handle bar in engagement with said guides, its prongs projecting substantially parallel with and outwardly of said fork; an operating handle having segmentally arranged teeth for engagement with the rack-bar; and a connecting-rod extending between and having pivotal connections with the operating handle and said parallel arms.

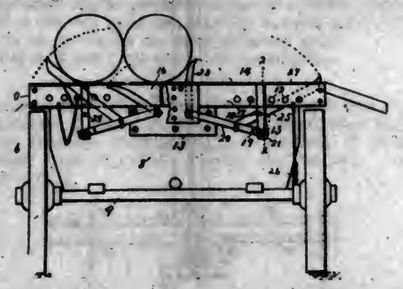
1,021,291. UMBRELLA AND PARASOL. FRANCESCO PAOLO ANELLO, Newark, N. J. Filed Nov. 14, 1911. Serial No. 660,175. (Cl. 135—34.)



In an umbrella of the character designated, the combination with the frame work of the stick A, formed with the stud a^2, and with the annular flanged hub piece a, the removable cover c, formed with the central opening for the insertion of the stick, the clamping device D, consisting of the tubular sleeve d, formed with the bayonet slot d^2, adapted to engage the stud a^2, on the stick, and the external bearing shell d', rigidly attached to said sleeve d, and inclosing it and the stud a^2, as and for the purpose set forth.

1,021,292. LOG-WAGON ATTACHMENT. JOHN H. ANTHONY, Hickman, Ark. Filed Oct. 31, 1910, Serial No. 589,989. Renewed Aug. 29, 1911. Serial No. 646,690. (Cl. 21—38.)

1. A log-wagon attachment comprising a transversely perforated body, mounted on the wagon bunk, a depending plate on said body secured to said bunk, a perforated guide plate on a side of said body and, at intervals, spaced therefrom, a hanger on said body, a lever fulcrumed on said depending plate and having a terminal loop encircling said hanger, a spring bolt on said lever adapted to engage holes in said hanger, a dog pivoted on said lever, intermediate its ends, and movable between said guide plate and said body and a stop pin to engage said perforations and to maintain said dog in operative position.



2. In a log-wagon attachment, a body mounted on the wagon bunk, a depending plate on said body secured to said bunk, a vertical hanger on said body, a lever fulcrumed on said plate and having vertically adjustable engagement with said hanger, a guide directed dog pivoted on said lever, a guide directed check dog pivoted on said plate, and means to hold said dogs releasably in operative position.

3. In log-wagon attachments a body mounted on the wagon bunk a depending plate on said body secured to said bunk, vertical hangers on said body, levers pivoted on said plate and having vertically adjustable engagement with said hangers, guide directed main dogs pivoted on said levers, guide directed check dogs pivoted on said plate, and means to support said dogs, releasably, in operative position.

4. In a log-wagon attachment a body secured on the wagon bunk a perforated vertical hanger on said body, an arm carrying a dog and pivoted on a fixed member, a loop at the outer end of said arm to loosely inclose said hanger, a spring bolt housed at the outer end of said arm adapted to engage the perforations in said hanger, and means to disengage said bolt from said perforations, as described.

5. A log-wagon attachment comprising a transversely perforated body mounted on the wagon bunk, a depending plate on said body bolted to said bunk, a plate spaced at intervals on a side of said body, a perforated hanger on said body, a lever fulcrumed on said depending plate, means by which the outer end of said lever is vertically adjustable on said hanger, a guide-directed dog pivotally mounted on said lever, a guide directed check dog pivoted on said depending plate and stop pins to engage the perforations in said body, as described.

[Claim 6 not printed in the Gazette.]

1,021,293. INSTRUMENT SET FOR ELECTRICAL DISTRIBUTION SYSTEMS. VINCENT G. APPLE, Dayton, Ohio, assignor to Dayton Electrical Manufacturing Co., a Corporation of Ohio. Filed May 11, 1907. Serial No. 373,056. (Cl. 171—313.)

1. An instrument set of the character described, comprising a hollow frame, suitable terminals exposed upon the rear face of the frame, a voltmeter and a hand switch exposed upon the front face of the frame, a cut out relay completely inclosed within the frame, and connections for bringing the voltmeters through the hand switch across certain of said terminals, and permanently connecting the automatic cut out relay with certain of said terminals.

2. An instrument set of the character described, comprising a frame, including separable base and cover parts inclosing a chamber, suitable terminal connections from the interior to the exterior of the frame, a voltmeter and a hand switch exposed upon the face of the cover, an automatic cut out relay inclosed within the chamber of the frame, and wiring connections concealed within the chamber, connecting the voltmeter and hand switch in series with appropriate terminals, and permanently connecting the cut out relay with appropriate terminals.



3. An instrument set for inclusion in an ignition system, consisting of a frame, providing a separable base and cover including a chamber, a volt-meter, an automatic cut-out and a hand-switch carried by said cover, and suitable circuit connections, the automatic cut-out and wiring connections being concealed within the chamber by the cover, said connections comprising a terminal for connection in common with a dynamo, a storage battery and a working circuit, and individual connections for the remaining terminals of said dynamo, storage battery and working circuit, and the electrical connections comprising wiring for bridging the volt-meter through the hand switch across the battery terminals, and for connecting the automatic cut-out to control the connection of the individual battery terminal with the individual dynamo terminal.

4. An instrument set for inclusion in an ignition system comprising a frame providing a separable base and cover of insulating material inclosing a chamber, said frame carrying exposed upon the face of its cover a voltmeter and a hand-switch, and carrying on the cover within the chamber, an automatic cut out, four binding posts on the outside of the frame for mechanically connecting the frame to a support and for electrically connecting one in common to a dynamo, storage battery, and working circuit, and the others individually to the said electrical instrumentalities, and connections concealed within the frame for bridging the voltmeter through the hand-switch across the battery terminals and for connecting the automatic cut out to control the connection of the individual battery terminal with the individual dynamo terminal.

1,021,294. HULL AND SUPERSTRUCTURE OF SHIPS AND BOATS. EMMANUEL ANTONIADES, Smyrna, Turkey. Filed Aug. 15, 1911. Serial No. 644,079. (Cl. 114—61.)



1. A vessel, comprising a plurality of hermetically sealed floating tubular structures of rectangular cross section widely separated and connected together constituting the hull, and a superstructure above the hull of less width than the hull, comprising a deck and two sets of struts connecting each tubular structure to the deck one set being connected to the top of the tubular structure and extending diagonally upward and inward to the sides of the deck and the other set being connected to the inner side of the tubular structure and extending to the middle of the deck.

2. A vessel, comprising outside and middle hermetically sealed floating tubular structures widely separated and connected together constituting the hull, and a superstructure above the hull, comprising a deck and struts connected to the outside tubular structures and extending diagonally inward and upward to the deck and other struts connected to the middle tubular structure and extending upward and outward to the deck.

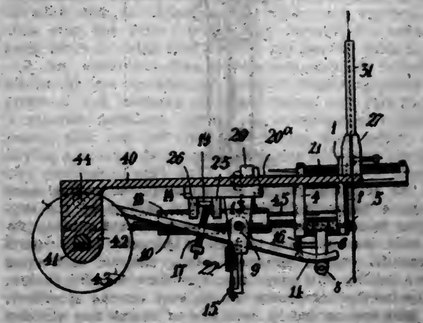
3. A vessel, comprising outside and middle hermetically sealed floating tubular structures widely separated and connected together constituting the hull, and a superstructure above the hull of less width than the hull, comprising a deck, struts and ties connecting the deck with the outside tubular structures and struts and arches connecting the middle tubular structure with the deck.

4. A vessel, comprising a plurality of hermetically sealed floating tubular structures widely separated and connected together constituting the hull, a superstructure of less width than the hull, comprising a deck, and struts connected to the tubular structures and extending diagonally inward and upward to the deck, propellers arranged between the tubular structures and in advance of the rear ends thereof, and propeller shafts extending diagonally forward and upward from the propellers to the upper portion of the superstructure.

5. A vessel, comprising a plurality of hermetically sealed floating tubular structures widely separated and connected together constituting the hull, a superstructure above the hull of less width than the hull, comprising a deck, and struts connected to the tubular structures and extending diagonally inward and upward to the deck, a keel arranged in the middle portion of the hull, a rudder attached to the keel and operating connections for the rudder extending diagonally upward and forward to the upper front portion of the superstructure.

[Claim 6 not printed in the Gazette.]

1,021,295. SAW-FILING MACHINE. JOHAN ARNESEN, Jelöen, near Moss, Norway. Filed Sept. 26, 1910. Serial No. 583,862. (Cl. 76—35.)

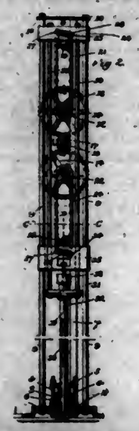


1. In a hand saw filing machine, a plate or table carrying a guide for the saw, a rod supported beneath said plate, a file holder carrying member mounted to have slidable and oscillating movement thereon, a file holder supported from said member, a spring tending to rock said file holder carrying member in one direction to cause the holder to press the file against the saw, a slide guided beneath the table to reciprocate parallel with said rod, parallel lugs projecting from said slide, an arm projecting from the file holder carrying member engaging between the lugs, means for reciprocating the slide, means for rocking said carrying member in opposition to the tension of the spring, and means for feeding the saw.

2. In a hand saw filing machine, a plate or table carrying a guide for the saw, a rod supported beneath said plate, a file holder carrying member mounted to have slidable and oscillating movement on said rod, a slide mounted to move parallel with said rod and having depending lugs, an arm extending from the file holder carrying member and lying between said lugs for causing the parts to reciprocate in unison, a spring tending to oscillate said file holder carrying member to cause the file holder to press the file against the saw, a pitman connecting said slide with a moving part for reciprocating the slide, and a set screw carried by the pitman in rear of its pivot and having its end bearing against said arm.

3. In a band saw filing machine, a plate or table carrying a guide for the saw, a file holder carrying member mounted to have reciprocatory and oscillating movement with relation to said plate, spring means tending to rotate said member to force the file against the saw, a slide mounted to move in a path parallel to the path of movement of said member, means for causing said member and slide to reciprocate in unison while permitting oscillating movement of said member, a pitman connecting a moving part with said slide for reciprocating the latter, said pitman having a forward extension, pawl mechanism for feeding the saw, means whereby said forward extension of the pitman operates said pawl mechanism, and means carried by the pitman for oscillating said member against the tension of the spring to press the file holder away from the saw.

1,021,296. PUMP-OPERATING MECHANISM. PLAYFAIR G. AULT, Birmingham, Ala. Filed May 15, 1911. Serial No. 627,271. (Cl. 103—62.)



1. An actuating device for double piston pumps, comprising a supporting frame; guides carried by the supporting frame; cross heads mounted on said guides; piston rods, one connected to each of the cross heads; pairs of parallel endless sprocket chains, one for each cross head; driving and supporting sprockets for the chains; means for simultaneously driving such driving sprockets; and pins one carried by each pair of chains and coacting with a slot in the corresponding cross head to reciprocate said cross head, the said slot consisting of two arcs of opposite curvature, the radius of curvature of the arcs being twice the radius of the sprockets.

2. An actuating device for double piston pumps comprising a supporting frame; guides carried by the supporting frame; cross heads mounted on the guides; piston rods one connected to each of the cross heads; pairs of parallel endless sprocket chains, one pair for each cross head; driving and supporting sprockets for the chains; gears mounted to rotate with the driving sprockets; a shaft; gears carried by said shaft each of said gears meshing with a pair of the gears turning with the sprockets; and pins, one carried by each pair of chains, each coacting with a slot in the corresponding cross head, such slot consisting of two arcs of opposite curvature, the radius of curvature of the arcs being greater than the radius of the sprockets.

3. An actuating device for double piston pumps comprising a supporting frame; guides carried by the supporting frame; cross heads mounted on the guides; piston rods one connected to each of the cross heads; pairs of parallel endless sprocket chains, one pair for each cross head; driving and supporting sprockets for the chains; gears mounted to rotate with the driving sprockets; a shaft; gears carried by said shaft each of said gears meshing with a pair of the gears turning with the sprockets; and pins, one carried by each pair of chains, each coacting with a slot in the corresponding cross head, such slot consisting of two arcs of opposite curvature, the radius of curvature of the arcs being twice the radius of the sprockets.

4. An actuating device for pumps comprising a supporting frame; guides carried by the supporting frame; a cross head mounted on said guides; a piston rod connected to the cross head; a pair of parallel endless sprocket chains; driving and supporting sprockets for the chains; means for driving the driving sprockets; and a pin carried by the chains and coacting with a slot in the cross head, such slot consisting of two arcs of opposite curvature, the radius of curvature of the arcs being greater than the radius of the sprockets.

5. An actuating device for pumps comprising a supporting frame; guides carried by the supporting frame; a cross head mounted on said guides; a piston rod connected to the cross head; a pair of parallel endless sprocket chains; driving and supporting sprockets for the chains; means for driving the driving sprockets; and a pin carried by the chains and coacting with a slot in the cross head, such slot consisting of two arcs of opposite curvature, the radius of curvature of the arcs being twice the radius of the sprockets.

1,021,297. HORSE-RELEASING DEVICE. RICHARD E. BARRETT, Boykins, Va. Filed Sept. 23, 1911. Serial No. 650,868. (Cl. 21—75.)

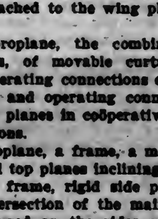


1. In a horse releaser, the combination with a swingletree, of a rearwardly bowed spring secured centrally to the rear face thereof, a lever fulcrumed intermediate its ends to each end of the spring, a latch pin adapted to project through the eye of a trace pivotally mounted upon each lever for engagement with the rear face of the adjacent end of the spring, and means for releasing said pins.

2. In a horse releaser, the combination with a swingletree, of a rearwardly bowed spring secured to the rear face thereof, each end of the spring being forked to form spaced arms, said arms being rearwardly bent to form loops having alined openings, a pivot pin disposed within said openings and projecting beyond the loops, a U-shaped lever having its legs fulcrumed intermediate their ends upon the projecting ends of the pivot pin, a latch pin adapted to project through the eyes of a trace pivotally mounted between the free ends of the legs of each lever for engagement with the rear face of the adjacent end of the spring, and means for releasing said pins.

1,021,298. SEWED HAND-BAG. ELY BECKER, Brooklyn, N. Y. Filed Dec. 19, 1911. Serial No. 666,718. (Cl. 190—41.)

1. An article, such as a grip sack, in which two parts are secured together by a braided seam composed of stitches passing through said two parts, alternately under and over the parts to be secured and alternately forward at least three stitches and backward at least two stitches, all substantially as set forth.



2. An article, such as a grip sack, in which two parts are secured together by a braided seam composed of stitches sewed with a flat thread, passing through said two parts, alternately under and over the parts to be secured and alternately forward at least three stitches and backward at least two stitches, all substantially as set forth.

3. An article, such as a grip sack, in which two parts are secured together by a braided seam composed of stitches passing through said two parts, alternately under and over the parts to be secured and alternately forward three stitches, and backward two stitches, all substantially as set forth.

4. A braided seam, adapted to secure edges of an article together and composed of stitches passing through the parts to be secured, alternately forward at least three stitches and backward at least two stitches all substantially as set forth.

1,021,299. AEROPLANE. BAXTER W. BLEWETT, Denton, Tex. Filed Feb. 25, 1911. Serial No. 610,846. (Cl. 244—12.)



1. In an aeroplane, a main plane, side planes depending from the main plane, wing planes at each end of the side planes movably mounted, movable curtain planes at each end of the main and side planes, and coöperative connections attached to the wing planes and the curtain planes.

2. In an aeroplane, the combination with rigidly mounted planes, of movable curtain planes, swinging wing planes, operating connections extending between the curtain planes, and operating connections extending between the wing planes in coöperative relation to the first named connections.

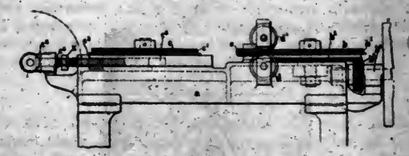
3. In an aeroplane, a frame, a main plane mounted on the frame, rigid top planes inclining upward and outward from the main frame, rigid side planes depending from the line of intersection of the main planes and the top planes and secured on the sides of the frame, movable curtain planes at each end of the frame, and swinging wing planes at each corner of the frame.

4. In an aeroplane, a frame, a main plane mounted on the frame, rigid top planes inclining upward and outward from the main frame, flange planes depending from the outer edges of the top planes, rigid side planes depending from the line of intersection of the main planes and the top planes and secured on the sides of the frame, movable curtain planes at each end of the frame, and swinging wing planes at each corner of the frame.

5. In an aeroplane, a frame having uprights at each end supporting a top plane, opposed guide members extending vertically adjacent the uprights of the frame and provided with inwardly extending horizontal portions located adjacent the underside of the top plane of the frame, and flexible curtain planes arranged between the guide members at each end of the frame and provided with projections engaging in said guide members.

[Claims 6 and 7 not printed in the Gazette.]

1,021,300. APPARATUS FOR MANUFACTURING METALLIC HOOPS. CHARLES LÉON BERHIER, Paris, France. Filed Sept. 20, 1910. Serial No. 582,904. (Cl. 80—5.)



1. An apparatus for the manufacture of metallic hoops from rings comprising a pair of grooved disks, one loose and one driven, upon which the ring is stretched, a set of loose reducing rolls arranged in the path of the ring and means for drawing said loose disk away from the driven disk to maintain the tension of said ring upon the driven disk during the operation of the apparatus.

2. An apparatus for the manufacture of metallic hoops from rings comprising a pair of grooved disks, one loose and one driven, upon which the ring is stretched, a set of loose reducing rolls arranged in the path of the ring and means for drawing said loose disk away from the driven disk to maintain the tension of said ring upon the driven disk during the operation of the apparatus, in combination with a stop arranged in the path of said drawing disk to automatically relieve the tension and thus stop the drive of the ring through the reducing rolls after the ring has reached the desired caliber.

3. An apparatus for the manufacture of hoops or circles by the drawing of metallic rings, comprising a frame, a disk mounted upon said frame, said disk having a grooved periphery, means for revolving said disk, a second disk mounted upon said frame, said second disk having a grooved periphery, means for adjusting the relative position of said disks, and drawing rollers mounted in pairs in line with said grooved peripheries.

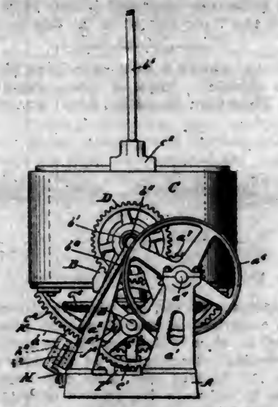
4. An apparatus for the manufacture of hoops or circles by the drawing of metallic rings, comprising a frame, a disk mounted upon said frame, said disk having a grooved periphery, means for revolving said disk, a second disk mounted upon said frame, said second disk having a grooved periphery, means for adjusting the relative position of said disks, a stop arranged in the path of said second disk, said stop being adjustable in position and adapted to arrest the action upon reaching the desired extension, and drawing rollers mounted in pairs in line with said grooved peripheries.

5. An apparatus for the manufacture of hoops or circles by the drawing of metallic rings, comprising a frame, a disk revolubly mounted upon said frame, said disk having a grooved periphery, a crown bevel wheel secured to said disk, a bevel pinion meshing with said bevel wheel, a shaft upon which said bevel pinion is keyed, a driving pulley keyed upon said shaft, a second disk, said second disk having a grooved periphery, a slide upon which said second disk is revolubly mounted, said slide being slidable upon a dove-tail on said frame, a nut carried by said slide, a screw engaging said nut, means for revolving said screw, a stop mounted upon said screw, and drawing rollers mounted in pairs in line with said grooved peripheries.

1,021,301. MIXING-MACHINE. JAMES D. CLOUGH, Lakewood, Ohio. Filed May 4, 1911. Serial No. 624,980. (Cl. 107—38.)

1. A mixing machine comprising the combination of a frame, a mixing kettle mounted thereon, a steam jacket associated with said kettle, a steam inlet communicating with said jacket, and an interposed distributing member

having diametrically positioned curved openings, adjacent openings being arranged to distribute the steam alternately in different opposite directions.



2. A mixing machine comprising the combination of a frame, a mixing kettle mounted thereon, a steam jacket associated with said kettle, a steam inlet communicating with said jacket, and an interposed distributing member having diametrically positioned curved openings, adjacent openings being arranged to alternately distribute the steam toward and away from each other.

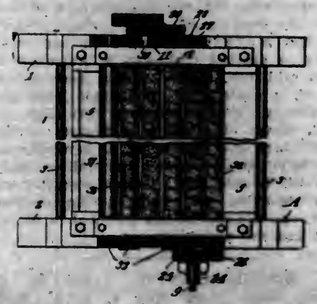
3. A mixing machine comprising the combination of a frame provided with bearings, a jacketed mixing kettle journaled upon said bearings, and a steam pipe extending through said journal and communicating with said jacket, said journal being provided with a permanently open air-space extending therethrough and surrounding said pipe whereby a circulation is permitted.

4. A mixing machine comprising the combination of a frame, a kettle mounted for tilting movement thereon, a segmental rack fixedly associated with said kettle, and means comprising a plurality of coöperating members slidable each within another, one such member adapted to lock said rack against oscillatory movement.

5. A mixing machine comprising the combination of a frame, a mixing kettle pivotally mounted thereon, and a plurality of different locking means movably connected independently of each other with said frame, and means for simultaneously operating said locking means.

[Claims 6 to 19 not printed in the Gazette.]

1,021,302. DETINNING-MACHINE. WILLIAM M. CONNOR, Baltimore, Md. Filed Aug. 1, 1911. Serial No 641,791. (Cl. 51—15.)

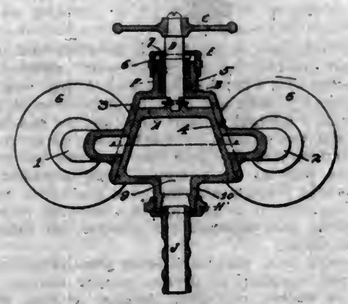


1. A detinning machine, comprising a plurality of successively acting scraping means, and means for operating said scraping means at an increasing peripheral speed from the feed to the delivery end of the machine.

2. A detinning machine, comprising a plurality of successively acting scraping rollers, means for imparting to said rollers a longitudinally reciprocating movement, and means for rotating said rollers and imparting increased peripheral speeds thereto from the feed to the outlet end of the machine.

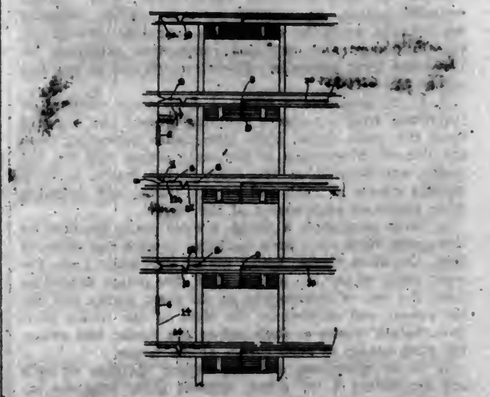
3. A detinning machine, comprising a plurality of successively acting scraping rollers embodying cylinders having wire prongs projecting therefrom, said prongs decreasing in diameter and number on each succeeding roller, and means for rotating said rollers.

1,021,303. VALVE FOR WATER DISTRIBUTION. THOMAS GRANT COOKE, Chicago, Ill. Filed June 14, 1911. Serial No. 633,148. (Cl. 137—26.)



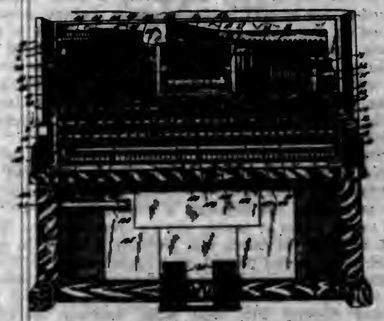
In a combination bib or faucet, a conical valve chamber with sides sloping upward having an open bottom and closed top, pipes leading from opposite sides of the chamber to the mains, a hollow rotatable valve comprising correspondingly shaped walls, a closed top, a closed bottom provided with a small central discharge orifice, and a plurality of ports of varying sizes provided in the valve walls adapted to register with the pipes, a valve stem secured to the top of the valve passing through an orifice in the top of the chamber, an integral sleeve upon the top of the chamber surrounding the valve stem orifice, a spring surrounding the valve stem within the sleeve and secured to the valve stem to exert an upward pressure thereon, a cap surrounding the valve stem and forming a closure for the sleeve, the discharge orifice of the valve provided with a depending flange forming a securing means for a discharge nipple.

1,021,304. FIRE-DOORS FOR ELEVATOR-SHAFTS. JOSEPH R. DONNELLY and THOMAS F. DONNELLY, Cleveland, Ohio. Filed Apr. 13, 1911. Serial No. 620,904. (Cl. 189—48.)



The combination of a plurality of gravitating doors, a cable connected to each door and adapted to support the same in open position and having a fusible link, a rocking trigger having a pair of notched arms to one of which said cable has a slip connection, a main cable under tension, and a cable connected at one end to the main cable and having a slip connection at the other end to the other arm of the trigger.

1,021,305. SELECTOR FOR AUTOMATIC PLAYERS. FRANCIS W. DRAPER, Richmond, Ind., assignor to The Starr Piano Company, Richmond, Ind., a Corporation of Indiana. Original application filed Aug. 24, 1910, Serial No. 578,780. Divided and this application filed Mar. 23, 1911. Serial No. 616,349. (Cl. 84—233.)



1. In a player mechanism, the combination, with a piano, of a main transverse wind trunk, and a pneumatic action trunk, a sheet-driving mechanism, a pneumatic motor, and an expression box, all supported by the main wind trunk and with it forming a unitary structure removably mountable in the piano case in front of the action thereof and above the key bed, the action trunk, motor and expression box being in pneumatic connection with the main wind trunk and said expression box comprising expression mechanism for controlling the pneumatic action, a motor controller, a sound-volume controller, and a cover member removable from the expression box to render accessible the interior thereof.

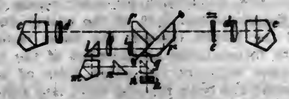
2. In a player mechanism, the combination, with a piano, of a main transverse wind trunk, and a pneumatic action trunk, a sheet-driving mechanism, a pneumatic motor, and an expression box, all supported by the main wind trunk and with it forming a unitary structure removably mountable in the piano case in front of the action thereof and above the key bed, the action trunk, motor and expression box being in pneumatic connection with the main wind trunk and said expression box comprising expression mechanism for controlling the pneumatic action, a motor controller, and a cover member removable from the expression box to render accessible the interior thereof.

3. In a player mechanism, the combination, with a piano, of a main transverse wind trunk, and a pneumatic action trunk, a sheet-driving mechanism, a pneumatic motor, and an expression box, all supported by the main wind trunk and with it forming a unitary structure removably mountable in the piano case in front of the action thereof and above the key bed, the action trunk, motor and expression box being in pneumatic connection with the main wind trunk.

4. In a player mechanism, a main transverse wind trunk divided into compartments, a pneumatic action trunk arranged below the main trunk, vertical trunks connecting the main and action trunks into a unitary structure, a pneumatic motor mounted on the main wind trunk and connected with one of the chambers thereof, an expression box also mounted upon said main wind trunk and having a plurality of compartments connected with the several chambers of the main trunk, a motor controller and expression controllers mounted on said expression box and communicating therewith, and valve mechanism arranged within the expression box for controlling the controllers carried thereby, said expression box having a removable cover which, when removed, renders accessible the valve mechanism within the box.

5. In a player mechanism, a main transverse wind trunk divided into compartments, a pneumatic action trunk arranged below the main trunk, vertical wind trunks connecting the main and action trunks into a unitary structure, a pneumatic motor mounted on the main wind trunk and connected with one of the chambers thereof, an expression box also mounted upon said main wind trunk and having a plurality of compartments connected with the several chambers of the main trunk, a motor controller and expression controllers mounted on said expression box and communicating therewith, and valve mechanism within the expression box for controlling the controllers carried thereby.

1,021,306. COINCIDENCE-TELEMETER. OTTO EPPENSTEIN, Jena, Germany, assignor to The Firm of Carl Zeiss, Jena, Germany. Filed Nov. 17, 1911. Serial No. 660,802. (Cl. 88—3.)



1. In a horizontal coincidence-telemeter two objective reflecting systems, two objective lenses, a separating prism system located between the objective lenses, these parts being adapted to produce a double image, the single images of which are of different size and the larger one of which is erect and the smaller one inverted, optical means placed behind the separating edge of the said prism system in the path of the otherwise lost rays and adapted to transpose the double image presented by the said rays, so as to place it parallel to the first one and to arrange its single images, as regards the line of coincidence, in the opposite order to the single images in the first double image, an ocular system adapted for alternately viewing both double images and a measuring device placed on one side of the separating prism system.

2. In a horizontal coincidence-telemeter two objective reflecting systems, two objective lenses, a separating prism system located between the objective lenses, these parts being adapted to produce a double image, the single images of which are of different size and the larger one of which is erect and the smaller one inverted, an optical system placed behind the separating edge of the said prism system in the path of the otherwise lost rays and comprising a reversing lens for reproducing the double image presented by the said rays in a plane parallel to that of the first named double image, but with its single images, as regards the line of coincidence, in the opposite order to the single images in the first double image, an ocular system adapted for alternately viewing both double images and a measuring device placed on one side of the separating prism system.

1,021,307. VEHICLE WHEEL-TIRE. LUKE G. FLEMING, Tarrytown, N. Y. Filed Jan. 25, 1911. Serial No. 604,523. (Cl. 152—19.)

1. A wheel tire comprising an outer casing having a split along the peripheral face of the casing and in the direction of the length thereof, the said casing being provided with ribs at the sides of the split and recesses at the outer sides of said ribs, a tread overlying the said split, ribs and recesses, spaced members secured on the inner face of the tread and having flanges extending into the said recesses, and ribs on the said flanges and extending lengthwise within said recesses, the said ribs engaging the sides of the casing ribs.

2. A wheel tire, comprising an outer casing having a split along the peripheral face of the casing and in the direction of the length thereof, the outer casing being provided with elastic and integral reinforced ribs at the sides of the split and exterior recesses adjacent the said ribs, a tread overlying the said split, ribs and recesses,

the said tread having at its inner face spaced members extending into the said recesses, and wires carried by said members and extending lengthwise within said recesses, the said wires engaging the outer sides of the reinforced casing ribs.



3. A wheel tire, comprising an outer casing having a split along the peripheral face of the casing and in the direction of the length thereof, the outer casing being provided with integral ribs at the sides of the split, and annular recesses adjacent the outer sides of said ribs, an annular tread overlying the said split, ribs and recesses, spaced clips secured on the inner face of the tread and having angular flanges extending into the said recesses, and ribs extending lengthwise within said annular recesses and secured on the inner sides of said flanges, the said ribs engaging the outer sides of the ribs of said casing.

4. A wheel tire, comprising an outer casing having a split along the peripheral face of the casing and in the direction of the length thereof, and a tread of a flat woven wire fabric removably attached to the said outer casing and overlying the said split.

5. A wheel tire, comprising an outer casing having a split along the peripheral face of the casing and in the direction of the length thereof, the outer casing being provided with reinforced ribs at the sides of the split and exterior recesses adjacent the said ribs, and a tread overlying the said split, ribs and recesses, and formed of a flat woven wire fabric provided at the inner face with engaging members extending into the said recesses and engaging the said casing ribs.

[Claim 6 not printed in the Gazette.]

1,021,308. TRANSOM-LIFTER, &c. ALEXANDER FROMHOLD, Rutherford, N. J. Filed Sept. 1, 1911. Serial No. 647,172. (Cl. 16—28.)



1. The combination with a transom adapted to swing to closed position when released, of a latch mounted on the transom and moved by gravity into operative position, a catch mounted on the frame or casing, and a lever pivotally supported on the frame or casing, engaging the transom, bearing directly against the latch and having a limited longitudinal movement with respect to its pivot, whereby operative movement of the lever first disengages the latch and then moves the transom.

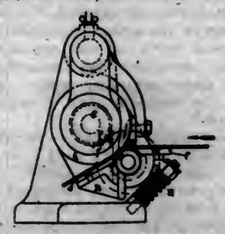
2. The combination with a transom adapted to swing to closed position when released, of a latch mounted on the transom and moved by gravity into operative position, a catch mounted on the frame or casing, a guide secured to the transom, and an operating lever pivotally supported on the frame or casing, movable longitudinally through said guide, having a limited longitudinal movement with relation to its pivot, and bearing directly against an arm of said latch, whereby operative movement of the lever first disengages the latch and then moves the transom.

3. The combination with a transom adapted to swing to closed position when released, of a weighted latch mounted on the transom and having a short opposed arm and moved by gravity into operative position, a catch mounted on the frame or casing, a guide secured to the transom, and an operating lever pivotally supported on the casing, adapted to have a limited longitudinal movement with relation to its pivot, engaging said guide, and bearing directly against the short arm of the latch, whereby operative movement of the lever first disengages the latch and then moves the transom.

4. The combination with a transom adapted to swing to closed position when released, of a latch mounted on the transom, a catch mounted on the frame or casing, a guide secured to the transom, a supporting bracket secured to the frame or casing, and an operating lever bent outwardly from the casing and pivotally mounted on said bracket, in its bowed portion, in a plane remote from the transom with freedom for limited longitudinal movement with relation to its pivot, engaging said guide and cooperating directly with said latch, whereby operative movement of the lever first disengages the latch and then moves the transom.

5. The combination with a transom adapted to swing to closed position when released, of a pivoted weighted latch mounted on the transom normally held in operative position by gravity and having an oppositely extended short arm, a catch mounted on the frame or casing, a guide secured to the transom and an operating lever pivotally supported on the frame or casing, adapted to have limited longitudinal movement on its pivot and bearing directly upon the short arm of said latch whereby the latter is disengaged upon the said longitudinal movement of the operating lever.

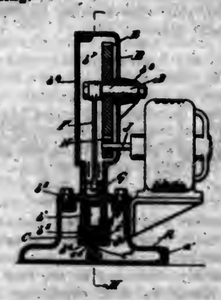
1,021,309. BELT-CUTTING MACHINE. HUGO GENZE, EMIL GÄCK, and ROBERT GÄCK, Gross Auheim-on-the-Main, Germany. Filed Aug. 24, 1911. Serial No. 645,736. (Cl. 164—60.)



In a belt-cutting machine, the combination, with a frame, a shaft journaled therein, and cutter disks fast on the shaft, of a second frame mounted to rock about the said shaft, a pressing member secured to the former frame, a feed roll journaled in the second frame, and a spring tending to rock the second frame and press the feed roll against the said pressing member.

1,021,310. AIR-PUMP. HERBERT J. HAWTHORNE, GUY B. WYATT, and OTTO P. WARNER, Cleveland, Ohio; said Warner assignor to R. H. Reynolds, Milwaukee, Wis. Filed Mar. 6, 1911. Serial No. 612,659. (Cl. 230—27.)

1. An air pump comprising a cylinder having one end open and provided adjacent thereto with a lateral opening, a piston within said cylinder, operating mechanism connected with said piston, and a movable cylinder-head provided with an annular recess adapted to inclose said end and opening.

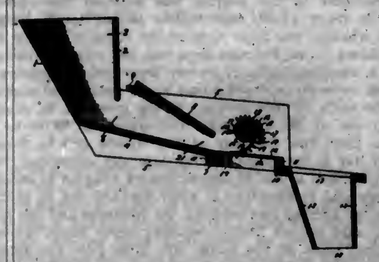


2. An air pump comprising a cylinder having near one end a plurality of circumferentially disposed openings, a piston within said cylinder, operating mechanism connected with said piston, and a movable cylinder-head adapted to both interiorly and exteriorly close said openings.

3. An air pump comprising a frame having a hollow member, a cylinder having an open end extending into said member, and provided with an inlet and a side outlet, the latter communicating with said hollow member, a movable cylinder-head provided with a recess adapted to successively close said cylinder end and side outlet, an operating shaft projecting into said frame, a pinion upon said shaft, a driving gear engaging said pinion, a crank-shaft connected with said gear, a connecting rod secured to said crank-shaft, and a piston connected with said rod.

4. An air pump comprising an upright frame having a receiving chamber, a cylinder extending into said chamber and having its inserted end open, a movable cylinder-head having an annular recess for permanently inclosing said open end, an operating shaft projecting into said frame, a pinion upon said shaft, a driving gear engaging said pinion, a crank-shaft connected with said gear, a connecting rod secured to said crank-shaft, and a piston pivotally connected with said rod, said cylinder being provided with an air inlet more remotely located from the end of the return than from the end of the compression stroke of said piston, and an air outlet within said chamber located near said open end, and adapted to be closed by said cylinder head.

1,021,311. CRANBERRY-GRADER. LOTHROP A. HAYDEN, Carver, Mass. Filed Aug. 18, 1911. Serial No. 644,809. (Cl. 130—32.)



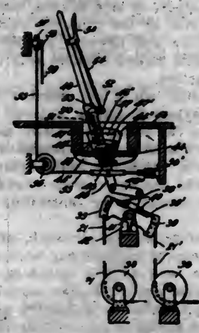
1. In a cranberry-grader, a screen comprising parallel bars or rods, a roll mounted above the screen, flexible aprons secured at one edge to the roll and with their outer edges free, fingers extending from the outer surfaces of the aprons and operative between the bars or rods when the roll is rotated, and means for rotating the roll.

2. In a cranberry-grader, a screen comprising parallel bars or rods, a frame supporting the screen and provided with a discharge-opening beneath, a roll mounted near the surface of the screen, flexible aprons secured at one edge to the roll and with their outer edges free, fingers integral with the aprons and extending at substantially right angles with the surface thereof and operative between the bars or rods when the roll is rotated, and means for rotating the roll.

3. In a cranberry-grader, a screen comprising parallel bars or rods, a roll mounted above the screen, flexible aprons secured at one edge to the roll and with their outer edges free, fingers extending from the outer surfaces of the aprons and operative between the bars or rods when the roll is rotated, means for conducting the berries to the screen, and means for rotating the roll.

4. In a cranberry-grader, a screen comprising parallel bars or rods, a roll mounted above the screen, flexible aprons secured at one edge to the roll and with their outer edges free, fingers extending from the outer surfaces of the aprons and operative between the bars or rods when the roll is rotated, means for conducting the berries to the aprons, a guard for preventing the berries from bounding over the screen or aprons, and means for rotating the roll.

1,021,312. SYSTEM OF OPERATING RAILWAY SWITCHES AND SIGNAL DEVICES. PHILIP D. HIBNER, Seattle, Wash. Filed Sept. 30, 1908, Serial No. 455,442. Renewed Apr. 18, 1911. Serial No. 621,884. (Cl. 104—246.)



1. In combination, with a switch-tongue, of two levers, normally disconnected operable means whereby the switch normally disconnected operable means whereby the switch-tongue may be actuated from either of said levers, and means arranged to be affected by a car whereby both of said levers are temporarily rendered inoperative.

2. In combination, a switch-tongue, two levers, normally disconnected operable means intermediate each of said levers and said tongue, said levers being each arranged to be engaged with said operable means for the selective operation of the tongue by either of the levers.

3. In combination, a switch tongue, a pivoted yoke, operative connection between the yoke and the tongue, a second yoke, operative connections between said yokes, and normally disconnected lever devices for each said yoke whereby said tongue may be influenced by either lever independently of the other lever.

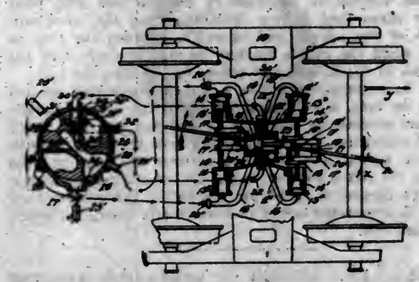
4. In combination, a switch tongue, a pivoted yoke, operative connection between the yoke and the tongue, a second yoke, operative connections between said yokes, normally disconnected lever devices for each said yoke whereby said tongue may be influenced by either lever independently of the other lever, and means arranged to be affected by a car whereby both of said levers are temporarily rendered inoperative.

5. In combination, a switch tongue, a pivoted yoke, operative connection between the yoke and the tongue, a lever arranged to be engaged with the yoke for operating

the tongue therefrom, a second yoke, line connections between said yokes, and means engageable with the second named yoke for actuating the tongue independently of said lever.

[Claims 6 to 11 not printed in the Gazette.]

1,021,313. RAILWAY-SWITCH CONTROLLER. PHILIP D. HIBNER, Seattle, Wash. Filed Sept. 30, 1908, Serial No. 455,441. Renewed July 18, 1911. Serial No. 639,202. (Cl. 104—171.)



1. The combination with the movable member of a railway-switch, devices located in the track for controlling the actions of said movable member, and a car-truck, of a blade carried by the truck and arranged to be normally inoperative with respect to said devices, and air-actuated apparatus also carried by the truck for causing the blade to be made operative and likewise capable of adjusting the same so that said switch member may be moved in a predetermined direction.

2. The combination with the movable member of a railway switch, devices including a lever for actuating said member, and a car truck, of a blade, means actuated by compressed air for imparting vertical and horizontal swinging motions to the blade, and a valve operatively connected with said means whereby the action of the compressed air is regulated for controlling said motions to the blade.

3. The combination with a car-truck, of two pairs of power cylinders mounted transversely with respect to the truck, a piston for each of said cylinders, a piston rod for each pair of cylinders, crank-arms mounted upon each of said rods, a blade pivotally connected adjacent to its ends to blocks, said blocks being pivotally connected with the respective crank-arms, another power cylinder arranged longitudinally to the truck, a piston for this cylinder, a piston rod therefor, a pair of crank-arms fixedly connected to one of the first named rods, a crank pin carried by the last named crank-arms and being connected with one end of the piston rod of the last named cylinder, a valve connected with a source of compressed air supply, and communicating connections between the valve and each of said cylinders, said valve being adapted to control the flow of compressed air through said connections whereby the respective functions of the various pistons are accomplished.

4. The combination with the movable member of a railway switch, and a lever located in the track for controlling both the opening and closing of said movable member, of normally inoperative means carried by a car and engageable with said lever, and air actuated apparatus for causing said means to engage the lever to selectively open or close the switch.

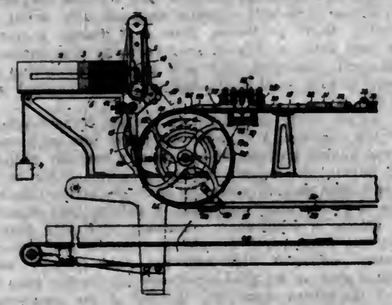
1,021,314. DRAFT ATTACHMENT. JOHN F. HOLTHUS, Orlando, Okla. Filed Sept. 9, 1910. Serial No. 581,238. (Cl. 56—33.)

1. The combination with a mowing machine having a drag bar, of a draft appliance comprising a link mounted on a substantially horizontal pivot carried by the machine, a depending link pivotally attached to the first named link, evener securing means on said depending link, a flexible element directed upon itself to form a loop, the terminals of said loop being connected to said depending link, a sheave secured to said drag bar engaging the bight of said loop, said sheave being disposed in a substantially horizontal plane.



2. The combination with a mowing machine having a drag bar, of a draft appliance comprising a vertically rocking link adjustably attached to the machine, a depending link pivotally connected to the first named link, evener securing means on said depending link, lateral projections on said depending link near the free end thereof, a flexible element directed upon itself to form a loop, the terminals of said loop being connected to said projections, and a sheave secured to said drag bar engaging the bight of said loop.

1,021,315. MACHINE FOR MAKING PAPER BOXES. EMIL JAGENBERG, Dusseldorf, Germany. Filed Oct. 5, 1910. Serial No. 585,348. (Cl. 93—44.)



1. A machine of the character described, comprising an endless conveyer, a front wheel and a rear wheel supporting the same, a core secured to the conveyer in proximity to one of the transverse core-edges, so as to be deflected from the conveyer at the wheels and to form a pocket for a box blank having laterally extending front and rear flaps, and a pair of spaced folders adapted to straddle the core and terminating at their forward end in proximity to the parting line between the conveyer and the front wheel, said folders having inclined upper faces, whereby the front flaps of the blank will glide over the folders, while the rear flaps will be turned up thereby.

2. A machine of the character described, comprising an endless conveyer, a front wheel and a rear wheel supporting the same, a core secured to the conveyer in proximity to one of the transverse core-edges, so as to be deflected from the conveyer at the wheels and to form a pocket for a box blank having laterally extending front and rear flaps, a pair of spaced folders adapted to straddle the core and terminating at their forward end in proximity to the parting line between the conveyer and the front wheel, said folders having inclined upper faces, whereby the front flaps of the blank will glide over the folders, while the rear flaps will be turned up thereby, and a plurality of yieldingly mounted rollers arranged above the conveyer back of said folders and adapted to turn the forward section of the blank over the core.

3. A machine of the character described, comprising an endless conveyer, a front wheel and a rear wheel supporting the same, a core secured to the

conveyer in proximity to one of the transverse core-edges, so as to be deflected from the conveyer at the wheels and to form a pocket for a box blank having laterally extending front and rear flaps, a pair of spaced folders adapted to straddle the core and terminating at their forward end in proximity to the parting line between the conveyer and the front wheel, said folders having inclined upper faces, whereby the front flaps of the blank will glide over the folders, while the rear flaps will be turned up thereby, a plurality of yieldingly mounted rollers arranged above the conveyer back of said folders and adapted to turn the forward section of the blank over the core, and a pair of additional folders arranged back of the rollers and adapted to turn the front flaps against the rear flaps.

4. A machine of the character described, comprising an endless conveyer, a front wheel and a rear wheel supporting the same, a core secured to the conveyer in proximity to one of the transverse core-edges, so as to be deflected from the conveyer at the wheels and to form a pocket for a box blank having laterally extending front and rear flaps, a pair of spaced folders adapted to straddle the core and terminating at their forward end in proximity to the parting line between the conveyer and the front wheel, said folders having inclined upper faces, whereby the front flaps of the blank will glide over the folders, while the rear flaps will be turned up thereby, a plurality of yieldingly mounted rollers arranged above the conveyer back of said folders and adapted to turn the forward section of the blank over the core, a pair of additional folders arranged back of the rollers and adapted to turn the front flaps against the rear flaps, and a plurality of pressure rollers arranged back of the additional folders, and adapted to press the top of the folded blank against the core.

5. A machine of the character described, comprising an endless conveyer, a front wheel and a rear wheel supporting the same, a core secured to the conveyer in proximity to one of the transverse core-edges, so as to be deflected from the conveyer at the wheels and to form a pocket for a box blank having laterally extending front and rear flaps, a pair of spaced folders adapted to straddle the core and terminating at their forward end in proximity to the parting line between the conveyer and the front wheel, said folders having inclined upper faces, whereby the front flaps of the blank will glide over the folders, while the rear flaps will be turned up thereby, a plurality of yieldingly mounted rollers arranged above the conveyer back of said folders and adapted to turn the forward section of the blank over the core, a pair of additional folders arranged back of the rollers and adapted to turn the front flaps against the rear flaps, and stripping means arranged in proximity to the rear conveyer wheel and adapted to draw the folded blank off the core.

1,021,316. TOOL-HANDLE. JOHN C. F. JOHNSON and JOHN HARTMAN, Tacoma, Wash. Filed May 17, 1911. Serial No. 627,532. (Cl. 145—104.)



1. A tool including a pair of handle sections, a blade carried between the handle sections, one of the handle sections having a recess in its inner face opening against the blade, a bushing fitted in the recess and open at the side next to the blade and closed by the same, and a reversible screw-driver engaging through the outer end of the handle section into the bushing.

2. A tool comprising a pair of handle sections, a blade engaging between the handle sections, one of the handle sections having a recess in its inner face opening through its outer end and against the blade, a bushing fitted in the recess and open at the side next to the blade and closed by the same and having an inwardly extending spring tongue provided with a detent adjacent its free end, and a reversible screw-driver having spaced notches for the reception of the detent when inserted in the bushing.

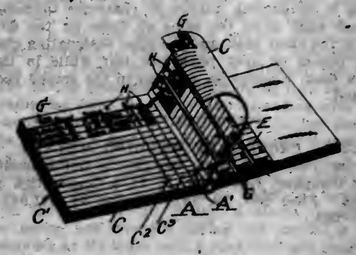
3. A tool comprising a pair of handle sections one of which has a recess in its inner side opening through its outer end, a blade carried between the handle sections and closing the inner side of the recess, a bushing fitting in the recess and having an enlarged outer end providing a pair of shoulders midway of its ends, said bushing being open at the side next to the blade and closed by the same, a screw-driver inserted in the bushing and having a blade portion and a butt, the butt engaging in opposite directions in the enlarged pocket to project the blade portion into the reduced pocket and out through the handle, and retaining means carried within the recess for yielding engagement with the screw-driver.

4. A tool comprising a pair of handle sections one of which has a recess in its inner face, a bushing fitting in the recess and having shoulders midway of its ends, said bushing being open at the side next to the blade and closed by the same, a screw-driver having shoulders midway of its ends, adapted to engage into the bushing and having spaced grooves in one side, and a spring operated detent carried within the bushing for engagement in the grooves.

5. A tool comprising a handle having a recess in its central portion open through its outer end, the recess being reduced at its inner end providing shoulders, a bushing fitting in the recess and having shoulders adjacent to its ends engaging against the shoulders in the recess, a reversible screw-driver carried in the bushing and having shoulders midway of its ends for engagement against the shoulders within the bushing, and a spring member carried within the recess and engaging with the screw-driver to yieldingly hold the same within the bushing.

[Claims 6 and 7 not printed in the Gazette.]

1,021,317. METER-RECORD. MICHAEL H. KANE, Worcester, Mass. Filed Mar. 6, 1911. Serial No. 612,547. (Cl. 11—19.)



1. In a meter record or the like, the combination of two sets of books or leaf holders, one of which has alternate right and left hand pages, the left hand pages having columns, a vertical row of horizontal divisions designated at the top for containing a list of names or the like and the right hand pages having blank spaces opposite said list of names, each left hand page having a designating character, the other of which books has a plurality of leaves, the left hand faces of which are duplicates of said left hand pages in the first named book and contain the same entries in the same order, and the same designating character, and a plurality of removable leaves, each having a date, a designating character the same as that of one of said leaves, and horizontal divisions corresponding in position with the divisions of said duplicate pages adapted to be temporarily placed in the second book, each having its horizontal divisions in registration with those of one of said duplicate pages in order to receive entries and to be transferred from said book permanently to the blank space of the right hand page of the first named book, and when in each book

constituting a column therein registering with the left hand page thereof, the leaves of the first named book having means for securing said temporary leaves over the blank pages thereof in a row arranged successively with respect to said dates.

2. In a meter record, the combination with a book or holder having a plurality of leaves, the pages on the left sides thereof when opened out having columns designated for containing a list of customers divided by horizontal lines, a series of temporary removable leaves of column width having horizontal lines, means for holding said temporary leaves with their horizontal lines corresponding in position with the horizontal lines on said pages, whereby entries of meter readings can be made on said temporary leaves corresponding with each of the entries on the first named leaves, and a second book or holder provided with a plurality of leaves having left hand pages, each identical with a left hand page of the first named book, the entries thereon being duplicates of those of the left hand pages of the first named book or holder, and the right hand pages being blank, and means for holding said temporary leaves on the blank pages of the second book, with the horizontal lines in horizontal registration with the horizontal lines in the left hand pages thereof.

3. In a record book, the combination with a book having a plurality of leaves provided with pages on the left side thereof, said pages having columns designated for containing a list of customers divided by horizontal lines, and provided with a series of temporary removable leaves of column width having horizontal lines corresponding in position with the horizontal lines on said pages, means for holding said temporary leaves in position, whereby entries can be made on said temporary leaves corresponding with each of the entries on the first named leaves, and a second book or holder provided with a plurality of leaves all alike, the left hand pages thereof being duplicates of the left hand pages of the first named leaves in the first named book or holder, means for holding said temporary leaves on the blank pages of the second book with the horizontal lines in horizontal registration with the horizontal lines in the left hand pages thereof, each of the left hand pages of both books having a designating number or character thereon, those on each page being the same as those on the duplicate page of the other book, and the same designating character being placed on each removable leaf while in the first named book, whereby its position in the second book will be fixed.

1,021,318. PROCESS OF WELDING METALS. ANTON LUCAS, New York, N. Y., assignor to Goldschmidt Thermit Company, New York, N. Y., a Corporation of New York. Filed Nov. 12, 1910. Serial No. 591,983. (Cl. 22—204.)



1. The process of uniting metals, which consists in subjecting a piece of solid metal to the action of a mass of molten cast metal and raising the temperature of said solid metal substantially to the welding point, and subjecting said cast metal to the action of superheated molten metal to raise the temperature of said cast metal to a point considerably above welding temperature and melt a portion of said solid metal.

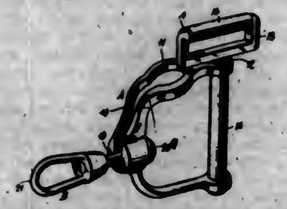
2. The process of butt-welding a pair of rails, which consists in subjecting the ends of said rails to the action of a mass of molten cast metal and raising the temperature of said solid metal substantially to the welding point, and subjecting said cast metal to the action of superheated molten metal to raise the temperature of said cast metal to a point considerably above welding temperature and melt adjacent portions of the ends of said rails.

3. The process of uniting metals, which consists in subjecting a piece of solid metal to the action of a mass of molten cast metal and raising the temperature of said solid metal substantially to the welding point, and subjecting said cast metal to the action of an ignited mass of thermit to raise the temperature of said cast metal to a point considerably above welding temperature and melt a portion of said solid metal.

4. The process of butt-welding a pair of rails, which consists in subjecting the ends of said rails to the action of a mass of molten cast metal and raising the temperature of said solid metal substantially to the welding point, and subjecting said cast metal to the action of an ignited mass of thermit to raise the temperature of said cast metal to a point considerably above welding temperature and melt adjacent portions of the ends of said rails.

5. The process of butt-welding a pair of rails, which consists in subjecting the ends of said rails to the action of a mass of molten cast metal and raising the temperature of said solid metal substantially to the welding point, and subjecting said cast metal to the action of an ignited mass of thermit at a point close to the webs of the rails to raise the temperature of said cast metal to a point considerably above welding temperature and melt the webs and other adjacent portions of the ends of said rails.

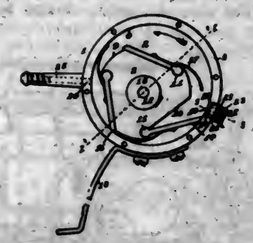
1,021,319. TRACE-COUPLING. WILLIAM R. LUCY, Ralston, Wash. Filed Oct. 9, 1911. Serial No. 653,640. (Cl. 54—52.)



1. A coupling comprising a pair of detachably interlocking sections, one of said sections consisting of a U-shaped member including a bight portion and spaced arms and having a slot therein extending partially through the bight portion and one of the arms of said member, said slot having the end thereof enlarged which is disposed in the arm of the member, a shaft rotatably mounted between the free ends of the arms of the member and having one terminal provided with a loop portion adapted to partially overlie the enlarged end of the slot, and the other member of the coupling comprising a stem slidable in the slot of the first named member and having one end terminating in a ball adapted to pass through the enlarged end of the slot and locked against such passage when the loop portion of the shaft of the first named member is positioned to partially overlie the enlarged end of the slot and a link swiveled on the other end of said stem.

2. A coupling comprising a pair of detachably interlocking sections, one of said sections consisting of a U-shaped member including a bight portion and spaced arms and having a slot therein extending partially through the bight portion, and one of the arms of said member, said slot having the end thereof enlarged which is disposed in the arm of the member, a bar mounted between the free ends of the arms of the said member, the other member of the coupling comprising a stem slidable in the slot of the first named member and having one end terminating in a ball adapted to pass through the enlarged end of the slot, means for locking the ball end of the stem against passage through the enlarged end of the slot, and a link swiveled on the other end of said stem.

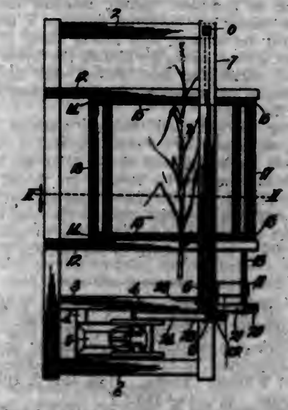
1,021,320. ROTARY AIR-COMPRESSOR. JAMES R. MASON, North Versailles township, Allegheny county, Pa. Filed Sept. 25, 1911. Serial No. 651,237. (Cl. 230—30.)



1. A fluid compressor comprising a casing having inlet and exhaust ports, a rotating member mounted eccentrically in said casing, a series of plates pivoted at one of their ends to said member and adapted to engage by their other ends with the inner wall of said casing, and spring wings on said plates engaging with said wall and adapted to form a space between the same and said plates for compressing the fluid between said plates and wings.

2. A fluid compressor comprising a casing having inlet and exhaust ports, a rotating member mounted eccentrically in said casing, a series of plates pivoted at one of their ends to said member and adapted to engage by their other ends with the inner wall of said casing, and spring wings on said plates engaging with said wall and adapted to form a space between the same and said plates for compressing the fluid between said plates and wings.

1,021,321. MACHINE FOR SNAPPING AND HUSKING EARS OF CORN. JOSEPH F. MAST, Harper, Kans. Filed Oct. 3, 1910. Serial No. 585,136. (Cl. 130—5.)



A machine for snapping and husking ears of corn, consisting of a suitable frame, uprights thereon, a bridge bar connecting the uprights vertically over one side of said frame, a pair of snapping and husking rolls journaled one above the other in said uprights between the bridge bar and said frame, a pair of bars secured upon the said frame and projecting beyond the side thereof over which the bridge bar is disposed, an endless open conveyer arranged between the frame and bridge bar and the said bars, with its upper strand or run between the snapping rolls and extending longitudinally beyond the same, means for operating the conveyer, means for imparting movement from the conveyer to the undermost roll, and gear wheels connecting said rolls to cause them to feed the stalks between them toward the side of the frame beyond which said bars project.

1,021,322. CORN-POPPING MACHINE. FRANKLIN P. MCCORD, Durant, Okla. Filed Mar. 2, 1911. Serial No. 611,775. (Cl. 53—4.)



1. In a corn popping machine, a vertical casing, a discharge hopper at the lower end of the casing, a motor box mounted on the casing, a feeding sleeve in the casing, a conveyer in the sleeve, a rotatable pan connected with the conveyer and surrounding the sleeve into which the latter discharges, an agitator carried by the sleeve and extending into the pan, a gear member connected to the conveyer within the motor box, a feed hopper supported over the sleeve, and a burner located under the pan.

2. In a corn popping machine, a vertical casing, a feeding sleeve depending into the casing, a conveyer mounted in the sleeve, a rotatable pan at the lower end of the sleeve into which the latter discharges, an agitator carried by the sleeve and extending into the pan, a gear member connected with the conveyer, a burner located under the pan, and a feed hopper over the sleeve.

3. In a corn popping machine, a vertical casing, a rotatable pan mounted in the casing, a sleeve depending in the casing and having its lower end adjacent the pan, said sleeve having provision for discharging into the pan, fingers radiating from the sleeve and extending over the pan, a conveyer mounted in the sleeve, a burner located under the pan, and a feed hopper mounted over the sleeve.

4. In a corn popping machine, a vertical casing, a discharge hopper at the bottom of the casing, a spout attached to the hopper, a sack support under the spout, a motor box mounted on the casing, a sleeve depending from the motor box into the casing and having a discharge opening at its lower end, a rotatable pan mounted below the sleeve, an agitating device carried by the sleeve and operating in the pan, a conveyer suspended in the sleeve, a gear member in the motor box having connection with the conveyer, a burner located under the pan, and a hopper over the sleeve.

5. In a corn popping machine, a vertical casing, a feeding sleeve depending into the casing, a conveyer mounted in the sleeve, a gear member connected with the conveyer, a rotatable pan below the sleeve connected with the conveyer, said sleeve having discharge openings within the pan, an agitating device connected to the sleeve and projecting into the pan, a bearing member connected to the pan and surrounding the sleeve, a burner adjacent the pan, and a feed hopper supported over the sleeve.

[Claims 6 and 7 not printed in the Gazette.]

1,021,323. BUBBLE-HAT. ALDEN L. MCMURTRY, Sound Beach, Conn. Filed May 6, 1911. Serial No. 625,444. (Cl. 46—70.)

1. A cuplike receptacle, means for attaching said receptacle to a person's body, a tube projecting through

the lower portion of the receptacle, a portable gas tank connected with said tube, and a manually controlled valve.

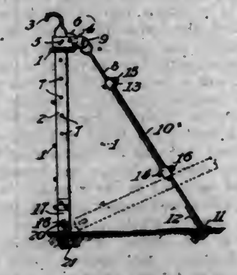


2. A cuplike receptacle, means for attaching said receptacle to a person's head, a tube projecting through the lower portion of the receptacle, said tube extending upward on the outside of the receptacle, a portable gas tank, a manually controlled valve therefor, and a hollow flexible connection between the tank and the tube.

3. A hat, a cuplike receptacle therein, a tube projecting through the lower portion of the receptacle, a gas tank connected with said tube, and a manually controlled valve.

4. A hat, a cuplike receptacle therein, a tube projecting through the lower portion of the receptacle, said tube extending upward on the outside of the receptacle, a portable gas tank, a manually controlled valve therefor, and a hollow flexible connection between the tank and the tube.

1,021,324. FENCE-REPAIRING IMPLEMENT. MARION F. MEAD, Geddes, S. D. Filed May 12, 1911. Serial No. 626,871. (Cl. 39—51.)



1. In a fence-repairing implement, the combination of a wire-engaging lever-bar, means for securing it to the ground, and a brace-bar for holding the wire-engaging lever bar upright and pressed against the wires.

2. In a fence-repairing implement, the combination of a wire-engaging lever-bar, means for securing it to the ground, and a brace-bar adjustably secured to the wire-engaging lever-bar, and means for holding the brace-bar in engagement with the ground while supporting and pressing forward the wire-engaging lever-bar.

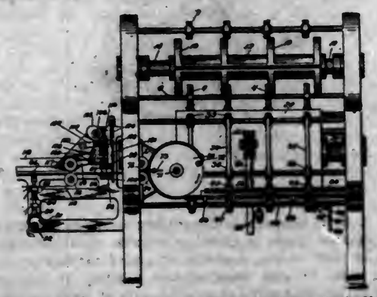
3. In a fence-repairing implement, the combination of a wire-engaging lever-bar having at the bottom a depending device for engaging the ground, an extensible brace-bar secured to the wire-engaging lever-bar and serving to hold the wire-engaging lever-bar upright and under pressure against the wires.

4. In a fence-repairing implement, the combination of a wire-engaging lever-bar having a divided or open foot-piece, removable attaching means secured to the foot-piece, a ground-engaging device secured to the wire-engaging lever-bar by the attaching means, and an adjustable brace-bar pivoted to the wire-engaging lever-bar.

5. In a fence-repairing implement, the combination of a wire-engaging lever-bar having at the bottom a transverse bar, an attaching screw having a shank which is partially rectangular and partially circular, the shank engaging the transverse bar and an extensible and adjustable brace-bar secured to the wire-engaging lever-bar.

[Claim 6 not printed in the Gazette.]

1,021,325. BOOK OR PAMPHLET MAKING MACHINE. JOHN D. MORGAN, Summit, N. J., assignor to Goss Printing Press Company, Chicago, Ill., a Corporation of Illinois. Filed July 14, 1911. Serial No. 638,448. (Cl. 11—2.)



1. A book or pamphlet making machine including in combination means for stitching together a plurality of sheets, means for folding said sheets along the line of the stitching, and means for trimming the folded-together edge opposite the stitching.

2. A book or pamphlet making machine including in combination means for stitching together a plurality of sheets, means for folding said sheets along the line of the stitching, means for clamping the edge opposite the stitching, and means for cutting said edge parallel to said folded edge.

3. A book or pamphlet making machine including in combination means for stitching together a plurality of sheets at a plurality of points in line with each other, means for folding said sheets together along the line of stitches, and means for trimming the edge opposite to the fold parallel to the fold.

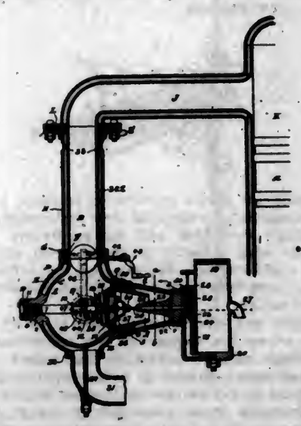
4. A book or pamphlet making machine including in combination means for stitching together a plurality of sheets, means for folding said sheets along the line of the stitching, a stop, means for feeding the folded pamphlet thereto and registering said folded edge against said stop, and means for trimming the edge opposite the fold parallel to the fold.

5. A book or pamphlet making machine including in combination means for stitching together a plurality of sheets, means for folding said sheets along the line of the stitching, a stop, means for feeding the folded pamphlet thereto and registering said folded edge against said stop, means for clamping the edge opposite the fold, and means for trimming said clamped edge parallel to said fold.

[Claims 6 and 7 not printed in the Gazette.]

1,021,326. HYDROCARBON-VAPORIZER FOR INTERNAL-COMBUSTION ENGINES. JAMES WILLIAM MOWBRAY, Gleichen, Alberta, Canada, assignor, by direct and mesne assignments, to The Hydro-Carbon Vaporizer Limited, Fort William, Canada. Filed July 3, 1911. Serial No. 636,696. (Cl. 48—154.1.)

1. A hydro-carbon vaporiser comprising a chamber provided with an outlet, and further provided with an intake opening; a combining-tube held in said intake opening; means for securing said combining-tube in place; the said combining-tube being provided with a conical-shaped passage-way increasing in area from its intake end to its discharge end, and being provided at its discharge end with an outwardly-beveled valve seat; a spring-controlled valve mounted within said chamber and constructed to co-act with said beveled valve-seat of said combining-tube; an apertured supporting-member surrounding the outer portion of said combining-tube; means for supporting said supporting-member on said chamber; a spray-nozzle tapered toward its discharge end, supported by said supporting-chamber in front of said combining-tube and with its tapered end extending a suitable distance into the intake end of said combining-tube, the said valve being moved from its seat when the pressure within said chamber is below that of the atmosphere, simultaneously with the inrush and expansion of a current of petrol-charged air through said combining-tube and into said chamber through the outward-flared passage-way formed between said valve and its seat, and a valve controlling the passing of petrol into said spray-nozzle.

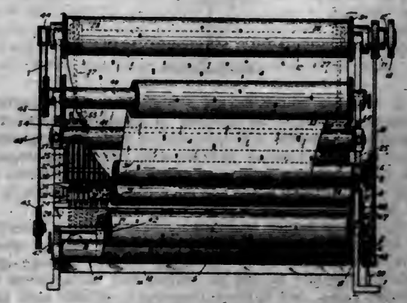


2. A hydro-carbon vaporizer of the class described comprising a heating-chamber having two walls spaced apart so as to form a jacket in which is passed, through an opening, the heating medium; a conduit carried by said heating-chamber and communicating therewith; a port-provided sleeve carried by said heating-chamber and surrounding said conduit and communicating with said jacket; a combining-tube communicating with said heating-chamber; means for securing said combining-tube in place; the said combining-tube being provided with a conical-shaped passage-way increasing in area from its intake end to its discharge end, and being provided at its discharge end with an outwardly-beveled valve-seat; a spring-controlled valve mounted within said chamber and constructed to co-act with said beveled valve-seat of said combining-tube; an apertured supporting-member surrounding the outer portion of said combining-tube; means for supporting said supporting-member to said chamber; a spray-nozzle tapered toward its discharge end, supported by said supporting-member in front of said combining-tube and with its tapered end extending a suitable distance into the intake end of said combining-tube, the said valve being moved from its seat when the pressure within said chamber is below that of the atmosphere, simultaneously with the inrush and expansion of a current of petrol-charged air through said combining-tube and into said chamber through the outward-flared passage-way formed between said valve and its seat, and a valve controlling the passage of petrol into said spray-nozzle.

3. A hydro-carbon vaporizer of the class described, comprising a heating-chamber provided with an intake, and an outlet, opening, and having two walls spaced apart so as to form a jacket into which is passed through an opening, the heating medium; a conduit carried by said heating-chamber and communicating therewith by said outlet opening; a port-provided sleeve carried by said heating-chamber and surrounding said conduit and communicating with said jacket; a conduit for introducing water into said heating-chamber; a combining-tube screwing into said intake opening in said heating-chamber and provided with a conical-shaped passage-way getting larger in area from its intake to its discharge end and being provided at its discharge end with an outwardly-beveled valve-seat; a spring-controlled valve mounted within said heating-chamber and seating against said valve-seat; an apertured supporting-member threaded at its inner end and screwing around part of the inner portion of said combining-tube; a spray-nozzle tapered toward its discharge end screwing into the outer end of said supporting-member, and mounted in front of said combining-tube with its discharge end extending a suitable distance therseinto; the said valve being moved from its seat when the pressure within said chamber is below that of the atmosphere, simultaneously with the inrush and expansion of a current of petrol-charged air through said combining-tube and into said chamber through the outwardly-flared passage-way formed between said valve and its seat, and a valve controlling the passage of petrol into said spray-nozzle.

4. A hydro-carbon vaporiser of the class described comprising a heating chamber; a conduit connected therewith; means whereby said chamber and said conduit are heated; a combining tube provided with a conical-shaped passageway carried by said heating-chamber and communicating therewith and opening to the atmosphere; a spray-nozzle positioned with its inner end extending a suitable distance through the smaller end of said combining tube; means carried by said combining-tube for supporting said spray-nozzle in position; a valve stem mounted within said heating-chamber and provided with a chamber in its inner end; a valve mounted to slide on said valve-stem; a spring carried by said valve-stem and normally holding said valve against the inner end of said combining-tube; a valve stem carried by said valve and extending into the chamber formed in said first-mentioned valve-stem; a conical-shaped head carried by said second-mentioned valve-stem and normally seating against the discharge end of said spray-nozzle; a needle valve for controlling the passage of fuel into said spray-nozzle, and a conduit whereby water is introduced into said heating-chamber, the whole being arranged as and for the purpose specified.

1,021,327. MACHINE FOR MAKING PERFORATED MUSIC. EDGAR WILLIAM MYERS, Seattle, Wash., assignor to Euterpean Duplicator Company, Inc., Seattle, Wash., a Corporation of Washington. Filed July 3, 1909, Serial No. 505,937. Renewed Aug. 10, 1911. Serial No. 643,401. (Cl. 164—114.)



1. In a machine for making perforated music, a punch supported for movement, a drive shaft, a head supported for movement toward and from said punch, a driving connection between said shaft and said head, an actuator for said punch adjustably supported on said head, adjustable means for holding said actuator in adjusted position, and a retracting means supported on said head for adjustment independent of said actuator.

2. A machine for making perforated music comprising an actuator means, a plurality of punches arranged out of the path thereof, means supporting said punches for movement, a plurality of keys supported on said punches

for movement into and out of the path of said actuator means for communicating the movement of the latter to said punches, spring actuated pressers engaging the rear end portions of said keys, and means for controlling the movement of said keys including a master-sheet and a plurality of selectors engaging said master-sheet and having connections with said keys.

3. A machine for making perforated music comprising a plurality of punches supported for movement, keys slidably supported on said punches, means for controlling the movement of said keys including a plurality of selectors, pressers engaged with said keys comprising spring actuated stems supported for sliding movement, and an actuator means supported for movement across the path of said keys.

4. A machine for making perforated music comprising a plurality of punches supported for movement, keys slidably supported on said punches, an actuator means supported for movement across the path of said keys, pressers tending to force said keys into the path of said actuator means, said pressers comprising headed stems engaged with said keys, means supporting said stems for sliding movement, springs for actuating said stems, adjustable plugs in said last means for regulating the tension of said springs, and means for controlling the movement of said keys including a master-sheet and a plurality of selectors arranged to engage said master-sheet.

1,021,328. BOTTLE-HOLDER. JOSEPH NOLL, Buffalo, N. Y., assignor to Conrad Hammer, Buffalo, N. Y. Filed Mar. 13, 1911. Serial No. 614,093. (Cl. 141—7.)



1. A bottle holder having a plurality of stiff radially movable pivoted arms adapted to grasp the neck of a bottle and provided with two sets of inwardly projecting contact points offering resistance to the introduction of the bottle between said arms and a set of abutments on said arms against which the open end of the bottle is to be held.

2. A bottle holder comprising a head having a plurality of outstanding lugs and each lug having a pair of spaced ears, a bottle holding arm pivotally secured between each pair of ears and having an outstanding toe adjacent its pivotal point, and springs interposed between said toes and said lugs to force said arms inward.

3. A bottle holder comprising a head having a plurality of outstanding lugs, each provided with a depression in its upper face and with a pair of spaced ears, a bottle holding arm having one end pivotally secured between each pair of said ears and provided with an angular toe projecting from the outer edge thereof, and springs held at one of their ends in the depressions of said lugs and bearing at their other ends against said angular toes to force the bottle holding arms inward.

4. A bottle holder having a support and a plurality of radially movable arms pivotally secured to said support, each of said arms having prominences and an abutment at its inner edge, as and for the purpose set forth.

5. A bottle holder comprising a head, a plurality of bottle holding arms pivotally secured to said head and having their inner edges flared at their outer ends, each arm having two spaced inwardly projecting contact points between its extremities and an abutment between the inner contact point and the pivot of said arm, corresponding contact points on said arms acting in unison to grasp a bottle.

1,021,329. FUSIBLE-LINK DEVICE. WILLIAM POPPENDIECK, Carlstadt, N. J., assignor to S. H. Pomeroy, New Rochelle, N. Y. Filed June 14, 1911. Serial No. 633,197. (Cl. 236—16.)



1. A fusible link device constituting in effect, a link of a chain connection, comprising two independent lever arms pivotally connected and having fingers on the shorter lever arms adapted to engage with said chain connection and to release the same upon relative movement of the lever arms, and a fusible link connecting the longer lever arms.

2. A fusible link device constituting in effect, a link of a chain connection, comprising two independent lever arms pivotally connected and having fingers on the shorter lever arms adapted to engage with said chain connection and to release the same upon relative movement of the lever arms, a bracket on which said device is supported, and a fusible link connecting the longer lever arms.

3. A fusible link device comprising two independent lever arms pivotally connected and having fingers to engage chain connections, guards to prevent the accidental disengagement of the chains from said fingers, and a fusible link connecting said lever arms.

4. A fusible link device comprising a supporting bracket having a slotted lip, lever arms pivoted together upon said bracket and having fingers to engage chain connections and to enter the slots in said lip, and a fusible link connecting said lever arms.

1,021,330. AWNING-ARM. WALDOW P. PRICE, Des Moines, Iowa, assignor of one-half to James E. Ireland, Des Moines, Iowa. Filed July 24, 1911. Serial No. 640,310. (Cl. 156—42.)

1. In a device of the class described, the combination of a bracket, designed to be secured to a building, an arm pivoted on said bracket, and having a joint at its central portion capable of folding downwardly, a lever pivoted to said bracket, below said arm and extending normally upwardly adjacent to and past said arm, a second arm pivoted to the upper end of said lever at one end and pivoted at its other end to said first mentioned arm at a point thereon, beyond the joint therein, and inclined normally outwardly and downwardly from the lever, a link pivoted to said lever below said first mentioned arm and extending normally outwardly away from the bracket and pivoted at its other end to said first mentioned arm near the inner end thereof, and means for limiting the downward movement of said first mentioned arm.

2. In a device of the class described, the combination of a bracket, designed to be secured to a building, an arm pivoted on said bracket, and having a joint at its central portion capable of folding downwardly, one portion of said arm being curved at the point of the joint therein, so that when the arm is folded, the two parts thereof may lie adjacent, a lever pivoted to said bracket, below said arm and extending normally upwardly adjacent to and past said arm, a second arm pivoted to the upper end of said lever at one end, and pivoted at its other end to said first mentioned arm at a point thereon, beyond the joint therein, and inclined normally outwardly and downwardly from the lever, a link pivoted to said lever below said first mentioned arm and pivoted at its other end to said first mentioned arm near the inner end thereof, and means for limiting the downward movement of said first mentioned arm.



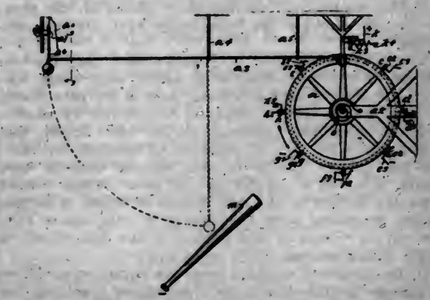
3. In a device of a class described, the combination of a bracket, designed to be secured to a building, an arm pivoted on said bracket, and having a joint at its central portion capable of folding downwardly, a lever pivoted to said bracket, below said arm and extending normally upwardly adjacent to and past said arm, a second arm pivoted to the upper end of said lever at one end and pivoted at its other end to said first mentioned arm at a point thereon, beyond the joint therein, and inclined normally outwardly and downwardly from the lever, a link pivoted to said lever below said first mentioned arm and extending normally outwardly away from the bracket and pivoted at its other end to said first mentioned arm near the inner end thereof, and means for limiting the downward movement of said first mentioned arm, and a spring secured to said bracket, and to said first arm and designed to exert yielding pressure to hold said first arm in its extended position.

4. In a device of the class described, a bracket designed to be secured to the front of a building, parallel right angled extensions thereon, parallel bars pivotally secured on each side of the upper extension, a single arm pivotally secured between the outer ends of said parallel bars, a second pair of parallel bars pivotally secured on each side of the lower extension, a single bar rigidly secured between the outer ends of said last mentioned parallel bars and extending normally upwardly and outwardly from said bracket between said first mentioned parallel bars to a point above the same, parallel arms pivoted at their ends on the outer side of the outer ends of said single bar, and pivotally secured at their other ends to said single arm at a point spaced apart from its iner end, a third pair of parallel bars pivoted respectively to the outer sides of the outer ends of said second pair of parallel bars and to the outer sides of said first mentioned parallel bars at a point spaced apart from the inner ends thereof, means for limiting the downward and outward movement of said single bar, between the first mentioned parallel bars, said parts being so arranged and constructed that said arm in one position of its movement, extends at right angles from said bracket and in another position of its movement it is folded up adjacent to said bracket.

5. In a device of the class described, a bracket designed to be secured to the front of a building, a bar secured thereto having its ends extended at right angles therefrom, in a vertical plane, parallel bars pivotally secured on each side of the upper end of said bar, a single arm pivotally secured between the outer ends of said parallel bars, a second pair of parallel bars pivotally secured on each side of the lower end of said short bar, a single bar rigidly secured between the ends of said last mentioned parallel bars and extending normally upwardly and outwardly from said bracket between said first mentioned parallel bars to a point above the same, parallel bars pivotally secured on each side of the outer end of said last mentioned single bar and pivotally secured at their outer ends on each side of said arm at a point spaced apart from the inner end thereof, parallel bars pivotally secured to the respective outer ends of said second pair of parallel bars and to the outer sides of said first mentioned parallel bars at a point spaced apart from the inner end thereof, means for limiting the downward and outward movement of the single bar between the first mentioned parallel bars, said parts being so constructed and arranged that said first mentioned single arm, in one position of its movement, extends at right angles from said bracket and in another position of its movement is folded up adjacent to said bracket and means for exerting a yielding pressure for holding said device in its extended position.

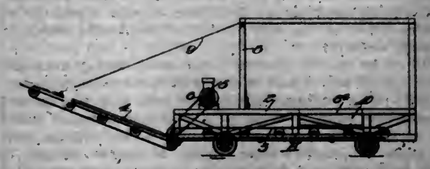
[Claim 6 not printed in the Gazette.]

1,021,331. AMUSEMENT DEVICE. EDIA R. RAMSEY, Penn Yan, N. Y. Filed Sept. 27, 1911. Serial No. 651,525. (Cl. 46—59.)



In an amusement device, a captive ball adapted to be struck by a bat in the hands of a player, a plurality of electric lamps arranged to represent a ball-field, and means operated by said ball in its flight for energising any one of said lamps depending upon the character of the blow.

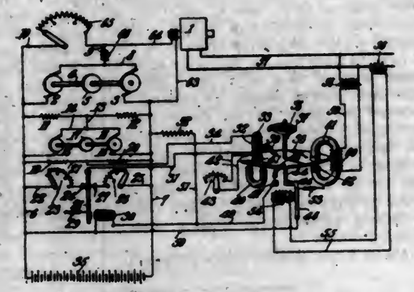
1,021,332. PORTABLE LOADING-TRAP. BERNARD RANSOME, Oakland, Cal. Filed Apr. 27, 1911. Serial No. 623,561. (Cl. 214—1.)



An improved portable loading apparatus, consisting of a wheeled truck having a platform elevated above the body thereof, said platform having an opening through it, a traveling belt extending lengthwise of the truck and supported throughout its length on the body thereof, said belt being arranged below the platform and said opening, a motor carried by said platform having connection with said belt, runways at opposite sides of the platform, and hinged along their long sides, to the corresponding sides of the platform, means for raising

and lowering the runways, a second endless belt adjustably connected to the truck adjacent one end of the first-named belt, said belt extending in the same direction and arranged one behind the other, and means for raising and lowering said second belt.

1,021,333. REGULATOR. FORREST E. RICKETTS, Baltimore, Md. Filed May 26, 1909. Serial No. 498,384. (Cl. 171—119.)



1. In an electric system a dynamo-electric machine having an armature circuit and a field circuit, means capable of supplying two electromotive forces connected to three points of the field circuit and means controlled by the electrical condition of the armature circuit of the dynamo-electric machine for controlling said electromotive forces.

2. The combination of a dynamo-electric machine two sources of current connected in series, each being connected in parallel with a different part of the field circuit of said dynamo-electric machine, a plurality of electromagnets operatively mounted in the field circuit, and means controlled by said plurality of magnets for varying the relative voltage of said sources whereby each source is caused to furnish current to or receive current from the portion of the field circuit to which it is connected depending upon the voltage of said source relative to the voltage of said portion of the field circuit to which it is connected.

3. In an electric system a generator having an armature circuit and a field circuit, means capable of supplying two electromotive forces connected to three points of said field circuit, means controlled by the electrical condition of the armature circuit of the generator for controlling the said electromotive forces and means for compensating for the inertia of said last named means.

4. In an electric system a dynamo-electric machine having an armature circuit and a field circuit, means capable of supplying two electromotive forces connected to three points of the field circuit, and means controlled by the electrical condition of the armature circuit of the dynamo-electric machine for varying one of said electromotive forces inversely as the other of said electromotive forces allowing the sum of said electromotive forces to remain constant.

5. In an electric system, a generator having an armature circuit and a field circuit, two dynamos each in parallel with a different portion of said field circuit and means controlled by a plurality of magnets, one of which is energized by said armature circuit, for causing each dynamo to receive current from or deliver current to the portion of said field circuit to which it is connected depending upon the electrical condition of the armature circuit to be controlled.

[Claims 6 to 19 not printed in the Gazette.]

1,021,334. RADIATOR. THEODORE D. ROBINSON, Lockport, N. Y. Filed Apr. 11, 1910. Serial No. 554,655. (Cl. 62—28.)

1. A radiator comprising a casing and a plurality of assembled tubes set into said casing, each tube having a bead near one end formed by expanding the metal outward and a retainer flange spaced from said bead, said tubes having the beads of adjoining tubes and the edges of the retainer flanges of adjoining tubes lying in contact to provide solder-receiving grooves between the heads and flanges, and solder in said grooves uniting said tubes.



2. A radiator comprising a casing and a plurality of assembled tubes set within said casing, each tube having spacing-means near opposite ends and an outstanding retainer flange at each end separated from the adjacent separating-means to form solder-receiving grooves, said tubes having their separating-means lying in contact with the separating-means of adjoining tubes to form water passages, and solder in said solder-receiving grooves for uniting said tubes.

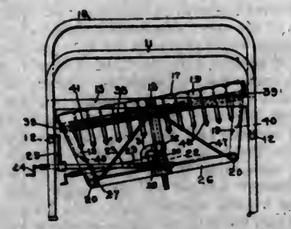
3. A radiator comprising a casing and a plurality of assembled air-tubes set within said casing, each tube having outstanding retainer flanges at opposite ends, separating-means between said tubes spaced from said flanges to form solder-receiving grooves, and solder in said grooves uniting said tubes.

4. A radiator comprising a casing and assembled air-tubes set within said casing, said air-tubes having spacing beads near opposite ends and outstanding retainer-flanges at each end separated at the corners of the tubes, the spacing beads of adjoining tubes and the retainer flanges of adjoining tubes lying in contact, the spacing flanges of each tube being formed to provide openings for solder in the space between said flanges and said beads, and solder in said grooves uniting said tubes.

5. An angular tube for radiators having beads near opposite ends and outstanding retainer flanges at its ends separated from said beads by intervening spaces, said flanges being cut-away at the angles of the tube, as and for the purpose specified.

[Claims 6 and 7 not printed in the Gazette.]

1,021,335. INVALID-BEDSTEAD. THOMAS C. ROBINSON, deceased, Everett, Mass., by Elizabeth J. Savage, administratrix. Filed May 11, 1911. Serial No. 626,607. (Cl. 5—12.)



1. An adjustable bedstead comprising a main frame, a bed frame, connections between said parts permitting the bed frame to be transversely tipped, and mechanism for tipping the bed frame and positively securing it at any position within the limits of its adjustability, said mechanism including a downwardly projecting arm affixed to the central portion of the bed frame, a screw threaded shaft journaled in bearings on the main frame, a nut engaged with the said shaft and having a sliding engagement with the arm, means for preventing the rotation of the nut with the shaft, and means operable from the exterior of the main frame for rotating the shaft.

2. An adjustable bedstead comprising a main frame, a pivoted bed frame adapted to be transversely tipped relatively to the main frame, and having a hinged head section, the main portion of the pivoted bed frame having a downwardly projecting arm, mechanism supported by the main frame and coöperating with said arm in transversely tipping the bed frame and securing it at any position within the limits of its tipping movement, and mechanism supported by the pivoted bed frame for imparting a swinging adjustment to the head section thereof, and positively securing the latter in any position to which it may be adjusted.

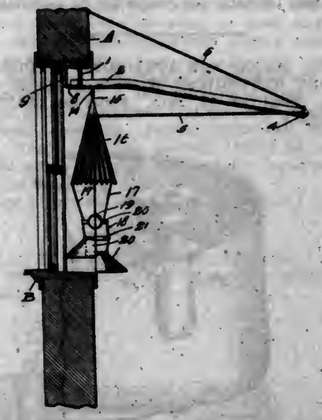
3. An adjustable bedstead comprising a main frame, a bed frame having head and body sections pivotally connected together and having a wire mattress, means for independently adjusting the longitudinal inclination of the head and body sections, and independent spring supports extending transversely of the bed frame at the pivotal point of its sections.

4. An adjustable bedstead comprising a main frame, a bed frame having head and body sections pivotally connected together and having a wire mattress, means for independently adjusting the longitudinal inclination of the head and body sections, and independent spring supports extending transversely of the bed frame at the pivotal point of its sections, said spring supports comprising a plurality of sockets, a stationary bar to which said sockets are connected, springs mounted in said sockets, and plungers supported by said springs and connected to the mattress of the bed frame.

5. An adjustable bedstead comprising a main frame, two pivotally connected bed frame sections having their outer ends pivotally supported by the main frame whereby the bed frame may tilt laterally as a whole, an arm carried by the bed frame and having a nut at its lower end, a screw shaft mounted in the main frame and engaging said nut, and means for independently adjusting the inclination of the bed frame sections.

[Claim 6 not printed in the Gazette.]

1,021,336. FIRE-ESCAPE. MANUEL RODRIGUEZ Y FONOLL, New York, N. Y. Filed June 30, 1911. Serial No. 636,169. (Cl. 227—19.)



1. In a fire escape, the combination of a tubular support adapted to be mounted so as to have its outer end beyond the face of a building, said outer end being provided with downwardly opening chamber therein, a carrier mounted for movement through said tube, and a parachute carried by said carrier, said parachute being adapted to be released from the tubular support as the carrier passes through the chamber and opening in the outer end thereof.

2. In a fire escape, the combination of a tubular support provided with a longitudinal slot in the lower wall thereof terminating in an enlarged outlet, a spring actuated check mounted in the end of said slot within the tubular support, a track disposed within said tubular support longitudinally thereof above the slot therein, a wheel carrier mounted upon said track within the support, a parachute carried thereby and means for supporting the party to be rescued carried by the parachute.

3. In a fire escape, the combination of a tubular support having a longitudinally disposed track therein, a wheeled carrier mounted upon said track within the tubular support, the outer end of said tubular support being curved downwardly to permit the movement of the carrier therein by gravity, a parachute carried by the carrier, and means for checking the movement of the carrier at the end of the support and directing the movement of the parachute downwardly.

4. In a fire escape, the combination with a tubular support provided with a longitudinal slot in the lower end thereof, said tubular support having a straight portion adapted to be adjacent the building and with a downwardly and outwardly extending portion terminating in a downwardly opening chamber in the end thereof, a spring actuated check mounted in said chamber and adapted to seal the main portion of the tubular support, a track disposed in said tubular support above the slot therein, a wheeled carrier mounted upon said track, a parachute carried by said wheeled carrier and adapted to move with said carrier by gravity through the tubular support and be checked in its movement by the spring actuated check, and a body support carried by said parachute.

5. In a fire escape, the combination with a curved tubular support provided with a longitudinal slot in the lower wall thereof terminating in an enlarged opening, a plug sealing the outer end of said support and providing a chamber thereat, a hingedly mounted stop disposed in the support near the opening at the outer end thereof, a spring for normally holding said stop away from the sealed end thereof, a track disposed longitudinally within the support above the opening therein, a wheeled carrier disposed upon said track for movement within the support, a parachute carried thereby, and an adjustable body support carried by the parachute.

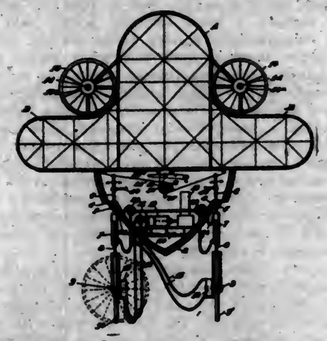
1,021,337. QUADRUPLE-LENS OBJECTIVE. PAUL RUDOLPH, Jena, Germany, assignor to The Firm of Carl Zeiss, Jena, Germany. Filed Oct. 4, 1910. Serial No. 585,229. (Cl. 88—57.)



1. Single objective composed of four lenses cemented together, the front cemented surface being convex toward the front and collective, the middle one concave toward the front and collective, and the rear one concave toward the front and dispersive, the front lens having a concave front surface and a smaller index n_D than 152, the rear lens being dispersive, with a convex hinder surface, and having an index n not smaller than 1.58, and the index n_D of the third lens being at least 1.57.

2. Double objective comprising as a component a single objective composed of four lenses cemented together, the front cemented surface being convex toward the front and collective, the middle one concave toward the front and collective and the rear one concave toward the front and dispersive, the front lens having a concave front surface and a smaller index n_D than 1.52, the rear lens being dispersive, with a convex hinder surface, and having an index n_D not smaller than 1.58, and the index n_D of the third lens being at least 1.57.

1,021,338. AIRSHIP. CHARLES A. RUSH, San Francisco, Cal. Filed Nov. 23, 1911. Serial No. 661,983. (Cl. 244—6.)



1. The combination in a flying machine, of a gas container, a hull rigidly attached to the underside thereof, a plurality of cylinders mounted to be swung universally on the exterior of the hull, pistons reciprocally mounted in the cylinders, and wheels carrier on said pistons.

2. The combination in a flying machine, of a gas container, a hull rigidly attached to the underside thereof, a plurality of cylinders mounted to be swung universally on the exterior of the hull, pistons reciprocally mounted in the cylinders, wheels carried on said pistons, said wheels fitted with propeller blades, and means for reciprocating said pistons by fluid pressure for disposing the wheels at various distances from the hull.

3. The combination in a flying machine, of a gas container, a hull rigidly attached to the underside thereof, a plurality of cylinders mounted to be swung universally on the exterior of the hull, pistons reciprocally mounted in the cylinders, wheels carried on said pistons, said wheels fitted with propeller blades, means for reciprocating said pistons by fluid pressure for disposing the wheels at various distances from the hull, and means for rocking the cylinders in their universal mountings to dispose them at various angles in relation to the hull.

4. The combination in a flying machine, of a gas container, a hull rigidly attached to the underside thereof, a plurality of cylinders mounted to be swung universally on the exterior of the hull, pistons reciprocally mounted in the cylinders, wheels carried on said pistons, said wheels fitted with propeller blades, means for reciprocating said pistons by fluid pressure for disposing the wheels at various distances from the hull, means for rocking the cylinders in their universal mountings to dispose them at various angles in relation to the hull, and means for rotating the cylinders to dispose the wheels in various positions.

5. The combination in a flying machine, of a gas container, a hull rigidly attached to the underside thereof, a plurality of cylinders mounted to be swung universally on the exterior of the hull, pistons reciprocally mounted in the cylinders, wheels carried on said pistons, said wheels fitted with propeller blades, means for reciprocating said pistons by fluid pressure for disposing the wheels at various distances from the hull, means for rocking the cylinders in their universal mountings to dispose them at various angles in relation to the hull, means for rotating the cylinders to dispose the wheels in various positions, and means for rotating the wheels.

[Claims 6 to 17 not printed in the Gazette.]

1,021,339. INDICATING PUSH-BUTTON. WALTER R. SCHLAGH, San Francisco, Cal. Filed Aug. 1, 1911. Serial No. 641,762. (Cl. 177—10.)

1. A push button having a combined longitudinal and angular movement, a guide casing in which said push button is reciprocally and turnably mounted, said casing having a slot formed in its side and said push button having characters adapted to be exposed through said slot, and means for adjusting the push button angularly to expose different characters in said slot when the push button is moved longitudinally.

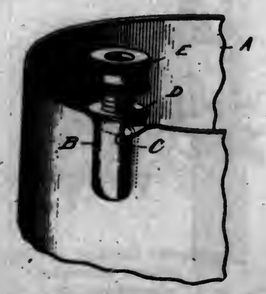


2. A push-button, an indicator carried by the push-button, a guide casing in which said indicator is reciprocally mounted, a slot formed in said casing, indicating characters formed on the indicator and adapted to be exposed through said slot, and means for adjusting the indicator to expose different characters in said slot, said means consisting of a pin on the indicator extending through a slot formed in the casing.

3. A push-button, an indicator carried by the push-button, a guide casing in which said indicator is reciprocally mounted, a slot formed in said casing, indicating characters formed on the indicator and adapted to be exposed through said slot, and means for adjusting the indicator to expose different characters in said slot, said means consisting of a pin on the indicator extending through a slot formed in the casing, said slot arranged to admit of reciprocal movement of the pin lengthwise of the casing and also peripherally thereof.

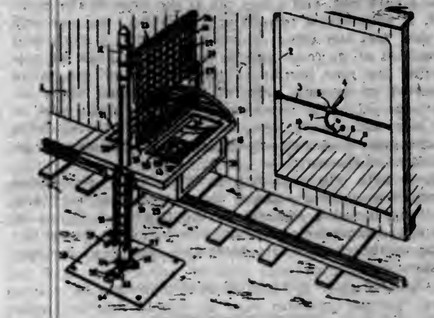
4. A push-button, an indicator carried by the push-button, a guide casing in which said indicator is reciprocally mounted, a slot formed in said casing, indicating characters formed on the indicator and adapted to be exposed through said slot, means for adjusting the indicator to expose different characters in said slot, said means consisting of a pin on the indicator extending through a slot formed in the casing, said slot arranged to admit of reciprocal movement of the pin lengthwise of the casing and also peripherally thereof, and means operable by said indicator for completing an electrical circuit.

1,021,340. MEANS FOR ATTACHING BINDING-POSTS TO DRY BATTERIES. WILLIAM A. SCOTT, Tacoma, Wash. Filed Oct. 14, 1911. Serial No. 654,779. (Cl. 173—259.)



In combination with a wall of the casing having a portion of its marginal edge bent to form a laterally extending and curved portion, a binding post having a shank portion with a longitudinal head formed in its lower end and terminating in its inner end in a widened portion, the marginal outline of which is concaved to conform to the said curved portion, which is adapted to engage the inner end of the recess, as set forth.

1,021,341. MAIL-BAG CATCHING AND DELIVERING APPARATUS. EARL R. SIMPSON, Salem, Oreg. Filed Dec. 29, 1910. Serial No. 599,827. (Cl. 105—231.)



1. A mail-crane, comprising, in combination, a horizontal platform provided with a pair of parallel slots arranged in spaced relation to each other; a cage disposed directly beneath said slots; and a vertical buffer mounted upon said platform in the space between said slots and disposed parallel with the same.

2. A mail-crane, comprising, in combination, a platform provided with a slot; a vertical buffer mounted upon the platform adjacent said slot; and a retaining member movable through said slot into engagement with a mail-bag delivered to the buffer.

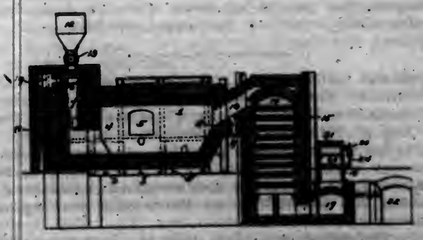
3. A mail-crane, comprising, in combination, a platform provided with a slot; a vertical buffer mounted upon said platform adjacent said slot; a shaft carried by the platform and disposed parallel with said slot; a retaining member secured to said shaft; and means for rocking said shaft, to move said member through the slot into engagement with the mail-bag delivered to the buffer.

4. A mail-crane, comprising, in combination, a platform provided with a slot; a vertical buffer mounted upon the platform adjacent said slot; a horizontally-disposed rock shaft secured to the under face of said platform parallel with said slot; a retaining member secured to said shaft; and a trip lever secured to the outer end of said shaft, for rocking the same, to move said member through said slot into engagement with a mail-bag delivered to the buffer.

5. A mail-crane, comprising, in combination, a platform provided with a slot; a vertical buffer mounted upon the platform adjacent said slot and provided with an opening extending inwardly from the front edge thereof; and a retaining member carried by said platform and movable through said slot into engagement with a mail-bag delivered to the buffer.

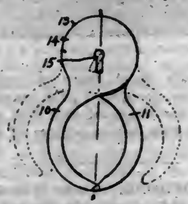
[Claims 6 to 8 not printed in the Gazette.]

1,021,342. FURNACE. JAMES D. SWINDELL, Pittsburgh, Pa. Filed Apr. 20, 1910. Serial No. 556,640. (Cl. 75—84.)



A furnace structure comprising a horizontal melting furnace provided at one end with air and gas inlets and outlets, a vertical fusing furnace at the opposite end of the melting furnace and partially separated from the latter by a vertical wall which terminates at its lower end above the bottom of said furnaces whereby a means of communication is afforded between the lower portions of said furnaces, said fusing furnace having ports in its wall near its upper end permanently open to the atmosphere, and charging means communicating with the top of the fusing furnace above said ports.

1,021,343. LOCKING-CLAMP. LEONARD C. TINGLEY, Providence, R. I., assignor to M. A. N. Manufacturing Company, Providence, R. I., a Corporation of Rhode Island. Filed Sept. 6, 1910, Serial No. 580,654. Renewed Jan. 17, 1912. Serial No. 671,567. (Cl. 70—17.)



1. A device of the character described comprising jaws pivoted together, and locking mechanism for holding them against spreading from either one of a plurality of positions, said locking mechanism being adapted to be released by the action of a key.

2. A clamp comprising a pair of jaws, a hub pivotally connecting them, and locking mechanism for holding the jaws against spreading from either one of a plurality of positions, said hub constituting a portion of the locking mechanism, the device being provided with means to permit the operation of a key to release the locking mechanism.

3. A clamp comprising jaws pivoted together, ratchet mechanism for permitting the jaws to close while preventing them from spreading, and a key for rendering said ratchet mechanism inoperative.

4. A clamp comprising jaws pivoted together, ratchet mechanism for permitting the jaws to close while preventing them from spreading, and a key for rendering said ratchet mechanism inoperative, said ratchet mechanism comprising a disk having a circular series of teeth and connected to a jaw to oscillate therewith, one of said disks being yieldingly mounted to permit the teeth to be disengaged by said key.

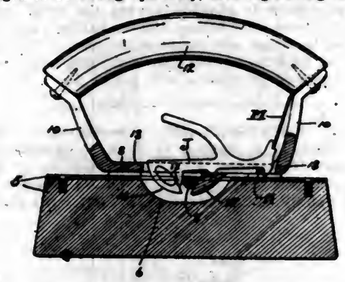
5. A clamp comprising a pair of jaws having cylindrical bearing portions in axial alinement, a pair of disks each having a circular series of teeth, each disk being secured non-rotatively in one of said cylindrical portions, one disk being movable toward and from the other, and means whereby said movable disk may be disengaged from the other by a key.

[Claims 6 and 7 not printed in the Gazette.]

1,021,344. SAD-IRON. GEORGE E. WAIT, Chagrin Falls, Ohio, assignor to The Ober Manufacturing Company, Chagrin Falls, Ohio, a Corporation of Ohio. Filed Dec. 18, 1911. Serial No. 666,557. (Cl. 68—26.)

In a sad-iron, the combination, with a body provided in its top with a cavity and having a cross-bar arranged transversely of said body at the top of said cavity, and a handle comprising a base-plate removably mounted on the body and provided with a slot extending longitudinally of said base-plate and arranged in registry with said cavity at the sides of said cross-bar, said base-plate having a tongue projecting downwardly at one side of said cross-bar into said cavity and under said cross-bar, of a latch entering and extending longitudinally of said slot and provided at one end with a lug which projects downwardly at the other side of said cross-bar into said cavity and

has its lower portion arranged opposite the lower portion of the aforesaid tongue, which latch is pivotally connected at its other end to the aforesaid base-plate and arranged to be swung upwardly, said lug having the lower



portion of its side which faces the cross-bar provided opposite said lower portion of said tongue with a recess which extends transversely of said side and has its wall curving inwardly from top to bottom of said recess.

1,021,345. XYLOPHONE. HENRY WELCH, Buffalo, N. Y. Filed Jan. 7, 1911. Serial No. 601,487. (Cl. 84—31.)



A xylophone or the like having a hammer rest-rail extending along the sounding-bars; combined with a hammer comprising a handle adapted to be held in the hand of the player and a head supported from the handle by an elastic shank, said hammer having a cushion on the handle adapted to engage said rest-rail when said sounding-bars are being struck.

1,021,346. BATH DEVICE. MABEL A. WILSON, St. Louis, Mo. Filed Aug. 25, 1911. Serial No. 646,061. (Cl. 4—27.)



1. A bath tub comprising an integral structure arranged as a chair having basins on opposite sides of and above the seat, the outer and rear walls of said basins extending above the inner walls and merging with a wall constituting the back of the chair, and a foot tub whose inner wall underlies the seat.

2. A bath tub arranged as a chair having water receptacles mounted on opposite sides of the seat, a water receptacle movably mounted above and at the front of the seat, and a water receptacle at the foot of the chair.

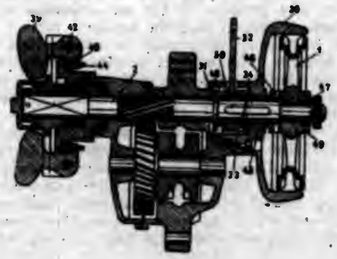
3. A bath tub arranged as a chair having water receptacles on opposite sides of the seat, the outer walls of said receptacles being extended upwardly and the rear walls forming continuations thereof and also of the back of the chair, the back of the chair being extended up above the rear walls of said water receptacles to constitute a back rest, and a foot tub at the front of the chair.

4. A bath device comprising a foot tub, the rear wall of said foot tub being extended upwardly, a chair seat supported at its front edge by said wall, means for supporting the rear portion of the seat, water receptacles mounted on opposite sides of the seat, said water receptacles extending forwardly beyond the front edge of the seat, and a water receptacle adapted to be supported at the ends of said side receptacles and extending across the front of the seat.

5. A bath chair having separate water receptacles mounted on opposite sides of the seat, a water receptacle pivotally mounted adjacent to the front end of one of the side receptacles and adapted to be swung across the front of the chair, and a receptacle located at the foot of the chair.

[Claims 6 and 7 not printed in the Gazette.]

1,021,347. HOISTING-GEAR. HANS WINDHOFF, Schöneberg, near Berlin, Germany. Filed Mar. 7, 1908. Serial No. 419,647. (Cl. 57—116.)



1. In a hoisting gear, winch or pulley block, a housing, a pair of gear wheels engaging with each other and having slanting teeth, the shafts of one of said gears being axially adjustable under the effect of said slanting teeth, a coupling engaged by such axial thrust, one member of said coupling being connected with one of the shafts, the other member being connected by means of a ratchet with the housing so as to be able to turn in one direction only, a centrifugal brake governor on the coupling controlling the speed of the sinking load and the coupling shaft respectively, substantially as and for the purpose described.

2. In a hoisting gear, winch or pulley block, a housing, a pair of gear wheels engaging each other and having slanting teeth, the shaft of one of said gear wheels being axially adjustable under the effect of said slanting teeth, means for driving said shaft, a coupling engaged by such axial thrust, one member of the coupling being connected with one of the shafts, the other member being connected with the housing so as to be able to turn in one direction only, a centrifugal brake governor on the friction coupling controlling the speed of the sinking load and the coupling shaft respectively, and means for automatically disconnecting the driving means when the load sinks, substantially as and for the purpose described.

1,021,348. METHOD OF FORMING MOLDS AND MOLD-CORES. JEROME F. BRYANT, Chicago, Ill., assignor of one-half to Hugh J. Bryant, Youngstown, Ohio. Filed Jan. 28, 1911. Serial No. 605,166. (Cl. 22—193.)

1. The method of forming molds and mold cores which consists in introducing molding sand between a flexible pattern and a non-yielding flask member, and subsequently flexing said pattern to press the molding sand against the confining flask member.

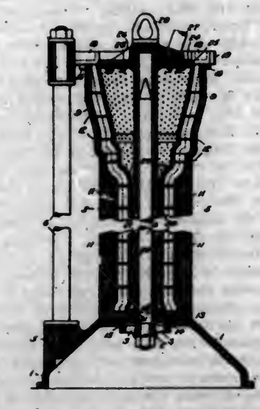
2. The method of forming molds and mold cores which consists in introducing molding sand between a flexible pattern and a non-yielding flask member, and subsequently employing fluid pressure for flexing said pattern to press the molding sand against the confining flask member.



3. The method of forming molds and mold cores which consists in introducing molding sand between an elastic pattern and an inelastic flask member, and subsequently employing fluid pressure for flexing said pattern to press the molding sand against the confining flask member.

4. The method of forming molds and mold cores, which consists in exhausting fluid pressure from within the molding flask, introducing molding sand between an elastic pattern and the said inelastic molding flask, and finally subjecting said pattern to fluid pressure, thereby causing the pattern to compress the molding sand into final shape.

1,021,349. APPARATUS FOR FORMING MOLDS AND MOLD-CORES. JEROME F. BRYANT, Chicago, Ill., assignor of one-half to Hugh J. Bryant, Youngstown, Ohio. Filed Feb. 4, 1911. Serial No. 606,577. (Cl. 22—27.)



1. In mold and core making apparatus, the combination with a flask for containing molding sand, of a flexible pattern within said flask, and means for flexing said pattern to pack the molding sand.

2. In molding and core making apparatus the combination with a rigid non-yielding flask for containing molding sand, of a flexible pattern within said flask, and means for flexing said pattern to pack the molding sand upon its face.

3. In mold and core-making apparatus, the combination with a flask for containing molding sand, a perforated former, within said flask, a flexible pattern adjacent to said former and means for flexing said pattern to pack the molding sand.

4. In mold and core-making apparatus, the combination with a flask for containing molding material, a pilot pin projecting into said flask, a sleeve surrounding said pin, a perforated former surrounding said sleeve, a flexible pattern adjacent to said former, and means for flexing said pattern to pack the molding material.

5. In mold and core-making apparatus, the combination with a flask for containing molding sand, of a flexible pattern within said flask, and means for flexing said pattern to pack the molding sand by agency of fluid pressure.

[Claims 6 to 9 not printed in the Gazette.]

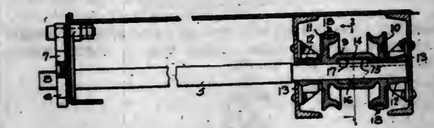
1,021,350. PENCIL-CASING. CHARLES S. BUSH, Providence, R. I. Filed Oct. 5, 1911. Serial No. 652,928. (Cl. 120—9.)



1. The new and improved automatic memory device herein described, the same consisting of an open-ended outer casing having a longitudinally disposed opening formed in its wall and a ring rigidly secured to the latter, whereby the device is adapted to be removably attached to the hand of the user, a tube removably and revolubly mounted in said casing having its peripheral surface adapted to be written upon, one end of the tube being closed and forming a support for the corresponding end of said casing, a removable cap element supporting and closing the other ends of the casing and tube, and a pencil or other analogous member mounted in the last-named cap and normally concealed in the tube.

2. In a device of the general character described, the combination with a tubular outer casing having a normally-open longitudinal slot formed in its wall and a digital ring secured to and extending laterally from the casing at a point substantially opposite said slot, of an inner tube removably seated in said casing having its surface adapted to be written upon while contained in the casing, one end of the tube being arranged to support the corresponding end of the casing, a cap member removably mounted in the other end of the casing for supporting the corresponding ends of the tube and casing members, a pencil and eraser mounted in the last-named cap, and having the pencil normally inserted and concealed within the inner tube.

1,021,351. CAR-DOOR-OPERATING MECHANISM. ANDREW CHRISTIANSON, Butler, Pa., assignor to Standard Steel Car Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Nov. 11, 1911. Serial No. 659,817. (Cl. 105—185.)



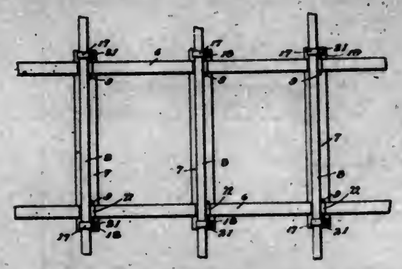
1. In car door operating mechanism, the combination of a shaft, a projection on said shaft, a sleeve loosely mounted on said shaft carrying a sheave, said sleeve having an enlarged portion having an inwardly extending projection engaged by said projection on said shaft, and connections between said sheave and the car door.

2. In car door operating mechanism, the combination of a shaft, a projection on said shaft, a sleeve loosely mounted on said shaft carrying sheaves at each end thereof, an intermediate enlarged portion on said sleeve having an inwardly extending projection engaged by said projection on said shaft, and connections between said sheave and the car door.

1,021,352. CLAMP. EDWARD F. CORDS, Selby, S. D. Filed July 16, 1910. Serial No. 572,374. (Cl. 21—74.)

1. The combination with a longitudinal beam and a transverse beam crossing the same; of a clamp comprising a hook shaped plate engageable over the transverse beam and having an outturned and upturned extension, a loop having a shank portion carried by the outturned portion of the plate, an inverted U-shaped yoke straddling said longitudinal beam and secured below the same, an ear projecting outwardly from one of the branches of said yoke and a locking lever eccentrically pivoted to

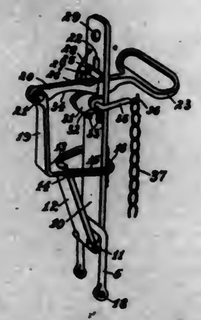
said ear and having a hook nose engageable with the loop member to secure the beams together.



2. A clamp of the class described comprising a plate of hooked formation, a loop adjustably connected thereto, an inverted U-shaped member, nuts threaded on the extremities thereof, a lever having a hook nose, said lever being eccentrically pivoted to one portion of the U-shaped member and adapted for engagement with the loop and a bearing plate having opposite side portions downturned, one end upturned and the opposite end formed with a curved ear for pivotal attachment to the bight portion of the U-shaped member.

3. The combination with a longitudinal beam and a transverse beam crossing the same; of a clamp for securing said beams together, said clamp comprising a hook plate engageable with the transverse beam at one side of the longitudinal beam and having an outturned apertured extension, a loop suspended from the extension and having a shank adjustable therein, an inverted U-shaped yoke straddling said longitudinal beam adjacent to the transverse beam, a tie secured to the lower ends of the U-shaped yoke, an ear projecting outwardly from one of the branches of said yoke by bending the same upon itself, a locking lever eccentrically pivoted to said ear and having a hook nose engageable with the loop member at its lower end and a bearing plate interposed between said beams, said bearing plate being retained from movement thereon and being hinged to the yoke.

1,021,353. BOAT-DETACHING APPARATUS. WILLIAM COULTER, Lorain, Ohio. Filed Feb. 7, 1912. Serial No. 676,382. (Cl. 9—23.)



1. In a boat detaching apparatus, the combination of a bar, a plate hingedly connected to the bar, a stirrup member pivoted to the bar for holding the plate in an angular position with relation to the bar, means interposed between the bar and the plate for supporting a weight, a locking lever pivoted to the stirrup member for engaging said bar to lock the stirrup member in normal position, and means for disengaging the locking lever from the bar and moving the stirrup member out of engagement with said plate, substantially as described.

2. In a boat detaching apparatus, the combination of a bar, a plate hingedly connected to the bar, a stirrup member pivoted to the bar for holding the plate in an angular position with relation to the bar, means interposed between the bar and the plate for supporting a weight, a locking lever pivoted to the stirrup member for engaging said bar to lock the stirrup member in normal position, and a cam for forcing the locking lever out of locking engagement with the bar and disengaging the stirrup member from the plate, substantially as described.

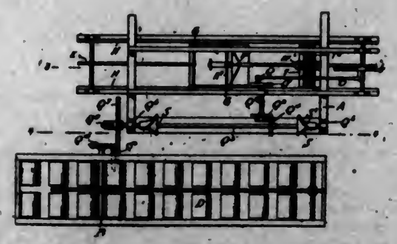
3. In a boat detaching apparatus, the combination of a bar, a plate hingedly connected to the bar, a stirrup member pivoted to the bar for holding the plate in an angular position with relation to the bar, means interposed between the bar and the plate for supporting a weight, an arm projecting upwardly from the stirrup member, a locking lever pivotally connected to the arm, the locking lever being provided with means for engaging the bar to hold the stirrup member in normal position, and a cam for forcing the locking lever out of engagement with the bar and disengaging the stirrup member from the plate, substantially as described.

4. In a boat detaching apparatus, the combination of a bar, a plate hingedly connected to said bar, a tongue projecting from the free end of the plate and forming shoulders therewith, a stirrup member pivotally connected to the bar for engaging said tongue to hold the plate in an angular position with relation to the bar, a shackle interposed between said plate and said bar and engaging the sides thereof for supporting a weight, an arm projecting upwardly from the stirrup member, said bar being provided with a slot, a locking lever pivotally connected to said arm and passing through said slot, the locking lever having a recess forming shoulders for embracing the lower edge of said slot to hold the stirrup member in locked position, the locking lever having an operating handle, and means for disengaging the locking lever from the bar and moving the stirrup member out of engagement with said plate, substantially as described.

5. In a boat detaching apparatus, the combination of a bar, a plate hingedly connected to the bar, a stirrup member pivoted to the bar for holding the plate in an angular position with relation to the bar, a shackle interposed between the bar and the plate and engaging the sides thereof for supporting a weight, an arm projecting upwardly from the stirrup member, a locking lever pivotally connected to the arm, the locking lever being provided with means for engaging the bar to hold the stirrup member in normal position, a cam pivotally connected to the bar for forcing the locking lever out of locking engagement with the bar and disengaging the stirrup member from the plate, an arm projecting from the cam, means for operating said arm, and means connecting the last mentioned means to said arm which will become automatically detached from the arm when the stirrup member is disengaged from said plate, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,021,354. APPARATUS FOR STRIKING OFF BRICK. JOHN H. DAVIDHEISER and FRANK B. DAVIDHEISER, Stowe, Pa. Filed May 22, 1911. Serial No. 628,843. (Cl. 25—104.)



1. An apparatus for striking off brick comprising a frame, sprocket wheels mounted thereon, an endless chain passing about said wheels, a carriage secured to said chain, shafts mounted in said carriage, eccentrics mounted in bearings in the carriage and fixed to one of said shafts, tracks upon which said wheels travel, means for actuating said chain to impart a reciprocating movement to the carriage, a striking off plate fastened to said carriage, an oscillating bar secured to the shaft, which is fixed to said eccentrics, means in the path of said bar adapted to oscillate the latter to rock the shaft, thereby causing the striking off plate to be raised as it approaches its forward limit, and means for oscillating the bar in the opposite direction as the carriage approaches its rearward limit to return the plate to its normal position.

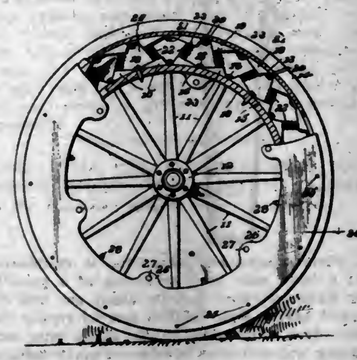
2. An apparatus for striking off brick comprising a frame, sprocket wheels mounted thereon, an endless chain passing about said wheels, a carriage secured to said chain, shafts mounted in said carriage, eccentrics mounted in bearings in the carriage and fixed to one of said shafts, tracks upon which said wheels travel, means for actuating said chain to impart a reciprocating movement to the carriage, a striking off plate fastened to said carriage, an oscillating bar secured to the shaft, which is fixed to said eccentrics, an anti-friction roller, a support to hold the latter in the path of said bar to cause the latter to oscillate as it reaches its forward limit, a stop against which the bar is adapted to contact as it reaches its rearward limit, thereby causing the striking off plate to be returned to its normal position.

3. An apparatus for striking off brick comprising a frame, sprocket wheels mounted thereon, an endless chain passing about said wheels, a carriage secured to said chain, shafts mounted in said carriage, eccentrics mounted in bearings in the carriage and fixed to one of said shafts, tracks upon which said wheels travel, means for actuating said chain to impart a reciprocating movement to the carriage, a striking off plate fastened to said carriage, an oscillating bar secured to the shaft, which is fixed to said eccentrics, an anti-friction roller, a support to hold the latter in the path of said bar to cause the latter to oscillate as it reaches its forward limit, pivotal plates mounted upon the carriage, springs bearing against each plate, the plates being spaced apart and adapted to receive and hold the bar after having been oscillated by contact with said roller, and a stop against which the bar is adapted to contact as the carriage reaches its rearward limit, thereby releasing the bar from said plates.

4. An apparatus for striking off brick comprising a frame, sprocket wheels mounted thereon, an endless chain passing about said wheels, a carriage secured to said chain, shafts mounted in said carriage, eccentrics mounted in bearings in the carriage and fixed to one of said shafts, tracks upon which said wheels travel, means for actuating said chain to impart a reciprocating movement to the carriage, a striking off plate fastened to said carriage, an oscillating bar secured to the shaft, which is fixed to said eccentrics, an anti-friction roller, a support to hold the latter in the path of said bar to cause the latter to oscillate as it reaches its forward limit, a cross-piece upon the frame, a scraper pivotally mounted thereon, pivotally mounted, spring-actuated plates upon the carriage and spaced apart and adapted to receive and hold the bar as it is swung to its limit by said roller, and means for releasing the bar as the carriage approaches its rearward limit.

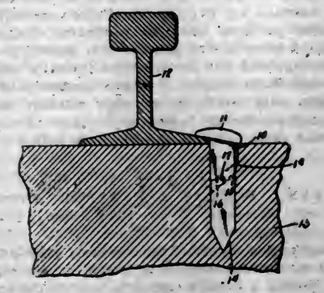
5. An apparatus for striking off brick comprising a frame, sprocket wheels mounted thereon, an endless chain passing about said wheels, a carriage secured to said chain, shafts mounted in said carriage, eccentrics mounted in bearings in the carriage and fixed to one of said shafts, tracks upon which said wheels travel, means for actuating said chain to impart a reciprocating movement to the carriage, a striking off plate fastened to said carriage, an oscillating bar secured to the shaft, which is fixed to said eccentrics, an anti-friction roller, a support to hold the latter in the path of said bar to cause the latter to oscillate as it reaches its forward limit, a cross-piece upon the frame, a pivotal frame mounted upon said cross-piece, a spring-pressed scraper mounted upon said pivotal frame, a lug upon the endless chain adapted to contact with the pivotal frame to cause the scraper to tilt as the carriage approaches its forward limit, spring-actuated pivotal plates upon the carriage adapted to receive and hold the bar as it is oscillated by said roller, and a stop against which the bar is adapted to contact as the carriage reaches its rearward limit.

1,021,355. SPRING-WHEEL. JOHN C. DECKARD and ISAAC L. DECKARD, Vincennes, Ind. Filed May 23, 1911. Serial No. 628,980. (Cl. 152—38.)



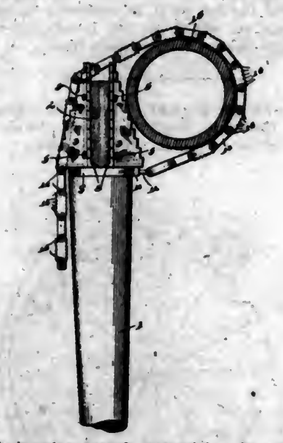
A wheel including an inner and an outer rim, a plurality of seats having overlapping ends and connected respectively to the inner face of the outer rim and the outer face of the inner rim, each of said seats being formed with reversely inclined faces with the centers of the outer seats opposite the overlapping ends of the inner seats whereby the inclined faces of the outer seats extend respectively in substantially parallel relations to the inclined faces of the inner seats, fastening means operating through said overlapping ends for securing said seats to the rim members, and springs bearing by their ends against each opposing pair of said parallel faces.

1,021,356. RAILROAD-SPIKE. EDWARD J. DITTMER, Durbin, N. D. Filed Oct. 19, 1911. Serial No. 655,529. (Cl. 85—23.)



In a railroad spike, the combination with the shank and head portion thereof, said shank portion having a diagonal slot therethrough below the head; of a pivot pin disposed transversely through the spike and slot and a retaining pin of rectangular cross section pivotally mounted thereon for limited movement within the slot, the lower end of the retaining pins being flush with the forward face of the shank and upper end thereof projecting beyond the back face of the spike.

1,021,357. CHAIN PIPE-WRENCH. JOHN J. DONOGHUE, Chicago, Ill. Filed Jan. 30, 1911. Serial No. 605,460. (Cl. 81—70.)



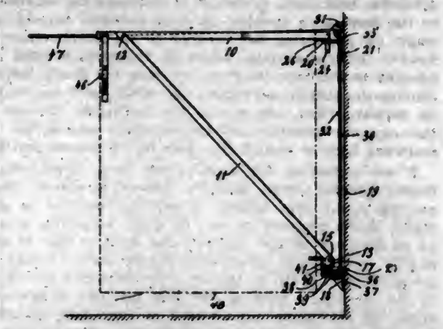
1. A chain pipe-wrench comprising in combination, a handle; a head, said head consisting of a plurality of angular plates arranged radially about one end of said handle and having their vertices secured rigidly thereto, the outer edges of the sides of said plates being serrated for gripping, adjacent sides of adjacent plates being parallelly extending; a chain having one end in swiveled connection with said handle adjacent said head thereof, said chain being adapted to be wrapped around the pipe or object to be gripped, the free end of said chain being adapted to be arranged between adjacent of said projecting head portions; and spaced projections upon said chain adapted to engage against the ends of said projecting head portions to maintain said chain in gripping relation with the object about which it is arranged, substantially as described.

2. A chain pipe-wrench comprising in combination, a handle; a head, said head consisting of a plurality of angular plates arranged radially about one end of said handle and having their vertices secured rigidly thereto, the outer ends of said plates being serrated for gripping; adjacent sides of adjacent plates being parallelly extending; a chain having one end in swiveled connecetion with said handle adjacent said head thereof, said chain being adapted to be wrapped around the pipe or object to be gripped, the free end of said chain being adapted to be arranged between any two of said parallelly extending projecting head portions, inwardly projecting flanges upon the rearward edges of the pairs of said parallelly extending projecting head portions; spaced laterally projecting studs on said chain adapted to engage against said flanges to maintain said chain in gripping relation with the object embraced thereby; and teeth upon the opposite sides of said chain, substantially as described.

1,021,358. DISPLAY APPARATUS. EVERETT M. DOUGHERTY, Escanaba, Mich. Filed June 7, 1911. Serial No. 631,834. (Cl. 211—22.)

1. A display device comprising a support having a slotted edge, said slot terminating in a circular aperture, a display arm having a pivot adapted to seat in the aperture, said pivot having a depending guide stem adapted to pass through the slot, hoisting lines connected respectively to the inner and outer portions of the arm, drums on which the lines are wound, said drums having different diameters, and the drum on which the line which is connected to the inner portion of the arm is wound having the largest diameter, and said drum having an enlarged portion, and means for rotating the drums.

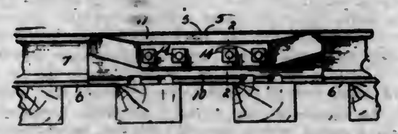
2. A display device comprising a support, a horizontal arm loosely carried thereby, means for disengaging the arm from the support and for raising and lowering the arm, and a prop carried by the arm for supporting it in lowered position.



3. A display device comprising a support having an opening, a display arm having a pivot seating in said opening and disengageable therefrom, hoisting lines connected to the arm, drums on which said lines are wound, a shaft on which the drums are mounted, means for connecting the drums to the shaft to rotate therewith, said drums being also releasable from the shaft, and means for operating the shaft.

4. A display device comprising a support, a horizontal display arm carried thereby, means for raising and lowering said arm, and a brace connected to the arm and swinging therewith, said brace being channeled, and the arm seating in the channel when lowered.

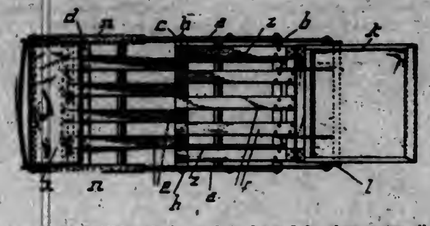
1,021,359. RAIL-JOINT. JOHN P. DULLUM, Wright, Minn. Filed Oct. 8, 1908. Serial No. 456,734. (Cl. 239—3.)



In a rail joint, the combination with the meeting ends of two rail sections; of angle bars fitted upon the inner and outer faces of said rails and overlying their connection, the inner angle bar having an inwardly beveled upper portion upon which the heads of the rails are supported and a concaved portion outwardly thereof and extending from the inner face of the head to a point therebelow, the outer angle bar having a central enlargement provided with a rectilinear outer face and with side portions tapering inwardly toward the ends of the bar, the top portion of the bar being provided with a narrow horizontal tread surface and a beveled surface outwardly thereof to provide inclined end portions, the upper inner edge of the outer bar being formed with a shoulder receiving the under and outer portion of the head of each rail in supporting position and fastening bolts connecting the parts within the area of the rectilinear portion of the enlargement, the face of the inner bar having semicircular depressions in an enlargement below the bolt heads.

1,021,360. COMBINED FOLDING BEDSTEAD AND CHAIR. ARVID ENGELBERT EDSTRÖM and OLOF BERNHARD ANDERSSON, Umea, Sweden, assignors to A. Edström & Co., Umea, Sweden. Filed Feb. 6, 1911. Serial No. 606,791. (Cl. 5—9.)

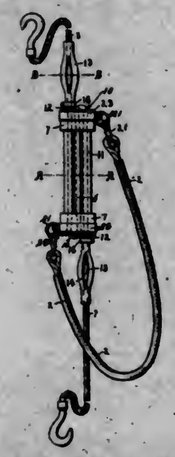
1. A convertible bedstead and chair having folding sides, a back and two extensible and contractible sections arranged to slide in each other, one of said sections *e* at all times protruding at one end through the said back and the other section *f* also protruding through the said back when the said sections are contracted to form a chair bottom.



2. A convertible chair and bedstead having extensible and contractible sides and bottom, the said bottom consisting of two sections *e f* sliding in each other and one end of section *e* being provided with a shoulder 6 which serves as an abutment or stop for the corresponding end of section *f* substantially as set forth.

3. A convertible chair and bedstead having extensible and contractible sides and bottom, the latter consisting of two sections sliding in each other, a back and a bottom extending member *k* which is approximately of the same length as said sections and is adapted to be arranged immediately above the same when they are contracted to form a chair seat, the rear ends of said member and sections then protruding rearward through said back substantially as set forth.

1,021,361. FIRE-ESCAPE. THOMAS H. ELLIOTT, Vancouver, British Columbia, Canada. Filed Aug. 14, 1911. Serial No. 644,051. (Cl. 227—29.)



1. In a fire escape, an elongated central body having grooves extending lengthwise from end to end, caps rigidly secured to the ends of said body, and having longitudinal apertures registering with said grooves, a rope passed back and forth through said grooves, said caps having opposed recesses, elongated grip members held over said grooves with their ends projected into said recesses, said grip members adapted to engage said rope in said grooves, a tubular member carried by each cap and registering with one of the apertures of the respective caps, and a hand grip secured to each tubular member through which the rope ends pass, gripping elements within said hand grips, and a sling having its ends respectively secured to said caps.

2. As a fire escape, an elongated body of substantially triangular form in cross section, said body having a groove extending from end to end on each face, a pair of caps secured over the ends of said body and having longitudinal apertures registering with said grooves, grooved gripping members coöperating with said body to grip a rope in said grooves, said caps having recesses to receive said gripping members and retain them in position, a rope of descent passed back and forth through said caps and grooves, and a body sling secured at its ends respectively to said caps.

3. As a fire escape, an elongated body of substantially triangular form in cross section, said body having a groove extending from end to end of each face, a pair of caps secured over the ends of said body and having longitudinal apertures registering with said grooves, grooved gripping members coöperating with said body to grip a rope in said grooves, said caps having recesses to receive said gripping members and retain them in position, a rope of descent passed back and forth through said caps and grooves, a body sling secured at its ends respectively to said caps, and an auxiliary gripping member carried by one of said caps, and through which said rope of descent passes, said auxiliary gripping member including gripping elements.

1,021,362. ROLL FOR ROLLER-SKATES. OTIS W. EVERETT, Worcester, Mass. Filed July 18, 1911. Serial No. 639,123. (Cl. 46—52.)



1. A roll, comprising a central shaft or stud, a set of balls extending around said stud, two ball cases or cups for said balls, held between the depressed portions of the two sides of the roll, and said two sides having depressed portions, and made separate from the ball cups, and extending upon opposite sides of the ball cups, and having the central opening therein on opposite sides of the ball cups, and one of said sides having a tread thereon for the roll, and the other side extending within said tread.

2. A roll, comprising two sides, one side having a tread thereon for the roll, and the other side extending within said tread, and two ball cases or cups held between said sides.

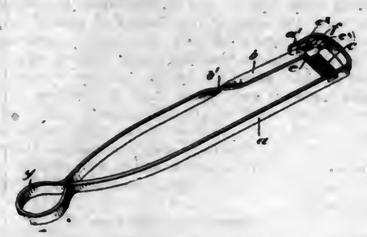
3. A roll, comprising two sides, one side having a tread thereon for the roll, and the other side extending within said tread, and two ball cases or cups held between said sides, one of said cases or cups having a flange or projection thereon within which extends the edge of the other case or cup.

4. A roll, comprising a central shaft or stud, a set of balls extending around said stud, two ball cases or cups for said balls, one of said cases or cups having an annular flange or projection thereon, within which extends the edge of the other case or cup, and two sides, made separate from said ball cups, and extending upon opposite sides thereof, one of said sides having thereon a tread for the roll, and the other side extending within said tread.

1,021,363. IGNITING DEVICE. JOSEPH B. GOULD, Boston, Mass., assignor to Matchless Lighter Company, Boston, Mass., a Corporation of Massachusetts. Filed May 14, 1910. Serial No. 561,301. (Cl. 67—6.)

1. An igniting device comprising a pair of arms movable relatively together and apart, a piece of spark-producing material carried by one of said arms, and a rubbing member carried by the other in such position that the spark-producing member is caused to travel over its surface in contact therewith during the relative movement of the arms, said rubbing member being inclined to the direction of application of the pressure employed in moving the arms whereby the members are crowded together in close frictional contact.

2. An igniting device comprising arms mounted so as to be movable together and apart, one of said arms being bent over and doubled back at its end, a rubbing strip contained between the body of said arm and the bent over end thereof, and a spark-producing member carried by the other arm in such position as to be movable therewith over and in contact with the surface of said rubbing strip.



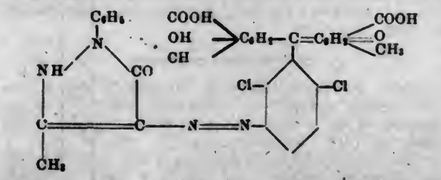
3. An igniter, comprising a flexible spring frame in the form of a hand-hold and having two arms, one of said arms being movable with relation to the other, an abrading member carried by the extremity of one of said arms and a spark-producing friction member carried at the extremity of the other arm, said members being held in contact with each other by the spring of said frame in such manner that when one arm of said frame is moved with respect to the other, the said members are brought into operative frictional engagement.

4. An igniter comprising a flexible spring frame made of a flattened strip doubled to form two resiliently connected arms movable together and apart, an abrader extending from one of the arms in the direction of such relative movement, the other arm being twisted to bring the wider dimension of its end approximately parallel to the abrader, and a piece of spark-producing material secured to the end of said latter arm and held thereby in contact with the surface of the abrader.

5. An igniting device comprising a pair of arms arranged to swing laterally toward and from each other, one of said arms being longer than the other and being bent at its outer end toward and partly around the other, to form a stop limiting the separation of the arms, the first named arm having an abrasive surface extending in the direction of swinging motion, and a quantity of pyrophoric material secured on the other arm arranged to bear on the abrasive surface.

1,021,364. GREEN TRIPHENYLMETHANE DYE. ARTHUR HAUSDÖRFER, Elberfeld, and CARL HEIDENREICH, Leverkusen, near Cologne, Germany, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Aug. 22, 1911. Serial No. 645,432. (Cl. 8—1.)

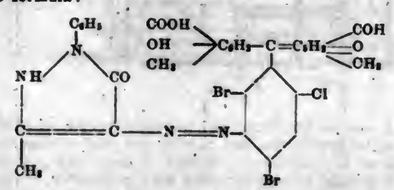
The herein described new dyestuff having most probably the formula:



which dyestuff is in the shape of the free carboxylic acid after being dried and pulverized a red powder scarcely soluble in water and soluble in dilute alkalis with a yellowish-brown coloration; dyeing wool from acid baths brown shades which on being treated with bichromate change into a green fast to fulling, potting and light, substantially as described.

1,021,365. YELLOW-GREEN TRIPHENYLMETHANE DYE. ARTHUR HAUSDÖRFER, Elberfeld, and CARL HEIDENREICH, Leverkusen, near Cologne, Germany, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Aug. 22, 1911. Serial No. 645,433. (Cl. 8—1.)

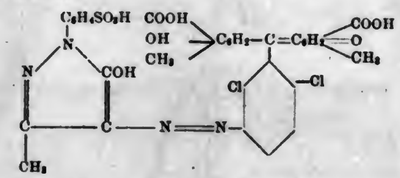
The herein described new dyestuff having most probably the formula:



which dyestuff is in the shape of the free carboxylic acid after being dried and puverized a red powder scarcely soluble in water and soluble in dilute alkalis with a yellowish coloration, dyeing wool from acid baths brown shades which on being treated with bichromate change into a full yellowish-green fast to fulling, potting and light, substantially as described.

1,021,366. TRIPHENYLMETHANE DYE. ARTHUR HAUSDÖRFER, Elberfeld, and CARL HEIDENREICH, Leverkusen, Germany, assignors to Fabenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Oct. 31, 1911. Serial No. 657,704. (Cl. 8—1.)

The herein-described new dyestuff having most probably the formula:



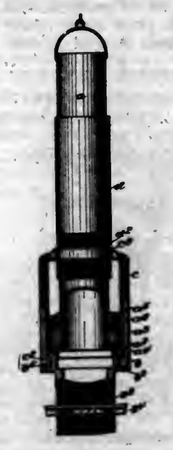
which dyestuff is in the shape of its sodium salt after being dried and pulverized a red powder easily soluble in water with a yellow coloration; dyeing wool from acid baths red-brown shades which on being treated with bichromate change into a green fast to fulling, potting and light, substantially as described.

1,021,367. CLOSET-TANK VALVE. HENRY N. LIBBEY, Boston, Mass. Filed Jan. 24, 1910. Serial No. 539,626. (Cl. 4—5.)

1. In a tank valve, the combination with an annular valve seat; of a tubular valve coöperating therewith and provided with an overflow pipe extending upward from the valve proper; a cage surrounding the said valve proper and an inclosing tube extending upward from the upper portion of said cage around the overflow pipe and constituting the main guide for the valve, the lower portion of said inclosing tube constituting the limiting stop in the upward movement of the valve; and means for permitting the raising and lowering of said guide tube for purposes of adjustment.

2. In a tank valve the combination with an annular seat; of an overflow pipe smaller than said seat; a weighted valve member screw threaded on the outside of said pipe; a valve washer surrounding said pipe; a retaining device for said washer screw-threaded on the outside of the valve member and engaging the outer edge of said washer; and an undercut recess formed in the upper part of said valve member and containing weighting

material; a supporting cage surrounding the valve seat; and an adjustable tubular guide secured in the upper



portion of said cage, and extending upward therefrom and surrounding the overflow pipe.

1,021,368. MEANS FOR FORMING CONCRETE STEPS. JOHN R. LONG, Akron, Ohio, assignor of one-half to Albert Roren, New York, N. Y. Filed Jan. 19, 1911. Serial No. 603,435. (Cl. 25—118.)



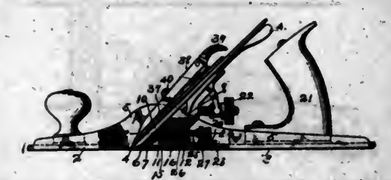
1. A former for concrete steps comprising a skeleton middle frame, two different strips fixed lengthwise on the rear of said frame one above the other, a pair of blocks at each end of said frame in planes corresponding substantially to said facing strips, and anchoring mechanism for separably connecting said blocks to said frame.

2. A former for concrete steps comprising a frame of substantially rectangular shape having parallel front and rear portions and adapted to be supported on the level of the top of the step being formed, a member affixed to the rear of said frame the full length thereof and a second member affixed to the bottom and rear of said frame extending the full length thereof, and means detachably fixing said members on said frame, in combination with blocks removably secured to the ends of said frame.

3. In a form for making concrete steps, skirting boards set to fix the outside of the skirting of the steps, in combination with a top former for the skirting secured to each of said boards, and intermediate means connecting said parts comprising a central frame and blocks removably connected with the ends of said frame and with said top formers.

4. The combination of the middle skeleton frame, a pair of blocks secured one upon the other and anchored to the ends of said frame, in combination with a former fixed to the outside of each of the upper of said blocks, boards disposed edgewise at the outside of said formers and clamps locking said boards and formers together.

1,021,369. PLANE. THOMAS A. MANLEY, Auburn, N. Y., assignor to Ohio Tool Company, Auburn, N. Y., a Corporation of New York. Filed Jan. 18, 1912. Serial No. 671,879. (Cl. 145—15.)



1. In a plane, the combination with a sole having a throat and an elevated seat arranged rearwardly of said throat, of a frog having a plane bottom adapted to rest and slide upon said seat, said frog having longitudinal grooves formed in its opposite bottom corners, a pair of angular tongues carried by the body of the plane, said tongues received by said grooves, and adjustable means carried by said frog adapted to engage said tongues for guiding and locking said frog.

2. In a plane, the combination with a sole having a throat and an elevated seat arranged rearwardly of said throat, of a frog having a plane bottom adapted to rest and slide upon said seat, said frog having longitudinal grooves formed in its opposite bottom corners, a pair of angular tongues carried by the body of the plane, said tongues received by said grooves, adjustable means carried by said frog adapted to engage said tongues for guiding said frog, and a screw coöperating with said means for locking said frog rigidly to the elevated seat.

3. In a plane, the combination with a sole having a throat and an elevated seat arranged rearwardly of said throat, of a frog having a plane bottom adapted to rest and slide upon said seat, said frog having longitudinal grooves formed in its opposite bottom corners, a pair of angular tongues carried by the body of the plane, said tongues received by said grooves, adjustable means carried by said frog adapted to engage said tongues for guiding and locking said frog, and a swivel-screw for adjusting said frog to different positions on said sole.

4. In a plane, the combination with a sole having spaced cheek pieces and having an elevated seat between said cheek pieces, of horizontal guide-ribs formed on the inner sides of said cheek pieces above and parallel to the said seat, a frog having a plane bottom slidable upon said seat, the opposite lower corners of said frog cut away to clear said ribs, a pair of keys disposed end to end in a transverse slot formed in the bottom of said frog, said keys having their outer ends beveled to pass under and to engage said ribs, and a tapering screw for spreading said keys apart for locking the frog to said ribs.

5. In a plane, the combination of a sole having a transverse throat and an inclined bearing adjacent the throat, and having an elevated seat adjacent the inclined bearing, triangular ribs formed above and parallel to the said elevated seat, a frog having a plane bottom surface adapted to engage and slide upon said elevated seat between said ribs, said frog having portions cut-away for clearing said ribs, and a pair of transversely movable keys carried by said frog adapted to engage said ribs for guiding and also for locking said frog.

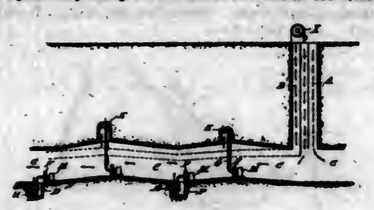
[Claims 6 to 11 not printed in the Gazette.]

1,021,370. MINE-PROTECTION SYSTEM. JAMES MCGAVIN, Chicago, Ill. Filed July 17, 1911. Serial No. 639,074. (Cl. 98—28.)

1. In a mine, the combination of the walls thereof having a plurality of pockets formed therein for collecting gas, with means associated with the pockets for removing the gas, substantially as described.

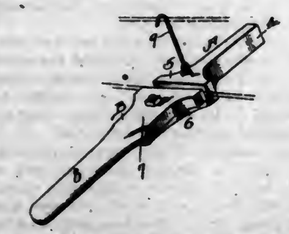
2. In a mine, the combination of the walls thereof having a plurality of pockets formed therein for collecting gas, with a system of suction pipes for removing the gas, substantially as described.

3. In a mine, the combination of the walls thereof having a plurality of pockets formed therein for collecting



gas, a system of suction pipes for removing the gas, with an upcast air shaft into which the gas is discharged, substantially as described.

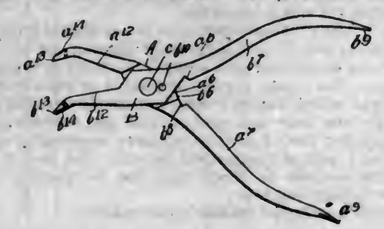
1,021,371. WIRE-STRETCHER. WILLIAM A. MEDLIN, Ripley, Miss. Filed Nov. 9, 1911. Serial No. 659,333. (Cl. 39—121.)



1. A wire stretcher comprising two pivotally connected members, the said members comprising coöperating heads spaced apart and forming gripping jaws, a shank carried by one of said heads adapted to engage a post, an operating handle carried by the other head, and a hook member loosely connected to one of said heads and adapted to engage a wire immediately above the wire gripped between the said heads.

2. A device of the kind described comprising two pivotally connected wire gripping members, one of said members having an integral shank adapted to engage a post, and the other having an integral operating handle, and a wire spacing device loosely connected to the member adapted for engagement with the post, as and for the purpose set forth.

1,021,372. PLIERS. GILBERT R. MESNARD, Chicago, Ill. Filed Mar. 23, 1910. Serial No. 551,032. (Cl. 81—47.)



A pair of pliers providing two crossed pivoted levers constituting, on one side of the pivot, jaws, said jaws having confronting surfaces arranged to meet throughout their entire length when closed, the meeting line of said jaws extending substantially radially from the pivot center for a relatively long distance from the inner ends of the jaws, and the meeting line of the jaws adjacent the tip being deflected downward at an abrupt angle, the nose portions of the jaws being bent downward conformably with the deflection of the meeting line, and providing lateral off-set portions of relatively short extent having made in their confronting surfaces grooves angularly disposed to the longitudinal vertical plane of the pliers to present the forward end of the grooves in said vertical longitudinal plane and the rear end of said grooves at the rear extremities of the off-set portions, the downwardly deflected nose of said pliers when closed tapering lengthwise and being rounded in cross section.

1,021,373. WATERPROOF SWITCH-BOX. ROYAL RUEBEN MILLER, Pueblo, Colo., assignor of one-half to Willard C. Darby, Pueblo, Colo. Filed May 16, 1910. Serial No. 561,747. (Cl. 104—155.)



In a waterproof switch box of the character described, the combination of a box provided with a surface lid and an interior lid provided with lips on the underside; an offset in the interior of said box provided with channels adapted to receive the lips of said interior lid and adapted to contain waterproof fluid; a cap with a groove extending around near the circumference thereof adapted to hold waterproof fluid, resting on bracket means underneath said interior lid; said interior lid provided with circular lips extending downwardly adapted to engage said circular groove in said cap, said cap being turnable in said position, and also provided with means for attaching an operating shaft and lever; all substantially as set forth.

1,021,374. SPRINKLER-HEAD. FRANK E. OPITZ and ROBERT R. EGBERT, Pomona, Cal. Filed Dec. 2, 1911. Serial No. 663,523. (Cl. 137—59.)



1. In combination with a sprinkler head having transverse slots therein, straps movably mounted thereon, links connecting said straps and pivoted together and adapted to hold the head at different elevations, as set forth.

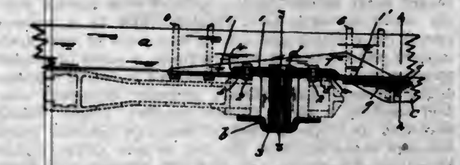
2. In combination with a tubular sprinkler head having transverse slots therein, straps about said head and movable thereon, links arranged in pairs, the members of each pair being pivoted together and to said straps, as set forth.

3. In combination with a tubular sprinkler head having transverse slots therein, straps about said head and movable thereon, links arranged in pairs, the members of each pair being pivoted together and to said straps, the two pairs of links which are pivoted to the same straps being disposed in planes at inclinations to each other to form braces to prevent the head moving laterally, as set forth.

1,021,375. CAR-UNDERFRAME. HARRY M. PFLAGER, St. Louis, Mo., assignor to Transom Draft Gear Company, St. Louis, Mo., a Corporation of Delaware. Filed Oct. 20, 1909. Serial No. 523,581. (Cl. 105—76.)

In a car underframe, the combination with a body bolster and the center sills of the underframe, of a reinforcing member, which is readily detachable from the body bolster by vertical movement of said reinforcing member, or said bolster, which reinforcing member comprises a center plate overlying the center of the body bolster, longitudinally extending vertically disposed ribs integral with the sides of said center plate, the ends of which ribs project equal distances in front of and to the rear of

the ends of the center plate, horizontally disposed plates integral with the projecting ends of the longitudinally extending ribs, which last mentioned plates occupy a plane below the plane occupied by the center plate, thereby forming transverse shoulders at the ends of the center plate which bear against the front and rear edges of the body bolster, vertically disposed plates integral with the rear ends of the pair of rearwardly projecting plates,



which vertically disposed plates bear directly against the ends of the subsills of the car underframe, vertically disposed reinforcing webs integral with the inner edges of the vertically disposed plates and the corresponding pair of horizontally disposed plates to the rear of the center plate, means for rigidly fixing the center plate to the top chord of the body bolster and means for fixing the pairs of ribs to the center sills of the car underframe.

1,021,376. BODY-PROTECTOR. JOHN C. PHELPS, Pownal, Vt. Filed June 17, 1911. Serial No. 633,762. (Cl. 89—36.)



1. A body protector comprising a plurality of horizontal bars, a plurality of metallic members interposed between said bars, side members secured to said bars and receiving the terminals of the said metallic members, and means for securing said protector to the body.

2. A body protector comprising a frame composed of horizontal bars, the sides of said bars being grooved, a plurality of metallic members mounted in said grooves, side members securing the said horizontal bars together and receiving the terminals of said metallic members, and means for securing the frame to the body.

3. A body protector comprising a frame composed of horizontal bars provided with grooves in the sides thereof, the surfaces of said grooves being knurled, a plurality of sectional metallic members seated in said grooves, side members securing said horizontal bars together and receiving the terminals of said metallic members, and means for securing said frame to the body.

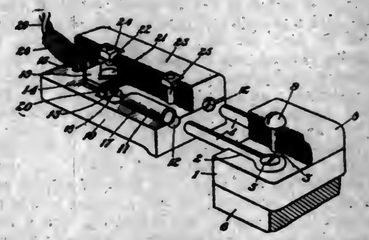
4. A body protector comprising a frame, means for securing said frame to the body, a hollow resilient body secured to said frame and adapted to retain the latter in spaced relation to the body, and means passing through said resilient body for securing said frame about the wearer.

5. A body protector comprising a frame, means for securing said frame to the body, a hollow resilient body of smaller diameter at its central portion than at its terminals, and a belt passing through said hollow body for securing the frame to the wearer.

[Claim 6 not printed in the Gazette.]

1,021,377. ELECTRICAL CONNECTOR. JAMES CHARLES ROYCE, Toronto, Ontario, Canada. Filed May 20, 1910. Serial No. 562,412. (Cl. 173—332.)

1. In an electrical connector, the combination with a suitable socket member, of a block of insulating material, an expansible longitudinally split pin secured in said block, and adjustable means for expanding said pin secured in said block and extending transversely through the split of said pin.



2. In an electrical connector, the combination with a suitable socket member, of a block of insulating material, a split pin secured in said block and having a transverse orifice therethrough, and a tapered spreader adjustably secured in said block and extending through the orifice in said pin.

3. In an electrical connector, the combination with a suitable socket member, of a block of insulating material, a split pin formed of semi-cylindrical shaped wire doubled and formed with a looped head, a counter-sunk headed screw extending through the looped head of said pin and into said block, and a threaded member secured to said block and adapted to receive the threaded end of said screw.

4. In an electrical connector, the combination with a suitable socket member, of a block of insulating material having a recess formed in the face thereof opening to one edge, an expansible longitudinally split pin having its head resting in said recess and the stem extending beyond one edge of said block, adjustable means for expanding said pin secured in said block and extending through the split of said pin, an insulating block adapted to fit over the aforesaid block to completely cover in the head portion of said pin resting in the aforesaid block, and means for clamping said blocks together.

5. In an electrical connector, the combination with a suitable socket member, of a block of insulating material, an expansible longitudinally split pin resting in said block, an electrical conductor connected to said block, and an adjustable expanding member extending transversely through the split of said pin and forming an electrical connection between said pin and said electrical conductor.

1,021,378. PIPE CONNECTION. WILHELM SCHULZ, Houston, Tex., assignor of fifty-one one-hundredths to Henry H. Dixon, George M. Dixon, Charles M. Rein, and R. C. Duff. Filed June 16, 1911. Serial No. 633,557. (Cl. 137—34.)



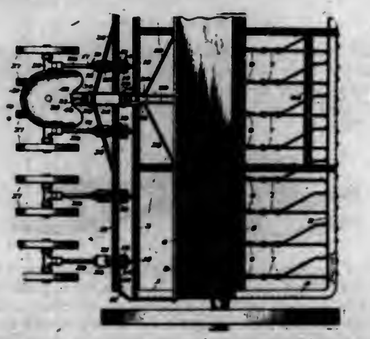
1. In a coupling of the character described the combination with a plurality of pipe sections, of a joint member carried by each section; a tubular connecting member projecting through one of said joint members and having a threaded engagement at one end with the other of said joint members; an annular rim carried by the free end of said connecting member and a flange depending from said rim and fitting into a corresponding groove in the first mentioned joint member; a gasket surrounding said depending flange and lining said groove; an expanding ring surrounding said flange and pressing against said gasket; a means extending through a tapped hole in the last mentioned joint member and projecting into a recess in the threaded end of said connecting member; a removable cap carried by the first mentioned joint member for per-

mitting access to the interior of said coupling, and an annular shoulder carried by one of said joint members and projecting into said corresponding recess in the other of said joint members.

2. In a coupling of the character described the combination with a plurality of pipe sections, of a joint member carried by each section; a tubular connecting member projecting through one of said joint members and having a threaded engagement at one end with the other of said joint members; an annular rim carried by the free end of said connecting member and a flange depending from said rim and fitting into a corresponding groove in the first mentioned joint member; a gasket surrounding said depending flange and lining said groove; an expanding ring surrounding said flange and pressing against said gasket a set screw extending through a tapped hole in the last mentioned joint member and projecting into a recess in the threaded end of said connecting member; a removable cap carried by the first mentioned joint member for permitting access to the interior of said coupling, and an annular shoulder carried by one of said joint members and projecting into a corresponding recess in the other of said joint members.

3. In a coupling of the character described the combination with a plurality of pipe sections, of a joint member carried by each section, a tubular connecting member projecting through one of said joint members and having a threaded engagement at one end with the other of said joint members and an annular rim carried by the other or free end of said connecting member; an annular flange depending from said rim and fitting into a corresponding groove in the first mentioned joint member; a gasket surrounding said depending flange and lining said groove; an expanding ring surrounding said flange and pressing against said gasket, said connecting member being also provided with peripheral recesses at its extreme threaded ed; a set screw extending through a tapped hole in the last mentioned joint member and projecting into one of the recesses in said connecting member; a movable cap carried by the first mentioned joint member for permitting access to the interior of said coupling, and an annular shoulder carried by one of said joint members and projecting into a corresponding recess in the other of said joint members.

1,021,379. GRAIN-DRILL. DUNY A. SCHUTT, Chicago, Ill., assignor to International Harvester Company, a Corporation of New Jersey. Filed Nov. 24, 1911. Serial No. 662,089. (Cl. 111—18.)



1. A grain drill including, in combination, a wheeled frame, furrow openers, seed delivery mechanism, and presser wheel mechanism including a transversely arranged draft member having opposite ends thereof flexibly connected with said wheeled frame in a manner permitting a rising and falling movement of said draft member relative to said wheeled frame, a series of bracket members secured to said draft member in spaced relation, double armed rocking levers pivotally connected with said brackets, a series of axle members, presser wheels journaled upon said axle members, draft rods connecting said axle members with one end of said rocking levers in a manner permitting a lateral swinging movement of said axle members and a turning movement of said draft rods about their axes.

2. A grain drill including, in combination, a wheeled frame, furrow openers, seed delivery mechanism, and presser wheel mechanism including a transversely arranged draft member having opposite ends thereof flexibly connected with said wheeled frame in a manner permitting a rising and falling movement of said draft member relative to said wheeled frame, a series of bracket members secured to said draft member in spaced relation, double armed rocking levers pivotally connected with said brackets, a series of axle members, presser wheels journaled upon opposite ends of said axle members, clevis members connected with one end of said rocking levers by means of vertically arranged pins whereby said clevis members are permitted to swing laterally, draft rods having one end thereof connected with said axle members and their opposite ends with said clevis members in a manner permitting said rods to turn axially.

3. A grain drill including, in combination, a wheeled frame, furrow openers, seed delivery mechanism, and presser wheel mechanism including a transversely arranged draft member having opposite ends thereof flexibly connected with said wheeled frame in a manner permitting a rising and falling movement of said draft member relative to said wheeled frame, a series of bracket members secured to said draft member in spaced relation, double armed rocking levers pivotally connected with said brackets, a series of axle members, presser wheels journaled upon opposite ends of said axle members, clevis members connected with one end of said rocking levers by means of vertically arranged pins whereby said clevis members are permitted to swing laterally, draft rods having one end thereof connected with said axle members, and their opposite ends with said clevis members in a manner permitting said rods to turn axially, links pivotally connected with the opposite ends of said rocking levers and slidably received by openings in said draft member, and compression springs encircling said links and operative in a manner to rock said levers in one direction.

4. A grain drill including, in combination, a wheeled frame, a seed hopper arranged upon said wheeled frame, furrow openers, seed delivery mechanism, and presser wheel mechanism including a transversely arranged draft member having opposite ends thereof flexibly connected with said wheeled frame in a manner permitting a rising and falling movement of said draft member relative to said wheeled frame, seat supporting members having their lower ends secured to said wheeled frame and their upper ends connected with said seed hopper by means of laterally extending brace members, seat supporting bars pivotally connected with the upper ends of said seat supporting members in a manner permitting a swinging movement thereof in a vertical plane, a reversible seat supporting plate adapted to be received between said seat supporting bars, means whereby said plate may be secured in either position, and weight sustaining bars connecting said seat supporting bars with said draft member.

1,021,380. GLOVE-LEATHER AND PROCESS OF PREPARING IT. EDMUND SIMON, Dresden, Germany, assignor to The Firm of Louis Grisser, Zwickau, Germany. Filed Sept. 9, 1909. Serial No. 516,948. (Cl. 149—5.)

1. Leather containing salicylic acid ester and benzoic acid ester.

2. The improvement in the manufacture of leather, which consists in treating it with salicylic acid ester and benzoic acid ester.

3. The improvement in the manufacture of leather, which consists in tawing it and giving it its last dressing in a liquor containing salicylic acid ester and benzoic acid ester.

1,021,381. FIREARM. CARL AXEL THEODOR SJÖGREN, Stockholm, Sweden, assignor to Aktiebolaget Svenska Vapenoch Ammunitionsfabriken, Stockholm, Sweden, a Company of Sweden. Filed May 26, 1911. Serial No. 629,741. (Cl. 42—3.)



1. In a fire-arm, the combination of a breech bolt adapted to swing about its forward end, rear abutments for the said breech bolt for locking the same in its closing position, and a weight movable under the action of the recoil and acting to swing the said breech bolt out of engagement with the said abutments, when firing takes place.

2. In a fire-arm, the combination of a breech bolt adapted to swing about its forward end, rear abutments for the said breech bolt for locking the same in its closing position, and a part having lugs engaging obliquely extending lateral grooves in the breech bolt, said part being actuated when firing takes place so as to automatically disengage the breech bolt.

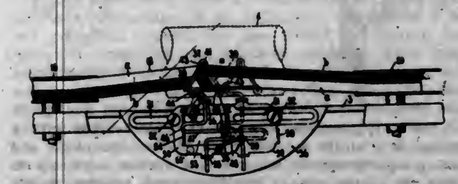
3. In a fire-arm, the combination of a breech bolt adapted to swing about its forward end and having obliquely extending lateral grooves and lateral shoulders, rear abutments for the said breech bolt for locking the same in its closing position, and a part which is automatically moved backward relatively to the breech bolt when firing takes place, said part having lugs engaging the grooves in the breech bolt for automatically disengaging the same and other lugs adapted to bear on the shoulders of the breech bolt, when the latter has been disengaged, so as to move the breech bolt backward.

4. In a fire-arm, the combination of a breech bolt adapted to swing about its forward end and having obliquely extending lateral grooves open at both ends, rear abutments for the said breech bolt for locking the same in its closing position, and a part which is automatically moved backward relatively to the breech bolt when firing takes place, said part having lugs engaging the grooves in the breech bolt for automatically disengaging the same.

5. In a fire-arm, the combination of a breech bolt adapted to swing about its forward end and having obliquely extending lateral grooves open at both ends and lateral shoulders, rear abutments for the said breech bolt for locking the same in its closing position, and a part which is automatically moved backward relatively to the breech bolt when firing takes place, said part having lugs engaging the grooves in the breech bolt for automatically disengaging the same and other lugs adapted to bear on the shoulders of the breech bolt, when the latter has been disengaged, so as to move the breech bolt backward.

[Claims 6 and 7 not printed in the Gazette.]

1,021,382. TYPE-WRITING MACHINE. CHARLES E. SMITH, New York, N. Y., assignor, by mesne assignments, to Union Typewriter Company, Jersey City, N. J., a Corporation of New Jersey. Filed Jan. 16, 1912. Serial No. 671,483. (Cl. 197—157.)



1. In a typewriting machine, the combination with a ribbon, of means for guiding the ribbon so that it will travel longitudinally of the printing line at those portions of the ribbon against which the types impact and for turning the ribbon by said guiding means so that opposite side edges portions of the ribbon will simultaneously travel next to the printing line, and means for bringing either of two side edge portions of the ribbon which are next to the printing line into use.

2. In a typewriting machine, the combination with a ribbon having two longitudinally extending fields of different characteristics, of means for guiding the ribbon so that it will extend longitudinally of the printing line at those portions of the ribbon against which the types impact and for turning the ribbon by the guiding surfaces of said guiding means so that different fields at opposite side edge portions of the ribbon will simultaneously travel next to the printing line, and means for bringing either of two fields of the ribbon next to the printing line into use.

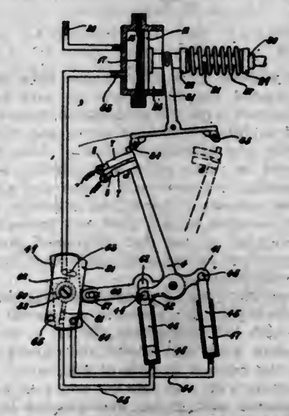
3. In a typewriting machine, the combination with a ribbon having two longitudinally extending fields of different characteristics, of means for vibrating the ribbon transversely of said fields at each printing operation, means for guiding the ribbon and turning it so as simultaneously to bring different fields next to the printing line, and means for bringing either of said fields next to the printing line into use.

4. In a typewriting machine, the combination with a ribbon having two longitudinally extending fields of different characteristics, of ribbon guiding means having three guiding surfaces around which the ribbon is turned, each of said guiding surfaces being arranged at an angle to others and so disposed that the ribbon is reversed thereby to bring different fields next to the printing line as the ribbon passes through said guiding means, and means for bringing either field next to the printing line into use.

5. In a typewriting machine, the combination with a ribbon having two longitudinally extending fields of different characteristics, of ribbon guiding means having three guiding surfaces around which the ribbon is turned, one of said surfaces being a horizontal surface and two of them being inclined with reference to the horizontal surface so that the ribbon is reversed when it is turned on said surfaces and different fields are brought next to the printing line, and means for bringing either one of the two fields next to the printing line into use.

[Claims 6 to 41 not printed in the Gazette.]

1,021,383. PRESSURE-REGULATOR. MARTIN V. SMITH, Hartford, Conn., assignor of one-half to John J. Delahanty, Hartford, Conn. Filed Feb. 18, 1911. Serial No. 609,448. (Cl. 175—308.)



1. In an apparatus of the class described, the combination of a motor controlling device, fluid conveying means, means operable automatically and solely by the fluid for

shifting said motor controlling device into a plurality of motor controling positions, means for holding the said device in its respective positions, and means for automatically releasing the motor controlling device when the pressure of the fluid reaches predetermined yet different points.

2. In an apparatus of the class described, the combination of an oscillatory motor-controlling device, fluid conveying means, means operable by the fluid for automatically shifting said device into a plurality of motor-controlling positions, means for positively holding the device in its respective positions, and means governed independently by the fluid for releasing the said device at successive times and when the pressure of the fluid reaches predetermined yet different points.

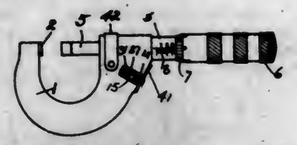
3. In an apparatus of the class described, the combination of a motor-controlling device, fluid conveying means, means involving a valve, for automatically changing the course of the fluid to effect alternately successive movements of said controller into a plurality of distinct positions, means for positively holding the controller in its shifted positions, and means governed by the fluid for releasing the controlling device when the pressure reaches predetermined yet different points.

4. In an apparatus of the class described, the combination of a motor controlling device, fluid conveying means, means including a valve, for automatically causing the fluid to act against the controlling device to shift the same into a plurality of distinct positions, means actuated by said controlling device for operating said valve to change the course of the fluid, means for holding the controlling device in its respective positions, and means for releasing the controlling device when the pressure reaches predetermined yet different points.

5. In an apparatus of the class described, the combination of a controller, means for automatically oscillating said controller, a shaft, a pair of latches rigidly supported by said shaft and serving alternately to hold the controller in its shifted positions, and fluid governed means for rocking said shaft to thereby move one latch to its operative position and simultaneously the other latch to its inoperative position.

[Claims 6 to 19 not printed in the Gazette.]

1,021,384. MICROMETER-GAGE. MILTON A. SMITH, Woonsocket, R. I. Filed May 26, 1910. Serial No. 563,498. (Cl. 73—16.)

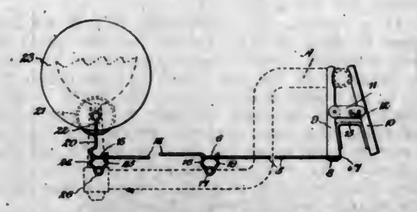


1. In a micrometer gage comprising a yoke having an internally threaded barrel, a sleeve on said barrel arranged to coöperate with the graduations thereof, a spindle connected to rotate with said sleeve and threaded to coöperate with the internal threads of said barrel, a pinion mounted to rotate with said spindle, said yoke having an opening to receive said pinion and adapted to prevent lateral movement thereof, an angularly arranged counter shaft mounted in said yoke and having a pinion operatively engaged by the first mentioned pinion, and counting mechanism mounted on said shaft and operatively connected therewith.

2. A micrometer gage comprising a yoke having an internally threaded barrel, a sleeve on said barrel arranged to coöperate with the graduations thereof, a spindle connected to rotate with said sleeve and threaded to cooperate with the internal threads of said barrel, a pinion mounted to rotate with said spindle, said yoke having an opening to receive said pinion and adapted to prevent lateral movement thereof, an angularly arranged counter shaft mounted in said yoke and having a pinion operatively engaged by the first mentioned pinion, a counter drum rigidly secured to said counter shaft, additional counter drums loosely mounted on said counter shaft, and means within said drums for controlling the rotation of the loosely mounted drums.

3. A micrometer gage comprising a yoke having an internally threaded barrel, a sleeve on said barrel arranged to coöperate with the graduations thereof, a spindle connected to rotate with said sleeve and threaded to coöperate with the internal threads of said barrel, a pinion mounted to rotate with said spindle, said yoke having an opening to receive said pinion and adapted to prevent lateral movement thereof, an angularly arranged counter shaft mounted in said yoke and having a pinion operatively engaged by the first mentioned pinion, a counter drum rigidly secured to said counter shaft, additional counter drums loosely mounted on said counter shaft, plates within said drums, said plates being provided with means for engaging said yoke to prevent rotation of the former, and pinions carried by said plates and controlling the rotation of said loosely mounted drums.

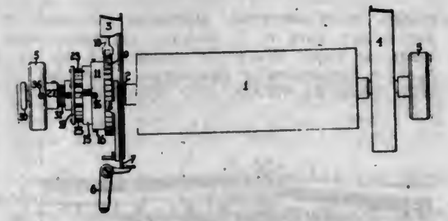
1,021,385. LIGHT-SHADE BRACKET. WILLIAM H. STRATTON, Chicago, Ill. Filed Feb. 24, 1911. Serial No. 610,531. (Cl. 248—38.)



1. A bracket comprising a pair of rods, one of said rods having a loop at one of its ends, and the other rod having at one of its ends a bend terminating in a spring loop and a spring finger extending therefrom, said bend and finger passing through the loop of the other rod, attaching means connected to one of the rods, and a holder carried by the other rod.

2. A bracket comprising a pair of rods, one of said rods having a loop at one of its ends, and the other rod having at one of its ends a bend terminating in a spring loop and a spring finger extending therefrom, said bend and finger passing through the loop of the other rod, and the portions of the bend and the spring which engage said loop being bowed, attaching means connected to one of the rods, and a holder carried by the other rod.

1,021,386. TYPE-WRITING MACHINE. RICHARD W. UHLIG, Rutherford, N. J., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of New Jersey. Filed Jan. 20, 1910. Serial No. 538,977. (Cl. 197—123.)



1. In a typewriting machine, the combination with a platen, of a clutch member fixed to turn therewith and having equally spaced seats, a bolt carrier relatively to which the platen turns, a line-space wheel attached to the bolt carrier, unequally spaced bolts mounted in the bolt carrier to lock the fixed clutch member thereto, a releasing head mounted for longitudinal and rotary movement relatively to the platen, springs interposed between the releasing head and the bolts to press the bolts toward the fixed clutch member, the bolts operated by the releasing head, and a finger piece connected with the releasing head to control the engagement and disengagement of the bolts.

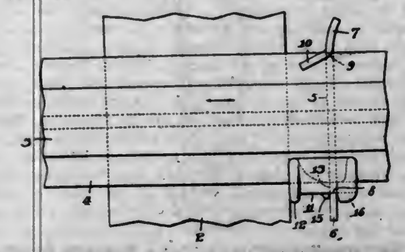
2. In a typewriting machine, the combination with a platen, a line-space wheel relative to which the platen turns, line-space mechanism for operating the wheel, and a detent for the wheel, of a clutch mechanism for positively locking the platen and line-space wheel together, including a disk fixed to turn with the platen, and provided with a circular series of seats arranged closely together, a bolt carrier with which the line space wheel is connected, a plurality of spring-pressed unequally spaced bolts in the bolt carrier, mounted to move toward and from the disk, the inner ends of the bolts being pointed, and a finger piece with which the bolts are connected.

3. The combination with a platen, of an axle fast to said platen and fast to a disk which faces a line-space wheel for said platen, said line-space wheel being loose on said axle and carrying an annulus extending on the opposite side of said disk, pins extending parallel to said axle through said annulus and independently projectable into perforations in said disk to lock said disk to said line-space wheel, and a finger piece for operating said pins.

4. The combination with a platen, of an axle fast to said platen and fast to a disk which faces a line-space wheel for said platen, said line-space wheel being loose on said axle and carrying an annulus extending on the opposite side of said disk, pins extending parallel to said axle through said annulus and independently projectable into perforations in said disk to lock said disk to said line-space wheel, and a guide for the rear end of said pins holding them rigidly parallel to said axle.

5. The combination with a platen, of an axle fast to said platen and fast to a disk which faces a line-space wheel for said platen, said line-space wheel being loose on said axle and carrying an annulus extending on the opposite side of said disk, pins extending parallel to said axle through said annulus and independently projectable into perforations in said disk to lock said disk to said line-space wheel, a guide for the rear end of said pins holding them rigidly parallel to said axle, a finger piece for operating said pins, and a detent holding said finger piece.

1,021,387. ANTICREEPER FOR RAILROAD-RAILS. DAVID F. VAUGHAN and DAVID L. VAUGHAN, Haddonfield, N. J. Filed June 27, 1910. Serial No. 568,968. (Cl. 238—4.)



1. The combination with a cross-tie and a railroad rail having a base flange, of an anticreeper comprising a flat bar extending beneath the base flange and having flat, upwardly extending end portions provided with inner edges facing the side edges of the base flange, one of said end portions having a part extending over said base flange and supporting one end of said bar, the inner edge of the other end portion extending vertically from the top of the body of the bar to the top of the end portion, and a shoe engaged with the last mentioned inner edge and supporting the adjacent end of the bar and maintaining the other end of the bar in spaced relation to the cross-tie.

2. The combination with a cross-tie and a railroad rail having a base flange, of an anticreeper comprising a flat bar extending beneath the base flange and having flat, upwardly extending end portions provided with inner edges facing the side edges of the base flange, said bar being provided with means for supporting it on the base flange and maintaining its side faces and the side faces of its end portions substantially in vertical position, and means acting on the cross-tie and on one end of the bar and maintaining the other end of the bar in spaced relation to the cross-tie, one of said end portions having a lateral bend therein.

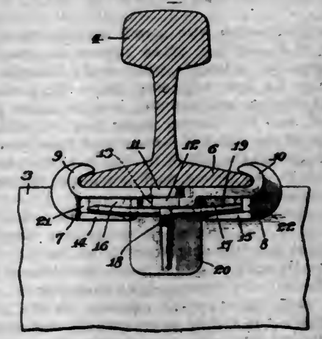
3. The combination with a cross-tie and a railroad rail having a base flange, of an anticreeper comprising a flat bar extending beneath the base flange and having flat, upwardly extending end portions provided with inner edges facing the side edges of the base flange, the side faces of said bar and its end portions being arranged substantially in vertical position, a shoe engaging one side of the base flange and the cross-tie and supporting one end of said bar and maintaining the other end thereof in spaced relation to the cross-tie, the forward face of said bar being engaged with said shoe, and said other end portion being provided with a supporting means engaging the top of the base flange.

4. The combination with a cross-tie and a railroad rail having a base flange, of an anticreeper comprising a flat bar extending beneath the base flange and having flat, upwardly extending end portions provided with inner edges facing the side edges of the base flange, the side faces of said bar and its end portions being arranged substantially in vertical position, a shoe engaging one side of the base flange and the cross-tie and supporting one end of said bar and maintaining the other end thereof in spaced relation to the cross-tie, the inner edge of one of said end portions and the forward face of said bar being engaged with said shoe, and said other end portion being provided with a supporting means engaging the top of the base flange.

5. The combination with a cross-tie and a railroad rail having a base flange, of an anticreeper comprising a flat bar extending beneath the base flange and having a flat upwardly extending end portion provided with an inner edge engaged with one side of the base flange, the side faces of said bar and said end portion being arranged substantially in vertical position, said end portion having a lateral bend therein, means engaging the top of the base flange and supporting said end portion, and a shoe engaging the base flange and the cross-tie and supporting the other end of the bar and maintaining the first named end thereof in spaced relation to the cross-tie, the forward face of said bar being engaged with said shoe.

[Claims 6 to 14 not printed in the Gazette.]

1,021,388. ANTICREEPER FOR RAILROAD-RAILS. DAVID F. VAUGHAN, Haddonfield, N. J. Filed Aug. 11, 1911. Serial No. 643,508. (Cl. 238—4.)



1. The combination with a railroad rail and a stationary part of a road bed, of an anticreeper comprising jaws

engaging the sides of the rail, and means for forcing said jaws toward each other and against the rail, said means including a spring exerting pressure in a direction longitudinally of the rail, said anticreeper having a part engaging said stationary part.

2. The combination with a railroad rail and a stationary part of a road bed, of an anticreeper comprising jaws engaging the sides of the rail, means for forcing said jaws toward each other and against the rails, said means including a spring exerting pressure in a direction longitudinally of the rail, and a part engaging said stationary part and connected to the anticreeper beneath a position between the sides of the rail.

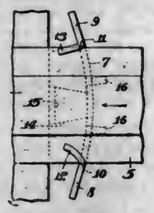
3. The combination with a railroad rail and a stationary part of a road bed, of an anticreeper comprising two members having parts engaged with each other, a jaw on one member engaging one side of the rail, a jaw on the other member engaging the other side of the rail, and a spring pressing said members into engagement with each other and pressing said jaws against said rail, one of said members having a part engaging said stationary part.

4. The combintion with a railroad rail and a stationary part of a road bed, of an anticreeper comprising two separable members having spring-engaging parts, a jaw on one member engaging one side of the rail, a jaw on the other member engaging the other side of the rail, and a spring engaging said spring-engaging parts and forcing said jaws against the rail, one of said members having a part engaging said stationary part.

5. The combination with a railroad rail and a stationary part of a road bed, of an anticreeper comprising two separable members having spring-engaging parts, a jaw on one member engaging one side of the rail, a jaw on the other member engaging the other side of the rail, and a spring exerting pressure against one of said members in two directions opposite to each other and exerting pressure against the other of said members in one direction and forcing said jaws against the rail, one of said members having a part engaging said stationary part.

[Claims 6 to 30 not printed in the Gazette.]

1,021,389. ANTICREEPER FOR RAILROAD-RAILS. DAVID L. VAUGHAN, Riverton, N. J. Filed Aug. 12, 1911. Serial No. 643,671. (Cl. 238—4.)



1. The combination with a railroad rail and a stationary part of a road bed, of an anticreeper comprising a spring metal bar extending transversely beneath the rail and having its ends extending above the plane of the bottom of the rail and forming jaws engaging the sides of the rail, said bar exerting pressure in the direction of the length of the rail and forcing said jaws toward each other and against the rail in tending to assume a position from which it was sprung, said anticreeper having a part engaging said stationary part.

2. The combination with a railroad rail and a stationary part of a road bed, of an anticreeper comprising a spring metal bar extending transversely beneath the rail and having its ends extending above the plane of the bottom of the rail and forming jaws engaging the sides of the rail, said bar exerting pressure in the direction against which it is desired to prevent the rail from creeping and forcing said jaws toward each other and against the rail in tending to assume a position from which it was sprung, and a part extending from said bar beneath a position between the sides of the rail and engaging said stationary part.

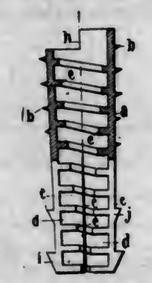
3. The combination with a railroad rail and a stationary part of a road bed, of an anticreeper comprising a flat, spring metal bar extending transversely beneath the rail and having its ends extending above the plane of the bottom of the rail and forming jaws engaging the sides of the rail, the broad faces of the bar extending between the narrow edges thereof being arranged substantially in vertical position, said bar exerting pressure in the direction of the length of the rail and forcing said jaws toward each other and against the rail in tending to assume a position from which it was sprung, said anticreeper having a part engaging said stationary part.

4. The combination with a railroad rail and a stationary part of a road bed, of an anticreeper comprising a flat, spring metal bar extending transversely beneath the rail and having its ends extending above the plane of the bottom of the rail and forming jaws engaging the sides of the rail, the broad faces of the bar extending between the narrow edges thereof being arranged substantially in vertical position, said bar exerting pressure in the direction against which it is desired to prevent the rail from creeping and forcing said jaws toward each other and against the rail in tending to assume a position from which it was sprung, and a part extending from said bar beneath a position between the sides of the rail and engaging said stationary part.

5. The combination with a railroad rail and a stationary part of a road bed, of an anticreeper comprising a flat, spring metal bar extending transversely beneath the rail and having its ends extending above the plane of the bottom of the rail and forming jaws engaging the sides of the rail, the broad faces of the bar extending between the narrow edges thereof being arranged substantially in vertical position, said bar exerting pressure in the direction of the length of the rail and forcing said jaws toward each other and against the rail in tending to assume a position from which it was sprung, and said bar having a bent portion extending therefrom in the direction of the length of the rail and engaging said stationary part.

[Claims 6 to 14 not printed in the Gazette.]

1,021,390. APERTURED BOLT APPLICABLE ESPECIALLY FOR FIXING RAILS ONTO THE WOODEN SLEEPERS. RAOUL DIAZ WAGNER, Paris, France. Filed Oct. 20, 1910. Serial No. 588,170. (Cl. 85—2.4.)



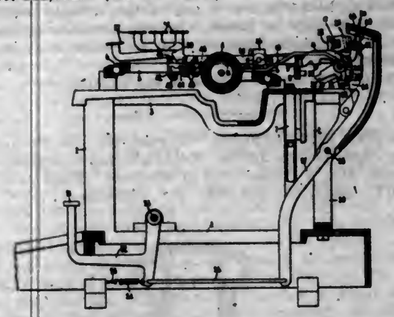
1. An expansion bolt comprising a hollow body and a continuous flat spiral flange formed on the inside thereof, the width of said flange gradually increasing from one end to the other of said body.

2. An expansion bolt comprising a hollow body, split at one end and solid at the other, projections arranged on the outside of said body and adapted to bite into the material in which it is set, and a thin flat continuous spiral flange arranged on the inside of said body and adapted to engage the threads of an ordinary wood screw.

3. An expansion bolt comprising a hollow body exteriorly screw threaded and provided on the inside with a continuous spiral flange, the inner end of said flange determining an opening adapted to receive a threaded screw, said flange increasing in width from one end of the body to the other, whereby said opening is rendered tapering.

4. An expansion bolt comprising a hollow substantially cylindrical body, split adjacent one end, and continuous at its other end, such continuous end being provided with exterior screw threads, and the split end of said body having exterior projections adapted to constitute anchors, and a spiral flange projecting from the inner wall of said hollow body, and extending from one end to the other thereof the width of said flange increasing from one end of the body to the other.

1,021,391. TYPE-WRITING MACHINE. JOHN WALDHEIM, Newark, N. J., assignor, by mesne assignments, to Union Typewriter Company, Jersey City, N. J., a Corporation of New Jersey. Filed Dec. 5, 1911. Serial No. 663,982. (Cl. 197—177.)



1. In a typewriting machine and in tabulating mechanism, the combination of a carriage, a series of independently adjustable graduated column stops, a series of independently operable denominational stops, said column and denominational stops having variable extents of relative movement toward and away from each other, key controlled column selecting means which may be set at will to determine the extent of variable relative movement that may be effected between the column and denominational stops, keys having a uniform extent of movement, and means controlled by said keys for moving said denominational stops individually to operative position and to arrest the carriage at various columnar positions as determined by the setting of said key-controlled column selecting means.

2. In a typewriting machine and in tabulating mechanism, the combination of a carriage, a series of independently adjustable graduated column stops, a series of independently operable denominational stops, said column stops having variable extents of movement toward and away from the denominational stops, key controlled column selecting means which may be set at will to determine the extent of variable relative movement that may be given to the column stops, keys having a uniform extent of movement, means controlled by said keys for moving said denominational stops individually to operative position to bring any desired denominational stop into cooperative relation with a given column stop as determined by the previous actuation of the key controlled column selecting means, and carriage releasing means controlled by an actuation of the key controlled means for moving the denominational stops.

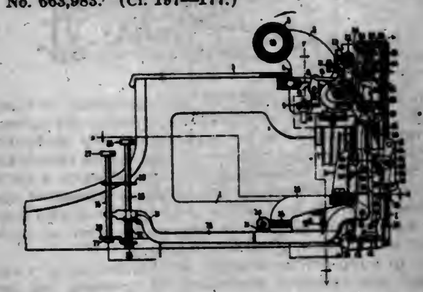
3. In a typewriting machine and in tabulating mechanism, the combination of a carriage, a series of independently adjustable graduated column stops, a series of independently operable denominational stops, said column and denominational stops having variable extents of relative movement toward and away from each other, a series of independently operable column selecting keys, means controlled by said keys to determine the extent of relative variable movement that may be effected between the column and denominational stops, and a series of independently operable denominational keys having a uniform extent of movement for moving said denominational stops individually into operative position and for arresting the carriage at various columnar positions as determined by the column selecting key which has been actuated.

4. In a typewriting machine and in tabulating mechanism, the combination of a carriage, a series of independently adjustable graduated column stops, a series of independently operable denominational stops, said column and denominational stops having variable extents of relative movement toward and away from each other, a series of independently operable column selecting keys having a uniform extent of movement, means which may be set by said keys to determine the extent of relative movement that may be effected between the column and denominational stops, and a series of individually operable denominational keys having a uniform extent of movement for moving said denominational stops to operative position and for arresting the carriage at various columnar positions as determined by the column selecting key which has been actuated.

5. In a typewriting machine and in tabulating mechanism, the combination of a carriage, a series of independently adjustable graduated column stops, a series of independently operable denominational stops, said column and denominational stops mounted for movement toward and away from each other and having variable extents of relative movement toward and away from each other, key controlled column selecting means which may be set at will to determine the extent of relative variable movement that may be effected between the column and denominational stops, and key controlled means for moving said denominational stops individually to operative position.

[Claims 6 to 45 not printed in the Gazette.]

1,021,392. TYPE-WRITING MACHINE. JOHN WALDHEIM, Newark, N. J., assignor, by mesne assignments, to Union Typewriter Company, Jersey City, N. J., a Corporation of New Jersey. Filed Dec. 5, 1911. Serial No. 663,983. (Cl. 197—177.)



1. In a typewriting machine, the combination of a carriage, column selecting mechanism, keys therefor, denominational selecting mechanism including key actuated levers, carriage releasing means, and automatically operating mechanism intermediate said key actuated levers and the carriage releasing means to render the carriage releasing means inoperative until an actuation of a column selecting key has been effected.

2. In a typewriting machine, the combination of a carriage, column selecting mechanism, keys therefor, denominational selecting mechanism including key actuated levers, carriage releasing means normally inoperative to release the carriage, and automatically operating means intermediate said key actuated levers and the carriage releasing means and controlled by an actuation of a key of the column selecting mechanism for rendering the carriage releasing means operative.

3. In a typewriting machine, the combination of a carriage, column selecting mechanism, keys therefor, denominational selecting mechanism including key actuated levers, means for releasing the carriage, said carriage releasing means comprising a device on which said key ac-

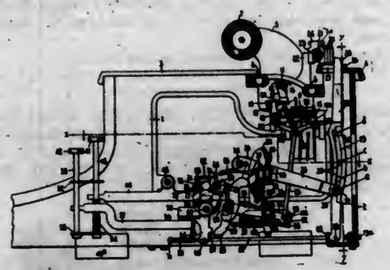
tuated levers are normally inoperative and automatically operating means for rendering said key actuated levers operative on said device when a key of the column selecting mechanism is actuated, whereby it is necessary to actuate the column selecting mechanism before an actuation of the denominational selecting mechanism is effective to release the carriage.

4. In a typewriting machine, the combination of a carriage, column selecting mechanism, keys therefor, denominational selecting mechanism including key actuated levers, carriage releasing means comprising a carriage releasing device on which said levers are operative, a blocking device intermediate said levers and device and normally interposed between said levers and device to prevent an actuation of said device, and means controlled by an actuation of any of said column selecting keys for moving said blocking device out of the path of said levers.

5. In a typewriting machine, the combination of a carriage, column stops, a coöperative stop, column selecting means, means for locking the column selecting means in the actuated position, and means controlled by the travel of the carriage for releasing said locking means.

[Claims 6 to 53 not printed in the Gazette.]

1,021,893. TYPE-WRITING MACHINE. JOHN WALDHEIM, Newark, N. J., assignor, by mesne assignments, to Union Typewriter Company, Jersey City, N. J., a Corporation of New Jersey. Filed Dec. 5, 1911. Serial No. 663,984. (Cl. 197—177.)



1. In a typewriting machine, the combination of a carriage; and tabulator mechanism for arresting the carriage at variable positions in the travel thereof, sair mechanism including a fulcrumed member movable varying extents and by the variation in extent of movement of which a variation in position of arrest of the carriage is determined, and means for varying the position of the fulcrum of said member and thereby cause a variation in the extent of movement which may be given said member.

2. In a typewriting machine, the combination of a carriage; and tabulator mechanism for arresting the carriage at variable positions in the travel thereof, said mechanism including a fulcrumed member movable varying extents and by the variation in extent of movement of which a variation in position of arrest of the carriage is determined, and a series of keys for varying the position of the fulcrum of said member and thereby causing a variation in the extent of movement which may be given said member, each of said keys controlling a different position of the fulcrum.

3. In a typewriting machine, the combination of a carriage; and tabulator mechanism for arresting the carriage at variable positions in the travel thereof, said mechanism including a fulcrumed member movable variable extents and by the variation in the extent of movement of which the variation in position of arrest of the carriage is determined, means for varying the position of the fulcrum of said member and thereby causing a variation in the extent of movement which may be given said member, and means for locking the fulcrum in any of the variable positions to which it may be moved.

4. In a typewriting machine, the combination of a carriage; a tabulator mechanism for arresting the carriage at variable positions in the travel thereof, said mechanism including a fulcrumed member movable varying extents and by the variation in extent of movement of which the variation in position of arrest of the carriage is determined, key controlled means for varying the position of the fulcrum of said member to change its leverage and thereby cause a variation in the extent of movement which may be given said member, and automatically operating means for locking said fulcrum in any of the variable positions to which it may be moved.

5. In a typewriting machine, the combination of a carriage; and tabulator mechanism for arresting the carriage at variable positions in the travel thereof, said mechanism including a variably movable fulcrumed member, by the variable movement of which the variation in position of arrest of the carriage is determined, key controlled means for varying the position of the fulcrum of said member and thereby causing a variation in the movement which may be given said member, automatically operating means for locking said fulcrum in any of the variable positions to which it may be moved, and automatically operating means for releasing said fulcrum to enable it to be restored to normal position.

[Claims 6 to 43 not printed in the Gazette.]

1,021,894. BELL-RINGER. EDWARD WILSON, St. Louis, Mo., assignor to Adreon Manufacturing Company, St. Louis, Mo., a Corporation of Missouri. Filed Apr. 22, 1911. Serial No. 622,725. (Cl. 121—2.)



1. In a bell-ringing device, a piston provided in its upper end with an expansion chamber which is open at one end, a cylinder reciprocatingly mounted on said piston and having a closed end which forms the other end wall of said expansion chamber, means for intermittently admitting small charges of fluid under pressure to said expansion chamber, which fluid expands and thus moves said cylinder in one direction, and means for permitting said fluid to exhaust or escape freely from said chamber when the cylinder approaches the end of its stroke and when it moves in the opposite direction nearly to the end of its stroke.

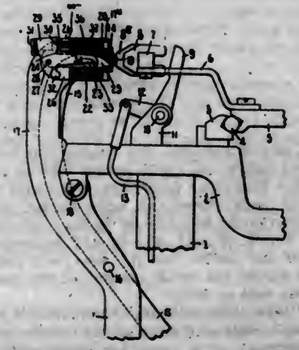
2. In a bell-ringing device, a hollow piston provided intermediate its ends with a partition or cross web that divides the interior of same into a pressure chamber and an expansion chamber, the expansion chamber being open at one end, a cylinder reciprocatingly mounted on said piston and forming a closure for the open end of said expansion chamber, coöperating means on said cylinder and piston for permitting small charges of fluid to pass from said pressure chamber into said expansion chamber wherein said fluid expands and thus moves said cylinder upwardly, and a port which permits the fluid to exhaust from said expansion chamber when said cylinder reaches the end of its upward stroke and continues to exhaust until said cylinder reaches nearly the limit of its downward stroke.

3. In a bell-ringing device, a hollow piston provided intermediate its ends with a cross web or partition that divides the interior of same into a lower chamber and an upper chamber, said upper chamber being open at its upper end, a cylinder reciprocatingly mounted on said piston and having a dome-shaped upper end of greater internal diameter than the external diameter of the piston, means for supplying fluid under pressure to the lower chamber of said piston, means for permitting a small charge of said fluid to enter the upper chamber of the piston in which it expands and thus moves the cylinder upwardly, an exhaust port in said cylinder located adjacent the dome-shaped end thereof for establishing direct communication between the upper chamber of the piston and the atmosphere after the cylinder has reached the end of its upward stroke and while it is moving downwardly, a valve coöperating with said exhaust port, and means for actuating said valve so as to open and close said exhaust port.

4. In a bell-ringing device, a hollow piston provided intermediate its ends with an inclined web or partition that divides the interior of said piston into a pressure chamber and an expansion chamber, a cylinder reciprocatingly mounted on the upper end of said piston and forming the end wall of said expansion chamber, an annular groove on the interior of said cylinder, and an outlet port and an admission port for said pressure and expansion chambers, respectively, located in the same horizontal plane and adapted to coöperate with the annular groove on the interior of said cylinder.

5. In a bell-ringing device, a hollow piston provided intermediate its ends with a cross web or partition that divides the interior of same into a pressure chamber and an expansion chamber, a cylinder reciprocatingly mounted on said piston and having a dome-shaped top which forms one wall of said expansion chamber and into which the upper end of the piston extends when the cylinder is at the end of its downward stroke, means for permitting a small charge of fluid under pressure to pass from the pressure chamber into the expansion chamber in which it expands and thus moves the cylinder upwardly, an exhaust port in said cylinder arranged adjacent the upper end of same for establishing direct communication between said expansion chamber and the atmosphere, a slide valve arranged inside of said cylinder for closing said exhaust port, and a groove on the exterior of said piston for receiving said valve and provided with shoulders which strike against the valve and thus move it into and out of operative position when said cylinder reciprocates.

1,021,895. TYPE-WRITING MACHINE. OSCAR WOODWARD, Montclair, N. J., assignor, by mesne assignments, to Union Typewriter Company, Jersey City, N. J., a Corporation of New Jersey. Filed Oct. 21, 1911. Serial No. 655,974. (Cl. 197—179.)



1. In a typewriting machine and in tabulating mechanism, the combination of a settable tabulator stop, a coöperative tabulator stop, and means for restoring said settable stop from said position, said means comprising a wiper and a finger piece pivoted to said wiper for controlling the same.

2. In a typewriting machine and in tabulating mechanism, the combination of a plurality of settable tabulator stops movable into and out of set position, a coöperative tabulator stop, and restoring means for said plurality of stops, said means comprising a wiper, a latch, and a finger piece operative first to move said wiper to operative position and thereafter to move said latch relatively to said wiper to latch the same in operative position.

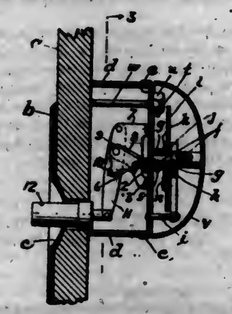
3. In a typewriting machine and in tabulating mechanism, the combination of a plurality of settable tabulator stops movable into and out of set position, a coöperative tabulator stop, and restoring means for said plurality of stops, said means comprising a wiper, a latch, and a finger piece operative first to move said wiper to operative position and thereafter to cause said latch to engage a relatively fixed part to latch said wiper in operative position.

4. In a typewriting machine and in tabulating mechanism, the combination of a plurality of settable tabulator stops movable into and out of set position, a coöperative tabulator stop, and restoring means for said plurality of stops, said means comprising a wiper, a latch pivoted to said wiper and provided with a finger piece operative to move said wiper to operative position and set said latch.

5. In a typewriting machine and in tabulating mechanism, the combination of a plurality of tabulator stops movable relatively to their supports into and out of set positions, a coöperative tabulator stop, and restoring or resetting means for said plurality of stops, said means comprising a wiper and a spring-pressed latch pivoted to said wiper and provided with a finger piece, said finger piece being operative first to move said wiper to operative position and thereafter to swing said latch on its pivot to latching position.

[Claims 6 to 11 not printed in the Gazette.]

1,021,896. MECHANICALLY-OPERATED DOOR-BELL. JEAN A. YOUNG, Millville, N. J., assignor of one-half to August Benson, Millville, N. J. Filed Oct. 1, 1910. Serial No. 584,796. (Cl. 116—35.)



1. In a door bell, the combination with a ring, of a disk arranged behind the ring, gong-operating mechanism, including a turnable hub, arranged behind the disk, a pin extending through a slot in the disk and engaging said hub, a lever pivoted in front of the disk and carrying said pin, a push-pin in front of the disk, and levers connecting the push-pin and the first named lever.

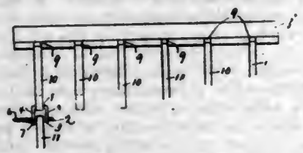
2. In a door bell, the combination with a ring, of a disk arranged behind the ring, gong-operating mechanism, including a turnable hub, arranged behind the disk, a pin extending through a slot in the disk and engaging said hub, a lever pivoted in front of the disk and carrying said pin, a second pin carried by said lever, a second lever engaging the second pin, a third lever engaging the second lever, and a push-pin carried by the third lever.

3. In a door bell, the combination with a ring, of a disk arranged behind the ring, gong-operating mechanism, including a turnable hub, arranged behind the disk, a pin extending through a slot in the disk and engaging said hub, a lever pivoted in front of the disk and carrying said

pin, a second pin carried by said lever, a plate secured to the disk, a lever pivoted to the plate, a push-pin carried by the second lever, and a third lever, also pivoted on the plate, one arm of which is engaged by the second lever and the other arm of which engages the second pin carried by the first lever.

4. In a door bell, the combination with a ring and a disk applied to the rear thereof, of a gong applied to the rear of the disk, a system of wheels between the gong and disk, a hammer actuated by said wheels, a hub on one of the wheels, a spring for actuating said hub, a system of levers within the ring in front of the disk, means connected with said levers and extending through an orifice in the disk and adapted to turn the hub to wind the spring, and a push pin connected with said levers.

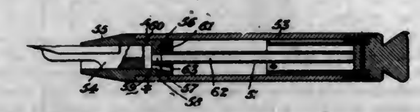
1,021,397. BALE-TIE BUCKLE. JAMES E. ARMSTRONG, Weatherford, Tex., assignor to Standard Bale Wire Buckle Co., Fort Worth, Tex., a Corporation of Texas. Filed Nov. 6, 1911. Serial No. 658,899. (Cl. 24—26.)



1. A bale-tie buckle constructed of a length of wire bent to form a bale-tie engaging member, and two side bars projecting therefrom and terminating with hooks and then extended from one of said hooks to form a combined handle and guard member, and then bent upon itself and projected across and beyond said side bars within the plane of said hooks to form a yieldable bale-tie engaging member and a guard member, said yieldable bale-tie engaging member being normally spaced from said hooks and from said side bars, but adapted to be automatically drawn into engagement with said hooks by the strain of the bale-tie.

2. A bale-tie buckle constructed of a length of wire bent to form a frame having a fixed bale-tie engaging member, two side bars projecting therefrom and terminating with hooks, and said wire after forming one of said hooks being extended laterally in a plane with the beaks of said hooks and bent back upon itself into a loop forming a handle and to form a yieldable bale-tie engaging member within the plane of said hooks.

1,021,398. FOUNTAIN-PEN. FRANK M. ASHLEY, New York, N. Y. Filed Dec. 3, 1906. Serial No. 345,979. (Cl. 120—47.)



1. In a fountain pen, the combination with a reservoir having a filling passage which communicates with the reservoir at the rear end of said reservoir only, of a plug having an ink supply passage independent of said filling passage, leading from the reservoir to the pen point, means for controlling the area of said last passage, and filling means located at the rear end of said reservoir.

2. In a fountain pen, the combination with a reservoir having a tube communicating with the pen point and the reservoir and forming a filling passage which communicates with the reservoir at the rear end of said reservoir only, of a plunger located at the rear end of said reservoir for filling the reservoir through the tube, a supply passage independent of said filling tube leading from the reservoir to the pen section, a valve connected to the tube for controlling the supply passage independent of said filling passage, said valve being movable to vary the outflow through said passage.

3. A fountain pen comprising a casing having a reservoir therein, a pen section, a valve, and a tube having a filling passage which communicates with said pen section at one end and with the reservoir at the rear end of said reservoir only, a separate passage independent of said filling passage leading from said reservoir to said pen section and controlled by said valve, and means for drawing ink into said reservoir and expelling air therefrom.

4. In a fountain pen, the combination with a casing having a reservoir provided with a filling passage having an opening located near the rear end of and within said reservoir, a separate passage independent of said filling passage leading from said reservoir to supply the pen, a valve for controlling said last named passage, and means for drawing ink into said reservoir and expelling the air therefrom.

5. The combination in a fountain pen with a casing having a reservoir for ink, of a pen section located at one end thereof, a filling tube extending therefrom to the opposite end of the casing, a plug having a valve controlled ink passage connecting the reservoir and the pen section to supply the pen, a hollow plunger inclosing said tube and provided with a collar at its inner end, a separable abutment carried by the casing against which the collar on the plunger may abut, packing material located on the opposite side of the abutment on the casing and means for holding the same under compression.

[Claims 6 to 20 not printed in the Gazette.]

1,021,399. SEWING-MACHINE PULL-OFF. ALEXANDER BOYD, Elizabeth, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Mar. 25, 1911. Serial No. 616,865. (Cl. 112—26.)



1. In a sewing machine, the combination with a laterally jogging needle and needle-thread take-up and tension devices, of a loop-taker coöperating with said needle and carrying an under-thread, an under-thread pull-off, and means for actuating said pull-off to draw off under-thread after the action of said take-up and subsequent to the entrance of the needle into the work, the pull-off being ineffective during the initial descent of the needle subsequent to the take-up action.

2. In a sewing machine, the combination with a laterally jogging needle and stich-setting means acting upon the needle-thread, of a loop-taker coöperating with said needle and carrying an under-thread, an under-thread pull-off, and means for imparting to the pull-off a two-stage action to draw off portions of the lower thread respectively during the stitch-setting operation and after the subsequent entrance of the needle into the work, with an intermediate ineffective period.

3. In a sewing machine, the combination with a laterally jogging needle and stitch-setting means acting upon the needle-thread, of a loop-taker coöperating with said needle and carrying an under-thread, and an under-thread pull-off connected to and movable simultaneously with said loop-taker and constructed with two active thread-engaging portions and an intermediate inactive portion.

4. In a sewing machine, the combination with a laterally jogging needle, and stitch-setting means acting upon the needle-thread, of a circularly-moving under-thread carrying loop-taker constructed with a central thread-cavity and with an adjacent pull-off flange having two eccentric thread-engaging portions and an intermediate concentric thread-engaging portion, and actuating means for said loop-taker.

5. In a sewing machine, the combination with a laterally jogging needle, a loop-taker coöperating therewith, a needle-thread tension device, a take-up device, and actuating means for the take-up device whereby the latter is caused to draw up the needle-thread to set the stitches and to slacken the needle-thread preparatory to the puncturing of the work by the needle and seizure of the needle-thread loops by the loop-taker, of an under-thread pull-off adapted to draw off a supply of under thread for a succeeding stitch while the needle-thread is taut but ineffective while the needle-thread is slackened.

[Claims 6 and 7 not printed in the Gazette.]

1,021,400. PORTABLE MACHINE FOR REGROOVING RAILWAY-SLEEPERS. ALBERT COLLET, Paris, France, assignor to Société Maurice et Pierre Collet & Cie., Paris, France. Filed Apr. 10, 1911. Serial No. 620,051. (Cl. 144—133.)



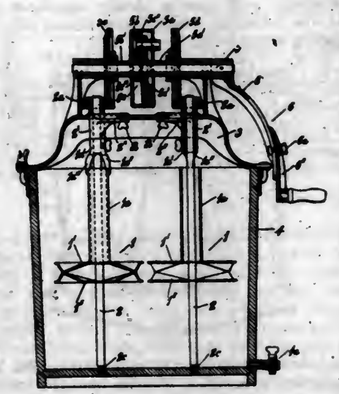
1. In a machine for grooving railway sleepers, the combination of a carriage adapted to run upon the rails of a railway having rollers thereon, a frame movable transversely upon said carriage, comprising transverse bars resting upon said rollers, cutters upon the ends of said frame, adapted to groove a sleeper beneath it upon the road-bed means for driving said cutters and means for adjusting the height of said cutter.

2. In a machine for grooving railway sleepers, the combination of a carriage adapted to run upon the rails of a railway, and a cutter adapted to groove a sleeper beneath it upon the road-bed, said cutter being adjustable to cut at different inclinations and means for adjusting the height of said cutter.

3. In a machine for grooving railway sleepers, the combination of a carriage adapted to run upon the rails of a railway, cutters adapted to groove a sleeper beneath them upon the road-bed, said cutters being adjustable to cut at different inclinations, and means for adjusting the height of said cutters, said means comprising screws adapted to raise and lower said cutters, a hand-wheel, transmission-shafts, a gear connection between said shafts and screws and universal joints between the ends of said shafts and said hand-wheel and said gears.

1,021,401. CREAM-SEPARATOR AND CHURN. ALPHEUS FAY, Louisville, Ky. Filed Apr. 22, 1911. Serial No. 622,780. (Cl. 31—44.)

1. In a device of the character described, the combination in an agitator of tubular shaft and an upper impeller member attached together, said tubular shaft having a hub integral with it at its upper end, with arms leaving its upper end open, and a lower impeller member inverted with respect to said upper member and secured thereto, said lower member forming, with said upper member, impelling means with a central open region, said tubular shaft being continuously closed between its open upper end and said upper impeller member, and opening into said central open region through said upper impeller member.



2. In a device of the character described, the combination of vertical parallel agitator shafts, and an agitator on each shaft, adapted to coöperate to produce collision of liquid particles and to set up liquid and air currents to produce a state of ebullition in the liquid, each of said agitators comprising impeller members each in the form of a series of radial channels of outwardly increasing triangular cross section joined by plane webs and of general circular contour, inversely assembled and having the peripheral terminations of the channels rigidly joined, with tubular shafts forming continuously-closed conducting means to said impellers to conduct air thereto while the impellers act centrifugally on the liquid and air during rotation.

3. In a device of the character described, an agitator comprising impeller members, each in the form of a series of radial channels of outwardly increasing triangular cross section joined by plane webs and of general circular contour, inversely assembled, one of said members having a peripheral slot at the termination of each of said radial channels, said slot tapering toward the other member, and said other member having a lug, integral therewith, located at the termination of each of its channels, on the periphery, and entering said slot in said other member and formed therein to rigidly fix it therein, holding said members rigidly together.

4. In a device of the character described, juxtaposed hollow agitators and means for actuating them whereby they act upon liquid in opposed directions, substantially as and for the purposes specified.

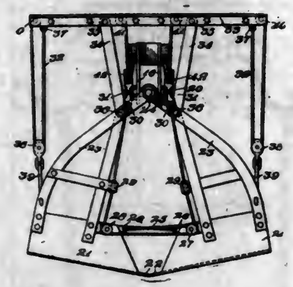
5. In a device of the character described, juxtaposed hollow agitators, each with an air inlet continuously closed from above to its hollow interior, to act upon liquid in opposed directions, and to centrifugally impel air currents therethrough, as supplied through the air inlets.

[Claim 6 not printed in the Gazette.]

1,021,402. HOISTING-MACHINE. JOHN G. FOGARTY, Carthage, N. Y. Filed Mar. 24, 1910. Serial No. 551,318. (Cl. 37—14.)

1. In a hoisting machine, the combination with a movable supporting arm, of a bucket mounted on the arm to swing bodily about an axis arranged at the extremity thereof, the bucket comprising scoop members movable relatively at the end of the arm about an axis extending longitudinally of the end of the arm, said axes being arranged in the same transverse plane, and means for moving the scoop members relatively.

2. In a hoisting machine, the combination with a movable supporting arm having a bifurcated outer end, of a member arranged between the arms of the bifurcation and having pivots turning in and extending through said arms, coöperating scoop members mounted to swing on the swinging member, closing cables connected to the scoop members, and sheaves loosely supported on the pivots of the swinging member and having the closing cables passing about them.



3. In a hoisting machine, the combination with a movable supporting arm, of a member mounted to swing thereon about an axis extending transversely of the length of the arm, a pair of coöperating and relatively swinging scoop members carried by the swinging member, a guide member, links supporting the guide member above the scoop members, opening cables connected to the scoop members and passing to the guide member, and sheaves supported in proximity to the axis of the swinging member and having the opening cables passing about them.

4. In a hoisting machine, the combination with a movable supporting arm, of a member mounted to swing on said arm about an axis extending transversely of the length of the arm, a pair of coöperating scoop members pivoted to the first named member to swing about a common axis extending longitudinally of the arm, a guide member, links supporting the guide member from the scoop members and above the latter and the arm, opening cables leading from the scoop member to the guide member, and sheaves arranged in proximity to the turning axis of the scoop members and having the opening cables passing about them.

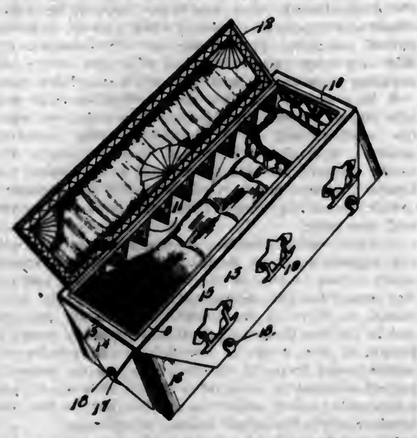
5. In a hoisting machine, the combination with a movable supporting arm bifurcated at its outer end, of a swinging member arranged between the arms of the bifurcation and having pivots turning in and extending through said arms, scoop members turning relatively to each other on said swinging member about an axis intersecting the axis of the swinging member, a guide member, yoked links supporting the guide member from the scoop members above the latter and the supporting arm, pulleys on the guide member, sheaves loosely supported by the pivots of the swinging members, and opening cables connected to the scoops and passing about the pulleys on the guide members to and about the sheaves.

[Claim 6 not printed in the Gazette.]

1,021,403. COMBINED BURIAL-CASKET AND GRAVE-VAULT. JOSEPH W. FREEMAN, Columbus, Ohio. Filed Nov. 25, 1911. Serial No. 662,496. (Cl. 27—7.)

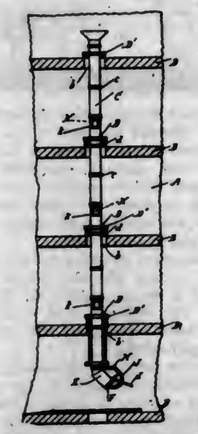
1. A burial casket comprising a box provided with drop sides and ends hinged to the rim of the box and adapted to be folded down beside the same, removable corner pieces adapted to be fitted to the corners of the box, and means to clamp said corner pieces against the box and under the edges of said sides and ends.

2. A combined burial casket and grave vault, comprising a box having a lid at the top, drop sides and ends hinged to the rim of the box and arranged to be swung down against the sides and ends of the box or swung up over the lid of the box, and a cover fitting upon and adapted to be sealed to the box and inclosing said drop sides and ends when they are swung up as stated.



3. A metal casket comprising a box, ornamental sides and ends hinged to the rim of said box and adapted to be folded down against the same or swung up over the top of the box, fastening devices to hold said sides and ends in position when swung down, and handles fastened to the sides.

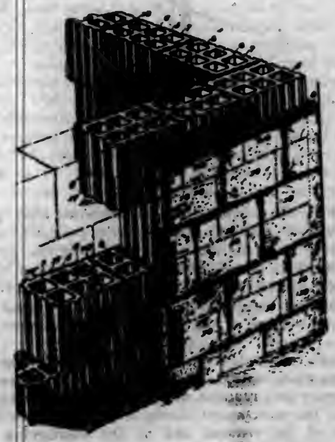
1,021,404. DELIVERY-CHUTE. HOWARD S. GARDNER, Newark, N. J. Filed Feb. 24, 1910. Serial No. 545,630. (Cl. 193—22.)



1. The combination, with a building provided with a series of floors having openings in them, of a temporary chute for building material formed of a series of similar tubular sections and having a straight and unobstructed passage, said chute being arranged loosely in the said openings and provided with a discharge door, removable collars provided with projecting flanges which are clamped on certain of the chute sections and beams arranged in pairs at the sides of the chute between the said flanges and the floors and supporting the chute.

2. The combination, with a floor provided with an opening, of a delivery-chute for concrete arranged loosely in said opening, said chute being formed of tubular sections and provided with a discharge-door for retaining the concrete in it, a collar secured to the lower part of the chute, a collar secured to the upper part of the chute above the floor, a pair of beams arranged between the floor and the upper collar so that the weight of the chute and its contents is distributed, and suspension rods secured to the said beams and passing through the said opening and having their lower ends connected to the lower collar.

1,021,405. FACING-TILE. FRANCIS C. GIDEON, Ballston, Va. Filed June 15, 1911. Serial No. 633,488. (Cl. 72—21.)



1. A wall having mortar receiving grooves, facing tiles forming a finishing surface for the wall and also provided with mortar receiving grooves, the grooves in the wall and tiles being arranged at an angle to each other, and a plastic binding medium interposed between the wall and tiles and extending within said grooves, whereby to form a mechanical bond between the parts.

2. A wall having vertical mortar receiving grooves, facing tiles having horizontal mortar receiving grooves, and a plastic binding medium interposed between the wall and facing tiles and extending within the grooves, whereby to form a mechanical lock between the parts.

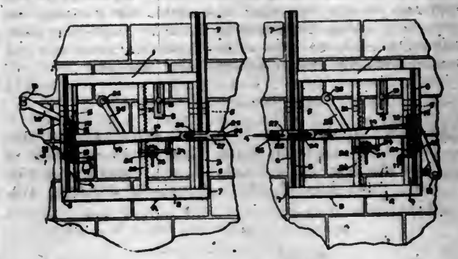
3. A wall having a plurality of vertically disposed dove-tail mortar receiving grooves in the outer face thereof, facing tiles having horizontally disposed dove-tail grooves formed in the inner faces thereof and arranged at an angle to and crossing the grooves in the wall, and a plastic binding medium interposed between the wall and tiles and extending within the grooves, whereby to form a mechanical bond between the parts.

4. A wall including a plurality of superposed blocks having vertical mortar receiving grooves formed therein, interlocking facing tiles arranged to break joint with the blocks and having horizontal grooves formed in the inner faces thereof, and a plastic binding medium interposed between the outer faces of the blocks and the inner faces of the tiles and extending within the grooves in both the blocks and tiles, whereby to form a mechanical bond between the parts.

5. A wall including a plurality of superposed blocks having vertical mortar receiving grooves, facing tiles arranged to break joint with the blocks and covering the vertical and horizontal mortar joints of the wall, said tiles having their upper and lower longitudinal edges and opposite end walls inclined to present parallel beveled edges for engagement with the correspondingly beveled edges of adjacent facing tiles and their inner faces provided with horizontal mortar receiving grooves, and a relatively thin layer of plastic binding material interposed between the blocks and facing tiles and extending within the grooves in the wall and tiles to form a mechanical bond between the parts.

[Claims 6 to 9 not printed in the Gazette.]

1,021,406. BRICKLAYER'S LINE-HOLDER. HENRY GILLETTE, Belpre, Kans. Filed Sept. 11, 1911. Serial No. 648,750. (Cl. 72—132.)



1. A device of the character described, comprising a rectangular body member including top, bottom and side members, a rack bar carried by said top and bottom members and parallel to the side members, said side members and rack bar being each provided intermediate their length with a hinged joint, a transverse member slidable vertically upon said body member and provided with a gear coacting with said rack, a winding drum carried by one end of said transverse member, a cord holder carried by the other end of said transverse member and provided with alined apertures, and a cord secured by one end to said winding drum and with its other end threaded through the apertures of said cord holder.

2. A device of the character described, comprising a rectangular frame member, means for securing said frame member to the wall of a building, the sides of said frame member being grooved, a transverse member having rearwardly extending ribs engaging with said grooves whereby the transverse member is slidably mounted for vertical movement upon the frame, a winding drum carried by one end of said transverse member, a cord holder carried by the other end of said transverse member, said cord holder comprising a body member having a cord receiving aperture, an arm pivoted to said body member and having alined cord receiving apertures, a spring coacting between said body member an arm to hold the outer end of the latter against the wall and a cord secured by one end to the winding drum and having its other end threaded through the cord receiving apertures of the cord holder.

1,021,407. COIN-CONTAINER. HOWARD E. HARBAUGH, Kenosha, Wis. Filed June 29, 1911. Serial No. 635,979. (Cl. 133—6.)



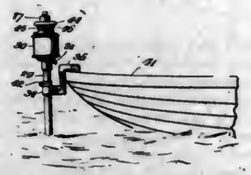
1. In a device of the character described, the combination with a hollow, flat, tubular body portion closed at one end and open at the other, said open end portion being slightly cut away to permit the lower-most coin to project, and means for yieldably holding the coins within the container, comprising a pair of opposed bosses formed by striking inwardly the side walls of the body portion near its open end, and said side walls provided with opposite slots passing through said bosses.

2. In a device of the character described, the combination with a hollow, flat, tubular body portion, closed at one end and open at the other, and adapted to accommodate a plurality of rows of superimposed coins, and means for holding said coins yieldably in position, comprising a pair of opposed bosses, projecting inwardly into the

body portion near its lower end and side walls of said body portion being slotted through said bosses.

3. In a device of the character described, the combination with a hollow, flat, tubular container, closed at one end and open at the other, and means for confining the coins in position comprising an inwardly projecting member rigid with the side walls of the container and the latter vertically slotted adjacent said member.

1,021,408. BOAT STEERING AND PROPELLING DEVICE. JULIUS E. HASCHKE, Chicago, Ill., assignor to Jewel Electric Co., Chicago, Ill., a Corporation of Illinois. Filed July 17, 1911. Serial No. 638,823. (Cl. 115—17.)



1. In a device of the character described, a motor having a housing and a vertical drive shaft, said motor housing providing a jacket-attaching part concentric with said shaft, a propeller structure having a gear and a housing therefor, said gear-housing providing a jacket-attaching part, a vertical shaft at one end engaging said vertical motor shaft and at the other end having a worm engaging said propeller gear, a jacket surrounding said vertical shaft, engaging said jacket-attaching portions of the motor and gear housings, and supporting said motor and propeller; and a clamp for detachable engagement of a boat and for adjustable engagement of said jacket to vary the height of said jacket and jacket-carried motor and propeller relative to the boat.

2. In a device of the character described, a motor having a vertical drive shaft, a housing concentric with the axis of said shaft, a hand wheel mounted above said casing concentric with said axis, electric terminals for said motor mounted on the hand wheel, a snap switch for the motor circuit having a casing concentric with said axis and mounted upon the hand wheel, a propeller, gearing associated with said propeller, a housing inclosing the gearing, a jacket concentric with said shaft axis connecting and supporting said motor and propeller parts, a shaft within said jacket at one end having direct connection with said motor shaft and at its other end connected to said gearing, and means for connection between said jacket and a boat, said means being of a character to permit vertical adjustment of said jacket and supported parts relatively to said boat, and permit rotation of said jacket and supported parts relatively to said boat, whereby a person in the boat may rotate said several concentric parts about said shaft axis by means of said hand wheel.

3. In a device of the character described, a motor, a propeller, a substantially vertical jacket connecting and supporting said motor and propeller, a shaft inclosed within said jacket for transmitting power from said motor to said propeller, and adjustable means for attaching said jacket, and parts carried thereby, to a boat; said means comprising a clamping device for detachable engagement of a boat, an adjustable collar slidable upon said jacket, means upon said collar to position it at desired height upon the jacket, a supporting collar loosely surrounding said jacket below the adjustable collar and supporting said jacket for rotation at a height determined by the position of said adjustable collar, pivotal connections between said supporting collar and said clamping device, one of said pivoted parts having a segmental slot and the other a screw member engaging in said slot, whereby said supporting collar and rotatably supported parts may be adjusted and held at desired inclination.

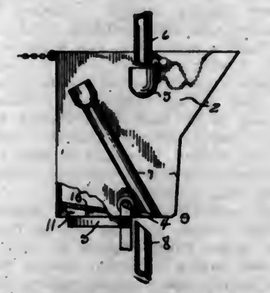
1,021,409. METALLIC FENCE-POST. JOSEPH HUBER, Elma, Iowa. Filed Apr. 1, 1910. Serial No. 552,909. (Cl. 189—23.)



1. A post comprising a hollow metallic body portion having exterior angularly disposed ribs gradually increasing in width from the top to the bottom of the post, and a flat reinforcing plate disposed at right angles to the ribs and housed within the body of the post, the upper end of the reinforcing plate being reduced and projected vertically above the top of the post to form a support for a cap.

2. A post comprising a hollow metallic body portion, a reinforcing plate housed within the body portion and having its upper end reduced and projected vertically above the top of the post, a cap having a socket therein for the reception of the reduced end of the reinforcing plate, there being registering transverse openings formed in the cap and reduced end of the plate, and a fastening device extending through said openings for securing the cap in position on the post.

1,021,410. CISTERN-GUARD. CHARLES W. JOHNSON, Houston, Tex. Filed Aug. 22, 1910. Serial No. 578,429. (Cl. 137—9.)

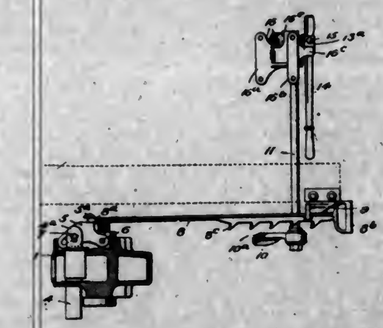


1. A device of the character described, comprising a support; a receptacle pivotally mounted thereon and provided with an overhanging discharge spout at one side thereof, and also provided with a discharge opening; a receiving inlet carried by said receptacle near the top and at one side thereof; a feed pipe normally in alinement with said receiving inlet adapted to discharge thereinto; a conveyer section immovably secured upon the exterior of one side of said receptacle and so arranged as to be brought into alinement with said feed pipe when said receptacle is tilted on its pivotal support; and a means within said receptacle tending to direct the contents of said receptacle to a discharge opening.

2. A device of the character described comprising a support; a receptacle pivotally mounted thereon and provided with an overhanging discharge spout at one side thereof, and also provided with a discharge opening; a receiving inlet pocket carried by said receptacle near the top and upon the exterior of one side thereof; a feed pipe in alinement with said receiving inlet adapted to discharge thereinto; a conveyer section immovably secured to said receptacle and so arranged as to be brought into alinement with said feed pipe when said receptacle is tilted on its pivotal support; a means for restoring said receptacle to its normal position and a bottom within said receptacle tending to direct the contents of said receptacle to an outlet.

3. A device of the character described comprising a support; a receptacle pivotally mounted upon said support, the said pivot being located at one side of the center of gravity of said receptacle; an overhanging spout carried by said receptacle at its upper end; a receiving inlet pipe carried by said receptacle near the top thereof and upon the exterior of one side thereof; a feed pipe, normally, in alinement with said receiving inlet pipe adapted to discharge thereinto; a conveyer section immovably secured to the exterior of said receptacle and so located as to be brought into alinement with said feed pipe when said receptacle is in its tilted position upon its pivotal support; a means secured to the upper end of said receptacle whereby said receptacle may be restored, manually, to its normal position; and a bottom for said receptacle, said bottom so constructed as to direct the contents of said receptacle, normally, toward an orifice through which the contents of the said receptacle may pass.

1,021,411. UNCOUPLING DEVICE. WILLIAM KELSO, Pittsburgh, Pa., assignor to McConway & Torley Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed May 3, 1910. Serial No. 559,144. (Cl. 213—59.)



1. In an uncoupling mechanism, the combination with a laterally swinging coupler, of a rotatable staff which is movable in the direction of its length, a handle attached to and adapted to rotate said staff, a bracket in which said staff is journaled, said bracket having an inclined face adapted to cause said staff to rotate automatically in one direction, horizontally movable means for effecting an unlocking movement of the lock of the car coupler, and means for operatively connecting said staff and horizontally movable means and operating to actuate said horizontally movable means upon a rotation of said staff following a movement of the latter in its direction of length.

2. In an uncoupling mechanism, the combination with a slidable uncoupling bar having teeth upon one side, of a rotatable staff which is movable in the direction of its length, and an operating arm which is secured to said staff and is movable into and out of driving engagement with the teeth of said uncoupling bar by movement of the said staff in its direction of length.

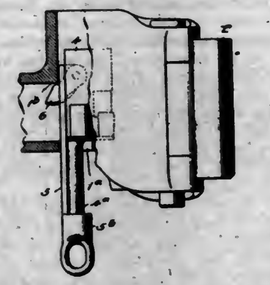
3. In an uncoupling mechanism, the combination with a slidable uncoupling bar, a rotatable staff which is movable lengthwise independently of said uncoupling bar, and means actuated by said staff for engaging the under side of said uncoupling bar and moving it lengthwise in one direction only.

4. In an uncoupling mechanism, the combination with a rotatable staff which is movable in the direction of its length, of a handle pivotally connected to said staff, a bracket provided with stops constituting means for preventing accidental rotation of said staff prior to a lengthwise movement thereof, a slidable uncoupling bar which is actuated by said staff and is provided with teeth upon its under side, and means movable with said staff for engaging said teeth to actuate said slidable uncoupling bar.

5. In an uncoupling mechanism, the combination with a rotatable staff which is movable in the direction of its length, of a handle pivotally secured to said staff, and a bracket having inclined guide faces which are adapted to engage and cause a rotation of said staff and handle, said bracket also having an abutment adapted to be engaged by said handle when the latter is swung upwardly.

[Claims 6 to 9 not printed in the Gazette.]

1,021,412. CAR-COUPLING. WILLIAM KELSO, Pittsburgh, Pa., assignor to McConway & Torley Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Sept. 18, 1911. Serial No. 649,909. (Cl. 213—14.)



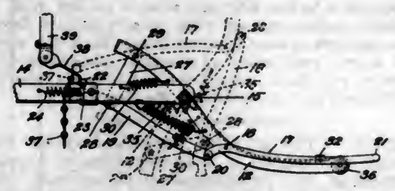
1. In a car coupler, the combination with a coupler head, of a knuckle pivotally mounted thereon, a vertically sliding lock for said knuckle, and a lifting member for raising said lock to unlocked position, said lock projecting through the lower wall of the coupler head and being formed with a recess which is open through the face of the lock, and said lifting member having slidable socketed engagement with the lock, being movable into engagement with the lower end of said lock and being provided with a pivoted dog which extends into the recess of said lock and is movable into and out of alinement with a portion of the coupler head.

2. In a car coupler, the combination with a coupler head, of a knuckle pivotally mounted thereon, a vertically sliding lock for said knuckle, and a vertically sliding lifting member for raising said lock to unlocked position, said lock being formed with a downwardly extending portion of reduced cross-section which projects through the lower wall of the coupler head and being also formed with a recess which is open through the face of said lock, and said lifting member being provided with a socket which receives the lower end of the downwardly extending portion of said lock and being provided with a pivoted dog which extends into the recess in said lock and is adapted to project through a slot formed in the lifting member at the upper end thereof.

1,021,413. CAR-FENDER. WILLIAM L. C. KOCH, Dedham, Mass. Filed Nov. 29, 1911. Serial No. 663,097. (Cl. 105—252.)

1. A car fender comprising a fender body hinged to the car, a feeler bar carried by the fender body in advance of its forward end, yieldingly maintained displaceable stops carried by the car behind the fender body and mechanism intermediate the feeler bar and stops and carried by the fender, adapted to coöperate with the stops in locking the fender in its normal position, and to coöperate with the feeler bar in displacing the stops and releasing the fender body when the feeler bar is raised.

2. A car fender comprising a fender body hinged to the car, yieldingly maintained displaceable stops carried by the car behind the fender body, a feeler bar extending crosswise of the fender body in advance of its forward end, and supporting knuckles composed of levers carrying the feeler bar and fulcrumed on the fender body, said levers having longer and shorter arms, and links pivoted to the said shorter arms and adapted to engage the stops, the links being movable endwise and caused to exert displacing pressure on the stops by an upward movement of the feeler bar.



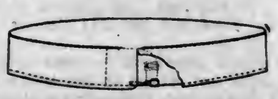
3. A car fender comprising a fender body hinged to the car, pivoted stops carried by the car behind the fender body, rearwardly pulling springs connected with said stops, a feeler bar extending crosswise of the fender body in advance of its forward end, supporting knuckles composed of levers fulcrumed on the fender body and carrying the feeler bar, links pivoted to the levers and adapted to engage the stops, the links being movable endwise and caused to exert displacing pressure on the stops by an upward movement of the feeler bar, and means for exerting a forward pull on the links in opposition to the rearward pull on the stops.

4. A car fender comprising a fender body hinged to the car, pivoted stops carried by the car behind the fender body, rearwardly pulling springs connected with said stops, a feeler bar extending crosswise of the fender body in advance of its forward end, supporting knuckles composed of levers fulcrumed on the fender body and carrying the feeler bar, links pivoted to the levers and adapted to engage the stops, the links being movable endwise and caused to exert displacing pressure on the stops by an upward movement of the feeler bar, arms pivoted to the links and to the rear end portion of the fender body, and springs connecting said arms with the fender body and adapted to exert a forward pull, through the arms, on the links in opposition to the rearward pull on the stops.

5. A car fender comprising a fender body hinged to the car, a feeler bar carried by the fender body in advance of its forward end, a stop bar pivoted to the car behind the fender body, means for yieldingly maintaining the stop bar in its operative position and permitting its forward displacement therefrom, mechanism carried by the fender body, intermediate the feeler bar and the stop bar, adapted to coöperate with the stop bar in locking the fender body in its normal position, and with the feeler bar in displacing the stop bar to release the fender body when the feeler bar is raised, and means operable by an attendant for displacing the stop bar.

[Claims 6 to 9 not printed in the Gazette.]

1,021,414. COLLAR-FASTENING DEVICE. RUDOLF KRASBERG, Poughkeepsie, N. Y. Filed Jan. 16, 1909. Serial No. 472,650. (Cl. 24—81.)



A collar holding device comprising a body portion provided with fastening means at the top adapted to engage the inner end and hook retaining means at the bottom adapted to engage the lower portion of the outer end of the collar when in position upon the neck, said fastening means comprising a pair of jaws and a hinged lever adapted to operate the same, and said hook retaining means comprising a hook, and a pivoted lever mounted adjacent thereto and adapted to bind said collar therein, the lever of said fastening means and said hook retaining means being upon the same side of said device.

1,021,415. WAIST. ISAAC LEFKOWITZ, New York, N. Y. Filed July 7, 1911. Serial No. 637,319. (Cl. 2—98.)



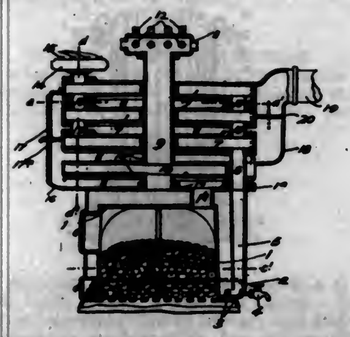
1. A blouse-waist forming a finished outer garment comprising a body-fitting back, solid from neck to waist-line; separate, symmetrical, lapping front sections joined to said back and each depending from the shoulder to drape the bust and each having a lower terminal edge conforming to the waist-line when said sections are lapped over one another and continuing forward from the waist-line of said back to mid-front position; broad, crushable, girdle-sections, each continuing from a said front section and each adapted to overlie and conceal the lower terminal edge of the opposite front section; and means for securing together said girdle-sections about the waist of the wearer.

2. A blouse-waist forming a finished outer garment comprising a body-fitting back, solid from neck to waist-line; separate, symmetrical, lapping front sections joined to said back and each depending from the shoulder to drape the bust and each having a lower terminal edge conforming to the waist-line when said sections are lapped over one another and continuing forward from the waist-line of said back to mid-front position; broad, crushable, girdle-sections, each continuing from a said front section and each adapted to overlie and conceal the lower terminal edge of the opposite front section; and sash-sections, each continuing from a girdle-section to be tied together to secure the garment and add finish thereto.

3. A blouse-waist forming a finished outer garment comprising a body-fitting back, solid from neck to waist-line; a tuck-in skirt depending from said solid back to be gripped by the wearer's skirt-band; separate, symmetrical, lapping front sections joined to said back and each depending from the shoulder to drape the bust and each having a lower terminal edge conforming to the waist-line when said sections are lapped over one another and continuing forward from the waist-line of said back to mid-front position; broad, crushable, girdle-sections, each continuing from a said front section and each adapted to overlie and conceal the lower terminal edge of the opposite front section; and means for securing together said girdle-sections about the waist of the wearer.

4. A blouse-waist forming a finished outer garment comprising a body-fitting back, solid from neck to waist-line; a tuck-in skirt depending from said solid back to be gripped by the wearer's skirt-band; a tie-tape, secured at the waist-line to said back to tie at the front about the waist of the wearer; separate, symmetrical, lapping front sections joined to said back and each depending from the shoulder to drape the bust and each having a lower terminal edge conforming to the waist-line when said sections are lapped over one another and continuing forward from the waist-line of said back to mid-front position; broad, crushable, girdle-sections, each continuing from a said front section and each adapted to overlie and conceal the lower terminal edge of the opposite front section; and means for securing together said girdle-sections about the waist of the wearer.

1,021,416. HOT-WATER HEATING-BOILER. THOMAS DUNCAN MACGREGOR, Davisville, Ontario, Canada. Filed Feb. 21, 1911. Serial No. 609,982. (Cl. 122—218.)



1. A hot water heating boiler comprising a water jacketed fire pot, a conduit connected to said jacket at one end and having radiator supply pipes connected to its opposite end, and a preheating section arranged to be heated by the products of combustion, said section being connected respectively with radiator return pipes and with the fire pot.

2. A hot water heater comprising a water jacketed fire pot, a water section adjacent thereto and connected with said jacket, a conduit connected to said section and having pipe connections for supplying radiators, a section in the path of the products of combustion from the fire pot, radiator return pipe connections to said section, and a connection from said section to said jacket.

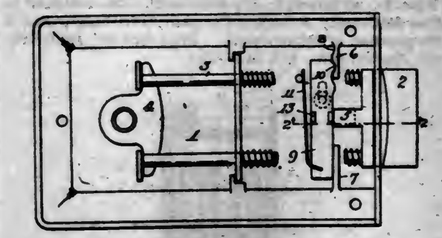
3. A hot water heating boiler comprising a water jacketed fire-pot around the fire, a plurality of water sections adjacent to the fire-pot connected to the water jacket, return conduits connecting the sections to the radiators and means for circulating the products of combustion around the sections whereby the return water from the radiators is warmed before being delivered to the fire-pot for its maximum heating prior to circulating to the radiators again as and for the purpose specified.

4. A hot water heating boiler comprising a water jacketed fire-pot around the fire, a heated water section of preferably oblong form and suitably connected to the fire-pot, a pipe for delivering the heated water to the radiators and suitably connected to the water section and superimposed return water sections, independent of the aforesaid water section, the upper section of which being connected to the return pipes from the radiators and the lowest of the sections being suitably connected to the bottom of the fire-pot, smoke and heat spaces between the return water sections and above and below the heated water section and suitably connected together, and means whereby the return water is distributed around the bottom of the water jacket of the fire-pot, as and for the purpose specified.

5. A hot water heating boiler comprising a water jacketed fire-pot around the fire, a heated water section of preferably oblong form and suitably connected to the fire-pot, a pipe for delivering the heated water to the radiators and suitably connected to the water section and superimposed return water section independent of the aforesaid water sections, the upper section of which being connected to the return pipes from the radiators and the lowest of the sections being suitably connected to the bottom of the fire-pot, smoke and heat spaces between the return water sections and above and below the heated water sections and suitably connected together, and a belt extending around the bottom of the fire pot and having a series of perforations in the inner wall of the belt as and for the purpose specified.

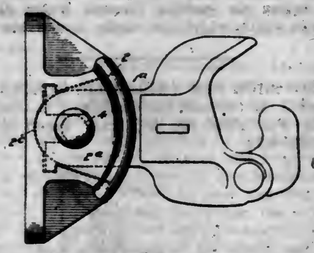
[Claims 6 to 9 not printed in the Gazette.]

1,021,417. RIM-LATCH. GEORGE N. MASON, Reading, Pa., assignor to Reading Hardware Company, Reading, Pa., a Corporation of Pennsylvania. Filed Nov. 25, 1911. Serial No. 662,272. (Cl. 70—29.)



In a latch, the combination with a casing, a spring actuated latch bolt, an undercut shank on said bolt forming an abutment for the dead locking means, and means for actuating the bolt, of a vertically movable dead-locking slide having undulations formed on one of its edges at the top, guides formed in the casing against which one edge only of the slide contacts, the upper guide having undulations which register with the undulations on the slide, two oppositely positioned posts on the face of the slide, one of which is adapted to engage the undercut portion of the bolt to hold it deadlocked in retracted position and the other to engage the end of the bolt shank and hold it in deadlocked projected position, a spring bearing directly against the slide and adapted to keep it normally in sliding contact with the guides and a thumb pin on the slide, projecting through an opening in the casing, for moving the slide.

1,021,418. COUPLING. WILLIAM MCCONWAY, Jr., Pittsburgh, Pa., assignor to The McConway & Torley Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed July 20, 1911. Serial No. 639,530. (Cl. 213—42.)

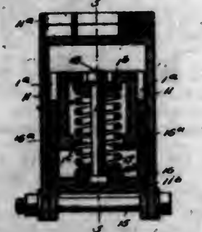


1. The combination with a bracket having a flaring socket which is adapted to receive the shank of a car coupler, of a coupler having a shank which is insertible through the mouth of and extends into said socket and is connected thereto by means of a pivot pin so as to be capable of swinging with respect to said bracket, and an adjusting plate arranged within said socket and interposed between said bracket and the shank of said coupler, said adjusting plate being insertible through the mouth of the flaring socket and being bifurcated to straddle said pivot pin and being provided with means for engaging said bracket to secure said adjusting plate in position in said socket.

2. The combination with a bracket having a flaring socket the lateral walls whereof are provided with recesses located adjacent to the upper and lower walls of said

socket, of a coupler having a shank extending into said socket, a pivot pin connecting said coupler shank and bracket so as to permit said coupler to swing laterally on said bracket, and an adjusting plate arranged within said socket and connected to said bracket by means of outwardly projecting lugs which are formed on said plate and extend into the said recesses in the lateral walls of said flaring socket, said adjusting plate being bifurcated and straddling said pivot pin.

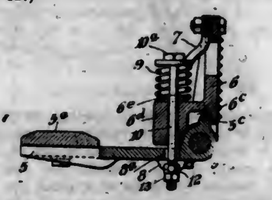
1,021,419. DRAFT APPLIANCE FOR RAILWAY-CARS. WILLIAM MCCONWAY, JR., Pittsburgh, Pa., assignor to The McConway & Torley Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Oct. 31, 1911. Serial No. 657,819. (Cl. 213—42.)



1. In a draft appliance for railway cars, the combination with a vertically movable coupler having a spring seat upon its interior and guideways upon its exterior, of a follower having upwardly extending portions which are slidable in the corresponding guideways upon the exterior of the coupler, and a spring resting upon said follower and upon the said spring seat of the coupler.

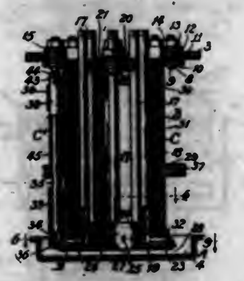
2. In a draft appliance for railway cars, the combination with a vertically movable coupler having a spring seat upon its interior and a spring receiving aperture in alinement therewith, a follower having upwardly extending portions which slidably engage the coupler, said follower and coupler being relatively movable vertically, a spring extending through the said aperture in the coupler and bearing upon said spring seat and follower, means for limiting the extent of upward movement of the coupler with respect to the follower, and means carried by the car for supporting said follower, said follower supporting means having an opening through which the coupler passes and within which the coupler is movable vertically.

1,021,420. SHOE FOR THIRD-RAIL ELECTRIC CARS. LOUDEN A. MCCOUBRIE and CHARLES F. RAYDURN, Philadelphia, Pa. Filed Dec. 21, 1911. Serial No. 667,141. (Cl. 191—32.)



A shoe for electric railway cars, comprising a supporting member having a front perforated projection provided with a chamber in one part thereof and with a recessed seat in another part, a shoe contact member having a rear portion provided with an enlarged opening and a back-stop and on the under side with recessed hump portions, said back-stop extending into the chambered part of said supporting member, a vertical bar carrying and supporting one end of a helical spring and engaging at the opposite end the recessed seat of said projection, a cross-bar having an enlarged central opening freely fitting said vertical bar and said cross-bar movably engaging in the recesses of said hump portions and a tightening means threaded to said vertical bar from the underside of said shoe contact member, substantially as and for the purposes described.

1,021,421. LUBRICATING DEVICE. EDDY THOMAS MCKAIG, Chicago, Ill., assignor to Ivert Larsen, Chicago, Ill. Filed Feb. 2, 1910. Serial No. 541,608. (Cl. 184—33.)



1. In a device of the character set forth, the combination of a casing, a stationary cylinder within the casing projecting from one wall thereof and provided with a series of suction-ducts and discharge-ducts alternating therewith, a rotary cylinder inclosing said first-named cylinder and provided with a duct adapted to be brought into successive registration with said first-named ducts, a pump carried by said rotary cylinder and having an actuating stem extending toward the wall of said casing mentioned, and a plurality of adjustable cams connected with said wall of said casing and projecting into the casing adjacent the outer surface of the upper end of said rotary cylinder.

2. In a device of the character set forth, the combination of a casing, a stationary cylinder attached to a wall thereof and located within the casing, said cylinder having a frusto-conical enlargement at its opposite end and having also suction and discharge ducts with orifices opening at the external surface of said enlargement, an encompassing rotary cylinder journaled on said first-named cylinder and having a tapering surface co-acting with the conical surface of said first-named cylinder and having a duct adapted to be brought into successive registration with said first-named ducts, a pump carried by said rotary cylinder and having a stem extending toward the wall of said casing mentioned, and a series of cams arranged about the upper portions of said rotary cylinder and equipped with adjusting stems extending through said wall of said casing.

3. In a device of the character set forth, the combination of a casing provided with a removable top-plate, a stationary cylinder attached to and depending from said top-plate and provided with a series of suction-ducts and discharge-ducts alternating therewith, a rotary cylinder encompassing and journaled on said first-named cylinder, a pump carried by said rotary cylinder and provided with a duct adapted to be brought into successive registration with said first-named ducts, means for actuating said rotary cylinder, and a series of pump-actuating cams having adjusting-stems extending through said plate.

4. In a device of the character set forth, the combination with a casing equipped with a removable top-plate, a stationary cylinder depending from said top-plate and provided with a series of suction-ducts and discharge-ducts alternating therewith, said discharge-ducts extending through said top-plate and adapted for connection with tubes leading to the parts to be oiled, a rotary cylinder encompassing and journaled on said first-named cylinder and equipped with an actuating-wheel, means for rotating said last-named cylinder through the medium of said wheel, a pump carried by said rotary cylinder, and a series of pump-actuating cams encircling the upper end of said rotary cylinder and having adjusting-stems extending through said plate.

5. In a device of the character set forth, the combination of a fixed cylinder provided with a series of suction-ducts communicating with the interior of said cylinder and having orifices at the external surface thereof, and provided, also, with discharge-ducts alternating with said suction-ducts and having orifices at the external surface of said cylinder, an encompassing rotary cylinder having an inwardly opening duct, a pump carried by said rotary cylinder and acting through said last-named duct, and a series of adjustably fixed cams co-acting with said pump. [Claim 6 not printed in the Gazette.]

1,021,422. TIRE FOR VEHICLE-WHEELS. TOD J. MELL, Youngstown, Ohio, assignor to The Republic Rubber Company, Youngstown, Ohio, a Corporation of Ohio. Filed Dec. 23, 1910. Serial No. 598,979. (Cl. 152—1.)

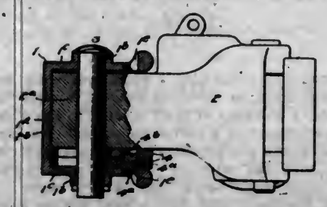


1. An elastic tire for vehicle wheels comprising in combination an embedded non-stretchable reinforcing member encircling the structure, and anchor bars bisecting said reinforcing member at intervals.

2. An elastic tire for vehicle wheels comprising in combination an embedded non-stretchable reinforcing member encircling the structure continuously, a jacket of relatively hard material inclosing said reinforcing member, and anchor bars bisecting said reinforcing member and its inclosing jacket at intervals.

3. An elastic tire for vehicle wheels comprising in combination a non-stretchable reinforcing member spirally arranged, a jacket of relatively hard rubber inclosing said reinforcing member, anchor bars bisecting said reinforcing member and its inclosing jacket at intervals, and an annulus of relatively hard rubber beneath the convolutes of said reinforcing member.

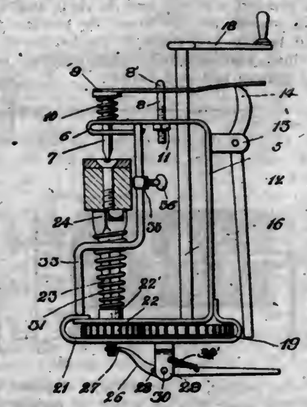
1,021,423. COUPLING. ISAAC H. MILLIKEN, Pittsburgh, Pa., assignor to The McConway & Torley Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed July 24, 1911. Serial No. 640,113. (Cl. 213—42.)



1. The combination with a bracket having a socket which is adapted to receive the shank of a coupler, of a coupler having a shank extending into said socket, means for securing said coupler to said bracket, and an adjusting plate arranged in said socket between said coupler shank and bracket, said adjusting plate having a lug upon one side and the upper and lower walls of said socket being provided with recesses adapted to receive the lug on said adjusting plate, whereby said plate may interlock with said bracket and be maintained in position in said socket either above or beneath the coupler shank.

2. The combination with a bracket having a flaring socket which is adapted to receive the shank of a coupler, of a coupler having a shank which is insertible through the mouth of and extends into said socket, a pivot pin connecting said coupler to said bracket, and a plurality of adjusting plates arranged in said socket, each of said adjusting plates having a lug upon one side and having upon the other side a recess adapted to receive a corresponding lug upon another of the adjusting plates, and the upper and lower walls of said socket being provided with recesses for forming a lug and socket engagement with an adjacent adjusting plate, whereby said plates may have interlocking engagement with each other and are maintained in position by said bracket.

1,021,424. TIRE-BOLT WRENCH. CLARENCE E. OATMAN, Brookline, Mo., assignor of one-half to George D. Owen, Battlefield, Mo. Filed Dec. 5, 1911. Serial No. 664,008. (Cl. 81—55.)

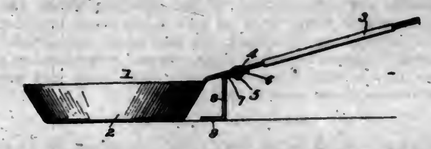


1. In a wrench of the character described, the combination of a frame, a yieldingly held longitudinally movable wrench head mounted in the frame, operating means mounted in said frame to rotate the wrench head, a spring pressed pin mounted in said frame and disposed in longitudinal alinement with the wrench head, an arm, an adjustable fulcrum for said arm mounted in the frame, one end of said arm bearing against said spring pressed pin, the adjustment of said fulcrum determining the extent of movement of the pin, means mounted upon the frame to engage the other end of said arm and move the pin into engagement with the tire bolt, and means mounted in the frame for rigidly clamping the same upon the felly of a wheel.

2. In a wrench of the character described, the combination of a frame, a wrench head mounted in said frame and yieldingly held in engagement with the nut, means mounted in the frame for rotating said wrench head, a spring pressed pin movably mounted in the frame in opposed relation to the wrench head, a bolt longitudinally adjustable in one end of the frame, an arm fulcrumed upon said bolt and engaging one end of said pin, and a cam lever mounted upon the frame to engage the other end of said arm and move the same upon its fulcrum to actuate the pin against the tension of its spring and engage the same with the head of a bolt.

3. In a wrench of the character described, the combination of a frame, a yieldingly held longitudinally movable wrench head mounted in the frame, operating means mounted in said frame to rotate the wrench head, an elongated metal loop longitudinally arranged in the frame and having its end portions offset and extending in opposite directions, a spring pressed pin longitudinally movable in one end of the frame and disposed in alinement with the wrench head, means for actuating said pin against the tension of its spring and regulating the extent of its movement to engage the same with the head of a bolt, and a clamping screw adjustably mounted upon one of the offset ends of said loop-shaped rod and adapted to engage the felly of a wheel to rigidly hold said frame in position thereon.

1,021,425. ATTACHMENT FOR FRYING-PANS. HARRY OSBORN, Buckley, Wash. Filed Mar. 22, 1911. Serial No. 616,250. (Cl. 53—7.)



The combination with a cooking utensil having a handle extending therefrom, of a support secured thereto adjacent to the cooking utensil, said support comprising a rectangular strip of material bent at right angles toward the cooking utensil at the lower or bearing terminal thereof, and bent to the angle of the handle at the opposite terminal, and securing means piercing said last named bent portion and said handle.

1,021,426. CORN-POPPER. LLOYD ROWAN, Shawneetown, Ill. Filed Mar. 2, 1910. Serial No. 546,795. (Cl. 53—4.)

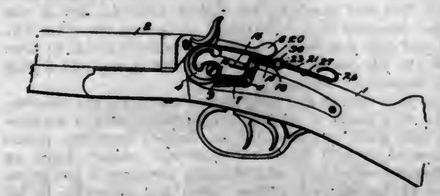


1. In a corn popper, a horizontally disposed rotating cylinder on the inner face of which is formed a spiral groove, and a spiral conveyer arranged for independent rotary movement within the interior of said cylinder which spiral conveyer rotates faster than the cylinder.

2. In a corn popper, a horizontally disposed rotating cylinder on the inner face of which is formed a spiral groove, a spiral conveyer arranged for independent rotation within the interior of said cylinder, and means whereby said cylinder and spiral conveyer are rotated which spiral conveyer rotates faster than the cylinder.

3. In a corn popper, a rotating horizontally disposed cylinder constructed of foraminous material on the inner face of which is formed a spiral groove, and a spiral conveyer arranged for independent rotation within the interior of said cylinder which spiral conveyer rotates faster than the cylinder.

1,021,427. SAFETY APPLIANCE FOR HAMMER-GUNS. LEE G. SAGABIEL, Memphis, Ind. Filed May 18, 1911. Serial No. 626,961. (Cl. 42—70.)



1. In a hammer gun, a stock, hammers mounted upon the sides of said stock and provided with notches, catches pivotally mounted upon said stock and normally engaging said notches, and means slidably mounted upon said stock for moving said catches out of engagement with said notches.

2. In a hammer gun, a stock, hammers mounted upon said stock, catches pivotally mounted upon said stock and normally engaging said hammers, a plate mounted upon said stock and engaging said catches, and means for moving said plate to move said catches out of engagement with said hammer.

3. In a hammer gun, a stock, hammers mounted upon said stock, catches pivotally mounted upon said stock and normally engaging said hammers, a plate slidably mounted upon said stock and engaging said catches, and a lever mounted upon said stock and adapted to move said plate to rock said catches to release said hammers.

4. In a hammer gun, a stock, hammers mounted upon the sides of said stock, catches pivotally mounted upon the sides of said stock and normally engaging said hammers, to lock the same, said catches extending up the sides of said stock to points adjacent the central portion of the upper face of said stock, a plate slidably mounted upon the upper face of said stock and engaging said catches, and a lever mounted upon said stock and adapted to move said plate to rock said catches to release said hammers.

5. In a hammer gun, a stock, hammers mounted upon said stock, catches mounted upon said stock and adapted to lock said hammers, a plate slidably mounted upon said stock, said plate comprising a body portion having a reduced forward end positioned between said catches and provided with shoulders at each side of said forward end engaging said catches, lugs formed upon said plate, and a lever pivotally and slidably mounted upon said stock and adapted to be rocked or moved forward to engage one or both of said lugs to move said plate and rock said catches to release said hammers.

[Claims 6 to 9 not printed in the Gazette.]

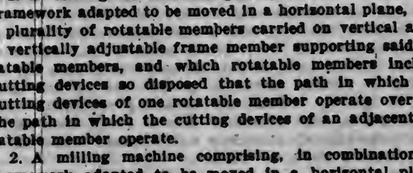
1,021,428. ANIMAL-TRAP. ADAM SCHRAMM, Weehawken, N. J. Filed Sept. 19, 1911. Serial No. 650,083. (Cl. 43—31.)



An animal trap comprising a stem, means for suspending the same from an overhead support, a slide movable on the stem, a plurality of jaws pivoted to the slide, each jaw being composed of a curved shank and of a head carried by said shank and provided with an outwardly extending upper barb and with an inwardly and downwardly extending outer edge below said barb to form a lower point with the inner edge, and a fixed slotted guide carried by the stem and encompassing the jaws, the guide slots being arranged at greater radial distance from the stem than the upper ends of the shanks, the lower tapering and pointed ends of the several heads forming collectively a single axial prong when the jaws are drawn together, upon which the bait is adapted to be speared.

1,021,429. REINFORCED CONCRETE. WILLIAM FRY SCOTT, Toronto, Ontario, Canada. Filed Mar. 23, 1909. Serial No. 485,181. (Cl. 72—61.)

1. A concrete beam provided with a metallic reinforcement comprising a longitudinal tension member having forked ends and bowed tension plates, of large width and face area relative to the cross sectional area of the longitudinal member, connecting the ends of the forks and having their concave faces directed toward the center of the beam, whereby tensional strains are transmitted through said plates as a continuation of the longitudinal tension member.



2. A concrete beam provided with a metallic reinforcement comprising a longitudinal tension member having forked ends and bowed tension plates, of large width and face area relative to the cross sectional area of the longitudinal member, connecting the ends of the forks and set with their ends toward the tension and compression sides of the beam and their concave faces directed toward the center of the beam, whereby tensional strains are transmitted through said plates as a continuation of the longitudinal tension member.

3. A concrete beam provided with a metallic reinforcement comprising a longitudinal tension member formed of two rods having their ends spread apart to form V-shaped forks, and bowed tension plates, of large width and face area relative to the cross sectional area of the longitudinal member, connecting the ends of the forks and having their concave faces directed toward the center of the beam, whereby tensional strains are transmitted through said plates as a continuation of the longitudinal tension member.

4. In a metallic reinforcement for concrete beams the combination of a longitudinal metal tension member having forked ends; flexible metal anchor plates connecting the ends of the forks and secured thereto in a flexed or bowed position with their concave faces directed toward the center of the beam, whereby tensional strains are transmitted through said plates as a continuation of the longitudinal tension member.

5. In a metal reinforcement for concrete beams the combination of a metal tension member having forked ends; stiff flexible bowed metal plates for the ends of the tension member; a stiff detachable connection between one end of each plate and one of the end forks of the tension member which connection is adapted to enable the plate to be flexed; and means securing the other end of the plate to the other forked ends in said flexed and bowed position with the concave face of the bow toward the center of the beam.

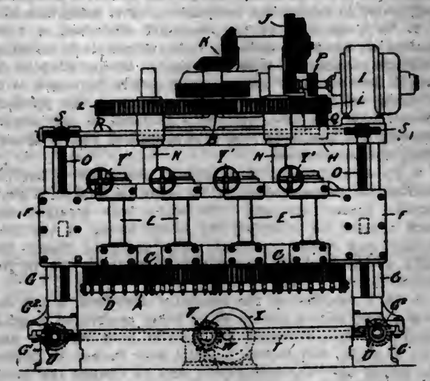
[Claims 6 to 10 not printed in the Gazette.]

1,021,430. MILLING-MACHINE. CHARLES FREDERICK SHANKS, Johnstone, Scotland. Filed Nov. 18, 1911. Serial No. 661,091. (Cl. 90—16.)

1. A milling machine comprising, in combination, a framework adapted to be moved in a horizontal plane, and a plurality of rotatable members carried on vertical axes, a vertically adjustable frame member supporting said rotatable members, and which rotatable members include cutting devices so disposed that the path in which the cutting devices of one rotatable member operate overlaps the path in which the cutting devices of an adjacent rotatable member operate.

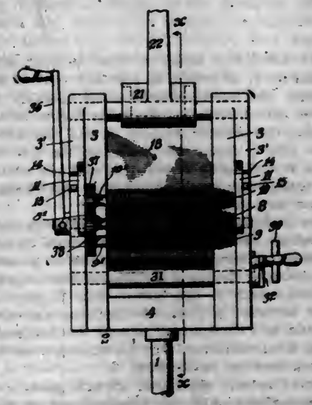
2. A milling machine comprising, in combination, a framework adapted to be moved in a horizontal plane, said framework including end standards, a frame member extending transversely of said standards, means for adjusting said frame member vertically relatively to said standards, and a plurality of rotatable members carried on vertical axes mounted on said frame member, said rotatable members including cutting devices so disposed that the path in which the cutting devices of one rotatable member operate overlaps the path in which the cutting devices of an adjacent rotatable member operate.

3. A milling machine comprising, in combination, a framework adapted to be moved in a horizontal plane, said framework including end standards, a frame member extending transversely of said standards, means for adjusting said frame member vertically relatively to said standards, a plurality of rotatable members carried on vertical axes mounted on said frame member, said rotatable members including cutting devices so disposed that the path in which the cutting devices of the rotatable member operate overlaps the path in which the cutting devices of an adjacent rotatable member operate, and means for adjusting said rotating members axially relative to said frame member.



4. A milling machine comprising in combination, a framework adapted to be moved in a horizontal plane, said framework including end standards, a frame member extending transversely of said standards, means for adjusting said frame member vertically relatively to said standards, a plurality of cutter wheels rotatable on vertical axes each wheel having tooth-like projections on its periphery, and cutting devices carried on said projections and so disposed that the path of movement of the cutting devices on one wheel overlaps the path of movement of the cutting devices on an adjacent wheel.

1,021,431. MACHINE FOR MAKING COILED EYELET-LACING FOR LEATHER BELTING. JESSE C. SIMMONS and LOUIS BERZON, Philadelphia, Pa., assignors of one-third to Christian J. Krayer, Mount Holly, N. J. Filed Nov. 8, 1911. Serial No. 659,137. (Cl. 140—93.)



1. In a machine of the character described, a grooved block, a knife blade having a flanged support slidably mounted in the groove of said block and having a handle

for drawing the knife blade from side to side of the machine, and means to hold a belt-section in the path of said knife blade while a terminal portion of said section is being trimmed and the said means being provided with an eccentric and an operating handle for manipulating said eccentric, for holding and releasing said belt-section.

2. In a machine of the character described, a grooved block, a beveled knife blade having a T-shaped lug engaging the groove of said block and having a handle for drawing the knife blade from side to side of the machine and means to hold a belt-section while the terminal portion is being trimmed, said means provided with an operating device to release the belt-section, after being trimmed.

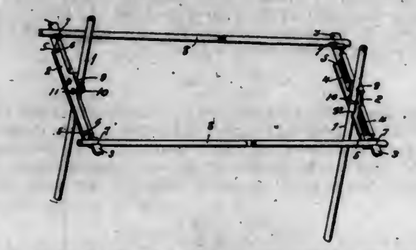
3. In a machine of the character described, a block having an operating device, a series of positively actuated shiftable channeled rollers, a spiral needle adapted to travel between said rollers, said rollers arranged with a taper at one of their extremities, and the journals thereof near the other extremity flattened in one portion thereof, and means to lock said channeled rollers in any given shifted position.

4. In a machine of the character described, a bar for holding the belting-section while being perforated, a grating-like former arranged with walls both straight and with a pitch for inserting the eyelet lacing of the belt-section, and means to actuate said former to change the pitch of the lacing in one portion after insertion in the belt-section.

5. In a machine of the character described, a bar for holding the belting-section while being perforated, a grating-like former arranged with walls both straight and with a pitch, and means to shift said former to flatten the lacing onto the belt-section and to change the pitch of the lacing beyond where secured to said belt-section.

[Claims 6 to 10 not printed in the Gazette.]

1,021,432. ADJUSTABLE SHELF. MICHAEL H. SMITH, Kansas City, Mo. Filed July 28, 1911. Serial No. 641,541. (Cl. 211—15.)



1. In an adjustable shelf, a cross support comprising two members one of which is provided with a longitudinal channel, the other member being slidably fitted in the channel and having an upwardly facing semicircular seat portion, the channel member having two notches one above the other, means for clamping the two members together, a vertical post mounted in said two notches, and clamping means for engaging the post and channel member between said two notches.

2. In an adjustable shelf, a cross support comprising an intermediate member having a horizontal channel, two longitudinally adjustable members mounted in said channel, and clamping means for securing the longitudinally adjustable members to the intermediate member, the intermediate member having two notches one above the other, a vertical post mounted in said notches, and clamping means intermediate of the notches for securing the intermediate member to the post.

3. In an adjustable shelf, two vertical posts, two cross supports comprising each two members one of which has a longitudinal channel, the other member being longitudinally adjustable in said channel, and means for clamping the two members together, the channel member having two notches one above the other in which the adjacent post is mounted, the other member having an upwardly facing seat portion, means intermediate of the notches of the channel members for clamping the channel members to said posts respectively, and a horizontal bar mounted in said seat portions.

4. In an adjustable shelf, two vertical posts, two cross supports comprising each an intermediate member having a horizontal channel, two longitudinally adjustable members mounted in said channel, and clamping means for securing the adjustable members to the intermediate member, the intermediate members each having two notches disposed one above the other in which is mounted the adjacent post, the longitudinally adjustable members having each an upwardly facing seat portion, means intermediate of the notches of each intermediate member for clamping the intermediate member to the adjacent post, and two horizontal bars mounted respectively at opposite sides of said posts in the seat portions of adjacent longitudinally adjustable members.

1,021,433. CONCRETE RAILWAY-TIE. ANDREW STARK, Chicago, Ill. Filed May 10, 1909. Serial No. 495,076. (Cl. 238—3.)



1. In a concrete railway tie of inverted T-shape in cross section, in combination with the concrete formed integrally with bosses in the angle between the vertical and horizontal members at both sides of the vertical member at the rail crossings, said bosses forming at their upper sides ledges lower than the top of the vertical member; rail-supporting blocks lodged on said ledges at opposite sides of the vertical member and extending higher than the top of said member, and transversely extending reinforcing rods embedded in said horisontal member below said ledges.

2. In a concrete railway tie of inverted T-shape in cross section, in combination with the concrete formed integrally with bosses in the angle between the vertical and horizontal members at both sides of the vertical member at the rail crossings, said bosses having their upper faces lower than the top of the vertical element and affording seats for rail-supporting blocks; such rail-supporting blocks lodged on said ledges; bolts securing the blocks in position extending through the vertical member of the T, and transversely extending reinforcing rods embedded in said horizontal member below the ledges.

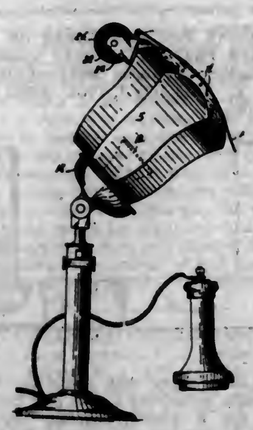
3. A concrete railway tie of inverted T-shape in cross section, comprising in combination with the concrete formed integrally with bosses in the angle between the vertical and horisonal members at both sides of the vertical member at the rail crossing, such bosses forming at their upper sides ledges lower than the top of the vertical member; rail-supporting blocks lodged on said ledges at opposite sides of the vertical member, and extending higher than the top of said member; bolts securing the blocks in position extending through the vertical member of the T; transversely extending reinforcing rods embedded in said horizontal member below such ledges, and longitudinally extending reinforcement embedded in said member above the bolts.

4. A railway tie comprising, in combination with a concrete body formed with a middle longitudinal upwardly projecting rib and laterally situated ledges, wooden rail-supporting blocks lodged upon such ledges and extending higher than the top of said rib; metal rail-seating angle plates embracing respectively the outer upper corners of opposite blocks, and bolts engaging the vertical flanges of such angle plates and the blocks and binding the plates against the blocks and the blocks against the opposite sides of the rib.

5. A railway tie comprising a concrete body portion, in combination with rail-seating angle plates having each a horizontal and a vertical flange, the horizontal flange having at one side a reflexed lip for engaging the base flange of the rail; horizontal bolts embedded transversely in the concrete body and protruding at opposite sides, the vertical flanges of the rail-seating plates being apertured for passing respectively onto the opposite ends of said bolts, and means for binding the plates on the bolts at the opposite sides of the concrete body.

[Claims 6 to 15 not printed in the Gazette.]

1,021,434. PORTABLE FACE-MASK FOR TELEPHONE USE. LINCOLN C. STOCKTON, Denver, Colo., assignor to The Acme Utility Company, Denver, Colo., a Corporation of Colorado. Filed July 10, 1909. Serial No. 507,006. (Cl. 179—188.)



1. A face mask of the class described, comprising a shell open at both ends, its extremities being of unequal size, the smaller extremity being applied to the telephone transmitter, the mouth-piece of the latter entering the opening therein, while the opening at the opposite extremity of the hood is adapted to conform to the contour of the face, and is surrounded by a yielding member, to form a tight joint, as the face is pressed against the same, while using the telephone, and a speaking tube located within the shell and having one extremity adjacent the mouth of the user, while its opposite extremity enters the mouth piece of the transmitter for the purpose set forth.

2. A face mask comprising an outer shell, open at both ends, an inner wall separated from the outer shell to form an intervening compartment, the inner wall being shorter than the outer wall, whereby the intervening space communicates at its inner extremity with the cavity of the mask, the forward extremity of the said space being in communication with the atmosphere, the inner extremity of the mask having an opening adapted to receive the mouth-piece of the telephone transmitter, while the outer extremity is shaped to fit the face of a person, using the telephone, and a speaking tube located within the mask and mounted upon the inner wall thereof, for the purpose set forth.

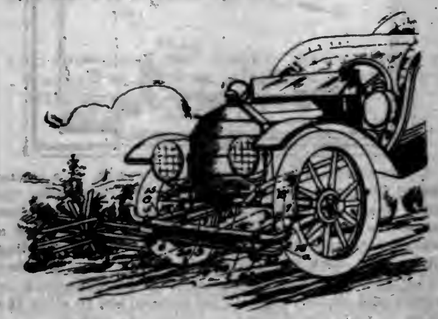
3. A face mask, of the class described, comprising a shell open at both ends, its rear extremity being smaller than its forward extremity, the opening in the rear extremity being adapted to receive the mouth-piece of the transmitter of a telephone, the rear extremity of the mask also having a window, above the mouth-piece opening, the forward extremity of the mask being provided with a yielding member surrounding the face opening, for the purpose set forth.

4. A face mask for use with telephones, comprising a shell having a face opening at its forward extremity, and a mouth-piece opening at its opposite extremity, the last named extremity having a window located above the mouthpiece opening, an inner wall forming an air space between itself and the shell, the said space being in communication with the atmosphere at one extremity and with the cavity of the mask at its opposite extremity, and a speaking tube located within the mask, substantially as described.

5. A face mask for use with telephones, comprising a shell, having its rear extremity open to receive the mouth-piece of a telephone transmitter and equipped with retaining hooks, adapted to engage the transmitter, the rear extremity of the device being also provided with a window located above the mouth-piece opening, the forward extremity of the device having a yielding member surrounding the face opening therein, the device having an inner wall, forming an air space, which is in communication with the cavity of the mask and also with the atmosphere, and a speaking tube located within the mask between the mouth-piece of the transmitter and the mouth of the speaker, when the device is in use.

[Claims 6 to 14 not printed in the Gazette.]

1,021,435. VEHICLE-FENDER. EDGAR M. THOMPSON, Richmond, Ind. Filed Nov. 8, 1911. Serial No. 659,107. (Cl. 105—130.)



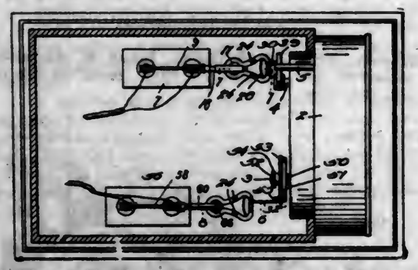
1. In a vehicle fender, the combination of an upper frame supported in a substantially horizontal position and a lower frame pivotally secured at its inner end and adapted to swing downwardly from its unreleased position, said lower frame being normally disposed in a substantially horizontal plane, catch members carried by said frames and adapted to engage one another to hold said lower frame in a normal position, said upper frame comprising longitudinal telescoping side bars and a transverse fender bar, coil springs disposed in one section of said side bars and engaging one end of the other section and the fender bar, and means for forcing said lower frame downwardly when an object strikes the fender bar and releases said catch members.

2. In a vehicle fender, the combination of an upper frame supported in a substantially horizontal position and a pivoted lower frame adapted to swing downwardly from its unreleased position and normally disposed in a substantially horizontal plane, catch members carried by said frames and adapted to engage one another to hold said lower frame in a normal position, said upper frame comprising longitudinal telescoping side bars and a transverse fender bar, coil springs disposed in one section of said side bars and engaging one end of the other section and the fender bar, said fender bar having a longitudinal opening formed therein, said fender bar having a longitudinal slot formed in the lower side thereof and communicating with said opening, a spring roller disposed in said opening, a roll of canvas mounted on said roller and having one end disposed through said slot and secured to the lower frame, and means for forcing said lower frame

downwardly when said fender bar strikes a person or object and releases said catch members.

8. In a vehicle fender, the combination of an upper frame supported in a substantially horisontal position and a pivoted lower frame adapted to swing downwardly from its unreleased position and normally disposed in a substantially horizontal plane, hangers having one end pivoted to the frame of the vehicle and the other end pivoted to said upper frame to support the same, catch members carried by said frames and adapted to engage one another to hold said lower frame in a normal position, coil springs disposed between said frames near their inner ends and adapted to force said lower frame downwardly when said catch members are released and means carried by said upper frame and secured to the outer end of the lower frame adapted to form a barrier between the wheels of the vehicle and the person or object struck when said lower frame is in its lowered position.

1,021,436. TIME-SWITCH. JAMES THOMPSON, Greensburg, Pa. Filed July 17, 1911. Serial No. 639,003. (Cl. 161—27.)



1. The combination with an electric switch, of a spring shifted plunger engaging the switch for controlling the same, clasps for locking the plunger in desired position against the tension of the spring, said clasps including a locking bar, and means carried by one of the winding arbors of a clock for moving the locking bar, said bar acting to lock the clasps in their operative position to operate said clasps to release the plunger and to allow the spring to shift the plunger to operate the switch.

2. The combination with a clock having rotating winding arbors, of a knife blade switch mounted adjacent one of said winding arbors, a spring pressed plunger for controlling the operation of the switch, clasps for locking the plunger in position to stretch its springs, means for securing the clasps in locking position, and an operating finger carried by the winding arbor for unlocking the clasps to permit the spring to shift the plunger and switch.

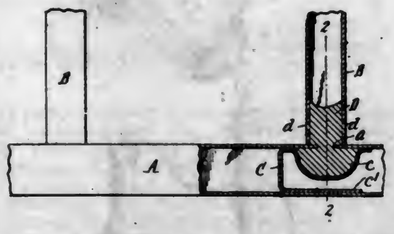
3. The combination with the alarm arbor of an alarm clock, of a plate secured thereto and having an end adapted to shut off the alarm upon partial rotation of the arbor, a spring operated switch mounted adjacent the clock, means for holding the switch in position against the force of the controlling spring, and a finger formed on the plate carried by the winding arbor for disengaging said means to allow the spring to operate the switch.

4. The combination with the winding arbor of an alarm clock, of a sleeve engaged on the arbor, a washer adjustably secured on the sleeve and having an outwardly projecting finger, a normally open switch disposed adjacent said winding arbor, a spring pressed plunger for closing the switch, and clasps for locking the plunger, said clasps including a locking bar therefor for holding the switch in open position against the tension of the spring, said locking bar being disposed in the path of movement of the finger and the rotation of the winding arbor causing the finger to engage the bar to release the switch and allow the spring to close the same.

5. The combination with a base, of a knife blade switch mounted thereon, a spring pressed plunger for operating the switch, clasps for engaging the plunger, means for locking the clasps to hold the plunger against the force of its spring, an alarm clock disposed adjacent the switch and having a lever for shutting off the alarm, a plate secured on the winding arbor of the alarm and having a finger for engaging the locking means of the clasp to unlock the clasps to permit the plunger to be shifted by its springs to operate the switch, a finger on the plate for engaging the alarm controlling lever to shut off the alarm after the clasps have been unlocked, an arm projecting from the plate, a casing inclosing the switch, and a rod slidably engaged in the casing and having a portion for engaging the arm of the plate and a second portion for engaging the switch to close the switch and force the plate arm downward to partially rotate and rewind the winding arbor of the alarm and disengage the ends of the plate from the alarm controlling lever and from the clasps locking means.

[Claim 6 not printed in the Gazette.]

1,021,437. JOINT FOR THE TUBES OF BEDSTEAD AND OTHER FRAMES. CHARLES VALLONE, Buffalo, N. Y., assignor to Barcalo Manufacturing Company, Buffalo, N. Y. Filed July 1, 1910. Serial No. 569,889. (Cl. 22—116.)



1. A mold for making cast joints for tubes which meet at an angle, comprising a body part having a molding cavity, and a yielding holding part which is fixed to the body part and is adapted to bear against the interior surface of the tube in which the mold is located and retain the mold in position by friction, due to the pressure of said yielding part against the tube, substantially as set forth.

2. A mold for making cast joints for tubes which meet at an angle, comprising a body part having a molding cavity, and a yielding tongue which is fixed to and projects from the body part and is adapted to frictionally engage the interior surface of the tube in which the mold is located to retain the mold in position, substantially as set forth.

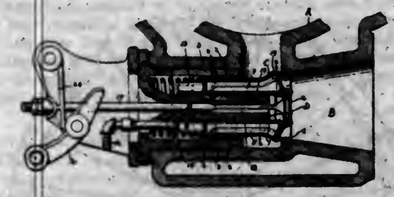
3. The combination with a tube provided with a hole in the side thereof, a second tube which extends at an angle to the first tube and joins the latter at said hole, and an internal joint plug which connects said tubes, of a mold for said joint plug which is arranged in said tube having the hole and is provided with a yielding holding part that projects from the body of the mold and is adapted to frictionally engage the interior surface of the tube to retain the mold in position, substantially as set forth.

1,021,438. ENGINE-VALVE. RUDOLF WINTZER, Milwaukee, Wis., assignor to Power and Mining Machinery Company, New York, N. Y., a Corporation of New Jersey. Filed May 24, 1906. Serial No. 318,495. (Cl. 123—177.)

1. The combination with a duct, of a valve in said duct, a bearing for said valve upon the interior thereof and means upon the exterior of said valve for preventing the passage of fluid from the duct to the bearing.

2. The combination with a duct, of a valve, a bearing for the valve extending within the same, a wall exterior to the valve and packing between the exterior of said valve and said wall.

3. The combination with a duct, of a valve in said duct, a bearing for the valve, a wall surrounding said valve, said wall and valve inclosing a channel located between said bearing and that part of said duct on the intake side of the valve seat, packing between said valve and wall upon each side of said channel and an outlet for said channel opening into that part of the duct on the discharge side of the valve seat.

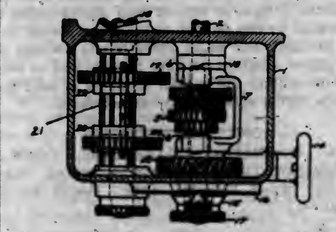


4. The combination with a duct having a valve cavity, of a valve bearing extending into the cavity and separated from the walls thereof, a valve closure movably mounted within the cavity and on the bearing to encircle it, the said valve closure having a chamber which surrounds the bearing and which is surrounded by the walls of the valve cavity, a valve seat arranged to be engaged by the valve closure to close the duct, and means for supplying a cooling fluid to the chamber in the valve closure.

5. The combination with a duct of a hollow valve therein, an interior bearing projecting within said valve, a chamber for cooling fluid within said valve and encircling said bearing and means for supplying fluid to said chamber and withdrawing it from said chamber in a continuous circulatory passage independent of said duct.

[Claims 6 to 12 not printed in the Gazette.]

1,021,439. VARIABLE-SPEED MECHANISM. WILLIAM F. ZIMMERMANN, Newark, N. J., assignor to Gould & Eberhardt, Newark, N. J., a Corporation of New Jersey. Original application filed July 31, 1909, Serial No. 510,657. Divided and this application filed Sept. 29, 1910. Serial No. 584,436. (Cl. 74—58.)



1. The combination with a frame, of a driven shaft rotatably mounted therein, a series of driven gears individually slidable on and rotatable with said shaft, a tumbler pivotally mounted in said frame, a gear carried by said tumbler, a drive shaft, a gear mounted on and rotatable with said drive and intermeshing with said tumbler gear, means to individually slide said driven gears, and means to rock said tumbler whereby said tumbler gear is intermeshed with any one of said driven gears.

2. The combination with a driven shaft, of a series of driven gears individually slidable on and rotatable therewith, a drive shaft, a gear mounted on and rotatable with said drive shaft, a tumbler pivoted about said drive shaft, a tumbler gear carried by said tumbler and intermeshing with said drive shaft gear, means to individually slide said driven gears and means to rock said tumbler whereby said tumbler gear is intermeshed with any one of said driven gears.

3. The combination with a frame, of a drive shaft, a gear mounted on and rotatable with said shaft, a tumbler pivotally mounted in said frame, a tumbler gear carried by said tumbler and intermeshing with said drive shaft gear, a driven shaft rotatably mounted in said frame, a series of driven gears individually and relatively slidable on said driven shaft and rotatable therewith, means to individually and relatively slide each gear of said series and means to rock said tumbler, whereby said tumbler gear is intermeshed with one of said driven gears when slid into the engaging position.

4. The combination with a driven shaft of a series of driven gears individually and relatively slidable thereon and rotatable therewith, a drive shaft, a gear mounted on and rotatable with said shaft, a tumbler pivoted about said shaft, a tumbler gear carried by said tumbler and intermeshing with said drive shaft gear, means in common to individually and relatively slide each gear of said series of driven gears, and means to rock said tumbler to intermesh said tumbler gear with one of said driven gears when moved into the engaging position.

5. The combination with a frame of a driven shaft rotatably mounted therein, a series of driven gears individually and relatively slidable on and rotatable with said driven shaft, a tumbler pivotally mounted in said frame, a drive shaft, a gear mounted on and rotatable with said shaft, a tumbler gear carried by said tumbler and intermeshing with said drive shaft gear, means to individually and relatively slide said driven gears and means to rock said tumbler, whereby said tumbler gear is intermeshed with any one of said series of driven gears and means to clamp said tumbler to said frame in the position of intermesh.

[Claims 6 to 12 not printed in the Gazette.]

1,021,440. RESILIENT WHEEL. REX E. ARNOLD and CLARKSON P. HOCKETT, Kouts, Ind. Filed June 29, 1911. Serial No. 636,045. (Cl. 152—50.)



1. A spring spoke gradually decreasing in thickness from its ends toward an intermediate point, and gradually increasing in width toward said point to compensate for the decrease in thickness.

2. A spring spoke gradually decreasing in thickness from its ends toward an intermediate point and gradually increasing in width toward said point to compensate for the decrease in thickness, the intermediate portion of the spoke being bowed laterally and the end portions being straight and in alinement longitudinally of the spoke.

1,021,441. INSOLE FOR SHOES. DE ROY AUSTIN, Omaha, Nebr. Filed Nov. 18, 1910. Serial No. 593,119. (Cl. 36—43.)

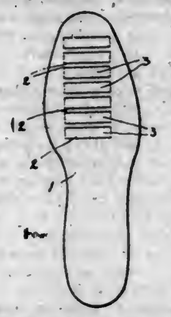
1. In a shoe, an insole having therein a series of incisions each entering a surface of the sole and curving so as to emerge from the same surface and form a transverse strip attached to the body of the sole.

2. In a shoe, an insole having in the lower side thereof between the instep and toe a series of reëntrant incisions forming transverse strips attached at both ends to the body of the sole and detached from the sole at their central portions, said strips lying in the channels formed by the detachment of said portions from the sole.

3. In a shoe, an insole having a series of transverse channels formed in the lower side thereof, and strips integral with the sole and of the same material lying in and filling said channels.

4. In a shoe, an insole having a series of transverse channels formed in the lower side thereof between the instep and toe, and strips integral with the sole and of the same material lying in said channels and attached at both ends to the body of the sole.

5. In a shoe, an insole having in the lower surface thereof a series of incisions each having two lines of



emergence from the lower surface and forming a strip attached at both ends to the body of the sole.

[Claim 6 not printed in the Gazette.]

1,021,442. TOBACCO-PIPE. JOHN BACHMANN, Chicago, Ill. Filed Sept. 26, 1910. Serial No. 583,973. (Cl. 131—12.)



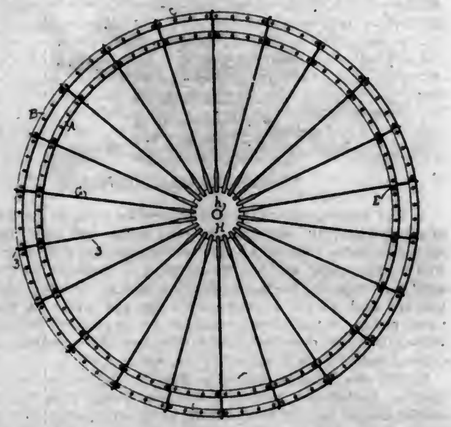
1. A tobacco pipe comprising a chambered bowl, and a stem provided with a continuous unbroken passage therethrough to the exterior of the bowl, and including a portion of the chamber in said bowl, and means normally closing the end of the passage at the exterior of the bowl comprising a closure rotatably mounted in said bowl and adapted to normally overlie and close the end of said passage, said closure being provided with an eccentrically disposed port extending therethrough adapted upon rotation of said closure to be brought into registration with said passage to form a continuation thereof.

2. A tobacco pipe comprising a chambered bowl and a stem provided with a continuous passage therethrough to the exterior of the bowl, and including a portion of the chamber in said bowl, said passage being of substantially uniform diameter throughout its length, and a movable element for the end of said passage permanently secured to said bowl and normally closing the end of the passage, said closure being provided with a port extending therethrough of substantially the same diameter as said passage and adapted to aline therewith in one position of the closure to form a continuation thereof whereby there is provided a continuous passage of substantially uniform diameter for a cleaner through the stem, bowl and closure.

3. A tobacco pipe comprising a chambered bowl and a stem provided with a continuous passage therethrough to the exterior of the bowl, and including a portion of the chamber in said bowl, said passage being of substantially uniform diameter throughout its length, said bowl being provided with a circular recess in the exterior thereof, a closure rotatably mounted in said recess and fitting snugly against the bottom thereof, said closure being provided with a port extending therethrough adapted to register with the passage in the pipe, and means for permanently securing said closure in position and arranged to frictionally hold the same against rotation.

4. A tobacco pipe comprising a chambered bowl and stem provided with a continuous passage therethrough to the exterior of the bowl, and including a portion of the chamber in said bowl, said bowl being provided with a circular recess in the exterior thereof, a closure rotatably mounted in said recess and provided with a port extending therethrough adapted to register with the passage in the pipe, and a circular metallic flange secured to the exterior of said bowl and overlying the outer surface of said closure.

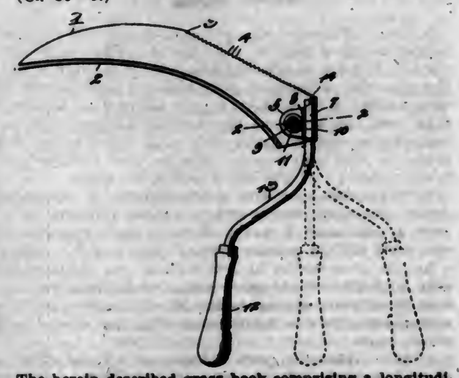
1,021,443. MOLD FOR CONCRETE WALLS. ANTHONY BARONE, Mount Morris, N. Y. Filed June 7, 1911. Serial No. 631,743. (Cl. 25—131.)



1. In a form for molding plastic walls, the combination of inner and outer form walls each composed of a plurality of connected plates having flanged side and end portions, the flanges of one of said plates being adapted to be secured to the flanges of adjacent plates, means for securing said flanges together and means for spacing said form walls at the desired distance apart, said spacing means being secured to the inner and outer walls by said flange securing means, substantially as set forth.

2. In a form for molding plastic walls, the combination of inner and outer form walls each composed of a plurality of connected plates having flanged side and end portions, the flanges of one of said plates being adapted to be secured to the flanges of adjacent plates, a spacing member for said form walls which passes through openings in said plates adjacent to said flanges and is secured at its opposite ends to the flanges of plates of said inner and outer form walls, substantially as set forth.

1,021,444. COMBINED GRASS-HOOK, CORN-KNIFE, AND PRUNING-SAW. ALBERT A. BATES, East Highgate, Vt. Filed June 24, 1911. Serial No. 635,137. (Cl. 30—9.)



The herein described grass hook comprising a longitudinally curved blade formed at its inner end at its outer corner with an integral tang which is bent over from the metal out of which the blade is formed and which embodies a clamping portion parallel with and spaced from the blade and a curved socket portion, the socket being entirely above the plane of the blade, so that the lower side of the blade will present an unobstructed flat surface, a handle having a curved rod projecting from one end thereof and with the handle forming a compound curve, one end of the rod being mounted in the socket of the tang and adapted to be turned therein, and a clamping bolt extending through the blade and tang, connecting the free end of the tang to the blade, whereby the handle rod is detachably connected to the blade and is also permitted to be turned in the socket to angularly adjust the handle with respect to the blade.

1,021,445. PROCESS OF PRODUCING CALCIUM CYANAMID. ALEXANDER BONNINGTON and HARRY G. ARNES, Toronto, Ontario, Canada. Filed Feb. 16, 1911. Serial No. 608,996. (Cl. 23—13.)

1. A direct process of manufacturing calcium cyanamid which consists in first forming a porous mass containing in intimate admixture calcium in combination, and carbon; and then heating said mixture to a suitable temperature; and passing nitrogen through the mass.

2. A direct process of manufacturing calcium cyanamid which consists in first forming a porous mass containing, in intimate admixture calcium carbonate, and carbon; and then heating said mixture to a suitable temperature, and passing nitrogen through the mass.

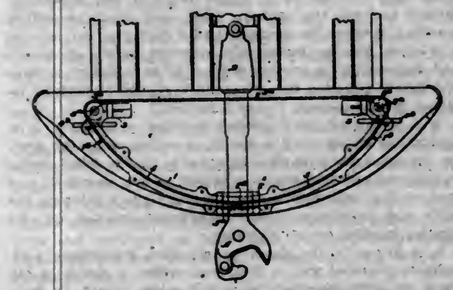
3. A direct process of manufacturing calcium cyanamid which consists in forming a porous mass containing, in intimate admixture, calcium carbonate and carbon; passing said mixture through a heated zone in a furnace in which re-action takes place; passing nitrogen through the heated mass and allowing the mass to cool in the presence of the nitrogen.

4. A direct process of manufacturing calcium cyanamid which consists in forming a porous mass containing, in intimate admixture, calcium carbonate, a catalytic agent and carbon; passing said mixture through a heated zone in a furnace in which reaction takes place; introducing nitrogen into the mass and allowing the mass to cool in the presence of the nitrogen.

5. A direct process of manufacturing calcium cyanamid which consists in forming a porous mass containing, in intimate admixture, calcium carbonate, calcium fluorid, and carbon; passing said mixture through a heated zone in a furnace in which reaction takes place; introducing nitrogen into the mass and allowing the mass to cool in the presence of the nitrogen.

[Claims 6 to 9 not printed in the Gazette.]

1,021,446. COUPLING-CONTROLLING MECHANISM. HARRY C. BUHOUP, Chicago, Ill., assignor to The McConway & Torley Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Aug. 29, 1910. Serial No. 579,379. (Cl. 213—42.)



1. In a mechanism of the character indicated, the combination of a pivotally mounted coupler, and a flexible controller member whereby said coupler may be caused to turn on its pivot, said coupler and said controller member being independently movable.

2. In a mechanism of the character indicated, the combination of a pivotally mounted coupler, a flexible controller member which is movable to cause said coupler to turn upon its pivot and which is also movable independently of the coupler, and means movable with the controller member to cause said coupler to turn on its pivot.

3. In a mechanism of the character indicated, the combination of a pivotally mounted coupler, a movable controller member, said controller member being movable independently of the coupler, and means movable by and also independently of the controller member and of the coupler to cause the coupler to turn on its pivot.

4. In a mechanism of the character indicated, the combination of a pivotally mounted coupler, an endless flexible controller member movable independently of the coupler, and means movable with the controller member and also independently of the coupler to cause the coupler member to turn on its pivot.

5. In a mechanism of the character indicated, the combination of a pivotally mounted coupler, a flexible controller member movable independently of the coupler, and means movably connected to the controller member and adapted to turn the coupler on its pivot, said means being movable by the coupler when the latter swings in one direction and being unaffected by a swinging movement of the coupler in the opposite direction.

[Claims 6 and 7 not printed in the Gazette.]

1,021,447. TREE AND SHRUB PROTECTOR. JULIUS J. CARSTENS, Tuleta, Tex. Filed June 23, 1911. Serial No. 634,857. (Cl. 47—22.)

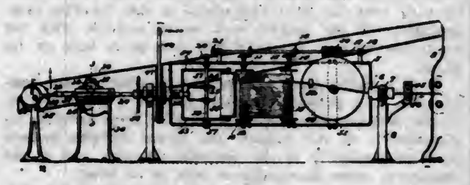


1. In a device of the character described, a housing comprising outer and inner substantially cylindrical shells, a filling of poor heat conducting material to occupy the annular space between said shells, the outer shell having one end thereof flared to form an annular socket, and a lid to fit snugly within said socket.

2. In a device of the character described, a housing formed of a plurality of sections disposed in end to end relation, each of said sections comprising outer and inner substantially circular shells, means to retain said outer and inner shells in each section in their proper concentric position, and one end of the outer shell of one section being flared to form a socket for receiving the adjacent end of the outer shell of the other section.

3. In a device of the character described, a housing formed of a plurality of detachable sections disposed in end to end relation, each section comprising outer and inner shells, a filling of poor heat conducting material occupying the space between the outer and inner shells, and one end of one shell of one section being shaped to form a socket for receiving the adjacent end of the corresponding shell of the other section.

1,021,448. SPINNING-MACHINE. EDWARD J. COTTER and JOHN J. COTTER, Philadelphia, Pa. Filed Feb. 7, 1911. Serial No. 607,134. (Cl. 118—8.)



1. In a machine of the class described, means for twisting yarn, a bobbin, means for positively rotating the bobbin to wind the yarn thereon, and means actuated by engagement with the yarn on said bobbin for retarding the movement thereof as the amount of yarn on the bobbin increases.

2. In a machine of the class described, means for twisting yarn, a bobbin, means for positively rotating the bobbin to wind the yarn thereon, means for evenly distributing the yarn on said bobbin, and means actuated by engagement with the yarn on the bobbin for retarding the movement of said bobbin as the amount of yarn on the bobbin increases.

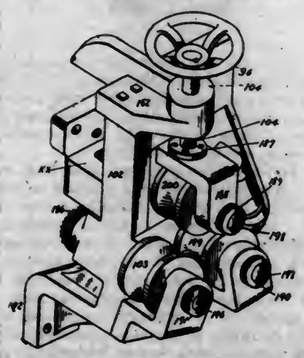
3. In a machine of the class described, means for twisting yarn, a rotary bobbin having a fixed center of movement, means for positively rotating the bobbin to wind the twisted yarn thereon to form a skein, and means operable by engagement with the skein for automatically retarding the movement of said bobbin as the skein increases in size.

4. In a machine of the class described, means for twisting yarn, a bobbin upon which the yarn is wound, a reciprocating actuating member operatively connected with the bobbin for rotating the latter, and means actuated by engagement with the yarn on said bobbin for varying the stroke of the actuating member as the amount of yarn on the bobbin increases.

5. In a machine of the class described, a frame, a bobbin journaled on the frame, means for delivering material to the frame, means for positively rotating the bobbin to wind the material thereon, means for rotating the frame to effect the twisting of the material, and means for retarding the movement of the bobbin winding mechanism as the amount of material on the bobbin increases.

[Claims 6 to 16 not printed in the Gazette.]

1,021,449. PIPE OR TUBE BENDING MACHINE. JAMES FILLMORE COX, Bayonne, N. J., assignor of one-half to Matthew T. Cronin, Bayonne, N. J. Filed Mar. 7, 1911. Serial No. 547,722. (Cl. 153—54.)



A machine of the character described including a plurality of feed-rolls, a bending roll superposed with respect to said feed-rolls, a support for said rolls, having an arcuate slot, a screw-threaded member received by said slot and equipped upon opposite sides of said support with retaining nuts, said screw-threaded member being provided with a yoke carrying a pitch determining roll, the axis of which is arranged in a plane at right angles to the axes of the aforesaid rolls.

1,021,450. PIPE OR TUBE BENDING MACHINE. JAMES FILLMORE COX, Bayonne, N. J., assignor of one-half to Matthew T. Cronin, Bayonne, N. J. Original application filed June 3, 1909, Serial No. 499,868. Divided and this application filed Mar. 7, 1910. Serial No. 547,724. (Cl. 153—40.)

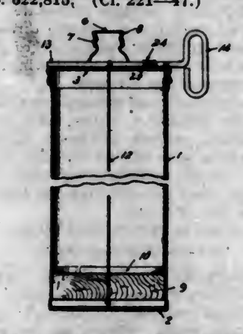


1. In a machine of the character described, a collapsible plug arrangement, a revolving ball connected thereto, a flexible connection or chain also connected to said plug and a mandrel connected to the aforesaid parts, for bending tubes or pipes.

2. In a machine of the character described, the combination of a flexible plug, a rod connection therefor, a revoluble ball connected to said plug and adjusting angular lever for said parts.

3. In a machine of the character described, a collapsible plug arrangement, a revolving ball connected thereto, a flexible connection for said plug, and a mandrel connected to said parts.

1,021,451. RECEPTACLE FOR CONTAINING AND DISCHARGING SEMISOLID AND PASTY SUBSTANCES. JAMES F. CRAVEN, Pittsburgh, Pa. Filed Apr. 22, 1911. Serial No. 622,815. (Cl. 221—47.)



1. A device of the character specified, comprising a receptacle provided with a discharge orifice, means arranged to force the contents from said discharge orifice, a rotary member for actuating said discharge means, and a friction member immovably attached to the receptacle and surrounding a smooth portion of said rotary member and firmly gripping the same and arranged to prevent rotation of said member in one direction.

2. A device of the character specified, comprising a receptacle provided with a discharge orifice, a rotary member for actuating said discharge means, and a coiled spring having one end immovably attached to the receptacle and surrounding said rotary member and tightly gripping the same and thereby arranged to prevent rotation of said turning member in one direction.

3. A device of the character specified, comprising a receptacle provided with a discharge orifice, a piston or follower in said receptacle arranged when moved to force the contents through the discharge orifice, a rotary member for moving said piston or follower, and a friction member immovably attached to the receptacle and surrounding a smooth portion of said rotary member and firmly gripping the same and arranged to prevent rotation of said member in one direction.

4. A device of the character specified, comprising a receptacle provided with a discharge orifice, a piston or follower in said receptacle arranged when moved to force the contents through the discharge orifice, a rotary member for moving said piston or follower, and a coiled spring having one end immovably attached to the receptacle and surrounding said rotary member and tightly gripping the same and arranged to prevent rotation of said member in one direction.

5. A device of the character specified, comprising a receptacle provided with a discharge orifice, a piston or follower in said receptacle arranged when moved to force the contents through the discharge orifice, a flexible member connected to said piston, a winding member for said flexible member, and a friction member immovably attached to the receptacle and surrounding a smooth portion of said winding member and firmly gripping the same and arranged to prevent rotation of said winding member in one direction.

[Claim 6 not printed in the Gazette.]

1,021,452. RECEPTACLE FOR CONTAINING AND DISCHARGING SEMISOLID AND PASTY SUBSTANCES. JAMES F. CRAVEN, Pittsburgh, Pa. Filed Apr. 22, 1911. Serial No. 622,816. (Cl. 221—47.)



1. A device of the character described comprising a receptacle provided with a discharge orifice, means for forcing the contents through said discharge orifice, a closure for said discharge orifice, and a single means connecting the forcing means and said closure and arranged to both open and close said closure and also prevent rearward movement of said forcing means.

2. A device of the character described comprising a receptacle provided with a discharge orifice, a closure for said discharge orifice, a piston or follower in said receptacle arranged when moved to force the contents through the discharge orifice, a rotating or turning member for moving said piston or follower, and a single means connecting said rotating or turning member and said closure and arranged to both open and close said closure and also preventing rearward rotation of said piston actuating means.

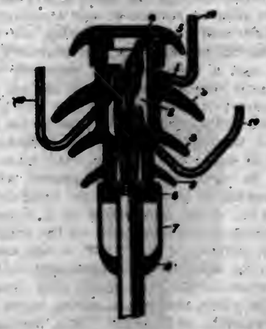
3. A device of the character described comprising a receptacle provided with a discharge orifice, a closure for said discharge orifice, a piston or follower for forcing the contents through said discharge orifice, a rotary threaded member engaging said piston or follower, and a single means connecting said screw or threaded rod and said closure and arranged to both open and close said closure and also prevent rearward rotation of said screw or threaded rod.

4. A device of the character described comprising a receptacle provided with a discharge orifice, a piston or follower for forcing the contents through the discharge orifice, a closure for said discharge orifice having a limited rotary movement, a rotary member for actuating said piston, and means connecting said rotary member and said closure and frictionally attached to one thereof.

5. A device of the character described comprising a receptacle provided with a discharge orifice, a piston or follower for forcing the contents through said discharge orifice, a rotary member for actuating said piston or follower, a rotary closing device for said discharge orifice, and a coiled spring connecting said closing device and said rotary member and attached to one thereof.

[Claim 6 not printed in the Gazette.]

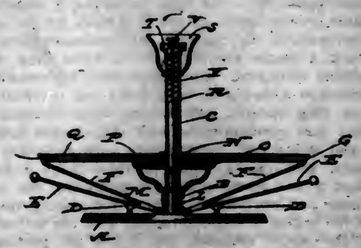
1,021,453. TERMINAL STRUCTURE. CHARLES W. DAVIS, Edgeworth, Pa., assignor to Standard Underground Cable Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed July 1, 1909. Serial No. 505,381. (Cl. 247—12.)



1. A terminal structure for metal-sheathed cables which consists of a body portion of substantially cylindrical form with an axial opening through it from end to end, means for securing rigidly and hermetically a cable introduced into one end thereof to said body portion, a cap closing said axial opening at the opposite end thereof, said cap provided with a petticoat extending beyond the walls of the said body portion, and an orifice formed in the wall of the body portion beneath the protection of the petticoat formed upon said cap, substantially as described.

2. A three-piece terminal for an electric cable, consisting of a casing, a thimble, and a cap, said casing being of substantially cylindrical form with an axial opening through it from end to end and said casing formed of insulating material integral and homogeneous throughout, externally petticoated, and provided with two lead out orifices giving communication within the said axial opening and arranged upon opposite sides of such external petticoat, said thimble being adapted to be connected hermetically to a cable sheath and closing at one end the axial opening through said casing, and said cap closing at its opposite end the axial opening through said casing, substantially as described.

1,021,454. SERVING-TABLE. THOMAS ERNEST DAVIS, Auburn, N. Y. Filed Jan. 23, 1911. Serial No. 604,204. (Cl. 45—26.)



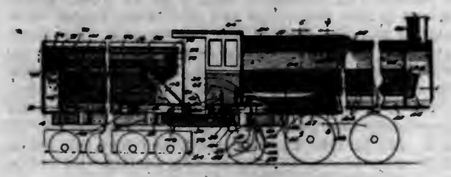
1. A serving table, consisting of a support, a staff rising therefrom and having a lower enlarged portion, a collar

slidably mounted on the lower portion and having pivotally connected thereto the lower ends of a pair of levers, said levers being fulcrumed near their lower extremities upon the said support and having formed integral therewith a pair of brake arms extending upwardly and having a portion adapted to engage the edges of the table, said collar being normally retained in position by a coiled spring interposed between the collar and a cap mounted in bearings contacting against the underface of the table and upon which the table revolves when one of the levers is depressed, and means mounted in the upper reduced portion of the support for revolving said table when the brakes are released.

2. In a serving table, the combination of a base, a standard rising therefrom, a cap mounted on the standard immediately below and contacting with the table whereby the table is revolved through the medium of a spring mounted in the upper reduced portion of said standard, said spring having a pawl and ratchet mechanism for adjusting its tension, a spring mounted on said standard immediately below said cap, a collar slidably mounted on the lower portion of said standard below said spring, and a series of hand levers fulcrumed on the base and pivotally connected to said sliding collar, said hand levers having brake arms formed integral therewith and extending upwardly to engage the edges of the table, said brake arms being adapted to be released from engagement with the table upon the depression of either of the hand levers.

3. A serving table, consisting of a support, a staff rising therefrom, a table mounted on the support, a collar in the lower portion of said staff, a cap mounted thereabove, a spring interposed between said collar and cap, levers fulcrumed on the base and having their lower ends pivoted to the collar, said levers having brake arms formed integral therewith, said brake arms having a portion adapted to engage the edge of the table, a spring mounted in the sleeve of the upper reduced portion of said staff for revolving the table upon the bearings in said cap when either of said hand levers is depressed and means for retaining said spring under tension, said means consisting of a pawl and ratchet mounted in the casing of the upper reduced portion of the staff.

1,021,455. LOCOMOTIVE. THOMAS RUSSELL DAWSON, Barnesboro, Pa. Filed May 10, 1911. Serial No. 626,297. (Cl. 122—434.)



1. A locomotive comprising an engine provided with a fire box and boiler, said boiler being provided with upper and lower sets of conducting passages for heated gases, means for delivering heat from the fire box to the upper passages of the boiler, means for conducting heat from the upper passages to the lower passages, a chamber in the engine provided with an outlet, a stack for the engine, flues surrounding the chamber and communicating with said stack, a tender provided with a water tank, means for dividing said tank into independent heat-conducting compartments, a casing in said tender and provided with a bottom inlet opening, said casing being provided with an outlet that communicates with one of said compartments and inlets that communicate with the other compartments, said casing being provided with a bottom inlet, and a flue frame pivotally connecting the engine and tender and provided with flues for placing the side flues of the engine in communication with the bottom outlets of the tender chamber and a flue for placing the outlet of the engine chamber in communication with the bottom inlet of the tender casing.

2. A locomotive comprising an engine provided with heat-circulating and discharging flues, a tender provided with heat-circulating means, means pivotally connected to the engine and tender and provided with a flue for placing the circulating flues of the engine in communication with the heat-circulating means of the tender and with flues for conducting the heat from the tender to the discharging flues of the engine, a damper for preventing heat passing through the circulating means of the tender, and dampers for placing the circulating flues of the engine in direct communication with the discharging flues.

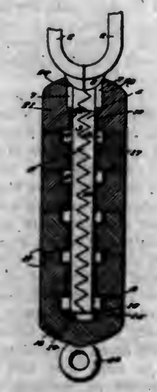
3. A locomotive comprising an engine provided with a firebox and boiler, upper and lower independent heat-conducting means in the boiler, a chamber in the engine receiving the heat from the lower heat-conducting means, independent heat-discharging means in the engine, a tender provided with a water tank, means for circulating heat through said tank, and a heat conductor pivotally connected to the engine and tender and provided with means for placing the chamber in communication with the heat-circulating means of the tender and said circulating means in communication with the heat discharging means.

4. A locomotive comprising an engine provided with heat-circulating flues and independent discharge flues, dampers controlling the communication between said flues, manually-controlled means for operating said dampers, a tender provided with heat-circulating flues, manually-operating means for controlling the circulation through the tender flues, and means for placing the circulation flues and discharge flues of the engine in communication with the flues of the tender.

5. A locomotive comprising an engine provided with boiler-heating flues and independent heat-discharging flues, a tender provided with a water tank, means for dividing the water tank into independent heat passages, a casing provided with outlets that communicate with two of said passages and an independent inlet that communicates with one of said passages, and a heat conductor pivotally connected to the engine and tender and provided with a flue for connecting the heating flues of the engine with the inlet of said casing and independent flues for connecting the outlets of said casing with the said discharging flues.

[Claims 6 to 9 not printed in the Gazette.]

1,021,456. PERMUTATION-PADLOCK. CHARLES J. EVANS, Wichita, Kans. Filed Oct. 17, 1910. Serial No. 587,539. (Cl. 7—113.)



1. A permutation padlock having a shackle composed of two coacting parts having coextensive legs adapted to be placed together to form a shank, the inner faces of the legs being formed with interlocking teeth, said shank having radial lugs projecting therefrom, and a body portion including a plurality of rotatable superposed locking

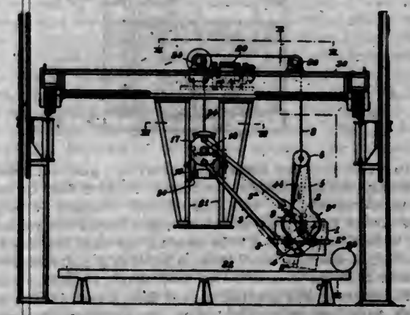
disks surrounding the shank but removable therefrom, each disk having radially extending notches, the locking disks being rotatable to bring the notches into alinement with each other and with the lugs on the shank to permit the shank to be inserted and removed.

2. A permutation padlock having a shackle composed of two coacting parts having coextensive legs adapted to be placed together to form a shank, the contacting faces of the parts being interlocked with each other, the outside faces of said parts having radial lugs projecting therefrom, said lugs being spaced at intervals along the length of the shank, and a body portion including a slotted pintle and a plurality of rotatable locking disks mounted on the sleeve for rotation therearound, said locking disks having radially extending notches, the disks being independently rotatable to bring the notches into alinement with each other and with the slot in the central pintle to permit the shackle to be inserted or withdrawn.

3. A permutation padlock having a shackle composed of two coacting parts, each part comprising a straight portion and a bowed portion, the bowed portions of the shackle being pivoted to each other, the straight portions of the shackle being provided with outwardly projecting lugs spaced at intervals along the shackle, and a body portion composed of a tubular pintle oppositely slotted to receive the lugs on the shackle and a plurality of rotatable disks surrounding the pintle, said disks being radially notched, the notches extending from the inside of the disk outward, the disks being independently rotatable to bring the notches into alinement with each other and with the slots in the pintle to permit the introduction and removal of the straight portion of the shackle.

4. In a permutation padlock, the combination with a shackle having a shank, of a longitudinally slotted tubular pintle having a fixed head at one end and a rotatable, removable terminal disk at the other end having a centrally disposed recess in its upper face for the reception of the extremity of the pintle and a radially extending slot leading from said recess, a plurality of rotatable locking members disposed between the fixed head and the terminal disk, each having a central passage to receive and surround said tubular pintle and being provided with means whereby they may have a locking engagement with the lugs of the shank, and a radially projecting lug on said shank engaging in the said radial slot in the terminal disk and preventing the rotation of the terminal disk on the pintle when the shank of the shackle is inserted through said pintle and into the central recess.

1,021,457. TEEMING-CRANE. NICKLAS FRANZEN, Florette, and JOHN A. BECHTEL, Tarentum, Pa., assignors to Pittsburgh Plate Glass Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Mar. 20, 1911. Serial No. 615,568. (Cl. 212—8.)

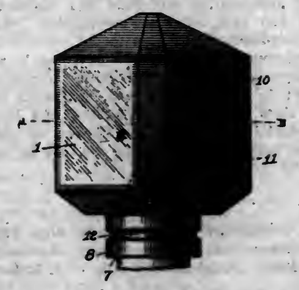


1. In a machine for manipulating a suspended load, the combination of a pair of tongs, a rotating member laterally disposed with relation to said tongs, a pair of pitmen, each having crank connection at one end to the said rotary member and each having pivotal connection at the other end to one member of the said tongs, substantially as described.

2. In a teeming machine, the combination of a carrier, a pot hung from said carrier by flexible suspension, a rotating shaft hung from said carrier by flexible suspension, operative connection between said shaft and said pot, for tipping the latter, and means borne by said carrier for taking up and paying out both of said flexible suspensions in unison, substantially as described.

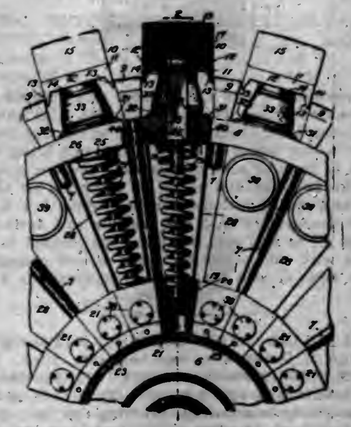
3. In a teeming machine, the combination of a carrier, a pair of clamps sustained by said carrier, a rotating shaft laterally disposed with relation to said clamps, a pair of pitmen having crank connection at one end to said rotating shaft and at the other end each to one of said clamps, and means for locking and unlocking said clamps in fixed relative positions, substantially as described.

1,021,458. BICHROMATIC LAMP. JESSE HOWARD FRY, Rochester, Pa. Filed May 23, 1911. Serial No. 629,000. (Cl. 240—100.)



A glass globe for a pilot-light having a plane face formed as a part thereof and having a single opening, the globe body consisting of an inner layer of glass of one color forming the complete globe structure, and an outer layer of glass of a different color integrally united with the said inner layer and covering the said inner layer except the plane-face portion thereof.

1,021,459. VEHICLE-WHEEL. EDWARD A. GLENN, Chicago, Ill. Filed Jan. 20, 1908, Serial No. 411,697. Renewed Aug. 11, 1911. Serial No. 643,639. (Cl. 152—28.)



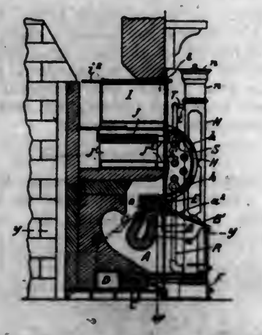
1. A vehicle-wheel comprising a hub, a felly joined thereto by spokes, radially-extending yieldingly-supported rods projecting beyond the felly and provided with tread-portions, flanges on the outer circumference of the felly

surrounding each of said rods, flanges on the under sides of the tread-portions surrounding the rods, said flanges being of different diameters and adapted to telescope with each other, and flexible housings connecting the flanges on the tread-sections with the flanges on the felly.

2. A vehicle-wheel comprising a hub, a felly joined thereto by spokes, radially-extending yieldingly-supported rods projecting beyond the felly and provided with tread-portions, flanges on the outer circumference of the felly surrounding said rods, flanges of less diameter than said first-named flanges on the under sides of the tread-portions surrounding the rods, said flanges being adapted to telescope with each other, and flexible housings of frusto-conical shape connecting the flanges on the tread-sections with the flanges on the felly.

3. A vehicle-wheel comprising in combination a hub and a ring-support joined thereto by spokes, fillers on the spokes extending beyond said support, radially-extending reciprocable rods mounted near their outer ends in said support to reciprocate therethrough and at their inner ends in said hub, to be guided thereby, stops on said rods, coil-springs surrounding said rods and confined between said stops and said hub, non-overlapping transversely-extending tread-sections secured to the outer ends of said rods to reciprocate in the spaces provided between said fillers, flanges provided on the outer circumference of said support to encircle said rods, depending flanges on the inner sides of said tread-sections, and housings of flexible material secured to the flanges on said tread-sections and support for encircling the rods on their outer ends, for the purpose set forth.

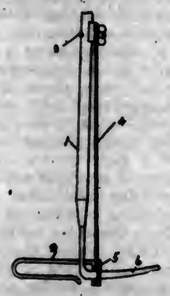
1,021,460. DOMESTIC FIRE, RANGE, AND THE LIKE. GEORGE ROBERTSON HISLOP, Paisley, Scotland. Filed Feb. 16, 1909. Serial No. 478,164. (Cl. 126—137.)



The combination with the fire-place of a chimney, of a fire chamber having side walls provided with passages and including a reverberating chamber at the rear thereof, a curved hollow bridge in said chamber, said bridge being disposed in front of said reverberating chamber and provided with an outlet and means for admitting air to said bridge, said means including an air supply box located adjacent the back of said fire chamber and devices for supplying air to said box, said box being adapted to communicate with said bridge by means of said passages in the side walls of said fire chamber, substantially as described.

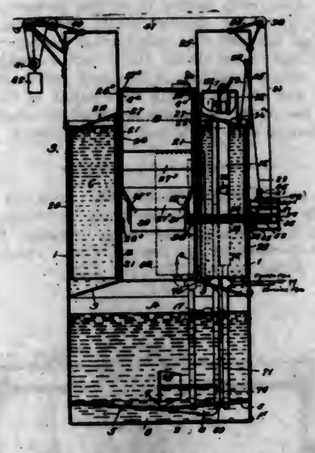
1,021,461. HAND-RAKE-CLEANING ATTACHMENT. WILLIAM E. HOLDERMAN, Salt Lake City, Utah. Filed Aug. 22, 1911. Serial No. 645,435. (Cl. 55—146.)

1. In combination with a garden rake, a cleaning blade having apertures therethrough receiving the teeth of said rake, a flat spring attached to said blade and adjustably attached to the handle of the rake, depending legs attached to said blade, retaining hooks fastened to upper side of said blade and having a hook formed on their upper ends adapted to engage the head piece of said rake, and a clip between said spring and the handle of the rake adapted to give direction to said spring.



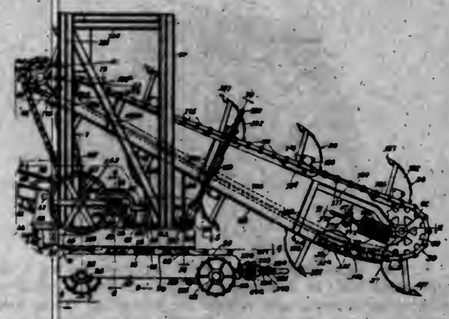
2. In combination with a hand rake, a blade having openings therethrough conforming to the form of the teeth of the rake and within which the teeth of the rake are made to operate, a flat spring one end of which is secured to said blade and whose other end is bolted to the handle of the rake, a clip conforming on one side to the form of the handle of the rake and flat on the other side with said sides inclined toward each other adapted to give direction to said spring and thereby to the normal position of said blade on the teeth of the rake, depending legs secured on said blade and adapted by contact with the ground to flex said spring, and retaining hooks fastened to the upper side of said blade adapted to limit the downward movement of said blade.

1,021,462. ACETYLENE-GAS GENERATOR. FRANK R. HUDSON, Windsor, Mo. Filed Jan. 31, 1911. Serial No. 605,710. (Cl. 48—39.)



An apparatus for generating acetylene gas, comprising a casing having a carbid chamber, a friction feed cylinder mounted within the exit end of said chamber, a water tank about the carbid chamber, a gas receptacle telescoping within said tank, a tube passing through the walls of the carbid chamber and tank, a rotatable shaft mounted in said tube, an arm fitted to said shaft, a crank secured to the cylinder and pivoted to said disk, a reel fixed to said shaft, bars fastened to the casing, bracket members mounted upon said bars, pulleys journaled upon said members, a cable passing about the pulleys, a weight, a pulley fastened thereto, and about which the cable passes, gear mechanism connected to said reel, a winged wheel operating therewith and designed to regulate the rotary movement of the reel, a cord fastened to the telescoping gas receptacle, a weighted lever pivotally mounted adjacent to the governor, and adapted to engage said winged wheel, and to which lever said cord is connected, as set forth.

1,021,463. MACHINE FOR HANDLING LOOSE MATERIALS. GEORGE W. JACKSON, Chicago, Ill., assignor, by mesne assignments, to George W. Jackson Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed June 1, 1909. Serial No. 499,527. (Cl. 37—24.)



1. In a machine for picking up and loading loose material, the combination, of a wheeled truck, a pivot projecting from said truck upwardly, a horizontally swinging turn-table supported on said truck-pivot at one end, a boom pivotally supported at its rear end upon said turn-table to swing vertically at its forward end only, means constructed to directly and positively connect the boom to the forward end of the turn-table, whereby the bulk of the weight of the turn-table and its appurtenants is added to the weight of the boom to resist vertical movement of the boom at its forward end in picking-up operation, a traveling pickup and conveying device carried by said boom, a motor, operative connection between said motor and said turn-table to swing said turn-table on its pivot, the pivotal point of said turn-table being at its rear end and at the rear end of said truck, said turn-table being supported at its forward end upon said truck, there being no support for said turn-table at its rear end beyond said pivot-support.

2. A machine for picking up and loading loose material, including, in combination, a wheeled truck, a pivot on said truck and projecting upwardly therefrom, a horizontally swinging turn-table supported on said truck-pivot at one end, a boom pivotally supported on said turn-table to swing vertically, a traveling pickup and conveying device carried by said boom, a motor, operative connection between said motor and said turn-table to swing said turn-table on its pivot, the pivotal point of said turn-table being at its rear end and at the rear end of said truck, said turn-table being supported at its forward end upon said truck, there being no support for said turn-table at its rear end beyond said pivot-support, the pivotal point of said turn-table and the pivot on said truck being at one side of the longitudinal center line of both, the turn-table and the truck.

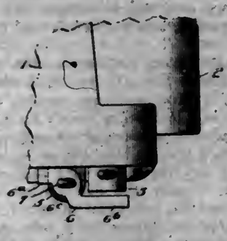
3. A machine for picking up and loading loose material, including, in combination, a wheeled truck, a pivot on said truck and projecting upwardly therefrom, a horizontally swinging turn-table supported on said truck-pivot at one end, a boom pivotally supported on said turn-table to swing vertically, a traveling pickup and elevation device carried by said boom, a motor, operative connection between said motor and said turn-table to swing said turntable on its pivot, said turn-table being of inverted pan shape, said operative connection including a main transmission shaft located longitudinally on said turn-table, gearing to connect said main transmission shaft to said motor, gearing on said main transmission shaft and a gear-wheel connected to said gearing, and means connecting said gear-wheel to the said truck, there being in said turn-table depressions and recesses constructed to receive said main transmission shaft, said gearing, and said gear-wheel.

4. A machine for picking up and loading loose material including, in combination, a wheeled truck, a pivot on said truck and projecting upwardly therefrom, a horizontally swinging turn-table supported on said truck-pivot at one end, a boom pivotally supported on said turn-table to swing vertically, a traveling pickup and elevating device carried by said boom, a motor, operative connection between said motor and said turn-table to swing said turn-table on its pivot, said turn-table being of inverted pan shape, said operative connection including a main transmission shaft located longitudinally on said turn-table, gearing to connect said main transmission shaft to said motor, gearing on said main transmission shaft and a gear-wheel connected to said gearing, means connecting said gear-wheel to said truck, there being in said turn-table depressions and recesses constructed to receive said transmission shaft, said gearing, and said gear-wheel, and a clutch on said main transmission shaft constructed to lock the gearing separately to said main transmission shaft.

5. In a machine for picking up and loading loose material, the combination, of a truck, propelling wheels on said truck, an upstanding cylindrical pivot on said truck, said pivot being located at the rear end of said truck, said truck having a body of inverted pan shape, carrying rollers near the forward end of said truck the major portions of said carrying rollers being located in and below the upper surface of said truck, a turn-table, said turn-table being of inverted pan shape, a tubular boss in said turn-table projecting downwardly from the inner top surface of said turn-table and engaging said upstanding cylindrical pivot, said tubular boss being located at the rear end of said turn-table, a track at the under side of said turn-table and located at the forward end thereof and co-operating with said carrying rollers, there being in the top surface of said turn-table a series of depressions and recesses, a motor on said turn-table, a main transmission shaft located longitudinally on said turn-table connected to said motor, and shafts and gearing connected to said main transmission shaft, constructed to rotate said turn-table, the major portions of said shafts and the gearing being located in said depressions and recesses and in the pan-shaped body of the turn-table.

[Claims 6 to 38 not printed in the Gazette.]

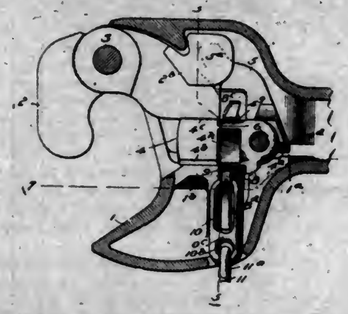
1,021,464. KNUCKLE-PIN RETAINER FOR CAR-COUPLINGS. JOSEPH KELSO, Pittsburgh, Pa., assignor to McConway & Torley Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Apr. 14, 1911. Serial No. 621,066. (Cl. 213—13.)



In a knuckle pin retainer for car couplers, the combination with the coupler head, knuckle and knuckle pin, said coupler head being provided with a perforated lug on its lower face, of a knuckle pin retaining member which is formed with a horizontally extending pin receiving aperture intermediate of its length and with end portions which are in different planes, one of said end portions engaging the coupler head outside of the knuckle pin re-

ceiving aperture therein and the other extending under the knuckle pin, and a pin passing through the aperture in the knuckle pin retaining member and through the perforated lug on the lower face of the coupler head.

1,021,465. CAR-COUPLING. JOSEPH KELSO, Pittsburgh, Pa., assignor to McConway & Torley Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Apr. 14, 1911. Serial No. 621,069. (Cl. 213—10.)



1. In a car coupler, the combination with the coupler head, of a knuckle pivotally mounted thereon, a lock for said knuckle, said lock being movably mounted upon the coupler head so as to be capable of rectilinear and rotary movements, and a lock operating member engaging said lock to move the same and having a portion which extends transversely across the upper face of the lock when the said lock is in locked position, said transversely extending portion being adapted to engage and retain said lock in locked position and being movable out of locking engagement with said lock.

2. In a coupler, the combination with the coupler head, of a knuckle pivotally mounted thereon, a lock for said knuckle, a knuckle opener member rigidly connected to said lock, said lock and said knuckle opener member being movably mounted upon the coupler head so as to be capable of rectilinear and rotary movements, and a lock operating member which is movably mounted upon the coupler head and which is provided with an arm engaging the lock for moving the same to unlocked position and with an arm projecting over said lock.

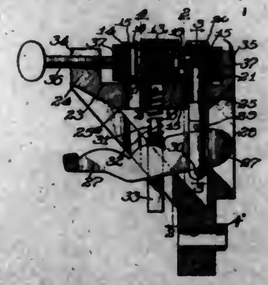
3. In a car coupler, the combination with the coupler head, of a knuckle pivotally mounted thereon, a lock for said knuckle, a knuckle opener member rigidly connected to said lock and extending back of the tail of said knuckle, said lock and said knuckle opener members being vertically movable and horizontally rotatable, an axle upon which said lock and knuckle opener member are mounted, and a bell crank lever pivotally mounted upon the coupler head and having an arm which engages the lock to lift the same and a portion which extends over the upper face of said lock.

4. In a car coupler, the combination with the coupler head, of a knuckle pivotally mounted thereon, a lock for said knuckle, a knuckle opener member movable by said lock, an axle, said lock being loosely journaled on said axle so as to be capable of successively moving upwardly, tilting and rotating thereon, and means for moving said lock upwardly and for rotating it upon said axle.

5. In a car coupler, the combination with the coupler head, of a knuckle pivotally mounted thereon, an upwardly movable and horizontally rotatable lock for said knuckle, a knuckle opener member rigidly connected to said lock and extending behind the tail of said knuckle, a lock operating member pivotally mounted on the coupler head, said lock operating member having an arm extending under the lock for moving the same both vertically and rotatably and having a hooked portion normally extending above the lock and across the path traversed by the latter when moving to unlocked position, means projecting out through the coupler head for actuating said lock operating member, and means carried by said knuckle for rotating said lock and said knuckle opener member to a position permitting the lock to drop to locked position.

[Claims 6 to 8 not printed in the Gazette.]

1,021,466. NUMBERING ATTACHMENT FOR PRINTING-PRESSES. CHARLES W. KUEN, Chicago, Ill., assignor to Rand McNally & Company, Chicago, Ill., a Corporation. Filed July 5, 1910. Serial No. 570,401. (Cl. 101—184.)



1. The combination with a printing press having a reciprocable bed, of a numbering head having a train of numbering wheels, and means for actuating them, said actuating means having a vertically reciprocable plunger extending downward from the numbering head, a bracket having a seat upon which said numbering head rests and is adjustable to different positions, said bracket having also means for confining the plunger to a strictly endwise rectilinear movement, means for securing the numbering head to its seat, means for securing the frame to the reciprocable bed and means deriving its movement from the reciprocable bed for reciprocating the plunger.

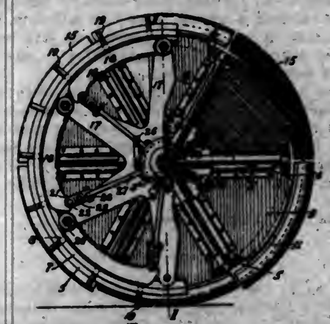
2. In a numbering attachment for printing presses, the combination with a numbering head having a train of numbering wheels and means for actuating them, said actuating means including a vertically reciprocable plunger extending downward from the numbering head, of a bracket having a seat for said numbering head, and a lever fulcrumed to the bracket and engaging the downwardly extending portion of the plunger, said lever being adapted to engage a relatively movable part of the press.

3. In a numbering attachment for printing presses, the combination with a numbering head having a train of numbering wheels, and means for actuating them, said means including a vertically reciprocable plunger extending downward from the numbering head, of a bracket having a seat on which the numbering head is supported and is adjustable end for end, and a lever fulcrumed to the bracket and engaging the downwardly extending portion of the plunger whichever of the two positions of adjustment the numbering head may occupy, said lever being adapted to be engaged by a relatively movable part of the press.

4. In a numbering attachment for printing presses, the combination with a numbering head having a train of numbering wheels and means for actuating them, said actuating means including a vertically reciprocable plunger extending downward from the numbering head, of a bracket having a seat on which the numbering head is supported and is adjustable from a given position to a position at right angles thereto, and a lever fulcrumed to the frame and engaging the downwardly extending portion of the plunger, whichever of the two positions of adjustment the numbering head may occupy, said lever being adapted to be engaged by a relatively movable part of the press.

5. In a numbering attachment for printing presses having reciprocating beds, the combination with a numbering head having a train of numbering wheels and means for actuating them, a bracket having a seat for said numbering head, means for adjustably securing the numbering head to said seat, means for securing the bracket to the reciprocating bed of the press, means for actuating the numbering wheels, said actuating means having a vertically reciprocable plunger, extending downward, a movable rod, means for lifting and lowering said rod by movement derived from a movable part of the press and means for transmitting movement from said vertically movable rod to the vertically reciprocable plunger.

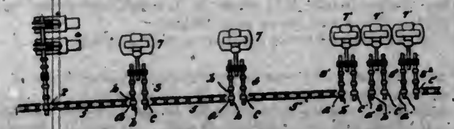
1,021,467. WHEEL. CHARLES E. MARTIN and SAMUEL J. CLOKEY, Washington, Pa. Filed Feb. 10, 1911. Serial No. 607,752. (Cl. 152—28.)



1. In a wheel, the combination of a hub, a series of spokes, a continuous rigid rim mounted on the outer ends of the spokes, said rim U-shaped in cross-section and having a series of slots therein, a series of tire supporting members each located between adjacent spokes and extending through a slot in the rim, coacting guide means, said supporting members each formed with a flange on its outer end disposed within the rim and movable therein, springs interposed between the hub and the supporting members, and a sectional tire located in the rim and resting upon the flanges of the supporting members.

2. In a wheel, the combination of a hub, a series of spokes, a continuous rigid rim mounted on the outer ends of the spokes, said rim U-shaped in cross-section and having a series of slots therein a series of tire supporting members each located between adjacent spokes and extending through a slot in the rim, coacting guide means between the spokes and the supporting members, said supporting members each formed with a flange on its outer end disposed within the rim and movable therein, a spring engaging member on the tire supporting members, springs interposed between the hub and the spring engaging members, and a sectional tire located in the rim and resting upon the flanges of the supporting members.

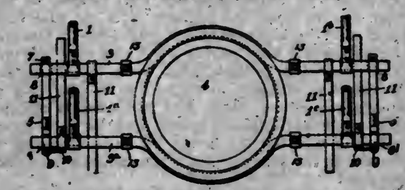
1,021,468. APPARATUS FOR ROLLING SHAPES. GEORGE G. MCMURTRY, New York, N. Y. Filed Dec. 1, 1906. Serial No. 465,524. (Cl. 80—34.)



1. A mill for rolling flanged beams including in combination a reversing universal mill and means for passing the blank back and forth through the same to partially reduce the blank, a continuous mill comprising a plurality of universal mills in tandem and means for passing the blank from said reversing universal mill to said continuous mill, the universal mills constituting said continuous mill operating in one and the same direction, and means for driving said universal mills constituting the continuous mill at successively increasing rates of speed corresponding to the elongation successively effected, the mills being adapted to operate on different portions of such blank simultaneously to reduce it to its finished dimensions rapidly in a single pass.

2. A mill for rolling flanged beams including in combination a blooming mill and means for passing a blank back and forth through the same, a reversing universal mill and means for passing the blank from the blooming mill to said reversing universal mill and back and forth through the same to partially reduce the blank, a continuous mill comprising a plurality of universal mills in tandem and means for passing the blank from said reversing universal mill to said continuous mill, the universal mills constituting said continuous mill operating in one and the same direction, and means for driving said universal mills constituting the continuous mill at successively increasing rates of speed corresponding to the elongation successively effected, the mills being adapted to operate on different portions of such blank simultaneously to reduce it to its finished dimensions rapidly in a single pass.

1,021,469. MACHINERY FOR ENGAGING AND CARRYING LOADS. JOSEPH NAMBCHE, Tarentum, Pa., assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Mar. 20, 1911. Serial No. 615,550. (Cl. 57—109.)



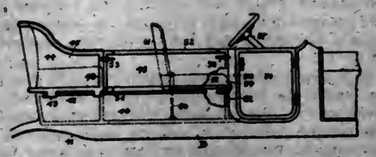
1. The combination with a pair of loosely suspended tongs of irregular shape, of a finger rigidly secured to one member of the tongs and extending adjacent to and in contact with the other member of the tongs, substantially as described.

2. In a pair of pot-tongs or like structures, the combination of a pair of rods arranged adjacent to one another and in a generally parallel position, one of said rods being supported by loosely turning joints and being of irregular shape, and a finger rigidly secured to said irregularly-shaped rod and extending to and in contact with the other of the said pair of rods, substantially as described.

3. A pair of pot-tongs or like structures, consisting of rods arranged adjacent to one another in a generally parallel position, each rod suspended at its opposite ends by freely turning joints, said rods offset outwardly intermediate their supported ends and each provided with a finger rigidly secured thereto and extending beneath and engaging the opposite rod, substantially as described.

4. The combination with a pair of swivel-supported irregularly-shaped coöperating pot-clamping jaws, of a finger rigidly secured to one of said jaws and extending to and in contact with the companion jaw, and means for drawing the said jaws into clamping engagement with a pot, substantially as described.

1,021,470. AUTOMOBILE-BODY. LOUIS W. OSTER and FRANK J. MILLER, Cleveland, Ohio; said Oster assignor to said Miller. Filed Mar. 20, 1911. Serial No. 615,706. (Cl. 21—43.)



1. An automobile body comprising a box and a set of seats mounted thereon one behind the other, the forward

of said seats being adapted to fold within said body and the rearward of said seats adapted to be moved to the position occupied by said forward seat, panels for the top of said box adapted to be placed lengthwise at the sides of said body to provide a foot compartment between said seats when both are in use, and said body having uprights at either side in line with the sides of one of said seats and means to fasten said panels between said uprights and said rear seat.

2. An automobile body having side doors and supporting uprights therefor, a foldable front seat, and a slidable rear seat adapted to cover said front seat and abut against said uprights, and movable side panels adapted to fit between said uprights and said rear seat when retired to the rear on said body.

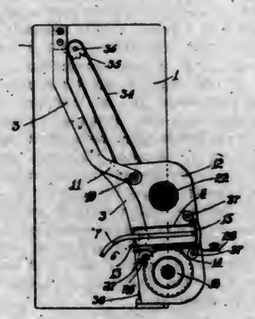
3. In automobiles, a body and steering and controlling means therein at its front, a side door opposite said means, a pair of foldable front seats spaced apart centrally of said body to provide an aisle between the same, and a slidable seat the full width of said body and adapted to be moved forward to the position vacated by said foldable seats, an upright next to said door and means to lock said rear seat against said upright.

4. An automobile body and a rear seat and two separate foldable front seats therein, said rear seat slidable on said body to the position occupied by said front seats, separate panels for the sides of said body adapted to lock said rear seat in place and to form sides for said front seats and means to lock said panels detachably in position.

5. An automobile body having a movable rear seat and a pair of separately foldable front seats and horizontal guides projecting laterally at either side of said body at the outside thereof on which said rear seat is slidably mounted, and interchangeable panels adapted to be placed at the side of said body or across the same according to the position of the said rear seat, substantially as shown and described.

[Claims 6 to 8 not printed in the Gazette.]

1,021,471. ADJUSTABLE MUSIC-BOX. ROBERT W. PAIN, New York, N. Y. Filed Jan. 24, 1911. Serial No. 604,341. (Cl. 84—233.)



1. In a player piano, the combination with the piano casing, having an opening in its front, of a music roll and take-up roll support, pivoted behind said opening, a tracker pivoted independently of the music roll and take-up roll support, behind said opening, and L-shaped strips one part thereof forming a guide for the tracker and the other part forming a stop for the tracker, substantially as set forth.

2. In a player piano, the combination with the piano casing, having an opening in its front, of a music roll and take-up roll support, pivoted behind said opening, a tracker pivoted independently of the music roll and take-up roll support, behind said opening, and guides for the tracker on said music roll and take-up roll support, substantially as set forth.

3. In a player piano, the combination with a piano casing having an opening in its front, of a music roll and take-up roll support, pivoted at its upper part behind said opening, to swing partly through said opening, a music roll and take-up roll mounted on said support, a tracker pivoted independently of said support, power transmitting mechanism for driving said rolls, which mechanism is secured to one end wall of said support, and a manual lever projecting beyond the front edge of the said end wall of said support and serving to control said power transmitting mechanism, substantially as set forth.

4. In a player piano, the combination with a piano casing, having an opening in its front, of fixed bars behind said opening, a tracker pivoted to said bars, a music roll and take-up roll support pivoted to said bars, and means for imparting a swinging motion to the tracker from said support, substantially as set forth.

5. In a player piano, the combination with a piano casing, having an opening in its front, of bars projecting into said opening, a tracker pivoted to said bars, a music roll and take-up roll support pivoted to said bars, and means for imparting a swinging motion to the tracker from the pivots of said support, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

1,021,472. BLADING FOR TURBINES. CHARLES ALGERNON PARSONS and JAMES WALTER WILSON, Newcastle-upon-Tyne, and JOHN FORD, Wallsend, England; said Wilson and Ford assignors to said Parsons. Filed June 21, 1907. Serial No. 380,094. (Cl. 121—57.)



1. A substantially flexible bladed strip ready for insertion in a turbo-machine groove comprising blades, separate distance pieces and substantially flexible connecting means consolidated therewith.

2. A substantially flexible bladed strip ready for insertion in a turbo-machine groove comprising blades, separate distance pieces and substantially flexible connecting means continuous of a plurality of said blades and distance pieces consolidated therewith.

3. A substantially flexible bladed strip ready for insertion in a turbo-machine groove comprising blades, separate distance pieces and wire like connecting means consolidated with said blades and distance pieces.

4. A substantially flexible bladed strip ready for insertion in a turbo-machine groove comprising blades, separate distance pieces and wire like connecting means passed into openings in the distance pieces and blades, the whole being consolidated.

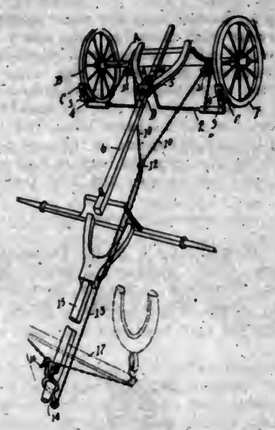
5. A substantially flexible bladed strip ready for insertion in a turbo-machine groove comprising blades, separate distance pieces and round metallic wire like connecting means passed into holes in the distance pieces and blades, the whole being consolidated.

[Claims 6 and 7 not printed in the Gazette.]

1,021,473. REDUCING GROUND GRAIN TO ELONGATED OR FILAMENT FORM. HENRY D. PERKY, Glencoe, Md.; Laban Sparks, administrator of said Henry D. Perky, deceased, assignor, by mesne assignments, to The Shredded Wheat Company, Niagara Falls, N. Y. Filed Jan. 19, 1906. Serial No. 296,871. (Cl. 99—11.)

The process of producing a mass of filamentous food, by cooking ground grain, cooling to a set or solid condition, subjecting the solid material to filamentous reduction, compressing the filaments together, subjecting the mass thus produced to a second filamentous reduction, and finally evaporating the moisture from the resultant.

1,021,474. BRAKE. OLOF PETERSON, St. Paul, Minn. Filed Jan. 12, 1910. Serial No. 537,696. (Cl. 21—8.)



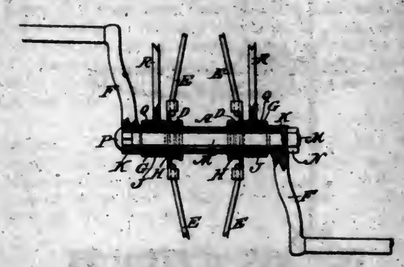
In combination with a vehicle and its wheels, a cross bar having a longitudinally adjustable journal support upon said vehicle, brake shoes vertically slidable upon the ends of said cross bar in front of said wheels, a lever fulcrumed upon the free end of the vehicle tongue, and a cable connecting the lower end of said lever and said cross bar, said cable running over intermediate idlers, for the purpose set forth.

1,021,475. INTERMITTENT GRIP DEVICE FOR LUBRICATING APPARATUS. CARL POTTEL, Halle-on-the-Saale, Germany. Filed June 8, 1911. Serial No. 631,989. (Cl. 74—54.)



In combination, a shaft, a ratchet wheel mounted on said shaft, a rod adapted to swing through an ascertained course, a fork connected at its crotch to the top of said rod, the end of each tine thereof being journaled on said shaft on each side of said ratchet, a pawl pivoted in the crotch of said fork in engagement with said ratchet, two teeth integral with the upper part of one tine of said fork, a lever mounted on a stationary pivot, a pawl integral with said lever extending between said teeth, a link pivotally connected to the other end of said lever, two links pivotally connected at one end to the same and pivotally connected at their other ends on each side of said ratchet wheel to the shaft and a pawl pivoted between the tops of the two last mentioned links, substantially as and for the purpose set forth.

1,021,476. WHEEL-HUB. WILLIAM T. PURSGLOVE, Philadelphia, Pa., assignor to The A. Mecky Company, a Corporation of Pennsylvania. Filed Dec. 18, 1911. Serial No. 666,518. (Cl. 208—68.)



1. In a hub, a hub-member proper, and a crank having on its horizontal limb a nose which is adapted to be interlocked with an end of said hub member proper, said nose, limb and the vertical limb of said member being of integral construction.

2. In a hub, a tubular hub-member proper, and a crank having on its horizontal limb a nose exteriorly of angular form, said hub member having in its end a socket of angular form, the same interlockingly receiving said nose, a bolt adapted to be passed through the limbs of the crank, said nose and said hub member, and means for tightening said bolt in its position.

3. In a hub, a tubular hub member proper, the same having on an end thereof a shoulder whose exterior is angular and whose interior comprises an angular socket, a crank having on its horizontal limb a nose whose exterior is angular and is adapted to enter and interlock with said socket, a tightening bolt adapted to pass through said crank, the nose thereof and said hub member proper, and a spoke-carrying sleeve which is interlockingly fitted on the exterior of said shoulder.

1,021,477. ABSORBENT PRODUCT. VICTOR RAISIN, Paris, France, assignor to Société Compagnie Industrielle des Alcools de l'Ardeche, Paris, France. Filed May 19, 1909. Serial No. 497,105. (Cl. 99—11.)

1. The herein described material comprising the deincrusted porous cellulose residue of the wood-sugar process, dehydrated to a less than 20% moisture content.

2. The herein described material comprising the deincrusted porous cellulose residue of the wood-sugar process washed and dehydrated to a less than 20% moisture content.

3. The combination of a deincrusted porous cellulose residue of the wood-sugar process, washed and dehydrated to a less than 20% moisture content, with distillers' wash.

1,021,478. ELECTRIC INDUCTION-FURNACE. JAMES HENRY REID, Newark, N. J., assignor to George Goodwin, Ottawa, Canada. Filed Mar. 19, 1910. Serial No. 550,495. Renewed Apr. 28, 1911. Serial No. 623,963. (Cl. 204—64.)

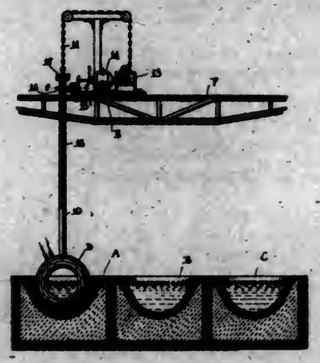
1. In an electric furnace, a heating coil having a magnetic circuit and means for continuously rotating the same.

2. In an electric furnace, a heating coil having a magnetic circuit and means for rotating the same about a transverse axis.

3. In an electric furnace, a heating coil having a magnetic circuit and means for rotating the coil in such a way as to stir the charge in the furnace.

4. In an electric furnace a hearth, a heating coil adapted to be raised and lowered into the charge thereon, said heating coil being adapted to fit closely to the surface of the hearth.

5. In an electric furnace a hearth and induction heating coil therein having a magnet circuit, said heating



coil being adapted to fit closely to the hearth and being independent of the charge thereon.

[Claims 6 to 12 not printed in the Gazette.]

1,021,479. POWDER-CAN TOP. FREDERICK REUTTER, Waterbury, Conn., assignor to Scovill Manufacturing Company, Waterbury, Conn., a Corporation of Connecticut. Filed Apr. 15, 1911. Serial No. 621,364. (Cl. 221—64.)



1. A top for powder cans and other receptacles, having a neck provided with discharge holes and projections thereon, a shell-like cap fitted to the neck and having complemental discharge holes and projections, the projections on the neck and cap coöperating as stops, a spring arranged within the neck, and an axial rivet connecting the spring and cap with the neck and permitting a bodily yielding movement of the cap toward and from the neck as said cap is turned upon the rivet to open and close the discharge holes, the projections coacting in both positions of the discharge holes to hold the cap against accidental turning.

2. A top for powder cans and other receptacles, having a neck provided with discharge holes and a stop member, a cap provided with complemental discharge holes and stop members and mounted to turn upon the neck, a spring stationarily held within the neck clear of the discharge holes, and an axial rivet connecting the cap and spring to the neck and permitting longitudinal bodily movement of the cap toward and from the top of the neck and rotation of the cap upon the neck to open and close the discharge holes and to stop and hold the cap in either position, the stop members being beads arranged in a circle on one of the named parts and complemental beads of less number disposed at greater intervals on the other part.

3. A top for powder cans and other receptacles, having a neck provided with discharge holes and a stop member, a cap provided with complemental discharge holes and stop members and mounted to turn upon the neck, a spring stationarily held within the neck clear of the discharge holes, and an axial rivet connecting the cap and spring to the neck and permitting rotation of the cap upon the neck to open and close the discharge holes and allowing sufficient longitudinal play of the cap to permit it to move bodily toward and from the neck so that the stop members may coöperate to stop and hold the cap in either position, the stop members being outwardly projecting beads of different numbers on the neck and cap.

4. A top for powder cans and other receptacles, having a neck provided with discharge holes and a stop member, a cap provided with complemental discharge holes and stop members and mounted to turn upon the neck, a spring having a notched end in engagement with a projection on the neck whereby it is stationarily held within the neck clear of the discharge holes, and an axial rivet connecting the cap and spring to the neck and permitting rotation of the cap upon the neck to open and close the discharge holes and to stop and hold the cap in either position.

1,021,480. POWDER-CAN TOP. FREDERICK REUTTER, Waterbury, Conn., assignor to Scovill Manufacturing Company, Waterbury, Conn., a Corporation of Connecticut. Filed Apr. 15, 1911. Serial No. 621,361. (Cl. 221—64.)



1. A powder can top, having a neck provided with a head having perforations and intermediate stops, a perforated cap inclosing said head, having a flange hugging the neck, and axially riveted to said head so as to turn on the neck, and a spring arranged within the neck next to its head and connected with said cap by its axial rivet to turn therewith and having ends coöperating with the stops to hold the cap against accidental movement in both open and closed positions.

2. A powder can top, having a neck provided with a head having perforations and intermediate stops, a perforated cap inclosing said head, having a flange hugging the neck, and axially riveted to said head so as to turn on the neck, and a spring arranged within the neck next to its head and connected with said cap by its axial rivet to turn therewith and having ends coöperating with the stops to hold the cap against accidental movement in both open and closed positions, said spring ends being equal in number to the number of perforations in the head and cap and serving to open and close the perforations in the head from within the top.

3. A powder can top, having a neck provided with a head having perforations and intermediate stops, a perforated cap inclosing said head, having a flange hugging the neck, and axially riveted to said head so as to turn on the neck, and a spring arranged within the neck next to its head and connected with said cap by its axial rivet to turn therewith and having ends coöperating with the stops, said ends being equal in number to the number of perforations in the head and cap and serving to open and close the perforations in the head from within the top, there being twice as many stops as there are such perforations so as to hold the spring and cap against accidental rotation in either direction.

4. A powder can top, having a perforated head provided with stops, a perforated cap axially riveted to said head to turn thereon, and a spring connected with said cap to turn therewith and having ends coöperating with the stops to hold the cap in a given position, the spring's ends having flared sides.

5. A powder can top, having a perforated head provided with stops, a perforated cap axially riveted to said head to turn thereon, and a spring connected with said cap to turn therewith and having ends coöperating with the stops to hold the cap in a given position, the stops formed as radial depressions in the head extending inwardly and the ends of the spring formed to ride over and engage the same.

[Claim 6 not printed in the Gazette.]

1,021,481. POWDER-CAN TOP. FREDERICK REUTTER, Waterbury, Conn., assignor to Scovill Manufacturing Company, Waterbury, Conn., a Corporation of Connecticut. Filed Apr. 15, 1911. Serial No. 621,362. (Cl. 221—64.)



1. A top for powder cans and other receptacles, comprising a neck having discharge holes arranged in a circle on its end, and stop members alternating with the holes, and a cap having a series of discharge holes adapted to be turned into and out of register with the holes in the neck and also having alternating stop members complemental to the stop members on the neck, the stop members on the neck and cap coöperating with one another to hold the cap in discharging position and said stop members on one part entering the discharge holes of the other part to close said holes and hold the cap in closed position.

2. A top for powder cans and other receptacles, comprising a neck having a series of discharge holes in its end and a series of stop members alternating with the discharge holes, a spring-held cap axially mounted upon the neck and having a series of discharge holes adapted to be turned into and out of register with the holes in the neck and also having in alternation with said holes a series of stop members complemental to the stop members in the neck, the stop members on one part serving to enter and close the discharge holes in the other part.

3. A top for powder cans and other receptacles, having a neck provided with discharge holes and alternating beads, a cap mounted upon said neck and provided with complemental discharge holes and beads, an axial rivet connecting the cap and neck, a bowed spring arranged within the neck upon which the rivet is fixed, means to hold the spring stationary, and a washer interposed between the spring and the top end of the neck.

1,021,482. POWDER-CAN TOP. FREDERICK REUTTER, Waterbury, Conn., assignor to Scovill Manufacturing Company, Waterbury, Conn., a Corporation of Connecticut. Filed Apr. 15, 1911. Serial No. 621,363. (Cl. 221—64.)



1. A top for receptacles, comprising a neck having an end closed save for discharge holes and provided with a series of radial projections arranged in pairs which flank said discharge holes, intervening solid parts between the projections, a cap rotatively mounted upon the neck and having complemental discharge holes, radial projections and solid parts, an axial rivet passed through the cap and neck, a spring within the neck in which the rivet is fixed, and means to hold said spring stationarily in the neck, whereby as the cap is turned the spring permits it to rise and fall under tension so that its projections may ride over those in the neck to bring the holes into alinement with one another or to cover them with the solid parts and in each instance to draw the projections into cap-locking engagement.

2. A top for receptacles, comprising a neck having an end closed save for discharge holes and provided with a series of radial projections arranged in pairs which flank the holes, a cap mounted upon the neck and having complemental hole sand radial projections, there being twice as many radial projections as there are holes so as to leave unperforated spaces between holes, an axial rivet passed through the cap and neck, and a spring within the neck in which the rivet is fixed, and means to hold said spring stationarily in the neck.

3. A top for receptacles, comprising a neck having an end closed save for discharge holes therein, a cap mounted upon said neck and having complemental discharge holes, a spring-held axial rivet connecting the neck and cap, a series of radially arranged complemental stop members on the neck and cap alternating with the discharge holes, and complemental concentric circular projections arranged substantially about the center and rim of the neck and cap.

1,021,483. HINGED CAP FOR POWDER-CANS. FREDERICK REUTTER, Waterbury, Conn., assignor to Scovill Manufacturing Company, Waterbury, Conn., a Corporation of Connecticut. Filed Mar. 17, 1911. Serial No. 615,140. (Cl. 221—62.)



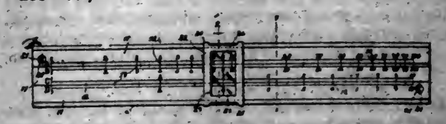
1. A powder can, having a hinged cap for closing its discharge end, the pintle for said hinged cap being oblong in cross-section and located on the discharge end of the can, and the knuckle located on said cap and comprising a depending portion bent about said pintle and conforming substantially to the cross-sectional shape thereof, to thereby cause a binding action between said pintle and knuckle in the opening and closing movements of the cap.

2. A powder can, having a hinged cap for closing its discharge end, the pintle for said hinged cap being oblong in cross-section and formed by an offset integral portion of the discharge end of the can, and the knuckle located on said cap and formed by a depending portion thereof bent about said pintle and conforming to the cross-sectional shape thereof, to thereby cause a binding action between said pintle and knuckle in the opening and closing movements of the cap.

3. A powder can, having a discharge neck fixed to and projecting from the body of the can, a portion of the neck of the can being slitted to form a hinge pintle, an independent lining adapted to be inserted into and frictionally held upon the inside of the neck of the can and covering the slitted portion of said neck, and a cap hinged to the pintle of said neck.

4. A powder can, having a discharge neck, a circumferential bead on said neck of greater width than the thickness of the metal of the can, a portion of the neck at the opposite edges of the bead being slitted and the portion of the bead between said slits forced outwardly to form a hinge pintle oblong in cross-section, a lining within the neck covering the opening at said slitted and offset portion, and a cap having a knuckle hinged to said pintle and substantially conforming to the cross-sectional shape thereof, to thereby cause a binding action between said pintle and knuckle in the closing and opening movements of the cap, said binding action serving to hold the cap open when the contents of the can are being discharged.

1,021,484. SLIDE-RULE. GEORGE W. RICHARDSON, Chicago, Ill. Filed Apr. 3, 1911. Serial No. 618,634. (Cl. 235—70.)



1. In a slide rule, the combination with a stock having parallel upturned marginal flanges, and scales fixed on said flanges, of a resilient curved slide arranged between

said scales and the stock and having its margins frictionally engaging said flanges.

2. In a slide rule, the combination of a stock, parallel scale bearing strips mounted thereon, said strips having their inner edges reduced in thickness, and a convexly curved slide arranged beneath said strips and in contact with said reduced edges of the strip.

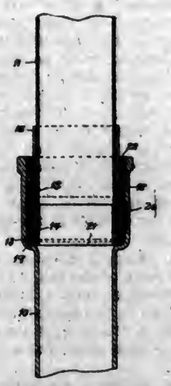
3. In a slide rule, the combination of a plate, parallel scale bearing strips mounted upon said plate, said strips being secured to the plate along one margin and having their free edges chamfered, and a slidable scale bearing member arranged between said strips and the plate.

4. In a slide rule, the combination of a plate forming a stock, parallel scale bearing strips fixed on said plate and spaced therefrom, said strips having their adjacent margins chamfered and a longitudinally curved slide arranged between said strips, said slide comprising a plurality of superposed plates.

5. In a slide rule, the combination with a stock, and parallel scale bearing members fixed thereon, of a resilient curved slide arranged below said members, and a resilient laminated runner mounted on said stock.

[Claims 6 to 15 not printed in the Gazette.]

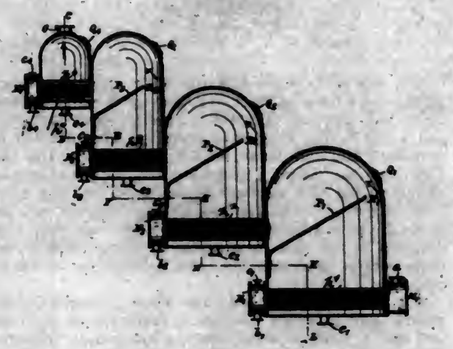
1,021,485. PIPE-COUPLING. DAVID W. ROSS, Boston, Mass. Filed Oct. 10, 1910. Serial No. 586,146. (Cl. 137—29.)



In a pipe joint, the combination with a hard pipe having a bell end provided with an internal annular shoulder and a ductile pipe extending into said bell end, of an inner coupling sleeve having a conical outer surface and an end flange and fitted into the end of the ductile pipe within the bell to expand the same into conical shape, said inner coupling sleeve having its flange resting on the shoulder of the bell end of the hard pipe, an outer coupling sleeve surrounding the end of the ductile pipe within the bell end and provided with an end flange and having a conical portion adjacent said flange, the end flanges of the inner and outer sleeves clamping between them the edge of the conical end portion of the ductile pipe, the outer sleeve extending beyond the open end of the bell end and said sleeve being of smaller diameter than the bell end, and sealing means in said bell end.

1,021,486. EVAPORATING APPARATUS HAVING MULTIPLE EVAPORATION. WACLAW RUSIECKI, Rakitnaja, Russia. Filed Apr. 14, 1911. Serial No. 621,098. (Cl. 127—18.)

1. In an evaporating apparatus of the character described, the combination, with a series of box-like horizontal elements arranged adjacent to each other and step-shaped one above the other, of a system of rectilinear heating tubes arranged transversely of the same and communicating with the preceding chamber, liquid supply pipes connecting each preceding element with the next following element, a liquid supply-pipe for the lowermost element, means for supplying steam to the transverse heating tubes of the lowermost element, and means for conducting the steam away from the heating tubes of all the elements.



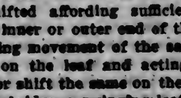
2. In an evaporating apparatus of the character described, the combination with a series of box-like, horizontal elements arranged adjacent to but step-shaped one above the other, of transverse heating tubes arranged in each element and communicating with the next preceding element, liquid supply pipes connecting each preceding element with the next following element, a liquid supply-pipe for the lowermost element, means for supplying steam to the transverse heating tubes of the lowermost element, and means for conducting the steam away from the heating tubes of all the elements, the total cross-section area of the tubes in each element being greater in each following element than in the preceding element.

3. In an evaporating apparatus of the character described, the combination with a series of box-like, horizontal elements, arranged adjacent to but step-shaped one above the other, of a plurality of rectilinear heating tubes arranged transversely in said elements and communicating at one end with the next preceding element, liquid supply pipes connecting each preceding chamber with the next following chamber, a liquid supply-pipe for the lowermost element, means for supplying steam to the transverse heating tubes of the lowermost element, and means for conducting the steam away from the heating tubes of all the elements, the length of the tubes in each element being less in each following element than in the preceding one.

4. In an evaporating apparatus of the character described, the combination, with a series of box-like, horizontal elements arranged adjacent to and step-shaped one above the other, of a plurality of rectilinear heating tubes arranged transversely in said elements and opening at one end into the preceding chamber, valved liquid supply-pipes connecting each preceding chamber with the next following chamber, a liquid supply pipe for the lowermost element, means for supplying steam to the heating tubes of the lowermost element, and means for conducting the steam away from the heating tubes of all the elements, the level of the liquid in each following element being higher than that in each preceding element but below the lowermost tier of heating tubes in the next element.

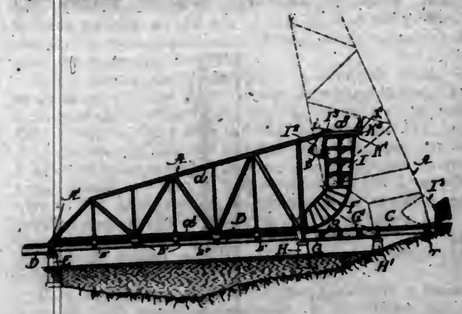
5. In an evaporating apparatus of the character described, the combination, with a series of box-like, horizontal elements arranged adjacent to and step-shaped one above the other, of a plurality of rectilinear heating tubes arranged transversely in said elements and opening at one end into the preceding chamber, valved liquid supply-pipes connecting each preceding chamber with the next following chamber, a liquid supply pipe for the lowermost element, means for supplying steam to the heating tubes of the lowermost element, and means for conducting the steam away from the heating tubes of all the elements, all the elements, with the exception of the uppermost, being provided with inclined baffle-plates extending from the front-walls of the elements toward the upper portions of the same and leaving spaces between them and the walls of the elements for the passage of the vapors from one element to the heating tubes of the next following one.

1,021,487. VALANCE. ROBERT C. SCHEMMEL, Union City, Ind., assignor to Backstay Machine and Leather Company, Union City, Ind. Filed June 6, 1910. Serial No. 565,338. (Cl. 21—62.)



The herein described valance comprising a foundation piece adapted to be disposed against the face of a carriage top bow and also adapted to be tacked to said bow, a covering strip of flexible material stitched to the inner portion of the foundation piece and extending outward from said point of connection and resting in front of the foundation piece, a filling piece arranged at the inner side of the said outwardly extending portion of the covering strip and extending outward beyond the foundation piece and arranged with its inner side flat against the outer side of the foundation piece and also arranged entirely outward beyond said connection, and stitches connecting the outer portion of the said filling piece and the covering strip at a point outward beyond and separated from the outer edge of the foundation piece.

1,021,488. BASCULE-BRIDGE. ALBERT H. SCHERZER, Chicago, Ill. Filed July 30, 1907. Serial No. 386,254. (Cl. 14—39.)



1. In a bascule bridge, the combination with a swinging leaf, of means for swinging the leaf to open and close the bridge, consisting of a shifting counterweight mounted on, and supported solely by, said leaf and movable on the leaf in a manner permitting the shifting of its center of gravity in a direction endwise of the leaf, said counterweight when shifted affording sufficient preponderance of weight at the inner or outer end of the leaf to produce opening and closing movement of the same, and actuating means mounted on the leaf and acting on the counterweight to move or shift the same on the leaf.

2. In a bascule bridge, a swinging leaf comprising longitudinal trusses, a fixed counterweight extending transversely between and rigidly connecting said trusses, and a shifting counterweight.

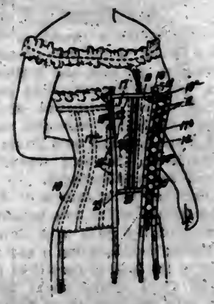
3. In a bascule bridge, a swinging leaf comprising longitudinal trusses, a fixed transverse counterweight extending between and rigidly connecting the trusses and a shifting counterweight located above said fixed counterweight.

4. In a bascule bridge, a swinging leaf comprising longitudinal trusses, fixed lateral counterweights arranged in the planes of the trusses, a fixed counterweight extending transversely between and rigidly connecting the trusses, and a shifting counterweight located between said fixed counterweights above said transverse counterweight.

5. In a bascule bridge, the combination with a swinging leaf, of means for swinging the leaf to open and close the bridge, consisting of a counterweight which is pivotally supported on and is sustained solely by said leaf, and which is adapted to be moved or swung about its pivotal axis in a manner to shift its center of gravity in a horizontal direction and endwise of the leaf, said counterweight when shifted affording sufficient preponderance of weight at the inner or outer end of the leaf to produce opening and closing movement of the same, and actuating means mounted on the leaf and acting on the counterweight to swing or move the same.

[Claims 6 to 11 not printed in the Gazette.]

1,021,489. CORSET. CHARLES H. SCHOPBACH, Aurora, Ill., assignor to International Corset Company, Aurora, Ill., a Corporation of Illinois. Filed Jan. 10, 1912. Serial No. 670,373. (Cl. 2—74.)



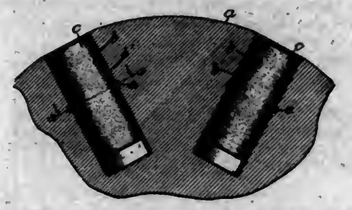
1. In a corset, in combination with a body opening in front and having eyelets adjacent one margin, a stiffening strip spaced from said margin and having eyelets, lacing connecting the eyelets of said stiffening strip with the eyelets adjacent said margin of the corset body, co-acting members of attaching devices carried respectively by said stiffening strip and the other margin of said corset body, a shield member adapted to lie beneath said lacing, said shield member being permanently attached at one lateral margin to the inner surface of the corset body along a line spaced from one margin thereof, and means for detachably connecting the other lateral margin of said shield to the inner surface of said corset body at points spaced from the other margin of said corset body.

2. In a corset, in combination with a body opening in front and having eyelets adjacent one margin, a stiffening strip spaced from said margin and having eyelets, lacing connecting the eyelets of said stiffening strip with the eyelets adjacent said margin of the corset body, coacting members of attaching devices carried respectively by said stiffening strip and the other margin of said corset body, a shield member adapted to lie beneath said lacing, said shield member being provided with vertically extending stiffening members intermediate its lateral margins and with horizontal stiffening members at its upper and lower margins terminating short of its lateral margins, said shield member being permanently attached at one lateral margin to the inner surface of the corset body along a line spaced from one margin thereof and having its other margin free and provided with a vertical stiffening member, and means for detachably connecting the free margin of said shield to the inner surface of said corset body at points spaced from the other margin of said corset body.

1,021,490. BOWLING-BALL. WALTER P. SCULLY, Chicago, Ill. Filed May 18, 1911. Serial No. 628,094. (Cl. 46—4.)

1. A bowling ball having a thumb or finger receiving hole therein and a lining for the hole presenting a friction

face to the interior of the hole, the wall of the hole and said lining being provided with separable engaging retaining members, said lining including a portion of sheet spring metal having a gap therein extending longitudinally of the hole to permit of the contraction of the lining, said sheet spring metal being of such a size as compared with the hole as to require contraction of the sheet spring metal in order to permit of the insertion of the lining within the hole, the sheet spring metal serving, by its resiliency, to expand when properly received within the hole to establish separable engagement between said retaining members.



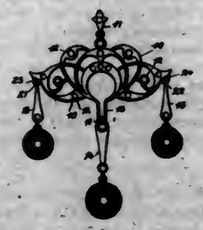
2. A bowling ball having a thumb or finger receiving hole therein and a lining for the hole presenting a friction face to the interior of the hole and including a resilient portion having a gap therein extending longitudinally of the hole to permit of the contraction of the lining and causing the lining to be held in separable engagement with the ball, the wall of the hole and said lining being provided with separable engaging members whereby said lining may be readily removed and replaced.

3. A bowling ball having a thumb or finger receiving hole therein and a lining for the hole presenting a friction face to the interior of the hole, said lining including a portion of sheet spring metal having a gap therein extending longitudinally of the hole to permit of the contraction of the lining, said sheet spring metal being of such a size as compared with the hole as to require contraction of the sheet spring metal in order to permit of the insertion of the lining within the hole, the sheet spring metal serving, by its resiliency, to expand when received within the hole to establish separable engagement between the lining and ball.

4. A bowling ball having a thumb or finger receiving hole therein and a lining for the hole presenting a friction face to the interior of the hole and including a resilient portion having a gap therein extending longitudinally of the hole to permit of the contraction of the lining and causing the lining to be held in separable engagement with the ball.

5. A bowling ball having a thumb or finger receiving hole therein and a lining for the hole presenting a friction face to the interior of the hole and including a portion having a gap therein extending longitudinally of the hole to permit of the contraction of the lining and permitting the lining to be held in separable engagement with the ball.

1,021,491. JEWELRY. ALEXANDER SEOMAN, New York, N. Y. Filed Sept. 23, 1911. Serial No. 650,902. (Cl. 63—21.)



1. A lavalliére, comprising a body member, a plurality of pendants or drops, and means whereby the position of each of the pendants is adjustable relatively to the other pendants and the body member to vary both the length and width of the lavalliére.

2. A lavalliére, comprising a body member, a plurality of pendants, and means whereby the position of each of the pendants is adjustable relatively to the other pendants and the body member.

3. A lavalliére, comprising a body member of any suitable design, a plurality of pendants of any desired design, and means whereby the position of each of the pendants is adjustable relatively to the other pendants and the body member to vary the width of the lavalliére, and certain other of the pendants are adjustable to position to vary the length thereof.

4. A lavalliére, comprising a body member of any suitable design, a central pendant, means whereby said pendant is connected to the body member and the position thereof is adjustable to vary the length of the lavalliére, other pendants on either side of the said central pendant, and means whereby the said other pendants are positively connected to the body member and the positions thereof are adjustable on the body portion to vary the width of the lavalliére.

5. A lavalliére, comprising a body member of any desired design, a loop extending downwardly from the lower central portion of said body member, a pendant, means for securing said pendant in different positions within the said loop to vary the length of the lavalliére, other pendants on the opposite sides of the aforesaid pendant, and means whereby the said other pendants are positively connected to the said body member and the positions thereof are adjustable to vary the width of the lavalliére.

[Claims 6 to 9 not printed in the Gazette.]

1,021,492. WINDOW, &c. JOSEPH B. STRAUSS, Chicago, Ill. Filed Apr. 18, 1910. Serial No. 556,095. (Cl. 189—72.)



1. A device for windows, etc., comprising an outside channel with its flanges projecting toward the sash, an inside plate located on the same side of the web of the channel as the said flanges, an intermediate pinion, toothed racks between the channel and plate engaging said pinion, said racks having projecting parts which project through the space between the channel and plate, said inside plate engaging said racks and acting as a guide therefor, and means for connecting the channel and plate rigidly together.

2. A device for windows, etc., comprising a movable section and a rack connected therewith, a pinion engaging said rack, and two inclosing separated members between which said pinion and rack are mounted, both of said members wider than the pinion and inclosing the rack teeth between them.

3. A device for windows, etc., comprising side frame pieces each made up of two separated parts, a pinion mounted between said parts, said parts wider than the diameter of the pinion and inclosing said pinion, racks between said parts and engaging the pinion, said racks having engaging portions which project between the edges of said parts.

4. A device for windows, etc., comprising a rack and pinion and an inclosing device therefor, consisting of two separated parts wider than the diameter of said pinion.

5. A device for windows, etc., comprising side frame pieces each made up of separated parts, a pinion removably mounted between said parts, both of said parts wider than the diameter of said pinion racks engaging said pinion and means for removing said pinion while said separated parts are in position.

[Claims 6 to 11 not printed in the Gazette.]

1,021,493. ENGINE-STARTER. GERALD S. SUTLIFF, Perry Creek township, Vigo county, Ind. Filed July 8, 1911. Serial No. 637,479. (Cl. 123—185.)



1. An engine starter including a rotatable shaft, a wheel secured to the shaft provided with projections, an arm pivotally mounted adjacent the wheel on the axis thereof and provided with a movable head projectable into the path of the projections to rotate the wheel, a lever pivoted between its ends to the arm, a link pivoted to the lever and also to the movable head, and means connected to the lever for projecting the head.

2. An engine starter including a rotatable shaft, a wheel secured to the shaft having projections thereon, an arm pivotally mounted adjacent the wheel on the axis thereof and having a segment of a pulley on one end portion thereof, the opposite end portion of the arm having a head mounted movably thereon, a lever pivoted on the arm adjacent the head, a link connected to the lever and also to the head, two cables connected to opposite end portions respectively of the lever and in operation of the arm and lever alternately pulling in contact with the segment of the pulley, and an operating lever pivotally supported and connected with the two cables.

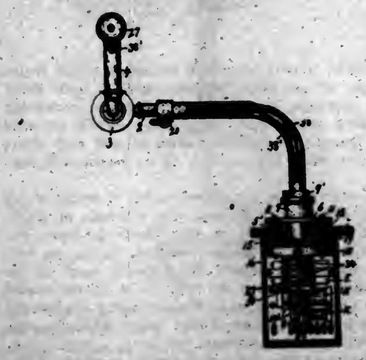
3. In an engine starter, the combination with a frame, a crank shaft rotatably supported on the frame, and a wheel mounted on and adapted to rotate the crank shaft in one direction, the wheel having a plurality of projections thereon, of an arm pivotally mounted adjacent the wheel on the rotative axis of the crank shaft and having a head movably mounted thereon and projectable into the path of the projections for rotating the wheel forward, a retracting bar mounted on the frame to be engaged by the head for moving the same from the path of the projections, a lever pivoted to the arm, a link connected to the lever and the head, and means connected with the lever for moving the arm.

4. In an engine starter, the combination with a frame, a crank shaft rotatably supported on the frame, and a wheel secured to the crank shaft and provided with projections, of an axial shaft supported by the frame in alinement with the crank shaft, an arm pivotally supported on the axial shaft and provided with a stop device, a lever pivoted to the arm and movable to the stop device, a head movably mounted on the arm and projectable to the path of the projections, a link pivoted to the lever and also to the head, a cable connected to the lever adjacent the link, and a cable connected to the lever beyond the pivot thereof.

5. In an engine starter, the combination with a frame, of a crank shaft rotatably mounted on the frame and having a squared end, a hollow shaft secured to the frame in alinement with the crank shaft, a fly-wheel secured to the crank shaft and extending rotatably onto the hollow shaft, the fly-wheel having projections thereon, an arm pivotally mounted on the hollow shaft and having a guide bar thereon, a head on the guide bar and movable to the path of the projections, a lever pivoted to the arm, a link pivoted to the lever and also to the head, and means connected to the lever for moving the head.

[Claim 6 not printed in the Gazette.]

1,021,494. TELEPHONE SYSTEM. SAMUEL LEWIS VAN AKIN, Jr., Liverpool, N. Y. Filed Feb. 2, 1910. Serial No. 541,588. (Cl. 179—149.)



1. In a telephonic system, a rotary support, a hollow receiver arm mounted on the support, a receiver mounted upon the receiving arm, a slip-ring on the rotary support and circuit connections between the slip-ring and receiver and extending through the receiver arm.

2. In a telephonic system, a rotary tubular support and a hollow receiver arm pivoted thereto, a receiver on said arm, a transmitter on the support at its junction with the receiver arm, ball and socket connections between the receiver and arm whereby the receiver may be oscillated in any direction, slip-rings on the support and circuit connections leading from the slip-rings to the transmitter and to the receiver.

3. In a telephonic system, a hollow arm mounted for rotary movement, a transmitter and a receiver carried by said arm, a slip ring rotating with the arm, a brush contacting with the ring, and circuit connections for the receiver and transmitter passed through said arm, one at least of said connections being connected to the slip ring.

4. In a telephonic system, a hollow arm mounted for horisontal rotary movement, a transmitter carried by the arm, a slip ring rotatable with said arm, a brush in contact with the slip ring, and circuit connections between the slip ring and transmitter passing through the hollow arm.

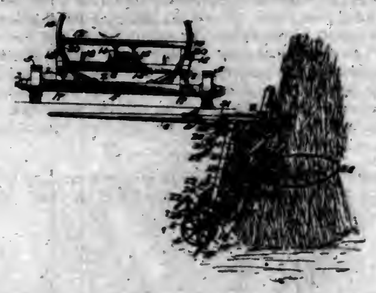
5. In a telephonic system, a hollow arm mounted for rotary movement, a transmitter mounted on the arm, a hollow receiver arm mounted for swinging movement upon the first named arm, a receiver on the receiver arm, slip rings rotating with the first named arm, brushes contacting with the slip rings, and circuit connections passed through the hollow arms and connecting the slip rings to the transmitter and to the receiver.

[Claims 6 to 8 not printed in the Gazette.]

1,021,495. SHOCK-MOVER. PETER VOELLINGER, Belleville, Ill. Filed Dec. 27, 1910. Serial No. 599,580. (Cl. 21—65.)

1. In a device of the character stated, a truck frame supported on wheels near its rear end, a rock shaft mount-

ed in bearings in said frame, a tongue connected with said rock shaft, and coöperating means on said tongue and frame upon opposite sides of said rock shaft for engagement when the truck is in its horisontal position.



2. In a device of the character stated, a truck frame supported on wheels near its rear end, a rock shaft mounted in bearings in said frame, a tongue connected with said rock shaft, and coöperating means on said tongue and frame upon opposite sides of said rock shaft for engagement when the truck is in its horisontal position.

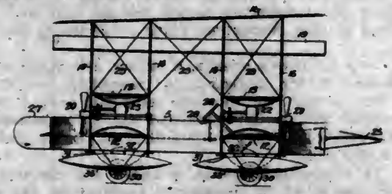
3. In a device of the character stated, a truck frame supported on wheels near its rear end, a tongue pivotally connected to the front end of said frame to allow the latter to be tilted into an upright position, and means carried by the tongue to support the forward ends of the sills of the said frame when the truck is in its horizontal position, the rear end of said tongue being shouldered to bear upon a cross member of said frame when the latter is in such horisontal position.

4. In a device of the character stated, a truck frame provided with a pivoted tongue and stakes rotatably mounted upon the rear end of said frame, said stakes being divergently supported with their upper portions laterally bent.

5. In a device of the character stated, a truck frame provided with a pivoted tongue, arched plates and sockets both rising from said frame, and shock embracing stakes mounted in said arched plates and having ends supported in said sockets and adapted to rotate laterally in said sockets and plates.

[Claim 6 not printed in the Gazette.]

1,021,496. FLYING-MACHINE. MICHAEL H. WHALEN, New York, N. Y. Filed Dec. 30, 1911. Serial No. 668,603. (Cl. 244—14.)



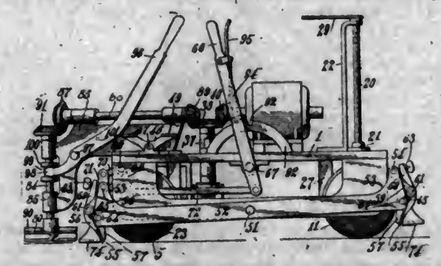
1. In a flying machine, the combination with a body portion, of divided planes extending from each side of the body portion, a convex plane above the body, an inclined plane above the convex plane, deflecting means, steering means, and propellers operated by motors.

2. In a flying machine, the combination with a body, of planes extending from the sides of the body, propellers carried by the said planes, uprights extending from the planes and body, an inclined plane at the upper end of the uprights, a convex plane beneath the inclined plane, a deflector, a rudder, and motors for the propellers.

3. In a flying machine, the combination with a body mounted on wheels, lateral planes at each side of the body, propellers journaled in the planes, uprights attached to the body, uprights carried by the lateral planes, an inclined plane at the top of the uprights, a convex plane beneath same, a deflector, a rudder, means for operating the rudder and the deflector, and engines for driving the propellers.

4. In a flying machine, the combination with a body extending the length of same, lateral planes on each side of the body, braces connecting the same, propellers carried by the planes, uprights carried by the body and by the planes, an inclined plane extending the length of the machine and carried by the uprights, a convex plane beneath same, motors for the propellers, a deflector, a rudder, wheels and springs for the body, cross bars beneath the body, pontoons beneath the cross bars and guys connecting the axles of the wheels with the outer ends of the lower planes to support the pontoons.

1,021,497. FLOOR-SCRAPING MACHINE. CHARLES T. WOODRUFF, Urbana, Ohio. Filed Oct. 14, 1911. Serial No. 654,572. (Cl. 144—115.)



1. In a machine of the type specified, the combination with a frame-work, and a longitudinal bar mounted on each side of said framework and pivoted at its center to said frame-work, of clamping frames mounted on the ends of said bars, scraping blades mounted in said clamping frames, and a lever connected to said bars to rock the same on their pivots, whereby only one of said scraping blades may be in engagement with the floor at a time.

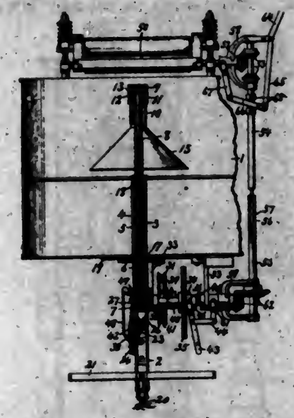
2. In a machine of the type specified, the combination with a frame-work, and longitudinal bars pivoted at their centers to said frame-work, of clamping frames pivotally mounted on the ends of said bars, scraping blades mounted in said clamping frames, said clamping frames being adapted to be swung upwardly to permit the removal of said blades, and means for rocking said bars on their pivots to permit one or the other of said blades to engage the floor.

3. In a machine of the type specified; the combination with a frame work; of longitudinal bars pivoted to said frame work; of a clamping frame pivotally mounted on said bars; a scraping blade mounted in said clamping frame, said clamping frame being adapted to be swung upwardly to permit of the removal of the blade; and means for rocking said bars on their pivots to permit the scraping blade to engage and disengage the floor.

4. In a machine of the type specified; the combination with a frame work; of longitudinal bars pivoted at their centers to said frame work; of clamping frames pivotally mounted on the ends of said bars; a scraping blade mounted in each clamping frame; a plate mounted on each clamping frame in front of the blades and adapted to engage the floor to guide the blades; and means for rocking said bars.

5. In a machine of the type specified; the combination with a frame work; of longitudinal bars pivoted to said frame work; of a clamping frame pivotally mounted on said bars; a scraping blade mounted in said clamping frame, said clamping frame being adapted to be swung upwardly to permit of the removal of the blade; a plate mounted on said clamping frame in front of the blade and adapted to engage the floor to guide the blade; and means for rocking said bars.

1,021,498. LAUNDRYING-MACHINE. WALTER J. ZUILL, Syracuse, N. Y. Filed May 3, 1910. Serial No. 559,168. (Cl. 68—19.)



1. In a laundrying machine, a vat, a plunger extending through the bottom of the vat, a yoke mounted on the plunger and movable relatively thereto, a piston mounted on the yoke, spring connections between the plunger and yoke, and means connected to the plunger for reciprocating the same.

2. In a laundrying machine, a vat, a piston movable in the vat, means extending through the bottom of the vat for reciprocating the piston, said piston having an independent vertical movement relatively to said operating means and a ratchet and pawl action for rotating the piston as it is reciprocated.

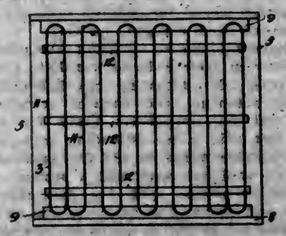
3. In a laundrying machine, a vat, a piston movable in the vat, means extending through the bottom of the vat for reciprocating the piston, and further means for intermittingly shifting the position of the piston circumferentially of the vat.

4. In a laundrying machine, a vat, a plunger extending through the bottom of the vat, a yoke on the plunger, pistons secured to said yoke and movable within the vat, means for reciprocating said plunger, and additional means for intermittingly rotating the plunger to change the positions of the pistons circumferentially of the vat.

5. In a laundrying machine, a vat having a tubular guide extending through the bottom thereof, a plunger movable in the guide, a yoke on the plunger, pistons mounted on the yoke and movable in the vat, yielding connections between the plunger and yoke, means applied to the lower end of the plunger for reciprocating the same, and additional means for intermittingly rotating the plunger to shift the positions of the pistons circumferentially of the vat.

[Claims 6 and 7 not printed in the Gazette.]

1,021,499. BROILER FOR GAS-STOVES. JULIETTE ARDEN, New York, N. Y. Filed Oct. 7, 1910. Serial No. 585,734. (Cl. 53—5.)



A broiler, comprising in combination, a pan and a gridiron, the latter having a substantially plane under surface devoid of such downward projections as would be likely to cause grease running down them to ignite the juices in the pan, the gridiron being supported by the walls of the pan at or near the top thereof, and the minimum distance from the under surface of the gridiron to the bottom of the pan being not less than two inches.

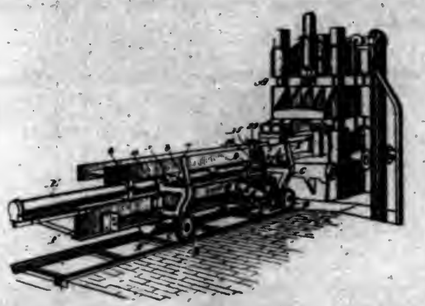
1,021,500. DISINFECTING APPARATUS. FORBES R. BENSINGER, Franklin, Pa., assignor to The Kretol Company, Inc., Washington, D. C., a Corporation of Delaware. Filed Oct. 3, 1911. Serial No. 652,477. (Cl. 4—30.)



1. The combination with a flush tank, of a disinfectant container associated therewith, and an automatic discharge device extending downwardly from the bottom of said container, such device comprising an imperforate tube, the bore of the lower portion of said tube being enlarged to form a valve chamber, and the upper end of such chamber constituting a valve seat, such enlarged bore being provided with integral screw threads extending to the end of the tube, a similarly threaded plug fitting such enlarged bore and constituting another valve seat, the distance between said seats being adjustable by screwing said plug more or less into the bore of the tube, a valve located in said chamber between said seats said plug having an axial opening, a valve stem secured to said valve and extending downwardly through such opening, said stem being smaller than said opening, whereby a space for liquid flow is provided, said plug being of greater diameter than said valve, whereby such valve may be taken out by removing the plug, and a float carried by the lower end of said valve stem and adapted to move said valve into engagement with one or the other of said seats.

2. The combination with a flush tank, of a disinfectant container associated therewith, and an automatic discharge device extending downwardly from the bottom of said container, such device comprising a socket secured to the bottom of said container, such socket being internally screw-threaded, an imperforate tube having its upper end screw threaded into said socket, the bore of the lower portion of said tube being enlarged to form a valve chamber, and the upper end of such chamber constituting a valve seat, such enlarged bore being provided with internal screw threads extending to the end of the tube, a similarly threaded plug fitting such enlarged bore and constituting another valve seat, the distance between said seats being adjustable by screwing said plug more or less into the bore of the tube, a valve located in said chamber between said seats, said plug having an axial opening, a valve stem secured to said valve and extending downwardly through such opening, said stem being smaller than said opening, whereby a space for liquid flow is provided, said plug being of greater diameter than said valve, whereby such valve may be taken out by removing the plug, and a float carried by the lower end of said valve stem and adapted to move said valve into engagement with one or the other of said seats.

1,021,501. FEEDING MECHANISM FOR HYDRAULIC PRESSES. WILLIAM P. BETTENDORF, Davenport, Iowa; J. W. Bettendorf administrator of said William P. Bettendorf, deceased. Filed Oct. 25, 1909. Serial No. 524,467. (Cl. 78—96.)



1. Means for feeding heavy work to machines, consisting of a suitable truck, a longitudinally disposed cylinder, means constituting a part of said truck to which said cylinder is secured, a stationary piston and piston-head therefor within the piston and means for alternately supplying the actuating gas or fluid on one side of said head and simultaneously exhausting it from the other and vice versa.

2. Means for feeding heavy work to machines, comprising a suitable truck, a longitudinally disposed cylinder, means constituting a part of said truck to which said cylinder is secured, a stationary hollow piston, having a port near its outer end and a port near its inner end, a piston-head secured on and closing the inner end of said hollow piston, and a hollow tube extending through said piston to which it is closed and through the piston-head, and means for supplying the actuating gas or fluid through said piston to one side of said piston-head, and exhausting it from the other side through said tube and vice versa.

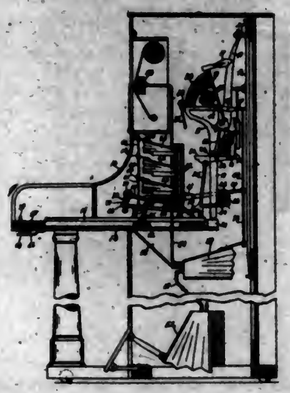
3. A truck for feeding heavy work to machines comprising wheels, bolsters, and a reach for connecting said bolsters, in combination with a longitudinally disposed cylinder, means constituting a part of said truck to which said cylinder is secured, a stationary piston and piston-head within said cylinder, means for supplying the actuating fluid on one side of said piston-head and exhausting it from the other and devices for retaining the work on said truck in a horisontal or vertical position.

4. A truck for feeding heavy work to machines comprising wheels, bolsters, and a reach for connecting said bolsters, in combination with a longitudinally disposed cylinder, means constituting a part of said truck to which said cylinder is secured, a stationary piston and piston-head within said cylinder, means for supplying the actuating fluid on one side of said piston-head and exhausting it from the other and pneumatically actuated devices for retaining the work on said truck in a horisontal or vertical position.

5. A truck for feeding heavy work to machines comprising wheels, bolsters, and a reach for connecting said bolsters, in combination with a longitudinally disposed cylinder, means constituting a part of said truck to which said cylinder is secured, a stationary piston and piston-head within said cylinder, means for supplying the actuating fluid on one side of said piston-head and exhausting it from the other, a rocking-cylinder carried by said truck, a piston reciprocable therein, devices secured to the outer end of said piston for moving the work transversely and retaining the work in the positions to which it has been moved, longitudinally disposed pipes secured to said truck and stationary pipes telescoping into the same for supplying the motive fluid to one end of said cylinder and exhausting the said fluid from the opposite end thereof.

[Claims 6 to 10 not printed in the Gazette.]

1,021,502. PNEUMATIC PIANO. WILLIAM G. BETZ, Chicago Heights, Ill., assignor to Steger & Sons Piano Manufacturing Company, Chicago, Ill., a Corporation. Filed Jan. 7, 1911. Serial No. 601,450. (Cl. 84—160.)



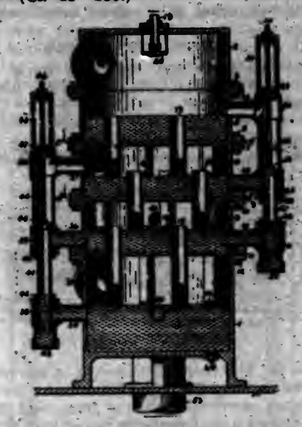
1. A pneumatic piano including hammers, pneumatic elements, a lever operated by each pneumatic element for operating its corresponding hammer, a hammer rest rail, pneumatically controlled means for actuating the hammer rest rail, levers operated by the means for actuating the hammer rest rail and a rod arranged transversely of the piano and actuated by said levers for adjusting all of the levers which are actuated by the pneumatic elements for taking up the lost motion of the parts of the action when the hammer rest rail is actuated.

2. A pneumatic piano including hammers, a pneumatic frame, pneumatic elements secured thereto, a lever for each pneumatic element, a connection between each pneumatic element and its corresponding lever for operating the latter, means actuated by each of said levers for operating the corresponding hammers, a hammer rest rail, pneumatically controlled means for actuating the hammer rest rail, levers pivoted between their ends to the pneumatic frame in position to be actuated by said means for actuating the hammer rest rail, levers fulcrumed between their ends to the lower pneumatic elements and pivoted at one end to said last mentioned levers, and a rod carried by the outer end of the levers pivoted in the pneumatic elements in position to engage the levers actuated by the pneumatic elements so that when the hammer rest rail is actuated the levers actuated by the pneumatic elements will be moved so as to overcome the lost motion of parts of the action.

3. A pneumatic piano including hammers, levers fulcrumed between their ends, intermediate means actuated by the levers for actuating the hammers, pneumatic means for actuating said hammer actuating levers, a hammer rest rail, means for actuating the hammer rest rail, means in adjustable engagement with the free ends of said levers for preventing lost motion of said levers and the parts of the action, and means actuated by the hammer rest rail actuating means for holding said lost motion preventing means in an engaging position.

4. A pneumatic piano including hammers, levers fulcrumed between their ends, intermediate means actuated by the levers for actuating the hammers, pneumatic means for actuating said hammer actuating levers, a hammer rest rail, pneumatic means for actuating the hammer rest rail, a rod extending transversely of the piano, adjustable means in the free ends of said levers upon which said rod rests, and a system of levers fulcrumed in connection with the pneumatic means for actuating said first-mentioned levers and actuated by the hammer rest rail actuating means for moving and holding said rod in its downward position.

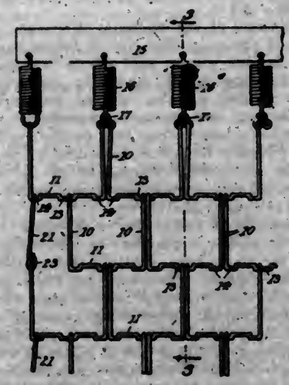
1,021,503. GAS-PURIFIER. WILLIAM C. BUTTERWORTH, Platteville, Wis. Filed June 18, 1910. Serial No. 567,644. (Cl. 48—130.)



1. A gas purifier, comprising a plurality of sections located one above the other and having means for conducting gas from one to the other, a plurality of water conducting tubes extending from one side of the sections, a stationary vertical pipe connecting the upper of the tubes, a vertically sliding pipe connecting the lower of the tubes and having its upper end sliding in the stationary vertical pipe, and means for adjusting the vertically sliding pipe.

2. A gas purifier, comprising a plurality of sections located one above the other and having horisontal partitions between them, vertical pipes located in the partitions and extending above and below the same, said pipes terminating short of the adjacent partitions and having lateral openings in their lower ends, a plurality of water-conducting tubes extending from one side of the sections, a stationary vertical pipe connecting the upper of the tubes, a vertical sliding tube connecting the lower of the tubes and having its upper end sliding in the stationary vertical pipe, and means mounted on the upper end of the stationary vertical pipe for adjusting the sliding pipe, said means including a stem extending through the stationary pipe and connected to the upper end of the sliding pipe.

1,021,504. BED-BOTTOM FABRIC. JACOB CHAYES, Brooklyn, N. Y. Filed Nov. 1, 1911. Serial No. 657,961. (Cl. 245—5.)



1. A wire fabric composed of parallel series of substantially U-shaped links having lateral shanks with terminal eyes and a connecting cross-bar having central and end recesses, the shank-eyes engaging the central recesses of adjoining links in one adjacent row, and the central recess of the cross-bar being engaged by the terminal shank-eyes of adjoining links in the opposite adjacent row, and a number of wire rods engaging the marginal end recesses of the cross-bars.

2. A wire fabric composed of parallel series of substantially U-shaped links having lateral shanks with elongated terminal eyes and a connecting cross-bar having central and end recesses, the elongated shank-eyes engaging the central recesses of adjoining links in one adjacent row, and the central recess of the cross-bar being engaged by the elongated terminal shank-eyes of adjoining links in the opposite adjacent row, and a number of wire rods engaging the marginal end recesses of the cross-bars.

1,021,505. AUTOMATIC CONTROLLING APPARATUS FOR STEAM-HEATING SYSTEMS. FRANK F. COGGIN, Matawan, N. J., and EGBERT H. GOLD, Chicago, Ill. Filed July 15, 1910. Serial No. 572,144. (Cl. 236—8.)



1. Controlling apparatus for steam heating systems comprising in combination a main steam valve having a steam passage way therethrough, an auxiliary valve to control said passage way, a pressure chamber communicating with said steam passage way and constructed so that the pressure therein actuates the movement of said main valve, a thermostat and an inclosed body of pressure transmitting fluid which is substantially non-expansible at ordinary temperatures operatively interposed between said thermostat and said auxiliary valve.

2. Controlling apparatus for steam heating systems comprising in combination a main steam valve having a steam passage way therethrough, an auxiliary valve to control said passage way, a pressure chamber communicating with said steam passage way and constructed so that the pressure therein actuates the movement of said main valve, a thermostat which governs said auxiliary valve, and a relief valve for said pressure chamber which opens when said auxiliary valve closes and vice versa.

3. Controlling apparatus for steam heating systems comprising in combination a main steam valve having a steam passage therethrough, a diaphragm which carries said main valve, means constituting a pressure chamber adjacent said diaphragm which communicates with said steam passage way, an auxiliary valve controlling said passage way, a relief valve for said pressure chamber which closes when the auxiliary valve opens and vice versa, and means for opening and closing said auxiliary valve.

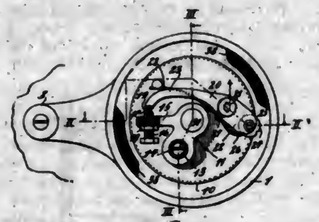
4. Controlling apparatus for steam heating systems comprising in combination a main steam valve having a steam passage therethrough, a diaphragm which carries said main valve, means constituting a pressure chamber adjacent said diaphragm which communicates with said steam passage way, an auxiliary valve controlling said passage way, a relief valve for said pressure chamber which closes when the auxiliary valve opens and vice versa, and means for opening and closing said auxiliary valve comprising a thermostat located in the apartment heated by said radiator.

5. Controlling apparatus for steam heating systems comprising in combination a main steam valve having a steam passage therethrough, a diaphragm which carries

said main valve, means constituting a pressure chamber adjacent said diaphragm which communicates with said steam passage way, an auxiliary valve controlling said passage way, a relief valve for said pressure chamber which closes when the auxiliary valve opens and vice versa, means for opening and closing said auxiliary valve comprising a thermostat located in the apartment heated by said radiator, and an inclosed body of pressure transmitting fluid which is substantially nonexpansible at ordinary temperatures interposed between said thermostat and said auxiliary valve.

[Claims 6 to 10 not printed in the Gazette.]

1,021,506. CIRCUIT-BREAKER FOR MAGNETOS AND THE LIKE. RICHARD H. CUNNINGHAM, New York, N. Y. Filed Feb. 8, 1911. Serial No. 607,269. (Cl. 123—166.)



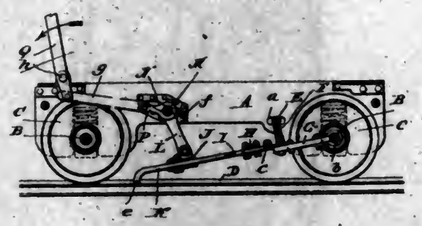
1. In a circuit breaker, a support rotatable about an axis and adapted to be carried upon the extremity of a shaft, a bracket carried by said support, a contact element adjustably mounted in said bracket, a lever of the first class pivotally connected to said support, said lever having one arm thereof heavier than the other, a part adapted to contact with the fixed element carried by the lighter arm of said lever being adapted to be rotated about its pivoted axis by centrifugal force when the support is rotated, and said contact elements being thereby normally held in contact, and means for separating said elements at determined intervals during the rotation of said support.

2. In a circuit breaker, a support rotatable about an axis and adapted to be carried upon the extremity of a shaft, a bracket carried by said support, a contact element adjustably mounted in said bracket, a lever of the first class pivotally connected to said support, said lever having one arm thereof weighted heavier than the other, a part adapted to contact, with the contact element aforesaid, said part being carried by the lighter arm of the lever, said lever being adapted to be rotated about its pivotal axis by centrifugal force when the support is rotated and said contact elements being thereby normally held in contact, means for separating said elements at determined intervals during the rotation of said support, and means for insulating said lever from said bracket.

3. In an electric circuit controlling device, a rotatable support, a lever of the first class pivoted thereupon, contacting means operable by said lever, one of the arms of said lever being weighted heavier than the other, said lever being rotatable about its pivotal axis into its circuit closing position by the action of centrifugal force when said support is rotated, a spring attached to said lever and normally urging said lever into the said circuit closing position, the action of said spring being supplemented by the centrifugal action aforesaid, and means for forcing said lever into open circuit position.

4. In an electric circuit controlling device, a rotatable support, a lever of the first class pivoted thereupon, contacting means operable by said lever, one of the arms of said lever being weighted heavier than the other, said lever being rotatable about its pivotal axis into its circuit closing position by the action of centrifugal force when said support is rotated, a spring attached to said lever normally urging said lever into the said circuit closing position, the action of said spring being supplemented by the centrifugal action aforesaid, and means for forcing said lever into open-circuit position, said means comprising a spring-held notched roller carried by said lever and a cam relatively fixed with respect to said support.

1,021,507. RAIL-BRAKE. JOHN C. DALE, Manhattan, Kans. Filed Sept. 11, 1911. Serial No. 648,612. (Cl. 188—48.)



1. In a rail brake, the combination of a frame equipped with an axle and wheels, bars supported at one end on the axle, hangers connected with the frame and the forward portions of said bars, transverse spaced bars hinged to and adapted to be swung up and down on the forward portions of the first-named bars, wedges pivoted between and extending forward from said spaced bars, transverse spaced bars disposed in front of the first-named transverse spaced bars and receiving between them the wedges, rail-engaging clutches pivoted between the second-named transverse bars and disposed at opposite sides of the wedges, upwardly and forwardly inclined guiding means carried by the frame, a transverse bar movable bodily in said guiding means, links connecting said bar and the second-named transverse spaced bars, a lever fulcrumed on the frame, and a connection intermediate the lower arm of said lever and the bodily movable bar.

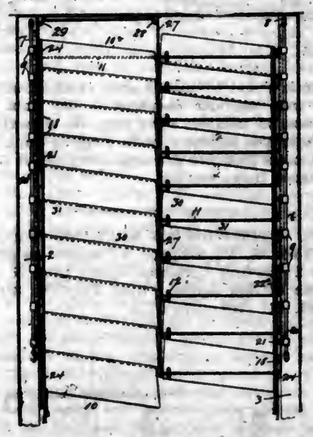
2. In a rail brake, the combination of a frame equipped with an axle and wheels, supporting means connected with said frame and axle, wedges, vertically swinging means carrying the wedges and hinged to said supporting means, vertically movable means receiving the forward portions of the wedges, clutches pivoted in said vertically movable means and disposed at opposite sides of the wedges, upwardly and forwardly inclined guiding means carried by the frame, a transverse bar movable bodily in said guiding means and connected with said vertically movable means, and means for so moving said transverse bar.

1,021,508. AWNING. AUGUSTUS M. DAUBENHEIM, New York, N. Y. Filed May 5, 1911. Serial No. 625,180. (Cl. 156—43.)

1. An awning of the character described, embodying a plurality of planes, a plurality of converging supporting elements for the planes, said supporting elements being adapted to support the planes in converging relation when the awning is down, and in overlapping relation when folded up, said planes being arranged to be rocked on substantially longitudinal axes on their said supporting elements whereby they may be placed at various angles relative to the general disposition of the awning, and means for guiding said supporting elements during the operation of folding the planes.

2. An awning of the character described, embodying a plurality of planes, a plurality of converging supporting elements for the planes, said supporting elements being adapted to support the planes in converging relation when the awning is down and in overlapping relation when folded up, said planes being arranged to be rocked on substantially longitudinal axes on their said supporting elements whereby they may be placed at various angles relative to the general disposition of the awning, flexible means for adjusting the planes at various angles on their axes, and means for guiding said supporting elements during the operation of folding the planes.

3. An awning of the character described, embodying a plurality of planes, a plurality of movable converging supporting elements for the planes, on which the said planes are arranged in diverging pairs, and of increasing length from top to the bottom of the awning, said supporting elements being arranged to support the planes in converging relation when the awning is down and in overlapping relation when folded up, said planes being arranged to be rocked relative to their supports upon substantially longitudinal axes whereby they may be placed at various angles relative to the general disposition of the awning, and means for guiding said supports.



4. An awning of the character described, embodying a plurality of planes, a plurality of movable converging supporting elements for the planes, adapted to support the planes in converging relation when the awning is down and in overlapping relation when folded up, said planes being arranged to be rocked relative to their supports upon substantially longitudinal axes whereby they may be placed at various angles relative to the general disposition of the awning, and arranged to fall in overlapping relation when swung to an upright position, and means for swinging said planes on their axes.

5. An awning of the character described, composed of diverging supports arranged to swing and to slide, planes arranged in converging pairs upon said supports and adapted to swing on their supports on substantially longitudinal axes, said planes being adapted to be swung upon their axes to different inclinations relative to the general disposition of the awning and to lie in overlapping relation when the said supports are moved to close the awning, the planes of one diverging side of the awning being adapted to be swung independently of those of the other and means for swinging the planes on each side of the awning independently.

[Claims 6 to 15 not printed in the Gazette.]

1,021,509. APPARATUS FOR ROASTING AND SINTERING ORES. ARTHUR S. DWIGHT, New York, N. Y., assignor, by mesne assignments, to Dwight and Lloyd Metallurgical Company, Jersey City, N. J., a Corporation of New Jersey. Filed Apr. 17, 1907. Serial No. 368,675. Renewed Jan. 21, 1910. Serial No. 539,814. (Cl. 75—60.)

1. In an apparatus for treating ores and metal bearing materials, the combination of a support for the material having gas passages, means for igniting the material while on the support on the lower side of the mass, and a substantially horizontally arranged retaining device for the upper part of the material having gas exit passages, substantially as set forth.

2. In an apparatus for treating ores or metal bearing materials, an ore holder having approximately vertical walls or supports between which a mass or layer of the ore can be arranged, and having for the upper and lower surfaces of said mass substantially horizontally arranged retaining devices adapted to prevent the displacement or agitation of the material and provided with gas inlet and gas exit passages, and means arranged below the lower retaining device for igniting the ore, substantially as set forth.



3. In an apparatus for treating metal bearing materials, the combination of a traveling support for the material, means for delivering air to the lower part of the said material whereby combustion can be started and supported in said lower part, and means for holding or restraining in quiescence the particles in the upper part of the mass of material when it is moving bodily, substantially as set forth.

4. In an apparatus for treating ores or metal bearing materials, the combination of a traveling support for the ore, means for delivering air to that part of the same which is adjacent to the support, said support having a section for the reception of crude ore, a section for the support and delivery of sinter, and a section intermediate of the two sections aforesaid whereon the ore can be treated, and means opposite to the last said section for restraining the opposite part of the ore against agitation or disturbance, substantially as set forth.

5. In an apparatus for treating ores or metal bearing materials, the combination of an endless support for a layer or stream of ore adapted to deliver air or gas to the interior of the body of said layer, and an endless restraining device adapted to contact with the mass of ore in opposition to the supporting device, said restraining device being movable in the direction of the support, substantially as set forth.

[Claims 6 to 18 not printed in the Gazette.]

1,021,510. ATTACHMENT FOR SHOE-HEELS. JOHN A. ENRIGHT, Columbus, Ohio. Filed Apr. 14, 1911. Serial No. 621,070. (Cl. 36—35.)



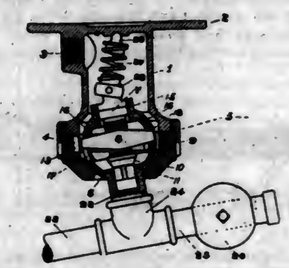
1. A heel cushioning device comprising a bowed plate of resilient material connected at one end to the shoe and carrying the heel proper upon its other end.

2. A heel cushioning device comprising a metallic base plate carrying the heel proper upon one end, and an extension thereon at the other end for connection to the shoe.

3. A heel cushioning device comprising a base plate of bowed resilient material and carrying a heel, an extension on one end of said plate for attachment to the shoe, and means at the opposite end of said plate and on the shoe for limiting the spreading action of said plate with respect to said shoe.

4. A heel cushioning device comprising a split heel, an upwardly curved flange on the forward edge of the upper portion of said split heel, a plate secured to said upwardly curved flange and extending rearwardly in substantially parallelism with the said upper portion of said heel, the lower portion of said heel carried by said plate, and means on said plate and on the upper portion of said heel for limiting spreading action of the said plate with respect to said upper portion.

1,021,511. VALVE. CHARLES G. ESHELMAN, Franklin, Pa. Filed Feb. 2, 1911. Serial No. 606,156. (Cl. 137—14.)



1. A valve, consisting of an inverted, cup-shaped casing, a fluid-inlet in said casing, a cap for said casing, having a central opening therein, a plunger-cage seated in said cap and arranged to revolve horizontally and to oscillate therein, a fluid-outlet for said cage, a plunger longitudinally operable in said cage and arranged to open and close said fluid-outlet, and a plunger-actuating lever arranged to be operated by the oscillation of said cage.

2. A valve consisting of a cup-shaped body, having a fluid-inlet, a cap for said body having a central opening therein, a plunger-cage seated in said cap, arranged to revolve and to oscillate therein, a nipple upon said cage arranged to project through the opening in said cap and forming a fluid outlet, a plunger longitudinally operable in said cage arranged to open and to close said outlet, a plunger-actuating lever engaging said plunger and arranged to be actuated by the oscillation of said cage, and means for automatically carrying said cage to either limit of its oscillation.

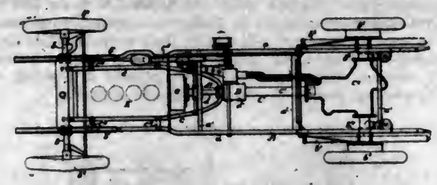
3. A valve of the class specified consisting of a cylindrical body closed at the upper end and having the lower end adapted for the attachment of a cap, there being a fluid inlet in said body, a cap attached to the lower end of said body, there being a central opening in said cap, a horizontally-revoluble plunger-cage seated in said cap arranged to oscillate therein, said cage being provided with a water-outlet consisting of a nipple arranged to project through the opening in said cap, a T attached to said nipple with two of its branches positioned horizontally, a pipe attached to one of said branches, an arm attached to the other branch, a counterweight mounted upon said arm, a plunger longitudinally operable in said cage arranged to open and to close said water outlet, an operating-lever engaging said plunger and arranged to be actuated by the oscillation of said cage, and means for carrying said cage to either limit of its oscillation.

4. A valve consisting of a casing having a fluid inlet, a spherical housing positioned in said casing and operable therein, there being fluid inlets and a fluid outlet in said housing, said fluid outlet being provided with means for the attachment of a fluid conduit, a closure for said fluid outlet and means actuated by the oscillation of said housing for operating said closure.

1,021,512. MOTOR-VEHICLE FRAME. POWELL EVANS, Philadelphia, Pa. Filed May 7, 1907. Serial No. 732,332. (Cl. 21—90.)

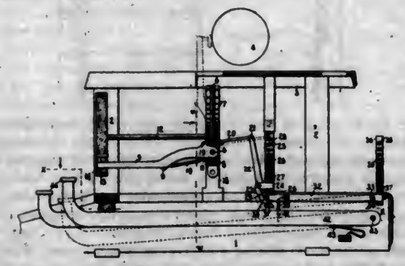
1. The combination of the front and rear axles; a main frame; springs respectively mounted between the axles and said frame; an auxiliary frame consisting of a gear case rotatably mounted on the rear axle, a tubular shaft container rigidly connected to the gear case, a casing rotatably mounted on the forward end of said container, a substantially U-shaped frame section rigidly fixed to said casing and having its arms extended substantially parallel with the side members of the main frame; and springs respectively mounted between said side members and the arms of the U-shaped frame section.

2. The combination of the front and rear axles; a main frame; springs respectively mounted between the axles and said frame; an auxiliary frame consisting of a gear case rotatably mounted on the rear axle, a tubular shaft container rigidly conected to the gear case, a substantially U-shaped frame section rotatably mounted on



said container and having its arms extended substantially parallel with the side members of the main frame; a pair of tension members hung from the forward parts of each of said side members; with a spring hung from each pair of tension members and supporting one of the arms of the U-shaped frame section.

1,021,513. TYPE-WRITING MACHINE. JACOB FELBEL, New York, N. Y., assignor, by mesne assignments, to Union Typewriter Company, Jersey City, N. J., a Corporation of New Jersey. Filed July 28, 1911. Serial No. 641,111. (Cl. 197—27.)



1. In a front-strike typewriting machine, the combination of a series of segmentally arranged upwardly and rearwardly striking type bars; a series of key levers having portions thereof that are inclined toward the center of the machine; and intermediate actuating connections between said key levers and type bars, said connections comprising a series of substantially parallel sub-levers of the third order and a series of substantially parallel sub-levers of the first order, the sub-levers of one series being arranged at an inclination to the sub-levers of the other series, and the sub-levers of one series coacting directly with the sub-levers of the other series, means for operatively connecting the sub-levers of one series of the type bars, and means for operatively connecting the sub-levers of the other series with the key levers.

2. In a front-strike typewriting machine, the combination of a series of segmentally arranged upwardly and rearwardly striking type bars; key levers; and intermediate actuating connections between said key levers and type bars, said connections comprising a series of substantially parallel sub-levers of the third order and a series of substantially parallel sub-levers of the first order, the sub-levers of one series being arranged relatively to the sub-levers of the other series to present inclined contact faces on the levers of one series for the direct camming action thereon of the sub-levers of the other series, one of said series of sub-levers having upstanding arms the upper ends of which are arranged in an arc and are connected with the type bars.

3. In a front-strike typewriting machine, the combination of a series of segmentally arranged upwardly and rearwardly striking type-bars; key levers; and intermediate actuating connections between said key levers and

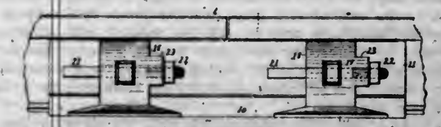
type bars, said connections comprising a series of sub-levers of uniform size and the pivotal centers of which are arranged in an arc, a second series of sub-levers of uniform size co-acting directly with said first mentioned series of sub-levers, the second series of sub-levers having their pivotal centers arranged in an arc, connections between one series of sub-levers and the type bars, and connections between the other series of sub-levers and the key levers.

4. In a front-strike typewriting machine, the combination of a series of segmentally arranged upwardly and rearwardly striking type bars; key levers; and intermediate actuating connections between said key levers and type bars, said connections comprising a series of sub-levers having upstanding arms arranged in an arc at the upper ends thereof, the sub-levers also having their pivotal centers arranged in an arc, connections between said sub-levers and type bars, a second series of sub-levers co-acting directly with the sub-levers of the first mentioned series and having their pivotal centers arranged in an arc, and connections between said key levers and the sub-levers of the second series.

5. In a front-strike typewriting machine, the combination of a series of segmentally arranged upwardly and rearwardly striking type bars; key levers; and intermediate actuating connections between said key levers and type bars, said connections comprising a series of sub-levers of a uniform size having upstanding arms arranged in an arc at the upper ends thereof, said arc being substantially co-extensive with the arc in which the type bars are arranged, the sub-levers also having their pivotal centers arranged in an arc, connections between said sub-levers and type-bars, a second series of sub-levers of uniform size co-acting directly with the sub-levers of the first mentioned series and having their pivotal centers arranged in an arc, and connections between said key levers and the sub-levers of the second series.

[Claims 6 to 16 not printed in the Gazette.]

1,021,514. RAIL-JOINT FASTENER. JULIAN E. FOOTE, Topeka, Kans. Filed Nov. 6, 1911. Serial No. 658,681. (Cl. 239—6.)



1. The combination with two rail-joint members, one of said members being formed to embrace one side of the rail web, and the upper side and the outer edge of the rail base, and the other member being formed to embrace the side of the rail web, the upper side and outer edge of the rail base, the under side of the rail base, the lower edge of the first-named member, and having a rib embracing the outer edge of the lower part of said other member; of two pairs of clamping members, each pair comprising two members embracing respectively opposite sides of said rail-joint, a draw-pin passing through all said members, a wedge-shaped retaining pin for drawing up and holding firmly the draw-pin, and a nut threaded onto the retaining pin for holding the same in place.

2. The combination with two rail-joint members, one of said members being formed to embrace one side of the rail web, and the upper side and the outer edge of the rail base, and the other member being formed to embrace the side of the rail web, the upper side and outer edge of the rail base, the under side of the rail base and the lower edge of the first-named member, and having a rib embracing the outer edge of the lower part of said other member; of a clamping member adapted to fit against the side of the rail-joint members, a draw-pin passing through all said members, a wedge-shaped retaining pin passing through the draw-pin and bearing against said clamping member, and a nut threaded onto the retaining pin for holding the same in place.

1,021,515. RESILIENT WHEEL. CARROLL D. GALVIN, Merchantville, N. J., assignor of one-sixth to Charles Jacobsen, one-sixth to Eugene S. Cochran, and one-sixth to Amandus F. Jorss, Washington, D. C. Filed Jan. 8, 1912. Serial No. 669,975. (Cl. 152—33.)



1. In a resilient wheel, the combination of an inner felly, an outer felly having outer and inner portions and recesses in its sides and also having a recess in its inner periphery, and an inflatable tube having an inflated annular portion interposed between the inner and outer fellies, and inwardly directed inflated portions occupying the side recesses of the outer felly, and also having end portions seated in the recess in the inner periphery of the outer felly.

2. In a resilient wheel, the combination of an inner felly, an outer felly having outer and inner portions and recesses in its sides and also having a recess in its inner periphery, and an inflatable tube having an inflated annular portion interposed between the inner and outer fellies, and having inwardly directed inflated portions occupying the side recesses of the outer felly and also having its outer peripheral portion split and its end portions secured together and seated in the recess in the inner periphery of said outer felly.

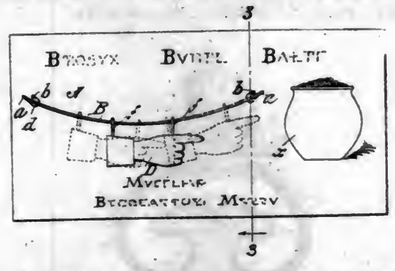
3. In a resilient wheel, the combination of an inner felly, an outer felly having outer and inner portions and side recesses between the same and also having a recess in its inner periphery, a pneumatic tube having an inflated portion disposed between the fellies and inwardly directed inflated portions disposed in the side recesses of the outer felly and also having end portions secured together and disposed in the recess in the inner periphery of the outer felly, inner terminals on the tube and connected with the inner felly, and outer terminals on the tube and connected with the outer felly.

4. In a resilient wheel, an inner felly having outwardly diverging side walls, an outer felly having outer and inner portions, and recesses in its sides and an annular recess in its inner periphery, an inflated tube having an inflated annular portion interposed between the inner and outer fellies and having inwardly directed inflated portions occupying said side recesses of said outer felly, said tube having its outer peripheral portion split and its juxtaposed end portions secured together and seated in said recess in said inner periphery of said outer felly, means for securing said tube to said outer felly, side plates having the flaring portions 37 and the inwardly extending flanges 8, and fastening devices common to said inner felly and side plates.

5. In a resilient wheel, an inflatable tube, means for securing the inner periphery of said tube in position, a detachable metal covered felly having annular side recesses forming T-shaped shoulders at its inner periphery interlocking with the outer inwardly contorted periphery of said tube when inflated, and a tread secured to said detachable felly.

[Claims 6 to 9 not printed in the Gazette.]

1,021,516. ADVERTISING DEVICE. THEODOR R. GRIESEL, Springfield, Mass. Filed Dec. 27, 1911. Serial No. 668,196. (Cl. 40—138.)



1. In a device of the character described, an advertising card or plate having a downwardly bowed runner rod supported by and standing forwardly of the plate, and a member having a suspension engagement with said bowed runner rod, and capable of shifting movements backward and forward on such rod.

2. In a device of the character described, a card or plate having an advertisement on the face thereof, a downwardly bowed runner rod having its end portions inwardly extended and terminating in eyes arranged in planes parallel to the face of the plate, and fastening means engaged through said eyes and the plate whereby the runner rod is held in a position forward of, and supported by the plate, and a member, provided with eyes extended above its upper edge and loosely engaged with said runner rod, which member has the form of a pointer directed to a prominent portion of the advertisement.

1,021,517. WHEELED SCRAPER. WILLIAM M. GENTLE, Greenwood, and JOSEPH K. COOPER, Indianapolis, Ind. Filed Aug. 30, 1909. Serial No. 515,159. (Cl. 37—33.)



1. The combination of a scraper with its forward end open, a wheel supported frame, means mounted in connection with said frame for supporting and dumping the scraper, vertically slotted bearings in said frame, a door for closing the forward end of the scraper, and lateral projections from the upper end of the door fitting in said bearings whereby the door will have vertical play.

2. The combination of a scraper with its forward end open, a wheel supported frame, means mounted in connection with said frame for supporting and dumping the scraper, vertically slotted bearings in said frame, a door for closing the end of the scraper with projections fitting in said door and frame for holding the door closed although mounted independently of the scraper.

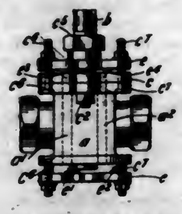
3. The combination of a scraper with its forward end open, a wheel supported frame, means mounted in connection with said frame for supporting and dumping the scraper, a door for closing the forward end of the scraper that is pivotally mounted in said frame, means connected with and controlled by said dumping means for closing said door, and a spring for opening said door.

4. The combination of a scraper, a wheel supported frame, means pivotally mounted in connection with said frame for supporting said scraper, catches on the forward end of the scraper, draw bars pivotally mounted in connection with the forward end of the frame for engaging said catches for loading, and jointed connecting bars pivoted to said scraper supporting means and said draw bars, whereby the joint between said connecting bars will hold the draw bars down in locking engagement, substantially as set forth.

5. The combination of a scraper, a wheel supported stationary frame, a rocking frame pivotally mounted in connection with said stationary frame, bars pivoted to said rocking frame for supporting the scraper, draw bars pivotally attached at their front ends to the stationary frame and hooked at their rear ends, catches on the forward end of said scraper in position to be engaged by said draw bars, connecting bars pivoted to said draw bars near their lower ends, and bars pivoted to the upper ends of said connecting bars and to said rocking frame and provided with stops for limiting their oscillatory movement and arranged so that when the scraper is being brought to the loading position the rocking frame will move the connecting bars extending therefrom to the draw bars, so that the joint between them will pass a straight line between the pivotal connection of said connecting bars and the draw bars and rocking frame, respectively.

[Claim 6 not printed in the Gazette.]

1,021,518. COCK. WILLIAM HENRY GREATOREX, Camberwell, London, England, assignor to Wallach Brothers Limited, London, England. Filed Sept. 20, 1911. Serial No. 650,439. (Cl. 137—7.)



1. In a cock; the combination with a body or casing, a hollow plug within said body, said body having vertical grooves extending therein to receive packing to pack said plug; of a plate capable of being partially rotated about the axis of said plug, projections on said plate to contact with said body to seal the ends of said grooves, means for connecting said plate to said body, means for guiding said plate in its rotary movements, and means to allow of the movement of said plate to expose the ends of said grooves.

2. In a cock; the combination with a body or casing, a hollow plug within said body, said body having vertical grooves extending therein to receive packing to pack said plug; of a plate capable of being rotated about the axis of said plug, said plate having side recesses therein, projections on said plate to seal the ends of said grooves, means for connecting said plate to said body, means for guiding said plate in its rotary movements, and means to allow of the movement of said plate to allow said recesses to come opposite the ends of said grooves to expose the latter.

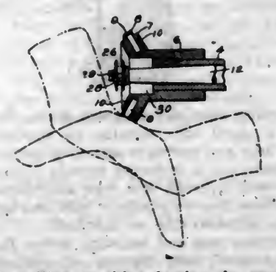
3. In a cock; the combination with a body or casing, a hollow tapered plug within said body, said body having vertical grooves extending therein to receive packing to pack said plug; of a plate capable of being turned about the axis of said plug, projections on said plate to contact with said body to seal the ends of said grooves, means for connecting said plate to said body, means for forcing said plate toward said body to cause said projections to contact with the said body, and means to allow of the movement of said plate to expose the ends of said grooves.

4. In a cock; the combination with a body or casing, a hollow tapered plug within said body, said body having vertical grooves extending therein to receive packing to pack said plug; of a plate, projections carried by said plate to contact with said body at the ends of said grooves, pins or studs to connect said projections to said plate the heads of said pins or studs being adapted to enter the ends of said grooves, means for connecting said plate to said body, and means to allow of the adjustment of said plate on said body to expose the ends of said grooves.

5. In a cock; the combination with a body or casing, a hollow tapered plug within said body, said body having vertical grooves extending therein to receive packing to pack said plug; of a packing gland at the upper end of said body, said gland having a central screw threaded aperture therein, means for attaching said gland to said body, a gland socket surrounding the shank of said plug and adapted to be screwed into and out of said screw threaded aperture in said packing gland, a plate surrounding said socket, projections on said plate to seal the ends of said grooves, means for connecting said plate to said body, and means to allow of the adjustment of said plate on said body to expose the ends of said grooves.

[Claims 6 and 7 not printed in the Gazette.]

1,021,519. TACK-PULLING MACHINE. JOHN B. HADAWAY, Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 9, 1910. Serial No. 591,412. (Cl. 12—16.)



1. A tack pulling machine having, in combination, a side-tack pulling tool, a sole-tack pulling tool means for normally nesting the sole tack pulling tool within the side-tack pulling tool, and means for separating the two tools to render the sole-tack pulling tool operative, substantially as described.

2. A tack pulling machine having, in combination, a rotary side-tack pulling tool mounted on a hollow shaft, a rotary sole-tack pulling tool mounted on a shaft having a bearing in said hollow shaft, and means for producing relative longitudinal movements of the shafts to increase and decrease the distance between said tools, substantially as described.

3. A tack pulling machine having, in combination, a pair of tack pulling tools normally nested within one another, one of the tools being arranged to remove the tacks from a shoe which is fed lengthwise of the axis of the tool, and means under the control of the operator for separating the tools, substantially as described.

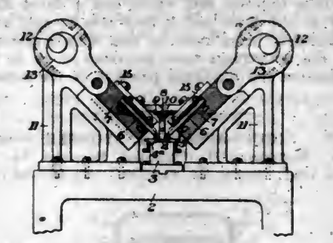
4. A tack pulling machine having, in combination, a side tack pulling tool arranged to remove the tacks from a shoe which is fed lengthwise of the axis of the tool, a sole tack pulling tool nested within the first mentioned tool, and means for separating the tools to render the sole tack pulling tool operative, substantially as described.

5. A tack pulling machine having, in combination, a frusto-conical tack pulling tool having a spiral groove on its periphery, and tack pulling blades extending across said groove at intervals, substantially as described.

[Claim 6 not printed in the Gazette.]

1,021,520. METHOD OF POINTING TIE-PLATE CLAWS. THOMAS V. HANDLOSER and JOHN C. DILWORTH, Pittsburgh, Pa., assignors to Dilworth, Porter & Company, Limited, Pittsburgh, Pa., a Partnership. Filed Aug. 3, 1910. Serial No. 575,361. (Cl. 29—16.)

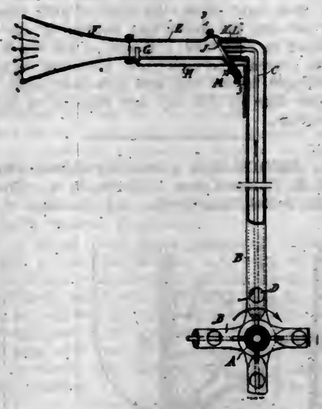
1. The method of pointing tie plate claws which project substantially at right angles to the plate body, consisting in moving a cutter or die at an oblique angle to the claw and toward the plate during the cutting operation, substantially as described.



2. The method of cutting tie plate claws, projecting substantially at right angles from the plate body, consisting in moving a cutter or die in conjunction with the claw in a path at an oblique angle to the claw and toward the body of the plate away from the end of the claw during the cutting movement, substantially as described.

3. The method of cutting tie plate claws projecting substantially at right angles to a plate body, consisting in holding the claw against one die and moving another die in contact with the claw at an oblique angle thereto and in a direction toward the plate and away from the end of the claw during the cutting operation, substantially as described.

1,021,521. MOTOR. PAUL LOUIS TOUSSAINT HÉROULT, La Praz, France. Filed Nov. 29, 1909. Serial No. 530,525. (Cl. 123—10.)



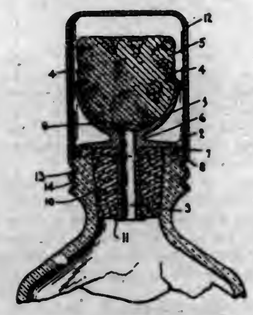
1. A reaction motor including in combination a flared discharge nozzle, an igniter in advance of said nozzle, a valve to which are supplied under pressure due to the force of rotation of the motor combustible and oxygen, a passage being provided between the valve and said igniter through which the supply of combustible and oxygen must pass in reaching the igniter, said valve being arranged to yield under the compression of the combustible and oxygen to permit the escape thereof into said passage, and to be closed by an explosion to prevent further escape thereof.

2. A reaction motor comprising an outwardly extending arm B having air admission holes near its inner end, a combustion tube C, a valve located near the outer end of said arm B and tube C and cutting off the flow therefrom, a tube E beyond said valve, an igniter G in the part of said tube opposite said valve, and a flared discharge nozzle F at the outer end of said tube E.

3. A reaction motor comprising an outwardly extending arm B having air admission holes near its inner end,

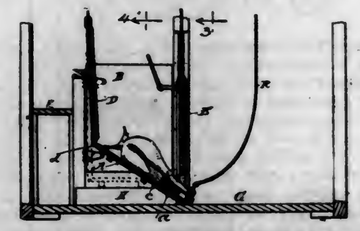
a combustion tube C, a valve located near the outer end of said arm B and tube C and cutting off the flow therefrom, a tube E beyond said valve, an igniter G in the part of said tube opposite said valve, and a flared discharge nozzle F at the outer end of said tube E, said valve being arranged to press upon its seat with a greater pressure as the centrifugal force increases so as to tend to counterbalance the increased pressure of the combustible and air.

1,021,522. LIQUID-APPLYING STOPPER FOR BOTTLES. FREDERICK H. HINSDALE, Roanoke, Va. Filed Apr. 6, 1911. Serial No. 619,293. (Cl. 15—46.)



In a liquid applying stopper for bottles comprising a sponge-holding cup, a plate formed on said cup provided with an attaching flange whereby it may be attached to the neck of a bottle, a discharge tube formed on and projecting from said plate, the bore of said tube being continued through the plate and bottom of the cup, a cork arranged on said tube, a flange on the lower end of the tube to prevent the cork from becoming detached, a sponge arranged in the cup, and attaching teeth formed on the outer edge of the cup and adapted to be forced into said sponge.

1,021,523. DEVICE FOR SLAUGHTERING ANIMALS. HERMAN B. HOECKELBERG, Cliffside, N. J. Filed Nov. 17, 1911. Serial No. 660,860. (Cl. 17—30.)



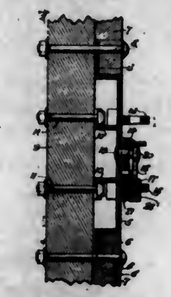
1. In a stall for receiving cattle to be slaughtered the combination of a tiltable floor, a vertical stall side, and means for tilting the floor whereby the animal is cast thereon, and its legs are caused to project from the stall between the floor and said stall side.

2. A stall for receiving cattle to be slaughtered having a tiltable floor and provided with a vertically movable side so arranged in relation to the floor that when the floor is tilted a limited open space is formed between such side and the lower portion of the floor such that the legs of the cast animal are secured in said space between the floor and said side.

3. In a stall for receiving cattle to be slaughtered the combination of a floor pivotally mounted near one side thereof and a vertically movable stall side pivotally secured to the opposite side of said floor whereby the floor may be tilted substantially as set forth.

4. In a stall for receiving cattle to be slaughtered the combination of a tiltable floor, means for tilting the same and a stall side so arranged as to provide between it and the floor, when the latter is tilted a space sufficient to receive and secure the legs of the animal, and to be moved to subsequently permit the passage of the body of the animal substantially as set forth.

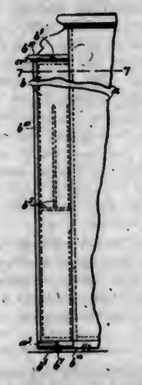
1,021,524. SLIDING-DOOR FASTENER. JAMES M. HOPKINS, Chicago, Ill. Filed Nov. 25, 1911. Serial No. 662,364. (Cl. 70—102.)



1. A reversible stop and fastening device for car doors comprising a metal body forming an abutment for the edge of the door and having a pair of projecting lugs, one above the other, and a fastening member pivotally mounted on said body between said lugs and shiftable in opposite directions into engagement with one or the other of said lugs, substantially as described.

2. A reversible stop and fastening device for car doors comprising a metal body forming an abutment for the edge of the door and having a pair of projecting, perforated lugs on its face, one above the other, and a fastening bolt having a pin and slot connection with said body at a point midway between said lugs, said bolt being arranged to swing between said lugs and shift longitudinally in opposite directions to engage the perforation of one or the other of said lugs, substantially as described.

1,021,525. ATTACHMENT TO PIANO-CASES. JOSIAH WESTBROOK HURST, Richmond, England. Filed Nov. 20, 1909. Serial No. 529,083. (Cl. 84—52.)



1. The combination of a musical instrument case; a base board slidable under the same; front, side and top members carried by the base board; with a cabinet also carried by the base board in position to coöperate with said front, side and top members to form a closed container; said cabinet being free to move bodily relatively to the instrument case as well as to turn on a vertical axis.

2. The combination of a musical instrument having a case provided with members projecting respectively at the upper and lower portions of one of its ends; one of the members being extended under the said case so as to be reinforced thereby and there being grooves in both of said members; with a music cabinet having studs forming pivots mounted to slide loosely in said grooves, as well as to turn therein.

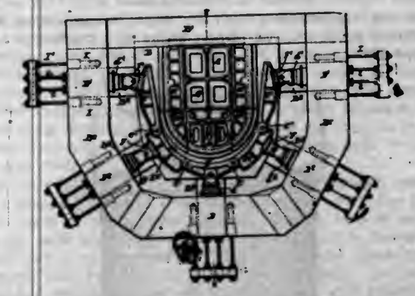
3. The combination of a musical instrument case; a base board slidably mounted under the same and having a groove; a top piece also having a groove; and a cabinet provided with trunnions forming vertical pivots operative in said grooves and free both to turn and to slide longitudinally therein.

4. The combination of a musical instrument case; a base board slidable under said case; rollers on said base board and a cabinet open on one face and mounted on said base board; with means movably connecting the cabinet to the base-board for guiding it from and into a position with its open face against one end of the case so as to be closed thereby.

5. The combination of a musical instrument case having supporting members projecting respectively from the upper and lower portions of one of its ends; with a cabinet having an open face; means movably connecting the cabinet to said members for guiding it from and into a position with said open face against one end of the instrument case so as to be closed thereby.

[Claim 6 not printed in the Gazette.]

1,021,526. PRESS FOR BENDING METAL SHAPES. CHARLES L. HUSTON, Coatesville, Pa. Filed Aug. 26, 1910. Serial No. 579,058. (Cl. 153—38.)

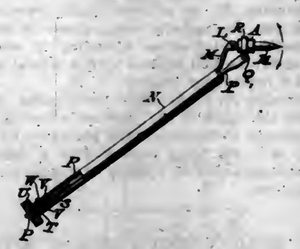


1. The combination in a press for shaping metal plates, of a fixed former, a central die, side dies and intermediate dies, said intermediate dies being coupled to the central die and to the side dies, with a plunger connected to the central die, plungers back of the side and intermediate dies, and shoes mounted between the plungers and the said side and intermediate dies and arranged so that the dies slide in the shoes as they are forced toward the former.

2. The combination of a fixed former, a central die, intermediate dies hinged to the central die, and a side die hinged to each intermediate die, curved slides on each intermediate and on each side die, a central plunger pivoted to the central die, intermediate plungers, shoes pivotally mounted on the plungers and having guides in which the slides of the dies have a certain amount of movement, a plunger back of each side die, shoes pivotally mounted on the plungers and having ways in which the slides of the side dies travel as the dies are forced toward the former.

3. The combination in a press for shaping metal plates, of a fixed former consisting of a center section; an end section and a section at each side; with connecting rounded corner sections loosely attached to the end and center sections, the end, side and corner sections being grooved to receive the plate to be shaped; and a series of dies opposite each of the side sections and corner sections and the center section, said dies being coupled together; with a plunger back of each die, the plungers having a sliding connection with the side and corner dies.

1,021,527. DENTAL HAND PORTE-POLISHER. JAMES W. IVORY, Philadelphia, Pa. Filed Mar. 6, 1911. Serial No. 612,456. (Cl. 32—10.)



1. In a dental porte polisher, a socket, a handle connected therewith and extending angularly from the exterior thereof, and a prong within said socket, said prong being separate from said socket and provided with means for detachably securing it to the end wall thereof.

2. In a dental hand porte polisher, a socket adapted to contain a polishing piece, and a mounting for said socket whereby its angle and that of said piece may be varied.

3. In a dental hand porte polisher, a socket adapted to contain a polishing member, a bearing on which said socket is pivotally mounted, a handle with which said bearing is connected, a movable device in said handle adapted to engage said socket, and means for operating said device in opposite directions whereby the angle of said polishing member may be varied.

4. In a dental hand porte polisher, a socket adapted to contain a polishing member, a bearing on which said socket is pivotally mounted, a tubular handle with which said bearing is connected, a stem in said handle adapted to engage said socket, means on said handle for operating said stem in opposite directions.

5. In a dental hand porte polisher, a socket adapted to contain a polishing member, a bearing on which said socket is pivotally mounted, a tubular handle with which said bearing is connected, a threaded stem in said handle, one end of which is pivotally connected with said socket, and a swivel device on said handle, the same being adapted to engage said stem to impart motions thereto in opposite directions and thereby vary the angle of said polishing member.

1,021,528. FASTENING FOR ARTIFICIAL-TOOTH CROWNS. JAMES W. IVORY, Philadelphia, Pa. Filed Mar. 21, 1911. Serial No. 615,950. (Cl. 32—9.)



1. A fastening for an artificial tooth crown comprising a dowel pin having opposite end portions comprising reversely pointing stems disposed in the same right line and which are adapted to enter respectively such crown and a natural root, said pin being formed with an offset intermediate of said stems with a transversely disposed opening in said offset and with a recess opposite said offset.

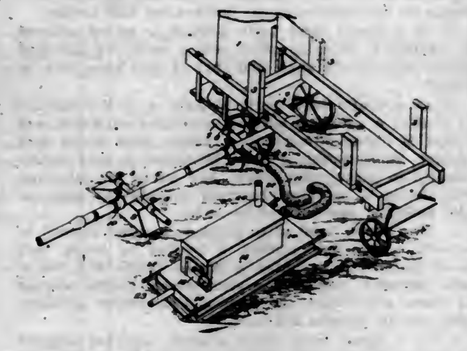
2. A fastening device for an artificial tooth crown composed of a substantially flat dowel pin, the opposite end portions of which constitute reversely pointing stems disposed in the same right line, one of said stems being provided with a bifurcation and the pin having a recess intermediate the stems.

3. In a fastening for an artificial tooth crown, a dowel pin, the same having an opening transversely therein, said opening being disposed in a portion to be surrounded by the filling or fastening material to receive some of such fastening material, said pin being further provided with a recess adjacent said opening.

4. A fastening for an artificial tooth crown composed of a dowel pin, the opposite end portions of which comprise reversely pointed stems extending in substantially the same right line and formed with a lateral offset said pin having a recess upon its face.

5. A fastening for an artificial tooth crown comprising a dowel pin the opposite end portions of which comprise reversely pointed stems disposed in substantially the same right line, said pin being formed with a lateral offset near its midlength and an opening extending transversely through said pin.

1,021,529. TOBACCO-BED-STEAMING APPARATUS. JOHN H. L. JOHNSON, Springfield, Tenn., assignor to Springfield Plant-Bed Steaming Company, Springfield, Tenn. Filed May 8, 1911. Serial No. 625,849. (Cl. 47—37.)



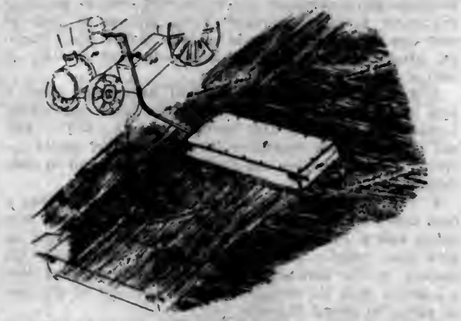
1. An apparatus of the character described, embodying a steam boiler provided with a pipe section, an elbow mounted to turn on said section and extending laterally therefrom, piping detachably connected to the laterally extending end of the elbow, the piping being provided with forwardly and rearwardly extending branches arranged in pairs, each branch being provided with a valve and the piping being provided intermediate of the pairs with valves, and a steaming hood arranged for operative connection with any of said branches.

2. In an apparatus of the character described, a steaming hood, a superheating chamber mounted on said hood, and communicating therewith, a steam supply nozzle leading into the chamber and opening therein, the nozzle being provided with a branch pipe opening into the hood, means for controlling the nozzle and its branch pipe, and a furnace for heating said superheating chamber.

3. In an apparatus of the character described, a steaming hood, a superheating chamber supported thereon, and provided with a conduit extending downwardly therefrom and opening into the hood, a pipe provided with a nozzle opening into the chamber and provided with a branch extending into and opening into the hood, independent controls for the nozzle and its branch, and a furnace for heating said chamber.

4. In an apparatus of the character described, an open bottom steaming hood provided above its lower edge with an outstanding marginal flange for the purpose specified.

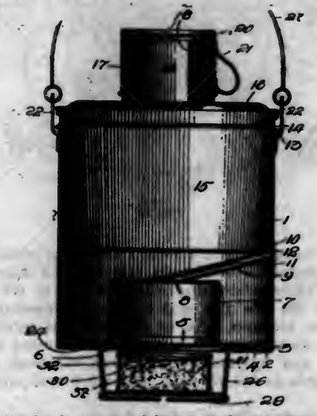
1,021,530. METHOD OF STEAMING TOBACCO-BEDS. JOHN H. L. JOHNSON, Springfield, Tenn., assignor to Springfield Plant-Bed Steaming Company, Springfield, Tenn. Filed May 10, 1911. Serial No. 626,823. (Cl. 47—37.)



1. The herein described method of treating soil, which consists in first preparing the soil to obtain a loose surface stratum, forcing steam downwardly through the surface soil and in contact with the subjacent hard stratum of earth, and subsequently covering the soil thus treated to retain the heat therein.

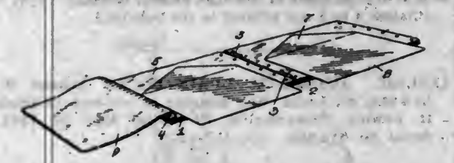
2. The herein described method of treating the soil of tobacco beds, which consists in first preparing the soil by tilling the same to obtain a loose surface stratum, forcing steam downwardly through the surface soil and in contact with the subjacent hard stratum of earth, cutting off the steam supply, covering the soil previously subjected to the action of steam, and subsequently removing the covering means and allowing the soil to cool.

1,021,531. DINNER-BUCKET. JOHN JUSSE, Telluride, Colo. Filed Nov. 10, 1911. Serial No. 659,628. (Cl. 126—266.)



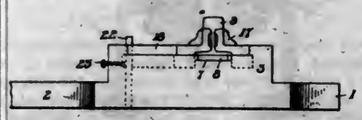
A dinner bucket comprising a body portion having a flat bottom with a centrally disposed opening, a hood carried by the bottom and arranged over said opening, a heating element, yokes fixed to and projecting from the bottom of said heating element, depending rods including upper and lower crank portions, said upper crank portions pivotally connected to the bottom of said body portion, certain of said lower crank portions extending through said yokes whereby said elements can be suspended by said rods below said body portion, a vertically movable actuating element, and means for coupling said actuating element to the other of said crank portions whereby when said element is elevated the rods will be moved toward said body portion and the heating element shifted into said hood.

1,021,532. ENVELOP-MOISTENING DEVICE. SECHMAN KARCMARCYK, New Bedford, Mass. Filed Oct. 11, 1911. Serial No. 654,174. (Cl. 120—75.)



An envelop moistening device comprising rectangular boards hinged together whereby one board can be folded upon the other, a moistening pad carried by each board, and a protecting pad connected to the end of one of said boards and adapted to be folded inwardly upon an envelop to prevent an envelop on the other board from being soiled when said boards are folded together.

1,021,533. RAIL-JOINT. JOSEPH WILSON KENNEDY, Duquesne, Pa. Filed Dec. 4, 1911. Serial No. 663,691. (Cl. 239—6.)



1. In a tie and rail fastener, the combination with rails, of a metallic frame, a chair formed integral with the upper edges of said frame adjacent to each end of said frame, said chair being cut away to provide fastener seats and a cushion seat, a cushion mounted upon said cushion seat and adapted to support said rails, an outer fastener arranged upon one of said seats and provided with dovetailed tongues engaging in said seat, an inner fastener arranged upon the other seat and provided with dovetailed tongues engaging in said seat, a wedge arranged in said chair between the wall thereof and the edge of said inner fastener, and a vertical pin retaining said wedge in said chair.

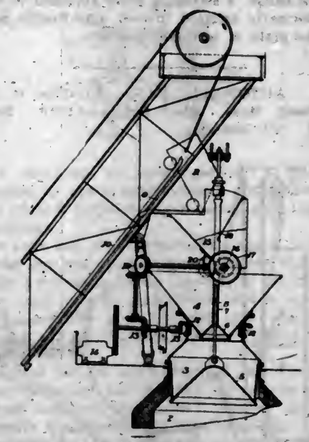
2. In a tie and rail fastener, the combination with rails, of a metallic frame, a chair formed integral with the upper edges of said frame adjacent to each end of said frame, said chair being cut away to provide fastener seats and a cushion seat, a cushion mounted upon said cushion seat and adapted to support said rails, an outer fastener arranged upon one of said seats and provided with dove-tailed tongues engaging in said seat, an inner fastener arranged upon the other seat and provided with dove-tailed tongues engaging in said seat, a wedge arranged in said chair between the wall thereof and the edge of said inner fastener, a vertical pin retaining said wedge in said chair, concrete arranged in said frame and beneath said chair, and means for locking said pin in engagement with said chair.

1,021,534. BLAST-FURNACE-CHARGING APPARATUS. JULIAN KENNEDY, Pittsburgh, Pa. Filed Mar. 31, 1911. Serial No. 618,220. (Cl. 75—115.)

1. In blast furnace charging apparatus, the combination with a receiving hopper or receptacle, of a rotary hopper below the same, connections arranged to rotate the latter hopper, and mechanism for the receiving hopper arranged to supply a continuous stream of material to the lower rotating hopper, substantially as described.

2. In blast furnace charging apparatus, the combination with upper and lower hoppers and bottom closures therefor, of means for rotating the upper hopper, and means for obtaining a regulated feed of the material into the rotating hopper, substantially as described.

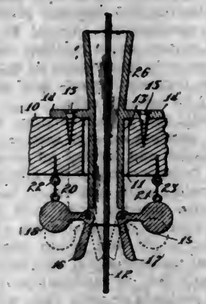
3. In blast furnace charging apparatus, the combination with upper and lower hoppers and bottom closures therefor, and means for rotating the upper hopper, of a receiving hopper above the rotating hopper, and a rotating feed device in the discharge opening of the receiving hopper, substantially as described.



4. In blast furnace charging apparatus, the combination of a rotary hopper, a receiving hopper above the rotary hopper, and a feed-regulating device in the discharge opening of the receiving hopper, the rotary hopper and feed device having driving connections with a common source of power, substantially as described.

5. In blast furnace charging apparatus, the combination with a receiving hopper or receptacle, of a rotary hopper below the same, connections arranged to continuously rotate the latter hopper, and a rotary distributing device for the first hopper arranged to supply a continuous stream of material to the continuously rotating hopper, substantially as described.

1,021,535. CLOSURE FOR FLOOR-OPENINGS. RUFUS J. KITTREDGE, Chicago, Ill., assignor to David S. Watson, Canastota, N. Y. Filed May 9, 1910. Serial No. 560,853. (Cl. 189—45.)



1. In a closure for an aperture for the accommodation of a belt, in combination a plurality of plates mounted to swing in parallel paths and normally crossing the aperture, and fusible means for holding the plates in a retracted position.

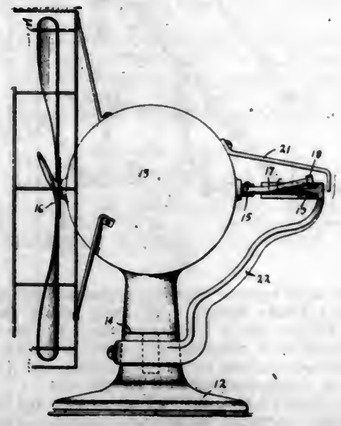
2. In a closure for floor openings, in combination, a bushing, a pair of coaxial plates pivotally attached to the bushing at one side of its chamber and normally inclining inwardly, and fusible means for holding the plates in a retracted position.

3. In a closure for floor openings, in combination, a bushing, two pairs of coaxial plates pivotally attached

to the bushing at opposite sides thereof, an outstanding weighted arm attached to each plate for normally inclining the plates inward, and fusible means for suspending the arms.

4. In a closure for floor openings, in combination, a bushing adapted to fit within the opening and having an upstanding flange, a swinging plate attached to the bushing and normally inclined inward, and fusible means for holding the plate in retracted position.

1,021,536. AUTOMATIC FAN. WILLIAM B. LASKEY, Marblehead, Mass. Filed Oct. 15, 1910. Serial No. 587,194. (Cl. 230—1.)



1. In an automatic fan, the combination with a base, a fan motor mounted to oscillate on said base, and a driving shaft rotated by said motor, of a track supported by said base and arranged with its length substantially parallel to the plane of oscillation of said moter, and a rotating member carried by said shaft, said rotating member and track being held in yielding engagement with each other.

2. In an automatic fan, the combination with a base, a fan motor mounted to oscillate on said base, and a driving shaft rotated by said motor, of a track supported by said base and having two opposite portions arranged with their length substantially parallel to the plane of oscillation of said motor, and a rotating member carried by said shaft and movable transversely of said track to engage the respective portions thereof, said member engaging said portions at its opposite sides.

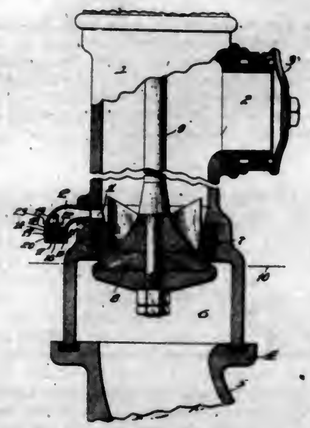
3. In an automatic fan, in combination, a base, a fan motor mounted to oscillate on said base, a driving shaft rotated by said motor and having an axially arranged tapering recess, a track supported by said base, a rotating member coöperating with said track, and means connecting said rotating member with said driving shaft at the apex of said recess for causing the same to rotate in unison with said shaft, said means permitting movement of said member transversely of said track.

4. In an automatic fan, in combination, a base, a fan motor mounted to oscillate on said base, a driving shaft rotated by said motor and having an axially arranged tapering recess, a track supported by said base, a rotating member coöperating with said track, means connecting said rotating member with said driving shaft at the apex of said recess for causing the same to rotate in unison with said shaft, said means permitting movement of said member transversely of said track, and a guide for limiting movement of said rotating member relative to said motor longitudinally of said track.

5. In an automatic fan, in combination, a base, a fan motor mounted to oscillate on said base, a driving shaft rotated by said motor and having an axially arranged tapering recess, a rack supported by said base, a pinion adapted to coöperate with said rack, and a flexible and resilient shaft by which said pinion is carried and secured to said driving shaft at the apex of said recess.

[Claims 6 to 8 not printed in the Gazette.]

1,021,537. AUTOMATIC DRAIN-COCK. ALBERT W. LAWNIN, St. Louis, Mo., assignor of one-half to Louis D. Lawnin, Edwardsville, Ill. Filed Mar. 20, 1911. Serial No. 615,480. (Cl. 137—13.)



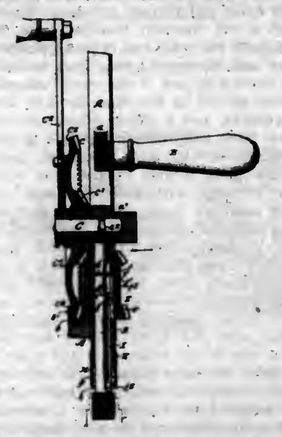
1. In a drain cock provided with a downwardly discharging outlet, a valve operatively related to said outlet, said valve being provided with a tapered point adapting it to close said outlet, the inner wall of the cock being beveled to leave a wedge-shaped space between it and the valve, and resilient means mounted on said valve and normally separating said valve from said discharge outlet.

2. In a device of the character described, the combination with a valve housing open at one end, of a plug for said open end, said plug being provided with a contracted aperture and an inwardly enlarged passage-way, a valve provided with a tapered point adapted to close said aperture and with a flange extending above and spaced from the inner end of the plug, when the valve is in closed position, and a spring interposed between said flange and the wall of said plug adjacent said aperture.

3. In a device of the character described, the combination with a stand pipe, of a drain cock therefor comprising an outwardly enlarged valve housing, means for closing the outer end of said housing, said means being provided with a central aperture and with an inwardly enlarged passageway leading thereto, a valve reciprocably mounted within said passage-way, said valve being provided with a pointed end adapted to close said aperture so as to leave a wedge-shaped space around the valve, a flange integral with said valve and overhanging the inner end of said passage-way, and resilient means interposed between said flange and said means for closing the outer end of said valve housing.

4. In a device of the character described, the combination with a stand pipe, of a drain cock therefor comprising an elbow, a plug at the lower end of said elbow, said plug being provided with a contracted opening in the outer wall thereof and an inwardly enlarged passage-way leading to said opening, a valve provided with a pointed end reciprocable to and from the inner end of said opening and with a flange, and a spring disposed between the inner end of said opening and said flange; said valve below said flange being of sufficient length to maintain said flange spaced from the inner end of said plug when the valve is in closed position.

1,021,538. GEARING. GEORGE O. LEOPOLD, Philadelphia, Pa., assignor to North Bro's. M'f'g Co., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Oct. 19, 1911. Serial No. 655,510. (Cl. 74—59.)



1. The combination of a frame; a gear wheel mounted thereon; a spindle mounted in the frame; two pinions meshing with the gear wheel, said spindle having a longitudinal slot therein and the pinions having notches; with a key mounted in the slot and arranged to enter the notches of either of the pinions; a shifter attached to or forming part of the key, said shifter extending into the slot beyond the pinions; and exposed means for operating the shifter to lock either one or the other of the pinions to the spindle or to lock both pinions to the spindle.

2. The combination of a frame; a gear wheel mounted thereon; a spindle mounted in the frame; two pinions loosely mounted on the spindle, each pinion having a notch; a shifter bar longitudinally movable in the slot of the spindle and having a projection at one end; a key pivotally mounted on the projection and adapted to enter a slot in either pinion; and exposed means for moving the shifter longitudinally.

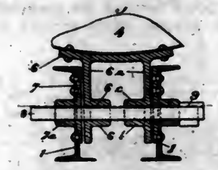
3. The combination of a frame; a gear wheel mounted thereon; a spindle mounted in the frame; two pinions mounted loosely on the spindle between two parts of the frame and meshing with the gear wheel, said spindle having a longitudinal slot therein, the pinions each having a longitudinal notch arranged to aline with the slot in the spindle; a shifter bar mounted in the slot of the spindle and having at one end a key arranged to enter the notches in either of the pinions; a shell connected to the shifter bar so that the shifter bar will move with the shell but the shell will be free to turn independently of the shifter bar; a spring within the shell, the shell having a spiral slot with notches therein; and a pin on the frame extending into the slot and adapted to rest in the notches to hold the shifer bar in the position to which it is adjusted.

4. The combination of a frame having a socket therein; a gear wheel having a spindle secured thereto and having its bearing in the socket, said spindle having an annular groove therein, and a screw mounted in the frame and extending into the groove to hold the spindle in position; a second spindle mounted in the frame; and a pinion thereon meshing with the teeth of the gear wheel.

5. The combination of a frame; a gear wheel mounted therein; a spindle mounted in the frame; two pinions loosely mounted on the spindle and having a longitudinal slot therein; a shifter bar mounted in the slot; a key carried by the shifter bar and arranged to lock either of the pinions to the spindle, said spindle having an annular groove therein; a key in one of the pinions extending into the groove; and a screw for confining the key in position.

[Claims 6 and 7 not printed in the Gazette.]

1,021,539. TANK-CAR CONSTRUCTION. CHARLES A. LINDSTRÖM, Pittsburgh, Pa., assignor to Pressed Steel Car Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Apr. 2, 1909. Serial No. 487,507. (Cl. 105—264.)



1. In a tank car, an understructure, a tank, and a wedge carried by one of said members and passed through the other of said members for securing said tank to the understructure.

2. In a tank car, an understructure and a tank having overlapping portions, and a wedge passed through said overlapping portions to secure the tank to the underframe.

3. In a tank car, an underframe and a tank having overlapping portions and key and gib means passed through said overlapping portions for securing said tank to the underframe.

4. In a tank car, an understructure and a tank having overlapping members and gib and key means carried by one of said members and passed through the other of said members for interlocking said members.

5. In a tank car, an understructure and a tank having securing members and a wedge carried by one of said members and passed through the other of said members for connecting said securing members.

[Claims 6 to 30 not printed in the Gazette.]

1,021,540. ELECTRIC SWITCH. EARL T. LOCKARD, Cincinnati, Ohio. Filed Aug. 4, 1909. Serial No. 511,130. (Cl. 175—288.)

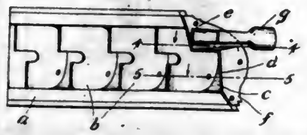


In an electric switch of the character described, the combination of a casing provided with a bottom, normally separated electric terminals therein, a connecting part for said terminals, an operating lever pivoted to said casing and provided with an operating treadle projecting outside said casing, a lock for said connecting part for maintaining the same in contact with said terminals, there being a spaced connection between said lock and operating lever for permitting the first part of the movement of said operating lever to be idle with relation to said lock, the said connection arranged to release said lock during the latter part of said movement of said operating lever, and means for maintaining said operating treadle in normally elevated position, and said operating treadle arranged to be depressed by the foot of the operator into substantial line with said bottom, said operating treadle when so depressed being located below the horizontal plane of said terminals, substantially as described.

1,021,541. STEAM-TURBINE. WILLIAM J. A. LONDON, Hartford, Conn., assignor to The Terry Steam Turbine Company, Hartford, Conn., a Corporation of Connecticut. Filed July 24, 1911. Serial No. 640,122. (Cl. 121—56.)

1. In a fluid actuated turbine, a reversing unit, the initial reversing chamber of said unit being of greater depth on its receiving side than on its delivery side, substantially as described.

2. In a turbine, the combination with a rotor and a reversing chamber in operative relation therewith, of a jet nozzle located in operative relation to said reversing chamber on the delivery side thereof, the top plate for said chamber being arranged in two different planes, that part of said top plate covering the receiving side of said chamber being in a plane above, or back of, said nozzle outlet.



3. In a turbine, a reversing chamber having a flat bottom plate, and a top plate arranged in different planes whereby the receiving side of said chamber is substantially deeper than its delivery side.

4. In a turbine, the combination with a rotor, of a reversing chamber having a flat bottom plate, and a top plate arranged in different planes whereby the receiving side of said chamber is of greater depth than the delivery side, and a jet nozzle located adjacent to the delivery side of said chamber, with its outlet below or in front of the higher plane of said plate.

5. In a turbine, the combination with a rotor, of a reversing chamber and a jet nozzle arranged adjacent to the delivery side of said chamber, said chamber having a rearward or upward extension beyond the outlet of said nozzle.

1,021,542. WRENCH. FRANK MACHAVA, Greensburg, Pa. Filed Oct. 2, 1911. Serial No. 652,259. (Cl. 81—88.)

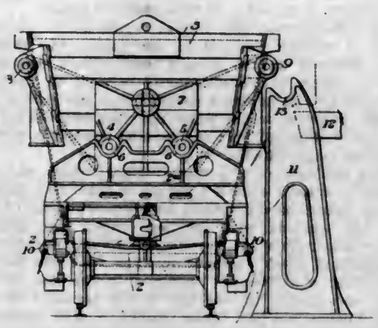


1. A wrench of the type described, comprising side plates, a jaw block carried by the outer ends thereof, a double jaw provided with guide bars and plates slidably mounted in said jaw block, side arms carried by the inner ends of said side plates, cross heads arranged between said arms, a sleeve inclosing said side arms and said cross heads, a block fixed in said sleeve, a rod extending through said block, cross heads and said jaw block and having the outer end thereof revolubly connected to said double jaw, and a nut rotatably mounted upon the inner end of said rod with the outer end of said nut arranged within said sleeve and telescoping the inner end of said block.

2. A wrench of the type described, comprising side plates, a jaw block carried by the outer ends thereof, a double jaw provided with guide bars and plates slidably mounted in said jaw block, side arms carried by the inner ends of said side plates, cross heads arranged between said arms, a sleeve inclosing said side arms and said cross heads, a block fixed in said sleeve, a rod extending through said block, cross heads and said jaw block and having the outer end thereof revolubly connected to said double jaw, a nut rotatably mounted upon the inner end of said rod with the outer end of said nut arranged within said sleeve and telescoping the inner end of said block, a support carried by one of the guide bars of said double jaw, a guide carried by the same bar and through which said rod extends, and a cutter wheel revolubly mounted in said jaw block and confronting said support.

3. A wrench of the type described, comprising side plates, a jaw block carried by the outer ends thereof, a double jaw provided with guide bars and plates slidably mounted in said jaw block, side arms carried by the inner ends of said side plates, cross heads arranged between said arms, a sleeve inclosing said side arms and said cross heads, a block fixed in said sleeve, a rod extending through said block, cross heads and said jaw block and having the outer end thereof revolubly connected to said double jaw, a nut rotatably mounted upon the inner end of said rod with the outer end of said nut arranged within said sleeve and telescoping the inner end of said block, a lever pivotally mounted in one of said cross heads, a pivoted jaw arranged in one end of said jaw block and adapted to be moved by a movement of said lever, and means arranged in said sleeve and engaging the other of said cross heads for holding said lever normally in an extended position.

1,021,543. LADLE-CAR. WILLIAM W. MCKELVEY, Youngstown, Ohio, assignor to The William B. Pollock Company, Youngstown, Ohio, a Corporation of Ohio. Filed Apr. 22, 1911. Serial No. 622,838. (Cl. 214—1.)



1. A ladle car having a ladle provided with a tiltable support on the car at one level, means on the ladle at a higher level to tiltably engage another support, and other means adapted to engage a tipping device independent of the ladle and car; substantially as described.

2. A ladle having a lower support, a car upon which said support has a normal bearing, another support near the top of the car, and a bearing for the last named support carried independently of the car; substantially as described.

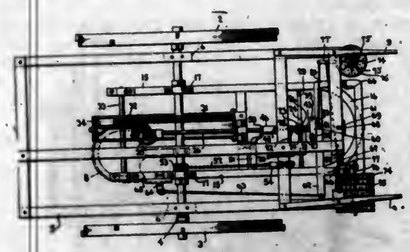
3. A dumping car having a ladle provided with two sets of supports, and bearings therefor, whereby its dumping or tipping movement is partly upon a bearing supported by the car and partly on a bearing supported independently of the car; substantially as described.

4. A dumping car provided with a plurality of open bearings, a ladle having a plurality of supports normally engaging said bearings, and other supports at a higher level, together with means independent of the car to engage the last named supports and form a bearing therefor; substantially as described.

5. A dumping ladle having supports at different distances from the top thereof, a car having a bearing for the lower support, and a supporting member independent of the car and adapted to provide a bearing for the upper support; substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,021,544. DISTRIBUTING-MACHINE. NICK MERONEK, Polonia, Wis. Filed Aug. 14, 1911. Serial No. 643,925. (Cl. 111—34.)



1. In a distributing machine of the character described, a wheeled supporting frame, a sub-frame, means for adjusting the relative position of these frames, the distributing mechanism pivotally mounted on the forward end of said sub-frame, and means for turning it on its pivots to keep it level with relation to the sub-frame independently of the adjustment of the latter with relation to the main frame.

2. In a distributing machine, a wheeled supporting frame, a sub-frame, means for adjusting the relative position of these frames, the distributing mechanism carried by the front end of said sub-frame, means for keeping it level thereon independently of the adjustment of the sub-frame with relation to the main frame, and means for swinging said mechanism horizontally to different angles with the sub-frame.

3. In a distributing machine, a supporting frame, a sub-frame adjustable vertically with relation thereto, a distributer frame adjustable horizontally on the sub-frame, a rock shaft mounted in bearings on the distributer frame, brackets projecting radially from said shaft and carrying the distributers, means for holding them level and independent means for controlling the various adjustments.

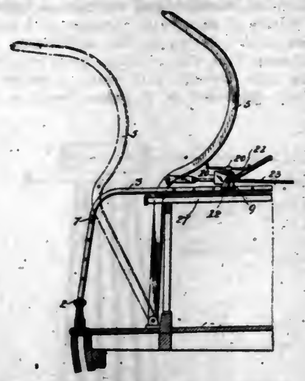
4. In a distributing machine, a supporting frame, a sub-frame adjustable vertically with relation thereto, a distributer frame adjustable horizontally on the sub-frame, a rock shaft mounted in bearings on the distributer frame, independent means for controlling the various adjustments, brackets projecting from said shaft and carrying the distributer bodies, automatic means for holding the latter level, agitators in said bodies, the power mechanism, and flexible connections between the latter and the agitating mechanism.

5. In a distributing machine, a supporting frame, a sub-frame adjustable vertically with relation thereto, a distributer frame adjustable horizontally on the sub-frame, a rock-shaft mounted in bearings on the distributer frame, independent means for controlling the various adjustments, the distributer bodies carried by said rock shaft, agitators therein, the power mechanism, an agitator driving wheel flexibly connected with the agitators, and a clutch mechanism between this wheel and the power mechanism.

[Claims 6 to 9 not printed in the Gazette.]

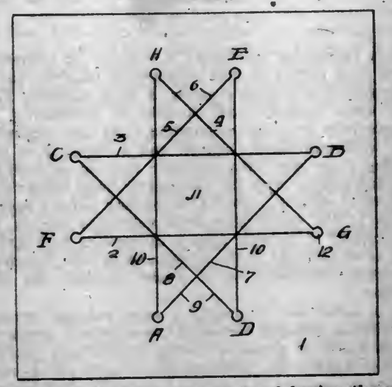
1,021,545. SHIP'S DAVIT AND MEANS FOR OPERATING THE SAME. WILLIAM L. MASSICK, Irvington, Va. Filed Nov. 29, 1911. Serial No. 663,008. (Cl. 9—22.)

In combination with the deck of a vessel and a davit pivoted thereto, an elevated structure composed of separated bars which extend transversely of the deck, between which bars the davit is adapted for vibration, a trunnioned block supported by the elevated bars, an interiorly threaded sleeve adapted for rotation within the



block by means of gearing, and a threaded bar which extends through the interiorly threaded sleeve and is pivoted to the davit, substantially as specified.

1,021,546. GAME APPARATUS OR PUZZLE. STEVEN MILLER, Smithdale, Pa. Filed July 27, 1911. Serial No. 640,864. (Cl. 46—21.)

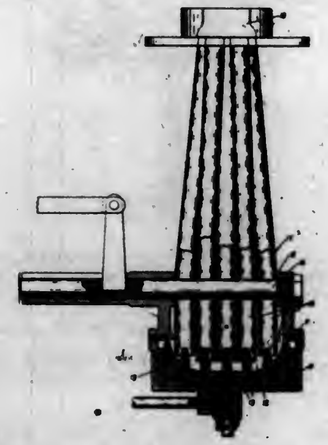


In a game apparatus, a game board having thereon a pair of oppositely disposed equilateral triangles intersecting each other and with the legs thereof extended, said board further having thereon a pair of parallel lines extending in planes at right angles to the lines constituting the bases of the triangles, circles connecting the outer termini of the extended portions of the legs of said triangles to the ends of said lines, said circles arranged in pairs, circles connecting the legs of each triangle to its base, the circles connecting the legs of one triangle to its base opposing the circles connecting the legs to the base of the other triangle, and the base lines of said triangles and said pair of parallel lines crossing each other to provide a square centrally of the board and with that portion of the board surrounded by the square uninterrupted.

1,021,547. CARBURETER. HOMER N. MOTSINGER, Pendleton, Ind., assignor to Motsinger Device Manufacturing Company, La Fayette, Ind., a Corporation of Indiana. Filed Sept. 25, 1909. Serial No. 519,604. (Cl. 123—127.)

1. A carbureter comprising a plurality of carbureting units each having a fixed carbureting relation, and all

delivering into a valve chamber, a valve normally filling said valve chamber and movable to successively and cumulatively bring the carbureting units into communication with said valve chamber and to increase the mixture-receiving volume of such valve chamber, said valve chamber bearing such relation to the carbureting units delivering thereto that the velocity of delivery from the carbureting unit through said valve chamber will not be materially decreased as it passes through the valve chamber.



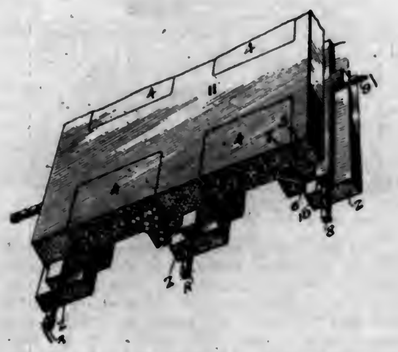
2. A carbureter comprising a plurality of carbureting units each having a fixed carbureting relation, and all delivering into a valve chamber, a valve normally filling said valve chamber and movable to successively and cumulatively bring the carbureting units into communication with said valve chamber, and a plurality of tubes leading from said valve chamber and corresponding in size and number with the carbureting units delivering to said valve chamber, said valve chamber bearing such relation to the carbureting units delivering thereto that the velocity of delivery from a carbureting unit through said valve chamber to the corresponding tube will not be materially decreased as it passes through the valve chamber.

3. A carbureter comprising a valve chamber having a plurality of passages delivering thereto and a corresponding plurality of passages leading therefrom, a plurality of fuel nozzles one mounted in each of the aforesaid leading-in passages and having a normally fixed carbureting relation thereto, a fuel reservoir communicating with said fuel nozzles, and a valve mounted in and filling said valve chamber and movable to successively and cumulatively open communication from the leading-in passages into the valve chamber.

4. A carbureter for internal combustion engines, comprising a fuel reservoir, a plurality of fuel nozzles leading therefrom, a plurality of air tubes, one associated with each of said nozzles and having a fixed carbureting relation thereto, said tubes delivering into a valve chamber, a corresponding series of tubes leading from said valve chamber to a point close to the inlet valve of the engine, and a valve arranged within the valve chamber and movable to successively open and close the connection between the two sets of tubes.

5. A carbureter for internal combustion engines, comprising a fuel reservoir, a plurality of fuel nozzles leading therefrom, a plurality of air tubes, one associated with each of said nozzles and having a fixed carbureting relation thereto, and having a cross section not materially exceeding that within which the vacuum, producible by the motor with which the apparatus is to work, will produce, at minimum velocity, a fuel delivery from the nozzle, said tubes delivering in a valve chamber, a corresponding series of tubes leading from said valve chamber to a point close to the inlet valve of the engine, and a valve arranged within the valve chamber and movable to successively open and close the connection between the two sets of tubes.

1,021,548. CONCRETE SKYLIGHT, VAULT-LIGHT, AND FLOOR-LIGHT. LOGAN WILLARD MULFORD, Narberth, Pa. Filed June 3, 1911. Serial No. 631,084. (Cl. 94—7.)



1. As a new article of manufacture, a sky light, vault light or floor light construction, consisting of a reinforced concrete slab having lens receiving openings therein, and provided with bonding elements extending beyond an outer face of said slab.

2. As a new article of manufacture, a sky light, vault light or floor light construction, consisting of a reinforced concrete slab having lens receiving openings therein, and provided with bonding elements extending beyond an outer face of the slab, and a second layer of reinforcing devices connected to said bonding elements.

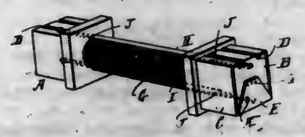
3. As a new article of manufacture, a sky light, vault light or floor light construction, consisting of a reinforced concrete slab having lens receiving openings therein, lenses covering the lens receiving openings and a layer of concrete surrounding said lenses.

4. As a new article of manufacture, a sky light, vault light or floor light construction consisting of a reinforced concrete slab, having lens receiving opening therein, bonding elements extending beyond an outer face of said slab, lenses covering said lens receiving openings and a layer of concrete surrounding said lenses and embedding said bonding elements.

5. As a new article of manufacture, a sky light, vault light or floor light construction, comprising a reinforced concrete slab, having lens receiving openings therein, bonding elements extending beyond an outer face of the slab, a second layer of reinforcing devices connected with said bonding elements, lenses covering said lens receiving openings, and a layer of binding material surrounding said lenses and embedding said bonding elements and second layer of reinforcing devices.

[Claim 6 not printed in the Gazette.]

1,021,549. FUSE-CASE. THOMAS E. MURRAY, New York, N. Y. Filed Apr. 18, 1911. Serial No. 621,862. (Cl. 175—273.)

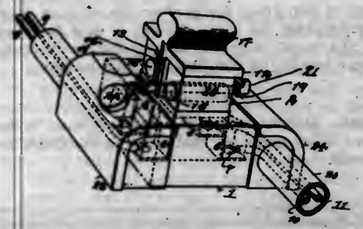


1. An electric fuse case comprising end pieces of refractory material, a tube of reticulated material, and securing rods extending between and engaging with said end pieces.

2. An electric fuse case comprising end pieces of refractory material, a tube of reticulated material, and securing rods attached to said tube, extending between and engaging with said end pieces.

3. An electric fuse case comprising two tubes of reticulated metal disposed one within the other.

1,021,550. ELECTRIC CUT-OUT. THOMAS E. MURRAY, New York, N. Y. Filed Sept. 18, 1911. Serial No. 649,872. (Cl. 175—277.)



1. An electric cut-out, comprising a base block, having a socket, a fuse carrier in said socket and partially withdrawable therefrom, means for preventing complete withdrawal of said fuse carrier from said socket, and means for locking said fuse carrier in either seated or partially withdrawn position.

2. An electric cut-out, comprising a base block, having a socket, circuit terminals therein, a fuse carrier entering said socket, a fuse in said carrier making contact with said terminals, means on said block engaging said carrier and permitting only a partial withdrawal thereof from said socket sufficient to afford access to said fuse, and means coöperating with said engaging means for supporting said carrier in partly withdrawn position.

3. An electric cut-out, comprising a base block, having a socket, circuit terminals therein, a fuse carrier entering said socket, a fuse in said carrier making contact with said terminals, means on said block engaging said carrier and permitting only a partial withdrawal thereof from said socket sufficient to afford access to said fuse, and means coöperating with said engaging means for locking said carrier in seated position in said socket.

4. An electric cut-out, comprising a base block, having a socket, circuit terminals therein, a fuse carrier in said socket having a slot, a fuse in said carrier making contact with circuit terminals, and a locking device comprising a slot in said carrier, and a bar secured to said base and passing through said slot: the said locking device permitting the carrier to be moved into the socket sufficiently to cause the fuse to bridge said terminals and to be withdrawn only far enough to remove the fuse.

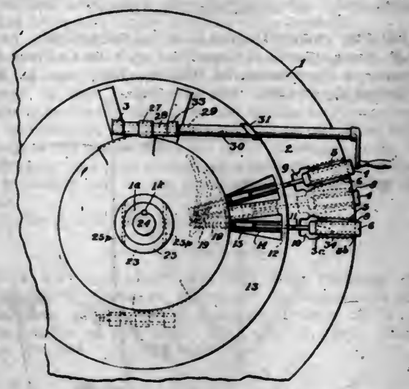
5. An electric cut-out, comprising a base block, having a socket, circuit terminals therein, a fuse carrier in said socket having a slot, a fuse in said carrier making contact with circuit terminals, a bar secured on said base and passing through said slot and preventing complete withdrawal of said carrier from said socket, and a separate locking piece entering said slot and preventing movement of said carrier upon said bar.

[Claim 6 not printed in the Gazette.]

1,021,551. SAW. HENRY B. NICHOLS, Philadelphia, Pa. Filed May 25, 1910. Serial No. 563,351. (Cl. 29—105.)

1. A machine of the class described comprising a steel disk, with teeth formed separately of abrasive material, secured at intervals around the periphery of the disk and overlapping each other in their paths of movement.

2. A machine of the class described comprising a steel disk, with teeth formed separately of abrasive material, secured at intervals around the periphery of the disk, and overlapping each other in their paths of movement, and alternate teeth projecting from opposite sides of the disk, so as to effect a clearance during the cut.



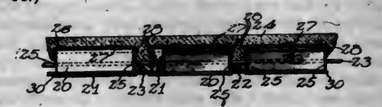
3. A saw for cutting very hard materials comprising a steel disk and teeth formed separately of abrasive material secured at intervals around the periphery of the disk, alternate teeth projecting from opposite sides of the disk, and having their lateral surfaces as well as their peripheral surfaces exposed, so as to effect a clearance during the cut.

4. A saw for cutting very hard materials, comprising a steel disk, with teeth formed separately of abrasive material and secured at intervals around the periphery of the disk, adjustable locking means for said teeth adapted to be held locked by centrifugal force at high speeds, and means for maintaining the same locked at low speeds of the saw.

5. A saw for cutting very hard materials, comprising a steel disk, with teeth formed separately of abrasive material and secured at intervals around the periphery of the disk, and adjustable locking means for said teeth adapted to be held locked by centrifugal force at high speeds, and spring pressed followers acting raidially upon the teeth so as to keep them locked at low speeds.

[Claims 6 to 19 not printed in the Gazette.]

1,021,552. TILE STRUCTURE FOR REINFORCED-CONCRETE FLOORS. JULIAN S. NOLAN, Highland Park, Ill. Filed Aug. 7, 1911. Serial No. 642,596. (Cl. 72—66.)



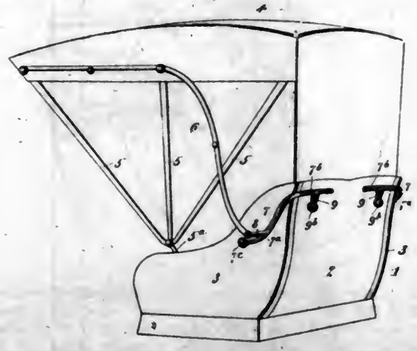
1. A tile structure for concrete floors comprising in combination a plurality of hollow, open-ended tiles, flat tile elements which space said hollow tiles apart so as to form channels to receive reinforcing rods and concrete and provide, with said hollow tiles, in all tile ceiling on the under surface of the floor, metal closure elements which extend across the open ends of the hollow tiles provided with means for sustaining said flat tile elements, and clips which bind said closure elements to said hollow tiles.

2. A tile unit for concrete and tile constructions comprising a hollow open ended tile, sheet metal closure plates covering the open ends of the tile and formed with flanges overlapping the top of the tile of substantially the same width as the plates, and means for binding the closure plates to the tile.

3. A tile unit for concrete and tile constructions comprising a hollow open ended tile, sheet metal closure plates covering the open ends of the tile and formed with

flanges overlapping the top of the tile of substantially the same width as the plates and flanges projecting in the opposite direction at the lower edges of said closure plates, and means for binding the closure plates to the tile.

1,021,553. SHIFTING-RAIL CONSTRUCTION. LESTER E. NUTT, Moline, Ill., assignor to Velie Carriage Company, a Corporation of Illinois. Filed Apr. 21, 1911. Serial No. 622,603. (Cl. 21—45.)



1. In combination with a vehicle seat, a shifting rail member applied around the corner of the seat at the rear to give support to the folding brace, said member comprising a side arm extending at the side of the side panel and firmly connected therewith, and terminating in rear of the front of the seat and provided with means for the attachment of the top folding brace, and a rear arm extending transversely inwardly from the rear end of the side arm, in rear of the back panel and connected with the back panel at a higher level than the point of connection of the side arm with the side panel.

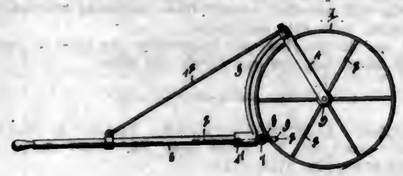
2. In combination with a vehicle seat, a shifting rail member applied around the corner of the seat at the rear to support the top brace, said member comprising a forwardly and downwardly extending slide arm disposed at the side of the side panel and terminating in rear of the front of the seat, and firmly connected at its front end to the said side panel, said side arm having a laterally extending stud 8 for the attachment of the top folding brace and a rear arm extending laterally inward from the upper end of the side arm in rear of the back panel, and connected with said back panel at a higher level than the connection of the side arm with the side panel.

3. In combination with a vehicle seat, a shifting rail member applied around the corner of the seat at the rear, and adapted to support the top brace, said member comprising a forwardly and downwardly extending side arm disposed at the side of the side panel with its end terminating in rear of the front of the seat and firmly connected to the side panel, and a rear arm extending inwardly from the upper end of the side arm in rear of the back panel, said rear arm being provided with a downwardly extending lug firmly connected at its lower end with the back panel, and a stud projecting laterally from the side arm and adapted to have the top brace jointed thereto, the said stud being arranged to give support to the bows when the top is folded back.

1,021,554. PUSH-WHEEL. WILLIAM PLUMMER, Indianapolis, Ind. Filed July 25, 1911. Serial No. 640,451. (Cl. 46—38.)

1. A racing wheel, comprising a wheel, a fork pivoted to the hub of said wheel, a handle, means disposed in said handle for engaging in the rim of said wheel, and a brace connecting the upper portion of said frame and said handle.

2. A wheel of the character described, comprising a wheel, a fork pivoted to the hub of said wheel, a handle, a bifurcated arm mounted to reciprocate in one end of said handle, a pulley mounted in said handle and arranged to engage the hub of said wheel, resilient means for forcing said pulley against the rim, wings adapted to embrace



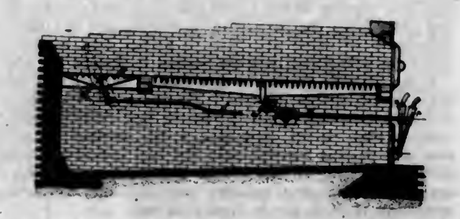
the rim of the wheel for guiding the same, a segmental brace connecting the upper portion of said fork and said end of the handle together, and another brace connecting the upper portion of said fork and said handle.

1,021,555. CURTAIN-POLE. HUGO PURAT, Bridgeport, Conn. Filed Sept. 18, 1911. Serial No. 649,828. (Cl. 156—19.)



A curtain pole comprising two semi-cylindrical parallel sections having their abutting faces interlocking at a plurality of points, means for hinging one end of said sections together, the interlocking faces of said sections capable of clamping a portion of a curtain thereto, one of said sections having its free end provided with a recess, a keeper extending across the recessed end of said section, a latch carried by the free end of the other of said sections and capable of engaging said keeper for connecting the free ends of said sections together, each of said sections at each end thereof provided with a parallel recess at a point removed from each terminus thereof, a latch secured to the periphery of each of said sections and having an outwardly curved portion arranged over a peripheral recess and capable of being forced therein, and caps mounted upon the ends of said sections and having their inner faces provided with grooves for the reception of said peripheral latches, whereby the caps are detachably connected in position.

1,021,556. GRATE. JOHN C. QUINN, Philadelphia, Pa., assignor to The Engineer Company, a Corporation of New York. Filed Dec. 28, 1905. Serial No. 293,584. (Cl. 126—176.)

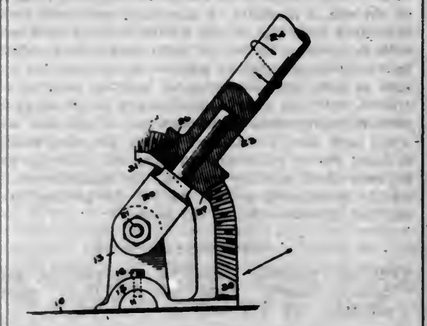


1. A grate consisting of a series of grate bars arranged longitudinally side by side and each provided with a channel extending longitudinally of the top face thereof and side horns at the upper part of and extending laterally from the opposite sides thereof, the horns on one side being in staggered relation to the corresponding horns on the opposite side, and the upper face of each of such horns having a groove or channel formed therein and open to the air space between the two adjacent horns on the opposite side of the bar, such grooves or channels of the individual horns communicating with the channel at the top face of the bar, the bars in said series of bars being so arranged that each horn of a bar is positioned opposite the air space between two horns of an adjacent bar.

2. A grate consisting of a series of grate bars arranged longitudinally side by side and each having a groove extending longitudinally of the top face thereof and side horns at the upper part thereof and extending laterally from the sides of the bar, the upper faces of such horns having grooves or channels formed therein open to air spaces between the horns on the opposite side of the bar and communicating with said longitudinal groove in the top face of the bar, the bars being so arranged and located that the extremities of the horns on opposite sides of each of two adjacent bars extend toward the spaces between the horns of the other bars.

3. A grate consisting of a series of grate bars arranged longitudinally side by side and each provided with a channel extending longitudinally of the top face thereof and side horns at the upper part of and extending laterally from the sides thereof, the horns on one side being in staggered relation to the corresponding horns on the opposite side, the extremities of the horns being pointed or formed with angular faces, and the upper face of each of such horns having a groove or channel formed therein and open to the air space between the two adjacent horns on the opposite side of the bar, such grooves or channels of the individual horns communicating with the channel of the top face of the bar, the bars being so arranged that each horn of a bar is positioned opposite the air space between two horns of an adjacent bar.

1,021,557. SURFACING-TROWEL. JOHN B. RUNNER, Indianapolis, Ind., assignor of three-fifths to Edward E. Gunckel and Frank L. Hickman, Jay county, Ind. Filed Sept. 19, 1911. Serial No. 650,113. (Cl. 72—186.)



1. A surfacing trowel comprising a blade, a toothed-arm arranged on said blade, a handle supporting spindle pivotally mounted on said blade, a handle loosely engaging said spindle, and teeth carried by said handle to engage the toothed-arm and to change the position of the latter with respect to the handle when said handle is rotated about its longitudinal axis.

2. A surfacing trowel comprising a blade, a toothed-arm arranged on said blade, a handle supporting spindle pivotally mounted on said blade, a handle loosely engaging said spindle, teeth carried by said handle to engage the toothed-arm, and means carried by the handle to engage the arm and prevent accidental displacement of the teeth on the handle from the toothed-arm when the two are engaged.

3. A surfacing trowel comprising a blade, a handle attachment on said blade, a toothed-arm arranged on said blade, means to prevent said attachment and arm from turning on said blade, a handle, and means on said handle loosely engaging said attachment to engage said arm and adapted to change the position of said blade with respect to the handle when the latter is rotated about its longitudinal axis.

4. A surfacing trowel comprising a blade, a toothed-arm arranged on said blade, a handle supporting spindle pivotally mounted on said blade, a handle loosely engaging said spindle, teeth carried by said handle to engage the toothed-arm to change the position of the latter with respect to the handle when said handle is rotated about its longitudinal axis, and a clamping-means for rigidly clamping the blade and handle together when desired.

5. A surfacing trowel comprising a blade, a handle attachment on said blade, a toothed-arm arranged on said blade, means to prevent said attachment and arm from turning on said blade, a handle loosely engaging said handle attachment, means on said handle to engage said arm and adapted to change the position of said blade with respect to the handle when the latter is rotated about its longitudinal axis, and a clamping-means for rigidly clamping the blade and handle attachment together when desired.

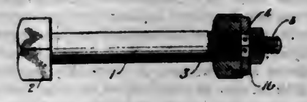
[Claims 6 and 7 not printed in the Gazette.]

1,021,558. HAND-RATCHET FOR DRILLS, &c. CHARLES J. SCHOLLER, Buffalo, N. Y., assignor to The Keystone Manufacturing Company, Buffalo, N. Y., a Corporation of New York. Filed Dec. 30, 1907. Serial No. 408,506. (Cl. 77—54.)



A ratchet comprising a stock having a bearing head and a pawl, a socket journaled in said bearing head and having teeth on its periphery which are engaged by said pawl, a shoulder at its lower end engaging with the corresponding end of the bearing head, an external screw thread at its upper end, an upwardly facing shoulder which is flush with the top of said head, and a seat extending axially through the socket from its upper to its lower end, the lower part of said seat being conical and the upper part thereof having the form of a slot; a feed sleeve having an integral screw nut at its lower end which engages the external thread of said socket and which engages with the top of the bearing head and the adjacent shoulder of the socket, and having a threaded bore of compartively small diameter at its rear end, and an unthreaded bore of larger diameter in front of the small bore and a shoulder which is arranged between the large bore and the screw nut and which engages the threaded end of said socket, and a feed screw arranged in the feed sleeve and working in the threaded small bore thereof, substantially as set forth.

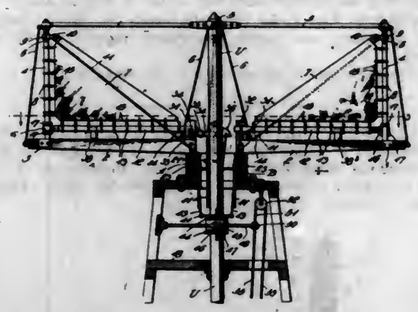
1,021,559. NUT-LOCKING DEVICE. JAMES STEELE, Brookville, Pa. Filed May 22, 1911. Serial No. 628,614. (Cl. 151—15.)



A nut locking device comprising the combination with a bolt having the threaded portion with the outer terminus thereof reduced to provide a smooth rectangular shank, a threaded stem projecting centrally from said shank and of less diameter than the threaded portion of the bolt, of a nut mounted upon the threaded portion of said bolt and having each outer corner thereof cut away to provide an angularly disposed shoulder extending in a plane intersecting two sides of the nut, a rectangular washer of equal axial length with the length of said rectangular shank and having a rectangular opening with

the walls of the latter snugly fitted throughout said shank, inwardly projecting lugs at the corners of said washer and each having an angularly inner face abutting against a shoulder of the nut, and an auxiliary nut mounted upon said stem and bent against the outer face of the washer for retaining the latter and its lugs in engagement with the nut.

1,021,560. WINDMILL. BENJAMIN F. SWIFT, Newton Stewart, Ind. Filed Nov. 6, 1911. Serial No. 658,752. (Cl. 170—1.)



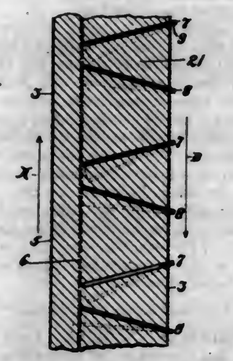
1. In a wind mill, the combination with a horizontally rotating head comprising a framework, upright masts rising from said framework, booms movably mounted on said masts, sails carried by said masts and booms, and stops against which the booms strike when swung outward; of uprights rising from said framework, a catch pivoted across each upright and having a weight at one end and a beveled face and shoulder at the other adapted to engage the inner end of the boom, and mechanism for tripping all said catches at will.

2. In a wind mill, the combination with a horizontally rotating head comprising a framework including a ring, upright masts rising from said framework, booms movably mounted at their outer ends on said masts, sails carried by said booms, and stops on said ring against which the inner extremities of the booms strike when swung radially outward; of uprights rising from the hub of said framework and each having a nose, a catch pivoted across said upright and having a weight at one end and a beveled face and shoulder at the other adapted to coact with said nose to engage the inner end of the boom, and controlling mechanism for tripping said catches at will.

3. In a wind mill, the combination with a horizontally rotating head comprising a framework including a ring, upright masts rising from said framework, booms movably mounted at their outer ends on said masts, sails carried by said booms, and stops on said ring against which the inner extremities of the booms strike when swung radially outward; of uprights rising from the hub of said framework and each having a nose, a catch pivoted across said upright and having a weight at one end and a beveled face and shoulder at the other adapted to coact with said nose to engage the inner end of the boom, independent chains leading downward from the lighter ends of said catches, a vertically movable collar to which said chains are connected, a band swivelly engaging said collar and having opposite trunnions, a lever having a loop within which said trunnions are journaled, and means for swinging said lever from a position on the ground.

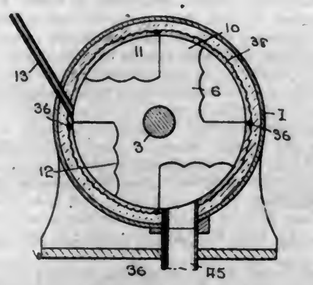
1,021,561. VEHICLE-TIRE. BENJAMIN CLIFFORD SWINEHART, Youngstown, Ohio. Filed June 20, 1911. Serial No. 634,372. (Cl. 152—1.)

1. An elastic tire for vehicle wheels comprising a body of elastic material having in the base thereof an embedded longitudinally-extending layer of wear-resisting material arranged remote from the lateral faces thereof and further provided with a circumferential series of diagonally-positioned cross-bars extending from one of the lateral faces of said base into the body thereof and resting against said layer, the ends of the said bars which engage said layer arranged to swing, in unison with the movement of the material of said tire, upon their opposite ends as pivots, whereby the body portions of said bars will shift from a diagonal position to a more nearly transverse one, said bars arranged when their position is shifted to compress the material of said tire existing between said layer and the rim flange on one side of the tire.



2. The combination with the tire-carrying flanged rim of a vehicle wheel, of an elastic tire adapted to be mounted thereon, a plurality of diagonally-positioned cross-bars extending from one of the lateral faces of said base and held in position by one of said flanges as an abutment, said bars terminating at points remote from the opposite side of said tire, the extended ends of said bars being free to shift on their opposite ends as pivots in unison with the movements of the material of said tire, whereby when said bars are shifted from a diagonal position to a more nearly transverse position the material existing between their movable ends and the opposite side of the tire is compressed against the rim for preventing creeping and displacement of the same.

1,021,562. MOTOR. JAMES FRANCES THOMAS, Montreal, Quebec, Canada. Filed May 29, 1911. Serial No. 630,044. (Cl. 121—56.)



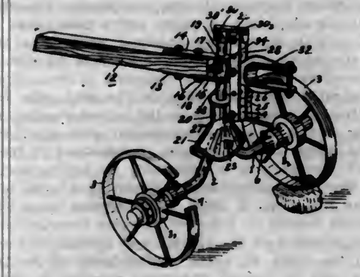
1. A battery of motors arranged in pairs, comprising casings, a shaft extending through said casings, a rotating piston for each casing and attached to said shaft, each piston having a plurality of arms radiating therefrom to form pockets, one face of each arm having depressions therein, means to convey propelling medium into said pockets, and additional means to control the flow of the propelling medium into the pockets.

2. In a motor the combination with a casing comprising a circular band having shoulders thereon, side plates having ledges and a piston rotatably mounted in the casing, of a packing between the piston and the casing.

3. In a motor the combination with a casing having projections therein and a piston rotatably mounted in the casing, of a packing surrounding the outer edge of the piston, means to anchor the packing to said projections, and reinforcing means for the packing.

4. In a motor the combination with a casing and pistons rotatably mounted therein, of a packing surrounding the outer edge of the pistons and means to anchor the packing in position around the pistons.

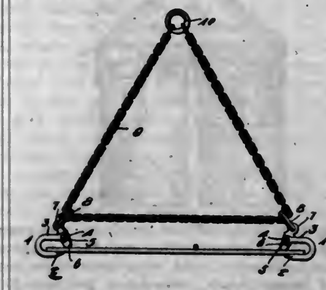
1,021,563. TRUCK MECHANISM. FREDERICK C. WARNE, Mansfield, Ohio, assignor to The Roderick Lean Manufacturing Company, Mansfield, Ohio, a Corporation of New Jersey. Filed Feb. 13, 1911. Serial No. 608,346. (Cl. 21—63.)



1. A fore-truck, comprising an axle having a portion in the center thereof bent upward from the axis to form a support, a supporting member having a splay socket formed therein adapted to pivotally engage said bent portion, and means to pivotally connect said bent portion or axle to the splay socket for oscillatory vertical motion, as described and set forth.

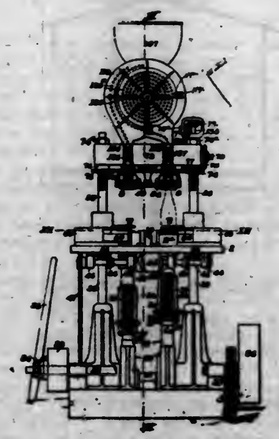
2. The combination of carrying wheels and an axle having a portion bent out of alinement with its axis, of a supporting member provided with a splay socket and a bearing, means to pivotally connect the supporting member and bent portion of the axle; said supporting member being provided with a lug, vertical bars attached to said lug on one end, a shaft fitted to said supporting member extending in a vertical direction, a bracket fitted to said shaft and to which the vertical bars are attached on one end.

1,021,564. HOISTING APPARATUS. HENRY CHARLY WARNITZ, Providence, R. I. Filed June 22, 1911. Serial No. 634,743. (Cl. 57—9.)



In a hoisting apparatus a pair of work engaging hooks, said hooks being formed from bars bent midway between their ends to form the bill of the hooks, said bills being flattened to form material engaging surfaces, said ends of the bars after forming the bill being bent upon themselves to form the shanks of the hooks, eyes formed on the ends of said shanks work gripping members pivotally mounted in the eyes of said shanks whereby the inner ends of said members are adapted to engage the material above the points where the same is engaged on its lower side by the bills of the hooks, eyes formed in the outer ends of said material gripping members, rings arranged in said eyes of the gripping members, a combined hook operating and hoisting chain having a loose engagement with said rings, and a connecting ring adapted to detachably connect the ends of the chain together.

1,021,565. BOTTLE CAPPING OR SEALING MACHINE. EARL PORTER WETMORE, Toledo, Ohio. Filed June 5, 1909. Serial No. 500,288. (Cl. 113—2.)



1. A bottle capping apparatus, having a plurality of capping heads, means for automatically distributing alternate bottles to one or the other of the capping heads, means for delivering bottles successively to the distributing means, and means for deflecting bottles from a filling machine to the delivering means, and means for driving the filling machine from the capping machine; substantially as described.

2. The combination of a bottle capping machine, having two capping heads, a conveyer, means for deflecting the bottles from a filling machine driven synchronously with the capping machine to the conveyer, and means for moving the successive bottles delivered by the conveyer to one or the other of the capping heads; substantially as described.

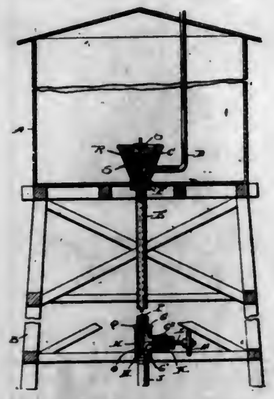
3. The combination of a bottle capping machine, having a receiving table and a plurality of capping heads, of a distributing arm for moving alternate bottles from the distributing point on the receiving table to one or the other of the capping heads, a continuously moving carrier for carrying successive bottles to the distributing point on said table, and a runway for deflecting bottles from a bottle filling machine to the carrier, and means for driving the bottle filling machine synchronously with the capping machine; substantially as described.

4. A bottle capping apparatus comprising a capping machine having a plurality of capping heads, a runway for automatically deflecting filled bottles from a bottle filling machine and delivering them to a carrier on the capping machine, a continuously moving carrier for delivering successive filled bottles to a distributing point at the end of said carrier, and a distributing arm for moving the filled bottles from the distributing point alternately to one or the other of the capping heads, and means for driving the filling machine from the capping machine; substantially as described.

5. A bottle-capping apparatus, comprising a capping machine having two capping heads, a carrier for automatically delivering filled bottles to the capping machine, said carrier extending from the delivery point of a bottle filling machine and arranged to deliver bottles freely to a timing point or station, means for distributing alternate bottles so delivered to one or the other of said heads, and timing means engaging the bottles on said carrier at said station and timing their delivery with respect to the action of the distributing means; substantially as described.

[Claims 6 to 75 not printed in the Gazette.]

1,021,566. CUT-OFF. WILLIAM THOMAS WOOD, Hereford, Tex. Filed Mar. 6, 1911. Serial No. 612,697. (Cl. 137—21.)



1. In a device of the character described, in combination, a tank, a supporting structure therefor, a conical valve casing mounted vertically in the bottom of the tank centrally thereof, an air pipe opening into the casing, a vertical hollow pipe connected at its upper end to the lower end of the valve casing, a three-way coupling disposed near the ground and having an upper threaded nipple engaging the lower end of the hollow pipe, a supply pipe connected to the lower threaded nipple of the three-way coupling, a horizontally extending threaded nipple formed upon the three-way coupling intermediate the vertical length thereof, a cap mounted in said horizontal nipple, a cranked shaft passing transversely through said horizontal nipple, a valve rod mounted in the vertical hollow pipe, said rod extending upwardly into the valve casing, an adjustable valve carried by said rod, the lower end of said rod engaging the cranked end of the transverse shaft, and means for rotating said shaft.

2. In a device of the character described, in combination, a tank, a supporting structure therefor, a conical valve casing mounted in the tank, an air pipe opening into the casing, a vertical hollow pipe connected at its upper end to the lower end of the valve casing, a three-way coupling disposed near the ground and having an upper threaded nipple engaging the lower end of the hollow pipe, a supply pipe connected to the lower threaded nipple of the three-way coupling, a horizontally extending threaded nipple formed upon the three-way coupling intermediate the upper and lower nipples, a cranked shaft passing transversely through said horizontal nipple, a valve rod mounted in the vertical hollow pipe, said rod extending upwardly into the valve casing, an elastic valve carried by said rod, the lower end of said rod engaging the cranked end of the transverse shaft, means for rotating said shaft, and means for adjusting said valve, said means consisting of a pair of nuts mounted in the valve casing above and below the valve and engaging therewith.

1,021,567. FLEXIBLE METALLIC TUBING. WILLIAM BERRYMAN and CHARLES CAMUS, Middlesex, England, assignors to United Flexible Metallic Tubing Company, Limited, Ponders End, England. Filed Mar. 24, 1911. Serial No. 616,754. (Cl. 137—75.)



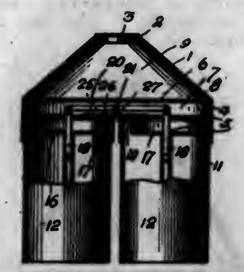
1. A flexible metallic tubing comprising a series of convolutions of a strip of metal, which tubing has a polygonal section formed by flattened surfaces arranged around the circumference of the tubing, and spirally to the axis thereof and has a profile composed of elements alternately parallel with and radial to the said axis; substantially as herein described.

2. A flexible metallic tubing comprising a series of convolutions of a strip of metal, which tubing has a polygonal section formed by flattened surfaces arranged around the circumference of the tubing, and spirally to the axis thereof and has a profile composed of elements alternately parallel with and radial to the said axis, and in which there are corrugations on the lateral margins of the strip for interlocking one convolution with another and complete channeled corrugations intermediate of the said marginal corrugations, substantially as herein described.

3. A flexible metallic tubing comprising a series of convolutions of a strip of metal, which tubing has a polygonal section formed by flattened surfaces arranged around the circumference of the tubing, and spirally to the axis thereof, the strip of metal having both of its lateral margins bent in reverse directions parallel to the axis of the tubing and respectively opposite the outer and inner surfaces of the strip so as to form interlocking channels for contiguous convolutions; substantially as described.

4. A flexible metallic tubing comprising a series of convolutions of a strip of metal, which tubing has a polygonal section formed by flattened surfaces arranged around the circumference of the tubing, and spirally to the axis thereof, the strip of metal having both of its lateral margins bent in reverse directions parallel to the axis of the tubing and respectively opposite the outer and inner surfaces of the strip so as to form interlocking channels for contiguous convolutions and complete channeled corrugations intermediate of the said interlocking channels; substantially as described.

1,021,568. MINER'S LAMP. JULIUS BERTHA, Tyre, Pa. Filed Nov. 25, 1911. Serial No. 662,331. (Cl. 48—23.)



1. In a miner's acetylene gas lamp, a liquid reservoir, carbid receptacles, a gas collecting chamber interposed between said reservoir and said receptacles and communicating with these latter, detachable perforated tubes arranged in said receptacles, valve bodies in communication with said tubes, a water pipe intercommunicating between said reservoir and carbid receptacles, a burner tube at the front side of said lamp and communicating with said gas collecting chamber, and means at the rear side of said lamp to facilitate attaching a lamp to a miner's cap.

2. A miner's acetylene gas lamp comprising a water reservoir having the base thereof provided with a controlling compartment, carbid receptacles detachably connected to the base of said reservoir and in communication with said controlling compartment, detachable perforated tubes arranged within the receptacles, perforated cups arranged within said receptacles for preventing the communication between said compartment and said receptacles from being clogged, water pipes intercommunicating between said reservoir and said tubes, a burner in communication with said controlling compartment and adapted to receive gas therefrom, and means for controlling the supply of water from said reservoir to said perforated tubes.

1,021,569. COMPOSITION FOR WATERPROOFING CONCRETE. WALTER CLEMENT BLADEN, Newark, N. J., assignor to Aaron C. Horn, New York, N. Y. Filed Dec. 30, 1911. Serial No. 668,634. (Cl. 134—79.)

1. A composition for waterproofing concrete comprising a solution of nitrocellulose and the fatty acid of a drying oil.

2. A composition for waterproofing concrete comprising a solution of nitrocellulose and the fatty acid of tung oil.

3. A composition for waterproofing concrete comprising a solution of nitrocellulose, the fatty acid of a drying oil, and a resinous body.

4. A composition for waterproofing concrete comprising a solution of nitrocellulose, tung oil acid, and a resinous body.

5. A composition for waterproofing concrete comprising a solution of nitrocellulose, tung oil acid and sandarac resin.

[Claims 6 to 9 not printed in the Gazette.]

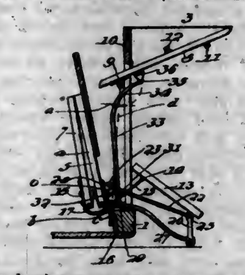
1,021,570. CURTAIN-POLE. WILLIAM F. BOLINGER, Avonmore, Pa. Filed June 30, 1911. Serial No. 636,187. (Cl. 156—19.)



1. A curtain pole comprising a tubular section slotted from one end thereof to the opposite end and having the material bordering upon the edges of said slot bent inwardly to provide guide-ways, one end of said section being cut away to provide arms with one of said arms extending rearwardly and doubled upon itself, a semi-cylindrical section adapted to slide into the guide-ways of said tubular section, said semi-cylindrical section being cut away to provide arms, one of said arms being bent rearwardly and doubled upon itself, a telescopic rod arranged in said section and adapted to hold the upper edges of a curtain, and ornamentations having sockets formed therein and adapted to receive said arms and the ends of said telescopic rod.

2. In a curtain pole, the combination with brackets, of a telescopic metallic pole having the outer ends thereof cut away to provide tapering arms and rearwardly extending arms, said rearwardly extending arms being doubled upon themselves and adapted to engage the outer sides of said brackets to prevent longitudinal displacement of said pole, a telescopic rod arranged in said curtain pole and adapted to hold the upper edges of curtains, and ornamentations detachably mounted upon the arms of the ends of said curtain pole and adapted to inclose the ends of said telescopic rod.

1,021,571. DOOR AND PEDAL OPERATING MECHANISM. GEORGE P. BRAND and JOHN SANTOS, New York, N. Y.; said Santos assignor to Behning Piano Company, a Corporation of New York. Filed May 2, 1910. Serial No. 558,790. (Cl. 84—169.)



1. A door having means for pivotally mounting it, a pedal support having means for pivotally mounting it, pedals pivotally mounted on said support, and means directly and pivotally connecting said door and support.

2. A door having pivoting means, a member pivotally connected to the door near its pivoting means, pedals, a movable support for said pedals, and a direct pivotal connection between said member and support.

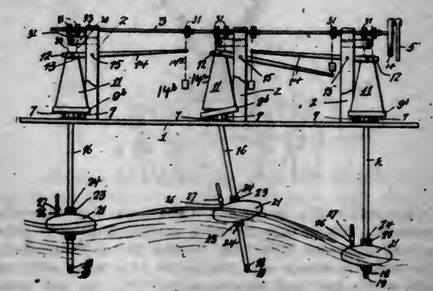
3. The combination of a casing, a door mounted at its upper edge on a fixed pivot on said casing, a swinging support, a pedal mechanism mounted thereon, and means pivotally connecting said door and support for moving said support into the casing.

4. A casing, a door having means for pivotally mounting it on said casing, a pedal support having means for pivotally mounting it, pedals pivotally mounted on said support, and means directly and pivotally connecting said door and support for moving said support into the casing in advance of the door.

5. A casing, a door having means for pivotally mounting it on said casing, a pedal support having means for pivotally mounting it, pedals pivotally mounted on said support, and means directly and pivotally connecting said door and support for moving said support in advance of and by the movement of the door.

[Claims 6 to 15 not printed in the Gazette.]

1,021,572. WAVE-ENERGY MOTOR. DAVID K. BRYSON, Pittsburgh, Pa. Filed Feb. 12, 1910. Serial No. 543,461. (Cl. 61—50.)



1. In a wave motor, the combination with a pier, bearings supported thereby, and a shaft journaled in said bearings, of a plurality of shaft operating units located upon said pier, each unit comprising a universal bearing, a rock head forming part of said bearing, a depending float lever supported by said rock head, a float slidably mounted upon said lever, a lug carried by said float and extending into said lever, a roller carried by the lower end of said lever, a reciprocating cap supported by said rock head, a walking beam pivotally mounted in one of the first mentioned bearings, a universal connection between

said beam and said cap, ratchet mechanisms located upon said shaft, a roller revolubly supported adjacent to each mechanism, an endless sprocket chain adapted to travel over said roller and the roller of said float lever and have the ends thereof yieldably connected to the lug of said float, and a sprocket chain connected with said beam and passing over the other of said ratchet mechanisms.

2. In a wave motor, the combination with a pier, bearings supported thereby, and a shaft journaled in said bearings, of a plurality of shaft operating units supported by said pier, each unit comprising a universal bearing, a rock head located thereon, depending channel bars carried by said rock head and constituting a float lever, a float slidably mounted upon said lever, means in connection with said float and adapted to cause a displacement of water therein, a beam pivotally carried by one of said bearings and adapted to be oscillated by a rocking movement of said head, ratchet mechanisms located upon said shaft for rotating the same, a sprocket chain connecting with said beam for actuating one of said mechanisms, and an endless sprocket chain connecting with said float for actuating the other of said mechanisms.

3. In a wave motor, the combination with a shaft, of a plurality of independent mechanisms for rotating said shaft, endless sprocket chains adapted to travel over some of said mechanisms, means adapted to movably anchor one of said chains relative to the swell of a wave, and means in connection with the first mentioned means and adapted to impart a movement to the other of said chains by the lateral impulse of a wave.

4. In a wave motor, the combination with a plurality of float levers, of floats slidably mounted upon said float levers and in conjunction with the movement of said float levers adapted to transmit power, and air connections with said float levers adapted to displace water within said floats by the injection of air.

5. A wave motor comprising a driven element, driving mechanisms therefor, and float mechanisms operated from the swell of a wave in either direction for actuating said driving mechanisms to operate the driven element.

[Claims 6 to 9 not printed in the Gazette.]

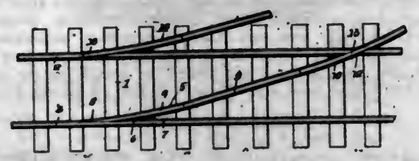
1,021,573. CULTIVATING IMPLEMENT. JOHN W. CARAWAN, Mesic, N. C. Filed Sept. 23, 1911. Serial No. 650,914. (Cl. 97—37.)



In a cultivating implement, a beam, an arch associated therewith and having laterally extending flanges, yokes pivoted upon said flanges and having disk carrying shafts, and brace members each connected adjustably with one limb of the arch and also connected with the disk carrying yoke associated with the opposite limb of said arch.

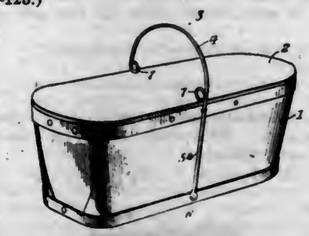
1,021,574. CROSSOVER FOR RAILS. HENRY D. CUMMINS, Hunt, N. Y. Filed June 17, 1911. Serial No. 633,670. (Cl. 104—112.)

A crossover comprising a pair of rail members 9 and 19, the former arranged exteriorly of and the latter between the main track rails, a switch rail 4 arranged between the main track rails, registering with the rail 9 and cut away at one end to engage the inner side of the web and to overlap and engage the inner side of the base of one of the main track rails and further flush with the head of said main track rail, a rail 14 positioned exteriorly of the main track rails, registering with the rail 19 and cut away at one end to provide a tongue extending on to the head of and further engaging the outer side of the web and the outer edge of and overlapping the inner side of the base of the other track rail, said tongue gradually increasing in height upwardly, and a cross-over rail registering with one end of the rail 9 and cut away



intermediate its ends for the passage of that track rail upon which the head extends, said crossover rail having the web thereof of sufficient height to support its head above the head of that track rail which extends through said crossover rail, said crossover rail engaging the inner and outer faces of that track rail upon which said tongue extends and further engaging each side edge of and overlapping the base of said rail, said crossover rail gradually increasing in height from each end toward the center thereof.

1,021,575. HANDLE. JACOB W. DAILEY, Forestville, N. Y. Filed May 13, 1911. Serial No. 626,937. (Cl. 217—125.)



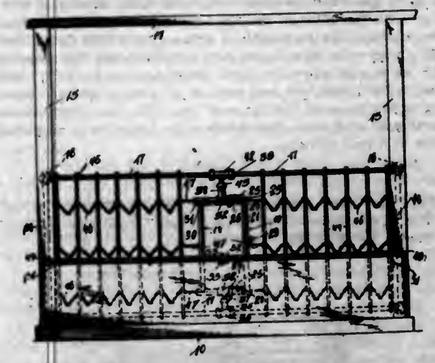
In combination with a basket having a cover, of a resilient handle connected with the basket, said handle comprising a U-shaped bail having its side arms bent upon each other to provide parallel loops projecting inwardly in direct line with said bail, said loops engaging the said cover firmly holding the same in place, and adapted to be disengaged from the cover by downward pressure on the bail, eyes formed on the free ends of the bail and secured to the lowermost points on the sides of the basket, and means for holding the bail permanently in vertical position.

1,021,576. STANCHION. WILLIAM P. DAWSON, Kamloops, British Columbia, Canada. Filed Dec. 15, 1910. Serial No. 597,524. (Cl. 119—27.)

1. A stanchion comprising a frame structure, horizontally disposed supporting bars mounted in said frame structure, a yoke frame slidably connected with said supporting bars, and a curtain slidably connected with said supporting bars and fixedly connected to said yoke frame.

2. A stanchion of the class described comprising a frame structure, having opposite side sections, guide bars horizontally mounted in the side sections, horizontally disposed supporting bars slidably connected to the guide bars, and a yoke frame slidably connected to the supporting bars.

3. A stanchion of the class described comprising a frame structure, having opposite side sections, guide bars horizontally mounted in the side sections, horizontally disposed supporting bars slidably connected to the guide bars, a yoke frame slidably connected to the supporting bars, and a curtain slidably connected with the said supporting bars and also linked to the yoke frame.

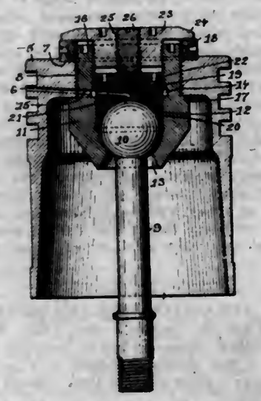


4. A stanchion of the class described comprising a frame structure, having opposite side sections, guide bars horizontally mounted in the side sections, horizontally disposed supporting bars slidably connected to the guide bars, a yoke frame slidably connected to the supporting bars, a curtain slidably connected with the said supporting bars, and also linked to the yoke frame, the said yoke frame being provided with extensible sections.

5. A stanchion comprising a frame, guide bars mounted in the frame, supporting bars slidably connected with the guide bars, sleeves slidably connected to the supporting bars, and a yoke frame rotatably connected with the sleeves.

[Claims 6 to 8 not printed in the Gazette.]

1,021,577. GAS-ENGINE PISTON. FULVIO DE FAZI, Providence, R. I., assignor of one-half to William Douglass Blossfield, Providence, R. I. Filed Nov. 10, 1911. Serial No. 659,588. (Cl. 121—104.)



1. An engine piston having a hole in its head, a socket secured to the head of the piston through the hole, a connecting rod having a ball end in the socket, a thrust block in the socket engaging with the ball end on the connecting rod, means for adjusting the thrust block for wear, means for holding the thrust block in the adjusted position and means for oiling the socket.

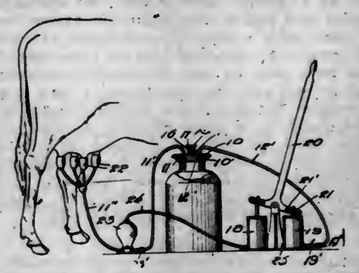
2. An engine piston having a screw-threaded hole in its closed end, a screw-threaded socket in the screw-threaded hole in the piston end, a connecting rod having a ball end in the socket, a thrust block in the socket and fitted to the ball end of the connecting rod, means for adjusting the thrust block for wear, means for holding the thrust block in the adjusted position and means for oiling the socket.

3. An engine piston having a screw-threaded hole in its closed end, a socket screwed into the hole in the piston end, a connecting rod having a ball end in the socket, a thrust block in the socket and having a semi-spherical cavity for the ball end on the connecting rod, means for adjusting the thrust block for wear, means for holding the thrust block in the adjusted position and means for oiling the socket.

4. An engine piston having a screw-threaded hole in its closed end, a shouldered socket screwed into the hole in the piston end, and having a cylindrical chamber contracted at its inner end, a connecting rod having a ball end in the chamber, a thrust block in the chamber and having a semi-spherical cavity in its end for the ball end of the connecting rod, a cap in screw-thread engagement with the socket, a set screw in screw-thread engagement with the cap and bearing on the thrust block and means for oiling the socket.

5. An engine piston having a screw-threaded hole in its closed end and a radial oil duct extending into the hole, a shouldered socket having a portion in screw-thread engagement with the hole in the piston end and extending outward through the same, an internally screw-threaded chamber having a rounded inner end terminating in an outwardly flaring opening, an internal annular oil groove and a radial oil duct on a line with the oil duct in the piston and extending into the oil groove, a screw-threaded ring in screw-thread engagement with the outer end of the socket, and engaging with the piston end, a connecting rod having a ball end in the socket chamber, a thrust block in screw-thread engagement with the screw-threaded chamber and having a semi-spherical cavity in its end and an oil duct which extends from the cavity outward, means for adjusting the thrust block for wear, a cap in screw-thread engagement with the outer end of the socket and having a flange which engages with the ring on the socket and a set screw in screw-thread engagement with the cap and bearing on the thrust block.

1,021,578. MILKING-MACHINE. LEO D. DE LANEY and MATHIAS A. HOLTZBAUER, Belmond, Iowa. Filed Dec. 22, 1910. Serial No. 598,857. (Cl. 31—73.)



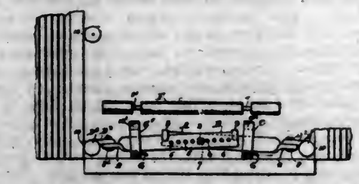
1. A milking device consisting of a cover adapted to rest within the opening in a milk receptacle, a plate arranged transversely on said cover, a nut, a screw passing centrally through said nut, a plurality of retaining members hingedly connected to said nut, said retaining members being adapted to contact with the flange of the receptacle, a plurality of tubes extending through said cover, pump cylinders, one of said tubes being connected to one of the pump cylinders which is adapted to create a vacuum within the milk receptacle, a series of teat cups the second tube being connected to said series of teat cups, a chamber arranged on said tube, said chamber being connected to the other of said pump cylinders whereby a vacuum is created in said chamber.

2. A milking machine consisting of a cover adapted to form a closure for a milk receptacle, means for securing said cover to said receptacle, tubes extending through said cover, means connected to one of said tubes for

creating a vacuum in said receptacle, a suction chamber, the other of the tubes connecting said receptacle with the suction chamber, a tube connecting the chamber with the milk supply, a second vacuum creating means, and connections between the said chamber and the second vacuum creating means.

3. The combination with a milk receptacle and a plurality of teat cups, of a pair of vacuum pumps, a vacuum chamber, connections between the teat cups and the vacuum chamber, connections between the vacuum chamber and the receptacle, connections between the vacuum chamber and one of said vacuum pumps, connections between the receptacle and the other of said vacuum pumps, and means for operating said pumps, whereby a vacuum is created alternately in the receptacle and in the vacuum chamber.

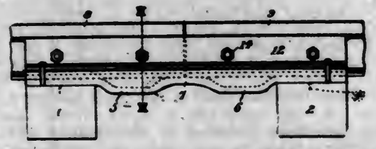
1,021,579. ADJUSTABLE MOUNTED ROLLER. TRACY W. DOOLITTLE, CLIFFORD S. WINSOR, and CHARLES VERGASON, Binghamton, N. Y. Filed Dec. 2, 1911. Serial No. 663,645. (Cl. 214—6.)



1. In an adjustable mounted roller, two hinged perforated bars, a nut bolt passing between the same, curved lugs projecting from the upper side of the bars, bent in opposite directions, each capable of hooking over the opposite bar, a plate extension from the outer end of each bar horizontal to the sides of the bar, there being a graduated series of perforations through the bars for receiving said nut bolt, clamping members pivotally mounted on said extension plates, and adapted to engage the surface of a door post, slotted journal supports having bearings therein slidingly mounted on said bars, clamping means mounted in said supports, a journaled roller adapted to and mounted on said bearings.

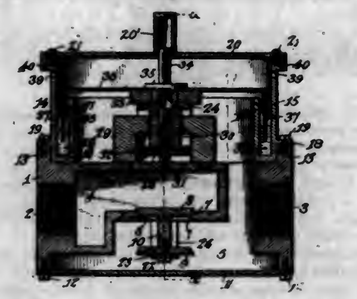
2. In an adjustable mounted roller for doorways, two perforated bars hinged upon a nut bolt passing between them, there being a series of perforations through said bars, a curved lug projecting from the upper side of each of said bars, each lug bent in opposite directions, and adapted to hook over the opposite bar, a plate extension from the outer end of each bar, horizontal to the sides of the bar, clamping members pivotally mounted on said extension plates, and adapted to engage the surface of a door post; slotted journal supports having bearings therein, slidingly mounted on said bars; means for clamping said supports to said bars at any given point, a journaled roller adapted to and mounted in said bearings.

1,021,580. RAIL CHAIR AND JOINT. CHARLES EDWARD DOTY, Waynesburg, Pa. Filed Dec. 29, 1911. Serial No. 668,517. (Cl. 239—6.)



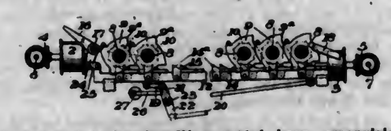
A combined rail chair and joint comprising a base plate provided with prongs capable of engaging in a pair of ties, said base plate formed with a plurality of depressions, each of said depressions interposed between the central portion and one end of the plate, said central portion being in alinement with the end portions of the plate and said end portions and central portions constituting bearings for supporting the bases of the rails, said depressed portion of said base plate affording a cushioning function for the ends of the rail, longitudinally extending members integral with the sides of the base plate and capable of abutting against the longitudinal edges of the rail bases, and fish plates capable of being positioned against the sides of the rails and provided with flanges integral with said longitudinal members and capable of being positioned upon the upper faces of the bases of the rails, the intermediate portion of said base plate adapted to support the opposing ends of a pair of rails.

1,021,581. GAS-CONTROLLER AND SAFETY-VALVE. FRANZ S. DRUMMOND, Blaine, Wash. Filed Apr. 8, 1911. Serial No. 619,814. (Cl. 50—30.)



In a gas regulator of the character described, a lower chamber and an upper chamber, the lower chamber being provided with an inlet port and an outlet port, and a partition between said ports having a double seated valve opening, a pair of valves connected by a stem adapted to be alternately seated on one side or the other of said valve opening, an upper chamber having a central opening communicating with the lower chamber, and an annular chamber adapted to be filled with mercury, a vertically movable cylindrical stem having an annular flange at its lower end, a vertical guide pin projecting into said cylindrical chamber, a vertical socket in the top of said upper chamber, a vertical guide pin at the upper end of said cylindrical member projecting into and slidable in said socket, a bell float mounted on the upper end of said cylindrical member and having its depending edge projecting into said annular chamber, a weight mounted on said cylindrical member, a second weight normally resting on a fixed support and having a central opening through which said cylindrical member slidably projects, the flange at the lower end of said member being normally out of engagement with and adapted to be lifted with said cylindrical member into engagement with said weight, and a frame connecting said cylindrical member with said pair of valves in the lower chamber.

1,021,582. APPARATUS FOR HANDLING METAL BARS. FRED H. DANIELS and AXEL F. BACKLIN, Worcester, Mass., assignors to The American Steel & Wire Company of New Jersey, Hoboken, N. J., a Corporation of New Jersey. Filed Oct. 30, 1908. Serial No. 460,361. (Cl. 193—11.)



1. Apparatus for handling metal bars, comprising a series of sets of toothed wheels, the teeth of adjacent sets of wheels overlapping and having edge portions arranged to lift and transfer the bars sidewise from one side to those on the opposite side when said wheels are rotated, and means including a ratchet and pawl for rotating the wheels; substantially as described.

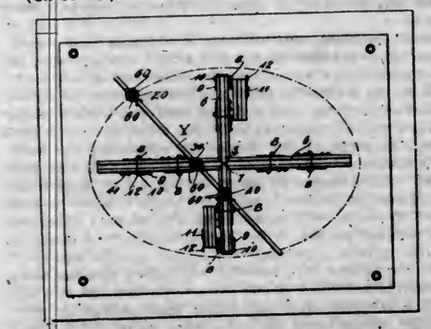
2. Apparatus for handling metal bars, comprising a conveyer having a series of sets of toothed wheels, with the teeth of adjacent sets of wheels overlapping, the teeth having edge portions arranged to engage with and positively move bars supported thereon laterally across the width of the apparatus from series to series when the wheels are actuated, and means for intermittently actuating the wheels to transfer the bars; substantially as described.

3. Apparatus for handling metal bars, comprising a roller delivery table arranged to deliver bars lengthwise thereon, and having means for actuating the table, a conveyer having a series of sets of toothed wheels with the teeth in one set overlapping those in its adjacent set, and having means for actuating said wheels, and mechanism arranged to simultaneously transfer the bars from the table to the conveyer and on the conveyer when said conveyer wheels are actuated; substantially as described.

4. Apparatus for handling metal bars comprising a series of sets of toothed wheels having the teeth of adjacent wheels overlapping, and arranged to transfer sidewise bars supported thereon when the wheels are rotated, and means including a ratchet and pawl for rotating the wheels; said means being arranged to prevent backward movement of said wheels; substantially as described.

5. Apparatus for handling metal bars comprising a conveyer having a series of sets of toothed wheels with the teeth of the adjacent sets overlapping and arranged to move bars supported thereon sidewise across the width of the apparatus when the wheels are actuated, and means for intermittently actuating the wheels to transfer the bars, said actuating means being adapted to alternately hold the sets of wheels to prevent backward movement thereof and rotate the wheels to transfer the bars; substantially as described.

1,021,583. DRAWING INSTRUMENT. JOHN DZIERWA, St. Louis, Mo. Filed June 5, 1911. Serial No. 631,213. (Cl. 33—5.)



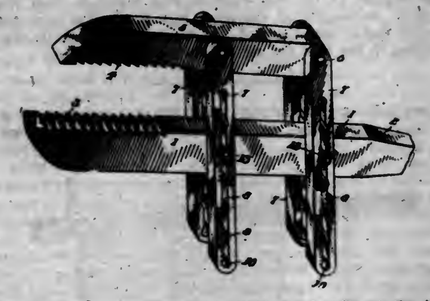
1. In a drawing instrument of the class described, the combination with a stick, members adjustably mounted thereon and two of them having pins at their lower ends, and a marking device carried by the third; of a cross comprising a rigid center, foldable arms comprising sections hinged to the outer ends of the arms of said center, the hinges between the sections of the foldable arms being alternately on opposite sides of said arms, and catches disposed opposite the hinges, the upper edges of said arms and sections being grooved for the reception of said pins.

2. In a drawing instrument of the class described, the combination with a stick, members adjustably mounted thereon, and two of them having pins at their lower ends, and a marking device carried by the third; of a cross comprising a rigid center, foldable arms comprising sections at the outer extremities of the arms of said center, a hinge at one side of each joint between said arms, and a catch at the other side of such joint comprising one member having an out-turned rib and another member having an inturned hook adapted to engage the rib when the parts are in alinement, all arms having grooves in their upper edges adapted for the reception of said pins.

3. In a drawing instrument of the class described, the combination with a stick, members adjustably mounted thereon and two of them having pins at their lower ends, and a marking device carried by the third; of a cross comprising a rigid center, foldable arms comprising sections at the outer extremities of the arms of said center, a hinge at one side of each joint between said arms, a catch at the other side of each such joint comprising one member having an out-turned rib and another member having an inturned hook adapted to engage the rib when the parts are in alinement, all arms having grooves in their upper edges adapted for the reception of said pins, and feet depending from the lower edges of the center and of each of said sections.

4. In a drawing instrument of the type described, the combination with a stick, and members thereon each having a transverse slot through its upper end adapted to receive said stick; of brackets at opposite sides of the slot in each member, two L-shaped levers having knuckles at their angles lapping each other and standing between said brackets, a pivot pin through the brackets and knuckles, an expansive spring between the upper ends of said levers, and a shoe beneath their lower ends adapted to bear upon said stick.

1,021,584. PIPE-WRENCH. ISAAC M. EDMUNDSON, McKeesport, Pa. Filed Oct. 27, 1911. Serial No. 657,079. (Cl. 81—117.)

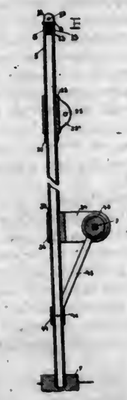


A wrench comprising a bar having a handle at the inner end thereof, and the outer end thereof toothed, a jaw having the outer end thereof toothed and confronting the toothed end of said bar, sets of arms pivotally connected to the sides of said jaw, said arms having longitudinal slots formed therein with the ends of said slots terminating in openings and the walls of said slots provided with oppositely disposed recesses, and pins mounted in the sides of said bar and extending through the slots of said arms, said pins corresponding in diameter to the diameter of the recesses and openings of said arms and having flat faces adapted to confront the walls of the slots of said arms whereby said arms can be shifted upon said pins and moved to lock said arms relatively to said pins.

1,021,585. HOISTING APPARATUS. JOHN S. EWERT, Dolton, S. D. Filed Aug. 29, 1911. Serial No. 646,599. (Cl. 212—10.)

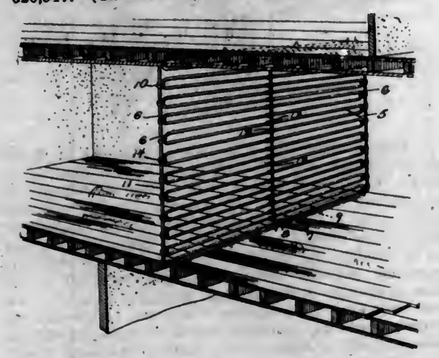
1. A hoisting apparatus including a standard, a ping mounted in the upper end of the standard for limited rotary movements and formed on its periphery with a recess forming consequent end walls, said recess being disposed in a plane at right angles to the longitudinal axis of the standard, a pin carried by the standard and projecting into the recess and adapted to be engaged by the end walls of said recess to limit the rotary movements of the plug, and a horizontal arm pivotally connected to the plug for vertical swinging movements.

2. A hoisting apparatus including a standard, a plug mounted in the upper end of the standard for limited rotary movements, a peripheral flange projecting from the plug and disposed upon the upper end of the standards, the plug below the flange being formed on its periphery with a recess forming consequent end walls, said recess being disposed in a plane at right angles to the



longitudinal axis of the standard, a pin carried by the standard and projecting into said recess and adapted to be engaged by the end walls of said recess to limit the rotary movements of the plug, ears projecting from the upper end of the plug, and a horizontal arm pivotally connected to the ears for vertical swinging movements.

1,021,586. EXPANSIBLE PARTITION. LEONARD P. J. FARRELL, Chicago, Ill. Filed Apr. 13, 1911. Serial No. 620,947. (Cl. 189—34.)



1. A portable partition comprising end bars having means for attachment to a support, and a plicated spring forming a connection between said end bars.

2. A portable partition comprising end bars having means for attachment to a support, and an expansible plicated spring forming a connection between said bars and having the strands thereof of equal length.

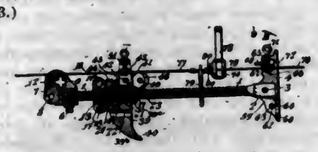
3. A portable partition comprising an expansible plicated spring having the opposite ends thereof bent to form terminal arms, end bars secured to said arms, and anchoring spurs carried by the end bars for engagement with a support.

4. A portable partition comprising an elongated body portion free to expand and contract and formed of a single length of wire bent to produce a plicated spring, the strands of which are of equal length, and end bars secured to the body portion and provided with laterally extending spurs for engagement with a support.

5. The combination with spaced supports, of a portable partition interposed between said supports and comprising an extensible body portion formed of a plicated spring, and end bars secured to the opposite terminals of the spring and bearing against the adjacent supports, said body portion being expansible, thereby to hold the end bars in engagement with said supports.

[Claims 6 to 10 not printed in the Gazette.]

1,021,587. WIRE-STRETCHER. JACOB FISHER, Roann, Ind. Filed Dec. 16, 1910. Serial No. 597,689. (Cl. 39—63.)



1. A combined wire stretcher and lifting jack including a bar, an anchoring sleeve secured to one end of the bar, a carrier slidable along the bar and having a lifting head, means for moving the carrier along the bar, means mounted on the carrier for connecting the same with a wire or other part to be stretched, a shoe, and means for pivotally connecting the shoe with the anchoring sleeve to form a support for the bar when the device is used as a lifting jack and for securing the shoe to the other end of the bar when the device is used as a wire stretcher.

2. A combined wire stretcher and lifting jack including a screw, an anchoring sleeve secured to one end of the screw and having a rounded portion, a nut engaging the screw, a carrier slidable on the screw and having a lifting head and actuated by the nut, means mounted on the carrier for connecting the same with a wire or other part to be stretched, a shoe, and means for pivotally connecting the shoe with the rounded portion of the anchoring sleeve to form a support for the screw when the device is used as a lifting jack and for securing the shoe to the other end of the screw when the device is used as a wire stretcher.

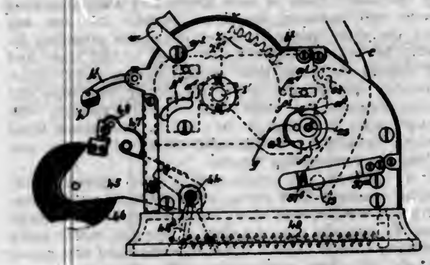
3. A combined wire stretcher and lifting jack including a screw provided at one end with a straight edge, an anchoring sleeve secured to the other end of the screw and having a rounded portion, a nut engaging the screw, a carrier provided with a lifting head and slidable along the screw, and connected with and actuated by the nut, means mounted on the carrier for connecting the same with a wire or other part to be stretched, and a shoe provided with a socket or recess having a wall adapted to fit against the straight edge of the screw to hold the shoe rigid therewith, said socket being also adapted to receive the rounded portion of the anchoring sleeve to permit a relative pivotal movement of the shoe and the screw.

4. A combined wire stretcher and lifting jack including, a longitudinal bar, a carrier movable thereon and provided with a laterally projecting lifting head, means for moving the carrier along the bar, a shoe, means for securing the shoe at one end of the bar when the device is used as a lifting jack and at the other end of the bar when employed as a wire stretcher, and means mounted on the carrier and the shoe for connecting the same with a wire or other part to be stretched.

5. A combined wire stretcher and lifting jack including a longitudinal bar, an anchoring sleeve secured to one end of the bar, a carrier mounted on the bar and provided with a laterally projecting lifting head, means for moving the carrier along the bar, a shoe, means for pivotally connecting the shoe with the anchoring sleeve when the device is used as a lifting jack and for securing the shoe to the other end of the bar when the device is employed as a wire stretcher, and means mounted on the carrier for connecting the same with a wire or other part to be stretched.

[Claims 6 and 7 not printed in the Gazette.]

1,021,588. ADDING AND PRINTING MACHINE. JOHN MERRY TOURTEL, London, England. Filed Mar. 21, 1910. Serial No. 550,730. (Cl. 235—60.)



1. An adding machine comprising toothed sectors, means for setting the sectors by hand, counting mechanism, a totalizing lever, counting wheels to engage the sectors and to be thrown into engagement with the sectors when the totalizing lever is moved, a zeroizing handle movable with the counting wheels, a locking bar for the toothed sectors operated by the counter lever when the counting wheels are thrown into engagement with the sectors, said locking bar being released when the zeroizing handle is turned, and means for causing the locking bar to reengage the sectors as the zeroizing handle completes its rotation.

2. An adding machine comprising toothed sectors, means for setting the sectors by hand, counting mechanism, a totalizing lever, counting wheels to engage the sectors and to be thrown into engagement with the sectors when the totalizing lever is moved, a zeroizing handle movable with the counting wheels, a locking bar for the toothed sectors operated by the totalizing lever when the counting wheels are thrown into engagement with the sectors, said locking bar being released when the zeroizing handle is turned, means for causing the locking bar to reengage the sectors as the zeroizing handle completes its rotation, and an operating handle having means thereon for finally releasing the locking bar.

3. In combination the toothed sectors, means for operating them by hand, adding means coöperating with the sectors, printing mechanism coöperating with the sectors, a locking bar operated by the printing mechanism to lock the sectors and an operating handle having means thereon for moving the locking bar out of engagement with the sectors.

4. In combination the toothed sectors, means for setting the same by hand, adding mechanism coöperating with the sectors, printing mechanism, a lever therefor, an operating handle and means for causing the lever to lock itself and unlock the handle when said lever is moved, and the said handle to unlock the lever when the handle is moved.

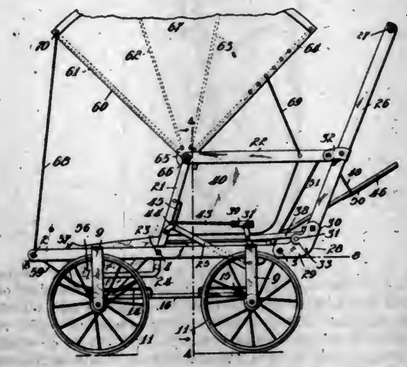
5. In combination the toothed sectors, levers for setting the same by hand, adding mechanism coöperating with the sectors, an operating handle for the sectors and adding mechanism, a pivoted rest bar for the setting levers, and means operable from the operating handle for actuating said bar.

[Claims 6 to 9 not printed in the Gazette.]

1,021,589. GO-CART. MELVIN J. FOYER and OTTO KURZ, Toledo, Ohio. Filed Oct. 25, 1907. Serial No. 399,171. (Cl. 21—83.)

1. In a go-cart, the combination with the running gear frame having side bars, of wheel supports pivotally connected to said side bars and foldable beneath the latter, front and rear cam loops mounted upon the inner sides of the wheel supports near the axles on which the wheels are mounted, an operating bail for each laterally opposite pair of wheels, and operative interconnections whereby said bails are moved together.

2. In a go-cart, the combination with the running gear frame, of a pair of laterally opposite wheel supports pivotally connected at their upper ends to the respective sides of said running gear frame, a cam-shaped loop mounted upon the inner side near the lower end of each wheel support, and an operating bail having its arms pivotally connected with the respective sides of the running gear frame and extending through said loops and operatively engaging the same.



3. In a go-cart, the combination with the running gear frame having side bars, of front and rear wheel supports pivotally mounted upon one of said side bars and foldable transversely beneath the running gear frame, a cam bar extending between and having its ends rigidly connected with said wheel supports, supplemental cam strips mounted upon said cam bar at each end thereof and forming in conjunction with the latter cam loops, and cam arms pivotally mounted upon the running gear frame above the respective cam loops and extending through and operatively engaging the latter.

4. In a go-cart, the combination with the running gear frame and one of the side bars thereof, of a pair of wheel supports pivotally mounted upon said side bar near the front and rear ends thereof, a cam bar the ends of which are rigidly connected to the respective wheel supports, supplemental cam strips rigidly connected with said cam bar at points transversely opposite the wheel supports and forming with the cam bar cam loops, cam arms pivotally mounted upon the running gear frame and extending through the corresponding cam loops, a lever for actuating said cam arms, and link connections between said lever and cam arms whereby the latter are actuated simultaneously.

5. In a go-cart, the combination with the running gear frame comprising a side bar extending longitudinally at each side thereof, of front and rear wheel supports pivotally mounted to each of said side bars and foldable transversely beneath the running gear frame, longitudinally disposed cam loops mounted upon the inner sides of each of said several wheel supports, a cam bail for each transversely opposite pair of wheel supports, each cam bail having its arms pivotally connected to the respective side bars and its intermediate portion extending through the corresponding cam loops, a lever bail having each of its two side arms pivoted between their ends to the side bars at points between the front and rear cam bails, a pair of forwardly extending links connecting the two sides of the front cam bail with the corresponding arms of the lever bail, a pair of rearwardly extending links connecting the two sides of the rear cam bail with the respective arms of the lever bail, a folding back frame pivotally connected with the running gear frame, and operative connections between said folding back frame and said lever bail whereby the movement of the back frame into folded position operates the cam bails.

[Claims 6 to 21 not printed in the Gazette.]

1,021,590. SWING. JAMES H. FREY, Vincennes, Ind. Filed June 28, 1911. Serial No. 635,769. (Cl. 155—35.)

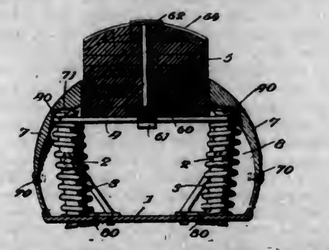


1. In a hanger for a swing, a hanger-member having its lower end terminating in a lateral cup-forming extension whose inner surface is flared upwardly and a hook-ended member having a downwardly presented point, received by said cup-forming extension, the cavity or chamber of the latter being adapted to allow of the oscillation of said point of said hook-ended member as the latter partakes of the swinging motion.

2. A device of the character described including a hook-ended member having at its lower end a lateral stud and an aperture near its hooked portion, means for supporting said hook-ended member in position, and a lateral suspending member comprising a hook-ended link adapted to engage said aperture, said lateral stud engaging said suspending member.

3. A device of the character described, including a hanger-member having a cavity, a hook-ended member with its point engaging said cavity, said hook-ended member having an aperture near its upper hooked portion and a lateral stud at its lower end, and a lateral suspending member comprising an upper-end hooked link engaging said aperture, said lateral stud engaging said suspending member.

1,021,591. RESILIENT TIRE. CHRISTIAN FRIEDERICH, Tripp, S. D. Filed Sept. 19, 1911. Serial No. 650,115. (Cl. 152—8.)



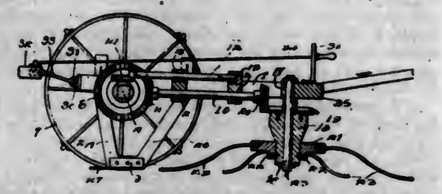
1. A resilient tire comprising a rim, two spaced series of spring posts, said posts being spaced apart and projecting approximately radially from said rim, coiled tread-sustaining springs on said posts, a flexible tread arranged between said series of posts and provided with cross heads having projecting ends bearing on said springs and receiving and slidable on said posts, and fixed opposite side plates inclosing the springs and posts, said tread being arranged between the other edge portions of said side plates.

2. A resilient tire comprising a rim, a flexible tread having flat opposite side faces, two series of blocks at their inner ends fixed to the rim, the blocks being spaced apart and projecting radially from the rim beyond the opposite side faces of the tread so that the tread is movable radially between said series, opposite side plates fitting the outer faces of said blocks and rigidly secured thereto and inclosing the space between the rim and tread, the outer edge portions of the plates extending inwardly toward the opposite side faces of the tread and over beyond the outer ends of said blocks, coiled tread-sustaining springs, and means carried by the tread and seating against the outer ends of said springs, said springs being arranged in two series, said tread being movable inwardly between said series of springs and against the compression thereof.

3. A resilient tire comprising a rim, approximately radially arranged fixed spring posts projecting therefrom, said posts being spaced apart and arranged in two series along the opposite edge portions of the rim, coiled tread sustaining springs on said posts, opposite fixed side plates at their outer edge portions extending inwardly beyond the outer ends of the posts and at their inner portions having recesses receiving the outer ends of the posts, respectively, and a flexible tread arranged between the outer edge portions of said plates and between the series of posts and provided with means seated against the outer ends of said springs and movable on said posts.

4. A resilient tire comprising a rim portion, a flexible tread portion, cross heads arranged transversely of the inner face of the tread portion and projecting laterally beyond the same, bolts passed inwardly through the tread portion, plates on the inner ends of said bolts and arranged longitudinally of the inner face of the tread portion and holding the tread portion against creeping on said heads, and coiled springs between the rim and tread portions and seating against said heads.

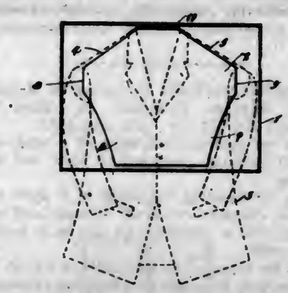
1,021,592. POTATO-DIGGER. SPENCER J. FRITZ, Avoca, N. Y. Filed Mar. 11, 1911. Serial No. 613,920. (Cl. 55—56.)



1. In a machine of the character described, a substantially U-shaped frame having a bridge and arms extending from said bridge, bracing bars connecting said arms, a vertical shaft carried by said bridge, a separating wheel rotatably mounted upon said shaft, a gear plate carried by said wheel, a horizontal shaft journaled in said braces, a gear mounted upon one end of said horizontal shaft and engaging said gear plate to rotate said wheel, an axle carried by said frame, gears slidably mounted upon said axle and positioned one on each side of said horizontal shaft, a gear mounted upon the end of said horizontal shaft and positioned between said gears, and means for sliding said gears to bring a desired one of said gears in contact with said last mentioned gear to rotate said horizontal shaft.

2. In a machine of the character described, a frame having a bridge and arms extending from said bridge, cross bars bracing said arms, a vertical shaft carried by said bridge, a separating wheel rotatably mounted upon said shaft, a gear plate secured to the upper portion of said wheel, a horizontal shaft carried by said bracing arms, a gear mounted upon one end of said horizontal shaft and meshing with said plate, a gear mounted upon the opposite end of said horizontal shaft, an axle carried by said frame, a collar slidably mounted upon said axle, gears formed upon said collar and positioned to each side of said last mentioned gear, journals mounted upon the upper faces of said cross bars, a shaft rotatably mounted in said journals, and an angular extension at one end of said last mentioned shaft engaging said collar whereby said collar may be moved to bring a selected one of said gears into engagement with said gear mounted upon said horizontal shaft.

1,021,593. REINFORCING AND SHAPE-KEEPING CARD FOR CLOTHES. SOLOMON DAVID GILKERSON, Winnipeg, Manitoba, Canada. Filed Aug. 14, 1911. Serial No. 644,030. (Cl. 211—13.)



A shape-keeping card for coats having at the top a projecting tab, adapted to be folded back at right angles to the body of the card and adapted to bear against the side of the containing box so as to hold the collar of a coat fitted on the card in the upright position, and having edges inclining downwardly from opposite sides of the tab and corresponding to the slope of the shoulders of the coat, straight side edges for determining the holes of the sleeves, and downwardly converging side edges below said straight edges, said card having a straight lower edge for determining the point of fold of the body of the coat, substantially as described.

1,021,594. BLOCKS. KNUD GJORUP and THORVALD PETERSEN, Hartford, Conn., assignors of one-fourth to Peter E. Bossen and one-fourth to Jens Bossen, South Windsor, Conn. Filed Aug. 26, 1911. Serial No. 646,217. (Cl. 46—35.)



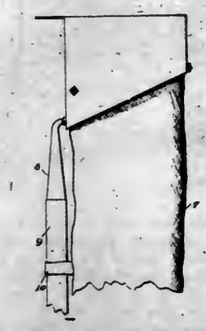
1. A toy house comprising a plurality of flat blocks, and a plurality of angular blocks adapted to be vertically and longitudinally mounted upon said flat blocks to form a number of hollow pillars.

2. A toy building block comprising a thin, flat strip of stiff material having a similar strip of like material extending at right angles from one longitudinal edge thereof and rigidly connected therewith.

3. A toy house composed of knock down elements, certain of said elements being in the form of a thin, flat strip, certain other of said elements being provided on one longitudinal edge with a similar strip extending at right angles to the first mentioned strip and rigidly connected therewith, all of said elements being formed of stiff material.

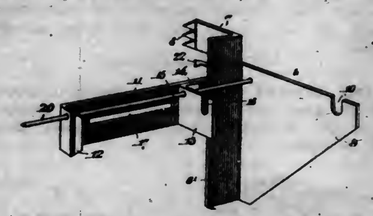
1,021,595. TOOL FOR PICKING FRUIT. HUGH P. GUY, St. Louis, Mo. Filed Dec. 14, 1910. Serial No. 597,237. (Cl. 56—99.)

A fruit picker of the class described comprising a substantially rectangular frame having an open face, a handle for the frame, a chute removably connected to the frame and secured to the handle, the said frame being provided at its front end with a pair of depending side members adapted to form a face and securely retain the chute in position thereto, the said frame having its top portion projecting beyond the front face of the frame and terminating at its rear edge approximately central



of the upper face, the said portion being provided with a central longitudinally extending opening having a flaring mouth, and the said frame being provided at the rear side with a substantially V-shaped opening whereby to provide a means to remove the fruit when it hangs in such a position with relation to the limb that the central longitudinally extending opening cannot be gotten over the limb.

1,021,596. SHADE AND CURTAIN HOLDER. CHARLES F. HAASS, East Atchison, Mo. Filed May 31, 1911. Serial No. 630,305. (Cl. 156—23.)



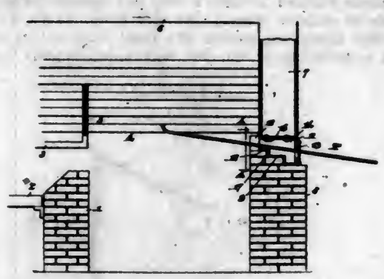
1. In a fixture for shades, curtains and the like, the combination of a plurality of curtain pole brackets having toothed end portions to bite into the opposite sides of a window frame, an extensible tie rod connecting the brackets and having angular shaped sharpened portions also to bite into the opposite sides of a window frame and shade roller brackets adjustably secured to the curtain pole brackets.

2. In a fixture for shades, curtains and the like, the combination of a plurality of curtain brackets having angular shaped sharpened end portions to bite into the opposite sides of a window frame, an extensible tie rod connecting said brackets and having angular shaped sharpened end portions adapted to engage with the opposite sides of the window casing, and shade brackets adjustably secured to the curtain brackets and slidably fitted on the tie rod.

1,021,597. DEVICE FOR STEAM-BOILERS. LEWIS E. HANKISON and WILLIAM E. STUMM, Connellsville, Pa. Filed July 8, 1911. Serial No. 637,501. (Cl. 122—379.)

1. The combination with a furnace and a tubular boiler, of means interposed between the boiler and the boiler setting for permitting the cleaning of said tubes, said means comprising a box-like casting having an opening in the front wall thereof, and a plurality of walls or

partitions spaced apart to form a passage for the insertion of a cleaning tube.



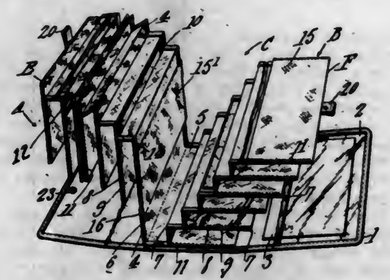
2. The combination with a furnace, a boiler setting, and a boiler, of means interposed between said boiler and boiler setting, comprising a body portion having a series of openings therethrough, means for closing said openings, and blocks or bricks of protecting material at the inner end of the body portion.

3. The combination with a furnace, of a water tube boiler, a setting therefor, and means interposed between the leg of the boiler and the setting, said means comprising a box-like member having a series of walls or partitions forming openings therethrough.

4. The combination with a steam boiler furnace, of a water tube boiler, and a boiler setting, of a body portion interposed between the leg of the boiler and the boiler setting, said body portion comprising a series of box-like sections placed end-to-end and having passages extending therethrough, the base of said sections being stepped to conform to steps formed in the boiler setting.

5. A device of the class described comprising a metallic body portion having an opening in the top wall thereof, and a base with vertically extending side walls forming passages, the top of said side walls being curved or recessed.

1,021,598. POCKET PASS-CASE. EDWARD C. HARRINGTON, St. Louis, Mo., assignor to James S. Taylor, St. Louis, Mo. Filed May 11, 1911. Serial No. 626,439. (Cl. 150—30.)



1. A device of the class described comprising a series of spaced receptacles, each including a front wall and a rear wall of greater height than the front wall, there being gussets connecting the upper edge of the rear wall of each receptacle with the upper edge of the front wall of the adjacent receptacle; and flexible ties connecting the lower edges of the receptacles.

2. A device of the class described including a single piece of flexible material folded zig-zag upon itself, transversely, to form contacting walls, the said walls being secured together in pairs, along their edges, longitudinally of the strip, throughout a portion only of the walls, to define a series of receptacles, and to leave a portion of one wall of each receptacle free to form a connecting gusset with an adjacent receptacle, whereby the receptacles may be collapsed into alinement; and a cover for the receptacles, to which one end of the strip is connected.

3. A device of the class described including a cover; flexible strips each secured at one end to the intermediate portion of the cover, each strip being folded zig-zag upon itself, transversely, to form contacting walls, the said walls being secured together in pairs, along their edges, longitudinally of the strip, throughout a portion only of the walls, to define a series of receptacles, and to leave a portion of one wall of each receptacle free, to form a connecting gusset with an adjacent receptacle; and flexible strips connecting the lower edges of the receptacles.

1,021,599. MOLD-COATING. CHARLES H. HASLETT and ALBERT A. MENTZER, Pittsburgh, Pa. Filed July 10, 1911. Serial No. 637,784. (Cl. 22—189.)

1. A wash for treating the walls of a sand mold for making metal castings, composed of alum and water in solution form.

2. A wash for treating the walls of a sand mold for making metal castings, composed of alum and water in solution form, and a substance to provide a body to the sand of the mold.

3. A wash for treating the face walls of a mold for making metal castings, composed of a solution of alum, water and glutrin.

1,021,600. SWAB. CHARLES M. HEETER, Butler, Pa. Filed Jan. 28, 1910. Serial No. 540,602. (Cl. 103—63.)



1. In a swab, the combination of a tubular stem, a sleeve of compressible rubber confined on the stem and compressed longitudinally by the weight of a column of fluid lifted thereby, the upper portion of the compressible rubber being softer than the lower portion.

2. In a swab, the combination of a tubular stem, a sleeve of longitudinally compressible rubber confined on the stem, the sleeve fully filling the space between the tubular stem and the well casing and compressed longitudinally by the weight of a column of fluid, the upper portion of the sleeve being of softer rubber than the lower portion.

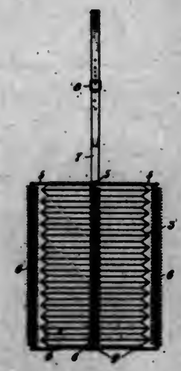
3. In a swab, the combination of a tubular stem, a rubber sleeve confined on the stem and arranged in sections one above the other, both sections being longitudinally compressible under the weight of a column of fluid with the upper section yielding to greater compression than the lower section.

4. In a swab, the combination of a tubular stem, a longitudinally compressible rubber sleeve confined on the stem, the sleeve arranged in sections one above and closely adjacent to the other, an abutment movable on the tubular stem for the upper end of the sleeve, and a coiled spring encircling the tubular stem and normally exerting downward pressure on said abutment.

5. A swab rubber of uniform transverse thickness from end to end with its upper portion softer than its lower portion.

[Claims 6 to 18 not printed in the Gazette.]

1,021,601. FEED-BAG. JOHANN HOLITZKI, Killaly, Saskatchewan, Canada. Filed Dec. 4, 1911. Serial No. 663,670. (Cl. 119—65.)



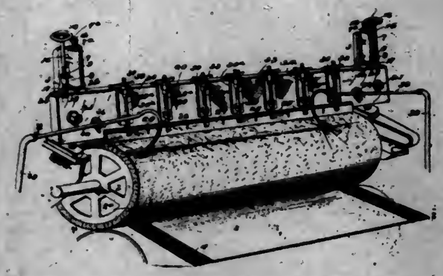
A feed bag comprising a bottom plate, a top ring, a casing of the bellows construction connecting said bottom plate and said top ring, said casing being made of three plies of material the intermediate ply being of rubber adapted to prevent a caving of the walls of said casing, radially disposed pins carried by said bottom plate, radially disposed pins carried by said top ring and vertically alining with pins of said bottom plate, coiled retractile springs connecting the pins of said bottom plate and the pins of said top ring, and straps carried by said top ring whereby said bag can be suspended from a horse's head.

1,021,602. MATCH-BOX. FREDERICK C. HOLKUM, Pocahontas, Ill. Filed May 10, 1911. Serial No. 626,211. (Cl. 206—22.)



A match box comprising a casing having a discharge opening therein, a feeder located in the casing and including a revolubly mounted shaft provided with a member thereon having a peripheral groove therein of an inwardly increasing diameter so that the side walls of the groove lie substantially tangential to the shaft to permit the match to gravitate thereon to the lowermost corner of the groove whereby the match is held against accidental escape from the groove on movement of the feeder to discharge the match and to guard the match against frictional contact with the walls of the casing to prevent the ignition thereof through frictional contact with the walls.

1,021,603. PAPER MACHINERY. CHARLES H. HORNBECK, Waterford, N. Y. Filed Sept. 16, 1911. Serial No. 649,744. (Cl. 92—47.)



1. In a machine of the class described, the combination of a couch roll, a guard-board, an elastic doctor-blade having its ends free and adjustably secured to the guard-board, means located at intervals in the length of the doctor-blade for adjusting any part of the lower edge of the doctor-blade to accommodate irregularities in the surface of the couch roll, and springs located adjacent the ends of and in contact with the guard-board to force the doctor-blade into contact with the couch roll, said spring being operable in exerting tension on the doctor blade independently of the means for adjusting the edge of said doctor blade.

2. In a machine of the class described, the combination of a couch roll, a guard board, an elastic doctor-blade formed with a series of slits and free at its ends and adjustably secured to the guard-board, springs located adjacent the ends of the guard-board to force the doctor-blade into contact with the couch roll, and means for raising the guard-board against the tension of the springs.

3. In a machine of the class described, the combination of a couch roll, an elastic doctor-blade having a plurality of slits, said blade having secured thereto a series of stems, there being a stem between every two adjacent slits, brackets mounted on the guard-board to receive the stems, each stem having a nut to adjust the edge of the doctor-blade, guides for the guard-board, and springs located near the ends of the guard-board to force the doctor-blade toward the couch roll.

4. In a machine of the class described, the combination of a couch roll, a guard-board, a doctor-blade on the guard-board, springs for forcing the doctor-blade toward the couch roll, means for adjusting the springs, and means bearing on the guard-board for elevating the latter and the doctor-blade against the tension of the springs.

5. In a machine of the class described, the combination of a couch roll, a guard-board, a doctor-blade secured to the guard-board, said doctor-blade having a series of slits to make it elastic, means for adjustably mounting the doctor-blade on the guard-board, springs normally engaging the guard-board to force the latter toward the couch roll, means for adjusting the springs, and means independent of the springs for increasing the pressure on the guard-board to force the edge of the doctor-blade toward the couch roll.

[Claims 6 to 9 not printed in the Gazette.]

1,021,604. CIRCUIT-BREAKER. HARVEY E. HOWE, Windber, Pa. Filed Dec. 4, 1911. Serial No. 663,705. (Cl. 191—1.)

1. In a circuit breaker, a plate of insulation, trolley wire holders carried by the ends thereof, a knife switch for establishing an electrical connection between said holders, and a shoe carried by the blade of said switch to bridge the gap between said holders.

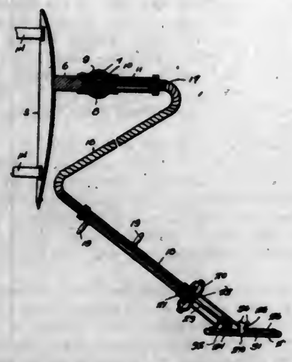
2. In a circuit breaker, a plate of insulation, trolley wire holders carried by the ends thereof and providing

a gap centrally of the lower edge of said plate, a switch blade pivotally connected to one of said holders, contact arms carried by the other holder to receive said blade and establish an electric connection between said holders, and a shoe carried by said blade and adapted to bridge the gap between said holders.



3. In a circuit breaker, trolley wire holders providing a gap, a knife switch adapted to provide an electrical connection between said holders, and a shoe carried by the blade of said switch to bridge the gap between said holders.

1,021,605. CANE-CUTTER. FRANK HUSTACE and JEROME J. SMIDDY, Honolulu, Hawaii. Filed Sept. 22, 1910. Serial No. 583,260. (Cl. 56—103.)



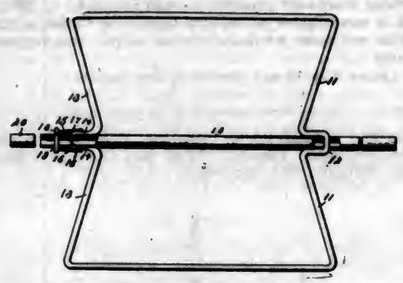
In a manually operated cane cutter, a breast plate, means for connecting the breast plate to the body of a person, a hollow flat head having a medial slot opening through its front edge, opposed cutting devices journaled within the head and intersecting said slot, a stem rising from said head and having a flared end connected with the head, connections between the stem and the said breast plate, a rotatable gear mounted within the stem, gear teeth formed on the cutting devices, and forwardly diverging driven shafts having pinion ends meshing with the rotary gear and the said gear teeth on the cutting devices, respectively.

1,021,606. REEL. ANDREW J. ISHAM, Sevierville, Tenn. Filed Sept. 9, 1911. Serial No. 648,489. (Cl. 242—110.)

1. In a reel the combination of a shaft, a flexible reel bar mounted on the shaft, the said reel bar being provided with a cranked offset at one end adapted to extend through the shaft to permit the reel bar to swing thereon and means at the other end for releasably retaining the ends of the reel bar in rigid engagement with the shaft.

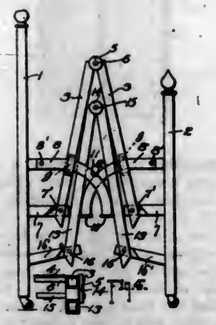
2. In a reel, the combination of a shaft, a flexible reel bar mounted on the shaft, the said reel bar being provided with a cranked offset at one end adapted to extend through the shaft to permit the reel bar to swing thereon and a collar at the other end for rigidly retaining the ends of the reel bar in engagement with the shaft.

3. In a reel, the combination of a shaft, a flexible reel bar mounted on the shaft, the said reel bar being provided with a cranked offset at one end adapted to extend through the shaft to permit the reel bar to swing thereon, a collar mounted to encircle the shaft and slidable thereon for retaining the opposite ends of the reel bar in rigid engagement with the shaft and a pin adapted



to extend through the said shaft and lock the said collar with the ends of the reel bar.

1,021,607. FOLDING BED. OSCAR KALLANDER, Jamestown, N. Y. Filed Dec. 8, 1911. Serial No. 664,653. (Cl. 5—9.)



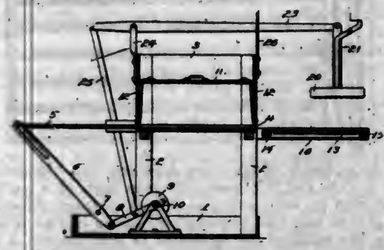
1. In a folding bed, the combination of posts comprising head and foot sections, side rails pivotally mounted on the said sections at their extremities and having other pivotal connections intermediate their lengths, and means secured to the sections to support the rails when in extended operative position, said means interlocking to hold the bed in folded inoperative position.

2. In a folding bed, the combination of posts comprising head and foot-sections, short horizontal arms secured to the sections, side rails jointed to the arms aforesaid and having other pivotal connections centrally thereof, locking means secured to the head and foot sections, guide members for the said locking members secured to opposite sides of the rails, enlarged heads formed on the extremities of the locking members co-acting with the joints of the side rails to support the bed in extended operative position, and a lug formed on one of the locking members adapted to engage in a slot in the opposite locking member to hold the bed in folded position.

3. In a folding bed, the combination of posts comprising head and foot sections, short horizontal arms secured to the sections, side rails having inclined extremities to form butt joints with the ends of the arms aforesaid and having pivotal connections centrally thereof, locking members secured to the head and foot sections above said arms, guide keepers secured to the opposite sides of the rails through which said locking members pass, enlarged heads formed on the extremities of the locking members against which the side rails are adapted to bear when in extended position, a lug formed on one of the locking members adapted to engage in a slot in the opposite locking member to hold the bed in folded position, other short arms secured to the head and foot sections beneath the first mentioned arms, auxiliary brace members jointed

to said arms and having pivotal connections at their opposite ends, and transverse pivot rods connecting the respective central connections of the side rails and auxiliary brace members.

1,021,608. STAMP-CANCELING MACHINE. FRANKLIN KEISTER, Twin Brooks, S. D. Filed Mar. 22, 1911. Serial No. 616,062. (Cl. 101—80.)



1. In a machine of the character described and in combination with a magazine to receive a pile of letters, cards or like matter and a stamp for marking said letters, a power driven shaft having a crank, an ejector, a lever connected with the ejector to effect a reciprocating movement thereof across the magazine to deliver the letters therefrom one at a time, a pitman connecting said lever with the crank of the power driven shaft, a lever having said stamp connected thereto, and a rod between the stamp carrying lever and the said pitman to impart a vibratory movement to said lever whereby the stamp is caused to reciprocate vertically.

2. In a machine of the character described and in combination with a magazine to receive a pile of letters, cards or like matter and a stamp for marking said letters mounted to reciprocate vertically, a power driven shaft having a crank, an ejector arranged to reciprocate across the magazine to deliver the letters therefrom one at a time, a lever mounted near one end and having its opposite end connected with said ejector by means of a pin and slot, a pitman connecting the short arm of said lever with the crank of the power driven shaft, a second lever pivoted near one end and having its opposite end connected with the said stamp, and a rod connecting the short arm of said second lever with the said pitman.

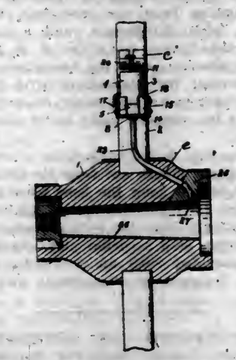
1,021,609. AUTOMATIC FIRE-ALARM. SAMUEL M. KOHR, Manchester, Pa. Filed Mar. 29, 1911. Serial No. 617,672. (Cl. 116—11.)



1. An automatic fire alarm comprising an alarm mechanism, a detent mechanism for holding the alarm mechanism in restraint under normal conditions, a trip for effecting release of the detent mechanism, a strand normally under tension and holding the trip in restraint, yieldable supports for the strand grouped about the alarm mechanism and having eyes at their free ends through which said strand passes loosely, other strands connected with the first mentioned strand and deflecting the portions thereof intermediate the supports, and fusible joints in the lengths of the strands.

2. In an automatic fire alarm and in combination with the alarm mechanism, a strand normally under tension to hold the alarm in restraint, and a fusible connection in the length of the strand embodying members having dovetail portions and a fusible connection of corresponding shape making connection with said members.

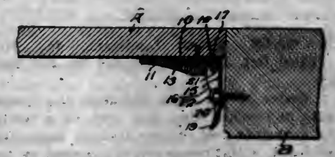
1,021,610. WAGON-HUB. EDWARD A. KEISER, Decatur, Nebr. Filed Sept. 9, 1910. Serial No. 581,148. (Cl. 64—26.)



1. In a device for the purpose set forth, a hub provided with spokes, a boxing within the hub, said boxing having a port communicating with the bore of the boxing, a lubricant receptacle arranged between two of the spokes, said receptacle comprising an upper and a lower member, a support for the receptacle said support comprising a base having up-struck portions forming straps, each of said straps being secured to the opposite pair of spokes, each of said spokes being provided with a curved resilient plate which is adapted to frictionally contact with the opposite sides of the receptacle, a flattened spring member engaging with the top of the receptacle, and a pipe communicating between the receptacle and the port of the boxing.

2. The combination with a vehicle hub and spokes therefor, of a lubricant receptacle between two of said spokes, said receptacle comprising a pair of removable sections, the lower section being formed with oppositely arranged depressions, the upper section being provided with an angular head, a support for the receptacle, said support comprising a base having off-set ends comprising straps, said straps adapted to be connected with the spokes, each of the said straps being provided with a curved resilient plate, each of said plates contacting the opposite sides of the receptacle, the said plates being further provided with studs adapted to engage within the depressions of the receptacle a hinged flattened spring between the spokes and adapted to normally contact with the top of the receptacle, a locking element for the spring and a helical spring surrounding the receptacle and exerting pressure between the flattened spring and the straps of the support.

1,021,611. DOOR-CATCH. FREDERICK J. LEE, Wichita, Kans. Filed May 19, 1911. Serial No. 628,147. (Cl. 70—49.)



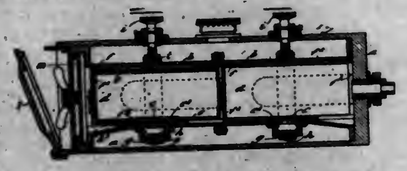
1. A door catch comprising a base-plate, a spring thereon outstanding from the base-plate, and a securing plate formed with side flanges by which it is pivotally connected to the base-plate, the pivotal ends of said side flanges being adapted to bear against the base-plate in the open relation of the parts to limit the opening movement of the securing plate, and the securing plate being also formed, between said flanges with a stop flange

adapted to rest against the tongue to hold the securing plate in its extreme open or closed position.

2. A door-catch comprising a base-plate, a spring tongue outstanding from the base-plate, the base-plate being formed with side-flanges, and a securing plate formed with side-flanges by which it is pivotally connected to the side-flanges of the base-plate, the securing plate being formed for engagement with a keeper and having at its inner end a stop flange bearing against said tongue to hold the securing plate in its extreme open or closed position.

3. A door holding device comprising a base plate having a spring tongue struck out from its inner end, and a securing plate hinged upon the base plate and having a stop flange upon its inner end resting against the spring tongue to yieldingly hold the securing plate in an open or closed position, said securing plate having a central slot therein provided with an outwardly bulged outer marginal edge designed for engagement with a keeper.

1,021,612. ACETYLENE-GAS GENERATOR. WYNDHAM WILLIAM LEWIS, Highgate, London, England. Filed Feb. 25, 1911. Serial No. 610,812. (Cl. 48—25.)



1. In acetylene gas generators, a receptacle adapted to contain carbid and a hollow absorbent wick folded to form an open-ended parallelepiped adapted to collapse under the pressure of the expanding carbid.

2. In acetylene generators, the combination of a water reservoir, a receptacle for calcium carbid communicating with the reservoir, a hollow wick of absorbent material within the receptacle adapted to collapse under pressure of the expanding carbid and to provide for the free flow of water to the carbid throughout its length.

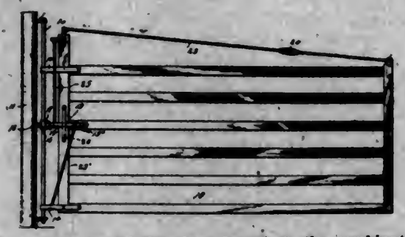
3. In acetylene generators, the combination of a water reservoir, a receptacle for calcium carbid communicating with the reservoir, a hollow wick of absorbent material positioned within the receptacle and adapted to collapse under pressure of the expanding carbid, and means for automatically controlling the flow of water from the reservoir to the wick by the pressure of the gas within the receptacle.

4. In acetylene generators, the combination of a water reservoir, a chamber communicating with the reservoir, a holder having openings for the escape of gas and admission of water and adapted to fit the chamber, a casing within the holder and containing calcium carbid and a hollow wick adapted to collapse under pressure of the expanding carbid and means for automatically controlling the flow of water from the reservoir to the wick by the pressure of gas within the casing.

1,021,613. GATE. PETER LINGWALL, Jr., Stratford, Iowa. Filed Oct. 19, 1910. Serial No. 587,983. (Cl. 39—8.)

1. In a device of the class described, the combination with a gate and coöperating gate post, of a vertical rod carried by said gate post, hinges slidably connecting said gate to said rod, a stationary bearing carried by said rod, a bar mounted for movement in said bearing, and means carried by the gate coöperating with said bar for taking up all sagging of the gate.

2. In a device of the class described, the combination with a gate and a coöperating gate post, of a vertical rod carried by said gate post, hinges slidably connecting said gate to said rod, a stationary bearing carried by said rod, a bar mounted for movement in said bearing, a bell crank pivotally carried by the gate, a link connecting said bell crank with said bar, a connection between said rod and the lower of said hinges, and means secured to said bell crank for adjusting the hang of the gate, as specified.



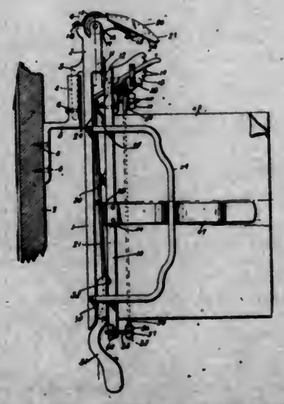
3. In a device of the class described, the combination with a gate and a coöperating gate post, of a vertical rod carried by said gate post, hinges slidably connecting said gate to said rod, a stationary bearing carried by said rod, a bar mounted for movement in said bearing, a bell crank pivotally carried by the gate, a link connecting said bell crank with said bar, a link connecting said rod to the lower of said hinges, and an adjustable rod connecting said bell crank to the outer end of said gate.

4. In a device of the class described, in combination, a movably supported post, a gate mounted thereon, a bearing carried by said post, a bell crank pivoted on said gate, a link member connecting one arm of said bell crank to said bearing, an adjustable connection between the other arm of said bell crank and the outer portion of said gate, and a second link member connecting said bearing to said gate, as herein specified.

5. In a device of the class described, in combination, a movably supported post, a gate mounted thereon, a bearing carried by said post, a bell crank pivoted on said gate, a link member adjustably connecting one arm of said bell crank to said bearing, means connecting the other arm of said bell crank to the outer portion of said gate, and a second link member adjustably connecting said bearing to said gate, as herein specified.

[Claim 6 not printed in the Gazette.]

1,021,614. BOOK-HOLDER. ERIC R. LUNDIUS, Seattle, Wash. Filed June 22, 1911. Serial No. 634,711. (Cl. 45—82.)



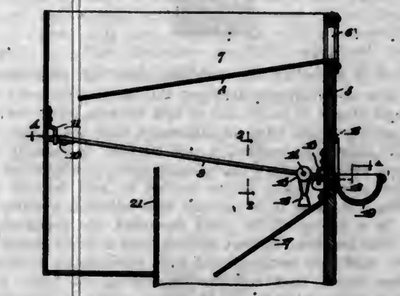
1. A book holder, comprising a body member adapted to be secured to a wall, a book supporting member hinged by its upper end to the upper portion of the body member, a ratchet sector carried by said supporting member, a spring pressed hook carried by said body member and adapted to engage with the ratchet member when the supporting member is swung outwardly, and means for releasing said hook.

2. A book holder, comprising a body member adapted to be secured to a support, a book supporting member hinged by its upper end to the body member and adapted to be swung toward and away from the same, means for clamping a book to said supporting member, a ratchet sector carried by said supporting member, a spring pressed hook carried by said body member and adapted to engage with said ratchet when the supporting member is swung away from the body member, and a release rod co-acting with said hook to disengage it from the ratchet member.

3. A book holder, comprising a body member, a book supporting member hinged by its upper end to the body member and adapted to be swung toward and away from the same, means for clamping a book to said supporting member, supporting wings hinged to said supporting member and adapted to open outwardly to form the supports for the open book when said supporting member is swung away from said body member, closing rails secured to said body member and adapted to co-act with said supporting wings to close the book when the supporting member is swung toward the body member, means for swinging the supporting member from said body member, means for holding said supporting member in its outswung position, and a release mechanism adapted to disengage said holding means whereby said supporting member may be swung inwardly.

4. A book holder, comprising a body member, a book supporting member hinged by its upper end to said body member, means for clamping a book to said supporting member, a ratchet sector carried by said supporting member, a spring pressed hook carried by said body member and adapted to engage with said ratchet member when the supporting member is swung outwardly, a release rod pivoted to said supporting member intermediate its length, one end of said rod being bent outwardly and extended through the supporting member and bearing against said hook, and a handle pivoted to the other end of said rod by means of which the rod is actuated to release the hook.

1,021,615. COIN-DETECTOR. ARTHUR E. MARSH, Denver, Colo. Filed Aug. 26, 1911. Serial No. 646,114. (Cl. 194—103.)



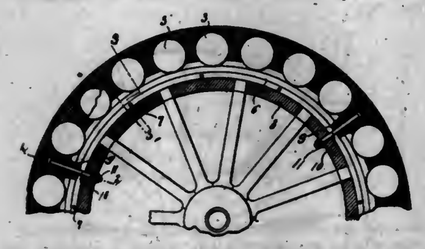
1. The combination with a coin chute, of a coin detector, comprising a tilting platform intersecting the path of said chute, and means pivoting the said platform on a diagonal axis, whereby said platform will tilt on the contact of a coin of a predetermined weight therewith at one end of the same and also on the contact of a coin of a different weight with respect to said first-named coin therewith at its opposite end.

2. The combination with a coin chute, of a coin detector, comprising a tilting platform intersecting the path of said chute, means pivoting the said platform on a diagonal axis, whereby said platform will tilt on the contact of a coin of a predetermined weight therewith at one end of the same and also on the contact of a coin of a different weight with respect to said first-named coin therewith at its opposite end, and adjustable weight means for balancing said platform.

3. The combination with a coin chute, of a coin detector, comprising a tilting platform intersecting the path of said chute, means pivoting the said platform on a diagonal axis, whereby said platform will tilt on the contact of a coin of a predetermined weight therewith at one end of the same and also on the contact of a coin of a different weight with respect to said first-named coin therewith at its opposite end, adjustable weight means for balancing said platform, and a partition in said chute below the platform to form independent chambers for receiving said coins, respectively.

4. The combination with a coin chute, of a coin detector, comprising a tilting platform intersecting the path of said chute, means pivoting the said platform on a diagonal axis, whereby said platform will tilt on the contact of a coin of a predetermined weight therewith at one end of the same and also on the contact of a coin of a different weight with respect to said first-named coin therewith at its opposite end, adjustable weight means for balancing said platform, a partition in said chute below the platform to form independent chambers for receiving said coins, respectively, the said chute being provided with an opening at one end of the platform, and a cup exteriorly of the chute below the said opening for receiving a coin lighter than the previously mentioned coin.

1,021,616. PNEUMATIC TIRE. JAMES MCGINNIS, Johnstown, Pa. Filed Oct. 11, 1911. Serial No. 654,052. (Cl. 152—22.)



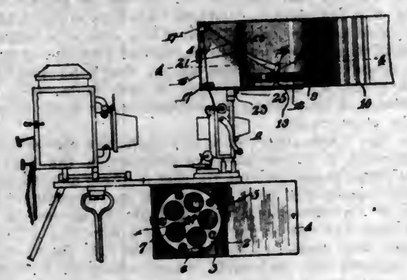
In combination with a wheel embodying a suitable rim, a continuous tire applied to said wheel and comprising an irregular hollow casing, the hollow portion being formed by a plurality of transverse webs providing chambers and having the base portion thereof split annularly, inflated elements arranged in said chambers and adapted to be introduced into the casing by spreading the split parts of the base aforesaid, certain of said webs being provided at intervals between series of the chambers with projections seating on the rim, and anchoring means connecting said certain webs with the rim, whereby slipping of the casing on the rim and fracture of the inflated element is prevented.

1,021,617. FILM-WINDING MECHANISM FOR MOVING-PICTURE MACHINES. JACOB B. MERKEL and GEORGE J. CARROLL, Tamaqua, Pa. Filed Mar. 19, 1910. Serial No. 550,310. (Cl. 88—17.)

1. Film-winding mechanism for moving picture machines comprising an upper magazine, a lower magazine, a reel of separable elements removably and revolubly mounted in the lower magazine, a reel support in the upper magazine, and a second reel support in the upper magazine and disposed at right angles to the first reel support therein for holding the film horizontally in coil form so that the film can be fed from its innermost wound portion to the reel in the lower magazine.

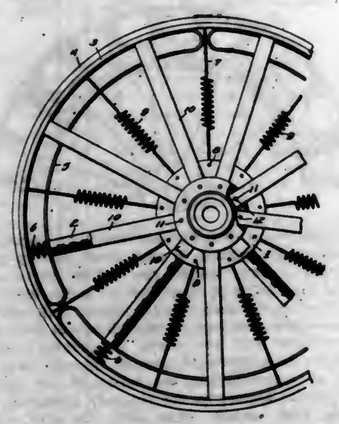
2. In film-winding mechanism, an upper magazine, a revolubly mounted film-supporting member located in the magazine and supporting the film in coil form, a reel support located forwardly of the first support and disposed at right angles to the axis of the support, a second magazine, and a winding reel in the second magazine and

having its axis parallel to the second named support in the first named magazine and at right angles to the first named magazine.



3. In a moving picture machine, the combination of a reel supporting box, means arranged therein to support a reel, and means within the box to support a roll of film and permit the same to be unwound from its center.

1,021,618. WHEEL. GEORGE H. METCALF, Wilkinson, Miss., assignor of one-half to J. A. Nunnery, Rosetta, Miss. Filed Apr. 20, 1911. Serial No. 622,240. (Cl. 152—28.)

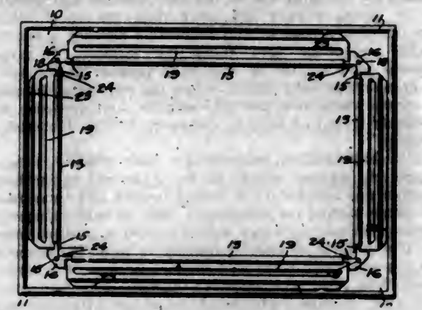


A wheel comprising a hub, spokes radiating therefrom, a felly, a plurality of endless band springs arranged between the felly and the spokes and having parallel sides, springs arranged between the sides of said endless band springs and in line with the spokes, leaf springs carried by the hub and loosely engaging the felly, and connectors secured to the hub and felly outside of the band spring and having interposed spiral spring portions.

1,021,619. STRETCHING-FRAME. FREDERIC R. MILLER, Cypress Hills, N. Y. Filed Jan. 17, 1911, Serial No. 603,159. Renewed Jan. 19, 1912. Serial No. 672,235. (Cl. 45—130.)

1. In a stretching frame, the combination with an open frame having an interior bead, of corner pieces connecting the bead and forming eccentric trunnions, wings with hinges to fit on the trunnions and edges on the wings to coöperate with the beads and clamp the material to be stretched.

2. In a stretching frame, the combination with an open frame having outer and inner beads, hinged wings with raised ends coöperating with the beads for gripping and clamping the material to be stretched, and locking means



on the beads for holding the wings in their clamping position.

1,021,620. MAIL-CARRIER. MARTIN T. MILLER, Tracy, Iowa. Filed July 27, 1911. Serial No. 640,886. (Cl. 129—28.)

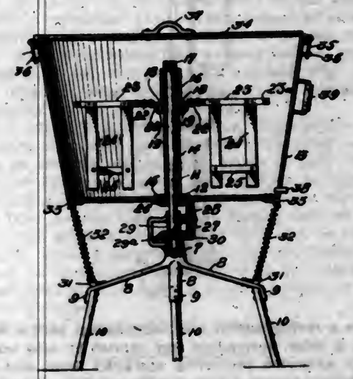


1. In a device of the class described, the combination of a base and vertically arranged side sections formed from a single length of metal, one of said sections being curved, the end of which being in alinement with the upper end of the other side section, a nut adapted to connect the ends of said sections, a clamping member slidably mounted on the side sections, means carried by said member for holding the same in a clamped and adjusted position.

2. In a device of the class described, the combination of a base and side sections formed from a single length of metal, said base being formed with horizontally arranged reverse bends, each side section having its inner face formed with notches, a clamping member adjustably mounted upon the side sections, said member having grooves formed therein, oppositely disposed latches having a base plate adapted to slide in said grooves, finger engaging loops carried by the latches, a coil spring arranged between the latches to hold the same in engagement with the notches formed in the side sections, whereby the adjusting member may be held in an adjusted position for clamping mail and the like.

1,021,621. CHURN. WRAY B. MILLER, Bourbon, Ind. Filed May 16, 1911. Serial No. 627,457. (Cl. 31—18.)

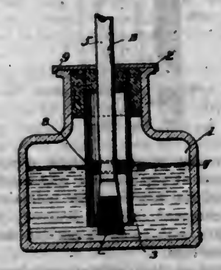
1. A churn comprising a support, a shaft journaled therein, a receptacle provided with a central bottom opening through which said shaft projects, a sleeve carried by and located within said receptacle and surrounding said shaft, a sleeve carried by said shaft and surrounding the upper portion of said first mentioned sleeve, said shaft sleeve being provided with external longitudinal ribs carrying laterally projecting flanges, a dasher supporting sleeve seated on said flanges and provided with internal grooves with which said ribs interlock, arms radiating from said supporting sleeve, dashers carried by said arms, means operated by a rotary movement of the receptacle for rotating the shaft in an opposite direction, and yieldable means opposing rotary movement of said receptacle.



2. A churn comprising a support, a shaft rotatably mounted in said support, a tub provided with a central opening through which said shaft passes, a sleeve leading from said opening and surrounding the inner portion of said shaft, the inner end of said shaft extending above said sleeve, a second sleeve secured to the inner end of said shaft and surrounding said first-mentioned sleeve, dashers connected with said last-mentioned sleeve, means for rotating said tub, and shaft, and springs connecting said tub with said support.

3. A churn comprising a standard, a tub, a shaft mounted in said standard and passing into said tub, a sleeve surrounding said shaft, a second sleeve connected with said shaft and surrounding said first mentioned sleeve, a collar removably mounted upon said second-mentioned sleeve, and dashers connected with said collar.

1,021,622. FOUNTAIN-STOPPER FOR MUCILAGE-BOTTLES. ARTHUR NELSON, Smithville, Minn. Filed Jan. 28, 1911. Serial No. 605,244. (Cl. 91—67.1.)



1. A mucilage bottle having a stopper and a fountain tube extending therethrough, in combination with a detachable brush including a handle having a stopper to engage the upper end of the fountain tube, and a follower constituting a piston to operate in said tube.

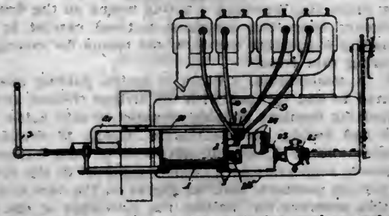
2. A mucilage bottle having a stopper and a fountain tube extending therethrough, in combination with a detachable brush including a handle having a cap, a stopper adjacent to said cap to engage the upper end of the fountain tube, and a follower constituting a piston to operate in said tube.

1,021,623. CEMENT VAULT. FRANKLIN S. NIXON, Phillipsburg, N. J. Filed May 11, 1911. Serial No. 626,453. (Cl. 72—7.)



A cement burial vault consisting of a cement receptacle having transverse rods slightly elevated formed with depending end projections, and a central depending projection above the bottom of the receptacle, and curved raised portions adjacent to said depending end projections, said depending projections each having an anchoring bar embedded therewith in the receptacle.

1,021,624. AUTOMOBILE STARTING MECHANISM. ALONZO F. OLDS, Chicago, Ill. Filed May, 3, 1911. Serial No. 624,726. (Cl. 123—180.)



1. In starting mechanism for explosive engines embodying multiple cylinders, the combination of a cylinder, a piston arranged to operate in the cylinder for drawing in a gaseous mixture and expelling the same, and a valve mechanism having connection with the piston to be operated thereby and having connection with each of the cylinders of the engine for supplying the same with an initial charge to produce an explosion upon the passage of a spark.

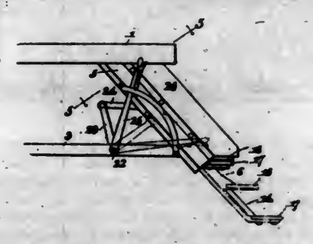
2. In a starting mechanism for explosive engines, the combination of a cylinder having an inlet and having a discharge opening in communication with each cylinder of the engine, a piston arranged to operate in the cylinder, a valve for controlling the discharge opening of the cylinder and the several passages leading to the engine cylinders, and operating means connecting said valve with the piston to admit of positively actuating said valve upon the forward stroke of the piston to expel the gaseous mixture from the cylinder.

3. In starting mechanism for explosive engines embodying multiple cylinders, the combination of a cylinder, a piston arranged to operate in the cylinder for drawing a gaseous mixture therein and expelling the same therefrom, a valve mechanism having communication with the said cylinder and with each of the cylinders of the engine and connected with the piston to be operated thereby, a carbureter, a mixer arranged between the carbureter and cylinder and comprising a series of chambers, and means arranged within said chambers for breaking up particles contained in the gaseous mixture to produce and insure a homogeneous easily ignitible mixture.

4. In engine starting mechanism, the combination of a cylinder, a piston arranged to operate therein, a rotatable valve for controlling the passages between the cylinder and the several cylinders of the engine or motor, a spur wheel having connection with said rotatable valve, and a

toothed bar yieldably connected with the piston and adapted to ride upon the teeth of the spur wheel upon the back stroke of the piston and to engage with said spur wheel to operate the same upon the forward stroke of the piston to admit of the gaseous mixture passing to the cylinders of the engine in rotation.

1,021,625. CAR-STEP. WILLIAM J. OLIVER, Erlanger, Ky. Filed Sept. 13, 1911. Serial No. 649,014. (Cl. 105—87.)



1. In combination, a flight of steps, guide members secured to and inclined with the strings thereof, supporting members slidably mounted in the guide members, means to limit the movement of the supporting members, an extension tread carried by said supporting members, secondary supporting members slidably mounted in the first supporting members, coacting means on the first and secondary supporting members, a tread carried by said secondary supporting members, and means for raising and lowering said treads.

2. In combination, a flight of stairs, guiding members secured to and inclined with the strings thereof, channel supporting members slidably mounted in said guide members and having notches therein, means to engage the notches and to limit the movement of said supporting members, supporting bars slidably mounted in the channel supporting members, coacting means on the bars and supporting members for limiting the movement of the bars, treads carried by the supporting members and bars, a projecting member connected to one of the treads, means for slidably supporting the projecting member, and lever operated mechanism for raising and lowering said projecting member.

3. In combination, a flight of stairs, guiding members secured to and inclined with the strings thereof, channel supporting members slidably mounted in said guide members and having notches therein, means to engage the notches and to limit the movement of said supporting members, supporting bars slidably mounted in the channel supporting members, coacting means on the bars and supporting members for limiting the movement of the bars, treads carried by the supporting members and bars, a projecting member connected to one of the treads, means for slidably supporting the projecting member, a crank shaft connected to said projecting member, a segment, and a lever operating over the segment for rotating the crank shaft in either direction for raising and lowering said treads.

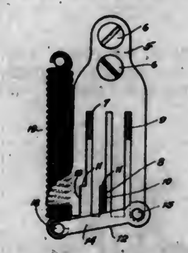
1,021,626. ROVING-MACHINE. WILLIAM C. PEIRCE, Providence, R. I., assignor to Providence Machine Company, Providence, R. I., a Corporation of Rhode Island. Filed Mar. 30, 1910. Serial No. 552,435. (Cl. 118—31.

1. In combination with bobbin rotating means having a ledge, bobbin locking means on said ledge, a secondary mounting adapted to seat on said ledge, said secondary mounting having a ledge which corresponds to said first named ledge, and having bobbin locking means thereon, said first named ledge serving both as a seat for the bobbin and as a seat for said secondary mounting, and said ledge of the secondary mounting serving as a seat for the bobbin, the bobbin being formed to co act with the locking means of the first named support when the secondary mounting is removed and to co-act with the locking means of the secondary mounting when the latter is used, and the secondary mounting being formed to co-act with the bobbin locking means of the first named ledge when said secondary mounting is used.



2. In a roving machine, in combination with a support having a ledge, upstanding lugs carried by said ledge, an annular extension projecting upwardly from said ledge, a secondary mounting formed with a ledge and having its lower portion formed with an opening shaped to receive said extension and also provided with recesses to receive said lugs, an annular extension formed on the ledge of said secondary mounting and forming a continuation of said extension of the support, and upstanding lugs carried by the ledge of the secondary mounting, the bobbin being formed with recesses to receive either the lugs of the support or mounting and being also adapted to receive either the extension of the support when the secondary mounting is out of use, or the extension of said mounting when the latter is in use.

1,021,627. TYPE-WRITER KEY-LOCK. MAX PFAU, Woodstock, Ill., assignor to Emerson Typewriter Company, Woodstock, Ill., a Corporation of Illinois. Filed Apr. 4, 1911. Serial No. 618,816. (Cl. 197—80.)



1. A key-lever lock for typewriters, comprising a member having a recessed slot therein, and means operated by the movements of the key-lever for increasing the normal length of said recessed portion, whereby the lever may be inserted within said recessed portion and locked, substantially as described.

2. A key-lever lock for typewriters comprising a member having a recessed slot therein, a vibratory member adapted to normally decrease the length of the recessed portion of the slot to prevent entrance of the key-lever thereinto, a movement greater than normal of said key-lever moving said vibrating member to permit the insertion of the lever within said recessed portion, whereby the lever is locked, substantially as described.

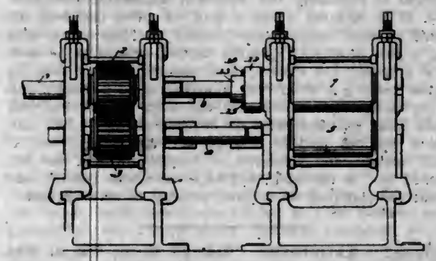
3. A key-lever lock for typewriters, comprising a member having a recessed slot therein, means operated by the movements of the key-lever for increasing the normal length of said recessed portion, whereby the lever may be inserted within said recessed portion and locked, and means for automatically returning the parts controlling the length of the recessed portion to normal position, substantially as described.

4. A key-lever lock for typewriters, comprising a member having a recessed slot therein, a vibratory member adapted to normally decrease the length of the recessed portion of the slot to prevent entrance of the key-lever thereinto, a movement greater than normal of said key-lever moving said vibrating member to permit the insertion of the lever within said recessed portion, whereby the lever is locked, and means for automatically returning the vibrating member to normal position, substantially as described.

5. A key-lever lock for typewriters, comprising a member having a recessed slot therein, a vibrating member serving to normally decrease the length of said recessed portion of the slot, whereby the key-lever is prevented from entering said slot when moved normally, a movement of the lever greater than normal moving said vibrating member into position whereby said lever can be inserted within the recessed portion of the slot and locked, said vibrating member engaging said lever in its locked position and assisting to maintain it in such position, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

1,021,628. ROLLING OR REDUCING MILL. WALTER R. REEVES, East Providence, R. I. Filed Mar. 17, 1911. Serial No. 615,111. (Cl. 80—54.)



1. In a rolling mill, a power shaft having a gear, and an auxiliary shaft connected to the power shaft, a second shaft having a gear in mesh with said first gear, a bottom roll connected to said second shaft, a top roll, and pawl and ratchet means between the top roll and said auxiliary shaft whereby the top roll may rotate at a speed in excess of that of the auxiliary shaft but not at a lower speed than that of the auxiliary shaft.

2. In a rolling mill, in combination with a power shaft, an auxiliary shaft connected thereto, a bottom roll, means for driving the bottom roll from the power shaft, a top roll frictionally engaged with the bottom roll and driven thereby, and a pawl and ratchet connection between the top roll and the auxiliary shaft whereby the top roll is assured of a speed of rotation at least as fast as that of the auxiliary shaft, said connection permitting the bottom roll to drive the top roll at a greater speed than that of the auxiliary shaft.

3. In a rolling mill, in combination with the bottom roll and the top roll frictionally driven thereby, a driving source connected to the bottom roll, and pawl and ratchet means between the driving source and the top roll whereby the top roll is positively driven from the driving source and may be driven independently of said driving source by the bottom roll.

4. In a rolling mill, a driving shaft, a bottom roll driven from the driving shaft, a top roll driven from the bottom roll and pawl and ratchet means connected to the top roll and to the driving shaft whereby the top roll is always positively driven at least as fast as that of the driving shaft and is capable of rotating at a greater speed than that of the driving shaft by said bottom roll.

5. In a rolling mill, a driving shaft, an auxiliary shaft, connected thereto, a bottom roll, a connection between the bottom roll and the driving shaft, a top roll frictionally driven by the bottom roll, a ratchet wheel keyed to the top roll, and a housing keyed to the auxiliary shaft and carrying the series of pawls for engagement with said ratchet wheel whereby the top roll may be driven by the bottom roll at a greater speed than that at which the auxiliary shaft rotates.

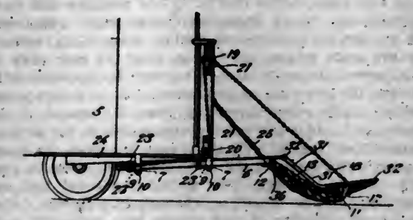
[Claims 6 and 7 not printed in the Gazette.]

1,021,629. LADDER. LOUIE F. REICHARDT, Massena, Iowa. Filed Sept. 5, 1911. Serial No. 647,789. (Cl. 228—15.)



A ladder comprising a main section, a step ladder section rigidly secured near its upper end to the upper end of the main section, truss blocks secured to the lowermost step of the step ladder section and arranged in spaced relation, a truss brace connecting the lower ends of said section and passing through the truss blocks, handles pivotally connected to the truss brace and held in spaced relation by said blocks, wheels carried by the main section, said handles being adapted to engage the lowermost step of the step ladder section when grasped and swung upwardly whereby the weight of the sections are thrown upon the wheel when it is desired to move the ladder.

1,021,630. VEHICLE-FENDER. ALFONSO SACRAMOSO, Philadelphia, Pa. Filed June 8, 1911. Serial No. 632,012. (Cl. 105—263.)



1. The combination with a vehicle body, of a fender comprising supporting members movably connected to the forward end of the said body, a normally lowered catch

net frame pivotally connected to the forward ends of said members, rearwardly inclined tracks fixed to the bottom of the said car body, rollers carried by the members and movable upon the tracks, upper and lower guide means carried by the body, and distorted flexible connections trained over the guide means and united with the rear ends of the members and said catch net frame for automatically elevating the latter on the movement of the members in one direction.

2. The combination with a vehicle body, of a fender comprising supporting members movably connected to the forward end of the said body, a normally lowered catch net frame pivotally connected to the forward ends of said members, rearwardly inclined tracks fixed to the bottom of the said body, rollers carried by the members and movable upon the tracks, upper and lower guide means carried by the body, and distorted flexible connections trained over the guide means and united with the rear ends of the members and said catch net frame for automatically elevating the latter on the movement of the members in one direction, and guide yokes depending from the bottom of the vehicle body and receiving the said members for holding the same in alinement with the tracks.

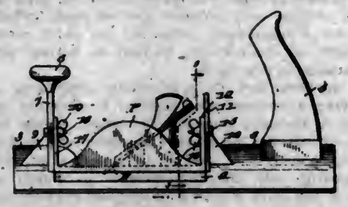
3. The combination with a vehicle body, of a fender comprising supporting members movably connected to the forward end of the said body, a normally lowered catch net frame pivotally connected to the forward ends of said members, rearwardly inclined tracks fixed to the bottom of the said body, rollers carried by the members and movable upon the tracks, upper and lower guide means carried by the body, distorted flexible connections trained over the guide means and united with the rear ends of the members and said catch net frame for automatically elevating the latter on the movement of the members in one direction, guide yokes depending from the bottom of the vehicle body and receiving the said members for holding the same in alinement with the tracks, and means on the members serving as rests for the catch net frame when in normally lowered position.

4. The combination with a vehicle body, of a fender, comprising supporting members movably connected to the forward end of the said body, a normally lowered catch net frame pivotally connected to the forward ends of said members, rearwardly inclined tracks fixed to the bottom of the said body, rollers carried by the members and movable upon the tracks, upper and lower guide means carried by the body, distorted flexible connections trained over the guide means and united with the rear ends of the members and said catch net frame for automatically elevating the latter on the movement of the members in one direction, guide yokes depending from the bottom of the vehicle body and receiving the said members for holding the same in alinement with the tracks, means on the members serving as rests for the catch net frame when in normally lowered position, and side guards connected and coöperative with the members when moving in one direction for the bringing of said guards into forwardly converging relation to each other above the catch net frame.

5. The combination with a vehicle body, of a fender, comprising supporting members movably connected to the forward end of the said body, a normally lowered catch net frame pivotally connected to the forward ends of said members, rearwardly inclined tracks fixed to the bottom of the said body, rollers carried by the members and movable upon the tracks, upper and lower guide means carried by the body, distorted flexible connections trained over the guide means and united with the rear ends of the members and said catch net frame for automatically elevating the latter on the movement of the members in one direction, guide yokes depending from the bottom of the vehicle body and receiving the said members for holding the same in alinement with the tracks, means on the members serving as rests for the catch net frame when in normally lowered position, side guards connected and cooperative with the members when moving in one direction for the bringing of said guards into forwardly converging relation to each other above the catch net frame, and means for normally separating the side guards.

[Claim 6 not printed in the Gazette.]

1,021,631. BEVELING-PLANE. ALVA L. SAVAGE, Dermott, Ark. Filed May 29, 1911. Serial No. 630,980. (Cl. 145—6.)



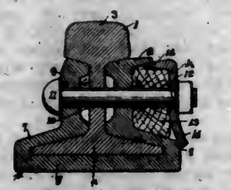
1. In a beveling plane, a pair of angularly disposed guide members having an opening therein, a plane frame secured in said opening, and means for permitting the adjustment of the position of the plane frame angularly and vertically with respect to the guide members.

2. In a beveling plane, a pair of guide members disposed at right angles to each other and provided with an opening, a plane frame having a blade, said plane frame being disposed in said opening, and means including a pair of tightening nuts for permitting the adjustment of the position of the blade vertically and angularly with respect to the guide members.

3. In a beveling plane, a pair of guide members disposed at right angles to each other and having an opening, a pair of slotted uprights carried by said guide members adjacent the ends of said opening, a plane frame having end portions abutting said slotted uprights, said end portions being provided with arc-shaped slots, and means passing through the slot in each uprights and its adjacent frame end for securing the frame end to the upright in angularly and vertically adjustable positions.

4. In a beveling plane, a pair of guide members disposed at right angles to each other and having an opening, a pair of slotted uprights carried by said guide members adjacent the ends of said opening, one of said uprights bearing a hand rest, a plane frame having a pair of upwardly turned end portions, each of said end portions being provided with an arc-shaped slot, a bolt having a squared portion disposed in the vertical slot of each upright and arranged to project through the arc-shaped slot in the up-turned adjacent frame portion, and a nut for clamping said frame portion to said upright.

1,021,632. RAIL-JOINT. EDWARD SAVOY, Chapel Hill, Tex. Filed June 28, 1911. Serial No. 635,785. (Cl. 239—6.)



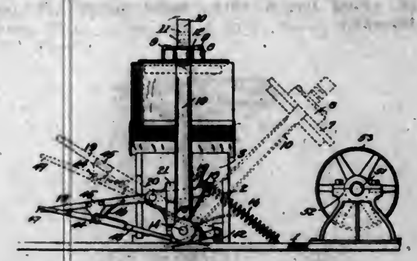
1. In a rail joint, a rail embracing joint chair having a rail head engaging member thereon, a clamping plate, means to draw the clamping plate toward the joint chair, and means on the clamp plate which coacts with the joint chair to force the clamping plate into engagement with the head engaging member.

2. In a rail joint, a rail embracing joint chair having a rail head engaging member thereon, a filler block, a clamping plate, means to draw the clamping plate into engagement with the filler block, and means on the clamping plate which coacts with the joint chair to force the clamping plate into engagement with the head engaging member.

3. In a rail joint, a rail embracing joint chair having a rail head engaging member, a clamping plate having a curved surface thereon and a flange, and means to force the clamping plate over a portion of the joint chair, whereby the flange is caused to engage the head engaging member.

4. In a rail joint, a rail embracing joint chair, an elastic filler, a clamping plate having a curved surface and a flange, said joint chair having a rail head engaging flange, and means to force the clamping plate over a portion of the joint chair, whereby the same is drawn into engagement with the head engaging flange and with the elastic filler.

1,021,633. MOLDING-MACHINE. MIKEL SCHCLECKI and WICENTI CHUDRIK, Pittsburgh, Pa. Filed Mar. 1, 1911. Serial No. 611,739. (Cl. 25—89.)



1. A molding machine comprising a base, a mold consisting of a bottom and a substantially rectangular body portion secured to the bottom and resting thereon, toggle levers connecting the mold to the base, a cover for the mold, a swinging frame for supporting the cover comprising an arm connected with each end thereof and hinged to the base, means for permitting the cover to be adjusted longitudinally of the arms, a spring normally holding the frame with the cover away from over the mold, means for swinging the frame to bring the cover over the mold, said means comprising a lever pivoted on the base, said lever having an angular portion at the end adjacent to the frame, the frame having a lug for engagement by the said angular portion, and means for straightening the toggle levers to force the mold toward the cover, said means comprising a yoke having arms pivoted to the toggle levers, a shaft journaled on the base, a cam on the shaft for engaging the body of the yoke, a spring normally holding the yoke out of engagement with the cam, a rock shaft provided with arms arranged at an angle to each other, a link connecting one arm with the yoke, a lever pivoted on the first named lever and engaging the other arm of the rock shaft at one end, and a spring normally holding the said lever in position to engage the arm of the rock shaft.

2. A molding machine comprising a base, a mold consisting of a bottom and a substantially rectangular body portion secured to the bottom and resting thereon, toggle levers connecting the mold to the base, a cover for the mold, a swinging frame for supporting the cover comprising an arm connected with each end thereof and hinged to the base, a spring normally holding the frame with the cover away from over the mold, means for swinging the frame to bring the cover over the mold, said means comprising a lever pivoted on the base, said lever having an angular portion at the end adjacent to the frame, the frame having a lug for engagement by the said angular portion, and means for straightening the toggle levers to force the mold toward the cover, said means comprising a yoke having arms pivoted to the toggle levers, a shaft journaled on the base, a cam on the shaft for engaging the body of the yoke, a spring normally holding the yoke out of engagement with the cam, and means on the lever for swinging the yoke into the said path of movement.

3. A molding machine comprising a base, a mold consisting of a bottom and a substantially rectangular body portion secured to the bottom and resting thereon, toggle levers connecting the mold to the base, a cover for the mold, a swinging frame for supporting the cover comprising an arm connected with each end thereof and hinged to the base, a spring normally holding the frame with the cover away from over the mold, means for swinging the frame to bring the cover over the mold, said means comprising a lever pivoted on the base, said lever having an angular portion at the end adjacent to the frame, the frame having a lug for engagement by the said angular portion, and means for straightening the toggle levers to force the mold toward the cover, said means comprising a yoke having arms pivoted to the toggle levers, a shaft journaled on the base, a cam on the shaft for engaging the body of the yoke, a spring normally holding the yoke out of engagement with the cam, and means on the lever for moving the yoke into the path of movement of the cam.

4. A molding machine comprising a base, a mold consisting of a bottom and a substantially rectangular body portion secured to the bottom and resting thereon, toggle levers connecting the mold to the base, a cover for the mold, a swinging frame for supporting the cover comprising an arm connected with each end thereof and hinged to the base, a spring normally holding the frame with the cover away from over the mold, means for swinging the frame to bring the cover over the mold, said means comprising a lever pivoted on the base, said lever having an angular portion at the end adjacent to the frame, the frame having a lug for engagement by the said angular portion, and means for straightening the toggle levers to force the mold toward the cover, said means comprising a yoke having arms pivoted to the toggle levers, a shaft journaled on the base, a cam on the shaft for engaging the body of the yoke, means for holding the yoke out of the path of movement of the cam, and means on the lever for swinging the yoke into the said path of movement.

5. A molding machine comprising a base, a mold consisting of a bottom and a substantially rectangular body portion secured to the bottom and resting thereon, toggle levers connecting the mold to the base, a cover for the mold, a swinging frame for supporting the cover comprising an arm connected with each end thereof and hinged to the base, a spring normally holding the frame with the cover away from over the mold, means for swinging the frame to bring the cover over the mold, said means comprising a lever pivoted on the base, said lever having an angular portion at the end adjacent to the frame, the frame having a lug for engagement by the said angular portion, and means for straightening the toggle levers to force the mold toward the cover, said means comprising a yoke having arms pivoted to the toggle levers, a shaft journaled on the base, a cam on the shaft for engaging the body of the yoke, and means on the lever for moving the yoke into the path of movement of the cam.

[Claims 6 to 9 not printed in the Gazette.]

1,021,634. SECURING DEVICE FOR COIN-RECEPTACLES. HERMAN O. SCHROEDER, Elkhorn, Nebr. Filed Feb. 11, 1911. Serial No. 607,959. (Cl. 248—20.)

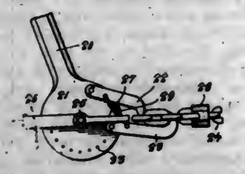
1. In a device of the character described, the combination with a support provided with a slot, and a receptacle support provided with spaced apart slots forming loops, of a securing member adapted to secure said support and receptacle support together, said member having a tongue adapted to pass through the slots and engage with the loops of said receptacle support and a second tongue adapted to be passed through the slot in said support.

2. In a device of the character described, the combination with a support and a receptacle support provided with spaced apart slots forming loops, of a securing

member, said member having a tongue adapted to pass through the slot and engage with the loops of said receptacle support, and means for detachably fastening said securing member to said support.



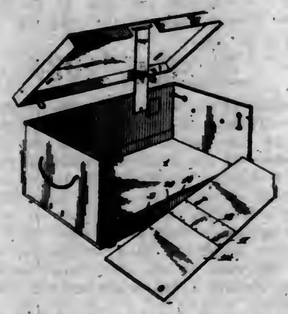
1,021,635. WIRE-STRETCHER. CHRISTOPHER W. SCHUMANN, Marshalltown, Iowa. Filed May 5, 1911. Serial No. 625,401. (Cl. 39—61.)



1. A stretching apparatus comprising a lever having a disk or head, a pin or bolt passing centrally therethrough, forwardly and rearwardly projecting draft and guide yokes connected with said pin or bolt, and anchoring member connected with the draft yoke, oppositely disposed pivoted hooks upon the disk or head to engage independent links of a chain passing through the guide yoke, and a spring connecting said hooks to maintain them in normal operative position.

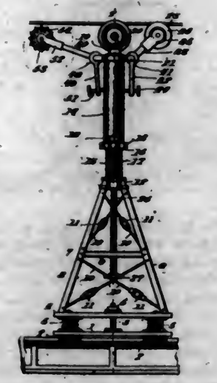
2. A stretching apparatus comprising a lever having a disk or head, a pin or bolt passing centrally therethrough, forwardly and rearwardly projecting draft and guide yokes connected with said pin or bolt, an anchoring member connected with the draft yoke, oppositely disposed pivoted hooks upon the disk or head to engage independent links of a chain passing through the guide yoke, a spring connecting said hooks to maintain them in normal operative position, and a locking device carried by the draft yoke to adjustably engage the lever and bear upon said yoke to maintain the lever in stretching position.

1,021,636. BOX-FASTENER. JOHN J. SHOOK and PETER J. SHOOK, Charleroi, Pa. Filed Feb. 9, 1911. Serial No. 607,531. (Cl. 70—3.)



A lock for the lids of folding boxes, comprising a resilient strap depending from the lid of the box and extending downwardly through the front wall and into the bottom of the box, said strap having its lower end formed with an opening, a rotatable, longitudinally shiftable pin arranged in an angle-shaped groove in the bottom of the box and having an angle-shaped end for engagement with the wall of the groove to arrest the movement of the pin, a guide for said pin, positioned at said groove, a longitudinal movable and pivotally connected plate inclosing said pin and connected to the lower face of the bottom of the box, said pin engageable in said opening for securing the lid of the box in position, and a staple carried by the bottom of the box for receiving the outer end of said plate.

1,021,637. MEANS FOR REMOVING ICE FROM TROLLEY-WIRES. JOHN ALONZO SLOAN, Westville, Ill., assignor of one-half to Charles H. Schmidt, Danville, Ill. Filed Jan. 6, 1911. Serial No. 601,117. (Cl. 191—38.)



1. A means for removing ice accumulations from trolley wires comprising a support mounted on the top of a car and of a length to extend upward from the car to a point adjacent to the trolley wire, an electric motor carried by the support, and a rotatable ice removing means carried and actuated by the motor, said ice removing means including members responsive to the action of centrifugal force on the rotation of the ice removing means to then engage the trolley wire.

2. A means for removing ice accumulations from trolley wires comprising a support adapted to the top of a car and of a length to extend upward from the car to a point adjacent to the trolley wire, an electric motor carried by the support, and rotatable ice removing means carried and actuated by the motor, said motor carried ice removing means comprising a series of wings each having an active edge adapted to engage the trolley wire and freely journaled at a point remote from the active edge, so that the wings will respond to centrifugal force under rotative movement caused by the motor.

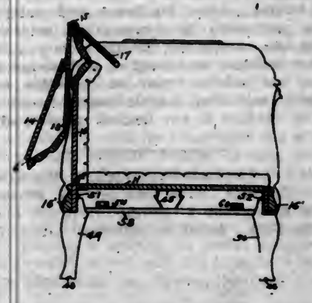
3. A means for removing ice from trolley wires comprising a support on the top of a car and of a length to extend upward from the car to a point adjacent but laterally displaced with reference to the trolley wire, an electric motor carried by the support, ice removing means carried by the support in operative relation to the trolley wire, and current collecting means also carried by the support and individual to the motor, said current collecting means being in operative position for engagement with the trolley wire back of the ice removing means with reference to the progressive movement of the car.

4. A means for the removal of ice from trolley wires comprising a support adapted to the top of a car and standing substantially upright in action, a motor carried by the upper end of the support, rotatable means carried and actuated by the motor for engaging the trolley wire to remove ice therefrom, a trolley wheel carried by the support for connecting the motor to the trolley wire, and a carrier for an ice shattering wheel also mounted on the support at the upper end thereof in position to engage the trolley wire in advance of the trolley wheel in the direction of travel of the car.

5. A self contained means for removing ice from trolley wires comprising a support on and insulated from the top of a car and including yielding connections adjacent the top of the car, said support being substantially upright in action and also including a telescoping section laterally displaced with reference to the trolley wire to be operated on and having a normal tendency to elongate, and ice removing means carried by the upper end of the support.

[Claims 6 to 16 not printed in the Gazette.]

1,021,638. BURIAL-CASKET. CLARK L. SMITH, Spokane, Wash. Filed June 6, 1911. Serial No. 631,611. (Cl. 27—3.)



1. In a casket, the combination with a bottom, side walls and a cover, of end walls comprising a stationary portion and a movable portion spaced therefrom formed with adjustable connections for regulating the position of the movable portion.

2. In a casket of the class described, the combination with side walls, a cover and a bottom, of end walls, said end walls comprising a stationary portion, a movable portion, and springs interposed between the stationary portion and movable portion for automatically adjusting the movable portion.

3. In a casket, the combination with a bottom, end walls and a side wall, of a hinged cover, a side wall hinged to said cover and adapted to be folded against the same, and a link pivotally connected at one end with one of said end walls and at the opposite end to said cover, whereby said cover and said hinged side wall may be supported upon the outer side of said first mentioned side wall.

4. In a casket, comprising in its construction side and end walls, a bottom, a cover hinged to each of said walls, one of the latter being permanently connected with the bottom, and the other being detachably connected therewith, a member extending longitudinally of the bottom, along one edge, said member being provided with a socket and with a channel on its upper side, and a member connected with the adjacent side wall and arranged to enter the socket, the lower edge of the wall being disposed in the channel.

5. In a casket, comprising in its construction side and end walls, a cover and a bottom, one of the walls being detachably connected with the bottom, and securing means, comprising a plurality of projecting members carried by said wall last mentioned, a longitudinal bar arranged to be reciprocated beneath the bottom, and devices carried by said bar for engaging the projecting members.

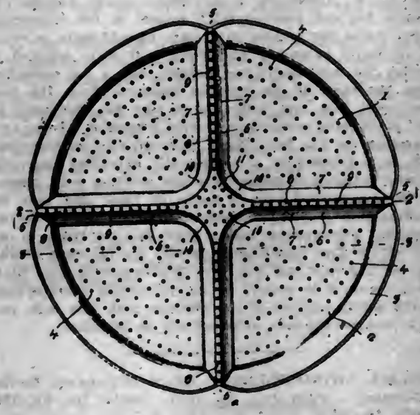
1,021,639. MOUTH-MIRROR. HOWARD R. SMITH, Washington, Pa. Filed Nov. 11, 1910. Serial No. 591,833. (Cl. 32—27.)

1. In combination with a handle having a recess in the outer end thereof, a mirror, and a pivot fastening connecting the mirror and the outer ends of the parts of the handle bordering upon the recess, said pivot fastening comprising complemental members each formed of a flat head and a threaded stem whereby the parts of the handle bordering upon the recess may be drawn together to create a friction upon the mirror to hold the latter in the required adjusted position.



2. In combination a handle having a recess in one end thereof and having a portion extending across the recess near the outer extremity thereof, a frame arranged within the said recess and provided with a mirror, a fastening pivotally connecting said frame to the parts of the handle bordering upon the recess, and an arm projecting from the pivoted frame and adapted to engage the part of the handle extending across the outer end of the recess, said arm having its projecting end formed with an eye.

1,021,640. BAKE-PAN. LIZZIE STEITLER, Owensboro, Ky. Filed Aug. 15, 1911. Serial No. 644,146. (Cl. 53—6.)



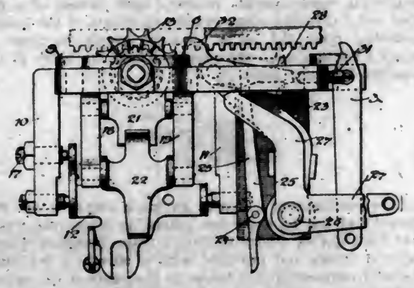
A bake pan having a perforated concaved bottom for the discharge of moisture, a plurality of partitions formed integral with said pan and dividing the same into compartments, portions interconnecting said partitions, and a horizontally arranged perforated partition intermediate said connecting portions and coöperating with said bottom in the discharge of moisture.

1,021,641. HOLDER FOR TYPE-WRITER ESCAPEMENT MECHANISMS. AUGUST STIBS, Woodstock, Ill., assignor to The Emerson Typewriter Co., Woodstock, Ill., a Corporation of Illinois. Filed Mar. 22, 1911. Serial No. 616,190. (Cl. 197—82.)

1. In a typewriter, a horizontal plate adapted to assume but one position with respect to the typewriter body, means for locking said plate to said body, a series of vertically extending lugs from said plate adapted to receive the escapement mechanisms, and a lug extending from the plate in an opposite direction from the first mentioned lugs and acting as a stop for the carriage, substantially as described.

2. In a typewriter, a horizontally extending plate-like member adapted to assume but one position with respect to the typewriter body, a series of front and rear depending lugs from said plate, adapted to receive the escapement mechanisms, and a depending lug lying to one side of the first mentioned lugs and serving as a mounting

for the line lock and back feed members, substantially as described.

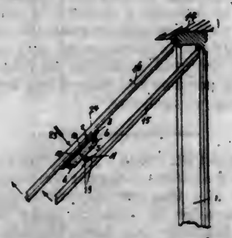


3. In a typewriter, a horizontally extending plate-like member adapted to assume but one position with respect to the typewriter body, a series of front and rear depending lugs from said plate, adapted to receive the escapement mechanisms, and a depending lug lying to one side of the first mentioned lugs and serving as a mounting for the line lock and back feed members, said plate being notched to provide a surface serving as a mounting for the bell ringer, substantially as described.

4. In a typewriter, a horizontal plate adapted to assume but one position with respect to the typewriter body, means for locking said plate to said body, a series of vertically extending lugs from said plate adapted to receive the escapement mechanisms, and a lug extending from the plate in an opposite direction from the first mentioned lugs and acting as a stop for the carriage, said plate being notched to provide a surface serving as a mounting for the bell ringer, substantially as described.

5. In a typewriter, a horizontally extending plate-like member adapted to assume but one position with respect to the typewriter body, a series of front and rear depending lugs from said plate, adapted to receive the escapement mechanisms, and a depending lug lying to one side of the first mentioned lugs and serving as a mounting for the line lock and back feed members, said plate being recessed to permit of the projection therethrough of the acting portion of the carriage feed, line lock, and back feed mechanisms, substantially as described.

1,021,642. WINDOW-LOCK. ERICH SÜHSMANN, Berlin, Germany. Filed July 24, 1911. Serial No. 640,330. (Cl. 16—22.)



1. A locking device for inner and outer hinged windows comprising in combination, a retainer hinged to one window and having recesses spaced apart from each other, and a stud mounted upon the other window and arranged to engage and tilt the retainer during relative differential movement of the windows until said stud registers with one of said recesses, whereby the retainer is released and the windows are coupled, substantially as described.

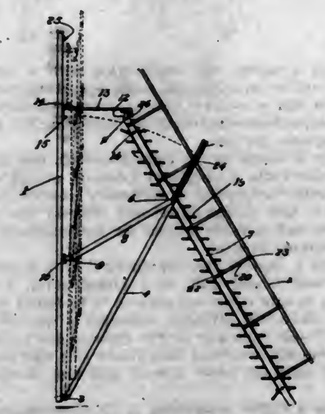
2. A locking device for inner and outer swinging hinged windows comprising in combination, a tilting retainer on one window having recesses spaced apart from each other, a spring to prevent tilting of said retainer in one direction, and a stud mounted upon the other window and arranged to engage and tilt the retainer during relative differential movement of the windows until the stud registers with one of said recesses, substantially as described.

3. A locking device for inner and outer swinging windows comprising in combination, tilting retainer means mounted on one window, and locking mechanism mounted on the other window and arranged to engage and tilt the retainer means during relative differential movement of the windows until said locking and retainer means are in locking engagement with respect to each other whereby the windows are coupled together, substantially as described.

4. A locking device for inner and outer swinging windows comprising in combination, movable locking means on one window, and rigid locking means on the other window coacting with said movable means during relative differential movement of the windows to lock the two windows in desired opened position, substantially as described.

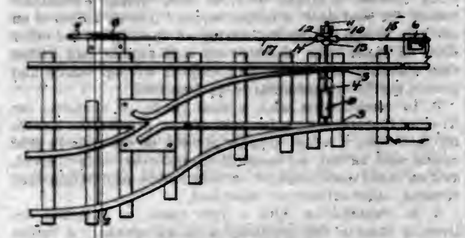
5. A locking device for inner and outer swinging windows comprising in combination, movable locking means on one window movable freely in one direction, a spring for resisting movement of said means in another direction, and locking means on the other window coacting with said first named locking means to rigidly couple the windows in any desired opened position.

1,021,643. LOWERING DEVICE. KALMAN SZENTIVANYI, Hartford, Conn., assignor of fifteen one-hundredths to Rudolph F. Hovath, Hartford, Conn. Filed May 26, 1911. Serial No. 629,624. (Cl. 227—10.)



A foldable lowering device comprising the combination with a support, of a pair of spaced braces pivotally connected at their inner ends to said supports and having their outer ends provided with relatively long longitudinally-extending slots, a pair of spaced arms pivotally connected at one end to said support above the pivot of the braces and extending to the slotted outer ends of the braces, conveyer frames arranged between the outer end of said braces, trunnions carried by the conveyer frames and extending through the slotted ends of the braces and pivotally mounted in the outer ends of said arms whereby said conveyer frames are pivotally mounted, a platform hinged to said support, a pair of hangers carried by the outer end of said platform and pivotally connected to the upper end of said frames, an endless conveyer supported by and of less length than said frames and provided with treads, foldable railings supported from said frames, and pins carried by said rail and extending through the slotted ends of the braces whereby the railings are maintained extended when the braces are extended and folded when the braces are shifted toward said supports.

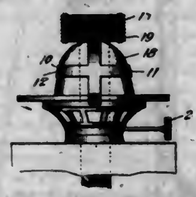
1,021,644. RAILROAD-SWITCH. LUDWIG C. P. TASCHEN, Ivanhoe, Colo. Filed Aug. 25, 1910. Serial No. 578,854. (Cl. 104—28.)



1. The combination with the connecting bar of a normally open spring switch, of a bearing thereto having an inwardly projecting wedge shaped member, a second wedge shaped member secured on the connecting bar, and a double wedge member slidably engaged between the wedge of the bearing and the wedge member secured on the connecting bar, whereby reciprocal movement of the double wedge member will force the bar and bearing wedge member apart to shift the switch.

2. The combination with the connecting bar of a spring switch, of a wedge member secured on said bar, a rod slidably supported at the side of the track, a wedge member secured on said rod and having its smaller portion normally in engagement with the wedge member of the switch bar, and trip operated levers for shifting the rod, whereby as the rod is shifted the wedge member thereof will be reciprocably moved and will cam the wedge member of the connecting bar inward to shift the spring switch.

1,021,645. FLAME-GAGE. VON W. THOMPSON, Atlanta, Ga. Filed May 16, 1911. Serial No. 627,525. (Cl. 73—151.)



1. A device of the class described comprising a base, flanges extended therefrom and connectible at their outer ends, a rod integrally formed on the base and depending therefrom, a second rod on the base and extending upwardly therefrom and a series of superimposed relatively spaced plates secured to the upper end of the said rod, the said plates being relatively rigid.

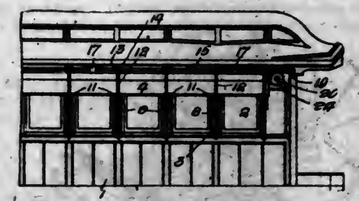
2. A device of the class described comprising a base for connection with a lamp, a rod extended upwardly from the said base and a series of superimposed plates, the ends of adjacent plates being connected and the lowermost plate being secured to the said rod.

3. A device of the class described comprising a base for connection with a lamp, a rod extended upwardly from the base, a series of superimposed plates, means for connecting the ends of adjacent plates, the lowermost plate being secured to the said rod.

4. A device of the class described comprising a base, a rod integrally formed on the base and depending therefrom, a second rod extending upwardly from the said base, a series of superimposed plates, the lowermost plate being mounted on the second mentioned rod and means for connecting the ends of the said plates.

5. A device of the class described comprising a base for connection with a lamp, flanges extended therefrom and connectible at their outer ends, a rod extending upwardly from the said base and a series of superimposed connected plates, the lowermost plate being mounted on the said rod.

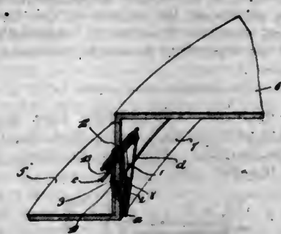
1,021,646. SHIELD FOR WINDOWS OF RAILWAY-CARS. JOHN A. WARD, Pittsburgh, Pa. Filed Oct. 27, 1911. Serial No. 657,119. (Cl. 98—21.)



1. In a shield for railway cars, the combination with a car, of an angularly disposed longitudinal stationary shield arranged above the window frames of said car, adjustable shields pivotally connected to the sides of said car, between the windows thereof, extensions carried by the upper ends of said shields and extending upwardly under said stationary shield, and means including a shiftable rod, and rack and pinion for adjusting said movable shields.

2. The combination with a car, of a stationary shield arranged above the window frames thereof, movable shields pivotally connected to the side of said car, between the windows thereof, vertical rods carried by the upper ends of said shields, a longitudinal shiftable rod supported by the side of said car and having connection with the rods of said movable shields, and means located at the end of said car and including a rack, pinion and ratchet wheel for holding said shiftable rod in adjusted position.

1,021,647. HAT-GUARD. CHARLES E. WATERWORTH, Las Cascadas, Canal Zone. Filed Dec. 27, 1910. Serial No. 599,455. (Cl. 2—186.)



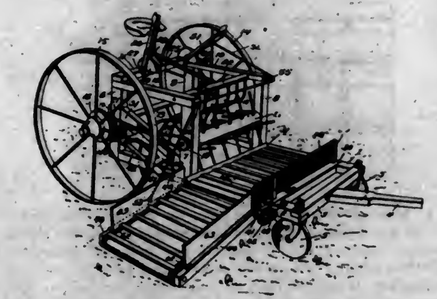
1. A hat guard comprising an elongated bobbin, a resilient arm connected at one end to the bobbin, the other end of said arm being secured to the inner surface of the hat crown, and a flexible element connected to said means and extending downwardly between the crown and the sweatband and adapted to be wound upon the bobbin.

2. A hat guard including a bobbin arranged within the crown of the hat and above the sweat band, a resilient arm connected to the bobbin extending downwardly to a point behind the sweat band, means for connecting the lower end of the arm to the hat crown, and a flexible element connected to said means extending downwardly and out between the sweat band and the hat crown and adapted to be wound upon the bobbin.

3. A hat guard comprising a T-shaped device including a bobbin provided at opposite ends with V-shaped recesses, said device also including a spring arm connected medially of the bobbin and extending downwardly to a point behind the sweat band, means for securing the lower end of said arm to the hat crown, and a flexible element connected to the said means and extending downwardly

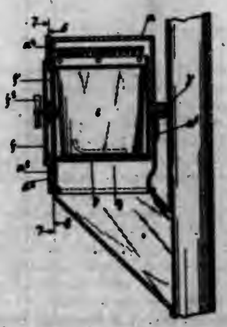
and out between the hat crown and the sweat band thereof and adapted to be wound upon the bobbin within the V-shaped recesses at the end thereof, substantially as described.

1,021,648. COMBINED HAY LOADER AND RAKE. ENOCH J. WILLIAMS, Langdon, Kans. Filed June 1, 1909. Serial No. 499,296. (Cl. 56—61.)



In a combined hay rake and loader, a wheel supported frame structure, a rake head supported for oscillation upon the frame, means for adjusting the rake head, teeth connected with the rake head, each tooth in the form of a compound curve with a forwardly presented convex upper portion and a forwardly presented concave lower portion, a shaft supported for rotation upon the frame in front of the rake, beater arms extending from the shaft coacting with the forwardly presented convex upper portions of the rake teeth to form a throat constricted against the passage of hay and operating on the hay during the lower part of their revolution, an endless carrier supported upon the frame in front of the beater and the rake, said carrier being transversely disposed to deliver material at one side of the frame, an elevator hingedly associated with the discharge end of the carrier and receiving motion therefrom, means for adjusting the elevator and for retaining it at various adjustments, means for transmitting motion to the endless carrier from one of the supporting wheels, and means for transmitting motion from one of the supporting wheels to the beater carrying shaft.

1,021,649. TILTING APPARATUS FOR EMPTYING PORTABLE DUST-BINS. ADOLF WODARRA, Friedenau, near Berlin, Germany. Filed Oct. 27, 1910. Serial No. 589,427. (Cl. 220—115.)



1. In combination with a dust chute, of a casing delivering thereto, a hinged door for said casing, a rotatable handle for said door, a tiltable refuse support pivoted on one side in said casing and having an opening on the other side, an inner door mounted on said handle and fitting said opening, said casing and support having tongue and groove bearing portions and tongue and groove stop portions.

2. In combination with a dust chute, of a casing delivering thereto, a hinged door for said casing, a rotatable handle for said door, a refuse support tiltably mounted on one side in said casing and having an opening on the other side, an inner door mounted on said handle and fitting said opening, said casing and support having tongue and groove portions, substantially as described.

3. In combination with a dust chute, of a casing delivering thereto, a door for said casing, a rotatable handle for said door, a refuse support pivoted on one side in said casing and having an opening on the other side thereof, and an inner door mounted on said handle and fitting said opening, substantially as described.

4. In combination with a dust chute, of a casing delivering thereto and provided with an opening, a refuse support pivoted on one side in said casing and having an opening registering with the opening of said casing, an element fitting the opening in said support, a door for said casing opening, and a rotatable handle in said door connected with said element to tilt said support, substantially as described.

5. In combination with a dust chute, of a casing delivering thereto, a door for said casing, a refuse support in said casing, and pivot devices mounted in said casing and door for tiltably mounting said support in said casing, one of said devices projecting outwardly with respect to said casing, substantially as and for the purposes set forth.

[Claims 6 and 7 not printed in the Gazette.]

1,021,650. TREE-PROP. EDGAR WORTHINGTON, Hagerstown, Md. Filed Oct. 20, 1911. Serial No. 655,784. (Cl. 47—31.)



1. A prop for a tree having a seat and a hinge joint, adapted to permit said seat and a limb supported therein to sway in any direction, one end of said prop being supported on the ground.

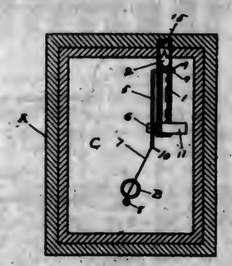
2. A prop for a tree comprising a pole adapted to rest on the ground, a seat for a limb of a tree, and a pivotal connection between said seat and the pole, said pivotal connection permitting of a limb to sway in a vertical plane, whereby to avoid the surface of the seat rubbing the bark of the limb.

3. A prop for a tree comprising a pole, a concave seat for a limb of a tree, the surface of the seat being convex in direction of a limb supported by said seat, and a pivotal connection between the seat and the pole, said pivotal connection permitting of a limb to sway vertically.

4. A prop comprising a concave seat to support the limb of a tree, a pole and a pivotal connection between the concave seat and the pole, the pole adapted to be supported on the ground whereby the pivotal connection will permit a limb of a tree to sway vertically and the limb may laterally sway the seat and pole, the lower end of the pole bearing on the ground acting as fulcrum for said lateral swaying movement.

5. A tree prop adapted to be supported on the ground comprising a pole, a cap member fitted on said pole and formed with a perforation, a concave elongated seat having depending perforated ears, and a pin passing through the perforations to form a pivotal connection, whereby the pivotal connection and the prop when the latter is supported on the ground will permit the limb to sway in a vertical plane, whereby the prop, seat and limb may sway laterally and avoid rubbing the bark on the limb.

1,021,651. AUXILIARY SAFE-LOCK. ARTHUR E. ANAKIN and WILLIAM J. SHEALY, Salt Lake City, Utah. Filed Nov. 22, 1911. Serial No. 661,790. (Cl. 109—8.)



1. In combination, a safe comprising main locking mechanism and a door, auxiliary locking mechanism consisting of a supporting member mounted on the door, a locking bolt carried by said supporting member to engage a wall of the safe, a locking member normally holding said bolt in an inactive position, means for projecting the bolt into a locking position when released from the locking member, means operable on tampering with the main locking mechanism of the safe for actuating the locking member, and means for interchangeably connecting the locking member with the supporting member to permit of mounting the locking member for movement in different positions in relation to the locking bolt.

2. In combination, a safe comprising main locking mechanism and a door, auxiliary locking mechanism consisting of a supporting member mounted on the door, a locking bolt carried by said supporting member to engage a wall of the safe, a locking member normally holding said bolt in an inactive position, means for projecting the bolt into a locking position when released from the locking member, means operable on tampering with the main locking mechanism of the safe for actuating the locking member, an arm carried by the supporting member, and means for connecting the locking member to said arm at different points on the body of the latter, whereby the locking member may be arranged in different positions for coöperation with the locking bolt.

3. In combination, a safe comprising main locking mechanism and a door, auxiliary locking mechanism consisting of a supporting member mounted on the door, a locking bolt carried by said supporting member to engage a wall of the safe, a locking member normally holding said bolt in an inactive position, means for projecting the bolt into a locking position when released from the locking member, means operable on tampering with the main locking mechanism of the safe for actuating the locking member, an arm, means adjustably connecting said arm with the supporting member, and means adjustably connecting the locking member to the arm whereby the locking member and arm may be adjusted to occupy positions permitting coöperation of the locking member and locking bolt when the auxiliary mechanism is arranged in different positions on the safe door.

4. As an article of manufacture, an auxiliary locking device consisting of a tubular supporting member, an arm adjustable longitudinally of the supporting member, a locking bolt mounted for movement in the supporting member, a locking member, and fastening means for securing the locking member in positions on the arm in which the locking member operates in a plane transverse to or parallel with the arm.

5. In combination, a safe comprising a door having a main locking mechanism therefor, inactive auxiliary locking means for said safe arranged to coöperate with the door to lock the same closed independently of the main locking mechanism, and a flexible connection secured to the auxiliary locking means at one end and extending across the main locking mechanism in the path of abnormal movement thereof, said connection being permanently connected at its opposite end to the door aforesaid.

1,021,652. SEED-PLANTER. JOSEPH Y. ATMAR, Teague, Tex. Filed July 26, 1911. Serial No. 640,546. (Cl. 111—7.)



1. In a seed planter, a frame comprising side beams, a suitably supported curved hopper having its lower end projected forwardly between the side beams, said hopper being provided with a slot in the underside thereof and with a seed aperture at the nose thereof, a toothed seed disk operating in the slot, means for regulating the size of the seed aperture, and means for intermittently obstructing the seed aperture.

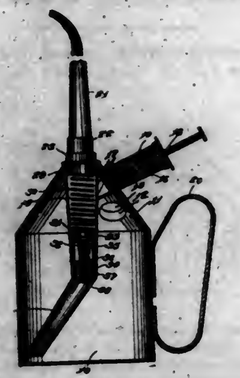
2. In a seed planter, a frame comprising side beams, a ground engaging wheel supported in bearings upon the side beams, a curved hopper supported between the side beams and having a forwardly extending lower portion provided with a seed aperture and with a slot in the underside thereof, a shaft supported in bearings upon the frame and having a toothed disk operating in the slot of the hopper, means for regulating the size of the seed aperture, a lever pivoted upon the front side of the hopper and having a downwardly extending arm provided with a flange constituting a closure for the seed aperture, said lever being provided with a forwardly extending arm having a terminal shoe, and tappets upon the ground engaging wheel adapted to engage said shoe to actuate the lever.

3. In a seed planter, a frame comprising side beams, a ground engaging wheel, a hopper supported between the side beams and having a forwardly extending nose provided with a seed aperture, a lever fulcrumed upon the hopper and having an arm provided with a flange constituting a closure for the seed aperture, seed discharge means associated with the hopper, a cross bar connecting the side members of the frame and having a pivoted upwardly extending arm upon which the lever is guided, tappets upon the ground engaging wheel adapted to engage and to actuate the lever, and means for adjutably supporting the lever with reference to the pivoted arm.

1,021,653. OIL-CAN. JUSTIMEN E. BETHANCOURT, Houma, La. Filed Nov. 11, 1911. Serial No. 659,799. (Cl. 221—51.)

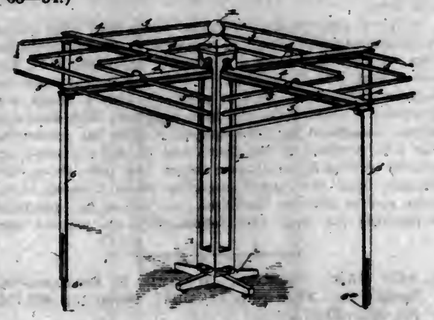
1. A receptacle, a tube in said receptacle communicating with the outlet of said receptacle, the inner end of said tube being turned in to form an inwardly extending flange, a second tube extending from said flange to a point adjacent the bottom of said receptacle, a valve housing in said first mentioned tube resting upon said flange, a valve carried by said housing, an outlet spout connected with said first mentioned tube, a valve in said outlet spout, and a pump connected with said first mentioned tube.

2. A receptacle, a tube extending into said receptacle through the outlet of said receptacle and having an inturned inner end forming a flange, a hollow valve housing positioned in said tube and resting upon said flange, a valve in said housing normally closing the inlet of said housing, a spout removably connected with said tube, a spring secured at one end to said spout and at the opposite end to said housing to hold said housing in position upon said flange, a valve within said spout, and a pump communicating with said tube.



3. A receptacle, a tube extending into said receptacle through the outlet of said receptacle, a valve in said tube normally closing the inlet of said tube, a plug mounted in the outer end of said tube and provided with a central opening, a spout removably connected with said plug and provided with an enlarged base portion forming a valve housing, a valve positioned in said housing and normally closing the opening of said plug to prevent the return of liquid from said spout into said tube, and a pump connected with said tube and adapted to suck the contents of said receptacle into said tube and force the same out through said spout.

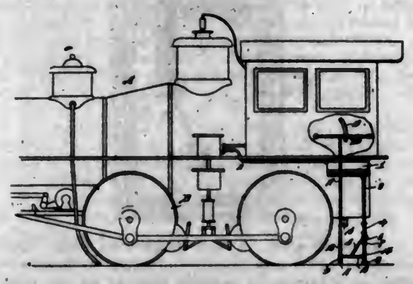
1,021,654. CLOTHES-RACK. ADAM A. BOSCHEE, Lodi, Cal., assignor of one-half to Christopher H. Suess, Lodi, Cal. Filed Nov. 22, 1911. Serial No. 661,689. (Cl. 68—34.)



1. The combination with a vertical self-supporting post having a longitudinal opening, of a panel hinged at the upper end of said opening and adapted to fold thereinto, such panel being composed of parallel members spaced apart, a series of arms pivoted between said members and adapted to be extended laterally and folded into the space between the members, and a leg pivoted to the outer end of the panel and adapted to fold upward and inward against the same and into the opening in the post, as described.

2. In an apparatus for the purpose specified, the combination with a vertical self-supporting post having a longitudinal opening, of a panel hinged at the upper end of said opening and adapted to fold thereinto so as to lie flush with the outer side of the post proper, such panel being composed of two boards arranged parallel but separated by a narrow space, and a series of sets of arms pivoted between the members of the panel and spaced apart and increasing in length from the post outward, substantially as described.

1,021,655. APPARATUS FOR BLOWING SAND FROM RAILWAY-TRACKS. CHARLES D. BROWN, Washington, Ill. Filed Dec. 13, 1911. Serial No. 665,413. (Cl. 104—153.)



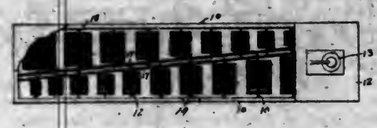
1. The combination with a track traveling wheeled vehicle, of a fluid conveying member adapted to be disposed above the rails of the track and located behind the wheels of the vehicle, a stationary fluid source connected with said member, a valve in the stationary fluid source having an operating lever, an adjustable scraping device, means pivotally connecting said scraping device to said stationary fluid source, means pivotally connected with the latter mentioned means and the operating lever of the valve, and means for vertically adjusting the scraping device with respect to the rails.

2. The combination with a track traveling wheeled vehicle, of a fluid conveying member adapted to be disposed above the rails of the track and located behind the wheels of the vehicle, a stationary fluid source connected with said member, a valve in the stationary fluid source having an operating lever, an adjustable scraping device, means pivotally connected to the lower end of the said stationary fluid source, means pivotally connected with the latter mentioned means and the operating lever of the valve, and means for vertically adjusting the scraping device with respect to the rails.

3. The combination with a track traveling wheeled vehicle, of a fluid conveying member adapted to be disposed above the rails of the track and located behind the wheels of the vehicle, a stationary fluid source connected with said member, a valve in the stationary fluid source having an operating lever, an adjustable scraping device, means pivotally connecting said scraping device to the lower end of said stationary fluid source, said means being disposed in parallel relation with the tread surface of the rails, means pivotally connected with the latter mentioned means and the operating lever of the valve, and means for vertically adjusting the scraping device with respect to the rails.

4. The combination with a track traveling wheeled vehicle, of a fluid conveying member adapted to be disposed above the rails of the track and located behind the wheels of the vehicle, a stationary fluid source connected with said member, a valve in the stationary fluid source having an operating lever, an adjustable scraping device, means pivotally connecting said scraping device to the lower end of said stationary fluid source, said means being disposed in parallel relation with the tread surface of the rail and positioning the scraping device forwardly of the said stationary fluid source, means pivotally connected with the latter mentioned means and the operating lever of the valve, and means for vertically adjusting the scraping device with respect to the rails.

1,021,656. PAPER-RACK AND DISPLAY DEVICE. CHARLES J. BAYANT, Spokane, Wash. Filed Aug. 14, 1911. Serial No. 643,969. (Cl. 211—2.)

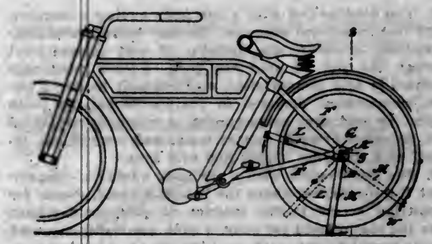


1. In a bag supporting device, a frame including substantially parallel side bars provided with apertures, two series of short bars extending transversely of the parallel bars, the bars of each series gradually increasing in length and having their outer ends supported in the side bars, the two series being reversely arranged, and means for supporting the inner ends of the aforesaid short bars.

2. In a bag supporting device, a frame including substantially parallel side bars, end bars extending above the upper surface of the side bars, members extending transversely of the frame and secured to the end bars, means connecting said transverse members with the side bars and means for supporting between the side bars two series of bags, said means including two series of short bars, the bars of each series gradually increasing in length and the two series being reversely arranged.

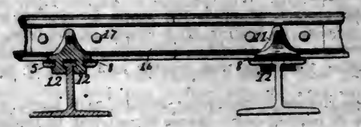
3. In a bag supporting device, a rectangular frame formed with recessed side bars, apertured diagonally disposed bars within said frame, a cup within each of said recesses, a telescoping socket member in each of said cups, a spring in compression to extend said socket member, the latter having a substantially concave face, a socket proper in the center thereof, a portion of substantially U-shape extending from the center to the outer edge and disposed in the plane intermediate of planes passing through the center and edge, and a bag supporting means mounted in said apertured bar and socket member.

1,021,657. DEVICE FOR STARTING MOTOR-CYCLES. FRANCIS A. BURROWS, Columbia, S. C. Filed Oct. 7, 1911. Serial No. 653,298. (Cl. 208—78.)



In a device for starting motorcycles, a U-shaped standard pivotally secured to the frame of the machine below the axle of the rear wheel, an integral lever-arm extending forwardly from the upper end of said U-shaped standard, on one side thereof, and provided with a foot-plate at its end arranged to be engaged by the foot of the rider, said standard serving to lift the rear wheel from the ground, and the depression of the foot-lever serving to elevate the standard and to give a forward movement to the machine.

1,021,658. RAILROAD TIE, CHAIR, AND FISH-PLATES. WILLIAM D. CARPENTER and JAMES A. HUMPHREY, Lima, Ohio. Filed June 12, 1911. Serial No. 632,697. (Cl. 238—6.)



A pair of fish plates one of which is provided with projecting studs to pass through a rail and the other having holes to receive the studs; a pillow block integral with each fish-plate; a T-shaped lug integral with and depending from the said pillow block, and a railroad tie provided with a top plate having T-shaped holes to receive the said lugs, whereby connecting bolts are dispensed with.

1,021,659. RAILROAD-TIE. MORRIS GEORGE CHALLBURG, Lincoln, Nebr. Filed Apr. 8, 1911. Serial No. 619,806. (Cl. 238—5.)



1. In a device of the class described, a hollow body having an opening therein, a rail support slidably mounted in said body and exposed through the opening, means carried by the support for securing a rail thereon, said means adapted to engage the body to limit the movement of the support in one direction, and an obstruction extended across the body of the tie to limit the movement of the support in the opposite direction.

2. A tie comprising a hollow body, a rail support slidably mounted therein, a rail mounted on said support, a second rail secured upon the tie, and means normally acting to hold the first rail to gage with the second rail.

3. A tie comprising a hollow body, a rail support slidably mounted within the body at one end and exposed to receive a rail, a rail mounted thereon, a rail secured upon the opposite end of the tie body, and a spring to normally hold the first rail to gage with the second rail.

4. A tie comprising a hollow body, a rail support slidably mounted within the body at one end and exposed to receive a rail, a rail mounted thereon, a rail secured upon the opposite end of the tie body, a spring to normally hold the first rail to gage with the second rail, and means to limit the movement of the support against the tension of the spring.

5. A tie comprising a hollow body, a rail support slidably mounted within the body at one end and exposed to receive a rail, a rail mounted thereon, a rail secured upon the opposite end of the tie body, a spring to normally hold the first rail to gage with the second rail, means to limit the movement of the support against the tension of the spring, means to limit the movement of the support in the opposite direction, and removable means for supporting the spring in position to act upon the support.

1,021,660. PROCESS FOR THE PRODUCTION OF LEATHER-BOARD STOCK. ALBERT L. CLAFF, Braintree, Mass., assignor to Hide-Ite Leather Company, Boston, Mass., a Corporation of Maine. Filed Jan. 4, 1911. Serial No. 600,723. (Cl. 92—3.)

1. The process of producing stock for leather-board, which consists in waterproofing cellulose fibers, and mixing such fibers with fibrous leather.

2. The process of producing stock for leather-board, which consists in precipitating upon the fibers of a mass of cellulose a waterproofing material, and mixing the cellulose thus treated with a mass of leather fibers.

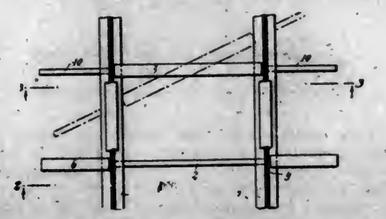
3. The process of producing stock for leather-board, which consists in beating up cellulose, precipitating an insoluble compound upon the fibers of the cellulose stock, and adding the cellulose fibers thus treated to a mass of leather fibers.

4. The process of producing stock for leather-board, which consists in beating up a charge of cellulose, adding thereto a fatty emulsion, precipitating said emulsion, and adding the fibers thus treated to a mass of leather fibers.

5. The process of producing leather-board stock, which consists in beating out a charge of cellulose to produce a fibrous mass, adding to said mass an emulsion containing an inherently waterproofing material, precipitating said emulsion directly upon the fibers of the cellulose, and adding the water-proofed cellulose fibers to a charge of leather fibers.

[Claims 6 to 8 not printed in the Gazette.]

1,021,661. RAILROAD-TIE AND LOCK. VERNON A. CONKLIN, Bayonne, N. J. Filed Dec. 29, 1910. Serial No. 599,815. (Cl. 238—5.)



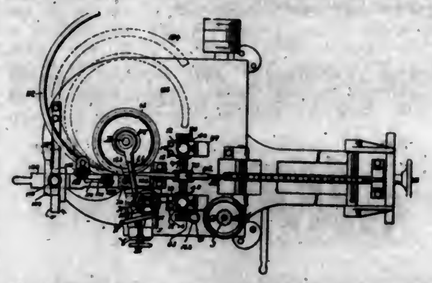
1. In a railroad track, parallel disposed rails, each rail having an outer and an inner base flange, and a series of parallel ties arranged transversely beneath said rails, each alternate tie embracing the outer base flange of each of the rails and having a flat top surface between the rails and every other tie embracing the inner flange of each of said rails, and having a flat top surface extending outward from each rail.

2. In a railroad track, parallel rails, each rail having an outer and an inner base flange, and a series of parallel ties arranged transversely beneath said rails, each alternate tie being cut away centrally, the ends of said cut-away portion being formed into an overhanging portion conforming substantially to the outer lower flange of each of the rails and every other tie being recessed from the rail outward to each end of the tie so as to leave part of said tie of a length equal to the distance between the webs of the parallel rails, each end of said part embracing the inner lower flange of each rail.

1,021,662. BENDING-MACHINE. JAMES FILLMORE COX, Bayonne, N. J., assignor of one-half to Matthew T. Cronin, Bayonne, N. J. Original application filed June 3, 1909, Serial No. 499,868. Divided and this application filed Mar. 7, 1910. Serial No. 547,723. (Cl. 153—54.)

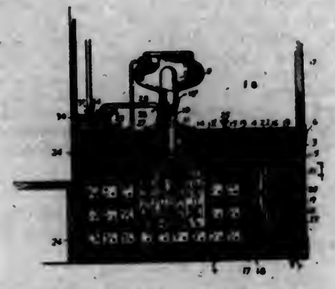
1. In a machine of the character described, the combination with a grooved former and means for actuating the same, of a guiding contrivance comprising parallel spaced-apart members provided with right-angled outstanding portions, a grooved roller arranged between the latter and a second grooved roller arranged between said members, contiguous to the periphery of the first referred to roller, said grooved former and rollers being adapted to receive between them the object for bending.

2. In a machine of the character described, the combination with a rotary grooved former, of a guiding contrivance comprising parallel spaced-apart members having right-angled outstanding portions, grooved rollers arranged intermediate of said members and said right-angled portions, respectively, said members and arms having slots therein receiving the axles of said rollers, said grooved rollers being arranged contiguous to the periphery of said former.



3. In a machine of the character described the combination, with a rotary grooved former of a guiding contrivance comprising parallel spaced-apart members having right-angled arms, said members and arms having longitudinal slots therein extending in lines perpendicular to each other, rollers having their axles received by and adjustable in said slots, said rollers being arranged contiguous to said grooved former, a bracket whose trend is at right-angles to that of said guiding contrivance, means for the retention of said bracket in effective position, a clamping block engaging said guiding contrivance and bracket.

1,021,663. APPLIANCE FOR RAILWAY-CARS AND OTHER CONVEYANCES. HARRISON TAYLOR CRONK, New York, N. Y. Filed Dec. 3, 1910. Serial No. 595,371. (Cl. 4—32.)



1. The combination with a car body having a compartment therein located above the bottom thereof, means for permitting access to the interior of said compartment through the side of said car body, a tank removably mounted in said compartment, said car body having a second compartment disposed in juxtaposed relation with respect to said first compartment, a receiving hopper in said second-mentioned compartment, and connections between said receiving hopper and said tank.

2. The combination with a car body having a compartment therein located above the bottom thereof, means for permitting access to the interior of said compartment from the side of said car body, a tank removably mounted in said compartment, said car body having a second compartment disposed in juxtaposed relation with respect to said first-compartment, a receiving hopper in said second-mentioned compartment, connections between said receiving hopper and said tank, a ventilating outlet for said tank, whereby the gases displaced by the incoming material may pass out of said tank, and a disinfector for disinfecting said gases.

3. The combination with a car body, said car body having a compartment therein, of a door located in the side of said car body permitting access to said compartment, a tank located in said compartment, a receiving hopper connected to said tank, said tank having a detachable cover, means for securing said cover in position, and a buffer on said means, adapted to be engaged by said door so as to hold said tank against movement when said door is closed.

4. The combination with a conveyance, of a tank connected to said conveyance, a receiving hopper in said conveyance, a connection between said receiving hopper and said tank, whereby the material in said receiving hopper may flow into said tank, a collapsible ventilating pipe leading from said tank, whereby the gases in said tank may pass out of said tank, and a disinfector connected to said ventilating pipe and adapted to disinfect said gases coming from said tank.

5. The combination with a conveyance, of a tank connected to said conveyance, a receiving hopper in said conveyance, a connection between said receiving hopper and said tank, whereby the material in said receiving hopper may flow into said tank, and a ventilating pipe extending from said tank, adapted to carry off the gases from said tank, said ventilating pipe comprising a plurality of sections, with means for detachably connecting said sections together.

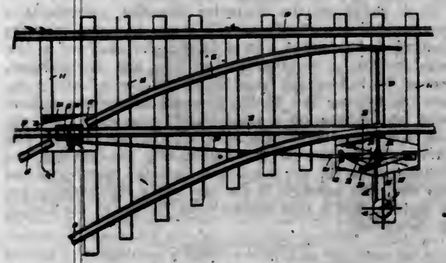
[Claims 6 to 9 not printed in the Gazette.]

1,021,664. STAPLE. WARREN R. DEAN, Carmangay, Alberta, Canada. Filed May 13, 1911. Serial No. 627,084. (Cl. 85—49.)



In a device of the class described an integral piece of material bent to form a U-shaped body having one end thereof longer than the other, the said ends being pointed, a head formed at one end of the said body and in longitudinal alinement with the said longer end, an inclined portion formed adjacent the said head and terminating in the said shorter end and a series of serrations formed on the outer sides of the said head and the said longer and shorter ends of the said piece of material, the said serrations extending traversely to the said longer and shorter ends.

1,021,665. SWITCH. CHARLES HENRY DIMOCK, Windsor, Nova Scotia, Canada. Filed May 23, 1911. Serial No. 629,051. (Cl. 104—24.)



1. In a switch, in combination, a main track, a branch track, a movable switch point, a movable frog adapted to render continuous either said main track or said branch track, an operative connection between said point and said frog, a support for said frog, and rollers associated with said frog and engaging said support.

2. In a switch, in combination, main track rails, one of said rails having a gap and a movable switch point terminating at said gap, a branch track rail terminating at said gap, a second branch track rail merging into said main track rail having said gap, a movable switch point located between said main track rails and terminating at said gap, a movable frog located in said gap and adapted to render continuous said switch point and said first branch track rail, or said main track rail having said switch point section, a support under said frog, rollers associated with said frog and engaging said support, and an operative connection between said switch point and said switch point section and said frog.

3. In a switch, a rail having a gap, a base plate positioned under said gap, a frog movably mounted upon said base plate, and rollers secured to said frog and engaging under said plate.

4. In a switch, a rail having a gap, a base plate positioned under said gap, a sole plate movably mounted upon said base plate, a frog supported by said sole plate, and a roller carried by said frog and engaging under said base plate.

5. In a switch, rails having coincident gaps, a base plate positioned under said gaps and having an opening, a sole plate movably mounted upon said base plate and having a projection movable in said opening, a frog mounted upon said sole plate, said base plate having arc-shaped slots, studs extending from said sole plate through said slots, and rollers carried by said studs and engaging at the underside of said base plate.

[Claims 6 to 10 not printed in the Gazette.]

1,021,666. SLEEPER. GEORGE DORFFEL, Oakland, Cal. Filed Aug. 15, 1911. Serial No. 644,102. (Cl. 238—3.)



1. A sleeper comprising a plurality of trough-like members of concrete, a wooden beam resting within said trough-like members and connecting the same together, the outer face of said beam being substantially flush with the outer face of said trough-like members, and means for securing said wooden beam within said trough-like members.

2. A sleeper comprising a pair of trough-like members, one provided with a concave end and the other with a convex end mating said concave end, and forming a joint therewith, a wooden beam disposed within said trough-like members and extending from one of said trough-like members to the other, and a plurality of bolts extending through said trough-like members and said beam.

3. A sleeper comprising a pair of trough-like members of concrete fitted together by a joint, a wooden beam mounted within said trough-like members and extending from one to another, means for securing said wooden beam in position relatively to said trough-like members, a plate supported by said trough-like members, and means for holding said plate in position upon said trough-like member on which it rests.

4. A sleeper comprising a pair of trough-like members, a beam mounted within said trough like members, each trough like member being provided with recesses forming with the sides of the beam hook passages, the said hook passages being in staggered relation to each other, metallic hooks extending within said hook passages, bolts extending through the trough like members and said beam, and on which the said hooks are mounted to swing, and bolts mounted upon said metallic hooks for engaging the base of a rail.

5. A sleeper comprising a pair of trough like concrete members movable relative to each other and each having a wide portion, a wooden beam resting within said concrete members and connecting the same together, the top face of said beam being flush with the top faces of said trough like members, plates extending across the top face of said beam and the said trough like members at the wide portion of the latter, the said plates being each provided at its ends with downwardly extending lugs for engaging opposite edges of said wide portion,

the said lugs being narrower than said plates, each plate having upturned lugs at the sides for engaging opposite side edges of a rail base, and means for engaging the upper face of the rail base to hold the rail upon said plate.

[Claim 6 not printed in the Gazette.]

1,021,667. VACUUM-CLEANER. JOHN J. DUFFIE, San Francisco, Cal. Filed Nov. 6, 1909. Serial No. 526,548. (Cl. 230—11.)

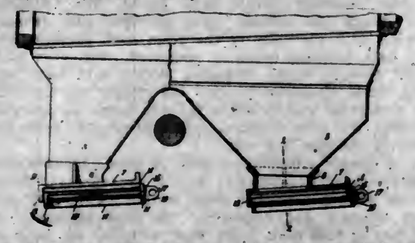


1. In a vacuum cleaner, a casing, a motor in said casing, a shaft operated by said motor, a fan on each end of said motor shaft, a partition adjacent each fan, a removable diaphragm in said casing, and adapted to form airtight joints with said partitions, a cover for said casing, and an air and dust inlet pipe in said cover, substantially as described.

2. In a vacuum cleaner, a casing, a motor in said casing, a shaft operated by said motor, a fan on each end of the motor shaft, a partition adjacent each fan, a diaphragm in said casing adapted to form air-tight joints with the said partitions, a cover for said casing, and an air and dust inlet pipe in said cover, substantially as set forth.

3. In a vacuum cleaner, a casing, a motor therein, a shaft operated by the motor, a plurality of fans on said motor shaft, one of said fans having its intake connected with the upper portion of the casing and discharging into the intake of another of said fans, a removable partition above said motor and fans separating them from the intake chamber, a removable cover for the casing forming a compartment in the upper portion thereof, and an air and dust inlet pipe into said compartment, substantially as described.

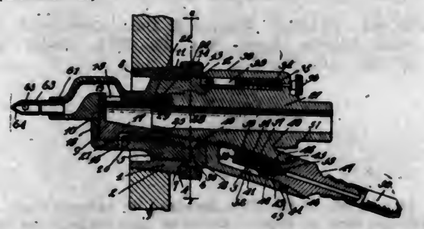
1,021,668. LOCOMOTIVE ASH-PAN. JAMES F. DUNN, Salt Lake City, Utah. Filed Aug. 1, 1911. Serial No. 641,716. (Cl. 110—167.)



1. In a locomotive ash pan a hopper, oppositely disposed guide members at the sides of the hopper each having two outwardly extending parallel flanges, one disposed over the other with the upper flanges extending outwardly beyond the lower flanges, at the sides of the device, a door for closing the hopper having faces disposed against the bottom of the lower flanges, and side members disposed at the outer sides of the lower flanges, and covered by the upper flanges, and inwardly extending bearing flanges on the side members disposed for traveling between the flanges on the guide members.

2. In a locomotive ash pan a hopper, oppositely disposed guide members at the sides of the hopper each having two outwardly extending parallel flanges, one disposed over the other, with the upper flanges extending outwardly beyond the lower flanges at the sides of the device, a door for the hopper having faces disposed against the bottom of the lower flanges and side members disposed at the outer sides of the lower flanges, and covered by the upper flanges, inwardly extending bearing flanges on the side members disposed for traveling between the flanges on the guide members, two members spaced apart and depending from the hopper, one of the depending members serving to prevent the ashes from falling off the door when the door is closed, and the other depending member serving to push the ashes off the door when the door is opened.

1,021,669. BEER-TAPPER. WILLIAM W. FRISHOLM, Leadville, Colo. Filed Apr. 2, 1910. Serial No. 552,963. (Cl. 225—1.)



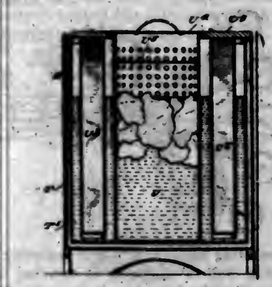
1. A device of the character specified, comprising a bushing for engaging a barrel, a tap threaded into the bushing and provided with a passage for beer and a passage for air, a coupling having beer and air passages, means for locking the coupling to the tap, a valve rotatable in the tap and having passages adapted to register with and connecting the respective passages of the tap and of the coupling, said valve having a depression encircling the air passage, and the coupling having a conical projection encircling the air passage therein for engaging said depression to connect the valve and the coupling, the locking means of the coupling being positioned to lock the coupling to the tap when the valve has been rotated into position to connect the respective passages, and a pipe leading from the tap to the bottom of the barrel.

2. A device of the character specified, comprising a bushing for engaging a barrel, a tap threaded into the bushing and provided with a passage for beer and a passage for air, a coupling having beer and air passages, means for locking the coupling to the tap, a valve rotatable in the tap and having passages adapted to register with and connecting the respective passages of the tap and of the coupling, means for connecting the coupling and valve to cause the valve to rotate with the coupling, the locking means for the coupling to lock the coupling to the tap when the passages of the tap, valve and coupling are in register, and a pipe leading from the tap to the bottom of the barrel.

1,021,670. POP-COOLER. JOHN H. GAREY, Davenport, Nebr. Filed July 6, 1911. Serial No. 637,062. (Cl. 62—14.)

1. A cooler for bottled liquids, consisting of a receptacle, a refrigerant chamber within the receptacle, a bottle receiving chamber separated from the refrigerant chamber by a foraminous partition, and removable bottle containing trays adapted to be introduced into the bottle receiving chamber.

2. A cooler for bottled liquids consisting of a receptacle, a central refrigerant chamber surrounded by foraminous walls, bottle receiving chambers surrounding said central chamber, bottle carrying trays adapted to be introduced into the bottle chambers, and means for covering each of the chambers.



3. A cooler for bottled liquids consisting of a circular receptacle, a central circular refrigerant chamber surrounded by a foraminous wall, bottle carrying trays adapted to be inserted in the space between the central chamber and the outer wall of the receptacle, segmental flanges secured to one end of the bottle trays, said segments adapted to form air tight covers for the bottle tray space.

4. A cooler for bottled liquids consisting of a circular, heat-insulated receptacle, a central circular refrigerant chamber therein surrounded by a foraminous wall, radial partitions between the central chamber and the heat insulated wall forming upright compartments, bottle carrying trays adapted to be inserted in said upright compartments, the upper ends of the bottle trays having segmental overhanging flanges adapted to cover the upper open end of the compartments, the segments fitting together to form a circular cover for the several compartments, and a removable cover for the central circular chamber.

5. A cooler for bottled liquids comprising a receptacle having a chamber to contain water and ice, a chamber to receive bottles carried in upright trays, and a foraminous partition separating said chambers.

[Claim 6 not printed in the Gazette.]

1,021,671. ATTACHMENT FOR SEWING-MACHINES. DOMENICO GATTONE, Los Angeles, Cal., assignor, by mesne assignments, to Sylvester Stormer, Pasadena, Cal. Filed Mar. 13, 1909. Serial No. 483,263. (Cl. 112—13.)



1. In a presser foot for sewing machines, in combination, two relatively transversely adjustable parts, one part having a projecting presser foot portion formed with a transverse undercut beveled shoulder and the other part having a projecting presser which has its edge beveled conformably to said shoulder and abutting thereagainst, the presser forming in effect a lateral continuation of the foot portion and being flush therewith.

2. In a presser foot for sewing machines, in combination, a stationary part provided with a presser foot, a presser arranged to form at all times a lateral continuation of the presser foot, and an edge guide, both the presser and the edge guide being independently transversely adjustable with relation to the presser foot and means common to and acting upon all of said parts to hold them against relative movement.

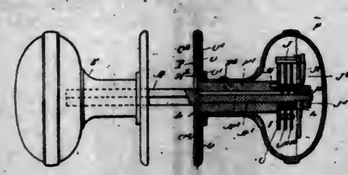
3. In a presser foot for sewing machines, in combination, two relatively adjustable parts, one of which has a presser foot portion having a transversely recessed under face and the other of which has a transversely curved presser which is fitted in the recess and projects laterally of the foot portion.

4. In a presser foot for sewing machines, in combination, a stationary part having a body portion and a projecting presser foot portion provided with a transverse undercut shoulder in its under face, and a second part of L-shaped cross section and removably associated with the stationary part, the second part having a back portion which is held against the back face of the body portion and a projecting presser portion formed to engage the shoulder.

5. In a presser foot for sewing machines, a part which is attached to the presser bar and has a forwardly projecting presser foot portion, the latter having an unyielding engaging surface and having also a transverse recess in its under face, and a presser part which forms a lateral continuation of the foot portion and is fitted in the said recess for transverse adjustment with relation to the foot portion, the under faces of the foot portion and of the presser part being flush.

[Claim 6 not printed in the Gazette.]

1,021,672. PERMUTATION-LOCK. THOMAS HENRY HART, Everett, Mass. Filed Mar. 24, 1911. Serial No. 616,567. (Cl. 70—53.)



1. A permutation door lock, comprising a spindle, an outer hollow knob having a hub, a knob plate for attachment to the door, a notched disk on the said hub, a click spring on the said knob plate and engaging the said notched disk, a series of tumblers, of which one is secured on the hub within the hollow knob and the others are loose on the spindle, and an arm attached to the spindle and carrying a dog for engagement with the tumblers.

2. A permutation door lock, comprising a spindle having a cylindrical portion, an outer hollow knob having a hub mounted to turn loosely on the said cylindrical portion, a notched disk on the inner end of the said knob hub, a series of tumblers within the hollow knob and of which one is secured to the outer end of the knob hub and the others are mounted to rotate loosely on the cylindrical spindle portion, an arm fixed on the end of the cylindrical spindle portion and provided with a spring-pressed dog engaging the said tumblers, a click spring engaging the said notched disk, and a knob plate for attachment to the door and having superimposed sections of which the outer one has a boss for engagement with the knob hub, the said click spring being attached to the said outer section of the knob plate.

3. A permutation door lock, comprising a spindle having a cylindrical portion, an outer hollow knob having a hub mounted to turn loosely on the said cylindrical portion, a notched disk on the inner end of the said knob hub, a series of tumblers within the hollow knob and of which one is secured to the outer end of the knob hub and the others are mounted to rotate loosely on the cylindrical spindle portion, an arm fixed on the end of the cylindrical spindle portion and provided with a spring-pressed dog engaging the said tumblers, a click spring engaging the said notched disk, a knob plate for attachment to the door and having superimposed sections of which the outer one has a boss for engagement with the knob hub, the said click spring being attached to the said outer section of the knob-plate, and indicating means on the said outer knob plate part and the knob hub.

4. A permutation door lock, comprising a spindle having a cylindrical portion, an outer hollow knob having a hub mounted to turn loosely on the said cylindrical portion, a notched disk on the inner end of the said knob hub, a series of tumblers within the hollow knob and of which one is secured to the outer end of the knob hub and the others are mounted to rotate loosely on the cylindrical spindle portion, an arm fixed on the end of the cylindrical spindle portion and provided with a spring-pressed dog engaging the said tumblers, a click spring engaging the said notched disk, a knob plate for attachment to the door and having superimposed sections of which the outer one has a boss for engagement with the knob hub, the said click spring being attached to the said outer section of the knob plate, and a spring on the inner knob plate part and engaging the polygonal portion of the spindle.

5. A door lock, provided with a spindle, a knob having a hub mounted to turn on the spindle, the said hub being provided with a disk having peripheral notches, permutation devices for connecting the hub with the spindle, a knob plate secured to the door and formed of two sections having a bearing for the said disk to turn in, and a click device attached to the said knob plate and engaging the said notched shoulder.

[Claim 6 not printed in the Gazette.]

1,021,673. SELF-FILLING FOUNTAIN-PEN. JOHN HENDRIE, Racine, Wis. Filed Sept. 12, 1911. Serial No. 648,872. (Cl. 120—47.)



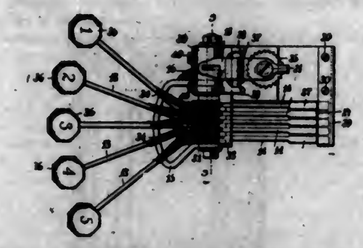
In a pen of the class described, a staff provided with a chamber for the reception of ink, a diaphragm at the lower end of said staff provided with a centrally disposed opening, a closure for the upper end of said staff provided with an opening therethrough; a cap screwed on said upper end having an opening therein eccentric to the opening in the closure, a bar extending across the lower end of said staff and provided with a downwardly extending conical projection, a sleeve screwed on the lower end of said staff and provided with pen-point carrying means, and a tube secured within said sleeve and passing through the opening in said diaphragm, said conical projection having its apex normally within the upper end of said tube.

1,021,674. MEDICINAL TABLET. ARTHUR HOROWITZ, Berlin, Germany. Filed Mar. 23, 1910. Serial No. 551,096. (Cl. 167—7.)

1. A compressed tablet for medicinal purposes consisting of a compressed mixture of a pulverized drug and pulverized hardened gelatin, substantially as described.

2. A compressed tablet for medicinal purposes consisting of a compressed mixture of a pulverized drug and pulverized hardened gelatin, said compressed mixture being covered externally with a coating of hardened gelatin, substantially as described.

1,021,675. TABULATING MECHANISM FOR TYPEWRITING MACHINES. GEORGE C. HOSKIN, Nevada, Iowa. Filed Feb. 28, 1911. Serial No. 611,869. (Cl. 197—178.)



1. In a tabulating mechanism for typewriting machines, the combination with a plurality of spacing blocks normally held out of and adapted to be moved into the path of the platen carrier, of a plurality of key bars; springs to normally depress said spacing blocks; springs connecting said spacing blocks and said key bars to support said key bars, said last mentioned springs having greater tension than the first mentioned springs to insure the lift of the said blocks by the depression of said key bars; a pivotally mounted yoke disposed in the path of said key bars to rock thereby when said key bars are depressed to lift the said spacing blocks; and transmission means connecting said yoke and the feeding mechanism for said platen carrier to release the said carrier when said yoke is depressed.

2. In a tabulating mechanism for typewriting machines, the combination with the escapement pinion of said machine, of a stationary yoke the ends whereof are disposed in the plane of the path of said escapement pinion; a spiral spring extended between the ends of said yoke; and manually operative means for moving said escapement pinion from engagement with the platen carrier of said machine, the said spring being disposed to engage the said pinion prior to the said pinion releasing the said carrier.

1,021,676. VULCANIZED WOOD. CHARLES HOWARD, New York, N. Y., assignor to National Lumber Vulcanizing Corporation, a Corporation of Delaware. Filed Oct. 11, 1909. Serial No. 522,193. (Cl. 99—12.)

1. The herein described product, comprising wood free from all volatile aqueous matters, and having its undecomposed resins deposited uniformly throughout the hardened fibers of the entire mass.

2. The herein described product, comprising wood deprived of pyroligneous acid, and having its undecomposed resins deposited uniformly throughout the hardened, undisrupted fibers of the entire mass.

3. The herein described product, comprising wood deprived of pyroligneous acid and free from all volatile aqueous matters, and having its resins disseminated in an undecomposed form uniformly throughout the entire mass.

4. The herein described product, comprising wood having its undisrupted fibers deprived of pyroligneous acid and uniformly impregnated with the hardened and undecomposed wood resins, thereby providing an improved vulcanized wood, which remains practically unchanged through long and severe use.

5. The herein described product, comprising wood free from all volatile aqueous matters, and having its gums and undecomposed resins deposited uniformly throughout the hardened fibers of the entire mass.

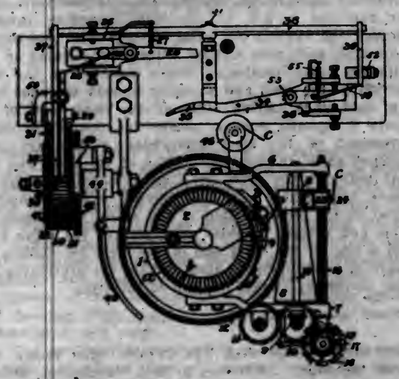
1,021,677. SANITARY DRINKING DEVICE. JOSEPH B. HOWELL, Walpole, Mass. Filed Oct. 4, 1910. Serial No. 585,255. (Cl. 210—6.)

1. A filter comprising a body provided with internally threaded inlet and discharge ends, filtering material in said body, a screen seated on said material in the inlet end of said body, a threaded washer engaging the threads of the inlet end and holding said screen to said filtering material, a gasket seated on said washer, a screen on the filtering material at the discharge end of the body, a nipple engaging said end and provided with internal lugs, a ball movable in said nipple between said lugs and screen, and a nozzle carried by said nipple.



2. A filter comprising a body provided with inlet and discharge ends, said ends being internally threaded, an externally threaded nipple engaging the discharge end, pressure reducing means in said nipple, said pressure reducing means comprising spaced lugs formed in said nipple, and a ball movable in the nipple and adapted to bear against said lugs in its raised position, a nozzle provided with an internally threaded body for engaging said nipple, a basket seated on the outer end of the nipple, a washer within said body and seated on said gasket, a screen on said washer, a washer on said screen, and filtering material in said body.

1,021,678. KNITTING-MACHINE. ROWLAND HUTCHINSON, Nottingham, England. Filed Dec. 14, 1910. Serial No. 597,266. (Cl. 66—12.)



1. The combination with a circular rib knitting machine of means for holding and guiding to the knitting mechanism an elastic thread, a conical feed roller for the elastic thread, means for rotating such roller, a pressure feed roller and means for traversing it to and fro over the conical roller substantially as herein set forth.

2. The combination with a circular rib knitting machine having a rotating cam cylinder, of means for holding and guiding to the knitting mechanism an elastic thread, a conical roller for feeding the elastic thread, a frame attached to the rotating cylinder of the knitting machine in which is mounted the said conical feed roller, means for turning the said roller comprising a circular gear fixed on the machine frame, and a train of gearing carried by the frame which supports the conical roller and disposed between the said fixed gear and the axle of the conical roller, and means for traversing the holding and guiding means for the elastic thread along the feed roller, substantially as herein set forth.

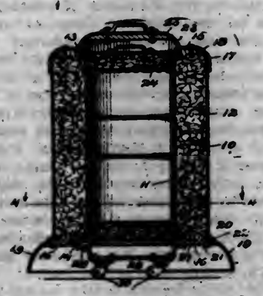
3. The combination with a circular rib knitting machine of means for holding and guiding to the knitting mechanism an elastic thread, a conical feed roller for the elastic thread, arms carrying the same, toothed gear wheels for rotating the said roller, a pressure feed roller, a pivoted frame carrying such roller, a pressure feed roller bracket, and a screw for traversing the bracket substantially as herein set forth.

4. The combination with a circular rib knitting machine of means for holding and guiding to the knitting mechanism an elastic thread, a conical feed roller for the elastic thread, toothed gear wheels for rotating such roller, a pressure feed roller, a bracket carrying such roller, a screw for traversing the said bracket, and ratchet mechanism for rotating the screw in either direction substantially as herein set forth.

5. The combination with a circular rib knitting machine of means for holding and guiding to the knitting mechanism an elastic thread, a conical feed roller for the elastic thread, a pressure roller working in contact with the feed roller, a bracket in which is supported the contact roller for traversing the pressure roller, a screw for actuating the bracket, a ratchet wheel and clawker for rotating the screw in one direction, a ratchet wheel and clawker for rotating the screw in the opposite direction and pattern mechanism controlling the action of the clawkers substantially as herein set forth.

[Claims 6 to 9 not printed in the Gazette.]

1,021,679. FIRELESS COOKER. ALFRED W. JANSEN, Chicago Heights, Ill. Filed Nov. 3, 1911. Serial No. 658,427. (Cl. 62—23.)



1. In a fireless cooker, an inner cylinder having outturned flanges, an outer shell having a bead formed at its lower edge, a base engaged within the groove formed at the bead, an annular ring clamping the base and shell and engaging the flange at one end of the cylinder, and an annular ring at the other end engaging the other flange of the cylinder and the upper end of the casing.

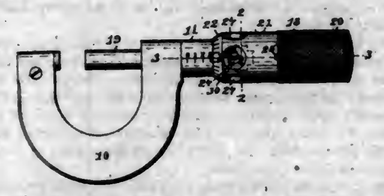
2. In a fireless cooker, an inner cylinder having outturned flanges at its opposite ends, an outer casing having a bead formed at its lower edge producing a furrow upon its outer surface, an annular base engaged within the furrow, an annular ring disposed between the cylinder and the casing and rigidly secured to each, and an annular ring engaging the cylinder at its opposite end and clamping the upper end of the casing.

3. In a fireless cooker, inner and outer cylinders spaced apart and having heat insulating material therebetween, a base formed upon the outer cylinder and extending downwardly to serve as a support, a heat insulating bottom member removably insertible in the inner cylinder, supporting casters carried by the removable bottom, and a heat insulating top member adapted to be inserted in the top of the inner cylinder.

1,021,686. MICROMETER-CALIPERS. FERNANDO OSCAR JAQUES, Sr., Cranston, R. I. Filed Jan. 2, 1912. Serial No. 668,963. (Cl. 73—77.)

1. A micrometer-caliper comprising a barrel, a thimble rotatably surrounding the barrel, a disk holding member

intermediate the barrel and the thimble, a series of indicating disks, means on the disk holding member for rotatably holding the disks in their operative positions and means for revolving the indicating disks, whereby the disks are rotated on their axis upon revolution of the thimble.



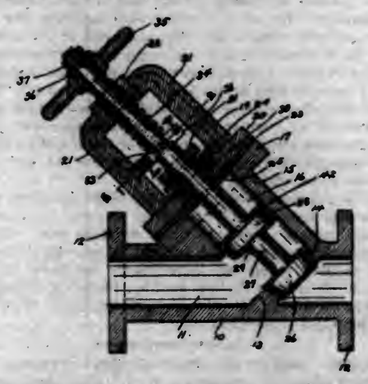
2. In a micrometer-caliper having a barrel and a thimble, a disk holding member having a sliding fit on the barrel and a series of flat sides, each side having a circular depression and a central stud for rotatably supporting an indicating disk.

3. In a micrometer-caliper having a barrel and a thimble, a disk holding member intermediate the barrel and the thimble, said disk holding member having a series of flat sides, each side having a circular depression and a central stud for rotatably supporting an indicating disk, and means for longitudinally adjusting the disk holding member, relatively to the thimble.

4. In a micrometer-caliper having a barrel, a thimble and a series of indicating disks, a disk holding member having a sliding fit on the barrel and a series of flat sides, each side having a circular depression, and a central stud in the depression for rotatably supporting an indicating disk, and a screw for adjusting the position of the disk holding member relative to the thimble.

5. A micrometer-caliper comprising a barrel, a two part thimble surrounding the barrel, one of the thimble parts having a series of comparatively large openings, means for securing the two parts of the thimble against separation, a series of indicating disks, a disk holding member having a sliding fit on the barrel, and a series of flat sides, each side having a circular depression and a central stud in the depression for rotatably supporting an indicating disk under an opening in the thimble, a screw for adjusting the position of the disk holding member relative to the thimble, and means for intermittently revolving th indicating disks as described.

1,021,681. VALVE FOR CORROSIVE LIQUIDS. JOHN F. JENNINGS, Cleveland, Ohio. Filed Feb. 13, 1911. Serial No. 608,259. (Cl. 137—4.)



1. In combination, in a valve for use with corrosive liquids, a valve casing formed of non-corrodible metal and provided with a valve chamber or passageway extending therethrough and with a partition having a valve opening, a tubular extension provided with a passageway which communicates with the chamber and is in line with the valve opening, a yoke secured to the end of said tubular extension and comprising a base which closes the passageway in said extension and is provided with an opening for a valve stem and with a stuffing box, a valve member coöperated with the valve opening, a stem carrying said valve member, said valve member and the portion of the stem extending inwardly through the stuffing box being coated with non-corrodible metal, a sleeve rotatably mounted on the outer portion of the stem and engaging in a threaded opening of the yoke, said stem having adjacent the inner end of the sleeve a squared portion, a hand wheel secured to the sleeve for turning the same, means for preventing rotary movement of the stem when the sleeve is turned comprising a guide which is clamped about the squared portion of the stem and slidingly engages the yoke, said stem extending entirely through the sleeve and beyond the end thereof, and means on the outer end of the sleeve for preventing endwise movement of the sleeve on the stem.

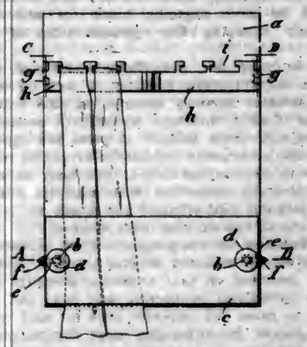
2. In combination, in a valve for use with corrosive liquids, a casing formed of non-corrodible metal and provided with a chamber or passageway extending therethrough, said chamber having a dividing partition provided with a valve opening, said casing having a tubular neck provided with a passageway which is in line with the valve opening and communicates with the chamber, a yoke secured to said tubular extension and having a base which closes the passageway therein and is provided with an opening for a valve stem and with a stuffing box, a layer of non-corrodible metal between the base of the yoke and the adjacent end of the tubular extension, said layer extending upwardly through the opening of the base and lining the interior of the stuffing box, a valve member coöperating with said valve opening, a stem carrying the valve member, said stem extending outwardly through the stuffing box, and the valve member and the portion of the stem extending inwardly through the stuffing box being covered with non-corrodible metal, said yoke having a threaded opening in line with the valve opening, a sleeve mounted on the outer portion of the stem and engaging in said threaded opening, said stem having adjacent the inner end of the sleeve a squared portion, means for preventing rotary movement of the stem comprising a two-part guide clamped about the squared portion of the stem and slidably engaging the yoke, the stem extending through the sleeve beyond the outer end thereof, a hand wheel secured on the outer portion of the sleeve for turning the same and causing endwise movement of the valve stem, and a nut on the outer end of the stem for holding the sleeve in position on the stem and for the preventing endwise movement thereof relative to the stem.

1,021,682. PRESS FOR NECKTIES. MAX JONAS, Berlin, Germany. Filed July 5, 1911. Serial No. 636,846. (Cl. 100—57.)

1. A press for neck-ties comprising in combination with a base plate, a pressure plate, means for adjustably securing the said pressure plate to the said base plate, a plurality of retaining arms hingedly connected with each of the longitudinal edges of said base plate, and means for removably retaining the free ends of said arms in the center of said base plate, substantially as and for the purpose set forth.

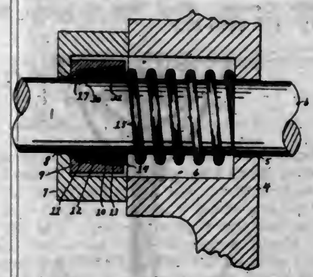
2. A press for neck-ties comprising in combination with a base plate, a pressure plate, means for adjustably securing the pressure plate to the base plate, supporting arms on the base plate, said arms having notches with overhanging flanges to retain and support neck-ties pressed between the base plate and the pressure plate.

3. A press for neck-ties comprising in combination with a base plate, a pressure plate, means for adjustably securing the pressure plate to the base plate, arms hinged to the base plate, said arms having notches with overhanging flanges to retain and support neck-ties while being pressed between the base plate and the pressure



plate, and means for holding the hinged arms in closed position.

1,021,683. PISTON-ROD AND VALVE-STEM PACKING. WILLIAM D. KESSELRING, Atchison, Kans. Filed Mar. 9, 1911. Serial No. 613,276. (Cl. 121—109.)

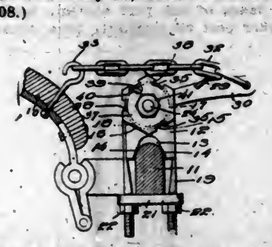


1. The combination of a casing, a rod extending therethrough, a gland, an interiorly tapered cup in the gland, a series of three packing rings surrounding the rod and fitting in the tapered part of the cup, the middle ring being semi-circular in cross section and having its flat side engaging against the rod, and the other two rings bearing against the rod and having faces corresponding in shape with, and bearing against the opposite sides respectively of the middle ring, a neck ring bearing against said packing rings, and a compression spring bearing against said neck ring.

2. The combination of a casing, a rod extending therethrough, a gland, an interiorly tapered cup in the gland, three packing rings fitting closely between the tapered part of the cup and the rod, the middle ring being semi-circular in cross section and having its flat side bearing against the rod, and the other two rings bearing against the rod and having faces corresponding in shape with, and bearing against, the opposite sides respectively of the middle ring, and a compression spring bearing against said packing rings and forcing them toward the smaller end of the cup.

3. The combination of a rod, a casing, an interiorly tapered cup, and three packing rings between the tapered part of the cup and the rod, the middle ring being semi-circular in cross section and having its flat side against the rod, and the other two rings having faces corresponding with, and bearing against, the opposite faces respectively of the middle ring, and a spring tending to force the rings toward the smaller end of the cup, each of said rings being split approximately on a tangent to its inner circumference.

1,021,684. SHAFT-SUPPORT. JOHN B. KLOEKER, Loramie, Ohio. Filed July 15, 1910. Serial No. 572,107. (Cl. 21—108.)



1. The combination with a vehicle axle, of blocks having serrated recesses formed in their under faces for engaging the said axle, said blocks having concaved recesses formed in their upper faces and having grooves formed therein extending downward from the concaved recesses, a cylinder engaged in the recesses of the blocks and having a longitudinally extending rib adapted to fit into the groove of the blocks, a securing band passing around the cylinder and the blocks and depending below the axle, and means for clamping the band to the axle to tightly secure the cylinder in the recesses of the blocks and to firmly secure said blocks in position, said cylinder having a slot formed in one end thereof, a bolt extending axially of the cylinder, a lever rotatably mounted on the bolt and projecting through the slot in the cylinder, connections leading from the lever for engaging a wagon thill, a spring wound on the bolt and having one of the ends secured to the lever for resisting forward movement of the lever, and means rotatably mounted on the other end of the bolt for engaging the opposite end of the spring and adjusting the tension of the spring.

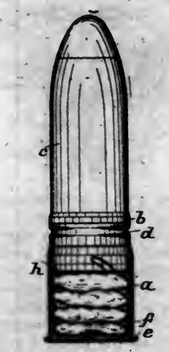
2. The combination with an axle and a shaft secured thereto; of means for resiliently supporting the shaft in a raised position, comprising bearing blocks having recessed upper and lower surfaces, said lower portions being disposed upon the axle, a casing mounted in the upper recesses and held from rotation therein, said casing being provided with recessed ends forming projections, a bolt provided with an enlarged head having notches engaged with certain of said projections at one end of the casing to hold the same from rotation, a coil spring disposed around said bolt and within the casing, a sleeve disposed on the screw threaded end of the bolt, said sleeve being formed with a notched collar, certain of said notches being engaged with the projections on the casing and with one end of the spring, a retaining member on the bolt, a lever rotatably mounted on the opposite end of the bolt and engaged with the opposite end of the spring and a flexible member secured to the lever.

3. A supporting member of the class described, comprising the combination with an axle and shafts; of an attaching member carried by the shafts, a casing, means for securing the casing against rotation upon the axle, a bolt disposed through the casing and held from rotation, a lever mounted upon the bolt and adapted for movement in a recessed portion of the casing, the opposite end of the casing being provided with beveled projections, a coil spring anchored to the lever and disposed within the casing, a collar carried by the opposite end of the the bolt, and provided with notches engaged with the projections, said spring being also anchored upon the collar and a securing member upon the bolt, said collar having a wrench engaging portion whereby it may be rotated over the projections to wind the spring, said lever being secured to the attaching member.

1,021,685. ARTILLERY-CARTRIDGE. BENEDIKT KNAEBEL, Dusseldorf, Germany. Filed Mar. 17, 1911. Serial No. 615,047. (Cl. 102—12.)

1. In combination with a shot, a casing composed of two parts, one part being secured to the shot, and the other part removably fitted within the first mentioned

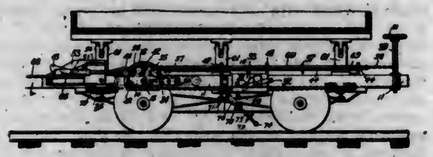
part and containing the propulsive charge, each of said parts having an outwardly projecting flange on its rear end, the flange of one part abutting against the flange of the other part to conjointly form extractor engaging means.



2. In combination with a shot, a casing composed of two parts, one part being designed to be secured directly to the shot and the other part removably fitted in the first mentioned part and designed to alone contain the propulsive charge, and means for preventing a relative rotation between the two parts.

3. In combination with a shot, a casing composed of two parts, one part being secured directly to the shot and the other part removably fitted within the former part and designed to contain the propulsive charge, both parts having parallel flanges, the flange of one part having segmental cut-outs, and the flange of the other part having projections fitting in such cut-outs.

1,021,686. DUMPING-CAR. VICTOR KOUNS, St. Louis, Mo. Filed June 15, 1911. Serial No. 633,275. (Cl. 105—190.)



1. A dumping car, comprising a wheel supported truck; a body pivotally mounted to rock on said truck; a draft member movably mounted on said truck; a plurality of flexible members operatively connecting said body and said draft member to depress the opposite sides of said body alternately; and means for arranging said flexible members to depress the side of said body as selected.

2. A dumping car, comprising a wheel supported truck; a body pivotally mounted to rock on said truck; a draft member movably mounted on said truck; an endless belt member longitudinally disposed and movably mounted on said truck; a plurality of flexible members arranged in pairs, both members of each pair being connected with said belt member at one side of the longitudinal center of said body and with said body at the opposite sides thereof; and means for selectively and alternately connecting the opposite sides of said belt member to said draft member.

3. A dumping car, comprising a wheel supported truck; a body pivotally mounted to rock on said truck; a draft member movably mounted on said truck; an endless belt member longitudinally disposed and movably mounted on said truck; an engaging block fixedly mounted on said draft member and extended laterally therefrom adjacent opposite sides of said belt member; a plurality of flexible members arranged in pairs, both members of each pair being connected with said belt member at one side of the longitudinal center of said body and with said body and at the opposite sides thereof; and locking devices mounted on said engaging block for selectively and alternately engaging the opposite sides of said belt member.

4. A dumping car, comprising a wheeled supporting truck; a body pivotally mounted to rock on said truck; a draft member movably mounted on said truck; a plurality of flexible members operatively connecting said body and said draft member to press the opposite sides of said body alternately; means for arranging said flexible members to depress the side of said body as selected; a pitman pivotally connected with said draft member; a rocking lock for said pitman; and means for rocking said lock at will to release said draft member.

5. A dumping car, comprising a wheel supported truck; a body pivotally mounted on said truck; a draft member movably mounted on said truck; a plurality of flexible members operatively connecting said body and said draft member to press the opposite sides of said body alternately; means for arranging said flexible members to depress the side of said body as selected; means for locking said draft member; and means for releasing said draft member at will.

[Claims 6 to 17 not printed in the Gazette.]

1,021,687. INSULATING-ROSETTE FOR ELECTRIC-LIGHT FIXTURES. NIELS LANG, Vancouver, British Columbia, Canada. Filed May 19, 1911. Serial No. 628,241. (Cl. 240—85.)



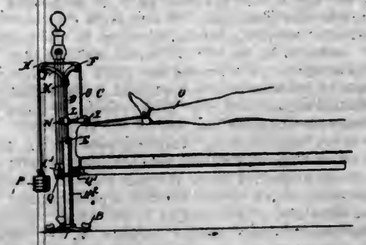
1. An insulating rosette for an electric lamp attachment comprising a body of insulating material centrally perforated to receive the lamp support said body being provided with terminal plates and binding screws for the attachment of the line service and lamp wires, and a conical guard of non-conducting fiber board bent around the central stem of the support and inclosing the terminal connections.

2. An insulating rosette for an electric lamp attachment comprising a central body of insulating material, said body having a central aperture, the under face of said body being coni-formed, downwardly inclined radial wings formed with said body, binding plates secured to said wings and projecting on to the coni-form face of said body, binding screws threaded into said plates, said body having recesses into which said binding screws project, said binding screws lying at a downward and outward inclination to the axial line of said body aperture.

3. In an electric light attachment a central disk-like body of insulating material, having its under face coni-formed and provided with radially projecting downwardly inclined wings, plates held on said coni-formed surface of said body portion, and having ears projected to lie under and against the respective wing surface, securing screws pass through said wings into said ears to retain said plates, and binding screws threaded into said plates and lying normal to the coni-formed surface, said body portion having recesses to receive the respective binding screws.

4. In an electric light attachment a central disk-like body of insulating material, having its under face coni-formed and provided with radially projecting downwardly inclined wings, plates held on said coni-formed surface of said body portion, and having ears projected to lie under and against the respective wing surfaces, securing screws pass through said wings into said ears to retain said plates, and binding screws threaded into said plates and lying normal to the coni-formed surface, said body portion having recesses to receive the respective binding screws, means for mounting said body portion on an electric light fixture, a conical guard of non-conducting material mounted on said fixture below and in close proximity to said body and beneath the same, and a canopy mounted on said fixture to inclose the aforesaid guard and body together with the body carried parts.

1,021,688. LEG-PULLING APPARATUS. LANDRY JOHN LE JEUNE, Welcome, La. Filed Aug. 31, 1911. Serial No. 646,968. (Cl. 128—52.)



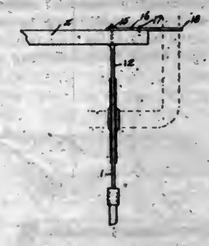
1. A leg pulling apparatus, comprising a stand, a vertically adjustable post carried by said stand, pulleys journaled at the upper end of the post, an arm adjustable on the post and carrying a pulley, a flexible connection passing over the said pulleys, a weight attached to one end of the said connection, said connection having its other end arranged for connection with the leg to be pulled, and an angularly adjustable arm supporting one of said upper pulleys whereby to permit of the adjustment of the pulley toward and away from the plane of the post and to vary the distance between the post and the suspended weight.

2. A leg pulling apparatus comprising a stand, a vertically adjustable post carried by said stand, an arm adjustable on said post and carrying a pulley, angularly divergent arms arranged at the upper end of the post and carrying pulleys, a flexible connection passing over the said pulleys and having one end arranged for attachment to the leg to be pulled, and a weight attached to the other end of said connection, one of said angular upper arms being adjustable whereby its pulley may be swung toward and away from the plane of the post and control the position of the suspended weight with respect to the post.

1,021,689. PIPE-SUPPORT. ARCHIBALD H. LYON, Fort George Wright, Wash. Filed June 1, 1911. Serial No. 630,661. (Cl. 135—14.)

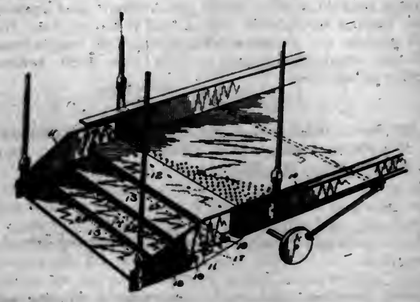
1. The combination with a tent frame structure including a ridge pole, of a strut engaged by the ridge pole adjacent one end, a pipe opening through the strut such opening having a horizontal axis, and a bracket secured to the extended end of the ridge pole having a pipe opening with a vertical axis, such axis falling beyond the lines of the tent structure.

2. The combination with a tent frame structure including a ridge pole, of a strut supporting the ridge pole, spaced from the end of such ridge pole, said strut being provided with a pipe opening the axis of which is horizontal, and a bracket carried by the extended end of the ridge pole provided with an opening, the axis of which is vertical and falls without the lines of the structure, and



means surrounding the opening in the strut for engagement with a tent fabric.

1,021,690. SEPARATING MECHANISM. FRED H. MASON and JAMES ALLEN, Scranton, Pa. Filed Nov. 15, 1911. Serial No. 660,681. (Cl. 83—54.)



1. In a separating mechanism, a plurality of plates arranged in horizontal planes and as spaced steps, and cylinders journaled to swing in the space between the steps.

2. In a separating mechanism, a plurality of substantially horizontal plates arranged in stepped relation with the rear of one step substantially beneath and spaced from the forward edge of the step above, and a cylinder journaled to swing in the space between such steps.

3. In a separating mechanism, a plurality of substantially horizontal plane steps spaced apart vertically, cylinders disposed and substantially filling the space between the steps, means to oscillate the structure, and means to impart swinging motion to the cylinders.

4. In a separating mechanism, side plates, plates disposed in substantially horizontal planes secured between the side plates and spaced apart with the rearward edge of one plate spaced substantially below the forward edge of the plate above, and cylinders mounted to swing upon axes adjacent the forward end of some of the steps and to substantially fill the space between the steps.

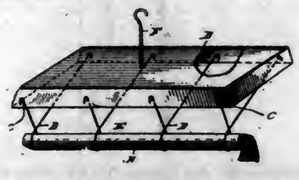
5. In a separating machine, stepped planes the rearward edge of one plane being below the forward edge of the plane above, and cylinders eccentrically journaled to swing between the steps to vary the space between the lower limit of the cylinder and the top of the step beneath.

[Claim 6 not printed in the Gazette.]

1,021,691. FRUIT-PROTECTOR. ALEXANDER G. McADIE, San Francisco, Cal. Filed Oct. 9, 1911. Serial No. 653,760. (Dedicated to the public.) (Cl. 126—59.5.)

1. A device of the kind described, comprising a shield, means for suspending said shield from a tree, a cartridge of combustible material adapted to radiate heat and means for suspending said cartridge beneath said shield.

2. A device of the kind described, comprising a shield, a hook arrangement for suspending said shield from a tree, a cartridge of combustible material adapted to radiate heat, said shield having a plurality of holes, a plurality of wire pieces engaging said holes and formed with loops in alinement with each other for suspending said cartridge beneath said shield.



3. A device of the kind described, comprising a shield formed in the shape of an inverted pan, a hook arrangement for suspending said shield from a tree, a cartridge of combustible material, said shield having a plurality of apertures, a plurality of wire pieces engaging said apertures and formed with loops in alinement with each other for suspending said cartridge beneath said shield, said cartridge adapted to burn slowly and transmit heat upwardly for heating said shield, said shield radiating heat from its surface for warming fruit during low temperatures, thereby preventing injury to fruit from frost, substantially as specified.

1,021,692. DRAWING INSTRUMENT. THOMAS HOMER MCANELLY, Findlay, Ohio. Filed May 8, 1911. Serial No. 625,803. (Cl. 73—150.)

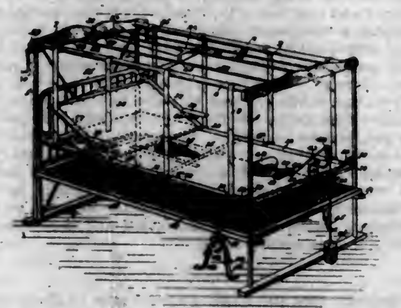


1. A drawing instrument, comprising a straight edge having a central section, and end sections, one of said end sections being hinged to one end of the central section to fold thereon, the other end section being pivoted to the opposite end of the central section in superposed relation, said central section being of a length at least that of the combined lengths of the end sections, whereby the free ends of the latter may be adjacent one another when both are moved to a folded position on the central section, and a pencil holder slidably mounted on the swinging section and having an extending free end adapted to overlap a portion of the free end of the hinged end section in the folded position.

2. A drawing instrument comprising a straight edge having a central section, and end sections, all having graduations along at least one edge, one of said end sections being hinged to one end of the central section to fold thereon, the other end section being pivoted to the opposite end of the central section in superposed relation, said central section being of a length at least that of the combined lengths of the end sections, whereby the free ends of the latter may be adjacent one another when both are moved to a folded position on the central section, and a pencil holder slidably mounted on the swinging section and having an extending ring, for the insertion of a pencil, adapted to overlap a portion of the free end of the hinged end section in the folded position.

3. A drawing instrument, comprising a straight edge made in sections, one end section having a pivotal connection with the adjacent section to permit of swinging the end section laterally, the sections having graduations representing linear measurement, and a pencil holder mounted to slide on the end section and having teeth along one edge spaced apart according to the divisions of the said graduations, the said pencil holder being provided at the outer end with an integral ring, and near the inner end with a pivoted ring, the said rings being for the insertion of a pencil for drawing circular lines of different radii.

1,021,693. APPARATUS FOR ADAPTING BEDS OF THE ORDINARY TYPE FOR THE USE OF INVALIDS. ROBERT M. MCGARY, Mechanicsburg, Pa. Filed June 21, 1910. Serial No. 568,147. (Cl. 5—44.)



1. In an apparatus for adapting beds of the ordinary type for the use of invalids, pairs of standards, transverse members connecting the standards respectively, longitudinally extending rollers journaled in the members, a shaft mounted in one of the transverse members, means for rotating the rollers from the shaft, a stretcher, belts secured to the stretcher and adapted to be wound around the rollers respectively, and guide wheels journaled to the stretcher for engaging one pair of the standards.

2. In an apparatus for adapting beds of the ordinary type for the use of invalids, the combination with a bed, of a frame projecting above the bed, a stretcher supported in the frame above the bed bottom, a back member hinged to the stretcher, a yoke carried by the frame intermediate of the ends thereof, pulleys mounted in the yoke, and cords secured to the back member and passed over the said pulleys.

3. In an apparatus for adapting beds of the ordinary type for the use of invalids, the combination with a bed, of a frame projecting above the bed, a stretcher supported in the frame above the bed bottom, a back member hinged to the stretcher, pulleys carried by the frame at about the center thereof, a drum also carried by the frame at one end, and cords each having one end secured to the back member and then passed over a pulley and its other end secured to the drum.

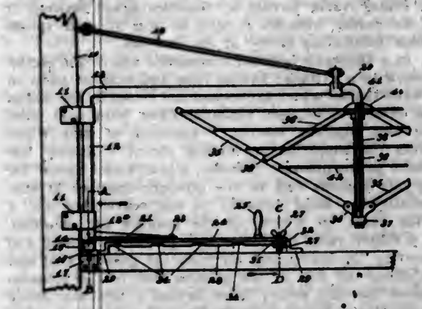
4. In an apparatus for adapting beds of the ordinary type for use of invalids, a stretcher having openings in its side members and supported in the frame, a back member hinged to the stretcher and having openings in its sides, arm rests hinged to the back member, and toothed arms hinged to the arm rests and engaging the openings of the back member to hold said rests in position, the said toothed arms projecting through the openings of the stretcher when the back member is not in use.

5. In an apparatus for adapting beds of the ordinary type for the use of invalids, in combination with a bed having an end member and side members, a mattress supported thereon, a support for one end of the side members of the bed, standards, two at the head and two at the foot of the bed, transverse members, one connecting the standards at the head of the bed and the other the standards at the foot, longitudinally extending rollers journaled in the transverse members, a stretcher having an opening disposed over the mattress, straps secured to the stretcher and adapted to be wound around the rollers, a shaft journaled on one of the transverse members, and gearing connecting the shaft with the rollers.

[Claim 6 not printed in the Gazette.]

1,021,694. CLOTHES-DRIER. LUMAN A. MCGEARY, Worcester, Mass., assignor to Frederick E. Walden, Worcester, Mass. Filed Apr. 7, 1911. Serial No. 619,525. (Cl. 68—34.)

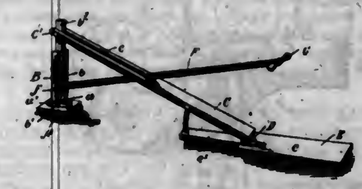
1. In a clothes drier, a guide bar having a slot therein and recesses, a block slidable along the guide bar, means for holding the block in the recesses in the guide bar, a lever connected to the block, a crane, a reel on the crane, and means for connecting the crane to the lever to take motion therefrom.



2. In a clothes drier, a lever, a crane to which the lever is connected, a guide bar having a slot therein, a block having a lug slidable in the guide slot, means connecting the lever to the block and for holding the block in engagement with the guide bar, a reel on the crane, and a brace for supporting the crane near its outer end.

3. In a clothes drier, a crane having a vertically disposed portion, and a horizontal portion, brackets supporting said clothes drier, a guide bar having a longitudinal slot, a horizontal arm, a collar provided on one end of said arm adapted to embrace the said vertically disposed portion of the crane, a horizontally adjustable lever having one of its ends pivotally connected to one end of the said arm, and having its opposite end slidable in the longitudinally disposed slot, means for holding the said lever in its adjusted positions, and a handle on said lever for operating said crane.

1,021,695. APPARATUS FOR SCRUBBING AND POLISHING FLOORS. FESTUS AONEW MCKAY, parish of St. Andrews, Jamaica. Filed Aug. 2, 1911. Serial No. 642,000. (Cl. 15—14.)

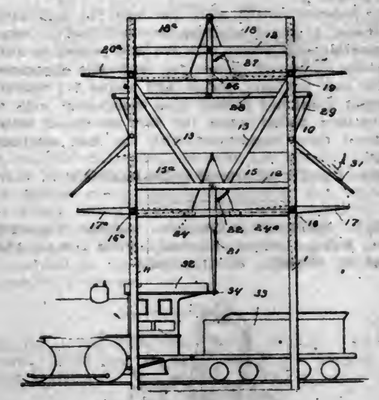


1. An apparatus for scrubbing and polishing floors, comprising a suitable brush, a carrier to which said brush is pivoted, a pressure lever, a pivotal connection between said pressure lever, and brush, a platform, the pressure lever hinged to the platform for vertical movement with relation to the platform, means for limiting the upward movement of the lever with relation to the platform and means for reciprocating the brush carrier.

2. An apparatus for scrubbing and polishing floors, comprising a slotted brush carrier, a brush pivotally mounted within the arms of the slotted carrier, a slotted pressure lever receiving the upper end of the brush carrier and to which said brush carrier is pivotally connected, a platform to which the pressure lever is hinged and a lever pivoted to the brush carrier and extending through the slot of the pressure lever and provided with a handle bar.

3. An apparatus for scrubbing and polishing floors, comprising a slotted brush carrier, a brush pivoted within the arms of the carrier, a slotted pressure lever receiving the upper ends of the brush carrier, and to which said brush carrier is pivotally connected, a platform to which the pressure lever is hinged, means to limit the upward movement of the pressure lever, means for reciprocating the brush carrier, and means upon the under surface of the platform to raise it above the floor at one end.

1,021,696. LOADING DEVICE. GEORGE E. MENKE, Hebron, Nebr., assignor of one-half to John J. Detmers, Hebron, Nebr. Filed July 29, 1911. Serial No. 641,198. (Cl. 214—1.)



1. In a device of the class described the combination of a frame, a pocket mounted on the frame, a series of plates revolubly mounted on the said frame and adapted to constitute bottoms for the said pocket, an auxiliary pocket mounted on the frame, a series of plates revolubly mounted on the said frame and adapted to constitute bottoms for the said auxiliary pocket, an operating lever for releasably retaining one of the first mentioned plates in engagement with the first mentioned pocket, an auxiliary operating lever mounted on the frame and adapted to retain one of the second mentioned plates in engagement with the said auxiliary pocket and a connection between the first mentioned plates and the said auxiliary operating lever whereby when the first mentioned operating lever is actuated to release one of the first mentioned plates from engagement with the first mentioned pocket, the auxiliary operating lever will be actuated to release one of the second mentioned plates from engagement with the said auxiliary pocket.

2. In a device of the class described a frame, a pocket mounted on the frame, a series of integral plates revolubly mounted on the frame and adapted to constitute bottoms for the said pockets, an operating lever for retaining one of the said plates in engagement with the said pocket, an auxiliary pocket mounted on the frame, a series of integral plates revolubly mounted on the frame and adapted to constitute bottoms for the said auxiliary pocket and means for operating the bottoms of the said auxiliary pocket when the said operating lever is actuated to release one of the plates for the first mentioned pocket from engagement therewith.

3. In a device of the class described a frame, a pocket mounted on the said frame, a series of integral plates mounted on the frame and adapted to constitute bottoms for the said pocket, an auxiliary pocket mounted on the frame, a series of integral plates revolubly mounted on the frame and adapted to constitute bottoms for the said auxiliary pocket and means for operating the bottoms on the said auxiliary pocket when the bottoms of the first mentioned pocket are operated.

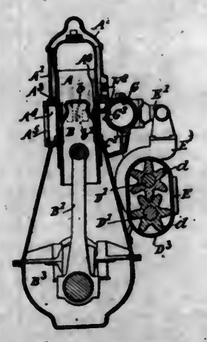
4. In a device of the class described the combination of a frame, a pocket mounted on the frame, a bottom for removable engagement with the said pocket, an auxiliary frame, a second bottom for removable engagement with the said auxiliary frame, an operating lever mounted

on the frame and engaging the first mentioned bottom for retaining the first mentioned bottom in engagement with the first mentioned pocket, an auxiliary operating lever mounted on the frame and adapted to engage the second mentioned bottom for retaining the same in engagement with the auxiliary pocket and a connection between the first mentioned bottom and the said auxiliary operating lever for releasing the second mentioned bottom from engagement with the auxiliary pocket when the first mentioned bottom is disengaged from the first mentioned pocket.

5. In a device of the class described the combination of a frame, a pocket mounted on the frame, a bottom for removable engagement with the said pocket, an auxiliary pocket, a second bottom for removable engagement with the said auxiliary pocket, and means for removing the second mentioned bottom from engagement with the said auxiliary pocket when the first mentioned bottom is released from engagement with the first mentioned pocket.

[Claims 6 and 7 not printed in the Gazette.]

1,021,697. EXPLOSION-ENGINE. GEORGE FREDERICK MORT, Ealing, London, England. Filed Oct. 1, 1910. Serial No. 584,887. (Cl. 123—69.)



1. In a two-cycle internal combustion engine the combination with a cylinder having inlet and exhaust ports in the walls thereof which are opened and closed by the piston, of means for supplying scavenging air at relatively low pressure to the cylinder, means for supplying gaseous fuel to the cylinder at substantially the same pressure as the scavenging air and through the same inlet ports and a rotary valve separating the scavenging air from the gaseous fuel and controlling the flow of gaseous fuel to the inlet ports; the said rotary valve having a clearance space between it and its casing whereby it may be run at high speeds without lubrication except at the bearings.

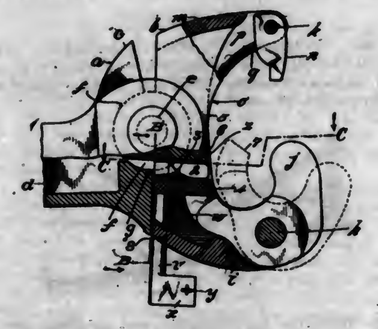
2. In a two-cycle internal combustion engine the combination with a cylinder having inlet and exhaust ports in the walls thereof which are opened and closed by the piston, a pressure chamber communicating with said inlet ports and adjacent thereto, means for supplying scavenging air at relatively low pressure to the pressure chamber, means for supplying gaseous fuel to the pressure chamber at substantially the same pressure as the scavenging air, and a rotary valve located in said pressure chamber and separating the scavenging air from the gaseous fuel and controlling the flow of the gaseous fuel to the pressure chamber; the said rotary valve having a clearance space between it and its casing whereby it may be run at high speeds without lubrication except at the bearings.

3. In a two-cycle internal combustion engine the combination with a cylinder having inlet and exhaust ports in the walls thereof which are opened and closed by the piston of a plurality of gear wheel blowers for supplying scavenging air at relatively low pressure to the cylinder, a gear wheel blower for supplying gaseous fuel at substantially the same pressure as the scavenging air and through the same inlet ports, a driving shaft on which all the blowers are mounted, and a rotary valve separating the scavenging air from the gaseous fuel and controlling the flow of gaseous fuel to the inlet ports; the said rotary valve having a clearance space between it and its casing whereby it may be run at high speeds without lubrication except at the bearings.

4. In a two-cycle internal combustion engine the combination with a cylinder having inlet and exhaust ports in the walls thereof which are opened and closed by the piston of a pressure chamber communicating with said inlet ports and adjacent thereto, a plurality of gear wheel blowers for supplying scavenging air at relatively low pressure to the pressure chamber, a gear wheel blower for supplying gaseous fuel to the pressure chamber at substantially the same pressure as the scavenging air, a driving shaft on which all the blowers are mounted, and a rotary valve located in said pressure chamber and separating the scavenging air from the gaseous fuel and controlling the flow of the gaseous fuel to the pressure chamber the said rotary valve having a clearance space between it and its casing whereby it may be run at high speeds without lubrication except at the bearings.

5. In a two-cycle internal combustion engine the combination with a cylinder having inlet and exhaust ports in the walls thereof which are opened and closed by the piston of two air blowers for supplying scavenging air at relatively low pressure to the cylinder, a gas blower for supplying gaseous fuel to the cylinder at substantially the same pressure as the scavenging air, said gas blower being arranged between the air blowers whereby leakage of the gaseous fuel is prevented, and a valve separating the scavenging air from the gaseous fuel and controlling the flow of gaseous fuel to the cylinder.

1,021,698. CAR-COUPLING. JAMES V. MUNGER, Portland, N. Y., assignor to George H. Dunham, Warren, Pa. Filed July 27, 1910. Serial No. 574,052. (Cl. 213—12.)



1. In a car-coupler, the combination of a drawbar member; a coupling member detachably connected therewith; a knuckle mounted on said coupling member; a stop device for said knuckle; and a shaft on which said stop device is mounted; one of said members being formed with a recess in which said shaft is rotatably mounted and the latter being formed with a reduced portion adapted to pass through the opening between the walls of said recess to permit the ready removal of said shaft from said recess, when said members are disconnected from each other.

2. In a car-coupler, the combination of a coupling member; a knuckle mounted thereon; a stop device for the latter; and a shaft on which said stop device is mounted; said member being formed with a recess in which said shaft is mounted and said shaft being formed with a part shaped to pass readily through the opening between the walls of said recess in a direction other than lengthwise of said shaft.

3. In a car-coupler, the combination of a drawbar member; a coupling member connected therewith detachably; a knuckle mounted on said coupling member; a stop device for said knuckle; and a shaft on which said stop device is mounted; said coupling member being formed with a stop which prevents the lateral displacement of said stop device and the lengthwise displacement of its shaft and with a recess in which the latter is mounted and from which it is readily removable, after said members are disconnected from each other.

4. In a car-coupler, the combination of a draw-bar member; a coupling member detachably connected therewith; a knuckle mounted on said coupling member; a locking device for said knuckle; and a shaft on which said locking device is mounted and which extends transversely of the rear face of said coupling member and is opposed to the front face of said drawbar member; said coupling member being formed in its rear face with a recess in which said shaft is mounted and from which the same is readily removable, after said members are disconnected from each other.

5. In a car-coupler, the combination of a drawbar member; a coupling member detachably connected therewith; a knuckle mounted on said coupling member; a lock-plate for said knuckle; and a shaft which carries said lock-plate; said coupling member being formed with a stop which engages said lock-plate and prevents thereby lengthwise displacement of said shaft; one of said members being formed with a recess in which said shaft is mounted said lock-plate being adapted to be thrown away from said stop and thereby render said shaft displaceable lengthwise and readily removable from said recess, after said members are disconnected from each other.

[Claims 6 to 8 not printed in the Gazette.]

1,021,699. FISH-BAIT. JOHN NORDLUND, Eureka, Cal. Filed Nov. 2, 1911. Serial No. 658,123. (Cl. 43—31.)



A bait of the class described comprising a pair of sections connected together, oppositely movable hooks pivotally mounted between the sections and adapted to be normally retracted within the body, swinging plates pivoted between the sections and having outturned bifurcated ears engaging said hooks, and a slidable rod mounted between the sections and engaged with the plates for moving the hooks outwardly on pulling upon the rod.

1,021,700. PROCESS OF INCREASING THE RAISING POWER OF DRIED YEAST. PETER DIEDRICH HINRICH OHLMAYER, Sande, Germany. Filed Aug. 24, 1911. Serial No. 645,828. (Cl. 99—10.)

1. The herein described process of increasing the raising power of dried yeast, which consists in subjecting such yeast to the action of aqueous vapor for sufficient time to cause re-hydration of the dried yeast organisms.

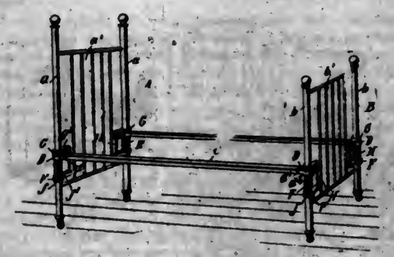
2. The herein described process of increasing the raising power of dried yeast, which consists in exposing such yeast to the action of moist air for sufficient time to cause re-hydration of the dried yeast organisms.

3. The herein described process of increasing the raising power of dried yeast, which consists in exposing such yeast in thin layers to the action of moist atmospheric air for sufficient time to cause re-hydration of the dried yeast organisms.

4. The herein described process of increasing the raising power of dried yeast, which consists in exposing such yeast to the action of air artificially saturated with moisture for sufficient time to cause re-hydration of the dried yeast organisms.

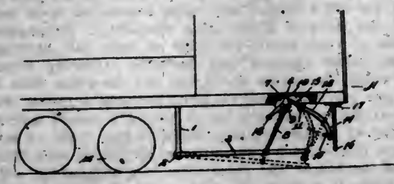
5. The herein described process of increasing the raising power of dried yeast, which consists in exposing such yeast in thin layers to the action of air artificially saturated with moisture for sufficient time to cause re-hydration of the dried yeast organisms.

1,021,701. BEDSTEAD. JOHN PRENDERGAST, New York, N. Y. Filed July 12, 1911. Serial No. 638,135. (Cl. 5—4.)



A bedstead comprising head and foot boards embodying vertical standards, sliding collars mounted on said standards, springs surrounding said standards and supporting said collars, collars fixedly secured to the standards above and below the sliding collars, radial arms carried by said fixed collars, a rod supported by said arms, and a radial arm carried by the sliding collar having a sliding connection with said rod.

1,021,702. CAR-FENDER. OTHO PRINCE, Cambridge, Ohio. Filed Apr. 15, 1911. Serial No. 621,294. (Cl. 105—130.)

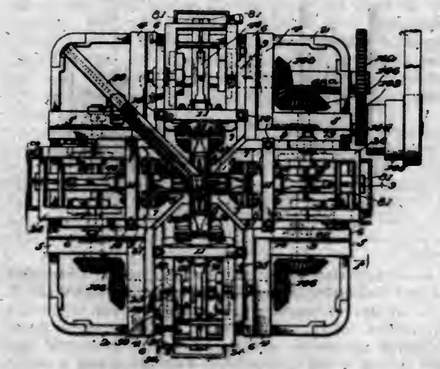


1. The combination with a car, of rigid members depending from the car beneath the platform thereof, a fender frame pivoted to said members, cam wheels rotatably mounted on the car, a connection between each of the cam wheels and the pivoted frame, a swinging gate pivoted beneath the platform of the car forward of the fender frame, and tripping members mounted beneath the platform of the car between the gate and the cam wheels, each tripping member being adapted to engage with a shoulder of the adjacent cam wheel at one end, and with the swinging gate at the opposite end, said swinging gate in its movement inward releasing the members from engagement with the cam wheels to effect the tripping of the fender.

2. The combination with a car, of a fender frame pivoted thereto, a shaft journaled in the frame of the car, cam wheels mounted upon said shaft, connections between said cam wheels and the pivoted frame, tripping members for said cam wheels, each comprising a plurality of arms, one of said arms being adapted to abut against its corresponding cam wheel and the other of said arms extending downward across the front of the pivoted frame, and a swinging member at the front of the car adapted to effect the tripping of the fender.

3. The combination with a car, of a pivoted fender frame located beneath the platform thereof, a shaft journaled in the sills of the car, a plurality of cam wheels carried by said shaft, rods connecting said cam wheels with the pivoted fender frame, trips for said cam wheels, each of said trips comprising a pivotally supported member having two arms, one of said arms engaging with the adjacent cam wheel, while the other of said arms extends downward and across the front of the pivoted fender, and a swinging gate adapted to contact with the latter arm for tripping the same to drop the fender.

1,021,703. BOX-MACHINE. MICHAEL QUINLAN, Moncton, Vt., assignor to New Haven Mills Mfg. Co., New Haven Mills, Vt. Filed Apr. 11, 1911. Serial No. 620,491. (Cl. 144—2.)



1. In a machine for assembling boxes, means for supporting a series of horizontally disposed boards in superposed relation, a board pressing slide, means for feeding said boards one at a time from the board support into position in advance of said pressing slide, means for raising the board to a vertical position in front of the pressing slide, and means for reciprocating said pressing slide.

2. A box machine including four pairs of independent slides, the slides of each pair being superposed upon each other, the pairs of slides being disposed in rectangular relation to each other, one slide of each pair carrying vertical board supports and inwardly extending tracks upon which the boards are moved and the other slide of each pair carrying board engaging pressers, a former disposed at the end of each track, upwardly curved springs disposed at the end of each track and in front of said formers, means for independently reciprocating said slides to feed the boards and press them into engagement with each other to form a box, and means for releasing the formers from engagement with the box so formed.

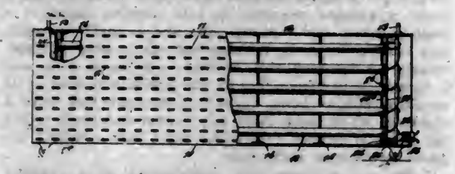
3. A box machine including four pairs of superposed independently movable slides, the pairs of slides being disposed in rectangular relation, one slide of each pair carrying vertically disposed board guides, and the other slide of each pair carrying board engaging pressers, reciprocating board feeding devices, one for each pair of slides and engaging the boards supported in the board guides to move them into a position in front of the pressers, means for turning the boards into a vertical position as they are shifted in front of the pressers, formers located in front of each pair of slides, stops on the formers for limiting the upward movement of the boards, means for independently reciprocating said slides, and pushers, to feed the boards and press them into engagement with each other to form a box, means for withdrawing said pressers from engagement with the boards, and means for releasing the formers from engagement with the box so formed.

4. A box forming machine including in its organization a pair of superposed slides, vertical board guides mounted on one of said slides, pressing members hingedly mounted upon the other slide in advance of the vertical guides, tracks mounted upon the first named slide and extending beneath the pressing members, means for pushing the boards from the board guides and beneath the hinged pressing members, and means located in advance of the pressing members for tilting the board in a vertical position.

5. A box forming machine including in its organization a pair of superposed slides, vertical board guides mounted on one of said slides, pressing members hingedly mounted on the other slide in advance of the vertical guides, tracks mounted upon the first named slide and extending beneath the pressing members, means for pushing a board from the board guides and beneath the hinged pressing members, and an upwardly curved spring located in advance of the pressing members for tilting the board to a vertical position.

[Claims 6 to 41 not printed in the Gazette.]

1,021,704. ELECTRIC DRIER. THOMAS B. RAY and WILLIAM LAFORD, New York, N. Y. Filed June 24, 1911. Serial No. 635,145. (Cl. 219—19.)



1. A device of the character described, comprising a substantially rectangular casing having openings therethrough, a plurality of partitions within the casing, heads located at each end of the casing, wheels for supporting said casing to adapt the same to be movable, said casing having handles, a plurality of heating elements arranged in parallel relation within said casing and supported in said heads and partitions, and electric connections, whereby said heating elements may be heated.

2. A device of the character described, comprising a casing having openings therethrough for the passage of heat, a plurality of partitions arranged within the casing, heads located in the ends of said casing, a plurality of heating elements supported in the heads and partitions, protecting plates arranged adjacent to the heads, and electric connections for the heating elements.

3. A device of the character described, comprising a casing having openings therethrough for the passage of heat, a plurality of heating elements including resistance coils one for each element, means for supporting said elements within the casing, bus bars supported at one end of the casing, electric connections between the bus bars and the resistance coils, said coils being arranged in sets and each set connected in series to said bars, and electrical connections for the heating elements.

4. A device of the character described, comprising a casing, a plurality of heating elements including resistance coils one for each element, means for supporting said elements within the casing, bars supported at one end of the casing, electric connections between the bars and the resistance coils, said coils being arranged in sets and each set connected in series to said bars, and means whereby the device may be connected to a source of electric supply.

1,021,705. PROCESS OF COATING CONFECTIONERY. MACPHERSON ROBERTSON, Fitzroy, Victoria, Australia. Filed Sept. 22, 1911. Serial No. 650,808. (Cl. 127—4.)

1. The process of manufacturing confectionery, which consists in supplying a suitable core, in applying granulated sugar to the exterior of said core, and in then subjecting the core so coated to the action of hot steam for a brief period, substantially as described.

2. The process of manufacturing confections, which consists in first providing a suitable core, second rolling said core in granulated sugar, and in third treating said core so coated with live steam, substantially as described.

1,021,706. FIREARM. CHARLES HENRY AUGUSTUS FREDERICK LOCKHART ROSS, Balnagown Castle, county of Ross, Scotland. Filed July 27, 1911. Serial No. 640,942; (Cl. 42—16.)

1. In a fire arm the combination of a breech bolt provided with an extension; a firing pin carried by said bolt; a shoulder carried by said extension; a detent adapted to engage said shoulder; a firing means independent of said pin carried by said extension; a shoulder carried by said firing means; a sear coacting with said last mentioned shoulder; a trigger controlling said sear; and means independent of said trigger for moving said detent out of engagement with said shoulder, substantially as described.



2. In a fire arm the combination of a breech bolt provided with an extension; a firing pin carried by said bolt; a shoulder carried by said extension; a detent adapted to engage said shoulder; a firing means independent of said pin carried by said extension; a shoulder carried by said firing means; a hand operated lever controlling said detent; a sear coacting with said last mentioned shoulder; and a trigger controlling said sear, substantially as described.

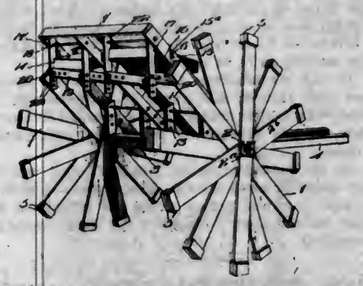
3. In a fire arm the combination of a breech bolt provided with an extension; a firing pin carried by said bolt; a shoulder carried by said extension; a detent provided with a finger piece and adapted to engage said shoulder; a firing means independent of said pin carried by said extension; a shoulder carried by said firing means; a spring controlled lever coacting with said detent and provided with a sear coacting with said last mentioned shoulder; and a trigger independent of said lever for controlling said gear, substantially as described.

4. In a fire arm the combination of a breech bolt provided with a slot and having a hollow slotted extension; an ejector located in the slot of the breech bolt; a firing plunger located in the hollow extension and having a sear lug provided with a shoulder extending through the slot of said extension; a detent adapted to retard the rearward movement of said bolt; a sear coacting with said shoulder; and a trigger pivoted to said sear; substantially as described.

5. In a fire arm the combination of a breech bolt provided with a slot and having a hollow slotted extension; an ejector located in the slot of the breech bolt; a firing plunger located in the hollow extension and having a sear lug provided with a shoulder extending through the slot of said extension; a detent adapted to retard the rearward movement of said bolt; a sear pivoted concentrically with said detent coacting with said shoulder; and a spring controlled trigger pivoted to said sear; substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

1,021,707. POISON-DISTRIBUTING APPARATUS. LEVIN V. ROSSER, Tuscaloosa, Ala. Filed Oct. 26, 1911. Serial No. 656,943. (Cl. 43—14.)

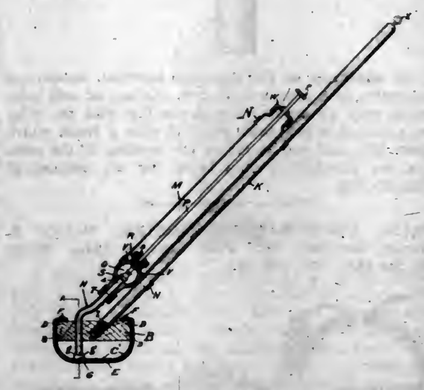


1. In a poison distributing apparatus the combination of a vehicle having rimless wheels; frames swingingly mounted on the vehicle; means for holding said frames in different adjusted positions; poison holding receptacles balanced to rock on said frames through the travel of the vehicle; and arms on the frames mounted to be adjusted parallel with said receptacles for engaging with and jarring the rocking receptacles, substantially as described.

2. In a poison distributing apparatus the combination of a vehicle having rimless wheels; frames swingingly mounted on the vehicle; poison holding receptacles balanced to rock on said frames, said receptacles having sifting bottoms; arms dependingly mounted on said frames adjacent the receptacles; and cross arms adjustably secured to said depending arms and said frames and adapted to be engaged by and jar the rocking receptacles, substantially as described.

3. In a poison distributing apparatus the combination of a vehicle; frames swingingly mounted on the vehicle; means for holding said frames in different adjusted positions; poison holding receptacles balanced to rock on said frames through the travel of the vehicle; and arms on the frames mounted to be adjusted parallel with said receptacles for engaging with and jarring the rocking receptacles, substantially as described.

1,021,708. FLOOR-OILER. LEWIS G. SCHAENEMAN, Albany, N. Y. Filed Oct. 24, 1910. Serial No. 588,602. (Cl. 91—39.)



1. The combination of a metallic receptacle; a wooden block secured therein; a cloth extending around the bottom and sides of the receptacle and secured to said block; a pipe connected with a rib extending along the bottom of the receptacle; a handle connected with said block; a tube secured to said handle communicating with said pipe; a means in said tube for regulating the discharge of its contents into said pipe.

2. The combination of a metallic receptacle; a wooden block secured therein; a cloth extending around the bottom and sides of the receptacle and secured to said block; a handle secured to said block adapted to be operated and moved with the receptacle backward and forward along the floor; a pipe extending to the bottom of said receptacle; a tube, provided at one end with a valve chamber communicating with the tube proper by means of contracted openings, secured to said handle; a valve rod extending through the cap at one end of said tube and provided with a thread engaging a thread in the wall of said valve chamber; a valve seat at the end of said rod in said valve chamber; a screw cap on the end of said tube, all substantially as described.

1,021,709. COLLAPSIBLE TUBE. HERBERT W. SNOW, Somerville, Mass. Filed Mar. 30, 1910. Serial No. 552,465. (Cl. 91—67.3.)

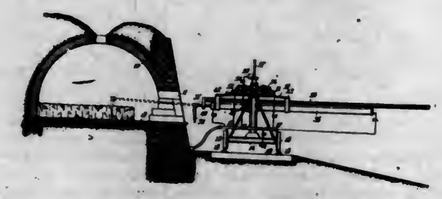
1. A collapsible tube which has a projection or supplementary reservoir at one end shaped like a cup, and an opening extending from the collapsible section to said

reservoir for the purpose of keeping the reservoir supplied by pressure on the collapsible section with part of said section's contents in such proportions as to thoroughly surround the brush with the liquefied mass; a movable cap to cover the end of the reservoir having a handle and brush attached, said cap to slide on easily over the smooth edge of the reservoir, thus allowing said brush to be placed into the reservoir easily and quickly wholly immersed in the reservoir's contents at all times when not being used, the reservoir being large enough to allow any substance within to be stirred up with the brush if necessary before using it.



2. An apparatus of the character specified, comprising a collapsible tube, a neck formed on one end of said tube, provided with an opening communicating with the tube, a cup attached to said neck provided with a brush which projects into said cup as far as the opening to the tube, and a cap attached to said brush for the purpose of closing the cup.

1,021,710. COKE-DRAWING MACHINE. DANIEL B. STAUFT, Scottdale, Pa. Filed Feb. 18, 1910. Serial No. 544,664. (Cl. 202—5.)



1. A coke drawing machine having a cylinder, a piston therein, a piston rod connected with said piston, a scraper carried by said piston rod, and a beam movable freely lengthwise of the cylinder for supporting said scraper and the end of the piston rod adjacent thereto, said piston rod being rotatable about a longitudinal axis at its connection with said beam.

2. A coke drawing machine having a cylinder, a piston therein, a piston rod connected to said piston, a scraper carried by said piston rod, and a beam movable lengthwise of the cylinder for supporting said scraper and the end of the piston rod adjacent thereto, said piston rod and said beam being constrained to move together longitudinally, said piston rod being rotatable about its longitudinal axis.

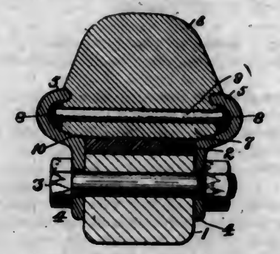
3. A coke drawing machine having a cylinder, a piston mounted thereon, a scraper, a piston rod connecting said piston and scraper, a beam slidably supported above said cylinder and movable lengthwise thereof, and means connecting said beam and one end of said piston rod, said means permitting said piston rod to be rotated.

4. A coke drawing machine having a frame, a member extending transversely thereof, a longitudinally movable piston rod extending substantially at right angles to said transverse member and supported thereby, an arm extending upwardly from said member, and horizontally movable means in engagement with the outer end of said arm for swinging the latter to oscillate said member.

5. A coke drawing machine having a main frame, an open rectangular frame disposed therein and movable vertically in respect thereto, a scraper, a rod for operating said scraper and extending through said second-mentioned frame and substantially at right angles thereto, and means for tilting said rod within said second-mentioned frame about a horizontal axis and also about a vertical axis.

[Claims 6 to 14 not printed in the Gazette.]

1,021,711. VEHICLE WHEEL-TIRE. BENJAMIN C. SWINEHART, Youngstown, Ohio. Filed Sept. 9, 1911. Serial No. 648,548. (Cl. 152—1.)



An elastic tire having a tread and base of relatively soft rubber, bodies of hard rubber incorporated in and forming parts of the lateral portions of said base, said bodies of hard rubber being completely separated from each other by the interposed body of soft rubber, and a series of bars arranged in spaced relation and extending transversely of the base of the tire and with their ends terminating in and inclosed by the hard rubber of said bodies, whereby said ends are held against movement during the movement or the distortion of the interposed soft rubber portion of the base through which said bars extend.

1,021,712. MANUFACTURE OF TEXTILE FABRICS. JOB WILKINSON, Bradford, England, assignor to The Bradford Dyers' Association, Limited, Bradford, England. Filed Mar. 23, 1911. Serial No. 616,444. (Cl. 139—9.)

1. In the manufacture of textile fabrics, weaving together weft threads and yarns of artificial silk threads twisted with threads of animal fiber to form the warp with the required elasticity, and afterward destroying the animal fiber leaving warp threads of artificial silk only, substantially as described.

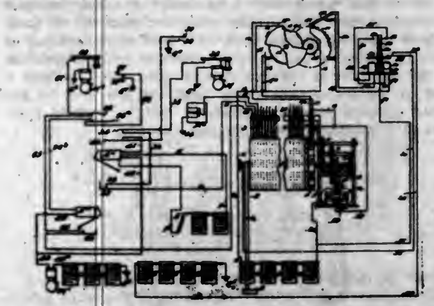
2. In the manufacture of textile fabrics, weaving together yarns of artificial silk threads twisted with others of animal fiber to give the required elasticity in the warp and afterward destroying the animal fiber throughout the fabric, substantially as described.

3. In the manufacture of textile fabrics, weaving together weft threads and yarns of artificial silk threads twisted with woolen threads and afterward destroying the woolen threads throughout the fabric, substantially as described.

4. In the manufacture of textile fabrics, weaving together yarns of artificial silk threads twisted with others of animal fiber and cotton yarns and afterward destroying the animal fiber throughout the fabric, substantially as described.

1,021,713. ELECTRIC CALL SYSTEM. JAMES W. WILSON, Rome, and WILLIAM H. STILL, Utica, N. Y.; said Still assignor to said Wilson. Filed Mar. 28, 1907. Serial No. 365,176. (Cl. 161—4.)

1. In a system of the character described, a motor, a clock and an electric circuit, a call cylinder, means connected with the clock to close the circuit to move the motor and cylinder at periodic intervals and means connected with the motor to govern the extent of the operation of the cylinder, substantially as described.



2. In a system of the character described, a clock, a motor, an electric circuit having a plurality of switches at the clock and a plurality of switches at the motor, means connected with the clock for closing the adjacent switches alternately for a given period of time and means connected with the motor for opening the circuit from either clock switch independent of the action of the clock, substantially as described.

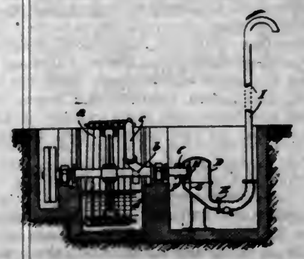
3. In a system of the character described, an electric circuit from a clock to a motor, a second circuit from the clock to the motor adapted at each end to be switched into the main circuit, a clock, mechanism therewith adapted to close a switch in the main circuit and alternately therewith and periodically to switch the second wire into the circuit, a motor, means thereon to close a switch in the main circuit and alternately therewith and periodically to switch the second wire into the circuit, and said switches, substantially as described.

4. In a system of the character described, a clock mechanism, a motor, a circuit connected with each, means in the clock mechanism for closing one of a pair of switches alternately, means in the motor mechanism for opening the circuit while closed at the clock mechanism, substantially as shown.

5. In a system of the character described, a call cylinder, a clock mechanism, a circuit therewith for turning the cylinder periodically in the work of the clock and means for interrupting the circuit to determine the distance of the cylinder revolution, said means comprising a pair of spring switches alternately closed and opened by the revolution of the cylinder, substantially as described.

[Claims 6 to 29 not printed in the Gazette.]

1,021,714. AIR-CHAMBERED STUFFING-BOX FOR SPIRAL PUMPS OR COILS. GIUSEPPE BRAMANTI-MATTEI and PAOLO BELTRAMO, Seravezza, Italy. Filed Apr. 21, 1911. Serial No. 622,484. (Cl. 103—43.)



1. In a pump of the character described, in combination, a rotatable tube, a coil supported thereby and rotatable therewith, one end of said coil being free and the other end of said coil communicating with said tube, a rising tube operatively communicating with said rotatable tube, and an air chamber interposed between said tubes.

2. In a pump of the character described, in combination, a rotatable tube, a coil supported thereby and rotatable therewith, one end of said coil being free and the other end of said coil communicating with said tube, a rising tube operatively communicating with said rotatable tube, and a casing interposed between said tubes, said rotatable tube communicating with said casing at a point above that which said rising tube communicates with said casing.

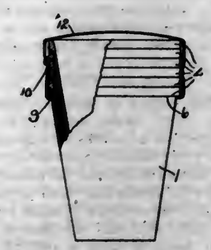
3. In a pump of the character described, in combination, a rotatable tube, a coil supported thereby and rotatable therewith, one end of said coil being free and the other end of said coil communicating with said tube, a casing, a stuffing box adjacent the upper part thereof, said rotatable tube extending through said stuffing box and communicating with the interior of said casing at its upper part, and a rising tube communicating with said casing at its lower part.

1,021,715. DEVICE FOR STAMPING OR MARKING MEATS. WILLIAM T. CONWAY, St. Louis county, Mo. Filed Dec. 14, 1911. Serial No. 665,874. (Dedicated to the public.) (Cl. 101—24.)



A stamp or marker consisting of a handle having a hole in its bottom, a ferrule attached to said handle, a disk having a threaded edge, said disk provided with a shoulder and an integral shank, openings in said handle, ferrule and shank for the admission of a screw, a cup-shaped plate having its upper interior portion screw-threaded, a series of holes drilled in said plate in the form of an inscription, pins provided with heads for entering said holes and constituting said inscription, said disk adapted to enter said cup-shaped plate and hold said pins in a fixed operative position by means of the threaded edge of said disk engaging the threaded portion of said plate, substantially as specified.

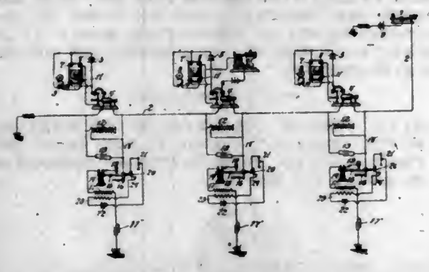
1,021,716. NEST OF DRINKING-CUPS. WILLIAM HERBERT CUSHMAN, Taunton, Mass., assignor to The E. A. Fargo Company, Taunton, Mass., a Corporation of Rhode Island. Filed Oct. 17, 1910. Serial No. 587,579. (Cl. 206—65.)



A nest of drinking cups comprising a plurality of tapering metal cups of uniform shape and size adapted to nest

one within the other, each cup having an annular shoulder about its upper edge, the lower edge of each shoulder being adapted to rest on the upper edge of the next lower cup, a ring having an inwardly turned flange for engaging the underside of the shoulder of the lowermost cup, and a cap screw threaded to said ring said cap and ring adapted to inclose the tops of all of said cups and bind the whole nest into one unitary element.

1,021,717. COMBINED TELEPHONIC AND TELEGRAPHIC SYSTEM. EDWIN R. GILL, Yonkers, N. Y., assignor, by mesne assignments, to Howard E. Merrell, New York, N. Y., and Orlo J. Hamlin, Smethport, Pa. Filed Aug. 5, 1907. Serial No. 387,021. (Cl. 179—3.)



1. A telegraphic line in combination with a number of selectively operated signaling devices at intervals along said line, a telephonic outfit adjacent to each signaling device normally disconnected from the telegraphic line, means for operatively connecting each telephonic outfit to the telegraphic line so that when two or more of said outfits are so connected they will be in multiple arc, and means for controlling said selectively operated signaling devices over said telegraphic line, said last named means including a circuit independent of all of said telephonic outfits, substantially as described.

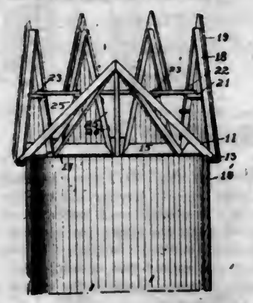
2. A telegraphic line in combination with a number of selectively operated signaling devices at intervals along said line, a telephone receiver and transformer secondary in series grounded on one side through a condenser, a telephone transmitter, a local battery and transformer primary on a normally open circuit, a normally open switch for simultaneously connecting said receiver and transformer secondary to said telegraphic line and closing the local transmitter circuit, and means for operating said selectively operated signaling devices over said telegraphic line, said last named means including a circuit independent of all of said telephonic circuits, substantially as described.

3. A telegraphic line, a number of selectively operated signaling devices at intervals along said line, relays in series along said line for controlling said selectively operated signals, condensers in shunt around each of said relays, a complete local telephonic outfit adjacent to each signaling device and normally disconnected from the telegraphic line and means for operatively connecting each telephonic outfit to the telegraphic line so that when two or more of said outfits are so connected they will be in multiple arc, substantially as described.

1,021,718. SILO. JOHN R. GRAFF, Cedar Rapids, Iowa. Filed Dec. 15, 1910. Serial No. 597,549. (Cl. 20—1.4.)

1. The combination of a silo having rafters extending radially from a point above the center of the upper end of the silo frame downwardly and outwardly to said frame, with a plurality of triangular roof sections, and means for hinging said roof sections to said rafters near their lower ends, so that said roof sections in one position of their movement coact to form a roof of greater circumference than the silo and in another position thereof rest in vertical position to form extensions of the silo wall.

2. The combination of a substantially round silo having rafters extending radially from a central point above the upper end of the silo frame downwardly and outwardly to points outside of said frame, said rafters being secured to said frame, with a plurality of triangular roof sections, means for hinging said roof sections to said rafters near their lower ends, said roof sections being of such form and hinged at such points on said rafters that in one position of their movement, they coact to form a roof of greater circumference than the silo, and in another position of their movement rest in vertical position to form extensions of the silo wall.



3. The combination with a silo, of a series of substantially triangular shaped roof sections pivotally supported near the top of the silo and capable in one position of extending inwardly adjacent to each other to form a roof and also capable of being extended upwardly from the edges of the silo to form extension sides for the silo, and means for filling the space between the roof sections when in their upright positions, said means comprising filling members hinged at one edge to one of the roof members and capable of swinging from position adjacent to the under surface of said roof member outwardly to position extending across the space between the roof member to which it is connected and the adjacent one.

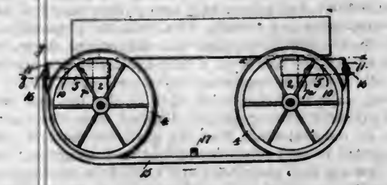
4. The combination with a silo, of a series of substantially triangular shaped roof sections pivotally supported near the top of the silo and capable in one position of extending inwardly adjacent to each other to form a roof and also capable of being extended upwardly from the edges of the silo to form extension sides for the silo, means for filling the space between the roof sections when in their upright positions, said means comprising filling members hinged at one edge to one of the roof members and capable of swinging from position adjacent to the under surface of said roof member outwardly to position extending across the space between the roof member to which it is connected and the adjacent one, and means for holding said filling members in both of the said positions.

5. In combination with a silo, a roof comprising substantially triangular roof sections hinged at a point outside the upper end of the silo and capable in one position of their movement of coacting to form a roof, and in another position of their movement of extending upwardly to form extensions of the silo wall, means for preventing ensilage from dropping between the roof sections and the silo wall, on the inside of the latter, when the roof sections are in their raised position, said means being secured to the silo frame and being capable of movement out of the way of the roof sections when the latter are closed.

[Claims 6 to 10 not printed in the Gazette.]

1,021,719. SLEIGH ATTACHMENT FOR VEHICLES. CLARENCE E. HUBER, Mansfield, Ohio, assignor of one-third to Jacob Huber and one-third to Harvey M. Huber, Mansfield, Ohio. Filed July 11, 1910. Serial No. 571,470. (Cl. 21—96.)

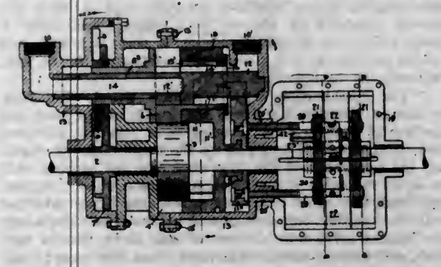
1. The combination, with a wheeled vehicle, of pairs of vertical plates arranged transversely of the vehicle at each side thereof, each of said plates being provided with an oblique slot extending at its lower end into the vertical plane of the wheels at one side of the vehicle, and sleigh runners having bolts engaging the slots in the respective pairs of plates for permitting said runners to hang in the plane of the wheels when in use, and out of said plane and above the road-engaging portions of said wheels when not in use.



2. The combination, with a wheeled vehicle, of slotted plates arranged transversely thereof, sleigh runners having bolts attached to their extremities and engaging the slots in said transverse plates, said slots comprising two vertical portions, one arranged in the plane of the wheels, and the other arranged inward of said plane, and an inclined portion extending upwardly from the outer to the inner vertical portions whereby said runners may be supported above and out of contact with the road engaging portions of said wheels when said bolts are arranged in the inner vertical portions of the slots, and said runners may be dropped into position under said wheels by moving said bolts to the outer vertical portions of said slots.

3. The combination, with a wheeled vehicle, of slotted plates arranged transversely thereof, sleigh runners having bolts attached to their extremities and engaging the slots in said transverse plates, said slots comprising two vertical portions, one arranged in the plane of the wheels and the other arranged inward of said plane, said outer vertical portions being longer than the inner ones for the purpose specified, and an inclined portion extending upwardly from the outer to the inner vertical portions whereby said runners may be supported above and out of contact with the road-engaging portions of said wheels when said bolts are arranged in the inner vertical portions of the slots, and said runner may be dropped into position under said wheels by moving said bolts to the outer vertical portions of said slots.

1,021,720. ROTARY ENGINE WITH PISTON OF VARIABLE AREA. SINCLAIR J. JOHNSON, Montclair, N. J. Filed Apr. 8, 1911. Serial No. 619,678. (Cl. 121—51.)



1. The combination with a piston adapted to have a continuous movement in a plane and an intermittently rotative abutment-provided member coöperative with the piston of a piston cut-off shiftable transverse to the plane of movement of the piston whereby the effective area of the piston may be varied at will.

2. The combination with a piston and an intermittently rotative abutment-provided member coöperative with the piston of a piston cut-off shiftable to and fro to vary the effective area of the piston, said cut-off partaking of the motion of the piston.

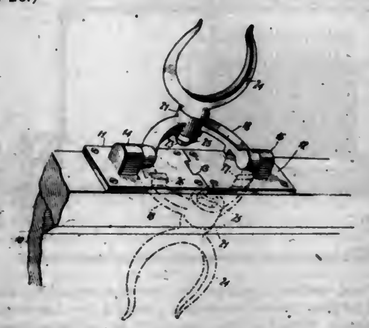
3. The combination with a rotary disk, a wing extending therefrom and constituting a piston and an intermittently rotative abutment-provided member coöperative with the piston of an annulus constituting a piston cut-off and having an internal diameter substantially equal to the diameter of the said disk and an external radius substantially equal to the end radius of said piston, said annulus being fitted to likewise slide over the longitudinal radial faces of the piston and a filler ring having a cut-out portion to accommodate said cut off annulus.

4. The combination with a wing piston and a piston cut-off of an abutment-provided member and a shifter adapted to adjust simultaneously said cut-off and said member whereby the effective area of the piston may be varied at will.

5. The combination with a revolving wing piston and an intermittently rotative abutment-provided member adapted to coöperate with said piston of a piston cut-off adapted to be shifted across the space swept through by the piston whereby the effective area of the latter may be varied and means for varying the area of the abutment walls coöperative with the piston in accordance with the position given to the piston cut-off.

[Claims 6 to 15 not printed in the Gazette.]

1,021,721. OAR-LOCK. CLIFFORD L. KEDDY, West Lynn, Mass. Filed May 12, 1910. Serial No. 560,894. (Cl. 9—26.)



The combination in a device such as described, of a base comprising a pair of interlocking plates, socketed lugs extending from the plates, an arcuate member movably mounted in the said socketed lugs, a bearing formed upon the arcuate member, lugs formed upon the arcuate member and supporting the same in a horizontal position and the bearing in a vertical position by their engagement with the plates, and an oar receiving fork journaled in the said bearing.

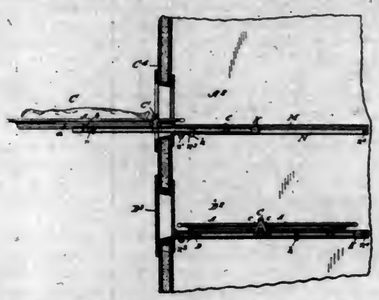
1,021,722. MORTUARY REFRIGERATOR. JACOB N. MCINTIRE, New York, N. Y., assignor to The Brunswick-Balke-Collender Company of New York, New York, N. Y., a Corporation of New York. Filed Feb. 25, 1911. Serial No. 610,959. (Cl. 62—3.)

1. In a mortuary refrigerator, the combination, with a slidable and removable frame; and a slidable and removable tray, supported solely by said frame, of a bar *e*, on the bottom of the tray and a stop G on the frame adapted to engage said bar; all as and for the purposes set forth.

2. In a mortuary refrigerator, the combination, with a chamber; a slidable frame B mounted therein; and a tray supported solely by said frame and slidable thereon, of a gravity latch D, mounted on frame B; and an engaging bar *e*, on the bottom of the tray; the whole arranged and operating together, in the manner and for the purposes hereinbefore set forth.

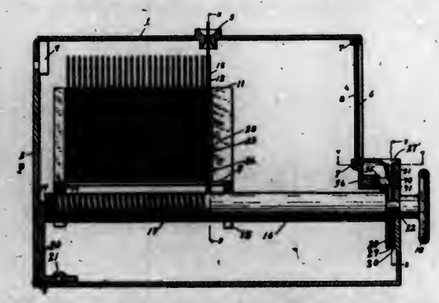
3. In a mortuary refrigerator, the combination, with a slidable tray A, of track-rails *a*, located on the flaring

sides of said tray and engaging with peripherally grooved supporting wheels, or rollers b, mounted on a frame B;



the whole arranged and operating together as and for the purposes hereinbefore set forth.

1,021,723. COIN OR CHECK CONTROLLED VENDING-MACHINE. WENDELL J. MORSE, Albion, Mich. Filed Aug. 6, 1910. Serial No. 575,910. (Cl. 211—8.)



1. In a vending machine, the combination of a suitable casing with a transverse delivery slot in the top thereof; a magazine with an open top provided with oppositely-disposed slots forming compartments, supported in suitable ways within the said casing; ways for said magazine to travel upon; open top holders adapted to reciprocate in the compartments of said magazine; a threaded nut underneath the said magazine for moving the same; a shaft journaled in the lower part of said casing and screw-threaded to act upon the said nut, and provided with an arm to actuate the delivery device and with a hand-wheel for actuating the same; an arm pivoted within the said casing and having a suitable engaging notch disposed to engage and elevate the said holders when actuated by said shaft arm; and a lock for locking the said shaft and limiting its movement, as specified.

2. In a vending machine, the combination of a suitable casing with a transverse delivery slot in the top thereof; a magazine; a threaded nut underneath the said magazine for moving the same; a shaft journaled in the lower part of said casing, screw-threaded to act upon the said nut and provided with an arm to actuate the delivery device and with a hand-wheel for actuating the same; an arm pivoted within the said casing, disposed to engage and elevate articles from said magazine; and a lock for locking the said shaft and limiting its movement.

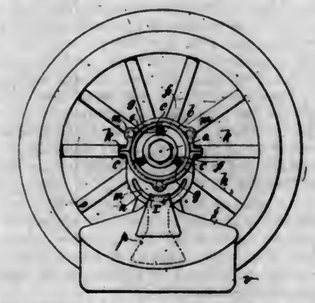
3. In a vending machine, the combination of a suitable casing with a transverse delivery slot in the top thereof; a magazine; a threaded nut underneath the said magazine for moving the same; a shaft journaled in the lower part of said casing, screw-threaded to act upon the said nut and provided with an arm to actuate the delivery device and with a hand-wheel for actuating the same; an arm pivoted within the said casing, disposed to engage and elevate articles from said magazine; and a lock for locking the said shaft and limiting its movement, as specified.

4. In a vending machine, the combination of a suitable casing, with a transverse delivery slot in the top thereof; a magazine; a threaded nut underneath the said magazine for moving the same; a shaft journaled in the lower part of said casing, screw-threaded to act upon the said nut and provided with an arm to actuate the delivery device and with a hand-wheel for actuating the same; a delivery device to be actuated by said arm; and a lock for locking the said shaft and limiting its movement, a specified.

5. In a vending machine, the combination with a suitable casing provided with a delivery slot in the top thereof, of a magazine supported on suitable ways within said casing, said magazine being open at the top and bottom and provided with oppositely disposed slots forming a series of compartments therein; open top holders loosely supported in said compartments of said magazine; means for feeding said magazine; and a delivery mechanism operatively associated therewith adapted to successively engage and elevate said holders to project the articles carried thereby through said delivery slot as the magazine is advanced.

[Claims 6 to 8 not printed in the Gazette.]

1,021,724. MUD-GUARD FOR THE WHEELS OF MOTOR AND OTHER VEHICLES. CHARLES HILLYARD NICHOLS, Wolverton, England. Filed Dec. 12, 1910. Serial No. 596,907. (Cl. 21—23.)

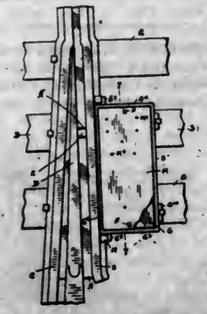


1. The combination with a vehicle wheel of a ring, adjustable means interposed between the inside of the ring and the hub of the wheel for securing same together, an outer ring rotatably mounted on the first ring, a balance weight depending from the outer ring tending to keep the outer ring in normal position, the outer ring having a slot therein arranged on the arc of a circle struck from a point below the center of the outer ring, a guard, and rollers carried by the guard and interposed in the slot, substantially as described.

2. The combination with a vehicle wheel of a ring, stretchers interposed between the inside of the ring and the hub of the wheel for securing same together, an outer ring, flanged rollers mounted on the outer ring for engaging the periphery of the first ring and for keeping said rings in rotatable engagement, a balance weight depending from the outer ring, the outer ring being provided with an eccentric slot arranged in its lower portion, a sector, rollers carried by the sector and interposed in said slot, and flexible means depending from the sector, substantially as described.

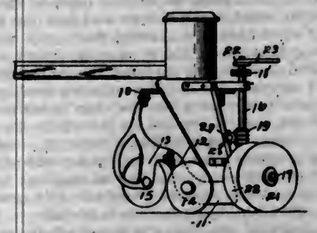
1,021,725. POINT-RAIL-LOCKING DEVICE. VICTOR H. NULLE, Anderson, Ind. Filed Mar. 10, 1911. Serial No. 613,549. (Cl. 104—115.)

1. In a track switch, the combination of a casement having an open top and adapted to have its side secured adjacent to the guard rail, pairs of studs rising from the bottom of said casement there being intermediate ridges on the said bottom at each pair of studs, friction rings on the guide studs, a transverse shift bar between said studs and having its one end to pass through the guard rail and having connection with the point rail, and being provided with a triangular tooth, a second set of studs rising from the bottom of the casement, friction rings on the forward pair of these last named studs, a detent disposed between the said studs, and at alinement to register with the center of the tooth when the point rail is in neutral position, a friction wheel at the forward end of said detent, a spring to press said detent forwardly, and against said tooth, a cover plate for said casement, having pairs of ridges on its under side to register with the tops of the said pairs of guide studs.



2. In a track switch, the combination of a casement to be secured adjacent to the rail, pairs of studs rising from the bottom of said casement, friction rings on the said studs, a transverse shift bar between said studs and having connection with the point rail, a triangular tooth on the side of said bar, a second set of studs rising from the bottom of the casement, friction rings on the forward pair of these studs, a detent disposed between the said studs and at alinement to register with the center of the tooth when the point rail is at neutral position, a friction wheel at the forward end of said detent, a spring to press said detent forwardly and against said tooth, and means to adjust the tension of said spring.

1,021,726. PLANTER. PRESTON OFFILL, Collegeview, Nebr., and EZRA G. PLUMMER, Altoona, Iowa. Filed May 23, 1910. Serial No. 562,906. (Cl. 111—6.)



1. In a planter, the combination of a furrow opener, two shafts in the rear of and on opposite sides of the furrow opener, each of said shafts being provided near its lower end with a horizontally arranged extension, disks rotatably mounted on each extension, means for vertically adjusting said shafts, and means for moving the shafts to adjust the angles of the disk, said means comprising pinions on said shafts in mesh with each other, an arm fixed to one of the shafts and a lever connected with said arm.

2. The combination with a furrow opener, of two shafts in the rear of and on opposite sides of the furrow opener, each of said shafts being provided with a horizontally arranged extension, a disk rotatably mounted on each extension, and means for rocking the shafts to adjust the angles of the disks, said means comprising pinions on said shafts in mesh with each other, an arm fixed to one of the shafts, and a lever connected with said arm.

3. The combination of a furrow opener, of two shafts slidingly and rotatably supported in the rear of and on opposite sides of the furrow opener, pinions on said shafts in mesh with each other, an arm on one of the shafts, a lever connected with said arm, gear teeth on each shaft, a horizontally arranged shaft having pinions thereon in mesh with said gear teeth, and means for rocking the horizontally arranged shaft to jointly raise and lower the said vertically arranged shafts, and horizontal extensions on the lower ends of said vertically arranged shafts, and two rotatable disks on each horizontal extension, substantially as for the purposes stated.

4. An improved planter, comprising a runner, two furrow opening disks supported in advance of the runner, the forward one being arranged to form a furrow and to throw the earth in one direction and the other being arranged in a lower plane to deepen the furrow and throw the earth in an opposite direction, two vertically arranged shafts in the rear of the runner on opposite sides thereof having horizontal extensions on their lower ends, two disks rotatably mounted on each extension, means for vertically adjusting said shafts, and means for jointly rocking the shafts to change the angles of the horizontal extensions, for the purposes stated.

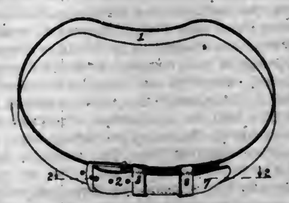
1,021,727. TIRE-CHAIN MECHANISM. CARL PETERSON, Portland, Oreg. Filed Dec. 12, 1911. Serial No. 665,391. (Cl. 152—2.)



1. In a tire chain mechanism, in combination with a dual tread tire; a plurality of loops; a pair of lugs on each loop, said lugs adapted to engage the groove of the tire; a continuous chain comprising a series of eyebolts journaled in said lugs and a series of intermediate links connecting said eyebolts; means for adjusting the length of the chain; and means coöperating with said adjusting means for interlocking the ends of the chain.

2. In combination with a grooved resilient tire, a detachable chain mechanism comprising: a series of loops adapted to seat on the peripherical surface of the tire; perforated lugs on said loops adapted to engage the tire groove, whereby said loops are held against transverse displacement; a chain composed of a series of eyebolts journaled in the perforations of said lugs and provided with means for limiting the oscillatory motion of the loops on the eyebolts, and a series of intermediate links operatively connecting said eyebolts; and means for adjustably interlocking the ends of said chain.

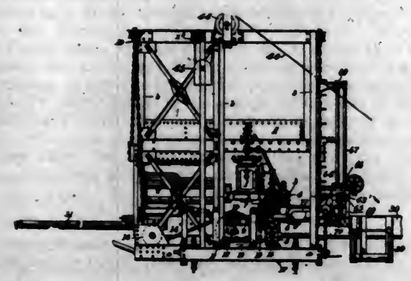
1,021,728. APPAREL-BELT. ANTON REZNIČEK, Jersey City, N. J. Filed Aug. 17, 1910. Serial No. 577,580. (Cl. 241—8.)



A belt composed of a strap, a loop at one end of the strap, a buckle piece folded on itself, a buckle at the fold,

the strap loop being secured to the buckle piece adjacent to the fold, a false tongue, a loop on the tongue, said loop being passed over the strap and secured between the members of the folded buckle piece.

1,021,729. APPARATUS FOR CHARGING AND DISCHARGING GAS-RETORTS. THOMAS RODMAN, Sewickley, ROBERT L. HIBBARD, Bellevue, and HENRY A. CARPENTER, Sewickley, Pa., assignors to Riter-Conley Manufacturing Company, Jersey City, N. J., a Corporation of New Jersey. Filed May 22, 1905, Serial No. 261,681. Renewed Aug. 22, 1911. Serial No. 645,392. (Cl. 202—5.)



1. In an apparatus for charging and discharging gas retorts, the combination of a frame, means to propel said frame, mechanism mounted within said frame for conveying coal to a retort and substantially simultaneously therewith discharging the coke therefrom, means to charge the coal contained in said conveying mechanism into said retort, and to withdraw said mechanism from said retort, a hopper mounted in the frame of said apparatus, means to raise and lower said coal conveying and coke discharging mechanism, and means to control the discharge of coal from said hopper into said coal conveying mechanism.

2. In an apparatus for charging and discharging gas retorts, the combination of a frame, a motor mounted in said frame, a hopper, means to transmit power from said motor to the axle of said frame, means to transmit power from said motor to elevate said hopper, a hollow ram adapted in its forward movement to push out or discharge the coke contained in a retort, and means to substantially after the discharge of the coke from the retort recharge the same with coal contained in said hollow ram.

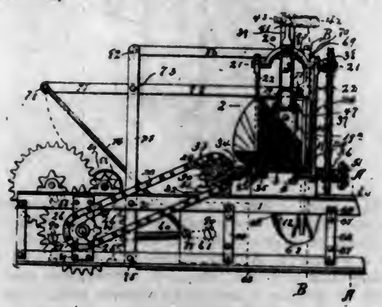
3. In an apparatus for charging and discharging gas retorts, the combination of a frame, means to propel said frame, mechanism mounted within said frame for conveying coal to a retort and substantially simultaneously therewith discharging the coke therefrom, means to charge the coal contained in said conveying mechanism into said retort, and to withdraw said mechanism from said retort, a hopper mounted in the frame of said apparatus, means to raise and lower said coal conveying and coke discharging mechanism, means to control the discharge of coal from said hopper into said coal conveying mechanism, and means to reverse the coal conveying mechanism to a position to receive another charge of coal.

4. In an apparatus for charging and discharging gas retorts, the combination of a frame mounted on wheels, a motor mounted in said frame, means to transmit power from said motor to the axle of said frame, a hopper to contain coal, a hollow ram disposed below said hopper, means to charge said ram with coal from said hopper, means to advance said ram against the coke contained in a retort and into said retort for the purpose of pushing or discharging the coke out of the retort at the opposite end and at the same time carrying into the retort a fresh charge of coal, means to discharge the coal from the ram into the retort after the discharge of the coke, and means to withdraw the ram from the retort upon the completion of the charging operation.

5. In an apparatus for charging and discharging gas retorts, the combination of a frame mounted on wheels, means mounted on said frame to propel the same upon said wheels, a hopper slidably mounted in said frame, a carriage mounted upon ways secured upon the lower portion of said hopper, a pair of semi-circular scoops adapted to contain coal to charge the retorts, means to reciprocate said scoops and means to simultaneously reverse said scoops to discharge the coal contained therein within the retort; a platform secured upon the rear end of the ways, a plate accessible from said platform and slidable upon vertically disposed rods, a number of levers connected to said rods and adapted to control the motive mechanism of said machine.

[Claims 6 and 7 not printed in the Gazette.]

1,021,730. REVERSIBLE FEED-HOPPER FOR BALING-PRESSES. GEORGE A. RYERSON, Bellevue, Ohio, assignor of one-half to Cornelius R. Callaghan, Bellevue, Ohio. Filed Jan. 24, 1911. Serial No. 604,296. (Cl. 100—25.)



1. In a device of the character described, the combination of a frame work therefor; a transversely extending shaft with bearings therefor, a sprocket wheel, mounted thereon near one of its ends; a pitman-operating gear wheel provided with an extended gudgeon, a second sprocket wheel mounted thereon, a connecting chain between said sprocket wheels; a feed hopper, with feed hole therein, mounted upon and secured to said frame work, a shaft therefor, extending transversely of the same, and bearings whereby the same is carried; a pair of meshing bevel gears, one for each shaft, such that as said chain is operated, said second or last mentioned shaft is made to operate; a third sprocket wheel mounted upon and near the opposite end of said second shaft; a cranked shaft, with crank pin and bearings therefor, a fourth sprocket wheel mounted upon one end thereof, and a second connecting chain between said sprocket wheels; an oscillating fork having a handle pivotal means by which the same is carried intermediate of the ends of the handle thereof, by the crank-pin of said crank; a rigid standard, rising from said hopper, and a pivotally connected oscillating connecting rod made to connect the upper end of said standard with the outer end of said fork handle; whereby as said gear wheel is made to operate said fork is made to operate.

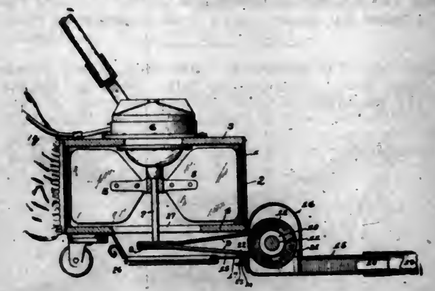
2. In a device of the character described, the combination of a frame work; a transversely extending shaft bearings therefor, and a sprocket wheel mounted thereon near one of its ends; a pitman-operating gear wheel provided with an extended gudgeon, a second sprocket wheel mounted thereon, and a connecting chain between said sprocket wheels; a circular track, mounted upon and carried by said frame work; a rotatable feed hopper, with feed hole therein, mounted upon said track, and suitable guiding means therefor which are carried thereby and made to engage one of the perimeters of said track, together with suitable retaining or holding means, whereby said hopper is made to turn upon said track as upon a pivot, and to be held in position as and when desired; a shaft therefor extending transversely of the same and bearings whereby the same is carried; two several pair of meshing bevel gears, one for each of the ends of said shafts, said gears being so set that as said hopper shall be turned about its axis, the appropriate pair of said gears will be brought into mesh, and said second shaft when operated will be given its appropriate action; a third sprocket wheel carried by said second shaft, near one of its ends; a cranked shaft with crank-pin and bearings therefor, a fourth sprocket wheel mounted upon one end thereof, and a connecting chain between said last mentioned sprocket wheels; an oscillating fork having a handle, and pivotal means by which the same is carried intermediately of the ends of the handle thereof, by the crank-pin of said crank; a rigid standard, rising from said hopper, and a pivotally connected oscillating connecting rod, made to connect the outer end of said cork handle, with the upper end of said standard; whereby as said gear wheel is made to operate, said fork is made to operate, whenever either pair of said bevel gears is in mesh.

3. In a device of the character described, the combination of a frame work; a transversely extending shaft with bearings therefor mounted thereon, and means for the operation thereof; a circular track mounted upon said frame work, a rotatable feed hopper with feed holes therein mounted upon said track, and suitable guiding means therefor carried thereby and made to engage one of the perimeters of said track; suitable retaining or holding means, whereby said hopper when rotated is made to turn upon said track as upon a pivot, and to be held in operative position, as and when desired; a shaft therefor extending transversely of the same and bearings whereby said shaft is carried; two several pairs of meshing bevel gears, one for each of the ends of said shafts, said gears being so set that as said hopper shall be turned about its axis, the appropriate pair of said gears will be brought into mesh, and said second shaft will, when operated, be given its appropriate action; a sprocket wheel carried by said last mentioned or second shaft, near one of its ends; a cranked shaft, with crank-pin and bearings therefor; a second sprocket wheel mounted upon one end thereof and a connecting chain between said sprocket wheels; an oscillating fork having a handle; pivotal means by which the same is carried intermediate of the ends of the handle thereof by the crank-pin of said crank; a rigid standard rising from said hopper, and a pivotally connected oscillating connecting rod, made to connect the outer end of said fork handle, with the upper end of said standard; whereby as said first mentioned shaft is made to operate, said fork is made to operate, whenever either pair of said gears is in mesh.

4. In a device of the character described, the combination of a frame work; a circular track mounted thereon, a rotatable feed hopper with feed hole therein mounted upon said track, and suitable guiding means therefor which are carried thereby and made to engage one of the perimeters of said track; suitable retaining or holding means, whereby said hopper when rotated is made to turn upon said track as upon a pivot, and to be held in operative position as and when desired; a shaft therefor extending transversely of the same and bearings whereby the same is carried; a driving sprocket wheel mounted thereon near one of its ends; a cranked shaft, with crank-pin and bearings therefor; a second sprocket wheel mounted upon one end thereof, and a connecting chain between said sprocket wheels; an oscillating fork having a handle, and pivotal means by which the same is carried intermediately of the ends of said handle by the crank-pin of said crank; a rigid standard rising from said hopper, and a pivotally connected oscillating connecting rod made to connect the outer end of said fork handle with the upper end of said standard; together with several means for the operation of said first mentioned shaft thereby causing said fork to operate, as and when said hopper is placed in operative position upon either side of said device.

5. In a device of the character described, a specially formed condensing feed hopper, wherein the one end there of is closed by a separate plate secured between the folded up sides thereof, and the opposite end thereof is partially closed by a suitable curve which is given to the bottom line; and wherein surplus material, thus created, is given in part to widening said bottom, and in part to concaving said sides, whereby said end is made condensing; and wherein the bottom thereof is cut away to form a feed hole; all substantially as described.

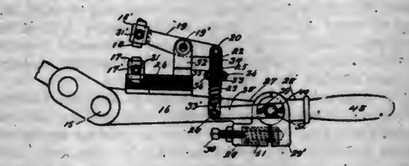
1,021,731. CARPET SWEEPER AND CLEANER. JAMES M. SPANGLER, Canton, Ohio, assignor to The Hoover Suction Sweeper Company, New Berlin, Ohio, a Corporation of Ohio. Filed June 25, 1908. Serial No. 440,381. (Cl. 15—60.)



1. For a suction carpet sweeper, an attachment consisting of a hollow casing provided with an opening adapted to register with the cleaning intake opening of the sweeper and with means for the attachment to said casing of a suction hose, and means for detachably connecting said casing to the sweeper.

2. For a suction carpet sweeper, an attachment consisting of a hollow casing provided with two openings, one adapted to register with the cleaning intake opening of said sweeper, means for the operative attachment of a suction hose to the casing at the other opening thereof, and said casing provided with portions adapted to frictionally engage the edges of said intake opening for detachably connecting said casing to said sweeper.

1,021,732. ELECTRIC WELDING-MACHINE. ALBERTIS C. TAYLOR, Warren, Ohio, assignor to The National Electric Welder Company, Warren, Ohio, a Corporation of Ohio. Filed July 20, 1911. Serial No. 639,492. (Cl. 219—4.)



1. A lever for bringing the points of the electrodes of a welding machine together prior to closing the circuit and subsequently closing the circuit by a continuance of the same movement, as set forth.

2. In an electric welding machine a lever fulcrumed on said machine: one end actuating one of the welding electrodes and the other end composed of two sections pivotally attached to each other and each bearing jaws normally held open by a spring, as shown and described.

3. In a spot welding machine a lever composed of two sections for operating one of the electrodes; a spring for holding said sections in the same line until the electrodes contact with the metal between them; an extension arm attached to one of said sections and operating a second lever arm to close the circuit upon compression of said springs.

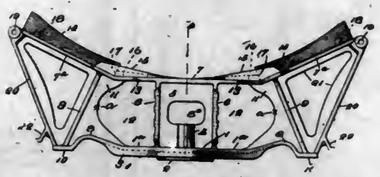
4. In an electric welding machine, the combination of an electrode, a lever connected thereto, said lever being composed of two sections with a knuckle joint between them, a spring for holding said joint open until said

electrode closes on the metal to be welded, a circuit controller, and an arm attached to one section of said lever and operated thereby to close the circuit through the controller.

5. In an electric welding machine the combination of a pair of electrodes; a jointed lever to bring them together; a compression spring normally holding the members of said lever in a right line; an extension arm attached to one of said members and operating as part of it; and circuit closing contact blocks insulated from said lever and brought together by the operation of said extension arm, as set forth and described.

[Claims 6 to 16 not printed in the Gazette.]

1,021,733. CAR-BOLSTER. JOHN MCE. AMES, Dongan Hills, N. Y. Filed Oct. 26, 1911. Serial No. 656,827. (Cl. 105—104.)



1. In an integral cast bolster, a plurality of relatively triangular flanged portions terminating in side bearings, a connecting bottom portion comprising a pin socket and sill attaching flanges and a continuous top portion provided with timber retaining means.

2. A tank car bolster comprising an integral casting, having triangular upwardly extending portions terminating in side bearings at their lower ends and in tank supports at their upper portions, top and bottom connecting portions, an intermediate center pin socket and sill attaching flanges and having enlarged sill gaps between said portions.

3. A tank car bolster comprising an integral casting, having inwardly flanged triangular upwardly extending portions terminating in side bearings at their lower ends and in tank supports at their upper portions, top and bottom connecting portions, an intermediate center pin socket and sill attaching flanges, and having enlarged sill gaps between said portions.

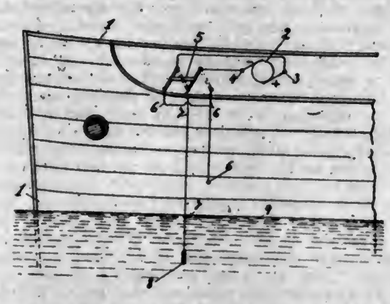
4. A tank car bolster comprising an integral casting, having triangular upwardly extending portions terminating in side bearings at their lower ends and in tank supports at their upper portions, longitudinally flanged top and bottom connecting portions, an intermediate center pin socket and sill attaching flanges, and having enlarged sill gaps between said portions.

5. A tank car bolster comprising an integral casting, with spaced vertical web portions, triangularly disposed flanges extending from said webs, a bottom connecting portion provided with center bearing, the top connecting portion being provided with longitudinally disposed flanges and abutments adapted to retain a superposed member in position, and sill attaching flanges connecting said top and bottom connecting portions.

[Claim 6 not printed in the Gazette.]

1,021,734. PROCESS FOR PROTECTING SHIPS FROM BARNACLES. GEORGE DELIUS and CHARLES P. TATRO, Seattle, Wash. Filed May 22, 1911. Serial No. 628,821. (Cl. 204—1.)

1. The process of protecting ships from barnacles, comprising the connecting of the metallic surface of the ship with one pole of a source of direct current electricity; the locating under water near to the said surface but not in contact therewith of an electrolytically insoluble terminal and connecting it with the other pole of said source of electricity; interposing in the two lines of electric connections a reversing switch; sending an electric current through the circuit of the said connections, and repeatedly shifting the switch, whereby the two terminals are alternately converted into positive and negative poles for electrochemical action.

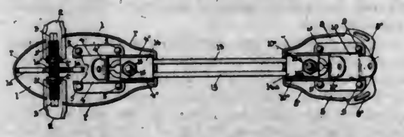


2. The process of protecting ships from barnacles, comprising connecting the terminal of one pole of a source of direct current electricity with the metallic surface of the ship; the locating of the terminal of the other pole in the water near the ship; sending a direct electric current through the said pole terminals and the ship's metallic surface, the circuit being completed through the water around the ship, and reversing at intervals the direction of the electric current.

3. The process of protecting ships from barnacles, comprising the repeated steps of sending a direct electric current into the metallic surface of the ship to return through an electric terminal immersed in the open water, and then sending a direct current into the immersed terminal to return through the metallic surface of the ship; the circuit being completed in each case through the open water between the ship and the immersed terminal.

4. The process of protecting ships from barnacles, which comprises the steps of sending a direct electric current to and fro at intervals through the metallic surface of the ship and the adjacent water.

1,021,735. ROLLER-SKATE. OTIS W. EVERETT, Worcester, Mass., assignor to The Samuel Winslow Skate M'f'g. Co., Worcester, Mass., a Corporation of Massachusetts. Filed June 30, 1910. Serial No. 569,755. (Cl. 46—51.)



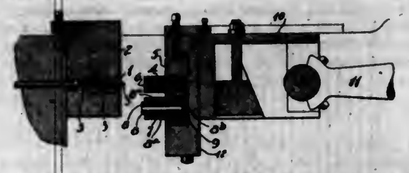
1. In an extension roller skate, the combination with the toe plate, and the heel plate, made separate, of two bars, made separate from said plates, and extending below said plates, and adjustably secured thereto at each end.

2. In an extension roller skate, the combination with the toe plate, and the heel plate, made separate, of two bars, curved or bent inwardly at one or both ends, and made separate from said plates, and extending below said plates, and adjustably secured thereto at each end, to allow of the adjustment of the toe plate and the heel plate on said bars.

3. In an extension roller skate, the combination with the toe plate, and the heel plate, made separate, of two bars, made separate from said plates, and extending between said plates, and guided in slots in downward lips or flanges on said plates, and adjustably secured at each end to the toe plate, and to the heel plate.

4. In an extension roller skate, the combination with the toe plate, and the heel plate, made separate, of two bars, made separate from said plates, and extending between said plates, and guided in slots in downward lips or flanges on said plates, and adjustably secured at each end in the toe plate, and to the heel plate by a clamp plate, and a bolt, and a nut.

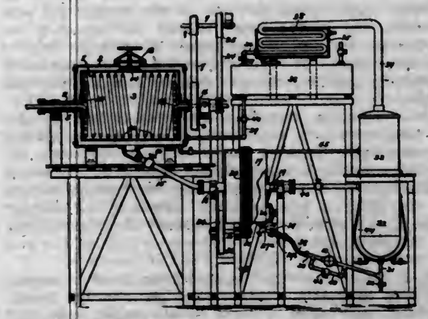
1,021,736. HEAD-SHAPING MACHINE. CHARLES GLOVER and CHARLES HOLT, New Britain, Conn., assignors to Corbin Screw Corporation, New Britain, Conn., a Corporation of Connecticut. Filed Mar. 31, 1910. Serial No. 552,505. (Cl. 10—12.)



1. In a heading machine, a holding die, a reciprocating carrier, a holder mounted thereon, an upsetting punch and a shaping die mounted upon said holder, said punch having a substantially cylindrical recess in its front end for producing a cylindrical blank, said shaping die comprising a plurality of radially movable jaws, the recess in said punch and the space between the jaws when closed being so proportioned to each other that the cylindrical blank formed by the punch may be changed to a polygonal form by the radial movement of the jaws of the shaping die, mechanism for reciprocating the carrier to and from said holding die, said holder being movable to bring said punch and shaping die alternately into and out of axial alinement with the holding die, and mechanism for opening and closing the jaws of the shaping die in synchronism with the reciprocating movement of said carrier.

2. In a machine for producing polygonal heads on rods, means for holding the rod upon which the head is to be formed, a reciprocating carrier, a holder therefor, an upsetting punch and a shaping die mounted upon said holder, said punch having a recess with its surface substantially parallel to its axis, said die having a plurality of jaws corresponding to the number of faces to be produced and means for moving said jaws radially in synchronism with the axial movement of the carrier to and from the holding die, said holder being movable to bring said punch and shaping die alternately into axial alinement with the rod in the holding die.

1,021,737. PROCESS FOR THE RECOVERY OF OILY INK FROM CLOTHS. MATHEW S. HOPKINS, Baltimore, Md., assignor to The Separate Recovery Company of America, Baltimore, Md. Filed May 13, 1910. Serial No. 561,165. (Cl. 87—6.)



1. The herein described process, consisting in treating material containing oily ink, with a solvent, treating the resultant liquor to precipitate the oily ink, and then churning the liquor to conglomerate the oily ink therein.

2. The herein described process, consisting in treating material containing oily ink with a solvent which is miscible with water, adding water to the resultant liquor, and churning the liquor to conglomerate the oily ink and permit the recovery of said oily ink as such.

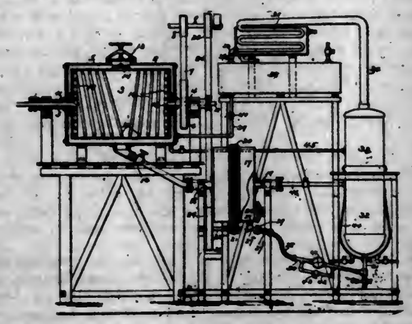
3. The herein described process consisting in washing material ladened with oily ink in acetone, adding water to the resultant liquor, and churning the liquor to conglomerate the oily ink and permit the recovery of the oily ink as such.

4. The herein described process, consisting in agitating material ladened with oily ink, in the presence of a solvent miscible with water, adding water to the resultant liquor churning the liquor to conglomerate the oily ink, distilling the liquor to volatilize the solvent, and finally condensing the volatilized solvent.

5. The herein described method, consisting in treating material containing oily ink with a solvent, treating the resultant liquor to conglomerate the oily ink and divorce them from the solvent, and recovering oily ink and the solvent separately.

[Claim 6 not printed in the Gazette.]

1,021,738. APPARATUS FOR THE RECOVERY OF OILY INK FROM CLOTHS. MATHEW S. HOPKINS, Baltimore, Md., assignor to The Separate Recovery Company of America, Baltimore, Md. Filed May 13, 1910. Serial No. 561,166. (Cl. 87—6.)



1. In apparatus of the character described, the combination of means for washing cloths ladened with oily ink in a solvent miscible therewith, means communicating with the washing means for churning the liquor consisting of oily ink, solvent and water to conglomerate the oily ink and recover the ink as such, means to separately withdraw the ink and the mixture of solvent and water from the churn, and means communicating with the churning means for recovering the solvent free from water and oily ink.

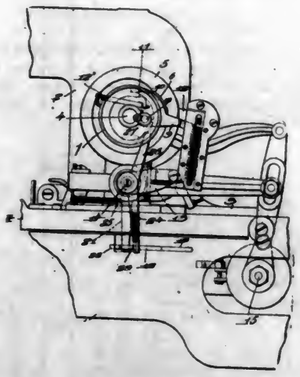
2. In apparatus of the characted described, the combination of a washer, means for discharging an oil solvent miscible in water, into said washer, a churn communicating with the washer, a still communicating with the churn, means for running water from the still to the churn, means for operating the churn to conglomerate the oily ink in the liquor contained in the churn, to recover the ink as such, and means for recovering the solvent.

1,021,739. BUTTONHOLE-SEWING MACHINE. JOHN KIEWICZ, Hyde Park, Mass., assignor to The Reece Button Hole Machine Company, Boston, Mass., a Corporation of Maine. Filed May 4, 1911. Serial No. 624,940. (Cl. 112—4.)

1. In a buttonhole sewing machine, the combination with a frame for sustaining the stitch-forming mechanism, of a driving clutch for operating said mechanism, a feed shaft for moving the frame to carry it into and out of operative position, a feed shaft clutch through which said feed shaft is actuated, driving-clutch-disengaging means movable from an inoperative to an operative position, means associated therewith to hold the feed shaft clutch in inoperative position when the driving-clutch-disengaging means is in inoperative position, and separate and independent means controlled by the driving clutch to hold said feed shaft clutch in inoperative position while the driving clutch is engaged.

2. In a buttonhole sewing machine, the combination

with a frame for sustaining stitch-forming mechanism, of a driving clutch for operating said mechanism, a feed shaft for moving the frame to carry it into and out of operative position, a feed shaft clutch through which the feed shaft is actuated, a lever for controlling said feed shaft clutch, a rocking driving-clutch-disengaging member movable from an inoperative to an operative position, means associated with said member to hold said lever in inoperative position while said member is in inoperative position, and separate means controlled by the driving clutch and engaging said lever to hold positively the feed shaft clutch disengaged while the driving clutch is in operation.



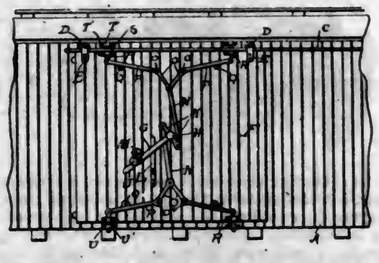
3. In a button hole sewing machine, the combination with a frame for sustaining stitch-forming mechanism, of a driving clutch for operating said mechanism, a feed shaft for moving the frame to carry it into and out of operative position, a feed shaft clutch through which said feed shaft is actuated, a lever for controlling said feed shaft clutch, driving-clutch-disengaging means movable from an inoperative to an operative position, means associated therewith to hold said lever in inoperative position when the driving-clutch-disengaging means is in inoperative position, and separate and independent means controlled by said driving clutch and engaging said lever to hold positively the feed shaft clutch disengaged while the driving clutch is in operation.

4. In a buttonhole sewing machine, the combination with a frame for supporting stitch-forming mechanism, of a driving clutch for operating said mechanism including a hub carrying a clutch dog and provided with a notch, a feed shaft for moving said frame to carry it into and out of operative position, a feed shaft clutch through which said feed shaft is actuated, a lever for controlling said clutch, and a pivoted locking lever adapted to engage said hub and also to engage said clutch-controlling lever and hold the latter positively in inoperative position when said locking lever is in engagement with the periphery of the hub, said locking lever permitting the clutch-controlling lever to move into operative position when said locking lever occupies the notch in said hub.

5. In a buttonhole sewing machine, the combination with a frame for supporting stitch-forming mechanism, of a driving clutch for operating said mechanism, a feed shaft for moving said frame to carry it into and out of operative position, a feed shaft clutch through which said feed shaft is actuated, a lever for controlling the clutch, driving-clutch-disengaging means to disengage the driving clutch at a predetermined point in the movement of the frame, and means controlled by the driving clutch and operating independently of said driving-clutch-disengaging means to hold positively the feed shaft controlling lever in inoperative position while the driving clutch is in operation.

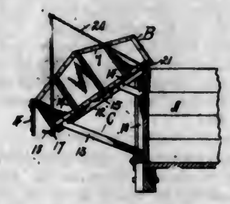
[Claims 6 and 7 not printed in the Gazette.]

1,021,740. CAR-DOOR LOCK. FREDERICK EDWIN LEIGHTON, Millbridge, Me., assignor of one-half to James S. Wyman, Millbridge, Me. Filed May 16, 1911. Serial No. 627,581. (Cl. 70—102.)



In a locking mechanism, the combination with the car and door, the keepers on the car, the lever fulcrumed to the car and having a head forming a pair of arms extending at right angles therefrom, a pair of vertical rods connected to said arms, a pair of short links connected to each rod, a pair of levers connected to each of the said links, and locking bolts connected to the outer ends of said levers and adapted to engage the keepers on the car for locking the door when opened or closed.

1,021,741. PORTABLE CAR-CHUTE. CHARLES J. MOMINEE, Toledo, Ohio, assignor to Herman I. Mominee, Toledo, Ohio. Filed Dec. 20, 1911. Serial No. 667,037. (Cl. 57—37.)



1. A car chute comprising supporting brackets capable of being removably attached to a car side and having inclined upper sides, a chute loosely resting on said brackets and having hooks capable of removably engaging the car side, a gate hinged at its upper edge to the forward end of the chute, and means for releasably holding the gate in position to close the forward end of the chute.

2. A car chute comprising supporting brackets capable of being removably attached to a car side and having inclined upper sides, a chute removably supported by said brackets and having hooks capable of removably engaging the car side, a roof over the forward portion of the chute, a gate pendently hinged at the forward edge of said roof to close the forward discharge opening of the chute, and means for releasably holding the gate in position to close the forward end of the chute.

3. A car chute comprising supporting brackets capable of being removably attached to a car side and having inclined upper sides, a chute loosely resting upon said brackets and having means for engaging a car side, said chute comprising a bottom, opposite forwardly converging ends, a top connecting the forward end portion of the ends, a frame rigidly connecting the bottom, ends, and top at the forward ends of the chute and forming a discharge opening at the forward end, and a gate pendently hinged to the top of said frame and capable of closing the discharge opening, and means for releasably securing the gate in closed position.

4. A chute comprising supporting brackets capable of being removably attached to a car side and having inclined upper sides, a chute removably resting upon said brackets capable of being releasably attached to a car side, said chute comprising a bottom, forwardly converging ends which have the forward portions of their upper edges inclined downwardly relative to their bottom planes to vertically restrict the discharge end of the chute, a roof connecting said inclined portions of the ends and cooperating with the ends and bottom to form a restricted discharge opening, a gate hinged to the top to close said opening, and means for releasably holding the gate in position to close the discharge end of the chute.

1,021,742. SILENCER FOR FIREARMS. ROBERT A. MOORE, New York, N. Y. Filed Sept. 22, 1911. Serial No. 650,684. (Cl. 89—31.)



1. Silencing means for firearms comprising a casing divided into a plurality of chambers and formed with a longitudinal projectile opening intersecting said chambers, and a longitudinally removable tubular baffle arranged in said projectile opening and having means for deflecting gases received therein outwardly into the chambers aforesaid.

2. Silencing means for firearms comprising a casing provided with a projectile opening therethrough and formed with a plurality of partitions separating it into chambers intersected by said opening, a tubular baffle detachably fitted into the projectile opening aforesaid with its tubular portion in alinement with said opening, said baffle being provided with means for deflecting a portion of the gases received by said opening across the opening and for deflecting other portions of the gases outwardly into the chambers of the casing.

3. Silencing means for firearms comprising a casing provided with a projectile opening therethrough and formed with a plurality of partitions separating it into chambers intersected by said opening, a tubular baffle detachably fitted into the projectile opening aforesaid with its tubular portion in alinement with said opening, said baffle being provided with means for deflecting a portion of the gases received by said opening across the opening and for imparting to other portions of the gases intersecting spiral movements.

4. Silencing means for firearms comprising a casing having a projectile opening therein, and a loose tubular baffle fitted in said projectile opening and removable through an end of the latter, said baffle being provided with spirally arranged fins and also formed with longitudinal fins projecting inwardly from the sides thereof.

5. In combination with a firearm, silencing means comprising a casing fitted to the muzzle portion thereof, and means for protecting the muzzle from the gases incident to firing the weapon and comprising a device adapted to be forced snugly against the muzzle by the pressure of said gases.

[Claims 6 to 8 not printed in the Gazette.]

1,021,743. BOLSTER. ALLEN E. OSTRANDER, Ridgewood, N. J. Filed Mar. 8, 1911. Serial No. 613,195. (Cl. 105—76.)



1. In a car underframe, side sills, a transverse supporting member comprising a compression member and a tension member and flanged pocketed castings fixed to the under surface of said tension member and to the upper surface of the compression member above the lower plane of said side sills and being there held by rivets in double shear, the pockets of said castings being adapted to receive inward projections of said side sills.

2. In a car underframe, side sills, a transverse supporting member comprising a compression member and a tension member, and means secured by through rivets in double shear between opposing faces of said compression and tension members, said means extending beyond the ends of said compression and tension members and being adapted to abut said compression member and to serve as pockets to receive inward extensions of said side sills and be secured to said extensions and to the web of said side sills.

3. In a car underframe, side sills, a transverse supporting member comprising a compression member and a tension member and flanged pocketed castings fixed to the under surface of said tension member and to the upper surface of the compression member, said castings bearing against the ends of said compression member, said castings having horizontal bearing surfaces and vertical plates adapted for attachment to said side sills.

4. In a car underframe, plate girder side sills, a transverse supporting member comprising a compression member and a tension member and angular pocketed castings fixed to the under surface of said tension member and to the upper surface of said compression member by rivets in double shear, said castings being adapted to engage the end of said compression member and the pockets in said castings being adapted to receive flanges of said side sills.

5. In a car underframe, plate girder side sills, a transverse supporting member comprising a compression member and a tension member and pocketed castings fixed to the under surface of said tension member and to the upper surface of said compression member above the plane of the side sills, the pockets in the castings receiving flanges of said side sills and parts of said castings contiguous to said pockets being adapted to engage a plurality of members comprised in said side sills.

[Claims 6 to 16 not printed in the Gazette.]

1,021,744. PROCESS FOR PREPARING PASTE USED AS WEAVERS' GLUE OR FOR OTHER SIMILAR DRESSING PURPOSES. PAUL REIMANN, Trehwitz, near Greiz, Germany, assignor of one-half to Frederick William Rogler, Vienna, Austria-Hungary. Filed Sept. 14, 1911. Serial No. 649,384. (Cl. 134—23.)

A process for preparing a paste used as a weaver's glue or for other similar dressing purposes consisting in boiling the ordinary domestic onion in water, separating the decoction thus obtained from the solid residues, adding linseed oil to the decoction and boiling them together, then mixing the substance with the paste as usually prepared in the manufacture of dressing substances and finally boiling them all together.

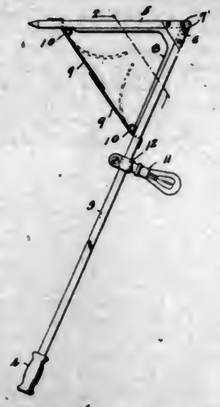
1,021,745. TRAIN-ORDER-CATCHING DEVICE. FRANK J. ROLFE, McCook, Nebr. Filed Nov. 24, 1911. Serial No. 662,159. (Cl. 105—231.)

1. A manually operated train order catcher, comprising a handle staff having a grip at one end, and a substantially straight forwardly and outwardly extending catching arm projecting from the rear end of the staff and disposed at an acute angle thereto.

2. A manually operated train order catcher, comprising a handle staff, an outwardly extending catching arm carried thereby, retaining means extending into the space between the staff and arm, and a cushion located in the angle formed by the staff and arm and extending along the same, substantially to the retaining means.

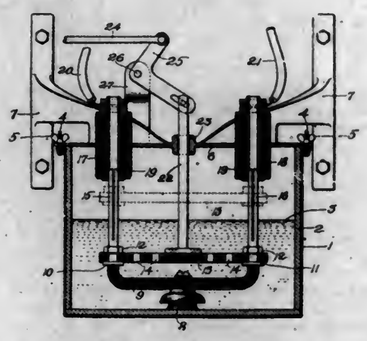
3. A manually operated train order catcher, comprising a handle staff having an angularly disposed forwardly extending train order catching arm mounted on the rear end thereof, and yielding retaining fingers mounted respectively on the staff and arm and extending into the space between the same, said fingers having their free ends overlapped.

4. A manually operated train order catcher, comprising a staff having a handle at its front end, and an angularly disposed train order catching arm extending from its



other end, a yielding buffer strip located against the inner sides of the staff and arm, and spring retaining fingers mounted on the staff and arm and extending into the space between the same.

1,021,746. OIL-SWITCH. CHARLES C. BADEAU, Boston, Mass., assignor to Sears B. Condit, Jr., Boston, Mass. Filed Feb. 20, 1909. Serial No. 479,204. (Cl. 175—283.)



1. An oil switch apparatus, comprising a support having an oil container cover fixed thereto, spaced apart line terminals carried thereby, an oil container removably secured thereto, a bridging contact fixed in the bottom of said oil container, and vertically movable contacts in sliding frictional engagement with said line terminals, said contacts at their lower limit of movement engaging said bridging contact beneath the oil in said container and at their upper limit of movement being a substantial distance above the top of the oil in said container.

2. An oil switch apparatus, comprising a support, stationary insulators mounted in said support, line terminal conductors carried by said insulators, switch contacts electrically connected to said line terminal conductors and having vertically slidable engagement therewith, an oil pan removably suspended beneath said support to immerse the switch contacts when the switch is closed, a normally stationary bridging contact mounted in the bottom of said oil pan in coöperative relation with said switch contacts, and means for raising said switch contacts to near the top of said pan for the purpose stated.

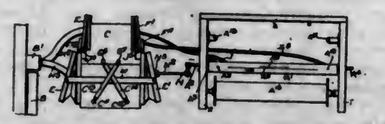
3. An oil switch apparatus, comprising an oil pan, a support therefor including a cover to which the oil pan is removably secured, line terminals carried by said cover ending in vertically slidable contact members, an operator connected to raise said contact members to near the top of said pan, and a bridging contact fixed to the bottom of said pan to engage said coptact members when in lowered position.

4. In an oil switch apparatus, a relatively stationary cover support adapted to be secured permanently to a switch board or the like, stationary insulators mounted in said cover support, line terminal conductors carried by said insulators, switch contacts, contact terminals extending from the latter having movable engagement with the terminals carried by said insulators, externally operable actuating means to move said switch contacts up and down, a normally stationary bridging contact coöperating with said switch contacts to make and break the circuit as said switch contacts are actuated, and an oil pan removably suspended on the under side of said cover support to immerse the switch contacts when the switch is closed.

5. In an oil switch apparatus, a support adapted to be permanently secured to a switchboard or the like, separated tubular insulators fixed in said support, conductor sleeves on said insulators adapted to receive line conductors at their upper ends, switch contacts provided with split terminals extending upwardly within said conductor sleeves, operating mechanism for moving said contacts up and down and thereby telescoping the split terminals thereof within the sleeves of said insulators as the switch is opened and closed, and a normally stationary bridging contact coöperating with said switch contacts to make and break the circuit as said switch contacts are actuated.

[Claim 6 not printed in the Gazette.]

1,021,747. OPERATING MECHANISM FOR TRACKER-BARS. FRANK WESLEY BULL, Oshawa, Ontario, Canada. Original application filed Mar. 10, 1911, Serial No. 613,503. Divided and this application filed May 15, 1911. Serial No. 627,191. (Cl. 84—178.)



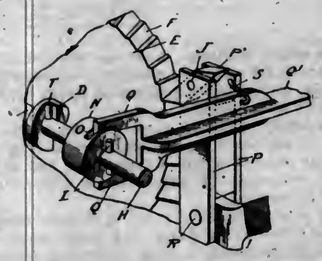
1. An operating mechanism for a horizontally movable tracker bar, having supplemental ducts located just behind the partitions between the note ducts and end ducts, comprising a valve box having a pair of valve chambers communicating with the end ducts of the tracker bar and valves and a vacuum chamber, opposing pneumatics communicating with the valve chambers, and means including a slide valve operated by the uncovering of the supplemental ducts for raising the valve corresponding to the uncovered end duct, as and for the purpose specified.

2. An operating mechanism for a horizontally movable tracker bar, having supplemental ducts located just behind the partitions between the note ducts and end ducts, comprising a valve box having a pair of valve chambers communicating with the end ducts of the tracker bar and valves and a vacuum chamber, opposing pneumatics communicating with the valve chambers and a slide valve operated by the uncovering of the supplemental ducts designed to open up communication between the uncovered end duct and the corresponding valve chamber, as and for the purpose specified.

3. An operating mechanism for a horizontally movable tracker bar, having supplemental ducts located just behind the partitions between the note ducts and end ducts, comprising a valve box comprising an upper and lower valve chamber each divided into a vacuum and atmospheric chamber, pneumatics supported at the ends of the valve chambers, ducts leading from the valve chambers into the pneumatics, valves designed to open and close communication between the vacuum chambers, atmospheric chamber, and the pneumatics, a slide valve seat provided with ducts leading from the atmosphere to beneath the alternately operated valves of the lower valve chamber, a slide valve provided with ducts designed to alternately register with the valve seat ducts, and suitable connecting means between the slide valve and the upper pneumatics, as and for the purpose specified.

4. In a device of the class described, a valve box comprising an upper and lower valve chamber each divided into a vacuum and atmospheric chamber, pneumatics supported at the ends of the valve chambers, ducts leading from the valve chambers into the pneumatics, valves designed to open and close communication between the vacuum chambers, atmospheric chamber, and the pneumatics, a slide valve seat provided with ducts leading from the atmosphere to beneath the alternately operated valves of the lower valve chamber, a slide valve provided with ducts designed to alternately register with the valve seat ducts, and suitable connecting means between the slide valve and the upper pneumatics, as and for the purpose specified.

1,021,748. NON-REVERSIBLE CLUTCH. ALEX A. FAUCHER and THADDEUS CROSBY, San Jacinto, Cal. Filed Apr. 10, 1911. Serial No. 620,262. (Cl. 123—185.)



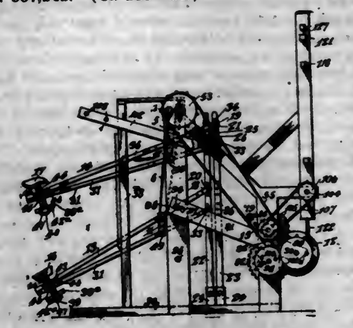
1. An automatic clutch release for cranking internal combustion engines comprising, in combination with the motor shaft, a clutch collar and a ratchet wheel fixed thereto, a longitudinally movable crank shaft, a clutch pin carried thereby, a collar swiveled upon said crank shaft, a pivotal forked bar engaging said collar, a pawl engaging the teeth of said ratchet wheel, and connections between the pawl and said forked bar.

2. An automatic clutch release for cranking internal combustion engines comprising, in combination with the motor shaft, a clutch collar and a ratchet wheel fixed thereto, a longitudinally movable crank shaft, a clutch pin carried thereby, a collar swiveled upon said crank shaft, a pivotal forked bar engaging said collar, pivotal bars, a pawl mounted upon the latter and adapted to engage the ratchet teeth, said bars being in the path of said forked member and adapted to be tilted thereby as the crank shaft is moved, toward the clutch collar, and connections between the pawl carrying bar and said forked bar.

3. An automatic clutch release for cranking internal combustion engines comprising, in combination with the motor shaft, a clutch collar and a ratchet wheel fixed thereto, a longitudinally movable crank shaft, a clutch pin carried thereby, a swiveled collar upon said crank shaft, a pivotal forked bar engaging said collar, pivotal bars, a pin carried thereby, a spring-pressed pawl mounted upon said pin and adapted to engage the teeth of the ratchet wheel when the pawl is at its farthest throw toward the ratchet wheel, a link pivotally connecting one of said pawl carrying bars with the forked bar.

4. An automatic clutch release for cranking internal combustion engines comprising, in combination with the motor shaft, a clutch collar and a ratchet wheel fixed thereto, a longitudinally movable and rotatable crank shaft, pins projecting therefrom, a collar swiveled between said pins and having diametrically opposite grooves, a clutch pin carried by the crank shaft, a plate pivoted to the frame of the apparatus and having forked arms engaging said grooves, swinging bars, a pawl carried by the latter and adapted to engage the teeth of the ratchet wheel, and a link connecting one of said swinging bars with the forked bar.

1,021,749. WEIGHT-MOTOR. SAMUEL WALTER GILLILAND, Bates county, Mo. Filed Apr. 23, 1910. Serial No. 557,242. (Cl. 185—28.)



1. A motor of the class described including upper and lower independent levers fulcrumed at their inner portions and movable vertically in opposite directions and located sufficiently close to permit a person to transfer his weight from one lever to the other, pivoted members extending longitudinally of the upper and lower levers adjacent to each of the same, mechanism connected with the inner portions of the levers and the members for transmitting motion from the same, standards connected with the outer portions of the levers and the pivoted members, a seat connected with the standard of the upper lever, and a foot rest mounted on the standard of the lower lever.

2. A motor of the class described including a vertically movable lever fulcrumed at its rear end, a lower member arranged beneath and extending longitudinally of the lever, an upright standard adjustable along the lever and the said member and pivotally connected to one of the parts and detachably engaged with the other part, means carried by the standard for supporting a person, and mechanism for transmitting motion from the lever.

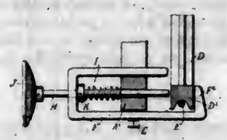
3. A motor of the class described including a vertically movable lever fulcrumed at its rear end, a lower member arranged beneath and extending longitudinally of the lever, an upright standard adjustably pivoted to the said member and detachably engaged with and adjustable along the lever, means carried by the standard for supporting a person, and mechanism for transmitting motion from the lever.

4. A motor of the class described including vertically movable levers pivoted at their rear portions and provided at their front portions with notches, lower members located beneath the levers and pivoted at their rear ends, upright standards adjustably pivoted to the said lower members and provided with means for detachably engaging the notches of the levers, means carried by the standards for supporting a person, and mechanism for transmitting motion from the levers.

5. A motor of the class described including a pivoted operating lever provided with a longitudinal slot, a pivoted member located below the lever and having a corresponding slot, a standard extending through and operating in the slots and adjustably and pivotally connected with the lever and the member, means carried by the standard for supporting a person, and mechanism for transmitting motion from the lever.

[Claims 6 to 31 not printed in the Gazette.]

1,021,750. BRAKE MECHANISM FOR SEWING-MACHINES. JACOB L. KLEINMAN, New York, N. Y. Filed Oct. 5, 1910. Serial No. 585,350. (Cl. 74—13.)

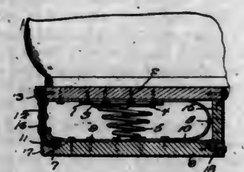


1. A brake attachment for sewing machines, comprising a U-shaped bracket having members of unequal length, the longer member being provided with a right angular arm at its end, the bracket being adapted to be secured to the frame of the machine adjacent to a rotating member thereof with the right angular arm opposite the outer face of the said rotating member, and a sliding and spring pressed brake rod mounted in the bracket with one end opposite the arm of the bracket, the other end of the rod being provided with a knee piece rigidly secured thereto.

2. A brake mechanism for sewing machines, comprising a bracket for attachment to the frame of the sewing machine, and having a right angular arm opposite one face of a rotating part of the sewing machine, a brake rod slidable in the said bracket and having one end opposite the said arm on the other side of the rotating part, a spring pressing the said brake rod to normally hold the brake rod ont of engagement with the said rotating part, and a knee piece rigidly secured to the said brake rod for engagement by the knee of the operator.

3. The combination with a frame, and a driven wheel mounted therein, the frame having an opening adjacent to the said wheel, of a bracket detachably secured to said frame and having a right angular arm opposite one face of the wheel, a brake rod mounted in the bracket and projecting through the opening in the said frame with one end opposite the arm on the other side of said wheel, a collar on the brake rod, a spring on the said rod between the collar and frame, and a knee piece rigidly secured to the other end of the brake rod.

1,021,751. RESILIENT HEEL. HENRY H. MATHIS, Camden, S. C. Filed Dec. 12, 1911. Serial No. 665,293. (Cl. 36—38.)



1. A shoe heel comprising spaced lifts, a resilient member interposed between the lifts, a flexible material bridging the space between the lifts, and ribs carried by the said material.

2. A shoe heel comprising spaced lifts, a resilient member interposed between the lifts, a flexible material folded upon itself and bridging the space between the lifts, and ribs located between the folds of the said material.

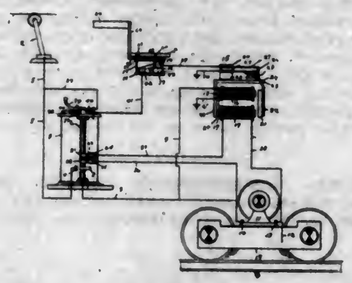
3. A shoe heel comprising spaced lifts one of which is provided with a continuous beveled edge, a resilient member interposed between the lifts and having an edge portion which overhangs the beveled edge, and a flexible material bridging the space between the lifts and having a portion confined at the beveled edge of the lift and under the overhanging portion of the said member.

4. A shoe heel comprising spaced lifts, a resilient member interposed between the lifts, one of the lifts having a continuous beveled edge, a portion of the said member projecting over a portion of the beveled edge of the lift, a plate mounted upon the last mentioned lift and projecting over a portion of the beveled edge thereof, and a flexible material bridging the space between the lifts and confined between said beveled edge and the projecting portions of said member and said plate.

5. A shoe heel comprising spaced lifts, a resilient member interposed between the lifts, a flexible material bridging the space between the lifts, and a metallic rim securing the flexible material against one of the lifts.

[Claims 6 and 7 not printed in the Gazette.]

1,021,752. SAFETY APPLIANCE FOR TRAMWAY-CARS. JAMES E. SCHOOLFIELD, San Francisco, Cal. Filed Feb. 9, 1911. Serial No. 607,658. (Cl. 172—179.)



1. In a safety appliance, a car, car controlling means, locking means for said car controlling means, and automatic means for rendering said locking means inoperative, substantially as described.

2. In a safety appliance, a car and controlling means therefor, electrically operated locking means for rendering said car controlling means inoperative, and automatic means for rendering said locking means inoperative, substantially as described.

3. In a safety appliance, a car, a movable member on said car, car controlling means, electrically operated locking means for rendering said car controlling means inoperative, means operated by said movable member for actuating said locking means, and automatic means for rendering said locking means inoperative, substantially as described.

4. In a safety appliance, a car, a movable member on said car, a circuit closer, car controlling means, locking means for rendering said car controlling means inoperative, of which said circuit closer forms a part, means for actuating said circuit closer to energize said locking means when said movable member is out of its normal position and means to automatically interrupt said locking means, substantially as described.

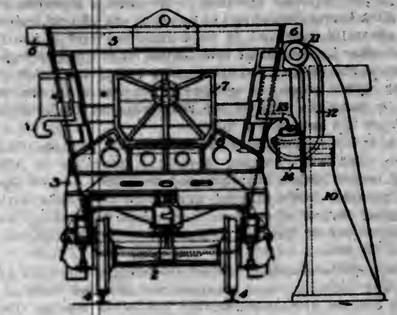
5. In a safety appliance, a car, a movable member on said car, means for holding said movable member in a normal position, car controlling means, locking means for rendering said car controlling means inoperative, a circuit closer forming a part of said locking means and operated by said movable member in an abnormal position for exciting said locking means, and means for rendering said locking means inoperative, substantially as described.

[Claims 6 to 21 not printed in the Gazette.]

1,021,753. LADLE-CAR. ERWIN C. SHERMAN, Youngstown, Ohio, assignor to The William B. Pollock Company, Youngstown, Ohio, a Corporation of Ohio. Filed Apr. 22, 1911. Serial No. 622,837. (Cl. 214—23.)

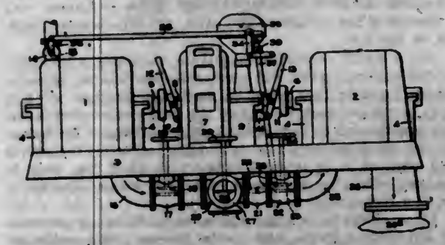
1. The combination of a ladle car, a track upon which the car is mounted, a tiltable ladle supported on the car, a bearing support adjacent to the track, and a swinging cradle mounted on said support and adapted to be engaged by the ladle, substantially as described.

2. The combination of a ladle car, a track upon which the car is mounted, a tiltable ladle mounted on the car, a fixed support adjacent to the track, and a swinging cradle mounted on said support and adapted to be engaged by the ladle, the support also having other supporting means for engagement with the ladle, substantially as described.



3. The combination of a ladle car, a supporting track therefor, a tiltable ladle mounted on the car, a stand adjacent to the track and having bearing surfaces, and a swinging cradle also mounted on said stand, the ladle and cradle having coöperating engaging means, substantially as described.

1,021,754. ELASTIC-FLUID TURBINE. JAMES WILKINSON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Oct. 14, 1911. Serial No. 654,722. (Cl. 121—118.)



1. The combination with a compound turbine, of a power absorbing apparatus interposed between portions of the turbine, and means for connecting and disconnecting said apparatus and turbine so that the former may be driven by either or both portions of said turbine.

2. The combination with a turbine having rotatable elements disposed in two separate casings, of a power absorbing apparatus disposed between said casings, a shaft for said apparatus, rotatable elements in each casing, shafts therefor, and couplings to couple said elements through the shaft of said power absorbing apparatus.

3. A turbo-generator-unit comprising a high pressure turbine, a low pressure turbine, motive fluid connections whereby said turbines are adapted to operate in series, a rotor for each turbine, a generator disposed between said turbines and having its rotatable parts co-axial with the rotors of said turbines, and means to connect said rotatable parts to said rotors.

4. An elastic fluid turbine apparatus comprising in combination, a plurality of turbines connected up to act in series, an interposed power driven apparatus interposed between two of said turbines, means to drive said apparatus from either turbine, a device responsive to the speed of said power driven apparatus, and means controlled thereby to regulate the supply of fluid to said turbine.

5. In combination, a high and low pressure turbine connected up to act in series, a power absorbing apparatus interposed between said turbines, and clutch means to couple said apparatus to either or both turbines.

[Claims 6 to 13 not printed in the Gazette.]

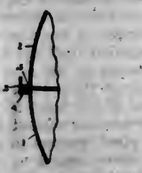
1,021,755. ATTACHMENT FOR HARVESTERS. DELANCY S. CANTINE, Walnut Grove, Minn. Filed Aug. 15, 1910. Serial No. 577,366. (Cl. 56—130.)



A harvester having cutters, a stalk guiding throat, a pivoted bar extending in a horizontal plane transversely of the throat directly in front of the cutters and in substantially the same horizontal plane with the cutters and having its front face at substantially right angles to the longitudinal center line of the throat, a spring connected to said bar, said spring having a resistance sufficient to cause the bar to bend over weeds and the like when said bar is pressed against them, but yielding to permit movement of said bar when it is pressed against the stalks to be harvested, together with stop means carried by the members of the guiding throat for limiting the forward movement of the bar; substantially as described.

REISSUES.

13,389. FLOAT. ARTHUR W. AYLING and PAUL F. REICHERT, Toledo, Ohio. Filed Sept. 18, 1911. Serial No. 650,042. Original No. 952,496, dated Mar. 22, 1910, Serial No. 520,336. (Cl. 137—104.)



1. The combination in a float with a pair of float sections each having an endless seat, and an adhering agent directly uniting said section seats, of permanent holding means extending from one float section to embrace the other and directly force the seats against the section uniting adhering agent.

2. The combination in a float with a pair of float sections each having an endless copper seat, and a rubber adhering agent directly uniting said copper section seats, of permanent holding means extending from one float section to embrace the other and directly force the seats against the section uniting rubber adhering agent.

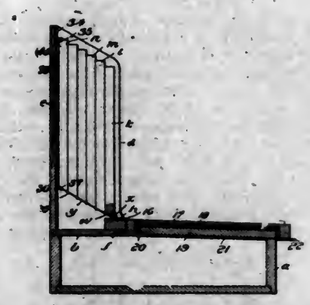
13,390. CREDIT-ACCOUNTING APPLIANCE. PERRY A. MCCASKEY, Alliance, Ohio, assignor to The McCaskey Register Company, Alliance, Ohio, a Corporation of Ohio. Filed Feb. 9, 1909. Serial No. 477,030. Original No. 859,508, dated July 9, 1907, Serial No. 317,716. (Cl. 45—2.)

1. A credit-accounting cabinet including a plurality of hinged bill-holding leaves each provided with bars or rods arranged parallel to the hinge-axes, partitions attached to the leaf and also to the bars or rods, and a plurality of bill-clamps mounted on each bar or rod.

2. A credit-accounting cabinet including a plurality of bill-holding leaves each having a beveled end, the beveled ends of the leaves being hinged one to another and the beveled end of the front leaf being provided with hinging devices, a supporting base, and hinging members mounted on the supporting base to be connected by said hinging devices.

3. A credit-accounting cabinet including a plurality of bill-holding leaves of uniform dimensions hinged one to another each at an end thereof with the axes of the hinge-pins of either two adjacent leaves arranged at adjacent

sides of the leaves and at less distance from the opposite end of one of the two leaves than from the opposite end of the other one of said two leaves to support the rearmost leaves in higher planes than the foremost leaves when in upright positions, one of the leaves having hinging members attached thereto at its side opposite to its side that is hinged to an adjacent leaf, a supporting base, and hinge members mounted on the base to be engaged by the hinging members of said one of the leaves.



4. A credit-accounting cabinet including a supporting base, hinging members mounted on the base, a plurality of bill-holding leaves having each a beveled end whose face is inclined at an acute angle to the front and at an obtuse angle to the back of the leaf, the leaves being hinged together with the pivots of the hinges at opposite sides of the leaves, the pivot of either two leaves being at the obtuse-angled corner of one leaf and at the acute-angled corner of the adjacent leaf, and hinging members attached to one of the leaves at the side or front thereof that is acute to the angle of the beveled end to coöperate with the hinging members of the base.

5. A credit-accounting cabinet including a case having a back, a pair of pivot-bearings in the case, and a plurality of bill-holding leaves hinged to each other, the foremost one of said leaves being provided with pivot members attachable to and detachable from said pivot-bearings only when said leaf is approximately upright, said pivot members normally supporting said foremost leaf upon said pivot bearings, and all of said leaves when upright being inclined to lean by gravity toward the back of the case.

6. A credit-accounting cabinet including a supporting base, pivot bearings on the base, and a plurality of bill-holding leaves provided with hinges adjustably connecting the leaves one to another, one leaf of either two adjacent leaves being movable with respect to the adjacent leaf toward or from the axis of the pivots of the connecting hinges, one of said leaves being supported on said pivot bearings and supporting the other leaves.

7. A credit-accounting cabinet including a plurality of bill-holding leaves, and adjustable hinges connecting the leaves one to another, each hinge having a part fixed to one leaf and a pivotally-connected part provided with a relatively adjustable plate fixed to an adjacent leaf.

8. A credit-accounting cabinet including a case, a pair of bearings in the case provided with elastic side members, and a plurality of bill-holding leaves hinged one to another, the front leaf being pivotally and removably mounted in said bearings and supporting the other leaves.

9. A credit-accounting cabinet including a plurality of hinged leaves having each a plurality of partition strips attached thereto, hinge rods extending through and attached to the strips, bill-clamps connected to the hinge rods and engaging the bodies of the leaves, and supporting devices connected to the leaves and the hinge rods between the strips.

10. A credit-accounting cabinet including a plurality of leaves having each a plurality of partition strips attached thereto, rods or bars extending through and attached to the strips, bill-clamps connected to the rods or bars for support, and frame-strips forming parts of the leaves and having said rods or bars connected thereto, said leaves being hinged together at opposite sides thereof and fitting close together at the edges thereof.

11. A credit-accounting cabinet including a case having a back, a pair of pivot bearings in the case, a plurality of bill-holding leaves hinged one to another, one of said leaves being pivotally mounted in said bearings and supporting the other leaves, all of said leaves when upright leaning toward the back of the case, and a spring supported in the case acting, when one or more of the leaves are drawn down, to move the tops of the remaining leaves forward away from the back of the case.

12. A credit-accounting cabinet including a supporting base provided with hinging devices, a plurality of bill holding leaves hinged together and the front one of the leaves provided with hinging devices to coöperate with the hinging devices of the base, and means for locking the hinging devices of the leaf detachably to the hinging devices of the base.

13. A credit-accounting cabinet including a plurality of bill-holding leaves grouped together and provided with adjustable hinging devices connecting the leaves together for shifting either leaf on its hinging devices longitudinally with respect to the other leaves of the group, and means for supporting the group of leaves.

14. A credit-accounting cabinet including a plurality of hinged leaves or frames having each a plurality of partitions thereon and a plurality of rods mounted on each leaf or frame and extending through the partitions, and bill-clamps mounted on the rods between the several partitions.

15. A credit-accounting cabinet including leaves or frames each comprising a main part, strips on the main part forming sides and ends extending continuously along the edge of the main part and partitions between the sides, the leaves being hinged together with the sides and ends engaging the main parts of adjacent leaves or frames, rods mounted in the partitions and sides, and bill-clamps mounted on the rods.

16. A credit accounting appliance, including a plurality of bill holding leaves, and pivotal devices joining adjacent leaves together in a group in such manner that one leaf may be turned upon the other, the said pivotal devices being constructed to permit the bodily shifting of the leaves of the group relatively to each other, whereby the leaves are adapted to be grouped either with their free ends in stepped relationship to each other for normal operation, or in a rectangular pack for storing.

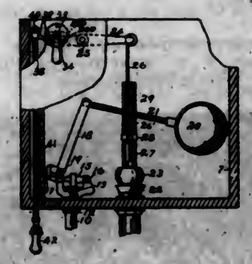
17. A credit accounting appliance, including a plurality of bill holding leaves, and pivotal devices joining adjacent leaves together in a group in such manner that one leaf may be turned upon the other, the said pivotal devices being constructed to permit the bodily shifting of the leaves of the group relatively to each other and to maintain the leaves of the series either in a rectangular pack or with their free ends in stepped relationship to each other.

18. A credit accounting appliance, including a series of bill holding leaves normally arranged for use in a substantially vertical position with their free ends in stepped relationship to each other, and pivotal devices joining adjacent leaves together in a group in such manner that one leaf may be turned upon the other, the said pivotal devices being constructed to permit bodily shifting of the leaves of the group relatively to each other and to move the remaining leaves in the series forward when one or more of said leaves are swung from a vertical to a reclined or horizontal position.

19. In apparatus of the class described, the combination of a series of leaves or frames arranged normally when in use with their upper free ends in stepped relationship to each other, and connections between the lower end of each leaf or frame and the lower end of each adjacent leaf or frame, the said connections including pivots carried by each leaf or frame and about the axis of which the said leaf or frame may turn, and means interposed between the pivots for one leaf and the next adjoining leaf or frame of the series constructed to permit the longitudinal shifting of the leaves or frames relatively to each other.

20. In apparatus of the class described, the combination of a series of leaves or frames of uniform shape and rectangular dimensions, devices connecting the lower ends of adjacent leaves or frames together, including pivots connected with the leaves or frames and about the axes of which the said leaves or frames may turn, and means interposed between the pivots for one leaf or frame and the next leaf or frame of the series constructed to permit the longitudinal shifting of the lower ends of the leaves or frames to and fro relative to each other and to transmit the movement of the lower end of each leaf or frame to the lower ends of the leaves or frames behind it in the series, and means for supporting the leaves or frames as a series.

18,391. FLUSH-TANK-OPERATING DEVICE. BERT O. TILDEN, New York, N. Y., assignor to American Sanitary Works, New York, N. Y., a Corporation of New Jersey. Filed Jan. 24, 1910. Serial No. 539,918. Original No. 821,002, dated May 22, 1906, Serial No. 268,641. Original Reissue No. 12,910, dated Jan. 12, 1909, Serial No. 458,144. (Cl. 4—5.)



1. In combination with a closet low-down flush-tank, of a flush-valve within said tank, a rocking lever pivoted within the tank and connected at one side of its fulcrum with the valve and having at the other side of its fulcrum a pair of bearing-faces spaced apart, a spindle projecting through the wall of the tank and provided on its outer end with a fixed operating-handle located within reach of the user seated on said closet, and having fixed on its inner end a rocking lever, likewise having a pair of bearing-faces spaced apart and coöperating with the bearing-faces of the valve-lever, so that on the swinging of said operating-handle in either direction from its normal position the free end of the valve-lever will be depressed and the valve operated.

2. In combination with a closet low-down flush-tank and with a flushing-valve within said tank, of valve-operating mechanism comprising two members, one a relatively long valve-operating lever pivoted within the tank and connected at one side of its fulcrum with the valve and having at the other side of its fulcrum a bearing-face, and a relatively short arm located at one side of the fulcrum of said valve-lever and having a bearing-face in position to engage the bearing-face of the valve-lever, and all located within the tank, a spindle projecting through the wall of the tank with its inner end connected to said arm and forming the fulcrum thereof, and an operating-handle rigidly secured to the spindle on the outside of the tank and within reach of the user seated on said closet so that on the swinging of said handle from its normal position the free end of the valve-lever will be depressed by the arm and the valve operated.

3. In combination, a flush tank, a flush-valve within said tank, a flush-valve lever pivoted between its ends and connected at one end with the flush-valve, a spindle mounted on said tank, a rocking lever carried by the spindle and having a contact extremity arranged to engage the opposite end of the valve lever, and a pendant gravitative handle located at right angle to said contact extremity and fixed on the spindle for actuating the valve lever, said handle being adapted to gravitate to its normal pendent position after movement thereof so as to instantly relieve the flush-valve lever of pressure after raising the flush-valve.

4. In combination, a flush-tank, a flush-valve mounted therein, a flush-valve lever pivoted between its ends to a side of the tank and connected at one end with the flush-valve, a spindle mounted so as to extend through a side of the tank, a rocking lever secured between its ends to one end of the spindle, the opposite ends of said lever being spaced from the spindle and constituting contact extremities adapted to engage the end of the flush-valve lever opposite that connected with the flush-valve and at spaced bearing points, said flush-valve lever being formed with a depression receiving the spindle aforesaid, whereby the contact extremities of the rocking lever are in the same plane as the spindle, and a pendent handle fixed on the other and outer end of the spindle for rocking the lever carried thereby, said handle being arranged at a right angle to the contact extremities aforesaid and adapted to gravitate to its normal pendent position after actuation hereof and in order to instantly relieve the flush-valve lever of pressure thereon when the flush-valve has been raised.

5. In combination, a flush tank, a flush valve therein, a flush-valve lever pivoted between its ends and connected at one end to the flush valve, a rocking lever pivoted between its ends to provide end arms of unequal length, the extremities of the rocking lever being arranged to engage the end of the flush-valve lever opposite that connected to the valve, and an operating handle for the rocking lever, the longer arm of the rocking lever being the more remote from the fulcrum of the flush-valve lever, whereby the operating handle is movable in either of opposite directions by substantially the same amount of force.

DESIGNS.

42,346. CHRISTMAS STOCKING. HERBERT M. ALLEN, Chicago, Ill. Filed Aug. 25, 1911. Serial No. 646,071. Term of patent 3½ years.



The ornamental design for a Christmas stocking, as shown.

42,347. LEVEL. ANDREW D. ARMSTRONG, Chicago, Ill. Filed Apr. 21, 1911. Serial No. 622,631. Term of patent 7 years.



The ornamental design for a level as shown.

42,348. DRINKING VESSEL OR SIMILAR ARTICLE. EDGAR MOTT BOTTOME, Moundsville, W. Va., assignor to Fostoria Glass Company, Moundsville, W. Va., a Corporation of West Virginia. Filed Jan. 24, 1912. Serial No. 673,256. Term of patent 14 years.



The ornamental design for a drinking vessel or similar article, as shown.

42,349. DRINKING VESSEL OR SIMILAR ARTICLE. EDGAR MOTT BOTTOME, Moundsville, W. Va., assignor to Fostoria Glass Company, Moundsville, W. Va., a Corporation of West Virginia. Filed Jan. 24, 1912. Serial No. 673,257. Term of patent 14 years.



The ornamental design for a drinking vessel or similar article, as shown.

42,350. DRINKING VESSEL OR SIMILAR ARTICLE. EDGAR MOTT BOTTOME, Moundsville, W. Va., and HAYDEN A. MARSHALL, Chicago, Ill., assignors to Fostoria Glass Company, Moundsville, W. Va., a Corporation of West Virginia. Filed Jan. 30, 1912. Serial No. 674,399. Term of patent 14 years.



The ornamental design for a drinking vessel or similar article, as shown.

42,351. PORTFOLIO-COVER. EDWARD F. CALDWELL, Larchmont, N. Y. Filed Dec. 22, 1911. Serial No. 667,417. Term of patent 3½ years.



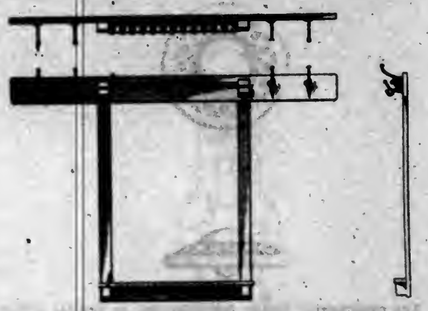
The ornamental design for a portfolio cover as shown.

42,352. PORTFOLIO-COVER. EDWARD F. CALDWELL, Larchmont, N. Y. Filed Dec. 30, 1911. Serial No. 668,774. Term of patent 3½ years.



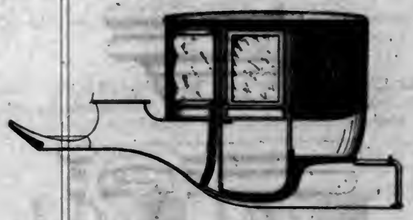
The ornamental design for a portfolio cover as shown.

42,353. CUE-RACK. HARMON F. DAVENPORT, Chicago, Ill., assignor to The Brunswick-Balke-Collender Co., Chicago, Ill., a Corporation of Delaware. Filed July 1, 1911. Serial No. 636,549. Term of patent 14 years.



The ornamental design for a cue rack, as shown.

42,354. VEHICLE-BODY. WILLIAM H. DOUGLAS, Belleville, N. J. Filed Oct. 10, 1911. Serial No. 653,957. Term of patent 7 years.



The ornamental design for a vehicle body, as shown

42,355. VEHICLE-BODY. WILLIAM H. DOUGLAS, Belleville, N. J.. Filed Oct. 10, 1911. Serial No. 653,958. Term of patent 7 years.



The ornamental design for a vehicle body, as shown.

42,356. DRINKING VESSEL OR SIMILAR ARTICLE. PHILLIP EBELING, Moundsville, W. Va., assignor to Fostoria Glass Company, Moundsville, W. Va., a Corporation of West Virginia. Filed Jan. 25, 1912. Serial No. 673,455. Term of patent 14 years.



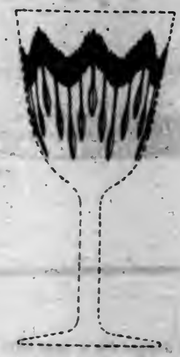
The ornamental design for a drinking vessel or similar article, as shown.

42,357. GLASS OR SIMILAR ARTICLE. ADRIAN GREDELUE, New York, N. Y., assignor to Adrian Michaut, Baccarat, France. Filed Feb. 8, 1912. Serial No. 676,457. Term of patent 14 years.



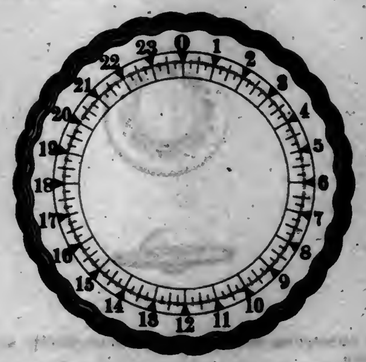
The ornamental design for a glass or similar article, as shown.

42,358. GLASS OR SIMILAR ARTICLE. ADRIAN GREDELUE, New York, N. Y., assignor to Adrian Michaut, Baccarat, France. Filed Feb. 8, 1912. Serial No. 676,458. Term of patent 14 years.



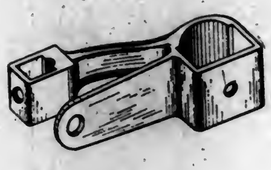
The ornamental design for a glass or similar article, as shown.

42,359. RIM FOR SCALE-DIALS. MARIUS H. HANSEN, Chicago, Ill. Filed Dec. 27, 1910. Serial No. 599,535. Term of patent 14 years.



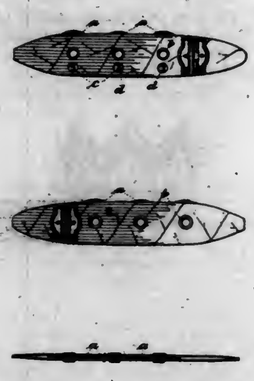
The ornamental design for a rim for scale dials as shown.

42,360. CARBON-HOLDER. JOSEPH J. JONES, Schenectady, N. Y. Filed Jan. 5, 1911. Serial No. 601,047. Term of patent 7 years.



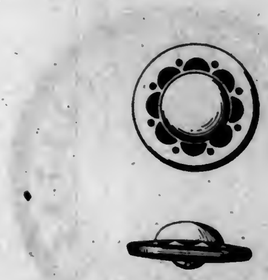
The ornamental design for a carbon holder as shown.

42,361. BASE-BALL SCORER. MAX L. KAUFMANN, New York, N. Y. Filed Dec. 29, 1911. Serial No. 668,529. Term of patent 3½ years.



The ornamental design for a base ball scorer as shown and described.

42,362. BUTTON OR SIMILAR ARTICLE. RUDOLPH LIEBMANN, New York, N. Y. Filed Dec. 26, 1911. Serial No. 668,005. Term of patent 3½ years.



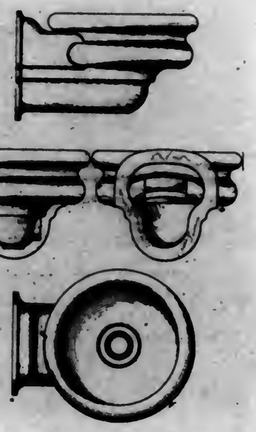
The ornamental design for a button or similar article, as shown.

42,363. BUTTON OR SIMILAR ARTICLE. RUDOLPH LIEBMANN, New York, N. Y. Filed Dec. 26, 1911. Serial No. 668,006. Term of patent 3½ years.



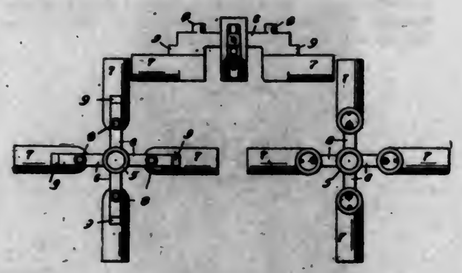
The ornamental design for a button, or similar article, as shown.

42,364. DRINKING-FOUNTAIN. PATRICK J. MADDEN, Chicago, Ill. Filed Jan. 5, 1912. Serial No. 669,710. Term of patent 14 years.



The ornamental design for a drinking fountain, as shown.

42,365. GAS-LAMP BODY. FREDERICK W. MAGES, London, Ontario, Canada, assignor of one-half to Thomas W. Baker, London, Ontario, Canada. Filed Sept. 9, 1910. Serial No. 581,339. Term of patent 14 years.



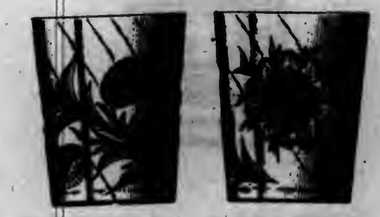
The ornamental design for a gas lamp body as shown and described.

42,366. BRIDLE-CHECK. FREDERICK C. MONIER, New Britain, Conn., assignor to North & Judd Manufacturing Company, New Britain, Conn., a Corporation. Filed Jan. 10, 1912. Serial No. 670,505. Term of patent 14 years.



The ornamental design for a bridle check, as shown.

42,367. DRINKING-GLASS OR SIMILAR ARTICLE. THOMAS MORTENSON, Middletown, N. Y. Filed Jan. 12, 1912. Serial No. 670,947. Term of patent 3½ years.



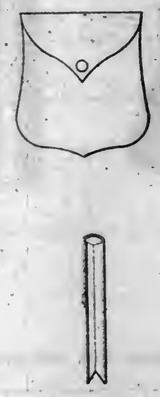
The ornamental design for a drinking glass or a similar article as shown.

42,368. COMBINATION-TOOL. FRANK MOSSBERG, Attleboro, Mass., assignor to Frank Mossberg Company, a Corporation of Rhode Island. Filed Sept. 30, 1911. Serial No. 652,199. Term of patent 14 years.



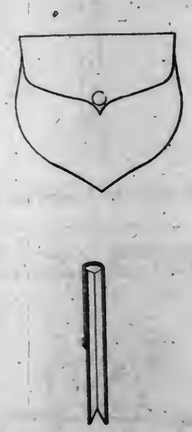
The ornamental design for a combination tool, as shown.

42,369. HAND-BAG. LEO POTTER, New York, N. Y. Filed Aug. 11, 1911. Serial No. 643,626. Term of patent 3½ years.



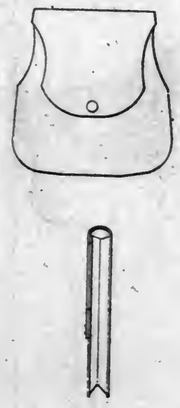
The ornamental design for a hand-bag as shown.

42,370. HAND-BAG. LEO POTTER, New York, N. Y. Filed Aug. 11, 1911. Serial No. 643,629. Term of patent 3½ years.



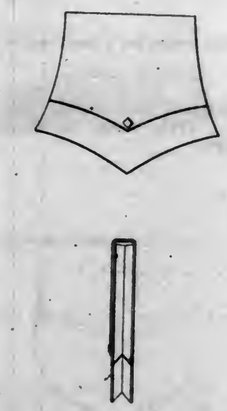
The ornamental design for a hand-bag as shown.

42,371. HAND-BAG. LEO POTTER, New York, N. Y. Filed Aug. 11, 1911. Serial No. 643,634. Term of patent 3½ years.



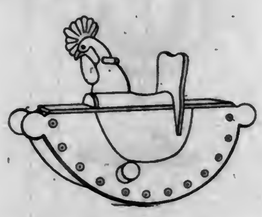
The ornamental design for a hand-bag as shown.

42,372. HAND-BAG. LEO POTTER, New York, N. Y. Filed Aug. 11, 1911. Serial No. 643,636. Term of patent 3½ years.



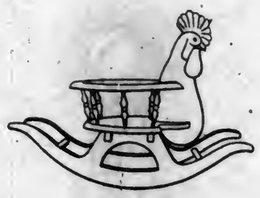
The ornamental design for a hand-bag as shown.

42,373. ROCKING-HORSE. ADOLF W. PRESSLER, Keene, N. H. Filed Nov. 11, 1911. Serial No. 659,833. Term of patent 7 years.



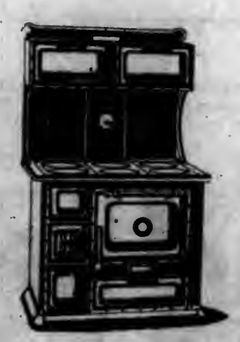
The ornamental design for a rocking horse, as shown.

42,374. ROCKING-HORSE. ADOLF W. PRESSLER, Keene, N. H. Filed Nov. 29, 1911. Serial No. 663,166. Term of patent 7 years.



The ornamental design for a rocking-horse, as shown.

42,375. COAL-RANGE. LOYD SCAUGGS, St. Louis, Mo., assignor to Copper Clad Malleable Range Company, St. Louis, Mo., a Corporation of Nebraska. Filed Dec. 30, 1911. Serial No. 668,775. Term of patent 14 years.



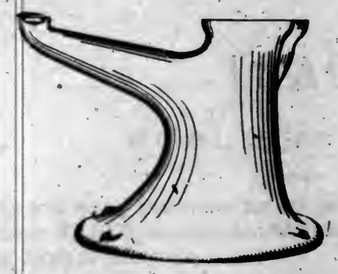
The ornamental design for a coal range, as shown.

42,376. TOY. HERMAN TORLUEMKE, St. Louis, Mo. Filed Oct. 25, 1911. Serial No. 656,794. Term of patent 14 years.



The ornamental design for a toy as shown.

42,377. ICE-CREAM-FREEZER BASE. FRANK TYSON, Canton, Ohio, assignor to The Tyson Company, Canton, Ohio, a Corporation of Ohio. Filed Jan. 8, 1912. Serial No. 670,108. Term of patent 14 years.



The ornamental design for an ice cream freezer base, as shown.

42,378. JACK-SCREW STAND AND LIFTER. THOMAS ANDREW JACKSON WHEELER, Ivanhoe, Tex. Filed Oct. 6, 1911. Serial No. 653,292. Term of patent 14 years.



The ornamental design for a jack screw stand and lifter, as shown.

TRADE-MARKS

PUBLISHED MARCH 26, 1912.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 46,322. (CLASS 15. OILS AND GREASES.) EDGAR LEVINSTEIN, Boston, Mass. Filed Dec. 7, 1909.

KROMOLINE

Particular description of goods.—Tanners' Oil for Stuffing Leather.
Claims use since Dec. 1, 1908.

Ser. No. 47,143. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) PLUNKETT-JARRELL GROCER CO., Little Rock, Ark. Filed Jan. 15, 1910.



Particular description of goods.—Tea, Ground Cinnamon, Orange Flavoring Extract, Lemon Flavoring Extract, Mince-Meat, Rice, Canned Pineapples, Canned Corn, Canned Tomatoes, Bartlett Pears, Canned Apricots, Canned Plums, Canned Peaches, Canned Cherries, Canned Peas, Canned Asparagus, Canned Salmon, Fresh Grapes, and Seeded Raisins.
Claims use since June 1, 1900.

Ser. No. 49,480. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GALBAN & CO. INC., New York, N. Y. Filed May 3, 1910.

CORONA

Particular description of goods.—A Compound of Beef-Fat and Cotton-Seed Oil.
Claims use since 1899.

Ser. No. 51,095. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) BARCO BRASS & JOINT CO., Chicago, Ill. Filed July 26, 1910.

BARCO

Particular description of goods.—Pipe-Joints and Connections and Flexible Pipe-Joints, Cut-Out Valves, and Chimes, Not Electric.
Claims use since May 1, 1908.

Ser. No. 51,158. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE SOUTHWESTERN MILLING COMPANY, Jersey City, N. J., and Kansas City, Mo. Filed July 29, 1910.

Charter Oak

Particular description of goods.—Wheat-Flour.
Claims use since March, 1863.

Ser. No. 51,193. (CLASS 48. MALT EXTRACTS AND LIQUORS.) JOHN HOHENADEL, Philadelphia, Pa. Filed July 30, 1910.



Particular description of goods.—Beer.
Claims use since on or about May 1, 1910.

Ser. No. 52,679. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) HOFFMAN & HOFFMAN, San Francisco, Cal. Filed Nov. 9, 1910.



Particular description of goods.—Washing Compounds.
Claims use since about January, 1907.

Ser. No. 52,971. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) ROCKWELL FURNACE COMPANY, New York, N. Y. Filed Nov. 26, 1910. Under ten-year proviso.

ROCKWELL

Particular description of goods.—Oil, Coal, and Gas Furnaces and Parts Thereof.
Claims use since about 1888.

Ser. No. 53,143. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) JOHANN SCHMIDT, Nuremberg, Germany. Filed Dec. 6, 1910.

Multax

Particular description of goods.—Wafer-Capsule-Closing Apparatus.
Claims use since Aug. 20, 1910.

Ser. No. 53,252. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) CROSSLEY & DAVENPORT, London, England. Filed Dec. 13, 1910.

CHERSEN

Particular description of goods.—Rock-Drills, Direct-Acting Steam Pumps or Compressors, Calking-Hammers, Chipping-Hammers, Coal-Cutting Machines.
Claims use since January, 1909.

Ser. No. 53,456. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) GENERAL ELECTRIC COMPANY, Schenectady, N. Y. Filed Dec. 23, 1910.

METITE

Consisting of the word "Metite."
Particular description of goods.—Brushes for Dynamo-Electric Machines.
Claims use since September, 1910.

Ser. No. 55,238. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) NATIONAL SWEEPER COMPANY, Newark, N. J. Filed Mar. 22, 1911.

LAUREL

Particular description of goods.—Carpet-Sweepers.
Claims use since Dec. 22, 1910.

Ser. No. 55,267. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) B. H. GLADDING DRY GOODS COMPANY, Providence, R. I. Filed Mar. 23, 1911. Under ten-year proviso.



No claim being made to the circles and the word "Quality."
Particular description of goods.—Laces; Curtains; Textile Portières; Textile Draperies; Cotton, Linen, Silk, Velvet, and Woolen Dress Goods; Linen, Cotton, Woolen, Velvet, and Silk Goods in the Piece; Towels; Cotton, Linen, Woolen, and Silk Sheets, Pillow-Cases, Blankets, Comforters, Puffs, Shams, and Spreads; Table-Linens; Veilings; Chiffon; Hair-Nets; Shawls; Handkerchiefs; Textile Carpets and Rugs; Steamer-Rugs; Carriage-Robes, and Afghans.
Claims use since 1807.

Ser. No. 50,415. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) LOS ANGELES PURE FRUIT CO., Batavia, N. Y. Filed May 17, 1911.



The picture of the maid's face being fanciful.
Particular description of goods.—A Preparation for Making Orangeade.
Claims use since Jan. 31, 1911.

Ser. No. 50,416. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) LOS ANGELES PURE FRUIT CO., Batavia, N. Y. Filed May 17, 1911.



The picture of the maid's face being fanciful.
Particular description of goods.—A Preparation for Making Lemonade.
Claims use since Jan. 31, 1911.

Ser. No. 50,967. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JULIA A. NORTON, Los Angeles, Cal. Filed June 12, 1911.



The portrait is that of the applicant.
Particular description of goods.—Face-Cream, Face-Powder, and Hair-Tonic.
Claims use since Mar. 1, A. D. 1905.

Ser. No. 51,142. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEORGE W. GREENE, Cullman, Ala. Filed June 17, 1911.



Particular description of goods.—A Remedy for Cancer.
Claims use since June 1, 1911.

Ser. No. 57,389. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) UNITED STATES GAUGE CO., Sellersville and New York, N. Y. Filed June 30, 1911.



Particular description of goods.—Vacuum-Gages, Pressure-Gages, Test-Gages, Water-Gages, Sounding Apparatus, Electrical-Alarm Gages, High and Low Water Alarm Gages, Draft-Gages, Thermal Gages.
Claims use since May 1, 1910.

Ser. No. 57,506. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) JOHN E. WALSH, Washington, D. C. Filed July 6, 1911. Under ten-year proviso.

JOHN MOSS

Particular description of goods.—Blend Whisky.
Claims use since 1890.

Ser. No. 58,517. (CLASS 39. CLOTHING.) IRVING HAT CO., New York, N. Y. Filed Sept. 2, 1911. Under ten-year proviso.

IRVING

Particular description of goods.—Hats and Caps of Cloth, Wool, Felt, Silk, Fur, and Straw.
Claims use since Aug. 1, 1894.

Ser. No. 58,707. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) FEODOR BURGMANN, Dresden-Laubegast, Germany, and New York, N. Y. Filed Sept. 18, 1911.



Particular description of goods.—Asbestos Plate Adapted to be Subdivided for Use as Machinery Packing.
Claims use since Jan. 1, 1911.

Ser. No. 58,836. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) SANDERSON BROTHERS & NEWBOULD LIMITED, Sheffield, England. Filed Sept. 25, 1911.

INDEPENDENCE 1776

Particular description of goods.—Tool-Steel and Steel in Bar, Rod, Sheet, Plate, Hoop, Ingot, and Wire Form.
Claims use since Feb. 17, 1910.

Ser. No. 58,991. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) WILLIAM LINK COMPANY, Newark, N. J. Filed Oct. 4, 1911.



Particular description of goods.—Jewelry for Personal Wear, and Hollow Ware, Flat Ware, Knives, Forks, and Spoons Made of Precious Metal.
Claims use since 1886.

Ser. No. 59,080. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) DIECKERHOFF, RAFFLOER & Co., New York, N. Y. Filed Oct. 9, 1911.

Diraco

Comprising the word "Diraco."
Particular description of goods.—Braids, Bindings, Silk and Cotton Beltings for Personal Wear, Cords, Webbings, Trimmings, Tapes, Beads, (Made of Glass, Agate, Steel, and Composition Material,) Collar-Supports, Crochet-Hooks, Curling-Irons, Buttons, Hair-Curlers, Corset-Laces, Shoe-Laces, Dress-Steels, Dress-Weights, Combs, Emery-Bags, Embroidery-Rings, Brass and Steel Pins, Horn Strips for Use in Corsets, Hooks and Eyes, Hair Goods, (in the Form of Rolls, Puffs, and Frames,) Hat-Pins of Steel and Composition Metal, Embroidered and Woven Initials, Hand Sewing-Needles, Needle-Books, Pincushions, Pin-Books, Pin-Cards, Ribbon-Wire, Thimbles, (of Nickel, Steel, and German Silver,) Rings, (of Cotton, Silk, and Linen,) and Spool-Holders.
Claims use since Oct. 1, 1908.

Ser. No. 59,213. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) CIE GLE DE PHONOGRAPHES, CINEMATOGRAPHES ET APPAREILS DE PRECISION, Paris, France. Filed Oct. 18, 1911.

"KOK"

Particular description of goods.—Kinematographic Apparatus.
Claims use since July 1, 1911.

Ser. No. 59,239. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) R. M. KELLOGG COMPANY, Three Rivers, Mich. Filed Oct. 19, 1911. Under ten-year proviso.



Particular description of goods.—Strawberry-Plants.
Claims use since Apr. 1, 1891.

Ser. No. 59,510. (CLASS 39. CLOTHING.) BLUM SHOE MFG. CO., Dansville, N. Y. Filed Nov. 2, 1911.



Particular description of goods.—House-Slippers.
Claims use since July 5, 1911.

Ser. No. 59,598. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) C. M. McCLUNG & Co., Knoxville, Tenn. Filed Nov. 7, 1911.



Particular description of goods.—Mail-Boxes, Lavatories, Door-Springs, Bath-Tubs, Water-Closets, Horseshoe-Nails, Steel and Composition-Metal Table Forks and Spoons, Queensware, and Enamel Ware.
Claims use since about 1893.

Ser. No. 59,644. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE NEWTON TEA & SPICE CO., Cincinnati, Ohio. Filed Nov. 10, 1911.

SAVINGS BANK

Consisting of the arbitrary words "Savings Bank."
Particular description of goods.—Coffee, Tea, and Spices.
Claims use since Sept. 2, 1911.

Ser. No. 59,713. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ROBERT L. GERHART, Lancaster, Pa. Filed Nov. 14, 1911.

F & M

Particular description of goods.—Rice, Tea, and Coffee.
Claims use since about May, 1910.

Ser. No. 59,714. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ROBERT L. GERHART, Lancaster, Pa. Filed Nov. 14, 1911.

IVORY

Particular description of goods.—Rice, Tea, and Coffee.
Claims use since about Nov. 1, 1909.

Ser. No. 59,816. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JAQUES MFG. CO., Chicago, Ill. Filed Nov. 20, 1911. Under ten-year proviso.



Particular description of goods.—Baking-Powder.
Claims use since July, 1890.

Ser. No. 59,857. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) J. RANDOLPH CANNON, Norfolk, Va. Filed Nov. 22, 1911.



Particular description of goods.—Remedy for Rheumatism.
Claims use since about 1906.

Ser. No. 59,892. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) UNITED SAFETY RAZOR COMPANY, New York, N. Y. Filed Nov. 24, 1911.



Particular description of goods.—Safety-Razors and Safety-Razor Blades.
Claims use since July 1, 1911.

Ser. No. 59,921. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) JACQUES VISSEAUX, Lyon, France. Filed Nov. 25, 1911.

VISSO

Particular description of goods.—Incandescent Burners and Mantles.
Claims use since Mar. 17, 1910.

Ser. No. 59,965. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) WOLVERINE MOTOR WORKS, Bridgeport, Conn. Filed Nov. 27, 1911.

WOLVERINE

Particular description of goods.—Internal-Combustion Engines and Clutches.
Claims use since 1895.

Ser. No. 59,975. (CLASS 37. PAPER AND STATIONERY.) AMERICAN SALES BOOK COMPANY, LIMITED, Toronto, Canada, and Elmira, N. Y. Filed Nov. 28, 1911.

SYSTEMAT

Particular description of goods.—Sales-Books.
Claims use since Oct. 14, 1911.

Ser. No. 59,999. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) AMERICAN IRON AND STEEL MANUFACTURING COMPANY, Lebanon and Reading, Pa. Filed Nov. 29, 1911.



Particular description of goods.—Structural Forgings, Bar-Iron, and Bar-Steel.
Claims use since August, 1911.

Ser. No. 60,037. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) WOLVERINE MOTOR WORKS, Bridgeport, Conn. Filed Dec. 1, 1911. Under ten-year proviso.

Wolverine Motor Works

Particular description of goods.—Internal-Combustion Engines and Clutches.
Claims use since prior to Feb. 15, 1895.

Ser. No. 60,058. (CLASS 39. CLOTHING.) HOOD RUBBER CO., Boston, Mass. Filed Dec. 2, 1911.



The trade-mark consists of a button applied to the surface of the boot or shoe, as shown in the drawing, no claim being made herein to the portion of the boot shown, which is included in the drawing merely to illustrate the manner of application of the mark.

Particular description of goods.—Rubber Boots and Shoes, Rubber Overshoes, and Rubber-Soled Tennis-Shoes.

Claims use since July 1, 1911.

Ser. No. 60,063. (CLASS 12. CONSTRUCTION MATERIALS.) PATENT VULCANITE ROOFING CO., Chicago, Ill. Filed Dec. 4, 1911.



Particular description of goods.—Building-Paper, Roofing-Felt, Building-Felt Known as "Dampcourse," Prepared Roofing Made from Felt, and Shingles Made from Felt.

Claims use since Jan. 1, 1904.

Ser. No. 60,074. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) GEORGE RAHMANN, New York, N. Y. Filed Dec. 5, 1911.

TRIUMPH

Particular description of goods.—Belt-Dressing.

Claims use since Nov. 15, 1911.

Ser. No. 60,087. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MACK'S MEDICAL CO. INC., Boston, Mass. Filed Dec. 6, 1911.



Particular description of goods.—A Medical Preparation for Overperspiring and Sore Feet.

Claims use since July 1, 1910.

Ser. No. 60,098. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) AMERICAN IRON AND STEEL MANUFACTURING COMPANY, Lebanon and Reading, Pa. Filed Dec. 6, 1911.



Particular description of goods.—Structural Forgings, Bar-Iron, and Bar-Steel.

Claims use since August, 1911.

Ser. No. 60,139. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) JOHN G. HENDERSON, Charlottesville, Va. Filed Dec. 9, 1911. Under ten-year proviso.

HENDERSON

Particular description of goods.—A Boring-Machine for Boring Joist for Electric-Light Wiring.

Claims use since May, 1893.

Ser. No. 60,140. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) F. MATT & CO., Newark, N. J. Filed Dec. 9, 1911.

ALCOVIE



Particular description of goods.—Leather Blackings and Dressings.

Claims use since Dec. 2, 1911.

Ser. No. 60,155. (CLASS 39. CLOTHING.) JACOB YETTER, Jacksonville, Fla. Filed Dec. 9, 1911. Under ten-year proviso.



Particular description of goods.—Coats, Vests, Trousers, Overcoats, and Rain-Coats.

Claims use since 1891.

Ser. No. 60,164. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) CLIMAX SANITARY COMPANY, Detroit, Mich. Filed Dec. 11, 1911.



Particular description of goods.—Water-Closets, Closet-Seats, Flushing-Tanks, and Closet-Bowls.

Claims use since February, 1911.

Ser. No. 60,215. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WHEELER CHEMICAL CO. INC., Lynchburg, Va. Filed Dec. 13, 1911.

ALKALINOS

Particular description of goods.—An Alkaline Solution for the Treatment of Catarrh.

Claims use since Dec. 8, 1911.

Ser. No. 60,220. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BROWN BROS., Baltimore, Md. Filed Dec. 14, 1911.

DIACRAMP

Particular description of goods.—A Remedy for Dysentery, Diarrhea, Cholera Morbus, Flatulent Colic, Nausea, Seasickness, Cramps and Pain in Stomach, and Painters' Colic.

Claims use since Nov. 21, 1911.

Ser. No. 60,221. (CLASS 15. OILS AND GREASES.) P. MOIR CRANE & CO., LTD., Manchester, England. Filed Dec. 14, 1911.



Particular description of goods.—Oils for Lubricating or Burning.

Claims use since 1862.

Ser. No. 60,235. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) AMERICAN IRON AND STEEL MANUFACTURING COMPANY, Lebanon and Reading, Pa. Filed Dec. 15, 1911.



Particular description of goods.—Threaded Bolts; Machine-Bolt Blanks; Bolt Ends; Metal Screws; Railway-Spikes; Dock-Spikes; Wharf-Spikes; Boat-Spikes; Rivets; Metal Nuts; Washers; Threaded Rods, and Structural Rods.

Claims use since August, 1911.

Ser. No. 60,281. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) AMERICAN IRON AND STEEL MANUFACTURING COMPANY, Lebanon and Reading, Pa. Filed Dec. 16, 1911.



Particular description of goods.—Threaded Bolts; Machine-Bolt Blanks; Bolt Ends; Metal Screws; Railway-Spikes; Boat-Spikes; Wharf-Spikes; Dock-Spikes; Rivets; Metal Nuts; Metal Washers; Threaded Rods, and Structural Rods.

Claims use since August, 1911.

Ser. No. 60,300. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) U-VA-JEE MANUFACTURING CO., Watertown, Wis. Filed Dec. 18, 1911.

U-Va-Jee

Particular description of goods.—Medicinal Salve.

Claims use since Oct. 27, 1911.

Ser. No. 60,325. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) THE STAR RUBBER CO., Akron, Ohio. Filed Dec. 18, 1911.

NEPTO

Particular description of goods.—Water-Bottles, Fountain-Syringes, Bulb-Syringes, Ear and Ulcer Syringes, Atomizers, Breast-Pumps, Bulbs for Syringes, Douches.
Claims use since 1909.

Ser. No. 60,327. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) THE STAR RUBBER CO., Akron, Ohio. Filed Dec. 18, 1911.

LUNA

Particular description of goods.—Water-Bottles, Fountain-Syringes, Bulb-Syringes, Ear and Ulcer Syringes, Atomizers, Breast-Pumps, Bulbs for Syringes, Douches.
Claims use since 1909.

Ser. No. 60,329. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) THE STAR RUBBER CO., Akron, Ohio. Filed Dec. 18, 1911.

VENO

Particular description of goods.—Water-Bottles, Fountain-Syringes, Bulb-Syringes, Ear and Ulcer Syringes, Atomizers, Breast-Pumps, Bulbs for Syringes, Douches.
Claims use since 1909.

Ser. No. 60,331. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) THE STAR RUBBER CO., Akron, Ohio. Filed Dec. 18, 1911.

SATURN

Particular description of goods.—Water-Bottles, Fountain-Syringes, Bulb-Syringes, Ear and Ulcer Syringes, Atomizers, Breast-Pumps, Bulbs for Syringes, Douches.
Claims use since 1909.

Ser. No. 60,332. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) THE STAR RUBBER CO., Akron, Ohio. Filed Dec. 18, 1911.

JUPITER

Particular description of goods.—Water-Bottles, Fountain-Syringes, Bulb-Syringes, Ear and Ulcer Syringes, Atomizers, Breast-Pumps, Bulbs for Syringes, Douches.
Claims use since 1908.

Ser. No. 60,343. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) AMERICAN IRON AND STEEL MANUFACTURING COMPANY, Lebanon and Reading, Pa. Filed Dec. 19, 1911.



Particular description of goods.—Threaded Bolts; Machine-Bolt Blanks; Bolt Ends; Metal Screws; Railway-Spikes; Dock-Spikes; Wharf-Spikes; Boat-Spikes; Rivets; Metal Nuts; Metal Washers; Threaded Rods, and Structural Rods.
Claims use since August, 1911.

Ser. No. 60,344. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) AMERICAN IRON AND STEEL MANUFACTURING COMPANY, Lebanon and Reading, Pa. Filed Dec. 19, 1911.



Particular description of goods.—Threaded Bolts; Machine-Bolt Blanks; Bolt Ends; Metal Screws; Railway-Spikes; Dock-Spikes; Wharf-Spikes; Boat-Spikes; Rivets; Metal Nuts; Metal Washers; Threaded Rods, and Structural Rods.
Claims use since August, 1911.

Ser. No. 60,365. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) AMERICAN IRON AND STEEL MANUFACTURING COMPANY, Lebanon and Reading, Pa. Filed Dec. 20, 1911.



Particular description of goods.—Threaded Bolts; Machine-Bolt Blanks; Bolt Ends; Metal Screws; Railway-Spikes; Dock-Spikes; Wharf-Spikes; Boat-Spikes; Rivets; Metal Nuts; Metal Washers; Threaded Rods, and Structural Rods.
Claims use since August, 1911.

Ser. No. 60,372. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) CLAUSS SHEAR COMPANY, Fremont, Ohio. Filed Dec. 20, 1911.

Rexall

Particular description of goods.—Shears, Scissors, Razors, and Safety-Razors.
Claims use since the month of September, 1909.

Ser. No. 60,376. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) INTERNATIONAL ACCESSORIES MANUFACTURING COMPANY, New York, N. Y. Filed Dec. 20, 1911.

A. B. C.

Particular description of goods.—Carbureters.
Claims use since on or about Dec. 12, 1911.

Ser. No. 60,386. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) AMERICAN IRON AND STEEL MANUFACTURING COMPANY, Lebanon and Reading, Pa. Filed Dec. 21, 1911.



No claim being made, however, for the words "American Iron and Steel M'f'g. Co., Lebanon, Pa., U. S. A.," or for the representation of a bolt and nut.
Particular description of goods.—Threaded Bolts; Machine-Bolt Blanks; Bolt Ends; Metal Screws; Railway-Spikes; Dock-Spikes; Wharf-Spikes; Boat-Spikes; Rivets; Metal Nuts; Metal Washers; Threaded Rods, and Structural Rods.
Claims use since August, 1911.

Ser. No. 60,388. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE DEAN ELECTRIC COMPANY, Elyria, Ohio. Filed Dec. 21, 1911.

TUTO-ETTE

Particular description of goods.—Electric Signaling-Horns.
Claims use since Oct. 1, 1911.

Ser. No. 60,410. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE NEW YORK AIR BRAKE COMPANY, New York, N. Y. Filed Dec. 22, 1911.



Particular description of goods.—Air-Pumps and Parts Thereof.
Claims use since Jan. 15, 1896.

Ser. No. 60,465. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DENTON BROTHERS DRUG CO., Beardstown, Ill. Filed Dec. 27, 1911.

TREX

Particular description of goods.—A Tonic Laxative Compound.
Claims use since Oct. 18, 1911.

Ser. No. 60,488. (CLASS 39. CLOTHING.) JACOB PFEBNGER, New York, N. Y. Filed Dec. 28, 1911.

Sea Side Queen

Particular description of goods.—Bathing-Suits.
Claims use since Dec. 1, 1911.

Ser. No. 60,502. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) HERBERT M. BINGHAM, New York, N. Y. Filed Dec. 29, 1911.

H - E - M - B

Particular description of goods.—Printers' Rollers.
Claims use since Jan. 1, 1911.

Ser. No. 60,503. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) HERBERT M. BINGHAM, New York, N. Y. Filed Dec. 29, 1911.



Particular description of goods.—Printer's Rollers.
Claims use since Jan. 1, 1911.

Ser. No. 60,507. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) "ELECTRA" LIGHTNING ROD CO., Chicago, Ill. Filed Dec. 29, 1911.



The spirally-arranged strand or group of wires being silver colored.
Particular description of goods.—Lightning-Rods.
Claims use since Feb. 9, 1909.

Ser. No. 60,528. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE START-O COMPANY, Cleveland, Ohio. Filed Dec. 30, 1911.

VICTOR

Particular description of goods.—Gas-Supply-Starting Devices for Internal-Combustion Engines.
Claims use since Sept. 5, 1911.

Ser. No. 60,540. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) GILLAN & GILLAN, Passaic, N. J. Filed Jan. 2, 1912.

G&G

Particular description of goods.—Liquid Stove-Polish.
Claims use since Feb. 18, 1911.

Ser. No. 60,599. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ACTIEN-GESELLSCHAFT FÜR ANILIN-FABRIKATION, Berlin, Germany. Filed Jan. 4, 1912.

Azodermin

Particular description of goods.—Wound-Healing Remedies.
Claims use since Sept. 16, 1909.

Ser. No. 60,672. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) F. O. PIERCE CO., New York and Brooklyn, N. Y. Filed Jan. 6, 1912.

PIERESCO

Particular description of goods.—Cold-Water Paint.
Claims use since May 12, 1911.

Ser. No. 60,679. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) ELY & WALKER DRY GOODS COMPANY, St. Louis, Mo. Filed Jan. 8, 1912. Under ten-year proviso.

Madame Lloyd's

Consisting of the words "Madam Lloyd's."
Particular description of goods.—Hose-Supporters, Safety-Pins, Hair-Pins, Toilet-Pins, Needles for Hand-Sewing, Buttons, Braid, Hooks and Eyes, Brushes for the Hands, Hair, and Complexion, Combs for the Hair, Thimbles of Base Metal, Dress-Shields, Inelastic Garter-Web, and Collar-Stays.
Claims use since about Jan. 1, 1892.

Ser. No. 60,699. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ALMOND J. WHITE, Chillicothe, Mo. Filed Jan. 9, 1912.

NU-SE-DO

Particular description of goods.—A Preparation to Prevent Mice, Moles, Gophers, Cut-Worms, Wire-Worms, and other Insects and Animals from Destroying Corn after it is Planted.
Claims use since Dec. 12, 1911.

Ser. No. 60,764. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) EDWARD Z. JEFFERSON, Sewickley, Pa. Filed Jan. 12, 1912.

JASEE

Particular description of goods.—Rubber Valves, Rubber Packing, Cotton-Covered Rubber-Lined Hose, Rubber Springs, and Oil, Gas, and Water Well Packer-Rubbers.
Claims use since Nov. 1, 1911.

Ser. No. 60,765. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) EDWARD Z. JEFFERSON, Sewickley, Pa. Filed Jan. 12, 1912.

EZ

Particular description of goods.—Rubber Valves, Rubber Packing, Cotton-Covered Rubber-Lined Hose, Rubber Springs, and Oil, Gas, and Water Well Packer-Rubbers.
Claims use since Nov. 1, 1911.

Ser. No. 60,833. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) WHITINSVILLE SPINNING RING COMPANY, Whitinsville, Mass. Filed Jan. 15, 1912.

DIAMOND FINISH

Particular description of goods.—Spinning and Twister Rings.
Claims use since December, 1911.

Ser. No. 60,971. (CLASS 2. RECEPTACLES.) HARMONY MILLS, Cohoes, N. Y., and Boston, Mass. Filed Jan. 22, 1912.

HARMONY

Particular description of goods.—Woven Cotton Bags.
Claims use since 1875.

Ser. No. 60,995. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE J. B. WILLIAMS COMPANY, Glastonbury, Conn. Filed Jan. 24, 1912.

MUG

Particular description of goods.—Shaving and Toilet Soaps.
Claims use since about July, 1880.

Ser. No. 61,017. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LOUIS R. FIEBERT, New York, N. Y. Filed Jan. 25, 1912.



The portrait shown is fanciful.
Particular description of goods.—Hair-Tonic.
Claims use since July, 1911.

Ser. No. 61,025. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) BARTHELS MFG. CO., New York, N. Y. Filed Jan. 25, 1912.



Particular description of goods.—Braids, Shoe-Laces, Galloons, and Corset-Laces.
Claims use since Apr. 10, 1903.

Ser. No. 61,081. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) F. MANTOVANI, Milan, Italy. Filed Jan. 27, 1912.



Particular description of goods.—A Powder for Absorbing Perspiration, for Children.
Claims use since February, 1907.

Ser. No. 61,101. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WELLS & RICHARDSON COMPANY, Burlington, Vt. Filed Jan. 27, 1912.

DANDELION BRAND Butter Color



No claim being made to the words "Brand" or "Butter Color."
Particular description of goods.—Preparations for Coloring Butter.
Claims use since May 1, 1876.

Ser. No. 61,103. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WELLS & RICHARDSON COMPANY, Burlington, Vt. Filed Jan. 27, 1912.

Diamond Package Dyes

No claim being made to the words "Package Dyes" and the word and figures "10 cents."
Particular description of goods.—Dyes.
Claims use since March, 1881.

Ser. No. 61,145. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE CUDAHY PACKING COMPANY, Chicago, Ill. Filed Jan. 31, 1912.

PARROT



Particular description of goods.—A Metal-Polish.
Claims use since Jan. 15, 1912.

Ser. No. 61,168. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOHN J. BRODRICK, New York, N. Y. Filed Jan. 31, 1912.

Anti Katzen-Jammer

Particular description of goods.—A Headache Remedy.
Claims use since Jan. 24, 1912.

Ser. No. 61,182. (CLASS 43. THREAD AND YARN.) RICHARDSON SILK CO., Chicago, Ill. Filed Feb. 1, 1912.

RMC

Particular description of goods.—Mercerized - Cotton Floss.
Claims use since Jan. 1, 1912.

Ser. No. 61,199. (CLASS 7. CORDAGE.) THE LINEN THREAD CO., New York, N. Y. Filed Feb. 2, 1912.

Salmon Ticket

Particular description of goods.—Twine.
Claims use since 1898.

Ser. No. 61,272. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) CHARLES V. STURTEVANT, San Francisco, Cal. Filed Feb. 5, 1912.

Surprise

Particular description of goods.—Stove-Polish.
Claims use since September, 1908.

Ser. No. 61,392. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) CHARLES A. STEWART, Rollinsford, N. H. Filed Feb. 9, 1912.

KUTMORE

Particular description of goods.—Cotton Piece Goods.
Claims use since May 1, 1911.

Ser. No. 61,488. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) CHARLES A. DANIEL, Philadelphia, Pa. Filed Feb. 12, 1912.

LITTLE PLUMBER

Particular description of goods.—Force-Cups, Plumbers' Friend, and Toilet-Plunger.
Claims use since Nov. 15, 1911.

Ser. No. 61,461. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) JACKSON-ENO RUBBER COMPANY, Los Angeles, Cal. Filed Feb. 14, 1912.

SAMSON

Particular description of goods.—Inner-Shoe Tire-Casings for Automobile-Tires.
Claims use since Apr. 1, 1911.

Ser. No. 61,513. (CLASS 15. OILS AND GREASES.) STANDARD OIL COMPANY OF BRAZIL, New York, N. Y. Filed Feb. 15, 1912.

BRINDILLA



Particular description of goods.—Refined Oil for Lighting, Heating, and Power Purposes.
Claims use since Feb. 8, 1912.

Ser. No. 61,519. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) CARBON PRODUCTS COMPANY, Charleston, W. Va. Filed Feb. 15, 1912.

Chieftain

Particular description of goods.—Furniture, Automobile, Linoleum, and Floor Polishes.
Claims use since Oct. 8, 1911.

Ser. No. 61,533. (CLASS 7. CORDAGE.) COLUMBIAN ROPE COMPANY, Auburn, N. Y. Filed Feb. 15, 1912.

OCEANIC

Particular description of goods.—Manila and Sisal Rope and Cordage.
Claims use since Oct. 30, 1911.

Ser. No. 61,553. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE ROWE RING-POINT COMPANY, Hartford, Conn. Filed Feb. 16, 1912.

Cat-Foot

Particular description of goods.—Horse-Nails.
Claims use since Feb. 7, 1912.

TRADE-MARKS

REGISTERED MARCH 26, 1912.

85,843. REMEDY FOR RHEUMATISM. BOYD MEDICINE CO., Detroit, Mich.
Filed September 8, 1911. Serial No. 58,589. PUBLISHED JANUARY 23, 1912.

85,844. SWEET WINES OF THE HAUT-SAUTERNE TYPE. CALIFORNIA WINE ASSOCIATION, San Francisco, Cal.
Filed June 15, 1908. Serial No. 35,364. PUBLISHED JANUARY 23, 1912.

85,845. WRITING AND PRINTING PAPER. JOHN CARTER AND COMPANY, INCORPORATED, Boston, Mass.
Filed December 8, 1911. Serial No. 60,121. PUBLISHED JANUARY 16, 1912.

85,846. PEROXID OF HYDROGEN. CONSUMERS COMPANY, Chicago, Ill.
Filed November 25, 1911. Serial No. 59,919. PUBLISHED JANUARY 23, 1912.

85,847. NERVE AND BLOOD TONIC. JNO. B. DANIEL, Atlanta, Ga.
Filed November 2, 1911. Serial No. 59,511. PUBLISHED JANUARY 23, 1912.

85,848. CERTAIN SCIENTIFIC APPLIANCES. HENRY DANZER, Paris, France.
Filed August 14, 1911. Serial No. 58,200. PUBLISHED JANUARY 23, 1912.

85,849. REMEDY FOR DISEASES OF THE LUNGS. DIONOS MEDICAL COMPANY, Englewood, Colo.
Filed November 22, 1911. Serial No. 59,850. PUBLISHED JANUARY 23, 1912.

85,850. TRIANGULAR RULERS. FRANCIS I. DU PONT, Wilmington, Del.
Filed September 28, 1911. Serial No. 58,895. PUBLISHED JANUARY 23, 1912.

85,851. SPARKLING WINE. EMPIRE STATE WINE CO., Penn Yan, N. Y.
Filed October 24, 1911. Serial No. 59,323. PUBLISHED JANUARY 23, 1912.

85,852. LEAD-PENCILS, COLORED PENCILS, COPYING-PENCILS, AND INK-PENCILS. A. W. FABER, Stein and Berlin, Germany.
Filed November 25, 1911. Serial No. 59,918. PUBLISHED JANUARY 16, 1912.

85,853. GENERAL TONIC AND BLOOD REMEDY. DR. PETER FAHRNEY & SONS CO., Chicago, Ill.
Filed November 23, 1911. Serial No. 59,890. PUBLISHED JANUARY 23, 1912.

85,854. LINIMENT. LEHEL J. FENNYERY, Longmeadow, Mass.
Filed November 27, 1911. Serial No. 59,968. PUBLISHED JANUARY 23, 1912.

85,855. CIGARS. RODRIGO FERNANDEZ, Key West, Fla.
Filed July 19, 1911. Serial No. 57,723. PUBLISHED JANUARY 16, 1912.

85,856. CERTAIN PHARMACEUTICAL PREPARATIONS. WILLARD BURDETTE FORCE, New York, N. Y.
Filed January 27, 1911. Serial No. 54,123. PUBLISHED JANUARY 23, 1912.

85,857. ELECTRIC LIQUID-MIXING AND ELECTRIC LIQUID-HEATING MACHINES. FULTON-BELL COMPANY, New York, N. Y.
Filed October 6, 1911. Serial No. 59,022. PUBLISHED JANUARY 23, 1912.

85,858. PASTE SOAP. GIT MFG. CO., Westfield, Mass.
Filed November 1, 1911. Serial No. 59,485. PUBLISHED JANUARY 23, 1912.

85,859. LIQUID REMEDY FOR DISEASES OF THE EYE. JOHN B. HADEN, Galveston, Tex.
Filed September 25, 1908. Serial No. 37,599. PUBLISHED JANUARY 5, 1909.

85,860. CLIPS OR GUARDS FOR EYEGLASSES. MOSES H. HARRIS, New York, N. Y.
Filed October 9, 1911. Serial No. 59,074. PUBLISHED JANUARY 23, 1912.

85,861. CLEANING-POWDER. WM. H. HAYWARD, New York, N. Y.
Filed July 27, 1911. Serial No. 57,843. PUBLISHED JANUARY 23, 1912.

85,862. CERTAIN KINDS OF JEWELRY. FRANK D. HEALY, New York, N. Y.
Filed November 11, 1911. Serial No. 59,664. PUBLISHED JANUARY 23, 1912.

85,863. WEEKLY PERIODICAL. HILL PUBLISHING COMPANY, New York, N. Y.
Filed October 20, 1911. Serial No. 59,253. PUBLISHED JANUARY 23, 1912.

85,864. WATCHCASES. ILLINOIS WATCH CASE CO., Elgin, Ill.
Filed October 23, 1911. Serial No. 59,287. PUBLISHED JANUARY 16, 1912.

85,865. SALT. INDEPENDENT SALT CO., Brooklyn, N. Y.
Filed November 8, 1911. Serial No. 59,611. PUBLISHED JANUARY 23, 1912.

85,866. BEER. JAMESTOWN BREWING COMPANY, Jamestown, N. Y.
Filed December 15, 1911. Serial No. 60,254. PUBLISHED JANUARY 23, 1912.

85,867. RUBBER ERASERS AND RUBBER BANDS. KABUS RUBBER COMPANY, New York, N. Y.
Filed November 17, 1911. Serial No. 59,771. PUBLISHED JANUARY 23, 1912.

85,868. RUBBER ERASERS AND RUBBER BANDS. KABUS RUBBER COMPANY, New York, N. Y.
Filed November 17, 1911. Serial No. 59,772. PUBLISHED JANUARY 23, 1912.

85,869. SALVE FOR SKIN AFFECTIONS. CHESTER KENT & COMPANY, Jersey City, N. J., and Boston, Mass.
Filed November 25, 1911. Serial No. 59,928. PUBLISHED JANUARY 23, 1912.

85,870. PIANOS AND PIANO-PLAYERS. CHARLES KOHLER, New York, N. Y.
Filed August 22, 1911. Serial No. 58,314. PUBLISHED JANUARY 23, 1912.

85,871. CIGARS, CIGARETTES, CHEWING AND SMOKING TOBACCOS. NICHOLAS KUHNEN CIGAR CO., Davenport, Iowa.
Filed July 7, 1911. Serial No. 57,529. PUBLISHED JANUARY 16, 1912.

85,872. WRAPPING-PAPER. MAGNOLIA PAPER CO., Houston, Tex.
Filed October 24, 1911. Serial No. 59,324. PUBLISHED JANUARY 23, 1912.

85,873. WRAPPING-PAPER. MAGNOLIA PAPER CO., Houston, Tex.
Filed October 24, 1911. Serial No. 59,326. PUBLISHED JANUARY 23, 1912.

85,874. CERTAIN KINDS OF THREADS. ARNOLD OTTO MEYER, Hamburg, Germany.
Filed July 28, 1911. Serial No. 57,916. PUBLISHED JANUARY 23, 1912.

85,875. CORDIALS. PETER NEWTON, Chicago, Ill.
Filed December 15, 1911. Serial No. 60,264. PUBLISHED JANUARY 23, 1912.

85,876. CIGARS. THE L. C. NICHOLSON CO., Indianapolis, Ind.
Filed November 13, 1911. Serial No. 59,690. PUBLISHED JANUARY 16, 1912.

85,877. OINTMENT. CHARLES C. NIELSON, Kansas City, Mo.
Filed November 18, 1911. Serial No. 59,709. PUBLISHED JANUARY 23, 1912.

85,878. MOVING-PICTURE MACHINES. PALMER MOTION PICTURE COMPANY, New York, N. Y.
Filed October 2, 1911. Serial No. 58,963. PUBLISHED JANUARY 23, 1912.

85,879. CERTAIN MEDICINAL PREPARATIONS. VITO A. PITTARO, New York, N. Y.
Filed September 11, 1911. Serial No. 58,627. PUBLISHED JANUARY 23, 1912.

85,880. REMEDIES FOR CATARRH, ASTHMA, HAY-FEVER, HEADACHE, AND COLD. JOSEPH PRICE, Hartford, Conn.
Filed November 2, 1911. Serial No. 59,496. PUBLISHED JANUARY 23, 1912.

85,881. CERTAIN MEDICINAL REMEDIES. THEODORE E. QUERE, Cleveland, Ohio.
Filed September 15, 1911. Serial No. 58,679. PUBLISHED JANUARY 23, 1912.

85,882. CIGARS. SANCHEZ & HAYA CO., Tampa, Fla.
Filed May 29, 1905. Serial No. 6,919. PUBLISHED AUGUST 15, 1905.

85,883. DRESS-SHIELDS. SANITARY SKIRT SHIELD CO., Seattle, Wash.
Filed November 11, 1911. Serial No. 59,652. PUBLISHED JANUARY 23, 1912.

85,884. GINGER-ALE. WILLIAM A. SCOTT, North Tazewell, Va.
Filed November 4, 1911. Serial No. 59,538. PUBLISHED JANUARY 23, 1912.

85,885. MACHINES FOR MANUFACTURING, FINISHING, ADJUSTING, AND TESTING LENSES. THE STANDARD OPTICAL COMPANY, Geneva, N. Y.
Filed August 26, 1911. Serial No. 58,409. PUBLISHED JANUARY 23, 1912.

85,886. BEER. STORZ BREWING CO., Omaha, Nebr.
Filed December 9, 1911. Serial No. 60,152. PUBLISHED JANUARY 23, 1912.

85,887. CERTAIN CONSTRUCTION MATERIAL. THE UNITED GAS IMPROVEMENT COMPANY, Philadelphia, Pa.
Filed April 14, 1911. Serial No. 55,751. PUBLISHED JANUARY 23, 1912.

85,888. CERTAIN OPTICAL APPLIANCES. UNIVERSAL OPTICAL CORPORATION, Providence, R. I.
Filed June 5, 1911. Serial No. 56,839. PUBLISHED JANUARY 23, 1912.

85,889. KINEMATOGRAPHIC APPARATUS AND PHOTOGRAPHIC FILMS BEARING FINISHED PICTURES. CHARLES URBAN, London, England.
Filed October 15, 1909. Serial No. 45,347. PUBLISHED JANUARY 23, 1912.

85,890. LAXATIVE REMEDY. THE VITALIS CO., New York, N. Y.
Filed November 28, 1911. Serial No. 59,987. PUBLISHED JANUARY 23, 1912.

85,891. NON-POISONOUS SHEEP-DIP, GERMICIDE, VERMICIDE, AND ANTISEPTIC. WABASH CHEMICAL CO., Terre Haute, Ind.
Filed November 3, 1911. Serial No. 59,535. PUBLISHED JANUARY 23, 1912.

85,892. VENEERED PANELS. WHITE BROTHERS, San Francisco, Cal.
Filed July 26, 1911. Serial No. 57,834. PUBLISHED JANUARY 23, 1912.

85,893. FLOOR-SWEEPING COMPOUND. WILSON CHEMICAL CO., Council Bluffs, Iowa.
Filed October 14, 1911. Serial No. 59,168. PUBLISHED JANUARY 23, 1912.

85,894. PERFORATED MUSIC-SHEETS FOR MECHANICAL MUSIC-PLAYING INSTRUMENTS. THE WILCOX & WHITE COMPANY, Meriden, Conn.
Filed November 15, 1911. Serial No. 59,738. PUBLISHED JANUARY 23, 1912.

85,895. SHELLAC IN GUM OR SOLID FORM. GEO. A. ALDEN & CO., Boston, Mass.
Filed June 30, 1911. Serial No. 57,423. PUBLISHED JANUARY 23, 1912.

85,896. FERTILIZER-DISTRIBUTERS AND HARROWS. ATLANTA AGRICULTURAL WORKS, Atlanta, Ga.
Filed September 29, 1911. Serial No. 58,936. PUBLISHED JANUARY 23, 1912.

85,897. CULTIVATORS. ATLANTA AGRICULTURAL WORKS, Atlanta, Ga.
Filed September 29, 1911. Serial No. 58,937. PUBLISHED JANUARY 23, 1912.

85,898. TEA. G. E. BARBOUR COMPANY, LIMITED, St. John, New Brunswick, Canada.
Filed October 21, 1911. Serial No. 59,281. PUBLISHED JANUARY 23, 1912.

85,899. MACARONI-PASTE. BIRMINGHAM MACARONI COMPANY, Birmingham, Ala.
Filed September 28, 1911. Serial No. 58,909. PUBLISHED JANUARY 23, 1912.

85,900. CIGARS, CHEROOTS, AND CIGARETTES MADE OF CIGAR-TOBACCO. CAYEY-CAGUAS TOBACCO COMPANY, New York, N. Y.
Filed November 18, 1911. Serial No. 59,784. PUBLISHED JANUARY 23, 1912.

85,901. CREAM FOR THE SKIN. LOUIS G. DOMAN, New York, N. Y.
Filed November 24, 1911. Serial No. 59,894. PUBLISHED JANUARY 23, 1912.

85,902. VARNISHES AND VARNISH-GUMS. EMPIRE SHELLAC COMPANY, Boston, Mass.
Filed October 27, 1911. Serial No. 59,378. PUBLISHED JANUARY 23, 1912.

85,903. VARNISHES AND VARNISH-GUMS. EMPIRE SHELLAC COMPANY, Boston, Mass.
Filed October 27, 1911. Serial No. 59,380. PUBLISHED JANUARY 23, 1912.

85,904. CERTAIN KINDS OF CUTLERY. THE ENTERPRISE MANUFACTURING COMPANY OF PENNSYLVANIA, Philadelphia, Pa.
Filed May 29, 1911. Serial No. 56,682. PUBLISHED JANUARY 23, 1912.

85,905. COOKING COMPOUND CONTAINING COTTONSEED OIL AND OLEOSTEARIN. THE N. K. FAIRBANK COMPANY, Chicago, Ill.
Filed April 25, 1906. Serial No. 19,063. PUBLISHED JANUARY 23, 1912.

85,906. LUBRICATING-OILS. INGERSOLL-RAND COMPANY, Phillipsburg, N. J., and New York, N. Y.
Filed March 8, 1911. Serial No. 54,954. PUBLISHED JANUARY 23, 1912.

85,907. ROCK-DRILLS. INGERSOLL-RAND COMPANY, Phillipsburg, N. J., and New York, N. Y.
Filed March 8, 1911. Serial No. 54,955. PUBLISHED JANUARY 23, 1912.

85,908. BARB-WIRE. KEYSTONE STEEL & WIRE COMPANY, Peoria, Ill.
Filed October 7, 1911. Serial No. 59,037. PUBLISHED JANUARY 23, 1912.

85,909. ORANGES, LEMONS, GRAPE-FRUIT, TANGERINES, AND LIMES. LAKE REGION PACKING ASSOCIATION, Tavares, Fla.
Filed November 18, 1911. Serial No. 59,791. PUBLISHED JANUARY 23, 1912.

85,910. CHEWING-GUM. L. P. LARSON, JR. COMPANY, Chicago, Ill.
Filed August 17, 1911. Serial No. 58,239. PUBLISHED JANUARY 23, 1912.

85,911. FINISHED LEATHER. A. C. LAWRENCE LEATHER Co., Boston, Mass.
Filed November 15, 1911. Serial No. 59,732. PUBLISHED JANUARY 23, 1912.

85,912. GASOLENE. MAGNOLIA PETROLEUM COMPANY, Galveston and Dallas, Tex.
Filed August 22, 1911. Serial No. 58,326. PUBLISHED JANUARY 23, 1912.

85,913. [WITHDRAWN.]

85,914. STEEL FENCE POSTS AND POLES. CHARLES L. MICHOD, Los Angeles, Cal.
Filed September 19, 1911. Serial No. 58,724. PUBLISHED JANUARY 23, 1912.

85,915. IRON AND STEEL BARS AND RETICULATED OR OPENWORK METAL. MONOLITH STEEL CO., INC., Washington, D. C.
Filed December 17, 1909. Serial No. 46,584. PUBLISHED JANUARY 23, 1912.

85,916. BISCUITS. NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y.
Filed November 24, 1911. Serial No. 59,906. PUBLISHED JANUARY 23, 1912.

85,917. BISCUITS. NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y.
Filed November 24, 1911. Serial No. 59,907. PUBLISHED JANUARY 23, 1912.

85,918. SYRINGES FOR USE WITH FIRE-EXTINGUISHING COMPOUNDS. PYRENE MANUFACTURING CO., New York, N. Y.
Filed June 22, 1911. Serial No. 57,245. PUBLISHED JANUARY 23, 1912.

85,919. HORNS, WHISTLES, AND SIMILAR SOUND-PRODUCING DEVICES FOR AUTOMOBILES. THE RANDALL-FAICHNEY CO., Boston, Mass.
Filed July 17, 1911. Serial No. 57,683. PUBLISHED SEPTEMBER 5, 1911.

85,920. TOOL-STEEL. J. J. SAVILLE & COMPANY, LIMITED, Sheffield, England.
Filed December 10, 1909. Serial No. 46,408. PUBLISHED JANUARY 23, 1912.

85,921. MIXED PAINTS. SEARS, ROEBUCK AND CO., Chicago, Ill.
Filed October 28, 1911. Serial No. 59,411. PUBLISHED JANUARY 23, 1912.

85,922. LUBRICATING-OILS. STANDARD OIL COMPANY, Bayonne, N. J.
Filed November 3, 1911. Serial No. 59,532. PUBLISHED JANUARY 23, 1912.

85,923. CERTAIN MACHINERY AND TOOLS. THE L. S. STARRETT CO., Athol, Mass.
Filed June 5, 1911. Serial No. 56,841. PUBLISHED JANUARY 23, 1912.

85,924. LUBRICATING-OILS. THE TEXAS COMPANY, Houston and Port Arthur, Tex., and New York, N. Y.
Filed August 31, 1911. Serial No. 58,488. PUBLISHED JANUARY 23, 1912.

85,925. TYPE-WRITERS. CHARLES TWINING, New York, N. Y.
Filed October 23, 1911. Serial No. 59,292. PUBLISHED JANUARY 23, 1912.

85,926. SUBSTITUTE FOR TURPENTINE. FRANCIS JOSEPH UNDERWOOD, Jamestown, N. Y.
Filed October 16, 1911. Serial No. 59,189. PUBLISHED JANUARY 23, 1912.

85,927. ORANGES. UPLAND CITRUS ASS'N., Upland, Cal.
Filed October 12, 1911. Serial No. 59,129. PUBLISHED JANUARY 23, 1912.

85,928. NAPHTHA, GASOLENE, AND BENZIN. VACUUM OIL COMPANY, Rochester, N. Y.
Filed April 28, 1911. Serial No. 56,033. PUBLISHED JANUARY 23, 1912.

85,929. WATERPROOFING AND DAMP-PROOFING PAINT. WATERPROOF ENGINEERING COMPANY, Chicago, Ill.
Filed March 1, 1911. Serial No. 54,787. PUBLISHED JANUARY 23, 1912.

85,930. WHEAT-FLOUR. WESTERN FLOUR MILL COMPANY, Davenport, Iowa, and New Prague, Minn.
Filed November 1, 1911. Serial No. 59,472. PUBLISHED JANUARY 23, 1912.

85,931. CERTAIN FOODS. F. WIDLAR & Co., Cleveland, Ohio.
Filed May 11, 1908. Serial No. 34,688. PUBLISHED DECEMBER 19, 1911.

85,932. CERTAIN KINDS OF MACHINERY. WILLIAMS PATENT CRUSHER & PULVERIZER COMPANY, St. Louis, Mo.
Filed July 10, 1911. Serial No. 57,561. PUBLISHED JANUARY 23, 1912.

85,933. CANDY. WINDSOR CHOCOLATE COMPANY, Philadelphia, Pa.
Filed October 24, 1911. Serial No. 59,313. PUBLISHED JANUARY 23, 1912.

85,934. STOCK AND POULTRY FEED. J. ZIMMERN'S Co., Mobile, Ala.
Filed October 14, 1911. Serial No. 59,170. PUBLISHED JANUARY 23, 1912.

LABELS

REGISTERED MARCH 26, 1912.

16,252.—*Title:* "WHITE AND GOLD." (For Beer.) CLAUSSEN BREWING ASSOCIATION, Seattle, Wash. Filed February 8, 1912.

16,253.—*Title:* "OLD WUERZBURGER." (For Beer.) CLAUSSEN BREWING ASSOCIATION, Seattle, Wash. Filed February 15, 1912.

16,254.—*Title:* "SAVOY." (For Macaroni.) W C EGERTON, Brooklyn, N. Y. Filed November 20, 1911.

16,255.—*Title:* "BRILLIANT ILLUMINATOR." (For Carbon-Oil.) THE J. B. MURPHY CO., Watertown, Wis. Filed February 16, 1912.

16,256.—*Title:* "THE TIGER METHOD." (For Overalls.) J. M. ROBINSON, NORTON & CO., Louisville, Ky. Filed February 14, 1912.

16,257.—*Title:* "LEATH-R-NU." (For Liquid Preparation to be Used on Leather, Metal, Wood, &c. NU-BACK MFG. CO., Chicago, Ill. Filed March 6, 1912.

16,258.—*Title:* "PIMBLEY'S PIANO-NEWER." (For Composition for Cleaning and Renovating Piano-Cases and Woodwork.) PIMBLEY PAINT & GLASS CO., St. Joseph, Mo. Filed February 23, 1912.

16,259.—*Title:* "LOYAL MOOSE." (For Cigars.) SAGINAW SPECIALTY COMPANY, Saginaw, Mich. Filed November 11, 1911.

PRINTS

REGISTERED MARCH 26, 1912.

2,977.—*Title:* "NOTHIN' 'S TOO GOOD FER THE IRISH!" (For Wheat Breakfast Food.) CREAM OF WHEAT CO., Minneapolis, Minn. Filed March 6, 1912.

2,978.—*Title:* "GOLLY! DEY DONE STOLE MAH CAMP FIAH." (For Wheat Breakfast Food.) CREAM OF WHEAT CO., Minneapolis, Minn. Filed March 6, 1912.

2,979.—*Title:* "MIDOL." (For a Remedy for Neuralgia and Headache.) GENERAL DRUG COMPANY, New York, N. Y. Filed February 15, 1912.

2,980.—*Title:* "THE TIRE PERFECT." (For Non-Skid Tires.) THE REPUBLIC RUBBER COMPANY, Youngstown, Ohio. Filed February 17, 1912.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

EX PARTE MYGATT.

Decided February 12, 1912.

APPLICATION—PROSECUTION—ABANDONMENT.

Where in response to a requirement of the Examiner that a design be illustrated by showing the article in perspective or side elevation the applicant materially changed his claim, *Held* that the fact that the Examiner did not consider this amendment a compliance with the decision of the Commissioner in applicant's copending application did not justify a holding that the amendment was insufficient to save the case from abandonment.

ON PETITION.

DESIGN FOR PRISM-GLASS REFLECTORS.

Messrs. Brock, Becken & Smith for the applicant.

MOORE, *Commissioner:*

This is a petition from the action of the Examiner holding the above-entitled application to be abandoned for lack of proper prosecution.

The record shows that on September 27, 1910, the Examiner repeated his requirement that the design be illustrated by showing the article in perspective or side elevation, in order that the precise nature of the extension in the third dimension should be disclosed. A few days before the expiration of the time in which the Examiner notified applicant that he must act to save his case from abandonment he filed a substitute specification and claim. On November 10, 1911, the Examiner held the application abandoned on the ground that such amendment was not a compliance with the requirement of the decision of the Assistant Commissioner upon the petition in applicant's companion case, Serial No. 437,023, (reported in 171 O. G., 1257.) On December 11, 1911, applicant filed an argument in which he contended that the application was not abandoned and asked for a final rejection. From a repetition of the Examiner's action this petition was filed.

In place of the claim—

> The ornamental design for a shade, reflector, or similar article, as shown and described,

applicant in his amendment substituted a claim reading as follows:

> The ornamental design for a shade, reflector or similar article, having the superficial surface ornamentation as shown.

This was a material amendment to the merits of the claim. Even though the Examiner's holding that it does not meet the ruling of the Assistant Commissioner be true, it was such an amendment as the applicant had a right to make and was apparently made in good faith in an endeavor to overcome the objection raised by the Examiner and in which he was sustained by the Assistant Commissioner. It cannot therefore be held unresponsive, even though it did not conform to their view as to how the case should be amended.

In the case of *ex parte Gilman* (162 O. G., 783) it was stated:

> It appears from this quotation from the Examiner's answer that the ground urged by him for holding the argument not to be responsive is that the argument does not meet the views of the Examiner and that it does not convince him that he should allow the claims.
>
> The fact that an argument is not a convincing one should never be urged in support of an objection that the action containing that argument was not responsive, except possibly in some extreme case where the argument on its face is directed to a discussion of subject-matter which is entirely beside the case.

In the case of *ex parte Viniello* (144 O. G., 276) I held that where the Examiner rejected the claims of the application on the ground that they cover an inoperative device and required a demonstration of the utility thereof and within the year allowed by law for responsive action the applicant filed an argument for the purpose of showing that the device would operate as set forth in the specification the application was not abandoned for lack of proper prosecution.

Whether the new claim is patentable and overcomes the objection to the case as originally presented goes to the merits of the case and will not be considered upon this petition. In the companion case, No. 437,023, where a similar amendment to that under consideration was filed after the decision of the Assistant Commissioner mentioned above, it is noted that the Examiner rejected the substitute claim, and if he is of the opinion that applicant is not entitled to the substitute claim in the present case for the same or any other reason he should reject the claim.

In the case of *in re Mygatt*, (121 O. G., 1676; 28 App. D. C., 366,) where an appeal was taken to the Court of Appeals of the District of Columbia from the decision of the Commissioner rendered upon petition from a requirement of the Examiner that the claim should be in a certain form, the court said:

> The Examiner in effect rejected the claim twice, for a claim was presented and insisted upon, and twice the Ex-

aminer refused it, and said you must take a claim reading—

"The ornamental design for a reflector, as shown."

Such an instance, at least in a design application, is something more than an objection to the form of the proposed claim. It may be, and if we were called upon to decide, we doubtless would hold that the claim proposed by the Examiner, or one that included the words "and described" to be better in form in most cases and one that gives an applicant greater protection. (*Ex parte Freeman*, 23 App. D. C., 226.) Such a form of a claim has been held good in a design case by the Supreme Court. (*Dobson* v. *Bigelow Carpet Co.*, 114 U. S., 439; *Dobson* v. *Dornan*, 118 U. S., 10.) We however do not construe these cases as holding that such claims are the only ones permissible, or that the Commissioner of Patents' action in insisting upon such a form is not reviewable by appeal. Manifestly a descriptive claim in some cases is better, and a refusal to allow such a claim is a rejection of a claim and reviewable on appeal. As we have said, we think the Examiners-in-Chief erred in not entertaining the appeal, and while the better practice would be to require the Commissioner by proceedings duly taken to direct them to entertain the appeal we have decided to entertain the appeal for the double reason that a question of general public interest is involved and because by so doing we can save unnecessary time, expense and labor to the parties involved, as we are so clearly of the opinion that the actions of the Examiner were rejections of the claim. No good purpose would be subserved by dismissing the appeal when in the end we would take jurisdiction.

In view of the above holding that applicant's amendment was responsive and the application not abandoned it is unnecessary to consider applicant's contention that he has a right of appeal to the Examiners-in-Chief under the decision of the Court of Appeals of the District of Columbia in *ex parte Selden* (164 O. G., 741; 36 App. D. C., 428) from the Examiner's holding that the amendment was unresponsive.

The petition is granted to the extent indicated.

EX PARTE WYNNE.

Decided February 12, 1912.

1. APPLICATION—PROSECUTION—DEVICE HELD TO BE INOPERATIVE—ACTION ON THE MERITS.

Where in response to a requirement to demonstrate the operativeness of the process claimed the applicant filed affidavits which the Examiner regarded as insufficient to comply with the requirement, *Held* that the Examiner should have rejected the claims on the ground that the process was inoperative.

2. SAME—SAME—SAME—ABANDONMENT.

Where the Examiner required that the operativeness of applicant's process be demonstrated and at the end of the year applicant filed affidavits in an attempt to comply with the requirement, the fact that the Examiner regarded these affidavits as insufficient to establish that the process was operative did not justify a holding of abandonment.

ON PETITION.

REFINING PETROLEUM-OIL.

Mr. F. S. Appleman for the applicant.

MOORE, *Commissioner:*

This is a petition from the action of the Examiner holding the above-entitled application to be abandoned for lack of proper prosecution.

The record shows that on December 21, 1909, the Examiner required affidavits setting forth—

* * * the steps carried out in some special case on some stated specimen of oil and the tests and indications which establish the reality of the changes supposed to be effected in the petroleum.

In response thereto applicant filed certain affidavits.

In his action of May 17, 1910, the Examiner required a demonstration of the operativeness of applicant's process and stated that the affidavits furnished did not touch the question. On May 13, 1911, applicant filed the following amendment:

Responding to the official communication of May 17, 1910, request is made for reconsideration of the claims in the above entitled application in view of the arguments and affidavits filed in this case.

The Examiner held this action not to be proper prosecution of the case under Rule 171 and that the application was abandoned.

It is noted that the action of the applicant requested a reconsideration of the claims in view of the arguments and affidavits previously filed in the case. In the case of *ex parte Gilman*, (162 O. G., 783,) it was held:

It appears from this quotation from the Examiner's answer that the ground urged by him for holding the argument not to be responsive is that the argument does not meet the views of the Examiner and that it does not convince him that he should allow the claims.

The fact that an argument is not a convincing one should never be urged in support of an objection that the action containing that argument was not responsive, except possibly in some extreme case where the argument on its face is directed to a discussion of subject-matter which is entirely beside the case.

This case is quite similar to that of *ex parte Vinello*, (144 O. G., 277,) in which I stated:

It is believed that the Examiner's action was not in accordance with the practice of the Office. It is not claimed that the specification was in any sense obscure, and in view of this fact, in accordance with the decision of *ex parte Stocker*, (98 O. G., 1705; 1902, C. D., 53,) the Examiner should not have suspended action on the merits, but should have rejected the claims. While the Examiner's first action is stated to be a rejection for lack of utility, it is noted that in the next action, in response to the applicant's argument endeavoring to show the operativeness of the device, the Examiner did not again reject the claims, but held that the arguments filed were not a sufficient response, virtually refusing any action whatever on the merits until the requirement for a demonstration of the operativeness of the device had been complied with.

* * * * * * *

As far as the Examiner's action went applicant's response thereto was clearly sufficient, as it was an argument traversing the Examiner's position, and in any event he was entitled to a final rejection, with the right of appeal.

The record in this case shows that prior to his holding of abandonment the Examiner took four actions in the case, yet no claims have ever been rejected. Although in his early letters the Examiner held the specification so vague and indefinite that the invention could not be understood, this objection was not repeated in the Examiner's later actions and appears to have been cured by amendment, but the Examiner insisted upon a demonstration of the operativeness of applicant's process. The question of inoperativeness relates to the merits, and in view of the position taken by the Examiner he should have rejected the claims upon this ground. If the applicant could make no further demonstration and had no further arguments to offer and desired to stand upon the claims presented, he was entitled to have the case placed in condition for appeal.

The petition is granted.

THE MICHIGAN TEA RUSK CO. *v.* HOLLAND RUSK CO.

Decided March 16, 1912.

TRADE-MARK—CANCELATION—SHOWING OF INTEREST BY APPLICANT.

Where the petition for cancelation shows that the applicant for cancelation is not using the registered mark or one so nearly resembling it that their simultaneous use would be liable to cause confusion, *Held* that the applicant has not shown a likelihood of damage and that the petition for cancelation was properly dismissed.

APPEAL from Examiner of Interferences.

TRADE-MARK FOR RUSKS.

Mr. Theodore K. Bryant and *Mr. Mortimer A. Sooy* for The Michigan Tea Rusk Co.

Messrs. Munn & Co. for the Holland Rusk Co.

BILLINGS, *First Assistant Commissioner:*

This is an appeal by The Michigan Tea Rusk Co. from a decision of the Examiner of Interferences sustaining a demurrer and dismissing the application for cancelation.

It appears that the mark sought to be canceled is the word "Holland," for rusks. It clearly appears from the petition for cancelation that The Michigan Tea Rusk Co. does not now use the word "Holland" as a trade-mark for rusks, but that it uses the word "Dutch."

The petitioner has not set up in the petition for cancelation sufficient facts to show an interest in the subject-matter thereof to give the petitioner the right to intervene. As stated by the Court of Appeals of the District of Columbia in the *Underwood Typewriter Company* v. *A. B. Dick Company*, (162 O. G., 730:)

"The right of the petitioner to intervene was dependent upon a showing of interest. The statute does not contemplate that any one may petition the Commissioner to cancel a trade-mark duly registered, but it does provide that any one who 'shall deem himself injured may do so.' The petition must, therefore, contain a statement of fact on this jurisdictional question, sufficiently full to show that the petitioner has been injured by the registry of the mark he seeks to have canceled; and this fact must not be left to conjecture, but must affirmatively appear. * * * The averment that it has used the word as a trade-mark is not sufficient for the obvious reason that, unless the word has been used in the same business as that in which it was used by the appellant, no injury contemplated by the statute would have resulted, and no right to intervene would have followed. The averment in the sixth paragraph is merely a conclusion of the pleader unsupported by the facts previously set out. Such an allegation is insufficient. (*McIlhenny's Son* v. *New Iberia, etc., Co.*, 30 App. D. C., 337–339.)"

The proceeding in the foregoing case was for the cancelation of a registered trade-mark, but the statutory ground of opposition is the same, namely, on behalf of one who believes he would be damaged by the registration of a mark; and the same rule has been applied to an opposition. (*Battle Creek Sanitarium Co.* v. *Fuller*, 30 App. D. C., 411–415.) In that case it was said:

"It is not sufficient for the opponent to say that he believes he would be damaged. He must allege some fact showing an interest in the subject-matter, from which damages might be inferred. If he has not used the mark as a trade-mark upon goods of a like description, he can suffer no damage from its registration by another."

Tested by the rule declared in those cases, the opposition is fatally defective. The opponent does not claim to have manufactured and put on the market a similar article to that on which the trade-mark has been used. The sole ground of opposition, therefore, is that the trade-mark of the proponent has become public property by reason of the expiration of the patent upon the machine. If the opponent has the right to oppose the registration, any other person could be recognised to make the same opposition in the public interest which, so far as the pleading is concerned, is all that is involved.

Tested by this rule the petition for cancelation is fatally defective, for it nowhere appears therefrom that the petitioner is using the trade-mark "Holland" as a trade-mark for rusks, which is the mark sought to be canceled.

The only ground upon which the petition for cancelation could be held effective is that the two words "Dutch" and "Holland" are so nearly alike as to be likely to deceive purchasers.

I agree with the Examiner of Interferences that the words "Dutch" and "Holland" are not so nearly alike as to cause confusion in the minds of the purchasing public.

It follows that the petition for concelation must be dismissed. The decision of the Examiner of Interferences is affirmed.

EX PARTE WILSON.

Decided March 14, 1912.

1. APPLICATION — REISSUE — REINSTATEMENT OF CANCELED CLAIMS.

Where claims in a reissue application were canceled in view of a rejection based on the fact that applicant was making the same claims in an earlier application, *Held* that a decision by the Examiners-in-Chief that applicant had no right to make the claims in the earlier application constitutes no ground for allowing them to be reinstated in the reissue application.

2. SAME—LIMIT OF APPEAL—APPLICATION FOR REHEARING DOES NOT EXTEND.

A petition for rehearing does not in itself extend the limit of appeal or the time within which appeal should be taken to avoid abandonment.

ON PETITION.

PROCESS OF REMOVING PAINT AND VARNISH.

Mr. W. H. Swenarton for the applicant.

TENNANT, *Assistant Commissioner:*

This is a petition that certain claims be reinstated in the above-entitled reissue application, it being asserted that the Examiners-in-Chief in their decision in an interference involving a copending application of Wilson suggested that the claims if allowable should properly have been claimed in this reissue application.

The record shows that the application involved in the interference was filed May 10, 1907, and that during the pendency of this application Wilson filed a second application, which on November 26, 1907, matured into Patent No. 872,314, the second application containing all the subject-matter of the first, and according to the report of the Primary Examiner it was thought to be a continuation of the first application, which would be allowed to lapse. However, after the grant of the patent the first application was further prosecuted and was eventually placed in interference with the patent to Ellis, No. 875,163. Ellis moved to dissolve the interference on the ground that Wilson had no right to make the claims constituting the issue. This motion was granted by the Primary Examiner, and his decision was affirmed by the Examiners-in-Chief in a decision dated February 24, 1912, which is the decision referred to by the petitioner.

It is asserted that the applicant placed the claims corresponding to the counts of the issue of that interference in the earlier application instead of in this reissue application at the instance of the Office. The record of the earlier application, however, shows that the claims forming the issue of the interference were presented in that application on June 22, 1909, which is prior to the date upon which this reissue application was filed—to wit, October 23, 1909. Furthermore, the record of the reissue application shows that as originally presented the rejection was based upon the ground that no sufficient reason had been asserted to warrant the grant

of a reissue. After a formal amendement the case was again acted upon by the Examiner, and on November 23, 1909, the rejection upon the ground above stated was repeated and the reissue further rejected—

• • • on the ground that in simultaneously prosecuting the same claims in the reissue application which applicant is prosecuting in another copending application he is occupying an inconsistent position because in the prosecution of these claims in the reissue application applicant alleges that they constitute an invention coextensive with the patent whose reissue is sought while in prosecuting simultaneously these claims in a copending application applicant alleges that they constitute another invention.

In reply to this letter of rejection the applicant through his attorney directed the cancelation of claims 3 and 4, which correspond to the counts of the issue, stating:

Applicant has acquiesced in the objections made by the Examiner as to the presentation of identical claims in two different applications, and in view of the fact that they have now been canceled, it is believed there will be no further objection on this score.

It is thus seen that these claims, which were originally presented in the earlier application, were retained in that application instead of being prosecuted in the reissue application on the applicant's own volition, and no good and sufficient reason appears for now permitting these claims to be reinserted in this reissue application.

Furthermore, the prosecution of this reissue application has been concluded by reason of the fact that more than a year has elapsed since the date of the decision of the Examiners-in-Chief. It is contended that because the applicant requested a rehearing on the last day of the year following the date of the decision of the Examiners-in-Chief, and which rehearing was not denied until January 23, 1911, the reissue application is still pending.

This contention is without force, since it is well settled that a petition for rehearing does not in itself extend the limit of appeal or the time within which appeal should be taken to avoid abandonment. Even if the petition be considered as showing a lack of intent to abandon the reissue application I do not find that the facts are such as will justify holding that the failure to present the claims now sought to be reintroduced into this case was unavoidable within the meaning of section 4894 of the Revised Statutes.

The petition is denied.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

POPE *v.* MCKENZIE.

Decided January 2, 1912.

1. INTERFERENCE—PRIORITY—WHEN SENIOR PARTY IS PUT TO PROOF.

The party to an interference who first files an allowable application is not put upon his proof until his adversary shall have introduced evidence showing his own independent conception of the invention prior to that date.

2. SAME—SAME—EVIDENCE AS TO THE THIRD PARTY'S INVENTORSHIP IMMATERIAL.

The junior party to an interference cannot defeat the senior party's right by showing that a third person not a party to the proceedings was the real inventor, (citing *Foster* v. *Antisdel*, 88 O. G., 1527; 14 App. D. C., 552.)

3. SAME—SAME.

Evidence reviewed and *Held* insufficient to show that P. conceived the invention prior to McK.'s filing date and that priority was therefore properly awarded the latter.

Mr. F. W. Winter for the appellant.

Mr. A. P. Greeley and *Mr. A. M. Austin* for the appellee.

SHEPARD, *C. J.*:

Frederick Pope appeals from a decision of the Commissioner of Patents (174 O. G., 583) awarding priority to McKenzie in an interference proceeding between them as applicants for a patent for an apparatus for distilling wood. The issue is in three counts as follows:

1. An apparatus for the extraction of turpentine, etc., from wood comprising a closed vessel for the reception of wood to be treated provided with inlet and outlet for the bath and combined products respectively, a vessel for the reception of the bath and combined products, means for circulating the bath between the two vessels, means for introducing steam into the bath in the second named vessel, means for condensing the vapors from the second named vessel, and means for re-heating the bath on its return from the second named vessel to the first named vessel.

2. An apparatus for the extraction of turpentine, etc., from wood comprising a vessel for the reception of the wood to be treated provided with inlet and outlet for the bath and combined products respectively, a vessel for the reception of a portion of the bath with which the wood has been treated, means for circulating a portion of the bath between the two vessels, means for introducing steam into the portion of the bath in the second named vessel to remove the extracted products, and means for condensing all the vapors from the second named vessel.

3. An apparatus for extracting products from wood, a retort in which the wood is to be treated with a bath, a vaporising chamber connected to the retort, means for maintaining pressure in said retort, means for circulating the bath from the retort to the vaporising chamber and return, and means for heating the bath on its way back to the retort.

McKenzie's application filed June 20, 1908, is for the re-issue of a patent granted to him April 30, 1907, upon application filed December 30, 1905. Pope's application was filed December 13, 1906.

McKenzie is entitled to the date of his original application. Pope is, therefore, the junior party and charged with the burden of overcoming his adversary's *prima facie* case. E. B. Weed was the forerunner of the parties in this particular art. He had organized a corporation in New York for the purpose of distilling turpentine in North Carolina. Early in the year 1903, Malcolm McKenzie, his brother Angus, and some associates of theirs had purchased stock in the corporation. The McKenzies were made members of the board of directors; Angus becoming president and Malcolm general manager. Pope was employed by the corporation in June, 1904, became superintendent, and resigned or was discharged in May, 1905.

In our view of the point upon which the case turns, it is unnecessary to enter into a discussion of the particular meaning of the issue or the sources of the several counts thereof, or of the dates of conception, disclosure, reduction, etc., alleged in the preliminary statements. The Examiner of Interferences decided in favor of Pope. He first reviewed the evidence on behalf of McKenzie and held it insufficient to show that he had made the invention prior to his filing date. While not expressly so holding, the inference is strong that he regarded McKenzie as deriving his knowledge of the invention from Weed, who died before this controversy

arose. Reviewing the evidence on behalf of Pope he found it sufficient to show that he had knowledge of the invention before McKenzie, and had therefore discharged the burden of proof. He evidently thought that Pope derived the idea of the invention from Weed, though he may have improved thereon. He refers to the claim of McKenzie that Pope derived his information from Weed; but holding that McKenzie had failed to show that he had given the original idea to Weed to work out, he held that this was inadmissible, under the rule declared in *Foster* v. *Antisdel*, (14 App. D. C., 552.) The Examiners-in-Chief, (two members sitting,) reversed this decision. They regarded the proofs of each party as unsatisfactory in respect of the matter of conception and reduction to practice, and gave to each the benefit of his filing date only. Their decision was, therefore, that Pope had not sustained the burden of proof. They also held that both McKenzie and Pope had derived all of their information as to count 3 from Weed and called the attention of the Commissioner to the fact that, for that reason, count 3 was not patentable to either party.

The Commissioner, passing the recommendation as to count 3, affirmed the decision in favor of McKenzie. He found that Pope had not established a conception of any one of the counts prior to McKenzie's filing date, and also if given the date alleged in his statement, he could not recover because of laches. He concluded the discussion as follows:

The evidence in this case is such that the parties must in effect stand upon their respective filing dates and on those McKenzie must prevail.

The conditions of this case are quite similar to those in the case of *Mills and Conn* v. *Darlington* (present term). As indicated in that case, the one first to file an allowable application is not put upon his proof until his adversary shall have introduced evidence showing his own independent conception of the invention prior to that date. For the satisfactory reasons given in the opinion of *Foster* v. *Antisdel* (14 App. D. C., 552–554) he cannot defeat the senior party's right by showing that a third person, not a party to the proceeding, was the real inventor. We agree with the Commissioner that Pope's evidence is not sufficient to show that he conceived the invention prior to the filing of McKenzie's invention. This being the case it is unnecessary to review the evidence introduced by McKenzie to show that he conceived and reduced to practice the invention prior to filing his application.

For the reasons given, the decision must be affirmed. It is so ordered, and that this decision be certified to the Commissioner of Patents.

Affirmed.

ADJUDICATED PATENTS.

(U. S. C. C. A.) The Claude and Hess patent, No. 664,383, for an apparatus for storing and distributing acetylene gas, is not limited as to term by the British patent, No. 29,750 of 1896, under Revised Statutes, section 4887, (U. S. Comp. St., 1901, p. 3382.) *Acme Acetylene Appliance Co.* v. *Commercial Acetylene Co.*, (192 Fed. Rep., 321.)

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 16, 1912.

The Reed & Gere Manufacturing Co., its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of B. T. Babbitt, 463 Washington street, Jersey City, N. J., 11 Broadway, New York, N. Y., for registration of a trade-mark and trade-mark registered April 7, 1896, No. 28,096, to The Reed & Gere Manufacturing Co., 613 Francis street, St. Joseph, Mo., and a notice of such declaration sent by registered mail to said The Reed & Gere Manufacturing Co. at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said The Reed & Gere Manufacturing Co., its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 2, 1912.

Arabella G. Starke, her assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of Starke's Dixie Plow Works, Incorporated, 7 South Fifteenth street, Richmond, Va., for trade-mark registration and trade-mark registration No. 11,025, dated March 18, 1884, to Arabella G. Starke, of Richmond, Va., and the notice of such declaration sent by registered mail to the said Arabella G. Starke at the address given has been returned by the post-office as undeliverable.

Notice is therefore hereby given to the said Arabella G. Starke, her assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 2, 1912.

Arabella G. Starke, her assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of Starke's Dixie Plow Works, Incorporated, 7 South Fifteenth street, Richmond, Va., for trade-mark registration and trade-mark registration No. 11,541, dated September 30, 1884, to Arabella G. Starke, of Richmond, Va., and the notice of such declaration sent by registered mail to the said Arabella G. Starke at the address given has been returned by the post-office as undeliverable.

Notice is therefore hereby given to the said Arabella G. Starke, her assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 29, 1912.

Goodwin & Co., their assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of The Standard Cigar Company, 1209 West South street, Canton, Ohio, for a trade-mark and registration No. 10,200, dated April 17, 1883, to Goodwin & Co., of New York, N. Y., and the notice of such declaration sent by registered mail to the said Goodwin & Co. at the address given has been returned by the post-office undelivered.

Notice is therefore hereby given to the said Goodwin & Co., their assigns or legal representatives, that if they

or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 21, 1912.

Hutchens, Howe & Withington, their assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of Sigmund Rosenblatt & Son, Nos. 7 and 9 East Baltimore street, Baltimore, Md., for trade-mark registration and trade-mark registration No. 35,053, dated September 18, 1900, to Hutchens, Howe & Withington, Nos. 116 to 120 Michigan street, Chicago, Ill., and the notice of such declaration sent by registered mail to the said Hutchens, Howe & Withington at the address given has been returned by the post-office as undeliverable.

Notice is therefore hereby given to the said Hutchens, Howe & Withington, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 20, 1912.

Gabriel Codina Mir, his assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of the W. H. Crawford Co., 119 Commerce street, Baltimore, Md., for a trade-mark, registrations to Wilhelm Brauns, of Quedlinburg, Kingdom of Prussia, and German Empire, J. Eugene Jordan, of Seattle, Wash., Leo Sommer, of New York, N. Y., Weeks & Potter, 360 Washington street, Boston, Mass., and Sam'l. E. Egerton & Co., of Baltimore, Md., and registration No. 18,246, dated August 26, 1890, to Gabriel Codina Mir, of Habana, Cuba, and the notice of such declaration sent by registered mail to the said Gabriel Codina Mir at the address given has been returned by the post-office undelivered.

Notice is therefore hereby given to the said Gabriel Codina Mir, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 12, 1912.

Silicon Wall Plaster and Manufacturing Company, its assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of McCormick Waterproof Portland Cement Company, Bank of Commerce Building, St. Louis, Mo., for trade-mark registration and the trade-mark registration of Simpson Brothers Company, of Chicago, Ill., and trade-mark registration No. 19,086, dated June 26, 1894, to the Silicon Wall Plaster and Manufacturing Company, and the notice of such declaration sent by registered mail to the said Silicon Wall Plaster and Manufacturing Company at the address given has been returned by the post-office undeliverable.

Notice is therefore hereby given to the said Silicon Wall Plaster and Manufacturing Company, its assigns or legal representatives, that if said company or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 13, 1912.

Pedro Moreda, his assigns or legal representatives, take notice:

An interference has been declared by this Office between the applications of Bernardo Moreda y Debon, 85 San Miguel street, Habana, Cuba, and of Moreda & Co., of Habana, Cuba, for trade-mark registration and trade-mark registration No. 17,102, dated October 15, 1889, to Pedro Moreda, 51 Dragones street, Habana, Cuba, and the notice of such declaration sent by registered mail to the said Pedro Moreda at the address given has been returned by the post-office undeliverable.

Notice is therefore hereby given to the said Pedro Moreda, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 10, 1912.

Louis Kuhlmann & Bro., their assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of the Idaho Soap Company, Limited, 306 Sonna Building, Boise, Idaho, for registration of a trade-mark and trade-mark registration No. 12,024, dated March 17, 1885, to Louis Kuhlmann & Bro., 83 Himrod street, Brooklyn, N. Y., and the notice of such declaration sent by registered mail to the said Louis Kuhlmann & Bro. at the address given has been returned by the post-office undeliverable.

Notice is therefore hereby given to the said Louis Kuhlmann & Bro., their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

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TO THE

DECISIONS OF THE COMMISSIONER OF PATENTS AND OF THE UNITED STATES COURTS.

MARCH, 1912.

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DIGEST

OF THE

DECISIONS OF THE COMMISSIONER OF PATENTS AND OF THE UNITED STATES COURTS.

MARCH, 1912.

[Decisions of the Court of Appeals of the District of Columbia are indicated by one star (*) and of the Supreme Court of the United States by two stars (**).]

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ACCESS TO PENDING APPLICATIONS.

PUBLIC-USE PROCEEDINGS.

Where in connection with a petition for the institution of public-use proceedings it was stated that petitioner became aware that applications were pending for the invention alleged to have been in public use through the application of one W., to which it legitimately had access, *Held* that this affords no ground for giving one of the applicants involved in the public-use proceeding permission to inspect W.'s application, since it is in no way relied upon by the petitioner. [*In re* Deere & Mansur Company, 273.

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1. PATENTABILITY—INCANDESCENT-LAMP-SECURING MEANS.

Claims for a device for fastening an incandescent lamp in its socket *Held* unpatentable in view of the prior art. [*Ex parte* Morgan, 275.

2. SAME—DOUBLE USE.

Where the locking device employed by applicant had been used for the same purpose in nut-locks, *Held* that applicant had made merely a double use of this old instrumentality when he employed it as a means for fastening an incandescent lamp in its socket. [Id.

CONSTRUCTION OF TRADE-MARK STATUTES.

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1. PATENTS—VIOLATION OF AGREEMENT.

Any reasonable stipulation not inherently violative of some substantive law imposed by a patentee as part of a sale of a patented machine is valid and enforceable. If the stipulation is one which qualifies the right of use in a machine sold subject thereto, so that a breach would give rise to a right of action upon the contract, it would at the same time be an act of infringement, giving to the patentee his choice of remedies.

[**Henry *et al. v.* A. B. Dick Company, 751.

2. SAME—CONTRIBUTORY INFRINGEMENT—DEFINITION.

"Contributory infringement," says Judge Townsend in *Thomson-Houston Co.* v. *Kelsey Co.*, (72 Fed. Rep., 1016,) "has been well defined as the intentional aiding of one person by another in the unlawful making, or selling or using of the patented invention." [**Id.

3. SAME—SAME.

Where a patented machine was sold by complainant with a license agreement that it was to be used only with ink made by complainant, and defendant, with knowledge of such license agreement, sold to the owner of such machine ink not made by complainant, with the expectation that this ink was to be used in connection with such machine, *Held* that the acts of defendant constituted contributory infringement of complainant's patent. [**Id.

INTERFERENCE.

See Priority of Invention; Public-Use Proceedings; Res Adjudicata.

1. CONCURRENT DECISIONS OF PATENT OFFICE—ENTITLED TO GREAT WEIGHT.

"The concurrent decisions of the Office tribunals on questions of fact arising in interference cases are entitled to very great weight, and will not be disturbed except for manifest error, and, as was said in *Lindmark* v. *Hodgkinson*, (31 App. D. C., 612–614,) 'Especially is this true in a case like the present, which involves complicated construction, about which the experts of the Patent Office are less liable to err than ourselves.' " [*Healey v. Inwood and Lavenberg, 275.

2. PRIORITY—JUDGMENT BAR TO CLAIMS OF LOSING PARTY.

After the termination of an interference on its merits it is the judgment that the losing party is not the first inventor rather than the application of his opponent that stands as a bar to the allowance of his claims to the invention, although reference may be made to the file of the successful party to determine the scope of the judgment. [*Ex parte* Phelps, 525.

3. SAME—SAME—UNAFFECTED BY THE ABANDONMENT OF APPLICATION OF SUCCESSFUL PARTY.

Where an interference was decided in favor of the senior party because of the failure of the junior party to present testimony in support of the allegation of his preliminary statement, *Held* that the fact that the senior party's application was allowed to become finally abandoned constitutes no ground for allowing claims corresponding to the issue of the interference to the junior party. [Id.

4. MOTION TO DISSOLVE—VAGUENESS OR INDEFINITENESS OF THE COUNTS.

Where the claims in issue are perfectly clear when read upon the structures disclosed in the applications directly involved in an interference, *Held* that these claims are not indefinite because perchance it may be difficult to determine whether or not some other structure satisfies them. [Hewitt v. Hoiz v. Hewitt, 526.

5. EVIDENCE AS TO THE THIRD PARTY'S INVENTORSHIP IMMATERIAL.

The junior party to an interference cannot defeat the senior party's right by showing that a third person not a party to the proceedings was the real inventor, (citing *Foster* v. *Aniadel*, 88 O. G., 1527; 14 App. D. C., 552.) [*Pope v. McKenzie, 1072.

INVENTION BY THIRD PARTY.

See Interference, 5.

JUDGMENT ON THE RECORD.

See Res Adjudicata, 2.

JURISDICTION OF THE FEDERAL COURTS.

PATENTS—SUITS FOR VIOLATION OF LICENSES.

In determining whether a suit is one arising under the patent law and cognizable only in a court of the United States or one upon a contract between the patentee and his assignees or licensees and cognizable only in a State court unless there be diversity of citizenship the test of jurisdiction is: Does the complainant "set up some right, title or interest under the patent laws of the United States, or make it appear that some right or privilege will be defeated by one construction, or sustained by another, of those laws?" [**Henry *et al. v.* A. B. Dick Company, 751.

JURISDICTION OF THE STATE COURTS.

See Jurisdiction of the Federal Courts.

LICENSE.

See Infringement, 3; Jurisdiction of the Federal Courts.

LIMIT OF APPEAL.

See Reissue, 4.

MACHINE.

See Infringement, 1, 3; Patents.

OLD DEVICES.

See Construction of Claims, 2.

OPERATIVENESS.

See Priority of Invention, 1; Prosecution of Applications, 3, 4.

PATENTABILITY.

See Construction of Claims, 1; Res Adjudicata, 2.

PATENTS.

See Jurisdiction of the Federal Courts.

1. RIGHTS THEREUNDER.

The property right in the materials composing a patented machine and the right to use for the purpose and in the manner pointed out by the patent are separable rights. [** Henry *et al. v.* A. B. Dick Company, 751.

2. SAME.

The property right to a patented machine may pass to a purchaser with no right of use or with only the right of use in a specified way or at a specified place or for a specified purpose. The unlimited right or exclusive use which is possessed by and guaranteed to the patentee will be granted if the sale be unconditional; but if the right of use be confined by specific restrictions the use not permitted is necessarily reserved to the patentee. [**Id.

3. SAME—LIMITATION THEREOF.

There are certain limitations upon the right of vending and using a patented machine. If the thing patented belongs to a class of things which on account of their inherent danger to the public safety or health cannot be sold or used because prohibited by an exertion of the police power of a State, they will not be immune to such law because patented. [**Id.

PRELIMINARY STATEMENT.

See Interference, 3.

PRIORITY OF INVENTION.

See Interference, 2, 5; Public-Use Proceedings, 2.

1. FORMER DECISION AFFIRMED.

The decision of the Commissioner of Patents holding that the device of L and L. was not inoperative and awarding priority to them affirmed. [*Healey v. Inwood and Lavenberg, 275.

2. WHEN SENIOR PARTY IS PUT TO PROOF.

The party to an interference who first files an allowable application is not put upon his proof until his adversary shall have introduced evidence showing his own independent conception of the invention prior to that date. [*Pope v. McKenzie, 1072.

3. AWARD OF.

Evidence reviewed and *Held* insufficient to show that P. conceived the invention prior to McK.'s filing date and that priority was therefore properly awarded the latter. [*Id.

PROCESS.

See Prosecution of Applications, 3, 4.

PROOF.

See Priority of Invention, 2.

PROPERTY RIGHTS.

See Patents, 1, 2.

PROSECUTION OF APPLICATIONS.

See Drawings.

1. ELECTION—GROUND FOR REJECTION.

Where the Examiner is of the opinion that an amendment contains claims for an invention separate and distinct from that previously claimed, he should require the cancelation of such claims. From such action appeal lies to the Examiners-in-Chief. [*Ex parte* Weaver, 751.

2. ABANDONMENT.

Where in response to a requirement of the Examiner that a design be illustrated by showing the article in perspective or side elevation the applicant materially changed his claim, *Held* that the fact that the Examiner did not consider this amendment a compliance with the decision of the Commissioner in applicant's copending application did not justify a holding that the amendment was insufficient to save the case from abandonment. [*Ex parte* Mygatt, 1069.

3. DEVICE HELD TO BE INOPERATIVE—ACTION ON THE MERITS.

Where in response to a requirement to demonstrate the operativeness of the process claimed the applicant filed affidavits which the Examiner regarded as insufficient to comply with the requirement, *Held* that the Examiner should have rejected the claims on the ground that the process was inoperative. [*Ex parte* Wynne, 1070.

4. SAME—ABANDONMENT.

Where the Examiner required that the operativeness of applicant's process be demonstrated and at the end of the year applicant filed affidavits in an attempt to comply with the requirement, the fact that the Examiner regarded these affidavits as insufficient to establish that the process was operative did not justify a holding of abandonment. [Id.

PUBLIC-USE PROCEEDINGS.

See Access to Pending Applications.

1. PRIMA FACIE CASE—INSUFFICIENCY OF AFFIDAVITS.

Where in support of a petition for the institution of public-use proceedings only a single affidavit is filed, unaccompanied by a print, drawing, or photograph of the devices alleged to have been in public use or a detailed description of the same, and merely alleging a conclusion that devices like the one claimed by the applicant have been in public use, *Held* that a *prima facie* case of public use has not been made out. [*In re* Lowthwaite, 525.

2. PETITION FOR BROUGHT AFTER TERMINATION OF INTERFERENCE.

The question of priority is the only one involved in an interference proceeding, and the question of public use may properly be raised after the termination thereof. [*In re* Pittsburg Brake Shoe Company, 750.

3. QUESTION OF PUBLIC USE NOT RES ADJUDICATA BY REASON OF DECISION IN INTERFERENCE.

A final decision in an interference renders the question of priority *res adjudicata;* but it does not render the right of the successful party to a patent *res adjudicata*, (citing *Gaenifgt, Benoit, and Nicault* v. *Wictorsohn*, 134 O. G., 355; 134 O. G., 776; 30 App. D. C., 432.) [Id.

4. STRUCTURE ALLEGED TO HAVE BEEN IN PUBLIC USE NOT IDENTICAL WITH THAT DISCLOSED IN APPLICATION.

It is not necessary to the institution of public-use proceedings that the structure alleged to have been in public use be identical with that disclosed in the application; but it is sufficient if certain claims of the application read upon that structure. [Id.

REHEARING.

See Reissue, 4.

REINSTATEMENT OF CLAIMS.

See Reissue, 3.

REISSUE.

1. DIVISIONAL APPLICATIONS—AUTHORITY OF THE EXAMINER.
Where divisional applications are filed for the reissue of a patent and a patent is issued upon one of them, the Examiner has no authority to consider the other divisional applications unless ordered to do so by the Commissioner. [*Ex parte* Bayles, 749.

2. SAME—AUTHORITY OF COMMISSIONER.
Where divisional applications for the reissue of a patent are copending, the fact that a patent is issued upon one of them does not deprive the Commissioner of authority to subsequently issue patents upon the others. [Id.

3. REINSTATEMENT OF CANCELED CLAIMS.
Where claims in a reissue application were canceled in view of a rejection based on the fact that applicant was making the same claims in an earlier application, *Held* that a decision by the Examiners-in-Chief that applicant had no right to make the claims in the earlier application constitutes no ground for allowing them to be reinstated in the reissue application. [*Ex parte* Wilson, 1071.

4. LIMIT OF APPEAL—APPLICATION FOR REHEARING DOES NOT EXTEND.
A petition for rehearing does not in itself extend the limit of appeal or the time within which appeal should be taken to avoid abandonment. [Id.

REJECTION OF CLAIMS.

See Reissue, 3.

RES ADJUDICATA.

See Public-Use Proceedings.

1. PURPOSE.
The doctrine of *res adjudicata* is applied by the courts for the salutary purpose of preventing a successful party to litigation being vexed with subsequent litigations by the same party who contested the prior suit or by those in privity with him over the same cause of action. [*Ex parte* Temple and Goodrum, 526.

2. PATENTABILITY—ADVERSE DECISION IN INTERFERENCE.
In an interference involving applications of A., B., and C. judgment was rendered against A. on the record. After the termination of the interference claims were made by A. which were readable upon all three applications. *Held* that the question of A.'s right to a patent containing such claims was *res adjudicata*, notwithstanding the fact that these claims could not have been added to the issue of the three-party interference in view of a decision adverse to B. in another interference. [Id.

3. SAME—SAME—ASSIGNEES.
Where after the termination of an interference the assignee of the losing party placed the claims in issue in another application owned by said assignee at the time the interference was declared, *Held* that these claims were properly refused on the ground that the right of the assignee to a patent containing the same was *res adjudicata* by reason of the adverse decision in the interference. [Id.

RESPONSIVE ACTION BY THE APPLICANT.

See Prosecution of Applications, 2, 3, 4.

RIGHT TO MAKE CLAIMS.

See Reissue, 3.

RIGHT TO PATENT.

See Res Adjudicata, 2, 3.

RIGHT TO USE PATENTED MACHINE.

See Patents.

SIMILARITY OF MARKS.

See Trade-Marks, 3.

STATE OF THE ART.

See Construction of Claims, 1.

STATE STATUTES.

See Patents, 3.

STIPULATION.

See Infringement, 1.

SUITS FOR VIOLATION OF LICENSE.

See Jurisdiction of the Federal Courts.

TERMINOLOGY.

See Infringement, 2.

TESTIMONY.

See Interference, 3.

TRADE-MARKS.

1. GOODS OF THE SAME DESCRIPTIVE PROPERTIES—BUTTER AND OLEOMARGARIN.
Held that butter and oleomargarin are goods of the same descriptive properties within the meaning of the Trade-Mark Act. [John F. Jelke Co. *v.* Emil Fleischi & Son, 274.

2. "SIGNATURE" FOR INKS—DESCRIPTIVE.
The word "Signature" *Held* not registrable as a trade-mark for writing-inks, since it is descriptive of a characteristic or quality of the goods. [*Ex parte* Thaddeus Davids Co., 749.

3. CANCELATION—SHOWING OF INTEREST BY APPLICANT.
Where the petition for cancelation shows that the applicant for cancelation is not using the registered mark or one so nearly resembling it that their simultaneous use would be liable to cause confusion, *Held* that the applicant has not shown a likelihood of damage and that the petition for cancelation was properly dismissed.
[The Michigan Tea Rusk Co. *v.* Holland Rusk Co., 1070.

TRIBUNAL OF THE PATENT OFFICE.

See Interference, 1.

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ALPHABETICAL LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED DURING THE MONTH OF MARCH, 1912.

[Abbreviations: "Sp."—Monthly Volume of Specifications; "Gaz."—Official Gazette.]

A. Edström & Co. (See Edström and Anderseon, assignors.)
A. Mecky Company, The. (See Puraglove, William T., assignor.)
A. G. Eyles Chair Company. (See Eyles, Anton G., assignor.)
A. H. Heisey & Co. (See Sanford, Andrew J., assignor.)
Abbe, Walter, Brooklyn, N. Y. Electric-lamp socket. No. 1,020,245; Mar. 12; Sp. p. 2642; Gaz. vol. 176; p. 448.
Abbott, Jason O., Hebron, Ohio. Railway-tie. No. 1,020,173; Mar. 12; Sp. p. 2487; Gaz. vol. 176; p. 424.
Acme Supply Company. (See McKinnon, Alexander E., assignor.)
Acme Utility Company, The. (See Stockton, Lincoln C., assignor.)
Actien Gesellschaft für Anilin Fabrikation. (See Wolffenstein and Colman, assignors.)
Adams, Bert M., Detroit, Mich. Leaf-turner. No. 1,021,288; Mar. 26; Sp. p. 4848; Gaz. vol. 176; p. 885.
Adams, Clarence E., Lebanon, Ind. Electromagnetic rock-drill and chipping-hammer. No. 1,019,213; Mar. 5; Sp. p. 455; Gaz. vol. 176; p. 72.
Adams, John, Congo, Ohio. Metallic tie and rail-fastener. No. 1,020,392; Mar. 19; Sp. p. 2933; Gaz. vol. 176; p. 532.
Adams, Robert A. L. (See Bassick and Adams.)
Adreon Manufacturing Company. (See Wilson, Edward, assignor.)
Adt, Leo F., Albany, N. Y. Eyeglass-mounting. No. 1,019,115; Mar. 5; Sp. p. 230; Gaz. vol. 176; p. 37.
Adt, Leo F., Albany, N. Y. Eyeglasses. No. 1,019,116; Mar. 5; Sp. p. 236; Gaz. vol. 176; p. 38.
Adt, Leo F., Albany, N. Y. Eyeglass-mounting. No. 1,019,117; Mar. 5; Sp. p. 238; Gaz. vol. 176; p. 38.
Adt, Leo F., Albany, N. Y. Eyeglass-mounting. No. 1,019,214; Mar. 5; Sp. p. 459; Gaz. vol. 176; p. 73.
Ahrens, Albert A. (See Martin and Scheller, assignors.)
Ahrens, Louis, and E. M. Gilowsky, Milwaukee, Wis. Horseshoe. No. 1,019,401; Mar. 5; Sp. p. 931; Gaz. vol. 176; p. 136.
Air Device Company. (See Ricketts, James R., assignor.)
Akers, Harry G. (See Bonnington and Akers.)
Akers, Harry R., Tyler, Tex. Guard-rail clamp. No. 1,020,011; Mar. 12; Sp. p. 2140; Gaz. vol. 176; p. 369.
Akers, Willie E., Fairfax, Okla. Strainer. No. 1,020,369; Mar. 19; Sp. p. 3076; Gaz. vol. 176; p. 602.
Aktiebolaget Svenska Vapenoch Ammunitionsfabriken. (See Sjögren, Carl A. T., assignor.)
Albree, Edward C., Swampscott, assignor to Albree Self Figuring System Company, Boston, Mass. Accounting system. No. 1,019,290; Mar. 5; Sp. p. 682; Gaz. vol. 176; p. 99.
Albree Self Figuring System Company. (See Albree, Edward C., assignor.)
Alderson, Granville S. (See Echard and Alderson.)
Aldridge, Albert E., Victoria, British Columbia, Canada. Hat-pin guard. No. 1,019,038; Mar. 12; Sp. p. 1999; Gaz. vol. 176; p. 345.
Alexander, Arthur G., Chicago, Ill. Integrating fluid-meter. No. 1,020,735; Mar. 19; Sp. p. 3079; Gaz. vol. 176; p. 648.
Alexander, Joseph E., *et al.* (See Lineback, Edward E., assignor.)
Alexanderson, Ernst F. W., Schenectady, N. Y., assignor to General Electric Company. Alternating-current motor. No. 1,019,402; Mar. 5; Sp. p. 932; Gaz. vol. 176; p. 136.
Alexanderson, Ernst F. W., Schenectady, N. Y., assignor to General Electric Company. Single-phase motor. No. 1,021,260; Mar. 26; Sp. p. 4846; Gaz. vol. 176; p. 885.
Allard, James E. (See Blondell and Allard.)
Allatt, Thomas. (See James and Thompson, assignors.)
Allen, Charles C., Nebraska City, Nebr. Draw-bar for concrete structures. No. 1,020,676; Mar. 19; Sp. p. 3585; Gaz. vol. 176; p. 626.
Allen, Ernest J., Vilas, assignor of one-half to W. R. Downs, Antes Fort, Pa. Power-hammer-supporting device and adjustable frame for the same. No. 1,020,471; Mar. 19; Sp. p. 3095; Gaz. vol. 176; p. 559.
Allen, Ira, Dansville, N. Y. Airship. No. 1,020,870; Mar. 19; Sp. p. 3977; Gaz. vol. 176; p. 693.
Allen, James. (See Mason and Allen.)
Allen, John H., East Orange, N. J., assignor to Quincy, Manchester, Sargent Company, Chicago, Ill. Ball-joint. No. 1,020,941; Mar. 19; Sp. p. 4099; Gaz. vol. 176; p. 716.
Allis-Chalmers Company. (See Lieber, William H., assignor.)
Allis-Chalmers Company *et al.* (See Lietzenmayer, William J., assignor.)
Allis-Chalmers Company. (See Newhouse, Ray C., assignor.)
Almgren, Louis, San Diego, Cal. Equalizing trailing coupling device. No. 1,020,393; Mar. 19; Sp. p. 2934; Gaz. vol. 176; p. 533.
Alpha, Orville W., Franklin, La., assignor of one-half to A. V. Willson, Utica, Kans. Pump. No. 1,020,382; Mar. 12; Sp. p. 2896; Gaz. vol. 176; p. 491.
Altenbaugh, William F. (See Weaver and Altenbaugh.)
Althouse, John G., Omaha, Nebr. Clinker-tongs. No. 1,021,290; Mar. 26; Sp. p. 4851; Gaz. vol. 176; p. 885.
American Baker's Machinery Company. (See Masel, Theodore, assignor.)
American Blower Company. (See Gifford, Charles H., assignor.)
American Blower Company. (See McMurdie, Francis J., assignor.)
American Blower Company. (See Still, Frederick R., assignor.)
American Can Company. (See Graham, Charles W., assignor.)
American Can Company. (See Krohn, John, assignor.)
American Cag and Foundry Company. (See Ames, John M., assignor.)
American Car and Foundry Company. (See Frame, Robert E., assignor.)
American Car and Foundry Company. (See Robling, John M., assignor.)
American Car and Foundry Company. (See Summa, Victor M., assignor.)
American Car and Foundry Company. (See Willoughby, Victor, assignor.)
American Car and Foundry Company. (See Wolff, Herbert W., assignor.)
American Clay Machinery Company, The. (See Callaway, Edward H., assignor.)
American Column Company. (See Tresidder, John J., assignor.)
American Engineering Company. (See Riley, Robert S., assignor.)
American Foundry and Furnace Co. (See Bartlett, Eugene B., assignor.)
American Glove Company, The. (See Reisenbus and Sutherland, assignors.)
American Mono Service Company. (See Taylor, Elmer Z., assignor.)
American Optical Company. (See Day, George H., assignor.)
American Rotary Valve Company. (See Moorhead, Albert E., assignor.)
American Sanitary Works. (See Tilden, Bert O., assignor.) (Reissue.)
American Steel & Wire Company of New Jersey, The. (See Broden and Mustin, assignors.)
American Steel & Wire Company of New Jersey, The. (See Daniels and Backlin, assignors.)
American Telephone and Telegraph Company. (See Davidson, Charles J., assignor.)
American Telephone and Telegraph Company. (See Wright, John W., assignor.)
American Vanadium Co., The. (See Saklatwalla, Byramji D., assignor.)
Ames, John M., Dongan Hills, N. Y. Car-bolster. No. 1,021,735; Mar. 26; Sp. p. 5765; Gaz. vol. 176; p. 1036.
Ames, John M., Dongan Hills, N. Y., assignor to American Car and Foundry Company, St. Louis, Mo. Side frame for trucks. No. 1,021,125; Mar. 26; Sp. p. 4491; Gaz. vol. 176; p. 829.
Ammen, Francis D., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,020,571; Mar. 19; Sp. p. 3079; Gaz. vol. 176; p. 603.
Amstutz, Noah S., Cleveland, Ohio. Illustrative telegraphy. No. 1,019,408; Mar. 5; Sp. p. 935; Gaz. vol. 176; p. 136.

Amstutz, Noah S., Cleveland, Ohio. Illustrative telegraphy. No. 1,019,404; Mar. 5; Sp. p. 938; Gaz. vol. 176; p. 137.

Anakin, Arthur E., and W. J. Shealy, Salt Lake City, Utah. Auxiliary safe-lock. No. 1,021,651; Mar. 26; Sp. p. 5610; Gaz. vol. 176; p. 1009.

Andersen, Lauritz W., assignor to The Plume & Atwood Manufacturing Company, Waterbury, Conn. Combined electric socket and shade-holder and socket-cover. No. 1,020,736; Mar. 19; Sp. p. 3608; Gaz. vol. 176; p. 648.

Anderson Electric Car Company. (See Cochran, Clyde E., assignor.)

Anderson, Giles G., Enid, Okla. Fence-post. No. 1,020,872; Mar. 19; Sp. p. 3981; Gaz. vol. 176; p. 693.

Anderson, Harold B. (See Winton and Anderson.)

Anderson, James J., Vancouver, British Columbia, Canada. Furnace for obtaining metal from ore or matte. No. 1,020,531; Mar. 19; Sp. p. 3231; Gaz. vol. 176; p. 578.

Anderson, John A., Geneseo, Ill. Selector for corn-droppers. No. 1,020,591; Mar. 19; Sp. p. 3369; Gaz. vol. 176; p. 590.

Anderson, John H., St. Paul, Minn. Bob-sled runner. No. 1,020,120; Mar. 12; Sp. p. 2376; Gaz. vol. 176; p. 406.

Anderson, John J., Franklin, Minn. Twine-cutter. No. 1,020,788; Mar. 19; Sp. p. 3708; Gaz. vol. 176; p. 665.

Andersson, Olof B. (See Edström and Andersson.)

Anderton, William G., and C. S. Jarvis, Philadelphia, Pa. License-tag for motor-vehicles. No. 1,020,472; Mar. 19; Sp. p. 3098; Gaz. vol. 176; p. 559.

André, Charles, Lyon, France. Portable oven. No. 1,020,174; Mar. 12; Sp. p. 2480; Gaz. vol. 176; p. 424.

Anello, Francesco P., Newark, N. J. Umbrella and parasol. No. 1,021,291; Mar. 26; Sp. p. 4853; Gaz. vol. 176; p. 886.

Angell, Edmund R., Derry, N. H. Condenser for gas apparatus. No. 1,020,339; Mar. 12; Sp. p. 2811; Gaz. vol. 176; p. 477.

Angell, William R., assignor of one-half to F. G. Lundeen, Courtenay, N. D. Hame-fastener. No. 1,019,291; Mar. 5; Sp. p. 634; Gaz. vol. 176; p. 99.

Angold, Arthur E., Manchester, England. Electric-arc lamp. No. 1,019,292; Mar. 5; Sp. p. 637; Gaz. vol. 176; p. 100.

Anlauf, Franz J. (See Anlauf, Pius A. and F. J.)

Anlauf, Pius A. and F. J., Curtin, Oreg. Logging-bunk. No. 1,020,012; Mar. 12; Sp. p. 2141; Gaz. vol. 176; p. 369.

Anschel, Leo, Dortmund, Germany. Rotating disk cutting-machine. No. 1,020,873; Mar. 19; Sp. p. 3982; Gaz. vol. 176; p. 694.

Anschutz-Kaempfe, Hermann, Kiel, Germany. Gyroscope. No. 1,019,582; Mar. 5; Sp. p. 1290; Gaz. vol. 176; p. 193.

Anthony, John H., Hickman, Ark. Log-wagon attachment. No. 1,021,292; Mar. 26; Sp. p. 4855; Gaz. vol. 176; p. 886.

Antoniades, Emmanuel, Smyrna, Turkey. Hull and superstructure of ships and boats. No. 1,021,204; Mar. 26; Sp. p. 4858; Gaz. vol. 176; p. 887.

Appel, Benjamin, and S. S. Goldman, St. Louis, Mo. Fuel composition. No. 1,019,746; Mar. 12; Sp. p. 1605; Gaz. vol. 176; p. 281.

Apple, Vincent G., Dayton, Ohio, assignor to Dayton Electrical Manufacturing Co. Instrument set for electrical distribution systems. No. 1,021,293; Mar. 26; Sp. p. 4856; Gaz. vol. 176; p. 886.

Arbuckle, Alexander J., Johannesburg, Transvaal. Settling-tank. No. 1,020,013; Mar. 12; Sp. p. 2143; Gaz. vol. 176; p. 369.

Arden, Juliette, New York, N. Y. Broiler for gas-stoves. No. 1,021,490; Mar. 26; Sp. p. 5324; Gaz. vol. 176; p. 959.

Armbrust, Charles W., Crystal Lake, assignor of one-fourth to S. Stein, Chicago, Ill. Brake-shoe. No. 1,019,583; Mar. 5; Sp. p. 1292; Gaz. vol. 176; p. 194.

Armbrust, Charles W., Crystal Lake, assignor of one-half to H. W. Armbrust, North Crystal Lake, Ill. Brake-shoe. No. 1,020,532; Mar. 19; Sp. p. 3232; Gaz. vol. 176; p. 578.

Armbrust, Harriet W. (See Armbrust, Charles W., assignor.)

Armington, George A., Wickliffe, Ohio. Brake for hoisting machinery. No. 1,020,014; Mar. 12; Sp. p. 2146; Gaz. vol. 176; p. 370.

Armstrong, James E., Weatherford, assignor to Standard Bale Wire Buckle Co., Fort Worth, Tex. Bale-tie buckle. No. 1,021,397; Mar. 26; Sp. p. 5102; Gaz. vol. 176; p. 924.

Armstrong, John D. (See Halliday, George, assignor.)

Armstrong, Ulysses S., New Kensington, Pa. Cleaning-machine. No. 1,020,780; Mar. 19; Sp. p. 3799; Gaz. vol. 176; p. 665.

Arnesen, Johan, Jelöen, near Moss, Norway. Saw-filing machine. No. 1,021,295; Mar. 26; Sp. p. 4860; Gaz. vol. 176; p. 887.

Arnold, Charles J. (See Jones and Arnold.)

Arnold, Jacob F., assignor to H. H. Hutchinson, Massillon, Ohio. Label-holder. No. 1,020,175; Mar. 12; Sp. p. 2491; Gaz. vol. 176; p. 425.

Arnold, Rex E., and C. P. Hockett, Kouts, Ind. Resilient wheel. No. 1,021,440; Mar. 26; Sp. p. 5192; Gaz. vol. 176; p. 939.

Arnold, Samuel J., Dubuque, Iowa. Hand-press. No. 1,019,293; Mar. 5; Sp. p. 641; Gaz. vol. 176; p. 100.

Arnold, William B., Eaton Rapids, Mich. Tongue for shoes or the like. No. 1,019,877; Mar. 12; Sp. p. 1852; Gaz. vol. 176; p. 325.

Arreagada, Everaldo M. (See Krohn and Arreagada.)

Artista Piano Player Company. (See Turney, Eugene T., assignor.)

Asbury, Dorsey F. (See Smith and Asbury.)

Ascue, Elbert. (See Scheble and Ascue.)

Ashley, Frank M., New York, N. Y. Fountain-pen. No. 1,021,398; Mar. 26; Sp. p. 5104; Gaz. vol. 176; p. 924.

Ashton, Orrell, Lawrence, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Gripper. No. 1,019,012; Mar. 5; Sp. p. 1; Gaz. vol. 176; p. 3.

Ashton, Orrell, Lawrence, assignor to United Shoe Machinery Company, Boston, Mass. Quilting-machine. No. 1,019,118; Mar. 5; Sp. p. 240; Gaz. vol. 176; p. 38.

Ashton, Orrell, Lawrence, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Shoe-shaping machine. No. 1,019,878; Mar. 12; Sp. p. 1853; Gaz. vol. 176; p. 325.

Askin, Harry, Chicago, Ill. Umbrella for theatrical purposes. No. 1,020,071; Mar. 12; Sp. p. 2264; Gaz. vol. 176; p. 389.

Aspinwall, John, *et al.* (See Schwertner, Joseph, assignor.) (Reissue.)

Astfalck, Wiland, Tegel, near Berlin, Germany. Hydraulic press. No. 1,020,176; Mar. 12; Sp. p. 2492; Gaz. vol. 176; p. 425.

Atmar, Joseph Y., Teague, Tex. Seed-planter. No. 1,021,652; Mar. 26; Sp. p. 5612; Gaz. vol. 176; p. 1009.

Atwood, Wallace W., Chicago, Ill. Siderial sphere. No. 1,019,405; Mar. 5; Sp. p. 941; Gaz. vol. 176; p. 137.

Augenbraun, Peter F., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Pin-tumbler lock. No. 1,020,874; Mar. 19; Sp. p. 3983; Gaz. vol. 176; p. 694.

Ault, Playfair G., Birmingham, Ala. Pump-operating mechanism. No. 1,021,296; Mar. 26; Sp. p. 4862; Gaz. vol. 176; p. 888.

Auman, Daniel A. and G. C., assignors of one-third to G. M. Stern, Reading, Pa. Railway-rail. No. 1,020,592; Mar. 19; Sp. p. 3370; Gaz. vol. 176; p. 599.

Auman, George C. (See Auman, Daniel A. and G. C.)

Austin, De Roy, Omaha, Nebr. Insole for shoes. No. 1,021,441; Mar. 26; Sp. p. 5194; Gaz. vol. 176; p. 939.

Austin, Frederick C. (See Bentson, Hans J., assignor.)

Austin, Herbert, Barnt Green, near Birmingham, England. Friction-clutch having removable wearing-surfaces. No. 1,020,737; Mar. 19; Sp. p. 3690; Gaz. vol. 176; p. 649.

Auto Wind Shield Company. (See White, Herbert H., assignor.)

Automatic Packing & Labeling Company. (See Gwinn, George W., assignor.)

Automatic Vacuum Cleaner Company. (See Rakestraw, William H., assignor.)

Autoplate Company of America, The. (See Robertson, Charles J., assignor.)

Avery, Henry C., assignor of one-half to J. L. Perkins, Holyoke, Mass. Advertising device. No. 1,020,050; Mar. 26; Sp. p. 4155; Gaz. vol. 176; p. 773.

Avery, James E. (See Wormworth, Leslie, assignor.)

Awkerman, Romeo C. (See O'Brien and Awkerman.)

Ayers, John H., Commerce, Ga. Cotton-chopper. No. 1,021,228; Mar. 26; Sp. p. 4727; Gaz. vol. 176; p. 864.

Ayling, Arthur W., and P. F. Reichert, Toledo, Ohio. Float. (Reissue.) No. 13,389; Mar. 26; Sp. p. 5821; Gaz. vol. 176; p. 1043.

Aylsworth, Jonas W., East Orange, assignor of one-half to F. L. Dyer, Montclair, N. J. Phenolic condensation product and preparing same. No. 1,020,503; Mar. 19; Sp. p. 3371; Gaz. vol. 176; p. 599.

Aylsworth, Jonas W., East Orange, assignor of one-half to F. L. Dyer, Montclair, N. J. Plastic phenolic condensation product and forming same. No. 1,020,504; Mar. 19; Sp. p. 3375; Gaz. vol. 176; p. 600.

B. F. Perkins & Son. (See Stanley and Perkins, assignors.)

Babcock, Garrison, assignor to Telechronometer Company, Rochester, N. Y. Telephone metering system. No. 1,019,879; Mar. 12; Sp. p. 1856; Gaz. vol. 176; p. 326.

Bachelet, Emile, Mount Vernon, N. Y. Levitating transmitting apparatus. No. 1,020,942; Mar. 19; Sp. p. 4101; Gaz. vol. 176; p. 717.

Bachelet, Emile, Mount Vernon, N. Y. Levitating transmitting apparatus. No. 1,020,943; Mar. 19; Sp. p. 4104; Gaz. vol. 176; p. 717.

Bachmann, John, Chicago, Ill. Tobacco-pipe. No. 1,021,442; Mar. 26; Sp. p. 5195; Gaz. vol. 176; p. 940.

Baekeland, Leo H., Yonkers, assignor to General Bakelite Company, New York, N. Y. Composite cardboard. No. 1,019,406; Mar. 5; Sp. p. 943; Gaz. vol. 176; p. 138.

Baekeland, Leo H., Yonkers, assignor to General Bakelite Company, New York, N. Y. Uniting objects. No. 1,019,407; Mar. 5; Sp. p. 944; Gaz. vol. 176; p. 138.

Baekeland, Leo H., and N. Thurlow, Yonkers, assignors to General Bakelite Company, New York, N. Y. Wood-finishing. No. 1,019,408; Mar. 5; Sp. p. 946; Gaz. vol. 176; p. 138.

Backlin, Axel F. (See Daniels and Backlin.)

Backstay Machine and Leather Company. (See Schemmel, Robert C., assignor.)

Badeau, Charles C., assignor to S. B. Condit, Jr., Boston, Mass. Oil-switch. No. 1,021,746; Mar. 26; Sp. p. 5793; Gaz. vol. 176; p. 1040.

Badeau, Louis C., New York, N. Y. Airship. No. 1,020,015; Mar. 12; Sp. p. 2149; Gaz. vol. 176; p. 370.

Bailey, John, Great Falls, Mont. Electric delivery system. No. 1,020,016; Mar. 12; Sp. p. 2151; Gaz. vol. 176; p. 371.

Bailey, Percy S., Lynn, Mass., assignor to General Electric Company. Safety-stop for gas-cups. No. 1,019,409; Mar. 5; Sp. p. 949; Gaz. vol. 176; p. 138.

Bailey, William A., Sioux Falls, S. D. Hay-handling appliance. No. 1,021,085; Mar. 26; Sp. p. 4406; Gaz. vol. 176; p. 817.

Baillod, Paul, La Chaux-de-Fonds, Switzerland. Reading-desk. No. 1,020,875; Mar. 19; Sp. p. 3984; Gaz. vol. 176; p. 694.

Baker, Ambrose B., Salem, Ohio. Fly-catcher for lamps. No. 1,019,410; Mar. 5; Sp. p. 940; Gaz. vol. 176; p. 138.

Baker, Andrew H., Brockton, Mass. Poultry-feeder. No. 1,020,790; Mar. 19; Sp. p. 3801; Gaz. vol. 176; p. 666.

Baker, Franklin P., Malden, Mass. Inflatable dress or shirt shield. No. 1,021,176; Mar. 26; Sp. p. 4610; Gaz. vol. 176; p. 846.

Baker, George M., Garden City, N. Y. Scraper. No. 1,019,294; Mar. 5; Sp. p. 643; Gaz. vol. 176; p. 101.

Baker, Jackson B., Portland, Oreg. Intermediate awning-roller support. No. 1,020,246; Mar. 12; Sp. p. 2643; Gaz. vol. 176; p. 448.

Baker, Otto, Piermont, N. Y., and E. J. McCarty, assignors to T. J. McNamara, Clinton, Mass. Blower and shower for paper-machines. No. 1,019,013; Mar. 5; Sp. p. 4; Gaz. vol. 176; p. 3.

Balbach, Michael, Wilkes-Barre, Pa. Bender for gas-meters. No. 1,019,119; Mar. 5; Sp. p. 245; Gaz. vol. 176; p. 39.

Baldus, Anton, Frankfort-on-the-Main, Germany. Apparatus for measuring the viscosity of liquids. No. 1,021,229; Mar. 26; Sp. p. 4729; Gaz. vol. 176; p. 864.

Baldwin, Lucy E., Bridgman, Mich. Combined coat and hat rack. No. 1,020,791; Mar. 19; Sp. p. 3803; Gaz. vol. 176; p. 666.

Baldwin, Priscilla F., Wooster, Ohio. Preparing food products. No. 1,019,411; Mar. 5; Sp. p. 951; Gaz. vol. 176; p. 139.

Ball, Arthur P. (See Warsaw and Ball.)

Ball, Henry P., Pittsfield, Mass., assignor to General Electric Company. Electric heater. No. 1,021,230; Mar. 26; Sp. p. 4730; Gaz. vol. 176; p. 864.

Ballard, Harrie A., Boston, assignor to The Boylston Manufacturing Company, South Boston, Mass. Last. No. 1,020,677; Mar. 19; Sp. p. 3557; Gaz. vol. 176; p. 626.

Balog, George, Perth Amboy, N. J. Hat-pin-point protector. No. 1,020,394; Mar. 19; Sp. p. 2935; Gaz. vol. 176; p. 533.

Balston, Clyde C., assignor to A. Barker, New York, N. Y. Dumb-bell and the like. No. 1,019,584; Mar. 5; Sp. p. 1295; Gaz. vol. 176; p. 194.

Bamford, Joseph, Uttoxeter, England. Potato-digging machine. No. 1,020,247; Mar. 12; Sp. p. 2645; Gaz. vol. 176; p. 449.

Barber, Clarence A., Des Moines, Iowa. Safety appliance for flying-machines. No. 1,019,014; Mar. 5; Sp. p. 5; Gaz. vol. 176; p. 3.

Barber-Colman Company. (See Mathewson, Stanley B., assignor.)

Barber-Colman Company. (See Peterson, Burt A., assignor.)

Barcalo Manufacturing Company. (See Vallone, Charles, assignor.)

Barclay, Samuel M. T., Dubois, Pa. Nut-lock. No. 1,019,215; Mar. 5; Sp. p. 462; Gaz. vol. 176; p. 73.

Barclay, William P., Chicago, Ill. Centrifugal cream-separator. No. 1,020,248; Mar. 12; Sp. p. 2646; Gaz. vol. 176; p. 449.

Barker, Anthony. (See Balston, Clyde C., assignor.)

Barker, England J. (See La Barr, Frank B., assignor.)

Barker, Frederic R., Boston, Mass. Wheel-rim. No. 1,020,678; Mar. 19; Sp. p. 3559; Gaz. vol. 176; p. 626.

Barker, George H., Los Angeles, Cal. Game-counter. No. 1,019,015; Mar. 5; Sp. p. 7; Gaz. vol. 176; p. 4.

Barker, James F., Philadelphia, Pa. Wave-motor. No. 1,020,340; Mar. 12; Sp. p. 2812; Gaz. vol. 176; p. 477.

Barker, Walter S., Cambridge, Mass. Clasp. No. 1,019,016; Mar. 5; Sp. p. 8; Gaz. vol. 176; p. 4.

Barnes, John G., Harrogate, England. Detachable heel. No. 1,019,585; Mar. 5; Sp. p. 1296; Gaz. vol. 176; p. 194.

Barnes, Walter E., Malden, Mass. Valve. No. 1,019,747; Mar. 12; Sp. p. 1606; Gaz. vol. 176; p. 281.

Barnhart, Frank, Spokane, Wash. Wood-splitting machine. No. 1,020,072; Mar. 12; Sp. p. 2265; Gaz. vol. 176; p. 390.

Barnhart, Robert L., Charlerol, Pa. Electrically-operated animal-trap. No. 1,020,341; Mar. 12; Sp. p. 2815; Gaz. vol. 176; p. 477.

Barone, Anthony, Mount Morris, N. Y. Mold for concrete walls. No. 1,021,443; Mar. 26; Sp. p. 5196; Gaz. vol. 176; p. 940.

Barr, Archibald, Glasgow, Scotland, and W. Stroud, Leeds, England. Single-observer range-finder. No. 1,019,412; Mar. 5; Sp. p. 952; Gaz. vol. 176; p. 139.

Barrett, Harvey N. (See Newberry and Barrett.)

Barrett, Richard E., Boykins, Va. Horse-releasing device. No. 1,021,297; Mar. 26; Sp. p. 4864; Gaz. vol. 176; p. 888.

Barricklow, Irvin E., Antioch, Cal. Safety-fuse. No. 1,020,249; Mar. 12; Sp. p. 2648; Gaz. vol. 176; p. 449.

Barrie, Charles E., Brattleboro, Vt. Corn-husking machine. No. 1,019,580; Mar. 5; Sp. p. 1299; Gaz. vol. 176; p. 195.

Barrows, Webster, Malden, and H. L. Moreau, Boston, Mass. Making copies of certain objects in solid material. No. 1,020,679; Mar. 19; Sp. p. 3562; Gaz. vol. 176; p. 627.

Barthelemy, Edward N. (See White and Barthelemy.)

Bartholomew, George W. (See Brown and Bartholomew.)

Bartholomew, William, assignor to Troy Laundry Machinery Company, Limited, Chicago, Ill. Cuff-press. No. 1,021,231; Mar. 26; Sp. p. 4731; Gaz. vol. 176; p. 865.

Bartlett, Eugene B., Cleveland, Ohio, assignor to American Foundry and Furnace Co., Bloomington, Ill. Latrine. No. 1,019,587; Mar. 5; Sp. p. 1302; Gaz. vol. 176; p. 195.

Bartz, August C. F., Keystone, Wis. Spring attachment for apparel-supports. No. 1,020,473; Mar. 19; Sp. p. 3098; Gaz. vol. 176; p. 560.

Bassick, Edgar W., assignor to The Burns & Bassick Company, Bridgeport, Conn. Spring-latch. No. 1,019,216; Mar. 5; Sp. p. 463; Gaz. vol. 176; p. 74.

Bassick, Edgar W., and R. A. L. Adams, assignors to The Burns & Bassick Company, Bridgeport, Conn. Spring-latch. No. 1,019,217; Mar. 5; Sp. p. 464; Gaz. vol. 176; p. 74.

Bast, Fred W. (See Hessler and Bast.)

Batcheider, Asa F., Schenectady, N. Y., assignor to General Electric Company. Electric steam-heating system. No. 1,019,413; Mar. 5; Sp. p. 958; Gaz. vol. 176; p. 139.

Batcheider, J. Frank, *et al.* (See Chase, Milton, assignor.)

Bates, Albert A., East Highgate, Vt. Combined grass-hook, corn-knife, and pruning-saw. No. 1,021,444; Mar. 26; Sp. p. 5198; Gaz. vol. 176; p. 940.

Bates, Albert H., Cleveland, Ohio. Street-car. No. 1,020,017; Mar. 12; Sp. p. 2154; Gaz. vol. 176; p. 371.

Bates, Arthur. (See Pride and Bates.)

Bates, Arthur, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J. Machine for operating upon shoes. No. 1,020,177; Mar. 12; Sp. p. 2495; Gaz. vol. 176; p. 425.

Bates, Arthur, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J. Lasting-machine. No. 1,020,474; Mar. 19; Sp. p. 3100; Gaz. vol. 176; p. 560.

Bates, Arthur, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J. Machine for operating upon soles. No. 1,020,533; Mar. 19; Sp. p. 3235; Gaz. vol. 176; p. 578.

Bates, Arthur, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J. Lasting-machine. No. 1,020,631; Mar. 19; Sp. p. 3461; Gaz. vol. 176; p. 611.

Bates, Arthur, Leicester, England, assignor to United Shoe Machinery Company, Boston, Mass. Lasting-machine. No. 1,021,086; Mar. 26; Sp. p. 4409; Gaz. vol. 176; p. 818.

Bates, Eugene J., San Luis Obispo, Cal. Casing-tongs. No. 1,019,120; Mar. 5; Sp. p. 246; Gaz. vol. 176; p. 39.

Battin, Harold T., Bridgeport, Conn. Lock-nut. No. 1,020,178; Mar. 12; Sp. p. 2498; Gaz. vol. 176; p. 426.

Bauer, Charles, London, England. Locking-washer. No. 1,020,738; Mar. 19; Sp. p. 3702; Gaz. vol. 176; p. 649.

Bauer, Clarence E., assignor of one-fourth to F. Bauer and one-fourth to A. Cisler, Akron, Ohio. Guide. No. 1,020,876; Mar. 19; Sp. p. 3985; Gaz. vol. 176; p. 694.

Bauer, Fred, *et al.* (See Bauer, Clarence E., assignor.)

Bausch & Lomb Optical Company. (See Kellner, Gustav A. H., assignor.)

Baxter, John H., Berthoud, Colo. Windmill. No. 1,020,957; Mar. 26; Sp. p. 4156; Gaz. vol. 176; p. 773.

Basley, William H., Everett, assignor to Plympton Manufacturing Company, Boston, Mass. Strip-feeding mechanism. No. 1,019,295; Mar. 5; Sp. p. 644; Gaz. vol. 176; p. 101.

Beach, Harry L., Coshocton, Ohio. Straw-dispenser. No. 1,021,232; Mar. 26; Sp. p. 4734; Gaz. vol. 176; p. 865.

Beach, Herbert E., Birmingham, England. Electrolytic anode. No. 1,019,588; Mar. 5; Sp. p. 1304; Gaz. vol. 176; p. 196.

Beach, Oscar C., Los Angeles, and A. J. Hodge, Pasadena, assignors to F. W. Braun, Los Angeles, Cal. Gearing. No. 1,021,233; Mar. 26; Sp. p. 4736; Gaz. vol. 176; p. 865.

Beadell, Benjamin W., assignor to National Waterproof Film Company, Chicago, Ill. Container for picture-films and the like. No. 1,019,589; Mar. 5; Sp. p. 1306; Gaz. vol. 176; p. 196.

Beam, Jacob B., Punxsutawney, Pa. Radiator. No. 1,019,121; Mar. 5; Sp. p. 248; Gaz. vol. 176; p. 39.

Beam, Jacob B., Punxsutawney, Pa. Radiator. No. 1,019,122; Mar. 5; Sp. p. 254; Gaz. vol. 176; p. 40.

Beauregard, Victor, Boston, Mass., assignor of one-half to E. B. Waite, Chicago, Ill. Machine for marking mail-matter. No. 1,019,296; Mar. 5; Sp. p. 647; Gaz. vol. 176; p. 101.

Bechtel, John A. (See Franzen and Bechtel.)

Beck, Edwin S., Duncannon, Pa. Combined check and stop valve. No. 1,019,590; Mar. 5; Sp. p. 1307; Gaz. vol. 176; p. 196.

Beck, Frederic J., Poplar, Mont. Lock and tag holder for mail-pouches. No. 1,020,395; Mar. 19; Sp. p. 2936; Gaz. vol. 176; p. 534.

Becker, Benjamin H., and J. Ciesla, assignors to James S. Kirk & Co., Chicago, Ill. Soap-press. No. 1,021,126; Mar. 26; Sp. p. 4497; Gaz. vol. 176; p. 829.

Becker, Ely, Brooklyn, N. Y. Sewed hand-bag. No. 1,021,298; Mar. 26; Sp. p. 4865; Gaz. vol. 176; p. 888.

Becker, Harry, Baltimore, Md. Miner's lamp. No. 1,019,748; Mar. 12; Sp. p. 1607; Gaz. vol. 176; p. 281.

Becker, Lyda, Indianapolis, Ind. Skirt-marker. No. 1,020,250; Mar. 12; Sp. p. 2650; Gaz. vol. 176; p. 449.

Beckmann, Johannes, Altona, Ottensen, Germany. Electrical welding apparatus. No. 1,019,017; Mar. 5; Sp. p. 10; Gaz. vol. 176; p. 4.

Behning Piano Company. (See Brand and Santos, assignors.)

Behr, Hans C., and C. F. E. O. Schmitt, Johannesburg, Transvaal. Apparatus for subdividing streams of pulp and other liquids. No. 1,020,251; Mar. 12; Sp. p. 2652; Gaz. vol. 176; p. 450.

Bélanger, Victor, Marshfield, assignor to New Era Spinning Co., Boston, Mass. Device for spinning and twisting yarn. No. 1,020,179; Mar. 12; Sp. p. 2409; Gaz. vol. 176; p. 426.

Belcher, Warren J., assignor to The Whitney Manufacturing Company, Hartford, Conn. Drive-chain. No. 1,020,180; Mar. 12; Sp. p. 2505; Gaz. vol. 176; p. 426.

Bell, Arthur H., Denver Colo. Brooder. No. 1,020,252; Mar. 12; Sp. p. 2655; Gaz. vol. 176; p. 450.

Bell, Herbert, East Boston, Mass. Combination beer-cock. No. 1,020,877; Mar. 19; Sp. p. 3987; Gaz. vol. 176; p. 694.

Bell, John C., Harrison, N. J. Making-wire for paper-making. No. 1,020,073; Mar. 12; Sp. p. 2267; Gaz. vol. 176; p. 390.

Bell, Thomas, Fall River, Mass., and E. Brophy, Tiverton, R. I. Fire-alarm. No. 1,020,074; Mar. 12; Sp. p. 2268; Gaz. vol. 176; p. 390.

Bellamy, Charles H., Philadelphia, Pa., assignor to Concrete & Clay Products Company. Manufacture of tiles. No. 1,019,414; Mar. 5; Sp. p. 959; Gaz. vol. 176; p. 139.

Belluomini, John V., Oakland, and A. Marcucci, San Francisco, assignors of one-fourth to O. F. Breiling and one-fourth to E. J. Breiling, Oakland, Cal. Quick-release wrench. No. 1,019,939; Mar. 12; Sp. p. 2000; Gaz. vol. 176; p. 345.

Beltramo, Paolo. (See Bramanti-Mattei and Beltramo.)

Bemberg, Aktiengesellschaft, J. P. (See Schreiner, Ludwig, assignor.)

Bendelari, Arthur E., Joplin, Mo. Collapsible box or package. No. 1,020,878; Mar. 19; Sp. p. 3988; Gaz. vol. 176; p. 695.

Bender, John B., assignor to C. W. Neilsen, trustee, Toledo, Ohio. Compressor. No. 1,019,740; Mar. 12; Sp. p. 1609; Gaz. vol. 176; p. 281.

Benjamin Electric Manufacturing Company. (See Benjamin, Reuben B., assignor.)

Benjamin Electric Manufacturing Company. (See Blake, Robert S., assignor.)

Benjamin, Reuben B., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill. Switch-socket. No. 1,021,177; Mar. 26; Sp. p. 4611; Gaz. vol. 176; p. 846.

Benkó, Andrew, New York, N. Y. Photographic-plate developing, washing, and fixing apparatus. No. 1,021,035; Mar. 26; Sp. p. 4308; Gaz. vol. 176; p. 800.

Bennett, Carl K. (See Pierce, James M., assignor.)

Bennie, John W., Clifton, Ariz. Treating copper ores or copper-ore-mill tailings. No. 1,019,708; Mar. 5; Sp. p. 1518; Gaz. vol. 176; p. 235.

Bensinger, Forbes R., Franklin, Pa., assignor to The Kretol Company, Inc., Washington, D. C. Disinfecting apparatus. No. 1,021,500; Mar. 26; Sp. p. 5325; Gaz. vol. 176; p. 959.

Benson, August. (See Young, Jean A., assignor.)

Bentley, David H., *et al.* (See Black, John P., assignor.)

Bentson, Hans J., Winthrop Harbor, assignor to F. C. Austin, Chicago, Ill. Clean-out for excavator-buckets. No. 1,020,958; Mar. 26; Sp. p. 4158; Gaz. vol. 176; p. 773.

Berendes, Rudolf, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Producing the calcium salt of acetyl salicylic acid. No. 1,020,181; Mar. 12; Sp. p. 2508; Gaz. vol. 176; p. 427.

Berendes, Rudolf, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Producing the calcium salt of acetyl salicylic acid. No. 1,020,182; Mar. 12; Sp. p. 2508; Gaz. vol. 176; p. 427.

Berendes, Rudolph, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Calcium salt of acetyl salicylic acid and making same. No. 1,020,121; Mar. 12; Sp. p. 2376; Gaz. vol. 176; p. 406.

Berg, Fred G., assignor of one-half to M. B. Horney, Enid, Okla. Type-writer ribbon-cabinet. No. 1,020,475; Mar. 19; Sp. p. 3106; Gaz. vol. 176; p. 560.

Berger, Emanuel, assignor to J. Frisch & Sohn, Tapolcza, Austria-Hungary. Receptacle for wine and similar liquids. No. 1,020,739; Mar. 19; Sp. p. 3704; Gaz. vol. 176; p. 649.

Berlin Machine Works, The. (See Harper, William, assignor.)

Berneck, Rudolf M. von, M. Moest, and H. Graf, assignors to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany. Manufacturing pure nitric oxid. No. 1,021,234; Mar. 26; Sp. p. 4738; Gaz. vol. 176; p. 866.

Bernstein, Abraham, Cincinnati, Ohio. Supplemental horseshoe. No. 1,020,792; Mar. 19; Sp. p. 3804; Gaz. vol. 176; p. 666.

Berry, Charles E., Somerville, Mass. Spring-opening hinge. No. 1,019,940; Mar. 12; Sp. p. 2001; Gaz. vol. 176; p. 345.

Berryman, William, and C. Camus, Middlesex, assignors to United Flexible Metallic Tubing Company, Limited, Ponders End, England. Flexible metallic tubing. No. 1,021,567; Mar. 26; Sp. p. 5465; Gaz. vol. 176; p. 982.

Bertha, Julius, Tyre, Pa. Miner's lamp. No. 1,021,568; Mar. 26; Sp. p. 5466; Gaz. vol. 176; p. 982.

Berzon, Louis. (See Simmons and Berzon.)

Best, Clarence L., assignor to The Best Manufacturing Company, San Leandro, Cal. Sidehill-harvester. No. 1,020,391; Mar. 12; Sp. p. 2916; Gaz. vol. 176; p. 494.

Best, Edwin J., Ensley, Ala. Pressure-reducing valve. No. 1,020,969; Mar. 26; Sp. p. 4160; Gaz. vol. 176; p. 774.

Best Manufacturing Company, The. (See Best, Clarence L., assignor.)

Best, William J., Detroit, Mich. Burner-igniter. No. 1,020,075; Mar. 12; Sp. p. 2269; Gaz. vol. 176; p. 391.

Bethancourt, Justimen E., Houma, La. Oil-can. No. 1,021,653; Mar. 26; Sp. p. 5614; Gaz. vol. 176; p. 1009.

Bettendorf, J. W., administrator. (See Bettendorf, William P.)

Bettendorf, Joseph W., Bettendorf, Iowa. Car-truck construction. No. 1,020,960; Mar. 26; Sp. p. 4163; Gaz. vol. 176; p. 774.

Bettendorf, William P., deceased, Davenport, Iowa; J. W. Bettendorf, administrator. Feeding mechanism for hydraulic presses. No. 1,021,501; Mar. 26; Sp. p. 5327; Gaz. vol. 176; p. 960.

Betts, Lewis F., New York, assignor to A. A. Low, Horseshoe, M. J. Wohl, and H. Hertzberg, trustees, Brooklyn, N. Y. Oil-stove. No. 1,019,123; Mar. 5; Sp. p. 258; Gaz. vol. 176; p. 40.

Betz, William G., Chicago Heights, assignor to Steger & Sons Piano Manufacturing Company, Chicago, Ill. Pneumatic piano. No. 1,021,502; Mar. 26; Sp. p. 5331; Gaz. vol. 176; p. 960.

Bévenot, Paul, Paris, and E. de Neveu, Asnières, France. Desiccating process. No. 1,020,632; Mar. 19; Sp. p. 3465; Gaz. vol. 176; p. 612.

Biberstein, Frank, Milwaukee, Wis. Aeroplane. No. 1,021,178; Mar. 26; Sp. p. 4614; Gaz. vol. 176; p. 847.

Bienz, Johann, Berne, Switzerland. Manufacturing mineral waters. No. 1,021,087; Mar. 26; Sp. p. 4417; Gaz. vol. 176; p. 818.

Bigelow, Frank B. (See Fortune and Bigelow.)

Bigney, Sidney O. (See Hodges, James C., assignor.)

Bigney, Sidney O. (See Smith, Cyril A., assignor.)

Binick, William, Milwaukee, Wis. Traveling-bag. No. 1,019,218; Mar. 5; Sp. p. 465; Gaz. vol. 176; p. 74.

Binns, John E., Jr., Nashville, Tenn. Gearing. No. 1,020,595; Mar. 19; Sp. p. 3379; Gaz. vol. 176; p. 600.

Binns, John E., Jr., Nashville, Tenn. Seed-planter. No. 1,020,680; Mar. 19; Sp. p. 3563; Gaz. vol. 176; p. 627.

Binns, John E., Jr., Nashville, Tenn. Covering-wheel for grain-drills. No. 1,020,681; Mar. 19; Sp. p. 3566; Gaz. vol. 176; p. 627.

Biograph Company. (See Marvin, Harry N., assignor.)

Bissett, Harry L., *et al.* (See Christman, Matthias, assignor.)

Bittner, Phillip J. (See Primbs and Bittner.)

Bituminous Road Implement Company. (See Price, Charles P., assignor.)

Black, John P., Greenfield, assignor of one-third to C. P. Duncan and one-third to D. H. Bentley, Deputy, Ind. Hydrocarbon-burner. No. 1,019,124; Mar. 5; Sp. p. 259; Gaz. vol. 176; p. 40.

Blackburn, Richard H., Jersey City, N. J. Self-locking mast-step and foot-block. No. 1,020,793; Mar. 19; Sp. p. 3806; Gaz. vol. 176; p. 667.

Bladen, Walter C., Newark, N. J., assignor to A. C. Horn, New York, N. Y. Composition for waterproofing concrete. No. 1,021,560; Mar. 26; Sp. p. 5468; Gaz. vol. 176; p. 983.

Blair, Oliver C., Houston, Tex. Drafting appliance. No. 1,020,253; Mar. 12; Sp. p. 2656; Gaz. vol. 176; p. 450.

Blair, William R., assignor to Landis Machine Company, St. Louis, Mo. Thread take-up for sewing-machines. (Reissue.) No. 13,381; Mar. 12; Sp. p. 2922; Gaz. vol. 176; p. 494.

Blake, John S., Charlotte, N. C. Car-step. No. 1,020,254; Mar. 12; Sp. p. 2656; Gaz. vol. 176; p. 451.

Blake, Robert S., Chicago, Ill., assignor to Benjamin Electric Manufacturing Company. Tapping attachment. No. 1,021,179; Mar. 26; Sp. p. 4615; Gaz. vol. 176; p. 847.

Blakeley, Robert T., Bridgeport, assignor to H. Wright, trustee, New Haven, Conn. Combined stand, waxing device, and cleaner for flat-irons. No. 1,020,390; Mar. 12; Sp. p. 2914; Gaz. vol. 176; p. 494.

Blakeman, William N., Jr., New York, N. Y. Paint compound. No. 1,019,415; Mar. 5; Sp. p. 961; Gaz. vol. 176; p. 140.

Blanchard, Leon E., assignor to Reliance Speedometer Company, Boston, Mass. Speedometer. No. 1,021,036; Mar. 26; Sp. p. 4311; Gaz. vol. 176; p. 801.

Blank, George W., Wilkinsburg, Pa. Flag holding and stretching device. No. 1,020,396; Mar. 19; Sp. p. 2938; Gaz. vol. 176; p. 534.

Blaxter, George H., New Brighton, assignor to Pittsburgh Seamless Tube Company, Beaver Falls, Pa. Swaging-mill. (Reissue.) No. 12,877; Mar. 5; Sp. p. 1593; Gaz. vol. 176; p. 248.

Blewett, Baxter W., Denton, Tex. Aeroplane. No. 1,021,290; Mar. 26; Sp. p. 4866; Gaz. vol. 176; p. 889.

Blodgett, Charles L. (See Whipple, Arden, assignor.)

Blondel, André, Paris, France, assignor, by mesne assignments, to General Electric Company. Interior electric-lighting system. No. 1,019,730; Mar. 5; Sp. p. 1565; Gaz. vol. 176; p. 243.

Blondel, André, and G. Dobkevitch, Paris, France, assignors, by mesne assignments, to General Electric Company. Electric-arc lamp. No. 1,019,731; Mar. 5; Sp. p. 1567; Gaz. vol. 176; p. 244.

Blondel, André, and G. Dobkevitch, Paris, France, assignors, by mesne assignments, to General Electric Company. Electric-arc lamp. No. 1,019,744; Mar. 5; Sp. p. 1590; Gaz. vol. 176; p. 247.

Blondell-Lane Concrete Bar Company. (See Blondell and Allard, assignors.)

Blondell, Peter, and J. E. Allard, assignors to Blondell-Lane Concrete Bar Company, Buffalo, N. Y. Whiffle and double tree. No. 1,020,183; Mar. 12; Sp. p. 2508; Gaz. vol. 176; p. 427.

Bonnell, Russell, Elizabeth, N. J. Water-cooler. No. 1,019,416; Mar. 5; Sp. p. 962; Gaz. vol. 176; p. 140.

Bonnefield, William D. (See De Fast, Fulvio, assignor.)

Bonnin, Charles A., Michigan City, Ind. Trolley. No. 1,020,794; Mar. 19; Sp. p. 3808; Gaz. vol. 176; p. 667.

Bocorselski, Frank E., Springfield, Mass. Universal joint. No. 1,020,476; Mar. 19; Sp. p. 3107; Gaz. vol. 176; p. 560.

Bodle, Isaac F., South Eaton, assignor to S. E. L. Bodle, Jermyn, Pa. Tellurian. No. 1,019,750; Mar. 12; Sp. p. 1611; Gaz. vol. 176; p. 282.

Bodle, Josiah W., Greenwood, S. C. Railway-switch. No. 1,019,941; Mar. 12; Sp. p. 2002; Gaz. vol. 176; p. 345.

Bodle, S. Esther L. (See Bodle, Isaac F., assignor.)

Böhm, Conrad R., Berlin, Germany. Manufacture of incandescence bodies for gas-lighting. No. 1,020,255; Mar. 12; Sp. p. 2658; Gaz. vol. 176; p. 451.

Bolinger, William F., Avonmore, Pa. Curtain-pole. No. 1,021,570; Mar. 26; Sp. p. 5470; Gaz. vol. 176; p. 983.

Boll, George W., Wichita, Kans. Apparatus for drying grain in bins or granaries. No. 1,020,256; Mar. 12; Sp. p. 2659; Gaz. vol. 176; p. 451.

Bolton, Annie C. E., administratrix. (See Bolton, Daniel G.)

Bolton, Daniel G., deceased; A. C. E. Bolton, administratrix, assignor to F. S. Diener, Camden, N. J. Electrical insulator. No. 1,020,122; Mar. 12; Sp. p. 2377; Gaz. vol. 176; p. 406.

Bonin, Alexander L., Montreal, Quebec, Canada. Detachable tooth-brush. No. 1,020,018; Mar. 12; Sp. p. 2158; Gaz. vol. 176; p. 372.

Bonnington, Alexander, and H. G. Akers, Toronto, Ontario, Canada. Producing calcium cyanamid. No. 1,021,445; Mar. 26; Sp. p. 5199; Gaz. vol. 176; p. 941.

Bonsall, Seymour W., New York, N. Y. Wardrobe. No. 1,019,219; Mar. 5; Sp. p. 467; Gaz. vol. 176; p. 74.

Boone, Thomas M., Kingwood, W. Va. Gate-hanging. No. 1,020,019; Mar. 12; Sp. p. 2159; Gaz. vol. 176; p. 372.

Booth, Glen R., Chana, Ill. Lifting-jack. No. 1,020,879; Mar. 19; Sp. p. 3989; Gaz. vol. 176; p. 695.

Booth, William, Scranton, Pa. Burner. No. 1,019,592; Mar. 5; Sp. p. 1311; Gaz. vol. 176; p. 197.

Borden, Bradford, Toronto, Ontario, Canada, assignor to The Borden Company, Warren, Ohio. Pipe-cutting tool. No. 1,020,795; Mar. 19; Sp. p. 3811; Gaz. vol. 176; p. 667.

Borden Company, The. (See Borden, Bradford, assignor.)

Borochow, Moses A., Brooklyn, N. Y. Refuse-receptacle. No. 1,019,732; Mar. 5; Sp. p. 1570; Gaz. vol. 176; p. 244.

Borsodi, Morris, Scranton, Pa., assignor of one-half to L. Kleinmann, Brooklyn, N. Y. Water-heater. No. 1,020,682; Mar. 19; Sp. p. 3567; Gaz. vol. 176; p. 628.

Bosch, Firm of Robert. (See Honold, Gottlob, assignor.)

Boschee, Adam A., assignor of one-half to C. H. Suess, Lodi, Cal. Clothes-rack. No. 1,021,654; Mar. 26; Sp. p. 5615; Gaz. vol. 176; p. 1010.

Bossen, Jens, *et al.* (See Gjorup and Petersen, assignors.)

Bossen, Peter E., *et al.* (See Gjorup and Petersen, assignors.)

Boston Automatic Machine Company. (See Morgan, Gerry A., assignor.)

Botsford, Eugene N., Platteville, Wis. Derailment air-brake. No. 1,019,751; Mar. 12; Sp. p. 1618; Gaz. vol. 176; p. 282.

Bott, William L., and O. M. Davis, Star City, Ind. Road-drag. No. 1,019,417; Mar. 5; Sp. p. 963; Gaz. vol. 176; p. 140.

Bourcart, Jean J., Kolmar, Germany. Aeroplane or flying-machine. No. 1,019,418; Mar. 5; Sp. p. 964; Gaz. vol. 176; p. 140.

Bourck, François E., Paris, France. Apparatus for counting money. No. 1,020,397; Mar. 19; Sp. p. 2939; Gaz. vol. 176; p. 534.

Bourke, Alexander M., Maitland, New South Wales, Australia. Insulator. No. 1,020,880; Mar. 19; Sp. p. 3991; Gaz. vol. 176; p. 695.

Bourquin, Numa. (See Willson and Bourquin.)

Bowdle, Isaiah, assignor to F. Crawford, Pasadena, Cal. Device for use in laying conductors. No. 1,019,419; Mar. 5; Sp. p. 965; Gaz. vol. 176; p. 140.

Bowles, George B. (See Hendricks and Bowles.)

Bowser, Allen A., assignor to S. F. Bowser & Company, Incorporated, Fort Wayne, Ind. Faucet. No. 1,020,076; Mar. 12; Sp. p. 2270; Gaz. vol. 176; p. 391.

Bowser, Harry M., assignor to S. F. Bowser & Co., Incorporated, Fort Wayne, Ind. Fill and vent fitting device. No. 1,020,077; Mar. 12; Sp. p. 2274; Gaz. vol. 176; p. 391.

Boyd, Alexander, Elizabeth, N. J., assignor to The Singer Manufacturing Company. Sewing-machine pull-off. No. 1,021,309; Mar. 26; Sp. p. 5109; Gaz. vol. 176; p. 924.

Boyer, Aaron, Swissvale, Pa. Hose-coupling. No. 1,021,127; Mar. 26; Sp. p. 4490; Gaz. vol. 176; p. 830.

Boyle, Thomas F., Los Angeles, Cal. Tamper-handle clutch. No. 1,019,742; Mar. 5; Sp. p. 1587; Gaz. vol. 176; p. 247.

Boylston Manufacturing Company, The. (See Ballard, Harrie A., assignor.)

Brach, Leon S., New York, N. Y. Lock-nut. No. 1,021,235; Mar. 26; Sp. p. 4739; Gaz. vol. 176; p. 866.

Bradford Dyers' Association, The. (See Wilkinson, Joe, assignor.)

Bradley, Benjamin C., Canton, Ohio. Pulverising-mill. No. 1,020,398; Mar. 19; Sp. p. 2942; Gaz. vol. 176; p. 535.

Bradley Pulverizer Company. (See Griffin, Edwin C., assignor.)

Brain, George, New York, N. Y. Dipping-frame for candles. No. 1,019,220; Mar. 5; Sp. p. 468; Gaz. vol. 176; p. 75.

Bramanti-Mattei, Giuseppe, and P. Beltramo, Seravezza, Italy. Air-chambered stuffing-box for spiral pumps or coils. No. 1,021,714; Mar. 26; Sp. p. 5727; Gaz. vol. 176; p. 1029.

Brampton, Arthur, Birmingham, and F. Osborne, Four Oaks, England. Conduit-fitting for electrical and other purposes. No. 1,020,128; Mar. 12; Sp. p. 2370; Gaz. vol. 176; p. 407.

Brand, George P., and J. Santos, New York, N. Y.; said Santos assignor to Behning Piano Company. Door and pedal operating mechanism. No. 1,021,571; Mar. 26; Sp. p. 5471; Gaz. vol. 176; p. 983.

Brandes, Gordon H. (See Levy and Brandes.)

Brandon, William, Woodbine, Iowa. Berry-picker. No. 1,020,881; Mar. 19; Sp. p. 3993; Gaz. vol. 176; p. 696.

Brandt, Robert C., Oroville, Cal. Controlling device for aeroplanes. No. 1,020,342; Mar. 12; Sp. p. 2817; Gaz. vol. 176; p. 478.

Branham, Henry M., Fort Valley, Ga. Box. No. 1,020,534; Mar. 19; Sp. p. 3237; Gaz. vol. 176; p. 579.

Brath, Thomas D., Rochester, N. Y. Fire-nozzle. No. 1,019,420; Mar. 5; Sp. p. 967; Gaz. vol. 176; p. 141.

Braun, F. W. (See Beach and Hodge, assignors.)

Bräuning, Karl A., Herstal, near Liege, Belgium. Automatic firearm with fixed barrel and breech-action. No. 1,020,596; Mar. 19; Sp. p. 3381; Gaz. vol. 176; p. 600.

Braverman, William. (See Lanier, George A., assignor.)

Brawley, Edward, Braddock, Pa. Device for measuring circular bodies. No. 1,020,020; Mar. 12; Sp. p. 2160; Gaz. vol. 176; p. 372.

Brecker, Frank, Shenandoah, Pa. Cue-trimmer. No. 1,021,128; Mar. 26; Sp. p. 4501; Gaz. vol. 176; p. 830.

Brehier, Charles L., Paris, France. Apparatus for manufacturing metallic hoops. No. 1,021,300; Mar. 26; Sp. p. 4869; Gaz. vol. 176; p. 889.

Breiling, Emil J., *et al.* (See Belluomini and Marcucci, assignors.)

Breiling, Oscar F., *et al.* (See Belluomini and Marcucci, assignors.)

Brennan, Louis, Gillingham, England. Means for imparting to and maintaining the stability of bodies such as single-track vehicles or vessels. No. 1,019,942; Mar. 12; Sp. p. 2003; Gaz. vol. 176; p. 345.

Brennan, Paul C., assignor, by mesne assignments, to The United States Asphalt Refining Company, New York, N. Y. Self-contained machine for preparing road wearing-surfaces. No. 1,020,633; Mar. 19; Sp. p. 3467; Gaz. vol. 176; p. 612.

Brenner, Lupu W., Dayton, Ohio. Sectional valve for gas-engines. No. 1,020,535; Mar. 19; Sp. p. 3239; Gaz. vol. 176; p. 579.

Brentano's. (See Mecklem, Clive, assignor.)

Brenzinger, Julius, Mount Vernon, N. Y. Gearing. No. 1,020,477; Mar. 19; Sp. p. 3109; Gaz. vol. 176; p. 561.

Bresee, Wright D., assignor of one-fourth to E. H. Sargent, one-fourth to C. H. Sloan, Los Angeles, and one-half to M. L. Rice, San Francisco, Cal. Copying apparatus. No. 1,019,297; Mar. 5; Sp. p. 654; Gaz. vol. 176; p. 102.

Brewer, William A., Pittsburgh, Pa. Aeroplane. No. 1,021,129; Mar. 26; Sp. p. 4501; Gaz. vol. 176; p. 830.

Briggs, Jesse A. (See Ralston and Briggs.)

Briggs, Joseph W., Reward, Cal. Bracket attachment. No. 1,019,421; Mar. 5; Sp. p. 968; Gaz. vol. 176; p. 141.

Bright, Martin C., assignor of one-half to C. W. Meikel, Indianapolis, Ind. Adjustable float-feed. No. 1,019,943; Mar. 12; Sp. p. 2007; Gaz. vol. 176; p. 347.
Brisson, George, Norway, Mich. Sleigh-brake. No. 1,019,944; Mar. 12; Sp. p. 2009; Gaz. vol. 176; p. 347.
Britton, Charles S. (See McCombs, Charles H., assignor.)
Broadwater, John W., Philadelphia, Pa. Water-saving valve. No. 1,020,184; Mar. 12; Sp. p. 2510; Gaz. vol. 176; p. 427.
Brock, Matthias, Boston, Mass., assignor, by mesne assignments, to United Shoe Machinery Company. Lasting-machine. No. 1,019,125; Mar. 5; Sp. p. 260; Gaz. vol. 176; p. 41.
Brock, Richard E., and W. M. Selkirk, Monessen, assignors to Pittsburgh Steel Products Company, Pittsburgh, Pa. Tube-rolling apparatus. No. 1,020,399; Mar. 19; Sp. p. 2945; Gaz. vol. 176; p. 535.
Broden, Edwin H., Edgewood Park, and J. G. Mustin, Wilkinsburg, Pa., assignors to The American Steel & Wire Company of New Jersey, Hoboken, N. J. Metallic reel. No. 1,020,078; Mar. 12; Sp. p. 2276; Gaz. vol. 176; p. 392.
Broden, Edwin H., Edgewood Park, and J. G. Mustin, Wilkinsburg, Pa., assignors to The American Steel & Wire Company of New Jersey, Hoboken, N. J. Reel. No. 1,020,079; Mar. 12; Sp. p. 2277; Gaz. vol. 176; p. 392.
Brooks, Frederick W., Virginia, Minn. Furnace-door mouthpiece. No. 1,020,882; Mar. 19; Sp. p. 3993; Gaz. vol. 176; p. 696.
Brophy, Edward. (See Bell and Brophy.)
Brorby, Jacob I., Shenandoah, Iowa. Street-flushing machine. No. 1,019,126; Mar. 5; Sp. p. 269; Gaz. vol. 176; p. 41.
Brower, Ollie F., Eaton, Ohio. Hose-supporter. No. 1,019,880; Mar. 12; Sp. p. 1866; Gaz. vol. 176; p. 326.
Brown, Alvin B., Riverside, Cal. Saw-tool. No. 1,020,257; Mar. 12; Sp. p. 2600; Gaz. vol. 176; p. 451.
Brown, Andrew V., Philadelphia, Pa. Arm for supporting the nose-grips of eyeglasses. No. 1,019,018; Mar. 5; Sp. p. 11; Gaz. vol. 176; p. 5.
Brown, Charles D., Washington, Ill. Apparatus for blowing sand from railway-tracks. No. 1,021,655; Mar. 26; Sp. p. 5616; Gaz. vol. 176; p. 1010.
Brown, Clarence F. (See Rue and Brown.)
Brown, Frederick W., Florence, and G. W. Bartholomew, Denver, Colo. Hydraulic cement. No. 1,020,124; Mar. 12; Sp. p. 2380; Gaz. vol. 176; p. 407.
Brown, George V. A., Chicago, Ill. Railway-toilet. No. 1,019,593; Mar. 5; Sp. p. 1312; Gaz. vol. 176; p. 197.
Brown-Lipe Gear Company, The. (See Sponable, George W., assignor.)
Brown, Richard J. W., London, England. Breech mechanism for automatic recoil-operated guns. No. 1,021,130; Mar. 26; Sp. p. 4505; Gaz. vol. 176; p. 831.
Brown, Royl A., Ashland, Ohio. Buckle. No. 1,021,088; Mar. 26; Sp. p. 4419; Gaz. vol. 176; p. 818.
Brown, Theodore P., assignor to Simplex Player Action Company, Worcester, Mass. Piano. No. 1,019,127; Mar. 5; Sp. p. 271; Gaz. vol. 176; p. 41.
Brown, Willard M. (See Wermuth and Brown.)
Browne, Stephen W., Wilsonville, Nebr. Belt-shifter. No. 1,020,021; Mar. 12; Sp. p. 2162; Gaz. vol. 176; p. 372.
Bruce, George W., Larimore, N. D. Potato-harvester. No. 1,019,752; Mar. 12; Sp. p. 1619; Gaz. vol. 176; p. 282.
Bruce, George W., Larimore, N. D. Potato-harvester. No. 1,019,753; Mar. 12; Sp. p. 1622; Gaz. vol. 176; p. 283.
Bruce, George W., Larimore, N. D. Potato-harvester with side truck. No. 1,019,754; Mar. 12; Sp. p. 1624; Gaz. vol. 176; p. 283.
Brück, Fritz, Osnabrück, Germany. Submarine contact-mine. No. 1,021,089; Mar. 26; Sp. p. 4420; Gaz. vol. 176; p. 818.
Bruder, Frank, New York, N. Y. Combination cap and bonnet. No. 1,019,019; Mar. 5; Sp. p. 14; Gaz. vol. 176; p. 5.
Bruening, Theodore F., Kaywood, Tex. Ditching-plow. No. 1,021,131; Mar. 26; Sp. p. 4500; Gaz. vol. 176; p. 831.
Bruneau, Gerda, Clichy, France. Gas-burner. No. 1,019,298; Mar. 5; Sp. p. 656; Gaz. vol. 176; p. 102.
Brunelle, Arthur, assignor of one-half to N. Cuillerier, one-fourth to P. Patnode, and one-fourth to H. Patnode, North Yakima, Wash. Bale-handling apparatus. No. 1,020,663; Mar. 19; Sp. p. 3569; Gaz. vol. 176; p. 628.
Brunswick-Balke-Collender Company of New York, The. (See Hobbs, Francis C., assignor.)
Brunswick-Balke-Collender Company of New York, The. (See McIntire, Jacob N., assignor.)
Brunt, Thomas A., assignor to M. J. O'Brien, Renfrew, Ontario, Canada. Weighing-truck. No. 1,020,597; Mar. 19; Sp. p. 3383; Gaz. vol. 176; p. 601.
Brush, Alanson P., Flint, Mich. Brake-drum protector. No. 1,019,755; Mar. 12; Sp. p. 1626; Gaz. vol. 176; p. 284.
Bryant, Charles J., Spokane, Wash. Paper-rack and display device. No. 1,021,656; Mar. 26; Sp. p. 5618; Gaz. vol. 176; p. 1011.
Bryant Electric Company, The. (See Steiger, Walter V., assignor.)
Bryant, Hugh J. (See Bryant, Jerome F., assignor.)
Bryant, Jerome F., Chicago, Ill., assignor of one-half to H. J. Bryant, Youngstown, Ohio. Forming molds and mold-cores. No. 1,021,348; Mar. 26; Sp. p. 4967; Gaz. vol. 176; p. 906.
Bryant, Jerome F., Chicago, Ill., assignor of one-half to H. J. Bryant, Youngstown, Ohio. Apparatus for forming molds and mold-cores. No. 1,021,349; Mar. 26; Sp. p. 4969; Gaz. vol. 176; p. 907.
Bryant, Joseph D., Columbus, Ohio. Liquid wax finish. No. 1,020,634; Mar. 19; Sp. p. 3470; Gaz. vol. 176; p. 613.
Bryson, David K., Pittsburgh, Pa. Wave-energy motor. No. 1,021,572; Mar. 26; Sp. p. 5474; Gaz. vol. 176; p. 983.
Buchenberg, Alvin E., Toledo, Ohio. Electric welding apparatus. No. 1,019,299; Mar. 5; Sp. p. 657; Gaz. vol. 176; p. 103.
Buck, Bennett C., Beardstown, Ill. Safety-razor. No. 1,020,796; Mar. 19; Sp. p. 3814; Gaz. vol. 176; p. 668.
Budd, Edward G., assignor, by mesne assignments, to Hale and Kilburn Company, Philadelphia, Pa. Pedestal. No. 1,020,740; Mar. 19; Sp. p. 3705; Gaz. vol. 176; p. 649.
Budd, Edward G., assignor, by mesne assignments, to Hale and Kilburn Company, Philadelphia, Pa. Pedestal. No. 1,020,741; Mar. 19; Sp. p. 3706; Gaz. vol. 176; p. 650.
Budd, Edward G., assignor, by mesne assignments, to Hale and Kilburn Company, Philadelphia, Pa. Metallic door. No. 1,020,742; Mar. 19; Sp. p. 3708; Gaz. vol. 176; p. 650.
Buehler, Fred, and A. P. Goff, St. Joseph, Mo. Churn. No. 1,020,883; Mar. 19; Sp. p. 3995; Gaz. vol. 176; p. 696.
Buer, Heinrich C., Bonn, Germany. Producing lecithin. No. 1,019,945; Mar. 12; Sp. p. 2010; Gaz. vol. 176; p. 347.
Buffalo Leather Co. (See Smith, William R., assignor.)
Buffalo Pitts Company. (See Todd, Marquis J., assignor.)
Buffalo Radiator Company. (See McKeown, William C., assignor.)
Buffalo Sled Company. (See Orcutt, Charles D., assignor.)
Buffum, Frank W., Louisiana, Mo. Oil-can holder. No. 1,021,037; Mar. 26; Sp. p. 4313; Gaz. vol. 176; p. 801.
Buhoup, Harry C., Chicago, Ill., assignor to The McConway & Torley Company, Pittsburgh, Pa. Coupling-controlling mechanism. No. 1,021,446; Mar. 26; Sp. p. 5201; Gaz. vol. 176; p. 941.
Bull, Frank W., Oshawa, Ontario, Canada. Operating mechanism for tracker-bars. No. 1,021,747; Mar. 26; Sp. p. 5795; Gaz. vol. 176; p. 1040.
Bullard, Albert M., deceased, (M. R. Bullard, administratrix, Woodstock,) and J. N. Reynolds, assignors to Western Electric Company, New York, N. Y. Controlling system for automatic switching apparatus. No. 1,020,185; Mar. 12; Sp. p. 2512; Gaz. vol. 176; p. 427.
Bullard, Marion R., administratrix. (See Bullard and Reynolds.)
Bullock Electric Manufacturing Company, The, *et al.* (See Lietzenmayer, William J., assignor.)
Bulock, Charles O., Cleveland, Ohio. Carbureter. No. 1,019,128; Mar. 5; Sp. p. 273; Gaz. vol. 176; p. 42.
Bunau-Varilla, Philippe, Paris, France. Machine for molding printing-blocks. No. 1,020,023; Mar. 12; Sp. p. 2166; Gaz. vol. 176; p. 373.
Bunce, Albert L., assignor to Workman Manufacturing Company, Chicago, Ill. Temporary binder. No. 1,019,020; Mar. 5; Sp. p. 15; Gaz. vol. 176; p. 5.
Bundy, Jesse H., Greenfield, Ind. Swivel-joint hose-coupling. No. 1,020,258; Mar. 12; Sp. p. 2062; Gaz. vol. 176; p. 452.
Burby, John M., Long Island City, assignor to John M. Burby Company, New York, N. Y. Bearing for shafts. No. 1,019,300; Mar. 5; Sp. p. 663; Gaz. vol. 176; p. 103.
Burch, Mark H., Allenhurst, N. J. Put-up for dry goods. No. 1,019,021; Mar. 5; Sp. p. 17; Gaz. vol. 176; p. 6.
Burge, Harry. (See Macfarlane, Burge, and Williams.)
Burke, Richard H., Lexington, Mass. Shut-off T-valve. No. 1,020,022; Mar. 12; Sp. p. 2163; Gaz. vol. 176; p. 373.
Burkhart, Meinrad J., Missouri Valley, Iowa. Fence-wire fastener. No. 1,020,259; Mar. 12; Sp. p. 2063; Gaz. vol. 176; p. 452.
Burland, Jeffrey H. (See Lathey, Myron A., assignor.)
Burlingham, William, Elizabeth City county, and F. P. Palen, Newport News, Va. Ash-discharger. No. 1,020,743; Mar. 19; Sp. p. 3710; Gaz. vol. 176; p. 650.
Burner, Elisha W., Luray, Va. Spring-wheel. No. 1,020,260; Mar. 12; Sp. p. 2064; Gaz. vol. 176; p. 452.
Burns & Bassick Company, The. (See Bassick, Edgar W., assignor.)
Burns & Bassick Company, The. (See Bassick and Adams, assignors.)
Burrowes, Edward T., Portland, Me. Emergency attachment for vehicle-wheels. No. 1,019,301; Mar. 5; Sp. p. 665; Gaz. vol. 176; p. 103.
Burrows, Francis A., Columbia, S. C. Device for starting motor-cycles. No. 1,021,657; Mar. 26; Sp. p. 5619; Gaz. vol. 176; p. 1011.
Burton, William M., Chicago, Ill. Match. No. 1,019,756; Mar. 12; Sp. p. 1627; Gaz. vol. 176; p. 284.
Busch, Reinhardt J. (See Hartmann and Busch.)
Bush, Charles S., Providence, R. I. Pencil-casing. No. 1,021,350; Mar. 26; Sp. p. 4971; Gaz. vol. 176; p. 907.
Büssing, Heinrich, Brunswick, Germany. Vehicle wheel-rim. No. 1,020,797; Mar. 19; Sp. p. 3815; Gaz. vol. 176; p. 668.
Butcher, Alfred C., Staatsburg, N. Y. Furniture-caster. No. 1,019,302; Mar. 5; Sp. p. 669; Gaz. vol. 176; p. 104.

Butcher, James W., Jr., Washington, D. C. Truck-handle clamp. No. 1,020,961; Mar. 26; Sp. p. 4165; Gaz. vol. 176; p. 775.
Butterworth, Arthur B., San Francisco, Cal. Scrubbing-machine. No. 1,020,125; Mar. 12; Sp. p. 2381; Gaz. vol. 176; p. 407.
Butterworth, William C., Platteville, Wis. Gas-purifier. No. 1,021,503; Mar. 26; Sp. p. 5334; Gaz. vol. 176; p. 961.
Büttner, Alfred, Krebsmühle, near Gassen, Germany. Safety-razor. No. 1,019,303; Mar. 5; Sp. p. 671; Gaz. vol. 176; p. 104.
Button, Arnold E., Schenectady, N. Y., assignor to General Electric Company. Controlling device for lighting-circuits. No. 1,019,422; Mar. 5; Sp. p. 970; Gaz. vol. 176; p. 141.
Byrd, Atvill, Kansas City, Mo. Sanitary drinking-fountain. No. 1,019,881; Mar. 12; Sp. p. 1868; Gaz. vol. 176; p. 326.
Byrne, John F., assignor to Kellogg Toasted Corn Flake Company, Battle Creek, Mich. Box or carton. No. 1,020,536; Mar. 19; Sp. p. 3243; Gaz. vol. 176; p. 580.
C. Beseler Co. (See Schwanhäusser, Frederick, assignor.)
C. H. S. Company, The. (See Simmons, Charles H., assignor.)
Cable, Cornelius, Elkhart, Ind. Conveying and packing materials. No. 1,020,962; Mar. 26; Sp. p. 4167; Gaz. vol. 176; p. 775.
Cabot, Godfrey L. (See James, John E., assignor.)
Cabot, Sewall, Brookline, Mass. Space telegraphy. No. 1,021,132; Mar. 26; Sp. p. 4511; Gaz. vol. 176; p. 832.
Cadwell, Harry W., assignor to Frederick Stearns & Company, Detroit, Mich. Container and dropper. No. 1,019,022; Mar. 5; Sp. p. 18; Gaz. vol. 176; p. 6.
Cairncross, Andrew S., St. Paul, Minn. Peat-machine. No. 1,019,946; Mar. 12; Sp. p. 2011; Gaz. vol. 176; p. 347.
Cairncross, Andrew S., St. Paul, Minn. Drip-remover for pastry-machines. No. 1,021,236; Mar. 26; Sp. p. 4741; Gaz. vol. 176; p. 866.
Cake, Horace M., Washington, D. C. Package-tie. No. 1,020,963; Mar. 26; Sp. p. 4167; Gaz. vol. 176; p. 775.
Calef, Robert S., Keene, N. H. Chair. No. 1,019,594; Mar. 5; Sp. p. 1313; Gaz. vol. 176; p. 198.
Callaghan, Cornelius R. (See Ryerson, George A., assignor.)
Callaghan, William T., Chicago, Ill. Filing-case. No. 1,021,090; Mar. 26; Sp. p. 4423; Gaz. vol. 176; p. 819.
Callaway, Edward H., Westfield, N. J., assignor to The American Clay Machinery Company, Bucyrus, Ohio. Brick-drier. No. 1,020,186; Mar. 12; Sp. p. 2520; Gaz. vol. 176; p. 428.
Calongne, Francis W. (See Polizzi and Calongne.)
Camden Anchor-Rockland Machine Company. (See Lamb, Elden P., assignor.)
Cameron, James A., New York, N. Y., assignor to Cameron Picture Machine Company. Moving-picture machine. No. 1,020,383; Mar. 12; Sp. p. 2898; Gaz. vol. 176; p. 491.
Cameron Picture Machine Company. (See Cameron, James A., assignor.)
Campbell, Andrew C., Waterbury, Conn. Cotter-pin. No. 1,019,595; Mar. 5; Sp. p. 1317; Gaz. vol. 176; p. 198.
Campbell, George W., El Paso, Tex., assignor of one-half to H. A. Hollister, Santa Barbara, Cal. Mechanical movement. No. 1,020,261; Mar. 12; Sp. p. 2065; Gaz. vol. 176; p. 452.
Campbell, John A., Harmony, Ark. Water-carrier. No. 1,020,884; Mar. 19; Sp. p. 3996; Gaz. vol. 176; p. 696.
Campbell, John T., Norfolk, Va. Car-door hanger. No. 1,019,129; Mar. 5; Sp. p. 276; Gaz. vol. 176; p. 42.
Camus, Charles. (See Berryman and Camus.)
Canning, Thomas R., Birmingham, England. Electro-plating apparatus. No. 1,020,262; Mar. 12; Sp. p. 2667; Gaz. vol. 176; p. 453.
Cantine, Delancy S., Walnut Grove, Minn. Attachment for harvesters. No. 1,021,755; Mar. 26; Sp. p. 5820; Gaz. vol. 176; p. 1043.
Carawan, John W., Mesic, N. C. Cultivating implement. No. 1,021,573; Mar. 26; Sp. p. 5478; Gaz. vol. 176; p. 984.
Cardwell, James R., Chicago, Ill. Wallet. No. 1,020,537; Mar. 19; Sp. p. 3245; Gaz. vol. 176; p. 580.
Carels, Gustave, assignor to Société Anonyme Carels Freres, Ghent, Belgium, and Lewis Schneider & Co., Creuzot, France. Reversing-gear for internal-combustion motors. No. 1,019,947; Mar. 12; Sp. p. 2014; Gaz. vol. 176; p. 348.
Caretti, Peter, Connellsville, Pa. Shoemaker's tool. No. 1,019,882; Mar. 12; Sp. p. 1870; Gaz. vol. 176; p. 327.
Carlson, Albert, Preston, Wash. Hub-brake. No. 1,020,798; Mar. 19; Sp. p. 3816; Gaz. vol. 176; p. 668.
Carlson, Carl S., Amery, Wis. Releasable coupling for draft-equalizers. No. 1,019,596; Mar. 5; Sp. p. 1318; Gaz. vol. 176; p. 198.
Carmiencke, Charles A., Olingbouse, Nev. Spoon attachment. No. 1,020,263; Mar. 12; Sp. p. 2668; Gaz. vol. 176; p. 453.
Carpenter, Henry A. (See Rodman, Hibbard, and Carpenter.)
Carpenter, Israel J., Marlboro, Mass. Wheel-rim. No. 1,020,478; Mar. 19; Sp. p. 3109; Gaz. vol. 176; p. 561.
Carpenter, William D., and J. A. Humphrey, Lima, Ohio. Railway tie, chair, and fish-plates. No. 1,021,658; Mar. 26; Sp. p. 5620; Gaz. vol. 176; p. 1011.
Carr, John B. (See Swindell, Walter B., assignor.)
Carragher, Henry N., Fall River, Mass. Locking device for detachably securing a rim to the felly of a wheel. No. 1,020,126; Mar. 12; Sp. p. 2382; Gaz. vol. 176; p. 407.
Carrier, Melissa, Bridgeport, Nebr. Oil-burner. No. 1,019,130; Mar. 5; Sp. p. 277; Gaz. vol. 176; p. 43.
Carroll, George J. (See Merkel and Carroll.)
Carstens, Julius J., Tuleta, Tex. Tree and shrub protector. No. 1,021,447; Mar. 26; Sp. p. 5204; Gaz. vol. 176; p. 941.
Carswell, Firman L. (See Putney and Carswell.)
Carter, Oliver C. (See Walthall and Carter.)
Carter, William C., St. Louis, Mo. Float-tank mechanism for carbureters. No. 1,019,948; Mar. 12; Sp. p. 2016; Gaz. vol. 176; p. 348.
Carter, William H., Needham Heights, assignor to Springfield Knitting Co., Springfield, Mass. Border-forming mechanism for fabrics. No. 1,020,944; Mar. 19; Sp. p. 4107; Gaz. vol. 176; p. 717.
Case, Charles F. (See Sandgren and Case.)
Case, Frank E., Schenectady, N. Y., assignor to General Electric Company. Terminal for electric conductors. No. 1,019,423; Mar. 5; Sp. p. 971; Gaz. vol. 176; p. 142.
Casebolt, William T., Kansas City, Mo. Oil-burner. No. 1,020,024; Mar. 12; Sp. p. 2167; Gaz. vol. 176; p. 373.
Cassella Color Company. (See Gast, Richard, assignor.)
Cassidy, Hugh, Brooklyn, N. Y. Tube-cleaner connection for boilers. No. 1,020,635; Mar. 19; Sp. p. 3470; Gaz. vol. 176; p. 613.
Caswell, William C., Wellsville, Ohio. Nut-rotating device. No. 1,020,964; Mar. 26; Sp. p. 4169; Gaz. vol. 176; p. 775.
Cavender, John C. (See Merrill and Cavender.)
Challburg, Morris G., Lincoln, Nebr. Railway-tie. No. 1,021,659; Mar. 26; Sp. p. 5621; Gaz. vol. 176; p. 1011.
Chaloud, Frank, Jr., Brownlee, Nebr. Supplemental bottom for pots and pans. No. 1,021,133; Mar. 26; Sp. p. 4513; Gaz. vol. 176; p. 832.
Chamberlain, Glenn R., and A. G. Schroeder, Grand Rapids, Mich. Gas-fixture. No. 1,019,131; Mar. 5; Sp. p. 278; Gaz. vol. 176; p. 43.
Chamberlain, Glenn R., and A. G. Schroeder, Grand Rapids, Mich. Gas-fixture. No. 1,019,132; Mar. 5; Sp. p. 279; Gaz. vol. 176; p. 43.
Chamberlin, Victor E., assignor to The Waverley Company, Indianapolis, Ind. Controller for electric motors. No. 1,019,757; Mar. 12; Sp. p. 1629; Gaz. vol. 176; p. 284.
Champion Potato Machinery Company. (See Knoerzer, Otto, assignor.)
Chance, Henry M. and T. M., Philadelphia, Pa. Pumping liquids. No. 1,020,965; Mar. 26; Sp. p. 4170; Gaz. vol. 176; p. 775.
Chance, Henry M. and T. M., Philadelphia, Pa. Apparatus for pumping liquids. No. 1,021,237; Mar. 26; Sp. p. 4743; Gaz. vol. 176; p. 866.
Chance, Thomas M. (See Chance, Henry M. and T. M.)
Chance, Thomas M., Philadelphia, Pa. Pumping liquids. No. 1,021,038; Mar. 26; Sp. p. 4315; Gaz. vol. 176; p. 802.
Chandler, Edward T., Delmont, S. D. Harrow. No. 1,019,221; Mar. 5; Sp. p. 470; Gaz. vol. 176; p. 75.
Chaplain, George H. (See Topper and Chaplain.)
Chapman, Charles E., assignor of one-half to A. Raper, Fort Edward, N. Y. Saddle for motor-cycles, &c. No. 1,019,597; Mar. 5; Sp. p. 1319; Gaz. vol. 176; p. 198.
Chappel, James M., New York, N. Y., assignor to C. S. Marsh, Winchester, Mass. Weighing-machine. No. 1,021,134; Mar. 26; Sp. p. 4515; Gaz. vol. 176; p. 832.
Charavay, Frederick. (See Coles and Charavay.)
Charles Wing Company, The. (See Hawkes, William W., assignor.)
Charter, John, Whitman, Mass. Vehicle. No. 1,020,636; Mar. 19; Sp. p. 3473; Gaz. vol. 176; p. 613.
Chase, Milton, assignor of eleven-twentieths to I. J. Webster and two-twentieths to J. F. Batchelder, Haverhill, Mass. Safety flying-machine. No. 1,020,945; Mar. 19; Sp. p. 4112; Gaz. vol. 176; p. 718.
Chatfield, Alonzo B., Jr. (See Harrison and Chatfield.)
Chausse, Francis W., Portland, Oreg. Sash-lock. No. 1,020,637; Mar. 19; Sp. p. 3475; Gaz. vol. 176; p. 613.
Chaves, Jacob, Brooklyn, N. Y. Bed-bottom fabric. No. 1,021,504; Mar. 26; Sp. p. 5335; Gaz. vol. 176; p. 961.
Cheadle, George L., Jr., Austin, Ill. Railway-rail-fastening device. No. 1,020,264; Mar. 12; Sp. p. 2669; Gaz. vol. 176; p. 453.
Cheeseman, Alfred B. E., London, and J. G. Florence, Walthamstow, England. Internal-combustion engine of the revolving-cylinder type. No. 1,019,222; Mar. 5; Sp. p. 471; Gaz. vol. 176; p. 75.
Chester, Clarance H., Lebanon, Pa. Drinking-trough. No. 1,019,133; Mar. 5; Sp. p. 281; Gaz. vol. 176; p. 44.
Chicago Belting Company. (See Horsman, Thomas, assignor.)
Chicago Car Heating Company. (See Manchester, Thomas H., assignor.)
Chicago Feather Duster Company. (See Ransom, Albert, assignor.)
Chicago Flexible Shaft Company. (See McArdle, Michael W., assignor.)
Chicago Railway Equipment Company. (See Harrison, Philip B., assignor.)

Chicago Railway Equipment Company. (See Le Beau, Ernest A., assignor.)

Chicago Railway Equipment Company. (See Williams, Charles H., Jr., assignor.)

Childress, William S., Kansas City, Mo. Safety hat-pin. No. 1,020,384; Mar. 12; Sp. p. 2906; Gaz. vol. 176; p. 492.

Childs, Alfred L., *et al.* (See Frost, Walter E., assignor.)

Chitty, Henry, Kenley, F. M. T. Lange, London, and G. W. Mascord, Barnes, England. Distribution of electromotive power. No. 1,020,025; Mar. 12; Sp. p. 2169; Gaz. vol. 176; p. 374.

Christianson, Andrew, Butler, assignor to Standard Steel Car Co., Pittsburgh, Pa. Car-door-operating device. No. 1,019,023; Mar. 5; Sp. p. 19; Gaz. vol. 176; p. 6.

Christianson, Andrew, Butler, assignor to Standard Steel Car Company, Pittsburgh, Pa. Car-door-operating mechanism. No. 1,021,351; Mar. 26; Sp. p. 4973; Gaz. vol. 176; p. 907.

Christman, Matthias, assignor of one-third to H. L. Bissett and one-third to G. A. McLaughlin, Springfield, Mo. Wheel-hub plate. No. 1,020,885; Mar. 19; Sp. p. 3908; Gaz. vol. 176; p. 697.

Christoffersen, Christofter, Philadelphia, Pa. Rotary engine. No. 1,019,223; Mar. 5; Sp. p. 477; Gaz. vol. 176; p. 76.

Chubbuck, Samuel J., assignor to The Consolidated Manufacturing Company, Toledo, Ohio. Handle-grip control for motor-cycles or the like. No. 1,019,304; Mar. 5; Sp. p. 671; Gaz. vol. 176; p. 104.

Chudrik, Wicenti. (See Schelecki and Chudrik.)

Church, George W., *et al.* (See Jarvis, Herbert L., assignor.)

Churchill, James, Centralia, Wash. Working-glove. No. 1,021,238; Mar. 26; Sp. p. 4745; Gaz. vol. 176; p. 866.

Ciesla, John. (See Becker and Ciesla.)

Cincinnati Lathe & Tool Company, The. (See Perrine, John E., assignor.)

Cisler, Arthur, *et al.* (See Bauer, Clarence E., assignor.)

Clapp, Albert L., Braintree, assignor to Hide-ite Leather Company, Boston, Mass. Production of leather-board stock. No. 1,021,060; Mar. 26; Sp. p. 5622; Gaz. vol. 176; p. 1011.

Clapp, George E., Kalamazoo, Mich. Oil-burner. No. 1,020,265; Mar. 12; Sp. p. 2670; Gaz. vol. 176; p. 454.

Clapp, George E., Kalamazoo, Mich. Burning liquid fuel. No. 1,020,266; Mar. 12; Sp. p. 2674; Gaz. vol. 176; p. 454.

Clark, Byron G., Birmingham, England. Lacing-hook for boots and the like. No. 1,019,024; Mar. 5; Sp. p. 20; Gaz. vol. 176; p. 6.

Clark, Charles E., Durham, N. C. Yarn-sising machine. No. 1,020,843; Mar. 12; Sp. p. 2829; Gaz. vol. 176; p. 478.

Clark Dredge Manufacturing Company, The. (See Clark, Horace J., assignor.)

Clark, Guy Z., Billings, Mont. Whiffletree-hook. No. 1,019,949; Mar. 12; Sp. p. 2019; Gaz. vol. 176; p. 349.

Clark, Horace J., assignor to The Clark Dredge Manufacturing Company, Chicago, Ill. Raft for dredges. No. 1,019,224; Mar. 5; Sp. p. 480; Gaz. vol. 176; p. 76.

Clark, Horace W., Mattoon, Ill. Cement-mold. No. 1,019,598; Mar. 5; Sp. p. 1321; Gaz. vol. 176; p. 199.

Clark, John, Sydenham, England. Nut-lock. No. 1,020,026; Mar. 12; Sp. p. 2172; Gaz. vol. 176; p. 374.

Clark, John, St. Paul, Minn. Dipper-tooth for steam-shovels. No. 1,021,185; Mar. 26; Sp. p. 4617; Gaz. vol. 176; p. 832.

Clark, John B. (See McKinsie and Clark.)

Clark, Joseph S., *et al.* (See Lister, Nicholas E., assignor.)

Clark, Melville, Chicago, Ill. Automatic piano. No. 1,019,768; Mar. 12; Sp. p. 1633; Gaz. vol. 176; p. 285.

Clark, Walter E. (See Strouse and Clark.)

Clark, Walter G., New York, N. Y. Suspension insulator-clamp. No. 1,019,225; Mar. 5; Sp. p. 482; Gaz. vol. 176; p. 77.

Clark, William R., Muncie, Ind. Safety-crank for explosion-engines. No. 1,020,709; Mar. 19; Sp. p. 3818; Gaz. vol. 176; p. 669.

Clauson, Joseph A., Boston, Mass. Agitating-platform. No. 1,020,344; Mar. 12; Sp. p. 2822; Gaz. vol. 176; p. 478.

Clauss, Henrie, Fremont, Ohio. Tension attachment for shears. No. 1,020,400; Mar. 19; Sp. p. 2947; Gaz. vol. 176; p. 535.

Clausson, Walter E., Hartford, Conn. Paper drinking-cup. No. 1,020,187; Mar. 12; Sp. p. 2522; Gaz. vol. 176; p. 428.

Clawson, Clement C., Flagtown, N. J. Coin-controlled vending-machine. No. 1,020,966; Mar. 26; Sp. p. 4175; Gaz. vol. 176; p. 776.

Clayton-Joel, William, Melbourne, Victoria, Australia. Flashing gas-sign. No. 1,019,899; Mar. 5; Sp. p. 1322; Gaz. vol. 176; p. 199.

Clemmens, Charles S. (See Vause and Clemmens.)

Clifton, Archer E., Connersville, Ind. Construction of rotary blowers and pumps. No. 1,021,180; Mar. 26; Sp. p. 4617; Gaz. vol. 176; p. 847.

Clintonville Baler Company. (See Spilttgerber, Wilhelm, assignor.)

Clokey, Samuel J. (See Martin and Clokey.)

Clough, Frederick H., Rugby, England, assignor to General Electric Company. Shaft-bearing. No. 1,019,424; Mar. 5; Sp. p. 972; Gaz. vol. 176; p. 142.

Clough, James D., Lakewood, Ohio. Mixing-machine. No. 1,021,301; Mar. 26; Sp. p. 4870; Gaz. vol. 176; p. 889.

Coates, George D., Torrington, Conn. Repair-heel. No. 1,020,600; Mar. 19; Sp. p. 3821; Gaz. vol. 176; p. 669.

Coates, Samuel L., Rickreall, Oreg. Attachment for apple-paring machines. No. 1,019,600; Mar. 5; Sp. p. 1326; Gaz. vol. 176; p. 200.

Cochran, Clyde B., Cleveland, Ohio, assignor to Anderson Electric Car Company, Detroit, Mich. Control mechanism for electric vehicles. No. 1,020,080; Mar. 12; Sp. p. 2278; Gaz. vol. 176; p. 392.

Cochran, Eugene S., *et al.* (See Galvin, Carroll D., assignor.)

Cochran, Joseph E., Chicago, Ill. Weighing-scale. No. 1,020,744; Mar. 19; Sp. p. 3713; Gaz. vol. 176; p. 651.

Coey, Stewart C., Youngstown, Ohio. Magnetic skelp-charging machine. No. 1,019,759; Mar. 12; Sp. p. 1638; Gaz. vol. 176; p. 285.

Cogger, William B., Cleveland, assignor to T. Kundts, Lakewood, Ohio. Side standard for seats. No. 1,019,184; Mar. 5; Sp. p. 283; Gaz. vol. 176; p. 44.

Coggin, Frank F., Matawan, N. J., and E. H. Gold, Chicago, Ill. Automatic controlling apparatus for steam-heating systems. No. 1,021,505; Mar. 26; Sp. p. 5336; Gaz. vol. 176; p. 961.

Cohen, Louis. (See Gross and Cohen.)

Coleman, Edgar P., deceased, Buffalo, N. Y.; R. H. Coleman, administrator. Fluid-meter. No. 1,020,127; Mar. 12; Sp. p. 2383; Gaz. vol. 176; p. 408.

Coleman, Robert H., administrator. (See Coleman, Edgar P.)

Coles, David H., Brooklyn, N. Y., and F. Charavay, Jersey City, N. J., assignors, by mesne assignments, to Regun Motor Company. Internal-combustion engine. No. 1,020,128; Mar. 12; Sp. p. 2392; Gaz. vol. 176; p. 408.

Collet, Albert, assignor to Société Maurice et Pierre Collet & Cie., Paris, France. Portable machine for regrooving railway-sleepers. No. 1,021,400; Mar. 26; Sp. p. 5112; Gaz. vol. 176; p. 925.

Colley, John W., and E. G. Walter, Elkhart, Ind. Line-connecting device for floats and sinkers. No. 1,019,950; Mar. 12; Sp. p. 2020; Gaz. vol. 176; p. 349.

Collier, William D., Marco, Fla. Clam-digger. No. 1,019,601; Mar. 5; Sp. p. 1328; Gaz. vol. 176; p. 200.

Collins, Frank H., assignor of one-third to B. E. Harcourt and one-third to W. P. O'Grady, Medina, N. Y. Apparatus for cooling car-journals. No. 1,019,760; Mar. 12; Sp. p. 1639; Gaz. vol. 176; p. 286.

Collins, Herbert G., assignor to Sargent & Company, New Haven, Conn. Casket-handle. No. 1,019,761; Mar. 12; Sp. p. 1641; Gaz. vol. 176; p. 286.

Collins, James H., Harrisburg, Pa. Cross-tie. No. 1,020,886; Mar. 19; Sp. p. 3909; Gaz. vol. 176; p. 697.

Collister, Lloyd W., Farmington, Iowa. Making calcimine. No. 1,021,136; Mar. 26; Sp. p. 4618; Gaz. vol. 176; p. 833.

Colman, James. (See Wolffenstein and Colman.)

Colonial Trust Company, The. (See Debes, Victor A., assignor.)

Columbia Postal Supply Company. (See Ielfield, Fred C., assignor.)

Columbus Realty Company. (See Jones, Edward S., assignor.)

Combs, William L., and J. A. Kerber, Belfry, Mont. Ditching-machine. No. 1,020,911; Mar. 19; Sp. p. 4042; Gaz. vol. 176; p. 706.

Concrete & Clay Products Company. (See Bellamy, Charles H., assignor.)

Condit, Sears B., Jr. (See Badeau, Charles C., assignor.)

Congil, Francis M., Des Moines, Iowa. Plasterer's corner-strip. No. 1,019,961; Mar. 12; Sp. p. 2021; Gaz. vol. 176; p. 349.

Conklin, Vernon A., Bayonne, N. J. Railway-tie and lock. No. 1,021,061; Mar. 26; Sp. p. 5624; Gaz. vol. 176; p. 1012.

Connor, William M., Baltimore, Md. Detinning-machine. No. 1,021,302; Mar. 26; Sp. p. 4874; Gaz. vol. 176; p. 890.

Conrad, Annette C., *et al.* (See Shepard, Elisha H., assignor.)

Conrad, Isaac N., *et al.* (See Shepard, Elisha H., assignor.)

Consolidated Car Heating Company. (See Nuckols and Bruyn, assignors.)

Consolidated Manufacturing Company, The. (See Chubbuck, Samuel J., assignor.)

Constantinescu, Gogu, Bloomsbury, London, England. Carbureter for internal-combustion engines. No. 1,021,039; Mar. 26; Sp. p. 4320; Gaz. vol. 176; p. 802.

Conway, Thomas E., Galena, Kans. Coating compound. No. 1,020,801; Mar. 19; Sp. p. 3821; Gaz. vol. 176; p. 669.

Conway, William T., St. Louis county, Mo. Device for stamping or marking meats. No. 1,021,715; Mar. 26; Sp. p. 5729; Gaz. vol. 176; p. 1029.

Cook, Irving A., Lancaster, Ohio. Shoe-last. No. 1,019,602; Mar. 5; Sp. p. 1329; Gaz. vol. 176; p. 200.

Cook, Miles P., Flint, Mich. Journal-box cooler. No. 1,020,188; Mar. 12; Sp. p. 2524; Gaz. vol. 176; p. 428.

Cooke, Charles J., Hongkong, China. Advertising-display apparatus. No. 1,020,538; Mar. 19; Sp. p. 3247; Gaz. vol. 176; p. 581.

Cooke, Thomas G., Chicago, Ill. Valve for water distribution. No. 1,021,303; Mar. 26; Sp. p. 4876; Gaz. vol. 176; p. 890.

Coon, Calvin P., Bruce, Wis. Grain-door. No. 1,019,025; Mar. 5; Sp. p. 21; Gaz. vol. 176; p. 7.

Cooper, Joseph K. (See Gentle and Cooper.)

Copeland, George W., assignor of one-half to J. W. Karr, Ensley, Ala. Harrow. No. 1,020,180; Mar. 12; Sp. p. 2526; Gaz. vol. 176; p. 420.

Copper Oil Products Company. (See Ellis, Carleton, assignor.)

Corbin Screw Corporation. (See Glover and Holt, assignors.)

Cordeiro, Frederick J. B., U. S. Navy. Electric motor and dynamo. No. 1,019,709; Mar. 5; Sp. p. 1521; Gaz. vol. 176; p. 236.

Cords, Edward F., Selby, S. D. Clamp. No. 1,021,352; Mar. 26; Sp. p. 4974; Gaz. vol. 176; p. 907.

Core, Frederick B. (See Grubman, Leo, assignor.)

Corey, Charles W., Malden, Mass. Pneumatic floor-oiler. No. 1,019,135; Mar. 5; Sp. p. 285; Gaz. vol. 176; p. 45.

Cornett, Sigurd C., and A. D. Davenport, Gustine, Cal. Automatic inlet-valve. No. 1,019,603; Mar. 5; Sp. p. 1331; Gaz. vol. 176; p. 201.

Cornwall, Stephen N., Springfield, Mo. Curbing, &c. No. 1,020,687; Mar. 19; Sp. p. 4002; Gaz. vol. 176; p. 697.

Corts, August, Wyucote, assignor to William Wharton, Jr., & Company, Incorporated, Philadelphia, Pa. Movement-retarding device for rails. No. 1,020,802; Mar. 19; Sp. p. 3822; Gaz. vol. 176; p. 670.

Cory, William M., *et al.* (See Lancaster, Charles P., assignor.)

Cossar, Thomas, Otley, England. Printing-machine. No. 1,020,190; Mar. 12; Sp. p. 2529; Gaz. vol. 176; p. 429.

Cotter, Edward J. and J. J., Philadelphia, Pa. Spinning-machine. No. 1,021,448; Mar. 26; Sp. p. 5205; Gaz. vol. 176; p. 942.

Cotter, John J. (See Cotter, Edward J. and J. J.)

Cottrell, George A. (See Sheets and Cottrell.)

Cottrell, Henry W. (See Rountree, Henry W., assignor.)

Coulter, William, Lorain, Ohio. Boat-detaching apparatus. No. 1,021,353; Mar. 26; Sp. p. 4975; Gaz. vol. 176; p. 908.

Courtland, William A., New York, N. Y. Spool-holder. No. 1,020,401; Mar. 19; Sp. p. 2948; Gaz. vol. 176; p. 536.

Cousans, Louis B., London, England. Casing for centrifugal fans and pumps. No. 1,019,762; Mar. 12; Sp. p. 1642; Gaz. vol. 176; p. 286.

Cowey, Leonard E., Kew Gardens, England. Road-vehicle suspension arrangement. No. 1,020,385; Mar. 12; Sp. p. 2907; Gaz. vol. 176; p. 492.

Cowles, Arthur B., Rochester, N. Y. Delivery-receptacle. No. 1,020,539; Mar. 19; Sp. p. 3248; Gaz. vol. 176; p. 581.

Cox, James F., assignor of one-half to M. T. Cronin, Bayonne, N. J. Pipe or tube bending machine. No. 1,021,449; Mar. 26; Sp. p. 5210; Gaz. vol. 176; p. 942.

Cox, James F., assignor of one-half to M. T. Cronin, Bayonne, N. J. Pipe or tube bending machine. No. 1,021,450; Mar. 26; Sp. p. 5211; Gaz. vol. 176; p. 942.

Cox, James F., assignor of one-half to M. T. Cronin, Bayonne, N. J. Bending-machine. No. 1,021,662; Mar. 26; Sp. p. 5025; Gaz. vol. 176; p. 1012.

Cox, John A., and J. H. Kidwell, Parkersburg, W. Va.; said Cox assignor to said Kidwell. Telegraph-transmitter. No. 1,019,883; Mar. 12; Sp. p. 1872; Gaz. vol. 176; p. 327.

Craft, Elisha, Wellsburg, W. Va. Governor-pulley clutch. No. 1,019,305; Mar. 5; Sp. p. 673; Gaz. vol. 176; p. 105.

Crafton, Charles H., Staunton, Va. Electromagnetic time-recorder. No. 1,019,763; Mar. 12; Sp. p. 1643; Gaz. vol. 176; p. 286.

Craig, James, New Rochelle, N. Y. Lubricating means for wrist-pins. No. 1,020,638; Mar. 19; Sp. p. 3476; Gaz. vol. 176; p. 614.

Craigie, William, assignor of one-sixth to W. Marlton and one-sixth to W. Wallace, Goderich, Ontario, Canada. Hatch-fastener. No. 1,019,226; Mar. 5; Sp. p. 485; Gaz. vol. 176; p. 77.

Cramer, Joseph B. (See Kane, John H., assignor.)

Crandal, Chauncey D., deceased, St. Louis, Mo.; N. A. Crandal, administratrix. Clamp. No. 1,020,129; Mar. 12; Sp. p. 2396; Gaz. vol. 176; p. 409.

Crandal, Nellie A., administratrix. (See Crandal, Chauncey D.)

Craven, Fremont B., Golden City, Mo. Plow. No. 1,020,888; Mar. 19; Sp. p. 4004; Gaz. vol. 176; p. 698.

Craven, James F., Pittsburgh, Pa. Receptacle for containing and discharging semisolid and pasty substances. No. 1,021,451; Mar. 26; Sp. p. 5213; Gaz. vol. 176; p. 942.

Craven, James F., Pittsburgh, Pa. Receptacle for containing and discharging semisolid and pasty substances. No. 1,021,452; Mar. 26; Sp. p. 5215; Gaz. vol. 176; p. 943.

Cravens, George W., Chicago, Ill., assignor to The Electric Service Supplies Company, Philadelphia, Pa. Trolley-wire-supporting device. No. 1,019,764; Mar. 12; Sp. p. 1645; Gaz. vol. 176; p. 287.

Crawford, Frank. (See Bowdle, Isaiah, assignor.)

Crecelius, Louis J., assignor to C. A. Thompson, St. Louis, Mo. Machine for grinding balls or spheres. No. 1,020,803; Mar. 19; Sp. p. 3825; Gaz. vol. 176; p. 670.

Crecelius, Theodore E. (See Feldmann and Crecelius.)

Creger, Alvia L., Des Moines, Iowa. Unloading attachment for wagons. No. 1,019,952; Mar. 12; Sp. p. 2022; Gaz. vol. 176; p. 349.

Creveling, John L., New York, N. Y., assignor to Safety Car Heating and Lighting Company. Electric regulation. No. 1,020,479; Mar. 19; Sp. p. 3111; Gaz. vol. 176; p. 561.

Crighton, Peter F., and P. D. Hives, Saskatoon, Saskatchewan, Canada. Attachment for bed-springs. No. 1,019,765; Mar. 12; Sp. p. 1646; Gaz. vol. 176; p. 287.

Crissey, Clarence P., Lynn, Mass., assignor to General Electric Company. Control of stage-valves. No. 1,020,684; Mar. 19; Sp. p. 3570; Gaz. vol. 176; p. 628.

Crocker, Fredrick H., and P. E. Sheridan, Cambridge, Mass. Canopy for draft-animals. No. 1,021,217; Mar. 26; Sp. p. 4680; Gaz. vol. 176; p. 859.

Crockett, Ralph W., *et al.* (See Frost, Walter E., assignor.)

Crompton & Company. (See Macfarlane, Burge, and Williams, assignors.)

Crompton & Knowles Loom Works. (See Ryon, Eppa H., assignor.)

Cronin, Matthew T. (See Cox, James F., assignor.)

Cronk, Harrison T., New York, N. Y. Packing-joint. No. 1,019,766; Mar. 12; Sp. p. 1648; Gaz. vol. 176; p. 287.

Cronk, Harrison T., New York, N. Y. Appliance for railway-cars and other conveyances. No. 1,021,663; Mar. 26; Sp. p. 5626; Gaz. vol. 176; p. 1012.

Crosby Steam Gage and Valve Company. (See Miller, Edward F., assignor.)

Crosby, Thaddeus. (See Faucher and Crosby.)

Crouse-Hinds Company. (See Hinds and Dossert, assignors.)

Crump, John, Londonville, Ohio. Wire-splicer. No. 1,020,191; Mar. 12; Sp. p. 2533; Gaz. vol. 176; p. 430.

Cubelic, Ludwig, Charlottenburg, Germany, assignor to General Electric Company. Combined emergency and throttle valve. No. 1,020,685; Mar. 19; Sp. p. 3572; Gaz. vol. 176; p. 629.

Cubelic, Ludwig, Charlottenburg, Germany, assignor to General Electric Company. Governing mechanism for turbines. No. 1,020,686; Mar. 19; Sp. p. 3575; Gaz. vol. 176; p. 629.

Cubitt, Archibald S., Pittsfield, Mass., assignor to General Electric Company. Time and current limit relay. No. 1,019,425; Mar. 5; Sp. p. 974; Gaz. vol. 176; p. 142.

Cubitt, Archibald S., Pittsfield, Mass., assignor to General Electric Company. Electric flat-iron. No. 1,019,426; Mar. 5; Sp. p. 976; Gaz. vol. 176; p. 143.

Cubitt, Archibald S., Pittsfield, Mass., assignor to General Electric Company. Electric water-heater. No. 1,019,427; Mar. 5; Sp. p. 977; Gaz. vol. 176; p. 143.

Cubitt, Archibald S., Pittsfield, Mass., assignor to General Electric Company. Motor-control system. No. 1,019,428; Mar. 5; Sp. p. 979; Gaz. vol. 176; p. 143.

Cubitt, Archibald S., Pittsfield, Mass., assignor to General Electric Company. Electric toaster. No. 1,021,239; Mar. 26; Sp. p. 4746; Gaz. vol. 176; p. 867.

Cuillerier, Noe, *et al.* (See Brunelle, Arthur, assignor.)

Culley, John S., Louisville, Ky. Hanger for cement posts. No. 1,019,604; Mar. 5; Sp. p. 1332; Gaz. vol. 176; p. 201.

Cumberland, Peregrine E. G., St. Kilda, Victoria, assignor to A. Markell, Sydney, Australia. Means for preventing corrosion of surface condensers and other metal structures. No. 1,020,480; Mar. 19; Sp. p. 3113; Gaz. vol. 176; p. 562.

Cummings, Clarence A., Fresno, Cal. Adjustable packing-pliers. No. 1,019,605; Mar. 5; Sp. p. 1333; Gaz. vol. 176; p. 201.

Cummings, Frank M., Byesville, Ohio. Trolley-wheel. No. 1,020,540; Mar. 19; Sp. p. 3250; Gaz. vol. 176; p. 581.

Cummings, James, *et al.* (See Ironside, Matthew C., assignor.)

Cummings, Walter C., Boston, assignor to N. Heard, trustee, Newton, Mass. Apparatus for assembling veneer barrels. No. 1,020,687; Mar. 19; Sp. p. 3578; Gaz. vol. 176; p. 630.

Cummins, Henry D., Hunt, N. Y. Crossover for rails. No. 1,021,574; Mar. 26; Sp. p. 5479; Gaz. vol. 176; p. 984.

Cunningham, Richard H., New York, N. Y. Circuit-breaker for magnetos and the like. No. 1,021,506; Mar. 26; Sp. p. 5339; Gaz. vol. 176; p. 962.

Cunynghame, Henry H. S., Nutfield, England. Hygroscope. No. 1,019,767; Mar. 12; Sp. p. 1650; Gaz. vol. 176; p. 288.

Curran, Frank P., New York, N. Y. Handle for textile bags. No. 1,020,639; Mar. 19; Sp. p. 3478; Gaz. vol. 176; p. 614.

Currin, William D., *et al.* (See Lineback, Edward E., assignor.)

Curtis, Frederic A., assignor to The Steel Mantle Light Company, Toledo, Ohio. Oil-burner. No. 1,019,306; Mar. 5; Sp. p. 676; Gaz. vol. 176; p. 105.

Curtis, James G., assignor to The E. M. Hulse Company, Columbus, Ohio. Sofa or davenport bed. No. 1,019,606; Mar. 5; Sp. p. 1335; Gaz. vol. 176; p. 202.

Curtis Publishing Company, The. (See Sargent, William P., assignor.)

Cushman, William H., assignor to The R. A. Fargo Company, Taunton, Mass. Nest of drinking-cups. No. 1,021,716; Mar. 26; Sp. p. 5730; Gaz. vol. 176; p. 1029.

Cutler-Hammer Mfg. Co., The. (See Horton, Albert J., assignor.)

Chicago Railway Equipment Company. (See Le Beau, Ernest A., assignor.)

Chicago Railway Equipment Company. (See Williams, Charles H., Jr., assignor.)

Childress, William S., Kansas City, Mo. Safety hat-pin. No. 1,020,384; Mar. 12; Sp. p. 2906; Gaz. vol. 176; p. 492.

Childs, Alfred L., *et al.* (See Frost, Walter E., assignor.)

Chitty, Henry, Kenley, F. M. T. Lange, London, and G. W. Mascord, Barnes, England. Distribution of electromotive power. No. 1,020,025; Mar. 12; Sp. p. 2169; Gaz. vol. 176; p. 374.

Christianson, Andrew, Butler, assignor to Standard Steel Car Co., Pittsburgh, Pa. Car-door-operating device. No. 1,019,023; Mar. 5; Sp. p. 19; Gaz. vol. 176; p. 6.

Christianson, Andrew, Butler, assignor to Standard Steel Car Company, Pittsburgh, Pa. Car-door-operating mechanism. No. 1,021,351; Mar. 26; Sp. p. 4973; Gaz. vol. 176; p. 907.

Christman, Matthias, assignor of one-third to H. L. Bissett and one-third to G. A. McLaughlin, Springfield, Mo. Wheel-hub plate. No. 1,020,385; Mar. 19; Sp. p. 3998; Gaz. vol. 176; p. 697.

Christoffersen, Christoffer, Philadelphia, Pa. Rotary engine. No. 1,019,223; Mar. 5; Sp. p. 477; Gaz. vol. 176; p. 76.

Chubbuck, Samuel J., assignor to The Consolidated Manufacturing Company, Toledo, Ohio. Handle-grip control for motor-cycles or the like. No. 1,019,304; Mar. 5; Sp. p. 671; Gaz. vol. 176; p. 104.

Chudrik, Wicenti. (See Schelecki and Chudrik.)

Church, George W., *et al.* (See Jarvis, Herbert L., assignor.)

Churchill, James, Centralia, Wash. Working-glove. No. 1,021,228; Mar. 26; Sp. p. 4745; Gaz. vol. 176; p. 866.

Ciesla, John. (See Becker and Ciesla.)

Cincinnati Lathe & Tool Company, The. (See Perrine, John E., assignor.)

Cisler, Arthur, *et al.* (See Bauer, Clarence E., assignor.)

Clapp, Albert L., Braintree, assignor to Hide-ite Leather Company, Boston, Mass. Production of leather-board stock. No. 1,021,660; Mar. 26; Sp. p. 5622; Gaz. vol. 176; p. 1011.

Clapp, George E., Kalamazoo, Mich. Oil-burner. No. 1,020,265; Mar. 12; Sp. p. 2670; Gaz. vol. 176; p. 454.

Clapp, George E., Kalamazoo, Mich. Burning liquid fuel. No. 1,020,266; Mar. 12; Sp. p. 2674; Gaz. vol. 176; p. 454.

Clark, Byron G., Birmingham, England. Lacing-hook for boots and the like. No. 1,019,024; Mar. 5; Sp. p. 20; Gaz. vol. 176; p. 6.

Clark, Charles E., Durham, N. C. Yarn-sizing machine. No. 1,020,343; Mar. 12; Sp. p. 2820; Gaz. vol. 176; p. 478.

Clark Dredge Manufacturing Company, The. (See Clark, Horace J., assignor.)

Clark, Guy Z., Billings, Mont. Whiffletree-hook. No. 1,019,949; Mar. 12; Sp. p. 2019; Gaz. vol. 176; p. 849.

Clark, Horace J., assignor to The Clark Dredge Manufacturing Company, Chicago, Ill. Raft for dredges. No. 1,019,224; Mar. 5; Sp. p. 480; Gaz. vol. 176; p. 76.

Clark, Horace W., Mattoon, Ill. Cement-mold. No. 1,019,598; Mar. 5; Sp. p. 1321; Gaz. vol. 176; p. 199.

Clark, John, Sydenham, England. Nut-lock. No. 1,020,026; Mar. 12; Sp. p. 2172; Gaz. vol. 176; p. 374.

Clark, John, St. Paul, Minn. Dipper-tooth for steam-shovels. No. 1,021,185; Mar. 26; Sp. p. 4617; Gaz. vol. 176; p. 832.

Clark, John B. (See McKlasie and Clark.)

Clark, Joseph S., *et al.* (See Lister, Nicholas E., assignor.)

Clark, Melville, Chicago, Ill. Automatic piano. No. 1,019,758; Mar. 12; Sp. p. 1633; Gaz. vol. 176; p. 285.

Clark, Walter E. (See Strouse and Clark.)

Clark, Walter G., New York, N. Y. Suspension insulator-clamp. No. 1,019,225; Mar. 5; Sp. p. 482; Gaz. vol. 176; p. 77.

Clark, William R., Muncie, Ind. Safety-crank for explosion-engines. No. 1,020,799; Mar. 19; Sp. p. 3818; Gaz. vol. 176; p. 669.

Clauson, Joseph A., Boston, Mass. Agitating-platform. No. 1,020,344; Mar. 12; Sp. p. 2822; Gaz. vol. 176; p. 478.

Clauss, Henrie, Fremont, Ohio. Tension attachment for shears. No. 1,020,400; Mar. 19; Sp. p. 2947; Gaz. vol. 176; p. 535.

Clausset, Walter E., Hartford, Conn. Paper drinking-cup. No. 1,020,187; Mar. 12; Sp. p. 2522; Gaz. vol. 176; p. 428.

Clawson, Clement C., Flagtown, N. J. Coin-controlled vending-machine. No. 1,020,966; Mar. 26; Sp. p. 4175; Gaz. vol. 176; p. 776.

Clayton-Joel, William, Melbourne, Victoria, Australia. Flashing gas-sign. No. 1,019,699; Mar. 5; Sp. p. 1322; Gaz. vol. 176; p. 199.

Clemmens, Charles S. (See Vause and Clemmens.)

Clifton, Archer E., Connersville, Ind. Construction of rotary blowers and pumps. No. 1,021,180; Mar. 26; Sp. p. 4617; Gaz. vol. 176; p. 847.

Clintonville Baler Company. (See Splittgerber, Wilhelm, assignor.)

Clokey, Samuel J. (See Martin and Clokey.)

Clough, Frederick H., Rugby, England, assignor to General Electric Company. Shaft-bearing. No. 1,019,424; Mar. 5; Sp. p. 972; Gaz. vol. 176; p. 142.

Clough, James D., Lakewood, Ohio. Mixing-machine. No. 1,021,301; Mar. 26; Sp. p. 4870; Gaz. vol. 176; p. 889.

Coates, George D., Torrington, Conn. Repair-heel. No. 1,020,800; Mar. 19; Sp. p. 3821; Gaz. vol. 176; p. 669.

Coates, Samuel L., Rickreall, Oreg. Attachment for apple-paring machines. No. 1,019,600; Mar. 5; Sp. p. 1325; Gaz. vol. 176; p. 200.

Cochran, Clyde B., Cleveland, Ohio, assignor to Anderson Electric Car Company, Detroit, Mich. Control mechanism for electric vehicles. No. 1,020,080; Mar. 12; Sp. p. 2278; Gaz. vol. 176; p. 392.

Cochran, Eugene S., *et al.* (See Galvin, Carroll D., assignor.)

Cochran, Joseph E., Chicago, Ill. Weighing-scale. No. 1,020,744; Mar. 19; Sp. p. 3718; Gaz. vol. 176; p. 651.

Coey, Stewart C., Youngstown, Ohio. Magnetic skelp-charging machine. No. 1,019,759; Mar. 12; Sp. p. 1638; Gaz. vol. 176; p. 285.

Cogger, William B., Cleveland, assignor to T. Kundtz, Lakewood, Ohio. Side standard for seats. No. 1,019,134; Mar. 5; Sp. p. 283; Gaz. vol. 176; p. 44.

Coggin, Frank F., Matawan, N. J., and E. H. Gold, Chicago, Ill. Automatic controlling apparatus for steam-heating systems. No. 1,021,505; Mar. 26; Sp. p. 5336; Gaz. vol. 176; p. 961.

Cohen, Louis. (See Gross and Cohen.)

Coleman, Edgar P., deceased, Buffalo, N. Y.; R. H. Coleman, administrator. Fluid-meter. No. 1,020,127; Mar. 12; Sp. p. 2383; Gaz. vol. 176; p. 408.

Coleman, Robert H., administrator. (See Coleman, Edgar P.)

Coles, David H., Brooklyn, N. Y., and F. Charavay, Jersey City, N. J., assignors, by mesne assignments, to Regun Motor Company. Internal-combustion engine. No. 1,020,128; Mar. 12; Sp. p. 2392; Gaz. vol. 176; p. 408.

Collet, Albert, assignor to Société Maurice et Pierre Collet & Cie., Paris, France. Portable machine for regrooving railway-sleepers. No. 1,021,400; Mar. 26; Sp. p. 5112; Gaz. vol. 176; p. 925.

Colley, John W., and E. G. Walter, Elkhart, Ind. Line-connecting device for floats and sinkers. No. 1,019,950; Mar. 12; Sp. p. 2020; Gaz. vol. 176; p. 849.

Collier, William D., Marco, Fla. Clam-digger. No. 1,019,601; Mar. 5; Sp. p. 1328; Gaz. vol. 176; p. 200.

Collins, Frank H., assignor of one-third to B. E. Harcourt and one-third to W. P. O'Grady, Medina, N. Y. Apparatus for cooling car-journals. No. 1,019,760; Mar. 12; Sp. p. 1639; Gaz. vol. 176; p. 286.

Collins, Herbert G., assignor to Sargent & Company, New Haven, Conn. Casket-handle. No. 1,019,761; Mar. 12; Sp. p. 1641; Gaz. vol. 176; p. 286.

Collins, James H., Harrisburg, Pa. Cross-tie. No. 1,020,886; Mar. 19; Sp. p. 3909; Gaz. vol. 176; p. 697.

Collister, Lloyd W., Farmington, Iowa. Making calcimine. No. 1,021,136; Mar. 26; Sp. p. 4518; Gaz. vol. 176; p. 833.

Colman, James. (See Wolffenstein and Colman.)

Colonial Trust Company, The. (See Debes, Victor A., assignor.)

Columbia Postal Supply Company. (See Ielfield, Fred C., assignor.)

Columbus Realty Company. (See Jones, Edward S., assignor.)

Combs, William L., and J. A. Kerber, Belfry, Mont. Ditching-machine. No. 1,020,011; Mar. 19; Sp. p. 4042; Gaz. vol. 176; p. 706.

Concrete & Clay Products Company. (See Bellamy, Charles H., assignor.)

Condit, Sears B., Jr. (See Badeau, Charles C., assignor.)

Congil, Francis M., Des Moines, Iowa. Plasterer's corner-strip. No. 1,019,961; Mar. 12; Sp. p. 2021; Gaz. vol. 176; p. 349.

Conklin, Vernon A., Bayonne, N. J. Railway-tie and lock. No. 1,021,661; Mar. 26; Sp. p. 5624; Gaz. vol. 176; p. 1012.

Connor, William M., Baltimore, Md. Detinning-machine. No. 1,021,302; Mar. 26; Sp. p. 4874; Gaz. vol. 176; p. 890.

Conrad, Annette C., *et al.* (See Shepard, Elisha H., assignor.)

Conrad, Isaac N., *et al.* (See Shepard, Elisha H., assignor.)

Consolidated Car Heating Company. (See Nuckols and Bruyn, assignors.)

Consolidated Manufacturing Company, The. (See Chubbuck, Samuel J., assignor.)

Constantinescu, Gogu, Bloomsbury, London, England. Carbureter for internal-combustion engines. No. 1,021,039; Mar. 26; Sp. p. 4320; Gaz. vol. 176; p. 802.

Conway, Thomas E., Galena, Kans. Coating compound. No. 1,020,801; Mar. 19; Sp. p. 3821; Gaz. vol. 176; p. 669.

Conway, William T., St. Louis county, Mo. Device for stamping or marking meats. No. 1,021,715; Mar. 26; Sp. p. 5729; Gaz. vol. 176; p. 1029.

Cook, Irving A., Lancaster, Ohio. Shoe-last. No. 1,019,602; Mar. 5; Sp. p. 1329; Gaz. vol. 176; p. 200.

Cook, Miles P., Flint, Mich. Journal-box cooler. No. 1,020,188; Mar. 12; Sp. p. 2524; Gaz. vol. 176; p. 428.

Cooke, Charles J., Hongkong, China. Advertising-display apparatus. No. 1,020,588; Mar. 19; Sp. p. 3247; Gaz. vol. 176; p. 581.

Cooke, Thomas G., Chicago, Ill. Valve for water distribution. No. 1,021,303; Mar. 26; Sp. p. 4876; Gaz. vol. 176; p. 890.

Coon, Calvin P., Bruce, Wis. Grain-door. No. 1,019,025; Mar. 5; Sp. p. 21; Gaz. vol. 176; p. 7.

Cooper, Joseph K. (See Gentle and Cooper.)

Copeland, George W., assignor of one-half to J. W. Kerr, Ensley, Ala. Harrow. No. 1,020,189; Mar. 12; Sp. p. 2526; Gaz. vol. 176; p. 420.

Copper Oil Products Company. (See Ellis, Carleton, assignor.)

Corbin Screw Corporation. (See Glover and Holt, assignors.)

Cordeiro, Frederick J. B., U. S. Navy. Electric motor and dynamo. No. 1,019,709; Mar. 5; Sp. p. 1521; Gaz. vol. 176; p. 236.

Cords, Edward F., Selby, S. D. Clamp. No. 1,021,352; Mar. 26; Sp. p. 4974; Gaz. vol. 176; p. 907.

Core, Frederick B. (See Grubman, Leo, assignor.)

Corey, Charles W., Malden, Mass. Pneumatic floor-oiler. No. 1,019,135; Mar. 5; Sp. p. 285; Gaz. vol. 176; p. 45.

Cornett, Sigurd C., and A. D. Davenport, Gustine, Cal. Automatic inlet-valve. No. 1,019,603; Mar. 5; Sp. p. 1351; Gaz. vol. 176; p. 201.

Cornwall, Stephen N., Springfield, Mo. Curbing, &c. No. 1,020,387; Mar. 19; Sp. p. 4002; Gaz. vol. 176; p. 697.

Corts, August, Wyucote, assignor to William Wharton, Jr., & Company, Incorporated, Philadelphia, Pa. Movement-retarding device for rails. No. 1,020,802; Mar. 19; Sp. p. 3822; Gaz. vol. 176; p. 670.

Cory, William M., *et al.* (See Lancaster, Charles P., assignor.)

Cossar, Thomas, Otley, England. Printing-machine. No. 1,020,190; Mar. 12; Sp. p. 2529; Gaz. vol. 176; p. 429.

Cotter, Edward J. and J. J., Philadelphia, Pa. Spinning-machine. No. 1,021,448; Mar. 26; Sp. p. 5205; Gaz. vol. 176; p. 942.

Cotter, John J. (See Cotter, Edward J. and J. J.)

Cottrell, George A. (See Sheets and Cottrell.)

Cottrell, Henry W. (See Rountree, Henry W., assignor.)

Coulter, William, Lorain, Ohio. Boat-detaching apparatus. No. 1,021,353; Mar. 26; Sp. p. 4975; Gaz. vol. 176; p. 908.

Courtland, William A., New York, N. Y. Spool-holder. No. 1,020,401; Mar. 19; Sp. p. 2948; Gaz. vol. 176; p. 536.

Cousans, Louis B., London, England. Casing for centrifugal fans and pumps. No. 1,019,762; Mar. 12; Sp. p. 1642; Gaz. vol. 176; p. 286.

Cowey, Leonard E., Kew Gardens, England. Road-vehicle suspension arrangement. No. 1,020,385; Mar. 12; Sp. p. 2907; Gaz. vol. 176; p. 492.

Cowles, Arthur B., Rochester, N. Y. Delivery-receptacle. No. 1,020,539; Mar. 19; Sp. p. 3248; Gaz. vol. 176; p. 581.

Cox, James F., assignor of one-half to M. T. Cronin, Bayonne, N. J. Pipe or tube bending machine. No. 1,021,449; Mar. 26; Sp. p. 5210; Gaz. vol. 176; p. 942.

Cox, James F., assignor of one-half to M. T. Cronin, Bayonne, N. J. Pipe or tube bending machine. No. 1,021,450; Mar. 26; Sp. p. 5211; Gaz. vol. 176; p. 942.

Cox, James F., assignor of one-half to M. T. Cronin, Bayonne, N. J. Bending-machine. No. 1,021,662; Mar. 26; Sp. p. 5625; Gaz. vol. 176; p. 1012.

Cox, John A., and J. H. Kidwell, Parkersburg, W. Va.; said Cox assignor to said Kidwell. Telegraph-transmitter. No. 1,019,883; Mar. 12; Sp. p. 1872; Gaz. vol. 176; p. 327.

Craft, Elisha, Wellsburg, W. Va. Governor-pulley clutch. No. 1,019,505; Mar. 5; Sp. p. 673; Gaz. vol. 176; p. 105.

Crafton, Charles H., Staunton, Va. Electromagnetic time-recorder. No. 1,019,763; Mar. 12; Sp. p. 1643; Gaz. vol. 176; p. 286.

Craig, James, New Rochelle, N. Y. Lubricating means for wrist-pins. No. 1,020,638; Mar. 19; Sp. p. 3476; Gaz. vol. 176; p. 614.

Craigie, William, assignor of one-sixth to W. Marlton and one-sixth to W. Wallace, Goderich, Ontario, Canada. Hatch-fastener. No. 1,019,226; Mar. 5; Sp. p. 485; Gaz. vol. 176; p. 77.

Cramer, Joseph B. (See Kane, John H., assignor.)

Crandal, Chauncey D., deceased, St. Louis, Mo.; N. A. Crandal, administratrix. Clamp. No. 1,020,120; Mar. 12; Sp. p. 2396; Gaz. vol. 176; p. 409.

Crandal, Nellie A., administratrix. (See Crandal, Chauncey D.)

Craven, Fremont B., Golden City, Mo. Plow. No. 1,020,888; Mar. 19; Sp. p. 4004; Gaz. vol. 176; p. 698.

Craven, James F., Pittsburgh, Pa. Receptacle for containing and discharging semisolid and pasty substances. No. 1,021,451; Mar. 26; Sp. p. 5213; Gaz. vol. 176; p. 942.

Craven, James F., Pittsburgh, Pa. Receptacle for containing and discharging semisolid and pasty substances. No. 1,021,452; Mar. 26; Sp. p. 5215; Gaz. vol. 176; p. 943.

Cravens, George W., Chicago, Ill., assignor to The Electric Service Supplies Company, Philadelphia, Pa. Trolley-wire-supporting device. No. 1,019,764; Mar. 12; Sp. p. 1645; Gaz. vol. 176; p. 287.

Crawford, Frank. (See Bowdle, Isaiah, assignor.)

Crecelius, Louis J., assignor to C. A. Thompson, St. Louis, Mo. Machine for grinding balls or spheres. No. 1,020,803; Mar. 19; Sp. p. 3825; Gaz. vol. 176; p. 670.

Crecelius, Theodore E. (See Feldmann and Crecelius.)

Creger, Alvin L., Des Moines, Iowa. Unloading attachment for wagons. No. 1,019,952; Mar. 12; Sp. p. 2022; Gaz. vol. 176; p. 349.

Creveling, John L., New York, N. Y., assignor to Safety Car Heating and Lighting Company. Electric regulation. No. 1,020,479; Mar. 19; Sp. p. 3111; Gaz. vol. 176; p. 561.

Crighton, Peter F., and P. D. Hives, Saskatoon, Saskatchewan, Canada. Attachment for bed-springs. No. 1,019,765; Mar. 12; Sp. p. 1646; Gaz. vol. 176; p. 287.

Criesey, Clarence P., Lynn, Mass., assignor to General Electric Company. Control of stage-valves. No. 1,020,684; Mar. 19; Sp. p. 3570; Gaz. vol. 176; p. 628.

Crocker, Fredrick H., and P. E. Sheridan, Cambridge, Mass. Canopy for draft-animals. No. 1,021,217; Mar. 26; Sp. p. 4689; Gaz. vol. 176; p. 859.

Crockett, Ralph W., *et al.* (See Frost, Walter E., assignor.)

Crompton & Company. (See Macfarlane, Burge, and Williams, assignors.)

Crompton & Knowles Loom Works. (See Eyon, Eppa H., assignor.)

Cronin, Matthew T. (See Cox, James F., assignor.)

Cronk, Harrison T., New York, N. Y. Packing-joint. No. 1,019,766; Mar. 12; Sp. p. 1648; Gaz. vol. 176; p. 287.

Cronk, Harrison T., New York, N. Y. Appliance for railway-cars and other conveyances. No. 1,021,663; Mar. 26; Sp. p. 5626; Gaz. vol. 176; p. 1012.

Crosby Steam Gage and Valve Company. (See Miller, Edward F., assignor.)

Crosby, Thaddeus. (See Faucher and Crosby.)

Crouse-Hinds Company. (See Hinds and Dossert, assignors.)

Crump, John, Loudonville, Ohio. Wire-splicer. No. 1,020,191; Mar. 12; Sp. p. 2533; Gaz. vol. 176; p. 430.

Cubelic, Ludwig, Charlottenburg, Germany, assignor to General Electric Company. Combined emergency and throttle valve. No. 1,020,685; Mar. 19; Sp. p. 3572; Gaz. vol. 176; p. 629.

Cubelic, Ludwig, Charlottenburg, Germany, assignor to General Electric Company. Governing mechanism for turbines. No. 1,020,686; Mar. 19; Sp. p. 3575; Gaz. vol. 176; p. 629.

Cubitt, Archibald S., Pittsfield, Mass., assignor to General Electric Company. Time and current limit relay. No. 1,019,425; Mar. 5; Sp. p. 974; Gaz. vol. 176; p. 142.

Cubitt, Archibald S., Pittsfield, Mass., assignor to General Electric Company. Electric flat-iron. No. 1,019,426; Mar. 5; Sp. p. 976; Gaz. vol. 176; p. 143.

Cubitt, Archibald S., Pittsfield, Mass., assignor to General Electric Company. Electric water-heater. No. 1,019,427; Mar. 5; Sp. p. 977; Gaz. vol. 176; p. 143.

Cubitt, Archibald S., Pittsfield, Mass., assignor to General Electric Company. Motor-control system. No. 1,019,428; Mar. 5; Sp. p. 979; Gaz. vol. 176; p. 143.

Cubitt, Archibald S., Pittsfield, Mass., assignor to General Electric Company. Electric toaster. No. 1,021,239; Mar. 26; Sp. p. 4746; Gaz. vol. 176; p. 867.

Cuillerier, Noe, *et al.* (See Brunelle, Arthur, assignor.)

Culley, John S., Louisville, Ky. Hanger for cement posts. No. 1,019,604; Mar. 5; Sp. p. 1332; Gaz. vol. 176; p. 201.

Cumberland, Peregrine E. G., St. Kilda, Victoria, assignor to A. Markell, Sydney, Australia. Means for preventing corrosion of surface condensers and other metal structures. No. 1,020,480; Mar. 19; Sp. p. 3113; Gaz. vol. 176; p. 562.

Cummings, Clarence A., Fresno, Cal. Adjustable packing-pliers. No. 1,019,605; Mar. 5; Sp. p. 1333; Gaz. vol. 176; p. 201.

Cummings, Frank M., Byesville, Ohio. Trolley-wheel. No. 1,020,540; Mar. 19; Sp. p. 3250; Gaz. vol. 176; p. 581.

Cummings, James, *et al.* (See Ironside, Matthew C., assignor.)

Cummings, Walter C., Boston, assignor to N. Heard, trustee, Newton, Mass. Apparatus for assembling veneer barrels. No. 1,020,687; Mar. 19; Sp. p. 3578; Gaz. vol. 176; p. 630.

Cumming, Henry D., Hunt, N. Y. Crossover for rails. No. 1,021,574; Mar. 26; Sp. p. 5479; Gaz. vol. 176; p. 984.

Cunningham, Richard H., New York, N. Y. Circuit-breaker for magnetos and the like. No. 1,021,509; Mar. 26; Sp. p. 5339; Gaz. vol. 176; p. 962.

Cunynghame, Henry H. S., Nutfield, England. Hygroscope. No. 1,019,767; Mar. 12; Sp. p. 1650; Gaz. vol. 176; p. 288.

Curran, Frank P., New York, N. Y. Handle for textile bags. No. 1,020,630; Mar. 19; Sp. p. 3478; Gaz. vol. 176; p. 614.

Currin, William D., *et al.* (See Lineback, Edward E., assignor.)

Curtis, Frederic A., assignor to The Steel Mantle Light Company, Toledo, Ohio. Oil-burner. No. 1,019,306; Mar. 5; Sp. p. 676; Gaz. vol. 176; p. 105.

Curtis, James G., assignor to The E. M. Hulse Company, Columbus, Ohio. Sofa or davenport bed. No. 1,019,606; Mar. 5; Sp. p. 1335; Gaz. vol. 176; p. 202.

Curtis Publishing Company, The. (See Sargent, William P., assignor.)

Cushman, William H., assignor to The E. A. Fargo Company, Taunton, Mass. Nest of drinking-cups. No. 1,021,716; Mar. 26; Sp. p. 5730; Gaz. vol. 176; p. 1029.

Cutler-Hammer Mfg. Co., The. (See Horton, Albert J., assignor.)

Cutting, Samuel B., and E. Marshall, assignors to The Salts Textile Manufacturing Company, Bridgeport, Conn. Warp stop-motion for pile-fabric looms. No. 1,019,026; Mar. 5; Sp. p. 22; Gaz. vol. 176; p. 7.

D. T. Williams Valve Company, The. (See Swanberg, Floyd L., assignor.)

D'Ivry, Jean B. M. P. H. R., Paris, France. Electromagnetic receiving apparatus. No. 1,020,402; Mar. 19; Sp. p. 2952; Gaz. vol. 176; p. 536.

D'Urso, Vito E., New York, N. Y. Sound-amplifier for phonographs. (Reissue.) No. 13,378; Mar. 5; Sp. p. 1597; Gaz. vol. 176; p. 249.

Dade, John B., Frankfort, N. Y. Vise. No. 1,020,192; Mar. 12; Sp. p. 2534; Gaz. vol. 176; p. 430.

Daehler, Alfred H., Los Angeles, Cal. Motor-controlling mechanism for self-propelled vehicles. No. 1,020,889; Mar. 19; Sp. p. 4006; Gaz. vol. 176; p. 698.

Dahl, Harry G., assignor to Maxwell-Briscoe Motor Company, Tarrytown, N. Y. Gas-engine. No. 1,020,081; Mar. 12; Sp. p. 2281; Gaz. vol. 176; p. 393.

Dalley, Jacob W., Forestville, N. Y. Handle. No. 1,021,575; Mar. 26; Sp. p. 5480; Gaz. vol. 176; p. 984.

Dale, John C., Manhattan, Kans. Rail-brake. No. 1,021,507; Mar. 26; Sp. p. 5342; Gaz. vol. 176; p. 962.

Dale, John H., Newark, N. J. Piano-stool. No. 1,019,768; Mar. 12; Sp. p. 1653; Gaz. vol. 176; p. 288.

Dallenbach, Michael, Ridgway, Pa. Saw-gage. No. 1,019,429; Mar. 5; Sp. p. 984; Gaz. vol. 176; p. 144.

Dalton, Thomas J., Chicago, Ill. Shoe-cleaning device. No. 1,019,769; Mar. 12; Sp. p. 1654; Gaz. vol. 176; p. 288.

Dalton, Thomas J., assignor of one-half to H. F. Lundin, Chicago, Ill. Reversing mechanism. No. 1,020,193; Mar. 12; Sp. p. 2537; Gaz. vol. 176; p. 430.

Daniels, Fred H., and A. F. Backlin, Worcester, Mass., assignors to The American Steel & Wire Company of New Jersey, Hoboken, N. J. Apparatus for handling metal bars. No. 1,021,582; Mar. 26; Sp. p. 5490; Gaz. vol. 176; p. 986.

Danver, Andrew C., assignor of one-half to H. J. Flint, Providence, R. I. Packing. No. 1,019,607; Mar. 5; Sp. p. 1337; Gaz. vol. 176; p. 202.

Darby, Willard C. (See Miller, Royal R., assignor.)

Darley, John W., Jr., Baltimore, Md., assignor to H. A. Hollister, Santa Barbara, Cal. Mechanical movement. No. 1,020,267; Mar. 12; Sp. p. 2676; Gaz. vol. 176; p. 455.

Dauernheim, Augustus M., New York, N. Y. Awning. No. 1,021,508; Mar. 26; Sp. p. 5343; Gaz. vol. 176; p. 962.

Davenport, Austin D. (See Cornett and Davenport.)

Davidheiser, Frank B. (See Davidheiser, John H. and F. B.)

Davidheiser, John H. and F. B., Stowe, Pa. Apparatus for striking off brick. No. 1,021,354; Mar. 26; Sp. p. 4978; Gaz. vol. 176; p. 908.

Davidson, Alexander H., Colma, and S. Sundellus, San Francisco, Cal. Spray-burner. No. 1,020,055; Mar. 19; Sp. p. 4139; Gaz. vol. 176; p. 721.

Davidson, Charles G., Waco, Tex. Cable clip or hanger. No. 1,020,130; Mar. 12; Sp. p. 2397; Gaz. vol. 176; p. 409.

Davidson, Charles J., Hackensack, N. J., assignor to American Telephone and Telegraph Company. Instrument for testing batteries. No. 1,020,541; Mar. 19; Sp. p. 3251; Gaz. vol. 176; p. 582.

Davis, Burt L., *et al.* (See Tank, Henry P., assignor.)

Davis, Charles W., Edgeworth, assignor to Standard Underground Cable Company, Pittsburgh, Pa. Terminal structure. No. 1,021,453; Mar. 26; Sp. p. 5218; Gaz. vol. 176; p. 943.

Davis, Edwin F., Corning, N. Y. Track construction. No. 1,019,307; Mar. 5; Sp. p. 678; Gaz. vol. 176; p. 106.

Davis, Harry. (See Ward, Frederick G., assignor.)

Davis, James B., assignor of one-half to J. T. Mann, Brady, Tex. Neck-yoke or tongue attachment. No. 1,020,268; Mar. 12; Sp. p. 2680; Gaz. vol. 176; p. 455.

Davis, James B., Jr. (See Osborne, John W., assignor.)

Davis, Otis M. (See Bott and Davis.)

Davis, Thomas E., Auburn, N. Y. Serving-table. No. 1,021,454; Mar. 26; Sp. p. 5219; Gaz. vol. 176; p. 943.

Davis, William F., Kansas City, Kans. Road-binder-mixing machine. No. 1,020,640; Mar. 19; Sp. p. 3479; Gaz. vol. 176; p. 614.

Dawson, Robert C., McKeesport, Pa. Carbureting air. No. 1,019,430; Mar. 5; Sp. p. 986; Gaz. vol. 176; p. 144.

Dawson, Thomas R., Barnesboro, Pa. Locomotive. No. 1,021,455; Mar. 26; Sp. p. 5220; Gaz. vol. 176; p. 944.

Dawson, William P., Kamloops, British Columbia, Canada. Stanchion. No. 1,021,576; Mar. 26; Sp. p. 5481; Gaz. vol. 176; p. 984.

Day, George H., Southbridge, Mass., assignor to American Optical Company. Former and spindle for lens-cutting machines. No. 1,019,308; Mar. 5; Sp. p. 679; Gaz. vol. 176; p. 106.

Dayton Electrical Manufacturing Co. (See Apple, Vincent G., assignor.)

De Bevoise, Walter W., Brooklyn, N. Y. Edible cake and making same. No. 1,020,481; Mar. 19; Sp. p. 3119; Gaz. vol. 176; p. 562.

De Boos, Charles E., Temora, New South Wales, Australia. Pneumatic hub. No. 1,019,591; Mar. 5; Sp. p. 1309; Gaz. vol. 176; p. 197.

De Fazi, Fulvio, assignor of one-half to W. D. Blossfield, Providence, R. I. Gas-engine piston. No. 1,021,577; Mar. 26; Sp. p. 5484; Gaz. vol. 176; p. 985.

De Laney, Leo D., and M. A. Holtzbauer, Belmond, Iowa. Milking-machine. No. 1,021,578; Mar. 26; Sp. p. 5485; Gaz. vol. 176; p. 985.

De Neen, Albert W., St. Joseph, Mo. Refrigerator. No. 1,020,482; Mar. 19; Sp. p. 3120; Gaz. vol. 176; p. 563.

De Pass, Addison R., Columbia, S. C. Means for protecting dental work. No. 1,019,733; Mar. 5; Sp. p. 1571; Gaz. vol. 176; p. 244.

Dean Electric Company, The. (See Manson, Ray H., assignor.)

Dean, Warren E., Carmangay, Alberta, Canada. Staple. No. 1,021,664; Mar. 26; Sp. p. 5629; Gaz. vol. 176; p. 1013.

Deaner, Henry S., Sr., Philadelphia, Pa. Hat-pin holder and sheath. No. 1,020,131; Mar. 12; Sp. p. 2398; Gaz. vol. 176; p. 409.

Deatherage, Samuel A., Richmond, Ky. Tire. No. 1,020,804; Mar. 19; Sp. p. 3827; Gaz. vol. 176; p. 670.

Debes, Victor A., Wilkinsburg, assignor, by mesne assignments, to The Colonial Trust Company, trustee, Pittsburgh, Pa. Thrust-block. No. 1,020,745; Mar. 19; Sp. p. 3715; Gaz. vol. 176; p. 651.

Deckard, Isaac L. (See Deckard, John C. and I. L.)

Deckard, John C. and I. L., Vincennes, Ind. Spring-wheel. No. 1,021,355; Mar. 26; Sp. p. 4981; Gaz. vol. 176; p. 909.

Deere & Company. (See Kiel, John C., assignor.)

Deere & Company. (See Love, Robert, assignor.)

Deere & Mansur Company. (See White, Charles E., assignor.)

Degener, Gustave O., assignor to Underwood Computing Machine Company, New York, N. Y. Combined type-writing and computing machine. No. 1,020,082; Mar. 12; Sp. p. 2283; Gaz. vol. 176; p. 393.

Dehler, Albert S., Minneapolis, assignor to Mathews Gravity Carrier Company, St. Paul, Minn. Elevator. No. 1,020,746; Mar. 19; Sp. p. 3716; Gaz. vol. 176; p. 652.

Deister Concentrator Company, The. (See Deister, Emil, assignor.)

Deister, Emil, Fort Wayne, Ind., assignor to The Deister Concentrator Company. Ore-concentrator. No. 1,019,884; Mar. 12; Sp. p. 1874; Gaz. vol. 176; p. 327.

Delahanty, John J. (See Smith, Martin W., assignor.)

Delius, George, and C. P. Tatro, Seattle, Wash. Protecting ships from barnacles. No. 1,021,734; Mar. 26; Sp. p. 5770; Gaz. vol. 176; p. 1036.

Dempster, John T., Schenectady, N. Y., assignor to General Electric Company. Oscillograph. No. 1,019,432; Mar. 5; Sp. p. 989; Gaz. vol. 176; p. 145.

Dempster, John T., Schenectady, N. Y., assignor to General Electric Company. Vibrating rectifier. No. 1,019,608; Mar. 5; Sp. p. 1338; Gaz. vol. 176; p. 202.

Dempster, John T. H., Schenectady, N. Y., assignor to General Electric Company. Decarburized silicon and making the same. No. 1,019,431; Mar. 5; Sp. p. 988; Gaz. vol. 176; p. 145.

Denham, Dan F., Laurel, Miss. Piston-lift. No. 1,019,433; Mar. 5; Sp. p. 993; Gaz. vol. 176; p. 145.

Denis, Hector. (See Dubosc, Luttringer, and Denis.)

Denny, John W., Mapimi, Mexico. Wave-motor. No. 1,019,027; Mar. 5; Sp. p. 25; Gaz. vol. 176; p. 7.

Derdeyn, Hector, Jacksonville, Ill. Distributing apparatus. No. 1,019,609; Mar. 5; Sp. p. 1341; Gaz. vol. 176; p. 203.

Desoer, Armand, Ougree, Belgium. Metal sheeting-pile. No. 1,019,227; Mar. 5; Sp. p. 485; Gaz. vol. 176; p. 78.

Detmers, John J. (See Menke, George E., assignor.)

Detroit Typomarker Company. (See Scott, Burton W., assignor.)

Dettman, Fred, West Dundee, Ill. Starting mechanism for hydrocarbon-engines. No. 1,021,967; Mar. 26; Sp. p. 4179; Gaz. vol. 176; p. 777.

Deuel, Harry A., Pueblo, Colo. Machine for making wire-netting. No. 1,020,805; Mar. 19; Sp. p. 3828; Gaz. vol. 176; p. 671.

Deutsch, Mathias P. (See McGowan and Michler, assignors.)

Deutsche Telephonwerke G. m. b. H. (See Neubold, Erwin, assignor.)

Deutschmann, Adolf M., Eltville, Germany. Window-frame. No. 1,021,181; Mar. 26; Sp. p. 4619; Gaz. vol. 176; p. 847.

Devine, Walter J., Monument, Kans. Churn. No. 1,020,806; Mar. 19; Sp. p. 3832; Gaz. vol. 176; p. 671.

Devlin, Bernard, Jersey City, N. J. Safety gas-cock. No. 1,020,807; Mar. 19; Sp. p. 3833; Gaz. vol. 176; p. 671.

Dewald, Edward A., Leetsdale, and A. Rosenson, Ambridge, Pa. Mechanical movement. No. 1,020,068; Mar. 26; Sp. p. 4181; Gaz. vol. 176; p. 777.

Diamond Expansion Bolt Company. (See Pauli, Carl, assignor.)

Dickie, Charles, F. Lambert, and R. Stables, Kimberley, South Africa. Safety apparatus for supporting mine-cages or the like. No. 1,020,483; Mar. 19; Sp. p. 3122; Gaz. vol. 176; p. 563.

Dickinson, Edgar D. (See Junggren and Dickinson.)

Diener, Frank S. (See Bolton, Daniel G., assignor.)

Dietrich, Jerome C., Galt, Ontario, Canada. Hose-supporter. No. 1,020,132; Mar. 12; Sp. p. 2399; Gaz. vol. 176; p. 409.

Dietz, Charles F. (See Dietz, Valentine and C. F.)

Dietz, Valentine, Jr., Yonkers, and C. F. Dietz, New York, N. Y. Mausoleum construction. No. 1,020,747; Mar. 19; Sp. p. 3720; Gaz. vol. 176; p. 652.

Dilworth, John C. (See Handloser and Dilworth.)

Dilworth, Porter & Company. (See Handloser and Dilworth, assignors.)

Dimock, Charles H., Windsor, Nova Scotia, Canada. Switch. No. 1,021,665; Mar. 26; Sp. p. 5630; Gaz. vol. 176; p. 1013.

Discher, William. (See Holland and Discher.)

Diss, Louis P., Ilion, N. Y. Type-writer escapement. No. 1,021,182; Mar. 26; Sp. p. 4620; Gaz. vol. 176; p. 848.

Dissel, Theodore A., Boston, Mass. Cable-support. No. 1,020,969; Mar. 26; Sp. p. 4184; Gaz. vol. 176; p. 778.

Dittmer, Edward J., Durbin, N. D. Railway-spike. No. 1,021,356; Mar. 26; Sp. p. 4983; Gaz. vol. 176; p. 909.

Dixon, George M., *et al.* (See Schulz, Wilhelm, assignor.)

Dixon, Henry H., *et al.* (See Schulz, Wilhelm, assignor.)

Dobbins, Edward L., Jewell, Kans. Building-block. No. 1,019,228; Mar. 5; Sp. p. 486; Gaz. vol. 176; p. 78.

Dobkevitch, Gaëtan. (See Blondel and Dobkevitch.)

Dobson, William J. M., New York, N. Y. Belt-clamp. No. 1,020,748; Mar. 19; Sp. p. 3722; Gaz. vol. 176; p. 653.

Dodds, Joseph, Glasgow, Scotland. Rotary tippler for use in discharging coal or other mineral from hutches, corves, or the like. No. 1,020,133; Mar. 12; Sp. p. 2400; Gaz. vol. 176; p. 410.

Dodge, Omenzo G., Washington, D. C. Combination-lock. No. 1,019,136; Mar. 5; Sp. p. 286; Gaz. vol. 176; p. 45.

Dodge, Pickering, Falls Church, Va. Pipe-tamper, &c. No. 1,019,028; Mar. 5; Sp. p. 27; Gaz. vol. 176; p. 8.

Domnick, Otto, Aken, Germany. Protective envelop for glass receptacles. No. 1,020,269; Mar. 12; Sp. p. 2681; Gaz. vol. 176; p. 455.

Domoto, Takanoshin, San Francisco, Cal. Can-lining. No. 1,020,134; Mar. 12; Sp. p. 2403; Gaz. vol. 176; p. 410.

Donald, Mary, New York, N. Y. Veil. No. 1,020,083; Mar. 12; Sp. p. 2295; Gaz. vol. 176; p. 393.

Donaldson, Harry A. (See Heising and Donaldson.)

Doner, Martin J., assignor of one-half to H. A. Peters, Chicago, Ill. Automatic sign. No. 1,019,770; Mar. 12; Sp. p. 1656; Gaz. vol. 176; p. 289.

Donnelly, Joseph E. and T. F., Cleveland, Ohio. Fire-doors for elevator-shafts. No. 1,021,304; Mar. 26; Sp. p. 4877; Gaz. vol. 176; p. 890.

Donnelly, Thomas F. (See Donnelly, Joseph E. and T. F.)

Donnelly, William T., Brooklyn, N. Y. Floating dry-dock. No. 1,019,434; Mar. 5; Sp. p. 995; Gaz. vol. 176; p. 145.

Donnelly, William T., Brooklyn, N. Y. Dredging apparatus. No. 1,019,610; Mar. 5; Sp. p. 1342; Gaz. vol. 176; p. 203.

Donnelly, William T., Brooklyn, N. Y. Sectional floating dry-dock. No. 1,019,611; Mar. 5; Sp. p. 1344; Gaz. vol. 176; p. 204.

Donoghue, John J., Chicago, Ill. Chain pipe-wrench. No. 1,021,357; Mar. 26; Sp. p. 4983; Gaz. vol. 176; p. 910.

Doolittle, Tracy W., C. S. Winsor, and C. Vergason, Binghamton, N. Y. Adjustable mounted roller. No. 1,021,579; Mar. 26; Sp. p. 5486; Gaz. vol. 176; p. 986.

Doran, Robert L., Chicago, Ill. Hydrocarbon-lamp. No. 1,019,229; Mar. 5; Sp. p. 487; Gaz. vol. 176; p. 78.

Dorffel, George, Oakland, Cal. Sleeper. No. 1,021,666; Mar. 26; Sp. p. 5633; Gaz. vol. 176; p. 1013.

Dorgeloh, George H., Schenectady, N. Y., assignor to General Electric Company. Starting device for single-phase motors. No. 1,019,435; Mar. 5; Sp. p. 997; Gaz. vol. 176; p. 146.

Dorgeloh, George H., Schenectady, N. Y., assignor to General Electric Company. Controlling device for electric motors. No. 1,019,436; Mar. 5; Sp. p. 999; Gaz. vol. 176; p. 146.

Dorsey, Charles J., Baltimore, Md. Convertible toy vehicle. No. 1,020,027; Mar. 12; Sp. p. 2173; Gaz. vol. 176; p. 374.

Dosch, Oliver L., Elizabeth, N. J., assignor to The Singer Manufacturing Company. Polishing-machine. No. 1,020,946; Mar. 19; Sp. p. 4115; Gaz. vol. 176; p. 718.

Dossert, John J. (See Hinds and Dossert.)

Doty, Charles E., Waynesburg, Pa. Rail chair and joint. No. 1,021,580; Mar. 26; Sp. p. 5487; Gaz. vol. 176; p. 986.

Doucet, Edward, Manchester, N. H. Hat-pin guard. No. 1,020,890; Mar. 19; Sp. p. 4007; Gaz. vol. 176; p. 699.

Doudney, Raymond P., Faringdon, England. Carbureting apparatus. No. 1,019,309; Mar. 5; Sp. p. 681; Gaz. vol. 176; p. 106.

Dougherty, Everett M., Escanaba, Mich. Display apparatus. No. 1,021,358; Mar. 26; Sp. p. 4985; Gaz. vol. 176; p. 910.

Dover, Hannah M. (See Starn, George E., assignor.)

Dowd Knife Works. (See Dowd, Robert I., assignor.)

Dowd, Robert I., assignor to Dowd Knife Works, Beloit, Wis. Beating-engine. No. 1,019,612; Mar. 5; Sp. p. 1346; Gaz. vol. 176; p. 204.

Dowe, Arthur W., Camden, N. J., assignor to Miller Lock Co., Philadelphia, Pa. Padlock. No. 1,020,891; Mar. 19; Sp. p. 4008; Gaz. vol. 176; p. 699.

Downs, James W., Alameda, Cal. Window-ventilator. No. 1,020,970; Mar. 26; Sp. p. 4185; Gaz. vol. 176; p. 778.

Downs, William R. (See Allen, Ernest J., assignor.)

Doyle, James, assignor of one-twelfth to D. L. Peller, one-twelfth to J. Moore, and one-twelfth to A. Jenkins, Pittsburgh, Pa. Automatic serving system. No. 1,019,137; Mar. 5; Sp. p. 290; Gaz. vol. 176; p. 45.

Doyle, James S. (See Hedley and Doyle.)

Draper, Clare H., assignor to C. F. Roper & Company, Hopedale, Mass. Screw-propeller. No. 1,019,437; Mar. 5; Sp. p. 1002; Gaz. vol. 176; p. 147.

Draper Company. (See Lussier, Henry, assignor.)

Draper Company. (See Rhoades, Alonzo E., assignor.)

Draper Company. (See Stimpson, Edward S., assignor.)

Draper, Francis W., assignor to The Starr Piano Company, Richmond, Ind. Selector for automatic players. No. 1,021,305; Mar. 26; Sp. p. 4878; Gaz. vol. 176; p. 891.

Dreier, Dominick, Springdale, Mont. Rotary pump. No. 1,019,613; Mar. 5; Sp. p. 1347; Gaz. vol. 176; p. 204.

Droegemeier, Ernest O., Ellsworth, Kans. Elevator-hood. No. 1,020,542; Mar. 19; Sp. p. 3253; Gaz. vol. 176; p. 582.

Dronsfield, Albert J., Providence, R. I. Pressure-controlling device. No. 1,020,641; Mar. 19; Sp. p. 3482; Gaz. vol. 176; p. 615.

Drown, Frank E., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Sole-holding device. No. 1,020,135; Mar. 12; Sp. p. 2404; Gaz. vol. 176; p. 410.

Drummond, David D., Oglesby, Ill. Screw conveyer. No. 1,019,438; Mar. 5; Sp. p. 1005; Gaz. vol. 176; p. 147.

Drummond, Franz S., Blaine, Wash. Gas-controller and safety-valve. No. 1,021,581; Mar. 26; Sp. p. 5489; Gaz. vol. 176; p. 986.

Dryfoos, Nathan I., Cleveland, Ohio. Soldering-iron. No. 1,021,971; Mar. 26; Sp. p. 4186; Gaz. vol. 176; p. 778.

Dubosc, Olivier L. A. A. D. Luttringer, and H. Denis, assignors to Société Le Camphre, Paris, France. Manufacture of formates. No. 1,019,230; Mar. 5; Sp. p. 489; Gaz. vol. 176; p. 78.

Duboux, Alois, Grandvaux, and C. H. Rapin, Lalex, near Grandvaux, Switzerland. Chemical product for preserving eggs. No. 1,019,614; Mar. 5; Sp. p. 1349; Gaz. vol. 176; p. 205.

Dudley, Dana, Wakefield, Mass. Lamp-chimney holder. No. 1,020,543; Mar. 19; Sp. p. 3253; Gaz. vol. 176; p. 582.

Dudley, George W., Staunton, Va. Recording and adding machine. No. 1,019,231; Mar. 5; Sp. p. 490; Gaz. vol. 176; p. 78.

Duff, R. C., *et al.* (See Schulz, Wilhelm, assignor.)

Duffie, John J., San Francisco, Cal. Vacuum-cleaner. No. 1,021,667; Mar. 26; Sp. p. 5635; Gaz. vol. 176; p. 1014.

Dufwa, Frederick W., Mexico, Mexico. Bottle and stopper. No. 1,020,808; Mar. 19; Sp. p. 3835; Gaz. vol. 176; p. 672.

Dullum, John P., Wright, Minn. Rail-joint. No. 1,021,359; Mar. 26; Sp. p. 4987; Gaz. vol. 176; p. 910.

Duncan, Charles E., Sault Ste. Marie, Ontario, Canada, and J. Fawell, Pittsburgh, Pa. Manufacture of structural material. No. 1,021,137; Mar. 26; Sp. p. 4510; Gaz. vol. 176; p. 833.

Duncan, Charles P., *et al.* (See Black, John P., assignor.)

Dunham, George H. (See Munger, James Y., assignor.)

Dunlap, Charles, Edgewood, Cal. Lifting-jack. No. 1,021,138; Mar. 26; Sp. p. 4520; Gaz. vol. 176; p. 833.

Dunn, Alfred W., assignor to William Eastwood & Son Company, Rochester, N. Y. Shoe-forming machine. No. 1,019,310; Mar. 5; Sp. p. 683; Gaz. vol. 176; p. 107.

Dunn, James F., Salt Lake City, Utah. Locomotive ash-pan. No. 1,021,668; Mar. 26; Sp. p. 5636; Gaz. vol. 176; p. 1014.

Dunn, John B., Woonsocket, R. I. Cloth-finishing machine. No. 1,019,615; Mar. 5; Sp. p. 1349; Gaz. vol. 176; p. 205.

Dunn, Royal J., Port Huron, Mich. Carbureter. No. 1,020,270; Mar. 12; Sp. p. 2682; Gaz. vol. 176; p. 455.

Dunning, Edward, St. Louis, Mo. Roundabout. No. 1,020,084; Mar. 12; Sp. p. 2296; Gaz. vol. 176; p. 393.

Dunning, Parker, Schenectady, N. Y., assignor to General Electric Company. Motor-controlling device. No. 1,019,439; Mar. 5; Sp. p. 1008; Gaz. vol. 176; p. 147.

Dunsmore, Nathan. (See Harris, Samuel L., assignor.)

Duplicator Manufacturing Company. (See Flanigan, John J., assignor.)

Dupré, Wilfred, Worcester, Mass. Combined scrubber and mop. No. 1,020,809; Mar. 19; Sp. p. 3836; Gaz. vol. 176; p. 672.

Durbin, James F. and V. S., Fort Scott, Kans. Railway-car coupling. No. 1,019,138; Mar. 5; Sp. p. 296; Gaz. vol. 176; p. 46.

Durbin, Votaw S. (See Durbin, James F. and V. S.)

Duryea, Otho C. (See White and Duryea.)

Düsterloh, Gustav, Sprockhövel, Germany. Aerial vessel. No. 1,020,484; Mar. 19; Sp. p. 3122; Gaz. vol. 176; p. 563.

Duysens, Tossanus, Maastricht, Netherlands. Pneumatic hub for vehicle-wheels. No. 1,021,240; Mar. 26; Sp. p. 4747; Gaz. vol. 176; p. 867.

Dwight, Arthur S., New York, N. Y., assignor, by mesne assignments, to Dwight and Lloyd Metallurgical Company, Jersey City, N. J. Apparatus for roasting and sintering ores. No. 1,021,509; Mar. 26; Sp. p. 5349; Gaz. vol. 176; p. 963.

Dwight, Arthur S., and R. L. Lloyd, New York, N. Y., assignors, by mesne assignments, to Dwight & Lloyd Metallurgical Company, Jersey City, N. J. Metalliferous ore product. No. 1,020,345; Mar. 12; Sp. p. 2824; Gaz. vol. 176; p. 479.

Dwight and Lloyd Metallurgical Company. (See Dwight, Arthur S., assignor.)

Dwight & Lloyd Metallurgical Company. (See Dwight and Lloyd, assignors.)

Dyer, Frank L. (See Aylsworth, Jonas W., assignor.)

Dymond, John, assignor to L. S. McMurray, Toronto, Ontario, Canada. Machine for forming crimped pipe-elbows. No. 1,020,028; Mar. 12; Sp. p. 2175; Gaz. vol. 176; p. 375.

Dzierwa, John, St. Louis, Mo. Drawing instrument. No. 1,021,583; Mar. 26; Sp. p. 5493; Gaz. vol. 176; p. 987.

E. A. Fargo Company, The. (See Cushman, William H., assignor.)

E. M. Hulse Company, The. (See Curtis, James G., assignor.)

Earles, Phebe A., Roosevelt, Okla. Windrow attachment for mowing-machines. No. 1,020,810; Mar. 19; Sp. p. 3838; Gaz. vol. 176; p. 672.

Eaton, William G. (See MacFarland and Eaton.)

Ebbs, Robert E., and J. A. McCuller, Gurdon, Ark. Nut-lock. No. 1,020,386; Mar. 12; Sp. p. 2908; Gaz. vol. 176; p. 492.

Eberley, Frank L., *et al.* (See Eberley, George W., assignor.)

Eberley, George W., assignor of one-third to F. L. Eberley, Whitesboro, and one-third to Mohawk Valley Cap Factory, Utica, N. Y. Spacer. No. 1,019,139; Mar. 5; Sp. p. 298; Gaz. vol. 176; p. 40.

Eccleston, Lee and R. Gregson, Mont. Trap. No. 1,020,029; Mar. 12; Sp. p. 2180; Gaz. vol. 176; p. 375.

Eccleston, Ross. (See Eccleston, Lee and R.)

Echard, Andrew C., and G. S. Alderson, Alderson, W. Va. Railway-signal. No. 1,019,885; Mar. 12; Sp. p. 1877; Gaz. vol. 176; p. 328.

Echols, Francis G., assignor to Pratt & Whitney Company, Hartford, Conn. Drill and socket construction. No. 1,020,544; Mar. 19; Sp. p. 3254; Gaz. vol. 176; p. 582.

Eckert, Fred C., Waukesha, Wis. Key. No. 1,020,892; Mar. 19; Sp. p. 4010; Gaz. vol. 176; p. 699.

Eder, Frank J., St. Paul, Minn. Mail-collector. No. 1,019,029; Mar. 5; Sp. p. 28; Gaz. vol. 176; p. 8.

Edison, Thomas A., Llewellyn Park, West Orange, N. J. Crushing and separating fine materials. (Reissue.) No. 13,382; Mar. 12; Sp. p. 2923; Gaz. vol. 176; p. 495.

Edison, Thomas A., Llewellyn Park, Orange, assignor to Thomas A. Edison, Incorporated, West Orange, N. J. Phonograph-reproducer. No. 1,019,440; Mar. 5; Sp. p. 1010; Gaz. vol. 176; p. 148.

Edison, Thomas A., Llewellyn Park, assignor to Thomas A. Edison, Incorporated, West Orange, N. J. Sound-recording apparatus. No. 1,019,441; Mar. 5; Sp. p. 1011; Gaz. vol. 176; p. 148.

Edison, Thomas A., Llewellyn Park, assignor to Thomas A. Edison, Incorporated, West Orange, N. J. Phonograph-reproducer. No. 1,020,485; Mar. 19; Sp. p. 3125; Gaz. vol. 176; p. 563.

Edmonds, Frank M., and R. J. Goodnow, Boston, Mass.; said Edmonds assignor to said Goodnow. Gasolene-measuring rule. No. 1,019,442; Mar. 5; Sp. p. 1014; Gaz. vol. 176; p. 148.

Edmonds, Walter D., *et al.* (See Ladoff, Isador, assignor.)

Edmundson, Isaac M., McKeesport, Pa. Pipe-wrench. No. 1,021,584; Mar. 26; Sp. p. 5495; Gaz. vol. 176; p. 987.

Edsall, William H., Wallingford, Conn. Curtain-rod bracket. No. 1,019,232; Mar. 5; Sp. p. 501; Gaz. vol. 176; p. 79.

Edström, Arvid E., and O. B. Andersson, assignors to A. Edström & Co., Umea, Sweden. Combined folding bedstead and chair. No. 1,021,360; Mar. 26; Sp. p. 4988; Gaz. vol. 176; p. 910.

Edstrom, Henrik H., Pearl River, N. Y. Tap-wrench. No. 1,020,598; Mar. 19; Sp. p. 3384; Gaz. vol. 176; p. 601.

Edwards, Herbert A., London, England. Manufacture of cased metal pins for artificial teeth. No. 1,019,233; Mar. 5; Sp. p. 502; Gaz. vol. 176; p. 79.

Egbert, Robert R. (See Opits and Egbert.)

Elane, Halvor O., San Diego, Cal. Aeroplane. No. 1,021,040; Mar. 26; Sp. p. 4321; Gaz. vol. 176; p. 802.

Elck, Otto, Baltimore, Md. Roller conveyer. No. 1,019,030; Mar. 5; Sp. p. 30; Gaz. vol. 176; p. 9.

Elliertsen, Lucien C., Paris, France. Rheostat. No. 1,019,616; Mar. 5; Sp. p. 1351; Gaz. vol. 176; p. 205.

Ekorenrud, August O., Seattle, Wash. Stock and die. No. 1,019,284; Mar. 5; Sp. p. 502; Gaz. vol. 176; p. 79.

Elder, Donald, Onehunga, New Zealand. Wire-wrapping machine. No. 1,020,599; Mar. 19; Sp. p. 3387; Gaz. vol. 176; p. 601.

Elder, William S., assignor to J. Hirsh, Philadelphia, Pa. Union suit. No. 1,019,710; Mar. 5; Sp. p. 1523; Gaz. vol. 176; p. 236.

Eldridge, Hilliary. (See Rockey and Eldridge.)

Electric Bank Protection Company. (See Jurnick, Maximilian F., assignor.)

Electric Goods Manufacturing Company. (See Lincoln, Edwin S., assignor.)

Electric Heat Regulator Company. (See Kersteter, Joel C., assignor.)

Electric Service Supplies Company, The. (See Cravens, George W., assignor.)

Elevator Supply & Repair Company. (See Schenck, Charles, assignor.)

Elgin National Watch Company. (See Malvern, Lewis K., assignor.)

Elkofer, Martin, Leipzig, Germany. Feed-water regulator. No. 1,020,642; Mar. 19; Sp. p. 3484; Gaz. vol. 176; p. 615.

Elliott, Gale S., San Marcial, N. Mex. Toy. No. 1,020,030; Mar. 12; Sp. p. 2181; Gaz. vol. 176; p. 375.

Elliott, Richard P., Boston, Mass. Carbid-feed acetylene-generator. No. 1,019,140; Mar. 5; Sp. p. 302; Gaz. vol. 176; p. 46.

Elliott, Thomas H., Vancouver, British Columbia, Canada. Fire-escape. No. 1,021,361; Mar. 26; Sp. p. 4090; Gaz. vol. 176; p. 911.

Elliott, William S., E. R. Mills, and H. B. Holt, assignors to Liberty Manufacturing Company, Pittsburgh, Pa. Rotary motor. No. 1,019,771; Mar. 12; Sp. p. 1659; Gaz. vol. 176; p. 289.

Ellis, Carleton, Larchmont, N. Y., assignor, by mesne assignments, to F. H. Bennett Biscuit Company. Feeding-stuff. No. 1,019,734; Mar. 5; Sp. p. 1573; Gaz. vol. 176; p. 245.

Ellis, Carleton, Montclair, N. J., assignor to Copper Oil Products Company, New York, N. Y. Preserved wood and making same. No. 1,020,643; Mar. 19; Sp. p. 3485; Gaz. vol. 176; p. 616.

Ellis, Frank H., Chicago, Ill. Antislipping device or heel-protector for shoes. No. 1,020,085; Mar. 12; Sp. p. 2298; Gaz. vol. 176; p. 394.

Elm, Elmer J., Funk, assignor of one-half to G. A. Nelson, Axtell, Nebr. Buckle-guard. No. 1,020,811; Mar. 19; Sp. p. 3839; Gaz. vol. 176; p. 673.

Elsas, Martin, assignor to Liberty Vending Co., New York, N. Y. Vending-machine. No. 1,020,403; Mar. 19; Sp. p. 2954; Gaz. vol. 176; p. 536.

Embree, Clarence J., Tacoma, Wash. Seat and carrier for motor-cycles. No. 1,020,486; Mar. 19; Sp. p. 3127; Gaz. vol. 176; p. 564.

Emerson Typewriter Co., The. (See Stieg, August, assignor.)

Emerson Typewriter Company. (See Pfau, Max, assignor.)

Emery, Edwin A., Cripple Creek, assignor to The Emery Pneumatic Lubricator Company, Denver, Colo. Lubricating pneumatic machinery. No. 1,019,772; Mar. 12; Sp. p. 1662; Gaz. vol. 176; p. 289.

Emery, Edwin A., Denver, Colo., assignor to The Emery Pneumatic Lubricator Company. Solid lubricating compound for compressed-air apparatus. No. 1,020,893; Mar. 19; Sp. p. 4011; Gaz. vol. 176; p. 700.

Emery, John E., Winchester, and D. E. Hunter, Cambridge, assignors, by mesne assignments, to John S. Emery & Company, Inc., Boston, Mass. Machine for slitting the shells of nuts. No. 1,019,031; Mar. 5; Sp. p. 32; Gaz. vol. 176; p. 9.

Emery Pneumatic Lubricator Company, The. (See Emery, Edwin A., assignor.)

Engel, Arthur F., New York, N. Y., assignor to The Oliver Typewriter Company, Chicago, Ill. Ribbon-throw mechanism for type-writing machines. No. 1,020,404; Mar. 19; Sp. p. 2957; Gaz. vol. 176; p. 537.

Engel, August, assignor to Milwaukee Brass Manufacturing Company, Milwaukee, Wis. Bubble-cup nozzle. No. 1,020,405; Mar. 19; Sp. p. 2959; Gaz. vol. 176; p. 537.

Engelsmann, August, Charlottenburg, Germany. Apparatus for showing kinematographic pictures. No. 1,019,141; Mar. 5; Sp. p. 305; Gaz. vol. 176; p. 47.

Engineer Company, The. (See Quinn, John C., assignor.)

Engle, Matthew H., San Antonio, Tex. Attachment for windmills. No. 1,019,142; Mar. 5; Sp. p. 306; Gaz. vol. 176; p. 47.

Enright, John A., Columbus, Ohio. Attachment for shoe-heels. No. 1,021,510; Mar. 26; Sp. p. 5358; Gaz. vol. 176; p. 963.

Eppenstein, Otto, assignor to Firm of C. Zeiss, Jena, Germany. Coincidence-telemeter. No. 1,021,306; Mar. 26; Sp. p. 4880; Gaz. vol. 176; p. 891.

Eppler, Andrew, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Welt-preparing machine. No. 1,020,846; Mar. 12; Sp. p. 2827; Gaz. vol. 176; p. 479.

Eppler, Andrew, Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Shoe-turning machine. No. 1,020,812; Mar. 19; Sp. p. 3840; Gaz. vol. 176; p. 673.

Erb, Ludwig G. B., *et al.* (See Uebelmesser, Charles R., assignor.)

Erickson, Edwin, near Chancellor, S. D., and T. Erickson, Judith Gap, Mont. Rotary engine. No. 1,020,271; Mar. 12; Sp. p. 2683; Gaz. vol. 176; p. 456.

Erickson, Theodore. (See Erickson, Edwin and T.)

Ernst, Charles A., Schenectady, N. Y., assignor to General Electric Company. Electrode. No. 1,019,443; Mar. 5; Sp. p. 1015; Gaz. vol. 176; p. 149.

Erskine, John H., Charleston, W. Va. Stairway-ladder. No. 1,019,444; Mar. 5; Sp. p. 1016; Gaz. vol. 176; p. 149.

Esbelman, Charles G., Franklin, Pa. Valve. No. 1,021,511; Mar. 26; Sp. p. 5354; Gaz. vol. 176; p. 964.

Eslon, Victor E., assignor of one-half to C. Olsen, Tacoma, Wash. Mechanism for diffusing light. No. 1,020,813; Mar. 19; Sp. p. 3842; Gaz. vol. 176; p. 673.

Euchenhofer, Alexander, Dayton, Ohio. Garden implement. No. 1,019,773; Mar. 12; Sp. p. 1664; Gaz. vol. 176; p. 290.

Eureka Mower Company. (See Gilroy, William E., assignor.)

Eustis, George P., Washington, D. C. Rail-joint. No. 1,020,972; Mar. 26; Sp. p. 4188; Gaz. vol. 176; p. 779.

Euterpean Duplicator Company. (See Myers, Edgar W., assignor.)

Evans, Charles J., Wichita, Kans. Permutation-padlock. No. 1,021,456; Mar. 26; Sp. p. 5223; Gaz. vol. 176; p. 944.

Evans, Powell, Philadelphia, Pa. Motor-vehicle frame. No. 1,021,512; Mar. 26; Sp. p. 5356; Gaz. vol. 176; p. 964.

Everett, Otis W., Worcester, Mass. Roll for roller-skates. No. 1,021,362; Mar. 26; Sp. p. 4992; Gaz. vol. 176; p. 911.

Everett, Otis W., assignor to The Samuel Winslow Skate M'f'g. Co., Worcester, Mass. Roller-skate. No. 1,021,735; Mar. 26; Sp. p. 5771; Gaz. vol. 176; p. 1036.

Everhart, Charles O., assignor of one-half to A. Miles, Warren, Pa. Fluid-pressure regulator. No. 1,019,617; Mar. 5; Sp. p. 1353; Gaz. vol. 176; p. 205.

Ewert, John S., Dalton, S. D. Hoisting apparatus. No. 1,021,585; Mar. 26; Sp. p. 5495; Gaz. vol. 176; p. 987.

Eyles, Anton G., Cedar Rapids, Iowa. Chair. No. 1,020,086; Mar. 12; Sp. p. 2300; Gaz. vol. 176; p. 394.

Eyles, Anton G., assignor to A. G. Eyles Chair Company, Cedar Rapids, Iowa. Couch-bed, &c. No. 1,021,091; Mar. 26; Sp. p. 4425; Gaz. vol. 176; p. 819.

Ezzell, John M., Ardmore, Okla. Steel tape. No. 1,019,618; Mar. 5; Sp. p. 1354; Gaz. vol. 176; p. 206.

F. H. Bennett Biscuit Company. (See Ellis, Carleton, assignor.)

F. H. Smith Manufacturing Company. (See Sanseman, David C., assignor.)

F. N. Burt Company, The. (See Palmer, Lyndon C., assignor.)

Fabrowicz, Peter, Scranton, Pa. Trolley-harp. No. 1,019,619; Mar. 5; Sp. p. 1355; Gaz. vol. 176; p. 206.

Fahndrich, Edmund. (See Fahndrich, Francis X., assignor.)

Fahndrich, Francis X., assignor to E. Fahndrich, Youngstown, Ohio. Bottle-puzzle. No. 1,020,031; Mar. 12; Sp. p. 2183; Gaz. vol. 176; p. 376.

Fairchild, B. T., *et al.* (See Johnson, Edward W., assignor.)

Fallows, Edward H. (See Maloy, William H., assignor.)

Fandrey, Albert J., Indianapolis, Ind. Dust-arrester for radiators. No. 1,019,143; Mar. 5; Sp. p. 307; Gaz. vol. 176; p. 48.

Farbenfabriken vorm. Friedr. Bayer & Co. (See Berendes, Rudolph, assignor.)

Farbenfabriken vorm. Friedr. Bayer & Co. (See Gunther, Oscar, assignor.)

Farbenfabriken vorm. Friedr. Bayer & Co. (See Hausdörfer and Heidemreich, assignors.)

Farbenfabriken vorm. Friedr. Bayer & Co. (See Volkmann, Paul, assignor.)

Farbwerke vorm. Meister Lucius & Brüning. (See Berneck, Ernst, and Graf, assignors.)

Fargo, William G., Jackson, Mich. Conduit. No. 1,020,641; Mar. 26; Sp. p. 4824; Gaz. vol. 176; p. 803.

Farnum, Frederick, assignor to M. J. and M. P. Whittall, Worcester, and J. E. Whitin, Uxbridge, Mass., trustees. Pile-wire-lubricating device. No. 1,019,032; Mar. 5; Sp. p. 40; Gaz. vol. 176; p. 9.

Farquhar, Moubray G., and A. H. Hill, Birmingham, England. Automatic firearm. No. 1,019,620; Mar. 5; Sp. p. 1359; Gaz. vol. 176; p. 207.

Farrell, Leonard P. J., Chicago, Ill. Expansible partition. No. 1,021,586; Mar. 26; Sp. p. 5497; Gaz. vol. 176; p. 988.

Faucher, Alex A., and T. Crosby, San Jacinto, Cal. Non-reversible clutch. No. 1,021,748; Mar. 26; Sp. p. 5798; Gaz. vol. 176; p. 1041.

Faucher, Peter, Painesdale, Mich. Tobacco-knife. No. 1,019,033; Mar. 5; Sp. p. 42; Gaz. vol. 176; p. 10.

Fawell, Joseph. (See Duncan and Fawell.)

Fawkes, Emma C. (See Fawkes, Joseph W. and E. C.)

Fawkes, Joseph W. and E. C. Burbank, Cal. Trolley-line construction. No. 1,019,621; Mar. 5; Sp. p. 1361; Gaz. vol. 176; p. 207.

Fay, Alpheus, Louisville, Ky. Aerating butter-separator. No. 1,019,235; Mar. 5; Sp. p. 503; Gaz. vol. 176; p. 79.

Fay, Alpheus, Louisville, Ky. Homogenising apparatus. No. 1,019,953; Mar. 12; Sp. p. 2024; Gaz. vol. 176; p. 350.

Fay, Alpheus, Louisville, Ky. Cream-separator and churn. No. 1,020,814; Mar. 19; Sp. p. 3845; Gaz. vol. 176; p. 674.

Fay, Alpheus, Louisville, Ky. Cream-separator and churn. No. 1,021,401; Mar. 26; Sp. p. 5114; Gaz. vol. 176; p. 925.

Febert, Thomas, Lancaster, Mass. Can and bottle top. No. 1,020,487; Mar. 19; Sp. p. 3128; Gaz. vol. 176; p. 564.

Feely, Charles A., and A. F. Hennelly, New York, N. Y. Nursing-bottle holder. No. 1,020,136; Mar. 12; Sp. p. 2406; Gaz. vol. 176; p. 411.

Fegley, Thomas J., assignor to North Bro's M'f'g Co., Philadelphia, Pa. Spindle-bearing. No. 1,020,894; Mar. 19; Sp. p. 4013; Gaz. vol. 176; p. 700.

Feld, Francis, Wrentham, assignor of one-half to C. E. Hale, North Attleboro, Mass. Bracelet. No. 1,019,445; Mar. 5; Sp. p. 1017; Gaz. vol. 176; p. 149.

Felbel, Jacob, New York, N. Y., assignor, by mesne assignments, to Union Typewriter Company, Jersey City, N. J. Type-writing machine. No. 1,021,513; Mar. 26; Sp. p. 5357; Gaz. vol. 176; p. 964.

Feldmann, Louis, Jr., and T. E. Crecelius, assignors to Multiplex Display Fixture Company, St. Louis, Mo. Display-rack. No. 1,020,545; Mar. 19; Sp. p. 3256; Gaz. vol. 176; p. 583.

Fell, Jasper P. (See Vroom, Oler P., assignor.)

Fergus, Samuel R., St. John, Kans. Stacker. No. 1,019,311; Mar. 5; Sp. p. 695; Gaz. vol. 176; p. 107.

Ferguson, Jesse T., Hickory, Miss. Wire-grip. No. 1,020,600; Mar. 19; Sp. p. 3388; Gaz. vol. 176; p. 601.

Ferrell, Milton F., Cottonwood, Ariz. Safety-stirrup. No. 1,020,272; Mar. 12; Sp. p. 2607; Gaz. vol. 176; p. 457.

Fessenden, Reginald A., Washington, D. C., assignor to National Electric Signaling Company, Pittsburgh, Pa. Signaling. No. 1,019,236; Mar. 5; Sp. p. 507; Gaz. vol. 176; p. 80.

Fessenden, Reginald A., assignor to The National Electric Signaling Company, Pittsburgh, Pa. Signaling by electromagnetic waves. No. 1,020,032; Mar. 12; Sp. p. 2185; Gaz. vol. 176; p. 376.

Fiat San Georgio. (See Sacerdotl, Cesare, assignor.)

Field, Frederick F., Lakewood, R. I. Letter-box plate. No. 1,020,194; Mar. 12; Sp. p. 2539; Gaz. vol. 176; p. 431.

Fielding, George T., Jr., New York, N. Y. Advertising medium. No. 1,020,815; Mar. 19; Sp. p. 3850; Gaz. vol. 176; p. 674.

Fields, Hannibal D., Loughman, Fla. Child's wagon. No. 1,020,895; Mar. 19; Sp. p. 4013; Gaz. vol. 176; p. 700.

Fink, Elba F., Niles, Mich. Umbrella. No. 1,020,816; Mar. 19; Sp. p. 3853; Gaz. vol. 176; p. 675.

Finley, Robert E., Chambles, Ga. Chicken-roost. No. 1,019,144; Mar. 5; Sp. p. 308; Gaz. vol. 176; p. 48.

Finzel, Henry L., Milledgeville, Ill. Demonstrating-camera. No. 1,019,622; Mar. 5; Sp. p. 1363; Gaz. vol. 176; p. 208.

Fish, Leander E., Los Angeles, Cal. Power apparatus. No. 1,021,241; Mar. 26; Sp. p. 4749; Gaz. vol. 176; p. 867.

Fish, Leroy A., Cloquet, Minn. Airship. No. 1,021,139; Mar. 26; Sp. p. 4523; Gaz. vol. 176; p. 833.

Fishburne, Edward W., assignor to Richmond Stay-Bolt Drilling Machine Manufacturing Company, Incorporated, Richmond, Va. Machine for drilling bolts and other work. No. 1,021,242; Mar. 26; Sp. p. 4754; Gaz. vol. 176; p. 868.

Fisher, George H., and P. J. O'Neil, Leavenworth, Kans. Apparatus for making artificial ice. No. 1,020,195; Mar. 12; Sp. p. 2541; Gaz. vol. 176; p. 481.

Fisher, Isaac M., Seattle, Wash. Rope or strap fastening device. No. 1,020,749; Mar. 19; Sp. p. 3723; Gaz. vol. 176; p. 653.

Fisher, Jacob, Roann, Ind. Wire-stretcher. No. 1,021,587; Mar. 26; Sp. p. 5500; Gaz. vol. 176; p. 988.

Fisher, Marley, Lindsay, Cal. Display apparatus. No. 1,020,896; Mar. 19; Sp. p. 4015; Gaz. vol. 176; p. 700.

Fitzpatrick, Wayne D., Glenhayes, W. Va. Stovepipe-joint. No. 1,021,092; Mar. 26; Sp. p. 4427; Gaz. vol. 176; p. 820.

Flagge, Phillipp F., assignor to Milwaukee Corrugating Company, Milwaukee, Wis. Eaves-trough. No. 1,020,087; Mar. 12; Sp. p. 2301; Gaz. vol. 176; p. 394.

Flagstad, Oscar A. (See Flagstad, Peter C. and O. A.)

Flagstad, Peter C. and O. A., St. Paul, Minn. Machine for making pastry cones. No. 1,019,237; Mar. 5; Sp. p. 509; Gaz. vol. 176; p. 80.

Flagstad, Peter C. and O. A., St. Paul, Minn. Machine for making pastry cones. No. 1,019,238; Mar. 5; Sp. p. 511; Gaz. vol. 176; p. 81.

Flagstad, Peter C. and O. A., St. Paul, Minn. Machine for making pastry cones. No. 1,019,239; Mar. 5; Sp. p. 513; Gaz. vol. 176; p. 81.

Flak, Marcin, Port Jefferson, N. Y. Tie and rail-fastener. No. 1,020,406; Mar. 19; Sp. p. 2961; Gaz. vol. 176; p. 538.

Flanagan, George J., Chicago, Ill. Book-holder. No. 1,021,183; Mar. 26; Sp. p. 4625; Gaz. vol. 176; p. 848.

Flanders, Warren B., Pittsburgh, Pa., assignor to The Westinghouse Machine Company. Blade-mounting. No. 1,020,750; Mar. 19; Sp. p. 3724; Gaz. vol. 176; p. 653.

Flanigan, John J., assignor to Duplicator Manufacturing Company, Chicago, Ill. Copying-machine. No. 1,019,312; Mar. 5; Sp. p. 687; Gaz. vol. 176; p. 107.

Fleming, Edward, and A. M. Marsh, assignors of one-third to W. D. Hopkins, Columbus, Ohio. Seam-lock. No. 1,019,623; Mar. 5; Sp. p. 1367; Gaz. vol. 176; p. 208.

Fleming, Luke G., Tarrytown, N. Y. Vehicle wheel-tire. No. 1,021,307; Mar. 26; Sp. p. 4882; Gaz. vol. 176; p. 891.

Fleming, Richard, Westfield, N. J. Process of smelting ores and apparatus therefor. No. 1,020,546; Mar. 19; Sp. p. 3262; Gaz. vol. 176; p. 584.

Fleming, Richard, Lynn, Mass., assignor to General Electric Company. Induction-furnace. No. 1,020,688; Mar. 19; Sp. p. 3581; Gaz. vol. 176; p. 630.

Fletcher, Alfred H., New York, N. Y. Trolley-retainer. No. 1,019,774; Mar. 12; Sp. p. 1665; Gaz. vol. 176; p. 290.

Fletcher, Ira E., Montello, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Rotary heel-seat maker and counter-pounder. (Reissue.) No. 13,385; Mar. 19; Sp. p. 4140; Gaz. vol. 176; p. 721.

Flinn, Julius W., Golden, Colo. Attachment for wood-stave conduits. No. 1,020,137; Mar. 12; Sp. p. 2406; Gaz. vol. 176; p. 411.

Flint, Harvey J. (See Danver, Andrew C., assignor.)

Flomerfelt, Jacob D., Taft, Fla. Rail-tie. No. 1,020,273; Mar. 12; Sp. p. 2608; Gaz. vol. 176; p. 457.

Flora, Orlando V., Madison, Ind. Sash-cord fastener. No. 1,020,751; Mar. 19; Sp. p. 3725; Gaz. vol. 176; p. 653.

Flora, Orlando V., Madison, Ind. Metal-bound stirrup. No. 1,020,752; Mar. 19; Sp. p. 3726; Gaz. vol. 176; p. 654.

Florence, Joseph G. (See Cheeseman and Florence.)

Flynn, Michael J., New Brunswick, N. J., assignor of one-half to E. W. McCarty, New York, N. Y. Door check and closer. No. 1,020,033; Mar. 12; Sp. p. 2186; Gaz. vol. 176; p. 377.

Foehl, Charles, Philadelphia, Pa. Automatic shell-ejecting device for revolvers. No. 1,019,446; Mar. 5; Sp. p. 1019; Gaz. vol. 176; p. 149.

Foerst, John, Newark, N. J. Scale. No. 1,019,447; Mar. 5; Sp. p. 1021; Gaz. vol. 176; p. 150.

Fogarty, John G., Carthage, N. Y. Hoisting-machine. No. 1,021,402; Mar. 26; Sp. p. 5118; Gaz. vol. 176; p. 925.

Foley, James W., Denver, Colo. Downdraft smoke-carbonizing furnace. No. 1,019,624; Mar. 5; Sp. p. 1368; Gaz. vol. 176; p. 208.

Follett, Jennie L., Adams, Mass. Collapsible cup. No. 1,020,347; Mar. 12; Sp. p. 2831; Gaz. vol. 176; p. 480.

Foote, Julian E., Topeka, Kans. Rail-joint fastener. No. 1,021,514; Mar. 26; Sp. p. 5362; Gaz. vol. 176; p. 965.

Forbes, Thomas C., assignor to Los Angeles Rotary Gas Engine Company, Los Angeles, Cal. Ignition timer and detector. No. 1,019,886; Mar. 12; Sp. p. 1879; Gaz. vol. 176; p. 328.

Ford, Grant G., Speed, Kans. Medicinal needle. No. 1,020,753; Mar. 19; Sp. p. 3727; Gaz. vol. 176; p. 654.

Ford, John. (See Parsons, Wilson, and Ford.)

Fordyce, John R., Little Rock, Ark. Cotton-gin. No. 1,019,240; Mar. 5; Sp. p. 515; Gaz. vol. 176; p. 82.

Fornelius, Harvey, Athenia, N. J. Shade-roller appliance. No. 1,020,817; Mar. 19; Sp. p. 3855; Gaz. vol. 176; p. 675.

Forsberg, Frederick, Chicago, Ill. Foot-rest for bathtubs. No. 1,019,775; Mar. 12; Sp. p. 1667; Gaz. vol. 176; p. 290.

Forsheim, Joseph, New York, N. Y. Lamp. No. 1,021,093; Mar. 26; Sp. p. 4428; Gaz. vol. 176; p. 820.

Forstall, James. (See Frechette, Onesime, assignor.)

Forsyth, Robert H., Curranville, Kans. Concrete fence-post. No. 1,021,140; Mar. 26; Sp. p. 4526; Gaz. vol. 176; p. 834.

Forsyth, William D., Youngstown, Ohio, assignor of one-half to A. M. Neeper, Pittsburgh, Pa. Expanded metal. No. 1,019,034; Mar. 5; Sp. p. 44; Gaz. vol. 176; p. 10.

Fortune, John R., Detroit, Mich., and F. B. Bigelow, Chicago, Ill. Arch-plate for furnaces. No. 1,019,035; Mar. 5; Sp. p. 47; Gaz. vol. 176; p. 11.

Forty, William H., Kings Langley, assignor to C. E. F. M. Mainwaring, Sloane Gardens, London, England. Loom for weaving coir mats and the like. No. 1,019,625; Mar. 5; Sp. p. 1371; Gaz. vol. 176; p. 209.

Fosston Manufacturing Company. (See Helgerson, Thomas O., assignor.)

Foster Brothers Manufacturing Co. (See Foster, William S., assignor.)

Foster Brothers Manufacturing Company. (See Foster, William B., assignor.)

Foster, Edward, Auckland, New Zealand. Composition for attaching insulation to steam-boilers and other appliances. No. 1,019,776; Mar. 12; Sp. p. 1668; Gaz. vol. 176; p. 291.

Foster, James H., assignor to The Hydraulic Pressed Steel Company, Cleveland, Ohio. Wall-paper remover. No. 1,021,184; Mar. 26; Sp. p. 4627; Gaz. vol. 176; p. 848.

Foster, Samuel P., East Chattanooga, Tenn. Baling-press. No. 1,019,620; Mar. 5; Sp. p. 1373; Gaz. vol. 176; p. 209.

Foster, William B., Utica, N. Y., assignor to Foster Brothers Manufacturing Company. Corner-fastening for bedsteads. No. 1,021,185; Mar. 26; Sp. p. 4629; Gaz. vol. 176; p. 849.

Foster, William S., Utica, N. Y., assignor to Foster Brothers Manufacturing Co. Detachable fastener for upholstery. No. 1,020,407; Mar. 19; Sp. p. 2962; Gaz. vol. 176; p. 538.

Fowler, Alfred B., Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Grinding-machine. No. 1,019,887; Mar. 12; Sp. p. 1880; Gaz. vol. 176; p. 329.

Fowler, Frank G., Altoona, Pa. Spring device for car-vestibule diaphragms. No. 1,019,777; Mar. 12; Sp. p. 1668; Gaz. vol. 176; p. 291.

Fowler, William E., Jr., Hammond, Ind. Running-board for freight-cars. No. 1,019,627; Mar. 5; Sp. p. 1376; Gaz. vol. 176; p. 210.

Foyer, Melvin J., and O. Kurz, Toledo, Ohio. Go-cart. No. 1,021,589; Mar. 26; Sp. p. 5508; Gaz. vol. 176; p. 989.

Frame, Robert E., assignor to American Car and Foundry Company, St. Louis, Mo. Journal-bearing wedge. No. 1,021,141; Mar. 26; Sp. p. 4527; Gaz. vol. 176; p. 834.

Frame, William J., assignor to Hydro-Vacuum, Limited, Glasgow, Scotland. Hydraulic apparatus for exhausting or extracting air, gas, or vapor. No. 1,019,241; Mar. 5; Sp. p. 518; Gaz. vol. 176; p. 82.

Frank, Felix, Cleveland, Ohio. Air-cooling apparatus. No. 1,020,034; Mar. 12; Sp. p. 2191; Gaz. vol. 176; p. 377.

Frank Mossberg Company. (See Mossberg, Frank, assignor.)

Frank, Myer. (See Shanks, Edward B., assignor.)

Frank S. Betz Company. (See Hays and Rosenbaum, assignors.)

Franzen, Nicklas, Floreffe, and J. A. Bechtel, Tarentum, assignors to Pittsburgh Plate Glass Company, Pittsburgh, Pa. Teeming-crane. No. 1,021,457; Mar. 26; Sp. p. 5226; Gaz. vol. 176; p. 945.

Frazier, Albert S., Amsterdam, N. Y. Feathering propeller-wheel. No. 1,020,274; Mar. 12; Sp. p. 2699; Gaz. vol. 176; p. 457.

Frechette, Onesime, assignor to J. Forstall, St. Pierre, Canada. Ditching-machine. No. 1,019,242; Mar. 5; Sp. p. 520; Gaz. vol. 176; p. 82.

Frederick, Edwin E., Bridgeville borough, assignor to The Frederick-Elder Company, Bridgeville, Pa. Shade-holder. No. 1,020,689; Mar. 19; Sp. p. 3582; Gaz. vol. 176; p. 630.

Frederick-Elder Company, The. (See Frederick, Edwin E., assignor.)

Frederick Stearns & Company. (See Cadwell, Harry W., assignor.)

Fredrickson, John, Chicago, Ill. Joist and girder hanger. No. 1,019,778; Mar. 12; Sp. p. 1670; Gaz. vol. 176; p. 291.

Freeman, Edgar H., Trenton, N. J. Lining-fastening for electrical lamp-sockets. No. 1,020,035; Mar. 12; Sp. p. 2193; Gaz. vol. 176; p. 378.

Freeman, Edgar H., Trenton, N. J. Insulating-lining for electrical lamp-sockets. No. 1,020,036; Mar. 12; Sp. p. 2195; Gaz. vol. 176; p. 378.

Freeman, Edgar H., Trenton, N. J. Cap-lining fastener for electrical lamp-sockets. No. 1,021,243; Mar. 26; Sp. p. 4758; Gaz. vol. 176; p. 868.

Freeman, Joseph W., Columbus, Ohio. Combined burial-casket and grave-vault. No. 1,021,403; Mar. 26; Sp. p. 5120; Gaz. vol. 176; p. 926.

Freeman, Louis G., Cincinnati, Ohio. Insole and lasting tack puller and toe-wire remover. No. 1,019,313; Mar. 5; Sp. p. 992; Gaz. vol. 176; p. 108.

Freeman, Louis G., Cincinnati, Ohio, assignor to United Shoe Machinery Company, Paterson, N. J. Heel-seat-jointing machine. No. 1,019,145; Mar. 5; Sp. p. 309; Gaz. vol. 176; p. 48.

Freeman, Malcolm W., Millington, Mass. Pneumatic walking attachment. No. 1,021,142; Mar. 26; Sp. p. 4529; Gaz. vol. 176; p. 835.

Freeman, Merriel A., New Harmony, Ind. Corn-popper. No. 1,019,448; Mar. 5; Sp. p. 1023; Gaz. vol. 176; p. 150.

Freeman, Robert E., Maple City, Mich. Bean-puller. No. 1,020,408; Mar. 19; Sp. p. 2963; Gaz. vol. 176; p. 538.

Freer, Fred, *et al.* (See Ivor, Barry, assignor.)

Freese, Ira H., Clarksburg, W. Va. Shear and interrupting device for continuous-flow glass-tanks. No. 1,020,409; Mar. 19; Sp. p. 2965; Gaz. vol. 176; p. 538.

French, Edward V., Lynn, Mass. Water-meter. No. 1,020,037; Mar. 12; Sp. p. 2196; Gaz. vol. 176; p. 378.

Frey, James H., Vincennes, Ind. Swing. No. 1,021,590; Mar. 26; Sp. p. 5514; Gaz. vol. 176; p. 990.

Frey, John E., assignor of one-half to B. A. Laws, Pittsburgh, Pa. Vermin-trap. No. 1,020,690; Mar. 19; Sp. p. 3584; Gaz. vol. 176; p. 631.

Frick, Henry H., Fricks, Pa. Arch-centering. No. 1,019,314; Mar. 5; Sp. p. 996; Gaz. vol. 176; p. 108.

Friederich, Christian, Tripp, S. D. Resilient tire. No. 1,021,591; Mar. 26; Sp. p. 5515; Gaz. vol. 176; p. 990.

Friedman, William L., Oakland, Cal. Detachable hat-pin head. No. 1,020,754; Mar. 19; Sp. p. 3728; Gaz. vol. 176; p. 654.

Friend, George J., Kingsley, Oreg. Gate. No. 1,020,488; Mar. 19; Sp. p. 3130; Gaz. vol. 176; p. 565.

Frisch & Sohn, Jos. (See Berger, Emanuel, assignor.)

Frisholm, William W., Leadville, Colo. Concrete railway cross-tie. No. 1,020,973; Mar. 26; Sp. p. 4189; Gaz. vol. 176; p. 779.

Frisholm, William W., Leadville, Colo. Beer-tapper. No. 1,021,669; Mar. 26; Sp. p. 5637; Gaz. vol. 176; p. 1014.

Fritz, Spencer J., Avoca, N. Y. Potato-digger. No. 1,021,592; Mar. 26; Sp. p. 5517; Gaz. vol. 176; p. 990.

Fromhold, Alexander, Rutherford, N. J. Transom-lifter, &c. No. 1,021,308; Mar. 26; Sp. p. 4883; Gaz. vol. 176; p. 892.

Frost, Walter E., assignor of one-fourth to A. L. Childs and R. W. Crockett and one-fourth to W. W. Sanborn, Lewiston, Me. Railway-telephone. No. 1,019,628; Mar. 5; Sp. p. 1378; Gaz. vol. 176; p. 210.

Fry, Harry E., New York, N. Y. Adjustable heel for footwear. No. 1,020,138; Mar. 12; Sp. p. 2407; Gaz. vol. 176; p. 411.

Fry, Jesse H., Rochester, Pa. Bichromatic lamp. No. 1,021,458; Mar. 26; Sp. p. 5228; Gaz. vol. 176; p. 945.

Fuchs, Ernesto, Guadalajara, Mexico. Flying-machine. No. 1,020,275; Mar. 12; Sp. p. 2700; Gaz. vol. 176; p. 457.

Fulk, Alexander, Mount Airy, N. C. Brace for bolsters and the like. No. 1,020,410; Mar. 19; Sp. p. 2974; Gaz. vol. 176; p. 539.

Fuller, Frans A., assignor to J. E. Mergott Company, Newark, N. J. Bag-fastener. No. 1,020,547; Mar. 19; Sp. p. 3267; Gaz. vol. 176; p. 584.

Furber, Frederick M., Revere, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for operating upon soles. No. 1,019,888; Mar. 12; Sp. p. 1883; Gaz. vol. 176; p. 329.

Furr, Harry L., Harrisonburg, Va. Electrical switch means. No. 1,020,818; Mar. 19; Sp. p. 3856; Gaz. vol. 176; p. 675.

Furrer, Alfred, Altstadt, near Tetschen, Austria-Hungary. Tongs for separating spinning-cylinders. No. 1,020,139; Mar. 12; Sp. p. 2408; Gaz. vol. 176; p. 411.

Gäck, Emil. (See Genze and Gäck.)

Gäck, Robert. (See Genze and Gäck.)

Gaddis, Charles G., Olney, Ill. Safety appliance for oil-tanks. No. 1,019,779; Mar. 12; Sp. p. 1671; Gaz. vol. 176; p. 291.

Gaines, Frederick F., Savannah, Ga. Car-door fastener. No. 1,019,036; Mar. 5; Sp. p. 50; Gaz. vol. 176; p. 11.

Gaits, Joseph, Jeannette, Pa. Trolley-pole. No. 1,020,411; Mar. 19; Sp. p. 2974; Gaz. vol. 176; p. 539.

Galarneault, Casimir J. (See White and Barthelemy, assignors.)

Gallcher Machinery Co., The. (See Isbell, John F., assignor.)

Galvin, Carroll D., Merchantville, N. J., assignor of one-sixth to A. F. Jorss, one-sixth to C. Jacobsen, and one-sixth to E. S. Cochran, Washington, D. C. Removable rim for vehicle-wheels. No. 1,020,140; Mar. 12; Sp. p. 2409; Gaz. vol. 176; p. 411.

Galvin, Carroll D., Merchantville, N. J., assignor of one-sixth to C. Jacobsen, one-sixth to E. S. Cochran, and one-sixth to A. F. Jorss, Washington, D. C. Resilient wheel. No. 1,021,515; Mar. 26; Sp. p. 5363; Gaz. vol. 176; p. 965.

Gamble, Joseph W., assignor to Harrison Safety Boiler Works, Philadelphia, Pa. Water-heating system. No. 1,020,755; Mar. 19; Sp. p. 3728; Gaz. vol. 176; p. 654.

Gambrel, Walter C., Tabor, Ill. Car-truck. No. 1,020,276; Mar. 12; Sp. p. 2702; Gaz. vol. 176; p. 458.

Gambrel, Walter C., Tabor, Ill. Automatic time-controlled regulator for gas-engines. No. 1,020,897; Mar. 19; Sp. p. 4018; Gaz. vod. 176; p. 701.

Gandy, Arthur N., Brundidge, Ala. Nut-lock. No. 1,019,243; Mar. 5; Sp. p. 523; Gaz. vol. 176; p. 83.

Garbe, William F., Fort Collins, Colo. Valve head-gate. No. 1,020,974; Mar. 26; Sp. p. 4191; Gaz. vol. 176; p. 779.

Gardner, Harvey W., Springfield, Mo. Burner. No. 1,020,348; Mar. 12; Sp. p. 2833; Gaz. vol. 176; p. 480.

Gardner, Howard S., Newark, N. J. Delivery-chute. No. 1,021,404; Mar. 26; Sp. p. 5121; Gaz. vol. 176; p. 926.

Gardner, Roland, Cleveland, Ohio. Abrading-wheel and mounting therefor. No. 1,020,548; Mar. 19; Sp. p. 3268; Gaz. vol. 176; p. 584.

Garey, John H., Davenport, Nebr. Pop-cooler. No. 1,021,670; Mar. 26; Sp. p. 5639; Gaz. vol. 176; p. 1014.

Garland, Albert E., Boston, Mass. Gymnastic apparatus. No. 1,019,037; Mar. 5; Sp. p. 51; Gaz. vol. 176; p. 11.

Garrison, William T., assignor to K. Kearney, Los Angeles, Cal. Car-fender. No. 1,021,143; Mar. 26; Sp. p. 4530; Gaz. vol. 176; p. 835.

Garrow, Edward O., Richmond, Vt. Milk-strainer. No. 1,019,954; Mar. 12; Sp. p. 2027; Gaz. vol. 176; p. 350.

Gast, Richard, Fechenheim, near Frankfort-on-the-Main, Germany, assignor to Cassella Color Company, New York, N. Y. New cotton-dyestuffs and making same. No. 1,020,756; Mar. 19; Sp. p. 3732; Gaz. vol. 176; p. 655.

Gates, Charles E. (See Rich and Gates.)

Gathmann, Emil, New York, N. Y. Ingot-mold. No. 1,019,244; Mar. 5; Sp. p. 524; Gaz. vol. 176; p. 83.

Gattone, Domenico, Los Angeles, assignor, by mesne assignments, to S. Stormer, Pasadena, Cal. Attachment for sewing-machines. No. 1,021,671; Mar. 26; Sp. p. 5640; Gaz. vol. 176; p. 1015.

Gaylor, Leonard B., Stamford, Conn. Antiskid-grip. No. 1,020,480; Mar. 19; Sp. p. 3132; Gaz. vol. 176; p. 565.

Gazzolo, John D., *et al.* (See Ivor, Barry, assignor.)

Gebauer, Emil G., Chicago, Ill. Car-seal. No. 1,021,244; Mar. 26; Sp. p. 4760; Gaz. vol. 176; p. 869.

Geddes, Joseph, Rochester, N. Y. Chimney cap and ventilator. No. 1,019,889; Mar. 12; Sp. p. 1892; Gaz. vol. 176; p. 330.

Geels, Herman C., Decatur, Ind. Wind-wheel toy. No. 1,019,245; Mar. 5; Sp. p. 526; Gaz. vol. 176; p. 83.

Geer, Harry R., Johnstown, Pa. Rolling-mill appliance. No. 1,019,315; Mar. 5; Sp. p. 997; Gaz. vol. 176; p. 109.

Geisel, Theodor R., Springfield, Mass. Advertising device. No. 1,021,516; Mar. 26; Sp. p. 5366; Gaz. vol. 176; p. 966.

Gems, Julius F., Hampstead, London, England. Garment-form. No. 1,019,449; Mar. 5; Sp. p. 1025; Gaz. vol. 176; p. 150.

General Bakelite Company. (See Backeland, Leo H., assignor.)

General Bakelite Company. (See Backeland and Thurlow, assignors.)

General Charcrete Company. (See Stinebaugh, Conrad O., assignor.)

General Electric Company. (See Alexanderson, Ernst F. W., assignor.)

General Electric Company. (See Bailey, Percy S., assignor.)

General Electric Company. (See Ball, Henry P., assignor.)

General Electric Company. (See Batchelder, Asa F., assignor.)

General Electric Company. (See Blondel, André, assignor.)

General Electric Company. (See Blondel and Dobkevitch, assignors.)

General Electric Company. (See Button, Arnold E., assignor.)

General Electric Company. (See Case, Frank E., assignor.)

General Electric Company. (See Clough, Frederick H., assignor.)

General Electric Company. (See Crissey, Clarence P., assignor.)

General Electric Company. (See Cubelic, Ludwig, assignor.)

General Electric Company. (See Cubitt, Archibald S., assignor.)

General Electric Company. (See Dempster, John T., assignor.)

General Electric Company. (See Dempster, John T. H., assignor.)

General Electric Company. (See Dorgeloh, George H., assignor.)

General Electric Company. (See Dunning, Parker, assignor.)

General Electric Company. (See Ernst, Charles A., assignor.)

General Electric Company. (See Fleming, Richard, assignor.)

General Electric Company. (See Gillette, John C., assignor.)

General Electric Company. (See Graf, Fritz, assignor.)

General Electric Company. (See Graybill, John E., assignor.)

General Electric Company. (See Graybill and McJunkin, assignors.)

General Electric Company. (See Hall, John L., assignor.)

General Electric Company. (See Hamilton, Brace H., assignor.)

General Electric Company. (See Hanna, Max R., assignor.)

General Electric Company. (See Hansen, Charles A., assignor.)

General Electric Company. (See Härdén, Johannes, assignor.)

General Electric Company. (See Hastings and Wise, assignors.)

General Electric Company. (See Johannesen, Svend E., assignor.)

General Electric Company. (See Junggren and Dickinson, assignors.)

General Electric Company. (See Kieser, Walter, assignor.)

General Electric Company. (See Kuhlmann and Müller, assignors.)

General Electric Company. (See Lemp, Hermann, assignor.)

General Electric Company. (See Libby, Sam H., assignor.)

General Electric Company. (See Miller, Robert, Jr., assignor.)

General Electric Company. (See Mix, Edgar W., assignor.)

General Electric Company. (See Moody, Walter S., assignor.)

General Electric Company. (See Pigott, Stephen J., assignor.)

General Electric Company. (See Rice, Richard H., assignor.)

General Electric Company. (See Samuelson, Frederick, assignor.)

General Electric Company. (See Steinmetz, Charles P., assignor.)

General Electric Company. (See Thomson, Elihu, assignor.)

General Electric Company. (See Troy, Matthew O., assignor.)

General Electric Company. (See Wagner, Paul, assignor.)

General Electric Company. (See Weicker, William H., assignor.)

General Electric Company. (See Weintraub, Ezechiel, assignor.)

General Electric Company. (See Wilkinson, James, assignor.)

General Electric Company. (See Zimmer, Paul, assignor.)

General Gas Light Company. (See Humphrey, Frederick J. and H. R., assignors.)

General Railway Signal Company. (See Howe, Winthrop K., assignor.)

Genossenschaft für Textilpatente. (See Marazzi, Adolf, assignor.)

Gensmer, Theodore, assignor of one-half to J. W. Hurley, Portland, Oreg. Mechanical toy. No. 1,020,691; Mar. 10; Sp. p. 3587; Gaz. vol. 176; p. 631.

Gentle, William M., Greenwood, and J. K. Cooper, Indianapolis, Ind. Wheeled scraper. No. 1,021,517; Mar. 26; Sp. p. 5367; Gaz. vol. 176; p. 966.

Genze, Hugo, E. and R. Gück, Gross Auheim-on-the-Main, Germany. Belt-cutting machine. No. 1,021,309; Mar. 26; Sp. p. 4885; Gaz. vol. 176; p. 892.

Geoffroy, Raymond, Arctic, R. I. Pipe-wrench. No. 1,019,450; Mar. 5; Sp. p. 1027; Gaz. vol. 176; p. 151.

George, John E. (See Lane and George.)

George Mail Device Company. (See George, Marion N., assignor.)

George, Marion N., Irondale, assignor to George Mail Device Company, Inc., Birmingham, Ala. Mail-bag catcher. No. 1,019,629; Mar. 5; Sp. p. 1380; Gaz. vol. 176; p. 210.

George, Morton A., Bishop, Cal. Detachable hinge for windows. No. 1,021,245; Mar. 26; Sp. p. 4760; Gaz. vol. 176; p. 869.

George W. Jackson Manufacturing Company. (See Jackson, George W., assignor.)

Gibbons, William G., Edinburgh, Scotland. Variable-delivery pump for hydraulic transmission systems. No. 1,020,277; Mar. 12; Sp. p. 2704; Gaz. vol. 176; p. 458.

Gibbs, William E., Plainfield, N. J., assignor to Joseph Fahys & Co., New York, N. Y. Making Swiss watch-bows. No. 1,019,316; Mar. 5; Sp. p. 702; Gaz. vol. 176; p. 109.

Gideon, Francis C., Ballston, Va. Facing-tile. No. 1,021,405; Mar. 26; Sp. p. 5123; Gaz. vol. 176; p. 927.

Giermann, Wilhelm A., Blencoe, Iowa. Vehicle-tire. No. 1,021,246; Mar. 26; Sp. p. 4763; Gaz. vol. 176; p. 869.

Gifford, Charles H., assignor to American Blower Company, Detroit, Mich. Ventilating apparatus. No. 1,019,780; Mar. 12; Sp. p. 1672; Gaz. vol. 176; p. 292.

Gilbert, Fred E., Jacksonville, Fla. Bow-coupling for carriage-tops. No. 1,019,711; Mar. 5; Sp. p. 1524; Gaz. vol. 176; p. 236.

Gilkerson, Solomon D., Winnipeg, Manitoba, Canada. Reinforcing and shape-keeping card for clothes. No. 1,021,593; Mar. 26; Sp. p. 5519; Gaz. vol. 176; p. 991.

Gill, Edwin R., Yonkers, assignor, by mesne assignments, to H. E. Merrell, New York, N. Y., and O. J. Hamlin, Smethport, Pa. Signaling system. No. 1,019,781; Mar. 12; Sp. p. 1674; Gaz. vol. 176; p. 292.

Gill, Edwin R., Yonkers, assignor, by mesne assignments, to H. E. Merrell, New York, N. Y., and O. J. Hamlin, Smethport, Pa. Selective signaling system. No. 1,020,975; Mar. 26; Sp. p. 4193; Gaz. vol. 176; p. 779.

Gill, Edwin R., Yonkers, assignor, by mesne assignments, to H. E. Merrell, New York, N. Y., and O. J. Hamlin, Smethport, Pa. Combined telephonic and telegraphic system. No. 1,021,717; Mar. 26; Sp. p. 5731; Gaz. vol. 176; p. 1030.

Gillette, Henry, Belpre, Kans. Bricklayer's line-holder. No. 1,021,406; Mar. 26; Sp. p. 5126; Gaz. vol. 176; p. 927.

Gillette, John C., Baltimore, Md., assignor to General Electric Company, Sectional insulator. No. 1,019,451; Mar. 5; Sp. p. 1028; Gaz. vol. 176; p. 151.

Gilliland, Samuel W., Bates county, Mo. Weight-motor. No. 1,021,749; Mar. 26; Sp. p. 5799; Gaz. vol. 176; p. 1041.

Gilman, Osmon B., Boston, Mass. Machine for treating crackers. No. 1,019,630; Mar. 5; Sp. p. 1382; Gaz. vol. 176; p. 211.

Gilowsky, Emanuel M. (See Ahrens and Gilowsky.)

Gilroy, William E., assignor to Eureka Mower Company, Utica, N. Y. Check-row corn-planter. No. 1,019,038; Mar. 5; Sp. p. 54; Gaz. vol. 176; p. 12.

Girard, Augustus O., St. Louis, Mo. Stove. No. 1,020,278; Mar. 12; Sp. p. 2706; Gaz. vol. 176; p. 458.

Girtanner, Alice M. and F., St. Louis, Mo. Water-heater. No. 1,019,452; Mar. 5; Sp. p. 1029; Gaz. vol. 176; p. 151.

Girtanner, Frederick. (See Girtanner, Alice M. and F.)

Gjorup, Knud, and T. Petersen, Hartford, assignors of one-fourth to P. E. Bossen and one-fourth to J. Bossen, South Windsor, Conn. Blocks. No. 1,021,594; Mar. 26; Sp. p. 5519; Gaz. vol. 176; p. 991.

Glabsanya, Rudolph, Chicago, Ill. Vehicle-tire. No. 1,020,540; Mar. 19; Sp. p. 3270; Gaz. vol. 176; p. 585.

Gladding, Samuel E., Jersey City, N. J. Sounding apparatus for ships. No. 1,020,490; Mar. 19; Sp. p. 3135; Gaz. vol. 176; p. 565.

Glaubitz, Gallus von, Munich, Germany. Toy airship. No. 1,020,088; Mar. 12; Sp. p. 2302; Gaz. vol. 176; p. 395.

Glenn, Edward A., Chicago, Ill. Vehicle-wheel. No. 1,021,459; Mar. 26; Sp. p. 5229; Gaz. vol. 176; p. 945.

Glover, Charles, and C. Holt, assignors to Corbin Screw Corporation, New Britain, Conn. Head-shaping machine. No. 1,021,736; Mar. 26; Sp. p. 5773; Gaz. vol. 176; p. 1037.

Godding, Milon O., Portland, Oreg. Emergency-brake. No. 1,019,146; Mar. 5; Sp. p. 314; Gaz. vol. 176; p. 49.

Godines, Francisco L., Jersey City, N. J., and A. J. Marshall, assignors to Godines-Marshall Company, New York, N. Y. Lamp. No. 1,019,246; Mar. 5; Sp. p. 528; Gaz. vol. 176; p. 84.

Godines-Marshall Company. (See Godines and Marshall, assignors.)

Goersch, Friedrich W. J., Cleveland, Ohio. Wheel-hub. No. 1,021,247; Mar. 26; Sp. p. 4765; Gaz. vol. 176; p. 870.

Goetter, Charles, Chicago, Ill. Combination step-ladder and bench. No. 1,021,094; Mar. 26; Sp. p. 4429; Gaz. vol. 176; p. 820.

Goetz, Herman. (See Sherman and Goetz.)

Goff, Abbot P. (See Buehler and Goff.)

Gold, Egbert H. (See Coggin and Gold.)

Gold, Egbert H. (See Manchester and Gold.)

Goldberg, Solomon H. (See Sisson, Isaac H., assignor.)

Golden, Joseph A., *et al.* (See Uebelmesser, Charles R., assignor.)

Goldman, Samuel S. (See Appel and Goldman.)

Goldschmidt Thermit Company. (See Lucas, Anton, assignor.)

Goldstein, Martin, assignor of one-half to E. H. Harper, Keystone, W. Va. Razor-sterilizer. No. 1,020,038; Mar. 12; Sp. p. 2199; Gaz. vol. 176; p. 379.

Golloher, Charles H., Gloster, Miss. Cotton-seed delinter. No. 1,019,955; Mar. 12; Sp. p. 2028; Gaz. vol. 176; p. 350.

Goodnow, Russell J. (See Edmonds and Goodnow.)

Goodnow, Russell J., Boston, Mass. Fluid-measuring device. No. 1,019,453; Mar. 5; Sp. p. 1030; Gaz. vol. 176; p. 152.

Goodrich, Harry C., Palisade, N. J. Mount for hooks, eyes, and loops. No. 1,019,735; Mar. 5; Sp. p. 1574; Gaz. vol. 176; p. 245.

Goodspeed, Leland F., Milwaukee, Wis., assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa. Speed-gear mechanism. No. 1,019,454; Mar. 5; Sp. p. 1032; Gaz. vol. 176; p. 152.

Goodwin, George. (See Reid, James H., assignor.)

Goodwin, Joseph A., Berkley, Va. Flying-machine. No. 1,019,782; Mar. 12; Sp. p. 1676; Gaz. vol. 176; p. 292.

Goodwyn, Alfred E., Bluefield, W. Va. Faucet. No. 1,019,317; Mar. 5; Sp. p. 708; Gaz. vol. 176; p. 109.

Goold, Luella L., *et al.* (See Greeley, James T., assignor.)

Gordon, Peter J., and R. T. Prall, Youngstown, Ohio. Furnace. No. 1,021,144; Mar. 26; Sp. p. 4531; Gaz. vol. 176; p. 885.

Gordon, Waldo C., Boston, assignor of one-half to H. J. Wilder, Norwood, Mass. Screw-driver. No. 1,020,141; Mar. 12; Sp. p. 2413; Gaz. vol. 176; p. 412.

Gorich, Max. (See Grünewald and Gorich.)

Gorman, John, Peru, Ind. Railway cross-tie and supporting-plate. No. 1,021,145; Mar. 26; Sp. p. 4533; Gaz. vol. 176; p. 885.

Gorman, Lexie A., Germantown, Tenn. Rail-joint. No. 1,020,039; Mar. 12; Sp. p. 2200; Gaz. vol. 176; p. 379.

Gosch, Otto F. C. (See Stoltze, Oskar, assignor.)

Goss Printing Press Company. (See Morgan, John D., assignor.)

Goss, William M., Cheyenne, Wyo. Concrete-mixer. No. 1,020,279; Mar. 12; Sp. p. 2708; Gaz. vol. 176; p. 459.

Gough, Harold O., Sunnybank, Va. Arm-rest for musical instruments. No. 1,020,491; Mar. 19; Sp. p. 3136; Gaz. vol. 176; p. 565.

Gould & Eberhardt. (See Zimmermann, William F., assignor.)

Gould, Joseph B., assignor to Matchless Lighter Company, Boston, Mass. Igniting device. No. 1,021,363; Mar. 26; Sp. p. 4903; Gaz. vol. 176; p. 911.

Gouldbourn, Joseph, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J. Pounding-up roll. No. 1,019,890; Mar. 12; Sp. p. 1803; Gaz. vol. 176; p. 330.

Grab, Frederick, New York, N. Y. Envelop. No. 1,019,783; Mar. 12; Sp. p. 1680; Gaz. vol. 176; p. 293.

Grabe, Georg, Nikolassee, near Berlin, assignor to Siemens & Halske A. G., Berlin, Germany. Apparatus for metering conversations in automatic telephone-exchanges. No. 1,020,976; Mar. 26; Sp. p. 4197; Gaz. vol. 176; p. 780.

Graf, Fritz, Pankow, Germany, assignor to General Electric Company. Combined switch and branch plug. No. 1,019,455; Mar. 5; Sp. p. 1034; Gaz. vol. 176; p. 152.

Graf, Hugo. (See Berneck, Moest, and Graf.)

Gräflich Schaffgotsch'sche Werke, G. m. b. H. (See Stasch, Valentin, assignor.)

Graft, John R., Cedar Rapids, Iowa. Silo. No. 1,021,718; Mar. 26; Sp. p. 5733; Gaz. vol. 176; p. 1030.

Graham, Albert C., Oilfields, Cal. Offset-shoe and cast-iron offset-shoe guide. No. 1,019,712; Mar. 5; Sp. p. 1526; Gaz. vol. 176; p. 237.

Graham, Charles W., Rome, assignor, by mesne assignments, to American Can Company, New York, N. Y. Notching mechanism for can-body blanks. No. 1,020,550; Mar. 19; Sp. p. 3271; Gaz. vol. 176; p. 585.

Graham, Edward A., Brockley, England. Telephonic apparatus. No. 1,020,898; Mar. 19; Sp. p. 4020; Gaz. vol. 176; p. 701.

Grand Rapids Tool & Stamping Company *et al.* (See Vorce, Albert F., assignor.)

Grandjean, Arthur, San Diego, Cal. Gas-burner. No. 1,019,318; Mar. 5; Sp. p. 705; Gaz. vol. 176; p. 110.

Granger, Edward V. (See Taft, Hiram E., assignor.)

Grasser, Firm of Louis. (See Simon, Edmund, assignor.)

Gray, Arthur F. (See Voss, Ambrose S., assignor.)

Gray, Charles F., Bridgeport, Conn., assignor, by mesne assignments, to The Singer Manufacturing Company. Zigzag-stitch-sewing machine. No. 1,020,089; Mar. 12; Sp. p. 2303; Gaz. vol. 176; p. 395.

Gray, Charles F., Sierra Madre, Cal., assignor to The Singer Manufacturing Company. Thread-controlling mechanism for sewing-machines. No. 1,020,090; Mar. 12; Sp. p. 2305; Gaz. vol. 176; p. 395.

Graybill, John E., York, Pa., assignor to General Electric Company. Automatic stem-making machine. No. 1,019,457; Mar. 5; Sp. p. 1035; Gaz. vol. 176; p. 153.

Graybill, John E., and P. McJunkin, York, Pa., assignors to General Electric Company. Electric meter. No. 1,019,456; Mar. 5; Sp. p. 1035; Gaz. vol. 176; p. 153.

Greatorex, William H., Camberwell, assignor to Wallach Brothers Limited, London, England. Cock. No. 1,021,518; Mar. 26; Sp. p. 5371; Gaz. vol. 176; p. 966.

Greeley, Guy H., *et al.* (See Greeley, James T., assignor.)

Greeley, James T., Nashua, N. H., assignor of one-fourth to L. L. Goold, Pittsburgh, Pa., and one-fourth to G. H. Greeley, Merrimac, N. H. Hypodermic syringe. No. 1,021,146; Mar. 26; Sp. p. 4534; Gaz. vol. 176; p. 836.

Green, Arthur A., Schenectady, N. Y. Automatic fishing-pole. No. 1,021,147; Mar. 26; Sp. p. 4537; Gaz. vol. 176; p. 836.

Green, John R., Kansas City, Mo. Hydrocarbon-burner. No. 1,021,186; Mar. 26; Sp. p. 4680; Gaz. vol. 176; p. 849.

Green, Joshua J., Shreveport, La. Mixing-machine. No. 1,019,039; Mar. 5; Sp. p. 60; Gaz. vol. 176; p. 12.

Green, Joshua J., Shreveport, La. Feeding-machine. No. 1,019,040; Mar. 5; Sp. p. 62; Gaz. vol. 176; p. 13.

Green, Joshua J., Shreveport, La. Screening or separating machine. No. 1,019,041; Mar. 5; Sp. p. 64; Gaz. vol. 176; p. 13.

Green, Walter H., Chicago, Ill., assignor to Northern Water Softener Company, Madison, Wis. Water-treating apparatus. No. 1,019,784; Mar. 12; Sp. p. 1681; Gaz. vol. 176; p. 293.

Greenbaum, Morris S., Chicago, Ill. Manufacture of nutritive material for both animal and vegetable life. No. 1,020,091; Mar. 12; Sp. p. 2307; Gaz. vol. 176; p. 396.

Greenberger, Albert. (See Walent, Markus, assignor.)

Greene, Albert E., Pueblo, Colo. Electric furnace. No. 1,021,137; Mar. 26; Sp. p. 4632; Gaz. vol. 176; p. 849.

Greene, Harry S., Woonsocket, R. I. Planetary-napping-machine drum. No. 1,020,280; Mar. 12; Sp. p. 2709; Gaz. vol. 176; p. 459.

Greene, Louis E., Cleghorn, Iowa. Rake. No. 1,020,387; Mar. 12; Sp. p. 2910; Gaz. vol. 176; p. 403.

Greenleaf, William, Bay City, Mich. Vehicle-chock. No. 1,019,785; Mar. 12; Sp. p. 1685; Gaz. vol. 176; p. 293.

Greer, William H. C., Sherman, Tex. Suspension-bridge. No. 1,019,458; Mar. 5; Sp. p. 1048; Gaz. vol. 176; p. 153.

Gregg, Luther L., Jr., Lonejack, Mo. Vehicle-wheel. No. 1,020,977; Mar. 26; Sp. p. 4203; Gaz. vol. 176; p. 781.

Gregory, Thomas F., Henning, Tenn. Whiffletree. No. 1,020,196; Mar. 12; Sp. p. 2543; Gaz. vol. 176; p. 432.

Grenville, Walter W., Thorold, Ontario, Canada. Press for forming pulp articles. No. 1,019,786; Mar. 12; Sp. p. 1686; Gaz. vol. 176; p. 294.

Grether, Gustav, Koblenz, Germany. Parasiticide for plants. No. 1,021,095; Mar. 26; Sp. p. 4431; Gaz. vol. 176; p. 820.

Grieve, Robert. (See Tichon, Joseph E., assignor.)

Griffin, Edwin C., deceased, Newton; L. M. Griffin, executrix, assignor to Bradley Pulverizer Company, Boston, Mass. Grinding-mill. No. 1,020,092; Mar. 12; Sp. p. 2309; Gaz. vol. 176; p. 396.

Griffin, John A., Los Angeles, Cal. Concrete fence-post. No. 1,020,412; Mar. 19; Sp. p. 2975; Gaz. vol. 176; p. 539.

Griffin, Lovina M., executrix. (See Griffin, Edwin C.)

Griggs, George F., and J. A. Henderson, assignors of one-third to D. F. Sullivan and J. F. McNamara, Fitchburg, Mass. Chuck-jaw. No. 1,020,492; Mar. 19; Sp. p. 3138; Gaz. vol. 176; p. 566.

Gringa, Casper H., Waterloo, Iowa. Music-holder for pianos. No. 1,020,947; Mar. 19; Sp. p. 4120; Gaz. vol. 176; p. 718.

Grinnell, Ira L., Detroit, Mich. Air-motor. No. 1,019,459; Mar. 5; Sp. p. 1049; Gaz. vol. 176; p. 154.

Griscom-Spencer Company, The. (See Row, Reuben R., assignor.)

Gross, John, and L. Cohen, Denver, Colo. Apparatus for the treatment of ore. No. 1,021,248; Mar. 26; Sp. p. 4766; Gaz. vol. 176; p. 870.

Gross, Mannin, Council Grove, Kans. Liquid-fuel burner. No. 1,019,247; Mar. 5; Sp. p. 529; Gaz. vol. 176; p. 84.

Grosvenor, William M., Grantwood, N. J. Apparatus for treating fibrous materials. No. 1,019,310; Mar. 5; Sp. p. 706; Gaz. vol. 176; p. 110.

Grubman, Leo, assignor to F. B. Core, New York, N. Y. Photographer's developing-frame. No. 1,019,320; Mar. 5; Sp. p. 712; Gaz. vol. 176; p. 110.

Gruendler, Gustav J., St. Louis, Mo. Ice-box. No. 1,019,631; Mar. 5; Sp. p. 1383; Gaz. vol. 176; p. 211.

Grünewald, Otto, and M. Gorich, Ehrenfeld, near Cologne, Germany. Prop for mines. No. 1,021,249; Mar. 26; Sp. p. 4770; Gaz. vol. 176; p. 870.

Gruver, Lewis W., Pittsburgh, Pa. Oil-can. No. 1,020,413; Mar. 19; Sp. p. 2976; Gaz. vol. 176; p. 539.

Gaell, Henry A., Paris, France. Match-making machine. No. 1,020,644; Mar. 19; Sp. p. 3488; Gaz. vol. 176; p. 616.

Gulley, Robert P., Akron, Ohio. Mouthpiece for ozone-machines. No. 1,019,787; Mar. 12; Sp. p. 1689; Gaz. vol. 176; p. 294.

Gülicher, Friedrich A., Barmen-Rittershausen, Germany. Spooling-machine. No. 1,020,414; Mar. 19; Sp. p. 2977; Gaz. vol. 176; p. 540.

Gunckel, Edward E., *et al.* (See Runner, John B., assignor.)

Gundersen, August, Christiania, Norway, assignor of one-half to O. Hoff, New York, N. Y. Pile. No. 1,019,042; Mar. 5; Sp. p. 66; Gaz. vol. 176; p. 13.

Günther, Oscar, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Brown tetrazo dye. No. 1,019,321; Mar. 5; Sp. p. 714; Gaz. vol. 176; p. 111.

Günzel, Alfred, Rochlitz, assignor to A. Günzel, Altenburg, Germany. Link chain. No. 1,020,197; Mar. 12; Sp. p. 2544; Gaz. vol. 176; p. 432.

Günzel, Arno. (See Günzel, Alfred, assignor.)

Guy, Hugh P., St. Louis, Mo. Tool for picking fruit. No. 1,021,595; Mar. 26; Sp. p. 5520; Gaz. vol. 176; p. 991.

Guy, Samuel L., Tangipahoa, La. Comb-cleaner. No. 1,020,899; Mar. 19; Sp. p. 4023; Gaz. vol. 176; p. 702.

Gwinn, George W., New York, N. Y., assignor to Automatic Packing & Labeling Company, Durham, N. C. Automatic weighing mechanism. No. 1,020,692; Mar. 19; Sp. p. 3589; Gaz. vol. 176; p. 631.

Gwinn, George W., New York, N. Y., assignor to Automatic Packing & Labeling Company, Durham, N. C. Machine for weighing and packaging materials. No. 1,020,693; Mar. 19; Sp. p. 3594; Gaz. vol. 176; p. 632.

Gyro Motor Company. (See Moore, Robert S., assignor.)

Gyro Motor Company, The. (See Moore and Simmons, assignors.)

H. Mueller Manufacturing Company, The. (See Mueller and Schuermann, assignors.)

Haaga, Emil, Stuttgart, Germany. Circular-knitting machine. No. 1,019,632; Mar. 5; Sp. p. 1385; Gaz. vol. 176; p. 211.

Haase, Charles F., East Atchison, Mo. Shade and curtain holder. No. 1,021,596; Mar. 26; Sp. p. 5522; Gaz. vol. 176; p. 991.

Haber, Henry J. (See Smith, Clarence G., assignor.)

Haber, Henry J., Pittsburgh, Pa. Spraying device. No. 1,019,322; Mar. 5; Sp. p. 714; Gaz. vol. 176; p. 111.

Hackett, James, Belaire, Ohio. Bottle-blank mold. No. 1,019,147; Mar. 5; Sp. p. 316; Gaz. vol. 176; p. 49.

Hackney, L. S. (See Minor, Daniel E., assignor.)

Hadaway, John B., Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for use in the manufacture of boots and shoes. No. 1,019,956; Mar. 12; Sp. p. 2031; Gaz. vol. 176; p. 351.

Hadaway, John B., Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Tack-pulling machine. No. 1,021,519; Mar. 26; Sp. p. 5373; Gaz. vol. 176; p. 967.

Hadcock, James, Whitkirk, near Leeds, assignor to Job Day and Sons Limited, Leeds, England. Mechanism for transmitting motion. No. 1,019,891; Mar. 12; Sp. p. 1895; Gaz. vol. 176; p. 330.

Hadjispiridis, Michael D., New York, N. Y. Vacuum-cleaner. No. 1,019,033; Mar. 5; Sp. p. 1387; Gaz. vol. 176; p. 212.

Hadley, Artemas N., Indianapolis, Ind. Oblique-angled gearing. No. 1,020,900; Mar. 19; Sp. p. 4024; Gaz. vol. 176; p. 702.

Hadley, Frank, Chicago, Ill. Bed attachment. No. 1,019,957; Mar. 12; Sp. p. 2033; Gaz. vol. 176; p. 351.

Haerst, Pierre, Chicago, Ill. Wheel. No. 1,020,901; Mar. 19; Sp. p. 4027; Gaz. vol. 176; p. 702.

Hafer, Charles C., Phoenix, Ariz. Pulp-agitator. No. 1,020,694; Mar. 19; Sp. p. 3600; Gaz. vol. 176; p. 632.

Haggenmiller, August, Tarica, Peru. Smelting suited ores. No. 1,021,096; Mar. 26; Sp. p. 4432; Gaz. vol. 176; p. 820.

Hahn, Emil, New York, N. Y. Lock. No. 1,020,978; Mar. 26; Sp. p. 4206; Gaz. vol. 176; p. 781.

Hahn, John, Los Angeles, Cal. Pump-fitting. No. 1,021,188; Mar. 26; Sp. p. 4634; Gaz. vol. 176; p. 850.

Hahnefeld, Ernst H., assignor of one-half to H. Stockmeir, Baltimore, Md. Safety attachment for jewelry. No. 1,019,788; Mar. 12; Sp. p. 1690; Gaz. vol. 176; p. 294.

Hajdu, Joseph, Pricedale, and S. Németh, Grindstone, Pa. Metallic tie and joint. No. 1,020,415; Mar. 19; Sp. p. 2981; Gaz. vol. 176; p. 540.

Hale, Cornelius E. (See Feid, Francis, assignor.)

Hale and Kilburn Company. (See Budd, Edward G., assignor.)

Hall, Charles R., Seabeck, Wash. Concrete structure. No. 1,020,645; Mar. 19; Sp. p. 3490; Gaz. vol. 176; p. 616.

Hall, Elmer E., Chicago, Ill. Speculum. No. 1,020,281; Mar. 12; Sp. p. 2712; Gaz. vol. 176; p. 460.

Hall, Francis C., Kansas City, Mo. Chair-stool. No. 1,020,902; Mar. 19; Sp. p. 4028; Gaz. vol. 176; p. 703.

Hall, Harris F. (See Wright and Hall.)

Hall, John L., Schenectady, N. Y., assignor to General Electric Company. Control system for projectors and the like. No. 1,021,250; Mar. 26; Sp. p. 4771; Gaz. vol. 176; p. 871.

Hallaway, Walter E., Mist, Ark. Attachment for plows and cultivators. No. 1,020,282; Mar. 12; Sp. p. 2714; Gaz. vol. 176; p. 460.

Halliday, George, assignor of one-half to J. D. Armstrong, Tacoma, Wash. Cleaning grain. No. 1,019,148; Mar. 5; Sp. p. 318; Gaz. vol. 176; p. 49.
Halpin, Thomas P., assignor to Workman Manufacturing Company, Chicago, Ill. Locking device for temporary binders. No. 1,019,149; Mar. 5; Sp. p. 320; Gaz. vol. 176; p. 49.
Halstead, Arthur F. (See Rogerson, Albert C., assignor.)
Hamacher-Hawkins Manufacturing Company. (See Hamacher, Lee D., assignor.)
Hamacher, Lee D., Kansas City, Mo., assignor to Hamacher-Hawkins Manufacturing Company. Loose-leaf book. No. 1,020,948; Mar. 19; Sp. p. 4121; Gaz. vol. 176; p. 719.
Haman, Albert L. (See Hummel, Ernest A., assignor.)
Hamill, William W., Glasgow, Scotland. Carburetor for internal-combustion engines. No. 1,020,198; Mar. 12; Sp. p. 2545; Gaz. vol. 176; p. 432.
Hamilton, Bruce H., Lynn, Mass., assignor to General Electric Company. Oil-guard. No. 1,019,460; Mar. 5; Sp. p. 1051; Gaz. vol. 176; p. 154.
Hamilton, James L., Grand Junction, Colo. Machine for grading and sorting fruit. No. 1,020,093; Mar. 12; Sp. p. 2311; Gaz. vol. 176; p. 306.
Hamilton, Ralph E., Middlebury township, Shiawassee county, Mich. Window-screen construction. No. 1,020,601; Mar. 19; Sp. p. 3389; Gaz. vol. 176; p. 602.
Hamlin, Orlo, J., *et al.* (See Gill, Edwin R., assignor.)
Hammer, Conrad. (See Noll, Joseph, assignor.)
Hammond, W. D. (See McConnell, Ernest, assignor.)
Hamrick, Porter S., Wausau, Wis. Force-feed reservoir. No. 1,020,602; Mar. 19; Sp. p. 3391; Gaz. vol. 176; p. 602.
Handloser, Thomas V., and J. C. Dilworth, assignors to Dilworth, Porter & Company, Limited, Pittsburgh, Pa. Machine for pointing tie-plate claws. No. 1,019,634; Mar. 5; Sp. p. 1388; Gaz. vol. 176; p. 212.
Handloser, Thomas V., and J. C. Dilworth, assignors to Dilworth, Porter & Company, Limited, Pittsburgh, Pa. Pointing tie-plate claws. No. 1,021,520; Mar. 26; Sp. p. 5375; Gaz. vol. 176; p. 967.
Hankison, Lewis E., and W. E. Stumm, Connellsville, Pa. Device for steam-boilers. No. 1,021,597; Mar. 26; Sp. p. 5523; Gaz. vol. 176; p. 991.
Hanna, Max R., Schenectady, N. Y., assignor to General Electric Company. Motor-control system. No. 1,019,461; Mar. 5; Sp. p. 1052; Gaz. vol. 176; p. 154.
Hannam, William H., and W. E. Murray, assignors to Western Sugar Refining Company, San Francisco, Cal. Sugar-drier. No. 1,019,958; Mar. 12; Sp. p. 2035; Gaz. vol. 176; p. 352.
Hannam, William H., and W. E. Murray, assignors to Western Sugar Refining Company, San Francisco, Cal. Sugar-drying machine. No. 1,019,959; Mar. 12; Sp. p. 2037; Gaz. vol. 176; p. 352.
Hannon, Michael A., Boston, Mass. Clip for corner-beads. No. 1,019,462; Mar. 5; Sp. p. 1055; Gaz. vol. 176; p. 155.
Hansen, Charles A., Schenectady, N. Y., assignor to General Electric Company. Carbon electrode. No. 1,019,463; Mar. 5; Sp. p. 1057; Gaz. vol. 176; p. 155.
Hansen, John S., Brockton, Mass., assignor to O. A. Miller Treeing Machine Company, Portland, Me. Electrically-heated tool. No. 1,020,603; Mar. 19; Sp. p. 3393; Gaz. vol. 176; p. 602.
Hansen, John S., Brockton, Mass., assignor to O. A. Miller Treeing Machine Company, Portland, Me. Electrically-heated tool. No. 1,021,097; Mar. 26; Sp. p. 4433; Gaz. vol. 176; p. 821.
Hanson, Anders, Butler, S. D. Explosive-engine. No. 1,020,819; Mar. 19; Sp. p. 3868; Gaz. vol. 176; p. 676.
Hanson, Bengt M. W., assignor to Pratt & Whitney Company, Hartford, Conn. Rifling-machine. No. 1,019,892; Mar. 12; Sp. p. 1903; Gaz. vol. 176; p. 331.
Haranis, Joachim, Frankfort-on-the-Main, Germany. Exercising and strength-testing appliance. No. 1,020,551; Mar. 19; Sp. p. 3277; Gaz. vol. 176; p. 585.
Harbaugh, Howard E., Kenosha, Wis. Coin-container. No. 1,021,407; Mar. 26; Sp. p. 5128; Gaz. vol. 176; p. 927.
Harcourt, Bertram E., *et al.* (See Collins, Frank H., assignor.)
Härdén, Johannes, Schenectady, N. Y., assignor to General Electric Company. Arc-light electrode. No. 1,019,464; Mar. 5; Sp. p. 1057; Gaz. vol. 176; p. 155.
Hardin, Joseph A., assignor to Interstate Roofing & Foundry Company, Anniston, Ala. Permanent mold. No. 1,019,248; Mar. 5; Sp. p. 531; Gaz. vol. 176; p. 84.
Hardsocg, Lester C., assignor to Hardsocg Manufacturing Company, Ottumwa, Iowa. Rotating and feeding mechanism for drill-bars. No. 1,020,903; Mar. 19; Sp. p. 4030; Gaz. vol. 176; p. 703.
Hardsocg Manufacturing Company. (See Hardsocg, Lester C., assignor.)
Harley, William S., Milwaukee, Wis. Friction-clutch. No. 1,020,199; Mar. 12; Sp. p. 2550; Gaz. vol. 176; p. 433.
Harley, William S., Milwaukee, Wis. Spring-seat post. (Reissue.) No. 13,383; Mar. 12; Sp. p. 2926; Gaz. vol. 176; p. 495.
Harlow, Frank, Boston, Mass. Adjustable propeller. No. 1,019,635; Mar. 5; Sp. p. 1390; Gaz. vol. 176; p. 212.
Harman, Charles W., New Rochelle, assignor to Joseph Fahys & Co., New York, N. Y. Making Swiss watch-bows. No. 1,019,636; Mar. 5; Sp. p. 1392; Gaz. vol. 176; p. 213.
Harper, Ebenezer H. (See Goldstein, Martin, assignor.)
Harper, William, assignor to The Berlin Machine Works, Beloit, Wis. Planer-knife-adjusting mechanism. No. 1,020,416; Mar. 19; Sp. p. 2982; Gaz. vol. 176; p. 541.
Harpoon Caster Manufacturing Company. (See Schatz, Adam E., assignor.)
Harrington, Edward C., assignor to J. S. Taylor, St. Louis, Mo. Pocket pass-case. No. 1,021,598; Mar. 26; Sp. p. 5525; Gaz. vol. 176; p. 992.
Harris Automatic Press Company, The. (See Smith, Walter E., assignor.)
Harris, Leonard, London, England. Spring suspension for road-vehicles. No. 1,021,251; Mar. 26; Sp. p. 4774; Gaz. vol. 176; p. 871.
Harris, Otis L., *et al.* (See Lancaster, Charles P., assignor.)
Harris, Samuel L., assignor of one-third to N. Dunsmore, Knoxville, Tenn. Rail-joint. No. 1,020,820; Mar. 19; Sp. p. 3870; Gaz. vol. 176; p. 676.
Harris, William, Paterson, N. J. Loom. No. 1,020,388; Mar. 12; Sp. p. 2910; Gaz. vol. 176; p. 493.
Harris, William H., Trinidad, Colo. Weed-puller. No. 1,020,004; Mar. 12; Sp. p. 2313; Gaz. vol. 176; p. 307.
Harrison, Arthur W., Providence, R. I., assignor to U. K. Pettingill, Boston, Mass. Pencil. No. 1,021,148; Mar. 26; Sp. p. 4538; Gaz. vol. 176; p. 837.
Harrison, James J., and A. B. Chatfield, Jr., Wichita, Kans. Medicine-ejector. No. 1,019,465; Mar. 5; Sp. p. 1058; Gaz. vol. 176; p. 155.
Harrison, Philip B., assignor to Chicago Railway Equipment Company, Chicago, Ill. Clip for guard-fingers. No. 1,019,893; Mar. 12; Sp. p. 1907; Gaz. vol. 176; p. 331.
Harrison, Philip B., assignor to Chicago Railway Equipment Company, Chicago, Ill. Adjustable brake-head. No. 1,019,894; Mar. 12; Sp. p. 1908; Gaz. vol. 176; p. 331.
Harrison Safety Boiler Works. (See Gamble, Joseph W., assignor.)
Hart, Thomas H., Everett, Mass. Permutation-lock. No. 1,021,672; Mar. 26; Sp. p. 5642; Gaz. vol. 176; p. 1015.
Hartford, John D., *et al.* (See Ivor, Barry, assignor.)
Hartley, Guy M., Dighton, Mich. Differential gear. No. 1,020,417; Mar. 19; Sp. p. 2985; Gaz. vol. 176; p. 541.
Hartman, John. (See Johnson and Hartman.)
Hartman Manufacturing Company. (See Holt, William L., assignor.)
Hartmann, Geza, San Francisco, and R. J. Busch, Los Angeles, Cal. Metallic alloy. No. 1,020,757; Mar. 19; Sp. p. 3733; Gaz. vol. 176; p. 655.
Hartness, James, Springfield, Vt. Turning-tool. No. 1,020,493; Mar. 19; Sp. p. 3130; Gaz. vol. 176; p. 566.
Hartness, James, Springfield, Vt. Turning-tool. No. 1,020,494; Mar. 19; Sp. p. 3145; Gaz. vol. 176; p. 566.
Hartness, James, Springfield, Vt. Metal-turning tool. No. 1,020,495; Mar. 19; Sp. p. 3149; Gaz. vol. 176; p. 567.
Hartzell, Morris H., Philadelphia, Pa. Hat-pin-point protector. No. 1,019,466; Mar. 5; Sp. p. 1060; Gaz. vol. 176; p. 156.
Haschke, Julius E., assignor to Jewel Electric Co., Chicago, Ill. Boat steering and propelling device. No. 1,021,408; Mar. 26; Sp. p. 5129; Gaz. vol. 176; p. 928.
Hasiett, Charles H., and A. A. Mentzer, Pittsburgh, Pa. Mold-coating. No. 1,021,599; Mar. 26; Sp. p. 5526; Gaz. vol. 176; p. 992.
Hastings, Hammond C., and W. L. Wise, Rugby, England, assignors to General Electric Company. Controller for electric circuits. No. 1,019,467; Mar. 5; Sp. p. 1061; Gaz. vol. 176; p. 156.
Hastings, Ralph V., Chicago, Ill. Tire-protector. No. 1,019,468; Mar. 5; Sp. p. 1063; Gaz. vol. 176; p. 156.
Hatfield, John B. (See Neel and Hatfield.)
Hausdörfer, Arthur, Elberfeld, and C. Heidenreich, Leverkusen, near Cologne, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Green triphenylmethane dye. No. 1,021,364; Mar. 26; Sp. p. 4995; Gaz. vol. 176; p. 912.
Hausdörfer, Arthur, Elberfeld, and C. Heidenreich, Leverkusen, near Cologne, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Yellowgreen triphenylmethane dye. No. 1,021,365; Mar. 26; Sp. p. 4996; Gaz. vol. 176; p. 912.
Hausdörfer, Arthur, Elberfeld, and C. Heidenreich, Leverkusen, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Triphenylmethane dye. No. 1,021,366; Mar. 26; Sp. p. 4997; Gaz. vol. 176; p. 912.
Havard, Albert H., Urbana, Ill. Dirt-receptacle. No. 1,020,849; Mar. 12; Sp. p. 2834; Gaz. vol. 176; p. 480.
Hawe, Matthew, Pelham Manor, N. Y. Driving-belt. No. 1,020,496; Mar. 19; Sp. p. 3153; Gaz. vol. 176; p. 567.
Hawkes, William W., assignor to The Charles Wing Company, Amesbury, Mass. Spring. No. 1,020,350; Mar. 12; Sp. p. 2836; Gaz. vol. 176; p. 480.
Hawthorne, Herbert J., G. B. Wyatt, and O. P. Warner, Cleveland, Ohio; said Warner assignor to R. H. Reynolds, Milwaukee, Wis. Air-pump. No. 1,021,310; Mar. 26; Sp. p. 4886; Gaz. vol. 176; p. 892.
Hay, David. (See Hay, Rule, and Hay.)
Hay, Robert, P. B. Rule, and D. Hay, Mount Pleasant township, Westmoreland county, Pa. Coke-sprinkling apparatus. No. 1,020,979; Mar. 26; Sp. p. 4208; Gaz. vol. 176; p. 782.

Hayden, Lothrop A., Carver, Mass. Cranberry-grader. No. 1,021,311; Mar. 26; Sp. p. 4887; Gaz. vol. 176; p. 893.
Hayes, Jerry J., Elkhart, Ind. Change-speed gearing. No. 1,020,418; Mar. 19; Sp. p. 2987; Gaz. vol. 176; p. 541.
Hayes, Lewis A. (See McIlveene and Hayes.)
Hays, Harold M., New York, and W. R. Rosenbaum, Rochester, N. Y., assignors, by mesne assignments, to Frank S. Betz Company, Hammond, Ind. Head-lamp. No. 1,019,895; Mar. 12; Sp. p. 1908; Gaz. vol. 176; p. 332.
Hays, James W., Baltimore, Md. Motor for bicycles and various kinds of vehicles. No. 1,019,637; Mar. 5; Sp. p. 1393; Gaz. vol. 176; p. 213.
Hazard, Louis A., Baltimore, Md., assignor to Wise Brothers, New York, N. Y. Union overall-garment. No. 1,019,713; Mar. 5; Sp. p. 1527; Gaz. vol. 176; p. 237.
Healey, Fred B., and C. S. Homaher, Denver, Colo. Speedometer. No. 1,019,638; Mar. 5; Sp. p. 1395; Gaz. vol. 176; p. 213.
Heard, Nathan, trustee. (See Cummings, Walter C., assignor.)
Heathcote, Lewin J., Baltimore, Md. Ship-speed indicator. No. 1,020,980; Mar. 26; Sp. p. 4210; Gaz. vol. 176; p. 782.
Hebrank, William F., Highland, Ill. Assorting-machine. No. 1,020,981; Mar. 26; Sp. p. 4214; Gaz. vol. 176; p. 782.
Hedley, Frank, Yonkers, and J. S. Doyle, New York, N. Y. Time-recording device for electric trains. No. 1,020,419; Mar. 19; Sp. p. 2989; Gaz. vol. 176; p. 542.
Hedley, Frank, Yonkers, and J. S. Doyle, New York, N. Y. Time-recording device for electric trains. No. 1,020,420; Mar. 19; Sp. p. 2992; Gaz. vol. 176; p. 542.
Heerwagen, Leopold F. A. H., *et al.* (See Schwertner, Joseph, assignor.) (Reissue.)
Heeter, Charles M., Butler, Pa. Swab. No. 1,021,600; Mar. 26; Sp. p. 5528; Gaz. vol. 176; p. 992.
Heffernan, Florence F., New York, N. Y. Combined anti-skidding and jack attachment for automobiles. No. 1,019,469; Mar. 5; Sp. p. 1065; Gaz. vol. 176; p. 157.
Hefter, Joseph, Buffalo, N. Y. Automatic weighing-machine. No. 1,019,323; Mar. 5; Sp. p. 715; Gaz. vol. 176; p. 111.
Hegner, Charles. (See Herbold and Hegner.)
Heidenreich, Carl. (See Hausdörfer and Heidenreich.)
Heinitz, Woldemar R., assignor to Schubert & Salzer Maschinenfabrik Aktiengesellschaft, Chemnitz, Germany. Calculating-machine. No. 1,020,200; Mar. 12; Sp. p. 2552; Gaz. vol. 176; p. 433.
Heiskell, William L., Indianapolis, Ind. Device for writing for the use of the blind. No. 1,019,789; Mar. 12; Sp. p. 1691; Gaz. vol. 176; p. 295.
Heisler, Charles L., Schenectady, N. Y. Piston-rod-extension guide. No. 1,019,150; Mar. 5; Sp. p. 323; Gaz. vol. 176; p. 50.
Helgerson, Thomas O., Minneapolis, assignor of one-half to Fosston Manufacturing Company, St. Paul, Minn. Grain-cleaner. No. 1,019,470; Mar. 5; Sp. p. 1067; Gaz. vol. 176; p. 157.
Helsing, August W., and H. A. Donaldson, Fair Oaks, Pa. Nut-lock. No. 1,020,421; Mar. 19; Sp. p. 2996; Gaz. vol. 176; p. 543.
Helstrom, John, Morristown, N. J. Foot-pedal switch. No. 1,019,745; Mar. 5; Sp. p. 1502; Gaz. vol. 176; p. 248.
Henderson, Albert H., assignor to The Henderson Rubber Company, Baltimore, Md. Composition of matter. No. 1,020,497; Mar. 19; Sp. p. 3154; Gaz. vol. 176; p. 567.
Henderson, Albert H., assignor to The Henderson Rubber Company, Baltimore, Md. Treatment of rawhide. No. 1,020,498; Mar. 19; Sp. p. 3155; Gaz. vol. 176; p. 567.
Henderson, Albert H., assignor to The Henderson Rubber Company, Baltimore, Md. Fabric or cloth. No. 1,020,499; Mar. 19; Sp. p. 3158; Gaz. vol. 176; p. 568.
Henderson, George B. (See Woolslare, Harry A., assignor.)
Henderson, John A. (See Griggs and Henderson.)
Henderson Rubber Company, The. (See Henderson, Albert H., assignor.)
Hendricks, Samuel C., and G. E. Bowles, Hannibal, Mo. Mail receiving and delivering apparatus. No. 1,020,201; Mar. 12; Sp. p. 2556; Gaz. vol. 176; p. 434.
Hendrickson, Fred K., assignor to Prentice Bros. Company, Worcester, Mass. Belt-tightener for drills. No. 1,019,639; Mar. 5; Sp. p. 1397; Gaz. vol. 176; p. 214.
Hendrie, John, Racine, Wis. Self-filling fountain-pen. No. 1,021,673; Mar. 26; Sp. p. 5645; Gaz. vol. 176; p. 1016.
Hennelly, Andrew F. (See Feely and Hennelly.)
Hennessy, Leo M., Providence, R. I. Oil-burner. No. 1,019,640; Mar. 5; Sp. p. 1399; Gaz. vol. 176; p. 214.
Henry, George J., Jr., San Francisco, Cal. Thrust-bearing. No. 1,020,552; Mar. 19; Sp. p. 3278; Gaz. vol. 176; p. 586.
Henry, Hayes W., Melvern, Kans. Vehicle-wheel. No. 1,019,896; Mar. 12; Sp. p. 1911; Gaz. vol. 176; p. 332.
Henry, John A. (See Kish and Henry.)
Henry, William D., Pittsburgh, Pa. Metallic draft member. No. 1,019,736; Mar. 5; Sp. p. 1576; Gaz. vol. 176; p. 245.
Hepfinger, William, Tilden, Nebr. Water-cooler. No. 1,020,982; Mar. 26; Sp. p. 4215; Gaz. vol. 176; p. 783.
Hepp, Daniel, Chicago, Ill. Combined tie and collar fastener. No. 1,019,324; Mar. 5; Sp. p. 719; Gaz. vol. 176; p. 112.
Herbold, Henry H., Thayer, and C. Hegner, Cainesville, Mo.; said Herbold assignor to said Hegner. Safety-stop for mine-cars. No. 1,019,249; Mar. 5; Sp. p. 533; Gaz. vol. 176; p. 85.
Herbst, Frederick, Danville, Ill. Hair-pin. No. 1,020,904; Mar. 19; Sp. p. 4032; Gaz. vol. 176; p. 704.
Hercules Tire & Rubber Company. (See McCool, William A., assignor.)
Herman, Karl L., Chicago, Ill. Shipping-case. No. 1,019,471; Mar. 5; Sp. p. 1069; Gaz. vol. 176; p. 158.
Hermance Machine Co. (See Marsh, Calvin D., assignor.)
Herndon, Joseph R., assignor to Oxine Gas Manufacturing Company, Fort Worth, Tex. Apparatus for making carbureted hydrogen gas. No. 1,019,714; Mar. 5; Sp. p. 1528; Gaz. vol. 176; p. 237.
Héroult, Paul L. T., La Praz, France. Motor. No. 1,021,521; Mar. 26; Sp. p. 5376; Gaz. vol. 176; p. 967.
Hertsberg, Harry, *et al.*, trustees. (See Betts, Lewis F., assignor.)
Herzberg, Ernest A. and G. H., Seattle, Wash. Plasterboard machine. No. 1,019,250; Mar. 5; Sp. p. 534; Gaz. vol. 176; p. 85.
Herzberg, George H. (See Herzberg, Ernest A. and G. H.)
Hess Flume Company. (See Hess, George L., assignor.)
Hess, Franklin P., Lynn, assignor, by mesne assignments, to Hess Manufacturing Co., Boston, Mass. Drier. No. 1,020,695; Mar. 19; Sp. p. 3601; Gaz. vol. 176; p. 633.
Hess, George L., assignor to Hess Flume Company, Denver, Colo. Flume. No. 1,020,905; Mar. 19; Sp. p. 4033; Gaz. vol. 176; p. 704.
Hess, Henry, Philadelphia, Pa. Change-gear mechanism. No. 1,020,095; Mar. 12; Sp. p. 2315; Gaz. vol. 176; p. 397.
Hess, Louis F., Ansted, W. Va. Cutter-head. No. 1,019,251; Mar. 5; Sp. p. 535; Gaz. vol. 176; p. 85.
Hess Manufacturing Co. (See Hess, Franklin P., assignor.)
Hess, Owen H., Nazareth, Pa. Gudgeon. No. 1,020,906; Mar. 19; Sp. p. 4035; Gaz. vol. 176; p. 704.
Hesse, Walter A., Alameda, and J. T. Slaven, Oakland, Cal. Voltage-reducer. No. 1,019,641; Mar. 5; Sp. p. 1400; Gaz. vol. 176; p. 215.
Hesser, Otto, Stuttgart-Cannstatt, Germany. Machine for automatically making paper packets. No. 1,020,821; Mar. 19; Sp. p. 3871; Gaz. vol. 176; p. 676.
Hessler, Henry E., and F. W. Bast, Muscatine, Iowa. Tenon-machine gage. No. 1,020,422; Mar. 19; Sp. p. 2097; Gaz. vol. 176; p. 543.
Heusler, Sone A., Kansas City, Mo. Trunk. No. 1,019,325; Mar. 5; Sp. p. 720; Gaz. vol. 176; p. 112.
Hewitt, Herbert H., Buffalo, N. Y. Car-axle journal-box. No. 1,020,423; Mar. 19; Sp. p. 2998; Gaz. vol. 176; p. 544.
Heyde, Max A., assignor to S. E. Summerfield, New York, N. Y. Stocking. No. 1,020,822; Mar. 19; Sp. p. 3876; Gaz. vol. 176; p. 677.
Heylandt, Christian W. P., Hamburg, Germany. Expansion-engine for producing low temperatures. No. 1,019,790; Mar. 12; Sp. p. 1694; Gaz. vol. 176; p. 295.
Heylandt, Christian W. P., Hamburg, Germany. Expansion-engine for reducing compressed gas to low temperatures. No. 1,019,791; Mar. 12; Sp. p. 1696; Gaz. vol. 176; p. 296.
Heylman, Edward M., assignor to The Janesville Machine Company, Janesville, Wis. Transportation-truck for disk harrows. No. 1,020,983; Mar. 26; Sp. p. 4217; Gaz. vol. 176; p. 783.
Heylman, Edward M., assignor to The Janesville Machine Company, Janesville, Wis. Corn-planter. No. 1,021,042; Mar. 26; Sp. p. 4328; Gaz. vol. 176; p. 803.
Hibbard, Herbert O., assignor to Worcester Novelty Company, Worcester, Mass. Support for cards and the like. No. 1,020,907; Mar. 19; Sp. p. 4036; Gaz. vol. 176; p. 704.
Hibbard, Robert L. (See Rodman, Hibbard, and Carpenter.)
Hibner, Philip D., Seattle, Wash. System of operating railway-switches and signal devices. No. 1,021,312; Mar. 26; Sp. p. 4888; Gaz. vol. 176; p. 893.
Hibner, Philip D., Seattle, Wash. Railway-switch controller. No. 1,021,313; Mar. 26; Sp. p. 4891; Gaz. vol. 176; p. 894.
Hiby, Walther, Sandal, near Wakefield, England. Charging of coke-ovens. No. 1,019,642; Mar. 5; Sp. p. 1402; Gaz. vol. 176; p. 215.
Hiby, Walther, Sandal, near Wakefield, England. Apparatus for charging coke-ovens. No. 1,019,643; Mar. 5; Sp. p. 1403; Gaz. vol. 176; p. 215.
Hickman, Frank L., *et al.* (See Runner, John B., assignor.)
Hide-Ite Leather Company. (See Clapp, Albert L., assignor.)
Higgin, Henry, Newport, Ky. Machine for making metal tubes. No. 1,019,043; Mar. 5; Sp. p. 67; Gaz. vol. 176; p. 14.
Higgins, Sylvester, Jersey City Heights, N. J. Concrete wall construction. No. 1,019,326; Mar. 5; Sp. p. 722; Gaz. vol. 176; p. 112.
Hilding, Nils A., *et al.* (See Richer, Joseph, assignor.)
Hildreth, James W., Marion, Ohio. Fly-trap. No. 1,020,500; Mar. 19; Sp. p. 3161; Gaz. vol. 176; p. 568.
Hilger, Jacob W., Philadelphia, Pa. Wood-bending machine. No. 1,019,472; Mar. 5; Sp. p. 1071; Gaz. vol. 176; p. 158.
Hill, Arthur H. (See Farquhar and Hill.)

Hill, Charles V., St. Louis, Mo. Street-car advertising device. No. 1,020,351; Mar. 12; Sp. p. 2837; Gaz. vol. 176; p. 481.

Hill, Daniel B., Grayville, Ill. Motor-plow. No. 1,019,252; Mar. 5; Sp. p. 537; Gaz. vol. 176; p. 85.

Hill, Frank F., Los Angeles, Cal. Well-casing. No. 1,020,696; Mar. 19; Sp. p. 3606; Gaz. vol. 176; p. 633.

Hill, Hugo. (See Schneider, Rutenbeck, and Hill.)

Hill, Irving, Wallace, Cal. Alphabetical symbols. No. 1,021,189; Mar. 26; Sp. p. 4637; Gaz. vol. 176; p. 850.

Hillenbrand, John A., Vanderburgh county, Ind. Retarder for self-binding harvesters. No. 1,019,960; Mar. 12; Sp. p. 2039; Gaz. vol. 176; p. 352.

Hiller, Joseph L., Mattapoisett, Mass. Crushing and pulverizing machine. No. 1,020,501; Mar. 19; Sp. p. 3162; Gaz. vol. 176; p. 568.

Hillyard, Newton S., St. Joseph, Mo. Liquid-soap fountain. No. 1,020,758; Mar. 19; Sp. p. 3734; Gaz. vol. 176; p. 655.

Hinds, Jesse L., and J. J. Dossert, assignors to Crouse-Hinds Company, Syracuse, N. Y. Electrical coupling. No. 1,019,044; Mar. 5; Sp. p. 69; Gaz. vol. 176; p. 14.

Hines, William J., assignor to Puritan Comb Company, Leominster, Mass. Hair ornament. No. 1,020,424; Mar. 19; Sp. p. 3003; Gaz. vol. 176; p. 544.

Hinkel, Anna, Milwaukee, Wis. Sleeve-form. No. 1,020,502; Mar. 19; Sp. p. 3163; Gaz. vol. 176; p. 568.

Hinsdale, Frederick H., Roanoke, Va. Liquid-applying stopper for bottles. No. 1,021,522; Mar. 26; Sp. p. 5378; Gaz. vol. 176; p. 968.

Hirsh, Julius. (See Elder, William S., assignor.)

Hirz, Joseph H., Milwaukee, Wis. Lubricator for elevator-guides. No. 1,021,190; Mar. 26; Sp. p. 4638; Gaz. vol. 176; p. 850.

Hislop, George R., Paisley, Scotland. Domestic fire, range, and the like. No. 1,021,460; Mar. 26; Sp. p. 5231; Gaz. vol. 176; p. 946.

Hitner, Harry F., Mount Vernon, Ohio, assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa. Capping-off device. No. 1,019,792; Mar. 12; Sp. p. 1698; Gaz. vol. 176; p. 296.

Hives, Percy D. (See Crighton and Hives.)

Hixon, Joseph M., Attica, Ind. Headlight for automobiles. No. 1,019,961; Mar. 12; Sp. p. 2040; Gaz. vol. 176; p. 353.

Hjarne, Carl E. (See Johnson, Gustaf, assignor.)

Hloch, Franz, Mährisch-Schonberg, Austria-Hungary. Machine for pressing pasty masses, more particularly mixtures of asbestos and cement. No. 1,021,098; Mar. 26; Sp. p. 4435; Gaz. vol. 176; p. 821.

Hoagland, Frank O., assignor to The Union Metallic Cartridge Company, Bridgeport, Conn. Paper shot-shell. No. 1,020,142; Mar. 12; Sp. p. 2414; Gaz. vol. 176; p. 412.

Hobbs, Francis C., assignor to The Brunswick-Balke-Collender Company of New York, New York, N. Y. Pinspot for bowling-alleys. No. 1,020,646; Mar. 19; Sp. p. 3491; Gaz. vol. 176; p. 616.

Hoberg, Wilhelm, Schalksmühle, Germany. Scythe. No. 1,020,352; Mar. 12; Sp. p. 2839; Gaz. vol. 176; p. 481.

Hockett, Clarkson P. (See Arnold and Hockett.)

Hodge, Arthur J. (See Beach and Hodge.)

Hodge, Lillian B. (See Patchin, William E., assignor.)

Hodges, James C., Attleboro, Mass., assignor to S. O. Bigney. Elastic tension device. No. 1,020,553; Mar. 19; Sp. p. 3280; Gaz. vol. 176; p. 586.

Hodgman, Willis K., assignor to Huber-Hodgman Printing Press Co., Taunton, Mass. Impression mechanism for printing-presses. No. 1,019,253; Mar. 5; Sp. p. 540; Gaz. vol. 176; p. 86.

Hoeckelberg, Herman B., Cliffside, N. J. Device for slaughtering animals. No. 1,021,523; Mar. 26; Sp. p. 5379; Gaz. vol. 176; p. 968.

Hoff, Olaf. (See Gundersen, August, assignor.)

Hoffmann, Rudolf, Köpenick, near Berlin, Germany. Process and apparatus for the manufacture of glass drums and other hollow bodies. No. 1,021,043; Mar. 26; Sp. p. 4332; Gaz. vol. 176; p. 804.

Hofmann, Alfred E., Lucerne, Switzerland. Mechanical stoker. No. 1,019,644; Mar. 5; Sp. p. 1405; Gaz. vol. 176; p. 216.

Hogan, George F., Chicago, Ill. Sanitary-drinking-cup blank. No. 1,021,099; Mar. 26; Sp. p. 4436; Gaz. vol. 176; p. 821.

Hoglund, Carl O., Crookston, Minn. Concrete-mixing machine. No. 1,019,737; Mar. 5; Sp. p. 1577; Gaz. vol. 176; p. 246.

Holcomb, Preston L., Birmingham, Ala. Loading apparatus. No. 1,020,554; Mar. 19; Sp. p. 3282; Gaz. vol. 176; p. 586.

Holden, Charles R., Chicago, Ill. Railway-road-bed construction. No. 1,020,096; Mar. 12; Sp. p. 2320; Gaz. vol. 176; p. 397.

Holden, Daniel L., New York, N. Y. Ice-machine. No. 1,020,759; Mar. 19; Sp. p. 3736; Gaz. vol. 176; p. 655.

Holden, Delos, Upper Montclair, N. J. Ignition device. No. 1,020,503; Mar. 19; Sp. p. 3164; Gaz. vol. 176; p. 569.

Holderman, William E., Salt Lake City, Utah. Hand-rake-cleaning attachment. No. 1,021,481; Mar. 26; Sp. p. 5233; Gaz. vol. 176; p. 946.

Holdsworth, Fred D., assignor to Sullivan Machinery Company, Claremont, N. H. Lubricating device. No. 1,019,645; Mar. 5; Sp. p. 1407; Gaz. vol. 176; p. 216.

Holitzki, Johann, Killaly, Saskatchewan, Canada. Feed-bag. No. 1,021,601; Mar. 26; Sp. p. 5531; Gaz. vol. 176; p. 993.

Holkum, Frederick C., Pocahontas, Ill. Match-box. No. 1,021,602; Mar. 26; Sp. p. 5531; Gaz. vol. 176; p. 993.

Holland, George W., Tombstone, Ariz. Dumping-wagon. No. 1,020,823; Mar. 19; Sp. p. 3877; Gaz. vol. 176; p. 677.

Holland, James J., Philadelphia, Pa., and W. Discher, Toledo, Ohio. Combination atomizer and nebulizer. No. 1,020,647; Mar. 19; Sp. p. 3493; Gaz. vol. 176; p. 617.

Hollister, Harold A. (See Campbell, George W., assignor.)

Hollister, Harold A. (See Darley, John W., Jr., assignor.)

Holmes, John, Boston, Mass. Display device. No. 1,019,151; Mar. 5; Sp. p. 324; Gaz. vol. 176; p. 50.

Holmquist, John O., Chicago, Ill. Self-squaring curtain-stretcher. (Reissue.) No. 13,379; Mar. 5; Sp. p. 1599; Gaz. vol. 176; p. 249.

Holt, Charles. (See Glover and Holt.)

Holt, Harris B. (See Elliott, Mills, and Holt.)

Holt, Pliny E., Stockton, Cal. Autotractor "A" frame. No. 1,020,283; Mar. 12; Sp. p. 2715; Gaz. vol. 176; p. 460.

Holt, William A., Oconto, Wis. Log-carrying car. No. 1,020,824; Mar. 19; Sp. p. 3879; Gaz. vol. 176; p. 678.

Holt, William L., assignor to Hartman Manufacturing Company, Vincennes, Ind. Cultivator-tooth attachment. No. 1,020,202; Mar. 12; Sp. p. 2559; Gaz. vol. 176; p. 434.

Holtzbauer, Mathias A. (See De Laney and Holtzbauer.)

Holtzen, John F., Orlando, Okla. Draft attachment. No. 1,021,314; Mar. 26; Sp. p. 4894; Gaz. vol. 176; p. 894.

Homsher, Carl S. (See Healey and Homsher.)

Honold, Gottlob, assignor to Firm of R. Bosch, Stuttgart, Germany. Magnet-frame for electric ignition-machines. No. 1,020,143; Mar. 12; Sp. p. 2415; Gaz. vol. 176; p. 412.

Honolulu Iron Works Company. (See Kimball and Pratt, assignors.)

Hood, John, assignor of one-half to J. Pitton, Detroit, Mich. Excavating-machine. No. 1,020,504; Mar. 19; Sp. p. 3167; Gaz. vol. 176; p. 569.

Hoop, James B., Portland, assignor of one-half to W. Newton, Denver, Colo. Grinding-mill. No. 1,021,191; Mar. 26; Sp. p. 4639; Gaz. vol. 176; p. 850.

Hooton, Pinkie D., Hughes Springs, Tex. Box-car door fastener. No. 1,020,604; Mar. 19; Sp. p. 3395; Gaz. vol. 176; p. 603.

Hoover Suction Sweeper Company, The. (See Spangler, James M., assignor.)

Hope-Jones, Robert, assignor to The Rudolph Wurlitzer Manufacturing Company, North Tonawanda, N. Y. Organ-swell. No. 1,021,140; Mar. 26; Sp. p. 4539; Gaz. vol. 176; p. 837.

Hopkins, Alfred, Chelsea, Mass. Fabric. No. 1,019,473; Mar. 5; Sp. p. 1073; Gaz. vol. 176; p. 158.

Hopkins, James M., Chicago, Ill. Sliding-door fastener. No. 1,021,524; Mar. 26; Sp. p. 5380; Gaz. vol. 176; p. 968.

Hopkins, Mathew S., assignor to The Separate Recovery Company of America, Baltimore, Md. Recovery of oily ink from cloths. No. 1,021,737; Mar. 26; Sp. p. 5775; Gaz. vol. 176; p. 1037.

Hopkins, Mathew S., assignor to The Separate Recovery Company of America, Baltimore, Md. Apparatus for the recovery of oily ink from cloths. No. 1,021,738; Mar. 26; Sp. p. 5777; Gaz. vol. 176; p. 1037.

Hopkins, Solomon S., Waynesboro, Va. Combination mail-box and signaling mechanism. No. 1,021,100; Mar. 26; Sp. p. 4437; Gaz. vol. 176; p. 821.

Hopkins, William D. (See Fleming and Marsh, assignors.)

Horan, Patrick J., *et al.* (See Ironside, Matthew C., assignor.)

Hormbrey, George E., Northwich, England. Luggage and like carrier for cycles. No. 1,021,044; Mar. 26; Sp. p. 4335; Gaz. vol. 176; p. 804.

Horn, Aaron C. (See Bladen, Walter C., assignor.)

Hornbeck, Charles H., Waterford, N. Y. Paper machinery. No. 1,021,603; Mar. 26; Sp. p. 5532; Gaz. vol. 176; p. 993.

Horner, Harry E., Syracuse, N. Y. Garbage-strainer. No. 1,021,150; Mar. 26; Sp. p. 4543; Gaz. vol. 176; p. 837.

Horney, Merle B. (See Berg, Fred G., assignor.)

Hornseth, Sevrin P., Renville, Minn. Clothes-pin. No. 1,020,203; Mar. 12; Sp. p. 2562; Gaz. vol. 176; p. 434.

Horowitz, Arthur, Berlin, Germany. Medicinal tablet. No. 1,021,674; Mar. 26; Sp. p. 5646; Gaz. vol. 176; p. 1016.

Horsman, Thomas, Chicago, Ill., assignor to Chicago Belting Company. Compound belt. No. 1,019,152; Mar. 5; Sp. p. 326; Gaz. vol. 176; p. 51.

Horton, Albert J., White Plains, N. Y., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Motor-controller. No. 1,019,045; Mar. 5; Sp. p. 71; Gaz. vol. 176; p. 15.

Horton, Albert J., White Plains, N. Y., assignor to The Cutler-Hammer Mfg. Co., Milwaukee, Wis. Signal. No. 1,020,565; Mar. 19; Sp. p. 3285; Gaz. vol. 176; p. 587.

Horton, Alexander, Portsmouth, England. Aerial and other vessel. No. 1,019,646; Mar. 5; Sp. p. 1409; Gaz. vol. 176; p. 216.

Horton, Alexander, Portsmouth, England. Device for use on aerial and other vessels. No. 1,019,647; Mar. 5; Sp. p. 1412; Gaz. vol. 176; p. 217.

Horton, Charles M., Elizabeth, N. J., assignor to The Singer Manufacturing Company. Button-sewing machine. No. 1,020,949; Mar. 19; Sp. p. 4122; Gaz. vol. 176; p. 719.

Horwath, Rudolph F. (See Szentivanyi, Kalman, assignor.)

Horwood, Edward J., Broken Hill, New South Wales, Australia. Treating and subsequently separating sulfid ores, &c. No. 1,020,353; Mar. 12; Sp. p. 2840; Gaz. vol. 176; p. 481.

Hoskin, George C., Nevada, Iowa. Tabulating mechanism for type-writing machines. No. 1,021,675; Mar. 26; Sp. p. 5647; Gaz. vol. 176; p. 1016.

Hotaling, Calvin, Chanute, Kans. Window-shade adjuster. No. 1,020,605; Mar. 19; Sp. p. 3396; Gaz. vol. 176; p. 603.

Houlahen, Jeremiah J., Etna, Pa. Curtain-pole fixture. No. 1,019,474; Mar. 5; Sp. p. 1074; Gaz. vol. 176; p. 158.

Houlahen, Jeremiah J., Etna, Pa. Curtain-shade-roller fixture. No. 1,019,475; Mar. 5; Sp. p. 1076; Gaz. vol. 176; p. 159.

Howard, Charles, New York, N. Y., assignor to National Lumber Vulcanizing Corporation. Vulcanized wood. No. 1,021,676; Mar. 26; Sp. p. 5649; Gaz. vol. 176; p. 1016.

Howard, William H., Wheatland, Okla. Fuel-oil burner. No. 1,019,648; Mar. 5; Sp. p. 1413; Gaz. vol. 176; p. 217.

Howe, Harvey E., Windber, Pa. Circuit-breaker. No. 1,021,604; Mar. 26; Sp. p. 5535; Gaz. vol. 176; p. 993.

Howe, Winthrop K., Rochester, assignor to General Railway Signal Company, Gates, N. Y. Electric semaphore-signal for railways. No. 1,019,046; Mar. 5; Sp. p. 76; Gaz. vol. 176; p. 15.

Howe, Winthrop K., Rochester, assignor to General Railway Signal Company, Gates, N. Y. Relay-movement. No. 1,019,047; Mar. 5; Sp. p. 77; Gaz. vol. 176; p. 16.

Howell, Henry G., Anderson, S. C. Oven. No. 1,019,897; Mar. 12; Sp. p. 1913; Gaz. vol. 176; p. 333.

Howell, Joseph B., Walpole, Mass. Sanitary drinking device. No. 1,021,677; Mar. 26; Sp. p. 5650; Gaz. vol. 176; p. 1016.

Howland, Ephraim, Pontiac, Mich. Wire gate. No. 1,020,144; Mar. 12; Sp. p. 2417; Gaz. vol. 176; p. 413.

Hoyt, Homer J., assignor to Morgan & Wright, Detroit, Mich. Winding or wrapping machine. No. 1,020,097; Mar. 12; Sp. p. 2326; Gaz. vol. 176; p. 398.

Hubbard, George M., assignor to The W. & E. T. Fitch Co., New Haven, Conn. Buckle. No. 1,020,760; Mar. 19; Sp. p. 3740; Gaz. vol. 176; p. 656.

Hubbard, William E. (See Ough and Hubbard.)

Hubbell, Harvey, Bridgeport, Conn. Separable attachment-plug. No. 1,021,101; Mar. 26; Sp. p. 4439; Gaz. vol. 176; p. 822.

Huber, Clarence E., assignor of one-third to J. Huber and one-third to H. M. Huber, Mansfield, Ohio. Sleigh attachment for vehicles. No. 1,021,719; Mar. 26; Sp. p. 5736; Gaz. vol. 176; p. 1030.

Huber, Harvey M., *et al.* (See Huber, Clarence E., assignor.)

Huber-Hodgman Printing Press Co. (See Hodgman, Willis K., assignor.)

Huber, Jacob, *et al.* (See Huber, Clarence E., assignor.)

Huber, Joseph, Elma, Iowa. Metallic fence-post. No. 1,021,409; Mar. 26; Sp. p. 5131; Gaz. vol. 176; p. 928.

Hudson, Frank R., Windsor, Mo. Acetylene-gas generator. No. 1,021,462; Mar. 26; Sp. p. 5334; Gaz. vol. 176; p. 946.

Hudson, Jerry M., Piqua, Ohio. Molder's bench. No. 1,020,098; Mar. 12; Sp. p. 2329; Gaz. vol. 176; p. 398.

Huff, Frank, Napa, Cal. Electric damper control. No. 1,020,606; Mar. 19; Sp. p. 3398; Gaz. vol. 176; p. 603.

Huff, Russell, assignor, by mesne assignments, to Packard Motor Car Company, Detroit, Mich. Motor-vehicle. No. 1,019,264; Mar. 5; Sp. p. 544; Gaz. vol. 176; p. 86.

Huff, Samuel D., Wichita, Kans. Automatic stock and poultry feeder. No. 1,020,505; Mar. 19; Sp. p. 3169; Gaz. vol. 176; p. 569.

Huffman, John O., and E. J. Lauffer, assignors to The White Sewing Machine Company, Cleveland, Ohio. Throw-out device for reciprocating-shuttle sewing-machines. No. 1,020,099; Mar. 12; Sp. p. 2332; Gaz. vol. 176; p. 398.

Hughes, Samuel E., Alexandria, Ind. Road scraper and grader. No. 1,019,153; Mar. 5; Sp. p. 327; Gaz. vol. 176; p. 51.

Hull, John W., Sr., Zion City, Ill. Commode. No. 1,019,154; Mar. 5; Sp. p. 328; Gaz. vol. 176; p. 51.

Hume, James H., Glasgow, Scotland. Furnace-front. No. 1,019,155; Mar. 5; Sp. p. 330; Gaz. vol. 176; p. 52.

Hummel, Ernest A., assignor to A. L. Haman, St. Paul, Minn. Secondary electric clock. No. 1,021,045; Mar. 26; Sp. p. 4336; Gaz. vol. 176; p. 804.

Humphrey, Frederick J. and H. R., assignors to General Gas Light Company, Kalamazoo, Mich. Gas-lamp. No. 1,020,556; Mar. 19; Sp. p. 3287; Gaz. vol. 176; p. 587.

Humphrey, George S., *et al.*, executors. (See Hunt, Charles W.)

Humphrey, Hubert R. (See Humphrey, Frederick J. and H. R.)

Humphrey, James A. (See Carpenter and Humphrey.)

Hunt, Charles W., *et al.*, executors. (See Hunt, Charles W.)

Hunt, Charles W., deceased, New York, N. Y.; K. H. and C. W. Hunt and G. S. Humphrey, executors. Motor-truck. No. 1,020,607; Mar. 19; Sp. p. 3399; Gaz. vol. 176; p. 603.

Hunt, George G., Piano, Ill. Garment-hanger. No. 1,020,608; Mar. 19; Sp. p. 3400; Gaz. vol. 176; p. 603.

Hunt, Katharine H., *et al.*, executors. (See Hunt, Charles W.)

Hunter, David E. (See Emery and Hunter.)

Hunter, David E., Cambridge, Mass., assignor to Library Bureau, Boston, Mass. Expansible cabinet. No. 1,020,557; Mar. 19; Sp. p. 3290; Gaz. vol. 176; p. 588.

Hunter, James F., Sioux Rapids, Iowa. Shocker attachment. No. 1,020,425; Mar. 19; Sp. p. 3004; Gaz. vol. 176; p. 544.

Hupp, Albert, Kansas City, Mo. Mail-exchange system. No. 1,020,609; Mar. 19; Sp. p. 3402; Gaz. vol. 176; p. 604.

Hupp, Albert, Kansas City, Mo. Mail-bag station-crane. No. 1,020,610; Mar. 19; Sp. p. 3416; Gaz. vol. 176; p. 604.

Hurdleston, O. G. (See Watkins, William J., assignor.)

Hurley, John W. (See Gensmer, Theodore, assignor.)

Hurley, John W., Portland, Oreg. Garbage-receptacle. No. 1,019,156; Mar. 5; Sp. p. 331; Gaz. vol. 176; p. 52.

Hurson, James, Bigbend, S. D. Figure toy. No. 1,019,157; Mar. 5; Sp. p. 332; Gaz. vol. 176; p. 52.

Hurst, George W., Lake Arthur, La. Neck-yoke fastener. No. 1,021,102; Mar. 26; Sp. p. 4440; Gaz. vol. 176; p. 822.

Hurst, Josiah W., Richmond, England. Attachment to piano-cases. No. 1,021,525; Mar. 26; Sp. p. 5382; Gaz. vol. 176; p. 968.

Hustace, Frank, and J. J. Smiddy, Honolulu, Hawaii. Cane-cutter. No. 1,021,605; Mar. 26; Sp. p. 5536; Gaz. vol. 176; p. 994.

Husted, Charles L., Jersey City, assignor to New York Bottlers' Supplies Mfg. Co., Hoboken, N. J. Siphon-bottle. No. 1,020,506; Mar. 19; Sp. p. 3171; Gaz. vol. 176; p. 570.

Huston, Charles L., Coatesville, Pa. Press for bending metal shapes. No. 1,021,526; Mar. 26; Sp. p. 5383; Gaz. vol. 176; p. 969.

Hutchinson, Hugh H. (See Arnold, Jacob F., assignor.)

Hutchinson, Rowland, Nottingham, England. Knitting-machine. No. 1,021,678; Mar. 26; Sp. p. 5651; Gaz. vol. 176; p. 1017.

Hutton, Homer F., Jeffers, Mont. Grain-separator. No. 1,019,962; Mar. 12; Sp. p. 2041; Gaz. vol. 176; p. 353.

Hydraulic Pressed Steel Company, The. (See Foster, James H., assignor.)

Hydro-Carbon Vaporizer Limited, The. (See Mowbray, James W., assignor.)

Hydro-Vacuum. (See Frame, William J., assignor.)

Ickes, Peter C., Chanute, Kans. Knockdown tank. No. 1,019,255; Mar. 5; Sp. p. 545; Gaz. vol. 176; p. 87.

Ideal Power Generator Company, The. (See Krohn and Arreagada, assignors.)

Ideal Wheel Company, The. (See Strietelmeier, John E., assignor.)

Ieifield, Fred C., assignor to Columbia Postal Supply Company, Silver Creek, N. Y. Mail-marking machine. No. 1,019,158; Mar. 5; Sp. p. 333; Gaz. vol. 176; p. 53.

Indiana Manufacturing Company, The. (See Seburn, Harvey T., assignor.)

Ingersoll-Rand Company. (See Prellwitz, William, assignor.)

Ingram, Ralph O., *et al.* (See Miller, Alfred K., assignor.)

Innis, George C., assignor to W. H. Kimball, Boston, Mass. Automatic gas lighter and extinguisher. No. 1,019,159; Mar. 5; Sp. p. 337; Gaz. vol. 176; p. 53.

Insley Manufacturing Company. (See Insley, William H., assignor.)

Insley, William H., assignor to Insley Manufacturing Company, Indianapolis, Ind. Contractor's elevator. No. 1,019,327; Mar. 5; Sp. p. 723; Gaz. vol. 176; p. 112.

International Corset Company. (See Schopbach, Charles H., assignor.)

International Harvester Company. (See Schutt, Duny A., assignor.)

International Harvester Company. (See Sharp, James A., assignor.)

International Harvester Company. (See Willis, George W., assignor.)

International "Z" Electric Lamp Association Limited, The. (See Zerning, Hermann, assignor.)

Interstate Roofing & Foundry Company. (See Hardin, Joseph A., assignor.)

Ireland, James E. (See Price, Waldow P., assignor.)

Irey, James H., Pelican Rapids, Minn. Mower-sickle grinder. No. 1,019,649; Mar. 5; Sp. p. 1414; Gaz. vol. 176; p. 217.

Ironside, Matthew C., assignor of two-ninths to J. Cummings, Kansas City, Kans., two-ninths to P. J. Horan and two-ninths to D. McDonnell, Kansas City, Mo. Car-coupling. No. 1,021,103; Mar. 26; Sp. p. 4441; Gaz. vol. 176; p. 822.

Irvin, James H., Baltimore, Md. Paper-clip. No. 1,019,256; Mar. 5; Sp. p. 548; Gaz. vol. 176; p. 87.

Isbell, John F., assignor to The Gallgher Machinery Co., Salt Lake City, Utah. Head-motion for ore-concentrators. No. 1,019,650; Mar. 5; Sp. p. 1416; Gaz. vol. 176; p. 218.

Isham, Andrew J., Sevierville, Tenn. Reel. No. 1,021,606; Mar. 26; Sp. p. 5538; Gaz. vol. 176; p. 994.

Ishigami, Toru, Osaka, Japan. Tuberculo-toxoidin. No. 1,020,761; Mar. 10; Sp. p. 3742; Gaz. vol. 176; p. 656.

Ivor, Barry, Chicago, Ill. Strainer and water-separator for gasolene-supply. No. 1,019,161; Mar. 5; Sp. p. 344; Gaz. vol. 176; p. 54.

Ivor, Barry, assignor of one-sixth to J. D. Gazzolo, one-sixth to H. Q. Turner, one-sixth to J. D. Hartford, one-sixth to F. Freer, and one-sixth to H. R. McPherson, Chicago, Ill. Carbureter. No. 1,019,160; Mar. 5; Sp. p. 339; Gaz. vol. 176; p. 53.

Ivory, James W., Philadelphia, Pa. Dental hand portepolisher. No. 1,021,527; Mar. 26; Sp. p. 5385; Gaz. vol. 176; p. 969.

Ivory, James W., Philadelphia, Pa. Fastening for artificial-tooth crowns. No. 1,021,528; Mar. 26; Sp. p. 5386; Gaz. vol. 176; p. 969.

J. Stevens Arms & Tool Co. (See Lewis, George S., assignor.)

J. E. Mergott Company. (See Fuller, Franz A., assignor.)

J. K. Rishel Furniture Co. (See Strouse and Clark, assignors.)

J. M. Dodge Company, The. (See Johnston, Arthur C., assignor.)

J. & T. H. Wallis. (See Wallis, James, assignor.)

Jackson, Alfred, Philadelphia, Pa. Candy-cutting machine. No. 1,019,793; Mar. 12; Sp. p. 1699; Gaz. vol. 176; p. 296.

Jackson, George W., assignor, by mesne assignments, to George W. Jackson Manufacturing Company, Chicago, Ill. Machine for handling loose materials. No. 1,021,463; Mar. 26; Sp. p. 5237; Gaz. vol. 176; p. 947.

Jackson, James, Unadella township, Livingston county, Mich. Car-step. No. 1,021,046; Mar. 26; Sp. p. 4337; Gaz. vol. 176; p. 805.

Jackson, Simeon S., assignor to The Stafford Company, Readville, Mass. Pick-finder device for looms. No. 1,021,151; Mar. 26; Sp. p. 4544; Gaz. vol. 176; p. 837.

Jacobi, Louis N., Chicago, Ill. Resilient heel. No. 1,019,898; Mar. 12; Sp. p. 1914; Gaz. vol. 176; p. 333.

Jacobs, Henry, New York, N. Y. Reducing-corset. No. 1,020,825; Mar. 19; Sp. p. 3881; Gaz. vol. 176; p. 678.

Jacobsen, Charles, *et al.* (See Galvin, Carroll D., assignor.)

Jacquier, Gaston, Belgravia, near Johannesburg, Transvaal. Anticorrosive alloy or metallic compound. No. 1,019,963; Mar. 12; Sp. p. 2043; Gaz. vol. 176; p. 353.

Jaeger, Otto, Norristown, assignor to The Underwriters Company, Philadelphia, Pa. Vending-machine. No. 1,019,715; Mar. 5; Sp. p. 1530; Gaz. vol. 176; p. 238.

Jaeneke, Frederick C., Milwaukee, Wis. Water-heater. No. 1,020,558; Mar. 19; Sp. p. 3292; Gaz. vol. 176; p. 588.

Jagenberg, Emil, Dusseldorf, Germany. Machine for making paper boxes. No. 1,021,315; Mar. 26; Sp. p. 4895; Gaz. vol. 176; p. 894.

Jahns, Charles F., Fox Lake, Wis. Grain-harvester. No. 1,019,651; Mar. 5; Sp. p. 1419; Gaz. vol. 176; p. 218.

James, Frederick R., and A. C. Thompson, assignors of three-eighths to said James, three-eighths to said Thompson, and one-fourth to T. Allatt, Toronto, Ontario, Canada. Egg-preserving apparatus. No. 1,019,048; Mar. 5; Sp. p. 81; Gaz. vol. 176; p. 16.

James Hunter Machine Company, The. (See Scribner, Charles E. T., assignor.)

James, John E., Worthington, Pa., assignor of one-half to G. L. Cabot, Boston, Mass. High-pressure regulator and cut-off valve. No. 1,020,284; Mar. 12; Sp. p. 2717; Gaz. vol. 176; p. 460.

James S. Kirk & Co. (See Becker and Ciesla, assignors.)

Janesville Machine Company, The. (See Heylman, Edward M., assignor.)

Janney, Reynold, New York, N. Y. Rotary pump or motor. No. 1,020,285; Mar. 12; Sp. p. 2719; Gaz. vol. 176; p. 461.

Jansen, Alfred W., Chicago Heights, Ill. Fireless cooker. No. 1,021,679; Mar. 26; Sp. p. 5653; Gaz. vol. 176; p. 1017.

Janson, Carl G., Oakland, Cal. Sidewalk-elevator-door frame. No. 1,020,286; Mar. 12; Sp. p. 2722; Gaz. vol. 176; p. 461.

Jaques, Fernando O., Sr., Cranston, R. I. Micrometer-calipers. No. 1,021,680; Mar. 26; Sp. p. 5655; Gaz. vol. 176; p. 1017.

Jarvis, Claude S. (See Anderton and Jarvis.)

Jarvis, Herbert L., deceased, McKittrick; R. L. Jarvis, administratrix, Bakersfield, assignor of one-third to J. M. Sands, Los Angeles, and one-third to G. W. Church, Bakersfield, Cal. Swivel rope-socket. No. 1,019,794; Mar. 12; Sp. p. 1701; Gaz. vol. 176; p. 297.

Jarvis, Rose L., administratrix. (See Jarvis, Herbert L.)

Jeffery, Charles T., *et al.*, executors. (See Symmonds, Robert, Jr., assignor.)

Jeffery, Harold W., *et al.*, executors. (See Symmonds, Robert, Jr., assignor.)

Jeffery, Kate E., *et al.*, executors. (See Symmonds, Robert, Jr., assignor.)

Jeffery, Thomas B. (See Symmonds, Robert, Jr., assignor.)

Jencyk, Frank A., Chicago, Ill. Non-refillable bottle. No. 1,020,204; Mar. 12; Sp. p. 2563; Gaz. vol. 176; p. 435.

Jenkins, Alexander, *et al.* (See Doyle, James, assignor.)

Jenkins, Henry H., Morrison, Iowa. Hand galley-proofing press. No. 1,019,652; Mar. 5; Sp. p. 1422; Gaz. vol. 176; p. 219.

Jenkins, William M., Chicago, Ill. Bag-binder. No. 1,019,049; Mar. 5; Sp. p. 82; Gaz. vol. 176; p. 16.

Jenkins, William M., Pittsburgh, Pa., and E. R. Ward, Hartford, Conn. Tool for locking nuts. No. 1,020,040; Mar. 12; Sp. p. 2201; Gaz. vol. 176; p. 379.

Jendral, Jacob, Barnesboro, Pa. Metallic tie and rail-fastener. No. 1,020,984; Mar. 26; Sp. p. 4219; Gaz. vol. 176; p. 783.

Jennings, John F., Cleveland, Ohio. Valve for corrosive liquids. No. 1,021,681; Mar. 26; Sp. p. 5656; Gaz. vol. 176; p. 1018.

Jensen, Lars C., Cowley, Wyo. Beet and vegetable loader. No. 1,020,426; Mar. 19; Sp. p. 3007; Gaz. vol. 176; p. 545.

Jenson, August, assignor to Kenyon Electrical Manufacturing Company, Kenyon, Minn. Rural-mail-delivery device. No. 1,019,795; Mar. 12; Sp. p. 1702; Gaz. vol. 176; p. 297.

Jevert, Carl J., Chicago, Ill. Window-lock. No. 1,020,205; Mar. 12; Sp. p. 2565; Gaz. vol. 176; p. 435.

Jewel Electric Co. (See Haschke, Julius E., assignor.)

Jewett, Eugene C., Eagle Grove, Iowa. Grading-machine. No. 1,021,047; Mar. 26; Sp. p. 4338; Gaz. vol. 176; p. 805.

Job Day and Sons Limited. (See Hadcock, James, assignor.)

Johannesen, Svend E., Pittsfield, Mass., assignor to General Electric Company. Bell-ringing transformer. No. 1,021,252; Mar. 26; Sp. p. 4776; Gaz. vol. 176; p. 872.

Johansson, Karl W., Kneippbaden, Sweden. Milking-machine. No. 1,021,192; Mar. 26; Sp. p. 4641; Gaz. vol. 176; p. 851.

John M. Burby Company. (See Burby, John M., assignor.)

John S. Emery & Company. (See Emery and Hunter, assignors.)

Johnson, Alexander. (See Ulmen and Johnson.)

Johnson, Archie L. and K., Losantville, Ind. Account-register. No. 1,021,152; Mar. 26; Sp. p. 4555; Gaz. vol. 176; p. 838.

Johnson, Carl, Chicago, Ill. Acetylene-torch. No. 1,020,559; Mar. 19; Sp. p. 3294; Gaz. vol. 176; p. 588.

Johnson, Charles A., Middletown, Cal. Pin. No. 1,020,648; Mar. 19; Sp. p. 3494; Gaz. vol. 176; p. 617.

Johnson, Charles W., Houston, Tex. Cistern-guard. No. 1,021,410; Mar. 26; Sp. p. 5132; Gaz. vol. 176; p. 928.

Johnson, Edward W., assignor to S. Parish and B. T. Fairchild, Portville, N. Y. Cattle-stanchion. No. 1,020,354; Mar. 12; Sp. p. 2842; Gaz. vol. 176; p. 481.

Johnson, Eldridge R., Merion, Pa., assignor to Victor Talking Machine Company. Motor for talking-machines. No. 1,020,206; Mar. 12; Sp. p. 2566; Gaz. vol. 176; p. 435.

Johnson, Francis M., Bowersville, Ga. Plow-stock. No. 1,020,908; Mar. 19; Sp. p. 4036; Gaz. vol. 176; p. 705.

Johnson, Frank, New York, N. Y. Shuttle-guard. No. 1,019,050; Mar. 5; Sp. p. 84; Gaz. vol. 176; p. 17.

Johnson, Frank E., Chicago, Ill. Rail-bond. No. 1,020,826; Mar. 19; Sp. p. 3882; Gaz. vol. 176; p. 678.

Johnson, Gustaf, Pigeon Cove, assignor to C. E. Hjarne, Beverly, Mass. Locking device for registering mechanisms. No. 1,019,476; Mar. 5; Sp. p. 1078; Gaz. vol. 176; p. 150.

Johnson, John A., Oklahoma, Okla. Combination shade and curtain fixture for windows. No. 1,019,796; Mar. 12; Sp. p. 1705; Gaz. vol. 176; p. 297.

Johnson, John C. F., and J. Hartman, Tacoma, Wash. Tool-handle. No. 1,021,316; Mar. 26; Sp. p. 4808; Gaz. vol. 176; p. 895.

Johnson, John H. L., assignor to Springfield Plant-Bed Steaming Company, Springfield, Tenn. Tobacco-bed-steaming apparatus. No. 1,021,529; Mar. 26; Sp. p. 5388; Gaz. vol. 176; p. 970.

Johnson, John H. L., assignor to Springfield Plant-Bed Steaming Company, Springfield, Tenn. Steaming tobacco-beds. No. 1,021,530; Mar. 26; Sp. p. 5390; Gaz. vol. 176; p. 970.

Johnson, Kelly. (See Johnson, Archie L. and K.)

Johnson, Nels A., Jamestown, N. Y. Cutting-off tool. No. 1,019,477; Mar. 5; Sp. p. 1080; Gaz. vol. 176; p. 160.

Johnson, Sinclair J., Montclair, N. J. Rotary engine with piston of variable area. No. 1,021,720; Mar. 26; Sp. p. 5737; Gaz. vol. 176; p. 1031.

Johnston, Arthur C., Philadelphia, Pa., assignor to The J. M. Dodge Company, Naugatuck, Conn. Roof-batch for storage-buildings. No. 1,020,909; Mar. 19; Sp. p. 4038; Gaz. vol. 176; p. 705.

Jonas, Max, Berlin, Germany. Press for neckties. No. 1,021,682; Mar. 26; Sp. p. 5659; Gaz. vol. 176; p. 1018.

Jones, Aldred J., New Orleans, La. Railway track-scale. No. 1,019,478; Mar. 5; Sp. p. 1082; Gaz. vol. 176; p. 160.

Jones, Charles E., Windsor, Mo. Whiffletree-hook. No. 1,021,193; Mar. 26; Sp. p. 4644; Gaz. vol. 176; p. 851.

Jones, Edward C., and C. J. Arnold, Louisville, Ky. Smoke-burner. No. 1,019,797; Mar. 12; Sp. p. 1707; Gaz. vol. 176; p. 298.

Jones, Edward R., Baltimore, Md. Stamp or label affixing machine. No. 1,019,479; Mar. 5; Sp. p. 1088; Gaz. vol. 176; p. 161.

Jones, Edward S., Columbus, assignor of one-half to Columbus Realty Company, Columbus, Ind. Shaving-brush. No. 1,019,480; Mar. 5; Sp. p. 1094; Gaz. vol. 176; p. 161.

Jones, James M., Hamilton, Ontario, Canada. Safety-guard for stamping-presses. No. 1,020,827; Mar. 19; Sp. p. 3883; Gaz. vol. 176; p. 678.

Jones, John D., Walla Walla, Wash. Wheel-hub box. No. 1,020,287; Mar. 12; Sp. p. 2723; Gaz. vol. 176; p. 461.

Jones, Joseph M. (See Van Buren, George L., assignor.)

Jones, William A., Sharon, Pa. Device for removing foreign matter from the eyes. No. 1,020,985; Mar. 26; Sp. p. 4220; Gaz. vol. 176; p. 784.

Jones, William D., assignor of one-third to W. A. Rees and one-third to R. L. Rees, New York, N. Y. Electric washing-machine. No. 1,020,828; Mar. 19; Sp. p. 3887; Gaz. vol. 176; p. 679.

Jones, William D., assignor of one-third to W. A. Rees and one-third to R. L. Rees, New York, N. Y. Electric washing-machine. No. 1,020,829; Mar. 19; Sp. p. 3888; Gaz. vol. 176; p. 679.

Jordan, John E., Lott, Tex. Fly-trap. No. 1,019,899; Mar. 12; Sp. p. 1915; Gaz. vol. 176; p. 333.

Jorse, Amandus F., *et al.* (See Galvin, Carroll D., assignor.)

Joseph Fahys & Co. (See Gibbs, William E., assignor.)

Joseph Fahys & Co. (See Harman, Charles W., assignor.)

József, Blanár, Buffalo, N. Y. Filtering apparatus. No. 1,020,986; Mar. 26; Sp. p. 4222; Gaz. vol. 176; p. 784.

Judson, Adoniram B., New York, N. Y. Machine for picking, breaking, and operating on ice, coal, ores, and other substances. No. 1,020,762; Mar. 19; Sp. p. 3745; Gaz. vol. 176; p. 657.

Junggren, Oscar, and E. D. Dickinson, Schenectady, N. Y., assignors to General Electric Company. Governing mechanism for mixed-pressure turbines. No. 1,020,097; Mar. 19; Sp. p. 3668; Gaz. vol. 176; p. 634.

Jurulck, Maximilian F., New York, N. Y., assignor, by mesne assignments, to Electric Bank Protection Company. Burglar-alarm system. No. 1,019,481; Mar. 5; Sp. p. 1094; Gaz. vol. 176; p. 161.

Jusse, John, Telluride, Colo. Dinner-bucket. No. 1,021,531; Mar. 26; Sp. p. 5392; Gaz. vol. 176; p. 970.

Kadow, August, assignor to The Westlake Machine Company, Toledo, Ohio. Making blown-glass articles. No. 1,021,048; Mar. 26; Sp. p. 4340; Gaz. vol. 176; p. 805.

Kaiser, Frederick H. (See Zadig and Kaiser.)

Kaiserman, Achille, Kankakee, Ill. Window-shade roller. No. 1,019,653; Mar. 5; Sp. p. 1424; Gaz. vol. 176; p. 219.

Kaiserman, Achille, Kankakee, Ill. Window-shade-roller fitting. No. 1,019,654; Mar. 5; Sp. p. 1428; Gaz. vol. 176; p. 219.

Kalla, Thomas, Oppeln, Germany. Suspended bridge. No. 1,019,655; Mar. 5; Sp. p. 1428; Gaz. vol. 176; p. 219.

Kallander, Oscar, Jamestown, N. Y. Folding bed. No. 1,021,607; Mar. 26; Sp. p. 5539; Gaz. vol. 176; p. 994.

Kammerer, William. (See Schneider, Ritchie, and Kammerer.)

Kane, John H., assignor of one-half to J. B. Cramer, Wichita, Kans. Pump. No. 1,020,355; Mar. 12; Sp. p. 2844; Gaz. vol. 176; p. 482.

Kane, Michael H., Worcester, Mass. Meter-record. No. 1,021,317; Mar. 26; Sp. p. 4896; Gaz. vol. 176; p. 895.

Karcmarcyk, Szczepan, New Bedford, Mass. Envelop-moistening device. No. 1,021,532; Mar. 26; Sp. p. 5393; Gaz. vol. 176; p. 971.

Karger, Manasse, New Orleans, La. Cigarette-packer. No. 1,021,194; Mar. 26; Sp. p. 4645; Gaz. vol. 176; p. 851.

Karnes, Frank, Geneseo, Ill. Fly-trap. No. 1,019,257; Mar. 5; Sp. p. 549; Gaz. vol. 176; p. 87.

Karr, James W. (See Copeland, George W., assignor.)

Kearney, Edward J., Wauwatosa, and T. Trecker, West Allis, Wis. Speed-changing gearing. No. 1,019,798; Mar. 12; Sp. p. 1708; Gaz. vol. 176; p. 298.

Kearney, Katherine. (See Garrison, William T., assignor.)

Keddy, Clifford L., West Lynn, Mass. Oar-lock. No. 1,021,721; Mar. 26; Sp. p. 5742; Gaz. vol. 176; p. 1031.

Keener, James P., Brockton, Mass. Shoe-filler composition. No. 1,019,964; Mar. 12; Sp. p. 2044; Gaz. vol. 176; p. 353.

Keighley Company, The. (See Keighley, William B., assignor.)

Keighley, William B., assignor to The Keighley Company, Vineland, N. J. Feeding device for inseam-trimmers. No. 1,020,910; Mar. 19; Sp. p. 4039; Gaz. vol. 176; p. 705.

Kelly, James E., Rochester, N. Y. Handle. No. 1,019,799; Mar. 12; Sp. p. 1711; Gaz. vol. 176; p. 290.

Keith, Simeon C., Jr., Somerville, Mass. Bubbling drinking-fountain. No. 1,019,162; Mar. 5; Sp. p. 346; Gaz. vol. 176; p. 54.

Kelley, John R., Covington, Ky. Electroiytic interrupter. No. 1,020,698; Mar. 19; Sp. p. 3611; Gaz. vol. 176; p. 634.

Kellner, Gustav A. H., assignor to Bausch & Lomb Optical Company, Rochester, N. Y. Lens. No. 1,021,104; Mar. 26; Sp. p. 4442; Gaz. vol. 176; p. 822.

Kellogg, James M., Muscatine, Iowa. Trap. No. 1,020,356; Mar. 12; Sp. p. 2845; Gaz. vol. 176; p. 482.

Kellogg, Maurice E., Milan, Kans. Store-fixture. No. 1,020,427; Mar. 19; Sp. p. 3009; Gaz. vol. 176; p. 545.

Kellogg Switchboard & Supply Company. (See Libby, Albion D. T., assignor.)

Kellogg Toasted Corn Flake Company. (See Byrne, John F., assignor.)

Kells, Charles E., Jr., New Orleans, La. Sanitary attachment for faucets. No. 1,020,207; Mar. 12; Sp. p. 2568; Gaz. vol. 176; p. 435.

Kellum, Elmo F., Don Luis, Ariz. Mining apparatus. No. 1,020,649; Mar. 19; Sp. p. 3496; Gaz. vol. 176; p. 617.

Kelly, George B., Jamaica Plain, Mass. Machine for making perforated music-sheets. No. 1,021,049; Mar. 26; Sp. p. 4344; Gaz. vol. 176; p. 806.

Kelly, John R., Charleston, S. C. Spoke-puller. No. 1,019,656; Mar. 5; Sp. p. 1429; Gaz. vol. 176; p. 220.

Kelly, William H., Waynesboro, Va. Sash-holder. No. 1,019,051; Mar. 5; Sp. p. 86; Gaz. vol. 176; p. 17.

Kelly, William H., Los Angeles, Cal. Treatment of metals. No. 1,019,965; Mar. 12; Sp. p. 2045; Gaz. vol. 176; p. 354.

Kelso, David P., Slater, Wash. Sedan. No. 1,020,987; Mar. 26; Sp. p. 4223; Gaz. vol. 176; p. 784.

Kelso, Joseph, assignor to McConway & Torley Company, Pittsburgh, Pa. Knuckle-pin retainer. No. 1,020,952; Mar. 19; Sp. p. 4131; Gaz. vol. 176; p. 720.

Kelso, Joseph, assignor to McConway & Torley Company, Pittsburgh, Pa. Knuckle-pin retainer for car-couplings. No. 1,021,464; Mar. 26; Sp. p. 5254; Gaz. vol. 176; p. 947.

Kelso, Joseph, assignor to McConway & Torley Company, Pittsburgh, Pa. Car-coupling. No. 1,021,465; Mar. 26; Sp. p. 5255; Gaz. vol. 176; p. 948.

Kelso, William, assignor to McConway & Torley Company, Pittsburgh, Pa. Uncoupling device. No. 1,021,411; Mar. 26; Sp. p. 5133; Gaz. vol. 176; p. 929.

Kelso, William, assignor to McConway & Torley Company, Pittsburgh, Pa. Car-coupling. No. 1,021,412; Mar. 26; Sp. p. 5136; Gaz. vol. 176; p. 929.

Kendrick, Ada C., Williamsburg, Kans. Type-writer. No. 1,020,145; Mar. 12; Sp. p. 2418; Gaz. vol. 176; p. 413.

Kennedy, Henry N., Magnolia, Miss. Rail-joint. No. 1,019,966; Mar. 12; Sp. p. 2047; Gaz. vol. 176; p. 354.

Kennedy, Joseph W., Duquesne, Pa. Rail-joint. No. 1,021,533; Mar. 26; Sp. p. 5394; Gaz. vol. 176; p. 971.

Kennedy, Julian, Pittsburgh, Pa. Blast-furnace-charging apparatus. No. 1,021,534; Mar. 26; Sp. p. 5395; Gaz. vol. 176; p. 971.

Kennedy, Patrick, Brooklyn, N. Y. Charging storage batteries. No. 1,019,482; Mar. 5; Sp. p. 1100; Gaz. vol. 176; p. 162.

Kennedy, Patrick, New York, N. Y. Electric-current-supply system. No. 1,019,483; Mar. 5; Sp. p. 1108; Gaz. vol. 176; p. 162.

Kennedy, Patrick, New York, N. Y. Electric switch. No. 1,019,484; Mar. 5; Sp. p. 1114; Gaz. vol. 176; p. 163.

Kennedy, Richard, Chicago, Ill. Carbureter. No. 1,019,800; Mar. 12; Sp. p. 1713; Gaz. vol. 176; p. 290.

Kennedy, William F. (See Rennie, Robert J., assignor.)

Kenney, Frederick A., assignor to The Kenney Truck Company, Portland, Oreg. Load-binder. No. 1,020,650; Mar. 19; Sp. p. 3500; Gaz. vol. 176; p. 618.

Kenney, Patrick E., Celina, Ohio. Tire-tool. No. 1,020,288; Mar. 12; Sp. p. 2725; Gaz. vol. 176; p. 462.

Kenney Truck Company, The. (See Kenney, Frederick A., assignor.)

Kenny, John B., Geneva, N. Y. Basket-handle and cover-fastener. No. 1,019,801; Mar. 12; Sp. p. 1714; Gaz. vol. 176; p. 290.

Kent, Arthur A., Philadelphia, Pa. Electric meter. No. 1,019,163; Mar. 5; Sp. p. 349; Gaz. vol. 176; p. 55.

Kenward, Henry, Jonesboro, Ark. Reel. No. 1,019,802; Mar. 12; Sp. p. 1716; Gaz. vol. 176; p. 300.

Kenyon Electrical Manufacturing Company. (See Jenson, August, assignor.)

Keogh, John W., Chicago, Ill. Excelsior-machine. No. 1,020,100; Mar. 12; Sp. p. 2333; Gaz. vol. 176; p. 399.

Kerber, John A. (See Combs and Kerber.)

Kerr, Edward, Pittsburgh, Pa. Attaching umbrella or cane handles. No. 1,019,657; Mar. 5; Sp. p. 1430; Gaz. vol. 176; p. 220.

Kerr, Harry G., Philadelphia, Pa. Paper-box-making machine. No. 1,020,763; Mar. 19; Sp. p. 3746; Gaz. vol. 176; p. 657.

Kerr, Jennie M., assignor to A. Walick, Chicago, Ill. Hat and head covering. No. 1,020,012; Mar. 19; Sp. p. 4044; Gaz. vol. 176; p. 706.

Kersteter, Joel C., assignor to Electric Heat Regulator Company, Minneapolis, Minn. Thermostat for electric heat-regulating systems. No. 1,020,289; Mar. 12; Sp. p. 2727; Gaz. vol. 176; p. 462.

Kesselring, William D., Atchison, Kans. Piston-rod and valve-stem packing. No. 1,021,683; Mar. 26; Sp. p. 5660; Gaz. vol. 176; p. 1019.

Kessels, William T. (See Potts, James W., assignor.)

Kester, Franklin, Twin Brooks, S. D. Stamp-canceling machine. No. 1,021,608; Mar. 26; Sp. p. 5540; Gaz. vol. 176; p. 995.

Ketler, Perry O., New Waterford, Ohio. Milk-can lock. No. 1,019,052; Mar. 5; Sp. p. 87; Gaz. vol. 176; p. 17.

Keyser, John N., and G. Topham, Washington, D. C. Basket. No. 1,020,290; Mar. 12; Sp. p. 2728; Gaz. vol. 176; p. 462.

Keystone Manufacturing Company, The. (See Scholler, Charles J., assignor.)

Kibby, Albert S., Perry, Iowa. Gearing. No. 1,020,913; Mar. 19; Sp. p. 4045; Gaz. vol. 176; p. 706.

Kidwell, Jeremiah H. (See Cox and Kidwell.)

Kiel, John C., assignor to Deere & Company, Moline, Ill. Cultivator. No. 1,019,803; Mar. 12; Sp. p. 1717; Gaz. vol. 176; p. 300.

Kieser, Walter, Berlin, Germany, assignor to General Electric Company. Centrifugal pump. No. 1,020,699; Mar. 19; Sp. p. 3614; Gaz. vol. 176; p. 634.

Kieser, Walter, Berlin, Germany, assignor to General Electric Company. Centrifugal pumping apparatus. No. 1,020,700; Mar. 19; Sp. p. 3617; Gaz. vol. 176; p. 635.

Kieser, Walter, Berlin, Germany, assignor to General Electric Company. Centrifugal pump for abstracting air and water from surface condensers. No. 1,020,701; Mar. 19; Sp. p. 3619; Gaz. vol. 176; p. 635.

Kieser, Walter, Berlin, Germany, assignor to General Electric Company. Surface condenser. No. 1,020,702; Mar. 19; Sp. p. 3621; Gaz. vol. 176; p. 636.

Kieser, Walter, Berlin, Germany, assignor to General Electric Company. Protective device for turbines. No. 1,020,703; Mar. 19; Sp. p. 3623; Gaz. vol. 176; p. 636.

Kieser, Walter, Berlin, Germany, assignor to General Electric Company. Utilizing waste steam. No. 1,020,704; Mar. 19; Sp. p. 3625; Gaz. vol. 176; p. 637.

Kieser, Walter, Charlottenburg, Germany, assignor to General Electric Company. Stage-valve for turbines. No. 1,020,705; Mar. 19; Sp. p. 3626; Gaz. vol. 176; p. 637.

Kiewicz, John, Hyde Park, Mass. Sewing-machine. No. 1,020,041; Mar. 12; Sp. p. 2202; Gaz. vol. 176; p. 379.

Kiewicz, John, Hyde Park, assignor to The Reece Button Hole Machine Company, Boston, Mass. Buttonhole-sewing machine. No. 1,021,739; Mar. 26; Sp. p. 5778; Gaz. vol. 176; p. 1037.

Kimball, Irwin P., and R. J. Pratt, assignors to Honolulu Iron Works Company, Honolulu, Hawaii. Intermediate belt conveyer for sugar-cane mills. No. 1,020,706; Mar. 19; Sp. p. 3627; Gaz. vol. 176; p. 637.

Kimball, William H. (See Innis, George C., assignor.)

King, Albert E., Annandale, near Sydney, New South Wales, Australia. Arm-rest. No. 1,019,658; Mar. 5; Sp. p. 1431; Gaz. vol. 176; p. 220.

King, Charles W. G., assignor, by mesne assignments, to United States Metallic Packing Company, Philadelphia, Pa. Track-sander. No. 1,019,258; Mar. 5; Sp. p. 551; Gaz. vol. 176; p. 87.

King, Edward F., Attleboro, Mass. Dripless tea-strainer. No. 1,019,967; Mar. 12; Sp. p. 2049; Gaz. vol. 176; p. 354.

King, Marion A., New Caney, Tex. Conveyer. No. 1,021,253; Mar. 26; Sp. p. 4778; Gaz. vol. 176; p. 872.

King, Peter H. (See Rapp and King.)

Kinnear Manufacturing Company, The. (See MacFarland, Allison M., assignor.)

Kinney, Joseph W., Goldcreek, Mont. Disk harrow. No. 1,020,291; Mar. 12; Sp. p. 2730; Gaz. vol. 176; p. 462.

Kinney, Merton M., Cloquet, Minn. Hand-loom. No. 1,020,292; Mar. 12; Sp. p. 2731; Gaz. vol. 176; p. 463.

Kinnick, George, Edna, Kans. Cotton-chopper. No. 1,019,804; Mar. 12; Sp. p. 1719; Gaz. vol. 176; p. 300.

Kinsella, Albert J., Pontiac, Ill. Wire-stretcher. No. 1,020,101; Mar. 12; Sp. p. 2335; Gaz. vol. 176; p. 399.

Kish, Arpath, and J. A. Henry, Port Vue, Pa. Curtain-pole. No. 1,020,988; Mar. 26; Sp. p. 4224; Gaz. vol. 176; p. 784.

Kiso, Henry K., New York, N. Y. Match box and igniter. No. 1,020,357; Mar. 12; Sp. p. 2849; Gaz. vol. 176; p. 482.

Kittredge, Rufus J., Chicago, Ill., assignor to D. S. Watson, Canastota, N. Y. Closure for floor-openings. No. 1,021,535; Mar. 26; Sp. p. 5306; Gaz. vol. 176; p. 971.

Klein, Albert, New York, N. Y. Non-refillable bottle. No. 1,019,659; Mar. 5; Sp. p. 1432; Gaz. vol. 176; p. 220.

Kleinman, Jacob L., New York, N. Y. Brake mechanism for sewing-machines. No. 1,021,750; Mar. 26; Sp. p. 5808; Gaz. vol. 176; p. 1042.

Kleinmann, Leo. (See Borsodi, Morris, assignor.)

Klett, Hugo, Ilmenau, Germany. Stopper for vacuum-insulated vessels. No. 1,019,660; Mar. 5; Sp. p. 1434; Gaz. vol. 176; p. 221.

Kline, William H. Herscher, Ill. Plow. No. 1,019,900; Mar. 12; Sp. p. 1917; Gaz. vol. 176; p. 333.

Klingbiel, Carl, Duisburg, Germany. Making phosphates of potash and ammonia. No. 1,020,293; Mar. 12; Sp. p. 2733; Gaz. vol. 176; p. 463.

Kloeker, John B., Loramie, Ohio. Shaft-support. No. 1,021,684; Mar. 26; Sp. p. 5661; Gaz. vol. 176; p. 1019.

Knabe, Ernest J., Jr., Cincinnati, Ohio. Combined fall-cover and music-rack for piano or organ casings. No. 1,020,914; Mar. 19; Sp. p. 4046; Gaz. vol. 176; p. 706.

Knaebel, Benedikt, Dusseldorf, Germany. Artillery-cartridge. No. 1,021,685; Mar. 26; Sp. p. 5663; Gaz. vol. 176; p. 1019.

Knauff, George C., Chicago, Ill. Socket for electric lamps. No. 1,021,195; Mar. 26; Sp. p. 4646; Gaz. vol. 176; p. 852.

Knight, Gilbert N., Big Stone Gap, Va. Monetary document. No. 1,019,661; Mar. 5; Sp. p. 1435; Gaz. vol. 176; p. 221.

Knight, Livingston, Leicester, assignor to The Mills Woven Cartridge Belt Co., Worcester, Mass. Yarn-tension for looms. No. 1,019,053; Mar. 5; Sp. p. 88; Gaz. vol. 176; p. 18.

Knight, William G., Springfield, Mass. Silencer for railways. No. 1,020,507; Mar. 19; Sp. p. 3173; Gaz. vol. 176; p. 570.

Knoerzer, Otto, assignor to Champion Potato Machinery Company, Hammond, Ind. Builder's scaffold. No. 1,020,358; Mar. 12; Sp. p. 2850; Gaz. vol. 176; p. 483.

Kobicke, Christopher H. (See Schell, Max P., assignor.)

Koch, Albert. (See Lender and Koch.)

Koch, William L. C., Dedham, Mass. Car-fender. No. 1,021,413; Mar. 26; Sp. p. 5138; Gaz. vol. 176; p. 929.

Koeller, Alfred H. (See Schimper, Frederick, assignor.)

Koenig, Robert, assignor to Phenix Tube Company, Brooklyn, N. Y. Butt-seamed metal tube and making the same. No. 1,019,485; Mar. 5; Sp. p. 1116; Gaz. vol. 176; p. 163.

Koenig, Robert, assignor to Phenix Tube Company, Brooklyn, N. Y. Tube-drawing machine. No. 1,019,805; Mar. 12; Sp. p. 1720; Gaz. vol. 176; p. 301.

Koenig, Robert, assignor to Phenix Tube Company, Brooklyn, N. Y. Tube-forming mechanism. No. 1,019,968; Mar. 12; Sp. p. 2050; Gaz. vol. 176; p. 354.

Kohler, Edward C., Oak Park, Ill. Roller-skate. No. 1,020,980; Mar. 26; Sp. p. 4225; Gaz. vol. 176; p. 785.

Kohr, Samuel M., Manchester, Pa. Automatic fire-alarm. No. 1,021,609; Mar. 26; Sp. p. 5542; Gaz. vol. 176; p. 995.

Kolb, August R., Pelham, N. Y. Machine for manufacturing sheets, boards, tubes, and other articles from pulp. No. 1,019,486; Mar. 5; Sp. p. 1118; Gaz. vol. 176; p. 163.

Koontz, Walter S., Adeline, Ill. Discharging mechanism for grain-binding machines. No. 1,019,716; Mar. 5; Sp. p. 1533; Gaz. vol. 176; p. 238.

Kopetka, Joseph P., Bloomfield, Nebr. Ice-sawing machine. No. 1,021,196; Mar. 26; Sp. p. 4648; Gaz. vol. 176; p. 852.

Kops, Daniel, New York, N. Y. Apparel-corset. No. 1,019,487; Mar. 5; Sp. p. 1120; Gaz. vol. 176; p. 164.

Kops, Daniel, New York, N. Y. Apparel-corset. No. 1,020,764; Mar. 19; Sp. p. 3753; Gaz. vol. 176; p. 657.

Kouns, Victor, St. Louis, Mo. Dumping-car. No. 1,021,686; Mar. 26; Sp. p. 5664; Gaz. vol. 176; p. 1020.

Krasberg, Rudolf, Poughkeepsie, N. Y. Collar-fastening device. No. 1,021,414; Mar. 26; Sp. p. 5140; Gaz. vol. 176; p. 930.

Krautheim, Alexander, Frankfort-on-the-Main, Germany. Arrangement for filing loose leaves. No. 1,020,990; Mar. 26; Sp. p. 4226; Gaz. vol. 176; p. 785.

Krayer, Christian J. (See Simmons and Berzon, assignors.)

Krebs, Arthur C., assignor to Société Anonyme des Anciens Etablissements Panhard & Levassor, Paris, France. Valve for explosion-engines. No. 1,019,488; Mar. 5; Sp. p. 1122; Gaz. vol. 176; p. 164.

Kreger, Herman G., Dodge City, Kans. Wrench. No. 1,019,806; Mar. 12; Sp. p. 1721; Gaz. vol. 176; p. 301.

Kretol Company, The. (See Bensinger, Forbes R., assignor.)

Krevis, Emil A., Chicago, Ill. Tie-holder. No. 1,019,489; Mar. 5; Sp. p. 1123; Gaz. vol. 176; p. 164.

Krider, Edward A., Decatur, Nebr. Wagon-hub. No. 1,021,610; Mar. 26; Sp. p. 5543; Gaz. vol. 176; p. 995.

Krieger, Louis B., *et al.* (See Tank, Henry P., assignor.)

Kroder, John, New York, N. Y. Curtain-fixture. No. 1,019,662; Mar. 5; Sp. p. 1436; Gaz. vol. 176; p. 221.

Krohn, Gustave A., Coarsegold, and E. M. Arreagada, San Francisco, assignors to The Ideal Power Generator Company, Raymond, Cal. Power-generator. No. 1,019,164; Mar. 5; Sp. p. 351; Gaz. vol. 176; p. 55.

Krohn, John, Chicago, Ill., assignor to American Can Company, New York, N. Y. Sheet-metal-vessel-making machine. No. 1,020,560; Mar. 19; Sp. p. 3296; Gaz. vol. 176; p. 589.

Krosnowski, Stanislaw M., St. Petersburg, Russia. Apparatus for treating cotton fabrics. No. 1,020,294; Mar. 12; Sp. p. 2734; Gaz. vol. 176; p. 463.

Krotz, Alvaro S., assignor to Sears, Roebuck & Company, Chicago, Ill. Vehicle driving and braking means. No. 1,021,197; Mar. 26; Sp. p. 4650; Gaz. vol. 176; p. 852.

Krug, Marie A., Chicago, Ill. Valve-guard for stoves. No. 1,021,198; Mar. 26; Sp. p. 4651; Gaz. vol. 176; p. 853.

Krumming, Reinhold, Milwaukee, Wis. Temporary binder or loose-sheef holder. No. 1,020,561; Mar. 19; Sp. p. 3303; Gaz. vol. 176; p. 589.

Krzan, Anton, Chicago, Ill. Box. No. 1,019,490; Mar. 5; Sp. p. 1124; Gaz. vol. 176; p. 165.

Kuehn, Paul, assignor to Shareholders Protective League, Limited, Detroit, Mich. Amalgamator. No. 1,019,054; Mar. 5; Sp. p. 89; Gaz. vol. 176; p. 18.

Kuen, Charles W., assignor to Rand, McNally & Company, Chicago, Ill. Numbering attachment for printing-presses. No. 1,021,466; Mar. 26; Sp. p. 5259; Gaz. vol. 176; p. 948.

Kuester, Hugo W., Denver, Colo. Astrological chart and indicator therefor. No. 1,019,663; Mar. 5; Sp. p. 1437; Gaz. vol. 176; p. 222.

Kuhlmann, Karl, Berlin-Pankow, and H. Müller, Berlin, Germany, assignors to General Electric Company. Induction-motor. No. 1,019,491; Mar. 5; Sp. p. 1126; Gaz. vol. 176; p. 165.

Kundtz, Theodor. (See Cogger, William B., assignor.)

Kunzelman, John R., Gordon, Wis. Insect-escape for screens. No. 1,020,830; Mar. 19; Sp. p. 3890; Gaz. vol. 176; p. 680.

Kurowski, Alfred G. F., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,021,153; Mar. 26; Sp. p. 4558; Gaz. vol. 176; p. 838.

Kurrus, Charles G., *et al.* (See Pets, Egnas, assignor.)

Kurrus, Frank J., *et al.* (See Pets, Egnas, assignor.)

Kurt, J. A. (See Vessels, Clarence C., assignor.)

Kurz, Otto. (See Foyer and Kurz.)

Kuss, Arthur J., Mojave, Cal. Music-leaf turner. No. 1,019,492; Mar. 5; Sp. p. 1128; Gaz. vol. 176; p. 165.

Kyle, George B., Philadelphia, Pa. Horseshoe. No. 1,019,493; Mar. 5; Sp. p. 1130; Gaz. vol. 176; p. 166.

Kyle, Hattie, Parkinson, Mont. Cake-mixer. No. 1,019,055; Mar. 5; Sp. p. 91; Gaz. vol. 176; p. 18.

Kyle, John W., San Diego, Cal. Life-net holder. No. 1,020,146; Mar. 12; Sp. p. 2420; Gaz. vol. 176; p. 413.

L'Hommedieu, George A., Atlantic City, N. J. Picture-frame support. No. 1,019,670; Mar. 5; Sp. p. 1451; Gaz. vol. 176; p. 224.

La Barr, Frank B., Los Angeles, Cal., assignor to E. J. Barker, Morgan Park, Ill. Printing-press. No. 1,021,050; Mar. 26; Sp. p. 4345; Gaz. vol. 176; p. 806.

La Borde, John F., and P. K. Williams, Columbus, Ohio. Shoe-gumming machine. No. 1,019,494; Mar. 5; Sp. p. 1131; Gaz. vol. 176; p. 166.

La Paugh, Louie T., Utica, N. Y. Hair-drying apparatus. No. 1,019,808; Mar. 12; Sp. p. 1724; Gaz. vol. 176; p. 302.

La Société Anonyme Wolokno Schewelin. (See Schewelin, Wladimir, assignor.)

La Société d'Exploitation de Procédés Evaporatoires, Système Prache et Bouillon. (See Prache, Charles L., assignor.)

Lacer, Louis F., Anadarko, Okla. Tool-set. No. 1,019,259; Mar. 5; Sp. p. 552; Gaz. vol. 176; p. 88.

Lachman, Laurence S., New York, N. Y. Electric welding. No. 1,020,991; Mar. 26; Sp. p. 4227; Gaz. vol. 176; p. 785.

Lacroix, Fernand, Paris, France. Electrolysis of metallic solutions. No. 1,019,069; Mar. 12; Sp. p. 2052; Gaz. vol. 176; p. 355.

Ladoff, Anna M., *et al.* (See Ladoff, Isador, assignor.)

Ladoff, Isador, Cleveland, Ohio, assignor of thirty one-hundredths to P. C. Peck, New York, N. Y. Apparatus for producing the arc-light. No. 1,019,901; Mar. 12; Sp. p. 1918; Gaz. vol. 176; p. 334.

Ladoff, Isador, Cleveland, Ohio, assignor of fifteen one-hundredths to W. D. Edmonds, Boonville, fifteen one-hundredths to P. C. Peck, New York, N. Y., and seventy one-hundredths to A. M. Ladoff. Electrical conductor for lighting purposes. No. 1,019,902; Mar. 12; Sp. p. 1919; Gaz. vol. 176; p. 334.

Ladoff, Isador, Schenectady, assignor of fifteen one-hundredths to W. D. Edmonds, Boonville, fifteen one-hundredths to P. C. Peck, New York, and seventy one-hundredths to A. M. Ladoff, Schenectady, N. Y. Electrical conductor for lighting purposes. No. 1,019,970; Mar. 12; Sp. p. 2054; Gaz. vol. 176; p. 355.

Lafontaine, Alonzo and R., St. Stanislas, Quebec, Canada. Internal-combustion engine. No. 1,019,495; Mar. 5; Sp. p. 1134; Gaz. vol. 176; p. 166.

Lafontaine, Rosario. (See Lafontaine, Alonzo and R.)

Laford, William. (See Ray and Laford.)

Laforet, Jean, Valence, France. Shuttle-brake. No. 1,021,199; Mar. 26; Sp. p. 4652; Gaz. vol. 176; p. 853.

Laingor, Jesse B., and G. J. Yerger, Kansas City, Mo. Aircraft. No. 1,021,105; Mar. 26; Sp. p. 4444; Gaz. vol. 176; p. 823.

Lake, Wilmot, Washington, D. C. Hollow concrete wall. No. 1,020,919; Mar. 19; Sp. p. 4052; Gaz. vol. 176; p. 708.

Lakosky, Charles, Cooks Mills, Mich. Rail-joint. No. 1,020,562; Mar. 19; Sp. p. 3307; Gaz. vol. 176; p. 590.

Lamb, Elden P., Camden, assignor to Camden Anchor-Rockland Machine Company, Rockland, Me. Float-feed carbureter. No. 1,020,915; Mar. 19; Sp. p. 4048; Gaz. vol. 176; p. 707.

Lambert, Frederick. (See Dickie, Lambert, and Stables.)

Lambert, Milton. (See Mary and Lambert.)

Lancaster, Charles P., assignor of one-fourth to W. M. Cory and one-fourth to O. L. Harris, Marion, Ind. Railway-rail joint. No. 1,021,200; Mar. 26; Sp. p. 4653; Gaz. vol. 176; p. 853.

Lancsar, Stephen. (See Leopold, Joseph, assignor.)

Landis Machine Company. (See Blair, William R., assignor.) (Reissue.)

Lane, Alfred M., St. Louis, Mo. Metal weather-strip. No. 1,020,993; Mar. 26; Sp. p. 4231; Gaz. vol. 176; p. 786.

Lane, Alfred M., assignor to Monarch Metal Weather Strip Company, St. Louis, Mo. Weather-strip. No. 1,020,992; Mar. 26; Sp. p. 4229; Gaz. vol. 176; p. 785.

Lane, Hiram A., and J. E. George, Oakwood, Ill. Railway-crossing. No. 1,020,611; Mar. 19; Sp. p. 3419; Gaz. vol. 176; p. 605.

Lane, Walter, Chicago, Ill. Multiple drill. No. 1,020,359; Mar. 12; Sp. p. 2851; Gaz. vol. 176; p. 483.

Lanford, David L., Brownwood, Tex. Display device. No. 1,019,807; Mar. 12; Sp. p. 1723; Gaz. vol. 176; p. 301.

Lang, Edward, Saginaw, Mich. Beet-topper. No. 1,019,056; Mar. 5; Sp. p. 92; Gaz. vol. 176; p. 18.

Lang, George H., Boston, Mass. Carton-maker. No. 1,019,971; Mar. 12; Sp. p. 2056; Gaz. vol. 176; p. 355.

Lang, Niels, Vancouver, British Columbia, Canada. Insulating-rosette for electric-light fixtures. No. 1,021,687; Mar. 26; Sp. p. 5669; Gaz. vol. 176; p. 1020.

Lange, Frederick M. T. (See Chitty, Lange, and Mascord.)

Langsdon, Al V. (See Zuegner and Langsdon.)

Langum, John N., Barton, N. D. Horse-collar and hames. No. 1,020,042; Mar. 12; Sp. p. 2205; Gaz. vol. 176; p. 380.

Lanier, George A., Petersburg, assignor of one-half to W. Braverman, Richmond, Va. Article-holder. No. 1,020,916; Mar. 19; Sp. p. 4049; Gaz. vol. 176; p. 707.

Lanning, Charles D., Boston, Mass. Coherer. No. 1,019,260; Mar. 5; Sp. p. 554; Gaz. vol. 176; p. 88.

Lanphier, Robert C., assignor to Sangamo Electric Company, Springfield, Ill. Three-wire mercury-meter. No. 1,021,106; Mar. 26; Sp. p. 4447; Gaz. vol. 176; p. 823.

Larkins, Herman H., Princeton, Ky. Muffler. No. 1,021,254; Mar. 26; Sp. p. 4780; Gaz. vol. 176; p. 872.

Larsen, Charles A., Colgate, N. D. Grain-door. No. 1,020,831; Mar. 19; Sp. p. 3891; Gaz. vol. 176; p. 680.

Larsen, Ivert. (See McKaig and Larsen.)

Larson, John M., assignor to National Regulator Company, Chicago, Ill. Temperature-regulating apparatus. No. 1,019,496; Mar. 5; Sp. p. 1135; Gaz. vol. 176; p. 167.

Larson, Ludwick, Brady Island, Nebr. Door. No. 1,019,664; Mar. 5; Sp. p. 1440; Gaz. vol. 176; p. 222.

Larson, Nels L., Villisca, Iowa. Chute attachment for corn-shellers. No. 1,021,201; Mar. 26; Sp. p. 4655; Gaz. vol. 176; p. 854.

Laskey, William B., Marblehead, Mass. Automatic fan. No. 1,021,536; Mar. 26; Sp. p. 5398; Gaz. vol. 176; p. 972.

László, Bodnár, Youngstown, Ohio. Square. No. 1,020,428; Mar. 19; Sp. p. 3013; Gaz. vol. 176; p. 546.

Latham, Reginald W., San Benito, Tex. Oil-separator. No. 1,019,809; Mar. 12; Sp. p. 1725; Gaz. vol. 176; p. 302.

Lathey, Myron A., Ottawa, Ontario, assignor to J. H. Burland, Montreal, Canada. Printing-machine. No. 1,021,051; Mar. 26; Sp. p. 4347; Gaz. vol. 176; p. 807.

Latta, Albert E., Washington, D. C. Razor-sharpener. No. 1,019,261; Mar. 5; Sp. p. 556; Gaz. vol. 176; p. 89.

Lauffer, Emil J. (See Huffman and Lauffer.)

Laughlin, Judson, Ledyard, Iowa. Lock and key. No. 1,020,208; Mar. 12; Sp. p. 2569; Gaz. vol. 176; p. 436.

Lawnin, Albert W., St. Louis, Mo., assignor of one-half to L. D. Lawnin, Edwardsville, Ill. Automatic drain-cock. No. 1,021,537; Mar. 26; Sp. p. 5400; Gaz. vol. 176; p. 972.

Lawnin, Louis D. (See Lawnin, Albert W., assignor.)

Laws, Benjamin A. (See Frey, John E., assignor.)

Lawson, Peter C., Boston, Mass. Fastening device or toggle. No. 1,019,057; Mar. 5; Sp. p. 94; Gaz. vol. 176; p. 19.

Lawson, William C., Roanoke, Va. Conveyer apparatus. No. 1,021,052; Mar. 26; Sp. p. 4350; Gaz. vol. 176; p. 807.

Lawton, Robert W., San Francisco, Cal. Hydrocarbon-burner. No. 1,020,612; Mar. 19; Sp. p. 3420; Gaz. vol. 176; p. 605.

Le Beau, Ernest A., assignor to Chicago Railway Equipment Company, Chicago, Ill. Brake-beam. No. 1,020,563; Mar. 19; Sp. p. 3308; Gaz. vol. 176; p. 590.

Le Doyen, Alfred A., assignor of one-fourth to W. B. Toole, Augusta, Ga. Crate. No. 1,019,665; Mar. 5; Sp. p. 1441; Gaz. vol. 176; p. 222.

Le Jeune, Landry J., Welcome, La. Leg-pulling apparatus. No. 1,021,688; Mar. 26; Sp. p. 5670; Gaz. vol. 176; p. 1021.

Leasure, James W., Bradford, Pa. Protector or goggles. No. 1,020,994; Mar. 26; Sp. p. 4233; Gaz. vol. 176; p. 786.

Leberman, Joseph E., Sheboygan, Wis. Oil-catcher. No. 1,020,564; Mar. 19; Sp. p. 3309; Gaz. vol. 176; p. 590.

Lederer, George J. (See Pollard and Lederer.)

Lee, Frederick J., Wichita, Kans. Door-catch. No. 1,021,611; Mar. 26; Sp. p. 5545; Gaz. vol. 176; p. 995.

Lee, Helen, administratrix. (See Powers, Patrick W.)

Lee, Thomas E., San Diego, Cal., assignor to Lee's Railway Switch Device Company. Automatic switch. No. 1,020,147; Mar. 20; Sp. p. 2421; Gaz. vol. 176; p. 413.

Lee, William W. (See Powers, Patrick W., assignor.)

Lee's Railway Switch Device Company. (See Lee, Thomas E., assignor.)

Leeds, Morris E., Philadelphia, Pa. Temporary binder. No. 1,020,995; Mar. 26; Sp. p. 4234; Gaz. vol. 176; p. 786.

Leedy Manufacturing Company. (See Wanamaker, Charles B., assignor.)

Lees, George A., North Adams, Mass. Counter. No. 1,019,058; Mar. 5; Sp. p. 95; Gaz. vol. 176; p. 19.

Lefkowitz, Isaac, New York, N. Y. Waist. No. 1,021,415; Mar. 26; Sp. p. 5141; Gaz. vol. 176; p. 930.

Lehberger, George F., Weirton, W. Va., and E. Vaughan, New Castle, Pa. Scaling device. No. 1,019,497; Mar. 5; Sp. p. 1138; Gaz. vol. 176; p. 167.

Leighton, Frederick E., assignor of one-half to J. S. Wyman, Millbridge, Me. Car-door lock. No. 1,021,740; Mar. 26; Sp. p. 5782; Gaz. vol. 176; p. 1038.

Lemp, Hermann, Lynn, Mass., assignor to General Electric Company. Steering device for automobiles. No. 1,020,707; Mar. 19; Sp. p. 3629; Gaz. vol. 176; p. 638.

Lempera, John I., Chicago, Ill. Metallic door. No. 1,021,053; Mar. 26; Sp. p. 4351; Gaz. vol. 176; p. 807.

Lender, Rudolf, and A. Koch, Neu-Babelsberg, Germany. Paint and varnish base. No. 1,019,666; Mar. 5; Sp. p. 1442; Gaz. vol. 176; p. 223.

Lennox, Talbot, Chicago, Ill. Shearing-machine. No. 1,020,508; Mar. 19; Sp. p. 3175; Gaz. vol. 176; p. 570.
Lenz, Albert E., Perth Amboy, N. J. Toy. No. 1,020,613; Mar. 19; Sp. p. 3421; Gaz. vol. 176; p. 605.
Leopold, George O., assignor to North Bro's M'f'g. Co., Philadelphia, Pa. Gearing. No. 1,021,538; Mar. 26; Sp. p. 5462; Gaz. vol. 176; p. 973.
Leopold, Joseph, assignor of one-half to S. Lancsar, South Bethlehem, Pa. Screw-propeller. No. 1,019,498; Mar. 5; Sp. p. 1140; Gaz. vol. 176; p. 167.
Lero, Joe, Dallas, Tex. Target-controlled roundabout. No. 1,019,972; Mar. 12; Sp. p. 2060; Gaz. vol. 176; p. 355.
Lesperance, Alexander, Laconia, N. H. Paper-holder. No. 1,021,154; Mar. 26; Sp. p. 4559; Gaz. vol. 176; p. 838.
Lesselbaum, Rubin, New York, N. Y. Legging. No. 1,019,810; Mar. 12; Sp. p. 1726; Gaz. vol. 176; p. 302.
Lettré, Philip H., Attleboro Falls, Mass. Snap-bracelet. No. 1,020,148; Mar. 12; Sp. p. 2423; Gaz. vol. 176; p. 414.
Leveque, Bernard T., assignor to The Reece Button-Hole Machine Company, Boston, Mass. Buttonhole-sewing machine. No. 1,019,667; Mar. 5; Sp. p. 1443; Gaz. vol. 176; p. 223.
Levy, Howard S., and G. H. Brandes, Philadelphia, Pa. Positive-pressure blower. No. 1,019,499; Mar. 5; Sp. p. 1142; Gaz. vol. 176; p. 167.
Levy, Israel N., New York, N. Y. Collar and hood. No. 1,020,360; Mar. 12; Sp. p. 2853; Gaz. vol. 176; p. 483.
Lewis Foundry & Machine Company. (See Wackermann and Zabel, assignors.)
Lewis, George S., assignor to J. Stevens Arms & Tool Co., Chicopee Falls, Mass. Apparatus for stacking envelops, &c. No. 1,019,059; Mar. 5; Sp. p. 98; Gaz. vol. 176; p. 19.
Lewis, James F., Uniontown, Pa. Combined square and leveling device. No. 1,019,668; Mar. 5; Sp. p. 1448; Gaz. vol. 176; p. 223.
Lewis, Jesse T. (See Lewis, Thomas and J. T.)
Lewis, Milton E., Oakland, Cal. Automatic phonograph-stop. No. 1,019,669; Mar. 5; Sp. p. 1449; Gaz. vol. 176; p. 223.
Lewis Schneider & Co. *et al.* (See Carels, Gustave, assignor.)
Lewis, Thomas and J. T., Smithfield, Pa. Combined quilting-frame and curtain-stretcher. No. 1,020,295; Mar. 12; Sp. p. 2736; Gaz. vol. 178; p. 463.
Lewis, Wyndham W., Highgate, London, England. Acetylene-gas generator. No. 1,021,612; Mar. 26; Sp. p. 5546; Gaz. vol. 176; p. 996.
Libbey, Henry N., Boston, Mass. Closet-tank valve. No. 1,021,367; Mar. 26; Sp. p. 4997; Gaz. vol. 176; p. 912.
Libby, Albion D. T., Elyria, Ohio, assignor to Kellogg Switchboard & Supply Company, Chicago, Ill. Circuit-breaker. No. 1,019,060; Mar. 5; Sp. p. 100; Gaz. vol. 176; p. 19.
Libby, Sam H., Bloomfield, N. J., assignor to General Electric Company. Grab-bucket hoist. No. 1,019,500; Mar. 5; Sp. p. 1144; Gaz. vol. 176; p. 168.
Liberty Manufacturing Company. (See Elliott, Mills, and Holt, assignors.)
Liberty Vending Co. (See Elzas, Martin, assignor.)
Library Bureau. (See Hunter, David E., assignor.)
Lichetti, James, Philadelphia, Pa. Car-fender. No. 1,019,671; Mar. 5; Sp. p. 1452; Gaz. vol. 176; p. 224.
Lieb, John F., Philadelphia, Pa. Automobile-tire. No. 1,019,973; Mar. 12; Sp. p. 2063; Gaz. vol. 176; p. 356.
Liebau, Richard, Watervliet, N. Y. Spring-vehicle. No. 1,020,209; Mar. 12; Sp. p. 2570; Gaz. vol. 176; p. 436.
Lieber, William H., assignor to Allis-Chalmers Company, Milwaukee, Wis. Packing-expander. No. 1,019,262; Mar. 5; Sp. p. 559; Gaz. vol. 176; p. 89.
Lietzenmayer, William J., Webster, N. Y., assignor to Allis-Chalmers Company and The Bullock Electric Manufacturing Company. Expulsion-fuse circuit-breaker. No. 1,021,054; Mar. 26; Sp. p. 4353; Gaz. vol. 176; p. 808.
Lincoln, Edwin S., Brookline, Mass., assignor to Electric Goods Manufacturing Company. Pole-reversing timer or distributer. No. 1,019,061; Mar. 5; Sp. p. 103; Gaz. vol. 176; p. 20.
Linde, Carl von, Munich, Germany. Production of hydrogen from gas mixtures containing hydrogen. No. 1,020,102; Mar. 12; Sp. p. 2336; Gaz. vol. 176; p. 399.
Linde, Carl von, Munich, Germany. Separation of hydrogen from gaseous mixtures. No. 1,020,103; Mar. 12; Sp. p. 2338; Gaz. vol. 176; p. 400.
Lindsey, James O., Hereford, Tex. Windmill. No. 1,019,974; Mar. 12; Sp. p. 2064; Gaz. vol. 176; p. 356.
Lindström, Charles A., assignor to Pressed Steel Car Company, Pittsburgh, Pa. Tank-car. No. 1,020,765; Mar. 19; Sp. p. 3755; Gaz. vol. 176; p. 658.
Lindström, Charles A., assignor to Pressed Steel Car Company, Pittsburgh, Pa. Tank-car construction. No. 1,021,539; Mar. 26; Sp. p. 5404; Gaz. vol. 176; p. 973.
Lindström, Charles A., Pittsburgh, and J. F. Streib, Avalon, assignors to Pressed Steel Car Company, Pittsburgh, Pa. Dump-car. No. 1,019,263; Mar. 5; Sp. p. 561; Gaz. vol. 176; p. 89.
Lineback, Edward E., assignor of one-sixth to J. E. Alexander and five-sixths to W. D. Currin, Winston Salem, N. C. Boot and shoe cleaning and polishing machine. No. 1,019,672; Mar. 5; Sp. p. 1454; Gaz. vol. 176; p. 224.
Lineberger, Lester T., Gastonia, N. C. Lightning-arrester. No. 1,020,429; Mar. 19; Sp. p. 3013; Gaz. vol. 176; p. 546.
Lingwall, Peter, Jr., Stratford, Iowa. Gate. No. 1,021,613; Mar. 26; Sp. p. 5548; Gaz. vol. 176; p. 996.
Link-Belt Company. (See Peck, Staunton B., assignor.)
Linscott, Murray O., and W. A. McIntosh, Beverly, Mass. Hydrant-outlet. No. 1,020,917; Mar. 19; Sp. p. 4049; Gaz. vol. 176; p. 708.
Lister, Nicholas E., West St. John, New Brunswick, assignor of twenty-four one-hundredths to J. S. Clark, St. George, and twenty-four one-hundredths to G. H. Waring, St. John, Canada. Flanger for railways. No. 1,019,811; Mar. 12; Sp. p. 1728; Gaz. vol. 176; p. 302.
Litmer, Joseph. (See Vanderall and Litmer.)
Llewellyn Iron Works. (See Michod, Charles L., assignor.)
Lloyd, Henry, Lexington, Ky. Riveting-machine. No. 1,020,918; Mar. 19; Sp. p. 4051; Gaz. vol. 176; p. 708.
Lloyd, Richard L. (See Dwight and Lloyd.)
Lobnitz, Fred, Renfrew, Scotland. Lubricating device. No. 1,020,210; Mar. 12; Sp. p. 2572; Gaz. vol. 176; p. 436.
Lockard, Earl T., Cincinnati, Ohio. Electric switch. No. 1,021,540; Mar. 26; Sp. p. 5407; Gaz. vol. 176; p. 973.
Lockwood, Marquis H., assignor to Underwood Typewriter Company, New York, N. Y. Type-writer escapement mechanism. No. 1,019,328; Mar. 5; Sp. p. 725; Gaz. vol. 176; p. 113.
Loewenberg, Alfred, Chicago, Ill. Meter for measuring electrical currents. No. 1,020,565; Mar. 19; Sp. p. 3310; Gaz. vol. 176; p. 591.
Logan, William R., assignor of one-half to R. H. Ross, Los Angeles, Cal. Chicken feeder and exerciser. No. 1,019,975; Mar. 12; Sp. p. 2066; Gaz. vol. 176; p. 356.
Lohse, Henry, New York, N. Y. Autotruck-body. No. 1,019,062; Mar. 5; Sp. p. 107; Gaz. vol. 176; p. 20.
London, William J. A., assignor to The Terry Steam Turbine Company, Hartford, Conn. Steam-turbine. No. 1,021,541; Mar. 26; Sp. p. 5409; Gaz. vol. 176; p. 973.
Long, John R., East Akron, Ohio. Pipe-cutter. No. 1,019,063; Mar. 5; Sp. p. 108; Gaz. vol. 176; p. 21.
Long, John R., Akron, Ohio, assignor of one-half to A. Roren, New York, N. Y. Means for forming concrete steps. No. 1,021,368; Mar. 26; Sp. p. 4999; Gaz. vol. 176; p. 913.
Long, Robert E., New York, N. Y. Automobile-horn. No. 1,019,673; Mar. 5; Sp. p. 1459; Gaz. vol. 176; p. 225.
Lord, Chester B., St. Louis, Mo. Traction-wheel. No. 1,019,165; Mar. 5; Sp. p. 353; Gaz. vol. 176; p. 56.
Lord, Raymond S., Pittsburgh, Pa. Clamping device for pipe-joints. No. 1,019,717; Mar. 5; Sp. p. 1536; Gaz. vol. 176; p. 238.
Lorimer, George W., Piqua, Ohio, assignor, by mesne assignments, to Western Electric Company. Electrical contact-bank and making same. No. 1,019,166; Mar. 5; Sp. p. 354; Gaz. vol. 176; p. 56.
Lorimer, George W., Piqua, Ohio, assignor, by mesne assignments, to Western Electric Company. Automatic telephone-exchange. No. 1,020,211; Mar. 12; Sp. p. 2573; Gaz. vol. 176; p. 437.
Lorin, Ernest, Doulaincourt, France. Gas-generator. No. 1,020,651; Mar. 19; Sp. p. 3501; Gaz. vol. 176; p. 618.
Los Angeles Rotary Gas Engine Company. (See Forbes, Thomas C., assignor.)
Lotbinière, Alain J. de, Srinagar, India. Tire-inflation indicator. No. 1,019,674; Mar. 5; Sp. p. 1462; Gaz. vol. 176; p. 225.
Louden Machinery Company. (See Neller, Albert H., assignor.)
Louis, Lawrence H., Alamosa, Colo. Ratchet die-stock. No. 1,021,155; Mar. 26; Sp. p. 4561; Gaz. vol. 176; p. 839.
Love, Charles A., and J. P. Turner, Paris, Tenn. Truss. No. 1,019,501; Mar. 5; Sp. p. 1146; Gaz. vol. 176; p. 168.
Love, Robert, Syracuse, N. Y., assignor, by mesne assignments, to Deere & Company, Moline, Ill. Fifth-wheel for fertilizer-distributers. No. 1,019,064; Mar. 5; Sp. p. 109; Gaz. vol. 176; p. 21.
Low, Abbot A., *et al.*, trustees. (See Betts, Lewis F., assignor.)
Lowe, Almadoris B., Cleveland, assignor of one-half to T. A. Lowe, Burton, Ohio. Burglar-alarm. No. 1,019,264; Mar. 5; Sp. p. 564; Gaz. vol. 176; p. 90.
Lowe, James L., Moore, Mont. Dirigible headlight. No. 1,019,976; Mar. 12; Sp. p. 2069; Gaz. vol. 176; p. 357.
Lowe, Levi E., Columbus, Ohio. Valve-stem and head therefor. No. 1,020,766; Mar. 19; Sp. p. 3757; Gaz. vol. 176; p. 658.
Lowe, Thomas A. (See Lowe, Almadoris B., assignor.)
Lowry, George A., Boston, Mass. Spigot. No. 1,021,055; Mar. 26; Sp. p. 4355; Gaz. vol. 176; p. 808.
Lubbers, John H., Allegheny, assignor to Window Glass Machine Company, Pittsburgh, Pa. Drawing glass articles. No. 1,020,020; Mar. 19; Sp. p. 4054; Gaz. vol. 176; p. 708.
Lübeck, Emil, Barmen, Germany. Loom-shuttle. No. 1,019,977; Mar. 12; Sp. p. 2070; Gaz. vol. 176; p. 357.
Lucas, Anton, assignor to Goldschmidt Thermit Company, New York, N. Y. Welding metals. No. 1,021,318; Mar. 26; Sp. p. 4902; Gaz. vol. 176; p. 896.
Luckhoff, Louis, Canton, Ohio. Weed-destroyer. No. 1,020,614; Mar. 19; Sp. p. 3422; Gaz. vol. 176; p. 606.

Lucy, William R., Ralston, Wash. Trace-coupling. No. 1,021,319; Mar. 26; Sp. p. 4904; Gaz. vol. 176; p. 896.
Luebke, August H., assignor to B. F. Windsor, deceased, Kenosha, Wis.; W. F. White, executor. Spring-forming machine. No. 1,020,767; Mar. 19; Sp. p. 3758; Gaz. vol. 176; p. 658.
Lukens, Milton H., Marblehead, Mass. Dies for cutting threads. No. 1,020,996; Mar. 26; Sp. p. 4235; Gaz. vol. 176; p. 787.
Lukowski, Edward A., Hammond, Ind. Beer-tap. No. 1,020,212; Mar. 12; Sp. p. 2579; Gaz. vol. 176; p. 437.
Lundeberg, Carl F., Hartford, Conn., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,019,978; Mar. 12; Sp. p. 2071; Gaz. vol. 176; p. 357.
Lundeen, F. G. (See Angell, William R., assignor.)
Lundin, Helene F. (See Dalton, Thomas J., assignor.)
Lundin, Nils F., *et al.* (See Richer, Joseph, assignor.)
Lundius, Eric R., Seattle, Wash. Book-holder. No. 1,021,614; Mar. 26; Sp. p. 5549; Gaz. vol. 176; p. 996.
Lussler, Henry, Salem, assignor to Draper Company, Hopedale, Mass. Automatic filling-replenishing loom. No. 1,019,265; Mar. 5; Sp. p. 566; Gaz. vol. 176; p. 90.
Luttringer, Armand D. (See Dubosc, Luttringer, and Denis.)
Lyback, Peter J., Chicago, Ill. Belt excavator. No. 1,020,296; Mar. 12; Sp. p. 2730; Gaz. vol. 176; p. 464.
Lyell, August, Wellington, New Zealand. Apple paring, coring, and slicing machine. No. 1,019,675; Mar. 5; Sp. p. 1463; Gaz. vol. 176; p. 226.
Lyle, Arlo D. (See McHattie and Lyle.)
Lynde, Daniel H., Rockham, S. D. Burner. No. 1,021,056; Mar. 26; Sp. p. 4355; Gaz. vol. 176; p. 808.
Lyon, Archibald H., Fort George Wright, Wash. Pipe-support. No. 1,021,689; Mar. 26; Sp. p. 5671; Gaz. vol. 176; p. 1021.
Lyons, Robert L., Boston, Mass., assignor to himself, and C. J. Sibbald, Rochester, N. Y. Thread-cutting device for sewing-machines. No. 1,021,156; Mar. 26; Sp. p. 4563; Gaz. vol. 176; p. 839.
M. A. N. Manufacturing Company. (See Tingley, Leonard C., assignor.)
Maatschappij Holland Naamlooze Vennootschap tot Installatie van Bakkerijen. (See Vermeulen, Frederik, assignor.)
MacFarland, Allison M., Newark, N. J., assignor to The Kinnear Manufacturing Company, Columbus, Ohio. Spring-roller. No. 1,021,057; Mar. 26; Sp. p. 4357; Gaz. vol. 176; p. 809.
MacFarland, William J., Everett, and W. G. Eaton, Boston, Mass. Forming dies. No. 1,020,297; Mar. 12; Sp. p. 2740; Gaz. vol. 176; p. 464.
MacFarlane, Charles E., Portland, Oreg. Logging system. No. 1,019,170; Mar. 5; Sp. p. 370; Gaz. vol. 176; p. 58.
MacGregor, Thomas D., Daviaville, Ontario, Canada. Hot-water heating-boiler. No. 1,021,416; Mar. 26; Sp. p. 5143; Gaz. vol. 176; p. 931.
Macaulay, Edward, Paignton, England. Apparatus for reducing or neutralising the noxious fumes resulting from the combustion of nitroglycerin explosives. No. 1,019,502; Mar. 5; Sp. p. 1148; Gaz. vol. 176; p. 169.
Macfarlane, James C., H. Burge, Chelmsford, and A. Williams, London Wall, London, assignors to Crompton & Company, Limited, Chelmsford, England. Means for controlling electrically-operated driving systems. No. 1,019,676; Mar. 5; Sp. p. 1465; Gaz. vol. 176; p. 226.
Macfarlane, James C., H. Burge, Chelmsford, and A. Williams, London Wall, London, assignors to Crompton & Company, Limited, Chelmsford, England. Means for regulating electrically-operated driving systems. No. 1,019,677; Mar. 5; Sp. p. 1468; Gaz. vol. 176; p. 227.
Machava, Frank, Greensburg, Pa. Wrench. No. 1,021,542; Mar. 26; Sp. p. 5410; Gaz. vol. 176; p. 974.
Machlett, Robert, New York, N. Y. Heat-insulating vessel. No. 1,021,058; Mar. 26; Sp. p. 4358; Gaz. vol. 176; p. 809.
Mackintosh, Ernest K., Washington, D. C. Mechanism for operating a hand of a dial. No. 1,019,065; Mar. 5; Sp. p. 112; Gaz. vol. 176; p. 21.
Madden, Edward, Amsterdam, N. Y. Vaporizer. No. 1,020,430; Mar. 19; Sp. p. 3015; Gaz. vol. 176; p. 546.
Magnuson, Axel B., Cambridge, Mass. Hose-coupling. No. 1,020,615; Mar. 19; Sp. p. 3423; Gaz. vol. 176; p. 606.
Magnusson, John A., assignor of one-half to P. R. Tansy, Tacoma, Wash. Bolt-extractor. No. 1,019,718; Mar. 5; Sp. p. 1537; Gaz. vol. 176; p. 239.
Mahan, James J., Jersey City, N. J. Toy. No. 1,019,266; Mar. 5; Sp. p. 567; Gaz. vol. 176; p. 91.
Mainwaring, Charles E. F. M. (See Forty, William H., assignor.)
Malek, Josef, Braceville, Ill. Tie and rail-fastener. No. 1,019,503; Mar. 5; Sp. p. 1149; Gaz. vol. 176; p. 169.
Maloney, William, Ottawa, Ontario, Canada. Elevated railway. No. 1,019,331; Mar. 5; Sp. p. 731; Gaz. vol. 176; p. 113.
Maloy, William H., Suffern, assignor to E. H. Fallows, New York, N. Y. Back for brake-shoes. No. 1,019,812; Mar. 12; Sp. p. 1730; Gaz. vol. 176; p. 303.
Malvern, Lewis K., assignor to Elgin National Watch Company, Elgin, Ill. Jeweler's gage. No. 1,020,832; Mar. 19; Sp. p. 3802; Gaz. vol. 176; p. 680.
Manchester, Thomas H., assignor to Chicago Car Heating Company, Chicago, Ill. Hose-coupling. No. 1,019,979; Mar. 12; Sp. p. 2073; Gaz. vol. 176; p. 358.
Manchester, Thomas H., and E. H. Gold, Chicago, Ill.; said Manchester assignor to said Gold. Hose-coupling. No. 1,019,980; Mar. 12; Sp. p. 2075; Gaz. vol. 176; p. 358.
Maney, Thomas, Louisville, Ky. Track appliance. No. 1,020,298; Mar. 12; Sp. p. 2743; Gaz. vol. 176; p. 464.
Mangiarotti, Arcangelo, Milan, Italy. Pedal mechanism for bicycles. No. 1,020,299; Mar. 12; Sp. p. 2744; Gaz. vol. 176; p. 465.
Manley, Thomas A., assignor to Ohio Tool Company, Auburn, N. Y. Plane. No. 1,021,369; Mar. 26; Sp. p. 5001; Gaz. vol. 176; p. 913.
Mann, James T. (See Davis, James B., assignor.)
Mann, Louis T., Chicago, Ill. Means for transmitting power from axles to bodies of railway-cars. No. 1,019,903; Mar. 12; Sp. p. 1921; Gaz. vol. 176; p. 334.
Manning, Elmer F., Janesville, Wis. Atomizer. No. 1,020,833; Mar. 19; Sp. p. 3893; Gaz. vol. 176; p. 680.
Manson, Ray H., assignor to The Dean Electric Company, Elyria, Ohio. Alarm-signal device. No. 1,020,768; Mar. 19; Sp. p. 3761; Gaz. vol. 176; p. 659.
Manzel, Charles W., assignor, by mesne assignments, to J. L. Osgood, Buffalo, N. Y. Lubricator. No. 1,019,167; Mar. 5; Sp. p. 356; Gaz. vol. 176; p. 56.
Marazzi, Adolf, Kottern, near Kempten, Germany, assignor to Genossenschaft für Textilpatente, Basel, Switzerland. Formation of the thread-reserve for looms with mechanical bobbin change. No. 1,019,329; Mar. 5; Sp. p. 729; Gaz. vol. 176; p. 113.
Marcucci, Angelo. (See Belluomini and Marcucci.)
Margeson, Christopher, Springfield, Mass. Agricultural implement. No. 1,019,330; Mar. 5; Sp. p. 729; Gaz. vol. 176; p. 113.
Marino, Pascal, London, England. Electrolytic separator and making the same. No. 1,020,149; Mar. 12; Sp. p. 2424; Gaz. vol. 176; p. 414.
Markell, Alexander. (See Cumberland, Peregrine E. G., assignor.)
Markley, Willis R., Findlay, Ohio. Insulator. No. 1,021,059; Mar. 26; Sp. p. 4360; Gaz. vol. 176; p. 809.
Marks, Henry A., Winterhaven, Fla. Oil-burner. No. 1,020,616; Mar. 19; Sp. p. 3426; Gaz. vol. 176; p. 606.
Marlton, William, *et al.* (See Craigie, William, assignor.)
Marsh, Albert M. (See Fleming and Marsh.)
Marsh, Arthur E., Denver, Colo. Coin-detector. No. 1,021,615; Mar. 26; Sp. p. 5552; Gaz. vol. 176; p. 997.
Marsh, Calvin D., deceased; F. F. Stryker, administrator, assignor to Hermance Machine Co., Williamsport, Pa. Cutter-head. No. 1,021,202; Mar. 26; Sp. p. 4657; Gaz. vol. 176; p. 854.
Marsh, Charles S. (See Chappel, James M., assignor.)
Marshall, Albert J. (See Godinez and Marshall.)
Marshall, Edward. (See Cutting and Marshall.)
Marshall, Robert, and A. Norbury, Bloomington, Ill. Railway-crossing. No. 1,020,834; Mar. 19; Sp. p. 3896; Gaz. vol. 176; p. 681.
Marshall, Thomas J., New York, N. Y. Soap-bubble blower. No. 1,020,708; Mar. 19; Sp. p. 3632; Gaz. vol. 176; p. 638.
Martell, Lydia, and E. J. Payne, Seattle, Wash. Bust-supporter. No. 1,020,213; Mar. 12; Sp. p. 2580; Gaz. vol. 176; p. 438.
Martin, Charles E., and S. J. Clokey, Washington, Pa. Wheel. No. 1,021,467; Mar. 26; Sp. p. 5263; Gaz. vol. 176; p. 949.
Martin, George C., Los Angeles, Cal. Friction-clutch. No. 1,019,267; Mar. 5; Sp. p. 570; Gaz. vol. 176; p. 91.
Martin, Harry T., Panhandle, Tex. Rotary churn. No. 1,020,300; Mar. 12; Sp. p. 2745; Gaz. vol. 176; p. 465.
Martin, John O., and H. W. Scheller, assignors of one-third to A. A. Abrens, Lincoln, Ill. Coupling. No. 1,020,431; Mar. 19; Sp. p. 3017; Gaz. vol. 176; p. 547.
Martin, Rodney W., Dayton, Ohio. Adjustable multi-tracker for mechanical musical-instrument players. No. 1,019,813; Mar. 12; Sp. p. 1731; Gaz. vol. 176; p. 303.
Marvin, Harry N., Canastota, assignor, by mesne assignments, to Biograph Company, New York, N. Y. Animated-picture apparatus. No. 1,021,060; Mar. 26; Sp. p. 4361; Gaz. vol. 176; p. 810.
Mary, Joseph L., and M. Lambert, Shelbyville, Ind., assignors to Moore Carving Machine Company, Minneapolis, Minn. Sander or smoothing-machine. No. 1,019,066; Mar. 5; Sp. p. 115; Gaz. vol. 176; p. 22.
Mascord, George W. (See Chitty, Lange, and Mascord.)
Masel, Theodore, assignor to American Baker's Machinery Company, St. Louis, Mo. Dough-divider. No. 1,021,157; Mar. 26; Sp. p. 4565; Gaz. vol. 176; p. 839.
Mason, Fred H., and J. Allen, Scranton, Pa. Separating mechanism. No. 1,021,600; Mar. 26; Sp. p. 5673; Gaz. vol. 176; p. 1021.
Mason, George N., assignor to Reading Hardware Company, Reading, Pa. Reversible locking-bolt. No. 1,019,678; Mar. 5; Sp. p. 1469; Gaz. vol. 176; p. 227.
Mason, George N., assignor to Reading Hardware Company, Reading, Pa. Rim-latch. No. 1,021,417; Mar. 26; Sp. p. 5146; Gaz. vol. 176; p. 931.
Mason, James R., North Versailles township, Allegheny county, Pa. Rotary air-compressor. No. 1,021,320; Mar. 26; Sp. p. 4905; Gaz. vol. 176; p. 897.
Mast, Joseph F., Harper, Kans. Machine for snapping and husking ears of corn. No. 1,021,321; Mar. 26; Sp. p. 4907; Gaz. vol. 176; p. 897.
Matalene, Henry W., New York, N. Y. Stem winding and setting watch. No. 1,020,769; Mar. 19; Sp. p. 3763; Gaz. vol. 176; p. 659.

Matalene, Henry W., New York, N. Y. Folding watch-case. No. 1,020,770; Mar. 19; Sp. p. 3766; Gaz. vol. 176; p. 659.

Matchette, Frank J. (See Van Ness, Frank W., assignor.)

Matchette, Frank J., Milwaukee, Wis. Vacuum-sweeper. No. 1,020,104; Mar. 12; Sp. p. 2340; Gaz. vol. 176; p. 400.

Matchette, Frank J., Milwaukee, Wis. Closure for vacuum service-inlets. No. 1,021,203; Mar. 26; Sp. p. 4650; Gaz. vol. 176; p. 854.

Matchless Lighter Company. (See Gould, Joseph B., assignor.)

Mathewa Gravity Carrier Company. (See Dehler, Albert S., assignor.)

Mathewson, Stanley B., Atlanta, Ga., assignor, by mesne assignments, to Barber-Colman Company, Rockford, Ill. Means for securing the end portion of a warp. No. 1,019,332; Mar. 5; Sp. p. 732; Gaz. vol. 176; p. 114.

Mathis, Henry H., Camden, S. C. Resilient heel. No. 1,021,751; Mar. 26; Sp. p. 5809; Gaz. vol. 176; p. 1042.

Matlick, Isaac N., Portland, Oreg. Tellurian. No. 1,019,981; Mar. 12; Sp. p. 2078; Gaz. vol. 176; p. 358.

Matson, Charles, Elizabeth, N. J. Non-refillable bottle. No. 1,020,997; Mar. 26; Sp. p. 4237; Gaz. vol. 176; p. 787.

Matson, Charles I., Chicago, Ill. Aerial machine. No. 1,019,168; Mar. 5; Sp. p. 359; Gaz. vol. 176; p. 57.

Mattes, Henry, New York, N. Y. Portable cot. No. 1,020,998; Mar. 26; Sp. p. 4239; Gaz. vol. 176; p. 787.

Matteson, Walter C., San Jose, Cal. Means for mounting truck members on endless-band wheels. No. 1,020,105; Mar. 12; Sp. p. 2342; Gaz. vol. 176; p. 401.

Matthews, Walter S., Pascagoula, Miss. Collapsible drinking-cup. No. 1,020,617; Mar. 19; Sp. p. 3428; Gaz. vol. 176; p. 607.

Mattivi, Vigilio, Cedarhurst, Colo. Permutation-lock. No. 1,021,107; Mar. 26; Sp. p. 4449; Gaz. vol. 176; p. 823.

Mauck, John A., Princeton, Ind. Supplementary spring attachment and shock-absorber for automobiles. No. 1,020,043; Mar. 12; Sp. p. 2207; Gaz. vol. 176; p. 380.

Maxim, Hiram P., Hartford, Conn. Automobile-starter. No. 1,020,106; Mar. 12; Sp. p. 2344; Gaz. vol. 176; p. 401.

Maxim, Hiram P., Hartford, Conn., assignor to The Waverley Company, Indianapolis, Ind. Motor-vehicle. No. 1,021,061; Mar. 26; Sp. p. 4363; Gaz. vol. 176; p. 810.

Maxwell-Briscoe Motor Company. (See Dahl, Harry G., assignor.)

Maynes, Hyla F., Gaines, Pa. Machine for applying labels. No. 1,019,719; Mar. 5; Sp. p. 1538; Gaz. vol. 176; p. 239.

McAdie, Alexander G., San Francisco, Cal. Fruit-protector. No. 1,021,691; Mar. 26; Sp. p. 5674; Gaz. vol. 176; p. 1021.

McAneelly, Thomas H., Findlay, Ohio. Drawing instrument. No. 1,021,602; Mar. 26; Sp. p. 5676; Gaz. vol. 176; p. 1022.

McAnulty, Samuel E. (See Tichenor and McAnulty.)

McArdle, Michael W., assignor to Chicago Flexible Shaft Company, Chicago, Ill. Cutter for animal-shears. No. 1,019,333; Mar. 5; Sp. p. 734; Gaz. vol. 176; p. 114.

McArthur, Andrew J., and J. R. Tucker, Springfield, Ga. Automatic oiler. No. 1,020,835; Mar. 19; Sp. p. 3898; Gaz. vol. 176; p. 681.

McBarnes, Wade H., Decatur, Ind. Velocipede. No. 1,020,432; Mar. 19; Sp. p. 3019; Gaz. vol. 176; p. 547.

McCarty, Edward W. (See Flynn, Michael J., assignor.)

McCarty, Eugene J. (See Baker and McCarty.)

McCaskey, Perry A., assignor to The McCaskey Register Company, Alliance, Ohio. Credit-accounting appliance. (Reissue.) No. 13,390; Mar. 26; Sp. p. 5822; Gaz. vol. 176; p. 1043.

McCaskey Register Company, The. (See McCaskey, Perry A., assignor.) (Reissue.)

McClaskey, Charles H., Carneyville, Wyo. Lubricant journal-box. No. 1,019,814; Mar. 12; Sp. p. 1735; Gaz. vol. 176; p. 303.

McCloskey, Louis J., Carrick borough, assignor to Phillips Mine and Mill Supply Co., Pittsburgh, Pa. Car-door latch. No. 1,020,107; Mar. 12; Sp. p. 2349; Gaz. vol. 176; p. 402.

McCloud, Edward H., Columbus, Ohio. Mechanism for raising and lowering shutters or curtains. No. 1,019,169; Mar. 5; Sp. p. 364; Gaz. vol. 176; p. 57.

McClure, Charles W., Saginaw, Mich. Silo-roof construction. No. 1,019,334; Mar. 5; Sp. p. 734; Gaz. vol. 176; p. 114.

McClure, Edward, assignor of one-half to F. P. Smith, Chicago, Ill. Supporting mechanism for doors and other objects. No. 1,019,335; Mar. 5; Sp. p. 736; Gaz. vol. 176; p. 114.

McCluskey, Daniel J., San Francisco, Cal. Vehicle-spring. No. 1,019,336; Mar. 5; Sp. p. 738; Gaz. vol. 176; p. 115.

McColg, Franklin P., Durant, Okla. Corn-popping machine. No. 1,021,322; Mar. 26; Sp. p. 4908; Gaz. vol. 176; p. 897.

McColgan, William, Marshall, Minn. Reamer. No. 1,019,679; Mar. 5; Sp. p. 1470; Gaz. vol. 176; p. 227.

McCombs, Charles H., Cleveland, assignor of one-half to C. S. Britton, Bratenahl, Ohio. Shock-absorber. No. 1,019,504; Mar. 5; Sp. p. 1150; Gaz. vol. 176; p. 169.

McConnell, Ernest, assignor of one-half to W. D. Hammond, Los Angeles, Cal. Safety swinging window. No. 1,019,337; Mar. 5; Sp. p. 740; Gaz. vol. 176; p. 115.

McConnell, William, Sioux Falls, S. D. Pipe-machine. No. 1,019,505; Mar. 5; Sp. p. 1152; Gaz. vol. 176; p. 169.

McConway & Torley Company, The. (See Buhoup, Harry C., assignor.)

McConway & Torley Company. (See Kelso, Joseph, assignor.)

McConway & Torley Company. (See Kelso, William, assignor.)

McConway & Torley Company, The. (See McConway, William, Jr., assignor.)

McConway & Torley Company, The. (See Milliken, Isaac H., assignor.)

McConway, William, Jr., assignor to The McConway & Torley Company, Pittsburgh, Pa. Coupling. No. 1,021,418; Mar. 26; Sp. p. 5147; Gaz. vol. 176; p. 931.

McConway, William, Jr., assignor to The McConway & Torley Company, Pittsburgh, Pa. Draft appliance for railway-cars. No. 1,021,419; Mar. 26; Sp. p. 5148; Gaz. vol. 176; p. 932.

McCool, William A., Beaver Falls, Pa., assignor to Hercules Tire & Rubber Company. Vulcanizing-mold. No. 1,019,506; Mar. 5; Sp. p. 1155; Gaz. vol. 176; p. 170.

McCormick, John H., New Orleans, La. Cotton-seed delinter. No. 1,020,108; Mar. 12; Sp. p. 2350; Gaz. vol. 176; p. 402.

McCormick, Warren L., Sapulpa, Okla. Glass-lined pump-barrel. No. 1,019,507; Mar. 5; Sp. p. 1157; Gaz. vol. 176; p. 170.

McCotter, Charles R., assignor of one-half to G. S. Phillips, Jacksonville, Fla. Life-raft. No. 1,019,982; Mar. 12; Sp. p. 2084; Gaz. vol. 176; p. 359.

McCoubrie, Louden A., and C. F. Raydure, Philadelphia, Pa. Shoe for third-rail electric cars. No. 1,021,420; Mar. 26; Sp. p. 5150; Gaz. vol. 176; p. 932.

McCoy, Elijah, Detroit, assignor to Ypsilanti Lubricator Company, Ypsilanti, Mich. Gage. No. 1,021,255; Mar. 26; Sp. p. 4782; Gaz. vol. 176; p. 873.

McCuller, James A. (See Ebbs and McCuller.)

McCurry, James, Kearny, N. J. Curtain-roller. No. 1,019,338; Mar. 5; Sp. p. 742; Gaz. vol. 176; p. 115.

McDaniel, John W., Holley, Fla. Gum-truck. No. 1,020,509; Mar. 19; Sp. p. 3178; Gaz. vol. 176; p. 571.

McDermott, Michael M., Brooklyn, N. Y. Stiffening device for garments. No. 1,019,339; Mar. 5; Sp. p. 745; Gaz. vol. 176; p. 116.

McDonnell, David, *et al.* (See Ironside, Matthew C., assignor.)

McElroy, William E. (See Wearn, George W., assignor.)

McFeely, Ronald F., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Pounding-up machine. No. 1,019,067; Mar. 5; Sp. p. 117; Gaz. vol. 176; p. 22.

McFeely, Ronald F., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Gripper. No. 1,019,904; Mar. 12; Sp. p. 1926; Gaz. vol. 176; p. 335.

McGarvey, Anna, Westover, Pa. Cabinet and dough-raiser. No. 1,019,815; Mar. 12; Sp. p. 1736; Gaz. vol. 176; p. 304.

McGary, Robert M., Mechanicsburg, Pa. Apparatus for adapting beds of the ordinary type for the use of invalids. No. 1,021,093; Mar. 26; Sp. p. 5678; Gaz. vol. 176; p. 1022.

McGaughey, Alonzo M., Russellville, Ind. Display-rack. No. 1,019,983; Mar. 12; Sp. p. 2086; Gaz. vol. 176; p. 359.

McGavick, Alexander J., Chicago, Ill. Fence post and fence-fastening. No. 1,019,816; Mar. 12; Sp. p. 1737; Gaz. vol. 176; p. 304.

McGavick, Alexander J., Chicago, Ill. Fence post and fastening. No. 1,019,817; Mar. 12; Sp. p. 1738; Gaz. vol. 176; p. 304.

McGavin, James, Chicago, Ill. Mine-protection system. No. 1,021,370; Mar. 26; Sp. p. 5004; Gaz. vol. 176; p. 913.

McGavock, William J., Mexico, Mexico. Nut-lock. No. 1,019,680; Mar. 5; Sp. p. 1471; Gaz. vol. 176; p. 227.

McGeary, Luman A., assignor to F. E. Walden, Worcester, Mass. Clothes-drier. No. 1,021,694; Mar. 26; Sp. p. 5680; Gaz. vol. 176; p. 1022.

McGee, John, Quinlan, Tex. Mail-box-transmission system. No. 1,019,984; Mar. 12; Sp. p. 2088; Gaz. vol. 176; p. 360.

McGinnis, James, Johnstown, Pa. Pneumatic tire. No. 1,021,616; Mar. 26; Sp. p. 5554; Gaz. vol. 176; p. 997.

McGoffin, Thomas E. (See Sleeper and McGoffin.)

McGowan, Joseph C., and R. W. Michler, assignors of one-third to M. P. Deutsch, Perris, Cal. Signal. No. 1,019,340; Mar. 5; Sp. p. 746; Gaz. vol. 176; p. 116.

McGowan, Patrick A., Newport, Ky. Device for applying grease to rolls. No. 1,021,062; Mar. 26; Sp. p. 4367; Gaz. vol. 176; p. 810.

McGrath, John T., Battle Creek, Mich. Automatic machine for cutting off tubes. No. 1,020,433; Mar. 19; Sp. p. 3021; Gaz. vol. 176; p. 547.

McGuire, Michael G., Chicago, Ill. Sportsman's appliance. No. 1,020,044; Mar. 12; Sp. p. 2208; Gaz. vol. 176; p. 380.

McHattie, Jean J., and A. D. Lyle, Kansas City, Mo. Dress-form. No. 1,021,108; Mar. 26; Sp. p. 4451; Gaz. vol. 176; p. 823.

McIlveene, Mincola, Lueders, and L. A. Hayes, Weatherford, Tex. Potato-digging machine. No. 1,019,681; Mar. 5; Sp. p. 1475; Gaz. vol. 176; p. 228.

McIntire, Jacob N., assignor to The Brunswick-Balke-Collender Company of New York, New York, N. Y. Mortuary refrigerator. No. 1,021,722; Mar. 26; Sp. p. 5742; Gaz. vol. 176; p. 1031.

McIntosh, Charles C., Los Angeles, Cal. Fruit-sizer. No. 1,019,341; Mar. 5; Sp. p. 747; Gaz. vol. 176; p. 116.

McIntosh, William A. (See Linscott and McIntosh.)

McJunkin, Paul. (See Graybill and McJunkin.)

McKaig, Eddy T., assignor to I. Larsen, Chicago, Ill. Lubricating device. No. 1,021,421; Mar. 26; Sp. p. 5151; Gaz. vol. 176; p. 932.

McKay, Festus A., parish of St. Andrews, Jamaica. Apparatus for scrubbing and polishing floors. No. 1,021,695; Mar. 26; Sp. p. 5682; Gaz. vol. 176; p. 1023.

McKee, George F., and W. F. Schilling, Aspinwall, assignors to McKee-Schilling Permanent Mold Company, Pittsburgh, Pa. Casting apparatus. No. 1,019,905; Mar. 12; Sp. p. 1927; Gaz. vol. 176; p. 335.

McKee, George F., and W. F. Schilling, Aspinwall, assignors to McKee-Schilling Permanent Mold Company, Pittsburgh, Pa. Casting apparatus. No. 1,019,906; Mar. 12; Sp. p. 1930; Gaz. vol. 176; p. 335.

McKee-Schilling Permanent Mold Company. (See McKee and Schilling, assignors.)

McKelvey, William W., assignor to The William B. Pollock Company, Youngstown, Ohio. Ladle-car. No. 1,021,543; Mar. 26; Sp. p. 5411; Gaz. vol. 176; p. 974.

McKeown, William C., assignor to Buffalo Radiator Company, Buffalo, N. Y. Radiator-assembling machine. No. 1,020,150; Mar. 12; Sp. p. 2426; Gaz. vol. 176; p. 415.

McKenna, John A., Crafton, Pa. Faucet. No. 1,020,434; Mar. 19; Sp. p. 3026; Gaz. vol. 176; p. 548.

McKenzie, Dougal J., Chicago, Ill. Furnace. No. 1,019,508; Mar. 5; Sp. p. 1158; Gaz. vol. 176; p. 171.

McKinnon, Alexander E., assignor to Acme Supply Company, Chicago, Ill. Deck-sash ratchet. No. 1,019,068; Mar. 5; Sp. p. 136; Gaz. vol. 176; p. 22.

McKinzie, James F. and R. E., and J. B. Clark, La Salle, Ill. Electric motor. No. 1,020,566; Mar. 19; Sp. p. 3312; Gaz. vol. 176; p. 591.

McKinzie, Robert E. (See McKinzie and Clark.)

McLaughlin, George A., *et al.* (See Christman, Matthias, assignor.)

McLaughlin, Horace S. (See McMillen, Robert, assignor.)

McLaughlin, John C., Jersey City, N. J., assignor to Underwood Typewriter Company, New York, N. Y. Typewriting machine. No. 1,021,158; Mar. 26; Sp. p. 4569; Gaz. vol. 176; p. 840.

McLellan, Harry R. (See Strickland, James L., assignor.)

McMahon, Oscar L., Columbia, Tenn. Bandage. No. 1,019,985; Mar. 12; Sp. p. 2090; Gaz. vol. 176; p. 360.

McMillen, Robert, assignor of one-third to H. S. McLaughlin, Pittsburgh, Pa. Trolley. No. 1,019,509; Mar. 5; Sp. p. 1160; Gaz. vol. 176; p. 171.

McMillen, Russell H., Wheeling, W. Va. Still. No. 1,019,009; Mar. 5; Sp. p. 137; Gaz. vol. 176; p. 23.

McMurdie, Francis J., assignor to American Blower Company, Detroit, Mich. Ventilating apparatus. No. 1,019,818; Mar. 12; Sp. p. 1739; Gaz. vol. 176; p. 304.

McMurray, Louis S. (See Dymond, John, assignor.)

McMurtry, Alden L., Sound Beach Conn. Bubble-hat. No. 1,021,323; Mar. 26; Sp. p. 4910; Gaz. vol. 176; p. 897.

McMurtry, George G., New York, N. Y. Apparatus for rolling shapes. No. 1,021,468; Mar. 26; Sp. p. 5264; Gaz. vol. 176; p. 940.

McNamara, John F., *et al.* (See Griggs and Henderson, assignors.)

McNamara, Thomas J. (See Baker and McCarty, assignors.)

McNaull, William D., Toledo, Ohio. Means for attaching water-tubes to water-tube boiler and other drums. No. 1,021,204; Mar. 26; Sp. p. 4661; Gaz. vol. 176; p. 855.

McNulty, Harry B., East Cleveland, assignor, by mesne assignments, to The United States Phonograph Company, Cleveland, Ohio. Phonograph. No. 1,020,151; Mar. 12; Sp. p. 2430; Gaz. vol. 176; p. 415.

McPheron, Leslie D., Uniopolis, Ohio. Pump-rod coupling. No. 1,020,301; Mar. 12; Sp. p. 2746; Gaz. vol. 176; p. 465.

McPherson, Herbert R., *et al.* (See Ivor, Barry, assignor.)

McQuiston, William G., Oil City, assignor of one-half to H. T. Rose, Jr., Rouseville, Pa. Animal-trap. No. 1,020,950; Mar. 19; Sp. p. 4127; Gaz. vol. 176; p. 720.

Mead, Marion F., Geddes, S. D. Fence-repairing implement. No. 1,021,324; Mar. 26; Sp. p. 4911; Gaz. vol. 176; p. 898.

Meeklem, Clive, assignor to Brentano's, New York, N. Y. Score-card. No. 1,019,070; Mar. 5; Sp. p. 139; Gaz. vol. 176; p. 23.

Medlin, William A., Ripley, Miss. Wire-stretcher. No. 1,021,371; Mar. 26; Sp. p. 5005; Gaz. vol. 176; p. 914.

Meikel, Charles W. (See Bright, Martin C., assignor.)

Mellink, Charles F., Toledo, Ohio. Safe-cabinet. No. 1,020,652; Mar. 19; Sp. p. 3502; Gaz. vol. 176; p. 618.

Mell, Tod J., assignor to The Republic Rubber Company, Youngstown, Ohio. Tire for vehicle-wheels. No. 1,021,422; Mar. 26; Sp. p. 5155; Gaz. vol. 176; p. 933.

Mellin, Carl J., Schenectady, N. Y. Steam-pipe for articulated locomotives. No. 1,020,435; Mar. 19; Sp. p. 3028; Gaz. vol. 176; p. 548.

Melville-Hamilton, Augusta M., Medindie, South Australia, Australia. Water-bottle or water-bag. No. 1,019,171; Mar. 5; Sp. p. 371; Gaz. vol. 176; p. 58.

Melzer, Adolph, Evansville, Ind. Animal-ambulance. No. 1,019,268; Mar. 5; Sp. p. 574; Gaz. vol. 176; p. 92.

Menk, George L., St. Louis, Mo. Heating-stove. No. 1,019,172; Mar. 5; Sp. p. 373; Gaz. vol. 176; p. 58.

Menke, George E., assignor of one-half to J. J. Detmers, Hebron, Nebr. Loading device. No. 1,021,696; Mar. 26; Sp. p. 5683; Gaz. vol. 176; p. 1023.

Mentzer, Albert A. (See Haslett and Mentzer.)

Merkel, Jacob B., and G. J. Carroll, Tamaqua, Pa. Film-winding mechanism for moving-picture machines. No. 1,021,617; Mar. 26; Sp. p. 5555; Gaz. vol. 176; p. 997.

Meronek, Nick, Polonia, Wis. Distributing-machine. No. 1,021,544; Mar. 26; Sp. p. 5413; Gaz. vol. 176; p. 975.

Merrell, Howard E., *et al.* (See Gill, Edwin R., assignor.)

Merrill, Nate E., and J. C. Cavender, Hobart, Ind. Roller-bearing. No. 1,019,819; Mar. 12; Sp. p. 1741; Gaz. vol. 176; p. 305.

Merriman, Thomas T., and B. F. Peart, Central Point, Oreg. Vise. No. 1,019,682; Mar. 5; Sp. p. 1477; Gaz. vol. 176; p. 228.

Merrow, Edgar L. (See O'Connell, James P., assignor.)

Merryman, Clarence E., Anderson, Ind. Metallic thermometer. No. 1,020,045; Mar. 12; Sp. p. 2210; Gaz. vol. 176; p. 381.

Mesnard, Gilbert R., Chicago, Ill. Pliers. No. 1,021,372; Mar. 26; Sp. p. 5006; Gaz. vol. 176; p. 914.

Messick, William L., Irvington, Va. Ship's davit and means for operating the same. No. 1,021,545; Mar. 26; Sp. p. 5416; Gaz. vol. 176; p. 975.

Messter, Oskar, Berlin, Germany. Toy kinematograph. No. 1,020,999; Mar. 26; Sp. p. 4241; Gaz. vol. 176; p. 788.

Mestas, José V., Mexico, Mexico. Metallic mattress. No. 1,019,510; Mar. 5; Sp. p. 1162; Gaz. vol. 176; p. 171.

Metallurgical Research Company. (See Rockey and Eldridge, assignors.)

Metcalf, George H., Wilkinson, assignor of one-half to J. A. Nunnery, Rosetta, Miss. Wheel. No. 1,021,618; Mar. 26; Sp. p. 5557; Gaz. vol. 176; p. 998.

Metz, Charles H., Spokane, Wash. Belt-lacing tool. No. 1,020,214; Mar. 12; Sp. p. 2581; Gaz. vol. 176; p. 438.

Metz, Charles H., Spokane, Wash. Belt-punch. No. 1,020,302; Mar. 12; Sp. p. 2747; Gaz. vol. 176; p. 466.

Meyer, Robert, Mülheim-Ruhr, Germany. Automatic plate-valve. No. 1,019,683; Mar. 5; Sp. p. 1478; Gaz. vol. 176; p. 228.

Michael, James L., Upton, Wyo. Strangler for horses. No. 1,019,684; Mar. 5; Sp. p. 1479; Gaz. vol. 176; p. 229.

Michler, Robert W. (See McGowan and Michler.)

Michod, Charles L., assignor of one-half to Llewellyn Iron Works, Los Angeles, Cal. Armored well-screen. No. 1,019,986; Mar. 12; Sp. p. 2091; Gaz. vol. 176; p. 360.

Miles, Aquilla. (See Everhart, Charles O., assignor.)

Millar, Charles I., Providence, R. I. Cross-strap connector. No. 1,019,820; Mar. 12; Sp. p. 1742; Gaz. vol. 176; p. 305.

Millard, Dell E., Galesburg, Kans. Combined bag-holder and weighing-scale. No. 1,019,685; Mar. 5; Sp. p. 1481; Gaz. vol. 176; p. 229.

Millen, James L., Lansing, Mich. Sanitary drinking-fountain. No. 1,020,303; Mar. 12; Sp. p. 2748; Gaz. vol. 176; p. 466.

Miller, Alfred K., Worcester, assignor of thirty one-hundredths to R. O. Ingram, Andover, and thirty one-hundredths to H. L. Wadsworth, Boston, Mass. Yarn-winding machine. No. 1,019,173; Mar. 5; Sp. p. 376; Gaz. vol. 176; p. 59.

Miller, Arlington H. J., Bangor, Pa. Nut-lock and releasing device therefor. No. 1,019,686; Mar. 5; Sp. p. 1482; Gaz. vol. 176; p. 229.

Miller, Daniel H., Fort Worth, Tex. Wire fence. No. 1,019,071; Mar. 5; Sp. p. 140; Gaz. vol. 176; p. 23.

Miller, Edward F., Newton, assignor to Crosby Steam Gage and Valve Company, Boston, Mass. Safety-valve. No. 1,020,921; Mar. 19; Sp. p. 4056; Gaz. vol. 176; p. 709.

Miller, Eli J., York, Pa. Washing-machine. No. 1,020,618; Mar. 19; Sp. p. 3429; Gaz. vol. 176; p. 607.

Miller, Ernest B., Baltimore, Md. Apparatus for elevating, transporting, and discharging material. No. 1,021,063; Mar. 26; Sp. p. 4369; Gaz. vol. 176; p. 811.

Miller, Frank J. (See Oster and Miller.)

Miller, Frederic R., Cypress Hills, N. Y. Stretching-frame. No. 1,021,619; Mar. 26; Sp. p. 5558; Gaz. vol. 176; p. 998.

Miller, Frederick J., assignor to The Western Gas Fixture Company, Toledo, Ohio. Hickey. No. 1,019,821; Mar. 12; Sp. p. 1743; Gaz. vol. 176; p. 305.

Miller, H. T. (See Thompson, Knight H., assignor.)

Miller, Harriet M., Opdyke, Ill. Tie. No. 1,019,342; Mar. 5; Sp. p. 749; Gaz. vol. 176; p. 117.

Miller, Henry C., Milwaukee, Wis. Flexible binder-post. No. 1,019,174; Mar. 5; Sp. p. 378; Gaz. vol. 176; p. 59.

Miller, Herbert J., London, Ontario, Canada. Game apparatus. No. 1,020,215; Mar. 12; Sp. p. 2582; Gaz. vol. 176; p. 438.

Miller, Isaac E., Chicago, Ill. Cooking utensil. No. 1,020,304; Mar. 12; Sp. p. 2749; Gaz. vol. 176; p. 466.

Miller, James S., Reading, Pa. Sewage-separator. No. 1,019,907; Mar. 12; Sp. p. 1931; Gaz. vol. 176; p. 336.

Miller Lock Co. (See Dowe, Arthur W., assignor.)

Miller, Martin T., Tracy, Iowa. Mail-carrier. No. 1,021,620; Mar. 26; Sp. p. 5559; Gaz. vol. 176; p. 998.

Miller, Nicholas C., Dodgeville, Wis. Hoisting-drum. No. 1,019,269; Mar. 5; Sp. p. 575; Gaz. vol. 176; p. 92.
Miller, Robert, Jr., Schenectady, N. Y., assignor to General Electric Company. Resistance. No. 1,021,256; Mar. 26; Sp. p. 4782; Gaz. vol. 176; p. 873.
Miller, Royal R., assignor of one-half to W. C. Darby, Pueblo, Colo. Waterproof switch-box. No. 1,021,373; Mar. 26; Sp. p. 5007; Gaz. vol. 176; p. 914.
Miller, Steven, Smithdale, Pa. Game apparatus or puzzle. No. 1,021,546; Mar. 26; Sp. p. 5417; Gaz. vol. 176; p. 975.
Miller, Wray B., Bourbon, Ind. Nest. No. 1,019,072; Mar. 5; Sp. p. 142; Gaz. vol. 176; p. 23.
Miller, Wray B., Bourbon, Ind. Churn. No. 1,021,621; Mar. 26; Sp. p. 5560; Gaz. vol. 176; p. 998.
Milliken, Isaac H., assignor to The McConway & Torley Company, Pittsburgh, Pa. Coupling. No. 1,021,423; Mar. 26; Sp. p. 5156; Gaz. vol. 176; p. 933.
Mills, Edward L., Los Angeles, Cal. Drive-down-casing spear. No. 1,021,205; Mar. 26; Sp. p. 4662; Gaz. vol. 176; p. 855.
Mills, Edward R. (See Elliott, Mills, and Holt.)
Mills Woven Cartridge Belt Co., The. (See Knight, Livingston, assignor.)
Milwaukee Brass Manufacturing Company. (See Engel, August, assignor.)
Milwaukee Corrugating Company. (See Flagge, Phillipp F., assignor.)
Minor, Daniel B., assignor to L. S. Hackney, St. Paul, Minn. Centrifugal fan. No. 1,020,771; Mar. 19; Sp. p. 3767; Gaz. vol. 176; p. 660.
Minue, William E., Fredericton, New Brunswick, Canada. Rotating-cylinder engine. No. 1,019,908; Mar. 12; Sp. p. 1932; Gaz. vol. 176; p. 336.
Miquel, Juan. (See Vincke and Miquel.)
Miser, Charles E., assignor to Miser-Shaff Specialty Company, Watertown, N. Y. Automatic relief-valve. No. 1,019,511; Mar. 5; Sp. p. 1163; Gaz. vol. 176; p. 172.
Miser-Shaff Specialty Company. (See Miser, Charles E., assignor.)
Mitchell, William W., Chicago, Ill. Meat-chopper. No. 1,021,000; Mar. 26; Sp. p. 4243; Gaz. vol. 176; p. 788.
Mix, Edgar W., Paris, France, assignor to General Electric Company. Automatic regulation of mixed-pressure turbines. No. 1,021,257; Mar. 26; Sp. p. 4784; Gaz. vol. 176; p. 873.
Miltz, August, Charlottenburg, Germany. Slide-closure for vessels. No. 1,020,772; Mar. 19; Sp. p. 3768; Gaz. vol. 176; p. 660.
Mock, Frederick W., Milroy, Ind. Spring for gates, &c. No. 1,019,822; Mar. 12; Sp. p. 1744; Gaz. vol. 176; p. 305.
Moe, Eldor H., Salt Lake City, Utah. Electric fire-alarm. No. 1,019,270; Mar. 5; Sp. p. 577; Gaz. vol. 176; p. 92.
Moege, Wilhelm, Parkston, S. D. Latch. No. 1,021,258; Mar. 26; Sp. p. 4786; Gaz. vol. 176; p. 874.
Moeller, William J., Wyoming, assignor to The Philip Carey Manufacturing Company, Lockland, Ohio. Insulator-covering. No. 1,020,567; Mar. 19; Sp. p. 3313; Gaz. vol. 176; p. 592.
Moest, Martin. (See Berneck, Moest, and Graf.)
Mohawk Valley Cap Factory *et al.* (See Eberley, George W., assignor.)
Molencki, Edward, Detroit, Mich. Curtain-pole. No. 1,021,064; Mar. 26; Sp. p. 4371; Gaz. vol. 176; p. 811.
Mominee, Charles J., assignor to H. I. Mominee, Toledo, Ohio. Portable car-chute. No. 1,021,741; Mar. 26; Sp. p. 5783; Gaz. vol. 176; p. 1038.
Mominee, Herman I. (See Mominee, Charles J., assignor.)
Monarch Metal Weather Strip Company. (See Lane, Alfred M., assignor.)
Monarch Typewriter Company, The. (See Steele, Herbert H., assignor.)
Moody, Walter S., Pittsfield, Mass., assignor to General Electric Company. High-voltage transformer. No. 1,019,512; Mar. 5; Sp. p. 1165; Gaz. vol. 176; p. 172.
Moore, Alexander T., New Orleans, La. Treating fabrics. No. 1,019,900; Mar. 12; Sp. p. 1938; Gaz. vol. 176; p. 336.
Moore Carving Machine Company. (See Mary and Lambert, assignors.)
Moore, Clarence L., Allenhurst, N. J. Aeroplane. No. 1,019,987; Mar. 12; Sp. p. 2092; Gaz. vol. 176; p. 361.
Moore, Daniel M., Newark, N. J., assignor to Moore Electrical Co., New York, N. Y. Electrically-operated vacuum-tube. No. 1,020,109; Mar. 12; Sp. p. 2353; Gaz. vol. 176; p. 403.
Moore, Daniel M., Newark, N. J., assignor to Moore Electrical Co., New York, N. Y. Terminal for gas and vapor electric apparatus. No. 1,020,110; Mar. 12; Sp. p. 2357; Gaz. vol. 176; p. 403.
Moore, Edward Y., and M. Mulholland, Cleveland, Ohio; said Moore assignor to said Mulholland. Hatch-cover fastener. No. 1,019,343; Mar. 5; Sp. p. 750; Gaz. vol. 176; p. 117.
Moore Electrical Co. (See Moore, Daniel M., assignor.)
Moore, Jay W., Gays Mills, assignor to Stoelting Brothers Co., Kiel, Wis. Carrier. No. 1,019,175; Mar. 5; Sp. p 379; Gaz. vol. 176; p. 60.
Moore, Jeremiah, *et al.* (See Doyle, James, assignor.)
Moore, Lewis P., Weldon, Ill. Bolt-holding pincers. No. 1,020,361; Mar. 12; Sp. p. 2854; Gaz. vol. 176; p. 483.
Moore, Robert A., New York, N. Y. Silencer for firearms. No. 1,021,742; Mar. 26; Sp. p. 5784; Gaz. vol. 176; p. 1039.
Moore, Robert S., assignor to Gyro Motor Company, Washington, D. C. Piston for expansion-engines. No. 1,020,836; Mar. 19; Sp. p. 3899; Gaz. vol. 176; p. 682.
Moore, Robert S., and J. L. Simmons, assignors to The Gyro Motor Company, Washington, D. C. Gas-engine. No. 1,019,513; Mar. 5; Sp. p. 1166; Gaz. vol. 176; p. 172.
Moore, Thomas N., Coleman, Okla. Wagon-brake. No. 1,019,176; Mar. 5; Sp. p. 381; Gaz. vol. 176; p. 60.
Moorhead, Albert E., assignor, by mesne assignments, to American Rotary Valve Company, Chicago, Ill. Valve. No. 1,020,922; Mar. 19; Sp. p. 4058; Gaz. vol. 176; p. 709.
Moran, Michael C., Olyphant, Pa. Label. No. 1,020,305; Mar. 12; Sp. p. 2751; Gaz. vol. 176; p. 466.
Moreau, Hector L. (See Barrows and Moreau.)
Morgan, Arthur H., Cambridge, Mass. Gas-meter. No. 1,020,837; Mar. 19; Sp. p. 3900; Gaz. vol. 176; p. 682.
Morgan-Gardner Electric Company. (See Noble, Ralph E., assignor.)
Morgan, Gerry A., Goffstown, N. H., assignor to Boston Automatic Machine Company, Boston, Mass. Power-transmission mechanism. No. 1,021,150; Mar. 26; Sp. p. 4570; Gaz. vol. 176; p. 840.
Morgan, Henry W., Rochester, N. Y. Nailing-machine. No. 1,020,436; Mar. 19; Sp. p. 3029; Gaz. vol. 176; p. 548.
Morgan, John D., Summit, N. J., assignor to Goss Printing Press Company, Chicago, Ill. Book or pamphlet making machine. No. 1,021,325; Mar. 26; Sp. p. 4912; Gaz. vol. 176; p. 898.
Morgan, Percy D., Portland, Oreg. Combined pencil and compasses. No. 1,021,160; Mar. 26; Sp. p. 4572; Gaz. vol. 176; p. 841.
Morgan & Wright. (See Hoyt, Homer J., assignor.)
Morin, George F., Benson, Minn. Mail-bag deliverer. No. 1,019,823; Mar. 12; Sp. p. 1746; Gaz. vol. 176; p. 306.
Morris, George A., Inver Grove, Minn. Saw-set. No. 1,019,824; Mar. 12; Sp. p. 1747; Gaz. vol. 176; p. 306.
Morris, Harry. (See Reed, Isaac N., assignor.)
Morrison, William, Des Moines, Iowa. Alkaline battery. No. 1,020,568; Mar. 19; Sp. p. 3314; Gaz. vol. 176; p. 592.
Morrissey, Thomas F., West Orange, N. J., assignor to United Button Company. Sawing-machine. No. 1,019,720; Mar. 5; Sp. p. 1543; Gaz. vol. 176; p. 240.
Morse, Wendell J., Albion, Mich. Coin or check controlled vending-machine. No. 1,021,723; Mar. 26; Sp. p. 5745; Gaz. vol. 176; p. 1032.
Mort, George F., Ealing, London, England. Explosion-engine. No. 1,021,607; Mar. 26; Sp. p. 5685; Gaz. vol. 176; p. 1024.
Morton, Rolla A., Fresno, Cal. Internal-combustion rotary engine. No. 1,019,177; Mar. 5; Sp. p. 383; Gaz. vol. 176; p. 60.
Mossberg, Frank, Attleboro, Mass., assignor to Frank Mossberg Company. Ratchet-wrench. No. 1,019,825; Mar. 12; Sp. p. 1749; Gaz. vol. 176; p. 306.
Motsinger Device Manufacturing Company. (See Motsinger, Homer N., assignor.)
Motsinger, Homer N., assignor to Motsinger Device Manufacturing Company, Pendleton, Ind. Magneto-electric device. No. 1,021,001; Mar. 26; Sp. p. 4244; Gaz. vol. 176; p. 788.
Motsinger, Homer N., Pendleton, assignor to Motsinger Device Manufacturing Company, La Fayette, Ind. Carbureter. No. 1,021,547; Mar. 26; Sp. p. 5418; Gaz. vol. 176; p. 975.
Mouchet, Albert A., Youngsville, La. Machine for driving posts and well-tubing. No. 1,019,687; Mar. 5; Sp. p. 1483; Gaz. vol. 176; p. 229.
Mowbray, James W., Gleichen, Alberta, assignor to The Hydro-Carbon Vaporizer Limited, Fort William, Canada. Hydrocarbon-vaporizer for internal-combustion engines. No. 1,021,326; Mar. 26; Sp. p. 4915; Gaz. vol. 176; p. 898.
Moya, Hidalgo, Leicester, England. Aerial vessel. No. 1,019,514; Mar. 5; Sp. p. 1168; Gaz. vol. 176; p. 173.
Mueller, August, New York, N. Y. Hat-pin guard. No. 1,020,653; Mar. 19; Sp. p. 3504; Gaz. vol. 176; p. 619.
Mueller, Louis, Owosso, Mich. Rail-joint. No. 1,019,178; Mar. 5; Sp. p. 386; Gaz. vol. 176; p. 61.
Mueller, Philip, and A. C. Schuermann, assignors to The H. Mueller Manufacturing Company, Decatur, Ill. Sanitary drinking-fountain. No. 1,020,923; Mar. 19; Sp. p. 4063; Gaz. vol. 176; p. 710.
Mukautz, Peter J., Kansas City, Mo. Phonograph attachment for kinetoscopes. No. 1,020,362; Mar. 12; Sp. p. 2854; Gaz. vol. 176; p. 484.
Mulford, Logan W., Narberth, Pa. Concrete skylight, vault-light, and floor-light. No. 1,021,548; Mar. 26; Sp. p. 5420; Gaz. vol. 176; p. 976.
Mulholland, Mathew. (See Moore and Mulholland.)
Mullendore, Vine, Denver, Colo. Flying-machine. No. 1,019,988; Mar. 12; Sp. p. 2095; Gaz. vol. 176; p. 361.
Müller, Eduard F., Leipsig-Lindenau, Germany. Paper-bag machine. No. 1,020,773; Mar. 19; Sp. p. 3769; Gaz. vol. 176; p. 661.
Müller, Heinrich. (See Kuhlmann and Müller.)
Müllers, August, München-Gladbach, Germany. Napping-machine. No. 1,019,515; Mar. 5; Sp. p. 1169; Gaz. vol. 176; p. 173.
Multiplex Display Fixture Company. (See Feldmann and Crecelius, assignors.)
Multipost Company. (See Straight, Bennett D., assignor.)

Mumford, William S., Philadelphia, Pa. Damper. No. 1,020,216; Mar. 12; Sp. p. 2585; Gaz. vol. 176; p. 439.
Munger, James V., Portland, N. Y., assignor to G. H. Dunham, Warren, Pa. Car-coupling. No. 1,021,698; Mar. 26; Sp. p. 5689; Gaz. vol. 176; p. 1024.
Munro, Edward M., assignor of one-half to The R. E. T. Construction Company, Limited, London, England. Trolley-poles for electric traction systems. No. 1,021,206; Mar. 26; Sp. p. 4664; Gaz. vol. 176; p. 855.
Munson, Charles M., deceased; J. Munson, Chicopee, Mass., administratrix. Paper-testing machine. No. 1,019,721; Mar. 5; Sp. p. 1548; Gaz. vol. 176; p. 240.
Munson, Julia, administratrix. (See Munson, Charles M.)
Munz, Charles W., Detroit, Mich. Round-top extension-table. No. 1,019,826; Mar. 12; Sp. p. 1750; Gaz. vol. 176; p. 307.
Murphey, Frank P., Decatur, Ill. Corn-planter. No. 1,020,363; Mar. 12; Sp. p. 2857; Gaz. vol. 176; p. 484.
Murphey, William A., Dallas, Tex. Automatic advertising device. No. 1,019,688; Mar. 5; Sp. p. 1484; Gaz. vol. 176; p. 230.
Murphy Iron Works. (See Phillip, George W., assignor.)
Murray, Thomas E., New York, N. Y. Fuse-case. No. 1,021,549; Mar. 26; Sp. p. 5423; Gaz. vol. 176; p. 976.
Murray, Thomas E., New York, N. Y. Electric cut-out. No. 1,021,550; Mar. 26; Sp. p. 5424; Gaz. vol. 176; p. 977.
Murray, Warren E. (See Hannam and Murray.)
Musk, Albert, Rochester, N. Y. Tape-holder. No. 1,020,152; Mar. 12; Sp. p. 2438; Gaz. vol. 176; p. 415.
Mustin, James G. (See Broden and Mustin.)
Myers, David M., Hurdsfield, assignor to Myers Manufacturing Company, Fargo, N. D. Hay and grain loader. No. 1,019,344; Mar. 5; Sp. p. 752; Gaz. vol. 176; p. 117.
Myers, Edgar W., assignor to Euterpean Duplicator Company, Inc., Seattle, Wash. Machine for making perforated music. No. 1,021,327; Mar. 26; Sp. p. 4919; Gaz. vol. 176; p. 899.
Myers, Laura M., Chicago, Ill. Twine cutter and holder. No. 1,020,111; Mar. 12; Sp. p. 2359; Gaz. vol. 176; p. 403.
Myers Manufacturing Company. (See Myers, David M., assignor.)
Mygatt, Otis A., New York, N. Y. Compound shade-reflector of glass. No. 1,019,179; Mar. 5; Sp. p. 388; Gaz. vol. 176; p. 61.
Nameche, Joseph, Tarentum, assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa. Machinery for engaging and carrying loads. No. 1,021,469; Mar. 26; Sp. p. 5265; Gaz. vol. 176; p. 949.
Nance, Charles W., London, England. Aspirator. No. 1,020,709; Mar. 19; Sp. p. 3632; Gaz. vol. 176; p. 638.
National-Acme Manufacturing Company, The. (See Smith, Oscar A., assignor.)
National Chemical Company. (See Quinn, Wilbur W., assignor.)
National Dump Car Company. (See Otis, Spencer, assignor.)
National Dump Car Company. (See Zimmerman, Robert M., assignor.)
National Electric Signaling Company. (See Fessenden, Reginald A., assignor.)
National Electric Welder Company, The. (See Taylor, Albertis C., assignor.)
National Lumber Vulcanizing Corporation. (See Howard, Charles, assignor.)
National Malleable Castings Company, The. (See Schmidt, Ernest H., assignor.)
National Regulator Company. (See Larson, John M., assignor.)
National Waterproof Film Company. (See Beadell, Benjamin W., assignor.)
Naylor, Mansel E., Cincinnati, Ohio. Hand splitting-machine. No. 1,020,364; Mar. 12; Sp. p. 2860; Gaz. vol. 176; p. 484.
Naylor, Paul B., Kansas City, Mo. Silo. No. 1,019,180; Mar. 5; Sp. p. 389; Gaz. vol. 176; p. 62.
Nazel, John, Philadelphia, Pa. Forming-machine. No. 1,019,073; Mar. 5; Sp. p. 143; Gaz. vol. 176; p. 24.
Needham, Arthur J. and W. C., London, England. Fountain and centrifugal pump for use therewith. No. 1,020,569; Mar. 19; Sp. p. 3316; Gaz. vol. 176; p. 592.
Needham, Stephen D., Rantoul, Kans. Transport-truck for disk harrows. No. 1,019,345; Mar. 5; Sp. p. 768; Gaz. vol. 176; p. 118.
Needham, Walter C. (See Needham, Arthur J. and W. C.)
Neel, Harry C., Dravosburg, and J. B. Hatfeld, Alexandria, Pa. Sad-iron. No. 1,019,181; Mar. 5; Sp. p. 390; Gaz. vol. 176; p. 62.
Neeper, Alexander M. (See Forsyth, William D., assignor.)
Neer, Frederick A. (See Neer, Ira E., assignor.)
Neer, Ira E., Edinburg, assignor of one-half to F. A. Neer, Custer, Ill. Cotton-picker. No. 1,020,838; Mar. 19; Sp. p. 3904; Gaz. vol. 176; p. 682.
Nell, James, Jr., New York, N. Y. Guard for dental instruments. No. 1,021,065; Mar. 26; Sp. p. 4372; Gaz. vol. 176; p. 811.
Nelleen, Carper W. (See Bender, John B., assignor.)
Neller, Albert H., assignor to Louden Machinery Company, Fairfield, Iowa. Suspended tracks. No. 1,020,046; Mar. 12; Sp. p. 2211; Gaz. vol. 176; p. 381.
Nelson, Adolphus P., Grantsburg, Wis. Overhead carrier. No. 1,020,047; Mar. 12; Sp. p. 2215; Gaz. vol. 176; p. 381.
Nelson, Allan C., Flushing, N. Y. Chance device. No. 1,019,910; Mar. 12; Sp. p. 1939; Gaz. vol. 176; p. 336.
Nelson, Alva A., Needles, Cal. Car-raising device. No. 1,020,217; Mar. 12; Sp. p. 2588; Gaz. vol. 176; p. 439.
Nelson, Andrew, Sedalia, Mo. Shears. No. 1,019,689; Mar. 5; Sp. p. 1486; Gaz. vol. 176; p. 230.
Nelson, Arthur, Smithville, Minn. Fountain-stopper for mucilage-bottles. No. 1,021,622; Mar. 26; Sp. p. 5561; Gaz. vol. 176; p. 999.
Nelson, Delphos C. (See Nelson, James W., assignor.)
Nelson, Edmund B., Cadiz, Ohio. Radiator-cap for automobiles. No. 1,020,437; Mar. 19; Sp. p. 3033; Gaz. vol. 176; p. 549.
Nelson, Gustavus A. (See Elm, Elmer J., assignor.)
Nelson, James W., assignor of one-half to D. C. Nelson, Marion, Ohio. Automatic cut-off for talking-machines. No. 1,021,109; Mar. 26; Sp. p. 4452; Gaz. vol. 176; p. 824.
Nelson, Louis M., Pennington, N. J. Parachute. No. 1,019,271; Mar. 5; Sp. p. 579; Gaz. vol. 176; p. 93.
Nelson, Theodore C., Wood Lynne, N. J. Basket. No. 1,019,346; Mar. 5; Sp. p. 771; Gaz. vol. 176; p. 118.
Németh, Stephen. (See Hajdú and Németh.)
Neuhold, Erwin, Friedenau, near Berlin, Germany, assignor to The Firma Deutsche Telephonwerke G. m. b. H., Berlin, Germany. Impulse-transmitter. No. 1,021,259; Mar. 26; Sp. p. 4787; Gaz. vol. 176; p. 874.
Neveu, Edward de. (See Bévenot and Neveu.)
New Era Spinning Co. (See Bélanger, Victor, assignor.)
New Haven Mills Mfg. Co. (See Quinlan, Michael, assignor.)
New York Bottlers' Supplies Mfg. Co. (See Husted, Charles L., assignor.)
Newberry, Spencer B., and H. N. Barrett, Baybridge, Ohio. Making fertilizer. No. 1,020,153; Mar. 12; Sp. p. 2439; Gaz. vol. 176; p. 416.
Newhouse, Ray C., assignor to Allis-Chalmers Company, Milwaukee, Wis. End-play device. No. 1,019,074; Mar. 5; Sp. p. 144; Gaz. vol. 176; p. 24.
Newman, James F., Greenville, Fla. Composition of matter. No. 1,019,980; Mar. 12; Sp. p. 2098; Gaz. vol. 176; p. 362.
Newton, Albert E., Worcester, Mass., assignor to Prentice Bros. Company. Belt-drive. No. 1,019,516; Mar. 5; Sp. p. 1170; Gaz. vol. 176; p. 173.
Newton, Albert E., Worcester, Mass., assignor to Prentice Bros. Company. Weight safety device. No. 1,019,517; Mar. 5; Sp. p. 1171; Gaz. vol. 176; p. 174.
Newton, Whitney. (See Hoop, James P., assignor.)
Nichols, Charles H., Wolverton, England. Mud-guard for the wheels of motor and other vehicles. No. 1,021,724; Mar. 26; Sp. p. 5747; Gaz. vol. 176; p. 1032.
Nichols, Henry B., Philadelphia, Pa. Saw. No. 1,021,551; Mar. 26; Sp. p. 5426; Gaz. vol. 176; p. 977.
Nickerson, Susan, Portland, Oreg. Sieve. No. 1,019,847; Mar. 5; Sp. p. 772; Gaz. vol. 176; p. 118.
Nieschang, Charles C. F., Fort Wayne, Ind. Signal. No. 1,019,827; Mar. 12; Sp. p. 1751; Gaz. vol. 176; p. 307.
Niesen, Hubert. (See Niesen, Michael H. and H.)
Niesen, Michael H. and H., Kaukauna, Wis. Universal pipe-coupling. No. 1,020,839; Mar. 19; Sp. p. 3907; Gaz. vol. 176; p. 683.
Niewohner, John, Cleveland, Ohio. Nut-lock. No. 1,021,110; Mar. 26; Sp. p. 4455; Gaz. vol. 176; p. 824.
Nilson, Lars G., Hoboken, N. J., assignor of one-half to W. B. Strang, New York, N. Y. Oil-feeding mechanism. No. 1,020,774; Mar. 19; Sp. p. 3775; Gaz. vol. 176; p. 661.
Nitsch, Stanislaus. (See Winterstein and Nitsch.)
Nixon, Franklin S., Phillipsburg, N. J. Cement vault. No. 1,021,623; Mar. 26; Sp. p. 5562; Gaz. vol. 176; p. 999.
Nixon, Moses C., Peru, Ind. Windmill. No. 1,020,924; Mar. 19; Sp. p. 4066; Gaz. vol. 176; p. 711.
Noakes, William, Portland, Oreg. Saucepan-cover. No. 1,021,066; Mar. 26; Sp. p. 4372; Gaz. vol. 176; p. 812.
Noble, Donald, Bridgeport, Conn., assignor to The Singer Manufacturing Company. Sewing-machine. No. 1,020,112; Mar. 12; Sp. p. 2360; Gaz. vol. 176; p. 403.
Noble, Ralph E., assignor to Morgan-Gardner Electric Company, Chicago, Ill. Mining-machine. No. 1,019,722; Mar. 5; Sp. p. 1550; Gaz. vol. 176; p. 241.
Nolan, Julian S., Highland Park, Ill. Tile structure for reinforced-concrete floors. No. 1,021,552; Mar. 26; Sp. p. 5430; Gaz. vol. 176; p. 977.
Noll, Joseph, assignor to C. Hammer, Buffalo, N. Y. Bottle-holder. No. 1,021,328; Mar. 26; Sp. p. 4922; Gaz. vol. 176; p. 900.
Norbury, Albert. (See Marshall and Norbury.)
Nordlund, John, Eureka, Cal. Fish-bait. No. 1,021,600; Mar. 26; Sp. p. 5691; Gaz. vol. 176; p. 1025.
Norlund, Olof A., Williamsport, Pa. Nut-lock. No. 1,020,438; Mar. 19; Sp. p. 3035; Gaz. vol. 176; p. 549.
Normand, Augustin, Le Havre, France. Spray-burner. No. 1,020,048; Mar. 12; Sp. p. 2217; Gaz. vol. 176; p. 382.
North Bro's M'f'g Co. (See Fegley, Thomas J., assignor.)
North Bro's M'f'g Co. (See Leopold, George O., assignor.)
Northam, Robert J., Los Angeles, Cal. Paper-clip. No. 1,019,348; Mar. 5; Sp. p. 773; Gaz. vol. 176; p. 119.
Northern Brass Manufacturing Company. (See Westen, Charles, assignor.)
Northern Water Softener Company. (See Green, Walter H., assignor.)

Norwood, Elise R., San Francisco, Cal. Ribbon-clip for belt-buckles. No. 1,020,840; Mar. 19; Sp. p. 3908; Gaz. vol. 176; p. 683.
Norwood, Harry Y., Rochester, N. Y. Electric singeing instrument. No. 1,020,439; Mar. 19; Sp. p. 3036; Gaz. vol. 176; p. 549.
Nuckols, Claude C. and F. Pruyn, Albany, N. Y., assignors to Consolidated Car Heating Company. Electrical resistance. No. 1,019,075; Mar. 5; Sp. p. 146; Gaz. vol. 176; p. 24.
Nulle, Victor H., Anderson, Ind. Point-rail-locking device. No. 1,021,725; Mar. 26; Sp. p. 5749; Gaz. vol. 176; p. 1032.
Nunnery, J. A. (See Metcalf, George H., assignor.)
Nutt, Lester E., Moline, Ill., assignor to Velie Carriage Company. Shifting-rail construction. No. 1,021,553; Mar. 26; Sp. p. 5431; Gaz. vol. 176; p. 978.
Nutter, Charles P., Boston, Mass. Buckle. No. 1,020,925; Mar. 19; Sp. p. 4069; Gaz. vol. 176; p. 711.
O. A. Miller Treeing Machine Company. (See Hansen, John S., assignor.)
O'Brien, Joseph F., Brockton, Mass. Furniture-caster. No. 1,020,634; Mar. 19; Sp. p. 3505; Gaz. vol. 176; p. 619.
O'Brien, Michael J. (See Brunt, Thomas A., assignor.)
O'Brien, Vincent J., and R. C. Awkerman, assignors to The Standard Rock Drill Company, Denver, Colo. Valve mechanism for pneumatic tools. No. 1,020,619; Mar. 19; Sp. p. 3432; Gaz. vol. 176; p. 607.
O'Bryan, George W., Cambria, Va. Crushing and grinding mill. No. 1,019,828; Mar. 12; Sp. p. 1753; Gaz. vol. 176; p. 307.
O'Connell, James P., Crompton, R. I., assignor of one-half to E. L. Merrow, Malden, Mass. Sweeper. No. 1,021,161; Mar. 26; Sp. p. 4575; Gaz. vol. 176; p. 841.
O'Grady, William P., *et al.* (See Collins, Frank H., assignor.)
O'Keefe, Daniel, St. Louis, Mo. Making a composition of matter for the treatment of leather, fabrics, and the like. No. 1,020,926; Mar. 19; Sp. p. 4070; Gaz. vol. 176; p. 711.
O'Keefe, Daniel, St. Louis, Mo. Composition of matter for the treatment of leather, fabrics, and the like. No. 1,020,927; Mar. 19; Sp. p. 4071; Gaz. vol. 176; p. 711.
O'Neal, Demarian L., Valdosta, Ga. Turpentine-cup. No. 1,019,183; Mar. 5; Sp. p. 392; Gaz. vol. 176; p. 62.
O'Neil, Philip J. (See Fjaher and O'Neil.)
Oakes, John L., Kimberly, Idaho. Pump. No. 1,019,272; Mar. 5; Sp. p. 581; Gaz. vol. 176; p. 93.
Oatman, Clarence E., Brookline, assignor of one-half to G. D. Owen, Battlefield, Mo. Tire-bolt wrench. No. 1,021,424; Mar. 26; Sp. p. 5158; Gaz. vol. 176; p. 933.
Ober Manufacturing Company, The. (See Walt, George E., assignor.)
Oberlander, Gustave. (See Tanne, Julius, assignor.)
Odermatt, Frank J., Tucson, Ariz. Sash-lifter. No. 1,019,690; Mar. 5; Sp. p. 1487; Gaz. vol. 176; p. 230.
Oelman, Curt E., Detroit, Mich. Machine for mixing dough. No. 1,019,076; Mar. 5; Sp. p. 147; Gaz. vol. 176; p. 25.
Offill, Preston, Collegeview, Nebr., and E. G. Plummer, Altoona, Iowa. Planter. No. 1,021,726; Mar. 26; Sp. p. 5752; Gaz. vol. 176; p. 1033.
Ogden, Edmund J., Springfield, Ill. Aerial toy. No. 1,020,775; Mar. 19; Sp. p. 3777; Gaz. vol. 176; p. 662.
Ogden, William H., Binghamton, N. Y. Rotary steam-engine. No. 1,020,841; Mar. 19; Sp. p. 3909; Gaz. vol. 176; p. 683.
Ogden, William H., Binghamton, N. Y. Packing for engines. No. 1,020,842; Mar. 19; Sp. p. 3912; Gaz. vol. 176; p. 684.
Ogden, William H., Binghamton, N. Y. Internal-combustion engine. No. 1,020,953; Mar. 19; Sp. p. 4132; Gaz. vol. 176; p. 720.
Ohio Tool Company. (See Manley, Thomas A., assignor.)
Ohlhaver, Peter D. H., Sande, Germany. Manufacturing dried yeast. No. 1,020,306; Mar. 12; Sp. p. 2752; Gaz. vol. 176; p. 467.
Ohlhaver, Peter D. H., Sande, Germany. Increasing the raising power of dried yeast. No. 1,021,700; Mar. 26; Sp. p. 5692; Gaz. vol. 176; p. 1025.
Okerson, Adolph, Ishpeming, Mich. Valve-grinding device. No. 1,020,218; Mar. 12; Sp. p. 2589; Gaz. vol. 176; p. 430.
Oldham, Joseph R., Cleveland, Ohio. Ship construction. No. 1,020,365; Mar. 12; Sp. p. 2861; Gaz. vol. 176; p. 485.
Olds, Alonzo F., Chicago, Ill. Automobile starting mechanism. No. 1,021,624; Mar. 26; Sp. p. 5563; Gaz. vol. 176; p. 999.
Oliver, Charles V., West Union, Iowa. Type-writing machine. No. 1,019,077; Mar. 5; Sp. p. 149; Gaz. vol. 176; p. 25.
Oliver, James G., Alliance, Nebr. Seed-planter. No. 1,019,691; Mar. 5; Sp. p. 1489; Gaz. vol. 176; p. 231.
Oliver Motor Car Company. (See Sandgren and Case, assignors.)
Oliver Typewriter Company, The. (See Engel, Arthur F., assignor.)
Oliver, William J., Erlanger, Ky. Car-step. No. 1,021,625; Mar. 26; Sp. p. 5565; Gaz. vol. 176; p. 1000.
Olmsted, Charles M., Pasadena, Cal. Aerial propeller. No. 1,019,078; Mar. 5; Sp. p. 151; Gaz. vol. 176; p. 25.
Olsen, Carl. (See Eslon, Victor E., assignor.)
Olsen, Martin, Eureka, Cal. Life-saving apparatus. No. 1,020,366; Mar. 12; Sp. p. 2866; Gaz. vol. 176; p. 485.
Olympic Inserted Tooth Cylinder Company. (See Rich and Gates, assignors.)
Opitz, Frank E., and R. R. Egbert, Pomona, Cal. Sprinkler-head. No. 1,021,374; Mar. 26; Sp. p. 5009; Gaz vol. 176; p. 914.
Oppenheimer, Harry D., Chicago, Ill. Machine for cleaning intestines or casings. No. 1,019,079; Mar. 5; Sp. p. 156; Gaz. vol. 176; p. 26.
Orcutt, Charles D., North Tonawanda, assignor to Buffalo Sled Company, Buffalo, N. Y. Sled. No. 1,019,349; Mar. 5; Sp. p. 774; Gaz. vol. 176; p. 119.
Orlay, Jerôme, Temsche, Belgium. Elevated railway. No. 1,020,570; Mar. 19; Sp. p. 3318; Gaz. vol. 176; p. 502.
Orr, John A., Westonia, Miss. Buggy-top. No. 1,019,692; Mar. 5; Sp. p. 1490; Gaz. vol. 176; p. 231.
Orton, Ingomar F., Galveston, Tex. Weed-destroying composition. No. 1,020,049; Mar. 12; Sp. p. 2218; Gaz. vol. 176; p. 382.
Osborn, Harry, Buckley, Wash. Attachment for frying-pans. No. 1,021,425; Mar. 26; Sp. p. 5160; Gaz. vol. 176; p. 934.
Osborne, Fred. (See Brampton and Osborne.)
Osborne, John W., assignor of two-thirds to J. B. Davis, Jr., Winchester, Ill. Cultivator. No. 1,020,620; Mar. 19; Sp. p. 3437; Gaz. vol. 176; p. 608.
Osgood, J. L. (See Manzel, Charles W., assignor.)
Ost, Juan, Buenos Aires, Argentina. Purifying sugar. No. 1,020,219; Mar. 12; Sp. p. 2590; Gaz. vol. 176; p. 440.
Oster, Louis W., and F. J. Miller, Cleveland, Ohio; said Oster assignor to said Miller. Automobile-body. No. 1,021,470; Mar. 26; Sp. p. 5267; Gaz. vol. 176; p. 940.
Ostman, Joseph O., Hancock, Mich. Folding square. No. 1,019,693; Mar. 5; Sp. p. 1491; Gaz. vol. 176; p. 231.
Ostrander, Allen E., Ridgewood, N. J. Bolster. No. 1,021,743; Mar. 26; Sp. p. 5787; Gaz. vol. 176; p. 1039.
Otis Elevator Company. (See Seeberger, Charles D., assignor.)
Otis Elevator Company. (See Widmann and Wells, assignors.)
Otis, Spencer, assignor to National Dump Car Company, Chicago, Ill. Car. No. 1,019,911; Mar. 12; Sp. p. 1940; Gaz. vol. 176; p. 337.
Ott, Charles W., Pittsburg, Kans. Reel for clothes-lines. No. 1,020,440; Mar. 19; Sp. p. 3038; Gaz. vol. 176; p. 550.
Ottmann, William. (See Rider, Herbert E., assignor.)
Ough, Joseph M., Oakland, and W. E. Hubbard, San Francisco, Cal. Double-acting pump. No. 1,020,113; Mar. 12; Sp. p. 2363; Gaz. vol. 176; p. 404.
Owen, George D. (See Oatman, Clarence E., assignor.)
Owen, Oscar L., assignor to The Whitin Machine Works, Whitinsville, Mass. Heilman combing-machine. No. 1,019,273; Mar. 5; Sp. p. 582; Gaz. vol. 176; p. 93.
Owens, Benjamin F., Rockwell City, Iowa. Grain-door for cars. No. 1,019,274; Mar. 5; Sp. p. 583; Gaz. vol. 176; p. 94.
Oxine Gas Manufacturing Company. (See Herndon, Joseph R., assignor.)
Packard, Edwin D., Marion, Ohio. Steam-separator. No. 1,019,350; Mar. 5; Sp. p. 775; Gaz. vol. 176; p. 119.
Packard Motor Car Company. (See Huff, Russell, assignor.)
Padrick, Benjamin F., Portland, Oreg. Saw-carrying case. No. 1,020,050; Mar. 12; Sp. p. 2218; Gaz. vol. 176; p. 382.
Page, George W., Campbell, Cal. Pump. No. 1,020,051; Mar. 12; Sp. p. 2220; Gaz. vol. 176; p. 382.
Pain, Robert W., New York, N. Y. Adjustable music-box. No. 1,021,471; Mar. 26; Sp. p. 5268; Gaz. vol. 176; p. 950.
Palen, Frederick P. (See Burlingham and Palen.)
Palmer, John H., and E. W. Salmon, Jr., Baltimore, Md. Machine for joining sheet-metal plates. No. 1,020,154; Mar. 12; Sp. p. 2441; Gaz. vol. 176; p. 416.
Palmer, Lyndon C., assignor to The F. N. Burt Company, Limited, Buffalo, N. Y. Labeling-machine. No. 1,019,351; Mar. 5; Sp. p. 778; Gaz. vol. 176; p. 119.
Palmer, Martin C., Des Moines, Iowa. Hanger for screens and sash. No. 1,019,912; Mar. 12; Sp. p. 1944; Gaz. vol. 176; p. 337.
Parish, Smith, *et al.* (See Johnson, Edward W., assignor.)
Parker, Clark H., Beaver Dam, Wis. Centrifugal discharge mechanism. No. 1,020,307; Mar. 12; Sp. p. 2754; Gaz. vol. 176; p. 467.
Parker, George D., Riverside, Cal. Sprinkling apparatus. No. 1,021,007; Mar. 26; Sp. p. 4374; Gaz. vol. 176; p. 812.
Parks, Frederick R., Hamburg, N. Y. Automatic poultry-feeding apparatus. No. 1,019,080; Mar. 5; Sp. p. 157; Gaz. vol. 176; p. 26.
Parry Manufacturing Company. (See Parry, St. Clair and T. H., assignors.)
Parry, St. Clair and T. H., assignors to Parry Manufacturing Company, Indianapolis, Ind. Door-hanger. No. 1,020,776; Mar. 19; Sp. p. 3778; Gaz. vol. 176; p. 662.
Parry, Thomas H. (See Parry, St. Clair and T. H.)
Parsons, Charles A., J. W. Wilson, Newcastle-upon-Tyne, and J. Ford, Wallsend, England; said Wilson and Ford assignors to said Parsons. Blading for turbines. No. 1,021,472; Mar. 26; Sp. p. 5270; Gaz. vol. 176; p. 950.
Passig, Hans, Lake Benton, Minn. Fly-trap. No. 1,020,062; Mar. 12; Sp. p. 2223; Gaz. vol. 176; p. 383.
Patchin, William E., assignor to L. B. Hodge, Rochester, N. Y. Eaves-trough hanger. No. 1,020,951; Mar. 19; Sp. p. 4128; Gaz. vol. 176; p. 720.

Pate, Grover C., Daingerfield, Tex. Fertilizer-distributer. No. 1,020,571; Mar. 19; Sp. p. 3319; Gaz. vol. 176; p. 502.
Pate, Robert B., Oakland, Cal., and F. B. Rose, Oneida, N. Y. Concentrator. No. 1,020,220; Mar. 12; Sp. p. 2591; Gaz. vol. 176; p. 440.
Patnode, Herman, *et al.* (See Brunelle, Arthur, assignor.)
Patnode, Paul, *et al.* (See Brunelle, Arthur, assignor.)
Patterson, Edward G., Bismarck, N. D. Key-tag. No. 1,020,308; Mar. 12; Sp. p. 2755; Gaz. vol. 176; p. 467.
Patterson, Richard B., Jr., Chicago, Ill. Exerciser. No. 1,020,367; Mar. 12; Sp. p. 2867; Gaz. vol. 176; p. 485.
Patty, James S., Chicago, Ill. Paint and varnish remover. No. 1,019,829; Mar. 12; Sp. p. 1755; Gaz. vol. 176; p. 308.
Paul, Adolf R. E., Brooklyn, N. Y. Faucet. No. 1,019,694; Mar. 5; Sp. p. 1493; Gaz. vol. 176; p. 231.
Paull, Carl, Roselle Park, N. J., assignor to Diamond Expansion Bolt Company. Expansion-bolt. No. 1,019,723; Mar. 5; Sp. p. 1554; Gaz. vol. 176; p. 231.
Paull, Andrew, Seward, Pa. Trap. No. 1,019,518; Mar. 5; Sp. p. 1173; Gaz. vol. 176; p. 174.
Payer, James, Toronto, Ontario, Canada. Hat-fastener. No. 1,021,111; Mar. 26; Sp. p. 4455; Gaz. vol. 176; p. 824.
Payne, Edward J. (See Martell and Payne.)
Payne, Sarah G. K., Greenport, N. Y. Combined guard and protector for hat-pins. No. 1,019,695; Mar. 5; Sp. p. 1494; Gaz. vol. 176; p. 231.
Payton, Jesse B., Hydesville, Cal. Saw-set. No. 1,019,352; Mar. 5; Sp. p. 797; Gaz. vol. 176; p. 120.
Pearce, William H., Chicago, Ill. Pressure-transformer. No. 1,019,913; Mar. 12; Sp. p. 1945; Gaz. vol. 176; p. 337.
Peart, Benjamin F. (See Merriman and Peart.)
Peck, Philip C. (See Ladoff, Isador, assignor.)
Peck, Philip C., *et al.* (See Ladoff, Isador, assignor.)
Peck, Staunton B., assignor to Link-Belt Company, Chicago, Ill. Casing for friction-clutches. No. 1,020,441; Mar. 19; Sp. p. 3039; Gaz. vol. 176; p. 550.
Peddy, Thomas T., Bienville, La. Ventilator and deflector. No. 1,019,696; Mar. 5; Sp. p. 1495; Gaz. vol. 176; p. 232.
Peel, Charles F., New York, N. Y. Safety device. No. 1,019,081; Mar. 5; Sp. p. 159; Gaz. vol. 176; p. 26.
Peirce, William C., assignor to Providence Machine Company, Providence, R. I. Roving-machine. No. 1,021,626; Mar. 26; Sp. p. 5567; Gaz. vol. 176; p. 1000.
Pejchar, Josef, New York, N. Y. Metallic link fabric. No. 1,019,830; Mar. 12; Sp. p. 1755; Gaz. vol. 176; p. 308.
Pelchat, Hilaire. (See Pelchat, John O. and H.)
Pelchat, John O. and H., Central Falls, R. I. Hat-pin protector. No. 1,019,697; Mar. 5; Sp. p. 1497; Gaz. vol. 176; p. 232.
Peller, D. L., *et al.* (See Doyle, James, assignor.)
Pelouse, William N., Chicago, Ill. Weighing-scale. No. 1,019,698; Mar. 5; Sp. p. 1498; Gaz. vol. 176; p. 232.
Pember, Clifford F. (See Taft and Pember.)
Penfield, Raymond C., New York, N. Y. Apparatus for hacking bricks. No. 1,020,572; Mar. 19; Sp. p. 3320; Gaz. vol. 176; p. 503.
Pennington, Mary E., Philadelphia, Pa., and H. C. Pierce, Worcester, Mass. Poultry-cooling rack. No. 1,020,575; Mar. 19; Sp. p. 3343; Gaz. vol. 176; p. 504.
Pennsylvania Steel Railway Tie Company, The. (See Shoemaker, Samuel, assignor.)
Pepin, George J., Bottineau, N. D. Whiffletree attachment. No. 1,020,442; Mar. 19; Sp. p. 3041; Gaz. vol. 176; p. 550.
Perkins, Elmer E., Chicago, Ill. Car-bunk. No. 1,019,353; Mar. 5; Sp. p. 798; Gaz. vol. 176; p. 120.
Perkins, Frank G., deceased, South Bend, Ind.; G. S. Perkins, executrix, assignor to Perkins Glue Company. Glue and making the same. No. 1,020,655; Mar. 19; Sp. p. 3506; Gaz. vol. 176; p. 619.
Perkins, Frank G., deceased, South Bend, Ind.; G. S. Perkins, executrix, assignor to Perkins Glue Company. Making glue. No. 1,020,656; Mar. 19; Sp. p. 3512; Gaz. vol. 176; p. 619.
Perkins, Frank G., deceased, Lansdale, Pa.; G. S. Perkins, South Bend, Ind., executrix, assignor to Perkins Glue Company. Glue joint. No. 1,020,657; Mar. 19; Sp. p. 3514; Gaz. vol. 176; p. 620.
Perkins, Gertrude S., executrix. (See Perkins, Frank G.)
Perkins Glue Company. (See Perkins, Frank G., assignor.)
Perkins, John L. (See Avery, Henry C., assignor.)
Perkins, John L. (See Stanley and Perkins.)
Perky, Henry D., deceased, Glencoe, Md.; L. Sparks, administrator, assignor, by mesne assignments, to The Shredded Wheat Company, Niagara Falls, N. Y. Manufacturing grain into form for food. No. 1,019,831; Mar. 12; Sp. p. 1757; Gaz. vol. 176; p. 308.
Perky, Henry D., deceased, Glencoe, Md.; L. Sparks, administrator, assignor, by mesne assignments, to The Shredded Wheat Company, Niagara Falls, N. Y. Reducing ground grain to elongated or filament form. No. 1,021,473; Mar. 26; Sp. p. 5273; Gaz. vol. 176; p. 950.
Perrine, John R., assignor to The Cincinnati Lathe & Tool Company, Cincinnati, Ohio. Feed-gearing. No. 1,019,914; Mar. 12; Sp. p. 1940; Gaz. vol. 176; p. 338.
Perry, Frederick H., Beverly, Mass. Making clothes-pins or similar articles. No. 1,020,443; Mar. 19; Sp. p. 3041; Gaz. vol. 176; p. 551.
Peters, H. A. (See Doner, Martin J., assignor.)
Petersen, Frederick C., Lindsay, Nebr. Gambrel-stick. No. 1,020,843; Mar. 19; Sp. p. 3914; Gaz. vol. 176; p. 684.
Petersen, Thorvald. (See Gjorup and Petersen.)
Peterson, Albert C., Sheboygan, Wis. Pad-machine. No. 1,021,068; Mar. 26; Sp. p. 4375; Gaz. vol. 176; p. 812.
Peterson, Burt A., assignor, by mesne assignments, to Barber-Colman Company, Rockford, Ill. Pattern-controlled means for distributing heddles or the like. No. 1,019,915; Mar. 12; Sp. p. 1951; Gaz. vol. 176; p. 338.
Peterson, Carl, Portland, Oreg. Tire-chain mechanism. No. 1,021,727; Mar. 26; Sp. p. 5754; Gaz. vol. 176; p. 1033.
Peterson, John, New York, N. Y. Runaway-stop. No. 1,019,699; Mar. 5; Sp. p. 1501; Gaz. vol. 176; p. 233.
Peterson, John, Faribault, Minn. Music-bench. No. 1,020,777; Mar. 19; Sp. p. 3779; Gaz. vol. 176; p. 662.
Peterson, Olof, St. Paul, Minn. Brake. No. 1,021,474; Mar. 26; Sp. p. 5274; Gaz. vol. 176; p. 951.
Peterson, Peter A., New Hyde Park, N. Y. Hinge. No. 1,019,184; Mar. 5; Sp. p. 394; Gaz. vol. 176; p. 62.
Pettingill, Ubert K. (See Harrison, Arthur W., assignor.)
Petz, Egnaz, assignor of one-third to F. J. Kurrus and one-third to C. G. Kurrus, East St. Louis, Ill. Bottle-cleaning device. No. 1,020,510; Mar. 19; Sp. p. 3179; Gaz. vol. 176; p. 571.
Peugh, William G., Aberdeen, Miss. Display-rack. No. 1,020,114; Mar. 12; Sp. p. 2364; Gaz. vol. 176; p. 404.
Pfau, Max, assignor to Emerson Typewriter Company, Woodstock, Ill. Type-writer key-lock. No. 1,021,627; Mar. 26; Sp. p. 5569; Gaz. vol. 176; p. 1000.
Pflager, Harry M., St. Louis, Mo. Car construction. No. 1,021,207; Mar. 26; Sp. p. 4667; Gaz. vol. 176; p. 856.
Pflager, Harry M., assignor to Transom Draft Gear Company, St. Louis, Mo. Car-underframe. No. 1,021,375; Mar. 26; Sp. p. 5009; Gaz. vol. 176; p. 914.
Phelps, John C., Pownal, Vt. Body-protector. No. 1,021,376; Mar. 26; Sp. p. 5011; Gaz. vol. 176; p. 915.
Phenix Tube Company. (See Koenig, Robert, assignor.)
Philip Carey Manufacturing Company, The. (See Moeller, William J., assignor.)
Phillip, George W., Canton, N. C., assignor to Murphy Iron Works, Detroit, Mich. Automatic stoker. No. 1,019,082; Mar. 5; Sp. p. 161; Gaz. vol. 176; p. 27.
Phillips, George S. (See McCotter, Charles R., assignor.)
Phillips, Harry. (See Phillips, Wesley, assignor.)
Phillips Mine and Mill Supply Co. (See McCloskey, Louis J., assignor.)
Phillips, Thomas E. R., Liverpool, England. Electric automusical instrument. No. 1,020,155; Mar. 12; Sp. p. 2446; Gaz. vol. 176; p. 416.
Phillips, Wesley, Cape May, N. J., assignor, by mesne assignments, of one-half to H. Phillips, Greenwich, Conn. Wheel. No. 1,019,832; Mar. 12; Sp. p. 1758; Gaz. vol. 176; p. 308.
Phillips, William F., Cleveland, Ohio. Milk-bottle holder. No. 1,020,844; Mar. 19; Sp. p. 3915; Gaz. vol. 176; p. 684.
Pierce, Howard C. (See Pennington and Pierce.)
Pierce, James M., assignor of one-half to C. K. Bennett, Owatonna, Minn. Churn. No. 1,020,368; Mar. 12; Sp. p. 2869; Gaz. vol. 176; p. 486.
Pierce, Parley S. (See Swain, Charles S., assignor.)
Pigott, Stephen J., St. Ann's, Helensburgh, Scotland, assignor to General Electric Company. Elastic-fluid turbine. No. 1,021,260; Mar. 26; Sp. p. 4789; Gaz. vol. 176; p. 874.
Pink, Leonhard, Berlin, Germany; J. Simson, attorney in fact, assignor to said J. Simson, individually. Manufacturing jointless facings of floors, walls, and the like. No. 1,019,083; Mar. 5; Sp. p. 163; Gaz. vol. 176; p. 27.
Piper, Myron H., Walpole, assignor to United Printing Machinery Company, Boston, Mass. Gage for sheet-feeding mechanism. No. 1,019,084; Mar. 5; Sp. p. 164; Gaz. vol. 176; p. 28.
Pitton, James. (See Hood, John, assignor.)
Pittsburgh Plate Glass Company. (See Franzen and Bechtel, assignors.)
Pittsburgh Plate Glass Company. (See Hitner, Harry F., assignor.)
Pittsburgh Plate Glass Company. (See Nameche, Joseph, assignor.)
Pittsburgh Seamless Tube Company. (See Blaxter, George H., assignor.) (Reissue.)
Pittsburgh Steel Products Co. (See Selkirk, William M., assignor.)
Pittsburgh Steel Products Company. (See Brock and Selkirk, assignors.)
Platt, Clarence D., Bridgeport, Conn. Rotary snap-switch. No. 1,021,208; Mar. 26; Sp. p. 4668; Gaz. vol. 176; p. 856.
Platt, Maurice A., New York, N. Y. Pasteboard box. No. 1,019,833; Mar. 12; Sp. p. 1760; Gaz. vol. 176; p. 308.
Platt, Samuel L., Dallas, Tex., assignor of one-half to H. M. Porter, New York, N. Y. Pillow. No. 1,020,444; Mar. 19; Sp. p. 3043; Gaz. vol. 176; p. 551.
Platt, Thomas M., Philadelphia, Pa. Automatic feeder. No. 1,021,209; Mar. 26; Sp. p. 4670; Gaz. vol. 176; p. 856.
Plume & Atwood Manufacturing Company, The. (See Andersen, Lauritz W., assignor.)
Plummer, Ezra G. (See Offill and Plummer.)
Plummer, William, Indianapolis, Ind. Push-wheel. No. 1,021,554; Mar. 26; Sp. p. 5433; Gaz. vol. 176; p. 978.

Plympton Manufacturing Company. (See Bazley, William H., assignor.)

Podlešák, Henry J., Chicago, Ill. Explosive-engine. No. 1,019,354; Mar. 5; Sp. p. 800; Gaz. vol. 176; p. 120.

Point Marion Machine & Manufacturing Company. (See Reichel, Alvin S., assignor.)

Poirier, Arthur F., East Douglass, assignor of one-half to S. B. Taft, Uxbridge, Mass. Loosener for carding-machines. No. 1,019,355; Mar. 5; Sp. p. 804; Gaz. vol. 176; p. 121.

Polin, Oscar M., San Luis Obispo, Cal. Apparatus for making backing for teeth. No. 1,019,519; Mar. 5; Sp. p. 1175; Gaz. vol. 176; p. 175.

Polizzi, Joseph, and F. W. Calongne, New Orleans, La. Device for raising sunken bodies. No. 1,019,724; Mar. 5; Sp. p. 1556; Gaz. vol. 176; p. 242.

Pollak, Norbert, Nordbahnhof, Vienna, Austria-Hungary. Railway for pleasure and sport. No. 1,019,834; Mar. 12; Sp. p. 1761; Gaz. vol. 176; p. 309.

Pollard, John Z., and G. J. Lederer, Chicago, Ill. Apparatus for piling cloth. No. 1,021,002; Mar. 26; Sp. p. 4246; Gaz. vol. 176; p. 788.

Polnisch, Paul, assignor to W. C. Schwebel, Philadelphia, Pa. Bottle-cleaning machine. No. 1,020,156; Mar. 12; Sp. p. 2449; Gaz. vol. 176; p. 417.

Polnisch, Paul, assignor to W. C. Schwebel, Philadelphia, Pa. Gearing device. No. 1,020,309; Mar. 12; Sp. p. 2756; Gaz. vol. 176; p. 467.

Pomeroy, S. H. (See Poppendieck, William, assignor.)

Pontiere, Stanley, Ocean City, N. J. Submarine life-saving and observation tender. No. 1,019,356; Mar. 5; Sp. p. 805; Gaz. vol. 176; p. 121.

Poppendieck, William, Carlstadt, N. J., assignor to S. H. Pomeroy, New Rochelle, N. Y. Fusible-link device. No. 1,021,329; Mar. 26; Sp. p. 4924; Gaz. vol. 176; p. 900.

Porowski, Wladyslaw J., Brooklyn, N. Y. Glass-beveling machine. No. 1,019,520; Mar. 5; Sp. p. 1176; Gaz. vol. 176; p. 175.

Porter, Albert M., Amsterdam, Mo. Automatic train-pipe coupling. No. 1,021,261; Mar. 26; Sp. p. 4791; Gaz. vol. 176; p. 875.

Porter & Co., C. B. (See Wittebolle, Emile J., assignor.)

Porter, Hallet M. (See Platt, Samuel L., assignor.)

Porter, Robert L., and G. D. Watson, Los Angeles, Cal. Well-drilling tool. No. 1,019,357; Mar. 5; Sp. p. 807; Gaz. vol. 176; p. 121.

Porzel, Joseph, Buffalo, N. Y. Making radiators. No. 1,019,016; Mar. 12; Sp. p. 1954; Gaz. vol. 176; p. 339.

Pottel, Carl, Halle-on-the-Saale, Germany. Intermittent grip device for lubricating apparatus. No. 1,021,475; Mar. 26; Sp. p. 5274; Gaz. vol. 176; p. 951.

Potter, William H., Philadelphia, Pa. Draft-rigging. No. 1,020,445; Mar. 19; Sp. p. 3044; Gaz. vol. 176; p. 551.

Potts, James W., assignor of one-half to W. T. Keseis, St. Joseph, Mo. Vault-cover. No. 1,020,845; Mar. 19; Sp. p. 3917; Gaz. vol. 176; p. 685.

Powell, Elmer K., Steubenville, Ohio. Horseshoe. No. 1,019,358; Mar. 5; Sp. p. 809; Gaz. vol. 176; p. 122.

Powell, William H., Chicago, Ill. Shoe-fastening device. No. 1,020,658; Mar. 19; Sp. p. 3519; Gaz. vol. 176; p. 620.

Power and Mining Machinery Company. (See Wintzer, Rudolf, assignor.)

Powers, Francis S., assignor to C. and J. Schmittke, Detroit, Mich. Clothes-reel. No. 1,020,446; Mar. 19; Sp. p. 3046; Gaz. vol. 176; p. 551.

Powers, John, Los Angeles, Cal. Door-lock fastener. No. 1,020,157; Mar. 12; Sp. p. 2456; Gaz. vol. 176; p. 418.

Powers, Patrick W., assignor to W. W. Lee, deceased, Northampton, Mass.; H. Lee, administratrix. Manufacturing embossed steel-handled implements of steel. No. 1,020,158; Mar. 12; Sp. p. 2458; Gaz. vol. 176; p. 418.

Powers, Wellington M., *et al.* (See Vorce, Albert F., assignor.)

Prache, Charles L., assignor to La Société d'Exploitation de Procédés Evaporatoires, Système Prache et Bouillon, Paris, France. Evaporating apparatus. No. 1,020,659; Mar. 19; Sp. p. 3520; Gaz. vol. 176; p. 620.

Prack, Henry, Ottawa, Ill. Tool for removing insulation from wires. No. 1,019,835; Mar. 12; Sp. p. 1762; Gaz. vol. 176; p. 309.

Prall, Ralph T. (See Gordon and Prall.)

Prange, Maurice N., Detroit, Mich. Clutch. No. 1,020,778; Mar. 19; Sp. p. 3780; Gaz. vol. 176; p. 662.

Pratt, Charles R., Montclair, N. J., assignor to The Universal Speed Control Company. Pump. No. 1,019,521; Mar. 5; Sp. p. 1177; Gaz. vol. 176; p. 175.

Pratt, Robert J. (See Kimball and Pratt.)

Pratt & Whitney Company. (See Echols, Francis G., assignor.)

Pratt & Whitney Company. (See Hanson, Bengt M. W., assignor.)

Prellwitz, William, Easton, Pa., assignor to Ingersoll-Rand Company, New York, N. Y. Unloader for fluid-compressors. No. 1,019,359; Mar. 5; Sp. p. 810; Gaz. vol. 176; p. 122.

Prellwitz, William, Easton, Pa., assignor to Ingersoll-Rand Company, New York, N. Y. Unloader for compound fluid-compressors. No. 1,019,360; Mar. 5; Sp. p. 810; Gaz. vol. 176; p. 122.

Prellwitz, William, Easton, Pa., assignor to Ingersoll-Rand Company, New York, N. Y. Mounting for air-feed drills. No. 1,019,361; Mar. 5; Sp. p. 821; Gaz. vol. 176; p. 123.

Prendergast, John, New York, N. Y. Bedstead. No. 1,021,701; Mar. 26; Sp. p. 5093; Gaz. vol. 176; p. 1025.

Prentice Bros. Company. (See Hendrickson, Fred K., assignor.)

Prentice Bros. Company. (See Newton, Albert E., assignor.)

Prescott, Charles F., Sunnyside, Wash. Pump. No. 1,019,700; Mar. 5; Sp. p. 1504; Gaz. vol. 176; p. 233.

Press, Gabriel G., Hollowayville, Ill. Envelop-pad. No. 1,019,275; Mar. 5; Sp. p. 586; Gaz. vol. 176; p. 94.

Pressed Steel Car Company. (See Lindström, Charles A., assignor.)

Pressed Steel Car Company. (See Lindström and Streib, assignors.)

Preyer, Frederick W., Canton, Ohio. Spinning-top. No. 1,020,660; Mar. 19; Sp. p. 3522; Gaz. vol. 176; p. 621.

Price, Alfred, assignor of one-half to F. Rademacher, Los Angeles, Cal. Combination gate and by-pass valve. No. 1,020,159; Mar. 12; Sp. p. 2450; Gaz. vol. 176; p. 418.

Price, Charles P., Malden, Mass., assignor, by mesne assignments, to Bituminous Road Implement Company. Machine for coating or mixing mineral aggregate with bituminous material. No. 1,019,522; Mar. 5; Sp. p. 1183; Gaz. vol. 176; p. 176.

Price, Waldow P., assignor of one-half to J. E. Ireland, Des Moines, Iowa. Awning-arm. No. 1,021,330; Mar. 26; Sp. p. 4926; Gaz. vol. 176; p. 900.

Price, William W., Dayton, Ohio. Packing-ring. No. 1,020,115; Mar. 12; Sp. p. 2365; Gaz. vol. 176; p. 404.

Pride, John P., and A. Bates, Leicester, England, assignors to United Shoe Machinery Company, Paterson, N. J. Machine for use in the manufacture of boots and shoes. No. 1,019,085; Mar. 5; Sp. p. 169; Gaz. vol. 176; p. 28.

Priest, Randel, Ames, Colo. Folding shipping-crate. No. 1,020,447; Mar. 19; Sp. p. 3047; Gaz. vol. 176; p. 552.

Primbs, Maxmillian E., and P. J. Bittner, Reserve township, Allegheny county, Pa. Ironing-table. No. 1,019,523; Mar. 5; Sp. p. 1187; Gaz. vol. 176; p. 176.

Prince, Otho, Cambridge, Ohio. Car-fender. No. 1,021,702; Mar. 26; Sp. p. 5694; Gaz. vol. 176; p. 1025.

Prochnow, Louis A., Ann Arbor, Mich. Feeder and grit-separator. No. 1,019,185; Mar. 5; Sp. p. 395; Gaz. vol. 176; p. 63.

Proessler, Conrad. (See Schroeder, Adam C., assignor.)

Providence Machine Company. (See Peirce, William C., assignor.)

Pruyn, Frederic. (See Nuckols and Pruyn.)

Purat, Hugo, Bridgeport, Conn. Curtain-pole. No. 1,021,555; Mar. 26; Sp. p. 5434; Gaz. vol. 176; p. 978.

Puritan Comb Company. (See Hines, William J., assignor.)

Pursglove, William T., Philadelphia, Pa., assignor to The A. Mecky Company, Wheel-hub. No. 1,021,476; Mar. 26; Sp. p. 5275; Gaz. vol. 176; p. 951.

Putney, Herbert S., and F. L. Carswell, Topeka, Kans. Culvert-pipe. No. 1,020,779; Mar. 19; Sp. p. 3783; Gaz. vol. 176; p. 663.

Quincy, Manchester, Sargent Company. (See Allen, John H., assignor.)

Quinlan, Michael, Monkton, assignor to New Haven Mills Mfg. Co., New Haven Mills, Vt. Box-machine. No. 1,021,703; Mar. 26; Sp. p. 5695; Gaz. vol. 176; p. 1026.

Quinn, John C., Philadelphia, Pa., assignor to The Engineer Company. Grate. No. 1,021,556; Mar. 26; Sp. p. 5435; Gaz. vol. 176; p. 978.

Quinn, Wilbur W., Goshen, Ind., assignor of one-half to National Chemical Company, Syracuse, N. Y. Laundry-conveyer drop. No. 1,019,086; Mar. 5; Sp. p. 175; Gaz. vol. 176; p. 28.

R. E. T. Construction Company, The. (See Munro, Edward M., assignor.)

Racine-Sattley Company. (See Weaver, Ira A., assignor.)

Rademacher, Frank. (See Price, Alfred, assignor.)

Ragona, John. (See Ragona, Vincent, J., and W.)

Ragona, Vincent, J., and W., New York, N. Y. Paper-box-making machine. No. 1,019,276; Mar. 5; Sp. p. 587; Gaz. vol. 176; p. 94.

Ragona, William. (See Ragona, Vincent, J., and W.)

Rahr, William, Jr. (See Ulrich, Julius M., assignor.)

Rail Joint Company, The. (See Weeks, Charles A., assignor.)

Raisin, Victor, assignor to Société Compagnie Industrielle des Alcools de l'Ardeche, Paris, France. Absorbent product. No. 1,021,477; Mar. 26; Sp. p. 5276; Gaz. vol. 176; p. 951.

Rakestraw, William H., assignor to Automatic Vacuum Cleaner Company, Bloomington, Ill. Vacuum-cleaner. No. 1,020,310; Mar. 12; Sp. p. 2750; Gaz. vol. 176; p. 468.

Ralston, Isaac J., and J. A. Briggs, assignors of one-third to H. J. Walter, Kane, Pa. Pressure-regulator. No. 1,020,369; Mar. 12; Sp. p. 2870; Gaz. vol. 176; p. 486.

Ramsey, Edia R., Penn Yan, N. Y. Amusement device. No. 1,021,331; Mar. 26; Sp. p. 4928; Gaz. vol. 176; p. 901.

Ramsey, Joseph D., Boston, Mass. Filter. No. 1,020,053; Mar. 12; Sp. p. 2224; Gaz. vol. 176; p. 383.

Rand, McNally & Company. (See Kuen, Charles W., assignor.)

Ransom, Albert, assignor to Chicago Feather Duster Company, Chicago, Ill. Mop-head. No. 1,019,701; Mar. 5; Sp. p. 1506; Gaz. vol. 176; p. 233.

Ransome, Arthur W., New York, N. Y. Concrete-mixer. No. 1,019,917; Mar. 12; Sp. p. 1956; Gaz. vol. 176; p. 339.

Ransome, Bernard, Oakland, Cal. Portable loading-trap. No. 1,021,332; Mar. 26; Sp. p. 4929; Gaz. vol. 176; p. 901.

Ranz, Jacob, St. Louis, Mo. Variable-speed mechanism. No. 1,020,573; Mar. 19; Sp. p. 3337; Gaz. vol. 176; p. 593.

Raper, Alfred. (See Chapman, Charles E., assignor.)

Rapin, Constant H. (See Duboux and Rapin.)

Rapp, Peter G., and P. H. King, Chicago, Ill. Nut-lock. No. 1,019,277; Mar. 5; Sp. p. 610; Gaz. vol. 176; p. 95.

Rau, Frank. (See Rau, Joseph, assignor.)

Rau, Joseph, assignor of one-half to F. Rau, Fayette, Iowa. Automatic calf-feeder. No. 1,019,087; Mar. 5; Sp. p. 178; Gaz. vol. 176; p. 29.

Rau, Joseph, assignor of one-half to F. Rau, Fayette, Iowa. Stanchion and trip-lever. No. 1,020,710; Mar. 19; Sp. p. 3635; Gaz. vol. 176; p. 639.

Rauch, Otto, Truscot, Tex. Umbrella-holder. No. 1,020,846; Mar. 19; Sp. p. 3918; Gaz. vol. 176; p. 685.

Rauchenecker, Joseph, Chicago, Ill. Fountain-pen. No. 1,020,221; Mar. 12; Sp. p. 2594; Gaz. vol. 176; p. 440.

Ray, Thomas B., and W. Laford, New York, N. Y. Electric drier. No. 1,021,704; Mar. 26; Sp. p. 5706; Gaz. vol. 176; p. 1020.

Raydure, Charles F. (See McCoubrie and Raydure.)

Raynor, Frank L., Southampton, N. Y. Electric-lamp fixture. No. 1,020,711; Mar. 19; Sp. p. 3636; Gaz. vol. 176; p. 639.

Reading Hardware Company. (See Mason, George N., assignor.)

Recko, Josef, Bridgeport, Conn. Animal-trap. No. 1,020,448; Mar. 19; Sp. p. 3049; Gaz. vol. 176; p. 552.

Redfield, Charles E., Okanogan, Wash., assignor of one-half to G. F. Rigby, Jr., Carlton, Mont. Current-motor. No. 1,020,574; Mar. 19; Sp. p. 3339; Gaz. vol. 176; p. 594.

Reece Button Hole Machine Company, The. (See Kiewicz, John, assignor.)

Reece Button Hole Machine Company, The. (See Leveque, Bernard T., assignor.)

Reed, Isaac N., assignor of one-half to H. Morris, Jersey City, N. J. Hydrocarbon-gas turbine. No. 1,021,262; Mar. 26; Sp. p. 4795; Gaz. vol. 176; p. 875.

Rees, George M., Louisville, Ky. Fob-holder. No. 1,019,990; Mar. 12; Sp. p. 2098; Gaz. vol. 176; p. 362.

Rees, Richard L., *et al.* (See Jones, William D., assignor.)

Rees, William A., *et al.* (See Jones, William D., assignor.)

Reeves, Walter R., East Providence, R. I. Rolling or reducing mill. No. 1,021,628; Mar. 26; Sp. p. 5572; Gaz. vol. 176; p. 1001.

Regan, Cornelius J., Quincy, Mass. Grinding-mill. No. 1,020,712; Mar. 19; Sp. p. 3638; Gaz. vol. 176; p. 640.

Reichardt, Louie F., Massena, Iowa. Ladder. No. 1,021,629; Mar. 26; Sp. p. 5573; Gaz. vol. 176; p. 1001.

Reiche, Hermann, Millstone, N. J. Pencil. No. 1,021,112; Mar. 26; Sp. p. 4457; Gaz. vol. 176; p. 825.

Reichel, Alvin S., assignor of one-half to Point Marion Machine & Manufacturing Company, Point Marion, Pa. Machine for manufacturing glassware. No. 1,020,222; Mar. 12; Sp. p. 2594; Gaz. vol. 176; p. 441.

Reichert, Paul F. (See Ayling and Reichert.) (Reissue.)

Reid, Alban H., Philadelphia, Pa. Centrifugal separating-machine. No. 1,019,836; Mar. 12; Sp. p. 1764; Gaz. vol. 176; p. 309.

Reid, Andrew H., Toronto, Ontario, Canada. Device for holding inserts. No. 1,021,060; Mar. 26; Sp. p. 4379; Gaz. vol. 176; p. 813.

Reid, Belle, St. Louis, Mo. Water-heater. No. 1,020,621; Mar. 19; Sp. p. 3439; Gaz. vol. 176; p. 608.

Reid, James H., Newark, N. J., assignor to G. Goodwin, Ottawa, Canada. Electric induction-furnace. No. 1,021,478; Mar. 26; Sp. p. 5277; Gaz. vol. 176; p. 951.

Reimann, Paul, Trehwitz, near Greiz, Germany, assignor of one-half to F. W. Rogler, Vienna, Austria-Hungary. Preparing paste used as weavers' glue or for other similar dressing purposes. No. 1,021,744; Mar. 26; Sp. p. 5791; Gaz. vol. 176; p. 1039.

Rein, Charles M., *et al.* (See Schulz, Wilhelm, assignor.)

Reinoehl, Charles W., deceased, Steelton, and B. L. Weaver, Middletown; H. B. Reinoehl, Steelton, Pa., executrix. Anticreeper for railway-rails. No. 1,020,370; Mar. 12; Sp. p. 2871; Gaz. vol. 176; p. 487.

Reinoehl, Helen B., executrix. (See Reinoehl and Weaver.)

Reisenhus, Peter P., and V. Sutherland, assignors to The American Glove Company, Chicago, Ill. Glove. No. 1,021,210; Mar. 26; Sp. p. 4673; Gaz. vol. 176; p. 857.

Reiter, Nicholas, Racine, Wis. Milking-stool. No. 1,021,263; Mar. 26; Sp. p. 4797; Gaz. vol. 176; p. 875.

Reliance Speedometer Company. (See Blanchard, Leon E., assignor.)

Renault, Louis, Billancourt, France. Means for lubricating the transmission-gear of motor-vehicles. No. 1,020,054; Mar. 12; Sp. p. 2227; Gaz. vol. 176; p. 384.

Renner, John, Kansas City, Mo. Ball-ring for tent-poles. No. 1,019,901; Mar. 12; Sp. p. 2090; Gaz. vol. 176; p. 362.

Renner, Philip, Cincinnati, Ohio. Knife-guard. No. 1,020,055; Mar. 12; Sp. p. 2228; Gaz. vol. 176; p. 384.

Rennie, Robert J., Mooers Forks, assignor of one-half to W. F. Kennedy, Champlain, N. Y. Car-door fastener. No. 1,021,211; Mar. 26; Sp. p. 4674; Gaz. vol. 176; p. 857.

Republic Rubber Company, The. (See Mell, Tod J., assignor.)

Requa Motor Company. (See Coles and Charavay, assignors.)

Restein, Clement. (See Restein, Jules, assignor.)

Restein, Jules, assignor to C. Restein, Philadelphia, Pa. Packing. No. 1,020,661; Mar. 19; Sp. p. 3523; Gaz. vol. 176; p. 621.

Restucci, Giuseppe, Naples, Italy. Steam-valve separator. No. 1,019,278; Mar. 5; Sp. p. 612; Gaz. vol. 176; p. 95.

Rensher, Frank E., Pittsburgh, Pa. Pipe-coupling. No. 1,021,264; Mar. 26; Sp. p. 4798; Gaz. vol. 176; p. 875.

Reutter, Frederick, assignor to Scovill Manufacturing Company, Waterbury, Conn. Powder-can top. No. 1,021,479; Mar. 26; Sp. p. 5279; Gaz. vol. 176; p. 952.

Reutter, Frederick, assignor to Scovill Manufacturing Company, Waterbury, Conn. Powder-can top. No. 1,021,480; Mar. 26; Sp. p. 5281; Gaz. vol. 176; p. 952.

Reutter, Frederick, assignor to Scovill Manufacturing Company, Waterbury, Conn. Powder-can top. No. 1,021,481; Mar. 26; Sp. p. 5282; Gaz. vol. 176; p. 953.

Reutter, Frederick, assignor to Scovill Manufacturing Company, Waterbury, Conn. Powder-can top. No. 1,021,482; Mar. 26; Sp. p. 5284; Gaz. vol. 176; p. 953.

Reutter, Frederick, assignor to Scovill Manufacturing Company, Waterbury, Conn. Hinged cap for powder-cans. No. 1,021,483; Mar. 26; Sp. p. 5286; Gaz. vol. 176; p. 953.

Revell, Ralph W., Raymond, Wash. Grate. No. 1,019,837; Mar. 12; Sp. p. 1767; Gaz. vol. 176; p. 310.

Reynolds, Blake O. (See Reynolds, William A. and B. O.)

Reynolds, John N. (See Bullard and Reynolds.)

Reynolds, Paul H. (See Reynolds, William A. and B. O., assignors.)

Reynolds, R. H. (See Hawthorne, Wyatt, and Warner, assignors.)

Reynolds, William A. and B. O., assignors of one-half to P. H. Reynolds, Asheville, N. C. Making concrete pipe and tile. No. 1,019,918; Mar. 12; Sp. p. 1959; Gaz. vol. 176; p. 339.

Reznicek, Anton, Jersey City, N. J. Apparel-belt. No. 1,021,728; Mar. 26; Sp. p. 5755; Gaz. vol. 176; p. 1033.

Rheinische Metallwaaren- und Maschinenfabrik. (See Völler, Karl, assignor.)

Rhoades, Alonzo E., assignor to Draper Company, Hopedale, Mass. Filling-replenishing feeler-loom. No. 1,019,279; Mar. 5; Sp. p. 613; Gaz. vol. 176; p. 95.

Rhoades, Alonzo E., assignor to Draper Company, Hopedale, Mass. Controlling mechanism for automatic feeler-looms. No. 1,020,622; Mar. 19; Sp. p. 3440; Gaz. vol. 176; p. 608.

Rhoades, Alonzo E., assignor to Draper Company, Hopedale, Mass. Thread-collecting means for automatic looms. No. 1,020,662; Mar. 19; Sp. p. 3524; Gaz. vol. 176; p. 621.

Rhoades, Alonzo E., assignor to Draper Company, Hopedale, Mass. Traverse-motion for yarn-spinning apparatus. No. 1,020,713; Mar. 19; Sp. p. 3640; Gaz. vol. 176; p. 640.

Rhodes, Samuel G., New York, N. Y. Protective electric cut-out. No. 1,019,362; Mar. 5; Sp. p. 822; Gaz. vol. 176; p. 123.

Rice, Charles W. (See Tate and Rice.)

Rice, Martin L., *et al.* (See Bresee, Wright D., assignor.)

Rice, Richard H., Lynn, Mass., assignor to General Electric Company. Governing means for elastic-fluid turbines. No. 1,021,212; Mar. 26; Sp. p. 4675; Gaz. vol. 176; p. 857.

Rice, Richard H., Lynn, Mass., assignor to General Electric Company. Throttle-valve for turbines. No. 1,021,213; Mar. 26; Sp. p. 4680; Gaz. vol. 176; p. 858.

Rice, Richard H., Lynn, Mass., assignor to General Electric Company. Governor for air-compressors. No. 1,021,214; Mar. 26; Sp. p. 4682; Gaz. vol. 176; p. 858.

Rice, Richard H., Lynn, Mass., assignor to General Electric Company. Impeller for centrifugal apparatus. No. 1,021,265; Mar. 26; Sp. p. 4799; Gaz. vol. 176; p. 876.

Rice, Richard H., Lynn, Mass., assignor to General Electric Company. Turbo-generator. No. 1,021,266; Mar. 26; Sp. p. 4801; Gaz. vol. 176; p. 876.

Rich, Lyman S., Boston, Mass. Lathe-center. No. 1,020,311; Mar. 12; Sp. p. 2767; Gaz. vol. 176; p. 469.

Rich, Harrison W., and C. E. Gates, assignors to Olympic Inserted Tooth Cylinder Company, Spokane, Wash. Threshing-cylinder. No. 1,020,714; Mar. 19; Sp. p. 3644; Gaz. vol. 176; p. 641.

Richardson, George W., Chicago, Ill. Slide-rule. No. 1,021,484; Mar. 26; Sp. p. 5287; Gaz. vol. 176; p. 953.

Richer, Joseph, assignor of one-third to N. A. Hilding and one-third to N. F. Lundin, Waterbury, Conn. Making heel-plates. No. 1,019,919; Mar. 12; Sp. p. 1960; Gaz. vol. 176; p. 340.

Richmond Stay-Bolt Drilling Machine Manufacturing Company. (See Fishburne, Edward W., assignor.)

Rickel, James, St. Joseph, Mo. Corn-husking machine. No. 1,019,838; Mar. 12; Sp. p. 1771; Gaz. vol. 176; p. 310.

Ricketts, Forrest E., Baltimore, Md. Regulator. No. 1,021,333; Mar. 26; Sp. p. 4931; Gaz. vol. 176; p. 902.

Ricketts, James R., assignor to Air Device Company, Los Angeles, Cal. Railway pneumatic apparatus. No. 1,019,363; Mar. 5; Sp. p. 824; Gaz. vol. 176; p. 123.
Ricks, Absalom W., Rexburg, Idaho. Shoe-fastener. No. 1,020,511; Mar. 19; Sp. p. 3182; Gaz. vol. 176; p. 571.
Rider, Harry L., Oil City, Pa. Automatic train-controlling device. No. 1,021,162; Mar. 26; Sp. p. 4576; Gaz. vol. 176; p. 841.
Rider, Herbert E., Brooklyn, assignor to W. Ottmann, New York, N. Y. Mantle-burner for kerosene-lamps. No. 1,021,163; Mar. 26; Sp. p. 4580; Gaz. vol. 176; p. 842.
Rietzel, Adolph F., Stonington, Conn., assignor, by mesne assignments, to Thomson Electric Welding Company, Lynn, Mass. Composite sheet-metal work. No. 1,020,056; Mar. 12; Sp. p. 2229; Gaz. vol. 176; p. 384.
Rigby, George F., Jr. (See Redfield, Charles E., assignor.)
Rigby, James, Paterson, N. J. Quilling-machine. No. 1,019,839; Mar. 12; Sp. p. 1772; Gaz. vol. 176; p. 311.
Riggin, Henry H., Altoona, Pa. Valve. No. 1,020,449; Mar. 19; Sp. p. 3050; Gaz. vol. 176; p. 552.
Riley, Robert S., Providence, R. I., assignor, by mesne assignments, to American Engineering Company, Philadelphia, Pa. Towing-machine. No. 1,020,928; Mar. 19; Sp. p. 4072; Gaz. vol. 176; p. 712.
Ringe, John C., Bridgeport, Conn., assignor to The Singer Manufacturing Company. Needle-bar mechanism for sewing-machines. No. 1,020,057; Mar. 12; Sp. p. 2230; Gaz. vol. 176; p. 385.
Ritchie, William R. (See Schneider, Ritchie, and Kammerer.)
Riter-Conley Manufacturing Company. (See Rodman, Hibbard, and Carpenter, assignors.)
Roberts, Arthur. Streator, Ill. Excavator-wheel. No. 1,021,113; Mar. 26; Sp. p. 4461; Gaz. vol. 176; p. 825.
Roberts, Harry, Atlantic City, N. J. Hat-pin guard. No. 1,019,840; Mar. 12; Sp. p. 1773; Gaz. vol. 176; p. 311.
Roberts, Horace L., New York, N. Y. Bag-looping machine. No. 1,019,186; Mar. 5; Sp. p. 397; Gaz. vol. 176; p. 63.
Roberts, Horace L., Brooklyn, N. Y. Paper-bag-suspending means. No. 1,019,187; Mar. 5; Sp. p. 400; Gaz. vol. 176; p. 63.
Robertson, Charles J., Taunton, Mass., assignor, by mesne assignments, to The Autoplate Company of America, Jersey City, N. J. Mechanical movement. No. 1,019,188; Mar. 5; Sp. p. 401; Gaz. vol. 176; p. 64.
Robertson, Macpherson, Fitzroy, Victoria, Australia. Coating confectionery. No. 1,021,705; Mar. 26; Sp. p. 5708; Gaz. vol. 176; p. 1026.
Robinson, Beverly M., Calgary, Alberta, Canada. Measuring device for powder-boxes. No. 1,109,702; Mar. 5; Sp. p. 1507; Gaz. vol. 176; p. 223.
Robinson, Harry B., Muskegon, Mich. Water-glass fixture for steam-boilers. No. 1,020,623; Mar. 19; Sp. p. 3443; Gaz. vol. 176; p. 609.
Robinson, Joseph H. and L. F., Adams, Tenn. Combined planter and fertilizer-distributer. No. 1,019,189; Mar. 5; Sp. p. 404; Gaz. vol. 176; p. 64.
Robinson, Lillard F. (See Robinson, Joseph H. and L. F.)
Robinson, Theodore D., Lockport, N. Y. Radiator. No. 1,021,334; Mar. 26; Sp. p. 4941; Gaz. vol. 176; p. 902.
Robinson, Thomas C., deceased, Everett, Mass.; E. J. Savage, administratrix. Invalid-bedstead. No. 1,021,335; Mar. 26; Sp. p. 4943; Gaz. vol. 176; p. 902.
Rockey, Walter S., and H. Eldridge, New York, N. Y., assignors to Metallurgical Research Company. Remelting and refining old or scrap copper alloy. No. 1,019,524; Mar. 5; Sp. p. 1188; Gaz. vol. 176; p. 176.
Roden, Ephraim H., Chicago, Ill. Wrapper for newspapers, periodicals, and the like. No. 1,019,525; Mar. 5; Sp. p. 1189; Gaz. vol. 176; p. 176.
Roderick Lean Manufacturing Company, The. (See Warne, Frederick C., assignor.)
Rodman, Thomas, Sewickley, R. L. Hibbard, Bellevue, and H. A. Carpenter, Sewickley, Pa., assignors to Riter-Conley Manufacturing Company, Jersey City, N. J. Apparatus for charging and discharging gas-retorts. No. 1,021,729; Mar. 26; Sp. p. 5755; Gaz. vol. 176; p. 1034.
Rodriguez y Fonoll, Manuel, New York, N. Y. Fire-escape. No. 1,021,336; Mar. 26; Sp. p. 4945; Gaz. vol. 176; p. 903.
Roe, Nathaniel, Patchogue, N. Y. Steering device for motor-boats. No. 1,021,267; Mar. 26; Sp. p. 4803; Gaz. vol. 176; p. 877.
Rogerson, Albert C., assignor of one-half to A. F. Halstead, Manchester, England. Riveting-tool. No. 1,019,088; Mar. 5; Sp. p. 180; Gaz. vol. 176; p. 29.
Rogler, Frederick W. (See Reimann, Paul, assignor.)
Rohlfing, John M., assignor to American Car and Foundry Company, St. Louis, Mo. Car-bolster. No. 1,021,164; Mar. 26; Sp. p. 4583; Gaz. vol. 176; p. 842.
Rohlfing, John M., assignor to American Car and Foundry Company, St. Louis, Mo. Underframe. No. 1,021,215; Mar. 26; Sp. p. 4685; Gaz. vol. 176; p. 858.
Rolfe, Frank J., McCook, Nebr. Train-order-catching device. No. 1,021,745; Mar. 26; Sp. p. 5792; Gaz. vol. 176; p. 1030.
Roper & Company, C. F. (See Draper, Clare H., assignor.)
Ropp, Jacob, San Dimas, assignor to Ropp Manufacturing Company, Glendora, Cal. Combination-cultivator. No. 1,019,738; Mar. 5; Sp. p. 1579; Gaz. vol. 176; p. 246.
Ropp, Jacob, San Dimas, assignor to Ropp Manufacturing Company, Glendora, Cal. Combination-cultivator. No. 1,019,739; Mar. 5; Sp. p. 1581; Gaz. vol. 176; p. 246.
Ropp, Jacob, San Dimas, assignor to Ropp Manufacturing Company, Glendora, Cal. Irrigating-machine. No. 1,019,740; Mar. 5; Sp. p. 1583; Gaz. vol. 176; p. 246.
Ropp Manufacturing Company. (See Ropp, Jacob, assignor.)
Roren, Albert. (See Long, John R., assignor.)
Rose, Frank B. (See Pate and Rose.)
Rose, Hiram T., Jr. (See McQuiston, William G., assignor.)
Rosenbaum, William R. (See Haya and Rosenbaum.)
Rosenson, Aaron. (See Dewald and Rosenson.)
Ross, Charles H. A. F. L., Balnagown Castle, county of Ross, Scotland. Firearm. No. 1,021,706; Mar. 26; Sp. p. 5709; Gaz. vol. 176; p. 1026.
Ross, David W., Boston, Mass. Pipe-coupling. No. 1,021,485; Mar. 26; Sp. p. 5290; Gaz. vol. 176; p. 954.
Ross, Louis S., Newtonville, Mass. Compound for time burning railway signal-fusees. No. 1,019,190; Mar. 5; Sp. p. 406; Gaz. vol. 176; p. 64.
Ross, Robert H. (See Logan, William R., assignor.)
Rosser, Levin V., Tuscaloosa, Ala. Poison-distributing apparatus. No. 1,021,707; Mar. 26; Sp. p. 5712; Gaz. vol. 176; p. 1027.
Rossi, Auguste J., Niagara Falls, assignor to The Titanium Alloy Manufacturing Company, New York, N. Y. Compound or alloy of titanium and silicon. No. 1,019,526; Mar. 5; Sp. p. 1191; Gaz. vol. 176; p. 177.
Rossi, Auguste J., Niagara Falls, assignor to The Titanium Alloy Manufacturing Company, New York, N. Y. Producing the alloy of titanium with zinc. No. 1,019,527; Mar. 5; Sp. p. 1193; Gaz. vol. 176; p. 177.
Rossi, Auguste J., Niagara Falls, assignor to The Titanium Alloy Manufacturing Company, New York, N. Y. Producing alloys of titanium with ferrometal. No. 1,019,528; Mar. 5; Sp. p. 1195; Gaz. vol. 176; p. 177.
Rossi, Auguste J., Niagara Falls, assignor to The Titanium Alloy Manufacturing Company, New York, N. Y. Producing the alloy of titanium with lead. No. 1,019,529; Mar. 5; Sp. p. 1197; Gaz. vol. 176; p. 177.
Rossi, Auguste J., Niagara Falls, assignor to The Titanium Alloy Manufacturing Company, New York, N. Y. Producing the alloy of titanium with tin. No. 1,019,530; Mar. 5; Sp. p. 1199; Gaz. vol. 176; p. 178.
Rossi, Auguste J., Niagara Falls, assignor to The Titanium Alloy Manufacturing Company, New York, N. Y. Treating aluminium. No. 1,019,531; Mar. 5; Sp. p. 1201; Gaz. vol. 176; p. 178.
Rossi, Auguste J., Niagara Falls, assignor to The Titanium Alloy Manufacturing Company, New York, N. Y. Zinc and purifying and improving the same. No. 1,020,513; Mar. 19; Sp. p. 3183; Gaz. vol. 176; p. 572.
Rossi, Auguste J., Niagara Falls, assignor to The Titanium Alloy Manufacturing Company, New York, N. Y. Nickel and purifying and improving the same. No. 1,020,518; Mar. 19; Sp. p. 3185; Gaz. vol. 176; p. 572.
Rossi, Auguste J., Niagara Falls, assignor to The Titanium Alloy Manufacturing Company, New York, N. Y. Lead and purifying and improving the same. No. 1,020,514; Mar. 19; Sp. p. 3187; Gaz. vol. 176; p. 572.
Rossi, Auguste J., Niagara Falls, assignor to The Titanium Alloy Manufacturing Company, New York, N. Y. Tin and purifying and improving the same. No. 1,020,515; Mar. 19; Sp. p. 3189; Gaz. vol. 176; p. 572.
Rossi, Auguste J., Niagara Falls, assignor to The Titanium Alloy Manufacturing Company, New York, N. Y. Article composed essentially of titanium and lead and producing the same. No. 1,020,516; Mar. 19; Sp. p. 3191; Gaz. vol. 176; p. 572.
Rossi, Auguste J., Niagara Falls, assignor to The Titanium Alloy Manufacturing Company, New York, N. Y. Producing the binary alloy of titanium and aluminum. No. 1,020,517; Mar. 19; Sp. p. 3193; Gaz. vol. 176; p. 572.
Rountree, Henry W., assignor of one-half to H. W. Cottrell, Richmond, Va. Wardrobe-trunk. No. 1,021,070; Mar. 26; Sp. p. 4381; Gaz. vol. 176; p. 813.
Roush, Francis M., assignor of one-half to R. C. Roush, Canton, Ohio. Fender for cars. No. 1,019,841; Mar. 12; Sp. p. 1775; Gaz. vol. 176; p. 311.
Roush, Ruben C. (See Roush, Francis M., assignor.)
Row, Reuben R., Jersey City, N. J., assignor to The Griscom-Spencer Company. Pipe-joint and the like. No. 1,020,929; Mar. 19; Sp. p. 4076; Gaz. vol. 176; p. 712.
Rowan, Lloyd, Shawneetown, Ill. Corn-popper. No. 1,021,426; Mar. 26; Sp. p. 5160; Gaz. vol. 176; p. 934.
Rowe, Lewis S., Santa Barbara, Cal. Shoe-pad. No. 1,020,160; Mar. 12; Sp. p. 2461; Gaz. vol. 176; p. 410.
Royce, James C., Toronto, Ontario, Canada. Electrical connector. No. 1,021,377; Mar. 26; Sp. p. 5012; Gaz. vol. 176; p. 915.
Roze, Henri, Domaine de Haute-Fontaine, near Les Grandes Côtes, France. Elastic suspension for wheels of cycles and other vehicles. No. 1,019,089; Mar. 5; Sp. p. 181; Gaz. vol. 176; p. 29.
Rubens, Reuben, Liverpool, England. Safety-razor. No. 1,021,003; Mar. 26; Sp. p. 4240; Gaz. vol. 176; p. 789.
Rudolph, Paul, assignor to Firm of C. Zeiss, Jena, Germany. Quadruple-lens objective. No. 1,021,337; Mar. 26; Sp. p. 4947; Gaz. vol. 176; p. 903.
Rudolph, Raymond H., Elgin, Ill. Automatic leather-stitching machine. No. 1,019,364; Mar. 5; Sp. p. 826; Gaz. vol. 176; p. 124.

Rudolph Wurlitzer Manufacturing Company, The. (See Hoe-Jones, Robert, assignor.)
Rue, Joseph L., and C. F. Brown, Coshocton, Ohio. Telephone system. No. 1,019,992; Mar. 12; Sp. p. 2100; Gaz. vol. 176; p. 362.
Rule, Percy B. (See Hay and Rule.)
Rülke, Kurt, Berlin, Germany. Manufacture of disinfectant substances and products produced thereby. No. 1,020,624; Mar. 19; Sp. p. 3445; Gaz. vol. 176; p. 609.
Rumpf, Martin H., Paris, France. Embroidering-machine. No. 1,020,663; Mar. 19; Sp. p. 3527; Gaz. vol. 176; p. 622.
Runner, John B., Indianapolis, assignor of three-fifths to E. E. Gunckel and F. L. Hickman, Jay county, Ind. Surfacing-trowel. No. 1,021,557; Mar. 26; Sp. p. 5436; Gaz. vol. 176; p. 979.
Rush, Charles A., San Francisco, Cal. Airship. No. 1,021,338; Mar. 26; Sp. p. 4948; Gaz. vol. 176; p. 904.
Ruslecki, Waclaw, Rakitnaja, Russia. Evaporating apparatus having multiple evaporation. No. 1,021,486; Mar. 26; Sp. p. 5292; Gaz. vol. 176; p. 954.
Russell, James C., Pittsburgh, Pa. Treating metal articles. No. 1,019,191; Mar. 5; Sp. p. 409; Gaz. vol. 176; p. 65.
Russell, William A., Waterbury, Conn. Air-moistening device for heating apparatus. No. 1,019,842; Mar. 12; Sp. p. 1777; Gaz. vol. 176; p. 312.
Russell, William A., Yonkers, N. Y. Automatic air-moistening device. No. 1,019,843; Mar. 12; Sp. p. 1782; Gaz. vol. 176; p. 312.
Rutenbeck, Carl W. (See Schneider, Rutenbeck, and Hill.)
Ryan, Edward J. (See Schoonmaker, Charles A., assignor.)
Ryerson, Cornelius A., Toronto, Ontario, Canada. Water-heater. No. 1,019,000; Mar. 5; Sp. p. 183; Gaz. vol. 176; p. 29.
Ryerson, George A., assignor of one-half to C. R. Callaghan, Bellevue, Ohio. Reversible feed-hopper for balling-presses. No. 1,021,730; Mar. 26; Sp. p. 5759; Gaz. vol. 176; p. 1034.
Ryon, Eppa H., Worcester, Mass., assignor to Crompton & Knowles Loom Works. Loom. No. 1,020,664; Mar. 19; Sp. p. 3534; Gaz. vol. 176; p. 622.
S. F. Bowser & Co. (See Bowser, Harry M., assignor.)
S. F. Bowser & Company. (See Bowser, Allen A., assignor.)
Sabatino, John, Richmond Hill, assignor of one-half to J. Waldron, Morris Park, N. Y. Clutch mechanism for motor-shafts. No. 1,020,223; Mar. 12; Sp. p. 2603; Gaz. vol. 176; p. 441.
Sacerdoti, Cesare, Philadelphia, Pa., assignor to Fiat San Georgio, Spezia, Italy. Controlling device for motors. No. 1,019,091; Mar. 5; Sp. p. 183; Gaz. vol. 176; p. 30.
Saemann, Laura N., Oak Park, Ill. Abdominal supporter. No. 1,019,365; Mar. 5; Sp. p. 832; Gaz. vol. 176; p. 124.
Safety Car Heating and Lighting Company. (See Creveling, John L., assignor.)
Sagabiel, Lee G., Memphis, Ind. Safety appliance for hammer-guns. No. 1,021,427; Mar. 26; Sp. p. 5162; Gaz. vol. 176; p. 934.
Sagramoso, Alfonso, Philadelphia, Pa. Vehicle-fender. No. 1,021,630; Mar. 26; Sp. p. 5575; Gaz. vol. 176; p. 1001.
Saklatwalla, Byramji D., Bridgeville, assignor to The American Vanadium Co., Pittsburgh, Pa. Recovery of vanadium. No. 1,020,224; Mar. 12; Sp. p. 2605; Gaz. vol. 176; p. 442.
Saklatwalla, Byramji D., Bridgeville, assignor to The American Vanadium Co., Pittsburgh, Pa. Recovery of vanadium. No. 1,020,312; Mar. 12; Sp. p. 2769; Gaz. vol. 176; p. 469.
Salm, Sall, Cologne-Ehrenfeld, Germany. Apparatus for making tight the pores of castings. No. 1,019,532; Mar. 5; Sp. p. 1202; Gaz. vol. 176; p. 178.
Salmon, Edward W., Jr. (See Palmer and Salmon.)
Salts Textile Manufacturing Company, The. (See Cutting and Marshall, assignors.)
Samuel Winslow Skate M'f'g. Co. (See Everett, Otis W., assignor.)
Samuelson, Frederick, Rugby, England, assignor to General Electric Company. Heat-accumulator for low-pressure fluid. No. 1,021,216; Mar. 26; Sp. p. 4687; Gaz. vol. 176; p. 859.
Sanborn, George O., Seattle, Wash. Knitted collar for garments. No. 1,021,071; Mar. 26; Sp. p. 4383; Gaz. vol. 176; p. 813.
Sanborn, William W., *et al.* (See Frost, Walter E., assignor.)
Sanders, Ruffus H., Sacramento, Cal. Independent rail brace and lock. No. 1,021,268; Mar. 26; Sp. p. 4804; Gaz. vol. 176; p. 877.
Sandgren, Eric S., and C. F. Case, assignors to Oliver Motor Car Company, Detroit, Mich. Motor-vehicle. No. 1,020,518; Mar. 19; Sp. p. 3104; Gaz. vol. 176; p. 573.
Sandrik, Charles J., East Pittsburgh, Pa. Vehicle-wheel. No. 1,020,450; Mar. 19; Sp. p. 3053; Gaz. vol. 176; p. 553.
Sands, John M., *et al.* (See Jarvis, Herbert L., assignor.)
Sanford, Andrew J., assignor to A. H. Heisey & Co., Inc., Newark, Ohio. Bowl. No. 1,021,004; Mar. 26; Sp. p. 4250; Gaz. vol. 176; p. 789.
Sanford, James A., Jackson, Mich. Bottle-machine. No. 1,019,533; Mar. 5; Sp. p. 1203; Gaz. vol. 176; p. 178.
Sangamo Electric Company. (See Lanphier, Robert C., assignor.)
Santos, John. (See Brand and Santos.)
Sargent & Company. (See Collins, Herbert G., assignor.)
Sargent, Edgar H., *et al.* (See Bresee, Wright D., assignor.)
Sargent, John W., Providence, R. I. Engine-governor. No. 1,020,225; Mar. 12; Sp. p. 2606; Gaz. vol. 176; p. 442.
Sargent, William P., assignor to The Curtis Publishing Company, Philadelphia, Pa. Mail-bag holder. No. 1,019,366; Mar. 5; Sp. p. 833; Gaz. vol. 176; p. 124.
Sasseman, David C., River Forest, assignor to F. H. Smith Manufacturing Company, Chicago, Ill. Button-setting machine. No. 1,020,058; Mar. 12; Sp. p. 2232; Gaz. vol. 176; p. 385.
Sattler, Herman J., Easton, Pa. Let-off. No. 1,019,993; Mar. 12; Sp. p. 2106; Gaz. vol. 176; p. 363.
Saulelko, John M., St. Charles, Ill. Door-lock. No. 1,019,844; Mar. 12; Sp. p. 1787; Gaz. vol. 176; p. 313.
Saum, Robert J., assignor to The Western Tool and Manufacturing Company, Springfield, Ohio. Expanding mandrel. No. 1,019,920; Mar. 12; Sp. p. 1960; Gaz. vol. 176; p. 340.
Sauvage, William H., New York, N. Y. Slack-adjuster for railway-brakes. No. 1,020,519; Mar. 19; Sp. p. 3196; Gaz. vol. 176; p. 573.
Sauvage, William H., New York, N. Y. Brake-rigging. (Reissue.) No. 13,386; Mar. 19; Sp. p. 4144; Gaz. vol. 176; p. 723.
Savage, Alva L., Dermott, Ark. Beveling-plane. No. 1,021,631; Mar. 26; Sp. p. 5578; Gaz. vol. 176; p. 1002.
Savage, Arthur J., Utica, N. Y., assignor to Sears, Roebuck & Co., Chicago, Ill. Firearm. No. 1,019,367; Mar. 5; Sp. p. 835; Gaz. vol. 176; p. 125.
Savage, Elizabeth J., administratrix. (See Robinson, Thomas C.)
Savoy, Edward, Chapel Hill, Tex. Rail-joint. No. 1,021,632; Mar. 26; Sp. p. 5579; Gaz. vol. 176; p. 1002.
Saweljew, Michael, assignor to A. Siabloff, St. Petersburg, Russia. Link distributing-gear. No. 1,019,921; Mar. 12; Sp. p. 1962; Gaz. vol. 176; p. 340.
Sayer, Robert C., Redland, Bristol, England. Aerostatics. No. 1,019,368; Mar. 5; Sp. p. 842; Gaz. vol. 176; p. 125.
Schaefle, Simon M., Naperville, Ill. Mop-press. No. 1,019,369; Mar. 5; Sp. p. 843; Gaz. vol. 176; p. 125.
Schaeneman, Lewis G., Albany, N. Y. Floor-oiler. No. 1,021,708; Mar. 26; Sp. p. 5713; Gaz. vol. 176; p. 1027.
Schaffnet, Minnie, San Diego, Cal. Rotatable sprinkler connection. No. 1,019,922; Mar. 12; Sp. p. 1964; Gaz. vol. 176; p. 340.
Schatz, Adam E., Mount Vernon, assignor to Harpoon Caster Manufacturing Company, New York, N. Y. Chair-leg or furniture caster. No. 1,019,534; Mar. 5; Sp. p. 1208; Gaz. vol. 176; p. 179.
Schelecki, Mikel, and W. Chudrik, Pittsburgh, Pa. Molding-machine. No. 1,021,633; Mar. 26; Sp. p. 5580; Gaz. vol. 176; p. 1003.
Scheble, Eugene S., Cleburne, and E. Ascue, Blum, Tex.; said Ascue assignor of four-fifths of his right to said Scheble. Cotton-picker. No. 1,020,116; Mar. 12; Sp. p. 2367; Gaz. vol. 176; p. 404.
Scheller, Henry W. (See Martin and Scheller.)
Schell, Max P., assignor to C. H. Kobicke, San Francisco, Cal. Non-refillable bottle. No. 1,019,535; Mar. 5; Sp. p. 1209; Gaz. vol. 176; p. 179.
Schelter, George G., Rochester, N. Y. Contour-gage. No. 1,019,923; Mar. 12; Sp. p. 1966; Gaz. vol. 176; p. 341.
Schemmel, Robert C., assignor to Backstay Machine and Leather Company, Union City, Ind. Valance. No. 1,021,487; Mar. 26; Sp. p. 5296; Gaz. vol. 176; p. 955.
Schenck, Charles, assignor to Elevator Supply & Repair Company, Chicago, Ill. Lubricator for elevator-guides. No. 1,020,715; Mar. 19; Sp. p. 3645; Gaz. vol. 176; p. 641.
Schenck, Christian, Weston, Ill. Reinforcing means for collars. No. 1,020,576; Mar. 19; Sp. p. 3345; Gaz. vol. 176; p. 594.
Schenk, Nicholas, St. Louis, Mo. Vehicle-wheel. No. 1,019,845; Mar. 12; Sp. p. 1788; Gaz. vol. 176; p. 313.
Schenk, Nicholas, St. Louis, Mo. Resilient wheel. No. 1,019,846; Mar. 12; Sp. p. 1792; Gaz. vol. 176; p. 313.
Schenk, Nicholas, St. Louis, Mo. Resilient wheel. No. 1,019,847; Mar. 12; Sp. p. 1794; Gaz. vol. 176; p. 314.
Schenkel, Charles A., Wabash, Ind. Vehicle-tire. No. 1,021,072; Mar. 26; Sp. p. 4384; Gaz. vol. 176; p. 813.
Scherzer, Albert H., Chicago, Ill. Bascule-bridge. No. 1,021,488; Mar. 26; Sp. p. 5297; Gaz. vol. 176; p. 955.
Scheuer, Paul, McKeesport, Pa. Transfer-table for rolling-mills. No. 1,020,313; Mar. 12; Sp. p. 2769; Gaz. vol. 176; p. 469.
Schewelin, Wladimir, assignor to La Société Anonyme Wolokno Schewelin, Moscow, Russia. Treatment of vegetable fibers and materials. No. 1,020,625; Mar. 19; Sp. p. 3446; Gaz. vol. 176; p. 609.
Schick, Adolph, Wheeling, W. Va. Vehicle-wheel. No. 1,019,192; Mar. 5; Sp. p. 412; Gaz. vol. 176; p. 65.
Schlementz, Otto P., Chemnitz, Germany. Automatic nut-tapping machine. No. 1,020,451; Mar. 19; Sp. p. 3054; Gaz. vol. 176; p. 553.
Schiffers, August, Aix-la-Chapelle, Germany. Machine for dyeing, bleaching, and the like. No. 1,020,452; Mar. 19; Sp. p. 3056; Gaz. vol. 176; p. 553.
Schilling, William F. (See McKee and Schilling.)

Schimper, Frederick, Union, assignor of one-half to A. H. Koeller, Ridgefield Park, N. J. Yeast washing and aerating apparatus. No. 1,020,716; Mar. 19; Sp. p. 3648; Gaz. vol. 176; p. 642.
Schlage, Walter R., San Francisco, Cal. Indicating push-button. No. 1,021,330; Mar. 26; Sp. p. 4952; Gaz. vol. 176; p. 904.
Schlesinger, Isaac, assignor to L. Schlesinger, New York, N. Y. Toy drum. No. 1,020,717; Mar. 19; Sp. p. 3650; Gaz. vol. 176; p. 642.
Schlesinger, Leo. (See Schlesinger, Isaac, assignor.)
Schlichten, George W., Los Angeles, Cal. Apparatus for treatment of fiber-bearing and other plants. No. 1,021,260; Mar. 26; Sp. p. 4805; Gaz. vol. 176; p. 877.
Schloemer, Andrew, West Allis, Wis. Agricultural implement. No. 1,019,370; Mar. 5; Sp. p. 846; Gaz. vol. 176; p. 126.
Schmidt, Charles H. (See Sloan, John A., assignor.)
Schmidt, Ernest H., assignor to The National Malleable Castings Company, Cleveland, Ohio. Car-platform. No. 1,019,725; Mar. 5; Sp. p. 1558; Gaz. vol. 176; p. 242.
Schmidt, Ernest H., assignor to The National Malleable Castings Company, Cleveland, Ohio. Centering device for radial-draft gears. No. 1,020,380; Mar. 12; Sp. p. 2912; Gaz. vol. 176; p. 493.
Schmitt, Charles F. E. O. (See Behr and Schmitt.)
Schmittke, Charles, *et al.* (See Powers, Francis S., assignor.)
Schmittke, John, *et al.* (See Powers, Francis S., assignor.)
Schmoulousky, Leon, Matteawan, N. Y. Manufacturing hats and other articles. No. 1,020,314; Mar. 12; Sp. p. 2772; Gaz. vol. 176; p. 469.
Schneider, Charles P. E., Le Creuzot, France. Breech-operating mechanism of ordnance. No. 1,020,577; Mar. 19; Sp. p. 3345; Gaz. vol. 176; p. 594.
Schneider, Edward J., Hollywood, W. R. Ritchie and W. Kammerer, Colegrove, Cal. Automatic self-packing plunger-pump. No. 1,019,371; Mar. 5; Sp. p. 848; Gaz. vol. 176; p. 126.
Schneider, Gustav, C. W. Rutenbeck, and H. Hill, Cleveland, Ohio. Memograph or reminder-clock. No. 1,019,193; Mar. 5; Sp. p. 414; Gaz. vol. 176; p. 65.
Schnoor, Peter J. A., Holstein, Iowa. Trolley. No. 1,019,848; Mar. 12; Sp. p. 1798; Gaz. vol. 176; p. 314.
Schoell, Reinhold, assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Lock. No. 1,020,847; Mar. 19; Sp. p. 3651; Gaz. vol. 176; p. 685.
Scholefeld, Herman K., Kailua, Hawaii. Switch for trolley-conveyers. No. 1,020,453; Mar. 19; Sp. p. 3059; Gaz. vol. 176; p. 554.
Scholfield, Socrates, Providence, R. I. Appliance for illustrating the specific relation that exists between the faculties of sensation and emotion in the animal organism. No. 1,019,703; Mar. 5; Sp. p. 1509; Gaz. vol. 176; p. 234.
Scholl, Henry G., Hoboken, Pa. Cuspidor. No. 1,021,073; Mar. 26; Sp. p. 4385; Gaz. vol. 176; p. 813.
Scholler, Charles J., assignor to The Keystone Manufacturing Company, Buffalo, N. Y. Hand-ratchet for drills, &c. No. 1,021,558; Mar. 26; Sp. p. 5438; Gaz. vol. 176; p. 979.
Schoolfield, James E., San Francisco, Cal. Safety appliance for tramway-cars. No. 1,021,752; Mar. 26; Sp. p. 5811; Gaz. vol. 176; p. 1042.
Schoonmaker, Charles A., assignor of one-half to E. J. Ryan, Syracuse, N. Y. Flying-machine. No. 1,020,718; Mar. 19; Sp. p. 3651; Gaz. vol. 176; p. 642.
Schopbach, Charles H., assignor to International Corset Company, Aurora, Ill. Corset. No. 1,021,489; Mar. 26; Sp. p. 5301; Gaz. vol. 176; p. 955.
Schowalter, Edward J., Racine, Wis. Clothes-boiler attachment. No. 1,020,578; Mar. 19; Sp. p. 3349; Gaz. vol. 176; p. 585.
Schramm, Adam, Weehawken, N. J. Animal-trap. No. 1,021,428; Mar. 26; Sp. p. 5163; Gaz. vol. 176; p. 934.
Schreiner, Ludwig, Oehde, near Barmen, assignor to J. P. Bemberg, Aktiengesellschaft, Barmen-Rittershausen, Germany. Imparting luster to yarns, fabric, and the like. No. 1,020,117; Mar. 12; Sp. p. 2371; Gaz. vol. 176; p. 405.
Schroeder, Adam C., Derry Station, assignor of one-half to C. Proessler, Pittsburgh, Pa. Pneumatic wheel. No. 1,019,536; Mar. 5; Sp. p. 1210; Gaz. vol. 176; p. 179.
Schroeder, Albert G. (See Chamberlain and Schroeder.)
Schroeder, Herman O., Elkhorn, Nebr. Securing device for coin-receptacles. No. 1,021,634; Mar. 26; Sp. p. 5583; Gaz. vol. 176; p. 1003.
Schuberg, George E. (See Woolsey, Harry J., assignor.)
Schubert & Salzer Maschinenfabrik Aktiengesellschaft. (See Heinitz, Woldemar R., assignor.)
Schuermann, Anton C. (See Mueller and Schuermann.)
Schulz, Walter F., New York, N. Y. Carbureter. No. 1,020,059; Mar. 12; Sp. p. 2235; Gaz. vol. 176; p. 385.
Schulz, Wilhelm, Houston, Tex., assignor of fifty-one one-hundredths to H. H. and G. M. Dixon, C. M. Rein, and R. C. Duff. Pipe connection. No. 1,021,378; Mar. 26; Sp. p. 5014; Gaz. vol. 176; p. 915.
Schumann, Christopher W., Marshalltown, Iowa. Wire-stretcher. No. 1,021,035; Mar. 26; Sp. p. 5584; Gaz. vol. 176; p. 1004.
Schutt, Duny A., Chicago, Ill., assignor to International Harvester Company. Grain-drill. No. 1,021,379; Mar. 26; Sp. p. 5016; Gaz. vol. 176; p. 916.
Schutz, Charles, New York, N. Y. Game apparatus. No. 1,020,315; Mar. 12; Sp. p. 2773; Gaz. vol. 176; p. 470.
Schwab, William, assignor to J. R. Wentz, Fremont, Ohio. Can-opener. No. 1,020,954; Mar. 19; Sp. p. 4138; Gaz. vol. 176; p. 721.
Schwanhäusser, Frederick, Jersey City, N. J., assignor to C. Beseler Co. Stereopticon. No. 1,020,371; Mar. 12; Sp. p. 2875; Gaz. vol. 176; p. 487.
Schwarz, Maxim, Braunau, Austria-Hungary. Dyeing. No. 1,019,092; Mar. 5; Sp. p. 188; Gaz. vol. 176; p. 30.
Schwebel, William C. (See Poinisch, Paul, assignor.)
Schweitzer, Heinrich, New York, N. Y. Swage-machine. No. 1,019,994; Mar. 12; Sp. p. 2107; Gaz. vol. 176; p. 363.
Schwenkler, *née* Deege, Auguste, Berlin, Germany. Breast-supporter. No. 1,019,537; Mar. 5; Sp. p. 1211; Gaz. vol. 176; p. 179.
Schwertner, Joseph, New York, assignor of one-third to J. Aspinwall, Newburgh, N. Y., and one-third to L. F. A. H. Heerwagen, Hasbrouck Heights, N. J. Pneumatic apparatus. (Reissue.) No. 13,384; Mar. 12; Sp. p. 2928; Gaz. vol. 176; p. 496.
Scott, Burton W., assignor, by mesne assignments, to Detroit Typomarker Company, Detroit, Mich. Stapling mechanism for pin-ticketing machines. No. 1,019,924; Mar. 12; Sp. p. 1967; Gaz. vol. 176; p. 341.
Scott, Charles A., administrator. (See Scott, James W. and C. A.)
Scott, James H., San Diego, Cal. Sterilizing apparatus. No. 1,019,538; Mar. 5; Sp. p. 1212; Gaz. vol. 176; p. 180.
Scott, James W., deceased, (C. A. Scott, administrator,) and C. A. Scott, Kokomo, Ind. Apparatus for fumigating. No. 1,021,270; Mar. 26; Sp. p. 4814; Gaz. vol. 176; p. 878.
Scott, William A., Tacoma, Wash. Means for attaching binding-posts to dry batteries. No. 1,021,340; Mar. 26; Sp. p. 4954; Gaz. vol. 176; p. 904.
Scott, William F., Toronto, Ontario, Canada. Reinforced concrete. No. 1,021,420; Mar. 26; Sp. p. 5164; Gaz. vol. 176; p. 934.
Scotten, William M., Gregg township, Morgan county, Ind. Farm-gate. No. 1,019,726; Mar. 5; Sp. p. 1559; Gaz. vol. 176; p. 242.
Scovill Manufacturing Company. (See Reutter, Frederick, assignor.)
Scribner, Charles E. T., assignor to The James Hunter Machine Company, North Adams, Mass. Machine for making bats. No. 1,020,372; Mar. 12; Sp. p. 2876; Gaz. vol. 176; p. 487.
Scully, Walter P., Chicago, Ill. Bowling-ball. No. 1,021,490; Mar. 26; Sp. p. 5302; Gaz. vol. 176; p. 955.
Seaboyer, George E., Wooster, Ohio. Calcimine-brush. No. 1,020,373; Mar. 12; Sp. p. 2880; Gaz. vol. 176; p. 488.
Seaman, John T., Seattle, Wash. Rotary pump. No. 1,019,995; Mar. 12; Sp. p. 2108; Gaz. vol. 176; p. 363.
Sears, Roebuck & Co. (See Savage, Arthur J., assignor.)
Sears, Roebuck & Company. (See Krotz, Alvaro S., assignor.)
Seburn, Harvey T., assignor, by mesne assignments, to The Indiana Manufacturing Company, Indianapolis, Ind. Threshing-machine. No. 1,019,194; Mar. 5; Sp. p. 416; Gaz. vol. 176; p. 66.
Seeberger, Charles D., New York, N. Y., assignor to Otis Elevator Company. Conveyer. No. 1,020,060; Mar. 12; Sp. p. 2236; Gaz. vol. 176; p. 386.
Seeley, Charles L., La Junta, Colo. Locking device. No. 1,020,930; Mar. 19; Sp. p. 4078; Gaz. vol. 176; p. 712.
Seely, Arthur Y., Blaine, Wash. Machine for lacquering cans. No. 1,021,074; Mar. 26; Sp. p. 4386; Gaz. vol. 176; p. 814.
Segman, Alexander, New York, N. Y. Jewelry. No. 1,021,401; Mar. 26; Sp. p. 5304; Gaz. vol. 176; p. 956.
Sehrt, John, St. Louis, Mo. Seal-lock for boxes. No. 1,021,165; Mar. 26; Sp. p. 4586; Gaz. vol. 176; p. 843.
Seidenbecker, Grover F., Chicago, Ill. Sash-lock. No. 1,020,454; Mar. 19; Sp. p. 3061; Gaz. vol. 176; p. 554.
Selkirk, William M. (See Brock and Selkirk.)
Selkirk, William M., Monessen, assignor to Pittsburgh Steel Products Co., Pittsburgh, Pa. Mechanism for rolling tubing. No. 1,020,455; Mar. 19; Sp. p. 3062; Gaz. vol. 176; p. 554.
Selmersheim, Tony, Paris, France. Machine for reproducing the configuration of objects. No. 1,021,005; Mar. 26; Sp. p. 4251; Gaz. vol. 176; p. 790.
Senator, Andrew, Newark, N. J. Tie-clasp. No. 1,020,316; Mar. 12; Sp. p. 2774; Gaz. vol. 176; p. 470.
Separate Recovery Company of America, The. (See Hopkins, Mathew S., assignor.)
Serfoss, Aaron, Ashley, Pa. Pipe-wrench. No. 1,019,280; Mar. 5; Sp. p. 616; Gaz. vol. 176; p. 96.
Shaffer, Randolph, Albany, Ga. Automatic gasolene-vending machine. No. 1,019,372; Mar. 5; Sp. p. 850; Gaz. vol. 176; p. 127.
Shanks, Charles F., Johnstone, Scotland. Milling-machine. No. 1,021,430; Mar. 26; Sp. p. 5167; Gaz. vol. 176; p. 935.
Shanks, Edward B., Springwood, assignor to M. Frank, Richmond, Va. Paper-bag-delivery machine. No. 1,019,093; Mar. 5; Sp. p. 189; Gaz. vol. 176; p. 30.
Shapiro, Samuel, Philadelphia, Pa. Refrigerating-cover for milk-cans. No. 1,020,719; Mar. 19; Sp. p. 3656; Gaz. vol. 176; p. 643.
Shareholders Protective League. (See Kuehn, Paul, assignor.)

Sharp, George W., Enid, Okla. Cement-finishing machine. No. 1,019,539; Mar. 5; Sp. p. 1214; Gaz. vol. 176; p. 180.
Sharp, James A., Springfield, Ohio, assignor to International Harvester Company. Frame-adjusting mechanism for side-delivery rakes. No. 1,019,840; Mar. 12; Sp. p. 1799; Gaz. vol. 176; p. 315.
Sharp, John, San Bernardino, Cal. Swivel. No. 1,021,271; Mar. 26; Sp. p. 4816; Gaz. vol. 176; p. 878.
Shartle, Charles W., Middletown, Ohio. Pump-gang. No. 1,020,161; Mar. 12; Sp. p. 2462; Gaz. vol. 176; p. 419.
Shaulis, Edward F., Indiana, Pa. Uterine supporter. No. 1,019,373; Mar. 5; Sp. p. 853; Gaz. vol. 176; p. 127.
Shaw, Frank B., assignor of one-half to G. D. Whitmore, Middleville, Mich. Checkrein-hook for harness. No. 1,019,704; Mar. 5; Sp. p. 1512; Gaz. vol. 176; p. 234.
Shaw, James, San Francisco, Cal. Valve. No. 1,019,374; Mar. 5; Sp. p. 855; Gaz. vol. 176; p. 127.
Shealy, William J. (See Annkin and Shealy.)
Sheehy, Harry W., Akron, Ohio. Circuit-closing apparatus. No. 1,020,520; Mar. 19; Sp. p. 3202; Gaz. vol. 176; p. 574.
Sheetz, Asa A., Woodstock, Va., and G. A. Cottrell, Milford, Mich. Portable spraying-tower. No. 1,020,061; Mar. 12; Sp. p. 2239; Gaz. vol. 176; p. 386.
Shepard, Elisha H., assignor of one-half to I. N. and A. C. Conrad, Boyne City, Mich. Rail-joint. No. 1,020,317; Mar. 12; Sp. p. 2775; Gaz. vol. 176; p. 470.
Sheridan, Primrose E. (See Crocker and Sheridan.)
Sherman, Erwin C., assignor to The William R. Pollock Company, Youngstown, Ohio. Ladle-car. No. 1,021,753; Mar. 26; Sp. p. 5816; Gaz. vol. 176; p. 1042.
Sherman, Fred T., and H. Goetz, Seattle, Wash. Automobile dump-box. No. 1,020,665; Mar. 19; Sp. p. 3536; Gaz. vol. 176; p. 622.
Shields, Carl E., Rock Island, Ill. Bench-vise support. No. 1,019,540; Mar. 5; Sp. p. 1216; Gaz. vol. 176; p. 180.
Shirk, Abner, De Kalb, Ill. Wrench. No. 1,021,272; Mar. 26; Sp. p. 4818; Gaz. vol. 176; p. 878.
Shoemaker, Samuel, assignor to The Pennsylvania Steel Railway Tie Company, Philadelphia, Pa. Metallic railway-tie. No. 1,021,006; Mar. 26; Sp. p. 4253; Gaz. vol. 176; p. 790.
Shook, John J. and P. J., Charlerol, Pa. Box-fasteper. No. 1,021,636; Mar. 26; Sp. p. 5585; Gaz. vol. 176; p. 1004.
Shook, Peter J. (See Shook, John J. and P. J.)
Shrader, B. L. (See Weller, Nicholas, assignor.)
Shredded Wheat Company, The. (See Perky, Henry D., assignor.)
Shulin, Neal P., Butte, Mont. Reversible cuff. No. 1,020,318; Mar. 12; Sp. p. 2776; Gaz. vol. 176; p. 470.
Shutes, George W., Detroit, Mich. Shipping and display box. No. 1,019,850; Mar. 12; Sp. p. 1800; Gaz. vol. 176; p. 315.
Siahloff, Alexis. (See Saweljew, Michael, assignor.)
Silhhold, Charles J. (See Lyons, Robert L., assignor.)
Siegfried, Ira D., Cleveland, Ohio. Calculating-machine. No. 1,019,906; Mar 12; Sp. p. 2111; Gaz. vol. 176; p. 364.
Siemens & Halske A. G. (See Grabe Georg, assignor.)
Simard, Theodule, Winooski, Vt. Body-harness and umbrella-support. No. 1,020,666; Mar. 19; Sp. p. 3538; Gaz. vol. 176; p. 623.
Simmons, Charles H., Chicago, assignor to The C. H. S. Company, Yorkville, Ill. Valve. No. 1,020,374; Mar. 12; Sp. p. 2881; Gaz. vol. 176; p. 488.
Simmons, James L. (See Moore and Simmons.)
Simmons, Jesse C., and L. Berzon, Philadelphia, Pa., assignors of one-third to C. J. Krayer, Mount Holly, N. J. Machine for making coiled eyelet-lacing for leather belting. No. 1,021,431; Mar. 26; Sp. p. 5168; Gaz. vol. 176; p. 935.
Simms, Claude R., Pierce, Colo. Churn. No. 1,020,162; Mar. 12; Sp. p. 2463; Gaz. vol. 176; p. 419.
Simon, Edmund, Dresden, Germany, assignor to The Firm of L. Grässer, Zwickau, Germany. Glove-leather and preparing it. No. 1,021,380; Mar. 26; Sp. p. 5018; Gaz. vol. 176; p. 916.
Simon, Joseph A., Memphis, Tenn. Metallic packing. No. 1,020,456; Mar. 19; Sp. p. 3064; Gaz. vol. 176; p. 555.
Simons, John A., assignor of one-half to F. J. Westlake, Chatham, Ontario, Canada. Tubular handle. No. 1,021,075; Mar. 26; Sp. p. 4387; Gaz. vol. 176; p. 814.
Simplex Player Action Company. (See Brown, Theodore P., assignor.)
Simpson, Charles E., Winthrop, Mass. Athletic shoe. No. 1,021,166; Mar. 26; Sp. p. 4587; Gaz. vol. 176; p. 843.
Simpson, Earl R., Salem, Oreg. Mail-bag catching and delivering apparatus. No. 1,021,341; Mar. 26; Sp. p. 4954; Gaz. vol. 176; p. 905.
Simson, Joseph. (See Pink, Leonhard, assignor.)
Sinclair, Daniel A., New York, N. Y. Garter. No. 1,019,541; Mar. 5; Sp. p. 1217; Gaz. vol. 176; p. 181.
Singer Manufacturing Company, The. (See Boyd, Alexander, assignor.)
Singer Manufacturing Company, The. (See Dosch, Oliver H., assignor.)
Singer Manufacturing Company, The. (See Gray, Charles F., assignor.)
Singer Manufacturing Company, The. (See Horton, Charles M., assignor.)
Singer Manufacturing Company, The. (See Noble, Donald, assignor.)
Singer Manufacturing Company, The. (See Ringe, John C., assignor.)
Singer Manufacturing Company, The. (See Woodhead, Frank S., assignor.)
Single, Leonard, Hamilton, Ohio. Automatic stop and overload-controller. No. 1,019,851; Mar. 12; Sp. p. 1802; Gaz. vol. 176; p. 316.
Singley, Royal H., Burnham, Pa. Incandescent electric lamp. No. 1,020,319; Mar. 12; Sp. p. 2778; Gaz. vol. 176; p. 470.
Sisley, John N., Connellsville, Pa. Flier. No. 1,021,076; Mar. 26; Sp. p. 4389; Gaz. vol. 176; p. 814.
Sisson, Isaac H., assignor to S. H. Goldberg, Chicago, Ill. Machine for making hair-pins. No. 1,019,375; Mar. 5; Sp. p. 857; Gaz. vol. 176; p. 128.
Sisson, Strawther, Hazel, Ky. Rotary engine. No. 1,020,848; Mar. 19; Sp. p. 3923; Gaz. vol. 176; p. 848.
Sjögren, Carl A. T., assignor to Aktiebolaget Svenska Vapenoch Ammunitionsfabriken, Stockholm, Sweden. Firearm. No. 1,021,381; Mar. 26; Sp. p. 5020; Gaz. vol. 176; p. 917.
Skahen, Patrick D., Syracuse, N. Y. Clamp for burial-cases. No. 1,019,094; Mar. 5; Sp. p. 192; Gaz. vol. 176; p. 30.
Skidmore, Charles, Homer, Nebr. End-gate for wagons. No. 1,020,320; Mar. 12; Sp. p. 2779; Gaz. vol. 176; p. 471.
Slaven, John T. (See Hesse and Slaven.)
Sleeper, Charles W., Lancaster, N. H. Can-making machine. No. 1,019,376; Mar. 5; Sp. p. 870; Gaz. vol. 176; p. 128.
Sleeper, John H., and T. E. McGoffin, Weatherford, Okla. Grain-shocker. No. 1,020,521; Mar. 19; Sp. p. 3206; Gaz. vol. 176; p. 574.
Sloan, Augustus K., Jr., Brooklyn, N. Y. Universal binding-post. No. 1,020,457; Mar. 19; Sp. p. 3066; Gaz. vol. 176; p. 555.
Sloan, Coral H., *et al.* (See Bresee, Wright D., assignor.)
Sloan, John A., Westville, assignor of one-half to C. H. Schmidt, Danville, Ill. Means for removing ice from trolley-wires. No. 1,021,637; Mar. 26; Sp. p. 5586; Gaz. vol. 176; p. 1004.
Slowe, Preston C., Philadelphia, Pa. Emergency-brake for elevators. No. 1,021,114; Mar. 26; Sp. p. 4462; Gaz. vol. 176; p. 825.
Smiddy, Jerome J. (See Hustace and Smiddy.)
Smith, Albert H., Birmingham, England. Feed mechanism for automatic lathes. No. 1,019,542; Mar. 5; Sp. p. 1219; Gaz. vol. 176; p. 181.
Smith, Charles E., New York, N. Y., assignor, by mesne assignments, to Union Typewriter Company, Jersey City, N. J. Type-writing machine. No. 1,021,382; Mar. 26; Sp. p. 5022; Gaz. vol. 176; p. 917.
Smith, Chris H. (See Weir and Smith.)
Smith, Clarence G., Cleveland, Ohio, assignor to H. J. Haber, Pittsburgh, Pa. Heat-producing compound. No. 1,019,377; Mar. 5; Sp. p. 876; Gaz. vol. 176; p. 129.
Smith, Clarence Z., Atlanta, Ga. Pin-remover. No. 1,019,195; Mar. 5; Sp. p. 418; Gaz. vol. 176; p. 66.
Smith, Clark L., Spokane, Wash. Burial-casket. No. 1,021,638; Mar. 26; Sp. p. 5590; Gaz. vol. 176; p. 1005.
Smith, Clement, Topeka, Kans. Carbureter. No. 1,020,931; Mar. 19; Sp. p. 4080; Gaz. vol. 176; p. 713.
Smith, Cyril A., assignor to S. O. Bigney, Attleboro, Mass. Elastic connecting device. No. 1,020,579; Mar. 19; Sp. p. 3350; Gaz. vol. 176; p. 585.
Smith, Edwin R., Paris, Tex. Fountain-pen. No. 1,019,196; Mar. 5; Sp. p. 420; Gaz. vol. 176; p. 66.
Smith, Franklin P. (See McClure, Edward, assignor.)
Smith, George L., and D. F. Asbury, Washington, D. C. Breech mechanism for ordnance. No. 1,020,849; Mar. 19; Sp. p. 3925; Gaz. vol. 176; p. 686.
Smith, Henry F., Pittsburg, Kans. Dish-washing machine. No. 1,020,032; Mar. 19; Sp. p. 4082; Gaz. vol. 176; p. 713.
Smith, Howard R., Washington, Pa. Mouth-mirror. No. 1,021,639; Mar. 26; Sp. p. 5592; Gaz. vol. 176; p. 1005.
Smith, Jabez M., Malvern, Ark. Rail-joint. No. 1,020,627; Mar. 19; Sp. p. 3451; Gaz. vol. 176; p. 610.
Smith, James R., Mechanicsville, N. Y. Pipe-cutter. No. 1,020,580; Mar. 19; Sp. p. 3351; Gaz. vol. 176; p. 585.
Smith, Joseph F., Ancaster, Ontario, Canada. Elevator. No. 1,020,458; Mar. 19; Sp. p. 3069; Gaz. vol. 176; p. 555.
Smith, Martin V., assignor of one-half to J. J. Delahanty, Hartford, Conn. Pressure-regulator. No. 1,021,383; Mar. 26; Sp. p. 5032; Gaz. vol. 176; p. 917.
Smith, Michael H., Kansas City, Mo. Adjustable shelf. No. 1,021,432; Mar. 26; Sp. p. 5171; Gaz. vol. 176; p. 936.
Smith, Milton A., Woonsocket, R. I. Micrometer-gage. No. 1,021,384; Mar. 26; Sp. p. 5038; Gaz. vol. 176; p. 918.
Smith, Oscar A., assignor to The National-Acme Manufacturing Company, Cleveland, Ohio. Friction-clutch-operating mechanism. No. 1,020,459; Mar. 19; Sp. p. 3070; Gaz. vol. 176; p. 556.
Smith, Oscar A., assignor to The National-Acme Manufacturing Company, Cleveland, Ohio. Reel for metal-working machines. No. 1,020,460; Mar. 19; Sp. p. 3073; Gaz. vol. 176; p. 556.
Smith, Oscar W., Springfield, Ohio. Trolley-harp. No. 1,021,077; Mar. 26; Sp. p. 4390; Gaz. vol. 176; p. 814.

Smith and Post Company. (See Symons, Edgar B., assignor.)
Smith, Roy L., Lexington, Ky. Apparatus for discharging collapsible tubes. No. 1,020,321; Mar. 12; Sp. p. 2781; Gaz. vol. 176; p. 471.
Smith, Samuel L., Spokane, Wash. Car-coupling. No. 1,020,850; Mar. 19; Sp. p. 3941; Gaz. vol. 176; p. 686.
Smith, Thomas L., Milwaukee, Wis. Wheelbarrow. No. 1,020,461; Mar. 19; Sp. p. 3075; Gaz. vol. 176; p. 556.
Smith, Walter E., Clay Center, Kans. Incubator. No. 1,020,720; Mar. 19; Sp. p. 3657; Gaz. vol. 176; p. 643.
Smith, Walter E., Clay Center, Kans. Heat-distributing system. No. 1,020,933; Mar. 19; Sp. p. 4084; Gaz. vol. 176; p. 714.
Smith, Walter H., assignor to The Harris Automatic Press Company, Niles, Ohio. Printing-press. No. 1,019,197; Mar. 5; Sp. p. 423; Gaz. vol. 176; p. 67.
Smith, Walter H., assignor to The Harris Automatic Press Company, Niles, Ohio. Trip mechanism. No. 1,019,378; Mar. 5; Sp. p. 877; Gaz. vol. 176; p. 129.
Smith, William R., assignor to Buffalo Leather Co., Buffalo, N. Y. Machine for brushing and cleaning leather. No. 1,021,007; Mar. 26; Sp. p. 4255; Gaz. vol. 176; p. 790.
Smoot, Daisy E., Piedmont, Mo. Device for poisoning rodents. No. 1,019,543; Mar. 5; Sp. p. 1221; Gaz. vol. 176; p. 182.
Smythe, Joseph B., Coaticook, Quebec, Canada. Lifting-jack. No. 1,019,095; Mar. 5; Sp. p. 193; Gaz. vol. 176; p. 31.
Snellings, Harvie A., Norfolk, Va. Box. No. 1,019,925; Mar. 12; Sp. p. 1977; Gaz. vol. 176; p. 342.
Snoe, Thomas W., Alexandria, Ind. Handle-bar grip. No. 1,020,462; Mar. 19; Sp. p. 3070; Gaz. vol. 176; p. 557.
Snow, Herbert W., Somerville, Mass. Collapsible tube. No. 1,021,709; Mar. 26; Sp. p. 5715; Gaz. vol. 176; p. 1027.
Snyder, Frank, Council Bluffs, Iowa. Lock for car-doors. No. 1,020,721; Mar. 19; Sp. p. 3660; Gaz. vol. 176; p. 644.
Snyder, Joseph, and A. Thomas, Conshohocken, Pa. Tube-welding apparatus. No. 1,019,852; Mar. 12; Sp. p. 1804; Gaz. vol. 176; p. 316.
Snyder, Simon, assignor to Sprout, Waldron & Company, Muncy, Pa. Bolting-cloth cleaner. No. 1,021,008; Mar. 26; Sp. p. 4257; Gaz. vol. 176; p. 791.
Société Anonyme "Astra." (See Surcouf, Edouard, assignor.)
Société Anonyme Carels Freres *et al.* (See Carels, Gustave, assignor.)
Société Anonyme des Anciens Etablissements Panhard & Levassor. (See Krebs, Arthur C., assignor.)
Société Compagnie Industrielle des Alcools de l'Ardeche. (See Raisin, Victor, assignor.)
Société Le Camphre. (See Dubosc, Luttringer, and Denis, assignors.)
Société Maurice et Pierre Collet & Cie. (See Collet, Albert, assignor.)
Somerville, Thomas E., Glenellyn, Ill. Bundle-carrier. No. 1,020,722; Mar. 19; Sp. p. 3661; Gaz. vol. 176; p. 644.
Sorensen, John S., assignor to Sprout, Waldron & Company, Muncy, Pa. Attrition-mill. No. 1,021,167; Mar. 26; Sp. p. 4588; Gaz. vol. 176; p. 843.
Sorenson, Anchor N., Gustave, S. D. Bench-screw. No. 1,020,322; Mar. 12; Sp. p. 2782; Gaz. vol. 176; p. 471.
Soss, Joseph, Brooklyn, N. Y. Hinge. No. 1,019,096; Mar. 5; Sp. p. 105; Gaz. vol. 176; p. 31.
South, Frank L., Baldhill, Fa. Fieldless motor. No. 1,019,544; Mar. 5; Sp. p. 1222; Gaz. vol. 176; p. 182.
Southworth, Edward F., Syracuse, N. Y. Etymological chart. No. 1,019,545; Mar. 5; Sp. p. 1224; Gaz. vol. 176; p. 182.
Spalding, James F., Kansas City, Mo. Bow-tie shield. No. 1,021,078; Mar. 26; Sp. p. 4392; Gaz. vol. 176; p. 815.
Spangler, James M., Canton, assignor to The Hoover Suction Sweeper Company, New Berlin, Ohio. Carpet sweeper and cleaner. No. 1,021,731; Mar. 26; Sp. p. 5763; Gaz. vol. 176; p. 1035.
Sparks, Fred C., New Sharon, Iowa. Match-holder. No. 1,021,273; Mar. 26; Sp. p. 4820; Gaz. vol. 176; p. 879.
Sparks, Laban, administrator. (See Perky, Henry D.)
Spear, Fannie G., New York, N. Y. Egg-beater. No. 1,019,546; Mar. 5; Sp. p. 1224; Gaz. vol. 176; p. 182.
Spears, Frank A., Chicago, Ill. Clothes-boiler. No. 1,019,198; Mar. 5; Sp. p. 427; Gaz. vol. 176; p. 67.
Speer, Louis M., Pacific, Mo., assignor of one-half to N. Q. Speer, Berkeley Springs, W. Va. Sand-washing apparatus. No. 1,021,009; Mar. 26; Sp. p. 4260; Gaz. vol. 176; p. 791.
Speer, Noah Q. (See Speer, Louis M., assignor.)
Spencer, Frank E., Thomburg, Pa. Nut-lock. No. 1,019,097; Mar. 5; Sp. p. 197; Gaz. vol. 176; p. 32.
Spencer, Ira H., assignor to The Spencer Turbine Cleaner Company, Hartford, Conn. Cleaning-tool. No. 1,021,010; Mar. 26; Sp. p. 4261; Gaz. vol. 176; p. 791.
Spencer Turbine Cleaner Company, The. (See Spencer, Ira H., assignor.)
Spires, Elmer, Oklahoma, Okla. Wagon-brake. No. 1,020,851; Mar. 19; Sp. p. 3944; Gaz. vol. 176; p. 687.
Spiro, Louis, Clarksburg, W. Va. Bracing device for suit-cases. No. 1,019,547; Mar. 5; Sp. p. 1226; Gaz. vol. 176; p. 183.
Spitzer, Karl, Vienna, Austria-Hungary. Suction device for dust-laden air. No. 1,019,548; Mar. 5; Sp. p. 1227; Gaz. vol. 176; p. 183.
Splittgerber, Wilhelm, assignor to Clintonville Baler Company, Clintonville, Wis. Baling-press. No. 1,020,626; Mar. 19; Sp. p. 3449; Gaz. vol. 176; p. 610.
Sponable, George W., assignor to The Brown-Lipe Gear Company, Syracuse, N. Y. Chuck for holding and centering gears. No. 1,021,011; Mar. 26; Sp. p. 4262; Gaz. vol. 176; p. 791.
Springfield Knitting Co. (See Carter, William H., assignor.)
Springfield Plant-Bed Steaming Company. (See Johnson, John H. L., assignor.)
Sprout, Waldron & Company. (See Snyder, Simon, assignor.)
Sprout, Waldron & Company. (See Sorensen, John S., assignor.)
Spuhr, John B., Denver, Colo. Pivoted support for vehicle-wheels. No. 1,020,723; Mar. 19; Sp. p. 3663; Gaz. vol. 176; p. 644.
Stables, Richard. (See Dickie, Lambert, and Stables.)
Stafford Company, The. (See Jackson, Simeon S., assignor.)
Stahl, Karl M., New York, N. Y. Viewing device. No. 1,019,853; Mar. 12; Sp. p. 1805; Gaz. vol. 176; p. 316.
Stahlwerk Becker Aktien-Gesellschaft. (See Unterloff, Otto, assignor.)
Staley, Harrison L., assignor to Staley Manufacturing Company, Marthasville, Ind. Gearing. No. 1,020,226; Mar. 12; Sp. p. 2608; Gaz. vol. 176; p. 442.
Staley Manufacturing Company. (See Staley, Harrison L., assignor.)
Stancliff, Peter S., Toledo, Ohio. Clothes-line support. No. 1,021,274; Mar. 26; Sp. p. 4821; Gaz. vol. 176; p. 879.
Standard Bale Wire Buckle Co. (See Armstrong, James E., assignor.)
Standard Rock Drill Company, The. (See O'Brien and Awkerman, assignors.)
Standard Steel Car Company. (See Christianson, Andrew, assignor.)
Standard Underground Cable Company. (See Davis, Charles W., assignor.)
Stanley, John O., and J. L. Perkins, assignors to B. F. Perkins & Son, Incorporated, Holyoke, Mass. Strength-testing apparatus. No. 1,021,012; Mar. 26; Sp. p. 4265; Gaz. vol. 176; p. 792.
Staples, Frank A., San Francisco, Cal. Artificial bait. No. 1,019,926; Mar. 12; Sp. p. 1978; Gaz. vol. 176; p. 342.
Stark, Andrew, Chicago, Ill. Concrete railway-tie. No. 1,021,433; Mar. 26; Sp. p. 5172; Gaz. vol. 176; p. 936.
Starn, George E., Camden, assignor to H. M. Dover, Palmyra, N. J. Water-heater. No. 1,019,549; Mar. 5; Sp. p. 1229; Gaz. vol. 176; p. 183.
Starr Piano Company, The. (See Draper, Francis W., assignor.)
Stasch, Valentin, Friedenshütte, assignor of one-half to Gräflich Schaffgotsch'sche Werke, G. m. b. H., Beuthen, Germany. Safety apparatus for miners' trucks. No. 1,019,281; Mar. 5; Sp. p. 618; Gaz. vol. 176; p. 96.
Stauft, Daniel B., Scottdale, Pa. Coke-drawing machine. No. 1,021,710; Mar. 26; Sp. p. 5716; Gaz. vol. 176; p. 1028.
Stavely, Alwyn N., Lynch, Md. Barrel-rack. No. 1,019,550; Mar. 5; Sp. p. 1230; Gaz. vol. 176; p. 184.
Steel Mantle Light Company, The. (See Curtis, Frederic A., assignor.)
Steele, Edwin G. (See Sutton and Steele.)
Steele, Herbert H., Marcellus, assignor to The Monarch Typewriter Company, Syracuse, N. Y. Type-writing machine. No. 1,020,227; Mar. 12; Sp. p. 2611; Gaz. vol. 176; p. 443.
Steele, James, Brookville, Pa. Nut-locking device. No. 1,021,559; Mar. 26; Sp. p. 5440; Gaz. vol. 176; p. 979.
Steele, Walter L. (See Sutton and Steele.)
Steger & Sons Piano Manufacturing Company. (See Betz, William G., assignor.)
Stehle, O. A. (See Vogel, Joseph O., assignor.)
Steiger, Walter V., assignor to The Bryant Electric Company, Bridgeport, Conn. Electric snap-switch. No. 1,020,231; Mar. 12; Sp. p. 2621; Gaz. vol. 176; p. 444.
Stein, Sydney. (See Armbrust, Charles W., assignor.)
Steinmetz, Charles P., Schenectady, N. Y., assignor to General Electric Company. Electric lighting. No. 1,020,323; Mar. 12; Sp. p. 2784; Gaz. vol. 176; p. 472.
Steitler, Lizzie, Owensboro, Ky. Bake-pan. No. 1,021,640; Mar. 26; Sp. p. 5503; Gaz. vol. 176; p. 1005.
Stepanek, Anton, Newcastle, Ind. Headlight for automobiles. No. 1,021,275; Mar. 26; Sp. p. 4823; Gaz. vol. 176; p. 880.
Stephens, Annie W., New York, N. Y. Therapeutic device for the treatment of the eyes or ears. No. 1,020,724; Mar. 19; Sp. p. 3665; Gaz. vol. 176; p. 645.
Stephenson, Joseph E., Youngstown, Ohio. Washbowl. No. 1,020,324; Mar. 12; Sp. p. 2786; Gaz. vol. 176; p. 472.
Sterling Development Company, The. (See White and Duryea, assignors.)
Stern, George M. (See Auman, Daniel A. and G. C., assignors.)
Stern, Louis, Newark, N. J. Unhairing hides and skins. No. 1,019,854; Mar. 12; Sp. p. 1806; Gaz. vol. 176; p. 317.
Stevens, George W. (See Welwoda, Mathias, assignor.)

Stewart, Alfred C., Los Angeles, Cal. Mixing attachment for carbureters. No. 1,021,079; Mar. 26; Sp. p. 4393; Gaz. vol. 176; p. 815.
Stieg, August, assignor to The Emerson Typewriter Co., Woodstock, Ill. Holder for type-writer escapement mechanisms. No. 1,021,641; Mar. 26; Sp. p. 5594; Gaz. vol. 176; p. 1005.
Stiles, Winthrop A., Philadelphia, Pa. Circuit making and breaking device. No. 1,020,522; Mar. 19; Sp. p. 3210; Gaz. vol. 176; p. 575.
Still, Frederick R., Detroit, Mich., assignor to American Blower Company, Green Island, N. Y. Centrifugal fan. No. 1,020,725; Mar. 19; Sp. p. 3667; Gaz. vol. 176; p. 645.
Still, William H. (See Wilson and Still.)
Stimpson, Edward S., assignor to Draper Company, Hopedale, Mass. Automatic filling-replenishing mechanism for looms. No. 1,019,098; Mar. 5; Sp. p. 198; Gaz. vol. 176; p. 32.
Stimpson, Edward S., assignor to Draper Company, Hopedale, Mass. Hopper mechanism for automatic looms. No. 1,019,855; Mar. 12; Sp. p. 1808; Gaz. vol. 176; p. 317.
Stinebaugh, Conrad O., assignor to General Charcrete Company, Seattle, Wash. Composition of matter. No. 1,020,325; Mar. 12; Sp. p. 2787; Gaz. vol. 176; p. 472.
Stinson, William A., Greenwood, Miss. Whiffletree and trace connection. (Reissue.) No. 13,380; Mar. 5; Sp. p. 1602; Gaz. vol. 176; p. 250.
Stluka, Rudolph A., St. Louis, Mo. Packing and shipping case. No. 1,020,463; Mar. 19; Sp. p. 3076; Gaz. vol. 176; p. 557.
Stockmeir, Hans. (See Hahnefeld, Ernst H., assignor.)
Stockton, Lincoln C., assignor to The Acme Utility Company, Denver, Colo. Portable face-mask for telephone use. No. 1,021,434; Mar. 26; Sp. p. 5177; Gaz. vol. 176; p. 937.
Stoelting Brothers Co. (See Moore, Jay W., assignor.)
Stöger, Josef, Munich, Germany. Obstetrical device. No. 1,019,099; Mar. 5; Sp. p. 200; Gaz. vol. 176; p. 32.
Stoker, John W., Marion, Ind. Balancing device. No. 1,021,276; Mar. 26; Sp. p. 4825; Gaz. vol. 176; p. 880.
Stoll, Corus D., Kansas City, Mo. Refrigerator. No. 1,019,100; Mar. 5; Sp. p. 201; Gaz. vol. 176; p. 32.
Stoltze, Oskar, Altona, assignor to O. F. C. Goach, Hamburg, Germany. Vending-machine. No. 1,020,667; Mar. 19; Sp. p. 3539; Gaz. vol. 176; p. 623.
Stormer, Sylvester. (See Gattone, Domenico, assignor.)
Straight, Bennett D., assignor to Multipost Company, Rochester, N. Y. Stamp-affixer. No. 1,021,218; Mar. 26; Sp. p. 4601; Gaz. vol. 176; p. 860.
Strand, Clarence, Gary, Minn. Electric-lamp bracket. No. 1,020,062; Mar. 12; Sp. p. 2242; Gaz. vol. 176; p. 386.
Strang, William B. (See Nilson, Lars G., assignor.)
Stratton, William H., Chicago, Ill. Light-shade bracket. No. 1,021,385; Mar. 26; Sp. p. 5040; Gaz. vol. 176; p. 918.
Straus, Joseph H., Jr., assignor of one-half to R. H. Williams, Baltimore, Md. Wire-bending tool. No. 1,020,582; Mar. 19; Sp. p. 3353; Gaz. vol. 176; p. 596.
Strauss, Joseph B., Chicago, Ill. Window, &c. No. 1,021,492; Mar. 26; Sp. p. 5306; Gaz. vol. 176; p. 956.
Streeter, Oscar C., administrator. (See Streeter, William A.)
Streeter, William A., deceased, Concord, Ill.; O. C. Streeter, administrator. Animal-handling tool. No. 1,019,727; Mar. 5; Sp. p. 1561; Gaz. vol. 176; p. 242.
Strelb, John F. (See Lindström and Strelb.)
Streit, George B., Detroit, Mich. Easel. No. 1,020,583; Mar. 19; Sp. p. 3355; Gaz. vol. 176; p. 596.
Streng, Lawrence E., New Palestine, Ind. Corn-husking machine. No. 1,020,326; Mar. 12; Sp. p. 2788; Gaz. vol. 176; p. 472.
Strickland, James L., Westport, Nova Scotia, assignor to H. R. McLellan, St. John, Canada. Rotary internal-combustion engine. No. 1,019,856; Mar. 12; Sp. p. 1813; Gaz. vol. 176; p. 317.
Strietelmeier, John E., assignor to The Ideal Wheel Company, Cincinnati, Ohio. Wheel. No. 1,019,101; Mar. 5; Sp. p. 203; Gaz. vol. 176; p. 33.
Stripe, Mahlon A., Geneva, Ill. Rail-joint. No. 1,021,013; Mar. 26; Sp. p. 4267; Gaz. vol. 176; p. 792.
Stroud, William. (See Barr and Stroud.)
Strouse, William, and W. E. Clark, Hughesville; said Strouse assignor to J. K. Rishel Furniture Co., Williamsport, Pa. Bolt-operating mechanism. No. 1,019,282; Mar. 5; Sp. p. 619; Gaz. vol. 176; p. 96.
Stryker, Frank F., administrator. (See Marsh, Calvin D.)
Stumm, William E. (See Hankison and Stumm.)
Sturdevant, Riley M., Falls City, Nebr. End-gate. No. 1,020,726; Mar. 19; Sp. p. 3669; Gaz. vol. 176; p. 645.
Subers, Lawrence A., Cleveland, Ohio. Fabric having layers of variable extensibility. No. 1,021,014; Mar. 26; Sp. p. 4268; Gaz. vol. 176; p. 792.
Suess, Christopher H. (See Boschee, Adam A., assignor.)
Suhm, Arthur J., Milwaukee, Wis., and E. A. Suhm, Kankakee, Ill. Wheeled rake. No. 1,020,228; Mar. 12; Sp. p. 2615; Gaz. vol. 176; p. 443.
Suhm, Edgar A. (See Suhm, Arthur J. and E. A.)
Sühmann, Erich, Berlin, Germany. Window-lock. No. 1,021,642; Mar. 26; Sp. p. 5596; Gaz. vol. 176; p. 1006.
Sullivan, Daniel F., *et al.* (See Griggs and Henderson, assignors.)
Sullivan Machinery Company. (See Holdsworth, Fred D., assignor.)
Sulser, Adam H., Washington, D. C. Door closing and checking device. No. 1,019,857; Mar. 12; Sp. p. 1815; Gaz. vol. 176; p. 318.
Summa, Victor M., assignor to American Car and Foundry Company, St. Louis, Mo. Underframe. No. 1,021,115; Mar. 26; Sp. p. 4463; Gaz. vol. 176; p. 826.
Summa, Victor M., assignor to American Car and Foundry Company, St. Louis, Mo. Car-underframe. No. 1,021,168; Mar. 26; Sp. p. 4591; Gaz. vol. 176; p. 843.
Summa, Victor M., assignor to American Car and Foundry Company, St. Louis, Mo. Car-underframe. No. 1,021,169; Mar. 26; Sp. p. 4594; Gaz. vol. 176; p. 844.
Summa, Victor M., assignor to American Car and Foundry Company, St. Louis, Mo. Steel box-car. No. 1,021,170; Mar. 26; Sp. p. 4597; Gaz. vol. 176; p. 844.
Summerfield, Solon E. (See Heyde, Max A., assignor.)
Sundelius, Severus. (See Davidson and Sundelius.)
Surcouf, Edouard, assignor to Société Anonyme "Astra," Billancourt, France. Propulsion of airships. No. 1,019,283; Mar. 5; Sp. p. 620; Gaz. vol. 176; p. 97.
Sutcliffe, Samuel, Mytholmroyd, England. Snow-plow. No. 1,020,727; Mar. 19; Sp. p. 3670; Gaz. vol. 176; p. 646.
Sutherland, Victor. (See Reisenhus and Sutherland.)
Sutliff, Gerald S., Perry Creek township, Vigo county, Ind. Engine-starter. No. 1,021,493; Mar. 26; Sp. p. 5308; Gaz. vol. 176; p. 957.
Sutton, Henry M., W. L. and E. G. Steele, Dallas, Tex. Electrostatic separation. No. 1,020,063; Mar. 12; Sp. p. 2243; Gaz. vol. 176; p. 387.
Sutton, Thomas E., Climax, Ga. Line-marker for railways. No. 1,019,199; Mar. 5; Sp. p. 428; Gaz. vol. 176; p. 68.
Swaim, Charles S., assignor of one-half to P. S. Pierce, Lodi, Cal. Bicycle-support. No. 1,020,327; Mar. 12; Sp. p. 2791; Gaz. vol. 176; p. 473.
Swain, George F., Chicago, Ill. Exhaust-muffler. No. 1,020,163; Mar. 12; Sp. p. 2465; Gaz. vol. 176; p. 420.
Swaller, Henry D. (See Weber and Swaller.)
Swanberg, Floyd L., assignor to The D. T. Williams Valve Company, Cincinnati, Ohio. Oil-pump. No. 1,019,927; Mar. 12; Sp. p. 1979; Gaz. vol. 176; p. 342.
Swanfelt, Victor, Elwood, Ind. Swing. No. 1,020,229; Mar. 12; Sp. p. 2618; Gaz. vol. 176; p. 443.
Swank, Reuben B., Dayton, Ohio. Flying-machine. No. 1,020,628; Mar. 19; Sp. p. 3452; Gaz. vol. 176; p. 610.
Swarts, Al J., Kent, Wash. Spring-wheel. No. 1,020,328; Mar. 12; Sp. p. 2793; Gaz. vol. 176; p. 473.
Sweger, David P., Chambersburg, Pa. Draft-equalizer. No. 1,020,934; Mar. 19; Sp. p. 4086; Gaz. vol. 176; p. 714.
Swift, Benjamin F., Newton Stewart, Ind. Windmill. No. 1,021,560; Mar. 26; Sp. p. 5440; Gaz. vol. 176; p. 980.
Swindell, James D., Pittsburgh, Pa. Furnace. No. 1,021,342; Mar. 26; Sp. p. 4957; Gaz. vol. 176; p. 905.
Swindell, Walter B., Raleigh, N. C., assignor of one-half to J. B. Carr, Atlanta, Ga. Apparatus for compressing air and other fluids. No. 1,020,852; Mar. 19; Sp. p. 3945; Gaz. vol. 176; p. 687.
Swinehart, Benjamin C., Youngstown, Ohio. Vehicle-tire. No. 1,021,561; Mar. 26; Sp. p. 5443; Gaz. vol. 176; p. 980.
Swinehart, Benjamin C., Youngstown, Ohio. Vehicle wheel-tire. No. 1,021,711; Mar. 26; Sp. p. 5720; Gaz. vol. 176; p. 1028.
Swisher, George W., Clifton Forge, Va. Lath. No. 1,020,329; Mar. 12; Sp. p. 2794; Gaz. vol. 176; p. 473.
Symmonds, Robert, Jr., assignor to T. B. Jeffery, deceased, Kenosha, Wis.; K. E., C. T., and H. W. Jeffery, executors. Automobile. No. 1,020,375; Mar. 12; Sp. p. 2883; Gaz. vol. 176; p. 488.
Symmonds, Robert, Jr., assignor to T. B. Jeffery, deceased, Kenosha, Wis.; K. E., C. T., and H. W. Jeffery, executors. Adjustable steering-post for automobiles. No. 1,020,376; Mar. 12; Sp. p. 2886; Gaz. vol. 176; p. 489.
Symons, Arthur H., Kansas City, Kans. Clamp for concrete-forms. No. 1,020,164; Mar. 12; Sp. p. 2467; Gaz. vol. 176; p. 420.
Symons, Edgar B., Fort Wayne, Ind., assignor, by mesne assignments, to Smith and Post Company, Milwaukee, Wis. Stone-crushing machine. No. 1,019,997; Mar. 12; Sp. p. 2134; Gaz. vol. 176; p. 364.
Symons, Wilson E., Chicago, Ill. Alarm for automobiles. No. 1,019,552; Mar. 5; Sp. p. 1232; Gaz. vol. 176; p. 184.
Szentivanyi, Kalman, assignor of fifteen one hundredths to R. F. Horvath, Hartford, Conn. Lowering device. No. 1,021,643; Mar. 26; Sp. p. 5598; Gaz. vol. 176; p. 1006.
T. A. Willson & Co. (See Willson and Bourquin, assignors.)
Taenchen, Ludwig C. P., Ivanhoe, Colo. Railway-switch. No. 1,021,644; Mar. 26; Sp. p. 5600; Gaz. vol. 176; p. 1007.
Taft, Hiram E., Northbridge, Mass., assignor of one-half to E. V. Granger, Burrellville, R. I. Lock-nut. No. 1,019,379; Mar. 5; Sp. p. 879; Gaz. vol. 176; p. 129.
Taft, Jesse R., and C. F. Pember, New York, N. Y. Fire-escape apparatus. No. 1,019,284; Mar. 5; Sp. p. 621; Gaz. vol. 176; p. 97.
Taft, Samuel B. (See Poirier, Arthur F., assignor.)

Talbot, Rollie J., Whiteclay, Nebr. Grip for wire-stretchers. No. 1,020,728; Mar. 19; Sp. p. 3671; Gaz. vol. 176; p. 646.

Tandy, John L., Kansas City, Mo. Cot or couch. No. 1,019,553; Mar. 5; Sp. p. 1235; Gaz. vol. 176; p. 185.

Tank, Henry P., Alameda, assignor of three-tenths to L. B. Krieger and four-tenths to B. L. Davis, San Francisco, Cal. Alarm-valve. No. 1,019,200; Mar. 5; Sp. p. 430; Gaz. vol. 176; p. 68.

Tanne, Julius, Rozniatow, Austria-Hungary, assignor of one-half to G. Oberlander, Berlin, Germany. Manufacturing paraffin. No. 1,019,102; Mar. 5; Sp. p. 205; Gaz. vol. 176; p. 33.

Tanner, Joseph J., Clover, Utah. Parachute. No. 1,019,858; Mar. 12; Sp. p. 1818; Gaz. vol. 176; p. 318.

Tanner, Perry E. (See Warden, William F., assignor.)

Tansey, Howard F. (See Weer and Tansey.)

Tanzy, Peter R. (See Magnusson, John A., assignor.)

Tarrant, William P., Saratoga Springs, N. Y. Pouring-pot. No. 1,021,015; Mar. 26; Sp. p. 4270; Gaz. vol. 176; p. 793.

Tate, Earl H., Los Angeles, Cal. Amalgamating-flume table. No. 1,021,277; Mar. 26; Sp. p. 4826; Gaz. vol. 176; p. 880.

Tate, George W., and C. W. Rice, Chappell, Nebr. Flying-machine. No. 1,020,935; Mar. 19; Sp. p. 4088; Gaz. vol. 176; p. 714.

Tatro, Charles P. (See Delius and Tatro.)

Taylor, Albertis C., assignor to The National Electric Welder Company, Warren, Ohio. Electric welding-machine. No. 1,021,732; Mar. 26; Sp. p. 5765; Gaz. vol. 176; p. 1035.

Taylor and Company. (See Taylor, William O., assignor.)

Taylor, Daniel H., Palisades, Colo. Device for preventing collisions at sea. No. 1,020,330; Mar. 12; Sp. p. 2796; Gaz. vol. 176; p. 474.

Taylor, Edward D., Harper, W. Va. Packing-gland. No. 1,020,780; Mar. 19; Sp. p. 3785; Gaz. vol. 176; p. 663.

Taylor, Edwin, Brooklyn, assignor to Union Clay Products Company, New York, N. Y. Aluminous composition. No. 1,020,781; Mar. 19; Sp. p. 3786; Gaz. vol. 176; p. 663.

Taylor, Elmer Z., London, England, assignor, by mesne assignments, to American Mono Service Company, Atlantic City, N. J. Machine for making conical paper tubes. No. 1,020,165; Mar. 12; Sp. p. 2469; Gaz. vol. 176; p. 420.

Taylor, Ernest J., Highlandville, Mass. Roller-bearing. No. 1,020,523; Mar. 19; Sp. p. 3212; Gaz. vol. 176; p. 575.

Taylor, Frank W., Canute, Okla. Mail-box. No. 1,019,554; Mar. 5; Sp. p. 1236; Gaz. vol. 176; p. 185.

Taylor, Howard M., Baltimore, Md. Display mattress-rack. No. 1,020,331; Mar. 12; Sp. p. 2797; Gaz. vol. 176; p. 474.

Taylor, James S. (See Harrington, Edward C., assignor.)

Taylor, Timothy E., Thompson, Conn. Nut-lock. No. 1,020,853; Mar. 19; Sp. p. 3949; Gaz. vol. 176; p. 688.

Taylor, William O., assignor to Taylor and Company, Limerick Square, Pa. Tack weighing and packaging machine. No. 1,019,555; Mar. 5; Sp. p. 1238; Gaz. vol. 176; p. 185.

Teeter, Alvie F., Berne, Ind. Revolving harrow. No. 1,020,854; Mar. 19; Sp. p. 3949; Gaz. vol. 176; p. 688.

Teichmann, Otto, Stuttgart-Cannstatt, Germany. Dough-dividing machine. No. 1,019,556; Mar. 5; Sp. p. 1249; Gaz. vol. 176; p. 186.

Telechronometer Company. (See Babcock, Garrison, assignor.)

Temple, Winfield S., Sidney, Ill. Automobile-tire. No. 1,020,464; Mar. 19; Sp. p. 3078; Gaz. vol. 176; p. 557.

Terpening, Elmer A., Mokena, Ill. Tire-alarm. No. 1,019,557; Mar. 5; Sp. p. 1250; Gaz. vol. 176; p. 186.

Terry Steam Turbine Company, The. (See London, William J. A., assignor.)

Thayer, Everett E., Jackson, Mich. Kite. No. 1,021,278; Mar. 26; Sp. p. 4829; Gaz. vol. 176; p. 881.

Thayer, Garrison C., Bartlesville, Okla. Reinforced axle. No. 1,019,998; Mar. 12; Sp. p. 2119; Gaz. vol. 176; p. 365.

Thelen, Arnold J., St. Johns, Mich. Cleaning attachment for currycombs. No. 1,020,855; Mar. 19; Sp. p. 3951; Gaz. vol. 176; p. 688.

Thomas, Abel. (See Snyder and Thomas.)

Thomas, David A., Denver, Colo. Combined cigar tip-cutter and lighter. No. 1,021,080; Mar. 26; Sp. p. 4394; Gaz. vol. 176; p. 815.

Thomas, James F., Montreal, Quebec, Canada. Motor. No. 1,021,562; Mar. 26; Sp. p. 5445; Gaz. vol. 176; p. 980.

Thomas, Jesse B., Boston, Mass. Fire-extinguisher. No. 1,019,859; Mar. 12; Sp. p. 1821; Gaz. vol. 176; p. 319.

Thomas, Thomas W., assignor of ninety one-hundredths to H. G. Wellman, Cleveland, Ohio. Quick-breaking electric-switch mechanism. No. 1,021,016; Mar. 26; Sp. p. 4272; Gaz. vol. 176; p. 793.

Thomas, William R., Watertown, Wis. Railway-rail joint. No. 1,019,860; Mar. 12; Sp. p. 1824; Gaz. vol. 176; p. 320.

Thompson, Alan C. (See James and Thompson.)

Thompson, Charles A. (See Crecelius, Louis J., assignor.)

Thompson, Charles A., Irwin, Pa. Nut-lock. No. 1,020,668; Mar. 19; Sp. p. 3541; Gaz. vol. 176; p. 624.

Thompson, Edgar M., Richmond, Ind. Vehicle-fender. No. 1,021,435; Mar. 26; Sp. p. 5180; Gaz. vol. 176; p. 937.

Thompson, Francis E., Arlington, Mass. Headlight-controller. No. 1,021,279; Mar. 26; Sp. p. 4831; Gaz. vol. 176; p. 881.

Thompson, James, Greensburg, Pa. Time-switch. No. 1,021,436; Mar. 26; Sp. p. 5182; Gaz. vol. 176; p. 938.

Thompson, Knight H., assignor of one-half to H. T. Miller, Shelby, Ohio. Water-plug. No. 1,019,558; Mar. 5; Sp. p. 1254; Gaz. vol. 176; p. 186.

Thompson, Von W., Atlanta, Ga. Flame-gage. No. 1,021,645; Mar. 26; Sp. p. 5601; Gaz. vol. 176; p. 1007.

Thomson Electric Welding Company. (See Rietzel, Adolph F., assignor.)

Thomson, Elihu, Swampscott, Mass., assignor to General Electric Company. Igniting apparatus for gas-engines. No. 1,021,219; Mar. 26; Sp. p. 4701; Gaz. vol. 176; p. 860.

Thomson, Elihu, Swampscott, Mass., assignor to General Electric Company. Vaporizer for internal-combustion engines. No. 1,021,220; Mar. 26; Sp. p. 4704; Gaz. vol. 176; p. 860.

Thos. S. Watson Company. (See Watson, Thomas S., assignor.)

Thron, Heinrich, assignor to Vereinigte Chininfabriken, Zimmer & Co. G. m. b. H., Frankfort-on-the-Main, Germany. Quinin esters of aromatic amino acids and producing same. No. 1,019,285; Mar. 5; Sp. p. 024; Gaz. vol. 176; p. 97.

Thrush, William S. R., Carlisle, Pa. Grain-drill. No. 1,021,017; Mar. 26; Sp. p. 4275; Gaz. vol. 176; p. 794.

Thurber, Fred T., Red Lion, Colo. Elevated electric railway. No. 1,019,560; Mar. 5; Sp. p. 1256; Gaz. vol. 176; p. 187.

Thurlow, Nathaniel. (See Baekeland and Thurlow.)

Tibbott, Frederick M., Norfolk, Va. Rail-joint. No. 1,020,166; Mar. 12; Sp. p. 2473; Gaz. vol. 176; p. 421.

Tichenor, Lewis E., and S. E. McAnulty, Saratoga, Wyo. Vehicle-spoke. No. 1,019,560; Mar. 5; Sp. p. 1257; Gaz. vol. 176; p. 187.

Tichon, Joseph E., New Bedford, Mass., assignor to R. Grieve, Providence, R. I. Fancet. No. 1,019,380; Mar. 5; Sp. p. 881; Gaz. vol. 176; p. 129.

Tiemann, Harry D., Washington, D. C. Apparatus for drying timber and other moisture-bearing substances. No. 1,019,743; Mar. 5; Sp. p. 1588; Gaz. vol. 176; p. 247.

Tiemann, Harry D., Washington, D. C. Apparatus for drying timber and other moisture-bearing substances. No. 1,019,999; Mar. 12; Sp. p. 2120; Gaz. vol. 176; p. 365.

Tilden, Bert O., assignor to American Sanitary Works, New York, N. Y. Flush-tank-operating device. (Reissue.) No. 13,391; Mar. 26; Sp. p. 5826; Gaz. vol. 176; p. 1045.

Tingley, Leonard C., assignor to M. A. N. Manufacturing Company, Providence, R. I. Locking-clamp. No. 1,021,343; Mar. 26; Sp. p. 4953; Gaz. vol. 176; p. 905.

Tinker, William J., Pierce City, Mo. Gas-filter. No. 1,020,782; Mar. 19; Sp. p. 3787; Gaz. vol. 176; p. 663.

Titanium Alloy Manufacturing Company, The. (See Rossi, Auguste J., assignor.)

Titus, Henry W., New York, N. Y. Exercising apparatus. No. 1,019,861; Mar. 12; Sp. p. 1824; Gaz. vol. 176; p. 320.

Todd, Marquis J., assignor to Buffalo Pitts Company, Buffalo, N. Y. Dump-wagon. No. 1,020,524; Mar. 19; Sp. p. 3217; Gaz. vol. 176; p. 576.

Toennes, Richard, Boonville, Mo. Automatic gasolene-dispenser. No. 1,020,856; Mar. 19; Sp. p. 3952; Gaz. vol. 176; p. 688.

Tolgen, Edward A., Minot, N. D. Rail-joint. No. 1,020,525; Mar. 19; Sp. p. 3218; Gaz. vol. 176; p. 576.

Toliver, Charles H., San Diego, Cal. Airship. No. 1,020,118; Mar. 12; Sp. p. 2372; Gaz. vol. 176; p. 405.

Toole, William B. (See Le Doyen, Alfred A., assignor.)

Topham, George. (See Keyser and Topham.)

Topper, John M., and G. H. Chaplain, Leavenworth, Kans. Auxiliary steering device. No. 1,020,465; Mar. 19; Sp. p. 3079; Gaz. vol. 176; p. 557.

Tourtel, John M., London, England. Adding and printing machine. No. 1,021,588; Mar. 26; Sp. p. 5504; Gaz. vol. 176; p. 980.

Tracy, Arza R., Pateros, Wash. Automatic gas shut-off. No. 1,019,201; Mar. 5; Sp. p. 432; Gaz. vol. 176; p. 69.

Transom Draft Gear Company. (See Flager, Harry M., assignor.)

Trecker, Theodore. (See Kearney and Trecker.)

Trent, George W., Lansing, Kans. Combined rail-joint and nut-lock. No. 1,019,028; Mar. 12; Sp. p. 1980; Gaz. vol. 176; p. 342.

Tresidder, John J., New York, assignor to American Column Company, Brooklyn, N. Y. Cap and base for fireproof columns. No. 1,019,561; Mar. 5; Sp. p. 1258; Gaz. vol. 176; p. 187.

Trimont Manufacturing Company. (See Vinton, John H., assignor.)

Troy Laundry Machinery Company. (See Bartholomew, William, assignor.)

Troy, Matthew O., Schenectady, N. Y., assignor to General Electric Company. Transformer. No. 1,021,221; Mar. 26; Sp. p. 4706; Gaz. vol. 176; p. 861.

Tucker, Andrew J., Sedalia, Mo. Waterproofing and preserving composition. No. 1,020,857; Mar. 19; Sp. p. 3954; Gaz. vol. 176; p. 689.

Tucker, James R. (See McArthur and Tucker.)

Tudor, John H., Dallas, Tex. Furniture appliance. No. 1,019,202; Mar. 5; Sp. p. 434; Gaz. vol. 176; p. 69.

Tuite, Andrew, assignor to J. J. Tuite, Vincennes, Ind. Glass-drawing apparatus. No. 1,020,858; Mar. 19; Sp. p. 3956; Gaz. vol. 176; p. 689.

Tuite, John J. (See Tuite, Andrew, assignor.)

Turk, David W., Cleveland, Ohio. Bale-tie. No. 1,019,562; Mar. 5; Sp. p. 1259; Gaz. vol. 176; p. 188.

Turner, Cavett V. Y., Helena, Ark. Rail-joint. No. 1,019,203; Mar. 5; Sp. p. 435; Gaz. vol. 176; p. 69.

Turner, Harry Q., et al. (See Ivor, Barry, assignor.)

Turner, James P. (See Love and Turner.)

Turner, Noel H., Vulcan, Mich. Electric railway. No. 1,019,381; Mar. 5; Sp. p. 882; Gaz. vol. 176; p. 130.

Turney, Eugene T., Rock Island, assignor to Artista Piano Player Company, Milan, Ill. Wind-chest-tension indicator for piano-playing attachments. No. 1,020,584; Mar. 19; Sp. p. 3357; Gaz. vol. 176; p. 597.

Twombly Motors Company. (See Twombly, Willard I., assignor.)

Twombly, Willard I., assignor to Twombly Motors Company, New York, N. Y. Pneumatic tire. No. 1,019,286; Mar. 5; Sp. p. 625; Gaz. vol. 176; p. 97.

Tyler, Lewis L., Tacoma, Wash. Car-brake. No. 1,020,936; Mar. 10; Sp. p. 4090; Gaz. vol. 176; p. 715.

Uebelmesser, Charles R., New York, N. Y., assignor, by mesne assignments, to L. G. B. Erb and J. A. Golden. Moving-picture machine. No. 1,019,029; Mar. 12; Sp. p. 1981; Gaz. vol. 176; p. 342.

Uhlig, Richard W., Rutherford, N. J., assignor to Underwood Typewriter Company, New York, N. Y. Typewriting machine. No. 1,021,886; Mar. 26; Sp. p. 5041; Gaz. vol. 176; p. 918.

Ulmen, Philip C., and A. Johnson, Niagara, Wis. Pulpwood barker. No. 1,020,783; Mar. 19; Sp. p. 3788; Gaz. vol. 176; p. 664.

Ulmer, Charles, Lisbon, N. D. Change-making machine. No. 1,020,466; Mar. 19; Sp. p. 3081; Gaz. vol. 176; p. 558.

Ulrich, Julius M., Greenwich, Conn., assignor of one-half to W. Rahr, Jr., Manitowoc, Wis. Gas-engine. No. 1,019,563; Mar. 5; Sp. p. 1260; Gaz. vol. 176; p. 188.

Underwood Computing Machine Company. (See Degener, Gustave O., assignor.)

Underwood Typewriter Company. (See Ammen, Francis D., assignor.)

Underwood Typewriter Company. (See Kurowski, Alfred G. F., assignor.)

Underwood Typewriter Company. (See Lockwood, Marquis H., assignor.)

Underwood Typewriter Company. (See Lundeberg, Carl F., assignor.)

Underwood Typewriter Company. (See McLaughlin, John C., assignor.)

Underwood Typewriter Company. (See Uhlig, Richard W., assignor.)

Underwriters Company, The. (See Jaeger, Otto, assignor.)

Ungar, Martin, Chicago, Ill. Life-saving net. No. 1,021,280; Mar. 26; Sp. p. 4833; Gaz. vol. 176; p. 881.

Union Clay Products Company. (See Taylor, Edwin, assignor.)

Union Metallic Cartridge Company, The. (See Hoagland, Frank O., assignor.)

Union Typewriter Company. (See Felbel, Jacob, assignor.)

Union Typewriter Company. (See Smith, Charles E., assignor.)

Union Typewriter Company. (See Waldheim, John, assignor.)

Union Typewriter Company. (See Woodward, Oscar, assignor.)

United Button Company. (See Morrissey, Thomas F., assignor.)

United Flexible Metallic Tubing Company, The. (See Berryman and Camus, assignors.)

United Printing Machinery Company. (See Piper, Myron H., assignor.

United Shoe Machinery Company. (See Ashton, Orrell, assignor.)

United Shoe Machinery Company. (See Bates, Arthur, assignor.)

United Shoe Machinery Company. (See Brock, Matthias, assignor.)

United Shoe Machinery Company. (See Drown, Frank E., assignor.)

United Shoe Machinery Company. (See Eppler, Andrew, assignor.)

United Shoe Machinery Company. (See Fletcher, Ira E., assignor.) (Reissue.)

United Shoe Machinery Company. (See Fowler, Alfred B., assignor.)

United Shoe Machinery Company. (See Freeman, Louis G., assignor.)

United Shoe Machinery Company. (See Furber, Frederick M., assignor.)

United Shoe Machinery Company. (See Gouldbopru, Joseph, assignor.)

United Shoe Machinery Company. (See Hadaway, John B., assignor.)

United Shoe Machinery Company. (See McFeely, Ronald F., assignor.)

United Shoe Machinery Company. (See Pride and Bates, assignors.)

United Shoe Machinery Company. (See Woodward, Erastus, assignor.)

United States Asphalt Refining Company, The. (See Brennan, Paul C., assignor.)

United States Metallic Packing Company. (See King, Charles W. G., assignor.)

United States Phonograph Company, The. (See McNulty, Harry E., assignor.)

Universal Speed Control Company, The. (See Pratt, Charles E., assignor.)

Unterloff, Otto, Oberschöneweide, assignor to Stahlwerk Becker Aktien-Gesellschaft, Willich, Crefeld, Germany. Milling-cutter. No. 1,019,564; Mar. 5; Sp. p. 1263; Gaz. vol. 176; p. 188.

Upton, Henry J. (See Vaughn and Upton.)

Urban, Herman S., Richmond, Va. Sod-cutter. No. 1,020,230; Mar. 12; Sp. p. 2619; Gaz. vol. 176; p. 444.

Ure, John F. W., Chelsea, London, England. Aerial and other vessel and vehicle. No. 1,021,116; Mar. 26; Sp. p. 4468; Gaz. vol. 176; p. 826.

Valenza, Gandolfo, Hastings, Colo. Wrench. No. 1,019,204; Mar. 5; Sp. p. 437; Gaz. vol. 176; p. 69.

Vallier, John J., Chicago, Ill. Hat-pin guard. No. 1,020,784; Mar. 19; Sp. p. 3790; Gaz. vol. 176; p. 664.

Vallone, Charles, assignor to Barcalo Manufacturing Company, Buffalo, N. Y. Joint for the tubes of bedstead and other frames. No. 1,021,437; Mar. 26; Sp. p. 5185; Gaz. vol. 176; p. 938.

Van Akin, Samuel L., Jr., Liverpool, N. Y. Telephone system. No. 1,021,494; Mar. 26; Sp. p. 5311; Gaz. vol. 176; p. 957.

Van Boven, Edward T., Redlands, Cal. Cultivator. No. 1,019,382; Mar. 5; Sp. p. 883; Gaz. vol. 176; p. 130.

Van Brunt, Abram, Bridgeport, Conn. Suspender-buckle. No. 1,021,018; Mar. 26; Sp. p. 4276; Gaz. vol. 176; p. 794.

Van Buren, George L., assignor, by mesne assignments, to J. M. Jones, Kansas City, Mo. Coin-controlled vending-machine. No. 1,020,000; Mar. 12; Sp. p. 2121; Gaz. vol. 176; p. 365.

Van Deventer, James E. (See Van Deventer-Smith and Van Deventer.)

Van Deventer-Smith, Nellie, Indianapolis, and J. E. Van Deventer, Anderson, Ind. Work-holder for sewing-machines. No. 1,020,581; Mar. 19; Sp. p. 3352; Gaz. vol. 176; p. 596.

Van Egeren, Theodore, Glenburnie, Md. Plow. No. 1,021,117; Mar. 26; Sp. p. 4471; Gaz. vol. 176; p. 826.

Van Kannel, Benjamin F., New York, N. Y. Amusement apparatus called Indian trip. No. 1,021,019; Mar. 26; Sp. p. 4278; Gaz. vol. 176; p. 794.

Van Keuren, Charles E. (See Wickman, Henry J., assignor.)

Van Ness, Frank W., assignor to F. J. Matchette, Milwaukee, Wis. Lubricating system and apparatus. No. 1,019,103; Mar. 5; Sp. p. 206; Gaz. vol. 176; p. 33.

Van Pelt, Ada H., Los Angeles, Cal. Electric water purifier and filter. No. 1,020,001; Mar. 12; Sp. p. 2126; Gaz. vol. 176; p. 365.

Van Zandt, Edwin G., St. Louis, Mo. Gas-burner. (Reissue.) No. 13,387; Mar. 19; Sp. p. 4148; Gaz. vol. 176; p. 724.

Vanderail, Edward, and J. Litmer, Adrian, Minn. Whistling-machine. No. 1,020,859; Mar. 19; Sp. p. 3958; Gaz. vol. 176; p. 689.

Vargas, Angel, Iloilo, Philippine Islands. Plow. No. 1,020,232; Mar. 12; Sp. p. 2622; Gaz. vol. 176; p. 444.

Vaucain, Andrew C., Philadelphia, Pa. Drill-grinder. No. 1,020,860; Mar. 19; Sp. p. 3961; Gaz. vol. 176; p. 690.

Vaughan, David F., Haddonfield, N. J. Anticreeper for railway-rails. No. 1,021,388; Mar. 26; Sp. p. 5048; Gaz. vol. 176; p. 919.

Vaughan, David F. and D. L., Haddonfield, N. J. Anticreeper for railway-rails. No. 1,021,387; Mar. 26; Sp. p. 5043; Gaz. vol. 176; p. 919.

Vaughan, David L. (See Vaughan, David F. and D. L.)

Vaughan, David L., Riverton, N. J. Anticreeper for railway-rails. No. 1,021,389; Mar. 26; Sp. p. 5053; Gaz. vol. 176; p. 920.

Vaughan, Edward. (See Lehberger and Vaughan.)

Vaughan, Henry M., Newton, Iowa. Erasing device for type-writers. No. 1,019,205; Mar. 5; Sp. p. 438; Gaz. vol. 176; p. 70.

Vaughn, Francis W., Jr., West Medford, and H. J. Upton, Somerville, assignors to Vaughn-Upton Company, Boston, Mass. Fountain-pen. No. 1,019,930; Mar. 12; Sp. p. 1982; Gaz. vol. 176; p. 343.

Vaughn-Upton Company. (See Vaughn and Upton, assignors.)

Vause, George E., and C. S. Clemmens, Pittsburgh, Pa. Brake-locking device. No. 1,021,020; Mar. 26; Sp. p. 4280; Gaz. vol. 176; p. 795.

Velle Carringe Company. (See Nutt, Lester E., assignor.)

Vergason, Charles. (See Doolittle, Winsor, and Vergason.)

Vereinigte Chininfabriken, Zimmer & Co. G. m. b. H. (See Thron, Heinrich, assignor.)

Vermeulen, Frederik, assignor to Maatschappij Holland Naamlooze Vennootschap tot Installatie van Bakkerijen, Amsterdam, Netherlands. Baking-oven. No. 1,019,802; Mar. 12; Sp. p. 1826; Gaz. vol. 176; p. 320.

Vertical Condenser Company. (See Zeigler, John L., assignor.)

Vesey, Richard H., Denver, Colo. Journal-lubricator. No. 1,020,167; Mar. 12; Sp. p. 2475; Gaz. vol. 176; p. 421.

Vessels, Clarence C., assignor of one-half to J. A. Kurt, Kansas City, Mo. Puzzle. No. 1,021,281; Mar. 26; Sp. p. 4834; Gaz. vol. 176; p. 882.
Vibbert, Robert J., Ambrose, Ga. Row-gage attachment for plows. No. 1,021,021; Mar. 26; Sp. p. 4281; Gaz. vol. 176; p. 795.
Victor, Alexander F., Toledo, Ohio. Photographic film for picture-machines. No. 1,019,931; Mar. 12; Sp. p. 1984; Gaz. vol. 176; p. 343.
Victor, Alexander F., Toledo, Ohio. Picture-displaying machine. No. 1,019,932; Mar. 12; Sp. p. 1985; Gaz. vol. 176; p. 343.
Victor Talking Machine Company. (See Johnson, Eldridge R., assignor.)
Viera, Antonio, Ray, Ariz. Miner's candlestick. No. 1,020,332; Mar. 12; Sp. p. 2798; Gaz. vol. 176; p. 474.
Vincke, Heinrich G., and J. Miquel, San Feliu de Guixols, Spain. Manufacture of cork film. No. 1,020,669; Mar. 19; Sp. p. 3544; Gaz. vol. 176; p. 624.
Vincon, Gustavo, Turin, Italy. Ball-bearing. No. 1,020,729; Mar. 19; Sp. p. 3672; Gaz. vol. 176; p. 646.
Vinton, John H., Jamaica Plain, assignor to Trimont Manufacturing Company, Boston, Mass. Shaft-retaining means. No. 1,020,730; Mar. 19; Sp. p. 3673; Gaz. vol. 176; p. 646.
Voellinger, Peter, Belleville, Ill. Shock-mover. No. 1,021,495; Mar. 26; Sp. p. 5314; Gaz. vol. 176; p. 957.
Vogel, Joseph O., assignor of one-half to O. A. Stehle, Pittsburgh, Pa. Car-fender. No. 1,021,022; Mar. 26; Sp. p. 4283; Gaz. vol. 176; p. 795.
Volkmann, Paul, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Diazo dye and making the same. No. 1,020,670; Mar. 19; Sp. p. 3545; Gaz. vol. 176; p. 624.
Völler, Karl, Duesseldorf, assignor to Rheinische Metallwaaren- und Maschinenfabrik, Duesseldorf-Derendorf, Germany. Gun with recoiling barrel. No. 1,020,233; Mar. 12; Sp. p. 2623; Gaz. vol. 176; p. 444.
Von Daam, Gerrit, Scranton, Pa. Pincushion. No. 1,020,333; Mar. 12; Sp. p. 2800; Gaz. vol. 176; p. 475.
Vorce, Albert F., assignor of one-fourth to W. M. Powers, Benzonia, and one-half to Grand Rapids Tool & Stamping Company, Grand Rapids, Mich. Perfume-vending machine. No. 1,020,334; Mar. 12; Sp. p. 2801; Gaz. vol. 176; p. 475.
Vose, Ambrose S., Brookline, assignor of one-half to A. F. Gray, Watertown, Mass. Rotary cutter. No. 1,019,728; Mar. 5; Sp. p. 1562; Gaz. vol. 176; p. 243.
Vroom, Oler P., assignor of one-half to J. P. Fell, Linneus, Mo. Register. No. 1,021,118; Mar. 26; Sp. p. 4473; Gaz. vol. 176; p. 827.
W. & E. T. Fitch Co., The. (See Hubbard, George M., assignor.)
Wackermann, Frank, Carrick, and C. Zabel; said Zabel assignor to Lewis Foundry & Machine Company, Pittsburgh, Pa. Roll-adjusting mechanism. No. 1,020,064; Mar. 12; Sp. p. 2251; Gaz. vol. 176; p. 387.
Waddington, Joe S., Bradford, England. Treatment of sewage. No. 1,019,933; Mar. 12; Sp. p. 1988; Gaz. vol. 176; p. 344.
Wadsworth, Henry L., *et al.* (See Miller, Alfred K., assignor.)
Wagner, Frederick H., Baltimore, Md. Purifying gas and recovering by-products. No. 1,020,168; Mar. 12; Sp. p. 2478; Gaz. vol. 176; p. 422.
Wagner, Paul, Charlottenburg, Germany, assignor to General Electric Company. Bucket-wheel. No. 1,021,222; Mar. 26; Sp. p. 4707; Gaz. vol. 176; p. 861.
Wagner, Raoul D., Paris, France. Apertured bolt applicable especially for fixing rails onto the wooden sleepers. No. 1,021,300; Mar. 26; Sp. p. 5057; Gaz. vol. 176; p. 920.
Waibel, Frederick B., Newark, N. J. Dip-tank with automatic cover. No. 1,020,526; Mar. 19; Sp. p. 3220; Gaz. vol. 176; p. 576.
Wait, George E., assignor to The Ober Manufacturing Company, Chagrin Falls, Ohio. Sad-iron. No. 1,021,344; Mar. 26; Sp. p. 4961; Gaz. vol. 176; p. 905.
Waite, Edward B. (See Beauregard, Victor, assignor.)
Waite Grass Carpet Co. (See Waite, Ossian T., assignor.)
Waite, Ossian T., assignor to Waite Grass Carpet Co., Oshkosh, Wis. Grass-twine machine. No. 1,019,383; Mar. 5; Sp. p. 885; Gaz. vol. 176; p. 131.
Walden, Frederick E. (See McGeary, Luman A., assignor.)
Waldheim, John, Newark, assignor, by mesne assignments, to Union Typewriter Company, Jersey City, N. J. Typewriting machine. No. 1,021,301; Mar. 26; Sp. p. 5059; Gaz. vol. 176; p. 921.
Waldheim, John, Newark, assignor, by mesne assignments, to Union Typewriter Company, Jersey City, N. J. Typewriting machine. No. 1,021,302; Mar. 26; Sp. p. 5071; Gaz. vol. 176; p. 921.
Waldheim, John, Newark, assignor, by mesne assignments, to Union Typewriter Company, Jersey City, N. J. Typewriting machine. No. 1,021,303; Mar. 26; Sp. p. 5083; Gaz. vol. 176; p. 922.
Waldron, Jesse. (See Sabatino, John, assignor.)
Walent, Markus, assignor of one-half to A. Greenberger, Berwick, Pa. Cuspidor. No. 1,019,565; Mar. 5; Sp. p. 1264; Gaz. vol. 176; p. 189.
Walick, Anthony. (See Kerr, Jennie M., assignor.)
Walker, Henry E., Honolulu, Hawaii. Grain-cleaning machine. No. 1,020,377; Mar. 12; Sp. p. 2887; Gaz. vol. 176; p. 489.
Walker, James B., Rush Springs, Okla. Drinking-cup holder. No. 1,019,934; Mar. 12; Sp. p. 1989; Gaz. vol. 176; p. 344.
Walker, Ralph, Westhope, N. D. Elevating and bunching attachment for mowing-machines. No. 1,021,023; Mar. 26; Sp. p. 4284; Gaz. vol. 176; p. 796.
Walker, Thomas S., Birmingham, England. Ship's-log apparatus. No. 1,019,566; Mar. 5; Sp. p. 1265; Gaz. vol. 176; p. 189.
Wallace, Benjamin C., Stockton, Cal. Casket-canopy. No. 1,020,189; Mar. 12; Sp. p. 2481; Gaz. vol. 176; p. 422.
Wallace, James C., Guelph, Ontario, Canada. Bowling-alley. No. 1,019,104; Mar. 5; Sp. p. 209; Gaz. vol. 176; p. 33.
Wallace, William, *et al.* (See Craigie, William, assignor.)
Wallace, William R., Houghton, Mich. Rock-core drill. No. 1,019,206; Mar. 5; Sp. p. 439; Gaz. vol. 176; p. 70.
Wallach Brothers Limited. (See Greatorex, William H., assignor.)
Waller, Perry J., Los Angeles, Cal. Shaft-hanger. No. 1,020,629; Mar. 19; Sp. p. 3458; Gaz. vol. 176; p. 611.
Wallis, James, assignor of one-half to J. & T. H. Wallis, Limited, Beddington, England. Treatment of germ of wheat. No. 1,021,119; Mar. 26; Sp. p. 4476; Gaz. vol. 176; p. 827.
Walraven, Francis W., Las Cascadas, Canal Zone. Automatic drain-valve for steam-cylinders. No. 1,020,861; Mar. 19; Sp. p. 3903; Gaz. vol. 176; p. 690.
Walshe, Denny E., Grand Saline, Tex. Rotary hand-stamp. No. 1,020,527; Mar. 19; Sp. p. 3222; Gaz. vol. 176; p. 577.
Walston, John T., Springfield, Mo. Swing attachment. No. 1,020,335; Mar. 12; Sp. p. 2802; Gaz. vol. 176; p. 475.
Walter, Alfred R., Ealing, London, England. Pince-nez. No. 1,020,585; Mar. 19; Sp. p. 3350; Gaz. vol. 176; p. 597.
Walter, Bruce, Pittsburgh, Pa. Regulating-concentrator. No. 1,019,935; Mar. 12; Sp. p. 1991; Gaz. vol. 176; p. 344.
Walter, Edwin G. (See Colley and Walter.)
Walter, Hugo J. (See Ralston and Briggs, assignors.)
Walter, Torsten L., New York, N. Y. Shade-fixture. No. 1,019,863; Mar. 12; Sp. p. 1829; Gaz. vol. 176; p. 320.
Waltball, John, and O. C. Carter, North Fort Worth, Tex. Cotton-chopping attachment for cultivators. No. 1,020,862; Mar. 19; Sp. p. 3905; Gaz. vol. 176; p. 691.
Walton, Edgar M., Kansas City, Mo. Shingle-mold. No. 1,020,536; Mar. 19; Sp. p. 3260; Gaz. vol. 176; p. 597.
Walz, John, Burlington, Iowa. Display-rack. No. 1,019,384; Mar. 5; Sp. p. 889; Gaz. vol. 176; p. 131.
Wanamaker, Charles B., assignor to Leedy Manufacturing Company, Indianapolis, Ind. Drum-heater. No. 1,020,378; Mar. 12; Sp. p. 2889; Gaz. vol. 176; p. 489.
Ward, Charles, Charleston, W. Va. Water-tube boiler. No. 1,020,234; Mar. 12; Sp. p. 2625; Gaz. vol. 176; p. 445.
Ward, Charles and C. E., Charleston, W. Va. Stay for boiler-plates. No. 1,020,235; Mar. 12; Sp. p. 2626; Gaz. vol. 176; p. 445.
Ward, Charles E. (See Ward, Charles and C. E.)
Ward, Edmund R. (See Jenkins and Ward.)
Ward, Frederick G., assignor of one-third to H. Davis, Pittsburgh, Pa. Tread for pneumatic tires. No. 1,021,171; Mar. 26; Sp. p. 4602; Gaz. vol. 176; p. 844.
Ward, John A., Pittsburgh, Pa. Shield for windows of railway-cars. No. 1,021,646; Mar. 26; Sp. p. 5602; Gaz. vol. 176; p. 1007.
Ward, Mattie R., Leesville, La. Folding umbrella. No. 1,020,236; Mar. 12; Sp. p. 2628; Gaz. vol. 176; p. 445.
Ward, Volney H., Batesville, Miss. Syringe. No. 1,019,207; Mar. 5; Sp. p. 442; Gaz. vol. 176; p. 70.
Warden, William F., assignor to P. E. Tanner, Akron, Ohio. Tank-gage. No. 1,020,785; Mar. 19; Sp. p. 3791; Gaz. vol. 176; p. 664.
Wardwell, Simon W., Providence, R. I. Stitch-forming device. No. 1,019,208; Mar. 5; Sp. p. 443; Gaz. vol. 176; p. 71.
Ware, Henry, Springville, N. Y. Railway-tie surfacer and tie-plate gage. No. 1,019,936; Mar. 12; Sp. p. 1993; Gaz. vol. 176; p. 345.
Warg, Robert, Milwaukee, Wis. Centrifugal fan. No. 1,019,385; Mar. 5; Sp. p. 890; Gaz. vol. 176; p. 131.
Waring, George H., *et al.* (See Lister, Nicholas E., assignor.)
Warlick, Charles W., Martinsburg, Pa. Bed-rest. No. 1,019,864; Mar. 12; Sp. p. 1831; Gaz. vol. 176; p. 321.
Warne, Frederick C., assignor to The Roderick Lean Manufacturing Company, Mansfield, Ohio. Truck mechanism. No. 1,021,563; Mar. 26; Sp. p. 5447; Gaz. vol. 176; p. 981.
Warner Brothers Company, The. (See Warner, De Ver H., assignor.)
Warner, De Ver H., assignor to The Warner Brothers Company, Bridgeport, Conn. Corset. No. 1,019,865; Mar. 12; Sp. p. 1833; Gaz. vol. 176; p. 321.
Warner, George W., Topeka, Kans. Corrugated culvert. No. 1,020,002; Mar. 12; Sp. p. 2127; Gaz. vol. 176; p. 366.
Warner, Otto P. (See Hawthorne, Wyatt, and Warner.)
Warnitz, Henry C., Providence, R. I. Hoisting apparatus. No. 1,021,564; Mar. 26; Sp. p. 5448; Gaz. vol. 176; p. 981.

Warrington, James N., Los Angeles, Cal. Automatic pile-driver. No. 1,019,386; Mar. 5; Sp. p. 892; Gaz. vol. 176; p. 132.
Warrington, James N., Los Angeles, Cal. Hood or cap for piles. No. 1,020,467; Mar. 19; Sp. p. 3089; Gaz. vol. 176; p. 558.
Warsaw, Charles E., and A. P. Ball, Ames, Iowa. Non-refillable vacuum-bottle. No. 1,019,866; Mar. 12; Sp. p. 1834; Gaz. vol. 176; p. 322.
Warwick, Earl C., Kansas City, Mo. Spray. No. 1,020,937; Mar. 19; Sp. p. 4091; Gaz. vol. 176; p. 715.
Washington, Alfred D., Detroit, Mich. Shoe-polishing machine. No. 1,020,587; Mar. 19; Sp. p. 3362; Gaz. vol. 176; p. 598.
Waters, David, Pictou, Nova Scotia, Canada. Razor-stropper. No. 1,019,105; Mar. 5; Sp. p. 210; Gaz. vol. 176; p. 34.
Waterworth, Charles E., Las Cascadas, Canal Zone. Hat-guard. No. 1,021,647; Mar. 26; Sp. p. 5603; Gaz. vol. 176; p. 1007.
Watkins, Alfred, Chelsea, London, England. Machine for grinding the contact-surfaces of carbon brushes for dynamos and the like. No. 1,019,287; Mar. 5; Sp. p. 628; Gaz. vol. 176; p. 98.
Watkins, William J., assignor to O. G. Hurdleston, Fort Worth, Tex. Manufacturing carbureted hydrogen gas. No. 1,019,705; Mar. 5; Sp. p. 1513; Gaz. vol. 176; p. 234.
Watson, David S. (See Kittredge, Rufus J., assignor.)
Watson, George D. (See Porter and Watson.)
Watson, Orra M., Dallas City, Ill. Lock-nut for bolts. No. 1,019,887; Mar. 5; Sp. p. 898; Gaz. vol. 176; p. 132.
Watson, Thomas S., assignor to Thos. S. Watson Company, Milwaukee, Wis. Elevating, transporting, and discharging apparatus. No. 1,019,867; Mar. 12; Sp. p. 1836; Gaz. vol. 176; p. 322.
Watts, Alvin L., Chicago, Ill. Fountain-pen. No. 1,020,237; Mar. 12; Sp. p. 2629; Gaz. vol. 176; p. 445.
Waverley Company, The. (See Chamberlin, Victor E., assignor.)
Waverley Company, The. (See Maxim, Hiram P., assignor.)
Wearn, George W., Charlotte, N. C., assignor of one-fourth to W. E. McElroy, West Pompano, Fla. Folding window-blind. No. 1,019,567; Mar. 5; Sp. p. 1267; Gaz. vol. 176; p. 189.
Weaver, Benjamin D., River Rouge, Mich. Package-tie. No. 1,019,868; Mar. 12; Sp. p. 1839; Gaz. vol. 176; p. 322.
Weaver, Bent L. (See Reinoehl and Weaver.)
Weaver, Ira A., assignor to Racine-Sattley Company, Springfield, Ill. Plow. No. 1,021,024; Mar. 26; Sp. p. 4287; Gaz. vol. 176; p. 796.
Weaver, Leland S., Fremont, Mich., and W. F. Altenbaugh; said Weaver assignor to W. F. Altenbaugh, Jr., Seattle, Wash. Filing-cabinet. No. 1,021,025; Mar. 26; Sp. p. 4288; Gaz. vol. 176; p. 797.
Weber, Aaron M., New York, N. Y. Collar foundation. No. 1,020,786; Mar. 19; Sp. p. 3794; Gaz. vol. 176; p. 665.
Weber, Charles, and H. D. Swaller, Columbus, Ohio. Fluid-pressure motor. No. 1,019,388; Mar. 5; Sp. p. 899; Gaz. vol. 176; p. 132.
Weber Dental Manufacturing Company, The. (See Weber, Henry E., assignor.) (Reissue.)
Weber, Henry E., assignor to The Weber Dental Manufacturing Company, Canton, Ohio. Cuspidor. (Reissue.) No. 13,388; Mar. 19; Sp. p. 4150; Gaz. vol. 176; p. 725.
Webster, Ira J., *et al.* (See Chase, Milton, assignor.)
Webster, William A., Galesburg, Ill. Gate-hinge member. No. 1,019,389; Mar. 5; Sp. p. 901; Gaz. vol. 176; p. 133.
Weeks, Charles A., Philadelphia, Pa., assignor to The Rail Joint Company, New York, N. Y. Molding rail-joint castings. No. 1,019,706; Mar. 5; Sp. p. 1514; Gaz. vol. 176; p. 235.
Weeks, Paul, Los Angeles, Cal. Fluid-clutch. No. 1,021,282; Mar. 26; Sp. p. 4836; Gaz. vol. 176; p. 882.
Weer, Edward C., Franklin, and H. F. Taney, Dayton, Ohio. Track instrument. No. 1,020,238; Mar. 12; Sp. p. 2630; Gaz. vol. 176; p. 446.
Weicheldorfer, Wenzel, Potlatch, Idaho. Conveyer-cleat. No. 1,020,863; Mar. 19; Sp. p. 3907; Gaz. vol. 176; p. 691.
Weicker, William H., Providence, R. I., assignor, by mesne assignments, to General Electric Company. Controller mechanism for turbines. No. 1,021,223; Mar. 26; Sp. p. 4708; Gaz. vol. 176; p. 862.
Weidlog, Carl B. F., Shelton, assignor to T. Weidlog, Derby, Conn. Safety hat-pin. No. 1,020,938; Mar. 19; Sp. p. 4093; Gaz. vol. 176; p. 715.
Weidlog, Theka. (See Weidlog, Carl B. F., assignor.)
Weiler, Nicholas, Canton, Ill., assignor of one-half to B. L. Shrader, Fort Collins, Colo. Gage device for plows. No. 1,019,729; Mar. 5; Sp. p. 1563; Gaz. vol. 176; p. 243.
Weintraub, Ezechiel, Lynn, Mass., assignor to General Electric Company. Electrical resistance. No. 1,019,390; Mar. 5; Sp. p. 903; Gaz. vol. 176; p. 133.
Weintraub, Ezechiel, Lynn, Mass., assignor to General Electric Company. Boronized conductor and manufacture. No. 1,019,391; Mar. 5; Sp. p. 904; Gaz. vol. 176; p. 133.
Weintraub, Ezechiel, Lynn, Mass., assignor to General Electric Company. Electric furnace method and apparatus. No. 1,019,392; Mar. 5; Sp. p. 906; Gaz. vol. 176; p. 133.
Weintraub, Ezechiel, Lynn, Mass., assignor to General Electric Company. Boron-carbon alloy. No. 1,019,393; Mar. 5; Sp. p. 909; Gaz. vol. 176; p. 134.
Weintraub, Ezechiel, Lynn, Mass., assignor to General Electric Company. Reduction of chemical compounds. No. 1,019,394; Mar. 5; Sp. p. 910; Gaz. vol. 176; p. 134.
Weintraub, Ezechiel, Lynn, Mass., assignor to General Electric Company. Making resistance material. No. 1,019,508; Mar. 5; Sp. p. 1268; Gaz. vol. 176; p. 190.
Weintraub, Ezechiel, Lynn, Mass., assignor to General Electric Company. Making boron and boron alloys. No. 1,019,509; Mar. 5; Sp. p. 1270; Gaz. vol. 176; p. 190.
Weir, Andrew H., and C. H. Smith, Eaton, Ohio. Window-shade bracket. No. 1,020,528; Mar. 19; Sp. p. 3224; Gaz. vol. 176; p. 577.
Welwoda, Mathias, assignor to G. W. Stevens, New York, N. Y. Throttle-valve for carbureters. No. 1,020,379; Mar. 12; Sp. p. 2890; Gaz. vol. 176; p. 490.
Welch, Charles E., Lowville, N. Y. Grading, processing, and concentrating apparatus. No. 1,019,570; Mar. 5; Sp. p. 1271; Gaz. vol. 176; p. 190.
Welch, Henry, Buffalo, N. Y. Xylophone. No. 1,021,345; Mar. 26; Sp. p. 4962; Gaz. vol. 176; p. 906.
Welch, Marion F., Hollis, Kans. Signal for mail-boxes. No. 1,021,026; Mar. 26; Sp. p. 4291; Gaz. vol. 176; p. 797.
Wellman, Holley G. (See Thomas, Thomas W., assignor.)
Wells, Harry S. (See Widmann and Wells.)
Welsh, Ezra C., New Middletown, Ohio. Fire-escape. No. 1,020,065; Mar. 12; Sp. p. 2252; Gaz. vol. 176; p. 387.
Welsh, Tom, Moffat, Scotland. Carbureter for internal-combustion engines. No. 1,019,209; Mar. 5; Sp. p. 447; Gaz. vol. 176; p. 71.
Wentes, Louis, Philadelphia, Pa. Gas-heating sad-iron. No. 1,021,027; Mar. 26; Sp. p. 4292; Gaz. vol. 176; p. 797.
Wentz, John R. (See Schwab, William, assignor.)
Wermuth, Burt, and W. M. Brown, Detroit, Mich. Trenching implement. No. 1,020,468; Mar. 19; Sp. p. 3092; Gaz. vol. 176; p. 558.
Wescott, William B., Roxbury, Mass. Cutting-machine. No. 1,021,028; Mar. 26; Sp. p. 4294; Gaz. vol. 176; p. 798.
West, Laurel C., Milwaukee, Wis. Jock-strap. No. 1,020,588; Mar. 19; Sp. p. 3365; Gaz. vol. 176; p. 598.
West, Louis, Rochester, Minn. Automobile-horn. No. 1,019,571; Mar. 5; Sp. p. 1273; Gaz. vol. 176; p. 190.
Westbrook, James G., Ogdensburg, N. Y. Device for automatically controlling the motion of machines. No. 1,020,066; Mar. 12; Sp. p. 2254; Gaz. vol. 176; p. 388.
Westen, Charles, Chicago, assignor to Northern Brass Manufacturing Company, Waukegan, Ill. Machine for threading pipe-fittings. No. 1,020,529; Mar. 19; Sp. p. 3225; Gaz. vol. 176; p. 577.
Western Electric Company. (See Bullard and Reynolds, assignors.)
Western Electric Company. (See Lorimer, George W., assignor.)
Western Gas Fixture Company, The. (See Miller, Frederick J., assignor.)
Western Sugar Refining Company. (See Hannam and Murray, assignors.)
Western Tool and Manufacturing Company, The. (See Saum, Robert J., assignor.)
Westinghouse Air Brake Company, The. (See Goodspeed, Leland F., assignor.)
Westinghouse Machine Company, The. (See Flanders, Warren B., assignor.)
Westlake, Frederick J. (See Simons, John A., assignor.)
Westlake Machine Company, The. (See Kadow, August, assignor.)
Wetmore, Earl P., Toledo, Ohio. Bottle capping or sealing machine. No. 1,021,565; Mar. 26; Sp. p. 5450; Gaz. vol. 176; p. 981.
Wetterwald, Joseph, Lucerne, Switzerland. Automatic safety controlling device for aerial machines, especially aeroplanes. No. 1,020,671; Mar. 19; Sp. p. 3546; Gaz. vol. 176; p. 624.
Whalen, Michael H., New York, N. Y. Flying-machine. No. 1,021,406; Mar. 26; Sp. p. 5316; Gaz. vol. 176; p. 958.
Wheaton, Theodore C., Millville, N. J. Combination-jar. No. 1,019,106; Mar. 5; Sp. p. 216; Gaz. vol. 176; p. 34.
Wheeler, Holland, Lawrence, Kans. Regulating-valve. No. 1,019,869; Mar. 12; Sp. p. 1840; Gaz. vol. 176; p. 323.
Wheelock, Caroline M., Washington, D. C. Heating device. No. 1,020,119; Mar. 12; Sp. p. 2374; Gaz. vol. 176; p. 406.
Wheelock, Edwin M., Winona, Minn. Reversing-gearing. No. 1,021,029; Mar. 26; Sp. p. 4297; Gaz. vol. 176; p. 798.
Whelan, Charles A., Buena Vista, Colo. Buckle. No. 1,020,731; Mar. 19; Sp. p. 3674; Gaz. vol. 176; p. 647.
Whigham, Charles, McKeesport, Pa. Combined pole and shade bracket. No. 1,020,239; Mar. 12; Sp. p. 2632; Gaz. vol. 176; p. 446.
Whipple, Arden, assignor of forty-nine one-hundredths to C. L. Blodgett, Oakland, Cal. Hose-coupling washer. No. 1,019,572; Mar. 5; Sp. p. 1274; Gaz. vol. 176; p. 190.
Whitaker, Nathan J., Amsterdam, N. Y. Collar. No. 1,021,283; Mar. 26; Sp. p. 4839; Gaz. vol. 176; p. 883.

Whitcher, Rupert E., Keeler, Saskatchewan, Canada. Plow. No. 1,020,240; Mar. 12; Sp. p. 2634; Gaz. vol. 176; p. 446.
Whitcomb, James A., McAlester, Okla. Type-writing machine. No. 1,021,120; Mar. 26; Sp. p. 4477; Gaz. vol. 176; p. 827.
White, Albert E., Eau Claire, Wis. Saw-swage. No. 1,021,284; Mar. 26; Sp. p. 4840; Gaz. vol. 176; p. 883.
White, Charles E., assignor to Deere & Mansur Company, Moline, Ill. Harrow. No. 1,020,530; Mar. 19; Sp. p. 3227; Gaz. vol. 176; p. 578.
White, Herbert H., Brookline, assignor to Auto Wind Shield Company, Cambridge, Mass. Wind-shield. No. 1,020,336; Mar. 12; Sp. p. 2804; Gaz. vol. 176; p. 475.
White, John H., and E. N. Barthelemy, assignors of two-thirds to said Barthelemy and one-third to C. J. Galarneault, Foley, Minn. Track-laying machine. No. 1,019,395; Mar. 5; Sp. p. 912; Gaz. vol. 176; p. 134.
White, John S. (See White, Peter and J. S.)
White, Joseph, Piscataway township, Middlesex county, N. J. Ticket-printing machine. No. 1,019,107; Mar. 5; Sp. p. 217; Gaz. vol. 176; p. 34.
White, Morris C., and O. C. Duryea, assignors to The Sterling Development Company, Chicago, Ill. Heater for motor fluids. No. 1,020,067; Mar. 12; Sp. p. 2256; Gaz. vol. 176; p. 388.
White, Peter and J. S., St. Louis, Mo. Cotton-seed delinter and gin. No. 1,020,787; Mar. 19; Sp. p. 3795; Gaz. vol. 176; p. 665.
White Sewing Machine Company, The. (See Huffman and Lauffer, assignors.)
White, William F., executor. (See Luebke, August H.)
Whitin, James E., *et al.*, trustees. (See Farmer, Frederick, assignor.)
Whitin Machine Works, The. (See Owen, Oscar L., assignor.)
Whitlow, Andrew, Georgetown, Ill. Railway-joint. No. 1,019,573; Mar. 5; Sp. p. 1275; Gaz. vol. 176; p. 191.
Whitmore, Rex H., New York, N. Y. Cigarette. No. 1,020,864; Mar. 19; Sp. p. 3969; Gaz. vol. 176; p. 691.
Whitmore, Glenn D. (See Shaw, Frank B., assignor.)
Whitney Manufacturing Company, The. (See Belcher, Warren J., assignor.)
Whittall, Matthew J., *et al.*, trustees. (See Farmer, Frederick, assignor.)
Whittall, Matthew P., *et al.*, trustees. (See Farmer, Frederick, assignor.)
Whittier, Walter H., Grand Rapids, Mich. Automatic firearm. No. 1,019,037; Mar. 12; Sp. p. 1906; Gaz. vol. 176; p. 345.
Wiberg, Charles A., Lindstrom, Minn. Vehicle-gear. No. 1,019,108; Mar. 5; Sp. p. 219; Gaz. vol. 176; p. 35.
Wiborg, Charles G., Galesburg, Ill. Pump for vacuum-cleaners. No. 1,020,241; Mar. 12; Sp. p. 2635; Gaz. vol. 176; p. 447.
Wickman, Henry J., assignor of one-half to C. E. Van Keuren, Howell, Mich. Attachment to friction-top cans. No. 1,020,589; Mar. 19; Sp. p. 3367; Gaz. vol. 176; p. 598.
Widmann, Frederick, and H. S. Wells, St. Louis, Mo., assignors to Otis Elevator Company, Jersey City, N. J. Elevator. No. 1,021,172; Mar. 26; Sp. p. 4603; Gaz. vol. 176; p. 845.
Wieber, George, Syracuse, N. Y. Cutter. No. 1,020,865; Mar. 19; Sp. p. 3970; Gaz. vol. 176; p. 691.
Wiechers, Herman L., Leon, Mexico. Telephone-pay-station cabinet. No. 1,019,574; Mar. 5; Sp. p. 1276; Gaz. vol. 176; p. 191.
Wiernicki, John, Glassport, Pa. Wrench. No. 1,019,575; Mar. 5; Sp. p. 1279; Gaz. vol. 176; p. 191.
Wiese, Hermann, Wallaceburg, Ontario, Canada. Refining sugar. No. 1,021,173; Mar. 26; Sp. p. 4606; Gaz. vol. 176; p. 845.
Wilcox, Ralph, Negaunee, Mich. Shell for core-barrels for rotary drills. No. 1,019,707; Mar. 5; Sp. p. 1517; Gaz. vol. 176; p. 235.
Wilder, Herbert J. (See Gordon, Waldo C., assignor.)
Wiley, Andrew J., Boise, Idaho. Metal flume. No. 1,019,870; Mar. 12; Sp. p. 1841; Gaz. vol. 176; p. 323.
Wiley, Andrew J., Boise, Idaho. Metal flume. No. 1,019,871; Mar. 12; Sp. p. 1843; Gaz. vol. 176; p. 323.
Wilkinson, James, Providence, R. I., assignor, by mesne assignments, to General Electric Company. Turbine-valve mechanism. No. 1,021,224; Mar. 26; Sp. p. 4710; Gaz. vol. 176; p. 862.
Wilkinson, James, Schenectady, N. Y., assignor to General Electric Company. Packing for elastic-fluid turbines. No. 1,021,225; Mar. 26; Sp. p. 4716; Gaz. vol. 176; p. 862.
Wilkinson, James, Schenectady, N. Y., assignor to General Electric Company. Controller mechanism for turbines. No. 1,021,226; Mar. 26; Sp. p. 4720; Gaz. vol. 176; p. 863.
Wilkinson, James, Schenectady, N. Y., assignor to General Electric Company. Elastic-fluid turbine. No. 1,021,754; Mar. 26; Sp. p. 5817; Gaz. vol. 176; p. 1043.
Wilkinson, Joe, assignor to The Bradford Dyers' Association, Limited, Bradford, England. Manufacture of textile fabric. No. 1,021,712; Mar. 26; Sp. p. 5721; Gaz. vol. 176; p. 1028.
Wilkinson, Thomas B., Bakersfield, Cal. Well-pump and valve mechanism therefor. No. 1,020,337; Mar. 12; Sp. p. 2806; Gaz. vol. 176; p. 476.
Willard, Theodore A., Cleveland, Ohio. Reversible lamp-base. No. 1,020,732; Mar. 19; Sp. p. 3676; Gaz. vol. 176; p. 647.
William B. Pollock Company, The. (See McKelvey, William W., assignor.)
William B. Pollock Company, The. (See Sherman, Erwin C., assignor.)
William Eastwood & Son Company. (See Dunn, Alfred W., assignor.)
William Galloway Company. (See Wilson, Dalton K., assignor.)
William Wharton, Jr., & Company. (See Corts, August, assignor.)
Williams, Alan. (See Macfarlane, Burge, and Williams.)
Williams, Ansel, Fulton, Mo. Ironing-table. No. 1,021,285; Mar. 26; Sp. p. 4842; Gaz. vol. 176; p. 883.
Williams, Charles H., Jr., assignor to Chicago Railway Equipment Company, Chicago, Ill. Adjustable brake-rod. No. 1,019,872; Mar. 12; Sp. p. 1845; Gaz. vol. 176; p. 324.
Williams, Charles S., Carthage, Mo. Shoe brushing and scraping device. No. 1,021,081; Mar. 26; Sp. p. 4390; Gaz. vol. 176; p. 816.
Williams, Enoch J., Langdon, Kans. Combined hay loader and rake. No. 1,021,648; Mar. 26; Sp. p. 5605; Gaz. vol. 176; p. 1008.
Williams, Howard S., Cleveland, Ohio. Producing conical clutch-facings. No. 1,019,396; Mar. 5; Sp. 917; Gaz. vol. 176; p. 134.
Williams, James E., Bessemer, Ala. Valve mechanism. No. 1,020,003; Mar. 12; Sp. p. 2128; Gaz. vol. 176; p. 366.
Williams, John W., Monmouth, Ill. Stovepipe-ventilator. No. 1,020,500; Mar. 19; Sp. p. 3368; Gaz. vol. 176; p. 500.
Williams, Milton F., assignor to Williams Patent Crusher and Pulverizer Company, St. Louis, Mo. Crusher and pulverizer. No. 1,020,380; Mar. 12; Sp. p. 2893; Gaz. vol. 176; p. 490.
Williams, Milton F., assignor to Williams Patent Crusher & Pulverizer Company, St. Louis, Mo. Slicing-hammer. No. 1,020,381; Mar. 12; Sp. p. 2895; Gaz. vol. 176; p. 490.
Williams Patent Crusher and Pulverizer Company. (See Williams, Milton F., assignor.)
Williams, Peter K. (See La Borde and Williams.)
Williams, Raymond H. (See Straus, Joseph H., Jr., assignor.)
Willis, Banister L., Milan, Mo. Post-driver. No. 1,021,121; Mar. 26; Sp. p. 4479; Gaz. vol. 176; p. 828.
Willis, George W., Auburn, N. Y., assignor to International Harvester Company. Disk harrow. No. 1,021,174; Mar. 26; Sp. p. 4608; Gaz. vol. 176; p. 845.
Willis, Lilla B., Louisville, Ky. Combination dish mop and scraper. No. 1,020,866; Mar. 19; Sp. p. 3971; Gaz. vol. 176; p. 692.
Willoughby, Victor, Jeffersonville, Ind., assignor to American Car and Foundry Company, St. Louis, Mo. Collapsible shelving. No. 1,021,122; Mar. 26; Sp. p. 4482; Gaz. vol. 176; p. 828.
Willson, Arthur V. (See Alpha, Orville W., assignor.)
Willson, Frederick, and N. Bourquin, assignors to T. A. Willson & Co., Incorporated, Reading, Pa. Eye-shield spectacles. No. 1,021,175; Mar. 26; Sp. p. 4609; Gaz. vol. 176; p. 846.
Wilson, Dalton K., assignor to William Galloway Company, Waterloo, Iowa. Power-transmission device. No. 1,021,030; Mar. 26; Sp. p. 4298; Gaz. vol. 176; p. 798.
Wilson, Edward, assignor to Adreon Manufacturing Company, St. Louis, Mo. Bell-ringer. No. 1,021,304; Mar. 26; Sp. p. 5004; Gaz. vol. 176; p. 922.
Wilson, Harvey B., Dewitt, Ill. Harrow attachment for plows. No. 1,019,210; Mar. 5; Sp. p. 450; Gaz. vol. 176; p. 72.
Wilson, James S., Chelsea, Mass. Conduit. No. 1,020,672; Mar. 19; Sp. p. 3540; Gaz. vol. 176; p. 624.
Wilson, James W. (See Parsons, Wilson, and Ford.)
Wilson, James W., Rome, and W. H. Still, Utica, N. Y.; said Still assignor to said Wilson. Electric call system. No. 1,021,713; Mar. 26; Sp. p. 5722; Gaz. vol. 176; p. 1028.
Wilson, Lynn J., Lockport, Ill. Whip-holder. No. 1,019,873; Mar. 12; Sp. p. 1846; Gaz. vol. 176; p. 324.
Wilson, Mabel A., St. Louis, Mo. Bath device. No. 1,021,346; Mar. 26; Sp. p. 4963; Gaz. vol. 176; p. 906.
Wilson, Virgil A., East Point, Ga. Level. No. 1,020,733; Mar. 19; Sp. p. 3677; Gaz. vol. 176; p. 647.
Wilson, William, Birmingham, Mich. Collar coupling or fastener. No. 1,020,242; Mar. 12; Sp. p. 2637; Gaz. vol. 176; p. 447.
Wimans, Wesley G., Cleveland, Ohio. Attachment for hinged seats. No. 1,019,397; Mar. 5; Sp. p. 919; Gaz. vol. 176; p. 135.
Windhoff, Hans, Schöneberg, near Berlin, Germany. Hoisting-gear. No. 1,021,347; Mar. 26; Sp. p. 4965; Gaz. vol. 176; p. 906.
Window Glass Machine Company. (See Lubbers, John H., assignor.)
Windsor, Benjamin F. (See Luebke, August H., assignor.)
Winkley, Erastus E., Lynn, Mass. Building heels. No. 1,020,170; Mar. 12; Sp. p. 2482; Gaz. vol. 176; p. 423.
Winsor, Clifford S. (See Doolittle, Winsor, and Vergason.)
Winterstein, Fritz, and S. Nitsch, Pressburg, Austria-Hungary. Separating the solid constituents from the liquid constituents of fats or fatty substances. No. 1,020,673; Mar. 19; Sp. p. 3550; Gaz. vol. 176; p. 625.

Winton, Alexander, and H. B. Anderson, assignors to The Winton Motor Carriage Company, Cleveland, Ohio. Igniting mechanism for explosive-engines. No. 1,021,031; Mar. 26; Sp. p. 4302; Gaz. vol. 176; p. 799.
Winton Motor Carriage Company, The. (See Winton and Anderson, assignors.)
Wintner, Rudolf, Milwaukee, Wis., assignor to Power and Mining Machinery Company, New York, N. Y. Engine-valve. No. 1,021,438; Mar. 26; Sp. p. 5187; Gaz. vol. 176; p. 938.
Wise Brothers. (See Hazard, Louis A., assignor.)
Wise, Nathan, New York, N. Y. Safety gas-burner. No. 1,019,741; Mar. 5; Sp. p. 1584; Gaz. vol. 176; p. 247.
Wise, William L. (See Hastings and Wise.)
Wishman, Louis N., Kansas City, Mo. Bread-pan. No. 1,020,004; Mar. 12; Sp. p. 2129; Gaz. vol. 176; p. 366.
Witteborg, Emile J., Camden, N. J., assignor to C. B. Porter & Co., Philadelphia, Pa. Machine for folding the corners of metal pans. No. 1,020,039; Mar. 19; Sp. p. 4094; Gaz. vol. 176; p. 715.
Witthoefft, Charles H., assignor to Witthoefft Collapsible Concrete Forms Company, St. Louis, Mo. Mold for making concrete chimneys. No. 1,020,005; Mar. 12; Sp. p. 2131; Gaz. vol. 176; p. 367.
Witthoefft Collapsible Concrete Forms Company. (See Witthoefft, Charles H., assignor.)
Wlost, Gustav A., Schramberg, Germany. Resonating device. No. 1,020,243; Mar. 12; Sp. p. 2639; Gaz. vol. 176; p. 447.
Wodarra, Adolf, Friedenau, near Berlin, Germany. Tilting apparatus for emptying portable dust-bins. No. 1,021,640; Mar. 26; Sp. p. 5606; Gaz. vol. 176; p. 1008.
Wohl, Maurice J., *et al.*, trustees. (See Betts, Lewis F., assignor.)
Wolfe, James T., Washington, D. C. Fountain-pen. No. 1,019,874; Mar. 12; Sp. p. 1848; Gaz. vol. 176; p. 324.
Wolff, Herbert W., assignor to American Car and Foundry Company, St. Louis, Mo. Car-underframe. No. 1,021,123; Mar. 26; Sp. p. 4484; Gaz. vol. 176; p. 828.
Wolff, Herbert W., assignor to American Car and Foundry Company, St. Louis, Mo. Car-underframe. No. 1,021,124; Mar. 26; Sp. p. 4487; Gaz. vol. 176; p. 829.
Wolffenstein, Richard, and J. Colman, assignors to Actien Gesellschaft für Anilin Fabrikation, Berlin, Germany. Hair-dye. No. 1,019,576; Mar. 5; Sp. p. 1280; Gaz. vol. 176; p. 192.
Wood, William H., Rochester, N. Y. Combined shoe shank and filler. No. 1,021,032; Mar. 26; Sp. p. 4304; Gaz. vol. 176; p. 800.
Wood, William T., Hereford, Tex. Cut-off. No. 1,021,560; Mar. 26; Sp. p. 5464; Gaz. vol. 176; p. 982.
Wood, William T., Nashville, Tenn. Oil-burner. No. 1,020,734; Mar. 19; Sp. p. 3678; Gaz. vol. 176; p. 647.
Woodhead, Frank S., Bridgeport, Conn., assignor to The Singer Manufacturing Company. Feeding mechanism for sewing-machines. No. 1,020,068; Mar. 12; Sp. p. 2260; Gaz. vol. 176; p. 389.
Woodruff, Charles T., Urbana, Ohio. Floor-scraping machine. No. 1,021,497; Mar. 26; Sp. p. 5318; Gaz. vol. 176; p. 958.
Woodruff, William W., Canton, Miss. Sanitary mouth-piece. No. 1,019,288; Mar. 5; Sp. p. 629; Gaz. vol. 176; p. 98.
Woods, Leonard G., Pittsburgh, Pa. Journal-box. No. 1,019,109; Mar. 5; Sp. p. 221; Gaz. vol. 176; p. 35.
Woods, Norman E., Richmond, Va. Drill-socket. No. 1,019,110; Mar. 5; Sp. p. 223; Gaz. vol. 176; p. 36.
Woodward, Abner, near Marshallton, Del. Self-registering measure. No. 1,020,171; Mar. 12; Sp. p. 2484; Gaz. vol. 176; p. 423.
Woodward, Erastus, Somerville, Mass., assignor, by mesne assignments, to United Shoe Machinery Company, Paterson, N. J. Heel-attaching machine. No. 1,019,398; Mar. 5; Sp. p. 920; Gaz. vol. 176; p. 135.
Woodward, Oscar, Montclair, assignor, by mesne assignments, to Union Typewriter Company, Jersey City, N. J. Type-writing machine. No. 1,021,805; Mar. 26; Sp. p. 5097; Gaz. vol. 176; p. 923.
Woodworth, Robert B., Pittsburgh, Pa. Wheel construction. No. 1,020,060; Mar. 12; Sp. p. 2261; Gaz. vol. 176; p. 389.
Woolsey, Harry J., assignor of one-half to G. E. Schuberg, Jackson, Mich. Trolley-head. No. 1,020,172; Mar. 12; Sp. p. 2485; Gaz. vol. 176; p. 423.
Woolslare, Harry A., assignor of one-half to G. B. Henderson, Pittsburgh, Pa. Safety watch-pocket. No. 1,021,033; Mar. 26; Sp. p. 4305; Gaz. vol. 176; p. 800.
Woolslare, James A., Pittsburgh, Pa. Envelop. No. 1,020,469; Mar. 10; Sp. p. 3093; Gaz. vol. 176; p. 559.
Worcester Novelty Company. (See Hibbard, Herbert O., assignor.)
Workman Manufacturing Company. (See Bunce, Albert L., assignor.)
Workman Manufacturing Company. (See Halpin, Thomas P., assignor.)
Wormworth, Leslie, assignor of one-half to J. E. Avery, Goodlands, Manitoba, Canada. Combined mop holder and wringer. No. 1,019,577; Mar. 5; Sp. p. 1281; Gaz. vol. 176; p. 192.
Worsley, Otto G., Bangor, Mich. Vehicle-wheel. No. 1,020,338; Mar. 12; Sp. p. 2808; Gaz. vol. 176; p. 470.
Worthington, Bruce, Winchester, Va., assignor to Worthington Cotton Harvester Company. Cotton-picker. No. 1,020,867; Mar. 19; Sp. p. 3972; Gaz. vol. 176; p. 692.
Worthington Cotton Harvester Company. (See Worthington, Bruce, assignor.)
Worthington, Edgar, Hagerstown, Md. Tree-prop. No. 1,021,650; Mar. 26; Sp. p. 5608; Gaz. vol. 176; p. 1008.
Wright, Arthur, New York, N. Y. Safety-pin. No. 1,019,578; Mar. 5; Sp. p. 1282; Gaz. vol. 176; p. 192.
Wright, George, assignor to H. J. Wright, Auburn, N. Y. Spark-plug. No. 1,020,006; Mar. 12; Sp. p. 2132; Gaz. vol. 176; p. 367.
Wright, George E., Aberdeen, Md. Apparatus for washing and scalding vegetables. No. 1,019,111; Mar. 5; Sp. p. 224; Gaz. vol. 176; p. 36.
Wright, Harriet J. (See Wright, George, assignor.)
Wright, Heaton, trustee. (See Blakeley, Robert T., assignor.)
Wright, James K., New York, N. Y. Automatic engine-stop. No. 1,020,940; Mar. 19; Sp. p. 4095; Gaz. vol. 176; p. 716.
Wright, John W., Philadelphia, Pa., assignor to American Telephone and Telegraph Company, Boston, Mass. Tool for bending rings. No. 1,020,244; Mar. 12; Sp. p. 2640; Gaz. vol. 176; p. 448.
Wright, Sam F., Anna, Tex. Putty-trowel. No. 1,019,399; Mar. 5; Sp. p. 928; Gaz. vol. 176; p. 135.
Wright, Thomas, Jersey City, N. J. Coal-wagon. No. 1,019,211; Mar. 5; Sp. p. 452; Gaz. vol. 176; p. 72.
Wright, Thomas, Jersey City, N. J. Side-delivery body. No. 1,019,875; Mar. 12; Sp. p. 1840; Gaz. vol. 176; p. 326.
Wright, Thomas, Jersey City, N. J. Side-delivery door for bodies. No. 1,019,876; Mar. 12; Sp. p. 1851; Gaz. vol. 176; p. 325.
Wright, William, Chicago, and H. F. Hall, Chicago Heights, Ill. Expansion-joint. No. 1,021,082; Mar. 26; Sp. p. 4399; Gaz. vol. 176; p. 816.
Wright, William J., Franklin, Pa. Lubricating system for internal-combustion and other engines. No. 1,020,007; Mar. 12; Sp. p. 2133; Gaz. vol. 176; p. 367.
Wurmser, Eugen, Strassburg, Germany. Apparatus for cleaning and polishing boots and shoes. No. 1,020,008; Mar. 12; Sp. p. 2136; Gaz. vol. 176; p. 368.
Wyatt, Guy B. (See Hawthorne, Wyatt, and Warner.)
Wyman, James S. (See Leighton, Frederick E., assignor.)
Yale & Towne Manufacturing Company, The. (See Augenbraun, Peter F., assignor.)
Yale & Towne Manufacturing Company, The. (See Schoell, Reinhold, assignor.)
Yates, William, Upper Alton, Ill. Mat. No. 1,019,212; Mar. 5; Sp. p. 454; Gaz. vol. 176; p. 72.
Yaxley, Ernest E., Chicago, Ill. System of electrical control. No. 1,019,112; Mar. 5; Sp. p. 225; Gaz. vol. 176; p. 36.
Yaxley, Ernest E., Chicago, Ill. Timing mechanism. No. 1,019,113; Mar. 5; Sp. p. 228; Gaz. vol. 176; p. 36.
Yeo, William, Dunbar, Pa. Sand-washing apparatus. No. 1,020,868; Mar. 19; Sp. p. 3974; Gaz. vol. 176; p. 692.
Yerger, George J. (See Laingor and Yerger.)
Young, Clarence H., Boston, Mass. Couch-bed. No. 1,020,630; Mar. 19; Sp. p. 3458; Gaz. vol. 176; p. 611.
Young, Jean A., assignor of one-half to A. Benson, Millville, N. J. Mechanically-operated door-bell. No. 1,021,306; Mar. 26; Sp. p. 5101; Gaz. vol. 176; p. 923.
Youngston, James, Bear Poplar, N. C. Rail-joint. No. 1,020,070; Mar. 12; Sp. p. 2263; Gaz. vol. 176; p. 389.
Ypsilanti Lubricator Company. (See McCoy, Elijah, assignor.)
Zabel, Charles. (See Wackermann and Zabel.)
Zadig, Curt, and F. H. Kaiser, New York, N. Y. Fender for gas-stove valves. No. 1,021,034; Mar. 26; Sp. p. 4306; Gaz. vol. 176; p. 800.
Zahn, Robert, Plauen, Germany. Embroidery-machine. No. 1,020,009; Mar. 12; Sp. p. 2137; Gaz. vol. 176; p. 368.
Zahn, Robert, Plauen, Germany. Jacquard embroidery-machine. No. 1,020,010; Mar. 12; Sp. p. 2138; Gaz. vol. 176; p. 368.
Zahn, Robert, Plauen, Germany. Shuttle embroidering-machine. No. 1,020,674; Mar. 19; Sp. p. 3551; Gaz. vol. 176; p. 625.
Zarling, Henry, Sheboygan, Wis. Truck. No. 1,019,114; Mar. 5; Sp. p. 230; Gaz. vol. 176; p. 37.
Zeal, Giles H., London, England. Case for clinical thermometers. No. 1,019,280; Mar. 5; Sp. p. 631; Gaz. vol. 176; p. 99.
Zeigler, John L., Los Angeles, Cal., assignor to Vertical Condenser Company, Steam condenser and purifier. No. 1,020,675; Mar. 19; Sp. p. 3553; Gaz. vol. 176; p. 625.
Zeiss, Firm of Carl. (See Eppenstein, Otto, assignor.)
Zeiss, Firm of Carl. (See Rudolph, Paul, assignor.)
Zells, Walter E., Ann Arbor, Mich. Combined aeroplane and dirigible balloon. No. 1,019,579; Mar. 5; Sp. p. 1283; Gaz. vol. 176; p. 192.
Zerning, Hermann, Halensee, near Berlin, Germany, assignor, by mesne assignments, to The International "Z" Electric Lamp Association Limited, London, England. Producing hydrogenous compounds of tungsten and similar metals. No. 1,019,581; Mar. 5; Sp. p. 1288; Gaz. vol. 176; p. 193.
Ziemann, Henry C., Millinocket, Me. Automatic feed-regulating mechanism for paper-making machines. No. 1,019,580; Mar. 5; Sp. p. 1286; Gaz. vol. 176; p. 192.
Zimmer, Paul, Schenectady, N. Y., assignor to General Electric Company. Automatic motor-starting rheostat. No. 1,021,227; Mar. 26; Sp. p. 4724; Gaz. vol. 176; p. 863.

Zimmerman, Robert M., Montreal, Quebec, Canada, assignor to National Dump Car Company, Chicago, Ill. Dump-car. No. 1,021,083; Mar. 26; Sp. p. 4402; Gaz. vol. 176; p. 817.
Zimmerman, Robert M., Montreal, Quebec, Canada, assignor to National Dump Car Company, Chicago, Ill. Dump-car. No. 1,021,084; Mar. 26; Sp. p. 4404; Gaz. vol. 176; p. 817.
Zimmerman, Robert M., Montreal, Quebec, Canada, assignor to National Dump Car Company, Chicago, Ill. Dump-car. No. 1,021,286; Mar. 26; Sp. p. 4844; Gaz. vol. 176; p. 884.
Zimmerman, Robert M., Montreal, Quebec, Canada, assignor to National Dump Car Company, Chicago, Ill. Dump-car. No. 1,021,287; Mar. 26; Sp. p. 4846; Gaz. vol. 176; p. 884.
Zimmermann, William F., assignor to Gould & Eberhardt, Newark, N. J. Variable-speed mechanism. No. 1,021,439; Mar. 26; Sp. p. 5189; Gaz. vol. 176; p. 939.
Zipfel, Jacob J., Loleta, Pa. Tie and rail-fastener. No. 1,020,470; Mar. 19; Sp. p. 3094; Gaz. vol. 176; p. 559.
Zuegner, Louis W., and A. V. Langsdon, Chicago, Ill. Universal test-indicator. No. 1,019,400; Mar. 5; Sp. p. 929; Gaz. vol. 176; p. 135.
Zulli, Walter J., Syracuse, N. Y. Laundrying-machine. No. 1,021,498; Mar. 26; Sp. p. 5320; Gaz. vol. 176; p. 959.

ALPHABETICAL LIST OF PATENTEES OF DESIGNS.

Allen, Herbert M., Chicago, Ill. Christmas stocking. No. 42,346; Mar. 26; Gaz. vol. 176; p. 1045.
Armstrong, Andrew D., Chicago, Ill. Level. No. 42,347; Mar. 26; Gaz. vol. 176; p. 1046.
Baker, Thomas W. (See Magee, Frederick W., assignor.)
Beach, Harry L., Coshocton, Ohio, assignor to Charles E. Hires Co., Philadelphia, Pa. Stamped-metal framed picture. No. 42,266; Mar. 12; Gaz. vol. 176; p. 497.
Bennett, F. H. (See Ellis, Carleton, assignor.)
Bigelow Carpet Company. (See Elliot, William A., assignor.)
Bigelow Carpet Company. (See Loudon, Milton R., assignor.)
Bigelow Carpet Company. (See Moffat, John B., assignor.)
Bigelow Carpet Company. (See Reith, William G., assignor.)
Bigelow Carpet Company. (See Sauer, Emil G., assignor.)
Bigelow Carpet Company. (See Spring, John, assignor.)
Bigelow Carpet Company. (See Trik, Ernest W., assignor.)
Bottome, Edgar M., assignor to Fostoria Glass Company, Moundsville, W. Va. Drinking vessel or similar article. Nos. 42,348–9; Mar. 26; Gaz. vol. 176; p. 1046.
Bottome, Edgar M., Moundsville, W. Va., and H. A. Marshall, Chicago, Ill., assignors to Fostoria Glass Company, Moundsville, W. Va. Drinking vessel or similar article. No. 42,350; Mar. 26; Gaz. vol. 176; p. 1046.
Brandon, Rodney H., Anderson, Ind. Badge. No. 42,267; Mar. 12; Gaz. vol. 176; p. 497.
Brown, Morrow D. (See Peters and Brown.)
Brunswick-Balke-Collender Co., The. (See Davenport, Harmon F., assignor.)
Caldwell, Edward F., Larchmont, N. Y. Box. No. 42,251; Mar. 5; Gaz. vol. 176; p. 251.
Caldwell, Edward F., Larchmont, N. Y. Portfolio-cover. Nos. 42,351–2; Mar. 26; Gaz. vol. 176; p. 1046.
Calvert, Frank W., Narberth, assignor to The Charles E. Hires Company, Philadelphia, Pa. Ice-chest for liquid-dispensing apparatus. No. 42,268; Mar. 12; Gaz. vol. 176; p. 497.
Charles E. Hires Co. (See Beach, Harry L., assignor.)
Charles E. Hires Company, The. (See Calvert, Frank W., assignor.)
Cody, George, New York, N. Y. Plumber's trap. No. 42,315; Mar. 19; Gaz. vol. 176; p. 726.
Collins, Isaac J., Lancaster, Ohio. Pitcher or can. Nos. 42,269–70; Mar. 12; Gaz. vol. 176; p. 498.
Columbian Cutlery Company. (See Stewart, Walter G., assignor.)
Conger, Charles A., Oakland, Cal. Condiment-shaker. No. 42,271; Mar. 12; Gaz. vol. 176; p. 498.
Cooperative Foundry Company. (See Kennedy and King, assignors.)
Copper Clad Malleable Range Company. (See Scruggs, Loyd, assignor.)
Dake, Charles W., and J. E. Kilker, assignors to Pyle National Electric Headlight Company, Chicago, Ill. Casing for motors and generators. No. 42,316, Mar. 19; Gaz. vol. 176; p. 726.
Davenport, Harmon F., assignor to The Brunswick-Balke-Collender Co., Chicago, Ill. Cue-rack. No. 42,353; Mar. 26; Gaz. vol. 176; p. 1047.
De Vilbiss, Thomas A., Toledo, Ohio. Frame for air-brushes. No. 42,272; Mar. 12; Gaz. vol. 176; p. 498.
Display Vending Co. (See Whitmore, Frederick C., assignor.)
Douglas, William H., Belleville, N. J. Front-axle housing for vehicles. No. 42,317; Mar. 19; Gaz. vol. 176; p. 726.
Douglas, William H., Belleville, N. J. Vehicle-body. Nos. 42,354–5; Mar. 26; Gaz. vol. 176; p. 1047.
Dowse, William B. H., Newton, Mass. Spoon or fork. No. 42,273; Mar. 12; Gaz. vol. 176; p. 498.
E. I. Horsman Co. (See Horsman, Edward I., Jr., assignor.)
Ebeling, Phillip, assignor to Fostoria Glass Company, Moundsville, W. Va. Drinking vessel or similar article. No. 42,356; Mar. 26; Gaz. vol. 176; p. 1047.
Edmiston, Hugh C., Orange, N. J. Match-box and candle-holder. No. 42,318; Mar. 19; Gaz. vol. 176; p. 726.
Electro Dental Manufacturing Company. (See Willford, Edward B., assignor.)
Elliot, William A., Yonkers, N. Y., assignor to Bigelow Carpet Company. Carpet. Nos. 42,274–5; Mar. 12; Gaz. vol. 176; p. 499.
Erret, Joseph, Cleveland, Ohio. Automobile bow-rest. No. 42,276; Mar. 12; Gaz. vol. 176; p. 499.
Erskine, John O., Wellsburg, assignor to Jefferson Glass Company, Follansbee, W. Va. Lamp-shade. No. 42,319; Mar. 19; Gaz. vol. 176; p. 727.
Farr, Edward A., assignor to Manning, Bowman & Company, Meriden, Conn. Chafing-dish stand. No. 42,277; Mar. 12; Gaz. vol. 176; p. 499.
Fauser, Gustave M., New York, N. Y. Woven rug. No. 42,320; Mar. 19; Gaz. vol. 176; p. 727.
Fiebel, Leslie H., New York, N. Y. Jewelry ornament. Nos. 42,252–3; Mar. 5; Gaz. vol. 176; p. 251.
Fostoria Glass Company. (See Bottome, Edgar M., assignor.)
Fostoria Glass Company. (See Bottome and Marshall, assignors.)
Fostoria Glass Company. (See Ebeling, Phillip, assignor.)
Frank Mossberg Company. (See Mossberg, Frank, assignor.)
Frederick F. Ingram Company. (See Ingram, Frederick F., assignor.)
Frick Company. (See Oderman, Erik H., assignor.)
Fritchle Automobile and Battery Co., The. (See Fritchle, Oliver P., assignor.)
Fritchle, Oliver P., assignor to The Fritchle Automobile and Battery Co., Denver, Colo. Vehicle-body. No. 42,278; Mar. 12; Gaz. vol. 176; p. 499.
Gair, Robert, New York, N. Y. Dolly. Nos. 42,254–7; Mar. 5; Gaz. vol. 176; pp. 251–2.
Gair, Robert, New York, N. Y. Box-strip. No. 42,258; Mar. 5; Gaz. vol. 176; p. 252.
Gilbert, Edmund D., assignor to The S. S. White Dental Manufacturing Company, Philadelphia, Pa. Tool-handle. No. 42,321; Mar. 19; Gaz. vol. 176; p. 727.
Gillet, Alexis F., Omaha, Nebr. Tack-puller. No. 42,279; Mar. 12; Gaz. vol. 176; p. 499.
Gorman, Bernard D. (See Pearson and Gorman.)
Gredelue, Adrian, New York, N. Y., assignor to A. Michaut, Baccarat, France. Glass or similar article. Nos. 42,357–8; Mar. 26; Gaz. vol. 176; p. 1047.
Grelle, Charles E., Portland, Oreg. Lamp-post. Nos. 42,280–5; Mar. 12; Gaz. vol. 176; p. 500.
Grosvenor, Jonathan P., Worcester, Mass. Boot. No. 42,322; Mar. 19; Gaz. vol. 176; p. 727.
Hansen, Marius H., Chicago, Ill. Rim for scale-dials. No. 42,350; Mar. 26; Gaz. vol. 176; p. 1047.
Hoch, Ernest, New York, N. Y., assignor to Pacific Mills, Boston, Mass. Textile fabric or wall-paper. No. 42,323; Mar. 19; Gaz. vol. 176; p. 727.
Horsman, Edward I., Jr., assignor to E. I. Horsman Co., New York, N. Y. Doll. Nos. 42,324–5; Mar. 19; Gaz. vol. 176; pp. 727–8.
Horvath, Steven, Baxter, W. Va. Drinking-cup. No. 42,326; Mar. 19; Gaz. vol. 176; p. 728.
Huchberger, Benjamin, Chicago, Ill. Ring-setting for precious stones. No. 42,286; Mar. 12; Gaz. vol. 176; p. 501.
Huxley, Edward H., assignor to National India Rubber Company, Bristol, R. I. Rubber mat. No. 42,327; Mar. 19; Gaz. vol. 176; p. 728.
Ingram, Frederick F., assignor to Frederick F. Ingram Company, Detroit, Mich. Bottle. No. 42,287; Mar. 12; Gaz. vol. 176; p. 501.
J. L. Sommer Mfg. Co. (See Sommer, John L., assignor.)
Jefferson Glass Company. (See Erskine, John O., assignor.)
Jewel Cut Glass Company. (See Luckock, Henry R., assignor.)
Jewel Cut Glass Company. (See Luckock and Taylor, assignors.)
Jones, Joseph J., Schenectady, N. Y. Carbon-holder. No. 42,360; Mar. 26; Gaz. vol. 176; p. 1048.
Kaufmann, Max L., New York, N. Y. Base-ball scorer. No. 42,361; Mar. 26; Gaz. vol. 176; p. 1048.
Kelly, John F., assignor to Thomas Maddocks Sons Company, Trenton, N. J. Flushing-tank for water-closets. No. 42,328; Mar. 19; Gaz. vol. 176; p. 728.
Kennedy, Thomas R., and E. J. King, assignors to Cooperative Foundry Company, Rochester, N. Y. Stove. No. 42,329; Mar. 19; Gaz. vol. 176; p. 728.
Kilker, John E. (See Dake and Kilker.)
King, Edward J. (See Kennedy and King.)
Leyser, Frank L., Chicago, Ill. Ribbon-bow holder. No. 42,288; Mar. 12; Gaz. vol. 176; p. 501.
Liebmann, Rudolph, New York, N. Y. Button or similar article. Nos. 42,362–8; Mar. 26; Gaz. vol. 176; p. 1048.
Link, Charles W., Los Angeles, Cal. Automatic-top. Nos. 42,330–1; Mar. 19; Gaz. vol. 176; pp. 728–9.
Loudon, Milton R., Brooklyn, N. Y., assignor to Bigelow Carpet Company. Carpet. No. 42,289; Mar. 12; Gaz. vol. 176; p. 501.
Luckock, Henry R., assignor to Jewel Cut Glass Company, Newark, N. J. Glass vessel. No. 42,332; Mar. 19; Gaz. vol. 176; p. 729.

Luckock, Henry R., and C. H. Taylor, assignors to Jewel Cut Glass Company, Newark, N. J. Glass vessel. Nos. 42,333–6; Mar. 19; Gaz. vol. 176; pp. 729–30.
Madden, Patrick J., Chicago, Ill. Drinking-fountain. No. 42,364; Mar. 26; Gaz. vol. 176; p. 1048.
Magee, Frederick W., assignor of one-half to T. W. Baker, London, Ontario, Canada. Gas-lamp body. No. 42,365; Mar. 26; Gaz. vol. 176; p. 1048.
Manning, Bowman & Company. (See Farr, Edward A., assignor.)
Marshall, Hayden A. (See Bottome and Marshall.)
McKinney, James P., Pittsburgh, Pa. Hinge. No. 42,259; Mar. 5; Gaz. vol. 176; p. 252.
Michaut, Adrian. (See Gredelue, Adrian, assignor.)
Moffat, John B., Bronxville, N. Y., assignor to Bigelow Carpet Company. Rug. Nos. 42,291–2; Mar. 12; Gaz. vol. 176; p. 501.
Moffat, John B., Bronxville, N. Y., assignor to Bigelow Carpet Company. Carpet. No. 42,293; Mar. 12; Gaz. vol. 176; p. 502.
Monier, Frederick C., assignor to North & Judd Manufacturing Company, New Britain, Conn. Bridle-check. No. 42,366; Mar. 26; Gaz. vol. 176; p. 1049.
Mortenson, Thomas, Middletown, N. Y. Drinking-glass or similar article. No. 42,367; Mar. 26; Gaz. vol. 176; p. 1049.
Mossberg, Frank, Attleboro, Mass., assignor to Frank Mossberg Company. Combination-tool. No. 42,368; Mar. 26; Gaz. vol. 176; p. 1049.
Munier, Emile, Jersey City, N. J., assignor to Pacific Mills, Boston, Mass. Textile fabric or wall-paper. No. 42,337; Mar. 19; Gaz. vol. 176; p. 730.
National India Rubber Company. (See Huxley, Edward H., assignor.)
North & Judd Manufacturing Company. (See Monier, Frederick C., assignor.)
Ober Manufacturing Company, The. (See Walt and White, assignors.)
Oderman, Erik H., assignor to Frick Company, Waynesboro, Pa. Machine-frame. No. 42,294; Mar. 12; Gaz. vol. 176; p. 502.
Pacific Mills. (See Hoch, Ernest, assignor.)
Pacific Mills. (See Munier, Emile, assignor.)
Pape, Herman G., Buffalo, N. Y. Acoustic earpiece. No. 42,295; Mar. 12; Gaz. vol. 176; p. 502.
Pearson, Simon E., and B. D. Gorman, Genoa, Nebr. Type-writer table. No. 42,296; Mar. 12; Gaz. vol. 176; p. 502.
Peters, Louis G., and M. D. Brown, Denver, Colo. Germ-exterminator for drinking-receptacles. No. 42,297; Mar. 12; Gaz. vol. 176; p. 502.
Potter, Leo, New York, N. Y. Hand-bag. Nos. 42,369–72; Mar. 26; Gaz. vol. 176; pp. 1049–50.
Pressler, Adolf W., Keene, N. H. Rocking-horse. Nos. 42,373–4; Mar. 26; Gaz. vol. 176; p. 1050.
Pritchard, Albert R., Rochester, N. Y. Lantern. No. 42,338; Mar. 19; Gaz. vol. 176; p. 730.
Pyle National Electric Headlight Company. (See Dake and Kilker, assignors.)
Rainey, George, Enid, Okla. Insect-trap. No. 42,298; Mar. 12; Gaz. vol. 176; p. 503.
Reith, William G., New York, N. Y., assignor to Bigelow Carpet Company. Rug. No. 42,200; Mar. 12; Gaz. vol. 176; p. 503.
Rochester Stamping Company. (See Swan, Alfred H. S., assignor.)
S. S. White Dental Manufacturing Company, The. (See Gilbert, Edmund D., assignor.)
Sanford, Andrew J., Newark, Ohio. Glass vessel. No. 42,260; Mar. 5; Gaz. vol. 176; p. 252.
Sauer, Emil G., Richmond Hill, N. Y., assignor to Bigelow Carpet Company. Carpet. Nos. 42,300–3; Mar. 12; Gaz. vol. 176; p. 503.
Sauer, Emil G., Richmond Hill, N. Y., assignor to Bigelow Carpet Company. Rug. No. 42,304; Mar. 12; Gaz. vol. 176; p. 504.
Schultze, Carl E., New York, N. Y. Statuette. Nos. 42,261–2; Mar. 5; Gaz. vol. 176; pp. 252–3.
Scruggs, Loyd, assignor to Copper Clad Malleable Range Company, St. Louis, Mo. Coal-range. No. 42,375; Mar. 26; Gaz. vol. 176; p. 1050.
Sherman, Alvin G., Detroit, Mich. Gas-burner. No. 42,339; Mar. 19; Gaz. vol. 176; p. 730.
Sommer, John L., Newark, N. J., assignor to J. L. Sommer Mfg. Co. Bottle-opener. Nos. 42,305–6; Mar. 12; Gaz. vol. 176; p. 504.
Spring, John, New York, N. Y., assignor to Bigelow Carpet Company. Carpet. Nos. 42,307–8; Mar. 12; Gaz. vol. 176; p. 504.
Starch, Benjamin and E., La Crosse, Wis. Centrifugal-separator frame. No. 42,309; Mar. 12; Gaz. vol. 176; p. 504.
Starch, Emil. (See Starch, Benjamin and E.)
Stewart, Elsie, Germania, Iowa. Pincushion. No. 42,340; Mar. 19; Gaz. vol. 176; p. 730.
Stewart, Walter G., assignor to Columbian Cutlery Company, Reading, Pa. Grass-hook. No. 42,310; Mar. 12; Gaz. vol. 176; p. 505.
Swan, Alfred H. S., assignor to Rochester Stamping Company, Rochester, N. Y. Chafing-dish. Nos. 42,341–2; Mar. 19; Gaz. vol. 176; p. 731.
Taylor, Charles H. (See Luckock and Taylor.)
Thomas Maddocks Sons Company. (See Kelly, John F., assignor.)
Torluemke, Herman, St. Louis, Mo. Toy. No. 42,376; Mar. 26; Gaz. vol. 176; p. 1050.
Trik, Ernest W., Brooklyn, N. Y., assignor to Bigelow Carpet Company. Carpet. Nos. 42,311–13; Mar. 12; Gaz. vol. 176; p. 505.
Trimont Manufacturing Company. (See Vinton, John H., assignor.)
Tyson Company, The. (See Tyson, Frank, assignor.)
Tyson, Frank, assignor to The Tyson Company, Canton, Ohio. Ice-cream-freezer base. No. 42,377; Mar. 26; Gaz. vol. 176; p. 1051.
Vinton, John H., Jamaica Plain, Mass., assignor to Trimont Manufacturing Company, Boston, Mass. Housing for wrenches. No. 42,343; Mar. 19; Gaz. vol. 176; p. 731.
Walt, George E., and J. R. White, assignors to The Ober Manufacturing Company, Chagrin Falls, Ohio. Sad-iron handle. No. 42,344; Mar. 19; Gaz. vol. 176; p. 731.
Wallis, Frederick H., Minneapolis, Minn. Street-lamp. No. 42,263; Mar. 5; Gaz. vol. 176; p. 253.
Wheeler, Thomas A. J., Ivanhoe, Tex. Jack-screw stand and lifter. No. 42,378; Mar. 26; Gaz. vol. 176; p. 1051.
Wheelock, Edwin M., Winona, Minn. Traction-wheel. No. 42,264; Mar. 5; Gaz. vol. 176; p. 253.
White, James R. (See Walt and White.)
Whitmore, Frederick C., New York, N. Y., assignor to Display Vending Co. Cabinet for vending-machines. No. 42,265; Mar. 5; Gaz. vol. 176; p. 253.
Wilford, Edward B., Merion, assignor to Electro Dental Manufacturing Company, Philadelphia, Pa. Valve. No. 42,314; Mar. 12; Gaz. vol. 176; p. 505.
Woods Evertz Stove Co. (See Woods, William W., assignor.)
Woods, William W., assignor to Woods Evertz Stove Co., Springfield, Mo. Stove. No. 42,345; Mar. 19; Gaz. vol. 176; p. 731.

ALPHABETICAL LIST OF REGISTRANTS OF TRADE-MARKS.

A. C. Lawrence Leather Co., Boston, Mass. Finished leather. No. 85,911; Mar. 26; Gaz. vol. 176; p. 1067.
Alaska Packers Association, San Francisco, Cal. Canned salmon. No. 85,720; Mar. 12; Gaz. vol. 176; p. 521.
Alberty, Ada M., Seattle, Wash. Food for infants and invalids. No. 85,637; Mar. 5; Gaz. vol. 176; p. 269.
Alwin Manufacturing Company, Chicago, Ill. Go-carts. No. 85,788; Mar. 19; Gaz. vol. 176; p. 745.
American Paper Goods Company, The, Montclair, N. J., and Kensington, Conn. Paper bags and drinking-cups. No. 85,721; Mar. 12; Gaz. vol. 176; p. 521.
American Pin Company, Waterbury, Conn. Safety-pins. No. 85,638; Mar. 5; Gaz. vol. 176; p. 269.
American Steel & Wire Company of New Jersey, The, Hoboken, N. J. Barb-wire. No. 85,639; Mar. 5; Gaz. vol. 176; p. 269.
Ames Shovel and Tool Company, Jersey City, N. J., and Boston, Mass. Shovels, spades, scoops, and drainage-tools. Nos. 85,722–3; Mar. 12; Gaz. vol. 176; p. 521.
Ames Shovel and Tool Company, Jersey City, N. J., and Boston, Mass. Shovels, spades, scoops, and drainage-tools. Nos. 85,789–90; Mar. 19; Gaz. vol. 176; p. 745.
Andrew Jergens Co., New York, N. Y., and Cincinnati, Ohio. Toilet soaps. No. 85,749; Mar. 12; Gaz. vol. 176; p. 522.
Ascione & Company, A., New York, N. Y. Canned tomatoes. No. 85,724; Mar. 12; Gaz. vol. 176; p. 521.
Atlanta Agricultural Works, Atlanta, Ga. Fertilizer-distributers and harrows. No. 85,896; Mar. 26; Gaz. vol. 176; p. 1066.
Atlanta Agricultural Works, Atlanta, Ga. Cultivators. No. 85,897; Mar. 26; Gaz. vol. 176; p. 1066.
Atlantic Packing Co., The, Baltimore, Md. Oysters in cans. No. 85,725; Mar. 12; Gaz. vol. 176; p. 521.
Bagley, Wm. W., New York, N. Y. Chewing-gum. No. 85,640; Mar. 5; Gaz. vol. 176; p. 269.
Ballkards Company, The, Cleveland, Ohio. Playing-cards. No. 85,726; Mar. 12; Gaz. vol. 176; p. 521.
Banner Rock Products Company, Alexandria, Ind. Thermal insulation. No. 85,641; Mar. 5; Gaz. vol. 176; p. 269.
Banthien, Gustav, Hamburg, Germany. Preparation for making bouillon. No. 85,701; Mar. 19; Gaz. vol. 176; p. 745.
Barrett Manufacturing Company, New York, N. Y. Disinfectants, &c. No. 85,792; Mar. 19; Gaz. vol. 176; p. 745.
Beattie Manufacturing Company, Little Falls, N. J. Velvet rugs. No. 85,642; Mar. 5; Gaz. vol. 176; p. 269.
Big Bend Milling Co., The, Davenport, Wash. Wheat-flour. No. 85,643; Mar. 5; Gaz. vol. 176; p. 269.
Birdsey-Somers Co., New York, N. Y. Corset and underwaists. No. 85,644; Mar. 5; Gaz. vol. 176; p. 269.
Birmingham Macaroni Company, Birmingham, Ala. Macaroni-paste. No. 85,899; Mar. 26; Gaz. vol. 176; p. 1066.
Booth, Thomas C., New York, N. Y. Face-creams. No. 85,701; Mar. 5; Gaz. vol. 176; p. 270.
Borrelli & Vitelli, New York, N. Y. Certain kinds of coral jewelry. No. 85,645; Mar. 5; Gaz. vol. 176; p. 269.
Boyd Medicine Co., Detroit, Mich. Remedy for rheumatism. No. 85,843; Mar. 26; Gaz. vol. 176; p. 1065.
Bryant Box Company, Westfield, Mass. Lunch-boxes. No. 85,793; Mar. 19; Gaz. vol. 176; p. 745.
Burke & James, Chicago, Ill., assignor to Burke & James, Inc. Certain chemicals. No. 85,702; Mar. 5; Gaz. vol. 176; p. 271.
Burress, Zera L., Anderson, S. C. Remedies for cattle. No. 85,703; Mar. 5; Gaz. vol. 176; p. 271.
Cable & Sons, New York, N. Y. Pianos and player-pianos. No. 85,646; Mar. 5; Gaz. vol. 176; p. 269.
California Wine Association, San Francisco, Cal. Wines. No. 85,844; Mar. 26; Gaz. vol. 176; p. 1065.
Camp Chocolate Co., McKeesport, Pa. Sweetened popcorn. No. 85,728; Mar. 12; Gaz. vol. 176; p. 521.
Capmetone Chemical Co., Suffolk, Va. Remedies for certain ailments. No. 85,794; Mar. 19; Gaz. vol. 176; p. 745.
Carl Lindstrom Aktien Gesellschaft, Berlin, Germany. Talking-machines, disks, records, &c. No. 85,822; Mar. 19; Gaz. vol. 176; p. 746.
Cayey-Caguas Tobacco Company, New York, N. Y. Cigars, cheroots, and cigarettes. No. 85,900; Mar. 26; Gaz. vol. 176; p. 1066.
"Celrox" Ltd., London, England. Medicated wine. No. 85,795; Mar. 19; Gaz. vol. 176; p. 745.
Central California Canneries, San Francisco, Cal. Canned fruits. No. 85,647; Mar. 5; Gaz. vol. 176; p. 269.
Central California Canneries, San Francisco, Cal. Canned fruits. No. 85,729; Mar. 12; Gaz. vol. 176; p. 521.
Century Shoe Co., Ltd., Macungie, Pa. Boots and shoes. No. 85,796; Mar. 19; Gaz. vol. 176; p. 745.
Charbonnet, Peter G., New Orleans, La. Ointments and remedies for certain diseases. No. 85,705; Mar. 5; Gaz. vol. 176; p. 271.
Chester Kent & Company, Jersey City, N. J., and Boston, Mass. Salve. No. 85,869; Mar. 26; Gaz. vol. 176; p. 1065.
Clark & Dupré Wringer Mop Co., Worcester, Mass. Combined brush, scraper, mop, and wringer. No. 85,730; Mar. 12; Gaz. vol. 176; p. 521.
Clark-Hutchinson Company, Boston, Mass. Boots and shoes. No. 85,648; Mar. 5; Gaz. vol. 176; p. 269.
Cleveland Milling Company, The, Cleveland, Ohio. Flour. No. 85,731; Mar. 12; Gaz. vol. 176; p. 521.
Cocoanut Grove Citrus Grower's Association, The, Cocoanut Grove, Fla. Oranges, lemons, grape-fruit, tangerines, and limes. No. 85,649; Mar. 5; Gaz. vol. 176; p. 269.
Collin Valve Company, The, Bridgeport, Conn. Steam-valves. No. 85,732; Mar. 12; Gaz. vol. 176; p. 521.
Colt and Dixon Packing and Manufacturing Company, The, Frederick, Md. Canned vegetables. No. 85,797; Mar. 19; Gaz. vol. 176; p. 745.
Consumers Company, Chicago, Ill. Hydrogen-peroxid. No. 85,846; Mar. 26; Gaz. vol. 176; p. 1065.
Cormier, Neville, Crowley, La. Cancer remedy. No. 85,706; Mar. 5; Gaz. vol. 176; p. 271.
Crosse & Blackwell, Limited, London, England. Pickles. No. 85,798; Mar. 19; Gaz. vol. 176; p. 745.
Daniel, Jno. B., Atlanta, Ga. Nerve and blood tonic. No. 85,847; Mar. 26; Gaz. vol. 176; p. 1065.
Danzer, Henry Paris, France. Certain scientific appliances. No. 85,848; Mar. 26; Gaz. vol. 176; p. 1065.
Diongs Medical Company, Englewood, Colo. Remedy for diseases of the lungs. No. 85,849; Mar. 26; Gaz. vol. 176; p. 1065.
Doman, Louis G., New York, N. Y. Cream for the skin. No. 85,901; Mar. 26; Gaz. vol. 176; p. 1066.
Downing, Louis L., Cumberland, Md. Bread. No. 85,651; Mar. 5; Gaz. vol. 176; p. 269.
Dr. Peter Fahrney & Sons Co., Chicago, Ill. Tonic and blood remedy. No. 85,853; Mar. 26; Gaz. vol. 176; p. 1065.
Du Pont, Francis I., Wilmington, Del. Triangular rulers. No. 85,850; Mar. 26; Gaz. vol. 176; p. 1065.
Eagle Tannery, San Francisco, Cal. Harness, saddle, and sole leather. No. 85,734; Mar. 12; Gaz. vol. 176; p. 521.
Earnshaw Knitting Company, Chicago, Ill. Undershirts. No. 85,801; Mar. 19; Gaz. vol. 176; p. 745.
Eilers Music Company, San Francisco, Cal. Pianos. No. 85,652; Mar. 5; Gaz. vol. 176; p. 269.
Eitingon, Waldemar, New York, N. Y. Calfskins. No. 85,802; Mar. 19; Gaz. vol. 176; p. 745.
Empire Shellac Company, Boston, Mass. Varnishes and varnish-gums. Nos. 85,902–3; Mar. 26; Gaz. vol. 176; p. 1066.
Empire State Wine Co., Penn Yan, N. Y. Sparkling wine. No. 85,851; Mar. 26; Gaz. vol. 176; p. 1065.
Engel, Jacob A., Syracuse, N. Y. Fertilizer. No. 85,735; Mar. 12; Gaz. vol. 176; p. 521.
Enteronol Company, The, Tempe, Ariz., and Oswego, N. Y. Remedy in tablet form for certain diseases. No. 85,707; Mar. 5; Gaz. vol. 176; p. 271.
Enterprise Manufacturing Company of Pennsylvania, The, Philadelphia, Pa. Certain kinds of cutlery. No. 85,904; Mar. 26; Gaz. vol. 176; p. 1066.
F. B. Washburn & Co., Brockton, Mass. Candy. No. 85,697; Mar. 5; Gaz. vol. 176; p. 270.
F. F. Dalley Co. of Hamilton, Limited, Hamilton, Ontario, Canada. Stove-polish. No. 85,733; Mar. 12; Gaz. vol. 176; p. 521.
F. G. Klein Co., Burlington, Wis. Certain non-alcoholic beverages. No. 85,663; Mar. 5; Gaz. vol. 176; p. 269.
Faber, A. W., Stein and Berlin, Germany. Pencils. No. 85,852; Mar. 26; Gaz. vol. 176; p. 1065.
Fennyery, Lether J., Longmeadow, Mass. Liniment. No. 85,854; Mar. 26; Gaz. vol. 176; p. 1065.
Fernandez, Rodrigo, Key West, Fla. Cigars. No. 85,855; Mar. 26; Gaz. vol. 176; p. 1065.
Force, Willard B., New York, N. Y. Certain pharmaceutical preparations. No. 85,856; Mar. 26; Gaz. vol. 176; p. 1065.
Frank, Edwin G., Philadelphia, Pa. Washing compound. No. 85,737; Mar. 12; Gaz. vol. 176; p. 521.
Fred F. Field Company, Brockton, Mass. Leather boots and shoes. No. 85,736; Mar. 12; Gaz. vol. 176; p. 521.
Frederick City Packing Company, Frederick, Md. Canned fruits and vegetables. No. 85,653; Mar. 5; Gaz. vol. 176; p. 269.

Frederick Osann Company, New York, N. Y. Certain kinds of machines. No. 85,830; Mar. 19; Gaz. vol. 176; p. 746.
Fulton-Bell Company, New York, N. Y. Electric liquid mixing and heating machines. No. 85,857; Mar. 26; Gaz. vol. 176; p. 1065.
G. E. Barbour Company, Limited, St. John, New Brunswick, Canada. Tea. No. 85,896; Mar. 26; Gaz. vol. 176; p. 1066.
G. W. Carnrick Company, New York, N. Y. Digestive-ferment product. No. 85,704; Mar. 5; Gaz. vol. 176; p. 271.
Gandy Belting Company of Baltimore City, The, Baltimore, Md. Belt-dressing. No. 85,803; Mar. 19; Gaz. vol. 176; p. 745.
Gardiner, Beardsell & Company, Boston, Mass. Shoe-counters. Nos. 85,804–5; Mar. 19; Gaz. vol. 176; p. 745.
Gautier Frères, Aigre, France. Liqueurs. No. 85,654; Mar. 5; Gaz. vol. 176; p. 269.
Gearless Automatic Pump Co., Rock Island, Ill. Automatic pumps and parts thereof. No. 85,738; Mar. 12; Gaz. vol. 176; p. 521.
Geo. A. Alden & Co., Boston, Mass. Shellac in gum or solid form. No. 85,895; Mar. 26; Gaz. vol. 176; p. 1066.
Geo. R. Gibson Co., New York, N. Y. Toilet-brushes. No. 85,730; Mar. 12; Gaz. vol. 176; p. 521.
Gill Brothers Company, Steubenville, Ohio. Certain glassware. No. 85,906; Mar. 19; Gaz. vol. 176; p. 745.
Glt Mfg. Co., Westfield, Mass. Paste soap. No. 85,858; Mar. 26; Gaz. vol. 176; p. 1065.
Goldman Costume Company, New York, N. Y. Silk and cotton dresses. No. 85,808; Mar. 19; Gaz. vol. 176; p. 745.
Gossler Bros., New York, N. Y. Whiskies and cordials. No. 85,809; Mar. 19; Gaz. vol. 176; p. 745.
Gottfried Brewing Company, Chicago, Ill. Lager-beer. No. 85,740; Mar. 12; Gaz. vol. 176; p. 521.
Goudard and Menneeson, M., Paris, France. Carbureters, explosion-motor radiators, pumps, and lubricators. No. 85,655; Mar. 5; Gaz. vol. 176; p. 269.
Green & Green Company, The, Dayton, Ohio. Crackers. No. 85,741; Mar. 12; Gaz. vol. 176; p. 521.
Grove, Prager & Miller, Baltimore, Md. Cream-cheese. No. 85,742; Mar. 12; Gaz. vol. 176; p. 521.
H. A. Metz & Co., New York, N. Y. Remedy for certain diseases. No. 85,760; Mar. 12; Gaz. vol. 176; p. 522.
H. G. Lipscomb & Co., Nashville, Tenn. Certain tools. No. 85,755; Mar. 12; Gaz. vol. 176; p. 522.
Haden, John B., Galveston, Tex. Remedy for diseases of the eye. No. 85,859; Mar. 26; Gaz. vol. 176; p. 1065.
Hall & Carpenter, Philadelphia, Pa. Asbestos and cement griddles. No. 85,743; Mar. 12; Gaz. vol. 176; p. 521.
Haltiwanger-Taylor Drug Co., Atlanta, Ga. Remedy for affections of the bowels. No. 85,810; Mar. 19; Gaz. vol. 176; p. 745.
Hammond & Gray, assignors to Pi-Ki Pile Remedy Co., Attica, Ind. Salve. No. 85,811; Mar. 19; Gaz. vol. 176; p. 745.
Hammondsport Wine Company, Hammondsport, N. Y. Wine. No. 85,744; Mar. 12; Gaz. vol. 176; p. 521.
Harper, Herbert, New Bedford, Mass. Gravy-salt. No. 85,812; Mar. 19; Gaz. vol. 176; p. 745.
Harris, Moses H., New York, N. Y. Eyeglass clips or guards. No. 85,860; Mar. 26; Gaz. vol. 176; p. 1065.
Harrison, David A., Los Angeles, Cal. Breakfast foods. No. 85,745; Mar. 12; Gaz. vol. 176; p. 521.
Harry C. Lee & Co., New York, N. Y. Tennis-rackets. No. 85,754; Mar. 12; Gaz. vol. 176; p. 522.
Hawes Corset Co., The, Bridgeport, Conn. Corsets. No. 85,656; Mar. 5; Gaz. vol. 176; p. 269.
Hawk Fish Company, Seattle, Wash. Canned salmon. No. 85,746; Mar. 12; Gaz. vol. 176; p. 521.
Hayward, Wm. H., New York, N. Y. Cleaning-powder. No. 85,861; Mar. 26; Gaz. vol. 176; p. 1065.
Healy, Frank D., New York, N. Y. Certain kinds of jewelry. No. 85,862; Mar. 26; Gaz. vol. 176; p. 1065.
Hellen, William H., Uniontown, Pa. Pineapple-jack. No. 85,747; Mar. 12; Gaz. vol. 176; p. 521.
Heller Brothers Co., Newark, N. J. Certain tools. No. 85,708; Mar. 5; Gaz. vol. 176; p. 271.
Hewlett Bros. Co., Salt Lake City, Utah. Blended coffee and tea. No. 85,657; Mar. 5; Gaz. vol. 176; p. 269.
Hill Publishing Company, New York, N. Y. Weekly periodical. No. 85,863; Mar. 26; Gaz. vol. 176; p. 1065.
Hinkle Capsule Company, Mayfield, Ky. Remedy for gonorrhea, gleet, &c. No. 85,709; Mar. 5; Gaz. vol. 176; p. 271.
Hirst & Begley Linseed Co., Chicago, Ill. Vegetable oils. No. 85,814; Mar. 19; Gaz. vol. 176; p. 745.
Hoke, B. H., Coalport, Pa. Medicine in powder form for use in certain diseases. No. 85,710; Mar. 5; Gaz. vol. 176; p. 271.
Holland Medicine Company, Scranton, Pa., assignor to Oprechte Haarlemmer Olie Fabriek (Voorheen onder de firma G. de Koning Tilly), Haarlem, Netherlands. Medicinal plasters. No. 85,815; Mar. 19; Gaz. vol. 176; p. 745.
Holt Manufacturing Company, The, Stockton, Cal. Lubricating-oils. No. 85,748; Mar. 12; Gaz. vol. 176; p. 521.
Holt Manufacturing Company, The, Stockton, Cal. Engines, harvesters, and road-working machines. No. 85,816; Mar. 19; Gaz. vol. 176; p. 745.
Holway, Alvah W., assignor to I. X. L. Poison Fly Paper Company, Boston, Mass. Poisonous fly-paper. No. 85,817; Mar. 19; Gaz. vol. 176; p. 746.
Hon Kano Shoten, Mikage Town, Japan. Japanese sake. No. 85,773; Mar. 12; Gaz. vol. 176; p. 522.
I. X. L. Poison Fly Paper Company. (See Holway, Alvah W., assignor.)
Illinois Watch Case Co., Elgin, Ill. Watchcases. No. 85,864; Mar. 26; Gaz. vol. 176; p. 1065.
Independent Salt Co., Brooklyn, N. Y. Salt. No. 85,865; Mar. 26; Gaz. vol. 176; p. 1065.
Ingersoll-Rand Company, Phillipsburg, N. J., and New York, N. Y. Rock-drills. No. 85,658; Mar. 5; Gaz. vol. 176; p. 269.
Ingersoll-Rand Company, Phillipsburg, N. J., and New York, N. Y. Lubricating-oils. No. 85,906; Mar. 26; Gaz. vol. 176; p. 1066.
Ingersoll-Rand Company, Phillipsburg, N. J., and New York, N. Y. Rock-drills. No. 85,907; Mar. 26; Gaz. vol. 176; p. 1067.
Iroquois Iron Works, Buffalo, N. Y. Fire-wagons and melting-kettles. No. 85,818; Mar. 19; Gaz. vol. 176; p. 746.
J. G. Davis Co., Rochester, N. Y. Wheat-flour. No. 85,650; Mar. 5; Gaz. vol. 176; p. 269.
J. J. Saville & Company, Limited, Sheffield, England. Tool-steel. No. 85,920; Mar. 26; Gaz. vol. 176; p. 1067.
James McCord Company. (See Sprague, Warner & Company.)
Jamestown Brewing Company, Jamestown, N. Y. Beer. No. 85,866; Mar. 26; Gaz. vol. 176; p. 1065.
Japanese Tissue Mills, Holyoke, Mass. Toilet-paper. Nos. 85,659–60; Mar. 5; Gaz. vol. 176; p. 269.
Jewett & Sherman Company, Milwaukee, Wis. Coffees and certain spices. No. 85,661; Mar. 5; Gaz. vol. 176; p. 269.
John Carter and Company, Incorporated, Boston, Mass. Writing and printing paper. No. 85,845; Mar. 26; Gaz. vol. 176; p. 1065.
Johnstone, Robert L., New York, N. Y. Chewing-gum. No. 85,750; Mar. 12; Gaz. vol. 176; p. 522.
Joseph Dixon Crucible Co., Jersey City, N. J. Lubricating-grease. Nos. 85,799–800; Mar. 19; Gaz. vol. 176; p. 745.
Kabua Rubber Company, New York, N. Y. Rubber erasers and bands. Nos. 85,867–8; Mar. 26; Gaz. vol. 176; p. 1065.
Kelley-How-Thomson Co., Duluth, Minn. Asphalt roofing. No. 85,751; Mar. 12; Gaz. vol. 176; p. 522.
Keim, Peter D., Kalamazoo, Mich. Card game. No. 85,819; Mar. 19; Gaz. vol. 176; p. 746.
Kentucky Supply Co., Memphis, Tenn. Gin. No. 85,820; Mar. 19; Gaz. vol. 176; p. 746.
Keystone Steel & Wire Company, Peoria, Ill. Barb-wire. No. 85,908; Mar. 26; Gaz. vol. 176; p. 1067.
Kirkman & Son, W. C., Stockton, Cal. Potatoes. No. 85,662; Mar. 5; Gaz. vol. 176; p. 269.
Kohler, Charles, New York, N. Y. Pianos and piano-players. No. 85,870; Mar. 26; Gaz. vol. 176; p. 1065.
Koubek, August, Chicago, Ill. Medicinal tonic. No. 85,821; Mar. 19; Gaz. vol. 176; p. 746.
Krupka, Samuel G., Bridgeport, Conn. Mattresses. No. 85,752; Mar. 12; Gaz. vol. 176; p. 522.
L. C. Nicholson Co., The, Indianapolis, Ind. Cigars. No. 85,876; Mar. 26; Gaz. vol. 176; p. 1066.
L. P. Larson, Jr. Company, Chicago, Ill. Chewing-gum. No. 85,910; Mar. 26; Gaz. vol. 176; p. 1067.
L. S. Starrett Co., The, Athol, Mass. Certain machinery and tools. No. 85,923; Mar. 26; Gaz. vol. 176; p. 1067.
Lake Region Packing Association, Tavares, Fla. Oranges, lemons, grape-fruit, tangerines, and limes. No. 85,909; Mar. 26; Gaz. vol. 176; p. 1067.
Lanman & Kemp, New York, N. Y. Hair-tonic. No. 85,753; Mar. 12; Gaz. vol. 176; p. 522.
Liberty Vending Co., New York, N. Y. Vending-machines. No. 85,664; Mar. 5; Gaz. vol. 176; p. 269.
Lips, Carl H., New York, N. Y. Skin-stain removers. No. 85,711; Mar. 5; Gaz. vol. 176; p. 271.
Little Giant Punch & Shear Co., Sparta, Ill. Iron punching and shearing machines. No. 85,823; Mar. 19; Gaz. vol. 176; p. 746.
Lomelino Emanuel F., Springfield, Ill. Flour and flavoring extracts. No. 85,824; Mar. 19; Gaz. vol. 176; p. 746.
Lowry & Bro., Alfred, Philadelphia, Pa. Canned fruits, vegetables, salmon, dried currants, and raisins. No. 85,665; Mar. 5; Gaz. vol. 176; p. 269.
Maatschappij tot Exploitatie van Rademaker's Koninklijkes Cacao & Chocoladefabrieken, The Hague, Netherlands. Candy. No. 85,756; Mar. 12; Gaz. vol. 176; p. 522.
Madam Marie, Chicago, Ill. Preparation for the skin. No. 85,825; Mar. 19; Gaz. vol. 176; p. 746.
Magnolia Paper Co., Houston, Tex. Wrapping-paper. Nos. 85,872–3; Mar. 26; Gaz. vol. 176; p. 1066.
Magnolia Petroleum Company, Galveston and Dallas, Tex. Gasolene. No. 85,912; Mar. 26; Gaz. vol. 176; p. 1067.
Manischewitz, Behr, Cincinnati, Ohio. Matzos. No. 85,666; Mar. 5; Gaz. vol. 176; p. 269.
Martins-Birmingham Limited, Birmingham, England. Golf-balls. Nos. 85,757–8; Mar. 12; Gaz. vol. 176; p. 522.
McCord-Brady Company, Omaha, Nebr. Certain foods. No. 85,668; Mar. 5; Gaz. vol. 176; p. 270.
McDonald Milling Company, McDonald, Pa. Wheat-flour. No. 85,669; Mar. 5; Gaz. vol. 176; p. 270.
McDonald Milling Company, McDonald, Pa. Cornmeal. No. 85,670; Mar. 5; Gaz. vol. 176; p. 270.
McLeish, Wm., Appleton, Wis. Car movers and pushers. No. 85,759; Mar. 12; Gaz. vol. 176; p. 522.

Meteor Carbon Company, Charleston and Stonecoal, W. Va. Carbon-black. No. 85,671; Mar. 5; Gaz. vol. 176; p. 270.
Meyer, Arnold O., Hamburg, Germany. Certain kinds of cheeses. No. 85,874; Mar. 26; Gaz. vol. 176; p. 1066.
Michelin Tire Company, Milltown, N. J. Pneumatic tires for automobiles. No. 85,761; Mar. 12; Gaz. vol. 176; p. 522.
Michigan Milling Company, Ann Arbor, Mich. Wheat-flour, cornmeal, and Graham flour. No. 85,672; Mar. 5; Gaz. vol. 176; p. 270.
Michigan Milling Company, Ann Arbor, Mich. Wheat-flour. No. 85,762; Mar. 12; Gaz. vol. 176; p. 522.
Michod, Charles L., Los Angeles, Cal. Steel fence posts and poles. No. 85,914; Mar. 26; Gaz. vol. 176; p. 1067.
Microutsicos, Spyros A., New York, N. Y. Olive-oil diluted with cotton-seed oil. No. 85,826; Mar. 19; Gaz. vol. 176; p. 746.
Monolith Steel Co., Inc., Washington, D. C. Iron and steel bars and reticulated metal. No. 85,915; Mar. 26; Gaz. vol. 176; p. 1067.
Moore & Co., E. B., New York, N. Y. Mixed silk and worsted piece goods. No. 85,673; Mar. 5; Gaz. vol. 176; p. 270.
Morrow-Lawton Company, New York, N. Y. Breakfast cereals made of oats. No. 85,763; Mar. 12; Gaz. vol. 176; p. 522.
N. K. Fairbank Company, The, Chicago, Ill. Cooking compound containing cotton-seed oil and oleo-stearin. No. 85,905; Mar. 26; Gaz. vol. 176; p. 1066.
Nashville Hardwood Flooring Company, West Nashville, Tenn. Flooring, edge-strips for floors, &c. No. 85,764; Mar. 12; Gaz. vol. 176; p. 522.
Nashville Roller Mills, Nashville, Tenn. Wheat-flour. No. 85,827; Mar. 19; Gaz. vol. 176; p. 746.
National Biscuit Company, Jersey City, N. J., and New York, N. Y. Biscuits. Nos. 85,916–17; Mar. 26; Gaz. vol. 176; p. 1067.
National Insulator Co., Boston, Mass. Waterproofing and protective paint. No. 85,765; Mar. 12; Gaz. vol. 176; p. 522.
New York Belting & Packing Co. Ltd., New York, N. Y., and Passaic, N. J. Certain kinds of machinery packing. No. 85,828; Mar. 19; Gaz. vol. 176; p. 746.
Newton, Peter, Chicago, Ill. Cordials. No. 85,875; Mar. 26; Gaz. vol. 176; p. 1066.
Nicholas Kuhnen Cigar Co., Davenport, Iowa. Cigars, cigarettes, and tobaccos. No. 85,871; Mar. 26; Gaz. vol. 176; p. 1065.
Nielson, Charles C., Kansas City, Mo. Ointment. No. 85,877; Mar. 26; Gaz. vol. 176; p. 1066.
Nuera Pharmacal Co., Detroit, Mich. Remedies for sore throat and bronchial ailments. No. 85,820; Mar. 19; Gaz. vol. 176; p. 746.
O. K. Tool Holder Company, The, Shelton, Conn. Certain cutters and holders therefor. No. 85,675; Mar. 5; Gaz. vol. 176; p. 270.
Oakville Company, Waterbury, Conn. Toilet and safety pins. No. 85,676; Mar. 5; Gaz. vol. 176; p. 270.
Oprechte Haarlemmer Olie Fabriek (Voorheen onder de firma G. de Koning Tilly.) (See Holland Medicine Company, assignor.)
Ortega, E. C., Los Angeles, Cal. Canned chillies, pimentos, and chilli sauce. No. 85,678; Mar. 5; Gaz. vol. 176; p. 270.
Ortega, Emile C., Los Angeles, Cal. Canned chillies, chilli tomatoes, and tomatoes. No. 85,677; Mar. 5; Gaz. vol. 176; p. 270.
Otto Goetze Co., New York, N. Y. Cotton piece goods. No. 85,807; Mar. 19; Gaz. vol. 176; p. 745.
Palmer Motion Picture Company, New York, N. Y. Moving-picture machines. No. 85,878; Mar. 26; Gaz. vol. 176; p. 1066.
Partos, Cornel, New York, N. Y. Remedy for skin diseases. No. 85,712; Mar. 5; Gaz. vol. 176; p. 271.
Paul Brothers, Inc., Philadelphia, Pa. Infants' and children's boots and shoes. No. 85,831; Mar. 19; Gaz. vol. 176; p. 746.
Paul Revere Silver Company, Boston, Mass. Silver-plated flat and hollow ware. No. 85,682; Mar. 5; Gaz. vol. 176; p. 270.
Perseverance Worsted Company, Woonsocket, R. I. Worsted cloths. No. 85,679; Mar. 5; Gaz. vol. 176; p. 270.
Pi-Ki Pile Remedy Co. (See Hammond & Gray, assignors.)
Pittaro, Vito A., New York, N. Y. Certain medicinal preparations. No. 85,879; Mar. 26; Gaz. vol. 176; p. 1066.
Piver & Cie., L. T., Paris, France. Perfumery, toilet and sachet powders. No. 85,713; Mar. 5; Gaz. vol. 176; p. 271.
Prairie Side Celery Co., Tecumseh, Mich. Celery. No. 85,680; Mar. 5; Gaz. vol. 176; p. 270.
Premier Vacuum Cleaner Co., The, Cleveland, Ohio. Vacuum-cleaners. No. 85,766; Mar. 12; Gaz. vol. 176; p. 522.
Price, Joseph, Hartford, Conn. Remedies for catarrh, asthma, hay-fever, &c. No. 85,880; Mar. 26; Gaz. vol. 176; p. 1066.
Pyrene Manufacturing Co., New York, N. Y. Syringes for use with fire-extinguishing compounds. No. 85,918; Mar. 26; Gaz. vol. 176; p. 1067.
Quere, Theodore E., Cleveland, Ohio. Certain medicinal remedies. No. 85,881; Mar. 26; Gaz. vol. 176; p. 1066.
Randall-Faichney Co., The, Boston, Mass. Horns, whistles, and sound-producing devices for automobiles. No. 85,919; Mar. 26; Gaz. vol. 176; p. 1067.
Reckitt & Sons Ltd., Hull, England. Laundry blue and starch. No. 85,714; Mar. 5; Gaz. vol. 176; p. 271.
Rice, R. W., Wolfskill, Cal. Canned fruits and vegetables. No. 85,683; Mar. 5; Gaz. vol. 176; p. 270.
Roberson, William C., New York, N. Y. Wheat-flour. No. 85,767; Mar. 12; Gaz. vol. 176; p. 522.
Robert Heath & Sons Limited, Stoke-upon-Trent, England. Iron and steel bars and hoops. No. 85,813; Mar. 19; Gaz. vol. 176; p. 745.
Rosenfeld & Company, E., Baltimore, Md. Cotton, linen, silk, woolen, &c., piece goods. No. 85,684; Mar. 5; Gaz. vol. 176; p. 270.
Rosenstein, Morris, New York, N. Y. Cotton piece goods. No. 85,768; Mar. 12; Gaz. vol. 176; p. 522.
Roth-Homeyer Coffee Co., St. Louis, Mo. Coffees, tea, spices, and flavoring extracts. No. 85,685; Mar. 5; Gaz. vol. 176; p. 270.
Royal Specialty Company, The, Cleveland, Ohio. Electric vibrators. No. 85,769; Mar. 12; Gaz. vol. 176; p. 522.
Royal Specialty Company, The, Cleveland, Ohio. Electric hair-driers and vibrators. No. 85,770; Mar. 12; Gaz. vol. 176; p. 522.
San Francisco Salt Refinery, San Francisco, Cal. Salt. No. 85,715; Mar. 5; Gaz. vol. 176; p. 271.
Sanches & Haya Co., Tampa, Fla. Cigars. No. 85,882; Mar. 26; Gaz. vol. 176; p. 1066.
Sanitary Skirt Shield Co., Seattle, Wash. Dress-shields. No. 85,883; Mar. 26; Gaz. vol. 176; p. 1066.
Saratoga Graphite Company, Saratoga Springs, N. Y. Graphite. No. 85,771; Mar. 12; Gaz. vol. 176; p. 522.
Schlegall, Theodore, New York, N. Y. Clocks. No. 85,686; Mar. 5; Gaz. vol. 176; p. 270.
Schott & Roth, Karl A., Stuttgart, Germany. Umbrellas and parasols. No. 85,687; Mar. 5; Gaz. vol. 176; p. 270.
Scott, William A., North Tazewell, Va. Ginger-ale. No. 85,884; Mar. 26; Gaz. vol. 176; p. 1066.
Scranton Acetylene Lamp Company, Scranton, Pa. Portable gas-lamps. No. 85,772; Mar. 12; Gaz. vol. 176; p. 522.
Sears, Roebuck and Co., Chicago, Ill. Tobacco-pipes. No. 85,833; Mar. 19; Gaz. vol. 176; p. 746.
Sears, Roebuck and Co., Chicago, Ill. Mixed paints. No. 85,921; Mar. 26; Gaz. vol. 176; p. 1067.
Shiveley, Arnold C., North Manchester, Ind. Hand seed-sower. No. 85,689; Mar. 5; Gaz. vol. 176; p. 270.
Sligo Iron & Steel Co., Connellsville, Pa. Wrought-iron. No. 85,716; Mar. 5; Gaz. vol. 176; p. 271.
Smith, Kline & French Company, Philadelphia, Pa. Vanity-box. No. 85,774; Mar. 12; Gaz. vol. 176; p. 522.
Sohmer & Company, New York, N. Y. Pianos. No. 85,691; Mar. 5; Gaz. vol. 176; p. 270.
"Solo" Zündwaren- und Wichse-Fabriken Act. Ges., Vienna, Austria-Hungary. Matches. No. 85,776; Mar. 12; Gaz. vol. 176; p. 522.
Sprague, Warner & Company, Chicago, Ill., assignor to James McCord Company, Fort Worth, Tex. Canned fruits, vegetables, and fish. No. 85,692; Mar. 5; Gaz. vol. 176; p. 270.
Standard Fruit Co., The, Pulaski, Pa. Pineapples, oranges, grape-fruit, and lemons. No. 85,776; Mar. 12; Gaz. vol. 176; p. 522.
Standard Oil Company, Bayonne, N. J. Lubricating-oils. No. 85,922; Mar. 26; Gaz. vol. 176; p. 1067.
Standard Optical Company, Geneva, N. Y. Machines for manufacturing, finishing, adjusting, and testing lenses. No. 85,885; Mar. 26; Gaz. vol. 176; p. 1066.
Storz Brewing Co., Omaha, Nebr. Beer. No. 85,886; Mar. 26; Gaz. vol. 176; p. 1066.
Stumpf Erben, Hrch., Elonheim, near Bingen-on-the-Rhine, Germany. Wines. No. 85,834; Mar. 19; Gaz. vol. 176; p. 746.
Sylvanus Smith & Co., Gloucester, Mass. Salted, smoked, pickled, and canned fish. No. 85,690; Mar. 5; Gaz. vol. 176; p. 270.
Taylor & Co., H. W., New York, N. Y. Hair-tonic. No. 85,717; Mar. 5; Gaz. vol. 176; p. 271.
Temple, William C., Winter Park, Fla. Oranges, lemons, tangerines, grape-fruit, and limes. No. 85,693; Mar. 5; Gaz. vol. 176; p. 270.
Texas Company, The, Houston and Port Arthur, Tex., and New York, N. Y. Lubricating-oils. No. 85,694; Mar. 5; Gaz. vol. 176; p. 270.
Texas Company, The, Houston and Port Arthur, Tex., and New York, N. Y. Lubricating-oils. No. 85,924; Mar. 26; Gaz. vol. 176; p. 1067.
Textile Publishing Company, New York, N. Y. Weekly periodical. No. 85,835; Mar. 19; Gaz. vol. 176; p. 746.
Titus Blatter & Co., New York, N. Y. Cotton converted goods. No. 85,727; Mar. 12; Gaz. vol. 176; p. 521.
Trippe, Barker & Co., New York, N. Y. Cotton and linen piece goods. No. 85,836; Mar. 19; Gaz. vol. 176; p. 746.
Turner Brass Works, The, Sycamore and Chicago, Ill. Torches and paint-breamers. No. 85,777; Mar. 12; Gaz. vol. 176; p. 522.
Twin Falls Milling & Elevator Co., The, Twin Falls, Idaho. Wheat-flour. No. 85,695; Mar. 5; Gaz. vol. 176; p. 270.
Twin Falls Milling & Elevator Co., The, Twin Falls, Idaho. Wheat-flour. No. 85,778; Mar. 12; Gaz. vol. 176; p. 522.
Twining, Charles, New York, N. Y. Type-writers. No. 85,925; Mar. 26; Gaz. vol. 176; p. 1067.
Ullman Company, The, Cincinnati, Ohio. Whisky. No. 85,837; Mar. 19; Gaz. vol. 176; p. 746.
Underberg, Hubert, Rheinberg, Germany. Bitters. No. 85,838; Mar. 19; Gaz. vol. 176; p. 746.

Underwood, Francis J., Jamestown, N. Y. Turpentine substitute. No. 85,926; Mar. 26; Gaz. vol. 176; p. 1067.
United Drug Company, Boston, Mass. Writing-paper, envelops, and writing-tablets. No. 85,696; Mar. 5; Gaz. vol. 176; p. 270.
United Gas Improvement Company, The, Philadelphia, Pa. Certain construction material. No. 85,887; Mar. 26; Gaz. vol. 176; p. 1066.
United Ribbon Co., New York, N. Y. Neckties. No. 85,839; Mar. 19; Gaz. vol. 176; p. 746.
Universal Optical Corporation, Providence, R. I. Certain optical appliances. No. 85,888; Mar. 26; Gaz. vol. 176; p. 1066.
Upland Citrus Ass'n., Upland, Cal. Oranges. No. 85,927; Mar. 26; Gaz. vol. 176; p. 1067.
Urban, Charles, London, England. Kinematographic apparatus and photographic films bearing finished pictures. No. 85,889; Mar. 26; Gaz. vol. 176; p. 1066.
Vacuum Oil Company, Rochester, N. Y. Naphtha, gasolene, and benzin. No. 85,928; Mar. 26; Gaz. vol. 176; p. 1067.
Vernier, Amiel J., Chicago, Ill. Wheat-flour. No. 85,840; Mar. 19; Gaz. vol. 176; p. 746.
Victor Sporting Goods Company, Springfield, Mass. Certain sporting goods. No. 85,779; Mar. 12; Gaz. vol. 176; p. 522.
Vincenteill & Company, P. & F., Anvers, Belgium. Candied fruits and peels. No. 85,841; Mar. 19; Gaz. vol. 176; p. 746.
Vitalis Co., The, New York, N. Y. Laxative remedy. No. 85,890; Mar. 26; Gaz. vol. 176; p. 1066.
W. H. Marvin Company, The, Urbana, Ohio. Mince-meat. No. 85,667; Mar. 5; Gaz. vol. 176; p. 270.
W. S. Quinby Company, Boston, Mass. Tea. No. 85,681; Mar. 5; Gaz. vol. 176; p. 270.
Wabash Chemical Co., Terre Haute, Ind. Sheep-dip, germicide, vermicide, and antiseptic. No. 85,891; Mar. 26; Gaz. vol. 176; p. 1066.
Warren Brothers Company, Boston, Mass. Bituminous cements and pavements. No. 85,780; Mar. 12; Gaz. vol. 176; p. 522.
Waterproof Engineering Company, Chicago, Ill. Waterproofing and damp-proofing paint. No. 85,929; Mar. 26; Gaz. vol. 176; p. 1067.
Wayne Paper Goods Company, Fort Wayne, Ind. Paper bags. No. 85,781; Mar. 12; Gaz. vol. 176; p. 522.
Weddle, Harold, New York, N. Y. Tea. No. 85,782; Mar. 12; Gaz. vol. 176; p. 522.
Weingarten Bros., Inc., New York, N. Y. Corsets. No. 85,698; Mar. 5; Gaz. vol. 176; p. 270.
Western Flour Mill Company, Davenport, Iowa. Wheat-flour. No. 85,699; Mar. 5; Gaz. vol. 176; p. 270.
Western Flour Mill Company, Davenport, Iowa, and New Prague, Minn. Wheat-flour. No. 85,930; Mar. 26; Gaz. vol. 176; p. 1067.
White Brothers, San Francisco, Cal. Veneered panels. No. 85,892; Mar. 26; Gaz. vol. 176; p. 1066.
Widlar & Co., F., Cleveland, Ohio. Certain foods. No. 85,931; Mar. 26; Gaz. vol. 176; p. 1067.
Wilcox & White Company, The, Meriden, Conn. Perforated music-sheets for mechanical music-playing instruments. No. 85,894; Mar. 26; Gaz. vol. 176; p. 1066.
Wildman Mfg. Co., Norristown, Pa. Knitting and cloth-cutting machines, &c. No. 85,700; Mar. 5; Gaz. vol. 176; p. 270.
William S. Scull Company, Camden, N. J. Coffee. No. 85,688; Mar. 5; Gaz. vol. 176; p. 270.
William S. Scull Company, Camden, N. J. Coffee. No. 85,832; Mar. 19; Gaz. vol. 176; p. 746.
Williams Patent Crusher and Pulverizer Company, St. Louis, Mo. Certain kinds of machinery. No. 85,932; Mar. 26; Gaz. vol. 176; p. 1067.
Williams Remedy Co., Ty Ty, Ga. Remedy for certain diseases. No. 85,718; Mar. 5; Gaz. vol. 176; p. 271.
Wilson Chemical Co., Council Bluffs, Iowa. Floor-sweeping compound. No. 85,893; Mar. 26; Gaz. vol. 176; p. 1066.
Wilson & Wineman, Auburn, Ill. Metal-polish. No. 85,783; Mar. 12; Gaz. vol. 176; p. 522.
Windsor Chocolate Company, Philadelphia, Pa. Candy. No. 85,784; Mar. 12; Gaz. vol. 176; p. 523.
Windsor Chocolate Company, Philadelphia, Pa. Candy. No. 85,933; Mar. 26; Gaz. vol. 176; p. 1067.
Wineke-Bauernschmidt Co., of Balto. City, Baltimore, Md. Whisky. No. 85,787; Mar. 12; Gaz. vol. 176; p. 523.
Wood, J. Early, New York, N. Y. Periodical publication. No. 85,785; Mar. 12; Gaz. vol. 176; p. 523.
Worrell, Lillie B., Dayton, Ohio. Candy. No. 85,842; Mar. 19; Gaz. vol. 176; p. 746.
Wülfing, Johann A., Berlin, Germany. Certain prepared form of milk. No. 85,786; Mar. 12; Gaz. vol. 176; p. 523.
York, Chauncey F., Detroit, Mich. Pills for certain diseases. No. 85,719; Mar. 5; Gaz. vol. 176; p. 271.
Zimmern's Co., J., Mobile, Ala. Stock and poultry feed. No. 85,934; Mar. 26; Gaz. vol. 176; p. 1067.

ALPHABETICAL LIST OF REGISTRANTS OF LABELS.

Bottolfson, William P., Vancouver, British Columbia, Canada. "Sumore Biscuit." (For Biscuit.) No. 16,209; Mar. 5; Gaz. vol. 176; p. 272.
Bottolfson, William P., Vancouver, British Columbia, Canada. "Sumore Flour." (For Flour.) No. 16,210; Mar. 5; Gaz. vol. 176; p. 272.
Breisch & Co., Christian, North Lansing, Mich. "White Poppy." (For Flour.) No. 16,212; Mar. 5; Gaz. vol. 176; p. 272.
Brown Durrell Co., New York, N. Y. "Round Ticket Stocking." (For Stockings.) No. 16,211; Mar. 5; Gaz. vol. 176; p. 272.
C. M. C. Stewart Sulphur Company, The, Seattle, Wash. "Stewart's Liquid Compound of Sulphur." (For a Remedy.) No. 16,242; Mar. 19; Gaz. vol. 176; p. 747.
C. M. C. Stewart Sulphur Company, The, Seattle, Wash. "Sulphurro A Remedy." (For a Remedy.) No. 16,243; Mar. 19; Gaz. vol. 176; p. 747.
Clark-Hutchinson Company, Boston, Mass. "Bonnie Lassie." (For Shoes.) No. 16,213; Mar. 5; Gaz. vol. 176; p. 272.
Claussen Brewing Association, Seattle, Wash. "White and Gold." (For Beer.) No. 16,252; Mar. 26; Gaz. vol. 176; p. 1068.
Claussen Brewing Association, Seattle, Wash. "Old Wuerzburger." (For Beer.) No. 16,253; Mar. 26; Gaz. vol. 176; p. 1068.
Cordial Panna Company, The, Cleveland, Ohio. "Fernet-L-Branca, Di Leone Branca E. Comp." (For Bitters and Cordials.) No. 16,244; Mar. 19; Gaz. vol. 176; p. 747.
Cordon, John G. M., Clayton, N. C. "Cucumelis." (For a Lotion.) No. 16,214; Mar. 5; Gaz. vol. 176; p. 272.
Davison, H. C., Hutchinson, Kans. "Moneyback." (For Flour.) No. 16,215; Mar. 5; Gaz. vol. 176; p. 272.
Decker, Maybelle C., Atlanta, Ga. "Deckermaclair." (For Salad-Dressing.) No. 16,216; Mar. 5; Gaz. vol. 176; p. 272.
Dundas, J. Douglas, Vancouver, British Columbia, Canada. "Mitiline Flour." (For Flour.) No. 16,217; Mar. 5; Gaz. vol. 176; p. 272.
Eagle Pencil Company, New York, N. Y. "Eagle Mikado Pencils." (For Lead-Pencils.) No. 16,245; Mar. 19; Gaz. vol. 176; p. 747.
Egerton, W. C., Brooklyn, N. Y. "Imbriani." (For Macaroni.) No. 16,234; Mar. 12; Gaz. vol. 176; p. 524.
Egerton, W. C., Brooklyn, N. Y. "Savoy." (For Macaroni.) No. 16,254; Mar. 26; Gaz. vol. 176; p. 1068.
Ennis-Hanly-Blackburn Coffee Co., The, Kansas City, Mo. "Pay Day." (For Coffee.) No. 16,246; Mar. 19; Gaz. vol. 176; p. 747.
Fox Bros., Napoleon, Ohio. "Vo-Lant." (For Cigars.) No. 16,218; Mar. 5; Gaz. vol. 176; p. 272.
Guernsey & Murray Grocer Company, Kansas City, Mo. "Barondale." (For Whisky.) No. 16,247; Mar. 19; Gaz. vol. 176; p. 747.
Hampton-Kelley Canning Company, The, Hampton, Iowa. "Attention Brand." (For Sweet Corn.) No. 16,235; Mar. 12; Gaz. vol. 176; p. 524.
Hampton-Kelley Canning Company, The, Hampton, Iowa. "Over-All Club." (For Sweet Corn.) No. 16,236; Mar. 12; Gaz. vol. 176; p. 524.
Hampton-Kelley Canning Company, The, Hampton, Iowa. "Harvest Inn." (For Sweet Corn.) No. 16,237; Mar. 12; Gaz. vol. 176; p. 524.
Hampton-Kelley Canning Company, The, Hampton, Iowa. "Iowa Cluster." (For Sweet Corn.) No. 16,238; Mar. 12; Gaz. vol. 176; p. 524.
Hampton-Kelley Canning Company, The, Hampton, Iowa. "Our Effort Brand." (For Sweet Corn.) No. 16,248; Mar. 19; Gaz. vol. 176; p. 747.
J. B. Murphy Co., The, Watertown, Wis. "Brilliant Illuminator." (For Carbon-Oil.) No. 16,255; Mar. 26; Gaz. vol. 176; p. 1068.
J. M. Robinson, Norton & Co., Louisville, Ky. "The Tiger Method." (For Overalls.) No. 16,256; Mar. 26; Gaz. vol. 176; p. 1068.
Martin Marks Coffee Co., Portland, Oreg. "Monte Cristo." (For Coffee.) No. 16,219; Mar. 5; Gaz. vol. 176; p. 272.
Moehle Lithographic Company, The, New York, N. Y. "Donna Manila." (For Cigars.) No. 16,220; Mar. 5; Gaz. vol. 176; p. 272.
Moehle Lithographic Company, The, New York, N. Y. "Sola Rosa." (For Cigars.) No. 16,221; Mar. 5; Gaz. vol. 176; p. 272.
Norton, John J., Ellicott City, Md. "Norton's First Aid Pulmonary Balsam." (For a Remedy.) No. 16,222; Mar. 5; Gaz. vol. 176; p. 272.
Nu-Back Mfg. Co., Chicago, Ill. "Leath-R-Nu." (For Liquid Preparation to be Used on Leather, Metal, Wood, &c.) No. 16,257; Mar. 26; Gaz. vol. 176; p. 1068.
Pecora Paint Company, Philadelphia, Pa. "Pecora Asbestos Furnace Cement." (For Asbestos Furnace-Cement.) No. 16,224; Mar. 5; Gaz. vol. 176; p. 272.
Pepsi-Cola Co., Newbern, N. C. "Pepsi." (For Beverage.) No. 16,249; Mar. 19; Gaz. vol. 176; p. 747.
Pimbley Paint & Glass Co., St. Joseph, Mo. "Pimbley's Piano-Newer." (For Composition for Cleaning and Renovating Piano-Cases and Woodwork.) No. 16,258; Mar. 26; Gaz. vol. 176; p. 1068.
Potretzke, Ernest, Ada, Minn. "R. R. V." (For Cigars.) No. 16,250; Mar. 19; Gaz. vol. 176; p. 747.
Riggs, William E., Hastings, Nebr. "Don Alberto." (For Cigars.) No. 16,251; Mar. 19; Gaz. vol. 176; p. 747.
Rubber Products Company, The, Barberton, Ohio. "Sunset." (For Jar-Rings.) No. 16,225; Mar. 5; Gaz. vol. 176; p. 272.
Rubber Products Company, The, Barberton, Ohio. "Crown." (For Jar-Rings.) No. 16,226; Mar. 5; Gaz. vol. 176; p. 272.
Rubber Products Company, The, Barberton, Ohio. "Blackbird." (For Jar-Rings.) No. 16,227; Mar. 5; Gaz. vol. 176; p. 272.
Rubber Products Company, The, Barberton, Ohio. "Laurel." (For Jar-Rings.) No. 16,228; Mar. 5; Gaz. vol. 176; p. 272.
Rubber Products Company, The, Barberton, Ohio. "Daisy." (For Jar-Rings.) No. 16,229; Mar. 5; Gaz. vol. 176; p. 272.
Saginaw Specialty Company, Saginaw, Mich. "Loyal Moose." (For Cigars.) No. 16,259; Mar. 26; Gaz. vol. 176; p. 1068.
Saratoga Toilet Co., Saratoga Springs, N. Y. "Ineeda." (For a Remedy.) No. 16,239; Mar. 12; Gaz. vol. 176; p. 524.
Tetlow, Clara, Philadelphia, Pa. "Fair Maid." (For Complexion-Powder.) No. 16,230; Mar. 5; Gaz. vol. 176; p. 272.
Tomson & Co., P. C., Philadelphia, Pa. "Tomson's Red Seal Cleanser." (For a Cleanser.) No. 16,223; Mar. 5; Gaz. vol. 176; p. 272.
Towns & James, New York, N. Y. "Glycrin." (For Medicine or Pharmaceutical Preparation.) No. 16,231; Mar. 5; Gaz. vol. 176; p. 272.
Traverse City Refrigerator Co., Traverse City, Mich. "Service." (For Fireless Cookers.) No. 16,232; Mar. 5; Gaz. vol. 176; p. 272.
Traverse City Refrigerator Co., Traverse City, Mich. "Service." (For Combined Refrigerators and Fireless Cookers.) No. 16,233; Mar. 5; Gaz. vol. 176; p. 272.
Union Fruit Company, The, Paonia, Colo. "Elberta Best Peach on Earth." (For Elberta Peaches.) No. 16,240; Mar. 12; Gaz. vol. 176; p. 524.
Union Fruit Company, The, Paonia, Colo. "Paonia Mountain Apples." (For Apples.) No. 16,241; Mar. 12; Gaz. vol. 176; p. 524.

PRINTS.

Cochran, Drugan & Co., Hamilton township, Mercer county, N. J. "Siphon Jet Combination No. 2." (For Water-Closets.) No. 2,971; Mar. 19; Gaz. vol. 176; p. 747.

Cream of Wheat Co., Minneapolis, Minn. "Nothin's too good fer the Irish!" (For Wheat Breakfast Food.) No. 2,977; Mar. 26; Gaz. vol. 176; p. 1068.

Cream of Wheat Co., Minneapolis, Minn. "Golly! Dey Done Stole Mah Camp Fiah." (For Wheat Breakfast Food.) No. 2,978; Mar. 26; Gaz. vol. 176; p. 1068.

Curtis-Blaisdell Co., New York, N. Y. "When Ordering Coal Please Mention the Size Required." (For Coal.) No. 2,967; Mar. 5; Gaz. vol. 176; p. 272.

Derbyshire, Frederick W., Waltham, Mass. "Derbyshire Lathe Large and Small Chucks and Draw-in Spindle." (For Lathes, Large and Small Chucks, and Draw-in Spindles.) No. 2,968; Mar. 5; Gaz. vol. 176; p. 272.

General Drug Company, New York, N. Y. "Midol." (For Remedy for Neuralgia and Headache.) No. 2,979; Mar. 26; Gaz. vol. 176; p. 1068.

Goldman, Moses, New York, N. Y. "That's What You Will Get If You Take One Home." (For Sprayers.) No. 2,972; Mar. 19; Gaz. vol. 176; p. 747.

Hafertepen, Edwin B., Rochester, N. Y. "No-Hump." (For Collar-Buttons.) No. 2,973; Mar. 19; Gaz. vol. 176; p. 747.

Michael Bros., New York, N. Y. "Hercules Cloaks." (For Misses', Children's, and Infants' Cloaks.) No. 2,974; Mar. 19; Gaz. vol. 176; p. 747.

Northwestern Yeast Co., Chicago, Ill. "Magic Yeast." (For Magic Yeast.) No. 2,975; Mar. 19; Gaz. vol. 176; p. 747.

O'Callaghan & Fedden, New York, N. Y. "The Right Way The Wrong Way." (For Hosiery.) No. 2,976; Mar. 19; Gaz. vol. 176; p. 747.

Pepsin Syrup Company, Monticello, Ill. "Dr. Caldwell's Syrup Pepsin." (For Syrup Pepsin.) No. 2,969; Mar. 5; Gaz. vol. 176; p. 272.

Republic Rubber Company, The, Youngstown, Ohio. "The Tire Perfect." (For Non-Skid Tires.) No. 2,980; Mar. 26; Gaz. vol. 176; p. 1068.

Selter & Kappes Lithographing Co., The, New York, N. Y. "Wilbur's Cocoa Can Puzzle and Scenic Picture." (For Cocoa.) No. 2,970; Mar. 12; Gaz. vol. 176; p. 524.

DISCLAIMERS.

Guenther, Paul, Dover, N. J.; disclaimer filed by patentee. Sectional plaiting device for straight-knitting machines. No. 878,724; disclaimer filed Mar. 15, 1912; Gaz. vol. 176; p. 771.

Rice, Richard H., Lynn, Mass.; disclaimer filed by assignee. Combined emergency and throttle valve. No. 838,455; disclaimer filed Mar. 2, 1912; Gaz. vol. 176; p. 529.

ALPHABETICAL LIST OF INVENTIONS

FOR WHICH

PATENTS WERE ISSUED DURING THE MONTH OF MARCH, 1912.

[Abbreviations: "Sp."—Monthly Volume of Specifications; "Gaz."—Official Gazette.]

Abdominal supporter. L. N. Saeman. No. 1,019,365; Mar. 5; Sp. p. 832; Gaz. vol. 176; p. 124.

Abrading-wheel and mounting therefor. R. Gardner. No. 1,020,548; Mar. 19; Sp. p. 3268; Gaz. vol. 176; p. 584.

Absorbent product. V. Raisin. No. 1,021,477; Mar. 26; Sp. p. 5276; Gaz. vol. 176; p. 951.

Account-register. A. L. and K. Johnson. No. 1,021,152; Mar. 26; Sp. p. 4555; Gaz. vol. 176; p. 836.

Accounting appliance, Credit-. P. A. McCaskey. (Reissue.) No. 13,390; Mar. 26; Sp. p. 5822; Gaz. vol. 176; p. 1043.

Accounting system. E. C. Albree. No. 1,019,290; Mar. 5; Sp. p. 632; Gaz. vol. 176; p. 99.

Acetylene-generator, Carbid-feed. R. P. Elliott. No. 1,019,140; Mar. 5; Sp. p. 802; Gaz. vol. 176; p. 46.

Acid and making same, Calcium salt of acetyl salicylic. R. Berendes. No. 1,020,121; Mar. 12; Sp. p. 2376; Gaz. vol. 176; p. 406.

Acid, Producing the calcium salt of acetyl salicylic. R. Berendes. No. 1,020,181; Mar. 12; Sp. p. 2508; Gaz. vol. 176; p. 427.

Acid, Producing the calcium salt of acetyl salicylic. R. Berendes. No. 1,020,182; Mar. 12; Sp. p. 2508; Gaz. vol. 176; p. 427.

Acids and producing same, Quinin esters of aromatic amino. H. Thron. No. 1,019,285; Mar. 5; Sp. p. 624; Gaz. vol. 176; p. 97.

Adding and printing machine. J. M. Tourtel. No. 1,021,588; Mar. 26; Sp. p. 5504; Gaz. vol. 176; p. 989.

Advertising device. H. C. Avery. No. 1,020,956; Mar. 26; Sp. p. 4155; Gaz. vol. 176; p. 773.

Advertising device. T. R. Geisel. No. 1,021,516; Mar. 26; Sp. p. 5366; Gaz. vol. 176; p. 966.

Advertising device, Automatic. W. A. Murphey. No. 1,019,688; Mar. 5; Sp. p. 1484; Gaz. vol. 176; p. 230.

Advertising device, Street-car. C. V. Hill. No. 1,020,351; Mar. 12; Sp. p. 2837; Gaz. vol. 176; p. 481.

Advertising medium. G. T. Fielding, Jr. No. 1,020,815; Mar. 19; Sp. p. 3850; Gaz. vol. 176; p. 674.

Aerial and other vessel. A. Horton. No. 1,019,646; Mar. 5; Sp. p. 1409; Gaz. vol. 176; p. 216.

Aerial and other vessel and vehicle. J. F. F. W. Ure. No. 1,021,116; Mar. 26; Sp. p. 4468; Gaz. vol. 176; p. 826.

Aerial and other vessels, Device for use on. A. Horton. No. 1,019,647; Mar. 5; Sp. p. 1412; Gaz. vol. 176; p. 217.

Aerial machine. C. I. Matson. No. 1,019,168; Mar. 5; Sp. p. 359; Gaz. vol. 176; p. 57.

Aerial machines, especially aeroplanes, Automatic safety controlling device for. J. Wetterwald. No. 1,020,671; Mar. 19; Sp. p. 3546; Gaz. vol. 176; p. 624.

Aerial propeller. C. M. Olmsted. No. 1,019,078; Mar. 5; Sp. p. 151; Gaz. vol. 176; p. 28.

Aerial vessel. H. Moya. No. 1,019,514; Mar. 5; Sp. p. 1168; Gaz. vol. 176; p. 173.

Aerial vessel. G. Ditterich. No. 1,020,484; Mar. 19; Sp. p. 3122; Gaz. vol. 176; p. 563.

Aeroplane. C. L. Moore. No. 1,019,987; Mar. 12; Sp. p. 2092; Gaz. vol. 176; p. 361.

Aeroplane. H. O. Eiane. No. 1,021,040; Mar. 26; Sp. p. 4821; Gaz. vol. 176; p. 892.

Aeroplane. W. A. Brewer. No. 1,021,129; Mar. 26; Sp. p. 4501; Gaz. vol. 176; p. 830.

Aeroplane. F. Biberstein. No. 1,021,178; Mar. 26; Sp. p. 4614; Gaz. vol. 176; p. 847.

Aeroplane. B. W. Blewett. No. 1,021,299; Mar. 26; Sp. p. 4866; Gaz. vol. 176; p. 889.

Aeroplane and dirigible balloon, Combined. W. H. Zells. No. 1,019,579; Mar. 5; Sp. p. 1283; Gaz. vol. 176; p. 192.

Aeroplane-controlling device. E. C. Brandt. No. 1,020,342; Mar. 12; Sp. p. 2817; Gaz. vol. 176; p. 478.

Aeroplane or flying-machine. J. J. Bourcart. No. 1,019,418; Mar. 5; Sp. p. 964; Gaz. vol. 176; p. 140.

Aerostatics. R. C. Sayer. No. 1,019,368; Mar. 5; Sp. p. 842; Gaz. vol. 176; p. 125.

Agricultural implement. C. Marqueen. No. 1,019,830; Mar. 5; Sp. p. 729; Gaz. vol. 176; p. 113.

Agricultural implement. A. Schloesser. No. 1,019,870; Mar. 5; Sp. p. 846; Gaz. vol. 176; p. 126.

Air and other fluids, Apparatus for compressing. W. B. Swindell. No. 1,020,852; Mar. 19; Sp. p. 3945; Gaz. vol. 176; p. 687.

Air-brake, Derailment. E. N. Botsford. No. 1,019,751; Mar. 12; Sp. p. 1618; Gaz. vol. 176; p. 282.

Air-compressor governor. R. H. Rice. No. 1,021,214; Mar. 26; Sp. p. 4682; Gaz. vol. 176; p. 858.

Air-compressor, Rotary. J. B. Mason. No. 1,021,320; Mar. 26; Sp. p. 4905; Gaz. vol. 176; p. 897.

Air-cooling apparatus. F. Frank. No. 1,020,034; Mar. 12; Sp. p. 2191; Gaz. vol. 176; p. 377.

Air-craft. J. B. Laingor and G. J. Yerger. No. 1,021,105; Mar. 26; Sp. p. 4444; Gaz. vol. 176; p. 823.

Air, gas, or vapor, Hydraulic apparatus for exhausting or extracting. W. J. Frame. No. 1,019,241; Mar. 5; Sp. p. 518; Gaz. vol. 176; p. 82.

Air-moistening device, Automatic. W. A. Russell. No. 1,019,843; Mar. 12; Sp. p. 1782; Gaz. vol. 176; p. 312.

Air-moistening device for heating apparatus. W. A. Russell. No. 1,019,842; Mar. 12; Sp. p. 1777; Gaz. vol. 176; p. 312.

Air-motor. I. L. Grinnell. No. 1,019,459; Mar. 5; Sp. p. 1049; Gaz. vol. 176; p. 154.

Airship. L. C. Badeau. No. 1,020,015; Mar. 12; Sp. p. 2149; Gaz. vol. 176; p. 370.

Airship. C. H. Toliver. No. 1,020,118; Mar. 12; Sp. p. 2372; Gaz. vol. 176; p. 405.

Airship. I. Allen. No. 1,020,870; Mar. 19; Sp. p. 3977; Gaz. vol. 176; p. 693.

Airship. L. A. Fish. No. 1,021,139; Mar. 26; Sp. p. 4523; Gaz. vol. 176; p. 833.

Airship. C. A. Rush. No. 1,021,338; Mar. 26; Sp. p. 4943; Gaz. vol. 176; p. 904.

Airships, Propulsion of. E. Surcouf. No. 1,019,283; Mar. 5; Sp. p. 620; Gaz. vol. 176; p. 97.

Alarm: *See* Automobile-alarm; Burglar-alarm; Fire-alarm; Tire-alarm.

Alarm-signal device. R. H. Manson. No. 1,020,768; Mar. 19; Sp. p. 3761; Gaz. vol. 176; p. 659.

Alkaline battery. W. Morrison. No. 1,020,568; Mar. 19; Sp. p. 3314; Gaz. vol. 176; p. 592.

Alloy, Boron-carbon. E. Weintraub. No. 1,019,393; Mar. 5; Sp. p. 909; Gaz. vol. 176; p. 184.

Alloy, Metallic. G. Hartmann and E. J. Busch. No. 1,020,757; Mar. 19; Sp. p. 3733; Gaz. vol. 176; p. 655.

Alloy of titanium and aluminum, Producing the binary. A. J. Rossi. No. 1,020,517; Mar. 19; Sp. p. 3193; Gaz. vol. 176; p. 572.

Alloy of titanium with lead, Producing the. A. J. Rossi. No. 1,019,529; Mar. 5; Sp. p. 1197; Gaz. vol. 176; p. 177.

Alloy of titanium with tin, Producing the. A. J. Rossi. No. 1,019,530; Mar. 5; Sp. p. 1199; Gaz. vol. 176; p. 178.

Alloy of titanium with zinc, Producing the. A. J. Rossi. No. 1,019,527; Mar. 5; Sp. p. 1193; Gaz. vol. 176; p. 177.

Alloy or metallic compound, Anticorrosive. G. Jacquier. No. 1,019,963; Mar. 12; Sp. p. 2043; Gaz. vol. 176; p. 353.

Alloy, Remelting and refining old or scrap copper. W. S. Rockey and H. Eldridge. No. 1,019,524; Mar. 5; Sp. p. 1188; Gaz. vol. 176; p. 176.

Alloys of titanium with ferrometal, Producing. A. J. Rossi. No. 1,019,528; Mar. 5; Sp. p. 1195; Gaz. vol. 176; p. 177.

Alphabetical symbols. I. Hill. No. 1,021,189; Mar. 26; Sp. p. 4637; Gaz. vol. 176; p. 850.

Aluminous composition. E. Taylor. No. 1,020,781; Mar. 19; Sp. p. 3786; Gaz. vol. 176; p. 663.

Aluminum, Treating. A. J. Rossi. No. 1,019,531; Mar. 5; Sp. p. 1201; Gaz. vol. 176; p. 178.

Amalgamating-flume table. E. H. Tate. No. 1,021,277; Mar. 26; Sp. p. 4826; Gaz. vol. 176; p. 880.

Amalgamator. P. Kuehn. No. 1,019,054; Mar. 5; Sp. p. 89; Gaz. vol. 176; p. 18.

Ambulance, Animal-. A. Meiser. No. 1,019,266; Mar. 5; Sp. p. 674; Gaz. vol. 176; p. 92.

Amusement apparatus called Indian trip. B. F. Van Kannel. No. 1,021,013; Mar. 26; Sp. p. 4278; Gaz. vol. 176; p. 794.

Amusement device. E. R. Ramsey. No. 1,021,331; Mar. 26; Sp. p. 4928; Gaz. vol. 176; p. 901.
Animal-trap. J. Recko. No. 1,020,448; Mar. 19; Sp. p. 3049; Gaz. vol. 176; p. 552.
Animal-trap. W. G. McQuiston. No. 1,020,950; Mar. 19; Sp. p. 4127; Gaz. vol. 176; p. 720.
Animal-trap. A. Schramm. No. 1,021,428; Mar. 26; Sp. p. 5163; Gaz. vol. 176; p. 934.
Animal-trap, Electrically-operated. R. L. Barnhart. No. 1,020,341; Mar. 12; Sp. p. 2815; Gaz. vol. 176; p. 477.
Anode, Electrolytic. H. E. Beach. No. 1,019,588; Mar. 5; Sp. p. 1304; Gaz. vol. 176; p. 196.
Antiskid-grip. L. B. Gaylor. No. 1,020,480; Mar. 19; Sp. p. 3132; Gaz. vol. 176; p. 565.
Apertured bolt applicable especially for fixing rails onto the wooden sleepers. R. D. Wagner. No. 1,021,390; Mar. 26; Sp. p. 5057; Gaz. vol. 176; p. 920.
Apparel-supports, Spring attachment for. A. C. F. Bartz. No. 1,020,473; Mar. 19; Sp. p. 3098; Gaz. vol. 176; p. 560.
Appliance for illustrating the specific relation that exists between the faculties of sensation and emotion in the animal organism. S. Scholfield. No. 1,019,703; Mar. 5; Sp. p. 1509; Gaz. vol. 176; p. 234.
Arc-light-producing apparatus. I. Ladoff. No. 1,019,901; Mar. 12; Sp. p. 1918; Gaz. vol. 176; p. 334.
Arch-centering. H. H. Frick. No. 1,019,314; Mar. 5; Sp. p. 696; Gaz. vol. 176; p. 108.
Arm-rest. A. E. King. No. 1,019,658; Mar. 5; Sp. p. 1431; Gaz. vol. 176; p. 220.
Article-holder. G. A. Lanier. No. 1,020,916; Mar. 19; Sp. p. 4049; Gaz. vol. 176; p. 707.
Ash-discharger. W. Burlingham and F. P. Palen. No. 1,020,743; Mar. 19; Sp. p. 3710; Gaz. vol. 176; p. 650.
Aspirator. C. W. Nance. No. 1,020,709; Mar. 19; Sp. p. 3632; Gaz. vol. 176; p. 638.
Assorting-machine. W. F. Hebrank. No. 1,020,981; Mar. 26; Sp. p. 4214; Gaz. vol. 176; p. 782.
Atomizer. E. J. Manning. No. 1,020,833; Mar. 19; Sp. p. 3893; Gaz. vol. 176; p. 680.
Atomizer and nebulizer, Combination. J. J. Holland and W. Discher. No. 1,020,647; Mar. 19; Sp. p. 3493; Gaz. vol. 176; p. 617.
Attrition-mill. J. S. Sorensen. No. 1,021,167; Mar. 26; Sp. p. 4588; Gaz. vol. 176; p. 843.
Automatic players, Selector for. F. W. Draper. No. 1,021,305; Mar. 26; Sp. p. 4878; Gaz. vol. 176; p. 891.
Automatic switch. T. E. Lee. No. 1,020,147; Mar. 12; Sp. p. 2421; Gaz. vol. 176; p. 413.
Automobile. R. Symmonds, Jr. No. 1,020,375; Mar. 12; Sp. p. 2883; Gaz. vol. 176; p. 488.
Automobile-alarm. W. E. Symons. No. 1,019,552; Mar. 5; Sp. p. 1232; Gaz. vol. 176; p. 184.
Automobile-body. L. W. Oster and F. J. Miller. No. 1,021,470; Mar. 26; Sp. p. 5267; Gaz. vol. 176; p. 949.
Automobile-horn. L. West. No. 1,019,571; Mar. 5; Sp. p. 1273; Gaz. vol. 176; p. 190.
Automobile-horn. R. E. Long. No. 1,019,673; Mar. 5; Sp. p. 1459; Gaz. vol. 176; p. 225.
Automobile-starter. H. P. Maxim. No. 1,020,106; Mar. 12; Sp. p. 2344; Gaz. vol. 176; p. 401.
Automobile starting mechanism. A. F. Olds. No. 1,021,624; Mar. 26; Sp. p. 5563; Gaz. vol. 176; p. 990.
Automobile steering device. H. Lemp. No. 1,020,707; Mar. 19; Sp. p. 3629; Gaz. vol. 176; p. 638.
Automobile steering-post, Adjustable. R. Symmonds, Jr. No. 1,020,376; Mar. 12; Sp. p. 2886; Gaz. vol. 176; p. 489.
Automobiles, Combined antiskidding and jack attachment for. F. F. Heffernan. No. 1,019,469; Mar. 5; Sp. p. 1065; Gaz. vol. 176; p. 157.
Automobiles, Radiator-cap for. E. B. Nelson. No. 1,020,437; Mar. 19; Sp. p. 3033; Gaz. vol. 176; p. 549.
Automobiles, Supplementary spring attachment and shock-absorber for. J. A. Mauck. No. 1,020,043; Mar. 12; Sp. p. 2207; Gaz. vol. 176; p. 380.
Automusical instrument, Electric. T. E. R. Phillips. No. 1,020,155; Mar. 12; Sp. p. 2446; Gaz. vol. 176; p. 416.
Autotractor "A" frame. P. E. Holt. No. 1,020,283; Mar. 12; Sp. p. 2715; Gaz. vol. 176; p. 460.
Autotruck-body. H. Lohse. No. 1,019,062; Mar. 5; Sp. p. 107; Gaz. vol. 176; p. 20.
Autovehicle dump-box. F. T. Sherman and H. Goetz. No. 1,020,665; Mar. 19; Sp. p. 3536; Gaz. vol. 176; p. 622.
Awning. A. M. Dauernheim. No. 1,021,508; Mar. 26; Sp. p. 5343; Gaz. vol. 176; p. 962.
Awning-arm. W. P. Price. No. 1,021,330; Mar. 26; Sp. p. 4926; Gaz. vol. 176; p. 900.
Awning-roller support, Intermediate. J. B. Baker. No. 1,020,246; Mar. 12; Sp. p. 2643; Gaz. vol. 176; p. 448.
Axle, Reinforced. G. C. Thayer. No. 1,019,998; Mar. 12; Sp. p. 2119; Gaz. vol. 176; p. 365.
Bag: *See* Feed-bag; Hand-bag; Traveling-bag.
Bag-binder. W. M. Jenkins. No. 1,019,049; Mar. 5; Sp. p. 82; Gaz. vol. 176; p. 16.
Bag-fastener. F. A. Fuller. No. 1,020,547; Mar. 19; Sp. p. 3207; Gaz. vol. 176; p. 584.
Bag handle, Textile-. F. P. Curran. No. 1,020,639; Mar. 19; Sp. p. 3478; Gaz. vol. 176; p. 614.
Bag-holder and weighing-scale, Combined. D. E. Millard. No. 1,019,685; Mar. 5; Sp. p. 1481; Gaz. vol. 176; p. 229.
Bag-looping machine. H. L. Roberts. No. 1,019,186; Mar. 5; Sp. p. 397; Gaz. vol. 176; p. 63.
Bait, Artificial. F. A. Staples. No. 1,019,926; Mar. 12; Sp. p. 1978; Gaz. vol. 176; p. 342.
Bait, Fish-. J. Nordlund. No. 1,021,009; Mar. 26; Sp. p. 5691; Gaz. vol. 176; p. 1025.
Bake-pan. L. Steitler. No. 1,021,640; Mar. 26; Sp. p. 5593; Gaz. vol. 176; p. 1005.
Balancing device. J. W. Stoker. No. 1,021,276; Mar. 26; Sp. p. 4825; Gaz. vol. 176; p. 880.
Bale-handling apparatus. A. Brunelle. No. 1,020,683; Mar. 19; Sp. p. 3569; Gaz. vol. 176; p. 628.
Bale-tie. D. W. Turk. No. 1,019,562; Mar. 5; Sp. p. 1259; Gaz. vol. 176; p. 188.
Baling-press. S. P. Foster. No. 1,019,626; Mar. 5; Sp. p. 1373; Gaz. vol. 176; p. 209.
Baling-press. W. Spilttgerber. No. 1,020,626; Mar. 19; Sp. p. 3449; Gaz. vol. 176; p. 610.
Baling-presses, Reversible feed-hopper for. G. A. Ryerson. No. 1,021,730; Mar. 26; Sp. p. 5759; Gaz. vol. 176; p. 1034.
Ball: *See* Bowling-ball.
Bandage. O. L. McMahon. No. 1,019,985; Mar. 12; Sp. p. 2090; Gaz. vol. 176; p. 360.
Barrel-rack. A. N. Stavely. No. 1,019,550; Mar. 5; Sp. p. 1230; Gaz. vol. 176; p. 184.
Basket. T. C. Nelson. No. 1,019,346; Mar. 5; Sp. p. 771; Gaz. vol. 176; p. 118.
Basket. J. N. Keyser and G. Topham. No. 1,020,200; Mar. 12; Sp. p. 2728; Gaz. vol. 176; p. 462.
Basket handle and cover-fastener. J. B. Kenny. No. 1,019,801; Mar. 12; Sp. p. 1714; Gaz. vol. 176; p. 299.
Bat-making machine. C. E. T. Scribner. No. 1,020,372; Mar. 12; Sp. p. 2876; Gaz. vol. 176; p. 487.
Bath device. M. A. Wilson. No. 1,021,346; Mar. 26; Sp. p. 4963; Gaz. vol. 176; p. 906.
Bath-tub foot-rest. F. Forsberg. No. 1,019,775; Mar. 12; Sp. p. 1667; Gaz. vol. 176; p. 290.
Batteries, Charging storage. P. Kennedy. No. 1,019,482; Mar. 5; Sp. p. 1100; Gaz. vol. 176; p. 162.
Batteries, Means for attaching binding-posts to dry. W. A. Scott. No. 1,021,340; Mar. 26; Sp. p. 4954; Gaz. vol. 176; p. 904.
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Battery-testing instrument. C. J. Davidson. No. 1,020,541; Mar. 19; Sp. p. 3251; Gaz. vol. 176; p. 582.
Bean-puller. R. E. Freeman. No. 1,020,408; Mar. 19; Sp. p. 2963; Gaz. vol. 176; p. 538.
Bearing, Ball-. G. Vincon. No. 1,020,729; Mar. 19; Sp. p. 3672; Gaz. vol. 176; p. 646.
Bearing, Roller-. N. E. Merrill and J. C. Cavender. No. 1,019,819; Mar. 12; Sp. p. 1741; Gaz. vol. 176; p. 305.
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Bearing, Shaft-. J. M. Burby. No. 1,019,300; Mar. 5; Sp. p. 663; Gaz. vol. 176; p. 103.
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Bearing, Spindle-. T. J. Fegley. No. 1,020,894; Mar. 19; Sp. p. 4013; Gaz. vol. 176; p. 700.
Bearing, Thrust-. G. J. Henry, Jr. No. 1,020,552; Mar. 19; Sp. p. 3278; Gaz. vol. 176; p. 586.
Beating-engine. R. I. Dowd. No. 1,019,612; Mar. 5; Sp. p. 1346; Gaz. vol. 176; p. 204.
Bed attachment. F. Hadley. No. 1,019,957; Mar. 12; Sp. p. 2033; Gaz. vol. 176; p. 351.
Bed-bottom fabric. J. Chaves. No. 1,021,504; Mar. 26; Sp. p. 5335; Gaz. vol. 176; p. 961.
Bed, Couch-. C. H. Young. No. 1,020,630; Mar. 19; Sp. p. 3458; Gaz. vol. 176; p. 611.
Bed, &c., Couch-. A. G. Eyles. No. 1,021,091; Mar. 26; Sp. p. 4425; Gaz. vol. 176; p. 819.
Bed, Folding. O. Kallander. No. 1,021,607; Mar. 26; Sp. p. 5539; Gaz. vol. 176; p. 994.
Bed-rest. C. W. Warlick. No. 1,019,864; Mar. 12; Sp. p. 1831; Gaz. vol. 176; p. 321.
Bed, Sofa or davenport. J. G. Curtis. No. 1,019,606; Mar. 5; Sp. p. 1335; Gaz. vol. 176; p. 202.
Bed-spring attachment. P. F. Crighton and P. D. Hives. No. 1,019,765; Mar. 12; Sp. p. 1646; Gaz. vol. 176; p. 287.
Beds of the ordinary type for the use of invalids, Apparatus for adapting. R. M. McGary. No. 1,021,693; Mar. 26; Sp. p. 5678; Gaz. vol. 176; p. 1022.
Bedstead. J. Prendergast. No. 1,021,701; Mar. 26; Sp. p. 5693; Gaz. vol. 176; p. 1025.
Bedstead and chair, Combined folding. A. E. Edström and O. B. Andersson. No. 1,021,360; Mar. 26; Sp. p. 4988; Gaz. vol. 176; p. 910.
Bedstead and other frames, Joint for the tubes of. C. Vallone. No. 1,021,437; Mar. 26; Sp. p. 5185; Gaz. vol. 176; p. 938.
Bedstead corner-fastening. W. B. Foster. No. 1,021,185; Mar. 26; Sp. p. 4629; Gaz. vol. 176; p. 849.
Bedstead, Invalid-. T. C. Robinson. No. 1,021,335; Mar. 26; Sp. p. 4943; Gaz. vol. 176; p. 902.
Beer-tapper. W. W. Frisholm. No. 1,021,669; Mar. 26; Sp. p. 5637; Gaz. vol. 176; p. 1014.
Beet-topper. E. Lang. No. 1,019,056; Mar. 5; Sp. p. 92; Gaz. vol. 176; p. 18.
Bell, Mechanically-operated door-. J. A. Young. No. 1,021,396; Mar. 26; Sp. p. 5101; Gaz. vol. 176; p. 923.
Bell-ringer. E. Wilson. No. 1,021,394; Mar. 26; Sp. p. 5094; Gaz. vol. 176; p. 922.
Bell-ringing transformer. S. E. Johannesen. No. 1,021,252; Mar. 26; Sp. p. 4776; Gaz. vol. 176; p. 872.

Belt, Apparel-. A. Rezníček. No. 1,021,728; Mar. 26; Sp. p. 5755; Gaz. vol. 176; p. 1033.
Belt-clamp. W. J. M. Dobson. No. 1,020,748; Mar. 19; Sp. p. 3722; Gaz. vol. 176; p. 653.
Belt, Compound. T. Horsman. No. 1,019,152; Mar. 5; Sp. p. 326; Gaz. vol. 176; p. 51.
Belt-cutting machine. H. Gense, E. and R. Glick. No. 1,021,300; Mar. 26; Sp. p. 4885; Gaz. vol. 176; p. 892.
Belt-drive. A. E. Newton. No. 1,019,516; Mar. 5; Sp. p. 1170; Gaz. vol. 176; p. 173.
Belt, Driving-. M. Hawe. No. 1,020,496; Mar. 19; Sp. p. 3153; Gaz. vol. 176; p. 567.
Belt-shifter. S. W. Browne. No. 1,020,021; Mar. 12; Sp. p. 2162; Gaz. vol. 176; p. 372.
Bench: *See* Molder's bench; Music-bench.
Bending-machine. J. F. Cox. No. 1,021,662; Mar. 26; Sp. p. 5625; Gaz. vol. 176; p. 1012.
Berry-picker. W. Brandon. No. 1,020,881; Mar. 19; Sp. p. 3993; Gaz. vol. 176; p. 696.
Bicycle pedal mechanism. A. Mangiarotti. No. 1,020,299; Mar. 12; Sp. p. 2744; Gaz. vol. 176; p. 465.
Bicycle-support. C. S. Swaim. No. 1,020,327; Mar. 12; Sp. p. 2791; Gaz. vol. 176; p. 473.
Binder locking device, Temporary-. T. P. Halpin. No. 1,019,149; Mar. 5; Sp. p. 320; Gaz. vol. 176; p. 49.
Binder or loose-sheet holder, Temporary. R. Krumming. No. 1,020,561; Mar. 19; Sp. p. 3303; Gaz. vol. 176; p. 589.
Binder-post, Flexible. H. C. Miller. No. 1,019,174; Mar. 5; Sp. p. 378; Gaz. vol. 176; p. 59.
Binder, Temporary. A. L. Bunce. No. 1,019,020; Mar. 5; Sp. p. 15; Gaz. vol. 176; p. 5.
Binder, Temporary. M. E. Leeds. No. 1,020,995; Mar. 26; Sp. p. 4234; Gaz. vol. 176; p. 786.
Binding-post, Universal. A. K. Sloan, Jr. No. 1,020,457; Mar. 19; Sp. p. 3066; Gaz. vol. 176; p. 555.
Blade-mounting. W. B. Flanders. No. 1,020,750; Mar. 19; Sp. p. 3724; Gaz. vol. 176; p. 653.
Blind, Folding window-. G. W. Wearn. No. 1,019,567; Mar. 5; Sp. p. 1267; Gaz. vol. 176; p. 189.
Block: *See* Building-block; Thrust-block.
Blocks. K. Gjorup and T. Petersen. No. 1,021,594; Mar. 26; Sp. p. 5519; Gaz. vol. 176; p. 991.
Blower. Positive-pressure. H. S. Levy and G. H. Brandes. No. 1,019,499; Mar. 5; Sp. p. 1142; Gaz. vol. 176; p. 167.
Blowers and pumps, Construction of rotary. A. E. Clifton. No. 1,021,180; Mar. 26; Sp. p. 4617; Gaz. vol. 176; p. 847.
Board: *See* Car running-board.
Boat-detaching apparatus. W. Coulter. No. 1,021,353; Mar. 26; Sp. p. 4975; Gaz. vol. 176; p. 908.
Body-protector. J. C. Pheips. No. 1,021,376; Mar. 26; Sp. p. 5011; Gaz. vol. 176; p. 915.
Boiler: *See* Clothes-boiler; Heating-boiler; Water-tube boiler.
Boiler attachment, Clothes-. E. J. Schowalter. No. 1,020,578; Mar. 19; Sp. p. 3349; Gaz. vol. 176; p. 595.
Boiler device, Steam-. L. E. Hankison and W. E. Stumm. No. 1,021,507; Mar. 26; Sp. p. 5523; Gaz. vol. 176; p. 991.
Boiler-plate stay. C. and C. E. Ward. No. 1,020,235; Mar. 12; Sp. p. 2626; Gaz. vol. 176; p. 445.
Boiler-tube-cleaner connection. H. Cassidy. No. 1,020,635; Mar. 19; Sp. p. 3470; Gaz. vol. 176; p. 613.
Boilers, Water-glass fixture for steam-. H. B. Robinson. No. 1,020,623; Mar. 19; Sp. p. 3443; Gaz. vol. 176; p. 609.
Bolster. A. E. Ostrander. No. 1,021,743; Mar. 26; Sp. p. 5787; Gaz. vol. 176; p. 1039.
Bolster, &c., brace. A. Fulk. No. 1,020,410; Mar. 19; Sp. p. 2974; Gaz. vol. 176; p. 539.
Bolt: *See* Apertured bolt; Expansion-bolt; Locking-bolt.
Bolt-extractor. J. A. Magnusson. No. 1,019,718; Mar. 5; Sp. p. 1537; Gaz. vol. 176; p. 239.
Bolt-operating mechanism. W. Stronse and W. E. Clark. No. 1,019,282; Mar. 5; Sp. p. 619; Gaz. vol. 176; p. 96.
Bolting-cloth cleaner. S. Snyder. No. 1,021,008; Mar. 26; Sp. p. 4257; Gaz. vol. 176; p. 791.
Book-holder. G. J. Flanagan. No. 1,021,183; Mar. 26; Sp. p. 4625; Gaz. vol. 176; p. 848.
Book-holder. E. R. Lundius. No. 1,021,614; Mar. 26; Sp. p. 5549; Gaz. vol. 176; p. 996.
Book, Loose-leaf. L. D. Hamacher. No. 1,020,948; Mar. 19; Sp. p. 4121; Gaz. vol. 176; p. 719.
Book or pamphlet making machine. J. D. Morgan. No. 1,021,325; Mar. 26; Sp. p. 4912; Gaz. vol. 176; p. 898.
Boot and shoe cleaning and polishing apparatus. E. Wurmser. No. 1,020,008; Mar. 12; Sp. p. 2136; Gaz. vol. 176; p. 368.
Boot and shoe cleaning and polishing machine. E. E. Lineback. No. 1,019,672; Mar. 5; Sp. p. 1454; Gaz. vol. 176; p. 224.
Boots and shoes, Machine for use in the manufacture of. J. F. Pride and A. Bates. No. 1,019,085; Mar. 5; Sp. p. 169; Gaz. vol. 176; p. 28.
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Boron and boron alloys, Making. E. Weintraub. No. 1,019,569; Mar. 5; Sp. p. 1270; Gaz. vol. 176; p. 190.
Boronized conductor and manufacture. E. Weintraub. No. 1,019,891; Mar. 5; Sp. p. 904; Gaz. vol. 176; p. 133.
Bottle and stopper. F. W. Dufwa. No. 1,020,808; Mar. 19; Sp. p. 3835; Gaz. vol. 176; p. 672.
Bottle-blank mold. J. Hackett. No. 1,019,147; Mar. 5; Sp. p. 316; Gaz. vol. 176; p. 49.
Bottle capping or sealing machine. E. P. Wetmore. No. 1,021,585; Mar. 26; Sp. p. 5450; Gaz. vol. 176; p. 981.
Bottle-cleaning device. E. Pets. No. 1,020,510; Mar. 19; Sp. p. 3179; Gaz. vol. 176; p. 571.
Bottle-cleaning machine. P. Polnisch. No. 1,020,156; Mar. 12; Sp. p. 2449; Gaz. vol. 176; p. 417.
Bottle fountain-stopper, Mucilage-. A. Nelson. No. 1,021,622; Mar. 26; Sp. p. 5561; Gaz. vol. 176; p. 999.
Bottle-holder. J. Noll. No. 1,021,328; Mar. 26; Sp. p. 4922; Gaz. vol. 176; p. 900.
Bottle holder, Milk-. W. E. Phillips. No. 1,020,844; Mar. 19; Sp. p. 3915; Gaz. vol. 176; p. 684.
Bottle holder, Nursing-. C. A. Feely and A. F. Henneily. No. 1,020,136; Mar. 12; Sp. p. 2405; Gaz. vol. 176; p. 411.
Bottle-machine. J. A. Sanford. No. 1,019,533; Mar. 5; Sp. p. 1203; Gaz. vol. 176; p. 178.
Bottle, Non-refillable. M. P. Schell. No. 1,019,535; Mar. 5; Sp. p. 1209; Gaz. vol. 176; p. 179.
Bottle, Non-refillable. A. Klein. No. 1,019,659; Mar. 5; Sp. p. 1432; Gaz. vol. 176; p. 220.
Bottle, Non-refillable. F. A. Jencyk. No. 1,020,204; Mar. 12; Sp. p. 2563; Gaz. vol. 176; p. 435.
Bottle, Non-refillable. C. Matson. No. 1,020,997; Mar. 26; Sp. p. 4237; Gaz. vol. 176; p. 787.
Bottle, Non-refillable vacuum-. C. E. Warsaw and A. P. Ball. No. 1,019,866; Mar. 12; Sp. p. 1834; Gaz. vol. 176; p. 322.
Bottle or water-bag, Water-. A. M. Melville-Hamilton. No. 1,019,171; Mar. 5; Sp. p. 371; Gaz. vol. 176; p. 58.
Bottle, Siphon-. C. L. Husted. No. 1,020,506; Mar. 19; Sp. p. 3171; Gaz. vol. 176; p. 570.
Bottle-stopper, Liquid-applying. F. H. Hinsdale. No. 1,021,522; Mar. 26; Sp. p. 5378; Gaz. vol. 176; p. 968.
Bow-tie shield. J. F. Spalding. No. 1,021,078; Mar. 26; Sp. p. 4302; Gaz. vol. 176; p. 815.
Bowl. A. J. Sanford. No. 1,021,004; Mar. 26; Sp. p. 4250; Gaz. vol. 176; p. 789.
Bowling-alley. J. C. Wallace. No. 1,019,104; Mar. 5; Sp. p. 209; Gaz. vol. 176; p. 33.
Bowling-alleys, Pin-spot for. F. C. Hobbs. No. 1,020,646; Mar. 19; Sp. p. 3491; Gaz. vol. 176; p. 616.
Bowling-ball. W. P. Scully. No. 1,021,490; Mar. 26; Sp. p. 5302; Gaz. vol. 176; p. 955.
Box: *See* Autovehicle dump-box; Collapsible box; Hub-box; Ice-box; Mail-box; Match-box; Music-box; Paste-board box; Shipping and display box; Switch-box.
Box, A. Krzan. No. 1,019,490; Mar. 5; Sp. p. 1124; Gaz. vol. 176; p. 165.
Box, H. A. Snellings. No. 1,019,925; Mar. 12; Sp. p. 1977; Gaz. vol. 176; p. 342.
Box, H. M. Branham. No. 1,020,534; Mar. 19; Sp. p. 3237; Gaz. vol. 176; p. 579.
Box-fastener. J. J. and P. J. Shook. No. 1,021,636; Mar. 26; Sp. p. 5585; Gaz. vol. 176; p. 1004.
Box-machine. M. Quinlan. No. 1,021,703; Mar. 26; Sp. p. 5695; Gaz. vol. 176; p. 1026.
Box or carton. J. F. Byrne. No. 1,020,536; Mar. 19; Sp. p. 3243; Gaz. vol. 176; p. 580.
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Bracelet. F. Feid. No. 1,019,445; Mar. 5; Sp. p. 1017; Gaz. vol. 176; p. 149.
Bracelet, Snap-. P. H. Lattré. No. 1,020,148; Mar. 12; Sp. p. 2423; Gaz. vol. 176; p. 414.
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Bracket attachment. J. W. Briggs. No. 1,019,421; Mar. 5; Sp. p. 968; Gaz. vol. 176; p. 141.
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Brake, O. Peterson. No. 1,021,474; Mar. 26; Sp. p. 5274; Gaz. vol. 176; p. 951.
Brake-beam. E. A. Le Beau. No. 1,020,563; Mar. 19; Sp. p. 3308; Gaz. vol. 176; p. 590.
Brake-drum protector. A. P. Brush. No. 1,019,755; Mar. 12; Sp. p. 1626; Gaz. vol. 176; p. 284.
Brake-head, Adjustable. P. B. Harrison. No. 1,019,804; Mar. 12; Sp. p. 1908; Gaz. vol. 176; p. 331.
Brake-locking device. G. E. Vause and C. S. Clemmens. No. 1,021,020; Mar. 26; Sp. p. 4280; Gaz. vol. 176; p. 795.
Brake-rigging. W. H. Sauvage. (Reissue.) No. 13,386; Mar. 19; Sp. p. 4144; Gaz. vol. 176; p. 723.
Brake-rod, Adjustable. C. H. Williams, Jr. No. 1,019,872; Mar. 12; Sp. p. 1845; Gaz. vol. 176; p. 324.
Brake-shoe. C. W. Armbrust. No. 1,019,583; Mar. 5; Sp. p. 1292; Gaz. vol. 176; p. 194.
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Brake-shoes, Back for. W. H. Maloy. No. 1,019,812; Mar. 12; Sp. p. 1730; Gaz. vol. 176; p. 303.
Bread-pan. L. N. Wishman. No. 1,020,004; Mar. 12; Sp. p. 2129; Gaz. vol. 176; p. 366.
Breast-supporter. A. Schwenkler, *née* Deege. No. 1,019,537; Mar. 5; Sp. p. 1211; Gaz. vol. 176; p. 179.
Brick, Apparatus for striking off. J. H. and F. B. Davidheiser. No. 1,021,354; Mar. 26; Sp. p. 4978; Gaz. vol. 176; p. 908.

Brick-drier. E. H. Callaway. No. 1,020,186; Mar. 12; Sp. p. 2520; Gaz. vol. 176; p. 428.
Brick-hacking apparatus. R. C. Penfield. No. 1,020,572; Mar. 19; Sp. p. 3320; Gaz. vol. 176; p. 593.
Bricklayer's line-holder. H. Gillette. No. 1,021,406; Mar. 26; Sp. p. 5126; Gaz. vol. 176; p. 927.
Bridge, Bascule-. A. H. Scherzer. No. 1,021,488; Mar. 26; Sp. p. 5297; Gaz. vol. 176; p. 955.
Bridge, Suspended. T. Kalla. No. 1,019,655; Mar. 5; Sp. p. 1428; Gaz. vol. 176; p. 219.
Bridge, Suspension-. W. H. C. Greer. No. 1,019,458; Mar. 5; Sp. p. 1048; Gaz. vol. 176; p. 153.
Broiler for gas-stoves. J. Arden. No. 1,021,499; Mar. 26; Sp. p. 5324; Gaz. vol. 176; p. 959.
Brooder. A. H. Bell. No. 1,020,252; Mar. 12; Sp. p. 2655; Gaz. vol. 176; p. 450.
Brush, Calcimine-. G. E. Seaboyer. No. 1,020,373; Mar. 12; Sp. p. 2880; Gaz. vol. 176; p. 488.
Brush, Detachable tooth-. A. L. Bonin. No. 1,020,018; Mar. 12; Sp. p. 2158; Gaz. vol. 176; p. 372.
Brush, Shaving-. E. S. Jones. No. 1,019,480; Mar. 5; Sp. p. 1094; Gaz. vol. 176; p. 161.
Bubble blower, Soap-. T. J. Marshall. No. 1,020,708; Mar. 19; Sp. p. 3632; Gaz. vol. 176; p. 638.
Bubble-cup nozzle. A. Engel. No. 1,020,405; Mar. 19; Sp. p. 2959; Gaz. vol. 176; p. 537.
Bubble-hat. A. L. McMurtry. No. 1,021,823; Mar. 26; Sp. p. 4910; Gaz. vol. 176; p. 807.
Bucket, Dinner-. J. Jusse. No. 1,021,531; Mar. 26; Sp. p. 5392; Gaz. vol. 176; p. 970.
Bucket-wheel. P. Wagner. No. 1,021,222; Mar. 26; Sp. p. 4707; Gaz. vol. 176; p. 861.
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Buckle. G. M. Hubbard. No. 1,020,760; Mar. 19; Sp. p. 3740; Gaz. vol. 176; p. 656.
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Buckle. R. A. Brown. No. 1,021,088; Mar. 26; Sp. p. 4419; Gaz. vol. 176; p. 818.
Buckle, Bale-tie. J. E. Armstrong. No. 1,021,397; Mar. 26; Sp. p. 5102; Gaz. vol. 176; p. 924.
Buckle-guard. E. J. Elm. No. 1,020,811; Mar. 19; Sp. p. 3830; Gaz. vol. 176; p. 673.
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Buckle, Suspender-. A. Van Brunt. No. 1,021,018; Mar. 26; Sp. p. 4276; Gaz. vol. 176; p. 794.
Buggy-top. J. A. Orr. No. 1,019,692; Mar. 5; Sp. p. 1490; Gaz. vol. 176; p. 231.
Building-block. E. L. Dobbins. No. 1,019,228; Mar. 5; Sp. p. 486; Gaz. vol. 176; p. 78.
Bundle-carrier. T. E. Somerville. No. 1,020,722; Mar. 19; Sp. p. 3661; Gaz. vol. 176; p. 644.
Burglar-alarm. A. B. Lowe. No. 1,019,264; Mar. 5; Sp. p. 564; Gaz. vol. 176; p. 90.
Burglar-alarm system. M. F. Juruick. No. 1,019,481; Mar. 5; Sp. p. 1094; Gaz. vol. 176; p. 161.
Burial-case clamp. P. D. Skahen. No. 1,019,094; Mar. 5; Sp. p. 192; Gaz. vol. 176; p. 30.
Burner: *See* Gas-burner; Hydrocarbon-burner; Liquid-burner; Oil-burner; Smoke-burner; Spray-burner.
Burner. W. Booth. No. 1,019,592; Mar. 5; Sp. p. 1311; Gaz. vol. 176; p. 197.
Burner. H. W. Gardner. No. 1,020,348; Mar. 12; Sp. p. 2833; Gaz. vol. 176; p. 480.
Burner. D. H. Lynde. No. 1,021,056; Mar. 26; Sp. p. 4355; Gaz. vol. 176; p. 808.
Burner-igniter. W. J. Best. No. 1,020,075; Mar. 12; Sp. p. 2269; Gaz. vol. 176; p. 391.
Bust-supporter. L. Martell and E. J. Payne. No 1,020,213; Mar. 12; Sp. p. 2580; Gaz. vol. 176; p. 438.
Butter-separator, Aerating. A. Fay. No. 1,019,235; Mar. 5; Sp. p. 503; Gaz. vol. 176; p. 79.
Button-setting machine. D. C. Sasseman. No. 1,020,058; Mar. 12; Sp. p. 2232; Gaz. vol. 176; p. 385.
Cabinet and dough-raiser. A. McGarvey. No. 1,019,815; Mar. 12; Sp. p. 1736; Gaz. vol. 176; p. 804.
Cabinet, Expansible. D. E. Hunter. No. 1,020,557; Mar. 19; Sp. p. 3290; Gaz. vol. 176; p. 588.
Cable clip or hanger. C. G. Davidson. No. 1,020,130; Mar. 12; Sp. p. 2397; Gaz. vol. 176; p. 400.
Cable-support. T. A. Dissel. No. 1,020,969; Mar. 26; Sp. p. 4184; Gaz. vol. 176; p. 778.
Cake and making same, Edible. W. W. De Bevoise. No. 1,020,481; Mar. 19; Sp. p. 3119; Gaz. vol. 176; p. 562.
Cake-mixer. H. Kyle. No. 1,019,055; Mar. 5; Sp. p. 91; Gaz. vol. 176; p. 18.
Calcimine, Making. L. W. Collister. No. 1,021,136; Mar. 26; Sp. p. 4518; Gaz. vol. 176; p. 833.
Calcium cyanamid. Producing. A. Bonnington and H. G. Akers. No. 1,021,445; Mar. 26; Sp. p. 5199; Gaz. vol. 176; p. 941.
Calculating-machine. I. D. Siegfried. No. 1,019,996; Mar. 12; Sp. p. 2111; Gaz. vol. 176; p. 364.
Calculating-machine. W. R. Heinitz. No. 1,020,200; Mar. 12; Sp. p. 2552; Gaz. vol. 176; p. 433.
Calipers, Micrometer-. F. O. Jaques, Sr. No. 1,021,680; Mar. 26; Sp. p. 5655; Gaz. vol. 176; p. 1017.
Camera, Demonstrating-. H. L. Finzel. No. 1,019,622; Mar. 5; Sp. p. 1363; Gaz. vol. 176; p. 208.
Can: *See* Oil-can.
Can and bottle top. T. Febert. No. 1,020,487; Mar. 19; Sp. p. 3128; Gaz. vol. 176; p. 564.
Can-body blanks, Notching mechanism for. C. W. Graham. No. 1,020,550; Mar. 19; Sp. p. 3271; Gaz. vol. 176; p. 585.
Can holder, Oil-. F. W. Buffum. No. 1,021,037; Mar. 26; Sp. p. 4313; Gaz. vol. 176; p. 801.
Can-lacquering machine. A. Y. Seely. No. 1,021,074; Mar. 26; Sp. p. 4386; Gaz. vol. 176; p. 814.
Can-lining. T. Domoto. No. 1,020,184; Mar. 12; Sp. p. 2403; Gaz. vol. 176; p. 410.
Can lock, Milk-. P. O. Ketler. No. 1,019,052; Mar. 5; Sp. p. 87; Gaz. vol. 176; p. 17.
Can-making machine. C. W. Sleeper. No. 1,019,376; Mar. 5; Sp. p. 870; Gaz. vol. 176; p. 128.
Can-opener. W. Schwab. No. 1,020,954; Mar. 19; Sp. p. 4138; Gaz. vol. 176; p. 721.
Can top, Powder-. F. Reutter. No. 1,021,479; Mar. 26; Sp. p. 5279; Gaz. vol. 176; p. 952.
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Cans, Attachment to friction-top. H. J. Wickman. No. 1,020,589; Mar. 19; Sp. p. 3367; Gaz. vol. 176; p. 598.
Cans, Hinged cap for powder-. F. Reutter. No. 1,021,483; Mar. 26; Sp. p. 5286; Gaz. vol. 176; p. 953.
Cans, Refrigerating-cover for milk-. S. Shapiro. No. 1,020,719; Mar. 19; Sp. p. 3656; Gaz. vol. 176; p. 643.
Candlestick, Miner's. A. Viera. No. 1,020,332; Mar. 12; Sp. p. 2798; Gaz. vol. 176; p. 474.
Candy-cutting machine. A. Jackson. No. 1,019,793; Mar. 12; Sp. p. 1609; Gaz. vol. 176; p. 296.
Candy-dipping frame. G. Brain. No. 1,019,220; Mar. 5; Sp. p. 468; Gaz. vol. 176; p. 75.
Cane-cutter. F. Hustace and J. J. Smiddy. No. 1,021,605; Mar. 26; Sp. p. 5536; Gaz. vol. 176; p. 994.
Cane mills, Intermediate belt conveyer for sugar-. I. P. Kimball and R. J. Pratt. No. 1,020,706; Mar. 19; Sp. p. 3627; Gaz. vol. 176; p. 637.
Canopy for draft-animals. F. H. Crocker and P. E. Sheridan. No. 1,021,217; Mar. 26; Sp. p. 4689; Gaz. vol. 176; p. 859.
Cap and bonnet, Combination. F. Bruder. No. 1,019,019; Mar. 5; Sp. p. 14; Gaz. vol. 176; p. 5.
Capping-off device. H. F. Hitner. No. 1,019,792; Mar. 12; Sp. p. 1698; Gaz. vol. 176; p. 296.
Car. S. Otis. No. 1,019,911; Mar. 12; Sp. p. 1940; Gaz. vol. 176; p. 337.
Car-bolster. J. M. Rohling. No. 1,021,164; Mar. 26; Sp. p. 4583; Gaz. vol. 176; p. 842.
Car-bolster. J. M. Ames. No. 1,021,733; Mar. 26; Sp. p. 5768; Gaz. vol. 176; p. 1036.
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Car-bunk. E. E. Perkins. No. 1,019,353; Mar. 5; Sp. p. 798; Gaz. vol. 176; p. 120.
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Car coupling, Railway-. J. F. and V. S. Durbin. No. 1,019,138; Mar. 5; Sp. p. 296; Gaz. vol. 176; p. 46.
Car-couplings, Knuckle-pin retainer for. J. Kelso. No. 1,021,464; Mar. 26; Sp. p. 5254; Gaz. vol. 176; p. 947.
Car-door fastener. F. F. Gaines. No. 1,019,036; Mar. 5; Sp. p. 50; Gaz. vol. 176; p. 11.
Car-door fastener. R. J. Rennie. No. 1,021,211; Mar. 26; Sp. p. 4674; Gaz. vol. 176; p. 857.
Car-door fastener, Box-. P. D. Hooton. No. 1,020,604; Mar. 19; Sp. p. 3395; Gaz. vol. 176; p. 603.
Car-door hanger. J. T. Campbell. No. 1,019,129; Mar. 5; Sp. p. 276; Gaz. vol. 176; p. 42.
Car-door lock. F. Snyder. No. 1,020,721; Mar. 19; Sp. p. 3660; Gaz. vol. 176; p. 644.
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Car-door-operating device. A. Christiansen. No. 1,019,023; Mar. 5; Sp. p. 19; Gaz. vol. 176; p. 6.
Car-door-operating mechanism. A. Christianson. No. 1,021,351; Mar. 26; Sp. p. 4973; Gaz. vol. 176; p. 907.
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Car, Dump-. C. A. Lindström and J. F. Streib. No. 1,019,263; Mar. 5; Sp. p. 561; Gaz. vol. 176; p. 89.
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Car-fender. J. Lichetti. No. 1,019,671; Mar. 5; Sp. p. 1452; Gaz. vol. 176; p. 224.
Car-fender. F. M. Roush. No. 1,019,841; Mar. 12; Sp. p. 1775; Gaz. vol. 176; p. 311.
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Car-fender. W. L. C. Koch. No. 1,021,413; Mar. 26; Sp. p. 5138; Gaz. vol. 176; p. 929.
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Car grain-door. B. F. Owens. No. 1,019,274; Mar. 5; Sp. p. 583; Gaz. vol. 176; p. 94.
Car-journal-cooling apparatus. F. H. Collins. No. 1,019,760; Mar. 12; Sp. p. 1639; Gaz. vol. 176; p. 286.
Car, Ladle-. W. W. McKelvey. No. 1,021,543; Mar. 26; Sp. p. 5411; Gaz. vol. 176; p. 974.
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Car-platform. E. H. Schmidt. No. 1,019,725; Mar. 5; Sp. p. 1558; Gaz. vol. 176; p. 242.
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Car running-board, Freight-. W. E. Fowler, Jr. No. 1,019,627; Mar. 5; Sp. p. 1376; Gaz. vol. 176; p. 210.
Car safety appliance, Tramway-. J. E. Schoolfield. No. 1,021,752; Mar. 26; Sp. p. 5811; Gaz. vol. 176; p. 1042.
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Car, Steel box-. V. M. Summa. No. 1,021,170; Mar. 26; Sp. p. 4597; Gaz. vol. 176; p. 844.
Car-step. J. S. Blake. No. 1,020,254; Mar. 12; Sp. p. 2656; Gaz. vol. 176; p. 451.
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Car-underframe. H. W. Wolf. No. 1,021,123; Mar. 26; Sp. p. 4484; Gaz. vol. 176; p. 828.
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Car-vestibule diaphragms, Spring device for. F. G. Fowler. No. 1,019,777; Mar. 12; Sp. p. 1668; Gaz. vol. 176; p. 291.
Car-window shield, Railway-. J. A. Ward. No. 1,021,646; Mar. 26; Sp. p. 5602; Gaz. vol. 176; p. 1007.
Cars and other conveyances, Appliance for railway-. H. T. Cronk. No. 1,021,663; Mar. 26; Sp. p. 5626; Gaz. vol. 176; p. 1012.
Cars, Shoe for third-rail electric. L. A. McCoubrie and C. F. Raydure. No. 1,021,420; Mar. 26; Sp. p. 5150; Gaz. vol. 176; p. 932.
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Carbureter. H. N. Motzinger. No. 1,021,547; Mar. 26; Sp. p. 5418; Gaz. vol. 176; p. 975.
Carbureter, Float-feed. E. P. Lamb. No. 1,020,915; Mar. 19; Sp. p. 4048; Gaz. vol. 176; p. 707.
Carbureter for internal-combustion engines. T. Welsh. No. 1,019,209; Mar. 5; Sp. p. 447; Gaz. vol. 176; p. 71.
Carbureter for internal-combustion engines. W. W. Hamill. No. 1,020,196; Mar. 12; Sp. p. 2545; Gaz. vol. 176; p. 432.
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Carbureters, Float-tank mechanism for. W. C. Carter. No. 1,019,948; Mar. 12; Sp. p. 2016; Gaz. vol. 176; p. 348.
Carbureters, Mixing attachment for. A. C. Stewart. No. 1,021,079; Mar. 26; Sp. p. 4393; Gaz. vol. 176; p. 816.
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Carbureting apparatus. R. P. Doudney. No. 1,019,309; Mar. 5; Sp. p. 681; Gaz. vol. 176; p. 106.
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Card, Score-. C. Mecklem. No. 1,019,070; Mar. 5; Sp. p. 139; Gaz. vol. 176; p. 28.
Cards and the like, Support for. H. O. Hibbard. No. 1,020,907; Mar. 19; Sp. p. 4036; Gaz. vol. 176; p. 704.
Cardboard, Composite. L. H. Baekeland. No. 1,019,406; Mar. 5; Sp. p. 943; Gaz. vol. 176; p. 138.
Carding-machine loosener. A. F. Poirier. No. 1,019,355; Mar. 5; Sp. p. 804; Gaz. vol. 176; p. 121.
Carpet sweeper and cleaner. J. M. Spangler. No. 1,021,731; Mar. 26; Sp. p. 5763; Gaz. vol. 176; p. 1035.
Carriage-top bow-coupling. F. E. Gilbert. No. 1,019,711; Mar. 5; Sp. p. 1524; Gaz. vol. 176; p. 236.
Carrier: *See* Bundle-carrier; Mail-carrier; Overhead carrier; Water-carrier.
Carrier. J. W. Moore. No. 1,019,175; Mar. 5; Sp. p. 379; Gaz. vol. 176; p. 60.
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Casket-canopy. B. C. Wallace. No. 1,020,169; Mar. 12; Sp. p. 2481; Gaz. vol. 176; p. 422.
Casket-handle. H. G. Collins. No. 1,019,761; Mar. 12; Sp. p. 1641; Gaz. vol. 176; p. 286.
Caster, Chair-leg or furniture. A. E. Schatz. No. 1,019,534; Mar. 5; Sp. p. 1208; Gaz. vol. 176; p. 179.
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Cement-finishing machine. G. W. Sharp. No. 1,019,539; Mar. 5; Sp. p. 1214; Gaz. vol. 176; p. 180.
Cement, Hydraulic. F. W. Brown and G. W. Bartholomew. No. 1,020,124; Mar. 12; Sp. p. 2380; Gaz. vol. 176; p. 407.
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Chain, Link. A. Günzel. No. 1,020,197; Mar. 12; Sp. p. 2544; Gaz. vol. 176; p. 432.
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Chair. R. S. Calef. No. 1,019,594; Mar. 5; Sp. p. 1313; Gaz. vol. 176; p. 198.
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Churn, Rotary. H. T. Martin. No. 1,020,300; Mar. 12; Sp. p. 2745; Gaz. vol. 176; p. 485.
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Chute, Portable car-. C. J. Mominee. No. 1,021,741; Mar. 26; Sp. p. 5783; Gaz. vol. 176; p. 1038.
Cigar tip-cutter and lighter, Combined. D. A. Thomas. No. 1,021,080; Mar. 26; Sp. p. 4394; Gaz. vol. 176; p. 815.
Cigarette. B. H. Whitmore. No. 1,020,864; Mar. 19; Sp. p. 3969; Gaz. vol. 176; p. 691.
Cigarette-packer. M. Karger. No. 1,021,194; Mar. 26; Sp. p. 4645; Gaz. vol. 176; p. 851.
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Circuit-breaker, Expulsion-fuse. W. J. Lietzenmayer. No. 1,021,054; Mar. 26; Sp. p. 4353; Gaz. vol. 176; p. 808.
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Cistern-guard. C. W. Johnson. No. 1,021,410; Mar. 26; Sp. p. 5132; Gaz. vol. 176; p. 928.
Clam-digger. W. D. Collier. No. 1,019,601; Mar. 5; Sp. p. 1328; Gaz. vol. 176; p. 200.
Clamp: *See* Belt-clamp; Burial-case clamp; Concrete-form clamp; Insulator-clamp; Locking-clamp; Rail-clamp; Truck-handle clamp.
Clamp. C. D. Crandal. No. 1,020,129; Mar. 12; Sp. p. 2396; Gaz. vol. 176; p. 409.
Clamp. E. F. Cords. No. 1,021,352; Mar. 26; Sp. p. 4974; Gaz. vol. 176; p. 907.
Clasp: *See* Tie-clasp.
Clasp. W. S. Barker. No. 1,019,016; Mar. 5; Sp. p. 8; Gaz. vol. 176; p. 4.
Cleaner: *See* Bolting-cloth cleaner; Comb-cleaner; Grain-cleaner; Vacuum-cleaner.
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Cloth-finishing machine. J. B. Dunn. No. 1,019,615; Mar. 5; Sp. p. 1340; Gaz. vol. 176; p. 205.
Cloth-piling apparatus. J. Z. Pollard and G. J. Lederer. No. 1,021,002; Mar. 26; Sp. p. 4246; Gaz. vol. 176; p. 788.
Clothes-boiler. F. A. Spears. No. 1,019,198; Mar. 5; Sp. p. 427; Gaz. vol. 176; p. 67.
Clothes-drier. L. A. McGeary. No. 1,021,694; Mar. 26; Sp. p. 5680; Gaz. vol. 176; p. 1022.
Clothes-line reel. C. W. Ott. No. 1,020,440; Mar. 19; Sp. p. 3038; Gaz. vol. 176; p. 550.
Clothes-line support. P. S. Stancliff. No. 1,021,274; Mar. 26; Sp. p. 4821; Gaz. vol. 176; p. 879.
Clothes-pins or similar articles, Making. F. H. Perry. No. 1,020,443; Mar. 19; Sp. p. 3041; Gaz. vol. 176; p. 551.
Clothes-rack. A. A. Boschee. No. 1,021,654; Mar. 26; Sp. p. 5615; Gaz. vol. 176; p. 1010.
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Clutch casing, Friction-. S. B. Peck. No. 1,020,441; Mar. 19; Sp. p. 3039; Gaz. vol. 176; p. 550.
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Clutch, Governor-pulley. E. Craft. No. 1,019,305; Mar. 5; Sp. p. 673; Gaz. vol. 176; p. 105.
Clutch having removable wearing-surfaces, Friction-. H. Austin. No. 1,020,737; Mar. 19; Sp. p. 3699; Gaz. vol. 176; p. 649.
Clutch mechanism for motor-shafts. J. Sabatino. No. 1,020,223; Mar. 12; Sp. p. 2603; Gaz. vol. 176; p. 441.
Clutch, Non-reversible. A. A. Faucher and T. Crosby. No. 1,021,748; Mar. 26; Sp. p. 5798; Gaz. vol. 176; p. 1041.
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Coat and hat rack, Combined. L. E. Baldwin. No. 1,020,791; Mar. 19; Sp. p. 3803; Gaz. vol. 176; p. 666.
Coating compound. T. E. Conway. No. 1,020,801; Mar. 19; Sp. p. 3821; Gaz. vol. 176; p. 669.
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Cock. W. H. Greatorex. No. 1,021,518; Mar. 26; Sp. p. 5371; Gaz. vol. 176; p. 966.
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Elevator. A. S. Debler. No. 1,020,746; Mar. 19; Sp. p. 3716; Gaz. vol. 176; p. 652.
Elevator. F. Widmann and H. S. Wells. No. 1,021,172; Mar. 26; Sp. p. 4603; Gaz. vol. 176; p. 845.
Elevator-door frame, Sidewalk-. C. G. Janson. No. 1,020,286; Mar. 12; Sp. p. 2722; Gaz. vol. 176; p. 461.
Elevator emergency-brake. P. C. Slowe. No. 1,021,114; Mar. 26; Sp. p. 4462; Gaz. vol. 176; p. 825.
Elevator-guide lubricator. C. Schenck. No. 1,020,715; Mar. 19; Sp. p. 3645; Gaz. vol. 176; p. 641.
Elevator-guide lubricator. J. H. Hirz. No. 1,021,190; Mar. 26; Sp. p. 4638; Gaz. vol. 176; p. 850.
Elevator-hood. E. O. Droegemeier. No. 1,020,542; Mar. 19; Sp. p. 3253; Gaz. vol. 176; p. 582.
Elevator-shaft fire-doors. J. E. and T. F. Donnelly. No. 1,021,304; Mar. 26; Sp. p. 4877; Gaz. vol. 176; p. 890.
Embroidering-machine. M. H. Rumpf. No. 1,020,663; Mar. 19; Sp. p. 3527; Gaz. vol. 176; p. 622.
Embroidering-machine, Shuttle. R. Zahn. No. 1,020,674; Mar. 19; Sp. p. 3551; Gaz. vol. 176; p. 625.
Embroidery-machine. R. Zahn. No. 1,020,009; Mar. 12; Sp. p. 2137; Gaz. vol. 176; p. 368.
Embroidery-machine, Jacquard. R. Zahn. No. 1,020,010; Mar. 12; Sp. p. 2138; Gaz. vol. 176; p. 368.
Emergency-brake. M. O. Godding. No. 1,019,146; Mar. 5; Sp. p. 314; Gaz. vol. 176; p. 49.

End-gate. R. M. Sturdevant. No. 1,020,726; Mar. 19; Sp. p. 3669; Gaz. vol. 176; p. 645.
End-gate, Wagon. C. Skidmore. No. 1,020,320; Mar. 12; Sp. p. 2779; Gaz. vol. 176; p. 471.
End-play device. R. C. Newhouse. No. 1,019,074; Mar. 5; Sp. p. 144; Gaz. vol. 176; p. 24.
Engine: *See* Beating-engine; Expansion-engine; Explosion-engine; Explosive-engine; Gas-engine; Internal-combustion engine; Internal-combustion rotary engine; Rotary engine; Rotary steam-engine; Rotating-cylinder engine.
Engine igniting apparatus, Gas-. E. Thomson. No. 1,021,219; Mar. 26; Sp. p. 4701; Gaz. vol. 176; p. 860.
Engine igniting mechanism, Explosive-. A. Winton and H. B. Anderson. No. 1,021,031; Mar. 26; Sp. p. 4302; Gaz. vol. 176; p. 799.
Engine lubricating system, Internal-combustion and other. W. J. Wright. No. 1,020,007; Mar. 12; Sp. p. 2133; Gaz. vol. 176; p. 367.
Engine piston, Expansion-. R. S. Moore. No. 1,020,836; Mar. 19; Sp. p. 3899; Gaz. vol. 176; p. 682.
Engine-starter. G. S. Sutliff. No. 1,021,493; Mar. 26; Sp. p. 5308; Gaz. vol. 176; p. 957.
Engine-starting mechanism, Hydrocarbon-. F. Dettman. No. 1,020,967; Mar. 26; Sp. p. 4179; Gaz. vol. 176; p. 777.
Engine-stop, Automatic. J. K. Wright. No. 1,020,940; Mar. 19; Sp. p. 4095; Gaz. vol. 176; p. 716.
Engines, Automatic time-controlled regulator for gas-. W. C. Gambrel. No. 1,020,897; Mar. 19; Sp. p. 4018; Gaz. vol. 176; p. 701.
Engines, Hydrocarbon-vaporizer for internal-combustion. J. W. Mowbray. No. 1,021,326; Mar. 26; Sp. p. 4915; Gaz. vol. 176; p. 898.
Engines, Safety-crank for explosion-. W. R. Clark. No. 1,020,799; Mar. 19; Sp. p. 3818; Gaz. vol. 176; p. 669.
Engines, Vaporizer for internal-combustion. E. Thomson. No. 1,021,220; Mar. 26; Sp. p. 4704; Gaz. vol. 176; p. 860.
Envelop. F. Grab. No. 1,019,783; Mar. 12; Sp. p. 1680; Gaz. vol. 176; p. 293.
Envelop. J. A. Woolslare. No. 1,020,469; Mar. 19; Sp. p. 3003; Gaz. vol. 176; p. 559.
Envelop-pad. G. G. Press. No. 1,019,275; Mar. 5; Sp. p. 586; Gaz. vol. 176; p. 94.
Envelops, &c., Apparatus for stacking. G. S. Lewis. No. 1,019,059; Mar. 5; Sp. p. 98; Gaz. vol. 176; p. 19.
Evaporating apparatus. C. L. Prache. No. 1,020,659; Mar. 19; Sp. p. 3520; Gaz. vol. 176; p. 620.
Evaporating apparatus having multiple evaporation. W. Rusiecki. No. 1,021,486; Mar. 26; Sp. p. 5292; Gaz. vol. 176; p. 954.
Excavating-machine. J. Hood. No. 1,020,504; Mar. 19; Sp. p. 3167; Gaz. vol. 176; p. 569.
Excavator, Belt. P. J. Lyback. No. 1,020,296; Mar. 12; Sp. p. 2739; Gaz. vol. 176; p. 464.
Excavator-bucket clean-out. H. J. Bentson. No. 1,020,958; Mar. 26; Sp. p. 4158; Gaz. vol. 176; p. 773.
Excavator-wheel. A. Roberts. No. 1,021,113; Mar. 26; Sp. p. 4461; Gaz. vol. 176; p. 825.
Excelsior-machine. J. W. Keogh. No. 1,020,100; Mar. 12; Sp. p. 2333; Gaz. vol. 176; p. 399.
Exerciser. R. B. Patterson, Jr. No. 1,020,367; Mar. 12; Sp. p. 2867; Gaz. vol. 176; p. 485.
Exercising and strength-testing appliance. J. Harania. No. 1,020,551; Mar. 19; Sp. p. 3277; Gaz. vol. 176; p. 585.
Exercising apparatus. H. W. Titus. No. 1,019,861; Mar. 12; Sp. p. 1824; Gaz. vol. 176; p. 320.
Expansion-bolt. C. Pauli. No. 1,019,723; Mar. 5; Sp. p. 1554; Gaz. vol. 176; p. 241.
Expansion-engine for producing low temperatures. C. W. P. Heylandt. No. 1,019,790; Mar. 12; Sp. p. 1694; Gaz. vol. 176; p. 295.
Expansion-engine for reducing compressed gas to low temperatures. C. W. P. Heylandt. No. 1,019,791; Mar. 12; Sp. p. 1696; Gaz. vol. 176; p. 296.
Expansion-joint. W. Wright and H. F. Hall. No. 1,021,082; Mar. 26; Sp. p. 4399; Gaz. vol. 176; p. 816.
Explosion-engine. G. F. Mort. No. 1,021,697; Mar. 26; Sp. p. 5685; Gaz. vol. 176; p. 1024.
Explosive-engine. H. J. Podlesák. No. 1,019,354; Mar. 5; Sp. p. 800; Gaz. vol. 176; p. 120.
Explosive-engine. A. Hanson. No. 1,020,819; Mar. 19; Sp. p. 3868; Gaz. vol. 176; p. 676.
Extension-table, Round-top. C. N. Munz. No. 1,019,826; Mar. 12; Sp. p. 1750; Gaz. vol. 176; p. 307.
Extractor: *See* Bolt-extractor.
Eyeglass-mounting. L. F. Adt. No. 1,019,115; Mar. 5; Sp. p. 230; Gaz. vol. 176; p. 37.
Eyeglass-mounting. L. F. Adt. No. 1,019,117; Mar. 5; Sp. p. 238; Gaz. vol. 176; p. 38.
Eyeglass-mounting. L. F. Adt. No. 1,019,214; Mar. 5; Sp. p. 459; Gaz. vol. 176; p. 73.
Eyeglasses. L. F. Adt. No. 1,019,116; Mar. 5; Sp. p. 238; Gaz. vol. 176; p. 38.
Eyeglasses, Arm for supporting the nose-grips of. A. V. Brown. No. 1,019,018; Mar. 5; Sp. p. 11; Gaz. vol. 176; p. 5.
Eyes, Device for removing foreign matter from the. W. A. Jones. No. 1,020,985; Mar. 26; Sp. p. 4220; Gaz. vol. 176; p. 784.
Fabric: *See* Bed-bottom fabric; Metallic link fabric.
Fabric. A. Hopkins. No. 1,019,473; Mar. 5; Sp. p. 1073; Gaz. vol. 176; p. 158.
Fabric-border-forming machine. W. H. Carter. No. 1,020,944; Mar. 19; Sp. p. 4107; Gaz. vol. 176; p. 717.
Fabric having layers of variable extensibility. L. A. Subers. No. 1,021,014; Mar. 26; Sp. p. 4268; Gaz. vol. 176; p. 792.
Fabric or cloth. A. H. Henderson. No. 1,020,499; Mar. 19; Sp. p. 3158; Gaz. vol. 176; p. 568.
Fabric-treating apparatus, Cotton-. S. M. Krosnowski. No. 1,020,294; Mar. 12; Sp. p. 2784; Gaz. vol. 176; p. 463.
Fabrics, Manufacture of textile. J. Wilkinson. No. 1,021,712; Mar. 26; Sp. p. 5721; Gaz. vol. 176; p. 1028.
Fabrics, Treating. A. T. Moore. No. 1,019,909; Mar. 12; Sp. p. 1938; Gaz. vol. 176; p. 336.
Fan and pump casing, Centrifugal. L. B. Cousans. No. 1,019,762; Mar. 12; Sp. p. 1642; Gaz. vol. 176; p. 286.
Fan, Automatic. W. B. Laskey. No. 1,021,536; Mar. 26; Sp. p. 5398; Gaz. vol. 176; p. 972.
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Fan, Centrifugal. F. R. Still. No. 1,020,725; Mar. 19; Sp. p. 3667; Gaz. vol. 176; p. 645.
Fan, Centrifugal. D. B. Minor. No. 1,020,771; Mar. 19; Sp. p. 3767; Gaz. vol. 176; p. 660.
Farm-gate. W. M. Scotten. No. 1,019,726; Mar. 5; Sp. p. 1559; Gaz. vol. 176; p. 242.
Fastening device or toggle. P. C. Lawson. No. 1,019,057; Mar. 5; Sp. p. 94; Gaz. vol. 176; p. 19.
Fats or fatty substances, Separating the solid constituents from the liquid constituents of. F. Winterstein and S. Nitsch. No. 1,020,673; Mar. 19; Sp. p. 3550; Gaz. vol. 176; p. 625.
Faucet. A. E. Goodwyn. No. 1,019,317; Mar. 5; Sp. p. 703; Gaz. vol. 176; p. 109.
Faucet. J. E. Tichon. No. 1,019,380; Mar. 5; Sp. p. 881; Gaz. vol. 176; p. 129.
Faucet. A. R. E. Paul. No. 1,019,694; Mar. 5; Sp. p. 1493; Gaz. vol. 176; p. 231.
Faucet. A. A. Bowser. No. 1,020,076; Mar. 12; Sp. p. 2270; Gaz. vol. 176; p. 391.
Faucet. J. A. McKenna. No. 1,020,434; Mar. 19; Sp. p. 3026; Gaz. vol. 176; p. 548.
Faucet sanitary attachment. C. E. Kells, Jr. No. 1,020,207; Mar. 12; Sp. p. 2568; Gaz. vol. 176; p. 435.
Feed-bag. J. Holitzki. No. 1,021,601; Mar. 26; Sp. p. 5531; Gaz. vol. 176; p. 993.
Feed-water regulator. M. Elkofer. No. 1,020,642; Mar. 19; Sp. p. 3484; Gaz. vol. 176; p. 615.
Feeder and exerciser, Chicken. W. R. Logan. No. 1,019,975; Mar. 12; Sp. p. 2066; Gaz. vol. 176; p. 356.
Feeder and grit-separator. L. A. Prochnow. No. 1,019,185; Mar. 5; Sp. p. 395; Gaz. vol. 176; p. 63.
Feeder, Automatic. T. M. Platt. No. 1,021,209; Mar. 26; Sp. p. 4670; Gaz. vol. 176; p. 856.
Feeder, Automatic calf-. J. Rau. No. 1,019,087; Mar. 5; Sp. p. 178; Gaz. vol. 176; p. 29.
Feeder, Automatic stock and poultry. S. D. Huff. No. 1,020,505; Mar. 19; Sp. p. 3169; Gaz. vol. 176; p. 569.
Feeder, Poultry-. A. H. Baker. No. 1,020,790; Mar. 19; Sp. p. 3801; Gaz. vol. 176; p. 666.
Feeding apparatus, Automatic poultry-. F. R. Parks. No. 1,019,080; Mar. 5; Sp. p. 157; Gaz. vol. 176; p. 26.
Feeding-machine. J. J. Green. No. 1,019,040; Mar. 5; Sp. p. 62; Gaz. vol. 176; p. 13.
Feeding-stuff. C. Ellis. No. 1,019,734; Mar. 5; Sp. p. 1573; Gaz. vol. 176; p. 245.
Fence-post. G. G. Anderson. No. 1,020,872; Mar. 19; Sp. p. 3981; Gaz. vol. 176; p. 693.
Fence post and fastening. A. J. McGavick. No. 1,019,817; Mar. 12; Sp. p. 1738; Gaz. vol. 176; p. 304.
Fence-post and fence-fastening. A. J. McGavick. No. 1,019,816; Mar. 12; Sp. p. 1737; Gaz. vol. 176; p. 304.
Fence-post, Metallic. J. Huber. No. 1,021,409; Mar. 26; Sp. p. 5131; Gaz. vol. 176; p. 928.
Fence-repairing implement. M. F. Mead. No. 1,021,324; Mar. 26; Sp. p. 4911; Gaz. vol. 176; p. 898.
Fence, Wire. D. H. Miller. No. 1,019,071; Mar. 5; Sp. p. 140; Gaz. vol. 176; p. 23.
Fence-wire fastener. M. J. Burkhart. No. 1,020,259; Mar. 12; Sp. p. 2663; Gaz. vol. 176; p. 452.
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Fertilizer-distributer. G. C. Pate. No. 1,020,571; Mar. 19; Sp. p. 3319; Gaz. vol. 176; p. 502.
Fertilizer, Making. S. B. Newberry and H. N. Barrett. No. 1,020,153; Mar. 12; Sp. p. 2439; Gaz. vol. 176; p. 416.
Fiber-bearing and other plants, Apparatus for treatment of. G. W. Schlichten. No. 1,021,269; Mar. 26; Sp. p. 4805; Gaz. vol. 176; p. 877.
Fibers and materials, Treatment of vegetable. W. Schewelin. No. 1,020,625; Mar. 19; Sp. p. 3446; Gaz. vol. 176; p. 609.
Fibrous materials, Apparatus for treating. W. M. Grosvenor. No. 1,019,319; Mar. 5; Sp. p. 706; Gaz. vol. 176; p. 110.
Fieldless motor. F. L. South. No. 1,019,544; Mar. 5; Sp. p. 1222; Gaz. vol. 176; p. 182.
Fifth-wheel for fertilizer-distributers. R. Love. No. 1,019,064; Mar. 5; Sp. p. 109; Gaz. vol. 176; p. 21.
Filing-cabinet. L. S. Weaver and W. F. Altenbaugh. No. 1,021,025; Mar. 26; Sp. p. 4288; Gaz. vol. 176; p. 797.
Filing-case. W. T. Callaghan. No. 1,021,090; Mar. 26; Sp. p. 4423; Gaz. vol. 176; p. 819.

Filing loose leaves, Arrangement for. A. Krautheim. No. 1,020,990; Mar. 26; Sp. p. 4226; Gaz. vol. 176; p. 785.
Fill and vent fitting device. H. M. Bowser. No. 1,020,077; Mar. 12; Sp. p. 2274; Gaz. vol. 176; p. 391.
Filter. J. D. Ramsey. No. 1,020,053; Mar. 12; Sp. p. 2224; Gaz. vol. 176; p. 383.
Filter. J. N. Sisley. No. 1,021,076; Mar. 26; Sp. p. 4389; Gaz. vol. 176; p. 814.
Filter, Gas-. W. J. Tinker. No. 1,020,782; Mar. 19; Sp. p. 3787; Gaz. vol. 176; p. 663.
Filtering apparatus. B. József. No. 1,020,986; Mar. 26; Sp. p. 4222; Gaz. vol. 176; p. 784.
Fire-alarm. T. Bell and E. Brophy. No. 1,020,074; Mar. 12; Sp. p. 2268; Gaz. vol. 176; p. 390.
Fire-alarm, Automatic. S. M. Kohr. No. 1,021,609; Mar. 26; Sp. p. 5542; Gaz. vol. 176; p. 995.
Fire-alarm, Electric. E. H. Moe. No. 1,019,270; Mar. 5; Sp. p. 577; Gaz. vol. 176; p. 92.
Fire-escape. E. C. Welsh. No. 1,020,065; Mar. 12; Sp. p. 2252; Gaz. vol. 176; p. 387.
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Fire-escape. T. H. Elliott. No. 1,021,361; Mar. 26; Sp. p. 4990; Gaz. vol. 176; p. 911.
Fire-escape apparatus. J. R. Taft and C. F. Pember. No. 1,019,284; Mar. 5; Sp. p. 621; Gaz. vol. 176; p. 97.
Fire-extinguisher. J. B. Thomas. No. 1,019,859; Mar. 12; Sp. p. 1821; Gaz. vol. 176; p. 319.
Fire-nozzle. T. D. Brath. No. 1,019,420; Mar. 5; Sp. p. 967; Gaz. vol. 176; p. 141.
Fire, range, and the like, Domestic. G. R. Hislop. No. 1,021,460; Mar. 26; Sp. p. 5231; Gaz. vol. 176; p. 946.
Firearm. A. J. Savage. No. 1,019,367; Mar. 5; Sp. p. 835; Gaz. vol. 176; p. 125.
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Firearm. C. H. A. F. L. Ross. No. 1,021,706; Mar. 26; Sp. p. 5709; Gaz. vol. 176; p. 1026.
Firearm, Automatic. H. G. Farquhar and A. H. Hill. No. 1,019,620; Mar. 5; Sp. p. 1359; Gaz. vol. 176; p. 207.
Firearm, Automatic. W. H. Whittier. No. 1,019,937; Mar. 12; Sp. p. 1996; Gaz. vol. 176; p. 345.
Firearm with fixed barrel and breech-action, Automatic. K. A. Brüning. No. 1,020,596; Mar. 19; Sp. p. 3381; Gaz. vol. 176; p. 600.
Firearms, Silencer for R. A. Moore. No. 1,021,742; Mar. 26; Sp. p. 5784; Gaz. vol. 176; p. 1039.
Fireproof columns, Cap and base for. J. J. Tresidder. No. 1,019,561; Mar. 5; Sp. p. 1258; Gaz. vol. 176; p. 187.
Fishing-pole, Automatic. A. A. Green. No. 1,021,147; Mar. 26; Sp. p. 4537; Gaz. vol. 176; p. 836.
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Flat-iron, Electric. A. S. Cubitt. No. 1,019,426; Mar. 5; Sp. p. 976; Gaz. vol. 176; p. 143.
Flat-iron stand, waxing device, and cleaner, Combined. R. T. Blakeley. No. 1,020,390; Mar. 12; Sp. p. 2914; Gaz. vol. 176; p. 494.
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Float-feed, Adjustable. M. C. Bright. No. 1,019,943; Mar. 12; Sp. p. 2007; Gaz. vol. 176; p. 347.
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Floor-opening closure. R. J. Kittredge. No. 1,021,535; Mar. 26; Sp. p. 5396; Gaz. vol. 176; p. 971.
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Fluid-meter, Integrating. A. G. Alexander. No. 1,020,735; Mar. 19; Sp. p. 3679; Gaz. vol. 176; p. 648.
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Fountain and centrifugal pump for use therewith. A. J. and W. C. Needham. No. 1,020,569; Mar. 19; Sp. p. 3316; Gaz. vol. 176; p. 592.
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Fruit grading and sorting machine. J. L. Hamilton. No. 1,020,093; Mar. 12; Sp. p. 2311; Gaz. vol. 176; p. 396.
Fruit-picking tool. H. P. Guy. No. 1,021,595; Mar. 26; Sp. p. 5520; Gaz. vol. 176; p. 991.
Fruit-protector. A. G. McAdie. No. 1,021,691; Mar. 26; Sp. p. 5674; Gaz. vol. 176; p. 1021.
Fruit-sizer. C. C. McIntosh. No. 1,019,341; Mar. 5; Sp. 747; Gaz. vol. 176; p. 116.
Frying-pan attachment. H. Osborn. No. 1,021,425; Mar. 26; Sp. p. 5160; Gaz. vol. 176; p. 934.
Fuel composition. B. Appel and S. S. Goldman. No. 1,019,746; Mar. 12; Sp. p. 1605; Gaz. vol. 176; p. 281.
Fumigating apparatus. J. W. and C. A. Scott. No. 1,021,270; Mar. 26; Sp. p. 4814; Gaz. vol. 176; p. 878.
Furnace: *See* Carbonizing-furnace; Electric furnace; Electric induction-furnace; Induction-furnace.
Furnace. D. J. McKenzie. No. 1,019,508; Mar. 5; Sp. p. 1158; Gaz. vol. 176; p. 171.
Furnace. P. J. Gordon and R. T. Prall. No. 1,021,144; Mar. 26; Sp. p. 4531; Gaz. vol. 176; p. 835.
Furnace. J. D. Swindell. No. 1,021,342; Mar. 26; Sp. p. 4957; Gaz. vol. 176; p. 905.
Furnace arch-plate. J. R. Fortune and F. B. Bigelow. No. 1,019,035; Mar. 5; Sp. p. 47; Gaz. vol. 176; p. 11.
Furnace-charging apparatus, Blast-. J. Kennedy. No. 1,021,534; Mar. 26; Sp. p. 5395; Gaz. vol. 176; p. 971.
Furnace-door mouthpiece. F. W. Brooks. No. 1,020,382; Mar. 19; Sp. p. 3393; Gaz. vol. 176; p. 596.
Furnace for obtaining metal from ore or matte. J. J. Anderson. No. 1,020,531; Mar. 19; Sp. p. 3231; Gaz. vol. 176; p. 578.
Furnace-front. J. H. Hume. No. 1,019,155; Mar. 5; Sp. p. 330; Gaz. vol. 176; p. 52.
Furniture appliance. J. H. Tudor. No. 1,019,202; Mar. 5; Sp. p. 434; Gaz. vol. 176; p. 69.
Fuse-case. T. E. Murray. No. 1,021,549; Mar. 26; Sp. p. 5423; Gaz. vol. 176; p. 976.
Fuse, Safety-. I. E. Barricklow. No. 1,020,249; Mar. 12; Sp. p. 2648; Gaz. vol. 176; p. 449.
Fusees, Compound for time burning railway signal-. L. S. Ross. No. 1,019,190; Mar. 5; Sp. p. 406; Gaz. vol. 176; p. 64.
Fusible-link device. W. Poppendieck. No. 1,021,329; Mar. 26; Sp. p. 4924; Gaz. vol. 176; p. 900.

Gage: *See* Contour-gage; Flame-gage; Jeweler's gage; Micrometer-gage; Saw-gage; Tank-gage; Tenon-machine gage.
Gage. E. McCoy. No. 1,021,255; Mar. 26; Sp. p. 4782; Gaz. vol. 176; p. 873.
Galley-proofing press, Hand. H. H. Jenkins. No. 1,019,652; Mar. 5; Sp. p. 1422; Gaz. vol. 176; p. 219.
Gambrel-stick. F. C. Petersen. No. 1,020,843; Mar. 19; Sp. p. 3914; Gaz. vol. 176; p. 684.
Game apparatus. H. J. Miller. No. 1,020,215; Mar. 12; Sp. p. 2582; Gaz. vol. 176; p. 438.
Game apparatus. C. Schutz. No. 1,020,315; Mar. 12; Sp. p. 2773; Gaz. vol. 176; p. 470.
Game apparatus or puzzle. S. Miller. No. 1,021,546; Mar. 26; Sp. p. 5417; Gaz. vol. 176; p. 975.
Game-counter. G. H. Barker. No. 1,019,015; Mar. 5; Sp. p. 7; Gaz. vol. 176; p. 4.
Garbage-receptacle. J. W. Hurley. No. 1,019,156; Mar. 5; Sp. p. 331; Gaz. vol. 176; p. 52.
Garden implement. A. Euchenhofer. No. 1,019,773; Mar. 12; Sp. p. 1064; Gaz. vol. 176; p. 290.
Garment-hanger. G. G. Hunt. No. 1,020,608; Mar. 19; Sp. p. 3400; Gaz. vol. 176; p. 603.
Garment, Union overall-. L. A. Hazard. No. 1,019,713; Mar. 5; Sp. p. 1527; Gaz. vol. 176; p. 237.
Garter. D. A. Sinclair. No. 1,019,541; Mar. 5; Sp. p. 1217; Gaz. vol. 176; p. 181.
Gas and recovering by-products, Purifying. F. H. Wagner. No. 1,020,168; Mar. 12; Sp. p. 2478; Gaz. vol. 176; p. 422.
Gas apparatus, Condenser for. E. R. Angell. No. 1,020,339; Mar. 12; Sp. p. 2811; Gaz. vol. 176; p. 477.
Gas, Apparatus for making carbureted hydrogen. J. R. Herndon. No. 1,019,714; Mar. 5; Sp. p. 1528; Gaz. vol. 176; p. 237.
Gas-burner. G. Bruneau. No. 1,019,298; Mar. 5; Sp. p. 656; Gaz. vol. 176; p. 102.
Gas-burner. A. Grandjean. No. 1,019,318; Mar. 5; Sp. p. 705; Gaz. vol. 176; p. 110.
Gas-burner. E. G. Van Zandt. (Reissue.) No. 13,387; Mar. 19; Sp. p. 4148; Gaz. vol. 176; p. 724.
Gas-burner, Safety. N. Wise. No. 1,019,741; Mar. 5; Sp. p. 1584; Gaz. vol. 176; p. 247.
Gas-caps, Safety-stop for. P. S. Bailey. No. 1,019,409; Mar. 5; Sp. p. 949; Gaz. vol. 176; p. 138.
Gas-controller and safety-valve. F. S. Drummond. No. 1,021,581; Mar. 26; Sp. p. 5489; Gaz. vol. 176; p. 986.
Gas-engine. R. S. Moore and J. L. Simmons. No. 1,019,513; Mar. 5; Sp. p. 1166; Gaz. vol. 176; p. 172.
Gas-engine. J. M. Ulrich. No. 1,019,563; Mar. 5; Sp. p. 1260; Gaz. vol. 176; p. 188.
Gas-engine. H. G. Dahl. No. 1,020,081; Mar. 12; Sp. p. 2281; Gaz. vol. 176; p. 393.
Gas-fixture. G. R. Chamberlain and A. G. Schroeder. No. 1,019,131; Mar. 5; Sp. p. 278; Gaz. vol. 176; p. 43.
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Gas-generator. E. Lorin. No. 1,020,651; Mar. 19; Sp. p. 3501; Gaz. vol. 176; p. 618.
Gas generator, Acetylene-. F. R. Hudson. No. 1,021,462; Mar. 26; Sp. p. 5234; Gaz. vol. 176; p. 946.
Gas generator, Acetylene-. W. W. Lewis. No. 1,021,612; Mar. 26; Sp. p. 5546; Gaz. vol. 176; p. 996.
Gas lighter and extinguisher, Automatic. G. C. Innis. No. 1,019,159; Mar. 5; Sp. p. 337; Gaz. vol. 176; p. 53.
Gas-lighting, Manufacture of incandescence bodies for. C. R. Böhm. No. 1,020,255; Mar. 12; Sp. p. 2658; Gaz. vol. 176; p. 451.
Gas, Manufacturing carbureted hydrogen. W. J. Watkins. No. 1,019,705; Mar. 5; Sp. p. 1513; Gaz. vol. 176; p. 234.
Gas-meter. A. H. Morgan. No. 1,020,837; Mar. 19; Sp. p. 3900; Gaz. vol. 176; p. 682.
Gas-meter header. M. Balbach. No. 1,019,119; Mar. 5; Sp. p. 245; Gaz. vol. 176; p. 39.
Gas-purifier. W. C. Butterworth. No. 1,021,503; Mar. 26; Sp. p. 5334; Gaz. vol. 176; p. 961.
Gas-retort charging and discharging apparatus. T. Rodman, R. L. Hibbard, and H. A. Carpenter. No. 1,021,729; Mar. 26; Sp. p. 5755; Gaz. vol. 176; p. 1034.
Gas shut-off, Automatic. A. R. Tracy. No. 1,019,201; Mar. 5; Sp. p. 432; Gaz. vol. 176; p. 69.
Gasolene-dispenser, Automatic. R. Toennes. No. 1,020,856; Mar. 19; Sp. p. 3952; Gaz. vol. 176; p. 688.
Gasolene-supply, Strainer and water-separator for. B. Ivor. No. 1,019,161; Mar. 5; Sp. p. 344; Gaz. vol. 176; p. 54.
Gate: *See* End-gate; Farm-gate; Valve head-gate; Wire gate.
Gate. G. J. Friend. No. 1,020,488; Mar. 19; Sp. p. 3130; Gaz. vol. 176; p. 565.
Gate. P. Lingwall. No. 1,021,613; Mar. 26; Sp. p. 5548; Gaz. vol. 176; p. 996.
Gate-hanging. T. M. Boone. No. 1,020,019; Mar. 12; Sp. p. 2159; Gaz. vol. 176; p. 372.
Gate, &c., spring. F. W. Mock. No. 1,019,822; Mar. 12; Sp. p. 1744; Gaz. vol. 176; p. 305.
Gear, Differential. G. M. Hartley. No. 1,020,417; Mar. 19; Sp. p. 2985; Gaz. vol. 176; p. 541.
Gear, Link distributing-. M. Saweljew. No. 1,019,921; Mar. 12; Sp. p. 1962; Gaz. vol. 176; p. 340.
Gear mechanism, Change-. H. Hess. No. 1,020,095; Mar. 12; Sp. p. 2315; Gaz. vol. 176; p. 397.
Gear mechanism, Speed-. L. F. Goodspeed. No. 1,019,454; Mar. 5; Sp. p. 1032; Gaz. vol. 176; p. 152.
Gears, Centering device for radial-draft. E. H. Schmidt. No. 1,020,380; Mar. 12; Sp. p. 2912; Gaz. vol. 176; p. 493.
Gearing. H. L. Staley. No. 1,020,226; Mar. 12; Sp. p. 2608; Gaz. vol. 176; p. 442.
Gearing. J. Brenzinger. No. 1,020,477; Mar. 19; Sp. p. 3109; Gaz. vol. 176; p. 561.
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Gearing. O. C. Beach and A. J. Hodge. No. 1,021,233; Mar. 26; Sp. p. 4736; Gaz. vol. 176; p. 865.
Gearing. G. O. Leopold. No. 1,021,538; Mar. 26; Sp. p. 5402; Gaz. vol. 176; p. 973.
Gearing, Change-speed. J. J. Hayes. No. 1,020,418; Mar. 19; Sp. p. 2987; Gaz. vol. 176; p. 541.
Gearing device. P. Polnisch. No. 1,020,309; Mar. 12; Sp. p. 2756; Gaz. vol. 176; p. 467.
Gearing, Feed-. J. R. Perrine. No. 1,019,914; Mar. 12; Sp. p. 1949; Gaz. vol. 176; p. 338.
Gearing, Oblique-angled. A. N. Hadley. No. 1,020,900; Mar. 19; Sp. p. 4024; Gaz. vol. 176; p. 702.
Gearing, Reversing-. E. M. Wheelock. No. 1,021,029; Mar. 26; Sp. p. 4297; Gaz. vol. 176; p. 798.
Gearing, Speed-changing. E. J. Kearney and T. Trecker. No. 1,019,798; Mar. 12; Sp. p. 1708; Gaz. vol. 176; p. 298.
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Glass articles, Drawing. J. H. Lubbers. No. 1,020,920; Mar. 19; Sp. p. 4054; Gaz. vol. 176; p. 708.
Glass articles, Making blown-. A. Kadow. No. 1,021,048; Mar. 26; Sp. p. 4340; Gaz. vol. 176; p. 805.
Glass-beveling machine. W. J. Porowski. No. 1,019,520; Mar. 5; Sp. p. 1176; Gaz. vol. 176; p. 175.
Glass-drawing apparatus. A. Tulte. No. 1,020,858; Mar. 19; Sp. p. 3956; Gaz. vol. 176; p. 689.
Glass drums and other hollow bodies, Process and apparatus for the manufacture of. R. Hoffmann. No. 1,021,043; Mar. 26; Sp. p. 4332; Gaz. vol. 176; p. 804.
Glass receptacles, Protective envelop for. O. Domnick. No. 1,020,269; Mar. 12; Sp. p. 2681; Gaz. vol. 176; p. 455.
Glass-tanks, Shear and interrupting device for continuous-flow. I. H. Freese. No. 1,020,409; Mar. 19; Sp. p. 2965; Gaz. vol. 176; p. 538.
Glassware-manufacturing machine. A. S. Reichel. No. 1,020,222; Mar. 12; Sp. p. 2594; Gaz. vol. 176; p. 441.
Glove. P. P. Reisenhus and V. Sutherland. No. 1,021,210; Mar. 26; Sp. p. 4673; Gaz. vol. 176; p. 857.
Glove, Working-. J. Churchill. No. 1,021,238; Mar. 26; Sp. p. 4745; Gaz. vol. 176; p. 866.
Glue and making the same. F. G. Perkins. No. 1,020,655; Mar. 19; Sp. p. 3505; Gaz. vol. 176; p. 619.
Glue joint. F. G. Perkins. No. 1,020,657; Mar. 19; Sp. p. 3514; Gaz. vol. 176; p. 620.
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Go-cart. M. J. Foyer and O. Kurz. No. 1,021,589; Mar. 26; Sp. p. 5508; Gaz. vol. 176; p. 989.
Governor, Engine-. J. W. Sargent. No. 1,020,225; Mar. 12; Sp. p. 2606; Gaz. vol. 176; p. 442.
Grading-machine. E. C. Jewett. No. 1,021,047; Mar. 26; Sp. p. 4338; Gaz. vol. 176; p. 805.
Grading, processing, and concentrating apparatus. C. B. Welch. No. 1,019,570; Mar. 5; Sp. p. 1271; Gaz. vol. 176; p. 190.
Grain-binding machines, Discharging mechanism for. W. S. Koontz. No. 1,019,716; Mar. 5; Sp. p. 1533; Gaz. vol. 176; p. 238.
Grain-cleaner. T. O. Helgerson. No. 1,019,470; Mar. 5; Sp. p. 1007; Gaz. vol. 176; p. 157.
Grain, Cleaning. G. Halliday. No. 1,019,148; Mar. 5; Sp. p. 318; Gaz. vol. 176; p. 49.
Grain-cleaning machine. H. E. Walker. No. 1,020,377; Mar. 12; Sp. p. 2887; Gaz. vol. 176; p. 489.
Grain-drill. W. S. R. Thrush. No. 1,021,017; Mar. 26; Sp. p. 4275; Gaz. vol. 176; p. 794.
Grain-drill. D. A. Schutt. No. 1,021,379; Mar. 26; Sp. p. 5016; Gaz. vol. 176; p. 916.
Grain-drills, Covering-wheel for. J. E. Binns, Jr. No. 1,020,681; Mar. 19; Sp. p. 3566; Gaz. vol. 176; p. 627.
Grain in bins or granaries, Apparatus for drying. G. W. Boll. No. 1,020,256; Mar. 12; Sp. p. 2659; Gaz. vol. 176; p. 451.
Grain-separator. H. F. Hutton. No. 1,019,962; Mar. 12; Sp. p. 2041; Gaz. vol. 176; p. 353.
Grain-shocker. J. H. Sleeper and T. E. McGoffin. No. 1,020,521; Mar. 19; Sp. p. 3206; Gaz. vol. 176; p. 574.
Grain to elongated or filament form, Reducing ground. H. D. Perky. No. 1,021,473; Mar. 26; Sp. p. 5273; Gaz. vol. 176; p. 950.
Grass-hook, corn-knife, and pruning-saw, Combined. A. A. Bates. No. 1,021,444; Mar. 26; Sp. p. 5198; Gaz. vol. 176; p. 940.
Grate. R. W. Revell. No. 1,019,837; Mar. 12; Sp. p. 1767; Gaz. vol. 176; p. 310.
Grate. J. C. Quinn. No. 1,021,556; Mar. 26; Sp. p. 5435; Gaz. vol. 176; p. 978.
Grease to rolls, Device for applying. P. A. McGowan. No. 1,021,062; Mar. 26; Sp. p. 4367; Gaz. vol. 176; p. 810.
Grinder, Drill-. A. C. Vaucain. No. 1,020,860; Mar. 19; Sp. p. 3961; Gaz. vol. 176; p. 690.

Grinder, Mower-sickle. J. H. Irey. No. 1,019,649; Mar. 5; Sp. p. 1414; Gaz. vol. 176; p. 217.
Grinding balls or spheres, Machine for. L. J. Crecelius. No. 1,020,803; Mar. 19; Sp. p. 3825; Gaz. vol. 176; p. 670.
Grinding-machine. A. B. Fowler. No. 1,019,887; Mar. 12; Sp. p. 1880; Gaz. vol. 176; p. 329.
Grinding-mill. E. C. Griffin. No. 1,020,092; Mar. 12; Sp. p. 2309; Gaz. vol. 176; p. 396.
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Grinding-mill. J. B. Hoop. No. 1,021,191; Mar. 26; Sp. p. 4639; Gaz. vol. 176; p. 850.
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Gripper. O. Ashton. No. 1,019,012; Mar. 5; Sp. p. 1; Gaz. vol. 176; p. 3.
Gripper. R. F. McFeely. No. 1,019,904; Mar. 12; Sp. p. 1926; Gaz. vol. 176; p. 335.
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Guide. C. E. Bauer. No. 1,020,876; Mar. 19; Sp. p. 3985; Gaz. vol. 176; p. 694.
Gun with recoiling barrel. K. Völler. No. 1,020,238; Mar. 12; Sp. p. 2625; Gaz. vol. 176; p. 444.
Guns, Breech mechanism for automatic recoil-operated. R. J. W. Brown. No. 1,021,130; Mar. 26; Sp. p. 4505; Gaz. vol. 176; p. 831.
Guns, Safety appliance for hammer-. L. G. Sagabiel. No. 1,021,427; Mar. 26; Sp. p. 5162; Gaz. vol. 176; p. 934.
Gymnastic apparatus. A. E. Garland. No. 1,019,037; Mar. 5; Sp. p. 51; Gaz. vol. 176; p. 11.
Gyroscope. H. Anschütz-Kaempfe. No. 1,019,582; Mar. 5; Sp. p. 1290; Gaz. vol. 176; p. 193.
Hair-drying apparatus. L. T. La Paugh. No. 1,019,808; Mar. 12; Sp. p. 1724; Gaz. vol. 176; p. 302.
Hair-dye. R. Wolffenstein and J. Colman. No. 1,019,576; Mar. 5; Sp. p. 1280; Gaz. vol. 176; p. 192.
Hair ornament. W. J. Hines. No. 1,020,424; Mar. 19; Sp. p. 3003; Gaz. vol. 176; p. 544.
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Hair-pin-making machine. I. H. Sisson. No. 1,019,375; Mar. 5; Sp. p. 857; Gaz. vol. 176; p. 128.
Hame-fastener. W. R. Angell. No. 1,019,291; Mar. 5; Sp. p. 634; Gaz. vol. 176; p. 99.
Hammer, Slicing-. M. F. Williams. No. 1,020,881; Mar. 12; Sp. p. 2805; Gaz. vol. 176; p. 490.
Hammer-supporting device and adjustable frame for the same, Power-. E. J. Allen. No. 1,020,471; Mar. 19; Sp. p. 3095; Gaz. vol. 176; p. 559.
Hand-bag, Sewed. E. Becker. No. 1,021,298; Mar. 26; Sp. p. 4865; Gaz. vol. 176; p. 888.
Hand-press. S. J. Arnold. No. 1,019,293; Mar. 5; Sp. p. 643; Gaz. vol. 176; p. 100.
Handle: *See* Bag-handle; Basket-handle; Casket-handle; Tool-handle; Tubular handle; Umbrella or cane handle.
Handle. J. E. Kelly. No. 1,019,799; Mar. 12; Sp. p. 1711; Gaz. vol. 176; p. 290.
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Handle-bar grip. T. W. Snoe. No. 1,020,462; Mar. 19; Sp. p. 3076; Gaz. vol. 176; p. 557.
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Harrow. B. T. Chandler. No. 1,019,221; Mar. 5; Sp. p. 470; Gaz. vol. 176; p. 75.
Harrow. G. W. Copeland. No. 1,020,189; Mar. 12; Sp. p. 2526; Gaz. vol. 176; p. 429.
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Harrow, Disk. J. W. Kinney. No. 1,020,291; Mar. 12; Sp. p. 2730; Gaz. vol. 176; p. 462.
Harrow, Disk. G. W. Willis. No. 1,021,174; Mar. 26; Sp. p. 4008; Gaz. vol. 176; p. 845.
Harrow, Revolving. A. P. Teeter. No. 1,020,854; Mar. 19; Sp. p. 3949; Gaz. vol. 176; p. 688.
Harvester attachment. D. S. Cantine. No. 1,021,755; Mar. 26; Sp. p. 5820; Gaz. vol. 176; p. 1043.
Harvester, Grain-. C. F. Jahns. No. 1,019,651; Mar. 5; Sp. p. 1419; Gaz. vol. 176; p. 218.
Harvester, Potato-. G. W. Bruce. No. 1,019,752; Mar. 12; Sp. p. 1619; Gaz. vol. 176; p. 282.
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Harvester with side truck, Potato-. G. W. Bruce. No. 1,019,754; Mar. 12; Sp. p. 1624; Gaz. vol. 176; p. 283.
Harvesters, Retarder for self-binding. J. A. Hillenbrand. No. 1,019,960; Mar. 12; Sp. p. 2039; Gaz. vol. 176; p. 352.
Hat and head covering. J. M. Kerr. No. 1,020,912; Mar. 19; Sp. p. 4044; Gaz. vol. 176; p. 706.
Hat-fastener. J. Payer. No. 1,021,111; Mar. 26; Sp. p. 4455; Gaz. vol. 176; p. 824.
Hat-guard. C. E. Waterworth. No. 1,021,647; Mar. 26; Sp. p. 5603; Gaz. vol. 176; p. 1007.
Hat-pin guard. H. Roberts. No. 1,019,840; Mar. 12; Sp. p. 1773; Gaz. vol. 176; p. 311.
Hat-pin guard. A. E. Aldridge. No. 1,019,938; Mar. 12; Sp. p. 1999; Gaz. vol. 176; p. 345.
Hat-pin guard. A. Mueller. No. 1,020,653; Mar. 19; Sp. p. 3504; Gaz. vol. 176; p. 619.
Hat-pin guard. J. J. Vallier. No. 1,020,784; Mar. 19; Sp. p. 3790; Gaz. vol. 176; p. 664.
Hat-pin guard. E. Doucet. No. 1,020,890; Mar. 19; Sp. p. 4007; Gaz. vol. 176; p. 699.
Hat-pin guard and protector, Combined. S. G. K. Payne. No. 1,019,695; Mar. 5; Sp. p. 1494; Gaz. vol. 176; p. 232.
Hat-pin head, Detachable. W. L. Friedman. No. 1,020,754; Mar. 19; Sp. p. 3728; Gaz. vol. 176; p. 654.
Hat-pin holder and sheath. H. S. Deaner. No. 1,020,131; Mar. 12; Sp. p. 2398; Gaz. vol. 176; p. 409.
Hat-pin-point protector. M. R. Hartzell. No. 1,019,466; Mar. 5; Sp. p. 1060; Gaz. vol. 176; p. 156.
Hat-pin-point protector. G. Balog. No. 1,020,394; Mar. 19; Sp. p. 2935; Gaz. vol. 176; p. 533.
Hat-pin protector. J. O. and H. Pelchat. No. 1,019,697; Mar. 5; Sp. p. 1497; Gaz. vol. 176; p. 232.
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Lecithin, Producing. H. C. Buer. No. 1,019,945; Mar. 12; Sp. p. 2010; Gaz. vol. 176; p. 347.
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Lifter: *See* Sash-lifter; Transom-lifter.
Lifting-jack. J. B. Smythe. No. 1,019,095; Mar. 5; Sp. p. 193; Gaz. vol. 176; p. 31.
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Light-diffusing mechanism. V. E. Eslon. No. 1,020,813; Mar. 19; Sp. p. 3842; Gaz. vol. 176; p. 673.
Light-shade bracket. W. H. Stratton. No. 1,021,385; Mar. 26; Sp. p. 5040; Gaz. vol. 176; p. 918.
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Lightning-arrester. L. T. Lineberger. No. 1,020,429; Mar. 19; Sp. p. 3013; Gaz. vol. 176; p. 546.
Liquid-fuel burner. M. Gross. No. 1,019,247; Mar. 5; Sp. p. 529; Gaz. vol. 176; p. 84.
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Load-binder. F. A. Kenney. No. 1,020,650; Mar. 19; Sp. p. 3500; Gaz. vol. 176; p. 618.

Loads, Machinery for engaging and carrying. J. Namecche. No. 1,021,469; Mar. 26; Sp. p. 5265; Gaz. vol. 176; p. 949.

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Loading device. G. E. Menke. No. 1,021,606; Mar. 26; Sp. p. 5683; Gaz. vol. 176; p. 1023.

Loading-trap, Portable. B. Ransome. No. 1,021,332; Mar. 26; Sp. p. 4929; Gaz. vol. 176; p. 901.

Lock: *See* Can-lock; Car-door lock; Combination-lock; Door-lock; Nut-lock; Oar-lock; Padlock; Permutation-lock; Safe-lock; Sash-lock; Seal-lock; Tumbler-lock; Type-writer key-lock; Window-lock.

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Locking-bolt, Reversible. G. N. Mason. No. 1,019,678; Mar. 5; Sp. p. 1469; Gaz. vol. 176; p. 227.

Locking-clamp. L. C. Tingley. No. 1,021,343; Mar. 26; Sp. p. 4955; Gaz. vol. 176; p. 905.

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Locomotive ash-pan. J. F. Dunn. No. 1,021,668; Mar. 26; Sp. p. 5636; Gaz. vol. 176; p. 1014.

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Log-carrying car. W. A. Holt. No. 1,020,824; Mar. 19; Sp. p. 3879; Gaz. vol. 176; p. 678.

Logging-bunk. P. A. and F. J. Anlauf. No. 1,020,012; Mar. 12; Sp. p. 2141; Gaz. vol. 176; p. 369.

Logging system. C. E. MacFarlane. No. 1,019,170; Mar. 5; Sp. p. 370; Gaz. vol. 176; p. 58.

Loom. W. Harris. No. 1,020,388; Mar. 12; Sp. p. 2910; Gaz. vol. 176; p. 493.

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Loom, Hand-. M. M. Kinney. No. 1,020,292; Mar. 12; Sp. p. 2731; Gaz. vol. 176; p. 463.

Loom-shuttle. E. Lübeck. No. 1,019,977; Mar. 12; Sp. p. 2070; Gaz. vol. 176; p. 357.

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Looms, Controlling mechanism for automatic feeler-. A. E. Rhoades. No. 1,020,622; Mar. 19; Sp. p. 3440; Gaz. vol. 176; p. 608.

Looms, Hopper mechanism for automatic. E. S. Stimpson. No. 1,019,855; Mar. 12; Sp. p. 1808; Gaz. vol. 176; p. 317.

Looms, Pick-finder device for. S. S. Jackson. No. 1,021,151; Mar. 26; Sp. p. 4544; Gaz. vol. 176; p. 837.

Looms, Thread-collecting means for automatic. A. E. Rhoades. No. 1,020,662; Mar. 19; Sp. p. 3524; Gaz. vol. 176; p. 621.

Looms, Warp stop-motion for pile-fabric. S. B. Cutting and E. Marshall. No. 1,019,026; Mar. 5; Sp. p. 22; Gaz. vol. 176; p. 7.

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Looms, Yarn-tension for. L. Knight. No. 1,019,053; Mar. 5; Sp. p. 88; Gaz. vol. 176; p. 18.

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Lubricating compound for compressed-air apparatus, Solid. E. A. Emery. No. 1,020,893; Mar. 19; Sp. p. 4011; Gaz. vol. 176; p. 700.

Lubricating device. F. D. Holdsworth. No. 1,019,645; Mar. 5; Sp. p. 1407; Gaz. vol. 176; p. 216.

Lubricating device. F. Lobnitz. No. 1,020,210; Mar. 12; Sp. p. 2572; Gaz. vol. 176; p. 436.

Lubricating device. E. T. McKaig. No. 1,021,421; Mar. 26; Sp. p. 5151; Gaz. vol. 176; p. 932.

Lubricating pneumatic machinery. E. A. Emery. No. 1,019,772; Mar. 12; Sp. p. 1662; Gaz. vol. 176; p. 289.

Lubricating system and apparatus. F. W. Van Ness. No. 1,019,103; Mar. 5; Sp. p. 206; Gaz. vol. 176; p. 33.

Lubricator: *See* Elevator-guide lubricator; Journal-lubricator.

Lubricator. C. W. Manzel. No. 1,019,167; Mar. 5; Sp. p. 356; Gaz. vol. 176; p. 56.

Magnet-frame for electric ignition-machines. G. Honold. No. 1,020,143; Mar. 12; Sp. p. 2415; Gaz. vol. 176; p. 412.

Mail-bag catcher. M. N. George. No. 1,019,629; Mar. 5; Sp. p. 1380; Gaz. vol. 176; p. 210.

Mail-bag catching and delivering apparatus. E. R. Simpson. No. 1,021,341; Mar. 26; Sp. p. 4954; Gaz. vol. 176; p. 905.

Mail-bag deliverer. G. F. Morin. No. 1,019,623; Mar. 12; Sp. p. 1746; Gaz. vol. 176; p. 306.

Mail-bag holder. W. P. Sargent. No. 1,019,366; Mar. 5; Sp. p. 833; Gaz. vol. 176; p. 124.

Mail-bag station-crane. A. Hupp. No. 1,020,610; Mar. 19; Sp. p. 3416; Gaz. vol. 176; p. 604.

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Mail-delivery device, Rural-. A. Jenson. No. 1,019,795; Mar. 12; Sp. p. 1702; Gaz. vol. 176; p. 297.

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Mail-marking machine. F. C. Ielfield. No. 1,019,158; Mar. 5; Sp. p. 333; Gaz. vol. 176; p. 53.

Mail-matter-marking machine. V. Beauregard. No. 1,019,296; Mar. 5; Sp. p. 647; Gaz. vol. 176; p. 101.

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Mast-step and foot-block, Self-locking. R. H. Blackburn. No. 1,020,793; Mar. 19; Sp. p. 3806; Gaz. vol. 176; p. 667.

Mat. W. Yates. No. 1,019,212; Mar. 5; Sp. p. 454; Gaz. vol. 176; p. 72.

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Match-box. F. C. Holkum. No. 1,021,602; Mar. 26; Sp. p. 5531; Gaz. vol. 176; p. 993.

Match box and igniter. H. K. Klso. No. 1,020,357; Mar. 12; Sp. p. 2849; Gaz. vol. 176; p. 482.

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Mattress, Metallic. J. V. Mestas. No. 1,019,510; Mar. 5; Sp. p. 1162; Gaz. vol. 176; p. 171.

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Measure, Self-registering. A. Woodward. No. 1,020,171; Mar. 12; Sp. p. 2484; Gaz. vol. 176; p. 423.

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Mechanical movement. E. A. Dewald and A. Rosenson. No. 1,020,968; Mar. 26; Sp. p. 4181; Gaz. vol. 176; p. 777.

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Memograph or reminder-clock. G. Schneider, C. W. Rutenbeck, and H. Hill. No. 1,019,193; Mar. 5; Sp. p. 414; Gaz. vol. 176; p. 65.

Mercury-meter, Three-wire. R. C. Lanphier. No. 1,021,106; Mar. 26; Sp. p. 4447; Gaz. vol. 176; p. 823.

Metal articles, Treating. J. C. Russell. No. 1,019,191; Mar. 5; Sp. p. 409; Gaz. vol. 176; p. 65.

Metal-bar-handling apparatus. F. H. Daniels and A. F. Backlin. No. 1,021,582; Mar. 26; Sp. p. 5490; Gaz. vol. 176; p. 986.

Metal-bending press. C. L. Huston. No. 1,021,526; Mar. 26; Sp. p. 5383; Gaz. vol. 176; p. 969.

Metal, Expanded. W. D. Forsyth. No. 1,019,034; Mar. 5; Sp. p. 44; Gaz. vol. 176; p. 10.

Metal plane, Machine for folding the corners of. E. J. Wittebolle. No. 1,020,939; Mar. 19; Sp. p. 4094; Gaz. vol. 176; p. 715.

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Meter: *See* Electric meter; Fluid-meter; Gas-meter; Mercury-meter; Water-meter.

Meter-record. M. H. Kane. No. 1,021,317; Mar. 26; Sp. p. 4899; Gaz. vol. 176; p. 895.

Micrometer-gage. M. A. Smith. No. 1,021,384; Mar. 26; Sp. p. 5038; Gaz. vol. 176; p. 918.

Milking-machine. K. W. Johansson. No. 1,021,192; Mar. 26; Sp. p. 4641; Gaz. vol. 176; p. 851.

Milking-machine. L. D. De Laney and M. A. Haltzbauer. No. 1,021,578; Mar. 26; Sp. p. 5485; Gaz. vol. 176; p. 985.

Mill: *See* Attrition-mill; Crushing and grinding mill; Grinding-mill; Pulverizing-mill; Rolling or reducing mill; Swaging-mill; Windmill.

Milling-cutter. O. Unterloff. No. 1,019,564; Mar. 5; Sp. p. 1263; Gaz. vol. 176; p. 188.

Milling-machine. C. F. Shanks. No. 1,021,430; Mar. 26; Sp. p. 5167; Gaz. vol. 176; p. 935.

Mine-cages or the like, Safety apparatus for supporting. C. Dickie, F. Lambert, and R. Stables. No. 1,020,483; Mar. 19; Sp. p. 3122; Gaz. vol. 176; p. 563.

Mine-prop. O. Grünewald and M. Gerich. No. 1,021,249; Mar. 26; Sp. p. 4770; Gaz. vol. 176; p. 870.

Mine-protection system. J. McGavin. No. 1,021,370; Mar. 26; Sp. p. 5004; Gaz. vol. 176; p. 913.

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Mirror, Mouth-. H. R. Smith. No. 1,021,639; Mar. 26; Sp. p. 5592; Gaz. vol. 176; p. 1005.

Mixer: *See* Cake-mixer; Concrete-mixer.

Mixing-machine. J. J. Green. No. 1,019,039; Mar. 5; Sp. p. 60; Gaz. vol. 176; p. 12.

Mixing-machine. J. D. Clough. No. 1,021,301; Mar. 26; Sp. p. 4870; Gaz. vol. 176; p. 889.

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Mold: *See* Bottle-blank mold; Cement-mold; Concrete-chimney mold; Concrete-wall mold; Ingot-mold; Permanent mold; Shingle-mold; Vulcanizing-mold.

Mold-coating. C. H. Haslett and A. A. Mentzer. No. 1,021,599; Mar. 26; Sp. p. 5526; Gaz. vol. 176; p. 992.

Molds and mold-cores, Apparatus for forming. J. F. Bryant. No. 1,021,349; Mar. 26; Sp. p. 4969; Gaz. vol. 176; p. 907.

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Mop holder and wringer, Combined. L. Wormworth. No. 1,019,477; Mar. 5; Sp. p. 1281; Gaz. vol. 176; p. 192.

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Motion-transmitting mechanism. J. Hadcock. No. 1,019,891; Mar. 12; Sp. p. 1895; Gaz. vol. 176; p. 330.

Motor: *See* Air-motor; Current-motor; Electric motor; Fieldless motor; Fluid-pressure motor; Induction-motor; Rotary motor; Single-phase motor; Talking-machine motor; Wave-motor; Wave-energy motor; Weight-motor.

Motor. P. L. T. Héroult. No. 1,021,521; Mar. 26; Sp. p. 5376; Gaz. vol. 176; p. 967.

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Motor-control system. A. S. Cubitt. No. 1,019,428; Mar. 5; Sp. p. 979; Gaz. vol. 176; p. 143.

Motor-control system. M. R. Hanna. No. 1,019,461; Mar. 5; Sp. p. 1052; Gaz. vol. 176; p. 154.

Motor-controller. A. J. Horton. No. 1,019,045; Mar. 5; Sp. p. 71; Gaz. vol. 176; p. 15.

Motor controller, Electric-. V. E. Chamberlin. No. 1,019,757; Mar. 12; Sp. p. 1629; Gaz. vol. 176; p. 284.

Motor-controlling device. C. Sacerdoti. No. 1,019,001; Mar. 5; Sp. p. 183; Gaz. vol. 176; p. 30.

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Motor-controlling mechanism for self-propelled vehicles. A. H. Daehler. No. 1,020,889; Mar. 19; Sp. p. 4000; Gaz. vol. 176; p. 698.

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Mouthpiece, Sanitary. W. W. Woodruff. No. 1,019,288; Mar. 5; Sp. p. 620; Gaz. vol. 176; p. 98.

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Music-box, Adjustable. R. W. Pain. No. 1,021,471; Mar. 26; Sp. p. 5268; Gaz. vol. 176; p. 950.

Music-leaf turner. A. J. Kuss. No. 1,019,402; Mar. 5; Sp. p. 1128; Gaz. vol. 176; p. 165.

Music, Machine for making perforated. E. W. Myers. No. 1,021,327; Mar. 26; Sp. p. 4919; Gaz. vol. 176; p. 899.

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Musical instruments, Arm-rest for. H. O. Gough. No. 1,020,491; Mar. 19; Sp. p. 3136; Gaz. vol. 176; p. 565.

Nailing-machine. H. W. Morgan. No. 1,020,436; Mar. 19; Sp. p. 3029; Gaz. vol. 176; p. 548.

Napping-machine. A. Müllers. No. 1,019,515; Mar. 5; Sp. p. 1169; Gaz. vol. 176; p. 173.

Napping-machine drum, Planetary-. H. S. Greene. No. 1,020,280; Mar. 12; Sp. p. 2709; Gaz. vol. 176; p. 459.

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Nest. W. B. Miller. No. 1,019,072; Mar. 5; Sp. p. 142; Gaz. vol. 176; p. 23.

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Nut for bolts, Lock-. O. M. Watson. No. 1,019,387; Mar. 5; Sp. p. 898; Gaz. vol. 176; p. 132.

Nut-lock. F. E. Spencer. No. 1,019,097; Mar. 5; Sp. p. 197; Gaz. vol. 176; p. 32.

Nut-lock. S. M. T. Barclay. No. 1,019,215; Mar. 5; Sp. p. 462; Gaz. vol. 176; p. 73.

Nut-lock. A. N. Gandy. No. 1,019,243; Mar. 5; Sp. p. 523; Gaz. vol. 176; p. 83.

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Nut-lock. R. E. Ebbs and J. A. McCuller. No. 1,020,386; Mar. 12; Sp. p. 2908; Gaz. vol. 176; p. 492.

Nut-lock. A. W. Heising and H. A. Donaldson. No. 1,020,421; Mar. 19; Sp. p. 2996; Gaz. vol. 176; p. 543.

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Nut-lock. T. E. Taylor. No. 1,020,853; Mar. 19; Sp. p. 3949; Gaz. vol. 176; p. 688.

Nut-lock. J. Niewohner. No. 1,021,110; Mar. 26; Sp. p. 4455; Gaz. vol. 176; p. 824.

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Nut-lock and releasing device therefor. A. H. J. Miller. No. 1,019,686; Mar. 5; Sp. p. 1482; Gaz. vol. 176; p. 220.
Nut-locking device. J. Steele. No. 1,021,559; Mar. 26; Sp. p. 5440; Gaz. vol. 176; p. 979.
Nut-locking tool. W. M. Jenkins and E. R. Ward. No. 1,020,040; Mar. 12; Sp. p. 2201; Gaz. vol. 176; p. 379.
Nut-rotating device. W. C. Caswell. No. 1,020,964; Mar. 26; Sp. p. 4169; Gaz. vol. 176; p. 775.
Nut-shell-slitting machine. J. E. Emery and D. E. Hunter. No. 1,019,031; Mar. 5; Sp. p. 32; Gaz. vol. 176; p. 9.
Nutritive material for both animal and vegetable life, Manufacture of. M. S. Greenbaum. No. 1,020,091; Mar. 12; Sp. p. 2307; Gaz. vol. 176; p. 396.
Oar-lock. C. L. Keddy. No. 1,021,721; Mar. 26; Sp. p. 5742; Gaz. vol. 176; p. 1031.
Obstetrical device. J. Stöger. No. 1,019,099; Mar. 5; Sp. p. 200; Gaz. vol. 176; p. 32.
Offset-shoe and cast-iron offset-shoe guide. A. C. Graham. No. 1,019,712; Mar. 5; Sp. p. 1526; Gaz. vol. 176; p. 237.
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Oil burner, Fuel-. W. H. Howard. No. 1,019,648; Mar. 5; Sp. p. 1413; Gaz. vol. 176; p. 217.
Oil-can. L. W. Gruver. No. 1,020,413; Mar. 19; Sp. p. 2976; Gaz. vol. 176; p. 539.
Oil-can. J. E. Bethancourt. No. 1,021,653; Mar. 26; Sp. p. 5614; Gaz. vol. 176; p. 1009.
Oil-catcher. J. E. Leberman. No. 1,020,564; Mar. 19; Sp. p. 3309; Gaz. vol. 176; p. 590.
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Oil-separator. R. W. Latham. No. 1,019,809; Mar. 12; Sp. p. 1725; Gaz. vol. 176; p. 302.
Oil-switch. C. C. Badeau. No. 1,021,746; Mar. 26; Sp. p. 5793; Gaz. vol. 176; p. 1040.
Oil-tank safety appliance. C. G. Gaddis. No. 1,019,779; Mar. 12; Sp. p. 1671; Gaz. vol. 176; p. 291.
Oiler, Automatic. A. J. McArthur and J. R. Tucker. No. 1,020,835; Mar. 19; Sp. p. 3898; Gaz. vol. 176; p. 681.
Oiler, Pneumatic floor-. C. W. Corey. No. 1,019,135; Mar. 5; Sp. p. 285; Gaz. vol. 176; p. 45.
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Ore, Apparatus for treatment of. J. Gross and L. Cohen. No. 1,021,248; Mar. 26; Sp. p. 4766; Gaz. vol. 176; p. 870.
Ore-concentrator. E. Deister. No. 1,019,884; Mar. 12; Sp. p. 1874; Gaz. vol. 176; p. 327.
Ore-concentrators, Head-motion for. J. F. Isbell. No. 1,019,650; Mar. 5; Sp. p. 1416; Gaz. vol. 176; p. 218.
Ore product, Metalliferous. A. S. Dwight and R. L. Lloyd. No. 1,020,345; Mar. 12; Sp. p. 2824; Gaz. vol. 176; p. 479.
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Oxid, Manufacturing pure nitric. R. M. von Berneck, M. Moest, and H. Graf. No. 1,021,234; Mar. 26; Sp. p. 4738; Gaz. vol. 176; p. 866.
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Package-tie. B. D. Weaver. No. 1,019,868; Mar. 12; Sp. p. 1839; Gaz. vol. 176; p. 322.
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Packing. A. C. Danver. No. 1,019,607; Mar. 5; Sp. p. 1337; Gaz. vol. 176; p. 202.
Packing. J. Restein. No. 1,020,661; Mar. 19; Sp. p. 3523; Gaz. vol. 176; p. 621.
Packing and shipping case. R. A. Stiuka. No. 1,020,463; Mar. 19; Sp. p. 3076; Gaz. vol. 176; p. 557.
Packing, Engine-. W. E. Ogden. No. 1,020,842; Mar. 19; Sp. p. 3912; Gaz. vol. 176; p. 684.
Packing-expander. W. H. Lieber. No. 1,019,262; Mar. 5; Sp. p. 559; Gaz. vol. 176; p. 89.
Packing for elastic-fluid turbines. J. Wilkinson. No. 1,021,225; Mar. 26; Sp. p. 4716; Gaz. vol. 176; p. 862.
Packing-gland. E. D. Taylor. No. 1,020,780; Mar. 19; Sp. p. 3785; Gaz. vol. 176; p. 663.
Packing-joint. H. T. Cronk. No. 1,019,766; Mar. 12; Sp. p. 1648; Gaz. vol. 176; p. 287.
Packing, Metallic. J. A. Simon. No. 1,020,456; Mar. 19; Sp. p. 3064; Gaz. vol. 176; p. 555.
Packing, Piston-rod and valve-stem. W. D. Kesselring. No. 1,021,683; Mar. 26; Sp. p. 5660; Gaz. vol. 176; p. 1019.
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Pad-machine. A. C. Peterson. No. 1,021,068; Mar. 26; Sp. p. 4375; Gaz. vol. 176; p. 812.
Padlock. A. W. Dowe. No. 1,020,891; Mar. 19; Sp. p. 4008; Gaz. vol. 176; p. 699.
Padlock, Permutation-. C. J. Evans. No. 1,021,456; Mar. 26; Sp. p. 5223; Gaz. vol. 176; p. 944.
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Paper-bag-delivery machine. E. B. Shanks. No. 1,019,093; Mar. 5; Sp. p. 189; Gaz. vol. 176; p. 30.
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Paper-bag-suspending means. H. L. Roberts. No. 1,019,187; Mar. 5; Sp. p. 400; Gaz. vol. 176; p. 63.
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Paper-holder. A. Lesperance. No. 1,021,154; Mar. 26; Sp. p. 4550; Gaz. vol. 176; p. 838.
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Paper packets, Machine for automatically making. O. Heeser. No. 1,020,821; Mar. 19; Sp. p. 3871; Gaz. vol. 176; p. 676.
Paper-rack and display device. C. J. Bryant. No. 1,021,656; Mar. 26; Sp. p. 5618; Gaz. vol. 176; p. 1011.
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Partition, Expansible. L. P. J. Farrell. No. 1,021,586; Mar. 26; Sp. p. 5497; Gaz. vol. 176; p. 988.
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Paste used as weavers' glue or for other similar dressing purposes, Preparing. P. Reimann. No. 1,021,744; Mar. 26; Sp. p. 5791; Gaz. vol. 176; p. 1039.
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Pastry cones, Machine for making. P. C. and O. A. Flagstad. No. 1,019,237; Mar. 5; Sp. p. 509; Gaz. vol. 176; p. 80.
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Pianos, Music-holder for. C. H. Gringa. No. 1,020,947; Mar. 19; Sp. p. 4120; Gaz. vol. 176; p. 718.
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Picture apparatus, Animated-. H. N. Marvin. No. 1,021,060; Mar. 26; Sp. p. 4861; Gaz. vol. 176; p. 910.
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Pile-wire-lubricating device. F. Farmer. No. 1,019,032; Mar. 5; Sp. p. 40; Gaz. vol. 176; p. 9.
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Pincers, Bolt-holding. L. P. Moore. No. 1,020,361; Mar. 12; Sp. p. 2854; Gaz. vol. 176; p. 483.
Pipe: *See* Culvert-pipe; Tobacco-pipe.
Pipe connection. W. Schuls. No. 1,021,378; Mar. 26; Sp. p. 5014; Gaz. vol. 176; p. 915.
Pipe-coupling. F. E. Reusher. No. 1,021,264; Mar. 26; Sp. p. 4798; Gaz. vol. 176; p. 875.
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Pipe coupling, Automatic train-. A. M. Porter. No. 1,021,261; Mar. 26; Sp. p. 4791; Gaz. vol. 176; p. 875.
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Pipe-cutting tool. B. Borden. No. 1,020,795; Mar. 19; Sp. p. 3811; Gaz. vol. 176; p. 667.
Pipe-elbows, Machine for forming crimped. J. Dymond. No. 1,020,028; Mar. 12; Sp. p. 2175; Gaz. vol. 176; p. 375.
Pipe-fittings, Machine for threading. C. Westen. No. 1,020,529; Mar. 19; Sp. p. 3225; Gaz. vol. 176; p. 577.
Pipe-joint and the like. R. R. Row. No. 1,020,929; Mar. 19; Sp. p. 4076; Gaz. vol. 176; p. 712.
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Pipe-machine. W. McConnell. No. 1,019,505; Mar. 5; Sp. p. 1152; Gaz. vol. 176; p. 169.
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Pipe-tamper, &c. P. Dodge. No. 1,019,028; Mar. 5; Sp. p. 27; Gaz. vol. 176; p. 8.
Pipe-wrench. A. Serfoss. No. 1,019,280; Mar. 5; Sp. p. 616; Gaz. vol. 176; p. 96.
Pipe-wrench. R. Geoffroy. No. 1,019,450; Mar. 5; Sp. p. 1027; Gaz. vol. 176; p. 151.
Pipe-wrench. I. M. Edmundson. No. 1,021,584; Mar. 26; Sp. p. 5495; Gaz. vol. 176; p. 987.
Pipe-wrench, Chain. J. J. Donoghue. No. 1,021,357; Mar. 26; Sp. p. 4983; Gaz. vol. 176; p. 910.
Piston, Gas-engine. F. De Faxi. No. 1,021,577; Mar. 26; Sp. p. 5484; Gaz. vol. 176; p. 985.
Piston-lift. D. F. Denham. No. 1,019,433; Mar. 5; Sp. p. 993; Gaz. vol. 176; p. 145.
Piston-rod-extension guide. C. L. Heisler. No. 1,019,150; Mar. 5; Sp. p. 323; Gaz. vol. 176; p. 50.
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Plane, Beveling-. A. L. Savage. No. 1,021,631; Mar. 26; Sp. p. 5578; Gaz. vol. 176; p. 1002.
Planer-knife-adjusting mechanism. W. Harper. No. 1,020,416; Mar. 19; Sp. p. 2982; Gaz. vol. 176; p. 541.
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Plants, Parasiticide for. G. Grether. No. 1,021,095; Mar. 26; Sp. p. 4431; Gaz. vol. 176; p. 820.
Plaster-board machine. E. A. and G. H. Hersberg. No. 1,019,250; Mar. 5; Sp. p. 534; Gaz. vol. 176; p. 85.
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Plow. I. A. Weaver. No. 1,021,024; Mar. 26; Sp. p. 4287; Gaz. vol. 176; p. 706.
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Plows, Gage device for. N. Weiler. No. 1,019,729; Mar. 5; Sp. p. 1563; Gaz. vol. 176; p. 243.
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Pneumatic apparatus. J. Schwertner. (Reissue.) No. 13,384; Mar. 12; Sp. p. 2928; Gaz. vol. 176; p. 496.
Pneumatic wheel. A. C. Schroeder. No. 1,019,536; Mar. 5; Sp. p. 1210; Gaz. vol. 176; p. 179.
Pocket, Safety watch-. H. A. Woolslare. No. 1,021,033; Mar. 26; Sp. p. 4305; Gaz. vol. 176; p. 800.
Poison-distributing apparatus. L. V. Rosser. No. 1,021,707; Mar. 26; Sp. p. 5712; Gaz. vol. 176; p. 1027.
Pole and shade bracket, Combined. C. Whigham. No. 1,020,239; Mar. 12; Sp. p. 2632; Gaz. vol. 176; p. 446.
Pole-reversing timer or distributer. E. S. Lincoln. No. 1,010,061; Mar. 5; Sp. p. 103; Gaz. vol. 176; p. 20.
Polishing-machine. O. L. Doech. No. 1,020,946; Mar. 19; Sp. p. 4115; Gaz. vol. 176; p. 718.
Pop-cooler. J. H. Garey. No. 1,021,670; Mar. 26; Sp. p. 5639; Gaz. vol. 176; p. 1014.
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Post-driver. B. L. Willis. No. 1,021,121; Mar. 26; Sp. p. 4479; Gaz. vol. 176; p. 828.
Posts and well-tubing, Machine for driving. A. A. Mouchet. No. 1,019,687; Mar. 5; Sp. p. 1483; Gaz. vol. 176; p. 229.
Pot: *See* Pouring-pot.
Pots and pans, Supplemental bottom for. F. Chaloud, Jr. No. 1,021,133; Mar. 26; Sp. p. 4513; Gaz. vol. 176; p. 832.
Potato-digger. S. J. Fritz. No. 1,021,592; Mar. 26; Sp. p. 5517; Gaz. vol. 176; p. 990.
Potato-digging machine. M. McIlveene and L. A. Hayes. No. 1,019,681; Mar. 5; Sp. p. 1475; Gaz. vol. 176; p. 228.
Potato-digging machine. J. Bamford. No. 1,020,247; Mar. 12; Sp. p. 2645; Gaz. vol. 176; p. 449.
Poultry-cooling rack. M. E. Pennington and H. C. Pierce. No. 1,020,575; Mar. 19; Sp. p. 3343; Gaz. vol. 176; p. 594.
Pounding-up machine. R. F. McFeely. No. 1,019,067; Mar. 5; Sp. p. 117; Gaz. vol. 176; p. 22.
Pounding-up roll. J. Gouldbourn. No. 1,019,890; Mar. 12; Sp. p. 1893; Gaz. vol. 176; p. 330.
Pouring-pot. W. P. Tarrant. No. 1,021,015; Mar. 26; Sp. p. 4270; Gaz. vol. 176; p. 793.
Power apparatus. L. E. Fish. No. 1,021,241; Mar. 26; Sp. p. 4749; Gaz. vol. 176; p. 867.
Power, Distribution of electromotive. H. Chitty, F. M. T. Lange, and G. W. Mascord. No. 1,020,025; Mar. 12; Sp. p. 2160; Gaz. vol. 176; p. 374.
Power from axles to bodies of railway-cars, Means for transmitting. L. T. Mann. No. 1,019,903; Mar. 12; Sp. p. 1921; Gaz. vol. 176; p. 334.
Power-generator. G. A. Krohn and E. M. Arreagada. No. 1,019,164; Mar. 5; Sp. p. 351; Gaz. vol. 176; p. 55.
Power-transmission device. D. K. Wilson. No. 1,021,030; Mar. 26; Sp. p. 4298; Gaz. vol. 176; p. 798.
Power-transmission mechanism. G. A. Morgan. No. 1,021,150; Mar. 26; Sp. p. 4570; Gaz. vol. 176; p. 840.
Press: *See* Baling-press; Cuff-press; Galley-proofing press; Hand-press; Hydraulic press; Metal-bending press; Mop-press; Necktie-press; Printing-press; Soap-press.
Press for forming pulp articles. W. W. Grenville. No. 1,019,786; Mar. 12; Sp. p. 1686; Gaz. vol. 176; p. 294.
Pressing pasty masses, more particularly mixtures of asbestos and cement, Machine for. F. Hloch. No. 1,021,093; Mar. 26; Sp. p. 4435; Gaz. vol. 176; p. 821.
Pressure-controlling device. A. J. Dronsfield. No. 1,020,641; Mar. 19; Sp. p. 3482; Gaz. vol. 176; p. 615.
Pressure-regulator. I. J. Ralston and J. A. Briggs. No. 1,020,309; Mar. 12; Sp. p. 2870; Gaz. vol. 176; p. 486.
Pressure-regulator. M. V. Smith. No. 1,021,383; Mar. 26; Sp. p. 5032; Gaz. vol. 176; p. 917.
Pressure-transformer. W. H. Pearce. No. 1,019,913; Mar. 12; Sp. p. 1945; Gaz. vol. 176; p. 337.
Printing-block-molding machine. P. Bunau-Varilla. No. 1,020,023; Mar. 12; Sp. p. 2166; Gaz. vol. 176; p. 373.
Printing-machine. T. Cossar. No. 1,020,190; Mar. 12; Sp. p. 2529; Gaz. vol. 176; p. 429.
Printing-machine. M. A. Lathey. No. 1,021,051; Mar. 26; Sp. p. 4347; Gaz. vol. 176; p. 807.
Printing machine, Ticket-. J. White. No. 1,019,107; Mar. 5; Sp. p. 217; Gaz. vol. 176; p. 34.
Printing-press. W. H. Smith. No. 1,019,197; Mar. 5; Sp. p. 423; Gaz. vol. 176; p. 67.
Printing-press. F. B. La Barr. No. 1,021,050; Mar. 26; Sp. p. 4345; Gaz. vol. 176; p. 806.
Printing-press numbering attachment. C. W. Kuen. No. 1,021,466; Mar. 26; Sp. p. 5259; Gaz. vol. 176; p. 948.
Printing-presses, Impression mechanism for. W. K. Hodgman. No. 1,019,253; Mar. 5; Sp. p. 540; Gaz. vol. 176; p. 86.
Propeller, Adjustable. F. Harlow. No. 1,019,635; Mar. 5; Sp. p. 1380; Gaz. vol. 176; p. 212.
Propeller, Screw-. C. H. Draper. No. 1,019,437; Mar. 5; Sp. p. 1002; Gaz. vol. 176; p. 147.
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Propeller-wheel, Feathering. A. S. Frazier. No. 1,020,274; Mar. 12; Sp. p. 2699; Gaz. vol. 176; p. 457.
Protector or goggles. J. W. Leasure. No. 1,020,994; Mar. 26; Sp. p. 4233; Gaz. vol. 176; p. 786.
Puller: *See* Bean-puller; Spoke-puller; Weed-puller.
Pulp-agitator. C. C. Hafer. No. 1,020,694; Mar. 19; Sp. p. 3600; Gaz. vol. 176; p. 632.
Pulp and other liquids, Apparatus for subdividing streams of. H. C. Behr and C. F. E. O. Schmitt. No. 1,020,251; Mar. 12; Sp. p. 2652; Gaz. vol. 176; p. 450.
Pulp, Machine for manufacturing sheets, boards, tubes, and other articles from. A. R. Kolb. No. 1,019,486; Mar. 5; Sp. p. 1118; Gaz. vol. 176; p. 163.
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Pulverizing-mill. B. C. Bradley. No. 1,020,898; Mar. 19; Sp. p. 2942; Gaz. vol. 176; p. 535.
Pump. J. L. Oakes. No. 1,019,272; Mar. 5; Sp. p. 581; Gaz. vol. 176; p. 93.
Pump. C. R. Pratt. No. 1,019,521; Mar. 5; Sp. p. 1177; Gaz. vol. 176; p. 175.
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Pump. G. W. Page. No. 1,020,051; Mar. 12; Sp. p. 2220; Gaz. vol. 176; p. 382.
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Pump-barrel, Glass-lined. W. L. McCormick. No. 1,019,507; Mar. 5; Sp. p. 1157; Gaz. vol. 176; p. 170.
Pump, Centrifugal. W. Kieser. No. 1,020,699; Mar. 19; Sp. p. 3614; Gaz. vol. 176; p. 634.
Pump, Double-acting. J. M. Ough and W. E. Hubbard. No. 1,020,113; Mar. 12; Sp. p. 2363; Gaz. vol. 176; p. 404.
Pump-fitting. J. Hahn. No. 1,021,188; Mar. 26; Sp. p. 4634; Gaz. vol. 176; p. 850.
Pump for abstracting air and water from surface condensers, Centrifugal. W. Kieser. No. 1,020,701; Mar. 19; Sp. p. 3619; Gaz. vol. 176; p. 635.
Pump for hydraulic transmission systems, Variable-delivery. W. G. Gibbons. No. 1,020,277; Mar. 12; Sp. p. 2704; Gaz. vol. 176; p. 458.
Pump for vacuum-cleaners. C. G. Wiborg. No. 1,020,241; Mar. 12; Sp. p. 2635; Gaz. vol. 176; p. 447.
Pump-gang. C. W. Shartle. No. 1,020,161; Mar. 12; Sp. p. 2462; Gaz. vol. 176; p. 419.
Pump, Oil-. F. L. Swanberg. No. 1,019,927; Mar. 12; Sp. p. 1979; Gaz. vol. 176; p. 342.
Pump-operating mechanism. P. G. Ault. No. 1,021,296; Mar. 26; Sp. p. 4862; Gaz. vol. 176; p. 888.
Pump or motor, Rotary. R. Janney. No. 1,020,285; Mar. 12; Sp. p. 2719; Gaz. vol. 176; p. 461.
Pump-rod coupling. L. D. McPheron. No. 1,020,301; Mar. 12; Sp. p. 2746; Gaz. vol. 176; p. 465.
Pump, Rotary. D. Dreier. No. 1,019,613; Mar. 5; Sp. p. 1347; Gaz. vol. 176; p. 204.
Pump, Rotary. J. T. Seaman. No. 1,019,995; Mar. 12; Sp. p. 2108; Gaz. vol. 176; p. 363.
Pumps or coils, Air-chambered stuffing-box for spiral. G. Bramanti-Mattei and P. Beltramo. No. 1,021,714; Mar. 26; Sp. p. 5727; Gaz. vol. 176; p. 1029.
Pumping apparatus, Centrifugal. W. Kieser. No. 1,020,700; Mar. 19; Sp. p. 3617; Gaz. vol. 176; p. 635.
Pumping apparatus, Liquid-. H. M. and T. M. Chance. No. 1,021,237; Mar. 26; Sp. p. 4743; Gaz. vol. 176; p. 866.
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Punch, Belt-. C. H. Metz. No. 1,020,302; Mar. 12; Sp. p. 2747; Gaz. vol. 176; p. 466.
Push-button, Indicating. W. R. Schlage. No. 1,021,339; Mar. 26; Sp. p. 4952; Gaz. vol. 176; p. 904.

Push-wheel. W. Plummer. No. 1,021,554; Mar. 26; Sp. p. 5433; Gaz. vol. 176; p. 978.
Puzzle. C. C. Vessels. No. 1,021,281; Mar. 26; Sp. p. 4834; Gaz. vol. 176; p. 882.
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Quilling-machine. J. Rigby. No. 1,019,839; Mar. 12; Sp. p. 1772; Gaz. vol. 176; p. 311.
Quilting-frame and curtain-stretcher, Combined. T. and J. T. Lewis. No. 1,020,295; Mar. 12; Sp. p. 2736; Gaz. vol. 176; p. 463.
Quilting-machine. O. Ashton. No. 1,019,118; Mar. 5; Sp. p. 240; Gaz. vol. 176; p. 38.
Rack: *See* Barrel-rack; Clothes-rack; Coat and hat rack; Display-rack; Display mattress-rack; Paper-rack; Poultry-cooling rack.
Radiator. J. B. Beam. No. 1,019,121; Mar. 5; Sp. p. 248; Gaz. vol. 176; p. 39.
Radiator. J. B. Beam. No. 1,019,122; Mar. 5; Sp. p. 254; Gaz. vol. 176; p. 40.
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Radiator-assembling machine. W. C. McKeown. No. 1,020,150; Mar. 12; Sp. p. 2426; Gaz. vol. 176; p. 415.
Radiators, Dust-arrester for. A. J. Fandrey. No. 1,019,143; Mar. 5; Sp. p. 307; Gaz. vol. 176; p. 48.
Radiators, Making. J. Porzel. No. 1,019,016; Mar. 12; Sp. p. 1954; Gaz. vol. 176; p. 339.
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Rake. L. E. Greene. No. 1,020,387; Mar. 12; Sp. p. 2910; Gaz. vol. 176; p. 493.
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Scraper, Wheeled. W. M. Gentle and J. K. Cooper. No. 1,021,517; Mar. 26; Sp. p. 5367; Gaz. vol. 176; p. 966.
Screen: *See* Well-screen.
Screen and sash hanger. M. C. Palmer. No. 1,019,912; Mar. 12; Sp. p. 1944; Gaz. vol. 176; 337.
Screen insect-escape. J. R. Kunselman. No. 1,020,830; Mar. 19; Sp. p. 3890; Gaz. vol. 176; p. 680.
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Screw, Bench-. A. N. Sorenson. No. 1,020,322; Mar. 12; Sp. p. 2782; Gaz. vol. 176; p. 471.
Screw-driver. W. C. Gordon. No. 1,020,141; Mar. 12; Sp. p. 2413; Gaz. vol. 176; p. 412.
Scrubber and mop, Combined. W. Dupré. No. 1,020,809; Mar. 19; Sp. p. 3836; Gaz. vol. 176; p. 672.
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Seal-lock for boxes. J. Sehrt. No. 1,021,165; Mar. 26; Sp. p. 4586; Gaz. vol. 176; p. 843.
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Seat post, Spring-. W. S. Harley. (Reissue.) No. 13,383; Mar. 12; Sp. p. 2926; Gaz. vol. 176; p. 495.
Seats, Attachment for hinged. W. G. Winans. No. 1,019,397; Mar. 5; Sp. p. 919; Gaz. vol. 176; p. 135.
Seats, Side standard for. W. B. Cogger. No. 1,019,134; Mar. 5; Sp. p. 283; Gaz. vol. 176; p. 44.
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Separating-machine, Centrifugal. A. H. Reid. No. 1,019,836; Mar. 12; Sp. p. 1764; Gaz. vol. 176; p. 309.
Separating mechanism. F. H. Mason and J. Allen. No. 1,021,690; Mar. 26; Sp. p. 5673; Gaz. vol. 176; p. 1021.
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Serving system, Automatic. J. Doyle. No. 1,019,137; Mar. 5; Sp. p. 290; Gaz. vol. 176; p. 45.
Serving-table. T. E. Davis. No. 1,021,454; Mar. 26; Sp. p. 5219; Gaz. vol. 176; p. 943.
Settling-tank. A. J. Arbuckle. No. 1,020,013; Mar. 12; Sp. p. 2143; Gaz. vol. 176; p. 369.
Sewage-separator. J. S. Miller. No. 1,019,907; Mar. 12; Sp. p. 1931; Gaz. vol. 176; p. 336.
Sewage, Treatment of. J. S. Waddington. No. 1,019,933; Mar. 12; Sp. p. 1968; Gaz. vol. 176; p. 344.
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Sewing-machine attachment. D. Gattone. No. 1,021,671; Mar. 26; Sp. p. 5640; Gaz. vol. 176; p. 1015.
Sewing-machine brake mechanism. J. L. Kleinman. No. 1,021,750; Mar. 26; Sp. p. 5808; Gaz. vol. 176; p. 1042.
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Sewing machine, Buttonhole-. B. T. Leveque. No. 1,019,667; Mar. 5; Sp. p. 1443; Gaz. vol. 176; p. 223.
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Sewing-machine needle-bar mechanism. J. C. Ringe. No. 1,020,057; Mar. 12; Sp. p. 2230; Gaz. vol. 176; p. 385.
Sewing-machine pull-off. A. Boyd. No. 1,021,399; Mar. 26; Sp. p. 5109; Gaz. vol. 176; p. 924.
Sewing-machine thread-controlling mechanism. C. F. Gray. No. 1,020,090; Mar. 12; Sp. p. 2305; Gaz. vol. 176; p. 395.
Sewing-machine thread-cutting device. R. L. Lyons. No. 1,021,156; Mar. 26; Sp. p. 4563; Gaz. vol. 176; p. 839.
Sewing-machine thread take-up. W. R. Blair. (Reissue.) No. 13,381; Mar. 12; Sp. p. 2922; Gaz. vol. 176; 494.
Sewing-machine work-holder. N. Van Deventer-Smith and J. E. Van Deventer. No. 1,020,581; Mar. 19; Sp. p. 3352; Gaz. vol. 176; p. 596.
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Sewing-machines, Throw-out device for reciprocating-shuttle. J. O. Huffman and E. J. Lauffer. No. 1,020,099; Mar. 12; Sp. p. 2332; Gaz. vol. 176; p. 398.
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Shade and curtain holder. C. F. Haase. No. 1,021,596; Mar. 26; Sp. p. 5522; Gaz. vol. 176; p. 991.
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Sheet-metal plates, Machine for joining. J. H. Palmer and E. W. Salmon, Jr. No. 1,020,154; Mar. 12; Sp. p. 2441; Gaz. vol. 176; p. 416.
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Shock-absorber. C. H. McCombs. No. 1,019,504; Mar. 5; Sp. p. 1150; Gaz. vol. 176; p. 169.
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Shoe-cleaning device. T. J. Dalton. No. 1,019,769; Mar. 12; Sp. p. 1654; Gaz. vol. 176; p. 288.
Shoe-fastener. A. W. Ricks. No. 1,020,511; Mar. 12; Sp. p. 3182; Gaz. vol. 176; p. 571.
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Shoe-forming machine. A. W. Dunn. No. 1,019,310; Mar. 5; Sp. p. 683; Gaz. vol. 176; p. 107.
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Shoe-polishing machine. A. D. Washington. No. 1,020,587; Mar. 19; Sp. p. 3362; Gaz. vol. 176; p. 598.
Shoe shank and filler, Combined. W. H. Wood. No. 1,021,032; Mar. 26; Sp. p. 4304; Gaz. vol. 176; p. 800.
Shoe-shaping machine. O. Ashton. No. 1,019,878; Mar. 12; Sp. p. 1853; Gaz. vol. 176; p. 325.
Shoe-turning machine. A. Eppler. No. 1,020,812; Mar. 19; Sp. p. 3840; Gaz. vol. 176; p. 673.
Shoes, Antislipping device or heel for. F. H. Ellis. No. 1,020,085; Mar. 12; Sp. p. 2298; Gaz. vol. 176; p. 394.
Shoes, Machine for operating upon. A. Bates. No. 1,020,177; Mar. 12; Sp. p. 2495; Gaz. vol. 176; p. 425.
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Shuttle-guard. F. Johnson. No. 1,019,050; Mar. 5; Sp. p. 84; Gaz. vol. 176; p. 17.

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Sign, Automatic. M. J. Doner. No. 1,019,770; Mar. 12; Sp. p. 1656; Gaz. vol. 176; p. 289.
Sign, Flashing gas-. W. Clayton-Joel. No. 1,019,599; Mar. 5; Sp. p. 1322; Gaz. vol. 176; p. 199.
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Signal. J. C. McGowan and R. W. Michler. No. 1,019,340; Mar. 5; Sp. p. 746; Gaz. vol. 176; p. 116.
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Smelting sulfid ores. A. Haggenmiller. No. 1,021,096; Mar. 26; Sp. p. 4432; Gaz. vol. 176; p. 820.
Smoke-burner. E. C. Jones and C. J. Arnold. No. 1,019,797; Mar. 12; Sp. p. 1707; Gaz. vol. 176; p. 298.
Snap-switch, Rotary. C. D. Platt. No. 1,021,208; Mar. 26; Sp. p. 4668; Gaz. vol. 176; p. 856.
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Spinning apparatus, Traverse-motion for yarn-. A. E. Rhoades. No. 1,020,713; Mar. 19; Sp. p. 3640; Gaz. vol. 176; p. 640.
Spinning-cylinders, Tongs for separating. A. Furrer. No. 1,020,139; Mar. 12; Sp. p. 2408; Gaz. vol. 176; p. 411.
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Splitting-machine, Hand. M. E. Naylor. No. 1,020,364; Mar. 12; Sp. p. 2600; Gaz. vol. 176; p. 484.
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Spraying-tower, Portable. A. A. Sheetz and G. A. Cottrell. No. 1,020,061; Mar. 12; Sp. p. 2239; Gaz. vol. 176; p. 386.
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Tap-wrench. H. H. Edstrom. No. 1,020,598; Mar. 19; Sp. p. 3384; Gaz. vol. 176; p. 601.
Tape-holder. A. Musk. No. 1,020,152; Mar. 12; Sp. p. 2438; Gaz. vol. 176; p. 415.
Tape, Steel. J. M. Ezell. No. 1,019,618; Mar. 5; Sp. p. 1354; Gaz. vol. 176; p. 206.
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Telephonic and telegraphic system, Combined. R. E. Gill. No. 1,021,717; Mar. 26; Sp. p. 5731; Gaz. vol. 176; p. 1030.
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Tension device, Elastic. J. C. Hodges. No. 1,020,553; Mar. 19; Sp. p. 3280; Gaz. vol. 176; p. 586.
Tent-poles, Ball-ring for. J. Renner. No. 1,019,991; Mar. 12; Sp. p. 2099; Gaz. vol. 176; p. 362.

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Vacuum service-inlets, Closure for. F. J. Matchette. No. 1,021,203; Mar. 26; Sp. p. 4659; Gaz. vol. 176; p. 854.
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Wood-bending machine. J. W. Hilger. No. 1,019,472; Mar. 5; Sp. p. 1071; Gaz. vol. 176; p. 158.
Wood-finishing. L. H. Baekeland and N. Thurlow. No. 1,019,408; Mar. 5; Sp. p. 946; Gaz. vol. 176; p. 138.
Wood-splitting machine. F. Barnhart. No. 1,020,072; Mar. 12; Sp. p. 2265; Gaz. vol. 176; p. 390.
Wood, Vulcanized. C. Howard. No. 1,021,676; Mar. 26; Sp. p. 5640; Gaz. vol. 176; p. 1016.
Wrapper for newspapers, periodicals, and the like. E. H. Roden. No. 1,019,525; Mar. 5; Sp. p. 1189; Gaz. vol. 176; p. 176.
Wrench: *See* Pipe-wrench; Quick-release wrench; Ratchet-wrench; Tap-wrench; Tire-bolt wrench.
Wrench. G. Valenza. No. 1,019,204; Mar. 5; Sp. p. 437; Gaz. vol. 176; p. 69.
Wrench. J. Wiernicki. No. 1,019,575; Mar. 5; Sp. p. 1279; Gaz. vol. 176; p. 191.
Wrench. H. G. Kreger. No. 1,019,806; Mar. 12; Sp. p. 1721; Gaz. vol. 176; p. 301.
Wrench. A. Shirk. No. 1,021,272; Mar. 26; Sp. p. 4818; Gaz. vol. 176; p. 878.
Wrench. F. Machava. No. 1,021,542; Mar. 26; Sp. p. 5410; Gaz. vol. 176; p. 974.
Wrist-pins, Lubricating means for. J. Craig. No. 1,020,638; Mar. 19; Sp. p. 3476; Gaz. vol. 176; p. 614.
Writing for the use of the blind, Device for. W. L. Heiskell. No. 1,019,789; Mar. 12; Sp. p. 1691; Gaz. vol. 176; p. 295.
Xylophone. H. Welch. No. 1,021,345; Mar. 26; Sp. p. 4962; Gaz. vol. 176; p. 906.
Yarn-sizing machine. C. E. Clark. No. 1,020,343; Mar. 12; Sp. p. 2820; Gaz. vol. 176; p. 478.
Yarns, fabric, and the like, Imparting luster to. L. Schreiner. No. 1,020,117; Mar. 12; Sp. p. 2371; Gaz. vol. 176; p. 405.
Yeast, Increasing the raising power of dried. P. D. H. Ohlhaver. No. 1,021,700; Mar. 26; Sp. p. 5602; Gaz. vol. 176; p. 1025.
Yeast, Manufacturing dried. P. D. H. Ohlhaver. No. 1,020,306; Mar. 12; Sp. p. 2752; Gaz. vol. 176; p. 467.
Yeast washing and aerating apparatus. F. Schimper. No. 1,020,716; Mar. 19; Sp. p. 3648; Gaz. vol. 176; p. 642.
Yoke fastener, Neck-. G. W. Hurst. No. 1,021,102; Mar. 26; Sp. p. 4440; Gaz. vol. 176; p. 822.
Yoke or tongue attachment, Neck-. J. B. Davis. No. 1,020,268; Mar. 12; Sp. p. 2680; Gaz. vol. 176; p. 455.
Zinc and purifying and improving the same. A. J. Rossi. No. 1,020,512; Mar. 19; Sp. p. 3183; Gaz. vol. 176; p. 572.

ALPHABETICAL LIST OF DESIGNS.

Air-brush frame. T. A. De Vilbiss. No. 42,272; Mar. 12; Gaz. vol. 176; p. 498.
Automobile bow-rest. J. Erret. No. 42,276; Mar. 12; Gaz. vol. 176; p. 499.
Automobile-top. C. W. Link. Nos. 42,330–1; Mar. 19; Gaz. vol. 176; pp. 728–9.
Axle housing for vehicles, Front-. W. H. Douglas. No. 42,317; Mar. 19; Gaz. vol. 176; p. 726.
Badge. R. H. Brandon. No. 42,267; Mar. 12; Gaz. vol. 176; p. 497.
Ball scorer, Base-. M. L. Kaufmann. No. 42,361; Mar. 26; Gaz. vol. 176; p. 1048.
Boot. J. P. Grosvenor. No. 42,322; Mar. 19; Gaz. vol. 176; p. 727.
Bottle. F. F. Ingram. No. 42,287; Mar. 12; Gaz. vol. 176; p. 501.
Bottle-opener. J. L. Sommer. Nos. 42,305–6; Mar. 12; Gaz. vol. 176; p. 504.
Box. E. F. Caldwell. No. 42,251; Mar. 5; Gaz. vol. 176; p. 251.
Box-strip. R. Gair. No. 42,258; Mar. 5; Gaz. vol. 176; p. 252.
Bridle-check. F. C. Monier. No. 42,366; Mar. 26; Gaz. vol. 176; p. 1049.
Button or similar article. R. Liebmann. Nos. 42,362–3; Mar. 26; Gaz. vol. 176; p. 1048.
Carbon-holder. J. J. Jones. No. 42,360; Mar. 26; Gaz. vol. 176; p. 1048.
Carpet. W. A. Elliot. Nos. 42,274–5; Mar. 12; Gaz. vol. 176; p. 499.
Carpet. M. R. Loudon. No. 42,289; Mar. 12; Gaz. vol. 176; p. 501.
Carpet. J. B. Moffat. No. 42,293; Mar. 12; Gaz. vol. 176; p. 502.
Carpet. E. G. Sauer. Nos. 42,300–3; Mar. 12; Gaz. vol. 176; p. 503.
Carpet. J. Spring. Nos. 42,307–8; Mar. 12; Gaz. vol. 176; p. 504.
Carpet. E. W. Trik. Nos. 42,311–13; Mar. 12; Gaz. vol. 176; p. 505.
Centrifugal-separator frame. B. and E. Starch. No. 42,309; Mar. 12; Gaz. vol. 176; p. 504.
Chafing-dish. A. H. S. Swan. Nos. 42,341–2; Mar. 19; Gaz. vol. 176; p. 731.
Chafing-dish stand. E. A. Farr. No. 42,277; Mar. 12; Gaz. vol. 176; p. 499.
Christmas stocking. H. M. Allen. No. 42,346; Mar. 26; Gaz. vol. 176; p. 1045.
Condiment-shaker. C. A. Conger. No. 42,271; Mar. 12; Gaz. vol. 176; p. 498.
Cue-rack. H. F. Davenport. No. 42,353; Mar. 26; Gaz. vol. 176; p. 1047.
Cup, Drinking-. S. Horvath. No. 42,326; Mar. 19; Gaz. vol. 176; p. 728.
Dolly. R. Gair. Nos. 42,254–7; Mar. 5; Gaz. vol. 176; pp. 251–2.
Doll. E. I. Horsman, Jr. Nos. 42,324–5; Mar. 19; Gaz. vol. 176; pp. 727–8.
Drinking-fountain. P. J. Madden. No. 42,364; Mar. 26; Gaz. vol. 176; p. 1048.
Drinking-glass or similar article. T. Mortenson. No. 42,367; Mar. 26; Gaz. vol. 176; p. 1049.
Drinking-receptacles, Germ-exterminator for. L. G. Peters and M. D. Brown. No. 42,297; Mar. 12; Gaz. vol. 176; p. 502.
Drinking vessel or similar article. E. M. Bottome. Nos. 42,348–9; Mar. 26; Gaz. vol. 176; p. 1046.
Drinking vessel or similar article. E. M. Bottome and H. A. Marshall. No. 42,350; Mar. 26; Gaz. vol. 176; p. 1046.
Drinking vessel or similar article. P. Ebeling. No. 42,356; Mar. 26; Gaz. vol. 176; p. 1047.
Earpiece, Acoustic. H. G. Pape. No. 42,295; Mar. 12; Gaz. vol. 176; p. 502.
Fabric or wall-paper, Textile. E. Hoch. No. 42,323; Mar. 19; Gaz. vol. 176; p. 727.
Fabric or wall-paper, Textile. E. Munier. No. 42,337; Mar. 19; Gaz. vol. 176; p. 730.
Flushing-tank for water-closets. J. F. Kelly. No. 42,328; Mar. 19; Gaz. vol. 176; p. 728.
Gas-burner. A. G. Sherman. No. 42,339; Mar. 19; Gaz. vol. 176; p. 730.
Glass or similar article. A. Gredelue. Nos. 42,357–8; Mar. 26; Gaz. vol. 176; p. 1047.
Glass vessel. A. J. Sanford. No. 42,260; Mar. 5; Gaz. vol. 176; p. 252.
Glass vessel. H. R. Luckock. No. 42,332; Mar. 19; Gaz. vol. 176; p. 729.
Glass vessel. H. R. Luckock and C. H. Taylor. Nos. 42,333–6; Mar. 19; Gaz. vol. 176; pp. 729–30.
Grass-hook. W. G. Stewart. No. 42,310; Mar. 12; Gaz. vol. 176; p. 505.
Hand-bag. L. Potter. Nos. 42,369–72; Mar. 26; Gaz. vol. 176; pp. 1049–50.
Hinge. J. P. McKinney. No. 42,259; Mar. 5; Gaz. vol. 176; p. 252.
Ice-chest for liquid-dispensing apparatus. F. W. Calvert. No. 42,268; Mar. 12; Gaz. vol. 176; p. 497.
Ice-cream-freezer base. F. Tyson. No. 42,377; Mar. 26; Gaz. vol. 176; p. 1051.
Insect-trap. G. Rainey. No. 42,298; Mar. 12; Gaz. vol. 176; p. 503.
Jack-screw stand and lifter. T. A. J. Wheeler. No. 42,378; Mar. 26; Gaz. vol. 176; p. 1051.
Jewelry ornament. L. H. Fishel. Nos. 42,252–3; Mar. 5; Gaz. vol. 176; p. 251.
Lamp body, Gas-. F. W. Magee. No. 42,365; Mar. 26; Gaz. vol. 176; p. 1048.
Lamp-post. C. E. Grelle. Nos. 42,280–5; Mar. 12; Gaz. vol. 176; p. 500.
Lamp-shade. J. O. Erskine. No. 42,319; Mar. 19; Gaz. vol. 176; p. 727.
Lamp, Street-. F. H. Wallis. No. 42,263; Mar. 5; Gaz. vol. 176; p. 253.
Lantern. A. R. Pritchard. No. 42,338; Mar. 19; Gaz. vol. 176; p. 730.
Level. A. D. Armstrong. No. 42,347; Mar. 26; Gaz. vol. 176; p. 1046.
Machine-frame. E. H. Oderman. No. 42,294; Mar. 12; Gaz. vol. 176; p. 502.
Match-box and candle-holder. H. C. Edmiston. No. 42,318; Mar. 19; Gaz. vol. 176; p. 726.
Motor and generator casing. C. W. Dake and J. E. Kilker. No. 42,316; Mar. 19; Gaz. vol. 176; p. 726.
Picture, Stamped-metal framed. H. L. Beach. No. 42,266; Mar. 12; Gaz. vol. 176; p. 497.
Pincushion. E. Stewart. No. 42,340; Mar. 19; Gaz. vol. 176; p. 730.
Pitcher or can. I. J. Collins. Nos. 42,269–70; Mar. 12; Gaz. vol. 176; p. 498.
Plumber's trap. G. Cody. No. 42,315; Mar. 19; Gaz. vol. 176; p. 726.
Portfolio-cover. E. F. Caldwell. Nos. 42,351–2; Mar. 26; Gaz. vol. 176; p. 1046.
Range, Coal-. L. Scruggs. No. 42,375; Mar. 26; Gaz. vol. 176; p. 1050.
Ribbon-bow holder. F. L. Leyser. No. 42,288; Mar. 12; Gaz. vol. 176; p. 501.
Ring-setting for precious stones. B. Huchberger No. 42,286; Mar. 12; Gaz. vol. 176; p. 501.
Rocking-horse. A. W. Pressler. Nos. 42,373–4; Mar. 26; Gaz. vol. 176; p. 1050.
Rubber mat. E. H. Huxley. No. 42,327; Mar. 19; Gaz. vol. 176; p. 728.
Rug. J. B. Moffat. Nos. 42,291–2; Mar. 12; Gaz. vol. 176; p. 501.
Rug. W. G. Reith. No. 42,299; Mar. 12; Gaz. vol. 176; p. 503.
Rug. E. G. Sauer. No. 42,304; Mar. 12; Gaz. vol. 176; p. 504.
Rug, Woven. G. M. Fauser. No. 42,320; Mar. 19; Gaz. vol. 176; p. 727.
Sad-iron handle. G. E. Walt and J. R. White. No. 42,344; Mar. 19; Gaz. vol. 176; p. 731.
Scale-dial rim. M. H. Hansen. No. 42,359; Mar. 26; Gaz. vol. 176; p. 1047.
Spoon or fork. W. B. H. Dowse. No. 42,273; Mar. 12; Gaz. vol. 176; p. 499.
Statuette. C. E. Schultze. Nos. 42,261–2; Mar. 5; Gaz. vol. 176; pp. 252–3.
Stove. T. R. Kennedy and E. J. King. No. 42,329; Mar. 19; Gaz. vol. 176; p. 728.
Stove. W. W. Woods. No. 42,345; Mar. 19; Gaz. vol. 176; p. 731.
Tack-puller. A. F. Gillet. No. 42,279; Mar. 12; Gaz. vol. 176; p. 490.
Tool, Combination-. F. Mossberg. No. 42,368; Mar. 26; Gaz. vol. 176; p. 1049.
Tool-handle. E. D. Gilbert. No. 42,321; Mar. 19; Gaz. vol. 176; p. 727.
Toy. H. Toriuemke. No. 42,376; Mar. 26; Gaz. vol. 176; p. 1050.
Type-writer table. S. E. Pearson and B. D. Gorman. No. 42,296; Mar. 12; Gaz. vol. 176; p. 502.
Valve. E. B. Wilford. No. 42,314; Mar. 12; Gaz. vol. 176; p. 505.
Vehicle-body. O. P. Fritchle. No. 42,278; Mar. 12; Gaz. vol. 176; p. 499.
Vehicle-body. W. H. Douglas. Nos. 42,354–5; Mar. 26; Gaz. vol. 176; p. 1047.
Vending-machine cabinet. F. C. Whitmore. No. 42,265; Mar. 5; Gaz. vol. 176; p. 253.
Wheel, Traction-. E. M. Wheelock. No. 42,264; Mar. 5; Gaz. vol. 176; p. 253.
Wrenches, Housing for. J. H. Vinton. No. 42,323; Mar. 19; Gaz. vol. 176; p. 731.

ALPHABETICAL LIST OF TRADE-MARKS.

Ale, Ginger-. W. A. Scott. No. 85,884; Mar. 26; Gaz. vol. 176; p. 1066.
Balls, Golf-. Martins-Birmingham Limited. Nos. 85,757–8; Mar. 12; Gaz. vol. 176; p. 522.
Beer. Jamestown Brewing Company. No. 85,866; Mar. 26; Gaz. vol. 176; p. 1065.
Beer. Storz Brewing Co. No. 85,886; Mar. 26; Gaz. vol. 176; p. 1066.
Beer, Lager-. Gottfried Brewing Company. No. 85,740; Mar. 12; Gaz. vol. 176; p. 521.
Belt-dressing. The Gandy Belting Company of Baltimore City. No. 85,803; Mar. 19; Gaz. vol. 176; p. 745.
Beverages, Certain non-alcoholic. F. G. Klein Co. No. 85,663; Mar. 5; Gaz. vol. 176; p. 269.
Biscuits. National Biscuit Company. Nos. 85,916–17; Mar. 26; Gaz. vol. 176; p. 1067.
Bitters. H. Underberg. No. 85,838; Mar. 19; Gaz. vol. 176; p. 746.
Boots and shoes. Clark-Hutchinson Company. No 85,648; Mar. 5; Gaz. vol. 176; p. 269.
Boots and shoes, Infants' and children's. Paul Brothers. No. 85,831; Mar. 19; Gaz. vol. 176; p. 746.
Boots and shoes, Leather. Fred F. Field Company. No. 85,736; Mar. 12; Gaz. vol. 176; p. 521.
Boots and shoes made of leather. Century Shoe Co. No. 85,796; Mar. 19; Gaz. vol. 176; p. 745.
Bouillon, Preparation for making. G. Banthien. No. 85,791; Mar. 19; Gaz. vol. 176; p. 745.
Box, Vanity-. Smith, Kline & French Company. No. 85,774; Mar. 12; Gaz. vol. 176; p. 522.
Boxes, Lunch-. Bryant Box Company. No. 85,793; Mar. 19; Gaz. vol. 176; p. 745.
Bread. L. L. Downing. No. 85,651; Mar. 5; Gaz. vol. 176; p. 269.
Brush, scraper, mop, and wringer, Combined. Clark & Dupré Wringer Mop Co. No. 85,730; Mar. 12; Gaz. vol. 176; p. 521.
Brushes, Toilet-. Geo. R. Gibson Co. No. 85,739; Mar. 12; Gaz. vol. 176; p. 521.
Calfskins. W. Eitingon. No. 85,802; Mar. 19; Gaz. vol. 176; p. 745.
Candied fruits and peels. P. & F. Vincentelli & Company. No. 85,841; Mar. 19; Gaz. vol. 176; p. 746.
Candy. F. B. Washburn & Co. No. 85,697; Mar. 5; Gaz. vol. 176; p. 270.
Candy. Maatschappij tot Exploitatie van Rademaker's Koninklijkes Cacao & Chocoladefabrieken. No. 85,756; Mar. 12; Gaz. vol. 176; p. 522.
Candy. Windsor Chocolate Company. No. 85,784; Mar. 12; Gaz. vol. 176; p. 523.
Candy. L. B. Worrell. No. 85,842; Mar. 19; Gaz. vol. 176; p. 746.
Candy. Windsor Chocolate Company. No. 85,933; Mar. 26; Gaz. vol. 176; p. 1067.
Canned chilies, pimentos, and chilli sauce. E. C. Ortega. Nos. 85,677–8; Mar. 5; Gaz. vol. 176; p. 270.
Canned fruits. Central California Canneries. No. 85,647; Mar. 5; Gaz. vol. 176; p. 269.
Canned fruits. Central California Canneries. No. 85,729; Mar. 12; Gaz. vol. 176; p. 521.
Canned fruits and vegetables. Frederick City Packing Company. No. 85,653; Mar. 5; Gaz. vol. 176; p. 269.
Canned fruits and vegetables. R. W. Rice. No. 85,683; Mar. 5; Gaz. vol. 176; p. 270.
Canned fruits, vegetables, and fish, spices, and macaroni. Sprague, Warner & Company. No. 85,692; Mar. 5; Gaz. vol. 176; p. 270.
Canned fruits, vegetables, and salmon, dried currants, and raisins. A. Lowry & Bro. No. 85,665; Mar. 5; Gaz. vol. 176; p. 269.
Canned salmon. Alaska Packers Association. No. 85,720; Mar. 12; Gaz. vol. 176; p. 521.
Canned salmon. Hawk Fish Company. No. 85,746; Mar. 12; Gaz. vol. 176; p. 521.
Canned tomatoes. A. Ascione & Company. No. 85,724; Mar. 12; Gaz. vol. 176; p. 521.
Canned vegetables. Colt and Dixon Packing and Manufacturing Company of Frederick, Maryland. No. 85,797; Mar. 19; Gaz. vol. 176; p. 745.
Car movers and pushers. W. McLeish. No. 85,759; Mar. 12; Gaz. vol. 176; p. 552.
Carbon-black. Meteor Carbon Company. No. 85,671; Mar. 5; Gaz. vol. 176; p. 270.
Carburetors, explosion-motor radiators, pumps, and lubricators. M. Goudard and Mennesson. No. 85,655; Mar. 5; Gaz. vol. 176; p. 269.
Cards, Playing-. Ballkards Company. No. 85,726; Mar. 12; Gaz. vol. 176; p. 521.
Celery. Prairie Side Celery Co. No. 85,680; Mar. 5; Gaz. vol. 176; p. 270.
Cements and pavements, Bituminous. Warren Brothers Company. No. 85,780; Mar. 12; Gaz. vol. 176; p. 522.
Cereal breakfast foods. D. A. Harrison. No. 85,745; Mar. 12; Gaz. vol. 176; p. 521.
Cereals, Breakfast. Morrow-Lawton Company. No. 85,763; Mar. 12; Gaz. vol. 176; p. 522.
Cheese, Cream-. Grove, Prager & Miller. No. 85,742; Mar. 12; Gaz. vol. 176; p. 521.
Chemicals, Certain. Burke & James. No. 85,702; Mar. 5; Gaz. vol. 176; p. 271.
Cigars. R. Fernandez. No. 85,855; Mar. 26; Gaz. vol. 176; p. 1065.
Cigars. The L. C. Nicholson Co. No. 85,876; Mar. 26; Gaz. vol. 176; p. 1066.
Cigars. Sanchez & Haya Co. No. 85,882; Mar. 26; Gaz. vol. 176; p. 1066.
Cigars, cheroots, and cigarettes. Cayey-Caguas Tobacco Company. No. 85,900; Mar. 26; Gaz. vol. 176; p. 1066.
Cigars, cigarettes, and tobaccos. Nicholas Kuhnen Cigar Co. No. 85,871; Mar. 26; Gaz. vol. 176; p. 1065.
Cleaners, Vacuum-. The Premier Vacuum Cleaner Co. No. 85,766; Mar. 12; Gaz. vol. 176; p. 522.
Cleaning-powder. W. H. Hayward. No. 85,861; Mar. 26; Gaz. vol. 176; p. 1065.
Clocks. T. Schlegall. No. 85,686; Mar. 5; Gaz. vol. 176; p. 270.
Coffee. William S. Scull Company. No. 85,832; Mar. 19; Gaz. vol. 176; p. 746.
Coffee and tea, Blended. Hewlett Bros. Co. No. 85,657; Mar. 5; Gaz. vol. 176; p. 269.
Coffee, Blended. William S. Scull Company. No. 85,688; Mar. 5; Gaz. vol. 176; p. 270.
Coffee, tea, spices, and flavoring extracts. Roth-Homeyer Coffee Co. No. 85,685; Mar. 5; Gaz. vol. 176; p. 270.
Coffees and certain spices, Blended. Jewett & Sherman Company. No. 85,661; Mar. 5; Gaz. vol. 176; p. 269.
Construction material, Certain. The United Gas Improvement Company. No. 85,887; Mar. 26; Gaz. vol. 176; p. 1066.
Cooking compound. The N. K. Fairbank Company. No. 85,905; Mar. 26; Gaz. vol. 176; p. 1066.
Cordials. P. Newton. No. 85,875; Mar. 26; Gaz. vol. 176; p. 1066.
Cornmeal. McDonald Milling Company. No. 85,670; Mar. 5; Gaz. vol. 176; p. 270.
Corset and under waists. Birdsey-Somers Co. No. 85,644; Mar. 5; Gaz. vol. 176; p. 269.
Corsets. The Hawes Corset Co. No. 85,656; Mar. 5; Gaz. vol. 176; p. 269.
Corsets. Weingarten Bros. No. 85,698; Mar. 5; Gaz. vol. 176; p. 270.
Cotton and linen piece goods. Trippe, Barker & Co. No. 85,836; Mar. 19; Gaz. vol. 176; p. 746.
Cotton converted goods. Titus Blatter & Co. No. 85,727; Mar. 12; Gaz. vol. 176; p. 521.
Cotton, linen, silk, woolen, &c., piece goods. E. Rosenfeld & Company. No. 85,684; Mar. 5; Gaz. vol. 176; p. 270.
Cotton piece goods. M. Rosenstein. No. 85,768; Mar. 12; Gaz. vol. 176; p. 522.
Cotton piece goods, Dyed. Otto Goetze Co. No. 85,807; Mar. 19; Gaz. vol. 176; p. 745.
Crackers. The Green & Green Company. No. 85,741; Mar. 12; Gaz. vol. 176; p. 521.
Cream for the skin. L. G. Domar. No. 85,901; Mar. 26; Gaz. vol. 176; p. 1066.
Creams, Face-. T. C. Booth. No. 85,701; Mar. 5; Gaz. vol. 176; p. 270.
Cultivators. Atlanta Agricultural Works. No. 85,897; Mar. 26; Gaz. vol. 176; p. 1066.
Cutlery, Certain kinds of. The Enterprise Manufacturing Company. No. 85,904; Mar. 26; Gaz. vol. 176; p. 1066.
Cutters and holders therefor, Certain. The O. K. Tool Holder Company. No. 85,675; Mar. 5; Gaz. vol. 176; p. 270.
Digestive-ferment product. G. W. Carnrick Company. No. 85,704; Mar. 5; Gaz. vol. 176; p. 271.
Disinfectants, &c. Barrett Manufacturing Company. No. 85,792; Mar. 19; Gaz. vol. 176; p. 745.
Dress-shields. Sanitary Skirt Shield Co. No. 85,883; Mar. 26; Gaz. vol. 176; p. 1066.
Dresses, Silk and cotton. Goldman Costume Company. No. 85,808; Mar. 19; Gaz. vol. 176; p. 745.
Engines, harvesters, and road-working machines. The Holt Manufacturing Company. No. 85,816; Mar. 19; Gaz. vol. 176; p. 745.
Eyeglass clips or guards. M. H. Harris. No. 85,860; Mar. 26; Gaz. vol. 176; p. 1065.
Feed, Stock and poultry. J. Zimmern's Co. No. 85,934; Mar. 26; Gaz. vol. 176; p. 1067.
Fence posts and poles, Steel. C. L. Michod. No. 85,914; Mar. 26; Gaz. vol. 176; p. 1067.
Fertilizer. J. A. Engel. No. 85,735; Mar. 12; Gaz. vol. 176; p. 521.

Fertilizer-distributers and harrows. Atlanta Agricultural Works. No. 85,896; Mar. 26; Gaz. vol. 176; p. 1066.
Fire-extinguishing compounds. Syringes for use with. Pyrene Manufacturing Co. No. 85,918; Mar. 26; Gaz. vol. 176; p. 1067.
Fire-wagons and melting-kettles. Iroquois Iron Works. No. 85,818; Mar. 19; Gaz. vol. 176; p. 746.
Fish. Sylvanus Smith & Co. No. 85,690; Mar. 5; Gaz. vol. 176; p. 270.
Flooring, edge-strips for floors, &c. Nashville Hardwood Flooring Company. No. 85,764; Mar. 12; Gaz. vol. 176; p. 522.
Flour. The Cleveland Milling Company. No. 85,731; Mar. 12; Gaz. vol. 176; p. 521.
Flour. Michigan Milling Co. No. 85,762; Mar. 12; Gaz. vol. 176; p. 522.
Flour and flavoring extracts, Self-rising pancake and buckwheat. E. F. Lomelino. No. 85,824; Mar. 19; Gaz. vol. 176; p. 746.
Flour, cornmeal, and Graham flour, Wheat-. Michigan Milling Company. No. 85,672; Mar. 5; Gaz. vol. 176; p. 270.
Flour, Wheat-. The Big Bend Milling Co. No. 85,643; Mar. 5; Gaz. vol. 176; p. 269.
Flour, Wheat-. J. G. Davis. No. 85,650; Mar. 5; Gaz. vol. 176; p. 269.
Flour, Wheat-. McDonald Milling Company. No. 85,669; Mar. 5; Gaz. vol. 176; p. 270.
Flour, Wheat-. The Twin Falls Milling & Elevator Co. No. 85,695; Mar. 5; Gaz. vol. 176; p. 270.
Flour, Wheat-. Western Flour Mill Company. No. 85,699; Mar. 5; Gaz. vol. 176; p. 270.
Flour, Wheat-. W. C. Roberson. No. 85,767; Mar. 12; Gaz. vol. 176; p. 522.
Flour, Wheat-. The Twin Falls Milling & Elevator Co. No. 85,778; Mar. 12; Gaz. vol. 176; p. 522.
Flour, Wheat-. Nashville Roller Mills. No. 85,827; Mar. 19; Gaz. vol. 176; p. 746.
Flour, Wheat-. A. J. Vernier. No. 85,840; Mar. 19; Gaz. vol. 176; p. 746.
Flour, Wheat-. Western Flour Mill Company. No. 85,930; Mar. 26; Gaz. vol. 176; p. 1067.
Fly-paper, Poisonous. A. W. Holway. No. 85,817; Mar. 19; Gaz. vol. 176; p. 746.
Food for infants and invalids. A. M. Alberty. No. 85,637; Mar. 5; Gaz. vol. 176; p. 269.
Foods, Certain. McCord-Brady Company. No. 85,668; Mar. 5; Gaz. vol. 176; p. 270.
Foods, Certain. F. Widlar & Co. No. 85,931; Mar. 26; Gaz. vol. 176; p. 1067.
Game, Card. P. D. Keim. No. 85,819; Mar. 19; Gaz. vol. 176; p. 746.
Gasolene. Magnolia Petroleum Company. No. 85,912; Mar. 26; Gaz. vol. 176; p. 1067.
Gin. Kentucky Supply Co. No. 85,820; Mar. 19; Gaz. vol. 176; p. 746.
Glassware, Certain. Gill Brothers Company. No. 85,806; Mar. 19; Gaz. vol. 176; p. 745.
Go-carts, Folding. Alwin Manufacturing Company. No. 85,788; Mar. 19; Gaz. vol. 176; p. 745.
Graphite. Saratoga Graphite Company. No. 85,771; Mar. 12; Gaz. vol. 176; p. 522.
Grease, Lubricating-. Joseph Dixon Crucible Co. No. 85,800; Mar. 19; Gaz. vol. 176; p. 745.
Griddles, Asbestos and cement. Hall & Carpenter. No. 85,743; Mar. 12; Gaz. vol. 176; p. 521.
Gum, Chewing-. W. W. Bagley. No. 85,640; Mar. 5; Gaz. vol. 176; p. 269.
Gum, Chewing-. R. L. Johnstone. No. 85,750; Mar. 12; Gaz. vol. 176; p. 522.
Gum, Chewing-. L. P. Larson, Jr. Company. No. 85,910; Mar. 26; Gaz. vol. 176; p. 1067.
Hair-driers and vibrators, Electric. The Royal Specialty Company. No. 85,770; Mar. 12; Gaz. vol. 176; p. 522.
Hair-tonic. H. W. Taylor & Co. No. 85,717; Mar. 5; Gaz. vol. 176; p. 271.
Hair-tonic. Lanman & Kemp. No. 85,753; Mar. 12; Gaz. vol. 176; p. 522.
Horns, whistles, and similar sound-producing devices for automobiles. The Randall-Faichney Co. No. 85,919; Mar. 26; Gaz. vol. 176; p. 1067.
Hydrogen peroxid. Consumers Company. No. 85,846; Mar. 26; Gaz. vol. 176; p. 1065.
Insulation, Thermal. Banner Rock Products Company. No. 85,641; Mar. 5; Gaz. vol. 176; p. 269.
Iron and steel bars, &c. Monolith Steel Co. No. 85,915; Mar. 26; Gaz. vol. 176; p. 1067.
Iron and steel bars and hoops. Robert Heath & Sons. No. 85,813; Mar. 19; Gaz. vol. 176; p. 745.
Iron, punching and shearing machines. Little Giant Punch & Shear Co. No. 85,823; Mar. 19; Gaz. vol. 176; p. 746.
Iron, Wrought-. Sligo Iron & Steel Co. No. 85,716; Mar. 5; Gaz. vol. 176; p. 271.
Jewelry, Certain kinds of. F. D. Healy. No. 85,862; Mar. 26; Gaz. vol. 176; p. 1065.
Jewelry, Certain kinds of coral. Borrelli & Vitelli. No. 85,645; Mar. 5; Gaz. vol. 176; p. 269.
Kinematographic apparatus and photographic films bearing finished pictures. C. Urban. No. 85,889; Mar. 26; Gaz. vol. 176; p. 1066.
Knitting and cloth-cutting machines, &c. Wildman Mfg. Co. No. 85,700; Mar. 5; Gaz. vol. 176; p. 270.
Lamps, Portable gas-. Scranton Acetylene Lamp Company. No. 85,772; Mar. 12; Gaz. vol. 176; p. 522.
Leather, Finished. A. C. Lawrence Leather Co. No. 85,911; Mar. 26; Gaz. vol. 176; p. 1067.
Leather, Harness, saddle, and sole. Eagle Tannery. No. 85,734; Mar. 12; Gaz. vol. 176; p. 521.
Lenses, Machines for manufacturing, finishing, &c. The Standard Optical Company. No. 85,885; Mar. 26; Gaz. vol. 176; p. 1066.
Liniment. L. J. Fennyery. No. 85,854; Mar. 26; Gaz. vol. 176; p. 1065.
Liqueurs. Gautier Frères. No. 85,654; Mar. 5; Gaz. vol. 176; p. 269.
Liquid mixing and heating machines, Electric. Fulton-Bell Company. No. 85,857; Mar. 26; Gaz. vol. 176; p. 1065.
Lubricating compound. Joseph Dixon Crucible Company. No. 85,799; Mar. 19; Gaz. vol. 176; p. 745.
Macaroni-paste. Birmingham Macaroni Company. No. 85,899; Mar. 26; Gaz. vol. 176; p. 1066.
Machinery and tools, Certain. The L. S. Starrett Co. No. 85,923; Mar. 26; Gaz. vol. 176; p. 1067.
Machinery, Certain kinds of. Williams Patent Crusher & Pulverizer Company. No. 85,932; Mar. 26; Gaz. vol. 176; p. 1067.
Machines, Certain kinds of. Frederick Osann Company. No. 85,830; Mar. 19; Gaz. vol. 176; p. 746.
Matches. "Solo" Bündwaren- und Wichse-Fabriken Act. Ges. No. 85,775; Mar. 12; Gaz. vol. 176; p. 522.
Mattresses. S. G. Krupka. No. 85,752; Mar. 12; Gaz. vol. 176; p. 522.
Matzos. B. Manischewitz. No. 85,666; Mar. 5; Gaz. vol. 176; p. 269.
Medicated wine. "Celrox" Ltd. No. 85,795; Mar. 19; Gaz. vol. 176; p. 745.
Medicinal plasters. Holland Medicine Company. No. 85,815; Mar. 19; Gaz. vol. 176; p. 745.
Medicinal preparations, Certain. V. A. Pittaro. No. 85,879; Mar. 26; Gaz. vol. 176; p. 1066.
Medicinal tonic. A. Koubek. No. 85,821; Mar. 19; Gaz. vol. 176; p. 746.
Medicine for certain diseases. B. H. Hoke. No. 85,710; Mar. 5; Gaz. vol. 176; p. 271.
Metal-polish. Wilson & Wineman. No. 85,783; Mar. 12; Gaz. vol. 176; p. 522.
Milk, Certain prepared form of. J. A. Wülfing. No. 85,786; Mar. 12; Gaz. vol. 176; p. 523.
Mince-meat. The W. H. Marvin Company. No. 85,667; Mar. 5; Gaz. vol. 176; p. 270.
Music-sheets, Perforated. The Wilcox & White Company. No. 85,894; Mar. 26; Gaz. vol. 176; p. 1066.
Naphtha, gasolene, and benzin. Vacuum Oil Company. No. 85,928; Mar. 26; Gaz. vol. 176; p. 1067.
Neckties. United Ribbon Co. No. 85,839; Mar. 19; Gaz. vol. 176; p. 746.
Oil diluted with cotton-seed oil, Olive-. S. A. Microut-sicos. No. 85,826; Mar. 19; Gaz. vol. 176; p. 746.
Oils, Lubricating-. The Texas Company. No. 85,694; Mar. 5; Gaz. vol. 176; p. 270.
Oils, Lubricating-. The Holt Manufacturing Company. No. 85,748; Mar. 12; Gaz. vol. 176; p. 521.
Oils, Lubricating-. Ingersoll-Rand Company. No. 85,906; Mar. 26; Gaz. vol. 176; p. 1066.
Oils, Lubricating-. Standard Oil Company. No. 85,922; Mar. 26; Gaz. vol. 176; p. 1067.
Oils, Lubricating-. The Texas Company. No. 85,924; Mar. 26; Gaz. vol. 176; p. 1067.
Oils, Vegetable. Hirst & Begley Linseed Co. No. 85,814; Mar. 19; Gaz. vol. 176; p. 745.
Ointment. C. C. Nielson. No. 85,877; Mar. 26; Gaz. vol. 176; p. 1066.
Ointments and remedies for certain diseases. P. G. Charbonnet. No. 85,705; Mar. 5; Gaz. vol. 176; p. 271.
Optical appliances, Certain. Universal Optical Corporation. No. 85,888; Mar. 26; Gaz. vol. 176; p. 1066.
Oranges. Upland Citrus Ass'n. No. 85,927; Mar. 26; Gaz. vol. 176; p. 1067.
Oranges, lemons, grape-fruit, tangerines, and limes. The Cocoanut Citrus Grower's Association. No. 85,649; Mar. 5; Gaz. vol. 176; p. 269.
Oranges, lemons, grape-fruit, tangerines, and limes. Lake Region Packing Association. No. 85,909; Mar. 26; Gaz. vol. 176; p. 1067.
Oranges, lemons, tangerines, grape-fruit, and limes. W. C. Temple. No. 85,693; Mar. 5; Gaz. vol. 176; p. 270.
Oysters in cans. The Atlantic Packing Co. No. 85,725; Mar. 12; Gaz. vol. 176; p. 521.
Packing, Machinery. New York Belting & Packing Co. No. 85,828; Mar. 19; Gaz. vol. 176; p. 746.
Paint, Waterproofing and damp-proofing. Waterproof Engineering Company. No. 85,929; Mar. 26; Gaz. vol. 176; p. 1067.
Paint, Waterproofing and protective. National Insulator Co. No. 85,765; Mar. 12; Gaz. vol. 176; p. 522.
Paints, Mixed. Sears, Roebuck and Co. No. 85,921; Mar. 26; Gaz. vol. 176; p. 1067.
Panels, Veneered. White Brothers. No. 85,892; Mar. 26; Gaz. vol. 176; p. 1066.
Paper and tablets and envelops, Writing. United Drug Company. No. 85,696; Mar. 5; Gaz. vol. 176; p. 270.
Paper bags. Wayne Paper Goods Company. No. 85,781; Mar. 12; Gaz. vol. 176; p. 522.
Paper bags and drinking-cups. The American Paper Goods Company. No. 85,721; Mar. 12; Gaz. vol. 176; p. 521.
Paper, Toilet-. Japanese Tissue Mills. Nos. 85,659–60; Mar. 5; Gaz. vol. 176; p. 269.

Paper, Wrapping-. Magnolia Paper Co. Nos. 85,872–3; Mar. 26; Gaz. vol. 176; p. 1066.
Paper, Writing and printing. John Carter and Company. No. 85,845; Mar. 26; Gaz. vol. 176; p. 1065.
Pencils. A. W. Faber. No. 85,852; Mar. 26; Gaz. vol. 176; p. 1065.
Perfumery, toilet and sachet powders. L. T. Piver & Cie. No. 85,713; Mar. 5; Gaz. vol. 176; p. 271.
Periodical, Weekly. Textile Publishing Company. No. 85,835; Mar. 19; Gaz. vol. 176; p. 746.
Periodical, Weekly. Hill Publishing Company. No. 85,863; Mar. 26; Gaz. vol. 176; p. 1065.
Pharmaceutical preparations, Certain. W. B. Force. No. 85,856; Mar. 26; Gaz. vol. 176; p. 1065.
Pianos. Ehlers Music Company. No. 85,652; Mar. 5; Gaz. vol. 176; p. 269.
Pianos. Sohmer & Company. No. 85,691; Mar. 5; Gaz. vol. 176; p. 270.
Pianos and piano-players. C. Kohler. No. 85,870; Mar. 26; Gaz. vol. 176; p. 1065.
Pianos and player-pianos. Cable & Sons. No. 85,646; Mar. 5; Gaz. vol. 176; p. 269.
Pickles. Crosse & Blackwell. No. 85,798; Mar. 19; Gaz. vol. 176; p. 745.
Picture machines, Moving-. Palmer Motion Picture Company. No. 85,878; Mar. 26; Gaz. vol. 176; p. 1066.
Pills. C. F. York. No. 85,719; Mar. 5; Gaz. vol. 176; p. 271.
Pineapple-jack. W. H. Hellen. No. 85,747; Mar. 12; Gaz. vol. 176; p. 521.
Pineapples, oranges, grape-fruit, and lemons. The Standard Fruit Co. No. 85,776; Mar. 12; Gaz. vol. 176; p. 522.
Pins, Safety-. American Pin Company. No. 85,638; Mar. 5; Gaz. vol. 176; p. 269.
Pins, Toilet and safety. Oakville Company. No. 85,676; Mar. 5; Gaz. vol. 176; p. 270.
Pipes, Tobacco-. Sears, Roebuck and Co. No. 85,833; Mar. 19; Gaz. vol. 176; p. 746.
Popcorn, Sweetened. Camp Chocolate Co. No. 85,728; Mar. 12; Gaz. vol. 176; p. 521.
Potatoes. W. C. Kirkman & Son. No. 85,662; Mar. 5; Gaz. vol. 176; p. 269.
Preparation for the skin. Madam Marie. No. 85,825; Mar. 19; Gaz. vol. 176; p. 746.
Publication, Periodical. J. E. Wood. No. 85,785; Mar. 12; Gaz. vol. 176; p. 523.
Pumps and parts thereof, Automatic. Gearless Automatic Pump Co. No. 85,738; Mar. 12; Gaz. vol. 176; p. 521.
Remedies, Certain medicinal. T. E. Quere. No. 85,881; Mar. 26; Gaz. vol. 176; p. 1066.
Remedies for catarrh, asthma, hay-fever, &c. J. Price. No. 85,880; Mar. 26; Gaz. vol. 176; p. 1066.
Remedies for cattle. Z. L. Burress. No. 85,703; Mar. 5; Gaz. vol. 176; p. 271.
Remedies for certain ailments. Capmetone Chemical Co. No. 85,794; Mar. 19; Gaz. vol. 176; p. 745.
Remedies for sore throat and bronchial ailments. Nuera Pharmacal Co. No. 85,829; Mar. 19; Gaz. vol. 176; p. 746.
Remedy, Cancer. N. Cormier. No. 85,706; Mar. 5; Gaz. vol. 176; p. 271.
Remedy for affections of the bowels. Haltiwanger-Taylor Drug Co. No. 85,810; Mar. 19; Gaz. vol. 176; p. 745.
Remedy for certain diseases. The Enteronol Company. No. 85,707; Mar. 5; Gaz. vol. 176; p. 271.
Remedy for certain diseases. Williams Remedy Co. No. 85,718; Mar. 5; Gaz. vol. 176; p. 271.
Remedy for certain diseases. H. A. Metz & Co. No. 85,760; Mar. 12; Gaz. vol. 176; p. 522.
Remedy for diseases of the eye. J. B. Haden. No. 85,859; Mar. 26; Gaz. vol. 176; p. 1065.
Remedy for gonorrhea, gleet, &c. Hinkle Capsule Company. No. 85,709; Mar. 5; Gaz. vol. 176; p. 271.
Remedy for lung diseases. Dionga Medical Company. No. 85,849; Mar. 26; Gaz. vol. 176; p. 1065.
Remedy for rheumatism. Boyd Medicine Co. No. 85,843; Mar. 26; Gaz. vol. 176; p. 1065.
Remedy for skin diseases. C. Partos. No. 85,712; Mar. 5; Gaz. vol. 176; p. 271.
Remedy, Laxative. The Vitalis Co. No. 85,890; Mar. 26; Gaz. vol. 176; p. 1066.
Rock-drills. Ingersoll-Rand Company. No. 85,658; Mar. 5; Gaz. vol. 176; p. 269.
Rock-drills. Ingersoll-Rand Company. No. 85,907; Mar. 26; Gaz. vol. 176; p. 1067.
Roofing, Asphalt. Kelley-How-Thomson Co. No. 85,751; Mar. 12; Gaz. vol. 176; p. 522.
Rubber erasers and bands. Kabus Rubber Company. Nos. 85,867–8; Mar. 26; Gaz. vol. 176; p. 1065.
Rugs, Velvet. Beattie Manufacturing Company. No. 85,642; Mar. 5; Gaz. vol. 176; p. 269.
Rulers, Triangular. F. I. Du Pont. No. 85,850; Mar. 26; Gaz. vol. 176; p. 1065.
Sake, Japanese. Hon Kano Shoten. No. 85,773; Mar. 12; Gaz. vol. 176; p. 522.
Salt. San Francisco Salt Refinery. No. 85,715; Mar. 5; Gaz. vol. 176; p. 271.
Salt. Independent Salt Co. No. 85,865; Mar. 26; Gaz. vol. 176; p. 1065.
Salt, Gravy-. H. Harper. No. 85,812; Mar. 19; Gaz. vol. 176; p. 745.
Salve. Hammond & Gray. No. 85,811; Mar. 19; Gaz. vol. 176; p. 745.
Salve. Chester Kent & Company. No. 85,869; Mar. 26; Gaz. vol. 176; p. 1065.
Scientific appliances, Certain. H. Danser. No. 85,848; Mar. 26; Gaz. vol. 176; p. 1065.
Sheep-dip, germicide, vermicide, and disinfectant. Wabash Chemical Co. No. 85,891; Mar. 26; Gaz. vol. 176; p. 1066.
Shellac. G. A. Alden & Co. No. 85,895; Mar. 26; Gaz. vol. 176; p. 1066.
Shoe-counters. Gardiner, Beardsell & Company. Nos. 85,804–5; Mar. 19; Gaz. vol. 176; p. 745.
Shovels, spades, scoops, and drainage-tools. Ames Shovel and Tool Company. Nos. 85,722–3; Mar. 12; Gaz. vol. 176; p. 521.
Shovels, spades, scoops, and drainage-tools. Ames Shovel and Tool Company. Nos. 85,789–90; Mar. 19; Gaz. vol. 176; p. 745.
Silk and worsted piece goods, Mixed. E. B. Moore & Co. No. 85,673; Mar. 5; Gaz. vol. 176; p. 270.
Silver-plated flat and hollow ware. Paul Revere Silver Company. No. 85,682; Mar. 5; Gaz. vol. 176; p. 270.
Skin-stain removers. C. H. Lips. No. 85,711; Mar. 5; Gaz. vol. 176; p. 271.
Soap, Paste. Glt Mfg. Co. No. 85,858; Mar. 26; Gaz. vol. 176; p. 1065.
Soaps, Toilet. Andrew Jergens Co. No. 85,749; Mar. 12; Gaz. vol. 176; p. 522.
Sower, Hand seed-. A. C. Shiveley. No. 85,689; Mar. 5; Gaz. vol. 176; p. 270.
Sporting goods, Certain. Victor Sporting Goods Company. No. 85,779; Mar. 12; Gaz. vol. 176; p. 522.
Starch and blue, Laundry. Reckitt & Sons. No. 85,714; Mar. 5; Gaz. vol. 176; p. 271.
Steel, Tool-. J. J. Saville & Company. No. 85,920; Mar. 26; Gaz. vol. 176; p. 1067.
Stove-polish. F. F. Dalley Co. of Hamilton. No. 85,733; Mar. 12; Gaz. vol. 176; p. 521.
Sweeping compound, Floor-. Wilson Chemical Co. No. 85,893; Mar. 26; Gaz. vol. 176; p. 1066.
Talking-machines, phonographs, and certain parts thereof. Carl Lindström Aktien Gesellschaft. No. 85,822; Mar. 19; Gaz. vol. 176; p. 746.
Tea. W. S. Quinby Company. No. 85,681; Mar. 5; Gaz. vol. 176; p. 270.
Tea. H. Weddle. No. 85,782; Mar. 12; Gaz. vol. 176; p. 522.
Tea. G. E. Barbour Company. No. 85,898; Mar. 26; Gaz. vol. 176; p. 1066.
Tennis-rackets. Harry C. Lee & Co. No. 85,754; Mar. 12; Gaz. vol. 176; p. 522.
Threads, Certain kinds of. A. O. Meyer. No. 85,874; Mar. 26; Gaz. vol. 176; p. 1066.
Tires for automobiles, Pneumatic. Michelin Tire Company. No. 85,761; Mar. 12; Gaz. vol. 176; p. 522.
Tonic and blood remedy. Dr. Peter Fahrney & Sons Co. No. 85,853; Mar. 26; Gaz. vol. 176; p. 1065.
Tonic, Nerve and blood. J. B. Daniel. No. 85,847; Mar. 26; Gaz. vol. 176; p. 1065.
Tools, Certain. Heller Brothers Co. No. 85,708; Mar. 5; Gaz. vol. 176; p. 271.
Tools, Certain. H. G. Lipscomb & Co. No. 85,755; Mar. 12; Gaz. vol. 176; p. 522.
Torches and paint-breamers. Turner Brass Works. No. 85,777; Mar. 12; Gaz. vol. 176; p. 522.
Turpentine substitute. F. J. Underwood. No. 85,926; Mar. 26; Gaz. vol. 176; p. 1067.
Type-writers. C. Twining. No. 85,925; Mar. 26; Gaz. vol. 176; p. 1067.
Umbrellas and parasols. K. A. Schott & Roth. No. 86,687; Mar. 5; Gaz. vol. 176; p. 270.
Undershirts. Earnshaw Knitting Company. No. 85,801; Mar. 19; Gaz. vol. 176; p. 745.
Valves, Steam-. The Collin Valve Company. No. 85,732; Mar. 12; Gaz. vol. 176; p. 521.
Varnishes and varnish-gums. Empire Shellac Company. Nos. 85,902–3; Mar. 26; Gaz. vol. 176; p. 1066.
Vending-machines. Liberty Vending Co. No. 85,664; Mar. 5; Gaz. vol. 176; p. 269.
Vibrators, Electric. The Royal Specialty Company. No. 85,769; Mar. 12; Gaz. vol. 176; p. 522.
Washing compound. E. G. Frank. No. 85,737; Mar. 12; Gaz. vol. 176; p. 521.
Watchcases. Illinois Watch Case Co. No. 85,864; Mar. 26; Gaz. vol. 176; p. 1065.
Whiskies and cordials. Gossler Bros. No. 85,809; Mar. 19; Gaz. vol. 176; p. 745.
Whisky. The Wineke-Bauernschmidt Co. of Balto. City. No. 85,787; Mar. 12; Gaz. vol. 176; p. 523.
Whisky. The Ullman Company. No. 85,837; Mar. 19; Gaz. vol. 176; p. 746.
Wine. Hammondsport Wine Company. No. 85,744; Mar. 12; Gaz. vol. 176; p. 521.
Wine, Sparkling. Empire State Wine Co. No. 85,851; Mar. 26; Gaz. vol. 176; p. 1065.
Wines. H. Stumpf Erben. No. 85,834; Mar. 19; Gaz. vol. 176; p. 746.
Wines, Sweet. California Wine Association. No. 85,844; Mar. 26; Gaz. vol. 176; p. 1065.
Wire, Barb-. American Steel & Wire Company of New Jersey. No. 85,639; Mar. 5; Gaz. vol. 176; p. 269.
Wire, Barb-. Keystone Steel & Wire Company. No. 85,908; Mar. 26; Gaz. vol. 176; p. 1067.
Worsted cloths. Perseverance Worsted Company. No. 85,679; Mar. 5; Gaz. vol. 176; p. 270.

ALPHABETICAL LIST OF LABELS.

"Attention Brand." (For Sweet Corn.) The Hampton-Kelley Canning Company. No. 16,235; Mar. 12; Gaz. vol. 176; p. 524.

"Barondale." (For Whisky.) Guernsey & Murray Grocer Company. No. 16,247; Mar. 19; Gaz. vol. 176; p. 747.

"Blackbird." (For Jar-Rings.) The Rubber Products Company. No. 16,227; Mar. 5; Gaz. vol. 176; p. 272.

"Bonnie Lassie." (For Shoes.) Clark-Hutchinson Company. No. 16,213; Mar. 5; Gaz. vol. 176; p. 272.

"Brilliant Illuminator." (For Carbon-Oil.) The J. B. Murphy Co. No. 16,256; Mar. 26; Gaz. vol. 176; p. 1068.

"Crown." (For Jar-Rings.) The Rubber Products Company. No. 16,226; Mar. 5; Gaz. vol. 176; p. 272.

"Cucumelia." (For a Lotion.) J. G. M. Cordon. No. 16,214; Mar. 5; Gaz. vol. 176; p. 272.

"Daisy." (For Jar-Rings.) The Rubber Products Company. No. 16,229; Mar. 5; Gaz. vol. 176; p. 272.

"Deckermaclair." (For Salad-Dressing.) M. C. Decker. No. 16,216; Mar. 5; Gaz. vol. 176; p. 272.

"Don Alberto." (For Cigars.) W. E. Riggs. No. 16,251; Mar. 19; Gaz. vol. 176; p. 747.

"Donna Manila." (For Cigars.) The Moehle Lithographic Company. No. 16,220; Mar. 5; Gaz. vol. 176; p. 272.

"Eagle Mikado Pencils." (For Lead-Pencils.) Eagle Pencil Company. No. 16,245; Mar. 19; Gaz. vol. 176; p. 747.

"Elberta Best Peach on Earth." (For Elberta Peaches.) The Union Fruit Company. No. 16,240; Mar. 12; Gaz. vol. 176; p. 524.

"Fair Maid." (For Complexion-Powder.) C. Tetlow. No. 16,230; Mar. 5; Gaz. vol. 176; p. 272.

"Fernet-L-Branca, Di Leone Branca E. Comp." (For Bitters and Cordials.) The Cordial Panna Company. No. 16,244; Mar. 19; Gaz. vol. 176; p. 747.

"Glyroin." (For Medicine or Pharmaceutical Preparation.) Towns & James. No. 16,231; Mar. 5; Gaz. vol. 176; p. 272.

"Harvest Inn." (For Sweet Corn.) The Hampton-Kelley Canning Company. No. 16,237; Mar. 12; Gaz. vol. 176; p. 524.

"Imbriani." (For Macaroni.) W. C. Egerton. No. 16,234; Mar. 12; Gaz. vol. 176; p. 524.

"Ineeda." (For a Remedy.) Saratoga Toilet Co. No. 16,239; Mar. 12; Gaz. vol. 176; p. 524.

"Iowa Cluster." (For Sweet Corn.) The Hampton-Kelley Canning Company. No. 16,238; Mar. 12; Gaz. vol. 176; p. 524.

"Laurel." (For Jar-Rings.) The Rubber Products Company. No. 16,228; Mar. 5; Gaz. vol. 176; p. 272.

"Leath-R-Nu." (For Liquid Preparation to be Used on Leather, Metal, Wood, &c.) Nu-Back Mfg. Co. No. 16,257; Mar. 26; Gaz. vol. 176; p. 1068.

"Loyal Moose." (For Cigars.) Saginaw Specialty Company. No. 16,259; Mar. 26; Gaz. vol. 176; p. 1068.

"Mitiline Flour." (For Flour.) J. D. Dundas. No. 16,217; Mar. 5; Gaz. vol. 176; p. 272.

"Moneyback." (For Flour.) H. C. Davison. No. 16,215; Mar. 5; Gaz. vol. 176; p. 272.

"Monte Cristo." (For Coffee.) Martin Marks Coffee Co. No. 16,219; Mar. 5; Gaz. vol. 176; p. 272.

"Norton's First Aid Pulmonary Balsam." (For a Remedy.) J. J. Norton. No. 16,222; Mar. 5; Gaz. vol. 176; p. 272.

"Old Wuerzburger." (For Beer.) Claussen Brewing Association. No. 16,253; Mar. 26; Gaz. vol. 176; p. 1068.

"Our Effort Brand." (For Sweet Corn.) The Hampton-Kelley Canning Company. No. 16,248; Mar. 19; Gaz. vol. 176; p. 747.

"Over-All Club." (For Sweet Corn.) The Hampton-Kelley Canning Company. No. 16,236; Mar. 12; Gaz. vol. 176; p. 524.

"Paonia Mountain Apples." (For Apples.) The Union Fruit Company. No. 16,241; Mar. 12; Gaz. vol. 176; p. 524.

"Pay Day." (For Coffee.) The Ennis-Hanly-Blackburn Coffee Co. No. 16,246; Mar. 19; Gaz. vol. 176; p. 747.

"Pecora Asbestos Furnace Cement." (For Asbestos Furnace-Cement.) Pecora Paint Company. No. 16,224; Mar. 5; Gaz. vol. 176; p. 272.

"Pepsi." (For Beverage.) Pepsi-Cola Co. No. 16,249; Mar. 19; Gaz. vol. 176; p. 747.

"Pimbley's Piano-Newer." (For Composition for Cleaning and Renovating Piano-Cases and Woodwork.) Pimbley Paint & Glass Co. No. 16,258; Mar. 26; Gaz. vol. 176; p. 1068.

"R. R. V." (For Cigars.) E. Potretzke. No. 16,250; Mar. 19; Gaz. vol. 176; p. 747.

"Round Ticket Stocking." (For Stockings.) Brown Durrell Co. No. 16,211; Mar. 5; Gaz. vol. 176; p. 272.

"Savoy." (For Macaroni.) W. C. Egerton. No. 16,254; Mar. 26; Gaz. vol. 176; p. 1068.

"Service." (For Fireless Cookers.) Traverse City Refrigerator Co. No. 16,232; Mar. 5; Gaz. vol. 176; p. 272.

"Service." (For Combined Refrigerators and Fireless Cookers.) Traverse City Refrigerator Co. No. 16,233; Mar. 5; Gaz. vol. 176; p. 272.

"Sola Rosa." (For Cigars.) The Moehle Lithographic Company. No. 16,221; Mar. 5; Gaz. vol. 176; p. 272.

"Stewart's Liquid Compound of Sulphur." (For a Remedy.) The C. M. C. Stewart Sulphur Company. No. 16,242; Mar. 19; Gaz. vol. 176; p. 747.

"Sulphurro A Remedy." (For a Remedy.) The C. M. C. Stewart Sulphur Company. No. 16,243; Mar. 19; Gaz. vol. 176; p. 747.

"Sumore Biscuit." (For Biscuit.) W. P. Battolfson. No. 16,209; Mar. 5; Gaz. vol. 176; p. 272.

"Sumore Flour." (For Flour.) W. P. Battolfson. No. 16,210; Mar. 5; Gaz. vol. 176; p. 272.

"Sunset." (For Jar-Rings.) The Rubber Products Company. No. 16,225; Mar. 5; Gaz. vol. 176; p. 272.

"The Tiger Method." (For Overalls.) J. M. Robinson, Norton & Co. No. 16,256; Mar. 26; Gaz. vol. 176; p. 1068.

"Tomson's Red Seal Cleanser." (For a Cleanser.) P. C. Tomson & Co. No. 16,223; Mar. 5; Gaz. vol. 176; p. 272.

"Vo-Lant." (For Cigars.) Fox Bros. No. 16,218; Mar. 5; Gaz. vol. 176; p. 272.

"White and Gold." (For Beer.) Claussen Brewing Association. No. 16,252; Mar. 26; Gaz. vol. 176; p. 1068.

"White Poppy." (For Flour.) C. Briesch & Co. No. 16,212; Mar. 5; Gaz. vol. 176; p. 272.

PRINTS.

"Derbyshire Lathe Large and Small Chucks and Draw-in Spindle." (For Lathes, Large and Small Chucks, and Draw-in Spindles.) F. W. Derbyshire. No. 2,968; Mar. 5; Gaz. vol. 176; p. 272.

"Dr. Caldwell's Syrup Pepsin." (For Syrup Pepsin.) Pepsin Syrup Company. No. 2,969; Mar. 5; Gaz. vol. 176; p. 272.

"Golly! Dey Done Stole Mah Camp Fish." (For Wheat Breakfast Food.) Cream of Wheat Co. No. 2,978; Mar. 26; Gaz. vol. 176; p. 1068.

"Hercules Cloaks." (For Misses', Children's, and Infants' Cloaks.) Michael Bros. No. 2,974; Mar. 19; Gaz. vol. 176; p. 747.

"Magic Yeast." (For Magic Yeast.) Northwestern Yeast Co. No. 2,975; Mar. 19; Gaz. vol. 176; p. 747.

"Midol." (For a Remedy for Neuralgia and Headache.) General Drug Company. No. 2,979; Mar. 26; Gaz. vol. 176; p. 1068.

"No-Hump." (For Collar-Buttons.) E. B. Hafertepen. No. 2,973; Mar. 19; Gaz. vol. 176; p. 747.

"Nothin's too good fer the Irish!" (For Wheat Breakfast Food.) Cream of Wheat Co. No. 2,977; Mar. 26; Gaz. vol. 176; p. 1068.

"Siphon Jet Combination No. 2." (For Water-Closets.) Cochran, Drugan & Co. No. 2,971; Mar. 19; Gaz. vol. 176; p. 747.

"That's What You Will Get If You Take One Home." (For Sprayers.) M. Goldman. No. 2,972; Mar. 19; Gaz. vol. 176; p. 747.

"The Right Way The Wrong Way." (For Hosiery.) O'Callaghan & Fedden. No. 2,976; Mar. 19; Gaz. vol. 176; p. 747.

"The Tire Perfect." (For Non-Skid Tires.) The Republic Rubber Company. No. 2,980; Mar. 26; Gaz. vol. 176; p. 1068.

"When Ordering Coal Please Mention the Size Required." (For Coal.) Curtis-Blaisdell & Co. No. 2,967; Mar. 5; Gaz. vol. 176; p. 272.

"Wilbur's Cocoa Can Puzzle and Scenic Picture." (For Cocoa.) The Beitzer & Kappes Lithographing Co. No. 2,970; Mar. 12; Gaz. vol. 176; p. 524.

DISCLAIMERS.

Knitting machine, Sectional plaiting device for straight-. P. Guenther. No. 878,724; date of patent Feb. 11, 1908; disclaimer filed Mar. 15, 1912; Gaz. vol. 176; p. 771.

Valve, Combined emergency and throttle. R. H. Rice. No. 838,455; date of patent Dec. 11, 1906; disclaimer filed Mar. 2, 1912; Gaz. vol. 176; p. 529.

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ERRATA.

1,022,323, page 191, fifth claim, lines 4, 15–16, and 25, for the words "auxiliary valve" read *intermediate*.
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Total	755		

TO CITIZENS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	2	1	North Carolina	1	1
Arizona	2	.....	North Dakota	.....	.....
Arkansas	2	1	Ohio	41	4
California	25	4	Oklahoma	3	.....
Colorado	7	.....	Oregon	3	.....
Connecticut	24	.....	Pennsylvania	59	5
Delaware	.....	.....	Rhode Island	3	.....
Florida	2	2	South Carolina	2	.....
Georgia	2	.....	South Dakota	3	.....
Idaho	.....	.....	Tennessee	1	.....
Illinois	33	7	Texas	12	1
Indiana	22	.....	Utah	1	.....
Iowa	21	1	Vermont	2	.....
Kansas	8	3	Virginia	5	.....
Kentucky	5	.....	Washington	9	.....
Louisiana	2	.....	West Virginia	3	1
Maine	1	1	Wisconsin	15	2
Maryland	5	6	Wyoming	.....	.....
Massachusetts	40	6			
Michigan	20	.....	Alaska, District of	.....	.....
Minnesota	12	.....	Canal Zone	.....	.....
Mississippi	3	.....	District of Columbia	.....	.....
Missouri	14	5	Hawaii Territory	1	.....
Montana	5	.....	Philippine Islands	.....	.....
Nebraska	7	.....	Porto Rico	.....	.....
Nevada	2	.....	U. S. Army	.....	.....
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New Mexico	.....	.....	Total to citizens of the United States	553	91
New York	60	20			

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	.....	.....	Netherlands	.....	.....
Austria-Hungary	3	.....	Newfoundland	.....	.....
Belgium	2	.....	New South Wales	.....	.....
Bermuda	1	.....	New Zealand	1	.....
Brazil	.....	.....	Norway	.....	.....
British West Indies	.....	.....	Queensland	1	.....
Canada	6	1	Roumania	.....	.....
Cape Colony	1	.....	Russia	1	.....
Chile	.....	.....	Scotland	1	.....
China	.....	.....	South Australia	.....	.....
Costa Rica	.....	.....	Spain	.....	.....
Cuba	1	.....	Sweden	2	1
Denmark	1	.....	Switzerland	2	.....
Ecuador	.....	.....	Transvaal, South Africa	.....	.....
England	23	.....	Victoria	.....	.....
France	5	3	Western Australia	.....	.....
Germany	36	3			
Ireland	.....	.....	Total to citizens of foreign countries	92	9
Italy	3	.....			
Japan	.....	1			
Mexico	.....	.....			

Drawings.

PRECAUTIONS TO BE OBSERVED IN FORWARDING DRAWINGS TO THE UNITED STATES PATENT OFFICE.

Where drawings are to be filed in connection with an application for Letters Patent in the United States Patent Office, each sheet, before it can be accepted by the Office as a part of the application, must be signed in the name of the inventor at the lower right-hand corner, either by him or by an attorney whose written authorization from the applicant is filed in connection with the application. This signature must also be attested by two witnesses, each of whom should sign the drawing at the lower left-hand corner of the sheet. The signatures should never be written on a line parallel with the longer edges of the sheet, one of the shorter edges being always regarded, for the purpose of locating the signatures, as the lower edge of the sheet. The signatures must all be within the margin-lines of the sheet and below the lines of the drawing. The title of the invention should be written with pencil on the back of each sheet of drawings.

When there are filed on the same day two or more applications by the same inventor, each of the documents and drawings belonging to the same application should have placed thereon the same letter or number, which should be different from the letter or number placed upon those of any other of the applications.

It is desirable that all parts of the complete application, including the drawings, be deposited in the Office at the same time. Should, however, the other parts of the application be filed before the drawings are sent, the latter when forwarded should be accompanied by a letter stating the number of sheets inclosed, and that the drawings are to be filed with the other parts of the application, giving the date at which such other parts were filed in the Office, the name of the inventor, and title of the invention. If the application has received a serial number, that should also be given, and it should be indorsed with pencil on the back of each sheet of drawings. The letter should also state, if such be the case, that the new drawings are to be substituted for those previously filed.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business March 30, 1912.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
313	1. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Feb. 8	Feb. 12	529
138	2. Bee Culture; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Pneumatic Despatch; Pneumatics; Presses; Store-Service; Tobacco.	Feb. 5	Feb. 12	509
176	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Mar. 1	Mar. 18	185
232	4. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Metallic Building Structures.	Mar. 1	Feb. 26	341
167	5. Bookbinding; Harvesters; Jewelry; Music.	Jan. 16	Feb. 6	463
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilisers; Medicines; Preserving; Sugar and Salt.	Mar. 1	Mar. 1	291
312	7. Educational Appliances; Clutches; Games and Toys; Mechanical Motors; Nut and Bolt Locks; Optics; Velocipedes.	Jan. 6	Feb. 12	637
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Feb. 29	Feb. 29	357
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Pumps; Wind-Wheels.	Mar. 1	Feb. 23	329
235	10. Carriages and Wagons.....	Feb. 1	Feb. 14	659
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Feb. 12	Jan. 31	454
324	12. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Feb. 10	Jan. 25	586
320	13. Arms, Projectiles, and Explosive Charges, Making; Bolt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Turning.	Feb. 9	Feb. 19	476
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Feb. 7	Mar. 1	378
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Liquid Coating Compositions; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastic Compositions; Plastics.	Jan. 30	Jan. 26	844
109	16. Telegraphy; Telephony.....	Feb. 16	Feb. 19	218
303	17. Metrix-Making; Paper Manufactures; Printing; Type-Bar Making.	Mar. 1	Mar. 1	286
327	18. Injectors and Ejectors; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Boilers; Steam-Engines; Steam-Engine Valves.	Feb. 3	Feb. 27	278
236	19. Dampers, Automatic; Furnaces; Heat-Distributing Systems; Stoves and Furnaces.	Feb. 8	Feb. 14	485
179	20. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Feb. 6	Mar. 4	225
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Feb. 16	Feb. 26	327

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Jan. 30	Mar. 1	300
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Feb. 16	Feb. 21	423
144	24. Apparel; Apparel Apparatus; Sewing-Machines.	Feb. 12	Feb. 8	478
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Mar. 4	Mar. 6	186
106	26. Electricity, Generation; Motive Power.	Oct. 23	Dec. 1	521
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Feb. 19	Feb. 16	450
65	28. Internal-Combustion Engines..	Jan. 11	Jan. 13	799
147	29. Coopering; Fire-Escapes; Ladders; Rods; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	Jan. 20	Mar. 1	456
152	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Jan. 3	Mar. 13	300
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	Feb. 6	Feb. 2	304
278	32. Carbonating Beverages; Curtains, Shades, and Screens; Dispensing Beverages; Dispensing-Cans; Ornamentation; Packaging Liquids; Refrigeration.	Jan. 5	Mar. 1	305
71	33. Cutlery; Domestic Cooking Vessels; Masonry and Concrete Structures; Paving; Tents, Canopies, Umbrellas, and Canes.	Jan. 13	Feb. 1	441
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	Feb. 3	Jan. 27	495
244	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	Feb. 26	Mar. 1	733
264	36. Drafting; Driers; Engraving; Measuring Instruments; Photography.	Feb. 26	Feb. 14	574
107	37. Electric Lighting; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Jan. 15	Feb. 24	458
378	38. Animal Husbandry; Artesian and Oil Wells; Fishing and Trapping; Stationery; Stone-Working.	Jan. 17	Feb. 12	506
221	39. Water Distribution.....	Dec. 26	Dec. 27	663
220	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Mar. 1	Mar. 8	309
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	Jan. 30	Feb. 14	506
279	42. Electric Railways; Electric Signaling; Railway Signaling; Signals.	Jan. 29	Feb. 1	560
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Feb. 19	Feb. 24	316

Oldest new case, Oct. 23; oldest amended, Dec. 1.

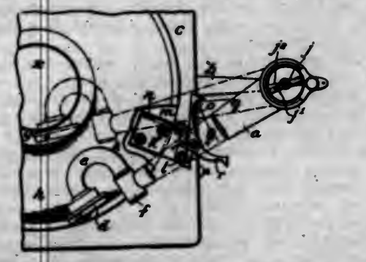
Total number of applications awaiting action 19,140

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks.....	Feb. 17	Feb. 15	1160
	Designs.....	Feb. 10	Feb. 16	370
	Labels and Prints.....	Mar. 16	Mar. 23	32

PATENTS

GRANTED APRIL 2, 1912.

1,021,756. AUTOMATIC BRAKE FOR TALKING-MACHINES. THEODORE BIENBAUM, London, England, assignor to Victor Talking Machine Company, a Corporation of New Jersey. Filed Nov. 15, 1909. Serial No. 528,039. (Cl. 181—3.)



1. In a talking machine, the combination with a rotary record support, of movable sound reproducing means, means for braking said record support normally held in engagement therewith, controlling means actuated by the said reproducing means and movable about a fixed axis independently of said braking means and of said reproducing means for rendering the braking means inoperative when said sound reproducing means is moved from an inoperative position to a starting position, and for bringing said braking means into operation as said sound reproducing means reaches the inner end of its reproducing path.

2. In a talking machine, the combination with a rotary record support, of movable sound reproducing means, means for braking said record support normally held in engagement therewith, controlling means actuated by the said reproducing means and movable about a fixed axis independently of said braking means and of said reproducing means for rendering the braking means inoperative when said sound reproducing means is moved inwardly from an inoperative position to a starting position, and for bringing said braking means into operation as said sound reproducing means reaches the inner end of its reproducing path.

3. In a talking machine, the combination with a rotary record support, of movable sound reproducing means, means for braking said record support normally held in engagement therewith, controlling means actuated by the said reproducing means and movable about a fixed axis independently of said braking means and of said reproducing means for rendering the braking means inoperative when said sound reproducing means is moved outwardly from an inoperative position to a starting position, and for bringing said braking means into operation as said sound reproducing means reaches the inner end of its reproducing path.

4. In a talking machine, the combination with a rotary record support, of movable sound-reproducing means, means for braking said record support normally held in engagement therewith, controlling means actuated by the said reproducing means and movable about a fixed axis independently of said braking means and of said reproducing means for rendering the braking means inoperative when said reproducing means is moved either inwardly or outwardly from an inoperative position to a starting position, and for bringing said braking means into operation as said sound reproducing means reaches the inner end of its reproducing path.

5. In a talking machine, the combination with a rotary turntable, of sound reproducing means, a pivoted swinging arm carrying said sound reproducing means, a brake lever pivoted upon a fixed axis and having a brake shoe normally held in engagement with said turntable, a controlling lever pivoted upon a fixed axis spaced from the fixed axis of said brake lever and actuated by the movement of said sound reproducing means and movable independently of said arm, and means carried by and projecting from said arm and adapted to engage said controlling lever to render said brake lever inoperative when said sound reproducing means is moved from an inoperative position to a starting position.

[Claims 6 to 18 not printed in the Gazette.]

1,021,757. COAL-POCKET. PHILO C. BLAISDELL, New York, N. Y. Filed May 8, 1911. Serial No. 625,737. (Cl. 193—22.)



1. In an apparatus of the kind described, a telescopic chute, in combination with a discharge valve of greater width than the chute suspended below the lower discharge end thereof, said valve being of inverted cone shape to engage the walls of the discharge end of the chute when the valve is drawn upward, and means for moving the valve with respect to the chute comprising a cable and a lever adapted to be moved against the cable to vary its effective length.

2. In an apparatus of the kind described, a telescopic coal chute, means for suspending it vertically, a valve of inverted cone shape suspended below the lower or discharge end of the chute, and also suspended vertically below and against the bottom of the chute, means for moving the chute suspending means and valve suspending means simultaneously and at the same rate, and further means for moving the valve relative to the chute.

3. In an apparatus of the kind described, a telescopic coal chute, means for suspending it vertically, a valve

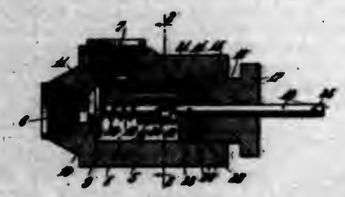
also suspended vertically against the bottom of the chute and means for moving the chute, suspending means and valve suspending means simultaneously, comprising a drum supporting both means in common.

4. In an apparatus of the kind described, a telescopic coal chute, means for suspending it vertically, a valve also suspended vertically against the bottom of the chute and means for moving the chute, suspending means and valve suspending means simultaneously, comprising a drum supporting both means in common, and further means for moving the valve relative to the chute.

5. In combination, a telescopic chute, cables for supporting the chute, a drum around which the cables are adapted to be wound, a valve of inverted cone shape and greater diameter than the chute adapted to close the chute at the bottom, and a cable by which valve is supported wound around the same drum.

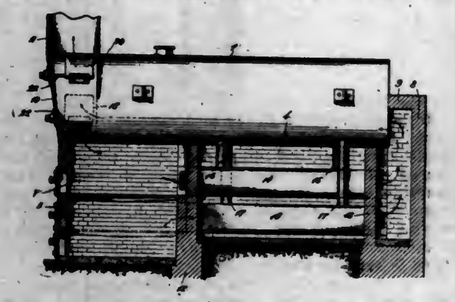
[Claims 6 to 8 not printed in the Gazette.]

1,021,758. CHECK OR SAFETY VALVE. ADOLPH E. BOSSE, Pittsburgh, Pa., assignor to Acme Refrigerating Company, a Corporation of Delaware. Filed Sept. 14, 1909. Serial No. 517,550. (Cl. 137—32.)



In a device of the character described, the combination of a valve casing having an interior valve seat, a valve disk normally resting on said seat, a stem extending rearwardly from said valve disk, a member within which the valve stem is supported and guided, said member being threaded in the valve casing, a gland threaded in the valve casing behind said valve stem supporting member and packing interposed between said gland and member to form a stuffing box and a rod extending through said stuffing box and adapted to engage the valve stem to thereby provide means extending exteriorly for arbitrarily rotating the valve on its seat, said rod being freely slidable and rotatable in said stuffing box.

1,021,759. BOILER. JAMES T. BROWN, Detroit, Mich. Filed June 3, 1911. Serial No. 630,968. (Cl. 122—57.)



1. The combination of a boiler setting having a pair of combustion chambers and a pair of return chambers with a boiler shell having internal flues connecting each combustion chamber with the corresponding return chamber, a pair of external hollow-walled flues each connecting a combustion chamber with the opposite chamber, and water legs connecting the walls of the latter flues with the shell interior.

2. The combination of a boiler setting having a pair of combustion chambers and a pair of return chambers with a boiler shell having internal flues connecting each combustion chamber with the corresponding return chamber, a pair of external hollow-walled flues each connecting a compartment with the opposite chamber, and manually operable means in each combustion chamber for cutting off communication between the adjacent external flue and the shell flues.

3. The combination of a boiler setting having outer walls and forward and back bridge walls, a central fire wall dividing the space in front of the forward bridge into the combustion chambers, a rear fire wall dividing the space behind the back bridge wall into two return chambers with a boiler shell spanning the bridge walls and having internal flues connecting each combustion chamber with the corresponding return chamber, a pair of external hollow-walled flues each extending through the bridge walls and connecting a combustion chamber with the opposite return chamber, and water legs connecting the water walls of the external flues with the boiler shell interior.

4. The combination of a boiler setting having outer walls and forward and back bridge walls, a central fire wall dividing the space in front of the forward bridge into two combustion chambers, a rear fire wall dividing the space behind the back bridge wall into two return chambers with a boiler shell spanning the bridge walls and having internal flues connecting each combustion chamber with the corresponding return chamber, a pair of external hollow-walled flues each extending through the bridge walls and connecting a combustion chamber with the opposite return chamber, water legs connecting the water walls of the external flues with the boiler shell interior, and means in each combustion chamber controlling communication between the companion external flue and the shell flues opening into said chamber.

5. The combination of a boiler setting having a pair of combustion chambers and a pair of return chambers with a boiler shell having internal flues connecting each combustion chamber with the corresponding return chamber, a pair of external hollow-walled flues each connecting a compartment with the opposite chamber, manually operable means in each combustion chamber for cutting off communication between the adjacent external flue and the shell flues, a breeching opening from the combustion chamber and manually operable means for controlling communication between each combustion chamber and the breeching.

[Claims 6 and 7 not printed in the Gazette.]

1,021,760. ELEVATOR AND CONVEYER. PETER B. CAMP, Washington, Ill. Filed Mar. 9, 1910. Serial No. 548,137. (Cl. 193—24.)



1. The combination with an upright elevator and its elevating mechanism of a conveyer adapted to vibrate in the direction of its length and associated with and adapted to discharge grain into said elevator, and means associated with the elevator and its said elevating mechanism for imparting a vibrating movement to the conveyer, including a member directly connected to the latter, and a rotating part oscillating the member, said conveyer adapted to tilt upward on end upon said member.

2. The combination with a vertical elevator, of a conveyer associated therewith, its bottom comprising a series of laterally disposed steps, a receiving chute communicating with the elevator into which the conveyer is adapted to discharge, a vibrating member to which the conveyer is pivotally connected, the latter adapted to tilt upward upon said member.

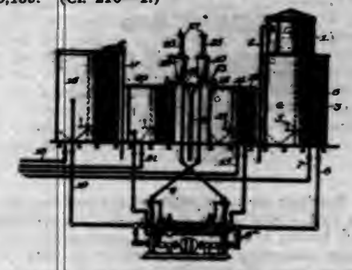
3. The combination with an elevator, of a chute communicating with one interior, a conveyer having its end within said chute, an arm supported between its ends and having the conveyer pivoted to one end thereof, and means to impart a vibratory motion to the other end of said arm, said conveyer adapted to tilt on said arm relative to the chute.

4. The combination with an elevator, of a conveyer associated therewith and adapted to tilt upward upon its end adjacent to the elevator, means to support it at that end, a supporting leg carried by the outer end of the conveyer, and a member attached at one end to said leg and pivotally held at its other end.

5. The combination with an elevator, of a conveyer associated therewith and adapted to discharge therinto, a receiving chute between the conveyer and elevator, a rock-arm mounted on the chute, one end pivotally supporting the conveyer at its end adjacent the elevator, means connecting the elevating mechanism and the opposite end of the said rock-arm, a supporting leg for the outer end of the conveyer, and a member pivotally connected to the said leg and having pivotal relation with a fixed part of the elevator.

[Claims 6 to 9 not printed in the Gazette.]

1,021,761. WATER-TREATING PROCESS. JOHN E. CAPS, Wilmette, Ill. Filed May 29, 1911. Serial No. 630,139. (Cl. 210—1.)

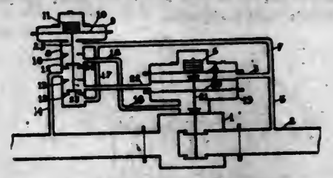


1. A water treating process comprising the impregnation of a portion of the water treated with alkali for the purpose of neutralizing the carbonic acid gas contained therein and the consequent precipitation of substances soluble in a solution of such gas, the treatment of another portion of the water to be treated with heat to drive off the carbonic acid gas to secure a consequent similar precipitation, and the mixture of the portions of water so respectively treated to neutralize the excess of alkali and acid present after such separate treatments.

2. A water treating process comprising the impregnation of a portion of the water to be treated with alkali, settling and filtering such treated water, the subsequent heating, settling and filtering thereof in combination with settling and filtering another portion of water, the subsequent heating, settling and filtering thereof, and the mixture of the waters so respectively treated.

1,021,762. MEANS FOR CONTROLLING FLOW THROUGH CONDUITS OR MAINS. FRANK L. CROSS, Detroit, Mich. Filed Feb. 21, 1910. Serial No. 545,023. (Cl. 50—11.)

1. In a gas generating and distributing system, a conduit, a valve adapted to automatically maintain a drop in pressure in the conduit whenever there is flow of fluid therethrough, a governor for the valve adapted to be operated by fluid admitted thereto from both a high and a low pressure point in the conduit caused by the valve, a valve controlling the admission of fluid from said two points to the governor, and means responding to changes in the drop in pressure and operating the governor valve to cause the governor and conduit valve to hold a constant outlet pressure in the conduit.



2. In a gas generating and distributing system, a conduit, a valve in the conduit, means operated by pressure of fluid in the conduit to automatically control the valve to set up a drop in pressure in the conduit whenever there is flow of fluid therethrough, a governor for the valve operated by fluid admitted thereto from both a high and a low pressure point in the conduit caused by the valve, a valve controlling the admission from said two points to the governor and means responsive to changes in the differences in pressure between said points and operating the governor valve to cause the governor and conduit valve to hold a constant outlet pressure in the conduit.

3. In a gas generating and distributing system, a conduit, a valve in the conduit, a diaphragm operating the valve in response to pressure of fluid in the conduit on the outlet side of the valve to set up a drop in pressure in the conduit whenever there is flow of fluid therethrough, means differentially operated by the pressures in the conduit on the inlet and outlet sides of the conduit valves and adapted to move the valve, a valve adapted to control the admission of fluid from the high and low pressure sides of the conduit valves to said valve moving means, and means controlled by pressures in the conduit to operate the valve of the conduit valve moving means.

4. In a gas generating and distributing system, a conduit, a valve in the conduit, a pressure chamber in communication with the conduit on the outlet side of the valve, means in the chamber operated by fluid pressure and adapted to control the conduit valve to set up a drop in pressure in the conduit whenever there is flow of fluid therethrough, a drum, a movable member dividing the drum into two compartments, adapted to act upon the conduit valve, a valve controlling the admission of fluid from the conduit on both the high and low pressure sides of the conduit valves to said drum compartments, and means responding to fluid pressure in the conduit for operating the latter valve.

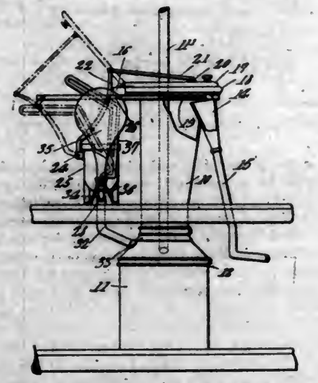
5. In a gas generating and distributing system, a conduit, a regulating valve in the conduit, a pressure chamber in communication with the conduit on the outlet side of the regulating valve, a movable member in the chamber operating the regulating valve in response to fluid pressure in the conduit to set up a drop in pressure in the conduit whenever there is flow of fluid therethrough, a drum, a movable member dividing the drum into two compartments and operating the regulating valve, a master valve controlling the flow of fluid from the conduit on both the high and low pressure sides of the regulating valve to the drum compartments, and means controlling the master valve in response to fluid pressure in the conduit, and coöperating with the regulating valve to hold a constant pressure in the conduit on the outlet side of the regulating valve.

[Claims 6 to 11 not printed in the Gazette.]

1,021,763. CLOSET. LEVI H. CROW, Wichita Falls, Tex. Filed July 18, 1911. Serial No. 639,206. (Cl. 4—30.)

1. In a dry closet, a hopper, a receptacle positioned below said hopper, a connection between said receptacle and hopper, a disinfectant distributing mechanism, a hinged lid for said hopper, a lever actuated by said hinged lid, said disinfectant mechanism including a casing, a pipe arranged below said casing, a shaft which when rotated causes the disinfectant material to be deposited within

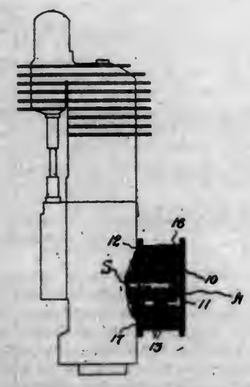
said pipe, a slotted lever mounted on said shaft, said lever being formed with an offset end, a pin carried by the first mentioned lever, said pin riding in the slot formed in the second mentioned lever, and means for spraying the disinfectant within said receptacle.



2. In a dry closet, a hopper, a receptacle positioned below said hopper, a connection between said receptacle and hopper, a disinfectant distributing mechanism, a hinged lid for said hopper, a lever actuated by said hinged lid, said disinfectant distributing mechanism including a casing, the side walls of which slope toward the base, the bottom of said casing being provided with a slot, a shaft supported by and extending within said casing, a closure for said slot mounted on said shaft, a plurality of agitators arranged on said shaft, a slotted lever arranged on the said shaft, said slotted lever having an operative connection with the first mentioned lever, and means for spraying the said disinfectant within the said receptacle.

3. In a dry closet, a hopper, a receptacle arranged below said hopper, a hinged lid for said hopper, a disinfectant distributing mechanism, said mechanism including a casing, a shaft rotatably supported within said casing, said casing being provided with a plurality of apertures, a pipe arranged below said casing, said pipe being formed with a longitudinal slot, a closure for said apertures carried by said shaft, a plurality of agitators carried by said shaft, and means for spraying the disinfecting material within said receptacle.

1,021,764. PULLEY. OLIVER DITSWORTH, Mount Carroll, Ill. Filed July 29, 1911. Serial No. 641,251. (Cl. 64—17.)

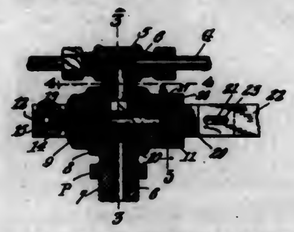


1. The herein described pulley comprising a hub provided with right and left threaded portions, a pair of side plates having threaded engagement with the aforesaid hub portions and movable toward and from each other, and a non-metallic rim freely rotatable with relation to said hub and adapted to be gripped between said side plates by virtue of such relative rotation between the hub and the rim, substantially as set forth.

2. The hereindescribed pulley comprising a cylindrical hub whose periphery is provided with right and left threaded portions, a pair of side plates having cylindrical portions with right and left threads coöperating with the aforesaid threaded hub portions, respectively, said plates also having outwardly extending flanges, and a series of non-metallic washers constituting the pulley lagging mounted loosely for rotation upon the hub but adapted to be gripped between said outwardly extending flanges when the side plates are caused to approach each other by virtue of such rotation.

3. The combination of a shaft, a pulley comprising a hub centrally bored and fitted to said shaft, non-metallic lagging, and a pair of plates removably secured to the hub and gripping the lagging therebetween and constituting the sole means for securing the lagging upon the hub, and a fastener securing the hub upon the shaft, one of said plates constituting a guard inclosing said shaft fastener, substantially as set forth.

1,021,765. AUTOMOBILE-PRIMER. WILBER R. DUNKEL, Pana, Ill., assignor of one-half to Carter R. Scroggin, Harristown, Ill. Filed Dec. 13, 1910. Serial No. 597,110. (Cl. 123—187.5.)



1. In a primer for multi-cylinder gas engines, the combination with a row of pet cocks seated in said cylinders and each having a lateral opening intersecting its bore, and a pipe connecting the upper end of the latter with a source of gasolene supply; of a measuring valve for each pet cock consisting of a plug seated in said opening and having a T-shaped chamber whose shank registers with said bore in either of two positions, one extremity of the head of said chamber opening out the end of the plug and being internally threaded, a plug adjustable within said threaded extremity, both ends of all plugs being slotted, plates engaging the slotted ends of adjacent plugs, and means for simultaneously turning the connected series of plugs.

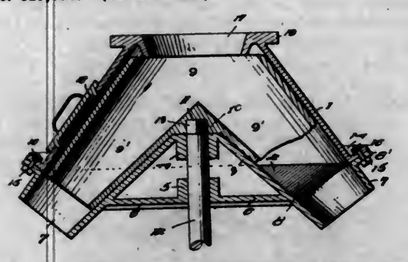
2. In a primer for multi-cylinder gas engines, the combination with a row of pet cocks seated in said cylinders and each having a lateral opening intersecting its bore, and a pipe connecting the upper end of the latter with a source of gasolene supply; of a valve for each pet cock consisting of a plug seated in said opening and having a T-shaped chamber whose shank registers with said bore in either of two positions, both ends of all plugs being slotted, plates engaging the slotted ends of adjacent plugs, connecting devices between the plates and slotted ends, and means for simultaneously turning the connected series of plugs.

3. In a primer for multi-cylinder gas engines, the combination with a row of pet cocks seated in said cylinders and each having a tapering lateral opening intersecting its bore, and a pipe connecting the upper end of the latter with a source of gasolene supply; of a measuring valve for each pet cock consisting of a tapering plug seated in said opening and having a T-shaped chamber whose shank registers with said bore in either of two positions, one extremity of the head of said chamber opening out the end of the plug and being internally threaded, a threaded plug adjustable within said threaded extremity, an adjusting nut screwed around the smaller end of said plug against the casing, both ends of each plug being recessed on their exterior, means for connecting the plugs in series, and means for simultaneously turning the connected series of plugs.

4. In a primer for multi-cylinder gas engines, the combination with a row of pet cocks seated in said cylinders and each having a tapering lateral opening intersecting its bore, and a pipe connecting the upper end of the latter with a source of gasolene supply; of a valve for each pet cock consisting of a tapering plug seated in said opening and having a T-shaped chamber whose shank registers with said bore in either of two positions, an adjusting nut screwed around the smaller end of said plug against the casing, both ends of all plugs being slotted and the arms of the slots being perforated, plates engaging the slotted ends of adjacent plugs and themselves having longitudinal slots registering with the perforations, connecting devices passing through the perforations and longitudinal slots, and means for simultaneously turning the connected series of plugs.

5. In a primer for multi-cylinder gas engines, the combination with a row of pet cocks seated in said cylinders and each having a tapering lateral opening intersecting its bore, and a pipe connecting the upper end of the latter with a source of gasolene supply; of a measuring valve for each pet cock consisting of a tapering plug seated in said opening and having a T-shaped chamber whose shank registers with said bore in either of two positions, one extremity of the head of said chamber opening out the end of the plug and being internally threaded, a threaded plug adjustable within said threaded extremity, an adjusting nut screwed around the smaller end of said plug against the casing, both ends of all plugs being slotted and the arms of the slots being perforated, plates engaging the slotted ends of adjacent plugs and themselves having longitudinal slots registering with the perforations, connecting devices passing through the perforations and longitudinal slots, and means for simultaneously turning the connected series of plugs.

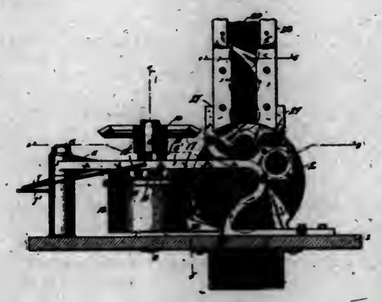
1,021,766. STREAM-DIVIDING APPARATUS. JOHN L. FERGUSON, Akron, Ohio. Filed Apr. 6, 1911. Serial No. 619,390. (Cl. 193—22.)



A stream dividing machine comprising a central bearing, an outwardly and upwardly inclined plate extending from said bearing and having discharge spouts leading therefrom, a chute rotatably mounted upon said bearing and having its outlet traveling in the line of said discharge spouts, a cap inclosing said spout, and having its lower portion terminating in an upwardly and outwardly inclined flange, said flange resting upon the outer portion of said plate, and means for securing said plate and flange together.

1,021,767. BRANDING-MACHINE. CARL R. FISCHER and JULIUS E. STOLL, Milwaukee, Wis. Filed June 26, 1911. Serial No. 635,423. (Cl. 101—24.)

1. A branding machine comprising a pair of vertically disposed delivery chutes having open discharge mouths, a vertically arranged disk conveyer located under the chutes having a set of pockets for registration with the mouths of the chutes, actuating gear for the disk, a pair of vibratory branding dies, each being arranged to aline with a set of the disk pockets, and actuating means for the dies.



2. A branding machine comprising a pair of vertically disposed delivery chutes having open discharge mouths, a vertically arranged toothed disk conveyer located under the chutes having a set of pockets for registration with the mouth of each chute, a horizontally disposed cam-section for engagement with the conveyer disk-teeth, the cam-section being provided with a delay-shoe terminal whereby the disk is intermittently held, oppositely disposed branding dies each being arranged to register successively with the sets of disk conveyer pockets, fulcrumed spring-controlled supporting arms for the branding dies, and actuating cams for said arms.

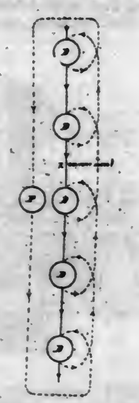
3. A branding machine comprising an apertured bed-plate, a circular housing supported upon the bed-plate over its aperture, a pocketed disk revolubly mounted within the housing, the housing being provided with openings arranged to register successively with the disk pockets, vibratory branding dies alined with the housing openings, a pair of oppositely disposed vertical chutes in communication with the housing, means for imparting positive intermittent rotation to the disk whereby its pockets are successively alined with the chutes and housing openings, and means for imparting intermittent movement to the branding dies in timed relation to movement of the disk.

4. A branding machine comprising an apertured bed-plate, a vertical housing located over the bed-plate, the housing side walls being provided with registered openings, a pair of vertically disposed delivery chutes having open mouths in communication with the housing, a vertically arranged toothed disk-conveyer revolubly mounted in the housing, the disk conveyer being provided with sets of pockets for successive registration with the chute mouths, housing openings and bed-plate aperture, a horizontally disposed cam-section for engagement with the disk teeth, the cam-section being provided with a delay-shoe terminal whereby the disk is intermittently locked against rotation, a vertically disposed supporting arbor for the cam-section, a pair of branding dies alined with the housing openings, burners in juxtaposition to the dies, spring-controlled fulcrumed supporting arms for said dies, actuating cams for the arms carried by the arbor, and driving means for said arbor.

1,021,768. PROCESS OF TREATING COPPER ORES. RUDOLF GAHL, Morenci, Ariz. Filed Jan. 28, 1911. Serial No. 605,297. (Cl. 75—69.)

The process of treating unroasted copper ores, which consists in concentrating the ores under conditions yielding tailings of such degree of subdivision that the copper therein is substantially soluble in a solution containing ferric iron and sulfuric acid, and then extracting the copper from said tailings by said solution.

1,021,769. PROCESS OF TREATING ORES. RUDOLF GAHL, Morenci, Ariz. Filed Aug. 29, 1911. Serial No. 646,684. (Cl. 75—18.)



1. The process of treating ores by decantation to prepare metal-bearing solutions, which consists in causing thickened pulp and a supernatant liquid to traverse a series of decanting vessels in resultantly opposite directions, and introducing a leaching agent at a point intermediate the ends of the series.

2. The process of treating ores by decantation to prepare metal-bearing solutions, which consists in causing thickened pulp and a supernatant liquid to traverse a series of decanting vessels in resultantly opposite directions and introducing a leaching agent and applying heat at a point or points intermediate the ends of the series.

3. The process of treating ores to recover values therefrom, which consists in causing thickened pulp and a supernatant liquid to traverse a series of decanting vessels in resultantly opposite directions, introducing a leaching agent at a point intermediate the ends of the series, and precipitating the values from the outflowing liquid.

4. The process of treating ores to recover values therefrom, which consists in causing thickened pulp and a supernatant liquid to traverse a series of decanting vessels in resultantly opposite directions, introducing a leaching agent at a point intermediate the ends of the series, precipitating the values from the outflowing liquid and returning the same to the opposite end of the series.

1,021,770. CANNING ACID FRUITS OR VEGETABLES. RAYMOND M. GLACKEN, Baltimore, Md. Filed June 9, 1911. Serial No. 632,287. (Cl. 99—1.)

1. The within described improvement in the industry of canning fruits and vegetables in tin, consisting in the reduction of their acidity by subjecting them to ethyl alcohol in the presence of heat and pressure.

2. The within described improvement in the industry of canning fruits and vegetables in tin, consisting in the reduction or lessening of their acidity by the addition of ethyl alcohol prior to the canning, whereby is effected a reduction or neutralization of the acids and the consequent prevention of the formation of salts of tin by contact of the acids with the tin cans.

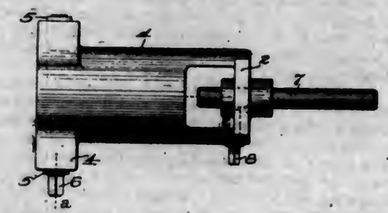
3. The within described improvement in the industry of canning fruits and vegetables in tin, consisting in the reduction of their acidity by the addition of ethyl alcohol and subsequent processing whereby is effected a reduction or neutralization of the acids and the consequent prevention of the formation of the salts of tin by contact of the acids with the tin cans.

4. The within described improvement in the industry of canning fruits and vegetables in tin, consisting in the reduction of their acidity by subjecting them to ethyl alcohol and acetate of soda in the presence of heat and pressure.

5. The within described improvement in the industry of canning fruits and vegetables in tin, consisting in the reduction or lessening of their acidity by the addition of ethyl alcohol and acetate of soda prior to the canning and processing, whereby is effected a reduction or neutralization of the acids and the consequent prevention of the formation of salts of tin by contact of the acids with the tin cans.

[Claim 6 not printed in the Gazette.]

1,021,771. LATHE APPLIANCE. GEORGE EDWARD GREENLEAF, Plainfield, N. J., assignor to Niles-Bement-Pond Company, Jersey City, N. J. Filed July 11, 1910. Serial No. 571,320. (Cl. 29—58.)



1. A lathe appliance comprising, a tubular body having a head at the rear end, lateral housings at the front end, gripping jaws slidable laterally within the housings, a double screw to move the jaws, a centering device for the screw, a stop adjustably passing through the rear head, and means for securing said stop in adjusted position.

2. In a lathe appliance, the combination of a tubular body having a head at the rear end, the head being adapted for fastening to a turret member, a rod passing through the head constituting a stop, means for clamping the stop in adjusted position, housings at the sides of the front end of the body, slidable blocks in the housing having clamping jaws opposite the axis of the body, and having bases outside of the circular limits of the body, a double screw engaging threaded bores in said bases, a centering device carried by the body for holding the screw axle stationary, and the screw being provided with an angular portion for turning the screw.

1,021,772. BED OR COUCH FABRIC. WILLIAM J. GROTENHUIS, Chicago, Ill., assignor to Sanitary Steel Couch Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 16, 1911. Serial No. 614,755. (Cl. 5—39.)



1. In a bed or couch fabric, a supporting frame having end bars, interwoven longitudinal and cross members, of resilient metal, springs for connecting the longitudinal members with the said bars, said longitudinal members comprising a plurality of wires, and means for spreading said wires and thereby spacing the same apart in pairs, each longitudinal member being in the form of a closed wire loop having a straight middle portion and tapered ends, the wires of each said pair terminating in four different springs, and each tapered end terminating in a single spring.

2. In a bed or couch fabric, a supporting frame having end bars, interwoven longitudinal and cross members, of resilient metal, springs for connecting the longitudinal members with the said bars, said longitudinal members comprising a plurality of wires, and means for spreading said wires and thereby spacing the same apart in pairs, each longitudinal member being in the form of a closed wire loop having a straight middle portion and tapered ends, the wires of each said pair terminating in four different springs, and each tapered end terminating in a single spring.

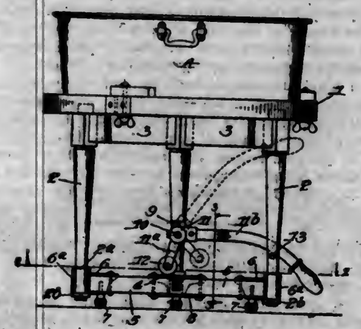
3. In a bed or couch fabric, a supporting frame having end bars, interwoven longitudinal and cross members, of resilient metal, springs for connecting the longitudinal members with the said bars, said longitudinal members comprising a plurality of wires, and means for spreading said wires and thereby spacing the same apart in pairs, each longitudinal member being in the form of a closed wire loop having a straight middle portion and tapered ends, the wires of each said pair terminating in four different springs, and each tapered end terminating in a single spring, said cross members consisting of flexible metal slats having only sliding contact with said wires, and means for spacing the said slats apart.

4. In a bed bottom, a fabric having a rectangular frame of resilient longitudinal and transverse metal slats, a supporting frame having end bars, springs connecting the projecting ends of the longitudinal slats with the said bars, flexible cross slats having their ends secured to said longitudinal slats, wires forming longitudinal members which are interwoven with said cross slats, springs for connecting the ends of said wire members to the said bars, the transverse slats of said fabric frame being provided with eyes for spreading the wires apart to form pairs, each eye holding a pair of wires, whereby the longitudinal wire members are free to slide endwise on the said fabric frame.

5. In a bed or couch fabric, a supporting frame having end bars, longitudinal and cross members, of resilient metal, springs for connecting the longitudinal members with the said bars, said longitudinal members comprising a plurality of wires, and means for spreading said wires and thereby spacing the same apart in pairs, each longitudinal member being in the form of a closed wire loop having a straight middle portion and tapered ends, the wires of each said pair terminating in four different springs, and each tapered end terminating in a single spring.

[Claim 6 not printed in the Gazette.]

1,021,773. LEG-LIFTING-CASTER DEVICE. ALBERT GRUB, Chicago, Ill., assignor of one-fourth to Frederick Grub and one-fourth to Benjamin Grub, Chicago, Ill. Filed Feb. 25, 1911. Serial No. 610,729. (Cl. 16—165.)

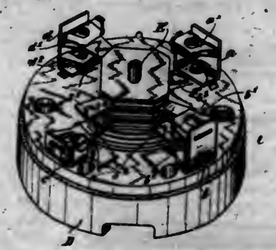


1. A stand comprising two members, one member comprising a top and rigid legs, and the other member having supporting rollers and guides for the legs of the first member, and means on one member operable against the other for moving the two members apart.

2. A stand comprising two members, one member having a top and rigid legs and the other member having supporting rollers and guides for the legs of the first member; means on one member operating against the other to separate the two members, and stops on the legs of the first member positioned to encounter the guides of the second member at the limit of separation of the two members.

3. A stand comprising two members, one member having a top and rigid legs and the other member having supporting rollers and being mounted for movement toward and from the first member; a rock shaft mounted upon the legs of the first member, and a bell crank on the rock shaft having one of its arms positioned for operating against the second member for separating the two members, and having its other arm extending to serve as an operating handle.

1,021,774. REGULATION OF ELECTRIC CIRCUITS. MONROE GUBTT, Hartford, Conn., assignor to The Hart & Hegeman Manufacturing Company, Hartford, Conn., a Corporation of Connecticut. Filed July 9, 1910. Serial No. 571,254. (Cl. 175—289.)



1. An electric switch having four stationary contacts, two of which have engaging portions at one elevation two others of which have engaging portions at a second and higher elevation; and a movable member having three bridging members one of which bridging members electrically connects the two engaging portions at the lower elevation simultaneously with a second bridging member electrically connecting the two engaging portions at the higher elevation and a third bridging member on the movable member constructed and arranged to electrically connect two engaging portions at different elevations when the movable member is moved to another position.

2. An electric switch having four contacts and a movable member having contact connecting members or bridges, one of which bridges electrically connects two of the stationary contacts while another contact connecting member or bridge electrically connects the other two stationary contacts at one position of the movable member, and a third contact connecting member or bridge on the movable member which electrically connects when the movable member is at another position two contacts not connected by either of the first mentioned contact connecting members or bridges when the movable member is in the first mentioned position.

3. An electric switch having four contacts and a movable member having contact connecting members or bridges, one of which bridges electrically connects two of the stationary contacts while another contact connecting member or bridge electrically connects the other two stationary contacts at one position of the movable member, and a third contact connecting member or bridge on the movable member which electrically connects when the movable member is in another position two contacts connected by one of the two first mentioned contact connecting members or bridges when the movable member is in the first mentioned position.

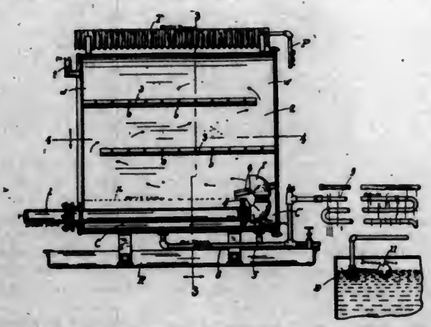
4. An electric switch having four stationary contacts designated one, two, three and four and a movable member carrying contact connecting members or bridges designated one, two and three the contacts and connecting

members or bridges on the movable member so arranged that in one position of the movable member contact or bridge one can connect contacts four and one when bridge three is connecting contacts two and three, so that in another position contact one can connect contacts one and two when bridge three connects contacts three and four; and so that in a third position contacts one and two will be the only contacts electrically connected and those by bridge two.

5. An electric switch having four stationary contacts designated one, two, three and four and a movable member carrying contact connecting members or bridges; contacts one, two and four having engaging portions at one level, contacts two, three and four having engaging portions at another level from the first, and a connecting member to connect at one elevation two of the contacts when the other two contacts are connected at another elevation by another connecting member or bridge.

[Claims 6 to 10 not printed in the Gazette.]

1,021,775. STEAM-CONDENSER. FREDERICK HAUSWIRTH, St. Louis, Mo. Filed June 22, 1911. Serial No. 634,822. (Cl. 62—30.)



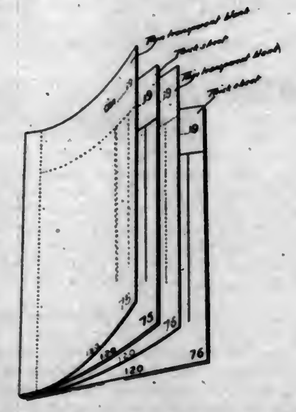
1. A steam condenser comprising a condensing chamber provided with a compartment for accumulating the pure product of condensation, a compartment for accumulating the waste product, means for preventing the pure product from entering the waste compartment, means within the first compartment for reboiling the liquid therein, said means entering the waste compartment through the means which prevent the pure condensation product from entering said waste compartment.

2. A steam condenser comprising a condensing chamber provided with a compartment for accumulating the pure water of condensation, a waste compartment, an overflow partition separating the compartments, and a steam pipe in the first compartment passing through the partition into the waste compartment.

3. In a steam-condenser, a condensing chamber, means for conducting steam thereinto, said chamber being provided with contiguous compartments, means for effecting a precipitation of a part of the mechanically suspended impurities into one of said compartments, means for collecting the waters of condensation of the main volume of steam in the other compartment, means within the last named compartment for reboiling the water and means for conducting the impurities of such reboiled waters into the first compartment.

4. A steam-condenser comprising an outwardly water-cooled condensing chamber provided with a main bottom compartment for the collection of the waters of condensation, and with a contiguous waste compartment separated therefrom by a partition wall, said compartments being provided with discharge means, a steam pipe disposed along the bottom of the main compartment and discharging through the partition wall into the waste compartment, gutters disposed on the inner walls of the chamber on each side of the discharge from the steam pipe and draining the waters of condensation over the partition wall into the main compartment, the partition wall between the compartments being of a height to allow for submergence of the steam pipe within the main compartment whereby reboiling of the water therein is made possible, deflecting plates on the outside of the condensing chamber positioned in a plane over the main collecting compartment to prevent contact of the cooling water with the outer walls of said compartment, and means in the condensing chamber for distributing the steam and returning the condensation waters to the main compartment, the impurities floating on the waters accumulated in the main compartment flowing over the partition wall aforesaid, into the waste compartment.

1,021,776. MANUFACTURE OF MANIFOLD-WRITING BOOKS AND PADS. FRITZ HEITZMANN, Freiburg, Germany. Filed Jan. 18, 1910. Serial No. 538,720. (Cl. 11—23.)



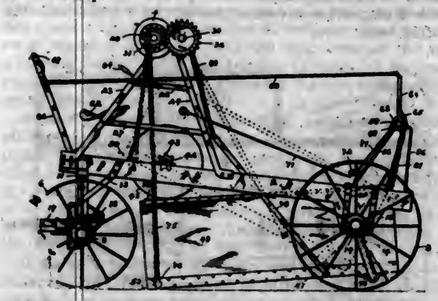
1. The method of manufacturing a manifold-writing book or pad, consisting in superimposing a pile of alternating thicker paper sheets each having transferable ink printing on its face, and thinner transparent paper blanks, in permanently connecting the sheets and blanks to form a book or pad, and in submitting them to pressure while the ink is still in a transferable state, whereby the printed matter on the face of each thicker sheet is reproduced directly on the back of the superposed blank.

2. The method of manufacturing a manifold-writing book or pad, consisting in superposing a plurality of paper sheets, each alternate sheet having transferable ink printing on its face, and the sheet above it being transparent, in permanently connecting all of said sheets to form a book or pad, and in submitting them to pressure while the ink is still in a transferable state, whereby the ink will be impressed on the transparent sheets.

3. A manifold-writing book or pad, comprising a pile of registering and alternating thick paper sheets each having printing on its front face, and thin paper sheets the back face of each of which latter bears an impression of the printing on the underlying thick sheet, said thin sheets being transparent so that the printing on the back face thereof is visible on the front face thereof.

1,021,777. EXCAVATING-MACHINE. FRANK E. HORNING, Wayne county, Ind. Filed May 27, 1911. Serial No. 629,888. (Cl. 37—33.)

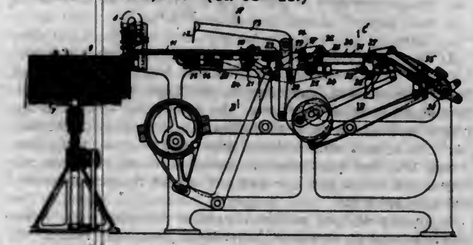
1. An excavating machine comprising a main-frame mounted on four ground wheels, the central portion of the rear axle being bent to extend across near the ground line and parallel therewith, a scoop having its rear end pivotally connected on said axle and extending forward therefrom to near the front wheels, means whereby the forward end of the scoop may be raised and lowered by power, means whereby the scoop swings forward as the front end is being raised, and a bumper for the rear end of the scoop.



2. In an excavating machine, a main frame having its forward end located higher than the rear, an eccentric rear axle having its central portion located near the ground-line, ground-wheels mounted on the outer ends of said axle, a pair of front wheels adapted to turn under the frame, means whereby the machine may be propelled by animals, a driver's seat located on the front of the said frame, a scoop having its rear portion pivoted on the central portion of the rear axle, standards extending up from each side of the main frame, a pair of shafts extending across the machine and supported by said standards, chains adapted to wind on one of said shafts and extending down and secured to the forward corners of the scoop, and means for connecting the other shaft to the scoop in the rear of the center thereof, and means whereby said shafts may be operated together but at different rates of speed from each other.

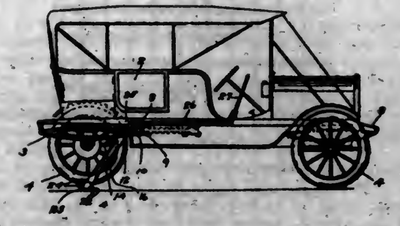
3. An excavating machine comprising a main-frame, an eccentric rear-axle having its central portion located near the ground and adapted to swing forward and backward, ground-wheels mounted on the ends of said axle, a front axle having ground wheels adapted to turn under the frame, means whereby the machine may be propelled by animal power, a driver's seat located on the front of the main-frame, a scoop having its rear portion pivotally mounted on the central portion of said rear axle and extending forward therefrom, standards extending up from the sides of the main-frame and toward the forward end thereof, a shaft carried by said standards, chains adapted to be wound on said shaft, the lower ends of said chains being secured to the lower forward corners of the scoop, means for revolving said shaft independent of the means for propelling the machine, said means including a sprocket wheel secured to one end of said shaft, a smaller sprocket wheel mounted below the first named sprocket wheel, a stub-shaft on which the smaller sprocket wheel is secured, a sprocket chain connecting said sprocket wheels, a channel wheel secured to said stub-shaft, and a belt adapted to operate on said channel wheel and over a similar channel carried by an engine located in the rear thereof, all substantially as shown and described.

1,021,778. MACHINE FOR MAKING PAPER BAGS. THEODOR HUGO, Berlin, Germany. Filed Feb. 25, 1910. Serial No. 546,002. (Cl. 93—13.)



A machine for making paper bags comprising means for doubling a blank having a side flap and a bottom flap, means for providing said flaps with an adhesive, means for conveying the doubled blank to a clamping device consisting of a plurality of substantially horizontal clamping levers, means for opening and closing said levers, a pivoted quadrantal side flap folder in front of the clamping device, a quadrantal bottom flap folder laterally flanking said device, means for intermittently lowering the clamping device, and means for successively imparting a partial rotation to the folders, thereby consecutively folding the side flap and the bottom flap against the blank.

1,021,779. AUTOMOBILE BRAKE AND JACK. PAUL JANEK, Cleveland, Ohio. Filed Apr. 17, 1911. Serial No. 621,472. (Cl. 21—8.)



1. The combination with a vehicle body and springs arranged under the rear end thereof of a pair of brackets secured to said vehicle body, a shaft rotatably supported by said brackets, brake members secured to said shaft and in their normal position adapted to extend longitudinally of the vehicle body and in their operative position adapted to extend downwardly into engagement with the surface over which the vehicle is moving, means for rotating said shaft so as to swing the brake members down into their operative positions and a plate mounted on each brake member and adapted to come in contact with the supporting springs on the rear of the vehicle body, for the purpose set forth.

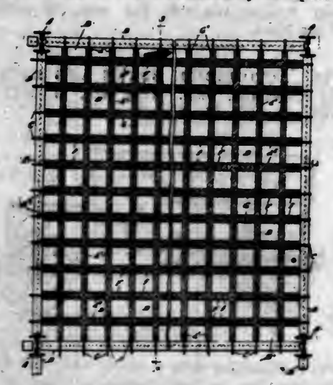
2. The combination with a vehicle body of a pair of brackets secured to said vehicle body, each bracket being provided with a pair of downwardly extending flanges provided with bearing openings, a shaft serrated at each end journaled in said flanges, a brake member mounted on said shaft between the flanges of each bracket member, said brake member having a serrated opening to receive the said shaft and means for rotating said shaft so as to bring the free ends of the brake members in contact with the surface over which the vehicle is moving.

1,021,780. FIREPROOF FLOOR CONSTRUCTION FOR BUILDINGS. ERNEST V. JOHNSON, Chicago, Ill. Filed Jan. 7, 1910. Serial No. 536,801. (Cl. 72—66.)

1. In a fireproof floor construction, the combination with supporting girders, of hollow panel tile having open ends and spaced apart longitudinally and transversely and arranged in longitudinal and transverse rows, transversely extending channel tile arranged transversely between and closing the ends of said hollow panel tile, spacer slab tile extending between the longitudinal rows of hollow panel tile and between the ends of said channel tile, longitudinally and transversely extending solid integral concrete beams or ribs filling the channels of said channel tile and the longitudinal spaces between said hollow panel tile, and crossing steel reinforcements extending longitudinally and transversely and embedded in said concrete beams or ribs, substantially as specified.

2. In a fireproof floor construction, the combination with supporting girders, of hollow panel tile having open ends and spaced apart longitudinally and transversely and arranged in longitudinal and transverse rows, transversely extending channel tile arranged transversely between and closing the ends of said hollow panel tile, spacer slab tile extending between the longitudinal rows of hollow panel tile and between the ends of said channel

tile, longitudinally and transversely extending solid integral concrete beams or ribs filling the channels of said channel tile and the longitudinal spaces between said hollow panel tile, and crossing steel reinforcements extending longitudinally and transversely and embedded in said concrete beams or ribs, and non-heat conducting and incombustible insulating members interposed between said steel reinforcements and said spacer slab tile and the bottom webs of said channel tile, substantially as specified.



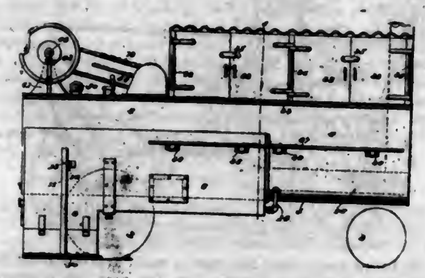
3. In a fireproof floor construction, the combination with hollow panel tile having open ends and spaced apart longitudinally and transversely and arranged in longitudinal and transverse rows, channel tile extending transversely between and closing the hollows of said panel tile, a network of longitudinal and transverse concrete ribs filling said channel tile and the spaces between the sides of said panel tile, and tensile acting reinforcements for said concrete ribs, tile members below said tensile acting reinforcements and heat insulating members interposed between said reinforcements and the tile members therebelow, substantially as specified.

4. In a fireproof floor construction, the combination with hollow panel tile having open ends and spaced apart longitudinally and transversely and arranged in longitudinal and transverse rows, channel tile extending transversely between and closing the hollows of said panel tile, a net-work of longitudinal and transverse concrete ribs filling said channel tile and the spaces between the sides of said panel tile, and tensile acting reinforcements for said concrete ribs, tile members below said tensile acting reinforcements said reinforcements extending both longitudinally and transversely, and heat insulating members interposed between said reinforcements and the tile members therebelow, substantially as specified.

5. In a fireproof floor construction, the combination with supporting girders, of hollow panel tile having open ends and spaced apart longitudinally and transversely and arranged in longitudinal and transverse rows, transversely extending channel tile arranged transversely between and closing the ends of said hollow panel tile, spacers of slab tile at the intersection of the longitudinal and transverse spaces between the rows of tile, said spacers lying between the ends of said channel tile, longitudinally and transversely extending solid integral concrete beams or ribs filling the channels of said channel tile and the longitudinal spaces between said hollow panel tile, and crossing steel reinforcements extending longitudinally and transversely and embedded in said concrete beams or ribs, substantially as described.

1,021,781. ASPHALT-MELTING WAGON. HENRY M. KINGSLEY, Chicago, Ill. Filed Feb. 7, 1911. Serial No. 607,169. (Cl. 94—6.)

1. An asphalt melting apparatus, including a melting tank, a fire-box, steam heating coils disposed in the melting tank, and steam superheating coils disposed in the upper portion of the fire-box and immediately below the floor of the melting tank, said superheating coils forming a shield to prevent the direct contact of the fire with the melting tank.



2. An asphalt melting apparatus, including a melting tank, a fire box extending below a portion of the melting tank and having a grate, superheating coils disposed in the fire box between the grate and the melting tank, steam heating coils disposed in the melting tank and connected to the superheating coils, one end of the pipe forming the superheating coils extending out of the fire box and being provided with means whereby it may be coupled with a steam supply pipe.

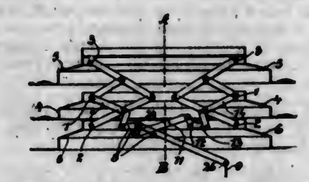
3. A melting tank having a series of fixed steam coils extending across the upper portion of the tank, said coils lying all in the same plane and connected to a source of steam supply, and forming means for dividing blocks of asphalt into sections, and doors disposed in the sides of the melting tank above the coils permitting the placing of block asphalt upon the coils.

4. A melting tank for asphalt having one series of steam heating coils traversing the upper portion thereof, and a second series of steam coils disposed below the first, the distance between the pipes of the second series being less than the distance between the pipes of the first series, said coils forming means for dividing blocks of asphalt.

5. An asphalt melting apparatus, including a melting tank, heating coils in the lower portion of the tank, and an upper and lower series of asphalt dividing coils traversing the upper portion of the tank and connected to the heating coils.

[Claims 6 to 14 not printed in the Gazette.]

1,021,782. ROOF-LIGHT. ALBIN KLEIN, Erfurt, Germany, assignor to The Firm of J. A. John Aktiengesellschaft, Erfurt-Ilversgehofen, Germany. Filed July 7, 1911. Serial No. 637,316. (Cl. 108—31.)



1. In a roof-light of the character described, the combination with a series of superposed louvered frames, of four sets of lazy-tongs levers, each set supporting the frames at a different corner, the sets being connected in pairs working in parallel planes, an actuating lever for each pair, and connections between the two actuating levers for the simultaneous operation of all the sets of lazy-tongs levers and opening out of the frames, substantially as set forth.

2. In a roof-light of the character described, the combination with a series of superposed louvered frames, of four sets of lazy-tongs levers, each set supporting the frames at a different corner, the sets being connected in pairs working in parallel planes, an actuating lever for each pair pivoted to the lowermost, stationary frame, each actuating lever having a long and two short arms, the short arms being connected to different sets of lazy-tongs levers, a rod connecting the long arms of the two actuating levers, and a pull-element on said rod for operating the levers and opening out the frames, substantially as set forth.

3. In a roof-light of the character described, four sets of lazy-tongs levers connected in pairs working in parallel planes, an actuating lever for each pair, each actuating lever having a long and two short arms, a link connecting the short arm of each actuating lever with a different set of lazy-tongs levers, and a rod connecting the long arms of the actuating levers for the simultaneous operation of the same, substantially as and for the purpose set forth.

4. In a roof-light of the character described, four sets of lazy-tongs levers connected in pairs working in parallel planes, an actuating lever for each pair, each actuating lever having a long and two short arms, a link connecting the short arm of each actuating lever with a different set of lazy-tongs levers, a slide movably held in a stationary guide-way, said slide being pivoted to one of the links for steadying the lazy-tongs, and a rod connecting the long arms of the two actuating levers for the simultaneous operation of the same, substantially as set forth.

5. In a roof-light of the character described, the combination with a series of superposed louvered frames, of four sets of lazy-tongs levers, each set supporting the frames at a different corner, the sets being connected in pairs working in parallel planes, an actuating lever for each pair, and connections between the two actuating levers for the simultaneous operation of all the sets of lazy-tongs levers and opening out of the frames, the levers being made shorter at one end of the frames than at the other so as to open out the frames differently at the opposite ends and at the same time tilt the raised series of raised frame backward, substantially as and for the purpose set forth.

1,021,783. WHEEL-RIM FOR PNEUMATIC TIRES. CARL GEORG KLEINSCHMIDT, Herne, Germany. Filed June 1, 1911. Serial No. 630,654. (Cl. 152—21.)



1. A device of the character described, comprising a pair of rim members having outer grooves, a tire cover engaged by said members, and a locking ring interposed between the edges of said cover and having laterally extending flanges that overlie said cover and inwardly extending ribs that engage the rim-grooves.

2. A device of the character described, comprising a pair of rim members having outer grooves, a tire cover engaged by said members, a split locking ring interposed between the edges of said cover and having flanges that engage the cover and ribs that engage the rim grooves, and coupling means for detachably connecting the ends of the locking ring.

3. In a vehicle wheel, the combination of a rim composed of two parallel separable rim members, with an outer tire cover having its edges engaged with the said rim members, an inner air tube and a transversely split locking ring which is placed between said air tube and rim members and having flanges holding the edges of the cover and internal projections engaging said rim members, together with pivoted locking members in the felly, having projections engaging the transverse edges of the locking ring, at the split part and a radial screw device for rocking said locking members toward each other.

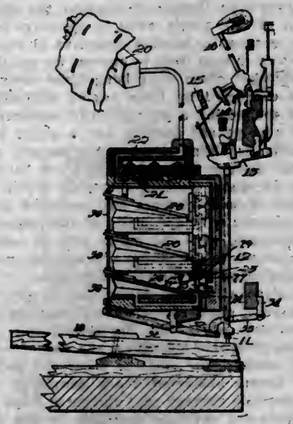
1,021,784. COMBINED PARACHUTE AND HELICOPTER. NORMAN W. KNIGHT, Spangle, Wash. Filed June 21, 1911. Serial No. 634,514. (Cl. 244—19.)



1. In a device of the class described a convoluted web, a webbed frame member pivoted to the under side thereof adjacent its upper portion, and inclined toward its lower portion normally and adapted to be moved upwardly into close proximity with the convoluted web by engagement with air under normal operation, and being adapted to fall and resist upward passage of air through the device, under casual circumstances as described.

2. In a device of the class described the combination with a convoluted web of a web member pivoted to the under side of the first named web at its upper portion and inclined toward its lower portion, its pivotal axis being disposed radially with respect to the axis of the convolutions of the first named web, and folding web portions at opposite sides of the second named web member coengaged therewith and with the first named web member to prevent lateral escape of air between said web members under casual operation, as described.

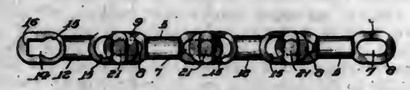
1,021,785. PNEUMATIC MUSICAL INSTRUMENT. ALBERT KRELL, Connersville, Ind., assignor to Krell Auto-Grand Piano Co., Connersville, Ind., a Corporation of Indiana. Filed Dec. 15, 1909. Serial No. 533,156. (Cl. 84—156.)



1. In a pneumatic musical instrument, the combination of a main pneumatic, an atmospheric port therefrom to the air, an exhaust channel having an opposite port connecting said channel with the pneumatic, a vertical diaphragm in the exhaust channel, a vertical valve for controlling the connection of the main pneumatic with both ports, means on the diaphragm independent of the valve for operating it, and a flexible soft support for the valve depending from above the inner surface of the atmospheric air port, whereby the exhaust will normally hold said valve against the exhaust port, but when it is once freed therefrom it will tend to lie flat against the inner surface of the atmospheric port.

2. In a pneumatic musical instrument, the combination of a striking pneumatic having an air passage, an exhaust channel, a port from the air passage to the exhaust channel, a port from the air passage to the external air located directly opposite the first named port, a depending soft flexible support normally adapted to hang freely in line with the inner surface of the air port, a vertical valve mounted on said flexible support and adapted to close either of said ports, a pneumatic in the exhaust-channel having means supported independently of said soft support for moving the valve back and forth, and a channel adapted to admit air behind the pneumatic for operating it.

1,021,786. SPROCKET-CHAIN. JOSEPH L. LEE, Carbondale, Pa. Filed June 10, 1911. Serial No. 632,373. (Cl. 74—32.)



1. A chain comprising links having elongated apertures, the outer walls of the apertures of the alternate links being substantially semicylindriform and polygonal respectively, and a pintle operative to connect said links and having elongated heads providing flanges arranged to be inserted through said apertures and to be turned transversely thereto, and having a polygonal portion arranged to be engaged with a portion of like contour in said links, to prevent the displacement of said pintle when in operative position.

2. A sprocket chain comprising alternate single and double links having elongated apertures, the outer walls of the apertures of the adjacent links being substantially semicylindriform and rectangular respectively, and a pintle operative to connect said links and having elongated heads providing overhanging flanges which are insertible through said apertures when alined, and arranged to be turned transverse thereto, to prevent the accidental displacement of said pintle when in operative position, and having a rectangular portion operative to engage the rectangular wall in said links to prevent its rotation.

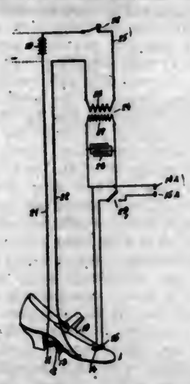
3. A sprocket chain comprising links having elongated apertures connected by links having similarly elongated apertures comprising a substantially semicylindrical portion and a polygonal portion, and a pintle having elongated heads providing overhanging flanges arranged to be inserted through said apertures when in registry, and having a polygonal portion rotatable within a cylindrical portion of said aperture and arranged to be slipped into engagement with the walls of the polygonal portion of said aperture, with the major axis of said heads disposed transverse to the major axis of said apertures, said flanges preventing the lateral displacement of said pintle, and the polygonal portion preventing its rotation.

4. A sprocket chain comprising center links having elongated apertures, side links connecting said center links and having elongated apertures, one end of which is substantially semicircular and the other end polygonal, and a pintle having elongated heads providing overhanging flanges insertible through said apertures when alined, and having polygonal portions rotatable in the semicircular portion of the apertures to shift said heads transverse to said apertures, said polygonal portions being engageable with the walls of the polygonal portions of said apertures, to prevent rotation of said pintle.

5. A sprocket chain comprising links having elongated apertures, links connecting the first mentioned links and having elongated apertures, one end of which is larger than the other end and a pintle having elongated heads providing overhanging flanges which are insertible through said apertures when alined, and having squared portions which are rotatable in the larger portions of said apertures to permit the turning of said heads transverse to said apertures, thus preventing the lateral displacement of said pintle, and said squared portions being engageable with the walls of the smaller portion of said apertures to prevent the rotation of said pintle.

[Claims 6 to 10 not printed in the Gazette.]

1,021,787. ELECTRICAL APPARATUS FOR STAGE EFFECTS. ALDEN L. MCMURTRY, Sound Beach, Conn. Filed May 6, 1911. Serial No. 625,442. (Cl. 46—70.)



1. An apparatus arranged to be carried by a dancer, said apparatus comprising an induction coil, a pair of electrodes at some part of the dancer's body connected with said induction coil, and means automatically controlled by the movement of the foot for energizing the induction coil.

2. An apparatus arranged to be carried by a dancer, said apparatus comprising an induction coil, a pair of electrodes at some part of the dancer's body connected with said induction coil, means for energizing the induction coil, and a switch on the dancer's foot for controlling the energization of the coil.

3. An apparatus arranged to be carried by a dancer, said apparatus comprising an induction coil, a pair of electrodes at some part of the dancer's body connected with said induction coil, means for energizing the induction coil, a switch on the dancer's foot for controlling the energization of the coil, and a manually operated circuit closer in series with said switch.

4. An apparatus arranged to be carried by a dancer, said apparatus comprising an induction coil, a plurality of pairs of electrodes at different parts of the dancer's body, a manually operated switch for connecting any one of said pairs of electrodes with said induction coil, means for energizing the induction coil, and a switch on the dancer's foot for controlling the energization of the coil.

5. An apparatus arranged to be carried by a dancer, said apparatus comprising an induction coil having a primary and a secondary winding, a battery, a circuit between the battery and the primary winding of the coil, a shoe, a circuit closer on the shoe in said circuit, and a pair of fixed electrodes connected with the secondary winding of the coil.

[Claims 6 to 9 not printed in the Gazette.]

1,021,788. GAME APPARATUS. CHARLES MUTTER, Paterson, N. J. Filed May 18, 1911. Serial No. 628,003. (Cl. 46—66.)

1. A game apparatus of the character described comprising a main stationary section, and a downwardly inclined end section adapted to be detachably secured to said main section to form the delivery end of the apparatus when employed as a bowling alley, and to be removed when the apparatus is employed as a shuffle board.

2. A bowling alley compraising a board, ball receiving gutters arranged along the sides of said board, track members secured to the inner sides of said gutters, one of said members extending parallel and on a level with the board, while the other track member is inclined downwardly from the delivery end of the board toward the opposite end thereof whereby the speed of the balls rolling into said gutters will be decreased as the balls roll toward the outer end of the board.



3. A combination bowling alley and shuffle board comprising a main section, a series of legs to support said section at the desired elevation, an inclined section detachably secured to one end of said main section to form the delivery end of the apparatus when the same is employed as a bowling alley, a pin box detachably secured to the opposite end of said main section, ball receiving gutters secured to the opposite sides of said sections, means in said gutters to retard the speed of the balls rolling therein toward the pin box end of the board, a ball return chute secured to one side of said board, and a platform arranged at the delivery end thereof.

4. A combination bowling alley and shuffle board comprising a main section, a series of legs to support said section at the desired elevation, an inclined section detachably secured to one end of said main section to form the delivery end of the apparatus when the same is employed as a bowling alley, a pin box detachably secured to the opposite end of said main section, ball receiving gutters secured to the opposite sides of said sections, means in said gutters to retard the speed of the balls rolling therein toward the pin box end of the board, a series of track supporting standards secured to the gutter at one side of the table, said standards having forked upper ends, inclined ball receiving tracks secured to said forked ends of the standards, and a curved stop plate connecting the ends of said track at the delivery end of the apparatus.

1,021,789. TOMBSTONE, SIGN, &c. PAUL F. NACHTIGALL, Fort Wayne, Ind. Filed Jan. 17, 1912. Serial No. 671,679. (Cl. 18—59.)



1. The process of securing fragile inscriptive and decorative members to the surface of a plastic composition which consists in arranging the fragile members in the desired order on the surface of a plate, then smearing the exposed portions of the fragile members with grease, then spreading over the plate and fragile members a layer of plaster of Paris to form a matrix of the fragile members, then removing the matrix when set and removing a portion of the molded surface of the same, then inserting the fragile members in the corresponding molds in the hardened matrix, then tamping suitable plastic material onto the surface of the matrix and rear portions of the fragile members and finally separating the plastic material and the attached fragile members from the matrix.

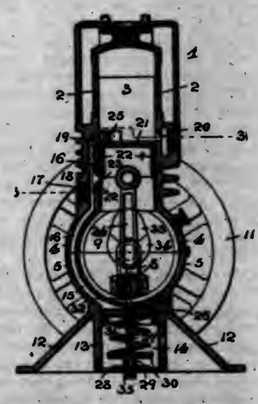
2. The process of securing fragile inscriptive and decorative members to concrete structures consisting in arranging the members in the desired manner on the surface of a flat clay plate, then applying grease to the exposed portions of the fragile members, then spreading over the surface of the clay plate and fragile members a layer of plaster Paris to produce a matrix of the said members, then removing the hardened matrix from the clay plate and fragile members and removing a portion of the molded surface of the matrix, then inserting the fragile members in an inverted manner in the corresponding molds on the matrix, then tamping a concrete mixture onto the fragile members and adjacent surface of the matrix and then separating the concrete mixture with the attached fragile members from the matrix.

1,021,790. TONGS. WILLIAM H. NEWVILLE, Delta, Colo. Filed Feb. 11, 1911. Serial No. 607,980. (Cl. 57—9.)



In a device of the class described, a stick provided with a cavity near one end thereof, a ferrule fitted on the stick and provided with an elongated slot communicating with said cavity, a stationary jaw formed on and extending from said ferrule, a movable jaw connected with the ferrule and stick and adapted to be swung toward and away from the stationary jaw, a bell-crank lever pivoted within the cavity and projecting through the slot in the ferrule, a hook-like ear cut and struck inwardly from the movable jaw, a link loosely connected with the ear and pivoted to the bell crank lever, and hand operable means carried by the stick and connected with the bell crank lever for bringing the movable jaw toward the stationary jaw.

1,021,791. EXPLOSIVE-GAS ENGINE. LEWIS B. O'NEILL, Montclair, N. J. Filed Apr. 29, 1911. Serial No. 624,123. (Cl. 123—73.)



1. In an explosive engine, the combination with a cylinder, of a crank-casing connected with said cylinder, said cylinder and crank-casing having communicating gas-passages or ducts formed in their walls, said gas-passages or ducts communicating with an upper and a lower port, a piston-head, an apron depending from said piston-head having a piston-port therein, said piston-port regis-

tering at proper times with said lower and said upper ports, a crank-shaft arranged in said crank-casing, a connecting rod connecting said crank-shaft with said piston-head, a cylindrical member connected with said crank-casing providing an auxiliary gas-chamber communicating with said gas-passages or ducts, a piston-member arranged in said gas-chamber, link-pins connected with said piston-member and extending into said crank-casing chamber, cam-members connected with said crank-shaft and operating in engagement with said link-pins to operate said piston-member, and an adjustable coil-spring in engagement with said piston-member to return the same upon the retreat of said cam-members, substantially as and for the purposes set forth.

2. In an explosive-engine, the combination with a cylinder and a crank-casing having gas-passages or ducts communicating with the interior of said cylinder and crank-casing, of a piston-head arranged in said cylinder, a crank-shaft supported in said crank-casing, a connecting rod connecting said crank-shaft with said piston-head, a cylindrical member providing an auxiliary gas-chamber in communication with said gas-passages or ducts, a piston-member arranged within said gas-chamber, link-pins connected with said piston-member, cam-members connected with said crank-shaft and operating in engagement with said link-pins to operate said piston-member, and an adjustable coil-spring in engagement with said piston-member to return the same upon the retreat of said cam-members, substantially as and for the purposes set forth.

3. In an explosive-engine, the combination with a cylinder and a crank-casing having gas-passages or ducts communicating with the interior of said cylinder and crank-casing, of a piston-head arranged in said cylinder, a crank-shaft supported in said crank-casing, a connecting rod connecting said crank-shaft with said piston-head, a cylindrical member providing an auxiliary gas-chamber in communication with said gas-passages or ducts, a spring-controlled piston-member arranged within said gas-chamber, and means connected with said crank-shaft for operating said piston-member to suck an auxiliary supply of gas into said auxiliary gas-chamber and subsequently discharge the same into said cylinder, substantially as and for the purposes set forth.

4. In an explosive-engine, the combination with a cylinder and a crank-casing having gas-passages or ducts communicating with the interior of said cylinder and crank-casing, of a piston-head arranged in said cylinder, a crank-shaft supported in said crank-casing, a connecting rod connecting said crank-shaft with said piston-head, a cylindrical member connected with said crank-casing providing an auxiliary gas-chamber communicating with said gas-passages or ducts, a piston-member arranged within said gas-chamber, link-pins connected with said piston-members, cam-members connected with said crank-shaft and operating in engagement with said link-pins to operate said piston-member, a rod or stem connected with said piston-member, a guide-plate, a guide-block connected with said guide-plate adapted to slidably support said rod or stem, a flange providing a spring-seat connected with said guide-block, a coil-spring arranged between said spring-seat and said piston-member, and means for adjusting the position of said guide-block with relation to said guide-plate to control the tension of said coil-spring, substantially as and for the purposes set forth.

[Claim 5 not printed in the Gazette.]

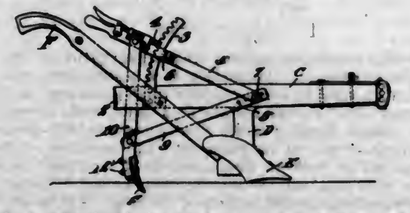
1,021,792. MAIL-BOX. CHARLES G. OVERMYER and GEORGE F. COLLINS, Coffeyville, Kans. Filed July 12, 1911. Serial No. 638,163. (Cl. 129—82.)



1. A mail box provided with a spring arm formed at one end with an angular portion secured to one side of the box, and serving as a torsion spring, said spring arm extending diagonally across the box and bearing at its outer end against the side of the box.

2. A mail box, a strip of sheet metal secured to one side of said mail box, a spring clamping arm having one end bent laterally and then into a V-shape and secured to said metallic strip, said spring arm extending diagonally across the box, and having a curved outer end bearing against the side of the box.

1,021,793. SUBSOILER ATTACHMENT FOR PLOWS. JAMES FRANKLIN PALMER, Greensboro, Ga., assignor of one-half to Simeon T. Ellis, Hagan, Ga. Filed Oct. 28, 1911. Serial No. 657,359. (Cl. 97—32.)



1. A subsoil attachment for plows, including a draw bar, a standard pivotally connected thereto, a share carried by the standard, a guide for the standard, separate means for securing the guide and the draw bar to a plow beam, an adjusting lever pivotally connected to the standard and draw bar, and coöperating means upon the guide and lever for holding said lever against movement relative to the guide.

2. A subsoil attachment for plows, including a draw bar, a standard pivotally connected thereto, a share secured to the standard, a guide for the standard, separate means for securing the guide and draw bar to a beam, an adjusting lever fulcrumed upon one of said means and pivotally connected to the standard, and coöperating means upon the guide and lever for locking said lever against movement relative to the guide.

3. A subsoil attachment for plows including a draw bar, a guide loop, separate means for securing the loop and bar to a plow beam, a standard pivotally connected to the beam and slidably mounted within the guide, a share carried by the standard, a lever fulcrumed upon one of the connecting means and pivotally connected to the standard, an arcuate rack bar extending from the guide loop, and means upon the lever and coöperating with the rack bar for locking said lever and the standard against movement relative to the beam.

4. The combination with a plow beam, of a subsoil attachment including a draw bar pivotally and adjustably connected to the beam, a guide loop secured to the rear end portion of the beam, a standard pivotally connected to the draw bar and slidably mounted within the loop, a lever fulcrumed upon the connection between the draw bar and beam, said lever being pivotally connected to the upper end of the standard, coöperating means upon the lever and loop for locking said lever against movement relative to the beam, and a share carried by the standard.

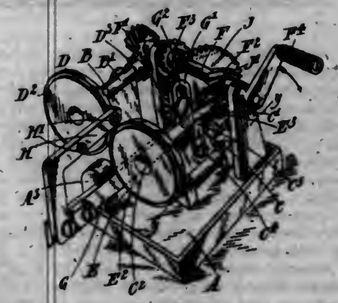
1,021,794. EXPANSION-BOLT ANCHOR. HENRY W. PLEISTER, Westfield, N. J., assignor to Henry B. Newhall, Plainfield, N. J. Filed Feb. 8, 1912. Serial No. 676,339. (Cl. 85—2.4.)



1. In combination with a substantially non-expansible body portion provided with one or more slots and free arms, one or more expanders mounted in the slots and carried by the body portion and adapted to move radially.

2. In combination in an expansion bolt anchor, a substantially non-expansible body portion provided with one or more slots and free arms, one or more expanders mounted in the slots, an open recess in one end of each expander, and means carried by the non-expansible body portion to coöperate with the open recess in each expander.

1,021,795. STROPPING-MACHINE FOR RAZORS. ARTHUR JAMES POSTANS, Brentford, England. Filed Jan. 13, 1911. Serial No. 602,384. (Cl. 51—16.)



1. In a stropping machine for razors the combination of, two stropping member supports movable to and from operative position, stropping members movably mounted one on each support and having their stropping faces opposed to each other, driving means for the stropping members, the driving means including means whereby driving in one direction moves the supports to bring the stropping members into operative position and driving in the reverse direction moves the supports to bring the members into non-operative position, and a carrier positioned to hold a razor-blade with its edge between and in contact with both stropping members simultaneously, substantially as set forth.

2. In a stropping machine for razors the combination of, two supports movable to and from operative position, stropping members movably mounted one on each support and having their stropping faces opposed to each other, driving means for the stropping members, the driving means including means whereby driving in one direction moves the supports to bring the stropping members into operative position and driving in the reverse direction moves the supports to bring the members into non-operative position, a movable carrier positioned to hold a razor-blade with its edge between and in contact with both stropping members simultaneously, a guide for the carrier to cause the carrier to move the blade lengthwise across the stropping members, and means for automatically reciprocating the carrier on the guide, substantially as set forth.

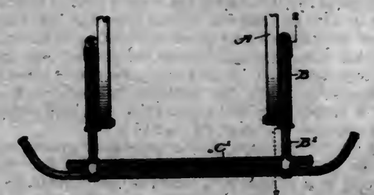
3. In a stropping machine for razors the combination of, two supports movable to and from each other, stropping members movably mounted one on each support and having their stropping faces opposed to each other, driving means for the stropping members, the driving means including means whereby driving in one direction moves the supports to bring the stropping members together and driving in the reverse direction moves such supports to separate the members, and a carrier positioned to hold a razor-blade with its edge between and in contact with both stropping members simultaneously, substantially as set forth.

4. In a stropping machine for razors the combination of, two supports movable to and from each other, stropping members movably mounted one on each support and having their stropping faces opposed to each other, driving means for the stropping members, the driving means including means whereby driving in one direction moves the supports to bring the stropping members together and driving in the reverse direction moves the supports to separate such members, a movable carrier positioned to hold a razor-blade with its edge between and in contact with both stropping members simultaneously, a guide for the carrier to cause the carrier to move the blade lengthwise across the stropping members, and means for automatically reciprocating the carrier on the guide, substantially as set forth.

5. In a stropping machine for razors the combination of, two movable supports, stropping disks rotatably mounted one on each support with their edges opposed to each other, a carrier positioned to hold a razor-blade with its edge between and in contact with the edges of both disks simultaneously, driving means to rotate the stropping disks, the driving means including means whereby driving in one direction moves the supports to bring the disks toward each other and against the blade and driving in the reverse direction moves the supports to separate the disks from the blade and from each other, substantially as set forth.

[Claims 6 to 16 not printed in the Gazette.]

1,021,796. AUTOMOBILE-FENDER. JOHN P. RANDERSON, Albany, N. Y. Filed Oct. 14, 1910. Serial No. 586,999. (Cl. 105—33.)



1. In a fender for automobiles, the combination, with the fender bar, of tubular supports containing cushioning springs, hinged members carrying the bar and passing

tering at proper times with said lower and said upper ports, a crank-shaft arranged in said crank-casing, a connecting rod connecting said crank-shaft with said piston-head, a cylindrical member connected with said crank-casing providing an auxiliary gas-chamber communicating with said gas-passages or ducts, a piston-member arranged in said gas-chamber, link-pins connected with said piston-member and extending into said crank-casing chamber, cam-members connected with said crank-shaft and operating in engagement with said link-pins to operate said piston-member, and an adjustable coil-spring in engagement with said piston-member to return the same upon the retreat of said cam-members, substantially as and for the purposes set forth.

2. In an explosive-engine, the combination with a cylinder and a crank-casing having gas-passages or ducts communicating with the interior of said cylinder and crank-casing, of a piston-head arranged in said cylinder, a crank-shaft supported in said crank-casing, a connecting rod connecting said crank-shaft with said piston-head, a cylindrical member providing an auxiliary gas-chamber in communication with said gas-passages or ducts, a piston-member arranged within said gas-chamber, link-pins connected with said piston-member, cam-members connected with said crank-shaft and operating in engagement with said link-pins to operate said piston-member, and an adjustable coil-spring in engagement with said piston-member to return the same upon the retreat of said cam-members, substantially as and for the purposes set forth.

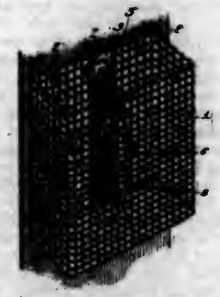
3. In an explosive-engine, the combination with a cylinder and a crank-casing having gas-passages or ducts communicating with the interior of said cylinder and crank-casing, of a piston-head arranged in said cylinder, a crank-shaft supported in said crank-casing, a connecting rod connecting said crank-shaft with said piston-head, a cylindrical member providing an auxiliary gas-chamber in communication with said gas-passages or ducts, a spring-controlled piston-member arranged within said gas-chamber, and means connected with said crank-shaft for operating said piston-member to suck an auxiliary supply of gas into said auxiliary gas-chamber and subsequently discharge the same into said cylinder, substantially as and for the purposes set forth.

4. In an explosive-engine, the combination with a cylinder and a crank-casing having gas-passages or ducts communicating with the interior of said cylinder and crank-casing, of a piston-head arranged in said cylinder, a crank-shaft supported in said crank-casing, a connecting rod connecting said crank-shaft with said piston-head, a cylindrical member providing an auxiliary gas-chamber in communication with said gas-passages or ducts, a piston-member arranged within said gas-chamber, link-pins connected with said piston-member and extending into said crank-casing chamber, cam-members connected with said crank-shaft and operating in engagement with said link-pins to operate said piston-member, and an adjustable coil-spring in engagement with said piston-member to return the same upon the retreat of said cam-members, substantially as and for the purposes set forth.

5. In an explosive engine, the combination with a cylinder, of a crank-casing connected with said cylinder, said cylinder and crank-casing having communicating gas-passages or ducts formed in their walls, an upper and a lower port communicating with said gas-passages or ducts, a piston-head, an apron depending from said piston head having a piston-port therein, said piston-port registering at proper times with said lower and upper ports, a crank-shaft arranged in said crank-casing, a connecting rod connecting said crank-shaft with said piston-head, a cylindrical member connected with said crank-casing providing an auxiliary gas-chamber communicating with said gas-passages or ducts, a piston-member arranged in said gas-chamber, link-pins connected with said piston-members, cam-members connected with said crank-shaft and operating in engagement with said link-pins to operate said piston-member, a rod or stem connected with said piston-member, a guide-plate, a guide-block connected with said guide-plate adapted to slidably support said rod or stem, a flange providing a spring-seat connected with said guide-block, a coil-spring arranged between said spring-seat and said piston-member, and means for adjusting the position of said guide-block with relation to said guide-plate to control the tension of said coil-spring, substantially as and for the purposes set forth.

[Claim 6 not printed in the Gazette.]

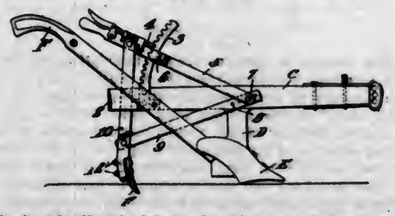
1,021,792. MAIL-BOX. CHARLES G. OVERMYER and GEORGE F. COLLINS, Coffeyville, Kans. Filed July 12, 1911. Serial No. 638,163. (Cl. 129—32.)



1. A mail box provided with a spring arm formed at one end with an angular portion secured to one side of the box, and serving as a torsion spring, said spring arm extending diagonally across the box and bearing at its outer end against the side of the box.

2. A mail box, a strip of sheet metal secured to one side of said mail box, a spring clamping arm having one end bent laterally and then into a V-shape and secured to said metallic strip, said spring arm extending diagonally across the box, and having a curved outer end bearing against the side of the box.

1,021,793. SUBSOILER ATTACHMENT FOR PLOWS. JAMES FRANKLIN PALMER, Greensboro, Ga., assignor of one-half to Simeon T. Ellis, Hagan, Ga. Filed Oct. 28, 1911. Serial No. 657,369. (Cl. 97—32.)



1. A subsoil attachment for plows, including a draw bar, a standard pivotally connected thereto, a share carried by the standard, a guide for the standard, separate means for securing the guide and the draw bar to a plow beam, an adjusting lever pivotally connected to the standard and draw bar, and coöperating means upon the guide and lever for holding said lever against movement relative to the guide.

2. A subsoil attachment for plows, including a draw bar, a standard pivotally connected thereto, a share secured to the standard, a guide for the standard, separate means for securing the guide and draw bar to a beam, an adjusting lever fulcrumed upon one of said means and pivotally connected to the standard, and coöperating means upon the guide and lever for locking said lever against movement relative to the guide.

3. A subsoil attachment for plows including a draw bar, a guide loop, separate means for securing the loop and bar to a plow beam, a standard pivotally connected to the beam and slidably mounted within the guide, a share carried by the standard, a lever fulcrumed upon one of the connecting means and pivotally connected to the standard, an arcuate rack bar extending from the guide loop, and means upon the lever and coöperating with the rack bar for locking said lever and the standard against movement relative to the beam.

4. The combination with a plow beam, of a subsoil attachment including a draw bar pivotally and adjustably connected to the beam, a guide loop secured to the rear end portion of the beam, a standard pivotally connected to the draw bar and slidably mounted within the loop, a lever fulcrumed upon the connection between the draw bar and beam, said lever being pivotally connected to the upper end of the standard, coöperating means upon the lever and loop for locking said lever against movement relative to the beam, and a share carried by the standard.

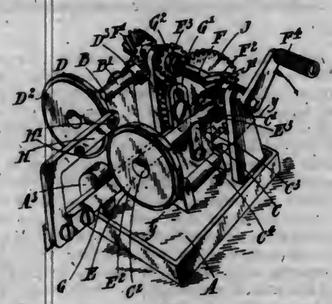
1,021,794. EXPANSION-BOLT ANCHOR. HENRY W. PLEISTER, Westfield, N. J., assignor to Henry B. Newhall, Plainfield, N. J. Filed Feb. 8, 1912. Serial No. 676,339. (Cl. 85—2.4.)



1. In combination with a substantially non-expansible body portion provided with one or more slots and free arms, one or more expanders mounted in the slots and carried by the body portion and adapted to move radially.

2. In combination in an expansion bolt anchor, a substantially non-expansible body portion provided with one or more slots and free arms, one or more expanders mounted in the slots, an open recess in one end of each expander, and means carried by the non-expansible body portion to coöperate with the open recess in each expander.

1,021,795. STROPPING-MACHINE FOR RAZORS. ARTHUR JAMES POSTANS, Brentford, England. Filed Jan. 13, 1911. Serial No. 602,384. (Cl. 51—16.)



1. In a stropping machine for razors the combination of, two stropping member supports movable to and from operative position, stropping members movably mounted one on each support and having their stropping faces opposed to each other, driving means for the stropping members, the driving means including means whereby driving in one direction moves the supports to bring the stropping members into operative position and driving in the reverse direction moves the supports to bring the members into non-operative position, and a carrier positioned to hold a razor-blade with its edge between and in contact with both stropping members simultaneously, substantially as set forth.

2. In a stropping machine for razors the combination of, two supports movable to and from operative position, stropping members movably mounted one on each support and having their stropping faces opposed to each other, driving means for the stropping members, the driving means including means whereby driving in one direction moves the supports to bring the stropping members into operative position and driving in the reverse direction moves the supports to bring the members into non-operative position, a movable carrier positioned to hold a razor-blade with its edge between and in contact with both stropping members simultaneously, a guide for the carrier to cause the carrier to move the blade lengthwise across the stropping members, and means for automatically reciprocating the carrier on the guide, substantially as set forth.

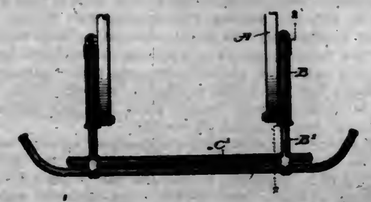
3. In a stropping machine for razors the combination of, two supports movable to and from each other, stropping members movably mounted one on each support and having their stropping faces opposed to each other, driving means for the stropping members, the driving means including means whereby driving in one direction moves the supports to bring the stropping members together and driving in the reverse direction moves such supports to separate the members, and a carrier positioned to hold a razor-blade with its edge between and in contact with both stropping members simultaneously, substantially as set forth.

4. In a stropping machine for razors the combination of, two supports movable to and from each other, stropping members movably mounted one on each support and having their stropping faces opposed to each other, driving means for the stropping members, the driving means including means whereby driving in one direction moves the supports to bring the stropping members together and driving in the reverse direction moves the supports to separate such members, a movable carrier positioned to hold a razor-blade with its edge between and in contact with both stropping members simultaneously, a guide for the carrier to cause the carrier to move the blade lengthwise across the stropping members, and means for automatically reciprocating the carrier on the guide, substantially as set forth.

5. In a stropping machine for razors the combination of, two movable supports, stropping disks rotatably mounted one on each support with their edges opposed to each other, a carrier positioned to hold a razor-blade with its edge between and in contact with the edges of both disks simultaneously, driving means to rotate the stropping disks, the driving means including means whereby driving in one direction moves the supports to bring the disks toward each other and against the blade and driving in the reverse direction moves the supports to separate the disks from the blade and from each other, substantially as set forth.

[Claims 6 to 16 not printed in the Gazette.]

1,021,796. AUTOMOBILE-FENDER. JOHN P. RANDERSON, Albany, N. Y. Filed Oct. 14, 1910. Serial No. 586,999. (Cl. 105—33.)



1. In a fender for automobiles, the combination, with the fender bar, of tubular supports containing cushioning springs, hinged members carrying the bar and passing

into the tubular supports, and means for holding the hinges within the tubular supports during operation, such means permitting their withdrawal when desired.

2. In a fender for automobiles, the combination, with the front bar, of tubular supports containing cushioning springs; supports for the front bar composed of two parts hinged together, the hinges being contained within the tubes when the fender is in use; and tension springs holding the hinged supports in place.

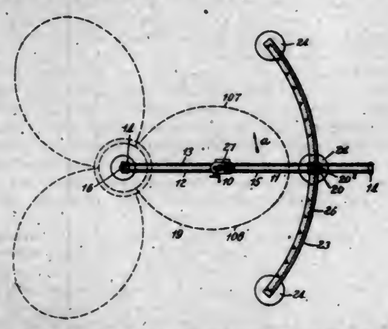
3. In a fender for automobiles, the combination, with the front bar and telescoping supports comprising an outer member and an inner member composed of parts hinged together, of means for supporting the inner member closely against one side of the outer member, as described.

4. In a fender for automobiles, the combination, with the front bar, tubular supports attached to the vehicle, hinged members carrying the bar and entering the supports, and cushioning springs therein; of gibs supporting the hinged members and located near the outer ends of the tubes.

5. In a fender for automobiles, the combination, with the front bar, of tubular supports attached to the vehicle, hinged members carrying the bar and entering the supports and cushioning springs therein, of spring-pressed gibs supporting the hinged members and located near the outer ends of the tubes.

[Claims 6 to 11 not printed in the Gazette.]

1,021,797. PITCHOMETER. WALTER F. RICE, Quincy, Mass., assignor to Fore River Shipbuilding Company, a Corporation of Massachusetts. Filed July 10, 1911. Serial No. 637,689. (Cl. 73—66.)



1. A pitchometer having, in combination, an arm adapted to be pivotally mounted concentric with the median axial line of a propeller, an annular plate concentric with said propeller, a slide piece fast to said arm adapted to slide on said plate, a measuring finger mounted on said arm and movable parallel to said axial line, an indicator, and means connecting said measuring finger and indicator, whereby, when said finger is moved parallel to said axial line, said indicator will be operated to change its reading.

2. A pitchometer having, in combination, an arm, adapted to be pivotally mounted concentric with the median axial line of a propeller, an annular plate concentric with said propeller, said plate having a scale thereon indicating angles of different degrees, a slide piece fast to said arm adapted to slide on said plate adjacent to said scale, a measuring finger mounted on said arm and movable parallel to said axial line, an indicator, and means connecting said measuring finger and indicator, whereby, when said finger is moved parallel to said axial line, said indicator will be operated to change its reading.

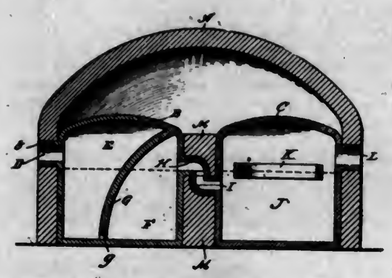
3. A pitchometer having, in combination, an arm, adapted to be pivotally mounted concentric with the median axial line of a propeller, a rotatable nut carried by said arm, a measuring finger having screw-threaded engagement with said nut and movable longitudinally thereof parallel to said axial line, means to prevent said measuring finger from rotating, a rotatable shaft carried by said arm, an index finger on said shaft, and mechanism connecting said nut and shaft whereby, when said nut is rotated, said shaft will be rotated and said finger will be moved parallel to said axial line.

4. A pitchometer having, in combination, an arm adapted to be pivotally mounted concentric with the median axial line of a propeller, a rotatable nut carried by said arm, a measuring finger having screw-threaded engagement with said nut and movable longitudinally thereof parallel to said axial line, means to prevent said measuring finger from rotating, a rotatable shaft carried by said arm, an index finger on said shaft, a plurality of trains of gears of different relative diameters connecting said nut and shaft, the final gear of each train rotatably mounted on said shaft, and means to lock each of said final gears one at a time to said shaft.

5. A pitchometer having, in combination, an arm adapted to be pivotally mounted concentric with the median axial line of a propeller, a rotatable nut carried by said arm, a measuring finger having screw-threaded engagement with said nut and movable longitudinally thereof parallel to said axial line, means to prevent said measuring finger from rotating, a rotatable shaft carried by said arm, an index finger on said shaft, a plurality of trains of gears of different relative diameters connecting said nut and shaft, the final gear of each train rotatably mounted on said shaft, a rod extending through said shaft longitudinally thereof and slidable therein, and a key fast to said rod projecting laterally therefrom through a slot provided in said shaft and adapted when in alinement therewith to project into a keyway provided in each of said final gears.

[Claims 6 to 9 not printed in the Gazette.]

1,021,798. POT-FURNACE. SOLON O. RICHARDSON, Jr., Toledo, Ohio. Filed Apr. 14, 1910. Serial No. 555,432. (Cl. 49—59.)



1. A continuous pot furnace, comprising the combination with the furnace, of means for supplying a reducing temperature to the interior thereof, a receiving pot mounted in the interior of said furnace, a working pot separate therefrom mounted in the interior of said furnace, said receiving pot being provided with a feed opening communicating with the exterior of said furnace and with a metal discharge opening communicating with said working pot, said working pot being provided with a metal receiving opening communicating with said receiving pot and with a working opening communicating with the exterior of the furnace, said receiving pot being divided by a partition into a reducing chamber and a planing chamber and being provided with a metal conduit establishing communication between said chambers, said pots and the communication between them being closed against the entrance of products of combustion from the interior of said furnace.

2. The combination with a glass furnace provided with a feed opening and a working opening, of a receiving and reducing pot mounted therein and provided with a feed opening fitted to the feed opening of the furnace, an internal partition provided with a metal passage below the metal level, and a discharge spout leading from a point in the interior of said pot on the side of said partition opposite to said feed opening, a working pot provided with a working opening fitted to the working opening of said furnace, and a feed spout leading to the interior of said pot, means for mechanically supporting said feed spout in a position communicating with the discharge spout of said first-named pot, said feed spout being arranged to support said discharge spout, and means for closing communication between said spouts and the interior of the furnace so as to exclude the gases within the furnace.

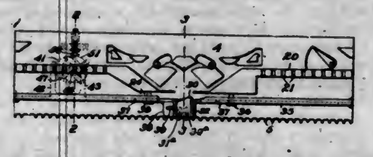
3. The combination with a glas furnace provided with a feed opening and a working opening, of a receiving and reducing pot mounted therein and provided with a feed opening fitted to the feed opening of the furnace, an internal partition provided with a metal passage below the metal level, and a discharge spout leading from a point in the interior of said pot on the side of said partition opposite to said feed opening, a working pot provided with a working opening fitted to the working opening of said furnace, and a feed spout leading to the interior of said pot, means for mechanically supporting said feed spout in a position communicating with the discharge spout of said first-named pot, said feed spout being arranged to support said discharge spout, and means for closing communication between said spouts and the interior of the furnace so as to exclude the gases within the furnace, said pots being so arranged with relation to each other that either pot may be removed from the furnace without disturbing the other pot.

4. The combination with a glass furnace, of means within the furnace constituting a reducing chamber, a planing chamber and a working chamber, which chambers are successively in communication with each other and closed against the entrance of products of combustion from the interior of the furnace; the reducing chamber being provided with a feed opening and the working chamber with a working opening, which openings are on opposite sides of said furnace.

5. The combination with a glass furnace, of means within said furnace constituting a reducing chamber, a planing chamber and a working chamber, which chambers are closed against the entrance of products of combustion from the interior of the furnace; the planing chamber being in communication with the chambers on either side of it at places respectively near the bottom of the communicating chambers and near the metal level.

[Claims 6 to 8 not printed in the Gazette.]

1,021,799. DROP-STITCH MECHANISM FOR KNITTING-MACHINES. FRANK W. ROBINSON, Reading, Pa., assignor, by mesne assignments, to The Nolde & Horst Co., Reading, Pa., a Corporation of Pennsylvania. Filed Dec. 3, 1910. Serial No. 595,332. (Cl. 66—21.)



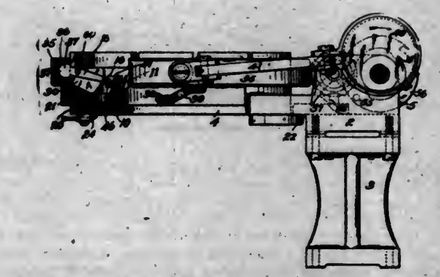
1. A knitting machine having a vertically movable needle cylinder and a cam cylinder provided with a fixed leveling ring having a series of notches adapted to permit the passage below said ring of determined drop-stitch needles only.

2. In a knitting machine, a cam cylinder carrying a plurality of vertically movable drop-stitch-needle lifters, and means for separately moving said lifters by successive rotations of the cam cylinder.

3. In a knitting machine, a cam cylinder carrying a plurality of vertically movable drop-stitch-needle lifters, and a cam ring engaging the several lifters so as to operate the latter successively by turning movements of the ring, and means for giving a step-by-stey movement to the ring by successive rotations of the cam cylinder.

4. A knitting machine having a series of needles with like hubs, a needle cylinder with guide grooves for said needles certain only of which are provided with wedge off-sets adapted to deflect the hub portions of the corresponding depressed needles, a cam cylinder provided with separate hub engaging lifters for the deflected and undeflected needles respectively, and means for separately moving said lifters by successive rotations of the cam cylinder.

1,021,800. LOOP-DOUBLING MECHANISM. FRANK W. ROBINSON, Reading, Pa., assignor, by mesne assignments, to The Nolde & Horst Co., Reading, Pa., a Corporation of Pennsylvania. Filed Feb. 15, 1911. Serial No. 608,795. (Cl. 66—32.)



1. In combination with a supporting frame, a quill ring provided with a circular series of loop-holding quill points, a loop picker and mechanism for reciprocatively operating the same, and means for automatically presenting one determined quill point to said picker during the movement of the latter in one direction and another determined quill point during the reverse movement thereof.

2. In combination with a supporting frame, a quill ring provided with a circular series of loop-holding quill points, a loop picker and mechanism for reciprocatively operating the same, and means for successively presenting adjacent quill points to successive movements of said picker in one direction and different determined quill points to the corresponding reverse movements thereof.

3. In combination with a supporting frame, a quill ring provided with a circular series of loop-holding quill points, a loop picker and mechanism for reciprocatively operating the same, means for holding said ring so as to present a determined quill point to the outward movement of said picker, and means for turning said ring so as to present another determined quill point to the reverse movement thereof.

4. In combination with a supporting frame, a quill ring provided with a circular series of loop-holding quill points, a loop picker pivotally mounted in said frame, means for imparting a reciprocating movement to said picker, and coacting means for turning said ring so as to present different determined points to the picker during each to and fro movement thereof substantially as set forth.

5. In combination with a supporting frame, a quill ring provided with a circular series of loop-holding quill points, a loop picker pivotally mounted in said frame, means adapted to impart a rocking movement to said picker, and mechanism for jointly operating said means and the quill ring substantially as set forth.

[Claims 6 to 18 not printed in the Gazette.]

1,021,801. CAN-OPENER. THOMAS HENRY RUSSELL, Clacton-on-Sea, England. Filed May 29, 1911. Serial No. 630,193. (Cl. 30—3.)



A can opener comprising in combination with a handle, a guard projecting from said handle, a blade secured to

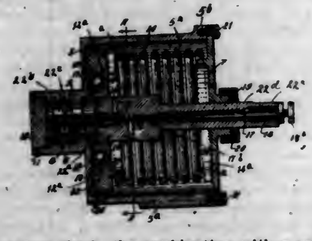
said guard, said guard having a groove, said groove being angular in cross section and decreasing in depth from the forward end of the guard rearward, said blade having a cutting edge, said cutting edge adjacent the guard being substantially parallel with the bottom of the said groove but lying in a different vertical plane, and said blade having a shoulder, said shoulder formed on the blade at a point in front of the end of the said guard and said shoulder having a bull nosed beak projecting therefrom, as and for the purpose set forth.

1,021,802. GUARD-ATTACHING BRACKET. FRITZ W. SCHMIDT, New Holstein, Wis. Filed Sept. 27, 1910. Serial No. 584,065. (Cl. 56—129.)



In a harvester having a finger bar, a guard finger fitted to the finger bar, and a retaining bolt for the guard finger; the combination of a bracket comprising vertically disposed parallel apertured ears, a housing web connecting the ears provided with a pocket for incasing the guard finger retaining bolt, horizontally disposed apertured feet extending from the bracket ears and arranged to straddle the guard finger bolt, independent bracket retaining bolts connecting the feet and finger bar upon opposite sides of its shank portion, an oscillatory guard having a hub extension pivotally mounted between the bracket ears, the oscillatory guard being provided with a forwardly disposed slot adapted to receive the point of the guard finger.

1,021,803. DOOR-CHECK. JOHN C. SCHMIDT, Chicago, Ill., assignor to Famous Door Check Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 12, 1911. Serial No. 620,596. (Cl. 16—88.)



1. In a door check, the combination with a casing, having a common liquid and spring chamber, a plunger adapted to rotate and reciprocate in said chamber, and having valve controlled passages extending therethrough, a hollow stem fixed on the plunger, having threads engaging a threaded extension on said casing, and having a duct forming a communication between the casing chamber and the bore of the stem, a valve controlling said duct and arranged in said stem, and a spring in said chamber bearing against and adapted to rotate said plunger in one direction.

2. In a door check, the combination with a cylindrical casing, having an oil and spring chamber co-extensive therewith, a plunger adapted to rotate and reciprocate therein, and having valve controlled passages extending therethrough, a reciprocating hollow stem on said plunger having threads engaging female threads in an extension at the bottom of said casing, and having ducts extending radially therethrough, a cut-off valve slidably mounted in the bore of said stem and adapted to control one of said ducts upon the longitudinal movement of the plunger, a second valve adjustably arranged in said stem and adapted to control the other duct, and a torsion spring arranged in said casing bearing against and adapted to rotate said plunger and stem.

3. In a door-check, the combination with a casing having a common liquid and spring chamber and an extension at the bottom thereof, a plunger adapted to reciprocate and also to rotate in said chamber, and having valve-controlled apertures therein, a hollow stem fixed on said plunger having a radial duct therein, a needle valve controlling said duct, said stem having a second duct extending radially thereof, a valve arranged in said stem and adapted to control said second duct and independent of the needle valve, a spring for said valve, and a torsion spring mounted in said chamber bearing against and adapted to rotate said plunger in one direction.

4. In a door-check, the combination with a casing having a liquid and spring chamber co-extensive therewith, a plunger adapted to reciprocate and also to rotate within said chamber, a hollow stem for said plunger having radial ducts forming communications between the bore of the stem and said chamber, a tubular valve arranged axially in said stem and adapted to control one of said ducts, a spring for said valve, an adjustable needle-valve controlling the other of said ducts, and having a stem projecting externally of the casing, and a torsion spring surrounding the stem of the plunger bearing against and adapted to rotate the plunger in one direction.

5. In a door-check, a casing having a common spring and liquid chamber, a plunger mounted in said casing and having valve-controlled passages therethrough, a hollow stem secured to the plunger and having radially arranged ducts therein communicating with the bore of the stem and said casing chamber, a tubular cut-off valve yieldingly arranged in said stem and adapted to control one of said ducts, and a needle-valve adapted to control the other of said ducts.

[Claim 6 not printed in the Gazette.]

1,021,804. ARMOR. ANNA MARGARETHA SCHNEIDER, Los Angeles, Cal. Filed Dec. 12, 1910. Serial No. 596,910. (Cl. 89—36.)

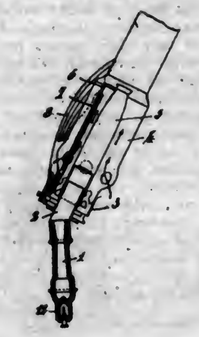


An armor formed of a plurality of metal plates assembled edge wise, each of said plates being quadrilateral and two of the edges being concavely curved and the other two convexly curved, the convex edges of each plate fitting into the concave edges of the next adjacent plates, substantially as described.

1,021,805. GAS-LIGHTING. PAUL GREYSON DE SCHODT, Namur, Belgium. Filed May 23, 1910. Serial No. 563,009. (Cl. 67—95.)

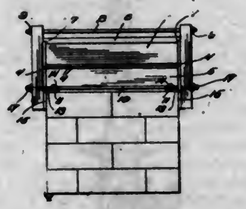
1. In incandescent lighting systems the combination of a mantle fitted upon a burner and arranged in a direction deviated from a vertical, a glass chimney arranged around said mantle, a chimney connected to said glass chimney for producing a draft and for allowing a current of air to pass through said glass chimney thus imparting a certain degree of rigidity to the flame and allowing it to take up a path substantially parallel to the axis of said mantle, and means for reflecting the light emitted by the face of the mantle opposite to that affording direct illumination.

2. In incandescent lighting systems the combination of a burner, a rigid mantle fitted in conjunction therewith and arranged in a direction deviated from a vertical, a long necked chimney arranged around said mantle on said burner, and constituting means for causing a current



of air to pass through said chimney around said mantle and for enabling a flame to issue along a path substantially parallel with the axis of said mantle.

1,021,806. APPARATUS FOR CONSTRUCTING CONCRETE PIERS, WALLS, AND THE LIKE. SAMUEL L. SHAFFER, Philadelphia, Pa. Filed Aug. 11, 1911. Serial No. 643,533. (Cl. 25—131.)



1. A device of the character described, comprising side planks, stay pieces spacing the upper edges of the upper planks, vertical stanchions against the side planks, rods projected through the upper ends of said stanchions, nuts screwed onto said rods, said stanchions and said planks having registering openings near their lower ends, rod frames positioned between the planks, and comprising angle irons, parallel rods projected through said angle irons and upset at their ends, said angle irons having openings, nuts against said angle irons registering with the openings, and held against rotary movement by the engagement of said nuts with the horizontal members of said angle irons, and bolts projected through the openings in the stanchions, planks and angle irons, and screwed into the nuts, substantially as described.

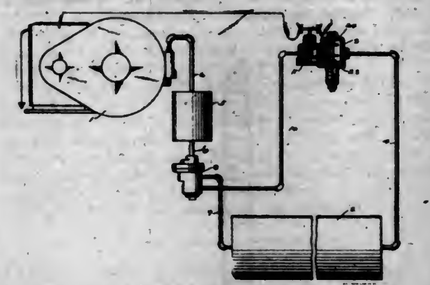
2. A device of the character described, comprising side planks, stay pieces spacing the upper edges of the upper planks, vertical stanchions against the side planks, rods projected through the upper ends of said stanchions, nuts screwed onto said rods, said stanchions and said planks having registering openings near their lower ends, rod frames positioned between the planks, and comprising angle irons, parallel rods projected through said angle irons and upset at their ends, said angle irons having openings, nuts against said angle irons registering with the openings, and held against rotary movement by the engagement of said nuts with the horizontal members of said angle irons, eye-bolts projected through the openings in the stanchions, planks and angle irons, and screwed into the nuts, and washers around said eye-bolts interposed between the eye ends of the bolts and the stanchions, substantially as described.

1,021,807. NUT-LOCK. WILLIAM ECKFORD SMITH, Winnipeg, Manitoba, Canada, assignor of one-third to Joseph Edward Acton and one-third to Thomas Henry Cairns, Winnipeg, Canada. Filed Mar. 30, 1911. Serial No. 617,908. (Cl. 151—59.)



A nut lock comprising a base plate having an opening at one end adapted to receive the end of the bolt, and having at the opposite end a bifurcated portion, and a locking plate having one end pivoted in the bifurcated portion of the plate and its opposite end adapted to abut against the side of the nut, said pivoted end having a serrated portion eccentric to the axis of the pivot and adapted, when said locking plate is swung down into locking position, to engage the part to which the nut lock is applied, substantially as described.

1,021,808. UNLOADING DEVICE FOR PUMPS. WALTER V. TURNER, Edgewood, Pa., assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Aug. 8, 1908. Serial No. 447,531. (Cl. 230—24.)



1. The combination with a pump, a storage reservoir for the fluid compressed by the pump, a governor for said pump and a receptacle intermediate the pump and reservoir into which the pump is adapted to compress fluid, of a valve device operated by fluid under pressure controlled by the governor for controlling an exhaust port from said receptacle.

2. The combination with a pump, a storage reservoir for the fluid compressed by the pump, and a receptacle intermediate the pump and reservoir into which the pump is adapted to compress fluid, of a valve for controlling an exhaust port from said receptacle, a movable abutment for operating said valve subject on one side to fluid pressure and having means tending to equalize the fluid pressures on opposite sides thereof, and means operating upon cutting the pump into action for releasing fluid from one side of said abutment to actuate the valve and open said exhaust port.

3. The combination with a pump, a storage reservoir for receiving fluid compressed by the pump, a receptacle intermediate the pump and reservoir into which the pump is adapted to compress fluid, and a governor operating according to the degree of pump pressure for cutting the pump into and out of action, of a valve for controlling an exhaust port from said receptacle, a movable abutment subject on one side to pump pressure for operating said valve, and means controlled by the governor for varying the fluid pressure on the opposite side of said abutment to actuate the same.

4. The combination with a pump, a storage reservoir for receiving fluid compressed by the pump, a receptacle intermediate the pump and reservoir into which the pump is adapted to compress fluid, and a governor operating

according to the degree of pump pressure for cutting the pump into and out of action, of a valve for controlling an exhaust port from said receptacle, a movable abutment subject on one side to pump pressure for operating said valve, said governor having means adapted upon movement to the cut out position to admit fluid under pressure to the opposite side of said abutment and upon movement to the cut in position to release fluid therefrom and thereby actuate the valve to open said exhaust port.

5. The combination with a pump, a storage reservoir for receiving fluid compressed by the pump, a receptacle intermediate the pump and reservoir into which the pump is adapted to compress fluid, and a governor operating according to the degree of pump pressure for cutting the pump into and out of action, of a valve for controlling an exhaust port from said receptacle, a movable abutment subject on one side to pump pressure for operating said valve, said governor comprising a piston for actuating an electric switch and adapted to control a port leading to said movable abutment, whereby in one position of the switch actuating piston fluid under pressure is admitted to the abutment and in another position said abutment is open to the atmosphere.

[Claims 6 to 12 not printed in the Gazette.]

1,021,809. CYSTOSCOPE. REINHOLD H. WAPPLER, New York, N. Y., assignor to American Cystoscope Makers, Inc., New York, N. Y., a Corporation. Filed Jan. 21, 1911. Serial No. 603,794. (Cl. 88—1.)



1. In an optical instrument of the class described, an objective socket having a bore that constitutes part of a sphere and a fenestral opening communicating with said bore, and a refracting and reflecting convex lens fitted into said bore the radius of curvature of the lens equaling substantially that of the bore.

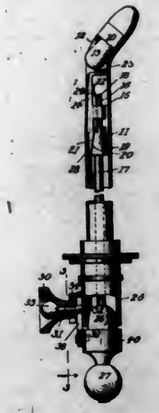
2. In an optical instrument of the class described, an objective socket having a bore that constitutes part of a sphere and a fenestral opening communicating with said bore, a refracting and reflecting convex lens within the bore, the radius of curvature of the lens equaling substantially that of the bore and means for retaining the lens within the bore.

3. In an optical instrument of the class described, an objective socket having a fenestral opening and a communicating bore that constitutes part of a sphere and merges into a cylindrical bore, a refracting and reflecting convex lens fitted into the first named bore, and a disk fitted into the second named bore for retaining the lens in position.

4. In an optical instrument of the class described, an objective socket having a fenestral opening and a communicating bore that constitutes part of a sphere and merges into a cylindrical bore, a refracting and reflecting convex lens fitted into the first named bore, a disk fitted into the second named bore for retaining the lens in position, and a pair of additional lenses fitted into the socket and coöperating with the first named lens.

5. An optical instrument of the class described, composed of a tube, an objective socket tapped into one end thereof and having a fenestral opening and a communicating hemi-spherical bore that merges into a cylindrical bore, a hemi-spherical lens fitted into the spherical bore with its light-admitting plane flush with the window and with its reflecting plane alined with the boundary between the hemi-spherical and cylindrical socket-bores, a disk fitted into the cylindrical bore for retaining said lens in position, a pair of additional lenses fitted into the socket and coöperating with the first named lens, a plurality of light-carrying and reversing lens-aggregates within the tube, an ocular socket tapped into the other end of said tube, a reversing prism within said socket, the base of which is so set relatively to the light-admitting plane of the first named lens that an upright rightsided image is obtained, and a magnifying lens intermediate the lens-aggregates and the prism.

1,021,810. CYSTOSCOPE. REINHOLD H. WAPPLER and ROBERT JUNG, New York, N. Y., assignors to American Cystoscope Makers, Inc., New York, N. Y. Filed July 22, 1911. Serial No. 640,046. (Cl. 128—24.)



1. In a cystoscope, a tube provided with a fenestral opening, a rod adapted to be inserted into said tube, an obturator slidable on said rod, an abutment adapted to be engaged by the obturator, and means actuated upon an advance of the rod for projecting the obturator into the fenestral opening of the tube.

2. In a cystoscope, a tube provided with a fenestral opening, a rod adapted to be inserted into said tube, an obturator slidable on said rod and having a bevel, an abutment adapted to be engaged by the obturator, and means on the rod adapted to engage the bevel of the obturator.

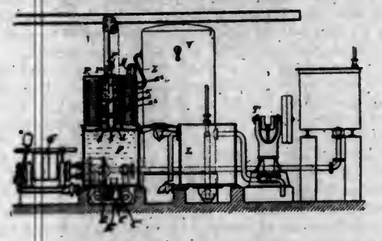
3. In a cystoscope, a tube provided with a fenestral opening, a rod adapted to be inserted into said tube, an obturator slidable on said rod and having a bevel, an abutment adapted to be engaged by the obturator, and a beveled collar on the rod that is adapted to engage the bevel of the obturator.

4. In a cystoscope, a tube provided with a fenestral opening, a rod adapted to be inserted into said tube, an obturator slidable on said rod and having a bevel, an abutment adapted to be engaged by the obturator, a beveled collar on the rod adapted to engage the first named bevel for projecting the obturator into the fenestral opening of the tube, an offset on the obturator which is adapted to engage the inner face of the tube, and a spring for withdrawing said offset from engagement with the tube.

5. In a cystoscope, a tube provided with a fenestral opening, an obturator adapted to be projected into said opening, a rod carrying the obturator, and means for reciprocating said rod.

[Claims 6 to 8 not printed in the Gazette.]

1,021,811. DYEING APPARATUS. HERMANN WINDRATH and HUBERT EICKEN, Grevenbroich, Germany. Filed Nov. 2, 1909. Serial No. 525,901. (Cl. 8—17.)



1. In a dyeing apparatus for textile fabric, a tank adapted to contain dyeing liquid and having an inlet and an outlet in the bottom thereof, a hollow, perforated carrier for the fabric adapted to be lowered into said tank and having ports adapted to register with said inlet and outlet ports, a bell removably secured around said carrier and adapted to be lowered therewith into said tank, and suction means communicating with the inlet and outlet for establishing a current of the liquid through the carrier and bell and fabric.

2. In a dyeing apparatus of the kind described the combination with the circular dye tank and the carrier for the material, this carrier having the shape of a hollow cylinder adapted to movably and tightly engage the said dye tank, means for raising and lowering the said carrier in said tank, a bell provided over the said carrier and adapted when the latter is lowered to dip with its lower edge in the dye contained in the tank thereby sealing the carrier, a vacuum plant, a flexible pipe connection between the said vacuum plant and the said bell, a cock in the said flexible pipe connection, whereby the air can be withdrawn from the bell, the carrier and the material, when the carrier is dipped into the dye, while when the carrier is removed from the tank, the air is prevented from arriving too rapidly at the material, substantially as and for the purpose described.

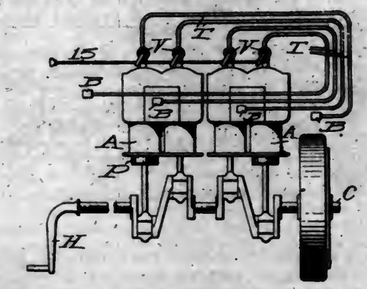
3. A dyeing apparatus for textile fabric comprising a tank adapted to contain dyeing liquid and having an inlet and an outlet in the bottom thereof, a hollow, perforated carrier adapted to be lowered into said tank and having openings adapted to register with said inlet and outlet, said carrier having a horizontal partition dividing it into a lower and upper chamber, a pipe communicating with the upper chamber, a bell surrounding the carrier and having air exhaust means connected therewith, and suction means connected with said inlet and outlet for establishing a current of said liquid through the textile fabric.

4. A dyeing apparatus for textile fabric comprising a tank for containing dyeing liquid, a carrier for textile fabric, a bell surrounding the carrier and fabric, means co-acting with the liquid for exhausting air from the textile fabric and means for establishing a current of the liquid through the fabric while the air is exhausted therefrom.

1,021,812. STARTING DEVICE FOR EXPLOSIVE-ENGINES. EDWARD M. WOOD, Worcester, Mass. Filed Apr. 7, 1910. Serial No. 553,914. (Cl. 123—80.)

1. In a starting device for an explosive gas engine, the combination of a cylinder, a storage chamber of large capacity connected thereto and normally open to the atmosphere at all times, and a valve between the cylinder and chamber.

2. In a starting device for an explosive gas engine, the combination of the cylinder, a storage chamber of large capacity connected to the explosion chamber and having an opening to the atmosphere, and an outwardly opening check-valve controlling said opening.



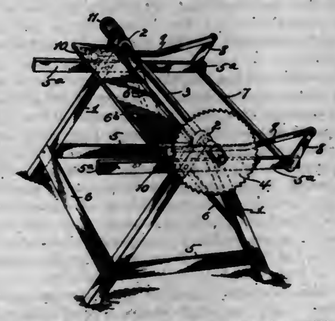
3. In a starting device for an explosive gas engine, the combination of the cylinder, a storage chamber of large capacity connected to the explosion chamber and having an opening to the atmosphere, and an outwardly opening check valve which cannot entirely or tightly seat, controlling said opening.

4. In a starting device for an explosive gas engine, the combination of the cylinder, a storage chamber of large capacity connected to the explosion chamber thereof and made in the form of a long tube of small cross section, and a valve for controlling communication between the storage chamber and explosion chamber.

5. In a starting device for an explosive gas engine, the combination of the cylinder, a storage chamber of large capacity connected to the explosion chamber, said storage chamber being made in the form of a long tube of small cross section having an opening to the atmosphere at all times, and a valve controlling communication between the explosion chamber and the storage chamber.

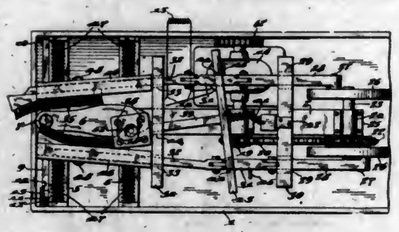
[Claims 6 to 10 not printed in the Gazette.]

1,021,813. WOOD-SAWING MACHINE. ABRAHAM M. ZIMMERMAN, Lancaster, Pa. Filed Mar. 24, 1911. Serial No. 616,668. (Cl. 143—58.)



In wood sawing machine, the combination with a frame comprising two inverted V-shaped end members connected together, a shaft journaled in the upper ends of said members and a saw on said shaft, of a track secured to each end member and projecting at the front and rear beyond the same, a carriage mounted on the tracks in rear of the frame, each end of the carriage being supported on a single track engaging member, a pitman adjacent each end of the carriage and projecting forwardly and a rock shaft journaled in the tracks adjacent the front ends of the latter and provided with arms to which the front ends of the pitmen are pivotally connected.

1,021,814. SHOE-SHINING MACHINE. PAUL AMADEO, Shenandoah, Pa. Filed Oct. 17, 1911. Serial No. 655,153. (Cl. 15—61.)



1. In a shoe shining machine, the combination with a casing, a frame in the casing, a motor in the casing, and a foot support in the casing, of spring-pressed guides, side brushes slidably mounted therein, and means to reciprocate the brushes, substantially as described.

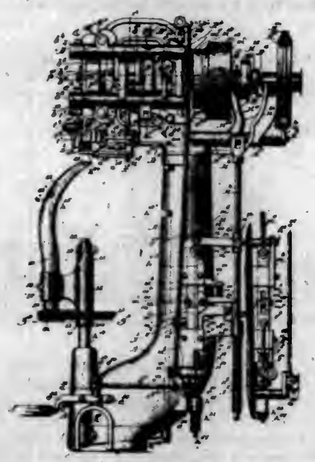
2. In a shoe shining machine, the combination with a casing, a frame in the casing, a motor in the casing, and a foot support in the casing, of a shaft driven by said motor, crank pins on said shaft located opposite each other, longitudinally movable brushes, links connecting said brushes with the crank pins, a transversely movable toe brush, means operated by the movement of the longitudinal brushes to move the toe brush transversely, a bar fixed to the toe brush, and a spring secured to the end of said bar and connecting the same to a rigid part of said frame, substantially as described.

3. In a shoe shining machine, the combination with a casing, a frame in the casing, a motor in the casing, and a foot support in the casing, of a shaft driven by said motor, longitudinally movable bars supported in said frame, brushes on said bars adapted to engage the sides of a shoe, crank disks on said shaft, pitmen connected to said crank disks, links connecting said pitmen and bars, a toe brush, a bar secured to said toe brush, a bracket on the frame, a spring connecting said bar and said bracket, a transverse bar secured to said toe brush bar and having openings through which the links are adapted to slide, and pins on said links adapted to engage said last-mentioned bar, whereby a transverse movement is imparted to the toe brush while a longitudinal movement is imparted to the side brushes, substantially as described.

4. In a shoe shining machine, the combination with a casing, a frame in the casing, a motor in the casing, and a foot support in the casing, of a shaft driven by said motor, longitudinally movable bars supported in said frame, brushes on said bars adapted to engage the sides of a shoe, crank disks on said shaft, pitmen connected to said crank disks, links connecting said pitmen and bars, a toe brush, a bar secured to said toe brush, a bracket on the frame, a spring connecting said bar and said bracket, a transverse bar secured to said toe brush bar and having openings through which the links are adapted to slide, pins on said links adapted to engage said last-mentioned bar, whereby a transverse movement is imparted to the toe brush while a longitudinal movement is imparted to the side brushes, and guides for said longitudinal brushes, substantially as described.

5. In a shoe shining machine, the combination with a casing, a frame in the casing, a motor in the casing, and a foot support in the casing, of a shaft driven by said motor, crank pins on said shaft located opposite each other, longitudinally movable brushes, links connecting said brushes with the crank pins, a transversely movable toe brush, means operated by the movement of the longitudinal brushes to move the toe brush transversely, said toe brush having a passage therethrough, and means for supplying polish to said passage, substantially as described.

1,021,815. PEGGING-MACHINE. ORRELL ASHTON, Lawrence, Mass., assignor to United Shoe-Machinery Company, Boston, Mass., a Corporation of New Jersey. Filed May 29, 1901. Serial No. 62,341. (Cl. 1—23.)



1. In a machine of the class described, a plurality of awls movable successively into stock during a single cycle of operations of the machine to form awl holes in a plurality of rows extending along the line of feed of the stock, and actuating devices therefor.

2. In a machine of the class described, a plurality of awls movable separately into stock to form a plurality of awl holes along the line of feed of the stock, one awl being movable also to feed the stock, and actuating devices therefor.

3. In a machine of the class described, a plurality of awls, actuating mechanism therefor constructed and arranged to cause the awls to enter the stock successively to form therein openings for fastenings, and additional co-acting mechanism for feeding the stock laterally while one awl only is in the stock.

4. In a machine of the class described, the combination with a plurality of stock-penetrating awls, of mechanism for operating all of them to prick a plurality of awl holes, and means for causing one of them to feed the stock when the other or others are out of the stock.

5. In a machine of the class described, a main awl, means to actuate said awl to enter the stock, means to move said awl to feed the stock, an auxiliary awl, and means to actuate said auxiliary awl to enter the stock.

[Claims 6 to 84 not printed in the Gazette.]

1,021,816. OUTER COVER FOR PNEUMATIC TIRES. JOHN CHARLES BARKER, Leeds, England. Filed June 28, 1911. Serial No. 635,704. (Cl. 152—14.)



1. An outer covering for pneumatic tires provided with integral projections covering the entire tread surface, the said projections being arranged in two rows in staggering manner, each projection being provided with an outer side of slight inclination to the axis of the wheel and an opposite side of considerable inclination extending to the opposite border of the tread between two of the projections of the opposite row.

2. An outer covering for pneumatic tires provided on its tread portion with integral projections arranged in rows, each projection being provided with a flat face inclined with respect to the axis of the wheel extending between two of the projections of an adjoining row and bordering on said projections, said face having a straight upper border in the line of travel of the tire.

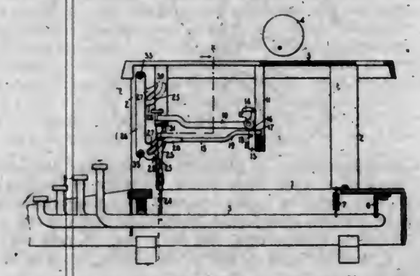
3. An outer covering for pneumatic tires provided on its tread portion with integral projections each having a flat top or tread with a straight inner border line and a flat face of considerable inclination to the axis of the wheel extending downward and laterally from said line between two other projections and to the same.

4. An outer covering for pneumatic tires provided with two rows of four-sided frusto pyramidal integral projections arranged around the tread of the tire in staggering manner and entirely covering said tread, each projection having a flat face inclined at an angle to the axis of the wheel, having its upper edge in a straight line and sloping across the tire to the opposite side thereof between two projections of the other row, and bordering on them.

5. An outer covering for pneumatic tires provided on its tread portion with integral projections arranged in rows in a staggering manner and entirely covering said tread, each of said projections having a flat straight sided top or tread, an approximately vertical flat outer face, a flat inner face, considerably inclined to the axis of the wheel and extending between and bordering on two projections of another row and two additional sides substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

1,021,817. TYPE-WRITING MACHINE. GLENN J. BARRETT, Grand Rapids, Mich., assignor, by mesne assignments, to Union Typewriter Company, Jersey City, N. J., a Corporation of New Jersey. Filed Feb. 6, 1911. Serial No. 606,844. (Cl. 197—27.)



1. In a typewriting machine, the combination of a type bar; a finger key; intermediate actuating connections between said finger key and type bar for actuating the latter by a depression of said key, said connections comprising a link connected directly with the type bar, means for moving the link transversely at the actuation of a key; and a cam with which certain of said intermediate connections coöperate and which is cammed thereby at each printing operation for effecting a longitudinal movement of said link when it is moved transversely.

2. In a typewriting machine, the combination of a type bar; a finger key; intermediate actuating connections between said finger key and type bar, said connections comprising a link operatively connected at one end to the type bar, means for moving said link transversely at the actuation of a key; and a fixed cam with which said link is coöperative to cam the link longitudinally toward the front of the machine when the link is moved transversely.

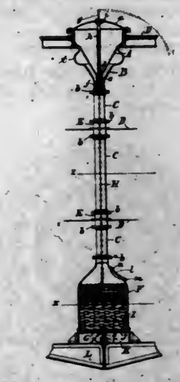
3. In a typewriting machine, the combination of a type bar; a finger key; intermediate actuating connections between said finger key and type bar, said connections comprising a link operatively connected at one end to the type bar, means for moving said link transversely at the actuation of a key; a slotted cam; and a follower on said link engaging said slotted cam to effect a longitudinal movement of the link when it is moved transversely.

4. In a typewriting machine, the combination of a type bar, a key lever for actuating the type bar by a depression of said key lever, a link operatively connected to said type bar and which receives a swinging movement at one end thereof, a cam which is engaged by said link and effects a longitudinal movement of the link when said link is swung to move transversely, and a second link which connects the first mentioned link and key lever.

5. In a front strike typewriting machine, the combination of an upwardly and rearwardly striking type bar, a link operatively connected to said type bar and extending forwardly therefrom, a cam with which said link coöperates for effecting a longitudinal movement of said link by camming it forwardly when said link is moved transversely; and an upwardly extending key actuated link connected with the first mentioned link for moving it transversely.

[Claims 6 to 39 not printed in the Gazette.]

1,021,818. SHIP LOCATOR AND RAISER. WILLIAM NAPOLEON BELL, Norfolk, Va. Filed Feb. 10, 1911. Serial No. 607,885. (Cl. 114—50.)



1. In combination with a ship, a pipe extending from the upper deck to the bottom thereof, a conical shaped buoy pocket secured to the upper end of the said pipe and having an annular swell, a receptacle secured to the lower end of the said pipe, a perforated bottom for the said receptacle, the bottom of the ship being spaced from the receptacle, a raising chain secured to the bottom of the vessel and arranged within the said receptacle, a smaller chain secured to the said chain and extending up the said pipe, an inverted conical shaped buoy fitting in the said pocket and attached to the upper end of the said smaller chain, whereby upon the ship sinking, the buoy is made to rise to the surface carrying with it the smaller chain.

2. In combination with a ship, a pipe extending from the upper deck to the bottom thereof, a buoy pocket secured to the upper end of the said pipe, a receptacle secured to the lower end of the said pipe, a perforated bottom for the said receptacle, the bottom of the ship being spaced from the receptacle, a bracket secured to the bottom, a bracket pivoted to the said bracket and extending through the center of the said bottom, a raising chain secured to the latter bracket and arranged within the said receptacle, a smaller chain secured to the said chain and extending up the said pipe, and a buoy arranged within the said pocket and attached to the upper end of the said smaller chain, whereby upon the ship sinking, the buoy rises to the surface carrying with it the smaller chain.

3. In combination with a ship, a pipe extending from the upper deck to the bottom and communicating with the bottom of the vessel, a conical shaped pocket secured to the upper end thereof and having an annular swell, an inverted conical shaped buoy fitting within the said pocket, and a chain attached to the lower end of the said buoy and extending down the said pipe.

1,021,819. BOOT OR SHOE. MÉDÉRIC BRIHAYE, Glageon, France. Filed May 8, 1909. Serial No. 494,911. (Cl. 36—45.)

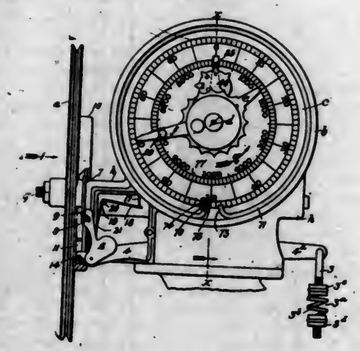


1. In a boot or shoe, the combination of an upper and a vamp each in a single piece and comprising soft tanned parts and stiff tanned parts.

2. In a boot or shoe, the combination of an upper and a vamp each in a single piece and comprising soft tanned parts and parts stiffened by chrome tanning.

3. In a boot or shoe, a combined upper and vamp comprising soft tanned parts and stiff tanned parts, the stiff tanned parts being located at the heel and toe portions of the upper and vamp, respectively, whereby the necessity for counter and toe cap stiffeners at these points is obviated.

1,021,820. INDICATOR AND STOP DEVICE. CARL A. BRINK, Bay Spring, R. I. Filed Aug. 19, 1907. Serial No. 389,271. (Cl. 73—9.)



1. In a registering and stop-controlling device for a machine, the combination with the stop-control mechanism of the machine, of means to indicate the number of operations performed by the machine, including a stationary dial and hands rotatable about the dial at different rates of movement, and means to cause the action of the stop-control mechanism, controlled by the joint action of the hands.

2. The combination in a registering and stop-controlling device having a dial and hands rotatable about the dial, of a flange surrounding the dial, provided with a groove, and a spring ring engaging the groove and provided with a stop-gage adapted to be engaged by one of the hands.

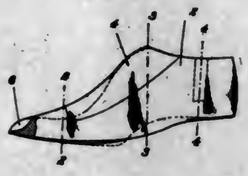
3. In a registering and stop-controlling device for a machine, the combination with the stop-control mechanism of the machine, of a dial, independent hands rotatable about the dial, means to turn the hands at different rates of movement, and means operative when concurrently engaged by the hands to cause the operation of the stop-control mechanism.

4. The combination in a registering and stop-controlling device with the stop-control mechanism of a machine, of a plurality of indicating hands, means to operate the hands at different rates of movement, and means intermediate the hands and the stop-control mechanism adapted to be engaged first by one hand and then by the other to actuate the stop-control mechanism.

5. The combination in a device of the character described with the stop-control mechanism of a machine of two indicating hands, means to move the hands, and means engaged by one hand to be moved into position to be engaged by the other hand to cause the action of the stop-control device.

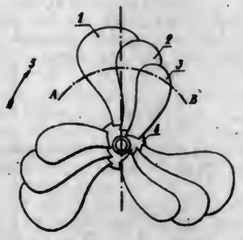
[Claims 6 to 28 not printed in the Gazette.]

1,021,821. LAST. ELI BROTHERS, Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Sept. 23, 1908. Serial No. 454,439. (Cl. 12—133.)



A last, having a cavity of greater width and length than depth in the upper side of the toe for the purpose described.

1,021,822. SCREW-PROPELLER. FERNAND BROUSSOUSE, Liege, Belgium. Filed July 11, 1910. Serial No. 571,441. (Cl. 115—46.)



A propeller having a plurality of helicoidal elements consisting of a main blade and a plurality of directing blades, said directing blades arranged with their entrance edges *en echelon* behind said main blade, the pitches of said directing blades being less than that of said main blade and decreasing progressively from one another rearward.

1,021,823. DRAIN-TRAP. SAMUEL G. BROWN, Lynn, Mass. Filed May 15, 1911. Serial No. 627,144. (Cl. 182—10.)



1. An oil-and-sediment retaining floor draining trap, having, in combination, a main pot, a drain connection opening under the normal water level in said pot and forming a sewer gas trap, an open topped deposit pot set into the main pot and hinged at one side thereof whereby it may be lifted to discharge the sediment accumulated therein, a main cover hinged to the top of the main pot and having an opening over the open top of the deposit pot, a flange formed on the under side of said cover encircling the opening and extending downwardly into the deposit pot so as to form with the surface of the water in the deposit pot an oil retaining reservoir, and a perforated lid hinged to the main cover to protect said opening and allow easy access for the removal of the oil without raising the main cover, substantially as described.

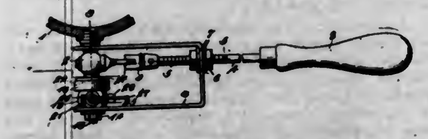
2. An oil-and-sediment-retaining floor draining trap, having, in combination, a main pot, a drain connection for the main pot, an open topped deposit pot set into the top of the main pot and hinged at one side thereof whereby it may be lifted to discharge the sediment accumulated therein, a main cover hinged to the side of the main pot opposite the deposit pot hinge and having an opening over the open top of the deposit pot, a flange formed on the under side of said cover encircling the opening and extending downwardly into the deposit pot so as to form with the surface of the water in the deposit pot an oil retaining reservoir, and a perforated lid hinged to the main cover to protect said opening and allow easy access for the removal of the oil without raising the main cover, substantially as described.

3. A floor draining trap, having, in combination, a main pot, a drain connection for the main pot and a deposit pot set into the main pot and hinged at one side thereof whereby the deposit pot may be lifted to discharge the sediment accumulated therein, a cover for the trap having an opening over the top of the deposit pot and hinged to the main pot at the side thereof opposite the deposit pot hinge whereby the cover and deposit pot are swung up in different directions, and do not interfere when they both are raised, substantially as described.

4. A floor draining trap, having, in combination, a main pot, a downwardly opening pipe elbow entering one side of the main pot and opening beneath the normal water level therein to form a sewer gas trap, a deposit pot set into the main pot and hinged at the side of the main pot through which the drain pipe elbow enters, whereby it may be lifted to discharge the sediment accumulated therein, said deposit pot being hollowed-in to fit over the drain pipe elbow and having its opposite side formed on the arc of a circle about its hinged connection so as to clear the inside of the main pot when it is raised, a cover for the trap having an opening over the top of the deposit pot and hinged to the main pot at the side opposite the deposit pot hinge whereby the cover may be swung up out of the path in which the deposit pot is lifted to discharge the sediment, substantially as described.

5. A floor draining trap, having, in combination, a pot body, a main cover hinged thereto and having an opening therethrough, a lid for said opening hinged to the main cover at the side of the opening opposite the main cover hinge whereby the lid will be held closed by gravity when the main cover is raised or lowered, substantially as described.

1,021,824. OIL-INDICATOR FOR AUTOMOBILES. JOHN ELMER CAMPBELL, New Castle, Pa. Filed Sept. 27, 1911. Serial No. 651,598. (Cl. 73—54.)



1. A device of the class described comprising a supporting member, a hollow member movably mounted therein, and provided with a movable closure, and an operating instrument also movably mounted in said supporting member adapted to operate the closure on said hollow member.

2. A device of the class described comprising a supporting member, a hollow member rotatably mounted thereon, a closure therefor normally held in its closed position and a manually operable member also carried on said supporting member adapted to raise said closure from its closed position when operated.

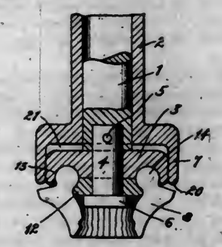
3. A device of the class described comprising a supporting member, a hollow member rotatably mounted on a horizontal axis thereon, and provided with a movable closure and an operating member rotatable on said supporting member on an axis at right angles to the axis of said hollow member and adapted to operate the closure upon its own rotation.

4. In a device of the class described, the combination with a pet-cock; of a frame adapted to be engaged therewith, a tubular member movably mounted in said frame and adapted to be engaged with the free end of said pet-cock when the frame is applied thereto, and means on the frame to open and close said pet-cock.

5. In a device of the class described, the combination with a pet-cock; of a frame adapted to be engaged with portions of said pet-cock, a hollow body member carried on said frame adapted to engage the free end of the pet-cock when the frame is engaged therewith, a tube mounted in said hollow body member, and means on the frame to open and close said pet-cock.

[Claims 6 to 14 not printed in the Gazette.]

1,021,825. CAP-CRIMPING DIE. ROSS V. CRAGGS, Baltimore, Md., assignor, by mesne assignments, to The National Exchange Bank of Baltimore, a Corporation of Maryland. Filed Sept. 29, 1909. Serial No. 520,086. (Cl. 113—4.)

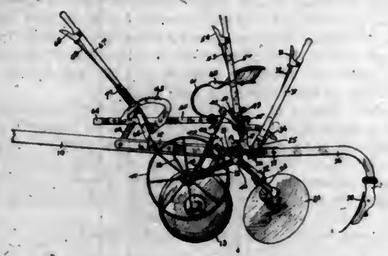


A bottle crimping die comprising a carrier having a centrally-disposed depending cylindrical extension and further having surrounding said extension an annular groove constituting a socket, a concentric row of crimping elements surrounding said extension and arranged in close proximity to each other and each consisting of an inwardly curved body-portion having a relatively long flat upper edge and a circular off-set projecting from the upper inner corner of the body-portion and fulcrumed in said socket, the upper edge of each of said sections projecting beyond said carrier and normally lying at an acute angle with respect to the axis of the carrier, each of said elements further provided with an inclined crimping edge terminating at its inner end in a recess, a vertically movable pressure exerting member surrounding the carrier and adapted to engage the projecting portion of the flat upper edges of said elements for moving said elements inwardly to crimp the cap around the bottle neck.

1,021,826. LISTER-CULTIVATOR. FREDERIC L. DEWEY, Canton, Ill., assignor to Parlin & Orendorff Company, Canton, Ill., a Corporation of Illinois. Filed May 17, 1911. Serial No. 627,774. (Cl. 97—31.)

1. In a lister cultivator, the combination with a frame, supporting wheels mounted thereon, cultivating devices carried thereby, ridge-wheels carried by said frame, and means for raising or lowering said ridge-wheels and by the same operation for lowering or raising said cultivating devices, of means coöperating therewith for raising or lowering said ridge-wheels independently of said cultivating devices.

2. In a lister cultivator, the combination with a frame, supporting wheels mounted thereon, cultivating devices carried thereby, ridge-wheels carried by said frame, and a lever by a stroke of which in one direction said ridge-wheels are raised relative to said cultivating devices and by a stroke of which lever in the other direction said ridge-wheels are yieldingly depressed relative to said cultivating devices, of additional means coöperating therewith for raising or lowering said ridge-wheels and by the same operation for lowering or raising said cultivating-devices.



3. In a lister cultivator, the combination with a frame, supporting wheels mounted thereon, a rock-shaft journaled therein, cultivating devices mounted on said rock-shaft, ridge-wheels connected with said rock-shaft, and means for rotating said rock-shaft to change the position of said ridge-wheels and said cultivating devices relative to said frame, of additional means coöperating therewith for changing the position of said ridge-wheels relative to said frame independently of said cultivating devices.

4. In a lister cultivator, the combination of a frame, supporting wheels mounted thereon, a rock-shaft journaled therein, brackets mounted on said rock-shaft, cultivating devices carried by said brackets, a ridge-wheel adapted to be swung relative to said frame, an arm adapted to be swung relative to one of said brackets, connections between said arm and said ridge-wheel for holding said ridge-wheel in position, adjustable means for holding said arm in any of a plurality of positions relative to said bracket, and means for rotating said rock-shaft to change the position of said ridge-wheel and said cultivating devices relative to said frame.

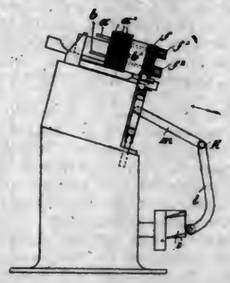
5. In a lister cultivator, the combination of a frame, supporting wheels mounted thereon, a rock-shaft journaled therein, brackets mounted on said rock-shaft, cultivating devices carried by said brackets, a ridge-wheel adapted to be swung relative to said frame, an arm adapted to be swung relative to one of said brackets, connections between said arm and said ridge-wheel for holding said ridge-wheel yieldingly in a lowered position relative to said arm but whereby said ridge-wheel is adapted to be positively raised by an upward stroke of said arm, adjustable means for holding said arm in any of a plurality of positions relative to said bracket, and means for rotating said rock-shaft to change the position of said ridge-wheel and said cultivating devices relative to said frame.

[Claims 6 to 11 not printed in the Gazette.]

1,021,827. MATRIX-SETTING AND LINE-CASTING MACHINE. JULIUS DORNETH, Berlin, Germany, assignor to Typograph G. M. B. H., Berlin, Germany. Filed Jan. 4, 1910. Serial No. 536,441. (Cl. 199—8.)

1. In a matrix setting and line casting machine the combination of a spindle carrying the space rings, a rack for rotating the spindle, a strong spring for moving said rack in one direction to rotate the spindle and justify the line, means for temporarily preventing said spring from acting upon the rack and a light spring connected to the rack and serving to move it in the reverse direction when the stronger spring is not acting on said rack.

2. In a matrix setting and line casting machine the combination of a spindle carrying the space rings, a rack for rotating said spindle, a lever engaging said rack, a strong spring connected to said lever and to a rigid part and serving to move said rack in one direction to rotate the space ring spindles and justify the line, a lighter spring connected to said lever and to the rack and serving to move the rack to reverse the space ring spindles, and means for engaging the lever to relieve the rack of the pressure of the stronger spring and permitting said rack to be moved under the influence of the lighter spring.



3. In a matrix setting and line casting machine, the combination of a spindle carrying space rings, a rack for rotating the spindle, means for moving said rack in one direction to rotate the spindle and thereby justify the line, means for disconnecting said rack moving means from the rack, yieldable means operatively connected to said rack and acting after the rack moving means is disconnected to return said rack to its normal position and thereby rotate the spindle in the reverse direction, whereby the yieldable means will remove the spacing rings from their justifying positions in the line.

4. In a matrix setting and line casting machine, the combination of a spindle carrying space rings, a rack for rotating said spindle, a spring for moving said rack in one direction to rotate the spindle and thereby justify the line, means for rendering the rack moving means inoperative after the line has been justified, and yieldable means operatively connected to said rack and acting thereon after the spring has been rendered inoperative to return said rack to its normal position and thereby rotate the spindle to remove the space rings from their justifying positions in the line.

5. In a matrix setting and line casting machine, the combination of a spindle carrying space rings, means for rotating said spindle to justify the line, means for rendering said means inoperative after the line is justified, and yieldable means for restoring said rack and said spindle to their normal positions, said yieldable means acting after the rack moving means has been rendered inoperative.

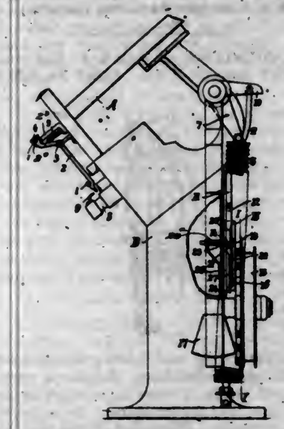
[Claims 6 to 8 not printed in the Gazette.]

1,021,828. TYPOGRAPH-MACHINE. JULIUS DORNETH, Berlin, Germany, assignor to Typograph G. M. B. H., Berlin, Germany. Filed Mar. 18, 1911. Serial No. 615,205. (Cl. 199—8.)

1. A machine of the character described having normally locked matrix supporting means capable of movement into and out of position to distribute the matrices supported thereby, means operative after the casting operation to unlock said supporting means, means to move said supporting means into distributing position, and means to return said supporting means into normal position.

2. A machine of the character described having normally locked tilting matrix supporting means capable of operation, when tilted, to distribute the matrices supported thereby, means operative after the casting operation to unlock said supporting means, means to tilt said supporting means into distributing position, and means to return said supporting means into normal position.

3. A machine of the character described having matrix supporting means capable of movement into and out of position to distribute the matrices supported thereby, hand controlled locking means for said supporting means, automatic means operative after the casting operation to unlock said supporting means, means to move said supporting means into distributing position, and means to return said supporting means into normal position.

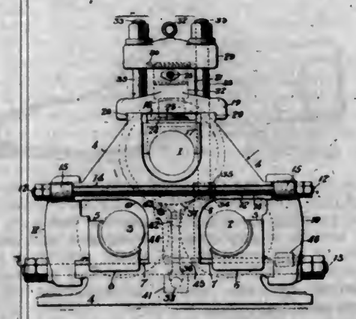


4. A machine of the character described having tilting matrix supporting means capable of operation, when tilted, to distribute the matrices supported thereby, hand controlled locking means for said supporting means, automatic means operative after the casting operation to unlock said supporting means, means to tilt said supporting means into distributing position, and means to return said supporting means into normal position.

5. A machine of the character described having matrix supporting means capable of movement into and out of position to distribute the matrices supported thereby, means for starting the movement of said matrix supporting means into distributing position, means independent of said starting means to complete the movement of said supporting means, and means to return said supporting means into normal position.

[Claims 6 to 22 not printed in the Gazette.]

1,021,829. SUGAR-CANE MILL. WILLIAM JOHN DYER and ARTHUR FREDRICK EWART, Honolulu, Hawaii, assignors to Honolulu Iron Works Company, Honolulu, Hawaii, a Corporation of Hawaii. Filed June 19, 1911. Serial No. 633,987. (Cl. 100—47.)



1. In a sugar-cane mill, a housing, a cap engaging the jaws at the top of said housing and provided with a hydraulic cylinder with ram, a bridle-plate above said cylinder, and two king bolts passing through holes in said cap and clamping said bridle-plate to the housing.

2. In a sugar-cane mill, a housing, a cap engaging the jaws at the top of said housing and provided with a hydraulic cylinder with ram, a bridle-plate above said cylinder, two king bolts clamping said bridle-plate to the housing, and a plate interposed between the cylinder and the bridle-plate.

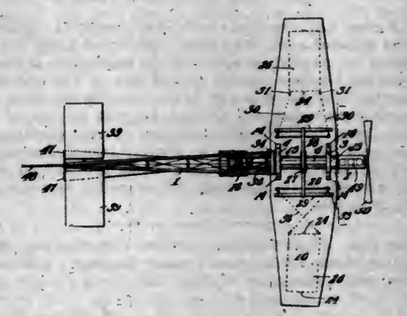
3. In a sugar-cane mill, a housing, a cap engaging the top of the housing and provided with a hydraulic cylinder with ram, a bridle-plate above said cylinder, two king bolts clamping the bridle-plate to the housing, a plate interposed between the cylinder and bridle-plate, and a crimp for sealing the joint between said plate and cylinder.

4. In a sugar-cane mill, a cast steel housing, a cast steel cap engaging the top of said housing and provided with a hydraulic cylinder, a cast iron bridle-plate above said cylinder, and two steel bolts for clamping the bridle-plate to the housing.

5. In a sugar-cane mill, a housing, a returner-bar supported at one end in said housing and hinged at its lower edge, a lever fulcrumed on a pin through said housing and abutting said returner bar laterally, and a bolt hinged to said lever by which the lever can be adjusted to engage the end of said returner-bar to a greater or less degree.

[Claims 6 to 8 not printed in the Gazette.]

1,021,830. AEROPLANE. HOWARD FARRELL, Lestershire, N. Y. Filed June 16, 1911. Serial No. 633,487. (Cl. 244—14.)



1. An aeroplane including a sustaining plane mounted for complete rotation about an axis extending in the direction of flight, means carried by said plane at opposite sides of its axis for restoring the lateral balance of the plane, and means for shifting said balancing means independently of the sustaining plane and irrespective of the angle of incidence of said plane.

2. An aeroplane including a body, a sustaining plane in front of the body and mounted for complete rotation relative thereto and about an axis extending in the direction of the line of flight, means carried by the sustaining plane at opposite sides of its axis for restoring the lateral balance of the plane, and means under the control of the aviator upon the body for shifting said balancing means relative to the sustaining plane and irrespective of the rotation of said plane about its axis.

3. An aeroplane including a body, a sustaining plane in front of the body and mounted for complete rotation about an axis extending in the direction of the line of flight, balancing planes carried by the sustaining plane at opposite sides of its center, and means extending into the body for tilting said balancing planes about an axis intersecting the line of flight and irrespective of the sustaining plane and of the movement of said plane about its axis.

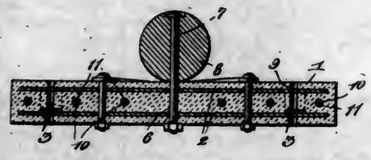
4. An aeroplane including a body, a sustaining plane in front thereof and mounted for complete rotation relative thereto about an axis extending in the direction of the line of flight, balancing planes movably connected to the sustaining plane, means extending into the body for tilting said balancing planes relative to the sustaining plane about an axis intersecting the line of flight and independently of the movement of said sustaining plane about its

axis, and means under the control of the aviator for holding said sustaining plane against rotation about its axis.

5. An aeroplane including a body, a sustaining plane, a bearing therefor at its center, said plane being mounted for complete rotation relative to the body and about an axis extending in the direction of flight, balancing planes carried by said sustaining plane, means under the control of the aviator for shifting said balancing planes relative to the sustaining plane and independently of the angle of adjustment of the sustaining plane, and means under the control of the aviator and embracing a portion of the bearing for holding said sustaining plane against movement relative to the body.

[Claims 6 and 7 not printed in the Gazette.]

1,021,831. CROSS-ARM FOR TELEPHONE OR TELEGRAPH POLES. JOHN REED FERRINGER, Emlenton, Pa. Filed Oct. 25, 1911. Serial No. 656,589. (Cl. 72—85.)



A cross arm constructed of plastic material, longitudinally disposed reinforcing angle bars spaced apart and arranged in parallel relation within said arm, U-shaped fastening members secured to said bars to hold the same securely in place, said arm having vertical openings disposed therethrough and through one web of each of the angle bars, insulator pins disposed in said openings to hold said bars against any relative lateral movement, nuts threaded on the lower end of said pins to hold them securely within the openings, and means for securing said arm to a pole.

1,021,832. PROTECTING DEVICE FOR BOOKS. BERNARD MORLEY FLETCHER, London, England. Filed Jan. 14, 1911. Serial No. 602,716. (Cl. 11—4.)



1. The herein described protecting device for books, consisting of a trough like member adapted to receive the front edges of the covers and leaves of a book and provided interiorly with means for preventing contact between it and tags projecting forwardly from the leaves of the books.

2. The herein described device for protecting books, consisting of a trough-like member adapted to receive the front edges of the covers and leaves of a book, the engagement between said device and the book preventing contact of said device with tags projecting forwardly from the leaves and covers of the book.

3. The herein described protecting device for books, comprising a trough-like member adapted to receive the front edges of the covers and leaves of a book and stops within said member adapted to engage the front portion of the book to limit the extent to which the latter can enter said member and prevent contact of said member with tags projecting forwardly from the leaves of the book.

4. The herein described protecting device for books, comprising a trough like member, adapted to receive the front edges of a book without contacting with tags projecting forwardly from the leaves of the book, and means for engaging the back of the book to retain said member in place thereon.

5. The herein described protecting device for books, comprising a trough like member adapted to receive the front edges of a book, stops which limit the extent to which the edges of the book can enter the trough and prevent contact of the front wall thereof with tags projecting forwardly from the leaves of the book, and means for engaging the book to retain the trough like member in position thereon.

[Claims 6 to 8 not printed in the Gazette.]

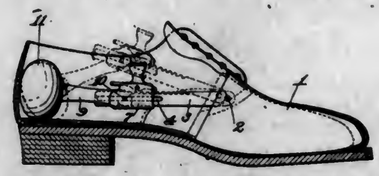
1,021,833. COUPLING. PATRICK J. GAFFNEY, Toledo, Ohio. Filed June 29, 1911. Serial No. 636,066. (Cl. 137—28.)



1. In combination, a cock having its discharge nipple provided with segmental spiral flanges, a part for connecting to said nipple, a coupling member rotatably carried by said part and having fingers for coöperating with said flanges to effect a tightening of the part and nipple when the coupling member is turned in one direction in engagement with said flanges, and a pawl pivoted to said nipple transversely thereof and adapted to coact with a finger on said member to hold said member in tightened position.

2. In combination, a cock having its discharge nipple provided with segmental spiral flanges, a part for connecting to said nipple, a coupling member rotatably carried by said part and having fingers for coöperating with said flanges to effect a drawing together and tightening of the parts when the coupling member is turned in one direction in engagement with and relative to said flanges, a pawl carried by said nipple, and a lug adjustably carried by the pawl for engaging a side of one of said fingers when the coupling member is in tightened position and coöperating with the pawl to hold said member in tightened position.

1,021,834. SHOE-TREE. JOHN S. HANSEN, Brockton, Mass., assignor to O. A. Miller Treeing Machine Company, Portland, Me., a Corporation of Maine. Filed Oct. 29, 1909. Serial No. 525,358. (Cl. 12—128.)



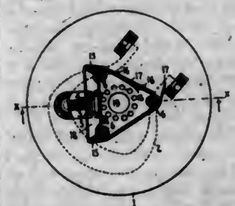
1. A shoe-tree having, in combination, a fore part and a heel part, a member connected with each of said parts, means comprising a slot in one member and a pin in the other member to constitute a pivotal and adjustable connection of said members, and means additional to such connection to hold the parts in adjusted position while permitting the free pivotal movement of the parts through said connection.

2. A shoe-tree having, in combination, a fore part and a heel part, a lever pivotally connected with one of said parts and provided with external recesses and a slot, a slide arranged for adjustment along the lever and carrying a pawl to engage said recesses, an arm connected with the other of said parts, and pivotal means for connecting said arm and slide and arranged to pass through the slot in said lever.

3. A shoe-tree having, in combination, a fore part and heel part, a lever pivotally connected with one of said parts, a slide arranged for movement along the lever and provided with means to secure it in different positions of adjustment thereon, an arm having one end connected with the other of said parts and its other end pivoted to said slide, said lever and arm being arranged to form a toggle connection, and coöperating means on the slide and arm constructed and arranged for mutual engagement to limit the movement of said parts when the toggle is broken.

4. A shoe tree, having in combination, a forepart, a heel part, an arm projecting from one of said parts, a lever pivoted to the other part, said lever having a slot formed therethrough and a series of teeth or recesses formed in one edge thereof, a slide having two sides and a bottom, one of said sides being extended and bent over to form a handle, a pin extending through the sides of the slide, the slot in said lever and the arm to pivotally connect the lever and arm, a pawl pivoted within said slide and a spring acting upon said pawl to hold it normally in position to engage the teeth on the lever.

1,021,835. TYPE-WRITING MACHINE. SPENCER PHILIP HARRY, London, England, assignor to The Monarch Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed Dec. 28, 1911. Serial No. 668,242. (Cl. 197—175.)



1. A ribbon spool for writing machines comprising a flange, a hub, said flange and said hub being rigidly related, and a second flange detachable from said rigid hub, said rigid hub alone maintaining the two flanges properly spaced apart.

2. A ribbon spool for writing machines comprising two flanges and a hub, and latching devices integral with said hub for detachably connecting one of said flanges, said latching devices serving to maintain said detachable flange in proper working relationship to the other flange.

3. A ribbon spool for writing machines comprising two flanges and a connecting hub, one of said flanges being frictionally connected to said hub and the other flange being rigidly connected to said hub, said frictionally connected flange being maintained at a predetermined distance from the other flange by the rigid hub alone.

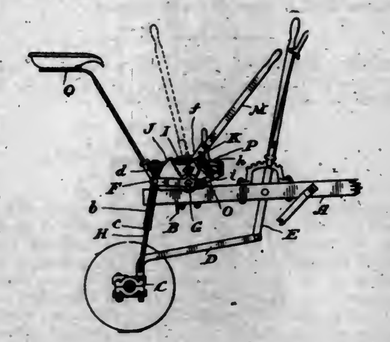
4. A ribbon spool for writing machines comprising a head or flange, a post or pin permanently and rigidly fixed to said head, and a second flange frictionally connected to said post and in part maintained by a device integral with said post at a predetermined distance from the first named flange, said device preventing movement toward or away from the first named flange.

5. A ribbon spool for writing machines comprising a head or flange, a plurality of posts permanently secured to said head, and a detachable head engaging said posts.

[Claims 6 to 22 not printed in the Gazette.]

1,021,836. LEVER MECHANISM. ANDREW JOHNSTON, Toronto, Ontario, Canada, assignor to Massey-Harris Co., Limited, Toronto, Canada. Filed Aug. 1, 1910. Serial No. 574,899. (Cl. 74—39.)

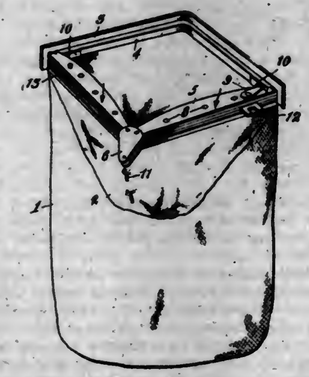
1. In a lever mechanism the combination of a pivoted ratchet segment; a fulcrumed actuating lever for the said segment liftably mounted on its fulcrum and adapted to engage the teeth of the ratchet; a pivoted retaining dog for the ratchet segment; and a single spring connected with both the lever and the said dog tending to draw said lever back and out of engagement with said ratchet teeth and tending also to maintain the dog in its normal position.



2. In a lever mechanism the combination of a pivoted ratchet segment; a suitably fulcrumed actuating lever for the said segment adapted to engage the teeth of the ratchet in one direction or to slip back over said teeth in the opposite direction; a pivoted retaining dog for the ratchet segment; a toggle lever pivotally connected with a stationary part and the said dog; and a spring engaging said lever and the said toggle and tending to draw back said lever and to maintain the dog in its normal position.

3. In a lever mechanism the combination of a pivoted ratchet segment; an actuating lever having a fulcrum located between the crank arm pivot and the periphery of the ratchet segment, and independent thereof; a segment-engaging-part on said lever, the lever being adapted to rise and fall on its fulcrum to permit the segment-engaging part to follow the arc of travel of the notch with which it may be engaged; a spring tending to draw back said lever; and a stationary part above and adjacent the fulcrum against which the spring is adapted to draw the lever to lift it on its fulcrum and disengage it from the ratchet segment.

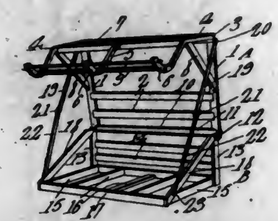
1,021,837. MAIL-BAG. EARL G. KIMMEL, Johnstown, Pa. Filed Apr. 26, 1911. Serial No. 623,345. (Cl. 150—18.)



In a mail bag, the combination of a strip of flexible material fastened on one-half of the upper portion thereof, plates having one of each of their end portions hinged to the end portions of said strip, said plates having their outer portions relatively flat and their inner portions con-

vexly shaped, a hinge connecting the other ends of said plates and arranged to permit the end portions of said plates connected thereto to move inwardly, so that their convex sides will engage with said flexible material and close the opening of said bag, said hinge being also arranged to permit the flat portions of said plates to engage with one another when in closed position.

1,021,838. FOLDING LUGGAGE AND HAT RACK. DANIEL R. KINNEY, Eaton, Colo. Filed July 7, 1911. Serial No. 637,347. (Cl. 105—5.)



1. A folding luggage and hat rack, having a stationary member provided with a rack portion extending at right angles thereto from the upper end thereof, and another member pivotally connected to the lower end of the first mentioned member and forming a rack extended parallel to the upper rack of the first mentioned member, and means for holding the last mentioned member in extended or collapsed position.

2. A folding luggage and hat rack, comprising an upper member having a right angle slatted portion connected to the upper ends thereof, a series of curved arms extending from said slatted portion, and another member pivotally connected to the lower end of said upper member and having a right angled portion adapted when extended to be parallel with the slatted portion of the upper member or when collapsed to be below and at right angles thereto.

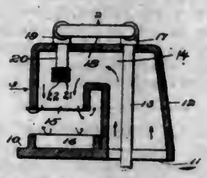
3. A luggage and hat rack, having an upper member provided with a right angled slatted portion and its upper ends terminating in a series of curved arms, a lower member carrying a shelf at right angles thereto and adapted to form when extended a shelf parallel with the slatted portion of the upper member, said lower member being pivoted to the upper member, and a pair of hinged arms for holding the lower member in extended or collapsed position with relation to the upper member.

4. A folding luggage and hat rack, comprising an upper member having two vertical and parallel strips connected together by transverse strips, a series of arms connected to the upper ends of said vertical strips and the upper transverse strip thereof and at right angles thereto, a series of slats connecting said arms to provide a rack at right angles to the vertical strips, a lower member having two side strips connected by transverse strips and pivotally connected to the lower ends of the vertical strips of the upper member, a shelf carried at right angles to the vertical strips of the lower member, and a pair of pivoted arms connected to the upper end of the vertical strips of the upper member and to the outer ends of the shelf of the lower member for holding the lower member collapsed or extended.

5. A folding luggage and hat rack, comprising an upper member having two parallel vertical strips, a series of transverse strips connecting said strips intermediate of their ends, a rack connected at right angles to said vertical strips at the upper ends thereof, a series of curved arms provided at the outer free ends of said rack, a pair of brace arms for connecting the outer ends of said rack portion to the vertical strips, a lower member having two vertical strips, a series of transverse strips connecting said strips together, an open shelf connected at right angles to the lower ends of said vertical strips of the lower member and extending outwardly therefrom and at right angles thereto, a pair of inclined braces connected to upper ends of the vertical strips of the lower member and to the outer ends of said shelf for retaining the same in relative position, a pair of rods opposite the respective ends of the vertical strips of the upper and lower members, a hinge connected to each of said rods and pivotally connecting the lower member to the upper member, and a pair of hinged arms having their upper ends connected to the sides of the vertical strips of the upper member and the outer free ends of the shelf of the lower member for retaining the lower member in extended or collapsed position.

[Claim 6 not printed in the Gazette.]

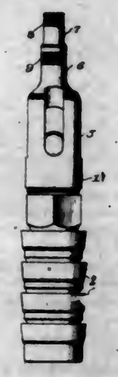
1,021,839. OIL-BURNER. ELWOOD S. LINE, Omaha, Nebr. Filed June 23, 1911. Serial No. 634,924. (Cl. 158—64.)



1. The combination with a base, of a fuel pan supported upon the base, an air duct having an opening through the base and a return bend upon itself directed downwardly upon the pan, a supply pipe passing upwardly through the air duct, a coil upon the exterior of the duct communicating with the supply pipe, and a discharge pipe connected to the coil and entering the discharge end of the air duct concentrically thereof and above the pan.

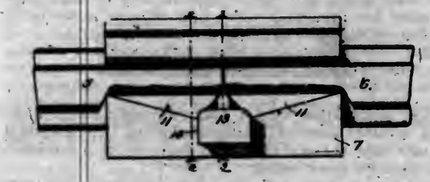
2. The combination with a base, of a fuel pan disposed thereon, an air duct having a passage through the base and provided with an elbow directing the discharge end of the air duct upon the pan, a fuel supply pipe leading upwardly through one section of the air duct and passing without such air duct, a coil communicating with the supply pipe disposed upon the exterior of the air duct and above the pan and a discharge pipe connected to the coil and passing within the air duct and disposed above the pan.

1,021,840. OIL-WELL VALVE. JOHN M. LOFFLAND, Woodsfield, Ohio. Filed Aug. 25, 1910. Serial No. 578,823. (Cl. 103—61.)



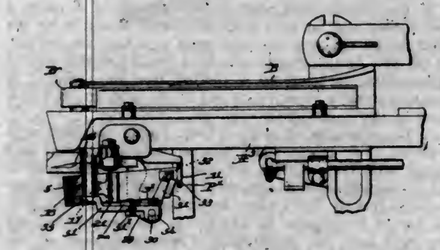
An oil well plunger comprising a body, a valve crown secured thereto, a fishing extension projecting longitudinally and centrally from the crown and having an externally corrugated gripping surface, and a reduced and threaded sucker rod extension projecting from and in line with the fishing extension.

1,021,841. RAIL-JOINT. JOHN M. LOFFLAND, Woodsfield, Ohio. Filed Mar. 21, 1911. Serial No. 615,863. (Cl. 238—6.)



The combination with meeting ends of railway rails and the supporting tie, of a chair comprising a block having a rail seat for receiving the rail ends provided with laterally converging side surfaces, wedge-shaped members inserted between the rail ends and the laterally converging surfaces, the said wedge-shaped members being provided with outwardly diverging beveled inner ends, the said block being provided with an opening in its bottom, and a wedge-shaped key inserted between the beveled inner ends of the wedge-shaped members and passed through the opening in the bottom of the block and engaged in the tie.

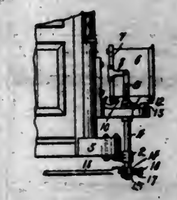
1,021,842. SHUTTLE-CHECKING MEANS FOR LOOMS. HENRY LUSSIER, Salem, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed July 15, 1911. Serial No. 638,674. (Cl. 139—29.)



In a device of the character described, a supporting structure provided with a pair of fixed fulcrum studs substantially at right angles to each other, a movable member having a hub portion journaled on each stud, the free end of each stud projecting beyond the hub portion of the member journaled thereon, a locking member having oppositely extended arms provided with flat sided, forked ends at right angles to each other and resting respectively against the hub portions of said movable members, each forked end straddling the projecting end of a stud, thereby holding the movable members securely on the studs while permitting rocking movement of such members, and means to attach the locking members rigidly and fixedly to the supporting structure and prevent any relative movement of the forked ends and the studs with which they coöperate.

1,021,843. AUTOMATIC DIRECTING MEANS FOR HEADLIGHTS. JOSEPH P. MCELLIOTT, Toledo, Ohio, assignor to The Automatic Movable Headlight Company, Toledo, Ohio, a Corporation of Ohio. Filed Sept. 19, 1910. Serial No. 582,760. (Cl. 240—62.)

1. The combination with a vehicle having a part which turns in following a curved course, of a vertical shaft carried by said vehicle, a headlight supported by such shaft, a member secured to such shaft and having transverse openings therethrough on opposite sides of the shaft, rods carried in parallelism by such member and working loosely through the openings therein, a cross arm connecting said rods and projecting outwardly beyond the same, means carried by said rods and yieldingly spacing said member and cross arm, and means connecting said cross arm and vehicle part for imparting rotation to the shaft upon a turning of such vehicle part.

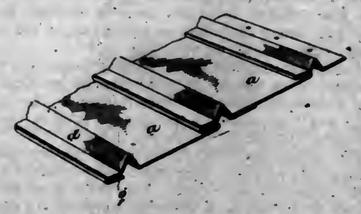


2. The combination with a vehicle, having a part which turns in following a curved course, of a vertical shaft carried by such vehicle, a headlight supported by such shaft, a part fixed to such shaft, rods working loosely through such part, a cross-arm carried by such rods, means yieldingly spacing said shaft part and cross-arm and rods connecting such cross-arm and vehicle part for imparting rotation to the shaft upon a turning of such vehicle part.

3. The combination with a vehicle having a part which turns relative thereto in following a curved course, of a bracket having an inverted V-shaped cam adjacent its upper outer edge, a vertical shaft in association with such bracket, connection between the shaft and vehicle part for imparting rotation from one to the other thereof, a member pivoted for vertical movements to such shaft and resting at its forward end upon said cam, and a headlight carried by the shaft for vertical oscillatory movements and resting by gravity upon the outer end portion of said member.

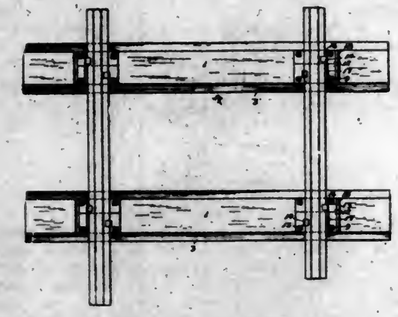
4. The combination with a vehicle, of a vertical shaft, a yoke carried at the upper end of the shaft, a back frame for a lamp having arms projecting forward therefrom and pivoted to the ends of the yoke arms, a lamp removably carried by said back frame, and means causing the lamp and frame to have vertical tilting movements upon a turning of the shaft from or to neutral position.

1,021,844. SHEET-METAL ROOFING-PLATE. HENRY E. MOOMAW, Salem, Va. Filed Oct. 28, 1911. Serial No. 657,264. (Cl. 108—22.)



A sheet metal roofing plate having an upstanding ridge extending along near one of its longitudinal edges, a portion of the plate outside of this ridge being folded under to form a hook-like pocket opening toward the adjacent ridge, a second ridge similarly dimensioned and shaped being formed along the plate near its other longitudinal edge, the portion of the plate outside of this latter ridge forming a nailing flange, and a longitudinal rib c being formed at the junction of the plate and the base of the last named ridge on the side opposite the nailing flange, this rib being formed by folding the plate and being extended in an inclined direction upwardly and away from the ridge so as to form an inclined pocket or channel between itself and the face of the plate, said ridges being higher than the rib c.

1,021,845. STEEL AND CONCRETE RAILWAY-TIE. WILLIAM F. MORRISON, Cowell, Cal. Filed Nov. 1, 1911. Serial No. 657,972. (Cl. 238—5.)



A railway tie comprising a suitable body, a casing around said body having near each end an abutment, a plate upon said casing also having an abutment, means for securing said plate to said casing while permitting it to slide longitudinally therein, and so that the end of said plate abuts against said abutment, said plate being formed with means for securing thereto the flange of a rail in contact with said abutment on the plate.

1,021,846. JOURNAL-BEARING. ROBERT T. PEARCE, Montclair, N. J., assignor to H. W. Caldwell & Son Company, Chicago, Ill., a Corporation of Illinois. Filed May 21, 1904. Serial No. 209,056. (Cl. 193—27.)



1. In a concentrator bearing, a journal box, a bell whose hub extends into and has its bearing in said journal box, and a shaft having its bearing in the hub of the bell; substantially as described.

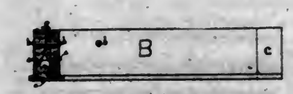
2. A concentrator bearing comprising supporting brackets, journal boxes formed integral with said brackets, bells having outwardly extending hubs fitting in the journal boxes, a shaft journaled at its opposite ends in the hubs of the bells, and set collars on the shaft.

3. The herein described concentrator bearing comprising supporting brackets, open-ended journal boxes formed integral therewith, bells having outwardly extended hubs journaled in the boxes, a shaft journaled at its opposite ends in the hubs of the bells, set collars on the shaft and caps secured upon the outer end of the journal boxes.

4. In a device of the class described, the combination of a bearing open at both ends, a bell having a hollow hub rotatively mounted in the bearing, a shaft having its bearing in the hub of the bell and carrying a pulley of less diameter than the bell, the outer end of the bearing forming a packing box communicating with the space between the hub of the bell and the bearing and between the hub of the bell and the shaft respectively, and a cap for closing the outer end of the bearing.

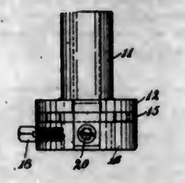
5. In a belt conveyer, a pair of journal boxes, bells having hubs fitting in said boxes, a shaft journaled at its opposite ends in said hubs, and pulleys upon said shaft of less diameter than said bells; substantially as described.

1,021,847. NAILING-STRIP. SMITH MARTIN RANDOLPH, Oak Park, Ill. Filed Dec. 18, 1907. Serial No. 406,972. (Cl. 72—105.)



The combination with a body of plastic composition, of a moisture absorbent penetrable nailing strip embedded in said body, the said strip being protected by a surrounding moisture proof casing.

1,021,848. FLOATING TOOL-HOLDER. BENJAMIN RINDFLEISCH, Cleveland, Ohio, assignor to The National-Acme Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Feb. 12, 1910. Serial No. 543,591. (Cl. 29—109.)



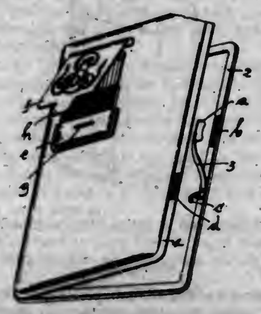
1. The combination with a tool spindle, of a head, a tool holder and an intermediate member mounted on the head for limiting the free movement in a line transversely of the axis of the spindle, the head being mounted on the intermediate member for a limited free movement in a line transversely of said axis and of the said line of movement of the intermediate member.

2. The combination with a tool spindle provided with a flange, of an intermediate member located adjacent said flange, said intermediate member being provided with a pair of sockets, said flange being provided with lugs entering said sockets, the sockets being longer in the diametrical line of the member in which they are located than are the said lugs for permitting lateral movement of the intermediate member relative to the spindle in one direction transversely of the spindle but restraining lateral movement in other directions, a tool holder, and a connecting member rigidly secured to the tool holder and overlying the intermediate member and the flange and having clips extending over and engaging the rear face of the said flange, the intermediate member having faces located in position for engaging the connecting member for preventing movement of the intermediate member relative to the holder transversely of said diametrical line and having faces for permitting a limited free movement transversely of the said line, and the flange being provided with engaging faces for the connecting member for permitting a limited free movement in the said line and transversely of the said line.

3. The combination with a tool spindle provided with a flange, said flange being provided at each of its opposite sides with a recess, of an intermediate member located adjacent said flange and provided with recesses, said recesses being of the same depth as the recesses in the flange and also being narrower laterally than are the recesses in the flange, said intermediate member being provided with a pair of sockets quartering with the recesses therein, and the said flange being provided with lugs entering said sockets, the sockets being longer in a diametrical line than are the said lugs for permitting lateral movement of the intermediate member relative to the spindle in one direction transversely of the spindle but restraining lateral movement in other directions, a tool holder provided with recesses conforming in size and shape to the recesses in the intermediate member, and a connecting member seated in said recesses and secured

to the tool holder and having clips engaging the outer face of the tool holder and the outer face of the said flange and conforming in lateral dimension to the lateral dimensions of the recesses in the tool holder and the intermediate member, and being chambered out radially at its portion overlying the flange and the intermediate member, the organization being such that the tool holder may move transversely of the axis of the spindle and intermediate member in the diametrical line of the said recesses, and the tool holder and intermediate member may move transversely of the axis of the spindle upon the diametrical line of the said lugs.

1,021,849. CIGAR-CASE. ADOLF SCHWIEGER, Hanover, Germany. Filed Nov. 5, 1910. Serial No. 590,950. (Cl. 206—41.)



1. In combination with a cigar case, a cigar cutter disposed on the edges thereof and comprising a shank pivotally secured to said case, a knife disposed at one end of said shank and arranged to move in and out of a slot provided in one of said edges, said shank being provided with means for locking said edges together after said knife is disposed within said slot.

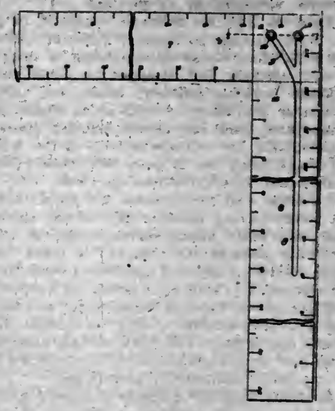
2. In combination with a cigar case, a cigar cutter disposed on the inner edge portion thereof and comprising a shank pivotally mounted thereon, a cigar knife integrally connected to the end of said shank and arranged to move in and out of a slot provided in the edge portion of said cigar case that the shank is attached to, a lock integrally mounted at the other end of said shank and arranged to actuate within a slot provided in the opposite edge portion of said case, said lock being provided with a resilient hook arranged to engage with the outside surface of said case when said cigar case is closed, substantially as described.

1,021,850. FOLDING SQUARE. CHESTER A. A. SHAKELY, Oil City, Pa. Filed Apr. 6, 1911. Serial No. 619,312. (Cl. 73—116.)

1. A folding square comprising a blade having a longitudinal slot, substantially parallel to the long edge thereof, with a branch slot at one end of said slot, and another blade having a pair of studs slidable in the longitudinal slot and one of said studs being slidable therefrom into the branch slot, to vary the angle of the blades, and devices on the studs to clamp the blades at adjustment.

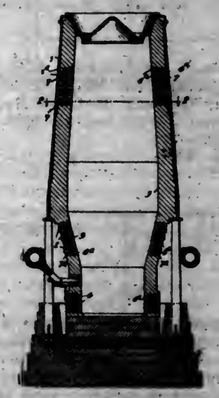
2. A folding square comprising a blade having diverging slots, one of which extends lengthwise of the blade, and parallel to the edge thereof, the ends of the slots being located in a line at a right angle to said edge, and another blade having studs projecting therefrom into said slots and movable along the same to vary the angle of the blades, or to adjust the blades lengthwise one upon the other.

3. A folding square comprising a blade having a longitudinal slot parallel to the edge thereof, with a branch slot diverging from said slot near one end thereof, and another blade provided with studs slidable in said slots, the studs being located in line parallel to the edge of their blade and at a distance from said edge equal to the distance of the longitudinal slot from the edge of its blade,



whereby the blades may form a straight-edge including both.

1,021,851. FIRE-BRICK WALL OR LINING FOR BLAST AND OTHER FURNACES. ALLAN N. H. STEALE, Chicago, Ill., assignor of one-half to Emanuel Block, Chicago, Ill. Filed Nov. 9, 1910. Serial No. 591,408. (Cl. 75—5.)



1. A fire-brick wall for furnaces composed in part of blocks each having one face thereof provided with portions extending in different planes and thereby forming a block with portions of different thicknesses, combined with other blocks corresponding in thickness to one of said portions and arranged to break the horizontal joints between adjacent blocks and bond the blocks together vertically, as well as to break the vertical joints and bond the blocks together transversely and longitudinally or circumferentially of the wall, substantially as specified.

2. A blast furnace fire-brick wall comprising blocks each having one face thereof provided with portions extending in different planes and thereby forming a block with portions of different thickness, combined with other blocks corresponding in thickness to one of said portions, and arranged to break the horizontal joints between adjacent blocks and bond the blocks together vertically as well as to break the vertical joints and bond the blocks together transversely and longitudinally or circumferentially of the wall, and bands surrounding said wall at the boshes portion of the furnace to confine said blocks from outward movement under heat and expansion and cause the vertical

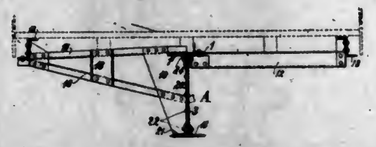
joints at the meeting end faces of the blocks to close up and prevent escape or passage of gas through the horizontal joints, substantially as specified.

3. A fire-brick wall for furnaces composed in part of rabbeted blocks having portions of different thicknesses, combined with other blocks corresponding in thickness to one of said portions and arranged to break the horizontal joints between adjacent blocks and bond the blocks together vertically as well as to break the vertical joints and bond the blocks together transversely and longitudinally or circumferentially of the wall, said rabbeted blocks being laid in pairs with their rabbets adjacent each other, substantially as specified.

4. A fire-brick wall for furnaces composed in part of rabbeted blocks having portions of different thicknesses, combined with other blocks corresponding in thickness to one of said portions and arranged to break the horizontal joints between adjacent blocks and bond the blocks together vertically, as well as to break the vertical joints and bond the blocks together transversely and longitudinally, or circumferentially of the wall, said rabbeted blocks being laid in pairs with their rabbets adjacent each other, and said wall having said rabbeted blocks on both faces of the wall, substantially as specified.

5. A fire-brick wall for furnaces composed in part of rabbeted blocks having portions of different thicknesses, combined with other blocks corresponding in thickness to one of said portions and arranged to break the horizontal joints between adjacent blocks and bond the blocks together vertically, as well as to break the vertical joints and bond the blocks together transversely and longitudinally or circumferentially of the wall, said rabbeted blocks being laid in pairs with their rabbets adjacent each other, the length of the rabbets in said blocks corresponding to half the length of said other blocks, substantially as specified.

1,021,852. STEEL UNDERFRAME FOR BOX-CARS. VICTOR M. SUMMA, St. Louis, Mo., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed Aug. 28, 1908. Serial No. 450,724. (Cl. 105—76.)



1. A car underframe comprising bolsters, a central longitudinal girder with flanged compression member, flanged tension member and vertical web plate terminating between the bolsters, a transversely extending supporting member composed of a plurality of parts one of which extends through the web plate of said center sill.

2. A car underframe comprising a central longitudinal girder with flanged compression member, flanged tension member and vertical web plate, transversely extending cross bearers comprising upper and lower channel members one of which passes through said girder, and reinforcing means connected with said girder in proximity to the member extending therethrough.

3. A car underframe comprising a central longitudinal girder with flanged compression member, flanged tension member and vertical web plate, a cross bearer comprising upper and lower channel members one of which forms a seat beyond the end of the other channel member, the member forming the seat extending through said central girder.

4. A car underframe comprising bolsters, a central longitudinal girder with flanged compression member, flanged tension member and vertical web plate terminating between the bolsters, said plate being deeper at its middle portion than near its ends, and a cross bearer comprising a plurality of parts one of which passes through the web of said central girder.

5. A car underframe comprising a central longitudinal girder with flanged compression member, flanged tension member and vertical web plate, a cross bearing member comprising two channels of unequal length one of which passes through the web of said girder and extends laterally beyond the end of its companion member to form a seat.

[Claims 6 to 61 not printed in the Gazette.]

1,021,853. COLLAPSIBLE RECEPTACLE. EUGENE VON VARGYAS, Pittsburgh, Pa., assignor to James P. McLean and William F. Heidenreich, Pittsburgh, Pa. Filed May 29, 1911. Serial No. 629,978. (Cl. 229—1.)



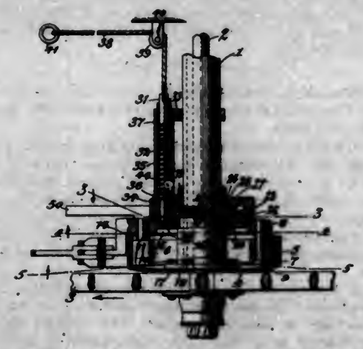
1. In a drinking cup, a collapsible receptacle adapted to have the lower edges thereof bent to provide tongues, and a base detachably supported by the tongues of said receptacle.

2. In a drinking cup, a collapsible receptacle adapted to have the lower edges thereof bent to provide tongues, and a base of greater diameter than said receptacle, and adapted to be detachably connected to said tongues.

3. In a drinking cup, a collapsible receptacle, a disk, segment-shaped members carried by said disk and adapted to hold oppositely disposed lower edges of said receptacle.

4. A drinking cup comprising a collapsible receptacle adapted to have the lower edges thereof bent to provide tongues, a disk adapted to support the bottom of said receptacle, and members mounted upon said disk and adapted to engage the tongues of said receptacle.

1,021,854. BACK-UP BRAKE FOR VEHICLES. DENNIS T. WALSH, Ansonia, Conn. Filed Dec. 8, 1911. Serial No. 664,539. (Cl. 21—8.)



1. A back-up brake for vehicles comprising a clutch disk rotating with a wheel of the vehicle and provided with a brake pawl movable relatively to the clutch disk, and a brake member mounted on a stationary part of the vehicle and movable into and out of the path of said pawl.

2. A back-up brake for vehicles comprising a clutch disk rotatable with a wheel of the vehicle and provided with an annular groove, a brake-pawl movably mounted on said disk and adapted to either project into said groove or clear the same, and a brake rod mounted on a stationary part of the vehicle and movable into and out of said groove of the disk.

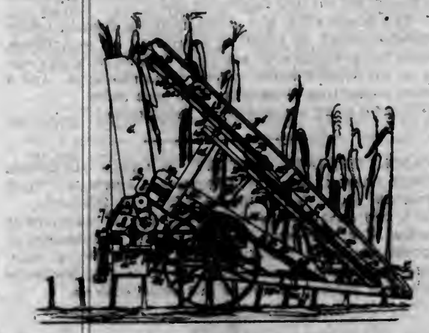
3. A back-up brake for vehicles comprising a clutch disk rotatable with a wheel of the vehicle provided with an annular groove, a brake-pawl movably mounted on said disk and adapted to either project into said groove or clear the same, means for yieldingly holding said pawl across said groove, and a brake rod mounted on a stationary part of the vehicle and movable into and out of said groove of the disk.

4. A back-up brake for vehicles comprising a clutch disk rotating with a wheel of the vehicle and provided with an annular groove, a brake pawl normally arranged across said groove and supported on said disk on opposite sides of said groove and movable out of said groove, and a brake rod mounted on a stationary part of the vehicle and movable into and out of said groove so as to engage or clear said pawl.

5. A back-up brake for vehicles comprising a clutch disk rotating with a wheel of the vehicle and provided with an annular groove, a brake pawl normally arranged across said groove and supported on said disk on opposite sides of said groove and movable out of said groove, means for yieldingly holding the pawl in its normal position, and a brake rod mounted on a stationary part of the vehicle and movable into and out of said groove so as to engage or clear said pawl.

[Claims 6 to 12 not printed in the Gazette.]

1,021,855. ENSILAGE-HARVESTER. JOSEPH WRIOBL, Flandreau, S. D. Filed May 20, 1911. Serial No. 628,392. (Cl. 56—110.)



1. A harvesting machine comprising the following elements in combination; a first cutting mechanism for cutting the standing stalks, means for carrying the cut stalks parallel to their initial position, a second cutting mechanism, and means for directing the cut stalks with their butt ends first into direct engagement with the said second cutting mechanism.

2. A harvesting machine comprising the following elements in combination; a first cutting mechanism for cutting the standing stalks, means for carrying the cut stalks parallel to their initial position, a second cutting mechanism, means for feeding the cut stalks with their butt ends first into direct engagement with the second cutting mechanism, and means for collecting the cut stalks from the carrying means and holding them with their butt ends perpendicular to the said second cutting mechanism.

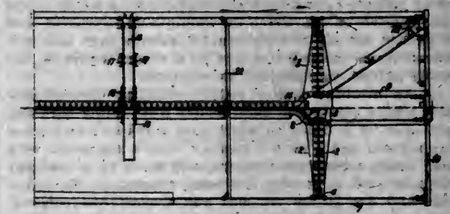
3. A harvesting machine comprising in combination with gathering devices and a cutting mechanism for severing the stalks that coöperates with the gathering devices, of a chopping mechanism for reducing the gathered stalks into small particles, means for collecting and conveying the cut stalks from the cutting mechanism to the chopping mechanism, said conveying means including devices for sustaining the cut stalks in the vertical position and delivering them perpendicularly to the chopping mechanism and a chute for engaging the butt ends of the cut stalks for directing the said ends to the said second cutting mechanism.

4. In a harvesting machine; the combination with gathering means and stalk cutting devices that coöperate therewith, of chopping mechanism, said chopping mechanism including feed devices for forcing the stalks endwise to the chopping devices, and other means for gathering and conveying the cut stalks, and delivering them in their vertical position to the aforesaid feed devices said other means including a U-shaped chute upon which the butt ends of the stalks ride and which extends from the cutting mechanism to the chopping mechanism.

5. In a harvesting machine, the combination with stalk gathering and cutting mechanism, and means for conveying the cut stalks in an upright position away from the cutting mechanism and other means for pocketing the cut stalks; of a chopping mechanism under the stalk pocketing means, a delivery means including gripping devices for pulling the stalks endwise down to the chopping mechanism and a runway for the stalk butts that extends from the cutting to the chopping mechanism.

[Claims 6 to 11 not printed in the Gazette.]

1,021,856. CAR-UNDERFRAME. JACOB H. WHITMOD, St. Louis, Mo., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed Aug. 28, 1908. Serial No. 450,679. (Cl. 105—76.)



1. In a car underframe, the combination comprising bolsters each with an opening relatively at the middle thereof, a filler in each of said bolster openings, a single built-up center girder with a vertical web plate between said bolsters, compression members forming parts of said center girder and diverging from the ends of said web plate and extending through said bolster at each side of said bolster filler, and a cover plate extending between and connecting said bolsters.

2. In a car underframe, the combination with side sills, bolsters, a built-up plate girder center sill with tension members terminating between said bolsters and compression members diverging from the ends of said tension members and extending beyond said bolsters, a sill cover plate connected with said bolsters, and filling members within relatively central openings of said bolsters and separating the extensions of said compression members.

3. In a car underframe, the combination with side sills, bolsters, a plate girder center sill with tension members terminating between said bolsters and compression members extending beyond said bolsters, and a transverse truss one member of which extends below said side sills and through the web plate of said center sill.

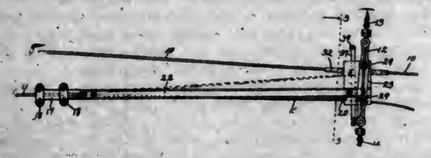
4. In a car underframe, the combination with side sills, bolsters, a plate girder center sill with tension members terminating between said bolsters and compression members extending beyond said bolsters, and a cross bearer having one member extending to said side sills and another member passing through the sill web plate and below said side sills.

5. In a railway car, bolsters, end sills and channel shaped draft sills extending from said end sills through said bolsters between which bolsters said draft sills con-

verge and are connected together, and means clamped between the connected portions of said draft sills connecting all of said draft sills together.

[Claims 6 to 10 not printed in the Gazette.]

1,021,857. OVERHEAD-TROLLEY SWITCH. EMIL H. ANDERSON, Indianapolis, Ind., assignor of one-half to Forrest M. Timmins, Indianapolis, Ind. Filed June 2, 1911. Serial No. 630,769. (Cl. 191—11.)



1. An overhead trolley switch including the combination with a continuous main trolley wire, a siding wire and a pull-over, of a frame consisting of one member with which the main wire and pull-over are secured and another member horizontally adjustable with relation to the first member and to which the siding wire is secured, and a switch member flexibly connected with said last-mentioned frame member, whereby the same switch construction is adapted for various sidings.

2. An overhead trolley switch including the combination with a continuous main trolley wire, a siding wire and a pull-over, of a frame consisting of one member with which the main wire and pull-over are secured and another member horizontally adjustable with relation to the first member and to which the siding wire is secured, and a switch member flexibly connected with said last-mentioned frame member and having a tongue which is laterally flexible, substantially as set forth.

3. An overhead trolley switch including the combination with a continuous main trolley wire, siding wire and pull-over, of a frame to which said wires and pull overs are secured and a switch member flexibly connected with said frame remote from its free end so as to be laterally slidable, said projecting end being tapered on its underside and flat on its top side and the extreme point of which is adapted when the switch is closed to lie immediately under the main trolley wire.

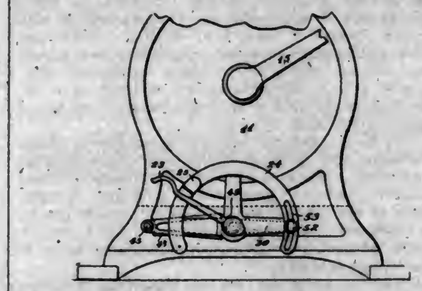
4. An overhead trolley switch including the combination with a continuous main trolley wire, siding wire and pull-over, of a frame to which said wires and pull overs are secured, and a switch member flexibly connected with said frame remote from its free end so as to be laterally slidable, said projecting end being tapered on its underside and flat on its top side and the extreme point of which is adapted when the switch is closed to lie immediately under the main trolley wire, the portion of said switch projecting beyond its connection with the frame being laterally flexible, substantially as set forth.

5. An overhead trolley switch including the combination with a continuous main trolley wire, siding wire and pull-over, of a frame to which said wires and pull overs are secured, a switch member flexibly connected at one end to said frame in line with the siding wire, a transversely extending rod mounted in the frame so as to be slidably laterally of the device, and means for pivotally connecting said switch member to said rod at a point remote from the end of the switch member, the parts being arranged so that when the switch is closed the point of the switch member will lie immediately under the trolley wire.

[Claims 6 to 9 not printed in the Gazette.]

1,021,858. PRINTING MECHANISM. ALBERT H. BATES, Cleveland, Ohio, assignor to The American Multigraph Company, Cleveland, Ohio, a Corporation of Ohio. Filed Jan. 2, 1909. Serial No. 470,375. (Cl. 101—126.)

1. The combination of a movable member formed with rails to carry individual lines of loosely held type, a rotary impression platen, an eccentric adjustment for such platen, and mechanism adjustable for different lengths of line to shift such eccentric to change the platen pressure.



2. The combination of a type holding member adapted to carry individual lines of type, a rotary eccentrically mounted platen with mechanism acting for individual lines and adjustable for different lengths thereof to shift such eccentric to change the platen pressure.

3. The combination of a rotary printing member adapted to carry individual lines of type, an impression platen having a surface which is non-coextensive with the printing surface, and multiplying means for varying the pressure on individual lines.

4. The combination of a rotary type carrying drum adapted to carry individual lines of type, a rotary impression platen having a periphery less than that of the drum, and mechanism composed of a set of moving parts for automatically varying the pressure between the drum and platen for varying lengths of line.

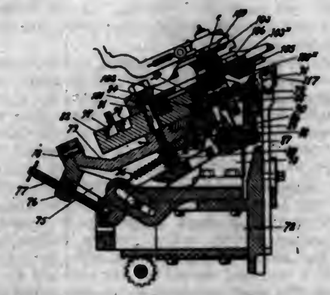
5. The combination of a rotary printing drum, a rotary impression platen, an eccentric adjustment for such platen, gearing for swinging such eccentric, a series of blocks carried on the drum adapted to form a variable guide, and a member connecting the gearing with such guide.

[Claims 6 to 22 not printed in the Gazette.]

1,021,859. PRIMARY BATTERY. WILHELM ALEXANDER FELIX BLEECK, Brisbane, Queensland, Australia. Filed June 25, 1909. Serial No. 504,372. (Cl. 204—37.)

In a two fluid battery comprising zinc in an excitant solution of caustic soda and a suitable complementary electrode separated therefrom by a porous pot, a depolarizer comprising chromic acid, water and hydrochloric acid with a mixture of ferrous and nickel sulfates.

1,021,860. LASTING-MACHINE. MATTHIAS BROCK, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed May 24, 1905. Serial No. 261,977. (Cl. 12—14.)



1. In a lasting machine, the combination of lasting plates movable over the bottom of the last and arranged for movement relatively to the last to adapt themselves to the swing of a right or a left last, with means for actuating said plates longitudinally and transversely of the last, including cam arms connected to the lasting plates and rolls for controlling the positions of the cam arms, and means by which one of said last mentioned movements can be varied without necessarily varying the other movement.

2. In a lasting machine, the combination with lasting-plates movable into alinement with the portion of the last to be acted upon, and actuating mechanism including cams and coöperating rolls for moving said plates inwardly over the bottom of a last, of adjusting means for the rolls for causing said plates to occupy substantially the same final inward position relatively to the last in operating upon lasts of different widths and the same lengths.

3. In a lasting machine, the combination with lasting-plates for wiping upper material from the opposite sides of an end portion of a last longitudinally and transversely toward the middle of the last, and means for actuating said lasting-plates, of a stop arranged for adjustment for variably limiting the movement of said actuating means to arrest the lasting plates in predetermined relation to the edge of shoes of different sizes.

4. In a lasting machine, the combination with lasting-plates for wiping upper material from the opposite sides of an end portion of a last longitudinally and transversely toward the middle of the last, actuating means for the lasting-plates, and means for limiting the movement of said actuating means, of adjusting means for varying the initial positions of the lasting-plates whereby they will be moved inwardly to different positions by said actuating means.

5. In a lasting machine, the combination with lasting-plates, a mechanism including cams connected with the lasting plates and coöperating cam rolls for actuating said plates longitudinally of the last and transversely toward the median line of the last, of means for varying the limits of the last-mentioned movement without substantially changing the movement longitudinally of the last.

[Claims 6 to 21 not printed in the Gazette.]

1,021,861. PUMPING APPARATUS. XENOPHON CAVERNO, Kewanee, Ill. Filed Mar. 18, 1907. Serial No. 362,884. (Cl. 103—79.)



1. In apparatus of the described class, the combination of a pump provided with inlet and outlet ports, and an air admission port provided with an inwardly opening valve, arranged to preclude the formation of a vacuum during the suction stroke of the pump, and another pump of less capacity having its outlet connected with the inlet port of the first mentioned pump, one of said pumps having a water forcing member adapted to elevate liquid above the pump with a downward and the other having a water forcing member of different character adapted to elevate liquid above the pump with an upward working stroke.

2. In apparatus of the described class, the combination of a pump cylinder provided with a solid plunger piston extending through the cylinder head, another pump cylinder of less capacity provided with a bucket piston reciprocating in the cylinder and adapted to permit water to pass above it on the down stroke, said last mentioned cylinder having its outlet connected with the inlet of the first mentioned pump, an air inlet arranged to admit air below said plunger during substantially the entire working stroke thereof, an inwardly opening valve for said air inlet, and means for simultaneously actuating said pistons in the same direction.

3. In apparatus of the described class, a water supply connection provided with two pumps of different capacity arranged in sequence, an air inlet duct for the pump of largest capacity, provided with an inwardly opening valve,—one of said pumps being provided with a plunger piston and the other with a bucket piston, whereby they may be actuated simultaneously in the same direction, with an alternate delivery,—one of said pumps being offset laterally from the other and provided with an independent piston rod, together with means for varying the stroke of one of the pistons.

4. In apparatus of the described class, the combination of a water supply connection provided with two pumps arranged in sequence with one receiving water from the other, an air inlet duct provided with an inwardly opening valve and arranged to admit air to the cylinder of the receiving pump during its suction stroke,—the stroke of said pump being of greater length than the other.

5. In apparatus of the described class, the combination of a water supply connection provided with two pumps arranged in sequence with one receiving water from the other, an air inlet duct provided with an inwardly opening valve and arranged to admit air to the cylinder of the receiving pump during its suction stroke,—the stroke of said pump being of greater length than the other and said inlet valve being operative for the admission of air during substantially the entire stroke.

[Claim 6 not printed in the Gazette.]

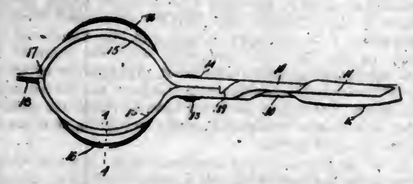
1,021,862. SWINGING WINDOW. EDWARD CULVER, Chicago, Ill., assignor of one-half to Frank B. Bassler, Chicago, Ill. Filed July 24, 1911. Serial No. 640,344. (Cl. 20—12.)



1. In a window, the combination comprising a window frame having a vertical pocket in one of its sides, a depressible window stop located at said side of the frame and capable of being depressed into said pocket, toothed posts carrying said stop and slidably mounted on said frame, a vertically extending rotary shaft in said pocket, toothed wheels carried by said shaft and meshing with the teeth of said posts, and shaft rotating means having an element projecting out through the frame.

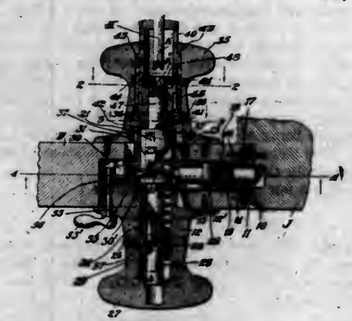
2. In a window the combination comprising a window frame, a pair of depressible window stops, at each side of said frame, toothed posts carrying said stops, and slidably mounted in the window frame, a pair of vertically extending shafts at each side of the frame, toothed wheels carried by said shafts and meshing with the teeth of the posts, pinions carried by said vertically extending shafts, horizontally extending shafts journaled upon the window frame and projecting out through the front thereof, worm gears mounted upon said horizontally extending shafts and meshing with the pinions upon the vertically extending shafts and hand wheels for turning said horizontally extending shafts.

1,021,863. SEAM-RIPPER. JAMES E. DANIELS, Monroe, Cal. Filed July 27, 1911. Serial No. 640,849. (Cl. 30—14.)



In a seam ripper, pivotally connected shanks having handle portions formed at their rear ends, a shoulder arranged on one shank portion and limiting the spreading thereof, the portions of the shanks beyond the pivot being bowed laterally in opposite directions with bottom flanges turned upwardly and outwardly and tapering toward the central portion of their free edges, the extremities of the bowed portions being brought in contact and extended forwardly at right angles to provide cutting points, said flange portions being adapted to receive the severed edges of the cloth for holding the same separated.

1,021,864. LOCK. CARL DENZLER, Detroit, Mich. Filed Jan. 27, 1911. Serial No. 604,950. (Cl. 70—91.)



1. The combination with a normally-retracted lock-bolt, of a rotatable controller therefor comprising a body for maintaining said bolt in its projected position, said body having a recess adapted to be brought into register with said bolt to permit the retraction thereof, and a knob for moving said controller, and means for locking said controller against rotation.

2. The combination with a normally-retracted lock-bolt, of a longitudinally movable and rotatable controller therefor comprising a body for maintaining said bolt in its projected position, said body having intermediate its ends a recess adapted to be brought into register with said bolt from either direction to permit the retraction thereof, and a knob for moving said controller, and means for locking said controller against longitudinal movement and against rotation.

3. The combination with a normally-retracted lock-bolt, of a movable controller therefor comprising a body for maintaining said bolt in its projected position, said body having intermediate its ends a recess adapted to be brought into register with said bolt from either direction to permit the retraction thereof, and a knob for moving said controller, a hand-operable catch for locking said controller against movement and comprising a slip-bolt, a spring for withdrawing said slip-bolt, and a cam for bringing said slip-bolt into lock-engagement with the controller.

4. The combination with a lock-bolt, and a plate for supporting the same, of a slidable rotatable controller having a recess adapted to receive the lock-bolt when retracted, a spring between said bolt and plate, and an independent non-rotatable plunger for moving said controller longitudinally, and frictional interlocking means between said plunger and controller.

5. The combination with a lock-bolt, and a plate for supporting the same, of a slidable rotatable controller having a recess adapted to receive the lock-bolt when retracted, a spring between said bolt and plate, and an independent non-rotatable plunger for moving said controller longitudinally, and a rib-and-groove connection between the ends of said plunger and controller for frictionally positioning the controller rotatively relatively to the plunger.

[Claims 6 to 8 not printed in the Gazette.]

1,021,865. NARCOTIZING-MASK. KARL ANTON (ALLAN) EMANUEL FRIES, Stockholm, Sweden. Filed Dec. 26, 1911. Serial No. 667,708. (Cl. 128—18.)



1. In a device of the character specified, the combination with an anesthetic receiver adapted to rest in contact with a part of the patient's body, of a frame adapted to rest over the patient's face and support a suitable absorbent material designed to be saturated with the anesthetic, and means for supplying anesthetic from the receiver to desired parts of the material supported by said frame.

2. In a device of the character specified, the combination with an anesthetic receiver adapted to rest in contact with a part of the patient's body, of one member of a frame carried by said receiver, an independent frame member complemental to said first named member, means for securing said members together to hold an absorbent material designed to be saturated with the anesthetic between said members, said frame members and fabric being adapted to rest over the patient's face, and means for directing a supply of anesthetic from the receiver to any desired part of the material supported by the frame members.

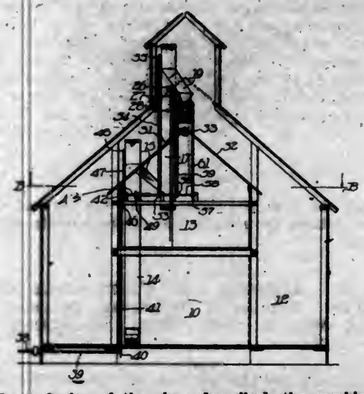
3. In a device of the character specified, the combination with an anesthetic receiver adapted to rest in contact with a part of the patient's body whereby the heat of the body will vaporize a portion of the anesthetic in said receiver and exert pressure on the remainder of said anesthetic, of a frame adapted to rest over the patient's face and support a suitable absorbent material designed to be saturated with the anesthetic, a plurality of nozzles directed over different parts of said material and means for conveying anesthetic from said receiver through any of said nozzles.

4. In a device of the character specified, the combination with an anesthetic receiver adapted to rest in contact with a part of the patient's body, of a frame carried by said receiver and adapted to support a suitable absorbent material over the patient's face, a tube projecting from said receiver, a plurality of nozzles adapted to communicate with said tube and having their outlet ends directed over different points of said material, and means for conducting anesthetic from said receiver to said nozzle.

5. In a device of the character specified, the combination with an anesthetic receiver adapted to rest in contact with a patient's body, of a frame carried by said receiver and adapted to support a suitable absorbent material over the patient's face, a tube projecting from said receiver and a cock at one end of said tube, nozzles projecting from said cock and having their outlet ends directed over different parts of said material, means for conducting anesthetic from said receiver to said cock, and means for directing the flow of anesthetic through any or all of said nozzles.

[Claims 6 to 8 not printed in the Gazette.]

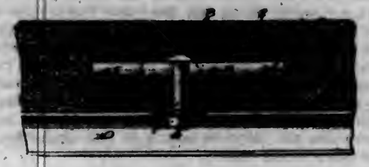
1,021,866. CONVEYING APPARATUS. JOHN H. GILMAN, Ottawa, Ill., assignor to King & Hamilton Company, Ottawa, Ill., a Corporation of Illinois. Filed Sept. 29, 1909. Serial No. 520,123. (Cl. 193—20.)



1. In a device of the class described, the combination with a barn having cribs, of an elevator having its discharging end in the center of the top of the barn, a plurality of stationary horizontal conveyers extending from the discharging end of the elevator, drop bottom sections in said conveyers, and means to deliver the grain from said sections to the cribs consisting of the inclined roof sections extending from beneath the horizontal conveyers to the edge of the cribs.

2. In a device of the class described, the combination with a barn having a central driveway, cribs on either side of said driveway, and a bin over said driveway, of an elevator having its discharging end in the center of the top of the barn, a plurality of stationary horizontal conveyers extending from the discharging end of the elevator, drop bottom sections in said conveyers, and inclined roof sections over said bin and provided with doors therein directly beneath the drop bottom sections.

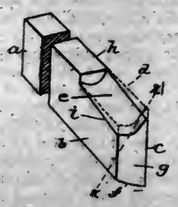
1,021,867. HANGER-SUPPORT. WILLIAM GOSS, Chicago, Ill. Filed July 29, 1910. Serial No. 574,491. (Cl. 72—62.)



1. In a device of the character described the combination with a metal frame comprising a head or channel portion closed at its top and sides and having flange portions projecting inwardly from the lower extremity of each side portion but spaced apart so as to provide an opening or slot, the flange portions offering support for a headed bolt, closely engaging the shank of the same, said flange portions being extended downwardly and outwardly to form a flaring chamber within which the bolt shank and its engaging nut may be carried during the molding of concrete about the hanger support.

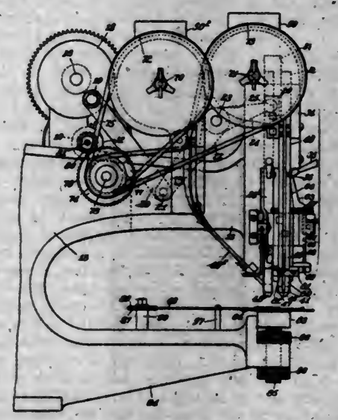
2. In a device of the character described the combination with a metal frame comprising a head or flange portion closed at its top and sides and having channel portions projecting inwardly from the lower extremity of each side portion but spaced apart so as to provide an opening or slot, the flange portions offering support for a headed bolt, closely engaging the shank of the same, said flange portions being extended downwardly and outwardly to form a flaring chamber within which the bolt shank and its engaging nut may be carried during the molding of concrete about the hanger support, said flange members at their lower extremities terminating in horizontal diverging extensions whose outer surfaces are adapted to lie flush with the surface of the concrete body aforesaid.

1,021,868. CUTTER FOR METAL-WORKING TOOLS. JAMES HARTNESS, Springfield, Vt. Filed Sept. 12, 1908. Serial No. 452,796. (Cl. 29—95.)



An instrumentality for turning metal, comprising an elongated bar having an inner face and a top slope forming a wedge or acute angle of not more than substantially 45° terminating in a cutting edge extending lengthwise of the bar, and a rib parallel with the cutting edge and having a top face at an angle to said inner face to constitute a lifter for the chip produced by said cutting edge.

1,021,869. MULTIPLE-RIVET-SETTING MACHINE. ARTHUR R. HAVENER, Waltham, Mass., assignor to Judson L. Thomson M'f'g Co., a Corporation of Maine. Filed Oct. 20, 1910. Serial No. 588,053. (Cl. 218—0.5.)



1. A rivet setting machine having, in combination, a slide, mechanism adapted to impart a reciprocatory motion thereto, a rectangular driver bar, a stationary member, and a locking pin mounted upon and adapted to slide transversely of said driver bar and alternately into and out of recesses provided in said slide and stationary member, respectively, the recesses in said slide and stationary bar being of substantially the same extent, vertically, as the diameter of said locking pin whereby when said locking pin is engaging either of said recesses, relative movement between said driver and the part with which said pin is engaged will be prevented.

2. A rivet setting machine having, in combination, a slide, mechanism adapted to impart a reciprocatory motion thereto, a driver bar, means adapted at all times to prevent said driver bar from being rotated, a stationary member, a locking pin mounted upon and adapted to

slide transversely of said driver bar and into and out of recesses provided in said slide and stationary member, respectively, and a lever pivoted to rock on said driver bar and adapted to move said locking pin into and out of said recesses alternately.

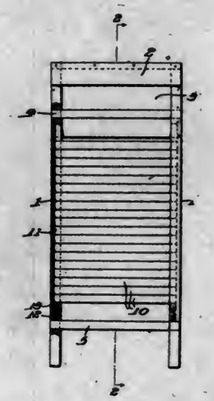
3. A rivet setting machine having, in combination, a slide, mechanism adapted to impart a reciprocatory motion thereto, a driver bar, a stationary member, a locking pin adapted to slide transversely of said driver bar and into and out of recesses provided in said slide and stationary member, respectively, a lever pivoted to said driver bar and adapted to move said locking pin into and out of said recesses alternately, and means to lock said pin in either of said recesses.

4. A machine for setting rivets and the like having, in combination, a driver bar, a rivet holder in two parts slidably mounted on opposite sides of said driver bar, each of said parts having a lateral outwardly disposed projection thereon, a U-shaped spring provided with recesses adjacent to the extremities of each of the legs thereof, adapted to receive the outer ends of said projections, whereby said holder parts, respectively, are yieldingly pressed against opposite sides of said driver bar.

5. A machine for setting rivets and the like having, in combination, a driver bar, mechanism adapted to impart a reciprocatory motion thereto, a rivet holder in two parts slidably mounted on said driver bar, yielding means adapted to press said holder parts against said driver bar, and a stationary U-shaped bracket with two stops on each leg of said bracket adapted to engage, respectively, said two parts and limit the distance said parts may be moved by said driver bar in opposite directions.

[Claims 6 to 8 not printed in the Gazette.]

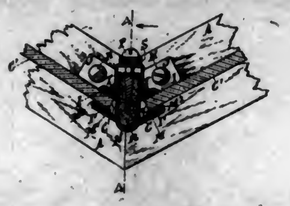
1,021,870. WASHBOARD. ANNA A. JONES, Philadelphia, Pa. Filed Aug. 9, 1911. Serial No. 643,084. (Cl. 68—29.)



A wash-board comprising spaced side posts, transverse rotary members arranged between said side posts, vibratory longitudinally thereof, yielding means arranged to engage one of said rotary members to oppose the movement thereof in one direction longitudinally of said side posts, said yielding means including a spiral spring, and a yielding cap secured to said spring.

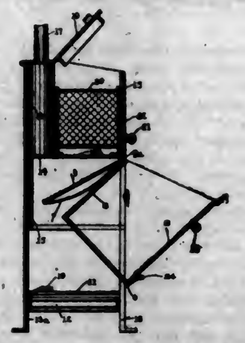
1,021,871. STORE-FRONT CONSTRUCTION. SAMUEL D. KELLEY, Boston, Mass. Filed Mar. 6, 1909. Serial No. 481,680. (Cl. 20—56.3.)

In a store front construction, a means for receiving the edges of the glass panes, said means comprising two interfitting members of sheet metal, one of said members being formed around a wooden core and so bent upon itself to form a substantially T-shaped member, the other member being substantially U-shaped in cross section, and having a constricted portion adapted to receive the core of the T-shaped members, and means passing



through the U-shaped member into the core of the T-shaped member for securing the two together in operative position.

1,021,872. GARBAGE AND WASTE-PAPER RECEPTACLE. WILLIAM M. KINGSBURY, Cleveland, Ohio. Filed May 27, 1911. Serial No. 629,898. (Cl. 220—115.)



1. A receptacle comprising a casing having a closed upper part and a ventilating flue leading from the top thereof, the lower part of the casing being open at the sides and bottom, and a removable garbage can in said casing, the top of said can projecting upwardly above the open part of the casing and into the closed part thereof, whereby odors will be confined in the upper part of the casing and conducted to the flue, and the lodgment of matter in the lower part of the casing will be prevented.

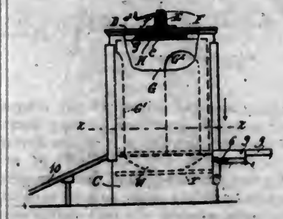
2. A receptacle comprising a casing, having a ventilating flue in the top, a garbage can pivotally mounted therein to swing in and out through the front of the casing, and a screen pivoted and inclosed within the casing below the top thereof, and adapted to rest on the top of the can when the latter is swung in and permitting escape of odors to the flue.

1,021,873. HEN'S NEST AND YARD. CHARLES F. KROEH, Orange, N. J. Filed Apr. 18, 1911. Serial No. 621,781. (Cl. 119—47.)

1. In a hen's nest, the combination with a stationary member having openings, of a revoluble member having openings, means constructed to receive the revoluble member always in one and the same direction, mutually engaging stopping-and-releasing devices borne by said members and constructed to hold said revoluble member at predetermined points against the force of said revolving means and to release the said member, means constructed to be operated in succession by the weight of an egg and by the weight of a hen and constructed to actuate the said stopping-and-releasing devices.

2. In a hen's nest, the combination with a stationary member having openings, of a revoluble member having openings, means constructed to revolve the revoluble member always in one and the same direction, mutually

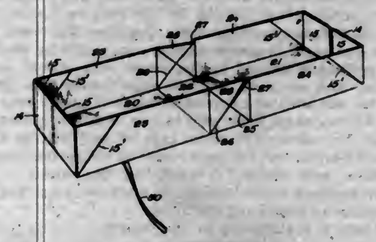
engaging stopping-and-releasing devices comprising movable portions located at different points on said stationary member and constructed to hold said revoluble member at predetermined points against the force of said revolving means and to release said member, means constructed to be operated by the weight of an egg and to actuate the movable portion of said stopping-and-releasing devices on one side of said stationary member to release the revoluble member, and means constructed to be operated by the weight of a hen and to actuate another movable portion of said stopping-and-releasing devices to release the said revoluble member.



3. In a hen's nest, the combination with a stationary outer member having openings, of a revoluble inner member having openings, means constructed to revolve the revoluble member always in one and the same direction, mutually engaging stopping-and-releasing devices borne by said members and constructed to hold said revoluble member at predetermined points against the force of said revolving means and to release the said member, means constructed to be operated in succession by the weight of an egg and by the weight of a hen and constructed to actuate the said stopping-and-releasing devices.

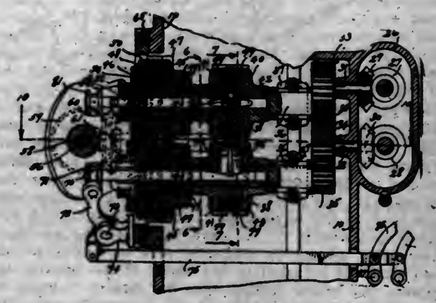
4. In a hen's nest, the combination with a stationary outer member having openings, of a revoluble inner member having openings, means constructed to revolve the revoluble member always in one and the same direction, mutually engaging stopping-and-releasing devices comprising movable portions located at different points on said stationary member and constructed to hold the said revoluble member at predetermined points against the force of said revolving means and to release said member, means constructed to be operated by the weight of an egg and to actuate the movable portion of said stopping-and-releasing devices on one side of said stationary member to release the revoluble member, and means constructed to be operated by the weight of a hen and to actuate another movable portion of said stopping-and-releasing devices to release the said revoluble member.

1,021,874. BLANK FOR FOLDING BOXES. ELIE W. LABOMBARDE, Nashua, N. H. Filed Oct. 6, 1900. Serial No. 521,399. (Cl. 229—116.)



A blank for a folding box having intersecting scores dividing the blank so as to define a top, a bottom, a flap connecting the top and bottom, end flaps extending respectively from the outer ends of the top and bottom, side flaps at the side edges of the top and bottom, corner flaps for joining the side flaps of the top with the end flap thereof, corner flaps for joining the side flaps of the bottom with the end flaps thereof, and folding flaps connecting the side flaps of the top and bottom with the flap which connects the top and bottom, each of said folding flaps having diagonal scores and each having a slit extending diagonally from the outer edge to the meeting point of the diagonal scores, said slit providing a triangular flap having two free edges and one connecting edge, and being adapted to be engaged and folded inwardly by the top to guide the side flaps of the top outside the side flaps of the bottom when the box is closed.

1,021,875. GEARING. CHARLES L. LIBBY, Indianapolis, Ind. Filed Feb. 6, 1908. Serial No. 414,504. (Cl. 74—59.)



1. Gearing including driving means, a shaft, clutch mechanism mounted in connection with said shaft and through which power is transmitted from said driving means to said shaft, said clutch mechanism having as a part thereof a longitudinally movable clutch operating rod, and a brake mechanism acting on said shaft adapted to be actuated by said clutch operating rod.

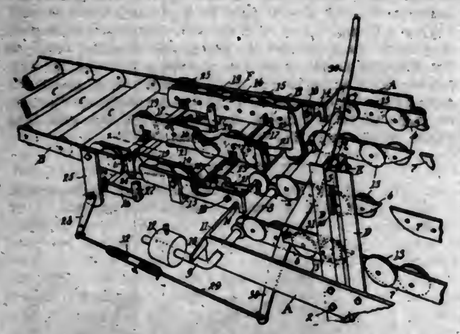
2. Gearing including driving means, a shaft, clutch mechanism mounted in connection with said shaft and through which power is transmitted from said driving means to said shaft said clutch mechanism having as a part thereof a longitudinally movable clutch operating rod with a notch therein, a brake mechanism adapted to act on said shaft, a lever with one end in said notch when the clutch mechanism is disengaged which is adapted to release said brake mechanism when said clutch rod is moved so as to move the lever out of the notch.

3. Gearing including driving means, a shaft, clutch mechanism mounted in connection with said shaft through which power is transmitted from said driving means to said shaft said clutch mechanism having as a part thereof a longitudinally movable clutch operating rod with a notch therein, a friction brake member secured on said shaft, a slidable friction brake member coöperating with said brake member on the shaft, a lever fulcrumed near said slidable brake member with one end adapted to enter said notch in said rod and be actuated by the longitudinal movement of said rod and the other end of said lever being in position to engage said slidable brake wheel and move it into braking position when said lever is actuated.

1,021,876. AUTOMATIC LOADER FOR LIFT-CARRIERS. CHARLES H. LISTER, St. Paul, Minn., assignor to Minnesota Manufacturers Association, Minneapolis, Minn., a Corporation of Minnesota. Filed May 23, 1910. Serial No. 562,903. (Cl. 193—8.)

1. The combination, with a gravity carrier and a straight lift elevator, of an auxiliary oscillating carrier section arranged at the discharge end of the carrier and having fulcrum support at its forward end, said oscillating section resting normally in line with the carrier and adapted to receive packages therefrom, and means operatively connected with the oscillating section and actuated by the travel of the elevator for raising the oscil-

lating section upon its fulcrum support coincidently with the arrival of an elevator platform at a predetermined point.



2. The combination, with a gravity carrier and a straight lift elevator, of an auxiliary tilting carrier section arranged at the discharge end of the carrier and having fulcrum support at its forward end, said tilting section resting normally in line with the carrier and adapted to receive packages therefrom, a package stop arranged at the forward end of the tilting section and standing normally in the path of descending packages, and means operatively connected with the tilting section and stop and actuated by the travel of the elevator for raising the tilting section upon its fulcrum support at predetermined times and coincidently withdrawing the stop.

3. The combination, with a gravity carrier and a straight lift elevator, of an oscillating tilting section arranged at the discharge end of the carrier and forming a continuation thereof, rollers carried by said tilting section, and means operatively connected with said tilting section and actuated by the travel of the elevator for tilting the tilting section at predetermined times.

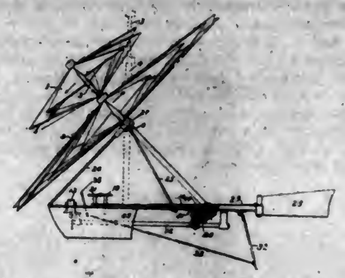
4. The combination, with a gravity carrier having side bars, and a straight lift elevator, of an oscillating tilting section arranged within the side bars of the carrier and pivotally supported thereon at the discharge end thereof, rollers carried by the tilting section and projecting above the side rails of the carrier, and means operatively connected with the tilting section and actuated by the travel of the elevator for tilting the tilting section at predetermined times.

5. The combination, with a gravity carrier and a straight lift elevator, of an oscillating tilting section arranged at the discharge end of the carrier and resting normally within and upon the carrier frame, said tilting section having fulcrum support at its forward end upon the carrier frame, rollers carried by said tilting section, a rock shaft arranged transversely of the tilting section and operatively connected therewith, and means actuated by the travel of the elevator for turning the rock shaft and thereby tilting the tilting frame at predetermined times.

[Claims 6 to 10 not printed in the Gazette.]

1,021,877. FLYING-MACHINE. IRA LEE MARTIN, Portland, Oreg. Filed Feb. 9, 1910. Serial No. 542,970. (Cl. 244—19.)

1. In a flying machine, a plurality of revoluble plane members upon a carrying shaft, a car supported adjustably to the lower end of said carrying shaft, fixed brace-like supporting members from said car pivotally and slidably connected at their upper ends with said carrying shaft intermediate its ends and below said plane members, whereby said shaft may be tilted through said pivotal connection and its lower end moved within said car forwardly or rearwardly to give incline to said revoluble plane members, and power mechanism in said car having adjustable driving connections for driving said carrying shaft and plane members.



2. In a flying machine, concentrically disposed revoluble carrier or propeller members, driving shafts therefor adapted to drive said members in opposite directions, a car adjustably supported to the lower end of said driving shafts, fixed brace-like supporting members pivotally and slidably connected at their upper ends to said shafts intermediate their ends, whereby the said shafts may be tilted through said pivotal connection and their lower ends moved rearwardly or forwardly in said car, for the purpose described, and power mechanism for driving said shafts and having an adjustable driving connection therewith.

3. In a flying machine, concentrically disposed revoluble carrier or propeller members, driving shafts therefor adapted to drive said members in opposite directions, a car with power mechanism therein, a power shaft from said mechanism, adjustable driving connections between said power shaft and the lower ends of said driving shafts, whereby the lower ends of said driving shafts are movable longitudinally of said power shaft, and fixed supporting brace members from said car, pivotally and slidably connected at their upper ends to said driving shafts at a point intermediate their ends, whereby when the lower ends of said driving shafts are moved longitudinally of said power shaft, said driving shafts are slidably tilted through said supporting brace members, for the purpose described.

4. In a flying machine, concentrically disposed carrier or propeller members, driving shafts therefor adapted to drive said members in opposite directions, a car with power mechanism therein, a power shaft extending in said car from said power mechanism, adjustable driving connections between the lower ends of said driving shafts and said power shaft, whereby the lower ends of said driving shafts can be moved longitudinally of said power shaft, supporting brace members from said car having pivotal and slidable connections at their upper ends with said driving shafts, whereby said driving shafts may be tilted at will through said connections by moving their lower ends upon said power shaft, and means for moving said driving shafts at their lower ends upon said power shaft, substantially as and for the purpose described.

5. In a flying machine of the character described, revoluble carrier or propeller members upon driving shafts, a car or boat supported by the lower ends of said driving shafts, and by rigid brace members therefrom having pivotal and slidable connections at their upper ends with said driving shaft below said carrier or propeller members, means for moving the lower ends of said driving shafts in said boat or car for the purpose of tilting the propeller members, and means for converting the carrier or propeller members into a parachute when not revolving, substantially as shown and described.

[Claim 6 not printed in the Gazette.]

1,021,878. GARMENT. ROSE S. MELNIK, Upper Montclair, N. J. Filed June 22, 1910. Serial No. 568,268. (Cl. 2—78.)

1. A corset having front meeting edges, a belt adapted to pass around the waist of the corset, means for securing the ends of the belt together, and extensions, each extension extending downward from the ends of the belt and connecting them with the bottom of the meeting edges of the corset.



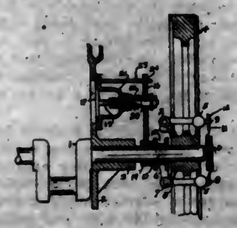
2. A corset having front meeting edges, clasps consisting of studs and slotted plates for securing the front edges together, a belt adapted to pass around the waist of the corset, a member on each end of the belt, each member having a slot to receive the stud of a clasp whereby the members are fastened to a clasp, and connecting strips secured to the members and to the bottom edge of the corset.

3. A corset having front meeting edges, clasps consisting of studs and slotted plates for securing the front edges together, a belt adapted to pass around the waist of the corset, a member on each end of the belt, each member having a slot to receive the stud of a clasp whereby the members are fastened to a clasp, connecting strips secured to the members and to the bottom edge of the corset, and hose supporters secured to the connecting-strips and adapted to normally operate in extension of the strips.

4. A corset having front meeting edges, clasps consisting of studs and slotted plates for securing the front edges together, a belt adapted to pass around the waist of the corset, members secured to the ends of the belt and provided with slots to receive a stud of a clasp, means on one member to receive and hold down the waist band of a skirt, and connecting strips secured to the members and the bottom of the corset adjacent to the meeting edges.

5. A garment having front meeting edges, a belt adapted to pass around the waist of the garment, means for securing the ends of the belt together, and a depending extension on each end of the belt, each extension being permanently secured to the bottom of the meeting edges of the garment, these extensions being adapted to be held taut when the securing means are fastened together.

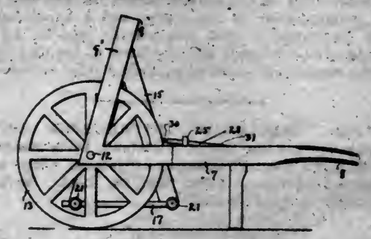
1,021,879. GOVERNOR FOR EXPLOSIVE-ENGINES. LOUIS J. MONAHAN, Oshkosh, Wis., assignor to Termaat & Monahan Co., Oshkosh, Wis. Filed Mar. 25, 1911. Serial No. 616,940. (Cl. 123—109.)



1. In a governor for explosive engines, the combination with a crank shaft and fly wheel, of centrifugal governor balls or weights having bell crank extending arms pivotally attached to the fly wheel, a sliding collar mounted on the crank shaft and adapted to be moved horizontally on the shaft by means of the said bell crank arms, an upwardly extending arm forming part of the collar, a suction inlet puppet valve arranged horizontally with its stem above the sliding collar and adapted to pass through the said extending arm, a nut attached to the end of the valve stem and adapted to strike the extending arm when the valve is seted upon by the suction of the engine and means, independent of the valve stem for guiding said arm in a path parallel to the axis of the crank shaft.

2. In a governor for explosive engines the combination with an inlet puppet valve having a stem extending through a guide, a nut on the end of the valve stem, a seating spring between the guide and nut, a crank shaft journaled parallel to the axis of the said puppet valve, a collar 14 adapted to slide on the crank shaft and having an extending part 16 with a hole near the end, the valve stem extending through said hole and the said nut being adapted to strike against the said extending part 16 whereby the permissible opening of the valve is determined by the position of the collar and extending part 16, centrifugal weight mechanism adapted to control the longitudinal position of the collar along the crank shaft.

1,021,880. PALLET-TRUCK. JOHN L. NEBLE and ANDERS HANSEN, Omaha, Nebr. Filed Oct. 20, 1911. Serial No. 655,713. (Cl. 21—116.)



1. In a truck of the character described, the combination with a barrow like main frame having a pair of handles at its rear end, an upstanding yoke mounted upon said frame at its forward end and inclined rearwardly from the vertical, there being communicating recesses formed in the frame and yoke, ground wheels located in said recesses, a platform hinged at its top to the yoke, supporting wheels for the said platform, pallet supporting ledges carried by said platform, a rigid frame member mounted for longitudinal sliding movement upon the main frame in such manner that movement of said frame member in any other direction than longitudinally is prevented and pivotal connections between said handle frame and said platform.

2. In a device of the character described, the combination with a barrow like main frame, ground wheels therefor, an upstanding yoke carried thereby, a pallet supporting platform hinged to the top of and depending from said yoke, supporting wheels upon said platform, a handle frame comprising a pair of side members and a rear end transverse connecting member, means for pivotally connecting the side members to the platform at their forward ends, a transverse connecting bar forming a part of the main frame, recesses formed in said bar through which the side members of the handle frame slide, and keepers to prevent other than longitudinal sliding movement of the handle frame, said transverse connecting bar being recessed for the reception of the rear transverse connecting member of the handle frame at its forward limit of movement.

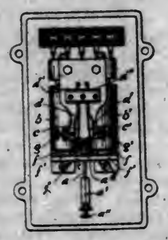
3. A truck, comprising, in combination with connected side-bars provided with wheels, a yoke disposed above the wheels and having its arms arranged in angular relation to and rigidly connected with the side-bars; a platform of substantially U-shape provided with bearing

wheels and with upright substantially-parallel side-members, said platform being normally disposed horizontally between the wheels with its side-members mounted pivotally upon the yoke to form parallel ledges projecting inwardly of the side-members; stationary guides upon the truck normally in alinement with the side members; and a rigid frame member for controlling the pivotal movements of the side-members of said platform, said frame member being pivotally mounted upon the side-members and extending rearwardly of the truck in engagement with said guides.

4. The combination with a truck having side bars connected by a cross-bar and provided with wheels; a yoke disposed transversely of and having substantially parallel arms rigidly mounted upon the side bars; a platform having arms pivotally mounted upon the yoke, said platform consisting of connected ledges extending longitudinally of the truck and transversely from the arms in directions of each other; and a rigid operating-frame for controlling the movements of the platform, said operating-frame being slidably mounted upon the cross-bar of the truck and pivotally connected with the arms of said platform.

5. A truck, comprising, in combination with side bars provided with wheels and connected at their front terminals by a yoke extending above the wheels, and connected intermediate their terminals by a cross-bar; upright supporting-members of inverted V-shape pivotally mounted upon the yoke and disposed between the wheels; ledges disposed substantially at right angles to and mounted upon the inner sides of the upright-supporting-members to extend longitudinally of the truck; and a handle-bar disposed rearwardly of and substantially parallel with the cross-bar and connected with the arms of the upright supporting-members for controlling their pivotal movements.

1,021,881. ELECTRICAL INTERRUPTER DEVICE. CHARLES HOWARD NORTH, Cleveland, Ohio, assignor to The North Electric Company, Cleveland, Ohio, a Corporation of Ohio. Filed Nov. 16, 1908. Serial No. 462,806. (Cl. 171—122.)



1. In an electro-magnetic appliance, the combination with an actuating electro-magnet, of an armature, a supporting-part and a vibratory member comprising a looped wire free at its outer end and securely held at its looped end by said supporting-part; said looped wire carrying the armature at a distance from its looped end, operatively positioned before the poles of the electro-magnet, substantially as set forth.

2. In a vibratory electro-magnetic appliance, the combination with an actuating electro-magnet, of its armature, a rigid supporting-part and a vibratory mounting for the armature comprising an extended arm free at its outer end and an attaching loop secured at the other end within said supporting-part, whereby the rate of flexure is rendered uniform, substantially as set forth.

3. In a vibratory electro-magnetic appliance, the combination with an actuating electro-magnet, of its armature, a rigid supporting-part, a vibratory mounting for the armature, comprising an extended arm free at its outer end and a rearwardly secured loop held within said supporting-part, whereby the rate of flexure is rendered substantially uniform, and means for adjusting the frequency of the armature's vibration, substantially as set forth.

4. In a vibratory electro-magnetic appliance, the combination with an actuating electro-magnet, of its armature, a stationary supporting-part, a mounting for said armature, comprising an extended arm free at its outer extremity and a rearwardly secured loop held within said supporting-part, whereby the rate of flexure is rendered substantially uniform and means associated wtih the free extremity of said arm for adjusting its rate of vibration, substantially as set forth.

5. In a vibratory electro-magnetic appliance, the combination with an actuating electro-magnet, of its armature, a stationary supporting-part, a mounting for said armature, comprising an extended vibratory arm and a rearwardly secured loop rigidly held within said supporting-part, whereby the rate of flexure or vibration is rendered substantially uniform, a contact-member also carried by said arm and angularly extended beyond its plane of vibration and a co-acting contact adapted to be intermittently engaged thereby, substantially as set forth.

[Claims 6 to 14 not printed in the Gazette.]

1,021,882. EXPLOSIVE. JAMES F. O'BRIEN, Chicago, Ill. Filed Sept. 5, 1911. Serial No. 647,473. (Cl. 52—1.)

1. An explosive, consisting of potassium chlorate and sugar in proportions approximately three to one and containing a relatively small amount of Prussian blue.

2. An explosive, consisting of $KClO_3$ seventy five parts, $C_{12}H_{22}O_{11}$ twenty five parts, and a relatively small amount of $Fe_4(Fe(CN)_6)_3$.

3. An explosive, consisting of $KClO_3$ seventy five parts, $C_{12}H_{22}O_{11}$ twenty five parts, and a maximum of approxi two per cent. of the total of the said ingredients of $Fe_4(Fe(CN)_6)_3$.

1,021,883. INSECT-KILLER. WILEY W. PARSONS and HENRY SPALDING, Hay Springs, Nebr. Filed Oct. 16, 1911. Serial No. 655,069. (Cl. 43—1.)



1. An insect killer comprising a body of bright gauze material bent upon itself forming a long section and a short section, the outer ends of each section being free, a wire inserted between the sections, a strip of metal secured to the body across the base, and a handle.

2. An insect killer comprising a body of gauze material having a portion of itself bent and extending approximately midway of its length, a reinforced base above the bent portion of the body and a handle secured to the same.

3. An insect killer comprising a gauze body of bright material, said body bent forming a long section and a short section, the short section extending approximately midway of the length of the long section, the edges of the body bent inwardly to prevent raveling, a stiffening rod inserted at the bend of the body and extending the entire width of the same, a reinforcing strip secured to the bent portion of the body, one side of the strip being higher than the other, and a handle passed through the strip and the body and firmly clamped thereon, substantially as specified.

1,021,884. PACKAGE-BAND-FASTENING DEVICE. WILLIAM A. PAULUS, New York, N. Y. Filed Nov. 1, 1910. Serial No. 590,117. (Cl. 24—17.)



1. A fastening device, comprising a locking band consisting of a strip of flexible material divided by score lines into four substantially equal parts, one end folded onto its adjacent part and these onto the next and so on, the last fold having its end secured to the part folded upon it, and a tie-band connected at one end with the folds on one side of the center of said locking band, the other end of the tie band being free, said locking band being adapted to permit the passage of the free end of the tie band centrally through the same and between the folds of the same on either side of the center, substantially as described.

2. A fastening device, comprising a locking band consisting of a strip of flexible material divided by score lines into four substantially equal parts, one end folded onto its adjacent part and these onto the next and so on, the last fold having its end secured to the part folded upon it, and a tie-band connected at one end with the folds on one side of the center of said locking band the other end of the tie band being free, said locking band being adapted to permit the passage of the free end of the tie-band centrally through the same and between the folds of the same on either side of the center, an outer fold of said locking band also being cut away to facilitate the passage of the tie-band beneath it.

1,021,885. DETACHABLE HINGE. FREDOLF J. PETERSON, Salem, Ohio, assignor to The American Case & Register Company, Salem, Ohio, a Corporation of Ohio. Filed Oct. 6, 1911. Serial No. 653,268. (Cl. 16—11.)



1. A detachable hinge consisting of two members, one of said members provided with bores having different diameters, a yoke consisting of pintle, retaining and handle portions, said retaining portion provided with a head, substantially as and for the purpose specified.

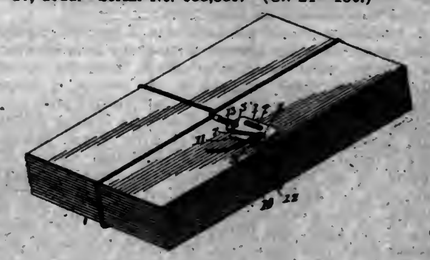
2. In a detachable hinge, the combination of hinge members provided with knuckles, a sliding yoke carried by one of the hinge members and adapted to couple the opposite hinge member to the member carrying the yoke, substantially as and for the purpose specified.

3. In a detachable hinge, the combination of hinge members provided with eye knuckles, a sliding yoke carried by one of the hinge members and adapted to couple the opposite hinge member to the member carrying the yoke, and means for limiting the movements of the yoke, substantially as and for the purpose specified.

4. In a detachable hinge, the combination of two members, one of said members provided with a recess adapted to receive the other hinge member, the member provided with a recess having longitudinal bores of different diameters, a yoke consisting of pintle retaining and knob portions, said retaining portion provided with a head, a shoulder located between the bores having different diameters, said shoulder located at one side of the recess into which the eye member of the hinge is entered, substantially as and for the purpose specified.

5. In a detachable hinge, the combination with separable hinge members, of a pintle member movable into and out of engagement with one of the hinge members, said pintle member undetachably connected to one of said members and provided with a handle adapted to join the pintle and hinge members together, substantially as and for the purpose specified.

1,021,886. PACKAGE-TYING DEVICE. AUGUST PIEPER and HENRY CASE, Gloversville, N. Y.; said Case assignor of one-half of his right to Alexander L. Johnson and William F. Case, Gloversville, N. Y. Filed June 17, 1911. Serial No. 633,839. (Cl. 24—130.)

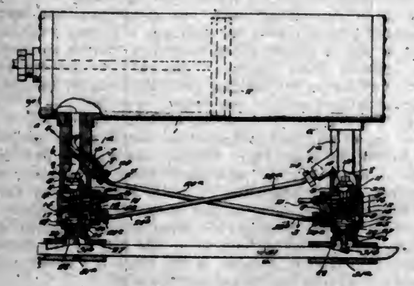


1. A package tying device, comprising a plate having a tie-cord receiving-hole at one end, a tie-cord tightening and engaging hole provided with a contracted lateral throat at the other end, and a wedge-like tie-cord engaging notch intermediate said tie-cord receiving and tightening and engaging holes.

2. A package tying device, comprising a metal plate having a hole in one end adapted to fixedly engage one end of a tie-cord, an obliquely arranged hole at the opposite end having a contracted lateral throat arranged substantially at an acute angle to said hole and flanked by a laterally extending tongue, and a wedge-like notch extending longitudinally of the plate and arranged between the two holes.

3. A package tying device, comprising a tie-cord, and a metal plate having a hole therein at one end for the application of the tie-cord, a wedge-shaped notch for engaging the free end of the tie-cord, a cord-tightening and fastening hole arranged obliquely at the opposite end and below said wedge-shaped notch and having substantially at one end a contracted laterally disposed throat, and a hook-like projection next to the throat extending into the hole, whereby the free end of the tie-cord when passed into the hole and thence into the wedge notch and back again into the oblique hole, the last entered portion of the tie-cord will cross the first entered portion of the cord between such portion and the hook-like projection and lock the cord against itself and against accidental escape.

1,021,887. AUTOMATIC SLIDE-LEVER CYLINDER-COCK. AUGUST V. POELMEICHER, Fort Madison, Iowa. Filed Sept. 30, 1911. Serial No. 652,036. (Cl. 121—117.)



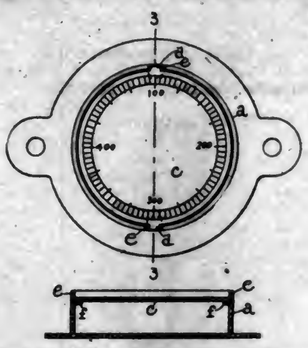
1. In combination, a main cylinder, a pair of cylinder cocks connected to the exhaust ports of the main cylinder, the cylinder cocks comprising casings, normally seated valve operated disks arranged in the casings, a water chamber between the valve and the disk crossing pipes connecting the casings below the disks, the casings having main passage ways and provided with branch passage ways, tubular members having a perforated portion extending on an inclination through the branch passage ways with the perforated portions arranged in the main passage ways, screw nuts, one threaded to one end of each of the pipes, and threaded into each of the branch passage ways, thus connecting the pipes to the branch passage ways, and screen members arranged between the tubular members and the screw nuts.

2. In combination, a main cylinder, a pair of cylinder cocks connected to the exhaust ports of the main cylinder, the cylinder cocks comprising casings, normally seated valve operated disks arranged in the casings, a water chamber between the valve and the disk crossing pipes connecting the casings below the disks, the casings having main passage ways and provided with branch passage ways, tubular members having a perforated portion extending on an inclination through the branch passage ways with the perforated portions arranged in the main passage ways, screw nuts, one threaded to one end of each of the pipes, and threaded into each of the branch passage ways, thus connecting the pipes to the branch passage ways, and screen members arranged between the tubular members and the screw nuts, the casings terminating in extension casings beyond the disks, valves arranged in the extension casings, the last named valves having stems provided with anti-frictional means, the extension casings having guides, and a slide lever operable through the guides having inclined cammed portions to coöperate with the anti-frictional means for raising the last named valve.

1,021,888. CASING FOR THERMOSTATIC INSTRUMENTS. GEORGE PORTER, Boston, Mass., assignor to Parker Manufacturing Company, Boston, Mass., a Corporation of West Virginia. Filed Aug. 20, 1906. Serial No. 331,259. (Cl. 73—151.)

1. In an instrument of the class referred to, in combination, a dial, an inclosing casing for said dial comprising a bottom having outwardly extended lugs provided with openings and a circular body portion open at its top and provided with a slot or opening at the upper edge thereof, and a lug or projection on said dial extended outwardly from said dial in the plane of the latter and into said opening to rest upon the bottom wall of said slot and support the dial above the bottom of the casing and lock it against rotary movement, substantially as described.

2. In an instrument of the class referred to, in combination, a pointer, a dial with which said pointer coöperates, an inclosing casing having a plurality of slots or openings in its body portion at the edge thereof and lugs or projections extended within the casing in line with said openings, and lugs or projections on said dial extended outwardly from said dial and into said openings



and resting on the lugs of the said body portion, substantially as described.

1,021,889. ROUTE-INDICATOR. JAY B. RHODES, Kalamazoo, Mich. Filed Apr. 4, 1911. Serial No. 618,912. (Cl. 235—95.)



1. The combination of a distance indicia member, a distance indicia index, a route key indicia member, a set back for said index comprising a heart-shaped cam, a plunger coacting with said cam, a ratchet for said route key indicia member, a coacting pawl on said plunger, a pawl detent pivotally mounted on said cam, a spring for said detent arranged to support it in position to engage said pawl when said index is in its zero position and a trip for said detent.

2. The combination of a distance indicia member, a distance indicia index, a route key indicia member, a set back for said index comprising a heart-shaped cam, a plunger coacting with said cam, a ratchet for said route key indicia member, a coacting pawl on said plunger, a pawl detent pivotally mounted on said cam, and a spring for said detent arranged to support it in position to engage said pawl when said index is in its zero position.

3. In an odometer, the combination of a driven distance member, a route key indicia member, a set back for said driven distance member comprising a heart-shaped cam, a plunger coacting with said cam, a ratchet for said route key indicia member, a coacting pawl on said plunger a pawl detent to engage said pawl when said driven distance member is in its zero position and a trip for said detent.

4. In an odometer the combination of a driven distance member, a route key indicia member, a set back for said driven distance member comprising a heart-shaped cam, a ratchet for said route key indicia member, a coacting pawl on said plunger, and a pawl detent arranged to engage said pawl when said driven distance member is in its zero position.

5. An odometer comprising distance indicating means, a set back means therefor, a series of route indicia, means for successively displaying said route indicia, by the operation of said set back means comprising a pawl and ratchet, a detent for said pawl positioned to be operative when the detent indicating means is at its zero position, and a trip for said detent.

[Claims 6 to 17 not printed in the Gazette.]

1,021,890. SLIDE-TROMBONE. GEORGE E. RIBLET, Erie, Pa. Filed Apr. 26, 1911. Serial No. 623,418. (Cl. 84—8.)



1. A slide trombone comprising a telescopic-tube mounted upon the upper end of each arm of the return-bend sliding-tube thereof, a transverse brace extending between and rigidly uniting said telescopic-tubes, and means to secure said telescopic tubes in adjusted position with relation to said return-bend sliding tube substantially as set forth.

2. A slide trombone comprising a telescopic-tube mounted upon the upper end of each arm of the return-bend sliding-tube thereof, a cross brace extending between and rigidly uniting said telescopic-tubes and screw mechanism adapted to secure said telescopic-tubes in adjusted position with relation to said return-bend sliding tube, substantially as set forth.

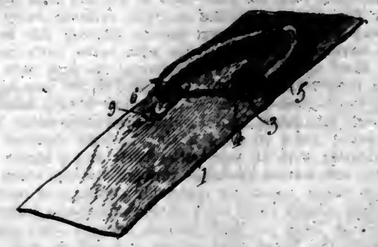
3. The combination in a slide trombone of a U-shaped tube, a telescopic extension upon the upper end of each arm thereof, a bushing ring in the upper end of each of said extensions, a cross brace extending between and uniting said extensions, and means adapted to secure said extensions against longitudinal movement with relation to said U-shaped tube, substantially as set forth.

4. In a slide trombone the combination of a return-bend sliding tube, a telescopic tube mounted upon the upper end of each arm thereof, a cross-brace extending between and uniting said telescopic tubes, means to secure said telescopic tubes against longitudinal movement with relation to said tube, parallel tubes inserted in the arms of said tube through the telescopic-tubes mounted thereon, a sleeve on the upper end of each of said parallel tubes having enlarged portions adapted to embrace the telescopic-tubes on the tube, and a hand-grip brace extending between and uniting said sleeves, substantially as set forth.

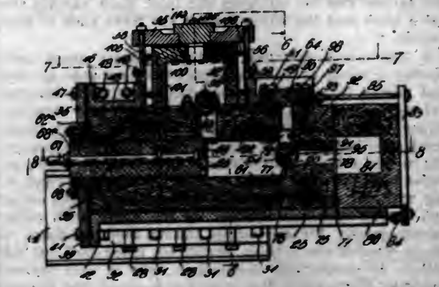
1,021,891. OBSTETRICAL PAD. JEFF D. ROBERTSON, Paducah, Ky. Filed Nov. 11, 1910. Serial No. 591,874. (Cl. 128—28.)

1. An obstetrical pad embodying a sheet of water proof material having one end folded upon itself and secured along its sides to the sheet and transversely from the sides inward for a portion of the width of the sheet to provide a mouth, and an inflatable tube insertible into the pocket through the mouth.

2. An obstetrical pad embodying a sheet of waterproof material provided on its under side at one end with a pocket and having a lateral opening, an inflatable tube disposed within the pocket and having its air nipple projecting through the opening, and means for sealing the pocket.



1,021,892. PUMP. GEORGE ROBSON, Murray, Ohio. Filed Aug. 21, 1911. Serial No. 645,125. (Cl. 103—77.)



1. The herein described multiple cylinder pump comprising a series of wooden barrels disposed side by side and having longitudinal bores with outlet ports opening out their upper sides and openings through said sides near their front ends, stuffing boxes in the rear ends of said bores, glass pistons reciprocating in said bores and through said boxes, outlet valves over said outlet ports, a single wooden valve block having inlet ports registering with the bores of said barrels beneath the openings through the latter, inlet valves mounted on said block over the inner ends of said inlet ports and accessible through said openings, and means for removably closing the upper ends of the latter.

2. The herein described multiple cylinder pump comprising a series of wooden barrels disposed side by side and having longitudinal bores with outlet ports opening out their upper sides and openings through said sides near their front ends enlarged where they communicate with said bores, stuffing boxes in the rear ends of said bores, glass pistons reciprocating in said bores and through said boxes, outlet valves over said outlet ports, a single wooden valve block having inlet ports registering with the bores of said barrels beneath the openings through the latter, inlet valves mounted on said block over the inner ends of said inlet ports and accessible through said openings, means for removably closing the upper ends of the latter, and an inlet block of wood having an internal inlet chamber communicating with the outer ends of all said inlet ports.

3. The herein described multiple cylinder pump comprising a series of wooden barrels disposed side by side and having longitudinal bores with outlet ports opening out their upper sides, their front ends being cut off oblique, stuffing boxes in the rear ends of said bores, glass pistons reciprocating in said bores and through said boxes, outlet valves over said outlet ports, a single wooden valve block having its inner face cut off oblique to complement the oblique ends of said barrels and inlet ports registering with the bores of said barrels, inlet valves mounted on

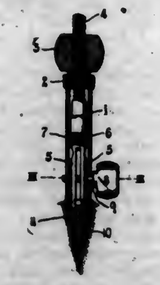
said block over the inner ends of its ports, and an inlet block of wood having an internal inlet chamber communicating with the outer ends of all said inlet ports.

4. The herein described multiple cylinder pump comprising a series of wooden barrels disposed side by side and having longitudinal bores with outlet ports opening out their upper sides and openings through said sides near their front ends, stuffing boxes in the rear ends of said bores, glass pistons reciprocating in said bores and through said boxes, outlet valves over said outlet ports, an outlet block of wood having a cross chamber communicating with all said outlet ports and a single main outlet and having openings through its top above said outlet valves, means for removably closing said openings, a single wooden valve block having inlet ports registering with the bores of said barrels beneath the openings through the latter, inlet valves mounted on said block over the inner ends of said inlet ports and accessible through said openings, means for removably closing the upper ends of the latter, an inlet block of wood having an internal inlet chamber communicating with the outer ends of all said inlet ports, packing interposed between said blocks, and means for clamping the outlet block upon the barrels and for clamping the inlet block against the valve block and the latter against the front ends of said barrels.

5. The herein described multiple cylinder pump comprising a series of wooden barrels disposed side by side and having longitudinal bores with outlet ports opening out their upper sides and openings through said sides enlarged where they communicate with said bores, their front ends being cut off oblique, glass pistons reciprocating in said bores, outlet valves over said outlet ports, an outlet block of wood having a cross chamber communicating with all said outlet ports and a single main outlet and having openings through its top above said outlet valves, means for removably closing said openings, a single wooden valve block having its inner face cut off oblique to complement the oblique ends of said barrels and inlet ports registering with the bores of said barrels beneath the enlarged part of the openings through the latter, inlet valves mounted on said oblique face, an inlet block of wood having an internal inlet chamber communicating with the outer ends of all said inlet ports, packing between and around said blocks, a metallic skeleton housing surrounding the structure thus far described, and means connected with said housing for clamping the outlet block upon the barrels and the inlet block against the valve block and the latter against the front ends of said barrels.

[Claims 6 to 11 not printed in the Gazette.]

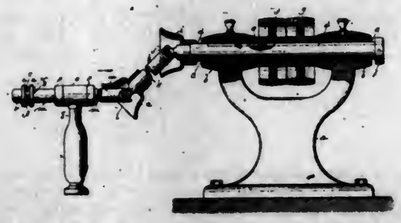
1,021,893. DENTAL POST-EXTRACTOR. THOMAS W. ROSS, St. Louis, Mo. Filed Feb. 27, 1911. Serial No. 611,039. (Cl. 32—10.)



1. A device of the character described comprising a sleeve, a threaded post operable in said sleeve, a nut arranged on said post and seated on one end of said sleeve for moving said threaded post with respect to said sleeve, spring jaws secured to said post and surrounded by said sleeve, said sleeve being provided with a longitudinal slot, and a clamping screw passing through said slot and fitted to said spring jaws to move them toward each other.

2. A device of the character described comprising a sleeve having an enlarged end provided with a tapered seat, a threaded post operable in said sleeve, spring jaws integrally joined together provided with serrated gripping faces and having a threaded portion by which they are connected to said post, a nut on said threaded post for moving said jaws with respect to said sleeve, said nut having a tapered end which is rotatably fitted to the tapered seat at the enlarged end of the sleeve, said sleeve being provided with two longitudinal slots located directly opposite each other, and a clamping screw passing through both of said slots and fitted to said serrated jaws to move them toward each other, said clamping screw having an enlarged unthreaded portion arranged within one of said slots and closely fitted to the sleeve so as to prevent the serrated jaws from turning during the operation of the said nut.

1,021,894. INSOLE-TACK-PULLING MACHINE. OSCAR C. RUMSEY, Brockton, Mass., assignor of one-half to Harry K. Perkins, Bridgewater, Mass. Filed June 24, 1911. Serial No. 635,205. (Cl. 12—16.)



1. In a tack-pulling machine for the purpose described, a spindle, mechanism for rotating the spindle, and an extractor mounted on the spindle and comprising a tube or barrel and lifting-fingers tangential with the periphery of the barrel and rigid therewith, said lifting-fingers being arranged in pairs and the two fingers constituting a pair extending from the periphery of the barrel next the opposite edges thereof leaving a space between the fingers of each pair broad enough to receive the shank or body of a tack but too narrow to receive the head thereof, whereby when the extractor is rotated the tack is lifted from position in a substantially longitudinal line.

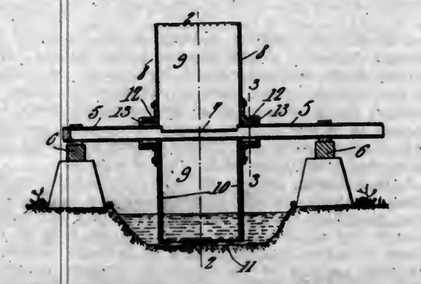
2. In a tack-pulling machine for the purpose described, a spindle, mechanism for rotating the spindle, and an extractor mounted on the spindle and comprising a tube or barrel and lifting-fingers tangential with the periphery of the barrel and rigid therewith, said lifting-fingers being arranged in pairs and the two fingers constituting a pair being straight and parallel and beveled toward each other at their outer ends and extending from the periphery of the barrel next the opposite edges thereof leaving a space between the fingers of each pair broad enough to receive the shank or body of a tack but too narrow to receive the head thereof, whereby when the extractor is rotated the tack is lifted from position in a substantially longitudinal line.

3. In a tack-pulling machine for the purpose described, a spindle, mechanism for rotating the spindle, and an extractor mounted on the spindle and comprising a tube or barrel and lifting-fingers tangential with the periphery of the barrel and rigid therewith, said lifting-fingers being arranged in pairs which are at right angles with the adjacent pairs and the two fingers constituting a pair extending from the periphery of the barrel next the opposite edges thereof leaving a space between the fingers of each pair broad enough to receive the shank or body of a tack but too narrow to receive the head thereof, whereby when the extractor is rotated the tack is lifted from position in a substantially longitudinal line.

4. In a tack-pulling machine for the purpose described, a spindle, means for supporting the spindle, mechanism for rotating the spindle, a hammer-head rigid with the means for supporting the spindle, and an extractor mounted on the spindle and comprising a tube or barrel and lifting-fingers extending from the periphery thereof, for the purpose set forth.

5. In a tack-pulling machine for the purpose described, a driving shaft supported in a suitable frame, a spindle and means for supporting the same, a link intermediate of the driving shaft and the spindle and connected with both by universal joints, a handle extending from the means for supporting the spindle, a hammer-head extending from the outer end of said handle, and an extractor mounted on the spindle and comprising a tube or barrel and lifting-fingers extending from the periphery thereof.

1,021,895. WATER-ELEVATOR. MARTIN SCHICHTL, North Yakima, Wash. Filed July 11, 1910. Serial No. 571,454. (Cl. 103—69.)



1. A water elevator, comprising a fixed tubular approximately horizontally disposed shaft having in the upper side thereof an opening, a wheel journaled upon said shaft, chutes carried by the wheel and extending radially from the rim thereof to the shaft, the forward side of each chute being unobstructed, said chutes being of uniform transverse dimensions throughout their length whereby they may serve as unobstructed ways when in and above horizontal position for conducting water directed from the wheel rim and intermediate points through the shaft, said chutes having their bottoms in planes coincidence with the radii of the wheel and the axis of the shaft, the outer ends of said chutes being provided with a rim at right angles to the body of the chute and of such a height as to carry water from the receiving level to the ejecting level in proportion to the propulsive force exerted to rotate the elevator.

2. A water elevator, comprising a wheel, a horizontally disposed tubular shaft having one end closed and the other open, said shaft being provided with a slot in the upper portion thereof within the wheel, a series of radially disposed water carrying chutes carried by the wheel and extending from the periphery thereof to the center of the wheel, the bottom of said chute being an exact radius of the circle of the wheel, the forward side of each of said chutes being unobstructed, and a rim at right angles to and at the extreme end of each chute, providing a pocket for the reception of water the full width of the chute, whereby the quantity of water engaged thereby will be limited to the height of the rim.

1,021,896. DOUGH-DIVIDER. REINHOLD A. SCHULZ, St. Louis, Mo. Filed June 10, 1911. Serial No. 632,496. (Cl. 107—51.)

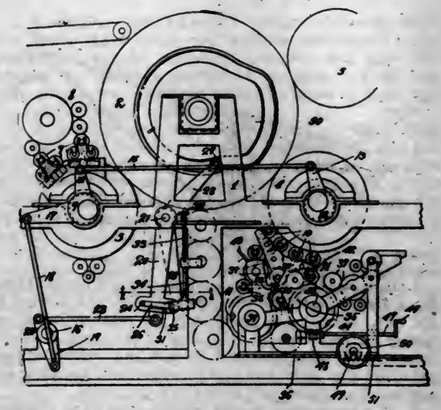
1. The herein-described dough-divider comprising a pair of end plates, a handle fixed to each plate, a series of tubular spindles having their ends seated in said plates, a series of tubular hubs mounted on each spindle, the hubs of one set varying in length with respect to the remaining set and rotary cutting disks fixed to said hubs.

2. In a dough divider of the class described, a series of tubular spindles, a common support for all of the spindles at each end thereof, a series of independent tubular hubs mounted on each spindle, and a cutting disk fixed to each tubular hub.



3. In a dough divider of the class described, a pair of end plates, a handle fixed to each plate, a series of spindles having their ends fixed to the plates, a series of tubular hubs mounted on each spindle and rotary cutting disks carried by said hubs.

1,021,897. PRINTING-MACHINE. WALTER SCOTT, Plainfield, N. J.; Isabella Scott and David John Scott executors of said Walter Scott, deceased. Filed June 5, 1906. Serial No. 320,240. (Cl. 101—89.)



1. In a printing machine, the combination with two cylinders, one of which is a form carrying cylinder, and form rolls located underneath the form carrying cylinder, of means for imparting a combined upward and outward movement to the form carrying cylinder, thereby moving the said form carrying cylinder out of engagement with the other cylinder and with the form rolls, the said means being normally inoperative, and devices for causing said means to be automatically operated.

2. In a printing machine, the combination with an impression cylinder, a form carrying cylinder, form rolls superposed above the same, a second form carrying cylinder, form rolls underneath the second form carrying cylinder, and means for moving each form carrying cylinder out of engagement with the impression cylinder and its form rolls, one cylinder moving downwardly and outwardly and the other moving upwardly and outwardly.

3. In a printing machine, the combination with an impression cylinder, a form carrying cylinder, an inking apparatus superposed above the same, a second form carrying cylinder, an inking apparatus underneath the said second form cylinder, and means for moving each form carrying cylinder out of engagement with the impression cylinder and its inking apparatus, one cylinder moving downwardly and outwardly and the other cylinder moving upwardly and outwardly.

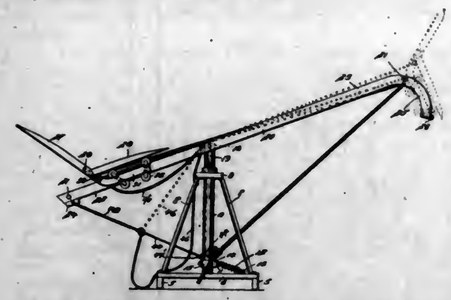
4. In a printing machine, the combination with a form carrying cylinder, of an inking apparatus having form and distributing rolls extending circumferentially and upwardly on the underside of said form carrying cylinder, two collapsible brackets carrying the form and distribut-

ing rolls adapted to be separately lowered, and a movable carriage supporting the inking apparatus whereby the inking apparatus can be withdrawn from underneath the form carrying cylinder when the brackets are collapsed.

5. In a printing machine, the combination with an impression cylinder, of a form carrying cylinder located in front of the impression cylinder, form rolls superposed above the same, bearings for the said form carrying cylinder permitting it to move downwardly and outwardly away from the form rolls and impression cylinder, a second form cylinder located rearwardly of the impression cylinder, form rolls located underneath the said second form cylinder, bearings for the said second form cylinder, permitting it to move upwardly and outwardly away from the form rolls and impression cylinder, and tripping means for effecting the movement of the said form cylinders.

[Claims 6 to 8 not printed in the Gazette.]

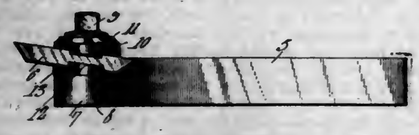
1,021,898. HAY STACKER AND LOADER. LE ROY R. SHAFTO, Elm Creek, Nebr. Filed Nov. 29, 1910. Serial No. 594,693. (Cl. 37—53.)



1. In a haystacker, a base, track members carried thereby, a fork movable on the members, brackets carried by the fork, spaced rods connecting the brackets, each rod having its end portions bent around the track members, rollers respectively journaled on each end portion of each rod above and below and engaging the track members, and means for elevating the fork along the track.

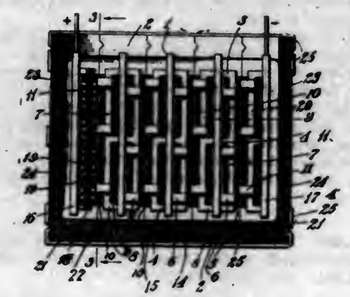
2. In a haystacker, a base having a partially revoluble spindle, track members movable therewith, a fork movable on the track members, the spindle having a transverse beam, provided with a strap bracing the beam with regard to the spindle, means coöperating between the ends of the beam and the base for resiliently holding the spindle in position, and a cable connected between the fork and beam.

1,021,899. LATHE-TOOL. RAYMOND R. SHAPLEY, Harrisburg, Pa., assignor of one-half to Benjamin F. Snavely, Harrisburg, Pa. Filed Oct. 24, 1911. Serial No. 656,374. (Cl. 29—98.)



A tool comprising a shank having an eye at one end, a bolt screw threaded into the said eye, and a pair of washers arranged on the said bolt and adapted to be clamped together and against the said eye by the said bolt and having a pair of grooves in their adjacent faces diverging from points on the peripheries of the said washers and the inner washer having a V-shaped lug projecting from the point on the periphery thereof from which the grooves diverge and forming a continuation of the bottom of the grooves.

1,021,900. STORAGE BATTERY. JOHN L. SMITH, Detroit, Mich. Filed Aug. 10, 1911. Serial No. 643,281. (Cl. 204—29.)



1. In a storage battery, a liquid holder formed of assembled frames of elastic non-conducting material, supporting sheets each secured in a frame in spaced relation to the adjacent sheet, positive and negative plates in pairs on the opposite faces of the supporting sheets and secured in spaced relation thereto along their margins, and retaining perforated linings of non-conducting material each secured against the face of a plate.

2. In a storage battery, end and intermediate spacing frames of elastic material adapted to form a liquid holder when assembled, a supporting sheet secured in each frame, positive and negative plates secured to the faces of the sheets in spaced relation thereto by inwardly extending marginal portions of the plates in intimate electrical contact with the sheets, and means for clamping the frames in assembled relation.

3. In a storage battery, end spacing frames of elastic, non-conducting material, intermediate spacing frames of similar material adapted when assembled therewith to interlock and form a liquid holder, supporting sheets each secured by its lateral margins in a frame at an interval from the bottom thereof, positive and negative plates each secured to the face of a sheet at an interval therefrom by inset portions of the plates forming electrical contacts with the sheets, and means for securing the frames in assembled relation.

4. In a storage battery, end spacing frames of elastic, non-conducting material, intermediate spacing frames of similar material adapted when assembled therewith to interlock and form a liquid holder, supporting sheets each secured by its lateral margins in a frame at an interval from the bottom thereof, positive and negative plates each secured to the face of a sheet at an interval therefrom, perforated linings of non-conducting material secured against the outer faces of the plates, and means for securing the frames in assembled relation.

1,021,901. SANITARY TRAY FOR CHAIRS. CLORA J. SNIDEMAN and FRANK H. HENLEY, Wabash, Ind. Filed June 10, 1910. Serial No. 566,146. (Cl. 155—12.)



1. The combination, with a chair having a pair of arm rests arranged above and one at each side of the seat and each of said arm rests having a longitudinal pocket formed at its outer end, of a pair of tray-supporting extensions each comprising a portion adapted to fit within an arm pocket and another portion adapted to receive a tray, and a one-piece metal tray provided at its ends with pockets formed to detachably receive the exposed ends of the tray-supporting arms.

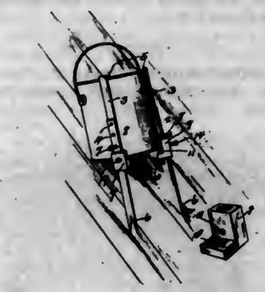
2. As an article of manufacture, a detachable tray for chairs comprising a one-piece metal tray portion having no open joints, and extensions at each end formed to detachably coöperate with receiving arms of a chair.

1,021,902. CURTAIN-POLE. MARION J. SOWERS, Hallton, Pa. Filed Aug. 31, 1910. Serial No. 579,801. (Cl. 156—19.)



In combination with a curtain pole, having a longitudinal channel in one side thereof and deepened at one end, said pole having a transverse opening therein, communicating with the other end of said channel, a locking bar in said channel, having one end pivotally secured in the deepened end of the channel and its opposite end beveled on its outer face, of means disposed in said channel at the end opposite the deepened end to engage the beveled face of the locking bar and hold said bar in a locked position, said means comprising a spring actuated dog having its shank portion disposed in said transverse opening, a wedge member disposed in said opening and arranged adjacent the shank portion to hold said shank rigidly within the opening, the head of said dog being inclined on its outer side and provided with a shoulder on its inner side to normally bear against the beveled end of the locking bar and locking the latter in place, and a coil spring bearing against the head of said dog to normally hold the same in a locking position.

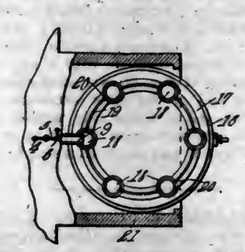
1,021,903. SUPPORT FOR PAINT-BUCKETS. GABRIBALDI STAHR, Petaluma, Cal. Filed Jan. 6, 1912. Serial No. 669,724. (Cl. 248—42.)



1. In combination, a pair of elongated flat members, one having a series of non-threaded apertures, while the other is provided with a series of threaded apertures, the members being held adjustable with relation to one another so that their apertures are in registration, means for holding the members adjustable with relation to each other, one of the members having an overhanging hook at its upper end, while the other terminates at its lower end in a fork adapted to engage a roof, and means slidable on the members adapted to clamp a paint bucket between it and the overhanging hook.

2. In combination, a pair of elongated flat members, one having a series of non-threaded apertures, while the other is provided with a series of threaded apertures, the members being held adjustable with relation to one another so that the apertures are in registration, means for holding the members adjustable with relation to each other, one of the members having an overhanging hook at its upper end, while the other terminates at its lower end in a fork adapted to engage a roof, an L-shaped slide arranged on the members at the point where they are adjacent one another, a thumb bolt penetrating the sides for holding it adjusted thereon, the slide having a foot, between which and the overhanging hook a paint bucket is adapted to be clamped, and a screw threaded in the foot to engage the bottom of the bucket, the screw of the foot constituting means to coöperate with the rim on the bottom of the bucket to prevent lateral displacement of the bucket.

1,021,904. GLASS-DELIVERING MACHINE. LEWIS STEELMAN, Millville, N. J. Filed Sept. 29, 1910. Serial No. 584,581. (Cl. 49—55.)



1. A melting tank, an outlet trough, a movable table, pots supported thereby, and movable successively under the trough, a hood extending from the tank and overhanging the trough, a portion of the table, and the pots upon said portion, and means for directing a flame into the pot registering with the trough.

2. A melting tank, an outlet trough, a rotary table, pots supported thereby, means for bringing the pots successively under the trough, means operated by the table for controlling the flow of metal into the trough, a hood extending from the tank and overhanging the trough and a portion of the table, and means for directing a flame into the pot registering with the trough.

3. A melting tank having a valved outlet, a rotary table, pots supported on the table, spacing troughs interposed between and opening into the pots, said pots and troughs being movable with the table successively into position to receive metal from the outlet.

4. A melting tank having a valved outlet, a rotary table, pots supported on the table, spacing troughs interposed between and opening into the pots, said pots and troughs being movable with the table successively into position to receive metal from the outlet, and means for directing a flame into the trough or pot under the outlet.

5. A melting tank having a valved outlet, a table mounted for rotation, heat non-conducting material upon the table, pots supported thereby, and combined spacing elements and troughs interposed between and communicating with the pots, said troughs and pots being movable successively into register with the outlet.

[Claims 6 to 11 not printed in the Gazette.]

1,021,905. SIGHTING OF SHORT-BARRELED WEAPONS. WILLIAM EDWARD STEERS, Whitehill, Caterham, England. Filed Aug. 24, 1911. Serial No. 645,824. (Cl. 42—80.)



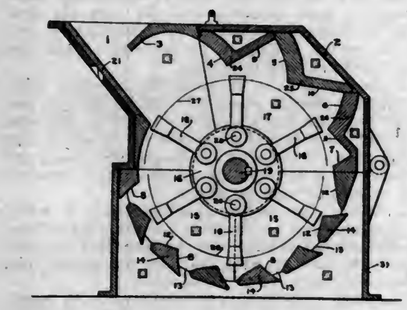
1. In combination a weapon having a barrel together with adjustable sight-carrying members extensible respectively rearward from the breech and forward from the muzzle, said members in their operative position extending the distance between the sights in their inoperative position beyond the length of the weapon.

2. In combination, a weapon having a barrel together with sight-carrying members extensible respectively rearward from the breech and forward from the muzzle, said members in their operative position extending the distance between the sights in their inoperative position beyond the length of the weapon and movable in relation thereto to be within the length of the weapon when closed.

3. In combination, a weapon having a barrel together with sight-carrying members extensible respectively rearward from the breech and forward from the muzzle beyond the length of the weapon one of said members partly covering the other in their non-extended position.

4. In combination, a weapon having a barrel, together with sight-carrying extensions movable longitudinally in relation to said barrel together with a stop member defining the position of one of said extensions in its extended position and of the other extension in its non-extended position and a second stop member defining the position of said first-mentioned extension in its non-extended position and of said other extension in its extended position.

1,021,906. PULVERIZER. CLIFFORD J. TOMLINSON, West Allis, Wis., assignor to Allis-Chalmers Company, Milwaukee, Wis., a Corporation of New Jersey. Filed Oct. 27, 1911. Serial No. 657,175. (Cl. 83—11.)



1. In a pulverizer, a casing, a beater mounted to traverse a circular path within said casing, and an inserted liner within said casing adjacent the path of said beater, said liner having a surface generated substantially involute to, and a second surface substantially tangent to, said beater path.

2. In a pulverizer, a beater mounted to traverse a circular path, a wall portion having adjacent said beater path an involute impact surface and a second wall portion having adjacent said beater path a surface tangent to said path.

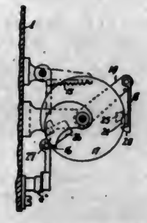
3. In a pulverizer, a beater mounted to traverse a circular path, and a wall adjacent said beater path having a series of surfaces involute to and a second series of surfaces tangent to said beater path, some of the portions of said wall bearing the individual involute and tangent surfaces being spaced apart.

4. In a pulverizer, a beater mounted to traverse a circular path, and a wall adjacent said beater path having a series of surfaces involute to said beater path, and having a second series of surfaces tangent to said beater path, said individual surfaces of one series alternating with individual surfaces of the other series, and some of the portions of said wall bearing pairs of different surfaces being spaced apart.

5. In a pulverizer, a beater mounted to traverse a circular path, and a wall having adjacent said beater path at least two involute impact surfaces, said surfaces being located so that tangents to one portion of said beater path impact on the one involute surface and tangents of an immediately adjacent portion of said beater path impact on the second involute surface.

[Claim 6 not printed in the Gazette.]

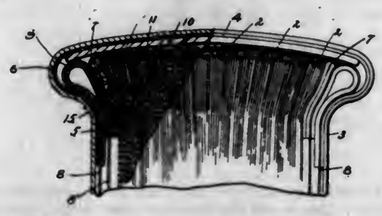
1,021,907. APPARATUS FOR PREVENTING SPARKING AT THE CONTACTS OF ELECTRICALLY-ILLUMINATED SIGNS. ROBERT FRANCIS VENNER, Addiscombe, England. Filed May 19, 1910. Serial No. 562,242. (Cl. 175—288.)



1. In an electric switch, the combination with a continuously rotating shaft, of a disk having a slotted periphery fixed to said shaft, a cam loosely mounted upon said shaft, a detent member for engaging said cam to hold it for a predetermined period, a releasing member carried by the disk for engaging and releasing said detent member, a spring connected to the cam and arranged to be wound up during the stoppage of said cam, a switch member arranged in the path of movement of said cam, and a spring normally tending to throw said switch member in a direction opposite to that in which it is moved by the cam.

2. In an electric switch, means for imparting both a quick make and quick break movement to said switch, said means comprising a slotted disk, a continuously rotating shaft upon which said slotted disk is fixed, a spring controlled cam loose on said shaft, means for causing the disk and cam to turn together for part of a revolution and then temporary stopping the cam and winding up its spring and subsequently releasing the same to cause said spring to urge the cam swiftly forward to close the switch.

1,021,908. BOOKBINDING. HENRY N. YERGER, Philadelphia, Pa. Filed Mar. 28, 1911. Serial No. 617,433. (Cl. 11—16.)



1. A method of book making consisting of binding a number of sections together then pasting a padding to the back of said sections, then placing a reinforcing member over said padding, then stitching certain of said sections, said padding and said reinforcing member together.

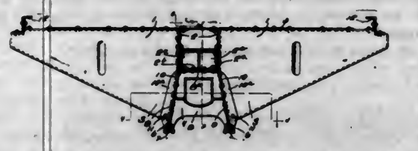
2. A method of book binding consisting of binding a number of sections together, then placing a doubled securing sheet having a doubled reinforcing member therein against the outermost of said sections, then pasting a padding on said sections, then stitching certain of said sections, said sheet and reinforcing member and said padding together.

3. A method of book binding consisting of binding a number of sections together, then placing a doubled securing sheet having a doubled reinforcing member therein against the outermost of said sections, then pasting a padding on said sections, then placing another reinforcing member over said padding, then stitching certain of said sections, said sheet and doubled reinforcing member, said padding and said second reinforcing member together.

4. A method of book binding consisting of binding a number of sections together, then placing a doubled securing sheet having a doubled reinforcing member therein against the outermost of said sections, then pasting a padding on said sections, then placing another reinforcing member over said padding, then stitching certain of said sections, said sheet and doubled reinforcing member, said padding and said second reinforcing member together, then pasting a cover to said reinforcing member.

5. A method of book binding consisting of binding a number of sections together, then placing a doubled securing sheet having a doubled reinforcing member therein, against the outermost of said sections, then pasting a padding on said sections, then placing another reinforcing member over said padding, then stitching certain of said sections, said sheet and said doubled reinforcing member, said padding and said second reinforcing member together, then pasting a cover to said reinforcing member, then pasting the outer portions of said doubled sheet against said cover.

1,021,909. CROSS-BEARER. JOHN MCE. AMES, Dongan Hills, N. Y., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed Aug. 26, 1911. Serial No. 646,251. (Cl. 105—76.)



1. In an underframe, the combination with a center sill comprising relatively shallow rolled sections and truss rods therefor, of a sectional cross bearer comprising pressed diaphragms, and an interposed casting below said sills having integrally formed truss rod saddles.

2. In an underframe, the combination with a center sill comprising relatively shallow rolled sections and truss rods therefor, of a sectional cross bearer comprising spaced diaphragms connected to the webs of said sills, and an interposed cast member formed with a pair of truss rod saddles.

3. In an underframe, the combination with a center sill comprising relatively shallow rolled sections and truss rods therefor, of a sectional cross bearer comprising a cast compression member bearing against said sills and formed with a truss rod saddle, and spaced diaphragms connected directly to said member and to the webs of said sills.

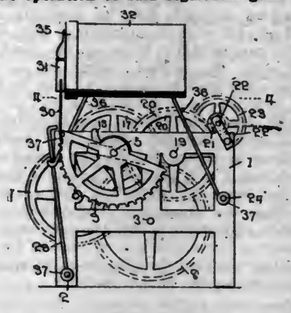
4. In an underframe, the combination, of a center sill, comprising relatively shallow rolled sections, diaphragms fixed to and outstanding therefrom and each having a portion depending below the center sill and tapering outwardly and downwardly therefrom, a cast flanged filler block fixed to and depending from the center sill between said diaphragms and flared to correspond with the taper of the depending portions of the diaphragms, there being integral truss rod saddles at the lower corners of the filler, and truss rods engaging said saddles.

5. In an underframe, the combination with a center sill comprising relatively shallow rolled sections, and side sills, of a sectional cross bearer comprising a central cast section fixed to and below said center sill and to said side sections, the latter sections being fixed to said side sills and said center sills, and truss rod saddles formed upon said central section.

[Claim 6 not printed in the Gazette.]

1,021,910. DUCK-DECOY. MICHAEL B. BAKER and JOSEPH A. KENDER, Whiting, Ind. Filed June 15, 1911. Serial No. 633,261. (Cl. 46—46.)

1. A device of the class described comprising a vibrator, a segmental gear for operating upon the vibrator and causing the latter to vibrate, means for operating said segmental gear, a vibration transmitter connected with the vibrator, a sound box, said vibration transmitter being resiliently connected to said sound box, and means for regulating the operation of said segmental gear.



2. A duck decoy comprising a segmental gear carried upon a shaft, means for rotating said shaft to revolve the segmental gear, means for controlling the rotation of said shaft, a vibrator tongue carried by a vibrator transmitter, said segmental gear being adapted for engagement with the vibrator tongue during a part of each revolution of said gear to compel the vibrator tongue to vibrate, means for limiting the length of the vibrations of said vibrator, a sound box, the vibrator transmitter being resiliently engaged against a closed end of the sound box, and means for holding said vibration transmitter resiliently engaged against said closed end of the box.

3. A device for imitating the quacking of a duck, comprising a vibrator, a sound box, connections between said vibrator and said sound box, means for intermittently engaging against and vibrating the vibrator, means for operating the vibrator engaging means, means for limiting the length of the vibrations of the vibrator and means for intermittently controlling the vibrator intermittently engaging means between its engagements against the vibrator.

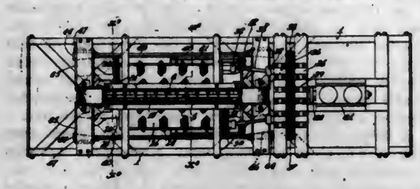
4. A duck decoy comprising a sound box, a vibrator resiliently connected with said sound box, a main shaft having a segmental gear rigid upon its upper end, a disk rigid upon said shaft, a small gear wheel rigid upon said shaft, a sleeve loose upon said shaft between said rigid gear wheel and said disk, said sleeve having a small ratchet wheel upon one end, one side of said ratchet wheel resting loosely against said disk, a large gear wheel integral with the opposite end of said sleeve and loosely resting against the side of the small rigid gear wheel, a pawl carried upon the face of the disk toward the ratchet wheel, the inner end of said pawl being adapted for engagement at times with the small ratchet wheel to lock the sleeve and large gear with the shaft, means carried by said disk for normally holding the inner end of said pawl in engagement with said ratchet, means for intermittently throwing the pawl out of engagement with the ratchet, means for operating said shaft, means operated by said large gear to regulate the speed of rotation of the shaft when the sleeve is locked with the shaft, said segmental gear being adapted to engage the vibrator during a portion of each revolution of said segmental gear and thus cause the vibrator to vibrate intermittently and cause sounds to emanate from the sound box intermittently to imitate the quacking of a duck, and means for resiliently connecting said vibrator to the sound box.

5. A duck decoy comprising a sound box, a vibrator resiliently connected with said sound box, a main shaft having a segmental gear rigid upon its upper end, a disk rigid upon said shaft, a small gear wheel rigid upon said shaft, a sleeve loose upon said shaft between said rigid gear wheel and said disk, said sleeve having a small ratchet wheel upon one end, one side of said ratchet wheel resting loosely against said disk, a large gear wheel integral with the opposite end of said sleeve and

loosely resting against the side of the smaller rigid gear wheel, a pawl carried upon the face of the disk toward the ratchet wheel, the inner end of said pawl being adapted for engagement at times with the small ratchet wheel to lock the sleeve and large gear with the shaft, means carried by said disk for normally holding the inner end of said pawl in engagement with said ratchet, means for intermittently throwing the pawl out of engagement with the ratchet, means for operating said shaft, means operated by said large gear to regulate the speed of rotation of the shaft when the sleeve is locked with the shaft, means for adjusting the speed regulating means for said shaft, said segmental gear being adapted to engage the vibrator during a portion of each revolution of said segmental gear and thus cause the vibrator to vibrate intermittently and cause sounds to emanate from the sound box intermittently to imitate the quacking of a duck, means for resiliently connecting said vibrator to the sound box, and means for supporting the sound box a spaced distance from the main shaft.

[Claim 6 not printed in the Gazette.]

1,021,911. TRACTOR. WILLIAM S. BOYD, deceased, Los Angeles, Cal., by David C. Boyd, administrator. Filed Oct. 19, 1909. Serial No. 523,550. Renewed Feb. 6, 1912. Serial No. 675,910. (Cl. 104—89.)



1. In a tractor, a frame, two series of gripping jaws provided with cable engaging means on their inner faces, said gripping jaws being mounted to move longitudinally of the frame, two members movable laterally on the main frame, traction wheels on said members engaging the gripping jaws to press said jaws together to grip the cable and to propel the machine forwardly by the engagement of said traction wheels with the jaws, and means for driving such traction wheels, said traction wheels comprising an upper set on each side of the machine inclined inwardly and downwardly, and a lower set on each side of the machine inclined inwardly and upwardly.

2. In a tractor, a frame, two series of gripping jaws provided with cable engaging means on their inner faces, said gripping jaws being mounted to move longitudinally of the frame, two members movable laterally on the frame, two members movable laterally on the main frame, traction wheels on said members engaging the gripping jaws to press said jaws together to grip the cable and to propel the machine forwardly by the engagement of said traction wheels with the jaws, and means for driving such traction wheels, said traction wheels and gripping jaws being provided with inter-engaging teeth.

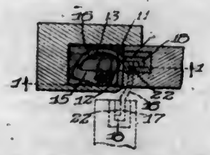
3. In a tractor, a frame, two series of gripping jaws provided with cable engaging means on their inner faces, said gripping jaws being mounted to move longitudinally of the frame, two members movable laterally on the main frame, traction wheels on said members engaging the gripping jaws to press said jaws together to grip the cable and to propel the machine forwardly by the engagement of said traction wheels with the jaws, and means for driving such traction wheels, said traction wheels and gripping jaws being provided with inter-engaging teeth, and said traction wheels comprising an upper set on each side of the machine inclined inwardly and downwardly, and a lower set on each side of the machine inclined inwardly and upwardly, said gripping jaws on each side being provided with upper and lower series of teeth for engaging the respective traction wheels.

4. In a tractor, a frame, two series of gripping jaws provided with cable engaging means on their inner faces, said gripping jaws being mounted to move longitudinally of the frame, two members movable laterally on the main frame, traction wheels on said members engaging the gripping jaws to press said jaws together to grip the cable and to propel the machine forwardly by the engagement of said traction wheels with the jaws, and means for driving such traction wheels, and said traction wheels comprising an upper set on each side of the machine inclined inwardly and downwardly, and a lower set on each side of the machine inclined inwardly and upwardly, said gripping jaws on each side being provided with upper and lower series of teeth for engaging the respective traction wheels, and said gripping jaws being provided with smooth track portions, and the traction wheels being provided with smooth peripheral portions for engaging said track portions.

5. A tractor comprising a frame, wheels on which said frame is mounted, an endless chain, and supporting wheels therefor, whereby the chain is mounted to move longitudinally of the machine, two series of gripping jaws connected to said chain, each gripping jaw having pivotal engagement with the chain and provided with cable engaging means on its inner face, members movable laterally on the main frame with respect to the chain, wheels carried by said members and engaging the gripping jaws to force them together, and means for driving the said wheels.

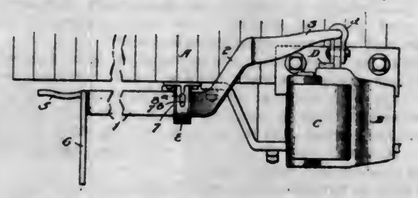
[Claims 6 to 8 not printed in the Gazette.]

1,021,912. HINGE. JACOB G. BRAUN, Chicago, Ill. Filed June 22, 1911. Serial No. 634,733. (Cl. 16—5.)



In a hinge of the class described, the combination of a member with a slotted face plate and pivotal bearing means disposed back of the face plate, a member pivotally mounted in the said bearing means having an arcuate shell portion secured to a radial arm and with an extended portion provided with lugs, and a receiver with openings adapted to receive the said extended portion and to be removably held thereon by the lugs, the said receiver being attached to a door or the like, and the shell portion of the pivotally mounted member being rotatable through the slot in the said face-plate.

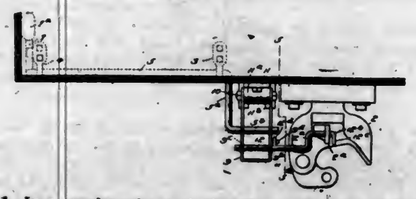
1,021,913. UNCOUPLING DEVICE FOR CAR-COUPLINGS. HARRY C. BUHOUP, Chicago, Ill. Filed Feb. 25, 1911. Serial No. 610,841. (Cl. 213—59.)



1. In an uncoupling device for car couplers, the combination of an uncoupling lever, a pivot about which the lever rotates and on which it is mounted, and a pivot block for said pivot of the uncoupling lever, said pivot block being journaled on the car and constrained to turn on an axis extending in the direction of length of the rotatable uncoupling lever and transversely of the car.

2. In an uncoupling device for car couplers, the combination of an uncoupling lever having one end bent or offset and provided with a hook to engage a coupler lock, and having its other end provided with a foot rest for rotating the lever on one axis and with a pendant arm for rotating the lever on another axis, a pivot on which the lever is mounted, a pivot block for the uncoupling lever, and a yoke which is secured to the car and in which the pivot block is journaled to rotate on an axis extending in the direction of length of the uncoupling lever.

1,021,914. COUPLING-RELEASE RIGGING. HARRY C. BUHOUP, Chicago, Ill. Filed Apr. 4, 1911. Serial No. 618,787. (Cl. 213—59.)

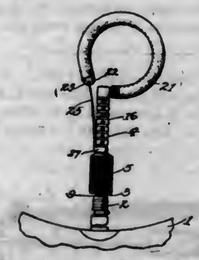


1. In a coupler release rigging, the combination with an operating lever extending transversely of a car, of a pivoted lever extending outwardly from the car and adapted to be operated by said operating lever, a lever connected to the lock of the coupler and movable with and also independently of said pivoted lever, and means for actuating said last named lever.

2. In a coupler release rigging, the combination with a rotatable operating lever which extends transversely of a car and is provided with a crank arm, of a lever pivotally mounted on the car and adapted to be actuated by said crank arm, and a lever connected to the lock of the coupler and movably mounted upon said pivotally mounted lever, one of the two last named levers being provided with a cam and the other being provided with a lug adapted to engage said cam to rotate the lever connected to the coupler lock.

3. In a coupler release rigging, the combination with an operating lever which is rotatable upon an axis extending transversely of the car, of a lever pivotally mounted upon the car and operated by the said operating lever, said pivotally mounted lever having a slotted aperture and a cam lug adjacent to said slotted aperture, and a lever slidably and rotatably mounted in said slotted aperture and having a cam member which engages the cam lug on said pivotally mounted lever.

1,021,915. AIR-GAGE. JOSEPH A. BUTTRESS, Los Angeles, Cal., assignor, by mesne assignments, of one-fourth to S. Herlinger, Los Angeles, Cal. Filed Sept. 3, 1909. Serial No. 516,152. (Cl. 73—109.)



1. A hollow scale, an indicator operatively connected with said scale, tension means connected with said scale, a fluid pressure receiving tube inclosing said tension means, said indicator and scale being connected with said tube, and means on said indicator to prevent the return of said indicator to normal position.

2. A hollow scale, an indicator operatively connected therewith, tension means connected with said scale, and a fluid pressure receiving tube connected with said scale and inclosing said tension means, said indicator being hingedly connected with said tube.

3. A hollow scale havig a head in one end thereof, and a nipple secured to the other end, a resilient member connected with said nipple, a hollow flexible body fitting said nipple, and incasing said resilient member, and an indicator pivotally connected with the free end of said flexible body, and arranged to operate on said scale.

4. A hollow scale provided with a head in one end and a nipple at the other end, a flexible fluid-receiving body fitting said nipple, said body being closed at one end, a resilient member incased in said flexible body, and secured at one end to said nipple, and an indicator pivotally connected with said body and operatively connected with said scale and arranged to travel thereon to indicate the pressure.

5. The combination with a hollow scale provided with annular shoulders and a nipple, of a resilient member connected with said nipple, a flexible fluid-receiving tube secured to said nipple and incasing said resilient member, a casing for said tube and an indicator pivotally connected with said casing and operatively connected with said scale, said indicator being arranged to engage said shoulders.

[Claims 6 to 15 not printed in the Gazette.]

1,021,916. COLLAR-SUPPORTER. ERNST CASPARY, Altena, Germany. Filed Nov. 15, 1910. Serial No. 592,555. (Cl. 2—91.)



1. A collar support consisting of a bundle of looped horsehairs, a covering for said loop, a metallic casing covering a portion of said bundle and a wire within said bundle.

2. A collar support consisting of two loops of horsehair with their ends presented toward each other, a wire between and extending into the end of each loop, and a metal piece inclosing said wire and the ends of said loops.

3. A collar support comprising two covered loops of hair with their ends presented toward each other, a wire entering the end of each loop and a covering holding said loops and said wire together in position.

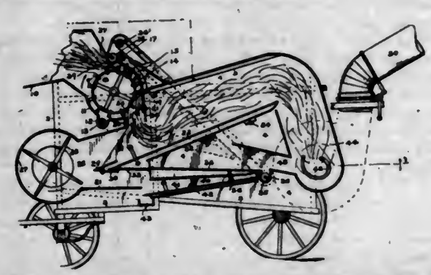
4. A stiffener for ladies' collars and like articles consisting of a bundle of horsehairs, formed into a pair of terminal loops and a middle part, a wire extending at its ends into said loops, coverings for said loops and a casing for said middle part overlapping the inner ends of said loop-coverings.

1,021,917. THRESHING-MACHINE. ASHLEY R. COOPER, Mooresville, Ind. Filed May 22, 1911. Serial No. 628,799. (Cl. 130—24.)

1. In a threshing machine, means comprising a fan for producing a substantially horizontal current of air, a table located in the air current and extending in the same general direction therewith, a spiked overshot cylinder having spikes in oblique rows diverging from the middle of the cylinder and a spiked concave operating therewith and both located above the front end of the table and adjustable means for directing the threshed product toward the front of the table substantially at right-angles through said air current.

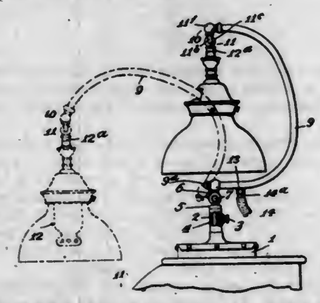
2. In a threshing machine, means for producing a substantially horizontal current of air, a vibrating slatted

table located in the air current and extending in the same general direction therewith, means under the table for separating the grain and chaff, means between the air current producing means and the table for directing a part of the air current above and part below the table, and means located above the table for loosening the grain from the straw and for delivering the product substantially in a vertical and downward direction to the air current and upon the front end of the table.



3. In a threshing machine, means for producing a substantially horizontal current of air, a vibrating perforated table located in the air current and exteuding in the same general direction therewith, means under the table for separating the grain from the chaff, means for diverting a part of the air current to the separating means under the table and for regulating the amount of current so diverted, and means located above the table for loosening the grain from the straw and for delivering the product substantially in a vertical and downward direction to the air current and upon the front end of the table.

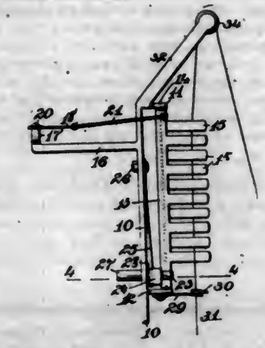
1,021,918. ADJUSTABLE LAMP-STAND. FLORENCE HIMES-COX, New York, N. Y. Filed Mar. 4, 1911. Serial No. 612,216. (Cl. 240—82.)



An adjustable lamp-stand comprising a base, a hollow arm, a lamp, and pivotal connections between the base and hollow arm and between the latter and the lamp, said hollow arm being shaped so that it can be adjusted into a position wherein it supports the lamp over the base, the last named connection comprising trunnions projecting oppositely from the hollow arm, and a yoke having seats in its free ends which operatively receives said trunnions, the lamp being supported from the yoke, said yoke and trunnion connection being provided with passageways connecting the lamp with the hollow arm.

1,021,919. TENSION DEVICE. ANDREW CRAWFORD, Paterson, N. J., assignor to Thomas Smith, Paterson, N. J. Filed Sept. 6, 1911. Serial No. 647,876. (Cl. 242—153.)

1. A tension device comprising a support, curved arms arranged back to back and staggered to pass each other, springs for yieldingly holding the arms apart, nd a finger-piece connected to the arms and adapted to force them toward and beyond each other to permit the insertion of a strand between the arms.

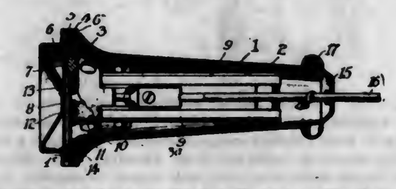


2. A tension device comprising a support having bearings thereon, a pair of bars swinging in the bearings and having separated arms thereon whereby the arms of one bar permit the passage of the arms of the other bar between them, springs connecting the support and the bars to normally force the bars to separate the arms whereby the arms exercise a yielding tension on a strand passing over them, and a finger-piece acting to limit the outward movement of the bars and when pressed, operating on the bars to cause their arms to swing toward and beyond each other to permit the insertion of a strand simultaneously between all of the arms.

3. A tension device comprising a support having bearings thereon, a pair of bars swinging in the bearings and having separated arms thereon whereby the sets of arms can be swung past each other, springs connected to the bars to normally force the bars apart, means for limiting the outward movement of the bars, the arms being curved when in normal position so that the convex portion of the sets of bars are toward each other, a finger-piece, a stirrup on the finger-piece, and projections engaged by the stirrup so that when the finger-piece is pressed the bars swing the fingers toward and beyond each other to cause the fingers to "gape."

4. A tension device comprising a support having bearings thereon, a pair of bars swinging in the bearings and having separated arms thereon whereby the sets of arms can be swung past each other, springs connected to the bars to normally force the bars apart, means for limiting the outward movement of the bars, the arms being curved when in normal position so that the convex portion of the sets of bars are toward each other, a finger-piece, a stirrup on the finger-piece, projections engaged by the stirrup so that when the finger-piece is pressed the bars swing the fingers toward and beyond each other to cause the fingers to "gape," a guide loop on the bottom of the support to feed the strand between the arms, a supporting arm on the top of the support, and a sheath on the supporting arm for receiving the strand as it comes from the arms.

1,021,920. TELEPHONE-RECEIVER. WILLIAM W. DEAN, Elyria, Ohio, assignor to The Dean Electric Company, Elyria, Ohio, a Corporation of Ohio. Filed Oct. 8, 1908. Serial No. 456,760. (Cl. 179—179.)



1. In a telephone receiver shell, the combination of a body portion, a separate threaded ring sunk into said body portion and secured thereto and a cap engaging said ring.

2. In a telephone receiver shell, a body portion and a cap portion, a threaded ring adapted to fit within the end of one of said portions, the edge of the portion being bent over to retain the ring and threads on said other portion and adapted to engage the threaded ring to unite the parts.

3. In a telephone receiver, the combination of a metallic receiver shell, a cap therefor, receiver mechanism mounted in said shell and an insulating member between the cap and mechanism to insulate each from the other.

4. In a telephone receiver shell, the combination of a main portion, a cap, and a threaded ring mounted on said main portion and adapted to engage said cap to secure said parts together, said body portion being folded over to form an abutment for said ring.

5. A telephone receiver consisting of a body portion formed from thin sheet metal, and a separate threaded ring secured thereto by forming a part of the body portion around it and adapted to engage the receiver cap.

[Claims 6 to 16 not printed in the Gazette.]

1,021,921. CANDLE-HOLDER. HARRY C. DECKERT, St. Louis, Mo. Filed Jan. 3, 1911. Serial No. 600,639. (Cl. 67—23.)

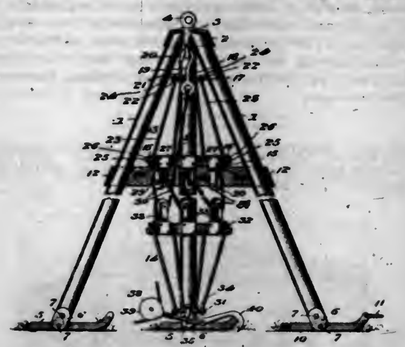


1. A candle holder comprising a plurality of resilient members, each member having one of its ends bent upwardly and inwardly forming a socket for supporting a candle, the opposite end of each of the members bent downwardly thereby forming a base by which the holder is supported in a hollow object, the horisontal portions of each member over-lapping forming a support for the base of the candle and a pin passing through the over-lapping portions of each member securing the same together, substantially as specified.

2. A candle holder composed of three over-lapping spring members connected together in proper relation, each forming a part of the candle socket, and each forming a part of the base, a pin located through the over-lapping and contacting portions of each member, its point projecting in the socket so as to contact with the base of the candle, the portions forming the socket arranged to automatically and independently regulate themselves to accommodate various thicknesses of candles, the portions forming the base arranged to independently regulate themselves to fit various sizes of hollow objects, substantially as specified.

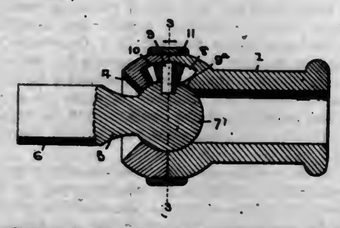
1,021,922. STUMP-PULLER. EDWARD C. ELLSON, Ellson, Minn. Filed Sept. 5, 1911. Serial No. 647,617. (Cl. 57—19.)

In a stump puller, the combination with a supporting frame, of upper and lower hangers, the upper hanger being swivelly supported by the upper end of the support, said hangers consisting of circular plates and bands, said plates and bands being spaced apart and connected by a plurality of inclined rods, a plurality of swivelly connected pulleys connected to said bands, a chain having its inner end connected to the upper hanger and being adapted to



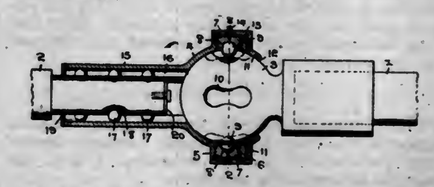
pass over and around said pulleys whereby the lower hanger is raised or lowered when movement is imparted to said chain.

1,021,923. UNIVERSAL JOINT. ALLEN H. FETZER, Galion, Ohio. Filed June 3, 1910. Serial No. 564,764. (Cl. 74—19.)



A universal joint comprising a solid ball member provided with a series of spaced radial pockets arranged transversely around the ball and extending only a short distance therein, a socket member adapted to fit around the ball and comprising two sections, said sections being provided upon their inner walls with a series of elongated grooves, said grooves having curved ends and extending only partially through said walls, said grooves also being arranged in position to register with the pockets of the ball when said ball and socket members are assembled, lugs carried by the meeting face of one of said sections, the other of said sections being provided with recesses, said recesses being adapted to receive said lugs and secure said sections against independent rotation, radial pins loosely set in the pockets of said ball and projecting into the grooves of said socket member, cone shaped sleeves fitted on said pins and located in said grooves, said sleeves being adapted to move longitudinally of said grooves, and means for securing said sections together.

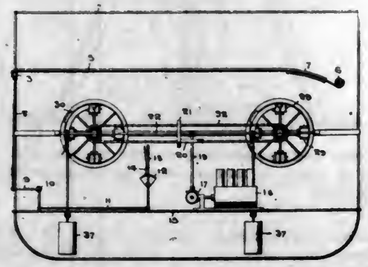
1,021,924. UNIVERSAL JOINT. ALLEN H. FETZER, Galion, Ohio. Filed Oct. 27, 1910. Serial No. 589,358. (Cl. 74—19.)



In a universal joint, a member having a ball thereon, said ball having elongated peripheral openings therein, a

member having a ball-socket therein and having a radially extending peripherally-threaded flange surrounding the ball and ball-socket, said flange having threaded apertures therein, balls in the said openings and extending into the said apertures, screw-threaded members in the apertures contacting the balls for adjusting the same, and a threaded retaining ring screwed onto the said flange for retaining the ball member in the socket and retaining the screws in the apertures.

1,021,925. FLYING-MACHINE. ADELBERT A. FOKKEN, Raymond, S. D. Filed Sept. 27, 1910. Serial No. 584,074. (Cl. 244—16.)



1. In a flying machine, including a frame, an aeroplane, and a motor driven propelling means, the combination with a roller horizontally disposed in a transverse plane and adapted to serve as a securing means for one end of the plane, of a horizontal bar slidably mounted on the vertical frame members and adapted to serve as securing means for the other end of the plane, means for adjusting said bar vertically and means for rolling said plane upon said roller.

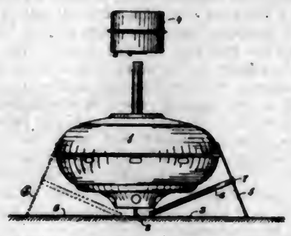
2. In a flying machine, the combination with a plurality of feathering-blade propeller wheels disposed on either side of the longitudinal center of the machine, of means for manually controlling the feathering of said blades, means for locking said feathering blades in adjusted position and additional means for automatically controlling the feathering of said blades.

3. In a flying machine, the combination with a plurality of feathering-blade propelling wheels alined on either side of the longitudinal center of the machine, spur gears carried on the shafts of the blades, wheels having segments of their peripheries toothed mounted on the shafts of said propellers and adapted to control the feathering of the blades thereof, and segments carried by said wheels having holes therethrough, of a collar surrounding each segment, a hand-lever secured to the collar, pins passing through holes in the segments and adapted to pass into registering holes in the collars, means for releasing said pins from engagement with the collar and means for automatically controlling the position of the segments to maintain the balance of the machine.

4. In a flying machine the combination with a plurality of feathering-blade propeller wheels disposed on either side of the longitudinal center of the machine, of means for manually controlling the feathering of said blades, means for locking said feathering-blades in adjusted position, means for automatically controlling the feathering of said blades, and means connecting the propellers upon one side so that the automatic adjustment of the feathering control will be effected simultaneously in all the propellers on said side.

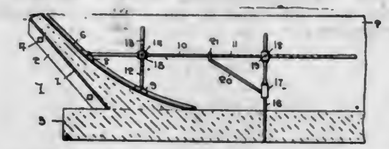
1,021,926. TOP. ARTHUR E. GIBBS, Canton, Ohio, assignor to The Gibbs Manufacturing Company, Canton, Ohio, a Corporation of Ohio. Filed Dec. 14, 1911. Serial No. 665,760. (Cl. 46—32.)

In combination, a top adapted to spin on a sustaining surface, and a wheel resting on the surface with its side impinging the periphery of the top, there being an axial stem on the wheel with its free end resting on the surface



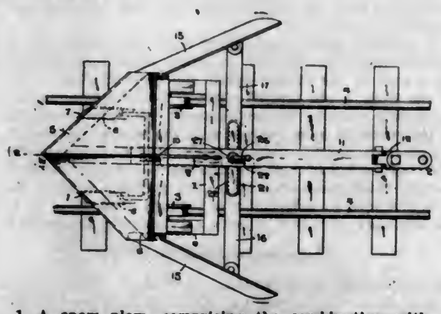
under the top, whereby the wheel is caused to hug and roll around with the periphery of the top.

1,021,927. FOUNTAIN-MOLD. THOMAS J. HARRISON, Sabula, Iowa. Filed May 27, 1911. Serial No. 629,773. (Cl. 25—130.)



A mold for forming a bowl of plastic material comprising a slanting sectional form, means for temporarily connecting said sections, said connected sections being positioned upon a platform and adapted to receive the plastic material upon their inner slanting surface, a rotatable support extending upwardly from the base centrally of said connected sections, a horizontal supporting rod adjustably secured to said rotatable support, means carried by said support for supporting said horizontal rod outwardly of said upwardly extending support, a curved smoothing plate pivotally secured to one end of said horizontal rod, a vertical rod pivoted to said smoothing plate and adjustably secured through said horizontal rod, said smoothing plate being adapted to be swung by said horizontal rod to smooth material upon the inner surfaces of said connected sections to form a smooth inner surface of a bowl, and means for temporarily locking together said rods and support.

1,021,928. SNOW-PLOW. FRANK J. HAYWARD, Spencer, Wis. Filed Nov. 15, 1910. Serial No. 592,437. (Cl. 104—51.)



1. A snow plow, comprising the combination with a frame, an axle and supporting wheels therefor, of a mold board carried by the frame, wings hingedly secured at the rear side edges of the mold board, means to swing said wings inwardly or outwardly, a tongue attached to the frame, means for attaching the rear end of the tongue

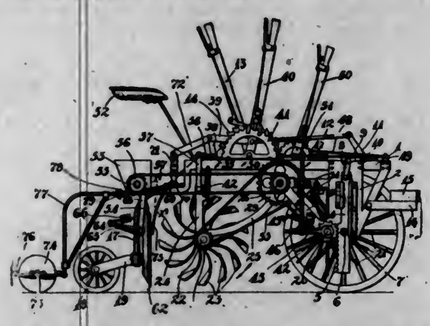
to a propelling means and means for adjusting the rear end of the tongue upwardly or downwardly.

2. In a snow plow the combination with a frame, supporting wheels therefor, a mold board attached to said frame and a propelling tongue, of wings hinged at one end to the frame at the rear side edges of the mold board, thrust bars pivoted to the wings, a housing carried by the tongue through which the inner ends of the thrust bars extend, the overlapping ends of the thrust bars having slots, teeth along one edge of each slot, the teeth of one slot being opposed to the teeth of the other slot, gears coöperating with said teeth, a shaft carrying said gears and a crank by means of which said shaft may be rotated.

3. In a snow plow the combination with a frame, supporting wheels therefor, a mold board carried by the frame, a tongue attached at one end to the frame, a threaded sleeve pivoted to the opposite end of the tongue, a yoke by means of which the tongue may be attached to a propelling means and a threaded bolt carried by the yoke and extending through said sleeve for adjusting the tongue upwardly or downwardly.

4. In a snow plow the combination with a frame and supporting wheels therefor, of a mold board attached to the frame, of wings hinged to the frame and the edge of the mold board, thrust bars attached to said wings, means engaging the inner ends of the thrust bars to move the same endwise, a tongue attached to the frame, sockets secured on the under side of said frame, plates slidably mounted in said sockets and a lever positioned upon said tongue for adjusting said plates.

1,021,929. LAND-WORKER AND SEEDER. EDWARD HOVEY, Minneapolis, Minn. Filed May 11, 1910. Serial No. 560,557. (Cl. 55—85.)

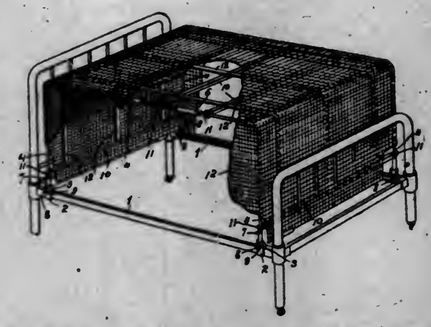


1. In a machine of the kind described, the combination with a truck having a vertically adjustable main frame and a supplemental frame carried by said main frame, means for independently adjusting said main and supplemental frames, toothed cylinders mounted on said main and supplemental frames, for independent movements into and out of contact with the ground, and a driving connection from the one toothed cylinder to the other toothed cylinder arranged to drive the two cylinders at different speeds, substantially as described.

2. In a machine of the kind described, the combination with a truck having a vertically adjustable main frame and a supplemental frame carried by said main frame, means for independently adjusting said main and supplemental frames, toothed cylinders mounted on said main and supplemental frames for independent movements into and out of contact with the ground, driving gear from the toothed cylinder on said main frame to the toothed cylinder on said supplemental frame, arranged to drive the latter noted cylinder at a higher rate of speed than the former, substantially as described.

3. In a machine of the kind described, the combination with a truck frame and a truck wheel, of a rack bar mounted for vertical adjustment on said frame, and provided with a trunnion, on which said wheel is journaled, of a toothed cylinder journaled on said main frame and movable vertically therewith into and out of contact with the ground, a pinion loosely mounted in respect to said cylinder and in mesh with the said rack bar, and a clutch for connecting said pinion for rotation with said cylinder, whereby the said toothed cylinder will be raised out of the ground under the forward movement of the machine, substantially as described.

1,021,930. CANOPY. TAYLOR JACKSON, Kansas City, Kans. Filed Sept. 25, 1911. Serial No. 651,108. (Cl. 5—14.)



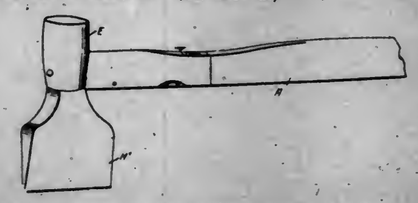
1. In a canopy, the combination with a bed frame, of supporting means secured thereto, two spreaders slidable relatively to and from each other on the supporting means, a flexible tape connected to the spreaders, and a flexible screen secured to the spreaders.

2. In a canopy, two inverted U shaped supports the arms of which are provided with means adapted to be secured to a bed frame, two spreaders slidably mounted toward and from each other on said supports, a flexible tape connecting the spreaders, and a screen secured to the spreaders.

3. In a canopy, two horizontally extensible U shaped supports the arms of which are provided with means for being secured to a bed frame, spreaders slidably movable toward and from each other on said supports, a tape connecting said spreaders, and a screen secured to said spreaders.

4. In a canopy, two horizontally and vertically extensible supports the arms of which are provided with means for being secured to a bed frame, spreaders slidably movable toward and from each other on said supports, a flexible tape connecting said spreaders, and a flexible screen secured to the spreaders.

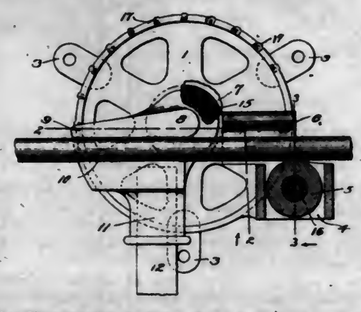
1,021,931. COMBINED HATCHET AND ADZ. EDWARD W. JAMES, Mechanicsburg, Ill. Filed July 17, 1911. Serial No. 638,861. (Cl. 145—2.)



In combination with a hatchet having a hammer and handle which are integral, the rear end of the hammer having a cylindrical recess, and the rear edge of the handle having a recess with a communicating channel intermediate same, and the recess in the rear end of the hammer, a hatchet blade provided with a cylindrical shank

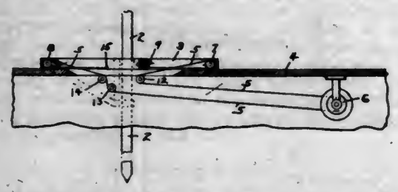
portion, the circumference of which has holes formed therein, said shank portion adapted to be mounted within the said cylindrical recess, a shoulder formed at the inner end of the shank portion, of the hatchet head and bearing against the rear end of the hammer about its recess portion, a longitudinally movable locking bolt mounted within the said channel and adapted to engage at one end one of the holes in the shank of the hatchet blade, and its other end widened forming a shoulder to limit the movement of the bolt in one direction, one edge of said widened portion having a recess formed therein, an angle lever pivoted within the recess in the handle, and having its short arm engaging the recess in said widened portion of the bolt, a spring mounted within the recess in the handle, and extending through an aperture therein, and secured to the handle, its other end being fastened to the outer face of the lever, which latter is flush with the recessed face of the handle, as set forth.

1,021,932. ROD-BENDING MACHINE. HANS HOLDEN JENSEN, Milwaukee, Wis. Filed Dec. 6, 1911. Serial No. 664,206. (Cl. 153—40.)



A bending machine of the class described comprising a base formed with a central bearing and provided with an off-standing bracket, a bearing roller mounted on said bracket, a work engaging and guiding member spaced from said bearing roller and arranged radially with respect to the first mentioned central bearing, a bending member provided with a journal received in the central bearing aforesaid and formed with spaced jaws projecting toward the outer portion of the base and arranged so that the space therebetween is normally in alinement with the space between the work engaging and guiding member and its associated bearing roller, one of the jaws of the bending member being formed with a radially projecting lever arm arranged at an angle to the jaws, and a member cooperating with the journal and bearing in which it is mounted to prevent displacement of the bending member from the base.

1,021,933. SPUD-OPERATING MECHANISM FOR DREDGERS. JOHN A. JOHNSON, Black Diamond, Cal. Filed Sept. 13, 1910. Serial No. 581,749. (Cl. 37—18.)

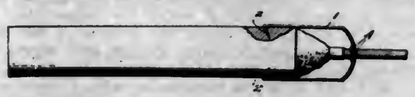


1. In an apparatus of the class described, the combination with a spud carrying beam, of a winding drum, a cable attached at its ends to the deck passing over pulleys spaced apart longitudinally of the beam and passing around the winding drum, and means for varying the direction of rotation of the winding drum.

2. In an apparatus of the class described the combination with a spud carrying beam, of a winding drum, a cable operating on the opposite ends of the beam, and passing around the winding drum and means for varying the direction of rotation of the winding drum.

3. In an apparatus of the class described the combination with a spud carrying beam of a winding drum having a helical groove on its face, a cable passing around the winding drum, and lying in a portion of the groove, the opposite ends of the cable operating on opposite ends of the beam, means for rotating the drum and means for varying the direction of rotation thereof.

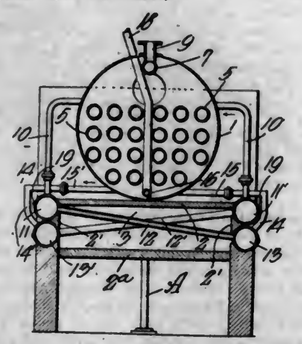
1,021,934. CAP AND FUSE HOLDER FOR DYNAMITE CARTRIDGES. WALTER B. KELLOGG, Superior, Wis. Filed Aug. 3, 1911. Serial No. 642,117. (Cl. 102—8.)



1. A cap and fuse holder for dynamite cartridges comprising a sheet metal plate having its ends tapered to form points adapted to be bent at right angles and forced into engagement with the cartridge, said plate having formed therein a centrally disposed cap and fuse receiving opening, and barbs formed on the edges of said opening and adapted to grip the fuse when inserted therethrough, thereby preventing the casual disengagement of the fuse from the holder.

2. A cap and fuse holder comprising a plate having therein an opening formed by slitting the metal at right angles and bending said slitted parts back, whereby the same form barbs for engaging and holding fuses of different sizes, cartridge engaging points formed on the ends of the plate, and barbs formed on said points.

1,021,935. STEAM-GENERATOR. JAMES W. KIDNEY, Point Pleasant, W. Va. Filed Dec. 27, 1911. Serial No. 668,168. (Cl. 122—195.)



1. A steam generator, having a fire box closed at its side and dome, a boiler shell disposed above the dome and out of direct contact with the flames from the fire box, a pair of superposed longitudinal drums disposed upon each side of the fire box and also out of direct contact with the flames, two sets of conduits leading from the shell to the respective lower drums, two sets of steam conduits leading from the respective upper drums to the shell, and steam generator conduits in communication with the respective lower and upper drums and disposed transversely of and within the fire box.

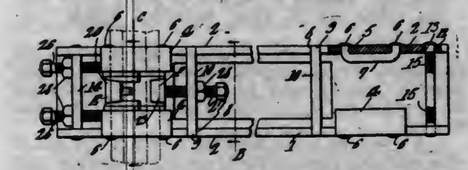
2. A steam generator, having a casing, a fire box having a sealed dome and side walls, a cylindrical boiler shell disposed above the dome and out of direct contact with the flames from the fire box, two superposed longitudinal drums mounted upon each side of the fire box throughout

the length thereof, one set of conduits leading from each respective lower drum of the lower portion of the shell to supply water from the shell to the lower drums, a set of steam conduits leading from the respective upper drums to the upper portion of the shell, and a plurality of water tubes disposed transversely of and within the fire box, said water tubes being connected to receive water from the respective lower drums and convey the same transversely of the fire box to the respective upper drums.

3. A steam generator, having a longitudinally disposed fire box with a sealed dome and side walls, a cylindrical boiler shell disposed longitudinally of and above the dome of the fire box and out of direct contact with the flames, a plurality of flue tubes disposed longitudinally of the shell, a combustion chamber interposed between the inner end of the fire box and said tubes of the shell, a smoke breeching disposed at the opposite end of the shell to receive the products of combustion from the flue tubes, two superposed cylindrical drums disposed longitudinally of and within the walls of the fire box and out of direct contact with the flames, a set of conduits to each lower drum for supplying water from the lower portion of the cylindrical shell to its respective lower drums, a set of steam conducting conduits for supplying steam from its respective upper drum to the cylindrical shell connected to the respective upper drums and to the shell, and a plurality of steam generator tubes disposed transversely of and within the fire box, said tubes having their lower ends in communication with the lower drums and with their upper ends in communication with the upper drums.

4. A steam generator, having a longitudinally disposed fire box with a sealed dome and side walls, a cylindrical boiler shell disposed longitudinally of and above the dome of the fire box and out of direct contact with the flames, a plurality of flue tubes disposed longitudinally of the shell, two superposed cylindrical drums disposed longitudinally of and within the walls of the fire box and out of direct contact with the flames, a set of conduits to each lower drum for supplying water from the lower portion of the cylindrical shell to its respective lower drums, a set of steam conducting conduits for supplying steam from its respective upper drum to the cylindrical shell connected to the respective upper drums and to the shell, and a plurality of steam generator tubes disposed transversely of and within the fire box, said tubes having their lower ends in communication with the lower drums and with their upper ends in communication with the upper drums.

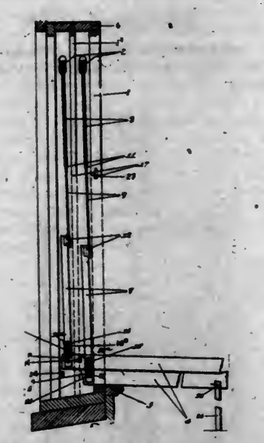
1,021,936. RAIL TIE AND FASTENER. WILLIAM A. LEWIS and JOHN E. STEPHEN, Ashland, Okla., assignors of one-third to Harry G. Rowley, Stuart, Okla. Filed Oct. 17, 1911. Serial No. 655,201. (Cl. 238—5.)



1. The combination with a tie body having cross strips connected thereto, and rail-supporting ledges disposed between the strips, of supporting devices within the tie body and under the ledges, rail-fastening members slidably mounted, between the ledges and the supporting devices, said fastening members having interfitting portions, rail-engaging jaws upstanding from said members and above the ledges, and means engaging the cross strips for shifting the members toward each other to bind their jaws upon a rail.

2. The combination with a tie body having rail-supporting ledges, of rail-engaging members extending under the ledges and having jaws projecting upwardly above said ledges, and means for supporting said members within the tie, each of said means including a length of material having laterally turned terminal portions secured within the side of the tie body.

1,021,937. WINDOW-SASH-ADJUSTING DEVICE. ARTHUR G. LINDLEY and NORMAN F. DICKENS, Schenectady, N. Y. Filed Sept. 15, 1910. Serial No. 582,140. (Cl. 20—43.)



1. In combination, a window frame, a sash therefor, counter-balances for the sash, notched hanging strips and connectors that fill the space between the sides of the sash and jamb and by which the sash is supported, pivots for uniting the sash and the lower ends of the strips, locking means carried by the jamb and extending into the space between it and the sides of the sash, said means entering the notches at points above said pivots when the strips are moved inwardly for sustaining the counterbalance.

2. In combination, a window frame of usual construction, a sash therefor which substantially occupies the entire space between the opposed side faces of the jamb, thin notched hanging strips and flexible connectors that fill the space between the sash and the side faces, said strips each having an offset therein, counter-balances attached to the connectors for supporting the sash, pivots connecting the sash with the lower ends of the strips, and locking pins that are carried by the inner faces of the jamb and enter said notches at points above the offset when the hanging strips are moved inwardly.

3. In combination, a window frame, a sash therefor, counterbalancing means for the sash, hanging strips situated between the sash and the jamb and connected to said means pivotal connections between the sash and the hanging strips, locking pins mounted in the jamb and extending toward the sash, there being side opening notches in the hanging strips to receive said locking pins when the strips are displaced by moving the sash inwardly, and devices mounted on said hanging strips to confine said locking-pins in the notches when the sash is lowered to horizontal position or removed.

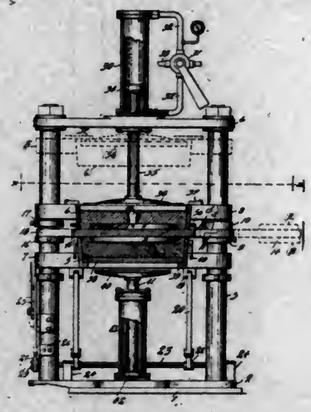
4. In combination, a window frame, a sash therefor, counterbalancing means for the sash, hanging strips situated between the sash and the jamb and connected to said means, pivotal connections between the sash and the hanging strips, locking pins mounted in the jamb, there being side opening notches in the strips to receive said locking pins when the strips are displaced by moving the sash inwardly, safety hooks pivotally mounted on the strips to confine the locking pins in the notches under certain conditions, and means carried by the sash for operating the hooks.

5. In combination, a window frame, a sash therefor, weights for balancing the sash, hanging strips between the sash and the jamb and connected to the weights, detachable pivotal connections between the sash and the hanging strips, locking pins mounted in the jamb, there being open-ended slots in the strips to receive said locking pins, safety hooks pivotally mounted on the strips, projections on the hooks, and pins carried by the sash for engaging

the projections to operate said hooks to permit the pins to enter the slots under certain conditions and to confine them therein under other conditions.

[Claims 6 to 10 not printed in the Gazette.]

1,021,938. MOLDING-MACHINE. HUGH MACKAY, Dallas, Tex. Filed Oct. 16, 1911. Serial No. 654,825. (Cl. 22—25.)



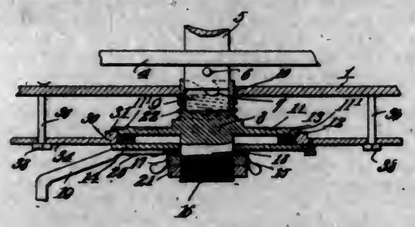
1. In a molding machine, a pair of standards, upper and lower mold frames disposed between the standards and slidable thereon, a molding plunger over the upper frame, a molding head mounted on the plunger, and latches carried by the upper frame arranged to be swung into the path of the molding head.

2. In a molding machine, a pair of vertical standards, upper and lower mold frames slidable on the standards, a horizontal pattern support hinged on one of the standards and provided with a hook engaging the other standard, patterns mounted on the upper and lower sides of the pattern support, an internal flange provided at the bottom of the lower frame, a pallet resting on said flange, a pressure cylinder mounted below the lower frame between the standards, a raising plunger working in the cylinder and having a support at its upper end under the pallet, links depending from the lower frame, a rock shaft, arms fixed on the rock shaft and pivoted to the links, a lever device for rocking said shaft, a cross head mounted on the standards, a second pressure cylinder mounted on the cross head, a plunger working in the second cylinder and having a rod extending down through the cross head, a molding head mounted on the lower end of the rod of the plunger, and latches carried on the upper frame arranged to be positioned in the path of the molding head.

3. In a molding machine, a pair of vertical standards, upper and lower mold frames slidable on the standards, a pattern support mounted on one of the standards and arranged to swing between the mold frames, a pallet supported in the lower mold frame, a plunger head under the pallet and free therefrom, an upper plunger movable vertically over the upper mold frame and free therefrom, said upper plunger having a head adapted to enter the upper mold frame, and latches mounted on the upper mold frame and arranged to be swung into the path of the upper plunger above its head.

1,021,939. STARTING DEVICE. JAMES MCNAMEE, Amsterdam, N. Y. Filed Aug. 15, 1910. Serial No. 577,254. (Cl. 123—185.)

1. In a starting device, the combination with the engine shaft and clutch member having interlocking parts, of spring means for normally separating said parts, a friction disk fixed on said clutch member, a friction disk loosely surrounding said clutch member, a crank handle fixed on said last mentioned disk, means adjustably mounted on said clutch member for tightening said disks, a pawl supporting member mounted adjacent said friction disk and being movable toward and away from said engine shaft, and pawls mounted upon said pawl supporting member and engaging different portions of the periphery of said last mentioned friction disk, there being ratchet teeth upon said friction disk.



2. A starting device comprising an engine shaft having a pin thereon, a clutch member having slots adapted to engage said pin, a coil spring for holding said clutch member normally out of engagement with said pin, a disk fixed on said clutch member, a second disk loose on said clutch member, a nut threaded on said clutch member for pressing said disks together, a crank handle fixed on said second disk, there being ratchet teeth on the periphery of the second disk, a pawl supporting member surrounding said disk and having arms, said pawl supporting member being movable toward and from said engine shaft, and pawls mounted on said pawl supporting member and engaging different portions of different ratchet teeth on said second disk.

3. In a starting device, the combination with the engine shaft and clutch member having interlocking parts, of spring means for normally separating said parts, a friction disk fixed on said clutch member, a friction disk loosely surrounding said clutch member, leather friction material interposed between said disk, a crank handle fixed on said last mentioned disk, means adjustably mounted on said clutch member for tightening said disks, a pawl supporting member mounted adjacent said friction disk and being movable toward and away from said engine shaft, and pawls mounted upon said pawl supporting member and engaging different portions of the periphery of said last mentioned friction disk, there being ratchet teeth upon said friction disk.

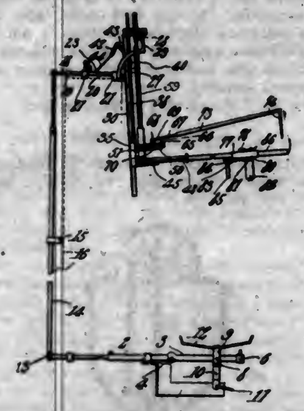
1,021,940. MUSIC-LEAF TURNER. ERNST MEIER, Hye, Tex., assignor of one-half to Albert Meier, Hye, Tex. Filed Apr. 20, 1910. Serial No. 556,506. (Cl. 84—17.)

1. A music leaf turner including oppositely movable holding and turning members adapted to pass each other, means for simultaneously actuating the same, and means for elevating one of the members when passing the other member.

2. A music leaf turner including a turning arm mounted to move in a plane perpendicular to the supported leaf, means upon said arm and movable about an axis perpendicular to said plane for buckling the leaf and shifting the same into the path of the said revoluble means, and means for rotating said leaf buckling means and subsequently swinging the arm.

3. A music leaf turner including a turning arm mounted to swing in a plane perpendicular to the supported leaf, a leaf holding device connected to the arm, means upon the arm and revoluble about an axis perpendicular to said plane, and coöperating with said leaf holding device, for buckling a leaf and shifting the same into the path of said revoluble means, and mechanism for rotating said revoluble means and subsequently swinging the arm.

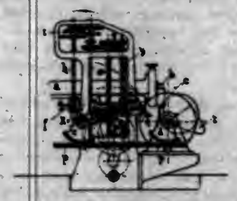
4. A music leaf turner including a turning arm mounted to swing in a plane perpendicular to the supported leaf, a holding element, a leaf engaging device revoluble about an axis perpendicular to said plane and carried by the arm, and mechanism for rotating said device for buckling the engaged leaf.



5. A music leaf turner including a turning arm mounted to swing in a plane perpendicular to the supported leaf, a leaf holding element connected thereto, means upon the arm and revoluble about an axis perpendicular to said plane for shifting a leaf into the path of said means, and mechanism for rotating said means and subsequently shifting the arm.

[Claims 6 to 20 not printed in the Gazette.]

1,021,941. SHAPING-MACHINE FOR SCREW-PROPELLERS. ALBERT MÜHLBERG, Basel, Switzerland. Original application filed Dec. 31, 1908, Serial No. 470,167. Divided and this application filed Dec. 2, 1909. Serial No. 530,915. (Cl. 90—31.)



1. In a shaping machine for automatically working the pressure surfaces of screw propeller blades of the aforesaid kind, of slidable cutting tool, rotary holders for holding the blade to be worked in such a position that the entering radius vector coincides with the axis of rotation of said holders, means for actuating said blade holders, driving means for moving said tool crosswise in a plane for the cutting operation, feeding means to feed the cutting tool transversely to its cutting movement, in a radial direction of the blade, and interconnecting means between said holder actuating means and said feeding means to control the turning of the blade to be worked in a determinate ratio with the feed of the cutting tool so that the superficial portions of the blade pressure surface which are to be worked may fall successively within the cutting plane of the tool during the duration of the cut.

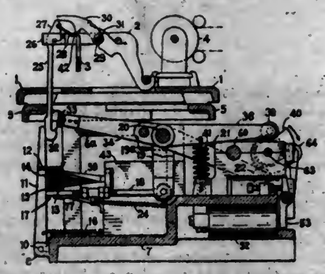
2. In a shaping machine for automatically working the pressure surfaces of screw propeller blades of the aforesaid kind, a cutting tool, a slidable tool carriage, two rotary face plates for holding the blade to be worked, longitudinally between them, driving means for moving said tool carriage crosswise for the cutting operation of the tool, a feed spindle for feeding the tool carriage transversely to the cutting movement of the tool, a lever mechanism geared with said rotary face plates to actuate them and gears between said feed spindle and said lever mechanism to transmit the feeding motion of the feed spindle to the lever mechanism and thereby to the rotary face plates, substantially as and for the purpose hereinbefore described.

3. In a shaping machine for automatically working the pressure surfaces of screw propeller blades of the aforesaid kind, a cutting tool, a slidable tool carriage, two rotary face plates for holding the blade to be worked, longitudinally between them, driving means for moving said tool carriage crosswise for the cutting operation of the tool, a feed spindle for feeding the tool carriage transversely to the cutting movement of the tool, a lever geared with said rotary face plates to actuate them, a vertically movable slide, a connection between the latter and said lever, a vertical spindle arranged to operate said slide, and a change gear between this spindle and the tool carriage feeding spindle, substantially as and for the purpose hereinbefore described.

4. In a shaping machine for automatically working the pressure surfaces of screw propeller blades of the aforesaid kind, a cutting tool, a slidable tool carriage, two rotary face plates for holding the blade to be worked, longitudinally between them, driving means for moving said tool carriage crosswise for the cutting operation of the tool, a feed spindle for feeding the tool carriage transversely to the cutting movement of the tool, a lever geared with said rotary face plates to actuate them, a vertically movable slide, an adjustable connection between the latter and said lever a vertical spindle arranged to operate said slide, and a change gear between this spindle and the too carriage feeding spindle, substantially as and for the purpose hereinbefore described.

5. In a shaping machine for automatically working the pressure surfaces of screw propeller blades of the aforesaid kind, a cutting tool, a slidable tool carriage, two rotary face plates for holding the blade to be worked, longitudinally between them, driving means for moving said tool carriage crosswise for the cutting operation of the tool, a feed spindle for feeding the tool carriage transversely to the cutting movement of the tool, a lever geared with said rotary face plates to actuate them, a vertically movable slide, an adjustable connecting pivot between said slide and said lever, a vertical spindle arranged to operate said slide, a change gear between this spindle and the tool carriage feeding spindle, a controlling device to automatically adjust said connecting pivot and an auxiliary gear between said controlling device and the slide operating spindle, substantially as and for the purpose hereinbefore described.

1,021,942. PRINTER FOR MULTIPLEX PRINTING-TELEGRAPH SYSTEMS. DONALD MURRAY, London, England. Filed Oct. 1, 1909. Serial No. 520,486. (Cl. 178—54.)



1. In a printing telegraph the combination with a typewriter mechanism, a selecting mechanism, and devices associated with the typewriter mechanism capable of receiving a selection from and retaining it independently of the selecting mechanism, of means for printing and for restoring the selecting mechanism, and independent means for operating the selecting mechanism.

2. In a printing telegraph, the combination of selecting mechanism, printing devices, levers connected to respective printing devices and adapted to be displaced or set by the selecting mechanism, means tending normally to restore said levers, and locking devices adapted to retain the levers in the displaced or set position.

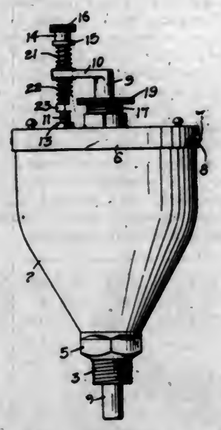
3. In a printing telegraph, the combination with selecting devices and printing devices, of a rotating shaft, means operated by said shaft for effecting printing and the restoration of the selecting devices, and means independent of said shaft for operating the selecting devices.

4. In a printer for a printing telegraph system, the combination of printing devices, a selecting mechanism, levers connected to respective printing devices and adapted to be displaced or set by the selecting mechanism, means for retaining a lever in its displaced position and for subsequently releasing said lever, and means engaging with any displaced lever to operate the corresponding printing device.

5. In a printer for a printing telegraph system, the combination with printing devices and means for operating said devices, a selecting mechanism means for operating and means for restoring said mechanism, and means for retaining the selection while the selecting mechanism is restored, of a cam shaft and cams thereon adapted to operate the printing mechanism and the restoring mechanism at the beginning of the operation of the printing mechanism.

[Claims 6 to 18 not printed in the Gazette.]

1,021,943. LUBRICATOR. CHARLES H. NEWHALL, Minneapolis, Minn. Filed Sept. 27, 1910. Serial No. 584,051. (Cl. 184—98.)



1. A lubricating device comprising a cup having a discharge opening, a rod therein adapted to rest on the journal and having normally a slight longitudinal movement with the revolution of the journal, and means outside the cup for regulating the throw or longitudinal movement of said rod in both directions.

2. A lubricating device comprising a cup having a cover and a discharge opening, a rod within said cup projecting into said discharge opening and through said cover, said rod having an arm thereon, and means mounted on said cover and engaging said arm for regulating the longitudinal movement of said rod.

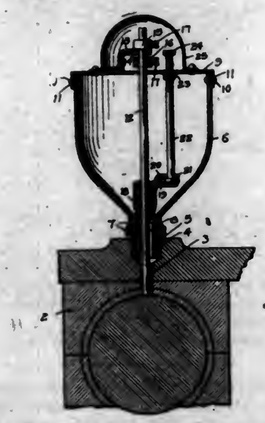
3. A lubricating device comprising a cup having a cover and a discharge opening, a rod extending through said opening and said cover and yielding means for controlling the longitudinal movement of said rod in both directions.

4. A lubricating device comprising a cup having a discharge opening and a cover, a rod projecting through said opening and through said cover, means adjustably mounted on said cover and engaging said rod to regulate the longitudinal movement or throw thereof in both directions.

5. A lubricating device comprising a cup having a discharge opening and a cover, a rod arranged within said cup and projecting through said cover, and having a forked arm extending laterally therefrom, a pin having a threaded connection with said cover and adapted to enter the fork of said arm, and stops above and below said fork, for the purpose specified.

[Claims 6 to 12 not printed in the Gazette.]

1,021,944. LUBRICATOR. CHARLES H. NEWHALL, Minneapolis, Minn. Filed Sept. 27, 1910. Serial No. 584,052. (Cl. 184—98.)



1. A lubricating device comprising a cup having a cover and a discharge opening, a rod arranged within said cup having its ends projecting respectively through said cover and said discharge opening, collars mounted on said rod above said cover and capable of adjustment thereon, and means extending between said collars and coöperating therewith to limit the longitudinal movement of said rod in both directions.

2. A lubricating device comprising a cup having a cover and a discharge opening, a rod arranged within said cup and projecting into said discharge opening and through said cover, a bracket having an opening through which said rod projects, and means mounted on said rod and capable of adjustment thereon to limit the throw or longitudinal movement of said rod in both directions.

3. A lubricating device comprising a cup having a cover and a discharge opening, a rod arranged within said cup and projecting into said discharge opening and through said cover, a bracket mounted on said cover and having an opening therein through which said rod projects, and stops mounted on said rod above and below said bracket to limit the longitudinal throw of said rod, one at least of said stops being adjustable.

4. A lubricating device comprising a cup having a cover and a feed opening, a rod therein adapted to rest on a journal and having normally a slight longitudinal movement with the revolution of the journal, means exterior to the cup for regulating the throw of the rod, a valve operating to close said feed opening, and means operable from the outside of the cup for opening or closing said valve.

5. A lubricating device comprising a cup having a cover and a discharge opening, a rod therein, means exterior to the cup for regulating the movement of the rod, a closing device mounted on said rod and movable thereon, and means connected with said closing device and operable from the outside of said cup and permitting the movement of said closing device to regulate the feed from said cup.

[Claims 6 to 10 not printed in the Gazette.]

1,021,945. TROWEL. WILLIAM ANDERSON NEWTON, Richmond, Va. Filed Oct. 26, 1911. Serial No. 656,925. (Cl. 72—136.)

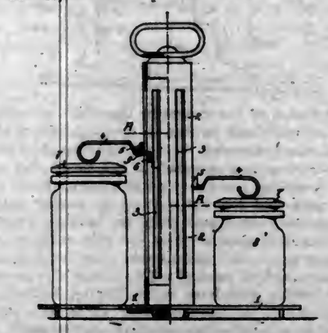


1. A trowel comprising a blade, a shank secured thereto, a handle secured to said shank, and a guard formed of one piece and bent upon itself, one portion of the said guard being provided with an opening to receive the end of said shank, the other portion of said guard engaging against the opposite side of said shank and the blade to form a seal.

2. The combination with a trowel having a blade, a shank extending upwardly and rearwardly of said blade, and a handle secured to said shank, of a guard formed of one piece and bent upon itself, one portion of said guard having a slot enlarged at one portion thereof and receiving said shank to hold said guard in position, the other portion of said guard engaging said blade.

3. As an article of manufacture, a guard for bladed tools comprising one piece bent upon itself, one portion of said guard having a slot therein enlarged at one portion and adapted to receive a part of a tool, the other portion of said guard being adapted for engagement with a second part of a tool.

1,021,946. STERILIZING APPARATUS. HERMANN OP DE HIPT, Oeflingen, Germany, assignor to The Firm of I. Weck, Gesellschaft mit beschränkter Haftung, Oeflingen, Germany. Filed Jan. 19, 1909. Serial No. 473,137. (Cl. 53—1.)



1. In a sterilising apparatus, the combination with a can support and a vertical tubular upright or pillar, having therein a plurality of longitudinally extending slots, and a plurality of resilient arms, each having a section extending through one of said slots and projections extending into contact with opposite faces of the wall in which said slot is formed, each of said arms being adapted to contact with the top of a can placed on the can support.

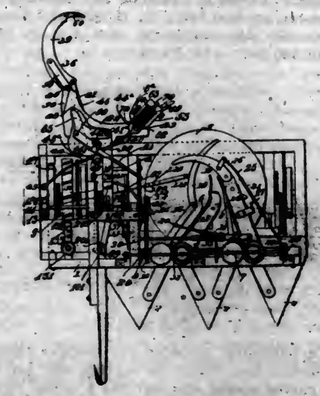
2. In a sterilising apparatus, the combination with a can support and a vertical upright or pillar, of a resilient arm, comprising two members, pivotally connected, one of said members engaging the upright or pillar and the other member being adapted to engage the top of a can placed on the can support, the pivoted connection between said members permitting the latter to be turned at any angle to the former to properly engage the can top.

3. In a sterilising apparatus, the combination with a can support and a vertical tubular upright or pillar, having a longitudinally extending slot formed therein, of a resilient arm including two members pivotally connected together, one of said members extending through said slot in the pillar, and having projections extending into contact with opposite faces of the wall in which said slot is formed, and the other adapted to contact with the top of a can placed on the can support.

4. In a sterilizing apparatus, the combination with a pillar having therein a longitudinal slot, of a can support having clamping means adapted to engage said slot and to secure the support at different parts of the slot, a nose on said can support extending into the slot in the pillar, and a spring adapted to engage the lid of a can placed on said support.

5. In a sterilizing apparatus, the combination with a can support, of a pillar having a longitudinal slot providing inner shoulders, and a spring adapted to engage the lid of a can placed on said support and having clamping means adapted to bear against the inner shoulders and the outer margins provided by the slot in the pillar, and a nose extending into the slot.

1,021,947. TWISTING MECHANISM FOR CORN-HARVESTERS. LEWIS E. PARSONS, Lewistown, Ill. Original application filed Sept. 22, 1908, Serial No. 454,183. Divided and this application filed Aug. 2, 1909. Serial No. 510,891. (Cl. 56—88.)



1. In a harvester, means for tying a binding wire about a shock comprising a needle adapted to carry the wire about the shock, a slitted twister rotatably mounted and adapted to receive and hold the wire, a hollow shaft through which the wire is passed and upon which the twister is mounted, a pinion carried by the hollow shaft, a larger pinion in engagement with the first-mentioned pinion, a shaft upon which the larger pinion is mounted, a crank carried by said shaft, and means for engaging said crank and intermittently rotating said pinions.

2. In a harvester, means for tying a binding wire about a shock comprising a needle adapted to carry the wire around the shock, a slitted twister rotatably mounted, a hollow shaft through which the wire is passed and upon which the twister is mounted, a pinion carried by the hollow shaft, a larger pinion in engagement with the first-mentioned pinion, a shaft upon which the larger pinion is mounted, a crank carried by said shaft, a cutter carried by said shaft, and means for engaging said crank and rotating said pinions and cutter.

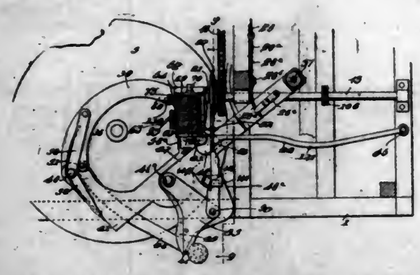
3. In a harvester, means for tying a binding wire about a shock comprising a disk rotated from the drive wheel of the harvester, a crank pin carried by said disk, a needle adapted to carry a binding wire around the shock, a slitted twister, a hollow shaft through which the wire is passed and upon which the twister is mounted, a second shaft mounted adjacent the hollow shaft, intergeared pinions carried by said shafts, a crank carried by the last mentioned shaft, and means for rotatably throwing said crank into the path of movement of said crank pin.

4. In a harvester, means for tying a binding wire about a shock comprising a rotatable disk, a crank pin carried thereby, a housing pivotally mounted upon the

harvester, a hollow shaft mounted in said housing, a slitted twister carried by said hollow shaft, a second shaft mounted in said housing adjacent the hollow shaft, intergeared pinions carried by said shafts, a crank carried by the last mentioned shaft, and means for tilting said housing to bring said crank into the path of movement of the crank pin on the rotatable disk.

5. In a harvester, means for tying a binding wire about a shock comprising a rotatable disk, a crank pin carried thereby, a housing pivotally mounted upon the harvester, a hollow shaft mounted on said housing, a slitted twister carried by said hollow shaft, a second shaft mounted in said housing adjacent the hollow shaft, intergeared pinions carried by said shaft, a crank carried by the last-mentioned shaft, and means for tilting said housing to bring said crank into the path of movement of the crank pin, said means including a notched lever having an inclined shoulder, and a projection upon the housing adapted to be engaged thereby, the notch in the lever being periodically engaged by the crank pin.

1,021,948. BINDING MECHANISM FOR CORN-HARVESTERS. LEWIS E. PARSONS, Lewistown, Ill. Original application filed Sept. 22, 1908, Serial No. 454,183. Divided and this application filed Aug. 2, 1909. Serial No. 510,892. (Cl. 56—119.)



1. In a harvester, a binder and dropper comprising a curved pivoted bar, means for moving said bar about its pivot, a curved needle arm carrying a needle and pivoted to said bar, a slide bar pivoted to said needle arm at its inner end, and a cam plate upon the pivoted bar and engaged by the opposite end of the slide bar to control the movement of the needle arm when the curved bar moves about its pivot.

2. In a harvester, a binder and dropper comprising a crane-like arm, a shaft carrying the same and pivoted in the frame of the machine, parallel plates secured to said arm, a needle bar pivoted between said plates, a curved needle arm pivoted to said needle bar and carrying a needle, a slide bar pivoted to the inner end of the needle bar, and cams formed on said parallel plates and engaged by rollers on the outer end of the slide bar.

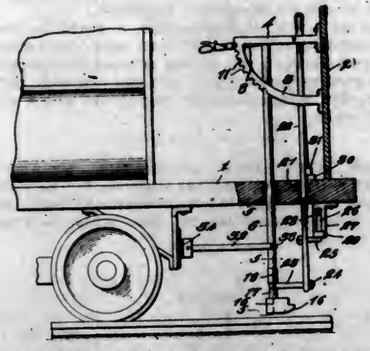
3. In a harvester, a binder and dropper comprising a cane-like arm, a shaft supporting the same and pivoted in the frame of the machine, cam-shaped parallel plates secured to said arm, a curved bar pivoted intermediate its end between said parallel cam plates, a curved needle arm carrying a needle and pivoted to said curved bar, a slide bar pivoted to the inner end of said needle arm and adapted to engage said parallel cam plates, a substantially boot-shaped cam carried by the curved bar, a hook-shaped lever supported by one of the cam plates and pivoted to said boot-shaped cam, and means actuated by said lever to lock the needle around the shock.

4. In a harvester, a binder and dropper comprising an arm, a vertically disposed movable shaft carrying said arm, two segmental vertically placed racks carried by said arm and shaft, one in vertical alinement with the other, a driving shaft provided with a pinion adapted to engage either of said racks, and mechanism for raising and lowering the vertically movable shaft to throw either of the racks into and out of gear with the pinion.

5. In a harvester, the combination with a binder and dropper, of a vertical shaft, an arm carried thereby and supporting said binder and dropper, duplicate segmental racks carried by said arm and shaft with their teeth opposed to each other, a driving shaft, a lever for raising or lowering said vertical shaft to throw the driving shaft into gear with one or the other of the segmental racks, a pinion actuated by the driving shaft and having a projection and a cam, a notched keeper bar, a slide bar connected to said shaft-lifting lever, a latch carried by said shaft-lifting lever and adapted to engage either of the notches in the keeper bar, shock-forming arms, a supplemental lever connected to one of the shock forming arms and adapted to be engaged by the projection on said pinion and itself adapted to engage a projection on said slide bar, and a lifting lever adapted to engage said spring latch and itself adapted to be engaged by the cam on the aforesaid pinion.

[Claims 6 and 7 not printed in the Gazette.]

1,021,949. SWITCH-THROWING MECHANISM. PAUL J. REIGER, Midland, Tex. Filed July 15, 1911. Serial No. 638,710. (Cl. 104—171.)



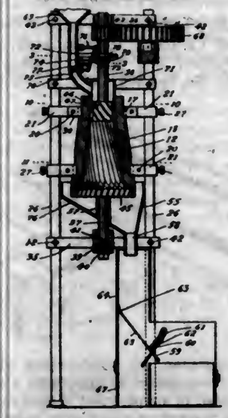
1. In a device of the character described, the combination of a car platform having an opening formed therein, a vertical shaft disposed in said opening, a triangular shaped operating shoe secured to the lower end of said shaft, an operating lever secured to the upper end of said shaft to raise and lower the same to engage said shoe with the switch points, said platform having an elongated opening formed therein adjacent the first opening, a lever disposed through said opening, said lever being connected to the lower end of said shaft to rotate the same, and means for locking said lever in the desired position.

2. In a device of the character described, the combination of a vertically disposed shaft, a triangular shaped operating shoe secured to the lower end of said shaft, said shoe having an upwardly projecting lug formed integrally therewith, a cap disposed over the upper end of said lug, a screw secured in said cap and lug and said cap being threaded onto the lower end of said shaft, a lever secured to the upper end of said shaft to raise and lower the same and means for rotating said shoe from left to right to open and close the switch points.

3. In a device of the character described the combination of curved brace members, horizontally disposed brace bars secured to said members, notches formed on the curved surface of one of said members, a lever carrying a ratchet, which is adapted to engage in said notches, a channeled guide member secured on the inner side of said curved member, engaging points carried by said lever and adapted to engage in the channels of said guide, a vertical shaft having its upper end secured to said lever, a triangular operating shoe secured to the lower end of said shaft and means for rotating said shoe from left to right to open or close the switch points.

4. In a device of the character described, the combination of a vertical shaft, a triangular shaped operating shoe secured to the lower end thereof, a lever secured to the upper end of said shaft, an arm secured to said shaft near the lower end thereof, a lever having its lower end secured to said arm, a guide case, a T shaped arm slidably mounted in said case upon which the second mentioned lever is mounted to rotate the operating shoe from left to right to open or close the switch points.

1,021,950. MILLING-MACHINE. WILLIAM T. SHEPARD, Le Mars, Iowa. Filed June 16, 1911. Serial No. 633,640. (Cl. 83—13.)



1. A milling machine comprising a vertically positioned hollow shell open at top and bottom, the upper part of the cavity within said shell being in form the frustum of a cone, the lower part of said cavity flaring outwardly and extending into a depending cylindrical portion, and a milling roller of substantially the same shape as said cavity working therein, the conical portion of said milling roller being provided with grooves and tooth-like corrugations, the flaring portion with flat-topped rubbing teeth and intervening grooves and the cylindrical portion with flat-topped corrugations and intervening grooves, part of all of said grooves intercommunicating.

2. A machine for milling grain comprising a vertically positioned hollow shell open at top and bottom and provided with grooves extending diagonally on the interior surface thereof, said shell having an outwardly flaring portion at the lower end thereof and a cylindrical portion joined to and extending downwardly from said flaring portion, a roller operatively positioned within the shell, said roller being provided with a correspondingly flaring portion and having diagonal grooves angularly disposed with respect to the grooves on the shell, and means to rotate the roller.

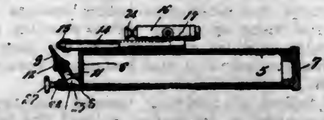
3. In combination with a vertically positioned hollow shell, a milling roller having a series of broad shallow undercut and sharply diagonal grooves extending a portion of the way from the top and about the periphery of said roller, the roller being further provided with a series of undercut grooves narrower, more numerous and extending more perpendicularly than the first named grooves and having a plurality thereof opening into each of said first named grooves, and means to rotate the roller within the shell.

4. A machine for milling grain comprising a hollow vertically positioned shell provided with toothlike corrugations on the interior thereof, a vertical roller working within and of substantially the same shape as the interior of said shell provided with feeding grooves, toothlike corrugations on the roller coöperating with the similar corrugations on the shell, and means on the roller coöperating with a portion of said corrugations on the shell to rub and tear the fragments of grain formed by the coaction of the corrugations on the roller and the shell.

5. A milling machine comprising a vertically positioned hollow shell open at top and bottom, the upper part of the cavity within said shell being in form the frustum of a cone and the lower part flaring outwardly, a roller of substantially the same shape as said cavity working within and coacting with said shell, the flaring portion of the roller being provided with flat-topped tooth-like rubbing members.

[Claims 6 to 9 not printed in the Gazette.]

1,021,951. ATOMIZING APPARATUS. WALTER J. SMART, New York, N. Y. Filed Nov. 10, 1910. Serial No. 591,545. (Cl. 91—45.)



1. In an air brush, the combination with a cylindrical reservoir having a free and clear interior and constituting the handle of the device, of an air tube mounted on one side of the reservoir and extending beyond one end thereof, a nozzle mounted on the said tube and longitudinally adjustable thereon, an extension from the other side of the said cylinder end provided with a chamber, there being a port from the cylinder to such chamber, a needle valve for controlling the port, a nozzle connection on such extension, a nozzle on the connection adjustable toward and from the air nozzle.

2. In an air brush, the combination with a cylindrical reservoir having a free and clear interior and constituting the handle of the device, of an air tube mounted on one side of the reservoir and extending beyond one end thereof, a nozzle mounted on the said tube and longitudinally adjustable thereon, an extension from the other side of the said cylinder end provided with a chamber, there being a port from the cylinder to such chamber, a needle valve for controlling the port, a nozzle connection on such extension, a nozzle on the connection adjustable toward and from the air nozzle, and a port entering said chamber from the outside.

3. In an air brush, the combination with a cylindrical reservoir, of an air tube mounted on one side of the reservoir, a nozzle mounted on the said tube and longitudinally adjustable thereon, an extension from the other side of the cylinder provided with a chamber, there being a port from the cylinder to such chamber, a needle valve for controlling the port, a nozzle carried by such extension and adjustable toward and from the air nozzle, and a port entering such chamber and provided with a combined plug and coupling seat.

4. In an air brush, the combination with a tubular reservoir having one end closed, of a removable closure at the other end of the said reservoir, an air tube mounted upon one side of the reservoir and having an adjustable nozzle extending beyond the closed end thereof, a chamber associated with such closed end and having a port communicating with the reservoir, a nozzle adjustable toward and from the air nozzle and having communication with the said chamber, a hose connection to the air tube and a valve between the connection and air tube.

1,021,952. MANUFACTURE OF TRANSPARENT AND TRANSLUCENT BODIES. KARL WERNER SPALTEHOLZ, Leipzig, Germany. Filed Apr. 8, 1909. Serial No. 488,663. (Cl. 88—1.)

1. The method of rendering organic and inorganic bodies transparent or translucent without fine sub-division thereof, which consists in impregnating or filling up a body with a material, the refractive index of which corresponds as exactly as possible to that of the body.

2. The method of rendering organic and inorganic bodies composed of constituents having different refractive in-

dices transparent or translucent without fine sub-division, which consists in impregnating or filling up a body with a material, the refractive index of which corresponds to the mean value of the refractive indices of the different constituents of the body.

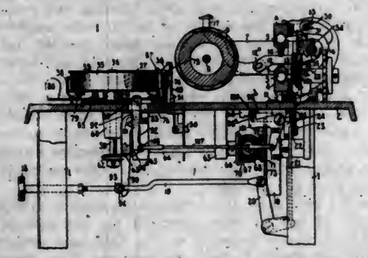
3. The method of rendering one constituent of organic and inorganic bodies composed of constituents having different refractive indices transparent or translucent without fine sub-division, which consists in impregnating or filling up a body with a material, the refractive index of which corresponds to that of one constituent of the body.

4. The method of rendering some of the constituents of organic and inorganic bodies composed of constituents having different refractive indices transparent or translucent without fine sub-division, which consists in impregnating or filling up a body with a material, the refractive index of which corresponds to the mean value of the refractive indices of said first-named constituents of the body.

5. The method of rendering organic and inorganic bodies transparent or translucent without fine sub-division, which consists in impregnating or filling up a body with a material, the refractive index of which corresponds as exactly as possible to that of the dry body.

[Claims 6 to 15 not printed in the Gazette.]

1,021,953. TYPE-WRITING MACHINE. HERBERT H. STEELE, Marcellus, N. Y., assignor to The Monarch Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed Nov. 28, 1910. Serial No. 594,535. (Cl. 197—151.)



1. The combination of a carriage that is fed step-by-step for letter spacing, carriage driving mechanism, a paper ribbon supply device, means for constantly drawing the paper ribbon uniform extents from said supply device during the step-by-step movements of the carriage, and connections between said means and the carriage driving mechanism, said means feeding the paper ribbon out of the machine, the arrangement permitting the paper ribbon readily to be torn away after passing said means.

2. In a typewriting machine, the combination of a carriage, carriage driving mechanism, carriage releasing means, ribbon feeding mechanism comprising devices coacting with each other through the ribbon, constantly operative connections between said carriage driving mechanism and certain of said devices, and means operative by said carriage releasing means for rendering said devices inoperative to feed the ribbon.

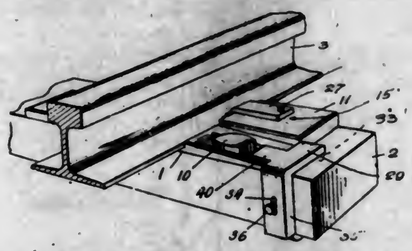
3. In a typewriting machine, the combination of a carriage, carriage driving means, carriage releasing means, ribbon feeding mechanism comprising devices for frictionally feeding the ribbon, constantly operative connections between certain of said devices and said carriage driving means, and means operative by said carriage releasing means for rendering said frictional feeding devices inoperative.

4. In a typewriting machine, the combination of a carriage, carriage driving mechanism, carriage releasing means, ribbon feeding mechanism comprising devices coacting with each other through the ribbon, constantly operative connections between said carriage driving mechanism and certain of said devices, and means operating automatically to render said devices inoperative to feed the ribbon.

5. In a typewriting machine, the combination of a carriage, carriage driving mechanism, carriage releasing means, feed rollers for frictionally feeding the ribbon, and means operative by said carriage releasing means for separating said feed rollers and thereby rendering said feed rollers inoperative.

[Claims 6 to 27 not printed in the Gazette.]

1,021,954. RAIL-FASTENER. ANTONY SZABADOS, New Michel, British Columbia, Canada, assignor of one-half to Helena Mueller, New Michel, Canada. Filed Oct. 6, 1911. Serial No. 653,142. (Cl. 238—4.)



1. In a rail fastener, the combination with a tie and rails, of a rail chair mounted upon said tie at each end thereof and adapted to support one of said rails, said chair having the ends thereof provided with enlargements with each enlargement having a pocket and a groove formed therein, a spring pressed fastener member located in each groove and adapted to engage the base flanges of said rail, a plate mounted upon each enlargement of said chair and adapted to guide the fastener members thereof, a pin adapted to lock each fastener member in engagement with said rail, and means for securing said chair to said tie.

2. In a rail fastener, the combination with a tie and rails, of a rail chair at each end of said tie and adapted to support a rail, said chair having the ends thereof enlarged and provided with pockets and grooves, plates mounted over the grooves of the enlargements of said chair, fastener members arranged within the pockets of the enlargements of said chair and adapted to be guided by said plates to engage said rail, pins for locking said fastener members in engagement with said rail, and means including adjustable clamps adapted to retain said chair in engagement with said tie.

1,021,955. RAIL-JOINT. ANTONY SZABADOS, New Michel, British Columbia, Canada, assignor of one-half to Helena Mueller, New Michel, Canada. Filed Oct. 6, 1911. Serial No. 653,143. (Cl. 239—11.)



1. The combination with rails, having the webs thereof provided with openings, of an inner splice bar adapted to brace the inner sides of said webs at the ends thereof, bolts extending through said inner splice bars and the webs of said rails, said bolts having annular grooves formed therein, an outer splice bar, a housing carried by the inner side of said outer splice bar and having one end thereof closed, an inner member slidably mounted in said housing, a locking member slidably mounted between said inner member and said splice bar, said splice bar and said member having openings formed therein to receive the grooved ends of said bolts with the openings of said locking member in communication with slots formed therein, whereby said locking member can be shifted to engage in the groove of said bolts and lock said bolts in engagement with said rails.

2. The combination with rails having the webs thereof provided with openings, of an inner splice bar adapted to brace the inner sides of said webs at the ends thereof, bolts extending through said inner splice bars and the webs of said rails, said bolts having annular grooves formed therein, an outer splice bar, a housing carried by the inner side of said outer splice bar and having one end thereof closed, an inner member slidably mounted in said housing, a locking member slidably mounted between said inner member and said splice bar, said splice bar and said member having openings formed therein to receive the grooved ends of said bolts with the openings of said locking member in communication with slots formed therein, whereby said locking member can be shifted to engage in the groove of said bolts and lock said bolts in engagement with said rails, means arranged in said housing and adapted to retain said locking member in an unlocked position, and means carried by said outer splice bars and adapted to lock said locking member in a locked position.

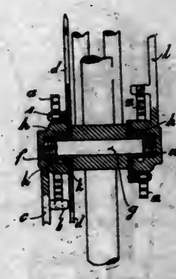
1,021,956. MEASURING DEVICE. MATTHEW TAMBURINI, Paterson, N. J. Filed Aug. 16, 1910. Serial No. 577,539. (Cl. 235—91.)



In an indicator, a frame comprising adjustable supporting members, indicating members mounted on said frame, an operating member comprising a cylinder having a reduced portion on one end thereof provided with a key, a cap section having a recess therein to receive the reduced portion of said cylinder including the aforesaid key thereon, a gear formed on said cap section a second gear meshing with the first mentioned gear and mounted on one of said adjustable supporting members, and a train of gears operatively connecting said second mentioned gear to said indicating members for moving each of the latter at different speeds, said train of gears being mounted on said adjustable supporting members.

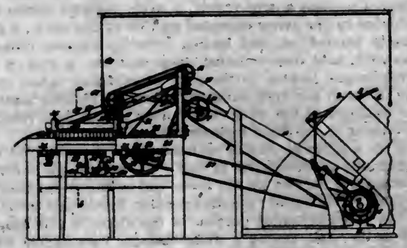
1,021,957. ELASTIC PEDAL-CRANK FOR CYCLES. ALFRED WALTER, Straupitz, Germany. Filed July 24, 1911. Serial No. 640,299. (Cl. 208—68.)

An elastic crank for cycles comprising in combination with the axle of the wheel, the chain wheel keyed upon said axle by means of a hub, a bush screwed upon the other end of said axle, a lateral extension of said bush, an outer pedal crank, a bub at the upper end of said outer pedal crank loosely mounted upon the hub of the chain wheel and having an inner annular groove and two radial arms projecting from the hub of the chain wheel engaging with said inner grooves, a lateral extension of the crank and a helical spring surrounding the hub of the crank and



fixed with one end to the chain wheel, and with the other end to the lateral extension of the crank, substantially as described and shown and for the purpose set forth.

1,021,958. CELL-CASE INTERLOCKER. ALWIN W. D. WEIS, Waterloo, and JOSEPH STARMAN, Cedar Rapids, Iowa. Filed Mar. 27, 1906. Serial No. 308,344. (Cl. 93—37.)



1. In a cell-case packer, the combination of a conveyer to take the cell-cases on their sides collapsed, tilting and forwarding mechanism to turn them up edgewise and advance them, and mechanism adapted to completely interlock them in this position.

2. In a cell-case packer, the combination of a conveyer to take the cell-cases on their sides collapsed, tilting and forwarding mechanism to turn them up on their sides and advance them, means for curving them as they are advanced, and a presser to close and interlock them.

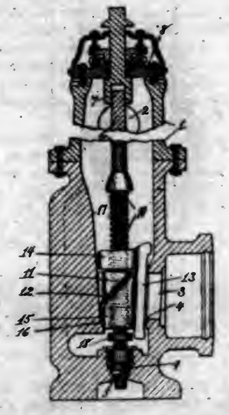
3. In a cell-case packer, the combination of a conveyer to take the severed and collapsed cell-cases on their sides and carry them endwise, a reciprocating plunger on which they fall in the same position, a stripper, an incline to receive them as stripped from the plunger, and mechanism to actuate said conveyer and plunger to advance the cell-cases transversely and on edge.

4. In a cell-case packer, the combination of a conveyer to take and deliver the severed and collapsed cell-cases on their sides, a reciprocating plunger having a receiving plate to catch them on their sides, a stripper to remove them as the plunger retreats, an incline to receive them as they fall from the plunger, and detents to catch the lower edges of the cell-cases and hold them in position to be uptilted and advanced by the forward movement of the plunger.

5. In a cell-case packer, the combination of a conveyer to deliver the severed and collapsed cell-cases on their sides, mechanism adapted to tilt the cell-cases a quarter turn and stand them on edge and push them forward in that position, and detents to catch the advanced cell-cases when pushed to the extreme forward position.

[Claims 6 to 9 not printed in the Gazette.]

1,021,959. HYDRANT. JOHN H. WHITEHOUSE, Troy, N. Y., assignor to The Ludlow Valve Manufacturing Company, Troy, N. Y., a Corporation of New Jersey. Filed Apr. 20, 1909. Serial No. 491,116. (Cl. 137—13.)



1. In a hydrant, and in combination, a case; a rotatory and longitudinally movable stem having a screw-threaded portion; a drip-valve carried by the inner end of the stem, adapted to close a drip-outlet; a wedge-member fitting and actuated by the screw-threaded portion of the stem; a gate loosely carried by, and having a wedge-member coöperative with, said stem-actuated wedge-member; a stop on the hydrant-case located in the path of said gate when opposite its seat; and stem-actuated means for binding together the members of the wedge-mechanism by the final rotative movement of the stem inclosing the gate.

2. In a hydrant, and in combination, a rotatory and longitudinally movable stem having a screw-threaded portion; a drip-valve carried by the inner end of the stem, adapted to close a drip-outlet; a wedge-member fitting and actuated by the screw-threaded portion of the stem; a gate loosely carried by, and having a wedge-member coöperative with, said stem-actuated wedge-member; and stem-actuated means for binding together the members of the wedge-mechanism by the upward movement of the stem which opens the drip-valve.

3. In a hydrant, and in combination, a case, a rotatory and longitudinally movable stem having a screw-threaded portion; a drip-valve carried by the inner end of the stem, adapted to close a drip-outlet; a wedge-member fitting and actuated by the screw-threaded portion of the stem; a gate loosely carried by, and having a wedge-member coöperative with, said stem-actuated wedge-member; a stop on the hydrant-case located in the path of said gate when opposite its seat; and an offset from said stem between said drip-valve and said gate engageable with said gate by the final gate-closing movement of the stem, whereby said wedge-members are bound together and the drip-valve is opened.

1,021,960. CISTERN OR CATCH-BASIN CLEANER. JONAS H. WIRST, Indianapolis, Ind. Filed July 5, 1910. Serial No. 570,235. (Cl. 210—3.)

1. A cistern cleaner including an annular flaring base having notches in the edge of the larger end thereof, the smaller end being adapted to have a pump-barrel connected thereto, and a pipe having a flaring pipe-end on one end thereof that extends about the flaring base at a distance therefrom, to form passages through and also around the base to the pipe, the opposite end portion of the pipe having a lateral branch-pipe thereon.

2. A cistern cleaner including an annular flaring base having notches in the edge of the larger end thereof, the smaller end being adapted to have a pump barrel connected thereto, and having also a tube therein extending from the smaller end toward the larger end thereof, and a pipe having a flaring pipe-end on one end thereof that extends about the flaring base at a distance therefrom, to form passages through and also around the base to the pipe, the opposite end portion of the pipe having a lateral branch-pipe thereon.



3. A cistern cleaner including an annular flaring base having notches in the edge of the larger end thereof, the exterior of the base having an annular seat thereon facing toward the smaller end of the base to receive the end of a pump-barrel, a flaring pipe-end having projections on the inner side of the larger end thereof engaging the annular seat, the pipe-end extending about the base, and a pipe connected to the pipe-end and having a lateral branch-pipe thereon.

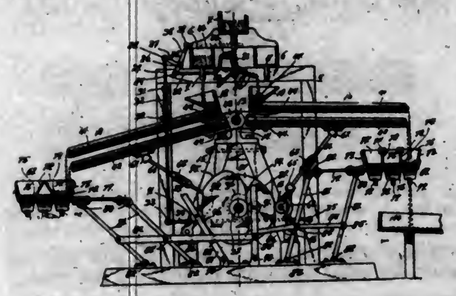
4. A cistern cleaner comprising an annular flaring base having notches in the edge of the larger end thereof, and having also a tube therein extending from the smaller end toward the larger end thereof, a flaring pipe-end extending about the base at a distance therefrom and supported by the base, a pipe connected to the smaller end of the flaring pipe-end and having a lateral branch-pipe thereon, and a pump comprising a pump-barrel extending through the pipe and connected to the smaller end of the base and thereby forming connection with the tube.

5. A cistern cleaner comprising an annular flaring base having notches in the edge of the larger end thereof, and having also a tube therein extending from the smaller end toward the larger end thereof, a flaring pipe-end extending about the base and secured thereto at a distance therefrom, a pipe connected to the smaller end of the flaring pipe-end and having a lateral branch-pipe thereon, a pump-barrel in the pipe and connected to the smaller end of the base and thereby forming connection with the tube, the pump-barrel extending beyond the pipe and having a spout thereon, a foot-valve mounted in the pump-barrel, a pump-rod in the pump-barrel, and a bucket on the pump-rod.

1,021,961. CONCENTRATOR. ARTHUR R. WILFLEY, Denver, Colo. Filed Feb. 2, 1911. Serial No. 606,196. (Cl. 83—88.)

1. In combination, a plurality of concentrating decks, a pulp distributer, comprising a receptacle substantially equal in length to the feed space of each deck, said receptacle having unobstructed discharge openings of relatively large capacity, said openings adapted to deliver the pump in distributed volume, sub-dividing means intermediate said decks and the distributer adapted to deliver the pulp to the respective decks, said sub-dividing means being proportioned and adapted to deliver the pulp from the distributer to the respective decks without restraint.

2. In combination, a plurality of concentrating decks, arranged one above another, a pulp distributer comprising a receptacle substantially equal in length to the feed space of each deck, said receptacle having unobstructed discharge openings of relatively large capacity, said openings adapted to deliver the pulp in distributed volume, sub-dividing means mounted on the uppermost deck below the distributer and adapted to deliver the pulp to the respective decks, said sub-dividing means being proportioned and adapted to deliver the pulp from the distributer to the respective decks without restraint.



3. In combination, a plurality of similar concentrating decks connected for common actuation, a pulp distributer comprising a receptacle substantially equal in length to the feed space of each deck, said receptacle having unobstructed discharge openings of relatively large capacity, said openings adapted to deliver the pulp in distributed volume, sub dividing means intermediate said decks and the distributer adapted to deliver the pulp to the respective decks, said sub-dividing means being proportioned and adapted to deliver the pulp from the distributer to the respective decks without restraint.

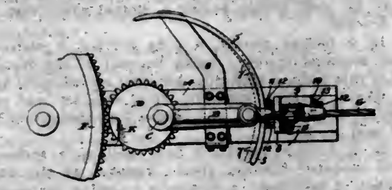
4. In combination a plurality of similar concentrating decks connected for common actuation and arranged one above another, a pulp distributer comprising a receptacle substantially equal in length to the feed space of each deck, said receptacle having unobstructed discharge openings of relatively large capacity, said openings adapted to deliver the pulp in distributed volume, sub-dividing means intermediate said decks and the distributer adapted to deliver the pulp to the respective decks, said sub-dividing means being proportioned and adapted to deliver the pulp from the distributer to the respective decks without restraint.

5. In combination a plurality of similar concentrating decks connected for common actuation and arranged one above another, a pulp distributer comprising a receptacle substantially equal in length to the feed space of each deck, said receptacle having unobstructed discharge openings of relatively large capacity, said openings adapted to deliver the pulp in distributed volume, sub-dividing means mounted on the uppermost deck below the distributer and adapted to deliver the pulp to the respective decks, said sub-dividing means being proportioned and adapted to deliver the pulp from the distributer to the respective decks without restraint.

[Claims 6 to 17 not printed in the Gazette.]

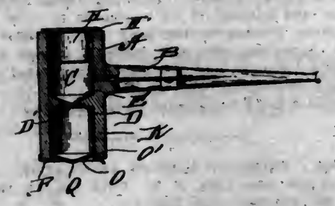
1,021,962. BRAKE. GEORGE S. WILSON and EUGENE F. MATHEY, Muscogee, Okla., assignors of one-third to C. L. N. Haines, Aurora, Mo. Filed Aug. 7, 1909. Serial No. 511,796. (Cl. 100—21.)

In a baling-press, the combination, with a bed member and a swinging arm, of a support extending laterally from said bed member, a shoe supported near one end by said support and made of a solid piece of metal having a curved bearing surface of approximately the same radius as the free end of said arm and open at the front and rear ends to permit passage of the end of the arm thereonto and therefrom, respectively, a bracket on said bed member near the other end of said shoe, a casing on said bracket to the rear of said shoe, a spring in said casing having an end in contact with said shoe, means on said casing whereby tension of said spring is altered, and a bolt connected to said shoe beyond the casing and passing through the



bracket and carrying means for further adjusting tension of said spring and for retaining said shoe against such tension.

1,021,963. SMOKING-PIPE. FRANK ANSLEY, Spokane, Wash. Filed Apr. 18, 1911. Serial No. 621,829. (Cl. 131—12.)



A tobacco pipe comprising a bowl portion having two chambers, the lower of which is arranged to receive the tobacco, the wall separating said chambers having a funnel-shaped depression on the side of the upper chamber, said depression opening through a central orifice into the tobacco chamber, a cap closing the base of the tobacco chamber, said cap being coned and apertured at its apex, a flanged plug closing the end of the upper chamber, a smoke duct leading from said upper chamber at a point intermediate its ends, and a stem secured to said bowl and having a bore communicating with said smoke duct, as set forth.

1,021,964. FOLDING AND CONVERTIBLE GO-CART. CLARENCE H. BRASECKER, Sparta, Mich. Filed Sept. 13, 1911. Serial No. 649,095. (Cl. 21—83.)



1. In a folding go-cart, a body portion, a series of wheels mounted thereon, a sliding bar connected to said wheels and traveling vertically within the body of said cart, a bracket depending from said bar, and a pivoted hanger for the wheels connected to said bracket.

2. In a folding go-cart, a body portion, a series of wheels mounted thereon, a sliding bar connected to said wheels and traveling vertically within the body of said cart, a bracket depending from said bar, and a pivoted hanger for said wheels having a slotted connection for said bracket.

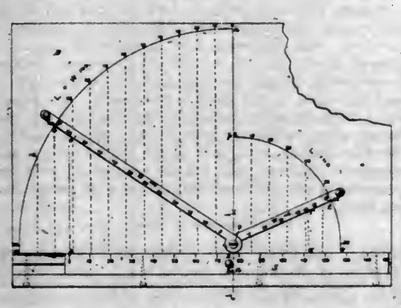
3. In a folding go-cart, a body portion, a series of wheels mounted thereon, tracks disposed at the opposite ends of said body, a vertically traveling bar mounted upon said tracks, brackets extending from said bar and connected to carrier wheels, and means for raising said bar upon said tracks.

4. In a folding go-cart, a body portion, a series of wheels mounted thereon, tracks disposed at the opposite ends of said body, a vertically traveling bar mounted upon said tracks, brackets extending from said bar and connected to carrier wheels, a traveling frame connected to said bar and adapted in its movement to raise the bar, and a lever connection to actuate said frame.

5. In a folding go-cart, a body portion, a series of wheels mounted thereon, tracks disposed at the opposite ends of said body, a vertically traveling bar mounted upon said tracks, brackets extending from said bar and connected to carrier wheels, a traveling frame connected to said bar and adapted in its movement to raise the bar, a sub-lever pivoted to the body and provided with a slotted connection with said frame, a pitman extending from said sub-lever, and a handle lever pivoted upon the body and connected to said pitman.

[Claims 6 to 12 not printed in the Gazette.]

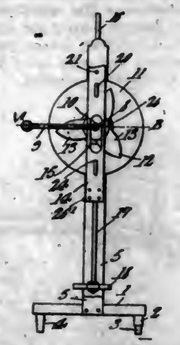
1,021,965. PRODUCT-NUMBER INDICATOR. ARTHUR T. BOLTON, New York, N. Y. Filed Jan. 14, 1910. Serial No. 538,124. (Cl. 235—61.)



A product number indicator, for visually showing the surface area of a rectangular volume, embracing two quadrants adjacent to each other and each provided with a rotatable arm carrying dimensional spaces, said arms being pivoted near the bases and at the junction of the sides of said quadrants; the united bases of said quadrants being divided into a definite number of equal spaces; the arcs of said quadrants being divided into dimensional spaces located at the intersection of lines vertically drawn from the ends of the divisional base spaces; together with a slidable scale located below said bases.

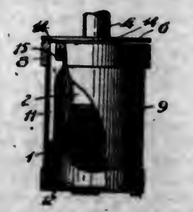
1,021,966. CHURN. WILLIAM D. D. BOWEN, Fulton, Miss. Filed Apr. 24, 1911. Serial No. 623,002. (Cl. 31—30.)

Churn operating mechanism including a supporting structure, an operating shaft journaled therein, a frame having oppositely disposed longitudinally extending slots through which the shaft extends, said shaft constituting a guide for the frame, a star wheel secured to the shaft between the sides of the frame and revoluble with the shaft, a dasher connected to and adjustable longitudinally relative to the frame, a guide element extending from the frame and slidably engaging the supporting structure, guide pins extending transversely of the frame above and below and in the path of the star wheel, said wheel



and pins coöperating to reciprocate the frame upon the shaft, and means for rotating the shaft and star wheel.

1,021,967. INCANDESCENT-MANTLE HOLDER AND GUARD. RUDOLPH E. BRUCKNER, New York, N. Y., and CHARLES A. MCCUNE, Jersey City, N. J., assignors to The Commercial Acetylene Company, New York, N. Y., a Corporation of New Jersey. Filed Jan. 9, 1912. Serial No. 670,166. (Cl. 67—103.)



1. In a device of the character described, a mantle, a protector box therefor, a mantle support fitted to one end of said box, the mantle being in pendant relation to said support, a guard loosely mounted in said box, a portion of said guard projecting outside said mantle support, a burner and means for rigidly securing said guard to said mantle support, said means being fixed relatively to said burner.

2. In a device of the character described, a mantle, a protector box therefor, a mantle support fitted to one end of said box, the mantle being in pendant relation to said support, a guard loosely mounted in said box having hooked portions overstanding the upper side of said mantle support, a burner, and means permanently fixed relatively to said burner for rigidly securing said guard to said mantle support by engaging said hooked portions.

3. In a device of the character described, a mantle, a protector box therefor, a tubular mantle support, the upper part of which is fitted to one end of said box, the mantle being in pendant relation to said support, a plurality of slots in said mantle support, a mantle guard loosely fitted in said box and having the parts arranged to pass through said support and to be engaged therewith.

4. In a device of the character described, a burner tube having a flange, a mantle support arranged to be detachably secured to said tube, a box-like mantle protector, the upper part of said mantle support being flanged outwardly and fitted to said box, a mantle guard loosely mounted within said box, the upper part of said mantle support having slots through which parts of said guard project, whereby said parts may be engaged between the top of said guard and the flange of said burner tube.

5. In a device of the character described, a mantle support arranged to be detachably secured to a burner, a

mantle fixedly secured in pendant relation thereto, a protector box surrounding said mantle and detachably connected with said mantle support, a mantle guard surrounding said mantle within said box and having portions loosely engaging clamping surfaces on the upper side of said support.

1,021,968. VEGETABLE-SLICER. WILLIAM BUSH, Cincinnati, Ohio. Filed Apr. 24, 1911. Serial No. 622,967. (Cl. 146—7.)

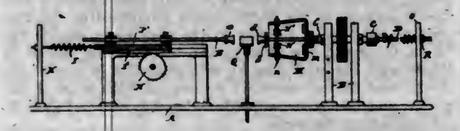


1. A vegetable cutter consisting of a base having an opening therein, a lever hinged to said base, a portion of said lever depending therefrom to form a plunger and a cutter seated over said opening, said cutter consisting of a pair of frames having wires stretched thereacross, one of said frames nesting within the other.

2. A vegetable cutter consisting of a base having an opening therein, a lever hinged to said base, a portion of said lever depending therefrom to form a plunger and a cutter seated over said opening, said cutter consisting of a pair of frames having wires stretched thereacross, one of said frames nesting within the other, the smaller of said frames having recesses in the sides thereof to receive the wires of the larger of said frames whereby said wires are held in proper position.

3. A vegetable cutter consisting of a base having an opening therein, a lever hinged to said base, a portion of said lever depending therefrom to form a plunger and a cutter seated over said opening, said cutter consisting of a pair of frames having wires stretched thereacross, one of said frames nesting within the other, the smaller of said frames having recesses in the sides thereof to receive the wires of the larger of said frames whereby said wires are held in proper position, said plunger having an arcuate head whereby it is enabled to follow the depression of the wires upon which the greatest pressure is brought to bear.

1,021,969. FRUIT-GRATING MACHINE. JOHN W. CHENEY, Los Angeles, Cal., assignor of one-half to Andrew J. Killeen, Los Angeles, Cal. Filed Jan. 2, 1912. Serial No. 669,070. (Cl. 146—9.)



1. In a grating machine, the combination with a rotary head having oppositely disposed graters yieldingly mounted therein, of oppositely disposed fruit holding and feeding devices movable toward and from each other to clamp the fruit and movable in unison to present the fruit to the graters in the head, with mechanism for rotating the head and for reciprocating the holders and feeders.

2. In a grating machine, the combination with the cylindrical grating head having internal yielding graters therein, and means for rotating said head, of fruit clamping and feeding mechanism embodying holders movable toward and from each other to clamp the fruit and movable in unison to present the fruit to the graters, driving mechanism for advancing the holders to present the fruit to the graters, and means for returning the holders to normal position.

3. In a fruit grating machine, the combination with the grater head having internal graters yieldingly mounted therein, a spring pressed fruit holder movable axially within the head, a coöperating fruit holder movable toward and from the first mentioned fruit holder, and driving mechanism for reciprocating the last mentioned holder, whereby the fruit will be clamped between the holders and advanced into the grater head, substantially as described.

4. In a grating machine, the combination with the rotary grater head, graters yieldingly mounted within said head, a spring pressed rod extending axially through the head, and a fruit holder mounted on said rod, of an oppositely disposed reciprocatory fruit holder, and means for reciprocating said last mentioned holder, whereby the fruit will be clamped between the holder and advanced into the grater head while so clamped.

5. In a grating machine, the combination with the grater head having internal graters yieldingly mounted therein, a spring pressed holder movable axially into the head, a coöperating oppositely disposed holder, a reciprocatory carriage on which the last-mentioned holder is mounted, and means for reciprocating said carriage whereby the fruit may be grasped between the holders and advanced into the grater head in opposition to the tension of the holder advancing spring.

[Claims 6 to 15 not printed in the Gazette.]

1,021,970. TYPE-WRITING MACHINE. CORNELIUS B. CORCORAN, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of New Jersey. Filed Jan. 19, 1910. Serial No. 538,837. (Cl. 197—123.)



1. In a typewriting machine, the combination with a platen, a line-space wheel relatively to which the platen turns, a detent for the wheel and line-spacing mechanism for turning the wheel, of a clutch mechanism for positively and rigidly connecting the line-space wheel and platen, including a clutch member fixed to turn with the platen, a coöperating clutch member connected with the line-space wheel, the platen capable of rotation relatively to said coöperating clutch member, a bolt loosely mounted in one of the clutch members for back and forth movement relatively to the remaining clutch member, to releasably connect the platen and line-space wheel, and releasing mechanism operable against the tension of a returning spring for effecting the disengagement of the bolt from the fast clutch member to permit the rotation of the platen relatively to the line-space wheel.

2. In a typewriting machine, the combination with a platen, a line-space wheel rotatable relatively thereto, a detent for the wheel, and line-space mechanism for turning the wheel, of a clutch mechanism for positively and rigidly connecting the platen and line-space wheel against independent rotation, including a clutch member fixed to turn with the platen and having seats therein, a loose clutch member having a screw coupling with the line-space wheel to afford the loose clutch member a turning movement relatively to both the platen and line-space wheel, a bolt mounted for back and forth movement in the loose clutch member to releasably connect the clutch members, releasing mechanism to control the engagement and disengagement of the clutch members, the releasing mechanism affecting the loose clutch member to cause a slight rotation thereof relatively to the platen and line-space wheel to aline the bolt with a seat in the fixed clutch member, and a spring for seating the bolt.

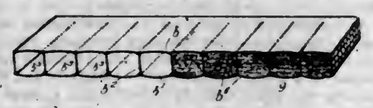
3. In a typewriting machine, the combination with a platen and its axle, a line-space wheel rotatable on the axle, a detent for the wheel and line-space mechanism for turning the wheel, of a clutch mechanism for positively and rigidly connecting the platen and line-space wheel releasably together, including a clutch member fixed on the axle, a bolt carrier loose on the axle and connected with the line-space wheel, a bolt mounted in the bolt carrier and movable to lock the fixed clutch member to the line-space wheel, one end of the axle being hollow and having a slot therein, a releasing head connected to the bolt and sliding on the axle, the releasing head having an annular groove communicating with the slot in the hollow axle, and a stem in the hollow axle, terminating in a button at its outer end, and carrying a bit projecting through the slot in the axle into the annular groove in the releasing head, to control the position of the releasing head to effect the engagement and disengagement of the clutch members.

4. In a typewriting machine, the combination with a platen having an axle hollow at one end, a line-space wheel relatively to which the platen turns, a detent for the wheel, and line-space mechanism for turning the wheel, of a clutch mechanism for connecting the platen and line-space wheel, including a clutch member fixed to turn with the platen, a coöperating clutch member connected with the line-space wheel and having a bolt releasably engaging the fixed clutch member, a spring-pressed releasing head for effecting the engagement and disengagement of the bolt and fixed clutch member, the releasing head capable of longitudinal and rotary movements on the axle, and a finger-operated stem slidable in and out of the hollow axle and connected with the releasing head for operating the latter.

5. In a typewriting machine, the combination with a platen, a line-space wheel relatively to which the platen turns, a detent for the wheel, and line-space mechanism for turning the wheel, of a clutching mechanism for connecting the platen and line-space wheel, including a clutch member fixed to turn with the platen and having a plurality of seats arranged circularly thereof, a bolt-carrier connected with the line-space wheel and having a spring-pressed bolt movable endwise in the carrier toward and from the fixed member, releasing mechanism controlling the engagement and release of the bolt from the fixed member, the bolt carrier being connected with said releasing mechanism to be moved back and forth, and a cam and follower connection between the bolt carrier and line-space wheel effective to turn the bolt carrier relatively to the fixed clutch member, as it is pushed toward the latter to register the bolt with a seat in said fixed clutch member.

[Claims 6 to 25 not printed in the Gazette.]

1,021,971. PROCESS OF FILLING MATTRESSES. BENJAMIN D. COURTS, Chicago, Ill., assignor, by mesne assignments, to Dixie Cotton Felt Mattress Company, Chicago, Ill., a Corporation of Illinois. Filed June 3, 1909. Serial No. 499,952. (Cl. 100—57.)



1. The process herein described of filling mattresses of the type comprising a plurality of long narrow compartments, which consists in forming fibrous filling material into bats or layers, superposing a sufficient number of these bats or layers in separate batches to fill and distend the separate compartments of the mattress, then separately compressing these batches sufficiently to readily pass into the respective compartments, then inserting these batches separately into the compartments, the pressure being maintained throughout their entire length until they are fully inserted, and then removing the pressure from the batches progressively from the inner end and thus permitting them to separately expand and distend the respective compartments of the mattress, the friction against the tick caused by the expansion of the batch of material being sufficient to anchor or hold the batch in position during the withdrawal of the compressing means.

2. The method of forming a tuftless mattress which consists in first connecting the opposite sides of a tick by flexible division walls to form a series of narrow transverse compartments and subsequently stuffing each compartment by inserting therein a predetermined charge of material adequate to completely fill the compartment, said charge of material being held compressed within a carrier during the act of inserting it into the compartment, and then withdrawing the carrier while the charge is retained in position in the compartment by friction of the charge against the walls of the compartment, this friction being caused by the expansive tendency of the released charge.

3. The method of forming a mattress which consists in first connecting the opposite sides of the tick by division walls to form a series of narrow, transverse compartments and subsequently stuffing each compartment by inserting therein a predetermined charge of material adequate to completely fill the compartment and inclosed and compressed over the entire area of its four lateral sides within a sectional sheath, releasing the pressure on the charge when fully inserted, withdrawing the portion of the sheath upon one lateral side of the charge and finally withdrawing the portions of the sheath inclosing the other lateral sides while the charge is frictionally held in position within the compartment, substantially as described.

1,021,972. FRICTION-CLUTCH. HENRY DAUSCHEL, Manheim, Pa. Filed Jan. 3, 1911. Serial No. 600,603. (Cl. 192—13.)

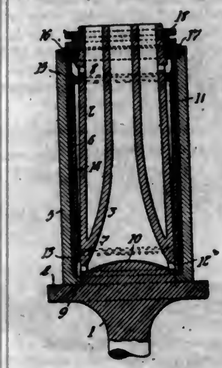


1. A friction-clutch, comprising a flange having a hub loosely supported upon a shaft, a split ring having a hub fixedly secured to the shaft, levers fulcrumed to the free ends of the ring, a slidable wedge adapted to engage the levers to spread the ring, means to cause the wedge to rotate with the split ring, an arm journaled in one of the levers, and having operative connection with both of the levers, and means for adjusting the arm with relation to its supporting members.

2. A friction-clutch comprising a flanged wheel having a hub loosely supported upon a shaft, a split ring having a hub fixedly secured to the shaft, levers fulcrumed to the free ends of the split ring, a wedge arranged to move into and out of engagement with the levers, an arm journaled in one of the levers and having a pin adapted to engage the other of the levers, and a set screw for adjusting the arm with respect to its supporting member.

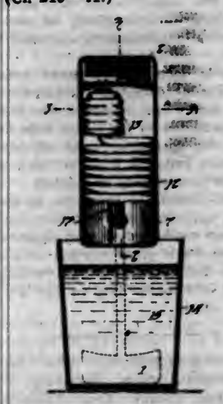
1,021,973. PROCESS FOR MAKING SOUND-RECORDS. FRANK L. DYER, Montclair, N. J., assignor, by mesne assignments, to Thomas A. Edison, Incorporated, West Orange, N. J., a Corporation of New Jersey. Filed June 5, 1909. Serial No. 500,414. (Cl. 181—16.)

The process of forming cylindrical sound records, consisting in causing a thin layer of suitable fluid record material to form centrifugally within a cylindrical mold and around a backing of cheaper material, and to join firmly to the latter by flowing into recesses therein, hardening



the record material, and removing the complete composite record from the mold, substantially as described.

1,021,974. PORTABLE ELECTRIC HEATER. FRANK L. DYER, Montclair, N. J. Filed Oct. 7, 1910. Serial No. 585,738. (Cl. 219—41.)



1. In a portable heater, the combination of a heater, a heating coil within the same, a plug and connections between and joined to the same and said coil, and a casing for inclosing said plug and connections when not in use, said heater being pivotally connected to said casing, substantially as described.

2. In a portable heater, the combination of a heater, a heating coil within the same, a plug and connections between and joined to the same and said coil, and a casing for inclosing said plug and connections when not in use, said heater being adapted to be retained in axial alinement with said casing when not in use and moved therefrom for use, substantially as described.

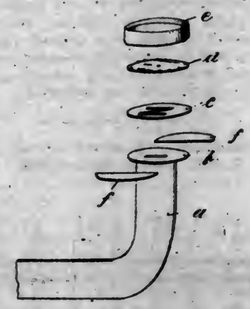
3. In a portable heater, the combination of a heater, a heating coil within the same, flexible electrical connections joined to said coil, a tubular casing for compactly inclosing said connections when not in use, said heater and casing being constructed to permit the compact adjustment and retention of the heater in axial alinement with said casing when not in use, said heater being movable out of said position when it is to be used, substantially as described.

4. In a portable heater, the combination of a casing, a heater, a heating coil within the same, flexible electrical connections joined to said coil adapted to be inclosed within said casing when not in use, and means connecting said heater to said casing permitting movement of said heater away from said casing when said heater is to be used, substantially as described.

5. In a portable heater, the combination of a casing, a heater, a heating coil within the same, flexible electrical connections joined to said coil adapted to be inclosed within said casing when not in use, and means connecting said heater to said casing permitting movement of said heater into position to form a cover for said casing when said heater is out of use, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

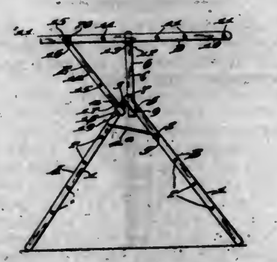
1,021,975. KEY-CAP FOR TYPE-WRITING AND SIMILAR MACHINES. CARL F. EHMSEN, Schönebeck-on-the-Elbe, Germany, assignor to The Firm of Metall-Industrie Schönebeck A. G., Schönebeck-on-the-Elbe, Germany. Filed Sept. 18, 1911. Serial No. 650,072. (Cl. 197—102.)



1. An improvement in key caps for type-writing and similar machines, comprising in combination with a key having a flat key plate and a disk carrying an index character, a celluloid key ring fitting over said key plate and disk, and projecting a slight distance below said key plate, and means fitted against the bottom of said key plate within said downwardly projecting portion of said key ring, and secured to said ring and plate.

2. An improvement in key caps for typewriting and similar machines, comprising in combination with a key having a flat key plate, a character carrying disk and its transparent cover supported on said key plate, a celluloid key ring fitting over said key plate, disk and cover, and projecting below the lower surface of said key plate, and segments fitted within the space formed by the projecting portion of said key ring, and sealed to said lower surface of the key plate and to said projecting portion of the key ring.

1,021,976. CLOTHES-DRIER. EDWARD T. FERRY, Chester, Pa. Filed Oct. 31, 1911. Serial No. 657,886. (Cl. 68—34.)



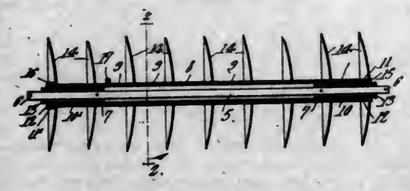
1. A clothes drier, comprising supporting frames pivotally connected at their upper ends, a link frame pivotally connected at one end to one of said supporting frames, a prop pivotally connected at one end to the other of said supporting frames, a top frame pivotally connected adja-

cent its center to the outer end of the link frame, and devices removably connecting the free end of the prop with the top frame, substantially as described.

2. A clothes drier, comprising supporting frames pivotally connected at their upper ends, a link frame pivotally connected at one end to one of said supporting frames, a prop pivotally connected at one end to the other of said supporting frames, a top frame pivotally connected adjacent its center to the outer end of the link frame, devices removably connecting the free end of the prop with the top frame, said devices comprising a rod projected through the prop, and said top frame having angular notches therein receiving said rod, substantially as described.

3. A clothes drier comprising two supporting frames, one narrower than the other, and said frames pivotally connected at their upper ends, a link frame pivotally connected to the wider supporting frame, whose movement is limited by the upper ends of the narrower supporting frame, a prop pivotally connected to the narrower of said supporting frames, shoulders on said props engaging the narrower of said supporting frames and limiting the pivotal movement of said prop toward the link frame, a top frame pivotally connected between its ends to the link frame, and means removably connecting the prop to the top frame, substantially as described.

1,021,977. HARROW. MARSHAL ELSAS, Scott, Kans. Filed Aug. 7, 1911. Serial No. 642,615. (Cl. 55—30.)



1. In a harrow, the combination with a fixed shaft, of a tubular casing encompassing the said shaft, bearings mounted on the ends of the said casing and provided with stuffing boxes, glands for the said stuffing boxes, and a plurality of disks mounted on the said tubular casing.

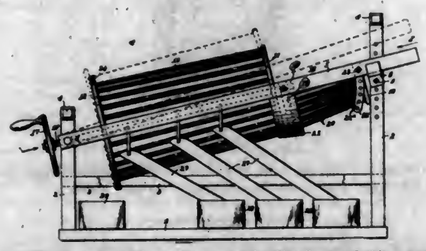
2. In a harrow, the combination with a fixed shaft, of a tubular casing encompassing the said shaft, bearings secured to the ends of the said tubular casing through which the said shaft passes, one of the said bearings having a radially projecting flange on the outer end thereof and the other bearing having the outer end externally screw-threaded, a plurality of disks, sleeve spacing the said disks apart, and a jam nut screwed on the outer end of the said bearing having the external screw threads to secure the disks and blades between the said flange and jam nut, one of the said sleeves having a tapped opening extending through the said tubular casing, and a screw plug engaged in the said opening.

1,021,978. FOUNTAIN-PEN CLASP. THEODORE K. FELCH, Newark, N. J., assignor of one-half to William J. Osborne, Asbury Park, N. J. Filed Mar. 24, 1911. Serial No. 616,690. (Cl. 24—11.)



The combination with a pen cap provided with a socket in one wall thereof, of a pocket edge engaging clip carried by the cap and comprising a plurality of spring coils having one terminal normally tensioned toward the cap and having its end seated within the socket of the cap, the other terminal constituting a spaced coil forming a spiral terminating in a pocket edge engaging extremity, said extremity being normally tensioned toward the cap; whereby the insertion of the pocket edge between the cap and pocket edge engaging terminal at the extremity of the clip exerts a tension to unwind the spiral and coils against the anchoring of the other terminal within the socket of the cap to cause the pocket edge to be compressed between the engaging extremity and the cap.

1,021,979. VEGETABLE-SORTER. OLIVER W. FISHER, Madison, Ohio. Filed June 29, 1911. Serial No. 635,945. (Cl. 130—32.)



1. In a vegetable sorter, an inclined revoluble sorter having downwardly diverging radially adjustable sorter bars, a hopper at the upper end of said sorter, means for adjusting said hopper independently of said sorter, and a plurality of chutes longitudinally arranged beneath said sorter bars.

2. In a vegetable sorter, an inclined revoluble sorter having spider heads carrying downwardly diverging sorter bars, bar supporting members mounted on one of said heads and connected to the lower ends of said sorter bars, and means for supporting and adjusting said bar supporting members radially of said head whereby the space between said bars may be regulated.

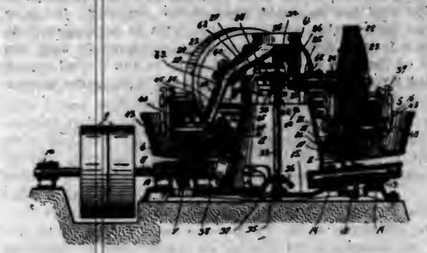
3. In a vegetable sorter, a revoluble sorter comprising an inclined shaft, upper and lower spider wheels mounted thereon, sorter bars connected to said upper spider wheel and diverging from each other toward said lower spider wheel, and means for supporting and radially adjusting the lower ends of said sorter bars on the latter and from and toward each other.

1,021,980. HEAT-DEFLECTING AND SOOT-CATCHING ATTACHMENT FOR HOT-AIR REGISTERS. MARY A. FORWARD, Elkhart, Ind. Filed Dec. 4, 1911. Serial No. 663,955. (Cl. 126—329.)



In a heat deflecting and soot catching attachment for hot air registers, a hood comprising front, rear and end walls, said rear wall terminating short of the end and front walls, an attaching flange formed on the lower edge of the rear wall, similar flanges formed on the rear sides of the lower portions of the end walls, said flanges being adapted to be engaged with the top and side edges of the register whereby the hood is detachably secured thereto, inwardly extending upwardly inclined flanges formed on the lower edges of the front and end walls to provide a soot collecting channel whereby the soot and dust caught by the hood is collected and retained therein, said channel forming flanges on the end walls terminating a suitable distance from the end wall attaching flanges to form spaces to receive the side edges of the register when the hood is applied thereto.

1,021,981. PULVERIZING-MILL. WALTER A. GALLAND, Denver, Colo., assignor to John H. Elspass, Denver, Colo. Filed Apr. 4, 1911. Serial No. 618,978. (Cl. 83—45.)



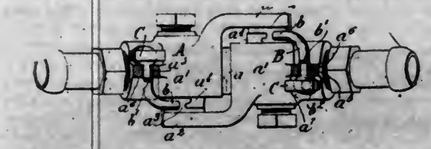
1. The combination with a rotary mortar, of pulverizing rolls, bearings in which the rolls are journaled, a hub to which the said bearings are pivotally connected at one extremity, a vertically disposed shaft upon which the hub is vertically movable, and a centrally located hollow frame member surrounding the shaft and having openings through which the bearings of the rolls are passed, the openings being of sufficient size to permit of an oscillatory movement of the bearings, substantially as described.

2. The combination with a rotary mortar, of pulverizing rolls, bearings on which the said rolls are journaled, a centrally located rotatable shaft, a hub vertically adjustable upon the said shaft, the bearings being pivotally connected with the said hub, a centrally located hollow frame member surrounding the shaft, the frame member having openings through which the said bearings pass, the openings being of sufficient size to permit an oscillatory movement of the bearings, substantially as described.

3. The combination with a rotary mortar, of pulverizing rolls, bearings in which the said rolls are journaled, a centrally located vertically disposed shaft, a hub mounted on the said shaft and vertically adjustable, the bearings in which the rolls are journaled being pivotally connected with the hub, a centrally located hollow frame member, and a hopper mounted on the frame member, the frame member having openings through which the said bearings pass, the openings being of such size as to allow the bearings the necessary oscillation, substantially as described.

4. The combination with a rotary mortar, of pulverizing rolls, bearings in which the said rolls are journaled, a hub upon which the said bearings are pivotally mounted at their extremities remote from the rolls, the opposite extremities of the bearings being free to oscillate, a centrally located rotatable shaft upon which the said hub is vertically movable, whereby the angle of the rolls with respect to the vertical may be adjusted, substantially as described.

1,021,982. LOCK FOR COUPLINGS. EDWARD E. GOLD, New York, N. Y. Filed Feb. 2, 1911. Serial No. 606,210. (Cl. 134—89.)



1. A lock for couplers having overlapping members comprising a bolt, a bearing therefor in one of said members which permits the bolt to turn, a projection upon one end of said bolt adapted to be turned into locking engagement with the overlapping member, and a set-screw engaging said bolt eccentrically to its longitudinal axis and adapted to turn said bolt in said bearing to locking position and to hold it in such position.

2. A lock for couplers having overlapping members comprising a bolt, a bearing therefor in one of said members which permits the bolt to turn, a projection upon one end of said bolt adapted to be turned into locking engagement with the overlapping member, and locking means eccentrically mounted in said bolt and adapted when operated to turn said bolt to locking position and positively lock the same in such position and when released to automatically swing said bolt out of locking position.

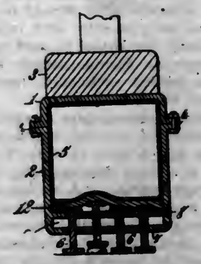
3. A positive lock for couplers having overlapping members, comprising a bolt adapted to be rocked into and out of locking position, a bearing for said bolt upon one member, one end of said bolt being offset from the body thereof and adapted to engage and lock the overlapping member when the bolt is rocked into locking position, and a set-screw threaded into said bolt eccentrically to its longitudinal axis and adapted to rock said bolt to locking position and to hold the same in said position.

4. A positive lock for couplers having overlapping members, comprising a bolt adapted to be rocked into and out of locking position, a bearing for said bolt upon one member, one end of said bolt being offset from the body thereof and adapted to engage and lock the overlapping member when the bolt is rocked into locking position, and a set-screw threaded into said bolt eccentrically to its longitudinal axis and adapted to rock said bolt to locking position and to hold the same in said position, and when released to turn said bolt by gravity to unlocking position.

5. A positive lock for couplers having overlapping members comprising a bolt, having its end reduced in diameter and offset from the body, and a bearing for said bolt upon one member which permits the bolt to be rocked into and out of locking position, a set-screw eccentrically threaded into said head and adapted to rock the bolt to locking position, and to hold it in such position.

[Claims 6 to 11 not printed in the Gazette.]

1,021,983. CUSHION-TIRE. ALBIN HAJOS, Chattanooga, Tenn. Filed Aug. 10, 1910. Serial No. 576,436. (Cl. 152—13.)



A cushion tire comprising an outer metallic shell which is made in two sections having bolted flange connection with one another, one of the sections being rigidly secured to the rim of the wheel and the other section having a thickened peripheral portion which is provided with slotted openings, tread elements having an I-shaped cross section and having shanks slidably disposed in the slotted openings and heads at each end of the shanks and of greater extent than the openings, the adjacent end faces of the openings and the shanks being relatively tapering so as to provide for a certain degree of pivotal longitudinal displacement of said shanks as the tread elements come into contact with the ground, and inflatable rubber cushioning tube wholly inclosed in the shell, and a protecting strip of flexible material interposed between the cushioning tube and the tread elements to protect the former, the cushioning tube and the protecting strip together conforming to the cross sectional outline of the

shell, the said thickened peripheral portion being of double walled construction and having an intervening space in which packing material may be interposed.

1,021,984. CONNECTING DEVICE FOR PIPE-ELEVATORS. FRANK H. HOLMES, Oil City, Pa. Filed July 19, 1911. Serial No. 639,821. (Cl. 166—7.)



1. In a connecting device for pipe elevators, the combination with a strap adapted to surround the pipe, and comprising a main member, a secondary member, and means connecting such two members to form two hinges, a part of each of such hinge-forming means being dismountable, whereby said secondary member may be swung upon either of such two hinges; of suitable bails connected with said strap.

2. In a connecting device for pipe elevators, the combination with a strap adapted to surround the pipe, and comprising a main member, a secondary member, the ends of said two members being formed to overlap and provided with registering bores, and removable hinge-pins seated in said bores and connecting said two members; of suitable bails connected with said strap.

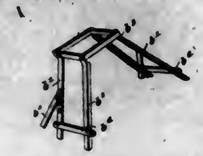
3. In a connecting device of pipe elevators, the combination with a strap adapted to surround the pipe, and comprising a main member, together with a secondary member, such two members being formed to overlap, such overlapping portions being provided with registering bores, and a removable hinge-pin seated in said bores and provided at its outer portion with a laterally projecting lug adapted to project beyond such bore; of suitable bails connected with said strap.

4. In a connecting device for pipe elevators, the combination of a strap-member forming substantially one-half of the entire strap, and formed at each of its ends with a projecting lug; a second strap-member mounted upon said first-named strap-member and having a hinged connection therewith at each end; part of such hinge connection being removable, whereby said second-named member may be swung upon either of such hinge connections, or such member may be removed entirely; and bails disconnectibly mounted upon said lugs.

5. In a connecting device for pipe elevators, the combination of a strap adapted to surround the pipe and provided with two laterally projecting lugs, each such lug being provided with a transverse bore; a bail consisting of a single bar of metal bent to form a loop, and provided with two eyes at its free ends; and removable pins passing through said eyes and the bores of said lugs respectively.

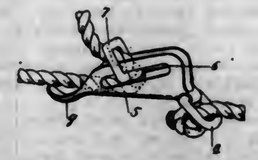
1,021,985. ADJUSTABLE FORM FOR SMOKE-CHAMBER CONSTRUCTION FOR CHIMNEYS HAVING OPEN FIREPLACES. LOUIS JACK, Moylan, Pa. Filed Sept. 15, 1911. Serial No. 649,588. (Cl. 72—90.)

A device of the class described, composed of a rectangular ring with legs attached thereto, in a manner to produce a truncated pyramidal adjustable fixture; the legs of angle iron, having at the upper ends a perforated lip set at an angle therewith to give the fixtures a broad base; said legs being connected with the ring by screw bolts, as shown, to permit adjusting movements; the feet of the legs resting in recesses of the masonry; the base of the legs having acute angular form in both directions on the frontal aspect to approximately coincide with the level of the base on which they rest; in the lateral aspect of the fixture the angle is so acute as to have the fixture



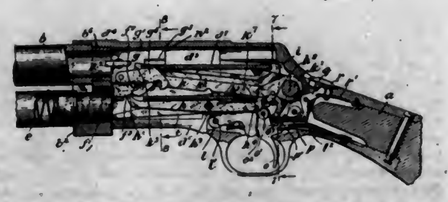
resting on four points to permit free movement and to avoid disturbing the levels of the ring in each direction; having a tie bar to adjust the base of the lateral sides to the dimension of the throat A; an adjustable brace attached to the distal legs to define the pocket D, and to control and support the masonry at that region; all the several parts being formed and connected with each other substantially as described.

1,021,986. CLAMPING DEVICE. JOHN A. JOHNSON, New Britain, Conn. Filed Aug. 21, 1911. Serial No. 645,155. (Cl. 24—136.)



A clamping device of the class described comprising a channel-like body, the side walls of which have slots inclined in a forward, downward direction, and a substantially rectangular loop adapted for the passage therethrough of an object to be clamped, the inner cross bar of said loop being adapted to traverse said slots and also to lock said object against the bottom of said channel-like body when at the forward portion of said slots, being adapted to release said object when at the rear portion of said slots, the sides of said loop being in proximity to the outer side faces of said body during the back and forth movement of said cross bar and the rear cross bar of the loop being adapted to swing behind the back of the body from the upper side thereof to hold said inner cross bar in its object releasing position.

1,021,987. REPEATING FIREARM. GEORGE S. LEWIS, Chicopee Falls, Mass., assignor to J. Stevens Arms & Tool Company, Chicopee Falls, Mass., a Corporation of Massachusetts. Filed June 9, 1911. Serial No. 632,262. (Cl. 42—21.)



1. In a firearm, the combination of a frame, a barrel, said frame and barrel being separable, a longitudinally movable grip piece, a slide bar carried thereby and entering the frame, a cylindrical guide for the grip piece, a lug connecting the guide to the barrel at the forward

end of the guide and a longitudinally slotted sleeve-like stop mounted on the guide to stop the forward movement of the grip piece and adapted to be turned on the guide to bring its slide into alinement with said lug and to be moved forward to permit further forward movement of the grip piece and the withdrawal of the slide bar from the frame.

2. In a firearm, the combination of a frame, a barrel, said frame and barrel being separable, a magazine tube secured to the barrel by a lug at its forward end, a grip piece mounted on the magazine tube, a slide bar carried by the grip piece and entering the frame and a longitudinally slotted stop sleeve mounted on the magazine tube in front of the grip piece.

3. In a firearm, the combination with a frame, a barrel, a grip piece and a slide bar, of a cartridge lifter mounted in the frame, an inertia block pivoted on the cartridge lifter and a slide bar stop device actuated by the movement of the inertia block to release the slide bar.

4. In a firearm, the combination with a frame, a barrel and a magazine, of a cartridge lifter mounted in the frame, a cartridge stop mounted in the forward end of the cartridge lifter and extending below the same somewhat remote from the end of the magazine and a cartridge stop lever pivoted in the frame and having its stop toe adjacent to the end of the magazine, the rear end of the stop lever being notched and the cartridge lifter having a stud entering the said notch whereby as the cartridge lifter approaches the limit of its downward movement the stop toe on the lever is moved into the path of the next cartridge in the magazine.

5. In a firearm, the combination of a frame and a breech-block movable longitudinally in the frame and actuated therein, said breech-block comprising a main L-shaped part having a rearwardly extending portion, and a transversely disposed L-shaped part detachably secured to the rearwardly extending portion of the main part and having lugs to engage guide grooves in the frame.

[Claims 6 to 11 not printed in the Gazette.]

1,021,988. FIREARM. GEORGE S. LEWIS, Chicopee Falls, Mass., assignor to J. Stevens Arms & Tool Company, Chicopee Falls, Mass., a Corporation of Massachusetts. Filed July 14, 1911. Serial No. 638,545. (Cl. 42—21.)



1. In a firearm, the combination of a hammer, a trigger, a sear pivoted co-axially with the trigger and having a toe to engage the hammer and a rearward beveled extension, and a safety locking slide to coöperate with the trigger and having a beveled end to coöperate with the sear to disengage the hammer.

2. In a firearm, the combination of a hammer having a plurality of notches, a trigger, a sear controlled by the trigger and adapted to engage one of the notches of the hammer to hold it in cocked position, a second sear adapted to engage another of the notches of the hammer to hold it in cocked position, a safety slide and means actuated by the movement of the safety slide to control said second named sear.

3. In a firearm, the combination of a hammer having a plurality of notches, a trigger, a sear controlled by the trigger and adapted to engage one of the notches of the hammer to hold it in cocked position, a second sear adapted to engage another of the notches of the hammer to hold it in cocked position, a slide bar and a safety locking slide actuated by the movement of the slide bar and coöperating with the trigger and also coöperating with said second named sear to disengage the hammer.

4. In a firearm, the combination of a hammer having a plurality of notches, a trigger, a sear controlled by the trigger and adapted to engage one of the notches of the hammer to hold it in cocked position, a second sear adapted to engage another of the notches of the hammer to hold it in cocked position, a cartridge lifter and means actuated by the movement of the cartridge lifter to control said second named sear.

5. In a firearm, the combination of a hammer having a plurality of notches, a sear pivoted co-axially with the trigger and adapted to engage one of said notches to hold the hammer in cocked position, and a second sear also pivoted co-axially with the trigger and adapted to engage another of said notches to hold the hammer in cocked position.

[Claims 6 to 12 not printed in the Gazette.]

1,021,989. STORAGE-BATTERY ELECTRODE AND PROCESS OF MAKING IT. WILLIAM MORRISON, Des Moines, Iowa. Filed Oct. 5, 1911. Serial No. 653,007. (Cl. 204—29.)



1. A storage-battery electrode, comprising a support and conductor, active material thereon, and wire gauze surrounding but electrically insulated from said active material.

2. A negative-pole storage-battery electrode, comprising a support and conductor, active material thereon, a porous envelop inclosing said active material, and wire gauze surrounding said envelop.

3. A negative-pole electrode for storage batteries having alkaline electrolytes, comprising a support and conductor, active material thereon, a porous envelop of vegetable parchment resistant to alkali inclosing said active material, and wire gauze surrounding said envelop.

4. A storage-battery electrode, comprising a body of active material and a helically-wound strip of wire gauze inclosing said active material, the adjacent edges of said strip being intermeshed.

5. A storage-battery electrode, comprising a body of active material, a porous envelop inclosing said active material, and a strip of wire gauze helically wound on said envelop.

[Claims 6 to 14 not printed in the Gazette.]

1,021,990. BINDER FOR PEROXID ACTIVE MATERIAL AND PROCESS OF MAKING IT. WILLIAM MORRISON, Des Moines, Iowa. Filed Feb. 20, 1912. Serial No. 678,771. (Cl. 204—29.)

1, A permanent binder for the active material of positive-pole lead electrodes, consisting of a compound having

in its acidic radical a metal incapable of directly replacing hydrogen in a sulfuric acid solution; insoluble by anodic oxidation in a sulfuric acid solution; incapable of cathodic reduction to metal, or of electrolytic separation as metal, in a sulfuric acid solution; and capable of forming complex anions with electro-negative elements.

2. A permanent binder for the active material of positive-pole lead electrodes, consisting of a lead compound having in its acidic radical a metal incapable of directly replacing hydrogen in a sulfuric acid solution; insoluble by anodic oxidation in a sulfuric acid solution; incapable of cathodic reduction to metal, or of electrolytic separation as metal, in a sulfuric acid solution; and capable of forming complex anions with electro-negative elements.

3. A permanent binder for the active material of positive-pole lead electrodes, consisting of an oxygen compound of lead and a metal incapable of directly replacing hydrogen in a sulfuric acid solution; insoluble by anodic oxidation in a sulfuric acid solution; incapable of cathodic reduction to metal, or of electrolytic separation as metal, in a sulfuric acid solution; and capable of forming complex anions with electronegative elements.

4. A permanent binder for the active material of positive-pole lead electrodes, consisting of an oxygen-sulfur compound of lead and a metal incapable of directly replacing hydrogen in a sulfuric acid solution; insoluble by anodic oxidation in a sulfuric acid solution; incapable of cathodic reduction to metal, or of electrolytic separation as metal, in a sulfuric acid solution; and capable of forming complex anions with electronegative elements.

5. A permanent binder for the active material of positive-pole lead electrodes, consisting of a compound having tungsten in its acidic radical.

[Claims 6 to 16 not printed in the Gazette.]

1,021,991. BINDER FOR PEROXID ACTIVE MATERIAL AND PROCESS OF MAKING IT. WILLIAM MORRISON, Des Moines, Iowa. Filed Feb. 23, 1912. Serial No. 679,298. (Cl. 204—29.)

1. Active material for positive-pole lead electrodes, comprising a compound containing tantalum.

2. A permanent binder for the active material of positive-pole lead electrodes, consisting of a compound having tantalum in its acidic radical.

3. A permanent binder for the active material of positive-pole lead electrodes, consisting of a lead compound having tantalum in its acidic radical.

4. A permanent binder for the active material of positive-pole lead electrodes, consisting of a compound containing oxygen, lead and tantalum.

5. A permanent binder for the active material of positive-pole lead electrodes, consisting of a compound containing oxygen, sulfur, lead and tantalum.

[Claims 6 to 19 not printed in the Gazette.]

1,021,992. BINDER FOR PEROXID ACTIVE MATERIAL AND PROCESS OF MAKING IT. WILLIAM MORRISON, Des Moines, Iowa. Filed Feb. 23, 1912. Serial No. 679,299. (Cl. 204—29.)

1. Active material for positive-pole lead electrodes, comprising a compound containing niobium.

2. A permanent binder for the active material of positive-pole lead electrodes, consisting of a compound having niobium in its acidic radical.

3. A permanent binder for the active material of positive-pole lead electrodes, consisting of a lead compound having niobium in its acidic radical.

4. A permanent binder for the active material of positive-pole lead electrodes, consisting of a compound containing oxygen, lead and niobium.

5. A permanent binder for the active material of positive-pole lead electrodes, consisting of a compound containing oxygen, sulfur, lead and niobium.

[Claims 6 to 8 not printed in the Gazette.]

1,021,993. PROCESS OF BINDING THE ACTIVE MATERIAL OF POSITIVE-POLE LEAD ELECTRODES. WILLIAM MORRISON, Des Moines, Iowa. Filed Feb. 23, 1912. Serial No. 679,300. (Cl. 204—29.)

1. The process of binding the active material of positive-pole lead electrodes, which consists in dissolving in a solution of a reducing agent a compound having in its acidic radical a metal incapable of directly replacing hydrogen in a sulfuric acid solution; insoluble by anodic oxidation in a sulfuric acid solution; incapable of cathodic reduction to metal, or of electrolytic separation as metal, in a sulfuric acid solution; and capable of forming complex anions with electronegative elements, which can constitute the acidic radical of compounds having lead as a base, adding sulfuric acid, and saturating the active material with the resultant solution.

2. The process of binding the active material of positive-pole lead electrodes, which consists in dissolving in a solution of hydrogen peroxid a compound having in its acidic radical a metal incapable of directly replacing hydrogen in a sulfuric acid solution; insoluble by anodic oxidation in a sulfuric acid solution; incapable of cathodic reduction to metal, or of electrolytic separation as metal, in a sulfuric acid solution; and capable of forming complex anions with electronegative elements, which can constitute the acidic radical of compounds having lead as a base, adding sulfuric acid, and saturating the active material with the resultant solution.

3. The process of binding the active material of positive-pole lead electrodes, which consists in dissolving in a solution of a reducing agent a compound having tungsten in its acidic radical, adding sulfuric acid, and saturating the active material with the resultant solution.

4. The process of binding the active material of positive-pole lead electrodes, which consists in dissolving in a solution of hydrogen peroxid a compound having tungsten in its acidic radical, adding sulfuric acid, and saturating the active material with the resultant solution.

1,021,994. PROCESS OF BINDING THE ACTIVE MATERIAL OF POSITIVE-POLE LEAD ELECTRODES. WILLIAM MORRISON, Des Moines, Iowa. Filed Feb. 23, 1912. Serial No. 679,301. (Cl. 204—29.)

1. The process of binding the active material of positive-pole lead electrodes, which consists in saturating the material with a solution of a compound having in its acidic radical a metal incapable of directly replacing hydrogen in a sulfuric acid solution; insoluble by anodic oxidation in a sulfuric acid solution; incapable of cathodic reduction to metal, or of electrolytic separation as metal, in a sulfuric acid solution; and capable of forming complex anions with electro-negative elements, which can constitute the acidic radical of compounds having lead as a base, and then reacting on said compound to precipitate in said active material a binder consisting of a lead-tungsten-oxygen compound.

2. The process of binding the active material of positive-pole lead electrodes, which consists in saturating the material with a solution of a compound having in its acidic radical a metal incapable of directly replacing hydrogen in a sulfuric acid solution; insoluble by an anodic oxidation in a sulfuric acid solution; incapable of cathodic reduction to metal, or of electrolytic separation as metal, in a sulfuric acid solution; and capable of forming complex anions with electro-negative elements, which can constitute the acidic radical of compounds having lead as a base, and then electro-chemically reacting on said compound to precipitate in said active material a binder consisting of a lead-tungsten-oxygen compound.

1,021,995. PROCESS OF BINDING THE ACTIVE MATERIAL OF POSITIVE-POLE LEAD ELECTRODES. WILLIAM MORRISON, Des Moines, Iowa. Filed Feb. 24, 1912. Serial No. 679,702. (Cl. 204—29.)

1. In a process of binding the active material of positive-pole lead electrodes, the step which consists in electrolytically impregnating the active material with a compound containing tantalum in its acidic radical.

2. In a process of binding the active material of positive-pole lead electrodes, the step which consists in electrolytically impregnating the active material with compounds containing tantalum and niobium in their acidic radicals.

3. In the process of binding the active material of positive-pole lead electrodes, the step which consists in passing an electric current from the electrode through a solution of a tantalate, thereby impregnating the active material with a tantalum compound.

4. The process of binding the active material of positive-pole lead electrodes, which consists in passing an electric current from the electrode through a solution of a tantalate thereby impregnating the active material with a tantalum compound, and thereafter reacting on said compound with sulfuric acid.

5. The process of binding the active material of positive-pole lead electrodes, which consists in passing an electric current from the electrode through a solution of a tantalate, thereby impregnating the active material with a tantalum compound, and thereafter electrochemically reacting on said compound with sulfuric acid.

[Claims 6 to 11 not printed in the Gazette.]

1,021,996. PROCESS OF BINDING THE ACTIVE MATERIAL OF POSITIVE-POLE LEAD ELECTRODES. WILLIAM MORRISON, Des Moines, Iowa. Filed Feb. 24, 1912. Serial No. 679,703. (Cl. 204—29.)

1. In a process of binding the active material of positive-pole lead electrodes, the step which consists in electrolytically impregnating the active material with a compound containing niobium in its acidic radcal.

2. In a process of binding the active material of positive-pole lead electrodes, the step which consists in passing an electric current from the electrode through a solution of a niobate, thereby impregnating the active material with a niobium compound.

3. The process of binding the active material of positive-pole lead electrodes, which consists in passing an electric current from the electrode through a solution of a niobate, thereby impregnating the active material with a niobium compound, and thereafter reacting on said compound with sulfuric acid.

4. The process of binding the active material of positive-pole lead electrodes, which consists in passing an electric current from the electrode through a solution of a niobate, thereby impregnating the active material with a niobium compound, and thereafter electrochemically reacting on said compound with sulfuric acid.

5. The process of binding the active material of positive-pole lead electrodes, which consists in passing an electric current from the electrode through a solution of a niobate, thereby impregnating the active material with a niobium compound, and thereafter electrochemically reacting on said compound with sulfuric acid.

[Claims 6 to 8 not printed in the Gazette.]

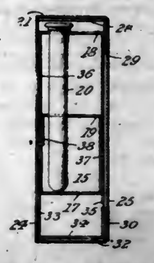
1,021,997. STORAGE-BATTERY CONDUCTOR OR SUPPORT. WILLIAM MORRISON, Des Moines, Iowa. Filed Feb. 24, 1912. Serial No. 679,704. (Cl. 204—29.)

1. A storage-battery conductor or support, consisting of lead, a member of the periodic sulfur group having an atomic weight higher than that of sulfur, and another metal.

2. A storage-battery conductor or support, consisting of lead, a member of the periodic sulfur group having an atomic weight higher than that of sulfur, and other metals.

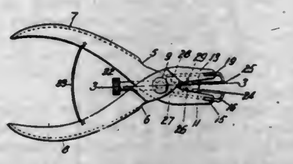
3. A storage-battery conductor or support, consisting of lead, a member of the periodic sulfur group having an atomic weight higher than that of sulfur, and antimony.

1,021,998. PAPER BOX FOR CULTURE-TUBES AND SIMILAR ARTICLES. PHINEAS B. MYERS, Morristown, N. J. Filed Jan. 30, 1912. Serial No. 674,277. (Cl. 229—28.)



A paper box comprising a foldable section that forms a box proper and an upright transverse partition integral therewith, and a removable foldable insert composed of an apertured top plate, an apertured partition, a false bottom, a true bottom, and a pair of integral connecting sides.

1,021,999. CLIPPER. WALTER H. NICHOLLS, Charlestown, Mass. Filed July 15, 1910. Serial No. 572,125. (Cl. 30—23.)



1. A clipper having, in combination, a pair of crossed levers provided respectively with slots, a pair of cutters provided with opposed cutting edges and located in said slots respectively, a pivot on which said levers are fulcrumed, said pivot having an aperture and being located laterally of and external to said cutters, and means to attachably and detachably attach said cutters to said pivot, said means including a device extending through said aperture.

2. A clipper having, in combination, a pair of crossed levers provided respectively with slots, a pair of cutters provided with opposed cutting edges and located in said slots, respectively, a member on which one of said cutters is mounted, a pivot on which the other of said cutters is pivoted to said member, a pivot on which said levers are fulcrumed, and means forming an attachable and detachable connection between said member and the last-mentioned pivot.

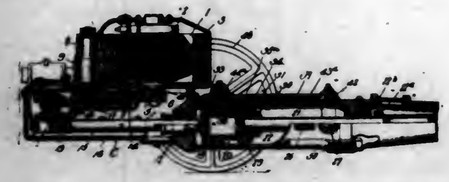
3. A clipper having, in combination, a pair of crossed levers provided respectively with slots, a pair of cutters provided with opposed cutting edges and located in said slots, respectively, a member on which one of said cutters is mounted, a pivot on which the other of said cutters is pivoted to said member, said pivot being provided with an aperture, a pivot on which said levers are fulcrumed, and means extending from said member through said aperture and forming an attachable and detachable connection between said member and the last-mentioned pivot.

4. A clipper having, in combination, a pair of jaws, an element to which one of said jaws is pivoted and on which the other of said jaws is suitably mounted, a pair of crossed levers connected respectively to said jaws to operate the same, a pivot on which said levers are pivoted to each other, a screw extending from said element through said pivot, and a nut having screw-threaded engagement with said screw on the opposite side of said pivot to that on which said jaws are located.

5. A clipper having, in combination, a pair of crossed levers, a pivot on which said levers are pivoted to each

other, said pivot being provided with an aperture, a pair of jaws connected, respectively, to said levers to be operated thereby, a block on which said jaws are mounted, a rod extending from said block through said aperture, and a nut having screw-threaded engagement with said rod on the opposite side of said pivot to that on which said jaws are located.

1,022,000. ELECTROPNEUMATIC TOOL. ALEXANDER PALMROS, Fairmont, W. Va., assignor to The Pneumelectric Machine Company, Syracuse, N. Y., a Corporation of New York. Filed Dec. 13, 1904. Serial No. 236,738. (Cl. 125—14.)



1. In a power driven reciprocating tool, the combination of a cylinder, a reciprocating member having a piston working in said cylinder and compressing an expansible medium on its rearward stroke and driven by said expansible medium on its forward stroke, and an electric motor having its armature in continuously fixed driving connection with the reciprocating member and free to rotate independently of the motor power and race ahead under the influence of the compressed medium during delivery of the stroke of the machine.

2. The combination with a motor comprising a driving stationary part and a rotating part, capable of racing ahead of the driving force, of a reciprocating member having continuously fixed driving connection with the rotating part of the motor, and means in which power is stored during one stroke of the reciprocating member, acting on the rotary part of the member to cause said part to race ahead of its driving force.

3. The combination with an electric motor, of a reciprocating member having continuously fixed driving connection with the armature, and means in which power is stored during one stroke of the reciprocating member, acting on the armature to cause it to race ahead of its driving force.

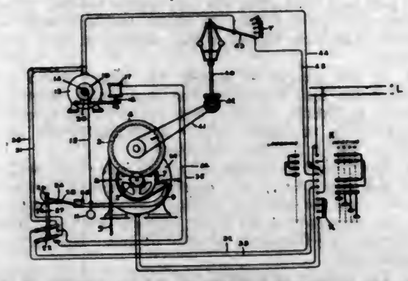
4. The combination with a retracting and a striking member, of means constructed to store air compressed on the retracting stroke of the retracting member, and means utilizing said compressed air to cause the impact of the striking element, the retracting and the striking elements being separated by an air space through which one exerts control over the other.

5. The combination with a motor comprising a driving stationary part and a rotating part, capable of racing ahead of the driving force, of a reciprocating member having continuously fixed driving connection with the rotating part of the motor, means in which power is stored during one stroke of the reciprocating member, acting on the rotary part of the member to cause said part to race ahead of its driving force, and a yielding connection interposed in said reciprocating member.

[Claims 6 to 41 not printed in the Gazette.]

1,022,001. ELECTRICALLY-CONTROLLED BRAKE. EDGAR PRICE, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Oct. 16, 1908. Serial No. 457,997. (Cl. 172—152.)

1. In combination, a rotatable mechanism, a brake therefor biased to an "on" position, an electromotive device for releasing the brake, an electrically controlled holding device for holding said brake released, and means operative upon the release of said brake for interrupting the circuit to said electromotive device and completing a circuit to said holding device; a means responsive to the speed of said mechanism for varying the torque of said electromotive device, and means for rendering either the holding device or the last named means operative but not both at the same time.



2. In combination, a rotatable mechanism, a controller therefor, a brake for said mechanism biased to an "on" position, means operative in certain positions of the controller for controlling said brake comprising an electromotive device, an electrically controlled holding device for holding said brake released, and means operative upon the release of said brake for interrupting the circuit from said controller to said electromotive device and completing a circuit from said controller to said holding device; and another means, operative in another position of said controller, coöperating with said electromotive device, and a resistance, said last named means being responsive to the speed of said mechanism for cutting said resistance into and out of circuit with said electromotive device according as the speed of said mechanism becomes greater or less than a certain value.

3. In combination, a motor, a hoist driven thereby, a controller for said motor having hoisting and lowering positions, a brake for said motor biased to an "on" position, means operative from said controller when the same is in a hoisting position, for releasing said brake comprising an electromotive device, an electrically controlled holding device for holding said brake released, and means operative upon the release of said brake for interrupting the circuit from the controller to said electromotive device, and completing the circuit from said controller to said holding device; and another means, operative in a lowering position of said controller, coöperating with said electromotive device, and a resistance, said last named means being responsive to the speed of said hoist for cutting said resistance into and out of circuit with said electromotive device according as the speed of said hoist becomes greater or less than a certain value.

4. In combination, a rotatable mechanism, a brake therefor biased to an "on" position, means for releasing said brake comprising an electromotive device, an electrically controlled device for holding said brake released, and means operative automatically upon the release of said brake for interrupting the circuit to said electromotive device and completing the circuit to said holding device.

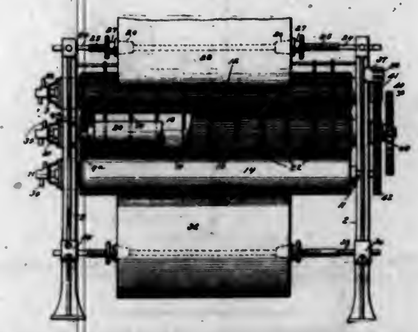
5. In combination, a rotatable mechanism, a brake therfor biased to an "on" position, a brake releasing motor, an electrically controlled device for holding said brake in its released position, means for closing a circuit from a source to said brake releasing motor, and a switch device automatically operated upon release of said brake for interrupting the circuit to said brake releasing motor and completing the circuit to said electrically controlled holding device.

[Claim 6 not printed in the Gazette.]

1,022,002. PAPER-CORRUGATOR. ELIJAH C. RINNER, Coshocton, Ohio. Filed Apr. 29, 1911. Serial No. 624,236. (Cl. 154—31.)

1. A paper corrugating machine, including a first named corrugating roll, a coacting corrugating roll disposed on one side of the fixed roll and movable toward or from the same, a pressing roll mounted diametrically opposite

to the movable corrugating roll and coacting with the fixed corrugating roll, said pressing roll being shiftable toward or from the fixed roll, adjustable spacing means disposed between the rolls and positively holding them spaced apart and means for directing a sheet of fabric between the corrugating rolls and between the pressing roll and the fixed roll and for directing a sheet of fabric between the pressing roll and the first named sheet.



2. A paper corrugating machine, including an adjustable corrugating roll, a movable corrugating roll mounted on one side of the first named adjustable roll and having means whereby it may be positively adjusted toward or from the first named roll, a smooth pressing roll on the other side of the first named roll and adjustable toward or from the first named roll, adjustable means for positively spacing the rolls from each other, a paste-applying roller mounted adjacent to the first named corrugating roll, means for directing a sheet of fabric between the corrugating roll and the paste-applying roller and carrying said fabric between the pressing roll and the first named corrugating roll, and means for directing a sheet of fabric between the two corrugating rollers and between the first named corrugating roll and the first named sheet of fabric.

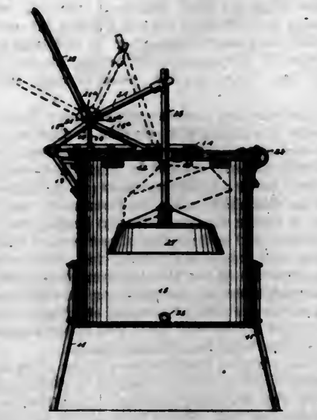
3. In paper corrugating machinery, a corrugating roll mounted in slidably adjustable journals, a superposed corrugating roll mounted in journals shiftable toward or from the journals of the first named roll, a pressing roll below the first named roll and mounted in journals shiftable toward and from said first named roll, adjustable means interposed between the said journals for positively and adjustably spacing the journals from each other, means for forcing the superposed corrugating roll and the pressing roll toward the first named roll, means for directing a sheet of paper between the corrugating rolls then over the first named corrugating roll and between said roll and the pressing roll, means for directing a sheet of paper over the pressing roll and between said roll and the first named sheet of paper, and means for applying paste to the sheet as it passes over the corrugating roll.

4. A paper corrugating machine, including upper and lower rolls and an intermediate roll, means for vertically adjusting the intermediate roll, means for independently adjusting the upper roll relatively to the intermediate roll, and means for independently adjusting the lower roll toward and from the intermediate roll.

5. A paper corrugating machine, including side standards, each vertically slotted, an upper corrugating roll, a lower pressing roll, and an intermediate corrugating roll between the pressing roll and the first named corrugating roll, all of said rolls being mounted in journal bearings sliding in the vertical slots of the standards, means for adjustably holding the journal bearings of the intermediate corrugating roll in fixed relation to the standards, means for forcing the upper corrugating roll toward the intermediate corrugating roll, means for forcing the pressing roll toward the intermediate corrugating roll, and adjustable means disposed between the journal bearings of the several rolls for positively spacing the upper corrugating roll and the lower pressing roll with relation to the intermediate corrugating roll.

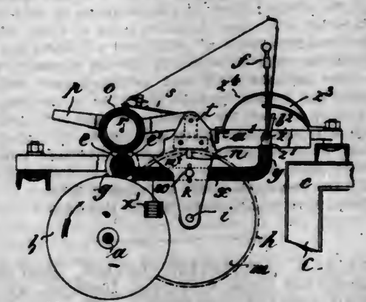
[Claims 6 to 8 not printed in the Gazette.]

1,022,003. WASHING-MACHINE. OSCAR W. ROBESON, Carroll, Iowa. Filed Apr. 12, 1911. Serial No. 620,674. (Cl. 68—19.)



In a device of the class described, a tub body, a cover member constructed with a central opening of proper size to permit free play of the plunger arm hereinafter mentioned, brackets secured to said tub body and extending to a point spaced apart from the upper circumference thereof, brackets on said cover hinged to said first named brackets at a point spaced apart from said tub body, upward extensions on said brackets on said cover spaced apart from the center of the cover, a cross member rotatably mounted in said upward extensions, a hub centrally located on said cross member, a plunger in said tub body, a plunger arm secured to said plunger and extending upwardly therefrom through said cover, an arm pivoted to said plunger arm, and secured to said hub, a handle secured to said hub.

1,022,004. CROSS-WINDING MACHINE. JEAN SCHWEITER, Horgen, near Zürich, Switzerland. Filed Aug. 1, 1910. Serial No. 574,795. (Cl. 242—37.)



1. In a cross winding machine, a reel; means for driving the reel; a pivoted lever adapted to interrupt the revolution of the reel; a rocking shaft; a hand lever rigidly mounted on said rocking shaft and adapted to oscillate therewith; a spring tensioned thread guiding arm loosely mounted on said rocking shaft; means on said rocking shaft engaging one end of said pivoted lever, said means being adapted to depress one end of said pivoted lever on the swinging of said arm, whereby the opposite

end of said pivoted lever will raise the reel from gearing relation with the driving element.

2. A cross winding machine comprising a frame, a driving element; a roller driven thereby; a reel supported on said roller and receiving rotation therefrom; a pivoted lever having one end thereof in position to engage with and lift said roller; a rocking shaft; a hand lever rigidly mounted on said rocking shaft; a spring tensioned thread guiding arm loosely mounted on said rocking shaft; a stop piece connected with said arm, engaging one end of said pivoted lever and adapted to depress the same end of the pivoted lever on the swinging of said arm in one direction whereby the opposite end of said pivoted lever will raise the reel from gearing relation with the driving element.

3. A cross-winding machine comprising a frame, a driving element, a roller driven thereby, a reel supported on said roller and receiving rotation therefrom, a pivoted lever having one end thereof in position to engage with and lift said roller; a rocking shaft; a hand lever firmly mounted on said shaft, a sleeve mounted to rock on said shaft and a spring tensioned thread guiding arm secured to said sleeve and comprising a rod and a spring wire attached to said rod, said sleeve having means coöperating with the other end of the pivoted lever to depress said end of the pivoted lever on the swinging of said arm in one direction, when the thread is being strained, whereby the first mentioned end of said lever will raise the roller from gearing relation with the driving element.

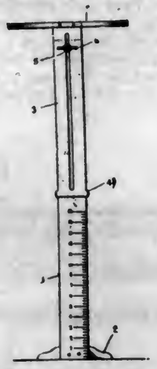
4. A cross winding machine comprising a frame, a driving element, a roller driven thereby, a reel supported on said roller and receiving rotation therefrom, a pivoted lever having one end thereof in position to engage with and lift said roller, a rocking shaft, a hand lever firmly mounted on said shaft, a stop piece firmly mounted on said shaft and engaging the opposite end of the pivoted lever, a spring tensioned thread guiding arm loosely mounted on said shaft and coöperatively related thereto, said stop piece adapted to automatically depress said opposite end of the pivoted lever on the swinging of said arm when the thread is broken whereby the first mentioned end of the pivoted lever will raise the roller out of gearing relation with the driving element.

5. A cross-winding machine comprising a frame, a driving element, a roller driven thereby, a reel supported on said roller and receiving rotation therefrom, a pivoted lever having one end thereof in position to engage with and lift said roller, a rocking shaft, a hand lever firmly mounted on said shaft, a sleeve mounted to rock on said shaft and a spring tensioned, thread guiding arm secured to said sleeve and comprising a rod and a spring wire attached to said rod, said sleeve having means coöperating with the other end of the pivoted lever to depress said end of the pivoted lever on the swinging of said arm in one direction when the thread is being strained, whereby the first-mentioned end of said lever will raise the roller from gearing relation with the driving element; a stop piece fixed on said shaft and in engagement with said pivoted lever, means on said shaft for coöperating with said guiding arm on the swinging of said guiding arm in the opposite directions when the thread is broken, said last-mentioned means actuating said shaft and stop piece to throw said roller out of gear in a similar manner, through the coöperation with the pivoted lever.

[Claims 6 to 8 not printed in the Gazette.]

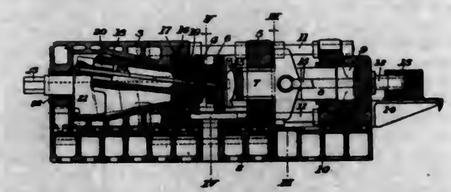
1,022,005. MEASURING DEVICE. BERT KEISER SHRADER and JAMES R. GILMAN, Louisville, Ky.; said Gilman assignor to said Shrader. Filed Mar. 2, 1911. Serial No. 611,849. (Cl. 73—48.)

The combination in a device such as described of a base, a stationary graduated plate extending therefrom, a threaded stud projecting from the upper terminal of the graduated plate, a sliding plate located upon the graduated plate and formed with a slot which receives the said stud, a binding nut threaded upon the stud, ears extending from the sliding plate beyond the opposite side of the stationary plate, a pin connecting said ears and engaging the graduated plate and a horizontally disposed strip of a bendable nature attached at its intermediate



portion to the upper end of the sliding plate substantially as and for the purposes set forth.

1,022,006. METAL-FORGING APPARATUS. EDWIN E. SLICK, Pittsburgh, Pa. Filed Feb. 20, 1911. Serial No. 609,719. (Cl. 80—16.)



1. Apparatus for forging comprising opposing dies, shafts on which the dies are mounted, supports for said shafts, means for causing relative approach of said dies and means on the end of one die shaft arranged to wabble said die and shaft with respect to the support therefor.

2. Apparatus for forging comprising opposing dies, shafts on which the dies are mounted, supports for said shafts, means for causing relative approach of said dies and a driving shaft having a crank connection with one of said die shafts and arranged to wabble said die and shaft with respect to the support therefor.

3. Apparatus for forging comprising opposed die faces at an angle to each other, shafts on which said die faces are mounted, supports for said shafts, means for causing relative approach of said die faces and means including a crank connected to one shaft and arranged to wabble said die and shaft with respect to the support therefor.

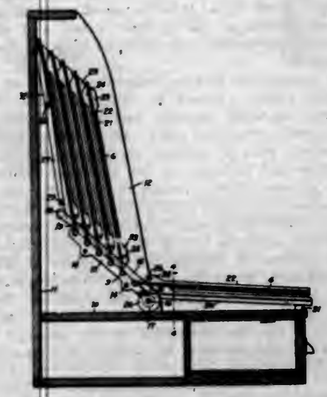
4. Apparatus for forging comprising a die support, a die holder having a shaping die on one end thereof angularly mounted in the support and a rotatable crank connected to said die holder and arranged to wabble said die and shaft with respect to the support therefor.

5. Apparatus for forging comprising a support, a die holder having a forging face thereon angularly mounted in the support and a rotary driving shaft having a crank, said crank being connected to the angular die holder and arranged to wabble said die and shaft with respect to the support therefor.

[Claims 6 to 13 not printed in the Gazette.]

1,022,007. ACCOUNT-REGISTER. ALBERT F. STAPLES, Canisteo, N. Y., assignor to Superior Register Company, Canisteo, N. Y., a Corporation of New York. Filed June 8, 1911. Serial No. 632,092. (Cl. 45—2.)

1. An account-register having, in combination, a plurality of bill-holder frames provided with interlocking devices to secure the frames together, said devices being movable into coöperative position by relative movements of the frames in their respective planes, and means for pivotally supporting the frames in relative positions in which the locking devices are normally out of operative engagement.



2. An account-register having, in combination, a plurality of bill-holder frames provided with interlocking devices to secure the frames together, said devices being movable into coöperative position by relative movements of the frames in their respective planes, and means for pivotally supporting the frames at the bottom with their pivotal axes arranged in an inclined plane.

3. An account-register having, in combination, a plurality of bill-holder frames provided with interlocking devices to secure the frames together at the bottom, said devices being movable into coöperative position by relative movements of the frames in their respective planes, and means for pivotally supporting the frames at the bottom with their pivotal axes arranged in an inclined plane.

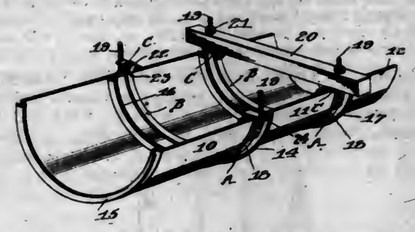
4. An account-register having, in combination, a plurality of bill-holder frames provided, near the bottom, with interlocking devices, said devices comprising a hook on each frame and an abutment on the next adjacent frame adapted to be engaged with said hook by a relative movement of the two frames in their respective planes, and means for pivotally supporting the frames at the bottom with their pivotal axes arranged in an inclined plane.

5. An account-register having, in combination, a plurality of bill-holder frames provided with interengageable devices by which relative sliding movement of the frame is limited in one direction to retain the frames in position with their upper and lower edges in substantial alinement, means for detachably connecting the frames together when not in use, said means being adapted both to prevent separation of the frames and to prevent relative sliding movement to disengage said devices, and means for pivotally supporting the frames in relative positions in which said devices are normally out of operative engagement.

[Claims 6 to 11 not printed in the Gazette.]

1,022,008. FLUME. WILLBERT L. SWICK, Glenwood Springs, Colo. Filed June 15, 1911. Serial No. 633,288. (Cl. 61—5.)

1. The combination of a pair of flume sections having their adjacent ends overlapped in non-interlocking relation and provided at the extreme outer ends of said overlapped portion with oppositely disposed lateral extensions respectively, an inner clamping bar disposed against the inner face of the inner overlapped portion, and an outer clamping bar disposed against the outer face of the outer overlapped portion in clamping relation to the inner clamping bar, the lateral extension of the inner and outer overlapped portions being normally disposed in spaced relation to the adjacent edges of the inner and outer clamping bars respectively.



2. The combination of a pair of flume sections having their adjacent ends overlapped in non-interlocking relation and provided at the extreme outer end of said overlapped portion with oppositely disposed corrugations respectively, an inner clamping bar disposed against the inner face of the inner overlapped portion, and an outer clamping bar disposed against the outer face of the outer overlapped portion in clamping relation to the inner clamping bar, the corrugations of the inner and outer overlapped portion being normally disposed in spaced relation to the adjacent edges of the inner and outer clamping bars respectively.

1,022,009. ELECTRIC-ARC LAMP. EZECHIEL WEINTRAUB, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Nov. 17, 1904. Serial No. 233,083. (Cl. 176—47.)

1. In an electric arc lamp, the combination of a gas-tight envelop, an inert fixed gas therein, arc maintaining electrodes in said envelop initially contacting with each other, and means operating on said gas to separate said electrodes before the arc starts.

2. In an electric arc lamp, the combination of a gas-tight envelop provided with a bent portion, a body of mercury located in said bent portion but not completely filling it, a coöperating solid electrode forming with said body of mercury the terminals of a relatively short arc, and inert gas at moderate pressure in said envelop on both sides of said mercury.

3. In an electric arc lamp, the combination of an arc-inclosing envelop, an atmosphere of gas therein, a fluid electrode, and a refractory sleeve sufficiently large to permit free motion of the cathode spot and inclosing on its surface the active portion of said electrode.

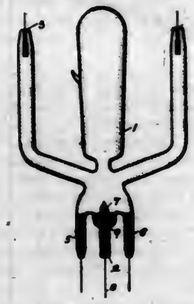
4. In an electric device, the combination of a gas-tight envelop, a considerable quantity of inert fixed gas therein, coöperating electrodes normally in contact when the lamp is in inoperating condition, and means for increasing the gas pressure to separate said electrodes.

5. In an electric arc lamp, the combination of a gas-tight envelop, gas at considerable absolute pressure in

said envelop, electrodes in said envelop, thermal means in series with said electrode for separating said electrodes and thermal means in shunt with said arc for causing said electrodes to approach one another.

[Claims 6 and 7 not printed in the Gazette.]

1,022,010. VAPOR ELECTRIC DEVICE. EZECHIEL WEINTRAUB, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed July 13, 1909. Serial No. 507,363. (Cl. 176—50.)



1. In a mercury-vapor device, the combination of a negative electrode and a member containing copper projecting above the surface of said negative electrode.

2. In a mercury-vapor device, the combination of a mercury electrode, and a metallic member projecting above the surface thereof during the operation of said device, said member being adapted to rapidly absorb and dissipate heat.

3. In a mercury-vapor device, the combination of a mercury electrode, and a copper-containing member projecting above the surface of the mercury, said member being of sufficient size to rapidly absorb and dissipate heat from its surface.

4. In a vapor electric device, the combination of a mercury electrode, and a metallic block projecting above the surface thereof having vertical grooves to assist the ascension of mercury.

5. In a mercury vapor device, the combination of a mercury electrode and a metallic member projecting above the surface of said electrode during the operation of said device, said member being free to adjust its position above the mercury surface with variations of level of said mercury electrode.

[Claims 6 to 9 not printed in the Gazette.]

1,022,011. REFRACTORY ARTICLE. GEORGE WEINTRAUB, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Mar. 24, 1910. Serial No. 551,380. (Cl. 204—64.)



1. The process of making hollow structures of refractory material, which consists in finely dividing such material, molding it in its loose state to the required shape around a rigid core covered with compressible material and sintering the refractory material whereby the hollow structure thus obtained is allowed to contract upon cooling without fracturing.

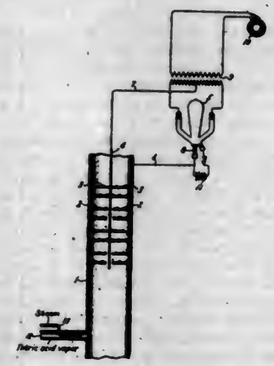
2. The process of making hollow vessels of refractory materials, which consists in confining said materials in pulverulent form in a suitable mold, providing space for the shrinkage of the finished vessel and sintering said refractory material into coherent form by the application of heat.

3. The process of making coherent masses of refractory oxids, which consists in confining said oxids in pulverulent condition between annular, relatively movable refractory retaining walls, the inner of said walls being covered with a coating of compressible material, and heating said material to the sintering temperature.

4. The process, which consists in lining the inner wall of an annular container with yieldable material, placing a refractory powder in said container, and heating said container and contents to the sintering temperature.

5. The process of making hollow vessels of magnesia which consists in firing the magnesia to substantially the sintering temperature, grinding the calcined material, confining the same when ground in a mold, while providing space for the shrinkage of the finished vessel, and sintering said material by heating to a temperature of about 1500° C.

1,022,012. PURIFICATION OF GASES. WILLIS R. WHITNEY, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Mar. 6, 1911. Serial No. 612,648. (Cl. 75—30.)



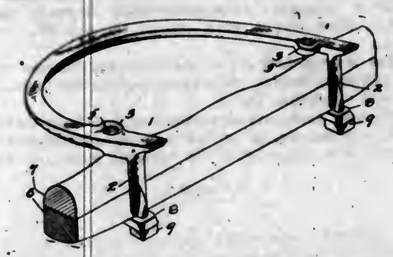
1. The process of removing sulfur dioxid from gases which consists in introducing steam and nitric acid vapor into said gases, to form sulfuric acid as a product of the resulting reaction, and then subjecting said gases to the precipitating action of high differences of electrical potential whereby the sulfuric acid is deposited.

2. The process of purifying waste gases containing sulfur dioxid as an impurity which consists in mixing it with watery vapor and nitrous oxidizing gases, and then causing said waste gases to pass in proximity to electrode surfaces of widely separated electrical potential whereby sulfuric acid formed by chemical reaction is removed.

1,022,013. FIFTH-WHEEL FOR VEHICLES. FRANK E. WILCOX, Mechanicsburg, Pa. Filed Aug. 26, 1911. Serial No. 646,149. (Cl. 21—24.)

1. A substantially semicircular metallic lower member of a fifth wheel, having at each end a single integral threaded prong disposed at right angles to the plane of the body of said member, and the metal of the circular

portion of the member adjacent the top ends of the prongs offset and a hole in each offset portion of the metal.



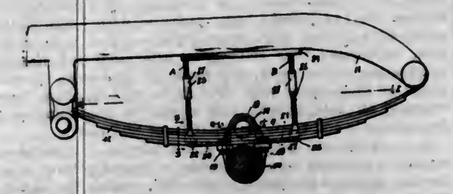
2. The combination with a vehicle axle, of a lower member of a fifth wheel with a single integral threaded prong at each end, the metal at the rear of each prong offset and provided with a tapered hole, tire bolts with tapered heads seated in the holes, and perforated ties and nuts applied to the threaded ends of the prongs and bolts.

1,022,014. PROCESS FOR THE MANUFACTURE OF EBONITES RESISTING THE ACTION OF CHLORIN. MEYER WILDERMANN, Ealing, London, England. Filed Oct. 2, 1908. Serial No. 455,874. (Cl. 18—53.)

1. A process for manufacturing ebonite capable of resisting the action of alkali and chlorin, which consists in forming a mixture of raw rubber with sulfur in the proportions of at least 25% of sulfur to 55% of rubber together with a suitable inert substance, such as graphite, capable of resisting the action of alkali and acids, and in vulcanizing said mixture in case of pure ebonites, substantially longer than 13 hours and in case of iron covered with ebonite at least 13 hours, substantially as described.

2. Ebonite capable of resisting the action of alkali and chlorin, consisting of a mixture of raw rubber with sulfur in the proportion of at least 25% of sulfur to 55% of rubber together with a suitable inert substance, such as graphite, capable of resisting the action of alkali and acids, the mixture being vulcanized in the case of pure ebonites substantially longer than 13 hours, and in case of iron covered with ebonite at least 13 hours, substantially as described.

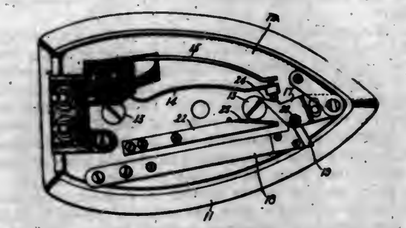
1,022,015. SHOCK-ABSORBER. JAMES H. WOODRING, Corry, Pa. Filed Aug. 29, 1911. Serial No. 646,587. (Cl. 21—105.)



1. In a shock absorber for vehicles, the combination of a vehicle axle and frame, a tubular member secured to the axle and having its bore disposed longitudinally of the latter, a coil spring mounted in the bore of said member and having its ends extended in opposite directions to form arms disposed transversely of the axle, and connections between the vehicle frame and the ends of said arms, whereby relative movement of the frame with respect to the axle will be resisted by said spring.

2. In a shock absorber for vehicles, the combination of a vehicle axle and frame, a tubular member secured to the axle and having its bore disposed longitudinally of the latter, a coil spring mounted in the bore of said member and having its ends extended in opposite directions to form arms disposed transversely of the axle, and rods depending from the frame of the vehicle and secured at their lower ends to respective ends of the arms of the spring whereby relative movement of the frame with respect to the axle will be resisted by said spring.

1,022,016. ELECTRIC HEATER. WILLIAM S. ANDREWS, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Jan. 14, 1911. Serial No. 602,604. (Cl. 219—25.)



1. The combination with an electric heater, of a switch in the circuit thereof, and means controlled by the temperature for opening said switch and thermostatically controlled means for preventing its subsequent closing.

2. The combination with an electric heater, of a switch in the circuit thereof, means for automatically opening said switch, and means controlled by the temperature for preventing the closing thereof.

3. The combination with an electric heater, of a normally open switch in the circuit thereof, means for holding said switch closed, and means controlled by the temperature for preventing the closure of the switch after it has opened.

4. The combination with an electric heater, of a normally open switch in the circuit thereof, a thermostatic element for holding said switch closed, and a thermostatic element for preventing the closure of the switch after it has opened.

5. The combination with an electric heater, of a switch in the circuit thereof, means for causing said switch to automatically open, and thermostatic means for preventing the closure of the switch after it has opened.

[Claims 6 to 9 not printed in the Gazette.]

1,022,017. GRAVITY CARRIER SYSTEM. WILLIAM H. BICKFORD, Washington, Iowa. Filed June 27, 1911. Serial No. 635,678. (Cl. 104—146.)



1. In a gravity carrier system, supports, members movable up and down upon the supports, means upon each member arranged to clutch with the respective support whereby to support the member at different elevations thereon, a rail extending between the said members and supported thereby, a carrier supported for travel along the rail, and means actuated by the carrier for releasing said clutch means.

2. In a gravity carrier system, supports, members movable up and down upon the supports, means upon each member arranged to clutch with the respective supports whereby to support the member at different elevations thereon, a rail extending between said members, a carrier supported for travel along the rail, and means upon the carrier arranged to engage with the clutch means to disengage the said clutch means from the support.

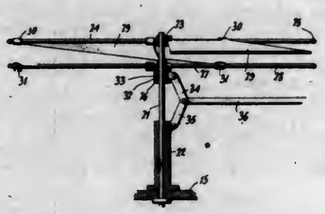
3. In a gravity carrier system, supports, a member movable up and down upon each support, means upon each member arranged to clutch with the respective support whereby to support the member at diferent elevations thereon, a rail extending between said members, a carrier supported for travel along the rail, and means to disengage the clutch means from the support and thereby allow the respective member to drop upon its respective support.

4. In a gravity carrier system, a support, a member movable up and down upon the support, means upon the member arranged to clutch with the respective support whereby to support the member in elevated position thereon, a rail supported at one end by the member, a carrier supported for travel along the rail, and means upon the carrier arranged to engage with the clutch means to disengage the same from the support and thereby allow the said member to drop from its elevated position.

5. In a gravity carrier system, a support, a member movable up and down upon the support, means for holding the member in elevated position upon the support, a rail supported at one end by the member, a carrier mounted for travel along the rail, and means upon the carrier engageable with the means for supporting the member in elevated position, whereby to render the last mentioned means inoperative and thereby allow the said member to drop from its elevated position.

[Claims 6 to 12 not printed in the Gazette.]

1,022,018. FLYING-MACHINE. RUPERT L. BROUGH, Middlebury, Vt. Filed July 7, 1910. Serial No. 570,807. (Cl. 244—15.)



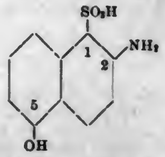
1. In a flying machine, a body, vertical shafts respectively arranged within the body at either end thereof, a stationary sleeve disposed around each shaft intermediate its ends, a hub fixedly mounted upon the upper end of each shaft, radiating arms connected to said hub, a hub slidably mounted on each shaft below the first mentioned hub, radiating arms connected with each second mentioned hub, blades respectively connected to one arm of one of the hubs and to another arm of the other hub, links pivotally connected to the second mentioned hubs and the sleeves, a rod pivotally connected at its ends to the free ends of the links and a weight connected to the rod for operating the latter to vary the angle of the respective blades.

2. In a flying machine, a body, helicopters having adjustable blades and disposed above the respective ends of the body, each helicopter consisting of a normally stationary hub and a movable hub, arms respectively radiating from said hubs and blades each pivotally connected to one arm of one of the hubs and to another arm of the other hub, regulating means for varying the angle of incidence of the helicopter blades with the atmosphere and a gravity actuated control for said regulating means operable by the tilting of the machine.

1,022,019. AMINO-OXY-NAPHTHALENE SULFONIC ACID AND PROCESS OF MAKING SAME. HANS BUCHERER, Biebrich, Germany, assignor to The Firm of Kalle & Company, Aktiengesellschaft, Biebrich, Germany. Filed May 4, 1910. Serial No. 559,399. (Cl. 8—1.)

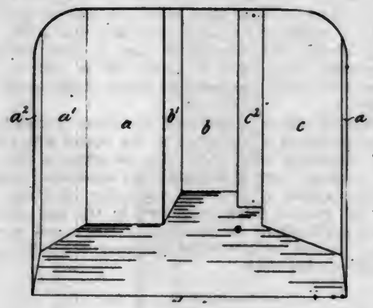
1. The manufacture of an amino-oxy-naphthalene sulfonic acid by subjecting the 2-amino-naphthalene-1.5-disulfonic acid to alkaline fusion.

2. The new amino-oxynaphthalene sulfonic acid obtainable by alkaline fusion of the 2-amino-naphthalene-1.5-disulfonic acid, of probably the following structural formula



which crystallizes from its solution in hot water in white needles difficultly soluble in cold water and which yields soluble azo colors on combination with a diazo body in alkaline solution and difficultly soluble azo colors when combined with a diazo body in an acid solution.

1,022,020. STAGE-SCENERY. EDWARD GORDON CRAIG, Florence, Italy. Filed Apr. 27, 1910. Serial No. 557,902. (Cl. 46—70.)



1. A device for producing scenic effects comprising a series of monochromatic foldable double jointed screens adapted to be relatively projected at different angles to assist the imagination of the spectators of physical conditions, the end screens being provided with longitudinal guide slots having their upper ends provided with openings, supporting rods slidable in said slots and having penetrating lower ends and laterally projecting thumb pieces at their upper ends that lie in said openings, base supports for said screens, and means for concealing said base supports and the lower portions of said rods.

2. A device for producing scenic effects comprising a series of portable screens having a double jointed connection, and rods slidable in the end screens for engaging the surface upon which the screens are supported.

3. A device for producing scenic effects comprising a series of monochromatic screens having connections to permit folding and also arrangements at relative angles, and means carried by the end screens for supporting the same in perpendicular positions.

4. A device for producing scenic effects comprising a series of screens having double jointed connections, supporting casters carried by the lower ends of said screens, means carried by said screens for retaining the same in perpendicular positions, and means carried by said screens for concealing said casters and said means.

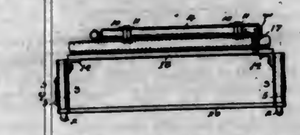
1,022,021. SPACE-BLOCK. EDMUND H. FARQUHAR, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Sept. 19, 1908. Serial No. 453,736. (Cl. 171—206.)



1. The combination with a lamination in a dynamo-electric machine, of a sheet metal space block or rib having at least two projecting portions punched out at the base thereof one on either side of said rib, said projecting portions resting on said lamination, said block having an inclined notch therein which engages a portion of said lamination, and means independent of said projecting portions for riveting said block to said lamination.

2. The combination with a lamination in a dynamo-electric machine having a hole therein, of a sheet metal space block or rib having at least two projecting portions punched out at the base thereof one on either side of said rib, said projecting portions resting on said lamination, said block having another portion entering said hole in order to fasten said rib to said lamination, and an inclined notch therein which engages a portion of said lamination.

1,022,022. FOLDING OR COLLAPSIBLE BED. FRANK HENRY FARRINGTON, Roanoke, Ala. Filed Mar. 7, 1911. Serial No. 612,765. (Cl. 5—9.)



1. In a folding or collapsible bed, the combination with a bed frame, of posts connected to the frame comprising a plurality of sections, one section of each post telescoping in another section, means pivotally connecting the other section to the frame, and means for connecting the several sections together when in their extended positions.

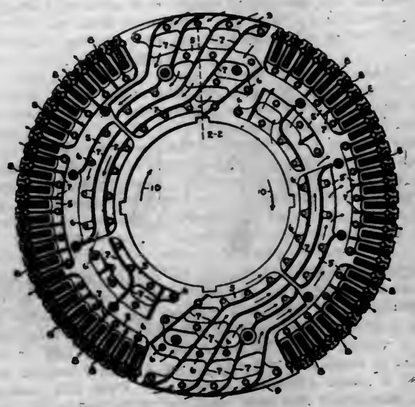
2. In a bed, the combination with a bed frame, of posts, each post comprising an upper, an intermediate, and a lower section, the intermediate section slidably connected to the lower section, means for connecting the latter two sections together, when the intermediate section is in its extended position, means for connecting the upper section to the intermediate section, side rods connecting the upper sections of the posts together, and end rods pivotally connected to the upper sections.

3. In a bed, the combination with a bed frame, of posts, each post comprising an upper and an intermediate section, the sections slidably connected together, means for removably connecting the upper sections to the intermediate sections, means pivotally connecting two of the upper sections to the frame, means pivotally connecting the remaining upper sections to the first-named sections whereby they can be swung into alinement with the other upper sections and then folded upon the frame.

4. In a bed, the combination with a bed frame, of sectional posts, means pivotally connecting two of the uppermost members of the posts to the frame, and means connecting said pivoted members to the remaining uppermost post members whereby said last-named post members can be swung toward the pivoted post members of the other end whereby all of the uppermost post members can be swung upon the frame.

5. In a bed, the combination with a bed frame, of posts, each post comprising a standard, tubular member and an upper member, the tubular members and standards being slidably connected together, means for connecting the tubular members and standards together when the tubular member is in extended position, means on the tubular members for supporting the frame, means pivotally connecting two of the upper post members to the frame, and means for connecting the upper post members together.

1,022,023. DYNAMO-ELECTRIC MACHINE. WILLIAM J. FOSTER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Jan. 24, 1910. Serial No. 539,642. (Cl. 171—206.)



1. In a dynamo electric machine, a rotor provided with ventilating spaces, space blocks in the ventilating spaces having ribs which form channels in said spaces, each of said channels extending from one portion of the periphery of said rotor to another portion of said periphery and making at the two ends thereof different angles with radial lines so that the forces tending to throw the air out of said rotor will be different at the two ends of said channel.

2. In a dynamo electric machine, a rotor provided with ventilating spaces, space blocks in the ventilating spaces having ribs which form channels in said spaces, each of said channels making at the two ends thereof different angles with radial lines.

3. In a dynamo electric machine, a rotor provided with ventilating spaces, space blocks in the ventilating spaces having ribs which form channels in said spaces, each of said channels being inclined at one end to a radius and extending radially at the other end.

4. In a dynamo electric machine, a rotor provided with ventilating spaces, space blocks in the ventilating spaces having ribs which form channels in said spaces, each of said channels extending from one portion of the periphery of the rotor to another portion of said periphery and making at the two ends thereof different angles with radial lines.

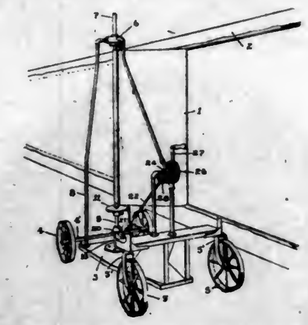
5. In a dynamo electric machine, a rotor provided with ventilating spaces, space blocks in the ventilating spaces having ribs which form channels in said spaces, each of said channels extending from one portion of the periphery of the rotor to another portion of said periphery, and being inclined at one end to a radius and extending radially at the other end.

[Claims 6 to 10 not printed in the Gazette.]

1,022,024. ROLLING-OFF MACHINE FOR SHADE-CLOTH. LOUIS B. GIRARD, Los Angeles, Cal., assignor to The Girard Manufacturing Company, Los Angeles, Cal., a Corporation of California. Filed June 2, 1910. Serial No. 564,721. (Cl. 242—90.)

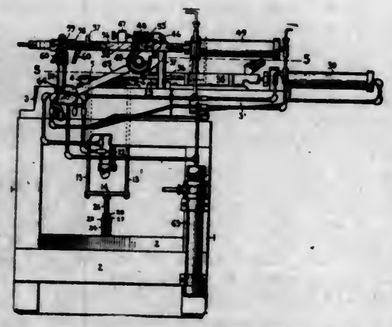
1. A machine for rolling off shade cloth comprising a support formed as a wheeled vehicle, a frame thereon

provided with an upper bearing for the roller on which the shade cloth is to be wound, said upper bearing having a gimbal support and consisting of a sleeve through which said roller is passed, a vertical shaft mounted to rotate on said vehicle, means on said shaft for engaging with the lower end of the roller to rotate the same, and means for rotation of said shaft, said shaft being rotatable independently of the movement of the wheeled vehicle.



2. In a machine for rolling off shade cloth comprising a wheeled vehicle, a member rotatably mounted on the said vehicle to turn on a vertical axis, said member being provided with a socket for receiving the lower end of a roller, means for engaging the lower end of the roller to cause said roller to rotate with said member and with a flange extending horizontally from said member for supporting the said cloth as it is wound on said roller, a frame extending upwardly from said wheeled vehicle and provided with a bearing for receiving the upper end portion of said roller, said bearing being formed as a sleeve for engaging the roller loosely to permit rotation of the roller in said sleeve, manual operating means, and gearing connecting said manual operating means with the roller supporting member on the vehicle, said roller supporting member and its operating means being movable independently of the movement of the vehicle.

1,022,025. MACHINE FOR FORMING AND ELECTRICALLY WELDING TUBES. EMILE J. GUAY, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Jan. 19, 1911. Serial No. 603,443. (Cl. 219—6.)



1. A machine for forming and making sheet metal tubes, comprising a mandrel, jaws for folding a sheet metal blank around said mandrel, a welding wheel adapted to move along the joint of said tube, means for conveying an electric current to said wheel and mandrel, and means for withdrawing the mandrel from the completed tube.

2. In a machine for making sheet metal tubes, the combination with a mandrel, of hinged jaws located below said mandrel and adapted to coöperate therewith to form a tube from a sheet metal blank, hinged plates located on each side of said mandrel to support the blank and yield upwardly when said jaws are closed, and means for electrically welding the edges of the blank while held by the said jaws.

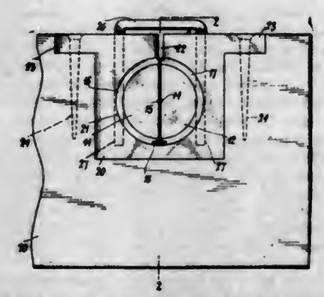
3. In a machine for making sheet metal tubes, the combination with a mandrel, of hinged jaws located below said mandrel and adapted to coöperate therewith to form a tube from a sheet metal blank, an arbor on which said jaws are hinged, holding studs carried by said arbor, means for lifting said arbor to cause said studs to clamp the blank to the mandrel before the jaws close, and means for electrically welding the edges of the blank while held by the said jaws.

4. In a machine for making sheet metal tubes, the combination with a mandrel, of hinged jaws located below said mandrel and adapted to coöperate therewith to form a tube from a sheet metal blank, an arbor on which said jaws are hinged, bushings engaging said arbor, holding studs on said bushings, means for lifting said bushings prior to the closing of said jaws, and means for electrically welding the edges of the blank while held by the said jaws.

5. In a machine for making sheet metal tubes, the combination with a mandrel, of an arbor located below the same, bushings engaging said arbor and mounted on rods, a spring biasing said rods upward, jaws hinged on said arbor and adapted to coöperate with said mandrel to form a tube from a sheet metal blank, a cylinder and piston, links connecting said jaws with the piston rod, means for conducting compressed air to and from said cylinder, and means for electrically welding the edges of the blank while held by the said jaws.

[Claims 6 to 9 not printed in the Gazette.]

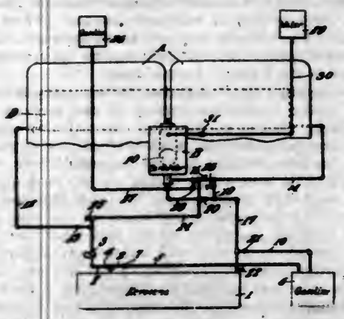
1,022,026. INSULATOR. JOSEPH A. GUTHRIE, Little Rock, Ark., assignor, by direct and mesne assignments, to Guthrie-Mitchell Company, Little Rock, Ark., a Corporation. Filed July 24, 1911. Serial No. 640,169. (Cl. 173—314.)



1. An insulator including a substantially frusto-conical element formed of insulating material, and comprising mating halves, a substantially frusto-conical clamping element formed of mating halves surrounding the insulating element, and provided with a key slot, a socket element provided with a tapered bore adapted to snugly receive said clamping element, and a key engaged through said socket element and fitting in said key slot.

2. An insulator including a substantially frusto-conical insulation element formed of mating halves, a substantially frusto-conical clamping element formed of mating halves surrounding said insulation element and provided with a peripheral key slot, a socket element provided with a tapered bore adapted to receive said clamping element, and provided with spaced key openings, and a substantially U-shaped key having legs engaged through said openings and seated in said key slot.

1,022,027. HYDROCARBON-ENGINE. HIRAM HYDE and JACK GAGE, Geneseo, Kans. Filed May 8, 1911. Serial No. 625,788. (Cl. 123—119.)

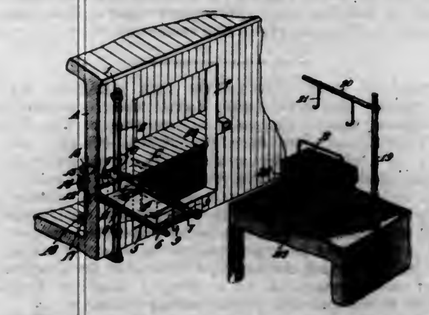


1. The combination with a hydrocarbon engine having an exhaust chamber and a carbureter, of means for directing rich fuel into the carbureter to drive the engine, a jacket inclosing said exhaust chamber and having an air space therein provided with an outlet, means for conducting heated air from said space to the carbureter, a coil within said space, a fuel tank, a pump for circulating fuel through the tank and coil, to heat the fuel, and separate means for cutting off the supply of rich fuel from the carbureter and directing heated fuel from the coil to the carbureter.

2. The combination with a hydrocarbon engine having an exhaust chamber, and a carbureter, of a jacket surrounding the exhaust chamber, means for conducting air therefrom to the carbureter, a coil within the jacket, the contents of the jacket and of the coil being adapted to be heated by the gases discharged into the exhaust chamber, a fuel supply, a pipe connection between said supply and the coil, a pipe connection between the coil and the carbureter, means for controlling the passage of fuel through said connections, a starting tank, a valved connection between said starting tank and the carbureter, valved means for directing water into the carbureter, and an emergency tank communicating with the fuel conducting connections.

3. Fuel feeding apparatus for hydrocarbon engines, including a tank for fuel to be heated, a jacket for inclosing the exhaust chamber of the engine, said jacket having an air inlet, a coil within the jacket, a second fuel tank, a pump for setting up a circulation of fuel from the first mentioned tank through the coil and back to said tank to vaporize the fuel, valved means for directing the vaporized fuel into a carbureter, means for directing heated air from the jacket and into the carbureter.

1,022,028. MAIL DELIVERING AND RECEIVING APPARATUS. CHARLES A. IFFERT, Monroe, Wis. Filed Feb. 9, 1912. Serial No. 676,573. (Cl. 105—231.)



1. The combination with a car structure, of a standard mounted for rotation thereon, means within the structure for rotating the standard, a shelf outstanding from and movable with the standard, and means detachably engaging the shelf for holding it in substantially horizontal position.

2. The combination with a car structure, of a standard mounted for rotation thereon, a shelf suspended from and mounted to swing relative to the standard, means for holding the shelf in a substantially horizontal position, and means within the structure for rotating the standard to move the shelf toward or away from the structure.

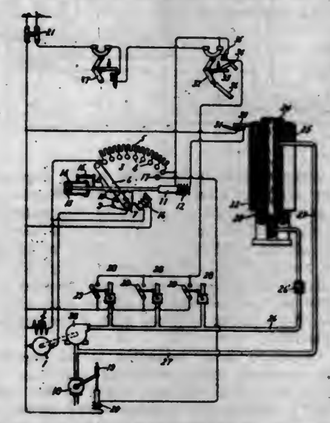
3. The combination with a car structure, of a standard mounted for rotation thereon, an arm outstanding from the standard, a shelf mounted to swing relative to, and suspended from the arm, means on the arm and coöperating with the shelf for holding the shelf in a substantially horizontal position, and means within the car structure for rotating the standard.

4. The combination with a car structure, of a standard mounted for rotation thereon, an arm extending from the standard, a shelf suspended from and adapted to swing relative to the arm, coöperating means upon the shelf and arm for holding said shelf in a substantially horizontal plane, and hooked elements suspended from and adapted to swing freely relative to the arm.

5. The combination with a car structure, of a standard mounted for rotation thereon, an arm extending from the standard, a shelf suspended from and adapted to swing relative to the arm, coöperating means upon the shelf and arm for holding said shelf in a substantially horizontal plane, hooked elements suspended from and adapted to swing freely relative to the arm, and means within the car structure for rotating the standard.

[Claims 6 to 8 not printed in the Gazette.]

1,022,029. MOTOR-CONTROL SYSTEM. KENNETH F. KINGWELL, Rugby, England, assignor to General Electric Company, a Corporation of New York. Filed Jan. 4, 1910. Serial No. 536,290. (Cl. 172—288.)



1. The combination with an electric motor and a pump driven thereby, of an automatic starter for said motor, an electromagnetically operated valve for controlling the supply of fluid, an accumulator for storing fluid, a circuit breaker for opening the motor circuit, means for automatically tripping the circuit breaker when the fluid in said accumulator reaches a predetermined point and for automatically operating the valve when it reaches a second predetermined point, and means for preventing the operation of the circuit breaker while the supply of fluid is being consumed.

2. The combination with an electric motor and a pump driven thereby, of an accumulator for storing fluid, a valve controlling the consumption of fluid from said accumulator, a circuit breaker arranged to be automatically opened when the fluid in said accumulator reaches

a predetermined point and connections whereby the automatic opening of said circuit breaker is prevented while the valve is closed.

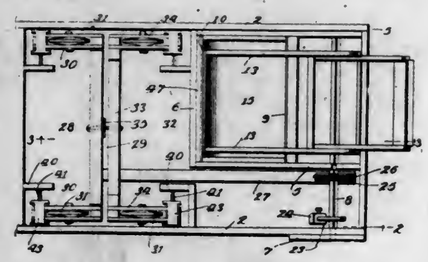
3. The combination with an electric motor and a pump driven thereby, of an accumulator for storing fluid, a plurality of valves controlling the consumption of fluid from said accumulator, a circuit breaker arranged to be automatically opened when the fluid in said accumulator reaches a predetermined point and connections whereby the automatic opening of said circuit breaker is prevented while any one of said valves has closed.

4. The combination with an electric motor and a pump driven thereby, of an accumulator for storing fluid, a circuit breaker arranged to be automatically opened when the fluid in the accumulator reaches a predetermined point, and means for preventing the operation of the circuit breaker at said point while the stored fluid is being consumed.

5. The combination with an electric motor and a pump driven thereby, of an accumulator for storing fluid, an automatic starter for said motor arranged to be operated when the fluid in the accumulator reaches a predetermined point, a circuit breaker arranged to be automatically opened when the fluid in the accumulator reaches a second predetermined point, and means for preventing the operation of the circuit breaker while the stored fluid is being consumed.

[Claims 6 and 7 not printed in the Gazette.]

1,022,030. COMPUTING-SCALE. RALPH B. LARRABEE, Anson, Me. Filed Apr. 4, 1911. Serial No. 618,963. (Cl. 73—104.)



1. A computing scale including in its organization a vertically movable platform, a piston chamber entirely opened at one end, the other end of the piston chamber being formed with an opening, an inwardly movable valve normally closing said opening, a piston mounted in the chamber, a scale beam, and operative connections between the platform, scale beam and piston whereby the scale beam shall be operated and the piston moved toward the open end of the piston chamber upon a vertical movement of the platform.

2. A computing scale including in its organization a vertically movable counterweighted platform, a piston chamber open at one end and closed at the other, said closed end of the piston chamber being formed with an air inlet opening, an inwardly movable valve normally closing said air opening, a piston movable in the piston chamber, and operative connections between the platform and said piston.

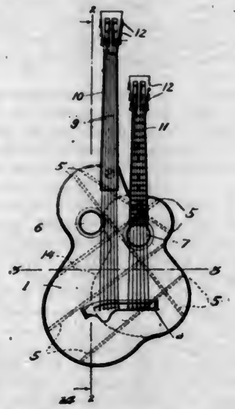
3. A computing scale including in its organization a vertically movable platform, a rock shaft, operative connections between the platform and the rock shaft, a counterweighted beam extending from the rock shaft, arms extending radially from the rock shaft, a piston chamber extending concentric to the rock shaft, and a piston connected to the arms and movable in said piston chamber, said piston chamber having its upper end open and its lower end provided with an air inlet valve closing against pressure from within the piston chamber.

4. A computing scale including in its organization a casing, a rock shaft supported in one end of the casing, arms projecting from the rock shaft and carrying a piston and a scale plate, a chamber mounted in the casing in which said piston moves, said chamber being concentric to the rock shaft, a counterweighted beam on the rock shaft, a circular disk on the rock shaft, a pivoted scale platform, a lever attached to the platform, and a flexible connection passing over the disk on the rock shaft and connected to the free end of the lever.

5. A computing scale including in its organization an exterior casing, a platform formed in two sections, each section being pivoted at one edge, the adjacent edges of the sections being free to move vertically, a connection between the two sections, a lever extending from one of said sections, a rock shaft, a disk on the rock shaft, a flexible connection passing over the disk and connected to the lever, a counterweighted beam on the rock shaft, a pistou chamber concentric to the rock shaft, arms projecting radially from the rock shaft and supporting a piston movable in said chamber, a scale plate carried upon the arms and movable therewith, and a fixed scale plate extending across the direction of travel of the movable scale plate.

[Claim 6 not printed in the Gazette.]

1,022,031. GUITAR. AUGUST LARSON, Chicago, Ill. Filed June 2, 1909. Serial No. 499,789. (Cl. 84—133.)



1. In a stringed instrument, a soundboard, means for securing strings in suitable relation thereto, a sound chamber provided upon the back of said soundboard, a smaller sound chamber secured to the back of said soundboard and located within said first-mentioned chamber, and separate openings in said soundboard to said chambers.

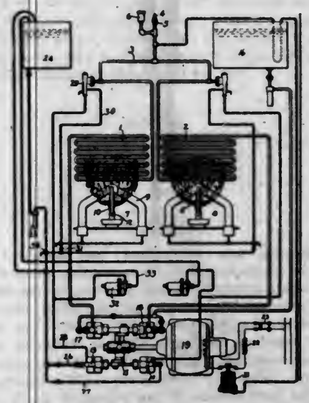
2. In combination with a guitar, a smaller sound chamber secured to the back of the sounding board within the body or sound chamber of said guitar, and separate openings in said soundboard to said chambers.

1,022,032. FEED-REGULATOR FOR HEATING SYSTEMS. HERMANN LEMP, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed July 19, 1906. Serial No. 326,845. (Cl. 122—448.)

1. In a vapor producing system, the combination of a vapor generator, comprising independent conduits discharging in multiple to a common receptacle, fire chambers, pumps for supplying liquid to the generator conduits and fuel to the fire chambers, a motor for driving the pumps, devices responding to a condition of the vapor in the generator for varying the supply of fuel to the fire chambers, and means responding to a different condition of the vapor in the generator for controlling the motor.

2. In a vapor producing system, the combination of vapor generators arranged in multiple to discharge vapor

to a common conduit, heating means for the generators, pumps for supplying liquid to the generators and fuel to the heating means, a motor for driving the pumps, fuel controlling means arranged between a fuel pump and the heating means that is responsive to a condition of the vapor in the generators, means for relieving the pressure on the fuel system when said controlling means reduces the supply to the heating means, and means responsive to a condition of the vapor in the conduit for controlling the motor.



3. In a vapor producing system, the combination of a vapor generator, a fire chamber, pumps for supplying liquid to the generator and fuel to the fire chamber, an electric motor for driving the pumps, a thermostatic device for varying the supply of fuel to the fire chamber, a by-pass regulator for the fuel system which opens under conditions of excess pressure, and a controller for the motor which is sensitive to a condition of the vapor generated.

4. In a vapor producing system, the combination of generators arranged in multiple to discharge vapor to a common conduit, a separate fire chamber for each of the generators, fuel and liquid pumps, a motive power agency for actuating the pumps, regulators for the fuel supply systems which are responsive to a condition of the vapor in the generators, and an automatically acting regulator responsive to another condition of the vapor in the generators for controlling the motive power agency.

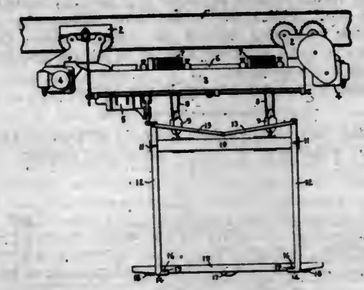
5. In a vapor producing system, the combination of generators arranged in multiple to discharge vapor to a common conduit, a separate fire chamber for each of the generators, fuel and liquid pumps, a valve responsive to the temperature of the vapor generated for controlling the effective discharge of one of the pumps, a secondary regulator for the pump so controlled as to take care of the excess discharge, a motive power agency for driving the pumps, and a means responding to the pressure of the vapor generated for controlling the motive power agency.

[Claims 6 to 10 not printed in the Gazette.]

1,022,033. MEANS FOR HANDLING FREIGHT. SAM H. LIBBY, East Orange, N. J., assignor to General Electric Company, a Corporation of New York. Filed Jan. 19, 1911. Serial No. 603,502. (Cl. 212—8.)

1. In a freight handling system, the combination with a traveling carrier, of a hoisting motor thereon, a grapple adapted to be raised and lowered by said motor, a platform with which said grapple can engage, and means for automatically disengaging said grapple by lowering it slightly after said platform has been deposited upon a support.

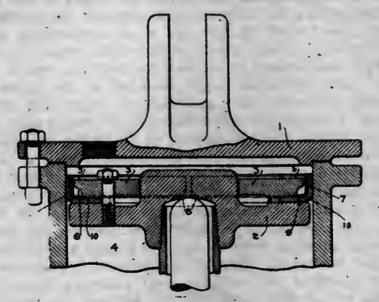
2. In a freight handling system, the combination with a traveling carrier, of hoisting mechanism thereon, a frame suspended by the ropes of said hoisting mechanism, hooked levers pivoted to said frame, and a platform adapted to be engaged by said hooks and released therefrom when said hooks are lowered slightly after said platform has been deposited upon a support.



3. In a freight handling system, the combination with a traveling carrier, of hoisting mechanism thereon, a frame suspended by the ropes of said mechanism, hooked levers pivoted to said frame, links pivoted to said levers and to each other, and a platform adapted to be engaged by said hooks and to be released therefrom by lowering said platform after it has been deposited upon a support.

4. In a freight handling system, the combination with a traveling carrier, of hoisting mechanism thereon, a frame suspended by the ropes of said mechanism, a transverse shaft at each end of said frame, hooked levers secured to the ends of said shafts, links pivoted to the upper ends of the levers on each side of said frame, said links being pivoted together between said levers, and a platform adapted to be engaged by said hooked levers, and provided with one or more bosses on its under side.

1,022,034. PACKING-EXPANDER. WILLIAM H. LIEBER, Milwaukee, Wis., assignor to Allis-Chalmers Company, Milwaukee, Wis., a Corporation of New Jersey. Filed Feb. 20, 1911. Serial No. 609,647. (Cl. 121—108.)



1. In combination with a cylindrical packing, a self-expansible ring having a cylindrical surface adapted to bear against said packing, and means on said ring and embedded in the body of said packing for locking said ring and packing against relative axial displacement.

2. In combination with a cylindrical packing, a self-expansible ring having a circular peripheral surface adapted to bear against said packing, and means projecting beyond said peripheral surface of said ring and embedded in the body of said packing for locking said ring and packing against relative axial displacement.

3. As an article of manufacture, an expansible packing expander ring formed from a continuous strip of material having at all portions of its length an L-shaped cross-section, said ring having projections extending outwardly from its periphery for locking said ring to the packing.

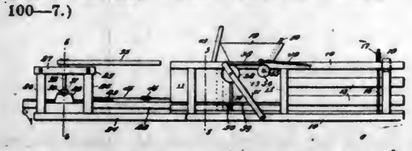
4. As an article of manufacture, a sheet-metal packing expander ring formed from a continuous strip of metal hav-

ing at all portions of its length an L-shaped cross section, said ring having projections extending from its outer surface for locking said ring to its packing.

5. As an article of manufacture, a sheet-metal self-expansible spring packing expander ring having a cylindrical portion, said cylindrical portion being distorted to form projectons extending beyond the outer surface thereof and adapted to be embedded directly in the packing to lock said ring to its packing.

[Claims 6 to 8 not printed in the Gazette.]

1,022,035. BALING-PRESS. JOHN D. MCKENZIE, Laurel, Miss. Filed May 6, 1911. Serial No. 625,433. (Cl. 100—7.)



1. The combination with a baling press having a movable plunger, of tramping means operated upon movement of the plunger in one direction, mechanism for driving said plunger, means normally holding said mechanism in operative position, and means for moving said last-named means for bringing the said mechanism to operative position and adapted to be released by the plunger when moved a predetermined distance.

2. In a baling press, a main frame having a baling chamber provided with a top opening, a plunger working within said chamber, mechanism for advancing said plunger, manually operated means controlling the first-named mechanism and adapted to be shifted in one position for setting the first-named mechanism for operation, and means operated by the plunger when advanced to effect the automatic release of said second-named means to move the said mechanism to inoperative position.

3. In a baling press, a main frame having a baling chamber provided with a top opening, a plunger working within said chamber, mechanism for advancing said plunger, manually operated means controlling the first-named mechanism and adapted to be shifted in one position for setting the first-named mechanism for operation, means operated by the plunger when advanced to effect the automatic release of said second-named means to move the said mechanism to inoperative position, and a normally raised tramping board mounted on the frame for swinging movement and automatically controlled by the plunger, whereby the said board will be moved into position for closing the top opening of the baling chamber.

4. In a baling press, a main frame having a baling chamber, a plunger movable in said chamber, a feed hopper rising from said frame and communicating with the baling chamber, a tramping board pivoted to the main frame and adapted to be moved into position for closing the communication between the feed hopper and the baling chamber, mechanism operated by the plunger when moving in one direction for swinging said tramping board into position for closing communication between the feed hopper and the baling chamber, means for returning the tramping board to normal position, manually set mechanism for advancing the said plunger, and means controlling said manually set mechanism for automatically releasing the same when the plunger has been moved to a predetermined point within the baling chamber.

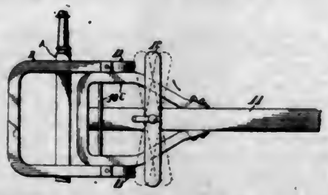
1,022,036. SHORING-TOOL. WALTER R. MCLENDON and ROBERT I. EUSTIS, Los Angeles, Cal., assignors of one-fourth to Frank D. Eustis, Los Angeles, Cal. Filed July 27, 1911. Serial No. 640,791. (Cl. 72—79.)

1. A shoring tool comprising a tubular base member having a cap on the top thereof and a transverse aperture just below the top; an upper member having a plurality of transverse apertures therein slidably mounted in said base member; two sleeves mounted on said upper member, the lower sleeve being externally threaded and the upper sleeve being internally threaded and engaged by the lower sleeve, said lower sleeve being provided with wrench engaging means.



2. A shoring tool comprising two members, one of which is telescopically and non-revolubly mounted in the other in combination with means to move the top of the top member away from the top of the other member; and means independent of the moving means, to hold said telescopic members in a plurality of adjusted positions, said means comprising a plurality of transverse perforations in the telescopic parts, and a pin adapted to pass through the perforations in the telescopic parts when the perforations are drawn into register or to pass through the perforations in one of the parts when the perforation is brought above the other part.

1,022,037. VEHICLE-HOUNDS. MICHAEL F. MEATH, Sadorus, Ill. Filed Apr. 13, 1911. Serial No. 620,823. (Cl. 21—29.)

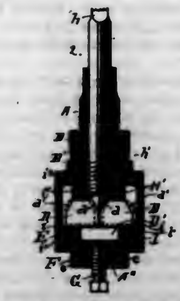


The combination of the axle hounds of a vehicle, tongue hounds pivotally connected to the axle hounds, a tongue supported by said tongue hounds, a double tree pivotally mounted upon said tongue and stops mounted on the forward end of each of the axle hounds for engaging the adjacent ends of the double tree to limit the movement of the latter toward the axle hounds before said double tree has entered the path of travel traversed by the axle hounds during their pivotal movement with respect to the tongue hounds.

1,022,038. VALVE-SEATING IMPLEMENT. AUGUST W. MEITZ, Grand Rapids, Mich. Filed June 19, 1911. Serial No. 634,179. (Cl. 90—12.5.)

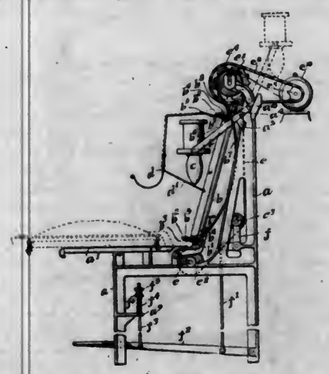
1. In a valve seating implement, a hollow standard having the lower end closed and a mortise through near the said closed end, a clamping block through the lower end of said mortise, a pilot nut around the lower end of the standard a reseating cutter mounted on the standard above the pilot nut F, facing cutters mounted in the mortise and bearing upon the reseating cutters and the clamping block, a set screw through the solid part of the lower end of the standard in position to act upon the clamping block to hold the facing cutters to place, and a bolt passing into the hollow of the standard and adapted to adjust the facing cutters.

2. In an implement for seating valves, a hollow standard having a mortise through it near the lower end and a solid portion below the mortise, a pilot nut forming a shoulder around the standard adjacent to the mortise, a reseating cutter around the standard above the pilot nut, the reseating cutter grooved across the upper surface, a clamping block in the mortise in the standard, facing cutters mounted in said mortise and engaging the upper surface of the clamping block and the groove in the top of the reseating cutter, a set screw screwed through the solid part of the lower end of the standard against the clamping block to hold the facing cutters to place, a collar and a feed screw mounted on the standard above the reseating cutter, and a bolt mounted in the hollow of the standard for adjusting the facing cutters.



3. In an implement for seating valves, a hollow standard, having a mortise through it laterally near the lower end, a pilot nut screwed onto the lower end of the standard and having depressions in the surface to form escapes for chips, a reseating cutter mounted on the standard above the pilot nut, a clamping block in the mortise, facing cutters mounted in the mortise above the clamping block and the reseating cutter, a collar having mortises to pass over the facing cutters, a set screw passing up through the lower end of the standard to bear upon the clamping block to hold the facing cutters to place, and a bolt within the hollow of the standard to adjust the facing cutters laterally to the width of the ledge of the valve seat.

1,022,039. BLUE-PRINTING MACHINE. FERDINAND F. METZGER, Philadelphia, Pa., assignor to Williams, Brown and Earle, Inc., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Mar. 8, 1911. Serial No. 613,046. (Cl. 95—75.)



1. In a blue printing machine, standards, a normally vertically inclined shiftable bed, means for pivotally supporting the bed to said standards, light emitting bodies, and means whereby said bodies are pivotally supported from said standards on one side of said bed and are adapted to be shifted over said bed to allow said bed to be shifted into a substantially horizontal position.

2. In a blue printing machine, standards, a normally vertically inclined shiftable bed, a framing for said bed pivotally connected with said standards, means connected with said standards to lock said bed in its vertically inclined shifted position, light emitting bodies, and means whereby said bodies are adapted to be pivotally supported from said standards and to be shifted beyond said bed so as to permit the latter to assume a horizontal position.

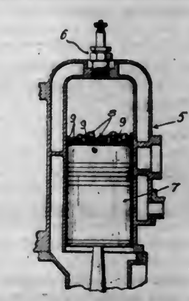
3. In a blue printing machine, standards, a normally vertically inclined bed, a framing for said bed and pivotally supporting the same from said standards and arranged so as to be shifted into a horizontal position, means connected with said standards for engaging said framing to lock said bed in its vertically inclined position, light emitting bodies, means connected with said standards whereby said bodies are supported therefrom, and means connected with said standards and adapted to engage the supporting means of said light emitting bodies to limit the position of the same.

4. In a blue printing machine, standards, a normally vertically inclined bed, a framing for said bed and supporting the bed from said standards so as to permit of the shifting of the bed into a substantially horizontal position, a framing connected with said standards, light emitting bodies arranged in series and carried by said framing, and means connected with said standards and coöperating with said framing to limit position of said bodies with respect to that of said bed.

5. In a blue printing machine, standards, a normally vertically inclined bed, means for pivotally supporting the bed from said standards so as to permit it to be shifted into a substantially horizontal position, a framing connected with said standards, light emitting bodies in series arrangement carried by said framing, and means connected with said standards and adapted to engage said framing to control the operative position of said bodies with respect to that of said bed.

[Claims 6 to 27 not printed in the Gazette.]

1,022,040. MEANS FOR REMOVING CARBON FROM ENGINE-CYLINDERS. EUGENE S. MICHENER, New Castle, Pa. Filed May 31, 1910. Serial No. 564,255. (Cl. 83—64.)



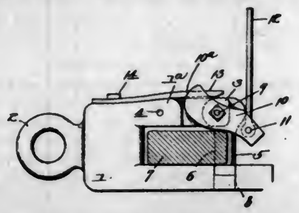
1. A cleaner comprising a chain, and arcuate helical wire elements loosely mounted on the terminal links of the chain and adapted to slide in either direction on said links.

2. A cleaner comprising a chain having a plurality of rings, loosely connected to each other, each ring being formed of a single strand of wire bent to provide a series of convolutions, and arcuate helical wire elements loosely mounted on the terminal rings of the chain and adapted to slide in either direction on said terminal links.

1,022,041. SAFETY-CLEVIS. JOSEPH MIRON, Wabeno, Wis. Filed July 21, 1911. Serial No. 639,889. (Cl. 21—75.)

1. In a device of the character described, the combination of a clevis, a main lever pivoted upon one arm of the

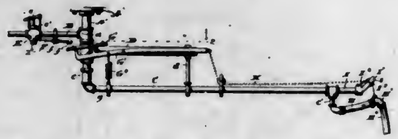
clevis, a draft pin carried by the main lever and adapted to engage the opposite arm of the clevis, a whiffletree arranged within the clevis so as to bear against the draft pin, and a releasing lever carried by the main lever and adapted to bear against the whiffletree to move the main lever and withdraw the draft pin from operative position.



2. In a device of the character described, the combination of a clevis, a main lever pivoted upon one arm of the clevis, a draft pin pivotally mounted within the main lever and adapted to engage the opposite arm of the clevis, yielding means normally holding the main lever and draft pin in operative position, a whiffletree received within the clevis so as to bear against the draft pin, and a releasing lever pivotally mounted upon the main lever at a point between its ends, one end of the releasing lever being formed with a cam portion adapted to bear against the whiffletree to force the main lever outwardly and withdraw the draft pin from operative position.

3. In a device of the character described, the combination of a clevis formed with a long arm and a short arm, a main lever pivotally mounted within the short arm of the clevis, a draft pin pivotally mounted upon the main lever and adapted to engage the long arm of the clevis, the said draft pin being formed with a cam, a leaf spring extending from the main lever so as to hold the same yieldingly in normal position, the end of the leaf spring cooperating with the cam of the draft pin for normally holding the draft pin in such a position as to engage the long arm of the clevis when moved toward the same, a whiffletree received within the clevis so as to bear against the draft pin, and a releasing lever pivoted upon the main lever and formed with a cam adapted to engage the whiffletree to force the main lever outwardly and withdraw the draft pin from operative position.

1,022,042. VEHICLE-WASHER. EDWARD MULLER, East New Durham, N. J. Filed June 8, 1911. Serial No. 632,062. (Cl. 137—14.)



1. In a vehicle washer, a water supply pipe, a flexible hose connected to said water supply pipe, a valve controlling the passage of water from said water supply pipe to said hose, an actuating member for said valve, means tending to shift said actuating member to a position to effect the closing of the valve, a rotary sheave positioned between the valve actuating member and the hose, means for preventing movement of said sheave in one direction, and a flexible connection between said actuating member and said hose, said flexible connection having an intermediate portion wound around said sheave.

2. In a vehicle washer, a water supply pipe, a flexible hose connected to said water supply pipe, a valve controlling the passage of water from said water supply pipe to said hose, an actuating member for said valve, means tending to move said actuating member to a position to effect the closing of the valve, a sheave rotatably supported between said valve actuating member and said hose, a ratchet wheel rotatable with said sheave, a pawl normally engaging said ratchet wheel to prevent rotation of said sheave in one direction, said pawl being movable to a position to permit rotation of the sheave in both directions, and a flexible connection between said valve actuating member and said hose, said flexible connection having an intermediate portion wound around said sheave.

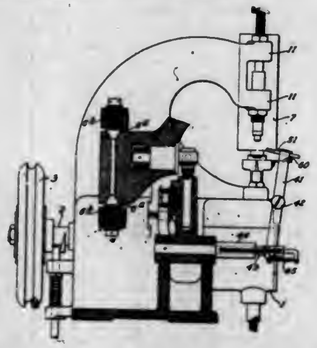
3. In a vehicle washer, a water supply pipe, a delivery pipe rotatably connected with said water supply pipe, a valve controlling the passage of water from said water supply pipe to said delivery pipe, a flexible hose connected to said delivery pipe, an actuating member for said valve rotatable with said delivery pipe, means tending to hold said actuating member in a position to effect closing of the valve, a sheave rotatably supported on said delivery pipe, means for normally preventing rotation of said sheave in one direction, and a flexible connection between said valve actuating member and said hose, said flexible connection having an intermediate portion wound around said sheave.

4. In a vehicle washer, a water supply pipe, a delivery pipe rotatably connected with said water supply pipe, a valve controlling the passage of water from said water supply pipe to said delivery pipe, a flexible hose connected to said delivery pipe, an actuating member, for said valve rotatable with said delivery pipe, means tending to hold said actuating member in a position to effect closing of the valve, a sheave rotatably supported on said delivery pipe, a ratchet wheel rotatable with said sheave, and a pawl engaging said ratchet wheel to normally prevent rotation of said sheave in one direction, said pawl being movable to a position to permit rotation of the sheave in both directions, and a flexible connection between said valve actuating member and said hose, said flexible connection having an intermediate portion wound around said sheave.

5. In a vehicle washer, a fixed water supply pipe, a delivery pipe rotatably connected to said fixed water supply pipe, a valve in the fixed water supply pipe, a lever rotatable with the delivery pipe, connections between the valve and lever whereby the valve can be actuated by the lever in any position of the delivery pipe, means tending to hold said lever in a position to effect opening of the valve, a hose connected to the end of said rotatable delivery pipe, a rotatable sheave carried by the delivery pipe, means for normally preventing rotation of said sheave in one direction, and a flexible connection between said lever and the flexible hose, said flexible connection having a portion wound around said sheave.

[Claim 6 not printed in the Gazette.]

1,022,043. MACHINE FOR COVERING EYELETS. LORENZ MUTHER, Boston, Mass. Filed Feb. 21, 1907. Serial No. 358,610. (Cl. 18—37.)



1. In a machine for covering eyelets, upper and lower forming dies; means for feeding eyelets to said forming dies; means to contain and indirectly heat disks of covering material; a carrier for feeding said disks of covering material to the forming dies one at a time; yielding means mounted in both said forming dies for positioning and holding said disks in place; and means causing said forming dies to coöperate to form and press the covering material upon the head of an eyelet.

2. In a machine for covering eyelets, upper and lower forming dies; means for feeding eyelets to said forming dies; means to contain and indirectly heat disks of covering material; a carrier for feeding said disks of covering material to the forming dies one at a time, and for positioning and holding said disk in place; means for causing said forming dies to co-act to form and press the covering material upon the head of an eyelet; means for removing the covered eyelet from the forming dies; and means for clamping the covered eyelet, carrying it away from the path of the covering means, and for releasing it from said removing means.

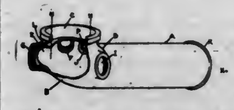
3. A machine for covering eyelets comprising upper and lower forming dies; means for operating said dies to press a disk of covering material upon an eyelet; means for feeding eyelets to said forming dies, comprising a hopper to contain said eyelets and a raceway for conveying the eyelets to one of said forming dies; and means for agitating the hopper at certain points in the movement of the dies and for causing the hopper to remain at rest at certain other portions of the movement of said forming dies.

4. In a machine for covering eyelets, a frame; a shaft revolubly mounted in said frame; an upper forming die yieldingly mounted in said frame; a lower forming die slidably mounted in said frame; means on said shaft for moving said lower die axially to cause it to coöperate with said upper forming die to cover an eyelet with a disk of previously heated flexible covering material.

5. In a machine for covering eyelets, a frame; a shaft revolubly mounted in said frame; an upper forming die yieldingly and adjustably mounted in said frame; a lower forming die slidably mounted in said frame; means on said shaft for moving said lower forming die axially; means for feeding eyelets to said forming dies; means for feeding disks of covering material to said forming dies; and means whereby said forming dies coöperate to form and press the covering material upon the head of the eyelet; and means for removing the eyelet from the forming dies.

[Claims 6 to 11 not printed in the Gazette.]

1,022,044. WATER-CLOSET BEND. BEN OAKES, Detroit, Mich. Filed Apr. 26, 1911. Serial No. 623,547. (Cl. 137—75.)



1. A water closet bend comprising a horizontal soil pipe portion with an outlet opening, and an upturned portion with a main inlet opening, openings for the connecting of waste pipes entering the heel and sides of said elbow portion, said bend having an expanded portion extending around the upturned elbow from the said openings for waste pipes to and terminating in the top portion of the bore of the horizontal portion between the junction of the horizontal portion and the up-turned elbow, and the outlet end, said expanded portion forming a by-passage for air to circulate around the main vertical flow to the openings for waste pipes from the top portion of the bore of the horizontal portion, said by-pass running horizontally around the up-turned portion between the plane of the axis of the bore of the horizontal portion and the plane of the top of the bore of the horizontal portion; means for receiving a main inlet pipe, as and for the purpose described.

2. A water closet bend comprising a horizontal soil pipe portion with an outlet opening and an up-turned portion with a main inlet opening, said bend having a part of its upturned portion expanded, forming an annular air chamber around the main inlet opening between the walls of said expanded part and the main inlet flow, said annular air chamber being between the plane of the axis of the bore of the horizontal soil pipe portion and the plane of the top of the bore of the horizontal soil pipe portion and terminating in the top of the bore of said horizontal soil pipe portion, said waste openings entering and discharging direct into said annular air chamber, around the outer line of the main vertical flow, as said flow passes into the up-turned portion before said flow is deflected by the turn of the bend into the horizontal soil pipe portion, the orifice of said openings for waste pipes being free from the main vertical flow as it passes through the up-turned portion; means for receiving a main inlet pipe, as and for the purpose described.

3. A water closet bend comprising a horizontal portion with an outlet opening, and an up-turned portion with a main inlet opening, said bend so constructed that the end of the main inlet discharges into an enlarged section in the upper portion of the up-turned portion, said enlarged section being above the plane of the axis of the bore of the horizontal soil pipe portion, and extending horizontally around the up-turned elbow portion, below the plane of the top of the bore of the horizontal soil pipe portion, openings for waste pipe connections entering said enlarged section, said enlarged section forming an air chamber extending from said openings for waste pipes around the main vertical flow, said air chamber terminating in the top of the bore of the horizontal soil pipe portion, between the neck of the bend and the outlet end; means for receiving a main inlet pipe, as and for the purpose described.

4. A water closet bend comprising a horizontal soil pipe portion with an outlet opening and an up-turned portion with a main inlet opening, provided with a hub for calking, openings for waste pipe connections entering into an expanded body portion extending horizontally around the up-turned portion between the plane of the axis of the bore of the horizontal soil pipe portion and the plane of the top of the bore of the horizontal portion, from said waste openings to and terminating in the top portion of the bore of said horizontal portion, said main inlet opening directing the main vertical flow through said expanded body portion, said expanded body portion forming an annular chamber for air to pass around said vertical flow between the outer perpendicular line of said vertical flow and the inner walls of said expanded body portion, said opening for waste pipe connections entering and discharging direct into said annular air chamber around and free from the said vertical flow, before said vertical flow is deflected by the turn in the bend into the horizontal soil pipe portion, said annular air chamber having communication with the main soil and vent line, as and for the purpose described.

5. A water closet bend having a horizontal portion with an outlet and an up-turned portion with a main inlet, said main inlet having its discharge end enter into the top of an annular air chamber formed around the up-turned portion of the bend, and directing the main vertical flow through the center of said annular air chamber, said annular air chamber being below the plane of the top of the bore of the horizontal portion, and above the plane of the axis of the bore of the horizontal soil pipe portion, said annular air chamber terminating in the top portion of the bore of the horizontal soil pipe portion, openings for waste pipe connections entering the walls of said air chamber around the vertical flow through said air chamber, before said vertical flow is deflected into the horizontal soil pipe portion by the turn in the bend, said annular air chamber having communication with the main vertical vent line; means for receiving a main inlet pipe, as and for the purpose described.

1,022,045. CAN-NOZZLE SEAL. HENRY W. PHELPS, Yonkers, N. Y., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Jan. 11, 1912. Serial No. 670,710. (Cl. 70—100.)

1. The seal for can nozzles, consisting of a strip of sheet metal perforated to pass over the screw cap down

to the flange thereof, having the tail to be bent over the corner and soldered to the side of the can, and having a weakened line for severing from the can, substantially as specified.



2. The seal for can nozzles, consisting of a strip of sheet metal perforated to pass over the screw cap down to the flange thereof, having the tail to be bent over the corner and soldered to the side of the can, and having weakened lines for severing from the can, at each side of the nozzle, substantially as specified.

1,022,046. SHUTTLE. CHARLES POMMIER, Passaic, N. J. Filed Dec. 13, 1911. Serial No. 665,592. (Cl. 139—89.)



1. In a shuttle, a longitudinally recessed spindle pivotally supported therein, expandible flaps integral with said spindle, means slidably arranged in said spindle to act against said flaps, and a resilient tong-shaped member having at one end an aperture whereby it is adapted to be removably applied to the said spindle, said member being adapted to be acted upon by said expandible flaps.

2. In a shuttle, a longitudinally recessed spindle pivotally supported therein, expandible flaps integral with the said spindle, means slidably arranged in said spindle to act against said flaps and a resilient member having V-shaped bends and adapted to be removably applied to said spindle and to be acted upon by the said expandible flaps.

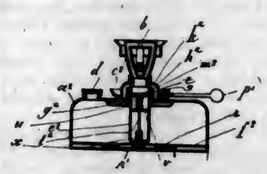
3. In a shuttle, a longitudinally recessed and tapered spindle pivotally supported therein, expandible flaps integral with the said spindle, means slidably arranged in the said spindle to act against said flaps and a resilient tong-shaped member having an aperture at its forward end to engage the pointed end of said spindle and V-shaped bends, said strip being adapted to be removably applied to said spindle and to be acted upon by the said expandible flaps.

4. In a shuttle, the combination with an expandible tapered spindle having notches at its rear end, of a resilient tong-shaped member having at its forward end an aperture to engage the pointed end of the said spindle, noses at its rear ends to engage said notches and V-shaped bends, said strip being adapted to be removably applied to the said spindle and to be acted upon by the same when expanded.

1,022,047. PROCESS OF TREATING THE ROOT OF CHICORY. RICHARD PORATH, Pyritz, Germany. Filed Apr. 25, 1911. Serial No. 623,298. (Cl. 99—11.)

The hereindescribed process of treating chicory roots, which consists in reducing raw chicory roots to a pulp, separating the sap or juice from the pulp, drying the remaining pulp, and then roasting and grinding the same.

1,022,048. STOVE AND LAMP. HANS ADOLF VON POST, Stockholm, Sweden, assignor to Aktiebolaget Pyro, Stockholm, Sweden, a Limited Company. Filed May 15, 1909. Serial No. 496,281. (Cl. 158—32.)



1. In a device of the class described, the combination with a tank of a burner in communication therewith, a receptacle communicating with said tank and adapted to contain a substance which is volatilized by heat to produce pressure within the tank, said receptacle being normally free from communication with the atmosphere, said receptacle being connected to the burner by heat conducting material, whereby it will be heated thereby, and means for introducing the substance into said receptacle.

2. In a device of the class described, the combination with a tank of a burner in communication therewith, a receptacle communicating with said tank and adapted to contain a substance which is volatilized by heat to produce pressure within the tank, said receptacle being normally free from communication with the atmosphere, said receptacle being connected to the burner by heat conducting material, whereby it will be heated thereby, and means for introducing the substance into said receptacle, said means comprising an initial lighting device.

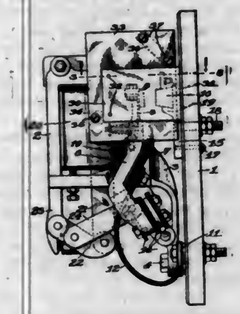
3. In a device of the class described, the combination with a tank of a burner in communication therewith, a receptacle communicating with said tank and adapted to contain a substance which is volatilized by heat to produce pressure within the tank, said receptacle being normally free from communication with the atmosphere, said receptacle being connected to the burner by heat conducting material, whereby it will be heated thereby, an initial lighting device operatively associated with said burner, and means for placing said initial lighting device in communication with said receptacle, the capacity of the initial lighting device being so proportioned that the combustible fluid will be evaporated within the burner while the initial lighting flame is still burning.

4. In a device of the class described, the combination with a tank of a wickless burner, a pipe communicating with said burner and extending into said tank, a receptacle supported by said pipe and communicating with said tank, said receptacle being adapted to contain a substance which is volatilized by heat to produce pressure within the tank, said receptacle being normally free from communication with the atmosphere, an initial lighting device operatively associated with said burner, and means for placing said initial lighting device in communication with said receptacle.

5. In a device of the class described, the combination with a tank of a wickless burner, a pipe communicating with said burner and extending into said tank, a receptacle supported by said pipe and communicating with said tank, said receptacle being adapted to contain a substance which is volatilized by heat to produce pressure within the tank, said receptacle being normally free from communication with the atmosphere, a second receptacle adapted to receive an igniting fluid, said second mentioned receptacle being positioned between said burner and said first mentioned receptacle, and means for placing said receptacles in communication with one another.

[Claims 6 to 8 not printed in the Gazette.]

1,022,049. ELECTRIC SWITCH. GUSTAVE B. REISBACH, Milwaukee, Wis. Filed July 25, 1910. Serial No. 573,650. (Cl. 175—281.)



1. In an electric switch, in combination, a stationary contact and a coöperating movable contact, a magnetic plate supported and retained in place by one of said contacts and having substantially parallel extensions disposed on opposite sides of said contacts, the current traversing said contacts inherently producing a magnetic field between said extensions, and an insulating chute or barrier arranged between and supported by said extensions, said chute or barrier having an obliquely disposed arc deflector.

2. In an electric switch, in combination, a stationary contact and a coöperating movable contact, a magnetic plate supported by one of said contacts and having substantially parallel extensions disposed on opposite sides of said contacts, the current traversing said contacts inherently producing a magnetic field between said extensions, and an insulating chute or barrier arranged between and supported by said extensions, said chute or barrier having an obliquely disposed arc deflector, said magnetic plate and said chute or barrier being removable from the switch as an integral structure and being retained in place solely by its engagement with said stationary contact.

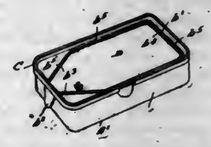
3. In an electric switch, in combination, a stationary contact and a coöperating movable contact, a magnetic plate supported by one of said contacts and having substantially parallel extensions disposed on opposite sides of said contacts, the current traversing said contacts inherently producing a magnetic field between said extensions, and an insulating chute or barrier arranged between and supported by said extensions, said chute or barrier having an obliquely disposed arc deflector, said magnetic plate and said chute or barrier being adapted to be removed from the switch as an integral structure and to be retained in place solely by its engagement with said stationary contact, said magnetic plate having a sliding engagement with said contact.

4. In an electric switch, in combination, vertically disposed coöperating switch contacts, a magnetic plate fitting between one of said contacts and its supporting member and having substantially parallel extensions disposed on opposite sides of said contacts, the current traversing said contact inherently producing a magnetic field between said extensions, and insulating plates secured to the inner faces of said extensions to form an insulating chute or barrier, said plates being of greater dimensions than said extensions.

5. In an electric switch in combination, coöperating contacts, one of said contacts being stationarily mounted and provided with a recessed portion, a magnetic plate fitting in the recessed portion of said stationary contact and supported by said contact, said magnetic plate having substantially parallel extensions disposed on opposite sides of said coöperating contacts, the current traversing said contact inherently producing a magnetic field between said extensions to extinguish arcs drawn between said contacts, and insulating plates secured to the inner faces of said extensions to form an insulating tube or barrier.

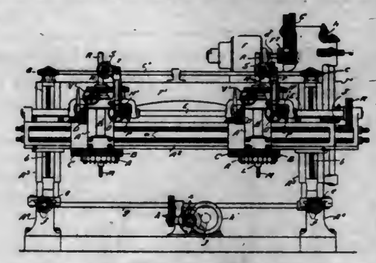
[Claims 6 and 7 not printed in the Gazette.]

1,022,050. KEY-OPENING CAN. FRANK RUDOLPHI, Chicago, and SWAN TEVANDER, Maywood, Ill., assignors to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Mar. 30, 1907. Serial No. 365,492. (Cl. 220—65.)



In a key opening can, the combination with a can body having a seaming flange, of a can cover having a seaming flange and provided with an integral tongue having a wide base where the same joins the cover flange, said body and cover flanges being interfolded to form a double seam and extending across the base portion of the tongue, said cover having a central flat portion located within the seaming flange and provided with weakened or scored lines extending across said flat portion and located entirely within the double seam and ending in divergent lines, the terminals of said end portions being located opposite the base of the tongue and spaced apart a distance less than the width of the base of the tongue, said cover having also a raised stiffening rib outside of and closely adjacent to said weakened or scored lines and terminating at the ends of said lines, substantially as specified.

1,022,051. MILLING AND BORING MACHINE. CHARLES FREDERICK SHANKS, Johnstone, Scotland. Filed Nov. 15, 1911. Serial No. 660,356. (Cl. 29—33.)



1. In a milling and boring machine, the combination with supporting ways, A^4, of a traveling frame-work comprising end standards and a frame-piece or cross-bar, A^2, connecting said standards, bracket members adjustably mounted on said frame-piece or cross-bar, milling devices rotatably supported by said bracket members, rotating boring devices also supported by said bracket members and arranged co-axially with said milling devices, means for causing said frame-work to travel on said supporting ways, means for adjusting said frame-piece or cross-bar A^2 vertically on the said end standards, and driving means for rotating said milling and boring devices.

2. A milling and boring machine comprising in combination a framework adapted to be moved in a horizontal plane, said framework including end standards, a frame extending transversely of said standards and adjustable vertically relatively thereto, bracket members adjustably connected to said frame, milling devices rotatable on vertical axes and mounted on said bracket members, and boring devices mounted on said bracket members arranged co-axially with said milling devices.

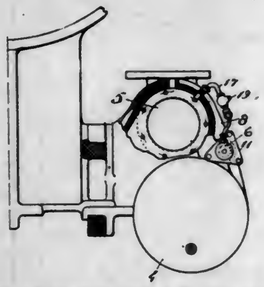
3. A milling and boring machine comprising in combination, a framework adapted to be moved in a horizontal plane, said framework including end standards, a frame extending transversely of said standards and adjustable vertically relatively thereto, bracket members adjustably connected to said frame, milling cutter wheels rotatable on vertical axes and mounted on said bracket members and adjustable axially relatively to said bracket members, and boring devices mounted on said bracket members arranged co-axially with said milling devices.

4. In a milling and boring machine, the combination with supporting ways, A^4, of a traveling frame-work comprising end standards and a frame-piece or cross bar, A^2, connecting said standards, bracket members adjustably mounted on said frame-piece or cross-bar, milling devices rotatably supported by said bracket members, rotating boring devices also supported by said bracket members and arranged co-axially with said milling devices, means for causing said frame-work to travel on said supporting ways, means for adjusting said frame-piece or cross-bar A^2 vertically on the said end standards, means for adjusting said bracket members horizontally on said frame-piece or cross-bar, independent feeding mechanisms for the milling and boring devices, and driving means for rotating said milling and boring devices.

5. In a milling and boring machine, the combination with supporting ways, A^4, of a traveling frame-work comprising end standards and a frame-piece or cross-bar, A^2, connecting said standards, bracket members adjustably mounted on said frame-piece or cross-bar, milling devices rotatably supported by said bracket members, rotating boring devices also supported by said bracket members and arranged co-axially with said milling devices, means for causing said frame-work to travel on said supporting ways, means for adjusting said frame-piece or cross-bar A^2 vertically on the said end standards, and driving means for rotating said milling and boring devices, said driving means comprising a driven shaft, E, with which said milling and boring devices have independent connections so that the boring devices may be at rest when the milling devices are in operation, and vice versa, and the operating mechanism of the boring devices comprising reversing gearing.

[Claim 6 not printed in the Gazette.]

1,022,052. DRIFTING DEVICE FOR LOCOMOTIVES. PATRICK SHEEDY, Los Angeles, Cal. Filed June 27, 1911. Serial No. 635,664. (Cl. 121—117.)



1. A locomotive cylinder having a circulating conduit cast with the cylinder, and having a cored port communicating directly between the end of said circulating conduit and the cylinder.

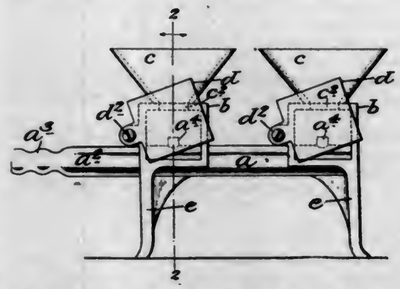
2. A locomotive cylinder having a circulating conduit cast with the cylinder and a cored port communicating directly between the end of said circulating conduit and cylinder, and a controlling valve attached at each end directly to the conduit.

3. An engine cylinder having a by-pass from one end of the cylinder to the other end, said by-pass being integral with the cylinder casting, and a valve at each end of the by-pass, so located and arranged that when the engine is running free the steam or air within the cylinder will exhaust from one end of the cylinder to the other through said by-pass.

4. An engine cylinder having a by-pass from one end of the cylinder to the other end, integral with the cylinder casting, a valve at each end of the by-pass so arranged that when the engine is running free the steam or air within the cylinder will exhaust back and forth from end to end through the by-pass, and a high pressure steam connection leading to and adapted to normally seat each valve in the by-pass.

5. The combination with a locomotive cylinder, of a circulating conduit covered through the cylinder body, and provided with a port at each end of the cylinder communicating with the circulating conduit, a valve at each end connected directly with and seated against the ends of the conduits, the valve stem having a piston with a retractile spring to unseat the valve, and a pipe connection with the steam chest of the cylinder to normally seat said controlling valve.

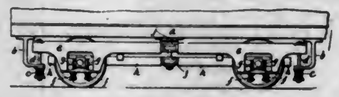
1,022,053. FIRE-LIGHTING DEVICE. PETER C. TRUELSEN and ADOLF SIMONSEN, Glendale, N. Y. Filed Nov. 13, 1911. Serial No. 660,137. (Cl. 158—10.)



1. A fire lighting device comprising a pipe one end portion of which is provided on the top thereof with gas and air mixing chambers above which are burners, said chambers being provided with means for admitting air thereto, comprising doors pivoted at one side thereof and adapted to be adjusted into different positions, the other end portion of said pipe being provided with an extension which forms a handle and with which a gas hose may be connected.

2. A fire lighting device comprising a pipe provided on the top of one end portion thereof with gas and air mixing chambers above which are burners, said chambers being open at one side and provided with pivoted doors adapted to be adjusted into different positions, the other end portion of said pipe being provided with an extension which forms a handle and with which a gas hose may be connected, and said device being also provided with legs for supporting it in operative position.

1,022,054. AXLE-TRUCK OR UNDERCARRIAGE FOR RAILWAY, TRAMWAY, AND MINING VEHICLES. JAMES SUTHERLAND WARNER, Forest Gate, England. Filed Oct. 18, 1909. Serial No. 523,337. (Cl. 105—243.)



1. In a railway, tramway or mining truck, the combination of a "minor" frame, a "major" frame supported on links from the "minor" frame, a body suspended on links from the "major" frame, and a king pin, or king pins, about which the frames and the body can rotate, relatively to each other.

2. In a railway, tramway or mining truck, the combination with a body, major frame, and minor frame, of links of distinctly different lengths supporting respectively said body from said major frame, and said major frame from said minor frame.

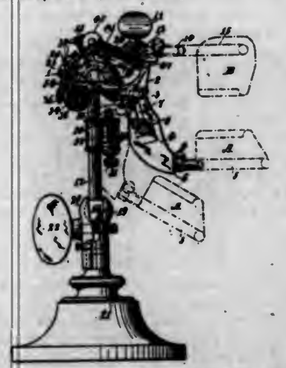
3. In a railway, tramway or mining truck, the combination with a body and a major frame, of links of distinctly different lengths supporting said body from said major frame.

4. In a railway, tramway or mining truck, the combination with a major frame, of a body oscillatable about a center, and links disposed at different distances from the center of oscillation and supporting said body from said major frame.

5. In a device of the character described, the combination with a major frame, of a minor frame, means for swingingly suspending one of said frames from the other, a vehicle body, and means for swingingly suspending said vehicle body from one of said frames.

[Claims 6 to 9 not printed in the Gazette.]

1,022,055. ARTIFICIAL-TEETH ARTICULATOR. MARCELINO WEISS, Habana, Cuba. Filed July 19, 1911. Serial No. 639,274. (Cl. 32—1.)



1. In a dental articulator a stationary part representing the upper jaw and provided with two cavities, a movable part representing the lower jaw and provided with knuckle-shaped ends fitting said cavities and freely movable therein, resilient means yieldingly connecting said two parts, and means on said parts adapted to hold the plaster casts.

2. In a dental articulator, a stationary part representing the upper jaw and provided with two cavities, a movable part representing the lower jaw and provided with knuckle-shaped ends fitting said cavities, resilient means yieldingly connecting said two parts, a holding member removably secured to said stationary part, brackets adjustably secured to said movable part, and a holding member removably secured to said brackets, both said holding members adapted to hold the plaster casts.

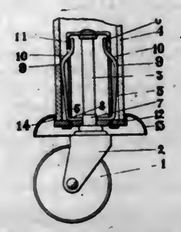
3. In a dental articulator a stationary part representing the upper jaw and provided with two cavities, a movable part representing the lower jaw and provided with knuckle-shaped ends fitting said cavities, resilient means yieldingly connecting the said two parts, a support adjustably secured to said stationary part, brackets adjustably secured to said movable part, and a holding member fitted to each said support and said brackets for carrying the plaster casts, and means for removably securing said holding members to said support and said brackets.

4. In a dental articulator a stationary part representing the upper jaw and provided with two cavities, a movable part representing the lower jaw and provided with knuckle-shaped ends fitting said cavities, and helical springs connecting said two parts, and means on said two parts for holding the plaster casts.

5. In a dental articulator a stationary part representing the upper jaw and provided with two cavities, a movable part representing the lower jaw and provided with knuckle-shaped ends fitting said cavities, resilient means yieldingly connecting said two parts, means on said two parts for holding the plaster casts, and coiled springs arranged on said stationary part and bearing against said movable part to hold the same in its normal position relative to said stationary part.

[Claims 6 to 14 not printed in the Gazette.]

1,022,056. CASTER. EDGAR W. BASSICK, Bridgeport, Conn., assignor to The M. B. Schenk Co., Meriden, Conn. Filed Dec. 6, 1911. Serial No. 664,289. (Cl. 16—4.)



1. In a bed caster for a hollow metallic leg, a leg ornament having an apron or member adapted to cover portions of said leg, having down turned, friction members adapted to co-act with the exterior of the leg for securing purposes, said caster having a projecting member adapted to support said ornament and prevent its being pushed off from the bottom of said leg.

2. In a bed caster for a hollow metallic leg, a leg ornament having an apron or member adapted to cover portions of said caster, having down turned, friction members adapted to co-act with the exterior of the leg for securing purposes, said caster having a projecting member adapted to support said ornament and prevent its being pushed off from the bottom of said leg.

3. In a bed caster for a hollow metallic leg, a leg ornament having an apron or member adapted to cover portions of said leg and caster having down turned, friction members adapted to co-act with the exterior of the leg for securing purposes, said caster having a projecting member adapted to support said ornament and prevent its being pushed off from the bottom of said leg.

4. In a bed caster for a hollow metallic leg, a leg ornament having an apron or member adapted to cover portions thereof, having down turned, friction members adapted to co-act with the exterior of the leg for securing purposes, said caster having a projecting member adapted to support said ornament and prevent its being pushed off from the bottom of said leg, said projecting member forming a part of a supporting disk of said caster.

1,022,057. INCANDESCENT ELECTRIC LIGHTING. WILLIAM L. BLISS, Brooklyn, N. Y. Filed Oct. 20, 1905. Serial No. 283,570. (Cl. 175—281.)

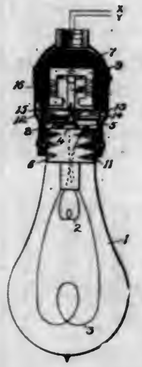
1. An incandescent electric lighting apparatus comprising a base, a main spring contact having a branch arm, a short-circuiting spring contact having an arm, and magnetically operable means for connecting said arms.

2. In an incandescent lamp socket, a base, a spring arm having a centrally located terminal, a second spring arm having an eccentrically located terminal, and an annular terminal.

3. In an incandescent lamp socket, a base, a spring arm having a terminal disk, a second spring arm having a terminal disk, and a spring branch integral with each arm, said branches being adapted to be connected.

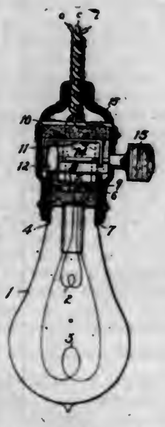
4. In an incandescent electric lighting apparatus, a socket member having a screw-threaded terminal and two spring arm contacts, and a removable lamp having two filaments connected in series, a screw-threaded terminal

connected to one filament, a plate connected to the other filament and an annular terminal common to both filaments, said screw-threaded socket terminal engaging the screw-threaded lamp terminal, and said contacts engaging said plate and said annular terminal respectively.



5. In an incandescent lighting system, a distributing circuit, a lamp socket connected thereto and having three contacts for engagement by lamp terminals, and a polarized relay switch in said socket for connecting two of said contacts when the current flows in one direction in the circuit.

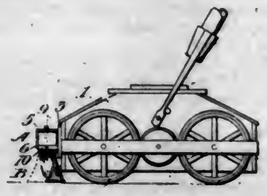
1,022,058. ELECTRICAL APPARATUS. WILLIAM LORD BLISS, Brooklyn, N. Y. Filed Nov. 1, 1906. Serial No. 341,534. (Cl. 176—27.)



1. An incandescent electric lighting apparatus, comprising a socket having three terminals, a three-wire conductor connected to said terminals, a switch in said socket adapted to control the circuit to one of said terminals, and a removable bulb having a plurality of filaments of different resistances with fixed concentric terminals adapted to be connected to said socket terminals.

2. Incandescent electric lighting apparatus comprising a socket having a threaded terminal and two yielding terminals and a removable bulb member having two filaments, an exterior terminal for one filament, a central terminal for the other filament, one of said two latter terminals being threaded, and an annular terminal common to both filaments, the two yielding socket terminals engaging the annular bulb terminal and the non-threaded bulb terminal respectively.

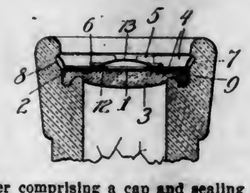
1,022,059. CARPET-SWEEPER ATTACHMENT. AMBROSE K. BRETTELLE, Chicago, Ill. Filed Feb. 21, 1911. Serial No. 610,032. (Cl. 15—60.)



1. A brush attachment for carpet sweepers comprising, in combination with the sweeper casing, external brush supports carried with the casing, a self-adjusting brush having a limited vertical and lateral movement within said supports, and retaining means for detachably holding the brush within said supports.

2. A brush attachment for carpet sweepers, comprising, in combination with the sweeper casing, external brush supporting keepers each consisting of a pair of reversely arranged angle arms, and a self-adjusting brush mounted in said keepers.

1,022,060. STOPPER. HARRY M. BROWN, Brooklyn, N. Y., assignor to Richard A. Canfield, Providence, R. I. Filed Oct. 18, 1911. Serial No. 655,405. (Cl. 215—17.)



1. A stopper comprising a cap and sealing medium carried thereby, and a locking-ring surmounting the cap and having web-connection at one end therewith, said locking-ring having an upstanding locking-flange with the corner at its attached end relieved, for the purpose set forth.

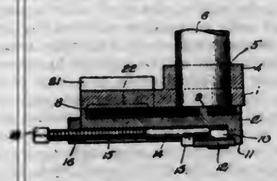
2. A stopper comprising a cap and sealing medium carried thereby, and a tab-equipped locking-ring surmounting the cap and having an upstanding locking-flange with a web joining its upper edge at one end to the periphery of the cap, said locking-flange and web being depressed at their junction below the general level of the upper edge of the upstanding flange of the locking-ring.

3. A stopper comprising a cap fitted with a cork disk, and a surmounting locking-ring having an upstanding locking-flange with a web connecting its upper edge at one end to the periphery of the cap, the junction of the web and flange being depressed and slightly inclined, said locking-ring having a central tab attached to its free end.

4. A stopper comprising a cap fitted with a cork disk and provided with a centering embossment, an upflanged locking-ring surmounting said cap and having one end attached to the periphery of the cap said locking-ring adapted to engage an internal groove in the mouth of a bottle, and a central tab attached to the free end of the locking-ring and having a centering embossment co-acting with said first-named embossment.

1,022,061. ELECTRICALLY-HEATED BRANDING-HEAD. EDWIN N. CHANDLER, Brockton, Mass., assignor to Simplex Electric Heating Company, Boston, Mass., a Corporation of Massachusetts. Filed Nov. 25, 1910. Serial No. 594,011. (Cl. 101—24.)

1. An electrically heated branding head, comprising a plate, a fixed ledge projecting from one face thereof at one side, a projection adjustable centrally across said plate to co-act with said ledge as a die clamp, an electric resistance element extending in parallelism with said plate to heat a die carried thereby, and a heavy plate or block secured to said first plate having a socket therein substantially opposite a die carried by said first plate, said plates embracing between them said resistance element and together constituting a substantial mass of heat storing metal.



2. An electrically heated branding head, comprising a plate having a fixed ledge at one side, and a ledge to co-act therewith for clamping a die adjustable centrally across a face thereof, a heavy plate or block with a plunger receiving socket therein secured to said first plate so that said socket is at the same side of the head thus formed as said fixed ledge, and an electric resistance element extending flatwise of the head and embedded therein, the two plates forming said head constituting a substantial mass of heat storing metal, the parts being constructed and arranged so as to protect said resistance element from the operative thrusts of a plunger on said head.

3. A branding head, comprising a plate, a ledge projecting from the operative face thereof centrally of one side, an undercut channel formed centrally across said plate at right angles to said ledge, a follower adjustable in said channel and held therein by the under-cut sides thereof to co-act with said ledge to clamp a die, a resistance element lying parallel to said plate and embedded therein adjacent a die clamped thereon, and means to secure a plunger to said plate substantially in line with the die.

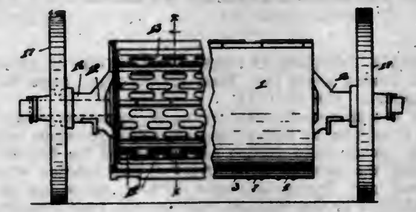
4. An electrically heated branding head, comprising a plate having a ledge projecting centrally at an edge of an operative face thereof, an undercut channel extending centrally across the plate at right angles to said ledge, a follower adjustable therein and held by the under-cut sides of said channel and adapted to co-act with said ledge to clamp a die, a resistance element embedded in said plate, and a second plate fixed to said first plate and having a socket to receive an operator.

5. An electrically heated branding head, comprising a pair of plates removably fixed together and constituting a substantial mass of heat-storing metal, one of said plates having its inner face dished out over substantially its entire area, a resistance element embedded therein, and extending in parallelism with a work receiving face of one of said plates, a plunger engaged with and extending through the other of said plates, a projection upstanding from the former plate to receive the thrust of said plunger and protect the embedded resistance element, an undercut channel extending across the outer face of the former of said plates centrally thereof and centrally beneath said plunger, a follower therein and held by the undercut face of said channel, and means coöperative therewith to clamp dies of varying sizes substantially in line with said plunger.

1,022,062. FERTILIZER-DISTRIBUTER. EUGENE CHRISTOPHER, Urbana, Ill. Filed Apr. 17, 1911. Serial No. 621,510. (Cl. 111—14.)

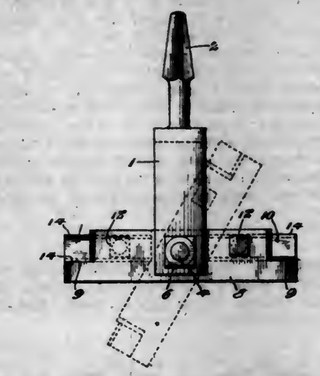
1. A fertilizer distributer comprising a receptacle, a shaft extending therethrough and mounted upon wheels to rotate therewith, a perforated cylinder fixedly mounted upon said shaft within said receptacle, and flanges arranged lengthwise of and spaced about the inner and outer sides of the cylinder.

2. A fertilizer distributer comprising a receptacle, a shaft extending through said receptacle and mounted upon wheels to rotate therewith, a perforated cylinder fixedly mounted upon said shaft and wholly within said receptacle, flange members spaced about the periphery of said cylinder and extending in close proximity with the side of the receptacle, a feed opening in the bottom of the receptacle, and means for controlling the feed opening.



3. A fertilizer distributer comprising an outer receptacle, a feed opening in the bottom of said receptacle, a perforated cylinder mounted to rotate within said receptacle, and flange members spaced about the periphery of said cylinder, whereby the fertilizer will be carried upwardly between the cylinder and receptacle and drop into the cylinder through its perforations at the top and out of its perforations at the bottom.

1,022,063. BOILER-CLEANER. EDWARD S. CLINE, Phoenixville, Pa. Filed Jan. 25, 1912. Serial No. 673,353. (Cl. 83—64.)



1. A device of the character described, comprising a support adapted to be connected to means for transmitting a rotary motion thereto, a bar pivoted between its ends to said support, said bar having grooves in its inner face at its ends, and cutters secured in said grooves, substantially as described.

2. A device of the character described, comprising a support adapted to be connected to means for transmitting a rotary motion thereto, a bar pivoted between its ends to said support, said bar having grooves in its inner face at its ends, cutters secured in said grooves, said bar being recessed at its ends, and said cutters at their outer ends projecting into the recesses in the bar, substantially as described.

3. A device of the character described, comprising a fork, a bar, said bar and said fork having registering openings, the openings in the bar being in the center thereof, a bolt projecting through said openings, a nut on one end of said bolt, said bar having recesses in its inner face at its ends, and longitudinal grooves communicating with said recesses, cutters located in said grooves, and projecting into the recesses, and means in the bar for securing the cutters in the grooves, substantially as described.

4. A device of the character described, comprising a fork, a bar, said bar and said fork having registering openings, the opening in the bar being in the center thereof, a bolt projecting through said openings, a nut on one end of said bolt, said bar having recesses in its inner face at

its ends, and longitudinal grooves ,communicating with said recesses, cutters located in said grooves, and projecting into the recesses, and means in the bar for securing the cutters in the grooves, said cutters having their outer and inner faces beveled, substantially as described.

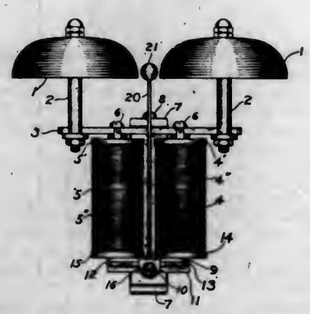
1,022,064. PROCESS OF PRESERVING WOOD. CHARLES H. CURTIS, Argos, Ind. Filed Apr. 10, 1911. Serial No. 620,091. (Cl. 99—12.)

1. The process of preserving wood, comprising preparing a solution by fusing together sodium carbonate and finely ground silica, cooling and pulverizing the frit, dissolving the same in water, treating said solution with chlorin gas; drying the wood by heat, immersing the dried wood in said solution, removing the wood from the bath and drying the same, and thereafter repeating the steps of immersing the wood in the solution and drying the same until the wood is impregnated to the desired degree.

2. The process of preserving wood, comprising preparing a solution by fusing together sodium carbonate and finely ground silica, cooling and pulverizing the frit, dissolving the same in water, treating said solution with chlorin gas; drying the wood by heat, immersing the dried wood in said solution, removing the wood from the bath and drying the same, and thereafter repeating the steps of immersing the wood in the solution and drying the same until the wood is impregnated to the desired degree, thereafter immersing said wood in a bath of dilute sulfuric acid under pressure, to render the silica insoluble, and then again drying the wood by heating.

3. The process of preserving wood, comprising preparing a solution by fusing together sodium carbonate 2 parts, and finely ground silica 1 part, cooling and pulverizing the frit, dissolving the same in water, treating said solution with chlorin gas; drying the wood by heat, immersing the dried wood in said solution, removing the wood from the bath and drying the same, and thereafter repeating the steps of immersing the wood in the solution and drying the same until the wood is impregnated to the desired degree.

1,022,065. RINGER. WILLIAM W. DEAN, Elyria, Ohio, assignor to The Dean Electric Company, Elyria, Ohio, a Corporation of Ohio. Filed July 11, 1910. Serial No. 571,493. (Cl. 177—7.)



1. In a ringer, the combination of a pair of gongs, a magnetic yoke, a pair of electro-magnets each consisting of a core, a spool and a coil mounted thereon, said magnets attached at one end to the magnetic yoke and arranged parallel to each other, a non-magnetic yoke connecting the other ends of the magnets, an armature pivoted to said non-magnetic yoke, means to attach said non-magnetic yoke directly to the heads of said spools, said means being accessible without removing the armature from the yoke, a clapper adapted to strike the gongs and a clapper rod carrying the same supported by the armature.

2. In a ringer, the combination of a pair of gongs, a magnetic yoke, a pair of electro-magnets each consisting of a core, a spool and a coil mounted thereon, said magnets attached at one end to the magnetic yoke and arranged parallel to each other, a non-magnetic yoke connecting the other ends of the magnets, an armature pivoted to said non-magnetic yoke, said non-magnetic yoke supported by said spools, either of said magnets being removable from said combination without disturbing the armature, a clapper adapted to strike the gongs and a clapper rod carrying the same supported by the armature.

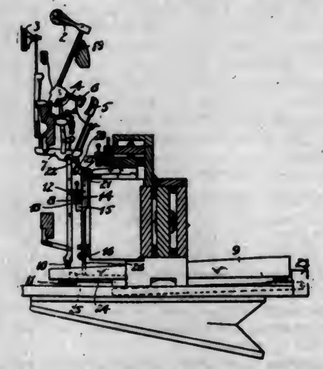
3. In a ringer the combination of a pair of gongs, a magnetic yoke, a pair of electro magnets, each consisting of a core, a spool and a coil mounted thereon, said magnets attached at one end to said magnetic yoke, a non-magnetic yoke connecting the other ends of the magnets, means to attach said yoke to the spool heads of the magnets, an armature mounted on said non-magnetic yoke and covering a portion of the area thereof, said means being applied to the area not covered by the armature and being removable without disturbing said armature, a clapper adapted to strike said gongs and a clapper rod carrying said clapper supported by said armature.

4. In a ringer the combination of a pair of gongs, a magnetic yoke, a pair of electro magnets, each consisting of a core, a spool and a coil mounted thereon, said magnets attached at one end to said magnetic yoke, a non-magnetic yoke connecting the other ends of the magnets, screws to attach said yoke to the spool heads of the magnets, an armature mounted on said non-magnetic yoke and when so mounted covering a portion of the area thereof, said screws being applied to the area uncovered by the armature and being removable without disturbing said armature, a clapper adapted to strike said gongs and a clapper rod carrying said clapper and supported by the armature.

5. In a ringer the combination of a pair of gongs, a magnetic yoke, a pair of electro-magnets each consisting of a core, a spool and a magnet winding, said magnets attached at one end to said magnetic yoke and arranged parallel to each other, a non-magnetic yoke attached to the other ends of the magnets and supported therefrom, connecting means to attach said non-magnetic yoke and the spool heads together, said magnets being interchangeable without disarranging the circuit connections thereof, an armature pivoted on said non-magnetic yoke, a clapper rod carried by said armature and clapper thereon adapted to strike the gongs when the armature is vibrated.

[Claims 6 and 7 not printed in the Gazette.]

1,022,066. PLAYER-PIANO ACTION. SILAS S. DONOVAN, Meriden, Conn., assignor to The Wilcox & White Company, Meriden, Conn., a Corporation of Connecticut. Filed Apr. 12, 1911. Serial No. 620,588. (Cl. 84—233.)



1. In a player piano action, a hammer, manually controllable means for operating said hammer, mechanically controllable regulated means for operating said hammer, intervening parts between said hammer and each of said operating means for transmitting movement of either to said hammer, adjustable regulating means for the manually controllable hammer operating means, and independent means for restoring the regulation between the hammer and the mechanical operating means therefor, in the event of settlement of said manually controllable hammer operating means, and means for moving said regulation restoring means into operation when the instrument is to be played mechanically, and for moving said regulation restoring means out of operation when the instrument is to be played manually.

2. In a player piano action, a hammer, manually controllable means for operating said hammer, mechanically controllable regulated means for operating said hammer, intervening parts between said hammer and each of said operating means for transmitting movement of either to said hammer, adjustable regulating means for the manually controllable hammer operating means, means independent of the hammer and striker for restoring the regulation between the hammer and the mechanical operating means therefor in the event of settlement of the manually controllable hammer operating means.

3. In a player piano action, a hammer, means for operating the same including a manually operable key and a mechanically operable striker, intervening parts between the hammer and both of said operating devices, said parts including a wippen, adjustable means for regulating the position of the striker relatively to said wippen, other adjustable regulating means for said key, and a manually controllable means for taking up lost regulation between said wippen and striker when the instrument is to be played mechanically and in the event of settlement of the key adjustment.

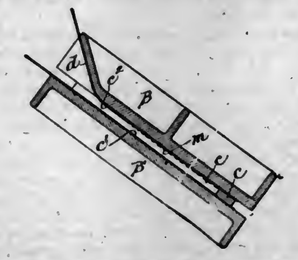
4. In a player piano action, a plurality of hammers, a plurality of manually operable keys for operating said hammers, a plurality of mechanically operable strikers for operating the hammers independently of the keys, intervening parts between all of said hammers and all of said operating devices for transmitting the movement of the latter to said hammers, a device for regulating the operative position of each of the keys relatively to its respective hammer, another device for regulating the operative position of each of the strikers relatively to its respective hammer, and a manually operable take-up device arranged to co-act with the parts between a plurality of the hammers and their respective strikers to reëstablish the regulation between said hammers and strikers in the event of lost regulation between said parts due to settlement of the key regulation.

5. In a player piano action, a hammer, manually controllable means for operating said hammer, mechanically controllable regulated means for operating said hammer, intervening parts between said hammer and each of said operating means for transmitting the movement of either to said hammer, adjustable regulating means for the manually controllable hammer operating means, independent means for restoring the regulation between the hammer and the mechanical operating means therefor in the event of settlement of the key regulation and means for moving said regulation restoring means into operative position when the instrument is to be played mechanically, and for moving said regulation restoring means out of operative position when the instrument is to be played manually, said means comprising a hinged key slip.

1,022,067. METHOD AND APPARATUS FOR MAKING STEREOTYPE-PLATES. JAMES MARSHALL DOW, Everett, Mass. Filed May 6, 1911. Serial No. 625,618. (Cl. 22—2.)

1. The method of casting a stereotype plate consisting in introducing molten metal into a casting box having a matrix surface which is inclined and overhanging throughout its whole extent, whereby the metal will rise against the matrix surface and into the indentations thereof without flowing over any part of the matrix surface.

2. A stereotype casting box, comprising two opposed walls spaced apart, said box being supported in an inclined position, and a matrix secured against the upper of said opposed walls, the inclined matrix surface throughout its whole extent overhanging the lower wall surface, whereby the molten metal will flow over the lower surface of the box and rise against the matrix surface without flowing over any part of the matrix surface.

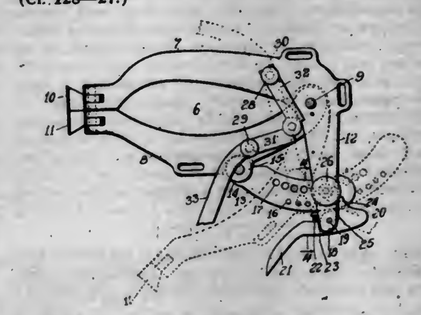


3. A stereotype casting apparatus, comprising a supporting frame, a casting box having a box-section and a separable cover section, the box-section being pivotally mounted on said frame and adapted to contain a matrix, said box being revoluble to an inclined position at an angle exceeding ninety degrees with a horizontal plane, whereby the box-section will overhang the cover section.

4. A stereotype casting apparatus, comprising a supporting frame, a casting box having a box-section and a separable cover section, the box-section being pivotally mounted on said frame and adapted to contain a matrix, said box being revoluble to an inclined position at an angle exceeding ninety degrees with a horizontal plane, whereby the box-section will overhang the cover section, and a stop to arrest and hold said box in such inclined position.

5. A stereotype casting apparatus, comprising a supporting frame, a casting box having a box-section and a separable cover section, the box-section being pivotally mounted on said frame and adapted to contain a matrix, said box being revoluble to an inclined position at an angle exceeding ninety degrees with a horizontal plane, whereby the box-section will overhang the cover section, and a bar secured transversely of said frame, adapted to engage said box to arrest and hold said box in such inclined position.

1,022,068. MOUTH-SPECULUM. SOLA B. DUNN, Chicago, Ill. Filed Aug. 2, 1909. Serial No. 510,691. (Cl. 128—27.)



1. In a mouth speculum, the combination with a pivoted pin bar, a post and a thickened pawl adapted to project between the pins of said bar and bear against said post whereby the pivot of the pawl is relieved from a pressure against the pawl, substantially as described.

2. A mouth speculum comprising in combination a pivoted pin bar, a pawl adapted to project between the pins of said bar and lock the jaw members in an open position, said pawl and pins being located in a plane below both jaw member, substantially as described.

3. A mouth speculum comprising in combination a pair of jaws, a pin plate pivoted to one of said jaws, a post provided with a slot through which said pin plate is movable, a pawl pivoted toward the end of said post and adapted to engage the pins of said plate, a spring interposed between said post and pawl whereby the pawl is normally depressed to engagement with said pins, substantially as described.

4. A mouth speculum comprising in combination a pin plate pivoted to one of said jaw members, a post projecting from the other jaw member in a plane beyond the said pin plate, and a pawl pivoted to said post and adapted to be moved to engagement with said pin plate and lock the jaw members in an open position, substantially as described.

5. A mouth speculum comprising in combination a pair of pivoted jaws, a pin plate pivoted to one of said jaws, a post provided with a recess through which said pin plate is movable, a pawl pivoted to said post, a spring automatically actuating said pawl to engagement with said pin plates, and against said post, substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

1,022,069. AMPOULE. FRANK R. ELDRED, Indianapolis, Ind., assignor to The Eli Lilly & Company, Indianapolis, Ind., a Corporation of Indiana. Filed Mar. 13, 1911. Serial No. 614,241. (Cl. 128—28.)



1. An ampoule for medicaments comprising a main hollow body having a pair of tubular extensions, the internal diameter of said tubular extensions being large enough to avoid the formation of a liquid seal therein, a check valve arranged within said main body and adapted to seat loosely at the inner end of one of said tubular extensions, and a liquid contained within said main body.

2. An ampoule for medicaments comprising a main hollow body having a pair of tubular extensions, the internal diameter of said tubular extensions being large enough to avoid the formation of a liquid seal therein, a check valve arranged loosely within said main body and adapted to seat loosely at the inner end of either of said tubular extensions, and a liquid contained within said main body.

1,022,070. ANCHORAGE FOR DENTAL BRIDGES AND PLATES. STEELE F. GILMORE, Indianapolis, Ind. Filed May 13, 1911. Serial No. 627,027. (Cl. 32—12.)

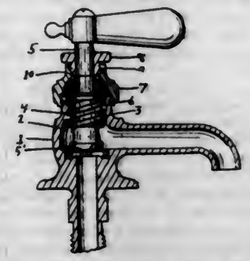


1. In anchorage for dental bridges, the combination of a round bar anchored to one or more of the sound teeth, a plate having a channel to receive the bar and a spring clamp carried by the plate to engage the bar to permit the removal of the plate therefrom at will.

2. In anchorage for dental bridges, the combination of a metal cap on a natural tooth, a round bar anchored to said cap, a plate having a channel to receive the bar, and clamp of sheet metal in the form of a split sleeve having a body embedded in and securely attached to the plate in alinement with the channel whereby the bar upon entering the channel will enter the split sleeve the arms of the sleeve being resilient and embracing more than half of the circumference of the bar when introduced into the split sleeve to form a lock.

3. In anchorage for dental bridges, the combination of a metal cap or caps on a tooth or teeth to be anchored to, a round bar or bars secured to one or more of the caps on said teeth, a plate having a channel or channels to receive the bar or bars, and a clamp for each channel embedded in the plate and having resilient arms to spread and receive one of the bars between its arms and to close against the bar and embrace over one-half of its circumference to form a lock.

1,022,071. FAUCET AND BIB-COCK. ANDREW J. GORLICK, Cleveland, Ohio, assignor to The Rickersberg Brass Company, a Corporation of Ohio. Filed Sept. 22, 1910. Serial No. 583,244. (Cl. 137—4.)

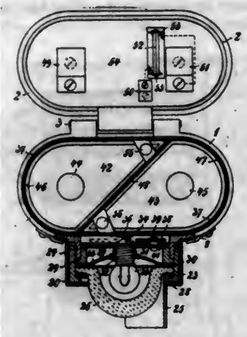


A device of the type set forth comprising a casing provided with an inlet, an outlet and a valve seat, a valve, controlling said inlet and outlet, a cap on the upper end of the casing having an upper contracted neck portion, a bushing screw threaded into said neck portion, a valve stem passing through said bushing for operating said valve, said valve stem having a shoulder thereon adapted to come into contact with the bushing to limit the outward movement of the stem, and a rubber ring within said cap surrounding said shoulder.

1,022,072. PORTABLE ELECTRIC LAMP. EMIL GOTTSCHALCK, Berlin, Germany, assignor to Electric-Export Werke G. M. B. H., Berlin, Germany. Filed Dec. 30, 1909. Serial No. 535,588. (Cl. 240—17.5.)

1. In a portable electric lamp, a casing, battery cells contained therein and having a circuit terminal, said casing having an opening through the side thereof for access to said circuit terminal, a removable lamp having a terminal coöperating with the battery circuit terminal through said opening, a closure plate for said opening and means acting on said plate normally tending to move the same into position to close said opening.

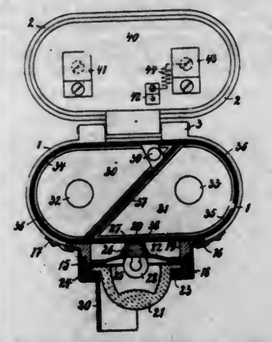
2. In a portable electric lamp, a casing, battery cells contained therein and having a circuit terminal, said casing having an opening through the side thereof for said circuit terminal, a removable lamp, a cone shaped terminal therefor, arranged to coöperate with the circuit terminal through said opening to complete the lamp circuit therethrough, and a movable spring pressed insulating cover plate for said opening, normally arranged to close said opening and to be displaced from its normal closing position by engagement therewith of the cone-shaped lamp terminal when the lamp is in position for use.



3. In a portable electric lamp, a casing, battery cells arranged therein, a lamp mounted on the casing and having one terminal thereof in electrical connection with one side of the battery cells, and the other terminal in electrical connection with the casing, a cover for the casing, contacts carried by the cover and arranged, when said cover is closed, to complete circuit connection from the casing to the other side of the battery, a locking bolt for locking the cover closed, a catch for retaining the bolt in locking position, said bolt and latch being of magnetic material and inclosed, whereby by applying magnets to release the latch and withdraw the bolt the cover may be opened and the lamp circuit broken.

4. In a portable electric lamp, a casing having an opening in the middle of its front wall, a cell contained in a metal cup located in the casing, a movable lamp having a terminal in direct contact through said opening with the metal cup of the cell, a closure plate for said opening and means acting on said plate normally tending to move the same into position to close said opening.

1,022,073. PORTABLE ELECTRIC LAMP. EMIL GOTTSCHALCK, Berlin, Germany, assignor to The Firm of Electric-Export-Werke G. M. B. H., Berlin, Germany. Original application filed Nov. 15, 1909, Serial No. 528,246. Divided and this application filed Sept. 11, 1911. Serial No. 648,674. (Cl. 240—17.5.)

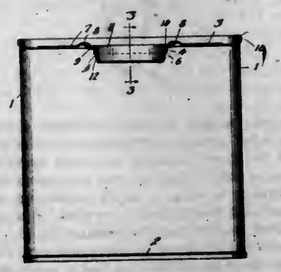


1. In a portable electric lamp, the combination of a metallic casing, a reflector of fragile non-conductive material, a strip of conductive material upon said reflector, an incandescent lamp held in said reflector, battery cells within said casing, arranged within metallic cups and means to electrically connect and form a circuit in which the lamp, the strip, the cells and the casing are situated for the purpose of extinguishing the lamp as soon as the reflector is broken.

2. In a portable electric lamp, the combination of a metallic casing, a reflector of fragile non-conductive material, a strip of conductive material upon the rear of said reflector, a sleeve within said reflector, and an incandescent lamp, a threaded socket adapted to be secured within said sleeve, a pair of battery cells within said casing, arranged within metallic cups and means to electrically connect and form a circuit in which the lamp, the strip, the cells and the casing are situated for the purpose of extinguishing the lamp as soon as the reflector is broken.

3. In a portable electric lamp, the combination of a metallic casing, a reflector of fragile non-conductive material, a strip of conductive material upon the rear of said reflector, a sleeve within said reflector and an incandescent lamp, a threaded socket adapted to be secured within said sleeve, a pair of battery cells within said casing, having their adjacent walls inclined to the center plane of the casing and being arranged within metallic cups, an insulating sheet surrounding the battery cells, a conductive button on said sheet forming a contact between the socket of the lamp and the cup of one cell, and means to electrically connect and form a circuit in which the lamp, the strip, the cells and the casing are situated for the purpose of extinguishing the lamp as soon as the reflector is broken.

1,022,074. FRICTION-TOP CAN. THOMAS GRAHAM, Baltimore, Md., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Jan. 13, 1911. Serial No. 602,509. (Cl. 220—80.)



1. In a friction top can, the combination with a top head having a depending friction seat wall flange, of a coöperating friction closure member having a friction seat wall provided with a fine, circumferential score engaging the inner lower edge of the friction seat wall flange of the top head to hold and lock said member in place and increase the tightness of the closure, substantially as specified.

2. In a friction top can, the combination with a top head having a depending friction seat wall flange with an inward spring action at its lower edge, of a friction cap having a friction seat wall provided with an external, circumferential score engaging the lower edge of the friction seat wall flange of the top head with a barb-like locking action to hold the friction cap in position and effect a tight closure, substantially as specified.

1,022,075. COMBINATION TIME AND PERCUSSION FUSE. JOHN GRONEK, Philadelphia, Pa. Filed Apr. 3, 1911. Serial No. 618,080. (Cl. 102—37.)

A device of the class described, comprising a single casting consisting of a disk having a beveled edge and threaded extensions projecting from opposite faces of said disk in axial alinement, one of said extensions comprising a shank for attaching the device to the end of a shell and each of said extensions being provided with percussion cap chambers, there being an annular groove in the outer projection adjacent its base and a perforation extending from said groove to the adjacent cap chamber, a ring rotatably mounted upon the base of the outer projection and surrounding said annular groove, the periphery of

said ring being beveled to register with that of said disk, there being registering arcuate grooves in the adjacent faces of said disk and said ring also being provided with a radial groove extending from the arcuate groove in its



face to the annular groove in said projection, a nut rotatably holding said ring in position, means for locking said nut, and co-acting timing symbols on the peripheries of said disk and ring, substantially as described.

1,022,076. STAMPING DEVICE. WILLIAM J. GROTENHUIS, Chicago, Ill., assignor of one-half to Philip A. Salisbury, Chicago, Ill. Filed May 11, 1911. Serial No. 626,476. (Cl. 101—160.)

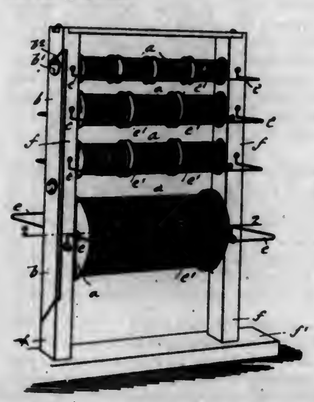


In a rubber stamp, a band having its face provided with means for making impressions, a stationary bridge across the flat face of which the band travels to change the impression, and rotary means for operating the band, the said bridge having a small projection on the face thereof, and said band having a series of relatively small and separated positioning depressions on the back thereof, with substantial flat surfaces between said depressions, whereby the back of each band has a practically continuous flat wearing surface, said flat surfaces adapted to engage the flat face of said bridge, said projection adapted engage said depressions, said band being thickened to accommodate said depressions in the form of transverse notches, said notches facilitating the flexing of the band around said rotary means, and said projection being in the form of a rib extending longitudinally of the bridge at a point midway between the sides thereof, said notches adapted to contract while the band is passing around said rotary means, as set forth.

1,022,077. SPOOL-RACK. SAMUEL HAAS, New York, N. Y. Filed Nov. 10, 1910. Serial No. 591,602. (Cl. 242—139.)

1. A spool-rack comprising a pair of uprights provided with a plurality of alined transverse bearing-holes, one of the uprights having its outer face provided with an outwardly opening groove communicating with the bearing-holes thereof, rods in said holes and having bent-up ends in said groove, a cover plate movably secured to the grooved upright and covering the groove when in normal position and means for locking the cover plate in normal position.

2. A spool-rack comprising a pair of uprights having alined transverse bearing-holes therein, the outer face of one of said uprights being cut away to form a sunken portion provided with slanting shoulders at its ends and with an outwardly opening vertical groove communicating with the bearing-holes of said upright, horizontal rods supported in said bearing-holes and provided with bent-up ends located in said groove, a cover-plate pivoted for movement against the face of said sunken portion and adapted to fill the same when in normal position, whereby said groove is closed, means for locking the cover-plate in said normal position, spools on said rods, tension springs in the bores of said spools and bearing against said rods and bores and having bent-up ends engaging the ends of the spools, and wire-thread guides secured to the uprights and passing in front of the spools and provided with eyelets for the threads.



3. A spool-rack comprising a pair of uprights having alined transverse bearing-holes therein, the outer face of one of said uprights being cut away to form a sunken portion provided with slanting shoulders at its ends and with an outwardly opening vertical groove communicating with the bearing-holes of said upright, horizontal rods supported in said bearing-holes and provided with bent-up ends located in said groove, a cover-plate pivoted for movement against the face of said sunken portion and adapted to fill the same when in normal position, whereby said groove is closed, means for locking the cover-plate in said normal position, spools on said rods, tension springs in the bores of said spools and bearing against said rods and bores and having bent-up ends engaging the ends of the spools, and wire-thread guides secured to the uprights and passing in front of the spools and provided with eyelets for the threads.

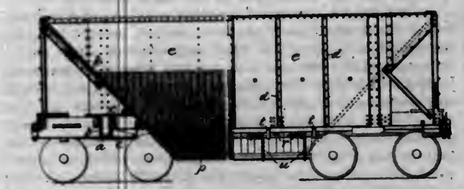
4. The combination in a spool rack of a horizontal rod, a spool adapted to turn thereon, and a bow-shaped spring inserted in the bore of the spool between it and said rod and operating to impart a lateral tension on the spool, said spring being bent at its opposite ends forming stops which engage the ends of the spool, one of said stops being shorter than the diameter of the bore of the spool.

1,022,078. WATCH. WILLIAM HAINES, Philadelphia, Pa. Filed Aug. 25, 1911. Serial No. 646,023. (Cl. 58—85.)



In a watch, an arbor, adjacent plates of the watch frame, said arbor being adapted to pass through said plates, wheels on the ends of said arbor, and located respectively on said plates, one of said wheels being adapted to operate an adjacent member of the winding train, stem winding mechanism including a spur wheel which latter is adapted to gear with and rotate the other wheel on said arbor, and indicating mechanism of the wound or unwound condition of the watch, the same being adapted to be operated by said train.

1,022,079. DUMP-CAR. HARRY STILLSON HART, Chicago, Ill., assignor to Rodger Ballast Car Company, Chicago, Ill., a Corporation of Maine. Filed Jan. 18, 1905. Serial No. 241,653. (Cl. 105—185.)



1. A car, the load-carrying members of which consist of bolsters and side plate girders supported thereby, in combination with transverse cross bearers between said side girders, gusset plates connecting said bearers and side girders, sectional sill members intermediate and parallel with said side girders and supported by said cross bearers, and a hopper bottom carried by the sill members.

2. A car, the load carrying members of which consist of bolsters and side plate girders supported thereby, a plurality of transverse cross bearers connecting the side girders together, sectional intermediate sill members arranged parallel with the side girders and connecting the cross bearers together, metallic gusset plates connecting the side girders and cross bearers together, and a hopper bottom supported by the sectional sill members.

3. In a car of the class described, the combination of bolsters, load carrying plate-girder sides supported by said bolsters, a hopper bottom extending downwardly between said sides and supported thereby, a plurality of cross bearers extending through said hopper bottom and connecting said sides, and intermediate sectional sills parallel to said sides and connecting said bolsters and cross bearers, said sills and said cross bearers being adapted to support said hopper.

4. In a car of the class described, the combination of bolsters, vertical side plate girders supported by the bolsters and carrying the entire load, intermediate girders supported by the side girders, a longitudinal hopper supported by the side and intermediate girders, and a door at or near the bottom of the hopper depending from said intermediate girders.

5. In a car of the class described, bolsters, end walls inclining downwardly between said bolsters, a center sill structure located wholly outside of said end walls, plate girder sides supported by said bolsters, cross beams between said bolsters and supported by said sides, intermediate longitudinal sills supported by said cross beams and bolsters, and a central hopper between said intermediate sills and supported thereby and by said cross beams and plate girder sides.

[Claims 6 to 11 not printed in the Gazette.]

1,022,080. CANVAS BELTING. JOHN B. HAY, Youngstown, Ohio. Filed Sept. 23, 1911. Serial No. 650,956. (Cl. 74—63.)



1. A belt of the class described, formed of a single strip of canvas wrapped longitudinally layer upon layer forming a plurality of plies and the free ends of said strip being locked into the next adjacent ply, substantially as described.

2. A belt of the class described, formed of a single strip of canvas wrapped longitudinally layer upon layer forming a plurality of plies, and provided with integral lateral extensions on the first ply, said extensions being folded over the edges of the succeeding plies and secured between the last ply and next to the last ply, substantially as described.

1,022,081. GRIP-CONTROL MECHANISM FOR MOTOR-CYCLES. WILLIAM G. HENDERSON, Cleveland, Ohio. Filed Sept. 15, 1911. Serial No. 649,587. (Cl. 21—90.)



1. In spark and throttle controlling mechanism for motor vehicles, the combination with the handle bar of a rotatable grip mounted on the handle bar, said grip being provided with an internal toothed surface, a toothed surface on the handle bar corresponding to the toothed surface of the grip, a longitudinal shaft rigidly fastened to said grip and extending through the straight portion of the handle bar and mounted at the turn of the bar, means for pressing said shaft forward and holding said toothed surfaces in adjustable contact and means for conveying the motion imparted to the grip by the operator to the throttle or sparking device, for the purpose specified.

2. In a spark and throttle controlling mechanism for motor vehicles the combination with the handle bar of a rotatable grip mounted on the handle bar, said grip being provided with an internal radially toothed surface, a radially toothed surface on the handle bar corresponding to the toothed surface of the grip, a longitudinal shaft rigidly secured to said grip and extending through the straight portion of the handle bar, a bearing at the turn of the handle bar adapted to support the longitudinal shaft, a crank or arm at the forward end of said longitudinal shaft and means for conveying the motion imparted by the operator to the grip, from said crank to the throttle or sparking device, and a spring mounted on the forward end of said longitudinal shaft between the hub on the handle bar and said crank adapted to force said shaft forward and hold the said toothed surfaces in adjustable contact, substantially as and for the purpose specified.

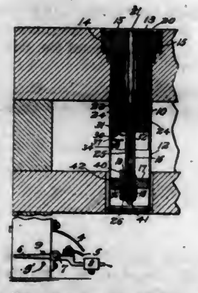
1,022,082. DRIER FOR CLAYWARE. HERMANN HEUSS, Dayton, Ohio, assignor to The C. W. Raymond Company, Dayton, Ohio. Filed Apr. 5, 1911. Serial No. 618,987. (Cl. 34—46.)



In a drier for clay ware, a drying tunnel, a radiating flue extending longitudinally below said tunnel and consisting of side walls, a sectional top closure for said flue comprising a plurality of arched radiating plates, having longitudinal marginal flanges extending at right angles and engaging the inner sides and tops of said flue walls, the ends of said plates overlapping and the inner portions of said overlapped ends being provided with peripheral

grooves for the reception of a cementitious material, whereby said sectional top closure is sealed throughout its length and the products of combustion are prevented from entering the drying tunnel.

1,022,083. BOWLING-ALLEY. FRANCIS C. HOBBS, New York, N. Y., assignor to The Brunswick-Balke-Collender Company of New York, New York, N. Y., a Corporation of New York. Filed June 9, 1909. Serial No. 501,070. (Cl. 46—54.)



1. In a bowling alley, the combination with a plurality of indicators corresponding in number with the number of pins, of a centering device for each pin, and connections rendered operative by each centering device as its pin is centered for rendering the corresponding indicator operative.

2. In a bowling alley, the combination with a plurality of electrically operated indicators corresponding in number with the number of pins, of a centering device for each pin, and circuit controlling means operated by each centering device.

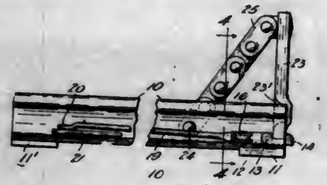
3. In a bowling alley, the combination with a plurality of electrically operated centering devices corresponding in number with the number of pins, of a plurality of operating mechanisms, one for each centering device.

4. In a bowling alley, the combination with a plurality of centering devices corresponding in number with the number of pins, of a plurality of actuating magnets one for each centering device, a circuit including all the magnets, and circuit controlling devices.

5. In a bowling alley, the combination with centering devices corresponding in number with the number of pins, of an operating mechanism for each centering device, indicators corresponding in number with the centering devices, a plurality of indicator circuits, and circuit controlling means operated by the centering devices.

[Claims 6 to 17 not printed in the Gazette.]

1,022,084. COMBINED CAR STAKE AND BUNK. WILLARD HOUGHTON, Seattle, Wash. Filed Nov. 11, 1911. Serial No. 659,741. (Cl. 105—173.)



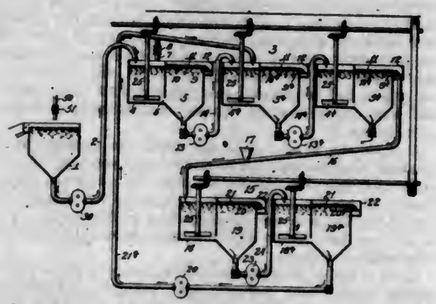
1. The combination of a car bunk comprising two rail members, a block having a hinged leaf movable lengthwise of the bunk between the rails thereof, means to effect the inward and outward movements of said block with respect to the bunk, a stake adapted to seat within a receptacle provided in the aforesaid block-leaf, and a flexible connection between the bunk and the upper end of the stake.

2. The combination of a car-bunk provided with a channel, a block positioned in said channel, a leaf hingedly connected to the block, a stake connected by a chain with the bunk and adapted to be supported by said leaf only when the latter is positioned within the bunk channel.

3. The combination of a car-bunk provided with a channel, a block positioned in said channel, a leaf hingedly connected to the block, a lever connected to said block, a rod connected from one end to said lever, an actuating lever fulcrumed to the bunk and having an arm pivotally connected to the other end of said rod whereby the last named lever may be swung into position to prevent any endwise movement to said rod and thereby rendering the first named lever temporarily inoperative to afford motion to the block, or vice versa, and a stake connected by a chain with the bunk and adapted to be supported by said leaf only when the latter is positioned within the bunk channel.

4. The combination with a car-bunk provided with a channel, a block positioned in said channel, a leaf hingedly connected to the block, a stake connected by a chain with the bunk and adapted to be supported by said leaf only when the latter is positioned within the bunk channel, and means whereby said leaf may be moved outwardly with the block and in respect to the bunk in order to disengage the stake from the leaf.

1,022,085. ART OF CONCENTRATION OF MINERAL SUBSTANCES. JAMES M. HYDE, Basin, Mont. Filed Nov. 10, 1911. Serial No. 659,583. (Cl. 83—85.)



1. The process of concentrating ore pulps comprising a separation treatment which consists in adding to the pulp a material which preferentially coats the valuable particles of the ore, agitating the mixture, permitting the valuable parts of the ore to float in the form of a froth, separating the froth by overflowing it together with some of the water in order to insure overflow of the entire mass of the froth, subjecting the separated froth to a cleaning treatment which consists in reagitating the concentrated material to free impurities entrapped therewith, permitting the concentrates to again form a froth and allowing the impurities to settle, overflowing the froth without any free flowing water, and returning the settled impurities and the part of the froth not carried into the overflow to the part of the pulp which is undergoing the separation treatment.

2. A continuous process of concentrating the valuable constituents from ore pulps comprising the addition to the pulp of an acid precipitant adapted to react upon the ore, allowing a time interval to elapse prior to subjecting it to the separation treatment, then subjecting the pulp to a separation treatment comprising the steps of adding a material which will preferentially coat the valuable particles of the ore and separating said coated particles as a concentrate by flotation.

3. A continuous process of concentrating the valuable constituents from ore pulps comprising the addition to the pulp of an acid precipitant adapted to react upon the ore, allowing a time interval to elapse prior to subjecting it to the separation treatment, then subjecting the pulp

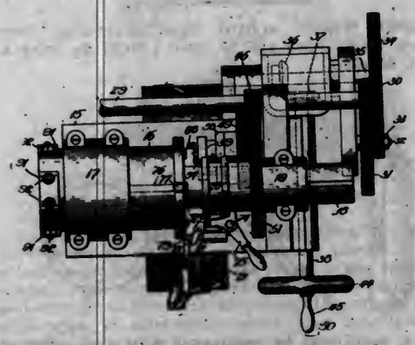
to a separation treatment comprising the steps of adding a non-metallic material which will preferentially coat the valuable particles of the ore and separating said coated particles as a concentrate.

4. A continuous process of concentrating the valuable constituents from ore pulps comprising the addition of an acid precipitant to the pulp, allowing a time interval to elapse prior to subjecting it to the separation treatment, then subjecting the pulp to a separation treatment comprising the steps of adding a material which will preferentially coat the valuable particles of the ore and separating said coated particles as a concentrate by flotation, subjecting the concentrate thus produced to a cleaning treatment which consists in agitating the concentrating material, permitting the concentrates to float, removing the concentrates from the top of the mixture, and returning the material which settles after the cleaning agitation to the part of the pulp which has passed through the first two steps specified and which is undergoing the separation treatment.

5. A continuous process of concentrating the valuable constituents from ore pulps comprising the addition of an acid precipitant to the pulp, allowing a time interval to elapse prior to subjecting it to the separation treatment, then subjecting the pulp to a separation treatment comprising the steps of adding a material which will preferentially coat the valuable particles of the ore and separating said coated particles as a concentrate, subjecting the concentrate thus produced to a cleaning treatment which consists in agitating the concentrated material, removing the concentrates from the mixture, and returning the rest of the mixture to the part of the pulp which has passed through the first two steps specified and which is undergoing the separation treatment.

[Claims 6 to 10 not printed in the Gazette.]

1,022,086. TURRET-OPERATING MECHANISM. JOHN H. JANN, Chicago, Ill. Filed Oct. 10, 1910. Serial No. 586,220. (Cl. 29—50.)



1. In a metal-working machine, the combination of a turret, means for reciprocating said turret, a continuously rotating element, means for connecting said element to said turret to rotate the same, and a device mounted on said turret for actuating said means to establish said connection.

2. In a metal-working machine, the combination of a turret, means for reciprocating said turret, a continuously rotating element, means adapted to connect said element and said turret, and means mounted on the turret to actuate said connecting means and effect rotation of the turret when it reaches a predetermined longitudinal position and to control the extent of said rotation.

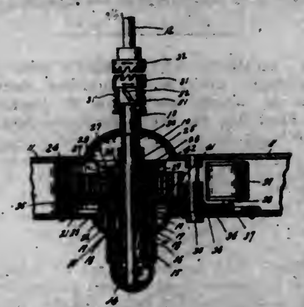
3. In a metal-working machine, the combination of a turret, means for reciprocating said turret, means for rotating said turret comprising a continuously rotating gear, a gear having driving connections with the turret and a clutch for connecting said gears, and means controlled by the longitudinal position of said turret for closing said clutch and by the angular position of the turret for opening said clutch.

4. In a metal-working machine, the combination of a turret, means for reciprocating said turret, turret rotating mechanism, a clutch for connecting said turret to said rotating mechanism, and means for controlling said clutch comprising a member disposed in alinement with said turret and adapted to be actuated thereby and connections between said member and the clutch and means mounted on the turret for actuating said controlling means to open and close the clutch.

5. In a metal-working machine, the combination of a turret, means for reciprocating said turret, turret rotating mechanism, a clutch for connecting said rotating mechanism with the turret, and clutch controlling means comprising a thrust member located at one end of and in alinement with said turret to be reciprocated thereby, a cam head adapted to engage with the clutch, and lever connections with said clutch member and cam head whereby longitudinal movement of the thrust member by the turret will actuate said cam head to permit the closing of the clutch.

[Claims 6 to 13 not printed in the Gazette.]

1,022,087. AUTOMOBILE-STARTER. CHARLES D. JENNEY, Indianapolis, Ind. Filed June 22, 1911. Serial No. 634,751. (Cl. 185—40.)



1. An engine starter comprising a spring, a connecting member carried by one end of said spring for connection with the engine, means for temporarily restraining said member from forward movement, a small motor, intermediate connections between said motor and the other end of the spring whereby said spring may be potentialized by the motor, and means by which the spring may be automatically connected to an engine upon potentialization of said spring.

2. An engine starter comprising a spring, a releasable connecting member carried by one end of said spring for connection with the engine, means for temporarily restraining said member from forward movement, a small motor, and intermediate connections between said motor and the other end of the spring whereby said spring may be potentialized by the motor.

3. An engine starter comprising a shaft, a clutch member carried by said shaft and formed for engagement with an engine shaft, a spring-sleeve journaled on said shaft, a clutch member carried by said spring-sleeve, a stationary clutch member separably coöperating with said spring-sleeve clutch member, a threaded member carried by said spring-sleeve, a winder rotatable relative to the spring-sleeve, a spring connecting the said winder and spring-sleeve, a threaded member carried by the winder and threaded upon the threaded member carried by the spring-sleeve, said two threaded members being relatively axially movable to cause alternate separation and reëstablishment of the clutching engagement between the spring-sleeve and the stationary clutch and between the shaft and the engine, a small motor, and a speed-decreasing driving train between said motor and the winder.

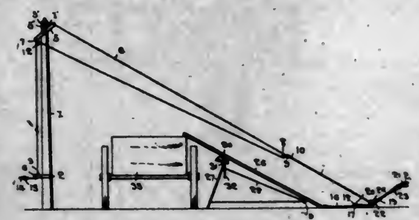
4. An engine starter comprising a shaft, a clutch member carried by said shaft and formed for engagement with

an engine shaft, a spring-sleeve journaled on said shaft, a clutch member carried by said spring-sleeve, a stationary clutch member separably coöperating with said spring sleeve clutch member, a threaded member carried by said spring-sleeve, a winder rotatable relative to the spring-sleeve, a spring connecting the said winder and spring-sleeve, and a threaded member carried by the winder and threaded upon the threaded member carried by the spring-sleeve, said two threaded members being relatively axially movable to cause alternate separation and reëstablishment of the clutching engagement between the spring-sleeve and the stationary clutch and between the shaft and the engine.

5. An engine starter comprising a main casing, a shaft journaled therein, a clutch member carried by said shaft and adapted to engage an engine shaft, a spring-sleeve journaled upon said shaft, a clutch member carried by said spring-sleeve, a stationary clutch member from which the spring-sleeve clutch member is axially withdrawable, a winder journaled on the spring-sleeve, a spring connecting the winder and spring-sleeve, a threaded member carried by the spring-sleeve, a threaded member rotatably carried by the winder and axially movable thereon, said threaded member coöperating with the spring-sleeve threaded member and, at times, abutting against the casing, and a driving connection between the spring sleeve and the shaft operating in one direction only.

[Claims 6 to 11 not printed in the Gazette.]

1,022,088. LOADING ATTACHMENT FOR MANURE-SPREADERS. CHARLES E. JOHNSON, Degraff, Ohio, assignor of one-half to William H. Hinkle, Degraff, Ohio. Filed Oct. 14, 1911. Serial No. 654,584. (Cl. 214—10.)



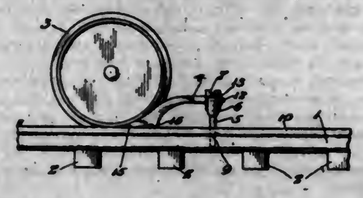
1. A loading mechanism comprising a post, a bracket carrying cable guiding means, said bracket being positioned near the lower end of the post, an arm pivoted at its center to the post, cable guiding means carried by one end of the arm, a clamp, a cable guiding means connected to said clamp, a swingletree, a cable having one end secured to the arm and passing over the cable guiding means and having its opposite end secured to the swingletree, a dump fork connected to said clamp, a slide for said fork, and means for supporting the slide in slanting position.

2. Loading mechanism comprising a stationary post, cable guiding means carried by the post, a cable passing over the guiding means carried by the post, a fork connected to said cable and adapted to be drawn thereby, a slide for the fork, a frame having a roller and a segmental cam for supporting the slide in slanting position, and means for releasing the upper or rear end of the fork to allow the same to swing upon the forward end of the fork handle.

1,022,089. CAR-STARTER. CHARLES X. JOHNSON, Morris Run, Pa. Filed Jan. 19, 1912. Serial No. 672,134. (Cl. 105—71.)

1. A device of the character described, comprising a lever, an anchor piece pivotally connected to the lever, a lug on the anchor piece adapted to engage a fixed point, and a fulcrum bar positioned at right angles to the lever and connected thereto, substantially as described.

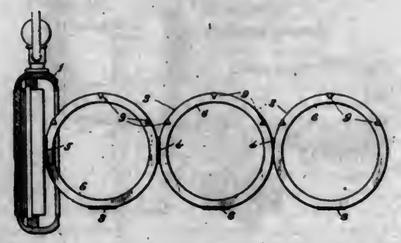
2. A device of the character described, comprising a lever, an anchor piece pivotally connected to the lever, a lug on the anchor piece adapted to engage a fixed point, a fulcrum bar positioned at right angles to the lever and connected thereto, said fulcrum bar at its free end of general foot shape having an extended toe portion adapted to be positioned under a wheel, and a heel portion to fulcrum on the rail, substantially as described.



3. A device of the character described, comprising a lever having a bifurcated end and a transverse opening, an anchor piece pivotally secured in the bifurcated end of the lever, curved lugs on the lower end of said anchor piece adapted to engage under the head of a rail, a curved fulcrum bar having a reduced end projecting through the opening in the lever, and a pin positioned through the bar and securing it in the lever, substantially as described.

4. A device of the character described, comprising a lever having a bifurcated end and a transverse opening, an anchor piece pivotally secured in the bifurcated end of the the lever, curved lugs on the lower end of said anchor piece adapted to engage under the head of a rail, a curved fulcrum bar having a reduced end projecting through the opening in the lever, a pin positioned through the bar and securing it in the lever, and the free end of said lever of general foot shape with an extended toe portion to be projected under a wheel, and a heel portion to fulcrum on the rail, substantially as described.

1,022,090. WATCH-ALBUM. ISAAC KASINDORF, New York, N. Y. Filed Apr. 15, 1910. Serial No. 555,674. (Cl. 63—19.)



1. A watch case in combination with a plurality of picture holding frames hingedly connected together at their opposite edges to fold one upon the other and a hinge connection between one of said frames and said watch case, each of said frames comprising a pair of similar annular members hingedly connected at points removed from the hinges connecting the several frames, substantially as described.

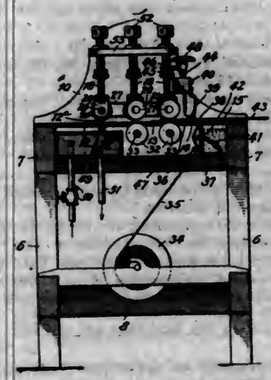
2. A watch case in combination with a plurality of hingedly connected picture holding frames, one of said frames being hingedly connected to the watch case, and each of said frames comprising a pair of similar skeleton frame members hingedly connected at points removed from the hinges connecting the several frames and one member of each frame being hingedly connected to the corresponding member of the next adjacent frame on one side and the other member being hingedly connected to the corresponding member of the adjacent frame on the other side and means for securing the members of each frame together in closed position, substantially as described.

1,022,091. CAR-ROOF CONSTRUCTION. JEREMIAH J. KELLEHER and CHARLES D. PORTER, Philadelphia, Pa. Filed Nov. 8, 1911. Serial No. 659,090. (Cl. 108—5.)



In combination with roof timbers and transversely positioned cap plates on said timbers, of roof sheets located on the timbers and having their edges confined beneath the cap pieces and their ends projecting over the edges of the roof, rods around which the ends of said plates are bent, the ends of said rods projecting beyond the plates, and eave clips confining the ends of said rods, the edges of said plates, and the ends of said caps.

1,022,092. VENEER-TAPING MACHINE. WILLIAM J. KELLY, Clinton, Iowa. Filed Oct. 12, 1909. Serial No. 522,331. (Cl. 144—279.)



1. In a veneer-taping machine, coöperating feed-rollers between which the strips of veneer are introduced, the rollers bearing against one side of the strips operating against their marginal portions and being constructed and arranged to force both of the strips toward each other with equal, or substantially equal, force into intimate edgewise contact, for the purpose set forth.

2. In a veneer-taping machine, coöperating feed-rollers between which the strips of veneer are introduced, the rollers bearing against one side of the strips being disposed on opposite sides of the joint between the latter and operating against their adjacent marginal portions and having their axes converging toward the line of feed of the strips through the machine, for the purpose set forth.

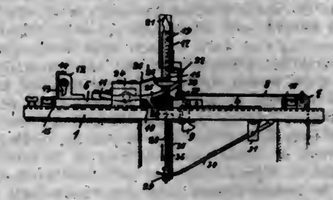
3. In a veneer-taping machine, a pair of feed-rollers and a third roller spaced apart and adapted to feed strips of veneer through the machine, the rollers of said pair being disposed on opposite sides of the joint between said strips and operating against the marginal portions of the latter, with the axes of said pair of rollers converging toward the line of feed of the strips through the machine, for the purpose set forth.

4. In a veneer-taping machine, means for feeding the strips of veneer through the machine comprising, in combination, a pair of positively-driven feed-rollers, and a third roller coöperating therewith, said pair of rollers engaging with the untaped side of the strips and extending into the space between the vertical planes of the ends of said third roller, and said third roller engaging only with the tape applied to said strips, whereby said pair of rollers and said third roller engage the work at opposite sides thereof in the same vertical plane, and the taped surfaces of the strips are unmarred in passing through the machine.

5. In a veneer-taping machine, the combination with a table, of means for feeding the strips of veneer through the machine comprising, in combination, a roller journaled to extend through said table, and a pair of positively-driven feed-rollers located above said third roller, said pair of rollers engaging with the untaped side of said strips and extending into the space between the vertical planes of the ends of said third roller, and said third roller engaging only with the tape applied to said strips, whereby the upper and lower rollers engage the strips at opposite sides thereof in the same vertical plane, and the taped surfaces of the strips are unmarred in passing through the machine.

[Claims 6 to 11 not printed in the Gazette.]

1,022,093. MACHINE FOR ARTIFICIALLY LENGTHENING THE BARBS OF ORNAMENTAL FEATHERS. HANS KRIEGSMANN, Leipzig-Anger, Germany. Filed Feb. 23, 1911. Serial No. 610,316. (Cl. 28—33.)



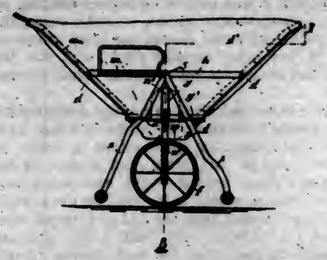
1. A machine for tying additional barb lengths to the barbs of ornamental feathers characterised by a rotating and vertically moving hollow cylinder with a head provided on one side with a longitudinal slot, in combination with a pin capable of sliding axially therein.

2. A machine for tying additional barb lengths to the barbs of ornamental feathers characterised by a rotating and vertically moving hollow cylinder with a head provided on one side with a longitudinal slot in combination with a pin capable of sliding axially therein and a holding device for the ends of the barbs, comprising a bell-crank lever secured to a hollow cylinder and a shear-like clamp opposite the cylinder and adapted to move toward the latter.

3. A machine for tying additional barb lengths to the barbs of ornamental feathers characterised by a rotating and vertically moving hollow cylinder with a head provided on one side with a longitudinal slot in combination with a pin capable of sliding axially therein and holding devices for the ends of the barbs, a lever to move the cylinder and the pin vertically and a longitudinal sliding spring operated slide provided with a stepped rack adapted to turn the cylinder and provided with wipers adapted to strike and actuate said lever to move the cylinder and pin vertically.

4. A machine for tying additional barb lengths to the barbs of ornamental feathers characterised by a rotating and vertically moving hollow cylinder with a head provided on one side with a longitudinal slot in combination with a pin capable of sliding axially therein, holding devices comprising a lever mounted on the cylinder and a clamp for the ends of the barbs and a longitudinally sliding spring operated slide, said slide being provided with stepped rack to rotate the cylinder, wipers to rotate the cylinder and adapted to actuate said lever on the cylinder and to actuate said clamp to cause said lever and said clamp to open and release the ends of the barbs.

1,022,094. CONVERTIBLE PERAMBULATOR AND BAG. EDUARD PAUL KÜRSTEN, Leipsig, Germany. Filed Aug. 19, 1910. Serial No. 578,066. (Cl. 21—83.)



1. A convertible perambulator and bag comprising an apertured floor, walls hinged to opposite edges of said floor so that said walls can be rocked toward each other above said floor, supporting wheels, and means connecting said wheels to said walls so that the wheels are drawn through the floor to the space between the walls when the latter are rocked toward each other.

2. A convertible perambulator and bag comprising an apertured floor, walls hinged to opposite edges of said floor so that said walls can be rocked toward each other above said floor, supporting wheels, means connecting said wheels to said walls so that the wheels are drawn through the floor to the space between the walls when the latter are rocked toward each other, and pieces of flexible material connecting said walls to each other at the sides.

3. A convertible perambulator and bag comprising an apertured floor, wheels, slidable carriers for said wheels, vertical guides fixed to said floor for said wheel carriers so that the wheels can be retracted through the apertured floor from normal position, means for locking said wheel carriers in normal position relative to said floor, walls hinged to opposite edges of said floor so that said walls can be rocked toward each other above said floor, and pieces of flexible material connecting said walls to each other at the sides, so that said walls and flexible pieces inclose the retracted wheels when the walls are rocked toward each other.

4. A convertible perambulator and bag comprising an apertured floor, wheels, slidable carriers for said wheels, vertical guides fixed to said floor for said wheel carrier so that the wheels can be retracted through the apertured floor from normal position, means for locking said wheel carriers in normal position, relatively to said floor, walls hinged to opposite edges of said floor so that said walls can be rocked toward each other, pieces of flexible material connecting said walls to each other at the sides, foldable struts connecting said frames to each other, and pivotal connections between said struts and the slidable wheel carriers.

5. A convertible perambulator and bag comprising an apertured floor, wheels, slidable carriers for said wheels, vertical guides fixed to said floor for said wheel carriers so that the wheels can be retracted through the apertured floor from normal position, catches pivotally connected to the wheel carriers, springs tending to hold said catches in position to serve as supports for the floor when the wheels are in normal position, means for collectively removing said catches from said supporting position against the action of springs, frames hinged to opposite edges of said floor so that said frames can be rocked toward each other, covers on said frames, and pieces of flexible material connecting said frames to each other at the sides.

[Claim 6 not printed in the Gazette.]

1,022,095. GARMENT. CHARLES R. LEONARD, New Rochelle, N. Y. Filed July 1, 1908. Serial No. 441,490. (Cl. 2—86.)

1. A garment having a contracted opening for embracing a part of the body of the wearer composed of alternating elastic and non-elastic portions, the elastic portions being in juxtaposition at the said opening and diverging therefrom in the form of gores, and an encircling elastic band surrounding the said opening, said elastic and non-elastic portions being turned over to form a housing for said elastic band.



2. A garment having a contracted neck composed of alternating elastic and non-elastic portions, the elastic portions being in juxtaposition at the neck opening and diverging therefrom in the form of gores, and an encircling elastic band surrounding the neck opening, said elastic and non-elastic portions being turned over to form a housing for said elastic band.

1,022,096. ROACH-EXTERMINATOR. NORMAN R. LEVI, New Kensington, Pa. Filed Sept. 19, 1911. Serial No. 650,210. (Cl. 167—6.)

1. An insecticide comprising kerosene, turpentine, bicarbonate of soda and a poisonous solution.

2. An insecticide comprising water, kerosene, turpentine, bicarbonate of soda, strychnin and sal-soda.

3. An insecticide comprising turpentine one-half pint, kerosene one pint, bicarbonate of soda one-half ounce and a poisonous aqueous solution.

4. An insecticide comprising strychnin, sal-soda, water, turpentine, kerosene and bi-carbonate of soda.

5. An insecticide comprising strychnin one-eighth ounce, sal-soda six ounces, bicarbonate of soda one-half ounce, turpentine one-half pint, kerosene one pint and water one-half pint.

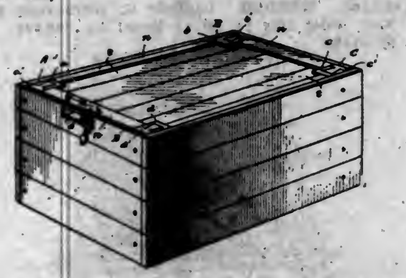
1,022,097. PROCESS OF MANUFACTURING FINE ARTIFICIAL THREADS. CARL RUDOLPH LINKMEYER, Bremen, Germany. Filed Dec. 1, 1909. Serial No. 530,847. (Cl. 18—54.)

1. The herein described process of manufacturing fine artificial threads or filaments which consists in passing a viscous cellulose solution in the form of a thick thread into a precipitant adapted to coagulate, under the conditions of formation, a fine filament only, and in forming from the thick thread while in the same precipitant a filament of such fineness that the precipitant effects the complete coagulation of the filament before it is removed therefrom.

2. The herein described process of manufacturing fine artificial threads or filaments, which consists in passing a viscous cellulose solution containing vegetable matter other than cellulose in the form of a thick thread into a precipitant adapted to coagulate, under the conditions of formation, a fine filament only, and in drawing out from the thick thread while in the same precipitant a filament of such fineness that the precipitant effects the complete coagulation of the filament before it is removed from the precipitant.

3. The herein described process of manufacturing fine artificial threads or filaments, which consists in passing a cellulose solution through orifices to form a number of thick threads into a constantly moving body of a suitably diluted coagulant to entrain the threads from the orifices and to reduce their diameter by the drawing power of the circulating coagulant to such extent that the latter effects the coagulation of the fine filaments resulting before they are removed from the coagulant.

1,022,098. KNOCKDOWN BOX. JOHN J. LONG, Norfolk, Va. Filed Mar. 29, 1911. Serial No. 617,778. (Cl. 217—12.)



1. A knock-down box comprising sides, corner post members carried upon the extremities of the sides, ends fitting between the sides and having complemental post members interlocking with said first post members, battens carried upon the ends, a bottom removably held between the battens, pins engaging through the complemental post members to lock the same, and a detachable cover engaging against the heads of the pins to hold the same in position.

2. A knock-down box comprising sides, ends fitting between the sides and adapted for vertical sliding movement into and out of position, a bottom carried between the ends and held in position by the registration thereof, pins locking the ends in position, and a detachable cover upon the box engaging the pins to hold the same from displacement.

3. A knock-down box comprising sides, ends coöperating with the sides, interlocking complemental post members carried respectively on the sides and ends at their meeting edges, a bottom, retaining means disposed upon the ends engaging the bottom when the ends are in position, locking means engaging the post members to hold the same together, and a top carried on the sides and ends and engaging the locking means to hold the post members from separation whereby the ends and the bottom are held in set up position.

4. A knock-down box comprising sides, ends interfitting with the sides, a bottom removably carried between the ends, means carried by the ends for detachable engagement with the bottom, locking means engaging the sides and ends to hold the same together, and a cover interfitting with the sides and ends and engaging the locking means to insure the interlocking of the ends and sides.

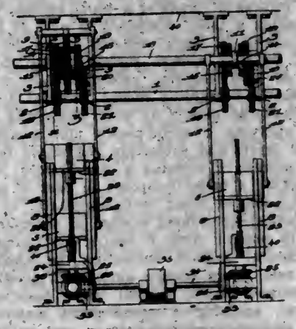
5. A knock-down box comprising sides, ends interfitting with the sides, battens carried at the upper and lower edges of the ends and adapted for registration when the ends are in position, a bottom engaging the lower battens and being held therein by the position of the ends, locking pins engaging the sides and ends to hold the same together and projecting into the upper battens, and a cover engaging in the upper battens and against the pins to secure the same from movement from the sides and ends whereby the bottom is held from displacement.

[Claims 6 to 10 not printed in the Gazette.]

1,022,099. POWER-TRANSMISSION DEVICE. JOSEPH LOVELY, Hamilton, R. I. Filed Aug. 3, 1911. Serial No. 642,154. (Cl. 185—32.)

1. In a power transmission device, the combination with a rocking lever, of a weight connected at each end thereof, means to raise the weights alternately, a power shaft, and means to rotate the shaft continuously in one direction by the oscillating movement of the lever.

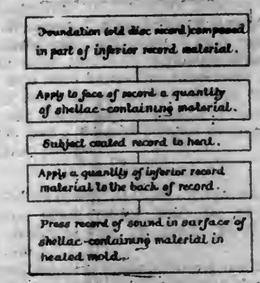
2. In a power generator, the combination with a rocking lever, of a weight connected to each end thereof, a support for each weight, a screw for raising and lowering each support alternately, a power shaft, and means to rotate the shaft continuously in one direction by the oscillating movement of the lever.



3. In a power transmission device, the combination with a rocking lever, of a weight connected to each end thereof, a support for each weight, a screw for raising and lowering each weight, screw-operating mechanism, a power shaft, means to rotate the shaft continuously in one direction by oscillating movement of the lever, and means controlled by the weight for reversing the screw-operating mechanism.

4. In a power transmission device, the combination with a rocking lever, of a weight connected to each end thereof, a support for each weight, a screw for raising and lowering each weight, screw-operating mechanism, a power shaft, means to rotate the shaft continuously in one direction by oscillating movement of the lever, and means controlled by each weight when it reaches the lower limit of its movement to reverse the screw-operating mechanism.

1,022,100. RE-PRESSING DISK SOUND-RECORDS. THOMAS H. MACDONALD, Bridgeport, Conn., assignor to American Graphophone Company, Bridgeport, Conn., a Corporation of West Virgina. Filed Sept. 8, 1906. Serial No. 333,813. (Cl. 181—16.)



1. The process of utilizing or repressing old disk records, which consists of covering the surface thereof with suitable material in powdered form, applying heat, placing additional material at the back, and compressing the same against a record-matrix.

2. The process of utilizing or repressing old disk records, which consists of applying suitable materials at the front and back thereof respectively, and subjecting the same to heat and pressure against a record-matrix.

3. The process of pressing a sound-record, which consists in taking a tablet composed of inferior material capable of being rendered plastic by heat, and having one surface or side composed of superior shellac-containing

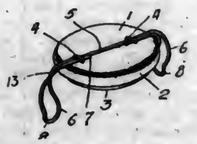
material, applying to said shellac-containing surface a layer of powdered shellac-containing record material, heating the said tablet and said powdered layer until they become plastic, applying a sound-record matrix to said heated powdered layer, and subjecting the whole to pressure.

4. The process of pressing a sound-record, which consists in taking a tablet composed in part of an inferior material capable of being rendered plastic by heat, and having a superior record surface containing shellac, applying to said superior record surface a layer of superior shellac-containing record material also capable of being rendered plastic by heat, subjecting the whole to heat, applying a sound-record matrix against said last-named layer, and subjecting the whole to pressure.

5. The process of pressing a sound-record, which consists in taking a tablet composed in part of an inferior material capable of being rendered plastic by heat and having a shellac-containing surface of superior material, applying in powder form a shellac-containing material to said superior surface, subjecting the whole to heat until the said layers become united and plastic, placing a body rendered plastic by heat to the back of said inferior layer, applying a sound-record matrix to said powdered shellac-containing surface, and subjecting the whole to pressure.

[Claims 6 to 10 not printed in the Gazette.]

1,022,101. BOTTLE-CLOSURE. JOHN MATUS, Torrington, Conn. Filed July 31, 1911. Serial No. 641,580. (Cl. 215—25.)



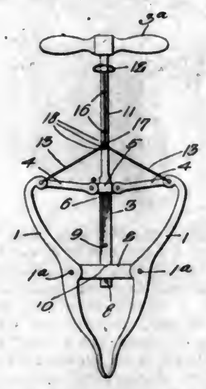
The combination with a bottle having a rim, of a disk adapted to be detachably held upon said rim, staples carried by the top of said disk, and a piece of wire arranged under said staples and having the ends thereof bent to provide loop-shaped resilient arms adapted to engage under said rim with the ends of said wire returned under said staples to enter said disk.

1,022,102. WIRE-STRETCHER. JOHN W. A. MCGILVREY, Albia, Iowa. Filed Oct. 16, 1911. Serial No. 654,949. (Cl. 39—61.)



In a device of the character described, a link chain adapted to be anchored, pulling means coöperating with said chain, said means comprising an operating lever, a pair of pawls pivotally connected to said lever at spaced points thereon and directed at the same side thereon, one of said pawls being relatively longer than the other and each comprising a single length of metal bent U-shape and having its arms bent outwardly and inwardly at corresponding points in their lengths, said arms being contracted and curved at their free ends and a spring disposed between said pawls constantly tending to move the free ends thereof away from each other, and said chain passing between the arms of each pawl.

1,022,103. WEEDER. GARNETT G. MCTAGGART, Reno, Nev. Filed July 14, 1911. Serial No. 638,541. (Cl. 55—148.)



1. A device of the character described, including jaw-members for penetrating the ground, a handled member, intermediate connecting members between said jaws and handled member, one of said intermediate members being adapted to receive said handled member, the other intermediate members being pivoted to a sleeve receiving said handled member, said handled member having lateral stops engaging said sleeve and the first-referred to intermediate member.

2. A device of the class described, comprising opposed articulated jaws for insertion into the ground, a handled member having lateral stops thereon and intermediate connecting members between jaw-members and said handled member, including links and a sleeve, said links being connected to said jaw-members and said sleeve, said stops engaging said sleeve and an intermediate member directly.

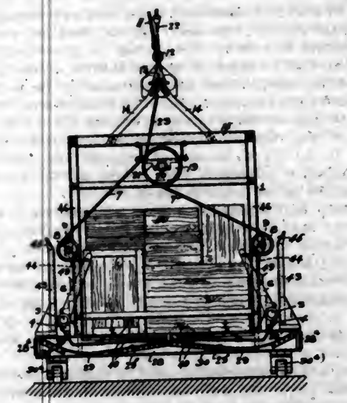
1,022,104. MERCHANDISE-CARRIER. WILLIAM BOYD MILLER, Pittsburgh, Pa. Filed Jan. 23, 1911. Serial No. 604,210. (Cl. 214—1.)

1. In a device of the character described, the combination with a portable carrier including oppositely disposed and pivotally mounted arms, and means for manipulating the same, of a support for merchandise provided with means for directing said arms into merchandise carrying position.

2. In devices of the character specified, the combination of a plurality of pivotally movable cantalivers and means for manipulating the same, with a support adapted to hold merchandise in suspended position and provided with means for guiding said cantalivers into position beneath said merchandise.

3. In devices of the character specified, the combination of a plurality of cantalivers each having a plurality of pivotally movable links, means for pivotally carrying and means for manipulating said cantalivers, with a merchandise support provided with means for guiding said pivoted links beneath said merchandise and adapted to allow the free removal of said cantalivers while maintained in horizontal carrying position.

4. In devices of the character specified, the combination of a plurality of oppositely arranged cantalivers, each having a plurality of pivoted links arranged to be limited in their outward pivoting, means for pivotally carrying said cantalivers and means for manipulating the same, with a platform support provided with curved guideways adapted to receive said cantaliver links and guide the same into carrying and extending position beneath the merchandise.



5. In devices of the character specified, the combination of a plurality of oppositely arranged cantaliver arms, each having a plurality of pivoted links arranged to be limited in their downward pivoting, means for pivotally carrying said cantalivers and means for manipulating the same, with a platform support having cross members adapted to hold the merchandise in suspended position and open guides between the same arranged to receive said cantaliver links and to allow for the vertical removal of said cantalivers carrying the merchandise.

[Claims 6 to 21 not printed in the Gazette.]

1,022,105. CAR-STAKE. WILLIAM J. MOLONEY, Oakland, Cal. Filed Aug. 2, 1911. Serial No. 642,011. (Cl. 105—183.)



1. A car stake comprising a plurality of telescoping members, a threaded screw rod for extending and retracting one of said members relative to the other, and means for rotating said screw rod.

2. A car stake comprising a plurality of metallic telescoping sections, a block having a threaded bore therein carried by the lowermost of said sections, a second threaded block carried by the section telescoping in the lower section, a threaded rod passing through the threaded bores in the blocks, and members arranged on said rod above and below the block on the telescoping section, and means for rotating said rod.

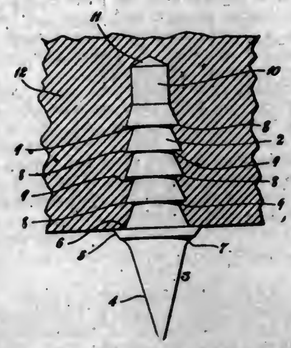
3. A car stake comprising a plurality of metallic sections adapted to telescope one within another, a tubular threaded rod extending through the lower section and connected to the adjacent section, a second rod threaded into the tubular rod and connected to the upper section of the stake, and means for rotating the rods to raise and lower the sections of the stake.

4. A car stake comprising a plurality of metallic sections telescoping one within the other, a threaded block arranged adjacent to the top of the lowermost section, a second threaded block at the top of the intermediate section, a tubular threaded rod extending through the threaded blocks, collars arranged on the tubular rods above and below the block of the intermediate section, the second rod connected to the upper section of the stake and threaded into the tubular rod, a collar fast to the top of the second mentioned screw rod, and a handle for actuating the rods to raise and lower the sections of the stake.

5. The combination with a car, of a plurality of car stakes arranged at opposite sides, each stake comprising a plurality of telescoping sections, and a plurality of screw rods for raising and lowering said sections, and a chain adapted to connect the top sections of the rods to hold the load upon the car.

[Claim 6 not printed in the Gazette.]

1,022,106. BOOT OR SHOE CALK. JOHN B. MURPHY, Hartford, Conn., assignor to The North and Pfeiffer Manufacturing Company, Hartford, Conn., a Corporation of Connecticut. Filed Nov. 15, 1911. Serial No. 660,381. (Cl. 36—67.)



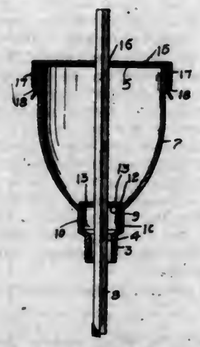
A calk comprising an upwardly tapered shank and a point, said shank having a series of superposed annular ribs of inverted frusto-conical form, the under surfaces of which are at right angles to the longitudinal axis of the shank and said ribs from the lowermost one being of progressively decreasing diameter toward the top of the shank and said shank having a head comprising a cylindrical portion and a tapered pointed portion surmounting said cylindrical portion.

1,022,107. LUBRICATING-CUP. CHARLES H. NEWHALL, Minneapolis, Minn. Filed Mar. 18, 1911. Serial No. 614,123. Renewed Feb. 23, 1912. Serial No. 679,496. (Cl. 184—69.)

1. A lubricating device comprising a cup having a cover and a feed opening, and a rod projecting through said feed opening and adapted to bear on the journal to be lubricated, and having a limited longitudinal movement, a valve mounted in said cup and comprising a stationary and a movable member having feed openings or ports, said rod moving lengthwise independently of said valve, and having a rotary movement therewith to regulate said feed openings.

2. A lubricating device comprising a cup having a feed opening and cover, a rod projecting through said opening, a rotary valve having feed ports, said rod having a rotary movement with said valve to regulate said feed ports and a limited longitudinal movement independently of said valve.

3. A lubricating device comprising a cup having a feed opening and a cover, a rod projecting through said feed opening and having a limited longitudinal movement, a valve for closing said feed opening, said valve and rod having a relative vertical movement and a simultaneous rotary movement.

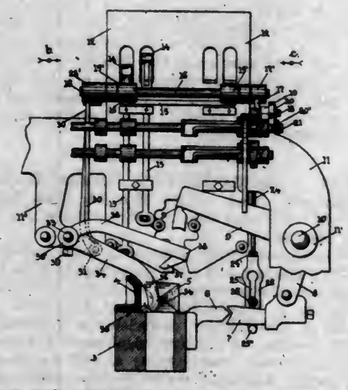


4. A lubricating device comprising a cup having a feed opening and cover, a rotary valve, said valve comprising a stationary disk or member having feed openings or ports, and a rotating disk resting upon said stationary disk and having ports to register with the ports in said stationary disk, a rod passing through said valve and feed opening and having a limited longitudinal movement, the rotation of said rod operating to revolve said movable disk and open or close said feed openings.

5. A lubricating device comprising a cup having a feed opening and cover, a feed valve composed of a stationary disk having ports and a movable disk also having ports resting on said stationary disk, a rod polygonal in cross section passing through said valve and having a limited longitudinal movement independently of said valve, the rotation of said rod operating to rotate said movable disk and close or open said feed ports.

[Claims 6 to 11 not printed in the Gazette.]

1,022,108. WEFT-REPLENISHING LOOM. EPPA H. RYON, Worcester, Mass., assignor to Crompton & Knowles Loom Works, a Corporation of Massachusetts. Filed Feb. 4, 1910. Serial No. 541,959. (Cl. 139—85.)



1. In a weft replenishing loom, a magazine, a shuttle feeler, located above the lay, and having a cam surface thereon, normally above the path of the running shuttle, to coöperate with said shuttle at the magazine end of the loom, means to lower said cam surface into the path of said shuttle, which acts as a cam to engage and move said shuttle feeler when the shuttle is not properly boxed, a transfer mechanism, and connections from said feeler to said transfer mechanism, whereby the feeler is controlled by the transfer mechanism, and the transfer mechanism controlled by the feeler, when the shuttle is not properly boxed.

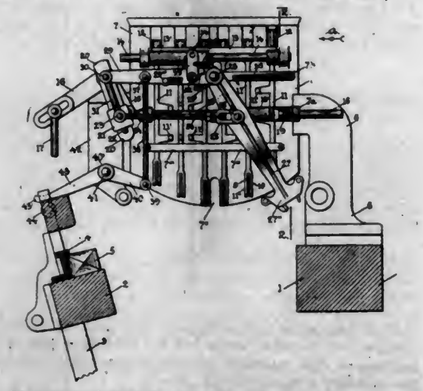
2. In a weft replenishing loom, a shuttle feeler, pivoted above the lay on a stationary part of the loom, and having an inclined or cam surface thereon to be lowered into the path of and be engaged by the shuttle at the magazine end of the loom, in case said shuttle is not properly boxed, a transfer mechanism, connections from said feeler to said transfer mechanism, whereby the feeler is lowered into the path of the running shuttle, when said transfer mechanism is set for a change of bobbins, and the transfer mechanism is prevented from acting by the feeler when the shuttle is not properly boxed.

3. In a weft replenishing loom, a shuttle feeler pivotally mounted above the lay on a stationary part of the loom, and having a cam surface thereon, normally above the path of the shuttle as it enters the stationary shuttle box at the magazine end of the loom, a transfer mechanism, and connections from said feeler to said transfer mechanism, whereby the cam surface of said feeler is lowered into the path of the shuttle when the transfer mechanism is set.

4. In a weft replenishing loom, a shuttle feeler pivotally mounted above the lay, and having a hook to catch a filling thread, a cutter adjacent the feeler, connections from said feeler to some part of the transfer mechanism, and said transfer mechanism, acting to cause said feeler to be carried to a position where the filling will be severed by said cutter.

5. In a weft replenishing loom, a shuttle feeler, pivotally mounted above the lay, and having a cam surface thereon to coöperate with the shuttle in the stationary shuttle box at the magazine end of the loom in case the shuttle is not properly boxed, a cutter for the filling thread, separate from the feeler, but located adjacent thereto, means on said feeler to catch a filling thread and carry the same into a position to be severed by said cutter, when the shuttle is properly boxed and the transfer of filling takes place.

1,022,109. WEFT-REPLENISHING LOOM. EPPA H. RYON, Waltham, Mass., assignor to Crompton & Knowles Loom Works, a Corporation of Massachusetts. Filed Dec. 5, 1910. Serial No. 595,599. (Cl. 139—85.)



1. In a magazine of the class described, having compartments for a plurality of stacks of bobbins, supporting means for the lowest bobbin in each compartment, means to automatically release the lowest bobbin when called, a conveyer to catch a bobbin when released, and move the same to a position to be transferred into the shuttle, movable slides connected with each of said supporting means, and means to operate said slides, and connections from said slides to said conveyer to operate the same.

2. In a magazine of the class described, having compartments for a plurality of stacks of bobbins, supporting means for the lowest bobbin in each compartment, means to automatically release the lowest bobbin when called, a movable conveyer to catch a bobbin when released, and move the same to a position to be transferred into the shuttle, a movable slide connected with each of said supporting means, and means to operate said slides, and connections from said slides, to said conveyer, to move the same, from its position under any one of the bobbin compartments, to a position under the transferrer, a lay, and means on said lay to return said carrier to an operative position under one of the bobbin compartments after each transfer of a bobbin into a shuttle.

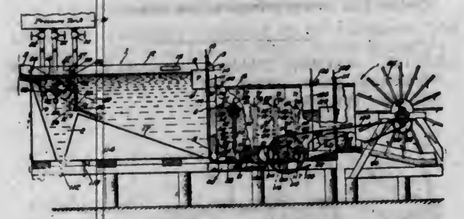
3. In a magazine of the class described, a plurality of compartments for stacks of bobbins, a movable bobbin conveyer, and connections from said conveyer to move the same in unison with the drop shuttle boxes of the loom, a lay, and mechanism to move said conveyer to a central position under the transferrer after a bobbin has been dropped therein, and means on said lay to return said carrier to an operative position under one of the bobbin compartments.

4. In a magazine of the class described, having a plurality of compartments for bobbins, supporting means for the lowest bobbin in each compartment, means to automatically release the lowest bobbin, when called, a single movable conveyer, and mechanism to move the same to register with any one of the compartments, to receive the bobbin released from a compartment, means to move said conveyer to carry the bobbin into a position to be transferred into the active shuttle and means to move the conveyer to a position registering with the compartment having filling corresponding to the filling in the active shuttle, after the transfer takes place.

5. In a magazine of the class described, having compartments for a plurality of stacks of bobbins, supporting means for the lowest bobbin in each compartment, means to automatically release the lowest bobbin when called, a conveyer to catch a bobbin when released, means connected to said conveyer to control the same, and cause it to register with any one of the said compartments having filling corresponding to that in the active shuttle, means to withdraw said conveyer from its controlling means after a bobbin has been dropped into said conveyer, and to move said conveyer with the bobbin therein to a position to have the bobbin transferred into the active shuttle.

[Claim 6 not printed in the Gazette.]

1,022,110. GOLD AND QUICKSILVER SAVING APPARATUS. LOUIS SACHSE, Los Angeles, Cal. Filed Aug. 23, 1911. Serial No. 645,686. (Cl. 83—68.)



1. A gold and quicksilver saving apparatus comprising an unobstructed supply tank having a smooth sloping floor; means to deliver the metal-carrying liquid to the supply tank; an amalgamating tank adapted to contain quicksilver, and having an outlet; said floor sloping from receiving end to outlet to practically increase the submergence of the floor thereof from end to end; there being a supply port between the tanks at the lower end of the sloping supply tank floor above the level of said lower end of the supply tank floor and above the quicksilver level of the amalgamating tank and below the level of the outlet; amalgamating apparatus in the amalgamating tank above and below the supply port level; a gate for the supply port, and a float in the supply tank operatively connected with the gate to maintain an approximately constant level of material in the supply tank.

2. A gold and quicksilver saving apparatus comprising a supply tank having a sloping floor; means to deliver the metal-carrying liquid to the supply tank, an amalgamating tank adapted to contain quicksilver, and having an outlet; there being a supply port between the tanks at the lower end of the sloping supply tank floor above the level of said lower end of the supply tank floor and above the quicksilver level of the amalgamating tank and below the level of the outlet; amalgamating apparatus in the amalgamating tank above and below the supply port level; a gate for the supply port, and a float in the supply tank operatively connected with the gate to maintain an approximately constant level of material in the supply tank, and a current-breaking gate in front of the supply port.

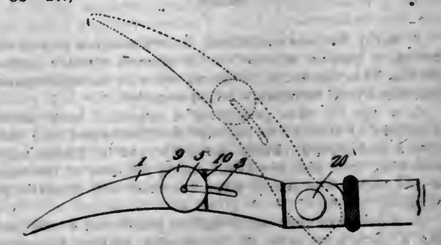
3. A gold and quicksilver saving apparatus comprising a supply tank having a sloping floor; means to deliver the metal-carrying liquid to the supply tank; an amalgamating tank adapted to contain quicksilver, and having an outlet; there being a supply port between the tanks at the lower end of the sloping supply tank floor above the level of said lower end of the supply tank floor and above the quicksilver level of the amalgamating tank and below the level of the outlet; amalgamating apparatus in the amalgamating tank above and below the supply port level; a gate for the supply port; a float in the supply tank operatively connected with the gate to maintain an approximately constant level of material in the supply tank, and a vertically adjustable current-breaking gate in front of the supply port.

4. The combination with a supply tank and an amalgamating tank having a supply port between them; said amalgamating tank being provided with a contracted discharge outlet so as to maintain a depth of liquid in the amalgamating tank, of a gate to control the port and a float in the supply tank above the liquid level of the amalgamating tank and connected with the gate to raise and lower the same.

5. The combination with a supply tank and an amalgamating tank having a supply port between them, of a lip in the amalgamating tank below the port, a current-breaking gate above the lip and means to adjust said gate toward and from the lip.

[Claims 6 to 11 not printed in the Gazette.]

1,022,111. DRAFTING-PEN. EDWIN R. SMITH, Paris, Tex. Filed Aug. 26, 1910. Serial No. 579,015. (Cl. 33—17.)



1. A pen embodying blades, and a tie member uniting the blades to resist a separation of the blades, the tie member being movable in the blades, at a fixed angle to the blades, to permit a separation of the blades.

2. A pen embodying longitudinally slotted blades, and a tie member located in the slots, and uniting the blades to resist a separation of the blades, the tie member being movable transversely of its length, and longitudinally of the slots, at a fixed angle to the blades, to permit a separation of the blades.

3. A pen embodying blades, one of which is provided in its outer face with a shoulder, and a tie member uniting the blades to resist a separation of the blades, the tie member being movable in the blades, at a fixed angle to the blades, to ride off the shoulder and to permit a separation of the blades.

1,022,112. CATNIP-BALL. WALTER E. SMITH, Boston, Mass., assignor to Charles C. Rogers, Winchester, Mass. Filed Aug. 20, 1908. Serial No. 449,415. (Cl. 46—69.)



1. A catnip ball comprising a chambered body having a cavity to contain catnip, and also having a recess on its exterior surface, and a piece of soft fibrous material filling said recess and coming flush with the exterior of the ball, the recessed portion of the ball and said fibrous material being provided with perforations leading to the cavity, and the fibers of said fibrous material partially filling the aperture therethrough and thereby preventing the catnip from sifting through the apertures of the body.

2. In a catnip ball, the combination with a body provided with an interior cavity adapted to contain catnip, and also having a circular recess of uniform depth on its exterior surface, said recessed portion of the body being provided with apertures, of a piece of felt set into said recess and having a thickness equal to the depth thereof, said felt being provided with apertures which are alined with those of the body but which are partially closed by the projecting fibers, whereby the catnip material is prevented from sifting through the apertures.

3. A catnip ball comprising a body adapted to roll and formed of two concavo-convex halves, each having an annular rabbet and an annular slightly undercut lip, the lip of each part fitting into the rabbet of the other part, each part having an exterior recess, and a piece of soft, fibrous material filling each recess, the recessed portions and the fibrous material being perforated to emit a catnip odor.

1,022,113. CATNIP-BALL. WALTER E. SMITH, Boston, Mass., assignor to Charles C. Rogers, Winchester, Mass. Filed Aug. 31, 1908. Serial No. 450,948. (Cl. 46—69.)



1. A toy for cats comprising a body adapted to roll and having a portion at least of its exposed exterior surface formed of a moldable compound made of catnip material and wood pulp intimately mixed together.

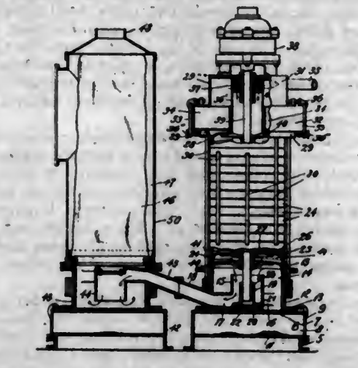
2. A toy for cats presenting a spherical body having a portion at least of its exterior surface formed of a compound comprising catnip material, and a binder of a character that does not affect either the odor or the taste of the catnip and which when hardened will preserve the shape of the toy.

3. A device of the class described presenting a body having a portion at least of its exterior surface formed of a moldable catnip compound which when dry has sufficient cohesive properties to maintain its molded shape.

1,022,114. CLEANING APPARATUS. IRA H. SPENCER, Hartford, Conn., assignor to The Spencer Turbine Cleaner Company, Hartford, Conn., a Corporation of Connecticut. Filed June 26, 1908. Serial No. 440,469. (Cl. 230—11.)

1. In combination a drum, a cup supported within the drum projecting from one end thereof, and a duct leading from said cup and having an opening at one side of the drum midway between the ends of the drum.

2. In combination a base, a shell composed of rings duplicates each of the other placed end to end and with compartments formed in said shell, a cap fitting the end of the shell, a casing fitting upon said cap, tie-bolts engaging the base and shell to secure all of the parts together, a neck extending from the cap and within the casing, a motor supported by the casing, a shaft depending from the motor within the shell, and impellers secured to said shaft and located within said compartments.



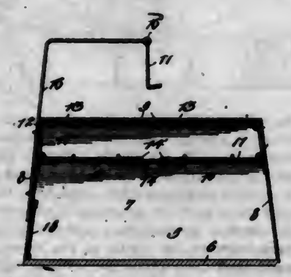
3. In combination a shell, means for supporting the shell, a shaft depending within the shell, a cup supported within the structure having an opening through its end, a bearing projecting through said opening and having an opening at one end, a plate to hold said bearing in place, said cup having a duct extending outward through the wall of the chamber in which the cup is located and impellers secured to said shaft.

4. In combination a shell, means for supporting the shell, a motor supported by the shell, a motor shaft depending within the shell, a cup supported within the structure and having an opening through its end, a bearing projecting through said opening, a plate to hold said bearing in place, said cup having a duct extending outward through the wall of the chamber in which the cup is located, and impellers secured to said shaft.

5. In combination a shell, means for supporting the shell, a motor supported by the shell, a shaft depending from the motor within the shell, a cup supported within the structure and having a recess in its bottom and an opening from said recess to the interior of the shell, a bearing having a flange located within the recess and projecting through said opening, a plate located within the recess to hold the bearing in position, said cup having an opening through the wall of the chamber containing it, and impellers secured to said shaft.

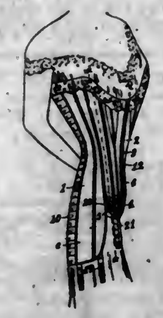
[Claims 6 to 16 not printed in the Gazette.]

1,022,115. ANIMAL-TRAP. CARLETON E. WALCOTT, Waterbury, Conn. Filed Oct. 17, 1910. Serial No. 587,528. (Cl. 43—24.)



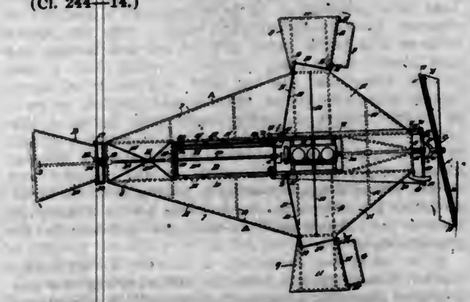
A trap comprising a receptacle, downwardly tilting cover plates hinged to the opposite walls in the same plane and meeting in the center, downwardly tilting partition plates hinged to the opposite walls and meeting at the center in a plane beneath the cover plates, plate sustaining springs having one terminal portion secured beneath the cover plate and the other terminal portion secured above the partition plate and the medial portion arranged along the wall between the two plates, said springs having coils connecting the medial and terminal portions in the angles formed by said plates with the walls, stops for the cover plates, additional stop members for the partition plates, said stops limiting the upward movement of said plates, and a bait holding device disposed above the cover plate.

1,022,116. CORSET. CLARA E. WOODWORTH, Detroit, Mich. Filed May 2, 1910. Serial No. 559,037. (Cl. 2—73.)



In a corset, two front sections, thin flat steel strips secured to the front edges of the adjacent front sections and extending from the top of the corset to the lower portion of the abdomen, transverse elastic bands arranged in a series at each side of the corset forming side sections extending from the top of the corset to the bottom thereof below the abdomen and lower ends of the strips, said side sections being drawn in at the waist line of the corset and widening at the bottom of the corset below the abdomen, spaced apart transverse elastic bands of double thickness arranged in two series and secured between said steel strips and said front sections at points upon the latter at the sides of the abdomen, said last-named elastic bands being longer near the top of the abdomen than at the lower portion thereof, flaps boned the entire lengths thereof, said flaps extending over the middle of the last-named series of elastic bands and separated therefrom, and hose-supporting members secured to the bottoms of said flaps.

1,022,117. AIRSHIP. VINCENT C. DE YBARRONDO, Los Angeles, Cal. Filed Jan. 11, 1910. Serial No. 537,546. (Cl. 244—14.)



1. In an airship, a main plane comprising a longitudinal central portion and lateral portions each of which is of varying width and provided at its widest portion with a lateral extension which increases in width toward its outer edge.

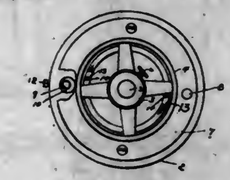
2. In an airship, a main plane comprising a longitudinal central portion and lateral portions each of which is of varying width and provided at its widest portion with a lateral extension which increases in width toward its outer edge; each of said lateral extensions being provided with a movable supplemental plane.

3. In an airship, a main plane, a bearing thereon, a sleeve rotatable in said bearing, a yoke fixed to said sleeve, a supplemental steering plane pivotally mounted in said yoke, a gear connected with said steering plane, a shaft rotatable in said sleeve, a gear upon said shaft meshing with said gear upon said steering plane; means for rotating said sleeve, and means for rotating said shaft.

4. In an airship, a main plane, a bearing thereon, a sleeve rotatable in said bearing, a yoke fixed to said sleeve, a supplemental steering plane pivotally mounted in said yoke, a gear connected with said steering plane, a shaft rotatable in said sleeve, a gear upon said shaft meshing with said gear upon said steering plane; means for rotating said sleeve, and means for rotating said shaft; each of said rotating means being provided with a controlling lever, and said levers being arranged in juxtaposition.

5. An airship provided with an adjustably supported flexible body, and means for presenting varying portions of the superficial area of the same directly in opposition to the air to check the motion of the airship; said supplemental frame being triangular in form and provided with an endless belt upon which said sheet or apron is mounted.

1,022,118. ADJUSTABLE DRIVER OR CARRIER FOR LATHES, &c. NICHOLAS W. BAECHLE, Cincinnati, Ohio. Filed Apr. 10, 1911. Serial No. 619,949. (Cl. 82—40.)



1. In an adjustable driver, the combination of a carrying plate; a driver movably mounted upon the plate, having a plurality of driving arms and adapted to loosely encircle an arbor; means for moving the driver relatively to the axis of the plate; and means for securing the driver in its adjusted positions.

2. In an adjustable driver, the combination of a carrying plate; a driver having a pivotal connection with the plate and a plurality of driving arms and adapted to loosely encircle an arbor; an eccentric adapted to adjust the position of the driver relatively to the axis of the plate; and means for securing the driver in its adjusted positions.

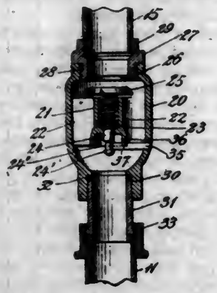
3. In an adjustable driver, the combination of a carrying plate; a driver having a plurality of driving arms and a pivotal connection with the plate, and adapted to loosely encircle an arbor; a pin eccentrically mounted in the plate and taking through a slot in the driver whereby the position of the driver relatively to the axis of the plate may be adjusted; and means for securing the driver in its adjusted positions.

4. In an adjustable driver, the combination of a carrying plate; a driver movably mounted upon the plate, having a plurality of angular driving arms and adapted to loosely encircle an arbor; chilled steel bearing-faces carried by the arms; means for moving the driver relatively to the axis of the plate; and means for securing the driver in its adjusted positions.

1,022,119. SAFETY APPLIANCE. WILLIAM E. BARTON, Hartford, Conn. Filed Mar. 22, 1910. Serial No. 550,922. (Cl. 137—92.)

The combination with a supply pipe of a normally-open and tending-to-close valve having a stem provided with a head, a cylindrical barrel having ribs formed in-

tegral therewith for guiding the movement of said valve, said ribs connecting the barrel to the supply pipe, a spring surrounding said valve stem within said barrel and tending to close the valve and a wire in engagement



with said stem at one end and having its opposite end secured to the casing for holding said valve in its open position against the tension of the spring and having a portion which is fusible at a certain degree of temperature to release said valve.

1,022,120. GUARD FOR HAT-PINS. JOHN W. BIERACKI, New Haven, Conn. Filed July 15, 1911. Serial No. 638,632. (Cl. 24—155.)



A guard for the pointed end of a hat pin, comprising a tapering head having a centrally disposed bore for the reception of the pointed end of the pin, said head having its periphery cut away to provide a recess and said head further formed with a radially disposed opening communicating at one end with the bore and at its other end with said recess, a cam pin shiftably mounted in said opening and extending in the bore for engagement, when shifted in one direction, with the pointed end of a pin for securing the head on the latter, a curved lever mounted in the recess and connected at one end to said cam pin, a handle disposed at right angles with respect, and connected, to the other end of said lever, said recess being of such length as to permit of the elevating and lowering of said lever, and means for retaining said lever in position.

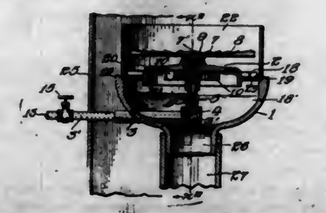
1,022,121. INSULATOR-PIN. CLARENCE JOSEPH BOYLAND, Indianapolis, Ind. Filed Nov. 8, 1911. Serial No. 659,216. (Cl. 173—321.)

1. An insulator pin comprising a one part sheet metal shell split longitudinally throughout its length with the edges spaced apart whereby the pin as a whole is transversely contractible, one end of the pin being reduced in diameter to form a shank and a shoulder at the inner end thereof, the shell being thinner at the shank, the shank having a plurality of longitudinal slits extending from the shoulder to the outer end of the shank to form yieldable tongues which have their adjoining edges spaced apart, and a plurality of staggered spurs struck from the tongues which project away from the outer end of the shank.

2. An insulator pin comprising a one part sheet metal shell split longitudinally throughout its length, one end of the pin being reduced in diameter to form a shank and a shoulder at the inner end thereof, the shank having a plurality of longitudinal splits extending from the shoulder to the outer end of the shank to form yieldable tongues, and a plurality of spurs struck from the tongues.



1,022,122. ROTARY OIL-BURNER. WILLIAM M. BRITTEN, Los Angeles, Cal., assignor of one-half to Clyde Harshman, Los Angeles, Cal. Filed Jan. 25, 1909. Serial No. 474,169. (Cl. 158—28.)



1. An oil burner comprising a chamber, an oil supply pipe extending thereinto, a tubular stud extending from said oil supply pipe and communicating therewith, a burner head formed with a hollow hub journaled on said tubular stud and having a perforation communicating with the central opening in the tubular stud, said burner head being provided at its upper end with a plurality of separate blades constituting a rotary fan, the spaces between said blades being open at top and bottom, and said burner head being further provided with a disk portion below said fan and with a plurality of downwardly extending blades on said disk portion to serve as turbine means, and a water supply pipe having a discharge opening extending in position to direct a stream of water against said turbine means.

2. An oil burner comprising a chamber, an oil supply pipe extending thereinto, a tubular stud extending from said oil supply pipe and communicating therewith, a burner head formed with a hollow hub journaled on said tubular stud and having a perforation registering with the central opening in the tubular stud, said burner head being provided at its upper end with a plurality of separate blades constituting a rotary fan, the spaces between said blades being open at top and bottom, and said burner head being further provided with a disk portion below said fan and with a plurality of downwardly extending blades on said disk portion to serve as turbine means, a water supply pipe having a discharge opening extending in position to direct a stream of water against said turbine means, and an annular member supported on the walls of the chamber and formed with a flange extending in proximity to the aforesaid disk member on the burner head and with openings between said flange and the wall and chamber for the passage of air.

3. An oil burner comprising a chamber, an oil supply pipe extending thereinto, a tubular stud extending from said oil supply pipe and communicating therewith, a burner head formed with a hollow hub journaled on said tubular stud and having a perforation registering with the central opening in the tubular stud, said burner head being provided at its upper end with a plurality of separate blades constituting a rotary fan, the spaces between said blades being open at top and bottom, and said burner head being further provided with a disk portion below said fan and with a plurality of downwardly extending blades on said disk portion to serve as turbine means, a water supply pipe having a discharge opening extending in position to direct a stream of water against said turbine means, and an annular member supported on the walls of the chamber and formed with a flange extending in proximity to the aforesaid disk member on the burner head and with openings between said flange and the wall and chamber for the passage of air, and a ring resting on the top of the chamber and having openings in its lower portion for admission of air from the outside of the chamber.

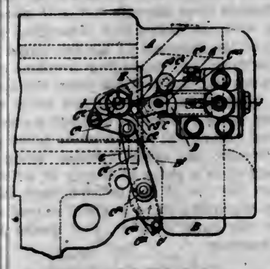
1,022,123. CLIP FOR METALLIC WINDOW-SASH. CLARENCE W. DAVOCK, Detroit, Mich., assignor to Detroit Steel Products Company, Detroit, Mich., a Corporation of Michigan. Filed Sept. 29, 1910. Serial No. 584,383. (Cl. 189—78.)



1. The combination with a T-shaped muntin, the glass being adapted to engage the angle between the stem and head of the T, and the stem having an aperture intermediate the head of the muntin and the plane of the outer face of the glass, of a bendable metal clip passing through said aperture and having the ends thereof bent to bear upon the glass.

2. The combination with a T-shaped muntin, the glass being adapted to engage the angle between the stem and head of the T, and the stem having an aperture intermediate the head of the muntin and the plane of the outer face of the glass, of a metallic clip passing through said aperture and bent to form portions arranged between the ends of the glass and the stem of the muntin, the ends of said clip bearing upon the glass.

1,022,124. BREECH-LOADING ORDNANCE. ARTHUR TREVOR DAWSON and GEORGE THOMAS BUCKHAM, Westminster, London, England, assignors, by mesne assignments, to Vickers Limited, Westminster, England. Filed Dec. 29, 1910. Serial No. 599,940. (Cl. 89—1.)



1. In a breech loading ordnance, the combination with the laterally sliding breech block, of a valve for controlling the supply of compressed fluid to the gun, and means for opening the said valve by the lateral sliding movement of the breech block.

2. In a breech loading ordnance, the combination with the laterally sliding breech block, of a valve for controlling the supply of compressed fluid to the gun, means for opening the said valve by the lateral sliding movement of the breech block, and means for closing the said valve.

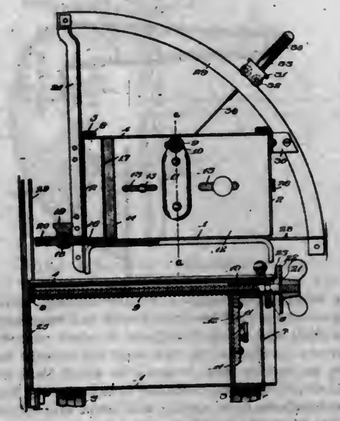
3. In breech loading ordnance, the combination with the laterally sliding breech block, of a valve for controlling the supply of compressed fluid to the gun, means for opening the said valve by the lateral sliding movement of the breech block and means for closing the said valve by the lateral sliding movement of the breech block in the reverse direction.

4. In a breech loading ordnance, the combination with the laterally sliding breech block, of a valve for controlling the supply of compressed fluid to the gun, means for opening the said valve by the lateral opening sliding movement of the breech block, and means for closing the said valve by the lateral sliding movement of the breech block in the reverse direction.

5. In breech loading ordnance, the combination with the laterally sliding breech block, of a valve for controlling the supply of compressed fluid to the gun, means for opening the said valve by the lateral opening sliding movement of the breech block, and means for closing the said valve by hand.

[Claims 6 to 10 not printed in the Gazette.]

1,022,125. CHEESE-CUTTING MACHINE. FRANK DECKER, Rochester, N. Y. Filed Mar. 17, 1911. Serial No. 615,031. (Cl. 31—68.)



1. In a slicing machine, the combination with a receptacle, of a follower movable within the receptacle, an extension slidably adjustable on the follower to different positions for varying the size thereof, a wall adjustable within the receptacle to engage the edge of said extension and having an extended base portion adapted to rest upon the bottom of the receptacle, and a cutting device arranged in advance of the follower.

2. In a slicing machine, the combination with a receptacle, of a follower movable within the receptacle, an extension slidably adjustable on the follower to different positions for varying the size thereof, a wall adjustable within the receptacle to engage the edge of the extension and having an extended base portion, means for adjustably securing the base portion on the bottom of the receptacle, and a cutting device arranged in advance of the follower.

3. In a slicing machine, the combination with a receptacle, of a follower movable within the receptacle, an extension slidably adjustable on the follower to different positions for varying the size thereof, a wall adjustable within the receptacle to engage the edge of the extension and having a right-angled base portion adapted to rest on the bottom of the receptacle in parallelism therewith, means for adjustably securing said base portion on the bottom of the receptacle, and a cutting device arranged in advance of the follower.

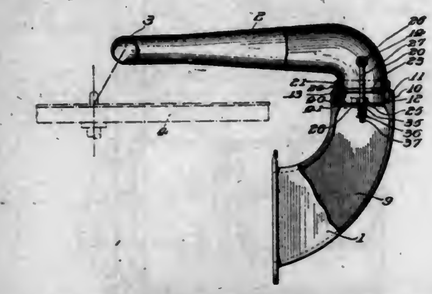
4. In a slicing machine, the combination with a receptacle, of a follower movable within the receptacle, an extension slidably adjustable on the follower to different positions for varying the size thereof, a wall adjustable within the receptacle to engage the edge of the extension

and having a right-angled base portion resting on the bottom of the receptacle and arranged for movement through an opening in the side of the receptacle, means for adjustably securing said base portion on the bottom of the receptacle, and a cutting device arranged in advance of the follower.

5. In a slicing machine, the combination with a receptacle, of a follower movable within the receptacle, an extension slidably adjustable on the follower to different positions for varying the size thereof, a wall adjustable within the receptacle to engage the edge of the extension and having a right-angled base portion resting on the bottom of the receptacle and movable through an opening in the side of the receptacle, means arranged without the receptacle for adjustably securing said base portion relatively to the side of the receptacle, and a cutting device arranged in advance of the follower.

[Claims 6 to 15 not printed in the Gazette.]

1,022,126. TALKING-MACHINE. WILBURN N. DENNISON, Merchantville, N. J., assignor to Victor Talking Machine Company, a Corporation of New Jersey. Filed Aug. 27, 1910. Serial No. 579,200. (Cl. 181—3.)



1. The combination with a hollow support having an open end, of a tone arm having an open end communicating with the open end of said support, a pivot connected to said tone arm, a bushing in the open end of said support, a bearing carried by said bushing in which said pivot is rotatively supported and normally longitudinally movable, and yielding means surrounding said pivot and coöperating with said bearing for holding said tone arm in place.

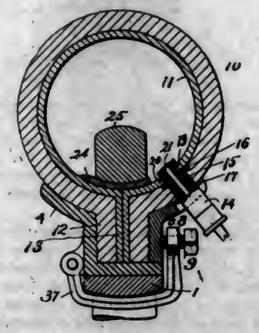
2. The combination with a hollow support having an open end, of a tone arm having an open end communicating with the open end of said support, a bushing in the open end of said support, said bushing for holding said tone arm movably in position, a collar fixed around the open end of said tone arm and having a lower end wall substantially in the form of a spherical zone, the upper end wall of said bushing being shaped to conform to the lower end wall of said collar, and yielding means surrounding said pivot means and coöperating with said bushing for holding said end walls in sliding contact with each other.

3. The combination with a bracket constituting a sound conveying tube throughout its entire extent, of a washer snugly fitted within one end and having a concave outer end wall, a bridge within said washer and in rigid engagement therewith, a tone arm having an open end in alinement with the open end of said bracket, a sleeve snugly fitted around the open end portion of said tone arm and having a convex outer end wall, said washer and sleeve being in alinement and slidable contact with each other, a cross-head within said tone arm and in pivotal engagement therewith, a pivot-pin rigid with said cross-head and in slidable engagement with said bridge, and resilient means surrounding said pivot for yieldingly maintaining said sleeve and washer in frictional contact with each other.

4. The combination with a bracket constituting a sound conveying tube throughout its entire extent, of a washer snugly fitted within one end and having a concave outer end wall, a bridge within said washer and in rigid engagement therewith, a tone arm having an open end in alinement with the open end of said bracket, a sleeve snugly fitted around the open end portion of said tone arm and having a convex outer end wall, said washer and sleeve being in alinement and slidable contact with each other, a cross-head within said tone arm and in pivotal engagement therewith, and a pivot-pin rigid with said cross-head and in slidable engagement with said bridge.

5. The combination with a bracket constituting a sound conveying tube throughout its entire extent, of a washer snugly fitted within one end, a bridge within said washer and in rigid engagement therewith, a tone arm having an open end in alinement with the open end of said bracket, a sleeve snugly fitted around the open end portion of said tone arm, said washer and sleeve being in alinement and slidable contact with each other, a cross-head within said tone arm and in pivotal engagement therewith, and a pivot-pin rigid with said cross-head and in slidable engagement with said bridge.

1,022,127. TIRE. EDWARD DETTELBACH, Cleveland, Ohio. Filed June 17, 1910. Serial No. 567,377. (Cl. 152—13.)



1. A tire comprising an inner cylindrical shaped member having free projecting edges, an outer member cylindrical in shape and having free projecting edges, the said members being longitudinally movable with respect to each other and the projecting edge pieces upon the inner member being held between the projecting pieces upon the outer member, and means for holding them together.

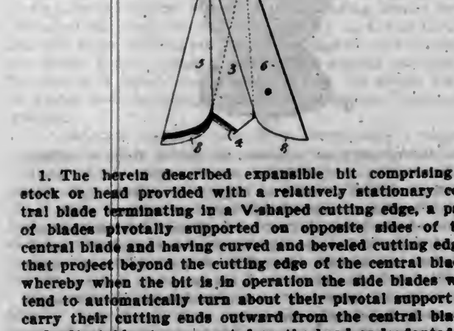
2. A tire comprising an inner and an outer member which members are free to move relatively, the said members being formed from annular strips of material tubular in form but with the edges free, depending portions carried by each of the members at the free edges thereof, and means for securing the depending portions on the inner member between the like portions upon the outer member.

3. A tire comprising an inner and outer member, the outer member being formed of resilient material but substantially non expanding, said member being formed with depending flanges, an inner member being formed of resilient material of a shape to snugly fit within the outer member when the tire is not inflated, said member being formed with depending flanges which extend between the flanges upon the outer member, and means for securing the flanges together.

1,022,128. BUFFING-MACHINE. EDWIN RUST DOUGLAS, Glenside, Pa. Filed July 21, 1911. Serial No. 639,704. (Cl. 51—4.)

1. In a device of the character stated, a buffing-wheel, a carrier supported to rotate concentrically with such wheel, a chuck movably supported in said carrier, and means for successively and automatically moving such chuck against one face of the wheel, against the periphery of the same and against its opposite face.

2. In a device of the character stated, a buffing-wheel, a continuous carrier-support journaled to travel concentrically with said wheel, a series of chucks movably supported upon said carrier, and means for successively and automatically moving each of such chucks against one face of the wheel, against the periphery of the same and against its opposite face.



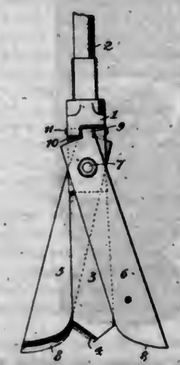
3. In a device of the character stated, a single buffing wheel, a rotary table, a floating chuck carried thereby, a plurality of cams located on opposite sides of said chuck and connections common to said cams and chuck for actuating the latter and to successively present the same against the inner, peripheral and outer portions of the buffing-wheel.

4. In a device of the character stated, a buffing wheel, a plurality of cams located on opposite sides of said wheel, a floating chuck casing, a chuck in said casing, connections common to said cams and chuck for operating the latter, and means for rotating said chuck.

5. In a device of the character stated, a buffing wheel, a chuck casing, chuck jaws therein, a plurality of cams located on opposite sides of said chuck casing, connections from said cams to said chuck casing for actuating the latter, and tripping mechanism for actuating said jaws.

[Claims 6 to 54 not printed in the Gazette.]

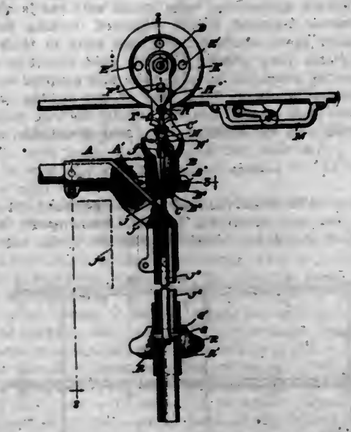
1,022,129. ADJUSTABLE DRILLING-BIT. WILLIAM T. EVANS and BERNARD F. REILLY, Wilkes-Barre, Pa. Filed Aug. 4, 1911. Serial No. 642,358. (Cl. 166—6.)



1. The herein described expansible bit comprising a stock or head provided with a relatively stationary central blade terminating in a V-shaped cutting edge, a pair of blades pivotally supported on opposite sides of the central blade and having curved and beveled cutting edges that project beyond the cutting edge of the central blade, whereby when the bit is in operation the side blades will tend to automatically turn about their pivotal support to carry their cutting ends outward from the central blade, and adjustable stops mounted on the head and adapted to limit such turning movement of the side blades.

2. The herein described expansible bit comprising a head having a relatively stationary blade, a pair of blades pivotally connected to the head on opposite sides of the stationary blade and having curved cutting edges which extend beyond the free end of the stationary blade, the ends of said side blades adjacent the head being recessed, stops on the head extending into said recesses in the ends of the pivotally mounted blades, and pins adjustably supported by said stops and adapted to limit turning movement of the pivotal blades in one direction.

1,022,130. CARRIER. RAY W. FRANKLIN, Waterloo, Iowa. Filed Jan. 27, 1912. Serial No. 673,833. (Cl. 104—146.)



1. A carrier apparatus comprising a frame, a yoke mounted thereon, a wheel carried by the yoke and having a web with apertures therein, a longitudinally movable pin for engagement with one or another of said apertures, means for moving the pin longitudinally, a tilting casting mounted upon the yoke, a bar pivoted thereto, and locking means actuated by said bar as the latter is raised by tilting of said casting mounted upon the yoke, as set forth.

2. A carrier apparatus comprising a frame, a yoke mounted thereon, a wheel carried by the yoke and having a web with apertures therein, a longitudinally movable pin for engagement with one or another of said apertures, means for moving the pin longitudinally, a tilting casting mounted upon the yoke, a bar pivoted thereto, locking means actuated by said bar as the latter is raised by tilting of said casting mounted upon the yoke, and a tilting member pivotally mounted upon the yoke and having its upper end convexed, as set forth.

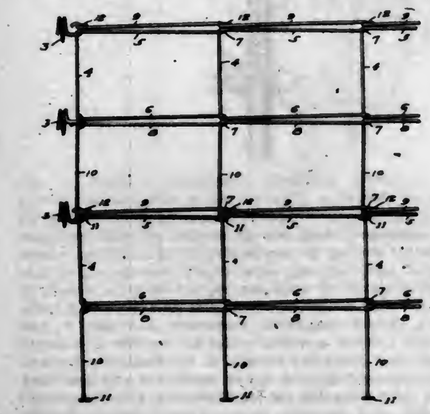
3. A carrier apparatus comprising a frame, a yoke mounted thereon, a wheel carried by the yoke and having a web with apertures therein, a longitudinally movable pin for engagement with one or another of said apertures, the head of the pin having a slot therein, a pivotal cam lever engaging said slot, a casting having trunnions thereon pivotally mounted in said yoke, a rod pivotally connected to said casting, a carrier bar adjustably connected thereto, a standard upon which said bar is mounted, gravity locking devices mounted upon said standard, an anti-friction roller carried by the bar and adapted to actuate said gravity devices, a track, a stop, and means carried thereby designed to tilt said casting to cause the locking device to be actuated, as set forth.

4. A carrier apparatus comprising a frame, a yoke mounted thereon, a wheel carried by the yoke and having a web with apertures therein, a longitudinally movable pin for engagement with one or another of said apertures, the head of the pin having a slot therein, a pivotal cam lever engaging said slot, a casting having trunnions thereon pivotally mounted in said yoke, a rod pivotally connected to said casting, a carrier bar adjustably

connected thereto, a standard upon which said bar is mounted, a casting fastened to the standard, locking devices having their lower edges inclined and slots in their vertical portions, pins passing through said slots, an antifriction roller journaled upon the bar and adapted to contact with the lower inclined edge of the locking device, as set forth.

5. A carrier apparatus comprising a frame, a yoke mounted thereon, a wheel carried by the yoke and having a web with apertures therein, a longitudinally movable pin for engagement with one or another of said apertures, the head of the pin having a slot therein, a pivotal cam lever engaging said slot, a casting having trunnions thereon pivotally mounted in said yoke, a rod pivotally connected to said casting, a carrier bar adjustably connected thereto, a standard upon which said bar is mounted, a casting fastened to the standard, locking devices having their lower edges inclined and slots in their vertical portions, pins passing through said slots, an antifriction roller journaled upon the bar and adapted to contact with the lower inclined edge of the locking device, ribs at the ends of said gravity locking devices, movable in guideways in the casting upon said standard, as set forth.

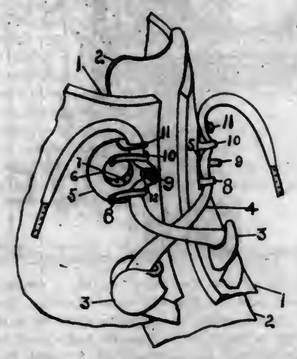
1,022,131. BED-SPRING FABRIC. GEARHART GANGELHOFF, Jr., and MICHAEL JORDAN, Minneapolis, Minn. Filed Oct. 5, 1911. Serial No. 652,980. (Cl. 245—5.)



1. A bed spring fabric composed of longitudinal rows of links, each link being substantially U-shaped in form and comprising a cross bar and parallel side members forming angled continuations of said cross bar, each side member being composed of two bars formed by bending the ends of said members backwardly upon themselves, loops being formed by the bends in said bars at one end of said side members and said bars being spaced apart to interlock with the side members of the adjoining longitudinal link, one of the outer bars of said side members having a lateral extension to engage the cross bar of the corresponding link of the adjoining row and forming a cross tie between the parallel rows of links, the outer bar of the other side member having a hooked end to engage the loop of the corresponding side member of the adjoining longitudinal link.

2. A bed spring fabric composed of longitudinal rows of links, each link being substantially U-shaped in form and comprising a cross-bar and parallel side members forming angled continuations of said cross-bar, each side member being composed of two bars formed by bending the ends of said members backwardly upon themselves, loops being formed by the bends in said bars at one end of said side members and said bars being spaced apart to interlock with the side members of the adjoining longitudinal link, one of the outer bars of said side members having a lateral extension to engage the cross-bar of the corresponding link of the adjoining row and forming a cross-tie between the parallel rows of links.

1,022,132. FASTENING DEVICE. WILLIAM H. GANSS, Toledo, Ohio. Filed July 8, 1909. Serial No. 506,497. (Cl. 24—117.)



A hold fast device comprising an eyelet adapted to be attached to a suitable support, a pair of spaced hooks extending parallel with each other and overlying the face of the eyelet, and an abutment located between said hooks and disposed in staggered relation thereto, said hooks and abutment being all formed integral with and carried by said eyelet at the extreme edge thereof, said abutment projecting upwardly from such edge at an angle to the plane thereof and comprising a strip bent over upon itself, the end of such strip resting against the face of the eyelet adjacent the base of the abutment, thereby constituting a brace for the same.

1,022,133. INVERTED INCANDESCENT MANTLE. CHARLES KNOX HARDING, Chicago, Ill. Filed Oct. 21, 1910. Serial No. 588,366. (Cl. 67—98.)

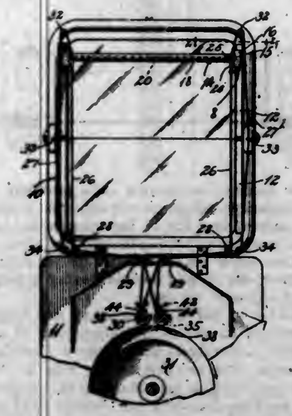


1. An incandescent mantle constructed from a tubular fabric, having a cylindrical body portion and a semi-spherical shaped closed end formed by uniting the edges of a plurality of curved end sections integral with the fabric of the body portion, each of said sections having a length of about the semi-circumference of the semi-spherical closed end, and each of said sections having a width such that the sum of the combined widths of all the sections equals the semi-circumference of the semi-spherical closed end portion.

2. An incandescent mantle constructed from a tubular fabric, having a cylindrical body portion and a semi-spherical shaped closed end formed by uniting the edges of four curved end sections integral with the fabric of the body portion, each one of the four sections having a length of about the semi-circumference of the semi-spherical closed end, and each of said four sections having a width such that the sum of the combined widths of all the sections equals the semi-circumference of the semi-spherical closed end portion.

3. The method of making a mantle, consisting of slitting lengthwise opposite sides of one end of a tubular fabric, thereby producing opposite flaps, cutting the opposite side edges of each flap to form similar laterally disposed gores at each of said edges, sewing together the adjacent edges of the gores at each side of each flap, and sewing together the ends of the flaps.

1,022,134. WINDOW-CLEANER. JOHN E. HECKERT, Claremont, Cal. Filed May 4, 1911. Serial No. 624,941. (Cl. 15—59.)



1. A window cleaning mechanism comprising a rocking bar, guiding means mounted upon a window, guiding means engaging the same and carried by the said rocking bar, a latch for holding the bar in elevated position and means for moving the bar back and forth upon the said guides, the said means also effecting the rocking of the bar, and means operated thereby for releasing said latch.

2. A window cleaning mechanism comprising a window cleaning member, cords for moving the same back and forth over a glazed surface, drums for moving the cords first in one direction and then in the other, and means connected with the drums for engaging a source of power for operating the window cleaning device.

3. A window cleaning mechanism, comprising a glass engaging member, cords connected therewith, pulleys directing the movement of said cords, winding drums for actuating the cords to move the member back and forth over the glass, friction rollers connected with said drums, and means for carrying the said rollers against the moving part of a vehicle mechanism whereby the drums will be wound and unwound for moving the window cleaning member.

4. A window cleaning mechanism, comprising a glass engaging member, cables for moving the same back and forth upon the glass, drums adapted to wind up said cables, rock shafts carrying the drums, friction rollers for turning the drums, the said rollers being arranged in the proper relation to the fly wheel of a vehicle motor, and treadles capable of pressing the said friction rollers against the said fly wheel for imparting movement to the drums.

5. A window cleaning device, comprising a movable window engaging member, cords for drawing the same back and forth over a glazed surface, said cords extending over suitable guiding means for directing their action, a plurality of winding drums engaging said cords, means for communicating power to the drums for winding or unwinding the cords, rock shafts carrying said drums, treadles connected with each rock shaft for rocking them, and braking means arranged adjacent to said drums and adapted to check their movement when desired.

[Claims 6 to 8 not printed in the Gazette.]

1,022,135. DRILL. CHRISTIAN F. HEINKEL and JOHN MUTH, Cleveland, Ohio; said Muth assignor to said Heinkel. Filed Oct. 24, 1908. Serial No. 459,381. (Cl. 77—70.)

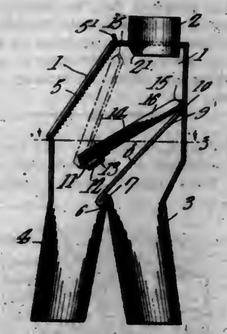


1. A drill having a body, a shank on said body, two flutes in said body, a slit connecting said flutes, and a cutter in said slit and molecularly united to the leading faces of said flutes.

2. A drill having a body, a shank on said body, a plurality of flutes in said body, a slit connecting two of said flutes, one cutter in said slit and molecularly united to the leading faces of said two flutes, and a plurality of cutters molecularly united to the leading faces of the others of said flutes.

3. A drill having a body, a shank on said body, a plurality of flutes in said body, two of said flutes deeper than the others of said flutes and connected by a slit, one cutter in said slit and molecularly united to the leading faces of said deeper flutes and extending across the diameter of said drill, and a plurality of narrower cutters molecularly united to the leading faces of the others of said flutes.

1,022,136. FILTER. CHRISTIAN HINES and CHARLES S. HINES, Napoleon, Ohio. Filed June 23, 1911. Serial No. 634,872. (Cl. 210—4.)

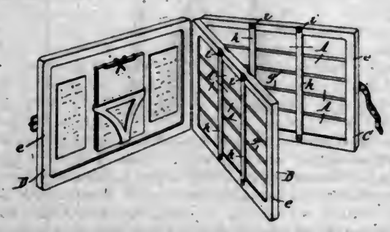


1. In a filter, a casing having two spaced transversely disposed outlets and an inlet in line with the rear outlet, a screen mounted in the casing and having its lower end gripping the edges at the junction between the outlets and inclined rearwardly to cover the rear outlet and be permanently interposed between the inlet and rear outlet of the casing, a shaft having a central crank and journaled transversely within the casing at a point above the forward outlet of the casing, means for turning the crank exteriorly of the casing, and a plate valve having a pocket to receive the crank of the shaft removably mounted upon the shaft and of sufficient length to normally have its upper end interposed between the screen and the inlet of the casing to guide the water from the inlet to the forward outlet.

2. In a filter, a casing, an inlet conduit disposed at the upper end thereof and provided with a rearwardly bent deflecting wall or lip, two spaced outlet conduits connected to the lower end of said casing, said casing being provided with an aperture in the forward wall thereof paralleled by grooved flanges, a closure slidably mounted in said grooved flanges, a frame carrying a screen insertible through aperture of the casing and adapted to have its lower ends engage the wall at the junction of the two outlet conduits and inclined to have its upper end engage the rear wall of the casing to produce a screen for the rear outlet conduit, a shaft provided with a central ball-shaped crank journaled transversely of the casing below the aperture and above the unscreened conduit of the casing, a deflector, a flange carried upon the lower end of said deflector and forming a receptacle for the ball-shaped crank of the shaft, whereby the deflector is bodily carried by the shaft and is adapted to swing within the casing to deflect the water from the screened conduit to the unscreened conduit, said deflector being of a size to permit its insertion or withdrawal through the aperture of the casing, and a spring terminal for the shaft exterior of the casing for engaging the casing and retaining the deflector in adjusted position.

3. In a filter, a casing, an inlet conduit disposed at the upper end thereof and provided with a rearwardly bent deflecting wall or lip, two spaced outlet conduits connected to the lower end of the casing, said casing being provided with an aperture in the forward wall thereof, paralleled by grooved flanges, a closure slidably mounted in said grooved flanges, a frame carrying a screen insertible through the aperture of the casing and adapted to have its lower end engage the wall at the junction of the two outer conduits and inclined to have its upper end engage the rear wall of the casing to produce a screen for the rear outlet conduit, a shaft provided with a central ball-shaped crank journaled transversely of the casing below the aperture and above the unscreened conduit of the casing, a deflector, a flange carried upon the lower end of said deflector and forming a receptacle for the ball-shaped crank of the shaft, whereby the deflector is bodily carried by the shaft and is adapted to swing within the casing to deflect the water from the screened conduit to the unscreened conduit, said deflector being of a size to permit of its insertion or withdrawal through the aperture of the casing, a spring terminal for the shaft exterior of the casing for engaging the casing and retaining the deflector in adjusted position, and an abutment mounted upon the casing and in the path of the terminal of said spring terminal for engaging the same and locking the deflector in upright position.

1,022,137. DISPLAY DEVICE. SHELDON HODGE, Buffalo, N. Y., assignor to Pratt & Lambert, Inc., Buffalo, N. Y. Filed Aug. 31, 1911. Serial No. 647,071. (Cl. 211—14.)



1. In a display device, the combination of a support having transverse ribs separated by depressed spaces, transverse rows of removable blocks arranged in said spaces, and upright holding strips releasably attached to said support and extending over the meeting edges of said blocks, substantially as set forth.

2. In a display device, the combination of a double-faced support having on opposite sides transverse ribs separated by depressed spaces, transverse rows of removable blocks arranged in said spaces, and upright holding strips releasably attached to said support and extending over the meeting edges of said blocks, substantially as set forth.

3. A display device comprising a double-faced support having on opposite sides transverse ribs separated by depressed spaces, transverse rows of blocks arranged in said spaces and upright holding strips releasably attached to said support, a single-faced support provided with similar transverse ribs, blocks and holding strips and arranged on one side of said double-faced support, and a cover arranged on the opposite side of said double-faced support, said supports and cover being movably connected together, substantially as set forth.

1,022,138. METAL FLUME OR TROUGH. EMERSON E. HOLTZ, Billings, Mont., assignor of one-fourth to Hugh B. Stridiron and one-fourth to Elmer Kowalk, Billings, Mont. Filed July 3, 1911. Serial No. 636,582. (Cl. 61—5.)



1. A flume having overlapping ends provided with interlocking expansible beads, and means for clamping the overlapping ends of one side of the interlocking beads.

2. A flume comprising semi-cylindrical sections, one end of each section being provided with spaced semi-circular beads, the other end of said section having a single semi-circular bead adjacent its end.

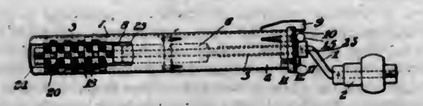
3. In a device of the kind described, the combination with two sections having interlocking ends, of a hanger arranged under said interlocking ends, a clamping member for engaging said sections to one side of the interlocking ends and holding said sections in interlocked position, and wedging members for forcing said clamping member into position.

4. In a device of the kind described, the combination with two sections having overlapping ends and provided with interlocking beads, of a hanger arranged under said ends, a clamping member for engaging the inner section to one side of its interlocked connection, and a wedging member for forcing and holding said clamping member in position.

5. In a device of the kind described, the combination with two sections having overlapping interlocking ends, of a support, a hanger carried on said support conforming to the configuration of said sections, a clamping member arranged against the inner face of the inner section to one side of the interlocked connection, and wedging members for forcing said clamping member in position.

[Claims 6 to 9 not printed in the Gazette.]

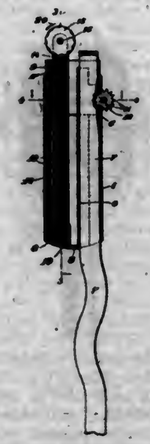
1,022,139. ROTARY TOOTH-BRUSH. JOSEPH HORN, Philadelphia, Pa. Filed June 2, 1911. Serial No. 630,848. (Cl. 15—37.)



1. In a tooth-brush, in combination, a cylindrical brush, a shaft carrying said brush, a crank for rotating said shaft, a cylindrical body carrying said shaft, a cylindrical case furnished with a slot for access to said brush, a notched key carried by the inner end of said case, and a rotatable notched locking plate carried by the inner end of said body for engaging said notched key.

2. In a tooth-brush, in combination, a cylindrical brush, a shaft carrying said brush, a crank for rotating said shaft and brush, a cylindrical body carrying said shaft, a plate secured to the outside end of said body, a cylindrical slotted case inclosing said body and brush, a notched key projecting from the inner end of said body, and a notched disk having a cam face adjacent to the notch therein for engaging the notched key on said case, said disk being carried by the outside face of the plate on the outside end of said body and being adapted to rotate around said shaft as a center.

1,022,140. PORTABLE LIGHTER. CONRAD HUBERT, New York, N. Y. Filed Aug. 17, 1909. Serial No. 513,268. (Cl. 67—8.)



1. A portable lighter comprising a wick tube, a guide substantially parallel with the wick tube, a combined thumb wheel and friction disk located at the end of the guide and mounted to rotate in a plane passing longitudinally through the wick tube and the guide and in exposed position so as to be directly manually operatable, a sparking element slidable along the guide into engagement with the combined thumb wheel and friction disk, and means for pressing the sparking element against the combined thumb wheel and friction disk.

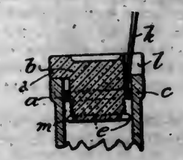
2. A portable lighter comprising a wick tube, a combined thumb wheel and friction disk mounted to rotate in a plane passing longitudinally through the wick tube and located adjacent to the end of the wick tube, a sparking element, and means for holding the sparking element in engagement with the combined thumb wheel and friction disk.

3. A portable lighter comprising a wick tube adapted to expose a wick at its upper end, a guide tube substantially parallel with the wick tube and bifurcated at its upper end to form side lugs in proximity to the upper end of the wick tube, means joining the wick tube and the guide tube, a combined friction disk and directly manually operatable actuating wheel pivoted between the side lugs and disposed in a plane passing longitudinally through the wick tube and the guide tube, a bar of sparking material slidable in the guide tube into engagement with the peripheral face of the disk, a coiled thrust spring in the guide tube below such bar for pressing the bar into frictional engagement with the disk, and an abutment for the lower end of the spring.

4. A portable lighter comprising a casing, a wick tube therein adapted to expose a wick at its upper end, a guide tube therein substantially parallel with the wick tube, a bar of sparking material loosely slidable in the guide tube and exposed at the upper end thereof adjacent to the exposed portion of the wick, a combined friction disk and thumb wheel peripherally frictionally engaging the exposed end of the bar of sparking material, a coiled thrust spring in the guide tube below such bar and abutting the lower end thereof, and a screw plug in the lower end of the guide tube forming an abutment for the lower end of the spring, the bar of sparking material being of polygonal cross-section and the contiguous portions of the guide tube being sufficiently conformed to the cross-sectional shape of such bar to prevent rotation of the bar in the guide tube.

5. In a portable lighter, the combination, with a sparking element, of a combined thumb wheel and friction disk, and means for pressing the sparking element into contact with the combined thumb wheel and friction disk.

1,022,141. BOTTLE, JAR, AND THE LIKE AND STOPPER THEREFOR. DANIEL HURST and HERBERT KYNASTON BRIDGER, London, England. Filed Aug. 24, 1910. Serial No. 578,778. (Cl. 215—50.)



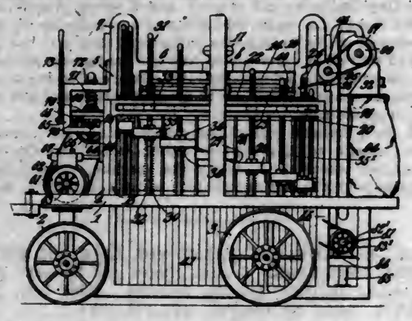
1. The combination with a bottle neck having a uniform engaging surface and a stopper therefor having channels or grooves extending along its base near the lower end thereof and the remainder of said stopper having a uniform engaging surface, and a ring of rubber adapted to be interposed between the grooved portion of the stopper and the neck of the bottle and moved between the uniform engaging surfaces of the neck and stopper and downwardly with respect to the neck and upwardly with respect to the stopper upon insertion thereof into the neck and to a final point above said groove.

2. The combination with a bottle neck having a uniform engaging surface and a stopper therefor having channels or grooves extending along its lower base from the lower end upwardly and also having portions projecting outwardly near the lower end thereof, the remainder of said stopper having a uniform engaging surface, and a ring of rubber adapted to be interposed between the grooved portion of the stopper above its projecting portions, and the neck of the bottle, said ring moving downwardly between the uniform engaging surfaces of the neck and stopper and with respect to the neck and upwardly with respect to the stopper upon insertion thereof into the neck and to a point above such grooved or channeled portion.

3. The combination with a bottle neck having a uniform engaging surface and a stopper therefor having channels or grooves extending from its lower end upwardly a slight distance therefrom, the remainder of said stopper having a uniform engaging surface, said stopper having circumferentially disposed grooves near the lower end theerof and intersecting said first named grooves, and a ring of rubber adapted to be interposed between the grooved portion of the stopper and the neck and moved downwardly with respect to the neck and upwardly with respect to the stopper between the uniform engaging surfaces of said neck and stopper.

4. The combination with a bottle neck having a uniform engaging surface and a closure member therefor having a uniform engaging surface, one of the same having grooves ar channels near its end and extending longitudinally thereof, and a ring of rubber or the like interposed between the uniform engaging surfaces of the neck and closure member adjacent such grooves in a manner to be shifted beyond said grooves when the closure is forced into a closing position.

1,022,142. MACHINE FOR PICKING AND CLEANING COTTON. BILLIE JOHNSON, Temple, Tex. Filed Aug. 18, 1908. Serial No. 449,118. (Cl. 56—118.)



1. In a cotton harvester a rotating and revolving picker and a rotating cylinder having means for reciprocating the picker parallel with the axis of the cylinder.

2. In a cotton harvester a picker revolving about an axis and rotating axially, and a rotating cylinder having means for reciprocating the picker parallel with the axis of the cylinder.

3. In a cotton harvester a rotating and revolving picker and a rotating spirally grooved cylinder for reciprocating the picker.

4. In a cotton harvester a picker moving in a sinusoidal orbit, and a rotating spirally grooved cylinder for communicating to the picker the reciprocating component of such movement.

5. In a cotton harvester a rotating picker moving in a sinusoidal orbit, and a rotating cylinder having means for communicating to the picker the reciprocating component of such movement, which movement is parallel with the axis of the cylinder.

[Claims 6 to 36 not printed in the Gazette.]

1,022,143. SUSPENSION DEVICE FOR TROLLEY-WIRES. EDUARD KINDLER, Friedenau-Berlin, Germany. Filed Aug. 9, 1911. Serial No. 643,137. (Cl. 191—1.)



A suspension device for trolley wires, comprising a suspension block, provided with a tapered undercut groove, and a wedge having an outer surface shaped to engage said groove and having an inner groove shaped to underclutch a portion of the wire; substantially as described.

1,022,144. TROLLEY. HARRY A. KRAUSE, Philadelphia, Pa. Filed Feb. 8, 1911. Serial No. 607,388. (Cl. 191—37.)

1. The combination with a trolley harp, and a journal bolt fixed therein, of a trolley wheel mounted to turn on the bolt, sleeves on said bolt at opposite sides of the wheel, set screws securing said sleeves to the bolt, upwardly projecting plates integral with said sleeves at their inner ends, and extending beyond the periphery of the wheel at opposite sides of the wheel, and having openings therethrough, angular guard fingers pivotally supported at their lower ends on said sleeves and at their upper ends projected through the openings in the guard plates over the periphery of the wheel, springs normally pressing said guard fingers toward each other, and means for pulling said guard fingers apart, substantially as described.

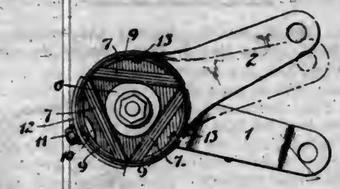
2. The combination with a trolley harp, and a journal bolt fixed therein, of a trolley wheel mounted to turn on the bolt, sleeves on said bolt at opposite sides of the wheel, set screws securing said sleeves to the bolt, upwardly projecting plates integral with said sleeves at their inner ends, and extending beyond the periphery of the wheel at opposite sides of the wheel, and having openings therethrough, angular guard fingers pivotally supported at their lower ends on said sleeves and at their upper ends projected through the openings in the guard plates over the periphery of the wheel, lugs secured to said guard fingers and projecting at an angle therefrom, bow springs exerting pressure on said lugs, and secured to the sleeves, a depending bail connected at its ends to said lugs, and a flexible connecting device secured to said bail, whereby a downward pull on said flexible connecting device serves to pull the guard fingers apart, substantially as described.



3. The combination with a trolley harp, and a journal bolt fixed therein, of a trolley wheel mounted to turn on the bolt, sleeves on said bolt at opposite sides of the wheel, set screws securing said sleeves to the bolt, upwardly projecting plates integral with said sleeves at their inner ends, and extending beyond the periphery of the wheel at opposite sides of the wheel, and having openings therethrough, angular guard fingers pivotally supported at their lower ends on said sleeves and at their upper ends projected through the openings in the guard plates over the periphery of the wheel, springs normally pressing said guard fingers toward each other, means for pulling said guard fingers apart, disk wheels mounted to turn on said journals at opposite sides of the trolley wheel and projecting at their edges beyond the periphery of said wheel, said disk wheels located between the harp and the trolley wheel, and bulged out centrally inclosing said guard fingers and the supports therefor, substantially as described.

4. The combination with a trolley harp, and a journal bolt fixed therein, of a trolley wheel mounted to turn on the bolt, sleeves on said bolt at opposite sides of the wheel, set screws securing said sleeves to the bolt, upwardly projecting plates integral with said sleeves at their inner ends, and extending beyond the periphery of the wheel at opposite sides of the wheel, and having openings therethrough, angular guard fingers pivotally supported at their lower ends on said sleeves and at their upper ends projected through the openings in the guard plates over the periphery of the wheel, lugs secured to said guard fingers and projecting at an angle therefrom, bow springs exerting pressure on said lugs, and secured to the sleeves, a depending bail connected at its ends to said lugs, a flexible connecting device secured to said bail, whereby a downward pull on said flexible connecting device serves to pull the guard fingers apart, disk wheels mounted to turn on said journals at opposite sides of the trolley wheel and projecting at their edges beyond the periphery of said wheel, said disk wheels located between the harp and the trolley wheel, and bulged out centrally inclosing said guard fingers and the supports therefor, substantially as described.

1,022,145. SHOCK-ABSORBER ADJUSTMENT. BURTON L. LAWTON, Meriden, Conn., assignor to The Connecticut Shock Absorber Company, Meriden, Conn., a Corporation of Connecticut. Filed Jan. 4, 1912. Serial No. 669,452. (Cl. 21—105.)



1. In a shock absorbing apparatus for vehicles, two arms pivotally connected, a cam carried by one of said arms, a spring resting against said cam, a holder for said spring, in combination with a housing inclosing said parts carried by the other arm, said spring holder being shiftable in said housing, and means for locking said spring holder within said housing.

2. In a shock absorbing apparatus for vehicles, two arms, a housing carried by one arm, a cam within said housing and secured to the other arm, a spring within said housing resting against the cam, a spring carrier for said spring adjustable within said housing whereby the position of the spring within said housing may be varied, and means to secure said spring within said housing in a fixed relation thereto after adjustment.

3. In a shock absorbing apparatus for vehicles, two arms, a housing carried by one of said arms, a cam within said housing and connected to the other arm, said cam having a plurality of high parts with intermediate low parts, a plurality of springs within said housing normally resting against the low parts of said cam, a spring carrier for said springs adjustable within said housing, and means for locking said spring carrier at various positions of adjustment.

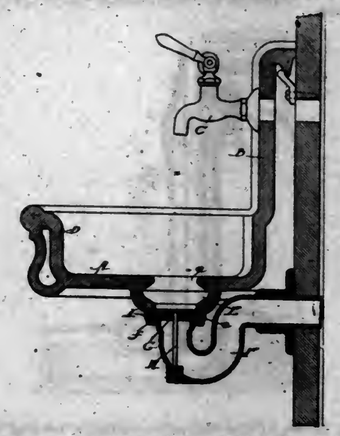
4. In a shock absorbing apparatus for vehicles, two arms, a housing carried by one arm, a cam within said housing secured to the other arm, said cam having a plurality of high parts and intermediate low parts, a plurality of springs normally resting against the low parts of said cam, a ring-like spring carrier fitted approximately within the walls of the housing and adjustable relatively thereto, said housing having a slot adjacent to the outer side of said ring, clamping means carried by said ring and projecting outside of said housing through said slot, and means for securing said clamping means in a fixed relation relatively to said housing to hold said ring against movement therein after adjustment.

5. In a shock absorbing apparatus for vehicles, two arms, a housing carried by one arm, a cam within said housing secured to the other arm, said cam having a plurality of high parts and intermediate low parts, a plurality of springs normally resting against the low parts of said cam, a ring-like spring carrier fitted approximately within the walls of the housing and adjustable relatively thereto, said housing having a slot adjacent to the outer side of said ring, clamping means carried by said ring and projecting outside of said housing through said slot, and means for securing said clamping means in a fixed relation relatively to said housing to hold said ring against movement therein after adjustment, said clamping means including a cover plate for the slotted portion of said housing.

[Claims 6 to 11 not printed in the Gazette.]

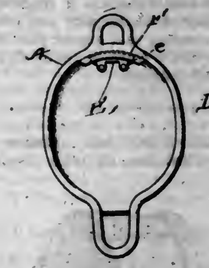
1,022,146. PLUMBING-FIXTURE. PATRICK J. MADDEN, Chicago, Ill. Filed Nov. 23, 1908. Serial No. 464,073. (Cl. 137—96.)

In a plumbing fixture, the combination of a receptacle having an opening for the passage of water, a pipe registering with said opening, said pipe and receptacle having oppositely presented bearing surfaces, a strainer bearing upon the receptacle around said opening, a tie rod passing through the strainer and having an enlarged head which bears upon the top of the strainer and is provided with features, accessible from above the strainer, for receiving a tool for turning it, said tie rod being externally screw



threaded and said pipe having an internally screw threaded socket into which the tie rod screws, said socket being wholly closed by an integral part of the pipe.

1,022,147. PLUMBING-FIXTURE. PATRICK J. MADDEN, Chicago, Ill. Filed July 27, 1909. Serial No. 509,912. (Cl. 4—12.)



1. In a plumbing fixture, the combination of a bowl having an outlet opening and having at its back, above said outlet opening, a single shoulder having a bearing surface formed on an arc of a circle lying in a plane substantially parallel with the general plane of the back of the bowl, a single bracket having a single upwardly presented seat for said shoulder formed on an arc complementary to the bearing surface of said shoulder, whereby the bowl may be adjusted about the axis of said arc, and a support to which a bracket is fixedly secured.

2. In a plumbing fixture the combination of an adjustable bowl having at its bottom a centrally located discharge opening and having at its back, above said discharge opening, a single downwardly presented shoulder having a curved bearing surface lying in a plane parallel with the general plane of the back of the bowl, and a single bracket having a single upwardly presented curved bearing surface complementary to that of the shoulder, said shoulder, bracket and outlet being located on the central vertical line of the bowl.

1,022,148. AUXILIARY WATER-HEATER. JOHN S. MAKIN and HENRY A. SCHELLMAN, Philadelphia, Pa., assignors to The Makin Heating Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed June 12, 1911. Serial No. 632,534. (Cl. 122—20.)

1. In a device of the character stated, a heating-chamber, a discharge-pipe extending from the top of the same,

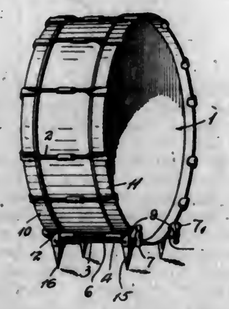
a supply-pipe projecting axially through said discharge-pipe into the interior of said chamber, and a baffle-plate secured to surround said supply-pipe above the lower end of the same.



2. In a device of the character stated, a heating chamber having radiating branches, a baffle-plate within said chamber and having its edges extending to the junction points of the walls of the radiating branches of the chamber, a discharge-pipe extending from the top of the chamber, and a supply-pipe projecting axially through the discharge-pipe and opening below said baffle-plate.

3. In a device of the character stated, a heating-chamber having radiating branches, a discharge-pipe extending from the top of said chamber, a supply-pipe extending axially through said discharge-pipe and into the chamber, a baffle-plate surounding said supply-pipe above the lower end of the same, and a water-leg extending from the bottom of the heating chamber.

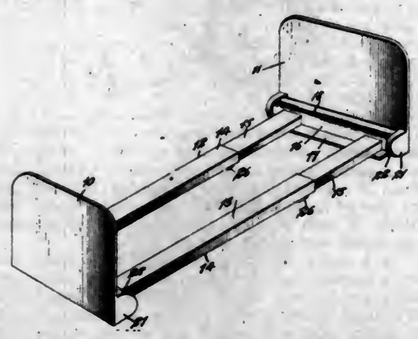
1,022,149. DRUM-SUPPORT. ALBERT MAPHET, Los Angeles, Cal. Filed Apr. 13, 1911. Serial No. 620,799. (Cl. 84—10.)



1. A drum supporting and securing mechanism comprising a drum gripping bar, means for clamping the bar upon the drum, brackets projecting from the said bar, bifurcated springs legs pivoted in said brackets, said legs being provided with apertures and a projection or detent extending inwardly from said brackets upon which the said apertures of the legs may be sprung for holding the legs in their adjusted positions.

2. A drum supporting and securing mechanism comprising extensible bars, means for drawing the extensible portions of the bars tightly upon the drum, each of said bar sections having brackets projecting therefrom, pivoted standard legs mounted in said brackets, their inner bifurcated ends being adapted to be compressed for facilitating their adjustment, a pin projecting from each bracket and adapted to engage apertures in one of the bifurcated portions of each standard leg, and other pins also projecting into said brackets for preventing an inward movement of the other bifurcated portion of each standard leg.

1,022,150. BOOK-RACK. ERNEST OLDENBUSCH, New York, N. Y. Filed Dec. 7, 1910. Serial No. 596,148. (Cl. 45—53.)

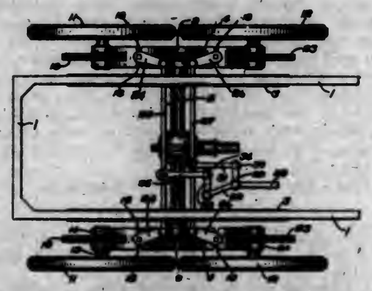


1. A book rack having two parallel book supporting members, a transversely extending tube presenting a substantially flat lower side terminating in a horizontal flange, said tube having apertures in the side thereof above said flange to receive the ends of said members and support them on said flat lower side and an end wall having flanges integral therewith and bent to engage with the ends of said tube to form a pivotal connection therewith.

2. A book rack having two parallel book supporting members, a transversely extending tube of sheet metal and presenting a substantially flat lower side, said tube having apertures in the wall thereof directly above said flat lower side and receiving the ends of said members to support them on said flat lower side and an end wall having flanges bent to engage with the ends of said tube to form a pivotal connection therewith.

3. A book rack having two parallel book supporting members, a transversely extending tube of sheet metal having apertures in the side thereof receiving the ends of said members to support them and an end wall having flanges bent to lie parallel with each other and in engagement with the ends of said tube and each of said flanges having a marginal flange partly encircling said tube whereby said end wall is pivotally secured to said tube.

1,022,151. TRACKLESS POWER-DRIVEN VEHICLE. ISAAC E. PALMER, Middletown, Conn. Filed June 20, 1911. Serial No. 634,266. (Cl. 21—90.)



1. Running gear for trackless, power driven vehicles comprising in combination a body, a driving axle supported therein, a gear at one end of said axle, a frame and a pair of traction wheels at the same side of said body as said

gear, a pair of gear wheels respectively co-axial with said traction wheels and meshing with said axle gear, and supplemental frames for said traction wheels and their gear wheels and jointed to said frame, the axial lines of said supplemental frame joints being in substantially vertical alinement with the lines of driving contact of said gear wheels.

2. Running gear for trackless, power driven vehicles comprising in combination a body, a driving axle supported therein, a gear at the end of said axle, a pair of traction wheels at the same side of said body as said gear, a train of gear wheels in driving engagement with said axle gear wheel and in driving relation to said traction wheels, and main and supplemental frames for said gear wheels, said frames being laterally deflectable with respect to each other on lines substantially coincident with the lines of driving contact of a plurality of said gear wheels.

3. Running gear for trackless power driven vehicles comprising in combination a truck having a driving axle, a gear at one end of said axle, a frame and a traction wheel at the same side of said body as said gear, said traction wheel having a supplemental frame, and a gear in driving relation to said axle gear, and external thereto, said frame and supplemental frame being laterally deflectable with respect to each other upon a line substantially coincident with a line of driving contact between said axle gear and traction wheel gear and which is substantially normal to the axes of said gears.

4. Running gear for trackless power driven vehicles comprising in combination a truck having a driving axle, a gear at one end of said axle, a traction wheel having a gear external to said first-mentioned gear, said wheel and gear being at the same side of the body as said axle gear and in driving relation thereto, a main frame for said axle gear, a supplemental frame for said traction wheel and gear, said main and supplemental frames being at the same side of the truck and jointed to each other on a line coincident with a line of driving contact of said gear wheels and which is substantially normal to the axes of said gears.

5. A running gear for trackless power driven vehicles comprising in combination a body, a driving axle supported therein, a gear at one end of said axle, a yoke for said gear, a pair of traction wheels at the same side of said body as said yoke, each of said traction wheels having a gear wheel, and a pair of supplemental yokes jointed to the main yoke, the lines of joining of said main and supplemental frames being substantially coincident with the lines of driving contact of said gear wheels.

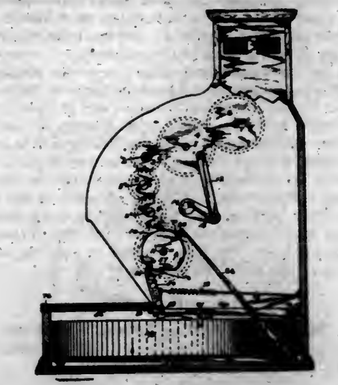
[Claims 6 to 11 not printed in the Gazette.]

1,022,152. CASH-REGISTER. JOHN F. PARKER, Kansas City, Mo., assignor to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (incorporated in 1906.) Filed Feb. 19, 1909. Serial No. 479,000. (Cl. 235—9.)

1. In a cash register, the combination with a main operating mechanism, means for locking said operating mechanism, a rotatable cash receptacle differentially adjustable and divided into a series of compartments, and a series of devices carried by said receptacle and operable to render said locking means effective.

2. In a cash register, the combination with a main operating mechanism, means for locking said operating mechanism, a rotatable cash receptacle differentially adjustable and divided into a series of compartments, a series of devices carried by said receptacle and operable to render said locking means effective, and means preventing the operation of said devices when said receptacle is not in one of its adjusted positions.

3. In a cash-register, the combination of operating mechanism which includes key-elements, registering mechanism, indicating devices, an extended oval front base portion formed by the front casing-piece 76, an opening in the top plate of the said front portion, an adjustable cover over the said opening, a rotatable circular receptacle, a vertical shaft supporting the said receptacle, partitions which divide the receptacle into a plurality of compartments, and means for actuating the said receptacle whereby one of the said compartments is adjusted opposite the said opening in the casing, and means for locking and releasing the cover, substantially as described.

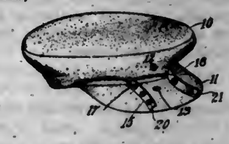


4. In a cash-register, the combination of key-elements, a horizontal shaft 14, a setting-lever fulcrumed on the said shaft, registering mechanism, indicating devices, a casing of which the lower or base portion extends beyond the body of same, an opening in the top plate of the said extended portion, an adjustable cover over the said opening, a rotatable circular receptacle, a vertical shaft upon which the said receptacle is mounted, a pinion fast on the said vertical shaft, and means which operatively connect the setting-lever with the said pinion for the purpose of adjusting the said receptacle in a horizontal plane, substantially as described.

5. In a cash-register, the combination of registering mechanism, indicating devices, key-elements, mechanism which operatively connect the said key-elements with the indicating devices and registering mechanism, a setting-lever 72, a segment gear 50 which is fast to the said setting-lever, a gear 48 in mesh with the said segment gear, a pinion 47 in mesh with the said gear 48, a vertical shaft 44 on which is keyed the pinion 47, a circular receptacle 43 supported by the said shaft 44, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,022,153. CAP. JOHN SCOTT PETHYBRIDGE, Newton Abbot, England. Filed June 8, 1911. Serial No. 631,901. (Cl. 2—106.)



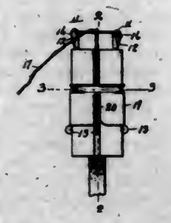
1. As a new article of manufacture, a cap comprising a body portion, a peak or eye-shade secured thereto, devices secured within the body portion adjacent to the sweatband and passing through slits in the front thereof, and means for securing the free ends of said devices in different positions to vary the size of the opening in the cap.

2. As a new article of manufacture, a cap comprising a body portion, a peak or eye-shade secured thereto, a tape secured centrally within the said body member adjacent to the sweatband to the rear portion thereof, passing around the sides of the body member and through slits in the front portion thereof, and fastening devices connected to the free ends of the said tapes exteriorly of the body member of the cap so that these ends of the tape may be overlapped and connected in different positions to vary the size of the opening in the cap.

3. As a new article of manufacture, a cap comprising a body portion having slits on either side of the center in the front thereof, a tape secured centrally to the interior central back portion of the cap and having its free ends extending through the said slits, and means for fastening the ends of the tape together in different positions outside the body portion at the front thereof to adjust the size of the opening in the cap body.

4. As a new article of manufacture, a cap comprising a body portion having slits on either side of the center at the front thereof, a lining for said body portion, a tape secured centrally to the inner back portion of the cap body between the same and the lining, the free ends of the tape extending through the said slits in the front portion of the cap body, means for securing the tape in position between the body portion and lining adjacent to the opening in the body portion, and means for securing the free ends of the tape together at different positions exteriorly of the body portion at the front thereof to vary the size of the opening in the said body portion of the cap.

1,022,154. TOY KNITTING DEVICE. FREDERICK C. REHM, Detroit, Mich. Filed Jan. 7, 1911. Serial No. 601,273. (Cl. 66—21.)



1. A knitting device, having in combination with a cylindrical holder provided with longitudinal grooves in its outer surface and with an annular groove extending about its center portion, hooked needles provided with projecting lower end portions, slidably engaging in said longitudinal grooves, and a notched band engaging in said annular groove, extending over said holder and against projections on said needles, whereby said needles are confined in position with respect to the holder and by the movement whereof around the holder said needles are released for actuation in turn, substantially as described.

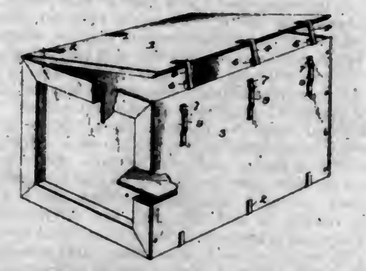
2. In a knitting device, the combination of a cylindrical holder having grooves extending lengthwise thereof in its outer surface, hooked needles engaging therein, and a longitudinally slotted band member engaging about said needles and adapted to register in sequence, with its slotted portion opposite the stem portion of each needle, thereby permitting the actuation of each lengthwise of the holder, substantially as described.

1,022,155. GARMENT-ATTACHING-MEANS. AMANDA E. RICHARDSON, Boston, Mass. Filed June 29, 1910. Serial No. 569,432. (Cl. 24—151.)



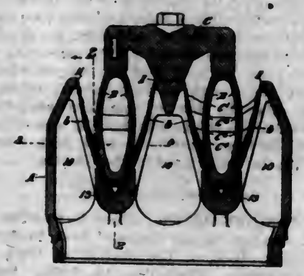
A garment fastening hook formed of a single piece of wire and consisting of a substantially straight garment penetrating shank bent at one extreme and into a transversely extending anchoring member, the shank at its opposite end being bent laterally from the shank and continued to form a nearly closed eye substantially remote from said anchoring member and lying in a plane substantially normal to that of said anchoring member, whereby the eye is positioned substantially normal to the garment when the anchoring member is flat thereagainst, the wire being continued from said eye substantially parallel with and close to said shank for a substantial distance so as to engage the adjacent face of the garment, and terminating between the eye and anchoring member in a point.

1,022,156. BOX-FASTENER. ROBERT SCHLEICHER, Louisville, Ky., assignor to Mengel Box Company, Louisville, Ky., a Corporation of New Jersey. Filed Feb. 7, 1912. Serial No. 676,055. (Cl. 70—3.)



A box-fastener, comprising two members, each formed from a strip of sheet metal, one member comprising a body portion, one end thereof being adapted to be secured to a box while the other is provided with wings, the second member having its ends fashioned so as to enable it to be secured to a box member, and having a bowed or outwardly-deflected central portion adapted to coact with the wings when the same are folded inwardly beneath the same.

1,022,157. FLAP-VALVE. CLARENCE N. SCOTT, Houston, Tex., assignor to International Steam Pump Company, a Corporation of New Jersey. Filed Aug. 4, 1911. Serial No. 642,327. (Cl. 103—66.)



1. In a flap valve, a valve seat slotted to form a plurality of ports and curved to maintain the valve under tension when closed, in combination with an elastic plate extending over the series of ports and unslotted so as to form a continuous plate valve controlling the series of ports.

2. In a flap valve, a valve seat slotted to form a plurality of ports and curved to maintain the valve under tension when closed, in combination with an elastic plate extending over the series of ports and unslotted so as to form a continuous plate valve controlling the series of ports, and a spring plate backing pressing the valve toward its seat.

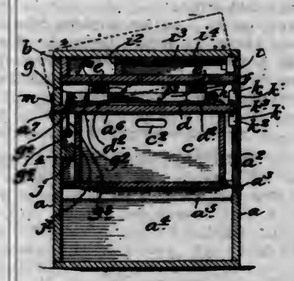
3. In a flap valve, a valve seat slotted to form a plurality of ports and curved to maintain the valve under tension when closed, in combination with an elastic plate extending over the series of ports and unslotted so as to form a continuous plate valve controlling the series of ports, and a spring plate backing formed of a series of spring plates of widths decreasing from the free edge of the valve plate and pressing the valve toward its seat.

4. In a flap valve, a valve seat slotted to form a plurality of ports and curved to maintain the valve under tension when closed, in combination with an elastic plate extending over the series of ports and unslotted so as to form a continuous plate valve controlling the series of ports, and a spring backing formed of a series of spring fingers of widths decreasing from the free edge of the plate and pressing the valve toward its seat.

5. In a flap valve, the combination with a valve seat curved to maintain the valve under tension when closed, of an unslotted elastic plate valve, and a spring plate backing pressing the valve toward its seat.

[Claims 6 to 8 not printed in the Gazette.]

1,022,158. TRUNK. RASMUS SIMONSEN, Hoboken, N. J. Filed Oct. 4, 1911. Serial No. 652,752. (Cl. 190—11.)



1. A trunk comprising a bottom part and a top part, the bottom part being provided with a cover hinged at the back, the top part being mounted on said cover and vertically movable, means for raising and lowering said top part and holding it in an elevated position, and means for securing the top part of the trunk to the cover of the bottom part so that both may be turned backwardly in the operation of opening the bottom part, said bottom part being also provided in the front top portion thereof with a door rearwardly of which is a drawer.

2. A trunk comprising a bottom part and a top part, the bottom part being provided with a cover hinged at the back and on which the top part is mounted, means for raising the top part and holding it in a raised position, and means for locking the top part to the cover of the bottom part when said top part is in its lowered position.

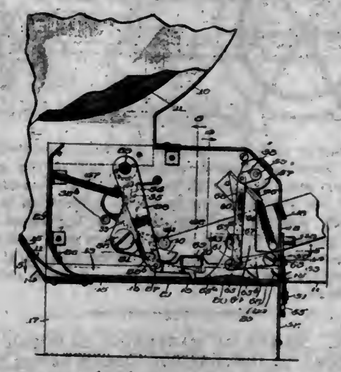
3. A trunk comprising a bottom part and a top part, the bottom part being provided with a cover hinged at the back and on which the top part is mounted, means for raising the top part and holding it in a raised position, and means for locking the top part to the cover of the bottom part when said top part is in its lowered position, said top part being also provided with a drawer having a longitudinal partition and a cover for the front part of said drawer hinged thereto.

4. A trunk comprising a top and bottom part, the bottom part being provided with a cover hinged at the back and on which the top part is mounted, folding devices connected with said cover and with said top part and adapted to hold the top part in a raised position and to fold therein when said top part is lowered, means for locking said top part in its closed position, and automatic devices for raising said top part when it is unlocked.

5. A trunk, comprising a bottom part and a vertically movable top part, the bottom part being provided with a cover hinged at the back and on which the top part is mounted, means for locking the cover and the top part in their closed position, and means for automatically raising the top part when unlocked.

1,022,159. MACHINE FOR VENDING AND REGISTERING TICKETS. JAMES WILEY SMALL, Rochester, N. Y. Filed Apr. 29, 1911. Serial No. 624,031. (Cl. 235—31.)

1. In a machine of the class described, the combination of a magazine having means for supporting a strip of tickets, and mechanism for registering the number of tickets delivered, said registering mechanism having a bodily movable and rotatable part provided with a series of equidistant features which are adapted to successively engage features with which ticket strip is provided at intervals, and means for transmitting the bodily movement of said part to the register, proper, whereby it is operated, and whereby its rotation brings its equidistant features, aforesaid, into position to be engaged by the successive engaging features of the ticket-strip aforesaid.



2. In a machine of the class described, the combination of a magazine having means for supporting a strip of tickets, spring-actuated mechanism for feeding the ticket-strip forward, and mechanism for registering the number of tickets delivered, said registering mechanism having a bodily movable part adapted, to successively engage equidistant features with a series of which the ticket-strip is provided, whereby said bodily movable part is moved to actuate the registering mechanism by movement derived from the ticket-strip, and a spring for impelling said movable part into engagement with the ticket-strip, whereby their positive engagement is insured.

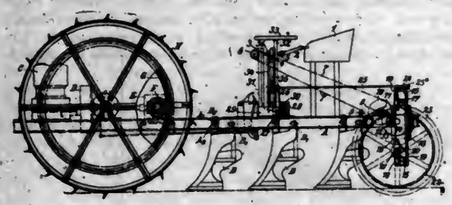
3. In a machine of the class described, the combination of a magazine having means for supporting a strip of tickets, and mechanism for registering the number of tickets delivered, said registering mechanism having a rotatable and bodily movable star wheel, and means for transmitting movement from said star wheel to the register proper.

4. In a machine of the class described, the combination of a magazine having means for supporting a strip of tickets, and mechanism for registering the number of tickets delivered, said registering mechanism having a star wheel provided with features adapted to engage features with which the ticket strip is provided at intervals, a link upon which the star wheel is journaled, a link for actuating the adding train of the register proper, and a thrust rod connecting said links, whereby the register proper is operated by movement derived from the ticket strip.

1,022,160. STEERING DEVICE FOR POWER-PROPELLED VEHICLES. ROBERT STOCK, Berlin, Germany. Filed Oct. 19, 1909. Serial No. 523,447. (Cl. 97—30.)

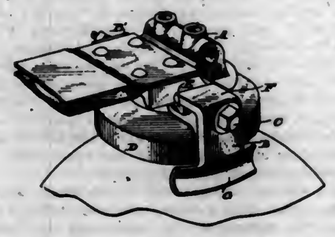
1. A motor vehicle comprising a frame, a driver's seat, a steering wheel arranged to engage the ground in the rear of the driver's seat, a horizontal axle for said wheel, a vertical shaft to which said axle is secured, a rack mounted to slide up and down on said frame and carrying said vertical shaft, a crank at the upper portion of the shaft, an operating wheel in front of the driver's seat, a shaft journaled on the frame and connected with said wheel, a crank arm on said shaft, a connecting rod having universal joints connecting it with said crank and crank arm, each of said joints comprising a ball member, a socket member formed of two sections, a box containing

said sections, and means for holding the socket members in said box, a pinion journaled in the frame and meshing with said rack, an operating member located in front of the driver's seat and adapted to be actuated by him, and an operative connection between said member and the pinion to turn the latter.



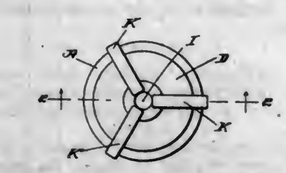
2. A motor vehicle comprising a frame, a vertically adjustable steering wheel arranged to engage the ground, a driver's seat, an upright steering shaft arranged in front of the said seat, an operative connection between said shaft and the steering wheel, a horizontal shaft, likewise arranged in front of the driver's seat, and mechanism, operated by the rotation of said horizontal shaft, for adjusting the steering wheel up and down relatively to the frame.

1,022,161. MEANS OF FASTENING ELECTRIC CONDUCTORS TO INSULATORS. JOSEPH SEXTON THOMPSON, Mill Valley, Cal. Filed Mar. 22, 1911. Serial No. 616,116. (Cl. 173—313.)



A device for supporting and fastening electric conductors or parts to insulators, comprising a central portion to which is fastened the conductor or part, and two clamping pieces to embrace the central portion and the insulator, the whole held in position by one bolt only.

1,022,162. JET-HEAD FOR DRINKING-FOUNTAINS. HERBERT W. THORNDIKE, Boston, Mass., assignor to F. W. Webb Manufacturing Company, Boston, Mass., a Corporation of New Jersey. Filed Oct. 29, 1910. Serial No. 589,683. (Cl. 137—11.)



1. The improved jet head for drinking fountains comprising a body having an orifice therein for the emission of a jet, and a plurality of radially extending arms about the said orifice, said arms having a surface next the jet extending away from the orifice and substantially parallel with the jet.

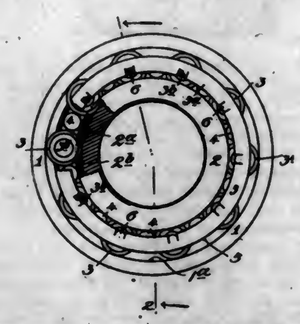
2. The improved jet head for drinking fountains, comprising a body having an orifice therein for the emission of a jet, and a plurality of radially extending arms about the said orifice, said arms having a surface next the jet extending away from the orifice and substantially parallel with the jet, there being an unobstructed space between the inner ends of each pair of adjacent arms.

3. The improved jet head for drinking fountains, comprising a body having an orifice therein for the emission of a jet, and a plurality of radially extending arms about the said orifice, said arms having a surface next the jet extending away from the orifice and substantially parallel with the jet, there being an unobstructed space between the inner ends of each pair of adjacent arms, said spaces having a greater area than the orifice.

4. The improved jet head for drinking fountains comprising a body having an orifice therethrough, radially extending arms about the said orifice and a transverse abutment within the said body and below the inner opening of the said orifice.

5. The improved jet head for drinking fountains comprising a body having an orifice therein for the emission of a jet and a plurality of L-shaped arms about and closely adjacent to said orifice, and having their upper portions extending outwardly therefrom.

1,022,163. ANTIFRICTION-BEARING. COLCORD UPTON, Baltimore, Md., assignor to Simplex Roller Bearing Company, New York, N. Y., a Corporation of New York. Filed Mar. 6, 1911. Serial No. 612,465. (Cl. 64—61.)



1. An anti-friction bearing comprising inner and outer race rings, rolling members between said race rings, a retainer betwen said race rings provided with spaced flanges forming a continuous groove, and separator rolls between said flanges and between said rolling members, said retainer being separate from said race rings and free to rotate therebetween, the separator rolls at their ends abutting the adjacent inner faces of said flanges and being free from said retainer to assume required positions between the rolling members, the annular portion of the retainer between the flanges retaining the separator rolls from outward radial displacement.

2. An anti-friction bearing comprising inner and outer race rings, rolling members between said race rings, an inwardly annularly grooved retainer between said race rings provided with spaced radial flanges and openings receiving said rolling members, and separator rolls within the groove of the retainer, said retainer being separate from said race rings and free to rotate therebetween with the travel of the rolling members, the separator rolls at their ends abutting the adjacent inner faces of said flanges, and being free from said retainer to assume required positions between the rolling members, the annular portion of the retainer between the flanges retaining the separator rolls from outward radial displacement.

3. An anti-friction bearing comprising inner and outer race rings, rolling members between said race rings, a retainer provided with openings receiving the rolling members and having spaced radial flanges adjacent the ends of the rolling members forming a continuous groove, and separator rolls between the flanges and between the rolling members and located within said groove, said retainer being separate from said race rings and free to rotate

therebetween with the travel of the rolling members, the separator rolls at their ends abutting the adjacent inner faces of said flanges, and being free from said retainer to assume required positions between the rolling members, the annular portion of the retainer between the flanges retaining the separator rolls from outward radial displacement.

4. An anti-friction bearing comprising inner and outer race rings, rolling members therebetween, and a retainer between said race rings provided with spaced flanges, openings receiving said rolling members, said rolling members having recesses, the retainer having projections entering said recesses, said retainer having an inner continuous groove, and separator rolls within said groove and between said rolling members, the ends of the separator rolls abutting the flanges of the retainer.

5. An anti-friction bearing comprising inner and outer concentric race rings, rolling members therebetween, a retainer between said race rings provided with openings receiving said rolling members, and having parallel flanges, said rolling members having recesses and the retainer having projections entering said recesses, and separator rolls between said rolling members and flanges, the ends of the separator rolls abutting the flanges of the retainer.

[Claims 6 to 10 not printed in the Gazette.]

1,022,164. HAMMOCK OR SWINGING COUCH. HENRY A. VOSSMER, Brighton, Mass. Filed June 15, 1911. Serial No. 633,302. (Cl. 5—61.)

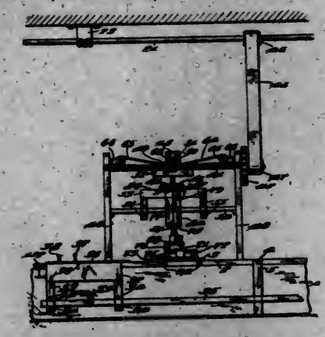


1. A hammock or the like having, in combination, a frame comprising two members each provided with a series of holes extending thereinto from one side and a series of relatively larger holes extending thereinto from another side and communicating with the first-mentioned holes, respectively, a series of flexible members extending from one of said members to the other and into the first-mentioned holes, respectively, said flexible members being provided respectively with knots located in said larger holes, respectively, and a plurality of series of hollow spindles, each of said flexible members extending through one of said series.

2. A hammock or the like having, in combination, a frame comprising two opposite longitudinal seat members, two opposite transverse seat members, a longitudinal back members, and two transverse side arm members, a plurality of hollow spindles interposed between said transverse seat members and said transverse side arm members, a plurality of hollow spindles interposed between the rear longitudinal seat member and said longitudinal back member, a plurality of hollow spindles interposed between said longitudinal seat members, and a plurality of flexible members passing through said spindles and connecting said seat members, said back member and said side arm members.

3. A hammock or the like having, in combination, a frame comprising two opposite longitudinal seat members, two opposite transverse seat members, a longitudinal back member and two transverse side arm members, a series of flexible members extending from said back member to and through one of said longitudinal seat members located therebelow and extending thence to the other longitudinal seat member, a second series of flexible members extending from one of said side arm members to and through one of said transverse seat members thence to and through the other of said transverse seat members, and thence to the other of said side arm members, and a plurality of series of hollow spindles through which said series of flexible members extend, said flexible members and said spindle thereon forming a flexible seat, a flexible back, and flexible sides.

1,022,165. BRICK-MACHINE. HARRY S. C. WALKER, Alexandria, Pa. Filed Aug. 25, 1910. Serial No. 578,855. (Cl. 25—104.)



1. In a brick machine, the combination with a table, and a mold guide thereon, of a track over the mold guide, a car on the track, telescoping shafts supported by the car, means for turning the shafts, a disk on the lower shaft having an eccentric bearing, a slicker plate, a slicker secured thereto, a central pin on the slicker plate located in the bearing in the disk, a circular rack on the slicker-plate, and a roller on the disk running on the circular rack, substantially as described.

2. In a brick machine, the combination with a table, and a mold guide thereon, of a track over the mold guide, a car on the track, telescoping shafts supported by the car, means for turning the shafts, a disk on the lower shaft having an eccentric bearing, a slicker plate, a slicker secured thereto, a central pin on the slicker plate located in the bearing in the disk, a circular rack on the slicker plate, and a roller on the disk running on the circular rack, and means for moving the car longitudinally as the shafts are turned, substantially as described.

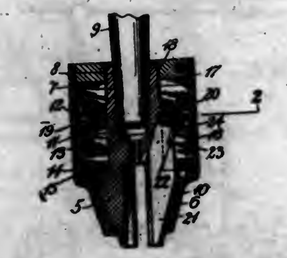
3. In a brick machine, the combination with a table, and a mold guide thereon, of a track over the mold guide, a car on the track, telescoping shafts supported by the car, means for turning the shafts, a disk on the lower shaft having an eccentric bearing, a slicker plate, a slicker secured thereto, a central pin on the slicker plate located in the bearing in the disk, a circular rack on the slicker plate, a roller on the disk running on the circular rack, means for moving the car longitudinally as the shafts are turned, and a lever on the car constructed to elevate the slicker and the shafts and stop the longitudinal movement of the car, substantially as described.

4. In a brick machine, the combination with a table, and a mold guide thereon, of a track over the mold guide, a car on the track, telescoping shafts supported by the car, means for turning the shafts, a disk on the lower shaft having an eccentric bearing, a slicker plate, a slicker secured thereto, a central pin on the slicker plate located in the bearing in the disk, a circular rack on the slicker plate, a roller on the disk running on the circular rack, parallel screw-threaded rods, means for turning the rods, a cross bar connected with the car, blocks on the cross bar having screw-threaded recesses receiving the rods and moved thereby, and means for elevating the bar and blocks out of engagement with the screw-threaded rods, substantially as described.

1,022,166. CHUCK. DAVID WEIR, Hartford, Conn. Filed May 28, 1908. Serial No. 435,554. (Cl. 29—121.)

1. A chuck body, a carrier ring mounted thereon, a sleeve mounted upon the body, an interengaging feeding thread connecting said sleeve with one of said members

and of a pitch insufficient to hold the parts against relative rotary movement by reason of ordinary pressure exerted longitudinally of the body in the operation of the chuck, a locking thread connecting said sleeve with the other of said members and of a pitch sufficient to hold the parts against rotary movement by reason of pressure exerted lengthwise of the body, jaws carried by the carrier ring and means engaging the jaws to close them together.



2. A chuck body, a carrier ring mounted upon the body, a feeding thread connecting the carrier ring and sleeve, said thread being of a pitch insufficient to hold the sleeve from rotary movement by reason of ordinary pressure exerted axially thereof in the operation of the chuck, a locking thread between the sleeve and body and of a pitch sufficient to hold the parts against rotary movement by reason of pressure exerted axially of the structure, and means for closing the jaws together.

3. A body part, a carrier ring slidable along the body part, jaws carried by said ring, a sleeve mounted upon the body part and having a coarse, quick feeding thread engaging said ring and of a pitch insufficient to prevent rotation of the sleeve by reason of ordinary pressure exerted axially thereof in the operation of the chuck, and a locking thread upon the sleeve engaging a thread upon the body part and of a pitch sufficient to hold the sleeve against rotary movement by reason of pressure exerted axially of the structure, and means engaging the jaws to separate and close them.

4. A body part, a carrier ring mounted thereon, jaws carried by said ring, a sleeve mounted upon the body and having an internal feeding thread connecting the sleeve and carrier ring, said sleeve also having on its inner surface a tightening and holding thread to oppose the action of the feeding thread, and means engaging the jaws to close them.

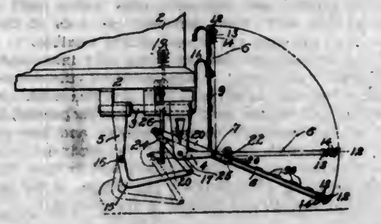
5. A body part, a carrier ring mounted thereon, jaws carried by said ring, a sleeve mounted upon the body and entirely inclosing the upper portion thereof, said sleeve having on its inner surface a feeding thread connecting it with the carrier ring and said sleeve also carrying on its inner surface a tightening and holding thread constructed to oppose the action of the feeding thread, and means engaging the jaws to close them.

[Claims 6 to 9 not printed in the Gazette.]

1,022,167. CAR-FENDER. FRANK W. WELLS, Vancouver, British Columbia, Canada. Filed May 23, 1910. Serial No. 562,914. (Cl. 105—130.)

1. In a car fender, the combination with a main fender including a vertical portion which extends up the front end of the car and a forwardly extending portion pivotally connected to fold up against the vertical portion, a supplementary fender behind the main fender the front rail of which supplementary fender is susceptible of being lowered to and raised from the track level and articulated means for connecting the main fender to the supplementary fender so that as the front rail of the main fender is lifted the front rail of the supplementary fender will be depressed and means under the control of the motorman for latching the fenders to hold the main fender horizontally and the supplemental fender with its front rail close to the track.

2. A car fender comprising in combination, a rectangular frame projecting forwardly from and pivotally mounted in brackets downwardly projecting from the front end of a car to which frame the supporting latticework of the fender is attached, members mounted on the same pivots and projecting backwardly therefrom, means for releasably securing these members to the side members of the main fender frame so as to be movable with it on its pivot, a supplementary fender pivotally mounted on brackets depending from the under frame of the car behind those of the main fender and links connecting the front end of the supplementary fender to the rearwardly projecting side members of the main fender.



3. A car fender comprising in combination, a rectangular frame projecting forward from and pivotally mounted in brackets downwardly projecting from the under frame of the car, members mounted on the same pivots and projecting backward therefrom, means for connecting these backwardly projecting members to the side members of the main fender frame, means for releasing such connection, a supplementary fender pivotally mounted behind the main fender, links connecting the front end of the supplementary fender with the members backwardly projecting from the main fender side frame, and a latch to retain the supplementary fender in the downward position.

4. In a car fender in combination, a main fender having a vertical and forwardly projecting portion pivotally connected at their junction, a front rail in advance of that of the main fender toward which it is movable against the resistance of springs, a supplementary fender pivotally mounted to the car frame behind the main fender, articulated means for connecting the main fender to the supplementary fender so that as the front end of the main fender lifts up that of the supplementary fender is depressed, removable means for securing the supplementary fender in the downward position and removable means for sustaining the supplementary fender clear of the track.

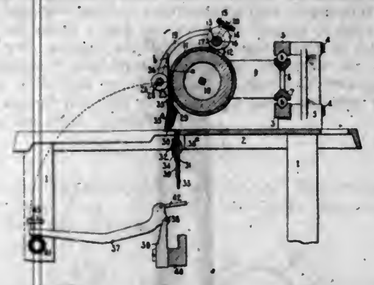
5. In a car fender having main and supplementary forwardly projecting body-catching receptacles coöperative together so that the upward movement of the main one lowers the supplementary one, means for automatically securing the supplementary receptacle at the lower limit of its movement and means for releasing said securing means.

[Claim 6 not printed in the Gazette.]

1,022,168. TYPE-WRITING MACHINE. LYNN B. WYCKOFF, Chicago, Ill., assignor to The Monarch Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed Sept. 19, 1911. Serial No. 650,102. (Cl. 197—135.)

1. In a front-strike typewriting machine, the combination of a carriage, a rotative platen carried thereby, and a stationary substantially horizontally disposed shelf-like support or platform arranged in front of the platen and beneath the printing line and extending longitudinally of the platen, said support being operative to support a card or the like at the bottom edge thereof while the card is maintained in substantially a flat condition in front of the platen and at the printing line.

2. In front-strike typewriting machine, the combination of a carriage, a rotative platen carried thereby, a substantially horizontally disposed shelf-like support arranged in front of the platen and beneath the printing line and extending longitudinally of the platen, said support being operative to support a card or the like at the bottom edge thereof while the card is maintained in front of the platen at the printing line, and margin feed rollers which are separate from said shelf-like support and which are supported independently thereof, said margin feed rollers being coöperative with the card at the side edges thereof.



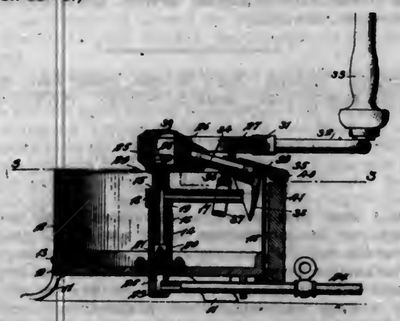
3. In a front-strike typewriting machine, the combination of a carriage, a rotative platen carried thereby, a stationary substantially horizontally disposed shelf-like support or platform arranged in front of the platen and beneath the printing line and extending longitudinally of the platen, said support being operative to support a card or the like at the bottom edge thereof while the card is maintained in substantially a flat condition in front of the platen and at the printing line, a supporting rod arranged above the platen, supporting arms which extend forwardly and downwardly from said rod, and margin feed rollers carried by supporting arms and coöperative with the side edges of the card, the arrangement being such that a card is fed upwardly in front of said supporting rod.

4. In a front-strike typewriting machine, the combination of a carriage, a rotative platen carried thereby, and a stationary support carried by a fixed part of the machine and operative to support a card or the like at the bottom edge thereof while the card is maintained in substantially a flat condition in front of the platen and at the printing line.

5. In a front-strike typewriting machine, the combination of a carriage, a rotative platen carried thereby, and a support carried by a fixed part of the machine and operative to support a card or the like at the bottom edge thereof while the card is maintained in front of the platen at the printing line, said support having a card supporting surface parallel with the printing line.

[Claims 6 to 10 not printed in the Gazette.]

1,022,169. TURN-DOWN-COLLAR EDGE IRONING OR FINISHING MACHINE. WILLIAM A. ZEIDLER, New York, N. Y. Filed Apr. 7, 1911. Serial No. 619,474. (Cl. 68—9.)



1. A collar edge-finishing machine comprising a vertical cylindrical member upon whose upper edge the fold of the collar is placed, a grooved ironing-shoe to engage the fold-edge of the collar, a handle frame and handle connected with said ironing-shoe, and means pivotally mounting said handle-frame concentrically with said cylindrical member and permitting it to be manually rocked angularly for rocking said shoe on the fold-edge of the collar.

2. A collar edge-finishing machine comprising a vertical cylindrical member upon whose upper edge the fold of the collar is placed, a grooved ironing-shoe to engage the fold-edge of the collar, a handle frame and handle connected with said ironing-shoe, and means pivotally mounting said handle-frame concentrically with said cylindrical member and permitting it to be manually rocked angularly for rocking said shoe on the fold-edge of the collar, said shoe at its groove being inclined downwardly and outwardly at an angle to the horizontal plane of said cylinder.

3. A collar edge-finishing machine comprising a vertical cylindrical member upon whose upper edge the fold of the collar is placed, a grooved ironing-shoe to engage the fold-edge of the collar, a handle frame and handle connected with said ironing-shoe, a vertical tubular post secured centrally within said cylinder, a hub swiveled on the upper end of said post and having a tubular stem extending into the same and a laterally projected burner-pipe for heating said shoe, means mounting said handle frame on said hub, means for leading gas to the interior of said post, and means for compelling said burner-pipe to maintain its relation to said shoe during the movement of the latter along its circular path.

1,022,170. CARD BUSINESS SYSTEM. LLOYD STERLING ANTISDEL, Chicago, Ill. Filed Dec. 7, 1911. Serial No. 664,524. (Cl. 129—16.)



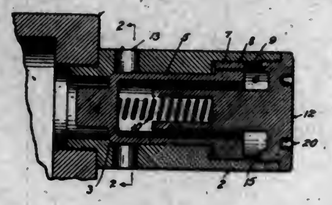
1. In a system of the class described, the combination of a plurality of similar record members each having one edge graduated to indicate percentages, an indicator member slidably mounted upon said edge, and a key number on each of said cards for coöperation with the graduations on the card in governing the movement of said indicator member thereon, substantially as described.

2. In a system of the class described, the combination of a plurality of similar record cards each having one edge graduated to indicate percentages, an indicator member slidably mounted upon said edge and adapted to yieldingly hold itself in positions of adjustment upon said edge, and a key number on each of said cards for coöperation with the graduations on the card in governing the movement of said indicator member thereon, substantially as described.

3. In a system of the class described, the combination of a plurality of record members each having one edge graduated to indicate percentages from zero per cent. to one hundred per cent., an indicator member slidably mounted on said edge, and a key number on each of said cards for coöperation with the graduations on the card in governing the movement of said indicator member thereon, substantially as described.

4. In a system of the class described, the combination of a plurality of record members each having one edge graduated to indicate percentages from zero per cent. to one hundred per cent., an indicator member slidably mounted upon said edge, and a minimum number space, a maximum number space and a key number space on each card for the reception of numerals for governing the movement of the indicator member thereon, substantially as described.

1,022,171. VALVE. CHARLES R. BALLARD, Midway, Pa. Filed Mar. 3, 1911. Serial No. 611,969. (Cl. 103—66.)



1. A self-contained outlet valve for compressors, pumps and the like, comprising a cylindrical one-piece casing having a bore enlarged at its outer end to form a piston chamber, said casing being provided at its inner end with means for attachment to a cylinder head and adjacent thereto with a valve seat and having ports through its side walls, a valve comprising a cylinder having its inner end closed to coöperate with said valve seat, said cylinder having a close sliding fit in said bore and being enlarged at its outer end to form a piston having a close sliding fit in said piston chamber and being provided with a restricted passage leading from one face of the piston to the other, a cap fitting in the outer open end of the bore to close the latter, said cap having a reduced central stem projecting inwardly into said bore, and a spiral spring seated between said stem and valve to seat the latter.

2. A self-contained valve for compressors, pumps and the like, comprising a one-piece cylindrical casing having a reduced forward end provided with screw threads for connection to a cylinder head, whereby the valve projects bodily from the cylinder head, said casing being provided with a bore reduced at its forward end to form a valve seat and enlarged at its rear end to form a piston chamber and provided to the rear of said seat with ports through its side walls, a valve comprising a hollow cylinder having a close sliding fit in said bore, said cylinder being closed at its forward end and formed to coöperate with the valve seat and enlarged at its rear end to form a piston sliding in said piston chamber, a cap secured to the outer end of said casing to close the latter, said cap having a stem projecting into said hollow cylinder, and a spiral spring seated in said hollow cylinder and engaging said stem and arranged to seat said valve, said valve having a reduced forward end substantially filling said bore to reduce clearance.

3. A self-contained valve for compressors, pumps and the like, comprising a one-piece casing provided at one end with means for attachment to a cylinder head and provided with a bore and ports through its side walls, said bore forwardly of said ports being formed with a valve seat and being enlarged at its rear end to form a piston chamber, a valve in said casing comprising a hollow cylinder having one end closed and formed to cooperate with said seat and being enlarged at its rear end to form a piston having a close sliding fit in said chamber, a cap screwed into the outer end of said casing and having a reduced hollow stem projecting forwardly into said cylinder, and a spiral compression spring seated in said hollow cylinder and hollow stem and arranged to seat said valve.

1,022,172. DETACHABLE CUE-TIP. ADAM BENHOFF, Canton, Md., assignor of one-half to Charles F. Smith, Canton, Md. Filed Jan. 22, 1912. Serial No. 672,667. (Cl. 46—9.)

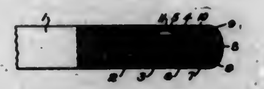
1. The combination with a cue tip comprising a head and a stem, of means for attaching the tip to a cue comprising a pin projecting from the stem, an internally threaded ring arranged between the pin and said head and rotatable about the stem, and a sleeve adapted for connection to the cue, said sleeve adapted to fit between the stem and the ring and having threads for engaging the threads in the latter and having a slot in its wall for receiving the pin.

2. The combination with a cue tip comprising a head and a stem, of means for attaching the tip to a cup comprising a pin projecting from the stem, an internally threaded ring arranged between the pin and said head and rotatable about the stem, and a sleeve adapted for connection to the cue, said sleeve having a shoulder



adapted to form a stop for the ring and having a threaded portion adapted to fit between the stem and the ring and to engage the threads in the ring, and said sleeve having also a slot, for receiving the pin, extending from its outer end through said threaded portion and past the shoulder.

1,022,173. BILLIARD-CUE. WILLIAM BLANEY, Marblehead, Mass., assignor of one-half to Benjamin G. Melvin, Marblehead, Mass. Filed Oct. 6, 1911. Serial No. 653,091. (Cl. 46—9.)

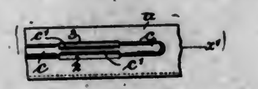


1. A billiard cue tip comprising a plug, a locking member thereon, a cushion member thereon, a sleeve having a longitudinal locking recess for said locking member permitting longitudinal movement only of said plug relative to said sleeve, said sleeve adapted to engage the periphery of both the plug and the cue.

2. A billiard cue tip comprising a plug, a locking member thereon, a cushion member thereon, a sleeve having an engaging portion for the locking member, said sleeve adapted to engage the periphery of both the plug and the cue and non-rotatable relatively to either of them.

3. A billiard cue tip comprising a plug having an offset locking member thereon, a cushion member thereon, a sleeve having an offset longitudinal section on one face thereof for said locking member, and non-rotatable relative to said plug.

1,022,174. HINGE. JOHN BONESS, Ozone Park, N. Y. Filed June 13, 1911. Serial No. 632,943. (Cl. 16—104.)

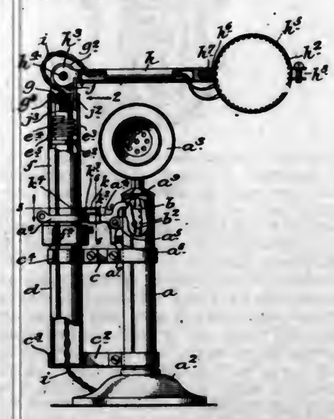


1. A hinge comprising a metal member having knuckle forms and an intermediate hinge pin formed integral therewith and with the metal member, and a co-acting metal member having a knuckle form made as an integral tongue which is turned around a pin of the other member.

2. A hinge comprising alternate semi-circular sections stamped up from a sheet metal member with integral intermediate parts, also stamped from the metal thereof and rolled together so as to form one or more hinge pins and one or more tongues formed integral from another sheet metal member, engaging and rolled around the said hinge pin or hinge pins to connect the parts in a permanent and hinged relation.

3. A hinge comprising the parts *c*, pressed out from a sheet metal member, and hinge pins formed by cut away portions which leave slots, and rolling the same together into cylindrical form to constitute integral hinge-pins between the parts *c* and one or more tongues formed integral with another sheet metal member, and to which a preliminary semi-circular bend is imparted for connection with said cylindrical hinge-pins and thereafter rolled around the said hinge-pins to form knuckles connecting the parts together.

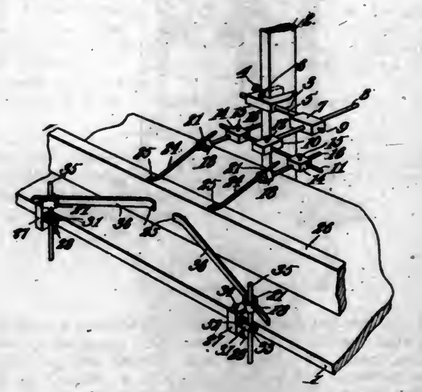
1,022,175. TELEPHONE. ROBERT A. BONIVENTURE, New York, N. Y. Filed Mar. 29, 1911. Serial No. 617,591. (Cl. 179—149.)



1. In a telephone, the combination with the standard of the transmitter having the usual pivoted receiver supporting arm and the usual circuit wires which pass therethrough of a receiver supporting attachment comprising a tube adapted to be secured to the standard of the transmitter below said arm and terminating below said arm and provided with an extension of less diameter, and which passes upwardly through the fork of said arm, a rotary sleeve mounted on said extension and also passing through said fork, a tension device for holding said rotary sleeve in a predetermined position, a supplemental receiver arm pivoted to the top of the rotary sleeve and adapted to turn therewith and to swing vertically, means operated by swinging the supplemental receiver arm vertically to lock the rotary sleeve in a predetermined position, and means whereby the rotary movement of said arm and sleeve will operate the first named receiver arm to close the circuit through the standard of the transmitter.

2. In a telephone, the combination with the standard of the transmitter having the usual pivoted receiver supporting arm and the usual circuit wires which pass therethrough, of a receiver supporting attachment comprising a tube adapted to be secured to the standard of the transmitter below said arm and terminating below said arm and provided with an extension of less diameter, and which passes upwardly through the fork of said arm, a rotary sleeve mounted on said extension and also passing through said fork, a tension device for holding said rotary sleeve in a predetermined position, a supplemental receiver arm pivoted to the top of the rotary sleeve and adapted to turn therewith and to swing vertically, means operated by swinging the supplemental receiver arm vertically to lock the rotary sleeve in a predetermined position, and means whereby the rotary movement of said arm and sleeve will operate the first named receiver arm to close the circuit through the standard of the transmitter, and said tube and its extension and the supplemental receiver arm being also provided with receiver circuit wires which are passed therethrough.

1,022,176. ATTACHMENT FOR WOODWORKING-MACHINES. WILLIAM T. BOOTHBY, Marietta, Ohio, assignor of one-half to George B. H. Sandford, Marietta, Ohio. Filed Jan. 13, 1911. Serial No. 602,442. (Cl. 144—243.)

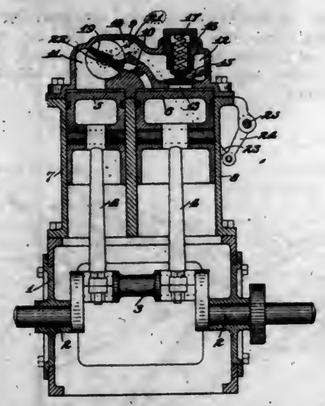


1. In a device of the class described, a support adapted to be mounted upon a wood-working machine; an arm adjustably held upon the support for rotation and for longitudinal sliding movement; a second arm disposed at an angle to the first arm, and adjustably held thereon for rotation and for longitudinal sliding movement; a third arm disposed at an angle to the second arm, and held thereon adjustably, for rotation and for longitudinal sliding movement; a fourth arm disposed at an angle to the third arm, and adjustably held thereon for rotation and for longitudinal sliding movement; and a depending tongue adjustably held upon the fourth arm, for rotation, and for sliding movement longitudinally of said arm.

2. In a device of the class described, a support adapted to be mounted upon a wood-working machine; a rod slidable and rotatable in the support and provided with a head; a rod slidable and rotatable in the head, and disposed substantially at right angles to the first named rod, the last named rod being provided with a head; a rod slidable and rotatable in the last named head, and disposed substantially parallel to the first named rod; blocks slidable and rotatable upon the last named rod; arms slidable and rotatable in the blocks, and disposed substantially at right angles to the last named rod; tongues adjustably held for rotation and for sliding movement upon the arms; and clamping devices in the support, the heads and the blocks.

3. In a device of the class described, a support adapted to be mounted upon a wood-working machine; a rod slidable and rotatable in the support and provided with a head; a rod slidable and rotatable in the head, and disposed substantially at right angles to the first named rod, the last named rod being provided with a head; a rod slidable and rotatable in the last named head, and disposed substantially parallel to the first named rod; blocks slidable and rotatable upon the last named rod; arms slidable and rotatable in the blocks, and disposed substantially at right angles to the last named rod; split holders slidable and rotatable upon the arms; spring tongues superposed upon the holders; clamping plates superposed upon the tongues; clamping devices adjustably uniting the plates with the holders; and clamping devices in the holders, in the blocks, in the heads, and in the support.

1,022,177. INTERNAL-COMBUSTION MOTOR. BENJAMIN BRAZELLE, Kirkwood, Mo., assignor to Brazelle Motor Company, St. Louis, Mo., a Corporation of Missouri. Filed Sept. 29, 1909. Serial No. 520,084. (Cl. 123—26.)



1. An internal combustion motor comprising a cylinder, a piston therein, a shaft operatively connected to said piston, means for charging said cylinder with an explosive mixture, means for igniting said charge, an inclosed chamber having a large normally closed communication with said cylinder at the head end thereof arranged to make said chamber substantially continuous with said cylinder, a normally closed valve for controlling such communication, and means operatively connected to said shaft for opening said valve substantially simultaneously with ignition of said charge whereby said chamber in effect increases the volume of said cylinder.

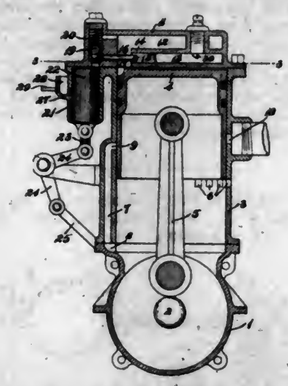
2. An internal cumbusition motor comprising two cylinders having a passageway connecting them and an intermediate chamber communicating with said cylinders, a check valve controlling the outlet from one cylinder into said chamber and means for controlling the communication between said chamber and the other cylinder and simultaneously opening the passageway between said cylinders.

3. An internal combustion motor comprising two cylinders of different sizes having a passageway connecting them and an intermediate chamber communicating with said cylinders, a check valve controlling the communication from the larger cylinder into said chamber and means for controlling the communication between said chamber and the smaller cylinder and simultaneously opening said passageway between said cylinders.

4. An internal combustion motor comprising two cylinders of different sizes having a passageway connecting them and an intermediate chamber communicating with said cylinders, means for charging the smaller cylinder with an explosive mixture, means for charging the larger cylinder with air, a check valve controlling the outlet from the larger cylinder into said chamber, means for igniting said explosive charge, and means for opening communication between said chamber and the smaller cylinder and opening the passageway between said cylinders substantially simultaneously with such explosion.

5. An internal combustion motor comprising two cylinders of different sizes having a passageway connecting them and an intermediate chamber communicating with said cylinders, means for charging the smaller cylinder with an explosive mixture, means for charging the larger cylinder with a non-explosive gas, means for igniting the explosive charge, a check valve controlling the outlet from the larger cylinder into said chamber, and means for controlling the communication between said chamber and the smaller cylinder and opening the passageway between said cylinders, substantially simultaneously with such ignition.

1,022,178. INTERNAL-COMBUSTION MOTOR. BENJAMIN BRAZELLE, Kirkwood, Mo., assignor to Brazelle Motor Company, St. Louis, Mo., a Corporation of Missouri. Filed July 16, 1910. Serial No. 572,235. (Cl. 123—191.)



1. An internal combustion motor comprising a cylinder and two chambers of unequal volume, permanently communicating with said cylinder and with each other, means for charging each of said chambers with air, means for subsequently charging the smaller chamber with fuel to form an explosive mixture with the air therein, and means for igniting said mixture.

2. An internal combustion motor comprising a cylinder and a hollow head therefor containing two chambers of unequal size communicating with said cylinder and with each other, the larger one of said chambers substantially inclosing the other, means for charging said chambers with air, means for charging the inner chamber with gaseous fuel to form an explosive mixture, and means for igniting said mixture.

3. An internal combustion motor comprising a cylinder and a hollow head therefor containing two chambers communicating with said cylinder and with each other, one of said chambers being larger and substantially inclosing the other, means for charging said chambers with air, means for charging the inner chamber with gaseous fuel, and means for igniting said charge, said fuel charging means comprising a pipe extending into said smaller chamber, a pump, a passageway extending from said pump to said pipe, a check valve in said passageway, and an oil reservoir open to the atmosphere and having a port opening into the pump cylinder.

1,022,179. CONTRIVANCE FOR INTERMITTENTLY DISPLAYING SHEETS. EDWARD WILLIAM BROWN, Forest Gate, England. Filed Nov. 4, 1911. Serial No. 658,478. (Cl. 40—36.)

1. In a contrivance for intermittently displaying sheets, a series of sheets, means for suspending said sheets and means for twice inverting and twice transferring relatively to the front and the back of the contrivance each said sheet between each display thereof.

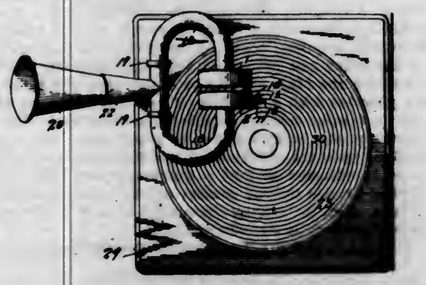
2. In a contrivance for intermittently displaying sheets, a series of pairs of sheets, means for suspending said sheets and means for inverting and transferring relatively to the front and the back of the contrivance each said pair of sheets together, with the outer sheets of the pair still outermost after transferal.

3. In a contrivance for intermittently displaying sheets, a rearwardly inclined guide groove near the upper end of each side thereof, a series of pairs of sheets, rods secured to the horizontal borders of said sheets with the extremities of the upper of said rods located in said grooves, means for inverting and transferring relatively to the front and the back of the contrivance each said pair of sheets together, with the outer sheet leading, a tilting lever on each side of the contrivance in advance of said grooves and in the path of said rod secured to the trailing border of said leading sheets, and a second lever on each side of the contrivance with its upper end in the path of said tilting lever and its lower end in the path of said transferring means.



4. In a contrivance for intermittently displaying sheets, a rearwardly inclined guide groove near the upper end of each side thereof, a series of pairs of sheets, rods secured to the horizontal borders of said sheets with the extremities of the upper of said rods located in said grooves, sprocket-wheels on each side of the contrivance, a pitch-chain on each side of the contrivance led over said sprocket-wheels, a pair of separated grooved fingers on each said chain, a friction roller above said guide-groove and in engagement with said chains, a tilting lever on each side of the contrivance in advance of said grooves and a second lever on each side of the contrivance with its upper end in the path of said tilting lever and its lower end in the path of said fingers of said chain.

1,022,180. TALKING-MACHINE. JOHN B. BROWNING, Camden, N. J., assignor to Victor Talking Machine Company, Camden, N. J., a Corporation of New Jersey. Filed Dec. 22, 1903. Serial No. 186,197. (Cl. 181—3.)



1. In a talking machine a plurality of sound reproducers connected to a common outlet, each of said sound reproducers having a vibrating arm and a needle point connected thereto by an adjustable arm, and a compensating spring attached to each sound reproducer and also to each of the vibrating arms.

2. A talking machine, comprising a T shaped sound conveyer mounted upon a vertical axis, and a sound conveyer connected with each lateral arm of the T to swing vertically and sound box mechanism connected with the free end of said latter conveyers.

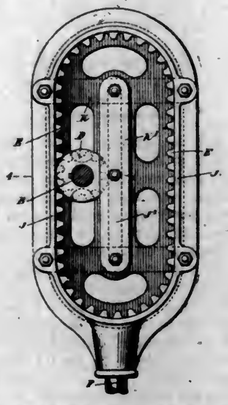
3. A device of the class described comprising a record tablet, a plurality of sound conveying tubes mounted to swing about a fixed axis and in a plane parallel to said tablet, a sound box carried by each of said tubes and engaging said record tablet, and a hollow sound connecting member connecting said tubes.

4. In a talking machine, the combination with a pivoted swinging sound conveying arm provided with a sound conduit, of a plurality of separately movable sound boxes carried thereby and communicating with said conduit.

5. A talking machine comprising a pivoted movable arm provided with a sound conduit and a plurality of sound boxes carried by said arm and communicating with said conduit, each sound box being provided with an independent stylus bar.

[Claims 6 to 36 not printed in the Gazette.]

1,022,181. GEARING. FREDERICK WILLIAM CRAGE, Port Elizabeth, Cape Colony. Filed July 5, 1911. Serial No. 636,948. (Cl. 74—27.)



A gearing for converting rotary motion into reciprocating rectilinear motion, comprising a revoluble pinion provided at each end with a flange rigid therewith, an elongated loop having on its inner face at the center thereof teeth with which the pinion meshes, the portions of the loop at the sides of the teeth forming guideways for the flanges of the pinion, a plate secured upon one face of the loop and provided with an elongated member projecting centrally into the loop and having its outer end flush with the other face of the loop, said member forming a central guideway, for the flanges of the pinion, and a plate of a length and width greater than that of the said member and secured thereto.

1,022,182. METHOD OF WIRE-DRAWING. JOHN T. H. DEMPSTER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Jan. 13, 1911. Serial No. 602,498. (Cl. 205—19.)

1. The method of drawing wire which consists in baking or burning a suitable lubricant into the surface of the wire by highly heating it when in contact with the wire and then passing the wire through the wire drawing die.

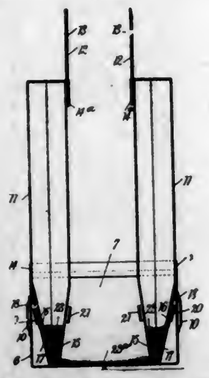
2. The method of wire drawing which consists in baking or burning into the surface of the wire a graphite coating and then passing the wire through the wire-drawing die.

3. The method of drawing tungsten wire which consists in applying to the wire an adherent graphite coating by highly heating graphite while in contact with the wire and then passing the wire through the die.

4. The method drawing wire which consists in applying to the wire by a baking or burning in operation, a

coating which after the passage of the wire through the die is shiny and adherent and then passing the wire through the wire drawing die.

1,022,183. AUTOMATIC FEED-BAG. GEORGE DOUTNEY, New York, N. Y. Filed June 29, 1911. Serial No. 635,915. (Cl. 119—65.)



1. A feed bag comprising a feed bucket, a pair of pockets, each pocket having ends and being connected between said ends with said bucket and adapted to turn into different positions relatively to said bucket for the purpose of bringing portions of said pockets into and out of said feed bucket, and means for suspending said pockets directly upon the head of an animal to be fed.

2. A feed bag comprising a feed bucket, and a supply pocket having an outlet at its lower end and suspending means near the top, the said pocket having a swinging connection with the bucket at the upper edge of the latter and at a point on the pocket removed from the outlet end, the said pocket being movable on its connection through an arc sufficient to swing the outlet end to the inside of the bucket or to the outside thereof.

3. A feed bag comprising a feed bucket and a pocket having its lower end disposed within and opening within the bucket, said pocket having a hinge connection with the upper end of the bucket on which the pocket has a movement in an arc to remove the lower end from said bucket.

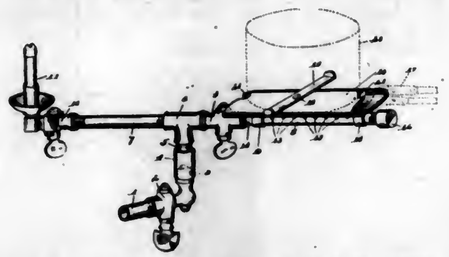
4. A feed bag comprising a feed bucket and a pocket having a connection at a point intermediate its ends with said bucket, the pocket being formed with a discharge opening at one end and being movable on said connection to swing the end with the discharge opening into or out of said bucket.

5. A feed bag comprising a bucket and a pocket pivoted to the upper edge of said bucket, so as to render said pocket movable relatively to said bucket through an arc of approximately 180 degrees, said pocket in one position having one end within the bucket along the side thereof, and the pocket in the other position lying along the exterior of the bucket.

[Claims 6 and 7 not printed in the Gazette.]

1,022,184. HEATING APPARATUS. WALTER N. DUTTON, Oak Park, Ill. Filed July 24, 1911. Serial No. 640,321. (Cl. 126—232.)

1. In a heater of the character described, the combination of a coupling adapted to be threaded upon a gas tip nipple; stretches of pipe extending from said coupling; a gas tip and governing cock therefor at the outer end of one of said pipe stretches; a cock governing the other of said pipe stretches, the latter being provided in its upper side with a plurality of jet openings; a tubular member detachably secured upon said last mentioned pipe stretch; and means on said tubular member adapted in combination with the latter to constitute a supporting web, substantially as described.



2. In a heater of the character described, the combination of a coupling adapted to be threaded upon a gas tip nipple; horizontally disposed stretches of pipe extending from said coupling; a gas tip and governing cock therefor at the outer end of one of said pipe stretches; a cock governing the other of said pipe stretches, the latter being provided with a plurality of jet openings in its upper side; a tubular member detachably secured upon said last mentioned pipe stretch above the same; and means on said tubular member adapted in combination with the latter to constitute a supporting web, substantially as described.

3. In a heater of the character described, the combination of a coupling adapted to be threaded upon a gas tip-nipple; stretches of pipe extending from said coupling; a gas tip and governing cock therefor at the outer end of one of said pipe stretches; a cock governing the other of said pipe stretches, the latter being provided in its upper side with a plurality of jet openings; a tubular member detachably secured upon said last mentioned pipe stretch; and a bar pivoted upon said tubular member adapted to be adjusted to constitute a supporting web in combination with said tubular member, substantially as described.

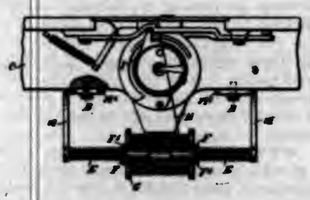
4. In a heater of the character described, the combination of a coupling adapted to be threaded upon a gas tip nipple; horizontally disposed stretches of pipe extending from said coupling; a gas tip and governing cock therefor at the outer end of one of said pipe stretches; a cock governing the other of said pipe stretches, the latter being provided with a plurality of jet openings in its upper side; a tubular member detachably secured upon said last mentioned pipe stretch above the same; and a bar pivoted medially upon the upper side of said tubular member adapted to be adjusted so as to constitute a supporting web in combination with said tubular member, substantially as described.

5. In a heater of the character described, the combination of a coupling adapted to be threaded upon a gas tip nipple; horizontally disposed stretches of pipe extending from said coupling; a gas tip and governing cock therefor at the outer end of one of said pipe stretches; a cock governing the other of said pipe stretches, the latter being provided with a plurality of jet openings in its upper side; a tubular member detachably secured upon said last mentioned pipe stretch above the same; and a bar pivoted medially upon the upper side of said tubular member adapted to be adjusted so that a supporting web will be constituted by said tubular member and bar, said bar and said tubular member having upwardly turned stop-forming ends, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,022,185. SPOOL-HOLDER FOR SEWING-MACHINES. ETHEL MARY ELSDEN, (now by marriage Ethel M. Jones,) Hamilton, Bermuda. Filed May 19, 1909. Serial No. 496,884. (Cl. 242—136.)

1. In combination with a support, of a spool holder comprising a pair of brackets, each consisting of an arm having at one end a lateral slotted foot, a set screw passing through the slot and engaging the support for adjustably connecting the bracket thereto, said brackets being arranged with the feet in alinement to permit them to be adjusted toward and from each other, each arm having at its outer end an inwardly projecting pin, a trunnion for entering the bore of the spool at each end thereof, each trunnion having a collar for engaging the end of the spool and having a pin extending toward the pin of the adjacent arm, and a coil spring encircling the pins and connecting the trunnions to the arms, said springs wholly supporting the spool.



2. A spool holder for sewing machines, comprising a pair of trunnions for entering the bore of the spool at opposite ends thereof, each trunnion having a collar for engaging the end of the spool, a bracket arm for each trunnion, a spring connecting each trunnion with the adjacent arm, each of the said arms having an inwardly extending longitudinally slotted foot for receiving a set screw to hold the arm to a support, and to permit the arms to be adjusted toward and from each other to vary the tension of the springs, said springs wholly supporting the spool.

3. A spool holder for sewing machines, comprising trunnions for engaging the bore of the spool at each end thereof, an arm for each trunnion, a spring connecting each trunnion with the adjacent arm, each of the said arms having means whereby it may be adjustably connected with a support, the adjustment being toward and from the opposite arm for varying the tension of the springs, said trunnions wholly supporting the spool.

4. A spool holder for sewing machines, comprising a trunnion for engaging each end of the bore of the spool, an arm for each trunnion having means whereby it may be adjustably connected with a support, and a yielding connection between the trunnion and the arm, said trunnions wholly supporting the spool.

1,022,186. DEVICE FOR BALL GAMES. ARMAND ENGLER, Paris, France. Filed June 1, 1911. Serial No. 630,561. (Cl. 46—59.)



1. A device for ball games comprising a track formed of a concaved curved member gradually narrowing toward one end, a handle at the other end of said track, and a receptacle located at the meeting point of said handle and track.

2. A device for ball games comprising a track composed of a concaved curved member having two nearly parallel curved edges beveled on the inside and narrowing gradually toward one end, a handle formed integral with the track at the other end, and a receptacle located at the meeting point of said handle and track.

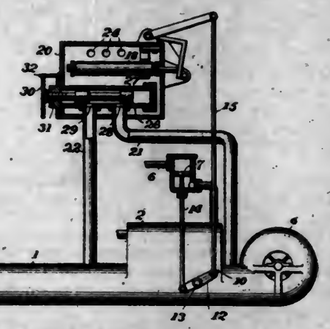
1,022,187. SHADE AND CURTAIN HANGER. PRESTON J. EVELEIGH, Charleston, S. C. Filed Aug. 10, 1911. Serial No. 643,315. (Cl. 156—23.)

A device of the class described comprising the combination of a plurality of brackets adapted to be positioned at opposite sides of a window casing, each bracket being made up of two members extending at right angles to each other, a rod for holding them in position, the rod being made up of end portions and an intermediate portion, one of the end portions being provided with a pin extending laterally thereof and also provided with a longitudinally extending slot, the intermediate portion being provided with a slot in which the said pin engages, the said intermediate portion being also provided with a threaded stud extending through the slot on the said end portion, there being an adjustable nut on the said stud whereby the adjustment of the parts may be determined, the said intermediate portion being also provided with an offset end, the other end portion being pro-



vided with a similar offset end, a pin engaging the intermediate portion and the end portion whereby they are pivotally connected together, auxiliary sides in engagement with the said end portion between which the offset adjacent ends of the intermediate portion and the said end portion are positioned whereby the parts are strengthened, the outer end of each end portion being reduced whereby they may engage in openings provided in the said brackets.

1,022,188. COMPENSATING SYSTEM OF TEMPERATURE CONTROL. HARRY G. GEISSINGER, New York, N. Y., assignor to Geissinger Regulator Company, New York, N. Y., a Corporation of New York. Filed Mar. 7, 1910. Serial No. 547,749. (Cl. 236—5.)



1. A temperature controlling apparatus including hot and cold air ducts, a mixed air conduit, a mixing damper arranged to close or partially close either of the said ducts for varying the relative volumes of the air delivered to the mixed air conduit, a thermostat having a casing, mechanism controlled by the thermostat for actuating the damper, and a duct extending from the thermostat casing to the mixed air conduit.

2. A temperature regulating system comprising means for regulating the temperature of air supplied to an air-duct leading to a compartment to be maintained at a certain temperature, a heat-insulating casing or chamber isolated from the influence of the temperature in the compartment to be regulated and located at a distance from said air-duct, a thermostat controlling said regulating means and located within said chamber, means for supplying said chamber with currents of warm and cold air respectively which will produce a resultant temperature the same as that to be maintained in said compartment, and means for varying the ratio of said warm and cold air currents to suit the differing conditions of separate installations.

3. In a temperature regulating system having a heating conduit, means for subjecting said conduit to a temperature-changing medium, a thermostat controlling said means and located at a distance from the rooms or com-

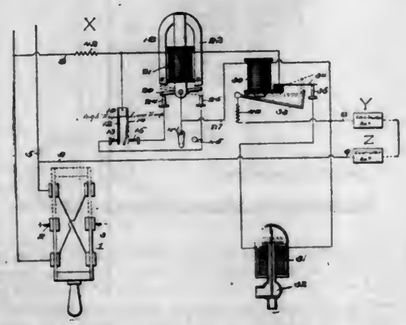
partment in which the temperature is to be regulated and from said conduit, a heat-insulating casing or chamber surrounding said thermostat, means for supplying said chamber with currents of air of different temperatures which will produce a resultant temperature which is the same as that desired to be maintained in the rooms or compartment, and means for varying the ratio of said air currents to suit the conditions of any installation.

4. A temperature regulating system comprising a temperature-changing device, means for regulating the temperature-changing medium supplied thereto, a thermostatic controller for said regulating means isolated from the influence of the temperature of the rooms to be regulated and located at a distance from said temperature-changing device, a heat insulating casing surrounding said controller, and means for subjecting said controller to an artificial atmosphere having the desired temperature of the rooms or compartment to be regulated.

5. A temperature regulating system comprising a temperature-changing device, a distributing air-duct connected therewith having a damper to control the air currents therethrough, means for regulating the temperature-changing medium supplied to said device, a thermostatic controller for said damper and said regulating means isolated from the influence of the temperature of the rooms to be regulated and located at a distance from said temperature-changing device, a heat insulating casing surrounding said controller, and means for subjecting said controller to an artificial atmosphere having the desired temperature of the rooms or compartment to be regulated.

[Claims 6 to 15 not printed in the Gazette.]

1,022,189. REMOTE TEMPERATURE CONTROL. HARRY G. GEISSINGER, New York, N. Y., assignor to Geissinger Regulator Company, New York, N. Y., a Corporation of New York. Filed Sept. 24, 1910. Serial No. 583,655. (Cl. 236—4.)



1. A system of temperature control comprising an electro-magnetic mechanism for regulating a heating medium, a relay controlling said mechanism, a thermostat having a plurality of thermal elements, a polarized magnet having an armature arranged to connect said relay with one or another of said thermal elements, and means for reversing the polarity of current supplied to said magnet.

2. A system of temperature control, comprising mechanism for regulating a heating medium, a controller for said mechanism, a thermostat having a plurality of thermally-actuated elements, an electromagnetic device for placing said controller under the directing influence of one or another of said thermal elements, and means for nullifying the effect of said device.

3. In a system of temperature control, comprising a plurality of sets of controlling mechanism, each mechanism comprising a valve for controlling a heating medium, a relay controlling said valve, a thermostat having thermal elements responding to different degrees of heat, and a polarized magnet operating to connect said relay in circuit with one or another of said thermal elements, of an electric circuit connected to each of said magnets, and a switch for changing the polarity of the current supplied to said circuit.

4. In a system of temperature control, comprising a plurality of sets of controlling mechanism, each mechanism comprising a valve for controlling a heating medium, a relay controlling said valve, a thermostat having thermal elements responding to different degrees of heat, and a polarized magnet operating to place said relay in circuit with one or another of said thermal elements, of an electric circuit connected to each of said magnets, a switch for changing the polarity of the current supplied to said circuit, and an auxiliary switch associated with each relay adapted to connect one of the thermal elements directly thereto.

5. In a system of temperature control, comprising a plurality of sets of controlling mechanism, each mechanism comprising a regulator for a heating medium, a relay controlling said regulator, a thermostat having thermally-actuated elements responding to different degrees of heat an electro-responsive device operating to place said relay in circuit with one or another of said thermally-actuated elements, and means for simultaneously actuating said electro-responsive devices.

[Claims 6 to 8 not printed in the Gazette.]

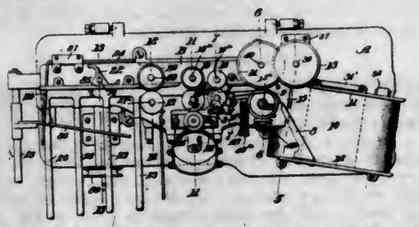
1,022,190. GARMENT. ABRAHAM GOLDBERG, New York, N. Y. Filed Oct. 6, 1911. Serial No. 653,102. (Cl. 2—145.)



1. A skirt having a part reversibly secured thereto along an edge of said part, equal in area substantially to one-half the area of the skirt, and means for reversibly fastening the free edge of said part to the skirt at the first-mentioned edge of said part.

2. A skirt having a part reversibly secured thereto along a vertical edge of said part and extending from the waistband to the lower edge of said skirt, said part being equal in area to substantially one-half of the area of the skirt, means for reversibly fastening the free edge of said part to the skirt along the first-mentioned edge of said part, and a flap secured to said skirt and adapted to be concealed under said reversible part.

1,022,191. MAIL-MARKING MACHINE. GEORGE H. GRAHAM, Jersey City, N. J., assignor to Universal Stamping Machine Company, New York, N. Y., a Corporation of New Jersey. Filed Oct. 13, 1910. Serial No. 586,957. (Cl. 101—82.)



1. In a mail marking or similar machine, the combination of an endless traveling belt, its supporting drums, its hinged supporting arms, and an adjustable rock frame connected with one of said arms whereby the belt may be stretched or loosened.

2. In a mail marking machine, the combination of a feed belt, a pair of drums supporting said belt, a hinged supporting arm for one end of each drum, which arms may be tripped to permit the belt to be removed from the drums; with a pivoted support for the bearings of one drum, and means for rocking said support so as to adjust such drum laterally and tension the belt.

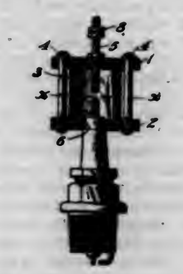
3. In a mail marking machine, the combination of a feed belt, a pair of drums supporting said belt, a supporting arm at one end of each drum, and a hinged supporting arm at the other end of each drum, adapted to be dropped to permit the belt to be removed from the drums; with a pivoted support for the arms of one drum, and means for rocking said support so as to adjust the drum laterally and tension the belt.

4. In a mail marking machine having a top plate, the combination of a pair of forwarding rolls, a trip-finger adapted to extend across the path of the mail matter passing between said rolls, a divided pivoted support for said trip-finger mounted partially above and partly below the top plate of the machine, and means connected with said support below the top plate permitting said support to laterally yield with respect to the traveling mail matter, and means connected with the finger below the top plate to hold it yieldingly in mail engaging position.

5. In a mail marking machine having a top plate, the combination of a pair of forwarding rolls, a trip-finger adapted to extend across the path of the moving mail, a pivoted arm carrying said finger, the pivot pin of said finger extending below said arm and through the top plate upon which the finger and rolls are mounted; a second arm connected to said pivot pin below the plate, spring controlled means engaging said second arm adapted to cause it to swing the finger toward the rolls, and spring actuated devices adapted to swing the carrying arm and finger toward the path of the mail.

[Claims 6 to 20 not printed in the Gazette.]

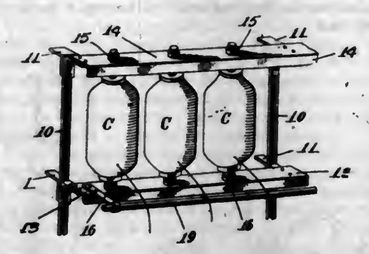
1,022,192. ATTACHMENT TO SPARK-PLUGS. HENRY C. HEMMETER, Pontiac, Mich., assignor of one-half to Cassius C. Van Wagoner, Pontiac, Mich. Filed Apr. 27, 1911. Serial No. 623,589. (Cl. 123—169.)



1. An attachment to a spark plug comprising a pair of opposed plates of insulating material provided with annular grooves facing each other, a glass tube interposed between and having its ends seated in said grooves, clamping means for forcing one plate toward the other, an electrode in one of the plates, and means carried by the other plate for clamping the same to a spark plug.

2. An attachment to a spark plug comprising a pair of opposed plates of insulating material provided with annular grooves, a glass tube interposed between the plates and having its ends seated in said grooves, means for drawing the plates together to clamp the tube, an electrode in one plate, and means for clamping the other plate to a spark plug.

1,022,193. CREEL-SUPPORTING RAIL FOR SPINNING-FRAMES. LEWIS T. HOUGHTON, Worcester, Mass. Filed Apr. 27, 1903. Serial No. 154,412. (Cl. 242—131.)



1. In a spinning or twisting machine, the combination of a creel rail having perforations, a tubular bushing having an outwardly tapering upper portion secured in each of said perforations and held therein by friction, and a step-piece held by friction in each of said bushings.

2. In a spinning or twisting machine, the combination of supports or uprights, a creel-rail mounted thereon and having perforations, and a tubular member having an outwardly tapering upper portion secured in one of said perforations by being forced longitudinally in place therein and being of sufficient size to cause the same to be held solely by the friction produced when it is forced into said perforation, said tubular member having a rigid bearing thereon.

3. In a spinning or twisting machine, the combination of a creel-rail, metallic bushings, a step-piece of porcelain or similar material fitting into each bushing, and held in place therein by the pressure of the bushing caused by forcing the same into place in the rail.

4. In a spinning or twisting machine, the combination of a metallic creel-rail, metallic bushings, a step-piece of porcelain or similar material, and a packing fitting into each bushing, said packing and step-piece being secured in place by the compression of the bushing caused by forcing the bushing into the rail.

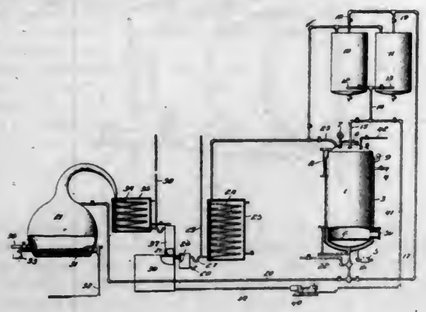
5. In a spinning or twisting machine, the combination of end supports or uprights, a lower creel rail consisting entirely of metal carried by said supports or uprights and having perforations extending entirely therethrough, and metallic tubular members flared outwardly at their upper ends, each extending through one of said perforations projecting above and below the metallic rail and frictionally secured therein, and each having a fixed bearing at the top for a creel spindle.

[Claims 6 to 11 not printed in the Gazette.]

1,022,194. METHOD OF RECOVERING RESIN FROM WASTE PRODUCTS. FRANK L. HUGGINS, Wilmington, N. C., assignor of one-half to John P. Moore, Jr., Wilmington, N. C. Filed Jan. 13, 1912. Serial No. 671,058. (Cl. 203—4.)

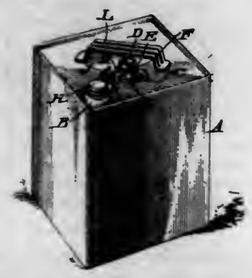
1. The herein described continuous process which consists in placing material containing rosin in a closed chamber having an outlet pipe at the bottom, admitting a solvent to said chamber from a solvent tank to submerge said material heating said chamber, admitting steam to the upper part of said chamber to expel said solvent through said outlet back to said solvent tank passing steam up through the residue of said material in said chamber, removing said residue and placing a fresh supply of material in said chamber, admitting said previously used solvent to said chamber to submerge said fresh supply of material forcing said solvent through said outlet back to said solvent tank, admitting fresh solvent from a second tank to said chamber, forcing said second supply of solvent by steam pressure through said outlet back to its tank, passing steam up through the residue of material, removing said residue from said chamber and placing a fresh supply of material therein, admitting

said first mentioned supply of solvent to said chamber to submerge said fresh supply of material forcing said saturated solvent by steam pressure through said outlet to a still, distilling said solvent to separate the contained rosin, condensing said solvent and forcing it back to said solvent tank.



2. The process of recovering rosin from waste products of the kind described consisting in dividing a quantity of solvent into two separated supplies, submerging successively three charges of said material with one supply of solvent, submerging the second and third of said charges of material successively with said second supply of solvent, distilling the first supply of solvent to separate the rosin, submerging a fourth charge of material with said second supply of solvent, and distilling said second supply of solvent.

1,022,195. SPOUT FOR CANS. CHARLES F. KELLOM, Philadelphia, Pa. Filed Aug. 5, 1911. Serial No. 642,490. (Cl. 221—56.)

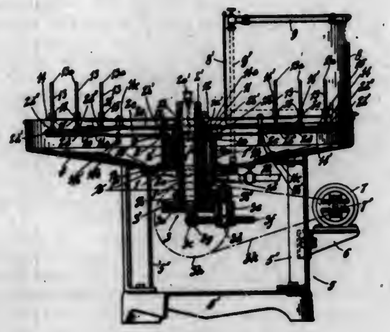


1. An attachment for a movable spout of a can, consisting of a divided ring, resilient arms continuous of the ends of said ring, laterally-extending limbs continuous of said arms, and ears attachable to the can, said ears being adapted to have said limbs mounted thereon, and said ring being adapted to freely embrace said spout.

2. A can provided with a nozzle, and ears, a movable spout having a neck adapted to engage tightly said nozzle, a divided ring adapted to freely embrace the exterior of said neck and carry said spout, resilient arms continuous of the ends of said ring, and laterally extending limbs continuous of said arms and adapted to be sprung into and mounted on said ears.

3. A can provided with a nozzle, and ears, a movable spout having a neck adapted to engage tightly said nozzle, said spout having a circumferential channel on the exterior thereof, a divided ring freely embracing the wall of said channel, laterally resilient arms continuous of the ends of said ring, and limbs on the terminals of said arms, said limbs being mounted on said ears.

1,022,196. BOTTLE-RINSING MACHINE. KARL KIEFER, Cincinnati, Ohio. Filed June 30, 1911. Serial No. 636,203. (Cl. 141—7.)



1. In a bottle-rinsing machine, connection elements one of which is rotatable with respect to the other, a shaft passing through the elements and having a bearing in one of them, said elements having registering orifices, and one of said elements having a relief opening to divert water, escaping from the registering orifices, away from the bearing of the shaft.

2. In a bottle-rinsing machine, connection elements one of which is rotatable with respect to the other, a shaft passing through the elements and having a bearing in one of them, said elements having a bearing between them, one of them having annular grooves in its bearing surface with relief openings leading therefrom, and the elements having orifices registering within a region between grooves, said relief openings leading from said annular grooves being adapted to divert water, escaping from the registering orifices, away from the bearing of the shaft.

3. In a bottle-rinsing machine, connection elements one of which is rotatable with respect to the other, a shaft passing through the elements, and having a bearing in one of them, said elements having a bearing between them and the bearing surface of one of the elements having a part composed of gasket material flanked radially by parts composed of more durable material, and the elements having orifices registering within the limits of the part composed of gasket material, and one of said elements having relief openings to divert water, escaping from the registering orifices past said gasket surface, away from the bearing of the shaft.

4. In a bottle-rinsing machine, connection elements one of which is rotatable with respect to the other, a shaft passing through the elements and having a bearing in one of them, said elements having a bearing between them, and one of said elements having part of its bearing surface composed of material adapted to make water-retaining and lubricant-excluding contact with the bearing surface of the other element, and having another part of its surface adapted to make a bearing contact with the surface of said other element and to have said bearing contact lubricated, said elements having orifices registering within the limits of said water-retaining and lubricant-excluding part of the surface of said element, and one of said elements having relief openings, to divert water, escaping from the registering orifices, away from the bearing contact of the elements and from the bearing of the shaft.

5. In a bottle-rinsing machine, a connection head comprising a central vertical bearing hub, a horizontal drainage flange surrounding the bearing hub, radial undercut wings above the flange, and a bearing plate supported above and upon said hub and said wings, the head having a supply passage opening through said plate, and the plate having means for draining its upper surface to said flange between said wings.

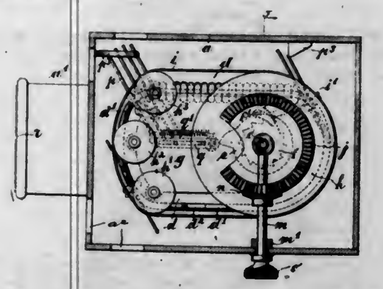
[Claims 6 to 10 not printed in the Gazette.]

1,022,197. BALL-AND-SOCKET PIPE-JOINT. CLEMENS A. KIEL, Louisville, Ky. Filed July 7, 1911. Serial No. 637,348. (Cl. 137—88.)



A two-part ball-and-socket pipe-joint comprising a hollow ball-member having a hollow neck opening thereinto, and a socket-member extending around a major portion of the ball-member and in sliding contact with a narrow zone thereof beyond the center of said ball-member to form a metal-to-metal contact only, and to prevent endwise separation of the members, said socket-member having a neck provided with a bore which opens into the inside of said member.

1,022,198. PICTURE-EXHIBITOR. GEORGE KOBICH, New York, N. Y. Filed Jan. 15, 1910. Serial No. 538,206. (Cl. 40—78.)



1. A picture exhibitor comprising a suitably supported picture guide, open picture carrying rings thereon, suitable gearing for moving picture carrying rings on said guide and keeping them normally in contact with each other, a portion of the guide being so arranged that the picture carrying rings, which normally lie in this portion, are out of the path of the moving means, and means for advancing the series of picture carrying rings by pushing the last one of the said series to bring the first one into the path of the picture moving means.

2. A picture exhibitor comprising a suitably supported rigid base plate with a guiding rim on its circumference adapted to be opened in one place, open picture carrying rings on the rim of the base plate, means for moving the picture carrying rings along said rim, a portion of the guiding rim being so arranged that the picture carrying rings, which normally lie in this portion, are out of the path of the moving means, and means for advancing the series of picture carrying rings by pushing the last one of the said series to bring the first one into the path of the picture moving means.

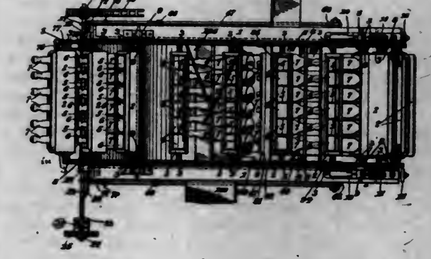
3. A picture exhibitor comprising a box, a suitably supported oblong base plate therein having a guiding rim on its circumference adapted to be opened in one place, open picture carrying rings on said rim, suitable gearing for moving said rings and keeping them normally in contact with each other, picture guides for keeping them in line, a portion of the guiding rim being so arranged that the picture carrying rings thereon, which normally lie in this portion, are out of the path of the moving means, and means for advancing the series of picture carrying rings by pushing the last one of the said series to bring the first one into the path of the picture moving means.

4. A picture exhibitor comprising an oblong box, a suitably supported base plate therein, a circumferential guiding rim on the base plate adapted to be opened in one place, open picture carrying rings on said guiding rim, means including suitable gearing for moving the picture carrying rings along said rim, a portion of the guiding rim being so arranged that the picture carrying rings thereon, which normally lie in this portion, are out of the path of the moving means, and a shifting device operated by the gearing for advancing the series of picture carrying rings by pushing the last one of the said series to bring the first one into the path of the picture moving means.

5. A picture exhibitor comprising an oblong box with lens for viewing the pictures, a suitably supported oblong base plate in said box, a circumferential guiding rim thereon adapted to be opened in one place, open picture carrying rings on said rim, means for moving the picture carrying rings along said rim, a portion of the guiding rim being so arranged that the picture carrying rings, which normally lie in this portion, are out of the path of the moving means, said means including suitable gearing, wheels in connection therewith, a steel band on said wheels having means to engage and move the picture carrying rings, and means for pushing the last picture carrying ring of the series to bring the first picture carrying ring into the path of the picture-moving means whereby said first picture may be brought into a viewing position.

[Claim 6 not printed in the Gazette.]

1,022,199. BOTTLE-WASHER. HERMANN KRAUSE, St. Louis, Mo., assignor to Henry Scarborough, Sr., Chicago, Ill. Filed May 2, 1910. Serial No. 559,009. (Cl. 141—7.)



1. In a bottle washing machine, the combination of an endless carrier having a plurality of bottle receptacles adapted to convey the bottles to be cleansed, means for driving the carrier, devices for cleaning the bottles in a receptacle, a support whereon said cleaning devices are mounted, means for moving said support bodily, and with it said cleaning devices, means for loading said receptacles with bottles, a lever connected at one end with said loading means, and a member connected to the other end of said lever and projecting into the path of movement of said support, for rocking said lever during the movement of said support in one direction, to operate said loading means.

2. In a bottle washing machine, the combination of a support having a plurality of brush openings adjacent one end thereof and a plurality of rinsing water openings adjacent the other end, a bottle carrier having a plurality of bottle receptacles adapted to convey the bottles in an inverted position over said support, means to drive said carrier intermittently to cause one receptacle to stop over said brush openings and another receptacle to stop over said rinsing water openings during each pause of the carrier, a bottle cleansing means comprising a plurality of members each provided with a brush adapted to reciprocate through a brush opening in said support, and to enter and leave a bottle in the receptacle

there-above during each pause of said carrier, a bottle rinsing means comprising a plurality of nozzles connected with a water supply, each of said nozzles being arranged to squirt the rinsing water through a rinsing water opening in said support and into a bottle in the receptacle thereabove, means for supplying said nozzles with the rinsing water under pressure during each pause of said carrier, and a plurality of guides for directing the bottles during their passage over said support.

3. In a bottle washing machine, the combination of a support having a plurality of brush openings adjacent one end thereof and a plurality of rinsing water openings adjacent the other end, a bottle carrier having a plurality of bottle receptacles adapted to convey the bottles in an inverted position over said support, means to drive said carrier intermittently to cause one receptacle to stop over said brush openings and another receptacle to stop over said rinsing water openings during each pause of the carrier, a bottle cleansing means comprising a plurality of members each provided with a brush adapted to reciprocate through a brush opening in said support, and to enter and leave a bottle in the receptacle thereabove during each pause of said carrier, a bottle rinsing means comprising a plurality of nozzles connected with a water supply, each of said nozzles being arranged to squirt the rinsing water through a rinsing water opening in said support and into a bottle in the receptacle thereabove, means for supplying said nozzles with the rinsing water under pressure during each pause of said carrier, a plurality of guides for directing the bottles during their passage over said support, and springs arranged to center the bottles over said brush openings, and said rinsing water openings.

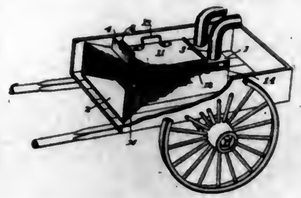
4. In a bottle washing machine, the combination of a support having a plurality of brush openings adjacent one end thereof and a plurality of rinsing water openings adjacent the other end, a bottle cleansing means comprising a plurality of members each provided with a brush adapted to reciprocate through a brush opening in said support, a bottle rinsing means comprising a plurality of nozzles connected with a water supply, each of said nozzles being arranged to squirt the rinsing water through a rinsing water opening in said support, means for conveying the bottles over said support to be treated by said cleansing means and said rinsing means, and a plurality of guides for guiding said bottles during their passage over said support.

5. In a bottle washing machine, the combination of a support having a plurality of brush openings adjacent one end thereof and a plurality of rinsing water openings adjacent the other end, a bottle cleansing means comprising a plurality of members each provided with a brush adapted to reciprocate through a brush opening in said support, a bottle rinsing means comprising a plurality of nozzles being arranged to squirt the rinsing water through a rinsing water opening in said support, means for conveying the bottles over said support to be treated by said cleansing means and said rinsing means, a plurality of guides for guiding said bottles during their passage over said support, and springs arranged to center the bottles over said brush openings, and said rinsing water openings.

[Claims 6 to 14 not printed in the Gazette.]

1,022,200. INSECT-DESTROYING APPARATUS. DAVID C. MCCROSKEY, Yazoo City, Miss. Filed Mar. 28, 1911. Serial No. 617,359. (Cl. 43—5.)

1. Insect destroying apparatus comprising a furnace or fume producer having a flaring front end, a slidable gate closing said front end, said gate having apertures adjacent the bottom thereof, a grate supported above the bottom of said furnace to support a charge of combustible mixture containing ingredients which generate the fumes, a vertical partition beneath said grate, a slide-controlled opening in the top of the producer, and a pair of discharge flues arranged adjacent the rear of the producer to discharge the fumes over the vegetation affected.



2. An insect-destroying apparatus comprising a furnace or fume producer having an opening in one end, a slidable gate closing said opening, said gate having apertures adjacent the bottom thereof, a grate supported above the bottom of said opening to support a charge of combustible mixture containing ingredients which generate fumes, means located beneath said grate for dividing the space therebetween and the bottom of the furnace into a plurality of longitudinal compartments, said furnace having an opening in its top to charge the same and means for closing said opening, and discharge means communicating with said producer to discharge the fumes generated over the vegetation affected.

1,022,201. SELF-LOCKING NUT. FREDERICK MOORE, Stoke Newington, London, England. Filed Nov. 25, 1910. Serial No. 594,178. (Cl. 151—26.)



1. In combination with a threaded nut having a slot thereon, means for locking said nut from rotation in one direction only comprising a bar slidable in said slot, a curved edge on said bar, said edge being curved substantially to conform to the curvature of the thread with which it engages but to permit a limited amount of sliding movement and said edge being shaped to conform to the shape of the thread, surface serrations on that side of the center line of the arc of curvature of the said edge which is foremost in the direction of undesired rotation and a spring normally pressing said serrations into engagement with the thread.

2. In combination with a threaded nut having a slot on the exterior thereof, means for locking said nut from rotation in one direction only comprising a bar slidable in said slot, a curved edge on said bar, said edge being curved substantially to conform to the curvature of the thread with which it engages but to permit a limited amount of sliding movement and said edge being shaped to conform to the shape of the thread, surface serrations on that side of the center line of the arc of curvature of the said edge which is foremost in the direction of undesired rotation and a flat spring disposed in an opening in the nut at right angles to the direction of sliding of the locking bar and arranged to press said serrations on the locking bar into engagement with the thread.

3. In combination with a threaded nut having a slot on the exterior thereof, means for locking said nut from rotation in one direction only comprising a bar slidable in said slot, a curved edge on said bar, said edge being curved substantially to conform to the curvature of the thread with which it engages but to permit a limited amount of sliding movement and said edge being shaped to conform to the shape of the thread, suitable serrations on that side of the center line of the arc of curvature of the said edge which is foremost in the direction of undesired rotation, said locking bar and nut having holes therein adapted to register in the disengaged position of said bar when the serrated side is in inoperative position, and a member adapted to engage in said holes to hold said bar in inoperative position.

4. In combination with a threaded nut having a rectangular slot on the exterior thereof, means for locking said nut from rotation in one direction only, comprising a rectangular bar slidable in said slot, a forced over upper edge on said slot to retain said bar, a curved edge on said bar, said edge being curved substantially to conform to the curvature of the thread with which it engages but to permit a limited amount of sliding movement and said edge being shaped to conform to the shape of the thread, surface serrations on that side of the center line of the arc of curvature of the said edge which is foremost in the direction of undesired rotation, said locking bar and nut having holes therein adapted to register in the disengaged position of said bar when the serrated side is in inoperative position, and a member adapted to engage in said holes to hold said bar in inoperative position.

1,022,202. SATCHEL-LOCK. DAVID MORGENSTERN and MAX BRILL, New York, N. Y. Filed Feb. 1, 1912. Serial No. 674,736. (Cl. 70—116.)



1. In a device of the character described, the combination with a satchel having a lock formed with interlocking knobs, of an encircling auxiliary lock for normally preventing said knobs from separating.

2. In a device of the character described, the combination with a satchel formed with a pair of interlocking snapping knobs, of an encircling member fitted over said knobs, and means for pivotally connecting said encircling member to said satchel whereby the encircling member may be moved pivotally to and from a position encircling said knobs.

3. In a lock for satchels, the combination with a satchel of a pair of interlocking clasping members, and an encircling member pivotally mounted on said satchel and adapted to encircle said interlocking clasping members.

4. In a lock for satchels, the combination with a satchel having a pair of interlocking clasping members for normally holding said satchel closed, of an encircling member for said clasping members pivotally mounted on said satchel, and means for resisting an unlocking movement of the encircling member from said clasping members.

5. In a lock for satchels, the combination with a satchel having interlocking clasping members connected with said satchel and designed to hold the same closed, of an encircling member adapted to encircle said clasping members, means for pivotally mounting said encircling member on said satchel, and resilient projecting members projecting into the path of movement of said encircling member for resisting the application and removal of said encircling member from around said interlocking clasping members.

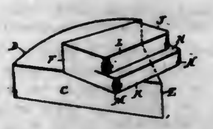
[Claim 6 not printed in the Gazette.]

1,022,203. PROPELLER. JOHN F. NETTLE, Butte, Mont. Filed July 5, 1911. Serial No. 636,835. (Cl. 115—46.)



In a propeller, a blade having a face, and two series of projecting members disposed side by side and transversely of the blade, the projecting member in one series being disposed between the longitudinal planes of the projecting members in the other series.

1,022,204. HEATING-FURNACE. FREDRICK J. NICE, Pontiac, Mich. Filed Mar. 4, 1911. Serial No. 612,227. (Cl. 158—1.)



1. The combination of an apertured casing of refractory material, an inlet pipe extending through a wall thereof, whereby a supply of combustible material may be introduced thereinto, and a movable block having a wedge-shaped base portion with the edge of the wedge vertically directed and in line with the discharge from the inlet pipe, said block member also having a rectangular top portion with one side terraced and in line with the discharge from said pipe, whereby the column of fuel is divided and dispersed to remote portions of the interior of the casing.

2. The combination of a refractory casing, means for introducing into the interior thereof a supply of fuel under pressure, and a movable block located within said casing in line with the entering stream of fuel, said block having a wedge-shaped base portion having the edge of the wedge lying normally in the line of such entering stream of fuel, and a rectangular top portion having its side which faces in the direction of the edge of the wedge terraced, with the rising portion of each step lying substantially perpendicular to the axis of the entering stream of fuel.

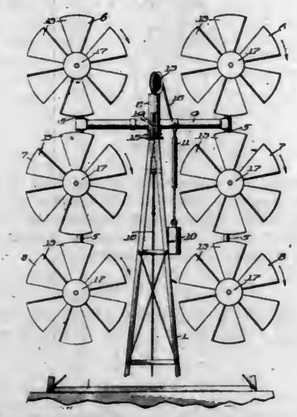
3. A distributing block for a heating furnace, comprising a wedge shaped lower portion and an upper portion of quadrilateral shape in horizontal section having those of its corners adjacent the point of the wedge extending beyond the respective planes of the vertical sides of said wedge shaped base, the sides of said upper portion facing in the same direction as the point of the wedge being terraced, substantially as described.

4. A distributing block for a heating furnace, comprising a wedge-shaped base portion, the vertical edge of its apex being adapted to receive the impact of a projected stream of fuel, and an upper portion having a terraced side, the vertical portions of the terraced side thereof facing in the same direction as the apex of the wedge shaped base portion of the block, substantially as described.

1,022,205. WINDMILL. LA VERNE W. NOYES, Chicago, Ill. Filed Nov. 17, 1911. Serial No. 660,836. (Cl. 170—3.)

1. A wind mill including a load driving wind wheel mounted to be rotated by the wind about its axis and to be bodily swung by the wind transversely with respect to

the horizontal about an axis which is normally located above the axis of the wheel whereby the weight of said wheel opposes bodily swinging movement of the wheel which is occasioned by the wind.



2. A wind mill including a plurality of load driving wind wheels mounted to be rotated about axes individual thereto and to be bodily swung by the wind transversely with respect to the horizontal about an axis intervening between the individual axes of the wind wheels and located closer to the upper of the individual wind wheel axes, the sails of the wind wheels being of such relative effective area that the action of the wind will preponderate upon the lower sails and cause the wind wheels to be bodily swung in opposition to the swinging force exerted by the wind upon the upper sails.

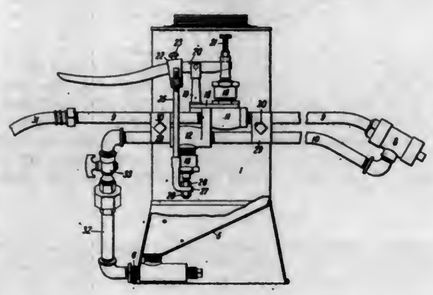
3. A wind mill including a plurality of load driving wind wheels mounted to be rotated about axes individual thereto and to be bodily swung by the wind transversely with respect to the horizontal about an axis intervening between the individual axes of the wind wheels, the sails of the wind wheels being of such relative effective area that the action of the wind will preponderate upon the lower sails and cause the wind wheels to be bodily swung in opposition to the swinging force exerted by the wind upon the upper sails.

4. A wind mill including a plurality of load driving wind wheels mounted to be rotated about axes individual thereto and to be bodily swung by the wind transversely with respect to the horizontal about an axis intervening between the individual axes of the wind wheels and located closer to the upper of the individual wind wheel axes, the sails of the wind wheels being of such relative effective area that the action of the wind will preponderate upon the lower sails and cause the wind wheels to be bodily swung in opposition to the swinging force exerted by the wind upon the upper sails; and a mounting affording an additional axis of movement for the wind wheels and which is transverse to the horizontal and to the axes of rotation of the wind wheels, said wind wheels having effective sail areas substantially evenly distributed upon opposite sides of said additional axis whereby the wind wheels may be bodily rotated as a group and held to the wind.

5. A wind mill including a plurality of load driving wind wheels mounted to be rotated about axes individual thereto and to be bodily swung by the wind transversely with respect to the horizontal about an axis intervening between the individual axes of the wind wheels, the sails of the wind wheels being of such relative effective area that the action of the wind will preponderate upon the lower sails and cause the wind wheels to be bodily swung in opposition to the swinging force exerted by the wind upon the upper sails; and a mounting affording an additional axis of movement for the wind wheels and which is transverse to the horizontal and to the axes of rotation of the wind wheels, said wind wheels having effective sail areas substantially evenly distributed upon opposite sides of said additional axis whereby the wind wheels may be bodily rotated as a group and held to the wind.

[Claims 6 to 9 not printed in the Gazette.]

1,022,206. SPRAYING-MACHINE. WILLIAM O. QUEST, Pittsburgh, Pa. Filed Sept. 2, 1910. Serial No. 580,245. (Cl. 91—45.)



1. In a spraying machine, the combination of a portable tank, a spraying head comprising a casing inclosing a chamber and having a spraying nozzle, a pipe for connecting the chamber and the interior of the tank, and a fluid pressure connection to said chamber, said pipe and said connection being attached to the side of a tank substantially at its vertical center and serving as carrying handles therefor.

2. In a spraying machine, a spraying head comprising a casing inclosing a chamber having shoulders thereon, a nozzle connected to the casing and having a bell mouth in the chamber and a shoulder for engagement with the casing, a cap arranged to bear upon and clamp the nozzle to the casing an ejector nozzle projecting into the chamber and having a shoulder for engaging the casing, the respective shoulders on the nozzles and casing being so arranged as to properly position the ejector nozzle and bell mouth with reference to each other, the ejector nozzle being arranged for connection to a source of fluid pressure and the casing having an opening for the introduction of spraying material thereto.

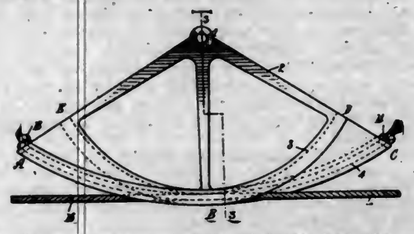
3. In a spraying machine the combination of a tank, a spraying head comprising a casing inclosing a chamber connected to said tank, a nozzle provided with a bell mouth projecting into said chamber, an ejector nozzle also projecting into said chamber into such proximity to the bell mouth as to leave a free space between its end and the end of said bell mouth, fluid pressure connections to said ejector nozzle, and engaging shoulders on the casing and respective nozzles to properly position the nozzle and bell mouth with reference to each other, and means for clamping the nozzles to the casing with said shoulders engaging.

4. In a spraying machine the combination of a tank provided with an inclined curved bottom having an outlet from its extreme lower portion, a spraying head comprising ejector members, a pipe connecting the outlet of the tank to said spraying head, a fluid pressure pipe also connected to said spraying head, a control valve in each of said pipes, and operating means for said valves, said pipes being attached to said tank above the outlet and forming a carrying handle therefor.

5. In a spraying machine the combination of a tank provided with a filling opening, a strainer in conjunction with said opening, a bottom for the tank sloping to an outlet opening at its extreme bottom, a spraying head comprising ejector members, a pipe connecting the outlet of the tank with said spraying head, a fluid pressure pipe also connected to said head, a control valve in each of said pipes, said pipes being attached to said tank above the outlet forming a carrying handle therefor, and means adjacent the pipes for operating said valves simultaneously.

[Claims 6 to 11 not printed in the Gazette.]

1,022,207. COMPENSATING STEERING-GEAR. EDWARD T. REICHERT, Jr., New York, N. Y. Filed Oct. 27, 1911. Serial No. 657,061. (Cl. 114—162.)



1. In an improvement of the kind described, the combination of a pair of sector sections having their radial sides unequal, said sector sections being superposed, with the short side of one coinciding with the long side of the other and being rigidly connected together, and a pair of tiller ropes secured to each of said sections adjacent the end of the longer side thereof.

2. In an improvement of the kind described, the combination of a pair of sector sections rigidly connected together, each of said sections having its radial sides unequal, and one section being superposed upon the other section, with the short side of one coinciding with the long side of the other, each of said sections having a groove in the side connecting the radial sides, and a tiller rope for each section received in said groove and secured to the section adjacent the end of the longer side of the section.

3. In an improvement of the kind described, the combination of a pair of sector sections rigidly connected together, the radial sides of said sections being unequal in length, said sections being superposed upon each other, with the shorter side of one coinciding with the longer side of the other, the extremities of the unequal radial sides of each section being united by a curved side, each of said curved sides having a groove formed therein, and a pair of tiller ropes, one received by each of said grooves and connected to the corresponding sector section at the end of the longer radial side thereof.

4. In an improvement of the kind described, a sector having a pair of converging radial sides and having means adjacent the point of intersection of said sides for mounting the said sector upon a shaft or post, and having a pair of grooves formed in the side joining the said radial sides and extending longitudinally of said last-named side, each of said grooves curving continuously from one end to the other and having one end thereof located nearer to the point of intersection of said radial sides than the other end.

5. In an improvement of the kind described, a sector having a pair of converging radial sides and having means adjacent the point of intersection of said sides for mounting said sector upon a shaft or post, and having a pair of grooves formed in the side connecting the radial sides together and extending longitudinally of said side, each of said grooves curving continuously from one end to the other and having one end nearer to the point of intersection of said radial sides than the other end, said grooves being so located with respect to each other that the end of one of said grooves which is nearer to the point of intersection of the radial sides will be adjacent the end of the other of said grooves which is farther from the intersection of said radial sides.

1,022,208. RATCHET-WRENCH. WILLIAM GEORGE RUSCOM, Stamford, Conn. Filed May 26, 1911. Serial No. 629,607. (Cl. 81—60.)

In a ratchet wrench having a handle, one end of which is formed into a relatively broad portion slotted transversely, a bracket extending from said handle attached to and parallel with said broadened portion, a wheel rotating in said slot and journaled between said broadened portion and said bracket, a ratchet rigidly affixed to said wheel, a pair of bolts disposed on opposite sides of the bracket, substantially T-shaped in cross-section and housed in said broadened portion, means maintaining one member of each



of said bolts in engagement with said ratchet, to prevent the same from rotating in one direction, said broadened portion having a channel therein, and means whereby said bolts may be rotated on the axis of the member engaging the ratchet, and seat in one channel to hold said member disengaged from said ratchet, said wheel having a series of differently sized nut-engaging recesses spaced about the periphery thereof.

1,022,209. EXTINGUISHER FOR LANTERNS. CARL T. SIEBERT, East Pittsburgh, Pa. Filed Dec. 26, 1911. Serial No. 667,655. (Cl. 67—77.)



1. In a lantern, a gravity oil receptacle adapted to lower the wick in the wick casing of the lantern when the lantern is accidentally tilted or upset, and means connected to said receptacle and extending to the top of the lantern whereby the receptacle can be retained in an elevated position when carried.

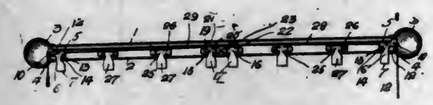
2. In a lantern having a frame, a gravity oil receptacle adapted to lower the wick within the wick casing of said lantern and snuff the flame of the wick, and means arranged within the frame of said lantern whereby said oil receptacle can be retained in an elevated position when the lantern is carried by the bail thereof.

3. In a lantern having a frame, a gravity oil receptacle adapted to descend by gravity and lower the wick of the lantern within the wick casing when said lantern is tilted or upset, arms connected to said receptacle and extending upwardly through the frame of said lantern, and a bail connected to the upper ends of said arms whereby said lantern can be carried with said receptacle in an elevated position.

1,022,210. CURTAIN-POLE. JOHN THIB, Dexter, N. Y. Filed Dec. 29, 1911. Serial No. 668,550. (Cl. 156—20.)

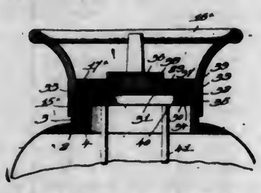
A curtain pole comprising a hollow rod having a longitudinal slot formed therein, hollow heads carried by the

ends of said rod and provided with openings, stationary carrier frames arranged in the ends of said rod, pulleys revolubly mounted in said stationary carrier frames, movable carrier frames 15 and 16 arranged intermediate the ends of said rods, carrier frames arranged within said rods between said stationary carrier frames and said movable carrier frames, hangers carried by all of said carrier



frames and extending through the slot of said rod and adapted to support the upper ends of curtains, cords having the ends thereof attached to said carrier frame 16 and extending over said pulleys with the opposite ends of said cord extending through the openings of said hollow head and means for attaching the carrier frame 15 to said cords, whereby when said cords are pulled said carrier frames 15 and 16 can be shifted back and forth in said rod.

1,022,211. FIRE-EXTINGUISHER. JESSE B. THOMAS, Boston, Mass. Filed Dec. 23, 1911. Serial No. 667,462. (Cl. 220—124.)



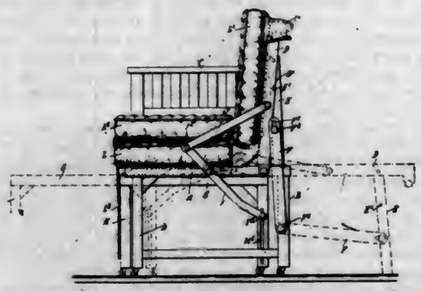
1. In a fire-extinguisher, a canister having a tubular neck, an imperforate cover, a cylindrical cap having threaded engagement with and projecting beyond the neck around the edge of said cover and provided with an inturned annular portion to directly engage the exterior of the cover adjacent its periphery and above the neck to force the cover toward the neck into position to close the canister, a central projection on the outer face of the cover extended loosely through the said annular portion of the cap, and a connecting member fixedly mounted on said cover projection and extended laterally to overhang the annular cover-depressing portion of the cap, the cap and cover being freely rotatable relatively to each other.

2. In a fire-extinguisher, a canister having an open tubular end, an imperforate cover to close it, a cylindrical cap adapted for screw-threaded engagement with and projecting beyond the open end of the canister around the cover and having an integral, annular cover-seating portion to engage the exterior of the cover adjacent the periphery thereof and force the cover into position to close the open end of the canister, and a ring-like connecting member fixedly attached to the cover externally and centrally thereof and extended laterally to overhang the cover-seating portion of the cap, leaving a clearance therebetween, whereby said cap and cover are permanently connected while free rotative and limited axial movements of said parts are permitted.

3. In a fire-extinguisher, a canister having a neck, an imperforate cover, a cap coöperating with the neck and extended beyond it around the cover and having an inturned, centrally open and integral top overhanging and adapted to engage directly the outer face of the cover, adjacent its periphery and above the neck of the canister, to force the cover toward the neck into closing position to seal the canister, a central projection on the cover extended loosely through the open top of the cap and threaded above said top, and a connecting member fixedly mounted upon the threaded part of the cover projection and overhanging the adjacent part of the cap top, with a clearance between, whereby said cap and cover are permanently connected while free relative rotative and limited relative axial movements of said parts are permitted.

4. In a fire-extinguisher, a canister having a tubular neck, an imperforate cover, having a lateral peripheral flange provided with an upturned annular rib, a packing ring interposed between the flange of the cover and the outer end of the neck, a cylindrical cap coöperating with and extending beyond the neck around the flange of the cover and having an inturned annular portion overhanging and adapted to engage directly and externally the annular rib on the cover and thereby force said packing ring into sealing engagement with the end of the canister neck, and a connecting member permanently connected with the cover centrally thereof adjacent its outer face and projecting laterally over said annular portion of the cap, leaving a clearance therebetween, whereby the cap and cover are connected permanently while free relative rotative and limited relative axial movements of said parts are permitted.

1,022,212. CONVERTIBLE BED AND DIVAN. WILLIAM THOMPSON, New York, N. Y. Filed Oct. 21, 1911. Serial No. 655,891. (Cl. 5—46.)



1. A convertible bed and divan, comprising a middle bed section and two end bed sections, of which the middle section forms the seat of the divan, one of the said end bed sections being pivoted on the said middle bed section to swing upward for forming the back of the divan, and the other end bed section being mounted to slide forward into extended position for a bed and backward under the middle section when forming a divan, and means connecting the said sections with each other for swinging the said swing bed section upward and simultaneously sliding the other sliding bed section inward or for swinging the said swing bed section downward and simultaneously sliding the sliding bed section outward into extended position.

2. A convertible bed and divan, comprising a middle bed section and two end bed sections, of which the middle section forms the seat of the divan, one of the said end bed sections being pivoted on the said middle bed section to swing upward for forming the back of the divan and the other end bed section being mounted to slide forward into extended position for a bed and backward under the middle section when forming a divan, and a lever pivoted on the said middle bed section and pivotally connected at one end with the said swinging bed section and pivotally and slidingly connected at its other end with the said sliding bed section.

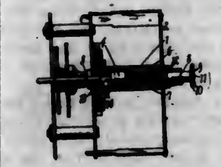
3. A convertible bed and divan, comprising a middle bed section and two end bed sections, of which the middle section is adapted to form the seat of the divan, one of the said end bed sections being pivoted on the said middle bed section to swing upward for forming the back of the divan, and the other end bed section being mounted to slide forward into extended position for a bed and backward under the middle section when forming a divan, the said sliding bed section being provided at the rear with vertical guideways, and a lever pivoted on the said middle bed section and pivotally and slidingly connected with the said guideways of the sliding bed section.

4. A convertible bed and divan, comprising a middle bed section and two end bed sections, of which the middle section is adapted to form the seat of the divan, one of the said end bed sections being pivoted on the said middle bed section to swing upward for forming the back of the divan and the other end bed section being mounted to slide forward into extended position for a bed and backward under the middle section when forming a divan, means connecting the said sections with each other for swinging the said swing bed section upward and simultaneously sliding the other sliding bed section inward or for swinging the said swing bed section downward and simultaneously sliding bed section outward into extended position, and a leg for the said swinging bed section and pivotally connected therewith, the leg being adapted to be seated on the rear of the middle bed frame section to form a brace for the swinging bed section when the latter is folded and forms the back for the divan.

5. A convertible bed and divan, comprising a middle bed section and two end bed sections, of which the middle section is adapted to form the seat of the divan, one of the said end bed sections being pivoted on the said middle bed section to swing upward for forming the back of the divan, and the other end bed section being mounted to slide forward into extended position for a bed, and backward under the middle section when forming a divan, means connecting the said sections with each other for swinging the said swing bed section upward and simultaneously sliding the other sliding bed section inward or for swinging the said swing bed section downward and simultaneously sliding the sliding bed section outward into extended position, a leg for the said swinging bed section and pivotally connected therewith, the leg being adapted to be seated on the rear of the middle bed frame section to form a brace for the swinging bed section when the latter is folded and forms the back for the divan, and a link pivoted to middle bed frame section and having a sliding and pivotal connection with the leg.

[Claim 6 not printed in the Gazette.]

1,022,213. CLOCK. HOWARD J. TERRANZA, New York, N. Y., assignor to The Ansonia Clock Company, New York, N. Y., a Corporation of Connecticut. Filed June 4, 1910. Serial No. 564,996. (Cl. 58—46.)

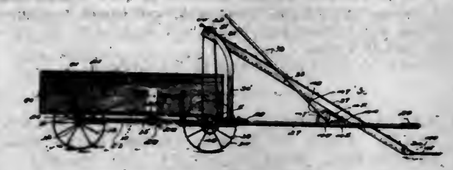


1. In a clock, the combination with the central shaft or arbor and the winding arbor provided with a bore having an enlarged portion, of a set stem mounted in the bore of the winding arbor to move toward and away from the central shaft or arbor and provided with a collet fixed thereon within the enlarged portion of the said bore to limit the movement of the set stem in a direction away from the central shaft or arbor and a spring for normally holding the set stem away from the central shaft or arbor.

2. In a clock, the combination with the central shaft or arbor and the winding arbor provided with a bore having enlarged portions separated by a contracted portion, of a longitudinally sliding set stem mounted in the contracted portion of the bore and provided with collets thereon located in the enlarged portions of the bore and a spring located intermediate of one of the collets and the contracted portion of the bore for holding the set stem normally away from the central shaft or arbor.

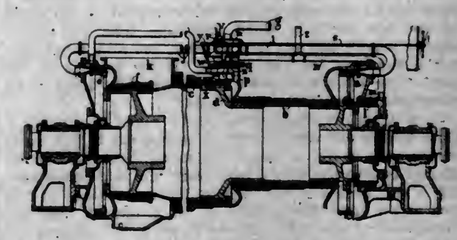
1,022,214. MACHINE FOR LOADING GRAIN-SHOCKS. MERTON E. WEEKS, Lake Benton, Minn. Filed June 13, 1911. Serial No. 632,977. (Cl. 56—61.)

1. A shock loader comprising a vehicle provided with a body, a supporting frame projecting from the forward end thereof, standards carried by said frame and having rearwardly curved upper ends which overhang said body, a conveyer frame pivotally connected to the overhanging end of said standards and having its free portion extending through said supporting frame, means carried by the supporting frame for adjusting the free portion of the conveyer frame, said adjusting means comprising slotted guide plates carried by the under-surface of the conveyer frame, an adjusting rod extending through said plates and provided with a hand crank, and a hand lever pivotally mounted on the frame and fastened to said crank, a conveyer carried by the conveyer frame, and means actuated by said vehicle for operating the conveyer.



2. A loader comprising a vehicle including a body, a supporting frame projecting from the forward end thereof and including spaced parallel horizontal bars, standards carried by said bars, a conveyer frame formed of parallel beams having their upper ends pivotally connected to said standards, slotted guide plates carried by the undersurface of said beams, an adjusting rod extending through said plates and provided with an end crank, a hand lever carried by one of said bars and fastened to said crank, rollers carried by said rod and engaging the edges of the slotted portions of said plates, a conveyer in the conveyer frame, and means for operating said conveyer.

1,022,215. COMBINED AHEAD AND ASTERN TURBINE. HERBERT WHEATLEY RIDSDALE, London, and STANLEY SMITH COOK, Wallsend, England, assignors to Charles Algernon Parsons, Newcastle-upon-Tyne, England. Filed July 28, 1911. Serial No. 641,050. (Cl. 121—58.)



1. In a turbine having ahead and astern turbine parts, a single balancing piston, connecting means by which one side of said piston is subjected to the pressure in a stage of either turbine part when in action, and means for supplying said stage with additional working fluid which passes thereto through the existing connecting means.

2. In a turbine having ahead and astern turbine parts, a single balancing piston, external pipe means placing one side of the piston in communication with a stage of the turbine part in action, and means for supplying said stage with additional working fluid which passes thereto through the existing pipe means.

3. In a turbine having ahead and astern turbine parts, a single balancing piston, external pipe means adapted to place automatically one side of said piston in communication with a stage of the turbine part in action, and means for supplying said stage with additional working fluid which passes thereto through the existing pipe means.

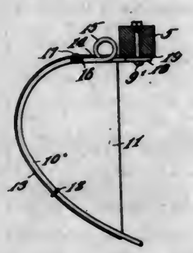
4. In a turbine having ahead and astern turbine parts, a single balancing piston, external pipe means capable of placing a stage of either turbine part in communication with one side of the balancing piston, valve controlling means situated in the pipe means and adapted to place

said piston in communication with the turbine part in action, and means whereby a stage of the active turbine part is supplied with additional working fluid which passes thereto through the existing pipe means.

5. In a turbine having ahead and astern turbine parts, a single balancing piston, external pipe means adapted to place a stage of either turbine part in communication with one side of the balancing piston, valve controlling means situated in the pipe means and adapted to place the piston in communication with the turbine part in action, and means placed between said valve means and the piston, whereby additional working fluid can be passed through the existing pipe means and supplied to the turbine part in action.

[Claims 6 to 10 not printed in the Gazette.]

1,022,216. SHIELD ATTACHMENT FOR SULKY-RAKES. JAMES M. WILSON, Atlanta, Kans. Filed Nov. 28, 1911. Serial No. 662,878. (Cl. 56—67.)



1. A shield attachment for sulky rakes comprising a plate having one edge curved to correspond to the curve of the rake teeth, a flange projecting from the said curved edge to receive one of the rake teeth, and means for securing the flange to the said tooth.

2. A shield attachment for sulky rakes comprising a plate having one edge curved to correspond to the curve of the rake teeth, a flange projecting from the curved edge to receive one of the rake teeth, the said flange having a slot near one end thereof for the passage of the loop of the tooth and means for securing the tooth at an intermediate portion of the flange.

3. A shield attachment for sulky rakes comprising a plate having one edge curved to correspond to the curve of the rake teeth, a flange projecting from the curved edge to receive one of the rake teeth, the said flange having a slot near one end thereof for the passage of the loop of the tooth and having an ear projecting from the corresponding end to be clamped between the axle and the end of the tooth and means for securing the tooth at an intermediate portion to the flange.

4. The combination with a sulky rake including a wheel mounted axle, and teeth bolted to the underside of the axle and having loops; of shield attachments comprising plates having one of their edges curved to correspond to the rake teeth and flanges projecting from the said curved edges to receive the end teeth, the said flanges having slots near their upper ends through which the loops of the end teeth project and having ears projecting from the upper ends thereof and clamped between the axle and the ends of the end teeth, the end teeth being secured to the flanges at an intermediate portion, and braces attached to the said flanges and to the said axle.

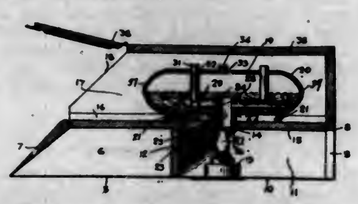
1,022,217. GARTER. EDWARD BLOUNT WINTERS, Coffeyville, Kans. Filed Apr. 4, 1911. Serial No. 618,806. (Cl. 241—6.)

A garter comprising a non-resilient leg band, a resilient member made of a single length of wire and having hooked ends adapted for engagement with the ends of the said leg band, a rest adapted to bear against the leg when the garter is in use, the lower end of the rest being turned back on itself, a clasp engaging the said turned back portion of the rest, the intermediate portion of the said resilient member also engaging the said turned back portion, and means for securing the turned back portion



to the rest, whereby the said resilient member and clasp will be secured to the rest, the resilient member being held from contact with the leg by reason of the rest.

1,022,218. CHICKEN-BROODER. WALLACE ORLANDO WITHAM, Salem, Oreg. Filed Jan. 5, 1911. Serial No. 600,918. (Cl. 237—23.)

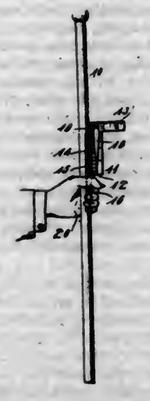


1. In a chicken brooder a heater having a side wall curved in cross section downward and inward, a flange depending from the heater, spaced from the periphery of the heater, the flange permitting the chickens to get their backs up against the side wall of the heater, while preventing the chickens from walking under the heater in such a manner as to heat their heads.

2. In a chicken brooder a housing, a heater disposed in the housing and having a top with openings and a side wall converging downwardly, a supporting flange depending from the heater, spaced from the vertical plane of the periphery of the heater, the flange permitting the chickens to get their backs up against the side wall of the heater while preventing the chickens from walking under the heater and thereby heating their heads, a depending annular water chamber disposed within the flange and in communication with the heater, the inner wall of said water chamber extending upwardly into the heater and having openings in the upper portion thereof and a closure for its top, said water chamber depending below the horizontal plane at the bottom of the flange, and being adapted to be disposed in the housing to prevent the lateral displacement of the heater, and flues in the heater connected with the openings in the inner wall of the water chamber, the flues extending through the openings in the top of the heater.

3. In a chicken brooder a housing, a heater disposed in the housing and having a top with openings and a side wall, a supporting flange depending from the heater, a depending annular chamber disposed within the flange and in communication with the heater, the inner wall of the said chamber extending upwardly into the heater and having openings in the upper portion thereof and a closure for its top, said chamber depending below the horizontal plane at the bottom of the flange, and being adapted to be disposed in the housing to prevent the lateral displacement of the heater, and tubes in the heater connected with the openings in the inner wall of the chamber, the tubes extending through the openings in the top of the heater.

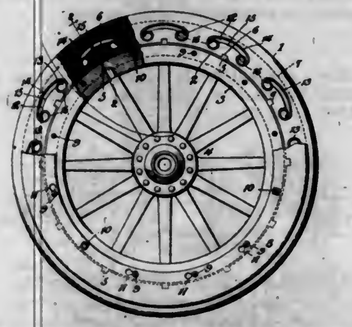
1,022,219. TOOL OR INSTRUMENT FOR RITUALISTIC PURPOSES. BRIAH TAYLOR WOODS, Sr., Sheldon, Iowa. Filed Oct. 2, 1911. Serial No. 652,867. (Cl. 73—150.)



1. A square or like instrument provided with a stem and a trough-like plate longitudinally secured to said stem and projecting beyond the end thereof.

2. A square, in combination with a compass, consisting of separate legs, pivotally attached to each other and to the square, the square being provided with a trough-shaped bar longitudinally secured to its stem and projecting beyond the end thereof.

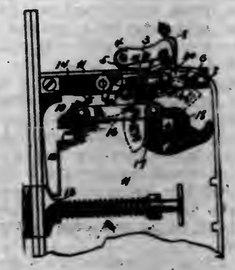
1,022,220. RESILIENT TIRE. GIDEON S. ADAMS, Seaville, N. J., assignor, by direct and mesne assignments, to Eureka Double Resilient Tire Mfg. Co., Camden, N. J. Filed Apr. 6, 1911. Serial No. 619,431. (Cl. 152—8.)



1. The combination of a solid elastic tire provided with an annular series of curved longitudinal slots spaced apart at their ends and separated by intervals of solid portions extending from the inner edge of the tire to the tread thereof, said slots forming outer highly resilient portions, inner projecting cushioning seats located intermediate of the ends of the slots, and curved springs mounted in the slots and bearing against the outer wall thereof and having terminal coils located at the opposite ends of the seats.

2. The combination of a solid elastic tire provided with an annular series of curved longitudinal slots spaced apart at their ends and separated by intervals of solid portions extending from the inner edge of the tire to the tread thereof, said slots forming outer highly resilient portions, inner projecting cushioning seats terminating short of the ends of the slots, and curved springs mounted in the slots and bearing against the outer walls thereof and having terminal coils located at the opposite ends of the seats, the outer portions of the coils being approximately in the plane of the end portions of the seats and the central portions of the seats projecting outward beyond the plane of the coils, whereby the latter are prevented from being crushed when the tire is subjected to excessive strain and the outer walls of the slots are compressed against the cushioning seats.

1,022,221. INDICATOR FOR LOCKS. PETER F. AUGENBRAUN, Stamford, Conn., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Filed May 23, 1911. Serial No. 629,047. (Cl. 70—6.)



1. In a lock, the combination with an escutcheon having a slot therein, of an indicator mounted to slide over the outer face of said escutcheon, and a lever pivoted to the inner face of said escutcheon and carrying the indicator, the said lever coöperating with means adapted to be engaged by a movable part of the lock whereby the indicator will be locked against movement.

2. In a lock, the combination with an escutcheon having a slot therein, of an indicator mounted to have a sliding movement over the outer face of said escutcheon, a lever pivoted to the inner face of the scutcheon and carrying said indicator, a lock having a movable member and means coöperating with said pivoted lever and movable member of the lock whereby when said movable member of the lock is manually moved in one direction it will engage a part of said coöperating means and lock the indicator against movement.

3. In a lock, the combination of an escutcheon having a slot therein, an indicator mounted to slide on the outer face of same, a bell crank lever pivoted to the inner face of said escutcheon and connected with the indicator, a lock having a movable member and a post interposed between the indicator and said movable member of the lock, and coöperating with both, whereby the post will be locked against movement and the indicator blocked, when the movable member of the lock is in one position.

4. In a lock, the combination of an escutcheon having a slot therein, an indicator mounted to slide on the outer face of same, a bell crank pivoted to the inner face of said escutcheon and connected to the indicator, a lock having a sliding element, a slide carried by the escutcheon and adapted when in one position to lock the bell crank against movement and a post carried by the slide on the escutcheon and adapted to be engaged and moved by the sliding element of the lock.

5. In a lock, the combination of an escutcheon having a slot therein, an indicator mounted to slide thereon, a spring actuated bell crank lever pivoted to the inner face of the escutcheon and connected to the indicator, a lock having a sliding element, a side carried on the inner face of the escutcheon and actuated in one direction by a spring, and provided with a recess into which the free end of the bell crank lever may be moved when said slide is in one position, and a post carried by the slide on the escutcheon and adapted to be engaged and moved by the sliding element of the lock.

1,022,222. STRIKE-PLATE FOR DOOR-LOCKS. PETER F. AUGENBRAUN, Stamford, Conn., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Filed Dec. 18, 1911. Serial No. 666,476. (Cl. 70—15.)



1. As a new article of manufacture, a strike plate for locks having a recess, a depressed seat at the front of the recess, the said seat being serrated on its outer face, and a movable keeper plate adjustably secured on said serrated seat.

2. As a new article of manufacture, a strike plate for locks having a recess, shoulders and a depressed seat in front of said recess and projecting at the front of the plate, and a movable keeper plate resting on said seat and supported at its rear by the shoulders on the strike plate.

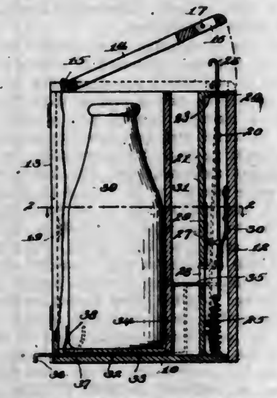
3. As a new article of manufacture, a strike plate having a recess, shoulders and a depressed seat in front of said recess, and a keeper plate adjustably secured on said seat and supported at its rear edge by the shoulders on the strike plate.

4. As a new article of manufacture, a strike plate having a recess for the bolt head, a depressed seat at the front of said recess and projecting in front of the strike plate and a keeper movably secured to said seat and adapted to be projected over the front edge of the recess in the strike plate.

5. As a new article of manufacture, a strike plate having a recess, a depressed seat in front of said recess and projecting in front of the strike plate, and a keeper adjustably secured on said seat, the outer face of said keeper being flush with the outer face of the strike plate.

[Claims 6 to 8 not printed in the Gazette.]

1,022,223. MILK-BOTTLE HOLDER. JOSEPH I. BANTOM, Chicago, Ill. Filed Dec. 26, 1911. Serial No. 667,639. (Cl. 232—41.)



1. The combination with a stationary receptacle carrying a closure and a lock therefor; of a second closure carried by the receptacle, a latch in the receptacle for the second closure, a keeper on said second closure for said latch, a sliding member in the receptacle and operable from the outside thereof for releasing the latch, and an abutment on said member and in the receptacle, between which the article to be held in the receptacle is adapted to be placed to lock the member.

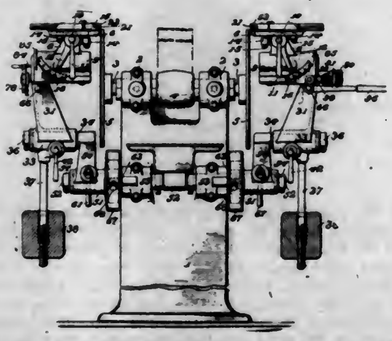
2. The combination with a stationary receptacle carrying a closure and a lock therefor; of a second closure carried by the receptacle, a latch in the receptacle for the second closure, a keeper on said second closure for said latch, means for holding the latch in retracted position, means in the receptacle and operable from the outside thereof for releasing the latch, means controlled by the contents of the receptacle for locking the releasing means, and means for shooting the latch forward.

3. The combination with a stationary receptacle carrying a closure and a lock therefor; of a second closure for the receptacle, a latch in the receptacle for the second closure, a keeper on said second closure for said latch, means for holding the latch in retracted position, a sliding member in the receptacle and operable from the outside thereof for releasing the latch, an abutment on said member and in the receptacle, between which the article to be held in the receptacle is adapted to be placed to lock the member, and means for shooting the latch forward.

4. The combination with a receptacle having a closure and a lock therefor; of a second closure for the receptacle, a sliding and laterally movable latch for the second closure, a keeper for the latch, a lateral arm on the latch, a slotted wall in the receptacle into the slot of which the arm is adapted to pass when the latch is retracted, resilient means engageable with the latch for moving the same laterally to place the arm into the slot, means for moving the latch in a direction to withdraw the arm from the slot, means controlled by the contents of the receptacle for locking the last-mentioned means, and means for shooting the latch forward.

5. The combination with a receptacle having a closure and a lock therefor; of a second closure for the receptacle, a sliding and laterally movable latch for the second closure, a keeper for the latch, a lateral arm on the latch, a slotted wall in the receptacle into the slot of which the arm is adapted to pass when the latch is retracted, resilient means engageable with the latch for moving the same laterally to place the arm into the slot, a sliding member for moving the latch in a direction to withdraw the arm from the slot, an abutment on said member and in the receptacle, between which the article to be held in the receptacle is adapted to be placed to lock the member, and means for shooting the latch forward.

1,022,224. GRINDING-MACHINE. CHARLES R. CARPENTER, Racine, Wis. Filed Dec. 14, 1909. Serial No. 533,001. (Cl. 51—12.)



1. In a grinding machine, in combination, a work table having an ear, a table feed carriage having an upwardly projecting ear, a table clamping and pivot bolt passing transversely through said ears and at one end provided with a depending bolt-rotating handle, and a pointer depending beside said carriage and at its upper end having a hub centered on said bolt, and means for confining the pointer to oscillation on said bolt with the table to indicate the angle of inclination of the table, said carriage having a raised portion at the side thereof and along which the free end of said pointer moves, said raised portion having a table-angle-indicating scale.

2. A grinding machine having counter-balanced work-table supporting and controlling means comprising a supporting fulcrum provided with and carried by a counterbalanced radial arm having a hub turnable on a fixed center to raise and lower said fulcrum and the work table, said hub provided with clamping means for locking said arm in the desired adjustment.

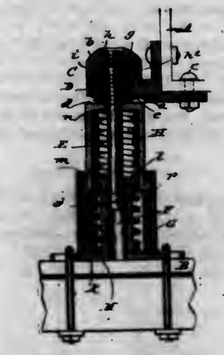
3. A work table having supporting and controlling means comprising a supporting stud, a vertically movable radial arm carrying the same and provided with a hub, a supporting shaft on which said hub is turnable, a table-carrying rocker arm fulcrumed to said radial arm and counterbalancing means to counterbalance the weight of the table and supporting means carried by said stud.

4. A work table having supporting and controlling means comprising a vertically movable radial supporting arm provided with a hub turnable about a fixed center, a vertically-rockable table support fulcrumed to the free end of said arm, means for clamping said hub against rotation, and counter-balancing means acting on said hub to balance the load carried by said arm.

5. A work table having supporting and controlling means comprising a radial supporting arm swingable vertically about a fixed center for moving the table vertically, counterbalancing means for balancing the load supported by said arm, a table-carrying rocker arm mounted on the free end of said radial arm to swing thereon about an axis parallel with said fixed center, and means whereby said arm can be locked in any position within its range of swinging movement.

[Claims 6 to 54 not printed in the Gazette.]

1,022,225. CUSHIONING DEVICE. AIME CHABOT, Jr., Spratt, Mich. Filed July 5, 1911. Serial No. 636,840. (Cl. 21—105.)



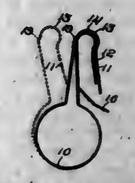
1. A cushioning device, comprising a fixed casing having an inwardly directed flange, a cylinder movable in said casing and having a flange fitting and guided therein and also having an aperture in its upper end, a plunger extending loosely through said aperture in the movable cylinder and having an enlargement at its lower end movable in the cylinder and also having its upper portion threaded and provided with a key-way, a movable casing guided in the fixed casing and having an outwardly-directed flange fitting within the same and also having an aperture in its top loosely receiving the said plunger, a coil spring inclosed in the casings and surrounding the movable cylinder and plunger and interposed between the flange of the cylinder and the top of the movable casing, a ball having a threaded bore receiving the threaded portion of the plunger and also having a key-way, a key disposed in the registered ways of the plunger and ball, a boxing section superposed on the movable casing and loosely receiving the plunger, said boxing section having a seat in its upper side shaped in conformity to and receiving the ball, and a second boxing section shaped in conformity to and connected to the first-named section and having an aperture to receive the plunger and also having a seat in its underside shaped in conformity to and receiving the ball.

2. A cushioning device, comprising a fixed casing having an inwardly directed flange, a cylinder movable in said casing and having a flange fitting and guided therein and also having an aperture in its upper end, a plunger extending loosely through said aperture in the movable cylinder and having an enlargement at its lower end movable in the cylinder and adapted at its upper end for connection with a device that is to be supported, a movable casing guided in the fixed casing and having an outwardly-directed flange fitting within the same and also having an aperture in its top loosely receiving the said plunger, and a coil spring inclosed in the casings and surrounding the movable cylinder and plunger and interposed between the flange of the cylinder and the top of the movable casing.

3. A cushioning device comprising a fixed casing, a casing movable relative to the fixed casing and extending upward beyond the same for arrangement under a device that is to be supported, a plunger movable independently of the casings, means in the fixed casing movable independently of the same and the plunger, and a coil spring surrounding the plunger and inclosed in the casings and interposed between the said means and the movable casing.

4. A cushioning device comprising a fixed casing, a casing movable relative to the fixed casing and extending upward beyond the same for arrangement under a device that is to be supported, a plunger movable independently of the casings and having an enlargement on its lower portion, a cylinder movable in the casings and receiving and adapted to be moved vertically by the enlargement of the plunger and having an abutment, and a coil spring surrounding the plunger and the cylinder and inclosed in the casings and interposed between the abutment of the cylinder and the movable casing.

1,022,226. CABLE-HANGER. JOHN DAVIS, Aurora, Ill. Filed Apr. 17, 1911. Serial No. 621,602. (Cl. 248—33.)



1. An integral cable hanger consisting of a band of metal bent at its center into an inclosing loop for closely engaging the cable and having its ends bent into nesting inner and outer hooks, the outer hook having an opening in its shank and the inner hook having a contracted end adapted to pass through said opening to bring said hooks into nesting relation.

2. An integral cable hanger consisting of a band of metal bent at its center into an inclosing loop for closely engaging the cable and having its extended ends bent into hooks, the one passing through an opening in the other and adapted to nest with it, and a tongue extending from one end of said opening and adapted to be bent over one of said hooks to lock the parts.

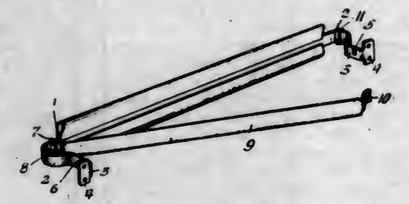
3. An integral cable hanger consisting of a band of metal bent at its center into an inclosing loop for closely engaging the cable and having its extended ends bent back upon themselves to form hooks to engage the support, said hooks having at their bends substantially the same radius of curvature and one of said hooks having an elongated opening between its bend and said loop and the other of said hooks being narrowed from the corresponding point in its length outward to its end, whereby it may be passed through said opening and nest with the other hook and the two hooks thereby locked together.

4. An integral cable hanger consisting of a band of metal bent at its center into an inclosing loop for closely engaging the cable and having its extended ends bent back upon themselves to form hooks to engage the support, said hooks having at their bends substantially the same radius of curvature and one of said hooks having an elongated opening between its bend and said loop and the other of said hooks being narrowed from the corresponding point in its length outward to its end, whereby it may be passed through said opening and nest with the other hook and the two hooks thereby locked together, and a tongue extending from one end of said opening and adapted to be bent over one of said hooks to further lock the parts.

5. An integral cable hanger consisting of a band of metal bent at its center into an inclosing loop for closely engaging the cable and having its extended ends formed into interlocking hooks, the bend in one hook extending through an opening in the other and fitting snugly within the bend in the other to lock the parts when in nested position.

[Claim 6 not printed in the Gazette.]

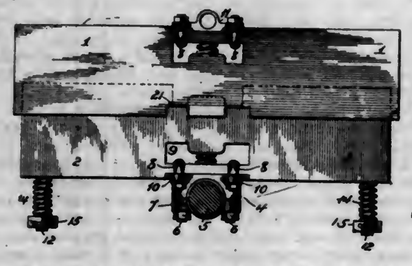
1,022,227. CURTAIN-FIXTURE. JOHN H. DEITZ, Allenport, Pa. Filed Nov. 10, 1911. Serial No. 659,647. (Cl. 156—19.)



1. A curtain fixture comprising a plate having the ends thereof reduced to provide straps and integral brackets, links carried by said straps and a bar pivotally connected to one of said links and adapted to be held by the other of said links in parallelism with said plate.

2. A curtain fixture comprising a plate having the longitudinal edges thereof bent into proximity to each other, said plate having the ends thereof reduced to provide curved straps and integral brackets adapted to support the pintles of a curtain shade roller, links carried by said straps and a bar pivotally connected to one of said links and adapted to be held by the other of said links in parallelism with the bent edges of said plate, said bar having the longitudinal edges thereof bent into proximity to each other to confront the longitudinal bent edges of said plate.

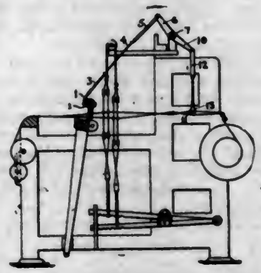
1,022,228. VEHICLE-SPRING. RICHARD JAMES EDWARDS, Galena, Ill. Filed Sept. 9, 1911. Serial No. 648,565. (Cl. 21—50.)



1. A spring for vehicles comprising a two part telescoping casing, the upper section of said casing being recessed at its top and the lower section recessed in its bottom, a bracket seated in the top recess, an axle bearing seated in the lower recess, clips passing through openings in the sides of said sections of the casing and engaging said bracket and bearing for locking same to their respective sections, and springs located within said two part casing and tending to separate the sections thereof.

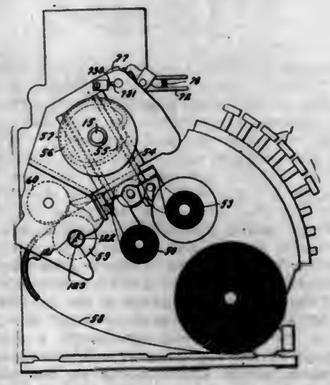
2. A spring for vehicles comprising a two part telescoping casing, clips passing through openings in the sides of each section of the casing and spanning the top and bottom members respectively of said sections for securing the top section to a vehicle and the lower section to an axle, a plurality of springs within said casing tending to hold the sections against collapsing and a plurality of independent springs also within the casing tending to prevent a separation of the said sections.

1,022,229. MECHANISM FOR PUTTING COVER ON CLOTH IN LOOMS FOR WEAVING. NATHANIEL FISH and HENRY HODGKINSON, Darwen, England. Filed Oct. 21, 1909. Serial No. 523,915. (Cl. 139—18.)



A device for putting cover on cloth which comprises, in combination with the hand rail and the back lease rod of the loom, a horizontal rock shaft supported at the top of the loom and provided with oppositely projecting arms, link connections between the hand rail and an arm at one side of the rock shaft whereby the shaft is positively rocked at the moment of beat up and link connections between the back lease rod and the arms at the opposite side of the rock shaft whereby the back lease rod is perpendicularly lifted when the shaft is rocked in the manner and at the time aforesaid.

1,022,230. TOTAL-PRINTING CASH-REGISTER. FREDERICK L. FULLER, Dayton, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (incorporated in 1906.) Filed June 6, 1910. Serial No. 565,390. (Cl. 235—3.)



1. In an accounting machine, the combination with a set of type carriers for recording items upon a record strip, of a second set of type carriers for recording the total of the items upon said strip, operating means common to both sets of type carriers, means for bodily moving the total type carriers into and out of recording position and means for causing relative movement between the type carriers and the record strip.

2. In an accounting machine, the combination with a set of type carriers for recording items upon a record strip, of a second set of type carriers for recording the total of the items upon said strip, a frame supporting the record strip, means for moving the frame thereby carrying the strip to receive impressions from the type carriers, and means for bodily moving the type carriers into and out of recording position.

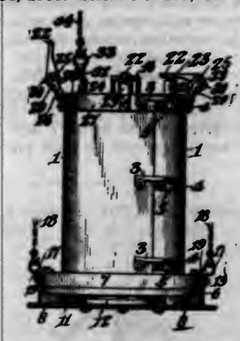
3. In an accounting machine, the combination with a set of type carriers for recording items upon a record strip, of a second set of type carriers for recording the total of the items upon said strip in a column separate from the items, operating means common to both sets of type carriers, a frame supporting the record strip, means for moving the frame thereby carrying the strip to receive impressions from the type carriers, and means for bodily moving the type carriers into and out of recording position.

4. In an accounting machine, the combination with a set of type carriers for recording items upon a record strip, of a second set of type carriers for recording the total of the items upon said strip in a column separate from the items, operating means common to both sets of type carriers, a frame supporting the total type carriers, a lever for moving the frame thereby carrying the total type carriers into and out of recording position and means for causing relative movement between the type carriers and the record strip.

5. In an accounting machine, the combination with a set of type carriers for recording items upon a record strip, of a second set of type carriers for recording the total of said items upon said strip, a frame supporting said strip, means for moving the frame thereby taking impressions upon the strip from the type carriers, and means for moving the total type carriers into and out of recording position.

[Claims 6 to 30 not printed in the Gazette.]

1,022,231. MOLD FOR BASES FOR TELEPHONE AND OTHER POLES. JOHN A. GAREY, Mound City, Mo. Filed Feb. 24, 1909. Serial No. 479,753. (Cl. 25—127.)



A mold for making articles with reinforcing tubes or rods, including a core, a bottom, an outer shell provided at the top with a bracing member hinged at its outer end and provided at its inner end with means for holding a rod or tube, said bracing member being also provided at its hinged end with a projection, and a spring having a bend forming a recess for engaging the said projection.

1,022,232. VALVE-GEAR. JOHN HENRY GENTRY, Greentown, Ind. Filed Jan. 11, 1912. Serial No. 670,694. (Cl. 121—97.)

1. In a valve gear, the combination with a valve rod, and a horizontal reciprocatory eccentric rod, of an inverted reverse link pivoted at its upper end and extending below the plane of the eccentric rod, an inverted radius link pivotally connected at its lower end to the lower end of the reverse link and at its upper end with the said eccentric rod and located below the plane of the same, said eccentric rod being provided with an extension projection beyond the radius link, a rocker arm, an upright link connecting the rocker arm with the extension of the eccentric rod, and means for transmitting motion from the rocker arm to the valve rod.



2. In a valve gear, the combination with a valve rod, and a horizontal reciprocatory eccentric rod, of an inverted reverse link pivoted at its upper end and extending below the plane of the eccentric rod, an inverted radius link pivotally connected at its lower end to the lower end of the reverse link and at its upper end with the said eccentric rod and located below the plane of the same, said eccentric rod being provided with an extension projecting beyond the radius link, a bell crank having one of its arms connected with the valve rod, and an upright link connected at one end to the other arm of the bell crank and having its other end adjustably connected to the extension of the eccentric rod.

3. In a valve gear, the combination with a valve rod, and a horizontal reciprocatory eccentric rod disposed longitudinally of the engine, of an inverted reverse link located at one side of the frame of the engine and pivoted at its upper end and extending below the eccentric rod, an inverted radius link located below the plane of the eccentric rod and pivoted at its lower end to the reverse link and connected at its upper end to the eccentric rod, the latter being provided with an extension projecting beyond the radius link, a bell crank extending beneath the frame of the engine and provided at one side of the same with an upwardly extending rocker arm connected with the valve rod, said bell crank having a horizontal rocker arm located at the opposite side of the engine frame and extending to a point below the extension of the eccentric rod, and an upright link connecting the horizontal rocker arm with the extension of the eccentric rod.

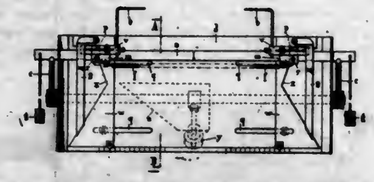
4. In a valve gear, the combination with a valve rod, and a reciprocatory eccentric rod, of a reverse link pivoted in approximately the plane of the eccentric rod and arranged substantially at right angles to the same, a radius link pivotally connected at one end to the reverse link and at its other end to the eccentric rod at a point intermediate of the ends of the same, the eccentric rod being extended past the radius link, a connecting link pivotally connected to the extension of the eccentric rod and extending from the same side of the same as the reverse and radius links, and means for transmitting motion from the connecting link to the valve rod.

1,022,233. AUTOMATIC TAKE-UP DEVICE FOR FLAT-KNITTING MACHINES. CARL GOEBEL, Mülhausen, Germany, assignor to Class & Flentje Gesellschaft mit beschränkter Haftung, Mülhausen, Germany, a Corporation of Germany. Filed July 6, 1911. Serial No. 637,071. (Cl. 66—9.)

1. An automatic take up device for knitting machines comprising in combination a bar arranged transversely to the direction of delivery of the fabric, a take up hook slidably mounted thereon, automatic means for causing said hook to slide along said bar, and means for causing appropriate movements of the bar and sliding hook back and forth in the line of delivery, substantially as described.

2. An automatic take up device for knitting machines comprising in combination a bar arranged transversely to the direction of delivery of the fabric, take up hooks slid-

ably mounted near opposite ends thereof, automatic means for causing said hooks to slide toward and away from each other along said bar, and means for causing appropriate movements of the bar and hooks back and forth in the line of delivery, substantially as described.



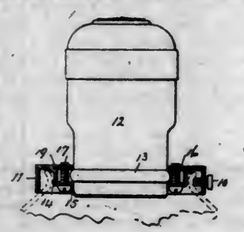
3. An automatic take up device for knitting machines comprising in combination a bar arranged transversely to the direction of delivery of the fabric, interchangeable take up hooks slidably and removably mounted near opposite ends of said bar, automatic means for causing said hooks to slide along said bar, and means for causing appropriate back and forth movements of said bar and hooks, substantially as described.

4. An automatic take up device for knitting machines comprising in combination a bar arranged transversely to the direction of delivery of the fabric, a support slidably mounted upon said bar, a take up hook adjustably mounted upon said support, automatic means for causing said hook to slide along said bar, and means for causing appropriate back and forth movements of said bar and hook support, substantially as described.

5. An automatic take up device for knitting machines comprising in combination a bar arranged transversely to the direction of delivery of the fabric, means for causing back and forth movement of said bar in the line of delivery, a slidable support on said bar, a take up hook thereon, a guide track, means tending to press said slidable support toward said guide track during movement of the bar in one direction and automatic means for holding said support away from said guide track during opposite movement of the bar, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

1,022,234. SHADE-HOLDER. GILBERT W. GOODRIDGE, Bridgeport, Conn., assignor to The Bryant Electric Company, a Corporation of Connecticut. Filed May 9, 1911. Serial No. 625,975. (Cl. 240—114.)



1. A shade holder having a central depending flange with inwardly offset abutment engaging the lower side of a supporting bead in adjusted position, an independent member engaging the upper side of said bead in adjusted position and means for drawing said members together to lock the shade holder to said bead.

2. A shade holder having a central depending flange with inwardly offset abutment engaging the lower side of a supporting bead in adjusted position, an independent abutment member engaging the upper side of said bead in adjusted position and screw means passing through said abutments in adjusted position for drawing said abutments together to lock the shade holder to said bead.

3. In a shade holder, a central depending flange with inwardly offset abutment engaging the lower side of a supporting bead and means in connection therewith for locking the holder to said bead.

4. A shade holder having a body member, and shade supporting means carried thereby, a flange on said body member engaging one side of a bead in adjusted position, a clamping ring having its inner edge seated against the opposite side of said bead and its outer edge against the body of the shade holder in adjusted position, and means to draw said clamping ring and flange together to lock the shade holder on said bead.

5. A shade holder having a body member, and shade supporting means carried thereby, a flange on said body member engaging one side of a bead in adjusted position, a clamping ring having its inner edge seated against the opposite side of said bead and its outer edge against the body of the shade holder in adjusted position, and means to draw said clamping ring and flange together to lock the shade holder on said bead, said body being offset to afford a seat for said clamping ring.

[Claim 6 not printed in the Gazette.]

1,022,235. FOOT-POCKET. JOHN F. HARRIS, Pickens, S. C. Filed Feb. 14, 1911. Serial No. 608,584. (Cl. 2—80.)



A device of the class described comprising a primary sack of rectangular formation and being provided with fastening devices on its outer walls, adjacent to the top corners thereof, a secondary sack of double thickness and of the same formation as the primary sack, located therein, the outer side and bottom walls of said secondary sack being spaced from the inner side and bottom walls of said primary sack for the reception of a flexible fabric, a binding tape, means for securing said tape, the inner walls of said secondary sack being tucked throughout their entire length and serving as a heat insulator, flaps provided with fastening means formed integral with said secondary bag and extending over the top edges of the primary sack and flexible fabric and extending downwardly in engagement with the outer walls of said primary sack, the said fastening means coöperating with said fasteners carried by the primary sack and removably securing said secondary sack to said primary sack.

1,022,236. GYROSCOPIC TOP. MOSES L. HAWKS, New York, N. Y. Filed May 13, 1911. Serial No. 627,064. (Cl. 46—32.)



1. In a gyroscopic top a frame comprising a bearing ring having laterally enlarged portions struck up from the body of the ring and strengthening ribs also struck up from the body of the ring and extending between the enlarged, struck up portions.

2. In a gyroscopic top a frame comprising a bearing ring, said ring being struck up at diametrically opposite points and a second ring located entirely within the first ring and disposed within said struck up portions and riveted thereto.

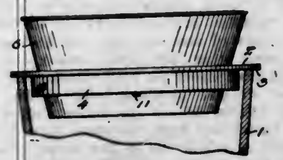
3. In a gyroscopic top, a frame comprising a bearing ring having a struck up or indented portion, and a second ring having meeting end portions, said end portions being disposed in the depression formed by said struck up or indented portion, and riveted thereto.

4. In a gyroscopic top, a frame comprising a bearing ring, and a second ring transverse thereto, one of said rings having meeting jointed end portions, and the other of said rings having a struck up or indented portion, said end portions of the one ring being disposed within the struck up or indented portion of the other ring.

5. In a gyroscopic top, a frame comprising a bearing ring and a second ring transverse thereto, one of said rings having meeting jointed end portions, and the other of said rings having a struck up or indented portion, said end portions of the one ring being disposed within the struck up or indented portion of the other ring and riveted thereto.

[Claims 6 to 16 not printed in the Gazette.]

1,022,237. COOKING UTENSIL. MARY A. HAYES, La Crosse, Wis. Filed Apr. 11, 1911. Serial No. 620,363. (Cl. 53—2.)



The combination with a kettle, of a pair of upper and lower rings having counter-sunk portions, apertures formed in the center of each counter-sunk portion, recesses formed in the counter-sunk portion of each ring adjacent the apertures, resilient latches formed upon the lower ring and adapted to engage the recesses of the counter-sunk portion of the upper ring, a plate for closing the aperture formed in the counter-sunk portion of the lower ring, resilient latches formed upon the plate and adapted to engage the last mentioned recesses, perforations formed in the counter-sunk portion of the lower ring whereby steam from the kettle is permitted to pass to the rings and the bottom of a utensil supported thereby.

1,022,238. KNITTING-NEEDLE. HERBERT HEATON, Rockledge, Pa. Filed May 10, 1911. Serial No. 626,241. (Cl. 66—5.)



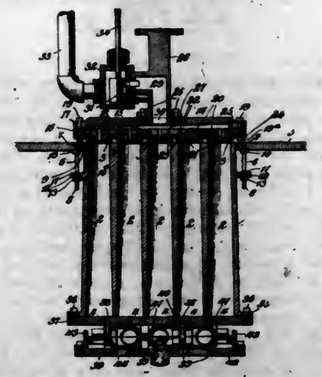
1. A latch knitting needle comprising a shank having a hooked end; a latch coöperating with said hooked end; a pivot for said latch; said shank having a depression formed therein directly in front of the pivot of the latch, whereby the fabric loop on the shank of the needle is relaxed as said loop passes the pivot of the latch.

2. A latch knitting needle comprising a shank having a hook end; a latch coöperating therewith; a pivot for said latch; said shank being enlarged at the parts thereof adjacent the pivot; and having a depression directly in front of the pivot of the latch, whereby the fabric loop on the shank of the needle is relaxed as said loop passes the pivot of the latch.

1,022,239. PROCESS OF MAKING SALVE. JOHN W. HERALD, Galveston, Tex. Filed Mar. 18, 1911. Serial No. 614,082. (Cl. 167—9.)

The process of making a medicinal paste which consists in boiling leaves and stems of *Oxalis acetosella* in rain water while in a copper receptacle, to reduce their bulk, then straining the same, and then repeating the boiling operation to reduce the same to a medicinal paste.

1,022,240. MOLDING APPARATUS. MADDRA J. HEWLETT, Kewanee, Ill. Filed July 18, 1911. Serial No. 639,165. (Cl. 22—36.)



1. A sand molding apparatus comprising a sand holding receptacle having a plurality of separate sand receiving pockets or compartments, each having a separate sand outlet, and means for supplying compressed air to the sand holding receptacle for simultaneous delivery to the said pockets or compartments.

2. A sand molding apparatus comprising a sand holding receptacle provided with a plurality of separate sand receiving pockets or compartments and provided at the bottom of each of the pockets or compartments with a sand outlet, and means located at the top of the said receptacle for supplying compressed air to the same for simultaneous delivery to the pockets or compartments, said means including separate openings or passages for each of the pockets or compartments.

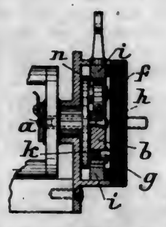
3. A sand molding apparatus comprising a sand holding receptacle having a plurality of upright sand holding pockets or compartments gradually increasing in area from the top to the bottom and provided at the latter with sand outlets, and means for supplying compressed air to the pockets or compartments of the said receptacle.

4. A sand molding apparatus comprising a sub-divided sand holding receptacle having a plurality of separate sand receiving pockets or compartments tapered upwardly and gradually increasing in diameter from top to bottom, the upper portions of the pockets or compartments being circular and the lower portions being rectangular, the walls of the upper portion gradually merging into the walls of the lower portion, said receptacle being provided at the bottom of the pockets with sand outlets, and means located at the upper ends of the pockets or compartments for supplying the same with compressed air.

5. A sand molding apparatus comprising a sub-divided sand holding receptacle having a plurality of sand receiving pockets or compartments and provided at the lower end thereof with sand outlets, and a compressed air cap arranged at the top of the said receptacle and extending over the upper ends of all the pockets or compartments and having separate air passages or openings communicating with the upper ends of each of the pockets or compartments for simultaneous delivery of compressed air to the same.

[Claims 6 to 18 not printed in the Gazette.]

1,022,241. CURRENT INTERRUPTER AND DISTRIBUTER FOR ELECTRICAL IGNITION APPARATUS. GOTTLOB HONOLD, Stuttgart, Germany, assignor to The Firm of Robert Bosch, Stuttgart, Germany. Filed Dec. 11, 1909. Serial No. 532,521. (Cl. 123—168.)



1. In a current interrupter and distributer for magneto ignition apparatus, a housing containing an interrupter having a pair of interrupter elements, a cam adapted to periodically separate said elements, and a contact brush carried by the interrupter, in combination with a distributing plate constituting a closure for said housing and carrying a series of contact segments adapted to successively contact with said brush; substantially as described.

2. In a current interrupter and distributer for electrical ignition apparatus, an interrupter having a pair of interrupter elements, an adjustable cam adapted to periodically separate said elements, a contact brush carried by the interrupter, a distributing plate having a series of contact segments adapted to successively contact with said brush, and means for adjusting said cam, whereby the separation of said elements relative to the period of contact between the brush and each of said segments may be adjusted; substantially as described.

3. In a current interrupter and distributer for electrical ignition apparatus, a rotary interrupter support, two coöperating interrupter elements on said support, an adjustable cam ring embracing said elements and engaging one of them to separate them periodically, a contact brush carried by the other of said elements, a distributing plate having a series of contact segments disposed opposite to said brush and in contacting relation thereto, and an adjusting lever connected to said cam ring; substantially as described.

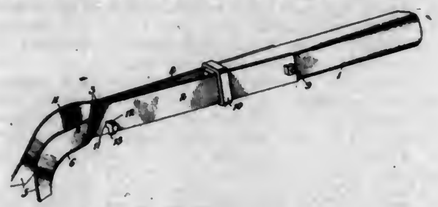
4. In a current interrupter and distributer for magneto ignition apparatus, a pinion on the shaft of the magneto, a distributer pinion meshing therewith, two coöperating interrupter elements on said distributer pinion, an adjustable cam ring embracing said elements and engaging one of them to separate them periodically, a contact brush carried by the other of said elements, a distributing plate having a series of contact segments disposed opposite to said brush and in contacting relation thereto, and an adjusting lever connected to said cam ring; substantially as described.

5. In a current interrupter and distributer for electrical ignition apparatus, a housing containing a rotary interrupter support, a pair of interrupter elements on said support, an adjustable cam ring embracing said elements and engaging one of them periodically to separate them, and a contact brush carried by the other interrupter element, in combination with a distributing plate constituting a closure for said housing and carrying a series of contact segments disposed opposite to said contact brush in contacting relation thereto, and an adjusting lever connected to the adjustable cam ring and extending through the wall of the housing; substantially as described.

[Claim 6 not printed in the Gazette.]

1,022,242. CANE-STRIPPER. JOHN WESLEY JACKSON, Pinepark, Ga. Filed May 8, 1911. Serial No. 625,720. (Cl. 130—31.)

1. A cane stripper provided with mating blades in approaching relation and having active ends curving first away one from the other, then toward each other as they recede from the handle, and finally again away from each other, the blades also curving in the portions included in the second and third named curvatures in the direction of the active stroke of the stripper.



2. A cane stripper provided with mating blades in approaching relation and having active ends curving first away one from the other, then toward each other as they recede from the handle, and finally again away from each other, the blades also curving in the portions included in the second and third named curvatures in the direction of the active stroke of the stripper, the curved portions of the blades flaring throughout one from the other in a direction opposite to that of the direction of the operative stroke.

3. A cane stripper having opposing blades with the active cane engaging portions curved in the direction of the active stroke of the stripper, and also curved first away from each other, and then toward each other as well as in the direction of the active stroke of the stripper.

4. A cane stripper provided with elastic blades in approaching relation toward the active ends and at said active ends flaring one from the other in a direction the reverse of the active stroke of the stripper, said active ends of the blades first receding and then approaching, and finally again receding to the ends of the blades, and curving substantially throughout the active portion in the direction of the active stroke of the blades.

5. A cane stripper provided with hawk-bill blades having a normal approaching tendency and yieldable to a force tending to separate the blades, and a stop member in traversing relation to the blades and having terminal angle extensions for engaging and arresting the movement of the blades one from the other, said stop member being also provided with an intermediate angle extension projecting therefrom in the same direction as the end angle extensions and lodged between the blades.

[Claims 6 and 7 not printed in the Gazette.]

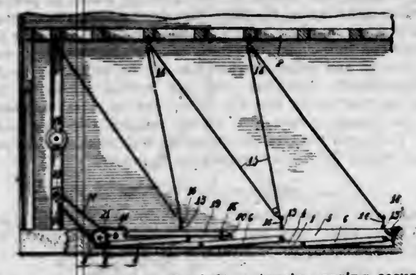
1,022,243. PROCESS OF MANUFACTURING FODDER COMPOSED OF PEAT AND MOLASSES. EDUARD JOSEPH, Berlin, Germany. Filed Oct. 15, 1909. Serial No. 522,850. (Cl. 99—11.)

1. A process of manufacturing a fodder composed of peat and molasses and having an admixture of alkali, consisting in the peat being made very slightly alkaline by an admixture of soda lye before mixing it with the molasses etc., so that the acids contained in the peat completely disappear as such, before the peat is mixed with the molasses and other food stuffs and subsequently mixing the thus prepared peat with molasses.

2. A process of manufacturing a fodder composed of peat and molasses and having an admixture of alkali, consisting in firstly making the peat very slightly alkaline by an admixture of soda lye, then partially removing the liquid therefrom and the salts contained in this liquid and hereafter mixing the thus prepared peat with molasses.

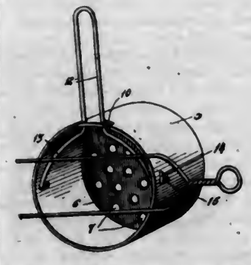
1,022,244. CONVEYER. AMOS G. KLINE and CHARLES A. KLINE, New Memphis, Ill. Filed May 26, 1911. Serial No. 629,529. (Cl. 119—15.)

The combination with a base, of links pivoted to the sides thereof, a trough pivoted to the upper terminals of the links, a flexible member connecting one end of the said trough and the base, a series of pulleys attached to the trough, a series of pulleys arranged above the trough, a rotatable drum, a cable attached to the trough and passing over said pulleys and connected to the drum, a shaft journaled in the trough, a belt secured to the shaft and extending through the trough, a follower slidable within



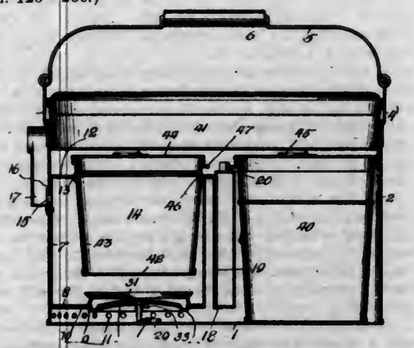
the trough attached to the belt, a tension spring secured to the trough and engaging the belt for scraping the latter, means for rotating the shaft and props attached to the trough and engaging the base.

1,022,245. COOKING UTENSIL. FREDRICK KNEIFEL and THOMAS H. WATT, Barberton, Ohio. Filed Sept. 12, 1911. Serial No. 648,890. (Cl. 53—8.)



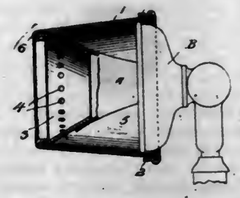
A utensil of the class described, comprising a body having spaced L-shaped slots cut in from the upper edge of its side wall, the inner branches of the slots being directed toward each other, so as to form hooks, and a handle comprising a single strand of rigid wire bent to provide spaced parallel limbs having outwardly curved ends provided with hooks for engagement with the body, the limbs being designed to engage in the L-shaped slots on the tilting of the body.

1,022,246. DINNER-BUCKET. EMERICK KOBETZ, Cleveland, Ohio. Filed Oct. 2, 1911. Serial No. 652,258. (Cl. 126—266.)



A dinner bucket comprising an oblong casing, a shell arranged at one end and above the bottom thereof and constituting a heating chamber, a transversely extending narrow receptacle within said casing at one side of said shell and constituting a fuel reservoir, a bracket carried by said shell and engaging said receptacle for supporting it above the bottom of said casing, a burner carried by said shell at the lower end thereof, means arranged upon the bottom of said casing for supplying fuel from said reservoir to said burner, vertically disposed means extending through said receptacle and operated exteriorly of said casing for regulating the supply of fuel from said reservoir to said burner, means for suspending a receptacle in said shell over said burner, said casing and said shell provided with air inlet openings, a nipple carried by one end of said casing and communicating with the interior of said shell, and a vertical flue arranged against the outer face at one end of said casing and communicating with said nipple.

1,022,247. DISINFECTANT DEVICE FOR MOUTHPIECES. AMELIA E. LE FORD, Boston, Mass. Filed July 19, 1911. Serial No. 639,281. (Cl. 179—185.)



1. A disinfecting device for telephone mouthpieces comprising a member adapted to be secured to the telephone transmitter, an inwardly reduced member secured within the first member and adapted to be partly extended into the mouthpiece of the telephone and arranged with respect to the mouth piece of the telephone and the said first named member and so fashioned as to form an intervening chamber therebetween to entirely surround the mouthpiece, and a disinfectant container communicating with the chamber, the said second member having a passage therein which opens at one end into the chamber and at the opposite end into the container.

2. The combination with a telephone transmitter and a mouthpiece therefor, of a disinfecting device comprising a member having means for engaging the transmitter, the said member being extended beyond the outer end of the mouthpiece, a second member secured to the outer end of the first member and extending into the mouthpiece and provided in front of the mouthpiece with a plurality of perforations, and a disinfectant container opening into the said first member so as to permit the fumes of the disinfectant to be discharged through the perforations of the second member.

3. The combination with a telephone transmitter and a mouthpiece therefor, of a disinfecting device, the said device including a member embracing the mouthpiece and detachably secured to the transmitter, a second member secured to the outer end of the first member, the said second member being of an inwardly reduced construction and having its small end fitted in the mouthpiece, the said second member having perforations therein located at a point in advance of the mouthpiece, and a disinfectant container supported by the first member and opening directly thereinto.

4. The combination with a telephone transmitter and a mouthpiece therefor, of a disinfecting device comprising inner and outer members, one of the members being adapted to be secured to the transmitter of the telephone, the other member being extended into the mouthpiece and provided in advance of the mouthpiece with a circular series of openings, a disinfectant container supported by the outer member, and a tube extending upwardly and outwardly from the container and having its inner end disposed within the outer member and arranged above the plane of said container.

5. The combination with a telephone transmitter and a mouthpiece therefor; of a member embracing the mouth-

piece and removably fitted to the transmitter, a second member secured to the outer end of the first member and inwardly reduced to fit within the mouthpiece of the transmitter and defining with the mouthpiece and with the outer member walls of an intervening chamber between the mouthpiece and the outer member, the inner member being provided at a point forwardly of the mouthpiece with perforations, and a disinfectant container secured to the first member and provided with a tube which extends into the chamber, whereby the fumes emanating from the disinfectant will be distributed into the chamber and conveyed by way of the perforations in said second member to a point in front of the mouthpiece of the transmitter.

1,022,248. GOLF-BALL. PATRICK ALPHONSUS MARTIN, Birmingham, and JOHN STANLEY, Sparkhill, near Birmingham, England. Filed Aug. 20, 1910. Serial No. 578,181. (Cl. 46—4.)



1. A golf ball having a core composed of a compressible colloid substance incorporated with a weighting material which will not interfere with the lubricating properties thereof, and an elastic-tensioned winding enveloping such core and maintaining the same under compression to reduce its size and increase its density.

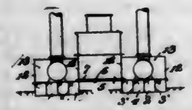
2. A golf ball having a core composed of a compressible colloid substance incorporated with a weighting material in the form of an impalpable nonabsorbent powder, and an elastic-tensioned winding enveloping such core and maintaining the same under compression to reduce its size and increase its density.

1,022,249. TELESCOPIC GUN-SIGHT ATTACHMENT. DONALD W. MATHESON, Yorkton, Saskatchewan, Canada. Filed Sept. 18, 1911. Serial No. 649,805. (Cl. 42—80.)



A telescopic gun sight attachment for rifles comprising a pair of telescoping sections provided with means for attachment to a gun barrel adapted to permit longitudinal movement of one section relatively to the other, said sections being provided with elongated openings to receive the front and rear sights of the gun respectively, and a lens removably mounted in the outer end of each of said sections.

1,022,250. SELF-PROPELLED VESSEL. ALEXANDER MCDOUGALL and ALEXANDER MILLER MCDOUGALL, Duluth, Minn. Filed Dec. 10, 1909. Serial No. 532,505. (Cl. 115—33.)



1. A shallow vessel comprising two shallow hulls substantially rectangular in cross section, each hull having a depth substantially one-third its width, said hulls spaced apart, a deck spanning the space between the hulls and rigidly securing them together, propelling wheels located between and supported by the hulls adjacent their ends, and longitudinal continuous vertical walls located at the inner and outer sides of the hulls to provide longitudinal strength and rigidity to the shallow hulls for supporting the propelling wheels.

2. A shallow draft vessel comprising two shallow hulls, substantially rectangular in cross-section, each hull having a depth not exceeding one-third its width to produce shallow draft hulls, the hulls separated a distance substantially equal to their width, means rigidly connecting the separated hulls, paddle wheels located between and supported by and adjacent the ends of the hulls, means for independently operating the said wheels, whereby they can be revolved in opposite directions to raise the water in the channel between the wheels causing it to flow under the hulls and tend to lift the hulls and wash out a shoal upon which the hulls may happen to ground.

1,022,251. WASHBOARD. GEORGE MELBER, Ekalaka, Mont. Filed Mar. 18, 1911. Serial No. 615,318. (Cl. 68—29.)

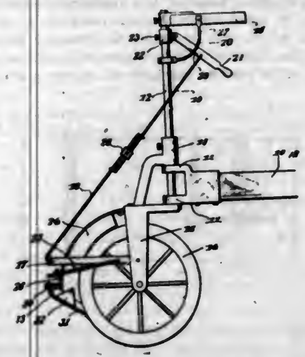


A wash board comprising a pair of spaced legs and a rubbing surface positioned between the legs, the said rubbing surface having its lower portion provided with rectangular openings arranged in parallel relation with each other and adjacent the legs, spaced longitudinally and transversely arranged boards at the rear of the rubbing surface, the said boards being so arranged with relation to the said openings as to form walls and pockets, in conjunction with the legs, a follower member, the said boards having their lower portion formed to provide elongated openings adapted to receive and support the said follower in an operative position, the said follower comprising a horizontally disposed rectangular strip having reduced portions adjacent its end adapted to slidably fit within the said elongated openings, and having its ends so formed and of an area equal to that of the pockets so as to permit the same to be positioned within the pockets, bracket members secured at the rear of the board and having centrally bulged portions adapted to close the said elongated openings and to prevent the accidental displacement of the follower from the board, and the said legs being of a width equal to the depth of the said pockets whereby when the follower is positioned upon the board it will lie in substantially the same plane as that of the leg, a threaded member rigidly connected with the washboard and adapted to project through the central portion of the followers, and a winding nut to coact with the threaded member and adapted to simultaneously adjust the ends of the follower within the pockets.

1,022,252. BRAKE MECHANISM. PETER S. MOE, Creston, Wash. Filed May 16, 1911. Serial No. 627,534. (Cl. 21—8.)

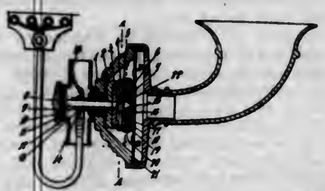
1. A brake mechanism comprising a U-shaped bar for pivotal engagement with the frame of a vehicle, a rod connected to the said U-shaped bar, a second rod engaging the first rod, means for rigidly securing the said rods, a lever connected with the second rod, a notched bar mounted on the vehicle and adapted to be engaged by the said lever, a brake shoe hingedly mounted on the frame of the vehicle and extending between the said U-shaped bar, a plurality of threaded rods mounted to swing on the said U-shaped bar and a plate for adjustable engagement with the said rods and secured to the said brake shoe, the said brake shoe being adapted to engage or disengage the running gear of the vehicle when the said lever is operated.

2. In a brake mechanism the combination of a vehicle frame, a wheel revolubly mounted on the said frame, a brake shoe hingedly mounted on the frame and adapted for engagement with the said wheel, a U-shaped bar pivotally mounted on the said frame, the said brake shoe being extended between the sides of the said bar, an operating lever mounted on the frame of the said vehicle, a notched bar connected to the frame of the vehicle and adapted to be engaged by the said operating lever to



rigidly position the same relatively to the notched bar and rods connecting the said operating lever with the said U-shaped bar for operating the said brake shoe when the said lever is operated.

1,022,253. TELEPHONE-TRANSMITTER. MATTHEW MOLONEY, Christchurch, New Zealand. Filed Oct. 25, 1909. Serial No. 524,478. (Cl. 179—124.)



1. In a telephone transmitter, the combination of a metal cylinder, a carbon cup therein, carbon pencils projecting radially inward from holes in said cup, a carbon center stud, having a groove therein receiving the points of said pencils, carbon washers on the point of said center stud, pellets between said washers, granulated carbon around the point of said stud, means for retaining said granulated carbon in place, a screw pin connected to the transmitting diaphragm, a carbon disk secured to said screw pin, and a transmission screw with which one of the circuit wires is in electrical connection, substantially as specified.

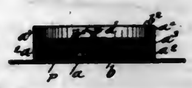
2. In a telephone transmitter, the combination of a metal cylinder, a carbon cut therein, carbon pencils projecting radially inward from holes in said cup, a carbon center stud, having a groove therein receiving the points of said pencils, carbon washers on the point of said center stud, pellets between said washers, granulated carbon around the point of said stud, means for retaining said granulated carbon in place, a screw pin connected to the transmitting diaphragm, and a carbon disk secured to said screw pin.

3. In a telephone transmitter, the combination of a metal cylinder, a carbon cup therein, carbon pencils projecting radially into said cup, a carbon center stud, having a groove therein receiving the points of said pencils, carbon washers on the point of said center stud, pellets between said washers, granulated carbon around the point of said stud, and means for retaining said granulated carbon in place, substantially as specified.

4. In transmitting apparatus of telephones, the combination of a carbon cup, carbon pencils projecting radially into said cup, and a center stud having a groove receiving the points of said pencils, substantially as set forth herein and illustrated.

5. In transmitting apparatus of telephones, in combination a pointed center stud, carbon washers upon the point of said stud, and a layer of pellets between said washers, substantially as set forth herein and illustrated.

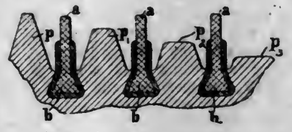
1,022,254. VANITY-BOX. PAUL NOCARD, Paris, France, assignor to L. T. Piver & Cie., a Firm. Filed Jan. 19, 1911. Serial No. 603,521. (Cl. 132—28.)



1. A pocket pasteboard vanity box consisting of a flat box constructed of a pasteboard disk provided with an upward circumferential flange constituting the body of the box and with an internal reinforcing flange cemented thereto and serving as a cover stop, and a sliding cover-puff constructed of a flat pasteboard disk provided on its under side with a flat powder pad cemented thereto and on its upper side with a central knob and at its periphery with an upward flange surrounding said knob and operative piston-like within said box to hold the cover closed and serving to reinforce the upper half of the body of the box.

2. A cover-puff for a vanity box consisting of a pasteboard disk, a powder pad cemented to the under side thereof, a knob secured to the upper side of said disk and an upward flange at the periphery of said disk inclosing said knob.

1,022,255. DYNAMO-ELECTRIC MACHINERY. CHARLES ALGERNON PARSONS and ALEXANDER HENRY LAW, Newcastle-upon-Tyne, England; said Law assignor to said Parsons. Filed July 9, 1909. Serial No. 506,755. (Cl. 171—206.)



1. In dynamo electrical machinery, a core with a slot therein, the width of the slot at the periphery of the core being less than its width nearer the center a conductor with an enlarged side adapted at least in part to enter the slot; as set forth.

2. In dynamo electric machinery a core with a slot therein the width of the slot at the periphery of the core being less than its width nearer the center a conductor having an enlarged side adapted loosely to enter said slot and insulating means situate between the conductor and the slot wall; as set forth.

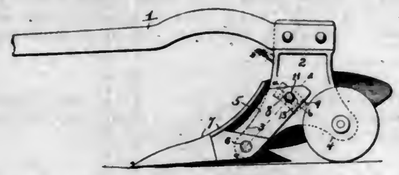
3. In dynamo electric machinery a core with a slot therein the width of the slot at the periphery of the core being less than its width nearer the center, a conductor having an enlarged side adapted loosely to enter said slot, and wedging means for the purpose of tightening the conductor in the slot; as set forth.

4. In dynamo electric machinery a core with a slot therein the width of the slot at the periphery of the core being less than its width nearer the center, a conductor having an enlarged side adapted loosely to enter said slot, insulating means between the conductor and the slot wall and wedging means for the purpose of tightening the conductor in the slot; as set forth.

5. In dynamo electric machinery a core, a conductor radially in part embedded in the core with transverse cuts in the embedded part; as set forth.

[Claims 6 to 13 not printed in the Gazette.]

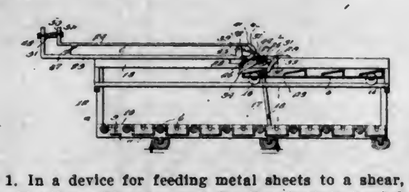
1,022,256. PLOW. WILLIAM L. PAUL, South Bend, Ind., assignor to Oliver Chilled Plow Works, South Bend, Ind. Filed Jan. 23, 1911. Serial No. 604,200. (Cl. 97—21.)



1. The combination with a standard having forwardly and rearwardly projecting parts at its lower end, of a frog pivoted to the forwardly projecting part of the standard, soil-engaging parts secured to said frog, means adjustably connecting the frog with the intermediate portion of the standard, and a wheel having a mounting in the rearwardly projecting part at the lower end of the standard.

2. The combination of a frog, soil engaging parts including a mold board, carried by said frog, a standard disposed between the frog and mold-board and pivoted at its lower end to the frog, and means adjustably connecting the upper portion of said frog to the standard.

1,022,257. SHEET-FEEDER. ROBERT S. PAYNE, Monessen, Pa. Filed June 20, 1911. Serial No. 634,260. (Cl. 164—117.)



1. In a device for feeding metal sheets to a shear, the combination with a support for the sheet to be fed; of sheet moving means adapted to engage a sheet positioned on the support, and bodily movable means for moving the sheet moving means for the purpose described.

2. In a device for feeding metal sheets to a shear, the combination with a support for the sheet to be fed; of bodily movable sheet moving means adapted to engage a sheet positioned on the support, and bodily movable means for moving the sheet moving means.

3. In a device for feeding metal sheets to a shear, the combination with a support for the sheet to be fed; of bodily movable sheet moving means adapted to engage a sheet positioned on the support, and reciprocating means for moving the sheet moving means predetermined distances for the purpose described.

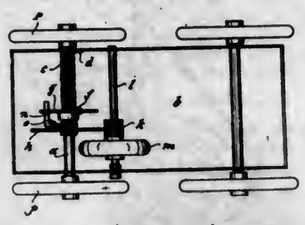
4. In a device for feeding metal sheets to a shear, the combination with a support for the sheet to be fed; of sheet moving means adapted to engage a sheet positioned on the support, a series of projections on the sheet moving means, and bodily movable means for engaging said projections successively for the purpose described.

5. In a device for feeding metal sheets to a shear, the combination with a support for the sheet to be fed; of sheet moving means adapted to engage a sheet positioned on the support, a series of projections on the sheet moving means, and bodily movable means including a pivoted element adapted to over-ride said projections successively when moved in one direction and interlock therewith when moved in the opposite direction.

[Claims 6 to 11 not printed in the Gazette.]

1,022,258. APPARATUS FOR ACTUATING TOY VEHICLES AND THE LIKE. CHRISTIAN PAUL PFEIL, Nuremberg, Germany. Filed Oct. 23, 1911. Serial No. 656,184. (Cl. 46—48.)

1. In apparatus for actuating toy vehicles and the like, the combination with a running wheel axle of the toy, of a driving spring, means for coupling said spring to said axle, a flywheel carried by the vehicle, reversible mechanism for transmitting the effort of the said spring so as to drive said flywheel, and means for reversing said reversible mechanism when said spring has run down, whereby when said spring is tensioned and then released, it will drive the running wheel axle to propel the toy and at the same time drive the flywheel which latter will continue to propel the toy after said spring has run down as set forth.



2. In a toy driving apparatus, the combination with the toy body, of a wheeled axle therefor, a fly wheel operatively connected with said axle, a spring for driving said axle, and a self releasing ratchet mechanism for rotating said fly wheel from the impulse of said spring, substantially as and for the purpose set forth.

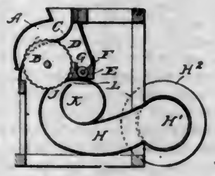
3. In apparatus for actuating toy vehicles and the like, the combination with a running wheel axle of the toy, of a spring for driving said axle to propel the toy, a flywheel carried by the toy, a ratchet wheel loose on said axle, a toothed wheel fixed on said axle, a pinion fixed to said flywheel, gearing with said toothed wheel and a pawl carried by said toothed wheel adapted to engage and drive said ratchet wheel, as set forth.

4. In apparatus for actuating toy vehicles and the like, the combination with a running wheel axle, of a spring for driving said axle to propel the toy, a flywheel carried by the toy, a ratchet wheel loose on said axle, a toothed wheel fixed on said axle, a pinion fixed to said flywheel, gearing with said toothed wheel and a crank arm pivoted eccentrically to said toothed wheel adapted to move into and out of engagement with the teeth of said ratchet wheel, whereby during the running down of said spring, said crank arm derives said toothed wheel and through it said flywheel, and when said spring has run down, said crank arm moves out of engagement with said ratchet wheel to allow said flywheel to drive said axle through said toothed wheel to continue the actuation of the toy as set forth.

5. In a toy driving apparatus, the combination with a toy body, running gear therefor, a spring for driving the running gear for a given period, and a momentum device actuated upon advancing movement of said body to drive the same for a period following the completion of the driving action by said spring, substantially described.

[Claim 6 not printed in the Gazette.]

1,022,259. COTTON-GIN. FRANK PHELPS, Wellston, Okla., assignor to Thomas Gin Compress Company, Little Rock, Ark., a Corporation of New Jersey. Filed Jan. 25, 1907. Serial No. 354,077. (Cl. 13—9.)



1. A cotton gin, including a conduit, through the walls of which the saws are arranged to project, a partition dividing the conduit in two chambers, and means for creating an air current between the chambers to be directed against and transverse the saws.

2. A cotton gin, including a conduit, through the walls of which the saws are arranged to project, a partition dividing the conduit in two chambers, said partition terminating adjacent one wall of the conduit to provide communication between the chambers, means for creating an air blast in one chamber, and means for creating an air suction in the other chamber.

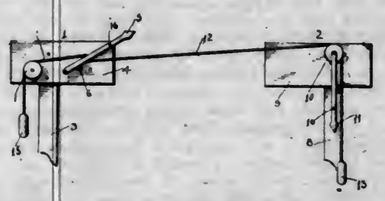
3. In a gin, the combination with the saws, of a lint-chute or receptacle having its mouth adjacent to and substantially inclosing peripheral portions of the saws, and an air-tube or chamber having a contracted exit-chute delivering into said mouth and arranged to direct an air-blast approximately tangentially on the peripheries of the saws, and a series of wedge-shaped partitions arranged in the exit chute of the air-chamber near or adjacent to the mouth of the lint-receptacle and adapted to concentrate the air-blast upon the peripheries of he saws.

4. In a gin, the combination with the saws, of a lint-chute or receptacle having its mouth adjacent to peripheral portions of the saws, and a sheet-metal air-tube having a contracted exit-chute extending from one side thereof and arranged to discharge into the mouth of said lint-chute and to direct an air-blast approximately tangentially on the peripheries of the saws, the upper surface of said exit-chute being formed to provide a longitudinal trash-receptacle and divider-board adjacent to the backs of the saws, and a lower surface thereof terminating in the space between the divider-board and trash-receptacle, leaving a narrow exit-passage for the air-blast.

5. In a gin, the combination with the saws, of means including an air chamber arranged behind the lower portions of the saws and having a generally involute form to provide a nozzle for applying a stripping blast to the under portions of the saws.

[Claims 6 to 9 not printed in the Gazette.]

1,022,260. SIGNALING SYSTEM. JOHN POE, Garfield, Ark., assignor of one-half to Jacob S. Russum, Independence, Kans. Filed July 20, 1911. Serial No. 639,512. (Cl. 116—22.)



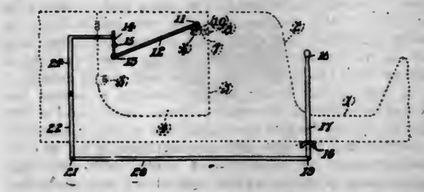
A signaling system comprising a swingingly mounted semaphore arm, a rotatably mounted pulley, a second semaphore arm secured to said pulley and adapted to turn therewith, a cable having one end secured to the first mentioned semaphore arm intermediate its length, said cable being extended to pass over the pulley and provided at its free end with a weight, a second cable secured to the first mentioned semaphore arm and extending in a direction opposite to that of the first mentioned cable, a pulley over which said cable is passed, and a weight secured to the free end of said second cable.

1,022,261. SPIKE. MARTIN RASMUSSEN, Racine, Wis., assignor to Edward J. Schowalter, Racine, Wis. Filed Apr. 18, 1910. Serial No. 556,230. (Cl. 85—23.)

A spike comprising the body portion with its central portion cut-away part way of its length to divide the spike, one of the inner faces of the divided parts being smooth, and the other divided part having its inner face toothed, the outer faces of the divided parts having incuts arranged at intervals along its lengths, said incuts providing wedge shaped barbs having knife edges, a wedge adapted to be wholly inserted between the divided portion having on one face teeth to engage the teeth of said divided part, and said wedge also having on its other side a smooth face to engage the smooth face of the divided part whereby to force the knife edges of the wedge shaped barbs into an object.



1,022,262. DOOR-OPENING DEVICE FOR VEHICLES. EWING B. RHODES, Pittsburgh, Pa. Filed Oct. 25, 1911. Serial No. 656,642. (Cl. 39—91.)



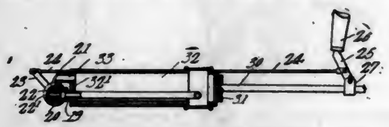
1. In a door operating mechanism for vehicles, the combination with a vehicle body having a hollow wall provided with a doorway and a hinged hollow door, of a rock shaft journaled in the hollow wall of said vehicle, an angle arm carried by said rock shaft within said wall, a pin pivotally connected to the end of the arm and extending into an opening provided therefor in said door, and capable of opening the latter when said shaft is rocked, a latch arranged in said door and adapted to engage in said wall to retain said door in a closed position, means within said door and adapted to be actuated by said pin to release said latch to permit of the opening of the door by the pin, means connected to the inner side of said wall normally tending to maintain the door in a closed position, and means including an operating lever and a reach rod for rocking said shaft.

2. In a door operating mechanism, the combination with a hollow wall having a hollow door hinged thereto, of a rock shaft journaled in said hollow wall, an angle arm carried thereby, a pin carried by the end of said angle arm and extending into said hollow door, means carried by the inner side of said wall and engaging with the door for tending to maintain it in a closed position, means arranged in said door and adapted to normally lock said door in a closed position, and means including an operating lever and a reach rod adapted to actuate said rock shaft and the last mentioned means whereby said door will be released and opened.

1,022,263. FLUID-HYDROCARBON BURNER. PETER ROOT, Eureka, Cal. Filed June 9, 1911. Serial No. 632,254. (Cl. 158—75.)

1. A fluid hydrocarbon burner having a casing in communication with an oil supply at one end thereof, a steam conducting pipe mounted within the casing and projecting

through the outward end of the casing below the center line thereof, the other end of the steam pipe being in communication with a steam supply, a nozzle connected to the extended end of said pipe exteriorly of the casing, a valve mounted in said nozzle for controlling the emission of steam therefrom, and an oil nozzle disposed above and in coöperative relation with the steam nozzle.

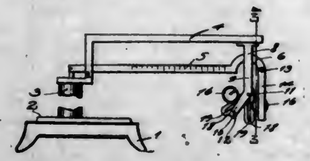


2. A fluid hydrocarbon burner having a casing in communication at one end with an oil supply, a steam conducting pipe mounted within said casing and in communication with a steam supply at one end thereof, the other end of said pipe projecting beyond the end of the casing below the center line thereof, a nozzle connected to said extended end of said pipe for conveying the steam away from the casing, a valve for controlling the emission of steam therefrom, and a continuously opened oil feed nozzle leading from the casing and disposed to drip the oil from above upon said steam nozzle.

3. A burner having a casing circular in cross section at its inlet and elliptical in cross section at its outlet end, the inlet end of said casing being in communication with an oil supply, a steam conducting pipe mounted within said casing and projecting from the outlet end thereof, a nozzle connected to the outer end of said pipe exteriorly of the casing, a valve for controlling the emission of steam therefrom, and an oil feed nozzle disposed in the outlet end of the casing above the steam nozzle to feed the oil directly upon said steam nozzle.

4. A fluid hydrocarbon burner, having a casing the inlet end of which is circular in cross section and which gradually tapers toward the outlet end which is elliptical in cross section, the inlet end of said casing being in communication with an oil supply, a steam conducting pipe disposed longitudinally within the casing and extending from its inlet end to and through the outlet end thereof, the outer end of the steam pipe being below the central line of the casing, a nozzle connected to the outer end of said steam supply pipe, a valve for controlling the flow of steam therefrom, means for actuating said valve, and an oil nozzle disposed in the outlet end of the casing above the central line thereof and having its discharge end disposed slightly in the rear of and above the outlet of the steam nozzle, whereby oil fed therefrom will drip upon the steam nozzle to be atomized with the steam.

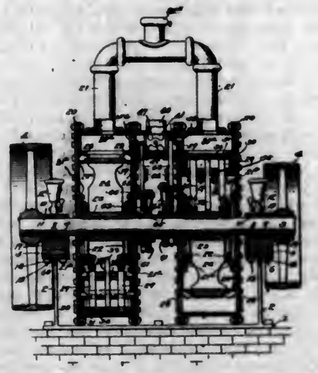
1,022,264. SCALE. ALFRED RUCH, Minden, Iowa. Filed Oct. 9, 1911. Serial No. 653,649. (Cl. 73—56.)



1. The combination with the beam protecting arm of a beam scale, of a bracket depending therefrom and having a portion providing a guide for the beam, arms depending from the bracket, a pair of bolts connecting the arms, and weights having slotted extensions slidably engaged on one of the bolts and normally resting against the other of said bolts.

2. In a beam scale, the combination with the beam protecting arm, of a guide bracket for the beam depending from said arm, a yoke projecting downward from the guide bracket, a pair of bolts connecting the arms of the yoke, weights having slotted extensions slidably engaged on one of the bolts and normally resting on the other, and a receiving yoke pivoted to the beam and having a bar connecting its arms, the weights each having a slot formed therein to receive the bar when the weights are swung outward into operative position.

1,022,265. REVOLVING-PISTON ROTARY STEAM-ENGINE. JAMES E. SACKETT, Monticello, N. Y. Filed Nov. 13, 1911. Serial No. 659,920. (Cl. 121—72.)



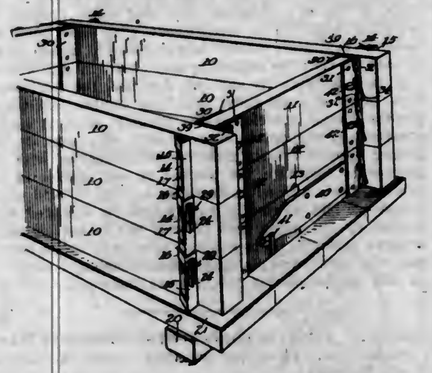
1. In a rotary steam engine, the combination of a suitably supported shaft, parallel cylinders surrounding said shaft, flanged rings fixed to the inner sides of the side walls of the cylinders and arranged eccentrically to the shaft, wheels fixed to the shaft and arranged in the cylinders and having diametrically-opposite steam-tight boxes, radially movable, revoluble pistons disposed in said boxes and having inwardly extending rods, circular rings connected to said rods and arranged and movable in the said ring flanges, steam exhaust conduits communicating with the cylinders, open-frame presser blocks arranged in the cylinders and registered with said conduits, an intermediate steam chest located between the cylinders and having forward ports and rear ports in its side walls, a conduit for supplying steam to said chest, forward and rear side steam chests arranged at opposite sides of the intermediate chest and communicating with the forward ports and rear ports, respectively, thereof, forward steam chambers arranged at opposite sides of the intermediate and forward, side steam chests and connected through ports with the latter and also connected through ports with the interiors of the cylinders at points in front of the presser blocks, rear steam chambers arranged at opposite sides of the intermediate and rear, side steam chests and connected through ports with the latter and also connected through ports with the interiors of the cylinders at points in rear of the presser blocks, cut-off valves located in the intermediate steam chest and adapted to control the ports in the side walls thereof, means for moving said cut-off valves, valves disposed in the forward and rear side steam chests and adapted to control the ports between the same and the forward and rear steam chambers, reversely arranged eccentrics located between the cylinders and fixed to the shafts, eccentric straps surrounding said eccentrics, reciprocatory rods connected with said eccentric straps and carrying cross-bars, and stems carried by said cross-bars and connected to the last-named valves.

2. In a rotary steam engine, the combination of a suitably supported shaft, cylinders surrounding said shaft, wheels fixed to the shaft and arranged in the cylinders and having diametrically-opposite steam-tight boxes, radially movable, revoluble pistons disposed in said boxes, means for projecting and retracting said pistons incidental to the revolutions thereof, steam exhaust conduits communicating with the cylinders, open-frame presser blocks arranged in the cylinders and registered with said conduits, an intermediate steam chest located between the cylinders and having forward ports and rear ports in its side walls, a conduit for supplying steam to said chest, forward and rear, side steam chests arranged at opposite sides of the intermediate chest and communicating with the forward ports and rear ports, respectively, thereof, forward steam chambers arranged at opposite sides of the intermediate and forward, side steam chests and connected through ports with the latter and also connected through ports with the interiors of the cylinders at points in front of the presser blocks, rear, steam chambers arranged at opposite sides of the intermediate and rear, side steam chests and connected through ports with the latter and also connected through ports with the interiors of the cylinders at points in rear of the presser blocks, cut-off means located in the intermediate steam chest and adapted to control the ports in the side walls thereof, valves for controlling the ports between the side steam chests and the forward and rear steam chambers, and driving connections intermediate the shaft and said valves.

3. In a rotary steam engine, the combination of a suitably supported shaft, cylinders surrounding the same, revoluble and radially movable pistons disposed in the cylinders and connected with the shaft and arranged diametrically opposite each other, means for projecting and retracting the pistons incidental to the revolutions thereof, steam exhaust conduits connected with the cylinders, open-frame presser blocks arranged in the cylinders and registered with said conduits, a steam chest located between the cylinders and connected with the interiors thereof in front and rear of the presser blocks, valves operated by the shaft for controlling communication between the chest and the cylinders, and manually operated means in the chest for reversing the engine.

4. In a rotary engine, the combination of a cylinder, a revoluble and radially movable piston therein, an open frame presser block arranged in the cylinder, means for supplying the cylinder with steam in front and rear of said block, and an exhaust conduit connected with the cylinder and registered with said block.

1,022,266. WAGON-BOX. ELMER A. SALTZMAN, Noble, and ELMER KRABILL, Wayland, Iowa. Filed Oct. 26, 1911. Serial No. 656,864. (Cl. 21—7.)



1. In a wagon box, a sectional side wall, guides on said wall sections, stems on the sections fitting in the guides of the sections below, said stems having perforations, angular latches pivoted at their angle to the guides and having one of their branches adapted to enter the perforations, and locking devices engageable with the other branches of the latches.

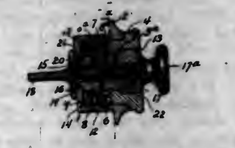
2. In a wagon box, a sectional side wall, guides on said wall sections, said guides comprising strips which are L-shaped in cross-section, one of the flanges of the strip being outstanding, spaced cross-pieces between the outer ends of the outstanding flanges and the outer ends of the other flanges, channel bends on the outstanding flange, depending stems on the wall sections fitting in the guides of the section below, said stems fitting under the cross-pieces, and having an outstanding flange seating in the channel bend, and latches engageable with the stems.

1,022,267. HOSE-SUPPORTER. CHARLOTTE SAYERS, Syracuse, N. Y. Filed May 24, 1910. Serial No. 563,157. (Cl. 24—90.)



A garment supporting device consisting of a shank having heads on its opposite ends, one of said heads being formed with slots located on the opposite sides of said shank to receive a textile band and provided with prongs projecting in opposite directions and adapted to engage said textile band and the shank being formed with a passage extending therethrough and having its terminals arranged adjacent to the slots of said head.

1,022,268. COMBINATION-LOCK. JOSEPH SCHECHTER, New York, N. Y., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Filed Nov. 28, 1911. Serial No. 662,947. (Cl. 70—53.)



1. In a combination lock, the combination with a casing, a dial carried by said casing, and tumblers within and carried by the casing and actuated by the dial, of a spindle passing through the casing, dial and tumblers and mounted to rotate in the same, and longitudinally movable locking pins, interposed between the tumblers and spindle and bearing against both for locking the spindle against rotation.

2. In a combination lock, the combination with a casing, a dial having a driving pin, and ring shaped tumblers each having a driving pin, and each also provided on its inner side with a gating, of a spindle and a series of longitudinally movable locking pins interposed between the tumblers and spindle for locking the latter against rotation.

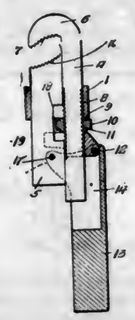
3. The combination with a casing, a dial, and a plurality of ring shaped tumblers, each of the latter having an internal gating and a friction device for preventing its accidental rotation, of a rotating spindle and means interposed between said spindle and tumblers for locking the former against rotation, except when the tumblers are moved to bring their gatings into alinement with said locking means.

4. The combination with a casing, a sleeve therein and a dial and tumblers mounted on the sleeve within the casing, each tumbler having a gating on its inner side, of a spindle within the sleeve and a series of locking pins carried by the sleeve and bearing against the spindle and tumblers, for locking the spindle against rotation except when the gatings in the tumblers are in alinement with the pins.

5. The combination with a casing, a sleeve secured therein and a dial and tumblers mounted to rotate on the sleeve, each tumbler having a gating in its inner wall, of a spindle mounted in the sleeve and provided with a cam shaped section and a series of locking pins mounted in the sleeve and bearing at one end against the tumblers and at the other end on said cam shaped section.

[Claims 6 and 7 not printed in the Gazette.]

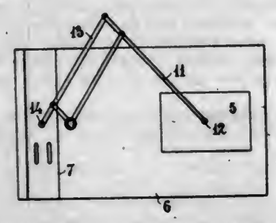
1,022,269. WRENCH. JOHN W. SCHWAB, Canton, Ohio. Filed Oct. 11, 1911. Serial No. 653,985. (Cl. 81—85.)



1. A wrench of the type described, comprising a guide, depending side pieces, a frame carried by said side pieces, a shank slidably mounted in said guide and said frame between said side pieces, a nut encircling said side pieces for adjusting said shank, a jaw slidably mounted in said guide and said frame against said shank, and a lever pivotally connected to said frame and to the inner end of said jaw for moving said jaw relatively to said shank.

2. A wrench of the type described, comprising a guide, depending side pieces carried thereby, a frame supported by said side pieces, a toothed shank slidably mounted in said guide and said frame between said side pieces, a nut encircling said side pieces and having oppositely disposed teeth adapted to engage said toothed shank, a jaw carried by the outer end of said shank, an adjustable jaw, movably mounted in said guide and said frame against said shank, and a handle loosely connected to said frame and to the inner end of said adjustable jaw for moving said jaw relatively to said shank.

1,022,270. METHOD OF AND DEVICE FOR CUTTING OUT CONTOUR-BANDS USED IN COLORING KINEMATOGRAPH-FILMS. CARLO SCIAMENGO, Turin, Italy. Filed Nov. 2, 1911. Serial No. 658,248. (Cl. 88—24.)



1. A method of cutting out contour bands as used in coloring kinematograph films consisting in projecting and enlarging the images of the printed film on to a screen, tracing a point over the profile of said enlarged images and cutting a waste film by means of a device controlled by said point.

2. Apparatus for cutting out contour bands as used in coloring kinematograph films comprising a table, a screen in said table, a printed film, means for projecting the images of the printed film on said screen, a band advancing in accordance with the printed film, a point capable of being traced over the profile of the images on the screen, means for cutting the contour band and connections between said cutting means and the controlling point.

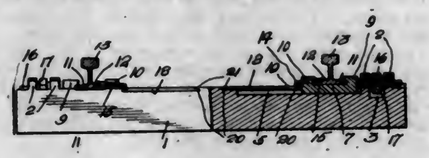
3. Apparatus for cutting out contour bands as used in coloring kinematograph films comprising a table, a ground glass screen in said table, a printed film, means for projecting and enlarging the images of the printed film on said screen, a band advancing in accordance with the printed film, a point capable of being traced over the profile of the images on the screen, means for cutting the band and connections between said cutting means and the controlling point reducing the scale.

4. Apparatus for cutting out contour bands as used in coloring kinematograph films comprising a table, a screen in said table, a printed film, means for projecting the images of the printed film on said screen, means for advancing said film, a celluloid band, means for advancing said band in accordance with the printed film, a point capable of being traced over the profile of the image on the screen, means for cutting the band and connections between said cutting means and the controlling point.

5. Apparatus for cutting out contour bands as used in coloring kinematograph films comprising a table, a screen in said table, a printed film, means for projecting the images of the printed film on said screen, means for advancing said film, a waste film, means for advancing said waste film in accordance with the printed film, a point capable of being traced over the profile of the images on the screen, means for cutting the waste film and connections between said cutting means and the controlling point.

[Claim 6 not printed in the Gazette.]

1,022,271. METALLIC TIE AND RAIL-FASTENER. ANDY SEDIVYO, Indiana Harbor, Ind. Filed Nov. 6, 1911. Serial No. 658,664. (Cl. 238—5.)

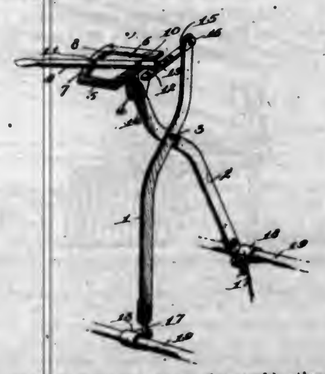


1. In a metallic tie and rail fastener, the combination with rails, of a tie body provided with recesses communicating with longitudinal dovetailed grooves, chairs slidably mounted in said grooves and adapted to support said rails, outer and inner fasteners carried by said chair, a clip in connection with said inner fastener for retaining said rail in engagement with said outer fastener, a cover plate closing said recess, and means carried by said tie body for adjusting said chairs in said grooves.

2. In a metallic tie and rail fastener, the combination with rails, of a tie body, said body having longitudinal grooves formed therein, chairs slidably mounted in said grooves and adapted to support said rails, said tie body having recesses formed therein, communicating with said grooves to facilitate the placing of said chairs in said grooves, inner and outer fasteners carried by said chairs, transverse ribs carried by said tie, screw threaded stems carried by the outer ends of said chairs and extending through said ribs, nuts screwed upon said stems between said ribs, and cover plates detachably mounted in the top of said tie for closing the recesses thereof.

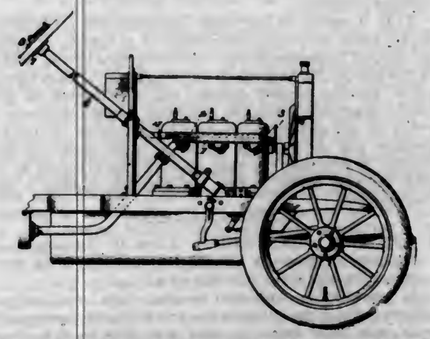
1,022,272. CULTIVATOR-HOPPLE. FLETCHER SMITH, Dallas, Tex. Filed Apr. 20, 1910. Serial No. 556,646. (Cl. 97.—35.)

1. In a hopple for cultivators, the combination with the beams of cultivator gangs, of sockets secured on the beams, main adjusting bars intermediately pivoted and crossed and having their upper ends separated, pins being secured to the lower ends of the adjacent bars and freely movable in the sockets, a horizontally disposed segment attached at one side of its longitudinal center to the upper end of one of the main adjusting bars and consisting of an open frame having teeth formed in the inner edge of the side opposite that secured to the bar, a link movably attached at its outer end to the upper end of the remaining adjusting bar and projecting inwardly and free of contact with any part of the bar carrying the segment to permit unrestricted movement of said latter bar in its adjustment to and from the remaining bar, the link being on a level with the inner attached side of the segment, and a shifting lever applied in flat position on and intermediately fulcrumed to the attached side of and movable over the segment and extending over and having one end adjustably connected to the said link, the lever having means engaging the teeth of the segment.



2. In a hopple for cultivators, the combination with the beams of cultivator gangs, of a pair of main adjusting bars connected by an intermediate pivot and having their lower ends operatively associated with the said beams, the upper ends of the bars being diverged and unconnected, a segment fixed to the upper end of one bar and disposed at an angle thereto, a horizontally disposed link movably attached to the upper end of the remaining bar and extending inwardly toward the free end of the bar to which the segment is attached, and a lever intermediately fulcrumed on and extending fully over the segment and having one end adjustably connected to the link, the lever and segment being provided with coöperating means for holding the lever in adjusted position.

1,022,273. MEANS FOR HEATING AUTOMOBILE STEERING-WHEELS. GRANT E. SMITH, Poughkeepsie, N. Y. Filed Mar. 17, 1911. Serial No. 615,100. (Cl. 237—3.)



1. The combination with a motor vehicle, and an engine therefor, of an air-receptacle designed to be heated by the engine, a pipe leading from said receptacle, and a steering-wheel with which said pipe communicates, said steering-wheel having a hollow rim provided with an inlet and an outlet for the heated air, the outlet being directly from the wheel rim into the atmosphere.

2. In combination with a motor vehicle, and an engine therefor, of an air-receptacle designed to be heated by the engine, a pipe leading from said receptacle, and a steering-wheel with which said pipe communicates, said steering-wheel having a hollow portion provided with an inlet and an outlet for the heated air, the outlet being directly from the hollow portion into the atmosphere.

3. The combination with a motor vehicle, and an engine therefor, of an air-receptacle designed to be heated by the engine, a pipe leading from said receptacle, a steering-wheel having a chambered hub and a hollow rim communicating with said hub, said hub having a part to which said pipe is connected, and said rim having an outlet for the hot air opening directly into the atmosphere.

4. The combination with a motor vehicle, and an engine therefor, of an air-receptacle designed to be heated by the engine, a pipe leading from said receptacle, a steering-wheel having a chambered hub and a hollow portion communicating with said hub, said hub having a fixed part to which said pipe is connected, and said hollow portion having an air outlet, and a fixed tubular casing paralleling said pipe and upon which said fixed hub part is centrally mounted.

5. The combination with a motor vehicle, and an engine therefor, of an air-receptacle comprising a pipe or pipes passed through a portion of the engine so as to be heated thereby, a supply pipe leading from the former pipe or pipes, and a steering-wheel having a chambered hub and a hollow rim communicating with said hub, said hub having a fixed part to which said supply pipe is connected, and said rim having an air-outlet.

[Claims 6 to 9 not printed in the Gazette.]

1,022,274. ETCHING FLUID FOR FLAT PRINTING-PLATES OF METAL. OTTO CARL STRECKER, Eberstadt, near Darmstadt, Germany. Filed Nov. 2, 1911. Serial No. 658,278. (Cl. 101—173.)

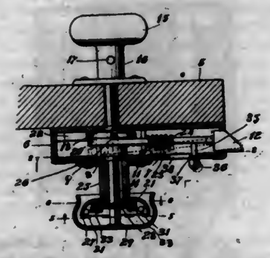
1. An etching liquid for flat printing plates of metal consisting of a mixture of a fluo-silicate, a second fluo-silicate, a bi-phosphate, a nitrate, a second nitrate and gum arabic.

2. An etching liquid for flat printing plates of metal, consisting of a fluo-silicate, a second fluo-silicate, a bi-phosphate, a nitrate, a second nitrate, an oxidizing compound in addition and gum arabic.

3. An etching fluid for flat printing plates of metal, consisting of a mixture of fluo-silicate of aluminium, a second fluo-silicate, a bi-phosphate, a nitrate of aluminium and a second nitrate and gum arabic.

4. An etching liquid for flat printing plates of metal, consisting of a mixture of 4 parts of fluo-silicate of aluminium, 12 parts of fluo-silicate of ammonium, 30 parts of bi-phosphate of ammonium, 14 parts of nitrate of aluminium, 38 parts of nitrate of ammonium, one kilogram of this salt mixture being dissolved in 22 liters of water to which 3 liters of thick liquid gum arabic are added.

1,022,275. COMBINED DOOR LOCK AND BELL. AMOS W. SUMMERS and JAMES V. THOMPSON, Spencer, W. Va. Filed Mar. 25, 1911. Serial No. 616,849. (Cl. 35—1.)



1. The combination with a lock having a turning spindle, of a stationary inner knob section surrounding the spindle and having a circular concave outer end, a triangular-shaped plate fixed to the spindle and having pivotal clappers mounted at the corners thereof, a stationary

gear surrounding the spindle and carried by the inner knob section, and pinions fixed to the pivots of the clappers and meshing with the gear.

2. The combination with a lock having a turning spindle, of a stationary inner knob section surrounding the spindle and having a circular concave outer end, a triangular-shaped plate fixed to the spindle and having pivotal clappers mounted at the corners thereof, a stationary gear surrounding the spindle and carried by the inner knob section, pinions fixed to the pivots of the clappers and meshing with the gear, and a shell fixed to the spindle and inclosing the said concave end of the knob section.

1,022,276. PRIMARY BATTERY. ZDZISLAW SZPOR, Stanislawow, Austria-Hungary. Filed Sept. 12, 1911. Serial No. 648,988. (Cl. 204—44.)

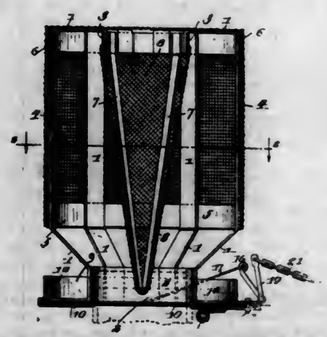


1. In a primary battery, the combination of a jar, a muff-shaped partition or fitting supported therein clear of the bottom and dividing the jar into an outer chamber for the soluble depolarizer and in an inner chamber for the electrolyte, said chambers being connected with each other by a ring-shaped slot, a flat electrode at the bottom of the jar and a flat soluble electrode at the upper part of the fitting.

2. In a primary battery, the combination of a jar, a muff-shaped partition or fitting supported therein clear of the bottom and dividing the jar into an outer chamber for the soluble depolarizer and in an inner chamber for the electrolyte, said chambers being connected with each other by a ring-shaped slot, a flat electrode located at the bottom of the jar and formed in the shape of a star, the inner corners of which form an opening corresponding to the contraction of the fitting, and a flat soluble electrode at the upper part of the fitting.

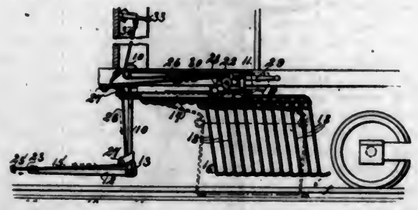
3. In a primary battery, the combination of a jar, a muff-shaped partition or fitting supported therein clear of the bottom and dividing the jar into an outer chamber for the soluble depolarizer and in an inner chamber for the electrolyte, said chambers being conneced with each other by a ring-shaped slot, a wire electrode located at the bottom of the jar, and a flat soluble electrode located in the upper enlarged portion of the fitting, and means for supporting the same in the upper part of the fitting.

1,022,277. SPARK-ARRESTER. ED GUSTAV TAACK, True, Tex. Filed June 5, 1911. Serial No. 631,217. (Cl. 110—133.)



The improved spark-arrester, comprising a superstructural frame whose lower portion is contracted, a base-ring to which said portion is rigidly attached, a wire screen covering such frame save at the lower portion, and an annular pan attached to and surrounding the base ring, the same having about the same diameter as the spark-arresting screen above, the latter being elevated from and of greater diameter than the base ring, whereby sparks may discharge from the screen through the open space above and surrounding the base ring and thus be received by the pan, substantially as described.

1,022,278. COMBINED FENDER AND APRON. SAMUEL M. TEETER and ELLAR G. TEETER, St. Louis, Mo. Filed Aug. 8, 1911. Serial No. 642,932. (Cl. 105—130.)



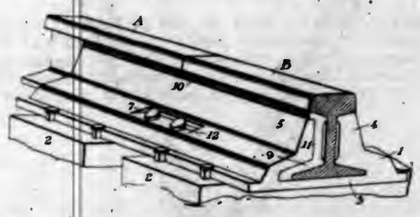
1. In a combined fender and apron for attachment to vehicles, a plurality of members secured to the front end of the said vehicle and depending therefrom, an apron rigidly secured to the said bars and extending laterally outward therefrom, a fender pivotally mounted on the under side of the vehicle in the rear of the said apron, a hook pivotally mounted on the under side of the said vehicle and adapted for engagement with the said fender to releasably retain the fender a distance from the ground, a cord positioned at the front end of the said apron, an L-shaped member pivotally mounted on the said apron and having one end of the said cord secured thereto and a second cord attached to the said L-shaped member and having connection with the said hook, so that when the first cord is moved, the said second cord will be operated to actuate the said hook to release the said fender and permit the same to assume a lowered position.

2. In a device of the class described, the combination of an apron for rigid attachment to a vehicle, a V-shaped fender for pivotal engagement with the under side of the vehicle in the rear of the said apron, the said fender consisting of bars having coiled springs connected thereto and terminating in teeth and means mounted on the said apron and connected with the said fender to automatically release the same so that the said fender will assume a lowered position.

3. In a device of the class described the combination of an apron for rigid attachment to a vehicle, a fender for pivotal engagement with the under side of the vehicle in the rear of the said apron and consisting of bars having coiled springs secured thereto and terminating in vertically depending teeth, an L-shaped member mounted to swing on the said apron and a cord connected to the said member and to the said fender so that when the said member is operated the said cord will be actuated to release the said fender so that the same will assume a lowered position.

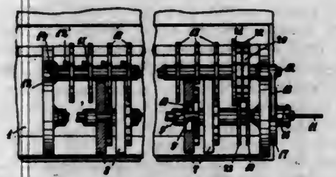
1,022,279. RAIL-JOINT. JOHN H. TRESSLER and CHARLES J. TRESSLER, Glencoe, Pa. Filed Oct. 21, 1911. Serial No. 655,831. (Cl. 239—6.)

In combination with the meeting ends of a pair of railway rails having their webs provided with openings, a chair, said chair being provided with angular fish plates one of the said fish plates having its vertical wall formed with a plurality of inwardly extending studs, the said studs being of a length approximately equaling the thickness of the webs of the rails, the second angular fish plate being spaced away from the first named plate a distance approximately equaling the thickness of the webs of the rails, the upper edge of the second named fish plate terminating a distance below the upper edge of the first named fish plate, the upper wall of the second named fish plate being inclined from one of the ends of the chair toward the opposite end thereof, the said second fish plate being provided with a plurality of openings registering with similar openings in the base, an angular wedge plate, said wedge plate having its base flange formed with a plurality of depressions, said fish plate being also provided with a headed portion having an off-set which is adapted to lie upon the upper edge of the second fish plate, the studs



of the first named fish plate adapted to engage with the openings of the rails, the wedge plate adapted to be inserted within the space between the second named fish plates and the rails, pins for the openings and the depressions of the second fish plate and base flange, said pins being provided with slots, and cotter pins for the slots adapted to contact with the under face of the base.

1,022,280. CALCULATING-MACHINE. FRANZ TRINKS, Brunswick, Germany. Filed July 5, 1911. Serial No. 636,940. (Cl. 235—144.)



1. In a calculating machine, the combination with a registering mechanism comprising a plurality of registering elements, and means to transmit values on said registering mechanism, of means to reset some of the registering elements to zero position independently of other similar elements consisting of a secondary shaft having resetting means thereon.

2. In a calculating machine, the combination with a registering mechanism comprising a plurality of registering elements, and means to transmit values on different groups of said registering mechanism, of secondary means to reset some of the groups of registering elements independently of other groups of the same kind of elements.

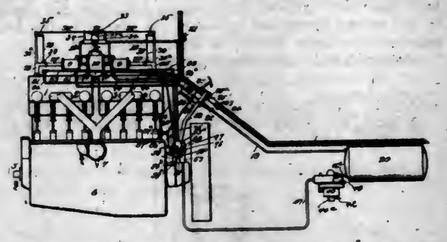
3. In a calculating machine the combination with a setting mechanism adapted to have values set thereon, a registering mechanism, means to transmit the values set on said setting mechanism to the registering mechanism, and means to bring said setting mechanism into coöperation with different groups of registering elements of the registering mechanism, of secondary means to reset one of said groups to zero position independently of other groups.

4. In a calculating machine, the combination with a registering mechanism comprising a plurality of registering elements, and means to transmit values on said registering mechanism, of a secondary shaft, resetting means on said shaft adapted to coöperate with some of the registering elements with the exclusion of others, and means to coöperate with said secondary shaft for resetting the registering elements coöperating therewith.

5. In a calculating machine, the combination with a registering mechanism comprising a plurality of registering elements, transmission elements coöperating with said registering elements, and means to transmit values on said registering mechanism through the intermediary of said transmission elements, of resetting devices on a part of said transmission elements with the exclusion of the others, and means to operate said transmission elements for resetting the registering elements.

[Claim 6 not printed in the Gazette.]

1,022,281. STARTING DEVICE FOR INTERNAL-COMBUSTION ENGINES. FRANK H. WALKER, Atwood, Kans. Filed Jan. 7, 1911. Serial No. 601,261. (Cl. 123—180.)



1. The combination with a multiple-cylinder internal-combustion engine; of means for starting the same, said means comprising a source of fuel under pressure connected to the respective engine cylinders, a valve mechanism for successively charging said cylinders from the source, said valve mechanism being movable bodily into and out of operative position, and means controlled by the valve mechanism for igniting the charge in the second cylinder thus charged.

2. The combination with a multiple-cylinder internal-combustion engine; of means for starting the same, said means comprising a source of fuel under pressure connected to the respective engine cylinders, a valve mechanism for successively charging the cylinders from said source, said valve mechanism being movable bodily into and out of operative position, and means controlled by the valve mechanism for successively igniting the charges in the cylinders in the reverse order in which they are charged.

3. The combination with a multiple-cylinder internal combustion engine, of means for starting the same, said means comprising a source of fuel under pressure, a valve mechanism connected to said source, connections between the valve mechanism and the respective engine cylinders, means for operating the valve mechanism to admit a charge to one of the engine cylinders, relief valves on the engine cylinders, means for operating the relief valves, connections between said relief valve operating means and the means for operating the aforesaid valve mechanism, the connections between said means being such that the admission of a charge into one cylinder opens the relief valve of a cylinder in which the piston travels in the opposite direction from the piston of the first-mentioned cylinder.

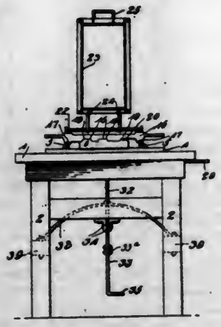
4. The combination with a multiple-cylinder internal combustion engine; of means for starting the same, said means comprising a source of fuel under pressure, a valve mechanism connected to said source, connections between the valve mechanism and the respective engine cylinders, means for operating the valve mechanism to admit a charge to one of the engine cylinders to place the piston of another cylinder into firing position, and thereafter admitting a charge into the second-mentioned cylinder, relief valves on the engine cylinders, means for operating the relief valves, connections between the relief valve operating means and the means for operating the aforesaid valve mechanism, the connections between said means being such that when the charge is admitted into the first-mentioned cylinder, the relief valve of the other cylinder is opened.

5. The combination with a multiple-cylinder internal combustion engine; of means for starting the same, said means comprising a source of fuel under pressure, a valve mechanism connected to said source, connections between the valve mechanism and the respective engine cylinders, means for operating the valve mechanism to admit a

charge to one of the engine cylinders to place the piston of another cylinder into firing position, and thereafter admitting a charge into the second-mentioned cylinder, relief valves on the engine cylinders, means for operating the relief valves, connections between the relief valve operating means and the means for operating the aforesaid valve mechanism, the connections between said means being such that the admission of a charge into one cylinder opens the relief valve of a cylinder in which the piston travels in the opposite direction from the piston of the first-mentioned cylinder, and means for firing the charge in the second mentioned cylinder, the charge in the first-mentioned cylinder thereupon being compressed.

[Claims 6 to 17 not printed in the Gazette.]

1,022,282. ROOFING-TILE MACHINE. OTTO WALTER, De Kalb, Ill. Filed June 15, 1911. Serial No. 633,311. (Cl. 25—43.)

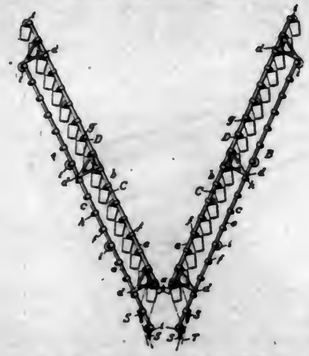


In a machine of the character described, a suitable supporting frame, a pallet adapted to be removably engaged with said frame, longitudinally disposed ribs formed on said pallet along one edge and through the center thereof, said rib being adapted to form grooves in the under side of the tile, the central rib having arranged therein a transverse groove adapted to receive the material whereby a web is formed in the central grove of the tile, means whereby said web is perforated, said means comprising a rock shaft, a crank arm formed on one end of the shaft, a curved needle arranged on the arm and adapted to be forced through said web, a handle formed on the outer end of said shaft, the lower surface of said central rib of the pallet having a guide groove for receiving and guiding the needle, an abutting wall against which the end of said needle comes in contact for limiting the movement thereof in one direction, and a slidably mounted scraping bar having formed therein a series of notches whereby the upper surface of the tile is formed.

1,022,283. CREEL. SIMON W. WARDWELL, Providence, R. I., assignor to Universal Winding Company, Portland, Me., a Corporation of Maine. Filed Mar. 22, 1905. Serial No. 251,485. (Cl. 242—131.)

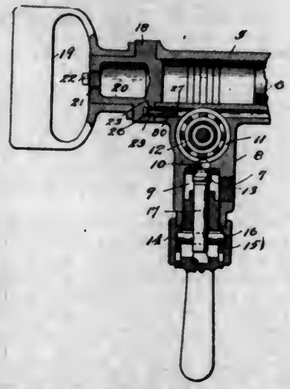
1. The combination in a V-shaped creel, of two sets of parallel frames, each frame comprising two horizontal rods and a plurality of vertical rods arranged parallel to each other and supported on the horizontal rods, of *cop* holders supported on the vertical rods of the rear frames and adjustable up and down and around the rods, and tension devices supported on the rods of the forward frame and adjustable up and down and around said rods to aline them with the cop holders.

2. A knock-down creel having wings arranged at an acute angle to each other, each wing consisting of two frames and each frame comprising two horizontal rods and a series of parallel vertical rods, means on the horizontal rods to secure them to the ends of the vertical rods, brackets secured to the horizontal rods of one frame to support it in relation to the opposite frame, hinged joints to connect the adjacent ends of the two wings, cop supports having brackets adapted to be removably secured to the vertical rods of one frame, and tension devices having brackets adapted to be removably secured to the vertical rods of the opposite frame.



3. A creel having two sets of parallel frames, holders arranged to support cops to deliver over their ends, means for securing each holder to adapt it to be adjusted at an acute angle to the rear frame, tension devices supported by the front frames and means to adapt the tension devices to be adjusted to aline with the axes of the cops supported on the holders.

1,022,284. LUBRICATING MECHANISM. DANIEL SHAW WAUGH, Denver, Colo., assignor to The Denver Rock Drill & Machinery Co., Denver, Colo., a Corporation of Colorado. Filed June 5, 1911. Serial No. 631,404. (Cl. 184—76.)

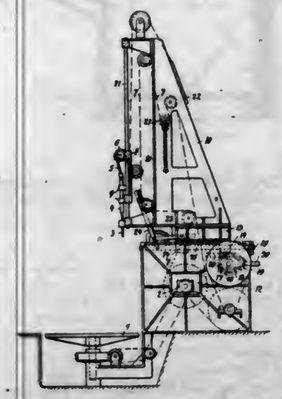


1. The combination with motive fluid operated mechanism to be lubricated, of means for supplying lubricant thereto, including a chamber having an inlet port opening through one end wall, and an outlet port opening through the opposite end wall, a reciprocatory valve located wholly within the chamber and having a lubricant holding recess, one end of the valve being movable to a position to close the outlet port, the other end being movable against the wall, through which the inlet port opens, said valve furthermore having a channel opening through the latter end and communicating with the lubricant holding recess, the channel being disposed out of alinement with the inlet port.

2. The combination with a cylinder member, of a closure head for one end of the same, containing a lubricant reservoir, a pin for preventing relative rotation between the cylinder and head, having a lubricant passage therethrough, and means for controlling the supply of lubricant through said passage.

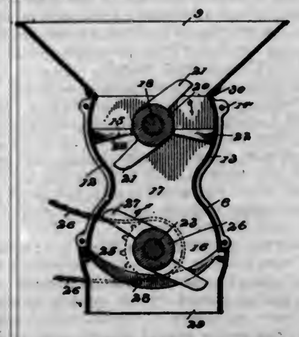
3. The combination with a cylinder member, of a closure head for one end of the same, containing a lubricant reservoir, a pin for preventing relative rotation between the cylinder and head, having a lubricant passage therethrough, and automatic means coöperating with the pin and actuated by the motive fluid for controlling the supply of lubricant through the passage.

1,022,285. MACHINE FOR MAKING CEMENT PIPES OF ANY SECTIONAL FORM. FERDINAND WIENBERG, Copenhagen, and LARS JÖRGENSEN, CARSTEN JESPERSEN, and JÖRGEN KRISTIAN JÖRGENSEN, Elsinore, Denmark. Filed Oct. 20, 1910. Serial No. 588,136. (Cl. 25—37.)



In a machine for making cement pipes of any sectional form, the combination with a rotatable mold plate, adapted to carry the mold, the space above said plate being free, means for rotating this plate, a stationary frame, an upper frame slidingly mounted thereon, a stamper mounted on said upper frame, means for moving the stamper in vertical directions to stamp the cement within the mold, an interchangeable grooved guide disk, a guide pivot engaging therewith, to which said guide pivot is fixed a driving rod, secured on the upper frame, and means for rotating the guide disk to cause the frame and the stamper mounted thereon to move to and from the axis of the mold plate according to the form of the mold, of means for securing the driving rod in different positions on the upper frame so as to make the machine adjustable to different sizes of pipes, substantially as described.

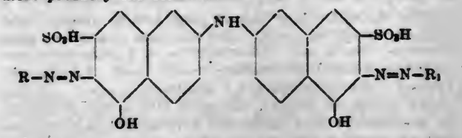
1,022,286. CIDER-MILL. R T WILSON, Greenville, Mich. Filed Aug. 31, 1908, Serial No. 451,124. Renewed Feb. 19, 1912. Serial No. 678,746. (Cl. 146—11.)



A mill of the character described, comprising a housing having an upper and lower cylindrical portion, a cylinder within the upper cylindrical portion, outwardly extending broad crushing teeth carried by opposite sides of the cylinder, inwardly extending crushing blades carried by the cylindrical portion and extending close to the cylinder and a little below the center thereof, and between which the crushing teeth pass, a cutting cylinder within the lower cylindrical portion cutting blades carried by the cylinder, and circular cutting bars secured to the cylindrical portion in approximately a horizontal line with the cylinder and extending down around the cylinder and between which the cutting teeth pass and means for rotating the cutting cylinder at a greater rate of speed than the crushing cylinder.

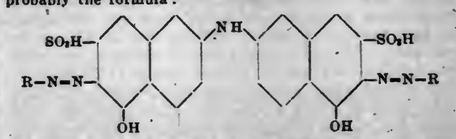
1,022,287. AZO COLORING-MATTER. ARTHUR ZART, Vohwinkel, near Elberfeld, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed June 6, 1911, Serial No. 631,551. Renewed Feb. 7, 1912. Serial No. 676,013. (Cl. 8—1.)

1. The herein described new disazo dyestuffs having most probably the formula:



R and R_1 meaning 2-arylcarbonylamino-5-naphthol-7-sulfonic acid, which are after being dried and pulverized in the shape of their alkaline salts dark powders easily soluble in water; yielding upon reduction with stannous chlorid and hydrochloric acid an aminoarylcarbonyl-2-amino-5-naphthol-7-sulfonic acid and 5.5'-dioxy-6.6'-diamino-2.2'-dinaphthylamin-7.7'-disulfonic acid, dyeing cotton blue-red shades which can be combined on fiber with diazotized para-nitranilin from red to Bordeaux shades which are fast to washing and can be discharged to a pure while, substantially as described.

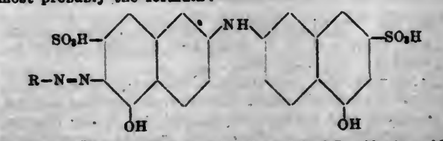
2. The herein described new disazo dyestuff having probably the formula:



R meaning 2-benzoylamino-5-naphthol-7-sulfonic acid, which is after being dried and pulverized in the shape of its sodium salt a dark powder, soluble in water with a bluish-red color and soluble in concentrated sulfuric acid with a reddish-violet color; yielding upon reduction with stannous chlorid and hydrochloric acid 2-para-aminobenzoylamino-5-naphthol-7-sulfonic acid and 5.5'-dioxy-6.6'-diamino-2.2'-dinaphthylamin-7.7'-disulfonic acid; dyeing cotton bluish-red shades, changing into a fast Bordeaux by development with diazotized para-nitranilin which are fast to washing and can be discharged to a pure white with hydrosulfite, substantially as described.

1,022,288. AZO COLORING-MATTER. ARTHUR ZART, Vohwinkel, near Elberfeld, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed June 6, 1911, Serial No. 631,552. Renewed Feb. 7, 1912. Serial No. 676,014. (Cl. 8—1.)

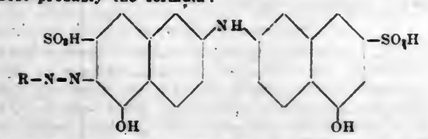
1. The herein described new monoazo dyestuffs having most probably the formula:



R meaning 2-arylcarbonylamino-5-naphthol-7-sulfonic acid, which are after being dried and pulverized in the shape

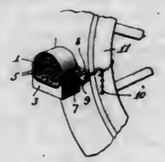
of their alkaline salts dark powders easily soluble in water; yielding upon reduction with stannous chlorid and hydrochloric acid an aminoarylcarbonyl-2-amino-5-naphthol-7-sulfonic acid and 5.5'-dioxy-6-amino-2.2'-dinaphthylamin-7.7'-disulfonic acid; dyeing cotton blue-red shades which can be combined on fiber with diazotized para-nitranilin to red to Bordeaux shades which are fast to washing and can be discharged to a pure white, substantially as described.

2. The herein described new monoazo dyestuff having most probably the formula:



R meaning 2-benzoylamino-5-naphthol-7-sulfonic acid, which is after being dried and pulverized in the shape of its sodium salt a dark powder, soluble in water with a bluish-red color and soluble in concentrated sulfuric acid with a bluish-red color; yielding upon reduction with stannous chlorid and hydrochloric acid 2-para-amino-benzoylamino-5-naphthol-7-sulfonic acid and 5.5'-dioxy-6-amino-2.2'-dinaphthylamin-7.7'-disulfonic acid; dyeing cotton bluish-red shades, changing into a fast Bordeaux by development with diazotized para-nitranilin which are fast to washing and can be discharged to a pure white with hydrosulfite, substantially as described.

1,022,289. TIRE-VULCANIZING REPAIR APPARATUS. CECIL F. ADAMSON, East Palestine, Ohio. Filed Feb. 19, 1912. Serial No. 678,518. (Cl. 18—18.)



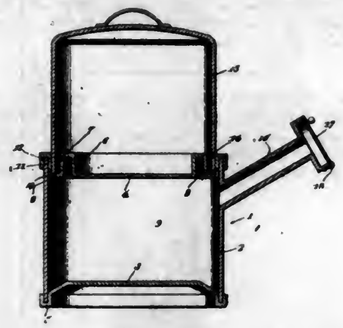
1. A vulcanizing device, comprising a member having a vulcanizing face and an opposite open cupped face constructed to retain a charge of combustible fluid when disposed with its vulcanizing face lying in any plane from a horizontal to a vertical position, said member being constructed to direct the flame of said combustible fluid away from said vulcanizing face.

2. A vulcanizing device, comprising a combustible fluid retaining vulcanizing member adapted to operate with its vulcanizing face in any position from a horizontal to a vertical plane, and having one end formed to constitute a combustible fluid retaining chamber when the device is in a vertical position, said member formed open on its side opposite to the vulcanizing face.

3. A vulcanizing device, comprising a combustible fluid retaining vulcanizing member adapted to operate with its vulcanizing face in any position from a horizontal to a vertical plane, and having one end formed to constitute a combustible fluid retaining chamber when the device is in a vertical position, said member formed open on its side opposite to the vulcanizing face, and a series of heat transmitters connected to the inner side of said vulcanizing face and projecting toward the open side of said member.

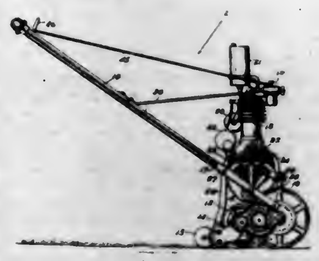
1,022,290. TABLE-SERVICE DEVICE. SARAH ANDERSON, Ridgewood, N. J. Filed July 22, 1911. Serial No. 639,935. (Cl. 126—246.)

A serving dish comprising a member having a chamber portion adapted for the reception of a heating medium, and a top tray portion closing one end of the chamber and provided with a plurality of annular concentrically arranged spaced walls forming an intervening inner heating chamber and an outer cover-receiving space, and a



cover removably fitted to the tray member and having a portion extending into the said cover-receiving space.

1,022,291. MOWING-MACHINE. WENDELL P. ANTHONY, Eddystone, Pa., assignor to Wm. Simpson & Sons, Philadelphia, Pa., a Firm. Filed Oct. 28, 1910. Serial No. 589,539. (Cl. 56—19.)



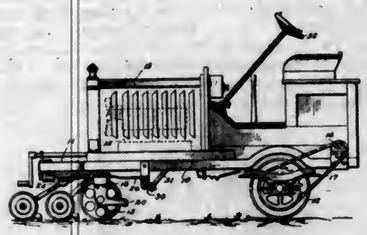
1. A mowing machine comprising ground wheels, a cutter, and a handle bar for guiding the machine, in combination with a motor mounted on the machine, driving wheels mounted on a movable shaft and arranged to be driven by the motor, and means on the handle bar for throwing the driving wheels into and out of direct engagement with the ground wheels.

2. A mowing machine comprising ground wheels, a cutter, and a handle bar for guiding the machine, in combination with a motor mounted on the machine, friction wheels mounted on a swinging shaft and arranged to be driven by the motor, and means on the handle bar for throwing the friction wheels into and out of direct engagement with the ground wheels.

3. A mowing machine comprising a frame, a pair of ground wheels, a rotary cutter driven by the ground wheels and a guiding handle bar, in combination with a motor mounted on the frame, a shaft mounted in movable bearings, means connecting the motor with said shaft, friction wheels on said shaft and movable therewith into and out of direct engagement with the tread of ground wheels, and means mounted on the handle bar for moving said shaft and friction wheels.

4. A mowing machine comprising a frame, ground wheels, a rotary cutter, means for operatively connecting the cutter with the ground wheels whereby the cutter is driven by the ground wheels, means for driving the ground wheels comprising a driven shaft having wheels adapted to engage the ground wheels, a swinging support for said shaft whereby the driving wheels may be moved into and out of engagement with the ground wheels, a motor, a sprocket chain connecting the motor shaft with the said driven shaft, a handle bar, means supported on the handle bar for swinging the driven shaft to carry its wheels into and out of engagement with the ground wheels, and additional means supported on the handle bar for controlling the motor.

1,022,292. MOWING-MACHINE. WENDELL P. ANTHONY, Eddystone, Pa., assignor to Wm. Simpson & Sons, Philadelphia, Pa., a Firm. Filed Nov. 7, 1910. Serial No. 591,170. (Cl. 56—19.)



1. In a lawn mower, the combination with a main frame and supporting wheels therefor, of a plurality of cutting mechanisms each comprising ground wheels and a rotating cutter, each of said cutting mechanisms being connected to the main frame by a universal joint, whereby it is permitted to adapt itself to the surface of the lawn.

2. In a lawn mower, the combination with a main frame and supporting wheels therefor, of three cutting mechanisms, each of said mechanisms comprising ground wheels and a rotary cutter, and each cutting mechanism being connected to the main frame by a universal joint, two of said cutting mechanisms being arranged respectively at opposite sides of the main frame, and the third cutting mechanism being arranged centrally and adapted to cut a swath between the swaths cut by the side cutting mechanisms.

3. A power operated mowing machine comprising a main frame, a motor, a rear truck provided with a wheel driven by the motor, a forward truck swiveled to the main frame, means for turning the forward truck to steer the machine, and a plurality of cutting mechanisms connected to the forward truck by universal joints, for the purpose set forth.

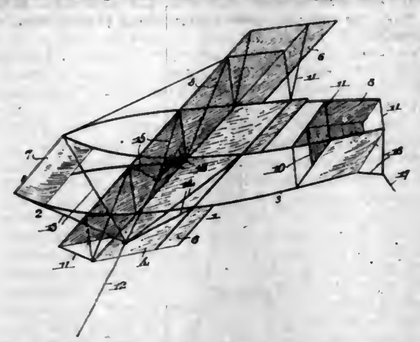
4. A power operated mowing machine comprising a main frame, a motor, a rear truck provided with a wheel driven by the motor, a forward truck swiveled to the main frame, means for turning the forward truck to steer the machine, and a plurality of independent cutting mechanisms detachably connected to the forward truck and having universal movement relative thereto.

5. A power operated mowing machine comprising a main frame, a motor, a rear truck provided with a wheel driven by the motor, a forward truck swiveled to the main frame, means for turning the forward truck to steer the machine, and three independent cutting mechanisms connected to the front truck by universal joints, one of said mechanisms being arranged in advance of the other two and adapted to cut a swath between the swaths cut by the other two.

[Claims 6 to 9 not printed in the Gazette.]

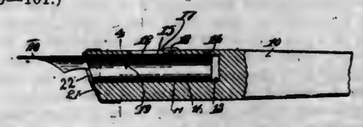
1,022,293. BIPLANE KITE. OTTO BETH, Lynbrook, N. Y. Filed Sept. 16, 1911. Serial No. 649,689. (Cl. 244—23.)

A biplane kite including a main frame carrying superposed supporting surfaces, head and tail frames carrying balancing surfaces, a controlling cord, branches leading from the cord to the front corners of the head frame, branches leading from the cord to the upper front and



rear corners of the main frame, and branches leading from the cord to the lower rear corners of the main frame.

1,022,294. PENHOLDER. EARL BORSON, New Boston, Mo. Filed Aug. 24, 1910. Serial No. 578,685. (Cl. 120—101.)



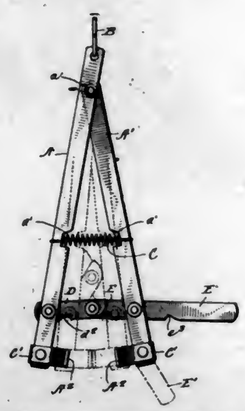
A pen holder comprising a stock having a longitudinal bore through the side of the stock and a longitudinal slot communicating with said bore, a cap fitted upon the end of the stock and having an aperture registering with the bore, an outer ferrule permanently secured within the bore and having a flange upon its outer end bearing against the cap, said ferrule also having a longitudinal slot registering with the slot located in the stock, and an inner pen retaining ferrule slidably mounted within the outer ferrule in spaced relation thereto and having a pin projecting through the slots of the outer ferrule and stock, said inner ferrule also having a stop upon its outer surface movable therewith to the free end of the outer ferrule and engaging the inner surface of the outer ferrule and holding the inner ferrule in spaced relation from the said outer ferrule at one side thereof to permit the insertion of a pen point therebetween.

1,022,295. TROUSERS-HANGER. GUSTAF R. BOWMAN, Rockford, Ill. Filed July 6, 1911. Serial No. 637,072. (Cl. 211—13.)

1. A trousers hanger comprising a pair of arms pivoted to each other at their uper ends, clamping jaws projecting inwardly toward each other from the lower ends of said arms, said arms having notches in the inner edges intermediate their upper and lower ends, a coil spring connected to said arms and seated in the aforesaid notches, said spring normally forcing the jaws toward each other, and a two-part latch pivotally connected at its ends to the said arms below the coil spring, an operating handle projecting outwardly from said latch whereby the latch is adapted to force the jaws apart to permit the entrance of a garment between the said jaws, said latch adapted to be broken by the upward movement of the garment between said arms and permit the spring to force the clamping jaws into gripping contact with the garment.

2. A trousers hanger comprising a pair of arms pivoted to each other at their upper ends, clamping jaws at the lower ends of said arms, a spring connected to said arms and normally forcing the jaws toward each other, and a two-part latch pivotally connected at its ends to the said arms, said latch adapted to hold the clamping jaws apart

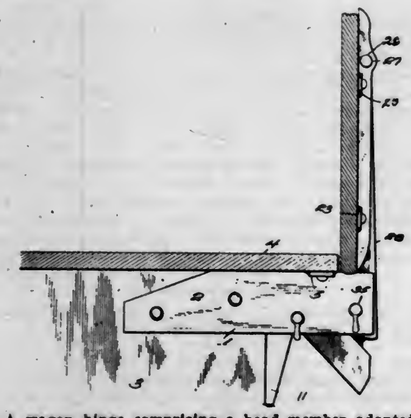
to permit the entrance of the garment between said jaws, said latch adapted to be broken by the upward movement of the garment between said jaws, and permit the spring to force the clamping jaws into gripping contact with the garment.



3. A trousers hanger comprising a pair of arms pivoted to each other at or near their upper ends, transverse clamping jaws at the lower ends of said arms, a spring connected to said arms and normally forcing them and the clamping jaws toward each other, a latch for holding said jaws separated and consisting of two members pivotally connected to the arms and to each other, the end of one member of the latch having one end reduced or cut out and its other forming a handle, the other latch member having a lug positioned to engage the reduced or cut out end of the first mentioned latch member, said latch adapted to hold the clamping jaws apart in opposition to the aforesaid spring, and to be released or broken by the upward movement of a garment between said jaws, and means for suspending the hanger arms.

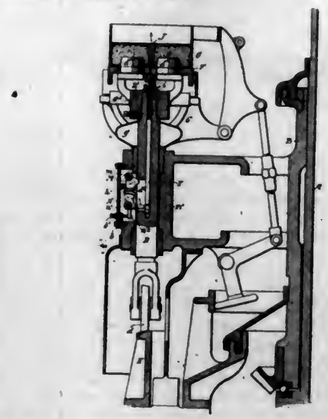
4. A trousers hanger comprising a pair of opposing jaws normally held in contact with each other, and means for separating said jaws, said means also positioned to be engaged by the entrance of the garment between the separated jaws and release them whereby said jaws may spring together to support the garment.

1,022,296. WAGON-BODY. WILLIAM E. BRELSFORD, Triumph, Ill. Filed Sept. 1, 1909. Serial No. 515,619. (Cl. 21—74.)



A wagon hinge comprising a head member adapted to be secured against the end of a stringer and below a platform, said head member being formed with side plates, a brace block pivoted to said side plates, said head member being formed with guiding surfaces, a brace bar pivoted at its lower end to said brace block, a bar pivoted to the upper end of said brace bar, a side board secured to said bar, a projection on said brace bar and formed with an opening, a pivoted rod extending through said opening in said projection, said brace block being adapted to engage the outer surface of the head in its innermost position, the lower end of said bar being formed with a rest for said side board, and a rounded cross bar formed on said bar and adapted to contact with the guiding surfaces formed on said head.

1,022,297. SPRUE-RAISING MECHANISM FOR MOLDING-MACHINES. JOHN WILSON BROWN, Jr., Philadelphia, Pa., assignor to The Enterprise Manufacturing Company of Pennsylvania, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Feb. 2, 1911. Serial No. 606,175. (Cl. 22—38.)



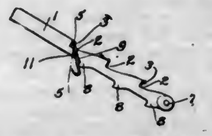
1. The combination in a molding machine, of a table, a pattern carrying spindle, a bearing therefor, means for vertically moving said spindle, a sprue mounted above the table, a rod extending through the spindle and carrying the sprue at its upper end, an arm on the bearing engaging the sprue rod, and means actuated by the spindle on its downward movement for operating the arm to raise the rod and its sprue.

2. The combination in a molding machine, of a frame, a table carried thereby, a spindle mounted in the frame, a pattern carried by the spindle, said spindle having a longitudinal and a transverse opening, a sprue rod mounted in the longitudinal opening, two segments geared together and mounted on the frame, one segment connected to the rod, and the other segment actuated by the spindle on its downward movement to lift the sprue clear of the mold.

3. The combination in a molding machine, of a frame, a table supported thereby, said table having openings therein, a spindle mounted in the frame, a frame mounted on the end of the spindle and carrying the patterns which project through the openings in the table and into the mold, said spindle having a longitudinal opening and a lateral slot communicating with the opening at its base, a rod in the opening in the spindle and having a pin which projects through the table, a sprue carried by the upper end of the pin, two segments, one segment having an arm projecting through the lateral slot in the spindle and engaging the pin, the other segment having a portion entering the slot when the spindle is in its raised position, the two segments being geared together, a spring back of the last mentioned segment so as to force it into the slot, and a stop to limit the downward movement of the rod.

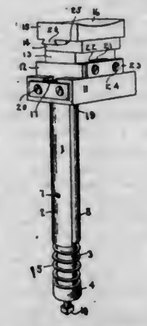
4. The combination of a carrying frame, a spindle mounted in the frame, a pattern carried by the spindle, a table having an opening through which the pattern extends, said table being supported by the frame, the spindle having a longitudinal opening and a transverse slot communicating with the opening, a rod mounted in the opening and having a pin at its upper end which passes through an opening in the table, a sprue mounted on the upper end of the pin, two studs mounted on the carrying frame and two segments, one mounted on one stud and the other mounted on the other stud, the two segments having teeth which intermesh, an arm on one segment engaging the rod, said segment having a second arm, an adjustable stop regulating the downward movement of the rod, the first segment having a projection arranged to enter the slot in the spindle, a cap plate for closing the opening in the frame, and a spring mounted between the cap plate and the first mentioned segment, tending to force the segments into the slot of the spindle.

1,022,298. GAMBREL. FRED A. BULLER, Springfield, S. D. Filed July 17, 1911. Serial No. 638,987. (Cl. 17—30.)



A gambrel comprising a gambrel bar having notches and lugs carried on opposite sides thereon, and a gambrel hook adjustably carried by said gambrel bar and coöperating with said notches and lugs to hold said gambrel hook in adjusted position.

1,022,299. ATTACHMENT FOR SHOE-LASTING MACHINES. RUSH BUNTAN, Lestershire, N. Y. Filed Oct. 26, 1911. Serial No. 656,917. (Cl. 12—127.)

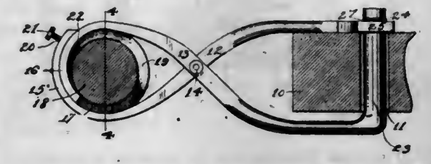


1. A shoe supporting post for lasting machines comprising an upper section, a lower section having a telescopic engagement with the upper section, a spring arranged between the lower and upper sections whereby the latter is yieldingly supported, and a series of laterally slidable toe supporting elements, including a resilient pad, supported on the upper end of the upper spring supported section and adapted to receive and yieldingly support the toe of the shoe while being lasted, the slidability of the post sections and the lateral slidable adjustments of the supporting elements affording universal adjustment of the resilient pad.

2. A shoe supporting post for lasting machines comprising an outer upper tubular section, a lower inner section having a telescopic engagement with said outer section, a head formed on the lower end of said inner section, a coiled spring arranged between said head and the lower end of the tubular section of the post whereby the latter is yieldingly supported on the inner section, means to limit the sliding engagement of the outer section with the inner section, a head arranged on the upper end of said outer section, adjustable pad supporting blocks slidably engaged with said head, and a resilient pad adjustably secured to one of said blocks.

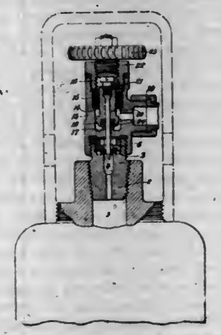
3. A shoe supporting post for lasting machines comprising a tubular outer upper section, an inner section having a telescopic engagement with said outer section, said inner section having formed therein near its inner end a slot, a pin inserted through said outer section and through said slot whereby the sliding engagement of the outer section on the inner section is limited, a head formed on the lower end of said inner section, a coiled spring arranged between said head and the lower end of the upper section whereby the latter is yieldingly supported on the lower section, an attaching screw arranged in the lower end of said inner section, a head arranged on the upper end of said outer section, pad supporting blocks having a sliding adjustable engagement with each other and with said head, and a resilient toe receiving pad having an adjustable engagement with one of said blocks, whereby the toe of the shoe is yieldingly supported while the shoe is being lasted.

1,022,300. CLEVIS. OLAF M. BYE, Princeton, Minn. Filed Sept. 7, 1911. Serial No. 648,107. (Cl. 97—4.)



A clevis comprising a pair of members crossed and pivotally connected together, one end of each of the said members being formed with overlapped hook portions for engagement with a whiffletree, a screw passed through said hook portions and adapted to engage in the whiffletree, the opposite end of one of said members having a portion extending at right angles thereto and provided with a transverse opening near its free end, said right angular portion being adapted to engage in an opening in a plow beam, transversely flattened portion on the relative end of the other member having an opening therethrough for the reception of said extension, and a fastening device disposed in the opening in said extension.

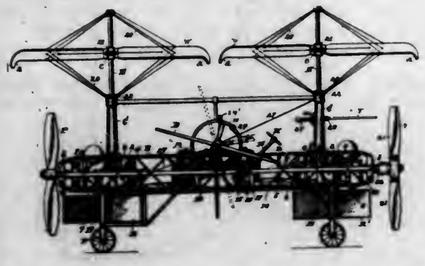
1,022,301. CONTAINER OR CYLINDER FOR COMPRESSED OR LIQUEFIED GAS. ROBERT HUNTER CAMPBELL, Edmonton, England, assignor to Aerators Limited, Edmonton, England. Filed May 13, 1910. Serial No. 561,061. (Cl. 220—110.)



A trade container for compressed gases having an internally threaded neck, a perforated plug screwed into said neck, a perforable washer or cap within said plug acting as a closure and safety valve, said plug having

an externally threaded nipple portion projecting above the neck of said container to receive a perforating draw-off device adapted to be screwed on said projecting portion, in combination with a combined perforating and draw-off device, comprising a casing with inlet and outlet ports, means for securing the same to the projecting portion of said plug with the inlet port communicating with the perforation of the plug, a valve with renewable face closing said inlet port, a piercer passing through said valve and adapted to rupture said closure in the plug and means for moving said valve and piercer in said casing to perforate said closure and control the escape of gas from the container, substantially as described.

1,022,302. POWER-DRIVEN MACHINE FOR AERIAL NAVIGATION. VARNUM F. CARPENTER, Cleveland, Ohio. Filed Oct. 24, 1910. Serial No. 588,597. (Cl. 244—15.)

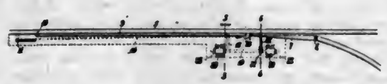


1. A machine substantially as described comprising a substantially cigar shaped body having tubular uprights near its ends, power driven shafts supported in said uprights and projecting above the same, lift blades mounted on said shafts between their ends and the top of said uprights and inclined stays running to said blades top and bottom and confining the blades to horizontal rotation; in combination with balancing planes relatively midway between said lift planes, a shaft on which said balancing planes are mounted outside said body and said shaft adapted to rotate said balancing planes to a substantially vertical position, said latter shaft being supported across the top and middle of said body, thereby elevating the said balancing planes above the body of the machine, propellers at the ends of said body and gear connections operatively uniting the same with said power driven shafts.

2. In aerial machines, a skeleton body of substantially cigar shape, a drive shaft lengthwise through the same and propellers on the ends thereof outside said body, tubular uprights fixed on said frame near the ends thereof and vertical shafts extending through said uprights above the same and operatively geared with said drive shaft, lift blades fixed on the said vertical shafts and above said tubular uprights and limited to horizontal rotation, stays for said blades above and below on said shafts, a single hand controlled cross shaft at the middle and top of said body having bearings at its ends, and a single balancing blade fixed on each end thereof outside said body and arranged relatively beneath the said horizontal blades and overlapped thereby, and inclined stays stretched between the said bearings and the main frame.

3. In an aerial machine, a main frame having a propeller at each end and lift blades over its ends limited to a horizontal rotation, in combination with a single balancing plane at each side of said frame centrally between and beneath said lift blades and overlapped thereby and a cross shaft supporting said planes, having suitable bearings at its ends; wire stays 27 extending from said frame on an inclined plane longitudinally of the frame and connected at their other ends with said bearings, and means for rotating said shaft, whereby said planes can be adjusted to a substantially vertical position between and in respect to said lift blades.

1,022,303. AUTOMATIC RAILWAY-SWITCH. ROY H. CONLEY, Los Angeles, Cal. Filed June 23, 1911. Serial No. 634,850. (Cl. 104—24.)

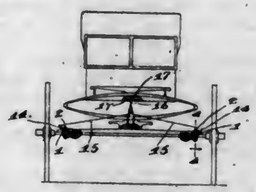


1. The combination with main and side rails, of a movable switch point for opening and closing movements, a rocking shaft supported below the main rails, an arm formed on the said shaft and loosely connected with the switch point, a lateral branch extension formed on the rocking shaft at right anges to the said arm, a depressible tread bar pivotally connected to one of the main rails, a rod depending from said tread bar and movable into and out of engagement with the said branch extension, and means connected with said depending rod and actuated by a moving car to shift the said depending bar into engagement with the branch extension, whereby on the depressing of the tread bar, the said switch bar will be thrown to closed position.

2. The combination with main and side rails, of a movable switch point for opening and closing movements, a rocking shaft supported below the main rails, an arm formed on the said shaft and loosely connected with the switch point, a lateral branch extension formed on the rocking shaft at right angles to the said arm, a depressible tread bar pivotally connected to one of the main rails, a rod depending from said tread bar and movable into and out of engagement with the said branch extension, means connected with said depending rod and actuated by a moving car to shift the said depending bar into engagement with the branch extension, whereby on the depressing of the tread bar, the said switch bar will be thrown to closed position, and means acting upon the tread bar for elevating the same for the depressing thereof by the wheels of such moving car.

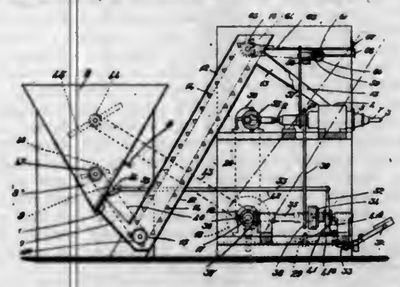
3. The combination with main and side rails, of a movable switch point for opening and closing movements, a rocking shaft supported below the main rails, an arm formed on the said shaft and loosely connected with the switch point, a lateral branch extension formed on the rocking shaft at right angles to the said arm, a depressible tread bar pivotally connected to one of the main rails, a rod depending from said tread bar and movable into and out of engagement with the said branch extension, means connected with said depending rod and actuated by a moving car to shift the said depending bar into engagement with the branch extension, whereby on the depressing of the tread bar, the said switch bar will be thrown to closed position, means acting upon the tread bar for elevating the same for the depressing thereof by the wheels of such moving car, and means acting upon the depending rod to move its operating mechanism to normal position.

1,022,304. SHAFT AND TONGUE COUPLING. CURTIS C. COULTER, Rock Island, Ill. Filed Sept. 22, 1910. Serial No. 583,250. (Cl. 21—75.)



A shaft coupling comprising a clip having thereon apertured connecting lugs, a supporting plate adapted to be connected to said clip, a bolt operating bar pivotally connected to said plate and having a sliding engagement with said bolt, an operating arm formed on said bar, a guard plate secured to said bar and arm, an anti-rattling spring carried by said operating arm and adapted to be engaged with the coupled end of the shaft whereby the same is held against rattling and whereby the arm is held down in operative position, and means whereby the coupling is released by an occupant of the vehicle.

1,022,305. APPARATUS FOR PACKING OR STUFFING ARTICLES. HENRY SAMUEL DEAN, London, England. Filed Aug. 19, 1911. Serial No. 645,048. (Cl. 100—57.)

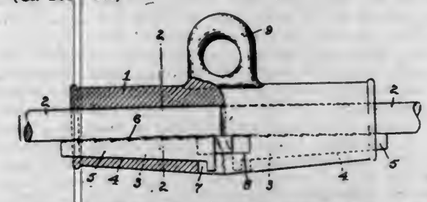


1. In an apparatus for packing or stuffing articles, the combination of a casing having an outlet; a hollow rotary member arranged within said casing for feeding material toward said outlet; a reciprocatory member arranged within the bore of said rotary member and projecting through the outer end thereof; and separate means for operating said rotary and reciprocatory members.

2. In an apparatus for packing or stuffing articles, the combination of a casing having a tubular extension provided with a nozzle; a hollow feed screw arranged within said casing and projecting into said extension; a plunger arranged in the bore of said screw and projecting through the outer end thereof; means for rotating said screw; and means for reciprocating said plunger.

3. In an apparatus for packing or stuffing articles, the combination of a casing having an outlet; a hollow rotary member arranged within said casing for feeding material toward said outlet; a reciprocatory member arranged within the bore of said rotary member and having a barbed end projecting through the outer end thereof; and separate means for operating said rotary and reciprocatory members.

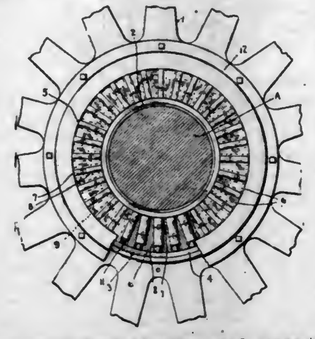
1,022,306. PULL-LINE COUPLING. EDWARD R. DONAHUE, HANS J. ANDERSON, and HARRY B. GREGG, Bradford, Pa. Filed May 9, 1911. Serial No. 626,050. (Cl. 166—10.)



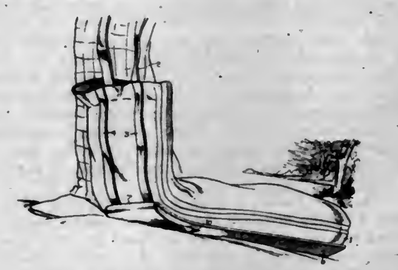
A sucker or pull rod coupling comprising an integral body having a tubular passage for the reception of the ends of the sucker rods, and oppositely disposed tapered keyways, tapered keys slidably held in said keyways, said body having a transverse keyway in line with said keys, and a wedge in said transverse keyway between the heads of the keys.

1,022,307. ROLLER-BEARING HUB. WILLIAM C. EBERHART and SIMON GLASER, Sayre, Pa. Filed June 15, 1911. Serial No. 633,374. (Cl. 64—50.)

A roller bearing hub having an annular recess in one face, a bearing casing mounted in said recess and composed of an annular disk having flanges extending laterally from both the edges of one face thereof, radially disposed rollers arranged in said casing with their opposite ends engaging the inner faces of said flanges, said rollers being composed of sections of different lengths arranged in longitudinal alinement and connected to revolve independently of each other, the outer ends of said rollers being reduced, and a fastening plate secured to said hub and over-lapping said reduced roller ends.



1,022,308. COTTON OR DRAG SACK PROTECTOR. THOMAS M. ELKINS, Duffau, Tex. Filed Apr. 20, 1911. Serial No. 622,406. (Cl. 21—65.)



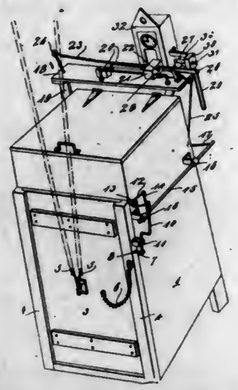
1. A device of the character described comprising a sack, a plurality of strips secured to the under surface of said sack, said strips being unattached for portions of their lengths, a transverse strip secured to said sack and to said unattached portions of said first mentioned strips, means carried by said sack and covered by said transverse strip to secure the ends of said first mentioned strips, and a protecting plate provided in one end with openings through which the unsecured portions of said first mentioned strips are passed to hold said plate in position.

2. A device of the character described comprising a sack, a protecting plate secured to said sack, and a transverse strip secured to said sack and overlapping the forward edge of said plate.

3. A device of the character described comprising a sack, a protecting plate provided with openings in one end, a plurality of longitudinally extending strips secured to said sack and passing through said openings to hold said plate in place, and a transverse protecting strip secured to said sack and said longitudinally extending strips and overlapping said protecting plate.

4. A device of the character described comprising a sack, a protecting plate provided with openings adjacent its forward end, strips secured to said sack and passing through said openings, and means secured to the under surface of said sack to secure the ends of said strips to hold said protecting plate in place, the forward portion of said protecting plate extending beyond said securing means.

1,022,309. AUTOMATICALLY-OPERATED STOCK-FEEDER. BURTON A. ELLIOTT, Cass City, Mich. Filed Nov. 27, 1911. Serial No. 662,737. (Cl. 161—10.)



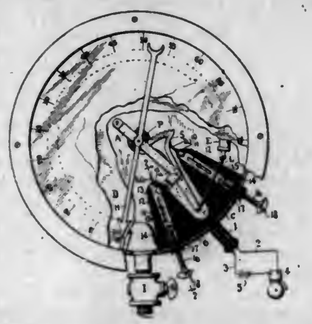
1. A stock feeder comprising a hopper having therein a discharge opening, a door to close said opening, springs connected to said door whereby the later is opened, a spring to limit the opening movement of the door, a door fastening bolt, a bolt releasing device said device comprising a suitably mounted lever connected at one end to the bolt, a suitably mounted rock shaft, a crank arm formed on one end thereof, a flexible connection between said bar and the free end of said bolt retracting lever whereby when the shaft is rocked the lever will be retracted, a crank arm on the opposite end of said rock shaft, an operating mechanism connected with the last mentioned crank arm whereby the shaft is rocked to actuate said bolt releasing mechanism, a trigger to hold said operating mechanism in a set or operative position, and an automatically operated trigger releasing mechanism connected with said trigger whereby the latter may be tripped to release the operating mechanism at any desired time.

2. In a stock feeder, a hopper having therein, a door opening, a spring operated door to close said opening, a fastening bolt to hold said door in closed position, a bolt retracting mechanism, a rock shaft operatively connected at one end to said retracting mechanism, a crank arm arranged on the opposite end of said shaft, a shaft operating mechanism comprising a slidably mounted block, a spring connected thereto, a cord to connect said block with the crank arm on said rock shaft whereby when the block is retracted by said spring the shaft will be rocked and said bolt retracting mechanism actuated to retract the door fastening bolt, a trigger adapted to be engaged with said block to hold the same in operative position against the pressure of said spring, and an automatically operated tripping mechanism adapted to release said trigger at any desired time.

3. In a stock feeder, a hopper having therein a door opening, a spring operated door to close said opening, a fastening bolt to hold said door in closed position, a bolt retracting mechanism, a rock shaft operatively connected at one end to said retracting mechanism, a crank arm arranged on the opposite end of said shaft, a shaft operating mechanism comprising a slidably mounted block, a spring connected thereto, a cord to connect said block with the crank arm on said rock shaft whereby when the block is retracted by said spring the shaft will be rocked and said bolt retracting mechanism actuated to retract the door fastening bolt, a trigger adapted to be engaged with said block to hold the same in operative position against the pressure of said spring, a weight connected with said trigger, a weight supporting rod adapted to hold the weight in an inoperative position, a block adapted to push said weight from the end of the rod when the latter is retracted whereby the force of the falling weight will release said trigger, and means whereby said rod is retracted and disengaged from said weight.

4. In a stock feeder, a hopper having therein a door opening, a spring operated door to close said opening, a fastening bolt to hold said door in closed position, a bolt retracting mechanism, a rock shaft operatively connected at one end to said retracting mechanism, a crank arm arranged on the opposite end of said shaft, a shaft operating mechanism comprising a slidably mounted block, a spring connected thereto, a cord to connect said block with the crank arm on said rock shaft whereby when the block is retracted by said spring the shaft will be rocked and said bolt retracting mechanism actuated to retract the door fastening bolt, a trigger adapted to be engaged with said block to hold the same in operative position against the pressure of said spring, a clock having arranged therein an alarm winding shaft, a slidably mounted weight supporting rod, a cord connected to one end of said rod and adapted to be wound on said alarm winding shaft whereby the rod is retracted, a weight adapted to be loosely engaged with one end of said rod and a flexible connection between said weight and said trigger, and a block adapted to engage said weight and hold the same when said rod is retracted thereby pushing the weight from the end of the rod whereupon the force of the weight will release the trigger.

1,022,310. PRESSURE-GAGE. CHARLES O. EVERHART, Warren, Pa., assignor of one-half to Aquilla Miles, Warren, Pa. Filed July 3, 1911. Serial No. 636,572. (Cl. 177—311.)

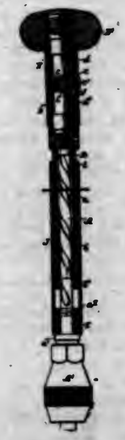


In a pressure gage, the combination with the casing having a dial, a hand moving thereover and having a pinion on its arbor, a toothed sector engaging said pinion and pivoted in the casing, and an expansible element controlling the movement of said sector; of an insulating block within the casing, screws therein at either side of said sector, two adjustable terminals, each comprising a body having a longitudinal slot loosely engaging one of said screws, an upturned ear at its outer end, and a contact spring at its inner end standing in the path of said sector, insulating nuts carried by said casing, set screws engaging said nuts and having heads at their inner ends swiveled in said ears, said screws and terminals being directed substantially inward toward the center of the casing, and an alarm circuit whereof one terminal is connected with both said terminals and the other with the sector.

1,022,311. SPIRAL SCREW-DRIVER AND DRILL. THOMAS J. FEGLEY, Philadelphia, Pa., assignor to North Bro's M'f'g Co., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Jan. 10, 1910. Serial No. 537,246. (Cl. 145—53.)

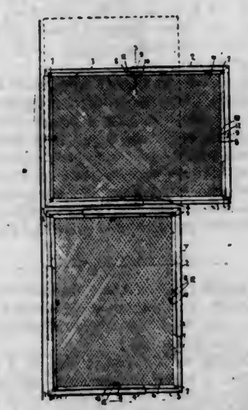
The combination in a ratchet tool, of a spiral spindle, a chuck at one end of the spindle, a ratchet spindle in which the other end of the spindle is seated, a shell attached to the said ratchet spindle and a nut carried by

the said shell through which the spiral spindle extends, a ratchet wheel on the ratchet spindle, a shell inclosing said spindle, pawls mounted on the shell and arranged to engage the ratchet wheel, a casing inclosing the shell and slotted, a shifter for the said pawls extending through the slot, a hand hold at the outer end of the shell inclosing the ratchet spindle, with an extended tubular



hand hold mounted adjacent to the chuck so as to turn freely on the spiral spindle and on the first mentioned shell which incloses the spindle, the said hand hold being held so as to move longitudinally with the spindle whereby an extended hand hold for the spindle is provided, which also prevents the entrance of dust to the spiral groove of the spindle and to the nut through which it extends.

1,022,312. ADJUSTABLE WINDOW-SCREEN. SAMUEL G. FOSTER, Westfield, and SAMUEL A. FOSTER, Rahway, N. J. Filed Feb. 14, 1911. Serial No. 608,563. (Cl. 156—14.)



1. A window screen including a single sheet of woven wire fabric, having the strands thereof disconnected relatively to each other and running diagonally to provide for the adjustment of the mesh of the fabric in planes at right angles to vary the length and breadth of the screen.

2. A window screen comprising an adjustable frame having a single sheet of screen fabric loosely connected therewith and the strands of said fabric being disconnected relatively to each other to permit said frame and fabric to be adjusted together in the same directions in planes at right angles to vary the length and breadth of the screen.

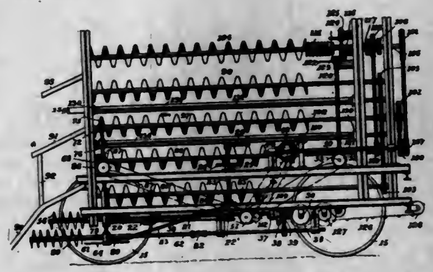
3. An adjustable window screen comprising a frame, composed of sections adjustably connected to vary the dimensions of the frame, and a single sheet of screen fabric loosely connected with said frame sections and adjustable simultaneously therewith to conform to the contour of the frame and present a smooth unwrinkled screen surface in all of its positions.

4. An adjustable window screen comprising a frame composed of sections connected for adjustment in planes at right angles to vary the dimensions of the frame, and a single sheet of screen wire connected to said frame sections and adjustable simultaneously therewith and in the same directions, the fabric conforming continuously in contour to the contour of the frame and presenting a smooth unwrinkled screen surface.

5. A window screen comprising a frame adjustable in size, a single sheet of woven wire screen fabric adjustable in size without wrinkling, and means for securing the cut unbound edges of the screen sheet to the edges of the frame to permit the screen fabric to be adjusted in size simultaneously with the frame, whereby the screen fabric will at all times fit the frame without buckling.

[Claims 6 to 9 not printed in the Gazette.]

1,022,313. CANE-HARVESTER. AUGUST GERDES, Gretna, La. Filed May 11, 1909. Serial No. 495,289. (Cl. 56—110.)



1. In a harvester, in combination a gathering screw, a second shorter gathering screw mounted above the first, a support for said screws whereby they may be moved bodily over the ground, and means for rotating said screws at a pitch speed equal to their bodily movement.

2. In a harvester, in combination, a frame or support, a pair of gathering screws mounted on said support, one on each side of its median line, a second pair of screws shorter than the first pair mounted above said first pair, one on each side of the median line, but nearer to said line, and means for rotating said screws at a pitch speed equal to their bodily movement.

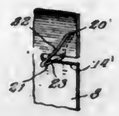
3. In a harvester, the combination with a frame, of gathering means on the front end thereof including a gathering screw, a hinged shaft for rotating said screw, and means for vertically adjusting said screw on said frame.

4. In a harvester, the combination with a frame, of a plurality of pairs of substantially horizontally arranged coöperating gathering screws on said frame and projecting and overhanging from the forward end thereof, one pair above the other, and means for rotating said screws.

5. In a harvester, the combination with a frame, of a plurality of pairs of substantially horizontally arranged gathering screws on said frame and projecting and overhanging from the forward end thereof, one pair above the other, means for rotating said screws, and means for vertically adjusting the lower pair of screws.

[Claims 6 to 33 not printed in the Gazette.]

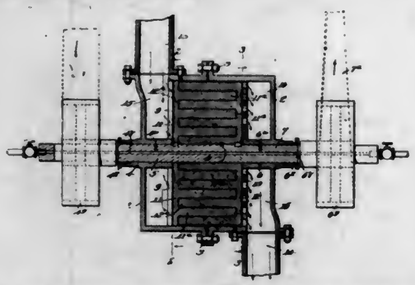
1,022,314. FENCE-POST. JAMES WALTER GOLDEN, Hodges, Mont. Filed Sept. 1, 1911. Serial No. 647,168. (Cl. 39—12.)



1. A fence post provided with a plurality of spaced substantially horizontal notches in its free edge for receiving the fence wires, each notch having a recess in its lower side adjacent to the inner edge of the notch, and a loop for each notch, the post having an opening above each notch for receiving the loop, the said opening being disposed laterally with respect to the recess and on the outer side thereof to constrain the loop to take an inclined position when engaged with the recess.

2. A fence post having a wing provided with a plurality of spaced substantially horizontal notches in its free edge for receiving the fence wires, each notch having a recess in its lower side, and a loop pivoted to the wing above each notch and resting in the recess.

1,022,315. COMBINED CUTTER AND MIXER. CHARLES S. HARDY, San Diego, Cal. Filed Nov. 21, 1911. Serial No. 661,506. (Cl. 99—13.)



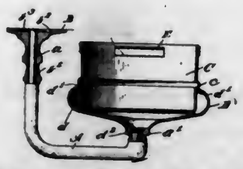
1. In a combined cutter and mixer, an outer casing, a pair of perforated partitions within said casing, an inlet pipe between one of said partitions and the end of said casing, an outlet pipe between the other partition and the opposite end of said casing, a plurality of sets of knives disposed between said partitions, the individual knives of one set being spaced apart to permit the passage of the knives of the other set, and means for revolving the two sets of knives in opposite directions.

2. In a combined cutter and mixer, an outer casing, a pair of perforated partitions within said casing, an inlet pipe between one of said partitions and the end of said casing, an outlet pipe between the other partition and the opposite end of said casing, a plurality of sets of radially extending knives disposed between said partition, one of said sets of knives being close to one partition, the other set being close to the other partition, and a plurality of sets of intermediate knives, one set of radially extending knives and intermediate knives being arranged to revolve in one direction, and the other set of radial knives and intermediate knives being arranged to revolve in the opposite direction.

3. In a combined cutter and mixer, an outer casing, a pair of perforated partitions within said casing, the perforations in one of said partitions being larger than those in the other partition, an inlet pipe between one of said partitions and the end of said casing, an outlet pipe between the other partition and the opposite end of said casing, a plurality of sets of radially extending knives disposed between said partition, one of said sets of knives being close to one partition, the other set being close to the other partition, and a plurality of sets of intermediate knives, the individual knives of one of said intermediate sets of knives alternating with the individual knives of the other set, one set of intermediate knives just clearing the other, one set of radially extending knives being arranged to revolve in one direction, and the other set of radial knives and intermediate knives being arranged to revolve in the opposite direction.

4. In a combined cutter and mixer, an outer casing, a perforated partition disposed within said casing near one end thereof, an inlet pipe between said partition and the end of the casing, a second perforated partition disposed within said casing near the opposite end, the perforations in said second partition being smaller than those in the first named partition, an outlet pipe between said second named partition and the end of the casing, a pair of shafts carried by said casing, the end of one shaft abutting the end of the other shaft, a series of knives carried by one of said shafts, certain of said knives being spaced apart, a second series of knives carried by the other shaft, said second series of knives being spaced apart to pass between the first named knives, one set of knives just clearing the other set, and the knives being arranged to just clear the partitions, and means for revolving the two shafts in opposite directions.

1,022,316. SANITARY DENTAL WASTE-RECEPTACLE. THOMAS S. HARLAN, Salt Lake City, Utah. Filed June 19, 1909. Serial No. 503,079. (Cl. 248—20.)



1. A sanitary dental waste receptacle comprising an L-shaped arm provided with a swivel at its upper end, an annular cup-holder disposed upon the lower end of said arm, and a cup removably disposed in said cup-holder, the latter having an annular perimeter engaging the sides of the cup at a distance above the bottom thereof.

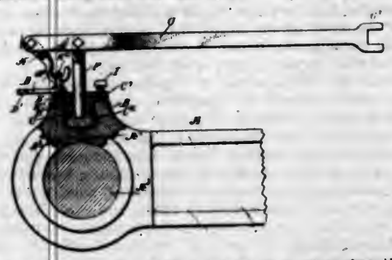
2. In a device of the character disclosed, an L-shaped arm, a swivel for the upper end of said arm, adapted to be attached to the under side of a support, a cup-holder on the lower end of the arm, and a cup removably disposed in said cup-holder, the latter being formed with an annular perimeter, and with sides bulging outwardly beyond the perimeter of the said cup.

3. In a device of the character disclosed, an L-shaped arm, a swivel for the upper end of said arm, adapted to be attached to the under side of a support, a cup-holder for the lower end of said arm, and a cup removably disposed in said cup-holder, said cup provided with an annular bead or rib located at a distance above the bottom thereof, and the said cup-holder being provided with an annular and inwardly projecting edge or perimeter adapted to engage the cup immediately below said bead or rib, as set forth.

1,022,317. GREASE-CUP PLUG. GEORGE HENRY HUDSON, New York, N. Y., assignor of one-half to John McTernan, New York, N. Y. Filed May 10, 1911. Serial No. 626,158. (Cl. 184—105.)

1. The combination with a grease cup, of a plug therefor having a bore, a cover for opening and closing said bore, and a stud forming, with said cover, a permanent part of the plug, in combination with a plunger adapted to pass into the bore when the latter is open, and a lever on which the plunger is pivoted provided also with a member engageable with said stud.

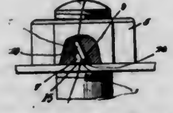
2. The combination with a grease cup, of a plug therefor having a bore, a pivot on the grease cup and provided with an eye, and a cover mounted to swing on the said pivot for closing or opening the bore, in combination with a plunger adapted to pass into the said bore, a lever on which the plunger is pivoted, and a link pivotally connected with the said lever and provided with a hook adapted to hook onto the said eye.



3. The combination with a grease cup, of a plug therefor having a flange and an exterior thread for screwing the plug in position on a member, the plug having a bore for the reception of the grease, a pivot screwing in the said flange and having a pin engaging a recess in the said member to hold the plug against unscrewing, a cover mounted to swing on the said pivot and over the top of the flange, and means for fastening the free end of the cover in position on the said flange.

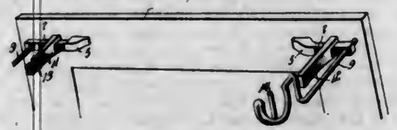
4. The combination with a grease cup, of a plug therefor having a flange and an exterior thread for screwing the plug in position on a member, the plug having a bore for the reception of the grease, a pivot screwing in the said flange and having a pin engaging a recess in the said member to hold the plug against unscrewing, the said pivot having an eye, and a cover mounted to swing on the said pivot to open and close the said bore, in combination with a plunger adapted to engage the said bore at the time the cover is open, a lever on which the plunger is pivoted, and a link pivoted on the said lever and having a hook adapted to engage the said eye.

1,022,318. NUT-LOCK. ARTHUR D. JOHNSON, Philadelphia, Pa. Filed Mar. 29, 1911. Serial No. 617,546. (Cl. 151—34.)



A nut lock comprising a body having in its bearing face a recess extending within the body, a locking dog of slightly greater length than the depth of the recess, said dog having one of its ends rounded to snugly engage the seat within the recess and formed on its opposite end with a biting tooth, and instruck burs formed on the outer edge of the side walls of the recess in the body of the nut and projecting toward each other to engage the opposite sides of the dog to hold the same within the recess.

1,022,319. CURTAIN-BRACKET. OTTO KENITZ and GEORG DEBROWSKY, Passaic, N. J. Filed May 9, 1911. Serial No. 625,950. (Cl. 150—24.)

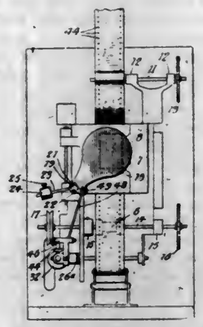


1. In curtain brackets, the combination with brackets having serrated inner and outer sides, of an arm adjustable along the bracket and having attaching means, and a curtain pole hook screwed into the end of the bracket and adapted to prevent the removal of the arm.

2. In a curtain bracket, the combination with brackets having a threaded stud at one end and a perforation at the other, of serrations on the inner and outer faces and a perforated arm carried by the brackets and having a tooth to engage the serrations, and a curtain pole support adapted to pass through the perforations at the outer end of the bracket to secure the arm in place.

3. In curtain brackets, the combination with brackets having serrated sides and a perforation at one end, of a threaded stud at the other end, arms adapted to fit the brackets and having a tooth for the serrations, and threaded curtain pole supports adapted to pass through the perforation at the end of the bracket and having a vertical pin to fit the pole.

1,022,320. FILM FIRE-SCREEN. DOUGLASS BERRY KERSHAW, Lynchburg, Va., assignor to Patrick Henry Casey, Lynchburg, Va. Filed Mar. 25, 1911. Serial No. 616,810. (Cl. 88—17.)



1. In combination with a kinetoscope and the film moved thereby, of a screen pivoted adjacent to the film and between the film and the source of light and mounted to swing over and away from over the film, an arm extending from the screen on the opposite side from its pivotal mounting, a weight slidable on the arm, means for holding the weight in adjusted position, a rock shaft having radial arms arranged at an angle to each other journaled adjacent to the screen, a link connecting one of the arms to the screen on the opposite side of the the pivotal mounting from the weighted arm, a roller over which the film passes and rotated by the passage of the film, a governor shaft, a driving connection between the said shaft and the roller, a governor on the shaft, said governor comprising a collar fixed to the shaft, and a sleeve movable longitudinally of the shaft, spring plates connecting the sleeve and the collar, a weight connected with the center of each plate, and a disk connected with the sleeve and bearing against the other arm of the rock shaft, the governor when in normal position holding the screen over the film.

2. In combination with a kinetoscope and the film moved thereby, of a screen pivoted adjacent to the film and between the film and the source of light and mounted to swing over and away from over the film, a rock shaft having radial arms journaled adjacent to the screen, a link connecting one arm of the shaft to the screen, a roller over which the film passes and rotated by the said film, a governor shaft, a driving connection between the said shaft and the roller, a governor on the shaft, said governor comprising a collar fixed to the shaft, and a sleeve movable longitudinally thereof, spring plates connecting the sleeve and the collar, a weight connected with the center of each plate, a disk connected with the sleeve and bearing against the other arm of the rock shaft and normally holding the screen over the film, and means on the other side of the screen from its pivotal connection for moving the same away from over the film when the governor is in operation.

3. In combination with a kinetoscope and the film moved thereby, of a screen pivoted adjacent to the film

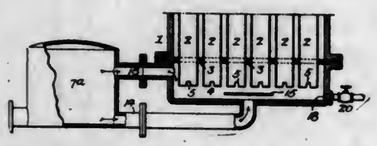
and between the film and the source of light and mounted to swing over and away from over the film, a rock shaft journaled adjacent to the screen, a link connecting one arm of the shaft to the screen, a roller over which the film passes and rotated by the said film, a governor shaft, a driving connection between the said shaft and the roller, a governor on the shaft, said governor comprising a collar fixed to the shaft, a sleeve movable longitudinally thereof, spring plates connecting the sleeve and the collar, a weight connected with each plate, and a disk connected with the sleeve and bearing against the other arm of the rock shaft and normally holding the screen over the film when the governor is inoperative.

4. In combination with a kinetoscope and the film moved thereby, of a screen pivoted adjacent to the film and between the film and the source of light and mounted to swing over and away from over the film, a rock shaft journaled adjacent to the screen, a link connecting one arm of the shaft to the screen, a roller over which the film passes and rotated by the said film, a governor shaft, a driving connection between the said shaft and the roller, a governor on the shaft, a disk slidable on the shaft and operated by the governor, said disk bearing against the other arm of the rock shaft, and normally holding the screen over the film when the governor is inoperative, and a weight connected with the screen and adjustable toward and from the same for moving the screen away from the film.

5. In combination with a kinetoscope and the film operated thereby, of a screen mounted adjacent to the film for swinging movement over and away from over the film between said film and the source of light, a rock shaft journaled adjacent to the screen, a connection between one arm of the shaft and the screen, a roller over which the film passes and rotated by the film, a governor shaft, a driving connection between the shaft and the roller, a governor on the shaft, a disk slidable on the shaft and bearing against the other arm of the rock shaft and normally holding the screen over the film when the governar is inoperative, and a counterbalance acting normally to swing the screen away from over the film.

[Claims 6 to 11 not printed in the Gazette.]

1,022,321. PROCESS FOR CONCENTRATING LIQUIDS. PAUL KESTNER, Lille, France, assignor to Kestner Evaporator Company, Philadelphia, Pa., a Corporation of Pennsylvania. Original application filed July 20, 1910, Serial No. 572,855. Divided and this application filed Aug. 16, 1911. Serial No. 644,405. (Cl. 127—9.)



1. The process of evaporating liquids, which comprises transmitting liquid into and through a heated tube as an annular traveling film by means of a jet of steam directed axially of said annular film.

2. The process of evaporating liquids, which comprises transmitting liquid into and through a vertical heated tube as an annular traveling film by means of a jet of steam directed axially of said annular film.

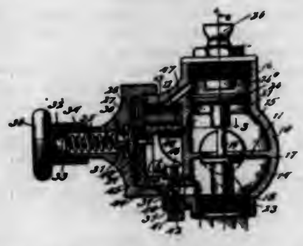
3. In the evaporation of liquids, the process which comprises releasing the pressure upon a heated liquid in a suitable chamber to permit self-evaporation and formation of vapor, separately conducting the vapor so formed and the residual liquid into different points of the feed chamber of an evaporator having heated tubes, and simultaneously feeding portions of such liquid and of such vapor to each of said tubes.

4. In the evaporation of liquids, the process which comprises releasing the pressure upon a heated liquid in a suitable chamber to permit self-evaporation and formation of vapor, separately conducting the vapor so formed and the residual liquid into different points of the feed chamber of an evaporator having vertical heated tubes, and simultaneously feeding portions of such liquid and of such vapor to each of said tubes.

5. In the evaporation of liquids, the process which comprises releasing the pressure upon a heated liquid in a suitable chamber to permit self-evaporation and formation of vapor, separately conducting the vapor so formed and the residual liquid into different points of the feed chamber of an evaporator having heated tubes, and simultaneously feeding portions of such liquid and of such vapor to each of said tubes, the vapor being fed into the tubes in such manner as to draw in liquid by an injector action.

[Claims 6 to 13 not printed in the Gazette.]

1,022,322. PRESSURE-REDUCING DEVICE. THOMAS H. MANCHESTER, Chicago, Ill., assignor to Chicago Car Heating Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 11, 1911. Serial No. 620,328. (Cl. 50—11.)



1. A pressure reducing device comprising in combination a casing constructed so as to constitute a high pressure chamber, a low pressure chamber formed with a cylinder, a chamber intermediate the high pressure chamber and the cylinder which is open at the side, and ports between the high and low pressure chambers, the high pressure and intermediate chambers and the intermediate chamber and the cylinder; a main valve controlling the port between the high and low pressure chambers; a piston to operate the valve in the cylinder; an auxiliary valve controlling the port between the high pressure chamber and the intermediate chamber; removable elements closing the open side of said intermediate chamber and constituting together a diaphragm chamber which is located at one side of the axial line of the main valve, means providing a port between the low pressure chamber and the diaphragm chamber; and a diaphragm adapted to control said auxiliary valve.

2. A pressure reducing device comprising in combination a casing constructed so as to constitute a high pressure chamber, a low pressure chamber formed with a cylinder, a chamber intermediate the high pressure chamber and the cylinder which is open at the side, and ports between the high and low pressure chambers, the high pressure and intermediate chambers, and the intermediate chamber and cylinder; a main valve controlling the port between the high and low pressure chambers; a piston to operate the valve in the cylinder; an auxiliary valve controlling the port between the high pressure chamber and the intermediate chamber; removable elements closing the open side of said intermediate chamber and constituting together a diaphragm chamber, means providing a port between the low pressure chamber and the diaphragm chamber; a diaphragm; a bell crank in said intermediate chamber interposed between said diaphragm and said auxiliary valve, and a removable plug in which said auxiliary valve is mounted.

3. A pressure reducing valve comprising in combination a casing formed on its upper side with a cylinder open at the top and with webs dividing the casing into a high pressure chamber, a low pressure chamber, and a chamber intermediate the high pressure chamber and the cylinder which is open at the side, said casing having an opening on the under side below the cylinder; plugs to close the upper end of the cylinder and said opening in the casing, a head to close the open side of the intermediate chamber, a bonnet inclosing said head and forming therewith a diaphragm chamber which is located at one side of the axial line of the main valve, a diaphragm in the diaphragm chamber, a port in the web between the high pressure chamber and the intermediate chamber, an auxiliary valve located in said high pressure chamber to control said port and formed with a stem, a plug in the casing in which the auxiliary valve is mounted, a bell crank in the intermediate chamber interposed between the diaphragm and said auxiliary valve, a port leading from the intermediate chamber to the cylinder, a piston in the cylinder formed on the under side with a boss, a port in the web between the high and low pressure chambers, a main valve to control said port formed on its under side with a stem adapted to fit into said boss and on its lower side with a sleeve which is slidable in the plug on the under side of said casing.

4. In a pressure reducing device, the combination with a casing divided so as to form a high pressure chamber, a low pressure chamber one above the other, and a third chamber at the side of the other two, of a main valve having reciprocating movement within the casing, a piston to operate said valve, a diaphragm arranged at one side of the axis of the main valve, an auxiliary valve adapted to control the flow of fluid to one side of said piston, and a bell crank lever interposed in said third named chamber between said auxiliary valve and said diaphragm.

5. In a pressure reducing device, the combination with a casing formed with webs dividing said casing into a high pressure chamber, a low pressure chamber and an auxiliary valve chamber, the web between the high pressure chamber and low pressure chamber being formed with a port and the casing formed so as to constitute a cylinder communicating with said low pressure chamber, of a main valve formed on its under side with a sleeve, a plug in the casing under said valve in which said sleeve is guided, a spring interposed between the plug and said valve, a stem on the upper side of said valve, a piston in said cylinder having a boss by means of which it is mounted on said stem, a plug in the casing directly above said piston, said casing being formed with a port leading from the high pressure chamber to the auxiliary valve chamber and having a seat in the high pressure chamber, and a port from the latter to said cylinder, a valve in the high pressure chamber controlling the first named port, a plug in which said valve is mounted, a bonnet on the side of said casing and formed with a threaded stem, a diaphragm and a head interposed between said bonnet and said casing, a screw cap having a hand wheel on the threaded stem of the bonnet, a spring interposed between said cap and said diaphragm, a pin on the diaphragm, a bell crank lever pivotally mounted within said auxiliary valve chamber and interposed between said pin and said auxiliary valve, and a rib formed on the inner surface of said casing with a bore which puts into communication with each other the low pressure chamber and the space between said diaphragm and said head.

[Claims 6 to 11 not printed in the Gazette.]

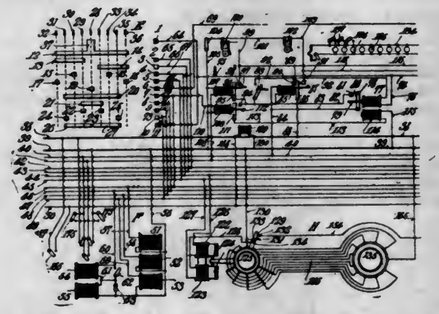
1,022,323. HOLDER FOR PRINTING-SURFACES. PAUL MARTIN, Roubaix, France. Original application filed Aug. 16, 1910, Serial No. 577,427. Divided and this application filed Apr. 15, 1911. Serial No. 621,385. (Cl. 101—169.)

In a stereotype cylinder, cylindrical portions of reduced diameter at each end of said cylinder, circular end plates carried by said reduced portions, so as to form an annular space between each end of the cylinder and the adjacent plate holders for retaining and adjusting the stereotype plate sliding in slots in said cylinder, screwed shanks integral with said holders and passing through the end plates, and nuts threaded upon said shanks and held



wholly within the annular space between the cylinder and the end plates.

1,022,324. CONTROLLING SYSTEM FOR MOTOR-TRACTION CARS. WILLIAM C. MAYO, El Paso, Tex., assignor, by direct and mesne assignments, of one-third to George E. Briggs, Barstow, Tex., and one-third to John Houlehan, El Paso, Tex. Original application filed Feb. 24, 1908, Serial No. 417,431. Divided and this application filed Nov. 3, 1908. Serial No. 460,828. (Cl. 188—4.)



1. In a system of electric car control, electric means for operating a triple valve to the positions of service, lap, release, and emergency, and a controller provided with contact segments for effecting the operations of release, lap, and service by the electric means and for maintaining the emergency electric controlling means active except in the position for the emergency application of the brakes.

2. In a system of electric car control, electric means for operating a triple valve to the position of full release, slow release, lap, service and emergency, and a controller provided with circuit-controlling means for causing the several operations.

3. In a system of electric control for cars, electric means for controlling a triple valve and including a normally closed circuit for preventing the emergency application of the brakes and permitting such application when the normally closed circuit is ruptured.

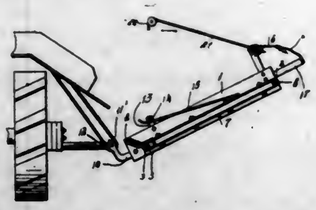
4. In a system of electric control for cars, electrically controlled means for maintaining the prime mover of the car in connection with the car axles, and active on closed circuit, and other electrically controlled means for operating the brakes and holding the emergency side of the brake operating means inoperative on closed circuit, the means for maintaining the connection between the prime mover and the car axles and the emergency side of the brake operating means causing the release of the car axles from the prime mover and the application of the brakes on the breaking of the circuit.

5. In a system of electric control for cars, electrically-controlled means for maintaining the prime mover of the

car in connection with the car axles and active on closed circuit, other electrically-controlled means for operating the brakes and holding the emergency side of the brake-operating means inoperative on closed circuit, and a controller having means for maintaining such closed circuits during the normal running of the car and causing the break of said circuits under abnormal conditions.

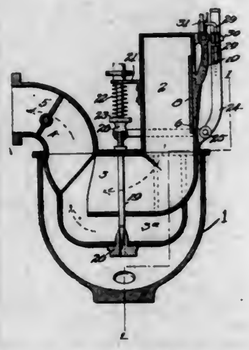
[Claims 6 to 10 not printed in the Gazette.]

1,022,325. HARVESTER ATTACHMENT. WARREN MOORE, Loomis, Nebr. Filed Oct. 7, 1911. Serial No. 653,364. (Cl. 193—14.)



A conveying attachment consisting of a frame comprising suitably connected side members, roller carrying shafts journaled in said frame, an endless conveyer guided over the rollers, and L-shaped brackets reversibly connected with the side members and having bearings adapted to engage a driven shaft.

1,022,326. CARBURETER. JOSEPH NAMUR, Kinsley, Kans. Filed Aug. 28, 1911. Serial No. 646,517. (Cl. 48—155.2.)



1. The improved carbureter having two air chambers provided with air inlets and valves differing in size, a needle valve controlling the admission of ignitible fluid to the mixing chamber, and means connecting the air valves and needle valve, whereby both are adapted to open simultaneously and correspondingly, substantially as described.

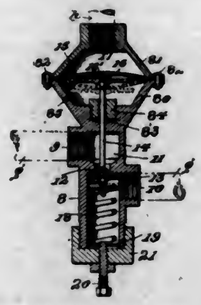
2. The improved carbureter having two air chambers provided with air inlets differing in size, differential valves for such inlets and differential springs holding the valves normally closed, a needle valve controlling the admission of the ignitible fluid, a pivoted lever, one end of which is connected with the needle valve, a spring applied to said valve and pressing upon the lever, and means for operatively connecting the upper end of the lever with the air valves, whereby when the latter are opened, the needle valve is simultaneously opened, substantially as described.

3. The improved carbureter comprising a hollow body having two air chambers provided with differential openings for admission of air, differential valves applied to such openings and having their fulcrums provided with lateral arms, differential springs bearing upon said arms and holding the valves normally closed, a needle valve and a spring applied thereto, a pivoted elbow lever upon which the spring is adapted to bear, and means connected with the upper arm of the lever for bearing on the extended shanks of the air inlet valves, substantially as described.

4. The improved carbureter comprising a hollow body and two air chambers having differential air openings, differential valves normally closing such openings and springs tending to hold the same normally closed, a needle valve controlling admission of the ignitible fluid to the mixing chamber, a spring applied to such valve, and a pivoted lever upon one end of which the spring bears, its upper portion being provided with vertically adjustable fingers bearing against extensions of the shanks of the inlet valves, substantially as described.

5. The improved carbureter comprising a hollow body provided with air chambers having differential openings and corresponding valves for closing the same, differential springs for holding such valves normally closed, a needle valve controlling admission of the ignitible fluid, a spiral spring applied to the same, an elbow lever with whose horizontal arm the needle valve is operatively connected, its upper arm having a pivoted cruciform piece provided with lateral extensions, and fingers which are vertically adjustable in said piece and adapted to bear upon lever extensions of the air inlet valve shanks, all operating substantially as described.

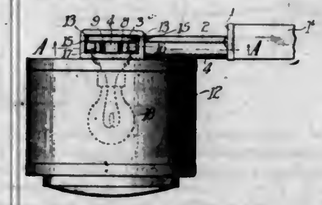
1,022,327. PRESSURE-OPERATED CONTROLLING-VALVE FOR HOUSE WATER-SUPPLY SYSTEMS. ROBERT H. NELSON, Dixon, Ill., assignor of one-half to Charles A. Robbins, Dixon, Ill. Filed Apr. 17, 1909. Serial No. 490,622. (Cl. 137—4.)



1. A water-supply-system controlling valve comprising a casing having an open enlarged end and closed at its opposite end, a cap on said enlarged end having an inlet opening, a diaphragm between said enlarged end and cap, said casing having a water passage with an inlet and an outlet and an intermediate valve seat, and a partition between said passage and said enlarged end, a valve to close said seat against the flow of water through said passage and having a stem rigid therewith and extending into said enlarged end and slidable through said partition, an enlarged plate loosely and flatly resting against said diaphragm and having a center socket receiving the end of said stem, packing means for said stem accessible above said partition, and a spring between the closed end of the casing and said valve and holding the valve to its seat and provided with exterior adjusting means.

2. A water-supply-system controlling valve comprising a casing enlarged at one end, a cap on said end, a diaphragm between said end and cap, said cap having an inlet opening above said diaphragm, said casing having a longitudinal water passage with an inlet and an outlet and a valve seat between the same, and a partition closing said passage from the space in said end below said diaphragm, a cap closing the opposite end of said casing, a reciprocatory valve to engage said seat and close said passage, a coiled spring below and holding said valve to its seat, spring adjusting means carried by and extending to the exterior of said last-mentioned cap, a valve-opening stem from said valve to said diaphragm and slidable through said partition, and a packing box in said partition having a gland accessible above said partition on the removal of said first mentioned cap and diaphragm.

1,022,328. ELECTRIC-LAMP BRACKET AND SOCKET. ELMER L. PARTRIDGE, Chicago, Ill., assignor to The Adams & Westlake Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 10, 1910. Serial No. 586,414. (Cl. 240—73.)



1. In a device of the class described, the combination of a base, a tongue having a horizontal part projecting from said base and having a vertical part at its free end, said tongue having a channel extending lengthwise thereof through said base and horizontal part and extending into and opening out of said vertical part, a pair of contact plates insulated from each other and projecting from the opening in said vertical part, an electrical conductor leading from each of said contact plates through said channel, and a socket member adapted to fit said tongue and carrying contact members insulated from each other and adapted to respectively engage said contact plates.

2. In a device of the class described, the combination of a base, a tongue extending horizontally therefrom and having a vertical part at its free end, a boss formed on said tongue and having a channel extending lengthwise thereof, a pair of contact plates secured in said tongue near the end of said boss and insulated therefrom, a conductor housed in said channel and connected to said contact plates, a socket member adapted to fit said vertical part, and a pair of spring contact members carried by said socket member and adapted to respectively engage said contact plates.

3. In a device of the class described, the combination of a base, a tongue extending horizontally therefrom and having a vertical part at its free end, a boss formed on said tongue and said vertical part, said tongue having a slot formed therein near the end of said boss and having a channel extending from said slot lengthwise of said boss, a member fixed in said slot comprising a pair of contact plates insulated from each other and from said tongue, a conductor housed in said channel and connected to said contact plates, a socket member adapted to fit said vertical part, a pair of contact members on said socket member insulated therefrom and adapted to engage said contact plates, and a lamp carried by said socket member and electrically connected to said contact members.

4. In a device of the class described, the combination of a base, a tongue having a horizontal part projecting from said base and having a vertical part at its free end, said tongue having a channel extending lengthwise thereof through said base and horizontal part and extending into and opening out of said vertical part, a pair of contact plates insulated from each other and projecting from the opening in said vertical part, an electrical conductor leading from each of said contact plates through said channel, a socket member adapted to fit said tongue and carrying contact members insulated from each other and adapted to respectively engage said contact plates, and a shoulder adapted to support said socket member in position to insure the engagement of said contact members and contact plates.

5. In a device of the class described, the combination of a base, a tongue having a horizontal part projecting from said base and having a vertical part at its free end, said tongue having a channel extending lengthwise thereof through said base and horizontal part and extending into and opening out of said vertical part, a contact plate insulated from said vertical part and exposed through the opening in said vertical part, an electrical conductor leading from said contact plate through said channel, a lamp having thereon a socket adapted to fit said tongue and carrying a contact member insulated from said socket and adapted to engage said contact plate, and electrical conducting means adapted to complete the electrical circuit through said lamp.

[Claims 6 to 8 not printed in the Gazette.]

1,022,329. FUSE. FREDERICK P. POOLE and PAUL A. BRENDEL, Bridgeport, Conn., assignors to The Bryant Electric Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Dec. 15, 1909. Serial No. 533,279. (Cl. 175—277.)



1. A fuse having shell and center contacts, in combination with an inclosed fuse strip having its opposite ends electrically connected with the shell and being electrically connected with the center contact at a point intermediate said ends, together with a barrier interposed between said ends to form separate fuse chambers therefor.

2. A plug fuse having shell and center contact, a central well and a plurality of lateral wells, and a plurality of inclosed fuse members extending between and permanently connected to said shell and center contacts through said central and lateral wells, for the purpose described.

3. A plug fuse having shell and center contact, a central well and a plurality of lateral wells, and a plurality of inclosed fuse members extending between and permanently connected to said shell and center contacts through said central and lateral wells, in combination with barrier means arranged in said central well and serving to confine the rupture points of said fuse members in separate chambers, for the purpose described.

1,022,330. FLUID-PRESSURE REGULATOR. JOSEPH D. RAMSEY, Boston, Mass. Filed Jan. 18, 1911. Serial No. 603,373. (Cl. 50—14.)



1. A regulator, comprising a casing, a valve consisting of a relatively movable part and a relatively stationary

part, the latter adjustably mounted in said casing, a spring for yieldingly holding said movable part in opposition to the water pressure, and means for adjusting the position of both said valve parts in the casing in accordance with the requirements of said spring without changing the relative position of said valve parts.

2. A regulator, comprising a casing, a spring therein, a movable valve part within the casing engaging said spring and provided with inlet ports, and adjusting means for varying the normal position of said valve part with reference to its inclosing casing and at the same time regulating the tension of said spring.

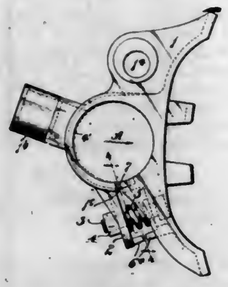
3. A regulator, comprising a casing, a movable valve tube inclosed thereby, a spring between the two for holding the tube yieldingly in opposition to the water pressure, and adjusting means for varying the position of said tube and thereby varying the tension of said spring, said means being inclosed and protected by said casing.

4. A regulator, comprising a casing, a movable valve tube inclosed thereby, a spring between the two for holding the tube yieldingly in opposition to the water pressure, adjusting means for varying the position of said tube with reference to the casing and thereby varying the tension of said spring, and coöperating valve parts movable with said adjusting means and tube as the adjusting means is adjusted, said parts being inclosed and protected by said casing.

5. A regulator, comprising a casing, a movable valve tube inclosed thereby, a spring between the two for holding the tube yieldingly in opposition to the water pressure, and adjusting means for varying the position of said tube relative to said casing and thereby varying the tension of said spring, said tube and said adjusting means being provided with coöperating portions of the valve mechanism and said parts being inclosed by said casing.

[Claims 6 to 18 not printed in the Gazette.]

1,022,331. BRAKE-HEAD. HENRY B. ROBISCHUNG, Cloverdale, Mich., assignor to Chicago Railway Equipment Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 23, 1908. Serial No. 428,726. (Cl. 188—28.)



1. A brake head provided with a socket, one wall of which socket is yielding, and means for moving said socket wall in both directions; substantially as described.

2. A brake head having a socket, one wall of which socket is yielding, means for positively moving said socket wall in one direction and a spring for moving said wall in the opposite direction; substantially as described.

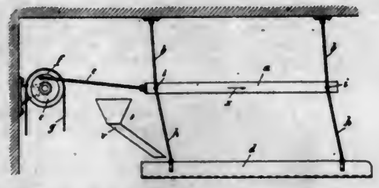
3. A brake head having a socket, one wall of which socket is yielding, yielding means for forcing said movable socket wall outwardly, and positive means for forcing said movable socket wall inwardly; substantially as described.

4. A brake head having a socket, one wall of which socket is yielding, means for moving said yielding socket wall in both directions, and a stop for limiting the amount of movement of said socket wall; substantially as described.

5. A brake head having a split socket, stops at the split of said socket for limiting the inward movement of the parts, and means coöperating with projections extending from the walls of said socket, beyond said stops, for drawing the split end of the socket walls together.

[Claims 6 to 9 not printed in the Gazette.]

1,022,332. CONVEYING-TROUGH. HUGO ROTH, Brunswick, Germany, assignor to Amme, Giesecke & Konegen, Aktiengesellschaft, Braunschweig, Brunswick, Germany, a Corporation of Germany. Filed May 2, 1910. Serial No. 558,990. (Cl. 193—11.)



1. The combination with a conveying trough of a reciprocating driving mechanism for the same and freely swinging links pivotally pendant from the driving mechanism and pivotally connected to and supporting the trough, the links providing for free reciprocating movement of the trough with relation to the driving mechanism.

2. The combination with a conveying trough of a driving mechanism for the same which includes a reciprocatory beam, and freely swinging links pivotally pendant from the beam and pivotally connected to and supporting the trough, the links providing for free reciprocating movement of the trough with relation to the beam.

3. The combination with a conveying trough of a driving mechanism for the same, which includes a reciprocating beam, and freely swinging bars pivotally connected to the beam and to the trough, the swinging movement of the bars being consequent to the reciprocating movement of the beam and providing for free reciprocating movement of the trough with relation to the beam.

4. The combination with a conveying trough of a reciprocating driving mechanism for the same, freely swinging links pivotally pendant from the driving mechanism and pivotally connected to and supporting the trough and means to arrest and cushion the feeding movement of the trough near the end of its stroke.

5. The combination with a conveying trough, of a driving mechanism for the same, which includes a reciprocating beam, freely swinging bars pivotally connected to the beam and to the trough, the swinging movement of the bars being consequent to the reciprocating movement of the beam and providing for free reciprocating movements of the trough with relation to the beam, and means to arrest and cushion the feeding movement of the trough near the end of its stroke.

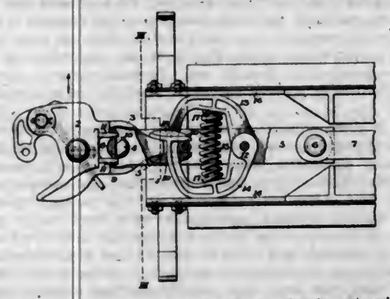
1,022,333. ARMORED TIRE. VICTOR A. ROUILLIARD, Fall River, Mass., assignor of one-half to Armel L. Audet, Fall River, Mass. Filed Dec. 16, 1911. Serial No. 666,178. (Cl. 152—18.)



1. A rubber tire comprising one or more layers and a protecting metallic coat electro-deposited on one of them, substantially as described.

2. A pneumatic rubber tire composed as to its exterior, peripheral portion of a series of superposed layers each having a protecting metallic coat formed by electro-deposition, substantially as described.

1,022,334. CENTERING DEVICE FOR CAR-COUPLINGS. ERNEST H. SCHMIDT, Cleveland, Ohio, assignor to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed Sept. 11, 1909. Serial No. 517,306. (Cl. 213—42.)



1. A coupler having a shank, a shank extension to which the coupler is pivoted, a draft rigging to which the shank extension is pivoted, and a yielding centering device pivotally connected with the shank extension in the rear of the pivotal point of the coupler and in front of the pivotal point of the shank extension, said centering device having a sliding contact with portions of the car and engaging the coupler shank, to center both the coupler and the shank extension.

2. A coupler, a pivoted shank extension to which the coupler is pivotally connected, a pair of centering arms pivotally attached to the shank extension and having a sliding contact at their sides with the car sills, said arms having shoe portions at their free ends which engage the coupler shank in rear of its pivot and also the coupler shank extension forward of its pivot, together with a centering spring arranged to act upon said arms.

3. A coupler, a pivoted shank extension to which the coupler is pivoted, the coupler having a shank extending back of its pivotal connection with the shank extension, and yielding centering arms pivoted to the shank extension in the rear of the coupler pivot and having a sliding contact with the car sills, said arms engaging the rear end portion of the coupler shank.

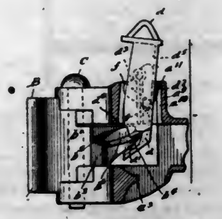
4. A pivoted coupler shank extension formed of upper and lower members, a coupler pivoted between said members and having a shank extending rearward of the pivot, centering arms pivoted between said upper and lower members and having a sliding contact with the car sills, said arms having their free end portions overlapping each other and provided with shoe portions, said shoe portions engaging with opposite sides of the extension of the coupler and also engaging with opposite sides of a bearing on the shank extension, and a centering spring between said arms and acting thereon.

5. In car coupler mechanism, a pivoted coupler shank extension, a coupler, and a pivot pin connecting the coupler and the shank extension, the coupler having a rearward projection beneath the lower end of said pin and also having a free removable guard member extending transversely over the upper end of the pivot pin.

[Claim 6 not printed in the Gazette.]

1,022,335. CAR-COUPLING. WILLIAM S. SCHROEDER, Chicago, Ill., assignor, by direct and mesne assignments, to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed Sept. 4, 1907. Serial No. 391,297. (Cl. 213—10.)

1. In a car coupler, the combination with the draw head, of a knuckle, a vertically movable lock, a side lifting lever having a vertically swinging lifting arm, said lock having a recess to receive and a shoulder to engage said lifting arm, said draw head having a covered and horizontally and forwardly elongated recess to accommodate the shank portion of said lifting lever when the same is swung forward to permit the bent lifting arm of said lever to be removed or inserted in the draw head, and a vertical guide pin or cotter for guiding and holding the lifting lever in position, substantially as specified.



2. A car coupler knuckle having a rear arm or tail furnished with two intersecting inclines on its upper face for the lock to ride upon, said inclines being one above the other and one inside the other so that when the knuckle opens, the lock may drop off the upper and inner incline onto the lower and outer incline and so that when the knuckle closes, the lock will ride only on the lower and outer incline until it drops into position for holding the knuckle closed, substantially as specified.

1,022,336. NUT-LOCK. CLARENCE W. SHAW, Johnstonville, Cal. Filed June 13, 1911. Serial No. 632,931. (Cl. 151—8.)

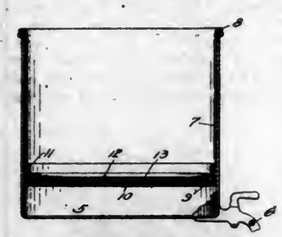


1. In combination, a threaded member, a nut threaded thereon, and provided with diametrically opposed longitudinal grooves, a locking device disposed within the nut, means for holding said device in locking engagement with the threaded member, keys carried by said locking device and engaging said longitudinal grooves, and means for moving said locking device longitudinally of the nut to disengage the same from the threaded member, said keys and grooves guiding said locking device in its longitudinal movement.

2. The combination with a member having a threaded end and provided with a transverse groove, of a locking device including a plate, means carried by said plate and adapted to engage the groove, a nut threaded on said member and housing said locking device and formed interiorly with longitudinal key-ways, keys carried by said plate and adapted to engage said key-ways, and means arranged exteriorly of the nut for moving the said locking device longitudinally of the nut and out of engagement with the groove, said keys and key-ways guiding said locking device in its longitudinal movement and preventing rotation of the device independently of the nut.

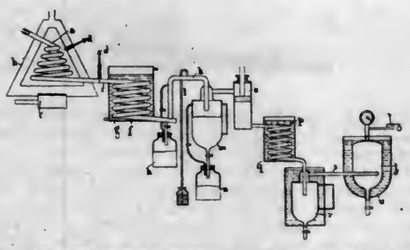
3. The combination with a member having a threaded end, said end being provided with a transversely disposed groove, of a locking device including a plate, key members formed on said plate and adapted to enter said groove, a nut adapted to fit the threaded end of said member and completely house said plate, means interposed between the head of said nut and the plate to hold the locking device in engagement with the member, said nut being formed interiorly with longitudinal keyways, keys carried by said plate and adapted to enter said keyways, and means for moving said plate longitudinally of said nut, said keyways and keys forming the guiding means of said plate in its longitudinal movement.

1,022,337. COFFEE-COOKER. JOHN N. SHAW, Seattle, Wash. Filed Oct. 16, 1911. Serial No. 654,856. (Cl. 53—3.)



In a coffee percolator, a cylindrical vessel, a shell adapted to closely fit therein with the outer surface of the shell contacting the inner surface of said vessel, an outturned top flange upon said shell adapted to seat upon the top of said vessel, an integral inturned flange upon the open bottom end of the shell, the latter being of a less height than the containing vessel, a dish-shaped member having an out-turned top flange and perforations through the bottom thereof adapted to fit within said shell with the flange contacting the inner surface and seated upon the bottom flange of the shell, a strainer cloth flatly engaging the bottom of and fitted within said member, a disk member having an inturned peripheral bead and having perforations through its bottom and adapted for reception within the dish-shaped member and flatly disposed upon said strainer cloth.

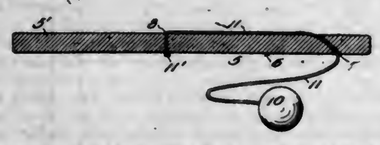
1,022,338. MANUFACTURE OF ISOPRENE. OSWALD SILBERRAD, Buckhurst Hill, England. Filed Jan. 24, 1911. Serial No. 604,473. (Cl. 23—24.)



1. A process for the production of isoprene by the depolymerization of turpentine consisting in heating the turpentine to a temperature of about 450 C. to 750 C. in apparatus which is maintained at a pressure considerably below atmospheric pressure, as set forth.

2. A process for the production of isoprene by the depolymerization of turpentine consisting in passing turpentine through a tube heated to a temperature of 450 to 750 C. the interior of which is maintained at a pressure considerably below atmospheric pressure.

1,022,339. GAME APPARATUS. JOSEPH A. SLOAN, Seattle, Wash. Filed Mar. 2, 1911. Serial No. 611,841. (Cl. 46—59.)



1. A game apparatus comprising a bat provided with a vertically-disposed opening and a relatively wide inclined opening, an elastic cord extending through said vertical opening and having its inner end knotted and engaging the lower face of the bat to prevent said end passing through said vertical opening, said cord further extending lengthwise of the upper face of the body-portion and then downwardly through said inclined opening and depending from the bat, and a spherical body carried by the outer end of said cord.

2. A game apparatus comprising a bat including a handle and a body-portion, said bat further provided with a centrally-disposed opening at the outer terminus of the handle and a relatively wide inclined opening in proximity to the outer end of the body-portion, an elastic cord having its inner portion extending through said vertical opening and with the inner end of the cord knotted to prevent its passage through said vertical opening, said cord further extending longitudinally of the upper face of the body-portion and then downwardly through said inclined opening and depending from the bat, and a spherical body carried by the outer end of said cord, the rear wall of said inclined opening being rounded.

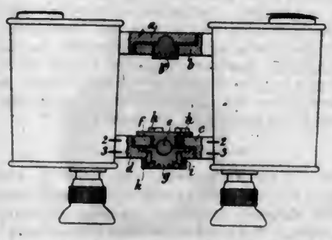
3. A game apparatus comprising a bat provided with a vertically-disposed opening and a relatively wide inclined opening, an elastic cord extending through said vertical opening and having its inner end knotted and engaging the lower face of the bat to prevent said end passing through said vertical opening, said cord further extending lengthwise of the upper face of the body-portion and then downwardly through said inclined opening and depending from the bat, and a spherical body carried by the outer end of said cord, the rear wall of said inclined opening being rounded.

4. A game apparatus comprising a bat including a handle and a body-portion, said bat further provided with a centrally-disposed opening at the outer terminus of the handle and a relatively wide inclined opening in proximity to the outer end of the body-portion, an elastic cord having its inner portion extending through said vertical opening and with the inner end of the cord knotted to prevent its passage through said vertical opening, said cord further extending longitudinally of the upper face of the body-portion and through said inclined opening, and a spherical body secured to the forward end of said elastic cord, the rear wall of said inclined opening being rounded.

5. A game apparatus comprising a bat provided intermediate its ends and centrally of its longitudinal edges with a vertically-disposed opening and further provided in proximity to its outer end and centrally of its longitudinal edges with a relatively wide inclined opening, the inclination thereof being toward the vertical opening, an elastic cord having its inner portion extending through said vertical opening and its inner end abutting against the lower face of the bat to prevent withdrawal of said cord up through said vertical opening, said cord further extending centrally of its upper face toward and then down through said inclined opening, and a spherical body connected to the forward end of said cord.

[Claim 6 not printed in the Gazette.]

1,022,340. HINGED DOUBLE TELESCOPE. ADOLF STEINLE, Jena, Germany, assignor to The Firm of Carl Zeiss, Jena, Germany. Filed Dec. 19, 1910. Serial No. 598,172. (Cl. 88—34.)



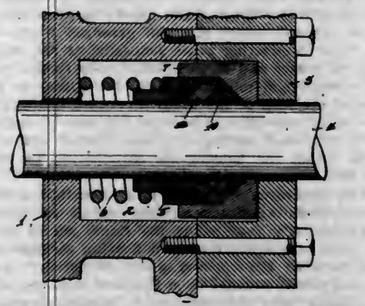
1. In a double telescope a hinge connecting the single telescopes and comprising two pairs of hinge arms, a front and a hinder one, each single telescope carrying two of the hinge arms, a front and a hinder one, each hinge arm being fitted with a spherical hinge surface and the front and the hinder pair of hinge surfaces each having its own center of curvature, a separate hinge part on at least one hinge arm of each single telescope, each hinge part presenting one of the hinge surfaces, and means for adjusting each hinge part on its hinge arm transversely to the hinge axis.

2. In a double telescope a hinge connecting the single telescopes and comprising two pairs of hinge arms, a front and a hinder one, each single telescope carrying two of the hinge arms, a front and a hinder one, each hinge arm being fitted with a spherical bearing surface and the front and the hinder pair of bearing surfaces each having its own center of curvature and inclosing a ball as a loose journal, a separate hinge part on at least one hinge arm of each single telescope, each hinge part presenting one of the hinge surfaces, and means for adjusting each hinge part on its hinge arm transversely to the hinge axis.

3. In a double telescope a hinge connecting the single telescopes and comprising two pairs of hinge arms, a front and a hinder one, each single telescope carrying two of the hinge arms, a front and a hinder one, each hinge arm being fitted with a spherical bearing surface and the front and the hinder pair of bearing surfaces each having its own center of curvature and inclosing a ball as a loose journal, a separate hinge part on at least one hinge arm of each single telescope, each hinge part presenting one of the hinge surfaces, and means for adjusting each hinge part on its hinge arm in a fixed path transversely to the hinge axis.

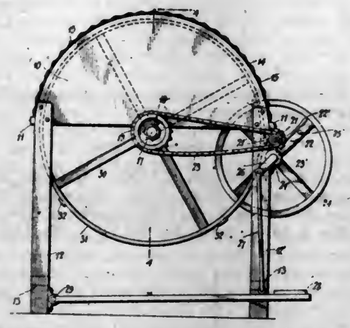
4. In a double telescope a hinge connecting the single telescopes and comprising two pairs of hinge arms, a front and a hinder one, each single telescope carrying two of the hinge arms, a front and a hinder one, the hinge arms of the one single telescope being outer ones and those of the other single telescope being inner ones, each hinge arm being fitted with a spherical bearing surface, the front and the hinder pair of bearing surfaces each having a special center of curvature and inclosing a ball as a loose journal, the hinge parts and balls having central openings, a clamping bolt connecting the outer arms, and a distancing tube being placed between the inner arms, a separate hinge part on at least one hinge arm of each single telescope, each hinge part presenting one of the hinge surfaces, and means for adjusting each hinge part on its hinge arm in a fixed path transversely to the hinge axis.

1,022,341. PACKING-RING. JEREMIAH J. SULLIVAN, New Decatur, Ala., assignor of one-half to himself, and one-half to James J. McCarthy, Chicago, Ill. Filed Apr. 17, 1909. Serial No. 490,499. (Cl. 121—100.)



In a packing of the class described, a cup ring provided with an inner angular surface, a follower ring fitting within said cup ring, having an inclined end oppositely inclined from the angular surface of the cup ring, a shoulder formed annularly around said follower ring, providing a seat for a spring for maintaining said follower ring under tension within said cup ring, a conical split ring of lesser diameter than the bore of the cup ring seated against the angular surface of said cup ring, and a second split ring interposed between the angular surfaces of said conical ring and follower ring of equal diameter with the bore of the cup ring, with one peripheral edge angled to engage with the angular surface of said cup ring, whereby said rings maintain parallelism with cup and follower rings.

1,022,342. PEANUT-PICKER. PAUL J. THEUS, Ocala, Fla. Filed Oct. 20, 1911. Serial No. 655,766. (Cl. 130—30.)



1. A peanut stripping machine comprising a stationary open-work element a rotating open-work stripping element, and intermittent driving means for the latter, whereby said rotating element is at times stationary and in register with the stationary element.

2. In a peanut stripping machine, a curved stationary open-work element, a rotating member having its periphery concentric with and adjacent the stationary element, diagonally arranged stripper bars mounted transversely on the rotating member for coaction with the stationary element to engage the stems of peanuts, and means for intermittently rotating the rotating member, whereby the rotating member is at times stationary and in register with the stationary element.

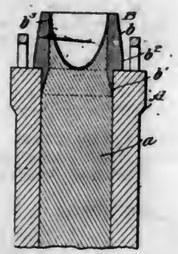
3. A peanut stripping machine comprising a stationary open-work element, a rotating stripping element disposed in close concentric relation thereto, said rotating element including a shaft, parallel rings secured thereto, a plurality of groups of bars on the rings arranged in parallelism with each other, said groups of bars being arranged diagonally with respect to the stationary element, and means for intermittently rotating the stripping element, whereby the stripping element is stationary and in register with the stationary element, at times, and produces a shearing action between the stationary and rotating elements when the latter is in motion.

1,022,343. FEEDER FOR INGOT-MOLDS. ERNEST J. TURNER, Pittsburgh, Pa., assignor of one-third to Bloomfield H. Howard, Aspinwall, Pa. Filed Jan. 24, 1912. Serial No. 673,098. (Cl. 22—147.)

1. As a new article of manufacture a feeder for ingot molds, formed of refractory material and comprising a body having an unrestricted passage and provided at one end with a neck adapted to extend into a mold and having a comparatively thin wall and a shoulder at the junction of the neck with the body to rest upon the end of the mold, the passage of the body being of uniform diameter and the passage of the neck being of gradually increasing diameter from its upper to its lower end.

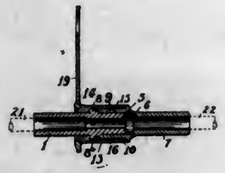
2. As a new article of manufacture a feeder for ingot molds formed of refractory material and comprising a body having an unrestricted passage and provided at one end with a neck to extend into a mold and with a shoulder at the junction of the neck with the body to rest upon

the end of the mold, the wall of the neck being comparatively thin, whereby the passage through the feeder will



be of a diameter nearly equal to that of the mold upon which the feeder is used.

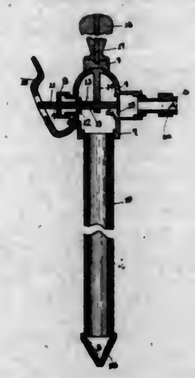
1,022,344. COUPLING OR UNION. WILLARD IRVING TWOMBLY, New York, N. Y., assignor to Twombly Motors Company, New York, N. Y., a Corporation of New York. Filed May 3, 1910. Serial No. 559,149. (Cl. 137—28.)



A coupling or union, comprising in combination tubular male and female members, the male member having an annular flange one face of which is beveled and having a cylindrical extension forward of the bevel face, the female member having an enlarged portion at one end in which the forward extending portion of the male member engages and provided with an internal bevel in the end to engage with and have a ground-joint connection with the bevel on the flange of the male member, said enlarged portion of the female member also provided with external screw threads with the threads cut away at opposite points; a sleeve to engage over the connection of said male and female members, said sleeve having an internal annular shoulder to engage with the annular flange on the male member and provided with internal screw threads with the threads cut away at opposite points, so that the threaded portions of the sleeve may slide along the unthreaded portions of the female member and the threaded portions of the latter may slide along the unthreaded portions of the sleeve; and a lever connected to said sleeve portion to impart rotary motion to the sleeve to throw the threads thereon into engagement with the threads on the female member drawing the beveled portion of the female member up against the bevel on the annular flange of the male member and clamping the female member firmly against the extended portion of the male member, to couple and lock the members together in water-tight connection, or to apply a reverse motion to the sleeve to uncouple the male and female members.

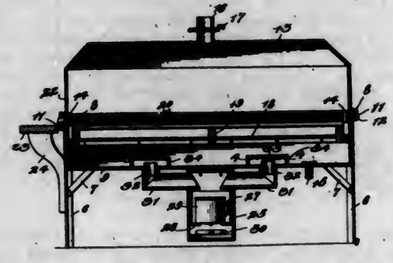
1,022,345. SIDEWALK-FLUSHER. EVAN WATKINS, Cleveland, Ohio, assignor of one-half to Gustav H. Hanna, Cleveland, Ohio. Filed Apr. 17, 1911. Serial No. 621,634. (Cl. 137—17.)

A flusher comprising a valve body having a handle at one end thereof, a pipe extending from the other end thereof and terminating in a nozzle, a nipple at one side of the body adapted to be coupled to a supply pipe, a valve seat at the inner end of said nipple, a reciprocating valve movable in said nipple to and from said seat and having a stem working through an opening in the side of the body opposite to said nipple, and extending across



within the body, and a lever fulcrumed on the valve body and operatively connected to said stem and extending to position beside the handle, substantially as and for the purpose described.

1,022,346. BATH APPARATUS. GEORGE G. WIGGINS, Denver, Colo., assignor of two-thirds to Charles O. Rice and Norman MacDonald, Denver, Colo. Filed Dec. 9, 1911. Serial No. 664,798. (Cl. 4—13.)



1. In an apparatus of the character described, a frame, a housing mounted therein, a body supporting bed arranged within said housing, a heater centrally arranged beneath the housing and depending from the bottom wall thereof, vessel supports arranged within said heater, vapor conducting tubes connected at one of their ends to the heater and at their other ends to the bottom of the housing upon opposite sides of its center, the lower portions of the ends of the tubes connected to the heater being extended inwardly to direct the waters of condensation into the vessel arranged in said heater, and means arranged within the housing for distributing the vapor beneath said body supporting bed.

2. In an apparatus of the character described, a frame, a housing consisting of two sections, one of said sections being permanently mounted in the frame, plates secured to the walls of the other of said housing sections to be received between the opposed walls of the first named section and closely engaged upon the inner surfaces thereof to frictionally hold said sections in assembled relation, angle bars secured to the side walls of the first named housing section, a body supporting bed removably mounted upon said angle bars, depending angle plates secured to the bottom of the first named housing section, a heater secured between said angle plates, and vapor conducting tubes connecting said heater to the bottom section of the housing adjacent its opposite ends.

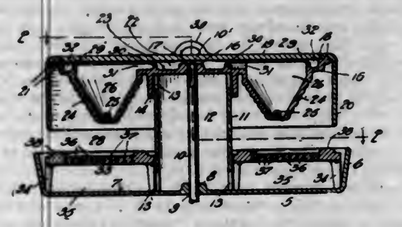
1,022,347. PROCESS OF REGENERATING CONSUMED CATALYSTS. MOSE WILBUSCHEWITSCH, Nischninovgorod, Kanavino, Russia. Original application filed Jan. 12, 1911, Serial No. 602,322. Divided and this application filed July 19, 1911. Serial No. 639,453. (Cl. 23—28.)

1. The herein described process of regenerating catalysts, which consists in separating the foreign matter from the said catalyst, separating the fatty acids, treating the same with an acid for dissolving the metal contained in the catalyst, transforming the metal-salt into the carbonate, transforming the carbonate into the oxid, and reducing the oxid to the metal.

2. The herein described process of regenerating catalysts, which consists in separating from the said catalysts the major portion of the oil, saponifying the oil still contained in the residue, treating the same with an acid for dissolving the metal contained in the catalyst, removing the fatty acids obtained thereby, transforming the metal-salt into the carbonate, transforming the carbonate into the oxid, and reducing the oxid to the metal.

3. The herein described process of regenerating catalysts which consists in separating the major portion of the oil from the said catalyst, saponifying the oil still contained in the residue, treating the same with acid, removing the fatty acids obtained thereby, transforming the metal-salt into the carbonate, transforming the carbonate into the oxid, reducing the oxid into the metal, and grinding the metal with oil into an emulsion.

1,022,348. HYDROCARBON-BURNER. CHRISTIAN BACKINGER, Seattle, Wash. Filed Nov. 2, 1910. Serial No. 590,374. (Cl. 158—53.)



1. A hydrocarbon burner comprising a base pan, a grating arranged at each end thereof, an upright hollow support interposed between said gratings and communicating at its lower end with the interior of said pan, said support at its top provided with an outlet, a plate mounted upon and having a depending flange surrounding said upright, a double ridge at the perimeter of said plate, an inverted hollow cone depending from said plate at each side of said support, each of said cones formed with a vertically-disposed nozzle at its lower end and each of said cones constituting a superheating chamber, an oil supply pipe extending through said support and opening through said plate, and a hood inclosing the plate and provided with a pair of grooves in which extend said ridges.

2. A hydrocarbon burner comprising a base pan, a grating arranged at each end thereof, an upright hollow support interposed between said gratings and communicating at its lower end with the interior of said pan, said support at its top provided with an outlet, a plate mounted upon and having a depending flange surrounding said upright, a double ridge at the perimeter of said plate, an inverted hollow cone depending from said plate at each side of said support, each of said cones formed with a vertically-disposed nozzle at its lower end and each of said cones constituting a superheating chamber, an oil supply pipe extending through said support and opening through said plate, a hood inclosing the plate and provided with a pair of grooves in which extend said ridges, a wall projecting from said plate and forming a continuation of the inner face of each of the cones and formed with an opening, and an extension integral with the plate, with one end of said wall and with the inner ridge, thereby forming a conducting means for the oil to the said opening.

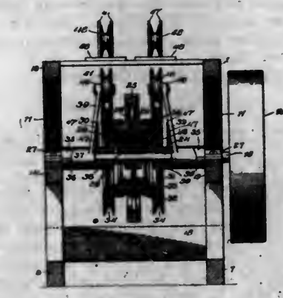
3. A hydrocarbon burner comprising a base pan, a vertically-disposed support arranged centrally thereof, a plate mounted upon said support and having an upturned portion at its perimeter, a pair of hollow inverted cones integral with said plate and arranged one at each side of said support and constituting superheating chambers, a vertically-disposed nozzle at the lower end of each of said cones, said cones having their lower ends spaced from said base pan, a hood inclosing said plate and depending below said cones and having the upturned portion of said plate extending therein, an oil supply pipe projecting through said pan, support and opening through said plate, and means integral with the plate for directing the oil to said superheating chambers, the top of said cover spaced from said directing means.

4. A hydrocarbon burner comprising a base pan, a vertically-disposed support arranged centrally thereof, a plate mounted upon said support and having an upturned portion at its perimeter, a pair of hollow inverted cones integral with said plate and arranged one at each side of said support and constituting superheating chambers, a vertically-disposed nozzle at the lower end of each of said cones, said cones having their lower ends spaced from said base pan, a hood inclosing said plate and depending below said cones and having the upturned portion of said plate extending therein, an oil supply pipe projecting through said pan, support and opening through said plate, means integral with the plate for directing the oil to said superheating chambers, the top of said cover spaced from said directing means, and a grating arranged within said pan at each side of said support and supported above the bottom of the pan.

5. A hydrocarbon burner comprising a base pan, a vertically-disposed support arranged centrally thereof, a plate mounted upon said support and having an upturned portion at its perimeter, a pair of hollow inverted cones integral with said plate and arranged one at each side of said support and constituting superheating chambers, a vertically-disposed nozzle at the end of each cone and spaced from said base pan, a hood inclosing said plate and depending below said cones and having the upturned portion of said plate extending therein, an oil supply pipe projecting through said pan, support and opening through said plate, means integral with the plate for directing the oil to said superheating chambers, the top of said cover spaced from said directing means, and a grating arranged within said pan at each side of said support and supported above the bottom of the pan, each of said grating including a heat retaining ring.

[Claims 6 and 7 not printed in the Gazette.]

1,022,349. MULTIPLE HOIST. WENDELL A. BARKER, Chicago, Ill. Filed Apr. 25, 1911. Serial No. 623,190. (Cl. 57—83.)



1. In a hoist, the combination of a driving member mounted on a shaft, a hoisting member loosely moutned

on the shaft adjacent one face of the driving member, friction clutch mechanism between the hoisting member and the driving member, shifting mechanism for shifting the hoisting member into lateral engagement with the driving member, a guide pulley mounted on said shifting member, and other guide pulleys for guiding the hoisting rope over the hoisting member and said first mentioned guide pulley in such manner that tension on the slack end of the rope actuates the shifting member to throw the hoisting member into clutch with the driving member, substantially as described.

2. In a hoist, the combination of a driving member mounted on a shaft, a hoisting member loosely mounted on the shaft adjacent one face of the driving member, friction clutch mechanism between the hoisting member and the driving member, a shifting member on the shaft for throwing the hoisting member laterally into engagement with the driving member, an arm on said shifting member, a pulley on the arm, and other pulleys for guiding the rope over the hoisting member and over the arm pulley in such a manner that tension on the slack end of the rope throws the arm to actuate the shifting member to throw the hoisting member into clutch with the driving member, substantially as described.

3. In a hoist, the combination of a driving member mounted on a shaft, a hoisting member loosely mounted on the shaft adjacent one face of the driving member, friction clutch mechanism between the hoisting member and the driving member, a shifting member on the shaft for throwing the hoisting member laterally into engagement with the driving member, an arm on the shifting member, a pulley on the arm, an incoming guide pulley in fixed relation with respect to the hoisting member, an outgoing guide pulley in fixed relation to the arm pulley, and positioned with respect to the same to guide the slack end of the rope over the arm pulley in a manner to create an angle in the same, whereby when tension is thrown on the slack end of the rope the arm will be thrown over to throw the shifting mechanism and bring the hoisting member into clutch engagement with the driving member, substantially as described.

4. In a hoist, the combination of a rotatable power member, a hoisting sheave laterally adjacent the same, clutch mechanism between the power member and the sheave, shifting mechanism in position to shift the sheave to actuate the clutch mechanism, a guide pulley secured to the shifting mechanism, and other pulleys suitably positioned to guide the hoisting rope over the sheave and over the first mentioned guide pulley to form an angle in the hoisting rope with the shifting mechanism guide pulley in such angle, substantially as and for the purpose described.

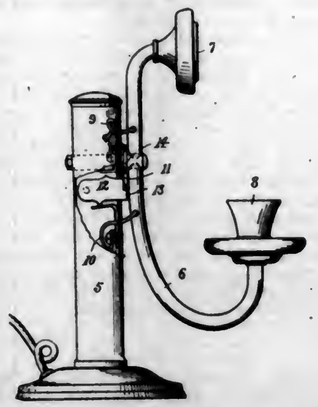
5. In a hoist, the combination of a rotatable driving member, a hoisting sheave laterally adjacent the same, clutch mechanism between the driving member and the sheave, a stationary member, a cam shifting member between the sheave and the stationary member in position to shift the sheave and actuate the clutch mechanism, a guide pulley carried by the cam member, and other pulleys suitably positioned for guiding the hoisting rope over the sheave and over the cam member guide pulley to produce an angle in the hoisting rope with its apex at the cam member guide pulley, substantially as and for the purpose set forth.

[Claim 6 not printed in the Gazette.]

1,022,350. TELEPHONE. CHARLES C. BLACKHAM, Bridgeport, Conn. Filed May 4, 1911. Serial No. 625,000. (Cl. 179—147.)

1. In a telephone of the class described, the combination with a hollow supporting stand, a contact lever extended out therefrom and adapted to make and break the electrical circuit, a combined receiver and transmitter bracket pivotally connected to the stand, means carried by the bracket to engage the lever before mentioned for operating the same to make and break the said electrical connections by the turning of the bracket with relation to the stand.

2. In a telephone bracket of the class described, the combination with a supporting stand, of a curved bracket pivotally connected thereto, a transmitter mounted in one end of the bracket and a receiver upon the other, a pivotal lever carried by the stand and adapted to make and break the electrical connections for the receiver and transmitter, a cam carried by the bracket and adapted to engage said lever in a way to hold the same out of contact when the bracket is in a vertical position, and constructed to allow the lever to form a connection when the bracket is adjusted for use.



3. In a telephone of the class described, the combination with a hollow supporting stand, a pivotal contact lever extended out therefrom and adapted to make and break the electrical circuit for the telephone, a curved bracket pivotally connected to the stand, a transmitter connected to the upper end of said bracket and a receiver upon the lower end thereof, a cam carried by the bracket to engage the lever before mentioned for operating the same to make and break the said electrical connections by the turning of the bracket with relation to the stand, and means for limiting the said movement.

4. In a telephone bracket of the class described, the combination with a supporting stand, of a curved bracket pivotally connected thereto, a transmitter mounted in one end of the bracket and a receiver upon the other; a pivotal lever mounted in the stand below the pivotal point of the bracket and adapted to make and break the electrical connections for the receiver and transmitter, a cam carried by the bracket above the lever and adapted to engage the same in a way to hold the lever down and out of contact when the bracket is in a vertical position and constructed to allow the lever to raise up to form a connection when the bracket is adjusted for use.

1,022,351. PROCESS OF PRODUCING CYANIDS AND CYANAMIDS. CARL BOSCH and ALWIN MITTASCH, Ludwigshafen-on-the-Rhine, Germany, assignors to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany, a Corporation. Filed Apr. 5, 1910. Serial No. 553,655. (Cl. 23—13.)

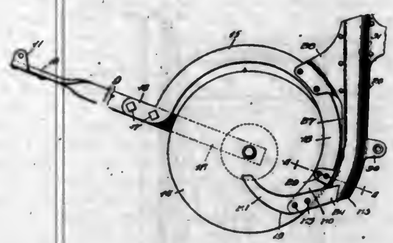
1. The production of cyanids and cyanamids of the alkali metals and of the alkaline earth metals by heating aluminum nitrid and silicon nitrids with carbon in the presence of a hereinbefore defined metallic compound.

2. The production of cyanids and cyanamids of the alkali metals and of the alkaline earth metals by heating aluminum nitrid and silicon nitrids with carbon in the presence of a hereinbefore defined metallic compound and of a flux.

3. The production of sodium cyanid by heating silicon nitrid with carbon in the presence of a sodium salt.

4. The production of sodium cyanid by heating silicon nitrid with carbon in the presence of sodium carbonate.

1,022,352. SCRAPER FOR FURROW-OPENERS. THOMAS BRENNAN, Jr., Minneapolis, Minn., assignor to The Monitor Drill Company, Minneapolis, Minn., a Corporation of Minnesota. Filed July 11, 1911. Serial No. 637,919. (Cl. 111—11.)



1. The combination with the draw bar and disk of a disk implement, of an arched member of resilient material having its forward end rigid with the draw bar and extending up and over the disk from one side to the other of the same, and a scraper secured to the lower end of the arched member, substantially as described.

2. The combination with the draw bar and disk of a disk implement, of an arched member of resilient material having its forward end rigid with the draw bar and extending up and over the disk from one side to the other of the same, a boot secured to the rear end of the arched member, and a scraper secured to the lower end of the arched member adjacent to the toe of the boot and independent thereof, substantially as described.

3. The combination with the draw bar and disk of a disk implement, of an arched member of resilient material having its forward end rigid with the draw bar and its arched portion extending up and over the disk, and a scraper secured to the lower end of the member, whereby the scraper is held firmly and evenly in engagement with the disk, by reason of the resiliency of the arched member, substantially as described.

4. The combination with the draw bar and disk of a disk implement, of an arched member of resilient material having its forward end rigid with the draw bar and its arched portion extending up and over the disk from one side of the same to the other, and a scraper secured to the lower end of the member, whereby the scraper is held firmly and evenly in engagement with the disk, by reason of the resiliency of the arched member, substantially as described.

5. The combination with the draw bar and disk of a disk implement, of an arched member of resilient material having its forward end rigid with the draw bar and its arched portion extending up and over the disk from one side of the same to the other, a grain boot secured to the rear end of the arched member, and a scraper secured to the lower end of the member independently of the boot, whereby the scraper is held firmly and evenly in engagement with the disk, by reason of the resiliency of the arched member, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,022,353. LAMP-CHIMNEY. YOUNG KIE BUELL, New York, N. Y. Filed May 17, 1909, Serial No. 496,528. Renewed July 12, 1911. Serial No. 638,208. (Cl. 240—95.)

1. In combination, a lamp chimney, a cap ring seated on the upper edge thereof, a plurality of studs projecting up from said cap ring and rigid therewith, a cap plate fixed on said studs, and a regulator ring adjustably mounted on said cap ring, being arranged so that its upper edge may lie near the outer edge of said cap plate forming a gap through which the gases of combustion may pass.

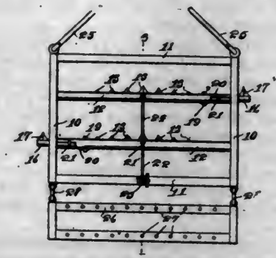
2. In combination, a chimney, a cap ring seated on the upper edge thereof and having external threads therethrough, a cap plate supported above said cap ring and having draft openings, a damper on said cap plate for controlling the amount of opening of said draft openings, and a regulating ring mounted on the threads of said cap ring and having its upper edge lying adjacent to the upper edge of said cap plate.



3. In combination, a tubular nipple, a base mounted on said nipple and having draft openings therethrough, a draft ring seating on said base, having draft openings adapted to register with said first draft openings and having draft openings in the side thereof, and a chimney seating on said base and having draft openings which may register with said last draft openings.

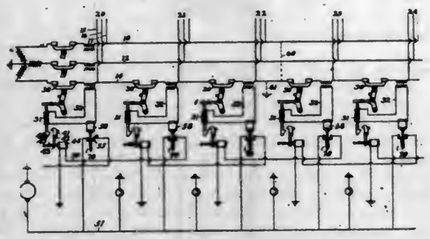
4. In combination, a tubular nipple, a base seating on said nipple and having a plurality of draft openings therethrough, a draft ring seating on said base, having draft openings adapted to register with said first draft openings, said draft ring having a vertical cylindrical side wall with side draft openings therethrough, a chimney having a neck seating over said vertical cylindrical wall and having its lower edge supported on said base, said chimney having side openings adapted to register with said first side openings, and tongues projecting up from said base and engaging said neck to retain said chimney.

1,022,354. CULTIVATOR. ELTON B. BUILTA, Arrowsmith, Ill. Filed Nov. 13, 1911. Serial No. 660,009. (Cl. 97—10.)



A cultivator comprising a rectangular frame, bars rotatably mounted in the frame, one end of certain of said bars being formed with a tubular portion, said tubular portion being formed with transversely alined openings in an open-ended slot, a shaft in the tubular portion, a bolt secured to the shaft and extending through said slot, said shaft being provided with an opening for registry with said alined openings, an adjusting bolt disposed in the alined openings and the openings in the shaft and one guiding tooth on said shaft and curved teeth on the said bars, said teeth diminishing in size from the center toward the opposite ends of the bars.

1,022,355. PROTECTING MEANS FOR ELECTRICAL DISTRIBUTION SYSTEMS. GEORGE A. BURNHAM, Saugus, Mass., assignor to S. B. Condit, Jr., Boston, Mass. Filed Oct. 28, 1911. Serial No. 657,319. (Cl. 175—294.)



1. In an electrical-distribution system including several sub-stations, an overload-switch and tripping-magnet responsive to an overload, arranged at each sub-station, means to prevent operation of each tripping-magnet controlled by means located at the next sub-station and responsive to an over-load, said controlling-means being more quickly responsive than the tripping-magnets, whereby those tripping-magnets which ordinarily would respond to an overload are prevented from operating except the one whose controlling-means is located beyond the cause of the overload and which does not respond, substantially as described.

2. In an electrical-distribution system including several sub-stations, an overload-switch and tripping-magnet responsive to an overload, arranged at each sub-station, locking-means to prevent operation of each tripping-magnet, controlling means for each locking-means arranged at a substation next the locking-means which it controls, said controlling-means being responsive to an overload but more quickly responsive than the tripping-magnets, substantially as described.

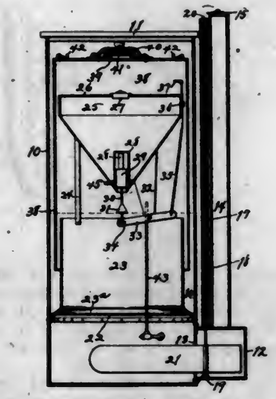
3. In an electrical-distribution system including several sub-stations, an overload-switch and tripping-magnet responsive to an overload, arranged at each sub-station, means to prevent operation of each tripping-magnet, a controlling-magnet for said means which is located at a sub-station next the means which it controls, and which is arranged in a transformer circuit in series relation with the tripping-magnet thereat, and which is more quickly responsive to an overload than the tripping-magnet, substantially as described.

4. In an electrical-distribution system including several sub-stations, an overload-switch and tripping-magnet responsive to an overload, arranged at each sub-station, electro-magnetically operated means to prevent operation of each tripping-magnet, a local-circuit for each electro-magnetically operated means extended to the next sub-station, a circuit-closer for each local-circuit at said next sub-station, and means responsive to an overload to operate said circuit-closer, said means being more quickly responsive than the tripping-magnet, substantially as described.

5. In an electrical-distribution system including several sub-stations, an overload switch and tripping-magnet responsive to an overload, arranged at each sub-station, electro-magnetically operated means to prevent operation of each tripping-magnet, a local-circuit for each electro-magnetically operated means extended to the next sub-station and having its source of supply independent of the distribution-system, a circuit-closer for each local-circuit at said next sub-station, and means responsive to an overload to operate said circuit-closer, said means being more quickly responsive than the tripping-magnet, substantially as described.

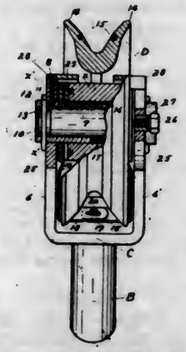
[Claims 6 to 8 not printed in the Gazette.]

1,022,356. ACETYLENE-GAS GENERATOR. JAMES M. CROWNER, Batavia, Iowa, assignor to Atlas Acetylene Lighting Company, Ottumwa, Iowa, a Corporation of Iowa. Filed Mar. 22, 1910. Serial No. 551,368. (Cl. 48—53.)



In an acetylene gas generator, a casing, a flange rigidly mounted on and extending inwardly from said casing, a shell formed with a flaring lower end adapted to be loosely supported on said flange, said shell being spaced from and within said casing, standards carried by said shell, a carbid holder carried by said standards and formed with a discharge port centrally of the shell, valve devices controlling said discharge port, a gas bell mounted loosely within the casing and inclosing said carbid holder and overlapping and surrounding the upper portion of said shell, said gas bell adapted to operate said valve devices, a cover for said casing, means for supplying water to and removing sludge from said casing, and a service pipe leading from said casing.

1,022,357. ELECTRIC TROLLEY. LUTHER M. DAVIS, Portland, Oreg. Filed Mar. 23, 1911. Serial No. 616,429. (Cl. 191—39.)



1. An electric trolley having a harp with parallel prongs and a trolley wheel mounted on a rigid shaft therein, a conductor having two members movable toward each other within the harp, provided with slots in their lower ends and secured by a screw to the lower part of the trolley harp, the upper ends extending upward with openings therein through which the shaft extends, contact pieces arched to fit over the shaft, placed between the wheel hub and the conductor members, and washers upon the shaft between the conductor members and the harp prongs, substantially as described.

2. An electric trolley having a harp with parallel prongs and a trolley wheel mounted on a rigid shaft therein a conductor having two members movable toward each other within the harp, provided with slots in their lower ends and secured by a screw to the lower part of the trolley harp, the upper ends extending upward with openings therein through which the shaft extends, and contact pieces arched to fit over the shaft and placed between the wheel hub and the conductor members, substantially as described.

3. An electric trolley having a harp with parallel prongs and a trolley wheel mounted on a rigid shaft therein, washers between the wheel hub and the harp prongs, recessed screws extending through the prongs into engagement with the washers, and springs within the screw recesses extending outwardly into engagement with the face of the washers, substantially as described.

4. An electric trolley comprising a harp with parallel prongs, a trolley wheel mounted therein, a rigid tubular wheel shaft supported by the prongs, provided with a lubricant discharge opening in its lower side and means to retain a lubricant within the shaft until slowly discharged, a conductor having two members movable toward each other within the harp, provided with slots in their lower ends and secured by a screw to the lower part of the trolley harp, the upper ends extending upward with openings therein through which the shaft extends, contact pieces arched to fit over the shaft, placed between the wheel hub and the conductor members, washers upon the shaft between the conductor members and the harp prongs, recessed screws extending through the prongs into engagement with the washers and springs within the screw recesses extending outwardly into engagement with the face of the washers, substantially as described.

1,022,358. TELEMETER. OTTO EPPENSTEIN, Jena, Germany, assignor to The Firm of Carl Zeiss, Jena, Germany. Filed Dec. 14, 1910. Serial No. 597,220. (Cl. 88—3.)



1. A telemeter the casing of which is rectilinear in the operative condition of the telemeter and consists of a middle portion and two end portions, each end portion containing an objective reflecting system, which is adapted to transmit the entering axial ray to the middle portion after having deflected it by 90° in the sighting plane, the middle portion containing in its central part the ocular system and at each end an objective lens, the axis of which is perpendicular to the direction of the said entering axial rays, and the three portions being movably connected together so as to allow an inoperative condition of the telemeter, in which the casing has a reduced size.

2. In a telemeter a rectilinear casing consisting of a middle portion and two end portions, which three portions are hinged together with the hinge axes perpendicular to the sighting plane, in each end portion an objective reflecting system having an invariable deflection of 90° in the sighting plane, in the central part of the middle portion an ocular system and at each end of this middle portion an objective lens, the axis of which is perpendicular to the direction in which the axial rays enter the objective reflecting systems.

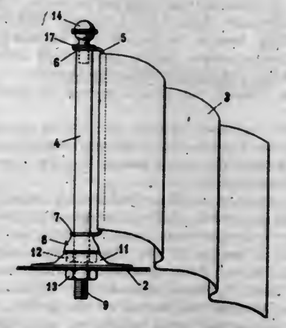
1,022,359. CONVEYER. FRITZ FISSLTHALER, Salzburg, Austria-Hungary. Filed Apr. 1, 1911. Serial No. 618,270. (Cl. 57—37.)

1. A conveyer comprising a single integral strip of sheet like material having an intact central body portion spirally disposed to form a tubular supporting body, the margins of said strip being bent and having their edges connected and forming a spiral conveying portion.



2. A conveyer comprising a single strip of sheet like material having an intact body portion spirally disposed to form a tubular body, the margins of said strip being bent radially and having their outer edges connected and forming a spiral conveying portion.

1,022,360. FLAG-HOLDER ATTACHMENT FOR AUTOMOBILE-RADIATORS, &c. OSCAR S. FITZSIMONS, Waterbury, Conn., assignor to The Novelty Manufacturing Company, Waterbury, Conn., a Corporation of Connecticut. Filed July 6, 1910. Serial No. 570,541. (Cl. 116—12.)



1. An attachment for an automobile radiator or the like comprising a post having a base and a clamping device and a threaded recess at the upper end, a flag carrying holder revolubly mounted upon said post and a removable knob having a threaded stem coacting with said threaded recess for detachably holding the holder in place.

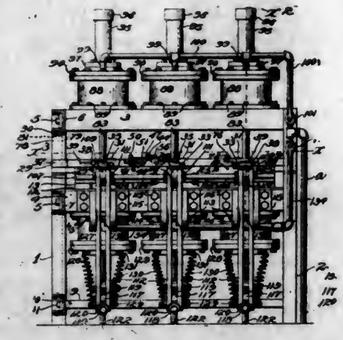
2. As an article of manufacture, an attachment of the character described comprising a post screw-threaded at its lower end, a base member surrounding the screw-threaded portion, a nut for securing said base member to said post and a second nut for clamping said post and base member to a support, a flag-carrying holder mounted upon and revoluble about said post above said base member and a knob removably engaging the upper end of said post for detachably holding said holder in place.

3. As an article of manufacture, an attachment of the character described comprising a post, a base member secured on the lower end of said post, means for securing said post to a support, a collar loosely mounted on said post above said base member, a flag-carrying holder revolubly mounted on said post and resting on said collar and a knob detachably engaging the upper end of said post for holding the flag-carrying holder removably in place.

4. As an article of manufacture, an attachment of the character described comprising a post, a flag-carrying holder revolubly mounted upon said post, a support on

said post for supporting said holder, means for readily and detachably securing said post upon a suitable supporting device and a knob detachably secured to the upper end of said post above said flag-carrying holder for detachably securing said holder on said post, said holder being directly supported laterally on said post independently of said knob.

1,022,361. PIANO-HAMMER MOLDING AND GLUING MACHINE. MARTIN GARDNER, Dolgeville, Cal. Filed Sept. 6, 1910. Serial No. 580,743. (Cl. 144—29.)



1. In a piano hammer molding and gluing machine the combination with oppositely arranged cauls, of caul-holders fixed to the cauls, clamps adapted to contact the caul-holders, clamp-holders fixed to the clamps, oppositely arranged adjusting means, levers pivoted at one of their ends to the clamp-holders, and at their other ends to the adjusting means, cross-heads each pivoted to a pair of said adjusting means and piston means to operate the cross-heads.

2. In a piano hammer molding and gluing machine the combination with a removable tray and means to operate the tray, of wedge and latch means to lock the tray to the tray-operating means.

3. A piano hammer molding and gluing machine comprising a mold adapted to receive a strip of hammer molding covering, a tray above the mold to hold a set of piano hammer moldings, means to lock the hammer moldings in the tray, means to move the moldings toward the covering and force the center portion thereof into the mold, means to lock the molding-moving means to the molding locking means cauls above the mold, means to hold the cauls, means to move the cauls toward the moldings and force the outer portions of the covering thereagainst, means to lock the caul-holding means, and means to retract the caul moving means from the caul-holding locking means.

4. A piano hammer molding and gluing machine comprising a frame; a removable bed-iron on the frame; a mold seated in the bed-iron and adapted to receive a strip of hammer molding covering; a tray above the mold to hold a set of piano hammer moldings; means to lock the hammer-moldings in the tray; means to move the moldings toward the covering and force the center portion thereof into the mold channel; means to lock the molding-means to the molding locking means cauls above the bed-iron; means to hold the cauls; means to move the cauls toward the hammer-moldings to force the outer portions of the covering thereagainst; means to lock the caul-holding means to the bed-iron; means to retract the molding-moving means; and means to retract the caul-moving means from the means that lock the caul-holding means.

5. In a piano hammer molding and gluing machine the combination with a bed-iron, a mold and operatable cauls adapted to mold the covering on hammer moldings, of molding-locking means and means to lock the mold, the molding-locking means and cauls against movement relative to the bed-iron.

[Claims 6 to 13 not printed in the Gazette.]

1,022,362. RAILWAY CROSS-TIE. OSCAR E. HALL, Pawnee City, Nebr., assignor to Hattie J. Stevens, Pawnee City, Nebr. Filed Dec. 5, 1910. Serial No. 595,826. (Cl. 238—6.)



1. A railway tie comprising a pair of sleepers having each in its upper face a recess, the inner end of each sleeper provided with a recess having an overhanging roof and with an open slot extending from the end recess to the upper face of the sleeper, a tie bar having terminal angle extensions to engage in the upper recess of each sleeper, and clamping members anchored within the end recess and extending by way of the open slots into adjustable engagement with the tie bar.

2. A railway tie comprising a pair of sleepers having each in its upper face a recess and a groove extending therefrom longitudinally to the inner end, the inner end of each sleeper provided with a recess having an overhanging roof, and with an open vertical slot extending from the end recess to the groove, a tie bar fitting within the grooves of the sleepers and having terminal angle extensions to engage one in the upper recess of each sleeper, and clamping members anchored with the end recesses and extending by way of the open slots into adjustable engagement with the tie bar.

3. A railway tie comprising a pair of sleepers having each in its upper face a recess and a groove extending therefrom longitudinally to the inner end, the inner end of each sleeper provided with a recess having an overhanging roof, a slotted plate inserted in the recess, beneath the roof, and an open vertical slot extending from the recess to an intersection with the groove, a tie bar fitting within the grooves of the sleepers and having terminal angle extensions to engage one in the upper recess of each sleeper, and bolts having their heads anchored beneath the overhanging roof of the end recesses and extending by way of the slots into adjustable engagement with the tie bar.

4. A railway tie comprising a pair of concrete sleepers having each in its upper face a recess and a groove extending therefrom longitudinally to the inner end, the inner end of each sleeper provided with a recess having an overhanging inserted metal plate, and with an open vertical slot extending from the end recess through the roof to the groove, a resilient packing strip in the groove, a tie bar fitting within the grooves of the sleepers and having angle extensions at its ends to engage one in the upper recess of each sleeper, and bolts having their heads anchored beneath the overhanging metal roof of the end recesses and extending by way of the open slots into adjustable engagement with the tie bar.

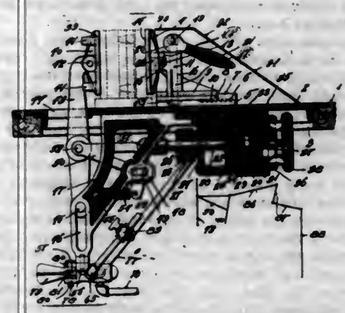
5. A railway tie comprising a pair of sleepers having in the upper face of each sleeper a recess which is located on the outer side of the rail, the inner end of each sleeper being provided with a recess having an overhanging roof and with an open slot extending from the recess to the upper face of the sleeper, a tie bar interlocked with the recess at the outer side of the rail, and clamping devices anchored within the end recess and connected with the tie bar on the inner side of the rail, said clamping devices being removable from the sleeper through the slot therein.

1,022,363. CORE-BOX-CLAMPING MACHINE. PHILIP B. HARRISON and ALBIN P. RISSLER, Chicago, Ill. Filed Apr. 24, 1911. Serial No. 623,054. (Cl. 22—10.)

1. In a device of the character described, a clamping head, a lever forming a support therefor, a piston rod connected to said lever, a piston on said rod, a cylinder within which the piston moves, an adjustable head for the cylinder, and means for introducing a fluid under pressure within said cylinder, to act upon said piston.

2. In a device of the character described, a clamping head, a lever forming a support therefor having fulcrum pins, a bracket, said bracket having elongated openings within

which the fulcrum pins of the lever move so that the clamping head may be lowered.



3. In a device of the character described, a clamping head, a lever forming a support therefor having fulcrum pins, to which lever the clamping head is pivoted, a bracket, said bracket having elongated openings within which the fulcrum pins of the lever move so that the clamping head may be lowered.

4. In a device of the character described, a clamping head, a lever support therefor, having fulcrum pins, a bracket having elongated openings forming guide ways for the fulcrum pins, a second lever pivoted to the first having a fulcrum pin moving within a guide way in the bracket, and means connected to said second lever to exert a pressure upon said clamping head.

5. In a device of the class described, a clamping head, a second clamping head, a cylinder, a piston in said cylinder connected to said clamping head, and adjustable means within said cylinder for limiting the movement of said piston.

[Claims 6 to 10 not printed in the Gazette.]

1,022,364. CORSET-STAY. GEORGE E. HAWES, Bridgeport, Conn. Filed Dec. 2, 1910. Serial No. 595,200. (Cl. 2—78.)



1. The combination with a flexible garment stay, of a reinforcement therefor comprising a sheet metal strip spirally wound around the portion of the stay to be stiffened, and having a series of extensions formed upon one edge and disposed against the two sides of the main body of the stay when wound thereabout.

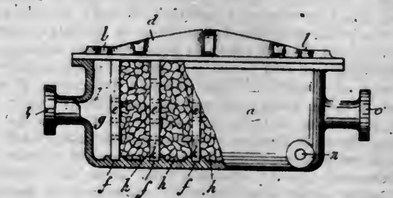
2. The combination with a flexible garment stay, of a reinforcement therefor comprising a sheet metal strip spirally wound around the portion of the stay to be stiffened, and having a series of extensions on one edge of the central portion of the stay that are disposed against the opposite sides of the central portion of the stay to make it stiffer at the middle than at the end portion of said reinforcement, and means for securing said strip and its extensions against the body of the stay.

3. The combination with a woven wire garment stay, of a reinforcement therefor comprising a sheet metal strip spirally wound around the portion of the stay to be stiffened and having underlapping extensions upon one edge of the center portion of the strip so as to be stiffer at its center than at its end portions to insure a gradual bend of the stay.

4. The combination with a flexible garment stay, of reinforcement therefor comprising a sheet metal strip spirally wound around the portion of the stay to be stiffened, and having a series of extensions upon one edge to form both overlapping and spaced edge portions to render the stay stiffer, yet flexible.

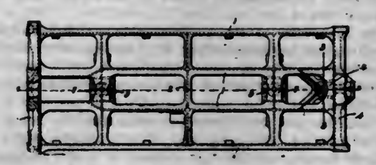
5. The combination with a flexible garment stay, of a reinforcement therefor comprising a sheet metal strip spirally wound around the portion of the stay to be stiffened, and having extensions on one edge that are disposed longitudinally against the side face of the body of the stay and under the adjoining edge of the reinforcing strip wound around the stay.

1,022,365. MECHANICAL METHOD OF TREATMENT OF FEED-WATER TO BOILERS FOR PREVENTION OF INCRUSTATION, CORROSION, OR PITTING. CHARLES HAYTHORPE, Kennington, London, England. Filed Nov. 25, 1911. Serial No. 662,484. (Cl. 204—25.)



An apparatus for treatment of feed water for steam boilers, consisting of a casing having an inlet and an outlet, zinc plates disposed vertically in said casing and forming chambers therebetween, the end zinc plates being spaced from the end walls of the casing to form distributing and sediment chambers communicating with the inlet and outlet respectively, crushed carbon interposed between the intermediate zinc plates, said carbon acting both as a filter and as one element of an electric couple of which the zinc forms the other element, the water passing through the casing forming the electrolyte, substantially as described.

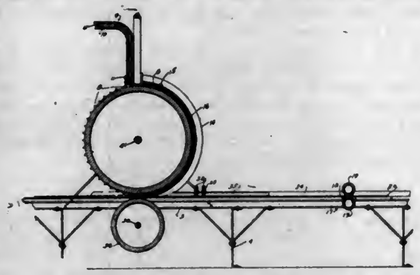
1,022,366. CAST-STEEL UNDERFRAME FOR CARS. CLARENCE H. HOWARD, St. Louis, Mo., assignor to Locomotive Tender Frame Company, St. Louis, Mo., a Corporation of Delaware. Filed June 21, 1911. Serial No. 634,589. (Cl. 105—76.)



1. In a cast steel underframe for cars, the combination of longitudinal members, bolster members and end sills, said longitudinal members having inwardly presented flanges between the bolsters and outwardly presented flanges between the bolster and end sill, the vertical webs of said longitudinal members being deflected at or near the bolster point so as to pass from the inner edges of one set of flanges to the outer edges of the other set of flanges.

2. In a cast steel tender underframe, the combination of flanged longitudinal members, the flanges thereof being substantially in alinement, and bolster members, the vertical webs of the longitudinal members being deflected substantially at the bolster point from the inner edges of one set of flanges on one side of the bolster to the opposite edges of the other set of flanges on the opposite side of the bolster.

1,022,367. APPARATUS FOR CONSTRUCTING COVERINGS. WILLIAM M. JANPOLE, Los Angeles, Cal. Filed Sept. 2, 1911. Serial No. 647,422. (Cl. 154—1.)



1. In apparatus of the class specified, the combination of a cylindrical barrel, a chute consisting of channels spaced apart to receive a plurality of laths therebetween and to accommodate the end portions of the laths therein, the lower end of said channels being disposed adjacent to the periphery of said barrel in a vertical plane slightly to the rear of a vertical plane through the center of said barrel, a table, means for moving paper board upon the table, means for distributing asphalt mastic onto the upper surface of said paper board, means including teeth on said barrel and arc shaped guides spaced therefrom for delivering at regular intervals laths from said chute to said paper board, and means for pressing and partially embedding the laths in the asphalt mastic on said paper board.

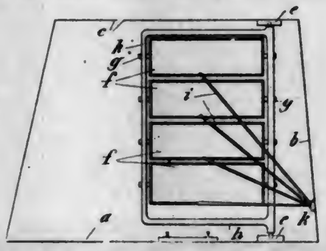
2. In apparatus of the class specified, the combination of a cylindrical barrel provided with spaced teeth thereon, a chute consisting of channels spaced apart to receive a plurality of laths therebetween and to accommodate the end portions of the laths therein, the lower end of said channels being disposed adjacent to the periphery of said barrel, said channels each having on the rear thereof a plate having the lower end portion thereof in close proximity to the periphery of the barrel and having a cutaway portion to provide a passageway for said teeth; the front end of said channels extending to about one-half the thickness of one of said laths above the end of said teeth and adapted to hold the lowermost lath in said chute from forward movement while one of said teeth is passing under said lath, a table, means for moving paper board upon the table, means for distributing asphalt mastic onto the upper surface of said paper board, and means for pressing and partially embedding the laths in the asphalt mastic on said paper board.

3. In apparatus of the class specified, the combination of a cylindrical barrel provided with spaced teeth disposed near its ends on the periphery thereof, a chute consisting of channels spaced apart to receive a plurality of laths therebetween and to accommodate the end portions of the laths therein, the lower end of said channels being disposed adjacent to the periphery of said barrel, said channels each having on the rear thereof a plate having the lower end portion thereof in close proximity to the periphery of the barrel and having a cutaway portion to provide a passageway for said teeth; the front end of said channels extending to about one-half the thickness of one of said laths above the end of said teeth and adapted to hold the lowermost lath in said chute from forward movement while one of the teeth is passing under said lath, a table, means for moving paper board upon the table, means for distributing asphalt mastic onto the upper surface of said paper board, means for leveling to a uniform thickness the asphalt mastic on said paper board, and means for pressing and partially embedding the lath in the asphalt mastic on said paper board.

4. In apparatus of the class specified, the combination of a table, means for moving paper board upon the table, means for distributing asphalt mastic onto the upper surface of said paper board, a cylindrical barrel provided with spaced teeth disposed near its ends on the periphery thereof, a chute consisting of channels spaced apart to receive a plurality of laths therebetween and to accommodate the end portions of the laths therein, the lower end of said channels being disposed adjacent to the periphery of said barrel in a vertical plane slightly to the rear of a vertical plane through the center of said barrel, said channels each provided on the rear thereof with a plate having the lower end portion thereof in close proximity to the periphery of the barrel, and having a cutaway portion to provide a passageway for said teeth, the front end of the lower end of said channels extending to about one-half the thickness of one of said laths above the end of said teeth, and adapted to hold the lowermost lath in said chute from forward movement while said teeth are passing under said lath, and means for pressing and partially embedding said laths in the asphalt mastic on said paper board.

5. In apparatus of the class specified, the combination of a table, means for moving paper board upon the table, means for distributing asphalt mastic onto the upper surface of said paper board, means on said table to guide the paper board in its movement, means to hold said paper board in close contact with said table, means for leveling to a uniform thickness the asphalt mastic on said paper board, a chute consisting of channels spaced apart to receive a plurality of laths therebetween and to accommodate the end portions of the laths therein, means for delivering at regular intervals laths from said chute to said paper board, the last means including a cylindrical barrel, provided with spaced teeth disposed near its ends on the periphery thereof and arc shaped guides arranged to have the inner face thereof spaced from the periphery of said barrel at a sufficient distance to serve for holding said laths in position between the teeth on the barrel as the barrel rotates to move the lath to deliver the lath substantially below the center of the barrel, and a second barrel arranged below the first mentioned barrel and adapted in conjunction with the first mentioned barrel to cause the laths to be pressed into and partially embedded in the asphalt mastic on the paper board.

1,022,368. FIRE-EXTINGUISHING DEVICE FOR LOCALIZING COAL-DUST EXPLOSIONS. HERMANN KRUSKOPF, Dortmund, Germany. Filed Sept. 14, 1911. Serial No. 649,368. (Cl. 169—13.)



1. A fire extinguishing device for localizing coal dust explosions in mine galleries, comprising a pivoted frame, a plurality of superposed receptacles pivotally mounted on the frame, and containing fire extinguishing fluid, ropes on each of said receptacles, said ropes being fastened on a common hook on the wall of the mine gallery, said ropes hanging freely when said frame is turned at the side of the gallery and being tightened when the frame is swung away from the side of said gallery, the tightening of the ropes causing the receptacles to tilt and pour the contents of same to check an explosion.

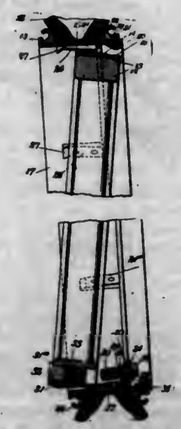
2. A fire extinguishing device for localizing coal dust explosions in mine galleries comprising a pivoted frame, including a vertical post, journals or trunnions on the ends of said vertical post, bearings for said trunnions, a plurality of superposed receptacles pivotally mounted on said frame and containing fire extinguishing fluid, a rope on each of said receptacles, said ropes being fastened at their opposite ends to a common support, said ropes hanging freely when said frame is turned adjacent the side wall of the gallery and being tightened when the frame is swung away from said side wall, the tightening of the ropes causing the receptacles to tilt and pour the contents to check explosions.

3. A fire extinguishing device for localizing coal dust explosions in mine galleries, comprising a pivoted frame, receptacles mounted on the frame and containing fire extinguishing fluid, and means for removing the fluid from the receptacles said means being operated by the force of an explosion.

4. A fire extinguishing device for localizing coal dust explosions in mine galleries comprising a frame, fire extinguishing fluid receptacles mounted on the frame and means operated by the force of an explosion for releasing the fire extinguishing fluid.

5. In a fire extinguishing device for localizing coal dust explosions in mine galleries, the combination of a pivoted frame, receptacles containing fire extinguishing fluid mounted on the frame, means connected to the pivoted frame and operated by the latter to tilt the receptacles and release the fluid portable supports, a receptacle mounted on the portable supports above the plane of the topmost receptacle mounted on the frame and adapted to be tilted when the portable supports are overthrown, the portable supports being overthrown, and the pivoted frame being swung, by the force of an explosion.

1,022,369. VEHICLE-WHEEL. GERARD B. LAMBERT, New York, N. Y. Filed Apr. 3, 1911. Serial No. 618,533. (Cl. 152—21.)

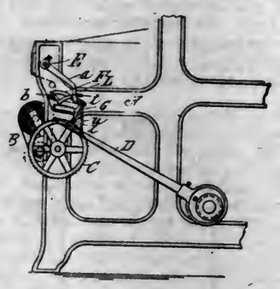


1. In combination, a wheel, a removable tire-carrying rim associated therewith, means for swinging said rim transversely of said wheel, and wedging means between said rim and said wheel, said wedging means comprising a continuous annular wedge member having double wedge faces, a wedge element having double wedge faces and adapted to engage said first member, and a wedge element having a single wedge face and adapted to engage said first member.

2. In combination, a wheel, a removable tire-carrying rim associated therewith, a felly band mounted upon said wheel and having relatively inclined wedge faces, a plurality of spaced, double wedge elements mounted upon said rim and occupying one arc thereof and adapted to engage said felly band, a plurality of wedge elements carried by said rim and occupying a complementary arc thereof and having single wedge faces and adapted to engage said felly band, and an operating member for moving said rim transversely of said wheel, whereby said rim can fulcrum upon said band at two points thereof.

3. In combination, a wheel, a removable tire-carrying rim associated therewith, a felly band mounted upon said wheel and having adjacent, oppositely inclined wedge faces, a plurality of spaced, double wedge elements mounted upon said rim and occupying one arc thereof and adapted to engage said felly band at both of said wedge faces thereof, a plurality of wedge elements carried by said rim and occupying a complementary arc thereof and having single wedge faces adapted to engage one of said wedge faces of said band, and an operating member for moving said rim transversely of said wheel.

1,022,370. LET-BACK MECHANISM FOR LOOMS. CHARLES LAVALLEE, New Market, N. H. Filed Aug. 27, 1910. Serial No. 579,290. (Cl. 139—60.)



1. In a let-back mechanism for a loom, the combination with a stop-motion-actuated-lever, a toothed wheel appurtenant to the cloth take-up means, of a device, slidably mounted on the loom and comprising a frame and a regulator piece, adjustable on such frame provided with a pawl-tooth having an engagement with said toothed wheel, also provided with a series of teeth, means located on the loom adjacent said slidable device and with which it coacts for checking the movement of the slidable device, and a dog movably mounted and normally in engagement with one of the teeth of the regulator piece, and with which the said stop motion lever coacts.

2. In a let-back mechanism for a loom, the combination with a fixed abutment on the loom, a toothed wheel appurtenant to the cloth take-up means, and a stop-motion-actuated lever, of a device slidably mounted on the loom relatively to said fixed abutment and comprising a frame, a regulator piece adjustable on the frame, and made with a series of teeth, and a pawl having an engagement with the teeth of said wheel,—a dog movably mounted and normally in engagement with one of the teeth of said adjustable regulator piece, and with which dog said stop motion lever coacts.

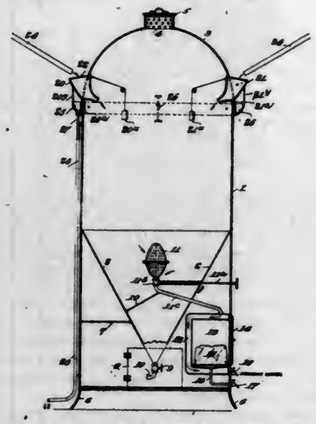
3. In a let-back mechanism for a loom, the combination with a fixed abutment on the loom, and a toothed wheel appurtenant to the cloth take-up means, of a member slidably mounted adjacent said abutment and having a toothed regulator piece, adjustable thereon, and which is provided with a pawl tooth having an engagement with the teeth of said wheel,—said regulator piece having a portion arranged to be brought to movement-limiting coaction with said fixed abutment, and a pivoted dog normally in engagement with a tooth of said adjustable regulator piece.

4. In a let-back mechanism for a loom, in combination a fixed abutment stud on the loom, a toothed wheel appurtenant to the cloth take-up means, a longitudinally apertured plate embracing and slidable relatively to said stud, and having a longitudinal slot therein, a regulator piece, provided with a pawl-tooth for engagement with said toothed wheel, provided with a series of teeth along its length and provided with a portion located in the longitudinal aperture of said plate which is adapted to have

the end thereof brought to a movement-limiting abutment against said stud, a bolt engaged through said longitudinal slot and through the regulator piece and having a binding nut for securing the latter in its adjustment on the slidable plate, and a dog movably mounted and normally in engagement with a tooth of the regulator piece.

5. In a let-back mechanism for a loom, in combination a fixed abutment stud on the loom, a toothed wheel appurtenant to the cloth take-up means, a longitudinally apertured plate embracing and slidable relatively to said stud, and having a longitudinal guideway therein, a regulator piece fitted in said guideway, provided with a pawl-tooth for engagement with said toothed wheel, provided with a series of teeth along its length and provided with a portion which is adapted to have a movement limiting abutment against said stud, means for confining the regulator piece in any given adjustment on the plate, a dog movably mounted and normally in engagement with a tooth of the regulator piece, and a stop-motion-actuated lever coacting with the dog for automatically releasing the latter from its engagement with the toothed regulator piece.

1,022,371. SANITARY CISTERN. JAMES ALEXANDER LEIGHTON, Estherwood, La. Filed June 5, 1911. Serial No. 631,208. (Cl. 137—9.)

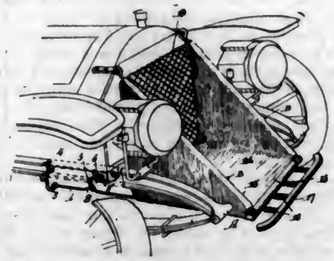


1. The combination with a water spout, of a sanitary cistern for receiving the water from said spout, comprising a receptacle pivoted in the wall of the cistern, and adapted to receive water from the spout when in one position, and to close the cistern when in another position, and automatic means for shifting the position of the receptacle.

2. The combination with a water spout, of a sanitary cistern for receiving the water from said spout, comprising a receptacle pivoted in the wall of the cistern, and adapted to receive water from the spout when in one position, and to close the cistern when in another position, automatic means for shifting the position of the receptacle, said automatic means comprising a trough disposed below the receptacle and connected therewith, and a counterbalancing weight disposed within the cistern and connected with the receptacle.

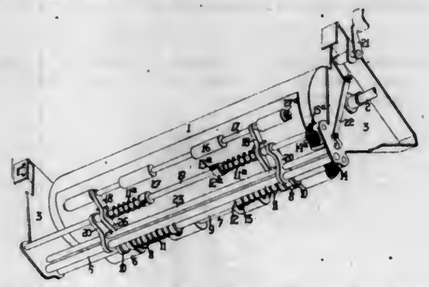
3. The combination with a water spout, of a sanitary cistern for receiving the water from said spout, comprising a receptacle pivoted in the wall of the cistern and adapted when in one position to receive water from the spout and when in another position to form a closure for the cistern, a circular trough disposed about said cistern and slidable relative thereto, said trough being adapted to receive water from the spout, a chain connecting said trough with said receptacle for operating the latter through a movement of the former, and a counter weight secured to said receptacle for restoring the latter to its normal position.

1,022,372. FENDER. ADOLPH H. LUEBKE, Montello, Wis. Filed Feb. 8, 1911. Serial No. 607,225. (Cl. 105—33.)



A longitudinally slidable fender frame including side members and a front cross bar, supporting means for the side members of the frame including springs having terminal eyes, means associated with the side members of the frame to engage said eyes to retain the frame against longitudinal movement, a guard member spaced from and connected with the front cross bar of the fender frame, and springs interposed between said guard member and the cross bar.

1,022,373. TYPE-WRITING MACHINE. JOHN C. MCLAUGHLIN, Jersey City, N. J., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of New Jersey. Filed Feb. 16, 1910. Serial No. 544,153. (Cl. 197—138.)



1. In a typewriting machine, the combination with a platen and forward and rear feed rolls therefor, of a turning shaft, roll-supporting arms journaled thereon, a plurality of springs on the shaft to press a series of said rolls against the platen; one end of each spring being adjustably secured to the shaft to permit relative tensioning of the springs, and a shaft-rotating device effective to regulate the tension of all the springs simultaneously and an equal amount.

2. In a typewriting machine, in combination, a platen, a roller shaft extending longitudinally therewith, a plurality of pressure rollers carried by said shaft and disposed apart along the length of said shaft, a tension shaft, arms carried loosely thereby and supporting said roller shaft, springs connected respectively with said arms, means for individually adjusting the tension of said springs; and means for simultaneously adjusting the tension of said springs.

3. In a typewriting machine, in combination, a platen, a pair of tension shafts disposed adjacent to the face thereof, arms carried by said shafts, rollers carried by said arms, springs in connection with said arms for pressing the same individually toward said platen, means for independently rotating said shafts to adjust the tension simultaneously of the springs associated with each shaft, and means for actuating said arms to cast off said rollers from said platen.

4. In a typewriting machine, in combination, a platen, a pair of oppositely disposed tension shafts adjacent thereto, rocking arms loosely mounted on said shafts, rollers carried thereby adapted to engage the platen, springs in connection with said rocking arms individually for pressing said rollers against the platen, means for rotating each of said shafts to adjust the tension of all of the springs on one shaft simultaneously, releasing arms rigid with said rocking arms and lying adjacent to each other, and means for actuating said releasing arms to cast off said rollers from said platen.

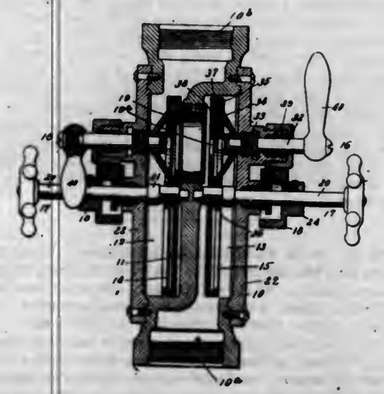
1,022,374. TROLLEY-WHEEL FOR ELECTRIC CARS. JOHN C. EAMES, San Francisco, Cal. Filed Dec. 2, 1909. Serial No. 531,088. (Cl. 191—39.)



1. A trolley wheel comprising a frame of two disks of sheet metal having hub and concave rim formed integrally with the frame, a grooved tire of good conducting material having a contact lug formed integrally with the tire together with a contact strip to conduct the electricity directly from the tire to the trolley pole without passing through the frame and suitable rivets or bolts to unite the parts substantially as and for the purpose set forth.

2. A trolley wheel consisting of a frame made of two disks of sheet metal with hub and concave tire supports formed integrally with the disks, suitable openings in the frame for rivet or bolt connections, a hole cut through the rim, a lug that constitutes an integral portion of the tire passing through said hole, a tire of good conducting material and suitable rivets or bolts to unite the parts substantially as and for the purpose set forth.

1,022,375. MULTIPLE COCK. PHILIP MUELLER, Decatur, Ill., assignor to The H. Mueller Manufacturing Company, Decatur, Ill., a Corporation of Illinois. Filed Mar. 28, 1911. Serial No. 617,517. (Cl. 137—7.)



1. A multiple cock comprising a casing, a valve-seat member, a valve-disk member, one of said members having a series of apertures of different sizes, adjusting means for one of the members to bring the desired aperture into operative relation with the other member, and independent-manually-operable clamping means arranged eccentric to the said adjusting means for positively moving one of the members longitudinally toward and from the other member whereby the members may be clamped against movement relative to one another when adjusted and may also be separated to provide for free movement of one member relative to the other.

2. A multiple cock comprising a casing, a valve seat member, a valve disk member, one of said seat and disk members being an apertured member provided with a series of apertures of different sizes, means for moving the members relatively to bring any desired aperture into operative relation with said other member, independent means for clamping the valve disk member upon the valve seat member, and adjustable means without the casing to determine the relative position of the members.

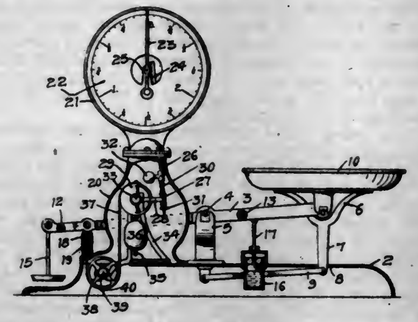
3. A valve as specified comprising a casing having an intermediate seat member provided with an eccentric bore, disk valves arranged against the opposite sides of the seat member and having series of openings adapted for individual registration with the bore of the seat member, means for turning said disk valves against the seat member, and independent means for binding the disks separately against the opposite sides of the seat member, said means including rings for engagement with the disk valves to distribute the pressure on all sides of the registering openings.

4. A valve comprising a casing having an intermediate seat member formed with an eccentric opening, registering stems journaled through the sides of the casing and having their inner ends supported for rotation in the seat member, disk valves movable longitudinally upon the inner ends of the stems and adapted to be brought to bear against the opposite sides of the seat member, each disk having a series of openings varying in size, any one of which is adapted for registration with the opening in the seat member, and separate clamping means carried through the opposite sides of the casing and arranged eccentric to the said stems for separately moving the disks toward and from the seat member to positively hold the same from rotation or to free them for rotation.

5. A valve comprising a casing having an intermediate seat member, said casing being provided with detachable opposed sides, stems journaled through the sides, disk valves movable longitudinally upon the inner ends of the stems for engagement against the seat member, separate manually operable clamping means extending through the sides and arranged eccentric to the stems for positively moving the disks longitudinally toward and from the seat member, and separate indicating means carried upon said stems to determine the positions of the disk valves with relation to the valve seat.

[Claims 6 to 19 not printed in the Gazette.]

1,022,376. SCALE. NILS NILSON, Wayzata, Minn. Filed Feb. 15, 1910. Serial No. 544,114. (Cl. 73—29.)



1. In a scale, the combination, with a base and a scale beam mounted thereon, of a scale platform carried by one end of said beam on one side of its pivot, a dial, an

indicator hand therefor, a wheel mounted on said base, means operatively connecting said wheel with said indicator hand, said wheel having a counter-poise weight, a second wheel supported on said base, flexible means attached to the periphery of said first named wheel and extending under said second named wheel and bearing thereon and attached to said scale beam on the opposite side of the pivot of said beam from said scale platform.

2. In a scale, the combination, with a base and a scale beam pivoted thereon, of a scale platform supported on said beam on one side of its pivot, a dial mounted on said base, an indicator hand, a counter-poise wheel supported on said base, means operatively connecting said counter-poise wheel with said indicator hand, a second wheel supported on said base beneath said first named wheel, and a flexible ribbon attached to the periphery of said first named wheel and passing under said second named wheel and secured thereto and connected to said scale beam on the opposite side of its pivot from said platform.

3. A scale comprising a base, a scale beam pivoted thereon, a scale platform carried by said beam on one side of its pivot, a counter-poise wheel mounted on said base, a dial, an indicator hand therefor, means operatively connecting said indicator hand with said counter-poise wheel, a second wheel supported on said base and of substantially the same diameter as said first named wheel, and flexible means attached to the periphery of said first named wheel and extending under said second named wheel and secured thereto and attached to said beam, substantially as described.

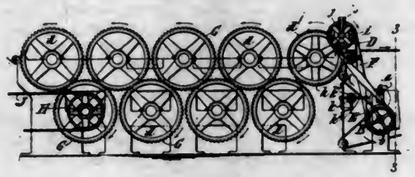
1,022,377. MECHANICAL FISHING DEVICE. EDGAR E. OWENS, Cambridge City, Ind. Filed Aug. 5, 1911. Serial No. 642,547. (Cl. 43—31.)



1. In a fishing device comprising a frame, a rod extending centrally through the frame, a plunger slidable on said rod, a spring for throwing said plunger in one direction, a trigger for holding the plunger in the other direction against the resiliency of said spring, a prong rigidly connected to the plunger and extending down below the frame, the lower portion of said prong being adapted to have a lateral movement, a second prong independent of the plunger but adapted to be moved therewith, a hook secured to the lower end of each prong and a float connected to the upper end of the frame, all substantially as shown and described.

2. A fishing device comprising a frame-like construction, a float attached to the upper portion of the frame, a line, a swivel connection between the line and the frame, a central rod extending through the frame, a plunger slidable on said rod, a helical spring adapted to throw said plunger downward, a trigger adapted to retain the plunger up against the resiliency of said spring, a sliding prong adapted to engage said trigger and hold it in engaged position and adapted to release the trigger when said prong is moved downward, a second prong connected to the plunger and extending down parallel with the first prong, hooks detachably attached to each of said prongs, one of said hooks being adapted to engage the inside and the other the outside of a fish, all substantially as shown and described.

1,022,378. PAPER-MACHINE. CHARLES E. POPE, Holyoke, Mass., assignor of three-fifths to Japanese Tissue Mills, Holyoke, Mass., a Corporation of Massachusetts. Filed Nov. 23, 1911. Serial No. 661,913. (Cl. 92—49.)



1. In a paper machine, the combination of web drawing out means, and variable speed driving means therefor, a drier drum with which the web drawing out means cooperates, and variable speed driving means for said drier drum, a series of further drying drums, and independent means for rotatively driving them in unison.

2. In a paper machine, in combination, web drawing out means including a roll guided felt apron, a shaft by means of which the roll guided apron is propelled, and variable speed mechanism for the driving of the shaft, a drier drum with which the felt apron coöperates, variable speed driving means between said shaft and said drier drum, a series of further drier drums and independent means for rotatively driving them in unison.

3. In a paper machine, the combination with a web drawing out means including the press rolls and felt aprons, a shaft on which one of the press rolls is carried and variable speed mechanism for the driving of said shaft, of a drier drum with which one of the felt aprons coöperates, a cone pulley having a driving connection with said drier drum, a cone pulley on the press roll shaft, a belt around said cone pulleys, and belt adjusting means, a series of further drier drums, and independent means for rotatively driving them in unison.

4. In a paper machine, the combination with a web drawing out means including the press rolls and felt aprons, a shaft on which one of the press rolls is carried and variable speed mechanism for the driving of said shaft, of a drier drum with which one of the felt aprons having a gear wheel thereon coöperates, a smaller gear wheel in mesh with the first named gear wheel, having a cone pulley associated therewith, a cone pulley on the press roll shaft, a crossed belt around said cone pulleys, and belt adjusting means, a series of further drier drums, and independent means for rotatively driving them in unison.

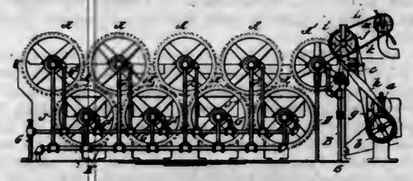
5. In a paper machine, in combination, the press rolls and felt aprons, a shaft on which one of the press rolls is carrier having a cone pulley and a gear wheel thereon, another shaft having a cone pulley with driving belt therefor, and a gear wheel in mesh with said first named gear wheel, a drier drum with which one of the felt aprons cooperates, a cone pulley having a driving connection with said drier drum and a pulley running around the last named cone pulley and the cone pulley on the press roll shaft and adjusting means for said belt, a series of further drier drums geared together for rotation in unison, and means for the rotative propulsion of the said further drier drums.

1,022,379. WEB FEEDING AND DRYING APPARATUS FOR PAPER-MACHINES. CHARLES E. POPE, Holyoke, Mass., assignor of three-fifths to Japanese Tissue Mills, Holyoke, Mass., a Corporation of Massachusetts. Filed Dec. 1, 1911. Serial No. 663,195. (Cl. 92—49.)

1. In the drying apparatus of a paper machine, a series of drier drums, means for supplying steam into the first one of the drums, and independent means for supplying steam under a different pressure into the other drums of the series.

2. In the drying apparatus of a paper machine, a series of drier drums, a steam pipe for supplying steam at a given pressure into the first one of the drums, another pipe for carrying steam under a different pressure, and

branches leading from said second pipe to connection into the other drums of the series.



3. In the drying apparatus of a paper machine, a series of drier drums, the first one thereof having its walls thicker than the walls of the other drums, means for supplying steam into the first one of the drums, and independent means for supplying steam under a different pressure into the other drums of the series.

4. In a drying apparatus of a paper machine, a series of drier drums, means for supplying steam thereinto and a revolubly bladed fan located above and to the rear of the first drum and operable to force air forwardly and across the top of such drum.

5. In a drying apparatus of a paper machine, a series of drier drums, means for supplying steam into the first one of the drums and independent means for supplying steam under a different pressure into the other drums of the series, and a revolubly bladed fan located above and to the rear of the first drum and operable to force air forwardly and across the top of such drum.

[Claim 6 not printed in the Gazette.]

1,022,380. HANDLE. RAPHAEL J. PRINS, Chicago, Ill. Filed June 25, 1909. Serial No. 504,241. (Cl. 220—30.)

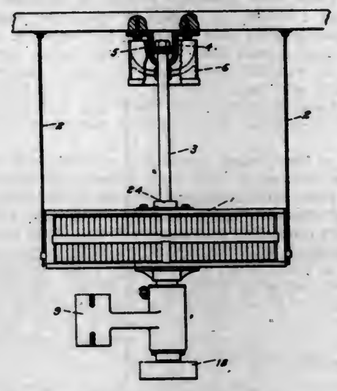


In a device of the class described, a handle comprising a suitable strip of material fastened at its ends to a box or bag, and a grip consisting of a rounded body to underlie the strip and having lateral longitudinal recesses to grip the edges of the strip, and a rounded supplemental top piece to overlie the strip and having lateral wings in the recesses.

1,022,381. FLOUR-BOLTER. ROBERT A. REYNOLDS, Detroit, Mich., assignor to The American Machinery Company, Port Huron, Mich., a Corporation of Michigan. Filed Oct. 26, 1911. Serial No. 656,885. (Cl. 83—38.)

1. In a bolting machine, an eccentric weight provided with a hub having a prismatic aperture and a zonular countersunk rim therefor, a shaft suspended from a flexible bearing, having a prismatic portion passed through said aperture and slightly spaced therefrom and terminating in a threaded portion, and a nut having a zonular face engaging complementarily with said countersunk rim of the aperture, substantially as described.

2. In a bolting machine, a shaft suspended from a flexible bearing, a sieve case suspended flexibly from above, a bearing member having a quill incasing parts of said shaft, an eccentric weight having a hub journaled on said quill, and a guide pin on the lower end of the hub, adapted to travel in a pit therefor and limit the gyration of said shaft, substantially as described.



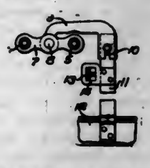
3. In a bolter, the combination of an eccentric weight, a swinging and revolving shaft, means by which the shaft may be revolved, a part-spherical bearing holding said eccentric weight on the shaft and a driving connection between the shaft and weight adapted to allow the weight to change its position with respect to the shaft, substantially as described.

4. A bolter, having in combination, a sieve case swingingly suspended from the ceiling, a flexible bearing fixed to the ceiling, a gyratory shaft suspended from the bearing, a bearing member attached to the sieve case, an eccentric weight revoluble on said bearing and loose driving connections between the said shaft and eccentric weight, substantially as described.

5. A bolter, having in combination, a sieve case swingingly suspended from the ceiling, a flexible bearing fixed to the ceiling, a gyratory shaft suspended from said bearing, a bearing member attached to the sieve case, an eccentric weight revoluble on said bearing member and loosely hung on and driven by said shaft so as to slide vertically on said bearing member, whereby the weight always revolves in a plane parallel to the sieve case, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,022,382. MOVABLE-LEASE-ROD SUPPORT. ALBERT H. SAWTELL, Medford, Mass., assignor to James K. Lanning, Boston, Mass. Filed Oct. 9, 1911. Serial No. 653,580. (Cl. 139—75.)



1. In a loom, a warp-supporting lease-rod or member mounted at its ends adjacent the side frames of the loom for warp-induced movements, a holder positioned at a point between and substantially remote from the side frames of the loom, a support for said holder below the plane of the warp, said holder having a portion extending from said support outside of the plane of the warp, and a connection between said holder and the lease-rod or member, said connection permitting the said warp-induced movements of said lease-rod or member.

2. In a loom, warp supporting lease rods or members and supporting means therefor permitting an oscillating up and down movement thereof, and including a mem-

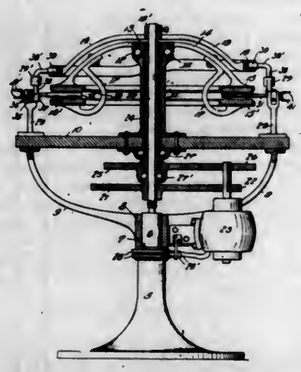
ber extending transversely of and connecting said lease rods at a point substantially remote from their ends and a holder for said member between the side frames of the loom and to which said member is pivoted.

3. A broad loom including among its elements a back brace and a center leg, a pair of oscillating lease rods, means adjacent the side frames of the loom for supporting the ends of said lease rods for oscillating movement, and means mounted upon the center leg of the loom for supporting the back brace at a point intermediate its ends and also for bracing the lease rods at a point intermediate their ends, but permitting oscillatory movement thereof.

4. In a loom, warp supporting movable lease rods or members mounted at their ends adjacent the side frames of the loom, and a support secured substantially midwidth of the loom and overhanging said lease rods, and means for connecting said support to said lease rods without interfering with the movements of the latter.

5. In a broad loom, a center leg, a pair of oscillating lease rods supported at their ends by the side frames of the loom, a yoke connecting said rods at a point substantially intermediate their ends, and a holder to which said yoke is pivoted, said holder being adjustably supported upon said center leg of the loom.

1,022,383. RAZOR-BLADE-SHARPENING MACHINE. EARL TESSMER, Seattle, Wash., assignor, by mesne assignments, to F. M. Gordon, Detroit, Mich. Filed June 5, 1911. Serial No. 631,488. (Cl. 51—16.)



1. In a machine of the class described, the combination with a pedestal, a table, and a motor, of a wheel carrying a pair of spaced rings formed of leather or other suitable razor-stropping material, a cam, transmission means for rotating said wheel and the cam at different speeds through power generated by said motor, stands secured to said table, shafts mounted for oscillation in the respective stands, a razor-holder detachably connected with each of said shafts and extending into the space between said rings, rods mounted in said stands for vertical movements and operated by said cam, and flexible connections between said rods and said shafts whereby the oscillations of the latter are accomplished to present the edges of razor blades carried in said holders alternately to the aforesaid rings.

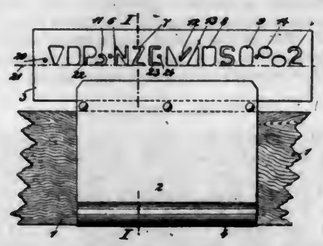
2. In a machine of the class described, the combination with a pedestal, a table rotatably supported thereby, and a motor connected with the table, of a wheel carrying a pair of spaced rings formed of leather or other suitable razor-stropping material, a cam, transmission means for rotating said wheel and the cam at different speeds through power generated by said motor, stands secured to said table, shafts mounted for oscillation in the respective stands, a razor-holder detachably connected with each of said shafts and extending into the space between said rings, rods mounted in said stands for vertical movements and operated by said cam, and flexible connections between said rods and said shafts whereby the oscillations of the latter are accomplished to present the edges of razor blades carried in said holders alternately to the aforesaid rings, and means whereby said rods may be temporarily rendered inoperative to oscillate the respective shafts.

3. In a machine of the class described, the combination with a pedestal, a table, and a motor, of a wheel carrying a pair of spaced rings formed of leather or other suitable razor-stropping material, a cam, transmission means for rotating said wheel and the cam at different speeds through power generated by said motor, stands secured to said table, shafts mounted for oscillation in the respective stands, a razor-holder detachably connected with each of said shafts and extending into the space between said rings, rods mounted in said stands for vertical movements and operated by said cam, flexible connections between said rods and said shafts whereby the oscillations of the latter are accomplished to present the edges of razor blades carried in said holders alternately to the aforesaid rings, and means whereby said rods may be temporarily rendered inoperative to oscillate the respective shafts.

4. In a machine of the class described, the combination with a pedestal, a table rotatably supported thereby, and a motor connected with the table, of a wheel carrying a pair of spaced rings formed of leather or other suitable razor-stropping material, a cam, transmission means for rotating said wheel and the cam at different speeds through power generated by said motor, stands secured to said table, shafts mounted for oscillation in the respective stands, a razor-holder detachably connected with each of said shafts and extending into the space between said rings, rods mounted in said stands for vertical movements and operated by said cam, flexible connections between said rods and said shafts whereby the oscillations of the latter are accomplished to present the edges of razor blades carried in said holders alternately to the aforesaid rings, and means whereby said rods may be temporarily rendered inoperative to oscillate the respective shafts.

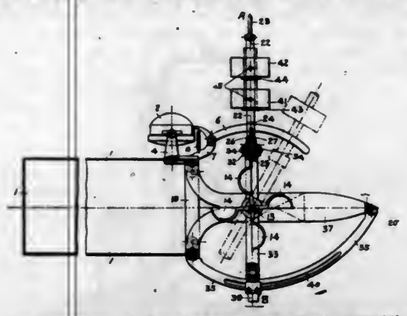
5. In a machine of the class described, the combination with a pedestal, a table rotatably supported thereby, and a motor connected with the table, of a wheel carrying a pair of spaced rings formed of leather or other suitable razor-stropping material, a cam, transmission means for rotating said wheel and the cam at different speeds through power generated by said motor, stands secured to said table, shafts mounted for oscillation in the respective stands, a razor-holder detachably connected with each of said shafts and extending into the space between said rings, and means actuated by said cam whereby said shafts are oscillated to present a razor blade carried by one of said holders to each of said rings alternately.

1,022,384. DEVICE FOR PRODUCING WRITING CHARACTERS. GEORG BAHR, Berlin-Charlottenburg, Germany. Filed Sept. 12, 1910. Serial No. 581,667. (Cl. 33—8.)



A device for producing writing characters consisting of a transparent plate or straight edge having a ground line and formed with successively arranged incisions and with perforations arranged therein at different distances from the ground line, a spring-holder for said plate or straight edge, and a handle on said spring-holder, the latter being adapted to be guided on a T-square, substantially as set forth.

1,022,385. APPARATUS FOR MEASURING THE VELOCITY AND DIRECTION OF THE MARINE UNDERCURRENTS. GIOVANNI BOCCARDO, Genoa, Italy. Filed Nov. 28, 1910. Serial No. 594,605. (Cl. 73—122.)



1. An apparatus of the character described comprising in combination, a suitable frame, a movable element carried by said frame, adapted to normally assume a definite position relative to the direction of current flow, and means for registering the position of the magnetic meridian with relation to said movable element when acted upon by the current.

2. An apparatus of the character described comprising in combination, a suitable frame, a movable element carried by said frame, adapted to normally assume a definite position relative to the direction of current flow, a device carried by said movable element provided with means for normally indicating the position of the magnetic-meridian, and means for retaining the said indicator in a set position with respect to said movable member for registering the relative position of the latter with the magnetic meridian at a certain period of operation.

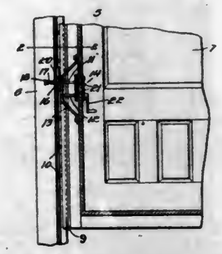
3. An apparatus of the character described comprising in combination, a suitable frame adapted for suspension by a cable or the like, a revoluble element carried by said frame and adapted to be actuated by the current flow, a tachometer operable upon movement of said wheel, mechanism for normally holding said wheel in a set position, means for disengaging said mechanism from said wheel for rendering said wheel and tachometer operable, and other means for engaging said wheel for retaining the same in a set position to discontinue operation of said tachometer, whereby the velocity of the current flow may be determined by the aid of said tachometer.

4. An apparatus of the character described comprising in combination, a suitable frame adapted for suspension by a cable or the like, a revoluble element carried by said frame and adapted to be actuated by the current flow, mechanism for automatically positioning said wheel in operative relation to the direction of current flow for actuation thereby, a tachometer operable upon movement of said wheel, mechaninism for normally holding said wheel in a set position, means for disengaging said second mentioned mechanism from said wheel for rendering the wheel and tachometer operable, and other means for engaging said wheel for retaining the same in a set position to discontinue operation of said tachometer whereby the velocity of current flow may be determined by the aid of said tachometer.

5. An apparatus of the character described comprising in combination, a suitable frame adapted for suspension by a cable, or the like, a revoluble element carried by said frame and adapted to be actuated by the current flow, a tachometer operable upon movement of said wheel, a pivoted member adapted to normally engage said wheel to prevent rotation thereof, a weight adapted to actuate said pivoted member for disengagement thereof from said wheel, a second pivoted member normally out of engagement with said wheel, and a second weight for actuating said second mentioned pivoted member to render said wheel inactive after having been freed by said first mentioned weight.

[Claims 6 to 11 not printed in the Gazette.]

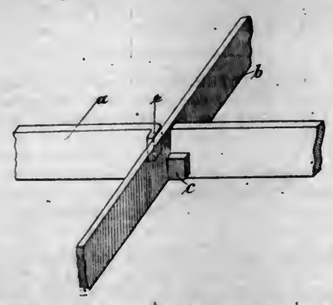
1,022,386. SAFETY DEVICE FOR ELEVATORS. CALVIN J. COLE, Jacksonville, Fla. Filed Mar. 25, 1911. Serial No. 616,899. (Cl. 187—93.)



1. The combination with a guide-way in a shaft or well, of a plurality of spaced lugs mounted contiguous to the same in vertical alinement with each other, a movable car adapted to travel upon said guide-way, a bracket projecting laterally from one side of the car, a rotatable shaft journaled in the bracket and the adjacent side wall of the car, a catch mounted upon the shaft and adapted for engagement with the lugs, a spring having connection with the shaft and the said catch for sustaining the latter under tension, a stop pin carried by the bracket and projected into the path of movement of the catch member to limit its movement in one direction, and hand controlled gear connections with the shaft for rotating the same, whereby the catch will be moved into position for successive engagement with the lugs.

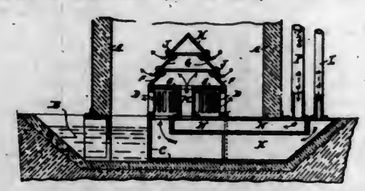
2. The combination with a guide-way in a shaft or well, of a plurality of spaced lugs mounted contiguous to the same in vertical alinement with each other, a movable car adapted to travel upon said guide-way, a bracket projecting laterally from one side of the car, a rotatable shaft journaled in the bracket and the adjacent side wall of the car, a catch mounted upon the shaft and adapted for engagement with the lugs, a spring having connection with the shaft and the said catch for sustaining the latter under tension, a stop pin carried by the bracket and projected into the path of movement of the catch member to limit its movement in one direction, a counter shaft journaled in the bracket and the wall of the car adjacent thereto, gears fixed to said shafts and meshing with each other, and a hand crank fixed to the counter shaft.

1,022,387. CROSS-JOINT BETWEEN FLAT IRON BARS. GEORG CZIMEG, Gratz, Austria-Hungary. Filed Jan. 20, 1911. Serial No. 603,772. (Cl. 189—36.)



A cross joint between two flat iron bars in which each of the iron bars is provided at the crossing point with a transverse slit corresponding in depth to the width of the section of the second bar to be introduced therein and with a longitudinal slit proceeding from said transverse slit corresponding in length to the thickness of the iron bar to be introduced therein, the thus severed ear being bent over at a suitable angle, substantially as set forth.

1,022,388. BLOWER FOR GAS-PRODUCERS. ALFRED BARKER DUFF, Pittsburgh, Pa. Filed Apr. 20, 1911. Serial No. 622,403. (Cl. 48—87.)



1. A blower for gas producers, comprising a casing, a lower grating with substantially vertical walls carried thereon, an upper louvered hood having a closed top superposed on the grating, a cover on the grating separating it from the hood, and independent conduits opening to said hood and grating for leading thereto respectively a blast of fully saturated and preferably superheated, steam and air and a blast carrying more air and less steam, for the purpose described.

2. A blower for gas producers, comprising a circular casing, a ring grating carried thereon, an inclosing cover plate on the upper side of said grating, a conical louver ring device carried by said cover plate, a conical cover on the louver ring device and independent conduits opening to said louver and grating ring device for leading thereto respectively a blast of fully saturated and preferably superheated, steam and air and a blast carrying more air and less steam, for the purpose described.

3. A blower for gas producers, comprising a casing, a grating ring with substantially vertical walls mounted thereon, a louvered hood superposed in said grating, a cover separating said grating from the hood, a pipe extending through the grating chamber and its cover and opening to the interior of said hood, in combination with independent conduits leading from said grating chamber and pipe respectively to the exterior of the producer, for connecting said pipe to a blast of fully saturated and preferably superheated steam and air, and said grating to a blast carrying more air and less steam, for the purpose described.

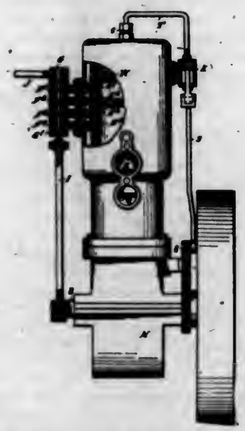
4. A blower for gas producers, comprising a circular casing, a grating ring with substantially vertical walls mounted thereon, an inclosing cover plate on the upper side of said grating, a conical louver ring device carried by said cover plate, a conical cover on said louver ring device, a pipe extending through the grating chamber and its cover and opening into the interior of the louver ring device, in combination with independent conduits leading from said grating chamber and pipe respectively to the exterior of the producer, for connecting said pipe to a blast of fully saturated and preferably superheated steam and air, and said grating to a blast carrying more air and less steam, for the purpose described.

1,022,389. GATE-FASTENER. THOMAS O. EMERY and JOHN M. DAY, Wood Lake, Nebr.; said Emery assignor to said Day. Filed Jan. 6, 1912. Serial No. 669,818. (Cl. 39—101.)



In combination, relatively movable and stationary members, a fulcrum member connected to said stationary member and comprising spaced arms, a lever having a bifurcated terminal provided with an off-set portion, the arms of said fulcrum member having pivoted therebetween the off-set portion of the lever, and an engaging member adapted to engage said movable member and pivoted in the bifurcated terminal of said lever to move and be guided therein, said fulcrum member preventing any spreading of the bifurcated terminal portion of the lever caused by the pull of said engaging member on the terminal of said lever.

1,022,390. INTERNAL-COMBUSTION ENGINE. JARVIS S. JENNINGS, Jr., Detroit, Mich., assignor of one-third to Benjamin Siegel, Patrick O'Brien, and Leo Breisacher and one-third to Fritz Goebel, Detroit, Mich. Filed Sept. 21, 1909. Serial No. 518,814. (Cl. 123—48.)



1. In an internal combustion engine the combination of a working cylinder, a working piston in said cylinder, a free piston fitting in said cylinder between the working piston and cylinder head, adapted to be elastically variably moved longitudinally therein by an excess of pressure upon one of its ends and dividing said cylinder into a combustion chamber and an air chamber, means for forcing air into said air chamber, and means for relieving the pressure in said air chamber at predetermined positions of said piston.

2. In an internal combustion engine the combination of a working cylinder, a working piston in said cylinder, a free piston fitting in said cylinder between the working piston and cylinder head, adapted to be variably moved longitudinally therein by an excess of pressure upon one of its ends and dividing said cylinder into a combustion chamber and an air chamber, means for forcing air into said air chamber and manually controlled means for relieving the pressure in said air chamber at different predetermined positions of said piston.

3. The combination of the cylinder M, a piston O in said cylinder, a piston W therein, between the piston O and the head of the cylinder, dividing the interior of said cylinder into chambers A and B, means for supplying air to chamber A, a plurality of apertures through the wall of the cylinder M so located that they shall be put successively into communication with the chamber A as the piston W moves toward the piston O, and a valve adapted to put one of said apertures or another into communication with the outer air, means for adjusting said valve to put the required one of said apertures into communication with the outer air and means for reciprocating said valve.

4. The combination of the cylinder M, a piston O in said cylinder, a piston W therein, between the piston O and the head of the cylinder, dividing the interior of said cylinder into chambers A and B, means for supplying air to chamber A, a plurality of apertures through the wall of the cylinder M so located that they shall be put successively into communication with the chamber A as the piston W moves toward the piston O, and a valve adapted to put one of said apertures or another into communication with the outer air, a part of said valve being connected to the operative parts of the engine so that it may open the required one of said apertures at the required position of said operative parts.

5. In an explosive engine provided with a cylinder M, a piston O in said cylinder, a piston W in said cylinder, between the piston O and the head of the cylinder, dividing the interior of the cylinder into chambers A and B, means for supplying air to chamber A, a plurality

of passages E^1, E^2, through the wall of said cylinder so located that they shall be put successively into communication with the chamber A as the piston W moves toward the piston O, a casing on the outside of said cylinder, a hollow cylinder adapted to turn and reciprocate in said casing, said cylinder having apertures at different angular positions adapted to be put in communication respectively with one of the passages E^1, E^2, and means for reciprocating the cylinder in said casing, substantially as and for the purpose described.

[Claims 6 to 11 not printed in the Gazette.]

1,022,391. METHOD OF MAKING INSOLES. GEORGE L. PREBLE, Lynn, Mass. Filed Nov. 17, 1910. Serial No. 592,823. (Cl. 36—22.)



1. The herein described method of making an insole, which consists in liquefying one side of a layer of celluloid, forming a layer of textile material with a stitch-receiving rib, and pressing the liquefied side of the celluloid against the textile material to cause the liquid celluloid to permeate said textile material.

2. The herein described method of making an insole, which consists in liquefying one side of a layer of celluloid, forming a layer of textile material with a crease, placing a strip of fibrous material in said crease, and pressing the liquefied side of said celluloid against the textile material and the strip to cause the liquid celluloid to permeate said textile material and said strip.

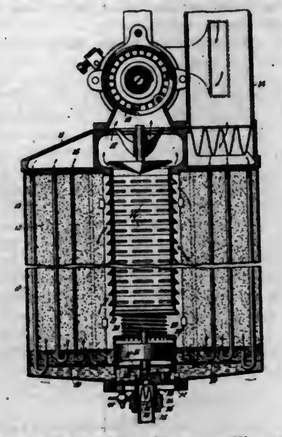
3. The herein-described method of making an insole, which consists in liquefying one side of a layer of celluloid, forming a stitch-receiving rib in a layer of suitable thin flexible material, and pressing the liquefied side of the celluloid against the side of said flexible material away from said rib to cause the celluloid to stick thereto.

4. The herein-described method of making an insole, which consists in liquefying one side of a layer of celluloid, forming a crease in a layer of suitable flexible material, placing a strip of reinforcing material in said crease, and pressing the liquefied side of said celluloid against the side of said flexible material from which said crease opens to cause said celluloid to stick to said flexible material and inclose said reinforcing strip in said crease.

1,022,392. FLOAT-VALVE FOR CARBURETERS. MATHIAS WEIWODA, New York, N. Y., assignor to George W. Stevens, New York, N. Y. Original application filed Feb. 20, 1909, Serial No. 479,045. Divided and this application filed Feb. 15, 1910. Serial No. 543,959. (Cl. 137—68.)

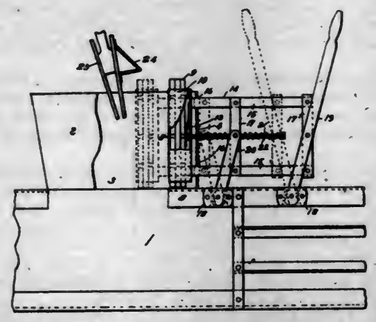
1. In a float feed mechanism, a casing having an opening in the lower end thereof, a plate constituting a closure for said opening and having an aperture therethrough, a liquid-delivery pipe detachably secured to said plate at the outer end of said opening, a valve within said casing for closing said aperture, a float adjacent said valve, levers pivoted to said plate and having operative engagement with said float and said valve, and a cage inclosing said float, levers and valve and secured to said plate, said cage, float and valve being removable through the opening in said casing, upon the removal of said plate.

2. A float feed for a tank, comprising a casing provided with an opening in the wall thereof, a plate adapted to close said opening, a delivery pipe connected to said plate and delivering through the same, a float valve casing carried by said plate upon the inner side thereof, and



a float valve within said casing controlling the passage of fluid from said delivery pipe.

1,022,393. BALING-PRESS. MOSES C. NIXON, Peru, Ind. Filed Mar. 20, 1911. Serial No. 615,741. (Cl. 100—24.)



1. In a device of the class described comprising a baling-case with a feed-aperture and hopper, a feeder, a division-block holder supported normally within the hopper and carried by pivotal supports, and means to move said holder over the feed-aperture into and out of the path of a projection on the feeder.

2. In a device of the class described comprising a baling-case with a feed-aperture and hopper, a division-block holder supported normally within the hopper and carried by pivotal supports, means to advance the holder over the feed-aperture, and means to restore the holder to normal position.

3. In a device of the class described comprising a baling-case with a feed-aperture and hopper, a division-block holder supported normally within the hopper, means to releasably hold a division-block within the holder, a frame secured to the holder and carried by pivotal supports whereby the holder may be advanced over the feed-aperture and again returned to normal position.

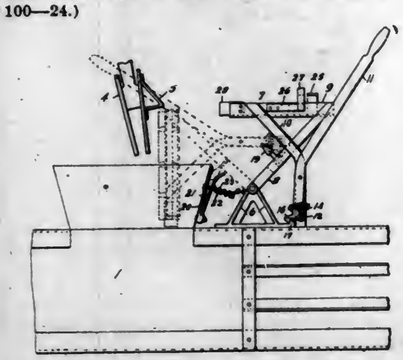
4. In a device of the class described, a feed hopper with a recess in the wall thereof, a division block-holder normally carried in said recess; bars secured to the holder and forming a carrying frame for said holder; suitable supports for said carrying frame; and means to reciprocate said carrying frame and holder.

5. In a device of the class described comprising a hopper, a division-block holder secured to and supported by

a horizontally disposed frame, said frame mounted with one end extending through the wall of said hopper and its other end mounted on pivotal supports, and means to reciprocate said frame and holder.

[Claims 6 to 12 not printed in the Gazette.]

1,022,394. BALING-PRESS. MOSES C. NIXON, Peru, Ind. Filed Apr. 5, 1911. Serial No. 619,179. (Cl. 100—24.)



1. In a baling-press having a block-dropper, a suitable member carried by the block-dropper, and resilient means permanently located and adapted to co-act with said member to receive the shock when said dropper is moved to position for dropping the block.

2. In a baling-press, a block-dropper, and resilient means coöperating therewith to receive the shock when the block-dropper is moved to position for dropping the block.

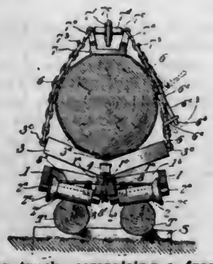
3. In a baling-press having a block-dropper, a suitable resilient contrivance, and a member suitably arranged to co-act with said contrivance to reduce the shock when the block-dropper is moved to position for dropping the block.

4. In a baling-press having a block-dropper, a member carried by said dropper, and a device comprising a stationary part suitably supported and another part movably connected with the stationary part and means to resiliently hold the two parts in working connection with each other, said device being adapted to co-act with the member to reduce the shock incident to moving the block-dropper to position for dropping the block.

5. In a baling-press having a block-dropper, a contrivance comprising two parts suitably supported and resiliently held in working connection with each other, and a suitable member arranged to co-act with said contrivance to receive the shock of the block-dropper when moved to position to drop the block.

[Claims 6 to 17 not printed in the Gazette.]

1,022,395. LOGGING-RAILWAY TRUCK. CRATON BERRYMAN, Reno, Nev. Filed Dec. 12, 1911. Serial No. 665,236. (Cl. 105—32.)



1. A logging truck, comprising a frame, pairs of rollers journaled in opposite sides of the frame, said rollers having flanges on their outer ends, the opposite pairs of rollers being oppositely inclined, a bolster slidably attached to the truck, and means for securing the logs to the bolster.

2. In a logging truck, the combination of a frame, pairs of rollers on opposite sides of the frame, the rollers being axially inclined and provided with flanges on their outer ends, a bolster pivoted to the truck and slidable thereon, a brace-bar attached to the truck and bolster, chains connected to the bolster for securing logs thereto, and a slack take-up connected with said chain.

3. A logging truck, comprising a frame approximately V-shaped in cross section, pairs of rollers journaled in opposite sides of the frame, the opposite pairs of rollers being oppositely inclined, a bolster slidably attached to the center of the truck; with chains attached to the ends of the bolster to secure the logs thereto, a slack take-up lever connected with said chains, and a tensioning device connecting the chains, substantially as described.

4. A logging truck, comprising a frame approximately V-shaped in cross section, pairs of rollers journaled in opposite sides of the frame, said rollers having flanges on their outer ends, and the pairs of rollers being oppositely inclined, a bolster pivoted on the truck, and means for securing the logs on the bolster.

5. A truck for logging railways, comprising a body, opposite rollers journaled in said truck, and inclined relatively to each other, an approximately V-shaped bolster pivoted on said truck, and means for securing the logs to the bolster.

REISSUES.

13,392. FASTENING DEVICE FOR SHOES AND THE LIKE. JAMES F. ATWOOD, Claremont, N. H. Filed Feb. 28, 1912. Serial No. 680,561. Original No. 1,015,928, dated Jan. 30, 1912, Serial No. 553,154. (Cl. 24—68.)



1. The combination with a shoe having the usual opening, of a fastening means for said opening comprising a member located beneath the outermost layer of the material composing the shoe, and having a plurality of attaching points, a member adapted to be engaged with any of said points, said material being constructed to permit the access of the second-named member to the first-named member at any of said points, and a locking device attached to the side of said opening not provided with said members and adapted to be engaged with the second-named member.

2. The combination with an article having separable sections, of a fastening device therefor having one member attached to one of the separable sections and the other to the opposing separable section, one of the means of attachment comprising a plate formed with a longitudinal slot having a plurality of lateral notches, and a device penetrating said slot and adapted when turned in one direction to freely pass along said slot, but when turned in another direction to enter a pair of said notches and be thereby held in an adjusted position.

3. The combination with an article having separable sections, of a fastening device therefor one of whose members comprises a hook having a laterally flattened stem, and a plate having a longitudinal slot formed with lateral notches in opposing pairs, said hook being movably located within said slot.

13,393. FABRIC AND YARN THEREFOR. ALBERT DE LASKI, Weehawken, and PETER D. THROPP, Trenton, N. J., assignors to de Laski & Thropp Circular Woven Tire Company, Trenton, N. J., a Corporation of New Jersey. Filed Jan. 11, 1911: Serial No. 602,114. Original No. 807,178, dated Dec. 12, 1905, Serial No. 267,929. (Cl. 139—9.)



1. A fabric having incorporated therein a thread of twisted rubber-treated fabric.

2. A fabric composed of weft and warp threads, the warp-threads consisting of twisted rubber-treated fabric.

3. A fabric composed of weft and warp threads, the weft-threads composed of twisted rubber-treated fabric.

4. A fabric composed of weft and warp threads, the weft and warp threads consisting of twisted rubber-treated fabric.

5. A fabric including threads formed of twisted rubber-treated strips, the said strips being formed from a sheet of rubber-treated material having embedded therein a series of threads.

6. A yarn consisting of a twisted strip of rubber-treated material.

7. A yarn consisting of a twisted strip of rubber-treated parallel strands.

8. A yarn consisting of a twisted strip of rubber-treated parallel and cross strands.

13,394. EYEGLASS-MOUNTING. JAMES T. LAUGHLIN, Boise, Idaho. Filed Apr. 15, 1911. Serial No. 621,430. Original No. 957,071, dated May 3, 1910, Serial No. 488,320. (Cl. 88—48.)



1. A mounting for eyeglasses having a nose bridge, flat loops to bear on the sides of the nose, and diverging rearwardly deflected extensions leading from the bottoms of said loop and terminating in a higher plane than the nose bridge.

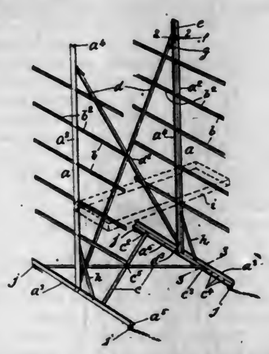
2. A mounting for eyeglasses comprising a single piece of spring wire having a central portion forming a nose bridge and end portions deflected rearwardly and terminating in a higher plane than the nose bridge, and portions intermediate the nose bridge and end portions presenting loops to bear on the sides of the nose, the front and rear members of said loops being side by side, whereby they will bear uniformly on the nose.

3. A mounting for eyeglasses consisting of a single piece of spring wire, said mounting comprising a bow-spring to rest upon the bridge of the nose and presenting flat loops to bear against opposite sides of the nose and having extensions which diverge upwardly from each other and are formed with enlarged terminals located at points well above the plane of the bow spring.

4. A mounting for eyeglasses comprising a single piece of spring wire having a central portion forming a nose bridge and end portions deflected rearwardly and terminating in a higher plane than the nose bridge, and portions intermediate the nose bridge and end portions presenting flat loops to bear on the sides of the nose, the wire from the bottom of each loop to its free end comprising a single curved length.

5. A mounting for eyeglasses consisting of a single piece of spring-wire, said mounting comprising a bow-spring shaped to rest upon and engage the bridge of the nose, a guard extending beyond the bow-spring at each end thereof, the material of each guard extending downwardly to a point below the horizontal axes of the lenses and forming a fold, and thence upwardly to a point beyond the bow-spring and terminating in an enlargement, said folds each lying in a plane at right angles to the lens whereby to grasp the flesh of the nose of the wearer, and lens engaging clamps fixed to the bow-spring.

13,395. RACK. FRANK P. SHEK, Brooklyn, N. Y. Filed Oct. 26, 1909. Serial No. 524,754. Original No. 924,386, dated June 8, 1909, Serial No. 477,530. (Cl. 211—14.)



1. A rack of the class described comprising upright members connected with horizontal base members, the upright members being provided with laterally directed arms, and the upright members being connected by diagonally arranged rods or bars which are pivoted to the bottoms of said upright members and movable longitudinally of the top portions of said upright members and adapted to be locked thereto, said rods or bars being pivotally connected centrally thereof, and the base members of the device being also connected by diagonally or obliquely arranged rods or bars, said rods or bars being pivotally connected centrally thereof, one end portion thereof being pivoted to said base members and the other end portions of said rods or bars being adapted to be connected with said base members at different points.

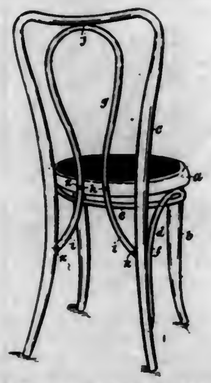
2. A rack of the class described comprising side portions composed of upright members and horizontal base members, the upright members being provided with laterally directed arms, and said upright members being connected at the top and bottom by diagonally or obliquely arranged rods or bars, said rods or bars being pivotally connected with the lower ends of the upright members and being movable longitudinally of the top portions thereof and adapted to be locked thereto, the base members being also connected by diagonally or obliquely arranged rods or bars, one end portion of said rods or bars being pivoted to the base members, and the other end portions thereof being adapted to be detachably connected therewith.

3. A rack of the class described comprising side portions composed of upright members and horizontal base

members, the upright members being provided with laterally directed arms and the top and bottom portions of said upright members being connected by diagonally or obliquely arranged rods or bars which cross each other and are pivotally connected where crossed, the connection of said rods or bars with said upright members at one end being a pivotal connection, and at the other a longitudinally movable connection, the base members being also connected by diagonally or obliquely arranged rods or bars which cross each other and are pivotally connected where crossed, one end portion of said rods or bars being pivoted to the said base members, and the other end portion thereof being detachably connected with said base members.

4. A rack of the class described, comprising side portions, each composed of a base, an upright member rigidly secured thereto and provided with laterally directed arms projecting from the upright members, diagonal brace members pivotally connected to the lower parts of the upright members and slidably connected at the upper ends to the upright members and means to lock the diagonal members to the upright members comprising a pin passing through the members and a cam lever on the pin, which cam lever by its movement draws the diagonal and the upright members together all substantially as set forth.

13,396. CHAIR. ALBERT WANNER, Jr., Hoboken, N. J. Filed Mar. 21, 1911. Serial No. 616,044. Original No. 950,974, dated Mar. 1, 1910, Serial No. 453,323. (Cl. 155—3.)



1. The combination, with a chair having a seat, a back, back-legs and front legs, of a bracing structure having a substantially straight form in side elevation and attached to the back above the seat and also attached to the back-legs below the seat and holding said back-legs against movement toward each other, substantially as described.

2. The combination, with a chair having a seat, a back, back-legs and front legs, of a bracing structure having a substantially straight form in side elevation and attached to the back above the seat and also attached to the back-legs below the seat and bearing against the seat, substantially as described.

3. The combination, with a chair having a seat, a back, back-legs and front legs, of a bracing structure having a substantially straight form in side elevation and attached to the back above the seat and also attached to the back-legs below the seat and being also attached to the seat, substantially as described.

4. The combination, with a chair having a seat, an arched back and back-legs, of an inverted substantially U-shaped brace having a substantially straight form in side elevation and secured to the back above the seat and extending and secured below said seat to the back legs, said brace standing clear of both side portions of the back and the back-legs between the points of securing said brace above and below the seat, substantially as described.

5. The combination, with a chair having a seat, a back and back-legs, of an inverted substantially U-shaped brace having a substantially straight form in side elevation and secured to the back and back-leg structure above the seat and to the back above the seat and extending and secured below said seat to the back legs, substantially as described.

6. The combination, in a chair, of the seat, the front legs, the back and back-leg structure, and a substantially U-shaped brace secured to the back and back-leg structure above the seat and also secured to the seat and having its lower ends diverging and secured to the leg-portions of said back and back-leg structure below the seat, substantially as described.

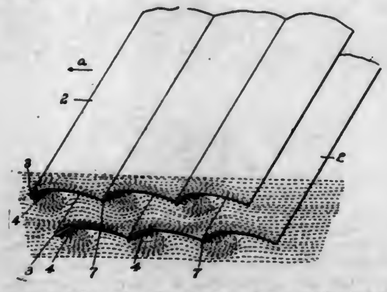
7. The combination, with a chair having a seat, a back and back-legs, of a brace having a substantially straight form in side elevation and comprising downwardly projecting substantially upright portions, said brace secured to the back above the seat and each of its downwardly projecting portions extending from above the seat to a back-leg below the seat and being secured to the latter below the seat, substantially as described.

8. The combination, with a chair having a seat, a back and back-legs, of a brace having a substantially straight form in side elevation and comprising downwardly projecting substantially upright portions, said brace being secured to the back above the seat and each of its downwardly projecting portions extending from above the seat to a back-leg below the seat and being secured to said seat and also to said back-leg below the seat, substantially as described.

9. The combination, with a chair, having a seat, a back, back legs and front legs, of a bracing structure having a substantially straight form in side elevation and attached to the back above the seat, said structure comprising downwardly projecting members having their lower-end portions relatively deflected and diverging from each other and respectively secured to the back legs below the seat, substantially as described.

10. The combination, with a chair, having a seat, a back, back legs and front legs, of a bracing structure having a substantially straight form in side elevation and attached to the back above the seat, said structure comprising downwardly projecting members having their lower end-portions relatively deflected and diverging from each other and respectively secured to the back legs below the seat, said members being also secured to the seat, substantially as described.

13,397. AEROPLANE. JOHN W. WAY, Edgeworth, Pa. Filed Feb. 5, 1912. Serial No. 675,644. Original No. 1,014,731, dated Jan. 16, 1912, Serial No. 528,200. (Cl. 244—31.)



1. A sustaining wing for an aeroplane, said wing being of curved contour and having the continuity of its concave surface interrupted at a point rearwardly of but adjacent to its anterior edge by a projection which extends outwardly from the said concave surface, said projection forming with the concave surface a constantly open pocket.

2. A sustaining wing or sail for an aeroplane of curved contour from front to rear, and provided upon its concave surface and adjacent to the anterior edge thereof with a vented air-retarding projection, substantially as described.

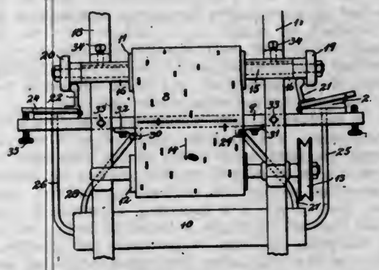
3. A sustaining wing or sail for an aeroplane of curved contour from front to rear, and provided upon its concave surface with a series of air-retarding projections, the length of the projections of the series increasing from the foremost rearwardly, substantially as described.

4. A sustaining wing or sail for an aeroplane composed of a plurality of segments arranged edge to edge and united along their adjoining edges, each of said segments being of curved contour in cross section, the posterior edge of the rearmost section being flexible, substantially as described.

5. In an aeroplane, the combination of two supporting wings or sails arranged one above the other, each of said wings or sails consisting of a plurality of arched segments and the said sails or wings being so arranged with respect to one another that a continuous stream of air will move in wave-like motion from the front to the rear of the said wings or sails, substantially as described.

6. A sustaining wing or sail for an aeroplane, composed of a plurality of segments each of curved contour in cross section, convex above and concave below, said segments united edge to edge and arranged with their united edges transverse to the line of motion of said wing or sail, substantially as described.

13,398. PERFORATED-NOTE-SHEET GUIDE. JAMES O'CONNOR, New York, N. Y., assignor to Autopiano Co., New York, N. Y., a Corporation of New York. Filed Dec. 12, 1911. Serial No. 665,410. Original No. 789,053, dated May 2, 1905, Serial No. 20,840. Original Reissue No. 13,283, dated Aug. 15, 1911, Serial No. 618,872. (Cl. 84—161.)



1. The combination with a sheet or web, of means, contacting with the surface of the web and held out of operation when the web is in its normal position, for guiding or restoring the web to that normal position when deflected or diverted therefrom.

2. The combination with a sheet or web, of means for guiding or restoring the web to its desired path when diverted therefrom and means, contacting with the surface of the web and held out of operation when the web is in its normal position, for inaugurating the operation of the guiding means.

3. The combination with the marginal surface of a traveling sheet or web, of means for guiding or restoring the web to its normal path when diverted therefrom, a tracker-bar, and means contacting with the marginal surface of the web and held out of operation when the web is in its normal position, for inaugurating the operation of the guiding means.

4. The combination, with an apparatus employing a traveling sheet or web, of means for maintaining the web and the apparatus in suitable operative relation, comprising means for deflecting the web or the apparatus into the desired relation, and means held out of operative engagement by the margin of the sheet for inaugurating the operation of the guiding means when the edge of the sheet is deflected or withdrawn from its normal position.

5. The combination, with a traveling sheet or web, of a tracker-bar, and means, maintained in inoperative condition by the sheet when in its normal position, for restoring the normal relation of the sheet and the tracker-bar when uncovered by the edge of the sheet.

6. The combination with the marginal surface of a traveling sheet or web, of a tracker-bar provided with contact devices arranged adjacent to and inside of the normal position of the edge of the sheet, so as to be covered by the marginal surface of the web when the latter is in its normal position, and means operable by the uncovering of the contact devices, for restoring the normal relation between the sheet and the tracker-bar.

7. The combination, with a traveling web, of pneumatic devices for restoring the web to normal position when deflected therefrom, and a tracker-bar, provided with contact devices located adjacent to and inside of the normal position of the edge of the web so as to be maintained in inoperative relation by the web while the latter is in normal position, whereby the operation of the pneumatic devices is inaugurated by the deflection or withdrawal of the web from the contact devices.

8. In a web-driving apparatus, means for restoring the web and the apparatus into normal relations when deflected therefrom, consisting of rolls for guiding the web, and a tracker-bar provided with an aperture adjacent to and within the normal position of the web so as to be covered thereby, and pneumatic devices, the operation of which is inaugurated by the uncovering of the aperture, for restoring the web or the tracker-bar to normal position.

9. In a web-driving apparatus, in combination with a roll thereof, motor for moving the roll sidewise and means normally held out of operation by the interposition of the sheet when in its normal position for moving the roll sidewise to restore the web to normal position when deflected therefrom.

10. In combination with mechanism employing a traveling sheet or web, a tracker provided with a guide-opening, arranged to be closed by the sheet, when the latter is in its normal position, means for propelling the sheet across the tracker, and pneumatic devices governed by the guide-opening for adjusting the relation of the tracker and the sheet-propelling means when the opening is uncovered.

11. In combination with mechanism employing a traveling sheet or web, a tracker provided with a guide-opening arranged to be normally closed by the sheet when the latter is in normal position, rolls for propelling the sheet across the tracker, a bellows governor by the guide-opening, and engaging with the tracker and rolls, to adjust their relation, when the guide-opening is uncovered.

12. In combination with mechanism employing a traveling sheet or web, an adjustable tracker provided with a guide-opening arranged to be closed by the sheet when the latter is in its normal position, longitudinally adjustable rolls for propelling the sheet, and a bellows operatively governed by the guide-opening, and engaging with the tracker and rolls to adjust them when the guide-opening is uncovered.

13. In combination with mechanism employing a traveling sheet or web, an adjustable tracker provided with a guide-opening arranged to be closed by the sheet when the latter is in normal position, laterally-adjustable means for propelling the sheets across the tracker-bar, a bellows connected with the guide-opening, and engaging with the tracker and sheet-propelling means to effect their relative adjustment, and means for clamping either the tracker or the sheet propelling means in place, whereby the other may be employed as the adjustable member.

14. In combination with mechanism employing a traveling sheet or web, a tracker, means for propelling the sheet across the tracker, a bellows for adjusting the relation between the tracker and the sheet-propelling means, and means for regulating and adjusting the amplitude of movement of the bellows.

15. In combination with mechanism employing a traveling sheet or web, a tracker provided with an adjustable guide-opening.

16. In an automatic musical instrument, the combination of a tracker provided with a guide-opening arranged

to be closed by the note-sheet when the latter is in its normal position, means for propelling the sheet across the tracker, and a bellows governed by the guide-opening, and adapted to adjust the relation of the tracker and the sheet-propelling means when the opening is uncovered.

17. In an automatic musical instrument, the combination of a tracker provided with a guide-opening, arranged to be closed by the note-sheet, when the latter is in normal position, means for propelling the sheet across the tracker, and a bellows governed by the guide-opening mounted upon the tracker and engaging with the sheet-propelling means, to adjust them when the guide-opening is uncovered.

18. In an automatic musical instrument, the combination of a tracker provided with a guide-opening, a delivery roll, and a take-up roll for drawing a note-sheet across said tracker, said guide-opening being arranged to be normally closed by the note-sheet, a shaft connected with one of said parts, and a bellows governed by said opening and engaging with the shaft to move the same when the opening is uncovered.

19. The combination, with a traveler sheet or web, of a tracker-bar, and means, maintained in inoperative condition by the sheet when in its normal position, for restoring the normal relation of the sheet and the tracker-bar when uncovered by the sheet.

20. In combination with mechanism employing a traveling sheet or web, a tracker provided with one or more guide-openings, arranged to be closed by the sheet, when the latter is in its normal position, means for propelling the sheet across the tracker, and pneumatic devices governed by the guide opening or openings for adjusting the relation of the tracker and the sheet-propelling means when the opening is uncovered.

21. The combination of a tracker-bar having a series of music apertures, means for drawing a perforated note-sheet forward over the tracker-bar, a pneumatic control opening appurtenant to the tracker-bar and arranged so that a lateral deviation of the note-sheet will change its condition, a pneumatic motor connected to adjust the lateral relation between the note-sheet and tracker-bar, and connections between said control opening and said pneumatic motor arranged so that when a lateral deviation of the note-sheet changes the condition of the control-opening, the pneumatic motor will operate to restore the normal lateral relation between the tracker-bar and note-sheet before the forward run of the note-sheet in abnormal lateral position can produce discord.

22. The combination of a tracker-bar having a series of music apertures, means for drawing a perforated note-sheet forward over the tracker-bar, a pneumatic guide opening appurtenant to the tracker-bar and arranged so that a lateral deviation of the note-sheet will uncover the same, a pneumatic motor connected to adjust the lateral relation between the note-sheet and tracker-bar, and connections between said guide opening and said pneumatic motor arranged so that when a lateral deviation of the note-sheet uncovers the guide-opening, the pneumatic motor will operate to restore the normal lateral relation between the tracker-bar and note-sheet before the forward run of the note-sheet in abnormal lateral position can produce discord.

23. The combination of a tracker bar having a series of music apertures, means for drawing a perforated note-sheet forward over the tracker bar, two pneumatic control openings appurtenant to the tracker bar and arranged so that a lateral deviation of the note-sheet in either direction will change the condition of one of said control openings, a pneumatic motor connected to adjust the lateral relation between the note-sheet and tracker-bar, and connections between said control openings and said pneumatic motor arranged so that when a lateral deviation of the note-sheet changes the condition of a control opening, the pneumatic motor will operate to restore the normal lateral relation between the tracker bar and note-sheet before the forward run of the note-sheet in abnormal lateral position can produce discord.

24. The following elements in combination: a tracker-bar, having a series of music apertures; two pneumatic guide-openings, appurtenant to the tracker-bar and arranged to be closed when the note-sheet is in its normal position; a music roll, comprising a roller, and a perforated note-sheet attached thereto; a drawing roll, to draw the note-sheet away from the music roll, across the tracker-bar; and two bellows-motors, each of which is worked by a pneumatic apparatus, and both of which are governed, but not worked, by means which include the two guide-openings, respectively, a connection, through which each of which motors works to slightly shift one of the rolls of the tracker-bar, whenever its guide-opening begins to be opened by a lateral tendency of the note-sheet; all the elements being combined and operating together, to cause the note-sheet to travel across the tracker-bar with constantly correct registration.

25. In combination with mechanism employing a traveling note-sheet; an adjustable tracker-bar, provided with two guide-openings, arranged to be closed by the note-sheet, when the latter is in its normal position; laterally adjustable means, for delivering the note-sheet across the tracker-bar; and two bellows-motors, each of which is worked by a pneumatic apparatus, and both of which are governed by means which include the two guide-openings respectively, and both of which engage with the tracker-bar and sheet delivering means, to effect their relative adjustment; and means for clamping either the tracker-bar or the sheet delivering means in place, whereby the other may be employed as the movable member.

26. In combination with mechanism employing a traveling note-sheet; a tracker-bar; two independent blocks clamped to the tracker-bar, each of which is provided with a guide-opening, and both of which guide-openings are arranged to be closed when the note-sheet is in its normal position; means for delivering the note-sheet across the tracker-bar; and two bellows-motors, each of which is worked by a pneumatic apparatus, and both of which are governed by means which include the two guide-openings, respectively, and both of which engage with the tracker-bar and sheet delivering means, for adjusting the relation of the tracker-bar and sheet delivering means, when the openings are respectively uncovered.

27. In combination with mechanism employing a traveling note-sheet; a tracker-bar, provided with two guide-openings, arranged to be closed by the note-sheet, when the latter is in its normal position; means for delivering the note-sheet across the tracker-bar, and two bellows-motors, each of which is worked by a pneumatic apparatus, and both of which are governed by means which include the guide openings, respectively, for adjusting the relation of the tracker-bar and sheet delivering means, when the openings are respectively uncovered.

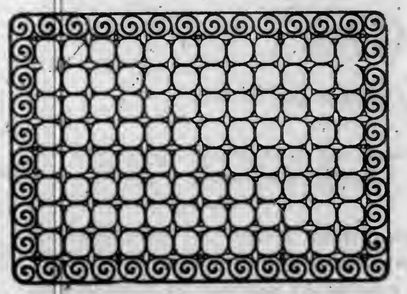
DESIGNS.

42,379. SHOE. WILLIAM BERNSTEIN, New York, N. Y. Filed Feb. 1, 1912. Serial No. 675,047. Term of patent 14 years.



The ornamental design for a shoe, as shown.

42,380. METAL DOOR-MAT. JOHN J. ENNIS and WILLIAM T. HOHNHORST, Covington, Ky. Filed Dec. 4, 1911. Serial No. 663,960. Term of patent 3½ years.



The ornamental design for a metal door mat, as shown.

42,381. JEWEL-SETTING. PHILIPP SILBERMANN, New York, N. Y. Filed Jan. 16, 1912. Serial No. 671,523. Term of patent 7 years.



The ornamental design for a jewel setting, as illustrated.

42,382. BRACKET. JOSEPH GEORGE TURNBULL, New York, N. Y. Filed Jan. 12, 1912. Serial No. 670,948. Term of patent 7 years.



The ornamental design for a bracket, as shown.

42,383. BADGE, EMBLEM, OR SIMILAR ARTICLE. WILLIAM P. WOODS, Evansville, Ind. Filed Jan. 2, 1912. Serial No. 669,100. Term of patent 14 years.



The ornamental design for a badge, emblem, or similar article, as shown.

TRADE-MARKS

PUBLISHED APRIL 2, 1912.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

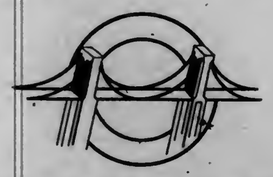
As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 2,881. (CLASS 48. MALT EXTRACTS AND LIQUORS.) VALENTIN BLATZ BREWING CO., Milwaukee, Wis. Filed Apr. 24, 1905.



Particular description of goods.—Beer.
Claims use since about Feb. 17, 1888.

Ser. No. 5,979. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) SILVER & COMPANY, New York, N. Y. Filed May 18, 1905.



Particular description of goods.—Bath-Room Hooks, Bath-Showers, Bath-Sprays, Bread-Molds, Bread-Pans, Broilers, Cake-Molds, Cake-Pans, Coasters Not of Precious Metal or Plated Ware, Coffee and Tea Pots, Coffee-Urns, Covered Pans, Double Pans, Egg-Poachers, Gas-Stove Connections, Ice-Cream Molds, Jelly-Molds, Lemon-Reamers, Metal Soap-Dishes, Mug-Holders, Potato-Mashers, Roasting-Pans, Robe-Hooks, Rolling-Pins, Saucepans, Shower-Bath Rings, "Sink and Toilet Tidy," Sink-Baskets, Sink-Strainers, Steam-Cookers, Stove-Kettles, Teapot-Stands, Toasters Not Electrically Heated, Trays Not of Precious Metal or Plated Ware and Not Wooden Trays, Wardrobe-Hooks, and Whisk-Broom Holders.
Claims use since Mar. 9, 1904.

Ser. No. 48,833. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) SCHARKEFA SCHARKE & Co., Berlin, Germany. Filed Apr. 4, 1910.

Genette

Particular description of goods.—Shears and Scissors, Steel Table and Kitchen Knives, Tweezers, Vegetable Slicers and Cutters, Lobster-Crackers, Bone-Saws, Cake-Knives, Nutcrackers, Meat-Beaters, Tree-Clippers, Tree Markers and Scribers, Pitchforks, Hedge Clippers and Shears, Garden-Knives, Hair and Beard Clippers, Barrel Scribers and Markers, Glass-Cutters, Animal Shears and Clippers, Can-Openers, Cigar-Cutters, Cigar-Box Openers, Cigar-Box Hammers, Florets, Foils, Daggers, Swords, Rapiers, Bowie-Knives, Rasps and Files, Corkscrews, Lamp-Snuffers, Hammers, Saws, Files, Draw-Plates, Tongs, Pincers, Pliers, Nippers, Pincettes, Chisels, Gouges, Borers, Awls, Gimlets, Augers, Drills, Punches, Screw-Drivers, Axes, Choppers, Cleavers, Hatchets, Screw-Wrenches, Spanners, Screw-Keys, Screw Stocks and Dies and Taps, Planes, Wire-Shears, Stone Drills and Borers, Game-Knives, Skinning-Knives, Bakers' Knives, Confectioners' Knives, Fat-Knives, Butchers' Knives, Bookbinders' Knives, Furriers' Knives, Veneering-Knives, Carvers' Knives, Chip-Carvers' Knives, Coopers' Knives, Paint-Knives, Ink-Knives, Felt-Knives, Tanners' Knives, Rubber-Knives, Glaziers' Knives, Hunting-Knives, Farriers' Knives, Putty-Knives, Shoemakers' Knives, Leather-Knives, Linoleum-Knives, Painters' Knives, Artists' Spatulas, Gilders' Knives, Weavers' Knives, Saddlers' Knives, Penknives, Automobilists' Knives, Knife-Steels, and Tourists' Knives.
Claims use since Sept. 24, 1908.

Ser. No. 51,166. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE HARDESTY MILLING CO., Canal Dover, Ohio. Filed July 30, 1910. Under ten-year proviso.

PEERLESS

Particular description of goods.—Wheat-Flour.
Claims use since January, 1874.

Ser. No. 52,043. (CLASS 39. CLOTHING.) VENOR SHOE COMPANY, Rochester, N. Y. Filed Sept. 30, 1910.

PLAYROOM

Particular description of goods.—Leather Boots and Shoes.
Claims use since June 1, 1910.

Ser. No. 53,265. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SVERRE ELLINGSEN, Bergen, Norway. Filed Dec. 13, 1910.

YACHTSMAN

Particular description of goods.—Canned Sardines.
Claims use since Oct. 20, 1910.

Ser. No. 53,543. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE PROGRESS COMPANY, Chicago, Ill., assignor to Uno Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 30, 1910.



No claim being made to the exclusive use of the words "Brilliancy" and "Speed."
Particular description of goods.—A Cleanser and Polisher for Wood.
Claims use since Sept. 28, 1910.

Ser. No. 53,971. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) PELIMON A. BALCOM, Denver, Colo. Filed Jan. 19, 1911.

UNIVERSAL

Particular description of goods.—Gas-Engines.
Claims use since February, 1908.

Ser. No. 53,972. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) PELIMON A. BALCOM, Denver, Colo. Filed Jan. 19, 1911.

UNIVERSAL

Particular description of goods.—Electric Motors, Electric Machines, Electric Solenoids, Electric Controllers, Electric Switches, Electric-Circuit Breakers, Electric Mine-Hoists, Electric Cranes, Electric Irrigating-Pumps, Electric-Motor Wheels, and Magnetic Wheels.
Claims use since February, 1908.

Ser. No. 54,126. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEORGE K. CUMMINGS, New York, N. Y. Filed Jan. 27, 1911.



Particular description of goods.—Cereal Breakfast Foods.
Claims use since Dec. 23, 1910.

Ser. No. 54,199. (CLASS 12. CONSTRUCTION MATERIALS.) EDWARD ALFRED PATERSON, Port Arthur, Canada. Filed Jan. 28, 1911.

ROCMAC

Particular description of goods.—A Binding Composition for Roads and Pavements.
Claims use since July 1, 1910.

Ser. No. 54,232. (CLASS 39. CLOTHING.) BOSTON RUBBER SHOE COMPANY, Boston, Mass. Filed Feb. 1, 1911.

HUB

Particular description of goods.—Rubber Boots and Shoes.
Claims use since October, 1909.

Ser. No. 54,233. (CLASS 39. CLOTHING.) BOSTON RUBBER SHOE COMPANY, Boston, Mass. Filed Feb. 1, 1911. Under ten-year proviso.

HUB

Particular description of goods.—Rubber Boots and Shoes.
Claims use since on or before Apr. 1, 1886.

Ser. No. 54,489. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LEHMANN-HIGGINSON GROCER CO., Wichita, Kans. Filed Feb. 13, 1911.

LE-HI

Particular description of goods.—Canned Corn, Sauer-Kraut, Hominy, Honey, Rice, Peas, Tomatoes, Sweet Potatoes, Pumpkin, Kidney-Beans, String-Beans, and Vinegar.
Claims use since Feb. 20, 1911.

Ser. No. 54,848. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LOUIS A. KAAS, Newark, N. J. Filed Mar. 4, 1911.

BIG K ROACH POWDER

K

No claim being made to the words "Roach Powder."
Particular description of goods.—Roach-Powder.
Claims use since Feb. 24, 1910.

Ser. No. 55,444. (CLASS 12. CONSTRUCTION MATERIALS.) A. C. HORN COMPANY, New York, N. Y. Filed Mar. 31, 1911.

HYDRASTEARIC

Particular description of goods.—Lime.
Claims use since Mar. 18, 1911.

Ser. No. 55,785. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) HERCULES ELECTRIC COMPANY, Indianapolis, Ind. Filed Apr. 17, 1911.

WIZARD

Particular description of goods.—Magneto-Electric Generators.
Claims use since Sept. 20, 1904.

Ser. No. 55,943. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE PFAFFMANN EGG NOODLE CO., Cleveland, Ohio. Filed Apr. 24, 1911.

RINGLETS

The word "Ringlets" being printed in gold.
Particular description of goods.—A Special Manufacture of Noodles for Soups.
Claims use since about Sept. 10, 1910.

Ser. No. 56,264. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WILLIAM HORLICK, Jr., Racine, Wis. Filed May 9, 1911.

BLACK WHITE

Particular description of goods.—A Condiment Consisting of a Mixture of Pepper and Salt.
Claims use since Apr. 25, 1911.

Ser. No. 56,299. (CLASS 12. CONSTRUCTION MATERIALS.) THE EMPIRE IRON AND STEEL COMPANY, Niles, Ohio. Filed May 11, 1911.

EMPIRE Old-Fashion Iron.

The words "Old Fashion Iron," "Service," and "Niles, Ohio," being hereby disclaimed as a part thereof.
Particular description of goods.—Metal Ceilings, Side Walls, and Skylights.
Claims use since Apr. 1, 1911.

Ser. No. 56,542. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE NORTHWESTERN ELEVATOR AND MILL CO., Toledo, Mount Vernon, and Loudonville, Ohio. Filed May 23, 1911.

Remus

Particular description of goods.—Prepared Cereal Flour.
Claims use since May 16, 1911.

Ser. No. 56,709. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) WINONA T. COLEMAN, Boston, Mass. Filed May 31, 1911.

AMAX

Particular description of goods.—Bitumen.
Claims use since May 26, 1911.

Ser. No. 57,282. (CLASS 48. MALT EXTRACTS AND LIQUORS.) BIRK BROS. BREWING CO., Chicago, Ill. Filed June 24, 1911.

MALT-VIGOR

No claim being made to the word "Malt."
Particular description of goods.—A Malt Preparation.
Claims use since May 1, 1902.

Ser. No. 57,807. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALEX LUNESCHLOSS, New York, N. Y. Filed July 25, 1911.

CALMONT

Particular description of goods.—Sardines.
Claims use since June 10, 1911.

Ser. No. 57,826. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SCHÜTTE, BÜNEMANN & CO., New York, N. Y. Filed July 26, 1911.

PALMAR

Particular description of goods.—Green Coffee.
Claims use since Mar. 1, 1907.

Ser. No. 58,240. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) SIRUBIN-WERKE, G. M. B. H., Berlin, Germany. Filed Aug. 17, 1911.

"Sirubin"

Particular description of goods.—Emery, Emery-Wheels, Emery-Cloth, and Emery-Paper.
Claims use since Oct. 25, 1910.

Ser. No. 58,259. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SELDEN I. RAINFORTH, New York, N. Y. Filed Aug. 18, 1911.

GUARDINE

Particular description of goods.—A Prophylactic Ointment for Venereal Diseases.
Claims use since Aug. 15, 1911.

Ser. No. 58,442. (CLASS 18. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) FELTEN & GUILLEAUME CARLSWERK ACTIEN-GESELLSCHAFT, Mülheim-on-the-Rhine, Germany. Filed Aug. 30, 1911.

NEPTUNE

Particular description of goods.—Barb-Wire, Wire Trellis, Wire Mats, Wire-Netting, Unions, Cocks, Valves, Wire Fences, Curtain-Rings.
Claims use since 1870.

Ser. No. 58,664. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DELTA OIL CO., Greenville, Miss. Filed Sept. 14, 1911.

DELTA

Particular description of goods.—Cotton-Seed Oil for Cooking Purposes.
Claims use since Sept. 1, 1911.

Ser. No. 58,673. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) FEDERAL RUBBER MANUFACTURING CO., Cudahy, Wis. Filed Sept. 14, 1911.

FEDERAL

Particular description of goods.—Tire-Sleeves, Outside Tire-Sleeves, Rubber Tubing, Rubber Motor-Cycle Tires, Inside Repair-Sleeves, Outside Repair-Sleeves, Bicycle-Tires, Inner Tubes for Bicycle-Tires, Tire-Plugs, Rubber Baby-Carriage Tires, Rubber Vehicle-Tires, Solid-Rubber Trunk-Tires, Rubber Ball-Joint Gaskets, Rubber Ball-Valves, Fuller-Faucet Rubber Balls, Rubber Band-Saw Bands, Rubber Basin Connections, Rubber Basin-Gaskets, Rubber Beer-Bung Rings, Rubber Beer-Pump Vents, Rubber Belting, Rubber Bib-Disks, Rubber Bib-Packings, Rubber Bib-Washers, Rubber Bung Rings and Gaskets, Rubber Closet Connections, Rubber-Cloth Insertion-Gaskets, Rubber-Cloth Insertion-Packing, Rubber-Cloth Insertion-Tubing, Rubber and Cotton Fire-Hose, Rubber and Cotton Mill-Hose, Rubber Creamer-Rings, Rubber Diagonal Packings, Rubber Diaphragms, Rubber Die-Springs, Rubber-Duck Packing, Rubber Fruit-Jar Rings, Rubber Flax-Packing, Rubber Gaskets, Rubber Hose, Rubber-Molding Machinery-Rings, Rubber Packers, Rubber Packing, Rubber Plunger-Rings, Rubber Pump-Valves, Rubber Springs, Rubber Sheet-Packings, Spring-Rubber, Rubber Tubing, Rubber Valves, Rubber Valve-Disks, Rubber Washers, and Rubber Aeroplane-Tires.
Claims use since July 15, 1911.

Ser. No. 58,761. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) VICTOR COMBINATION KITCHEN BOILER COMPANY, Oakland, Cal. Filed Sept. 21, 1911.

Victor

Particular description of goods.—Combination Kitchen-Boilers and Gas Water-Heaters.
Claims use since Aug. 10, 1911.

Ser. No. 58,[illegible]. (CLASS 18. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) JAMES McDOUGALL LIMITED, Wednesbury, England. Filed Sept. 23, 1911.



Particular description of goods.—Pipes, Tubes, and Conduits.
Claims use since January, 1874.

Ser. No. 58,899. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DETROIT GELATINE COMPANY, Detroit, Mich. Filed Sept. 28, 1911.

CRYSTO

Particular description of goods.—Gelatin.
Claims use since July 15, 1911.

Ser. No. 58,960. (CLASS 39. CLOTHING.) WATTS BROTHERS COMPANY, INC., Lynchburg, Va. Filed Oct. 2, 1911.

SUCCESS

Particular description of goods.—Outer Shirts, Undershirts, Drawers, Trousers, Hosiery, and Overalls.
Claims use since 1898.

Ser. No. 59,216. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DR. ARTHUR ERHARD GESELLSCHAFT MIT BESCHRÄNKER HAFTUNG, Berlin, Germany. Filed Oct. 18, 1911.

„Visnervin"

Particular description of goods.—A Remedy for Diseases of the Nerves and Lecithin and Dietetic Preparations.
Claims use since June 21, 1907.

Ser. No. 59,291. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EMIL RATH, Frankfort-on-the-Main, Germany. Filed Oct. 23, 1911.

„Fermocyl"

Particular description of goods.—A Remedy for Diabetes.
Claims use since May, 1909.

Ser. No. 59,383. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) CHARLES A. AHLSTROM, Jamestown, N. Y. Filed Oct. 27, 1911.



Particular description of goods.—Player-Pianos.
Claims use since May 15, 1911.

Ser. No. 59,606. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ANNA K. ZIEMSSEN, Philadelphia, Pa. Filed Nov. 7, 1911.

"Bridal"

Particular description of goods.—Hair-Oils and Unguents.
Claims use since 1906.

Ser. No. 59,629. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) THE DUPLEX ADDING MACHINE COMPANY, St. Louis, Mo. Filed Nov. 9, 1911.

Duco

Particular description of goods.—Adding and Calculating Machines.
Claims use since on or about Oct. 23, 1911.

Ser. No. 59,836. (CLASS 39. CLOTHING.) ADOLPH L. MOCK, New York, N. Y. Filed Nov. 21, 1911.

Phoebe Snow

The name "Phoebe Snow" appearing in the facsimile handwriting of the applicant.
Particular description of goods.—Children's, Misses', and Ladies' Aprons, Bathing-Suits, Cloaks, Corsets, Fur Muffs, Fur Neck-Pieces, Gloves, Hosiery, Hats, Ladies' Collars, Petticoats, Rain-Coats, Sweaters, and Muslin Underwear—Namely, Undervests, Chemises, Drawers, and Union Suits.
Claims use since Nov. 1, 1911.

Ser. No. 59,870. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) ALBERT G. MASON, Cleveland, Ohio. Filed Nov. 23, 1911. Under ten-year proviso.

FLORENCE

Particular description of goods.—Sewing-Machines, Sewing-Machine Parts, Needles, Shuttles, Ruffers, and Tuckers Belonging Thereto.
Claims use since about January, 1860.

Ser. No. 59,909. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) METALL-REGENO G. M. B. H., Munich, Germany. Filed Nov. 24, 1911.



No claim being made to the words "Metall-Regeno."
Particular description of goods.—A Preparation for Regenerating Metals.
Claims use since Apr. 1, 1911.

Ser. No. 60,035. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) FREDK. N. CHARRINGTON, London, England. Filed Dec. 1, 1911.

BROTA

Particular description of goods.—Finger-Rings.
Claims use since August, 1911.

Ser. No. 60,103. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE W. L. MILNER & COMPANY, Toledo, Ohio. Filed Dec. 6, 1911.

Milto

Particular description of goods.—Medicinal Tonics, Salves, Liniments, Sarsaparilla, Toilet Creams, Castor-Oil, Sodium Phosphates, Hypophosphites, Hair-Tonics, Emulsion of Cod-Liver Oil, Corn Salves and Remedies, Worm Remedies, Peptonized Beef, Iron, and Wine, and Remedies for the Kidneys and Liver, Female Complaints, Constipation, Dyspepsia, Sick Headache, Jaundice, Sour Stomach.
Claims use since Apr. 18, 1910.

Ser. No. 60,111. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN B. ROBBINS, Malden, Mass. Filed Dec. 5, 1911.



No claim being made to "Carleton's," "Mint Flavor Charcoal Gum," and "5¢."
Particular description of goods.—Chewing-Gum.
Claims use since Jan. 1, 1908.

Ser. No. 60,137. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) FORTUNA MACHINE CO., New York, N. Y. Filed Dec. 9, 1911.

Fortuna

Particular description of goods.—Annular Knives.
Claims use about May 1, 1909.

Ser. No. 60,237. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SOUTHWESTERN MEDICINE CO., Houston Heights, Tex. Filed Dec. 15, 1911.



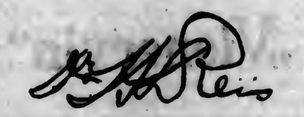
Particular description of goods.—Pills, a Remedy, in Tablet Form, for Headache, Liniment, and a Remedy, in Powder Form, for Heat and Chafed Skin.
Claims use since Mar. 1, 1910.

Ser. No. 60,276. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WESTERN GROCER COMPANY, Marshalltown, Iowa. Filed Dec. 15, 1911.

FOOT HILLS

Particular description of goods.—Canned Fruits and Vegetables; Canned Fish; Canned Oysters; Mustard; Catsup; Flavoring Extracts; Pork and Beans; Pork and Beans with Tomato Sauce; Hominy; Kraut; Coffee, and Tea.
Claims use since Apr. 28, 1903.

Ser. No. 60,295. (CLASS 32. FURNITURE AND UPHOLSTERY.) THE SANITARY BEDDING CO., New York, N. Y. Filed Dec. 16, 1911.



Consisting of the facsimile-signature of Dr. Herman L. Reis.
Particular description of goods.—Mattresses.
Claims use since about Nov. 29, 1911.

Ser. No. 60,341. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL ESSENCE FOR COFFEE CO., Philadelphia, Pa. Filed Dec. 18, 1911.

"KAR-EAL"

Particular description of goods.—A Substitute for Coffee.
Claims use since Mar. 8, 1911.

Ser. No. 60,390. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HENRIETTE GABILLA, Paris, France. Filed Dec. 21, 1911.

FOLLE PASSION

Particular description of goods.—Perfumes, Lotions, Toilet Waters and Creams, Powders, and Rouges.
Claims use since Sept. 24, 1910.

Ser. No. 60,391. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HENRIETTE GABILLA, Paris, France. Filed Dec. 21, 1911.

LES JEUX ET LES RIS

Particular description of goods.—Perfumes, Lotions, Toilet Waters and Creams, Powders, and Rouges.
Claims use since Oct. 29, 1910.

Ser. No. 60,392. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HENRIETTE GABILLA, Paris, France. Filed Dec. 21, 1911.

LA VIERGE FOLLE

Particular description of goods.—Perfumes, Lotions, Toilet Waters and Creams, Powders, and Rouges.
Claims use since Oct. 29, 1910.

Ser. No. 60,393. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HENRIETTE GABILLA, Paris, France. Filed Dec. 21, 1911.

TOUT LE PRINTEMPS

Particular description of goods.—Perfumes, Lotions, Toilet Waters and Creams, Powders, and Rouges.
Claims use since Oct. 29, 1910.

Ser. No. 60,492. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) STAPOLIFE FEED & MILLING CO., LTD., New Orleans, La. Filed Dec. 28, 1911.

MOLIFE

Particular description of goods.—Stock Feed.
Claims use since 1909.

Ser. No. 60,493. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) STAPOLIFE FEED & MILLING CO., LTD., New Orleans, La. Filed Dec. 28, 1911.

NOLEAN

Particular description of goods.—Stock Feed.
Claims use since 1909.

Ser. No. 60,494. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) STAPOLIFE FEED & MILLING CO., LTD., New Orleans, La. Filed Dec. 28, 1911.

NULIFE

Particular description of goods.—Stock Feed.
Claims use since 1909.

Ser. No. 60,496. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ANALGESOL CHEMICAL COMPANY, Jersey City and Passaic, N. J. Filed Dec. 20, 1911.



Exclusive use of the word "Nervine" is disclaimed.
Particular description of goods.—Medicinal Tonics.
Claims use since May 20, 1911.

Ser. No. 60,518. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) A. GOODMAN & SON, New York, N. Y. Filed Dec. 29, 1911. Under ten-year proviso.

Goodman's

Particular description of goods.—Macaroni, Egg-Barley, Spaghetti, Matzoth-Meal, Noodles, Egg-Alphabets, Egg-Flakes, and Matzoths.
Claims use since January, 1890.

Ser. No. 60,558. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DOOLEY, SMITH & COMPANY, New York, N. Y. Filed Jan. 2, 1912.

La Española



The picture of the girl shown being fanciful.
Particular description of goods.—Canned Pears.
Claims use since Oct. 25, 1911.

Ser. No. 60,610. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE THEO. POEHLER MERCANTILE CO., Lawrence, Kans. Filed Jan. 4, 1912.



Particular description of goods.—Coffee.
Claims use since 1900.

Ser. No. 60,622. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) R. WEDEKIND & Co. G. M. B. H., Uerdingen-on-the-Rhine, Germany. Filed Jan. 4, 1912.

„Erweco"

Particular description of goods.—Dyes.
Claims use since July, 1911.

Ser. No. 60,633. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) VETTE & ZUNCKER, Chicago, Ill. Filed Jan. 5, 1912.



The picture being fanciful.
Particular description of goods—Canned Chop-Suey.
Claims use since September, 1911.

Ser. No. 60,635. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) WILCOX & GIBBS SEWING MACHINE CO., New York, N. Y. Filed Jan. 5, 1912.

WILGIB

Particular description of goods.—Sewing-Machines, Sewing-Machine Parts, and Sewing-Machine Binders, Folders, Hemmers, Needles, Ruffiers, Tuckers, Spool-Stands, and Bobbin-Stands.
Claims use since Nov. 16, 1911.

Ser. No. 60,663. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) LANMAN & KEMP, New York, N. Y. Filed Jan. 6, 1912.



Particular description of goods.—Ice-Bags; Ice-Caps; Hot-Water Bags; Hot-Water Bottles; Nursery Feeding-Bottles and Attachments Therefor; Breast-Pumps and Attachments; Inflatable Rings and Cushions; Droppers and Feeders; Syringes, Inhalers, Inspirators, Sprayers, Atomizers, and Douches and Parts Thereof; Nipples; and Nipple Connections.
Claims use since Sept. 28, 1886.

Ser. No. 60,688. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) EUGENE SCHMID, Cincinnati, Ohio. Filed Jan. 8, 1912.

K

Particular description of goods.—Bread.
Claims use since June, 1909.

Ser. No. 60,797. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) GUSTAV WINDEKE AND COMPANY, Dayton, Ohio. Filed Jan. 18, 1912.



Particular description of goods.—Tube and Flue Expanders and Cutters.
Claims use since Dec. 15, 1911.

Ser. No. 60,829. (CLASS 39. CLOTHING.) THE HAGERSTOWN LEGGING COMPANY, Hagerstown, Md. Filed Jan. 15, 1912.



No claim being made to the word "Brand."
Particular description of goods.—Leather Leggings, Canvas Leggings, and Leather Sandals.
Claims use since Jan. 10, 1912.

Ser. No. 60,892. (CLASS 39. CLOTHING.) KIRK-DUNNING CO., INC., Philadelphia Pa. Filed Jan. 18, 1912.



Particular description of goods.—Leather and Canvas Shoes.
Claims use since Jan. 8, 1912.

Ser. No. 60,913. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) U. S. HAMB COMPANY, Buffalo, N. Y. Filed Jan. 19, 1912.

No. 910

Particular description of goods.—Hames.
Claims use since Jan. 2, 1912.

Ser. No. 60,915. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) U. S. HAME COMPANY, Buffalo, N. Y. Filed Jan. 19, 1912.

No. 920

Particular description of goods.—Hames.
Claims use since Jan. 2, 1912.

Ser. No. 60,974. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE OWL DRUG COMPANY, San Francisco, Cal. Filed Jan. 23, 1912.

EXCEDA

Particular description of goods.—Toilet Water, Perfumes, Face-Cream, Tooth-Powder, Tooth-Paste, Sachet-Powders, and Rouges.
Claims use since Jan. 16, 1912.

Ser. No. 60,979. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MCMECHEN PRESERVING COMPANY, Wheeling, W. Va. Filed Jan. 23, 1912.

PARKER HOUSE

Particular description of goods.—Catsup.
Claims use since Dec. 1, 1905.

Ser. No. 60,986. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed Jan. 23, 1912.

LADY HOLLYHOCK

Particular description of goods.—Biscuit.
Claims use since Jan. 16, 1912.

Ser. No. 61,016. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed Jan. 25, 1912.

FANCHETTE

Particular description of goods.—Biscuit.
Claims use since Dec. 30, 1911.

Ser. No. 61,027. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ANDREA DELLA MONICA, New York, N. Y. Filed Jan. 25, 1912.



I hereby disclaim the use of the words "Syrup" and "Andrea Della Monica."
Particular description of goods.—A Medicinal Syrup.
Claims use since May 15, 1911.

Ser. No. 61,041. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE CUDAHY PACKING COMPANY, Chicago, Ill. Filed Jan. 26, 1912.



Particular description of goods.—Hams and Bacon.
Claims use since Mar. 31, 1911.

Ser. No. 61,096. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed Jan. 27, 1912.

ROSETTES

Particular description of goods.—Biscuit.
Claims use since March, 1886.

Ser. No. 61,098. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed Jan. 27, 1912.

GENTRY

Particular description of goods.—Biscuit.
Claims use since Dec. 11, 1911.

Ser. No. 61,100. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed Jan. 27, 1912.

POPULARITY

Particular description of goods.—Biscuit.
Claims use since Nov. 27, 1906.

Ser. No. 61,105. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed Jan. 27, 1912.

FIRESIDE

Particular description of goods.—Biscuit.
Claims use since Aug. 29, 1911.

Ser. No. 61,113. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BARRETT MANUFACTURING COMPANY, New York, N. Y. Filed Jan. 29, 1912.

SYNTHOL

Particular description of goods.—Disinfectants and Insecticides.
Claims use since Jan. 20, 1912.

Ser. No. 61,114. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BARRETT MANUFACTURING COMPANY, New York, N. Y. Filed Jan. 29, 1912.

PYXOL

Particular description of goods.—Disinfectants and Insecticides.
Claims use since on or about Jan. 20, 1912.

Ser. No. 61,166. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALASKA FISH CO., Seattle, Wash. Filed Jan. 31, 1912.



Particular description of goods.—Canned Salmon.
Claims use since Jan. 16, 1912.

Ser. No. 61,169. (CLASS 43. THREAD AND YARN.) HARDING TILTON & COMPANY, Boston, Mass. Filed Jan. 31, 1912.

Lustabrite

Particular description of goods.—Mercerized and Otherwise-Processed Cotton Yarns.
Claims use since Jan. 9, 1912.

Ser. No. 61,221. (CLASS 5. ADHESIVES.) CAEMENTIUM SALES CO., Boston, Mass. Filed Feb. 2, 1912.

QUIXO

Particular description of goods.—Adhesive Cement.
Claims use since Jan. 30, 1912.

Ser. No. 61,227. (CLASS 12. CONSTRUCTION MATERIALS.) JOSEPH H. HOUGHTON, New York, N. Y. Filed Feb. 2, 1912.

CENTURY

Particular description of goods.—Portland Cement.
Claims use since Jan. 2, 1912.

Ser. No. 61,296. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) TOWER MANUFACTURING & NOVELTY CO., New York, N. Y. Filed Feb. 6, 1912.

NTY

Particular description of goods.—Toothpicks Made of Quill, Wood, and Celluloid, Antiseptic Toothpicks, Eye-Shades, Nail-Clips, and Nail-Files.
Claims use since Mar. 1, 1908.

Ser. No. 61,320. (CLASS 12. CONSTRUCTION MATERIALS.) CHAMBERLIN METAL WEATHER STRIP CO., Detroit, Mich. Filed Feb. 7, 1912. Under ten-year proviso.

CHAMBERLIN

Particular description of goods.—Weather-Strips.
Claims use since on or about Jan. 1, 1894.

Ser. No. 61,324. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BUFFALO SPECIALTY COMPANY, Buffalo, N. Y. Filed Feb. 7, 1912.

RATNIP

Particular description of goods.—Rodent-Poison.
Claims use since Jan. 25, 1912.

Ser. No. 61,331. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SOCIÉTÉ ANONYME DES CELLULOSES PLANCHON, Lyon, France. Filed Feb. 7, 1912.

PLAVIK

Particular description of goods.—Photographic Chemicals.
Claims use since October, 1911.

Ser. No. 61,426. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) PATTON PAINT COMPANY, Milwaukee, Wis. Filed Feb. 12, 1912.

IRONHIDE

Particular description of goods.—A Ready-Mixed Paint for Use as a Protective Coating for Metal Surfaces.
Claims use since Sept. 20, 1905.

Ser. No. 61,532. (CLASS 32. FURNITURE AND UPHOLSTERY.) NASHVILLE SPRING AND MATTRESS CO., Nashville, Tenn. Filed Feb. 15, 1912.

Acme

Particular description of goods.—Mattresses, Bed-Springs, Cots, and Feather Pillows.
Claims use since February, 1899.

Ser. No. 61,588. (CLASS 39. CLOTHING.) LEO GALITZKI, Chicago, Ill. Filed Feb. 17, 1912.



Particular description of goods.—Hats.
Claims use since Nov. 22, 1911.

Ser. No. 61,710. (CLASS 15. OILS AND GREASES.) THE WHITE & BAGLEY CO., Worcester, Mass. Filed Feb. 24, 1912.



Particular description of goods.—Motor Oils and Lubricants.
Claims use since Feb. 17, 1910.

Ser. No. 61,735. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) LIBERTY PAINT COMPANY INC., Brooklyn, N. Y. Filed Feb. 26, 1912.

WEATHERITE

Particular description of goods.—A Cold-Water Paint in Dry Powder Form.
Claims use since about Mar. 1, 1910.

Ser. No. 61,737. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) LIBERTY PAINT COMPANY INC., Brooklyn, N. Y. Filed Feb. 26, 1912.

CEILO

Particular description of goods.—A Cold-Water Calcimine in Dry Powder Form.
Claims use since about Mar. 1, 1910.

Ser. No. 61,825. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) MOREHEAD MANUFACTURING COMPANY, Detroit, Mich. Filed Feb. 29, 1912. Under ten-year proviso.

MOREHEAD

Particular description of goods.—Tilting Steam-Traps and Hydraulic Air-Compressors.
Claims use since Oct. 31, 1889.

TRADE-MARKS

REGISTERED APRIL 2, 1912.

85,935. CERTAIN ELECTRICAL MACHINES AND SUPPLIES. ALLMÄNNA SVENSKA ELEKTRISKA AKTIEBOLAGET, Vesterås, Sweden.
Filed February 24, 1911. Serial No. 54,729. PUBLISHED JANUARY 30, 1912.

85,936. SWEETENED CONDENSED MILK. AMERICAN MILK COMPANY, Chicago, Ill.
Filed December 4, 1911. Serial No. 60,070. PUBLISHED JANUARY 30, 1912.

85,937. PNEUMATIC TIRES, COVERS, AND SMOOTH OR ANTISKIDDING TREADS. ANTOINE ASCHÉRI, Paris, France.
Filed September 26, 1911. Serial No. 58,863. PUBLISHED JANUARY 30, 1912.

85,938. LIME, HYDRATED LIME, AND BUILDING-PLASTER COMPOSITIONS. THE ATLAS PORTLAND CEMENT COMPANY, Northampton, Pa.
Filed May 19, 1911. Serial No. 56,484. PUBLISHED JANUARY 30, 1912.

85,939. SHEATHING-PAPER. BARRETT MANUFACTURING COMPANY, New York, N. Y.
Filed October 11, 1911. Serial No. 59,101. PUBLISHED JANUARY 30, 1912.

85,940. MATTRESSES, CUSHIONS, PILLOWS, AND BEDSTEADS. G. W. BENT Co., Boston, Mass.
Filed December 24, 1909. Serial No. 46,712. PUBLISHED JUNE 28, 1910.

85,941. DRY-PLATES AND PAPER FOR PHOTOGRAPHIC AND KINEMATOGRAPHIC USE. JAQUES EDWIN BRANDENBERGER, Thaon-les-Vosges, France.
Filed April 22, 1911. Serial No. 55,913. PUBLISHED JANUARY 30, 1912.

85,942. CLOTHES-WASHING MACHINES. HARRY BUDD, Independence, Kans.
Filed June 13, 1911. Serial No. 57,003. PUBLISHED JANUARY 30, 1912.

85,943. LUBRICANT-GREASE. BURKO GREASE Co., Philadelphia, Pa.
Filed December 13, 1911. Serial No. 60,199. PUBLISHED JANUARY 30, 1912.

85,944. WHEAT-FLOUR AND CORNMEAL. THE BURRTON MILLING COMPANY, Burrton, Kans.
Filed August 22, 1911. Serial No. 58,319. PUBLISHED JANUARY 30, 1912.

85,945. HANDKERCHIEFS. CARTER & HOLMES, Chicago, Ill.
Filed March 2, 1910. Serial No. 48,113. PUBLISHED JANUARY 30, 1912.

85,946. METAL-POLISH. THE CHICAGO POLISH COMPANY, Chicago, Ill.
Filed April 1, 1911. Serial No. 55,469. PUBLISHED JANUARY 30, 1912.

85,947. MEN'S AND WOMEN'S OUTER COATS AND WRAPS. COLLINS & FAIRBANKS Co., Boston, Mass.
Filed November 1, 1911. Serial No. 59,487. PUBLISHED JANUARY 30, 1912.

85,948. COMPOUND OF CORN-SYRUP AND GRANULATED-SUGAR SYRUP. CORN PRODUCTS REFINING COMPANY, Jersey City, N. J., and New York, N. Y.
Filed July 3, 1911. Serial No. 57,462. PUBLISHED JANUARY 30, 1912.

85,949. MOTORS, MOTOR PARTS AND ARMATURES, DYNAMO-MACHINES, AND ELECTRICAL LIFTS. DAIMLER-MOTOREN-GESELLSCHAFT, Untertürkheim, near Stuttgart, Germany.
Filed September 13, 1911. Serial No. 58,658. PUBLISHED JANUARY 30, 1912.

85,950. LABELS. BERNARD H. DE HUY, Abilene, Kans.
Filed February 4, 1911. Serial No. 54,309. PUBLISHED JANUARY 30, 1912.

85,951. MEN'S AND WOMEN'S AND CHILDREN'S GLOVES AND MITTENS. THE DEMPSTER & PLACE COMPANY, Gloversville, N. Y.
Filed August 4, 1911. Serial No. 58,035. PUBLISHED JANUARY 23, 1912.

85,952. GLOVES AND MITTENS. THE DEMPSTER & PLACE COMPANY, Gloversville, N. Y.
Filed August 4, 1911. Serial No. 58,036. PUBLISHED JANUARY 30, 1912.

85,953. NATURAL SPRING-WATER. THE DE SOTO MINERAL SPRING COMPANY, Hot Springs, Ark.
Filed October 27, 1911. Serial No. 59,389. PUBLISHED JANUARY 30, 1912.

85,954. CANNED FRUITS, CANNED VEGETABLES, CANNED SALMON, AND CANNED HOMINY. DIEHM-FAENSLER GROCER Co., East St. Louis, Ill.
Filed June 17, 1911. Serial No. 57,117. PUBLISHED JANUARY 30, 1912.

85,955. GLUE AND GELATIN INTENDED FOR USE AS AN ADHESIVE. T. M. DUCHÉ & SONS, New York, N. Y.
Filed June 15, 1909. Serial No. 43,034. PUBLISHED APRIL 25, 1911.

85,956. COFFEE. DWINELL-WRIGHT COMPANY, Boston, Mass.
Filed May 2, 1908. Serial No. 34,555. PUBLISHED JANUARY 30, 1912.

85,957. LEATHER BOOTS, SHOES, AND LEGGINGS. ELLET-KENDALL SHOE COMPANY, Kansas City, Mo.
Filed November 2, 1907. Serial No. 30,951. PUBLISHED JANUARY 30, 1912.

85,958. WHEAT-FLOUR. M. FORCHHEIMER & Co., Mobile, Ala.
Filed May 24, 1911. Serial No. 56,559. PUBLISHED JANUARY 30, 1912.

85,959. DUST-CLOTHS AND BROOM-COVERS. EMIL J. FUNK, Cleveland, Ohio.
Filed August 26, 1911. Serial No. 58,405. PUBLISHED JANUARY 30, 1912.

85,960. CIGARS. GEORGE J. GAMMEL & COMPANY, Buffalo, N. Y.
Filed October 21, 1911. Serial No. 59,277. PUBLISHED JANUARY 30, 1912.

85,961. WOMEN'S BOOTS AND SHOES MADE WHOLLY OR PARTLY OF LEATHER. GORDON GOLDSMITH, Baltimore, Md.
Filed May 16, 1911. Serial No. 56,388. PUBLISHED JULY 4, 1911.

85,962. SMOKING-TOBACCO. THE GOVERNOR AND COMPANY OF ADVENTURERS OF ENGLAND TRADING INTO HUDSON'S BAY, Winnipeg, Manitoba, Canada.
Filed February 11, 1911. Serial No. 54,463. PUBLISHED JANUARY 30, 1912.

85,963. PLASTIC FLOORING AND PLASTIC FLOORING MATERIALS. HEDLEY R. GRAHAM, St. Louis, Mo.
Filed July 14, 1910. Serial No. 50,827. PUBLISHED JANUARY 30, 1912.

85,964. DIE-CASTINGS. C. M. GEBY MFG. CO., East Orange, N. J.
Filed December 12, 1911. Serial No. 60,182. PUBLISHED JANUARY 30, 1912.

85,965. SMOKING-PIPES. CARL HIRSCH, New York, N. Y.
Filed April 6, 1911. Serial No. 55,566. PUBLISHED JANUARY 30, 1912.

85,966. BLENDED COFFEE. JOHN HOFFMANN & SONS CO., Milwaukee, Wis.
Filed August 28, 1911. Serial No. 58,386. PUBLISHED JANUARY 30, 1912.

85,967. CERTAIN ELECTRICAL SUPPLIES. IMPERIAL RUBBER CO., New York, N. Y.
Filed December 2, 1911. Serial No. 60,056. PUBLISHED JANUARY 30, 1912.

85,968. CORSETS. MADAME IRÈNE, New York, N. Y.
Filed June 15, 1908. Serial No. 35,399. PUBLISHED OCTOBER 27, 1908.

85,969. CORSETS. MADAME IRÈNE, New York, N. Y.
Filed December 22, 1908. Serial No. 39,475. PUBLISHED MAY 31, 1910.

85,970. HATS AND CAPS OF CERTAIN MATERIALS. IRVING HAT CO., New York, N. Y.
Filed September 2, 1911. Serial No. 58,519. PUBLISHED DECEMBER 19, 1911.

85,971. CERTAIN FOODS. KIMBALL BROS. CO., Bath, Me.
Filed December 18, 1908. Serial No. 39,417. PUBLISHED JANUARY 4, 1910.

85,972. CERTAIN TOYS. ERNST PAUL LEHMANN, Brandenburg-on-the-Havel, Germany.
Filed May 31, 1911. Serial No. 56,704. PUBLISHED JANUARY 30, 1912.

85,973. CORSETS. LILY OF FRANCE CORSET CO., New York, N. Y.
Filed December 23, 1908. Serial No. 39,502. PUBLISHED NOVEMBER 14, 1911.

85,974. CORSETS. REJANE LITKE, New York, N. Y.
Filed October 3, 1911. Serial No. 58,978. PUBLISHED JANUARY 30, 1912.

85,975. KNIT UNDERWEAR. H. LOEB & CO., New York, N. Y.
Filed December 13, 1911. Serial No. 60,210. PUBLISHED JANUARY 30, 1912.

85,976. CHOCOLATE CREAM DROPS. THE WALTER M. LOWNEY COMPANY, Boston, Mass.
Filed November 7, 1910. Serial No. 52,644. PUBLISHED JANUARY 24, 1911.

85,977. BRANDIES. ANDREW MATTEI, Fresno, Cal.
Filed December 11, 1911. Serial No. 60,172. PUBLISHED JANUARY 30, 1912.

85,978. CANNED FRUITS AND CANNED VEGETABLES. THE MCGOWAN BROS. COMPANY, Steubenville, Ohio.
Filed November 18, 1911. Serial No. 59,794. PUBLISHED JANUARY 23, 1912.

85,979. RUBBER AUTOMOBILE-TIRES. MCGRAW TIRE & RUBBER COMPANY, East Palestine, Ohio.
Filed October 29, 1910. Serial No. 52,513. PUBLISHED MAY 9, 1911.

85,980. CHILDREN'S DOLLS. MITRED BOX COMPANY, New York, N. Y.
Filed November 18, 1911. Serial No. 59,790. PUBLISHED JANUARY 30, 1912.

85,981. BISCUIT. NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y.
Filed December 9, 1911. Serial No. 60,142. PUBLISHED JANUARY 30, 1912.

85,982. BISCUIT. NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y.
Filed December 9, 1911. Serial No. 60,144. PUBLISHED JANUARY 30, 1912.

85,983. BISCUIT. NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y.
Filed December 9, 1911. Serial No. 60,145. PUBLISHED JANUARY 30, 1912.

85,984. BISCUIT. NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y.
Filed December 9, 1911. Serial No. 60,148. PUBLISHED JANUARY 30, 1912.

85,985. BISCUIT. NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y.
Filed November 24, 1911. Serial No. 59,908. PUBLISHED JANUARY 30, 1912.

85,986. LAUNDRY WASHING-MACHINES. NATIONAL SEWING MACHINE COMPANY, Belvidere, Ill.
Filed October 16, 1911. Serial No. 59,183. PUBLISHED JANUARY 30, 1912.

85,987. CERTAIN MACHINERY PACKING. THE NEW JERSEY ASBESTOS CO., Camden, N. J.
Filed March 27, 1911. Serial No. 55,323. PUBLISHED JANUARY 23, 1912.

85,988. CERTAIN ELECTRICAL APPARATUS. L. H. NIELSEN COMPANY, Pittsburgh, Pa.
Filed March 13, 1911. Serial No. 55,045. PUBLISHED MAY 23, 1911.

85,989. WOOLEN YARN. NORDDEUTSCHE WOLLKÄMMEREI & KAMMGARNSPINNEREI, Bremen and Delmenhorst, Germany.
Filed December 21, 1910. Serial No. 53,395. PUBLISHED JANUARY 30, 1912.

85,990. MEN'S AND BOYS' TROUSERS, COATS, OVERALLS, AND OUTER SHIRTS. PEERLESS OVERALL CO., Huntington, W. Va.
Filed December 15, 1911. Serial No. 60,268. PUBLISHED JANUARY 30, 1912.

85,991. TURPENTINE SUBSTITUTES AND LINSEED-OIL SUBSTITUTES. THE PETROLEUM PRODUCTS CO., New York, N. Y.
Filed November 2, 1911. Serial No. 59,494. PUBLISHED JANUARY 30, 1912.

85,992. MEN'S, WOMEN'S, AND CHILDREN'S SHOES AND PARTS THEREOF. THOMAS G. PLANT COMPANY, Boston, Mass.
Filed April 7, 1910. Serial No. 48,897. PUBLISHED NOVEMBER 1, 1910.

85,993. VISES. PRENTISS VISE COMPANY, New York, N. Y.
Filed December 15, 1911. Serial No. 60,269. PUBLISHED JANUARY 30, 1912.

85,994. CIGARETTES. REPUBLIC OF FRANCE, Paris, France.
Filed January 18, 1911. Serial No. 53,943. PUBLISHED JANUARY 30, 1912.

85,995. GRAVERS. HAMMEL RIGLANDER & CO., New York, N. Y.
Filed November 7, 1911. Serial No. 59,600. PUBLISHED JANUARY 30, 1912.

85,996. LEATHER BOOTS AND SHOES. ROBERTS, JOHNSON & RAND SHOE COMPANY, St. Louis, Mo., assignor to International Shoe Company, St. Louis, Mo., a Corporation of Missouri.
Filed October 5, 1911. Serial No. 58,999. PUBLISHED JANUARY 30, 1912.

85,997. CYLINDER AND ENGINE OIL. WM. C. ROBINSON & SON, Co., Baltimore, Md., and Coraopolis, Pa.
Filed December 1, 1911. Serial No. 60,015. PUBLISHED JANUARY 30, 1912.

85,998. CYLINDER-OIL. WM. C. ROBINSON & SON, Co., Baltimore, Md., and Coraopolis, Pa.
Filed December 1, 1911. Serial No. 60,016. PUBLISHED JANUARY 30, 1912.

85,999. ENGINE-OIL. WM. C. ROBINSON & SON, Co., Baltimore, Md., and Coraopolis, Pa.
Filed December 1, 1911. Serial No. 60,018. PUBLISHED JANUARY 30, 1912.

86,000. VALVE-OIL. WM. C. ROBINSON & SON, Co., Baltimore, Md., and Coraopolis, Pa.
Filed December 1, 1911. Serial No. 60,021. PUBLISHED JANUARY 30, 1912.

86,001. CHILDREN'S AND MISSES' CLOAKS AND SUITS. E. ROSENHEIM'S SON, New York, N. Y.
Filed August 12, 1911. Serial No. 58,167. PUBLISHED JANUARY 30, 1912.

86,002. BEER. JACOB RUPPERT, New York, N. Y.
Filed December 22, 1911. Serial No. 60,413. PUBLISHED JANUARY 30, 1912.

86,003. CHILDREN'S OUTER SUITS. SACKMAN BROTHERS COMPANY, New York, N. Y.
Filed August 3, 1911. Serial No. 58,010. PUBLISHED JANUARY 30, 1912.

86,004. SUSPENSORY BANDAGES. THE SANITAS FUNDOSHI COMPANY, Cleveland, Ohio.
Filed June 24, 1911. Serial No. 57,288. PUBLISHED JANUARY 30, 1912.

86,005. SPEED-INDICATING INSTRUMENTS. STEWART & CLARK MANUFACTURING COMPANY, Chicago, Ill.
Filed December 1, 1911. Serial No. 60,065. PUBLISHED JANUARY 30, 1912.

86,006. CERTAIN FURNITURE. GUSTAV STICKLEY COMPANY, New York, N. Y.
Filed June 21, 1911. Serial No. 57,207. PUBLISHED JANUARY 30, 1912.

86,007. CIGARS. JOHN E. SULLIVAN, Harrisonburg, Va.
Filed April 28, 1911. Serial No. 56,024. PUBLISHED JANUARY 30, 1912.

86,008. COOKING-OIL CONTAINING COTTON-SEED OIL AND BEEF-STEARIN. THE TEXAS REFINING COMPANY, Greenville, Tex.
Filed June 14, 1911. Serial No. 57,034. PUBLISHED JANUARY 23, 1912.

86,009. TEXTILE COLLARS, UNDERDRAWERS, UNDERSHIRTS, UNION SUITS, AND PAJAMAS. TIM & CO., New York and Troy, N. Y.
Filed January 21, 1911. Serial No. 54,000. PUBLISHED MARCH 7, 1911.

86,010. ELECTRICAL BELL-RINGERS ACTUATED BY DIRECT CURRENT. U. S. E. M. CO., New York, N. Y.
Filed December 1, 1910. Serial No. 53,068. PUBLISHED JANUARY 30, 1912.

86,011. SILK RIBBONS. VIRGINIA SILK CO. (INCORPORATED,) Richmond, Va.
Filed December 9, 1911. Serial No. 60,154. PUBLISHED JANUARY 30, 1912.

86,012. CANNED CRABS. KUMAJIRO WAKANA, Tokyo, Japan.
Filed March 12, 1910. Serial No. 48,360½. PUBLISHED JANUARY 30, 1912.

86,013. BRICKS. WESTERN BRICK COMPANY, Danville, Ill.
Filed October 21, 1911. Serial No. 59,283. PUBLISHED JANUARY 30, 1912.

86,014. MACHINE-TOOLS. WIENER MACHINERY CO., New York, N. Y.
Filed June 30, 1911. Serial No. 57,399. PUBLISHED JANUARY 30, 1912.

86,015. CHARCOAL AND COKE. F. WITTIG & CO., Milwaukee, Wis.
Filed August 11, 1910. Serial No. 51,353. PUBLISHED OCTOBER 24, 1911.

86,016. CHILDREN'S SLEDS. YORK NOVELTY CO., York, Pa.
Filed November 7, 1911. Serial No. 59,605. PUBLISHED JANUARY 30, 1912.

86,017. ORANGES. A. F. YOUNG & CO., New York, N. Y.; Pittsburgh, Pa., and Boston, Mass.
Filed December 2, 1911. Serial No. 60,053. PUBLISHED JANUARY 30, 1912.

86,018. REFINED OIL FOR ILLUMINATING, HEATING, AND POWER PURPOSES. STANDARD OIL COMPANY OF NEW YORK, New York, N. Y.
Filed November 28, 1911. Serial No. 59,977. PUBLISHED JANUARY 30, 1912.

LABELS

REGISTERED APRIL 2, 1912.

16,260.—*Title:* "THOMSON RIVETS." (For Rivets.) EDWIN B. STIMPSON COMPANY, New York, N. Y. Filed February 7, 1912.

16,261.—*Title:* "HIGH BALL LITHIATED." (For Ginger-Ale.) J. P. HAX & E. V. HAX, Baltimore, Md. Filed January 8, 1912.

16,262.—*Title:* "HORSE SHOE GRIST MILL CEREAL. THE FINEST OF THE WHEAT, NATURAL COLOUR." (For Cereal.) HORSE SHOE GRIST MILL, Horseshoe, N. Y. Filed February 26, 1912.

16,263.—*Title:* "HUNT'S STAPLE QUALITY." (For California Fruits.) HUNT BROTHERS COMPANY, San Francisco, Cal. Filed March 13, 1912.

16,264.—*Title:* "HUNT'S SUPERIOR QUALITY." (For California Fruits.) HUNT BROTHERS COMPANY, San Francisco, Cal. Filed March 13, 1912.

16,265.—*Title:* "HUNT'S SUPREME QUALITY." (For California Fruits.) HUNT BROTHERS COMPANY, San Francisco, Cal. Filed March 13, 1912.

16,266.—*Title:* "RUBI-LYPTOL." (For a Nose and Throat Spray.) MALDEHYDE CHEMICAL COMPANY, St. Louis, Mo. Filed December 20, 1911.

16,267.—*Title:* "MATHUES BROTHERS MAAT." (For Cigarettes.) WILLIAM FRANKLIN MATHUES, New York, N. Y. Filed February 10, 1912.

16,268.—*Title:* "GETTHIN'S SELTO." (For Prepared Salt.) MARGARET MENGIS, New York, N. Y. Filed January 3, 1912.

16,269.—*Title:* "BLUE RIBBON MILK PAIL." (For Milk-Pails.) CHARLES S. MOORE, Danvers, Mass. Filed February 29, 1912.

16,270.—*Title:* "PALMER'S ALPEAN CHOCOLATES." (For Chocolates.) PALMER & CO., Sioux City, Iowa. Filed March 12, 1912.

16,271.—*Title:* "SLICK HAND CLEANER POWDER." (For Powder for Cleaning the Hands.) ALBERT T. SCHLICHTING, Newark, N. J. Filed March 14, 1912.

16,272.—*Title:* "RED DEVIL LYE." (For Lye.) WILLIAM SCHIELD, St. Louis, Mo. Filed March 13, 1912.

PRINTS

REGISTERED APRIL 2, 1912.

2,981.—*Title:* "KEBP." (For Ketterer's Excelsior Blood-Purifier.) THE F. W. KETTERER MEDICINE CO., Jacksonville, Fla. Filed February 28, 1912.

2,982.—*Title:* "KETTERER'S LIVER KLENZOR." (For Ketterer's Liver-Cleanser.) THE F. W. KETTERER MEDICINE CO., Jacksonville, Fla. Filed February 28, 1912.

2,983.—*Title:* "DRINK PEPSI-COLA." (For Pepsi-Cola.) THE PEPSI-COLA COMPANY, Newbern, N. C. Filed March 13, 1912.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

FORSBERG *v.* BRADBURY.

Decided March 4, 1912.

INTERFERENCE — PRELIMINARY STATEMENT — MOTION TO AMEND.

Where the testimony was taken with notice of a motion to amend the preliminary statement by one of the parties, and in order to properly determine whether such motion should be granted a consideration of a large part of the testimony is necessary, *Held* that the consideration of the motion should be postponed until final hearing, (citing *Bauer v. Crone*, 111 O. G., 1939.)

APPEAL on motion.

TELEPHONE-DROP.

Mr. De Witt C. Tanner for Forsberg.

Mr. Curtis B. Camp for Bradbury.

MOORE, *Commissioner:*

This is an appeal by Bradbury from a decision of the Examiner of Interferences denying his motion to amend his preliminary statement.

In his original preliminary statement Bradbury alleged a conception of the invention on or about November 5, 1907, and a reduction to practice on or about December 1, 1907.

Forsberg alleged conception on November 20, 1907, and a reduction to practice on November 23, 1907. Bradbury desires to amend his preliminary statement to allege a reduction to practice on November 12, 1907.

The showing made in the affidavits filed in support of the motion has been carefully analyzed in the decision of the Examiner of Interferences and need not be repeated here. The Examiner finds that the sole excuse advanced for Bradbury's failure to set out the date of November 12, 1907, in his original statement was his forgetfulness at the date of its execution, and that if Bradbury had made at the time he executed his original statement the investigation which he subsequently made at the time he was preparing to take his testimony he would have then discovered the facts now alleged. The Examiner further held that no satisfactory explanation has been made of the failure of Bradbury to make such investigation at the time he prepared his original statement.

Bradbury's motion was filed prior to the taking of testimony, but some nine months after the original statements were opened and approved. It further appears that at the time the taking of testimony was commenced said motion had not been decided by the Examiner of Interferences and that counsel for Bradbury called attention to said fact and suggested, if his opponent desired, that the taking of testimony be deferred until the final disposition of said motion, but that counsel for Forsberg preferred to go ahead with the taking of testimony. Testimony was therefore taken with a notice of the above fact upon the record and upon the assumption that the motion might be granted, covering the matters alleged in the affidavits in support of the motion. It further appears that at the present time the testimony-in-chief of both parties has been taken and that Forsberg's time for taking rebuttal testimony has not yet commenced to run.

At the hearing on this appeal Bradbury filed a brief containing copious extracts from the testimony taken. Counsel for Forsberg objected to the consideration of the testimony quoted by Bradbury unless all of the testimony should be considered and he should be given a chance to reply to Bradbury's brief.

Said testimony will not be considered at the present time. Obviously, however, testimony taken with the right of cross-examination and of rebuttal would form a more satisfactory basis upon which to render judgment than the *ex parte* affidavits filed in support of the motion. Moreover, in view of the fact that testimony was taken in the present case with a knowledge of the pendency of the motion of Bradbury to amend his preliminary statement no hardship could result from a postponement of a final decision upon the question of Bradbury's right to amend until the final hearing. It further appears from the dates alleged in the statements of the respective parties noted above that if the testimony of Bradbury establishes the dates alleged by him together with diligence in reducing the invention to practice at the time his opponent entered the field he will prevail upon his present dates, and there will be no necessity to determine whether he shall be allowed to amend his preliminary statement.

Under the practice set forth in *Karpenstein v. Hertzberg* (127 O. G., 2393) and *Smith and Wickes v. Emerson v. Sanders* (133 O. G., 1433) the question of amending a preliminary statement is one

largely within the jurisdiction of the Examiner of Interferences and will not be disturbed unless it is shown that such discretion has been abused. There appears to be no abuse of discretion which would warrant the reversal of the decision of the Examiner of Interferences, based upon the affidavits filed in support of the motion.

In accordance with the practice followed in the analogous case of *Bauer* v. *Crone* (111 O. G., 1939) the decision of the Examiner of Interferences is affirmed without prejudice to the right of Bradbury to renew his motion to amend his preliminary statement at the time the case comes on for final hearing.

EX PARTE WILLIAM PETERMAN, INC.

Decided February 1, 1912.

APPEAL—FEE—REFUNDMENT.

Where, in his answer to the appeal, the Examiner cited certain published decisions in view of which the applicant withdrew his appeal, *Held* that applicant's mistake in appealing, if any, was one of law and that the fee could not be refunded.

TRADE-MARK FOR INSECTICIDES.

Mr. T. F. Bourne for the applicant.

MOORE, *Commissioner:*

Applicant has filed a request "that the appeal be withdrawn" in this case, in view of the decisions cited by the Examiner of Trade-Marks in his statement on the appeal. It is also requested that the appeal fee be returned because—

the application was not rejected by the Examiner prior to the appeal in view of the said decisions.

The ground upon which registration was refused was that the mark "Ant Food" is clearly descriptive of the goods to which it is applied. In his statement on the appeal the Examiner did not shift the ground of his refusal to register, but merely cited certain cases as authority for the holding. These cases were as available to applicant as to the Examiner, and their bearing on the case should have been appreciated without citation. It is noted that in the action of December 3, 1909, attention was called to the "Roachsault" case, (*Barrett Chemical Co.* v. *Stern*, 176 N. Y., 27,) which is cited in *ex parte The Rat Biscuit Co.*, referred to in the Examiner's statement.

Applicant's mistake in appealing, if any, was one of law. The appeal fee, therefore, cannot be returned.

There being obviously no error in the Examiner's decision, the same is affirmed.

GRAHAM *v.* LANGHAAR.

Decided January 25, 1912.

1. INTERFERENCE—SUSPENSION IN VIEW OF A REFERENCE—GRANTED ONLY WHERE ANTICIPATION IS CLEAR.

It is well settled that after testimony has been taken an interference will not be suspended for the purpose of considering the pertinency of a reference unless the anticipation is clearly apparent.

2. SAME—SAME.

Permission to take testimony to establish the date of publication of a catalogue refused where such motion was not brought until after testimony had been taken and it was doubtful whether the catalogue was a publication within the meaning of section 4886, Revised Statutes, and whether the invention in issue was disclosed therein.

ON PETITION.

BALL-BEARING.

Mr. Gales P. Moore for Graham.

Mr. Arthur B. Jenkins for Langhaar.

BILLINGS, *First Assistant Commissioner:*

This is a petition by Langhaar that the supervisory authority of the Commissioner be exercised for a stay of proceedings and for permission to take testimony to establish the date of publication of a certain German catalogue which is alleged to contain a disclosure of a structure illustrating and describing the invention in issue and that proceedings be instituted which will result in the dissolution of this interference on the ground that its issue is anticipated if the date of publication is proved. The catalogue is one issued by Fichtel & Sachs, manufacturers of ball-bearings, of Schweinfurt, Germany, and it is alleged that the catalogue was published prior to June 1, 1908, a date prior to the date of alleged conception set up by Graham in his preliminary statement. There is nothing appearing in the catalogue itself to show its date of publication, and therefore request is made for permission to take testimony to prove its date of publication.

This petition is, it must be admitted, a very unusual one. The interference has progressed to the point where the testimony-in-chief has been taken by both parties and filed in the Patent Office. The rebuttal testimony only of the junior party has not yet been taken.

It appears, further, that this German catalogue has already been considered by the Primary Examiner. That portion of the catalogue upon which the moving party, Langhaar, relies as an anticipation of the count of the issue consists of several views of a ball-bearing contained on pages 34, 35, and 56. These illustrations are in the nature of a side view and an end view, partly in section, of the ball-bearing.

The principle is settled that where an interference has proceeded to a point that the testimony has been taken it should not be suspended for the purpose of considering the pertinency of a reference to the issue with a view of dissolving the interference, except in those cases where the reference is so clearly an anticipation as to be apparent to any one without the necessity of argument and discussion.

It is to be noted at the outset that it will be necessary to determine at least two propositions of law in cosidering the alleged reference, admitting, for the sake of argument, that the moving party could easily prove the date of the catalogue.

It is by no means certain that the catalogue, a copy of which has been offered as an exhibit, constitutes a publication within the meaning of section 4886 of the Revised Statutes. It would seem that in addition to the taking of testimony to establish the date of issue of the catalogue testimony would also have to be taken to show the extent of the distribution of this catalogue in order that it could be de-

termined whether it was merely circulated among certain members of the trade or whether it was placed in general circulation, so that any member of the public could readily obtain it by applying for it in a public library.

In the case of the *New Process Company* v. *Kock* (21 Fed. Rep., 580) it was said:

It has been held generally, and perhaps universally, that business circulars which are sent only to persons engaged or supposed to be engaged in the trade, are not such publications as the law contemplates in section 4886.

In the case of *Britton et al.* v. *White Mfg. Co.* (61 Fed. Rep., 93) a drawing was offered in evidence, which was contained in a pamphlet. This pamphlet was held to be a mere trade circular. An objection was taken to the introduction of this evidence on the ground that it was not such a printed publication as would anticipate a patent. This objection was sustained.

Should this trade catalogue be held to constitute a printed publication within the meaning of section 4886 of the Revised Statutes, then the question would arise whether the drawings on pages 34, 35, and 56, taken by themselves, accompanied by the exceedingly brief written description, meet the requirements of section 4888 of the Revised Statutes that a description of an invention must be—

in such full, clear, concise, and exact terms as to enable any person skilled in the art or science to which it appertains, or with which it is most nearly connected, to make, construct, compound, and use the same.

Unless these conditions are met the disclosure is not in law an anticipation of the invention claimed.

In *Westinghouse Electric & Mfg. Co.* v. *Saranac Lake Electric Light Co.* (108 Fed. Rep., 221) it was said:

The publication relied on must describe the invention in such a complete, clear and precise manner as to enable those skilled in the art to reproduce it without the aid of the patent.

It is not absolutely clear from these illustrations just what structure is intended to be shown thereby. Even admitting all the facts which petitioner seeks to establish by testimony, which facts must either be clearly proved or admitted to give this catalogue any standing at all as a reference, the questions then raised for determination are so involved and so intricate in character as to make it perfectly clear that this interference should not be delayed at this late day for the purpose of considering the points raised in the petition and motion.

The petition is denied.

EX PARTE DAVISON.

Decided September 13, 1911.

APPLICATION—DELAY IN FILING—NEW OATH.

Held that the ruling in *ex parte Brenna* (97 O. G., 2533) as to the requirement for a new oath where there has been a delay in the filing of the application is not applicable to a divisional application.

ON PETITION.

VENDING-MACHINE.

Mr. Charles G. Fowler for the applicant.

TENNANT, *Assistant Commissioner:*

This is a petition that the Examiner be directed to waive the requirement of an additional oath in the above-entitled application.

The record shows that this application was executed on November 24, 1909, and that it was filed on February 23, 1910. It is, however, stated on the second page of the specification that—

this application is a division of my application Serial No. 482,218, filed March 9, 1909.

It is urged that in view of the fact that the application is a division of an earlier application the requirement of a new oath is unnecessary.

It is well settled that a divisional application is in effect a part and continuation of the original application of which it is a division. No question has been raised by the Examiner that this application is a true division of the earlier application referred to or that there is any defect in the oath of the original application. Under these circumstances the principles set forth in *ex parte Branna* (97 O. G., 2533) are not applicable to the present case.

The petition is granted.

EX PARTE PALTER.

Decided February 17, 1912.

1. ASSIGNMENTS—PATENT OFFICE HAS NO JURISDICTION TO ADJUDICATE THE VALIDITY THEREOF.

It is well settled that the Patent Office has no jurisdiction to adjudicate the validity of assignments and that the function of recording the same is merely ministerial.

2. SAME—ASSIGNMENT RETURNED TO PARTY FILING THE SAME.

A party who files an assignment for record is entitled to have the same returned to him.

ON PETITION.

THIMBLE.

Messrs. Kenyon & Kenyon for the petitioner.

Mr. George Cook for the assignee.

TENNANT, *Assistant Commissioner:*

This is a petition by Elias Palter that an assignment relating to his application, for patent upon improvements in thimbles, and which assignment was filed for record by the assignee, be withheld from record and returned to him.

Accompanying this petition is an affidavit of Palter in which it is stated that said Palter made an assignment of the above-entitled application under duress. He therefore protests against the recording of such assignment and requests that the same be returned to him.

It is well settled that the Office has no jurisdiction to adjudicate the validity of assignments and that the function of recording assignments is merely ministerial. Inspection of the assignment which is presented for record shows that the same is formal in all respects. The Commissioner is therefore without authority to refuse to record the same.

The petition, in so far as it requests that the assignment be returned to the applicant, Palter, must be denied upon the ground that the party filing the same for record is entitled to have the assignment returned to him. Palter's remedy for redress plainly lies in the court and not in the Patent Office.

The petition is denied.

EX PARTE ELLIOTT JEWELRY COMPANY.

Decided February 29, 1912.

TRADE-MARKS—SIMILARITY—"EJCO" IN A MONOGRAM AND "E. J. Co."

The letters "EJCo" arranged in the form of a monogram *Held* deceptively similar to the prior registered trade-mark "E. J. Co."

ON APPEAL.

TRADE-MARK FOR RINGS, HAT-PINS, STICK-PINS, ETC.

Mr. Watson E. Coleman for the applicant.

TENNANT, *Assistant Commissioner:*

This is an appeal from the action of the Examiner of Trade-Marks refusing to register a mark consisting of the letters "EJCo," in view of the prior registration by the Enterprise Jewelry Company of the trade-mark "E. J. Co.," No. 80,045, November 1, 1910.

The applicant in its argument pointed out the differences between these marks as being that the registered mark consisted in the initials "E. J. Co.," whereas the applicant's mark is arranged in the form of a monogram of a distinctive appearance, the letter "E" having its upper and lower strokes of such length as to inclose the rest of the mark, and it is argued that the marks have such a dissimilar appearance that there is no liability of confusion in trade or in the minds of purchasers using the ordinary caution expected of them.

The Examiner states in his answer to the appeal that—

applicant desires to register the identical letters shown in the registered mark and does not point out any difference except in the arrangement of these letters. The slight difference in appearance is regarded as immaterial.

I find no error in the decision of the Examiner. The significance of the marks is identical, they are alleged to be applied to the same class of goods, and the slight difference in appearance clearly would not avoid the likelihood of confusion if these marks were used on merchandise of the same descriptive properties.

The decision of the Examiner of Trade-Marks is affirmed.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

HAWKINS *v.* WARD.

Decided January 2, 1912.

INTERFERENCE — PRIORITY — REDUCTION TO PRACTICE—DILIGENCE.

Where H., who was the first to conceive the invention in issue, delayed the reduction to practice thereof until it could be determined whether his invention would be an infringement of any prior existing patent and whether it would be necessary to modify the device, so as to avoid such prior patent, and in the meantime W. conceived the invention and reduced the same to practice, *Held* that H. was lacking in diligence, and priority was properly awarded to W.

Mr. A. G. Davis, Mr. A. A. Buck, and *Mr. G. E. Cruse* for the appellant.

Mr. Samuel M. Ward, Jr., pro se.

VAN ORSDEL, *J.:*

This is an appeal from a decision of the Commissioner of Patents (175 O. G., 845) in an interference proceeding. The issue of the interference is as follows:

1. In a block-signaling system, the combination of a step-by-step controller at each end of the block, one of which is operated a step forward and backward respectively in response to each car entering and leaving the block in a given direction, a danger-signal set in response to the first forward movement of said controller and cleared by its last return movement, a signal set at the entering end of the block in response to the setting of said danger-signal, danger and caution signals similarly arranged with respect to the other controller and governed thereby in response to cars entering and leaving the block in the opposite direction, two line-wires only extending along the block for controlling and operating said signals, and means including a switch for causing an indication of the movement of the operating-controller to be given each following car entering the block after the signals are set.

2. In a signaling system, the combination of step-by-step controllers, one at each end of the block, one of said controllers operated a step forward and backward respectively in response to cars entering and leaving the block in one direction, a danger-signal set when said controller assumes its first forward movement and cleared when the controller is restored, the other step-by-step controller similarly operated in response to cars entering and leaving the block in the other direction, a danger-signal similarly set by said controller, a single line-wire for controlling the setting of either of said signals, and a signal set in response to the setting of one of said danger-signals for indicating to the first car of a series the setting of said danger-signal.

3. In a block-signaling system, the combination of a step-by-step controller at each end of the block one of which is operated a step forward and backward respectively in response to each car entering and leaving the block in a given direction, a danger-signal at one end of the block set in response to the first forward movement of said controller and cleared in response to its last backward movement, a signal at the entering end set in response to the setting of the danger-signal, means for causing an indication to be given each subsequent car to show the forward movement of its signal-controller, signals and circuits similarly arranged and controlled by the other step-by-step controller in response to cars entering and leaving the block in the opposite direction, and a common line-circuit for controlling the setting of the danger-signals.

4. In a block-signaling system, a signal-circuit extending along the block, signal-setting means at one end controlled through said circuit by the first car of a possible series entering the block for setting a signal at that end, a signal at the other end controlled through said circuit by the setting of the first signal, and a switch operated in advancing the controller and controlled by the entry of each succeeding car of a series for causing an indication of the controller movement to be given each of said cars without affecting said first signal.

It appears from the record that appellant disclosed the invention about May 25, 1907, and filed his application on November 29, 1907. Appellee disclosed it about June 15, and filed his application on July 22, 1907. Neither party reduced the invention to practice. It is conceded that appellant was the first to conceive and disclose the invention.

The sole question, therefore, is whether appellant exercised due diligence toward reducing the invention to practice. It appears from the record that appellant is an engineer and patent attorney in the employ of the General Electric Company, the assignee of his application. It may, therefore, be presumed that he is skilled in the art to which this invention belongs, as well as the practice in procuring patents. It appears that a large part of the time between the date of disclosure and the date of filing his application in the Patent Office was consumed in making an investigation to determine whether or not this invention would be an infringement upon any prior existing patent. It is contended that such investigation constitutes a proper excuse for delay. With this contention we cannot agree. We see no distinction between delay for the purpose of ascertaining whether or not there is infringement, and delay for the mere business purpose of exploiting an invention before making

application for patent. In neither case does this furnish a valid excuse.

It does not affect the patentability of a novel device that it may, perchance, have to pay tribute to some dominating patent. This is merely a question between the pioneer inventor and the one who conceives the improvement. The latter is not entitled to withhold his improvement from the public until he may manufacture free from the claims of earlier inventors, and then secure a monopoly for the full period allowed by the patent laws. Neither is he entitled to delay the completion of his invention pending an examination into the prior art for the purpose of discovering dominating patents, in order to determine whether it should seem advisable to him to modify his invention so as not to come within the scope of such earlier patents. This is what appellant did here, for in his testimony he says:

I felt reasonably sure that Mr. Fairfax was not going to find any patents which would force us seriously to modify the system.

It can hardly be contended that actions which might result in the modification of the invention in issue constitute diligence in reducing this system to practice.

The decision of the Commissioner of Patents is affirmed, and the clerk is directed to certify these proceedings as by law required.

Affirmed.

Court of Appeals of the District of Columbia.

IN RE SCHWEINFURTER PRACISIONS-KUGEL-LAGER-WERKE FICHTEL & SACHS.

Decided February 5, 1912.

1. TRADE-MARKS—REPRESENTATION OF BALL-BEARING AND LETTERS "F & S" FOR BALL-BEARING—DESCRIPTIVE.

A mark consisting of the representation of a ball-bearing intertwined with the letters "F & S" *Held* descriptive as applied to ball-bearings, since its most prominent feature is the figure representing a ball-bearing and as accurately describes the articles to which it is applied as would the printed words "Ball-Bearing."

2. SAME—REGISTRABILITY.

In considering whether a trade-mark is registrable the mark must be considered in its entirety. (*Johnson* v. *Brandau*, 139 O. G., 732; 32 App. D. C., 348.)

Mr. J. C. Dowell for the appellant.

Mr. W. S. Ruckman for the Commissioner of Patents.

SHEPARD, *C. J.:*

This is an appeal from the decision of the Commissioner of Patents denying registration of a trade-mark. The mark consists of a figure representing an annular "ball-bearing" intertwined in which are the letters F & S in large ornamental type. It is applied to a class of goods particularly described as—

ball bearings, race rings for ball bearings, ball retainers, ball spacers and separators, appliances for fixing ball-bearings upon shafts or journals, roller bearings, balls and rollers for bearings, cup-and-cone bearings, journal bearings thrust bearings, journal bearings, bearing casings, axles, hub boxes and casings, inner boxes and casings for shaft bearings, lubricators, shaftings, couplings, pillow blocks, bearing brackets, shaft hangers and frames, toothed wheels, sprocket-wheels and sprocket-chains, power transmitting and transforming gears, multiple speed gears, change gears, differential gears, pulleys, pulley-blocks, cranes, windlasses, steam and gas engines and motors, hydraulic motors, turbines, pumps, blowers, grinding machines, drilling machines, planers and lathes, and repair parts of the foregoing.

Registration was refused, first, because the representation of the "ball bearing" is descriptive; and, second, because it so nearly resembles a representation of a "ball bearing" previously registered by one Kempster, as to be likely to produce confusion in trade.

The trade-mark must be considered in its entirety as applied for. (*Johnson* v. *Brandau*, 32 App. D. C., 348–353.) Hence we need not follow the argument that the F & S is a valid technical trade-mark of itself.

We agree with the Commissioner that the mark applied for is descriptive within the meaning of the Trade-Mark Act. Its most prominent feature is the figure representing a ball-bearing and as accurately describes the articles to which it is applied as would the printed words—Ball Bearing.

It is not necessary to consider the second ground of rejection.

The decision will be affirmed. It is so ordered, and that this decision be certified to the Commissioner of Patents.

Affirmed.

ADJUDICATED PATENTS.

(U. S. C. C. A.) The Gutmann patents, No. 458,162 and No. 530,176, for alternating-current electric motors, *Held* void for anticipation in the prior art. *Century Electric Co.* v. *Wagner Electric Mfg. Co.*, 192 Fed. Rep., 564.

(U. S. C. C. A.) The Gutmann patent, No. 530,177, for a method of transforming electrical into mechanical energy, *Held* not infringed. *Century Electric Co.* v. *Wagner Electric Mfg. Co.*, 192 Fed. Rep., 564.

(U. S. C. C.) The Long patent, No. 898,237, for a radiator for automobiles, *Held* valid and infringed as to claims 1 and 2 and not infringed as to claim 3. *Long* v. *Noye Mfg. Co.*, 192 Fed. Rep., 566.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 27, 1912.

Joseph H. Brown, his assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of The Great Atlantic and Pacific Tea Company, 150 Bay street, Jersey City, N. J., for registration of a trade-mark and trade-mark registered September 25, 1888, No. 15,907, to Joseph H. Brown, of Fort Worth, Tex., and a notice of such declaration sent by registered mail to said Joseph H. Brown at the said address having been returned by the post-office undeliverable notice is hereby given that unless said Joseph H. Brown, his assigns or legal repfesentatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 27, 1912.

Henrietta Newcomb Keith, her assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of J. H. Zellin & Company, Inc.,

306 and 308 Cherry street, Philadelphia, Pa., for registration of a trade-mark and trade-mark registered November 3, 1891, No. 20,291, to Henrietta Newcomb Keith, 16 Exchange Place, New York, N. Y., and a notice of such declaration sent by registered mail to said Henrietta Newcomb Keith at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Henrietta Newcomb Keith, her assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 26, 1912.

Edward P. Miller, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Smith Brothers, of 202 North Green street, Baltimore, Md., for registration of a trade-mark and trade-mark registered April 26, 1910, No. 77,663, to Edward P. Miller, of Chicago, Ill., and a notice of such declaration sent by registered mail to said Edward P. Miller at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Edward P. Miller, his assigns or legal representatives, enter an appearance therein within thirty days from the first publication of this order the interference will proceed as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 16, 1912.

The Reed & Gere Manufacturing Co., its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of B. T. Babbitt, 463 Washington street, Jersey City, N. J., 11 Broadway, New York, N. Y., for registration of a trade-mark and trade-mark registered April 7, 1896, No. 28,096, to The Reed & Gere Manufacturing Co., 613 Francis street, St. Joseph, Mo., and a notice of such declaration sent by registered mail to said The Reed & Gere Manufacturing Co. at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said The Reed & Gere Manufacturing Co., its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 8, 1912.

Arabella G. Starke, her assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of Starke's Dixie Plow Works, Incorporated, 7 South Fifteenth street, Richmond, Va., for trade-mark registration and trade-mark registration No. 11,025, dated March 18, 1884, to Arabella G. Starke, of Richmond, Va., and the notice of such declaration sent by registered mail to the said Arabella G. Starke at the address given has been returned by the post-office as undeliverable.

Notice is therefore hereby given to the said Arabella G. Starke, her assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 8, 1912.

Arabella G. Starke, her assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of Starke's Dixie Plow Works, Incorporated, 7 South Fifteenth street, Richmond, Va., for trade-mark registration and trade-mark registration No. 11,041, dated September 30, 1884, to Arabella G. Starke, of Richmond, Va., and the notice of such declaration sent by registered mail to the said Arabella G. Starke at the address given has been returned by the post-office as undeliverable.

Notice is therefore hereby given to the said Arabella G. Starke, her assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 29, 1912.

Goodwin & Co., their assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of The Standard Cigar Company, 1209 West South street, Canton, Ohio, for a trade-mark and registration No. 10,200, dated April 17, 1883, to Goodwin & Co., of New York, N. Y., and the notice of such declaration sent by registered mail to the said Goodwin & Co. at the address given has been returned by the post-office undelivered.

Notice is therefore hereby given to the said Goodwin & Co., their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 21, 1912.

Hutchens, Howe & Withington, their assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of Sigmund Rosenblatt & Son, Nos. 7 and 9 East Baltimore street, Baltimore, Md., for trade-mark registration and trade-mark registration No. 35,053, dated September 18, 1900, to Hutchens, Howe & Withington, Nos. 116 to 120 Michigan street, Chicago, Ill., and the notice of such declaration sent by registered mail to the said Hutchens, Howe & Withington at the address given has been returned by the post-office as undeliverable.

Notice is therefore hereby given to the said Hutchens, Howe & Withington, their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 20, 1912.

Gabriel Codina Mir, his assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of the W. H. Crawford Co., 119 Commerce street, Baltimore, Md., for a trade-mark, registrations to Wilhelm Brauns, of Quedlinburg, Kingdom of Prussia, and German Empire, J. Eugene Jordan, of Seattle, Wash., Leo Sommer, of New York, N. Y., Weeks & Potter, 360 Washington street, Boston, Mass., and Sam'l. E. Egerton & Co., of Baltimore, Md., and registration No. 18,246, dated August 26, 1890, to Gabriel Codina Mir, of Habana, Cuba, and the notice of such declaration sent by registered mail to the said Gabriel Codina Mir at the address given has been returned by the post-office undelivered.

Notice is therefore hereby given to the said Gabriel Codina Mir, his assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

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Trade-Marks	97—No.	86,019 to No. 86,115, inclusive.
Labels	10—No.	16,273 to No. 16,282, inclusive.
Prints	4—No.	2,934 to No. 2,937, inclusive.
Reissues	6—No.	13,399 to No. 13,404, inclusive.
Total	863	

TO CITIZENS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	2	.....	North Carolina	3	.....
Arizona	2	.....	North Dakota	5	.....
Arkansas	2	1	Ohio	48	5
California	46	4	Oklahoma	3	1
Colorado	7	1	Oregon	4	.....
Connecticut	28	1	Pennsylvania	65	8
Delaware	1	1	Rhode Island	1	7
Florida	6	1	South Carolina	2	.....
Georgia	5	.....	South Dakota	3	1
Idaho	.....	.....	Tennessee	7	.....
Illinois	55	11	Texas	18	2
Indiana	11	.....	Utah	.....	.....
Iowa	18	.....	Vermont	2	.....
Kansas	3	1	Virginia	6	.....
Kentucky	6	2	Washington	13	1
Louisiana	1	.....	West Virginia	6	.....
Maine	1	2	Wisconsin	10	2
Maryland	4	.....	Wyoming	.....	.....
Massachusetts	50	9			
Michigan	31	3	Alaska, District of	.....	.....
Minnesota	16	.....	Canal Zone	.....	.....
Mississippi	.....	.....	District of Columbia	4	1
Missouri	31	5	Hawaii Territory	1	.....
Montana	1	.....	Philippine Islands	1	.....
Nebraska	5	.....	Porto Rico	.....	.....
Nevada	1	.....	U. S. Army	.....	.....
New Hampshire	2	.....	U. S. Navy	.....	.....
New Jersey	30	6			
New Mexico	1	.....	Total to citizens of the United States	672	96
New York	108	20			

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Algeria	.....	.....	Netherlands	.....	.....
Argentina	.....	.....	Newfoundland	.....	.....
Austria-Hungary	.....	.....	New South Wales	2	.....
Belgium	.....	.....	New Zealand	.....	1
Brazil	.....	.....	Norway	.....	.....
British West Indies	.....	.....	Peru	.....	.....
Canada	22	.....	Roumania	.....	.....
Cape Colony	.....	.....	Russia	.....	.....
Chile	.....	.....	Scotland	1	.....
China	.....	.....	South Australia	.....	.....
Costa Rica	.....	.....	Spain	.....	.....
Cuba	.....	1	Sweden	1	6
Denmark	.....	1	Switzerland	2	.....
Ecuador	.....	.....	Turkey	.....	.....
England	18	.....	Transvaal, South Africa	.....	.....
France	5	1		1	.....
Germany	18	5	Trinidad	.....	1
Ireland	.....	.....	Victoria	1	.....
Italy	2	.....			
Jamaica	.....	.....	Total to citizens of foreign countries	74	15
Mexico	.....	.....			

Drawings.

RULE 52.

52. When there are drawings, the description will refer to the different views by figures and to the different parts by letters or numerals, (preferably the latter.)

RULE 52—EXTRACT.

(c) The different views should be consecutively numbered. Letters and figures of reference must be carefully formed. They should, if possible, measure at least one-eighth of an inch in height, so that they may bear reduction to one twenty-fourth of an inch; and they may be much larger when there is sufficient room. They must be so placed in the close and complex parts of drawings as not to interfere with a thorough comprehension of the same, and therefore should rarely cross or mingle with the lines. When necessarily grouped around a certain part, they should be placed at a little distance, where there is available space, and connected by short broken lines with the parts to which they refer. They must never appear upon shaded surfaces, and where it is difficult to avoid this, a blank space must be left in the shading where the letter occurs, so that it shall appear perfectly distinct and separate from the work. If the same part of an invention appear in more than one view of the drawing it must always be represented by the same character, and the same character must never be used to designate different parts.

It is suggested that numerals or letters be used without exponents.

Amendments.

In order to insure the prompt delivery of amendments to the proper examining division, applicants are requested in their actions on applications to give the division number and the room number appearing on the last Office letter, as well as the date of such letter.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business April 6, 1912.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended	
313	1. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Feb. 8	Feb. 14	517
128	2. Bee Culture; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Pneumatic Despatch; Pneumatics; Presses; Store-Service; Tobacco.	Feb. 3	Feb. 26	507
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Mar. 7	Mar. 25	187
232	4. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Metallic Building Structures.	Mar. 6	Mar. 6	3 4
167	5. Bookbinding; Harvesters; Jewelry; Music.	Jan. 27	Feb. 13	469
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	Mar. 7	Mar. 7	314
312	7. Educational Appliances; Clutches; Games and Toys; Mechanical Motors; Nut and Bolt Locks; Optics; Velocipedes.	Jan. 8	Feb. 15	651
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Mar. 8	Mar. 9	365
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Pumps; Wind-Wheels.	Mar. 7	Mar. 7	313
235	10. Carriages and Wagons.....	Feb. 7	Feb. 14	680
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Feb. 12	Feb. 9	461
324	12. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Feb. 6	Feb. 5	611
229	13. Arms, Projectiles, and Explosive Charges, Making; Belt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Turning.	Feb. 15	Mar. 4	458
207	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Feb. 13	Mar. 7	408
208	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Liquid Coating Compositions; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastic Compositions; Plastics.	Feb. 1	Feb. 6	378
109	16. Telegraphy; Telephony.....	Feb. 24	Feb. 26	254
203	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	Mar. 6	Mar. 6	324
227	18. Injectors and Ejectors; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Boilers; Steam-Engines; Steam-Engine Valves.	Feb. 7	Mar. 5	268
236	19. Dampers, Automatic; Furnaces; Heat-Distributing Systems; Stoves and Furnaces.	Feb. 14	Feb. 24	468
170	20. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Feb. 6	Mar. 4	244
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Feb. 24	Mar. 2	345

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended	
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Feb. 8	Mar. 6	293
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Feb. 16	Feb. 23	459
144	24. Apparel; Apparel Apparatus; Sewing-Machines.	Feb. 17	Feb. 24	474
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Mar. 11	Mar. 13	186
198	26. Electricity, Generation; Motive Power.	Oct. 23	Dec. 1	547
379	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Feb. 26	Feb. 24	431
65	28. Internal-Combustion Engines..	Jan. 26	Jan. 26	787
147	29. Coopering; Fire-Escapes; Ladders; Rocks; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	Feb. 4	Mar. 6	466
188	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Jan. 5	Mar. 20	286
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	Feb. 7	Feb. 13	309
278	32. Carbonating Beverages; Curtains, Shades, and Screens; Dispensing Beverages; Dispensing-Cans; Ornamentation; Packaging Liquids; Refrigeration.	Jan. 8	Mar. 7	296
71	33. Cutlery; Domestic Cooking Vessels; Masonry and Concrete Structures; Paving; Tents, Canopies, Umbrellas, and Canes.	Jan. 13	Feb. 3	555
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	Feb. 16	Feb. 14	469
244	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	Mar. 2	Mar. 6	741
264	36. Drafting; Driers; Engraving; Measuring Instruments; Photography.	Mar. 2	Feb. 24	555
107	37. Electric Lighting; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Feb. 1	Mar. 5	476
378	38. Animal Husbandry; Artesian and Oil Wells; Fishing and Trapping; Stationery; Stone-Working.	Jan. 17	Feb. 19	559
221	39. Water Distribution.....	Dec. 26	Dec. 27	654
220	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Mar. 6	Mar. 20	407
126	41. Railway Draft Appliances; Resilient Tires and Wheels.	Feb. 14	Feb. 14	600
279	42. Electric Railways; Electric Signaling; Railway Signaling; Signals.	Jan. 20	Feb. 6	547
222	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Mar. 6	Mar. 5	309

Oldest new case, Oct. 23; oldest amended, Dec. 1.

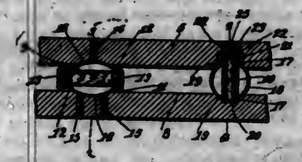
Total number of applications awaiting action 19,301

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks.....	Feb. 19	Mar. 7	1091
	Designs.....	Feb. 10	Feb. 16	370
	Labels and Prints.....	Mar. 25	Mar. 27	28

PATENTS

GRANTED APRIL 9, 1912.

1,022,396. COMBINED SQUARE AND LEVEL. GEORGE W. ALLEN, Corvallis, Oreg. Filed Apr. 7, 1911. Serial No. 619,597. (Cl. 73—188.)



1. A measuring instrument including a member formed with an elongated opening having substantially parallel side walls, said side walls being provided at opposite points with co-acting concave seats, a continuous curved frame housed within said opening and fitting between the seats, a spirit level carried by and extending across the frame, the frame being movable on the seats in the plane of the member to adjust the spirit tube with respect to the member, and means for securing the frame in different adjusted positions.

2. A measuring instrument including a member having an opening formed in opposite walls with co-acting concave seats, a continuous curved frame housed within said opening and fitting between the seats, a spirit tube carried by and extending across the frame, and means for moving the frame on the seats in the plane of the member to regulate the position of the spirit tube with respect to the member.

3. A measuring instrument including a member formed with an opening, a continuous spring frame housed within the opening and interposed between opposite walls thereof, a spirit tube carried by and extending across the frame, the frame being movable in the plane of the member to regulate the position of the tube with respect thereto, and means for compressing the spring frame to retain the same in adjusted position between said opposite walls of the opening.

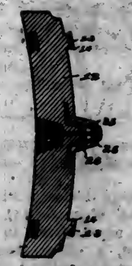
4. In a measuring instrument, a member formed with an opening, an elliptical frame of spring material interposed between opposite walls of the opening, a spirit tube supported in the frame and disposed in the direction of the major axis of the frame, a pair of adjusting screws working in the member and engaging one side of the frame at points on opposite sides of and substantially equidistant from the minor axis of the frame, and a clamping screw also working in the member and adapted to bear against the other side of the frame at a point in the minor axis of said frame.

1,022,397. BRAKE-SHOE. CHARLES W. ARMBRUST, Crystal Lake, Ill., assignor of one-fourth to Sydney Stein, Chicago, Ill. Filed Oct. 24, 1910. Serial No. 588,583. (Cl. 188—25.)

1. A brake-shoe composed of a plurality of sections, and a connecting strip embedded in said sections and uniting the same endwise, substantially as described.

2. A brake-shoe composed of a plurality of sections, and a connecting strip embedded in and uniting the adjacent ends of said sections, substantially as described.

3. A brake-shoe composed of a pair of sections each having a lug on its back, and a connecting strip embedded in said lugs and uniting said sections endwise, substantially as described.



4. A brake-shoe composed of a pair of sections each having a lug on its inner end, and a connecting strip embedded in said lugs and uniting said sections, substantially as described.

5. A brake-shoe provided in its wearing face with one or more recesses open on one side of the shoe and closed on the other, and adapted to permit the lateral insertion of a similarly shaped lug or lugs on the back of another shoe, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,022,398. NECKTIE HOLDER AND SHIELD. JOHN BAEUMLE, Milwaukee, Wis. Filed June 19, 1911. Serial No. 634,128. (Cl. 2—70.)

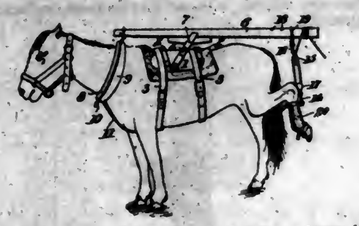


1. In a device of the described class, a flexible shield adapted to be used with a collar and necktie comprising a longitudinal central member provided upon its respective edges with a longitudinal series of recesses and a series of transversely arranged fingers, the fingers of one series alternating with and extending past the ends of the fingers of the opposite series, said fingers being respectively bent over the longitudinal central member at a slight distance therefrom, whereby a space is provided between said fingers and the central member for the reception of the tie, and whereby the fingers of the respective series taken together, extend entirely across the tie.

2. In a device of the described class, a flexible shield adapted to be used with a collar and necktie comprising a longitudinal central member provided upon its lower edge

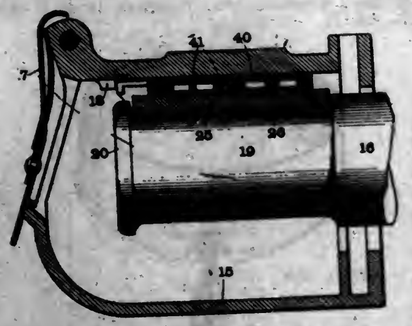
with a recess for the reception of a collar button, and upon its respective edges with a longitudinal series of transversely arranged fingers, the fingers of one series alternating with the fingers of the other series, said fingers being respectively bent over the longitudinal central member at a slight distance therefrom, whereby a space is provided between said fingers and the central member for the reception of the tie.

1,022,399. ANIMAL-SHOEING APPARATUS. REUBEN E. BALCH, Long Island, Ala., assignor of one-half to Joseph T. Thomasson, Chattanooga, Tenn. Filed Aug. 18, 1911. Serial No. 644,818. (Cl. 119—101.)



In an animal shoeing device, a saddle, a lever having notches near one end, a loose ring adapted to rest in one of said notches, a bar attached to said saddle to which said lever is pivoted, a collar, hames, having a loop adapted to be engaged by one end of said lever, adapted to be fastened in the grooves of said collar, means for holding the collar from slipping forward, a foot support, and means adapted to be secured to said support at one end and to the said ring which is adapted to rest in one of said notches in the lever at the other end, whereby one of the animal's feet may be raised and held from the ground, substantially as described.

1,022,400. JOURNAL-BEARING FOR RAILWAY-CARS. STERLING H. CAMPBELL, St. Louis, Mo. Filed May 3, 1909. Serial No. 493,502. (Cl. 64—20.)



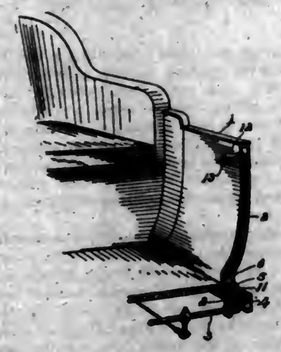
1. In a journal bearing for cars, the combination with a journal, of a wedge having an angular under face, a brass having a part of its upper face conforming to the under face of the wedge, and another part thereof curved to conform to the periphery of the journal, the angular part of the upper face of said brass contacting with the lower face of said wedge, and the highest point of the curved part of the upper face of said brass also contacting with the lower face of the wedge.

2. In a journal bearing for cars, the combination with a wedge having an angular under face, of a brass the back of which comprises alternate ribs and depressions, a lining for said brass, and lugs carried by said lining and having their ends projecting through said brass into the recesses between the ribs, said projecting ends being provided with releasable retaining means for holding the lining in position against the brass.

3. In a journal bearing for cars, the combination with a wedge having an angular under face, of a brass the back of which comprises alternate ribs and depressions, the ribs conforming to the under angular face of the wedge and the depressions being curved, a lining for said brass having lugs extending through said brass into spaces between the ribs, and rods passing through said lugs and ribs to secure the lining in position.

4. In a journal bearing for cars, the combination with a wedge having an angular under face, of a brass the back of which comprises alternate ribs and depressions, the ribs conforming to the under angular face of the wedge and the depressions conforming to an arc of substantially the same radius as the under face of the brass, a lining for said brass having lugs extending through said brass into the spaces between the ribs, and rods passing through said lugs and ribs to secure the lining in position.

1,022,401. CONTROL-LEVER FOR AUTOMOBILES. LOUIS CHEVROLET and ETIENNE PLANCHE, Detroit, Mich., assignors to Chevrolet Motor Company, Detroit, Mich., a Corporation of Michigan. Filed Nov. 15, 1911. Serial No. 660,357. (Cl. 21—125.)



1. The combination of an automobile body of the fore-door type having a false door formed with an inner and an outer wall spaced apart, a control lever extending upward within the space between said walls, and means on said lever projecting laterally into the body for operating the lever.

2. The combination of an automobile body of the fore-door type having a hollow false door provided with a curved slot in its inner side, a lever pivotally supported at its lower end below the body and extending upward within the hollow side, and a handle on the upper end of the lever projecting laterally through said slot.

3. The combination of an automobile body of the fore-door type having a curved side formed with an inner and outer wall spaced apart and the inner wall provided with a curved slot, a control lever pivotally supported at its lower end below the lower edge of said body and curved to conform to the curvature of said body side, and extending upward in the space between the walls thereof, and a handle on the upper end of said lever projecting through said curved slot.

1,022,402. LASTING-MACHINE. WALTER CHICK, Dayton, Ky., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Aug. 2, 1908. Serial No. 446,609. (Cl. 12—2.)

1. A lasting machine of the class described, having in combination, devices for working successive portions of an upper over a last progressively by repeated operations, and a shoe bottom rest arranged to position the shoe for the action of said devices having an attaching portion, and a shoe engaging foot both located in a plane parallel with the median vertical plane of the machine and a single supporting arm curved laterally and connecting the attaching portion to the foot.



2. A lasting machine of the class described, having in combination, devices for working successive portions of an upper over a last progressively by repeated operations, and a shoe bottom rest arranged to position the shoe for the action of said devices having an attaching portion, a shoe engaging foot and a single laterally curved connecting arm having a transversely inclined upper face.

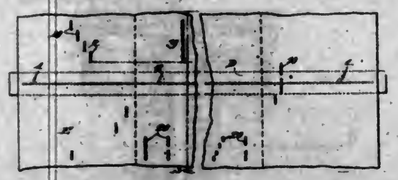
3. In a machine of the class described, a shoe bottom rest comprising an attaching portion, a foot and a laterally curved connecting arm, the upper face of which is beveled toward the inner edge.

4. A machine of the class described, having in combination grippers, means for actuating the grippers upwardly and outwardly to stretch an upper over a last, means for swinging the grippers laterally to plait the upper and a shoe bottom rest arranged to position the shoe for the action of said devices bowed laterally and having an inwardly beveled top face to permit the grippers to swing laterally and downwardly close to the shoe bottom.

5. A step by step lasting machine having devices for working an upper over a last, a support located in the median vertical plane of the machine and a rest for the bottom of the shoe extending outwardly from the support and laterally toward one side of the said plane and then laterally back toward said plane and having a shoe bottom engaging foot substantially in said plane, as and for the purpose described.

[Claim 6 not printed in the Gazette.]

1,022,403. NOTE-SHEET FOR AUTOPNEUMATIC PIANO-PLAYERS. MELVILLE CLARK, Chicago, Ill. Filed Mar. 16, 1910. Serial No. 549,665. (Cl. 84—162.)



1. The combination, in a pneumatic piano-player, of a perforated note sheet, a tracker and sound producing means, the note sheet and tracker being each provided with a plurality of separate divisions, the divisions of the note sheet corresponding to the melody and accompaniment parts of the selection to be played and containing, respectively, all of the melody and accompaniment perforations, said last-mentioned divisions separately containing perforations corresponding to all of the tones of the selection to be played, and having a width sufficient to completely cover the corresponding division of the tracker.

2. The combination, with a tracker, and sound-producing means, as herein described, of a perforated note sheet having a plurality of divisions, one of which divisions contains all of the melody perforations and the other of which divisions contains all of the accompaniment perforations, the melody division of the sheet containing perforations corresponding to tones within the compass of the accompaniment.

3. The combination, with a tracker, and sound producing means, as herein described, of a perforated note sheet having a plurality of divisions corresponding respectively to the melody and accompaniment parts of the selection to be played, the melody and accompaniment divisions containing all of the melody and accompaniment perforations respectively, the melody and accompaniment divisions of the sheet containing perforations corresponding respectively, each to tones within the compass of the other.

4. The combination, in a pneumatic piano-player, of a perforated note-sheet, a tracker, and sound-producing means, the note sheet having a plurality of divisions each of which contains a perforation corresponding to each note of the selection to be played.

5. The combination, in a pneumatic piano-player, of a perforated note-sheet, a tracker and sound-producing means, the note-sheet and the tracker each having a plurality of corresponding divisions, each division of the tracker having a duct corresponding to each note of the selection to be played.

[Claims 6 to 8 not printed in the Gazette.]

1,022,404. IRONING-BOARD. MARCUS S. CLARKE, Houston, Tex. Filed Mar. 9, 1911. Serial No. 613,270. (Cl. 68—1.)



1. A device of the character described composed of a suitable board and a supporting brace therefor; said brace comprising a supporting base, a stud upstanding therefrom and extending through said board and a plurality of nibs projecting from said base into said board, a plurality of legs extending from said base and designed to rest upon a support for said device, and a detachable means engaging with one of said legs and also with the support and securing the brace to the support.

2. A device of the character described including a suitable support, and a supporting brace mounted thereon; said brace including a suitable base and two downwardly extending legs integral therewith, one of said legs engaging against said support and the other of said legs resting thereon; a detachable means carried by the leg engaging against said support and engaging with the support, and a board secured to said base.

3. A device of the character described including a suitable support, and a supporting brace mounted thereon; said brace including a suitable base and two downwardly extending legs integral therewith, one of said legs engaging with said support and the other of said legs resting thereon, a shoulder carried by the first mentioned leg and resting upon said support, a detachable means carried thereby and engaging with said support, and a supporting foot carried by the other of said legs extending laterally on each side thereof and resting upon said support.

4. A device of the character described including a suitable support and a supporting brace mounted thereon; said brace including a suitable base and two legs integral therewith, one of said legs engaging with said support and the other of said legs resting thereon, a shoulder carried by the first mentioned leg and resting upon said support and a detachable hook carried by said leg and engaging with the support, a supporting foot carried by the other of said legs and extending laterally therefrom on each side thereof and resting on said support, a board on said base and an upwardly extending stud and a plurality of upwardly extending nibs carried by the base and projecting into said board and securing the same on the base.

5. A device of the character described composed of a suitable board and a supporting brace therefor; said brace comprising a supporting base, a means for securing the

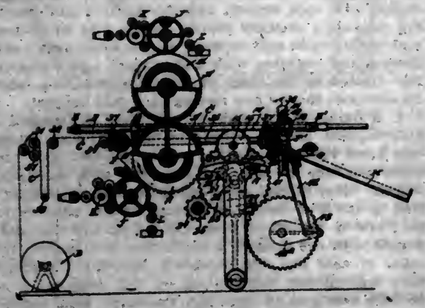
board thereto, a means projecting from said brace into said board, a plurality of legs extending from said base designed to rest upon a support for said device, and a detachable means engaging with one of said legs and also with the support securing the brace to the support.

1,022,405. RIDING-HABIT. MAX COWEN, New York, N. Y. Filed Apr. 12, 1911. Serial No. 620,679. (Cl. 2—60.)



A riding habit comprising a coat, trousers, and a skirt open at the front and back, and completely inclosing the trousers; the coat consisting at the front and back, of primary and secondary exterior sections, the primary sections at the back being carried downwardly to form the back of the skirt, and the secondary sections at the back being carried downwardly to form the back of the trousers; the primary sections at the front being carried downwardly to form the front of the skirt, and the secondary sections at the front being carried downwardly to form the front of the trousers; there being means upon the skirt, whereby its constituent portions may be secured together circumferentially of the garment, to form a continuous skirt, or be folded inwardly, and secured within the contour of the skirt whereby the skirt will constitute a pair of flaps, adapted to cover the trousers, when the device is employed as a riding costume.

1,022,406. PRINTING-PRESS. REUBEN D. COX, Glencoe, Ill. Filed June 17, 1910. Serial No. 567,473. (Cl. 101—100.)

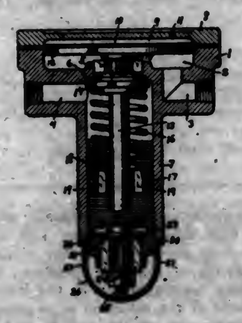


1. In a web press, the combination with printing means, of a gate which supports the web, and mechanism for imparting movement to said gate in opposite directions at different speeds comprising a rack on said gate, a pair of pinions connected so that they rotate together, one of said pinions meshing with said rack, a sector gear which has constant rotation and which intermittently meshes with one of said pinions, an oscillating sector gear of greater radius which meshes with the other of said pinions, a radial slide-way on said oscillating sector gear and a crank rotating in unison with said rotating sector gear constructed so that it slidably engages with the slide-way on said oscillating sector gear, while the rotating sector gear is out of mesh with its pinion.

2. In a printing press, the combination with printing elements formed with co-acting surfaces and with recesses between said surfaces, of a reciprocating gate which carries said web through the printing point and which is returned after each forward movement by a return movement at an increased speed, and means for feeding said web from said gate at intervals between printing operations comprising a feed cylinder arranged in advance of said gate, a feed cylinder arranged back of said gate, said cylinders being geared together, means for intermittently driving said cylinders, a roller bearing against the forward feed cylinder, the web being loosely wrapped around the rear cylinder, supporting means for said web back of said rear feed cylinder, said means comprising supporting devices spaced apart between which the web may be looped, and a weight in said loop of the web.

3. In a printing press, the combination with printing elements formed with co-acting surfaces and with recesses between said surfaces, of a reciprocating gate which carries said web through the printing point and which is returned after each forward movement by a return movement at an increased speed, and means for feeding said web from said gate at intervals between printing operations comprising a feed cylinder arranged in advance of said gate, a feed cylinder arranged back of said gate, said cylinders being geared together, means for intermittently driving said cylinders, a roller bearing against the forward feed cylinder, the web being loosely wrapped around the rear cylinder, supporting means for said web back of said rear feed cylinder, said means comprising supporting devices spaced apart between which the web may be looped, and a weight in said loop of the web, said web adapted to be constantly fed to said supporting means.

1,022,407. AUXILIARY CONTROLLER. ROBERT CRAMER, Milwaukee, Wis., assignor to Frank J. Matchette, Milwaukee, Wis. Filed May 2, 1910. Serial No. 558,829. (Cl. 230—34.)



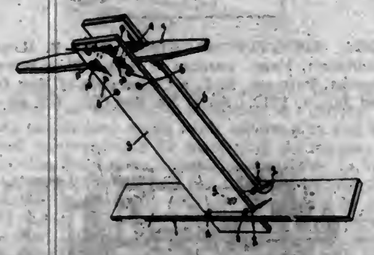
1. The combination in an auxiliary controller of a casing provided with a chamber and having bores and a valve port, the first of said bores communicating directly with said chamber and the second of said bores communicating with said chamber through said valve port, a pressure actuatable member, a valve to control said valve port and adapted to be actuated by said pressure actuatable member on a decrease of pressure in said chamber to open said valve port to establish communication between said bores, and a valve adapted to open to admit air at atmospheric pressure into said second bore when communication between said bores is closed by said first mentioned valve.

2. The combination in an auxiliary controller of a casing provided with a chamber, a hollow projection, a bore communicating directly with said chamber, a second bore and a port affording communication between said chamber and said second bore and the interior of said hollow projection, a pressure actuatable member in said chamber, a valve, to control the thoroughfare through said port, adapted to be moved in one direction by said pressure actuatable member, a spring to move said valve in the opposite direction, and a valve to admit air to said hollow projection and said second bore.

3. The combination in an auxiliary controller of a casing provided with a chamber, a hollow projection, a bore communicating directly with said chamber, a second bore and a port affording communication between said chamber and said second bore and the interior of said hollow projection, a pressure actuatable member in said chamber, a valve, to control the thoroughfare through said port, adapted to be moved in one direction by said pressure actuatable member, a spring to move said valve in the opposite direction, a valve to admit air to said hollow projection and said second bore, and adjustable means to limit the extent of movement of said valves.

4. The combination in an auxiliary controller of a casing provided with a chamber, a hollow projection, a bore communicating directly with said chamber, a second bore and a port affording communication between said chamber and said second bore and the interior of said hollow projection, a pressure actuatable member in said chamber, a valve, to control the thoroughfare through said port, adapted to be moved in one direction by said pressure actuatable member, an adjustable spring to move said valve in the opposite direction, a valve to admit air to said hollow projection and said bore, and an adjustable screw carried by one of said valves, the other of said valves being provided with a stem, said screw and said stem being in alinement, whereby said screw limits the movements of said valves and whereby when one valve is open it keeps the other valve closed.

1,022,408. REEL-CARRIER. CASPER FLITCH, Warner, Alberta, Canada. Filed July 11, 1911. Serial No. 638,599. (Cl. 242—115.)



In a device of the character described, a cross piece, a pair of parallel spaced apart bars mounted in said cross piece, said bars being provided adjacent their upper ends each with a parallel series of spaced apart bores, the bores of one bar corresponding with the bores of the other, a second cross piece slidable between said bars and provided with pairs of spaced apart loops, and bolts adapted to co-act with said bores and loops to adjustably secure said second cross piece in place.

1,022,409. EXPANSION-TANK SUPPORT. CHARLES H. FOSTER, St. Louis, Mo. Filed Aug. 26, 1911. Serial No. 646,246. (Cl. 248—36.)

1. A top supporting member for a tank having a vent pipe, comprising an extension bracket having a chambered stationary member and a slotted sliding extension member terminating in an eye, the chamber of the stationary member being adapted to be closed by a collapse of the members and adapted to house the screw by which the stationary member may be secured in position, and a screw on the stationary member traversing the slot of the sliding member.



2. A top supporting member for a tank having a vent pipe, comprising an extension bracket having a chambered stationary member and a sliding extension member terminating in an eye, the chamber of the stationary member being adapted to house the securing screws for the bracket, while being shipped, and be protected by the sliding member upon collapse of the members, the sliding member being provided with an elongated slot spanned by a rib near its inner end, and a clamping screw on the stationary member traversing the major length of the slot on one side of the rib.

1,022,410. SKIRT. HERMAN N. FREEDMAN, New York, N. Y. Filed May 2, 1910. Serial No. 558,956. (Cl. 2—42.)



An expansible skirt comprising an integral waist band, a body portion provided with a placket opening, an underlying and an overlying plait on each side of the placket opening consisting of three folds and formed by folding the material back underneath itself and forward again to the placket; the edges of the overlying plaits being permanently formed in the material and the edges of the underlying plaits being shiftable; the permanent plaits being bodily adjustable toward and away from the placket to decrease and increase the size of the waist band, respectively, the waist band being provided on each end with a series of holes extending to the placket opening and arranged so that those in the three folds will register in each adjusted position, and removable securing devices adapted to be inserted through the holes in the three folds and hold the folds in adjusted position.

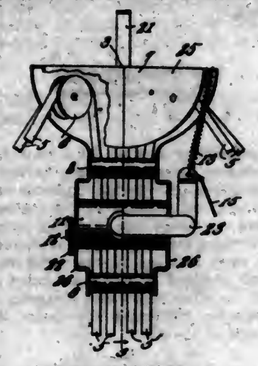
1,022,411. PULLEY-BLOCK. PETER J. GEORGESON, Tustin, Wis. Filed May 6, 1911. Serial No. 625,658. (Cl. 57—34.)

1. A device of the class described comprising a frame; shafts journaled for rotation therein; co-acting dogs secured to the shafts; intermeshing pinions upon the shafts; pairs of oppositely positioned rollers journaled for rotation in the frame, above and below the dogs; and a sheave journaled for rotation in the frame, above the uppermost pair of rollers.

2. A device of the class described comprising a frame; shafts journaled for rotation therein; coacting dogs secured to the shafts; intermeshing pinions upon the shafts; pairs of oppositely positioned rollers journaled for rotation in the frame, above and below the dogs; a sheave journaled for rotation in the frame, above the uppermost pair of rollers; and spring means engaging one dog, to maintain the dogs normally in co-acting relation.

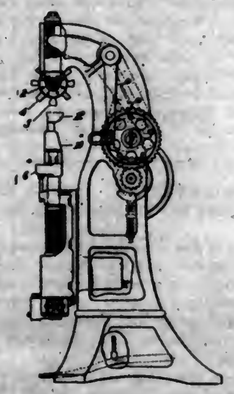
3. A device of the class described comprising a frame including radial, double-walled arms, certain of which are prolonged, to form depending extensions; sheaves journaled for rotation between the walls of the arms; co-acting dogs mounted in the extensions; and pairs of oppo-

sitely positioned rollers journaled for rotation in the extensions, above and below the dogs.



4. A device of the class described comprising a frame including radial, double-walled arms, certain of which are prolonged to form depending extensions; sheaves journaled for rotation between the walls of the arms; shafts journaled for rotation in the extensions; co-acting dogs secured to the shafts and located between the arms; intermeshing pinions secured to the shafts, upon the outside of one of the extensions; pairs of oppositely disposed rollers journaled for rotation in the extensions, above and below the dogs; one of the dogs being provided with an angularly disposed arm, prolonged upon the outside of one of the extensions; and a retractile spring connecting the last mentioned arm with the frame.

1,022,412. WORK-SUPPORT. JOHN J. GILLESPIE, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Original application filed Oct. 7, 1908, Serial No. 456,572. Divided and this application filed Nov. 5, 1909. Serial No. 526,395. (Cl. 12—123.)



1. In a machine of the class described, a shoe supporting jack comprising a spindle, a guide in which the spindle is adjustable endwise, and spindle supporting means independent of the guide and including a plurality of blocks movable in parallel paths one or more of which may be positioned under the spindle to determine the altitude at which the work will be sustained.

2. In a machine of the class described, a shoe supporting jack comprising a spindle, a guide in which the spindle is adjustable endwise, and spindle supporting means including a plurality of blocks of different thicknesses mounted to permit one or more to be shifted from a position at one side of the spindle into a position under the spindle.

3. A machine of the class described, having in combination, a shoe supporting jack comprising a spindle, a spindle guide, a base upon which the guide and spindle are pivotally mounted and upon which the spindle normally rests, and a block pivotally mounted on the base at one side of the spindle and adapted when the spindle and guide are rocked away therefrom to be swung into or out of position to rest the spindle.

4. In a machine of the class described, a work support comprising a spindle, a guide in which the spindle is movable endwise, means for resting the spindle and a block normally supported in an inoperative position adjacent to the spindle, said block being movable about an axis at one side of the line of pressure upon the spindle to or from position under the spindle to change the elevation at which the spindle will be supported.

5. In a machine of the class described, a work support comprising a spindle, a guide in which the spindle is movable endwise, and a plurality of blocks connected for movement together or separately at the will of the operator and adapted to be positioned under the spindle.

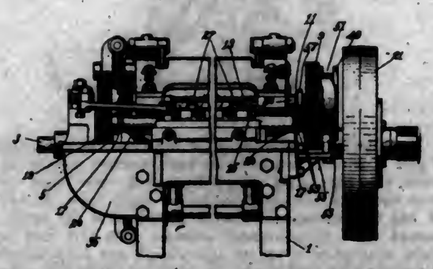
[Claims 6 to 13 not printed in the Gazette.]

1,022,413. LOWER CRANK-CASE FOR COMBUSTION-ENGINES. WILLIAM H. GOLDSTINE, Flint, Mich. Filed July 28, 1910. Serial No. 574,382. (Cl. 121—105.)



A lower crank case comprising a shell, a horizontally disposed partition removably received in the shell, said partition having transverse crank-grooves, said partition formed with openings intermediate said grooves, channels connecting said openings to said grooves; the lateral edges of said partition adapted to fit closely the walls of the shell, and means carried by the shell to support the partition, for the purposes set forth.

1,022,414. SPLITTING-MACHINE. JOHN B. HADAWAY, Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Jan. 4, 1912. Serial No. 669,422. (Cl. 69—15.)



1. A machine of the class described having, in combination, a knife, means for reciprocating said knife, means for feeding to said knife a piece of stock in a direction to have a draw cut produced thereon and means for changing the direction of the feeding movement during the time that the direction of movement of the knife is being reversed.

2. A machine of the class described having, in combination, a knife, means for reciprocating said knife, means for feeding to said knife a piece of stock in a direction to have a draw cut produced thereon, and means for changing the direction of feed first to one side and then to the other during the times that the direction of movement of the knife is being reversed.

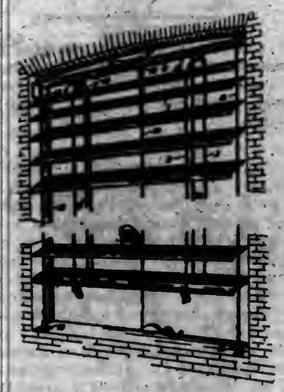
3. A machine of the class described having, in combination, a knife, means for moving said knife intermittently, means for feeding a piece of stock continuously to said knife, and means for periodically changing the direction of the feed, said changes in direction being timed to take place during the pauses in the movement of the knife.

4. A machine of the class described having, in combination, a knife, means for moving said knife intermittently, means for feeding a piece of stock continuously to said knife, and means for periodically changing the direction of said feed, said changes being effective while the knife is near the ends of its path.

5. A machine of the class described having, in combination, a knife, means for reciprocating said knife, means for feeding stock thereto, and means for changing the direction of the feed when the knife approaches the end of its path.

[Claims 6 to 14 not printed in the Gazette.]

1,022,415. METAL-SLAT VENETIAN BLIND. WILLIAM HENRY HANNAM, Sydney, New South Wales, Australia. Filed Sept. 3, 1909. Serial No. 516,117. (Cl. 156—17.)

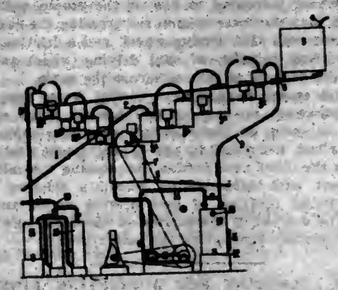


A Venetian blind, composed of separate slats of thin sheet-metal and S-shaped cross-section and having beads on their longitudinal edges, wires embedded in said beads, a curved carrier, means for suspending the top slat from said carrier, so that its angular position may be varied, link-chains fastened to the top slat, means for loosely suspending from the top slat the other slats by means of said chains, which are linked into the wires embedded in the beads, fixed guide ropes passing through openings in all the slats, lifting ropes connected to the bottom slat, means for guiding said lifting ropes, and means for pulling said lifting ropes.

1,022,416. RECOVERING VOLATILE LIQUIDS. CHARLES HARRISON, WILLIAM BATE, and WALTER G. PERKS, Hayle, England. Filed Sept. 13, 1907. Serial No. 392,718. (Cl. 52—3.)

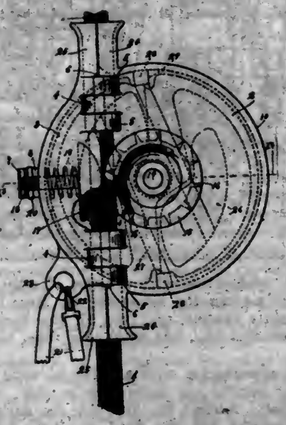
1. A process for the recovery of small percentages of vapor of volatile liquid diffused through a large bulk of air, which comprises causing the air current to pass upward through a series of separate and independent saturators, through which a chemically indifferent liquid descends from one to another in a continuous undisturbed flow, whereby the volatile vapor is diffused through the absorbent liquid, and finally recovering the dissolved volatile liquid therefrom by distillation.

2. A process for the recovery of acetone vapor from moist cordite which consists in drying it in a current of air, passing the air in an ascending current through saturators through which a solution of chlorid of calcium flows downward, distilling off the absorbed acetone



from the chlorid of calcium solution, and returning the said solution after distillation to the uppermost saturator for use over again.

1,022,417. FIRE-ESCAPE. VICTOR W. HEYDLAUFF, Havre, Mont. Filed July 13, 1911. Serial No. 638,260. (Cl. 227—25.)



1. A fire escape comprising a carrier frame adapted to travel downward on a cable and having hinged sections adapted to open for application to a cable, a frictional abutment on one of the said frame sections, a driving wheel opposite said abutment adapted to engage and be driven by said cable, and a friction clutch for restricting rotation of said driving wheel, and hence, controlling the descent of the carrier on the cable.

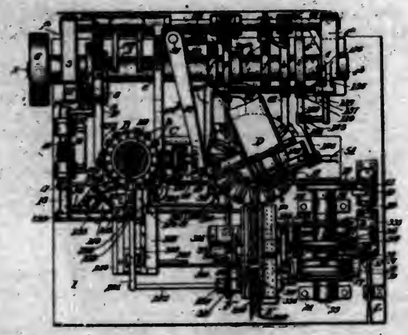
2. A fire escape comprising a carrier frame adapted to travel downward on a cable and having hinged sections adapted to open for application to a cable, a frictional abutment on one of the said frame sections, a driving wheel opposite said abutment adapted to engage and be driven by said cable, and a friction clutch for restricting rotation of said driving wheel and controlling the descent of the carrier on the cable, and a centrifugal governor controlling said clutch.

3. A fire escape comprising a carrier frame, a driving wheel journaled to said frame and engageable with the cable, a yielding frictional abutment engageable with the cable and pressing the cable into engagement with said driving wheel, a friction clutch comprising a frictional flange on said carrier frame and an expansible clutch ring rotatable with said driving wheel, and a centrifugal governor driven by said driving wheel and having connections for expanding said clutch ring and rendering the same operative, when a predetermined speed has been exceeded in the downward travel of the carrier.

4. A fire escape comprising a carrier frame adapted to travel downward on a cable and having hinge sections adapted to open up for application to the cable, of a driving wheel journaled to one of the frame sections, a device on the other case section for pressing the cable into engagement with said driving wheel, and a friction clutch for restricting rotation of said driving wheel and controlling the descent of the carrier on the cable.

5. A fire escape comprising a carrier frame adapted to travel downward on a cable and having hinge sections adapted to open up for application to the cable, of a driving wheel journaled to one of the frame sections, a device on the other case section for pressing the cable into engagement with said driving wheel, a friction clutch for restricting rotation of said driving wheel and controlling the descent of the carrier on the cable, and a centrifugal governor controlling the said clutch.

1,022,418. MACHINE FOR JUSTIFYING LINES OF TYPE. WILLIAM T. HOOFNAGLE, Bloomfield, N. J., assignor of one-half to Robert Watson, Washington, D. C. Filed Feb. 10, 1909, Serial No. 477,190. Renewed Nov. 28, 1911. Serial No. 662,943. (Cl. 101—199.)



1. The combination with a series of word holders, and means for moving the same step by step, of means for automatically feeding the type for the successive words of an assembled line, one word at a time, into successive holders.

2. The combination with a series of word holders, and means for moving the same step by step, of means for automatically feeding the type for the successive words of an assembled line, one word at a time, into successive holders, and means for automatically stopping the movement of the word holders and feeding mechanism after the type for the last word of a line have been transferred to a word holder.

3. The combination with a line holder and a series of word holders, of means for automatically transferring the type for successive words of an assembled line, one word at a time, from the line holder into successive word holders.

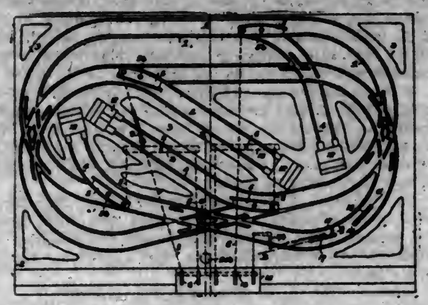
4. The combination with a line holder and a series of word holders, of means for intermittently moving the word holders relatively to the line holder, and means for transferring the type for successive words of a line, one word at a time, from the line holder to successive word holders.

5. The combination with a line holder and a series of word holders, of mechanism controlled by a line key for automatically transferring the type for successive words of a line, one word at a time, from the line holder to successive word holders.

[Claims 6 to 65 not printed in the Gazette.]

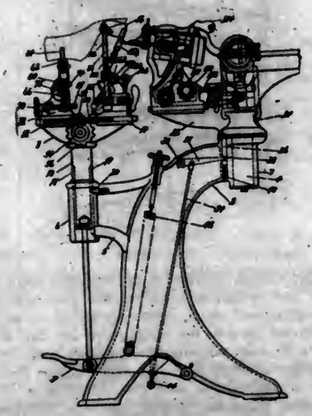
1,022,419. TOY OR GAME. FRANK HORNBY, Liverpool, England. Filed June 26, 1911. Serial No. 635,260. (Cl. 104—111.)

An improved toy comprising; a set of track rails stamped from a sheet metal plate; branch sidings to said track rails; switch points controlling the entrances to the sidings; spring controlled rods normally holding the said points to the sidings open; hand levers connected to the spring controlled rods; a starting trigger connected to one



of said levers; a scoring device comprising a toothed wheel projecting above the track; and a projection on the track normally in such a position as to wreck a train passing along the rails but adapted to be cleared therefrom by operating a button.

1,022,420. LASTING-MACHINE. ARTHUR ERNEST JERRAM, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Sept. 26, 1904. Serial No. 225,963. (Cl. 12—14.)



1. In a machine of the class described, the combination with a wiper and mechanism including supporting arms for actuating the wiper to work the upper about the fore part of a shoe toward the last bottom, of yielding connections between the wiper and arms, to permit the wiper to move with relation to the supporting arms for embracing lasts of different sizes.

2. In a machine of the class described, the combination with wipers and supporting arms therefor, of yielding connections between the wiper and the arms, said connections comprising studs pivotally connected to the end portions of the wiper and slidingly connected to the arms, and yielding means for pressing the studs toward the wiper.

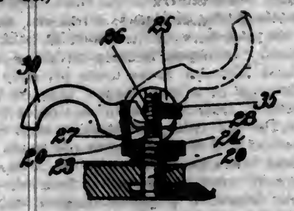
3. In a machine of the class described, the combination with a wiper and a carriage therefor, of supporting arms, bearings in the carriage through which the supporting arms are guided, connections between the upper ends of said arms and the wiper, and means for adjusting said ends of the arms toward and from each other to vary the spread of the wiper.

4. In a machine of the class described, the combination with a wiper and a carriage therefor, of two wiper supporting arms yieldingly mounted in the carriage for movement together transversely of the carriage.

5. A lasting machine having end lasting mechanism including lasting plates arranged to occupy a definite lateral position during operation and a jack similarly arranged and including an end embracing band or wiper, combined with means to determine the lateral position of the jack, and means included in said jack to permit limited lateral movement of the shoe and band to center irregularly shaped shoes relatively to the wiper plates.

[Claims 6 to 89 not printed in the Gazette.]

1,022,421. LASTING-PLATE CLAMP. CARL GUSTAF JOHNSON, Manchester, N. H., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 27, 1911. Serial No. 662,653. (Cl. 12—14.)



1. In a lasting machine the combination with a wiper plate and a carrier therefor, of a clamping bolt extending through said parts and having its head in a countersunk seat that is formed in the lower face of the plate and connected with the edge thereof by a slot, a block threaded on the upper end of the bolt and having a plane lower face and trunnions formed on its ends, a lever formed with hooks on its lower end and recessed to permit the hooks and trunnions to be interengaged only when the block is disconnected from the bolt and presented with its plane face against the back wall of the recess, said hooks having eccentric faces to effect a downward pressure for drawing the bolt into clamping position when the lever is rocked.

2. In a lasting machine the combination with a wiper plate and a carrier therefor, of a clamping bolt extending through said parts, a block on the upper end of the bolt having trunnions on its ends, a lever having hooks engaged with said trunnions and provided with edge faces that are eccentric with relation to the trunnion seats in the hooks and are adapted to wedge the block and the carrier apart for clamping the carrier and plate together.

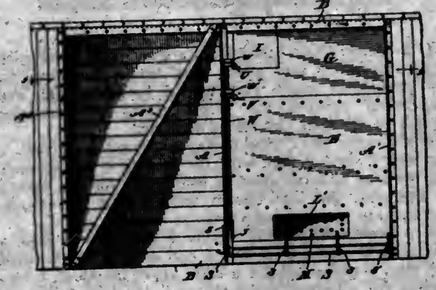
3. In a lasting machine the combination with a wiper plate and a carrier therefor, of a clamping bolt extending through said parts, a spring encircling the bolt above the carrier, a block threaded on the bolt above the spring and provided with trunnions, a lever fulcrumed on the trunnions and having an eccentric head for wedging the bolt and the carrier apart yieldingly through the spring to effect clamping of the plate and carrier together, and a locking screw fastening the block in adjusted position on the bolt and serving as a stop to limit movement of the lever.

4. In a lasting machine the combination with a wiper plate and a carrier therefor, of a clamping bolt extending through said parts, a block threaded on the bolt and having trunnions on its ends and a plane face formed approximately on a chord of a circle of which the trunnions are the center, and a lever having hooks which can only be engaged with or disengaged from the trunnions when the plane face of the block is presented in predetermined angular relation to the lever, and eccentric faces on the lever to enable it to act through the block and the carrier for causing the bolt to clamp the lasting plate to the carrier.

5. In a lasting machine the combination with a wiper plate and a carrier therefor, of a clamping bolt extending through said parts and having its head in a countersunk seat that is formed in the lower face of the plate and connected with the edge thereof by a slot, a block threaded on the upper portion of the bolt for adjustment from and toward the carrier, a lever fulcrumed on the block and adjustable therewith, a spring encircling the bolt between the carrier and the lever, and a washer capping the spring, said lever being formed with eccentric faces for engagement with the washer all arranged to effect clamping of the plate to the carrier yieldingly with a force determined by the adjusted position of the block on the bolt.

[Claim 6 not printed in the Gazette.]

1,022,422. COMBINED CAR AND GRAIN DOOR. ROBERT C. JOHNSON and DUNCAN S. MCEWING, Chicago, Ill. Filed Oct. 28, 1909. Serial No. 525,048. (Cl. 20—31.)



1. In combination, a car having the usual side door opening, a main door, means for mounting the door on the car so as to be movable into a position wherein it completely closes the door opening and into a position wherein it leaves the door opening uncovered, a portion of the door extending substantially across the entire width thereof near the top of the door being made movable with respect to the remainder of the door so as to provide an auxiliary door opening, said portion of the door being mounted on and supported by the door itself said movable portion of the door having an opening therethrough, and an auxiliary door for closing the latter opening.

2. In combination, a car having the usual side door opening, a main door, means for slidably mounting the door on the car so as to be movable into a position wherein it completely closes the said opening and a position wherein it leaves the opening uncovered, the upper portion of the door being made movable relative to the remainder of the door and hinged thereto at the top so as to swing inwardly said upper portion of the door having an opening therethrough near the top, and an auxiliary door hinged to the main door above said latter opening in position to close it.

3. In combination, a car having the usual side door opening, a main door arranged on the inside of the car, means for slidably mounting the door so as to be movable into a position wherein it completely closes said door opening and into a position wherein it leaves the opening uncovered, a housing arranged at one side of the door opening within the car, said housing being sufficiently large to receive the door when it is moved so as to uncover the door opening said main door having an auxiliary door movably mounted thereon near the upper end.

4. A car door comprising an open rectangular frame, a metal sheet secured to said frame, said sheet being of such size and shape as to close the opening in the frame except at one end thereof, an auxiliary door fitting in that portion of the opening left uncovered by said sheet, hinges joining said auxiliary door to the frame and a portion of the auxiliary door adjacent to the free edge being offset so as to overlap said sheet while the remainder of the auxiliary door lies in the plane of said sheet.

5. In a car door, an open rectangular frame formed of angle iron, a metal sheet secured to said frame, said sheet

being as wide as the frame but shorter so as to leave an opening at one end of the frame, an auxiliary sheet lying in said opening, hinges connecting said auxiliary sheet to said frame, and one of said sheets being offset adjacent to the meeting edges so as to permit it to overlap the other while both sheets lie in the same plane.

[Claims 6 and 7 not printed in the Gazette.]

1,022,423. BRANCH BLOCK FOR ELECTRIC MOLDINGS OR CONDUITS. GEORGE A. JORDAN, New York, N. Y. Filed Apr. 28, 1910. Serial No. 558,131. (Cl. 247—4.)



1. A branch block base having a shelf portion for each main over which said mains pass, bridge portions over the mains over which portions the branches pass, and connections between the proper mains and branches located on the shelf and bridge portions.

2. A branch block base having a projecting trough, a seat and a shelf in line with the trough, a clip connecting the seat and the shelf, a connection for the branch on the seat, the said branch lying within the trough, and the said trough lying above the main.

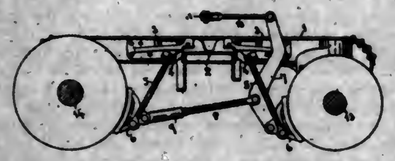
3. A branch block base having a shelf at one side, a seat upon a higher level and a clip connecting the shelf and seat, a connection for a main above the shelf, a connection for a branch above the seat, the base having at the other side a projecting trough under which the main passes, there being a seat and a shelf in line with the trough, the seat being on a higher plane than the shelf, a clip lying upon the seat and shelf, a second main passing over the second shelf and a second branch passing through the trough and connecting with the second main.

4. A branch block comprising a base adapted to be secured to a molding and having a shelf portion for each main over which said mains pass, bridge portions over the mains over which portions the branches pass, and connections between the proper mains and branches located on the shelf and bridge portions; and a cover adapted to cover said base and overlap the ends of the molding capping adjacent said base.

5. In combination, a grooved molding; a branch block base mounted thereon above the grooves; capping on said molding covering the grooves and terminating adjacent said base; and a branch block cover, substantially the same width as said molding, covering said base and covering the end portions of the capping adjacent said base.

[Claims 6 and 7 not printed in the Gazette.]

1,022,424. BRAKE-RIGGING. WILLIAM F. KIESEL, Jr., Altoona, Pa. Filed Nov. 17, 1910. Serial No. 592,831. (Cl. 188—24.)

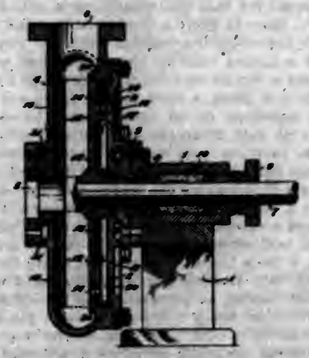


1. In a four wheel car truck, the combination with the truck frame, including the bolster, of driving and trailer wheels, brake heads adjacent said wheels, U-shaped hangers pivotally connected with said brake heads and suspended from the truck frame, vertical levers pivotally connected to the brake heads of the trailer wheels and extending upward through the hangers of said brake heads, compression rods connected to said levers above the brake heads and pivotally connected to the respective brake heads of the driving wheels, and an equalising bar connected to said levers, the ends of the equalising bars being substantially in the same vertical planes with the respective wheels, levers, hangers, brake heads and compression rods, for the purpose set forth.

2. In a four wheel car truck, the combination with the truck frame, including the bolster, of brake heads adjacent one pair of said wheels, hangers connected with the truck frame and supporting said brake heads, levers extending upward from said brake heads to a plane above the car truck, brake heads adjacent the other pair of said wheels, hangers supporting said brake heads from the car truck, compression rods connecting said latter brake heads with the respective levers at points above the brake heads to which said levers are connected, and an equalizing bar above the car truck and adjacent the pivotal center thereof, the ends of said bar being connected with the upper ends of said levers, for the purpose set forth.

3. In a four wheel car truck, the combination with the truck frame comprising side bars, a transom, and gussets connecting the side bars and transom, of hook members on the gussets, U-shaped hangers pivotally suspended from said hook members, brake heads pivotally arranged between the arms of said U-shaped hangers, levers extending vertically from one pair of said brake heads to a plane above the car truck, compression rods connecting the other pair of said brake heads to the levers at points above the said brake heads to which the levers are connected, the said levers being located between the members of their respective U-shaped hangers, an equalizer bar arranged near the pivotal center of the truck, the ends of said equalizer bar being substantially in the planes of said levers, links connecting the ends of the equalizer bar with the upper ends of the levers, and a draft rod connected with the central portion of the equalizer bar, for the purpose set forth.

1,022,425. CENTRIFUGAL PUMP. GUSTA C. KUECH-No. 588,013. (Cl. 103—43.)



1. A centrifugal pump comprising in combination, a casing having an inlet and an outlet, a rotor in said casing spaced apart from the walls thereof to form liquid receiving chambers on each side of said rotor, one of said chambers being normally open to an inflow of liquid and the other chamber being normally closed to such inflow, and differential valve controlling means for permitting an inflow to the closed chamber to automatically counteract the thrust on said rotor from said open chamber.

2. A centrifugal pump comprising in combination, a casing having an inlet and an outlet, a rotor in said casing spaced apart from the walls thereof to form liquid receiving chambers, one of said chambers being normally open to the liquid passing through said pump and the other chamber being normally closed to such liquid, and differential valve controlling adjustable means on said rotor for permitting a variable inflow to said closed chamber to automatically counteract the thrust on said rotor from said open chamber.

3. A centrifugal pump comprising in combination, a casing having an inlet and an outlet, a rotor in said casing spaced apart from the walls thereof to form liquid receiving chambers, one of said chambers being normally open to the liquid passing through the pump and the other chamber being normally closed to such liquid, and adjustable valve controlling means permitting an inflow and an outflow to and from said normally closed chamber corresponding to the variations of pressure in the normally open chamber to counteract the thrust on said rotor from said open chamber.

4. A centrifugal pump comprising in combination, a casing having an inlet and an outlet, a rotor in said casing spaced apart from the walls thereof to form liquid receiving chambers on opposite sides of the rotor, one of said chambers being normally open to the liquid passing through said pump and the other being closed thereto, and adjustable valve controlling means permitting an inflow from the pump to said normally closed chamber and an outflow from such chamber back to the pump corresponding to the variation of pressure in the open chamber.

5. A centrifugal pump comprising in combination, a casing having an inlet and an outlet, a rotor in said casing spaced apart from the walls thereof to form rotor balancing chambers, one of said chambers being normally opened to the liquid passing through said pump and the other chamber being normally closed, the rotor having openings permitting entrance of the liquid to said closed chamber, and an element adjustably carried by said rotor for controlling said opening.

[Claims 6 and 7 not printed in the Gazette.]

1,022,426. ARC-LIGHT ELECTRODE OR PENCIL. ISADOR LAPOFF, Cleveland, Ohio, assignor of thirty one-hundredths to Philip C. Peck, New York, N. Y. Filed Feb. 12, 1908. Serial No. 415,490. (Cl. 176—136.)

1. An arc light electrode comprising an iron tube containing a mixture consisting of powdered metallic iron and a powdered titanic substance.

2. An arc light electrode consisting of an iron tube containing a mixture consisting of powdered metallic iron and powdered oxid of titanium intimately and homogeneously mixed together.

1,022,427. SCREW INSERTER AND REMOVER. JOSEPH LEE, Brooklyn, N. Y. Filed July 22, 1910. Serial No. 573,164. (Cl. 145—50.)



1. A screw inserter and remover having an end provided with spring leaves of V cross-section taken transversely of the axis of the tool.

2. A screw inserter and remover having an end provided with spring leaves joined along one edge longitudinally of the tool and diverging from that edge.

3. A screw inserter and remover, composed of metal tubing, having its end flattened and one edge of said flattened portion slit and spread, substantially as set forth.

4. A screw inserter and remover, composed of metal tubing flattened at one end, the flattened portion being slit along one edge and the two parts thereof spread to form spring leaves connected along the other edge of said flattened portion.

1,022,428. CORN-HUSKER. JOHN LINDER, Meadowlands, Minn., assignor of one-half to Charles Maurer, Bovey, Minn. Filed July 31, 1911. Serial No. 641,407. (Cl. 130—5.)

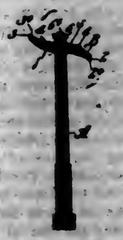


1. In a corn husking device, the combination of an ear support, a sliding head on said support, means on said head for engaging the fibrous stem of an ear and holding the same against rotation, a rotary head confronting said sliding head, resilient ear gripping fingers projecting from said rotary head, a cam ring sliding longitudinally upon said fingers and camming the same into engagement with said ear, and means for stripping the husk from the tip of the ear prior to the actuation of said gripping fingers.

2. In a corn husking device, the combination of an ear support, a sliding head on said support, means on said head for engaging the fibrous stem of an ear and holding the same against rotation, a rotary head confronting said sliding head, resilient cam actuated ear gripping fingers projecting from said rotary head and serving to twist the ear from its stem, and resilient fingers projecting from said rotary head having oppositely bowed terminals forming an expansible ring which engages between the husk and ear and strips the husk from the ear tip prior to the actuation of said ear gripping fingers.

3. In a corn husking device, the combination of a support, an ear holding trough pivoted at one end to said support and having its free end yieldingly mounted on said support, a sliding head on said trough having teeth on its face for engaging the fibrous stem of an ear and holding the stem against rotation, a rotary head confronting said sliding head, means for rotating said rotary head, resilient fingers projecting from said rotary head having terminal ear gripping means, a cam ring sliding longitudinally upon said fingers, means for simultaneously sliding said sliding head and said cam ring toward each other, and means projecting from said rotary head for stripping the husk from the tip of the ear prior to the actuation of said head rotating means.

1,022,429. SAFETY-RAZOR. EDWIN C. MADDEN, St. Louis, Mo. Filed July 29, 1910. Serial No. 574,542. (Cl. 30—12.)



1. In a safety razor, a handle, an upwardly inclined blade arranged adjacent the upper end of the handle, and a guard arranged on the upper side of the blade in such a manner that it travels in advance of the cutting edge of the blade during the operation of moving the blade upwardly over the surface being shaved.

2. In a safety razor, a handle, a transversely disposed blade-supporting member arranged adjacent the upper end of the handle and provided with an upwardly inclined portion, a blade mounted on the upwardly inclined portion of said member, and a guard arranged on the upper side of the blade for protecting the surface being shaved during the operation of moving the blade upwardly over said surface.

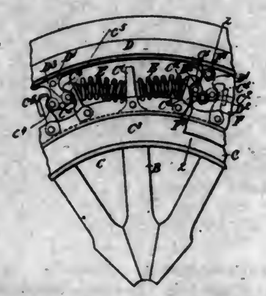
3. In a safety razor, a handle, a transversely disposed supporting member arranged adjacent the upper end of the handle and having upwardly and downwardly inclined portions, cutting edges arranged adjacent the ends of said inclined portions, a guard arranged above the cutting edge that is located adjacent the end of the upwardly inclined portion of said member, and a guard arranged below the cutting edge that is located adjacent the end of the downwardly inclined portion of said member.

4. In a safety razor, a handle, a cutting means arranged adjacent the upper end of said handle and comprising upwardly and downwardly inclined portions provided with cutting edges, a guard arranged above the upwardly inclined portion of said means in such a manner that it travels in advance of the cutting edge thereon, and a guard arranged below the downwardly inclined portion of said means adjacent the cutting edge thereon.

5. In a safety razor, a handle, a transversely disposed supporting member arranged adjacent the upper end of said handle and having upwardly and downwardly inclined portions, a double-edged cutting means carried by said member, a clamping device for retaining said cutting means in position, a guard on said device arranged above one of the cutting edges on said means, and a guard on said supporting member arranged below the other cutting edge on said means.

[Claims 6 to 8 not printed in the Gazette.]

1,022,430. SPRING-WHEEL FOR VEHICLES. FREDERICK WILLIAM MARGETTS and WILLIAM HENRY MARGETTS, East Dulwich, England. Filed Nov. 12, 1910. Serial No. 592,050. (Cl. 152—37.)



1. A spring wheel for vehicles comprising in combination, separate hub and rim portions, a plurality of blocks pivotally carried by one portion of the wheel and having its inclined bearing faces converging inwardly toward each other in the plane of the wheel, a corresponding number of projections carried by the other portion of the wheel and having bearings adapted to rest against the said faces of said blocks, and resilient means acting upon said blocks to normally retain the said bearings of said projections adjacent the converging portions of said faces, substantially as and for the purpose set forth.

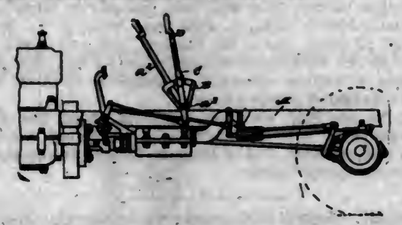
2. A spring wheel for vehicles comprising hub and rim portions, a plurality of blocks having double inclined faces and pivoted on one portion of the wheel, a corresponding number of projections, having transverse anti-friction rollers, on the other portion of the wheel and in the paths of the pivoted blocks, and helical springs bearing on the blocks to keep their inclined faces against said rollers on the projections, substantially as described.

3. A spring wheel for vehicles comprising separate hub and rim portions, cover plates secured to the rim portion and adapted to receive the periphery of the hub portion, transverse bearings, having anti-friction rollers, secured between the cover plates, a plurality of blocks, having double inclined bearing faces, and pivoted on the periphery of the hub portion, and helical springs bearing on the blocks to keep their inclined faces against the rollers on the transverse bearings, substantially as described.

4. A spring wheel for vehicles comprising separate hub and rim portions, a plurality of blocks, having double inclined bearing faces converging inwardly toward each other in the plane of the wheel, the said blocks being arranged in pairs with the said bearings face to face and pivoted on one portion of the wheel, a corresponding number of projections, having transverse bearings, on the other portion of the wheel and in the paths of the pivoted blocks to keep their faces against the said bearings and to force the members of the pairs toward each other with the said bearings interposed therebetween, substantially as described.

5. A spring wheel for vehicles comprising hub and rim portions, a plurality of blocks arranged in pairs face to face, pivoted on one portion of the wheel, a corresponding number of projections on the other portion of the wheel and in the paths of the pivoted blocks, springs bearing on the blocks to keep them against the projections and to force the members of the pairs toward each other, the wheel rim having annular side grooves, cover plates secured to the rim portion of the wheel, and having flanges entering said grooves, and the hub portion having an annular recess in each face of its periphery and containing a packing of resilient material, as a bearing for the cover plates, substantially as described.

1,022,431. AUTOMOBILE LOCKING MECHANISM. CARLE L. MASKEY, Cleveland, Ohio. Filed Jan. 17, 1910. Serial No. 538,441. (Cl. 21—90.)

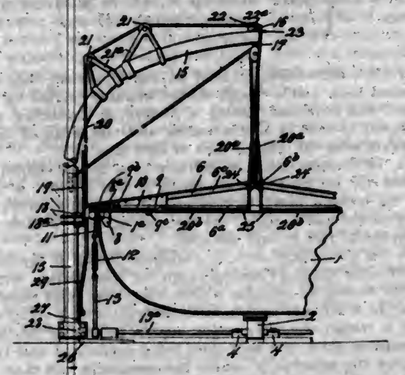


1. In mechanism of the class described the combination with an operating lever, a rod slidably attached to said lever, a guide segment therefor, said segment having a slot and said rod being adapted to enter such slot when said lever is in inoperative position; of an electric circuit and two contacts adapted to close said circuit and carried on said segment, said circuit being normally closed and one of said contacts extending into such slot whereby said circuit is broken upon the entrance of said rod into such slot.

2. In mechanism of the class described, the combination with an operating lever, a rod slidably attached to said lever, a guide segment for said lever, said segment having a slot and said rod being adapted to enter such slot when said lever is in inoperative position; of an electric circuit; and two contacts, adapted to close said circuit, and carried on said segment, said circuit being normally closed, and one of said contacts extending into such slot in the path of said rod, and being movable away from the fixed contact upon the entrance of said rod into said slot, whereby the circuit is broken.

3. In mechanism of the class described the combination with an operating lever, a rod slidably attached to said lever, a guide segment for said lever, said segment having a slot and said rod being adapted to enter such slot when said lever is in inoperative position; of an electric circuit; and two contacts, adapted to close said circuit, and carried on said segment, said circuit being normally closed, and one of said contacts extending into such slot in the path of said rod, and being movable in said slot away from the fixed contact, upon being actuated by the engagement of said rod with said slot.

1,022,432. MECHANISM FOR PREPARING BOATS FOR LAUNCHING. JOHN MCGOLDRICK, Baltimore, Md. Filed Dec. 8, 1911. Serial No. 664,627. (Cl. 9—22.)



1. In a boat releasing device, the combination with a boat and its cover, and chocks for the boat, of means for securing the boat and cover together, gripes for holding the boat upon the chocks and controlling the position of the said chocks and means for simultaneously releasing the boat from the cover and from the gripes whereby the chocks are also released.

2. In a boat releasing device, the combination with a boat and its cover, of means for securing the boat and cover together, chocks and gripes for the boat and means for simultaneously releasing the boat from the cover and gripes and means actuated by the release of the gripes for releasing the chocks.

3. The combination with davits, of a boat, a cover therefor, catches between the boat and cover, and connections between the catches and davits, whereby such catches are released upon the lowering of the boat.

4. The combination with davits, of a boat, a cover therefor, catches on the cover adapted to engage the boat, a connection between the catches and davits, and means for placing strain upon the said connections for releasing the catches.

5. The combination with a boat, of chocks therefor, gripes for holding the boat on the chocks, locks for the chocks controlled by the gripes, a cover, means for locking the cover to the boat, and means situated in the cover for releasing the boat from the cover and from the gripes.

[Claims 6 and 7 not printed in the Gazette.]

1,022,433. GARMENT FOR STAGE EFFECTS. ALDEN L. MCMURRAY, Sound Beach, Conn. Filed May 6, 1911. Serial No. 625,443. (Cl. 46—70.)

1. A dancer's garment of opaque material, and an electric lamp within said garment.

2. A dancer's garment of opaque material, and a plurality of electric lamps of different colors within said garment.

3. A dancer's garment of opaque material, a plurality of electric lamps of different colors within said garment, circuits for said lamps, and means for changing the connections of said circuits.

4. A dancer's garment of opaque material, a plurality of electric lamps of different colors within said garment, circuits for said lamps, and a manually operated switch arranged to cause a desired one of said lamps to be lighted.

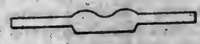
5. A dancer's garment of opaque material, a plurality of series of electric lamps within said garment, all of the lamps in one series being of one color, and the lamps



in the different series being of different colors, circuits for said lamps, and a manually operated switch arranged to cause the lamps in any desired series to be lighted.

[Claims 6 to 8 not printed in the Gazette.]

1,022,434. CRANK MANUFACTURE. THOMAS MERCER, Preston, England. Filed Mar. 17, 1910. Serial No. 550,039. (Cl. 29—6.)



The herein described method of making crank shafts consisting in forming a blank with end sections of a thickness approximately the same as the completed shaft and an intermediate section of greater thickness from which the crank is formed, said intermediate section having a recess in its upper edge between the portions thereof adapted to constitute the angles connecting the shaft sections and crank in the finished article, heating said blank and then forging it by pressure between dies so shaped that a complete crank shaft having its shaft and crank sections connected by square angles is formed at one operation.

1,022,435. AUTOMATIC STOP-MOTION FOR RIBBON-LOOMS. EMIL MILLER, North Haledon borough, N. J. Filed Sept. 28, 1911. Serial No. 651,817. (Cl. 139—51.)



1. In an automatic stop motion for ribbon looms a device having an open, bow-shaped portion which registers with the opening of the warp and through which the shuttle is adapted to pass while going through the warp shed, and which in case of a break is adapted to be engaged by the shuttle and be driven by the batten, to set in operation, and in combination with, means for stopping the loom.

2. In an automatic stop motion for ribbon looms, a double indicator having an open bow-shaped portion which registers with the opening of the warp shed to permit the passage of a shuttle therethrough, the bow-shaped portion passing through the reed, the other end of the indicator passing through a block on the breast beam and means for holding the indicator in normal position during the movement of the batten, substantially as set forth.

3. In an automatic stopping device for ribbon looms, the combination with the batten, the shuttles carried

thereon, and the breast beam of a loom, of a break indicator carried loosely by, and normally held stationary in the breast beam, having an open bow-shaped portion which registers with the warp shed and extends through the reed, in the path of the shuttle, and adapted to permit the shuttle to pass therethrough, excepting in case of a break, and adapted to be operated by the batten in case of a break, to release a stopping-arm, and such a stopping-arm, substantially as and for the purposes set forth.

4. In an automatic stopping device for ribbon looms, the combination with the batten, and the reed and shuttles carried thereon, of a driving-wheel and an adjustable ratchet-carrying sleeve, carried by said driving-wheel, a stopping arm adapted when released to engage said ratchet and means consisting of a break indicator carried loosely by and normally held stationary in the breast-beam and having an open bow-shaped portion which registers with the warp shed and extends through the reed in the path of the shuttle, adapted to permit the shuttle to pass therethrough, excepting in case of a break, and in case of a break adapted to be operated by the batten, to release said stopping arm, substantially as set forth.

1,022,436. FLAME-DEFLECTOR. ERNEST MIREAU, Toronto, Ontario, Canada. Filed Nov. 9, 1911. Serial No. 659,366. (Cl. 158—113.)



1. In a gas purifier and saver for stove burners, a grid of lattice form having a suitable binding edge, said grid being of circular shape and of uniformly increasing thickness from its center toward its edge forming a pocket.

2. In a gas purifier and saver for gas stove burners, a grid of lattice form having a suitable bounding edge, the bars of the grid being tapered from top to bottom as and for the purpose specified.

3. In a gas purifier and saver for gas stove burners, a grid of lattice form having a suitable bounding edge, the bars of the grid being tapered from top to bottom, and the bottom of the grid being in concave form as and for the purpose specified.

4. In a gas purifier and saver for gas stove burners, a grid of lattice form having a suitable bounding edge, the bars of the grid being tapered from top to bottom, and the bottom of the grid being in concave form and provided with suitable legs as and for the purpose specified.

5. The combination with a grid of lattice form having one of the openings disposed centrally, of a non-combustible and heat radiating covering for the same having the material thereof extending over the central opening and leaving openings over the remaining openings of the grid as and for the purpose specified.

[Claim 6 not printed in the Gazette.]

1,022,437. HAND-BRACE FOR GUNS. LEVI S. MYERS, Concordia, Kans. Filed June 26, 1911. Serial No. 635,329. (Cl. 42—71.)



The combination with a gun and its trigger, of a plate having one end portion curved longitudinally and extending with the chord of its curvature at right angles to the axis of the plate, said plate being disposed against the stock of the gun with said chord of curvature substantially parallel with the trigger of the gun, and means for adjustably securing the plate to the stock of the gun to permit of movement of the curved portion of the plate toward or away from the trigger.

1,022,438. CULINARY ARTICLE. CHARLES NELSON, New York, N. Y., assignor to S. Sternau & Company, Brooklyn, N. Y., a Copartnership. Filed Dec. 14, 1909. Serial No. 533,062. (Cl. 53—3.)



1. In combination, a stand having supporting legs with hooked tops, and a trough-shaped annulus carried by said legs; and a utensil having a perforated depending skirt adapted to seat in said annulus, and lugs adapted to cooperate with the hooked tops of said legs.

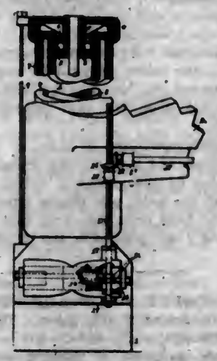
2. In combination, a stand having a trough-shaped annulus for its top; and a utensil having a skirt secured to its outside near its bottom and extending outwardly and downwardly below the bottom of said utensil and adapted to rest in said annulus.

3. In a culinary article, a utensil having a depending skirt with openings therethrough, in combination with a stand having an annulus within which the skirt rests.

4. In a culinary article, the combination of a stand having a trough shaped annulus, and a receptacle having a depending skirt, the said skirt being perforated and lying within the annulus to center the receptacle and there being an air space between the skirt and the bottom of the annulus.

5. In a culinary article, the combination with a stand comprising a trough shaped annulus and supporting legs for the same and rivets for securing the annulus and stand together, of a receptacle having a depending skirt, the said skirt resting on the rivets and centering the receptacle.

1,022,439. RADIAL DRILL. HENRY M. NORRIS, Cincinnati, Ohio, assignor to The Cincinnati Bickford Tool Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Aug. 30, 1910. Serial No. 579,781. (Cl. 77—27.)



1. In a radial drill, the combination with a column, a sleeve thereon formed with a transverse opening having its axis parallel to a tangent to the column, and a radial arm on the sleeve, of oppositely disposed clamping plugs movable in said opening in the sleeve, a shaft having two cams thereon, adjustable connections between said cams and the respective plugs, a lever on the arm, and connections therewith for actuating the shaft with the plugs into clamping engagement with the column.

2. In a radial drill, the combination of a column, a sleeve rotatively adjustable thereon, a pair of oppositely disposed clamping plugs carried by the sleeve and movable

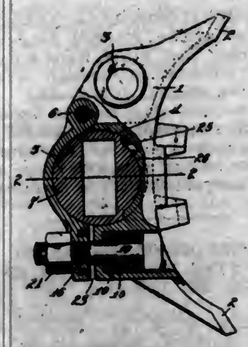
in a tangent to the column, a shaft journaled on the sleeve and provided with oppositely disposed cams, adjustable connections between said cams and said plugs, a radial arm on the sleeve, a shaft journaled thereon and provided with a hand lever, and gear connections between said shaft and the cam shaft, whereby the plugs may be actuated simultaneously into clamping engagement with the column for maintaining the sleeve in predetermined position of rotative adjustment.

3. A radial drill comprising a column, a sleeve rotatively supported concentric therewith and formed with a transverse opening, similar clamping plugs in said opening, a shaft provided with oppositely disposed eccentrics, rods adjustably connecting the plugs with the respective eccentrics, and means for turning the shaft with the plugs into clamping engagement with the column.

4. A radial drill comprising a column, a sleeve thereon, clamping plugs in the sleeve, a shaft provided with oppositely disposed eccentrics, adjustable connections from the eccentrics with the respective plugs, and means for turning the shaft for moving and maintaining the plugs into simultaneous clamping engagement with the column.

5. A radial drill comprising a column, a cap, a ball bearing arranged to support the cap on the column, a ball bearing arranged to maintain the cap concentric with the column, a sleeve secured to the cap and depending therefrom concentric with the column, a ball bearing between the lower portion of the sleeve and the column, and a radial arm on the sleeve.

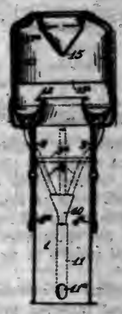
1,022,440. BRAKE-HEAD. HUBERT M. PERRY and CHARLES F. HUNTOON, Chicago, Ill. Filed Feb. 26, 1909. Serial No. 480,164. (Cl. 188—22.)



1. The combination with a brake beam, of a bearing sleeve mounted on said brake beam and provided at either side with an annular shoulder, an adjustable brake head comprising a body portion and a segmental clamping member pivotally connected to the body portion, said body portion and clamping member fitting closely around the bearing sleeve between the shoulders, the opposed bearing surface of said sleeve being smooth, a socket member formed in the lower end of the body portion of said head such socket member being square in cross section, open at the front end and closed at its rear end, an opposed socket member formed in the lower end of said pivoted clamping member, a bolt extending through the socket members having its squared head seated in the open end of the first mentioned socket member, a nut screwed to the threaded end of the bolt and a coiled expansion spring seated in said first mentioned socket member and engaging the closed end of said socket member and head of the bolt to draw the two parts of the head together.

2. The combination with a brake beam, of a bearing sleeve mounted on said brake beam, a bolt for securing the sleeve to the beam, the ends of said bolt being counter-sunk in suitable recesses formed in said sleeve, an annular shoulder at either side of the sleeve, a two-part brake head adjustably mounted in said sleeve between said annular shoulders, said brake head comprising a main body portion, and a segmental clamping member pivotally connected to the main body portion, a segmental tongue integrally connected to the bearing surface of the head and adapted to enter a similarly formed groove in the opposed bearing surface of the sleeve, said groove being of greater length than the tongue to permit limited movement of the head in the sleeve and means for clamping the head to the sleeve, comprising a socket member formed in the lower end of said main body portion open at its front end and closed at its rear end and polygonal in cross section, an opposed socket member carried by the lower part of said clamping member, a bolt extending through said socket members, the head of said bolt being polygonal in cross section, a nut threaded on the projecting end of the bolt and a coiled expansion spring seated in the socket member of the body portion between the closed inner end of the latter and the head of the bolt.

1,022,441. SPARK ARRESTER AND CONSUMER. GEORGE F. RODERICK, Medina, N. D. Filed Aug. 3, 1911. Serial No. 642,079. (Cl. 110—134.)



1. In combination with a smoke stack, an annular trough at the upper end thereof, means for elevating said trough away from but in line with the upper end of the stack at will to provide free exit for the gases between the stack and trough, pipes connecting said trough with the lower portions of the stack and means above the trough for deflecting the sparks downwardly into the same.

2. In combination with a smoke stack, an annular trough seated on the upper end thereof, extensible pipes connecting said trough with the lower part of the stack, a crown carried by said trough for deflecting the sparks downwardly into the trough, and means for raising the trough away from and in line with the upper end of the stack at will to provide a free exit from the gases.

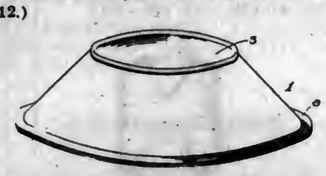
3. In combination with a smoke stack, an annular trough at the upper end thereof, a plurality of sets of pipes connected at their upper ends with the bottom of the trough, each of said sets uniting at their lower ends in a single vertically disposed pipe, lower pipes telescopingly engaging said vertically disposed pipes, said lower pipes having their lower ends connected with the stack, means carried by the trough for deflecting sparks into the trough, means for elevating the trough away from the upper end of the stack at will to provide a free exit for the gases, and guiding means for retaining said trough at all times directly above the top of the stack.

4. In combination with a smoke stack, an annular trough at the upper end thereof, means carried by said trough for deflecting sparks into the trough, extensible pipes connecting the trough with the lower part of the stack, arms depending from the trough on opposite sides of the stack, slidable connections between said arms and the stack for causing the trough in its vertical movement to be at all times directly above the top of the stack, a lever fulcrumed on a fixed support and having a forked

portion embracing the stack and pivotally connected with said arms, and means for operating said lever whereby the trough may be lifted away from the stack to provide free exit for the gases.

5. In combination with a smoke stack an annular trough seated at the upper end thereof, means carried by said trough for deflecting sparks into the trough, extensible pipes connecting the trough with lower part of the stack and means for lifting said trough at will from the top of the stack to provide free exit for the gases, arms depending from the trough on opposite sides of the stack, guiding means for said arms for causing the trough to be at all times directly above the top of the stack, a lever fulcrumed on a fixed support and having a forked portion embracing the stack and pivotally connected with said arms, said lever provided with spring pressed pivoted dog designed to engage any of a series of holes in said fixed support, and an arm, to which is connected a cord attached to the pull rope, said dog coöperating with said lever.

1,022,442. COIN-TRAY. LINNAEUS T. SAVAGE, New York, N. Y. Filed Mar. 21, 1911. Serial No. 615,961. (Cl. 133—12.)



1. A coin tray including in combination a metal base broad at the bottom and having its sides tapering inwardly to its upper edges, a dished glass coin receptacle supported on and fixed relatively to said base, said coin receptacle having a circular periphery with an annular groove formed therein, the upper edge of the base projecting into said peripheral groove to fix the coin receptacle to the base.

2. A coin tray including in combination a metal base broad at the bottom and tapering inwardly to the upper edge thereof, a dished glass coin receptacle supported on and fixed relatively to said base, the peripheral edges of said coin receptacle being engaged by the walls of said base to fix the receptacle to the base.

3. A coin tray including in combination a metal base broad at the bottom and tapering inwardly to the upper edge thereof, an integral dished glass coin receptacle supported on and fixed relatively to said base, the peripheral edges of said coin receptacle being engaged by the top edge of said base to fix said receptacle to said base.

4. A coin tray including in combination a metal base broad at the bottom and tapering inwardly to the upper edge thereof, an integral dished glass coin receptacle supported on and fixed relatively to said base, the peripheral edges of said coin receptacle being grooved, the top edge of the base engaging in said groove to fix said receptacle to said base.

5. A coin tray including in combination a hollow sheet metal base, broad at the base and tapering toward the top, a dished coin receptacle of transparent material on top and nesting within said base, the periphery of said coin receptacle being engaged by said base, whereby the receptacle is fixed to, and protected by, said base.

[Claim 6 not printed in the Gazette.]

1,022,443. BOTTLE-STOPPER. MAURICE W. SEND, Detroit, Mich. Filed June 24, 1911. Serial No. 635,184. (Cl. 215—55.)

1. A bottle stopper comprising a bottle neck closure, a tubular spout extending therethrough and having an outcurved end portion, an ear on the spout on the upper side of the bent portion, a cap having a pair of substantially parallel depending side walls embracing the upper portion of the spout and the ear on which they are pivoted above their centers of gravity, a front wall between the side walls adapted to seat itself against and seal the mouth of the spout when the closure and spout are in upright position, and weights secured on the inner faces of the side walls below the pivot centers thereof.

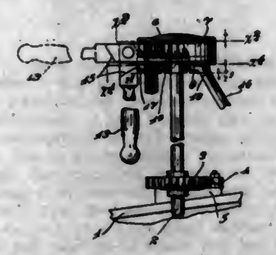


2. A bottle stopper comprising a bottle neck closure, a cap over the upper end thereof, a tubular spout secured in the cap and closure and provided with an outbent end portion, an ear on the spout on the upper side of the bent portion, a cap housing the upper portion of the spout, a pair of substantially parallel depending side walls on the cap embracing the ear on which they are pivoted and depending below the latter, a front wall uniting the side walls and bearing against the mouth of the spout as a seal when the spout is in substantially upright position, and weights on the lower end portions of the side walls.

1,022,444. 2-PHENYLQUINOLIN-4-CARBOXYLIC-ACID ESTER. LUDWIG TAUB, Elberfeld, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Dec. 16, 1911. Serial No. 666,213. (Cl. 23—24.)

The herein described ethyl ester of 2-phenylquinolin-4-carboxylic acid crystallizing from alcohol in whitish tasteless prisms melting at 61-62° C.; being soluble in organic solvents; forming salts with acids; and being a remedy against gout, substantially as described.

1,022,445. CAR-BRAKE-SETTING LEVER. AXEL W. TELLANDER, St. Paul, Minn. Filed Nov. 27, 1911. Serial No. 662,546. (Cl. 188—57.)



1. In a brake-setting mechanism, the combination with a brake rod having a ratchet wheel, of a brake lever mounted for pivotal and radial movements in respect to said rod, operative on said ratchet wheel, and provided with a pivoted handle or outer end section which, when released, disengages said lever from said ratchet wheel by a radial movement.

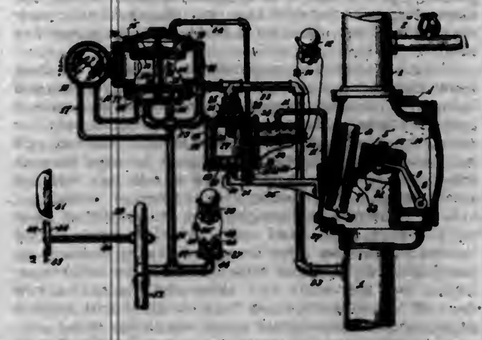
2. In a brake-setting mechanism, the combination with a brake rod provided with a ratchet wheel, of a brake lever provided with a tooth engageable with said ratchet wheel and having an oblique cam slot through which said rod is passed, and handle pivoted to the outer end of said lever, arranged to drop by gravity when released, and a part with which said lever engages when in normal position, to disengage said lever from said ratchet wheel.

3. In a brake-setting mechanism, the combination with a brake rod provided with a ratchet wheel, of a casing inclosing said ratchet wheel and pivoted on said rod, a lever projecting through one side of said casing, provided with an oblique slot through which said rod is passed and having a ratchet tooth for engagement with the teeth of said ratchet wheel, and a handle pivoted to the outer end of said lever adapted to drop by gravity when released, and normally engageable with an adjacent portion of said casing, to thereby disengage said lever from said ratchet wheel.

4. In a brake-setting mechanism, the combination with a brake rod provided with a ratchet wheel, of a casing inclosing said ratchet wheel and pivoted on said rod, a lever projecting through one side of said casing, provided with an oblique slot through which said rod is passed and having a ratchet tooth for engagement with the teeth of said ratchet wheel, a handle pivoted to the outer end of said lever adapted to drop by gravity when released, and normally engageable with an adjacent portion of said casing, to thereby disengage said lever from said ratchet wheel, a second ratchet wheel carried by said brake rod, and a retaining dog coöperating with said latter ratchet wheel, substantially as described.

5. In a brake-setting mechanism, the combination with a brake rod provided with a ratchet wheel, of a casing inclosing said ratchet wheel and pivoted on said rod, a lever projecting through one side of said casing, provided with an oblique slot through which said rod is passed and having a ratchet tooth for engagement with the teeth of said ratchet wheel, a handle pivoted to the outer end of said lever adapted to drop by gravity when released, and normally engageable with an adjacent portion of said casing, to thereby disengage said lever from said ratchet wheel, and a fixed bearing on said brake rod having stops limiting the oscillatory movements of said operating lever.

1,022,446. SPRINKLER-ALARM DEVICE. EVERETT L. THOMPSON, New York, and JOHN R. HAMILTON, Mount Kisco, N. Y., assignors to Venturi Alarm Company, Dover, N. J., a Corporation of New Jersey. Filed Feb. 6, 1906. Serial No. 299,798. (Cl. 169—22.)



1. In sprinkler alarm devices, a supply pipe connected with a distributing system, a valve casing, a check-valve angularly supported within said casing and substantially in line with said supply pipe, a jet device within said casing, a retarder comprising a float chamber, a suction chamber communicating with said float chamber through a choke passage, a float in said float chamber, a float valve operated by said float, said jet device being connected with said suction chamber to cause a diminution of pressure therein on the commencement of flow in said distributing system, a balanced valve having an exhaust chamber, a pressure chamber and an intermediate neutral chamber, a pressure pipe connecting said supply pipe and the pressure chambers of said balanced valve and retarder, an alarm and an alarm pipe connecting said alarm with said neutral chamber.

2. In sprinkler alarm devices, a supply pipe, a distributing system connected therewith, means to maintain a difference of pressure in said pipe on the commencement of flow therethrough, a jet device comprising a contracting passage having a direct open connection with said supply pipe adjacent said means, a retarder comprising a float chamber, a suction chamber connected therewith through a choke passage, a float having a float valve connected therewith in said float chamber, a suction pipe connecting said suction chamber with said jet device, a balanced valve comprising an exhaust chamber, a pressure chamber and an intermediate neutral chamber, an exhaust pipe connecting said exhaust chamber with said float chamber, an alarm and an alarm pipe connecting said alarm with said neutral chamber and a pressure pipe connecting said supply pipe with said pressure chamber and with said retarder.

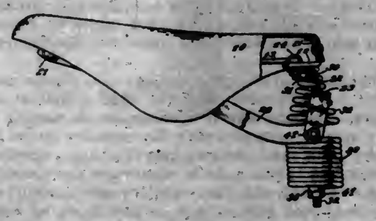
3. In sprinkler alarm devices, a supply pipe, a distributing system connected therewith, means to maintain a difference of pressure in said pipe on the commencement of flow therethrough, a jet device having direct open connection with said supply pipe adjacent said means, a retarder comprising a float chamber, an exhaust chamber connected with said float chamber through a choke passage, a float valve in said chamber, a balanced valve having an exhaust chamber connected with said float chamber, a pressure chamber connected with said float chamber and with said supply pipe and a neutral chamber connected with an alarm pipe and an alarm operated from said alarm pipe.

4. In sprinkler alarm devices, a jet device to be connected to a supply pipe, a retarder comprising a float chamber, communicating with a suction passage of said jet device through a choke passage, a float, and float valve in said float chamber, a pressure pipe to be connected with a supply pipe and with said float chamber, an alarm, and means to operate said alarm by the reduction in pressure in said float chamber.

5. In sprinkler alarm devices, a jet device to be connected with a supply pipe, a retarder comprising a float chamber, a float within said chamber, a float valve operated by said float, a suction pipe, communicating with said float chamber and said jet device, an alarm, and means to operate said alarm from the reduction in pressure in said float chamber.

[Claims 6 to 33 not printed in the Gazette.]

1,022,447. BICYCLE-SADDLE. DAVID S. TROXEL, Elyria, Ohio. Filed Dec. 14, 1911. Serial No. 665,603. (Cl. 208—15.)



1. In a device of the character described, the combination, with a seat and support, of two interposed springs, one a compression spring, the other a tension spring, and the two independently connected with the support and both serving to resist downward movement of the saddle.

2. In a bicycle saddle, the combination, with a seat and saddle support, of two pairs of interposed springs, each pair comprising both a compression spring and a tension spring independently connected with the saddle support.

3. In a bicycle saddle, the combination, with a saddle seat and saddle support, of a pair of depending rods connected with the seat, two pairs of springs surrounding said rods respectively, each pair having a tension spring connected at its lower end with the rod and at its upper end with the support, and a compression spring connected at its lower end with the support and at its upper end with the rod.

4. In a bicycle saddle, the combination, with a seat and support, of a yoke pivotally connected with the seat having two depending portions, two springs connected at their lower ends with the lower ends of such depending portions and at their upper ends with the support, and two additional springs connected at their lower ends with the support and having their upper ends engageable by shoulders on the yoke.

5. In a bicycle saddle, the combination of a seat, a support having a pair of rearwardly extending bars, a brace connecting the rear ends of said bars, a pair of rods depending from the seat on opposite sides of the rear end of the support, and two pairs of springs, each pair surrounding one of the rods and consisting of a close coiled helical tension spring connected at its lower end with the rod and at its upper end with the support and an upper spring consisting of an open wound conical compression spring connected at its lower end with the support and with its upper end closely surrounding the rod.

[Claims 6 to 9 not printed in the Gazette.]

1,022,448. FRAME CONSTRUCTION. FRANK B. UPTON, Chattanooga, Tenn., assignor of one-fourth to William E. Heron, Chattanooga, Tenn. Filed June 15, 1910. Serial No. 566,905. (Cl. 22—116.)



1. The combination with a tubular metal frame member having an opening in its wall at its point of connection with a lateral frame member, of a collapsible and indestructible mold member insertible and removable in said tube and having a recess therein approximately coincident with the opening in the wall of said tube, substantially as and for the purpose set forth.

2. The combination with a tubular metal frame member having an opening in its wall at its point of connection with a lateral frame member, of an indestructible mold member insertible and removable in said tube, said mold member having a portion which is a counterpart of the inside of the tube adjacent to said opening therein, and said mold member having a recess approximately coincident with said opening, and a collapsible device for releasably holding said mold member in contact with the wall of said tube.

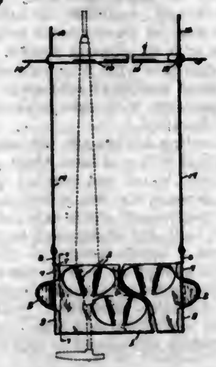
3. The combination with a tubular metal frame member adapted for connection with the ends of lateral frame members, said tube having openings in its wall or walls at its places of connection with the respective lateral frame members, of a mold member insertible and removable in said tube and having a series of recesses therein approximately coincident with the respective openings in the wall or walls of said tube, and a collapsible device adapted to hold said mold member in operative position in said tube, substantially as and for the purposes specified.

4. The combination with a tubular metal frame member having an opening in its wall at a point of connection with a lateral frame member, of a collapsible mold member having a portion which is a counterpart of the interior of said tube adjacent to said opening therein, and said mold member having a recess in said counterpart portion approximately coincident with the opening in the wall of said tube.

5. In a metal frame construction, the combination with a tubular member having an opening in its wall and a lateral member to be secured to said tubular member at the place where the opening therein is located, of a mold box detachably secured to said tubular member and to said lateral member so as to position said members with respect to each other and to form a mold external of said members, a removable member inserted in said tubular member and having a mold pattern adapted to cover the opening in said tubular member so as to coöperate with said external mold to complete the mold for an interlocking cast metal conection between said tubular member and said lateral member, and releasable means for holding said removable member in engagement with said tubular member.

[Claims 6 to 8 not printed in the Gazette.]

1,022,449. UMBRELLA-RACK. FRANK F. WARD, Schoolcraft, Mich. Filed June 15, 1910. Serial No. 567,059. (Cl. 45—33.)



1. An umbrella rack comprising a bar formed of sheet metal folded upon itself and having integrally-formed holders on the sides thereof, each consisting of a pair of opposed upwardly-diverging ears, end pieces for said bar having their edges folded over the sides of the bar, said end pieces being provided with tongues arranged through suitable slots in the top and sides of said bar, said end pieces being provided with integrally-formed holders, and suspending rods for said bar, the tongues at the upper edges of said end pieces being folded over the suspending rods.

2. An umbrella rack comprising a bar formed of sheet metal folded upon itself and having integrally-formed holders on the sides thereof, each consisting of a pair of opposed upwardly-diverging ears, end pieces for said bar having their edges folded over the sides of the bar, said end pieces being provided with tongues arranged through suitable slots in the top and sides of said bar, said end pieces being provided with integrally-formed holders.

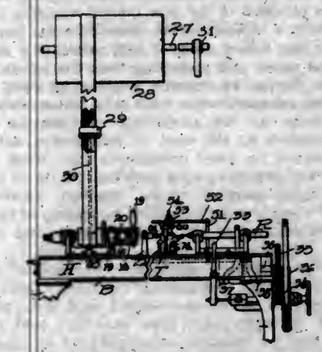
3. An umbrella rack comprising a bar formed of sheet metal folded upon itself and having integrally-formed holders on the sides thereof, each comprising a pair of opposed upwardly-diverging ears, end pieces for said bar engaging and supporting said sides, and suspending rods for said bar, said end pieces being provided with tongues at their upper edges engaging said suspending bars.

4. An umbrella rack comprising a bar formed of sheet metal folded upon itself and having integrally formed holders on the sides thereof, each comprising a pair of opposed upwardly diverging ears, and end pieces for said bar engaging and supporting said sides, said end pieces being provided with suspending means.

5. An umbrella rack comprising a channel shaped bar opening upwardly, and holders formed of wires inserted through both arms of the channel bar and looped, the ends of the wires being inserted through the adjacent arms of the channel and secured to each other within the channel.

[Claim 6 not printed in the Gazette.]

1,022,450. SPINDLE-TURNING LATHE. CHARLES H. WAYMOUTH, Fitchburg, Mass. Filed Oct. 20, 1910. Serial No. 588,040. (Cl. 142—44.)



1. In a lathe for turning spindles and the like, the combination with means for constantly rotating the work and means for intermittently feeding it forward, of a turning tool having a curved cutting edge, and means connected with said feeding means for moving the turning tool along with the work and in contact therewith as the work is fed forward so as to present successively different portions of its edge to the corresponding portions of the work and turn down the surface thereof and for returning the turning tool to starting position when the feed is inactive.

2. In a lathe, the combination with means for holding the stock to be operated upon, and means for feeding the work forward intermittently, means for stopping the feed, of a turning tool mounted to oscillate on an axis transverse to the axis of the work, and means for swinging said turning tool forward on its axis with the work as the work progresses so as to bring the different parts of its surface progressively in contact with the work, and for automatically reversing the motion of the turning tool when the end of an article and of the tool is reached and returning it to starting position during the pause in the feed ready to produce the next article.

3. In a turning lathe, the combination of means for supporting the work, an oscillatable turning knife, means for oscillating said knife back and forth on its axis, and means for feeding the work forward with the cutting knife as it oscillates in one direction, to present successively different portions of its edge to the corresponding portions of the work and for discontinuing the feed of the work while the turning knife oscillates back to starting position.

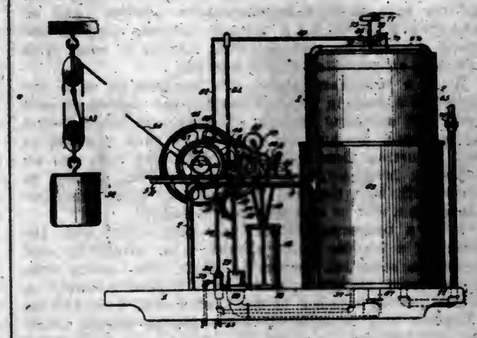
4. In a turning lathe, the combination with a support for the work, means for intermittently feeding the work forward with its front end unsupported and for simultaneously rotating the work, of a segmental turning knife mounted to oscillate on its axis in position to engage the work, and means for swinging said turning knife forward as the work moves forward and at the same speed, whereby all portions of the edge of the knife will successively engage the work and swinging it backward when the feed of the work is discontinued.

5. In a machine of the character described, the combination of means for supporting the work and feeding it forward horizontally, and intermittently, a transverse shaft adjacent to the work, a segmental turning knife carried by said shaft, and means for oscillating said turning knife in time with the forward feed and rests of the work.

[Claims 6 to 16 not printed in the Gazette.]

1,022,451. CARBURETER. JAMES E. WHITACRE, Rockford, Ill. Filed Jan. 23, 1909. Serial No. 473,927. (Cl. 48—145.)

1. In a carbureter, the combination of a carbureting chamber, a pump supplying air to the carbureting chamber, a pump supplying gasolene to the carbureting chamber, valves for the pumps and a supplemental valve for the air supplying mechanism.



2. In a carbureter, the combination of a carbureting chamber, a pump supplying air to the chamber, a pump supplying gasolene to the chamber, a supplemental valve for the air supply positively held closed while the air pump is not in action.

3. In a carbureter, the combination of a carbureting chamber, a pump supplying air to the chamber, a pump supplying gasolene to the chamber, a supplemental valve for the air supply, and means operated by the closed end of the chamber for releasing and stopping the action of the pumps and for opening and closing the supplemental valve.

4. In a carbureter, the combination of a carbureting chamber, a pump supplying air to the chamber, a pump supplying gasolene to the chamber, a supplemental valve for the air supply, a dog and connections between the chamber and dog for allowing the dog to stop the actions of the pumps and close the valve when the chamber has reached a predetermined upward position.

5. In a carbureter, the combination of a carbureting chamber, a pump supplying air to the chamber, a pump supplying gasolene to the chamber, a supplemental valve for the air supply, a dog holding the pumps inactive and connections for releasing the dog when the chamber has reached a predetermined downward position.

1,022,452. TEMPORARY BINDER. GEORGE P. WIGGINTON, Kalamazoo, Mich. Filed Oct. 24, 1911. Serial No. 656,468. (Cl. 129—41.)



1. In a temporary binder, the combination with the cover, of a binding strip; a ratchet bar carried by said cover; said bar being toothed on both edges; an adjusting member to which said binding strip is connected, mounted on said bar; a pawl mounted on said adjusting member to conct with the teeth on one edge of said bar; means for holding said pawl in an inoperative position; and an adjusting lever having a toothed engaging portion, pivotally mounted on said adjusting member to coact with the teeth on the other edge of said bar, the pivot of said lever being arranged in a rearwardly inclined slot in said adjusting member.

2. In a temporary binder, the combination with the cover, of a binding strip; a ratchet bar carried by said

cover, said bar being toothed on both edges; an adjusting member to which said binding strip is connected, mounted on said bar; a pawl mounted on said adjusting member to coact with the teeth on one edge of said bar; means for holding said pawl in an inoperative position; and an adjusting lever having a toothed engaging portion, pivotally mounted on said adjusting member to coact with the teeth on the other edge of said bar.

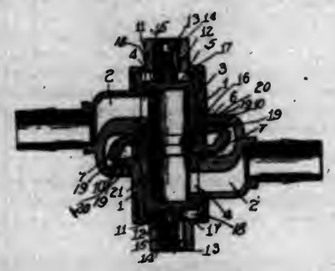
3. In a temporary binder, the combination with the cover, of a binding strip; a ratchet bar carried by said cover; an adjusting member to which said binding strip is connected, mounted on said bar; a pawl mounted on said adjusting member to coact with said bar; and an adjusting lever mounted on said adjusting member to coact with said bar, the pivot of said lever being arranged in a slot in said adjusting member.

4. In a temporary binder, the combination with the cover, of a binding strip; a ratchet bar carried by said cover; an adjusting member to which said binding strip is connected, mounted on said bar; a pawl mounted on said adjusting member to coact with said bar; and an adjusting lever mounted on said adjusting member to coact with said bar.

5. In a temporary binder, the combination with the cover, of a binding strip; a ratchet bar carried by said cover; an adjusting member to which said binding strip is connected, mounted on said bar; means for securing said adjusting member in its adjusted position on said bar; and an adjusting lever mounted on said adjusting member to coact with said bar, the pivot of said lever being arranged in a rearwardly inclined slot in said adjusting member.

[Claims 6 to 23 not printed in the Gazette.]

1,022,453. AIR-BRAKE-HOSE COUPLING. OLIVER P. WILHELM, Michigan City, Ind. Filed Sept. 7, 1909. Serial No. 516,489. (Cl. 137—30.)



1. A hose coupling, comprising two opposed members each equipped with a segmental lip on the body thereof and a segmental wing overhanging said body at a diametrically opposite point from said lip, said lips and wings of opposed members being adapted to engage each other to maintain said members coupled, there being a tapered recess in at least one of said members of greater diameter at its mouth and communicating between its ends with the hollow stem of said member for establishing communication between the same and said other member, a tapered valve in the said recessed member adapted to control the passage of fluid therethrough and projecting at one end from the face thereof opposing the other member, a segmental flange on the projecting end of said valve disposed to pass underneath the wing of its containing member, and projections at the ends of said flange adapted to receive the lip of the other member therebetween, whereby relative rotary movement of said coupling members is transmitted to said valve to open and close the same.

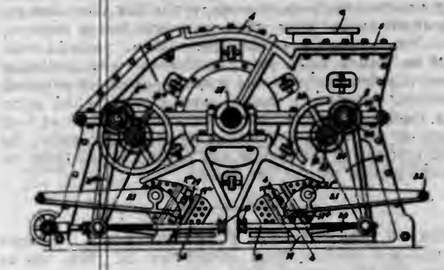
2. A hose coupling comprising two opposed members each equipped with a segmental lip on the body thereof and a segmental wing overhanging said body at a diametrically opposite point from said lip, said lips and wings of opposed members being adapted to engage each other to maintain said members coupled, at least one of said members being provided in the face thereof opposing the other member with a tapered recess communicating between its ends with the hollow stem of said member, a cup valve fitting said recess and projecting from the mouth thereof, said valve having an opening between its ends adapted to establish communication with said hollow stem, a segmental flange on the projecting end portion of said valve, shoulders at the ends of said flange, said flange being adapted to pass underneath the wing of said member when turned to open position, the lip of the other member being adapted to be received between said shoulders whereby relative rotary movement of said members is transmitted to said valve to open and close the same.

3. A hose coupling comprising two opposed members each equipped with a segmental lip on the body thereof and a segmental wing overhanging said body at a diametrically opposite point from said lip. said lips and wings of opposed members being adapted to engage each other to maintain said members coupled, at least one of said members being provided in the face thereof opposing the other with a tapered recess communicating between its ends with the hollow stem of said member, a cross bar spanning the bottom of said recess, a cup valve fitting said recess and projecting therefrom at one end, said projecting end thereof being open and the other end thereof closed, a valve stem on the closed end of said valve adapted to pass through an opening in said cross bar, a spring engaging said valve stem to normally draw said valve into said recess, a segmental flange on the projecting end of said valve, and projections at the ends of said flange between which the lip of the other member is adapted to be received. whereby relative rotary movement of said members is transmitted to said valve to open and close the same.

4. A hose coupling comprising two opposed members each equipped with a segmental lip on the body thereof and a segmental wing overhanging said body at a diametrically opposite point from said lip, said lips and wings of opposed members being adapted to engage each other to maintain said members coupled, at least one of said members being provided in the face thereof opposing the other with a tapered recess communicating between its ends with the hollow stem of said member, a cross bar spanning the bottom of said recess, a cup valve fitting said recess and projecting therefrom at one end, said projecting end thereof being open and the other end thereof closed, a valve stem on the closed end of said valve adapted to pass through an opening in said cross bar, a spring engaging said valve stem to normally draw said valve into said recess, a segmental flange on the projecting end of said valve, and projections at the ends of said flange between which the lip of the other member is adapted to be received and fit snugly between said projections and engage the same, whereby relative rotary movement of the said members is transmitted without loss to said valve to open and close the same.

[Claims 6 to 8 not printed in the Gazette.]

1,022,454. PULVERIZER. MILTON F. WILLIAMS and EDWARD H. FRICKEY, St. Louis, Mo., assignors to Williams Patent Crusher & Pulverizer Company, St. Louis, Mo., a Corporation of Missouri. Filed June 15, 1910. Serial No. 567,032. (Cl. 83—11.)



1. In a machine of the character described, the combination of a pivotally mounted breaker plate, a grinding section suspended therefrom adapted to be adjusted therewith, and also having a movement independent of said breaker plate, and means for adjusting the lower end of said grinding section.

2. In a machine of the character described, the combination of a pivotally mounted breaker plate, a cage section pivotally mounted thereon, a catch for holding said cage section in position, and means for moving said catch to release the cage section whereby material may be discharged from the machine.

3. In a machine of the character described, the combination of a pivotally mounted breaker plate, a pivotally mounted cage section suspended therefrom, and means for simultaneously adjusting said breaker plate, the end of the cage section connected thereto, and the lower end of the cage section remote therefrom.

4. In a machine of the character described, the combination of a pivotally mounted breaker plate, a cage section carried thereby, a lever for adjusting said breaker plate and adjacent end of said cage section, and a wedge operated by said lever for adjusting the opposite end of said cage section.

5. In a machine of the character described, the combination of hammers, a pivotally mounted breaker plate, a cage section pivotally connected to the breaker plate, levers arranged on opposite sides of the breaker plate, and connections between said levers and breaker plate for adjusting the lower end of said plate and the upper end of said cage section.

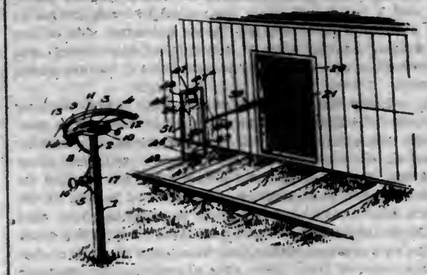
[Claims 6 to 20 not printed in the Gazette.]

1,022,455. MAIL-DELIVERY APPARATUS. HOWARD O. WILSON, Ainsworth, Nebr. Filed Dec. 1, 1911. Serial No. 663,274. (Cl. 105—231.)

1. In a mail delivery apparatus, the combination with a rotary circular head, of an arc-shaped arm separated from said head by a space adapted to receive the mail bag and adaptable to be positioned on either side of said head.

2. In a mail delivery apparatus, a catcher having a rotary stem, a head hinged thereto so that it can be disposed either horizontally or vertically and provided with an opening adapted to receive the end of the stem when in horizontal position, means for locking the head to said stem, an arc-shaped guard secured to the stem and passing through the head, and a catch for securing said head to said guard.

3. In a mail delivery apparatus, a crane having a stem mounted to swing outwardly from the car and also mounted for rotation on its own longitudinal axis, whereby the crane may be disposed vertically or horizontally and turned to different positions.

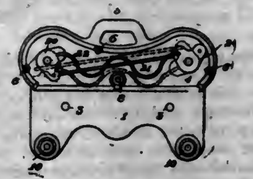


4. In a mail delivery apparatus, a crane having a stem mounted to swing outwardly from the car and also mounted for rotation on its own longitudinal axis, whereby the crane may be disposed vertically or horizontally and turned to different positions, and means for locking the crane in either horizontal or vertical position.

5. In a mail delivery apparatus, a crane having a stem mounted to swing outwardly from the car and also mounted for rotation on its own longitudinal axis, whereby the crane may be disposed vertically or horizontally and turned to different positions, said stem also being slidable in the direction of its length.

[Claims 6 to 12 not printed in the Gazette.]

1,022,456. PAPER-FILE. PHILIP H. YAWMAN, Rochester, N. Y., assignor to Yawman & Erbe Manufacturing Company, Rochester, N. Y., a Corporation of New York. Filed Nov. 25, 1907. Serial No. 403,705. (Cl. 129—10.)



1. In a paper file, the combination with a base member and an impaling post mounted thereon having a lateral opening at its upper end and an aperture arranged opposite said opening, of an arch rotatably mounted on the base to move upon an axis parallel to the post and having its free end arranged to engage within the opening in the latter, said outer end being provided with a lateral projection removed from the extremity thereof and coöperating with the aperture in the post, the extremity of the arch beyond the projection having a lateral bearing against the post.

2. In a paper file, the combination with a base member and an impaling post mounted thereon provided with a lateral opening near its upper end the upper edges of the walls of said opening being terminated in a plane oblique to the post to form an impaling point, of an arch rotatably mounted on the base to move upon an axis parallel to the post into engagement at its free end within the opening in the latter, and provided with a square overhanging shoulder adjacent said end engaging over the impaling point of the post.

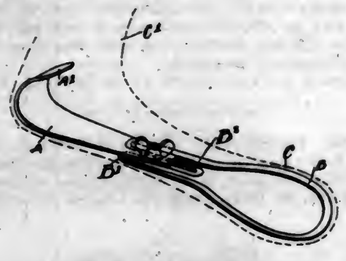
3. In a paper file, the combination with a base member and an impaling post mounted thereon having a lateral opening at its upper end, of an arch rotatably mounted on the base to move upon an axis parallel to the post and having its free end reduced to constitute an eccentric projection engaging within the opening in the latter, and forming a shoulder covering the upper end of the wall of the opening.

4. In a paper file, the combination with a base member and a pair of impaling posts mounted thereon, of a pair of arches rotatably mounted on the base to coöperate with the impaling posts and connected for simultaneous movement, and a tension member connected to both arches at points both of which normally lie on the same side of the plane defined by the axes of rotation of the arches and are removed or spaced from the said axes to rotate about the latter.

5. In a paper file, the combination with a base member and a pair of impaling posts mounted thereon, of a pair of arches connected for simultaneous movement, rotatably mounted on the base to coöperate with the impaling posts and having their movement in one direction limited by engagement with said posts, a plate secured to one of the arches, a stop on the base adapted to be engaged by said plate for limiting the movements of the arches in the other direction and means pivotally interlocked with both arches at points removed from their axes of rotation for exerting a tension thereon.

[Claim 6 not printed in the Gazette.]

1,022,457. STOCKING-STRETCHING DEVICE. ISAAC EDWARD YORK, Waterford, Ontario, Canada. Filed Oct. 5, 1911. Serial No. 652,992. (Cl. 223—19.)



1. A stocking stretching device comprising two members designed to fit the heel and foot portion of the stocking respectively, one of said parts comprising a substantially flat plate having a contracted forward end and a curved rear end and the other member comprising a loop having a contracted inner end, said inner end having the side members thereof bent backward upon themselves to form a subsidiary loop extending between the main sides of the loop a substantial distance to form a longitudinal slot, and means on said plate engaging said slot to clamp the plate and loop together.

2. A stocking stretching device comprising a plate and loop member having a contracted inner end, the contracted sides of the loop being turned backwardly of themselves so as to form a subsidiary slotted loop located between and parallel with the main sides of the loop, a clip designed to extend over suitable portions of the loop having a threaded stem extending through the aforesaid plate and a butterfly nut threaded onto the stem, as and for the purpose specified.

1,022,458. SHOE. DE ROY AUSTIN, Omaha, Nebr. Filed May 31, 1911. Serial No. 630,483. (Cl. 36—44.)



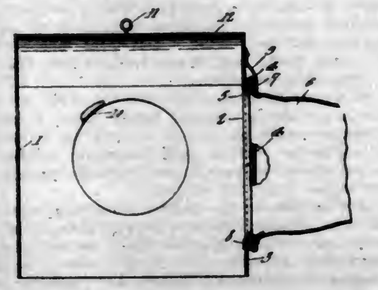
1. In a shoe, an upper, a welt, an insole comprising a piece of sole leather having a down-turned marginal lip and a sheet of felt disposed within said marginal lip, and an inseam passing through and securing together the felt sheet, the marginal lip, the upper, and the welt.

2. In a shoe, an upper, a welt, a sole leather insole, a felt insole disposed below the leather insole, and an inseam passing through the marginal portions of the felt insole and the leather insole, and through the upper and the welt.

3. In a shoe; an insole comprising a sheet of sole leather having the margin of the toe and shank portions thereof split to form two lips, and a sheet of felt having the margins thereof embraced by one of said lips; an upper; a welt; and an inseam passing through and securing together the welt, the upper, the felt sheet and the lip of the leather sheet which embraces the felt sheet.

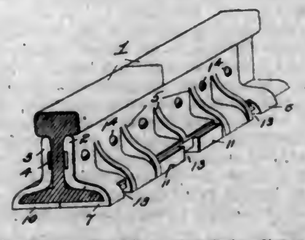
4. In a shoe, the combination with an upper, a welt, and an outsole, of an insole having an upper portion of relatively firm material and a lower portion of relatively resilient material, an inseam passing through and securing together the welt, the upper and the edges of both parts of the insole, and means for securing together the heel portions of the outsole and upper and the lower resilient portion only of the insole.

1,022,459. FRESH-AIR SLEEPING-HOOD. ALBERT BENNETT, Seattle, Wash. Filed Nov. 22, 1910. Serial No. 593,703. (Cl. 98—31.)



A device of the class described comprising a hood having an opening in one side; a ring of larger diameter than the opening, secured to the side of the hood in spaced relation thereto, that portion of the hood which is located between the ring and the opening, defining a flange in the hood; a tubular member; a ring secured to one end of the tubular member and adapted to fit inside of the first named ring and to abut against the flange, the ring which is carried by the tubular member having an angular finger adapted to hook over the flange, and a latch pivoted to the hood, the latch being movable to overhang both rings, and to coöperate with the finger in maintaining the tubular member engaged with the hood.

1,022,460. RAIL-JOINT. JOHN BERLIEN, St. Louis, Mo. Filed July 24, 1911. Serial No. 640,135. (Cl. 239—6.)



1. A rail joint comprising oppositely disposed splice plates one of said plates having two interlocking members extending across underneath the base flange of the rail, the opposite plate having three interlocking members, two of which extend half way across underneath said base flange and engage shoulders formed in the members of the first mentioned plate, the third member extending across underneath said base flange, said member having shoulders which interlock with shoulders formed in the members of the first mentioned plate.

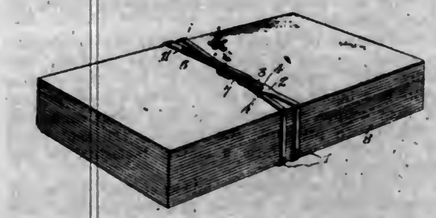
2. A rail joint comprising oppositely disposed splice plates provided with reinforcing ribs, one of said plates having two interlocking members extending partially across underneath the base flange of the rail to engage shoulders formed in the outer edges of the interlocking members of the other plate, and a third interlocking member extending across underneath said base flange to engage shoulders formed in the inner edges of the first mentioned interlocking members.

1,022,461. GARMENT. WILLIAM E. BRAY, Pryor Creek, Okla. Filed Apr. 3, 1911. Serial No. 618,716. (Cl. 2—135.)



As an article of manufacture, a skirt shield made up of separate pieces having curved edges secured together and forming a fold extending in the direction of the length of the shield, said pieces forming a longitudinal skirt receiving pocket open at its ends, means for detachably securing one longitudinal edge of the shield to the inner face of a skirt, means upon the other longitudinal edge of the shield for gathering the shield about the knees of the wearer, a tongue extending from said edge and between the gathering means, and a stiffening device secured to and extending transversely of the middle portion of the shield and below the tongue.

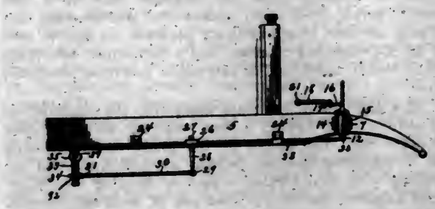
1,022,462. BUNDLE-TYING DEVICE. PARLEY K. BRINK, Liverpool, Pa. Filed Apr. 29, 1911. Serial No. 624,261. (Cl. 24—17.)



1. In a fastening device of the kind described, a thin narrow metallic strip formed with an enlarged broadened portion adjacent to one end and having a transverse raised bridging portion with alined slots, and a reduced portion projecting from the end of said broadened portion and bent over upon the latter and extending beneath and through said bridging portion, the other end of the strip being movable through said bridging portion and bent over the same and adapted to be detachably secured to the fastening strip.

2. In a fastening device of the kind described, a thin narrow metallic strip of a length to be wound about a package and formed at one end with a broadened portion and with a raised bridging portion having alined slots and with an opening adjacent to said bridging portion and a reduced narrow projection extending from the end of the broadened portion and bent over upon the same and extending through the bridging portion and secured at its end in the opening in said broadened portion, the other end of the strip having a hole adjacent to its end, said end overlapping the reduced portion at the other end of the strip and extending from said bridging portion and bent over the same and detachably engaging a hole adjacent the end of the strip.

1,022,463. AUTOMOBILE LAMP-BRACKET. JOHN E. BROWNE, Brookline, and HENRY HERBERT COLSON, Everett, Mass. Filed May 1, 1911. Serial No. 624,275. (Cl. 240—62.)



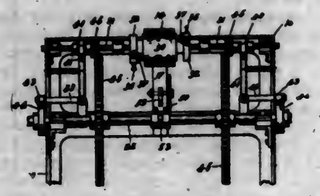
1. In a device of the character described, the combination with a movably mounted lamp bracket, of connections between the lamp bracket and the steering mechanism of an automobile, whereby said lamp bracket is moved in unison with said steering mechanism, and means for adjusting the degree of such movement, said adjusting means when moved to one position, substantially neutralizing such movement while still forming a positive connection between the steering mechanism and the lamp brackets.

2. In a device of the character described, the combination with a pair of lamp brackets mounted for rotation, of a connecting member between said lamp brackets, a longitudinally extending slidably mounted rod connected to one of said lamp brackets, an arm depending from and adjustable on said slidably mounted rod, a swinging arm moving in unison with the steering mechanism, a rod carried by said swinging arm, and a connection between the first named arm and said rod.

3. In a device of the character described, the combination with a pair of lamp brackets mounted for rotation, of a connecting member between said lamp brackets, a longitudinally extending slidably mounted rod connected to one of said lamp brackets, an arm depending from and adjustable on said slidably mounted rod, a swinging arm moving in unison with the steering mechanism, a rod carried by said swinging arm, and a connection between the first named arm and said rod, said connection comprising a clip slidably mounted upon said rod.

4. In a device of the character described, the combination with a pair of lamp brackets mounted for rotation, of a connecting member between said lamp brackets, a slidably mounted rod connected to one of said lamp brackets, an arm connected to said slidably mounted rod, a swinging arm moving in unison with the steering mechanism, a rod carried by said swinging arm, and a connection between the first named arm and said rod, said connection comprising a clip slidably mounted upon said rod, said rod being offset from and extending longitudinally of said swinging arm and said clip being movable upon said rod to a point where it is centered with relation to the axis from which said swinging arm swings.

1,022,464. CAN-FLANGING MACHINE. WILLIAM F. BUTLER, Indianapolis, Ind. Filed Oct. 5, 1908. Serial No. 456,260. (Cl. 153—29.)



1. In a machine of the class described the combination of a rotary head having a can receiving socket of less dimension than the length of the blank to be operated upon, a clamping member carried by said head and cooperating with said socket, means arranged in the path of movement of said clamping member for holding the same in clamping position a pair of flanging means arranged adjacent the rotary head one at each end thereof, means for moving said flanging means into and out of coöperative relation with the opposite ends of a can clamped within the head, means for withdrawing the clamping member from clamping position, an ejector carried by the clamping member, and a can chute delivering to said rotary head, and a can chute receiving from the ejector.

2. In a machine of the class described, the combination of a rotary head having a can receiving socket of less dimension than the length of the blank to be operated upon, a clamping member carried by said head and cooperating with said socket, a pair of flanging means arranged adjacent the rotary head one at each end thereof, means for moving said flanging means into and out of coöperative relation with the opposite ends of a can clamped within the head, a can chute delivering to said rotary head, an ejector carried by said clamping member, and a can chute receiving from the ejector.

3. In a machine of the class described a horizontal shaft, a head carried by said shaft and provided with a horizontal can pocket, means for rotating said shaft and head, a clamping head having a complementary can pocket pivoted upon the first mentioned head upon a horizontal axis at the rear edge of the can pocket of said first mentioned head, whereby the said clamping head will, when left free, hang away from the can pocket of the first head, a can chute delivering to one of the can pockets when the clamping head is extended from the first mentioned head, means for positioning the can endwise, means for temporarily holding the clamping head in clamping position during a short portion of the rotation of the shaft, a rotary flanging head arranged adjacent the position where the clamping head is held in clamping position, means for bringing said flanging head into flange-forming engagement with a can clamped in the can pockets, and a can chute leading from the discharging position of the clamping head.

4. In a machine of the class described a horizontal shaft, a head carried by said shaft and provided with a horizontal can pocket, means for rotating said shaft and head, a clamping head having a complementary can pocket pivoted upon the first mentioned head upon a horizontal axis at the rear edge of the can pocket of said first mentioned head, whereby the said clamping head will, when left free, hang away from the can pocket of the first head, a can chute delivering to one of the can pockets when the clamping head is extended from the first mentioned head, means for positioning the can endwise, means for temporarily holding the clamping head in clamping position during a short portion of the rotation of the shaft, a pair of rotary flanging heads arranged adjacent the position where the clamping head is held in clamping position, means for bringing said flanging heads into flange-forming engagement with a can clamped in the can pockets, an ejector carried by the clamping head, means for intermittently operating said ejector when the clamping head is extended from the first mentioned head, and a can chute leading from the discharging position of the clamping head.

5. In a machine of the class described a horizontal shaft, a head carried by said shaft and provided with a horizontal can pocket, means for rotating said shaft and head, a clamping head having a complementary can pocket pivoted upon the first mentioned head upon a horizontal axis at the rear edge of the can pocket of said first mentioned head, whereby the said clamping head will, when left free, hang away from the can pocket of the first head, a can chute delivering to one of the can pockets when the clamping head is extending from the first mentioned head, means for positioning the can endwise, means for temporarily holding the clamping head in clamping position during a short portion of the rotation of the shaft, a rotary flanging head arranged adjacent the position where the clamping head is held in clamping position, means for bringing said flanging head into flange-forming engagement with a can clamped in the can pockets, an ejector carried by the clamping head, means for intermittently operating said ejector when the clamping head is extended from the first mentioned head, and a can chute leading from the discharging position of the clamping head.

[Claim 6 not printed in the Gazette.]

1,022,465. GRAPHITE METAL AND METHOD OF PRODUCING IT. RAYMOND T. COLE, South Portland, Me. Filed Nov. 9, 1910. Serial No. 591,435. (Cl. 64—10.)

1. The method of forming a lubricant bearing-composition, which consists in coating graphite particles individually with a metal having a relatively high melting point, and distributing the coated graphite in a liquid mass of metal having a relatively low melting point, and allowing the said liquid metal to solidify and form a matrix inclosing the distributed graphite particles.

2. The method of forming a lubricant bearing-composition, which consists in coating graphite particles individually with a metal having a relatively high melting point, and distributing the coated graphite in a liquid mass of metal having a relatively low melting poiot, subjecting the fluid metal containing the graphite to pressure, and allowing the said liquid metal to solidify and form a matrix inclosing the distributed graphite particles.

3. The method of forming a lubricant bearing-composition, which consists in coating graphite particles individually with copper, distributing the copper-coated graphite in a liquid mass of metal having a lower melting point than copper, and allowing the said liquid metal to solidify and form a matrix inclosing the distributed graphite particles.

4. The method of forming a lubricant bearing-composition, which consists in coating graphite particles individually with copper, distributing the copper-coated graphite in a liquid mass of metal having a lower melting point than copper, subjecting the fluid metal containing the graphite to pressure, and allowing the said liquid metal to solidify and form a matrix inclosing the distributed graphite particles.

5. The method of forming a lubricant bearing-composition, which consists in coating graphite particles individually with copper, distributing the copper-coated graphite particles in liquid metal having a lower melting point than copper with which the copper alloys, and thereafter allowing the liquid metal to solidify and form a matrix inclosing the distributed graphite particles.

[Claims 6 to 8 not printed in the Gazette.]

1,022,466. COMPOUND FOR REMOVING CARBON FROM ENGINE-CYLINDERS. DANIEL E. CRIPE, Hillsburg, Ind. Filed Sept. 25, 1911. Serial No. 651,289. (Cl. 87—5.)

1. A compound for removing carbon from internal combustion engines consisting of salt, pulverized Cinchona bark, saltpeter, powdered zinc, and carbolic acid, in substantially the portions described.

2. A compound for removing carbon from internal combustion engines consisting of one pound of table or rock salt, one-half pound of saltpeter, one-fourth pound of pulverized Cinchona bark, one-half ounce of powdered zinc and one-fourth ounce of carbolic acid, all the ingredients, excepting the carbolic acid, being ground or pulverized and mixed together.

1,022,467. PORTABLE RAILWAY CONSTRUCTION. ALLAN STERLING CUNNINGHAM, Oskaloosa, Iowa, and BENJAMIN C. BUXTON, Barrington, Ill., assignors of one-fourth to Edward Henley, Oskaloosa, Iowa. Filed June 21, 1911. Serial No. 634,486. (Cl. 104—45.)



1. A portable track comprising rails, connecting plates to be positioned upon a flat surface and adapted to receive the rails thereupon, said connecting plates being provided with upward extensions, said rails adapted to fit over said upward extensions, and means for securing said parts in such relation to one another.

2. A portable track comprising connecting plates having upwardly extending off-set portions near their opposite ends, rails having hollowed out ends adapted to be positioned over said extensions of said plates, and means carried by said plates to temporarily secure the same to each other.

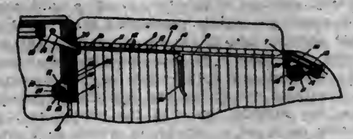
3. A portable track comprising connecting plates adapted to rest upon a surface and support rails, rails adapted to have their opposite ends resting upon said connecting plates to form the track, the meeting ends of the rails resting adjacent one another upon said connecting plates, said plates and said rails being provided with means whereby they may be temporarily locked together, and means integral with each rail and forming a part thereof adapted to rest upon said connecting plates to prevent said rails from rocking.

4. A portable track comprising rails, connecting plates having strengthening convolutions, said connecting plates adapted to be positioned upon a flat surface to receive the rails thereupon, said connecting plates being provided with upward extensions, said rails being adapted to fit over said upward extensions, and means for securing said plates in such relation to one another.

5. A portable track comprising rails, connecting plates to be positioned upon a flat surface and adapted to receive the rails thereupon, said connecting plates being provided with upward extensions, said connecting plates also being provided with convolutions longitudinally thereof between their upward extensions, said rails being adapted to fit over said upward extensions, and means for securing said parts in such relation to one another.

1,022,468. DOOR. HERMANN F. CUNTZ, Hartford, Conn. Filed June 24, 1910. Serial No. 568,631. (Cl. 20—22.)

1. A door comprising a sliding-section and a rolling-section, straps between the sections connecting the edge of the rolling-section to the sliding-section intermediate its ends, whereby a portion of the latter passes the rolling-section when the door is rolled in.



2. In a door, the combination of a sliding-section, a winding-roller and a rolling-section secured to the sliding-section a distance from its edge and to the roller, and adapted to be wound around the winding-roller and permit the edge of the sliding-section to pass tangentially by the winding-roller.

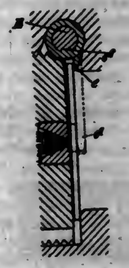
3. In a car door, the combination of a sliding-section, a rotatable winding-roller, straps secured to the winding-roller and an intermediate part of the sliding-section whereby the edge of the latter separates from the adjacent rolling-section, a rolling-section secured to said straps and adapted to be wound around said winding-roller, and an idler adapted to engage said rolling-section.

4. In a door for cars, the combination of a sliding-section having a glass panel therein, a vertical rotatable roller placed outside of the path of the panel section, straps composed of intermediate hinged links and flexible end-portions secured respectively to said roller and substantially at the vertical axis of the sliding-section, vertical strips, secured to the corresponding hinged links, and forming a rolling-section, a guide-way for said sections, an idler placed substantially tangential to the path of said sections and adapted to engage the rolling-section, and a housing adapted to receive said sections when the door is open.

5. In combination with a door, a door post, a casing adjacent to said door post, a winding roller in said casing, a door having a rolling-section and a panel, a guide and pocket for said panel section extending inwardly beyond the casing and a connection from the rolling-section to the panel section between its front and rear edges whereby the panel section may pass into said pocket section leaving its outer edge substantially flush with the door post.

[Claims 6 and 7 not printed in the Gazette.]

1,022,469. CARTRIDGE EXTRACTING AND EJECTING MECHANISM FOR BREECH-LOADING ORDNANCE. ARTHUR TREVOR DAWSON and GEORGE THOMAS BUCKHAM, Westminster, London, England, assignors to Vickers Limited, Westminster, England. Filed Oct. 2, 1909. Serial No. 520,711. (Cl. 89—21.)



1. In cartridge extracting and ejecting mechanism for ordnance, the combination with the ejecting arms and the short extracting arm between said ejecting arms, of a spindle on which said arms are mounted, and means for connecting the extracting arm and the ejecting arms with

said spindle so that lost motion can take place between the extracting arm and the ejecting arms.

2. In cartridge extracting and ejecting mechanism for ordnance, the combination with the extracting arm and the ejecting arms of a spindle on which said arms are mounted, means for rigidly connecting the extracting arm with said spindle, and means for connecting the ejecting arms with the spindle so that relative movement can take place between said spindle and the ejecting arms.

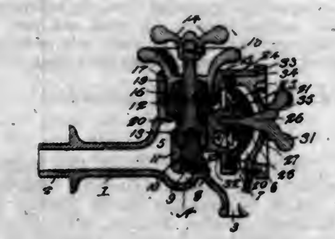
3. In cartridge extracting and ejecting mechanism for ordnance, the combination with the extracting arm and the ejecting arms, of a spindle on which said arms are mounted, a key on said extracting arm fitting in a keyway formed in said spindle, a key of less width than said keyway on each of the ejecting arms, and means for actuating said spindle when the breech is being opened.

4. In cartridge extracting and ejecting mechanism for ordnance, the combination with the extracting arm and the ejecting arms, of a spindle on which said arms are mounted, a key on said extracting arm fitting in a keyway formed in said spindle, a key of less width than said keyway on each of the ejecting arms, a striking arm on the outer end of said spindle and a cam for actuating said striking arm to rotate the spindle when the breech is being opened.

5. In cartridge extracting and ejecting mechanism for ordnance, the combination with the extracting arm and the ejecting arms, of a spindle on which said arms are mounted, a key on said extracting arm fitting in a keyway formed in said spindle, a key of less width than said keyway on each of the ejecting arms, a striking arm on the outer end of said spindle, and a cam on the carrier hinge pin for actuating said striking arm to rotate the spindle.

[Claims 6 and 7 not printed in the Gazette.]

1,022,470. FILTERING-FAUCET. LÉON DION, New York, N. Y., assignor to Eureka Machinery Company, a Corporation of Arizona. Filed July 26, 1910. Serial No. 573,978. (Cl. 210—7.)



1. A faucet comprising a casing divided by a partition into inlet and filtering chambers, a spout attached to the casing for receiving water from either chamber, a valve controlling the flow of water from the inlet chamber to the spout, a stem connected with the valve for seating and unseating the same, a valve controlling the flow of water to the filtering chamber, said last-mentioned valve having a central passage through which the stem of the first-mentioned valve extends, a handle connected with the stem, and a handle connected with the second valve.

2. A faucet comprising a casing divided into inlet and filtering chambers, a common spout for filtered or unfiltered water, a valve for permitting unfiltered water to pass to the spout from the inlet chamber, and a second valve for permitting water to pass from the inlet chamber to the filtering chamber, said valves being arranged in line with each other and each forming a stop for limiting the opening movement of the other.

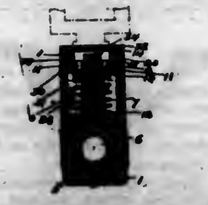
3. A faucet comprising a casing divided by a partition into inlet and filtering chambers, a spout connected with the chambers, a valve controlling the flow of water from the inlet chamber to the spout, a stem connected with the valve, a handle for the stem, a valve controlling the flow of water from the inlet to the filtering chamber and forming a packing around the valve stem, and a handle for the last-mentioned valve disposed below the handle on the said stem.

4. A faucet comprising a casing, a partition therein for dividing the casing into inlet and filtering chambers, said partition having a cavity partially internally threaded, a spout, passages connecting the spout with the filtering chamber and with the inlet chamber through the said cavity, a valve in the said cavity for cutting off the flow of water from the inlet chamber to the spout, a stem connected with the valve and threaded in the said cavity, a handle on the outer end of the stem for turning the same to seat and unseat the valve, a second valve surrounding the stem and arranged to control the flow of water from the inlet to the filtering chamber, and a handle threaded in the casing and connected with the second valve for opening and closing the same.

5. A faucet comprising a casing, a spout connected therewith, a filter in the casing, separate valves arranged on a common axis in the casing for permitting filtered or unfiltered water to pass from the faucet, and separate handles at the top of the faucet for independently operating the valves.

[Claims 6 to 11 not printed in the Gazette.]

1,022,471. VALVE. PETER S. DUNN, New Haven, Conn., assignor of one-third to David E. Fitz Gerald and one-third to Thomas F. Fitzsimmons, New Haven, Conn. Filed July 28, 1911. Serial No. 641,042. (Cl. 137—7.)



1. The combination with a valve body; of a plug within said valve body; a tumbler slidable upon the stem of said plug, having a plurality of notches in its outer edge; a plate fixed in said valve body, having a lug thereon of substantially the same shape in cross section as the notches in said tumbler; a key disk, having an operative connection with the stem of said plug, so that it may always be maintained in its proper relative position therewith; a spring between the head of said plug and said tumbler; and a key cap closing the chamber in said valve containing said plug and tumbler.

2. In a valve, the combination with a valve body, having a laterally projecting case thereon; of a plug within said case; a key cap closing the open end of said case and having an opening therethrough, said opening being formed so as to furnish stop shoulders with intermediate curved faces; a plug within said case; a guide plate fixed to said case and having a lug thereon that projects into the interior thereof; a tumbler having two notches in its outer edge of substantially the same shape in cross section as the said lug; a key disk, having an operative engagement with the stem of said plug and held against movement in one direction by said key cap; and a spring between the head of said plug and the said tumbler.

3. In a valve, the combination with a valve body, having a laterally projecting case thereon; of a key cap closing one end of said case and having an opening therethrough provided with stop faces substantially 90° from each other that are connected by an intermediate circular face; a plug within said case, having a stem thereon that is slotted at its outer end; a key disk held in operative engagement with said stem and having a slot therethrough which registers with the slot in said stem; a tumbler slidable upon said stem but held against rotation thereon, having two radial notches in its outer edge, and having key pockets therein in line with the slot in the stem of said plug; a spring between said tumbler and the head of said plug; and a guide plate fixed to one side of said case and having a lug thereon which projects into the interior of said case.

1,022,472. WELL-DRILL. FRANK FRANCE, Chicago, Ill. Filed Aug. 8, 1910. Serial No. 576,109. (Cl. 166—8.)



1. A well drill consisting of a cylindrical member having a longitudinal section removable therefrom, and a cutting member on the bottom thereof, said cutting member being removable, a locking member, the upper portion of said cylindrical member and removable section being reduced to receive said locking member.

2. A well drill consisting of a cylindrical member having a longitudinal section removable therefrom, and a cutting member on the bottom thereof, said cutting member being removable, a locking member, the upper portion of said cylindrical member and removable section being reduced to receive said locking member, said locking member consisting of a collar.

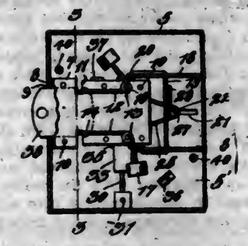
3. A well drill consisting of a cylindrical member having a longitudinal section removable therefrom, a cutting member on the bottom thereof, said cutting member being removable, a locking member, the upper portion of said cylindrical member and removable section being reduced to receive said locking member, said locking member consisting of a collar, and means for fixing said collar in engagement with said cylindrical member and removable section.

4. A well drill consisting of a cylindrical member having a longitudinal section removable therefrom, a cutting member on the bottom thereof, said cutting member being removable, a locking member, the upper portion of said cylindrical member and removable section being reduced to receive said locking member, said locking member consisting of a collar, means for fixing said collar in engagement with said cylindrical member and removable section, and closures for the bottom of said cylindrical member.

1,022,473. CHECK-LOCK. CHARLES E. FREELAND, Wheeling, W. Va., assignor of one-half to George W. Aukerman, Cadiz, Ohio. Filed Apr. 8, 1911. Serial No. 619,778. (Cl. 40—15.)

1. In a lock of the character described, a pivoted locking element normally held by gravity in its locking position, a pivotally mounted rod engaging said locking element, a gravity actuated member laterally adjustable toward and from said rod and adapted to actuate the same when in one position, a pivotally mounted manually operable element to support said adjustable member against gravity movement when the locking element is in its locking position, and means for limiting the pivotal movement of said last named element in either direction.

2. In a lock of the character described, a case having an opening in one of its walls, spaced parallel plates disposed upon opposite sides of said opening and extending into the case and having notches in their opposed edge portions, in combination with a check adapted to be inserted through the opening in the case and between said plates, said check having a notch in one edge to register with the notches in said plates, and gravity actuated locking means arranged in said case, said locking means including a loop member pivotally mounted upon said plates and extending into the notches of the same and the notch in said check to lock the check in position between the plates.

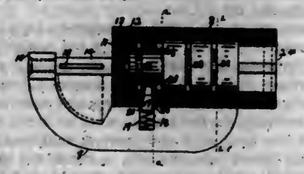


3. In a lock of the character described, a pair of pivoted locking elements normally held by gravity in their locking position, a U-shaped rod engaging said locking element, a pivotally mounted adjustable gravity actuated arm to engage said U-shaped rod to move the locking elements to their release positions, and manually operable means to support said arm against movement when said locking elements are in their locking positions.

4. In a lock of the character described, a pair of pivotally mounted locking elements normally held in their locking positions by gravity, a U-shaped rod pivotally mounted at its ends and engaging said locking elements, a pivotally mounted rod having a loop formed therein and an angularly disposed arm formed on one of its ends to engage said U-shaped rod, a weight carried by said loop to swing said rod upon its pivot and engage the arm with said U-shaped rod to move the same and throw the locking elements to their release positions, and a pivotally mounted operating rod to support said weighted rod when said elements are in their locking positions.

5. In a lock of the character described, the combination with a case having an opening in one of its walls, of spaced parallel plates extending into said case, said plates being disposed on opposite sides of said opening and having notches in their upper and lower edges, a pair of locking elements pivotally mounted upon said plates, each of said elements having a looped portion, gravity means carried by said elements to dispose said loops in the notches of the plates, gravity actuated manually controlled means arranged within the case to actuate said locking elements and move the same to their release positions, in combination with a check adapted to be inserted through the opening in the case and between said plates, said check having notches in its opposite edges to register with the notches in said plates and to receive the looped portions of the locking elements.

1,022,474. SAFETY-LOCK FOR KEYHOLES. TITUS E. GOOD, Brunner, Tex. Filed Dec. 5, 1910. Serial No. 595,696. (Cl. 70—8.)

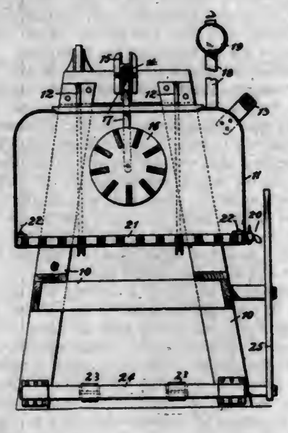


1. A device of the character described including a tubular casing and a rotatable barrel secured therein and

rotatable independently thereof, a catch support extending from the barrel and rigid therewith, a catch integral with the support and extending laterally therefrom, a resiliently mounted locking dog seated in a recess carried by the casing and arranged to project through alined holes in the casing and barrel and lock the same rigidly together, a rotatable key within the casing and projecting within the barrel and engaging with the barrel and locking dog, and arranged to simultaneously turn said barrel and depress the dog and disengage said dog from the barrel and ribe carried by the wall of said casing and barrel and disposed so as to engage with corresponding notches of said key and secure the key in the casing and barrel.

2. A device of the character described including a tubular casing and a rotatable barrel secured therein and rotatable independently thereof, a catch support extending from the barrel and rigid therewith, a catch integral with the support and extending laterally therefrom, a resiliently mounted locking dog seated in a recess carried by the casing and arranged to project through alined holes in the casing and barrel and lock the same rigidly together, and a rotatable key within the casing and projecting within the barrel and engaging with the barrel and locking dog, and arranged to simultaneously turn said barrel and depress the dog and disengage said dog from the barrel.

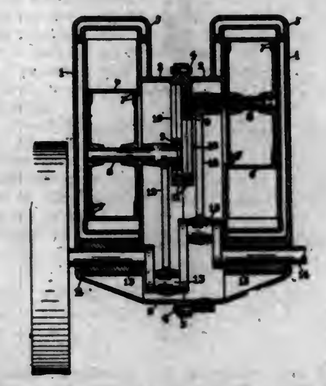
1,022,475. WASHING-MACHINE. EDWARD L. GOODWIN, Portland, Mich. Filed July 12, 1909. Serial No. 507,191. (Cl. 68—21.)



1. In a washing machine the combination of a supporting frame composed of two side members, a tub movable to and fro endwise between said side members, bearing plates on each side member at the top thereof, a cross bar extending from one plate to the other having opposite ends vertically slidable in bearings on the plates, a metal strap fastened to said cross bar near each end thereof, said strap thence extending downward into the tub, and a scrubbing roller rotatably mounted at the lower end of said metal straps, said roller being free to move vertically with the cross bar and being wholly removable from the tub, said plates and the parts slidably engaging the same, being wholly outside the tub.

2. In a washing machine the combination of a supporting frame composed of two side members, a tub movable to and fro endwise between said side members, bearing plates on each side member at the top thereof, a cross bar extending from one plate to the other having opposite ends vertically slidable in bearings on the plates, a metal strap fastened to said cross bar near each end thereof, said strap thence extending downward into the tub, a scrubbing roller rotatably mounted at the lower end of said metal straps, said roller being free to move vertically and being wholly removable from the tub, said plates and the parts slidably engaging the same, being wholly outside the tub, and a levitating rack detachably connected with the tub, said rack rising when released from the buoyant effect of the water, whereby articles of clothing resting thereon may be lifted when the scrubbing roller is removed from the tub.

1,022,476. EXPLOSIVE-ENGINE. FRANK J. GREMEL, Detroit, Mich. Filed Mar. 14, 1910. Serial No. 549,321. (Cl. 123—57.)



1. In a motor, cylinders closed at each end and provided at each end with intake and exhaust ports, a wall on one cylinder detachably-secured at its margin to a mating wall on the companion cylinder, forming therewith a base and crank shaft housing, a piston in each cylinder, a wrist pin extending from each piston through a longitudinal slot in the cylinder and sliding in guide-ways on the wall, and a crank shaft journaled in the walls and coupled operatively to each wrist pin.

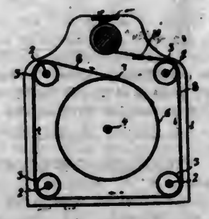
2. In a motor, cylinders closed at each end and provided at each end with intake and exhaust ports, a wall on one cylinder detachably-secured at its margin to a mating wall on the companion cylinder, forming therewith a base and crank shaft housing, a piston in each cylinder, a wrist pin extending from each piston through a longitudinal slot in the cylinder and sliding in guide-ways on the wall, intake and exhaust valves at each end of each cylinder, tappet rods operating each valve, a cam shaft having a single cam for each pair of tappets, a crank shaft journaled in the walls, and a connecting rod coupling each wrist pin with the crank shaft, the walls forming a housing and crank shaft base.

3. In a motor, cylinders closed at each end and provided at each end with intake and exhaust ports, a wall on one cylinder detachably secured at its margin to a mating wall on the companion cylinder, forming therewith a base and crank shaft housing, a piston in each cylinder, a wrist pin extending from each piston through a longitudinal slot in the cylinder and sliding in guide-ways on the walls, a crank shaft journaled in the walls and coupled operatively to each wrist pin, and a cover plate detachably secured over an opening formed in the mating walls and provided with an inlet manifold opening into the several intake ports, and exhaust manifold connecting the several exhaust ports.

4. In a motor, cylinders closed at each end and provided at each end with intake and exhaust ports, and with water jacketed walls, a wall on one cylinder detachably-secured at its margin to a mating wall on the companion cylinder, forming therewith a base and crank shaft housing, a piston in each cylinder, a wrist pin extending from each piston through a longitudinal slot in the cylinder and sliding in guide-ways on the wall, a crank-shaft journaled in the walls and coupled operatively to each wrist pin, and a cover plate detachably-secured over an opening formed in the mating walls and provided with an inlet manifold opening into the several intake ports, and an exhaust manifold connecting the several exhaust ports and with a water pipe discharging into the water jacket.

5. In a motor, cylinders closed at each end and provided at each end with intake and exhaust ports, a wall on one cylinder detachably-secured at its margin to a mating wall on a companion cylinder, extending below the cylinder ends and forming with the mating wall a base and crank shaft housing, a piston in each cylinder, a wrist pin extending from each piston through a longitudinal slot in the cylinder and sliding in guide-ways on the wall, a crank shaft journaled in the housing adjacent the lower end of the cylinder with its cranks playing between the lower ends of the cylinder, and connecting rods each coupling a wrist pin with an adjacent crank.

1,022,477. DAYLIGHT DEVELOPING-TANK FOR PHOTOGRAPHIC FILMS. EDWIN L. HAMMER, Rochester, N. Y. Filed Apr. 17, 1911. Serial No. 621,522 (Cl. 95—90.5.)



1. In a daylight developing apparatus, the combination of a tank, a frame removably supported in said tank, a spool holder on said frame, a series of rollers mounted in said frame, a string or belt attached to one of said rollers and adapted to pass over or around the rest of said rollers, and a clamp on one end of said string or belt.

2. In a daylight developing apparatus, the combination of a tank, a frame removably supported in said tank, a spool holder on said frame, a series of rollers mounted in said frame, a string or belt attached to one of said rollers and adapted to pass over or around the rest of said rollers, a clamp on one end of said string or belt, a gear wheel mounted on the outside of said frame and rotating with the roller to which said string is attached, a gear wheel mounted on the inside of said tank with which said first named gear is adapted to mesh, and an arbor supporting said second gear wheel and passing through the tank and adapted to be turned from the outside of the tank.

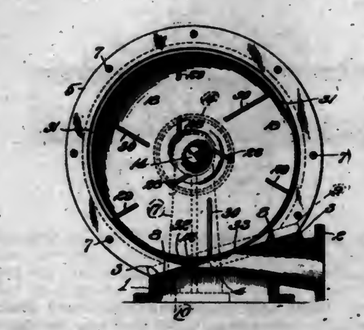
3. In a daylight developing apparatus, the combination of a tank, a gear wheel mounted on the inside of said tank and adapted to be turned from the outside of said tank, means outside the tank for turning said gear wheel, a frame removably mounted on the inside of said tank and having a gear wheel thereon adapted to mesh with the gear wheel mounted on the inside of said tank, a roller on the frame driven by said gear wheels, a spool holder for a film mounted in said frame, a series of rollers mounted in said frame and means for connecting the film with the first mentioned roller, whereby said film may be drawn around all the rollers mounted in said frame.

4. In a daylight developing apparatus, the combination of a tank, a frame having a series of rollers thereon, a top for sealing said frame in said tank, means extending through the side of said tank for the purpose of driving one of said rollers from the outside of the tank.

5. In a daylight developing apparatus, the combination of a frame, and a spool holder for said frame, said spool holder comprising two parts, one telescoping on the other, each having a pin thereon on which the spool is adapted to rotate, one of the sides of said frame being provided with a slot in which one of said pins is adapted to engage to hold said spool holder in position.

[Claim 6 not printed in the Gazette.]

1,022,478. CENTRIFUGAL PUMP. THOMAS R. HAYTON, Hannibal, Mo. Filed June 6, 1910. Serial No. 565,284. (Cl. 103—48.)



1. In a centrifugal pump, in combination with a runner having a central opening, a series of short blades at the center thereof arranged tangentially with respect to said opening, a second series of short blades extending inward from the periphery of the runner and in line with the first named set, and a series of relatively long blades extending inward from the periphery of the runner, each long blade being interposed between two short blades.

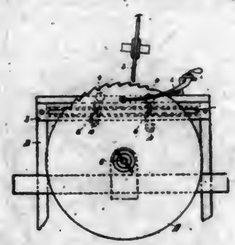
2. In a centrifugal pump, a runner having a central opening, a series of short, rigid blades arranged about and tangentially with respect to said opening, and extending outward therefrom and from wall to wall of the runner, and a second series of blades extending inward from the periphery of the runner but terminating short of the path described by the outer ends of said short blades, the runner being substantially concentric with the casing and having its outer edge located to rotate in close proximity to the inner edge of the outlet from the pump.

3. In a centrifugal pump, in combination with a casing having a discharge nozzle, a runner mounted in said casing having a central opening, a series of short, rigid blades arranged about and tangentially with respect to said opening and extending outward therefrom and from wall to wall of the runner, a second series of alternate, long and short blades extending inward from the periphery of the runner, the longer blades terminating short of the path described by the outer ends of the blades of the first series, said runner being substantially concentric with the wall of said casing and having its periphery in close proximity thereto, the space between the periphery of the runner and said casing at the bottom of the latter gradually widening until it conforms in size with the opening into said nozzle, the nozzle having a gradually enlarged diameter from such inlet opening to its discharge opening and the runner having its outer edge located to rotate in close proximity to the inner edge of the inlet opening of said nozzle.

1,022,479. REST FOR SAW-SHARPENING MACHINES. JOHN P. HEDSTROM, Big Rapids, Mich., assignor to Hanchett Swage Works, Big Rapids, Mich., a Corporation of Michigan. Filed July 15, 1909. Serial No. 507,666. (Cl. 76—77.)

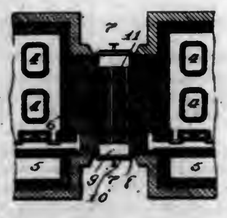
In a saw sharpening machine, the combination with a saw-supporting mandrel, of a stationary support located apart from said mandrel, a pair of rests located at opposite sides of but in alinement with said stationary support and having their working faces located in a plane in advance of the working face of said central support; and an arm located intermediate said pair of rests and in alinement therewith and adapted to press the saw disk

against said pair of rests and against said central support, whereby to bend the saw to prevent vibration of the



saw disk while subjected to the action of a grinding wheel.

1,022,480. GENERATOR-FURNACE. ERNST HELLER, St. Louis, Mo. Filed Dec. 14, 1910. Serial No. 597,303. (Cl. 48—113.)



1. The combination of the spaced-apart retort settings, the furnace arranged between the retort-settings, and clinker doors for providing access to the interior of the furnace at each of its ends.

2. The combination of the spaced-apart retort-settings the furnace of less length than the retort-settings, and arranged between the retort-settings, and clinker doors for providing access to the interior of the furnace at each of its ends.

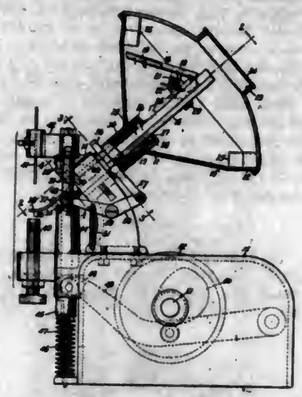
3. The combination of the spaced-apart retort-settings, a furnace arranged between the retort-settings, clinker doors for providing access to the interior of the furnace at each of its ends, and a filling-door at the top of the furnace.

4. The combination of the spaced-apart retort-settings, a furnace arranged between the retort-settings, clinker doors for providing access to the interior of the furnace at each of its ends, a fuel magazine arranged the full length of the furnace over the fire chamber, a filling door at the top of said magazine and means for conducting the fire gases from each side of the furnace for separate and independent uses.

1,022,481. MACHINE FOR DRIVING TACKS AND THE LIKE. FRANK HOLBROOK, Lynn, Mass., assignor of one-half to Thomas C. Rowen, Lynn, Mass. Filed Feb. 24, 1911. Serial No. 610,614. (Cl. 1—6.)

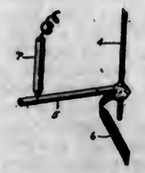
1. A machine for driving tacks and the like having, in combination, an inclined raceway, a tubular support through which said raceway extends and within which said raceway is supported, a hopper into which said raceway extends, said hopper having a hub surrounding and journaled upon said tubular support to rotate about an inclined axis and being provided with means for elevating the tacks and delivering them toward said raceway, means forming a pocket into which said tacks are delivered by said raceway, and means for driving said tacks.

2. A machine for driving tacks and the like having, in combination, an inclined raceway, a tubular support through which said raceway extends a hopper into which said raceway extends, said hopper having a hub surrounding and journaled upon said tubular support and being provided with means for elevating the tacks and delivering them toward said raceway, means carried by said hopper to revolve about said raceway for removing



therefrom tacks improperly positioned thereon, means forming a pocket into which the tacks are delivered by said raceway, and means for driving the tacks.

1,022,482. FILAMENT CONNECTION. JOHN W. HOWELL, Newark, N. J., assignor to General Electric Company, a Corporation of New York. Filed Aug. 7, 1907. Serial No. 387,453. (Cl. 176—38.)



1. The method of connecting a tungsten filament to a conductor, which consists in pasting the joint with copper paste and then sintering the paste by means of an arc.

2. The method of connecting a metal filament to a wire, which consists in pasting the joint and then heating the joint by drawing an arc from the wire to a temperature high enough to sinter the paste but low enough to avoid complete fusion of the joint.

3. The method of connecting a metal lamp filament to a conductor, which consists in pasting the joint and then heating the joint and regulating the temperature so that the paste above the conductor is sintered while other portions are fused.

4. The method of joining a tungsten filament to a nickel wire, which consists in pasting the joint with finely divided metal held in a binder and heating said joint sufficiently to harden the paste still leaving unfused that part which is above the wire.

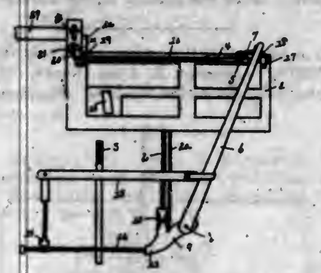
5. A connection between a tungsten lamp filament and its conductor, consisting of sintered metallic powder partially fused.

[Claims 6 to 18 not printed in the Gazette.]

1,022,483. AUXILIARY PICKER-ROD STAND. DAVID E. JONES, Utica, N. Y. Filed May 24, 1911. Serial No. 629,171. (Cl. 139—48.)

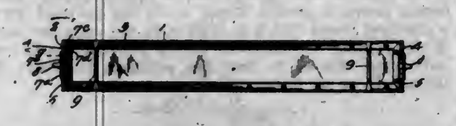
1. In a picker box, a stand integral with the frame thereof, and disposed at the lay end of the loom, said stand being reinforced by an auxiliary stand having a tapering aperture for the reception of the corresponding shaped end of the picker rod, whereby to hold said picker rod rigidly in normal position, substantially as described.

2. In a picker box for looms, a picker rod held in the lay end of the box by a stand formed integral with the frame of said box, means for reinforcing said stand, said means comprising an auxiliary stand secured in assembled position by a bolt connected with the frame of the picker box.



3. In a picker box for looms, a stand formed integral with the frame of said box, and disposed at the lay end of the loom, an auxiliary stand detachably secured to the picker box frame in rear of the integral stand, whereby to reinforce said integral stand, and a tapering aperture in said auxiliary stand adapted to receive and hold in a rigid manner the correspondingly shaped end of a picker rod, whereby said rod may cause the picker to throw a shuttle in a direct path across the loom.

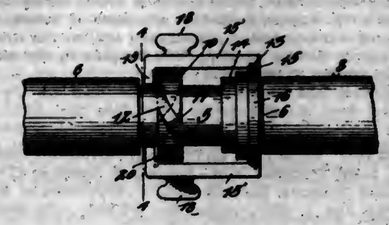
1,022,484. FENCE-POST MOLD. THEODORE H. KRUSE, Arvada, Colo. Filed July 12, 1911. Serial No. 638,190. (Cl. 25—121.)



1. A mold of the type described including separable end and lateral members, ledge-forming members of right-angled cross-section, and of frame-like outline and, in continuation, conforming to the outline of the lateral members, the edges of the outstanding end portions of said ledge-forming members having eyes formed thereon, the longitudinal portions of said ledge-forming members being braced together at their outer edges, near their ends, the braces thus provided being adapted to serve also as handles, end plates fixed to the end-members and having eyes formed upon their vertical edges received between the eyes of said ledge-forming members, and retaining pins inserted through said eyes.

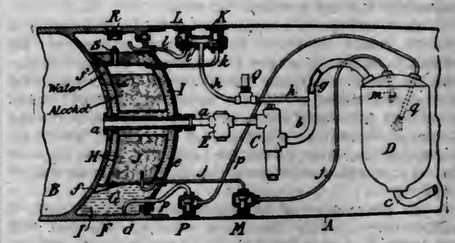
2. A mold embracing separable end and lateral plate members, said lateral plate members including flange forming portions secured around the longitudinal and transverse edges thereof, and outstanding from the outer surfaces of the latter, said outstanding flange forming portions being angular in cross section, the inner arms of the angles thus formed being secured to said plate member outer surfaces, said end plate members extending laterally beyond the end openings of the mold and resting flat upon the flange forming portions at their ends, means for removably applying said end plate members, comprising hinge leaf like plates fixed to said end plate members and the ends of said flange forming portions, respectively, at the vertical edges of said end plate members and said end flange forming portions, the eye forming edges of said hinge leaf like plates interfitting into each other beyond the outer vertical edges of said end plate members and said flange forming portion ends, and removable pintles engaging said eye forming edges of the hinge leaf like plates.

1,022,485. COUPLING. DALE F. LANGELL, Apple Creek, Ohio. Filed June 7, 1911. Serial No. 631,786. (Cl. 137—28.)



The herein described coupling comprising co-acting tubular members, one of said members being enlarged to receive the end of the other member, said enlarged end of the first named member being provided with peripheral ribs extending substantially half way therearound, the ends of said ribs being inclined across their entire width and in relatively opposite directions, the ends of one rib being spaced from the ends of the other rib, the inclined ends of the ribs forming the walls of diagonal grooves which extend in opposite angular directions with relation to the longitudinal axis of said member, and a clamping yoke loosely mounted upon the other of said members and having parallel arms with inturned ends to be received in said diagonal grooves on the first named member, said inturned ends of the yoke engaging the inclined ends of said ribs to draw the members together as the yoke is turned thereon, said ribs being also provided on their corresponding longitudinal edges with square shoulders to form recesses therein to receive the ends of the yoke arms and positively prevent further turning movement of the yoke.

1,022,486. HEATER FOR AUTOMOBILE TORPEDOES. FRANK M. LEAVITT, Smithtown, N. Y., assignor to E. W. Bliss Company, Brooklyn, N. Y., a Corporation of West Virginia. Filed Dec. 23, 1911. Serial No. 667,531. (Cl. 60—3.)



1. In a torpedo, a containing vessel divided by a partition into water and fuel compartments, a source of compressed air, and means for conducting compressed air under equal pressures into both compartments.

2. In a torpedo, a compressed air flask, a containing vessel formed against one end thereof, a partition therein dividing its interior into two compartments, and means for conducting compressed air under equal pressures into both compartments.

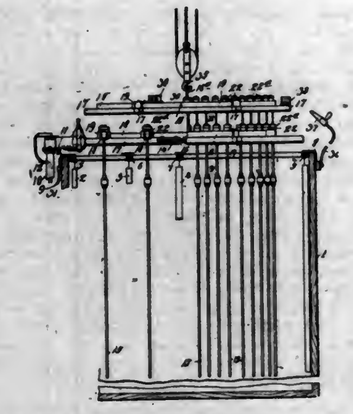
3. In a torpedo, a compressed air flask having its outer wall prolonged, a cover fitting against such prolonged wall to form a containing vessel, a partition dividing such vessel into two compartments, and means for conducting compressed air under equal pressures into both compartments.

4. In a torpedo, a containing vessel, a partition therein forming an inner vessel, and means for introducing compressed air under equal pressures into said containing vessel outside and inside of said inner vessel.

5. In a torpedo, a containing vessel, a partition therein dividing it into fuel and water compartments, means for introducing compressed air under equal pressures into both compartments, and a normally closed spring-pressed valve adapted to be opened on admission of pressure and adapted when opened to remain open against the stress of its spring, thereby avoiding back-pressure on the air due to the tension of the spring.

[Claims 6 to 10 not printed in the Gazette.]

1,022,487. ELECTROPLATING APPARATUS. GEORGE A. LUTZ, Plainfield, N. J., assignor to American Circular Loom Company, Portland, Me., a Corporation of Maine. Filed Jan. 7, 1911. Serial No. 601,346. (Cl. 204—5.)



1. An electroplating apparatus comprising a tank, a cathode frame provided with hollow connectors for articles to be plated, means to support said cathode frame over the tank; an anode frame, anodes suspended therefrom and extending within the hollow connectors; means to support the anode frame above the cathode frame out of circuit therewith; a second set of anodes, and means for suspending the same within the tank.

2. An electroplating apparatus comprising a tank, a cathode frame provided with hollow connectors for articles to be plated, means to support said cathode frame over the tank; an anode frame, anodes suspended therefrom and extending within the hollow connections; means to support the anode frame above the cathode frame out of circuit therewith; a second set of anodes, means for suspending the same within the tank, and means connecting the first and second named anodes in the same side of a circuit.

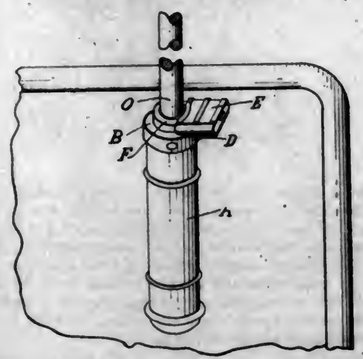
3. An electroplating apparatus comprising a tank, a cathode frame, hollow connectors movably connected with said frame to support articles to be plated, means to support said cathode frame over the tank, an anode frame, anodes suspended therefrom and extending within the hollow connectors, means to support the anode frame above the cathode frame out of circuit therewith, a second set of anodes, and means for suspending the same within the tank.

4. An electroplating apparatus comprising a tank, a cathode frame, hollow connectors movably connected with said frame to support articles to be plated, means to support said cathode frame over the tank, an anode frame, anodes suspended therefrom and extending within the hollow connectors, means to support the anode frame above the cathode frame out of circuit therewith, a second set of anodes, means for suspending the same within the tank, and means connecting said anodes in the same side of a circuit.

5. An electroplating apparatus comprising a tank, a cathode frame provided with hollow connectors for articles to be plated, means to support said cathode frame over the tank, an anode frame, means for movably suspending anodes from the anode frame to extend within the hollow connectors, means to support the anode frame above the cathode frame out of circuit therewith, a second set of anodes, and means for suspending the same within the tank.

[Claims 6 to 18 not printed in the Gazette.]

1,022,488. DEVICE FOR LOCKING WHIPS IN SOCKETS. ALGERNON R. LYON, Nardin, Okla. Filed Dec. 4, 1911. Serial No. 663,674. (Cl. 21—130.)



A device for holding whips in sockets comprising, in combination with a whip socket, a plate provided with an integral flange fitting over said socket and an opening for the reception of the butt end of a whip, said plate having a lateral extension which is flush with the face of the plate, a lock casing fixed to said projection, said casing having a pivotal tongue at its end provided with a concaved recess which is flush with the marginal edge of the opening in said plate, a stop projecting from the latter and adapted to limit the swinging movement of the tongue, as set forth.

1,022,489. PINCERS, PLIERS, AND THE LIKE. WILLIAM W. LYONS, Newark, N. J., assignor to Heller Tool Company, Newark, N. J., a Corporation of New Jersey. Filed Sept. 7, 1911. Serial No. 648,161. (Cl. 168—48.)



A tool of the kind described comprising two substantially straight pivoted crossing handles, terminating at their upper ends in opposed jaws of greater width than the thickness of the handles, the inner surfaces of the jaws above the pivot being inclined, and the outer edges of the inner surfaces of those parts of the handles which come opposite the jaws when the latter are opened, being correspondingly beveled to permit wider opening of the jaws, while the points of union with the handles are straightened.

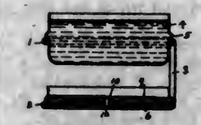
1,022,490. DRAFT-EQUALIZER. PHILLIP B. MARTIN and HENRY DAHLENBURG, Avon, S. D. Filed Mar. 31, 1911. Serial No. 618,188. (Cl. 21—76.)

In combination, a wagon tongue, a lever pivoted thereon, an evener bar connected to one terminal of the lever, a draft rod carried by the opposite terminal of said lever, a plurality of engaging members mounted on the aforesaid draft rod, a flexible member carried by said tongue and adapted to engage any one of said engaging members, and means carried by the latter to prevent acci-



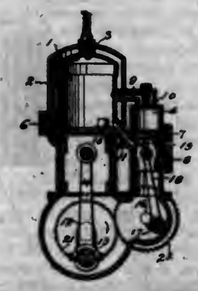
dental displacement of said flexible member from said engaging members.

1,022,491. FUMIGATOR. PETER T. MCCARTHY, JUDSON MICHMERSHUIZEN, and EDWARD MICHMERSHUIZEN, Holland, Mich. Filed Nov. 8, 1911. Serial No. 659,130. (Cl. 167—3.)



In a fumigator, the combination of a receptacle for the fumigating substance, a cover for the same, a support comprising a pair of rings and a post between the same, said rings adapted to receive the body and cover, solid hydro-carbon in said cover, and a wick supported by said hydro-carbon, said cover adapted to serve as a burner when placed beneath the receptacle.

1,022,492. INTERNAL-COMBUSTION ENGINE. JOHN J. MCINTYRE, Hartford, Conn. Filed Apr. 12, 1910. Serial No. 555,046. (Cl. 123—60.)



1. An internal combustion engine having a cylinder with a working piston, a crank shaft and crank connected with said working piston, a cylinder with a pump piston, a crank shaft and crank connected with said pump piston, a crank case containing the cranks, gearing connecting said crank shafts, a gas port to the upper end of the pump cylinder, a gas passage from the upper end of the pump cylinder to the working cylinder, a valve controlling said passage, an air port to the lower end of the pump cylinder, and an air passage from the lower end of the pump cylinder to the working cylinder, said ports being so located that the pump piston acts as a valve for controlling the inflow of gas and air through said ports, said pump piston having an opening in one side and being of such length and so coacting with said ports and passages that during its upward movement it forces gas through the gas passage into the working cylinder, and during its downward movement it compresses air in the crank case and then permits said compressed air to flow through its opening to the air passage into the working cylinder.

2. An internal combustion engine having a working cylinder, a working piston movable in the working cylinder, a crank and crank shaft connected with the working piston, a pump cylinder, a piston movable in the pump cylinder, a crank and crank shaft for reciprocating the pump piston, a crank case containing the cranks, gearing connecting the crank shafts, with a gas port and an air port opening through one side of the pump cylinder to opposite sides of the pump piston, and a gas passage and an air passage leading from the pump cylinder on opposite sides of the pump piston to the working cylinder, said gas port and air port being so located with relation to each other, and said pump piston being of such length and having such movement that the pump piston acts as a valve for said ports, opening said gas port and closing said air port on its downward movement, and opening said air port and closing said gas port on its upward movement.

3. An internal combustion engine having a working cylinder, a piston movable therein, a crank and crank shaft connected with the working piston, a pump cylinder and a pump piston movable in the pump cylinder, a crank and crank shaft for reciprocating the pump piston, a crank case containing the cranks, and gearing connecting the shafts, said pump cylinder having a gas intake port and an air intake port through one side to opposite sides of the pump piston, and being connected with the working cylinder by two passages which lead from opposite sides of the pump piston to the explosion side of the working piston, said pump piston moving across and opening and closing said ports and one of said passages during its reciprocation so as to admit gas above and compress air below during its downward movement, and admit the compressed air to and force gas into the working cylinder during its upward movement.

4. An internal combustion engine having a working cylinder, a piston movable therein, a crank and crank shaft connected with the working piston, a pump cylinder, a pump piston movable in the pump cylinder, a crank and crank shaft for reciprocating the pump piston, a crank case containing the cranks, a gear on the working piston crank shaft, an intermeshing gear on the pump piston crank shaft, said gears so engaging that the pump crank moves a few degrees in advance of the working crank, said pump cylinder having a gas intake port and an air intake port through one side to opposite sides of the pump piston, and being connected with the working cylinder by two passages which lead from opposite sides of the pump piston to the explosion side of the working piston, and said pump piston being arranged to move across and to open and close said gas and air intake ports during its reciprocation.

5. An internal combustion engine having a working cylinder and a piston therein, a pump cylinder parallel therewith and containing a piston, connecting means whereby the pistons reciprocate synchronously, said cylinders being connected by two passages that communicate with the pump cylinder respectively on opposite sides of the piston therein, said pump cylinder having a gas port and an air port which are opened and closed by the movements of the pump piston, said ports to the pump cylinder and passages from the pump cylinder to the working cylinder being so located with relation to each other and to the movements of the pump piston that gas is drawn into the pump cylinder through the gas port as a result of the downward movement, and is forced from the pump cylinder through one of said passages into the working cylinder as a result of the upward movement of the pump piston, and air is drawn into the pump cylinder through the air port as a result of the upward movement, and is compressed as a result of the downward movement of the pump piston and then permitted to pass through the other of said passages into the working cylinder.

[Claims 6 to 11 not printed in the Gazette.]

1,022,493. APPARATUS FOR MAKING SULFURIC ACID. CURTIS C. MEIOS, Woodbury, N. J. Filed Aug. 31, 1910. Serial No. 579,907. (Cl. 23—1.)

1. In apparatus of the character described, a casing, a single deflector disposed therein for dividing said casing into two compartments, having communication by

means of relatively small passages, said deflector having one side thereof provided with concaved surfaces and the opposite side thereof having straight surfaces, supply and discharge means for said casing arranged near the concaved and straight surfaces of the deflector, respectively.



2. In apparatus of the character described, a casing, a deflector disposed therein intermediate the ends thereof, said deflector being of sufficient width to divide said casing into two compartments, having communication by means of relatively small passages, said deflector having one side thereof provided with oppositely extending concaved surfaces, means to supply gases to said casing to impinge against the curved surfaces, and discharge means for said casing.

1,022,494. POCKET-KNIFE. WALTER JOHN MINTER, London, England. Filed May 18, 1911. Serial No. 628,028. (Cl. 30—10.)



1. A pocket knife comprising in combination, a handle, a blade pivoted thereto, a stop carried by said blade, a lever pivoted concentrically of said blade adapted to rest against the back thereof, and provided with an offset portion for engagement with said stop, whereby the blade may be opened by said lever, and means carried by said handle engaging said offset portion of said lever, when the blade is open, for retaining the same against the back of the blade.

2. A pocket knife comprising in combination, a handle, a blade pivoted thereto, a stop carried by said blade, a pivotally mounted lever adapted to rest against the back of the said blade and provided with an offset portion for engagement with said stop, whereby the blade may be opened by said lever, and means carried by said handle engaging said lever, when the blade is open, for retaining the same against the back of the blade.

3. A pocket knife comprising, a handle, a blade pivoted thereto and provided with a longitudinal central incision in the tang thereof, a main spring for normally retaining said blade in a closed or open position, a stop within the said incision of said blade, a cam within said incision pivoted concentrically with said blade and adapted to engage said stop when the blade is closed and to engage said main spring when the blade is open, and a lever for actuating said cam and normally extending longitudinally of said blade and at the back thereof, combined substantially as and for the purpose set forth.

1,022,495. MATERIAL OR COMPOSITION AND ARTICLE MADE THEREFROM. AUGUSTE ROBERT MÜLLER, London, England, assignor to R. M. D. Syndicate, Limited, London, England. Filed May 8, 1911. Serial No. 625,837. (Cl. 106—44.)

1. A material produced by mixing together asbestos and tar containing a relatively small quantity of inflammable oil, and heating the said mixture to 250° C. or over until substantially all of the inflammable constituents have been driven off.

2. A material produced by mixing together asbestos and tar containing a relatively small quantity of inflammable oil in proportions ranging from equal parts by weight of asbestos and tar to two parts by weight of asbestos to one of tar and heating said mixture to 250° C. or over until substantially all of the inflammable constituents have been driven off.

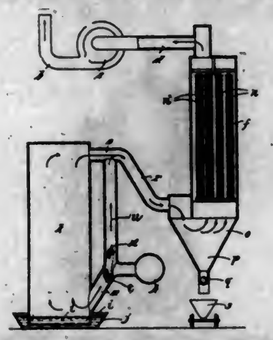
3. An article of manufacture produced by mixing together asbestos and tar containing a relatively small quantity of inflammable oil, heating the said mixture to 250° C. or over until substantially all of the inflammable constituents have been driven off, reducing the product to a powder and then compressing the same.

4. An article of manufacture produced by mixing together asbestos and tar containing a relatively small quantity of inflammable oil in proportions ranging from equal parts by weight of asbestos to two parts of asbestos to one of tar, heating said mixture to 250° C. or over until substantially all of the inflammable constituents have been driven off and which has been molded or compressed.

5. The method herein described, which consists in mixing together asbestos and tar containing a relatively small quantity of inflammable oil and heating the said mixture to 250° C. or over until substantially all of the inflammable constituents have been driven off.

[Claims 6 and 7 not printed in the Gazette.]

1,022,496. PROCESS FOR THE FILTRATION OF FURNACE-GASES. FRIEDRICH MÜLLER, Brebach-on-the-Saar, OTTO JOHANNSEN, Neufechingen, and PETER PAPE, Brebach-on-the-Saar, Germany, assignors to Company Rudolph Böcking & Cie. Erben Stumm- Halberg und Rud. Böcking G. M. B. H., Halbergerhütte, near Brebach, Germany. Filed Jan. 5, 1911. Serial No. 601,024. (Cl. 75—30.)



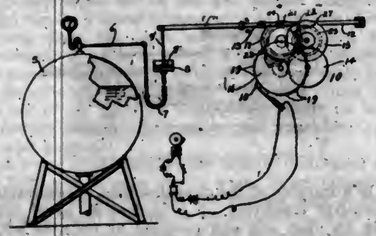
1. A process for the dry filtration of furnace gases, which comprises, firstly, cooling the gases to the dew point, thereafter somewhat reheating the gases and then passing the gases through filter material.

2. A process for the dry filtration of furnace gases, which consists, firstly, in cooling the gases to the dew-point and at the same time moistening the gases, thereafter somewhat reheating the gases and then passing the gases through filter material.

3. A process for the dry filtration of furnace gases, which comprises, firstly, cooling a part of the gases to the dew point, thereafter somewhat reheating the cooled gases by mixing with uncooled gases and then passing the gases through filter material.

1,022,497. ALARM APPARATUS. JAMES D. NELSON and EDWARD F. SMITH, Cincinnati, Ohio; said Smith assignor to said Nelson. Filed Mar. 3, 1910. Serial No. 547,008. (Cl. 178—103.)

1. The combination of a pressure tank, an electrical circuit, a circuit breaker in said circuit, a signaling device adapted variably to actuate the circuit breaker to indicate the various conditions in the pressure tank, a mechanical means for locking and for releasing the signaling device, an agent responsive to the pressures in the pressure tank, and mechanical connections between the agent and said mechanical means.



2. The combination of an apparatus subject to varying conditions to be observed, an alarm device comprising an electrical mechanism for transmitting telegraph signals, a spring actuated device for operating said mechanism and capable of giving distinguishable signals, an agent responsive to variations in the apparatus to be observed, mechanical means actuated by said agent, for controlling the operation of said device, and a cam operating in conjunction with said agent in actuating said mechanical means, whereby said device is caused to give distinguishable signals.

3. The combination of an apparatus subject to varying conditions to be observed, an alarm device comprising an electrical mechanism for transmitting telegraph signals, a spring actuated device comprising a driving wheel, an escapement wheel provided with stops, a signal wheel for operating said electrical mechanism, an agent responsive to pressure variations in the apparatus to be observed, means actuated by said agent for moving into and out of engagement with the stops of said escapement wheel to control the operation of said device, and a cam actuated by said driving wheel and operating in conjunction with said agent for controlling the operation of said means, whereby said device is caused to send either alarm or signals indicating normal conditions, in response to pressure variations in the apparatus to be observed.

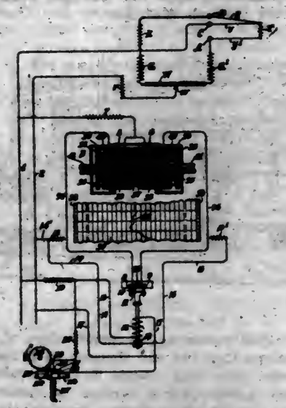
4. In combination with a pressure tank, a mercury column communicating therewith and adapted to fluctuate in response to variations of pressure in said tank, a mercury receptacle connecting with said column, a float located within said receptacle and controlled by the fluctuations of said column, an alarm device, and means for controlling the operation of said device comprising a lever actuated by said float, a cam-actuated lever secured thereto and actuated thereby, and a cam for controlling the operation of said cam-actuated lever.

5. The combination of an apparatus to be observed, an alarm device, an agent responsive to variations of conditions in said apparatus, a lever actuated by said agent for controlling the operation of said alarm device, and a cam for shifting said lever, whereby said device is caused to give distinguishable signals.

[Claims 6 to 9 not printed in the Gazette.]

1,022,498. CONTROL APPARATUS. EDWIN F. NORTHRUP, Philadelphia, Pa., assignor to Leeds and Northrup Company, a Corporation of Pennsylvania. Original application filed Feb. 16, 1909, Serial No. 478,144. Divided and this application filed Oct. 25, 1909. Serial No. 524,849. (Cl. 73—117.)

1. The combination with a selector member, of paths over which energy may be transmitted, said paths being normally incomplete, a second member periodically engaging and moving said selector member, means periodically actuating said second member, means against which said selector member may be moved by said second member, said selector member when moved against said last mentioned means causing the completion of one of said paths, and apparatus controlled by energy transmitted over said completed path.



2. The combination with a selector member, of paths over which energy may be transmitted, said paths being normally incomplete, a second member periodically engaging said selector member, means periodically actuating said second member, said selector member when engaged by said second member causing the completion of one of said paths; and step-by-step mechanism controlled by energy transmitted over said completed path.

3. The combination with a deflecting selector member responsive to changes in a condition, of paths over which energy may be transmitted, said paths being normally incomplete, a second member periodically engaging said selector member, means periodically actuating said second member, said selector member when deflected and engaged by said second member causing the completion of one of said paths, and a member moved by the energy transmitted over said completed path so long as said selector member remains deflected.

4. The combination with a galvanometer having a moving system, of a member carried by said moving system, a circuit, a second member periodically actuating said first named member, means periodically actuating said second member, said first named member when actuated by said second member controlling said circuit, and step-by-step mechanism controlled by the energy transmitted over said circuit.

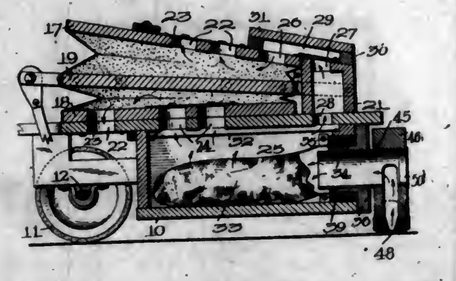
5. The combination with a galvanometer having a moving system, of a member carried by said moving system, a second member periodically engaging said first named member, means periodically actuating said second member, a pair of members normally out of engagement with said first named member and either one of which may be engaged by said first named member when actuated by said second member, a path over which energy may be transmitted completed in response to said engagement of one of said pair of members by said first named member, and apparatus controlled by the energy transmitted over said path.

[Claims 6 to 46 not printed in the Gazette.]

1,022,499. PNEUMATIC CLEANER. THEODORE O. OSTERHOLM, Worcester, Mass., assignor of one-third to A. Ivar Pollack and one-third to Sixten A. Rosen, Worcester, Mass. Filed Apr. 10, 1911. Serial No. 620,144. (Cl. 15—60.)

1. In a pneumatic carpet sweeper, the combination with wind inducing devices and a dust collector, of a casing therefor having a cylindrical passage therein, a nozzle having an elongated slot for collecting the dust and provided with a tube extending therefrom and fitting in said passage by which tube the nozzle is pivotally

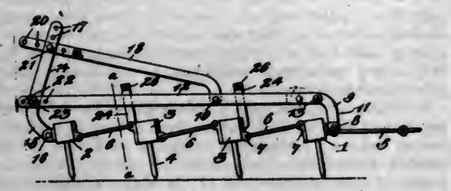
mounted on the casing, said tube having an opening connecting with said slot and being provided with an open end whereby a pipe can be inserted in the tube to shut off its communication with the slot and permit the exhaustion of air through the pipe.



2. In a carpet sweeper, the combination of a casing, wheels for supporting one end thereof, wind inducing devices connected with said wheels to be operated thereby as the device moves over a surface, a nozzle pivotally mounted on the casing and having an elongated slot for collecting dust, and wheels on said nozzle in position to support it in proper relation to the surface on which it moves and to support the end of the casing.

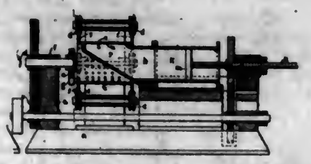
3. In a carpet sweeper, the combination with a casing having wind inducing devices and adapted to be moved over the surface to be cleaned, of a nozzle having an elongated slot and mounted on the casing to swing on an axis transverse to said slot and provided with rollers or wheels projecting slightly beyond the plane of said slot, whereby as the device is moved over a surface the said rollers will support the end thereof and keep the slot at the proper distance from the surface and parallel therewith independently of the position of the casing.

1,022,500. HARROW. RAYMOND CLAUD PEGRIM, Cedar Hill, Tenn. Filed June 19, 1911. Serial No. 633,990. (Cl. 55—76.)



In a harrow of the class described, the combination of a series of harrow bars, a link having a down-turned front end pivotally connected to the front harrow bar, a pair of link bars having their front ends secured to opposite sides of the said link, said link bars being spaced apart and extending rearwardly over the harrow bars, an adjusting lever fulcrumed to and disposed between the link bars, having its lower end pivotally connected to the rear harrow bar, the upper portion of the said adjusting lever being provided with a series of adjusting openings, a link arm pivotally connected at its front end between the pair of link bars and provided at its rear end with a series of adjusting openings, a pivot engaging one of the said openings and also one of the adjusting openings of the lever, links connecting the harrow bars flexibly together, and arms extending upwardly from the centers of the harrow bars and passing between and movable vertically and angularly in the space between the link bars, said arms having widened heads above the link bars for the purpose set forth.

1,022,501. MACHINE FOR MANUFACTURING GRAIN INTO FORM FOR FOOD. HENRY D. PERKY, Glencoe, Md.; Laban Sparks, administrator of said Henry D. Perky, deceased, assignor, by mesne assignments, to The Shredded Wheat Company, Niagara Falls, N. Y. Filed Mar. 13, 1906. Serial No. 305,888. (Cl. 107—14.)



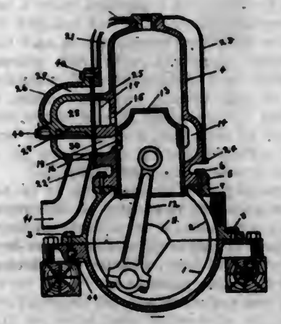
1. In a machine of the class described, a removable rolling receiver consisting of a perforated metal cylinder having an open end and provided at its ends with exterior annular rolling flanges of equal diameter adapted to protect the product adhering to the exterior of the cylinder between the flanges.

2. In a machine of the class described, the combination with a feed press, and a perforated hollow open-end cylinder, of a feed mouth extension within said cylinder, a drive head for the cylinder, and means for simultaneously operating said drive head and said press.

3. In a machine of the class described, the combination with a removable perforated cylinder provided with exterior end flanges, a feed press having a throat portion extending within and forming a bearing for said cylinder, a follower device for pressing the material into said throat portion, and means for simultaneously rotating said cylinder and moving said follower, substantially as specified.

4. In a machine of the class described, the combination with a perforated hollow cylinder and a press having a feed mouth forming an inside bearing for said cylinder, of means for simultaneously operating said press and said cylinder.

1,022,502. GAS-ENGINE. JAMES H. PIERCE, Bay City, Mich. Filed Mar. 5, 1909. Serial No. 481,295. (Cl. 123—173.)



1. A gas engine comprising a cylinder having intake and exhaust ports and a water passage leading downward from the outer end of the cylinder, which passage is open at its outer and inner ends, a water jacket inclosing the cylinder and extending to a point below the exhaust port, means communicating with the lower end of the water passage for receiving the overflow, and means for introducing water to the water jacket at a point adjacent the exhaust port.

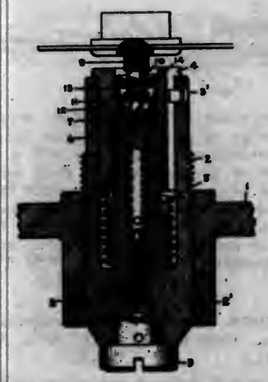
2. A water circulation for gas engines comprising a cylinder and a crank case, the former having intake and exhaust ports and a water passage leading from its outer end to a point adjacent the exhaust port, a water jacket inclosing the cylinder and extending to a point below the exhaust port, means communicating with the lower end of the water passage for receiving the overflow, the crank case provided with a water passage for leading water to the space between the cylinder and water jacket at a point below and adjacent to the exhaust port, the water adapted to overflow into the outer end of the passage in the cylinder.

3. A circulation system for gas engines comprising a cylinder having a water passage open at opposite ends and extending from the outer end of the cylinder, means communicating with the inner end of the water passage to receive the overflow, a water jacket removably inclosing the cylinder, and means for supplying liquid to the inner end of the cylinder, the liquid when at its highest temperature adapted to overflow into the outer end of the water passage.

4. A water circulation for gas engines comprising a cylinder having an exhaust port, a water jacket inclosing the cylinder and extending past the exhaust port, a member having an exhaust chamber in communication with the exhaust port, a water jacket for said chamber, the cylinder provided with a water passage extending from the head of the cylinder and discharging into the water jacket of the exhaust chamber, and an annularly grooved cap removably secured to the member, the water jacket of the member communicating with the groove in the cap, the cap provided with an overflow outlet for draining the last named water jacket, and means for supplying the cylinder jacket with water.

5. The combination with a cylinder having a water jacket and an exhaust port, of a chambered member communicating with the port, a water jacket partially surrounding the chambered member, an annularly recessed cap with which the water jacket of the member communicates, the cap provided with an overflow opening, and means for conducting water after its passage through the cylinder water jacket to the water jacket of the chambered member.

1,022,503. BEARING FOR ELECTRIC METERS. WILLIAM H. PRATT, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Jan. 25, 1910. Serial No. 539,916. (Cl. 64—25.)



1. A bearing for an electric meter shaft, comprising the shaft, an upper bearing pin attached thereto and having ears, a fixed hollow member having indentations adapted to engage said ears and a lower bearing plug yieldingly supported in said fixed member.

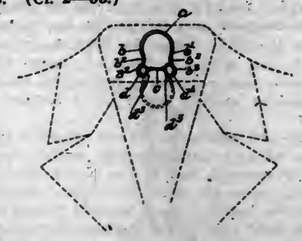
2. A bearing for an electric meter shaft, comprising the shaft, an upper bearing pin attached thereto and having ears, a fixed hollow member having indentations adapted to engage said ears, a lower bearing plug yieldingly supported in said member and a cap surrounding the bearing surfaces.

3. A bearing for an electric meter shaft, comprising the shaft, an upper bearing pin screwed into the lower end of said shaft and having ears, a fixed hollow member having indentations adapted to engage said ears and a lower bearing plug spring-supported in said member.

4. A bearing for an electric meter shaft, comprising the shaft, an upper bearing pin screwed into the lower end of said shaft and having ears, a fixed hollow member having indentations adapted to engage said ears, a lower bearing plug spring-supported in said member, a ball between the pin and the plug forming a ball bearing therewith, and a cap inclosing the ball.

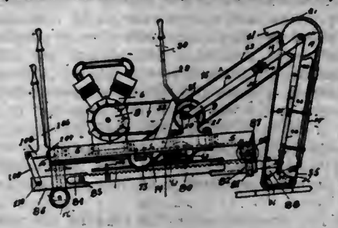
5. A bearing for an electric meter shaft, comprising the shaft, an upper bearing pin screwed into the lower end of said shaft and having ears, a fixed hollow member having indentations at its upper end adapted to engage said ears, a lower bearing plug movable in said member, a spring supporting said plug in said member, a ball between the pin and plug forming a ball bearing therewith, and a cap removably attached to the upper end of the fixed member inclosing the ball and its bearing surfaces.

1,022,504. GARMENT-HANGER. MICHAEL RAUGHTIGAN, Norwich, Conn., assignor of one-half to William H. Oat, Norwich, Conn. Filed Apr. 13, 1911. Serial No. 620,885. (Cl. 2—53.)



A garment-hanger constructed of a single piece of wire; said wire being bent, intermediate of the ends thereof, on the arc of a circle, to form the top of the hanger; thence, extended downward, on both sides, for a suitable distance; thence, bent inward, on both sides; thence, bent upward parallel with the lower portion of said downward extension, to form two pockets, and ending in horizontally-disposed terminals, said terminals being projected toward and overlapping each other, one of said terminals being grooved, and a portion of the other terminal extending into and lying within said groove.

1,022,505. FLOOR FINISHING AND SURFACING MACHINE. GEORGE S. REYNOLDS, San Diego, Cal. Filed June 6, 1911. Serial No. 631,649. (Cl. 51—13.)



1. In a floor surfacing machine, the combination with a bodily movable frame, of an abrasive belt, means for imparting travel to said belt, and means for imparting a bodily back and forth movement to said belt over the surface to be treated.

2. In a floor surfacing machine, the combination with a bodily movable frame, of an abrasive belt, means for imparting travel to said belt, means for imparting a bodily back and forth movement to said belt over the surface to be treated, and means for bodily elevating said belt to bring it out of contact with the surface acted upon.

3. In a floor surfacing machine, the combination with a bodily movable frame, of an abrasive belt, means for

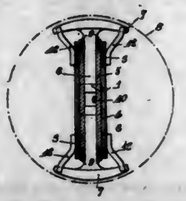
imparting travel to said belt, means for imparting a bodily back and forth movement to said belt over the surface to be treated, means for driving said machine bodily, and means for varying the rate of speed at which the machine is driven.

4. In a device of the character described, the combination with a wheeled supporting frame, of a longitudinally traveling rack bar, means for imparting a back and forth movement to said rack bar, a swinging frame to which said rack bar is connected, rollers mounted in said swinging frame, an abrasive belt passing over said rollers, and means for imparting movement to said abrasive belts.

5. In a device of the character described, the combination with a wheeled supporting frame, of a longitudinally traveling rack bar, means for imparting a back and forth movement to said rack bar, a swinging frame to which said rack bar is connected, rollers mounted in said swinging frame, an abrasive belt passing over said rollers, means for imparting movement to said abrasive belts, and manually operable means for imparting a swinging movement to said rack bar to elevate said abrasive belts.

[Claims 6 to 14 not printed in the Gazette.]

1,022,506. BRAKE MECHANISM FOR VEHICLES. FRANÇOIS ROLLAND and EMILE PILAIN, Tours, France. Filed Oct. 13, 1911. Serial No. 654,519. (Cl. 188—3.)



1. In fluid pressure brakes for vehicles, the combination with a dead axle and a stud axle, and a wheel carried by said stud axle, of a pintle operatively connecting said dead axle and stud axle and having a longitudinal bore, a piston in the bore of said pintle, a device carried by the wheel having an internally formed peripheral face concentric with said stud axle, means for introducing fluid pressure into the said bore of said pintle for actuation of said piston, and mechanism adapted to frictionally engage the said face of said device responsive to actuation of said piston.

2. In fluid pressure brakes for vehicles, the combination with a dead axle and a stud axle, and a wheel carried by said stud axle, of a pintle operatively connecting said dead axle and stud axle and having a longitudinal bore, a piston in the said bore of said pintle, a device carried by the wheel having an internally formed peripheral face concentric with said stud axle, means for introducing fluid pressure into the said bore of said pintle for actuation of said piston, a brake shoe curved complementary to said face of said device and operatively connected to said piston to frictionally engage the said face responsive to action of said piston in one direction, and instrumentality for positioning said brake shoe with the curved portion thereof in operative relation to the said peripheral face of said device.

3. In fluid pressure brakes for vehicles, the combination with a dead axle and stud axle, and a wheel carried by said stud axle, of a pintle operatively connecting the said dead axle and stud axle and having a longitudinal bore, a piston in the said bore of said pintle, means for introducing fluid pressure into the said bore of said pintle for actuation of said piston, and mechanism actionable upon movement of said piston in one direction for braking said wheel.

4. In fluid pressure brakes, the combination of a dead axle, a pintle carried by said dead axle and having a longitudinal bore, a stud axle, a shackle carried by said stud axle and provided with sleeve portions movable about said pintle, a wheel carried by said stud axle, a piston in the said bore of said pintle, a device carried by said wheel having an internally formed peripheral face concentric with said stud axle, means for introducing fluid pressure to the said bore of said pintle for actuation of said piston, and mechanism adapted to frictionally engage the said face of said device responsive to actuation of said piston.

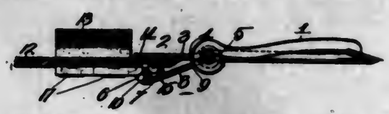
5. In fluid pressure brakes, the combination of a dead axle, a pintle carried by said dead axle and having a longitudinal bore, a stud axle, a shackle carried by said stud axle and provided with sleeve portions movable about said pintle, a wheel carried by said stud axle, a piston in the said bore of said pintle, means for introducing fluid pressure into the said bore of said pintle for actuation of said piston, and mechanism actionable upon movement of said piston in one direction for braking said wheel.

1,022,507. BABY-HOLDER ATTACHMENT FOR CRIBS, &c. MARION J. ROSS, Boston, Mass. Filed Dec. 15, 1911. Serial No. 665,989. (Cl. 5—3.)



A baby holder for cribs, comprising shoulder straps having a front V-shaped portion and a back V-shaped portion, a transversely arranged strap secured to both the front and back portions and adapted to encircle the child's body below the arms and provided with adjusting devices, a looped strap attached at its ends to the apexes of the front and back V-shaped portions of the shoulder straps and adapted to extend to a point between the legs of the child, and another strap adjustably connected with said looped strap and provided with means for attaching it to the frame of the crib.

1,022,508. BELT-FASTENING MEANS. OTIS R. RUST, Kansas City, Mo. Filed Feb. 8, 1911. Serial No. 607,444. (Cl. 24—265.)



A belt, comprising a buckle, a clamp secured to the buckle, consisting of two members, one hinged to the other and provided with a gripping jaw, a strap, and a loop adjustably arranged on the strap and provided with a tongue adapted to fit flatly against the strap at one end of the same; said end of the strap and the tongue of the loop fitting and adapted to be clamped between one of the members of the clamp and the jaw of the other member.

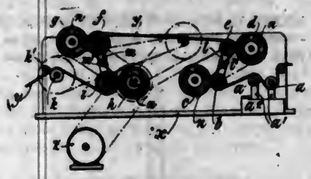
1,022,509. HORN. ERNST C. SCHMIDHOFER, Minneapolis, Minn. Filed Mar. 25, 1911. Serial No. 616,946. (Cl. 84—147.)



1. A horn comprising a body having a wind aperture at its rear end, a vibrator plate slidably mounted over said aperture, a rod connected with said plate and adapted to move it with respect to the aperture and a crank shaft mounted on the body and connected with said rod.

2. A wind instrument, comprising a horn shaped body having an aperture near its rear end, a box secured on the rear portion of the body and having an opening in its rear end and an opening registering with said aperture, a vibrator plate slidably mounted in said box, a rod secured on said plate and extending through the forward end of the box, and a crank shaft journaled on the body and connected to the forward end of said rod.

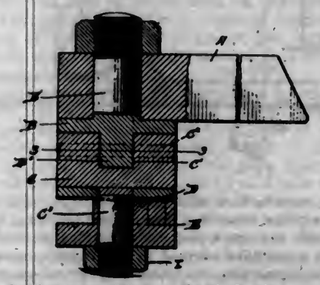
1,022,510. MEANS FOR CLEANING KINEMATOGRAPH AND LIKE FILMS. ALLEYNE BURTON SHADBOLT, Hammersmith, London, England. Filed Apr. 20, 1911. Serial No. 622,411. (Cl. 15—3.)



1. In a machine for cleaning films, the combination, with a supporting frame, of moistening devices arranged to bear against both sides of the film, a pair of cleaning rollers journaled in the frame, an adjustable support secured to the frame and arranged between the pair of cleaning rollers, idler rolls carried by the said support and adapted to press the opposite sides of the film against the respective cleaning rollers, and driving devices for drawing the film between the said cleaning rollers and idler rolls.

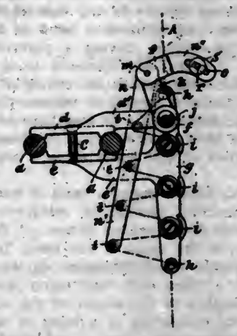
2. In a machine for cleaning films, the combination, with a supporting frame, of moistening devices arranged to bear against both sides of the film, a pair of cleaning rollers journaled in the frame, an adjustable arm or lever having its middle part pivoted to the frame between the said cleaning rollers, idler rolls journaled at the end portions of the said arm or lever and adapted to press the opposite sides of the film against the respective cleaning rollers, and driving devices for drawing the film between the said cleaning rollers and idler rolls.

1,022,511. TOOL-HOLDER. ALBERT SHERIFF, Covington, Ky. Filed Feb. 15, 1910. Serial No. 544,003. (Cl. 90—52.)



A tool holder comprising a shank having an aperture at its outer end, a head having a stem extending through said shank, the upper end of said stem being threaded to receive a nut, a transverse rib arranged upon said head having an aperture adjacent one end thereof, a block having a groove adapted to receive the transverse rib and a pivot pin adapted to pass through said block and through the aperture of the transverse rib, a stem projecting from said block, a serrated washer arranged thereon, and a tool holding member arranged upon said stem and a nut for securing the same thereon, said tool holding member having converging tool receiving slots, and a cut-away portion, said slots and cut-away portions being contiguous to the serrated face of the washer, substantially as and for the purpose described.

1,022,512. TENSION DEVICE. GRANT SIPP, Paterson, N. J. Filed Jan. 19, 1911. Serial No. 603,476. (Cl. 242—153.)



1. A thread-tension device comprising two thread-guiding members having thread-guiding portions alternately engaged by the thread, one of said members being free to move pivotally toward and from the other cross-wise of the normal thread line and means, allowing shifting of one of said members toward and from said thread line, for adjustably supporting said last-named member in co-operative relation to the other member, substantially as described.

2. A thread-tension device comprising two thread-guiding members having thread-guiding portions alternately engaged by the thread, one of said members being free to move pivotally toward and from the other crosswise of the normal thread line and pivoted means, allowing shifting of one of said members toward and from said thread line, for adjustably supporting said last-named member in coöperative relation to the other member, substantially as described.

3. A thread-tension device comprising two thread-guiding members having thread-guiding portions alternately engaged by the thread, one of said members being free to move pivotally toward and from the other crosswise of the normal thread line and means, allowing shifting of the pivoted member toward and from said thread line, for adjustably supporting said pivoted member in co-operative relation to the other member, substantially as described.

4. A thread-guiding device acting to guide the thread in a general up and down direction and comprising two thread-guiding members having thread-guiding portions alternately engaged by the thread, one of said members being pivotally movable on a substantially horizontal axis toward and from the other crosswise of the normal thread line and means allowing shifting of said last-named member toward and from the normal thread line, for adjustably supporting said last-named member in coöperative relation to the other member, substantially as described.

1,022,513. DECKLE-STRAP. FRANK L. SMITH, Akron, Ohio, assignor to The B. F. Goodrich Company, Akron, Ohio, a Corporation of Ohio. Filed June 16, 1911. Serial No. 633,522. (Cl. 92—44.)



1. A deckle-strap, consisting of a band of flexible rubber square in cross-section, having a plurality of rein-

forcing elements therein, said elements being symmetrically disposed with reference to the center of the strap, and each element being composed of layers of fabric, said layers lying in planes oblique to any face of the strap.

2. A deckle-strap, consisting of a band of flexible rubber square in cross-section, having a plurality of reinforcing elements therein, said elements being symmetrically disposed with reference to the center of the strap, and each element being composed of layers of fabric, said layers being in planes oblique to any face of the strap, and the layers of each element being in planes at right angles to the planes of the layers of each adjoining element.

3. A deckle-strap consisting of a band of flexible rubber square in cross-section, containing reinforcement composed of longitudinally-extending layers of fabric lying in planes oblique to the faces of the band, half of said layers lying in planes at right angles to the remaining layers, the layers of each such half being symmetrically disposed with reference to the center of the strap.

4. A deckle-strap consisting of a band of flexible rubber, square in cross-section, having embedded therein a plurality of reinforcing elements, each element being triangular in cross-section, the apices of the elements pointing toward the center of the strap, each element being composed of laminated, rubber-coated fabric, the layers in any one element lying in a plane at substantially right angles to the planes of the fabric in the next adjacent elements, and at an angle of substantially 45° to the adjacent onter face of the strap.

5. A deckle-strap consisting of a band of flexible rubber, square in cross-section, having embedded therein a plurality of symmetrically-disposed reinforcing elements composed of laminated fabric, the fabric of half of said elements lying in planes parallel to one diagonal of the strap, while the fabric of the other half of said elements stands at substantially right angles to said diagonal.

[Claims 6 to 8 not printed in the Gazette.]

1,022,514. ARC-LAMP HANGER. GEORGE E. STEVENS, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Feb. 23, 1909. Serial No. 479,468. (Cl. 240—66.)



1. An arc lamp hanger comprising a plug, a locking device adapted to engage and disengage said plug according to the extent of inward movement of said plug, and means controlled by said locking device to limit alternate inward movements of said plug.

2. An arc lamp hanger comprising a plug having a head and a shoulder, a locking device adapted to engage and disengage said head according to the extent of inward movement of said plug, and a stop controlled by said locking device to engage said shoulder on alternate inward movements of said plug.

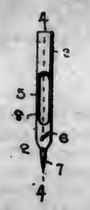
3. An arc lamp hanger comprising a plug, means to limit the first inward movement of the plug, a locking device adapted to engage said plug when brought into a predetermined position, and a releasing device carried by said locking device and operated by a second inward movement of said plug.

4. An arc lamp hanger comprising a headed plug, a segmental locking device to receive and support the head of said plug, means for yieldingly pressing the segments of said locking device together, a toggle actuated by the plug for opening said locking device, and means for limiting alternate inward movements of the plug.

5. An arc lamp hanger, comprising a headed plug, a stationary housing to receive said plug, a segmental locking ring in said housing to receive and support said head, a spring for automatically closing said ring after said head has passed up through it, forked toggle links pivoted together and to the segments of said ring, a shoulder on said plug for setting said toggle, and lugs on said links for tripping the toggle when said head passes down through it.

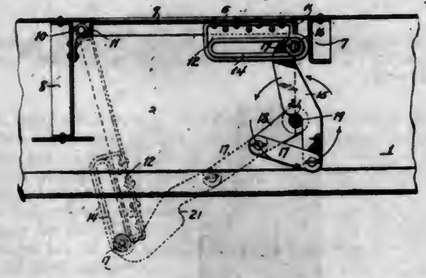
[Claims 6 to 13 not printed in the Gazette.]

1,022,515. NEEDLE FOR SOUND-REPRODUCING MACHINES. BENARD TENDLER, Schulenburg, Tex. Filed Sept. 20, 1911. Serial No. 650,345. (Cl. 181—11.)



A gramophone needle comprising a hollow shank, a flat portion terminating in a pointed end and elongated parallel connecting arms between said shank and said flat portion, said arms being spaced to form an elongated slot therebetween, said slot communicating with the bore of said shank, said arms being capable of being bent laterally.

1,022,516. DROP-DOOR MECHANISM FOR CARS. JOHN E. TESSEYMAN and ROBERT R. WEAVER, Columbus, Ohio, assignors to The Ralston Steel Car Company, Columbus, Ohio. Filed Nov. 28, 1911. Serial No. 662,949. (Cl. 105—14.)



1. The combination with a hinged door, of a shaft located in a plane below the door, levers having a loose connection with the doors, and each provided intermediate its ends with a shoulder adapted to rest loosely on said shaft, and means connecting the shaft and levers whereby when the shaft is rotated to lower the door, the said levers turn and have a longitudinal sliding movement on said shaft.

2. The combination with a hinged door having guides at its sides near its free end, of a shaft located in a plane below the door, levers having a sliding bearing in said guides and each provided intermediate its ends with a shoulder adapted when the door is closed to rest on said shaft, and means connecting the said shaft and levers whereby when the shaft is rotated to lower the door the said levers turn and have a longitudinal sliding movement on said shaft.

3. The combination with a hinged door having guide brackets at the sides near its free end, of a shaft mounted below but adjacent the free end of the door, and provided with cranks, levers each having sliding bearing in a guide bracket and each provided intermediate its ends with a shoulder adapted when the door is closed, to rest on said shaft and form a solid lock for the door, and links connecting the opposite ends of said levers to the cranks whereby when the shaft is turned to release the door, the levers have a turning and sliding movement on the shaft, and when the shaft is turned to close the door, the levers have a sliding and rotary movement in the reverse direction on said shaft.

4. The combination with a hinged door having slotted guide brackets at its sides near its free end, of a crank shaft mounted below but adjacent the vertical plane of the free edge of the door, two levers each provided intermediate its ends, with a shoulder adapted when the door is closed to rest on said shaft and having a sliding connection at one end with said slotted guides, and links connecting the other ends of said levers and cranks, whereby when the shaft is turned to release the door, the levers first turn and then slide on the shaft and pass over and away from the shaft, and in the closing movement of the door, are drawn up to and on the shaft, and then slide and turn thereon to fully close the door.

1,022,517. ELECTRICAL MEASURING INSTRUMENT. ELIHU THOMSON, Swampscott, Mass., assignor to General Electric Company, a Corporation of New York. Filed July 30, 1908. Serial No. 446,083. (Cl. 171—95.)



1. A measuring instrument comprising a magnet having confronting parallel annular pole pieces eccentrically mounted on the poles of said magnet, one of said pole pieces having a flange adapted to counteract irregularities in the field due to the relation of the poles of the magnet and thereby produce a uniform magnetic flux throughout a definite portion of the air gap between said pole pieces, and a current coil mounted to move in said portion of said air gap.

2. A measuring instrument comprising a magnet and confronting parallel annular pole pieces eccentrically mounted on the poles of said magnet, one of said pole pieces having an equalising flange shaped to produce a uniform magnetic flux between the pole pieces, and a current coil mounted to move between said pole pieces.

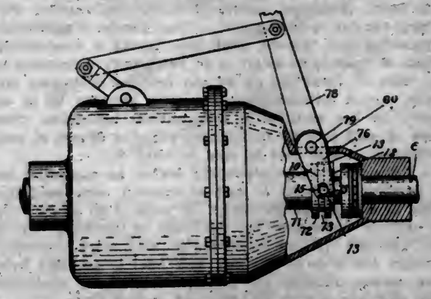
3. A measuring instrument comprising a magnet having its poles out of alinement and parallel annular pole pieces eccentrically mounted on the poles of said magnet, one of said pole pieces having an equalising flange extending between the pole of the magnet and the opposing pole piece and shaped to produce a uniform magnetic field between said pole pieces, and a current coil mounted to move between said pole pieces.

4. In a measuring instrument, the combination with a magnet having annular pole pieces mounted side by side and parallel to each other one of said pole pieces having a flange and a radial groove adapted to produce an annular field having adjacent portions of different flux density, of a moving system comprising a damping member of conducting material extending through both said adjacent portions of different flux density.

5. In a measuring instrument, the combination with a magnet having annular pole pieces mounted parallel with each other and side by side and provided with radial grooves in the adjacent faces to produce a weak field between two strong fields, of a moving system comprising a damping disk pivoted concentric with said pole pieces and extending through all said fields in all positions of the moving system.

[Claims 6 to 8 not printed in the Gazette.]

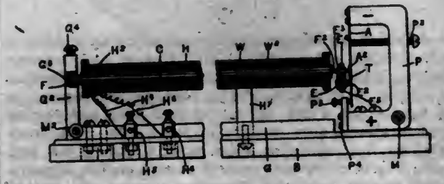
1,022,518. THRUST-COLLAR. HENRY A. TUTTLE, Taunton, Mass., assignor to Evans Stamping & Plating Company, Taunton, Mass., a Corporation of Massachusetts. Filed June 9, 1911. Serial No. 632,134. (Cl. 74—39.)



1. The combination with a rotatable sliding thrust-collar having a circumferential groove, adapted to be arranged on a shaft, of a non-rotatable semicircular yoke made of a width corresponding to the width of the groove in the thrust-collar, which is arranged in said groove, a circular ring of smaller diameter than the yoke adapted to be arranged on the shaft bearing the thrust collar contiguous the rear end thereof, bridges connecting the extremities of said yoke with the ring and a bridge connecting an intermediate part of said yoke with the ring, all of said bridges being angularly formed and extending over the rear end portion of the thrust-collar, and studs projecting outwardly from the bridges at the extremities of the yoke adapted to be engaged by an actuating-lever, substantially as described.

2. The combination with a rotatable sliding thrust-collar having a circumferential groove, adapted to be arranged on a shaft, of a non-rotatable semicircular yoke made of a width corresponding to the width of the groove in the thrust-collar, which is arranged in said groove, a circular ring of smaller diameter than the yoke adapted to be arranged on the shaft bearing the thrust collar contiguous the rear end thereof, bridges connecting the extremities of said yoke with the ring and a bridge connecting an intermediate part of said yoke with the ring, all of said bridges being angularly formed and extending over the rear end portion of the thrust-collar, and studs projecting outwardly from the bridges at the extremities of the yoke adapted to be engaged by an actuating-lever, said studs being made of a diameter greater than the width of the yoke, substantially as described.

1,022,519. TELEPHONE-REPEATER. NATHANIEL G. WARTH, Columbus, Ohio. Filed Jan. 28, 1910. Serial No. 540,523. (Cl. 179—171.)



1. In a telephone device, the combination of a long receiving coil having a long thin core capable of being varied in its length by the magnetic influence of the coil and a reproducing element adapted to be actuated by the

movements produced, together with a vibratory attractive armature associated with said reproducing element and confronting the free pole of said core to be actuated by the magnetic attraction of the core, substantially as specified.

2. In a telephone instrumentality, a long coil, a long magnetically molecular expansible core within the coil, a reproducing element attached to an end of said core to move with same and another reproducing element confronting the same core end to be attracted and actuated magnetically by same, said elements moving cooperatively to reproduce the original vibrations.

3. In a telephone instrument, the combination with a long tubular receiving coil, a long slender magnetically expansible core therein, said core having a cross-section which in mass is so small as to be entirely permeated by the lines of force set up by the received telephone currents, and a microphone transmitter adapted to be actuated by the endwise or longitudinal expansion vibrations of said core in accordance with the degree of magnetisation of said core by said receiver coil.

4. In a telephone reproducing device, an elongated coil in combination with a long attenuated core, said core being of a cross-section which in mass is so small as to be entirely permeated by the lines of force set up by the received telephone currents, said core extending through the bore of the coil and having one end fixed, with means adapted for reproduction effects associated with and operated by the free end of said core.

5. In a telephone relay, in combination, a long slender winding, a long and very slender magnetic core within said winding, said core being adapted to be expanded longitudinally or endwise by telephonic currents, a magnetic return member associated with said core and winding for confining the field of force, and a repeating microphone adapted to be actuated by the expansions of said core, substantially as specified.

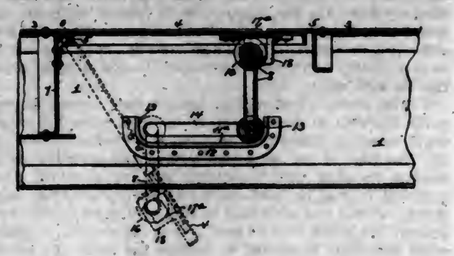
[Claims 6 to 8 not printed in the Gazette.]

1,022,520. WRENCH. GEORGE B. WEATHERLY, Fort Worth, Tex. Filed July 20, 1911. Serial No. 639,539. (Cl. 81—88.)



A device of the character described including a suitable handle having a longitudinal slot therein and recesses extending laterally from said slot, a laterally extending jaw integral with said handle, a yoke slidably secured to said handle and a jaw carried by said yoke and having a limited lateral play relative to the handle, rack teeth carried by the contacting sides of said sliding jaw and handle, a lever adjustably secured to said handle, a means secured to said lever and extending through the slot in said handle and designed to move along said slot but so shaped as to project into said recesses when said lever is suitably manipulated, and a pivotal connection by means of which said lever is connected to said sliding jaw.

1,022,521. DUMPING-CAR. ROBERT R. WEAVER, Columbus, Ohio, assignor to The Ralston Steel Car Company, Columbus, Ohio. Filed Nov. 28, 1911. Serial No. 662,887. (Cl. 105—14.)



1. The combination with a dumping door, of a crank shaft mounted to move toward and from the free end of the door, and means secured to the underside of the door for permitting backward and forward movement of the crank arm and for causing it to move with the door in opening and closing.

2. The combination with a dumping door, of a crank shaft mounted to move toward and from the free end of the door, and a bracket secured to the underside of the door, and permitting the crank arm to move only slightly in either direction past its dead center when the door is closed, and for causing the crank arm to move with the door in opening and closing.

3. The combination with a dumping door and trackways located beneath the door, of a crank shaft supported and adapted to travel to and fro upon said trackways, and brackets secured to the underside of the door and adapted to permit the crank arm to move only slightly in either direction past its dead center when the door is closed and for causing the crank arm to be moved by the door when the latter is opening and closing.

4. The combination with a dumping door and stationary trackways located beneath the door, of a crank-shaft supported and adapted to travel to and fro upon said trackways, and means attached to the underside of the door and adapted to permit the crank arm to move only slightly in either direction past its dead center when the door is closed and for causing the crank arm to be moved by the door when the latter is opening and closing.

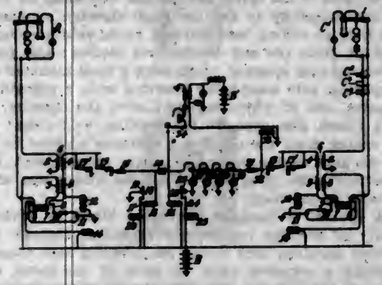
5. The combination with a dumping door and stationary trackways located beneath the door, of a crank-shaft provided with roller bearings which are supported and adapted to travel upon said bearings, and means for connecting the crank-arm with the underside of the door and for permitting it to move outwardly past its dead center when the door is closed and for causing the crank arm to be moved by the door when the latter is opening and closing.

[Claims 6 to 15 not printed in the Gazette.]

1,022,522. TELEPHONE-EXCHANGE SYSTEM. HARRY G. WEBSTER, Chicago, Ill., assignor, by mesne assignments, to Kellogg Switchboard & Supply Company, a Corporation of Illinois. Filed Dec. 28, 1907. Serial No. 408,402. (Cl. 179—58.)

1. A telephone system including a telephone line, multiple terminals therefor, an induction device connected between said terminals and said line, a line relay permanently controllable by the subscriber, a cut-off relay permanently controllable by the operator, said relays being connected in conductively disunited portions of the line circuit, a supervisory relay adapted for connection in that portion of the circuit including the cut-off relay, switch contacts for said supervisory relay, and means whereby the subscriber solely controls the operative positions of said switch contacts while said supervisory relay is connected with said cut-off relay.

2. A telephone system including a telephone line, multiple terminals therefor, a repeating coil connected between said line and its terminals, a line relay permanently controllable by the subscriber, a cut-off relay permanently controllable by the operator, said relays being connected in conductively disunited portions of the line circuit, a supervisory relay adapted for connection in that portion of the circuit including the cut-off relay, switch contacts for said supervisory relay, and a switch contact of said line relay for controlling the amount of current flow in said supervisory relay while it is connected with said cut-off relay.



3. A telephone system including a telephone line, multiple terminals therefor, an induction device connected between said terminals and said line, a line relay permanently controllable by the subscriber, a cut-off relay permanently controllable by the operator, said relays being connected in conductively disunited portions of the line circuit, a supervisory relay adapted for connection in that portion of the circuit including the cut-off relay, a switch contact of said line relay for controlling the amount of current flow in said supervisory relay while it is connected with said cut-off relay, and circuit-changing mechanism controlled by said supervisory relay and adapted to be altered thereby as the amount in said relay of current is varied.

4. A telephone system including a telephone line, multiple terminals therefor, a repeating coil connected between said line and its terminals, a line relay permanently controllable by the subscriber, a cut-off relay permanently controllable by the operator, said relays being connected in conductively disunited portions of the line circuit, a supervisory relay adapted for connection in that portion of the circuit including the cut-off relay, a switch contact of said line relay for controlling the amount of current flow in said supervisory relay while it is connected with said cut-off relay, and circuit changing-mechanism controlled by said supervisory relay and adapted to be altered thereby as the amount in said relay of current is varied.

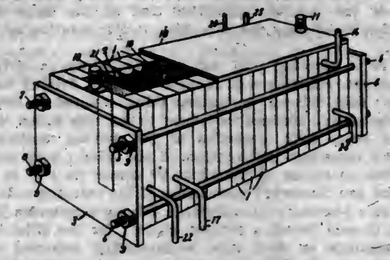
5. A telephone system including a telephone line, multiple terminals therefor, an induction device connected between said terminals and said line, a line relay permanently controllable by the subscriber, a cut-off relay permanently controllable by the operator, said relays being connected in conductively disunited portions of the line circuit, a supervisory relay connected with said cut-off relay, and a switch contact of said line relay for controlling the amount of current flow in said supervisory relay while it is connected with said cut-off relay.

[Claims 6 to 14 not printed in the Gazette.]

1,022,523. CONCENTRATION OF SOLIDS IN LIQUIDS. WILLIS R. WHITNEY, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Apr. 2, 1910. Serial No. 553,012. (Cl. 204—1.)

1. The process which consists in impressing an electromotive force upon a liquid containing suspended organic solid material, while said liquid is in contact with a diaphragm impermeable with respect to said solids, thereby migrating said solids toward and precipitating the same upon said diaphragm, introducing a disinfectant into contact with said organic material and removing said disinfectant by electrical migration.

2. The combination of a container, a plurality of partitions dividing said container into compartments, electrodes immersed in substantially pure water in each of the end compartments, means for renewing said water, means for maintaining a flow of liquid containing suspended solid matter through each of the other compartments and means for cooling the liquid in said container.



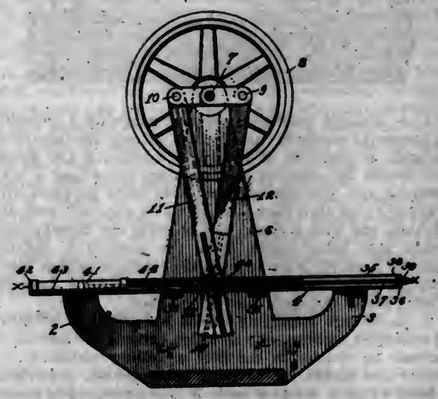
3. In an electrical migration apparatus, a container, permeable partitions separating said container into sections to form a plurality of chambers, means for maintaining a flow of substantially pure water through the end chambers, and electrodes for said chambers.

4. The process of preserving milk solids collected upon a diaphragm permeable with respect to liquids, but impermeable with respect to the milk solids which consists in electrically migrating a disinfectant through said milk solids, thereby destroying bacterial life.

5. The process of preserving an organic solid material collected upon a diaphragm permeable with respect to said liquid but impermeable with respect to said solid which consists in introducing a disinfectant into contact with said organic material and finally removing said disinfectant by electrical migration.

[Claims 6 and 7 not printed in the Gazette.]

1,022,524. MECHANISM FOR PIERCING METALLIC INGOTS OR BILLETS. MALCOLM URBAN WIKSTRÖM, Storfors, Sweden. Filed July 9, 1909. Serial No. 506,735. (Cl. 80—11.)



1. In a piercing mill, a double crank driving machanism, reciprocating reducing rods journaled to said driving mechanism at an inclination to each other; said bars having their inner faces curved leaving the entrance and exit of the pass between the rods wider than the central portion of the pass.

2. In a piercing mill, a frame, a driving mechanism, reciprocating rods journaled to said driving mechanism leaving their free ends depending between the standards of the frame; said rods having grooves formed therein, rollers to engage with grooves formed in the depending

ends of said rods to exert a pressure against the rods and guide them in their movements.

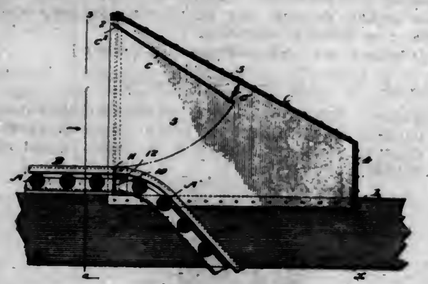
3. In a piercing mill for piercing billets, a double crank driving mechanism, reducing rods connected to said driving mechanism; said driving mechanism being adapted to impart reciprocating movement to the rods whereby the rods are made to assume an inclination in opposite directions to the axis of the piercing mill every half revolution of the driving mechanism and at the same time periodically change the direction of the rotation of the billet.

4. In a piercing mill for piercing billets, a driving mechanism, reducing rods connected to said driving mechanism; said driving mechanism being adapted to impart a reciprocating inclined movement to the rods which is reversed every half revolution of the driving mechanism thereby changing the rotation of the billet; said reducing rods operating on the billet to reduce its size in the upward and downward movements of the reducing rods.

5. In a piercing mill, a frame, a driving mechanism journaled to said frame, a tubular support for the billet having openings on each side, reciprocating reducing rods connected to the driving mechanism and adapted to assume a mutual inclination to the billet and each other which is periodically reversed, said reciprocating rods working the billet on the downward and on the upward strokes.

[Claim 6 not printed in the Gazette.]

1,022,525. PACKAGE-CONVEYING SYSTEM. BENJAMIN H. ALVEY and MORRIS U. BERNHEIM, Louisville, Ky., assignors, by mesne assignments, to The Alvey-Ferguson Company, Oakley, Cincinnati, Ohio, a Corporation of Ohio. Filed Dec. 10, 1907. Serial No. 405,916. (Cl. 193—1.)



1. A package conveying means comprising a plurality of connected sections, one of which extends inclinatorially through an opening in the room containing the other; and means for covering said opening, comprising a hood mounted over said opening, said hood being provided with a plurality of open sides, one of which registers with the opening, and with a closed side opposite the opening, said closed side being spaced from the opening a distance adapted to permit a package on the conveyer to pass therethrough from one section to the other, and a door for closing one of the open sides of the hood.

2. A package conveying means comprising a plurality of connected sections, one of which extends inclinatorially through an opening in the floor or ceiling containing the other; and means for covering said opening, comprising a hood which is mounted on said floor or ceiling over said opening and has an open bottom registering with the latter, a closed top spaced from the floor or ceiling a distance adapted to permit packages on the conveyer to pass through the hood, an open front having a door which affords access to its interior and a closed back and lateral sides.

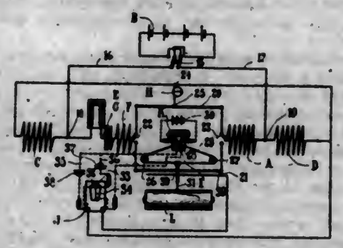
3. A package conveying system, comprising a section in one room, a second section connected therewith and extending inclinatorially to another room, through an opening in the floor or ceiling between said rooms, said opening being off-set from the end of the first section; and means for covering said opening, comprising a hood mounted over said opening, said hood being provided with a plurality of open sides, one of which registers with the opening, and with a closed side opposite the opening, said closed side being spaced from the opening a distance adapted to permit a package on the conveyer to pass therethrough from one section to the other, and a door for closing one of the open sides of the hood.

4. A package conveying system, comprising a spiral section in one room, a second section connected with the receiving end of the spiral section and extending off therefrom inclinatorially to another room through an opening in the floor or ceiling between said room, said opening being off-set from the end of the first section; and means for covering said opening, comprising a hood mounted over said opening, said hood being provided with a plurality of open sides, one of which registers with the opening, and with a closed side opposite the opening, said closed side being spaced from the opening a distance adapted to permit a package on the conveyer to pass therethrough from one section to the other, and a door for closing one of the open sides of the hood.

5. A system of package conveying elements having a plurality of sections respectively extending through floor or ceiling openings, and means for covering said openings comprising a separate hood for each of the same, each having an open front and bottom and being otherwise closed and provided with a door for closing communication through the floor or ceiling opening, said hood being of size adapted to permit packages to pass therethrough.

[Claims 6 to 20 not printed in the Gazette.]

1,022,526. METHOD OF AND APPARATUS FOR RECORDING MARINE CONDITIONS. HOWARD TURNER BARNES, Montreal, Quebec, Canada. Filed Mar. 6, 1911. Serial No. 612,623. (Cl. 234—1.5.)



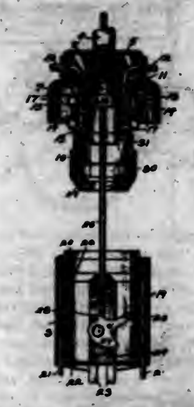
The method of determining the proximity of icebergs, etc., at sea, which consists in immersing in the water a thermometer getting an accurate record of the readings of said thermometer and deducing from certain peculiarities of said record the proximity of such icebergs, etc.

1,022,527. ARC-LAMP HANGER. JOHN T. BEECHLYN, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Feb. 19, 1909. Serial No. 478,871. (Cl. 240—66.)

1. An arc lamp hanger comprising a part containing an internal groove, a second part having a pawl, and means for causing said pawl positively to engage with said groove when the pawl-carrying part is caused to enter the grooved part to a certain extent and permitted to retract slightly.

2. An arc lamp hanger comprising a stationary part having a ledge, a movable part adapted to be drawn up into said stationary part and provided with a pawl, means to positively hold said pawl in position to engage said ledge during the time the movable part is first raised and slackened off and freeing said pawl upon a second raising of said movable part.

3. An arc lamp hanger comprising a stationary tubular part having an internal groove, a movable part adapted to enter said stationary part, an overbalanced pawl on the movable part, and means for holding said pawl in position to engage with said groove when said movable part is thrust into said stationary part.

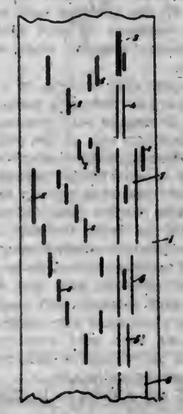


4. An arc lamp hanger comprising a stationary tubular part having an internal groove, a movable part adapted to enter said stationary part, an overbalanced pawl on the movable part, and means for holding said pawl in position to engage with said groove when said movable part is thrust into said stationary part, said means comprising a finger on the pawl and a shoulder on said stationary part to coöperate with said finger.

5. An arc lamp hanger comprising a stationary tubular part having an internal groove and an annular recess of larger diameter above said groove, a movable part having a slotted plug, an overbalanced pawl pivoted in the slot, a finger on said pawl, and a shoulder inside said stationary part to coöperate with said finger.

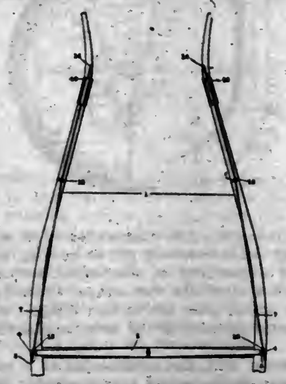
[Claim 6 not printed in the Gazette.]

1,022,528. TONE-VOLUME INDICATOR. FRANK B. BEINKAMP, Cincinnati, Ohio, and LEBBEUS L. HARDING, Canon City, Colo., assignors to The Vocalstyle Music Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Oct. 21, 1910. Serial No. 588,242. (Cl. 84—162.)



In a perforated music sheet for player pianos having perforations therein representing the notes of a composition, a series of parallel lines extending longitudinally upon said music sheet and parallel to the side edges of the music sheet, each pair of said parallel lines being spaced apart longitudinally from the adjacent pairs of parallel lines and the parallel lines of each pair being spaced varying distances laterally from each other and at a different distance from each other than the parallel lines of the adjacent pairs are spaced laterally from each other, whereby the volume of tone to be given any part of said composition as said music sheet passes over the tracker board of a player piano, is indicated, substantially as set forth and for the purposes specified.

1,022,529. TUG AND SHAFT ATTACHMENT. SAMUEL BLODGETT, Oakdale, Cal. Filed Aug. 2, 1909. Serial No. 510,849. (Cl. 21—36.)



1. A tug and shaft attachment comprising shafts, a swingletree thereon, a post screwed into each end of said swingletree, said posts having heads provided with tapering central orifices and rear semicircular recesses, a tug rod extending through each of said orifices, cylindrical cross bars on said tug rods bearing in the said semicircular recesses and guides for said tug rods as described.

2. A tug and shaft attachment comprising shafts, a swingletree on said shafts, a post screwed into each end of said swingletree, heads on said post provided with central tapering orifices and with rear semicircular recesses, tug rods projecting through said orifices and having threaded ends, and cylindrical members mounted on said threaded ends bearing in said recesses as described.

3. A tug and shaft attachment for shafts comprising shafts, a swingletree on said shafts, posts mounted on each end of said swingletree, heads on said posts provided with central orifices, tug rods projecting through said orifices and having threaded ends, members mounted on said threaded ends to the rear of said heads and bearing against the same, nuts mounted on said threaded ends and the other side of said heads and springs interposed between said heads and said nuts as described.

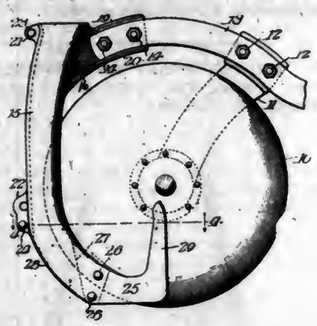
4. A device of the character described comprising shafts, a swingletree mounted on said shafts, tug rods mounted on each end of said swingletree, guides for said tug rods mounted on said shafts, said guides comprising frames, a fixed pulley and a spring pressed pulley mounted in each of said frames, said tug rods being adapted to project between said pulleys as described.

1,022,530. GRAIN-DRILL. PETER BROMAN, Beaver Dam, Wis., assignor to Beaver Dam Manufacturing Company, Beaver Dam, Wis., a Corporation of Wisconsin. Filed Oct. 5, 1911. Serial No. 653,078. (Cl. 111—11.)

1. In a grain drill, the combination of a suitably-supported rotary furrow-opening disk, a boot composed of a plurality of sheet-metal sections secured together, and a blade-like disk-scraper co-acting with said disk and formed integral with one of the sheet-metal sections of said boot, substantially as described.

2. In a grain drill, the combination of a suitably-supported rotary furrow-opening disk, a boot composed of a

plurality of sheet-metal sections secured together, and a blade-like disk-scraper co-acting with said disk, formed integral with one of the sheet-metal sections of the boot, and having a scraping edge along a substantially vertical radius of said disk, substantially as described.



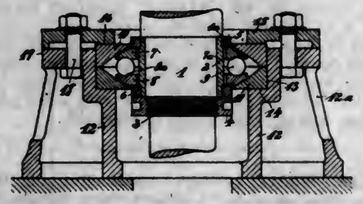
3. In a grain drill, the combination of a suitably-supported rotary concavo-convex furrow-opening disk, a boot composed of a plurality of sheet-metal sections secured together, and a blade-like disk-scraper co-acting with the convex face of the disk and formed integral with one of the sheet-metal sections of the boot, substantially as described.

4. In a grain drill, the combination of a suitably-supported rotary concavo-convex furrow-opening disk, a boot composed of a plurality of sheet-metal sections secured together, and a blade-like disk-scraper co-acting with the convex side of the disk, formed integral with one of the sheet-metal sections of the boot, and having a scraping edge along a substantially vertical radius of said disk, substantially as described.

5. In a grain drill, the combination of a suitably-supported rotary concavo-convex furrow-opening disk disposed angularly with relation to the direction of travel of the drill, a boot composed of a plurality of sheet-metal sections secured together and disposed rearwardly of said disk, and a flexible blade-like scraper co-acting with the convex side of said disk and formed integral with one of the sheet-metal sections of the boot, the scraper extending upwardly from the toe of the boot, substantially as described.

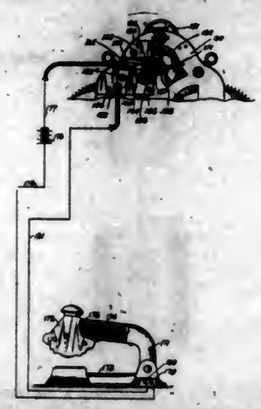
[Claims 6 to 10 not printed in the Gazette.]

1,022,531. SUPPORT BALL-BEARING. PAUL BAUHL, Dusseldorf, Germany. Filed Oct. 17, 1908. Serial No. 458,308. (Cl. 64—49.)



In a ball bearing the combination of a shaft, a sleeve fixed immovably to said shaft, projecting rings fixed immovably on the ends of said sleeve, two inner rings located between the said projecting rings, a single row of running balls between the facing surfaces of said inner rings, two outer rings surrounding said inner rings, the inner rings being ballfaced on their adjacent surfaces and having free play with the outer rings, with the projecting rings of said sleeve and with the cylindrical surface of this sleeve, and means for retaining said outer rings, substantially as described and for the purpose set forth.

1,022,532. TIME-CONTROLLED ELECTRIC SWITCH. CHARLES M. CROOK, Chicago, Ill., assignor, by mesne assignments, to Ernest E. Yaxley, Chicago, Ill. Filed Mar. 12, 1908. Serial No. 420,699. (Cl. 58—25.)



1. The combination with a clock, of a contact-piece rotated thereby, a coöperating movable contact-member, means for intermittently moving said contact-member out of the path of said contact-piece, and resilient means for returning said contact-member, the co-engaging surfaces of said contact-piece and contact-member being so formed that said returning means tends to accelerate said clock while said co-engaging surfaces are in contact.

2. The combination with a clock, of a contact-piece revolved thereby, a contact-member arranged to be movable into and out of the path of said contact-piece, positively-acting means for moving said contact-member out of the path of said contact-piece, and a spring for returning said contact-member, the co-engaging surfaces of said contact-piece and contact-member being so formed that said spring tends to accelerate said clock while said co-engaging surfaces are in contact.

3. The combination with a clock, of a contact-piece carried by a shaft of said clock and revolving therewith, a pivoted contact-member, a spring for moving said contact-member into the path of said revolving contact-piece, a cam back-geared from said shaft for moving said contact-member out of the path of said revolving contact-piece against the tendency of said spring, and adapted to release said contact-member when said contact-piece is adjacent thereto.

4. The combination with a clock, of a contact-piece revolved by said clock and having a tongue thereon, a contact-arm disposed to engage said tongue, a cam arranged to move said contact-arm out of the path of said tongue, and means for returning said contact arm, the contacting-surface of said tongue being inclined to the direction of movement of the contacting portion of said arm.

5. The combination with a clock, of a contact-piece revolving with one of the shafts thereof, a cam back-geared from said shafts, a contact-member arranged to be moved out of the path of said contact-piece by said cam, means for returning said member, said cam being adapted to suddenly release said member and permit the same to strike said contact-piece, said contact-piece having a surface for engagement with said contact-member inclined to the direction of movement of said member under the influence of said returning means.

[Claims 6 and 7 not printed in the Gazette.]

1,022,533. BOTTLE-CARRIER. FREDERICK L. CUMMINGS, Boston, Mass. Filed Apr. 6, 1911. Serial No. 619,347. (Cl. 215—1.)

1. A bottle carrier, composed of wire bent to lie flatwise substantially in a plane with its end portions formed into a bottle neck clamping opening, the wire converging to the opening formed of such end portions from a relatively wide handle grip formed of the central portion of the wire.



2. A bottle carrier, composed of wire formed centrally as a relatively wide handle grip and with intermediate portions converging to a bottle neck clamping opening formed of the end portions of the wire, the wire to form this opening having one end bent to embrace one side of a bottle neck and formed with a hook at its extremity, and the other end adapted to slide through said hook with a bend to embrace the other side of the bottle neck and its extremity formed with a hook to engage with a wire at the side of the bottle opposite said first hook, said ball and said two neck clamping portions lying in a common plane before application to the bottle, whereby the clamp opening may be adjusted by sliding the wire through the first named hook, and the clamping portions may be securely locked in clamping engagement with the bottle neck and against relative movement by bending the bail portions of said hooks at right angles to its initial position.

1,022,534. WRENCH. GEORGE M. CUSTER, Mattoon, Ill. Filed May 20, 1911. Serial No. 628,416. (Cl. 81—177.)

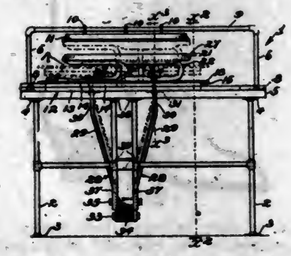


A wrench having a handle embodying substantially parallel spring sections terminating in angular bends outwardly disposed in the plane of movement of the wrench jaws forming grasping jaws, means sliding on the handle for clamping the members upon an interposed tool, and a tool having a yoke-shaped end with angular cross bar, adapted to be grasped by the angular bends of the handle, whereby said tool may be used either in its normal position or serve as a crank handle for rotating the wrench with its engaged nut.

1,022,535. GARMENT-PRESSING MACHINE. WILLIAM J. DANENHOWER, Los Angeles, Cal. Filed Jan. 17, 1911. Serial No. 603,186. (Cl. 68—9.)

1. A pressing machine comprising a frame, a pressing iron fixed to the frame, a pressing board beneath the iron, a slide to carry the pressing board, a carriage to support the slide, a swivel piece pivoted at one end to the slide and at the other end to the carriage, and means to move the carriage toward the iron.

2. A pressing machine comprising a frame, an iron fixed to the frame, a pressing board beneath the iron, a slide to carry the pressing board, a carriage to support the slide, a swivel piece pivoted at one end to the slide and at the other end to the carriage, brackets fastened to and beneath the carriage, and lever means to raise and lower the brackets.



3. A pressing machine comprising a frame, a pressing iron fixed to the frame, a table fixed to the frame beneath the pressing iron, a carriage normally resting on the table, a swivel piece pivoted at one end to the carriage, a slide pivoted to the other end of the swivel piece; a pressing board above the slide, brackets fixed to the slide and supporting one end of the pressing board, a detachable, reversible bracket to support the other end of the pressing board, means to raise the carriage toward the pressing iron, and guides for the carriage.

1,022,536. SNAP-SWITCH. FRANK C. DE REAMER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed July 17, 1908. Serial No. 443,967. (Cl. 175—290.)



1. In a snap switch, the combination with the guide-plate, of oppositely rabbeted washers of insulation resting thereon, a switch blade of two counterpart spring members having an opening provided with lateral notches engaging the rabbeted portions of said washers, and tubular rivets for fastening together said plate, washers and the members of the switch blade.

2. In a snap switch, the combination with the guide-plate, of washers of insulation resting thereon, a switch-blade having an opening provided with lateral notches engaging said washers, tubular rivets securing together said washers, blade and plate, and a dial having pins entering said tubular rivets.

3. In a snap switch, the combination with a switch-blade, of rabbeted washers of insulation engaging said blade, tubular rivets by which said washers are mounted, and a dial having pins detachably inserted in said rivets.

1,022,537. BOOT AND SHOE. PETER DOSCH, Stratford, Conn. Filed Nov. 17, 1910. Serial No. 592,936. (Cl. 36—76.)

1. In a boot or shoe, a tension member having prongs at one end adapted to enter the sole of the boot or shoe, a perforated flange at the opposite end, and adjusting means extending through the perforated flange and connecting the same with the heel of the boot or shoe.

2. In a boot or shoe, a tension member having prongs at one end adapted to enter the sole of the boot or shoe, a perforated flange at the opposite end, and a screw extending through the perforated flange and connecting the same with the heel of the boot or shoe.

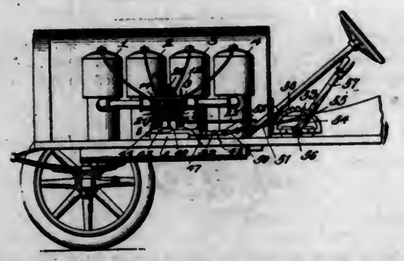
3. In a boot or shoe having an arched sole, a tension member located a distance below the top of the arch and

having one end connected to the sole, and means connecting the other end of the tension member and the heel for drawing the tension member toward the heel of the boot or shoe.



4. A boot or shoe having a heel and an arch, said heel being secured to one extremity of the arch, and adjustable tensioning means extending across the arch and out of contact with the surface thereof, said tensioning means having its opposing ends connected to the heel and to the forward extremity of said arch, whereby the ends of said arch may be drawn together.

1,022,538. STARTING DEVICE FOR GAS-ENGINES. CARL E. DUNHAM, Maddock, N. D. Filed Apr. 18, 1911. Serial No. 621,850. (Cl. 123—180.)



1. In a device for starting gas engines, the combination with the gas engine, of a tank for gas under pressure, a pipe connecting said tank to the cylinders of the engine, valves arranged in said pipe for closing direct communication between the tank and the engine, manually operated, means for alternately opening said valves, and spring held operating rods for holding said valves in a normally closed position.

2. In a device for starting gas engines, the combination with the gas engine, of a tank for gas under pressure, a pipe connected to said tank for supplying gas to the cylinders of the engine, two valves in said pipe for controlling the admission of gas to the cylinders, one of said valves being secured on the end of the pipe, tubes leading from said last mentioned valve to each of the cylinders of the engine, manually operated means for controlling said valves and admitting gas to the cylinders and electrical connections controlled by said manually operated means for causing a spark after the gas has been admitted to the cylinders to explode the charge.

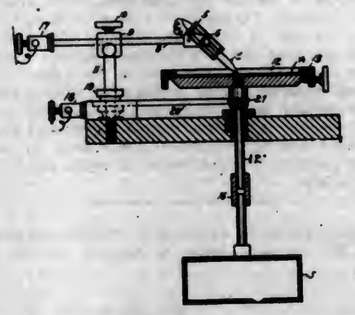
3. In a device for starting gas engines, the combination of a source of gas pressure, a conductor communicating therewith and with the gas engine, valves arranged in said conductor for closing direct communication between the source of gas pressure and the engine, one of said valves being arranged at the end of the conductor, having tubes connecting said valve to each cylinder of the engine, manually operated means for alternately opening said valves, and spring held operating rods for holding said valves in a normally closed position.

4. In a device for starting gas engines, the combination of a source of gas pressure, a conductor communicating therewith and with the cylinders of the engine, valves arranged in said conductor, means for holding said valves in a normally closed position, manually operated means for alternately opening said valves to admit gas to the cylinders of the engine, and electrical connections controlled by said manually operated means for causing a spark after the gas has been admitted to the cylinders to explode the charge.

5. In a device for starting gas engines, the combination of a source of gas pressure, a conductor leading from said source of gas pressure, a valve arranged in said conductor controlling the admission of gas to a three-way valve located at the end of said conductor, tubes running from said three-way valve to each cylinder and manually operated means controlling said valves for admitting gas to the cylinders of the engine.

[Claims 6 to 15 not printed in the Gazette.]

1,022,539. RECEIVER FOR ELECTROMAGNETIC WAVES. REGINALD A. FESSENDEN, Washington, D. C., assignor to The National Electric Signaling Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed May 4, 1904. Serial No. 206,393. (Cl. 178—319.)



1. A receiver for wireless telegraphy comprising a cell having an electrode terminal immersed therein, said terminal being exposed only on its end surface, and means to prevent accumulation of gas thereon, substantially as described.

2. A receiver for wireless telegraphy comprising an electrolytic cell having an electrode immersed therein consisting of a wire having a sheath covering it except on its end surface, and means to effect continual removal of bubbles of gas tending to accumulate on the terminal of said electrode.

3. A polarization cell adapted as a detector for wireless telegraphy having one electrode sheathed in non-conducting material except on its end surface, and another electrode of larger surface placed in the liquid of the cell below the level of the first electrode.

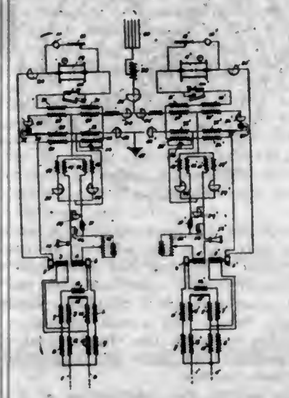
4. The combination of a support having a detachable terminal secured thereto and consisting of a conical non-conducting sheath with a conductor extending therethrough, and means for maintaining a moving body of liquid electrolyte in contact with the terminal of said electrode.

5. As an article of manufacture a detachable electrode for wireless telegraphy receivers consisting of a wire sealed in the point of a tapering non-conducting sheath and exposed only on its end surface at the pointed end of said sheath.

[Claims 6 to 20 not printed in the Gazette.]

1,022,540. WIRELESS SIGNALING. REGINALD A. FESSENDEN, Brant Rock, Mass., assignor to National Electric Signaling Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed Apr. 5, 1907. Serial No. 366,528. (Cl. 178—319.)

1. In the art of simultaneous transmission and receipt of wireless signals, the method of neutralizing the effect of the local sending circuit at a station, on a local receiving circuit, which consists in operatively connecting a balancing circuit, and the local sending source to the antennæ, adjusting said circuits so as to maintain a difference of approximately zero potential between two points in said circuits when transmitting, and connecting the receiving circuit operatively to the aerial and between said points.



2. In wireless telegraphy, apparatus for receiving signals without interference from signals being simultaneously sent at the same station, comprising an antennæ circuit and a second circuit operatively connected thereto, the said circuits being adjusted to create two points in the second circuit located on opposite sides of the connection to the receiving circuit with zero potential between them, so far as concerns the effect of the transmitted impulses, substantially as described.

3. In wireless telegraph apparatus, means for receiving signals, without interference from signals being simultaneously sent out at the same station, comprising an antennæ circuit and a second circuit operatively connected thereto and having its electrical constants arranged proportionately to those of the antennæ circuit, said two circuits being so adjusted as to create two points in the sending circuit located on opposite sides of the connection to the receiving circuit with zero potential between them so far as concerns the effect of the impulses being sent.

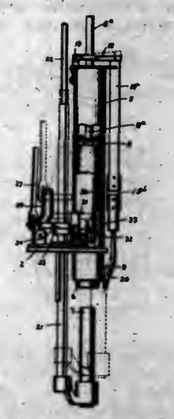
4. Wireless telegraph apparatus, comprising an antennæ circuit and a second circuit operatively connected thereto and having its electrical constants arranged proportionately to those of the antennæ circuit, and means to adjust said circuit so as to create two points in the sending circuit located on opposite sides of the connection to the receiving circuit with zero potential between them so far as concerns the effect of the impulses being sent, a telephone relay transmitter in operative relation to the source of the transmitted impulses, a line wire and a receiving electromagnetic instrument in operative relation to the line wire.

5. In wireless telegraphy, means for simultaneously sending and receiving impulses and preventing their disturbing each other, comprising devices for balancing the receiving circuit against impulses sent out on the same antenna, the receiving circuit being connected between two points on the sending circuit which are maintained at zero potential with respect to the impulses sent out, substantially as described.

[Claim 6 not printed in the Gazette.]

1,022,541. ARC-LAMP. RICHARD FLEMING, Swampscott, and EMILE J. GUAY, Lynn, Mass., assignors to General Electric Company, a Corporation of New York. Filed Feb. 15, 1907. Serial No. 357,460. (Cl. 176—52.)

1. In an arc lamp, a pair of electrodes, a controlling device for one of the electrodes arranged at one side thereof, and means for moving the other electrode toward the first electrode and laterally therefrom into engagement with said controlling device.



2. In an arc lamp, a pair of electrodes, a stop adjacent the end of one of said electrodes, a controlling device for the latter electrode arranged adjacent to the stop, and means for moving the other electrode into engagement with said stop and with said controlling device.

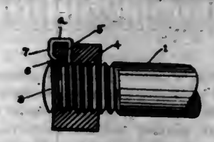
3. In an arc lamp, a pair of electrodes, a controlling device for one of the electrodes and a stop arranged in proximity to the lower end of the latter electrode, and means for operating the other electrode in the path of the first electrode so as to bring its arcing end into engagement with the stop and said controlling device.

4. In an arc lamp, a pair of electrodes, a clutch for one of said electrodes, a tripping finger for the clutch arranged beside the latter electrode, and means for moving the other electrode toward the first electrode and laterally to bring its arcing end into engagement with said tripping finger.

5. In an arc lamp, a gravity-actuated electrode, a second electrode, a controlling device for said gravity-actuated electrode extending adjacent the arcing end thereof, and means for moving said second electrode toward the other electrode and laterally so as to bring its arcing end into engagement with said controlling device.

[Claims 6 to 16 not printed in the Gazette.]

1,022,542. NUT-LOCK. WILLIAM FRY, Edinburg, Va. Filed Dec. 19, 1911. Serial No. 666,828. (Cl. 151—24.)

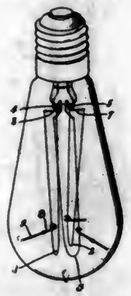


1. A nut adapted to be locked in position upon a screw threaded bolt, consisting of a rectangular or polygonal body and having a passage extending from one of its sides or edges into and through the female thread, and a recess in its outer face extending to and through the female thread at a point distant from the passage from the edge of the nut, substantially as hereinbefore set forth.

2. In combination with a nut such as described provided with passages completely through one side or edge and its face, a steel wire adapted to having its opposite ends passed through the passages in the nut, substantially as and for the purpose set forth.

3. In combination with a screw threaded bolt, a nut having a female thread and passages leading from one side and the outer face through the female thread, and a steel wire having its opposite ends passing through the passages in the nut and seated at different localities in the male thread of the bolt, substantially as set forth.

1,022,543. HOLDER FOR LAMP-FILAMENTS. LUDWIG GLASER, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed Mar. 13, 1907. Serial No. 362,133. (Cl. 176—39.)



1. The process of manufacturing holders for filaments, which consists in shaping the holders from refractory oxid, firing said holders to at least 2000° C. and then removing the glaze formed by the firing treatment.

2. The process of manufacturing holders for filaments, which consists in shaping the holders from refractory oxid, firing to at least 2000° C. and dissolving from the surface everything except thorium oxid.

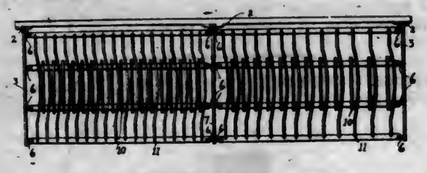
3. The process of finishing oxid filament holders which consists in firing to at least 2000° C. and then dipping in a strong acid mixture capable of removing from the surface of the holder everything but thorium oxid.

4. A holder of refractory oxid for lamp filaments composed mainly of mixed oxids but having a surface of a substantially pure oxid.

5. A refractory holder for lamp filaments composed of a body of mixed refractory material having a surface of substantially pure oxid more porous than the remainder of said body.

[Claim 6 not printed in the Gazette.]

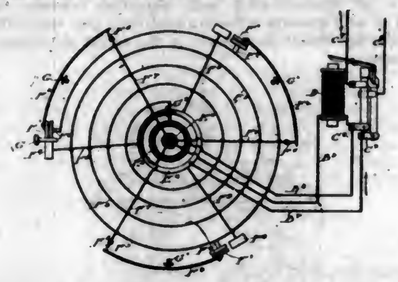
1,022,544. DISH-DRYING RACK. LOUIS GOEHR, San Francisco, Cal. Filed May 8, 1911. Serial No. 625,825. (Cl. 141—11.)



In a dish rack, a board, brackets removably secured to said board and having a plurality of upturned hooks, two sets of two bars supported by said hooks on said brackets in two different planes, horizontally, the upper pair of bars being at a greater distance from each other than the lower pair of bars, outwardly and horizontally extending curved wires connecting the two lower bars and curved wires connecting the two upper bars, the latter wires lying substantially in the same plane as the upper bars.

1,022,545. ELECTRIC OVEN. JOHN G. GRONBERG, Grand Rapids, Mich., and WALTER D. HODSON, Janesville, Wis., assignors to The Caloric Company, Janesville, Wis., a Corporation of Wisconsin. Filed Feb. 15, 1909. Serial No. 478,012. (Cl. 219—35.)

1. In a heater, the combination of a heating plate comprising a body and a top with intermediate space with a heating coil associated therewith, an electric supply circuit connected with the heating coil, a circuit breaker therefor, an electric circuit for said circuit breaker, additional means for closing the supply circuit and means responsive to the temperature for operating the circuit breaker to stop the heating process when any predetermined temperature has once been reached.



2. In a heater, the combination of a heating plate comprising a body and a top, with an air circulating space between them, a heating coil associated therewith, an electric supply circuit connected with the heating coil, a circuit breaker therefor, additional means for closing the supply circuit, and means responsive to the temperature for operating the circuit breaker to stop the heating process when once any predetermined temperature has been reached.

3. In a heater, the combination of a heating plate comprising a body and a top having discharge openings therethrough with an air space between them, and side inleading openings, a heating coil associated therewith, an electric supply circuit connected with the heating coil, a circuit breaker therefor, additional means for closing the supply circuit, and means responsive to the temperature for operating the circuit breaker to stop the heating process when any predetermined temperature has once been reached.

4. In a heater, the combination of a heating plate comprising a body, a top and cover, with air circulating spaces between them, a heating coil associated therewith, an electric supply circuit connected with the heating coil, a circuit breaker therefor, additional means for closing the supply circuit, and means responsive to the temperature for operating the circuit breaker to stop the heating process when any predetermined temperature has once been reached.

5. In a heater, the combination of a heating plate comprising a body and a top, with a space between them and a corrugated cover on the top, with a space between it and the top, a heating coil associated therewith, an electric supply circuit connected with the heating coil, a circuit breaker therefor, additional means for closing the supply circuit, and means for operating the circuit breaker responsive to variations in heat.

[Claims 6 to 19 not printed in the Gazette.]

1,022,546. TROLLEY-FROG. FRANK GUILLOT, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Aug. 3, 1908. Serial No. 446,514. (Cl. 191—11.)



1. The combination with a trolley frog body provided with one or more longitudinal hollow ribs at each end, of removable tongues inserted in said ribs, and means for rigidly clamping said tongues thereto.

2. The combination with a trolley frog body provided at each end with one or more longitudinal hollow ribs open at the outer end, of removable tongues having shanks adapted to enter said ribs, and means for rigidly clamping said tongues and the trolley wire to said ribs.

3. The combination with a trolley frog body provided at each end with one or more longitudinal hollow ribs open at the outer end, of removable tongues having shanks adapted to enter said ribs, and means for locking said tongues rigidly in place.

4. The combination with a trolley frog body provided at each end with one or more longitudinal hollow ribs, a stud in line with each rib and provided with a transverse slot, removable tongues each having a shank to enter said rib and an upward projection to enter said slot, and a locking device encircling said stud and projection.

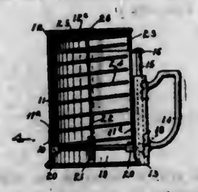
5. The combination with a trolley frog body provided with one or more longitudinal hollow ribs, of a tongue having a shank to enter a rib of said body, and a deep groove in its under side forming flanges adapted to be clamped upon a trolley wire laid in said groove, and a nut on the rib arranged to engage said tongue and grip the wire between said parts.

1,022,547. COMBINED SCREEN AND STORM DOOR. LOUIS HANSEN, Omaha, Nebr. Filed Aug. 9, 1910. Serial No. 576,284. (Cl. 20—35.)



A door frame having its side stiles and upper and lower rails rabbeted upon one of their faces, said rabbet portion being provided with a pocket, flexible panels for the door, and a retaining molding cleat formed with an off-set portion adapted to be inserted within the said pocket, whereby the flexible panel is wedged between the walls of the same which effectively grips it and holds the same in position.

1,022,548. DRINKING-CUP. AUGUST H. HARTMAN, Seattle, Wash. Filed Sept. 22, 1910. Serial No. 583,162. (Cl. 65—13.)



1. A sanitary drinking utensil, comprising a receptacle, a cover therefor having an orifice, a plunger in said receptacle, means for automatically extending the plunger, means for retracting the plunger, and a spring-operated closure for said orifice.

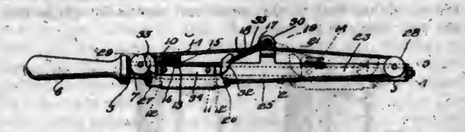
2. A sanitary drinking utensil, comprising a receptacle, a cover therefor having an aperture, a spring operated closure for said aperture, a plunger in said receptacle, resilient means for extending said plunger, and means for retracting the plunger.

3. A sanitary drinking utensil, comprising a receptacle, a cover therefor having an aperture, a deflector arranged above the aperture, a plunger arranged in said receptacle, resilient means for moving the plunger in one direction, manually operable means for moving the plunger in the other direction, and a chin rest attached to said receptacle.

4. A drinking utensil, comprising a cup, a sleeve telescopically engaging said cup, a cover for the sleeve having an aperture, a plunger arranged within said sleeve and means for operating said plunger.

5. A drinking utensil comprising a cup, a sleeve separably connected with said cup, a cover for the sleeve having an orifice, a spring held closure for the orifice, a plunger arranged within said sleeve, resilient means for moving said plunger in one direction and manually operable means for moving the plunger in the opposite direction.

1,022,549. RAZOR STROPPER AND HONER. ARTHUR C. HAYDEN, Brockton, Mass. Filed Apr. 25, 1911. Serial No. 623,312. (Cl. 51—16.)



1. A device of the kind described, comprising a frame, a carriage slidable thereon, operative elements consisting of a blade holder and a sharpening device, one of said elements having reversible connections with the carriage whereby said operative elements may be held in pressing engagement for either drawing or thrusting strokes at will, and means for holding the blade edge away from the edge of the sharpening device as said elements are brought into operative relation for either drawing or thrusting strokes.

2. A device of the kind described, comprising a support, a carriage slidable thereon, means for holding a blade, and means for holding a sharpening device, one of said holding means being arranged to permit reversal relative to the other whereby the blade and sharpening device may be held in pressing engagement for either drawing or thrusting strokes at will, and cams arranged to hold the blade edge away from the edge of the sharpening device at the beginning and end of operative movement for either drawing or thrusting strokes.

3. A device of the kind described, comprising a frame, a carriage slidable thereon, one of said elements being adapted to carry a blade and the other a sharpening member in operative relation, means to oscillate the blade relative to the sharpening member and to hold said parts in yielding engagement, said oscillating means being connected for actuation from the carriage, and cams mounted on the carriage arranged to hold positively the blade edge from wiping across the edge of the sharpening member.

4. A device of the kind described, comprising a frame, a carriage slidable thereon, operative elements consisting of a blade holder and a sharpening device mounted one on the frame and the other on the carriage in relatively reversible connection whereby they may be held in pressing engagement for either drawing or thrusting strokes at will, and cams carried by the carriage arranged to hold the blade edge away from the edge of the sharpening device as they are moved in to and out of operative relation with either drawing or thrusting strokes.

5. A device of the kind described, comprising a frame, a carriage reciprocable thereon, a pivotally mounted blade holder, and a sharpening device mounted one on the frame and the other on the carriage, the blade holder having reversible connections to present the blade in pressing engagement with the sharpening device for either drawing or thrusting strokes as desired, said connections tending to swing the blade upward over the frame, and means carried by the carriage for compelling the movement of the blade down through the frame from operative position on either side of its pivotal axis to operative position on the other side thereof.

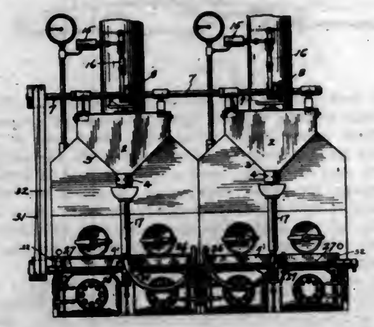
[Claims 6 to 9 not printed in the Gazette.]

1,022,550. APPARATUS FOR FEEDING FUEL TO FURNACES. ADAM HEBERER, Alameda, and HENRY A. HYNE, Belmont, Cal. Filed Apr. 19, 1910. Serial No. 556,329. (Cl. 110—101.)

1. In an apparatus for feeding fuel to furnaces, the combination with a furnace having a slot in the front wall thereof, of a spout extending into the furnace through said slot and adapted to be moved parallel to its original position across the full width of the furnace, a supply tube for conveying the fuel to the spout and an injector for projecting the fuel into the furnace.

2. In an apparatus for feeding fuel to furnaces, the combination with a furnace having a slot in the front

wall thereof, of a spout extending into the furnace through said slot, means for moving the spout parallel to its original position for the full width of the furnace, means for supplying fuel to the spout and means for projecting the fuel into the furnace.



3. In an apparatus for feeding coal to furnaces, a furnace, a spout adapted to be moved parallel to its original position for the full width of the furnace extending into the furnace, means for varying the supply of coal to the spout and means for projecting the coal into the furnace.

4. In an apparatus for feeding coal to furnaces, the combination of a furnace, a coal supply, a spout, means for regulating the supply of coal to the spout, means for projecting the coal from the spout, means for moving the spout laterally parallel to its original position across the furnace, a deflector plate mounted on the end of the spout and means for oscillating the deflector plate to continuously vary the angle between the plate and the spout.

1,022,551. MAKING RADIO-ACTIVE BEVERAGES. HERBERT HAY HEWITT, London, England. Filed Mar. 4, 1911. Serial No. 612,401. (Cl. 99—11.)

1. A method of imparting radio-activity to artificial beverages preparations, which consists in the application of carbon dioxid under pressure to radium-treated water in which are dissolved mineral salts so as to produce radio-active compounds in which the radium emanations are practically stable or fixed for reasonably long periods as described.

2. A method of mixing the mineral salts with finely pulverized radio-active substances then introducing same in radium water and carbonating the solutions as described.

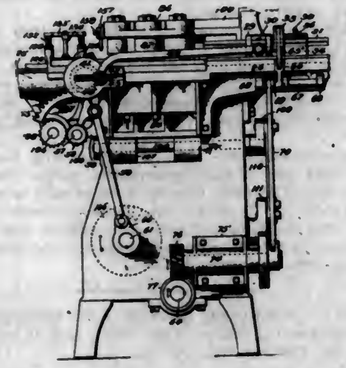
1,022,552. CAP-HEMMING MACHINE. GEZA HORVATH and GEORGE E. GREEN, Wheeling, W. Va. Filed July 25, 1910. Serial No. 573,676. (Cl. 113—80.)

1. In a cap hemming machine, a reciprocating head provided with a series of cutting punches of different sizes, and means for intermittently feeding a solder strip the distance of one punch between each punching operation to cut a ring concentric with the aperture of the previous operation.

2. In a cap hemming machine, means for automatically and successively cutting a series of solder rings one about the other.

3. In a cap hemming machine, a head provided with a cutting punch, a slide member adapted to feed a solder strip, means carried by said member to engage said strip in the movement of the slide in one direction, means for reciprocating said slide, and an automatically operated clamp engaging said strip during the return stroke of said slide member.

4. In a cap hemming machine, a head provided with a cutting punch, a slide member adapted to feed a solder strip, means carried by said member to engage said strip in the movement of the slide in one direction, a pitman extending from said slide member, an operating cam for said pitman, and means for adjusting the pitman connection radially to the axis of said cam.



5. In a cap hemming machine, a head provided with a cutting punch, a slide member adapted to feed a solder strip, means carried by said member to engage said strip in the movement of the slide in one direction, a pitman extending from said slide member, an operating cam for said pitman having a segmental recess upon one face, and a driving gear mounted upon the axis of said cam and provided with a lug entering said recess to travel therein.

[Claims 6 to 54 not printed in the Gazette.]

1,022,553. METHOD OF FUSING LAMP-FILAMENTS TO LEADING-IN WIRES. JOHN W. HOWELL, Newark, N. J., assignor to General Electric Company, a Corporation of New York. Filed Mar. 16, 1907. Serial No. 362,610. (Cl. 176—38.)



1. The process which consists in rigidly securing a tungsten lamp filament to a copper support and then fusing a portion of said support to form a connection of good conductivity, leaving unfused a portion of said support to which said filament is secured, said unfused portion of said support being adjacent the operative part of said filament.

2. In an incandescent lamp, the combination of a tungsten filament, and a copper leading-in wire having a portion fused about said filament and an unfused portion supporting the filament.

3. The method which consists in fusing a portion of a metallic member about a refractory filament of material which does not readily combine with that of said member, to form a conductive joint while the filament is maintained by another portion of said member in a position where it will be inclosed in the fused metal.

4. The method which consists in fusing the end of a copper member about a tungsten filament to form a conductive joint while the filament is maintained in proper relation to the fused end of the member by another portion thereof.

5. The combination with a refractory filament of a current conductor of material inert with respect to that of the filament loosely embracing one portion thereof and fused about a portion of the filament farther from the principal luminous portion than the portion thus embraced.

[Claim 6 not printed in the Gazette.]

1,022,554. WELDING FILAMENTS TO METAL WIRES. JOHN W. HOWELL, Newark, N. J., assignor to General Electric Company, a Corporation of New York. Filed Mar. 16, 1907. Serial No. 362,611. (Cl. 176—38.)



1. The method of joining a tungsten filament to a copper wire, which consists in pasting the junction with finely divided iron and then melting the copper at the junction about the filament so that the filament may be embedded in the fused metal.

2. The combination of a tungsten filament, and a copper conductor electrically connected therewith at a welded joint containing iron.

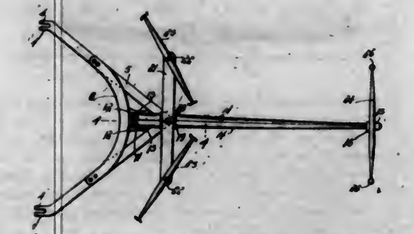
3. The combination of a tungsten filament and a conductor electrically connected therewith at a welded joint containing copper and iron.

4. The method of connecting a refractory metal filament and a metallic member of material inert with respect thereto which consists in fusing a portion of said member about said filament and fluxing the joint with material which causes the filament to maintain a central position with respect to the mass of molten metal.

5. An electric glow lamp comprising a tungsten filament attached to the melted ends of supports containing two metals one of which has the property of forming an alloy with tungsten while the other has the contrary property.

[Claim 6 not printed in the Gazette.]

1,022,555. POLE AND SHAFTS. HARRISON A. HUNTER, Mankato, Kans. Filed Mar. 23, 1911. Serial No. 616,317. (Cl. 21—36.)



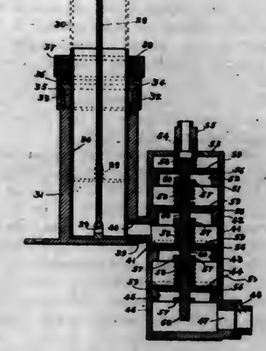
1. The combination with a vehicle, of a yoke member pivoted to the axle thereof, a slotted block secured to said yoke member, a pair of bars each having a T-plate secured to one end thereof for engagement in the slot in the blocks, a cap mounted on the outer ends of the bars for securing the same together, a U-plate engaging the inner ends of the bars for retaining them in engagement, a double tree pivotally supported by the yoke member above the pair of bars, and half round swingle trees pivotally secured to the outer ends of the double tree.

2. An attachment for vehicles, comprising a yoke member pivotally secured to the axle of the vehicle, a longitudinally slotted block secured to the yoke, half round bars having T-plates secured to their ends, said plates being engaged in the slot, a brace bar having threaded ends engaged in the half round bars and connecting the same, a cross bar secured to the yoke, bolts securing the ends of the cross bar to the half round bars, said bars having threaded ends of the same diameter as the threaded ends of the brace bar, a U-plate pivotally supported above the cross bar, and a pair of half round members mounted in the U-plate and together forming a swingle tree.

3. An attachment for vehicles, comprising a yoke member pivotally secured to the front axle, a slotted block secured to the yoke member, half round bars having T-plates secured on their ends, said plates when engaging in the slot of the block holding the bars spaced to provide shafts, said bars having outer threaded ends, a yoke bar having threaded ends of the same diameter as the ends of the half round bars, said yoke bar forming a brace for the shafts and a neck yoke when the shafts are united to provide a tongue, balls adapted to be engaged on the ends of the shafts or the ends of the yoke bar when used as a neck yoke, a cross bar providing a double tree for the tongue or a brace for the shafts, and half round swingle trees adapted to be pivotally supported above the cross bar to form together a unitary swingle tree for the shafts or separate swingle trees for the tongue.

4. The combination with a vehicle of convertible shaft and pole members therefor, comprising a slotted block supported by the axle of the vehicle, a pair of half round bars having T-shaped plates secured to one end, said bars having their other ends reduced and threaded, a bar having threaded ends of the same diameter as the ends of the half round bars, a cross bar, and a pair of half round swingle trees, whereby the bars form shafts braced by the cross bar and the bar having the threaded ends when the T-plates are engaged in the slotted block and the swingle trees together form a swingle tree, and the bars together form a wagon pole when the T-plates are engaged in the center of the slot, the cross bar forming a double tree to bear the swingle trees, and the bar having the threaded ends forming a neck yoke, and balls having internally threaded sockets for engagement upon appropriate exposed threaded ends of the different bars.

1,022,556. PUMP. GUSTAF JOHNSON and NELSON J. RUSSELL, Rockford, Ill. Filed Mar. 17, 1911. Serial No. 614,999. (Cl. 103—75.)

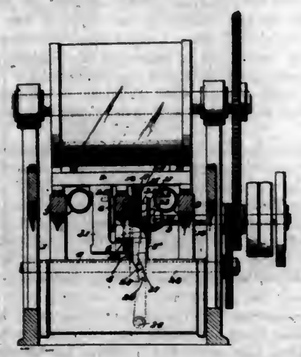


A pump including a valved casing provided with an inlet and an outlet, a pump cylinder communicating with said casing between the ends thereof and having at its upper end an annular recess, a packing ring fitted in said recess, a sleeve fitted on the upper portion of said cylinder and having an inwardly extended flange to rest on said packing ring, a cap secured on the upper portion of said sleeve, a plunger mounted in said cylinder and extended through said sleeve and cap, and means to operate said plunger.

1,022,557. BED-MOVEMENT. ROBERT T. JOHNSTON, Scotch Plains, N. J., assignor to The Harris Automatic Press Company, Niles, Ohio, a Corporation of Ohio. Filed Sept. 7, 1910. Serial No. 580,832. (Cl. 101—158.)

1. In combination with a printing press frame having side tracks, a central track carried by the frame at its center midway between the side tracks, a bed supported

at its longitudinal edges and center by said tracks, a bearing arranged centrally of the frame, a crank-shaft mounted in said bearing, driving gearing for the bed carried by said crank-shaft and surrounding a substantial portion of said bearing, and bed-reversing means carried by the crank-shaft on the side of said bearing opposite to that on which said driving gear is located.



2. In combination with a printing press frame having side tracks, a central track carried by the frame at its center midway between the side tracks, a bed supported at its longitudinal edges and center by said tracks, a bearing connected to said central track, a crank-shaft mounted in said bearing, driving gearing for the bed carried by said crank-shaft, and surrounding a substantial portion of said bearing at one side thereof, and bed-reversing means carried by the crank-shaft on the other side of said bearing.

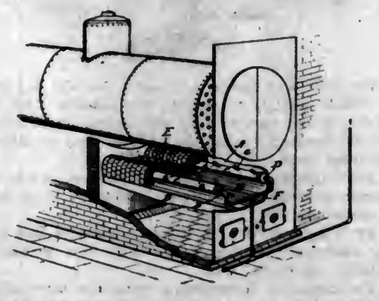
3. In combination with a printing press frame having end members, side tracks, and a central track rigidly carried by said end members, said central track being midway between the side tracks, a bed supported at its longitudinal edges and center by said tracks, a bearing arranged centrally of the frame, a crank-shaft mounted in said bearing, driving gearing for the bed carried by said crank-shaft, on one side of said bearing, and bed-reversing means carried by the crank-shaft on the other side of said bearing, said central track of the press frame being above and supported by said bearing.

4. In combination with a printing press frame having side tracks, a central track, a bed supported by said tracks, a bearing depending from said central track, said bearing having a lateral extension over a portion of which said central track extends, a crank-shaft mounted in said bearing and extension, a sleeve secured to the crank-shaft and telescoping said extension, a drive gear slidably mounted on said sleeve, upper and lower racks carried by the bed with which said drive gear is designed to engage, and bed-reversing means carried by said crank-shaft.

1,022,558. GAS-BURNER FOR FURNACES. EDWARD H. KESSELMAN, Butler, Pa., assignor of one-fourth to Margaret Kesselman, Butler, Pa., and one-fourth to Jessie McMichael and one-fourth to Ellen McMichael, Chicora, Pa. Filed June 19, 1911. Serial No. 634,140. (Cl. 158—7.)

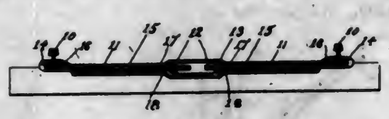
1. A gas burning furnace, comprising two parallel and horizontal outer pipes with outlet mixing tubes along the upper sides, the tubes of the two pipes being inclined inwardly toward each other to make an intersection of flame, said pipes being closed at both ends and having along their bottom sides air-inlet openings, and gas pipes arranged within the outer pipes and having nozzles along their sides alined with the mixing tubes of the outer pipe and an inclosing bed of fire resisting material surrounding the pipes and inclosing its burner outlets and extending entirely across the space between the pipes.

2. The combination with a furnace fire box and grate bars; of a gas burner consisting of horizontal air pipes and inner gas pipes laid parallel with each other and just above the grate bars and having inwardly directed nozzles and a fire resisting bed laid upon the grate bars and completely enveloping the burner pipes and extending across the fire box from side to side and forming a partition separating the ash pit from the fire box.



3. A gas burning furnace, comprising two horizontal pipes, one within the other, the outer one having a series of laterally projecting mixing tubes along its upper edge and the inner one a series of nozzles coinciding with the mixing tubes, said outer pipe having closed ends and an opening along its lower side and a refractory fire-proof bed completely inclosing said outer pipe except along the lines of its bottom opening and along the line of the burner outlets.

1,022,559. RAIL-CLAMP. EMIL H. KORGES, Moulton, Tex. Filed Aug. 23, 1911. Serial No. 645,588. (Cl. 238—5.)



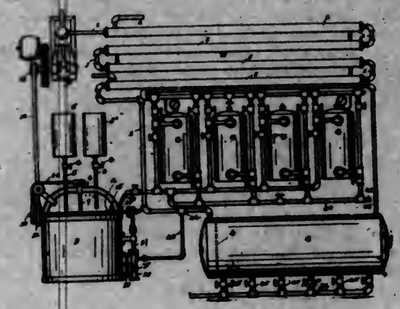
An anti-spreading device for railways comprising a pair of bars threaded on their inner meeting ends, sleeves slidably mounted on the bars, rail-engaging members on the outer ends of the bars, a rail engaging finger on the outer end of each of the sleeves, and a turn buckle engaged with the threaded ends of the bars whereby upon rotation of the turn buckle the bars will be drawn inwardly and the sleeves pushed outwardly.

1,022,560. SYSTEM FOR SOFTENING WATER. JOHN T. LEMON, Columbus, Ohio. Filed July 20, 1910. Serial No. 572,804. (Cl. 210—1.)

1. A system for softening water comprising pumping mechanism, a chemical mixer, an elongated settling tank constructed to permit an even and uninterrupted flow of the water therethrough, means for delivering the mixed chemicals to the water preceding its admission to the settling tank, and adjustable means for intercepting and returning any quantity of the mixed chemicals to the mixer.

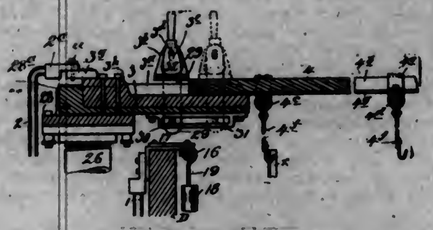
2. A system for softening water comprising pumping mechanism, a chemical mixer, an elongated settling tank constructed to permit an even and uninterrupted flow of the water therethrough, means for delivering the mixed chemicals to the water preceding its admission to the settling tank, and an adjustable trough for intercepting and shedding any quantity of the mixed chemicals back to said mixer.

3. A system for softening water comprising pumping mechanism, a chemical mixer, a receiving and delivery hopper for said chemicals, means for elevating and pouring said mixed chemicals into said hopper, an elongated settling tank for the uninterrupted passage of the chemical impregnated water therethrough, and an adjustable trough for splitting the volume of mixed chemicals and returning any portion to said mixer.



4. A system for softening water, comprising pumping mechanism, a chemical mixer, a receiving and delivery hopper for said chemicals, an endless bucket chain for elevating and pouring said chemicals into said hopper, an elongated settling tank for the uninterrupted passage of the chemical-impregnated water therethrough, a trough for spreading the volume of mixed chemicals in delivery from said bucket chain to said hopper and returning a portion of the volume to said mixer, and a handle for adjusting said trough to regulate the amount returned.

1,022,561. ELECTROPLATING APPARATUS. GEORGE A. LUTZ, Plainfield, N. J., assignor to American Circular Loom Company, Portland, Me., a Corporation of Maine. Filed Jan. 7, 1911. Serial No. 601,345. (Cl. 204—5.)



1. An electroplating apparatus comprising a tank, a plurality of conductors spaced apart adjacent the tank, means to suspend anodes from said conductors, a cathode provided with means to suspend articles to be plated between such anodes, and supports for the cathode adjacent to the wall of the tank and insulated from said conductors.

2. An electroplating apparatus comprising a tank, a plurality of conductors spaced apart adjacent the tank, means to suspend anodes from said conductors, a cathode provided with means to suspend articles to be plated between such anodes, supports for the cathode adjacent to the wall of the tank and insulated from said conductors, and posts supported adjacent the tank and carrying said supports.

3. An electroplating apparatus comprising a tank, a plurality of conductors spaced apart adjacent the tank and located in the same circuit, means to suspend anodes from said conductors, a cathode provided with means to suspend articles to be plated between such anodes, supports for the cathode adjacent to the wall of the tank and insulated from said conductors, and means for removably securing the cathode to said supports.

4. An electroplating apparatus comprising a tank, a conductor adjacent the tank, means to suspend anodes from said conductor, a cathode provided with means to suspend articles to be plated between such anodes, supports for the cathode adjacent to the wall of the tank and insulated from said conductor, said supports having balls and levers connected with said balls for securing the cathode upon the supports.

5. An electroplating apparatus comprising a tank, a conductor adjacent the tank, means to suspend anodes from said conductor, a cathode provided with means to suspend articles to be plated between such anodes, supports for the cathode adjacent to the wall of the tank and insulated from said conductor, said supports having balls and levers connected with said balls for securing the cathode upon the supports.

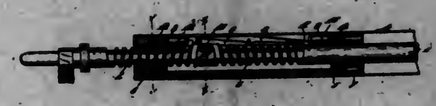
[Claims 6 to 24 not printed in the Gazette.]

1,022,562. DUMP-BOX. ROBERT MATTHIES and JOHN A. SHEPHERD, Hammond, Ind. Filed July 23, 1909. Serial No. 509,210. (Cl. 21—20.)



A dumping wagon body, having an open bottom, a central sill T-shaped in cross section extending longitudinally thereof, brackets secured to the vertical terminal of said sill and longitudinally thereof, a longitudinally disposed hinge shaft carried in said bracket, a pair of longitudinal bottom doors upon each side of the sill, having one member of each pair hinged to said shaft at each side of the sill and the other members hinged to the lower edges of the sides of the wagon body, flexible elements attached at their inner ends to the shafts and extending under the doors, guides located under the doors and through which said flexible elements pass, a rock shaft journaled upon each side of the body, a series of arms carried thereby and engaging the outer ends of the flexible elements, and a handle for each rock shaft operably connected, whereby the flexible elements are drawn through the guides to close the doors.

1,022,563. INK-DISTRIBUTING ROLL. JOSEPH S. MCKINLEY, Cincinnati, Ohio. Filed May 11, 1911. Serial No. 626,639. (Cl. 101—71.)



1. In an ink distributing roll, means for laterally feeding the roll during its rotation, comprising a shaft having oppositely disposed right and left hand screw threads, a rocking carrier mounted within the roll, adapted to alternately engage with said screw threads, means intermediate of said screw threads and at the terminals thereof, adapted to shift said carrier to disengage the same from one thread and engage the same with the second, and means for locking said carrier in its shifted positions.

2. An ink distributing roll, in combination with means for laterally feeding the same during its rotation, comprising a stationary shaft, right and left hand screw threads formed on said shaft, a carrier pivotally mounted within said roll and rotating therewith, its ends adapted to alternately engage with said screw threads, means formed on said shaft at one terminal of each of said screw threads for shifting said carrier to alternately engage with the respective screw threads and to move the roll laterally during its rotation, detent means adapted to engage with said carrier to maintain the same in its shifted position during the lateral feed of the roll.

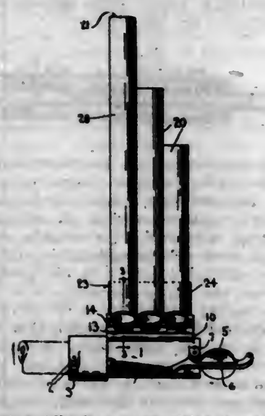
3. An ink distributing roll, in combination with means for laterally feeding the same during its rotation, comprising a stationary shaft, oppositely directed ways formed on said shaft, a carrier mounted within the roll, adapted to alternately engage with said ways, means for

shifting said carrier from one way to the second at the terminals of the lateral feeding movement of the roll, and spring actuated detent means to assist in the carrier shift and maintain the same in position during the lateral feed of the roll.

4. An ink distributing roll, in combination with means for laterally feeding the same during its rotation, comprising a stationary shaft, right and left hand screw threads formed upon said shaft, a frame supported within the roll journaled upon said shaft, a supplemental frame supported within said first frame, a rocking carrier pivotally mounted within said second frame, having oppositely disposed lugs projecting therefrom, adapted to engage alternately with their respective screw threads, spring actuated detents mounted within said second frame, having inclined heads, adapted to engage the ends of the carrier, a cam projecting from said shaft at one terminal of each of said threads, for rocking said carrier beyond the apex of the detents and maintained in such position by said detents during the lateral travel of the roll in either direction.

5. An ink distributing roll, in combination with means for laterally feeding the same during its rotation, comprising a stationary shaft, right and left hand screw threads formed upon said shaft, with the groove of each thread at one terminal end enlarged to provide free shifting movement of the roll carrier engaging therewith, a frame supported within the roll journaled upon said shaft, a supplemental frame supported within said first frame, a rocking carrier pivotally mounted within said second frame, having oppositely disposed lugs projecting therefrom, adapted to engage alternately with their respective screw threads, spring actuated detents mounted within said second frame, having inclined heads, adapted to engage the ends of the carrier, a cam projecting from said shaft at one terminal of each of said threads, for rocking said carrier beyond the apex of the detents and maintained in such position by said detents during the lateral travel of the roll in either direction.

1,022,564. AUTOMOBILE-HORN. WILLARD PENNOCK, Minerva, Ohio. Filed July 10, 1911. Serial No. 637,804. (Cl. 116—59.)

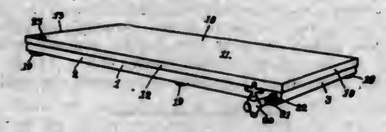


1. An automobile horn comprising a cylindrical body having a longitudinal slot, a seat upon the exterior of said body having a flat face at one side of the slot and notches in its face at the other side thereof, a plate mounted upon said flat face and over said slot with its edge extending across said notches, and tubes of different lengths closed at one end and open at the other and with their open ends disposed adjacent said notches.

2. An automobile horn comprising a tubular body having a longitudinal slot in its wall, a seat upon the exterior of said wall around the slot and notches in the face of the seat at one side of said slot, a plate mounted upon said seat and over the slot with its edge extending across said notches, a bracket having a lip lying over said plate, fastening means passing through the lip and plate and into openings in the flat face of the seat, and a series of tubes carried by said bracket with their open ends adjacent the open ends of said notches.

3. An automobile horn comprising a tubular body slotted longitudinally and formed with an integral seat around the radially outer end of the slot with a flat outer face at one side pierced with threaded holes and the face at the other side of the slot provided with notches, a flat plate adapted to overlie said seat and having holes registering with those in the face, a bracket having an angular lip deflected from it and pierced with slots adapted to register with the holes in said plate, a series of tubes carried by said bracket with their open ends cut off flush with the face of said lip, and screws passing through the slots therein and through the holes in said plate and taking into the threaded holes in said seat, as for the purpose set forth.

1,022,565. WATER-COOLING ICE-TRAY FOR REFRIGERATORS. JOHN PHILIPPS, Toledo, Ohio. Filed May 1, 1911. Serial No. 624,332. (Cl. 62—10.)



In combination with the ice chamber of a refrigerator or the like, a shallow water cooling ice tray adapted to be placed in and removed from the chamber, and to support a block of ice in the chamber, said tray comprising a base section having a bottom and sides forming a reservoir for water, and a detachable cap section having a top provided with sides adapted to telescopically fit over and around the base section and forming a cover therefor, the bottom of the base section being provided with an upwardly projecting central portion adapted to centrally support the closure section and form an air cooling chamber, a faucet detachably secured to a side of the base section in position to draw off all the water from the tray, and means to support the bottom of the tray on and slightly above the bottom of the ice chamber.

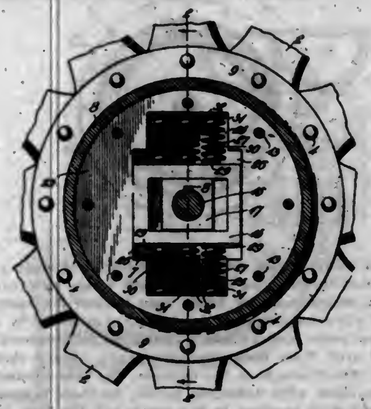
1,022,566. RUBBER SHOE. JOHN HEYROCK ROEDDING, Berlin, Ontario, Canada. Filed July 13, 1911. Serial No. 638,390. (Cl. 36—55.)



1. In a rubber shoe, the combination with the heel portion and counter portion, of a reinforcement extending between the heel portion and counter portion and comprising a blank of suitable material formed with side V-shaped notches intermediate of its length having one side arc-shaped and the other straight and forming with the rear portion lateral wings, the rear portion of the blank being designed to be turned up for insertion between the counter and heel portion, and the back edge of each notch being designed when the rear portion is turned up to abut and aline with the outside curved portion of the notch at the edge of the sole as and for the purpose specified.

2. In a shoe, a reinforcement for the heel portion comprising a blank of suitable material formed with side V-shaped notches intermediate of its length, having one side arc-shaped and the other straight and forming with the rear portion lateral wings, the rear portion of the blank being designed to be turned up for insertion between the counter and heel portions and the back edge of each notch being designed when the rear portion is turned up to abut and aline with the opposite curved portion of the notch at the edge of the sole as and for the purpose specified.

1,022,567. RESILIENT HUB FOR VEHICLE-WHEELS. EARL J. SEIFRIED and ISAAC G. SEIFRIED, Findlay, Ohio. Filed Feb. 13, 1911. Serial No. 608,432. (Cl. 152—44.)



1. In a device of the character described, the combination of a central circular plate, crossed shiftable link members on opposite sides of said plate movable in planes at angles to each other, the opposing inner walls of said link members being flat and parallel, a flat faced element arranged in said link members and having its flat faces slidably engaged with the parallel walls of said link members, means for guiding said link members in their shifting or sliding movement, and means for cushioning said link members.

2. In a resilient wheel, the combination of a central circular plate, crossed shiftable link members on opposite sides of said plate movable in planes at angles to each other, said members having flat parallel inner walls, a flat faced axle member arranged for sliding movement in the link members and having its flattened faces slidably engaged with the parallel walls of said link members, a wheel structure having means to guide said link members in their shifting movement, resilient means for cushioning said link members, a drive axle, and means for removably securing said axle member to said axle.

3. In a resilient wheel, the combination of an open hub member having a central plate, removable plates closing the open sides of said hub member and forming a chamber on each side of said central plate, supporting plates removably arranged in the chambers of said hub member, crossed link members slidably arranged in said supporting plates and movable in planes at angles to each other, cushioning springs arranged in said supporting plates for cushioning said link members, an axle member arranged for sliding movement in said link members, retaining plates for retaining said link members within said supporting plates and axle, and means for retaining said axle member on said axle.

4. In a resilient wheel, the combination of an open hub member having a central plate, removable plates closing the open sides of said hub member, and forming a chamber on each side of said central plate, supporting plates removably arranged in the chambers of said hub member, crossed link members slidably arranged in said supporting plates and movable in planes at angles to each other, cushioning springs arranged in said supporting plates for cushioning said link members, an axle member slidable in said link members, a drive axle in said axle member, means for locking the axle member to the axle for rotation therewith, means for retaining the axle member on the axle, retaining plates for retaining the link members in the supporting plates, means for preventing the entrance of dust into the hub structure, and a removable dust cap on the outer plate of the hub structure.

5. In a resilient wheel, a hub comprising a circular plate having a central opening, a shiftable member on each side of said plate, each movable at an angle with the other and in a different plane therefrom, means for cushioning each member, and an axle extending through and supported in both of said shiftable members.

[Claim 6 not printed in the Gazette.]

1,022,568. FIRE-ESCAPE. REUBEN SIDEMAN, San Francisco, Cal. Filed Sept. 25, 1911. Serial No. 651,186. (Cl. 227—22.)



1. A fire escape comprising a chair; a tubular standard fixed to and rising from the front portion of the chair; a flexible element passed through the standard; means upon the standard, and under the control of the occupant of the chair, for gripping the flexible element; a shaft journaled for rotation upon the chair, one end of the flexible element being connected with the shaft; and means upon the other end of the flexible element to engage with an overhead support.

2. A fire escape comprising a chair; two-part bearings located at the sides of the chair; a shaft journaled for rotation in the bearings; means uniting the parts of the bearings, and under the control of the occupant of the chair, for varying the frictional hold of the bearings upon the shaft; a flexible element assembled with the shaft; means upon the flexible element for engagement with an overhead support; a standard fixed to and rising from the chair; and a clamp carried by the standard, and under the control of the occupant of the chair, for frictionally engaging the flexible element.

3. A fire escape comprising a chair; a main shaft and an auxiliary shaft journaled for rotation upon the chair; intermeshing pinions upon the shafts; a friction brake under the control of the occupant of the chair, and engaging the main shaft; a flexible element connected with the main shaft; a flexible ladder connected with the auxiliary shaft; means connected with the flexible element and with the ladder for engaging an overhead support; and mechanism fixed to the chair and located above the same, for frictionally engaging the flexible element.

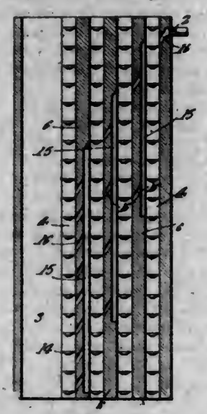
4. A fire escape comprising a chair; a main shaft and an auxiliary shaft journaled for rotation upon the chair; intermeshing pinions upon the shafts; a flexible element connected with the main shaft; a flexible ladder connected with the auxiliary shaft; means connected with the flexible element and with the ladder, for engaging an overhead support, and a device under the control of the occupant of the chair, and engaging the flexible element, to limit the lowering of the chair and to limit the unreeling of the ladder.

1,022,569. SNATCH-BLOCK. WILLIAM TREWHELLA, Trentham, Victoria, Australia. Filed Jan. 16, 1911. Serial No. 602,928. (Cl. 57—34.)



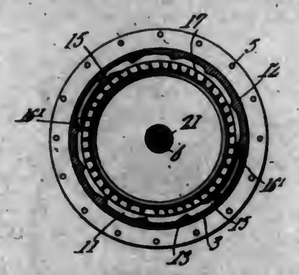
A new article of manufacture, a sheet metal snatch block, comprising a pulley, an axle therefor, a stamped, sheet-metal cheek piece fixed on the pulley axle on each side of the pulley and formed with guide horns having their ends extending over the flanges of the pulley, said cheek pieces having longitudinal slots closed at their ends, one of said cheek pieces having integral lugs bent at right-angles thereto on each side of the slot, a pin mounted in the lugs extending across the slot, a stamped, sheet-metal cross piece of substantially the same width as the slot pivoted on said pin between the lugs and having straight shoulders near its ends to bear against said closed ends of the slots, said bar being formed with a central raised portion extending from one cheek to the other, forming interior abutments for said cheeks and with an upturned lug on the free end to engage the outside of the other cheek piece, whereby said pieces are locked together.

1,022,570. ROTARY STEAM-ENGINE. DELEVAN P. UPSON, Jacksonville, Fla., assignor to Upson Rotary Motor Co., Jacksonville, Fla. Filed May 29, 1911. Serial No. 630,216. (Cl. 121—58.)



A rotary engine, comprising a cylinder, partitions located therein and dividing the same into compartments, a rotor journaled in the cylinder and provided with peripheral vanes, one to each compartment, said partitions having in their sides and at the edges of the paths of movement of the vanes recesses, which recesses increase in length throughout the series of partitions from the initial partition to the final partition, and have each an inclined shoulder at its inlet end and a right angled shoulder at the other end, said partitions also having steam transmission ports communicating at their receiving ends with the said recesses and having their discharge ends located tangentially and adjacent the edges of the paths of movement of the vanes, the transverse sectional area of the transmission portage throughout the partitions increasing by multiples of two from the initial partition to the final partition.

1,022,571. ROTARY STEAM-ENGINE. DELEVAN P. UPSON, Jacksonville, Fla., assignor to Upson Rotary Motor Co., Jacksonville, Fla. Filed May 29, 1911. Serial No. 630,217. (Cl. 121—58.)



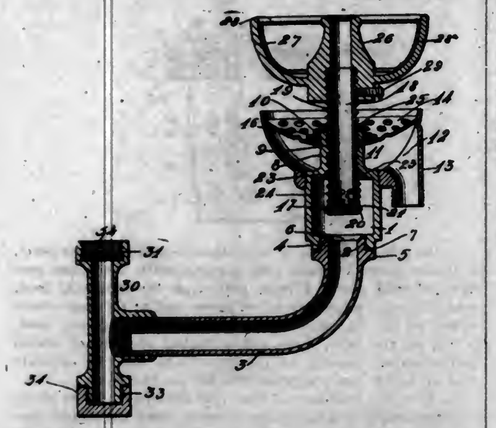
1. A rotary steam engine comprising a cylinder, a rotor journaled therein and provided with vanes, said cylinder having steam channels which open toward the vanes and which are arranged in stages connected together by transmission ports, said channels increasing in transverse sectional area from their admission ends toward their exhaust ends throughout the cylinder, the said channels being provided with deflectors having surfaces tangentially disposed with relation to the rotor and the sides of the channels about the ends of the said deflectors being cut away whereby the progressive increase in the transverse sectional area of the channels is not interrupted.

2. A rotary steam engine comprising a cylinder made up of rings and partition members, said partition members being centrally bored and dividing the interior of the cylinder into compartments, bushings of relatively soft metal fixed in the bores of the said partition members, a shaft journaled in the said bushings, disks having hubs mounted upon the said shaft and snugly fitting at their ends within the end portions of the bores of the partition members and against the sides of the said bushings, steam channels provided in the cylinder and opening toward the peripheries of the disks and vanes mounted upon the peripheries of the disks and arranged to move along the said steam channels, the said steam channels being connected by transmission ports whereby steam courses are established from the inlet to the exhaust of the cylinder about the peripheries of the said disks.

3. In a rotary engine, the combination of a casing, a shaft journaled therein, a rotor composed of a series of members gradually increasing in width from the center to the ends thereof, said rotor being mounted upon said shaft, said casing having a chamber adjacent to the periphery of each member of the rotor, a pressure fluid inlet disposed centrally of the casing, said casing being provided with a channel to receive the pressure fluid from said inlet and convey the said pressure fluid in opposed directions at diametrically opposite points of the central member of the rotor, said casing being further provided with a plurality of channels one to each member and in communication in successive pressure fluid conveying operation to permit each member to be acted upon successively, the last or outer chambers of the casing being provided each with an exhaust.

1,022,572. DRINKING-FOUNTAIN. ARTHUR WHITTIER, East Walpole, Mass. Filed Oct. 31, 1910. Serial No. 589,943. (Cl. 137—11.)

1. In a drinking fountain a valve casing, having in its upper and lower ends valve seats, a neck formed on said casing, said neck having arranged therein coarse threads, a tubular valve stem having a threaded engagement with said neck and having in the sides of its lower end a series of perforations, a double faced valve arranged on the lower end of said stem and adapted to be brought into engagement with one or the other of the seats arranged in said casing, means to screw said valve stem upwardly or downwardly in the threaded neck of the valve casing to project the perforated lower end of the stem into the casing to a greater or less extent thereby regulating the flow of water through the stem, a stop nut arranged on said stem, a discharge nozzle secured to the upper end of the stem and means to prevent the lips from being engaged with the nozzle when drinking from the fountain.



2. In a drinking fountain a valve casing having on one end an interiorly threaded neck and adapted to be connected at its opposite end to a water supply pipe, a tubular exteriorly threaded valve stem adapted to be screwed upwardly and downwardly in said neck, said stem having a perforated lower end adapted to be screwed into said casing to a greater or less extent thereby regulating the passage of water through the stem, a valve arranged on the lower end of said valve stem and adapted to cut off the flow of water through the stem, a catch basin arranged on said valve casing, a drain passage formed in said basin, a discharge nozzle secured to the upper end of said valve stem, a series of radially disposed arms formed on said nozzle, a combined hand wheel and guard ring formed on the upper ends of said arms whereby the lips are prevented from coming into contact with the nozzle when drinking therefrom and whereby said valve stem is adjusted in said casing.

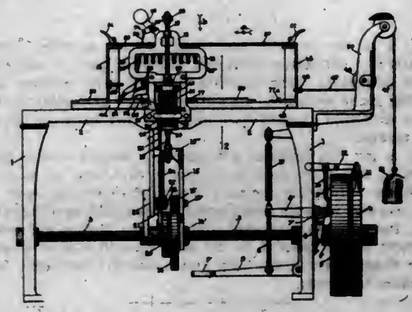
3. In a drinking fountain a valve casing having on one end an interiorly threaded neck and adapted to be connected at its opposite end to a water supply pipe, a tubular exteriorly threaded valve stem adapted to be screwed upwardly and downwardly in said neck, said stem having a perforated lower end adapted to be screwed into said casing to a greater or less extent thereby regulating the passage of water through the stem, a valve arranged on the lower end of said valve stem and adapted to cut off the flow of water through the stem, a catch basin arranged on said valve casing, a drain passage formed in said basin, a perforated strainer plate arranged in said catch basin, a retaining nut screwed on the upper end of the neck of the valve casing whereby said strainer plate is depressed and held in operative position in the catch basin, a discharge nozzle arranged on the upper end of said valve stem, a combined guard ring and hand wheel secured to said nozzle whereby the lips are prevented from being engaged therewith when drinking and whereby said valve stem may be adjusted in said valve casing, a stop nut arranged on said valve stem to limit the downward movement thereof, a water supply pipe connected with the lower end of said valve casing and a coupling arranged on the outer end of said supply pipe.

4. In a drinking fountain a valve casing, a tubular valve stem adjustably arranged therein, a valve on the inner end of said stem, a discharge nozzle secured to the upper end of said stem, a catch basin arranged on said casing below said discharge nozzle, said catch basin having formed therein a drain opening, a water supply pipe connected to the lower end of said valve casing, a T coupling arranged on the opposite end of said supply pipe, a socket formed on one end of said coupling and adapted to be engaged with a faucet, and a cap adapted to be screwed into engagement with the opposite end of the coupling whereby said end is closed.

5. In a drinking fountain, a valve casing having in its upper and lower ends valve seats, a tubular valve stem having a threaded engagement with said casing and having in its lower end a series of perforations, a double faced valve arranged on the lower end of said stem and adapted to be brought into engagement with one or the other of the seats in said casing, means to operate said valve and stem whereby the perforated lower end of the latter will be projected to a greater or less extent into said casing and adjustable means to limit the movement of said valve and casing whereby the flow of water through the fountain is regulated.

[Claims 6 to 10 not printed in the Gazette.]

1,022,573. JACQUARD-CARD-PUNCHING MACHINE. HORACE WYMAN, Worcester, Mass., assignor to Crompton & Knowles Loom Works, a Corporation of Massachusetts. Filed Apr. 24, 1911. Serial No. 622,969. (Cl. 164—112.)



1. In a card punching machine, a blank card carriage movable lengthwise of the frame, punch plates having one or more rows of holes crosswise of the frame, a row of punches for said holes, a row of keys arranged lengthwise of the frame, each punch having its coöperating key and pivoted dogs in inoperative position above said punches, and adapted to be made operative by said keys.

2. In a card punching machine, a blank card carriage movable lengthwise of the frame, a set of punch plates adapted for a row of punches crosswise of the frame, keys at one side of the blank card carriage each punch having a coöperating key, dogs in inoperative position above the row of punches, and intermediate levers by which said dogs may be made inoperative.

3. In a card punching machine, a blank card carriage movable lengthwise of the frame, a die plate having a row of holes crosswise of the frame, a row of punches adapted for said holes, keys, at one side of the blank card carriage, each key being adapted to coöperate with an independent punch actuating dogs in inoperative position above the punches, and intermediate levers between the keys and actuating dogs.

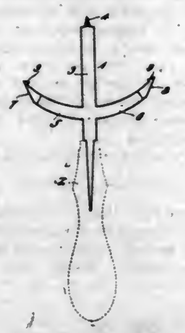
4. In a card punching machine, a blank card carriage movable horizontally on the frame, a pattern card carriage movable with the blank card carriage, a vertically movable punch carriage having a limit bar with detector needles thereon above the pattern card carriage, with limiting heads above the bar, said needles adapted to coöperate with a punched pattern card on its carriage, to repeat similar holes on a blank card on its carriage.

5. In a card punching machine, a movable blank card supporting carriage having a toothed rack thereon, a set

of punch plates, a series of punches above and across the movable blank card carriage, a series of keys at one side of said carriage, and parallel with its movement, means to move the punches up and down intermittingly, with means including a lever moved by a cam, and a ratchet pawl carried on said lever to move said carriage forward during such intermitted movement.

[Claims 6 to 10 not printed in the Gazette.]

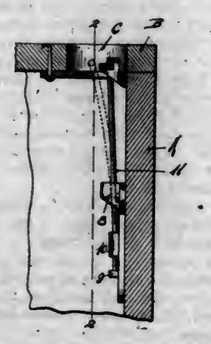
1,023,574. FRUIT-JAR OPENER. HARRY D. AULD, The Dalles, Oreg. Filed May 4, 1911. Serial No. 625,114. (Cl. 65—26.)



1. A jar top remover comprising a body member having a laterally extending obliquely disposed spur at one end, arms extending from opposite sides of said member and having right angularly projecting fingers extending in the same direction as said spur and provided with top-engaging means.

2. A jar top remover comprising a handle and a body portion, the body portion being in the form of a cross with an outwardly inclined laterally extending spur at one end and with its arm curved toward said spur-carrying end, the terminals of said arms having fingers extending at right angles thereto, in the same direction as said spur, said fingers having laterally and forwardly extending lugs at their free ends.

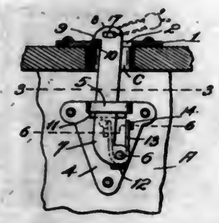
1,022,575. BOX-FASTENER. JAMES F. BEEHLER, St. Louis, Mo. Filed May 11, 1911. Serial No. 626,538. (Cl. 70—82.)



1. In a box fastener a base plate adapted to be applied to the wall of the box, a resilient loop having its lower portion applied to the face of said plate, a lug on the base plate against which the lower ends of the loop engage and a pair of ears integral with the base plate above the lug for clamping the lower portion of said resilient loop.

2. In a box fastener of the class described a base plate adapted to be applied to the wall of the box, a resilient catch formed of a single piece of wire bent double the lower portions of the legs of which catch are applied to the face of said base plate, a lug integral with the plate against which the legs of the catch engage, a pair of ears integral with the base plate above the lug for clamping the lower portions of the legs of the resilient catch, and a loop on the upper portion of the base plate through which the legs of the catch engage.

1,022,576. BOX-FASTENER. JAMES F. BEEHLER, St. St. Louis, Mo. Filed May 11, 1911. Serial No. 626,539. (Cl. 70—82.)

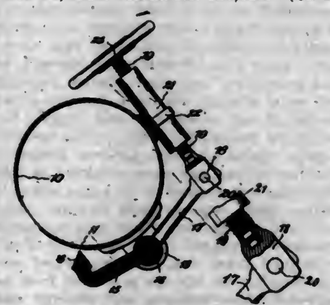


1. In a box fastener of the class described a base plate, a transversely disposed loop integral with the upper portion of said plate, a hook extending through said loop, and pivotally connected at its lower end to the base plate, a lug on the rear side of the lower portion of said hook, a lug on the base plate and a spring one end of which bears against the lug on the base plate, and the opposite end of which bears against the lug on the hook.

2. In a box fastener of the class described a base plate, a transversely disposed loop integral with the upper portion of said plate, a hook extending through said loop, and pivotally connected at its lower end to the base plate, a lug on the rear side of the lower portion of said hook, a lug on the base plate and a spring one end of which bears against the lug on the base plate, and a transversely disposed rib on the base plate adjacent the loop which rib forms a bearing for the hook during its swinging movement.

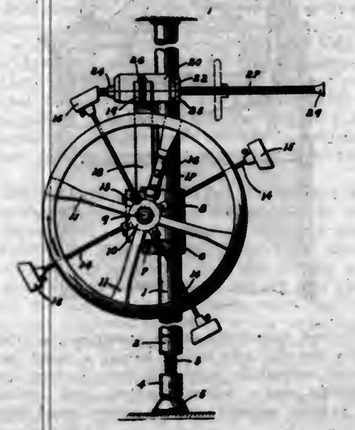
3. In a box fastener of the class described a base plate, a transversely disposed loop integral with the upper portion of said plate, a hook extending through said loop, and pivotally connected at its lower end to the base plate, a lug on the rear side of the lower portion of said hook, a lug on the base plate a spring one end of which bears against said last mentioned lug, and a second lug on the base plate adjacent the fulcrum point of the hook for supporting the spring.

1,022,577. DISTRIBUTER. GEORGE A. BERRY, Ely, Nev. Filed Feb. 24, 1911. Serial No. 610,618. (Cl. 137—58.)



In a distributer of the character described, the combination of a distributing pipe having a plurality of distributing apertures, a rod journaled along said pipe, a plurality of arms carried by said rod, coincident with, and movable within and from said pipe apertures, and constituting plugs to regulate the flow therefrom, an adjusting hand screw, a rocker arm extending from the rod, a loose connection between the screw and the rocker arm, and an internally threaded tube secured on said distributing pipe through which said screw is threaded.

1,022,578. PORTABLE ROCK-DRILL. GEORGE H. BIBB, Silverton, Colo. Filed Oct. 17, 1910. Serial No. 587,556. (Cl. 125—10.)



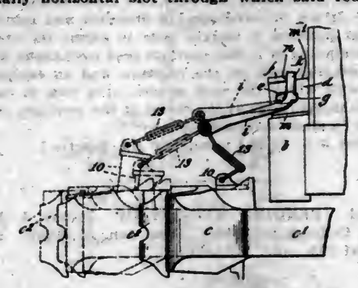
1. In a machine of the class described, a vertically disposed longitudinally adjustable support, a bearing mounted for longitudinal adjustment on said support, a shaft carried by said bearing, a rotating member on the shaft, resilient arms carried by the rotating member, hammers on said resilient arms a drill holder mounted on the shaft and rotatably adjusted with respect thereto, and a drill mounted in the holder in the path of travel of the hammers.

2. In a machine of the class described, a vertically disposed longitudinally adjustable support, a bearing mounted for longitudinal adjustment upon said support, a shaft carried by said bearing, a hub journaled for rotation on said shaft, spokes carried by said hub, a pair of rings connected to the outer ends of the spokes, a series of radially arranged resilient arms carried by the hub between the spokes, which arms project between and beyond the rings, hammers on the ends of the resilient arms, a drill support carried by the shaft, and a drill mounted in said drill support, one end of which drill is in the path of travel of the hammers.

3. In a machine of the class described, a vertically disposed longitudinally adjustable support, a bearing mounted for longitudinal adjustment upon said support, a shaft carried by said bearing, a hub journaled for rotation on said shaft, spokes carried by said hub, a pair of rings connected to the outer ends of the spokes, a series of radially arranged resilient arms carried by the hub between the spokes, which arms project between and beyond the rings, hammers on the ends of the resilient arms, a drill support carried by the shaft, a drill mounted in said drill support, one end of which drill is in the path of travel of the hammers, and a handle adapted to be applied to the spokes for rotation the hub and parts carried thereby.

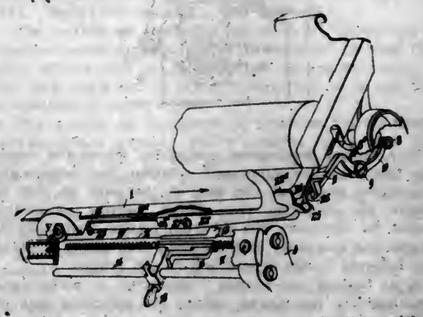
1,022,579. UNCOUPLING MECHANISM FOR CARS. RICHARD WEBB BURNETT, Montreal, Quebec, Canada. Filed June 22, 1910. Serial No. 568,336. (Cl. 213—6.)

The combination with a car and a coupler attached thereto and having a vertically movable locking member, of an uncoupling rod extending transversely of the car, and a bracket secured to the car, the rod having an upwardly projecting finger and an angular arm projecting outwardly over the coupler and flexibly connected to the locking member, and the bracket being formed with a substantially horizontal slot through which said rod passes



and a horizontal detent flange above said opening with which said finger engages on an abnormal forward movement of the coupler.

1,022,580. TYPE-WRITING MACHINE. CORNELIUS B. CORCORAN, New York, N. Y., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Nov. 26, 1910. Serial No. 594,269. (Cl. 197—63.)



1. In a typewriting machine, the combination with a carriage driven in letter-spacing direction and returnable to initial position, and means to arrest the carriage, of carriage-feed mechanism including escapement members mounted on the carriage and the frame respectively, the escapement member on the carriage being releasable from its co-acting member, and means to lock the shiftable escapement member to the co-acting member at the arrest of the carriage, and means for rendering said lock inoperative at will.

2. In a typewriting machine, the combination with a carriage driven in letter-spacing direction and returnable to initial position, and an adjustable margin gage to arrest the carriage at the beginning of a line, of carriage feed mechanism including a shiftable escapement member on the carriage engaging a co-acting member on the frame, and means latching with the margin gage at the contact of said carriage with said gage, to lock the escapement members together.

3. In a typewriting machine, the combination with a carriage driven in letter-spacing direction and returnable to initial position, and carriage feed mechanism including an escapement on the frame, and a movable rack on the carrage meshing with said escapement, of means to lock the rack and escapement together at the moment when the carriage reaches initial position, and means for rendering said lock inoperative at will.

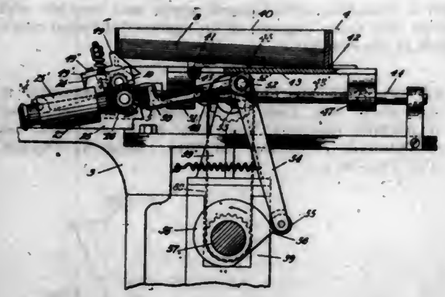
4. In a typewriting machine, the combination with a carriage driven in letter-spacing direction and returnable to initial position, and carriage feed mechanism including an escapement on the frame, and a movable rack on the carriage meshing with said escapement, of a lever carrying a lock for said rack effective at the moment when the

carriage reaches initial position, and means for moving said lever to render the lock ineffective.

5. In a typewriting machine, the combination with a carriage driven in letter-spacing direction and returnable to initial position, a margin gage to arrest the carriage at the beginning of a line, carriage feed mechanism including a swinging rack on the carriage, and an escapement pinion with which the rack meshes, of a lock in contact with the margin gage at the arrest of the carriage, to hold the rack in mesh with said pinion.

[Claims 6 to 14 not printed in the Gazette.]

1,022,581. FEEDING MECHANISM. HARRY J. DOUGLASS, Bellingham, Wash. Filed Jan. 31, 1910. Serial No. 541,199. (Cl. 113—113.)



1. A feeding mechanism comprising means for supporting blanks in superimposed relation for reciprocatory movement, means at the side of the path of said first means for diverting the blanks thereon successively, means for removing the diverted blanks from said first means, and means for operating said first means to advance the deflected blanks to said last named means.

2. A feeding mechanism comprising a reciprocatory container for the blanks, means for operating said container, a diverter supported below said container for movement to and from the path thereof for diverting the blanks successively from their normal path of travel, means for operating said diverter, means for forwarding the diverted blanks, and means arranged to engage the upper blanks and lift the same during movement of said container.

3. A feeding mechanism comprising a reciprocatory container for the blanks, means for operating said container, a diverter supported below said container for movement to and from the path thereof for diverting the blanks successively from their normal path of travel, means for operating said diverter, means for forwarding the diverted blanks, and means arranged to engage the upper blanks and lift the same during movement of said container, said last means lying adjacent one end of the path of said

1,022,582. AMPLIFIER FOR SOUND-REPRODUCING DEVICES. JOHN C. ENGLISH, Camden, N. J., assignor to Victor Talking Machine Company, a Corporation of New Jersey. Original application filed July 19, 1906, Serial No. 326,827. Divided and this application filed Jan. 15, 1910. Serial No. 538,277. (Cl. 181—27.)



1. A sound amplifying device comprising a rigid, substantially non-vibratory section having a sound conveying passage of constantly increasing cross section extending therethrough, and a hollow vibratory body section comprising exterior sounding boards spaced apart from each other.

2. A sound amplifying device comprising a heavy substantially non-vibratory section and a hollow vibratory body section communicating therewith, the passage through said sections being of continuously increasing cross sectional area.

3. A sound amplifying device comprising a section having rigid non-vibratory sides, and a body-section communicating therewith having vibratory sides, said sections having a continuous sound conducting passage therethrough.

4. A sound amplifying device comprising a substantially non-vibratory section, and a hollow body-section communicating therewith, said body-section having an exterior side consisting of a resonant sounding board.

5. A sound amplifying device comprising a substantially non-vibratory section, and a hollow body-section communicating therewith, said body-section having an exterior side consisting of a resonant sounding board, the passage for sound through said sections being of continuously increasing cross sectional area.

[Claims 6 to 28 not printed in the Gazette.]

1,022,583. HOSE-CARRIAGE. PETER G. ESLER, North Kaukauna, Wis. Filed Jan. 16, 1911. Serial No. 602,982. (Cl. 242—88.)

sprocket carried by a wheel of said body, movable sprockets adjacent each of the first named sprockets, an endless chain engaged over the last named movable sprockets and adapted to be engaged with the driving sprocket at one side, and adapted for engagement of one side with the driven sprocket outwardly and inwardly thereof, alternatively.

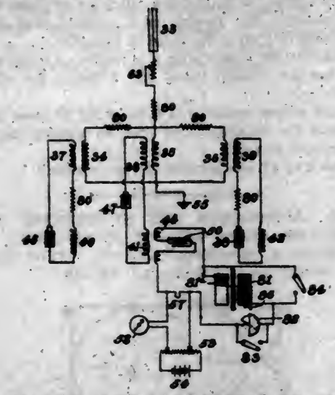
2. A device of the class described comprising a wheeled body, a plurality of rotatable supporting members mounted thereon and in lateral relative spaced relation, an endless hose supporting member engaged commonly around the members, a driven sprocket carried by one member a driving sprocket carried by a wheel of said body, movable sprockets adjacent each of the first named sprockets and opposite the other, an endless chain engaged over the last named movable sprockets and adapted to be moved into engagement with the driving sprocket at one part, and adapted for engagement of one side outwardly with the driven sprocket outwardly of the chain or inwardly thereof.

3. A device of the class described comprising a body, a wheel carried thereby a driving sprocket on the wheel a driven sprocket on the body, levers pivoted on the body each carrying an idler sprocket adapted for movement respectively toward and away from the driving and the driven sprockets, an endless chain engaged over the idler sprockets for engagement at times with the driving sprocket upon operative movement of the respective idler sprocket, said chain being normally engaged with the driven sprocket at one side and being adapted to be disposed in engagement with the opposite side of said driven sprocket upon movement of the respective idler sprocket, and a reel device carried by the body and connected with the driven sprocket.

4. A device of the class described comprising a wheeled carriage including a side portion, a forward driver's seat and a rear fireman's support, a sprocket carried by a wheel of the carriage, a reel device carried within the carriage, a driven sprocket carried thereby in the plane of the first sprocket, a lever on the carriage adjacent the driving sprocket, an idler sprocket carried thereby, a hand lever operable from the driver's seat for control of the first lever, a link connecting the two, a hand lever operable from the fireman's support, an idler sprocket thereon for movement toward and away from the driven sprocket an endless chain engaged over the idlers for movement into and out of engagement with the driving sprocket upon movement of the first named hand lever, and normally engaged with one side of the driven sprocket and adapted to be shifted into engagement with the opposite side of the sprocket upon movement of the second named hand lever.

5. In a hose carriage, the combination with a wheeled body of a plurality of rotatable supporting members mounted thereon and in lateral relative spaced relation, an endless hose supporting member engaged commonly around the members, a driven sprocket carried by one member, a driving sprocket carried by a wheel of said body, movable sprockets adjacent each of the first named sprockets and opposite the other, an endless chain engaged over the last named movable sprockets and adapted

nected auxiliary circuit having electrical constants variable in known degree, whereby the auxiliary circuit is by



known adjustment brought to the same known periodicity as the circuit to be measured.

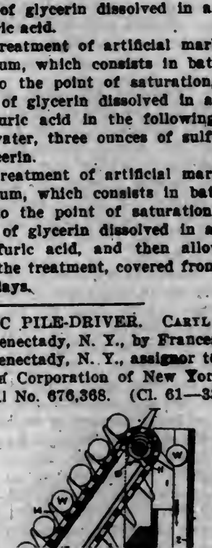
1,022,585. TREATMENT OF ARTIFICIAL MARBLE. HUGO GALLINOWSKY, St. Bernard, Ohio. Filed Aug. 14, 1911. Serial No. 643,897. (Cl. 106—45.)

1. The method of treatment of artificial marble casts of double-burned gypsum, which consists in bathing the surface of the cast to the point of saturation, with a liquid bath composed of glycerin dissolved in a ten per cent. solution of sulfuric acid.

2. The method of treatment of artificial marble casts of double-burned gypsum, which consists in bathing the surface of the cast to the point of saturation, with a liquid bath composed of glycerin dissolved in a ten per cent. solution of sulfuric acid in the following proportions: one quart of water, three ounces of sulfuric acid and two ounces of glycerin.

3. The method of treatment of artificial marble casts of double-burned gypsum, which consists in bathing the surface of the cast to the point of saturation, with a liquid bath composed of glycerin dissolved in a ten per cent. solution of sulfuric acid, and then allowing the cast to remain under the treatment, covered from the air, for from eight to ten days.

1,022,586. ELECTRIC PILE-DRIVER. CARYL D. HASKINS, deceased, Schenectady, N. Y., by Frances J. Haskins, executrix, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Feb. 8, 1912. Serial No. 676,368. (Cl. 61—38.)



2. A pile driver comprising a plurality of loose weights, and means for lifting and dropping them successively.

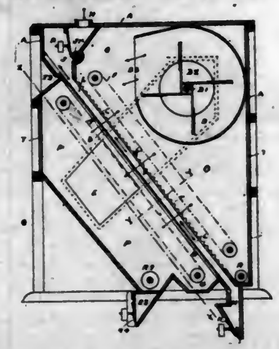
3. A pile driver comprising a plurality of loose weights, and an elevator for raising said weights and dropping them successively upon the head of the pile.

4. A pile driver comprising a plurality of loose weights, an elevator for raising them, and a motor for operating said elevator.

5. A pile driver comprising a plurality of loose weights, an elevator for raising them, and an electric motor for actuating said elevator.

[Claims 6 to 17 not printed in the Gazette.]

1,022,587. APPARATUS FOR SEPARATING SMALL PARTICLES FROM LARGER PARTICLES. JAMES HIGGINBOTTOM, Liverpool, England. Filed Apr. 14, 1905. Serial No. 255,610. (Cl. 83—38.)



1. In a separating apparatus, the combination of the fan blowing into the first depositing chamber, the stationary inclined diaphragm having air jet orifices, the stationary inclined screen having the material being separated traveling by gravity over its upper surface and the air current passing through the screen from its upper to its lower surface, the second depositing chamber, the air conduits from the second depositing chamber to the fan, the traveling brush to the diaphragm, and the traveling brush to the screen.

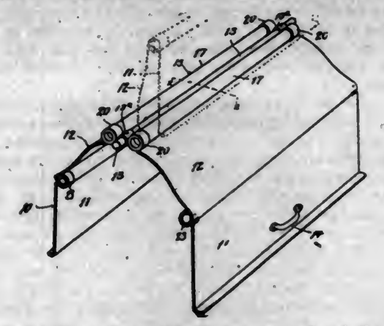
2. In a separating apparatus, the combination of a fan from which air is discharged, a first depositing chamber for receiving the air from the fan and in which small particles are deposited, a stationary inclined diaphragm having air jet orifices through which air passes from the chamber to the screen, a stationary inclined screen upon which the material being separated travels by gravity, and which has air currents passing through from its upper to its lower surface, a second depositing chamber for receiving air and separated particles which have passed through the screen, air conduits from the last named chamber to the fan, a traveling brush to said diaphragm, a traveling brush to said screen, an outer casing, a feed valve, a discharge valve for large particles, and discharge valves for small particles.

1,022,588. HINGE. JOHN C. HYLTON, Chicago, Ill. Filed May 18, 1911. Serial No. 627,908. (Cl. 16—104.)

1. A hinge comprising two companion leaves, each having the whole of one edge rolled into cylindrical formation, with each cylindrical edge partially wrapped around the other cylindrical edge, each cylindrical edge being of greater extent than a semi-circle, whereby the two leaves are held in pivotal connection at any desired angle with respect to each other.

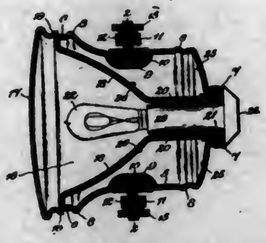
2. A hinge comprising two companion leaves, each having one edge rolled into a cylindrical ear, with the cylindrical ear of one fitted within and turning in that of the other, and thimbles secured on the ends of the outer ears.

3. A hinge comprising two companion leaves, each having one edge rolled into a cylindrical ear with the cylindrical ear of one fitted within and turning in that of the other, each leaf having notches in its ends adjacent to



the ears and thimbles secured on the ends of the ears and projecting into said notches.

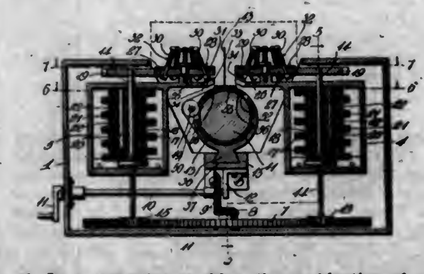
1,022,589. AUTOMOBILE-HEADLIGHT. EDGAR J. LUTWYCHE, Chicago, Ill. Filed Apr. 10, 1911. Serial No. 620,011. (Cl. 240—41.)



1. A lamp comprising an outer casing open at one end and having a reduced neck at its opposite end, a second casing within the first casing and having an exterior shoulder fitting against the edge of the open end thereof to close the same, said second casing being closed at its outer end, and having an intermediate portion forming a reflector, and provided at its inner end with a neck fitting within the neck of the outer casing, and a source of light mounted in the neck of the inner casing and projecting into the reflector portion thereof.

2. A lamp comprising a glass body having diametrically opposite side indentations, cushioning plugs mounted in said indentations, studs engageable with the cushions, and a lamp support to which the studs are connected.

1,022,590. COMPUTING-MACHINE. JOHN OSS, Atlanta township, Becker county, Minn. Filed Feb. 20, 1911. Serial No. 609,733. (Cl. 235—58.)



1. In a computing machine, the combination of a casing, a master gear in the casing, an inner casing, a train of computing gears in the inner casing, a vertical shaft

of said train projecting above and below the inner casing, gearing connecting the lower end of the vertical shaft with the master gear, a series of disconnected revoluble dials carried by the inner casing, a gear attached to each dial and adapted to engage a correspondingly located gear of the train, and means for throwing the gear of the train out of connection with the master gear.

2. In a computing machine, the combination of a casing, a master gear in the casing, an inner casing pivotally mounted in the main casing, a train of computing gears in the inner casing, a vertical shaft of said train projecting above and below the inner casing, gearing connecting the lower end of the vertical shaft with the master gear, a series of disconnected revoluble dials carried by the inner casing, means for throwing the gear of the train out of connection with the master gear, and means for moving the inner casing on its pivot to disconnect it from the master gear.

3. In a computing machine, the combination of a main casing, a master gear journaled therein, two inner casings within the main casing, a train of computing gears in each inner casing, a vertical shaft included in each of said trains projecting above and below the inner casing, gearing on the lower end of each vertical shaft adapted to engage the master gear, a series of disconnected revoluble dials in each inner casing, a gear for each dial of each series adapted to engage a corresponding gear in its computing train, and means for throwing the gears of the train of either of the inner casings out of engagement with the master gear.

4. In a computing machine, the combination of a main casing, a master gear journaled therein, two independent inner casings pivotally connected to the walls of the main casing, a train of computing gears in each inner casing, a vertical shaft included in each train projecting above and below its inner casing, gearing connecting the lower end of each vertical shaft independently of the master gear, a series of disconnected revoluble dials carried by each inner casing, a gear for each dial adapted to engage a correspondingly located gear of its respective computing train, means for moving either of the inner casings on its pivot to disconnect its train of gearing from the master gear, and means for securing the casings in their disconnected positions.

5. In a computing machine, the combination of a main casing, an inner casing pivoted to the walls of the main casing, a train of computing gearing in the inner casing, a series of dials carried by the inner casing, a gear for each dial, engaging a corresponding gear in the train, a master gear wheel in the main casing, means for moving the inner casing on its pivot for connecting or disconnecting each of the trains of gearing with the master wheel, an outside casing adjacent and pivoted to the main casing, a series of registering dials carried by the outside casing and connections whereby the movements of the inner casing to disconnect its gear with the master wheel are registered on the dial on the outside casing.

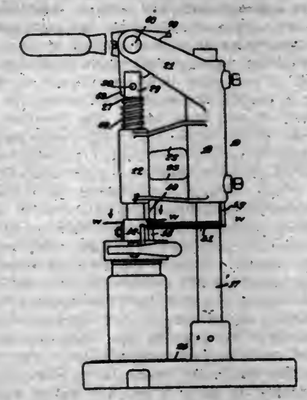
[Claims 6 to 9 not printed in the Gazette.]

1,022,591. CAPPING-MACHINE. EUGENE L. PERRY, New York, N. Y., assignor to American Stopper Company, New York, N. Y., a Corporation of New Jersey. Filed Nov. 24, 1909. Serial No. 529,692. (Cl. 226—4.)

1. In a machine of the class described, the combination of a bottle or jar support, a perpendicularly movable plunger, means for moving the plunger against the stress of a spring, means for limiting the movement of the plunger and locking it in its lowered position, a head rotatable in a horizontal plane on the end of the plunger, and means for rotating the head and means for gripping the cap by a limited pressure.

2. In a machine of the class described, a bottle or jar support, a rotatable head or chuck, means for rotating said head or chuck, means for moving said head or chuck to or from said bottle or jar support, and means for regulating the pressure without effecting the full throw of said head or chuck.

3. In a machine of the class described, a bottle or jar support, a rotatable head or chuck, means for moving said head or chuck to and from said support, a bracket through which the means carrying said head is movable, means for adjustment of said bracket, and means causing sufficient friction to enable the head and the applied cap to be rotated in unison.

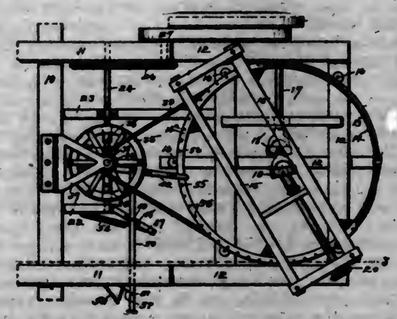


4. In a machine of the class described, a bottle or jar support, a rotatable head or chuck, means for moving said head or chuck to and from said support, a bracket through which the means carrying said head is movable, means for adjustment of said bracket, means causing sufficient friction to enable the head and the applied cap to be rotated in unison, and eccentric means for regulating the pressure of the operating means.

5. In a machine of the class described, a bottle or jar support, a rotatable head or chuck, means for moving said head or chuck to and from said support, a bracket through which the means carrying said head is movable, means for adjustment of said bracket, means causing sufficient friction to enable the head and the applied cap to be rotated in unison, eccentric means for regulating the pressure of the operating means, and means for releasing the frictional engagement as the head is reversely rotated.

[Claims 6 to 9 not printed in the Gazette.]

1,022,592. SWINGING STRAW-STACKER. EDWARD M. PETERSON, Leland, Iowa. Filed Sept. 14, 1910. Serial No. 581,973. (Cl. 193—17.)



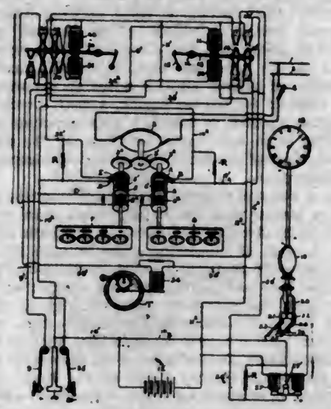
1. In a device of the class described, a movable turn table, a shaft, two clutch members thereon, a movable clutch member on said shaft, beveled gears on said clutch members, an upright shaft, a pinion thereon in mesh with said beveled gears, means whereby the rotation of said upright shaft is imparted to said movable turn table, a bracket having two arms, a lever pivoted to one of said arms extending to a point adjacent to said movable turn

table, limiting pins on said movable turn table designed to engage the end of said lever, a second lever pivoted to the other arm of said bracket and to said first lever, said second lever being operatively connected with said movable clutch member, a draw bar slidingly mounted and pivotally connected with said first lever, a third lever pivoted at one end and provided with a longitudinal slot near its center, a pin on said draw bar mounted in said slot, a contractible coil spring secured to the free end of said third lever and mounted at its other end at such a point that at one point in the movement of the lever, said spring is parallel therewith, and means for limiting the movement of said draw bar in one direction.

2. A device of the class described, comprising a stationary frame, a turn-table mounted thereon, an upper frame mounted on the turn-table, a shaft mounted on the stationary frame, means for rotating said shaft, two clutch members rotatably mounted on the shaft, a sliding clutch member mounted on the shaft between the rotary clutch members, a collar on the sliding clutch member, a beveled gear operatively connected with the rotary clutch members, an upright shaft actuated by the beveled gear, a sprocket wheel mounted on the upright shaft, a sprocket chain passing around said sprocket wheel and having both ends attached to the turn-table at points substantially opposite each other, a lever fulcrumed at one end on the stationary frame for actuating the sliding clutch member to throw it into and out of engagement with the rotary clutch members, said lever being provided with a slot, said slot being designed to receive the rim of the collar on the sliding clutch member, the sides of said slot being spaced apart sufficiently to allow the lever to move horizontally a certain distance without engaging the collar, a second lever fulcrumed at one end to the stationary frame, and provided with a longitudinal slot near its center, a bar connected at one end to the first mentioned lever and extending outwardly past the frame, said bar being also connected with the second lever by means of a pin designed to be inserted through the slot in the second lever and embedded in the bar, a spiral spring attached at one end to the stationary frame and at the other end to the free end of the second lever, said turn-table being provided with a series of openings, two pins designed to be detachably adjusted in said series of openings for engaging the first mentioned lever to move both levers to position past dead center with the spiral spring, whereupon the action of the spring will quickly and forcibly throw the sliding clutch member out of engagement with one of the rotary clutch members and into engagement with the other one, substantially as described and for the purposes stated.

3. In a device of the class described, the combination of a stationary frame, a turn-table mounted on said frame, an upper frame mounted on the turn-table, a shaft mounted on the stationary frame, a clutch mechanism mounted on the shaft having two pinions mounted thereon, a beveled gear in mesh with the two pinions, an upright shaft actuated by the beveled gear, a sprocket wheel on the upright shaft, a sprocket chain connected at both ends with the turn-table and passing around said sprocket chain, and a trip mechanism for actuating the clutch mechanism comprising a collar on the sliding clutch member, a lever fulcrumed at one end to the stationary frame and having its other end extending over the turn-table, said lever being provided with a slot to receive the rim of the collar, the sides of said slot being spaced apart sufficiently to allow the lever to move a short distance in a longitudinal direction without engaging the collar, said slot also being narrower at its central portion than it is at either end so that the sides thereof will engage the collar at a point spaced inwardly from the edge of the collar, a second lever fulcrumed at one end to the stationary frame and having its free end turned downwardly, said second lever being provided with a longitudinal slot, a bar connected at one end with the first mentioned lever and extending a short distance past the stationary frame, said bar being connected near its central portion with the second lever by means of a pin, said pin being designed to be inserted through the slot in the second lever and fastened to the bar, a spiral spring attached at one end to the stationary frame and at the other end to the free end of the second lever, said turn-table being provided with a series of openings, two pins designed to be detachably adjusted in said series of openings for engaging the first mentioned lever to move both levers to position past dead center with the spiral spring whereupon the action of the spring will quickly and forcibly actuate the clutch mechanism, said bar being provided with an opening near its outer end, and a pin designed to be inserted through said opening for holding the parts of the clutch mechanism out of engagement with each other, substantially as described and for the purposes stated.

1,022,593. DEVICE FOR MEASURING TIME INTERVALS. WILLIAM H. PRATT, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Jan. 15, 1908. Serial No. 410,935. (Cl. 235—92.)



1. The method of measuring an interval of time consisting in comparing the registration of a device registering during that interval of time with the registration of a substantially similar device registering an exact interval of time of substantially the same length as the interval whose length is to be measured, and by comparison of the two registrations determining the length of the interval to be measured.

2. The method of measuring an interval of time consisting in comparing the registration of a device registering during that interval of time with the registration of a substantially similar device registering an interval of time of substantially the same length as the interval to be measured, registering during substantially the same period, and registering only for an integral number of time-units, and by comparison of the two registrations determining the length of the interval to be measured.

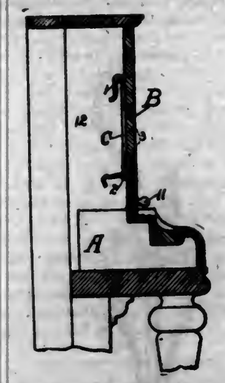
3. The method of measuring an interval of time consisting in employing a device registering for an interval of time whose length it is desired to measure, a second substantially similar device registering an interval of time of substantially the same length, and only registering for an integral number of time-units, and by comparison of the registration of the two devices computing the exact length of the time-interval to be measured.

4. The method of measuring an interval of time consisting in employing a device which can be made to register during said interval, a second substantially similar device automatically registering a time-interval, of an integral number of time-units, of substantially the same length as the interval to be measured and occurring during substantially the same period, and by comparison and computation determining the exact length of the time-interval to be measured.

5. The method of measuring an interval of time consisting in employing a registering device which can be started and stopped at the beginning and end of said interval respectively, a second and substantially similar registering device automatically started and stopped at a time-point nearest to and next succeeding that at which the first device is started and stopped, and by comparison of the registration of the two devices and computation with the number of time-units during which the second device registers determining the length of the interval of time to be measured.

[Claims 6 to 49 not printed in the Gazette.]

1,022,594. SUPPORT FOR PIANO MUSIC-DESKS. JOHN RAGONA, New York, N. Y. Filed Sept. 16, 1911. Serial No. 649,633. (Cl. 84—118.)



1. In a piano, in combination, the music-desk, the fixed pivotal support 1, the fixed locking support 2, and a one piece hook-member mounted on said music-desk and having its upper portion bent and bearing on said fixed pivotal support and permitting a vertical movement of said music-desk in addition to its swinging movement, the lower portion of said hook-member being bent and adapted to slide over said fixed locking support and lock thereon said music-desk, both, when in a vertical position and when in an inclined position, and to limit the outward travel of said music-desk, substantially as described.

2. In a piano, in combination, the music-desk, a fixed pivotal support, a fixed locking support, and a one piece hook-member mounted on said music-desk and having its upper portion bent into a vertically elongated hook bearing on said fixed pivotal support and permitting a vertical movement of said music-desk in addition to its swinging movement, the lower portion of said hook-member being bent and adapted to lock with the fixed locking support said music-desk when in a vertical position, to slide over said fixed locking support and cause said music-desk to rise vertically while moving to an inclined position, and to lock same in said raised and inclined position, substantially as described.

3. In a piano, in combination, the music-desk, the fixed pivotal support 1, the fixed locking support 2, and a one piece hook-member mounted on said music-desk and having its upper portion bent and bearing on said fixed pivotal support and permitting a vertical movement to said music-desk in addition to its swinging movement, the lower portion of said hook-member being shaped to have a curved bend, as at 6, for locking with the fixed locking support said music-desk when in a vertical position, said curved bend being prolonged into an arm, as at 7, having its end bent into a hook, as at 8, 9 and 10, for the purpose of sliding over said fixed locking support and causing said music-desk to rise vertically while moving to an inclined position, for limiting the outward travel thereof, and for locking same in said raised and inclined position, substantially as described.

4. In a piano, in combination, the music-desk, the fixed pivotal support 1, the fixed locking support 2, and a one piece hook-member mounted on said music-desk and having its upper portion bent into a vertically elongated hook, as at 4, bearing on said fixed pivotal support and for permitting a vertical movement of said music-desk in addition to its swinging movement, the end of said bearing being curved, as at 5, to aid the hooking of same on the fixed pivotal support, the lower portion of said hook-member being bent and adapted to slide over said fixed locking support and lock thereon said music-desk both when in a vertical position and when in an inclined position.

1,022,595. PROCESS FOR PRODUCING ALLOYS OF MANGANESE AND TITANIUM. AUGUSTE J. ROSSI, Niagara Falls, N. Y., assignor to The Titanium Alloy Manufacturing Company, New York, N. Y., a Corporation of Maine. Original application filed Mar. 22, 1907, Serial No. 363,959. Divided and this application filed May 4, 1909. Serial No. 493,857. (Cl. 75—17.)

1. The method of producing the binary alloy of manganese and titanium which comprises charging into a container a manganic substance, titanium oxid, and a reducing agent, heating them sufficiently highly and long to produce a bath containing molten manganese and maintain said bath until said oxid has been reduced therein by said agent, and then withdrawing the said alloy while molten.

2. The method of producing the binary alloy of manganese and titanium which comprises charging into a container oxid of manganese, titanium oxid, and aluminum, heating them sufficiently highly and long to produce a bath containing molten manganese and maintain said bath until said oxid of titanium has been reduced therein by said aluminum and then withdrawing the said alloy while molten.

1,022,596. ALLOYS OF THE PRECIOUS METALS AND METHOD OF INCREASING HARDNESS OF SUCH ALLOYS. AUGUSTE J. ROSSI, Niagara Falls, N. Y., assignor to The Titanium Alloy Manufacturing Company, New York, N. Y., a Corporation of Maine. Filed May 6, 1910. Serial No. 559,656. (Cl. 75—1.)

1. As a new article a metallic substance composed principally of a precious metal, a harder metal therewith alloyed and containing also not to exceed traces of titanium.

2. As a new article a metallic substance composed principally of gold, a harder metal therewith alloyed and containing also not to exceed traces of titanium.

3. As a new article a metallic subtance composed principally of gold, copper therewith alloyed and containing also not to exceed traces of titanium.

4. The metallurgical method which comprises bringing together in molten state a precious metal, a harder metal and titanium proportioned to combine with undesired elements and compounds and secure a final product containing not to exceed traces of titanium.

5. The metallurgical method which comprises bringing together in molten state gold, a harder metal and titanium proportioned to combine with undesired elements and compounds and secure a final product containing not to exceed traces of titanium.

[Claims 6 to 9 not printed in the Gazette.]

1,022,597. PROCESS FOR PRODUCING THE BINARY ALLOY OF TITANIUM AND ZINC. AUGUSTE J. ROSSI, Niagara Falls, N. Y., assignor to The Titanium Alloy Manufacturing Company, New York, N. Y., a Corporation of Maine. Filed Feb. 4, 1911. Serial No. 606,452. (Cl. 75—17.)

1. The method of producing the binary alloy of titanium with zinc, which comprises charging together oxid of zinc, oxid of titanium and carbon, and raising the temperature sufficiently to produce a bath of molten zinc, and reduction also of the titanium oxid, substantially as described.

2. The method of producing the binary alloy of titanium with zinc, which comprises reducing titanium oxid by carbon in a bath of molten zinc, substantially as described.

3. As a new article an alloy, or compound, consisting predominantly of titanium and zinc alloyed together and containing also some carbon.

4. As a new article an alloy, or compound, consisting predominantly of titanium and zinc alloyed together and containing also carbon in excess of 1%.

1,022,598. PROCESS FOR PRODUCING THE ALLOY OF TITANIUM WITH TIN. AUGUSTE J. ROSSI, Niagara Falls, N. Y., assignor to The Titanium Alloy Manufacturing Company, New York, N. Y., a Corporation of Maine. Filed Feb. 4, 1911. Serial No. 606,454. (Cl. 75—17.)

1. The method of producing the binary alloy of titanium with tin, which comprises charging together oxid of tin, oxid of titanium and carbon, and raising the temperature sufficiently to produce a bath of molten tin, and reduction also of the titanium oxid, substantially as described.

2. The method of producing the binary alloy of titanium with tin, which comprises reducing titanium oxid by carbon in a bath of molten tin, substantially as described.

3. As a new article an alloy, or compound, consisting predominantly of titanium and tin alloyed together and containing also some carbon.

4. As a new article an alloy, or compound, consisting predominantly of titanium and tin alloyed together and containing also carbon in excess of 1%.

1,022,599. PROCESS FOR PRODUCING THE ALLOY OF TITANIUM WITH COPPER. AUGUSTE J. ROSSI, Niagara Falls, N. Y., assignor to The Titanium Alloy Manufacturing Company, New York, N. Y., a Corporation of Maine. Filed Feb. 4, 1911. Serial No. 606,455. (Cl. 75—17.)

1. The method of producing the binary alloy of titanium with copper, which comprises charging together oxid of copper, oxid of titanium and carbon, and raising the temperature sufficiently to produce a bath of molten copper, and reduction also of the titanium oxid, substantially as described.

2. The method of producing the binary alloy of titanium with copper, which comprises reducing titanium oxid by carbon in a bath of molten copper, substantially as described.

3. As a new article an alloy, or compound, consisting predominantly of titanium and copper alloyed together and containing also some carbon.

4. As a new article an alloy, or compound, consisting predominantly of titanium and copper alloyed together and containing also carbon in excess of 1%.

1,022,600. ALLOYS OF THE PRECIOUS METALS AND METHOD OF INCREASING HARDNESS OF SUCH ALLOYS. AUGUSTE J. ROSSI, Niagara Falls, N. Y., assignor to The Titanium Alloy Manufacturing Company, New York, N. Y., a Corporation of Maine. Original application filed May 6, 1910, Serial No. 559,656. Divided and this application filed Jan. 25, 1912. Serial No. 673,358. (Cl. 75—1.)

1. As a new article a metallic substance composed principally of silver, a harder metal therewith alloyed and containing also not to exceed traces of titanium.

2. As a new article of metallic substance composed principally of silver, copper therewith alloyed and containing also not to exceed traces of titanium.

3. The metallurgical method which comprises bringing together in molten state silver, a harder metal, and titanium proportioned to combine with undesired elements and compounds and secure a final product containing not the exceed traces of titanium.

4. The metallurgical method which comprises bringing together in molten state silver, copper, and titanium proportioned to combine with undesired elements and compounds and secure a final product containing not to exceed traces of titanium.

5. The method of producing an alloy of silver with a harder metal which comprises bringing together in molten state silver and an alloy of said harder metal with titanium, said titanium being proportioned to combine with undesired elements and compounds and secure a final product containing not to exceed traces of titanium.

[Claim 3 not printed in the Gazette.]

1,022,601. VAGINAL SYRINGE. SVEN S. RUMBERG, Batavia, and FELIX C. HARTUNG, Chicago, Ill. Filed June 16, 1911. Serial No. 633,499. (Cl. 128—25.)



1. In a device of the class described, a hollow body reduced at one end, said body being provided with a vent in its walls, a tube secured in said body and projecting from said reduced end, said tube terminating in a nozzle, a check valve in said nozzle, and a means for forcing fluid through said tube, substantially as described.

2. In a device of the class described, a hollow body cylindrical at one end and reduced at the other, there being an opening in said reduced end, a plug inserted in the cylindrical end, a tube secured to the interior of said plug and projecting through said opening, said tube terminating in a nozzle, a check-valve in said nozzle, a passage-way in said plug communicating with said tube, a second passage-way in said plug communicating with the interior of said body, a check-valve in said second passage-way, a bulb connected to said plug and adapted to force liquid through said tube and nozzle, and a vent provided in the walls of said body, substantially as described.

3. In a device of the class described, a hollow body cylindrical at one end and reduced at the other, there being an opening in said reduced end, a plug inserted in the cylindrical end, a tube secured to the interior of said plug and projecting through said opening, and tube terminating in a nozzle, a check-valve in said nozzle, a passage-way in said plug communicating with said tube, a second passage-way in said plug communicating with the interior of said body, a check-valve in said second passage way, a bulb connected to said plug and adapted to force liquid through said tube and nozzle, a vent provided in the walls of said body, comprising a nipple projecting into and out of said body, an axial perforation in said nipple, a radial perforation communicating with said axial perforation and leading to atmosphere, and a bore in said nipple having a ball therein and leading to said axial perforation, substantially as described.

4. A device of the class described comprising a hollow body open at one end, a plug screwed in said body opposite the open end thereof, an axial tube secured to said plug and projecting through said open end, there being an annular opening formed between said tube and said open end, said tube terminating in a nozzle, an automatic check-valve in said nozzle to prevent the return flow of fluid escaping therefrom, two passage-ways in said plug one communicating with said tube and the other with the interior of said body, a check-valve in the last-named passage-way, a bulb coupling screwed to said plug the interior of which is in open communication with said tube and nozzle, a bulb secured to said coupling, and an air-vent plug secured in said body, substantially as described.

5. A device of the class described comprising a hollow body open at one end, a plug screwed in said body opposite the open end thereof, an axial tube secured to said plug and projecting through said open end, there being an annular opening formed between said tube and said open end, said tube terminating in a nozzle, an automatic check-valve in said nozzle to prevent the return flow of fluid escaping therefrom, two passage-ways in said plug one communicating with said tube and the other with the interior of said body, a check-valve in the last-named passage-way, a bulb coupling screwed to said plug the interior of which is in open communication with said tube and nozzle, a bulb secured to said coupling, an air-vent plug secured in said body comprising inwardly and outwardly projecting portions, a central bore, a ball in said bore, radial openings connecting said bore with the interior of the body, and a perforation leading from said bore to atmosphere, said ball being adapted to close said perforation, substantially as described.

[Claim 6 not printed in the Gazette.]

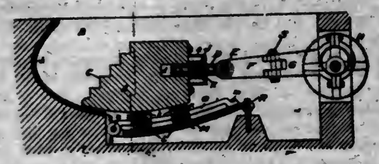
1,022,602. APPARATUS FOR REGENERATING AIR. GEORGE VON SCHAPRINGER, Vienna, Austria-Hungary. Filed Sept. 25, 1911. Serial No. 651,113. (Cl. 167—3.)



Apparatus for regenerating air, comprising, a box divided into superposed compartments, a suction device in the bottom compartment for exhausting the exhaled air, a cooling device, formed of ribbed tubes, in the next higher compartment, an absorption device, consisting of perforated sheet metal receptacles suspended in separate cells, provided in the top compartment and filled with absorbing material capable of absorbing the carbon-dioxid in the exhaled air, and an air-filter, closing the apparatus at the top and forming a communication between the compartment containing the absorption device and the surrounding atmosphere.

1,022,603. FULLING-MACHINE. AUGUSTUS G. SCHULTZ and DUNCAN M. FULLER, Albany, N. Y.; said Schultz assignor to said Fuller. Filed Mar. 11, 1909. Serial No. 482,776. (Cl. 38—11.)

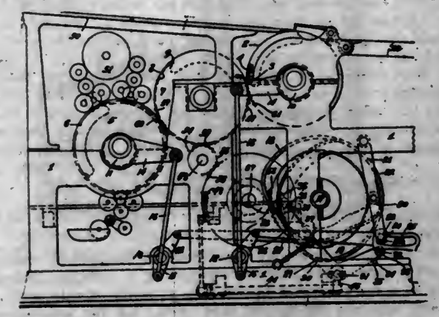
1. In a fulling machine, a hammer; a rod; a resilient means for connecting said rod to said hammer; a means for imparting reciprocal motion to said rod and hammer; an adjustable plate; rollers on said hammer resting on said plate; a means on said plate for directing the movement of and retaining connection with said hammer during its reciprocation.



2. In a fulling machine; a hammer; a means for imparting reciprocal motion thereto; supporting rollers; boxes connected with said hammer in which the ends of said rollers are journaled; a supporting plate for said rollers; means for guiding said hammer; rollers in said boxes in operative connection with said guiding means.

3. In a fulling machine; a hammer; guides on each side thereof consisting of rods; boxes through which said rods, respectively, pass; rollers in said boxes on each side of said rods; two or more rollers extending across the hammer beneath the same; means secured to said hammer for mounting said last mentioned rollers; an adjustable support for said last mentioned rollers.

1,022,604. MULTIREVOLUTION PRINTING-MACHINE. WALTER SCOTT, Plainfield, N. J.; Isabella Scott and David John Scott executors of said Walter Scott, deceased. Filed Apr. 24, 1906. Serial No. 313,384. (Cl. 101—100.)



1. In a printing machine, the combination with a printing mechanism composed of an impression member, a form carrying member, and a printing member interposed between the two, of a tripping mechanism for tripping and untripping the form carrying and impression members with relation to the printing member.

2. In a printing machine, the combination with a printing mechanism composed of an impression member, a form carrying member, and a printing member interposed between the two, of a tripping mechanism for sequentially tripping and untripping the form carrying and impression members with relation to the printing member, so timed that the form carrying member moves into and out of contact with the printing member ahead of the impression member.

3. In a printing machine, the combination with a printing mechanism, composed of an impression member, a form carrying member, and a printing member interposed between the two, of means for tripping and untripping the form carrying member with relation to the printing member, means for tripping and untripping the impression member with relation to the printing member, and an actuating device controlling both of the said tripping means.

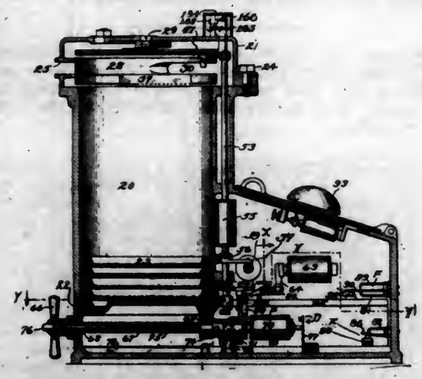
4. In a printing machine, the combination with a printing mechanism composed of an impression member, a form

carrying member, and a printing member interposed between the two, of means for tripping and untripping the form carrying member with relation to the printing member, means for tripping and untripping the impression member with reference to the printing member, timed to act subsequently to the tripping means of the form carrying member, and an actuating device controlling both tripping means.

5. In a multirevolution printing machine, the combination with a printing mechanism composed of an impression member, a form carrying member, and a printing member interposed between the two, of an automatic tripping mechanism adapted to trip and untrip the several members of the printing mechanism once to each cycle of the machine in such a manner that the form carrying and printing members are tripped and untripped ahead of the impression and printing members, and an interrupting means for interrupting the operation of the said automatic means acting sequentially to maintain the members tripped.

[Claims 6 to 26 not printed in the Gazette.]

1,022,605. TRAIN-STAFF SYSTEM. VIBE K. SPICER and VALENTINE I. SMART, Montreal, Quebec, Canada. Filed Nov. 9, 1909. Serial No. 527,101. (Cl. 246—56.)



1. In combination with train staffs in the form of rings, a staff instrument therefor comprising a suitable casing having a body adapted to retain a plurality of said staffs, a slot adjacent the top of said casing for the admission of said staffs to the body of the casing, a rotatable drum adapted to receive one of said staffs and having a slot adapted to register with the slot in the casing, a drawer located adjacent the bottom of said casing for the removal of staffs from the body of the casing, and means controlled by the position of the rotatable drum for locking the said drawer in its closed position.

2. In combination with train staffs in the form of rings, a staff instrument therefor comprising a suitable casing having a body adapted to retain a plurality of said staffs, a slot adjacent the top of said casing for the admission of said staffs, a rotatable drum adapted to receive one of said staffs and having a slot adapted to register with the slot in the casing, toes projecting inwardly in the top of said casing to retain the staff in the said drum, and lugs on said drum adapted to move the toes out of the path of the staff when the drum is rotated to close the slot in the casing.

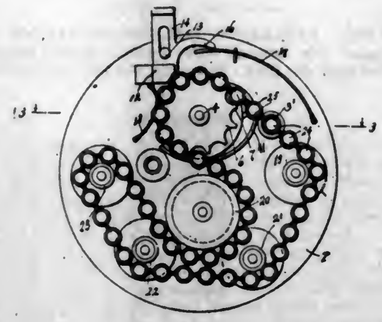
3. The combination with train staffs in the form of rings, a staff instrument therefor comprising a suitable casing having a body adapted to retain a plurality of said staffs, a slot adjacent the top of said casing for the admission of said staffs, a rotatable drum adapted to receive one of said staffs and having a slot adapted to register with the slot in the casing, toes projecting inwardly in the top of said casing to retain the staff in the said drum, and means operated by the drum for moving the toes out of the path of the staff when the drum is rotated to close the slot in the casing.

4. In combination with train staffs in the form of rings, a staff instrument therefor comprising a suitable casing having a body adapted to retain a plurality of said staffs, a slot adjacent the top of said casing for the admission of said staffs, a rotatable drum adapted to receive one of said staffs and having a slot adapted to register with the slot in the casing, toes located in the top of the casing and biased to project inwardly to retain a staff in the drum, and means operated by the drum for moving the toes out of the path of a staff and for permitting them to move into the path of a staff according to whether the drum is in position to close or open the staff-admitting slot.

5. In combination with train staffs in the form of rings, a staff instrument therefor comprising a suitable casing having a body adapted to retain a plurality of said staffs, a slot adjacent the top of said casing for the admission of said staffs to the body of the casing, a rotatable drum adapted to receive one of said staffs and having a slot adapted to register with the slot in the casing, a drawer located adjacent the bottom of said casing for the removal of staffs from the body of the casing, an electro-magnetic locking device for locking the drawer in its closed position, and a circuit controller operated by the rotatable drum for the control of said locking device.

[Claims 6 to 15 not printed in the Gazette.]

1,022,606. MICROSCOPE. KARL M. STAHL, New York, N. Y. Filed Mar. 27, 1909, Serial No. 486,225. Renewed Aug. 19, 1911. Serial No. 645,013. (Cl. 88—39.)

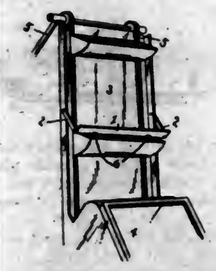


1. In a microscope of the kind described, the combination with a grooved wheel, of an endless carrier composed of two flexible strips sewed together at intervals to form pockets between themselves, pin shaped view bearing lenses mounted in said pockets and forming corrugations, whereby the carrier engaging the grooved wheel is caused to be fed.

2. In a microscope of the kind specified, the combination with a grooved wheel of an endless carrier composed of two flexible strips sewed together at intervals to form pockets between themselves, pin shaped view bearing lenses mounted in said pockets forming corrugations, whereby the carrier engaging the grooved wheel is fed and means for feeding said wheel.

3. In a microscope of the kind specified, the combination with a grooved wheel of an endless carrier composed of two flexible strips sewed together at intervals to form pockets between themselves, pin shaped view bearing lenses mounted in said pockets forming corrugations whereby the carrier engaging the grooved wheel is fed, a ratchet wheel connected with the grooved wheel and a spring actuated, movable bar the lower end of which is formed as a pawl engaging the ratchet wheel and serving for feeding the grooved wheel.

1,022,607. STROKING ATTACHMENT FOR CONCRETE-MIXING MACHINES. FRANK W. SWAUTUSCH, Butler, Ind. Filed Dec. 26, 1911. Serial No. 667,760. (Cl. 193—6.)



1. In a traveling bucket conveyer a yieldingly supported stroking mechanism adapted to automatically stroke off the buckets of the conveyer whereby a uniform quantity of material is elevated by the buckets.

2. In a traveling bucket conveyer a hingedly supported stroking mechanism adapted to scrape off the contents of the buckets even with the top thereof whereby a uniform quantity of the material is conveyed by the buckets.

3. In a traveling bucket conveyer a stroking mechanism comprising a scraping bar, supporting and attaching arms connected with the end of said bar and adapted to be hingedly connected to a suitable support whereby the scraper bar is held in position to engage the buckets as the latter are brought up by the conveying mechanism thereby scraping off the contents of the buckets even with the top of the same.

4. In a traveling bucket conveyer a stroking mechanism comprising a scraping bar, supporting and attaching arms connected with the end of said bar and adapted to be hingedly connected to a suitable support whereby the scraper bar is held in position to engage the buckets as the latter are brought up by the conveying mechanism thereby scraping off the contents of the buckets even with the top of the same, and means to prevent said scraping bar from catching upon the edges of the bucket.

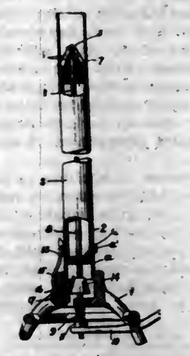
5. In a traveling bucket conveyer a stroking mechanism comprising a scraping bar, supporting and attaching arms connected with the ends of said bar and adapted to be hingedly connected to a suitable support whereby the scraper is held in position to engage the buckets as the latter are brought up by the conveying mechanism thereby scraping off the contents of the buckets even with the top of the same, and lifting plates secured to said scraping bar, said plates being curved upwardly at one end to engage the outer edge of the buckets and to lift the scraping bar over the same.

1,022,608. STAND FOR DRESS-FORMS. WILLIAM J. TAPLINGER, Philadelphia, Pa., assignor to Nellie Taplinger, Philadelphia, Pa. Filed Mar. 14, 1911. Serial No. 614,450. (Cl. 211—24.)

1. A stand for dress forms comprising the combination of an upright tubular standard having a cone surface at its top, a tube slidable on said standard, a rod working lengthwise through the standard and passing through the cone surface, clutch jaws pivoted to the rod and arranged to coöperate with the cone surface, a spring for actuating said rod in one direction, and a lever for operating the rod in the other direction, substantially as described.

2. A stand for dress forms comprising the combination of a pedestal, a standard rising therefrom, a tube slidable on the standard, a clutch tending to lock the standard and tube, a catch tending to lock the standard and tube, a lever near the pedestal, and mechanism actuated by the lever for releasing both the catch and the clutch, substantially as described.

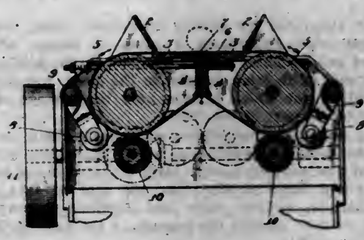
3. A stand for dress forms comprising the combination of a pedestal, a tubular standard rising therefrom, a tube slidable on the standard, an expansion clutch at the top of the standard for engaging and disengaging the inner wall of the tube, a catch member on the tube, a catch on the pedestal tending to engage said member, a rod movable through the pedestal and provided with means for releasing both the clutch and the catch, a pivotal lever at the pedestal for shifting said rod in one direction to release the clutch and catch, and a spring for shifting the rod in the other direction, substantially as described.



4. A stand for dress forms comprising the combination of a standard, a tube slidable thereon, an expansion clutch at the upper part of the standard for engaging and disengaging the interior of the tube, means for causing said clutch to normally engage the tube, an operating lever at the lower part of the standard, and connections extending through the standard from the lever to the clutch.

5. A stand for dress forms comprising standards slidable in relation to each other and whereof one is provided with a pedestal and the other is provided with a form, a clutch normally locking said standards together, and a foot lever workable by a downward push and arranged at the base of the pedestal and provided with connections for operating the clutch, substantially as described.

1,022,609. CHERRY-STEMMING DEVICE. ROY S. THOMPSON, Chicago, Ill. Filed Apr. 14, 1911. Serial No. 621,060. (Cl. 130—30.)



1. A fruit stemming device, comprising an inclined trough along which the fruit may roll, a pair of guides extending in parallel relation to each other along the middle of said trough, a pair of belts forming the bottom of said trough and mounted to travel toward each other over said guides and then downward between them, whereby the stems of the fruit will be swung by said belts into alinement with said guides and then be drawn into the space between said guides and be pulled from the fruit.

2. A fruit stemming device, comprising an inclined trough along which the fruit may roll, a pair of guides extending in parallel relation to each other along the middle of said trough, a pair of belts forming the bottom of said trough and mounted to travel toward each other over

said guides and then downward between them, whereby the stems of the fruit will be swung by said belts into alinement with said guides and then be drawn into the space between said guides and be pulled from the fruit, and one of said guides being mounted to yield relatively to the other to vary the space between them.

3. A fruit stemming device, comprising an inclined trough along which the fruit may roll, a pair of guides extending in parallel relation to each other along the middle of said trough, a pair of belts forming the bottom of said trough and mounted to travel toward each other over said guides and then downward between them, whereby the stems of the fruit will be swung by said belts into alinement with said guides and then be drawn into the space between said guides and be pulled from the fruit, one of said guides being mounted to yield relatively to the other to vary the space between them, and means normally urging said yielding guide toward the other.

4. A cherry stemmer, comprising an inclined trough, a pair of rollers journaled on axes extending parallel with said trough and spaced apart at opposite sides of the middle thereof, a pair of guides extending along the middle line of said trough between said rollers and having their opposed faces substantially flat and parallel, belts carried by said rollers and guides, and means for rotating said rollers to drive said belts toward each other over said guides.

1,022,610. APPARATUS FOR CUTTING THE WASTE FROM EMBROIDERIES. ALOIS TSCHERNE, Rorschach, Switzerland, assignor to The Firm of Henri Levy, Rorschach, Switzerland. Filed Mar. 9, 1911. Serial No. 613,243. (Cl. 164—73.)



1. An apparatus for cutting embroidery along the embroidered edge, comprising a plate, a holder slidably mounted on the plate, a knife mounted in the holder, the edge of said knife forming with the plate a slot which permits only the passage of the unembroidered part of the fabric.

2. An apparatus for cutting embroidery along the embroidered edge, comprising a plate, a holder slidably mounted on the plate, a knife mounted in the holder, the edge of said knife being parallel to the plate, and forming therewith a slot which permits only the passage of the unembroidered part of the fabric.

3. An apparatus for cutting embroidery along the embroidered edge, comprising a plate, a holder slidably mounted on the plate, a knife blade mounted in the holder at an acute angle to the plate, the edge of said knife being parallel to the plate and forming therewith a slot which only permits the passage of the unembroidered part of the fabric.

4. An apparatus for cutting embroidery along the embroideried edge, comprising a plate, a movable holder having a broad foot resting on the plate, a knife blade mounted in the holder at an acute angle to the plate, the edge of said knife being parallel to the plate and forming therewith a slot which only permits the passage of the unembroidered part of the fabric.

5. An apparatus for cutting embroidery along the embroidered edge, comprising a plate having a groove therein, a movable holder having a broad foot resting on the plate and a rib taking into the groove, a knife blade mounted on the holder at an acute angle to the plate, the edge of said knife being parallel to the plate and forming therewith a slot which only permits the passage of the unembroidered part of the fabric.

1,022,611. MACHINE FOR CUTTING EMBROIDERY FOUNDATION. ALOIS TSCHERNE, Rorschach, Switzerland, assignor to The Firm of Henri Levy, Rorschach, Switzerland. Filed Aug. 16, 1911. Serial No. 644,408. (Cl. 164—83.)



1. In a machine for cutting embroidery foundation, the combination of a knife carrier, a guide plate distanced therefrom forming a slot through which the foundation is passed during cutting action, a knife mounted on the carrier substantially parallel to the guide plate and in alinement with the slot, said guide plate and carrier supporting the foundation in front of the knife.

2. In a machine for cutting embroidery foundation, the combination of a knife carrier, a guide plate distanced therefrom forming a slot through which the foundation is passed during cutting action, a knife mounted on the carrier in the slot parallel to the guide plate, said guide plate and carrier supporting the foundation in front of the knife.

3. In a machine for cutting embroidery foundation, the combination of a knife carrier, a guide plate distanced therefrom forming a slot through which the foundation is passed during cutting action, and a knife pivoted on the carrier substantially parallel to the guide plate and having its cutting edge projecting above the guide plate and carrier.

4. In a machine for cutting embroidery foundation, the combination of a knife carrier, a guide plate distanced therefrom forming a slot through which the foundation is passed during cutting action, a knife pivotally mounted parallel to the guide plate and between the latter and the carrier and having its cutting edge extending above the same, and a spring on the carrier to yieldingly hold the knife in operative position.

5. In a machine for cutting embroidery, the combination of a knife carrier, a guide plate distanced therefrom forming a slot through which the fabric is guided, and a knife in alinement with the slot adapted to cut the foundation up to the beginning of the embroidery and from the end of the embroidery.

1,022,612. MANUFACTURE OF LAKES. ERNST ULRICHS, Elberfeld, Germany, assignor to Company "Wülfing, Dahl & Co., Actiengesellschaft," Barmen, Germany. Filed Aug. 15, 1911. Serial No. 644,116. (Cl. 8—1.)

1. A process for the manufacture of color-lakes, which consists in treating the dye produced from diazotized ortho-toluidin and naphtholsulphonic acid 1.4 with salts of heavy metals.

2. A process for the manufacture of color-lakes, which consists in treating the dye produced from diazotized ortho-toluidin and naphtholsulphonic acid 1.4 with a calcium salt.

3. As new articles of manufacture, color-lakes obtained from the dye produced from diazotized ortho-toluidin and naphtholsulphonic acid 1.4, characterized by their orange-red shade, their resistance to water and alcohol, their insolubility in oil, and their fast color against the action of light, yielding upon reduction by means of tin and hydrochloric acid, ortho-toluidin and 2 amido-naphtholsulphonic acid 1.4.

4. As a new article of manufacture, a color-lake obtained from the calcium salt of the dye produced from diazotized orthotoluidin and naphtholsulphonic acid 1.4, characterized by its orange-red shade, its resistance to water and alcohol, its insolubility in oil and its fast color against the action of light, yielding upon reduction by means of tin and hydrochloric acid, orthotoluidin and 2 amido-naphtholsuphonic acid 1.4.

1,022,613. ALARM-VALVE. HARRY VISSERING, Chicago, Ill., assignor to Harry Vissering and Company, Chicago, Ill., a Corporation of Illinois. Filed June 17, 1909. Serial No. 502,729. (Cl. 105—263.)



1. A valve device comprising a casing, a valve member, connections from the casing to an inlet conduit, to an outlet conduit, and to an atmospheric alarm port, means in said valve member adapted to register with said connections and means for operating said valve whereby said connections and registering means may be brought into register and said atmospheric connection may be brought into operative relation to said inlet conduit when the valve is open.

2. A valve device comprising a casing, a valve member, connections from the casing to an inlet conduit, to a plurality of outlet conduits and to an atmospheric alarm device, means in said valve member adapted to register with said connections and means for operating said valve whereby said connections and registering means may be brought into register, and communication may be established with an atmospheric alarm when the valve is open.

3. A valve device comprising a casing, a valve member, connections from the casing to an inlet conduit, to a plurality of outlet conduits, and to an atmospheric alarm device, means in said valve member adapted to register with said connections and means for operating said valve whereby said connections and registering means may be brought into register, and communication may be established with an atmospheric alarm when the valve is open.

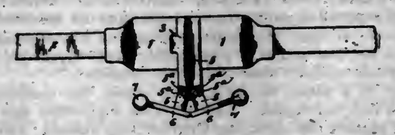
4. A valve device comprising a casing, a valve member, connections from the casing to a high pressure conduit, to a low pressure conduit, and to the atmosphere, means in said valve member adapted to register with said low pressure connections and means for operating said valve whereby said connections may successively be brought into register, and said atmospheric connection may be brought into operative relation to said inlet conduit when the valve is open.

5. A valve device comprising a casing, a valve member, connections from the casing to a high pressure conduit, to a plurality of low pressure conduits and to an atmospheric alarm port, means in said valve member adapted to register with said low pressure connections and means for operating said valve whereby said connections may be brought into register.

[Claims 6 to 31 not printed in the Gazette.]

1,022,614. CAR-COUPLING. ALBERT S. WALDREP, Chicago, Ill. Filed Aug. 18, 1910. Serial No. 577,787. (Cl. 213—18.)

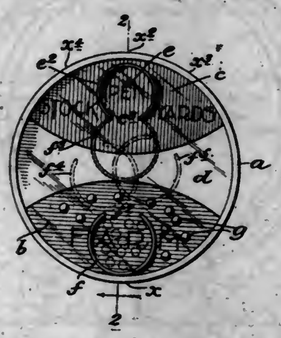
1. In a car coupler, the combination with a draw head and knuckle, of an extension part pivoted to the lower end of the knuckle to swing in a direction toward the draw head, a coupler support carried by said extension part.



2. In a car coupler, the combination with a draw head and knuckle, of an extension part pivoted to the lower end of the knuckle to swing in a direction toward the draw head, and means to limit the movement of said extension part in the opposite direction, said extension part having a lower coupler supporting flange.

3. In a car coupler, the combination with a draw head and knuckle, of an extension part for the knuckle, said knuckle having a lower apertured projection provided with a beveled end, and said extension part having an upper recess to receive said projection, and provided with a beveled base to conform to said projection and limit movement of the extension part in one direction, and a pin extending through portions of said extension part and through said knuckle projection to form a hinge, said extension part having a lower coupler supporting flange provided with a weighted arm.

1,022,615. PUZZLE. JOHN WENIG, Saginaw, Mich., assignor of one-half to Edwin D. Henderson, Jr., Saginaw, Mich. Filed Sept. 20, 1911. Serial No. 650,458. (Cl. 46—41.)



1. A puzzle comprising a box having a transparent cover, a pen in one side of said box and having an opening toward the center thereof, an open ring movable on the bottom of said box, and a plurality of balls also freely movable in said box.

2. A puzzle comprising a circular box having a transparent cover and the bottom of which is provided at one side with a pen which opens in the direction of the center of the box, a ring open at one side and freely movable on the bottom of said box, and a plurality of balls also freely movable on the bottom of said box.

1,022,616. BENCH FOR GREENHOUSES. MICHAEL WINANDY, Chicago, Ill. Filed July 24, 1911. Serial No. 640,241. (Cl. 47—27.)



1. In a bench for florists and others, the combination of a dirt bed support; heating pipes supporting said dirt bed support; and legs supporting said pipes, substantially as described.

2. In a bench for florists and others, the combination of a dirt bed support; heating pipes supporting said dirt bed support and extending longitudinally thereof; and legs supporting said pipes, substantially as described.

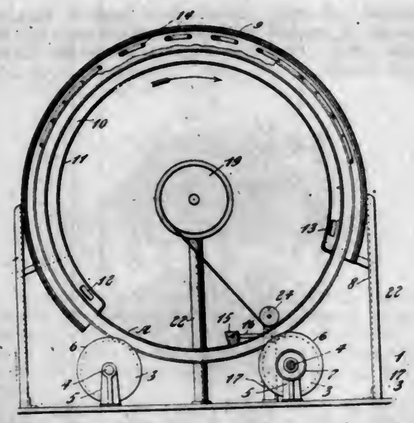
3. In a bench for florists and others, the combination of a dirt bed support; and heating pipes supporting said dirt bed support, substantially as described.

4. In a bench for florists and others, the combination of a dirt bed support; heating pipes supporting said dirt bed support and extending longitudinally thereof; and legs supporting said pipes, said legs being recessed to receive said pipes, substantially as described.

5. In a bench for florists and others, the combination of a dirt bed support; cross pieces on the bottom of said dirt bed support; longitudinally extending heating pipes arranged under and supporting said dirt bed support, said pipes contacting with said cross pieces; and legs supporting said pipes, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,022,617. APPARATUS FOR THE MANUFACTURE OF PHOTOGRAPHIC FILMS. OTTO WINTERMEYER, Leverkusen, near Cologne, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Oct. 22, 1909. Serial No. 524,000. (Cl. 18—15.)



1. A machine for forming film comprising a revoluble shell having an internal continuous film-forming surface and open ends, means for heating the shell, means for depositing material upon said surface, and a chamber through which the shell revolves and inclosing said heating means.

2. A machine for forming film comprising a revoluble shell having an intrenal continuous film-forming surface and open ends, means for depositing material upon said surface, a chamber through which a portion of the circumference of the shell moves, and a heating coil in the chamber exterior of the shell.

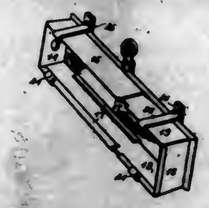
3. A machine for forming film comprising a revoluble shell having an internal continuous film-forming surface and open ends, means for heating the shell, means for depositing material upon said surface, a chamber inclosing a portion of said shell and the heating means, and means for permitting a circulation of air through the chamber.

4. A machine for forming film comprising a revoluble shell having a continuous internal film-forming surface, means for continuously depositing material upon said surface, and means for continuously stripping completed film therefrom during the revolution of said shell.

5. A machine for forming film comprising a revoluble shell having a continuous internal film-forming surface, means for depositing material upon said surface, means for drying the film on said surface during the revolution of the shell, and means for stripping film from the surface.

[Claims 6 to 8 not printed in the Gazette.]

1,022,618. ADJUSTABLE LAMP-HOLDER AND REFLECTOR. GUSTAV H. AMEND, Des Moines, Iowa. Filed Aug. 26, 1911. Serial No. 646,117. (Cl. 240—2.)



1. The combination of a mirror and supporting frame, a lamp holding frame and a lamp socket fixed thereto, said lamp supporting frame being shaped to rest against the surface of the mirror, and a clamp device passed around the back of the mirror frame and engaging the edges of the lamp supporting frame to hold the latter firmly in engagement with the mirror.

2. In a device of the class described, the combination of a mirror, a supporting frame therefor, a lamp supporting frame formed of two members, one member comprising an end piece and two side pieces, said side pieces being provided with guide members at both edges, a lamp socket fixed to said end piece, the other frame member comprising a central portion and two side portions, the latter being slidingly inserted between said guide members, two bars having slots in their ends, two hooked arms for each bar, each provided with a screw threaded opening and each being designed to engage one end of the bar and to overlap the adjacent portion of one of said frame members and screws passed through said slots and seated in said screw threaded openings, substantially as and for the purposes stated.

1,022,619. HORN-GAP SWITCH AND LIGHTNING-ARRESTER. ALFRED W. BURKE, Pittsburgh, Pa. Filed Apr. 2, 1910. Serial No. 553,079. (Cl. 175—282.)



1. A switch comprising relatively movable switch members having arc horns, said horns normally out of contact but positioned to make contact before the switch is opened and to break contact after it is opened.

2. A switch, comprising fixed and movable switch-members, a fixed arc horn in circuit with the fixed switch-member, and an opposed arc horn carried by the movable switch-member, in position to temporarily engage the fixed horn as the switch is opened.

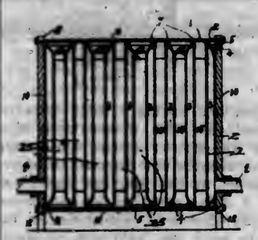
3. A switch, comprising fixed and movable switch-members, a fixed arc horn in circuit with the fixed switch-member, and an opposed arc horn flexibly carried by the movable switch-member, in position to temporarily engage the fixed horn as the switch is opened.

4. A switch, comprising fixed beveled switch-jaws, a pivoted switch-blade, a fixed arc horn in circuit with the switch-jaws, and an opposed arc horn flexibly carried by the switch-blade, between its pivot and the switch-jaws.

5. A double-throw switch, comprising two fixed switch-members connected to different lines, a movable switch-member, a fixed arc horn in circuit with each fixed switch-member, and two arc horns carried by the movable switch-member, in position to respectively coöperate with the fixed arc horns.

[Claims 6 and 7 not printed in the Gazette.]

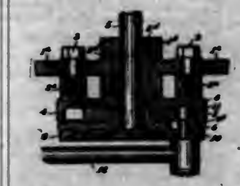
1,022,620. RADIATOR. CARL S. CARLBERG, Seattle, Wash., assignor of one-half to Erick Lundquist, Seattle, Wash. Filed Nov. 14, 1910. Serial No. 592,236. (Cl. 237—18.)



1. In a radiator the combination of a serpentine chamber formed of a pair of sheet metal plates the edge of one of which is first curved over and then the extreme edge bent backwardly until it is inclined to its original plane, thus forming a brazing trough between the plates when they are placed together and contact near their extreme edges, V shaped braces between the windings of said serpentine chamber, end frames and common means for drawing the same together and holding said serpentine chamber in place and for clamping said braces in position.

2. In a radiator the combination of a serpentine chamber formed of a pair of sheet metal plates the edge of one of which is curved over and then the extreme edge bent backwardly until it is inclined to its original plane, thus forming a brazing trough between the plates when they are placed together and contact near their extreme edges, vertically disposed V shaped braces between the windings of said serpentine chamber, end frames and common means for drawing said end frames together and holding said serpentine chamber in place between the same and for clamping said vertical braces in position.

1,022,621. MECHANICAL MOVEMENT. ROBERT G. CLYNE, Upper Alton, Ill. Filed Jan. 26, 1911. Serial No. 604,761. (Cl. 74—5.)



1. A mechanical movement, comprising a supporting frame, a driving shaft, a stationary face plate provided with a cam-groove, a crank disk covering said face plate and provided with a slide way and a guide-slot, a slide mounted in said slide way, a crank pin carried by said slide and extending through said guide-slot, a cam-roll mounted on said crank pin and extending in said cam-groove, and a connecting rod carried by said crank pin.

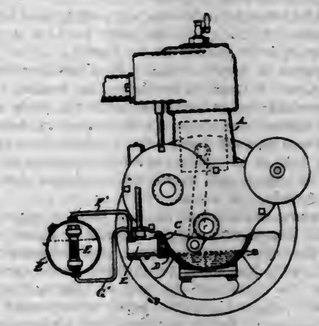
2. A mechanical movement, comprising a base provided with a standard having a bearing head, a stationary cam disk having a bearing sleeve mounted in said bearing head, a driving shaft in said bearing sleeve and provided with a crank disk covering said cam disk, a slide extending across the face of said crank disk and provided with a crank pin in coöperative relation to said stationary cam, means for adjusting said slide in said guide-way and a connecting rod carried by said crank pin.

3. A mechanical movement, comprising a base provided with a standard, a driving shaft carried by said standard and provided with a crank disk having flanged guide members extening across its face and affording an intermediate guide way, a slide mounted in said guide way and corresponding in length to the diameter of said crank disk, means carried by one of said guide members for adjusting said slide in said guide way, a stationary cam removably mounted opposite said crank disk, a crank pin mounted in said slide in coöperative relation to said cam, and a connecting arm carried by said crank pin.

4. A mechanical movement, comprising a supporting frame, a driving shaft carried thereby, a crank disk carried by said driving shaft and provided with flanged guide members extending across its face and affording an intermediate guide-way, a slide mounted in said guide-way and corresponding in length to the diameter of said crank disk, a stationary cam disk at one side and in concentric relation to said crank disk, means for securing said cam disk to said frame in said fixed relation to said crank disk, a crank pin mounted on said slide in coöperative relation to said cam disk, and a connecting rod carried by said crank pin.

5. A mechanical movement, comprising a base provided with a standard having a bearing head, a stationary cam disk having a bearing sleeve mounted in said bearing head, means for removably securing said cam disk to one side of said standard, a driving shaft in said bearing sleeve and provided with a crank disk covering said cam disk, said crank disk being provided with a flanged guide-way extending across its face and a guide slot corresponding to the throw of said cam disk, a slide mounted in said guide way and provided with a crank pin extending through said guide slot in coöperative relation to said cam disk, and a connecting rod carried by said crank pin.

1,022,622. LUBRICATOR. HOWARD E. COFFIN, Detroit, Mich., assignor to Chalmers-Detroit Motor Company, Detroit, Mich., a Corporation of Michigan. Filed June 26, 1909. Serial No. 504,538. (Cl. 123—196.)



1. In a lubricating system, the combination with a compression chamber forming a receptacle for the lubricant, of means for maintaining a constant level of the lubricant within said chamber.

2. The combination with an engine crank case forming a compression chamber and a splash pocket for the lubricant, of means for maintaining a constant level of the lubricant within said crank case while also maintaining the compression therein.

3. In a lubricating system, the combination with a chamber containing the lubricant, having inlet and outlet conduits connected therewith, of a differential pump for simultaneously propelling the lubricant in the inlet and outlet conduits, said pump comprising a plurality of intermeshing gears, one of said gears being of lesser width than the other, for the purpose described.

1,022,623. SAFETY-RAZOR. CLIFFORD E. DUNN, New York, N. Y. Filed July 29, 1908. Serial No. 445,872. (Cl. 30—12.)



1. A safety razor comprising a frame formed of a single piece of sheet metal, upon one end of which is formed a blade support and guard, blade-limiting stops adjacent to said guard, a handle formed from the middle of said piece of metal, a cap or backing formed from the other end of said piece of metal adapted to contact with the upper face of a blade on the support, and hooks formed on said cap adapted to engage the frame adjacent the guard to retain the backing in place.

2. A safety razor comprising a frame formed of a single piece of sheet metal, upon one end of which is formed a blade-support and guard, blade-limiting stops adjacent to said guard, a handle formed from the middle of said piece of metal, a spring tongue formed from said metal piece adapted to coöperate with a blade on the support and force the same against the stops, a cap or backing formed from the other end of said metal piece adapted to contact with the upper face of the blade, and hooks formed on said cap adapted to engage the frame adjacent the guard to retain the backing in place.

3. A safety razor comprising a frame formed of a single piece of sheet metal, upon one end of which is formed a blade-support and guard, blade limiting stops adjacent to said guard, a handle formed from the middle of said piece of metal, a blade, a cap or backing formed from the other end of said piece of metal adapted to contact with the upper face of the blade, and hooks formed on said cap adapted to engage the frame adjacent the guard to retain the backing in place.

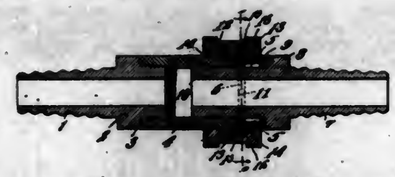
4. A safety razor comprising a frame formed of a single piece of sheet metal, upon one end of which is formed a blade-support and guard, blade limiting stops adjacent to said guard, a handle formed from the middle of said piece of metal, a blade, a spring tongue formed from said metal piece adapted to coöperate with the blade and force the same against the stops, a cap or backing formed from the other end of said metal piece adapted to contact with the upper face of the blade, and hooks formed on said cap adapted to engage the frame adjacent the guard to retain the backing in place.

5. A safety razor frame formed from a single piece of sheet steel, comprising a blade-support, a guard, a handle, stops at the ends of said guard, a cap or backing adapted to contact with the upper face of the blade, spring hooks located at the outer ends of said backing and adapted to fit over the stops, the parts being so arranged that the blade is clamped firmly between the blade-support and backing, which latter supports and gives rigidity to its cutting edge, and a spring tongue adapted to coöperate with the blade to force it forward against the stops.

[Claim 6 not printed in the Gazette.]

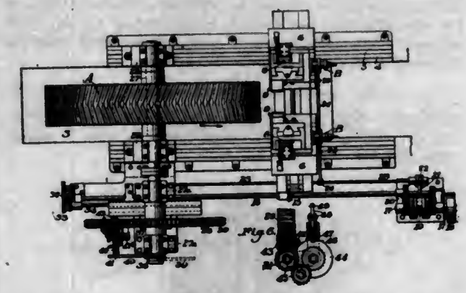
1,022,624. HOSE-COUPLING. EDWIN H. L. ENGLUND, Muskegon, Mich. Filed Nov. 1, 1911. Serial No. 658,047. (Cl. 137—28.)

1. A hose coupling having a main member provided at its outer end with two diametrically disposed slots terminating in an annular recess, a pin disposed to be projected into the annular recess at its point of junction with the slot, a spring upon said pin for normally holding the pin out of the recess, a sleeve mounted upon the member and provided with a cam slot to form a receptacle for the pin when retracted, a spring for actuating said sleeve to cause the cam surface to project the pin within the annular recess, and another coupling member having a cylindrical portion with diametrically opposed studs to fit within the slots and recess of the first mentioned member and be locked against longitudinal movement by said spring actuated pin.



2. A hose coupling, having a main cylindrical member provided at one end with diametrically disposed slots terminating in an annular recess, spring returned pins mounted in said member and disposed to be projected into the annular recess at the junction thereof with the respective slots, a collar mounted for oscillation upon said member and provided with diametrically disposed cam surfaces, one to each pin, said cam recesses permitting the retractions of the pins from the annular recess of the member, a spring connected to the member and said collar for actuating said collar to project the pins within the annular recess of the member, and another coupling member provided with a cylindrical portion adapted to enter the cylindrical member, said cylindrical portion being provided with diametrically opposite studs to enter the slots and annular recess of the first mentioned member, the spring actuated pins of the first mentioned member preventing the studs of the last mentioned member from entering the slots when the coupling is in locked position.

1,022,625. GEAR-CUTTING MACHINE. THOMAS FAWCUS, Pittsburgh, Pa. Filed Apr. 29, 1911. Serial No. 624,156. (Cl. 90—8.)



1. In a machine for cutting double helical gears, the combination of a rotary blank carrier, means for imparting a step by step indexing movement thereto between the successive cutting operations, means for imparting a rotary movement to the blank during the cutting, and cutting tools arranged to simultaneously cut from opposite sides of the blank toward the center thereof; substantially as described.

2. In a gear cutting machine, the combination with a rotary blank carrier and an index gearing for imparting successive step by step movements thereto, of two cutting tools arranged to cut from opposite sides of the blank toward the center thereof, and other gearing for rotating the blank during the cutting operations; substantially as described.

3. In a gear cutting machine, the combination with a blank supporting shaft or arbor and index gearing and stop mechanism for imparting a step by step movement to the shaft or arbor between successive cutting operations, of two cutting tools arranged to cut from opposite sides of the blank toward the center thereof, and other gearing arranged to effect a rotary movement of the carrier during the cutting operations; substantially as described.

4. In a gear cutting machine, the combination with a rotary blank supporting shaft or arbor, and gearing for imparting a step by step indexing movement thereto, said gearing including an index wheel, of a movable gear member loosely mounted on said carrier, gearing for actuating said gear member during each tooth-forming operation, and means for causing the movement of the gear member to impart a corresponding movement to the blank carrier and blank; substantially as described.

5. In a gear cutting machine, the combination with a rotary blank supporting shaft or arbor, and means for imparting a step by step indexing movement thereto intermediate the tooth-forming operations, of an index wheel secured to said shaft and having worm teeth, a swinging gear member loosely mounted on the shaft, a worm carried by said gear member and meshing with the worm wheel, and gearing for actuating the gear member during each tooth-forming operation; substantially as described.

[Claims 6 to 18 not printed in the Gazette.]

1,022,626. HOLDBACK. WILLIAM ALEXANDER HAGERMAN, London, Ontario, Canada, assignor of one-half to Wesley J. Hill, London, Canada. Filed Feb. 24, 1911. Serial No. 610,533. (Cl. 54—69.)



1. The combination of an elongated guide plate adapted to be attached to the shaft of a vehicle and having its guide open at its front end and closed at its rear end, a slide block mounted and movable in said plate and removable from the open front end of the guide by sliding it longitudinally and forwardly of the shaft, means for providing a frictional resistance to the forward movement of said block from its normal position at the rear closed end of the guide plate, a holdback strap, a draw strap, a back band, and a shaft loop or tug, means for connecting the front end of the draw strap to the back band, and means for connecting the inner ends of both the holdback strap and the draw strap to the slide block so that the latter is carried by both straps, the length of the draw strap being less than the distance between the front end of the guide of the guide plate and the front end of the shaft.

2. The combination of a chambered and slotted plate adapted to be attached to the upper side of the shaft of a vehicle and open at its front end and closed at its rear end, a slide block adapted to slide in said slotted plate and removable through the open end thereof by sliding it longitudinally of the shaft, a vertically disposed rigid loop or eye attached to and projecting from the upper side of said slide block, a holdback strap connected to the rear side of said loop or eye, a draw strap connected to the front side of said loop or eye, a back band, a shaft loop or tug, means for connecting the draw strap at its front end to the back band, the distance between the open front end of the plate and the front end of the shaft being greater than the length of the draw strap, whereby the said slide block will be disengaged from the said plate before the shaft loop is disconnected from the end of the shaft.

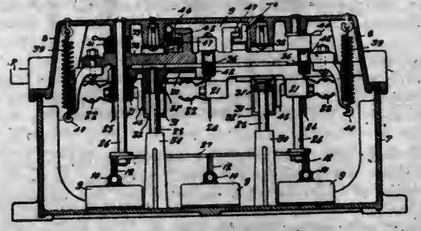
1,022,627. MEDICINAL BATH. ALBERT HEMPEL, Leipzig-Oetzsch, Germany. Filed Dec. 6, 1909. Serial No. 531,635. (Cl. 167—9.)

1. A medicinal bath, consisting of water having in suspension therein a covering layer of cellulose, said bath having also therein a medicament.

2. A medicinal bath, consisting of water having in suspension therein a covering layer of cellulose, said bath having also therein a gaseous medicament, the escape of the gases being retarded by the covering layer of cellulose material.

3. The process of forming a medicinal bath, which consists in adding to water sufficient cellulose materials to form a heat and gas-retaining layer thereover, such cellulose being impregnated with materials which upon access of water thereto will produce a gas.

1,022,628. MECHANISM FOR ACTUATING ELECTRICAL SWITCHES. BRYSON D. HORTON, Detroit, Mich., assignor to Detroit Fuse & Manufacturing Company, Detroit, Mich., a Corporation of Michigan. Filed Oct. 23, 1911. Serial No. 656,189. (Cl. 172—179.)



1. In mechanism for actuating electrical switches, the combination with a compound switch, of a rock-shaft having an arm fast thereon for engaging the outer side of one switch member and timed for having overthrow past the closed position thereof, of a loose arm on the shaft for engaging the outer portion of the other switch member, an abutment on the shaft for engaging such arm and timed for permitting overthrow of the shaft after such switch member has reached the limit of its movement.

2. In a device of the character specified, the combination with a switch embodying a running switch and a starting switch movable severally and in unison, of a rock-shaft, an arm fast with the rock-shaft and engaging the under side of the running switch, an arm loose upon the rock-shaft and engaging the upper side of the starting switch, an abutment carried by the rock-shaft for engaging the free arm and timed for permitting overthrow of the fast arm past the closed position of the running switch and for permitting overthrow of the shaft past the open position of the starting switch.

3. The combination with a main switch comprising a base and a part movable toward and from the base, of an auxiliary switch comprising a base carried by the movable part of the main switch and a part movable toward and from such base, and a rock-shaft having a fast arm for engaging the baseward portion of the movable part of the main switch and a free arm for engaging the outer portion of the movable part of the auxiliary switch, the free arm being provided with an abutment face and the shaft being provided with an abutment face for engaging the same for moving the free arm toward the base of the main switch.

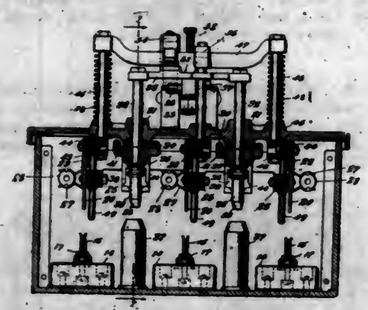
4. The combination with a running switch embodying a fuse for carrying the running load, of a starting switch embodying a conductor for carrying the starting load, a rock-shaft, a pair of arms thereon having engagement with the starting switch for closing the same, and a pair of arms on the rock-shaft for opening the running switch.

5. The combination with a running switch embodying a fuse for carrying the running load, of a starting switch embodying a conductor for carrying the starting load, a rock-shaft, and arms carried by the rock-shaft and timed for actuating the switches in predetermined sequence.

1,022,629. ELECTRICAL SWITCH. ALPHA H. KLING and BRYSON D. HORTON, Detroit, Mich., assignors to Detroit Fuse & Manufacturing Company, Detroit, Mich., a Corporation of Michigan. Filed July 11, 1911. Serial No. 637,888. (Cl. 172—179.)

1. The combination with a running switch embodying a movable member having a fuse for carrying the running

load, of a starting switch embodying a conductor movable independently of the said running switch movable member for carrying the starting load, and mechanism for actuating the said switches.



2. The combination with a switch having a pair of contacts, a fuse-holder in circuit with the contacts, of a pair of line-connected contacts for the engagement of the said switch contacts, a second pair of contacts in circuit with the said switch contacts, and a pair of contacts for engaging the second pair of switch contacts, and a conductor connecting the last-recited contacts.

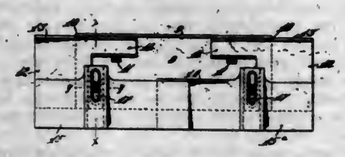
3. A starter for a three-phase motor comprising a closer for each of the motor circuits embodying a movable member having a fuse, and means embodying an element of large carrying capacity relative to the fuse for paralleling and shunting the fuse.

4. In a starter for a three-phase motor, the combination with a closer for each of the motor circuits embodying a fuse, of an element for paralleling the fuse, means for holding the paralleling element normally out of circuit, and manually-operative means for actuating the paralleling element.

5. In a starting switch, the combination with a switch comprising a movable portion having a fuse and a base, of an auxiliary switch embodying a movable portion having a conductor of larger carrying capacity than said fuse for paralleling and shunting the said fuse.

[Claims 6 to 20 not printed in the Gazette.]

1,022,630. FIREBACK FOR STOVES. FRANK V. KNAUSS, Portsmouth, Ohio. Filed May 11, 1911. Serial No. 626,632. (Cl. 126—145.)

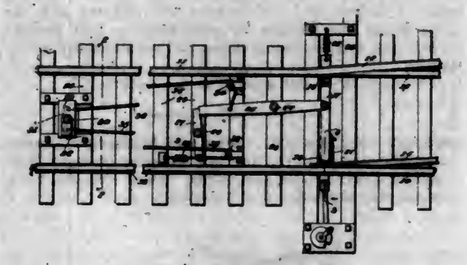


1. In an adjustable stove back lining, a main plate provided with a slide way formed upon one side thereof, end plates oppositely disposed, each provided with an extension sliding in said way, a second plate adjustable on each of said end plates, said second plates overlapping each other medially of and projected toward the main plate and movable with their respective end plates, and means passing through said end and second plates for securing the same together and drawing the second plates to the main plate and frictionally clamping the same thereto in any adjusted position.

2. In an adjustable stove back lining, a main plate, end plates oppositely disposed and slidably mounted upon the main plate, a second plate for each end plate adjustable transversely upon its respective end plate and movable therewith, with one end thereof projected to engage with the main plate and frictionally clamped thereto when the end and second plates are clamped together, and clamping means for clamping said end and second plates together.

3. In an adjustable stove back lining, a main plate, end plates oppositely disposed and slidably mounted upon said main plate, a second plate for each end plate, adjustable transversely upon its respective end plate and movable therewith, said second plates overlapping each other medially of the main plate, and each slightly arched, and clamping means for securing said end and second plates together respectively and thereby frictionally uniting the same with the main plate.

1,022,631. AUTOMATIC RAILWAY-SWITCH. WILLIAM T. LAWHORN and ANDREW J. MARKS, Bicknell, Ind. Filed July 21, 1911. Serial No. 639,809. (Cl. 104—23.)



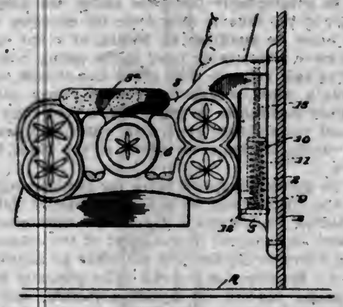
1. The combination with the main rails and siding, of switch rails, a coupling member connected to one of the switch rails and having sliding connection with the other switch rail, means for yieldably connecting said slidable switch rail to said coupling member, means operating upon said coupling member to hold the switch yieldably in closed position, a lever arm pivotally connected to said coupling member, a lock lever extending into the path of said lever arm, and means operative by an approaching train for actuating said lock lever and releasing said lever arm.

2. The combination with the main rails and siding, of switch rails, a coupling member connected to said switch rails, means for yieldably connecting said slidable switch rail to said coupling members, means operating upon said coupling member to hold the switch yieldably in closed position, a lever arm pivotally connected to said coupling member, a lock lever extending into the path of said lever arm, and means operative by an approaching train for actuating said lock lever and releasing said lever arm.

3. The combination with a railway track including a siding and the switch, a coupling member having rigid connection with one of the switch rails and slidable connection with the other switch rail, a spring connected to said coupling member and holding said pivoted switch rail yieldably at one end of its movement, another spring connected to said coupling member and to said slidable switch rail and holding the same yieldably at one end of its movement, a lever arm pivoted at one end to said coupling member, a lock member arranged to engage said lever arm and hold the same against the resistance of the yieldable holding means, and means operative by an approaching train for releasing said lock member.

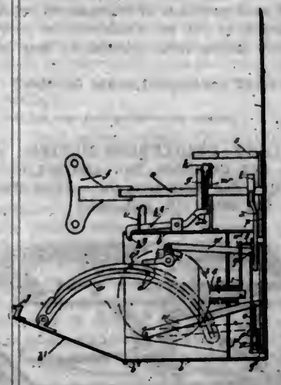
4. The combination with the main rails and siding, of switch rails, a coupling member connected to said switch rails, means for yieldably connecting said slidable switch rail to said coupling member, means operating upon said coupling member to hold the switch yieldably in closed position, a lever arm pivotally connected to said coupling member, a lock lever extending into the path of said lever arm, a trip arm mounted to swing and extending transversely of the path of an approaching train, a cross arm connected to move with said trip arm, a flexible member connected to said cross arm at one end and to said lever arm and another flexible member connected to said cross arm at the other end to said trip lever.

1,022,632. ARM-REST FOR CAR-SEATS. FREDERICK J. LEIGH, Seattle, Wash., assignor to Imperial Car Shipbuilding and Dry Dock Corporation, Seattle, Wash. Filed Nov. 17, 1909. Serial No. 528,496. (Cl. 155—2.)



The combination with a seat, of a supporting member independent of the seat, a base plate mounted on the supporting member and having a dove-tailed groove extending vertically therein, a car seat arm independently movable with relation to the seat and having a dovetailed end portion engaging in said groove, a bracket closing the lower end of the groove, and a coiled spring carried between the upper face of the bracket and the lower face of the dovetailed end of the arm whereby the arm is resiliently supported for vertical movement.

1,022,633. TIMING APPARATUS FOR BILLIARDS AND LIKE GAMES. PHILIBERT JULIEN ALPHONSE LEPAGE, Paris, France. Filed Oct. 25, 1911. Serial No. 656,739. (Cl. 161—17.)



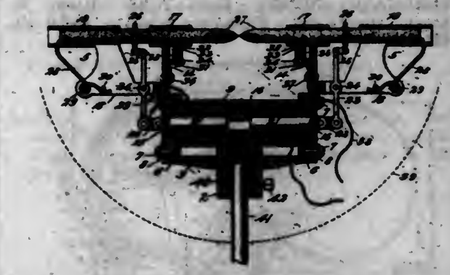
1. In a device of the character specified, the combination of a set of playing balls, means for actuating counting and recording mechanism, a receptacle for holding said set of playing balls, a door to said receptacle, means for coupling said door to said actuating means, whereby the opening and closing of said door will respectively start and stop said actuating means, and means to prevent closing of said door until a predetermined number of balls have been inserted in the receptacle.

2. In a device of the character specified, the combination of a set of playing balls, means for actuating counting and recording mechanism, a receptacle for holding said set of playing balls, a door to said receptacle, mechanism adapted to release automatically said actuating means and when actuated to stop said actuating means, part of said mechanism projecting inside said receptacle, and means to prevent closing of said door until a predetermined number of balls have been inserted in said receptacle.

3. In a device of the character specified, the combination of a set of playing balls, means for actuating counting and recording mechanism, a receptacle for containing said set of playing balls, a door to said receptacle, mechanism for releasing said door when closed, coupling mechanism for connecting said actuating means to the counting and recording mechanism, a spindle for operating said coupling mechanism and said door-releasing mechanism, a key for actuating said spindle, a device on said spindle for operating said coupling mechanism in advance of said door-releasing mechanism, mechanism normally stopping said actuating means, and a connection between said last mentioned mechanism and said door whereby said door can be opened only after said actuating means has been coupled to the counting and recording mechanism, and whereby the opening movement of said door necessarily releases said actuating means, as set forth.

4. In a device of the character specified, the combination of a set of playing balls, means for actuating counting and recording mechanism, a receptacle for holding said set of playing balls, a door to said receptacle, mechanism for stopping said actuating means, a plurality of compressible spring stops equal in number at least to a majority of said set of playing balls, a connection between each of said spring stops to said mechanism for stopping said actuating means, and mechanism operated by each of said spring stops in their extended condition for preventing the closing of said door, whereby said door can be closed to stop said actuating means only when a majority of said set of playing balls has been returned into said receptacle and forced back by the closed door so as to compress said spring stops and thereby disengage the mechanism that otherwise prevents the closing of said door, as set forth.

1,022,634. ELECTRIC SEARCH-LIGHT FOR AUTOMOBILES. CHARLES A. LEWIS, Denver, Colo. Filed Aug. 8, 1910. Serial No. 576,039. (Cl. 176—51.)



1. In an electric arc head-light, a bracket; supports secured to the opposite ends of said bracket and insulated therefrom; horizontally disposed sleeves upon the upper ends of the supports; electrodes slidably mounted in said sleeves; a solenoid on the bracket in circuit with the electrodes; slidable cores in the opposite ends of the solenoid; levers pivotally mounted in the supports and connected at their upper ends with the electrodes and at their lower ends with the cores, said levers being adapted to move the electrodes apart when the solenoid is energized; and springs for exerting a counter pressure upon the electrodes.

2. In an electric arc head-light as specified, a support; electrodes horizontally and slidably mounted in the support; rings loosely mounted on said electrodes; a solenoid in circuit with the electrodes, having movable cores extending into its opposite ends; levers pivotally mounted in the support and having a pivotal connection at their upper ends with said rings and at their lower ends with the outer ends of said cores, whereby when the levers are rocked by the movement of the cores the said rings are tilted and grip the electrodes frictionally and move them apart; and springs for exerting a continuous counter pressure on the outer ends of the electrodes.

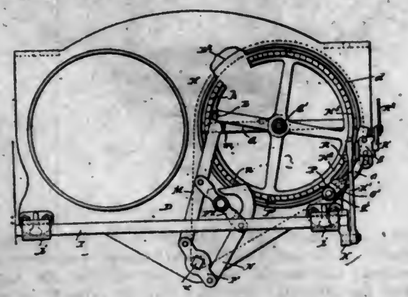
3. In an electric arc head-light as specified, a bracket; a support secured to each end of the bracket and insulated therefrom; horizontally disposed spaced sleeves at the upper end of each support; electrodes slidably mounted in said sleeves; a ring loosely mounted on each electrode between the spaced sleeves; a solenoid secured to the bracket in circuit with the electrodes; cores extending into the opposite ends of the electrodes having non-conducting links pivotally attached to their outer ends; levers pivotally mounted in the supports and pivotally connected at their upper ends to said rings and at their lower ends to the non-conducting links; and springs for exerting an inward pressure upon the outer ends of the electrodes.

4. In an electric arc head-light as specified, a bracket; metal supports secured to the opposite ends of the bracket and insulated therefrom; alined sleeves at the upper end of each support separated by a space, said supports having slots which open into the lower sides of the outer sleeves; a ring on each electrode in the space between the sleeves; levers pivotally mounted in the supports; links connecting th upper end of said levers and said rings; a solenoid removably secured to the bracket, having slidable cores in its opposite ends and in circuit with said electrodes; non-conducting links connecting the lower ends of said levers with the said cores; and springs mounted in the slotted portions of the supports, the upper ends of which extend up through the outer sleeves and bear upon the outer ends of the electrodes.

5. In an electric head light as specified, the combination with a pair of uprights, having carbon supporting sleeves at their upper ends, of spring operated pins carried by said uprights, which are adapted to enter apertures in said sleeves and to frictionally engage carbons placed in said sleeves.

[Claim 6 not printed in the Gazette.]

1,022,635. AUTOMATIC CUT-OFF VALVE FOR PNEUMATIC COTTON-ELEVATORS. HARRY W. LIGON, Atlanta, Ga. Filed July 6, 1911. Serial No. 637,143. (Cl. 13—19.)



1. In an automatic cut-off valve for suction cotton conveyers, the combination with a valve casing having two openings therein, one adapted to form a part of an exhaust duct from the conveyer conduit, and the other forming an auxiliary air intake, of an edgewise movable pivoted valve, and means for shifting said valve to close either one or the other of said openings embodying a power shaft, a pawl reciprocated by the shaft, a ratchet wheel with which the pawl coöperates and operative connections actuated by the ratchet wheel for moving the valve.

2. In an automatic cut-off valve for suction cotton conveyers, the combination with a valve casing having two openings therein, one adapted to form a part of the exhaust duct from the conveyer conduit, and the other forming an auxiliary air intake, of a substantially flat edgewise movable pivoted valve, and means for shifting said valve to close either one or the other of said openings, embodying a wheel, means for imparting long and short intermittent movements to the wheel, and operative connections actuated by the wheel to shift the valve during the long movements of the wheel.

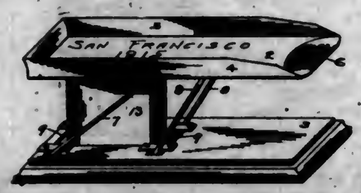
3. In an automatic cut-off valve for cotton conveyers, the combination with a valve casing having two openings therein in substantially the same plane, one adapted to form part of the exhaust duct from the conveyer conduit and the other an auxiliary air intake, of a flat edgewise movable valve pivotally mounted in the casing, and means for moving said valve to close either one of said openings embodying a wheel, means for imparting long and short intermittent movements to the wheel, a projection on the wheel, and valve shifter arms with which said projection engages during the long movements of the wheel to shift the valve.

4. In an automatic cut-off valve for suction cotton conveyers, the combination with a substantially flat valve casing having two openings therein in substantially the same plane, one adapted to form part of the exhaust duct from the conveyer conduit and the other an auxiliary air intake, of a flat edgewise movable valve pivotally mounted in the casing beneath the openings therein, and means for moving said valve to close either one of said openings, embodying a wheel, means for imparting long and short intermittent movements to the wheel, a projection on the wheel, valve shifter arms pivotally connected with the valve at one end and adapted to project into the path of said projection at the opposite end, the arrangement being such that said projection is brought into engagement with one of said shifter arms during each of the long movements of the wheel.

5. In an automatic cut-off valve for suction cotton conveyers, the combination with a valve casing having two openings therein, one adapted to form part of the exhaust duct from the conveyer conduit, and the other an auxiliary air intake, of a pivoted valve for closing either one or the other of said openings, and means for moving said valve embodying a ratchet wheel, a reciprocatory pawl coöperating with said wheel, and means for periodically holding said pawl out of engagement with the wheel during a portion of the movement of the pawl, whereby long and short intermittent movements may be imparted to the wheel.

[Claims 6 to 12 not printed in the Gazette.]

1,022,636. CASH-DELIVERING DEVICE. ADOLPH E. G. LUBKE, San Francisco, Cal., assignor of one-half to James L. Ord, San Francisco, Cal. Filed May 16, 1911. Serial No. 627,593. (Cl. 133—14.)

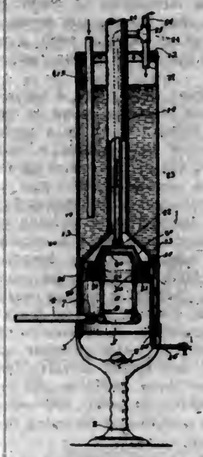


1. A change delivering device comprising a base, a chute, having one end open, links of unequal length connecting said chute with said base, the point of attachment of the shorter links lying closer to the open end of the chute than the longer links, the links being so arranged that they are inclined toward the open end of the chute when the chute is in a horizontal position.

2. A change delivering device comprising a base, a block mounted upon said base, a chute resting on said block, and links of unequal length connecting said base and said chute.

3. A change delivering device comprising a base, a block arranged on said base, a chute, having one end open, resting upon said block and lying normally parallel to said base, links of unequal length pivotally connected to said base and said chute, said links being normally inclined toward the open end of the chute.

1,022,637. WATER-HEATER. HAROLD C. MACAIRE, Chicago, Ill. Filed Feb. 24, 1911. Serial No. 610,524. (Cl. 122—18.)



1. A water-heater comprising a boiler; a hollow dome located under said boiler, said dome consisting of two superposed inverted frusto-conical members, the lower of which is smaller and inserted and threaded into the upper; connections between said dome and said boiler, and means for heating said dome and said boiler, substantially as described.

2. A water heater comprising a boiler; a hollow dome located under said boiler, said dome consisting of two inverted frusto-conical members, the lower of said members having a greater angularity than the upper so as to form a water space which gradually increases in width toward the top, said lower member being threaded therein; connections between said dome and said boiler; and a burner projecting its flame into said concavity, substantially as described.

3. A water-heater comprising a boiler; a hollow dome located under said boiler; means for heating said dome and boiler; a drain pipe for said dome, the interior of said dome being given a general inclination toward said drain pipe; and connections between said dome and said boiler, substantially as described.

4. A water heater comprising a boiler; a hollow dome located under said boiler; a burner projecting its flame into said dome; a drain pipe connected with the lower portions of said boiler and dome, the interior of said dome being given a general inclination toward said drain pipe; a stop cock in said drain pipe below said connections; and a pipe connecting the upper portion of said dome with the upper portion of said boiler, substantially as described.

1,022,638. EXCAVATING-SHOVEL. CHARLES A. MORRIS, Montclair, N. J., assignor to The Hayward Company, a Corporation of New York. Filed July 20, 1911. Serial No. 639,533. (Cl. 37—54.)



1. In a device of the class described, a shovel, a fall rope, a haul rope, and a controlling member coöperating directly with the fall rope and the haul rope, said controlling member being free from connection with the shovel and operating to support the forward end of the shovel and to preclude said shovel from dumping when tension is maintained on said ropes.

2. In a device of the class described, a shovel, a suspending bridle, a draft bridle, and a controlling member coöperating directly with the draft bridle and the suspending bridle, said controlling member being free from connection with the shovel, the operative length of said controlling member being such that, when tension is maintained on the bridles, the forward part of the shovel is supported by the controlling member and said shovel is thereby precluded from tilting to a dumping position.

3. In a device of the class described, a shovel, a suspending bridle therefor, a draft bridle attached to the forward part of the shovel, and a controlling bridle free from connection with the shovel but connected to the draft bridle forwardly of the attachment of said bridle to the shovel, said controlling member operating when tension is maintained on the draft bridle to support the forward part of the shovel and thereby retain said shovel in a nondumping position.

4. In a device of the class described, a shovel, a fall rope, a suspending bridle connected to the shovel rearwardly of the center of gravity thereof, a haul rope, a draft bridle connected to said shovel, and a controlling bridle, free from connection with the shovel, connected to the suspending bridle and attached to the draft bridle forwardly of attachment of the latter bridle to said shovel, said controlling member operating, when tension is maintained on the haul rope and the fall rope, to support the forward part of the shovel and to thereby retain the shovel in a non-dumping position.

5. In a device of the class described, a shovel, a suspending bridle attached to the shovel rearwardly of the center of gravity thereof, a draft bridle attached to the shovel, and a controlling bridle separate from said shovel and attached to the suspending bridle and the draft bridle, the operative length of said controlling bridle being such that, when the shovel is hoisted, the said controlling bridle will exert tension upon the draft bridle to change the line of pull thereof upon the forward part of the shovel.

[Claims 6 to 12 not printed in the Gazette.]

1,022,639. BRAKE. FRANK O'BRIEN, Jackson, Mich., assignor to The Lewis Spring & Axle Company, Jackson, Mich., a Corporation of Michigan. Filed Sept. 18, 1911. Serial No. 649,860. (Cl. 74—37.)



1. A brake, comprising a drum, a band encircling it, toggle levers connecting the opposite ends of the band, a yoke inclosing the toggles and having a curved inner portion overlapping and arranged close to said band ends, and a support to which the yoke is rigidly connected and which holds the inner curved portion of the yoke away from the drum and over the ends of the band.

2. A brake, comprising a drum, a band encircling it, toggle levers connecting the opposite ends of the band, a yoke inclosing the toggles and having a curved inner portion overlapping and arranged close to said band ends and having also cross pieces at its ends acting as stops which limit the movement of the toggles when the brake

is released, and a support to which the yoke is rigidly connected and which holds the inner curved surface of the yoke away from the drum and over the ends of the band.

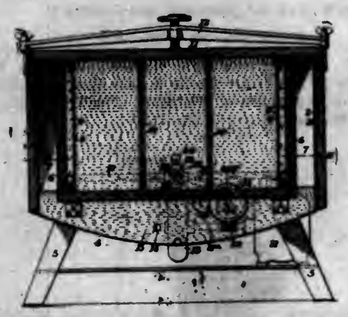
3. A brake, comprising a drum, a band encircling it, toggle levers connecting the opposite ends of the band, an operating lever, connections between the operating lever and the toggles, a spring for normally holding the toggles in release position, a yoke inclosing the toggles, and having a curved inner portion overlapping and arranged close to said band ends and provided also with stops at its ends which limit the movement of the toggles when the brake is released and against which the toggles are drawn by said spring, and a support to which the yoke is rigidly connected and which holds the inner curved surface of the yoke away from the drum and over the ends of the band.

4. A brake, comprising a drum, a band encircling it, pivot plates secured to the opposite ends of the band, lugs on the plates, toggle levers pivotally connected with said lugs, an operating lever connected with the toggles, a spring for moving the toggles to release position, and a stationary fixed yoke inclosing the toggles bearing on opposite ends of the band for holding them close to the periphery of the drum and which has stops against which said lugs are pressed by the spring when the brake is released.

5. A brake, comprising a drum, a band encircling it, plates attached to the opposite ends of the band, lugs on the plates, toggle levers pivotally connected with said lugs, an operating lever for the toggles, a spring for moving the operating lever to release position, and a yoke inclosing the toggle levers which is open at top and bottom and is provided at its ends with cross pieces against which the spring draws said lugs when the brake is released.

[Claims 6 and 7 not printed in the Gazette.]

1,022,640. WASHING-MACHINE. ROBERT S. ORR, Pittsburgh, Pa. Filed July 28, 1911. Serial No. 641,160. (Cl. 68—37.)



1. In a washing machine, a clothes containing vessel having a perforated plate or bulk head at each end portion thereof, a pump, means for driving the pump, pipe connections leading from the pump to opposite ends of the clothes containing vessel, a source of water supply for the pump, a valve controlling the circulation through said pipes arranged to reverse the direction of circulation, and means for automatically reversing the valve at intervals; substantially as described.

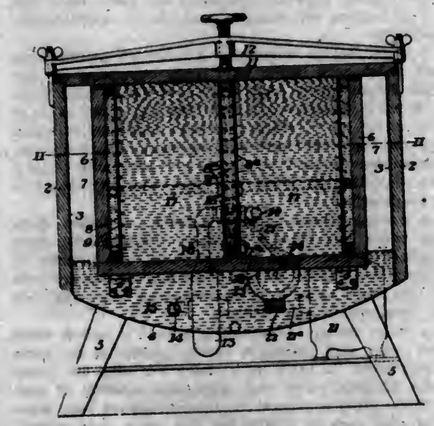
2. A washing machine, comprising a clothes containing vessel having a water receiving space at each end, one wall of each space being formed by a perforated plate or bulk head, a source of water supply, a pump, pipe connections leading from the pump to each of said spaces, a valve controlling the circulation of water through said pipes into and from said spaces, and means for periodically reversing the valve; substantially as described.

3. A washing machine, comprising a clothes containing vessel having a water receiving space at each end, one wall of each space being formed by a perforated plate or bulk head, a source of water supply, a pump, pipe connections leading from the pump to each of said spaces, a valve controlling the circualtion of water through said pipes into and from said spaces, and means for periodically reversing the valve together with a return water connection leading to the source of water supply; substantially as described.

4. A washing machine, comprising a clothes containing vessel having a water receiving space at each end, one wall of each space being formed by a perforated plate or bulk head, a source of water supply, a pump, pipe connections leading from the pump to each of said spaces, a valve controlling the circulation of water through said pipes into and from said spaces, and means for periodically reversing the valve, the clothes containing vessel having a plurality of compartments with a screen separating the compartments; substantially as described.

5. A washing machine, comprising an outer tank having a water chamber therein, a clothes containing vessel mounted in said tank, a valve, a water space at each end portion and an intermediate clothes containing space, a pump connected with the water chamber and also connected with each of said spaces, a valve for controlling the circulation of the pump and arranged to reverse the same, a motor for driving the pump, and connections operated by the motor for periodically reversing the valve; substantially as described.

1,022,641. WASHING-MACHINE. ROBERT S. ORR, Pittsburgh, Pa. Filed Aug. 7, 1911. Serial No. 642,629. (Cl. 68—37.)



1. In a washing machine, a clothes containing vessel having a water discharge compartment at each end, an intermediate compartment, a pump having a separate passage connecting it with each of the three compartments, a source of water supply for the pump, and a valve means for reversing the circulation of the pump; whereby in one position of the valve, water will flow into the clothes-containing vessel through each of the end compartments and flow out through the intermediate compartment; and in the other position of the valve, water will flow into the clothes vessel from the intermediate compartment and will flow out from both end compartments substantially as described.

2. In a washing machine, a clothes containing vessel having a water discharge compartment at each end, an intermediate compartment, a pump having a separate passage connecting it with each of the three compartments, a source of water supply for the pump, and valve means operated periodically by a motor for reversing the circulation of the pump; whereby in the position of the valve, water will flow into the clothes-containing vessel through each of the end compartments and flow out through the intermediate compartment; and in the other position of the valve, water will flow into the clothes vessel from the intermediate compartment and will flow out from both end compartments substantially as described.

3. In a washing machine, a clothes containing vessel, having a perforated plate or bulk head at each end portion thereof, and also having two similar separated plates or bulk heads at its central portion, a pump, a motor for driving the pump, connections leading from the pump to opposite ends of the vessel and another connection leading to the space between the central plates, a valve for controlling and reversing the circulation through said connections, whereby in one position of the valve, water will flow into the clothes-containing vessel through each of the end compartments and flow out through the intermediate compartment; and in the other position of the valve, water will flow into the clothes vessel from the intermediate compartment and will flow out from both end compartments and means for automatically actuating the valve; substantially as described.

1,022,642. LOW-TENSION SPARKING MECHANISM FOR GAS-ENGINES. HENRY J. PODLESAK, Chicago, Ill. Filed Feb. 17, 1909. Serial No. 478,355. (Cl. 123—157.)



1. In sparking mechanism for gas engines, the combination of a frame having a packing face and a lug extending laterally from said face and terminating in a seat face, a cylindrical perforation through the lug and the frame and substantially at right angles to the packing face, a shouldered rock shaft in said perforation, a counterbore in the frame at a distance from the lug and extending inwardly from the packing face, a second perforation through the frame co-axial with and of smaller diameter than the counterbore, a cylindrical sleeve inserted into the counterbore and extending beyond the packing face and having its perforation of substantially same size as and co-axial with the said second perforation, an insulating sleeve extending through the perforation of said sleeve and through said second perforation, insulating washers at either end of the insulating sleeve, a bolt passing through said washers and the insulating sleeve and rigidly clamping said washers and said sleeves to the frame, a contact member on the end of the bolt extending from the cylindrical sleeve, an arm secured to the end of the rock shaft extending from the seat face, and a second contact member secured to said arm and adapted to make contact with the first said contact member.

2. In sparking mechanism for gas engines, the combination of a frame having a packing face and a lug extending laterally from the packing face and terminating in a seat face, a cylindrical perforation through the lug and the frame, a counterbore at a distance from the lug and extending from the packing face into the frame, a second perforation through the frame co-axial with and of smaller size than the counterbore, a sleeve extending into the counterbore and relatively longer than the depth of the counterbore, a bolt passing through the sleeve and said co-axial perforation and insulatably secured to the body, a movable shouldered shaft in said cylindrical perforation, the shoulder of the shaft seating on the seat face on the lug, and an arm secured to the shouldered end of the shaft extending laterally therefrom and adapted to make contact with the head of said bolt.

3. In sparking mechanism for gas engines, the combination of a frame having a packing face; a lug integral with said frame and extending laterally from and beyond the packing face and terminating in a seat face, a perforation through the lug and through the frame, a shouldered shaft passing through said perforation and extending beyond the frame, the shoulder seating on the seat face, a sleeve provided with an arm and loosely mounted on said shaft; a stop secured to the frame and adapted to engage the arm of said sleeve; a spring connected to said arm and the frame and adapted to normally hold said arm against said stop; a projection secured to said shaft and adapted to engage with said arm, a second spring adapted to normally hold the projection in engagement with said arm, means for actuating said arm, a second perforation through the frame at a distance from first said perforation, a counterbore extending from said packing face into the frame and co-axial with and of larger diameter than said second perforation, a cylindrical sleeve within and longer than the depth of the counterbore, a bolt passing through said sleeve and said second perforation and insulatably secured to the frame, and an arm rigidly secured to the shouldered end of said shaft and adapted to make contact with that end of the bolt projecting beyond said sleeve.

4. In sparking mechanism for gas engines, the combination of a frame having a packing face, a lug integral with the frame and extending laterally from said face and terminating in a seat face, a cylindrical perforation through the lug and the frame and at right angles to the seat face, a counterbore at a distance from the lug and extending from the packing face into the frame, a second perforation through the frame co-axial with and of relatively smaller size than the counterbore, and a perforated bushing extending and fitting into the counterbore and projecting beyond the packing face.

1,022,643. SPRAYING DEVICE. ELMER E. SCHELLENGER, Riverside, Cal. Filed July 25, 1911. Serial No 640,495. (Cl. 137—57.)



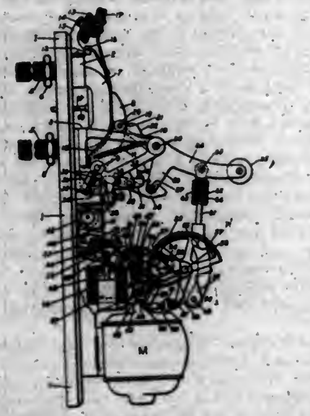
1. In combination with a nozzle, a spraying device connected thereto and having a substantially elliptical convex deflecting surface, the base of which is at an angle to and intersects the prolongation of the axis of the bore of the nozzle, and a concave depression disposed substantially at the center of the said deflecting surface and intersected by the prolongation of the axis of the nozzle bore.

2. In combination with a nozzle, a substantially U-shaped clip disposed transversely thereon, a spraying device having a supporting arm provided at its inner end with ears bent therefrom and bearing against the inner sides of the arms of the clip, and a pivot bolt extending through the ears of the spraying device and the arms of the clip and coacting therewith to clamp the ears of the spraying device against the nozzle and against the arms of the clip, whereby to secure the spraying device in any desired position.

1,022,644. REMOTE CONTROL APPARATUS. WILLIAM M. SCOTT, Philadelphia, Pa. Filed June 29, 1910. Serial No. 569,477. (Cl. 175—294.)

1. The combination with a main switch or circuit breaker, of a motive device for moving the same to normal position, said switch or circuit breaker movable to another position independent of actuation or control by said motive device, a disengageable mechanical connection between said motive device and said main switch or breaker, a switch controlling said motive device, and a member having lost motion connection with said motive device through said mechanical connection for actuating said

switch to deënergize said motive device when said main switch or breaker has reached normal position.



2. The combination with a main switch or circuit breaker, of a motive device for moving the same to normal position, said main switch or circuit breaker movable to another position independently of actuation or control by said motive device, a disengageable mechanical connection between said motive device and said main switch or breaker, a switch controlling said motive device, and a member having lost motion connection with the movable member of said main switch or circuit breaker for actuating said switch when said main switch or breaker moves to said other position.

3. The combination with a main switch or circuit breaker, of a motive device for actuating the same, a disengageable mechanical connection between said motive device and said main switch or breaker, a switch for breaking the circuit of said motive device when said main switch or circuit breaker reaches normal position, and a member actuated by said motive device for breaking said mechanical connection upon failure of such switch to break the circuit of said motive device.

4. The combination with a main switch or circuit breaker, of a motive device for moving the same to normal position, electro-responsive means for mechanically connecting said motive device and said main switch or breaker, a switch for deënergizing said electro-responsive means to disconnect said motive device from said main switch or breaker when the latter has reached normal position, and a member actuated by said motive device for disconnecting said motive device from said main switch or breaker upon failure of said motive device to become disconnected from said main switch or breaker upon deënergization of said electro-responsive means.

5. The combination with a main switch or circuit breaker, of a motive device for actuating the same, a disengageable mechanical connection between said motive device and said main switch or breaker, a switch controlling said motive device, a member having lost motion connection with the movable member of said main switch or circuit breaker for actuating said switch when said main switch or breaker moves to said other position, and a member actuated by said motive device for breaking said mechanical connection upon failure of such switch to break the circuit of said motive device.

1,022,645. PHARMACEUTICAL COMPOUND. ARTHUR EICHENGRÜN, Berlin, Germany. Filed Aug. 31, 1910. Serial No. 579,966. (Cl. 260—140.)

1. The herein described glycol-ortho-chloro-benzoic acid ester of the formula: $Cl.C_6H_4.COO.CH_2.CH_2.OH$ which is a limpid oil boiling at 205° C. under a pressure of 20 mm. and being a valuable remedy against scabies, substantially as described.

2. The herein described glycol-ortho-chloro-benzoic acid ester of the formula: $Cl.C_6H_4.COO.CH_2.CH_2.OH$ which is a limpid oil boiling at 205° C. under a pressure of 20 mm. and being a valuable remedy against scabies, substantially as described.

1,022,646. DISAPPEARING FOLDING CASTER. NILES C. TOLL, Lathrop, Cal. Filed May 20, 1911. Serial No. 628,531. (Cl. 16—165.)



1. A member having a recess on its under side, a member movable vertically in said recess, a caster comprising a yoke carrying a wheel, such yoke being hinged to said movable member, such yoke being provided with a hole disposed independently of its hinged relation to said movable member, and a pin on said member adapted to fit into said hole.

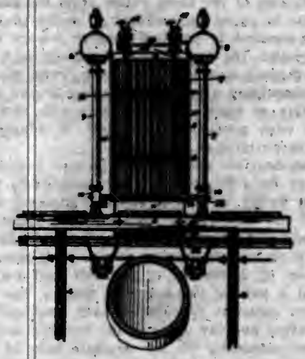
2. A device of the character described comprising a member having a recess in its under side, a member movable vertically in said recess, an upwardly projecting arm on said movable member, a pin secured in said movable member, rollers on said pin, a cable secured to the upper end of said arm and projecting over said rollers, means for winding said cable and a caster comprising a yoke carrying a wheel, such yoke being secured to said movable member, as described.

3. A member having a recess in its under side, a member movable vertically in said recess, a caster comprising a yoke carrying a wheel, such yoke being hinged to said member and a projecting stop member on the upper end of said yoke adapted to engage said movable member to limit the hinged movement of said yoke as described.

1,022,647. STEAM-BOILER STRUCTURE. HAYDEN HOMER TRACY, Berkeley, and HARRY EUGENE BOYER, San Francisco, Cal. Filed June 12, 1911. Serial No. 632,731. (Cl. 122—345.)

1. In a steam-boiler structure, the combination of a

having their steam spaces connected to the top headers, water circulating drums located at a lower level outside of the boiler and connected to the bottom headers, conduits or pipes forming external connections between such high-level steam drums and low-level water drums, a draft-inducing fan at the rear end of the boiler serving to draw gases around the tubes and between the headers, and a smoke stack in close connection with such fan.

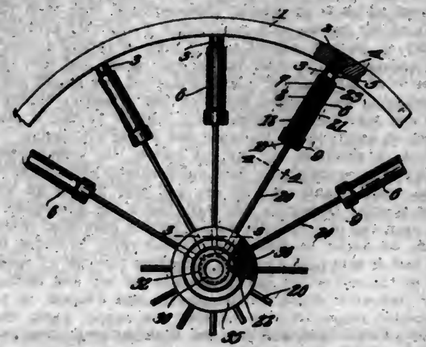


3. In a steam-boiler structure, the combination of a steam boiler comprising a plurality of rows or banks of water-tubes disposed within the boiler casing, transverse top and bottom headers, one of each for each row or bank of tubes, steam drums disposed horisontally above and exteriorly of the tubes and connected to the top headers, water-circulating drums located at a lower-level outside of the boiler and connected to the bottom headers, and conduits or pipes forming external connections between such high-level steam drums and low-level water drums.

4. In a steam-boiler structure, the combination of a boiler comprising an external elevated steam drum, a plurality of vertical water-tubes disposed in transverse rows or banks within the boiler casing, a plurality of closely adjoining transverse top headers, (having external vertical channels on their adjoining faces) in connection with the steam drum, and receiving the upper ends of said tubes, and bottom headers connecting said tubes with the general circulation.

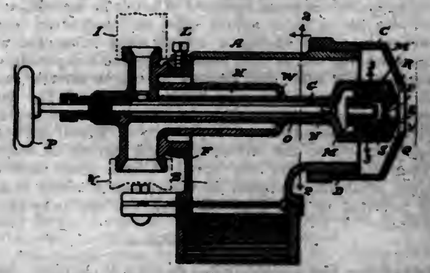
5. In a steam-boiler structure, the combination of a steam boiler having a casing, said boiler comprising an external elevated steam drum, a plurality of vertical water-tubes disposed in transverse rows or banks within the boiler casing, a plurality of transverse top headers, (having external vertical channels on their adjoining faces), in connection with the steam drum, and receiving the upper ends of said tubes, and bottom headers connecting said tubes with the general circulation, such pluralities of tubes and headers being arranged in sections with spaces between such sections and at both ends between them and the boiler casing, and said bottom-headers hav-

hole loosely embracing the spokes, and expansive springs within the barrel with their inner ends resting against



said collar and their outer ends against said nipple and cap respectively.

1,022,649. COMBINED OIL AND GAS BURNER. ALFRED R. ANTHONY, New York, N. Y., assignor to The Anthony Company, New York, N. Y., a Corporation of New York. Filed June 1, 1910. Serial No. 564,376. (Cl. 158—74.)



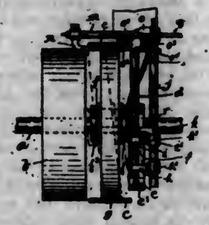
1. The herein described oil and gas burner, comprising a casing having a discharge aperture or outlet at one end and an air inlet that opens through a side wall, a fitting extending into the casing and having two concentric ducts or passages formed therein and adapted to be respectively connected with oil and gas supply pipes, the inner oil duct being of greater length than the gas duct and extending to a point adjacent the outlet from the casing, the gas duct having a plurality of discharge apertures in its end within the casing, a hollow plug communicating with the end of the oil duct within the casing and adapted to cause oil received therein to be delivered to the outlet of the burner as a whirling spray, the end of the casing in which said outlet is formed being adjustably connected with the body of the casing and forming about said plug an annular air passage connecting the interior of the

inlet in one of its side walls, a cap adjustably connected with one end of said casing and forming an extension thereof which is of greater cross-sectional area than the body of the casing, said cap having a centrally arranged outlet in its end, an oil supply pipe extending through the opening in the other end of the casing and into the interior of the cap, and a gas conduit of less length than the oil pipe surrounding said pipe and extending through the end wall of the casing, said conduit having a plurality of apertures at its inner end within the casing.

4. In a combined oil and gas burner, the combination of a casing comprising a body substantially cylindrical in cross section, and open at one end and having an air inlet opening through a side wall, and a cap surrounding the open end of said body and adjustably connected therewith, an outlet or discharge opening being provided in the end of said cap, a casting extending through an opening in the end of the casing opposite the cap and having two concentric ducts formed therein and adapted to be connected respectively to oil and gas supply pipes, the inner oil duct extending into the chamber within the cap and the gas duct being shorter and provided with apertures that communicate with the interior of the body of the casing, and a hollow plug connected with the end of said casting within the casing and communicating with the oil duct, the free end of said plug being expanded and having a surface extending parallel with the inner surface of the adjustable cap about the outlet therein.

5. In a hydrocarbon burner, the combination of a casing having a discharge aperture or outlet at one end, and a suitable air inlet, a supply pipe for conducting hydrocarbon into said casing, a mixing plug connected with the discharge end of said supply pipe and comprising two members, the outer plug member having an interior chamber closed except for a suitable outlet, and the inner member communicating with the supply pipe and provided within said chamber with a plurality of lateral outlets, a cap surrounding the mixing plug and having an opening communicating with the outlet in said plug, said cap being adjustably mounted on the casing, whereby it may be adjusted to and from the plug, for the purpose described.

1,022,650. BELT-SHIFTER. SAMUEL R. BAILEY, Amesbury, Mass. Filed June 22, 1908. Serial No. 439,674. (Cl. 64—4.)



1. In combination with a fast pulley, a loose pulley engagement with the opposite edge portion to draw the same toward the fast pulley as the first named edge portion is brought into engagement with the fast pulley, whereby said engaging device and said fast pulley may act simultaneously to start the belt, substantially as described.

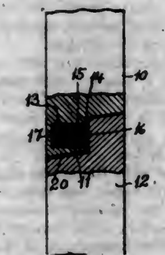
3. In combination with a fast pulley, a loose pulley supported at one side thereof, a belt adapted to be driven by the fast pulley, an arm, pivotally mounted adjacent the opposite side of the loose pulley from the fast pulley, and movable to swing approximately in the plane of the belt from a position in which it extends toward the direction from which the belt normally travels to a position transverse thereof, and a belt-engaging device mounted on said arm comprising a pair of diverging fingers extending approximately at right angles to said arm and between which the edge portion of the belt is adapted to be wedged, substantially as described.

4. In combination with a fast pulley, a loose pulley supported at one side thereof, a belt adapted to be driven by the fast pulley, a pivotal support adjacent the opposite side of the loose pulley from the fast pulley, an arm mounted on said support and extending, when in its initial position, longitudinally of the belt oppositely to the direction of movement of the belt and transversely thereof and a pair of belt-engaging fingers, one mounted on said arm adjacent the end of said longitudinally extending portion and the other at the extreme end thereof, said fingers extending at the opposite side of the belt from said arm at its opposite edges and in opposite directions, substantially as described.

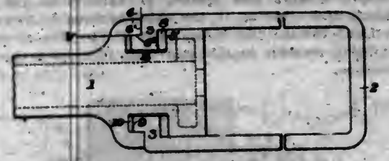
5. In combination with a fast pulley and a belt adapted to be driven thereby, a support at one side of said pulley, a hanger pivotally mounted on said support to swing toward and from said pulley, and a loose pulley mounted on said hanger, said support being constructed for adjustment in a plane parallel to said fast pulley to hold said hanger to swing about an axis approximately parallel to the belt as it leads onto the pulley, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

1,022,651. BUFFER FOR AUTOMOBILE-DOORS. LEWIS A. BEDARD, Boston, Mass. Filed July 12, 1911. Serial No. 638,092. (Cl. 16—77.)



forwardly, said lip and recess having angular interfitting portions which prevent relative lateral movement of the coupler and yoke; substantially as described.



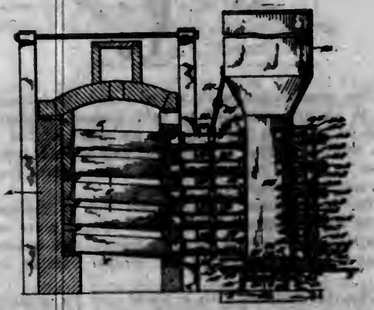
2. The combination in a draw bar, of a coupler, a yoke having inturned ends extending into recesses in the coupler, means for preventing spreading of the yoke, and distance pieces to force the yoke into snug engagement with such means.

1,022,653. SPECTACLE-FRAME. PHILIAS J. BOUCHER, Geneva, N. Y., assignor to Standard Optical Company, Geneva, N. Y., a Corporation of New York. Filed Sept. 22, 1910. Serial No. 583,295. (Cl. 88—53.)



A spectacle frame comprising eye-wires, end-piece members fixed to the adjacent extremities of the eye-wires and having abutting lugs adjacent said extremities and separated bearing-surfaces, a bearing-boss extending from one of said surfaces toward but not to the other surface, a temple pivotally mounted between said surfaces and upon said boss, and a screw seated in said boss and adjustably connecting the end-piece members.

1,022,654. MECHANICAL CHARGING MECHANISM FOR SMELTING-FURNACES AND THE LIKE. IRVING L. BIGGS, Newport, Del. Filed Nov. 13, 1911. Serial No. 659,972. (Cl. 214—23.)



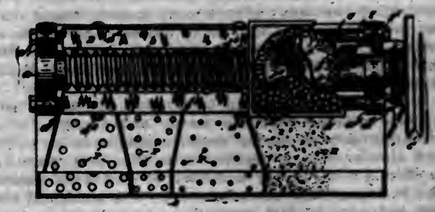
1. An apparatus of the character described, comprising a car, a receptacle movable transversely of the car, a tube

4. In an apparatus of the character described, comprising a car, a receptacle on the car, means for moving the receptacle transversely of the car, a vertical series of tubes communicating with the receptacle, worm conveyers in said tubes extending into the receptacle and adapted to force the material from the receptacle through said tubes, the inner ends of said tubes projecting into the receptacle and flared outwardly, substantially as described.

5. An apparatus of the character described, comprising a car, a receptacle on the car, means for moving the receptacle transversely of the car, a vertical series of tubes communicating with the receptacle, worm conveyers in said tubes extending into the receptacle and adapted to force the material from the receptacle through said tubes, movable nozzles on the free ends of said tubes, and means for simultaneously turning all of said conveyers, substantially as described.

[Claims 6 to 11 not printed in the Gazette.]

1,022,655. ASSORTING AND SIZING MACHINE. JOHN J. BRINE, Lowell, Mass. Filed Jan. 24, 1908. Serial No. 412,527. (Cl. 130—32.)



1. The combination of a screw, means for rotating the same, a hopper arranged above said screw and having a bottom provided with a discharge-hole on each side of the axis of said screw, a plate having a plurality of holes, means for moving said plate to bring two of said last-named holes to register with the discharge-holes in said bottom once in each revolution of said screw.

2. The combination of a screw, means for rotating the same, a hopper arranged above said screws and having a bottom provided with a discharge-hole on each side of the axis of said screw, a plate having a plurality of holes arranged at equal intervals in a circle concentric with said plate and means for rotating said plate to bring two of the holes therein to register with the discharge-holes in said bottom once in each revolution of said screw.

3. The combination of a screw, means for rotating the same, a hopper arranged above said screw and having a bottom provided with a discharge-hole on each side of the axis of said screw, a plate having a plurality of holes arranged at equal intervals in a circle concentric with said plate and means for rotating said plate to bring two of the holes therein to register with the discharge-holes in said bottom once in each revolution of said screw, and means for directing the contents of said hopper over said circle of holes.

cover or wiper arranged above said discharge-holes and above said plate to prevent more than one of the bodies contained in said hopper to pass through a discharge-hole at a time.

1,022,656. FRICTION-BRAKE. HENRY C. C. BRUNT, Collingswood, N. J., assignor to Victor Talking Machine Company, a Corporation of New Jersey. Filed Apr. 15, 1908. Serial No. 427,180. (Cl. 74—13.)



1. In a talking machine brake, the combination with a brake member having a recess, of an actuating member carrying means arranged to be moved in a rotary path to engage the walls of said recess and to effect a reciprocatory movement of said brake member, means limiting the movement of said brake member, and means adjacent to one end of said recess and arranged to lock said member to prevent the relative movement of said brake member and said actuating member.

2. In a talking machine brake, the combination with a brake member having a recess, and a notch, of an actuating member having means arranged to be shifted in a circular path to engage the walls of said recess and to effect a reciprocatory movement of said brake member, and to engage said notch to prevent the accidental relative movement of said member.

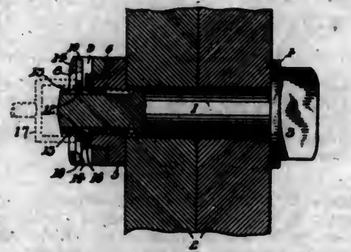
3. In a friction brake for talking machines, the combination of a casing, a cam lever, a brake member coacting with said cam lever, a turn-table, a brake pad mounted upon said brake member, and a pin mounted upon said cam lever, said brake member having a notch therein adapted to receive and firmly hold the said pin, thereby locking the brake member out of contact with said turn-table.

4. The combination with a brake member arranged for reciprocation, of a lever, a pin carried by said lever arranged to be shifted in an arc to engage a plane surface and reciprocate said brake member by oscillation of said lever, said brake member having a notch disposed to engage said pin to prevent the accidental relative movement of said member.

5. In a talking machine brake, the combination with a moving element, of a slotted reciprocatory brake member mounted to be brought into contact with the moving element, a lever, and a pin carried by said lever arranged to be swung in an arc, and to engage the slotted brake member and shift it toward or away from the moving element, said brake member being provided with a notch for engagement with said pin to prevent accidental relative movement of said lever.

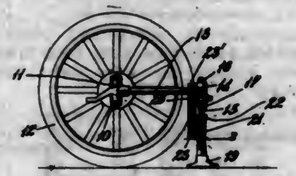
[Claims 6 to 13 not printed in the Gazette.]

locking-nut connected to the outer end thereof and having communicating axial and side openings, a catch, non-rotatively connected to the bolt and having its body in the axial opening and locking projections in the side openings, and a spring in the axial opening to force the projections toward the outer walls of the side openings, there being recesses in the said wall to receive the said projections.



4. In a nut-lock, a threaded bolt, a nut thereon, a locking-nut connected to the outer end thereof and having communicating axial and side openings, the latter having passages leading outwardly to the end of the locking-nut and notches in their outer walls, a catch non-rotatively connected to the bolt and having projections adapted to pass through the said passages and along the said side openings, and a spring in the axial opening to press the said projections outwardly.

1,022,658. TIRE-GUARD. CHARLES DABELSTEIN, Detroit, Mich. Filed Oct. 14, 1911. Serial No. 654,588. (Cl. 208—151.)

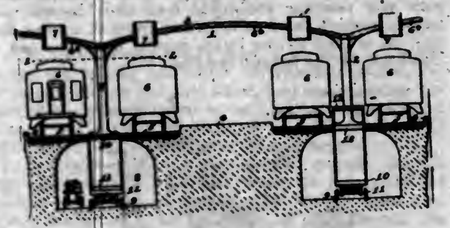


1. The combination with a wheel and its journal-support, of an arm attached to said support, a guard attached to said arm adjacent the periphery of the wheel and a scraper carried by the outer end of said arm, said scraper having a resilient portion intermediate its ends to permit lateral deflection thereof.

2. The combination with a wheel and its journal-support, of an arm attached thereto, a guard plate on the arm fitting the contour of said wheel, and a laterally yielding and vertically movable scraper carried by the arm.

3. The combination with a wheel and its journal-support, of an arm carried by said support, a wheel guard

2. A railroad terminal comprising pairs of tracks for the cars having a passenger platform between the pairs of tracks and having a space between the tracks of each pair, a subway under said space, and means substantially the width of such space between the cars on said pair of tracks for conveying baggage or other articles from said subway to a position in said space coincident with the doors of said cars.



3. A railroad terminal comprising pairs of tracks for the cars having a passenger platform between the pairs of tracks and having a space between the tracks of each pair, and means substantially the width of said space between the cars on said pair of tracks for vertically conveying baggage or other articles to a position in said space coincident with the doors of said cars.

4. A railroad terminal comprising pairs of tracks for the cars having a passenger platform between the pairs of tracks and having a space between the tracks of each pair, a subway under said space, and means substantially the width of such space between the cars on said pair of tracks for vertically conveying baggage or other articles from said subway to a position in said space coincident with the doors of said cars.

5. A railroad terminal comprising pairs of tracks for the cars having a passenger platform between the pairs of tracks and having a space between the said pairs, a train shed supported by columns in said space, and means substantially the width of such space between the cars on said pair of tracks for conveying baggage or other articles to a position in said space between such columns coincident with the doors of said cars.

[Claims 6 to 8 not printed in the Gazette.]

1,022,660. FOREPART-FORM FOR SHOE-TURNING MACHINES. JOHN L. DOW, Melrose Highlands, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Mar. 29, 1911. Serial No. 617,622. (Cl. 12—57.)



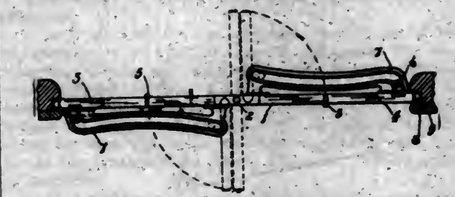
1. A forepart form for shoe turning machines, comprising a plate forming a body portion, and a forepart filler block slidably mounted on said plate, substantially as described.

2. A forepart form for shoe turning machines, comprising a plate forming a body portion, and a forepart filler block slidably mounted on said plate, substantially as described.

at its rear end and tapering downwardly toward its front or toe end, mounted for longitudinal movement on said plate, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,022,661. DOOR. JOHN C. DUNER, Wheaton, Ill. Filed Apr. 11, 1908. Serial No. 426,482. (Cl. 20—20.)



1. A door construction for dividing a doorway into two passages, comprising a central door pivoted to swing about a fixed vertical axis intermediate its edges, a side door pivoted to each of the vertical edges of the central door, a guide-way above each door, and means adjacent the free edge of each side door for engaging one of the said guide-ways, whereby each side door is swung to one side of the plane of the door-way and transversely thereto as the central door swings to a position transverse to the plane of the door-way.

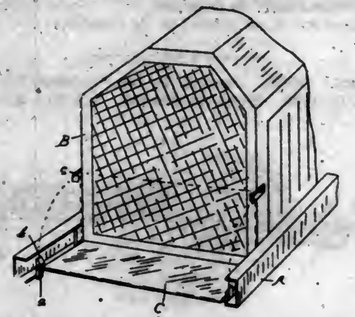
2. A door construction for dividing a door-way into two passages, comprising a central door pivoted to swing about a fixed vertical axis intermediate its edges, a side door pivoted to each of the vertical edges of the central door, guide-ways above the side doors on opposite sides of the plane of the door-way and means adjacent the free edge of each of the side doors for engaging one of the said guide-ways whereby each side door is swung against the central door when the central door swings to a position transverse to the plane of the door-way.

3. A door construction comprising a main door pivoted to swing about a fixed vertical axis intermediate its ends, a plurality of doors having a hinged connection thereto and free to move longitudinally of the door-way, locking means carried by one door and adapted to engage another door when folded thereagainst, and guide means for the plurality of doors for guiding them positively to folded position when the main door swings to open position, the said guide means being so positioned that when the doors are in folded position with two doors locked together, the guide means prevent any movement of any of the doors.

4. A folding door construction comprising a main door pivoted to swing about a fixed vertical axis intermediate its ends, a second door pivoted to the free edge of the first door, locking means carried by one door and constructed to engage the other door when the doors are in open position, and a guide means for causing the second door to move to folded position against the main door as the main door swings to open position so positioned that when the doors are in open position and locked together, such guide means prevents any movement of the two doors.

5. A door construction for dividing a door-way into two

with the face thereof, and means for retaining said member in its different positions of adjustment.



2. In a motor propelled vehicle, the combination of a radiator and a combined mud guard and shield for the front of the radiator comprising a plate pivoted adjacent the lower front edge of the radiator upon a horizontal axis, said plate being normally arranged forwardly of the radiator in a horizontal plane and adjustable independently of the radiator into substantially parallelism with the front face thereof, for the purpose described.

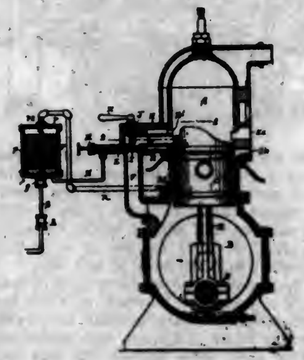
3. In a motor propelled vehicle, the combination of a radiator, spaced side sills supporting said radiator and having portions extending forwardly thereof, a plate pivoted adjacent the lower front edge of the radiator upon a horizontal axis, normally horizontally arranged intermediate the extensions of the side sills and adjustable into substantially parallelism with the front face of the radiator, and locking devices upon the radiator and the side sills for retaining the plate in its adjusted positions.

1,022,663. CLASP. JACOB EHMANN, Arlington, N. J. Filed Apr. 18, 1910. Serial No. 556,085. (Cl. 24—260.)



In a clasp, the combination with a U-shaped body portion having in the inner side of one arm a central longitudinal groove increasing in depth toward the closed end of the body-portion, a U-shaped spring within said U-shaped body portion, and a slide between said grooved arm and the spring having a protuberance fitting said groove, and held therein by the pressure of said spring, and the said groove in said body-portion being provided with pockets into which said protuberance is adapted to enter, said pockets also increasing in depth toward the closed end of the body-portion, so as to adapt the gripping action of the spring-jaws of the U-shaped spring to varying thicknesses of material, and also to prevent slipping of said slide after adjustment.

2. In a two cycle internal combustion engine, the combination of a cylinder, a compression chamber, a piston adapted to reciprocate in said cylinder to compress air in said compression chamber, a passage for conveying the compressed air to the combustion chamber, a reservoir for fluid hydrocarbon, a conduit for said hydrocarbon communicating with said reservoir and with the passage for compressed air and a passage communicating with said reservoir above the fluid level therein, and opening through the wall of said cylinder at a point that shall be covered by the piston toward the lower end of its stroke, for the purpose described.



3. In a two cycle internal combustion engine, the combination of a cylinder, a compression chamber, a piston adapted to reciprocate in said cylinder to compress air in said compression chamber, a passage for conveying the compressed air to the combustion chamber, a reservoir for fluid hydrocarbon, a conduit for said hydrocarbon communicating with said reservoir and with the passage for compressed air and a passage communicating with said reservoir above the fluid level therein, and opening through the wall of said cylinder at a point that shall be covered by the piston toward the lower end of its stroke, a supply pipe leading to said reservoir, and an automatic valve in said supply pipe opening toward said reservoir, for the purpose described.

4. In an internal combustion engine, the combination of a working cylinder, an intake port, an inclosed chamber adjacent to said inlet port, said cylinder being provided with an opening through its wall communicating with said chamber, said opening being so located that it shall be in communication with said cylinder before the exhaust port is opened.

1,022,665. SKATE-RUNNER SHARPENER. THOMAS ELSUM, Newark, N. J. Filed June 6, 1911. Serial No. 631,617. (Cl. 76—83.)

1,022,666. ELECTRICALLY-OPERATED DRIVING-GEAR. JOHN AUGUSTUS ESSBERGER, Berlin-Schöneberg, Germany. Filed Oct. 4, 1910. Serial No. 585,294. (Cl. 172—239.)



1. In combination a rotary shaft, a plurality of electric motors for driving said shaft, intermediate gearing between said motors and said shaft, said motors being distributed on different shafts of said gearing and the speed ratio of the gearing between the motors corresponding substantially to the speed range of said motors.

2. In combination a rotary shaft, gearing through which said shaft is driven and means for controlling the speed of said shaft over a large range without shock comprising motors on different shafts of said gearing, the speed range of each of said motors being substantially equal to the speed ration of the gearing arranged between it and the next and means for controlling the speed of said motors.

3. In combination, a rotary shaft, a plurality of gearing pairs in series and through which said shaft may be driven, shafts carrying said gearing pairs, electric driving means on one shaft of said gearing, the speed range of said driving means being substantially equal to the speed ratio of the gearing between it and a further shaft in the series of gearing pairs and electric driving means on said further shaft.

4. In combination, a rotary shaft, a plurality of gearing pairs in series and through which said shaft is driven, shafts carrying said gearing pairs, a motor on one shaft of the gearing, the speed range of said motor being substantially equal to the speed ratio of the gearing between it and a further shaft of said gearing, a clutch between said motor driven shaft and said further shaft and a motor on said further shaft.

5. In combination, a rotary shaft, a plurality of gearing pairs in series and through which said shaft is driven, shafts carrying said gearing pairs, a motor on one shaft of the gearing, the speed range of said motor being substantially equal to the speed ratio of the gearing between it and a further shaft on said gearing, a magnetic clutch between said motor driven shaft and said further shaft.

[Claims 6 to 8 not printed in the Gazette.]

1,022,667. GEAR-CUTTING MACHINE. THOMAS FAWCUS, Pittsburgh, Pa. Filed Mar. 11, 1911. Serial No. 613,885. (Cl. 90—4.)



ing both hobs or cutters in the same direction; together with means for affecting said hobs to cause them to produce cuts which are at reverse angles to their line of feed; substantially as described.

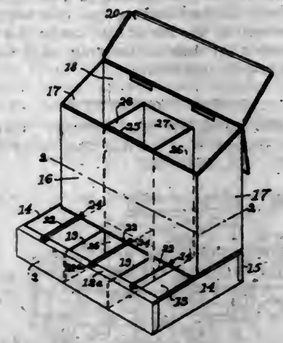
3. In a machine for cutting gears, a right-hand and a left-hand hob, means for revolving said hobs in opposite directions, and means for feeding them in the same direction, said hobs being arranged to act simultaneously upon a continuously revolving gear-blank; substantially as described.

4. In a machine for cutting double helical gears, the combination with a blank support, and means for continuously rotating said support, a tool carrier having two simultaneously movable tools mounted thereon, one of said tools being arranged to cut from one edge of a blank toward its center, and the other tool to make a simultaneous cut from the center toward the opposite edge, and means for actuating the carrier and tools; substantially as described.

5. In a machine for forming double helical gears, two rotary cutters, means for feeding said cutters in the same direction, and means for driving the cutters at relatively different speeds; substantially as described.

[Claims 6 to 16 not printed in the Gazette.]

1,022,668. DRY-FOOD HOPPER. CHARLES H. FELKER, Avon, Mass. Filed Sept. 15, 1911. Serial No. 649,547. (Cl. 119—52.)



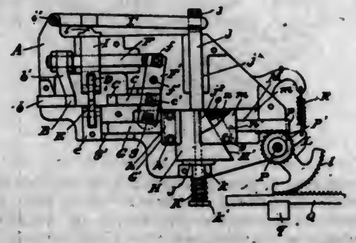
1. A dry-food hopper comprising a trough-shaped base, transversely partitioned to convert its interior into a plurality of compartments, and having an inwardly projecting flange on its front wall, the front portions of the compartments being open, a reservoir located over the rear portion of the base and having a flexible front wall, the lower end of which is elevated above the bottom of the base and offset from the front wall of the base, and guard rods having hooked ends engaged with the said flange and extending therefrom to the front wall of the reservoir and through orifices therein, the flexibility of the front wall of the reservoir permitting the engagement of the rods therewith, substantially as described.

1,022,669. FLY-TRAP FOR WINDOW AND DOOR SCREENS. CLARK A. FULCHER, Monroe, Mich., assignor of one-half to Oliver A. Braman, Monroe, Mich. Filed June 10, 1911. Serial No. 632,430. (Cl. 43—22.)



In a device of the character described, the combination of a frame having a fine woven wire fabric secured to one side thereof and a screen of a larger mesh secured to the opposite side, a fly trap detachably secured to the upper end of said frame, said trap comprising a frame, having screen wire secured to both sides, a trap plate hingedly mounted in said frame and disposed in a horizontal plane, spring retaining members having one end bent at right angles and secured to the top of said frame and the other free end engaging the ends of the trap plate to keep the same in a horizontal position.

1,022,670. MECHANICAL MOVEMENT. CHARLES M. GREY, East Orange, N. J. Filed Nov. 8, 1910. Serial No. 591,267. (Cl. 194—72.)



1. In a mechanical movement, movable coöperating members, means whereby said members are rendered relatively movable upon the introduction of an operating device, a transmitting member, and mechanism operated by said coöperating members for actuating said transmitting member.

2. In a mechanical movement, movable coöperating members, means whereby said members are dependent for

ting member, and mechanism dependent for its operation on the conjoint movement of said movable members for actuating the transmitting device.

5. In a mechanical movement, coöperating members, means whereby said members have movement relative to each other and are dependent for such movement upon one dimension of an operating device, other coöperating members, means whereby said members have movement relative to each other and are dependent for such movement upon another dimension of the operating device, a transmitting member, and mechanism dependent for its operation upon the conjoint relative movements of the first and second named coöperating members for actuating said transmitting member.

[Claims 6 to 20 not printed in the Gazette.]

1,022,671. DEVICE FOR CREASING AND PRESSING TROUSERS. MARTIN V. HAMMACK, Springfield, Mo. Filed Mar. 30, 1911. Serial No. 617,872. (Cl. 223—19.)



1. A trousers stretcher and presser, comprising a pair of adjustable members adapted to fit the inside of the trousers leg, one of said members having grooves upon its outer edge, an open clamping sleeve adapted to fit said grooves, a forming bar carried by the other of said members, open clamping sleeves adapted to engage said bar, and means for regulating the adjustment of said adjustable members.

2. A trousers stretcher and presser, comprising a pair of adjustable members adapted to fit the inside of the trousers leg, one of said members having grooves upon its outer edge, an open clamping sleeve adapted to fit said grooves, a forming bar carried by the other of said members, open clamping sleeves adapted to engage said bar, and means carried by said last named member for adjusting said forming bar to vary the shape of the bar according to the leg of the trousers.

3. A trousers stretcher and presser, comprising a pair of adjustable members adapted to fit the inside of the trousers leg, links connected in pairs to said members, a rod connected to the links, a sleeve connected to the links, an adjusting screw for operating the rod and sleeve, and means carried by said adjustable members for creasing and pressing the trousers, said means comprising a forming bar carried by one of said members, clamping sleeves on said bar, and a clamping sleeve engaging the other of said adjustable members.

1,022,672. SHOE ATTACHMENT. PETER HAMMER, Marlboro, N. Y. Filed June 17, 1911. Serial No.

yield under pressure thereon, and a cushion pad interposed between said top plate and said spring plate.

2. The combination with a top plate, of a spring plate secured to said top plate, said spring plate comprising an enlarged front portion and a cross-shaped rear portion, said spring plate being arched so as to contact with a support at spaced points, whereby the spring plate may yield under pressure thereon, and a cushion pad interposed between said top plate and said spring plate, said cushion pad having cross channels therein, with apertures through the pad communicating with said channels, and said top plate having apertures therein located in register with said first-mentioned apertures.

3. The combination with a top plate, of a spring plate secured to said top plate, said spring plate comprising an enlarged front portion and a cross-shaped rear portion, said spring plate being arched so as to contact with a support at spaced points, whereby the spring plate may yield under pressure thereon, and a cushion pad interposed between said top plate and said spring plate, said cushion pad having cross channels therein, with apertures through the pad communicating with said channels, and said top plate having apertures therein located in register with said first-mentioned apertures, the tops of said channels being cut away to form notches permitting the passage of air from said channels, and said top plate having notches therein corresponding to said first-mentioned notches to permit the air from said channels to come up above said top plate.

4. The combination with a top plate, of a spring plate secured to said top plate, said spring plate comprising an enlarged front portion and a cross-shaped rear portion, said spring plate being arched so as to contact with a support at spaced points, whereby the spring plate may yield under pressure thereon, and a cushion pad interposed between said top plate and said spring plate, said top plate having a longitudinally-extending groove therein tapering from a maximum at the front to a minimum toward the rear, and said spring plate having an arched channel fitting in said groove.

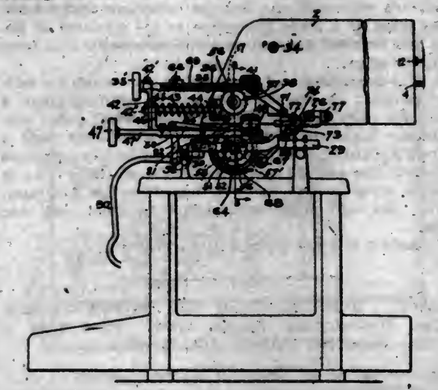
5. The combination with a top plate, of a spring plate secured to said top plate, said spring plate comprising an enlarged front portion and a cross-shaped rear portion, said spring plate being arched so as to contact with a support at spaced points, whereby the spring plate may yield under pressure thereon, a cushion pad interposed between said top plate and said spring plate, and a heel corset for enveloping the heel of the wearer's foot, having means thereon for engaging the arms of said cross-shaped portion of said spring plate.

[Claims 6 to 8 not printed in the Gazette.]

1,022,673. TYPE-WRITER. JOHN C. HARTT, East Liverpool, Ohio, assignor of one-half to Jennie W. Hartt, East Liverpool, Ohio. Filed June 28, 1910. Serial No. 569,351. (Cl. 197—130.)

1. In typewriters, the combination with a platen, and line spacing mechanism for actuating the same, of means for carrying a multiplicity of sheets, and feeding mechanism adapted to feed said sheets individually to said platen and to engage said line spacing mechanism and

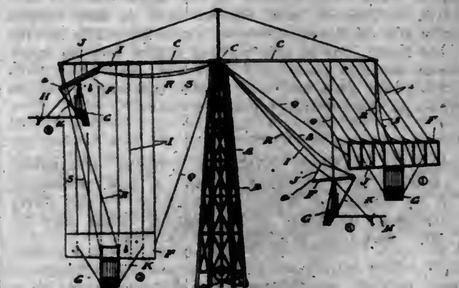
4. In typewriters, the combination with a platen, suitable spacing mechanism and a carriage, of a removable attachment comprising a receptacle for sheets or envelops, supplementary spacing mechanism adapted to actuate said platen, and feeding mechanism adapted to feed the sheets individually thereto, and provided with means for actuating said spacing mechanism simultaneously with said feeding.



5. In typewriters, the combination with a suitable platen, line spacing mechanism and carriage, of a receptacle adapted to carry a multiplicity of sheets, supplementary line spacing mechanism including a reciprocating bar, a feeding roller, another reciprocating bar arranged to actuate the same, and adapted to engage with the aforesaid reciprocating bar to actuate the platen during the feeding of a sheet, the said bars being automatically disengageable to permit the subsequent line spacing movement.

[Claims 6 to 26 not printed in the Gazette.]

1,022,674. AMUSEMENT DEVICE. FREDERICK J. H. HAZARD, Toronto, Ontario, Canada. Filed Sept. 12, 1910. Serial No. 581,624. (Cl. 46—27.)



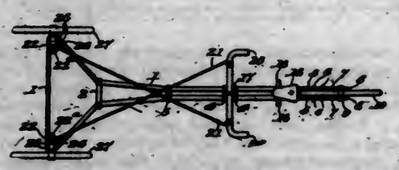
flexible self-adjusting bridles forming connections between the traction connections and the lifting plane of said aeroplane.

4. The combination of a movable arm; means for moving the arm; an aeroplane comprising a lifting plane, a passenger carrying body suspended therefrom, and means for varying the angle of the plane relative to the body; and a plurality of parallel traction connections flexibly connected with said arm and the aeroplane, said connections lying in a plane transverse to the direction of motion and intersecting the said plane intermediate its front and rear edges.

5. The combination of a movable arm; means for moving the arm; an aeroplane comprising a lifting plane, a passenger carrying body suspended therefrom, and a substantially horizontal tail connected to the body; and a plurality of parallel traction connections flexibly connected with said arm and the aeroplane, said connections lying in a plane transverse to the direction of motion and intersecting the said plane intermediate its front and rear edges.

[Claims 6 to 8 not printed in the Gazette.]

1,022,675. RUNNING-GEAR FOR MOTOR-CYCLES. CARL HENDRICKSEN, Seattle, Wash. Filed Sept. 7, 1910. Serial No. 580,902. (Cl. 21—90.)



A running gear for motorcycles comprising a main frame composed of an upper and a lower portion, said upper and lower portions being spaced apart and secured to each other by upright braces, each of said upper and lower portions being formed in one piece and bent into a loop, the sides of the loop being secured to each other at intervals by bands; a supplemental frame secured to the forward end of the main frame, the upright sides of said supplemental frame forming sleeves for vertical shafts, crank arms secured to the upper ends of said shafts, antifriction balls between each of said vertical shafts and its sleeve, outwardly extending shafts secured to the lower ends of said vertical shafts, forming axles, wheels mounted upon said axles and antifriction balls between said axles and said wheels, substantially as described as and for the purpose set forth.

1,022,676. MARINE COMPASS. HARRY HERTZBERG, Brooklyn, N. Y., assignor to Abbot A. Low, Horseshoe, N. Y., Maurice J. Wohl, New York, N. Y., and Harry Hertzberg, Brooklyn, N. Y., trustees. Filed May 31, 1907. Serial No. 376,729. (Cl. 73—129.)



1. A compass having a box, a non-spillable liquid-cup therein, a staff stepped in said cup, a single bar magnet fixed to the staff, a dial secured to said staff, a circuit controller on the staff, and a hollow float located in the cup for sustaining the weight of the aforesaid devices on the staff.

2. In a compass, a box, circuit terminals therein, a non-spillable liquid cup also within the box and arranged at a distance from the circuit terminals, said cup being composed of hollow sections united together, a staff, a magnetic needle carried by the staff, a circuit closer mounted on the staff and coöperating with said circuit terminals, and a float in the cup and attached to the staff.

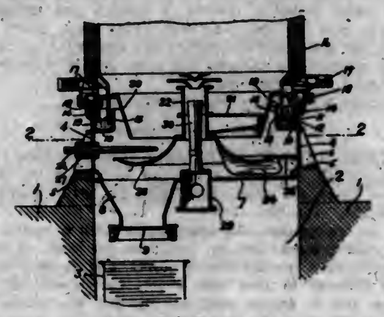
3. A mariner's compass comprising a staff, a magnetic needle thereon, a circuit controller carried by the staff, counterweights on either side of said staff, a non-spillable cup, and a float in said cup attached to the staff.

1,022,677. SICKLE FOR MOWERS. WILLIAM C. HOSS, Jackson, Cal. Filed Aug. 11, 1911. Serial No. 643,525. (Cl. 56—44.)



A device of the character described comprising a cutter bar, a plurality of upwardly projecting lugs on said cutter bar spaced apart at equal distances, teeth members fitting into said bar and having recesses receiving said lugs, the top plane of said teeth members being flush with the top plane of said lugs, a sliding bar disposed at the rear of said cutter bar and having means for locking said teeth in position in said cutter bar, an independent bar disposed over said teeth members and said lugs, screws projecting through said bar into said lugs, the top plane of said last named bar being flush with the top plane of said sliding bar as shown and described.

1,022,678. GAS-PRODUCER. WILLIAM B. HUGHES, Cleveland, Ohio, assignor to The Wellman-Seaver-Morgan Company, Cleveland, Ohio, a Corporation of Ohio. Filed Feb. 23, 1911. Serial No. 610,193. (Cl. 48—66.)

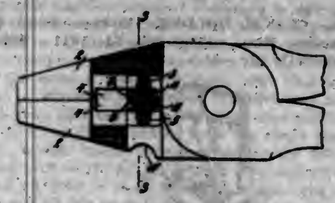


1. In a gas producer, a revoluble body, a table fixed to said body, and a scraper on the bottom of said table, in combination with a stationary ash receiver in which said scraper acts.

2. In a gas producer, a revoluble body, a revoluble ash table beneath said body, a stationary ash receiver having a cylindrical wall inclosing said table and a discharge hopper, a circular plate held by said wall adjacent to the periphery of said table, and means, providing a way for the passage of a car beneath said hopper, whereby said plate is supported.

3. In a gas producer, an ash receiver having a peripheral part and a hopper tapering therefrom to an eccentric outlet, in combination with a revoluble ash table and means for throwing ashes from said table into said hopper.

1,022,679. PLIERS FOR STRIPPING INSULATION FROM ELECTRIC WIRES. FRANK P. HUSTON, Dumont, N. J. Filed Aug. 7, 1909. Serial No. 511,699. Renewed Oct. 18, 1911. Serial No. 655,898. (Cl. 81—9.5.)



1. A pliers formed with a pair of jaws, each of said jaws being formed with a transverse groove in its inner face, the side walls of said grooves converging toward the bottom of the grooves, a correspondingly tapered splitting blade adapted to fit each of said grooves and to be wedged therein by pressure applied to the cutting edges of the blades, and cutting blades formed integral with the ends of said splitting blades and arranged perpendicular to said blades to cut the insulation transversely of the wire, each of said cutting blades being formed with a recess to receive the wire.

2. A pliers formed with a pair of jaws, each of said jaws being formed with a transverse groove in its inner face, the side walls of said grooves converging toward the bottoms of the grooves, a correspondingly tapered splitting blade adapted to fit each of said grooves, said blade being slightly larger than the grooves and adapted to be wedged therein by pressure applied to the cutting edges of the blades, and cutting blades connected to the ends of the splitting blades, recesses being formed in the sides of the plier jaws to receive said cutting blades, each of said cutting blades being formed with a recess to receive the wire.

3. A pliers formed with a pair of jaws, one of said jaws being formed with a transverse groove in its inner face, the side walls of said groove converging toward the bottom of the groove, a correspondingly tapered splitting blade adapted to fit said groove, said blade adapted to be wedged therein by pressure applied to the cutting edge thereof, and cutting blades connected to the ends of the splitting blade, each of said cutting blades being formed with a recess to receive the wire after the insulation has been cut transversely by the cutting blades.

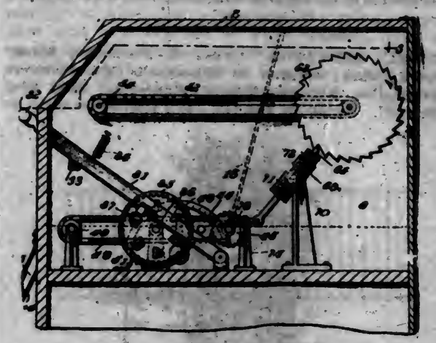
4. A pliers formed with a pair of jaws, one of said jaws being formed with a transverse groove in its inner face, the side walls of said groove converging toward the bottom of the groove, a correspondingly tapered splitting blade adapted to fit said groove, said blade adapted to be wedged therein by pressure applied to the cutting edge thereof, cutting blades connected to the ends of the splitting blade, each of said cutting blades being formed with a recess to receive the wire after the insulation has been cut transversely by the cutting blades, and a wire-centering means to center the wire in the grooves in the cutting blades.

5. A pliers formed with a pair of jaws having transverse grooves in their inner faces, a wire centering means to center the wire between said grooves, splitting blades adapted to be wedged in said grooves by pressure applied to their cutting edges, and cutting blades connected to the ends of said splitting blades and adapted to cut the insulation transversely of the wire, the jaws of the pliers being formed with recesses to receive said cutting blades.

[Claims 6 and 7 not printed in the Gazette.]

1,022,680. NEWSPAPER-VENDING MACHINE. BENONA JOHNSON, Elmira, N. Y. Filed Jan. 14, 1911. Serial No. 602,712. (Cl. 211—8.)

1. A vending machine including an article-containing compartment, a feed plate therein, an actuating member, means for shifting the feed plate forward upon each actuation of the actuating member, means for adjustably predetermining the amount of movement of the feed plate upon each actuation of the actuating member, and a scale for adjusting the feed plate to any desired initial position relative to the delivery end of the compartment, said scale having a plurality of series of graduations thereon, the graduations of each series being spaced from each other a distance corresponding to the amount of movement of the feed plate.



2. A vending machine including an article-containing compartment provided with a delivery chute at its forward end, a feed plate shiftably mounted in the vending compartment for movement toward the chute, motor actuated means operatively connected to the feed plate and tending to constantly shift the feed plate toward the delivery end of the compartment, said motor actuated means including a toothed wheel, a spring actuated stop engaging said toothed wheel and preventing its rotation by the motor, a tappet wheel having tappets thereon adapted to engage the stop to withdraw it from its engagement with the wheel, a driving wheel operatively connected to the tappet wheel and having ratchet teeth upon one face, and an actuating lever having a pawl engaging said teeth upon a movement of the lever in one direction to rotate the driving wheel and actuate the stop releasing mechanism but free to pass said teeth upon a return of the lever to its initial position.

3. A vending machine including an article containing compartment, a feeding device shiftably mounted in the vending compartment, motor actuated means operatively connected to the feeding device and tending to constantly shift the feeding device toward the delivery end of the compartment, a spring actuated stop preventing the movement of the motor actuated means, a tappet wheel having tappets thereon engaging the stop to withdraw it from its engagement with the motor actuated means, said tappets permitting the spring to immediately return the stop to its initial position, an operating lever, and means for rotating the tappet wheel a predetermined amount to release the stop upon each actuation of the lever in one direction.

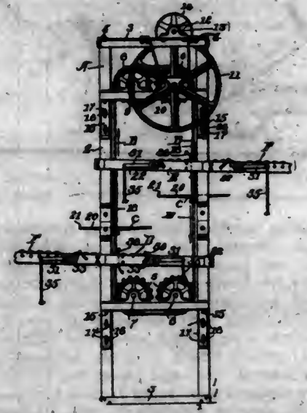
4. A vending machine of the character described, including a compartment adapted to contain a plurality of newspapers, said compartment being formed with a transverse delivery opening at its forward end, spring-actuated detaining fingers projecting into said opening and engaging in front of the articles being vended, a rotatable delivery member mounted in the front end of said compartment and engaging behind the article to be vended, a feed plate mounted in said compartment, motor-actuated means operatively engaged with the feed plate, the delivery means and the detaining device and acting to shift the feed plate forward, rotate the delivery means and move the detaining means out of their projected position, a stop preventing the operation of the motor, and manually operated means for momentarily releasing said stop to permit the actuation of the motor.

5. A vending machine, including a compartment having side walls and a bottom, the bottom of the compartment at its forward end being open, a delivery chute extending down from said opening, a rotatable delivery member

mounted in the open end of the compartment and including a plurality of radially projecting blades, spring-actuated detaining fingers projecting into the opening of the compartment, a motor operatively engaged with the feed plate and with the delivery member, and means for preventing the actuation of the motor, and manually operated means for disengaging said preventing means from its engagement with the motor.

[Claims 6 to 13 not printed in the Gazette.]

1,022,681. ELEVATOR. HENRY H. JOHNSTON, Minneapolis, Minn., assignor to Minneapolis Manufacturers Association, a Corporation of Minnesota. Filed Nov. 29, 1907. Serial No. 404,243. (Cl. 193—8.)

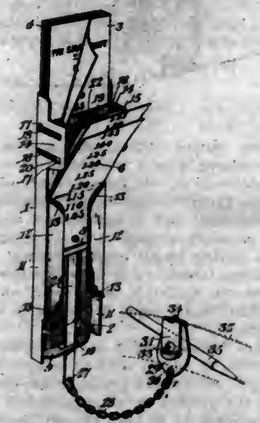


1. In an elevating apparatus, the combination with an upright frame, of a pair of elevating belts operating vertically in said frame, a pair of hangers pivotally suspended from said belts, a carrier floor fast upon the lower ends of the hangers, gravity conveyers on each side of said belts and intercepting the path of said carrier floor, and rigid shoes projecting inwardly from the sides of the elevator frame at intervals near the ends of the gravity conveyers in position to be engaged and swept by said carrier-hangers, whereby to steady the carrier floor and hold it from tilting when it coincides with a gravity conveyer.

2. In an elevating apparatus, the combination with a suitable frame having upright posts, elevating belts operating vertically between said posts, cars suspended between said belts, rigid guides at intervals on each side of said frame adapted to steady the lower portions of said cars, a platform having substantially horizontal bars spaced apart on each car, a loader and an unloader in the path of said cars, and means for driving said belts.

3. In an elevating apparatus, the combination with an upright frame, of rigid shoes arranged at vertical intervals on the sides of the frame, elevating belts operating vertically in said frame, and carriers pivoted at intervals on said belts, a carrier floor fast upon the lower ends of the carriers, gravity conveyers on each side of said belts and intercepting the path of said carrier floor, said shoes being located at intervals on said frame, a loader hinged in the path of said elevating carrier and having a stop at its inner end, and an unloader hinged in the path of said carrier on the lower side of said belt.

1,022,682. CHECK-HOLDER. EDWARD EDDY KARCH, Minneapolis, Minn. Filed Feb. 11, 1911. Serial No. 608,149. (Cl. 211—37.)



1. A holder for a pad of checks of a length and size to house the pad, said holder being open at one end for the projection of the pad of checks, and provided with a follower adjacent the open end, said follower having a check-stub diverting edge directed away from the open end of the holder.

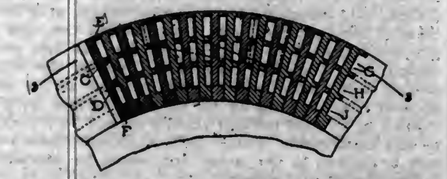
2. A holder for a pad of checks of a size to house the pad, and open at one end for the projection therefrom of the corresponding end of the pad of checks, said holder being provided with a follower adjacent the open end of the holder, said follower having a tearing edge directed toward the open end of the holder, and a stub-diverting edge directed away from the open end of the holder.

3. A holder for a pad of checks of a size to house the pad and open at one end for the projection therefrom of the corresponding end of the pad of checks, said holder being provided with a follower adjacent the open end of the holder, said follower having a tearing edge directed toward the open end of the holder, and a stub diverting edge directed away from the open end of the holder, and the holder being provided with stub holding devices adapted to direct the stubs of delivered checks toward the main body of the pad.

4. A holder for a pad of checks of a size and shape to house the pad of checks, said holder having a back member with a longitudinal slot therein, a recess at one end, and an end closing member at the other end, said holder also being provided with longitudinal side members outstanding from the back and with inturned flanges in spaced relation to the back member, the side members also being provided with portions extending away from the back member with slots traversing the extended portions and the side members adjacent thereto, a bridge piece connecting the extended portions of the side members and provided with a lip directed toward the back member, and a follower comprising a plate having a tearing edge and opposite the same a relatively sharp edge and with lugs adapted to the slots in the side members and the extensions thereof, said follower plate being also provided with a stub diverting lip extending from the sharp edge of the follower, elastic means for constraining the follower toward the back of the holder, a strip provided with a stabbing end adapted to enter a pad of checks and with anchoring means at the stabbing end, and a flexible support for the strip having means for the attachment of said support to the clothing of the operator.

[Claims 6 to 14 not printed in the Gazette.]

1,022,683. TURBINE. ARNOLD KIENAST, Leipzig, Germany. Filed Sept. 26, 1910. Serial No. 583,739. (Cl. 121—57.)



1. In a single wheel turbine provided with a plurality of rows of blade sections, means comprising conduits alternately arranged on opposite sides of said blade sections for passing steam through said turbine more than once, said conduits being shaped to supply steam to an increased number of rows at each passage.

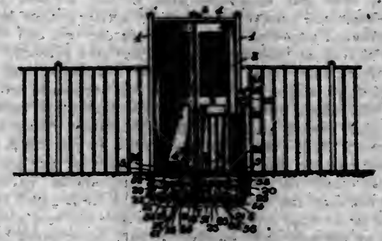
2. In a turbine having blades provided with ribs between the blades so as to form a plurality of rows of blade sections, means comprising conduits alternately arranged on opposite sides of said blade sections adapted to pass steam through said turbine more than once and to supply steam to an increased number of rows at each passage, said conduits widening in a direction parallel with the blades and normal to said ribs.

3. In a turbine having blades divided by ribs into a plurality of radially arranged blade sections, means comprising conduits for passing steam through said turbine more than once, said conduits widening continuously in a radial direction.

4. In a single wheel turbine, in combination, a casing, a relatively movable element comprising a plurality of rows of blade sections, and a plurality of conduits fixed to said casing and alternately arranged on opposite sides of said relatively movable element for passing steam through said element more than once, said conduits being shaped to supply steam to an increased number of rows at each passage.

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2. In a pay-as-you-enter door or turn-stile, the combination with a revolving door, of a lock-disk or wheel, said lock-disk or wheel being provided at its circumference with rectangular bolt-receiving openings, locking-bolts normally entering said bolt-receiving openings, an anti-friction roller connected with each locking-bolt, a rearwardly extending shank connected with each locking-bolt, standards for slidably supporting said shanks, a spring arranged with each shank and adapted to thrust the same forward to carry said locking-bolt into locking engagement with said lock-disk or wheel, solenoid coils, said shanks of said locking-bolts forming the armatures of said solenoids and the same serving to withdraw said locking-bolts from their locking engagement with said lock-disk or wheel when said solenoids are excited.



3. In a pay-as-you-enter door or turn-stile, the combination with a revolving door, of a lock-disk or wheel, said lock-disk or wheel being provided at its circumference with rectangular bolt-receiving openings, locking-bolts normally entering said bolt-receiving openings, an anti-friction roller connected with each locking bolt, a rearwardly extending shank connected with each locking-bolt, standards for slidably supporting said shanks, a spring arranged with each shank and adapted to thrust the same forward to carry said locking-bolts into locking engagement with said lock-disk or wheel, solenoid coils, said shanks of said locking bolts forming the armatures of said solenoids and the same serving to withdraw said locking-bolts from their locking engagement with said lock-disk or wheel when said solenoids are excited, a ratchet wheel revolving with said revolving door, and a pawl coöperating with said ratchet-wheel to prevent said revolving door from being turned in the wrong direction, substantially as and for the purposes set forth.

1,022,685. GROCER'S CABINET. WELDON ELI LEWIS, Hot Springs, Ark. Filed June 12, 1911. Serial No. 632,724. (Cl. 211—9.)



forward edges thereof, a bottom piece adapted to rest upon the inclined cleats of the end standards with its rear end portion under the lower edge of the back piece, a shelf member mounted upon the projecting end portions of the cleats carried by the end standards and having its rear edge abutting against the forward edge of the bottom piece, partitions mounted upon the shelf member, a front panel slidably mounted in the vertically disposed cleats upon the end standards, and a top piece having at its end tenons adapted to fit snugly within the said mortises and provided with a hinged section.

2. A dispensing cabinet comprising a back piece having vertically disposed spaced cleats, end standards hingedly attached to the ends of the back piece and having at their forward edges vertically disposed spaced cleats, said end standards also having inclined cleats and cleats the forward portions of which project beyond the forward edges of the said standards, said end standards having at their upper edges mortises provided with converging side walls, a bottom piece adapted to rest upon the inclined cleats carried by the end standards with its rear edge under the lower edge of the back piece, said bottom piece having upon its upper side spaced cleats which register with the spaced cleats carried by the back piece, a shelf member mounted upon the projecting end portions of the cleats carried by the end standards, partitions mounted upon the said shelf member, a front panel having at its lower edge recesses which receive the rear end portions of the said shelf partitions, said front panel having its ends slidably received between the cleats at the forward edge portions of the standards, a top piece having tenons which fit snugly within the mortises and having upon its under side spaced cleats which receive the upper portions of the first mentioned partitions, said top piece also having a hinged section.

3. A dispensing cabinet comprising top, bottom and back pieces, end standards supporting said pieces, said end standards having in the vicinity of their forward edges vertically disposed spaced cleats and provided with horizontally disposed cleats having forwardly projecting edge portions, a shelf member mounted upon the projecting portions of the horizontal cleats, partitions mounted upon the shelf member, a panel member slidably mounted in the cleats at the forward edge of the end standards and having notches at its lower edge which receive the rear edges of the shelf partitions, alined staples carried by the panel member and the end standards, a rod passing through said staples, and gates hingedly mounted upon the rods and adapted to lie upon the upper edges of the shelf partitions.

1,022,686. GAS-ENGINE. JOHN LOFTUS, Albany, N. Y. Filed Dec. 17, 1910. Serial No. 597,750. (Cl. 123—71.)



a closed position relative to said two ports until a predetermined pressure is reached in said compression cylinder.

2. In a gas engine, the combination of a power cylinder and a compression cylinder, a valve chamber, a movable member in said valve chamber dividing the latter into two compartments, a port leading from one of said compartments to the power cylinder, two ports leading from the other compartment one of said ports communicating with the power cylinder and the other with the compression cylinder, and a spring for maintaining said movable member in a closed position until a predetermined pressure is reached in said compression cylinder.

3. In a gas engine, the combination of a power cylinder and a compression cylinder, a valve chamber, a movable member in said valve chamber and dividing the same into two compartments, a port opening into one compartment and leading to the power cylinder, and two ports opening into the other compartment one port leading to the power cylinder and the other to the compression cylinder, said movable member being adapted to close the port leading to the compression cylinder, and means for maintaining the movable member in a closed position until a predetermined pressure is reached in said compression cylinder.

4. In a gas engine, a power cylinder and a compression cylinder, a valve chamber, a movable member therein and dividing said chamber into two compartments, said valve chamber being provided with a port leading from one of said compartments to the power cylinder and two ports leading from the other compartment, one of the latter leading to the power cylinder and the other to the compression cylinder, a spring for maintaining said movable member in a closed position relative to said port leading to said compression cylinder until a predetermined pressure is reached in the latter, and means for regulating the tension of said spring.

5. In a gas engine, a power cylinder, a power piston therein, an exhaust passage leading from the power cylinder, a valve chamber located in said exhaust passage, a movable member in the valve chamber adapted to close the exhaust passage and provide a compartment above it, a port opening into said compartment and leading to the power cylinder, a secondary cylinder, a piston in said secondary cylinder adapted to actuate said movable member, and passages leading from the power cylinder to said secondary cylinder and adapted to be controlled by said power piston.

[Claims 6 to 8 not printed in the Gazette.]

1,022,687. CARRIER. GUNDER G. MANDT, Waterloo, Iowa, assignor to William Galloway Company, Waterloo, Iowa. Filed Mar. 8, 1911. Serial No. 613,061. (Cl. 214—4.)



to one hanger and the other rock-arm to the other hanger, a tiltable bucket, a linking-connection between one of said rock-arms and said bucket, a stud projecting from the opposite side of said bucket, an indented body fixed to said stud, a detent detachably engaging the indentation therein, means for yieldingly retaining said detent in said indentation, a linking-connection between said stud and the other rock-arm, and means adapted to move the first-mentioned rock-arm to likewise shift the other rock-arm and raise or lower said bucket as desired.

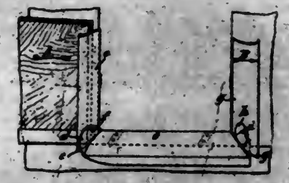
2. In combination, a carriage, said carriage having a trip-lever pivoted thereto, rock-arms pivoted together and each separately pivotally connected to said carriage, a tiltable bucket suspended from said rock-arms by linking-connections on opposite sides thereof, engaging-means on said bucket, detachable connections between said trip-lever and said engaging-means adapted to release said bucket when the trip-lever is tripped, and means for shifting said rock-arms to raise or lower said bucket.

3. In combination, a carriage, said carriage having a trip-lever pivoted thereto, rock-arms pivoted together and each separately pivotally connected to said carriage, a tiltable bucket suspended from said rock-arms by linking-connections, an indented disk secured to said bucket at the pivotal connection of one of said linking-connections therewith, bearings on the last-mentioned linking-connection, a slidable detent in said bearings adapted to engage detachably the indentation in said disk, means for yieldingly retaining said detent in engagement with said indentation, operative connections between the said trip-lever and said detent adapted to detach the latter from said disk when said lever is tripped, and means for shifting said rock-arms to raise or lower said bucket as desired.

4. In combination, a carriage, said carriage having a trip-lever pivoted thereto, rock-arms pivoted together and each separately pivotally connected to said carriage, a tiltable bucket suspended from said rock-arms by linking-connections, an indented disk secured to said bucket at the pivotal connection of one of said linking-connections therewith, bearings on the last-mentioned linking-connection, a slidable detent in said bearings adapted to detachably engage the indentation in said disk, means for yieldingly retaining said detent in engagement with its seat in said disk, a rock-shaft mounted on one of said rock-arms and having cranks at its opposite ends, and linking-connections between said trip-lever and one of said cranks and between said detent and the other of said cranks adapted to detach said detent from its seat in said disk when said trip-lever has been tripped.

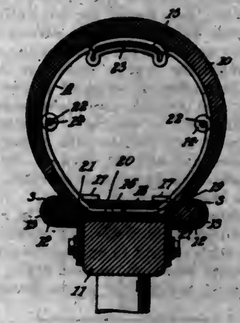
5. In combination, a carriage, said carriage having a trip-lever pivoted thereto, rock-arms pivoted together and each separately pivotally connected to said carriage, a tiltable bucket having outwardly-projecting studs on its opposite sides, linking-connections pivotally connected between said studs and the adjacent-rock-arms, engaging-means on one of said studs, detachable connections between said engaging-means and said trip-lever adapted to become detached from the engaging-means when said lever is tripped, a winding-drum with an integral ratchet-wheel on one side both rotatably mounted on the stud

plates being engaged by the inner surface of the other upturned end of said sill plate as the latter plate rotates about its hinges, whereby as the door is closed all of said plates will be rotated about their hinges.



2. In combination with a door frame, a sill plate hinged at one side of the frame and having upturned ends, and a pair of jamb plates hinged at the same side of the frame and at opposite sides of the opening, the lower end of one of said jamb plates being adapted, when rotated, to engage the outer surface of one of the upturned ends of said sill plate and the lower end of the other of said jamb plates being engaged by the inner surface of the other upturned end of said sill plate, as the latter plate rotated about its hinges, the said jamb plates being provided with projections with which the upturned ends of said sill plate engage, whereby as the door is closed all of said plates will be rotated about their hinges.

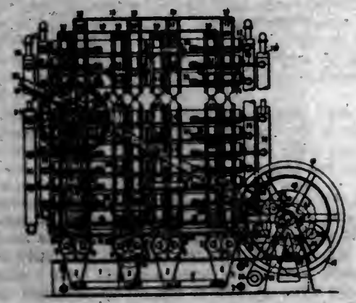
1,022,689. RESILIENT TIRE. HANS A. MEINHARDT, Pittsfield, Mass. Filed Sept. 15, 1911. Serial No. 649,488. (Cl. 152—8.)



1. A resilient tire comprising a case tube, and a series of inclosed spiral coils placed endwise of each other to collectively form a sectional spiral core, the end convolutes of each coil entering the end convolutes of the flanking coils.

2. A resilient tire comprising a case tube, a series of inclosed spiral coils placed endwise of each other to collectively form a sectional spiral core, the end convolutes of each coil having hooks and entering the end

supports, one of said plates being disposed above and spaced apart from the other thereof, and means adapted to relatively move said supports to impose the weight of said upper plate upon said lower plate.



2. In apparatus for drying veneer, in combination, a pair of supporting means, a series of plates resting on said supporting means, the plates of one series being disposed in alternate relation with and spaced apart from the plates of the other, and means adapted to relatively move said supporting means to impose the weight of the plates of one of said series upon the plates of the other thereof.

3. In apparatus for drying veneer, in combination, a pair of movable frames, a series of plates freely supported by one thereof, a second series of plates supported by the other thereof, the plates of said series being disposed in alternate relation and adapted to receive veneer therebetween, and means for relatively moving said frames to impose upon the veneer carried by the plates of one series the weight of the plates of the other series.

4. In apparatus for drying veneer, in combination, a pair of movable frames, a series of plates freely resting upon each of said frames, the plates constituting said series being disposed in alternate relation, and means for moving one of said frames with respect to the other whereby closures are effected between certain opposing faces of said plates and apertures provided between other opposing faces thereof.

5. In apparatus for drying veneer, in combination, a pair of balanced series of plates, the plates of each series being movable with respect to one another, and means for moving said series relatively to each other.

[Claims 6 to 75 not printed in the Gazette.]

1,022,691. OPERATING MECHANISM FOR POWER-ACTUATED WASHING-MACHINES. GUSTAV N. MEYER, Davenport, Iowa. Filed Mar. 10, 1911. Serial No. 613,635. (Cl. 74—50.)



secondary operating shaft, a motor and a motor shaft provided with two worms, one meshing with the worm wheel that is operatively connected to the primary operating shaft and the other with the worm wheel of the secondary operating shaft, with means for connecting the said worm wheels to the respective shafts which they operate, and for disconnecting them therefrom, to permit said shafts to be operated either simultaneously or independently.

2. Operating mechanism for washing machines and the like comprising, in combination with a body, an operating shaft capable of rotary reciprocatory motion, a worm wheel operatively connected therewith for imparting rotary reciprocatory motion to said shaft, a wringer operating shaft, a worm wheel connected thereto, and a motor provided with a shaft having two worms, each meshing with one of said worm wheels.

3. Operating mechanism for washing machines and the like comprising, in combination with a body, an operating shaft capable of rotary reciprocatory motion, a worm wheel operatively connected therewith for imparting rotary reciprocatory motion to said shaft, a wringer operating shaft, a worm wheel connected thereto, a motor provided with a shaft having two worms, each meshing with one of said worm wheels, means for disconnecting the operating shaft from its worm wheel, and a hand device for actuating said operating shaft when disconnected from said worm wheel.

4. Operating mechanism for washing machines and the like comprising, in combination with a body, an operating shaft capable of rotary reciprocatory motion, a worm wheel operatively connected therewith for imparting rotary reciprocatory motion to said shaft, a wringer operating shaft, a worm wheel connected thereto, a motor provided with a shaft having two worms, each meshing with one of said worm wheels, and a clutch device for operatively connecting the wringer shaft to and disconnecting it from its worm wheel.

5. Operating mechanism for washing machines and the like comprising, in combination with a body, an operating shaft capable of rotary reciprocatory motion, a pinion on said shaft, a swinging gear sector meshing with said pinion, a bracket attached to said body near its top, a motor mounted on said bracket and provided with a shaft having a worm, a worm wheel meshing with said worm and a pitman pivoted eccentrically to the work wheel and pivoted to said gear sector.

[Claim 6 not printed in the Gazette.]

1,022,692. STONE-SAW. WILLARD F. MEYERS, Long Island City, N. Y. Filed Mar. 31, 1909. Serial No. 486,857. (Cl. 125—18.)



blade to form abrasive surfaces, and cutting teeth thinner than the abrasive teeth and projecting beyond the abrasive teeth at the edge of the blade.

2. A stone saw comprising a blade, rigid abrasive teeth thicker than the blade extending from one side of the blade to the other and projecting from the opposite sides of the blade to form abrasive surfaces, and cutting teeth thicker than the blade and thinner than the abrasive teeth and projecting beyond the abrasive teeth at the edge of the blade.

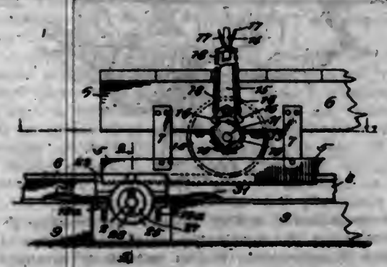
3. A stone saw comprising a blade, rigid abrasive teeth thicker than the blade extending from one side of the blade to the other and projecting from the opposite sides of the blade, and cutting teeth thicker than the blade and thinner than the abrasive teeth and projecting beyond the abrasive teeth at the edge of the blade, the abrasive teeth being tapered in thickness toward their outer ends.

4. A stone saw comprising a blade, a set of teeth carried by the blade for severing the stone, and another set of abrasive teeth carried by the blade for dressing the sides of the cut made by the first set of teeth, each abrasive tooth having active abrasive surfaces projecting from the opposite sides of the blade, the teeth in one set being arranged on the blade in alternate relation with the teeth of the other set.

5. In a stone saw, the combination of a blade having a socket in the edge thereof and an aperture back from such edge, a cutting tooth secured in the socket, and an abrasive tooth secured in the aperture and projecting therefrom at the sides of the blade to there form abrasive surfaces.

[Claim 6 not printed in the Gazette.]

1,022,693. CAR-HOLDER. WILLARD F. MEYERS, Long Island City, N. Y. Filed May 29, 1911. Serial No. 630,042. (Cl. 188—47.)



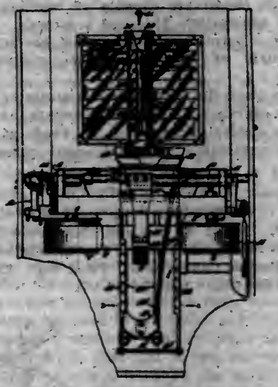
1. A car holder comprising a longitudinally movable friction bar, opposed clamping jaws one of which is movable to and from the other and between which the friction bar moves, and a lever movable in either direction from a middle position to move the movable jaw to clamping position.

2. A car holder comprising a longitudinally movable friction bar, opposed clamping jaws at opposite sides of the bar, yieldable means for pressing the jaws apart, from the stationary jaw member, a movable jaw member at the other side of the friction bar and slidable and non-rotatively mounted on the guide stem, a coiled thrust spring surrounding the stem between the jaw members and pushing such members apart, a lever rotatably mounted on the stem, the adjacent sides of the lever and of the slidable jaw member having interengaging cam faces, and means for resisting outward movement of the lever on the stem, whereby the rotation of the lever will slide the movable jaw member along the stem and press the friction bar between the jaws.

5. A car holder comprising a longitudinally movable friction bar, a stationary jaw member at one side of the friction bar, a combined support and guide stem projecting from the stationary jaw member, a movable jaw member at the other side of the friction bar and slidably and non-rotatively mounted on the guide stem, a coiled thrust spring surrounding the stem between the jaw members and thrusting against these members to separate them, a lever slidably and rotatively mounted on the stem outward from the slidable jaw member, the stem having a shoulder limiting the movement of the lever toward the jaw members, the adjacent sides of the lever and of the slidable jaw member having interengaging cam faces, and a stronger coiled thrust spring surrounding the stem outward from and pressing against the lever, so that when the lever is rotated to engage the cam faces the stronger thrust spring will overcome the weaker and the jaws will be thereby pressed into yielding frictional engagement with the friction bar.

[Claims 6 and 7 not printed in the Gazette.]

1,022,694. TIME-RECORDER. JAMES MORRISON, Cincinnati, Ohio, assignor to The Cincinnati Time Recorder Company, Cincinnati, Ohio, a Corporation of Ohio. Filed July 18, 1910. Serial No. 572,505. (Cl. 234—43.)

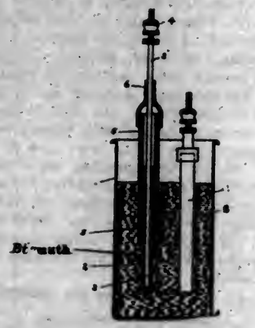


1. In a time recorder, having time indicating stamping mechanism, a card receiver having separate mouths, a card abutment stepped relative to the mouths, a member

5. In a time recorder, a laterally shifting card receiver having a series of mouths, means providing step limits of vertical card insertion relative to the mouths, a single lever, and connections between said card receiver and depth-controlling means and lever for laterally shifting the card receiver and vertically adjusting the step limits of card insertion.

[Claim 6 not printed in the Gazette.]

1,022,695. ELECTROLYTIC RECTIFIER. WILLIAM MORRISON, Des Moines, Iowa. Filed Oct. 14, 1910. Serial No 587,129. (Cl. 171—253.)



1. In an electrolytic rectifier, an anode of bismuth, an electrolyte capable of reacting on bismuth to give an asymmetric film, and a cathode.

2. In an electrolytic rectifier, an anode containing bismuth, an electrolyte capable of reacting on bismuth to give an asymmetric film, and a cathode.

3. In an electrolytic rectifier, an anode of bismuth, an electrolyte of chromium-oxygen compound, and a cathode.

4. In an electrolytic rectifier, an anode of bismuth, an electrolyte containing a soluble chromate, and a cathode.

5. In an electrolytic rectifier, an anode of bismuth, an electrolyte containing an alkali-metal chromate, and a cathode.

1,022,696. COMBINED BACK-REST AND WIND-SHIELD. ISAAC E. PALMER, Middletown, Conn., assignor to The I. E. Palmer Co., Middletown, Conn., a Corporation of Connecticut. Filed Sept. 11, 1911. Serial No. 648,681. (Cl. 5—61.)



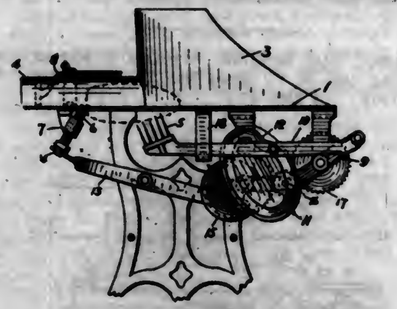
remainder of said bars being detachably supported by said end brackets or members.

2. A combined back rest and wind shield for couch hammocks comprising end brackets or members adapted to be supported by the hammock suspension ends, a plurality of longitudinal bars, a cloth strip connecting said bars, means for adjustably but fixedly securing the uppermost bar to said end brackets or members, and hooks for detachably securing the remaining bar or bars to said brackets or members.

3. An attachment for couch hammocks comprising a back rest or wind shield, end-supporting devices therefor provided with suspension portions, means for fixedly attaching the upper portion of said back rest or wind shield to said supporting devices and means for detachably supporting the lower portion thereof upon said supporting devices.

4. A combined back rest or wind shield attachment for couch hammocks and the like, consisting of a longitudinal rod or bar, inclined end-supporting means therefor, a wind shield member depending from said rod or bar, means for securely attaching said rod or bar to said end-supporting means, and means for detachably engaging the lower portion of said wind shield member with the end-supporting means, whereby said wind shield member may be securely supported in vertical and in inclined position.

1,022,697. MACHINE FOR STUFFING PILLOWS AND THE LIKE. JAMES B. PATTERSON, Philadelphia, Pa. Filed Sept. 26, 1911. Serial No. 651,372. (Cl. 100—57.)



1. A machine for stuffing pillows with excelsior or the like comprising the combination of a guide having slots, two sets of coöperating fingers operatively arranged in respect to said slots and whereof one set is adapted to feed stuffing and whereof the other set is adapted to operate as a stripper, and means for operating said fingers, substantially as described.

2. A machine for stuffing pillows comprising the combination of a guide having slots of unequal lengths, a set of stuffing feeding fingers, a set of staggered stripping fingers, and means for operating said fingers in connection with said slots, substantially as described.

bar, a cam and follower for raising and lowering said bar, a pivotal bar having stripping fingers slidably connected therewith, a guide for the last mentioned fingers, an eccentric for oscillating the pivotal bar, and means for operating said parts, substantially as described.

1,022,698. CHILD'S VEHICLE. MORGAN PETTIT, Connersville, Ind. Filed Sept. 5, 1911. Serial No. 647,563. (Cl. 208—42.)



1. In a child's vehicle, the combination of a cranked axle provided with wheels, a pole, hounds connecting the pole with the axle and arranged to provide a leg space, a seat supported by the hounds and axle, an animal body, suspenders pivotally connected to the pole and to said body to movably support the latter in relation to the pole, pedal swings supported by the pole, links connecting said swings with the axle cranks and a link connecting one of the pedal swings with the animal figure.

2. In a child's vehicle, the combination of a rear axle provided with opposite cranks, a pole, pedal swings suspended from the pole, links, each connecting one of the swings with one of the cranks, an animal figure, suspenders pivoted to the pole and having downwardly dropped ends pivoted to said animal figure, a link connecting one of the pedal swings with said animal figure, a front wheel steerably mounted on the pole, and a tiller connected with said steering wheel and extending toward the driver.

3. A child's vehicle comprising, an axle provided with a double crank, traction-wheels fast thereon, a frame mounted on the axle, a seat on the frame, a cross-bar on the frame, a horizontal pivot carried by the cross-bar, a pair of pedal-swings suspended from said pivot, links connecting each of the pedal-swings with one of the axle cranks, a pair of suspenders pivoted in the frame forward of the pedal-swings and one forward of the other, an animal-body mounted on said suspenders for fore and aft motion relative to the frame, a steering-wheel steerably pivoted in the frame, and means within reach of a rider on the seat for turning said steering wheel, combined substantially as set forth.

4. A child's vehicle comprising, an axle provided with a double crank, traction wheels fast thereon, a frame mounted on the axle, a seat on the frame, a cross bar on the frame, a horizontal pivot carried by the cross-bar, a pair of pedal-swings suspended from said pivot, links connecting each of the pedal-swings with one of the axle cranks, a pair of suspenders pivoted in the frame forward of the pedal-swings and one forward of the other, an animal-body mounted on said suspenders for fore and

nected with the head of the animal-body and extending within reach of a rider on the seat, combined substantially as set forth.

[Claims 6 to 16 not printed in the Gazette.]

1,022,699. ATTACHMENT FOR COTTON-PICKERS' SACKS. THOMAS P. REED, Wellston, Okla. Filed June 13, 1911. Serial No. 632,989. (Cl. 24—247.)



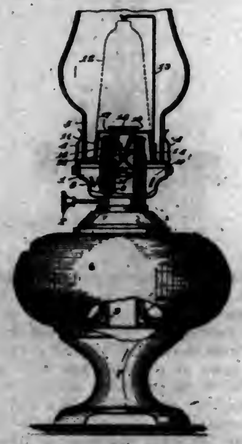
1. An attachment for cotton pickers' sacks including a plate having a stud arranged to receive a portion of the fabric of the sack, and a hanger slidably connected with the plate and provided at its outer end with means for suspending it from the cotton pickers' scales, said hanger being also provided at its inner end with a hook-shaped loop arranged to clamp the fabric around the stud by the sliding movement of the hanger, the end of said loop adapted to automatically engage the plate when the loop has reached its clamping position to lock the hanger against return slidable movement.

2. An attachment for cotton pickers' sacks including a plate provided with a stud and having an opening, and a hanger slidable through the opening and provided at its outer end with a ring or loop and having a hook at its inner end arranged to clamp a portion of the sack on the stud, said hook being also arranged to extend through the opening and provided with terminal locking means for automatically engaging the plate to lock the hanger against relative movement.

3. An attachment for cotton pickers' sacks including a plate provided with a stud and having an opening, and a hanger slidable through the opening and provided at its outer end with means for suspending it from cotton scales, said hanger being provided at its inner end with an approximately U-shaped resilient loop arranged to clamp a portion of a sack on the stud and having one of its sides free and arranged to extend through the opening of the plate and provided with a terminal lug engaging the plate and maintained in such engagement by the resiliency of the loop.

line with the stud, a hanger separate from the plate and provided at one end with means for suspending the same and at its other end with an open hook-shaped loop to engage with the stud, said loop having sufficient length to extend through the eye when the loop is in engagement with the stud and having a locking engagement with the end of the plate, said locking engagement being releasable manually but adapted to engage automatically upon the sliding movement of the hanger through the eye.

1,022,700. MANTLE-BURNER FOR KEROSENE-LAMPS. GRANVILLE S. RIDER, New York, N. Y. Filed Oct. 26, 1910. Serial No. 589,095. (Cl. 67—38.)



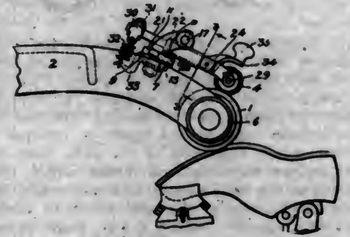
1. A mantle burner having, in combination with inner and outer wick tubes, and a gallery surrounding the outer wick tube and rising above the wick tubes, an air distributer comprising an inverted cone located partly above and partly below the top of the inner wick tube and having an upwardly diverging outer air-directing surface extending upwardly from a point within the inner wick tube and terminating substantially at the level of the top of the gallery.

2. A mantle burner having, in combination with inner and outer wick tubes and a gallery surrounding the outer wick tube and rising above the wick tubes, an air distributer comprising upwardly diverging imperforate walls forming an inverted hollow cone having a closed downwardly directed apex and extending from within the inner wick tube to substantially the level of the top of the gallery, and downwardly diverging supporting prongs projecting downwardly and outwardly from the apex of the inverted cone, such prongs having pointed free ends engaging the inner side of the inner wick tube, such points supporting the air distributer and constituting the sole surface spaced from the upper end of the inner wick tube to form an annular air outlet, a marginal eddy-producing groove being formed laterally at the outside of the upper and larger end of the cone.

5. The combination, in a mantle burner having an inner wick tube, of an air distributer for the inner wick tube, and pointed supports the points of which are adapted to make contact with the inner wick tube and form the only supporting means for the air distributer and which also form the only connection between the air distributer and the other parts of the burner.

[Claims 6 to 8 not printed in the Gazette.]

1,022,701. SOLE-LEVELING MACHINE. CHESTER E. ROGERS, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Jan. 3, 1911. Serial No. 600,541. (Cl. 12—34.)



1. A sole leveling machine comprising a leveling roll, a frame in which said leveling roll is journaled, a cleaning brush mounted adjacent said roll, and a universal joint connection between said frame and said brush.

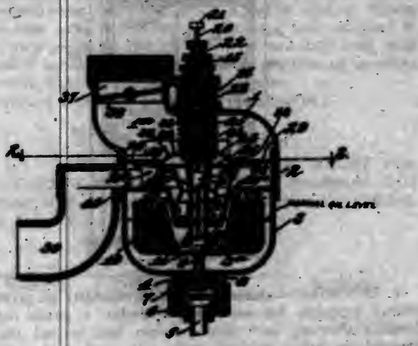
2. A sole leveling machine comprising a leveling roll, a frame in which said leveling roll is journaled, a cleaning brush mounted adjacent said roll, a universal joint connection between said frame and said brush, and means to hold said brush normally out of contact with said roll.

3. A sole leveling machine comprising a leveling roll, a cleaning brush mounted adjacent said roll, and a universal joint connection between said brush and said roll whereby the brush may be moved to and from the roll, longitudinally of the roll and turned angularly to follow the surface of the roll.

4. A sole leveling machine comprising a leveling roll, a frame in which said leveling roll is journaled, a cleaning brush mounted adjacent said roll, a universal joint connection between said frame and said brush, and yielding means to hold said brush normally out of contact with said roll, centrally of said roll and parallel with the axis thereof.

5. A sole leveling machine comprising a leveling roll, a frame in which said leveling roll is journaled, a plate secured to said frame, a member pivoted to said plate, a hanger journaled in said member on an axis perpendicular to the axis of said member, a frame pivotally mounted on said hanger on an axis perpendicular to the axis of

covering all or a portion of said second series of perforations in said oil supply tube, an additional device adapted to normally cover all of said second series of perforations, and an air valve connected to said additional device and adapted upon opening to actuate the same to uncover said second mentioned series of perforations.



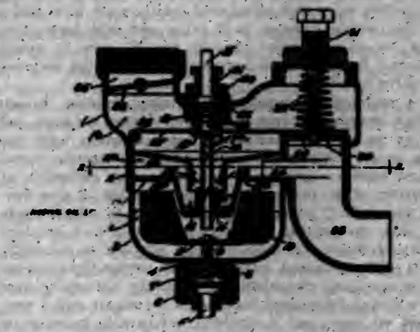
2. A carbureter comprising communicating carbureting and mixing chambers, an air chamber having a normally open communication with said carbureting chamber, said air chamber also having means of communication with said mixing chamber, a valve arranged to normally close said means of communication between said air chamber and mixing chamber, an oil receptacle having a normally open communication with said air chamber and said carbureting chamber, an oil supply tube having an opening or openings communicating with said oil receptacle and an additional opening or openings adapted to communicate with said carbureting chamber, and a device for normally closing said additional oil supply tube opening or openings and connected to the aforesaid valve controlling the communication between said air chamber and said mixing chamber so as to uncover said additional oil supply tube opening or openings when said valve is opened.

3. A carbureter comprising communicating carbureting and mixing chambers, an air chamber having a normally open communication with said carbureting chamber, said air chamber also having means of communication with said mixing chamber, a valve arranged to normally close said means of communication between said air chamber and mixing chamber, an oil receptacle having a normally open communication with said air chamber and said carbureting chamber, an oil supply tube having an opening or openings communicating with said oil receptacle and an additional opening or openings adapted to communicate with said carbureting chamber, a device for normally closing said additional opening or openings in the oil supply tube and connected to the aforesaid valve controlling the communication between said air chamber and said mixing chamber so as to uncover said additional opening or openings upon the opening of the valve, and means for closing said additional opening or openings in the oil supply tube independent of the device which is connected to chamber, and means for normally closing a part of said openings in the oil tube and connected to said lift valve which controls said annular series of perforations in the upper partition so that the normally uncovered openings in the oil tube are successively uncovered proportionately to the opening of said valve.

5. A carbureter comprising a casing divided by two horizontal partitions to constitute, respectively, a mixing chamber, an air chamber below said mixing chamber, and an oil reservoir below said air chamber, the upper partition having a central opening and a depending annular portion surrounding the opening and constituting a carbureting chamber, said upper partition also having an annular series of perforations therein, and the lower partition having a central depression constituting an oil receptacle, an oil supply tube extending vertically through the bottom of the oil receptacle and upwardly through the carbureting chamber, said oil tube having a perforation therein adjacent to the bottom of the carbureting chamber, means for covering and uncovering said perforation in the oil supply tube, a series of perforations above said first mentioned perforation in said oil supply tube, said second mentioned series of perforations opening into the carbureting chamber, a sleeve slidably fitted on said oil tube and normally covering said second mentioned series of perforations therein, and an air valve mounted on said sleeve and resting normally on top of said upper partition and covering the annular series of perforations therein.

[Claims 6 to 9 not printed in the Gazette.]

1,022,703. CARBURETER. WILLIAM F. ROTHE, East St. Louis, Ill., and EARLE E. CULP, St. Louis, Mo. Filed Feb. 27, 1911. Serial No. 611,181. (Cl. 48—154.1.)



1. A carbureter comprising a casing divided by two substantially horisontal partitions to provide a mixing chamber, an air chamber below said mixing chamber, and an oil reservoir below said air chamber, said mixing chamber having a separate air inlet opening and a valve normally closing said inlet opening, the upper partition having a central opening and a depending annular portion surround-

valve for said mixing chamber whereby, when said air valve is opened, the supporting device is lifted and the rod thereby moved to uncover a greater number of the perforations in its tubular portion.

2. A carbureter comprising a casing divided by two substantially horizontal partitions to provide a mixing chamber, an air chamber below said mixing chamber, and an oil reservoir below said air chamber, the upper partition having a central opening and a depending annular flange surrounding said central opening and constituting a carbureting chamber, the lower partition having a central depression constituting an oil receptacle into which the carbureting chamber projects, a vertically movable rod whose lower portion is tubular to constitute an oil supply tube, said rod being slidably fitted through the bottom of said oil receptacle and communicating with said oil reservoir, said tube having a multiplicity of perforations adapted to communicate with said carbureting chamber, an outwardly opening supply valve in the bottom of said oil receptacle beneath the end of said oil tube, and a resilient and adjustable support for said rod whereby the latter may be adjusted to uncover a desired number of the perforations in its tubular portion and also depressed to effect the opening of the inlet valve of said oil reservoir.

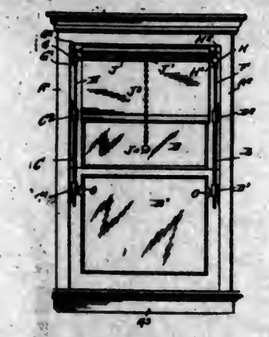
3. A carbureter comprising a mixing chamber, a carbureting chamber located below said mixing chamber and open at its top to continuous communication with the latter, an air chamber surrounding said carbureting chamber and open to continuous communication therewith at the bottom of the latter, a vertically movable oil pipe having a multiplicity of perforations adapted to communicate with said carbureting chamber, means for covering said perforations, vertically movable and adjustable supporting means for said oil pipe adapted to yieldingly hold it with a desired number of its perforations uncovered, said mixing chamber having an auxiliary air inlet, an inward open suction valve controlling said auxiliary air inlet, and a lever connection between said valve and said supporting means for the oil tube whereby the oil tube is raised to uncover its perforations proportionately to the distance said valve is raised.

4. A carbureter comprising a mixing chamber, a carbureting chamber located below said mixing chamber and open at its top to continuous communication with the latter, an air chamber surrounding said carbureting chamber and open to continuous communication therewith at the bottom of the latter, a vertically movable oil pipe having a multiplicity of perforations adapted to communicate with said carbureting chamber, adjustable and resilient supporting means for said oil pipe adapted to normally hold it with a desired number of its perforations uncovered, said means comprising a vertically adjustable support, a spring interposed between said support and a stop on said oil pipe, and a vertically adjustable member on said support adapted to engage said stop on the oil pipe to resist the action of said spring.

5. A carbureter comprising a mixing chamber, a carbureting chamber located below said mixing chamber and open at its top to continuous communication with the latter, an air chamber surrounding said carbureting chamber and open to continuous communication therewith at the bottom of the latter, said mixing chamber having an auxiliary air inlet, an inwardly opening suction valve controlling said auxiliary air inlet, a vertically movable oil pipe having a multiplicity of perforations adapted to communicate with said carbureting chamber, said oil pipe being slidably fitted in a bore so that any desired number of its perforations may be opened to communication with the carbureting chamber, vertically adjustable and resilient means for supporting said oil pipe, said means comprising a vertically adjustable support through which the pipe slides, a spring interposed between said support and a stop on said pipe, and a vertically adjustable member on said support adapted to contact with the stop and resist the action of said spring, and a lever connection between said vertically adjustable support and said valve which controls the auxiliary air inlet of said mixing chamber.

[Claim 6 not printed in the Gazette.]

1,022,704. WINDOW-SHADE ADJUSTER. HARRY M. SCHLOSS, New York, N. Y. Filed June 10, 1910. Serial No. 566,141. (Cl. 156—27.)



1. In a window shade adjuster, a plurality of cylinders, plural supports for each said cylinder, a guide rod extending through each said cylinder and beyond the end thereof, a piston secured upon each said guide rod and operable in said cylinders, means urging said piston to the full extent of its motion, means attached to said pistons for supporting a window shade and means formed in one of the supports for each said cylinder and operable upon said rods for securing said rods in any predetermined position.

2. In a device of the character described, a plurality of cylinders, a stationary bracket secured in each end of each said cylinder, a guide rod operable in and through each said cylinder and said brackets, pistons operable within said cylinder, springs within said cylinders for urging said pistons to the full extent of their motion, brackets secured to said pistons for supporting a shade, a rod securing said brackets reliably together, a chain carried by said rod for compressing said springs by lowering said piston, and thumb-nuts arranged in each of the lower said stationary brackets to retain said pistons in their lowered position.

1,022,705. MEANS FOR STRAIGHTENING OR ALTERING THE DIRECTION OR COURSE OF A BORE-HOLE. FRANK GEORGE SEINEKE, Johannesburg, Transvaal. Filed Oct. 15, 1910. Serial No. 587,297. (Cl. 166—3.)



1. Means for altering the direction or course of a bore hole comprising a plumb-bob and a means which fixes said plumb-bob in the bore hole in such a way that it serves as a guide for the boring crown and drill rods.

2. Means for altering the direction or course of a bore hole comprising a cylindrical plumb-bob and a means which fixes said plumb-bob in the bore hole so that it serves as a guide for the boring crown and drill rods.

3. Means for altering the direction or course of a bore hole comprising a cylindrical plumb-bob and a means which fixes said plumb-bob in the bore hole so that it serves as a guide for the boring crown and drill rods, said plumb-bob being tapered or beveled at the top to facilitate the engagement therewith of the boring crown, as set forth.

4. Means for altering the direction or course of a bore hole comprising a cylindrical plumb-bob and a means which fixes said plumb-bob in the bore hole so that it serves as a guide for the boring crown and drill rods, said plumb-bob being provided with recesses with which its fixing means engages.

5. Means for altering the direction or course of a bore hole comprising a cylindrical plumb-bob and a means which fixes said plumb-bob in the bore hole so that it serves as a guide for the boring crown and drill rods, said plumb-bob being provided with spiral grooves of opposite pitch with which its fixing means engages.

[Claims 6 to 12 not printed in the Gazette.]

1,022,706. AUTOMATIC CONTROLLING MEANS FOR SUBMARINE VESSELS. HAROLD W. SHONNARD, East Orange, N. J. Filed Feb. 5, 1909. Serial No. 476,204. (Cl. 114—25.)



1. In a submarine vessel, automatic means for steering the vessel toward a predetermined level, hydrostatic diaphragms additional to said means so arranged as to be subjected to pressure of the sea, and mechanical connecting and controlling devices connecting said diaphragms with said first named automatic means, substantially as described.

2. In a self-propelled submarine vessel, automatic means capable of movement in two directions for steering the vessel upward or downward respectively toward a predetermined level, means for limiting the effective action of said first named means in both directions, hydrostatic diaphragms arranged to be subjected to pressure of the sea, and operative connections between said diaphragms and said limiting means, substantially as described.

3. Means for automatically controlling the vertical angle of inclination of a submarine vessel, comprising in combination appropriate steering apparatus, and means responsive to differences of hydrostatic pressure existing at different portions of the vessel due to its vertical inclination, for controlling the operation of said steering apparatus, substantially as described.

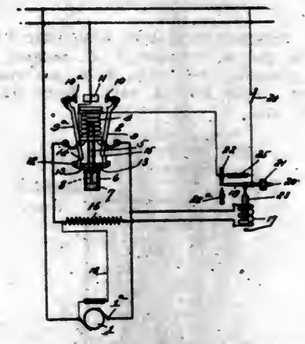
4. Means for automatically controlling the vertical angle of inclination of a submarine vessel, comprising in combination appropriate steering apparatus, motor mechanism operating the same, and means responsive to differences of hydrostatic pressure existing at different portions of the vessel due to its vertical inclination, for controlling the operation of said motor mechanism, substantially as described.

5. Means for automatically controlling the vertical angle of inclination of a submarine vessel comprising in combination appropriate steering apparatus, two devices sensitive to external hydrostatic pressure placed one forward of the other and adapted to respond to all pressures to which they are subjected, and means whereby the relative condition of said sensitive devices, is made to control the operation of said steering apparatus, substantially as described.

[Claims 6 to 26 not printed in the Gazette.]

1,022,707. SOLENOID-CONTROLLER. FRANK W. SMITH, Westfield, N. J., assignor to Sundh Electric Company, New York, N. Y., a Corporation of New York. Filed Apr. 5, 1910. Serial No. 553,546. (Cl. 172—288.)

1. A controller comprising a solenoid coil, means connecting said solenoid coil directly in circuit with the source of supply, a core for said coil, a pair of contacts brought together by the initial movement of said core, a motor, a motor circuit adapted to be completed by the contacts first operated by the solenoid core, a resistance and a controlling coil in said motor circuit, a movable core for said controlling coil, means in the solenoid coil circuit and connected to the movable core of the controlling coil to place resistance in the said solenoid circuit when excess of current is flowing through said motor circuit, means to return said solenoid coil circuit to its normal condition when the current flowing through the motor circuit is reduced, and to thereby permit the solenoid core to complete its movement, and contacts operated by said core as it completes its movement to cut the resistance and the controlling coil from the motor circuit.



2. A solenoid controller comprising a solenoid coil, a single core movable into and out of said solenoid coil, a pair of contacts arranged to be closed or opened by the movements of said core, an operating circuit arranged to be completed by the said pair of contacts, a resistance and a controlling coil in said circuit, a core movable into and out of said controlling coil, means moved by said core for cutting resistance into the solenoid coil circuit, means tending to return said movable means to its normal position to cut resistance out of the solenoid coil circuit and operating against the pull of the controlling coil, a second pair of contacts arranged to be closed by the further movement of the solenoid core, this latter pair of contacts also completing the operating circuit and cutting out the resistance and the controlling coil, thereby preventing the subsequent re-introduction of the resistance into the solenoid coil circuit.

3. A solenoid controller comprising a solenoid coil, a single reciprocable core for said coil, a circuit for said coil, a pair of contacts arranged to be closed by the movement of said core, a motor circuit adapted to be completed by the said pair of contacts, a resistance and a controlling coil in said motor circuit, a reciprocable core in said controlling coil, movable means operated by said core for cutting resistance into the solenoid coil circuit, said means tending always to return to its normal position, said controlling coil operating under an excess of current to place resistance in the solenoid coil circuit and operating when the current in the motor circuit is sufficiently reduced to cut the resistance from the solenoid circuit thereby permitting the solenoid core to continue its movement, another pair of contacts adapted to be operated by the subsequent movement of the solenoid core, this latter pair of contacts completing the circuit through the motor direct and permanently cutting out the resistance and the controlling coil of the motor circuit.

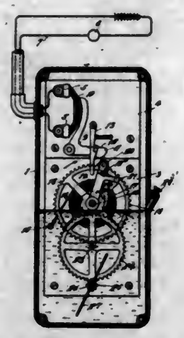
4. A solenoid controller comprising a solenoid coil, a core movable into and out of said coil, contacts adapted to be closed by said core at different points in its travel to close an electric circuit, and means in said circuit controlled by the movement of the solenoid core for neutralizing the pull of said coil to thereby arrest the movement of the core before it has completed its movement, said means operating upon a reduction of current in the circuit controlled by the solenoid to restore the solenoid to its normal action.

5. The combination of a motor, a solenoid coil, a circuit for said coil including means for opening and closing said circuit, a core movable into and out of said coil, a

resistance in the solenoid circuit, means for normally short-circuiting said resistance, means in the motor circuit controlled by the movement of the solenoid core and operating upon the completion of said motor circuit by the solenoid to switch the resistance into the coil circuit to thereby arrest the core before it has completed its movement and acting upon a reduction of the current flowing to the motor to again short circuit said resistance and thereby permit the core to make a further movement.

[Claim 6 not printed in the Gazette.]

1,022,708. TIME-SWITCH FOR ELECTRIC CIRCUITS. FRANK W. SMITH, Westfield, N. J., assignor to Sundh Electric Company, New York, N. Y., a Corporation of New York. Filed Feb. 15, 1911. Serial No. 608,738. (Cl. 161—27.)



1. A time switch comprising a box or casing, a circuit closing switch therein, a latch to hold said switch to maintain the circuit closed, a spring motor in said box, one end of the driving shaft of said motor extending through said box, a switch setting arm carried by the driving shaft within the box and adapted to move the switch to its locked position, when said shaft is rotated to wind the spring thereon, a releasing finger carried by said arm and adapted to release the latch when the driving shaft is rotated by the spring tension, a power reducing gear train connected to and operated by the driving shaft, a rotatable retarding device operated by said gear train, a filling of readily displaceable lubricating material in the box and submerging the retarding device and permitting said device to rotate very slowly, a switch operating button connected to the outer end of the driving shaft, a stop for said button to prevent the operation of the motor, and a stop to limit the rotation of the button in its switch operating movement.

2. A time switch comprising a circuit closing device, a latch to hold said device to maintain the circuit closed, a spring motor including a driving shaft, and a power reducing gear train, a switch setting arm carried by the driving shaft and adapted to move the switch device to its locked position when said shaft is rotated to wind the spring thereon, a releasing finger operated by the motor to release the latch when the driving shaft is rotated by the spring tension, a rotatable retarding device operated by the gear train, a box inclosing said retarding device, a filling of displaceable material in the box submerging the retarding device and permitting said device to rotate very slowly, a switch operating button connected to one end of the driving shaft, a stop adapted to be engaged by said button to hold the motor against operation, and an adjustable stop to limit the rotation of the button in its switch operating movement, whereby in setting the switch the driving shaft will be rotated and the operating spring wound thereon an amount equal to the unwinding of said spring in returning the switch operating button to the permanent stop.

3. A time switch comprising a circuit closing switch, a latch to hold said switch to maintain the circuit closed, a spring motor including a driving shaft, a driving spring connected at one end to said shaft and at its other end to a permanent fixed part, a ratchet wheel rigidly fixed to said shaft, a driving gear loosely connected to said shaft and carrying a pawl engaging the ratchet wheel of said shaft whereby the gear will be driven through said ratchet wheel, a pawl, a gear train operated through said driving gear, a retarding device operated by said gear train, a switch setting arm carried by the driving shaft and adapted to move the switch to its locked position when said shaft is rotated to wind the spring thereon, a releasing device operated by the motor and adapted to release the latch when the driving shaft is rotated by the spring tension, a switch operating button connected to one end of the driving shaft, a permanent stop adapted to be engaged by said button to hold the motor inoperative but permitting the driving shaft to be rotated by said button to set and lock the switch, an adjustable stop to limit the rotation of the button and the driving shaft in its switch operating movement, said stop being so adjustable as to permit of the rotation of the driving shaft a distance equal to one ratchet tooth or a multiple of said distance, whereby the rotation of the driving shaft in setting the switch will wind the spring thereon sufficiently to compensate for the unwinding of the spring in returning the motor to its normal inoperative position.

4. A time switch comprising a box or casing, a circuit closing switch therein, a latch to hold said switch to maintain the circuit closed a spring motor in said box and including a driving shaft, and a driving spring wound thereon, a ratchet wheel rigidly secured on said driving shaft, a driving gear loosely mounted on said driving shaft, a gear train operated by said driving gear, a retarding device operated by said gear train, a filling of lubricating material in the box and submerging the retarding device, a switch setting arm carried by the driving shaft, a releasing finger operated by the said shaft, a switch operating button connected to one end of the driving shaft, a stop for said button to hold the motor inoperative, a series of apertures in the box corresponding in number to the teeth of the ratchet wheel on the driving shaft and arranged equal distances apart around said driving shaft, and an adjustable stop adapted to be inserted in any one of said apertures, substantially as described for the purpose set forth.

5. A time switch comprising a circuit closing switch, a latch to hold said switch closed, a spring motor, a ratchet wheel fixed to the driving shaft of said motor, a driving gear loosely connected to said shaft, a pawl carried by said gear and engaging the ratchet wheel, a gear train operated through said driving gear, a retarding device operated by said gear train, means operated by the driving shaft to move the switch to its locked position when said shaft is rotated to wind the spring thereon, a switch operating button connected to one end of the driving shaft and an adjustable stop to limit the rotation of the button and the driving shaft in its switch operating movement.

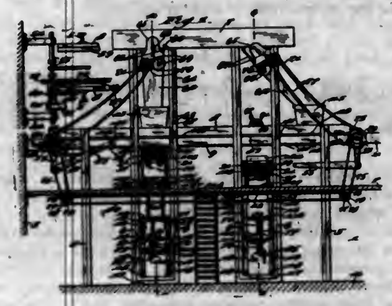
[Claims 6 to 9 not printed in the Gazette.]

1,022,709. COMBINED BALING AND COMPRESSING APPARATUS. TAYLOR J. SMITH, Union City, Ga. Filed June 15, 1911. Serial No. 633,255. (Cl. 100—1.)

1. In an apparatus of the character described, the combination with a press box, of a pressure head adapted to be positioned in the top of said box, a plunger movable up through the bottom of said box, a platen in the box, and a removable block interposed between the platen and the plunger, substantially as described.

2. In an apparatus of the character described, the combination with a press box, of a pressure head adapted to be positioned in the top of said box, a plunger movable up through the bottom of said box, a platen in the box, a removable block interposed between the platen and the plunger, said block of a size corresponding to the size of the bale when compressed, substantially as described.

3. In an apparatus of the character described, the combination with a press box, of a pressure head adapted to be positioned in the top of the box, a plunger movable up through the bottom of said box, a plate in the box, a removable block interposed between the platen and the plunger, bars projecting into the box and adapted to support the platen in its lowest position, and enable the removal of the block, substantially as described.



4. In an apparatus of the character described, the combination with a press box, of a pressure head adapted to be positioned in the top of said box, a plunger movable up through the bottom of said box, a platen in the box, a removable block interposed between the platen and the plunger, said block of a size corresponding to the size of the bale when compressed, bars projecting into the box and adapted to support the platen in its lowest position, and enable the removal of the block, substantially as described.

5. In an apparatus of the character described, the combination with a press box, of a pressure head adapted to be positioned in the top of said box, a plunger movable up through the bottom of said box, a platen in the box, a removable block interposed between the platen and the plunger, said box having an opening therein, a guide registering with said opening and into which said block is adapted to be moved when drawn out of the box, substantially as described.

[Claims 6 to 38 not printed in the Gazette.]

1,022,710. CAR-UNDERFRAME. VICTOR M. SUMMA, St. Louis, Mo., assignor to American Car and Foundry Company, St. Louis, Mo., a Corporation of New Jersey. Filed June 2, 1911. Serial No. 630,928. (Cl. 105—76.)



1. In a car underframe, the combination of bolster members and a trussed center sill construction in which the compression member is in the form of an H-beam to whose ends the tension members are anchored.

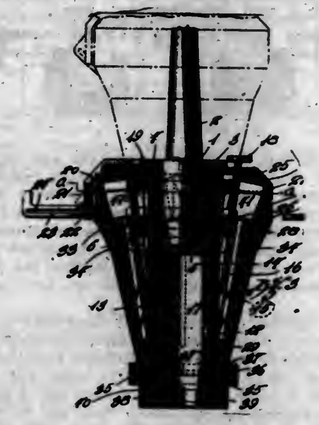
2. In a car underframe, the combination of bolster members and a trussed center sill construction comprising an H-beam compression member, struts, tension rods and castings interposed between the legs of the H-beam and secured to the horizontal web thereof.

3. In a car underframe, the combination of bolster members and a trussed center sill construction comprising an H-beam extending beyond the bolster points, draft sills connected to the vertical legs of said H-beam, anchoring members, and tension rods secured to said anchoring members.

4. In a car underframe, a trussed center sill in the form of an H-beam, struts interposed between the legs of said beam, anchoring members also interposed between the legs of said beam, and tension rods.

5. In a car underframe, the combination of bolster members and a center sill construction for car underframes comprising an H-beam, castings secured to the horizontal web and vertical legs thereof at or near its ends, struts secured to said H-beam, and tension rods cooperating with said struts and anchored in said castings.

1,022,711. DRILL MAGAZINE AND CHUCK. WELCOME F. SWEET, St. Louis, Mo. Filed Oct. 29, 1910. Serial No. 589,824. (Cl. 29—107.)



1. In a device of the character described, a mandrel having a slot therein, a magazine for drills supported by said mandrel, a series of drills mounted in the magazine, means whereby a drill may be inserted in the slot in the mandrel and means for ejecting the drill from the mandrel.

2. In a device of the character described, a mandrel having a slot therein, a drill magazine supported by said mandrel, a series of drills mounted in said magazine radially of the mandrel, means whereby said magazine may be rotated to present a drill in position in front of the slot in the mandrel, and means for inserting the drill in the slot in the mandrel.

3. In a device of the character described, a mandrel having a slot therein, a drill magazine supported by said mandrel, a series of drills mounted in said magazine radially of the mandrel, means whereby said magazine may be rotated to present a drill in position in front of the slot in the mandrel, means for inserting the drill in the slot in the mandrel, and means for clamping said drill in position in the mandrel.

4. In a device of the character described, a mandrel having a slot therein, a drill magazine mounted on the mandrel, comprising means for retaining a series of drills in position, means for inserting a drill within the mandrel, means for clamping said drill in position in the mandrel and means for ejecting the drill from the mandrel.

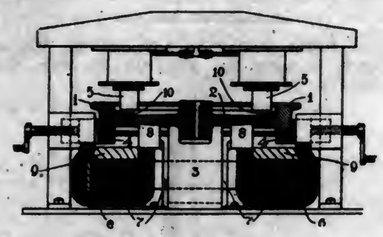
5. In a device of the character described, a slotted mandrel, a rotatable magazine mounted on said mandrel adapted to position a series of drills radially thereon, and a pusher mounted on a fixed support adapted to insert a predetermined drill within the slot in the mandrel.

[Claims 6 to 16 not printed in the Gazette.]

1,022,712. METHOD OF UNITING METAL. ELIHU THOMSON, Swampscott, Mass., assignor to Thomson Electric Welding Company, Lynn, Mass., a Corporation of Massachusetts. Filed Mar. 14, 1910. Serial No. 549,098. (Cl. 219—4.)

1. The method of welding a rim or margin to a center consisting in applying a piece of metal over a restricted peripheral space around the center and between the same and the margin, passing a heating electric current between the rim and center while they are the opposite poles of a circuit and through the piece of metal com-

pleting the circuit between them and forcing said metal into the restricted peripheral space when the parts become locally softened or heated to the proper welding temperature.



2. The method of uniting a wheel rim and center consisting in applying a tapered ring over a restricted peripheral space around the center and between the same and the rim, passing a heating electric current from one to the other of the two latter parts and through said tapered ring operating to complete the circuit between them and applying lateral pressure to force the ring into said peripheral space and weld the rim and center together.

3. The method of forming and completing a welded union between a wheel rim and center consisting in applying a piece of metal over a restricted peripheral space around the center and between the same and the rim to complete a circuit between them from one to the other, passing a heating electric current from one to the other through said piece of metal and applying lateral welding pressure when said piece of metal and the periphery of said center, together with the inside of the rim, become locally heated to the proper welding temperature by the passage of said current.

4. The method of uniting a metal wheel rim to its center or body consisting in assembling the wheel and rim in the desired finished relation, the two parts being of proper dimensions to leave a narrow peripheral space between them around the center, laying a piece of metal into said peripheral space to electrically bridge the center and rim, passing a heating electric current from one to the other of said center and rim and through said piece of metal to bring them to the welding temperature, forcing the piece of metal into said space by lateral pressure when the parts reach the proper welding temperature and at the same time supporting said rim and center against lateral displacement by the action of the welding pressure.

5. The method of uniting a metal wheel rim to its center or body consisting in applying a piece of metal in a narrow peripheral space around the center and between the same and the rim, passing a heating electric current from one to the other of the center and rim and through said piece of metal to locally heat the same to welding temperature, forcing the piece of metal into said peripheral space by lateral pressure applied to said piece and subsequently subjecting the joint to lateral pressure applied and continued at both sides of the joint to prevent weakening or shrinkage cracks as and for the purpose described.

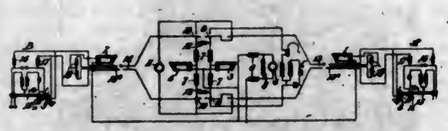
[Claim 6 not printed in the Gazette.]

1,022,713. TELEPHONE SYSTEM. FRANK C. UNGER, St. Louis, Mo. Filed Mar. 1, 1911. Serial No. 611,584. (Cl. 179—75.)

1. A local battery telephone system comprising an alternating current generating machine at the central exchange for operating the line-drops and clearing-out drop, and a separate and distinct generating device for operating the bells of the subscribers' telephones.

2. A telephone system having a signaling generator and means for preventing the induced current from said generator from affecting the receiving of a subscriber's telephone in case said receiver is thrown into a divided circuit.

3. A telephone system having resistance devices bridged across the cord circuit, the coils of said resistance devices being wound on separate cores so as to reduce their transformer action to a minimum, and condensers arranged in the line circuit so as to prevent the receivers of the subscribers' telephones from becoming affected by any inductive disturbance on the line in case said receivers are thrown into a divided circuit.

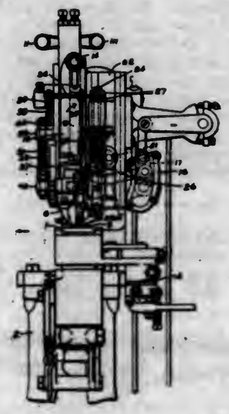


4. A telephone exchange system comprising a signal-generating device at the central exchange, resistance devices bridged across the cord circuit, and a condenser arranged across the circuit of said signal-generating device.

5. A telephone exchange system, comprising a grounded signal-generating device arranged at the central exchange, resistance devices bridged across the cord circuit and having their middle contacts grounded, and a condenser arranged across the circuit of said signal-generating device.

[Claims 6 to 15 not printed in the Gazette.]

1,022,714. SOLE-CHANNELING MACHINE. FRANK WALD, Dalmatia, Pa., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Jan. 3, 1911. Serial No. 600,573. (Cl. 12—27.)



1. A channeling machine, having, in combination, a reciprocating knife, a gage reciprocating with the knife and constantly in engagement with the sole, means to hold the work during the cutting stroke of the knife, and means for reducing the pressure of the gage during the idle stroke of the knife, substantially as described.

2. A channeling machine, having, in combination, a work support, channel and edge knives and means for reciprocating them in the line of feed, presser-feet movable with the knives in the line of feed, means for causing the presser-feet to determine the depth of the cut during the cutting stroke of the knives and to feed the work during the return stroke, and means for varying the pressure of the presser-feet upon the work at the ends of each stroke, substantially as described.

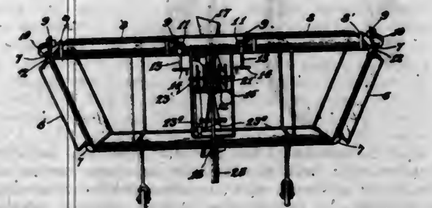
3. A channeling machine, having, in combination, a reciprocating cutter constructed to cut on the backward stroke, work feeding means operating during the forward stroke of the cutter, a work retainer movable to and from the work to hold the work during the cutting stroke, and means under control of the work retainer whereby the pressure of the feeding means upon the work is reduced during the forward stroke of the cutter, substantially as described.

4. A channeling machine, having, in combination, reciprocating channel and edge knives, presser-feet reciprocating with said knives and spring-pressed against the work, a work retainer movable to and from the work to hold the work during the cutting stroke of the knives, and means operating in timed relation with the work retainer to increase the spring pressure of the presser-feet while said retainer is holding the work, substantially as described.

5. A channeling machine, having, in combination, cutting means adapted to reciprocate in the line of feed of the sole, sole feeding means reciprocating with the cutting means and constantly in contact with the sole, a work retainer to hold the work during the cutting stroke of the knives, and mechanism to decrease the pressure of the feeding means on the sole at the time of turning the sole to conform the cut to the contour of the sole, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,022,715. AIRSHIP. SEAN P. WATT, Seattle, Wash., assignor of one-half to Francis G. Frink, Seattle, Wash. Filed Nov. 30, 1910. Serial No. 594,986. (Cl. 244—12.)



1. In an air ship, a frame, a sustaining plane on said frame comprising superimposed surfaces one of which is spaced forwardly of the other, and balancing planes extending between said surfaces and diverging in both rearward and upward directions.

2. In an air ship, a supporting frame, balancing means on said frame comprising rearwardly diverging planes, and angularly adjustable plane sections arranged to form continuations of said planes.

3. In an air ship, a supporting frame, balancing means on said frame comprising rearwardly diverging upwardly and outwardly inclined planes, and angularly adjustable plane sections each projecting beyond one edge of a respective plane to form a continuation thereof.

4. In an air ship, a supporting frame, balancing means on said frame comprising rearwardly diverging planes, and plane sections arranged lengthwise of the rear edges of said planes and hinged at one edge for swinging of their free portions outwardly from the outer faces of said planes.

1,022,716. BUFFER-BEAM. CHARLES T. WESTLAKE, St. Louis, Mo., assignor to Davis Locomotive Wheel Company, St. Louis, Mo., a Corporation of Delaware. Filed July 31, 1911. Serial No. 641,645. (Cl. 105—17.)



1. A buffer beam having its front and back walls cut away to form an opening, and a bottom wall deflected upwardly around said opening.

2. A buffer beam having its front and back walls cut away and its bottom wall deflected upwardly around said cut away portions and connected to the front and back walls at the edges of said opening.

3. A buffer beam having a downwardly opening recess and a removable block closing the bottom of said recess.

4. A buffer beam having downwardly opening recesses depending lugs on each side of said recesses, a removable block arranged between the said lugs for closing the bottom of said recess and a fastening device passing through said lugs for holding said block in position.

5. A buffer beam having horizontally disposed strengthening webs connecting its front and back walls, said strengthening webs being staggered with relation to each other and certain of which webs are diagonally disposed with respect to the front and rear walls.

[Claims 6 to 10 not printed in the Gazette.]

1,022,717. LIGHTNING-ARRESTER. ALEXANDER JAY WUARS, Pittsburgh, Pa., assignor to The Union Switch & Signal Company, Swissvale, Pa., a Corporation of Pennsylvania. Filed Jan. 9, 1911. Serial No. 601,514. (Cl. 175—215.)



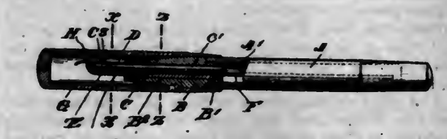
1. A lightning arrester comprising a plurality of pairs of fusible electrodes connected in multiple, the electrodes of each pair having a spark gap between their ends.

2. A lightning arrester unit comprising two oppositely arranged conductors, a plurality of pairs of fusible electrodes, the electrodes of each pair having a spark gap between their ends, one electrode of each pair being electrically connected with one of the conductors and the other electrode with the other conductor, and a capillary tube of frangible insulating material inclosing each pair of electrodes.

3. In a lightning arrester, two electrodes arranged with a spark gap between their ends, and a capillary tube inclosing said electrodes.

4. In a lightning arrester, two fusible electrodes arranged with a spark gap between their ends, and a capillary tube inclosing the electrodes.

1,022,718. FOUNTAIN-PEN. FRANK M. ASHLEY, New York, N. Y. Filed Feb. 17, 1911. Serial No. 609,241. (Cl. 120—42.)



1. A fountain pen comprising a reservoir and feed-plug, said feed-plug having an ink-duct which leads directly from the reservoir to the front of said feed-plug, and an opening extending longitudinally thereof and in open communication with the forward end of said ink-duct, and a rod having a greater length than that of the reservoir, one end of which is inserted in said opening in the feed-plug and in sliding engagement therewith.

2. A fountain pen comprising a reservoir and feed-plug, said feed-plug having an ink-duct and an opening extending longitudinally thereof, said ink-duct and opening being in open communication with each other at their forward ends, and a removable rod to close the rear end of said opening.

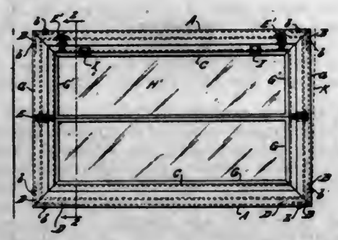
3. A fountain pen comprising a reservoir and feed-plug, said feed-plug having an ink-duct leading directly from the reservoir to the front end of the feed-plug and an opening extending longitudinally thereof and in open communication with said ink-duct by a plurality of small holes located at their forward ends, an ink stick in said opening, and a closure for said opening located at the rear end thereof.

4. A fountain pen comprising a reservoir and feed-plug, said feed-plug having an ink-duct and an opening extending longitudinally thereof, said ink-duct and opening being in open communication with each other at their forward ends, an ink stick in said opening, and a closure for said opening located at the rear end thereof.

5. A fountain pen comprising a reservoir and feed-plug, said feed-plug having an ink-duct leading directly from its front end to the reservoir, and an opening extending parallel with the ink-duct and in open communication therewith at its forward end, an ink stick in said opening, and a rod to close the rear end of said opening and of greater length than said reservoir, and adapted to slide therein.

[Claim 6 not printed in the Gazette.]

1,022,719. WIND-SHIELD FRAME. STEWART BROWN, Chicago, Ill. Filed Nov. 6, 1911. Serial No. 658,779. (Cl. 21—81.)



1. A wind shield frame comprising an outer frame, having top, bottom and side pieces joined together by resilient corner pieces, in combination with a rigid frame contained within the outer frame and yieldingly joined thereto.

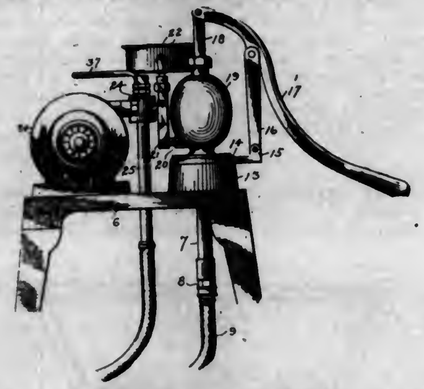
2. A wind shield frame comprising an outer frame having top, bottom and side pieces which are respectively U-shaped in cross section and joined together by resilient corner pieces, in combination with a rigid frame fitting between the sides of the pieces forming said top, bottom and sides of the outer frame, and means to yieldingly hold said inner frame in determined relation to the outer frame.

3. A wind shield frame comprising an outer frame having top, bottom and side pieces which are respectively U-shaped in cross section and joined together by resilient corner pieces, in combination with a rigid frame fitting between the sides of the pieces forming said top, bottom and sides of the outer frame, and springs between the inner and outer frames, to yieldingly hold said inner frame in determined relation to the outer frame.

4. A wind shield frame comprising an outer frame having top, bottom and side pieces which are respectively U-shaped in cross section and joined together by resilient corner pieces and lugs contained on the inner surface of said bottom piece, in combination with a rigid frame fitting between the sides of the pieces forming said top, bottom and sides of the outer frame, and resting on said lugs, and springs between the inner and outer frames, to yield-

the normal pressure of the fluid to further expand the said devices a predetermined amount, and a pressure indicator.

2. In a machine of the character described, the combination with an annular body having a variable circumference, of means for varying said body comprising a cylinder, a reciprocating piston therein adapted by its movement to cause the expansion of the annular body, fluid supply conduits leading to the cylinder supplying actuating fluid under pressure, to expand the annular body into engagement with the work, a controlling valve regulating the flow of actuating fluid and directing the same alternately to opposite sides of the piston, and means controlled by the operator to increase the fluid pressure to further expand the annular body a predetermined amount.



3. In a machine of the character described, the combination with radially adjustable expansion devices, of means for operating said expansion devices comprising a cylinder, a reciprocating piston therein adapted by its movement to adjust the expansion devices to and from a common point, fluid supply conduits leading to the cylinder supplying actuating fluid under pressure, a pump adapted to gradually raise the pressure of the actuating fluid above its normal pressure, a pressure gage indicating the pressure of the actuating fluid, and a control valve adapted to divert the fluid to either side of the piston.

4. The combination with expansion devices of operating means for operating said expansion devices comprising a cylinder, a reciprocating piston therein adapted by its movement to actuate the expansion devices, fluid supply conduits leading to the cylinder and adapted to supply actuating fluid to actuate the piston, thereby expanding the expansion devices into engagement with the work, and means controlled by the operator to further expand the expansion devices a predetermined amount, a valve adapted by its operation to relieve the pressure upon the piston when the predetermined expansive movement of the expansion devices is accomplished, and a gage indicating the actuating pressure at different stages of operation, substantially as specified.

a bar adjustably secured to said support and formed with a series of rigid and definitely positioned engaging devices, a member on the apron operatively connected to said feed controller and adapted to be moved into and out of line with said rigid engaging devices, and means for definitely limiting the movement of the feed controlling device.

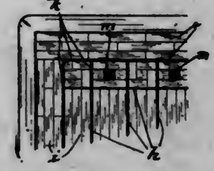


2. In a device of the class described, a bed, a carriage and apron, a carriage feed, a movable feed controlling device, a templet stop supported on the bed adjacent the carriage, means on the apron for engaging and disengaging the templet stops, said means being operatively connected to said feed controlling device, and a stop against which the feed controlling device is engaged at the end of the tripping movement.

3. In a device of the class described, a bed, a carriage, a carriage feed, a controlling clutch therefor, a longitudinally movable rod for shifting said clutch, said rod being adapted to be rocked, means for limiting the longitudinal movement of said rod, a handle and detent arm on the end of said rod, and a templet stop supported on the bed, having rigid definitely positioned engaging devices, adapted to coöperate with said detent to throw out the feed and definitely arrest the carriage movement.

4. In a device of the class described, a bed, an apron carriage, a feed therefor, a feed controller, a support on the bed in the line of carriage travel, a bar adjustably and removably secured on the support, said bar being formed with a series of definitely positioned engaging devices, a member on the apron for coöperating therewith, means whereby said engagement actuates the feed controller, and means for definitely limiting the movement of the feed controller actuating mechanism as it is influenced by the moving carriage during the cutting operation to bring the carriage to a dead stop.

1,022,722. BOX-BOARD CUTTING AND SCORING MECHANISM. THOMAS HARVEY CLINGER, Philadelphia, Pa., assignor to himself and Edward G. Schmidt, Philadelphia, Pa. Filed Nov. 10, 1911. Serial No. 659,499. (Cl. 3—58.)



1. In mechanism for cutting or scoring boxboard blanks, the combination with a platen, of a form comprising

knives; and releasing devices also within the frame each comprising end walls, a lever pivoted to one end wall, an arm secured to the pivot of the lever, and a spring connecting said arm with the other end wall.

3. In mechanism for cutting or scoring boxboard blanks, the combination with a platen, of a form comprising a frame, knives on edge within the frame and spacing devices within the frame for positioning the knives; certain of said spacing devices each comprising side and end walls, a two-armed lever, a bearing for the lever at the upper edge of one end wall, a hook carried by the other end wall, an arm secured to the pivot of the lever and adapted to limit the upward movement of the lever, a spring connecting said arm and hook, and a freely revoluble roller at the outer end of the lever.

1,022,723. NON-ANNEALED CAR-WHEEL. EDGAR A. CUSTER, Philadelphia, Pa., assignor to The Custer Sandless Casting Company, Philadelphia, Pa., a Corporation of Delaware. Filed Dec. 12, 1910. Serial No. 596,926. (Cl. 105—150.)

1. An integral cast iron non-annealed wheel having a chilled tread and homogeneous body free from shrinkage strains with a center comprising machinable metal.

2. An integral cast iron non-annealed wheel having a chilled tread and homogeneous body, free from shrinkage strains, with a center comprising soft metal having a fine grain.

3. An integral cast iron non-annealed wheel having a chilled tread and having its hub, spokes and rim free from shrinkage strains and of machinable metal.

4. An integral cast iron non-annealed wheel free from shrinkage strains having portions of homogeneous machinable metal of fine grain throughout and having portions of chilled iron containing white crystals.

5. An integral cast iron non-annealed wheel free from shrinkage strains having its hub, spokes and rim of homogeneous machinable metal of a fine grain throughout, and having its flange and tread of chilled iron containing white crystals.

[Claims 6 and 7 not printed in the Gazette.]

1,022,724. PROCESS OF PRODUCING CASTINGS HAVING CHILLED AND MACHINABLE SURFACES IN PERMANENT MOLDS. EDGAR A. CUSTER, Philadelphia, Pa., assignor to The Custer Sandless Casting Company, Philadelphia, Pa., a Corporation of Delaware. Filed Dec. 12, 1910. Serial No. 596,928. (Cl. 22—200.)



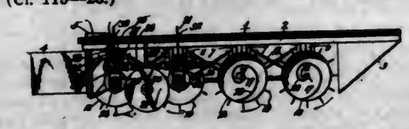
rality of parts, bringing said casting throughout swiftly to the point of setting, removing a portion of the mold out of contact with the casting as soon as the metal contiguous to said portion of the mold has set, conducting the heat more rapidly from the remaining portions of the casting, and causing a portion of the casting to remain in contact with the mold until the metal in said portion of the casting has chilled.

3. The process of producing castings comprising a hub and a tread portion in permanent molds, which consists in bringing the metal of the hub swiftly to the point of setting and then removing the mold out of contact with said hub portion, simultaneously causing the tread portion to set more deeply than the hub portion, permitting the tread portion to remain in contact with the mold until the same has chilled, and then removing said casting from the mold and permitting the same to cool to normal atmospheric temperature.

4. The process of producing wheels having a chilled tread and a machinable hub in permanent molds, which consists in bringing the metal of the casting swiftly to the point of setting, then first removing the mold out of contact with the hub portion, then secondly removing the mold out of contact with the spokes and then thirdly removing the mold out of contact with the rim, and permitting the tread portion of the casting to remain in contact with the mold until the same has chilled, and then removing said casting from the mold and permitting the same to cool to normal atmospheric temperature.

5. The process of producing castings comprising machinable surfaces and relatively hard surfaces in a permanent mold, which consists in bringing the casting swiftly to the point of setting and simultaneously causing a portion of the casting to set more deeply than other portions thereof and then removing the casting from the mold and allowing it to cool to normal atmospheric temperature.

1,022,725. BOAT. BENJAMIN T. DELAFIELD, Kansas City, Mo., assignor of one-fourth to John E. Weaver, Kansas City, Mo. Filed Apr. 9, 1910. Serial No. 554,848. (Cl. 115—20.)



1. A boat, comprising a deck, a plurality of transversely arranged buoyant rollers forming the hull of the boat provided with external ribs constituting paddles, means to revolve said rollers, a rudder for steering the boat, and a keel arranged in the longitudinal center of the boat and capable of movement in a vertical plane; said keel being of disk form, and capable of rotation.

2. A boat, comprising a deck and steering mechanism, a plurality of buoyant rollers arranged tandem and provided with external ribs constituting propelling blades, means for holding the rollers yieldingly depressed with respect to the deck, and driving means geared to said rollers and embodying a tumbling shaft connection between them to permit of their independent vertical movement.

3. A boat, comprising a deck, a plurality of transverse shafts suitably journaled below the deck, a pair of rollers mounted upon each shaft at opposite sides of and equal distances from the longitudinal center of the deck and provided with peripheral ribs constituting blades, means for driving the roller-carrying shafts, lever-controlled clutch mechanism for each of the last-named shafts to throw the same into and out of gear with the driving means, a prow depending from the deck in front of the foremost roller-carrying shaft, and means for steering the boat.

4. A boat, comprising a deck, a plurality of transverse shafts suitably journaled below the deck, a pair of rollers mounted upon each shaft at opposite sides of and equal distances from the longitudinal center of the deck and provided with peripheral ribs constituting blades, means for driving the roller-carrying shafts, lever-controlled clutch mechanism for each of the last-named shafts to throw the same into and out of gear with the driving means, a prow depending from the deck in front of the foremost roller-carrying shaft, and means for steering the boat, consisting of a yieldingly-depressed keel between a pair of the roller-carrying shafts and the rollers of said shafts, and a rudder arranged rearward of the rearmost roller-carrying shaft.

1,022,726. SAFETY-RAZOR. HENRY J. GAISMAN, New York, N. Y., assignor to Auto Strop Company, a Corporation of New York. Filed June 10, 1905. Serial No. 264,603. (Cl. 30—12.)



1. A safety razor comprising a blade-holder, a blade, a guard for the shaving edge of the blade, lugs to hold the blade, means for causing a relative movement between said holder and said lugs to release the blade, and means for adjusting said guard while the blade remains at rest.

2. In a razor, the combination of a frame, and a blade holder with a guard having an extension, a handle, and a guide-way transversely of the handle slidably receiving said extension for operating the guard, the movement of the extension being at an angle to the axis of the handle.

3. In a razor, the combination of a frame and a blade-holder with a movable guard having an extension for operating the guard, and a guideway slidably supporting the extension at an angle to the axis of the handle, said guard having lugs to engage and hold the blade in shaving position upon the guard, the movement of the extension being at an angle to the axis of the handle.

4. The combination of a handle, a razor blade which, when in shaving position, is inclined at an actue angle to said handle, a movable guard for the shaving edge of the blade moving in a line substantially at right angle to said handle provided with lugs over-lying the edge of the blade and disposed in substantially the plane thereof.

5. In a safety razor a frame, means to rotatively support a blade in said frame with its operative edge projecting radially from its axis of rotation, a blade supporting member carrying lugs and a guard, means stationary relatively to said frame to movably support said member, means to constantly press said member relatively to said blade in a direction angular to that of said blade's radial projection from said axis, to engage said lugs against said edge, and so hold the blade and guard together in operative relation for shaving.

[Claims 6 to 40 not printed in the Gazette.]

1,022,727. RAZOR. HENRY J. GAISMAN, New York, N. Y., assignor to Auto Strop Company, a Corporation of New York. Filed July 13, 1906. Serial No. 326,026. (Cl. 30—12.)

1. A blade holder having a pair of jaws to receive a blade between them, and stops carried by the jaws in line with the space between the jaws, one of said stops being rotatable, combined with a blade having recesses to receive said stops, said rotatable stop being mounted to rotate in the direction of travel of the blade into and from the holder.

2. A blade holder provided with a pair of jaws adapted to receive a blade between them, one of said jaws being longer than the other providing a space near their adjacent ends, and stops in line with the space between said jaws, one of said stops being located adjacent the first mentioned space to permit a blade to be freely pushed between the jaws past the adjacent stop.



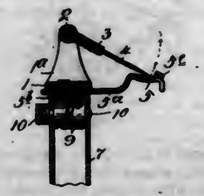
3. The combination of a shaft, with a blade holder comprising a piece of metal folded around said shaft and secured thereto and forming a pair of jaws adapted to receive a blade between them, dents in said metal entering depressions in the shaft.

4. The combination of a shaft, with a blade holder comprising a piece of metal folded around said shaft and secured thereto and forming a pair of jaws adapted to receive a blade between them, dents in said metal entering depressions in the shaft, and stops carried by said holder to retain a blade therein.

5. The combination of a shaft, with a blade holder comprising a piece of metal folded around the shaft and having a pair of jaws, said metal being cut away near one end to provide one jaw longer than the other.

[Claims 6 to 23 not printed in the Gazette.]

1,022,728. SAFETY-RAZOR. HENRY J. GAISMAN, New York, N. Y., assignor to Auto Strop Company, New York, N. Y., a Corporation of New York. Filed Sept. 4, 1909. Serial No. 516,164. (Cl. 30—12.)



1. A safety razor comprising a support having means to support a blade, a guard provided with an extension slidably carried by said support, a worm rotatively mounted on said support, a complemental portion on said extension co-acting with said worm, means on the guard for retaining a blade in co-action with said guard, and means for rotating said worm.

2. A safety razor comprising a frame provided with a handle and having means to support a blade, a guard provided with an extension, a guideway slidably supposting said extension, said guard having means to hold the blade, a worm rotatively supported adjacent the extension, said extension having a complemental portion co-acting with the worm, and means for rotating said worm.

3. A safety razor comprising a frame provided with a handle and means to support a blade, a guard provided with an extension, a guideway slidably supporting said extension, and a worm journaled within the handle and having means exterior to the handle for operating the worm, said extension having a complemental portion co-acting with the worm, said guard having lugs to engage the blade.

4. A safety razor comprising a frame provided with a handle and a blade holder, a guard provided with an extension extending transversely to the axis of the handle, a guideway supporting said extension, said guard having lugs to engage the blade, a worm rotatively carried by the handle, said extension having a complemental portion co-acting with the worm, and means for rotating the worm.

5. A safety razor comprising a frame provided with a handle and having a guideway, a guard having an extension carried in said guideway and movable transversely to the plane of the handle, a worm journaled within the handle and provided with a finger piece exterior to the handle on the side opposite the guard, means on the extension co-acting with said worm, a blade holder, and lugs on the guard to engage a blade.

[Claims 6 to 8 not printed in the Gazette.]

1,022,729. SAFETY-RAZOR. HENRY J. GAISMAN, New York, N. Y., assignor to Auto Strop Company, New York, N. Y., a Corporation of New York. Filed Sept. 4, 1909. Serial No. 516,165. (Cl. 30—12.)



1. A safety razor comprising a frame provided with means to support a blade and having a tubular handle, a guard, an arm extending from the guard through an opening in the handle and pivotally supported by the handle, a worm journaled to rotate within the handle, the arm being provided with a complemental portion co-acting with the worm, said guard being provided with means to retain a blade in correlation therewith, and means for rotating the worm.

2. A safety razor comprising a frame provided with a tubular handle and having means to support a blade, a guard provided with blade engaging lugs, an arm carrying the guard, said handle having an opening in one side through which said arm extends and is adapted to swing, a pivot connecting the arm with the handle, a worm journaled within the handle, complemental means on the arm engaging said worm, and means for rotating the worm.

3. A safety razor comprising a frame provided with uprights at opposite ends spaced apart and providing a passage between the uprights, a blade holder carried by said uprights, said frame having a handle, a guard provided with means to engage a blade, an arm carrying said guard and projecting through an opening in the handle and pivotally supported at its inner end within the handle, a worm journaled within the handle, said arm having complemental means co-acting with said worm, and means for rotating said worm.

4. A safety razor comprising a frame having uprights at opposite ends spaced apart and providing a space between said uprights open from side to side, a rod or shaft connected with and extending between said uprights, a blade holder carried by said rod or shaft, said frame having a handle, a guard provided with lugs to engage a blade, an arm carrying said guard and pivotally supported by said handle, a worm journaled upon the handle, said arm having complemental means co-acting with said worm, and means exterior to the handle for operating the worm.

5. A safety razor comprising a frame provided with a hollow handle, means to support a blade, a guard having means to retain a blade, an arm extending from the guard through an opening in the handle, a block within the handle and pivotally connected with said arm, a worm

journaled upon the handle, complemental means on said arm engaging said worm, and means exterior to the handle for operating the worm.

[Claims 6 to 9 not printed in the Gazette.]

1,022,730. SAFETY-RAZOR. HENRY J. GAISMAN, New York, N. Y., assignor to Auto Strop Company, New York, N. Y., a Corporation of New York. Filed Oct. 15, 1909. Serial No. 522,712. (Cl. 30—12.)



1. A safety razor comprising a blade support, a guard or blade seat provided with an extension having a pair of adjacent separated members, a pivot supporting said members, and a worm working in threads in said members.

2. A safety razor comprising a blade support, a blade seat or guard provided with an extension having a plurality of adjacent members provided with alined threads, means to movably support said members, a worm coacting with said threads, and means to retain the blade upon the blade seat or guard.

3. A safety razor comprising a blade support having a handle provided with an opening, a guard having an extension passing freely through said opening and provided with a plurality of adjacent members, means for movably supporting said members, and a worm working in threads in said members.

4. A safety razor comprising a frame provided with a pivotally supported blade holder and having a handle provided with an opening, a guard having an extension passing through said opening and provided with a pair of adjacent substantially parallel members, means on the handle pivotally supporting said extension, and a worm working in threads in each of said members.

5. A safety razor comprising a frame provided with blade supporting means, a guard having an extension and provided with a pair of adjacent members having a bore at the lower part and alined threaded openings above said bore, a pin entering said bore to pivotally support the guard, and a worm working in the threads of said members.

[Claims 6 to 8 not printed in the Gazette.]

1,022,731. SAFETY-RAZOR. HENRY J. GAISMAN, New York, N. Y., assignor to Auto Strop Company, New York, N. Y., a Corporation of New York. Filed May 3, 1910. Serial No. 559,174. (Cl. 30—12.)



1. A safety razor comprising a blade support, a guard or blade seat, means for pivotally supporting the latter, said guard having an arm provided with a curved portion described around the axis of the arm and provided with teeth extending in the direction of movement of the arm, a worm meshing with said teeth, and means for pivotally supporting said worm.

2. A safety razor comprising a blade support, a guard or blade seat, means for pivotally supporting the latter, said guard having an arm provided with a curved portion described around the axis of the arm and provided with teeth extending in the direction of movement of the arm, a worm meshing with said teeth and means for pivotally supporting said worm, said worm being formed concave between its ends.

3. A safety razor comprising a blade support, a handle, a guard provided with an arm having a branch located within said handle, a plate within the handle provided with an opening, said branch having a projection movably retained in said opening, said arm having teeth, a worm meshing with said teeth, and means for pivotally supporting the worm.

4. A safety razor comprising a blade support, a guard provided with an arm, means for pivotally supporting the arm, a worm meshing with complemental means on the arm, a handle supporting said arm and worm, a plate having a lug provided with an opening receiving said worm, and means for retaining said plate in position.

5. A safety razor comprising a blade support, a guard provided with an arm, means for pivotally supporting the arm, a worm meshing with complemental means on the arm, a handle supporting said arm and worm, a plate having a lug provided with an opening receiving said worm, and means for retaining said plate in position, said handle having a bearing for the worm at the side opposite said lug.

[Claim 6 not printed in the Gazette.]

1,022,732. SAFETY-RAZOR. HENRY J. GAISMAN, New York, N. Y., assignor to Auto Strop Company, New York, N. Y., a Corporation of New York. Filed Nov. 4, 1910. Serial No. 590,611. (Cl. 30—12.)



1. A safety razor comprising a blade support, a guard, means for movably supporting the guard, means for adjusting the guard with respect to a blade, and stops movable on the guard for engaging the blade to permit movement of the guard while said stops engage the blade.

2. A safety razor comprising a blade support, a guard, means for movably supporting the guard, means for adjusting the guard with respect to a blade, and stops movable on the guard for engaging the blade, to permit movement of the guard while said stops engage the blade, the guard also being provided with lugs to retain the blade upon the guard.

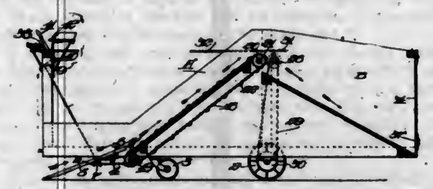
3. A safety razor comprising a blade support, a guard, means for movably supporting the guard, means for adjusting the guard with respect to a blade, and a spring-like piece carried by the guard for separate movement and provided with stops to engage the blade to permit movement of the guard while said stops engage the blade.

4. A safety razor comprising a blade support, a guard, means for movably supporting the guard, means for adjusting the guard with respect to a blade, and a spring-like piece carried by the guard for separate movement and provided with stops to engage the blade to permit movement of the guard while said stops engage the blade, the guard also being provided with lugs to retain the blade upon the guard.

5. A safety razor comprising a blade support, a guard, means for movably supporting the guard, means for adjusting the guard with respect to a blade, and a spring-like piece carried by the guard for separate movement and provided with arms having stops to engage the blade to permit movement of the guard while said stops engage the blade.

[Claims 6 to 19 not printed in the Gazette.]

1,022,733. HAY OR GRAIN GATHERING MACHINE. THOMAS S. HAMILTON, King City, Cal. Filed Apr. 12, 1911. Serial No. 620,551. (Cl. 56—61.)



1. In a hay-gathering machine, the combination of a carriage, a rock-shaft thereon, a series of rake-teeth mounted on said rock-shaft, a revoluble shaft mounted on and carried beneath said rake-teeth, a series of radially disposed, curved blades mounted on said revoluble shaft, said blades adapted to extend between the adjacent rake-teeth, and means for raising and lowering said revoluble shaft to raise and lower the outer ends of said rake-teeth.

2. In a hay-gathering machine, the combination of a carriage, a rock-shaft thereon, a series of rake-teeth mounted on said rock-shaft, a revoluble shaft mounted on and carried beneath said rake-teeth, a series of radially disposed, curved blades mounted on said revoluble shaft, said blades adapted to extend between the adjacent rake-teeth, means for raising and lowering said revoluble shaft to raise and lower the outer ends of said rake-teeth, a traveling conveyer leading from below the upper ends of said rake-teeth to a hopper, means for moving said conveyer through the running gear of said carriage, and means for rotating said revoluble shaft by the operation of said conveyer.

3. In a hay-gathering machine, the combination of a carriage, a rock-shaft thereon, a series of rake-teeth mounted on said rock-shaft, a revoluble shaft mounted on and carried beneath said rake-teeth, a series of radially disposed, curved blades mounted on said revoluble shaft, said blades adapted to extend between the adjacent rake-teeth, means for raising and lowering said revoluble shaft to raise and lower the outer ends of said rake-teeth, a traveling conveyer leading from below the upper ends of said rake-teeth to a hopper, means for moving said conveyer through the running gear of said carriage, means for rotating said revoluble shaft by the operation of said conveyer, and means for throwing the conveyer in or out of operative engagement with the running gear.

4. In a hay-gathering machine, the combination of a carriage, a rock-shaft thereon, a series of rake-teeth mounted on said rock-shaft, a revoluble shaft mounted on and carried beneath said rake-teeth, a series of radially disposed, curved blades mounted on said revoluble shaft, said blades adapted to extend between the adjacent rake-teeth, means for raising and lowering said revoluble shaft to raise and lower the outer ends of said rake-teeth, a traveling conveyer leading from below the upper ends of said rake-teeth to a hopper, upper and lower shafts over which the conveyer passes, means for moving said conveyer through the running gear of said carriage, means for rotating said revoluble shaft by the operation of said conveyer, means for throwing the conveyer in or out of operative engagement with the running gear, said means consisting of a friction disk mounted on a gudgeon, a lever arm on which said gudgeon is mounted, said lever arm fulcrumed eccentric to the axis of said gudgeon, a similar friction disk on the upper conveyer shaft, a spring on said lever for normally retaining the friction disk out of engagement with said similar disk, and means for actuating said lever to throw said first named friction disk into operative connection with the second named disk in opposition to said spring.

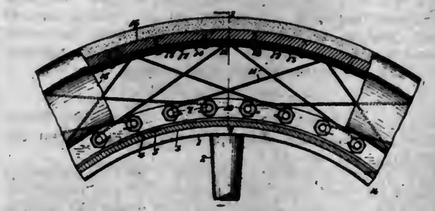
5. In a hay-gathering machine, the combination of a carriage, a rock-shaft thereon, a series of rake-teeth mounted on said rock-shaft, a revoluble shaft mounted on and carried beneath said rake-teeth, a series of radially disposed, curved blades mounted on said revoluble shaft, said blades adapted to extend between the adjacent rake-teeth, means for raising and lowering said revoluble shaft to raise and lower the outer ends of said rake-teeth, a traveling conveyer leading from below the upper ends of said rake-teeth to a hopper, means for moving said conveyer through the running gear of said carriage, means for rotating said revoluble shaft by the operation of said conveyer, means for throwing the conveyer in or out of operative engagement with the running gear, said means consisting of a friction disk mounted on a gudgeon, a lever arm on which said gudgeon is mounted, said lever arm fulcrumed eccentric to the axis of said gudgeon, a spring on said lever arm for normally retaining the friction disk out of engagement with a similar disk on a shaft for moving the conveyer, means for actuating said lever to throw said first named friction disk into operative connection with the second named disk in opposition to said spring, a hopper disposed beneath the upper end of said conveyer to receive hay discharged therefrom, and means for emptying the hopper of the hay collected therein.

1,022,734. SCARF-HOLDING COLLAR ATTACHMENT. THOMAS S. HAMILTON, King City, Cal. Filed Apr. 12, 1911. Serial No. 620,553. (Cl. 2—70.)



An improved scarf-holding collar attachment consisting of a plate fashioned to fit the collar and having an upwardly turned flange around its bottom edge, said plate having a flat hook member on the lower edge intermediate of the ends, the upper end of said hook portion adapted to extend under the downwardly turned flap of a shirt band and said plate having a member of a button fastening adjacent said hook member.

1,022,735. RESILIENT TIRE. EMIL E. HOFF, San Rafael, Cal. Filed Mar. 14, 1911. Serial No. 614,294. (Cl. 152—28.)

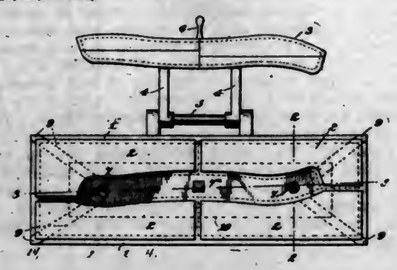


1. In a vehicle tire, the combination of an inner rim portion and an outer rim portion, and spring stay wires connected at their respective ends to and between said portions and extending each in a plane making a considerable angle with the radial direction of the wheel, the

middle portion of each stay wire being curved convexly outward, substantially as described.

2. In a vehicle tire, the combination of an inner rim portion and an outer rim portion, and two series of spring stay wires connected at their respective ends to and between said portions, and extending each in a plane making a considerable angle with the radial direction of the wheel, adjacent wires of the two series crossing each other, and the middle portions of said stay wires being curved convexly outward, substantially as described.

1,022,736. FOLDING-MACHINE. JOHN W. HOLMES, Troy, N. Y., assignor of one-half to Fred A. MacRae, Troy, N. Y. Filed Mar. 9, 1910. Serial No. 548,163. (Cl. 223—55.)



1. In a folding-machine having a templet-plate adapted to be withdrawn from a fold in the blank, and means for pressing the fold after the templet-plate has been withdrawn therefrom, the combination with the blank-supporting bed; of a plurality of separate blank-engaging instrumentalities mounted on said bed, each having a minute end adapted to enter between the fibers of the blank fabric, and having its longitudinal surface lines all parallel adjacent to said end, said bed having portions surrounding said instrumentalities to prevent an excessive penetration thereof into the blank.

2. In a folding-machine having a templet-plate adapted to be withdrawn from a fold in the blank, and means for pressing the fold after the templet-plate has been withdrawn therefrom, the combination with the blank-supporting bed; of a plurality of upwardly projecting wires mounted on the bed, with their ends adapted to engage the blank and prevent lateral displacement thereof, said wires being of such small cross-section that they are adapted to enter between the threads of the blank fabric, and said bed having portions surrounding said wires adapted to prevent an excessive penetration of the wires into the blank.

3. In a folding-machine, and in combination, a bed to support the blank; a fold-defining templet-plate; means for supporting said templet-plate and moving the same toward and from the bed; means whereby said templet-plate can be withdrawn from a fold in a blank formed thereon; means for infolding the edge of a blank over said templet-plate; means whereby the folded edge of the

1,022,737. CURTAIN-STRETCHER. JOHN W. HOLMES, Troy, N. Y., assignor of one-half to Fred A. MacRae, Troy, N. Y. Filed Mar. 9, 1910. Serial No. 548,164. (Cl. 160—22.)

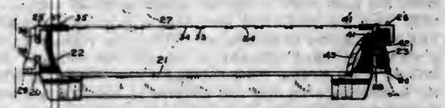
having slots therein and said brace-bar having a slot therein, a clamping-bolt extending through said slots, and a pair of links having pivotal connection with said brace-bar near its other end and having their outer ends pivotally connected with the sections of the other sectional bar.



2. A curtain-stretcher comprising a pair of oppositely disposed sectional bars, each composed of two alined sections, a brace-bar, a guide-member pivotally connected with the two sections of one bar and slidably receiving one end of the brace-bar, links uniting said sections to the brace-bar, a guide-member pivotally connected at its outer end with the sections of the other bar and having an inwardly extending stem, inwardly converging slotted links having their outer ends connected with said last-named sections, and a clamping-bolt extending through the slots in said links, through a perforation in the inner end of said stem, and through a longitudinal slot in said brace-bar.

3. A curtain-stretcher comprising a pair of sectional end-bars, a pair of side-bars beneath the plane of said end-bars and adjustably connected with said end-bars, a brace-bar beneath the plane of said end-bars and extending across the joints between the sections of said end-bars, a guide-member pivotally connected with the sections of one end-bar and slidably receiving one end of the brace-bar, links connecting said sections to the brace-bar, a T-form guide-member having its head portion disposed beneath the abutting ends of the sections of the other end-bar and pivotally connected with said sections, links pivotally connected with said last-named sections and having their inner end portions provided with slots, the adjacent end portion of said brace-bar having a slot therein, and a clamping-bolt extending through the slots of said links, through a perforation in the shank of said last-named guide-member and through the slot in said brace-bar, said clamping-bolt having its lower end

1,022,738. SPRING-BED. JULIUS W. HORVATH, Bridgeport, Conn. Filed Oct. 24, 1911. Serial No. 656,497. (Cl. 5—68.)



1. A spring bed comprising end bars, upwardly projecting brackets engaging the end bars, side bars engaging the brackets, a holding bar rigidly engaging the tops of the brackets at one end and an adjusting bar removably engaging the brackets at the other end.

2. A spring bed comprising angle end bars having holes in their horizontal webs, brackets having slots which receive the upwardly projecting vertical webs of said bars and lugs to engage the holes in said bars, side bars engaging the brackets, a holding bar rigidly engaging the brackets at one end and an adjusting bar carried by the brackets at the other end.

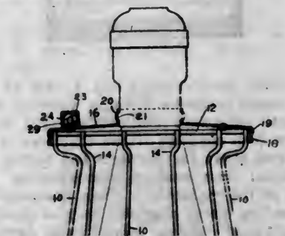
3. A spring bed comprising end bars, brackets engaging the end bars, the brackets at one end having slots in their upper ends and upwardly projecting lugs, side bars engaging the brackets, an angle holding bar having a vertical portion engaging the slots and its horizontal portion having holes which are engaged by the lugs, and an adjusting bar carried by the brackets at the other end.

4. A spring bed comprising end bars, brackets engaging the end bars and provided with sockets having cross walls, T side bars, the ends of which engage the sockets and are provided with recesses to receive the cross walls, for the purpose set forth, a holding bar rigidly engaging the brackets at one end and an adjusting bar carried by the brackets at the other end.

5. A spring bed comprising end bars, brackets removably engaging the end bars, side bars removably engaging the brackets, a holding bar rigidly engaging the brackets at one end, an adjusting bar having a rocking connection with the brackets at the other end, and a pawl having a socket connection with one of the side bars for locking the adjusting bar for the purpose set forth.

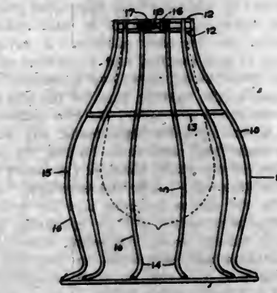
[Claims 6 to 9 not printed in the Gazette.]

1,022,739. LOCK-GUARD FOR INCANDESCENT LAMPS. HARVEY HUBBELL, Bridgeport, Conn. Filed Nov. 29, 1910. Serial No. 594,691. (Cl. 240—102.)



2. In a device of the character described, the combination with a guard, of a two-part locking plate adapted to engage the guard, one of the parts being provided with a hole and the other with slots, a threaded locking member which is bent at an angle and passed through the hole, a housing having lugs adapted to engage the slots in the other part and a hole to receive the threaded locking member and a key-controlled nut which engages the threaded locking member within the housing.

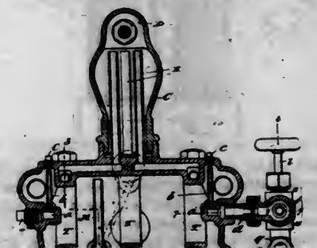
1,022,740. GUARD FOR INCANDESCENT LAMPS. HARVEY HUBBELL, Bridgeport, Conn. Filed Nov. 29, 1910. Serial No. 594,692. (Cl. 240—102.)



1. In a lamp guard, the combination with longitudinal elements, of a double attaching ring formed from a piece of wire bent at its mid length to form an eye and having eyes formed at its ends and an attaching screw engaging the eyes.

2. In a lamp guard, the combination with longitudinal elements, of a double attaching ring formed from a piece of wire bent at its mid length to form an eye which is outwardly turned and having parallel outwardly turned eyes at its ends and an attaching screw engaging the eyes.

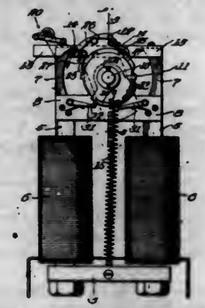
1,022,741. LUBRICATOR. LEOPOLD KASSANDER and OTTO BEST, New York, N. Y., assignors to Nathan Manufacturing Company, New York, N. Y. Filed Sept. 13, 1911. Serial No. 649,008. (Cl. 184—50.)



in and located in that portion of the casting in front of the horizontal channels and in the interval between two adjoining sight-feeds, a rotary disk cut-out valve for controlling ports in the vertical rear wall of said valve chamber leading to the horizontal oil chambers, and an operating stem and handle therefor extending through to the front of the casting and supported in bearings therein, the acting face portion of said cut-out valve which controls said ports being movable to and from the rear wall of the valve chamber, and spring-pressed toward and against the same, substantially as and for the purposes hereinbefore set forth.

2. In a multiple sight feed lubricator the combination with the oil reservoir and steam-equalizing and oil-pipe connections, of a casting integral with and located below and outside of the oil chamber; air pump and steam cylinder sight-feed chambers contained in said casting, and regulating valves, one for each chamber; a cut-out valve chamber formed in said casting, and a vertical oil channel leading thereto from the oil pipe; two horizontal oil channels v v' located in the casting back of the cut-out valve chamber and one above the other, the one communicating with the two steam cylinder sight-feeds, the other with the air pump sight-feed, and each having its own port opening into the cut-out valve chamber; a rotary disk cut-out valve controlling said ports and arranged to open at will either both the steam cylinder and air pump ports, or the air pump port only; and an operating stem and handle for said cut-out valve, extending through to the front of the casting and supported in bearings therein, substantially as and for the purposes hereinbefore set forth.

1,022,742. INDICATOR-ACTUATING MECHANISM. ORLANDO E. KELLUM, Los Angeles, Cal., assignor to National Street and Station Indicator Company, Los Angeles, Cal., a Corporation of California. Filed Nov. 23, 1910. Serial No. 593,831. (Cl. 172—126.)

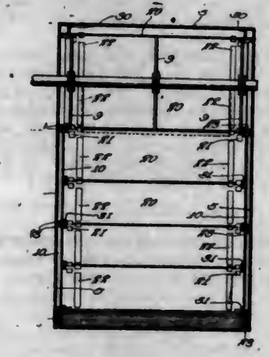


1. A mechanism of the class described, comprising an electro-magnetically charged pole piece, an armature rotatably mounted adjacent the pole piece and adapted to be attracted thereby, a ratchet wheel, pawls on the armature for engaging with the ratchet wheel, a stationary

3. A mechanism of the class described, comprising an electro-magnetically charged pole piece, an oscillating armature, means to hold the armature tilted toward or from the pole piece, a ratchet wheel mounted concentrically with the oscillating armature, a pawl on the armature and adapted to engage the teeth of the ratchet wheel, a stationary pawl adapted to engage the teeth of the ratchet wheel to stop the same, and a cam oscillating with the oscillating armature and adapted to raise the stationary pawl out of engagement with the ratchet wheel.

4. A mechanism of the class described, comprising an electro-magnetically charged pole piece, an oscillating armature, means to hold the armature inclined to or from the pole piece, a ratchet wheel concentrically mounted with the oscillating armature, a pair of pawls mounted on the armature and adapted to engage the teeth of the ratchet wheel for movement of the ratchet wheel in opposite directions, a stationary cam over which the pawls are adapted to slide and be held out of engagement with the ratchet wheel during a portion of their movement, a pair of stationary pawls adapted to engage with the teeth of the ratchet wheel to stop the movement thereof, and a cam oscillating with the armature and engaging with the stationary pawls to disengage them from the teeth of the ratchet wheel.

1,022,743. EXHIBIT DEVICE. ORLANDO E. KELLUM, Los Angeles, Cal., assignor to National Street and Station Indicator Company, Los Angeles, Cal., a Corporation of California. Filed Mar. 16, 1911. Serial No. 614,788. (Cl. 40—100.)

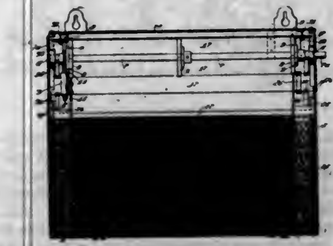


1. An exhibit device, comprising a pair of vertically arranged storage chambers situated adjacent each other back to back, guideways leading from the upper front to the lower rear portions of the chambers, a rotatable member located above the chambers and having its outermost peripheral lines situated approximately above the front edges of the chambers, a chain composed of transversely extending plates hingeably secured together along

segmental plate arranged above the rotating member and adapted to have its curved edge enter the notches in the plates.

3. In a device of the character described, a rotatable member, a chain of plates adapted to pass over the member, said chain being formed of a plurality of plates hingeably secured together along their edges, each plate being provided with a notch in its hinged edge near its end, and a segmental plate situated over the rotatable member and adapted to have its curved edge enter the notches in the plates.

1,022,744. EXHIBIT DEVICE. ORLANDO E. KELLUM, Los Angeles, Cal., assignor to National Street and Station Indicator Company, Los Angeles, Cal., a Corporation of California. Filed June 20, 1911. Serial No. 634,313. (Cl. 40—100.)



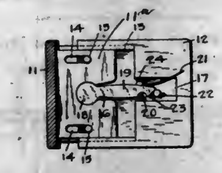
In a device of the character described, the combination of a storage chamber having a guide projecting inwardly from each of its end walls and leading from its upper end at the front of the chamber to its lower end at a point removed from the front of the chamber and having a vertical guide extending along its rear side from top to bottom, a chain composed of a series of transverse plates hingedly secured together along their longitudinal edges, each plate being provided with a single lug extending from each end at one of its longitudinal edges, the plates being so arranged that the lugs thereon are adjacent each other at alternate lines of juncture of plates, and each plate being provided with a notch on its lug provided longitudinal edge and adapted to engage around the second mentioned guide.

1,022,745. BOX-PROTECTOR. JOSEPH KURZ, New York, N. Y. Filed Dec. 5, 1911. Serial No. 663,997. (Cl. 70—100.)



parts slidingly engaging in said guiding recess and provided with a toothed projection to engage in said toothed recess, and means for securing the two members to the lid and side of a box, respectively.

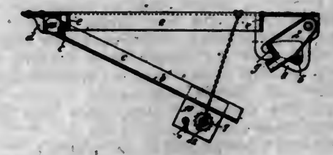
1,022,746. BOX-PROTECTOR. JOSEPH KURZ, New York, N. Y. Filed Jan. 29, 1912. Serial No. 674,114. (Cl. 70—100.)



1. A device of the character described, comprising two members, one member consisting of a flat plate, and the other member consisting of two leaves at a right angle to each other, one of said leaves slidably engaging the flat plate, means for securing the two members to the lid and side of a box, respectively, and a spring actuated latch for interlocking the flat plate and slidable leaf when secured to a box.

2. A device of the character described, comprising two members, one consisting of a flat plate provided with a guiding recess and with a central recess, the other member consisting of two leaves at a right angle to each other, one of said leaves being seated slidably in said guiding recess and provided with a recess in one edge, a latch having a head fitting pivotally in said edge recess and provided with a semicircular recess in one side, a locking pin upon the flat plate adapted to engage in said semicircular recess of the latch when the parts are in their locked position, a spring secured to the flat plate engaging the back edge of a latch to positively secure its engagement with the locking pin, and means for securing the two members to the lid and side of a box, respectively.

1,022,747. TRAP-DOOR. OTTO WILLIAM MEISSNER, Westmount, Quebec, Canada. Filed Nov. 12, 1907. Serial No. 401,876. (Cl. 57—32.)



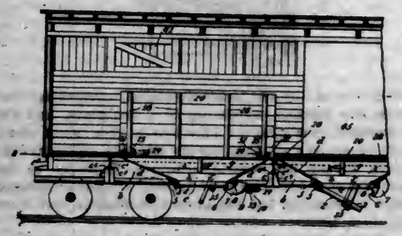
1. The combination with a trap door having upwardly projecting flanges on opposite sides, of a displaceable flange adapted to project under and close one of the remaining sides of the door, and operating mechanism connected to the flange.

2. The combination with a door having upwardly pro-

5. The combination with a door frame having a continuous flange extending around all sides of the door opening, a trap door hinged to the frame and having a continuous flange extending around all the sides thereof except one and adapted to inclose the corresponding portion of the flange of the door opening, and displaceable means for sealing the joint between the remaining portion of the door and the flanged frame.

[Claims 6 to 13 not printed in the Gazette.]

1,022,748. DUMP-CAR. OTTO WILLIAM MEISSNER, Westmount, Quebec, Canada. Filed Dec. 14, 1908. Serial No. 467,544. (Cl. 105—14.)



1. In a convertible car, the combination of an underframe comprising a center sill, cantaliver arms carried by the sill, a hopper suspended from the said sill and arms and presenting a flanged discharge opening and a flanged door adapted to straddle the said flanged discharge opening.

2. In a dump car, the combination with a center sill having a plurality of arms extending laterally on each side thereof, of a plurality of hoppers supported by such sill and arms and arranged in two parallel series on opposite sides of the center sill and presenting flanged discharge openings, and a plurality of trough shaped doors closing the said discharge openings.

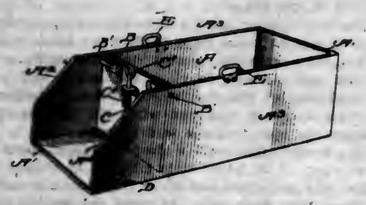
3. A convertible car comprising a plurality of floor hoppers presenting flanged mouths; trough-shaped doors controlling such mouths and having valvular means coacting therewith; displaceable floor members; and loading doors near the ends of the cars.

4. A convertible car comprising a plurality of floor hoppers presenting flanged mouths; trough-shaped doors controlling such mouths and having angular valvular means coacting therewith; displaceable floor members.

5. A convertible car comprising a plurality of floor hoppers presenting flanged mouths; trough-shaped doors controlling such mouths and having angular valvular means coacting therewith; displaceable floor members; and loading doors near the ends of the car.

[Claims 6 to 9 not printed in the Gazette.]

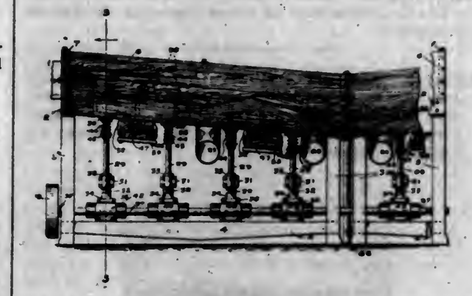
1,022,749. MEASURE. CHRISTIAN MESSNER, Hibbing, Minn. Filed Nov. 8, 1911. Serial No. 659,132. (Cl. 73—62.)



1. A measure comprising a receptacle open at one end and having its sides cut away at said end, a partition pivoted between the sides adjacent said cut away ends and a spring catch carried by said partition for the purpose specified.

2. A measure comprising a receptacle open at one end, sides cut away at said open end, a partition pivoted between said sides adjacent said cut away end, a spring catch carried by said partition and adapted to engage an opening or socket in the bottom of the receptacle, the contracted open end of said receptacle being provided with means for securing a bag or sack, as set forth.

1,022,750. PULP-SCREEN. JOHN OLSEN, Watertown, N. Y. Filed Nov. 19, 1906. Serial No. 343,999. (Cl. 92—32.)



1. A pulp screen comprising a vat, a screen inclined in the direction of the length of the vat, non-communicating vacuum chambers beneath the screen, a diaphragm for each vacuum chamber, said diaphragms being substantially parallel with the screen, rods for operating said diaphragms, said rods increasing in length from the lowest toward the highest part of the screen, and a flow spout for each vacuum chamber, substantially as described.

2. A pulp screen comprising a vat, a screen inclined in the direction of the length of the vat, non-communicating vacuum chambers beneath the screen, a diaphragm for each vacuum chamber, said diaphragms being substantially parallel with the screen, means for operating said diaphragms, and an outlet for each vacuum chamber, substantially as described.

3. A pulp screen comprising a vat, a screen, a diaphragm below said screen, the space between the screen and diaphragm being divided into separate suction chambers, plunger rods for actuating the diaphragm, and a flow spout leading from adjacent suction chambers and provided with a partition extending upwardly from its bottom to prevent material from one chamber flowing into the adjacent chamber, substantially as described.

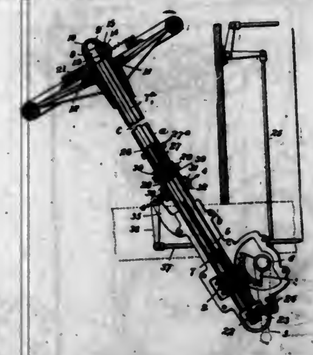
4. A pulp screen of the class described, comprising a vat, an inclined screen in said vat, vibratory diaphragms beneath said screen, the space between the diapragms and screen being divided into independent vacuum chambers, an independent flow-spout, means for permitting the cleaning of said flow-spouts without detaching the spouts, a flow-box having a number of separate compartments adapted to receive and discharge a volume of screened pulp flowing from said flow-spouts, and means for discharging refuse material from the screen vat.

5. A plup screen of the class described, comprising a number of inclined vats, a series of inclined screens forming the bottoms of said vats, an inclination extending from the head toward the tail end of the vat, a series of inclined flexible diaphragms disposed beneath said screens, a number of plunger rods of unequal lengths adapted to effect the vibration of said diaphragms, a series of flow-spouts, each spout having a partition extending upwardly from its bottom, means for cleansing said flow-spouts without detaching the spouts, and a flow-box into which the flow-spout discharges.

[Claims 6 and 7 not printed in the Gazette.]

1,022,751. MOTOR-CONTROLLING MECHANISM FOR MOTOR-VEHICLES. JAMES W. PACKARD, Lakewood, N. Y., assignor, by mesne assignments, to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Apr. 20, 1906. Serial No. 312,823. (Cl. 74—89.)

1. The combination of a hollow steering stem provided with a hand wheel, of a motor controlling rod arranged within the stem, means actuated by turning said rod, means actuated by reciprocating said rod, a hand lever for turning the rod extending at right angles to the stem adjacent to the wheel, and connections between said hand lever and said rod comprising a rack and pinion for reciprocating the rod.



2. The combination of a steering stem, a motor controlling rod within the stem, said rod having a rack at its upper end, a head rotatably mounted at the upper end of the stem and having a guide-way permitting longitudinal movement of the rod but preventing its rotation within the head, and an adjusting lever journaled transversely in the head and having a pinion engaging said rack.

3. The combination of a steering stem, a motor controlling rod within the stem, a cylindrical rack at the lower end of the stem, devices movable by the rack for operating one motor-controlling mechanism, a nut fixed within the stem, a worm loosely splined on the rod and engaging the nut, devices movable by the worm for operating another motor-controlling mechanism, and means for adjusting said rod longitudinally and angularly with respect to the stem.

4. The combination of a steering stem, a hand wheel secured thereto, a head rotatable with respect to the stem and hand wheel, a motor-controlling rod movable longitudinally with respect to the head and rotatable therewith, means actuated by turning said rod, means actuated by reciprocating said rod, a lever journaled transversely in the head for turning the latter and having means connected therewith for raising and lowering the rod, said lever projecting at each side of the head and having finger-pieces for rotating it about its axis.

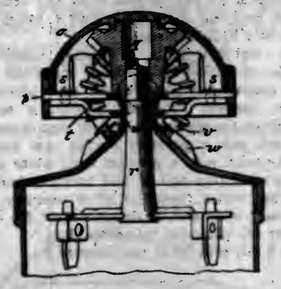
5. The combination of a steering stem, a hand wheel secured thereto, a head rotatable with respect to the stem and hand wheel, a motor-controlling rod movable longitudinally with respect to the head and rotatable therewith, said rod having a rack at its upper end, means actuated by turning said rod, means actuated by reciprocating said rod, a lever journaled transversely in the head for turning the latter, a pinion upon said lever engaging said rack, means for holding said head against rotation, and means for holding said lever against rotation about its axis.

[Claims 6 and 7 not printed in the Gazette.]

1,022,752. ICE-CREAM FREEZER. JAMES SCOTT PARRISH, Richmond, Va., assignor to Richmond Cedar Works, a Corporation of Virginia. Filed Dec. 21, 1910. Serial No. 598,573. (Cl. 62—4.)

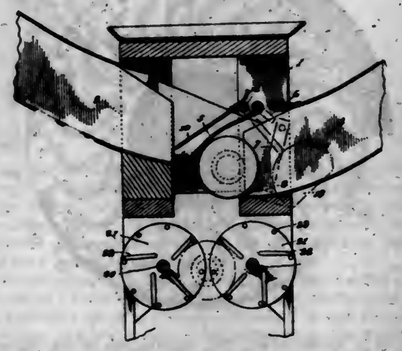
1. In an ice cream freezer, the combination of a gearing frame consisting of separated bars, a horizontal plate connecting the same and provided with a central opening for the hub of the driven gear, and a supplemental plate provided with a coinciding hole for the reception of the top of the freezer can.

2. In an ice cream freezer, the combination of a gearing frame consisting of separated bars, a horizontal plate connecting the same and provided with a central opening for the hub of the driven gear, and a supplemental plate provided with a coinciding hole for the reception of the



top of the freezer can, said supplemental plate having its ends rigidly fastened against the lower side of the aforesaid plate.

1,022,753. VENDING APPARATUS. MATTHEW B. PITTS, Toccoa, Ga., and JOHN A. HANCOCK, Columbia, S. C. Filed Aug. 8, 1910. Serial No. 576,254. (Cl. 211—8.)



1. A vending apparatus for bottled goods comprising oppositely-extended raceways, a vertically-disposed passageway into which said raceways open, a discharger beneath said passageway, a stop plate projected across the discharge end of one raceway, means for locking such stop plate, and a pivoted trip normally held inoperative by the stock from the other raceway and designed to automatically release said locking means when the supply from the latter raceway is exhausted.

2. A vending apparatus for bottled goods comprising oppositely-extended raceways, a vertically disposed passageway into which said raceways open, a discharger beneath said passageway, a stop plate projected across the discharge end of one raceway, a pivoted wing also projected across the discharge end of such latter raceway, and a weighted arm operated by said wing for releasing said stop plate when the supply is exhausted from the other raceway.

3. A vending apparatus for bottled goods comprising oppositely-extended raceways, a vertically-disposed passageway into which said raceways open, a discharger beneath said passageway, a stop plate projected across the discharge end of one raceway, means for locking such stop plate, a pivoted wing also projected across the discharge end of such latter racewey, and a weighted arm for releasing said locking means when the supply is exhaused from the other raceway.

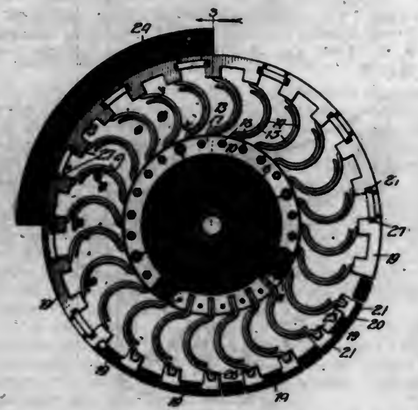
4. A vending apparatus for bottled goods comprising oppositely extended raceways, a vertically-disposed passageway in which said raceways open, a discharger beneath said passageway, a stop plate projected across the

discharge end of one raceway, means for locking such stop plate, a pivoted wing also extended across the discharge end of such latter raceway and normally held in closed position by the bottles from the other raceway, a crank rod carrying such wing, and a weight thereon for releasing said locking means.

5. The combination, in a vending apparatus for bottled goods, of oppositely-extended raceways, a vertically-disposed passageway into which said raceways open, a discharger beneath said passageway, a stop plate extended across the discharge end of one raceway and having a crank rod, a pivoted locking arm designed to engage said crank rod, a pivoted wing plate also extended across the discharge end of said raceway and normally so held by the bottles from the other raceway, a crank rod carrying said wing and having a weight for engaging said locking bar for releasing said stop plate.

[Claim 6 not printed in the Gazette.]

1,022,754. SPRING-WHEEL FOR VEHICLES. AUGUSTUS F. PRIEST, Chicago, Ill. Filed May 19, 1910. Serial No. 562,119. (Cl. 152—28.)



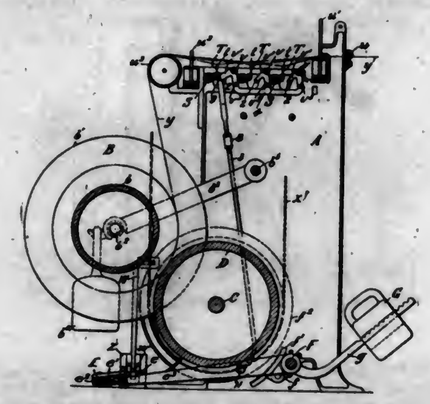
1. In a spring-wheel, the combination of its hub-portion, a rim formed of a circumferential series of laterally-overlapping relatively-movable sections, springs interposed between the rim and hub and bearing against said rim-sections, a continuous tire confined about said rim, and lugs on said rim-sections overlapping the sides of adjacent rim-sections, for the purpose set forth.

2. In a vehicle-wheel, the combination with a hub-portion, a rim formed of a circumferential series of relatively-movable disconnected laterally-overlapping non-radially guided sections, a continuous tire confined about said rim, and bow-shaped springs engaging with said hub and with said rim-sections, each of said springs bearing at its outer end against mutually overlapping portions of said sections, and the bowed sections thereof extending in the same direction, whereby the rim-sections are capable of movement circumferentially of said hub.

3. In a spring-wheel, a spring-supported rim comprising a circumferential series of relatively-movable laterally-overlapping sections formed with recesses on their inner surfaces the recesses of adjacent sections opposing and opening into each other and into which the springs of the wheel extend, and a tire confined about the rim.

1,022,755. WARPING-MACHINE. FESTUS S. RAND, Providence, R. I., assignor to Universal Winding Company, Portland, Me., a Corporation of Maine. Filed Nov. 22, 1909. Serial No. 529,394. (Cl. 28—31.)

1. In a warping-machine, the combination with a driving-shaft, of means to rotate the shaft at slow or fast speed, mechanism to control said means, a treadle to operate said controlling mechanism, means to shift the treadle to arrest the rotation of the shaft, pivoted drop wires held upright by the yarns and adapted to tilt to actuate the treadle-shifting means, and means to prevent the drop-wires from acting when the machine is operating at slow speed and to return them to their initial positions when the machine is stopped.



2. In a warping-machine, the combination with a driving-shaft, of means to rotate the shaft at slow or fast speed, mechanism to control said means, stop-motion devices to operate the controlling mechanism, pivoted drop-wires adapted to be suspended by the yarns and arranged to tilt to actuate the stop-motion devices to stop the machine, and means to prevent the drop-wires from acting when the machine is operating at slow speed.

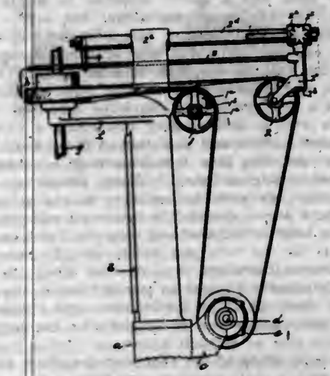
3. In a warping-machine, the combination with a driving-shaft, of an idler pulley on said shaft, a second pulley connected to rotate the shaft at a relatively slow speed, a third pulley fast on the shaft to rotate the latter at a maximum speed, means to shift the belt from one pulley to another to start the machine, stopping mechanism to operate the belt-shifting means to stop the machine, pivoted drop-wires suspended by the yarns and adapted, when the machine is operating at maximum speed to tilt to actuate the stopping mechanism, and means to control the position of the drop-wires to prevent them from tilting when the machine is operating at slow speed and to return them to their initial positions when the machine is stopped.

4. In a warping-machine, the combination with a driving-shaft, of means to rotate the shaft at slow speed, means to rotate the shaft at a greater speed, means to render one or the other of said means operative, stopping mechanism to arrest the rotation of the shaft, pivoted drop-wires held upright by the yarns and adapted to tilt to actuate the stopping mechanism, and means to regulate the positions of the drop-wires to prevent them from acting on the stop-motion when the machine is operating at slow speed and to return them to their initial positions when the machine is stopped.

5. In a warping-machine, the combination with a driving-shaft, of an idler pulley on said shaft, a second pulley connected to rotate the shaft at a relatively slow speed, a third pulley fast on the shaft to rotate the latter at maximum speed, a belt-shipper to shift the belt from one pulley to another, a treadle to operate said belt-shipper, means to move the treadle to shift the belt on to the idler pulley to stop the machine, knock-off devices to cause the action of the treadle, drop-wires held upright by the yarns and adapted, when the belt is on the third pulley, to tilt to actuate the knock-off devices, and means controlled by the treadle to hold the drop-wires in their upright positions when the machine is stopped and arranged to prevent the drop-wires from actuating the knock-off devices when the treadle is moved to shift the belt on to the second pulley.

[Claim 6 not printed in the Gazette.]

1,022,756. BELT-GEARING. CHARLES DE LOS RICS, Hartford, Conn. Filed Mar. 2, 1906. Serial No. 303,907. (Cl. 74—21.)



1. In a belt gearing for drill presses and similar machines a counter-shaft extending lengthwise of the machine, a spindle parallel to a vertical plane passing through the axis of said counter-shaft, and pulleys of different diameters mounted on said spindle and said shaft, an endless belt, idler pulleys for the delivery and return sides of said belt, said delivery idler being vertically adjustable, and said return idler being adjustable back and forth horizontally to take up slack, a swiveled support therefor to permit of its adjustment in a horizontal plane, and positive means for causing said return idler to track with either one of the spindle pulleys.

2. In a belt gearing for drill presses and similar machines, a counter-shaft extending lengthwise of the machine, a spindle parallel to a vertical plane passing through the axis of said counter-shaft, pulleys of different diameters on said spindle and said counter-shaft, an endless belt, idler pulleys for the delivery and return sides of said belt, said delivery idler being vertically adjustable, and said return idler being adjustable back and forth horizontally to take up slack, and devices for alining said return idler with either of said spindle pulleys comprising a swiveled support for said idler and means for holding said idler with its face squared to a vertical plane tangent to either of the spindle pulleys.

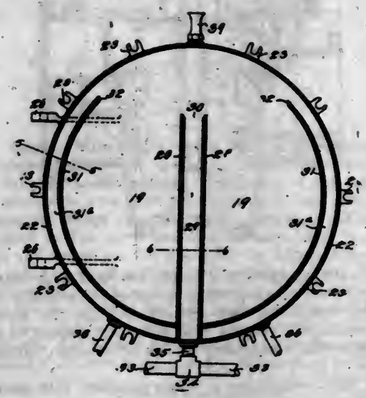
3. In a belt gearing for drill presses and similar machines the combination with the spindle, the counter shaft, a pair of pulleys of different diameters mounted on each, an endless belt, idler pulleys for the delivery and return sides of said belt, said delivery idler being vertically adjustable and said return idler being adjustable back and forth horizontally to take up slack, the relative position of said return idler and the pulleys on the countershaft being adjustable in the direction transverse to the planes of rotation of the latter to cause said belt to track with either of the pulleys on said countershaft of devices for alining said return idler with either of said spindle pulleys including a swivel support for said idler, and means for holding said idler with its face squared to a vertical plane tangent to either of the spindle pulleys, said means comprising a tiller rod having one end secured to the swiveling support of the idler and its free end held against sidewise movement.

4. In a belt gearing for drill presses and like machines the combination with the counter shaft and spindle, a pair of pulleys of different diameters on each, the belt and idler pulleys for said belt, a common support for said idlers, said support comprising a rod, a bushing in which said rod is eccentrically mounted, and a sleeve in which said bushing moves.

5. In a belt gearing for drill presses and like machines the combination with the counter shaft and spindle, a pair of pulleys of different diameters on each, the belt and idler pulleys for said belt, a common support for said idlers, said support comprising a rod, a bushing in which said rod is eccentrically mounted but free to turn therein, a sleeve in which said bushing moves, means for turning said bushing, and means for preventing the rolling of said rod during the turning of the bushing.

[Claims 6 to 11 not printed in the Gazette.]

1,022,757. SMOKE-BOX DOOR. DAVID SAMMEL, Altoona, Pa. Filed Dec. 12, 1910. Serial No. 596,814. (Cl. 122—498.)



1. In combination with a locomotive fire-box having an open end, of a closure for said open end, an inlet for receiving the exhaust steam in said closure, means in said closure for storing the water of condensation from the steam, and means for segregating the oil carried by said steam from the water of condensation.

2. In combination with a locomotive fire-box having an open end, of a closure for said open end, an inlet for receiving the exhaust steam in said closure, means in said closure for storing the water of condensation from the steam, means for segregating the oil carried by said steam from the water of condensation, and outlet means for removing said oil from the closure.

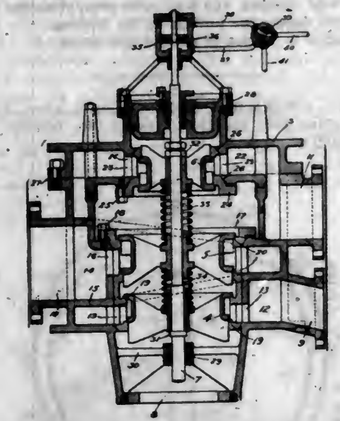
3. In combination with a locomotive fire-box having a open end, of a hollow closure for said open end, an inlet for receiving the exhaust steam in said closure, a conduit communicating with the inlet and forming a stand-pipe to catch the water of condensation and feed the same to the main portion of the closure, and means for removing from said water the waste oil brought in by said steam.

4. In combination with a locomotive fire-box having an open end, of a hollow closure for said open end, an inlet for receiving the exhaust steam in said closure, a conduit communicating with the inlet and forming a stand-pipe to catch the water of condensation and feed the same to the main portion of the closure, conduits for receiving the waste-oil brought in by said exhaust steam, and means for feeding said oil away from said conduits.

5. In combination with a locomotive fire-box having an open end, of a drum fitted to said end and constituting a closure therefor, said drum including spaced front and rear walls and a connecting web, an inlet in the bottom of the drum for receiving exhaust steam, spaced vertical partitions extending from the bottom of the drum and communicating with the inlet and terminating short of the top, said partitions forming a stand-pipe to catch the waters of condensation from said steam and feed the same to the main portion of the drum, and means for removing from said water the waste oil brought in by the steam.

[Claims 6 to 10 not printed in the Gazette.]

1,022,758. VALVE. EDWARD SEAVER, JR., Pittsburgh, Pa., assignor, by mesne assignments, to The Colonial Trust Company, trustee, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Sept. 22, 1910. Serial No. 583,206. (Cl. 121—58.)



1. A valve comprising a casing provided with separate delivery ports, separate disks mounted on a single valve stem for controlling the delivery through the separate ports, and means whereby said disks are adapted to operate successively comprising springs of different expansive force.

2. A valve comprising a casing provided with separate fluid delivery ports, a valve stem, separate disks mounted on said stem for independently controlling said ports and springs interposed between the disks, the spring for one disk preponderating in expansive force over the spring for another disk.

3. A valve comprising a casing provided with separate fluid delivery ports, a valve stem, valve disks for independently controlling said ports loosely mounted on said stem comprising springs of different expansive force and means for yieldingly holding said disks in place on said stem.

4. A valve comprising a casing provided with two fluid delivery ports, a valve stem, two separate disks mounted on said stem for independently controlling said ports and yielding means for holding one valve to its seat with an increasing pressure as the other valve is moved from its seat.

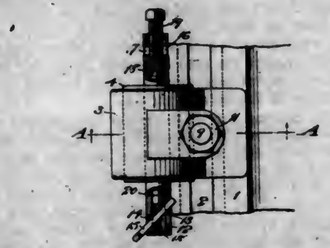
5. A valve comprising a casing provided with three separate fluid delivery ports, a valve stem, three separate disks for independently controlling said ports mounted on said stem and yielding means located between said disks for holding them in place on said stem yielding means for one preponderating in expansive force over the other.

1,022,759. HOSE-COUPLING. JOHN W. STINE and a threaded portion and stud formed thereon, of a female member consisting of a tube formed with a longitudinal slot and a diagonal slot, a flange formed on one end of the tube, an attaching member on the other end of the tube, and a sleeve mounted to rotate on said slotted tube having a longitudinal slot and a diagonal slot, said diagonal slots on the tube and sleeve extending in opposite directions and arranged to cross each other, the stud on the male member adapted to extend through the diagonal slots at their point of intersection.

2. In a coupling of the character described, the combination with a male member comprising a tube having a threaded portion and stud formed thereon, of a female member consisting of a tube formed with a longitudinal slot and a diagonal slot, a flange formed on one end of the tube, an attaching member on the other end of the tube, a sleeve mounted to rotate on said slotted tube having a longitudinal slot and a diagonal slot, said diagonal slots on the tube and sleeve extending in opposite directions and arranged to cross each other, the stud on the male member adapted to extend through the diagonal slots at their point of intersection, and means on the slotted tube and sleeve for registering the longitudinal slots.

3. In a coupling of the character described, the combination with a male member comprising a tube having a threaded portion and stud formed thereon, of a female member consisting of a tube formed with a longitudinal slot and a diagonal slot, a flange formed on one end of the tube, an attaching member on the other end of the tube, a sleeve mounted to rotate on said slotted tube having a longitudinal slot and a diagonal slot, said diagonal slots on the tube and sleeve extending in opposite directions and arranged to cross each other, the stud on the male member adapted to extend through the diagonal slots at their point of intersection, means on the slotted tube and sleeve for registering the longitudinal slots, and a packing ring disposed in a groove formed on the attaching member against which the outer end of the male member seats.

1,022,760. TOOL-HOLDER. ERNEST STOECKLIN, Ridgefield Park, N. J. Filed May 17, 1911. Serial No. 627,752. (Cl. 82—36.)



1. A tool holder comprising a split outer member, a rotatably adjustable inner member having a plurality of tool receiving holes therethrough, said inner member be-

1,022,761. BEVEL-GEAR CHUCK. CARL STVANEK, Stratford, Conn. Filed Dec. 20, 1910. Serial No. 598,461. (Cl. 29—130.)



1. A chuck of the character described comprising a chambered body, jaws pivoted to said body, an operating block located in the chamber of said body and operatively connected with said jaws, and a controlling spindle for said block projecting into said chamber, said block being loosely mounted on said spindle and movable laterally and longitudinally in said chamber.

2. A chuck of the character described comprising a body, jaws pivoted thereto, an operating spindle passing through said body, a block with which the jaws have operative engagement mounted on said spindle and having tilting and sliding movement relative to said body, and means for moving said spindle to cause the jaws to grip or release a piece of work.

3. A chuck of the character described comprising a body, jaws pivoted thereto, an operating spindle passing through said body, a block mounted on said spindle and having operative engagement with said jaws, said block being capable of tilting and sliding movement relative to said spindle, means for moving said spindle to slide the block in one direction, whereby the jaws will grip a piece of work, and means independent of the spindle for moving said block in the opposite direction to cause the jaws to release the work.

4. A chuck of the character described comprising a body, jaws pivoted thereto, an operating spindle passing through said body, a block mounted on said spindle with which the jaws have operative engagement, said block being capable of sliding and tilting movement in said body, means for moving said spindle to cause the jaws to grip and release a piece of work, and means for holding the block against rotation relative to the body.

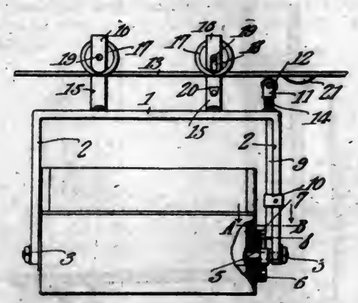
5. A chuck of the character described comprising a body, jaws pivoted thereto, a tilting sliding block with which the jaws have operative engagement and which is provided with a rounded socket, a spindle passing loosely through said block and having a rounded head engaging the socket, for the purpose set forth, means for drawing the spindle backward and a spring for forcing the block forward.

[Claims 6 to 12 not printed in the Gazette.]

1,022,762. BEE-FEEDER. GEORGE L. WHITE, Newark, N. J. Filed Aug. 19, 1911. Serial No. 645,019. (Cl. 6—3.)



1,022,763. LITTER-CARRIER. CLEMENS B. WILLENBORG, Dyersville, Iowa. Filed Aug. 28, 1909. Serial No. 515,106. (Cl. 214—14.)



A carrier including a cross bar, hangers depending therefrom, a receptacle having trunnions journaled within the hangers, a disk secured to one end of the receptacle and concentric with one of the trunnions, said disk having an annular flange provided with a notch, a rod slidably mounted in the cross bar and between, and in contact with, the flange on the disk and the adjacent hanger, a stud upon the rod normally surrounded by the flange, a spring engaging the rod and bearing downwardly on the cross bar for shifting the rod upwardly to move the stud into the notch when said notch is brought into register therewith, and means for holding the rod against lateral movement relative to the hanger on which it is mounted.

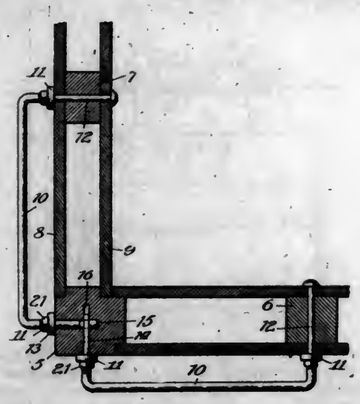
1,022,764. ROOFING MATERIAL. STEPHEN G. WRIGHT, Oak Park, Ill. Filed May 29, 1911. Serial No. 630,179. (Cl. 154—51.)



1. As a new article of manufacture, roofing composed of sheet water-proof material having its surface composed of comparatively coarse particles of baked earthy material of predetermined coloring whereby a roofing surface is produced presenting a coloring permanent under wear, for the purpose set forth.

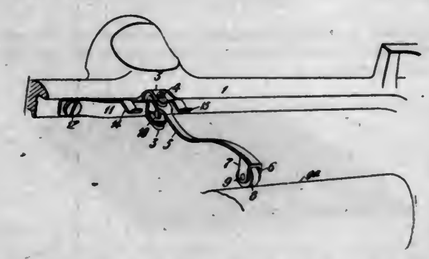
2. As a new article of manufacture, roofing composed of sheet water-proof material having its surface composed of particles of baked earthy material of predetermined coloring, said particles being partially embedded in a waterproofing coating and extending above the plane thereof, whereby a roofing surface is produced presenting a coloring permanent under wear, for the purpose set forth.

ladder-round attaching bolts, extending in said sockets, one having a head and the other having an eye receiving



and holding said head in detachable locking engagement at the intersection of the sockets.

1,022,766. TYPE-WRITING MACHINE. WALTER E. BARNARD, Hartford, Conn., assignor to Underwood Typewriter Company, New York., N. Y., a Corporation of Delaware. Filed Jan. 8, 1912. Serial No. 669,943. (Cl. 197—139.)



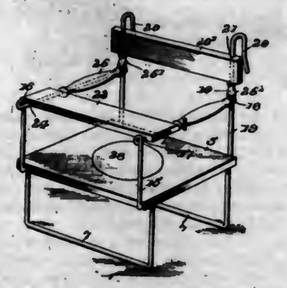
1. The combination with a platen and a platen-supporting frame, of an envelop-guiding arm loosely hinged upon the platen frame to swing sidewise in either direction from a position in contact with the platen to a position alongside of the platen frame, a double-acting spring secured upon the platen frame and engaging said guide near its hinge to hold it against the platen or the platen frame, and a clip upon said spring to engage said guide when it is out of use, and hold it against accidental displacement.

2. In a front-strike typewriter, the combination with a shiftable envelop guide, of a spring having clips or keepers, each provided with a decline or cam portion, to hold said guide arm below the line of vision.

3. The combination of a shiftable envelop-guide having enlarged bearings, to allow slight raising or lowering, and a spring having clips or keepers having cam portions to depress said guide arm.

1,022,767. CHILD'S CHAIR. MARTIN L. BEISTLE, Shippensburg, Pa. Filed Aug. 29, 1911. Serial No. 646,695. (Cl. 155—26.)

1. A folding nursery chair including a seat, side members pivotally mounted on the seat and having vertical extensions constituting a back section, said extensions terminating in suspension devices, a brace having grooves formed therein to receive the extensions of the side members, a second brace connecting the side members and having grooves formed therein for the reception of said side members, and fastening devices pivotally mounted on the braces and overlapping the grooves for retaining the braces in position.

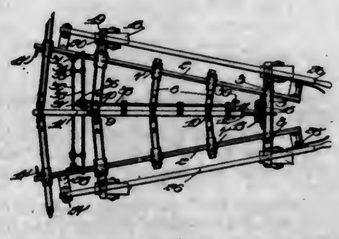


2. A folding nursery chair, including a seat, side members pivotally mounted on the seat and having rear extensions adapted to constitute back members, and also having front extensions formed with laterally extending end portions connected to the back members and constituting arm rest members, a brace having grooves formed therein to receive said arm rest members at the front thereof, fastening devices pivotally mounted on said brace and adapted to overlap the grooves for retaining the brace in position, and spacing members mounted on the arm rest members and interposed between the back members and the rear edge of said brace and bearing against the latter, for the purpose specified.

3. A folding nursery chair, including a seat, side members pivotally mounted on the seat and having vertical extensions constituting a back section, a brace having grooves formed transversely in its rear face to receive the extensions of the side members, a second brace connecting the side members and having transverse grooves in its under side for the reception of said side members, and fastening devices pivotally mounted on the rear and under faces of the respective braces adjacent the grooves therein to extend across the grooves and the side members and retain the braces in engagement with the side members.

4. A folding nursery chair, including a seat, side members pivotally mounted on the seat and embodying arm rest members having stops formed at their front ends, a brace resting on the arm rest members and against the stops at the front thereof, fastening devices secured to said brace and adapted to engage the arm rest members to retain the members in position, and spacing members mounted on the arm rest members and engaging the rear edge of the brace and the back of said members, for the purpose specified.

1,022,768. LEVEE-MACHINE. WILLIAM R. BORDGES, Salinas, Cal. Filed Apr. 4, 1911. Serial No. 618,915. (Cl. 37—7.)



1. An improved levee-forming machine, having in combination a pair of vertically disposed, rearwardly projecting gathering members, a saddle extending crosswise between the members and having pivots on which said members are pivoted, means including toggle links and connecting operating devices for varying the angular relation of the gathering members, freely turnable caster wheels upon which the gathering members are adjustably supported, and braces flexibly connected to said members.

2. A levee-forming machine comprising a pair of vertical scraping and gathering members, a saddle, pivots on said saddle on which said members are mounted between their ends, means for varying the angular relation of said members, freely turnable caster wheels upon which the scraping and gathering members are adjustably supported, and links and lever connections between said wheels and the members whereby the latter may be vertically adjusted.

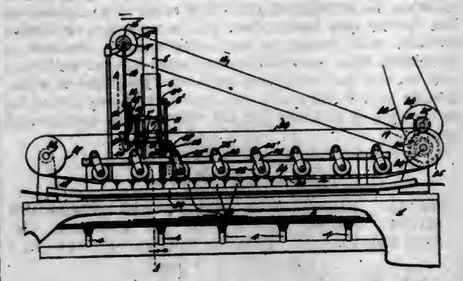
3. In a levee-forming machine, the combination of vertical gathering members, pivots upon which said members are mounted for adjustment between their ends, a saddle upon which said pivots are secured, means for swinging the gathering members about their pivots, and caster wheels supporting the gathering members, said means for swinging these last named members comprising toggle links connected at their outer ends to the gathering members, and operating instrumentalities connected to said links.

4. A check-forming machine including a pair of vertical, angularly disposed gathering members, toggle links connected at their outer ends to said members, an operating rod connected to the jointed ends of the toggle links, means for actuating the operating rod to open and close the gathering members, and means for adjusting said last named members to and from the ground.

5. A check-forming machine including a pair of vertical, angularly disposed gathering members, toggle links connected at their outer ends to said members, an operating rod connected to the jointed ends of the toggle links, means for actuating the operating rod to open and close the gathering members, and means for adjusting said last named members to and from the ground, said means including caster-wheels and links and levers connected to said caster wheels and the gathering members.

[Claim 6 not printed in the Gazette.]

1,022,770. MEANS FOR REGULATING THE FEED OF SOLDER IN CAN-SOLDERING MACHINES. STAPLETON S. CHEWNING, New Berlin, N. Y., assignor to Borden's Condensed Milk Company, New York, N. Y., a Corporation of New Jersey. Filed Jan. 20, 1912. Serial No. 672,311. (Cl. 113—94.)



1. In a can-soldering machine a tank, means to movably support unmolten solder adjacent said tank, means to feed said unmolten solder into said tank, means to melt, and maintain molten said solder in said tank, adjacent said tank a runway for the cans disposed to insure their partial immersion in said molten solder, a movable flexible member disposed to bear on said cans in said runway, means to continuously propel said member relatively to said runway, movably supported on a stationary part a tensioning member disposed to yieldingly force said flexible member toward said runway, and, impelled by said tensioning member during absence of cans from said runway, means to interrupt the operation of said solder-feeding means.

2. In a can-soldering machine a tank, means to movably support unmolten solder adjacent said tank, means to feed said unmolten solder into said tank, means to melt and maintain molten said solder in said tank, adjacent said tank a runway for the cans disposed to insure their partial immersion in said molten solder, an endless belt disposed to bear on said cans in said runway, means to continuously propel said belt relatively to said runway, movably supported on a stationary part a tensioning member disposed to yieldingly force said belt toward said runway, and, impelled by said tensioning member during absence of cans from said runway, means to interrupt the operation of said solder-feeding means.

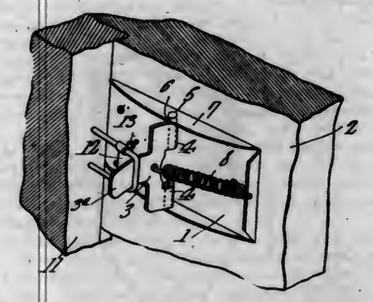
3. In a can-soldering machine a tank, means to feed solder into said tank, means to maintain said solder in molten state in said tank, adjacent said tank a runway for the cans disposed to insure their partial immersion in said molten solder, means to propel said cans through said runway, movably supported on a stationary part a tensioning member disposed to yieldingly force said can-propelling means upward said runway, on said tensioning member a cam, vibratably supported on a stationary part a bell-crank lever one arm of which projects in the path of said cam and means impelled by the other arm of said lever to interrupt operation of said solder-feeding means during absence of cans from said runway.

4. In a can-soldering machine a tank, means to maintain solder in molten state in said tank, means to movably support unmolten solder adjacent to said tank, means, comprising a ratchet wheel, to feed said unmolten solder toward said tank, journaled on a stationary part a rockable frame, means to rock said frame, carried by said frame movably relatively thereto a pawl normally disposed to turn said ratchet wheel, means to propel said cans through said runway, a tensioning member disposed to yieldingly force said propelling means toward said runway, and means impelled by said tensioning member to move and maintain said pawl out of reach of said ratchet wheel when cans are absent from said runway.

5. In a can-soldering machine a tank, means to maintain solder in molten state in said tank, means to movably support unmolten solder adjacent to said tank, means, comprising a ratchet wheel, to feed said unmolten solder

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1,022,769. DOOR-LATCH. GEORGE T. BUDDLE, Chicago, Ill. Filed July 19, 1911. Serial No. 639,458. (Cl. 70—119.)



1. A device of the character described, including a keeper, a trip comprising a transverse member secured to said keeper and having an offset or lip deflected laterally, and a latch pivotally mounted in position and having a tongue of arcuate outline adapted to be received by said keeper, and a resilient member adapted to deliver its stress or tension for the retention of said latch in effective position in connection with said keeper.

2. A device of the character described including a pivotally mounted latch having a tongue-extension, a spring for the retention of said latch in effective position, a keeper having a trip having an offset or lip adapted to dispose said latch in position to be received by said keeper, and an adjusting member for engagement with said latch.

toward said tank, journaled on a stationary part a rockable frame, means to rock said frame, carried by said frame movably relatively thereto a pawl normally disposed to turn said ratchet wheel, slidably mounted on said frame a bar carrying a pin disposed to lift and maintain said pawl out of reach of said ratchet wheel, means to normally maintain said pin out of reach of said pawl, on one end of said bar a shoe, means to propel said cans through said runway, a tensioning member disposed to yieldingly force said propelling means toward said runway, on said tensioning member a cam, journaled on a stationary part a bell-crank lever one of its arms projecting in the path of said cam and the other bearing against said shoe.

[Claim 6 not printed in the Gazette.]

1,022,771. MEANS FOR RECOVERING STRANDED SHIPS. JOSEPH W. CHURCH, San Francisco, Cal. Filed Mar. 20, 1911. Serial No. 615,590. (Cl. 114—51.)



1. In combination with a ship, a loop of a cable, the ends of which are secured to the upper portion of the ship, and the middle of which passes below the keel of the ship, cables slidably connected to said loop, and tugs connected to said latter cables, substantially as described.

2. In combination with a ship, tugs, a loop of a cable, the ends of which are secured to the upper portion of the ship, and the middle of which passes below the keel of the ship, and cables each connected at one end to one of said tugs and at the other end engaging said loop at a point near the bottom of the ship to transmit the strain from the tugs thereto.

3. In combination with a ship, tugs, cables from said tugs to said ship, and means for securing the ends of the cables, comprising a loop extending beneath the ship, the ends of said loop being attached to the upper portion of the ship, and devices attached to the ends of the cable and slidable upon said loop, substantially as described.

1,022,772. GRAVITY FUEL-FEEDING DEVICE. HERBERT CLOUSTON, Mohall, N. D. Filed May 29, 1911. Serial No. 630,125. (Cl. 110—5.)



lower portion of the inclined bottom, said hopper having a plurality of substantially vertically disposed partitions, spaced apart to form a series of fuel compartments off set laterally at different distances from the said feed spout, the said partitions terminating short of the inclined bottom to form an inclined chute leading to the feed spout.

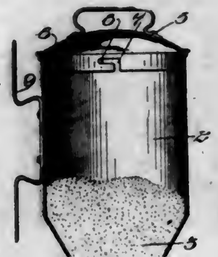
2. A fuel feeding device comprising a hopper having an inclined bottom, a feed spout leading downward from the lower portion of the inclined bottom, said hopper having a plurality of substantially vertically disposed partitions, spaced apart to form a series of laterally off set fuel compartments, one of said compartments being located directly over said feed spout and the others thereof being located at different distances from the said feed spout, the said partitions terminating short of the inclined bottom to form an inclined chute leading to the feed spout.

1,022,773. PROCESS OF MANUFACTURING GRATE-BARS. LEON DAVID and PAUL DAVID, San Francisco, Cal.; said Leon David assignor to said Paul David. Filed May 9, 1911. Serial No. 626,028. (Cl. 22—174.)

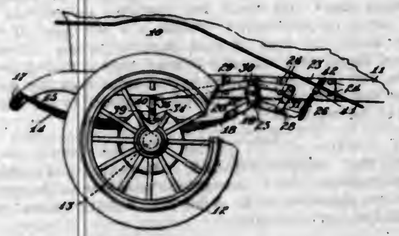


The improvement in the manufacture of grate bars, consisting in packing sand in a mold box around the sides and ends only of grate bar patterns, withdrawing the patterns to leave open slots conforming to the shape of the patterns, fitting the mold thus formed upon a smooth metallic plate to form a closure of one open side and complete the mold, forming a coping and a pouring gate, filling that part of the mold contiguous to the plate with dephosphorized iron, to form a chill, and the remainder of the mold with ordinary metal to form an integral structure.

1,022,774. DISPENSER. CHRIST DE JULIO, San Francisco, Cal. Filed June 1, 1911. Serial No. 630,555. (Cl. 221—64.)



1,022,775. VEHICLE-SPRING. FREDERICK DENMAN, Highland Park, Ill. Filed Sept. 9, 1910. Serial No. 581,297. (Cl. 21—101.)



1. In combination with a vehicle body and running gear, a leaf spring pivotally engaging the body at one end and bearing on the running gear intermediate its ends, a lever pivoted to the body intermediate its ends and adapted to be engaged at one end by the running gear upon relative upward movement of the latter, a second lever pivoted to the body intermediate its ends and connected at one end to the free end of the leaf spring, connection between the other end of said second lever and that end of the first named lever beyond its pivot from the point where it is adapted to be engaged by the running gear, and a second spring reacting between the last named end of the second lever and the vehicle body.

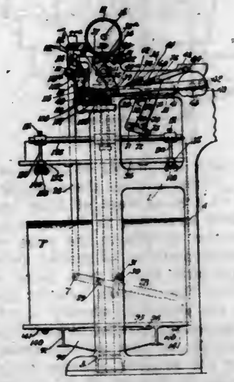
2. In combination with a vehicle body and running gear, a leaf spring pivotally engaging the body at one end and bearing on the running gear intermediate its ends, two levers independently pivoted to the body, one of said levers being adapted to be engaged by the running gear upon relative upward movement of the latter, and the other lever being connected to the other end of the leaf spring, connection between the levers, the pivot of the lever adapted to be engaged by the running gear being more remote from the said connection between the levers than the distance between the pivot of the other lever and said connection, and a second spring reacting between one of the levers and the vehicle body.

3. In combination with a vehicle body and running gear, a leaf spring pivotally engaging the body at one end and bearing on the running gear intermediate its ends, two levers independently pivoted to the body, one of said levers being adapted to be engaged by the running gear upon relative upward movement of the latter, and the other lever being connected to the other end of the leaf spring, connection between the levers, the pivot of the lever adapted to be engaged by the running gear being more remote from the said connection between the levers than the distance between the pivot of the other lever and said connection, and a second spring reacting between the last mentioned lever and the vehicle body, the point of engagement of said spring with said lever being more remote from the pivot of said lever than is the connection between the levers.

4. In combination with a vehicle body and running gear, a lever pivoted to the body, connection between the lever and running gear whereby the lever is turned on its pivot upon relative upward movement between the body and running gear, a second lever pivoted to the body, a spring reacting between the second lever and the body, connection between the second lever and the first lever whereby the second lever is turned on its pivot upon movement of the first lever in one direction, and a stop limiting the movement of the second lever in the opposite direction, the point of connection between the second lever and the first lever being more remote from the pivot of the second lever than the point of connection between the first lever and the running gear, whereby the second spring is compressed upon movement between the body and running gear in excess of a predetermined amount for positively turning the lever on its fulcrum against the effort of the said second spring.

[Claim 6 not printed in the Gazette.]

1,022,776. PAPER-FEEDING MACHINE. TALBOT C. DEXTER and RICHARD B. JONES, Pearl River, N. Y., assignors to Dexter Folder Company, Pearl River, N. Y., a Corporation of New York. Filed Oct. 28, 1910. Serial No. 589,543. (Cl. 101—36.)



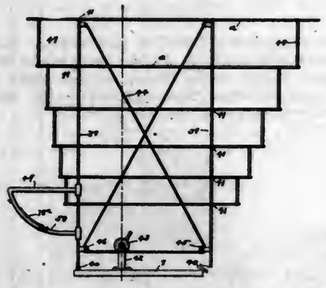
1. In a paper feeding machine, the combination of a frame, the main and auxiliary pile elevating mechanisms, including coupled pawl and ratchet mechanisms, a pile governor controlling the operation of said coupled pawl and ratchet mechanisms, and means for independently throwing said pawl and ratchet mechanisms into and out of operation.

2. In a paper feeding machine, the combination of a frame, the main and auxiliary pile elevating mechanisms, automatically controlled means for operating said main and auxiliary mechanisms, independent means for throwing said elevating mechanisms into and out of operation, and an independent power driven mechanism for operating said main elevating mechanism.

3. In a paper feeding machine, the combination of a frame, the main and auxiliary pile elevating mechanisms, automatically controlled means for operating said main and auxiliary mechanisms, independent means for throwing said elevating mechanisms into and out of operation, an independent power driven mechanism for operating said main elevating mechanism, and manually controlled means for connecting said power driven mechanism with said main elevating mechanism.

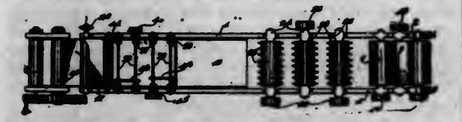
4. In a paper feeding machine, the combination of a frame, the main and auxiliary pile elevating mechanisms, automatically controlled means for operating said main and auxiliary mechanisms, independent means for throwing said elevating mechanisms into and out of operation, an independent power driven mechanism for operating said main elevating mechanism, and manually controlled

1,022,777. AERIAL NAVIGATION. HENRY DISSER, Washington, D. C. Filed Mar. 17, 1909. Serial No. 484,027. (Cl. 244—14.)



In an aeroplane, a plurality of planes of similar shape having their greatest axes in the direction of travel and their centers of area forward of their longitudinal centers, said planes increasing in size one above the other with their centers of area in the same vertical line, a relatively smaller platform of similar shape, means pivoted to the platform and to each plane supporting the planes one above the other in parallel relation to each other and to the platform, whereby upon movement of the planes they remain parallel to each other and to the platform, means for shifting the supporting means about its pivots upon the platform whereby the planes may be shifted fore and aft and remain in the same horizontal plane.

1,022,778. MACHINE FOR MAKING INSULATING FABRIC. GEORGE H. ELLIS, St. Paul, Minn., assignor, by mesne assignments, to Northern Insulating Company, St. Paul, Minn., a Corporation of Minnesota. Filed Mar. 28, 1910. Serial No. 551,869. (Cl. 154—27.)

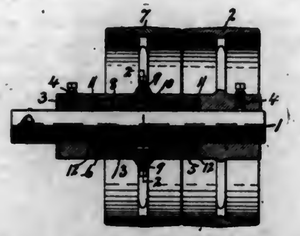


1. In a machine of the kind described, the combination with a water containing tank and an inclined open belt arranged to carry stock from a point below to a point above the surface of the water, a submerged table arranged to deliver the stock onto said apron, carding teeth on said table, and a toothed cylinder coöperating with said carding teeth to card the stock below the surface of the water, substantially as described.

2. In a machine of the kind described, the combination with a water containing tank, of an inclined open apron operative to carry the stock from a point below to a point above the surface of the water, and devices in the said tank for manipulating the stock in the water, in-

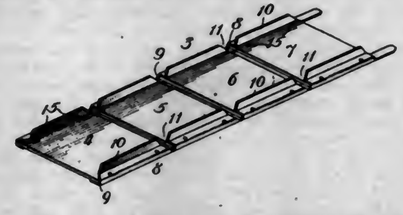
4. In a machine of the kind described, the combination with a water containing tank, of an endless open apron operative to carry the stock from a point below to a point above the water, and a multiplicity of tampers working above said apron and operative successively on the stock to progressively reduce the thickness of the fiber sheet, the first of said tampers having laterally spaced blades with reversely beveled stock engaging lower edges, and the other tampers having stock engaging lower edges that are beveled backward in respect to the direction of the travel of the stock on said apron.

1,022,779. LOOSE PULLEY. ROSMAN I. FANCHER, Baldwinsville, N. Y., assignor of one-half to Frank L. Fuller, Syracuse, N. Y. Filed May 3, 1910. Serial No. 559,190. (Cl. 64—26.)



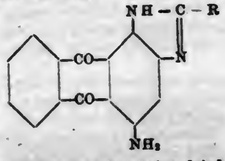
In combination with a shaft, a pulley and a collar both tight on the shaft and having their adjacent ends provided with sockets of greater diameter than the shaft, a sleeve having its opposite ends journaled in the sockets and provided with a central opening of greater diameter than the shaft forming an oil chamber, a flexible sleeve of absorbent material within the oil chamber, a loose pulley secured to the sleeve and packing rings in the ends of the first named sleeve.

1,022,780. BOX. DOUGLAS P. FLEMING, Chicago, Ill., assignor to Simplex Metal Bound Box Company, Chicago, Ill., a Corporation of New Jersey. Filed Aug. 20, 1910. Serial No. 578,081. (Cl. 217—12.)



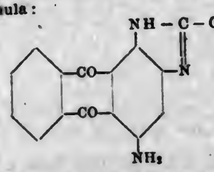
In combination, a box formed of box-stock and having openings formed adjacent to the ends of its sides, sheet metal binding-strips having trough-shaped sections in

none and aromatic aldehydes being amino-anthrimidazoles having most probably the following general formula:



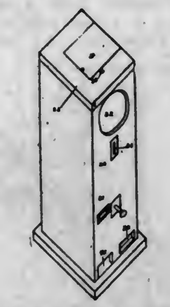
R meaning aryl, which are after being dried and pulverized dark powders soluble in pyridin, yielding vats with hydrosulfite and caustic soda lye, dyeing cotton from blue to green shades; being capable of being acylized in the amino group; products being thus obtained which are likewise vat dyes dyeing cotton from a hydrosulfite vat generally orange shades.

2. The herein described new vat dye having most probably the formula:



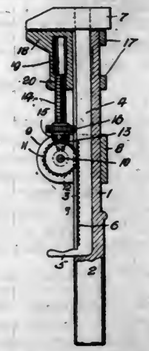
crystallizing in the shape of needles, dyeing cotton from the hydrosulfite vat greenish-blue shades; being converted by treatment with benzoyl chlorid into the benzoyl compound which dyes cotton from the hydrosulfite vat pure orange shades fast to light, substantially as described.

1,022,782. COIN-CONTROLLED VENDING DEVICE. JAMES R. HALLORAN, New Britain, Conn. Filed Feb. 13, 1911. Serial No. 608,408. (Cl. 194—39.)



1. In a vending device, the combination with a member having a clearance-opening, of a horizontally movable plunger arranged in line with the said clearance-opening, a vertically movable slide formed with a perforation for the reception of the said plunger, a coin-operated weight said opening, a coin-chute arranged above the said plunger in position to deliver a coin directly to the coin-slot thereof, and delivery mechanism connected with the said plunger and controlled thereby in the delivery of the articles vended by the machine.

1,022,783. WRENCH. LOUIS HERMANN, Chicago, Ill. Filed Jan. 4, 1912. Serial No. 669,424. (Cl. 81—133.)

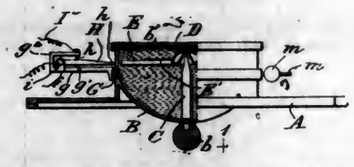


1. A wrench comprising a shank having a longitudinal groove formed in the front side thereof, a stem movably mounted in the groove of said shank and having the inner end thereof provided with a handle, a jaw mounted upon the outer end of said stem, a rack carried by the front side of said stem at one edge thereof, a bearing strap secured to said shank, a pinion revolubly mounted in said bearing strap and meshing with the rack, a screw revolubly supported by said bearing strap and adapted to rotate in unison with said pinion, and a jaw slidably mounted upon said shank and adapted to be moved by a rotation of said screw.

2. A wrench comprising a shank, a stem slidably mounted in the front side thereof, a jaw carried by the outer end of said stem, a rack carried by the inner end of said stem, a bearing strap mounted upon said shank, a pinion revolubly mounted in said bearing strap and meshing with said rack, an adjustable jaw slidably mounted upon said shank, a screw revolubly supported by said bearing strap and extending into said adjustable jaw, and means for imparting a rotary movement to said screw from a movement of said pinion.

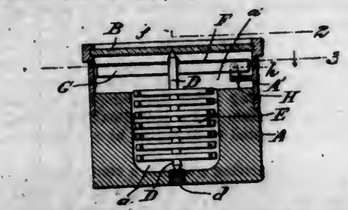
3. A wrench comprising a shank, a stem slidably mounted in the front side thereof, a jaw carried by the outer end of said stem, a rack carried by the inner end of said stem, a bearing strap mounted upon said shank, a pinion revolubly mounted in said bearing strap and meshing with said rack, an adjustable jaw slidably mounted upon said shank, a screw revolubly supported by said bearing strap and extending into said adjustable jaw, means for imparting a rotary movement to said screw from a movement of said pinion, and means carried by said stem to facilitate moving said stem within said shank.

2. A marine compass having a box or casing adapted to contain a liquid, a staff, permanent magnets rotatable on said staff, and soft iron straps in coöperative relation to the poles of said magnets and shaped to produce terminals of opposite polarity.



3. A marine compass having a box or casing adapted to contain a liquid, a staff, permanent magnets rotatable on said staff, soft iron straps in coöperative relation to the poles of said magnet, said straps being so shaped as to produce terminals of opposite polarity, and an external circuit controller composed of a pivoted soft iron switch bar adapted to operate a helm controlling device, said switch bar being operated by said magnets.

1,022,785. MARINE COMPASS. HARRY HERTZBERG, Brooklyn, N. Y., assignor to Abbot A. Low, Horseshoe, N. Y., Maurice J. Wohl, New York, N. Y., and Harry Hertzberg, Brooklyn, N. Y., trustees. Original application filed Aug. 14, 1906, Serial No. 330,613. Divided and this application filed May 31, 1907. Serial No. 376,730. (Cl. 73—125.)

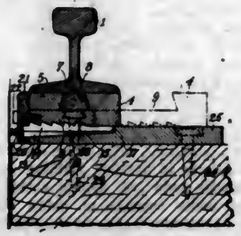


1. A marine compass comprising a casing, one part of said casing being composed of a mass of metal having a well therein, a staff, a magnetic needle carried thereon, said needle being composed of a plurality of magnetic bars, a controller carried by the staff, and circuit terminals in said casing adapted to be contacted by said controller, substantially as described.

2. A marine compass comprising a casing, a portion of said casing being a mass of metal having a well therein, a staff, a magnetic needle carried by said staff, said needle being composed of a series of superimposed magnetized bars, said bars operating in said well, a circuit controlling member carried by said staff, and terminals carried by said casing adapted to be contacted by said controller, substantially as described.

3. A marine compass comprising a box, one part of which is composed of a mass of metal having a well

movement, and means for securing the second jaw in block gripping position.

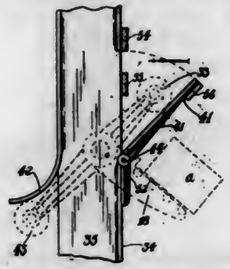


2. The combination with a rail having a lock block, of a plate, a block gripping jaw formed on the plate, a second block gripping jaw secured in the plate to have movement, and a pair of racks adapted to engage one another to hold the second jaw in block gripping position.

3. The combination with a tie and a rail having a lock block, of a plate, a block gripping jaw formed on the plate, a second block gripping jaw secured in the plate to have movement, means for securing the second jaw in block gripping position, and means for securing the said plate to the tie.

4. A rail having a dovetail lock block, a plate, a jaw formed on said plate for engaging one side of said block, a jaw slidble on said plate for engaging the other side of said block, a dovetail bar formed on the movable jaw and engaging a corresponding orifice in the plate, a set of teeth formed on said bar, a rack bar secured within said plate to have movement to and from said teeth, a handle for said rack bar, a wedge for holding said rack bar in engagement with said teeth, a handle for said wedge, and a facing plate for concealing said handles.

1,022,787. MECHANISM FOR CARRYING MATERIALS. WILLIAM T. JAMES, Chicago, Ill. Filed Apr. 6, 1908. Serial No. 425,547. (Cl. 193—8.)



1. In apparatus of the character described, vertically movable carrying means, lateral conveying means adjacent

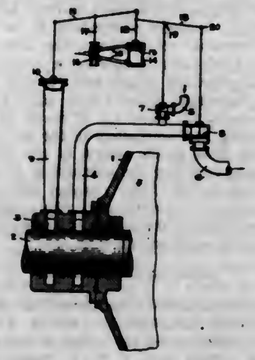
along the path of travel of the carrying means, lateral conveying means mounted for adjustment up and down the rail, and means whereby the carrying means may be made to tilt and to automatically discharge at different levels corresponding to the position of the lateral conveying means.

4. In apparatus of the character described, vertically movable carrying means, a supporting guide rail extending along the path of travel of the carrying means, lateral conveying means mounted for adjustment up and down the guide rail, adjustable suspending means for the lateral conveying means, and means whereby the carrying means may be made to automatically discharge at different levels corresponding to the position of the lateral conveying means.

5. In apparatus of the character described, an upright guide, a carrier thereon comprising a body portion and a laterally extending carrier arm intermediate the ends of such body portion, a member located on the body portion above the arm, contacting with the guide and preventing the tilting of the carrier when loaded, means engaging the carrier below such member for elevating the carrier, means on the upright guide for permitting the said member to move forward to tilt the carrier arm, and a counter-weight on the carrier located on the same side of said guide as said member for normally maintaining the arm in position to support an article.

[Claims 6 to 10 not printed in the Gazette.]

1,022,788. PACKING FOR ELASTIC-FLUID TURBINES. WALTER KIESER, Charlottenburg, Germany, assignor to General Electric Company, a Corporation of New York. Filed Jan. 29, 1912. Serial No. 673,995. (Cl. 121—58.)



1. The combination with a packing, of conduits leading respectively to regions of higher and lower pressure, valves controlling said conduits, a device responsive to changes in the steam leaking through said packing, and connections between said device and said valves.

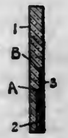
2. The combination with a packing, of conduits lead-

fulcrum for said lever, and means responsive to the steam escaping through said packing for controlling said motor.

5. The combination of a shaft, a packing therefor through which fluid tends to escape, conduit means connected to the packing and to sources of pressure, one of which is higher than the other, and a device responsive to the pressure of the steam leaking through the packing that causes the conduit to open in alternation.

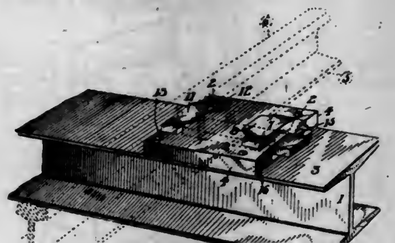
[Claim 6 not printed in the Gazette.]

1,022,789. LENS FOR EYEGLASSES. WILLIAM K. KIGHT, Dexter, Mo. Filed Jan. 16, 1909. Serial No. 472,613. (Cl. 88—54.)



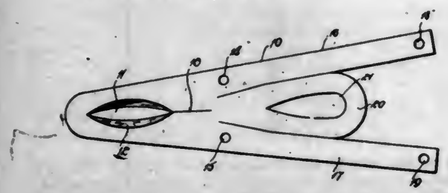
As a new article of manufacture, a trifocal lens for eyeglasses comprising a main lens for long distance vision provided with two depressions in the lower portion of its inner face, one depression being smaller than and within the other, there being concentric beveled shoulders formed at the upper edges of said depressions, a lens for short distance or reading vision arranged in the smaller one of the depressions and provided with a beveled edge corrresponding with and fitting against the beveled shoulder of the smaller depression, and a lens for intermediate vision arranged over the short distance lens and occupying the larger one of the depressions, the edge of which intermediate vision lens is beveled to correspond with and fit against the beveled shoulder of the larger depression and the beveled joints between the supplemental lenses and the main lens being inclined to correspond with the lines of vision of the wearer of the lenses whereby the lines of demarcation between the supplemental lenses and the main lens are reduced to a minimum.

1,022,790. TIE AND RAIL-FASTENER. WILLIAM J. KUPP, Pittsburgh, Pa. Filed July 27, 1911. Serial No. 640,860. (Cl. 238—2.)



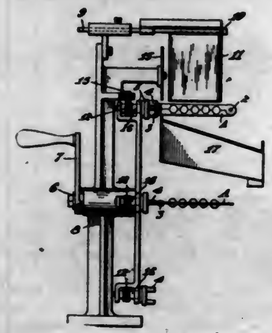
projecting above the upper face of the plate and frame with an inwardly projecting flange opposing the flange of said enlargement, the flange of said head capable of engaging with the other side of the base of the rail, a bar integral with the lower portion at the inner side of said head and extending through and projecting from said slot, the projecting end of said bar provided with a transversely-extending opening, and means extending through said opening and engaging said plate for maintaining said bar in position.

1,022,791. PLUMB-BOB CARRIER. WILLIAM A. LAIRD, Jr., Chambersburg, Pa. Filed Feb. 11, 1910. Serial No. 543,322. (Cl. 224—5.)



As an article of manufacture a plumb-bob carrier formed of a triangular blank, provided with an opening near its apex for the reception of a bob point, and having its rearward portion formed to produce divergent members and an intervening tongue, said tongue having an opening for the reception of a bob head, and being movable to register its opening with the first named opening, said members being secured at their ends to the blank between the openings to form belt receiving loops.

1,022,792. CHOCOLATE-DIPPING MACHINE. LUCY M. LANGE, Oakland, Cal., assignor of one-half to May Eva Clarke, Oakland, Cal. Filed May 9, 1911. Serial No. 626,114. (Cl. 91—3.)



revolving said carriers while passing beneath the drip plate.

3. The combination in a confection coating apparatus of a horizontally revoluble shaft and a spider or disk carried thereby, revoluble shafts journaled in the outer ends of the spider and holders carried thereby, hinged foldable clips adapted to contain confections to be coated, said clips being removably attachable to the holders to project therefrom, a means for supplying a liquid coating material, a perforated pipe through which the material may escape, a drip plate suspended beneath said pipe, with its lower edge contiguous to the upper arc of travel of the carriers, a fixed segmental arc contiguous to the said upper arc of travel, and pinions fixed to the shafts of the revoluble holders, said pinions engaging the segment to revolve the confection carriers during their passage beneath the drip plate.

4. The combination in a confection coating apparatus of a horizontally revoluble shaft and a spider or disk carried thereby, revoluble shafts journaled in the outer ends of the spider and holders carried thereby, hinged foldable clips adapted to contain confections to be coated, said clips being removably attachable to the holders to project therefrom, a means for supplying a liquid material, a perforated pipe through which said material may escape, a drip plate suspended beneath said pipe, with its lower edge contiguous to the upper arc of travel of the carriers, a fixed segmental arc contiguous to the said upper arc of travel, pinions fixed to the shafts of the revoluble holders, said pinions engaging the segment to revolve the confection carriers during their passage beneath the drip plate, and a conductor to convey away the surplus drip.

5. The combination in a confection coating apparatus of a horizontally revoluble shaft and a spider or disk carried thereby, revoluble shafts journaled in the outer ends of the spider and holders carried thereby, hinged foldable clips adapted to contain confections to be coated, said clips being removably attachable to the holders to project therefrom, a means for supplying a liquid material, a perforated pipe through which said material may escape, a drip plate suspended beneath said pipe, with its lower edge contiguous to the upper arc of travel of the carriers, a fixed segmental arc contiguous to the said upper arc of travel, pinions fixed to the shafts of the revoluble holders, said pinions engaging the segment to revolve the confection carriers during their passage beneath the drip plate, a conductor to convey away the surplus drip, and a hood located beneath the source of supply to protect the gears and mechanism from the drip.

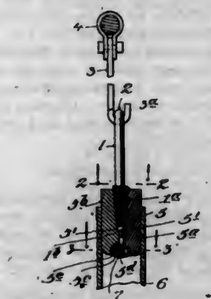
1,022,793. AUTOMATIC BALANCING MECHANISM FOR FLYING-MACHINES. LÁZÁR LUKÁCS, New York, N. Y., assignor of one-fourth to John Szűcs, New York, N. Y. Filed Sept. 7, 1911. Serial No. 648,084. (Cl. 244—14.)



dulum being formed as a seat for the operator, and connections between said pendulum, said motor and said auxiliary poiser frame, respectively, substantially as and for the purpose specified.

2. In an aerial vessel, the combination with a main frame, of a glider frame arranged thereon, a motor pivotally attached to said main frame, a screw propeller attached to the crankshaft of said motor, a pendulum supported by said main frame and adapted to swing in directions at right angles to each other around two pivots, an upwardly extending bar rigidly fastened to one of said pivots, a connecting rod pivoted to said bar and said motor, and connections between said pendulum and said glider frame, substantially as and for the purpose specified.

1,022,794. SUPPORT FOR ARTICLES TO BE ELECTROPLATED. GEORGE A. LUTZ, Plainfield, N. J., assignor to American Circular Loom Company, Portland, Me., a Corporation of Maine. Filed Feb. 2, 1911. Serial No. 606,082. (Cl. 204—5.)



1. A cathode support for an article to be plated comprising a support provided with threads at its lower part, a pair of relatively movable members having a threaded bore receiving the first named threads, the meeting parts of said members being tapered to cause their expansion, the lower part of said members being pivotally connected together to permit their expansion in parallel relation to interiorly grip the inner wall of the article.

2. A cathode support for an article to be plated comprising a support provided with threads at its lower part, a pair of relatively movable members having a threaded bore receiving the first named threads, the meeting parts of said members being tapered to cause their expansion, the lower parts of said members being provided with hinge members having laterally elongated slots and a pintle passing through said slots to permit lateral parallel movement of said parts.

3. The combination of a cathode provided with a hanger, with a support movably and detachably carried by said hanger and provided at its lower part with expansible members to fit within the bore of an article to be plated to suspend the latter and expose its exterior surface.

operate therewith and produce a magnetic field, said member being split into two parts and having a space block between one of said parts and said pole pieces, and clamping means coöperating with said pole pieces to force both parts of said member into firm engagement with each other and with said pole pieces and thereby firmly position the parts of said member in definite relation to each other and to said pole pieces.

2. In an electrical measuring instrument, the combination with a magnet having a pole piece, of a coöperating magnetic member mounted adjacent said pole piece to produce a magnetic field, said member being split into two parts and having a spacing rib between one of said parts and said pole piece, and clamping means coöperating with said pole piece to force the other part of said member toward said pole piece, thereby firmly clamping the parts of said member to each other and to said pole piece.

3. In an electrical measuring instrument, the combination with a magnet having pole pieces, of a core mounted between said pole pieces and split into two parts with a spacing rib between one of said parts and said pole pieces to space said core from the pole pieces, and clamping means whereby pressure is applied to the other part of said core in line with the spacing rib to clamp the parts of said core to each other and to the pole pieces.

4. In an electrical measuring instrument, the combination with a magnet having confronting concave pole pieces with a gap in the magnetic circuit of said pole pieces between the adjacent ends of said pole pieces, of a cylindrical core mounted concentric with said pole pieces and split into two parts along a plane at right angles to said gap, one of said parts having a spacing rib wider than said gap and in engagement with both pole pieces, and means coöperating with said pole pieces and the other part of said core to wedge both parts of said core together in fixed relation to said pole pieces.

5. In an electrical measuring instrument, the combination with a magnet having confronting concave pole pieces with their adjacent ends secured to space blocks of non-magnetic material, of a cylindrical core mounted concentric with said pole pieces and split into two parts along a plane at right angles to the plane of said space blocks, one of said parts having a spacing rib wider than said space blocks and positioned to span one space block, and a set screw threaded into the other space block to engage the other part of said core and thereby wedge the core in position.

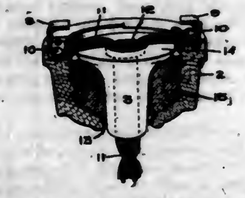
[Claims 6 and 7 not printed in the Gazette.]

1,022,796. CAR-COUPLING. WILLIAM S. MCGINNIS, Mahoningtown, Pa. Filed May 2, 1910. Serial No. 558,853. (Cl. 213—45.)



wardly flared yoke mounted on the last named car and forward of the link engaging means, the said yoke being adapted to laterally guidingly direct the coupling link to the engaging means for coupling thereof.

1,022,797. SHOCK-ABSORBING ROSETTE. SIDNEY B. PAINE, Newton, Mass., assignor to General Electric Company, a Corporation of New York. Filed Feb. 11, 1910. Serial No. 543,307. (Cl. 240—90.)



1. A shock-absorber for incandescent electric lamps, comprising an insulating body having an aperture, a vibration absorbing cushion supported on said body, and a block supported on said cushion and provided with a central aperture.

2. A shock-absorbing rosette for incandescent electric lamps, comprising a flanged tubular plug and a vibration absorbing cushion of fibrous material supporting said plug.

3. A shock-absorbing rosette for incandescent electric lamps, comprising a tubular plug having a tapering flange and a vibration absorbing cushion of fibrous material supporting said plug.

4. A shock-absorbing rosette for incandescent electric lamps, comprising a flanged tubular plug having a countersink in its upper end, and a vibration absorbing cushion of felt between said plug and the body of said rosette.

5. The combination with a base for a rosette, of a hollow body secured thereto, a flanged tubular plug inside said body and extending down through an opening in the bottom thereof, a vibration absorbing cushion of felt between said plug and said body, and a lamp cord knotted above said plug and rove through the same.

[Claims 6 and 7 not printed in the Gazette.]

1,022,798. BRACELET. MEYER L. ROBBINS, New York, N. Y. Filed Jan. 17, 1912. Serial No. 671,714. (Cl. 63—5.)



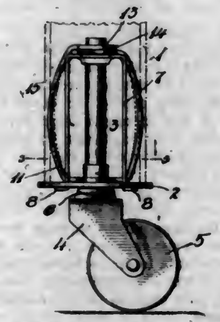
plates fitting between said outer and inner plates of the outer link, and connected at one end by a bar, the opposite ends of said side plates being connected by a pin, and provided with lugs extending over the edge of the outer link to assist in retaining the two links in their proper relative positions, and a spring contained within the assembled links, and bearing at one end against one of the end plates of the outer link, and at the opposite end against the pin connecting the side plates of the inner link, substantially as described.

1,022,799. METHOD OF PRODUCING AN ALLOY OF TITANIUM WITH LEAD. AUGUSTE J. ROSSI, Niagara Falls, N. Y., assignor to The Titanium Alloy Manufacturing Company, New York, N. Y., a Corporation of Maine. Original application filed Jan. 6, 1911, Serial No. 601,167. Divided and this application filed Jan. 30, 1912. Serial No. 674,258. (Cl. 75—17.)

1. The method of producing an alloy of titanium with lead which comprises bringing together plumbic material, titanic acid and carbon, and subjecting the combination to a temperature sufficient to insure production therefrom of molten lead and molten titanium.

2. The mode of producing an alloy of titanium with lead which comprises bringing together oxid of lead, oxid of titanium and carbon, and subjecting the combination to a temperature sufficient to insure reduction of said oxids by said carbon and then withdrawing and cooling the resulting metallic product.

1,022,800. CASTER. MARTIN B. SCHENCK, deceased, Meriden, Conn., by William A. Schenck, executor, Meriden, Conn., assignor to The M. B. Schenck Company, Meriden, Conn., a Corporation of Connecticut. Filed Jan. 27, 1912. Serial No. 673,828. (Cl. 16—4.)

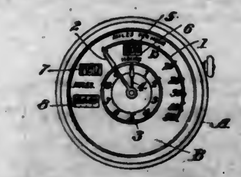


1. In a caster, the combination of a caster wheel, yoke and pintle with a supporting disk surrounding said pintle, a centering frame secured to said disk and adapted to engage the inner surface of a tabular leg, said pintle having its upper end passing through said frame and engaged

an inverted U-shaped centering frame secured to said disk, said pintle having its upper end passing through said frame and engaged thereby, and a spring frame having a closed end adjacent to said disk and two independently movable arms loosely embracing said pintle said spring frame extending through notches located in the lower ends of the arms of said centering frame and adjacent to said disk.

5. In a caster, the combination of a caster wheel, yoke and pintle with a supporting disk surrounding said pintle, an inverted U-shaped centering frame secured to said disk, said pintle having its upper end passing through said frame and engaged thereby, and a spring frame having a closed end adjacent to said disk and two independently movable arms embracing said pintle above said centering frame, said spring frame extending through notches located in the lower ends of the arms of said centering frame and adjacent to said disk and having its lower end partially surrounding said pintle, said centering frame having notches at its upper end which receive the upper ends of the arms of said spring frame.

1,022,801. INSTRUMENT FOR INDICATING SPEED AND RUNNING TIME OF MACHINES. RALPH SHIPMAN, Sunbury, Pa. Filed Apr. 5, 1910. Serial No. 553,610. (Cl. 235—104.)



1. In an instrument for indicating the speed or running time of a machine, a clock train, two springs adapted to operate alternately and independently for operating said train, and means operated by the machine to which the instrument is applied for applying tension to said springs.

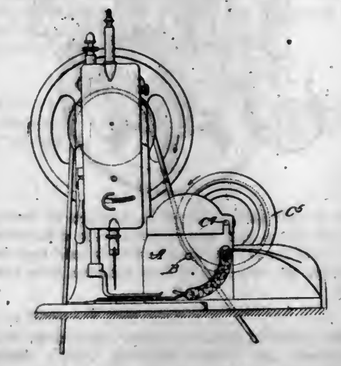
2. In an instrument for indicating the speed or running time of a machine, the combination with a clock train, and a main spring for operating the same, of means operated by the machine to which the instrument is applied for alternately applying tension to the main spring and then permitting said spring to relax during fixed intervals in the travel of the machine, and means operated by the machine, independently of the main spring, for applying driving force to the clock train while the main spring is inoperative, during such intervals.

3. In an instrument for indicating the speed or running time of a machine, the combination with a clock train, and a main spring for operating the same, of means operated by the machine to which the instrument is applied for alternately applying tension to the main spring and then permitting said spring to relax during fixed intervals in the travel of the machine, and means operated by the machine for applying driving force to the clock train while the main spring is inoperative, during such intervals.

on said cluch member and engaging the teeth of said wheel, and means for oscillating said clutch member comprising a main spring for turning said clutch member in one direction, means operated by the machine to which the instrument is applied for putting said spring under tension, and means, also operated by said machine, for moving the clutch member in the opposite direction at fixed intervals in the travel of the machine.

[Claims 6 to 10 not printed in the Gazette.]

1,022,802. PLAITING DEVICE. JOHN J. TEMPLE, Kalamazoo, Mich. Filed June 7, 1909. Serial No. 500,714. (Cl. 112—18.)



1. In a plaiter, a pair of forks which are adapted simultaneously to engage the material to be plaited, and means for rotating the forks in opposite directions to move the material oppositely upon itself.

2. In a plaiter, a pair of forks which are adapted simultaneously to engage the material to be plaited, means for rotating the forks in opposite directions to move the material oppositely upon itself, and means for withdrawing the forks from the fold thus made.

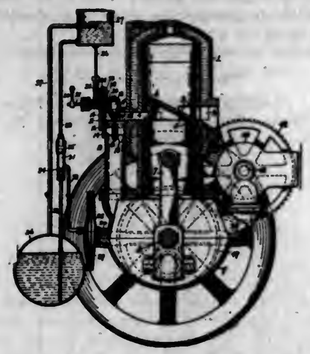
3. In a plaiter, a fork between the tines of which the material to be plaited may be placed, means for advancing the fork in the line of the feed, a gear connected to the fork, and a stationary gear with which said first-named gear may engage in its movement to rotate the fork to fold the material upon itself.

4. In a plaiter, a pair of forks which are adapted simultaneously to engage the material to be plaited, means for advancing the forks in the line of the feed and means for rotating the forks in opposite directions to fold the material oppositely upon itself.

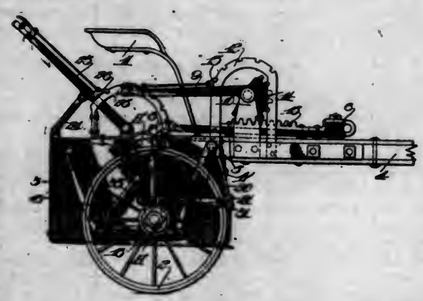
5. In a plaiter, a pair of forks between the tines of which the material to be plaited may be placed, means for advancing the forks, gears connected to the forks, and stationary gears on opposite sides of the path of the forks with which the gears attached to the forks may respectively engage, whereby the forks may be rotated in opposite directions.

[Claims 6 to 25 not printed in the Gazette.]

supply, a pipe connecting said source of supply with said feed chamber, a valve for regulating the flow of fuel to said chamber, a check valve in said pipe leading from the source of gasolene supply to prevent the pressure in the air passage during the period of compression from forcing the gasolene out of said feed chamber in advance of the opening of said air valve, and means operatively associated with said air valve for actuating the valve in said feed chamber to discharge the contents of said chamber onto the lifted air valve.



1,022,804. WHEELED SCRAPER. GEORGE M. WALLACE, Yuba City, Cal. Filed May 22, 1911. Serial No. 628,715. (Cl. 37—33.)



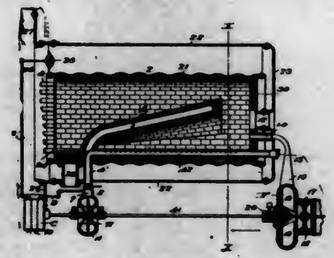
1. A self-loading scraper and carrier, consisting of a wheeled crank axle, a box journaled and suspended upon said axle, a pole fixed to a rigid frame, a draft bar slidable with relation to the pole, a rocker arm connecting the rear of the draft bar with the crank axle, and means to lock the draft bar in position, said means including a pinion and a part carried thereby adapted to latch with the fixed part of the frame said draft bar having a toothed surface engaged by said pinion

crumed lever, a toothed pinion carried thereby above the draft bar and engaging the toothed surface thereof, a pawl carried by the lever, and a segmental rack adapted to be engaged by the pawl whereby the crank axle may be turned to raise or lower the box.

4. In a loading and carrying apparatus, a wheeled crank axle, a load receiving and carrying box suspended therefrom a rigid pole, draft mechanism and connections therewith whereby the axle may be turned to raise or depress the box, said mechanism including a horizontal slidable draft bar having a toothed surface, and a manually operated pinion for moving the draft bar and holding means for holding the pinion to prevent movement of the draft bar.

5. In a loading and carrying apparatus, a wheeled crank axle, a load receiving and carrying box suspended therefrom having an independently hinged gate with link connections to the crank portions of the axle, means for raising and depressing the box, a lever pawl and rack mechanism and connections between the lever and the rear of the box whereby it is maintained in substantially horizontal position while being raised and lowered, said lever being movable to tilt the box and change the load when said box is in its elevated position.

1,022,805. APPARATUS FOR FEEDING FINE FUEL. JOHN A. WELTON, Canal Dover, Ohio. Filed May 29, 1911. Serial No. 630,093. (Cl. 110—28.)



1. In a mechanism for feeding fine fuel, the combination with a fire-box, of an arch within the same having a flue or passage extending through it, a twyer in the lower part of the fire-box below said arch and discharging upwardly and adapted to blow a pilot fire of coarse coal and to maintain the fine fuel in suspension while being burned, an air blower connecting with the twyer, and fuel feeding elements adapted to inject fine fuel and air into the space between the twyer and the arch.

2. In a fuel feeding mechanism, the combination with a fire-box or furnace, of an arch within the furnace and extending upwardly from the rear toward the front end, said arch having an air flue or passage through it, an upwardly directing twyer in the lower part of the furnace below said arch acting to maintain the fuel in suspension while being burned, means for feeding air under pressure to the twyer and to the passage through the arch, valves

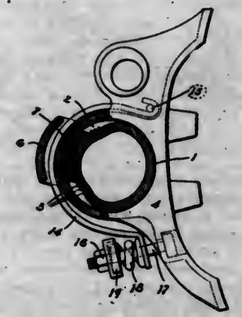
in suspension under the arch, said twyer adapted to blow a pilot fire of coarse coal over which fire the injected fine fuel is burned.

4. In a mechanism for feeding fine fuel the combination with a fire-box, of an arch built therein and inclining upwardly from the rear toward the front end, an upwardly directing twyer in the lower part of the fire-box below the arch acting to maintain the fuel in suspension while being burned, means for admitting air under pressure to the twyer, said arch having a flue or passage through it opening into the fire-box near the upper front end, means for admitting air to said passage, means for controlling the admission of air to the twyer and passage in the arch, and means for injecting fine fuel and air through the front end of the fire-box whereby the fuel is burned in suspension under the arch, said twyer adapted to blow a pilot fire of coarse coal over which fire the injected fine fuel is burned, said fire-box having an internal lining of refractory material.

5. The combination with a fire-box, of an arch built within the same and inclining upwardly from the rear to the front end said arch having an air passage through it opening into the upper front end of the fire-box, of an upwardly directing twyer extending along the lower portion of the fire-box below the arch and piercing the front end of the fire-box, and having a closure for the outer end affording access to the interior of the twyer, and means for supplying air under pressure to the twyer, said twyer discharging upwardly and adapted to blow a pilot fire of coarse fuel and maintain fine fuel in suspension while being burned, and means for feeding fine fuel above the twyer and into the space between said twyer and arch whereby the fuel is burned in suspension under the arch and the products of combustion are mixed with air delivered through the arch near the upper front end of the same.

[Claims 6 and 7 not printed in the Gazette.]

1,022,806. ADJUSTABLE BRAKE-HEAD. EDWARD L. WHITE, Chicago, Ill., assignor to Chicago Railway Equipment Company, Chicago, Ill., a Corporation of Illinois. Original application filed July 6, 1909, Serial No. 506,048. Divided and this application filed June 27, 1910. Serial No. 569,111. (Cl. 188—28.)



4. A device of the character described comprising a brake head, a brake beam carrying the head and having a circumferential groove, and an exteriorly-arranged leaf spring embracing a portion of said head, the ends of said leaf spring being attached to said head and the middle portion thereof passing through an opening in the head, whereby the head is held in place on the beam and is capable of automatic adjustment therearound, and the said groove being only on one side of said beam whereby when the brake head is turned a portion of a revolution to displace said groove, with respect to its coöperating part, said head may be removed from the beam.

5. A device of the character described comprising a brake head and a curved leaf spring arranged externally of the head and sprung around the beam for holding the head in adjusted position, the said spring having its ends retained by the head.

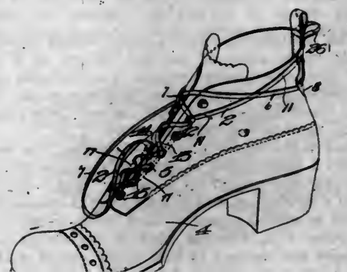
[Claims 6 to 15 not printed in the Gazette.]

1,022,807. NECKTIE-HOLDER. ALBERT WIEGEL, Cassel, Germany. Filed Aug. 16, 1911. Serial No. 644,465. (Cl. 24—56.)



A necktie holder consisting of an integral piece of sheet metal stamped and pressed to form a V-shaped housing, comprising a front part with a central, upwardly opening slot and with stop-plates at the upper edges, fastening members, and side parts angularly interposed between said front part and said fastening members, said side parts having longitudinal slots terminating in rearwardly extending enlargments at the top, to permit the insertion or removal of a collar button beneath said stop plates, substantially as and for the purpose set forth.

1,022,808. SHOE-LACING DEVICE. HENRY B. WOODS, San Francisco, Cal. Filed Aug. 29, 1911. Serial No. 646,584. (Cl. 36—50.)



ed in the eyelets of the lower part thereof; thence continuing up in tightening strands on the side of the shoe and to the rear, said strands being passed through the perforations in and crossed over the stay and then locked beneath the girdling part at the rear of the vamp.

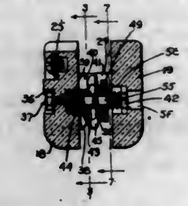
3. In a shoe, a fastening lace, a vamp having eyelets and hooks, said lace having a band portion encircling the rear of the vamp, stretches extending down through eyelets of said hooks under the vamp edges and being laced through eyelets therein, and tightening strands engageable with hooks of the shoe.

4. In a shoe, a fastening lace, a vamp having eyelets and eyelet hooks, said lace having a band portion encircling the rear of the vamp, stretches extending down through eyelets of said hooks and being laced through eyelets therein, and tightening strands engageable with hooks of the shoe.

5. In a shoe, a vamp having eyelets and eyelet hooks, a stay on the back of the vamp having perforations, and a lace threaded in the perforations in the stay and running around the sides of the vamp and through eyelet hooks; thence down beneath and adjacent to the vamp edges, passing out through eyelets adjacent to the lower portion of the vamp, the lace then being looped through the lower diagonally opposite eyelets to form a double cinch; thence being laced up through the upper eyelets and having tightening strands engageable with the eyelet hooks.

[Claim 6 not printed in the Gazette.]

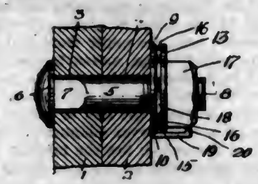
1,022,809. ELECTRIC SWITCH. LINN B. ABBOTT, Bridgeport, Conn., assignor to Harvey Hubbell, Incorporated, Bridgeport, Conn., a Corporation of Connecticut. Filed June 26, 1911. Serial No. 635,418. (Cl. 175—280.)



1. The combination with a shell having a centrally arranged chain guide at one end thereof, of a pair of spaced insulating blocks arranged longitudinally of said shell, switch mechanism between said blocks, and lips extending inwardly from said shell between said blocks and engaging the opposite faces thereof.

2. In a device of the character described, the combination with a shell having a centrally arranged chain guide at one end thereof and an insulating lining within said shell, of a pair of spaced insulating blocks arranged longitudinally of said shell, one of said blocks having a recess in its outer face, a bridge piece in the circuit lying in

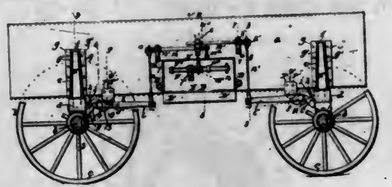
2. In a nut locking device, the combination with a bolt and nut, of washers arranged upon said bolt and held in spaced relation with respect to each other, a locking member engaging the nut, prongs carried by said member and extending between said washers and having the ends thereof clenched, and lugs carried by said member and spacing the latter relatively to said nut whereby said prongs can be pried from between said washers.



3. In a nut locking device, the combination with a bolt and nut, of a washer mounted upon the bolt, a washer mounted upon the bolt and having laterally projecting means engaging the other of the washers for maintaining said washers in spaced relation with respect to each other, a spaced locking member engaging the nut, and prongs carried by said member and extending between said washers and engaging the bolt, said prongs maintained in clenched position with respect to the bolt by the means carried by one of the washers.

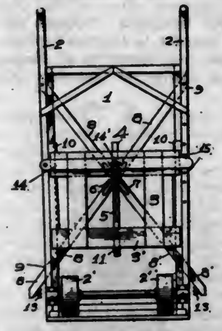
4. In a nut locking device, a bolt provided with a nut, a pair of washers positioned upon the bolt and spaced from each other, each of said washers having a portion of its edge flattened, a locking member engaging the flat edges of said washers and one of the facets of the nut, and prongs carried by said member and extending between the washers and engaging the bolt whereby the ends of the prongs will be clenched to hold said member in engagement with the nut.

1,022,811. WEIGHING MEANS OR SCALE FOR WAGONS. JAMES A. ASHLEY-REAVIS, Denver, Colo. Filed May 26, 1908. Serial No. 435,129. (Cl. 73—8.)



In combination, a wagon having a body and running-gear, roller bearing push blocks on said body, fulcrum levers adapted to engage said fulcrum supports and said push blocks, pivot blocks on said body, levers fulcrumed on said pivot blocks, connecting means between said fulcrum levers and said last named levers, a central beam, connecting means between said last named levers and said

lower ends of the clamp levers, vertically adjustable means slidably mounted within the truck frame for varying the throw of the said clamp levers, and a movable connection between said means and the clamp levers for permitting free movement of the latter without disturbing the adjusted position of the said adjustable means.



3. In a clamp truck, the combination of a pair of crossed fulcrumed clamp levers, of pivotal connections between the upper ends of the said levers and the truck-frame, clamping means carried by the lower ends of the levers, an adjustable frame slidable within the truck frame for varying the throw of the clamp levers, lock means for securing the adjustable frame in locked position relative to the truck frame, and devices for actuating the clamp levers without disturbing the adjusted position of the slide frame.

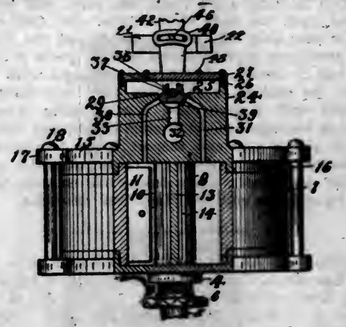
4. In a clamp truck, the combination with the frame thereof, of clamping devices pivoted thereto, an adjustable frame slidable within the truck frame for controlling the throw of the clamping means, connections between the adjustable frame and the clamping means for permitting free movement of the latter without disturbing the position of the slide frame, a lock bar fulcrumed to the said frame and pivoted at one end to the truck frame, and lock means for securing the free end of the said bar to hold the slide frame in any of its adjusted positions relative to the truck frame.

5. In a clamp truck, the combination with the truck frame having its opposing side pieces provided with longitudinal slots, of a pair of slotted crossed clamping levers pivoted at one end to said frame and working in and projected at opposite sides of the said slotted side pieces, an adjustable slide frame within the truck frame for regulating the throw of the clamping levers, of clamping means carried by the free ends of said levers, spring held foot operated devices for actuating the said levers, and means for holding the slide frame against movement during the operation of the clamp levers.

[Claims 6 and 7 not printed in the Gazette.]

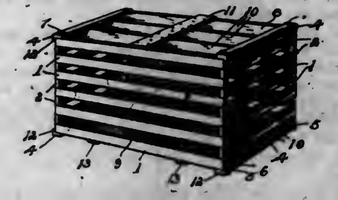
1,022,813. WATER-MOTOR. JOHN BAUER, Akron, Ohio. Filed July 27, 1911. Serial No. 640,806. (Cl. 138—1.)

partments of said cylinder and cause an intermittent, alternating partial revolution of said piston and shaft, and a tappet carried by said shaft adapted to oscillate said lever for shifting said valve.



2. A water motor comprising a cylinder, a shaft extending longitudinally therethrough, a piston within said cylinder embodying a radial blade fixedly secured to said shaft and provided with suitable packing, a partition within said cylinder extending from the lateral wall thereof inwardly and operating with said piston to divide the interior of said cylinder into two compartments, a valve-chest mounted on said cylinder and provided with a valve-seat at right angles to said shaft and having ports communicating with the two compartments of said cylinder and further provided with inlet and outlet passages, a valve mounted on said seat, a valve-stem for said valve arranged radially with respect to said shaft, an arm provided with a circular slot fixedly mounted on said valve-stem, and adapted to shift said valve for introducing a fluid alternately into the two compartments of said cylinder and cause an intermittent, alternate partial revolution of said piston and said shaft, an oscillating lever provided with a pin engaging said slot to oscillate said link for changing the position of said valve and a tappet carried by said shaft serving to oscillate said lever.

1,022,814. CRATE. WILLIAM BEEHLER, Owosso, Mich., assignor of one-half to Bertron K. Boyd, Owosso, Mich. Filed Aug. 11, 1910. Serial No. 576,640. (Cl. 217—36.)



the rabbet of one end member and moved endwise to disengage its opposite end from the other end member.

3. A crate comprising side and end slats having overlapping and pivotally connected ends, end cross bars each rabbeted to form a rib along one edge, said bars being secured upon the ends of the outer side slats with the ends of said slats within said rabbets and the ribs on the bars projecting outside of the vertical plane of the crate end, and a closure between the side slats with its ends within the rabbets of the cross bars, said closure being provided with a transverse fulcrum strip intermediate its ends engaging the side slats to support the closure and to permit one end thereof to be depressed out of the horizontal plane of the rib on the adjacent cross bar, whereby the closure may be moved endwise to disengage its opposite end from the other cross bar.

1,022,815. SEPARABLE ATTACHMENT-PLUG. REUBEN B. BENJAMIN, Chicago, Ill., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 21, 1908. Serial No. 463,763. (Cl. 173—343.)



1. An attachment plug made in two separable parts, a corrugated contact member carried by one of said parts, the other of said parts being insertible thereinto from the rear, and an end contact carried by said insertible part for engagement with the center contact of a socket.

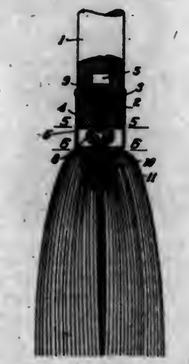
2. An attachment plug constructed in separable parts, one of said parts being insertible into the other from the rear and carrying a yielding contact for engagement with the center contact of a socket, binding terminals also carried by said insertible part, one of said binding terminals being electrically connected to said yielding contact, the other of said separable parts including a corrugated contact member, and means for making electrical connection between said corrugated contact member and the other of said binding terminals when said separable parts are put together.

3. An attachment plug made in separable parts, one of which is insertible into the other from the rear, an end contact carried by said insertible part for engagement with the center contact of a socket, binding terminals also carried by said insertible part, a side contact member carried by the other of said separable parts, and means for connecting said side contact with one of said binding terminals when said separable parts are put together.

contact, and coöperating means carried by said parts for electrically connecting said corrugated contact with the other binding terminal when one of said parts is inserted into the other.

[Claims 6 to 13 not printed in the Gazette.]

1,022,816. MOP-HOLDER. WALTER H. BILLINGS, Newton, Mass., assignor to Milton Chemical Company, Cambridge, Mass., a Corporation of Massachusetts. Filed Oct. 4, 1911. Serial No. 652,861. (Cl. 15—56.)



1. A mop holder comprising a handle having a threaded bore at one end thereof, a correspondingly threaded stem in said threaded bore, a pair of oppositely bowed map engaging jaws having their free ends bent toward each other and movably mounted on the end of said stem, a cap on the end of said handle and having bearings adapted to contact with said jaws when said stem is screwed in to force said free ends toward each other to hold a mop.

2. A mop holder comprising a handle having a bore in one end thereof, a threaded nut lodged in said bore, a nut retaining cap inclosing said handle end and having an external flange, a threaded stem fitting said nut, a pair of oppositely bowed flattened jaws having their free ends bent toward each other and movably mounted on said stem, and a second cap fitting over said nut retaining cap and having its edge bearing against said external flange, said second cap being slotted to partly receive said jaws but being of less width than the bowed portion of said jaws, whereby the lateral edges of said slot will constitute lateral bearings for forcing said jaw ends together when said stem is screwed in.

1,022,817. LOCKING DEVICE FOR TRAVELING-CASES, SAMPLE-CASES, &c. JOHN T. BINKLEY, Chicago, Ill. Filed Dec. 7, 1911. Serial No. 664,414. (Cl. 70—27.)



preparatorily-set, potentially-movable locking-member equipped with a plurality of catches, and key-controlled means for releasing said locking-member to permit retraction thereof.

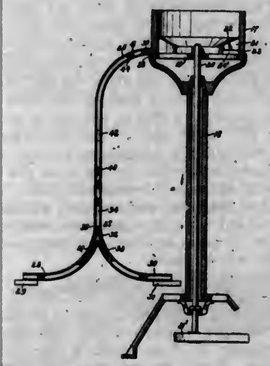
3. The combination with a case provided with parts adapted to close together, of a series of catches carried by one of said parts, and co-acting mechanism comprising a preparatorily-set, potentially-movable locking-member equipped with a series of catches adapted to automatically engage said first-named catches, and a key-controlled member adapted to free said locking-member to permit retraction thereof.

4. The combination with a case having parts adapted to close together, of a series of catches carried by one of said parts, and co-acting mechanism carried by the other of said parts, comprising a preparatorily-set, potentially-movable locking-member equipped with a series of catches adapted to engage said first-named catches, and a key-controlled rotatable and depressible plunger adapted to free said locking-member to permit retraction thereof.

5. The combination with the sections of a case, of a series of catches carried by one of said sections, and co-acting mechanism carried by the other of said sections, comprising a spring-retracted locking-member equipped with a series of catches adapted to automatically engage said first-named catches, means for latching said locking-member in "set" position against the force of its retracting spring, and key-controlled means for releasing said locking-member from its latched condition to permit retraction of the locking-member.

[Claims 6 to 11 not printed in the Gazette.]

1,022,818. AUTOMATIC FEEDER FOR THE METALLIC CAPS OF CROWN-CORKS. ALEXANDER BOGDÁNFFY, New York, N. Y., assignor to International Cork Company, Brooklyn, N. Y., a Corporation of New York. Filed Apr. 20, 1911. Serial No. 622,386. (Cl. 113—114.)



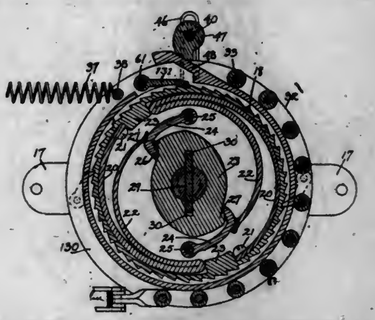
In an apparatus for feeding metallic caps, the combina-

material and rigidly secured to and about the upper end of the body, the inner walls of said band being parallel, and a closure having a cylindrical portion tightly fitting the inner wall of the band from the upper edge of the



latter to the upper edge of the can body, the lowermost portion of the cover resting upon the upper edge of the can body, and the cover being provided with a downwardly opening chamber entirely above the cone shaped body.

1,022,820. STARTER FOR INTERNAL-COMBUSTION ENGINES. GEORGE G. F. BOSWELL, Indianapolis, Ind., assignor of one-half to John L. Peetz, Indianapolis, Ind. Filed Feb. 6, 1911. Serial No. 606,695. (Cl. 123—185.)

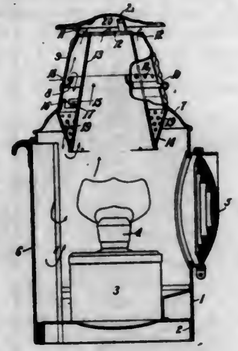


1. Starting means for internal combustion engines including a longitudinally movable starting shaft adapted to be moved into and out of engagement with the engine shaft, a spring tending to push said starting shaft into engagement with the engine shaft, means for holding said

said starting shaft, revoluble actuating means mounted on said starting shaft for actuating the same, a connection between said actuating means and the starting shaft arranged to transmit power to said starting shaft and permit the starting shaft to have reverse movement independently of said starting means in the case of back-firing of the engine, and means actuated by said revoluble actuating means for disengaging said rod from the groove in said shaft.

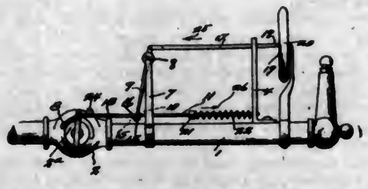
3. Starting means for internal combustion engines including a longitudinally movable starting shaft adapted to be moved into and out of engagement with the engine shaft and provided with a peripheral groove, a spring tending to push said starting shaft into engagement with the engine shaft, a rod radially movable in said groove for holding said shaft out of engagement with the engine shaft, a ratchet wheel revolubly mounted in said starting shaft for actuating the same, a cam mounted on said shaft so as to rotate therewith and yet permit the longitudinal movement of the shaft and provided with beveled shoulders, pawls pivoted to said ratchet wheel with beveled ends to engage said shoulders, springs carried by said ratchet wheel which press the shoulders into engagement with said cam, a ring surrounding the ratchet wheel, a pawl carried by said ring for engaging and actuating said ratchet wheel, means for giving the ring revoluble movement, and an inclined projection on said ring adapted to cause the disengagement of said rod from the groove in the starting shaft.

1,022,821. LANTERN OR LAMP. CHARLES C. BRIAND, Revere, Mass., assignor to Peter Gray & Sons, a Corporation of Massachusetts. Filed Oct. 8, 1908. Serial No. 456,838. (Cl. 240—51.)



1. In a lantern, a body casing having an air chamber in its top consisting of an inner imperforate tube and an outer casing having holes mid-way of its height; a perforated plate at the top of the casing having an inner hole to receive the top of the imperforate tube; an outwardly

1,022,822. AUTOMATIC GAS CUT-OFF. ABRAM M. C. BUBB, Woodbridge, Va. Filed Nov. 9, 1911. Serial No. 659,359. (Cl. 67—117.)



1. In combination, a burner tube having a valve cock including a valve member, the valve member having a lug, a pair of brackets mounted on the burner tube, an oscillatory member pivoted in one of the brackets, a bar having one end slidably mounted in the other bracket, a pawl adapted to engage the lug to move the valve member, means for hingedly connecting one end of the pawl and the bar to the lower end of the oscillating member, a bar pivoted to the upper end of the oscillating member and slidably mounted in the upper end of one of the brackets, means adapted to be expanded by the heat of the flame from moving the second bar so as to set the pawl in engagement with the lug, and means for moving the first bar and the pawl for closing the valve member when the first means become cold after the flame is extinguished.

2. In combination, a burner tube having a valve cock including a valve member, the valve member having a lug, a pair of brackets mounted on the burner tube, an oscillatory member pivoted in one of the brackets, a bar having one end slidably mounted in the other bracket, a pawl adapted to engage the lug to move the valve member, means for hingedly connecting one end of the pawl and the bar to the lower end of the oscillatory member, a bar pivoted to the upper end of the oscillating member and slidably mounted in the upper end of one of the brackets, means adapted to be expanded by the heat of the flame from moving the second bar so as to set the pawl in engagement with the lug, and a spring for moving the first bar and the pawl for closing the valve member as the first means become cold after the flame is extinguished.

3. In an automatic gas cut-off, a burner tube having a valve cock including a valve member provided with a lug, an oscillatory member, a sliding bar and a pawl hingedly connected to the lower end of the oscillatory member, means for actuating the oscillatory member for setting the pawl in engagement with the lug when the valve member is in open position, the means adapted to be actuated from the heat of the flame, and a spring placed under tension when the pawl is set in engagement with the lug, the spring adapted to move the bar and the pawl, which in turn closes the valve member.

1,022,823. GRAVITY-CARRIER. HERMAN JOSEPH BUCK, Minneapolis, Minn., assignor to Mathews Gravity Carrier Company, St. Paul, Minn., a Corporation. Filed Dec. 21, 1910. Serial No. 598,651. (Cl. 193—1.)

operative position and lowering the movable portion of said carrier section to an inoperative position simultaneously.

2. A gravity carrier consisting of fixed and movable sections, each having side rails and anti-friction wheels mounted thereon, a switch section also composed of side rails and anti-friction wheels, one of the side rails of said movable section being notched to receive the outer rail of said switch section and means for raising both rails of said switch section and simultaneously lowering said movable section or raising said movable section and lowering both rails of said switch section.

3. A gravity carrier comprising a straight carrier section having side rails and anti-friction wheels mounted thereon, said straight carrier section having a vertically movable portion capable of being lowered so that its anti-friction wheels are below the level of the other wheels of said straight carrier, a curved switch section also composed of side rails and anti-friction wheels mounted thereon, one rail of said straight section having a notch therein to receive the outer rail of said switch section, and means for lowering the movable portion of said straight section and lifting both rails of said switch section simultaneously.

4. A gravity carrier comprising a carrier section composed of side rails and anti-friction wheels thereon, a vertically movable switch section having curved side rails and wheels thereon, a rock shaft, an arm mounted thereon, a link pivotally connecting said arm with one end of said switch section and means operatively connecting said arm with the opposite end of said switch section, whereby both ends of said section will be raised or lowered simultaneously.

5. A gravity carrier comprising a straight section having a vertically movable portion and provided with anti-friction carrier wheels, a curved switch section also vertically movable, a rock shaft having an operating means, arms 16 and 17 mounted on said rock shaft, links connecting said arms respectively with one end of said switch section and with the corresponding end of the vertically movable portion of said straight carrier section, an arm 20 pivoted near the opposite end of said switch section, a link pivotally connecting said arm 20 with the outer rail of said switch section, and a rod connecting said arms 17 and 20, whereby the outer rail of said switch section will be raised simultaneously with the receiving end of said section.

[Claims 6 to 8 not printed in the Gazette.]

1,022,824. INCUBATOR. LYMAN C. BYCE, Petaluma, Cal., assignor to Petaluma Incubator Co., Petaluma, Cal., a Corporation of California. Filed Dec. 5, 1910. Serial No. 595,655. (Cl. 119—40.)



way and the jacket of the heater, and controlling devices mounted in the inlet end of said connection, said controlling devices comprising a movable tube having a port adapted to open communication between the inlet end of said connections and the outlet from the subway.

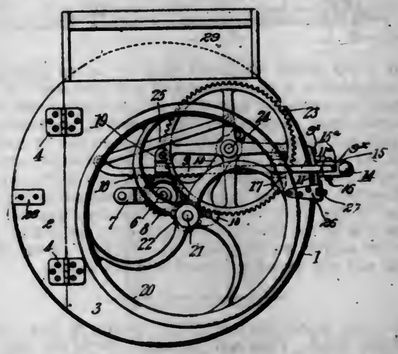
3. An incubator comprising a suitable casing provided with a subway in its bottom wall, a jacketed air heating device, a hot-air flue connected to the upper end of the heating device to discharge air into the incubator, connections between the bottom of the incubator and the heater to allow air to flow from the subway to the jacket of the heater, and means controlling the movement of air from the subway to the heating device.

4. An incubator comprising a suitable casing provided with a subway in its bottom wall, a jacketed air heating device, a hot-air flue connected to the upper end of the heating device to discharge air into the incubator, connections between the bottom of the incubator and the heater to allow air to flow from the subway to the jacket of the heater, and a controller through which fresh air may be admitted to the connections with the lower end of the subway, said controller being movably mounted in said connections and having a port adapted to be brought into and out of register with the subway, to admit heated air from the latter to said connections.

5. An incubator having a double bottom forming a subway or chamber, screened openings in one end of the incubator allowing the passage of air from the interior of the incubator to the subway, and unitary means controlling the circulation of both heated and fresh air through the subway.

[Claims 6 and 7 not printed in the Gazette.]

1,022,825. GEARING FOR WASHING-MACHINES. HORACE CAMMACK, Des Moines, Iowa. Filed Nov. 19, 1906. Serial No. 344,038. (Cl. 74—50.)



1. A gearing for washing machines comprising a support, a vertical shaft mounted in the support, a pinion fixed thereto, a rack in mesh with said pinion, a large gear wheel arranged in a horizontal plane, a balance wheel above the large gear wheel, a pinion connected with

with the small pinion on the balance wheel, and a pitman connected to the large pinion and to the said rack.

3. The combination of a support, a hinged member on the support, a lever fulcrumed to the support on the side opposite from the hinges, said lever having a lateral extension and a pin in said lateral extension, a shaft mounted vertically in the hinged portion, a small pinion on the shaft, a rack in mesh with the small pinion, an arm pivoted to the rack and having a hook in one end designed to engage the pin in the lever, and to be detachable from said pin when the hinged portion is raised, a large pinion, means for operatively connecting the large pinion with said rack, a balance wheel on top of the hinged portion, a small pinion connected therewith, the latter being in mesh with said large pinion.

4. An operating device for washing machines, comprising a body, a lever fulcrumed to the body, an upright shaft on top of the body, a pinion thereon, an oscillating rack fulcrumed to the body and in mesh with the pinion, a large pinion in a horizontal plane mounted on the body a balance wheel arranged in a horizontal plane on the body above said large pinion, a small pinion connected with the balance wheel and in mesh with the large pinion, a pitman pivoted to the oscillating rack and detachably connected with said lever, and a second pitman pivoted to the first at one end and pivotally connected with the large pinion at its other end.

1,022,826. ANCHOR FOR CONCRETE CONSTRUCTION. FRANKLIN CHATFIELD, Minneapolis, Minn., assignor of one-fourth to E. J. Couper, one-fourth to F. M. Stowell, and one-fourth to C. L. Pillsbury, Minneapolis, Minn. Filed May 5, 1910. Serial No. 559,643. (Cl. 72—62.)

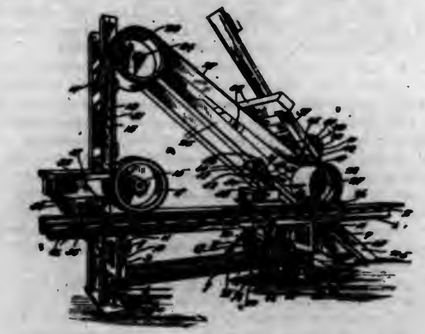


As a new article of manufacture, an anchor adapted to be embedded in a plastic material and comprising a hub having legs radiating therefrom and adapted to rest upon the false work when the concrete is poured, the lower end of said hub being supported by said legs out of contact with the false work and having a socket therein adapted to receive a hanger, and a removable plug fitting within said socket, the lower end of said plug extending into the plane of the outer extremities of the legs whereby the outer end of the plug will lie flush with the molded surface of plastic material upon the removal of the false work, and will normally conceal said hub socket.

1,022,827. SANDING-MACHINE. EDWIN G. COX, Walla Walla, Wash. Filed Mar. 29, 1911. Serial No. 617,769. (Cl. 51—13.)

1. In combination, a plurality of pulleys, a sanding or abrading belt traveling about the pulleys in triangular outline, a gravitating arm, a weight thereon, a cable connected to the gravitating arm, a pivoted lever, a pulley journaled on the lever, the cable passing over the pulley and connecting the lever and the weight, the lever constituting means for raising and lowering the weight, a ratchet on the lever, and a pawl on the gravitating arm to engage the ratchet.

2. In combination, a frame, a plurality of pulleys mounted in bearings thereof, an endless sanding belt traveling about the pulleys in triangular outline and having a vertically arranged traveling portion, a backing for said vertical traveling portion, a table arranged in front of the vertical traveling portion, the sanding belt having a horizontally arranged traveling portion, a feed bed thereunder, the horizontal traveling portion acting to smooth the flat surfaces of the work, while the vertical traveling portion acts to smooth the end of the work, the two functions performed by the belt being carried on simultaneously, a gravitating arm, a weight thereon, a pivoted lever on the frame, the frame having an elongated off-set portion provided with a slot through which the lever extends, the elongated off-set portion having ratchet teeth to be engaged by the lever, a pulley journaled on the frame, a cable connection passing over the pulley and connecting the lever and the weight, the lever constituting means for raising and lowering the weight, projections on the frame, screws passing through the projections and engaging the feed bed, whereby the feed bed may be simultaneously adjusted vertically toward or away from the sanding belt, screws passing through the projections at right angles to the first screws and threaded into the frame, hand wheels carried by the second screws between which and the frame the feed bed may be clamped after once having been adjusted vertically, said projections having slots through which the second screws pass, in order to permit the feed bed to be adjusted vertically.

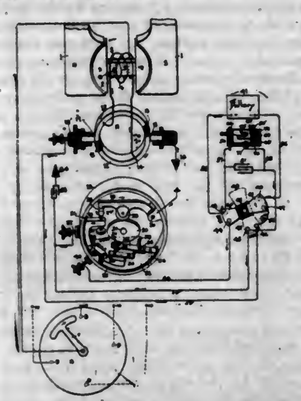


4. In combination, a frame, a plurality of pulleys, mounted in bearings thereof, an endless sanding belt traveling about the pulleys in triangular outline and having a vertically arranged traveling portion, a backing for said vertical traveling portion, a table arranged in front of the vertical traveling portion, the sanding belt having a horizontally arranged traveling portion, a feed bed thereunder, the horizontal traveling portion acting to smooth the flat surfaces of the work, while the vertical traveling portion acts to smooth the end of the work, the two functions performed by the belt being carried on simultaneously.

5. In combination, a frame having a plurality of pulleys, a sanding belt traveling about the pulleys in triangular outline and having a horizontally traveling portion, a gravitating arm, a weight thereon adapted to contact with the upper face of the sanding belt to increase the friction between the belt and the work, a pivoted lever on the frame, the frame having an elongated off-set portion provided with a slot through which the lever extends, the elongated off-set portion having ratchet teeth to be engaged by the lever, a pulley journaled on the frame, and a cable connection passing over the pulley and connecting the lever and the weight, the lever constituting means for raising and lowering the weight.

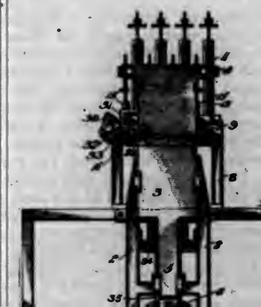
1,022,828. DUAL IGNITION SYSTEM. RICHARD H. CUNNINGHAM, New York, N. Y. Filed Feb. 9, 1910. Serial No. 542,879. (Cl. 123—148.)

1. In a dual ignition system, a magneto comprising primary and secondary windings, an external source of electricity in circuit with a primary winding of said magneto, a distributer in circuit with said secondary winding, a battery, means for throwing said battery in circuit with said primary winding, a commutator in said circuit and a circuit breaking appliance comprising an actuating member, and a movable contact for periodically interrupting current through said primary winding regardless of the source of current therethrough, said appliance further comprising additional circuit making and breaking parts, one at least of which is displacable by said actuating member immediately before the actuation of the movable contact aforesaid, whereby to economize the flow of current from said battery when the latter is in the circuit.



3. In a combined ignition system, a current generating apparatus including a primary and secondary winding, a distributer in circuit with said secondary winding, a battery, means for throwing said battery in circuit with said primary winding, a commutator in said circuit and a circuit breaking appliance comprising an actuating member, and a movable contact for periodically interrupting current through said primary winding regardless of the source of current therethrough, said appliance further comprising additional circuit making and breaking parts, one at least of which is displacable by said actuating member immediately before the actuation of the movable contact aforesaid, whereby to economize the flow of current from said battery when the latter is in the circuit.

1,022,829. MACHINE FOR CAPPING BOTTLES. WILLIAM J. CUNNINGHAM, Philadelphia, Pa. Filed Oct. 22, 1908. Serial No. 459,074. (Cl. 226—5.)



1. The combination with a can having an opening, of a receptacle detachably mounted in said opening, a detachable closure carried by the bottom of said receptacle, a plug movably mounted in the top of said receptacle, rods carried by the ends of said plug and one of said rods adapted to engage and detach said closure, and a handle carried by the other of said rods and adapted to replace said closure.

2. In a device of the character described, means for supporting a plurality of caps, a plunger, means for actuating the same, a plate, bearings for the mouth of a bottle carried by said plate, the latter having openings therein communicating with said bearings and a recess formed in said plate around said openings, into which the lowermost cap is adapted to be received and supported while the plate is actuated to a position beneath the supporting means, whereby the cap is directly received in position to be acted upon for insertion in the mouth of a bottle, said plate adapted to be moved to a position beneath said supporting means whereby the lowermost cap will be seated in the opening therein and said plate being adapted to be moved to a position beneath a plunger whereby the cap carried in said openings will be forced into the mouth of a bottle.

3. In a device of the character described, means for supporting a plurality of caps, a plunger, means for actuating the same, a plate, bearings for the mouth of a bottle carried by said plate, the latter having openings therein communicating with said bearings and a recess formed in said plate around said openings, into which the lowermost cap is adapted to be received and supported while the plate is actuated to a position beneath the supporting means, whereby the cap is directly received in position to be acted upon for insertion in the mouth of a bottle.

4. In a device of the character described, a hopper for receiving a plurality of caps, lugs projecting inwardly from said hopper, and a plate normally supporting the caps and having openings into which the lowermost cap enters when said plate is properly actuated, said lugs assisting in supporting said caps.

5. In a device of the character described, a hopper for containing a plurality of superimposed caps, a plate normally supporting said caps and having an opening at a suitable point therein and a recess in said plate at a suitable point around said opening into which the lowermost cap is received when the plate is moved to a position therefor, means suitably positioned for forcing the cap from said receiving means, a bottle head receiving means carried by and movable with said plate, means for actuating said forcing means and means for reciprocating said plate to alternately place the same first beneath the hopper to receive a cap and then beneath the forcing means.

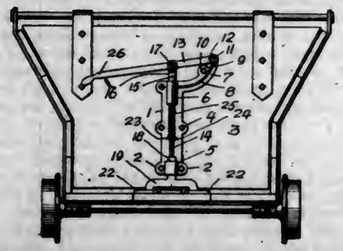
[Claims 6 to 13 not printed in the Gazette.]

1,022,830. PAINT-CAN. CLYDE W. DE NOON, Braddock, Pa. Filed Nov. 23, 1910. Serial No. 593,862. (Cl. 220—92.)



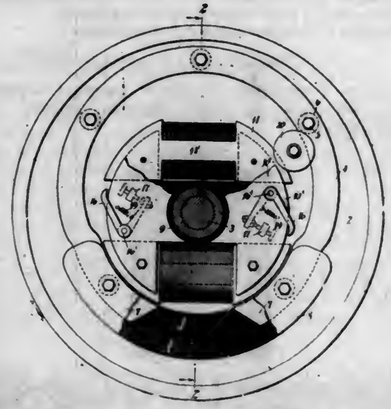
1. The combination with a can having an opening, of a receptacle detachably mounted in said opening, a detachable closure carried by the bottom of said receptacle, a plug movably mounted in the top of said receptacle, rods carried by the ends of said plug and one of said rods adapted to engage and detach said closure, and a handle carried by the other of said rods and adapted to replace said

to the outer face of the door and provided on its outer face at the upper and lower ends thereof with guides, a laterally and upwardly-projecting arm carried by the upper end of said plate, a lever pivoted at its inner end to the free end of said arm, a rod mounted for vertical movement in said guides, a key-shaped latch carried by the lower end of said rod and having beveled lugs adapted



for engagement with a latch plate, a head connected at one end to said rod above the upper guide and at its other end pivotally-connected to said lever intermediate the ends of the latter, a washer carried by the rod intermediate the guides of said plate, and a spring arranged on the rod between said washer and the upper guide of the plate, as and for the purpose described.

1,022,832. MAGNETO FOR INTERNAL-COMBUSTION ENGINES. ALFRED DURBIN, McConnelsville, Ohio. Filed Feb. 4, 1911. Serial No. 606,511. (Cl. 123—149.)



1. In an ignition system for gas engines, the combination of a fly-wheel, magnets mounted on the face of said fly-wheel and having pole pieces connected thereto, the said magnets being eccentrically mounted with respect

armature core having generating windings thereon located between said plates and supported by the same, and magnetic means operated by the engine for energizing the armature coils to generate an electro-motive force therein.

4. In an ignition system for internal combustion engines, the combination of a plate having a central hub or boss projecting therefrom, a pair of parallel plates mounted upon said boss and spaced from each other, an armature core having generating windings thereon located between said plates and supported by the same, a circuit breaker or timer mounted between said plates to control the circuit of said generating windings, and magnetic means operated by the engine for energizing the armature coils to generate an electro-motive force therein.

5. In an ignition system for internal combustion engines, the combination of a plate having means for mounting the same upon a shaft operated by the engine, a pair of parallel plates supported by said first-named plate and spaced from each other, an armature core having generating windings thereon located between said parallel plates and supported by the same, a circuit breaker or timer mounted between said parallel plates to control the circuit of the generating wipdings, and magnetic means operated by the engine for energising the armature coils to generate an electro-motive force therein.

[Claim 6 not printed in the Gazette.]

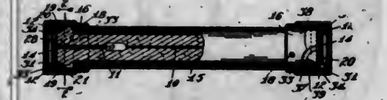
1,022,833. HAT-PIN-POINT PROTECTOR. CHARLES EKKER, Hammond, La. Filed June 30, 1911. Serial No. 636,176. (Cl. 24—155.)



A hat pin point protector comprising a sectional head adapted to be detachably mounted upon the shank of the pin and having the confronting faces of the sections thereof at the upper ends recessed to provide a tapering seat, a funnel shaped sleeve mounted in said seat and projecting beyond said head, said sleeve having its lower end positioned flush with the lower terminus of said seat, one of said sections having its inner face formed with a longitudinally extending recess with which the lower end of said sleeve communicates, apertured lugs carried by the inner face of the other of the sections of the head and extending into said recess, a spring pressed lever pivotally connected intermediate its ends to said lugs and provided with a nose extending parallel with the inner end of said sleeve, said nose adapted to engage the shank of a pin for locking the latter in the head, means connected to

head of the fuse strip, and a metallic terminal cap detachably applied to the end of the casing over the said disk and headed end of the fuse strip, said cap having elastic engagement with the headed end of the fuse strip.

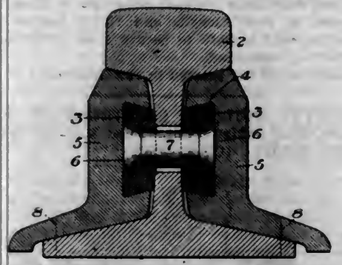
2. In an electrical fuse, in combination, a tubular shaft of insulating material, a metallic ferrule fixed upon each end of the shaft, a disk loosely seated against each of the ferrules, a fuse strip extending through the shaft and having its ends anchored to the disks, whereby the disks are held to their seats to close the ends of the shaft so long as the fuse strip remains intact, and a loose non-combustible packing filling the bore of the shaft about the fuse strip.



3. A rechargeable electric fuse comprising a shell of insulating material provided with a metallic ferrule at each end, a disk resting on said ferrule at each end of the shell, said disk being slotted, a fuse strip provided with longitudinally extending terminal strips at each end thereof, said terminal strips extending within the slots of said disk and being bent over at the ends, and terminal caps screwing on the end ferrules aforesaid and bearing on the bent over portions of said terminal strips of said fuse strip to make contact therewith.

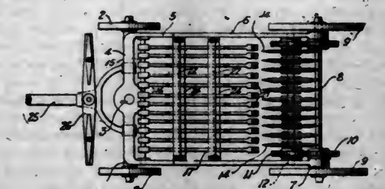
4. A rechargeable electric fuse comprising a shell of insulating material provided with a metallic ferrule at each end, a disk resting on said ferrule at each end of the shell, said disk being slotted, a strip provided with longitudinally extending terminal strips at each end thereof, said terminal strips extending within the slots of said disks and being bent over at the ends, and terminal caps screwed on the end ferrules aforesaid and elastically bearing on the bent over portions of said terminal strips of said fuse strip to make contact therewith.

1,022,835. RAIL-JOINT. ROY P. ETCHISON, Swissvale, Pa. Filed Dec. 27, 1911. Serial No. 668,154. (Cl. 239—9.)



4. In a boltless rail joint, a T-head rail having separately formed bars secured to opposite sides of its web by through connections, and splice bars with inner grooves engaging the retaining bars, the splice bars and rail having open-ended slots to receive means for preventing relative creeping, substantially as described.

1,022,836. SURFACE-TREATING MACHINE. FRANK I. FERENCZY, Wauseon, Ohio. Filed Apr. 27, 1911. Serial No. 623,703. (Cl. 55—12.)



1. A machine of the type described, comprising a front axle, wheels supporting the ends of said axle, a bolster pivotally mounted upon said axle, a rearwardly extending frame carried by said bolster, a shaft journaled in the rear end of said frame, rear wheels mounted upon the ends of said shaft, a shaft revolubly mounted in said frame, disks mounted on said shaft, means for imparting rotary movement to said shaft as the first mentioned shaft is rotated, a rod mounted in said frame near the forward end thereof, rearwardly extending arms carried by said rod, and depending teeth carried by the rear ends of said arms.

2. A machine of the type described, comprising a front axle, wheels supporting the ends of said axle, a bolster pivotally mounted on said axle, a rearwardly extending frame carried by the bolster, a shaft journaled in the rear end of said frame, rear wheels mounted upon the ends of said shaft, a second shaft revolubly supported by said frame, disks mounted on said second shaft, means for imparting rotary movement to said second shaft as the first mentioned shaft is rotated, a rod carried by said frame near its forward end, rearwardly extending arms carried by said rod, depending teeth carried by the free ends of said arms, and upper and lower transverse bars for limiting the movement of said arms.

1,022,837. PNEUMATIC HAMMER. CHARLES B. FRENCH, Kingston, Pa. Filed Mar. 18, 1911. Serial No. 615,324. (Cl. 121—20.)



a casing on said cylinder having an open end, an exhaust passage leading from the interior of said cylinder at one end to said casing, and a disk-valve on said valve-stem moving with said slide-valve and controlling the open end of said casing.

1,022,838. DENTAL BROACH. LEVI L. FUNK, Chicago, Ill. Filed Oct. 16, 1911. Serial No. 654,990. (Cl. 32—10.)

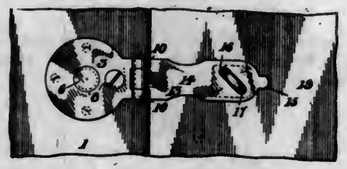


1. A broach, provided with a chisel shaped end having two faces, and said end concave at the intersection of said faces.

2. A broach provided with a chisel shaped end, having two faces, one of the faces of said end concave and extending beyond the axial line of the broach and said end concave at the intersection of said faces.

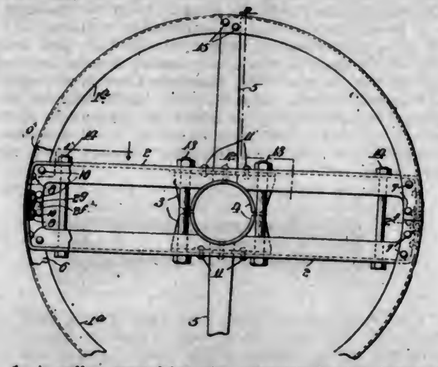
3. A broach provided with a chisel shaped end, having two faces, one of the faces of said end concave and extending beyond the axial line of the broach and said end concave at the intersection of said faces, and curved at the ends of said concaved intersection.

1,022,839. HASP-FASTENER. JOHN GERSCHI, Chicago, Ill. Filed Sept. 6, 1911. Serial No. 647,810. (Cl. 70—83.)



1. In a hasp and staple, a plate adapted to be secured to a stationary body, a head fixed upon said plate and inclosing said plate, a hasp pivotally connected to said head, a staple adapted to be secured to a movable body, and said hasp having a slot formed therein to receive

1,022,840. PULLEY. HENRY J. GILBERT, Saginaw, Mich. Filed May 23, 1904. Serial No. 209,335. (Cl. 64—18.)



1. A pulley comprising rim segments having inturned peripheral flanges, and spoke arms consisting of angle irons composed solely of two flanges interlocked with such peripheral flanges; substantially as described.

2. A pulley comprising rim segments having inturned peripheral flanges, which, at the meeting ends of such segments, are extended and folded back to form sockets, and spoke arms engaged by such sockets; substantially as described.

3. A pulley comprising rim segments having inturned peripheral flanges, which, at the meeting ends of such segments, are extended and folded back to form sockets, and spoke arms consisting of angle irons whose ends are engaged by such sockets; substantially as described.

4. A pulley comprising rim segments having inturned peripheral flanges, which, at the meeting ends of such segments, are extended and folded back to form sockets, and spoke arms consisting of angle irons, one of whose flanges is engaged by such sockets; substantially as described.

5. A pulley comprising rim segments having inturned peripheral flanges, which, at the meeting ends of such segments, are extended and folded back to form sockets, spoke arms consisting of angle irons, one of whose flanges is engaged by such sockets, and rivets passed through such flanges and sockets to secure such parts together; substantially as described.

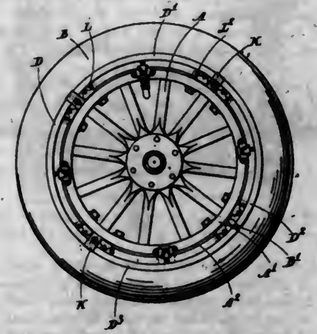
[Claims 6 to 32 not printed in the Gazette.]

1,022,841. BUILDING CONSTRUCTION. SECONDO GILETTI, East Oakland, Cal. Filed Mar. 25, 1911. Serial No. 616,844. (Cl. 25—131.)



in position, vertical core shells positioned between the wall-forming sections, said core shells being formed of tar-paper or like water-proof material having little inherent rigidity, and core supports removably fitting within the core shells and adapted to support the walls of the same against the pressure of the filling material when introduced around the core shells, said core-supports having corrugations, the apices of which form narrow lines of contact with the core-shells.

1,022,842. DETACHABLE RIM FOR RESILIENT TIRES. JOHN WILLIAM HALL and CYRIL BAYNES, London, England. Filed July 20, 1908. Serial No. 444,493. (Cl. 152—21.)



1. A rim divided transversely into a plurality of independent sections each arranged to be applied from one side of the tire and comprising a base portion to lie over the outer periphery of the wheel felly and having side flanges to receive the tire, which rim can as a whole be slid laterally on to and off from the felly, means operative when all the sections are in engagement with the tire to displace a section bodily in such direction as to expand the rim, and means for locking the sections to the felly when thereon, substantially as set forth.

2. A rim divided transversely into a plurality of independent sections each arranged to be applied from one side of the tire and comprising a base portion to lie over the outer periphery of the wheel felly and having side flanges to receive the tire, which rim can as a whole be slid laterally on to and off from the felly, the length of the sections being such that the diameter of the ring formed by placing them end to end with their concave faces toward a common center is less than the diameter of the felly, and means operative when all the sections are in engagement with the tire to displace a section bodily in such direction as to expand the rim, substantially as set forth.

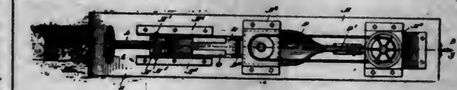
3. The combination of a resilient tire having beaded edges, a rim divided transversely into a plurality of independent sections each arranged to be applied from one side of the tire and comprising a base portion to lie over the outer periphery of the wheel felly and having inturned

register with that on the opposed end face of the adjacent section, whereby a transverse channel is provided between them, and a plurality of rotatable eccentric pins introduced into these channels of such dimensions as to approximately fill the same whereby as the pins are rotated, when all the sections are in position within the tire, the sections engaged by the pins are forced apart in a circumferential direction, substantially as and for the purpose set forth.

5. The combination of, a rim transversely divided into a plurality of independent sections having inturned edges to engage beads on the tire and transverse recesses on their end faces, the cross-section of each recess being of greater diameter in the radial direction of the rim than in the circumferential direction and the recess on one end face being arranged to register with that on the opposed end face of the adjacent section whereby a transverse channel is provided between them, and a plurality of rotatable eccentric pins introduced into these channels of such dimensions as to approximately fill the same whereby as the pins are rotated, when all the sections are in position within the tire, the sections engaged by the pins, are displaced bodily relatively to their companions, substantially as and for the purpose set forth.

[Claims 6 and 7 not printed in the Gazette.]

1,022,843. DITCHING-MACHINE AND TILE-DISTRIBUTER. ALBERTUS E. HANSON, Mason City, Iowa. Filed Feb. 16, 1911. Serial No. 608,885. (Cl. 37—53.)



1. A ditching machine and tile distributer, comprising a bed adapted to be drawn over the ground and having a lengthwise-extending opening, a standard on the forward portion of the bed, a second standard on the bed near the middle thereof, a spreader mounted to slide in the said opening in the bed and having a V-shaped front for cutting into the ground to form the ditch, the said spreader at its rear end being in the form of a chamber, a bracket on the upper forward portion of the spreader, a nut on the said bracket, a vertically disposed screw rod screwing in said nut, the said screw rod being journaled at its lower end in the bed and at its upper end in the forward standard, nuts held in the chamber at the rear end of the spreader, a vertically disposed screw rod screwing in said nuts and journaled at its upper end in said second standard, and a connection between the said screw rods to rotate the same in unison for raising and lowering the spreader.

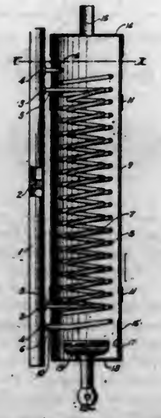
2. A ditching machine and tile distributer, comprising a bed adapted to be drawn over the ground, and having a lengthwise-extending opening, standards on the said bed, a spreader mounted to slide in the said opening and having a V-shaped front for cutting into the ground to form the ditch, the said spreader at its rear end being in the form of a chamber, vertically-disposed screw rods mounted to turn in the said standards, nuts having trunnions jour-

lengthwise-extending opening, standards mounted on the said bed, a spreader mounted to slide up and down in the said opening, manually-controlled means held on the said standards for raising and lowering the spreader, an abutment bar pivotally connected with the rear end of the said spreader, a nut having trunnions journaled on the bed, and a screw rod screwing in the said nut and engaging the abutment bar.

5. A ditching machine and tile distributer, comprising a bed adapted to be drawn over the ground and having a lengthwise-extending opening, standards mounted on the said bed, a spreader mounted to slide up and down in the said opening, manually-controlled means held on the said standards for raising and lowering the spreader, an abutment bar pivotally connected with the rear end of the said spreader, a nut having trunnions journaled on the bed, a screw rod screwing in the said nut and engaging the abutment bar, and a bearing for the said abutment bar to slide in, the bearing being pivoted on the said trunnions.

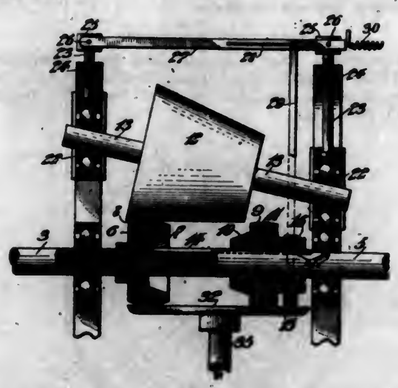
[Claims 6 to 8 not printed in the Gazette.]

1,022,844. HOT-WATER HEATER. JOHN A. HILL, Leechburg, Pa. Filed Apr. 14, 1911. Serial No. 621,130. (Cl. 122—13.)



A water heater comprising a vertically-disposed pipe provided with an integral partition to provide a cold water and a hot water section, said cold water section adapted to communicate with the sources of supply and said hot water section adapted to communicate with the boiler, a pair of coils of tubing having the upper convolutions thereof connected with the hot water section one above the other, the lower convolutions of said pair of coils connected with said cold water section one above the other, a vertically-disposed cylindrical shell inclosing said coils of tubing and from which extend the ends of said coils, said pipe disposed in parallelism with respect to said shell, said shell having its lower end open, a cap mounted

said main shaft, a driven shaft alined with said main shaft, a clutch member slidingly mounted on said driven shaft, an auxiliary friction cone mounted adjacent said members and normally engaging said driving member, means to shift said clutch member into engagement with said auxiliary cone, and means to move said auxiliary cone out of engagement with both said members at a predetermined time.



3. In a device of the character stated, a motor, a shaft therefor, a friction driving member fixedly secured on said shaft, a driven shaft alined with said main shaft, a clutch member slidingly mounted on said driven shaft, an auxiliary cone mounted adjacent said members and normally engaging said driving member, means to shift said clutch member into engagement with said auxiliary cone and means coöperating with the driving member to reverse the movement of said clutch member.

4. In a device of the character stated, a motor, a main shaft therefor, a friction driving member fixedly secured on said main shaft, a driven shaft alined with said main shaft, a clutch member slidingly mounted on said driven shaft, an auxiliary friction cone suitably mounted adjacent said members and adapted to normally engage said driving member, a lever adapted to shift said clutch member, and means operated by the movement of said lever at a predetermined time to shift said auxiliary cone out of engagement with said friction members.

5. In a device of the character stated, a motor, a main driving shaft therefor, a friction driving member fixedly secured on said main shaft, and provided with an internal cone face and an external friction surface, a driven shaft alined with said main shaft, a clutch member slidingly mounted on said driven shaft and having a cone surface adapted to engage said cone surface of said driven member and having a circumferential friction surface, an auxiliary cone member mounted adjacent said members, means to shift said clutch member to bring said latter circumferential surface into engagement with said auxiliary cone for a portion of the stroke of said member and to bring said

end of each of the shanks, the propeller blades being spaced from the hub so that one of the blades on each of the shanks will rotate at a distance from the hub greater than that at which the other propeller blades rotate, and means for holding the shanks in position relatively to the hub.

2. In a propeller a hub a shank adapted to move laterally relatively to the hub, means for securing the shank relatively to the hub, and two propeller blades mounted on the shank, one at each side of the hub.

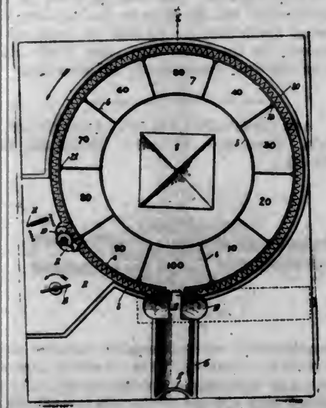
3. In a propeller a hub, a shank adapted to move laterally relatively to the hub, means for securing the shank to the hub, and two propeller blades disposed at an angle to each other mounted on the shank, one at each side of the hub.

4. In a propeller a hub, a shank extending obliquely relatively to the axis of the hub, and adapted to move laterally relatively to the hub, means for securing the shank to the hub in any one of a plurality of positions, and two propeller blades secured to the shank, one at each side of the hub.

5. In a propeller a hub, two shanks disposed at an angle to each other, each shank extending obliquely relatively to the axis of the hub, and secured to the hub, and two propeller blades mounted on each of the shanks, one at each side of the hub respectively.

[Claims 6 to 12 not printed in the Gazette.]

1,022,847. GAME. GUSTAVE J. JACCARD, New York, N. Y. Filed Nov. 21, 1911. Serial No. 661,502. (Cl. 46—56.)



1. Game apparatus of the kind described comprising a support mounted to rotate around an axis, means carried by said support constituting a plurality of compartments to revolve around the said axis as said support rotates, each of said compartments having an aperture in its wall, means for discharging a movable member into one of said compartments when the same are in motion, gear teeth formed upon the edge of said support, and means engaging said gear teeth to rotate the said support.

2. Game apparatus of the kind described, comprising

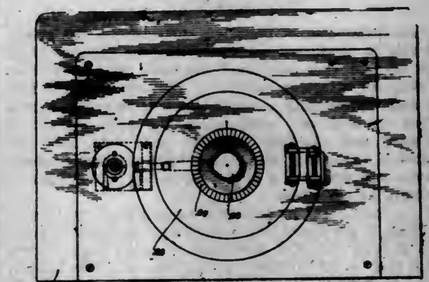
centric cylinders mounted upon said plate, partitions extending between the adjacent surfaces of said cylinders to divide the annular space between the said cylinders into a plurality of compartments, each of said compartments having an opening thereto in the wall of one of said cylinders, and fixed means for guiding a movable member toward the cylinder having the openings therein as said plate rotates, whereby, if the movement of the said member is properly timed, it will pass through an opening into one of said compartments.

4. Game apparatus of the kind described, comprising a plate, means for pivotally mounting said plate to rotate around its center, a pair of concentric cylinders mounted upon said plate, partitions extending between the adjacent surfaces of said cylinders to divide the annular space between them into a plurality of compartments, the outer cylinder having a plurality of openings therethrough, one of said openings leading into each of said compartments, and fixed means for guiding a movable member toward said outer cylinder when the plate is in rotation, whereby, if the movement of said member is properly timed, it will pass through one of said openings into one of said compartments.

5. Game apparatus of the kind described, comprising a plate, means for pivotally mounting the same to rotate around its center, said plate having gear teeth formed upon its circumferential edge, a pair of concentric cylinders mounted upon said plate, partitions extending between the adjacent surfaces of said cylinders, dividing the annular space therebetween into a plurality of compartments, the outer cylinder having a plurality of openings therethrough, each of said openings leading to one of said compartments, an inclined trough or guide having a reduced extension at one end terminating adjacent the said outer cylinder, and means for engaging the gear teeth on the plate to rotate the same, whereby a movable member rolling down in said trough will pass through one of the openings in the outer cylinder into one of said compartments.

[Claims 6 to 8 not printed in the Gazette.]

1,022,848. ELECTRIC PROTECTIVE CIRCUIT. OLE JACOBSON, Hamilton, Ohio, assignor to Herring-Hall-Marvin Safe Company, Hamilton, Ohio. Filed Sept. 1, 1908. Serial No. 451,206. (Cl. 177—316.)



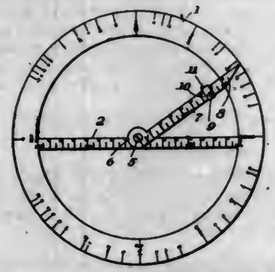
3. In a device of the character described, the combination with a door, of an electric circuit, an alarm operatively connected therewith, a combination lock for said door normally included in said circuit and carrying a circuit closed upon its shaft to complete said circuit, a shunt and a switch therein, located on the rear of the door casing and operable from the outside of said door for shunting the current around the lock.

4. In a device of the character described, the combination with a door, of an electric circuit, an alarm operatively connected therewith, a combination lock for said door normally included in said circuit and carrying a circuit closer upon its shaft to complete said circuit, a shunt and a switch therein, operable from the outside of said door for shunting the current around the lock, said switch being provided with a graduated indicator to indicate its position.

5. In a device of the character described, the combination with a door, of an electric circuit, an alarm operatively connected therewith, a combination lock for said door normally included in said circuit, and carrying a circuit closer upon its shaft to complete said circuit, a shunt and a switch therein located on the door casing for shunting the current around the lock, said switch being provided with a graduated indicator on the outside of said door casing to indicate its position.

[Claims 6 and 7 not printed in the Gazette.]

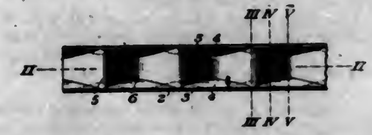
1,022,849. INSTRUMENT OF PRECISION. JOHN JASCOTT, Christopher, Ill. Filed Apr. 20, 1911. Serial No. 622,253. (Cl. 33—12.)



1. An instrument of precision, comprising a flat graduated ring, a graduated bar connecting the opposite inner edges of said ring positioned centrally with respect to the ring, an extension carried by the outer edge of said ring and representing a continuation of said bar, a boss carried by said bar intermediate the ends thereof, a graduated arm pivotally mounted upon said boss and adapted to swing over said ring, a slide adjustably mounted upon said arm, and a barrel carried by said slide, substantially, as described.

2. An instrument of precision comprising a flat graduated ring, a graduated bar connecting the opposite inner edges of said ring and positioned centrally with respect

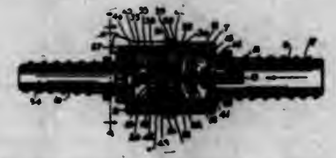
2. A concrete reinforcing bar having a plurality of continuous bonding faces, each of said faces having a series of adjoining depressions, each depression having four sloping faces, said faces sloping from the face of the bar to the bottom of the depressions, the inclined sides of each depression, which extend in a longitudinal direction, converging into like sloping faces of the adjoining depressions; substantially as described.



3. A rectangular concrete reinforcing bar having a plurality of bonding surfaces, each surface having a plurality of adjoining depressions, and each depression having four sloping faces, said faces sloping from the face of the bar to the bottom of the depressions, the inclined sides of each depression, which extend in a longitudinal direction, converging into like sloping faces of the adjoining depressions; substantially as described.

4. A square concrete reinforcing bar having adjoining bonding depressions in each face thereof, each of the depressions having four sloping faces sloping from the edge of the bar to the bottom of the depressions, the inclined sides of each depression, which extend in a longitudinal direction, converging into like sloping faces of the adjoining depressions, the depressions on opposite sides of the bar being diametrically opposite to each other and the depressions on the other two sides being staggered with relation thereto; substantially as described.

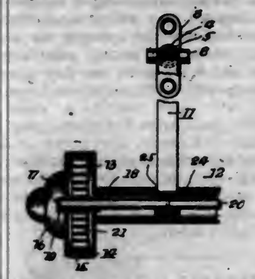
1,022,851. AIR COUPLING-VALVE. FRED KNACK, Cleveland, Ohio. Filed Mar. 31, 1911. Serial No. 618,238. (Cl. 137—30.)



1. The combination with a coupling member having a reduced extension, a bushing in the extension formed with a valve seat, and a loosely supported valve; of a second member formed with a finger projecting through the bushing for holding the valve unseated when the members are coupled, means for coupling the members, a spring arm attached to said member and a locking pawl carried by said arm adapted to engage recesses in the first member.

2. The combination with a coupling member having a reduced extension, a bushing in the extension formed with a valve seat, an integral perforated web and a valve and valve stem loosely supported therein; of a second member

at one end to the housings and at their other ends to said shaft, and spools carried by the shaft within the pole



and to which the lower ends of said flexible straps are connected.

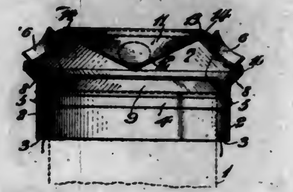
1,022,853. SUPPORT FOR ARTICLES TO BE ELECTROPLATED. GEORGE A. LUTZ, Plainfield, N. J., assignor to American Circular Loom Company, Portland, Me., a Corporation of Maine. Filed Jan. 7, 1911. Serial No. 601,468. (Cl. 204—5.)



1. A supporting device of the character described comprising a rod provided at its lower end with a head, and a support in angular form having a slot open through the angle of the support and extending partly into both walls of the support adapted to rest upon said head.

2. A supporting device of the character described comprising a rod having a head at the lower end and a reduced neck above the head, combined with a plate in angular form having a slot opening through the angle of said plate and extending into both its walls, one part of the slot being adapted to receive said head and the other

per portion, hot-air conduits extending from said upper portion, an inverted conical distributer supported upon said upper portion, and an annular upwardly and inwardly inclined deflector projecting at the upper end of the air-passage at a distance not less than the diameter of the same and projecting beneath the inlets of the hot-air conduits to intercept reverse air-currents in the same.



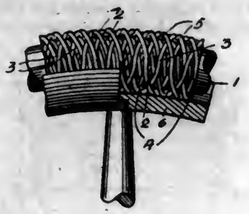
2. In a furnace, an inner and an outer casing forming an air-passage between them, a ring within the upper end of said outer casing and having an outwardly projecting flange resting upon the same, an annular top resting upon said flange and having an outwardly flaring lower portion and an inwardly inclined upper portion, hot-air conduits extending from said upper portion, an inverted conical cover supported upon the inner edge of the inwardly inclined upper portion of the top, and an annular upwardly and inwardly inclined deflector supported from the top at the upper end of the air-passage at a distance not less than the diameter of the latter and projecting beneath the inlets of the hot-air conduits to intercept reverse air-currents in the same.

1,022,855. FOLDING UMBRELLA. MARTIN MAKOWACZ, Pittsburgh, Pa. Filed June 23, 1911. Serial No. 634,947. (Cl. 135—25.)



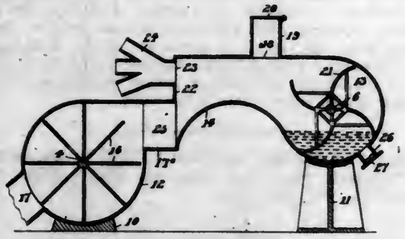
In a folding umbrella, the combination with a sectional stick having a notch, a runner and a stretcher, of an inner rib section pivotally connected to said notch and to the

gaging the inner spring, the convolutions of the outer spring extending in an opposite direction with respect to the convolutions of the inner spring, the convolutions of each spring being disposed diagonally with respect to



said ring, the convolutions of one spring being kinked at their intersection with the convolutions of the other spring thereby preventing displacement of one spring relatively to the other spring.

1,022,857. SMOKE-CONSUMER. JANOS MARKUS, Freeburg, Ill. Filed Aug. 30, 1911. Serial No. 646,774. (Cl. 110—144.)



1. A smoke consumer comprising a suction drum having a radially disposed inlet and a tangentially disposed outlet, a liquid drum arranged opposite the suction drum, a longitudinally extending casing constituting a connecting portion and opening at one end into the liquid drum and having the lower portion of its other end communicating with said outlet, a wheel revolubly mounted in said liquid drum for discharging liquid into the smoke within said casing, a plurality of distributing flues communicating with that end of the casing into which opens said outlet, a fan revolubly mounted in said suction drum, and means whereby said fan and wheel are operated in unison.

2. A smoke consumer comprising a suction drum having a radially disposed inlet and a tangentially disposed outlet, a liquid drum arranged opposite the suction drum, a longitudinally extending casing constituting a connecting portion and opening at one end into the liquid drum and having the lower portion of its outer end communicating with said outlet, a wheel revolubly mounted in said liquid drum for discharging liquid into the smoke within said casing, a plurality of distributing flues communicating with that end of the casing into which opens said outlet, a fan revolubly mounted in said suction drum, means whereby said fan and wheel are operated in unison, the bottom of said casing being arcuate in longitudinal section.

3. A smoke consumer comprising a suction drum having a radially disposed inlet and a tangentially disposed outlet, a liquid drum arranged opposite the suction drum, a longitudinally extending casing constituting a connecting portion and opening at one end into the liquid drum and having the lower portion of its other end communicating with said outlet, a wheel revolubly mounted in said liquid drum for discharging liquid into the smoke within said casing, a plurality of distributing flues communicating with that end of the casing into which opens said outlet, a fan revolubly mounted in said suction drum, means whereby said fan and wheel are operated in unison, the bottom of said casing being arcuate in longitudinal section, and means for facilitating the removal of solid matter from said liquid drum.

4. A smoke consumer comprising a suction drum having a radially disposed inlet and a tangentially disposed outlet, a liquid drum arranged opposite the suction drum, a longitudinally extending casing constituting a connecting portion and opening at one end into the liquid drum and having the lower portion of its other end communicating with said outlet, a wheel revolubly mounted in said liquid drum for discharging liquid into the smoke within said casing, a plurality of distributing flues communicating with that end of the casing into which opens said outlet, a fan revolubly mounted in said suction drum, means whereby said fan and wheel are operated in unison, the bottom of said casing being arcuate in longitudinal section, and means for facilitating the removal of solid matter from said liquid drum.

1,022,858. YIELDABLE SUPPORT FOR FURNITURE. JOHN MARKUS, Glen Carbon, Ill. Filed Nov. 15, 1909. Serial No. 528,071. (Cl. 155—33.)

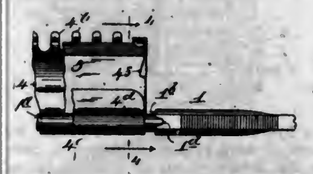


A yieldable support for furniture legs comprising the combination with the leg, of a tubular member having a part of its upper end surrounding and fixedly secured to the leg, said member further provided in proximity to the lower end of the leg with an opening of small diameter, a cap mounted upon the lower end of said member, a piston mounted in said member and normally engaging the cap, a shiftable rod extending through the cap and secured to the piston, a head carried by the outer end of the rod, and a coiled spring surrounding said rod and interposed between the lower end of the cap and the said head.

1,022,859. PILOT-COUPLING FOR LOCOMOTIVES. GEORGE V. MARTIN, Cleveland, Ohio, assignor to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed Aug. 16, 1910. Serial No. 577,500. (Cl. 213—42.)

secured to the sill or beam and extending forwardly therefrom, the pocket in said member being open at its rear end in line with the pocket of the beam, a coupler shank extending rearwardly into the pocket of the member and pivoted thereto, said shank being arranged to move longitudinally within said pocket, and a follower in engagement with the rear end of said shank, together with springs seated behind the follower, substantially as described.

1,022,860. RAZOR. FREDERICK MAY and JOHN H. BLEOO, New York, N. Y. Filed July 7, 1911. Serial No. 637,255. (Cl. 30—12.)



1. A razor comprising a blade holder having a bore, and a stem adapted to enter said bore, said stem being provided with a reduced portion to oppose the blade when the stem and holder are assembled, said stem being rotative within the holder to engage the adjacent edge portion of the blade to move the latter outwardly.

2. A razor comprising a blade holder having a guard and a bore substantially parallel therewith, and a stem adapted to fit said bore, said stem being provided with a rounded and a reduced portion and rotative in the bore of said holder to cause the rounded portion to abut against the blade.

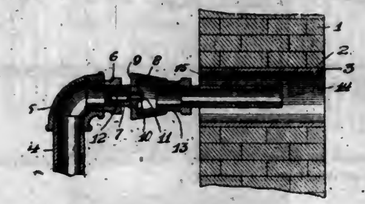
3. A razor comprising a holder provided with a guard and stops adjacent the guard, and having a bore extending substantially parallel with the guard, and a stem adapted to fit said bore and provided with a rounded and a reduced portion, the reduced portion permitting entrance of the stem into the bore of the holder without causing engagement of the blade with said stops, the rounded portion of the stem serving to move the blade outwardly when the stem and holder are rotated one with respect to the other.

4. A razor comprising a blade holder provided with a guard and having a bore substantially parallel with the guard, a blade retained by the holder, and a shank provided with a stem to enter said bore, said shank having a recess extending outwardly beyond the plane of the stem, the adjacent end of the holder fitting in said recess, to retain the blade and holder from rotating on the stem.

5. A razor comprising a holder provided with a guard and having a bore substantially parallel with the guard, a blade fitting the holder, a shank provided with a stem to enter said bore, said shank having a recess to retain the blade and holder from rotating on the stem, said stem having a reduced portion in a plane at one side of said recess to permit entrance of the stem into the bore without pushing the blade to shaving position on the

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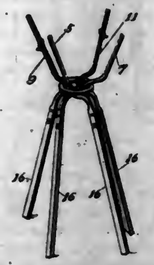
1,022,861. LAMP-BURNER. ANDREW MCMILLEN, Russellton, Pa. Filed Apr. 29, 1911. Serial No. 624,068. (Cl. 158—69.)



1. In a lamp burner, the combination with a reducing plug, said member provided at its inner end with interior threads, said opening being of less diameter than the inner diameter of said element, an exteriorly and interiorly threaded inwardly extending sleeve, said sleeve at its outer end engaging the threads of said member, a burner pipe having its outer end formed

with peripheral threads for engagement with the interior threads of said sleeve, and a pipe of relatively large diameter surrounding and projecting from the free end of said burner pipe and constituting a secondary air mixer.

1,022,862. FEED-BAG. ANDREW MCMILLEN, Russellton, Pa. Filed Apr. 29, 1911. Serial No. 624,068. (Cl. 119—69.)

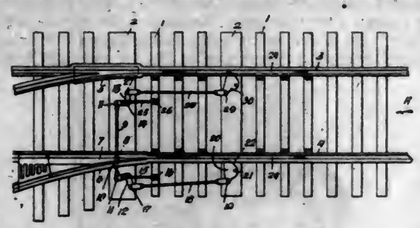


1. In a feed bag, a ring, a plurality of arms pivotally supported at the inner wall of said ring and having the lower ends thereof angularly disposed to provide rests for said ring, legs carried by the lower ends of said arms, extensions pivotally supported by the upper ends of some of said arms, and a receptacle adapted to be supported by all of said arms.

2. In a feed bag, a ring, inwardly projecting apertured lugs carried thereby, arms pivotally connected to said lugs and having the lower ends thereof angularly disposed to provide rests for said ring, legs carried by the lower ends of said arms, and a receptacle adapted to be supported between said arms.

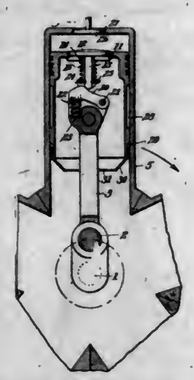
3. In a feed bag, a ring, inwardly projecting apertured lugs carried thereby, arms pivotally connected to said lugs and having the lower ends thereof angularly disposed to provide rests for said ring, legs carried by

ally connected to said rod and adapted to be moved by said members, and a car equipment, including rods adapted to



be released to place the lower ends thereof in position to engage said actuating members.

1,022,864. GAS-ENGINE. ROBERT S. MOORE and JAMES LEE SIMMONS, Washington, D. C., assignors to Gyro Motor Company, Washington, D. C., a Corporation of Delaware. Filed Nov. 1, 1910. Serial No. 590,237. (Cl. 123—47.)



1. A gas engine including in combination a cylinder, a piston, an intake valve located in the piston, a piston rod connected to said piston, and means actuated by the piston rod for opening said intake valve, said means including a member capable of yielding so as to allow the intake valve to remain closed during the expansion of the gases in the cylinder.

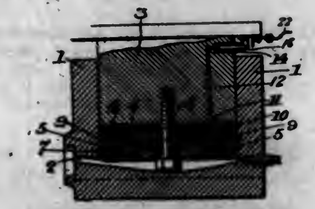
2. A gas engine including in combination, a cylinder, a piston, an intake valve located in said piston, a piston rod connected to said piston, means carried by the piston rod for opening said intake valve, said means including a member capable of yielding so as to allow the intake valve to remain closed, during the expansion of the gases in the cylinder.

3. A gas engine including in combination, a cylinder, a piston, a piston rod connected to said piston, an intake

cam whereby the same may yield to allow the intake valve to remain closed during the expansion of the gases in the cylinder.

[Claims 6 to 8 not printed in the Gazette.]

1,022,865. HYDRAULIC JACK. GUSTAV NICOLAI, Honolulu, Hawaii. Filed Sept. 7, 1911. Serial No. 648,048. (Cl. 188—10.)

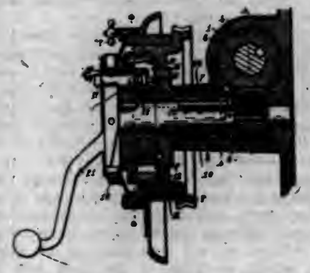


1. In a hydraulic jack, the combination with a ram having two or more crimps, of means to indicate automatically the failure of one of said crimps, said means comprising an outlet passage through the ram, and a signal device in connection with said passage.

2. In a hydraulic jack, a cylinder, a ram provided with two crimps with a washer interposed, a valve, a passage connecting the annular space between said crimps with the chamber of the valve, and a passage in the valve stem, substantially as described.

3. In a hydraulic jack, a cylinder, a ram provided with two crimps with an interposed washer, a valve, a passage connecting the annular space between said crimps with the chamber of the valve, and the stem of said valve adapted to operate the contacts of an electrical alarm circuit, substantially as described.

1,022,866. AUTOMATIC SPINDLE-STOP. HENRY M. NORRIS, Cincinnati, Ohio, assignor to The Cincinnati Bickford Tool Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Oct. 1, 1910. Serial No. 584,830. (Cl. 77—33.)



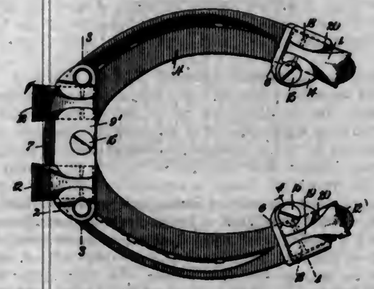
1. The combination of a rotatively driven member, a

driven member including a clutch, a graduated dial rotatively adjustable in relation to the pinion and provided with a stop, and means rotated with the pinion into engagement with the stop for disengaging the clutch.

5. A spindle stop comprising a shaft provided with a pinion, a graduated dial depth gage concentric therewith, means for securing said gage in different rotative positions, a rotatively driven member concentric with the shaft, connections between the shaft and the member including a clutch, a spindle sleeve provided with a rack engaging with the pinion, a pointer movable with the shaft to different graduations on the gage, and automatic mechanism constructed and arranged to disengage the clutch simultaneously with the registration of the pointer with a predetermined point on the gage.

[Claim 6 not printed in the Gazette.]

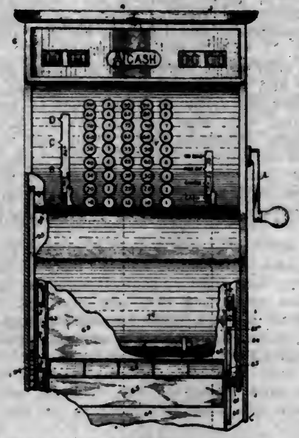
1,022,867. HORSESHOE-CALK. PHILIP S. PALMER, Spokane, Wash. Filed July 1, 1911. Serial No. 636,364. (Cl. 168—35.)



1. In a horseshoe calk, in combination, a bottom section, one end of which is upturned and inturned to form an overhanging ledge, a boss on the end of the section opposite the upturned end and spaced apart therefrom, a plate removably fastened to said boss and projecting toward said ledge, said plate and ledge being each beveled on its adjacent under side, and a calk having a shank adapted to bear on said section between the ledge and plate, said shank being beveled to engage the beveled portions of the plate and overhanging ledge.

2. In a horseshoe calk, in combination, a bottom section, one end of which is upturned and inturned to form an overhanging ledge, a boss on the end of the section opposite the upturned end and spaced apart therefrom, a plate removably fastened to said boss and projecting toward said ledge, said plate and ledge being each beveled on its adjacent under side, and a calk having a shank adapted to bear on said section between the ledge and plate, said shank being beveled to engage the beveled portions of the plate and overhanging ledge, said shank having transversely disposed grooves therein, and said overhanging ledge and plate having transversely disposed projections extending therefrom adapted to engage said grooves, to prevent the calk from sliding out of said

supported in said frame, and a lever having gear connections to rotate said frame and to control the indicator.



3. In a cash-register, the combination with an indicator, a manually adjustable setting-lever, and registering devices, of a rotatable construction, a plurality of pivoted receptacles supported by the said rotatable construction, and means which operatively connect the rotatable construction with both the said setting-lever and indicator, substantially as described.

4. In a cash-register, the combination with an operating mechanism which includes three series of rotatable indicating wheels loosely mounted on separate and independent shafts, a registering mechanism, and key elements which are operatively connected with both the indicating wheels and registering mechanism, of a rotatable construction and a plurality of cash receptacles supported by the same, substantially as described.

5. In a cash-register, the combination with indicating mechanism which includes a rotatable initial-indicating-wheel, of a rotatable cylindrical construction mounted within the casing and containing a plurality of pivoted receptacles, and means which operatively connect the said initial-indicating-wheel with the rotatable construction, substantially as described.

[Claims 6 to 33 not printed in the Gazette.]

1,022,869. PULLEY. JOSEPH PETRELLO, Philadelphia, Pa. Filed June 3, 1911. Serial No. 630,985. (Cl. 64—18.)

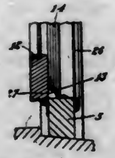


said bearing, fixed keys carried by the clamping sections, channeled pieces fitted over said clamping sections and coöperating with said keys, bolts for clamping together said channeled pieces including said clamping sections, overlapping rim parts bolted together and arms arranged in pairs connecting said clamping sections and the rim parts.

2. In a split pulley constructed of pressed sheet metal, a tubular and telescopically-arranged bearing, clamping sections comprising spaced plates fixed to each end of said bearing, fixed keys carried between each of said spaced plates, channeled pieces fitted over said spaced plates and coöperating with said keys, bolts for interlocking said clamping sections and channeled pieces, overlapping rim parts bolted together and arms arranged in pairs connecting together said clamping sections and said rim.

3. In a split pulley constructed of pressed sheet metal, a tubular bearing, clamping sections fixed to each end of said bearing, keys fixed to said clamping sections, channeled pieces coöperating with said keys and fitted over said clamping sections, bolts for clamping together said channeled pieces including said sections, telescopically-arranged rims for the pulley the inner rim of which is provided with inwardly-projecting tongues, arms arranged in pairs connecting said clamping sections and said tongues and means for clamping the rim parts together.

1,022,870. WINDOW-VENTILATOR. MICHAEL POWER, Toronto, Ontario, Canada, assignor of twenty-five one-hundredths to Robert Heber Bowes and twenty-four one-hundredths to Robert George Dickson, Toronto, Canada. Filed Oct. 25, 1910. Serial No. 589,024. (Cl. 98—3.)



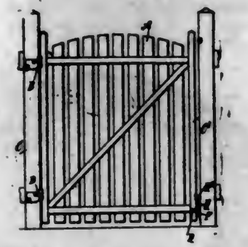
1. In a window ventilator, a frame having an opening therethrough, a sash hinged at its lower edge to the bottom rail of said frame, means for closing the openings at the ends of said sash when it is swung inwardly, a member extending longitudinally from end to end of the top side of the lower rail of said frame and projecting upwardly therefrom, and an arc shaped shield member secured to the outer side of the lower rail of said sash and projecting over said longitudinal member.

2. In a window ventilator, a frame having an opening therethrough, a sash hinged at its lower edge to the bottom rail of said frame, means for closing the openings at the ends of said sash when it is swung inwardly, a metal strip rigidly secured to the upper edge of the lower rail of said frame extending from end to end thereof and having an upwardly and inwardly extending portion arc shaped in cross section, and a metal strip rigidly secured automatically actuated by the operating lever to grip the saw blade between it and the plate simultaneously with



the actuation of the bolt, and means for holding the gripping jaw in coöperation with the operating lever.

1,022,872. GATE-LATCH. ERNEST RAATHS, Angelica, Wis., assignor of one-half to Ernst H. Bramschreiber, Zachow, Wis. Filed Oct. 7, 1911. Serial No. 653,384. (Cl. 70—28.)



1. In combination with a swing gate and gate post, of a keeper fixed on the gate, a latch plate fixed on the gate post and provided with spaced stops, a latch lever fulcrumed on the said latch plate and provided with a notch adapted to engage the said keeper, the said latch lever having a weighted arm for engagement with the said stops and the latch lever having a push arm for engagement with the gate when the notch end of the latch lever is swung downward.

2. In combination with a swing gate and gate post, of a keeper on the gate, and a latch lever fulcrumed on the gate post and having a notch for engagement with the said keeper, the said latch lever also having an integral push arm adapted to engage the gate and swing the same open on imparting an opening movement to the latch lever.

3. In combination with a swing gate and gate post, a keeper fixed on the gate, a latch plate fixed on the gate post and provided with spaced stops, a latch lever fulcrumed on the said latch plate and provided with a notch adapted to engage the said keeper, the said latch lever having a weighted arm for engagement with the said stops and the latch lever having a push arm for engagement with the gate when the notch end of the latch lever is swung downward, and a loop fixed on the said gate at the side at which the said weighted arm is arranged.

1,022,873. CURTAIN-POLE RING. CHARLES REMHOF,

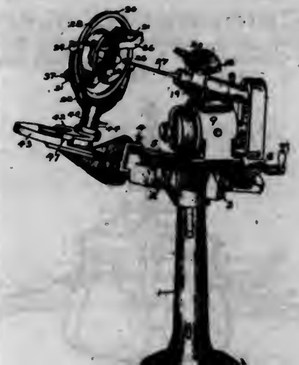
and having its sides concave to contact with the surfaces provided by the annular shoulders.

2. A device of the character described comprising a plurality of segments, caps engaging the end portions of the segments, a barrel extended from each of the caps, the barrels of adjacent caps being in telescopic engagement one with the other, each of said caps having an annular shoulder produced thereon to provide a bearing surface and a roller mounted on the bearing surface so produced and having its sides concaved to contact with the surfaces provided by the annular shoulders, the bore of the roller being greater than the lateral diameter of the bearing surface.

3. A device of the character described comprising a plurality of segments, caps engaging the end portions of the segments, a barrel extending from each of the caps, the barrels of adjacent caps being in telescopic engagement one with the other, each of said caps having an annular shoulder produced thereon intermediate the flange and barrel thereof to provide a bearing surface, and a roller mounted on the bearing surface so produced and having its sides concave to contact with the surfaces provided by the annular shoulders, the bore of the roller being greater than the lateral diameter of the bearing surface.

4. A device of the character described comprising a plurality of sections, the opposing end portion of adjacent sections being united by a coupling member, said coupling member consisting of two parts, each part having a marginal portion formed to produce a cap to embrace the end portion of one of the sections and having its central portion extended to produce a barrel, the barrel of one of the sections being telescopically engaged with the barrel of the second part to produce a shaft, and a roller mounted to revolve around the shaft so produced.

1,022,874. MACHINE FOR DRILLING PORCELAIN. JOHN RIDDELL, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Aug. 8, 1908. Serial No. 447,563. (Cl. 77—5.)

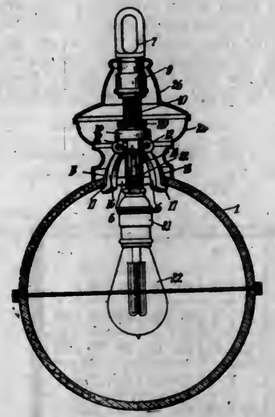


bored, and means for engaging said pivotal supporting means whereby said holder can be rocked on an axis eccentric to said hole.

4. A machine for drilling a semicircular hole in porcelain insulators, comprising a table having ways, a carriage pivoted on said table and riding on said ways, a motor on said table, a drill mounted on the motor frame and geared to said motor, means for reciprocating said drill, and means for supporting the insulator comprising a work holder, a swiveled part on which said holder is mounted, said part being arranged with its axis perpendicular to the axis of said drill and capable of rocking about either of two other pivotal axes.

5. A machine for drilling porcelain insulators, comprising a rotary cutter, a swiveled part, a work holder mounted on said part, a carrier on which said part is swiveled, a support for said carrier provided with slots, and pivot pins on said carrier engaging said slots.

1,022,875. LIGHTING-FIXTURE. JAMES T. ROBB, New York, N. Y., assignor to The Mitchell Vance Co., New York, N. Y. Filed Jan. 6, 1912. Serial No. 669,831. (Cl. 240—114.)



1. A lighting fixture comprising a body member, a plurality of jaws thereon, each of the jaws being pivotally supported on the body member intermediate of its length, the points of pivotal support being also intermediate the length of the body member, the upper ends of the jaws being adjacent the upper end of the body member, the lower ends of the jaws being offset, a shade or similar device in engagement with the lower offset ends of the jaws, ribs on the jaws for engagement with the shade, and means carried by the body member and engaging the upper ends of the jaws for holding the said ends adjacent the body member whereby the lower ends of the jaws are held against movement

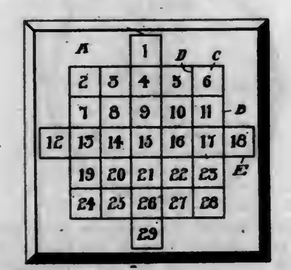
length, the upper ends of the jaws being adjacent the upper end of the body member, the lower ends of the jaws being offset, a shade or similar device suspended from the said offset ends, ribs on the jaws for engagement with the shade, the shade being held against upward movement together with a ring carried by the body member and movable relatively thereto, the ring being in engagement with the upper ends of the jaws whereby they are held adjacent the body member, the lower ends being thereby held against movement.

4. A lighting fixture comprising a body member, a plurality of jaws pivotally mounted thereon, the lower ends of the jaws being offset, a rib on each jaw, a shade or similar device suspended from the offset ends, the lower end of each rib being spaced from the offset end a distance substantially equal to the thickness of the shade, together with means for engagement with the upper ends of the jaws whereby they are held adjacent the body member, the lower ends being thereby held against movement.

5. A lighting fixture comprising a body member, a plurality of movable jaws thereon, the lower ends of the jaws being offset, a rib on each jaw, a shade or similar device suspended from the offset ends, the lower ends of the ribs being spaced from the offset ends a distance substantially equal to the thickness of the shade whereby the shade may be positioned between the offset ends and the ends of the ribs, together with means carried by the body member for engagement with the upper ends of the jaws whereby the jaws are held against movement.

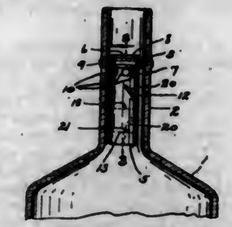
[Claims 6 to 13 not printed in the Gazette.]

1,022,876. GAME APPARATUS. HARRY V. ROBINSON, Pittsburgh, Pa. Filed Jan. 24, 1912. Serial No. 673,108. (Cl. 46—41.)



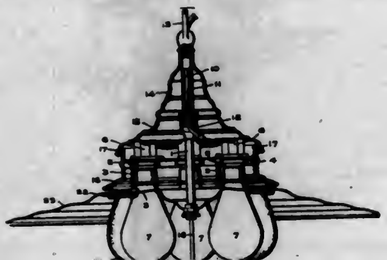
A game apparatus comprising a board rectangular in plan and having printed or otherwise marked thereon a large square divided into twenty-five small squares, said board having printed or otherwise marked thereon a small square at each side of said large square and intermediate the sides thereof, all of said squares being numbered 1 to 29 inclusive, and twenty-three pawns adapted to be placed upon said squares with the squares 2, 9, 11, 15, 20, and 28 left blank, whereby the pawns can be

slide freely therein and adapted when in its outer position to close the opening in said outer member, said inner cylindrical member being provided near its lower end with an exterior annular shoulder adapted to abut against the annular shoulder on the outer member when the inner member is in its outer position, said inner member being also provided with a series of openings near its upper end and a stopper forming disk secured on the upper end of said inner member and arranged to close the upper end of said outer cylindrical member.



2. A combined stopper and measuring device for bottles comprising a cylindrical member provided with an exterior annular flange at its upper end adapted to fit snugly within the neck of a bottle so as to leave a space between the neck of the bottle and said cylindrical member, said member being provided with a series of openings at its upper end below said flange, a cylindrical member closed at its lower end arranged within said outer member so as to slide freely therein, said inner cylindrical member being provided with a series of openings at its upper end, a stopper adapted to close the upper end of said outer member secured on the inner member, means for limiting the outward movement of said inner member in said outer member and means for retarding the movement of said inner member in said outer member when the bottle is tipped, for the purpose set forth.

1,022,878. DIFFUSING-CLUSTER. WALTER D'A. RYAN, Watertown, S. D., assignor to General Electric Company, a Corporation of New York. Filed Aug. 30, 1909. Serial No. 515,139. (Cl. 240—78.)



4. The combination with a reflector, of a diffusing globe below the same, incandescent lamps inclosed by said globe, and means for adjusting said lamps up or down with reference to said reflector.

5. The combination with a reflector having openings of irregular shape, of incandescent lamps received in said openings, a diffusing globe inclosing said lamps and having an opening at its lower end, and a casing above said reflector provided with vents.

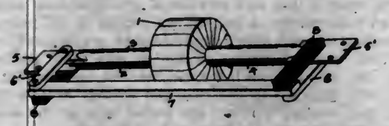
[Claim 6 not printed in the Gazette.]

1,022,879. PLATE-HOLDER. FREDERICK L. SCHLEY, New York, N. Y. Filed Mar. 1, 1911. Serial No. 611,667. (Cl. 101—109.)



The combination with a block having one or more openings therein, of a pair of plates disposed at right angles to each other and secured to adjacent sides of said block and having overhanging portions adapted to form retainers, to secure a plate on said block, an adjuster entirely filling each of said openings and having its upper surface flush with the upper surface of said block, a hook rotatably mounted on each of said adjusters, each of said adjusters having a worm wheel connected thereto, a worm engaging each of said worm wheels, a gear secured to each of said worms, and a rack adapted to engage a plurality of said gears, so as to simultaneously manipulate a plurality of said adjusters.

1,022,880. CURRENT-TRANSFORMER. LOUIS M. SCHMIDT, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Sept. 11, 1908. Serial No. 452,576. (Cl. 171—124.)

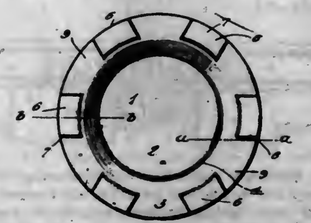


1,022,881. GEARING DEVICE. WILLIAM JACKSON SCHOONOVER, Des Moines, Iowa. Filed Dec. 24, 1906. Serial No. 349,214. (Cl. 74—50.)



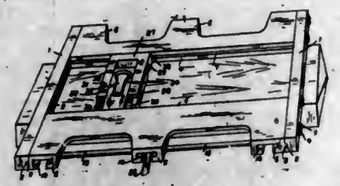
An operating device for washing machines, comprising a body, an upright mounted in the body, a pinion thereon, a rack on top of the body in mesh with the pinion, a pitman connected with said rack and having its other end provided with a vertically arranged slot open at its bottom, a gear wheel mounted above said rack, a balance wheel above said gear wheel, a pinion connected with the balance wheel, and in mesh with said gear wheel, a pitman pivoted to said gear wheel and also to the first mentioned pitman near its outer end and a lever fulcrumed to the body and having a lateral extension provided with a pin designed to enter the slot in the pitman so that the pitman may be elevated to disengage it from the operating lever, for the purposes stated.

1,022,882. PLATE. LUDWIG J. C. SCHWENN, New York, N. Y. Filed Mar. 18, 1911. Serial No. 615,307. (Cl. 65—15.)



A plate having a central chamber to receive the lower part of a superposed plate and having a raised wall provided with an outwardly inclined rim, the upper surface of which has a series of spaced upwardly extended reinforcements having broad flat upper surfaces alined with the upper edge of the inclined rim affording rests for the fingers in handling the plate and adapted for contact with a superposed plate to maintain the same above said in-

pieces into said side-pieces, a cross-piece slidably arranged between said side-pieces and means carried by said cross-piece for clamping the same to one of said side-pieces.



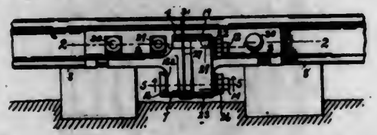
3. An adjustable form for routing machines or the like, comprising a pair of end-pieces, a pair of side-pieces adjustably secured to each of said end-pieces and a cross piece adjustable lengthwise of and adjustably secured between said side-pieces.

4. An adjustable form for routing machines or the like, comprising a pair of end-pieces, a pair of side-pieces adjustably secured to said end-pieces, a clamping iron adjustably arranged on one of said side-pieces and a crank lever operatively connected to said clamping iron.

5. An adjustable form for routing machines or the like, comprising a pair of end-pieces, a pair of side-pieces adjustably secured to said end-pieces, a clamping iron adjustably arranged on one of said side-pieces, a plurality of crank arms pivotally secured at one end thereof to the side carrying said clamping iron at intervals throughout the length of said side, adjustable connections between said crank arms and said clamping iron, a rod connecting the movable ends of said crank arms one with the other and means for reciprocating said rod.

[Claims 6 to 8 not printed in the Gazette.]

1,022,884. INSULATED RAIL-JOINT. WILLIAM H. SELLEW, Detroit, and EDWARD A. EVERETT, Highland Park, Mich. Filed Nov. 15, 1909. Serial No. 528,261. (Cl. 239—5.)



1. An insulated splice bar for insulating rail joints, comprising two parts, one part having tapered tie-bolts, the other part having tapered sockets to receive said bolts and provided with threaded apertures communicating with said sockets, externally and internally threaded nuts screwing onto said bolts and into said sockets, and insulating material between the parts of said splice bars, and between the connecting members thereof to electrically insulate one part from the other.

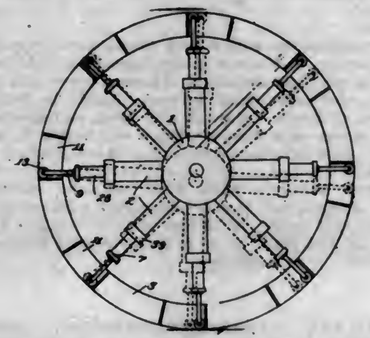
2. An insulated splice bar for insulating rail joints, comprising two parts, one of which is provided with

4. An insulated splice bar for insulating rail joints, comprising two parts, one of which is provided with tapered tenons and with apertures passing through said tenons, the other part being provided with tapered sockets to receive said tenons and with threaded apertures communicating with said sockets, bolts passing through said tenons and through said sockets and apertures, externally and internally threaded nuts screwing onto said bolts and into said sockets, and insulating material between the parts of said splice bar and between the connecting members thereof to electrically insulate one part from the other.

5. In an insulated rail joint, the rails, separate splice bar sections for each rail, one of the adjoining bar sections having projecting tie bolts formed integral therewith, the other adjoining bar section having sockets to receive said bolts which are disposed in substantially vertical alinement with the lower bolts under the base of the rail, nuts upon the ends of said bolts for drawing the adjoining splice bar sections together, a transverse bolt projecting from one splice bar section passing through the rail end and through the splice bar on the opposite side of the rail, and insulating means between said connected parts.

[Claims 6 and 7 not printed in the Gazette.]

1,022,885. RESILIENT WHEEL. ARTHUR SHERWOOD, Plantsville, Conn. Filed Jan. 24, 1911. Serial No. 604,447. (Cl. 152—28.)



A resilient wheel including a hub, hollow spoke sections fixed thereto, spoke sections slidably received within the first mentioned spoke sections, feet carried at the outer ends of the last mentioned spoke sections and provided with rollers, a hollow rim having at its inner side openings through which the said feet project, the rollers carried by the feet bearing against the outer portion of the rim, plates mounted upon the feet and located over the said openings in the rim, and springs carried by the feet and bearing against the plates to hold the same in close contact with the inner side of the rim.

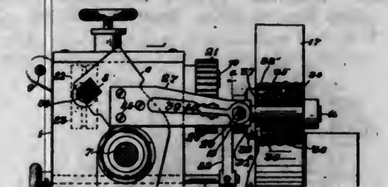
outer section, two pair of toggle arms connecting the sections, toggle arm supports projecting from the inside face of the braces of the outer section, said toggle arms pivoted to said supports and the legs of the inside section, said supports set at a distance from the legs of the outer section sufficient to admit the toggle arms and legs of the inner section when the support is folded.

1,022,887. WHEEL. HARLOW ORVILLE SHOCKLEY, Darlington, Wis. Filed Nov. 25, 1911. Serial No. 662,411. (Cl. 152—40.)



In a vehicle wheel, a hub member, a pneumatic cushion surrounding the same, U-shaped guides on each end of the hub member, a rim surrounding the pneumatic cushion, spokes hinged to the rim with their inner ends guided in the U-shaped guides, the spokes having their inner ends terminating in plates, the adjacent ends of which having notches, and keys inter-engaging the notches for locking the plates together and in sequence.

1,022,888. WIRE STRAIGHTENING AND CUTTING-OFF MACHINE. ELMORE F. SHUSTER, New Haven, Conn. Filed Nov. 13, 1911. Serial No. 659,935. (Cl. 140—126.)

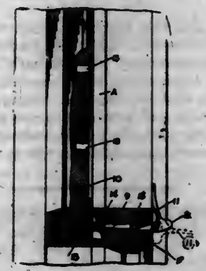


their shafts, a continuously running balance wheel pulley and a sliding clutch sleeve mounted on one of the feed roll shafts, an arm carried by the cutting off lever, a spring actuated trip rod mounted in said arm and connecting with the clutch sleeve, and means for actuating said rod.

2. A machine of the character described comprising a cutting off lever and its actuating mechanism, feed rolls, feed roll shafts and their actuating mechanism comprising a continuously running balance wheel pulley and a sliding clutch sleeve, an arm carried by the cutting off lever, a trip rod mounted in said arm and adapted to engage with the clutch sleeve, means for actuating said trip rod to disengage the clutch sleeve and stop the feed rolls, and means for automatically reengaging the trip rod with the clutch sleeve.

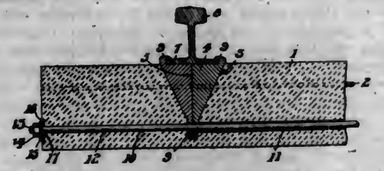
3. A machine of the character described comprising a cutting off lever and its actuating mechanism, feed rolls, feed roll shafts and their actuating mechanism comprising a continuously running balance wheel pulley and a sliding clutch sleeve mounted on one of the feed roll shafts, an arm carried by the cutting off lever, a movable trip rod mounted in the arm, means for actuating said rod in one direction to disengage the clutch sleeve and stop the feed rolls, and a spring for actuating said rod in the opposite direction, means on said arm for manually operating the trip rod to stop the feed rolls, and means for manually actuating the sliding clutch sleeve to start the feed rolls.

1,022,889. WINDOW-SASH LOCK. SIDNEY C. SLADDEN, New York, N. Y. Filed Nov. 24, 1911. Serial No. 662,129. (Cl. 16—144.)



1. A lock for sliding sashes, separated by a guide member, said lock comprising a plurality of sockets mounted within one of said sashes and removed from the parting edge thereof; a bolt rotatably mounted in the other of said sashes to extend therethrough at a point removed from the parting edge thereof, said bolt being provided with means for engaging said sockets in the other sash; and a lever pivotally connected with said bolt and having a head extended perpendicular to the handle of said lever and at both sides of the pivot, the extension at one side being relatively short and cam-shaped, to wedge against the sash in which said bolt is mounted, to draw the sashes together, and the other extension being relatively long, to interpose

1,022,890. TIE AND RAIL-FASTENER. WILLIAM T. SMITH, Swissvale, Pa. Filed Oct. 2, 1911. Serial No. 652,380. (Cl. 238—4.)

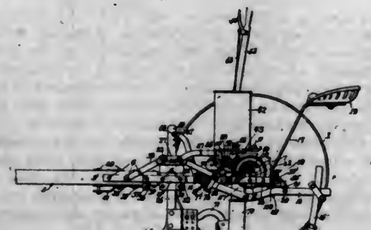


1. In a rail fastener, the combination with the tie having V shaped recesses formed therein adjacent to the ends of said tie and a longitudinal bore extending from one end of said tie to the other end and intersecting said recesses, and rails, of fasteners mounted in the recesses of said tie and engaging the base flanges of said rails, a sleeve arranged in the bore of said tie between the fasteners at the ends thereof, a tie rod mounted in said bore and extending through said sleeve and said fasteners.

2. In a rail fastener, the combination with the tie having V shaped recesses formed therein adjacent to the ends of said tie and a longitudinal bore extending from one end if said tie to the other end and intersecting said recesses, and rails, of fasteners mounted in the recesses of said tie and engaging the base flanges of said rails, a sleeve arranged in the bore of said tie between the fasteners at the ends thereof, a tie rod mounted in said bore and extending through said sleeve and said fasteners, and means including nuts and washers adapted to retain said tie rod in said tie.

3. In a tie and rail fastener, a concrete body having metallic reinforcements, said body having V shaped recesses formed therein, said body having a longitudinal bore formed therein intersecting said recesses, tapering fasteners arranged in said recesses and adapted to retain rails upon said tie, a tie rod arranged in the bore of said body and extending through the lower ends of said fasteners, and means for retaining said tie rod in the bore of said body.

1,022,891. PLANTER. WILLIAM SOBEY, Racine, Wis., assignor to J. I. Case Plow Works, Racine, Wis., a Corporation. Filed Sept. 10, 1909. Serial No. 517,113. (Cl. 111—6.)



cured to the parallel forward ends of said side bars behind the rear end of said tongue, a furrow opener having a standard vertically shiftable through said guide box, depending lugs connected to the forward ends of said side bars in front of said guide box, a transverse bolt extending below said tongue and between said lugs, and a clevis bar connected to the underside of said tongue and to said bolt, substantially as described.

3. In planters, the combination with a supporting wheel axle, a draft tongue, a frame comprising inner and outer side bars having separated rear ends and converging portions and overlapped parallel forward ends secured to the sides of said tongue, bearing boxes for said wheel axle secured to the separated rear ends of said side bars, a guide box arranged between and secured to the parallel forward ends of said side bars behind the rear end of said tongue, a furrow opener having a vertical standard shiftable through said guide box, straps secured to the forward ends of said side bars having integral depending lugs in front of said guide box, a transverse bolt extending through said lugs and below said tongue, and a clevis bar secured to the underside of said tongue and connected to said bolt, substantially as described.

4. In planters, the combination with a supporting wheel axle and a draft tongue, of a frame comprising side bars having converging portions and parallel front ends secured to said tongue, a guide box arranged at the parallel front ends of said side bars, and a furrow opener having a standard vertically shiftable through said guide box, said guide box comprising a pair of connected side plates secured directly to said side bars and projecting above the same, inclined brace bars connecting said plates to said side bars, and guide rollers for said standard arranged between said plates, substantially as described.

5. In planters, the combination with a supporting wheel axle, and a draft tongue, of a frame comprising side bars having converging portions and parallel front ends secured to said tongue, a guide box arranged between the parallel front ends of said side bars, and a furrow opener having a standard vertically shiftable through said guide box, said guide box comprising a pair of side plates secured directly to the front ends of said side bars and projecting above the same, connecting bolts and spacing sleeves arranged between said side plates, and guide rollers on the spacing sleeves at the upper front and lower rear corners of said plates for engaging the front and rear edges respectively of said standard, substantially as described.

[Claims 6 to 18 not printed in the Gazette.]

1,022,892. WRENCH. CARL A. SODERHOLM, Chicago, Ill. Filed Apr. 24, 1911. Serial No. 622,893. (Cl. 81—53.)



verse jaw, a spring actuated jacket arranged on the aforesaid stationary jaw and a serrated block seated in and projecting beyond said jacket for engagement with the transverse jaw.

3. A wrench comprising a stationary jaw provided with a handle and terminating at one extremity in an apertured head, a movable jaw secured to the said stationary jaw, a transverse serrated jaw connected to said movable jaw and adapted for engagement with the apertured head of the aforesaid stationary jaw, a head made integral with the said transverse jaw, a jacket having a forward prolongation slidably arranged on the said stationary jaw, a spring secured to the said jaw for engagement with the said jacket prolongation, a serrated block secured in said jacket and projecting therebeyond, a spring arranged below the jacket for engagement with the said serrated block and means for moving the said jacket against the tension of the spring engaging its forward projection.

4. A wrench comprising a stationary jaw provided with a handle and terminating at one extremity in an apertured head, a movable jaw secured to said stationary jaw, a transverse serrated jaw connected to said movable jaw and adapted for engagement with the apertured head of the aforesaid stationary jaw, a head made integral with the said transverse jaw, a jacket having a forward prolongation slidably arranged on the said stationary jaw, a spring secured to the said jaw for engagement with the said jacket prolongation, a block pivotally arranged in the said jacket, a serrated block secured in the said jacket and projecting therebeyond, a spring arranged below the said jacket and projecting thereinto for engagement with the said serrated block and a thumb-screw piercing the said serrated block for engagement with the said pivoted block.

5. A wrench comprising a stationary jaw formed with an inclined shoulder, provided with a handle and terminating at one extremity in an apertured head, a movable jaw secured to the said stationary jaw and having a bearing upon the inclined shoulder of the said jaw, a transverse serrated jaw connected to the said movable jaw and adapted for engagement with the apertured head of the aforesaid stationary jaw, a head made integral with the said transverse jaw, a jacket having a forward prolongation slidably arranged on the said stationary jaw, a spring secured to the said jaw for engagement with the said jacket prolongation, a serrated block secured in said jacket and projecting therebeyond, a spring arranged below the jacket for engagement with the said serrated block and means for moving the said jacket against the tension of the spring engaging its forward projection.

1,022,893. COMBINED WAIST AND HOSE SUPPORTER. THOMAS F. SOMERS, New York, N. Y. Filed Feb. 3, 1910. Serial No. 541,861. (Cl. 241—4.)

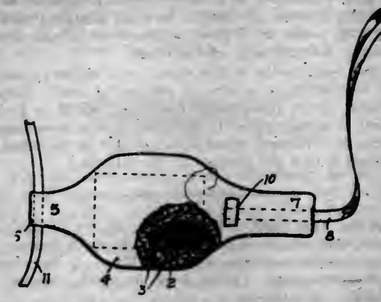


2. In a device of the class described, the combination with a body portion, of tubular knitted strengthening strips having elasticity secured thereto vertically extending over the shoulder portions and projecting considerably below the body portion to form hose supporters.

3. In a device of the class described, the combination with a body portion, of tubular knitted strengthening strips having elasticity secured thereto vertically and extending in continuous loops below the body portion to form hose supporters.

4. In a device of the class described, the combination with a body portion, of tubular knitted strengthening strips having elasticity secured thereto vertically at the sides, extending over the shoulder portions and projecting below the bottom edge of the body portion in the form of a continuous loop to form hose supporters.

1,022,894. CATAMENIAL NAPKIN. ELIZABETH SPRAGUE, Minneapolis, Minn. Filed Aug. 17, 1911. Serial No. 644,634. (Cl. 128—5.)



The catamenial napkin herein described, consisting of a central impervious fabric, a layer of absorbent material on each side thereof, said absorbent material extending beyond the edges of said impervious fabric and connected thereto by quilting together the layers of absorbent material and impervious fabric, an outer fabric covering secured only to the absorbent material and surrounding the same, said outer fabric being provided with a narrow forward extension and a narrow rearward extension and means connected to said extensions for supporting the napkin.

1,022,895. SHADE-HOLDER. WILLIAM S. STAPLEY, Bridgeport, Conn., assignor to Bridgeport Brass Company, Bridgeport, Conn., a Corporation of Connecticut. Filed May 12, 1909. Serial No. 495,415. (Cl. 240—114.)



2. The combination with a lamp socket member; of a shade holder member having a plurality of integrally formed separated spring clamping plates extending substantially parallel to the surface of the socket and operable to closely surround the same; a locking shoulder carried by one of said members for locking them together; each of said plates having a surface portion above said shoulder inclined to the curve of the socket, and means operable to move on said plates to contract the same and force said surfaces against the socket member, substantially as described.

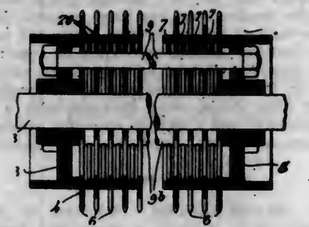
3. The combination with a lamp socket member; of a shade holder member having spring plates extending substantially parallel to the surface of the socket and operable to closely embrace the same, said plates being separated by slots; a locking shoulder carried by one of said members to lock the two together; a clamping member having inclined portions bearing against said plates above said shoulder and releasable from said holder member through said slots, substantially as described.

4. The combination with a shade; of a holder; a locking clamp consisting of a wire pivotally secured to the holder and doubled on itself to form an engaging shoulder adapted to swing on a pivot transversely to the axis of the holder, substantially as described.

5. The combination with a shade; of a holder; a locking clamp consisting of a wire, a portion of which forms a horizontal pintle and another portion of which is doubled on itself to form a plurality of engaging shoulders adapted to swing in a vertical plane, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,022,896. TOOTHED CYLINDER. FRANK C. STEVENS, North Andover, Mass., assignor to Davis & Furber Machine Company, North Andover, Mass., a Corporation of Massachusetts. Filed July 9, 1909. Serial No. 506,650. (Cl. 13—14.)



1. In a toothed cylinder, the combination with a shaft having two opposed heads, of a plurality of toothed disks situated between said heads and each having an aperture to fit the shaft, annular spacing rings situated between the disks, tie rods connecting the heads, said tie rods extending through the disks and clamping the heads, disks

1,022,897. RESISTANCE UNIT. GEORGE E. STEVENS, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed Oct. 2, 1908. Serial No. 455,893. (Cl. 219—63.)



1. An electric heating unit comprising a continuous resistance conductor formed into a plurality of spirals connected at the center and lying in different planes, and a spacing member between said spirals.

2. An electric heating unit comprising a continuous conductor formed into a plurality of parallel spirals and a spacing strip between said spirals.

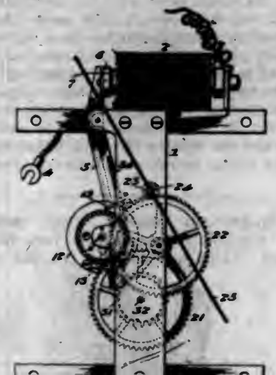
3. An electric heating unit comprising a flat resistance conductor doubled edgewise on itself and shaped to form two spirals and a spacing strip between said spirals.

4. An electric heating unit comprising a thin sheet of resistance metal cut to form concentric spirals joined at the center and a spacing strip between said spirals.

5. An electric heating unit comprising a thin sheet of resistance metal cut to form concentric spirals joined at one end and lying in different planes, and a spacing member between said spirals.

[Claim 6 not printed in the Gazette.]

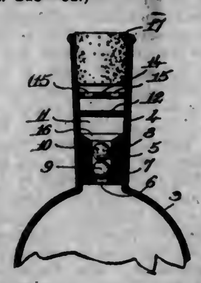
1,022,898. MOTOR FOR ADVERTISEMENT-DISPLAY APPARATUS. WILLIAM HENDERSON THOMPSON, Memphis, Tenn. Filed June 5, 1911. Serial No. 631,450. (Cl. 185—6.)



tisement display apparatus, of a shaft, a driving wheel secured thereto, a spring coöperating with the driving wheel aforesaid, a ratchet wheel loose in relation to the driving wheel, a spring connection between the ratchet wheel and the gear last named whereby the two are adapted to move together but have a limited relative movement, permitting the spring connection to drive the gear independently of the ratchet wheel, a pawl carried by the driving wheel and adapted to engage the ratchet wheel, and means for periodically turning the driving gear back to re-wind its spring.

3. In a motor for advertisement display apparatus, the combination with gears adapted to operate the advertisement display apparatus, of a shaft, a driving wheel secured thereto, a spring coöperating with the driving wheel aforesaid, a ratchet wheel loose in relation to the driving wheel and in relation to the ratchet wheel, a spring connection between the ratchet wheel and the gear last named whereby the two are adapted to move together but have a limited relative movement, permitting the spring connection to drive the gear independently of the ratchet wheel, a pawl carried by the driving wheel and adapted to engage the ratchet wheel, an electro-magnet, an armature therefor, a contact carried by the armature, a contact carried by the driving wheel, said contacts being in the circuit of the electro-magnet, whereby said contacts are adapted to engage with the unwinding of the main spring to thereby complete the circuit of the electro-magnet and cause the armature to kick back the driving wheel and thus re-wind the spring.

1,022,899. NON-REFILLABLE BOTTLE. WILLIAM P. UPHAM, Keene, N. H. Filed Aug. 17, 1911. Serial No. 644,493. (Cl. 215—64.)



1. The combination with a bottle body having a neck, of means within the neck forming a valve chamber provided with a valve seat and an enlarged chamber communicating with the valve chamber, two ball valves of different specific gravity situated within the valve chamber and either one adapted to seat on the valve seat, said enlarged chamber being of sufficient size to receive both ball valves at the same time and permit them to be interchanged therein.

2. The combination with a bottle body having a neck provided with a tapered passage which is largest at its

constitute an enlarged chamber between said member and disk, which chamber is of sufficient size to receive both ball valves at the same time and to permit them to be interchanged therein.

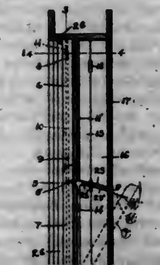
4. The combination with a bottle body having a passage of progressively decreasing diameter from the mouth to the bottle body, of a valve seat member fitting said passage at its portion of smaller diameter, said member having a port and a valve chamber communicating with each other and provided with a valve seat, two ball valves of different specific gravity occupying said chamber and either one of which is adapted to seat on the valve seat, a perforated disk 12 of a size to fit the passage and be positioned by the walls thereof at a distance above the valve seat member to constitute a chamber 11 of sufficient size to receive both valves at the same time and to permit said valves to be interchanged therein, and a second perforated disk 15 situated in and positioned by the walls of the passage above the first-named disk.

1,022,900. KEY. EUGENE VON VARGYAS, Pittsburgh, Pa., assignor of one-third to James S. Douthitt and one-third to Harry E. Platt, Coraopolis, Pa. Filed Aug. 18, 1911. Serial No. 644,772. (Cl. 70—9.)

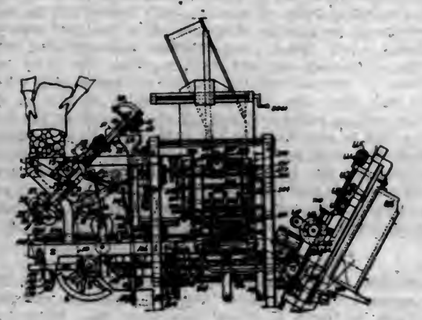


A key for permutation locks embodying an integral shank and finger piece, the shank being oval in cross-section; a plurality of interchangeable wards mounted on the shank each having a relatively long head having an opening longitudinally therethrough oval-shaped in cross-section and having a slot through one side extending throughout the length of the head exposing the shank on one side when the wards are mounted on the shank, and means on the outer end of the shank for securing the wards in position thereon.

1,022,901. WINDOW CONSTRUCTION. CARL J. WALLEN, Cleveland, Ohio. Filed Mar. 13, 1911. Serial No. 614,227. (Cl. 20—42.)



1,022,902. MACHINE FOR HANDLING COINS. RODNEY BRADFORD WARE, Thompsonville, Conn. Filed Jan. 6, 1909, Serial No. 470,998. Renewed Sept. 13, 1911. Serial No. 649,195. (Cl. 93—2.)



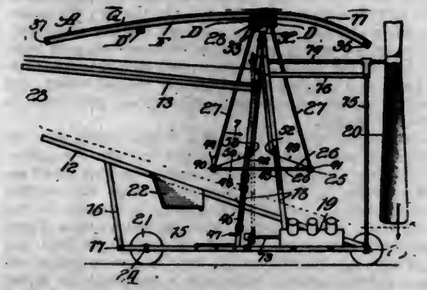
1. In a machine of the class described, in combination, a hopper adapted to receive coins of assorted sizes, means to automatically extract all the coins from the hopper, means to segregate a particular size and assemble them in a row, means to deposit all other sizes in a single receptacle, the before-mentioned means being simultaneously adjustable as to size on which it operates so that rows of different sizes may be assembled, means for taking from the row a stack containing a desired number, means adjustable as to size on which it operates for wrapping the stack.

2. In a machine of the class described in combination, a hopper adapted to receive coins of assorted sizes provided with two auxiliary receptacles, means to automatically extract all coins from the hopper, means to segregate a predetermined size and assemble them in a row, means to deposit all other sizes in one of the before-mentioned receptacles, means to deposit all mutilated coins in the other before-mentioned receptacle, the said means being adjustable as to size on which it operates so that rows of different sizes may be assembled, means manually adjustable as to size on which it operates for dividing the articles into bunches containing a predetermined number and means for wrapping the said bunches.

3. In a machine for handling articles of various diameters; means for assembling articles in a bunch, said means being adjustable so that articles of different sizes may be assembled; a wrapper forming mechanism provided with an adjustable knife and a pivotedly mounted wrapper holder, with means to vary the angle of the holder to the knife, so that wrappers of various sizes may be severed; means to coil the wrapper around the bunch.

4. In a machine of the class described, mechanism to segregate coins of similar size from a mass of mixed coin, means for dividing the selected size into stacks containing a definite number; means for delivering a wrapper, ad-

1,022,903. FLYING-MACHINE. JOHN A. WARRICK, Chicago, Ill. Filed Sept. 23, 1910. Serial No. 583,404. (Cl. 244—12.)



1. In a flying machine, the combination with steering and supporting planes, of a plurality of spars, the companion framing-sills, a cone-shaped mast supported from said sills, a movable cone-shaped controlling truss-frame supported upon and surrounding said mast and adapted to be manually operated by the passenger in the car, flexible connectors between the frame and the planes, whereby to control the flexing of the planes, and means for holding the said connectors in divided relation.

2. In a flying machine, the combination with steering and supporting planes of a cone-shaped truss-frame, suspended from its upper end on a universal joint bearing, a cross-bar connected to the front and rear base-bars of said truss-frame by sleeve bearings through which said base-bars are free to slide, means for locking said cross-bar against a lateral movement but permitting of a forward and backward movement with the truss-frame, and flexible connectors between the frame and the planes.

3. In a flying machine, a mast, a truss-frame surrounding said mast and pivotally supported on the upper end thereof, a cross-bar having sleeve-bearings on the respective ends thereof and which are mounted on the front and rear base-bars of said truss-frame, guides framed in said mast and between which said cross-bar is located in preventing a side movement of the latter, means associated with said cross-bar for locking the truss-frame against a forward and backward movement, and flexible connectors between the frame and the planes.

4. In a flying machine, the combination with steering and supporting planes of a mast composed of a number of posts diverging at the base and joined together at the top, a swinging cone-shaped truss-frame surrounding said mast and supported thereon, guides framed in said mast, a cross-bar having a number of apertures therein and inserted between said guides and having its respective ends loosely mounted on the front and rear base-bars of said truss-frame, and means for engaging the apertures in said cross-bar, whereby said truss-frame may be locked against movement, and flexible connectors between the frame and the planes.

5. In a flying machine, the combination with steering

tatable with the motor-shaft, a pair of contacts electrically connected together and arranged side by side, each of said contacts being pivotally mounted on one stud and having a slot allowing it to move about said other stud, and flexible tension members for pressing said contacts into engagement with the collector rings.



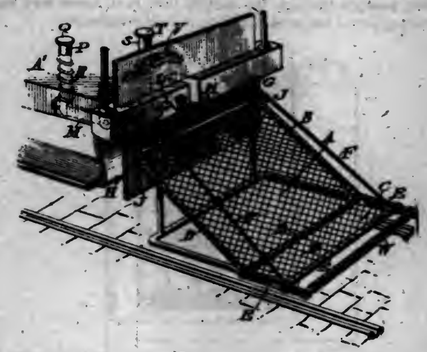
2. In an alternating-current motor, stationary collector rings concentric with the motor shaft, a pair of studs rotatable with the motor shaft, a pair of contacts electrically connected together and arranged side by side, each of said contacts being pivotally mounted on one stud and having a slot allowing it to move about said other stud, flexible tension members for pressing said contacts into engagement with the collector rings, and insulating bushings insulating said contacts from said studs.

3. In an alternating-current motor, stationary collector rings concentric with the motor shaft, two pairs of contacts pivotally mounted and rotatable with the motor shaft, each pair of contacts being electrically connected together and arranged side by side, one pair of contacts being on the opposite side of the motor-shaft from the other pair, and two tension members, one tension member connecting together a contact of each pair and the other tension member connecting together the other contacts of each pair so as to press them against said collector rings when the motor is starting.

4. In an alternating-current motor, stationary collector rings concentric with the motor-shaft, two pairs of studs rotatable with the motor-shaft, two pairs of contacts, the contacts of each pair being electrically connected together and arranged side by side, one pair of contacts being on the opposite side of the motor-shaft from the other pair, each of said contacts being pivotally mounted on one stud and having a slot allowing it to move about the other stud of the pair to which said first-mentioned stud belongs, and two tension members, one tension member conecting a contact of each pair and the other tension member connecting the other contacts of each pair so as to press them against said collector rings when the motor is starting.

5. In an alternating-current motor, stationary collector rings concentric with the motor-shaft, two pairs of studs rotatable with the motor shaft, two pairs of contacts, the contacts of each pair being arranged side by side, one pair of contacts being on the opposite side of the motor shaft from the other pair, each of said contacts being pivotally mounted on one stud and having a slot allowing it to move about the other stud of the pair to which said first-mentioned stud belongs, two tension members, one tension member connecting a contact of each pair and the other tension member connecting the other contacts of each pair so as to press them against said collector rings when the

said rock shaft, a crank arm on said rock shaft, a link attached to said crank arm, a lever on the car having said link conected therewith, and independent means both upon the same side of said rock shaft for operating said lever in opposite directions whereby said link may be lowered and raised, thus respectively raising and lowering said guard.



3. A car fender having a pivotal guard on the front end thereof, an arm connected with said guard, a rock shaft on the fender, said arm being connected with said rock shaft, a crank arm on said rock shaft, a link attached to said crank arm, a lever on the car connecting said link, and a plurality of treadles within reach of the motorman of the car, the same being connected with said lever on opposite sides of the axis of said lever.

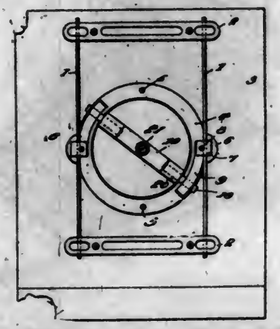
4. A car fender having a pivotal guard on the front end thereof, a lever mounted on the car, members on the guard and fender adapted to raise said guard, a lever pivotally connected with one of said members, a plurality of treadles connected respectively with said lever on opposite sides of the axis of said lever, said treadles having their heads within reach of the motorman of the car, one of said treadles having a recess in its sides, and a dog on the car adapted to enter said recess and control the respective treadle whereby the guard will be positively retained in its normally lowered position.

5. In a car fender, a scoop, and a pivotal guard on the front end thereof, means for raising said guard including a lever on the car, a spring connected with said lever and the adjacent part of the car, a treadle coöperating with said lever and spring and a treadle on the car connected with said lever for lowering said guard to its normal position.

[Claims 6 to 8 not printed in the Gazette.]

1,022,906. ELECTRIC-LAMP SOCKET. HORACE WHEELER, Hartford, Conn., assignor to General Electric Company, a Corporation of New York. Filed Mar. 10, 1909. Serial No. 482,579. (Cl. 173—339.)

3. In combination with a support having an opening entirely through it, said opening being recessed to form an inwardly extending seat, of a lamp socket fitting said opening and closing the same to the entrance of moisture, said socket being formed of transparent or translucent material and being provided with a recess on its outer face for the reception of an electric lamp, and electrical connections passing through the socket, into said recess and extending out of the socket on the rear face thereof.



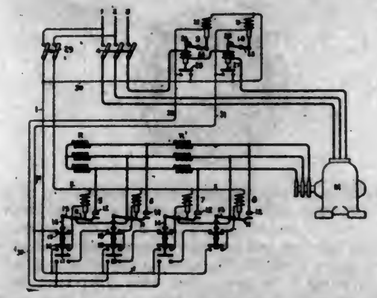
4. The combination with a support having an opening extending entirely through it, of a lamp socket filling said opening and closing the same, said socket being formed of transparent or translucent material and having a recess for the reception of an electric lamp upon its outer face, electrical connections extending at one end into said recess, the other ends of said connections extending out of the socket upon the rear face thereof and projecting radially beyond the rear face of the socket, connections mounted upon said support with which said radially projecting socket connections contact, and a knob attached to the rear face of the transparent body, whereby the body may be turned in or withdrawn from the support.

5. The combination with a support having an opening entirely through it, spring contact strips having the shape of an arc of a circle mounted at one end upon said support at the margin of the opening, and electrical connections attached to said contact strips, of a lamp socket comprising a body of transparent or translucent material fitting said opening and having on its front face a recess for the connection of an electric lamp, contact strips extending into said recess through the socket body from the rear face thereof, said strips extending radially outward on the rear face of the body and beyond the edge of the same and adapted to contact with the contact strips on the support, and a knob attached to the rear face of the socket body, whereby it may be turned in or withdrawn from the support.

[Claims 6 to 10 not printed in the Gazette.]

1,022,907. CONTROL OF ELECTRICALLY-OPERATED

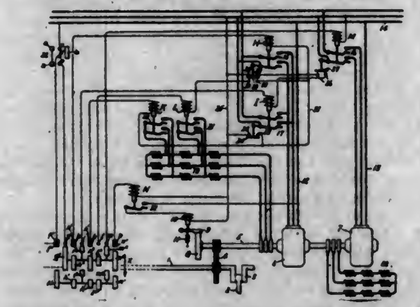
4. In combination, an electric motor, a plurality of contactors for controlling the same, a pair of relays mechanically supported in open position, and electrical means for temporarily releasing the relays alternately to cause them to close under the control of motor current to actuate the contactors successively.



5. In combination, a plurality of contactors, a control circuit, a pair of relays mechanically supported in open position, windings in the control circuit for releasing the relays alternately to cause them to close and actuate the successive contactors, and connections whereby the mechanical support of each relay is restored upon the closing of the relay.

[Claims 6 to 18 not printed in the Gazette.]

1,022,908. SYSTEM OF MOTOR CONTROL. MAX A. WHITING, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Aug. 23, 1911. Serial No. 645,555. (Cl. 172—239.)



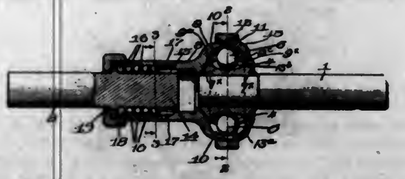
1. The combination with a rotatable shaft, of two induction motors, one having greater synchronous speed than the other, two electromagnetic switches respectively in circuit with said motors, a reversing switch for the high speed motor, and a limit switch driven by said shaft and controlling the aforesaid switches.

4. The combination with a rotatable shaft, of two induction motors, one having a greater synchronous speed than the other, resisters in circuit with the rotors of said motors, contactors controlling the stator circuits of said motors, a reversing contactor in circuit with the high speed motor, contactors for cutting out portions of the high speed motor resister, an electrically-released brake for said shaft, a contactor controlling said brake, and a limit switch rotating with said shaft and controlling the actuating coils of all said contactors.

5. The combination with a shaft, of two induction motors, one having a greater synchronous speed than the other, electromagnetic switches for controlling said motors and for reversing the high speed motor, a limit switch rotating with said shaft and having two duplicate sets of segments arranged in succession, fingers coöperating with said segments and connected with said switches, and a master switch for energising either set of contacts at will.

[Claim 6 not printed in the Gazette.]

1,022,909. UNIVERSAL JOINT. WILLIAM A. WHITNEY, Rockford, Ill. Filed July 30, 1908. Serial No. 446,055. (Cl. 74—10.)



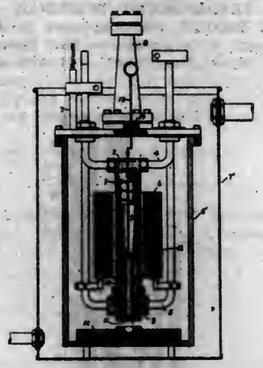
1. A universal joint comprising a member provided with a socket, a second member provided with a ball located within said socket, said socket and said ball being provided with complemental grooves, balls in said grooves, and a removable collar surrounding the first mentioned ball, said collar having a portion engaging the first mentioned ball, an annular flange threaded on said socket, and an intermediate, annular, dome-like portion having an internal annular groove which completes said complemental grooves.

2. A universal joint comprising a member provided with a socket, a second member provided with a ball located within said socket, said socket and ball being provided with complemental grooves, balls in said grooves, a ball spacer surrounding the first mentioned ball, and a collar removably secured to said socket member, said socket and said collar being shaped so as to limit movement of said ball spacer when the joint is flexed.

3. A universal joint comprising a member provided with a socket, a second member provided with a ball located within said socket, said socket and ball being provided with complemental grooves, balls in said grooves, a ball spacer surrounding the first mentioned ball, and a collar removably secured to said socket member, said socket and said collar being provided with shouldered recesses to receive opposite edges of said ball spacer.

4. A universal joint comprising a sleeve provided with

1,022,910. MANUFACTURE OF QUARTZ APPARATUS. WILLIS R. WHITNEY, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Jan. 7, 1908. Serial No. 409,677. (Cl. 204—64.)



1. The method of producing quartz vessels, which consists in melting and casting the quartz while in a substantial vacuum.

2. The method of producing transparent quartz apparatus, which consists in melting and shaping said quartz in a substantial vacuum.

3. The method which consists in heating quartz to a high temperature in an attenuated atmosphere, and shaping said quartz into vessels while out of contact with the air.

4. An apparatus for the production of transparent silica, comprising a crucible consisting of refractory metal inert with respect to silica, means for heating said crucible to the fusion temperature of silica, and means for maintaining a vacuum about said crucible during said heating.

5. An apparatus for producing quartz castings consisting of a refractory container inert to fused quartz, a heater for the container, a refractory mold inert to fused quartz, a vacuum chamber housing the container, heater and mold, and means for discharging the contents of the crucible into the mold within the vacuum chamber.

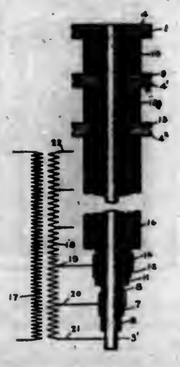
[Claims 6 and 7 not printed in the Gazette.]

1,022,911. TAPPING DEVICE FOR SIEVES OR SCREENS. FREDERICK WILLIAM ROGER WILLIAMS, London, England, assignor of one-half to Charles Hudson Mower, London, England. Filed Aug. 10, 1911. Serial No. 643,411. (Cl. 83—56.)



tion of the tapping device being produced by the inertia of the said tapping device during the movements of the vibratory frame.

1,022,912. TRANSFORMER-TERMINAL. EARLE G. WINSTON, Pittsfield, Mass., assignor to General Electric Company, a Corporation of New York. Filed May 28, 1909. Serial No. 498,917. (Cl. 173—259.)



1. A compound terminal composed of a central member, pairs of conducting rings of varying diameters surrounding the member adjacent its ends and insulated from it, conductors joining rings of like diameter insulated from each other, the lower rings uninsulated as to their exteriors, the upper rings each attached to a conducting disk, said disks being substantially coaxial with and surrounding the central member, and insulating members insulating the disks from each other and from the central member.

2. A compound terminal composed of a central rod of conducting material, pairs of conducting rings of varying diameters surrounding the rod adjacent its ends and insulated from the rod, conductors joining rings of like diameter insulated from each other, the lower rings uninsulated as to their exteriors, the upper rings and the central rod each attached to a conducting disk, said disks being substantially coaxial with and surrounding the central rod, and insulating members insulating the disks from each other and from the central rod.

3. In combination, a compound terminal composed of a plurality of conductors attached to a plurality of substantially circular coaxial conducting members insulated from each other as to their interior surfaces, and a connector having a looped end adapted to inclose said members and means for tightening the said loop on said members.

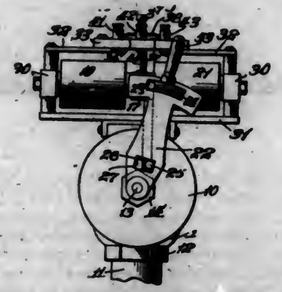
4. In combination, a terminal composed of a conductor terminating in a substantially disk-shaped conducting member, and a connector having a looped end adapted

bolster, such support having extensions on either side of such horizontal surface curved with the convex surface upward, and a space between such curved extension and



the oblique arms of the bolster which increases outwardly from the point of contact of such bolster and such support, all substantially as described.

1,022,914. ELECTRIC VALVE-OPERATING DEVICE. THEODORE H. WURMB and ROBERT BAUMANN, St. Louis, Mo., assignors to National Clock & Electric Manufacturing Co., St. Louis, Mo., a Corporation of Missouri. Filed Aug. 29, 1910. Serial No. 579,460. (Cl. 236—4.)



1. An electric valve-operating device, comprising the combination with an electro-magnet and its armature, of a device to be moved, an electric circuit in which said electro-magnet is inclined, a lever for applying the power of said electro-magnet and its armature to said device to be moved, and means for automatically changing the point on said lever at which the power is applied thereto for the movement of said device.

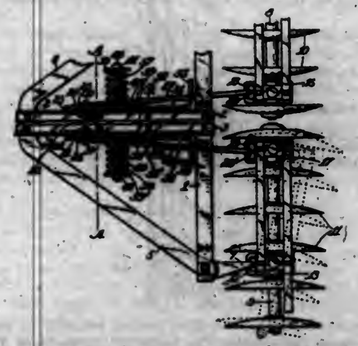
2. An electric valve-operating device, comprising the combination of an electro-magnet, its armature, a device arranged to be moved by the action of said armature, a rock-lever applied to said device, and means for automatically changing the point on said rock-lever at which the power of said magnet is applied thereto

3. An electric valve-operating device, comprising an electro-magnet, its armature, a valve having a rock-shaft, the rock-lever arranged with two points at which power may be applied to it, one of said points being located a

fulcrum of the lever, and means automatically operated by said armature for establishing a circuit to energize one of the magnets and breaking a circuit to deënergize the opposite magnet.

[Claim 6 not printed in the Gazette.]

1,022,915. DISK-HARROW GANG-EQUALIZER. LEWIS B. WYGANT, Vincennes, Ind., assignor to Hartman Manufacturing Company, Vincennes, Ind., a Corporation of Indiana. Filed Sept. 27, 1911. Serial No. 651,548. (Cl. 55—81.)



1. A disk-harrow gang-equalizer including a boss having a supporting base thereon, the boss being provided with an axle rod and having on each of two opposite sides thereof a laterally extending cam, two companion members connected with the axle rod at opposite sides of the boss and having each an arm thereon, the members having each a cam thereon engaging the cam on the adjacent side of the boss, and two springs on the axle rod coöperating therewith to hold the cams of the members in contact with the cams on the boss.

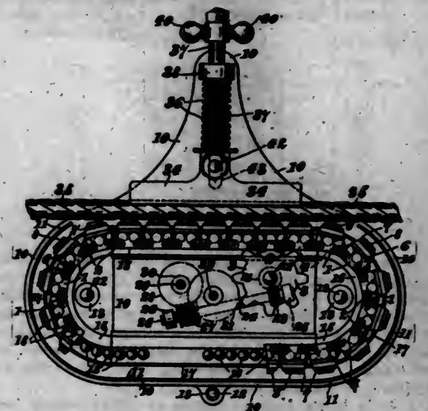
2. A disk-harrow gang-equalizer including a boss provided with a supporting base having bolt holes therein, the boss being provided also with an axle rod and having laterally projecting cams on opposite sides thereof, two companion members connected with the axle rod at opposite sides of the boss and having cams thereon to cooperate with the cams on the adjacent sides of the boss, the members having each an arm thereon, two springs on the axle rod coöperating therewith to hold the cams of the members in contact with the cams on the boss, and two pressure bars secured to the two arms respectively.

3. A disk-harrow gang-equalizer including a boss having a supporting base thereon, two companion members having each an arm thereon, each arm having a slot therein, an axle rod extending through the boss and the companion members, two pressure bars having each a hole therein receiving the axle rod, the bars extending against the arms and having lateral projections thereon, bolts in the slots adjustably securing the bars to the arms, and means for frictionally holding the companion

to the two levers and connected with the two axles respectively, of a boss rigidly secured to the frame and having cams on opposite sides thereof, an axle rod extending movably through the boss, two equalizing members journaled on the axle rod and having cams thereon coöperating with the cams of the boss, each member having an arm thereon, two pressure bars pivoted on the axle rod adjacent said members and secured to the arms of the members respectively, the bars having lateral projections thereon extending over the draft bars in proximity thereto, nuts on the end portions of the axle rod, and springs on the axle rod between the equalizing members and the nuts.

[Claim 6 not printed in the Gazette.]

1,022,916. LINEAR MEASURE FOR ROPES, &c. NORMAN DEWAR MACGREGOR YORKE, Glasgow, Scotland. Filed May 1, 1911. Serial No. 624,302. (Cl. 73—9.)

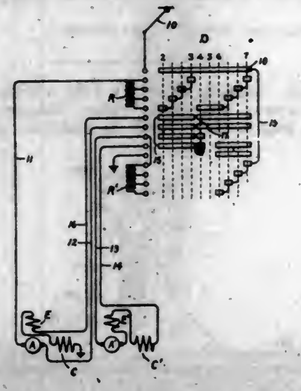


1. A device for measuring the length of an article (such as a rope, cord, rod, wire or tape) comprising an endless traveling band, an endless bearing race, having a straight unyielding portion therein, for the inner surface of the band, means for pressing the article being measured against the outer surface of the band which band is supported, and held in a straight line, by the said straight surface, and indicator mechanism automatically operated from the traveling band.

2. A device for measuring the length of an article (such as a rope, cord, rod, wire or tape) comprising an outer casing made in parts, an endless traveling band, an endless bearing race between the parts of the casing and having a straight unyielding portion therein, for the inner surface of the band, means for pressing the article being measured against the outer surface of the band which band is supported, and held in a straight line, by the said

to the spindle, and a spring fitted on the spindle and bearing on the plate, for pressing the article being measured against the traveling band, and indicator mechanism automatically operated from the traveling band.

1,022,917. MOTOR-CONTROL SYSTEM. THORSTEN VON ZWEIGBERGK, Southport, England, assignor to General Electric Company, a Corporation of New York. Filed Jan. 16, 1911. Serial No. 602,847. (Cl. 172—179.)

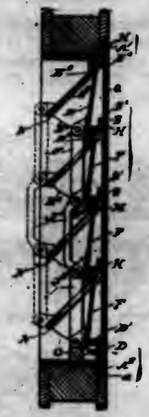


1. In a series parallel system of motor control having a ground return, the combination with a plurality of motors, of means for connecting the armatures of the motors in series to the source of supply and the fields of the motors in series with the armatures, between the armatures and the ground, and means for establishing a short circuit from a connection between the armatures to the connection between their corresponding fields.

2. In a series parallel system of motor control having a ground return, the combination with a pair of motors, of means for connecting the armatures of said motors in series to the source of supply and the fields of the motors with each other and with the armatures between the armatures and the ground, and means for short circuiting one of said motors by establishing a short circuit from the connection between the armatures to the connection between the fields.

3. In a series parallel system of motor control having a ground return, the combination with a plurality of motors having exciting and commutating fields, of means for connecting the armatures of said motors in series to the source of supply and the fields of said motor in series with each other and with the armatures between the armatures and the ground, and means for short circuiting one of said motors by establishing a short circuit from the connection between the armature of said motor and the adjacent armature to a connection between the field of

3. In a ventilator, a frame having recesses in opposite faces of its sides between their edges and a plate having its ends in said recesses, the recesses being adapted to support the plate and to permit it to be moved from closed to open position within them, and means for retaining the plates in open or closed position.



4. In a ventilator, a frame having recesses in the opposite faces of its sides, the walls of the recesses diverging from opposite points near the upper end of the recesses, and plates having their ends in opposite recesses and extending upward therein past the points from which the side walls diverge.

5. In a ventilator, a frame having recesses in the opposite faces of its sides, the walls of the recesses diverging from opposite points near the upper end of the recesses and the lower end of the recesses being formed on the arc of a circle and plates having their ends in opposite recesses and extending upward therein past the points from which the side walls diverge.

[Claims 6 to 14 not printed in the Gazette.]

1,022,919. ELECTRIC-LIGHTING DEVICE. LAURITZ W. ANDERSEN, Waterbury, Conn., assignor to The Plume and Atwood Manufacturing Company, a Corporation of Connecticut. Filed Jan. 16, 1912. Serial No. 671,481. (Cl. 240—114.)



ment with reference to one another and for holding the shells together and clamping the shade, gripping devices at the upper end of the inner shell for forcibly engaging the lamp socket, and which devices are held in position by the presence of the surrounding outer shell.

2. A shade holder for electric lighting devices, comprising inner and outer shells and adapted to be moved axially with reference to one another, gripping devices associated with the inner shell and adapted to engage a lamp socket, and the free ends of the said shells receiving between them the shade to be clamped and held, and means for holding the two shells firmly with relation to one another when holding the shade and gripping the socket.

3. A shade holder for electric lighting devices, comprising an inner shell having a flange at the lower end, a screw-threaded part, and means at the opposite and upper end adapting the same to engage a socket, and an outer shell having a flanged base and a screw-threaded collar, the screw-threaded parts of the said shells adapted to be brought into engagement to change the relation axially of the said shells, the flanged parts of the said shells receiving the shade between them and securely holding the same at all points.

4. A shade holder for electric lighting devices, comprising an inner shell having a flange at the lower end, a screw-threaded part, a concave annulus at the upper end, and provided with spaced incisions through the concave annulus and through the screw-threaded portion, and an outer shell having a flanged base and screw-threaded collar, the shade coming between the flanged parts of said shells to be held firmly by the movement of the outer shell over the inner shell and the inner shell at its concave annulus adapted to forcibly engage the body of the socket, and to be held in place by the clamping action of the outer shell.

5. A shade holder for electric lighting devices, comprising an inner shell having a flange at the lower end, a screw-threaded part, a concave annulus at the upper end, and provided with spaced incisions through the concave annulus and through the screw-threaded portion, and an outer shell having a flanged base and screw-threaded collar, the shade coming between the flanged parts of said shells to be held firmly by the movement of the outer shell over the inner shell and the inner shell at its concave annulus adapted to forcibly engage the body of the socket, and to be held in place by the clamping action of the outer shell, and both shells provided with series of apertures or holes therein, for ventilation, and for dissipating the heat.

1,022,920. BRUSH. RUFUS L. ANDERSON, Plant City, Fla. Filed Oct. 12, 1911. Serial No. 654,261. (Cl. 15—30.)



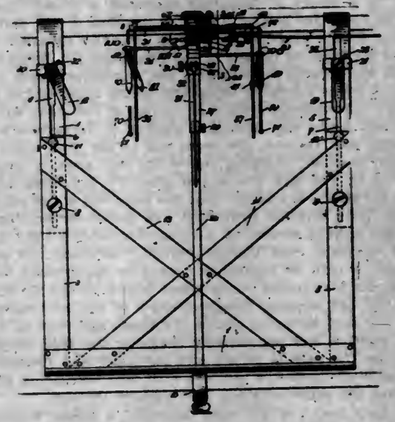
bers, the stock and annulus completely filling the seat of the back and secured by a portion of the latter engaging the projections.

4. In a brush, the combination of a back having a seat therein, a stock carrying bristle members, and a double row of rubber brush members surrounding the bristle members and having carrying means independent of the stock and over which portions of the stock extend within the seat.

5. In a brush, the combination of a back, a stock carrying bristle members, and a rubber annulus surrounding and located beneath the edge portion of the stock and interposed between the latter and the sides and ends of the seat and having brush members extending upwardly through portions of the stock and completely surrounding the bristle members.

[Claims 6 and 7 not printed in the Gazette.]

1,022,921. AUTOMATIC LEAF-TURNER. JAMES ARCHIBALD ANDREW, Victoria, British Columbia, Canada. Filed Apr. 8, 1911. Serial No. 619,713. (Cl. 84—17.)



1. In a device of the class described, a frame, the upper portion of the frame and at opposite corners being provided with clips, a post carried by the frame and at a substantially vertical central position thereon, downturned members carried by the post, a plurality of arms rotatably supported on the upper end portion of the post, the outer end of each arm being provided with movable fingers for engaging the opposite sides of successive leaves in a book, the said arms lying one above the other when the said leaves are so engaged, preparatory to turning them, a frame rotatably supported on the upper end of the said post, a vertically movable rack carried at the outer end of the said frame and provided with a number of transversely-extending pins, the lower end of the said

the frame, a plurality of arms rotatably supported on the post, each arm being provided with means for engaging the successive leaves of a book, the said arms lying one above the other, a frame rotatably supported on the upper end of the post and adjacent the upper one of the said arms, a vertically movable rack carried at the outer end of the said frame and provided with a number of transversely-extending pins, the lower end of the rack being normally in engagement with one of the said rotatable arms, a trigger pivotally carried adjacent the upper end of the said post, the vertical plane in which the trigger lies being closely adjacent the plane of the vertically movable rack, means for preventing movement of the trigger in one direction, a spring in engagement with the said post and the said rotatable frame, whereby the frame with the rack thereon is held normally adjacent the trigger, a cord or equivalent means in engagement with the frame, for moving the rack and one of the arms with the leaf engaged thereby, release of the cord permitting the spring to return the frame and the rack to normal position, each pin on the rack successively engaging the aforesaid trigger, whereby the rack is moved and the lower end thereof is brought into successive engagement with the arms.

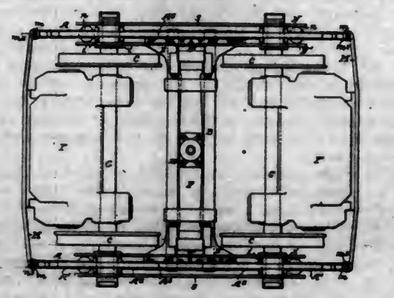
3. In a device of the class described, a frame, means on the frame for holding a book in position, a post carried by the frame, a plurality of arms pivotally mounted one above the other at the end of the post, each arm being provided with means for engaging the successive leaves of a book, a frame rotatably supported on the upper end of the post, a vertically-movable rack carried at the outer end of the said frame and having a number of transversely-extending pins thereon, the lower end of the rack, when in normal position, engaging one of the said arms, a trigger carried by the said device and pivotally supported adjacent the said post and the rack, the outer end of the trigger being freely movable downward, and means for holding it against upward movement, a spring for holding the frame with the said rack thereon normally adjacent the said trigger, a cord or equivalent means in engagement with the frame for turning the rack and with it one of the arms and the leaf engaged thereby, release of the cord permitting the said spring to return the frame and rack to normal position and successively engaging the said trigger, whereby the rack is moved and the lower end thereof is brought into operative position with each succeeding arm, to turn the same with the leaf engaged thereby.

4. In a device of the class described, a frame, a clamp on the frame for securing it to a suitable support, the upper portion of the frame at opposite corners being provided with clips for engaging a book, a post carried by the frame at a substantially central portion thereof; a downwardly-extending pivoted needle carried by the post for engagement with the central portion of the book, a plurality of arms rotatably supported adjacent the upper end of the post, the outer end of each arm being provided with fingers for engaging the successive leaves of the book on opposite sides thereof, the said arms lying one above the other, a frame rotatably supported on the post and above the said arms, a vertically-movable rack carried by the said frame and provided with a number of transversely-extending pins, the lower end of the rack being normally in engagement with one of the said arms, a trigger pivotally supported adjacent the top of the post, whereby it may be moved downwardly, and means for holding it against upward movement, a spring secured to the said post and the said rotatable frame, whereby the frame with the rack thereon is held normally adjacent the said trigger, a cord or equivalent means in engagement with the frame for turning it and one of the arms with the leaf engaged thereby, release of the cord permitting the said spring to return the frame and rack to normal position, each pin on the rack successively engaging the said trigger, whereby the rack is moved downwardly and the lower end thereof is brought into successive engagement with the rotatable arms and in position for turning the leaves successively.

5. In a device of the class described, a frame for holding a book, a vertically extending post carried by the frame, a plurality of arms rotatably supported on the post, each of the arms being provided with means for engaging the successive leaves of a book, rotatable frame carried by the post and above the said arms, a vertically movable rack carried in the frame, a trigger held against movement in one direction pivotally supported adjacent the said frame, downwardly-extending weighted arms movably supported adjacent the top of the post, a lug carried by the arms, means for supporting the said trigger and the said arms, the lower end of the said rack being normally in engagement with one of the said arms, a spring on the said post, one end thereof being in engagement with the frame, and means engaging the frame and also the lug on the said weighted arms, for raising the arms and turning the frame, whereby the rack may move one of the arms, thereby turning a leaf, there being means on the said rack engaging the said trigger on its return movement in order to move the rack downwardly and into engagement with another one of the said arms.

[Claims 6 to 8 not printed in the Gazette.]

1,022,922. CAR-TRUCK. WILLIAM L. AUSTIN, Philadelphia, Pa., assignor, by mesne assignments, to The Baldwin Locomotive Works, Philadelphia, Pa., a Corporation of Pennsylvania. Filed June 9, 1911. Serial No. 632,190. (Cl. 105—239.)



The combination in a truck, of side frames; transoms extending from one side frame to the other; with brace plates connecting the side frames to the transoms; each plate being made of a single piece and recessed to receive the bolster; the plate being bent at the inner end of the recess to form an abutment to receive the end thrust of the bolster.

1,022,923. METHOD OF REINFORCING PAPER BOXES. CHARLES S. BIRD, East Walpole, Mass. Filed Oct. 22, 1910. Serial No. 588,402. (Cl. 93—58.)

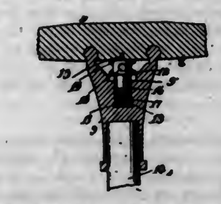


1. The method of reinforcing rectangular folding paper boxes composed of friable material, which consists first in pasting on the inner surface of the friable box blank along the prospective lines of creases comparatively thin reinforcing strips while said box blank is still flat, second, simultaneously creasing both the said friable blank and the said thin reinforcing strips without disintegrating the component layers of said blank and said strips so as to form a concavo-convex crease projecting on the inner surface of said box blank, and finally folding the blank into final position to form the rectangular box without tearing or cracking the layers of the blank and having said reinforcing strips on the inner surface of the rectangular folding box substantially as described.

2. The method of reinforcing a rectangular folding box composed of friable material, which consists first in pasting on the inner surface of the friable box blank along the prospective lines of creases comparatively thin reinforcing strips while said box blank is still flat, second, simultaneously creasing both the said friable blank and the said thin reinforcing strips without disintegrating the component layers of said blank and said strips so as to form a concave crease on the side of the box blank opposite said strips, and finally folding the blank into final position to form a rectangular box without tearing or cracking the layers of the blank and having said reinforcing strips on the inner surface of the rectangular folding box, substantially as described.

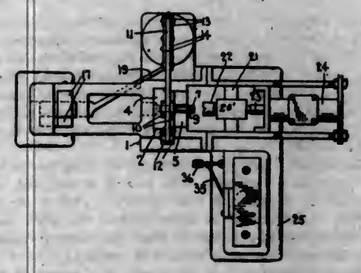
3. The method of reinforcing angular folding paper boxes composed of friable material which comprises first pasting onto one surface of the still flattened blank along the prospective lines of creases, strips of comparatively thin reinforcing material, next simultaneously creasing in one and the same direction both the so combined materials, and finally simultaneously bending them in one and the same direction to the angle of fold required by the finished box.

1,022,924. PICK-HANDLE. ALFRED BOHY, Hocking, Iowa. Filed Oct. 19, 1910. Serial No. 587,010. (Cl. 125—19.)



In combination with an ax having transversely extending and longitudinally spaced recesses therein and a recess intermediate said recesses, a handle attaching member having outwardly branching arms terminating in enlarged heads adapted to be seated in said spaced apart recesses, said member having a longitudinally extending bore intermediate between said arms, a nut seated in said bore and held against rotation therein, and a jam screw threaded by one end in said nut and adapted to engage by its other end in the intermediate recess of the ax to prevent lateral displacement of the same on said arm, said screw being provided intermediate its length with a pin receiving head which in clamped position bears against the head of the ax.

1,022,925. DRILL FORGING AND SHARPENING MACHINE. CARL O. BORKMAN, Victor, Colo. Filed Aug. 17, 1911. Serial No. 644,622. (Cl. 76—5.)



1. A drill forging and sharpening machine comprising a main frame, a drill forming die operatively mounted in said frame, a drill holding mechanism comprising a pair of slidably mounted drill gripping jaws, a pivotally mounted jaw operating lever, a pair of links adapted to connect said jaws with said lever on opposite sides of its pivotal connection whereby when said lever is operated, said jaws will be moved in opposite directions to bring the same into and out of operative engagement with the shank of the drill whereby the latter is held while being operated on by said forming dies, a dolly, and operating mechanism for said dolly.

2. A drill forging and sharpening machine comprising a supporting structure, a drill forming die comprising a stationary and a movable member, a holder to adjustably support and operate said movable member, a pair of drill gripping jaws, and means connected to simultaneously move said gripping jaws in opposite directions and to operate said movable die member, a dolly, and operating mechanism for said dolly.

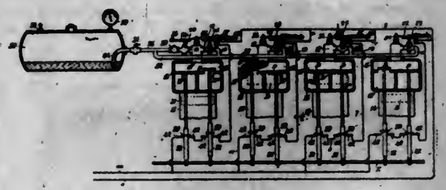
3. In a drill forging and sharpening machine a supporting structure, dies mounted in said structure, a vertically movable holder for one of said dies, drill gripping jaws, and means for simultaneously actuating said die holder and moving said gripping jaws in opposite directions, a dolly, and operating mechanism for said dolly.

4. In a drill forging and sharpening machine, a supporting structure, a movable die holder mounted in said structure, drill gripping jaws, and means for actuating said gripping jaws and said movable die holder simultaneously, comprising an equalizing lever, a series of levers connected with said equalizing lever on one side of its fulcrum and with said movable die holder, another series of levers connected with said equalizing lever on the other side of its fulcrum and with said gripping jaws, and means for actuating said equalizing lever, a dolly, and operating mechanism for said dolly.

5. In a drill forging and sharpening machine, a supporting structure, a movable die holder mounted in said structure, drill gripping jaws, and means for actuating said gripping jaws and said movable die holder simultaneously, comprising an equalizing lever, a series of levers connected with said equalizing lever on one side of its fulcrum and with said movable die holder, another series of levers connected with said equalizing lever on the other side of its fulcrum and with said gripping jaws, a fluid pressure cylinder, a piston mounted to reciprocate therein, and a piston rod connected at one end to said piston and at its other end to said equalizing lever, intermediately of the ends of said lever, a dolly, and operating mechanism for said dolly.

[Claim 6 not printed in the Gazette.]

1,022,926. SYSTEM AND APPARATUS FOR STARTING INTERNAL-COMBUSTION ENGINES. JAMES C. BOYLE, Calgary, Alberta, Canada. Filed Mar. 26, 1910. Serial No. 551,610. (Cl. 123—180.)



1. A multi-cylinder internal combustion engine and starting means therefor comprising intake and exhaust valves for each cylinder; a reservoir for compressed explosive fuel; conduits connecting each of said cylinders and said reservoir; controls for said conduits; means for operating said controls to open said conduits singly; and means for selecting the one of said controls to be operated, said means including the intake and exhaust valves of each cylinder when both are in closed position in one cylinder.

2. A multi-cylinder internal combustion engine and starting means therefor comprising intake and exhaust valves for each cylinder; a reservoir for compressed explosive fuel; conduits connecting each of said cylinders

and said reservoir; a plurality of valves disposed in said conduits; a connecting rod normally disengaged from each of the said valves and adapted for engagement therewith; an electro-actuated means for engaging said valves with said rod singly, said means being disposed in operative position when the intake and exhaust valves in one of said cylinders are closed.

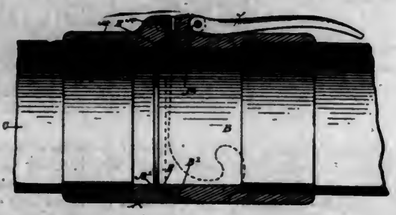
3. In a multi-cylinder internal combustion engine and starting means therefor embodying a reservoir for compressed explosive fuel; conduits connecting each of said cylinders and said reservoir; a plurality of valves for said conduits; a plurality of levers loosely mounted one on each of said valves; a plurality of members, one fixedly mounted on each of said valves adjacent said levers; locking mechanisms electro-actuated to lock said members and said levers; and a plurality of electric circuits for actuating said locking mechanisms, each of said circuits being completed when the intake valve and exhaust valve in any one cylinder are in closed position.

4. In a multi-cylinder internal combustion engine and starting means therefor embodying a reservoir for compressed explosive fuel; conduits connecting each of said cylinders and said reservoir; a plurality of valves for said conduits; a plurality of levers loosely mounted one on each of said valves; a plurality of members, one fixedly mounted on each of said valves adjacent said levers; locking mechanisms electro-actuated to lock said members and said levers; a plurality of electric circuits for actuating said locking mechanisms embodying the valve stems of the intake and exhaustlvalves of said engine and only when said valves are in closed position; and manually operable means for closing said circuits.

5. In a multi-cylinder internal combustion engine and starting means therefor embodying a reservoir for compressed explosive fuel; conduits connecting each of said cylinders and said reservoir; a plurality of valves for said conduits; a plurality of levers loosely mounted one on each of said valves; a plurality of members, one fixedly mounted on each of said valves adjacent said levers; locking mechanisms electro-actuated to lock said members and said levers; a plurality of electric circuits for actuating said locking mechanisms embodying the valve stems of the intake and exhaust valves only when said valves are in closed position; and means manually and simultaneously operable for closing the one of said circuits to operate the locking mechanism connected with the cylinder in which both the intake and exhaust valves are closed, and to shift the lever connected with one of the said members by said actuated locking mechanism to open the valve in that cylinder.

[Claims 6 and 7 not printed in the Gazette.]

1,022,927. PIPE OR HOSE COUPLING. PHILO R. BRADLEY, West New York, N. J., assignor of one-half to George Winkler, West New York, N. J. Filed May 9, 1911. Serial No. 626,116. (Cl. 137—28.)



A coupling, comprising male and female members, of which the female member is provided with a conical seat and the male member is provided with a conical projection adapted to be seated on the said seat, curved hooks integral on the female coupling member and projecting therefrom and having a web connecting their projecting portions, curved bearings formed in the peripheral face of the male coupling member and adapted to be engaged by the said hooks, and locking means for locking the said coupling members together, the said locking means and hooks being spaced equidistantly apart.

1,022,928. ILLUMINATING-SIGN. WILLIAM T. BRADSHAW, Berkeley, Cal. Filed May 3, 1911. Serial No. 624,778. (Cl. 240—106.)

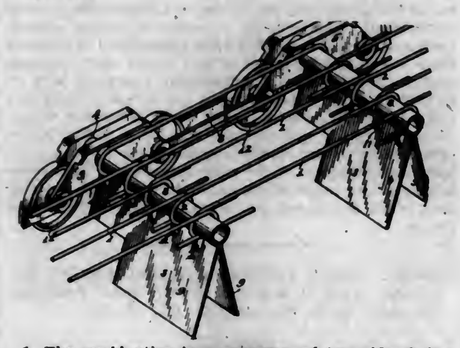


1. A main lens having convexed outer and inner surfaces, a number of small convex lenses arranged about the edge of said main lens, and a number of refracting prisms adjacent to the inner convex surface of said main lens and in the rear of said small convex lenses.

2. A main lens formed with an outer convex surface and an inner convex surface with an annular groove adjacent thereto, and prismatic grooves transverse to said annular groove, and a number of small convex lenses located about the edge of the convex surface of said main lens and opposite to said annular groove.

3. A main lens formed with a convex outer surface, a number of small lenses located about the edge of said convex surface, said main lens having an inner convex surface, and a flange, an external shoulder, an annular groove, and an inner annular groove provided with transverse prisms.

1,022,929. CONVEYER. HARRY COULSTON, Philadelphia, Pa., assignor to The Philadelphia Textile Machinery Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Aug. 31, 1911. Serial No. 647,038. (Cl. 193—26.)

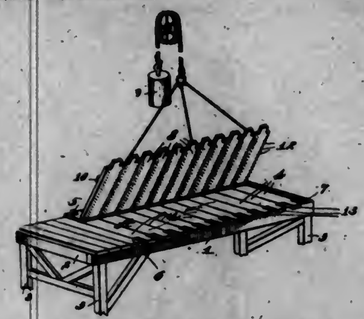


1. The combination in a conveyer, of two side chains, a series of transverse supporting members extending from one chain to the other and spaced a given distance apart by the chains, said supporting members having openings therein, with a series of longitudinal carrying members having elongated hooks at each end, said hooks extending around a portion of the transverse members and through openings therein.

2. The combination in a conveyer of a series of transverse supporting members each having a rounded upper section and a perforated web section; with a series of rods bent at each end to form hooks; the rods resting upon the transverse members and the hooked ends extending through the perforated web section.

3. The combination in a conveyer, of a series of transverse members having perforations, with hooked longitudinal members, carried by the transverse members, the hooks extending through the perforations, the lower portions of the transverse members being flared for the purpose of stiffening said member.

1,022,930. APPARATUS FOR SEVERING OR SEPARATING SHEETS OF MATERIAL. BENJAMIN D. COURTS, Chicago, Ill., assignor, by mesne assignments, to Dixie Cotton Felt Mattress Company, Chicago, Ill., a Corporation of Illinois. Filed June 3, 1909. Serial No. 499,953. (Cl. 19—10.)



1. In an apparatus for severing or separating sheets of material into strips or sections, the combination of a table comprising leaves or sections movable relatively to each other, pressure plates which overlie the different sections of the table and are movable therewith, and which are also movable toward and from said table, and means adjacent to the lateral edges of said table sections and pressure plates adapted for engaging a bat or layer of material confined between the same, substantially as described.

2. In an apparatus for severing or separating sheets of material into strips or sections, the combination of a table comprising leaves or sections movable relatively to each other, pressure plates which overlie the different sections of the table and are movable therewith, and which are also movable toward and from said table, and means adjacent to the lateral edges of said table sections and pressure plates comprising teeth in one thereof adapted for engaging a bat or layer of material confined between said table sections and said pressure plates, substantially as described.

3. In an apparatus for severing or separating sheets of material into strips or sections, the combination of a table comprising leaves or sections movable relatively to each other, pressure plates which overlie the different sections of the table and are movable therewith, and which are also movable toward and from said table, and series of teeth which project from the under sides of said pressure plates adjacent to their lateral edges, substantially as described.

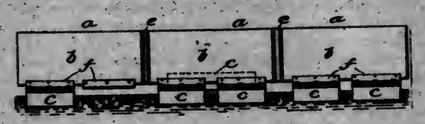
4. In an apparatus for severing or separating sheets of material into strips or sections, the combination of a table comprising leaves or sections pivoted at their rear ends so that their front ends will be movable laterally in the plane of the table, pressure plates hinged to said table leaves or sections at their rear ends, and series of teeth which project from the under sides of said pressure plates adjacent to their lateral edges, substantially as described.

5. In an apparatus for severing or separating sheets of material into strips or sections, the combination of a table comprising leaves or sections pivoted at their rear ends so that their front ends will be movable laterally in the plane of the table, pressure plates the rear ends of which are hinged to said table leaves or sections at a distance from their pivotal points, and series of teeth which project from the under sides of said pressure plates adjacent to their lateral edges, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,022,931. FLOATING DRY-DOCK. ANDREW C. CUNNINGHAM, Washington, D. C. Filed Dec. 24, 1910. Serial No. 599,075. (Cl. 114—46.)

1. In a floating dry dock, a plurality of sections comprising pairs of parallel upright side walls connected end to end in detachable relation with each other, and a plurality of transverse pontoons underlying and supporting each pair of side walls, said pontoons being interchangeable with respect to the several pairs of side walls.



2. In a floating dock structure, dock sections each comprising bottom units or pontoons interchangeable as between each other and said sections, certain of said pontoons differing from others in displacement, whereby the dock structure may be accommodated to a localization or concentration of weight in the vessel to be docked, as described.

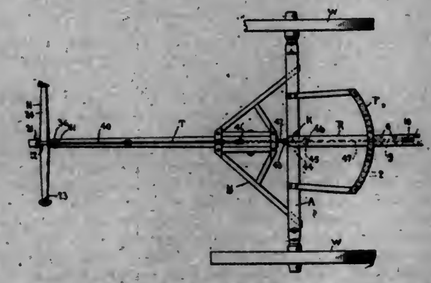
3. In a floating dock structure, interchangeable dock sections detachably connected end to end, each of said sections comprising side walls and transverse underlying pontoons detachably secured to said walls, all of said pontoons being of the same width and interchangeable as between each other and the different sections, but certain of said pontoons varying from others in displacement, whereby the pontoons may be arranged to accommodate the dock structure to a localization or concentration of weight in the vessel to be docked.

4. In a floating dry dock structure, the combination of parallel upright side walls, a pontoon directed transversely of said side walls and extending at its ends beneath the same, flanges on the upper surface of the pontoon, similar flanges attached to the lower edges of the side walls and mating with those of the pontoon, and bolts detachably securing said flanges together.

5. A floating dry dock, comprising a plurality of independent sections, each section having continuous side walls and a plurality of transverse pontoons, all of said pontoons being of the same width so as to be interchangeable in position, but some having greater depth than others for securing greater displacement, and the fastening devices on each pontoon for securing it to the bottom of said side walls being like those on all other pontoons in construction and position whereby they may be connected in any position to any of said side walls.

[Claim 6 not printed in the Gazette.]

1,022,932. TONGUE-LOCK. ALFRED DUBÉ, Edmonton, Alberta, Canada. Filed Oct. 16, 1911. Serial No. 654,886. (Cl. 21—39.)



1. In a device for steadying vehicles, the combination with a rack carried by the fifth wheel, a bolt carried by the reach in rear of said rack, means for pressing the tip of the bolt normally into engagement with said rack, and a lever engaging said bolt; of a tubular neck yoke bar having a horizontal rock shaft journaled through each extremity, a bail whose ends are rigidly connected with the ends of said shaft and whose center is connected with the collar of either horse, a rock lever rigidly secured to said shaft within the bar, a link loosely mounted through a hole in said bar near its center, flexible connections between its rear end and said bolt-operating lever,

and means whereby the swinging of either bail and rocking of its shaft moves said link forward through the neck yoke bar.

2. In a device for steadying vehicles, the combination with a rack carried by the fifth wheel, a bolt carried by the reach in rear of said rack, means for pressing the tip of the bolt normally into engagement with said rack, and a lever engaging said bolt; of a tubular neck yoke bar having a horizontal rock shaft journaled through each extremity, a bail whose ends are rigidly connected with the ends of said shaft and whose center is connected with the collar of either horse, a rock lever rigidly secured to said shaft within the bar, a link loosely mounted through a hole in said bar near its center, flexible connections between its rear end and said bolt-operating lever, rods connecting said rock levers in pairs and extending throughout the length of said neck yoke bar, and connections between said rods and the link whereby the swinging of either bail in either direction will move both said rods and their movement is communicated to said link and through the latter to said bolt-operating lever.

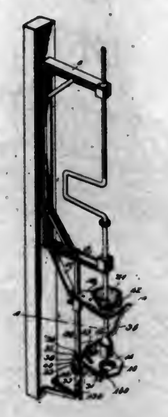
3. In a device for steadying vehicles, the combination with a rack carried by the fifth wheel, a bolt carried by the reach in rear of said rack, means for pressing the tip of the bolt normally into engagement with said rack, and a lever engaging said bolt; of a tubular neck yoke bar having a horizontal rock shaft journaled through each extremity, a bail whose ends are rigidly connected with the ends of said shaft and whose center is connected with the collar of either horse, a rock lever rigidly secured to said shaft within the bar, rods connecting the upper and lower ends of said rock levers and extending throughout the length of the neck yoke bar, an eye on each rod, two rods playing freely through said eyes and each having a head at one extremity, a bell-crank lever to which the other extremities are pivoted, a link loosely connected with the bell-crank lever, and flexible connections between said link and the bolt-operating lever.

4. In a device for steadying vehicles, the combination with a spring-actuated bolt mechanism for normally locking the front axle and tongue in the positions they assume around the king bolt; of a neck yoke bar having rock shafts through its extremities, bails connected with said shaft and the horses' collars, rock levers mounted on said shafts within said bar, parallel rods connecting their extremities in pairs, eyes on said rods, each eye being enlarged toward both ends of its axis, rods loosely engaging said eyes and having nuts adjustable thereon at one side of the eyes, and flexible connections between the other extremities of said rods and said locking mechanism for retracting the bolt when either rock shaft is turned in either direction.

1,022,933. TILE-MACHINE. JACOB B. ENGSTROM, Manchester, Iowa. Filed June 5, 1911. Serial No. 631,331. (Cl. 25—35.)

1. In a tile machine, the combination with an upright standard having a series of arms, a nut and a guide-eye carried by two of them, a cranked plunger passing loosely through said eye and having a threaded upper end screwing through said nut, and a conical core carried by the lower end of the plunger; of a table forming the mold-bottom and having a hole larger than the larger end of said core, a plate forming the mold-top and having a similar hole, a bracket pivotally supported from said upright and carrying said table, a spring supporting the bracket from one of said arms with yielding force so as to permit the depression of the table, flanges surrounding the holes in the table and top on their adjacent faces, and a shell forming the mold-jacket whose extremities are adapted for removable insertion within said flanges when the table is depressed.

2. In a tile machine, the combination with an upright standard having a series of arms, a nut and a guide-eye carried by two of them, a cranked plunger passing loosely through said eye and having a threaded end passing through said nut, and a conical core carried by the lower end of the plunger; of a plate carried by a third arm and constituting the mold-top and provided with a hole larger than the larger end of said core, a rod depending from said arm, a spring mounted loosely on said rod, a table supported by said spring and having a hole similar to that in the plate, the table constituting the mold-bottom, and a mold-jacket whose extremities are adapted for removable insertion between said bottom and top.



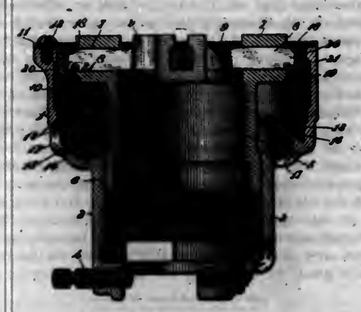
3. In a tile machine, the combination with an upright standard having a series of arms, a nut and a guide-eye carried by two of them, a cranked plunger passing loosely through said eye and having a threaded end passing through said nut, and a conical core carried by the lower end of the plunger; of a mold-top carried by a third arm on said standard, a rod depending from this arm, a spring on the rod, a swinging bracket pivotally mounted on said rod and yieldingly supported by said spring, a table carried by the bracket and having a plurality of holes similar to that in the plate, means for swinging the table from side to side to bring any hole beneath that in the plate, a flange surrounding each hole in the table, and a mold-jacket whose extremities are adapted for removable insertion between said top and table and within said flanges.

4. In a tile machine, the combination with an upright standard, a vertically movable and rotary plunger carried thereby, and a conical core at the lower end of the plunger; of arms projecting from said standard, a plate carried by one of them and having a hole larger than the larger end of said core, a rod connecting the arms, a spring thereon, a table pivotally mounted on said rod and yieldingly supported by said spring and provided with a plurality of holes similar to that in the plate, a lever connected with the table, a collar fast on the rod and having a dog, a bracket fast on the table and having notches with which said dog engages when any hole in the table is beneath that in the plate, and a mold-jacket whose extremities are adapted for removable insertion between said table and plate.

5. In a tile machine, the combination with an upright standard, a vertically movable plunger carried thereby, and a conical core at the lower end of the plunger; of arms projecting from said standard, a rod connecting the arms, a spring thereon, a table having a plurality of holes larger than said plunger, a bracket supporting the table and having an eye pivotally mounted on said rod and yieldingly supported by said spring, a lever connected with the table and forked at its inner end, a shoulder and a collar on the rod between which said fork engages, a dog on the collar, a flange on the bracket having notches with which said dog engages when any hole in the table is beneath that in the plate, and a mold-jacket whose extremities are adapted for removable insertion between said table and plate.

[Claims 6 and 7 not printed in the Gazette.]

1,022,934. THREAD-CUTTING MACHINE. HILAND B. FARNSWORTH, Sandusky, Ohio, assignor to The Sandusky Foundry & Machine Company, Sandusky, Ohio, a Corporation of Ohio. Filed Dec. 5, 1907. Serial No. 405,276. (Cl. 10—120.)

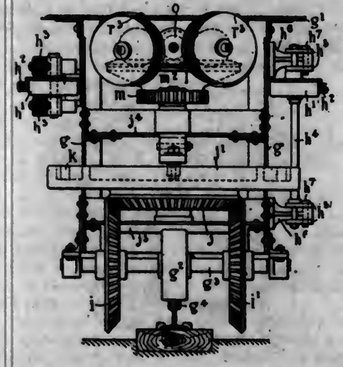


1. In a thread-cutting machine, the combination of a work-holder and a die-carrying head having a screw-connection, radially-movable dies carried by the head, means revolubly-mounted on the work-holder providing thrust-sustaining surfaces which revolve with and are traversed longitudinally by the backs of the dies as they advance axially, and automatic die-retracting and re-setting means operated respectively by the feed and reverse movements of the die-carrying head, the same comprising coöperative cam-instrumentalities of which a pair is on the die and another pair is carried by the work-holder and has a fixed longitudinal position, each pair of such instrumentalities including at least one beveled surface.

2. In a thread-cutting machine, the combination of a frame provided with an annular thrust-sustaining surface, which merges into a recess having a cam-surface, and a die provided with means for engaging a cam-faced portion of said recess for the purpose of removing the die from the work at the end of the cutting operation.

3. In a thread-cutting machine, the combination of a frame provided with an annular thrust-sustaining surface which merges into an annular recess having cam faces, and a die provided with means for engaging a cam-faced portion of said recess for the purpose of removing the die from the work at the end of the cutting operation.

1,022,935. APPARATUS FOR HANDLING, SORTING, AND DELIVERING PARCELS AND THE LIKE. ALFRED WARWICK GATTIE, London, and ARTHUR GEORGE SEAMAN, Altrincham, England. Filed June 26, 1909. Serial No. 504,570. (Cl. 193—2.)



1. A system for handling sorting and delivering parcels and the like comprising an endless moving conveyer, electrically operated rotating rollers for automatically delivering the parcels or the like on to said conveyer and means for automatically discharging said parcels or the like at the required destination.

2. A system for handling, sorting and delivering parcels and the like comprising an endless moving conveyer, electrically operated rotating rollers for automatically delivering the parcels or the like on to said conveyer, and for discharging said parcels or the like at the required destination.

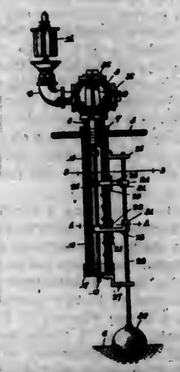
3. A system for handling, sorting and delivering parcels and the like comprising an endless moving conveyer trays having bottoms of magnetic material for containing parcels and the like electrically operated magnetic rotating rollers for automatically delivering said trays on to said conveyer and for discharging said trays at the required destination.

4. A system for handling sorting and delivering parcels and the like comprising an endless moving conveyer trays having bottoms of magnetic material for containing the parcels, electrically operated magnetic rollers for automatically delivering said trays on to the said conveyer and for discharging said trays at the required destination said rollers being automatically magnetized and rotated by the passage of the conveyer past certain contacts.

5. A system for handling sorting and delivering parcels and the like comprising a series of despatching and receiving stations, electrically operated magnetic rotating transfer rollers provided at each station and upon the conveyer, and trays having bottoms of magnetic material for containing the parcels.

[Claims 6 to 36 not printed in the Gazette.]

1,022,936. WATER-ALARM FOR STEAM-BOILERS. GILBERT J. GIBNEY, Mobile, Ala. Filed Mar. 22, 1911. Serial No. 616,143. (Cl. 137—102.)



1. The combination with a steam boiler body, of a tube threaded therein and extending internally and externally thereof, a valve casing fixed to the external end of the tube, an alarm element communicating with the valve casing, a barrel connected with the internal end of said tube and provided with perforations near its free end, a perforated cap closing the free end of the said barrel, a movable valve stem working within said barrel and having valves normally closing the valve casing, brackets fixed to the barrel and cap respectively, a movable float rod supported by the said brackets, a float fixed to the lower end of the said float rod, a rocking arm pivotally connected with the barrel and the valve rod, a second arm fixed to the valve rod spaced from the rocking arm, and striker members carried by the float rod between the said arms and adapted to alternately engage therewith.

2. The combination with a steam boiler body, of a tube threaded therein and extending internally and externally thereof, a valve casing fixed to the external end of the tube, an alarm element communicating with the valve

casing, a barrel connected with the internal end of said tube and provided with perforations near its free end, a perforated cap closing the free end of the said barrel, a movable valve stem working within said barrel and having valves normally closing the valve casing, brackets fixed to the barrel and cap respectively, a movable float rod supported by the said brackets, a float fixed to the lower end of the said float rod, a rocking arm pivotally connected with the barrel and the valve rod, a second arm fixed to the valve rod spaced from the rocking arm, and adjustable striker nuts carried by the said float rod and alternately engageable with the arms.

1,022,937. COASTER-BRAKE. WILEY P. GORDON, Lakeland, Fla. Filed Aug. 16, 1911. Serial No. 644,306. (Cl. 208—57.)



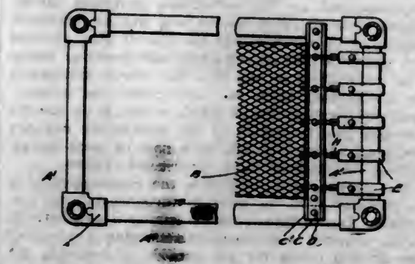
1. A coaster brake comprising a shaft mounted to revolve between the hangers of a vehicle, a threaded portion formed on the said shaft, a space being provided adjacent one end of the threaded portion, a collar keyed to the said shaft and having the inner end thereof adjacent the said space, a sleeve mounted to loosely encircle the said shaft and provided with a flange adapted to be engaged by the inner end of the said collar, a tooth formed on the said flange and adapted for engagement with the threaded portion of the said shaft, a toothed sleeve rigidly secured to one of the said hangers and mounted to encircle the said shaft, the teeth on the said sleeve being adapted for engagement with the threaded portion of the said shaft and means for connecting the tooth sleeve to the transmission gear of the vehicle.

2. A coaster brake comprising a shaft mounted to revolve between the hangers of a vehicle, a threaded portion formed on the said shaft, a space being provided adjacent one end of the threaded portion, a collar keyed to the said shaft and having the inner end thereof adjacent the said space, a sleeve mounted to loosely encircle the said shaft and provided with a flange adapted to be engaged by the inner end of the said collar, a tooth formed on the said flange and adapted for engagement with the threaded portion of the said shaft, a toothed sleeve rigidly secured to one of the said hangers and mounted to encircle the said shaft, the teeth on the said sleeve being adapted for engagement with the threaded portion of the said shaft, means for connecting the tooth sleeve to the transmission gear of the vehicle and crank shafts rigidly secured to the said shaft for operating the same.

3. A coaster brake comprising a shaft mounted to revolve between the hangers of a vehicle, a threaded portion formed on the said shaft, a space being provided adjacent one end of the threaded portion, a collar keyed to the said shaft and having the inner end thereof adjacent the said space, a sleeve mounted to loosely encircle the said shaft and provided with a flange adapted to be engaged by the inner end of the said collar, a tooth formed on the said flange and adapted for engagement with the threaded portion of the said shaft, a toothed sleeve rigidly secured to one of the said hangers and mounted to encircle the said shaft, the teeth on the said sleeve being adapted for engagement with the threaded portion of the said shaft, means for connecting the tooth sleeve to the transmission gear of the vehicle, a balance wheel formed on the first mentioned sleeve to revolve therewith between the said hangers and crank shafts rigidly secured to the ends of the said shaft for operating the same.

4. A coaster brake comprising a shaft mounted to revolve between the hangers of a vehicle, a threaded portion formed on the said shaft, a space being provided adjacent one end of the threaded portion, a collar keyed to the said shaft and having the inner end thereof adjacent the said space, a sleeve mounted to loosely encircle the said shaft and provided with a flange adapted to be engaged by the inner end of the said collar, a tooth formed on the said flange and adapted for engagement with the threaded portion of the said shaft, a toothed sleeve rigidly secured to one of the said hangers and mounted to encircle the said shaft, the teeth on the said sleeve being adapted for engagement with the threaded portion of the said shaft, means for connecting the tooth sleeve to the transmission gear of the vehicle and crank shafts rigidly secured to the said shaft for operating the same.

1,022,938. BED-FRAME. FRANK IRVINGTON GOULD, New Liskeard, Ontario, Canada. Filed Dec. 10, 1910. Serial No. 596,676. (Cl. 5—60.)



In a device of the character described, the combination with the bed frame, having side and end rails, of angle iron form, in which the right angle of the angle iron is on the outside lower edge of the side rails, of a spring, end bars attached to the spring and having end apertures and downwardly turned removable supporting terminals securing to the edge of the end bars and having tongues formed thereon adapted to register with suitable apertures in the end of the end bars, a tension member secured to the spring, and a hook-shaped member connected to tension member and adapted to extend around the end rail of the frame, as and for the purpose specified.

1,022,939. COMBINED WINDOW-AWNING AND FIRE-PROTECTOR. WEBB W. GUY and OLIVER L. RICHARDS, Cushing, Tex. Filed Sept. 12, 1911. Serial No. 648,834. (Cl. 189—55.)



portion, a cross bar at the upper end portion of the body adapted to engage attaching devices adjacent to the upper end of the window frame, means at the opposite end of the body adapted to engage fastening devices above the first-named attaching devices, and bars pivoted at one end to the middle portion of the body and adapted to engage fastening devices at the middle portion of the window frame when the body is folded for the purpose described.

2. A combined window awning and fire shield consisting of a metallic body formed of two portions each of which consists of a plurality of pivotally connected sections, the said body having a cross bar at its upper end adapted to engage attaching devices adjacent to the upper end of the window frame and adapted to be folded at its middle portion and having means at its free end adapted to engage attaching devices above the first-named attaching devices, and bars pivoted at one end to the middle portion of the body and adapted to engage fastening devices at the middle portion of the window frame for the purpose described.

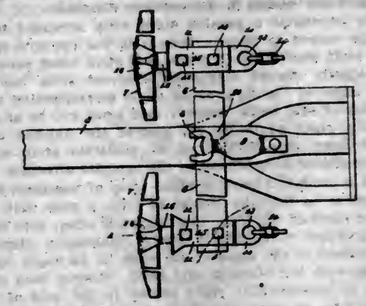
1,022,940. SAFETY SNAP-HOOK. HAAKEN P. HANSON, Albert Lea, Minn. Filed Jan. 30, 1911. Serial No. 605,509. (Cl. 24—235.)



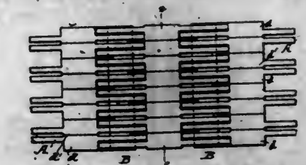
A snap hook comprising a body portion and an overhanging bill, said body having a longitudinal recess in its lower portion and a rear downwardly projecting wall, a dog pivotally secured in said recess and having an upper curved portion adapted to freely move over the end of the bill, an extension forming a part of the dog and adapted for contact with the rear wall of the body portion, said extension being shorter than the curved portion of the dog whereby a link receiving space is formed between the end of the bill and dog when the same is in link receiving position, a receiving notch being formed between the extension and the upper curved portion of the dog, and a spring for holding the dog in a closed position with the notched portion thereof housed within the recess of the body with the extension in contact with the rear wall of said body.

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gaging the ends of the said clip, a pivot passed through the yoke and engaged in the said whiffle tree, and perforated ears projecting outwardly from the rear end of said yoke.



1,022,942. CHAIN-LINK. HENRY E. HAYWARD, Philadelphia, Pa., assignor to Link-Belt Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 20, 1911. Serial No. 615,543. (Cl. 74—32.)



As a new article of manufacture, a link plate of a chain having two teeth and two pivot pin openings; segmental flanges forming extended bearings at the pivot pin openings and projecting at one side only; and having projecting flanges forming extended bearings at the working faces of each tooth and projecting on both sides of the plate; and also having a central flange extending on both sides of the plate, the flanges on one side being extended less than those on the other side of the plate.

1,022,943. CONDUIT. ANTHONY P. HINSKY, Brooklyn, N. Y., assignor to Eastern Flexible Conduit Company, Brooklyn, N. Y., a Corporation of New York. Filed Jan. 16, 1911. Serial No. 602,802. (Cl. 247—4.)



1. In a conduit a strip arranged to be helically wound

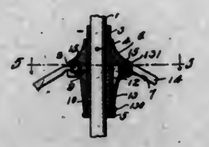
slots will be at substantially right angles to the axis of the finished tube, and an inner tube formed of an unslotted strip helically wound in the opposite direction.

4. In a conduit a parallel sided strip arranged to be helically wound to form a tube with the opposite edges of the strip abutting each other, said strip being provided with equally spaced diagonally disposed slots inclined to the edges of the strip at an angle corresponding with the pitch of said helix, whereby said slots will be at substantially right angles to the axis of the finished tube, and an inner tube formed of an unslotted strip wider than the slotted strip wound in the opposite direction.

5. In a conduit a parallel sided strip of vegetable fiber arranged to be helically wound to form a tube with the opposite edges of the strip abutting each other, said strip being provided with equally spaced diagonally disposed slots inclined to the edges of the strip at an angle corresponding with the pitch of said helix, whereby said slots will be at substantially right angles to the axis of the finished tube, an inner tube formed of an unslotted strip wider than the slotted strip wound in the opposite direction, and a woven textile covering over the slotted tube.

[Claim 6 not printed in the Gazette.]

1,022,944. UMBRELLA. OTTO A. HODINGER, Oneida, N. Y. Filed June 29, 1911. Serial No. 635,944. (Cl. 135—28.)



1. An umbrella runner having a notched flange, and ribs passing through said notches and having heads fitting within said flange; combined with a collar revoluble on the runner and closing said notches and itself having a notch at one point for the purpose set forth, a spring carried by the collar, and a detent carried by the spring and standing normally between two of said heads.

2. In an umbrella, the combination with a sleeve or ferrule, a head secured to the same and having a depending flange turned inward at its lower edge and notched, and the ribs having heads at their inner ends; of a collar fitting revolubly on said ferrule beneath said head and having a surrounding shoulder contacting with the inner edge of said flange, the whole being provided with an upright notch and an upright groove, a spring secured at its lower end within the groove and having a curved body outstanding beyond the collar, and a detent carried by the upper end of the spring and of a size to be pressed thereby radially outward beneath said flange and there to fit annularly between two of the rib-heads, the position of the groove and notch with respect to each other being such that when the detent stands between two of the rib-heads, none of the latter will register with the notch.

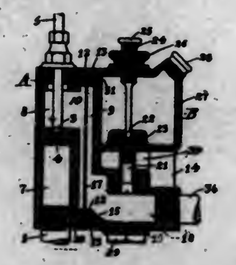
1,022,945. GUN-CLEANING DEVICE. WILLIAM E. HUGHES, Mineral Ridge, Ohio. Filed May 13, 1911. Serial No. 626,911. (Cl. 42—91.)



1. The combination with a compressible plug, of a spirally grooved rod slidable through the plug, an adjustable member carried by the plug and engaging in the groove in the rod, and a wiper head detachably connected to one end of the rod.

2. The combination with a compressible plug, of a spirally grooved rod slidable through the plug, an adjustable member carried by the plug and engaging in the groove in the rod, a wiper head detachably connected to one end of the rod, and a handle swivelingly connected with the opposite end of the rod.

1,022,946. SIGHT-FEED LUBRICATOR. FOSTER J. HULL, New York, N. Y., assignor to The Thomas W. Pangborn Company, New York, N. Y., a Corporation of New York. Filed July 12, 1910. Serial No. 571,609. (Cl. 184—56.)



1. A lubricator comprising two sections, one provided with an inlet connection, the other provided with an oil reservoir, said sections arranged to be secured together and provided with a passage between them, said sections arranged to separate along a line which is longitudinal with respect to said passage, and a screen in said passage through which fluid admitted through said inlet connection will pass, said second section provided with means for discharging lubricant into the fluid after its passage through said screen.

2. A lubricator comprising two sections, one provided with an inlet connection, the other provided with an oil reservoir, said sections arranged to be secured together and provided with a passage between them, said sections arranged to separate along a line which is longitudinal with respect to said passage, and a screen in said passage and arranged longitudinally therein, through which fluid admitted through said inlet connection will pass, said second section provided with means for discharging lubricant into the fluid after its passage through said screen.

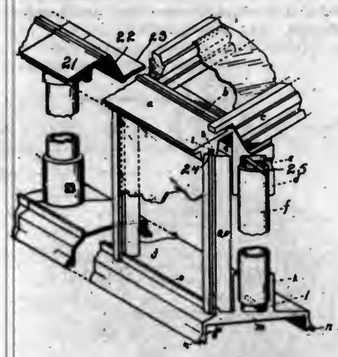
3. A lubricator comprising two sections, one provided with an inlet connection, the other provided with an oil reservoir, said sections arranged to be secured together and provided with a passage between them, and a screen in said passage clamped at the edges between the adjacent surfaces of said sections, through which screen fluid admitted through said inlet connection will pass, said second section provided with means for discharging lubricant into the fluid after its passage through said screen.

4. A lubricator comprising in combination an oil reservoir, a passage for fluid to receive the lubricant, said passage extending approximately vertically along the side of said oil reservoir and thence approximately horisontally beneath said oil reservoir, and a screen in the vertical portion of said passage through which the fluid will pass, before passing beneath said oil reservoir, said reservoir provided with means for discharging lubricant into the fluid after its passage through said screen.

5. A lubricator comprising in combination an oil reservoir, a passage for fluid to receive the lubricant, said passage extending approximately vertically along the side of said oil reservoir and thence approximately horisontally beneath said oil reservoir, and a screen in the vertical portion of said passage through which the fluid will pass, before passing beneath said oil reservoir, the floor of the horisontal portion of said passage being below the lowest portion of the vertical portion of said passage, said reservoir provided with means for discharging lubricant into the horisontal portion of said passage.

[Claims 6 to 9 not printed in the Gazette.]

1,022,947. GREENHOUSE CONSTRUCTION. MAURICE ISAAC JACOBS, Brooklyn, N. Y. Filed Mar. 1, 1911. Serial No. 611,695. (Cl. 189—4.)



1. A structural member for a building formed in sections and having a channel-like lower portion, each of said sections being provided with a member forming one half of a socket, said sections, when placed in position with ends adjoining, forming complete sockets, the ends of the members and walls of the sockets being beveled.

2. In a device of the class described, a plate formed in sections, each comprising a plurality of flat portions and a central connecting portion, and a socket portion, two of such socket portions when brought together constituting a complete socket, a sill, and means for connecting the sill and plate, said means arranged for reception within the sockets.

3. In a device of the class described, a plate formed in sections each comprising a plurality of flat portions and a central connecting portion, one of said flat portions being grooved on its lower surface, and a socket portion, two of such socket portions on adjacent sections when brought together constituting a complete socket, a sill, and means for connecting the sill and plate, said means arranged for reception within the sockets, and independent means for connecting the sill with the grooved portion of the plate.

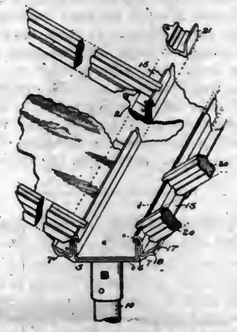
4. In a device of the class described, a plate formed in sections, each comprising a plurality of flat portions extending in substantially the same direction but offset from each other and a central connecting portion inclined with reference to the aforesaid flat portions and connected therewith, and a socket portion for each of said sections, two of such socket portions when placed adjacent to each other constituting a complete socket, and means arranged for reception within the sockets for supporting said plates.

1,022,948. GREENHOUSE-GUTTER. MAURICE ISAAC JACOBS, Brooklyn, N. Y. Filed Mar. 1, 1911. Serial No. 611,696. (Cl. 108—25.)

1. In a device of the class described, a channel member, a bracket for supporting the same, flanges extending upwardly from the bracket and engaging the sides of the channel, additional flanges projecting outwardly, a drip conducting member located between the flanges, said member having one edge turned over the side of the channel, a bead projecting from said edge, and roof members having their ends supported by the conducting member.

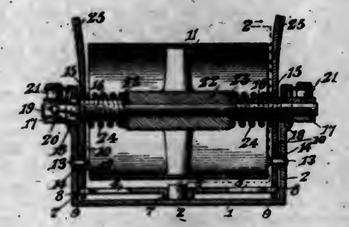
2. In a device of the class described, a channel member, a bracket for supporting the same, a drip conductor connected with the side of the channel member, said conductor being of trough-like formation, a rib projecting from one portion thereof, roof members supported by the conductor, clips connected therewith and engaging the rib, and a bead on another portion of the conductor and designed to be engaged by the glass of the roof.

3. In a device of the class described, a channel member, a bracket for supporting said member, a drip conductor formed in sections and connected with the side of the channel member, means for connecting adjacent sections, a rib formed on the conductor and engaged by a portion



of the bracket, roof members supported by the conductor, and means connected with certain of the roof members for engaging the rib.

1,022,949. AUTOMATIC BELT-GUIDE. RICHARD JOHNSON, Sr., Freeport, Ill. Filed Sept. 13, 1911. Serial No. 649,168. (Cl. 74—51.)



1. An automatic belt guide comprising a fixed supporting frame, side members pivoted at a point between their ends to the supporting frame and provided at one side of the pivotal point with bearings for a pulley shaft, a connecting lever pivoted at an intermediate point on the supporting frame and connected with the side levers at the opposite side of the pivotal point thereof to cause the side levers to simultaneously move in opposite directions, said side levers being arranged to be actuated by a belt when the pulley is out of alinement with the same.

2. An automatic belt guide including a fixed supporting frame, upright side levers pivoted to the supporting frame and provided above their pivots with openings to receive a pulley shaft, the upper portions of the levers being arranged to be engaged by a belt when the pulley is out of alinement with the same, and a bottom lever centrally pivoted to the fixed frame and connected at its terminals with the lower ends of the side levers.

3. An automatic belt guide including a fixed supporting frame provided at opposite sides with guide slots or openings, side levers pivoted between their ends to the sides of the frame and provided above the pivots with openings located in line with the guide openings or slots of the supporting frame, boxes guided in the slots or openings of the frame and extending through the openings of the side levers and adapted to receive a pulley shaft, and a bottom lever pivoted to the supporting frame and connected at its terminals with the lower ends of the side levers.

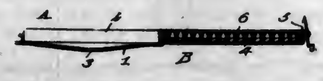
4. An automatic belt guide including a fixed supporting frame provided at opposite sides with arcuate slots, side levers pivoted between their ends to the sides of the supporting frame and provided with openings located at the said slots, boxes having outer portions guided in the arcuate slots of the supporting frame, said boxes being also provided with inner portions extending through the openings of the side levers, a shaft mounted in the boxes,

which are adapted to maintain a pulley in a central position on the shaft, and means for transmitting motion from one of the levers to the other.

5. An automatic belt guide including a fixed supporting frame, side levers pivoted between their ends to the supporting frame and provided at their lower ends with recesses and having openings located above the pivots, and a connecting lever centrally pivoted to the supporting frame and having terminal portions operating in the recesses of the side levers, whereby when one of the side levers is oscillated the other side lever will be simultaneously moved in the opposite direction.

[Claims 6 and 7 not printed in the Gazette.]

1,022,950. FOOT-SCRAPER. HARRIS JONES, Watertown, N. Y. Filed Dec. 20, 1910. Serial No. 598,290. (Cl. 21—55.)



1. A running board for vehicles having a portion depressed and having an opening in the depressed portion, and a rim secured to the depressed part of the running board and forming therewith a shallow receptacle.

2. A running board for vehicles having a portion depressed and having an opening in the depressed portion, a rim secured to the depressed part of the running board and forming therewith a shallow receptacle, and a cover hinged to the rim and adapted to swing outward into approximately the plane of the running board, said cover adapted to receive a brush.

1,022,951. DECORATIVE SHEATHED WALL. EDGARD J. JOSZ, New York, N. Y. Filed Feb. 9, 1911. Serial No. 607,505. (Cl. 180—85.)



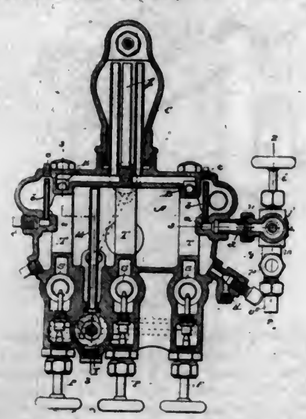
1. A decorative metal wall adapted to withstand vibration comprising a metallic base plate, an ornamental sheathing plate therefor, an interposed filler, and a flexible cement securing one of said plates and the filler together.

2. A decorative metal wall adapted to withstand vibration comprising a metallic base plate, a metallic ornamental sheathing, an interposed filler of non-heat conducting resilient material, and flexible cement between the filler and base plate and between the filler and sheathing.

3. A decorative metal wall adapted to withstand vibration comprising a metallic base plate, a flexible cement, a flexible filler impregnated with a constituent of said flexible cement, and sheathing, said cement uniting said sheathing, filler and plate together, the impregnated filler serving as a reservoir from which the said constituent may be drawn by said cement to replace that lost by evaporation.

4. A decorative metal wall comprising a metallic base plate, a metallic ornamental sheathing and an interposed filler connecting the plate and sheathing together, said filler comprising a layer of ground cork, a suitable binder therefor and a textile fabric reinforcing layer.

1,022,952. LUBRICATOR. LEOPOLD KASSANDER and OTTO BEST, New York, N. Y., assignors to Nathan Manufacturing Company, New York, N. Y. Original application filed Sept. 13, 1911, Serial No. 649,008. Divided and this application filed Nov. 8, 1911. Serial No. 659,280. (Cl. 184—50.)



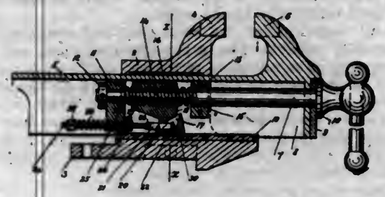
1. In a multiple sight-feed lubricator, the combination with the oil reservoir, the steam equalizing connections, the steam-cylinder and air-pump sight-feed chambers, and the oil pipe connections, including an oil pipe M within the oil chamber, extending up to and receiving its supply of oil from the upper part of the oil chamber, of a separate and distinct oil pipe *b* also within the oil chamber extending up therein to a point higher than the oil pipe M, an air-cylinder sight-feed attachment, and connections whereby said attachment is placed in communication with and receives its supply of oil from said oil pipe *b*, substantially as and for the purposes hereinbefore set forth.

2. In a multiple sight-feed lubricator the combination with the oil reservoir, the steam-equalizing connections, the steam-cylinder and air-pump sight-feed chambers, and the oil-pipe connections, including an oil pipe within the oil chamber, extending up to and receiving its supply of oil from the upper part of the oil chamber, and oil feed channels leading from said oil pipe to the several sight feed chambers, of a separate and distinct oil pipe *b* also within the oil chamber, a pocket in the side of the oil reservoir to which the lower end of said oil pipe is secured and into which it opens, and an air-cylinder feed attachment connected directly to, and receiving its supply of oil from, said pocket, said attachment comprising a sight-chamber, an inlet passage from the pocket to said chamber, and an outlet passage from said chamber, a regulating valve for regulating the rate of oil feed to the sight chamber and a shut-off valve located between the regulating valve and the inlet end of the attachment, substantially as and for the purposes hereinbefore set forth.

3. In a multiple sight-feed lubricator the combination with the oil reservoir, the steam-equalizing connections, the steam-cylinder and air-pump sight-feed chambers, and the oil-pipe connections, including an oil pipe M within the oil chamber and oil feed channels leading from said oil pipe to the several sight-feed chambers, of a separate and distinct oil pipe b also within the oil chamber, extending up therein to a point higher than the oil pipe M, a pocket on the side of the oil reservoir to which said oil pipe b is secured and into which it opens, and an air-cylinder sight-feed attachment directly connected to said pocket and receiving its supply of oil therefrom, substantially as and for the purposes hereinbefore set forth.

4. The reversible air-cylinder sight-feed attachment, comprising the body *f*, having oil inlet passage and shut-off valve controlling the same, the threaded plug *m* closing the lower end of the body *f* and containing the outlet passage and sight chamber, and the threaded bonnet *n* closing the upper end of the body *f*, and carrying the regulating valve for controlling the rate of feed of oil through the inlet passage to the sight chamber, the parts *m*, *n* being interchangeable, substantially as and for the purposes hereinbefore set forth.

1,022,953. VISE. HARRY S. KUHN, Waynesboro, Pa. Filed Sept. 27, 1911. Serial No. 651,669. (Cl. 81—36.)

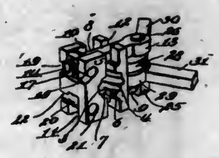


1. In a vise, the combination, with a stationary guide provided with a vise jaw, of a guide bar slidable in the said guide and provided with a longitudinal channel and having also a vise jaw, a revoluble operating spindle arranged in the said channel and provided with a screw-threaded portion, a locking bar secured to and resting on the bottom portion of the said guide, a nut engaging with the said screw-threaded portion and provided with an inclined surface, a locking wedge arranged between the said inclined surface and the locking bar, means for preventing the said wedge and inclined surface from being moved apart but permitting them to slide relatively to each other, a block secured in the said channel, a spring-actuated rod supported by the said block and operatively connected with the locking wedge, and a stop on the said rod between the locking wedge and the said block.

2. In a vise, the combination, with a stationary guide provided with a vise jaw, of a channel-shaped guide bar slidable in the said guide and also provided with a vise jaw, an operating spindle journaled in the said bar and provided with a screw-threaded portion, a locking bar secured to the bottom portion of the said guide under the operating spindle, a nut arranged inside the said guide bar and engaging with the said screwthreaded portion and provided with an inclined surface, a locking wedge arranged between the said inclined surface and the locking bar, means for preventing the said wedge and inclined surface from being moved apart but permitting them to slide relatively to each other, a block secured in the slidable bar and supporting the inner end portion of the operating spindle, a spring-actuated rod supported by the said block and operatively connected with the locking wedge, and a stop on the said rod between the locking wedge and the said block.

3. In a vise, the combination with a stationary guide provided with a vise jaw, of a guide bar slidable in the said guide and provided with a longitudinal channel and having also a vise jaw, a revoluble operating spindle arranged in the said channel and provided with a screw-threaded portion, a locking bar secured to the said guide, a nut engaging with the said screwthreaded portion and provided with an inclined surface, a locking wedge arranged between the said inclined surface and the locking bar, said wedge being provided with lateral projections which engage with the sides of the longitudinal channel and prevent the nut from revolving, means for preventing the said wedge and inclined surface from being moved apart but permitting them to slide relatively to each other, a block secured in the said channel, a spring-actuated rod supported by the said block and operatively connected with the locking wedge, and a stop on the said rod between the locking wedge and the said block.

1,022,954. WIRE-CABLE FASTENER. BRUCE K. LAMB, Bemis, W. Va. Filed Mar. 23, 1911. Serial No. 616,482. (Cl. 24—134.)



1. The combination of a clamping member; a swinging member connected thereto; a clamping member slidable laterally on the swinging member and arranged to swing with the same into operative position with relation to the first-named clamping member; means for forcibly sliding the second-named clamping member bodily along said swinging member toward said first-named clamping member into operative position with relation to the latter; and means carried by said first-named clamping member for locking said second-named member in such position.

2. The combination of a clamping member; a swinging member connected thereto; a clamping member slidable laterally on the swinging member and arranged to swing with the same into operative position with relation to the first-named clamping member; means for forcibly sliding the second-named clamping member bodily along said swinging member toward said first-named clamping member into operative position with relation to the latter; and means carried by said first-named clamping member and arranged for engagement with the last-mentioned means for locking said second-named member in such position.

3. The combination of a pair of clamping blocks provided with mating gripping seats; a bolt pivoted to one block and having the other block mounted thereon for lateral sliding movement; means connected to said bolt for forcibly sliding the slidable block bodily toward the first-named block; a support whereon said forcing means are mounted and a locking bolt pivoted to said first-named block and arranged for swinging movement into position for engagement with said support.

4. The combination of a pair of clamping blocks; a hinge bolt and a locking bolt pivoted to one block, said hinge bolt having the other block mounted thereon for lateral sliding movement; a member connected to said hinge bolt and arranged for direct engagement with said locking bolt, for retaining the second-named block in operative position with relation to said first-named block; and means carried by said member for forcing said second-named block to slide bodily along said hinge bolt toward said first-named block.

5. The combination of a pair of clamping blocks; a hinge bolt and a locking bolt pivoted to one block, said hinge bolt having the other block mounted thereon for lateral sliding movement, and said locking bolt being provided at one end with an eye; a bolt connected at one end to said hinge bolt and having its opposite end adapted for insertion through said eye, for retaining said second-named block in operative position with relation to said first-named block; and means carried by the third-named bolt for forcing said second-named block to slide bodily along said hinge bolt toward said first-named block.

[Claims 6 to 8 not printed in the Gazette.]

1,022,955. APPARATUS FOR TESTING AIR. WALTER STUART LEECH, Brooten, Minn. Filed Feb. 4, 1910. Serial No. 542,120. (Cl. 73—51.)

An air testing apparatus comprising a bracket board, a reservoir, spring arms secured to the bracket board and engaging the reservoir, a bracket arm secured to the

bracket board and engaging the reservoir, a liquid spreading member secured to the bracket board below the reservoir, and a receptacle secured to the bracket board below the member.



1,022,956. MULTICOLORING APPARATUS. JUSTUS VON B. LENGERKE and ANTON VON BEUST, Orange, N. J. Filed Jan. 14, 1911. Serial No. 602,686. (Cl. 91—44.)



1. An apparatus for distributing coloring and other liquids comprising a member mounted to revolve in a substantially horizontal plane, means for feeding the liquid to be distributed to said member, means for revolving said member at a speed sufficient to discharge such liquid therefrom by centrifugal force, and a pan having a bottom arranged beneath said member and a peripheral flange to form a collecting receptacle, said flange at one side of the axis of said member being extended above the plane thereof and the flange terminating below the plane of said member at the opposite side of its axis.

2. An apparatus for distributing coloring and other liquids comprising a member mounted to revolve in a substantially horizontal plane, means for feeding the liquid to be distributed to said member, means for revolving said member at a speed sufficient to discharge such liquid therefrom by centrifugal force, and a pan having a bottom arranged beneath said member and a peripheral flange to form a collecting receptacle, said flange at one side of the axis of said member being extended above the plane thereof and the flange terminating below the plane of said member at the opposite side of its axis, and means for conducting away the liquid collected by the pan.

3. An apparatus for distributing coloring and other liquids comprising a horizontally revoluble disk, means for feeding the liquid to be distributed to the upper side thereof, means for revolving the disk at a speed sufficient to discharge the liquid centrifugally therefrom, and means for intercepting and collecting the liquid discharged at one side and permitting distribution of the liquid discharged at the opposite side of the axis of the disk.

4. An apparatus for distributing coloring and other liquids comprising a horizontally revoluble disk, a nozzle for supplying the liquid to be distributed to the upper side thereof, means for revolving the disk at a speed sufficient to discharge the liquid centrifugally therefrom, a guard arranged to intercept the liquid discharged at one side of the disk, and having a cut-away portion which exposes a part of the periphery of the disk and means for collecting the liquid intercepted by the guard.

5. An apparatus of the class described comprising a horizontally revoluble disk, a pan arranged below the disk and serving as a collecting receptacle, said pan having a guard for intercepting and collecting liquid discharged at one side of the disk and having an opening which exposes and permits distribution of the liquid discharged from the opposite side of the disk, means for supplying liquid to the upper side of the disk, and means for conducting away the liquid collected by the pan.

[Claim 6 not printed in the Gazette.]

1,022,957. RAILWAY-TRACK APPLIANCE. THOMAS MANEY, Louisville, Ky. Filed Dec. 21, 1910. Serial No. 598,525. (Cl. 239—18.)



1. The combination with a tie plate having shoulders and an intermediate clip formed thereon, of a rail between the clip and one shoulder and means for securing it in place, and a guard rail having a sheared edge which fits snugly between the clip and the upper surface of the plate, a wedge inserted between the edge of the guard-rail base and the adjacent shoulder, and fastening means extending through the shoulder and overlapping said wedge.

2. The combination with a tie plate having shoulders, a clip thereon and provided with a groove adjacent to the clip in position to receive one edge of the base flange of a rail, means adapted to be inserted between the opposite edge of the base flange and the tie plate to tilt said rail, and means for securing the rail to the tie plate.

3. A railway tie plate having means thereon for holding a plurality of rails in position, and means whereby one of the rails can be tilted toward the adjacent rail.

4. A railway tie plate comprising a body adapted to receive a plurality of rails thereon, means for holding the rails in position on the body, means for allowing one of the rails to be tilted toward an adjacent rail, and means

reinforcing ribs extending longitudinally along the sides of said beam.



2. A hollow plow beam, generally rectangular in cross section, comprising upper and lower pieces of bent sheet metal, each having a horizontal portion, vertical portions at the edges of the horizontal portion, and outwardly extending horizontal flanges at the edges of said vertical portions, said flanges being connected together and forming projecting reinforcing ribs extending longitudinally midway of the sides of said beam.

1,022,959. SELF-ADJUSTING TROLLEY-POLE. GEORGE H. MEREDITH, San Francisco, Cal. Filed July 24, 1911. Serial No. 640,370. (Cl. 191—39.)

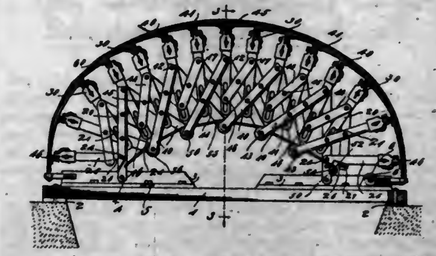


1. In a device of the character described, the combination of a trolley pole formed in sections, a casing applied to one of the sections and formed with a conical socket, and a cone applied to the opposite section and loosely received within the said socket, the second mentioned section being disposed at an angle to the axis of the cone.

2. In a device of the character described, the combination of a trolley pole formed in sections, a casing applied to one of the sections and provided with a conical socket, a cone applied to the opposite section and loosely received within the socket, the base of the cone being cut away on one side thereof and the said opposite section of the trolley pole being disposed at an angle to the axis of the cone, and means engaging the cut away portion of the cone to hold the cone in position and limit the rotary movement thereof.

3. In a device of the character described, the combination of a trolley pole formed in sections, a casing applied to one of the sections and provided with a conical socket having one side thereof cut away, a cone applied to the opposite section and loosely received within the socket, the second mentioned section being disposed at an angle to the axis of the cone, and a plate applied to the cut away portion of the casing and received within the cut away portion of the base of the cone so as to engage the apex of the cone and hold the same against displacement, the said plate also serving as a stop for coöperation with the cut away portion of the cone to limit the turning of the cone and being formed with a curved projection which is concentric with the axis of the cone and bears loosely against the cut away portion thereof.

1,022,960. ADJUSTABLE MOLD FOR CULVERTS AND BRIDGES. PETER C. MERILLAT, Winfield, Iowa. Filed Nov. 16, 1911. Serial No. 660,641. (Cl. 25—32.)



1. An adjustable collapsible mold for culverts or bridges including a plurality of individual arches of lazy-tong links standing in parallel upright planes and pivoted to each other at their ends and where they cross, the intermediate pivots being disposed below the center of the length of said links, and plates slidable on each other and each loosely connecting the upper end of a member in one arch with the corresponding member in the arch adjacent.

2. An adjustable collapsible mold for culverts or bridges including a plurality of individual arches of lazy-tong links standing in upright planes and pivoted to each other at their ends and where they cross, the intermediate pivots connecting the links of each arch being disposed below the center of the length of said links, extension elements adjustably connected with the upper ends of the various members of the arches, and plates sliding over each other and each loosely connecting an element in one arch with the corresponding element in the arch adjacent.

3. An adjustable mold for culverts including two arches of lazy tong links pivoted to each other at their ends and where they cross, the latter pivots being disposed below the center of the length of said links, means for supporting said arches, and flexible crowns connecting them.

4. An adjustable mold for culverts including two arches of lazy tong links pivoted to each other at their ends and where they cross, the latter pivots being disposed below the center of the length of said links, base members pivoted to the endmost links at the inner ends of the latter, a sill under each arch supporting said base members, and a flexible crown connected with the outer ends of the links in both arches.

5. An adjustable mold for culverts or bridges compris-

rabbles attached to and depending from the arms, the shafts being arranged in groups and positioned so that the distance between adjacent shafts of adjacent groups is greater than the distance between each pair of adjacent shafts in a group whereby the radial extremity of an arm carried by a shaft of one group slightly overlaps the extremity of an arm carried by the adjacent shaft of an adjacent group midway between the last said shafts, while the radial extremities of the arms carried by the shafts of a group deeply overlap each other, and the ore is rabbled in a series of zones of variable area from feed to discharge.



2. In an ore roasting furnace the combination of a plurality of superimposed hearths, a plurality of rotatable rabble shafts passing through the hearths, arms carried by each shaft and arranged to project respectively over each hearth, rabbles attached to and depending from the arms, means for feeding material in proximity to a rabble shaft, means for transferring material from one hearth to another hearth, and means in proximity to a rabble shaft for discharging rabbled material, the said rabble shafts being arranged in groups and positioned so that the distance between adjacent shafts of adjacent groups is greater than the distance between each pair of adjacent shafts in a group, whereby the radial extremity of an arm carried by a shaft of one group slightly overlaps the extremity of an arm carried by the adjacent shaft of an adjacent group midway between the last said shafts while the radial extremities of the arms carried by the shafts of a group deeply overlap each other, and the ore is rabbled in a series of zones of variable area from feed to discharge.

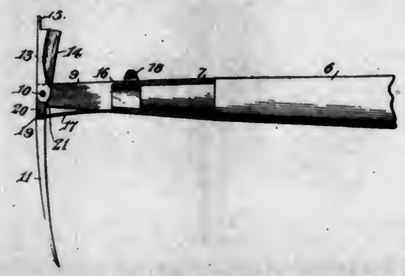
3. In an ore roasting furnace the combination of a dust chamber formed integrally with the furnace, a hearth arranged below the dust chamber, rotatable shafts passing through the dust chamber and hearth, tubes within the dust chamber incasing said shafts, ducts communicating with the dust chamber and hearth, arms carried by each shaft projectingly over the hearth, and rabbles attached to and depending from said arms, the shafts being arranged in groups and positioned so that the distance between adjacent shafts of adjacent groups is greater than the distance between each pair of adjacent shafts in a group whereby the radial extremity of an arm carried by a shaft of one group slightly overlaps the extremity of an arm carried by the adjacent shaft of an adjacent group midway between the last said shafts, while the radial extremities of the arms carried by the shafts of a group deeply overlap each other, and the ore is rabbled in a series of zones of variable area from feed to discharge.

4. In an ore roasting furnace the combination of a dust chamber formed integrally with the furnace, a plurality of superimposed hearths arranged below the dust chamber, rotatable shafts passing through the dust chamber and hearths, tubes within the dust chamber incasing said shafts, ducts communicating with the dust chamber and the hearths, arms carried by the shafts projectingly over the hearths, rabbles attached to and depending from said arms, the said rabble shafts being arranged in groups and positioned so that the distance between adjacent shafts of adjacent groups is greater than the distance between each pair of adjacent shafts in a group, whereby the radial extremity of an arm carried by a shaft of one group slightly overlaps the extremity of an arm carried by the adjacent shaft of an adjacent group midway between the last said shaft while the radial extremities of the arms carried by the shafts of a group deeply overlap each other, and the ore is rabbled in a series of zones of variable area from feed to discharge, means for feeding material to a hearth, and means for withdrawing material from a hearth.

5. In an ore roasting furnace the combination of a dust chamber formed integrally with the furnace, a hearth arranged below the dust chamber, rotatable shafts passing through the dust chamber and hearth, tubes within the dust chamber incasing said shafts, ducts communicating with the dust chamber and hearth, staggered baffle walls having openings for gases arranged within the dust chamber, arms carried by each shaft projectingly over the hearth, and rabbles attached to and depending from said arms, the shafts being arranged in groups and positioned so that the distance between adjacent shafts of adjacent groups is greater than the distance between each pair of adjacent shafts in a group whereby the radial extremity of an arm carried by a shaft of one group slightly overlaps the extremity of an arm carried by the adjacent shaft of an adjacent group midway between the last said shafts, while the radial extremities of the arms carried by the shafts of a group deeply overlap each other, and the ore is rabbled in a series of zones of variable area from feed to discharge.

[Claim 6 not printed in the Gazette.]

1,022,962. COMBINED FORK AND RAKE. JEREMIAH MILLER, Turtle Creek, W. Va., assignor of two-thirds to Jacob Dow Perry, Anthony David Lawson, and Charles Randolph Mitchell, Danville, W. Va. Filed Sept. 18, 1911. Serial No. 650,055. (Cl. 55—25.)



1. In a tool of the class described, the combination with a handle having a slotted ferrule, a fork having an integral arm extending from the head thereof and pivotally mounted in the slot of the ferrule, said slot receiving the said arm when the fork is arranged in longitudinal alinement with the handle, means for locking the parts in this position, and separate means for locking the parts when the fork and arm are turned at an angle to the handle.

2. A tool of the class described comprising a ferrule, a fork pivotally connected to the ferrule, an arm integral with and extending from the head of the fork, a spring catch adapted to engage the head of the fork to retain the same in one position, and means carried by the ferrule and engaging the arm for retaining the same in another position.

3. A tool of the class described comprising a ferrule bifurcated to form parallel spaced arms, a fork pivotally mounted between the said arms, an arm integral with and extending from the head of said fork and adapted to enter the space between the arms on one side, and a spring catch carried by the ferrule and lying in the space between the arms on the other side of the ferrule and adapted to engage a notch on the said fork and retain the same in one position.

4. A tool of the class described, comprising a tubular ferrule provided with oppositely disposed longitudinal slots opening to the outer end, a double ended tool member pivoted in its medial portion transversely of the walls of the slot to swing to a position in alinement with the ferrule and also at an angle thereto, a clip to lock one end of the tool member in one of the slots in alined position, and a spring bridging the other slot and arranged to engage and lock the tool member in angular position.

5. A tool of the class described comprising a slotted ferrule, a fork pivotally mounted within the slot of said ferrule, a spring catch mounted on the ferrule and extending outwardly along said slot and adapted to engage a notch in said fork to retain the same in one position, an arm extending from the head of the fork and adapted to be received in said slot, a lip on the outer end of said arm, said ferrule having a recess to receive said lip, and a turn button mounted on said ferrule and adapted to retain said lip in said recess when the fork is in another position.

[Claim 6 not printed in the Gazette.]

1,022,963. DOOR-CRAPE HANGER. MAURICE T. MILLER, Scranton, Pa. Filed Jan. 27, 1911, Serial No. 605,125. Renewed Jan. 27, 1912. Serial No. 673,918. (Cl. 27—2.)



1. A door crape and a support therefor comprising a crape head plate, a loop on the inner face of the plate, and a holder for the plate having a spring catch on the front face thereof for engagement with the loop, and a screw projecting from the inner face of the holder.

2. A door crape and a support therefor comprising a plate to which the crape is attached, a loop on the inner face of the plate, and a screw plate having a top flange projecting from the outer face thereof into engagement with the crape plate above the loop, and a spring catch depending from the outer face of the screw plate for the loop and engaging the crape plate below the loop.

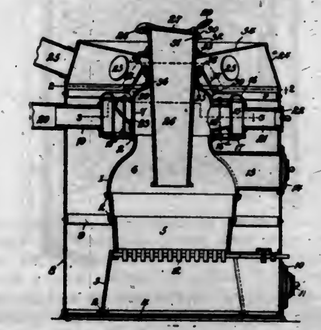
1,022,964. PACKAGE-TIE. THOMAS F. MILLER, Richland, Mich., assignor of one-half to Howard E. Russell, Plainwell, Mich. Filed Mar. 11, 1908. Serial No. 420,429. (Cl. 24—18.)



A package tie, comprising a flat strap of spring metal folded on itself to form an eye, the end of such strap being further folded on itself to form a hook, the bill of which points outwardly toward the end of said strap; a stud with a broad head and short and narrow neck to engage a cord when wrapped thereabout, riveted to said strap at the opposite end from said hook, a cord secured to said eye and adapted to engage the said stud and wrap under the bill of said hook and be engaged thereby, whereby the pressure of said hook supplements the action of said stud and returns the cord by pressure, and thus avoids the cutting of the cord, as specified.

1,022,965. SELF-FEEDING WARM-AIR FURNACE. STEPHEN P. MONCRIEF, Atlanta, Ga. Filed July 12, 1910. Serial No. 571,648. (Cl. 126—107.)

A furnace of the class described including an inner casing having a dome provided at the top with an opening and having a groove in its upper edge surrounding the said opening, an outer shell spaced from the inner shell and provided at the top with an opening located above the opening of the inner shell, a downwardly tapered magazine extending through the openings of the inner and outer shells and snugly fitting the same and provided above the dome with an annular flange extending downwardly into the groove of the dome, braces located in the space between the inner and outer shells and connected



with the exterior of the inner shell and with the magazine and supporting the latter in a permanent position, and a filling of cement arranged in the groove of the dome and having the flange of the magazine embedded in it to form a gas tight joint or connection, said flange permitting an expansion and contraction of the dome without affecting the said gas tight joint or connection.

1,022,966. RESILIENT TIRE. HARRY B. MONTGOMERY, Harrisburg, Pa. Filed June 29, 1911. Serial No. 636,043. (Cl. 152—10.)



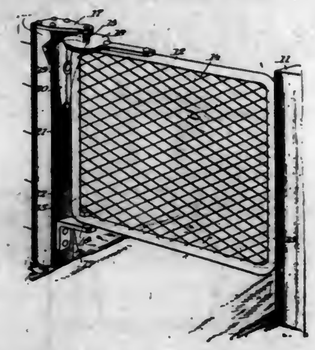
In a resilient tire, the combination of a hollow inflated cushion of annular form, a rim on which said cushion is mounted, the outer central circumferential portion of the cushion being provided with a reinforcement rendering the same substantially non-elastic whereby when the cushion is inflated, an annular groove is formed in said outer side, and a tread surrounding the cushion and having a portion thereof mounted in said groove so that the hollow portions of the cushion at opposite sides of the reinforcement above mentioned bear against the tread from opposite sides.

1,022,967. GATE-CLOSER. DAVID J. NELSON, Mediapolis, Iowa. Filed Dec. 7, 1910. Serial No. 596,106. (Cl. 39—16.)

1. The combination with a gate supporting post, of a swinging gate, a sector-shaped gear secured to the gate, a segmental-shaped gear pivotally connected to the post and meshing with said first named gear, said segmental-shaped gear carrying two weighted arms pivoted thereto, and adapted to swing outwardly when the gate is opened and said weighted arms serving to return the gate to closed position.

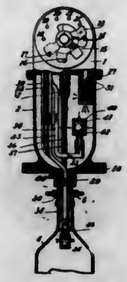
2. The combination with a post, a swinging gate connected therewith, a sector-shaped gear fixed to the gate meshing with a segmental-shaped gear pivoted to the post, arms pivotally secured to the segmental gear, each of

said arms carrying a weight slidably mounted thereon, the said weight being provided with a set screw to hold the same against vertical movement thereof.



3. The combination with a post, a swinging gate, a sector-shaped gear carried by the gate and meshing with a segmental gear pivoted to the post, said segmental gear being formed with spaced guide loops through which passes weight carrying arms said arms being pivoted to the segmental gear and extending downwardly in diverging relation to each other.

1,022,968. APPARATUS FOR AERATING LIQUIDS. LUDWIG NEUMAYER, Strassburg, Germany. Filed Oct. 20, 1910. Serial No. 588,180. (Cl. 209—1.)



1. In an apparatus for aerating liquid, the combination of a valve box, a series of valves having stems and mounted in the valve box, a shaft centrally disposed with references to said valve stems, a valve operating element mounted on the shaft and adapted to coöperate with the valve stems, a mixing tank adjacent the valve box, a water inlet pipe communicating with the mixing tank and one of the series of valves, a check valve at the end of the water inlet valve, a gas inlet pipe communicating with the mixing chamber and one of the series of valves, a check valve in the end of said gas inlet pipe, an outlet pipe communicating with one of the series of valves and the mixing tank, a float valve at the end of the outlet pipe, a pipe communicating with the same valve of the series as the outlet pipe and extending below the mixing tank, and a pipe extending from below the mixing tank and communicating with one of the series of valves to vent a bottle previously charged with aerated liquid by the outlet pipe, the said series of valves being successively operated by the valve operating element on the shaft.

2. In an apparatus of the class described, the combination of a tank, a valve casing, a rotary shaft in the valve casing, a plurality of valves mounted in the valve casing and arranged concentrically to the shaft, a water inlet pipe communicating with one of the valves and the tank, a gas inlet pipe communicating with one of the valves and the tank, a gas outlet pipe communicating with one of the valves and the tank, a pipe communicating with the valve with which the gas outlet pipe communicates and extends beyond the tank to supply a bottle with gas, an aerated liquid outlet pipe communicating with the tank and one of the valves, a pipe communicating with the valve with which the aerated liquid outlet pipe communicates and extending beyond the tank to supply a bottle with aerated liquid, a vent pipe communicating with one of the valves, and extending through the tank to vent a bottle, and a device on the shaft to successively operate the valves.

3. In an apparatus of the class described, the combination of a tank, a valve casing, a rotary shaft in the valve casing, a plurality of valves mounted in the valve casing, a water inlet pipe communicating with one of the valves and the tank, a gas inlet pipe communicating with one of the valves and the tank, a gas outlet pipe communicating with one of the valves and the tank, a pipe communicating with the valve with which the gas outlet pipe communicates and extends beyond the tank to supply a bottle with gas, an aerated liquid outlet pipe communicating with the tank and one of the valves, a check valve at the inner end of said aerated liquid outlet pipe, a pipe communicating with the valve with which the aerated liquid outlet pipe communicates and extending beyond the tank to supply a bottle with aerated liquid, a check valve at the outer end of the latter pipe, a vent pipe communicating with one of the valves and extending through the tank to vent a bottle, and a device on the shaft to successively operate the valves.

4. In an apparatus of the class described, the combination of a tank, a valve casing, a rotary shaft in the valve casing, a plurality of valves mounted in the valve casing, a water inlet pipe communicating with one of the valves and the tank, a gas inlet pipe communicating with one of the valves and the tank, a gas outlet pipe communicating with one of the valves and the tank, a pipe communicating with the valve with which the gas outlet pipe communicates and extends beyond the tank to supply a bottle with gas, an aerated liquid outlet pipe communicating with the tank and one of the valves, a check valve at the inner end of said aerated liquid outlet pipe, a pipe communicating with the valve with which the aerated liquid outlet pipe communicates and extending beyond the tank to supply a bottle with aerated liquid, a check valve at the outer end of the latter pipe, a vent pipe communicating with one of the valves and extending through the tank to vent a bottle, a blade on the shaft, said blade having a beveled surface to engage the valves and a depression to form a seat for the end of the stem valve when operated, and means for operating the shaft to successively operate the valves.

5. In an apparatus of the class described, the combination of a tank, a valve casing, a rotary shaft in the valve casing, a plurality of valves mounted in the valve casing, a water inlet pipe communicating with one of the valves and the tank, a gas inlet pipe communicating with one of the valves and the tank, a gas outlet pipe communicating with one of the valves and the tank, a pipe communicating with the valve with which the gas outlet pipe communicates and extends beyond the tank to supply a bottle with gas, an aerated liquid outlet pipe communicating with the tank and one of the valves, a check valve at the inner end of said aerated liquid outlet pipe, a pipe communicating with the valve with which the aerated liquid outlet pipe communicates and extending beyond the tank to supply a bottle with aerated liquid, a float valve at the outer end of the latter pipe, a vent pipe communicating with one of the valves and extending through the tank to vent a bottle, a blade on the shaft to successively operate the valves, said blade having an extension to engage and hold the valve open which admits gas to the tank during the period the valve is open to admit gas from the tank to a bottle, and to further hold said gas valve open at the time the aerated liquid valve is open, and means for operating the shaft.

[Claim 6 not printed in the Gazette.]

1,022,969. ELLIPSOGRAPH. TAKANOSUKE OHYE, San Diego, Cal. Filed Nov. 13, 1909. Serial No. 527,831. (Cl. 33—5.)

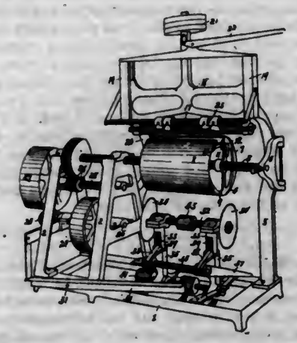


1. In a device of the character described, a ruler, a cap or ferrule mounted upon one end of the ruler and having a downwardly projecting sharp pointed leg, a sleeve adjustable upon the ruler and having a sharp pointed leg projecting therefrom, said leg being shaped and pointed similarly to that projecting from the cap, means for securing the sleeve in adjusted position, a casing formed upon the other end of the ruler, a tape measure, and means for coiling the latter within the casing, said tape measure being adapted to be releasably engaged and retained by the pointed members to form an ellipsograph guide.

2. A ruler having a stationary sharp pointed member extending therefrom, and an adjustable sleeve having a sharp pointed member, and a tape measure permanently associated with the ruler, said tape measure being adapted to be releasably engaged and retained by the pointed members to form an ellipsograph guide.

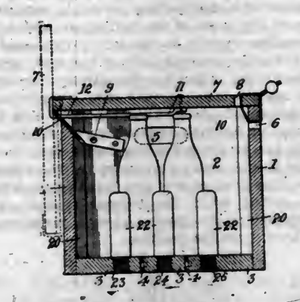
3. A ruler provided at one end with a sharp pointed projection and at the opposite end with a casing, a tape measure contained in said casing, and a sleeve slidable upon the ruler between the casing and the stationary sharp pointed member, said sleeve being provided with a set screw whereby it may be secured in adjusted position and with a sharp pointed member extending therefrom, said tape measure being adapted to be releasably engaged and retained by the pointed members to form an ellipsograph guide.

1,022,970. VENEER-BARREL-MAKING MACHINE. WILLARD J. OTT, Chicago, Ill. Filed Jan. 6, 1911. Serial No. 601,200. (Cl. 144—268.)



In a machine of the class described, a shaft, a collapsible drum mounted on said shaft and having two hingedly connected segmental parts one of which is fixed to the shaft, a shaft mounted longitudinally within the fixed part adjacent to its free edge, disks carried by said latter shaft and one having a notch in its periphery, a link connecting each disk to the free edge portion of the movable part and adapted to effect a positive inward or outward movement of the movable drum part relative to the fixed part upon a turning of said disks, and means carried by the fixed drum part and yieldingly acting on the notched disk to coöperate with the notch thereof to resist a turning of the disk from drum expanding position.

1,022,971. BOTTLE-CASE. GEORGE G. ROBERTS, Toledo, Ohio. Filed May 16, 1911. Serial No. 627,634. (Cl. 217—19.)



1. In a bottle-shipping case, the combination of a body, stationary guides secured to the inner faces of the end walls of said body and having transverse slots at their rear ends, a cover adapted to rest on the upper edges of the body, and runners secured to and depending from the cover and slidably engaging the transverse slots in the guides.

2. In a bottle-shipping case, the combination of a body, stationary guides secured to the inner faces of the end walls of the body and projecting over the rear wall of the same, a cover adapted to rest upon the upper edges of the body, and runners secured to said cover and fitting within the body, said runners slidably engaging the projecting portions of the guides and adapted to form a hinged connection therewith.

3. In a shipping case, the combination of a body having notches in the upper edge of its rear wall, stationary guides secured within the body in alinement with said notches and projecting thereinto, and a cover adapted to rest upon the body and provided with depending runners slidably playing through said notches and slidably engaging the guides.

4. In a shipping case, the combination of a body provided with notches in the upper edge of its rear wall, guides fixed within the case in alinement with said notches and projecting thereinto, and provided with transverse slots at their rear ends, a cover adapted to rest upon the body, and runners secured to and depending from the cover and slidably engaging the transverse slots in the guides.

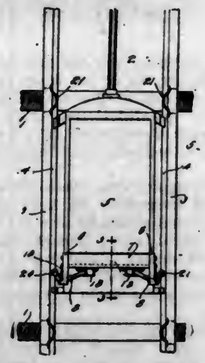
5. In a shipping case, the combination of a body consisting of side and end pieces and vertically disposed metallic reinforcing plates extending around the ends of the side pieces and between the same and the ends of the end pieces and bearing against the inner faces of the end walls, fastening devices securing said reinforcing plates and said side and end pieces together, and a slidable cover having metallic reinforcing plates secured around its edges and resting upon and riding across the ends of the first mentioned reinforcing plates.

[Claim 6 not printed in the Gazette.]

1,022,972. FOOT-GUARD FOR ELEVATORS. WILLIAM SHERMAN ROSS, Piqua, Ohio, assignor of one-half to H. Elmer Sheaf, Piqua, Ohio. Filed Nov. 16, 1911. Serial No. 660,645. (Cl. 187—98.)

1. In an elevator a foot guard mounted at the bottom of the door of the car and vertically slidable, a bell crank lever pivoted at the lower corner of the door having an inner arm connected slidably to the bottom of the guard and an outer arm outside of the car body, a spring normally holding the outer arm at an angle to the side of the car and the inner arm in its uppermost position thereby holding the guard raised and across the lower part of the doorway, and a cam plate secured to a guide standard of the elevator on a level with each floor to press the outer arm of the bell crank inward and its inner arm downward to lower the guard below the top of the car floor.

2. In an elevator a foot guard comprising a plate having a sliding engagement with the elevator car, bell crank guard operating levers pivotally connected to the lower end of the elevator car, rollers revolubly mounted in the outer ends of the arms of the bell crank levers, lever attaching brackets secured to the guard plate and adapted to receive the rollers on the ends of the inner arms of the levers whereby the latter are operatively connected with the guard, springs engaged with said levers whereby the latter are actuated to project and normally hold the guard in a projected or operative position, cam tripping devices arranged in the elevator shaft opposite each floor of the building and in the path of movement of the rollers in the ends of the outer arms of said bell crank levers whereby the latter are rocked when the bottom of the elevator is brought opposite to the floors and said guard thereby retracted to an inoperative position.



3. In an elevator, a foot guard comprising guide brackets secured to the lower end of the elevator car, a guard plate slidably mounted in said brackets, lever attaching brackets secured to the lower edge of said plate, bell crank levers pivotally mounted in said brackets, rollers revolubly mounted in the arms of said levers, the rollers of one set of said arms having a sliding engagement with the frames on said plate, springs secured to said brackets and adapted to engage said levers whereby the latter are actuated in the proper direction for raising said guard plate into its operative position, curved tripping plates secured to the guide standards of the elevator opposite each floor of the building and in the path of movement of the rollers in the outer arms of the bell crank levers whereby the latter are rocked when the elevator is brought opposite to the floors of the building thereby lowering said guard plate to an inoperative and out of the way position.

1,022,973. TRIGGER MECHANISM. JAMES M. RUSSELL, Jonesville, Va. Filed June 26, 1911. Serial No. 635,246. (Cl. 42—42.)



1. In a two-trigger double barrel gun, a casing inclosing a major portion of the trigger guard, and means within said casing for successively actuating the front and rear triggers by a continuous pressure on said means.

2. In a two-trigger double barrel gun, side plates embracing the trigger guard, a slidable bar mounted between the side plates and resting on the trigger guard, and means actuated by a continuous pressure on said slidable bar to engage successively the front and rear triggers.

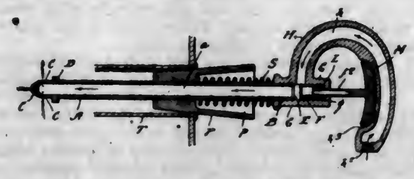
3. In a two trigger double barreled gun, means mounted on the trigger guard for successively actuating the triggers thereof to cause successive discharge of the two barrels by a continuous pressure on said means.

4. In a two-trigger double barreled gun, side plates embracing the trigger guard, a slidable bar mounted between the side plates, a spring plate supported by the side plates, said spring plate having a notch at its lower end to form a guide for the slidable bar, an upward extension at the forward end of the slidable bar, a stud projecting upwardly from said bar and adapted to engage the forward trigger, and an upwardly curved extension at the rear end of the slidable bar adapted to engage the rear trigger of the gun.

5. In a two trigger double barrel gun in combination, a trigger guard, front and rear triggers, a slidable bar mounted on said trigger guard, and means carried by said slidable bar for successively engaging the front and rear triggers by a single continuous rearward movement of the slidable bar.

[Claims 6 to 8 not printed in the Gazette.]

1,022,974. TUBE-CLEANER. STEPHEN D. SARGEANT, Charleston, S. C., assignor of two-thirds to John F. Riley, Charleston, S. C. Filed Feb. 23, 1911. Serial No. 610,426. (Cl. 137—97.)

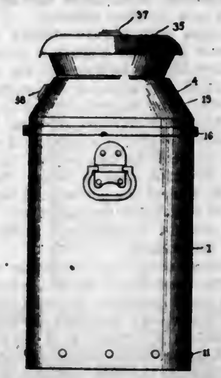


1. In a tube cleaner, a hollow rod threaded at one end and provided with delivery openings at the other end, a handle for said rod, said hollow handle having a bore arranged to receive the threaded end of said hollow rod, a valve disposed in said bore and arranged to close the end of said hollow rod, a tapered plug loosely mounted on said hollow rod, and a grip member disposed adjacent the grip portion of said handle for operating said valve.

2. In a flue cleaner, a hollow rod threaded at one end and provided with delivery openings at the other end, a hollow handle provided with a bore arranged to receive said hollow rod, said hollow handle being curved to provide a grip portion and having a recess, a valve disposed in the bore of said handle, a spring for normally holding said valve against the end of said hollow rod, a valve stem, a gripping member carried by said valve stem and arranged to extend into the recess in said hollow handle, a tapered plug loosely disposed on said hollow rod and provided with a recess in its larger end, and a coiled spring disposed on said hollow rod and arranged to bear at one end on said handle and at the other on said plug.

1,022,975. MILK-CAN. GEORGE SHEPARD, Portland, Oreg. Filed July 29, 1911. Serial No. 641,233. (Cl. 62—23.)

A milk can comprising an outer vessel including a bottom section, a top section and an intermediate section, the bottom section being embraced by the walls of the intermediate section and having a flange thereon spaced from the walls of the said intermediate section to form an intervening pocket therebetween immediately at the bottom of the can, metallic cement filling the pocket and sealing the joint between the bottom and intermediate sections respectively, the intermediate section being provided at its upper end with an inwardly extending spacing flange which is apertured to establish communication between the spaces surrounded by the intermediate section and the upper section, the said intermediate section having an external shoulder thereon disposed below the plane of the said spacing flange, the top section having its lower end seated on said shoulder and having a portion spaced from the walls of the intermediate section to form an intervening pocket therebetween, metallic cement located in the second pocket, an inner vessel located in the outer vessel and having its walls spaced therefrom to form an intervening vacuum chamber therebetween, the said inner vessel having its lowered end flared outwardly in the direction of the points of intersection between the bottom of the outer vessel and the intermediate section of the outer vessel, a bottom for the inner vessel, the said second bottom being spaced from the bottom of the first vessel, the flared portion of the second vessel having



passages therein to establish communication between the space between the first and second bottoms and the space between the vertical side walls of the said first and second vessels, the top section of the outer vessel being offset inwardly at its upper end and spaced from the top of the inner vessel to form an intervening pocket therebetween, metallic cement in the third pocket, a neck on the inner vessel, a closure for the neck, and means whereby the air may be exhausted from between the walls of the inner and outer vessels of the can.

1,022,976. PURSE. JOHN SPECHT, New York, N. Y., assignor to H. B. Hardenburg and Company. Filed Feb. 10, 1910. Serial No. 543,123. (Cl. 150—42.)

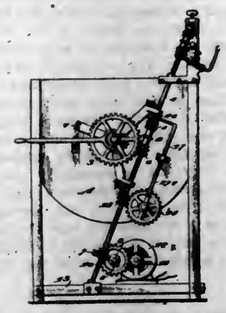


1. A purse comprising a flexibly jointed metallic frame, a flexible leather body consisting of a bottom, sides and ends, and a single leather flap having its inner end secured to an end edge of the body, the over-lapping edges of the body and the flap being rigidly secured to the metal frame, the remaining portion of the flap being free and depending along the end of the body toward the bottom, the free end of said flap and the opposite end of the body being provided with interlocking fastening members adapted to engage when the flap is folded over the meeting ends of the closed frame.

2. A purse comprising a flexibly jointed metallic frame, an integral flexible leather body consisting of a bottom, sides and ends, the meeting edges of said sides and ends being sewed together, and a single leather flap secured at one end to an end edge of the body with the finished face of the flap next the finished face of the material of the body, the end edge of the body and the edge of the flap secured thereto being secured to the metal frame causing the flap to depend from the top of the purse toward the bottom of the same, and the free end of said flap and the opposite end of the body being provided with interlocking fastening members.

3. A purse comprising a flexibly jointed metal frame composed of U-shaped end frames connected by links, a flexible body made of a single piece and consisting of a central portion constituting a bottom, and leaves projecting from said central portion and constituting sides and ends of the body, the meeting edges of said leaves being sewed together to form flexible corners, and a single flap secured at one end to an end edge of the body, the said end edge of the body and the attached end of the flap being secured to one of the end frames by the same fastening means, and the flap depending from the end frame when the purse is open and being arranged to be reversed over the meeting ends of the frame when the purse is closed and interlocked with the opposite end of the body.

1,022,977. GEARING FOR WASHING-MACHINES. LOUIS A. STEPHAN, St. Louis, Mo. Filed Aug. 25, 1911. Serial No. 645,946. (Cl. 74—50.)



1. The combination with a main shaft and means for driving said shaft, of a secondary shaft, a gear wheel mounted on the secondary shaft, a double worm slidably mounted on the main shaft adapted to mesh with the gear wheel, a worm wheel, means on the main shaft for driving the worm wheel, and means connecting the worm wheel to the double worm, whereby first one of the worms and then the other will be thrown into engagement with the large gear wheel during the rotation of the worm wheel.

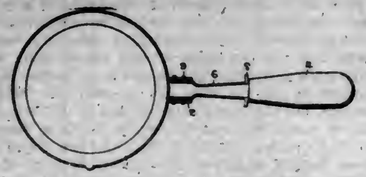
2. The combination with a main shaft and means for driving said shaft, of a secondary shaft, a gear wheel mounted on the secondary shaft, a double worm slidably mounted on the main shaft adapted to mesh with the gear wheel, a worm wheel, a worm on the main shaft meshing with the worm wheel, and means connecting the worm wheel to the double worm, whereby each of the worms will be brought into engagement with the gear wheel for rotating it in two directions during one revolution of the worm wheel.

3. The combination with a main shaft and means for driving the shaft, of a secondary shaft, a gear wheel mounted on the secondary shaft, a double worm slidably mounted upon the main shaft, a worm wheel, means on the main shaft for driving the worm wheel, and a link connected to the double worm and eccentrically connected to the worm wheel whereby first one worm and then the other will be thrown into engagement with the gear wheel during the rotation of the worm wheel.

1,022,978. UTENSIL-HANDLE. DAVID B. STEVENSON, Rankin, Pa. Filed Feb. 11, 1911. Serial No. 608,095. (Cl. 53—7.)

1. The combination with a utensil having a pair of extensions projecting therefrom, each extension having a plurality of apertures in line with each other therein, of a lifting device comprising a handle portion, a pair of spring members spaced apart and secured to said handle

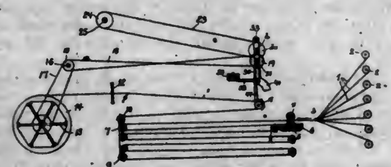
and extending outwardly therefrom and a plurality of lugs adjacent the free ends of said spring members, said lugs being in line with each other and with the apertures in the extensions of the utensil.



2. The combination with a utensil having a pair of extensions projecting therefrom, said extensions having a plurality of openings in line with each other, of a lifting device comprising a handle, having a longitudinally extending bore in one end thereof, a pair of spring members spaced apart and entering said bore, means to anchor the ends of the spring members in the bore and a plurality of outwardly projecting lugs at the free ends of the spring members, said lugs being in line with each other and in line with the openings in said extensions.

3. The combination with a utensil and a pair of extensions on said utensil, said extensions having a plurality of openings in line with each other, of a lifting device comprising a handle, having a longitudinally extending bore at one end, a pair of spring members spaced apart and having their inner ends entered and secured in said bore, a plurality of outwardly extending lugs at the free ends of said spring members, said lugs being in line with each other and with the openings in the extensions and a pair of operating lugs on the spring members adjacent the end of the handle to receive pressure to release the first mentioned lugs from the extensions.

1,022,979. TENSION-GOVERNOR FOR YARN-WINDING APPARATUS. GEORGE STONE, North Andover, Mass., assignor to M. T. Stevens, Nathaniel Stevens, S. D. Stevens, and M. T. Stevens, Jr., composing The Firm of M. T. Stevens & Sons, North Andover, Mass. Filed June 21, 1906. Serial No. 322,710. (Cl. 28—14.)



1. In a yarn-winding apparatus, the combination with a receiver and means for driving the same to wind the yarn thereon, including a friction clutch, of a governor controlled by the tension of the yarn for varying the friction power of said clutch in correspondence with variations in such tension; said governor comprising a swing-

3. In combination with a yarn-winding receiver, driving means therefor including a shaft, a wheel loose thereon, and a friction clutch member on the shaft adapted to engage the wheel; an actuator for moving the clutch member and wheel into contact, having a projection; a movable holder having a cam surface adapted to engage said projection; yielding means tending to move the holder so that its cam will cause the maximum engaging pressure of the clutch; and a yarn guide on the holder, over which the yarn being wound is passed, so arranged that increasing tension in the yarn will move the holder in opposition to said yielding means.

4. In combination with a yarn-winding receiver, driving means therefor including a shaft, a wheel loose thereon, and a friction clutch member on the shaft adapted to engage the wheel; an actuator for moving the clutch member and pulley into contact, having a projection; a pivoted holder having a plurality of arms on which are mounted respectively a cam, a weight, and a yarn guide; the cam being adapted to engage said clutch actuator projection, the weighted arm to swing the holder and cause the cam to connect the clutch, and the guide to receive a stretch of yarn being wound, in such manner that an increase of tension therein may partially overcome the pressure of the weight.

5. In combination with a yarn-winding receiver, driving means therefor including a shaft, a wheel loose thereon, and friction clutch members splined to the shaft, one on each side of the wheel; actuating devices for each of said clutch members; a projection on each said actuating device; a swinging frame including side members, a guide roll held between the side members, a cam on each of the side members arranged to engage the projections of said clutch-actuating devices, and a weighted arm; the weighted arm tending to swing the frame so as to move the clutch members into engagement with the wheel, and the guide roll being arranged to receive the yarn being led to the receiver in such manner that the tension thereof tends to overcome the effect of the weight.

[Claim 6 not printed in the Gazette.]

1,022,980. LOCK FOR WEARING-APPAREL. FRANCIS G. STRINGER, Nelson, British Columbia, Canada. Filed Sept. 12, 1911. Serial No. 648,896. (Cl. 45—18.)



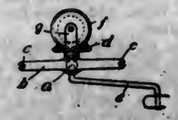
which the opposite end of said chain is connected, said locking device including a horizontal body portion and a vertical tubular extension communicating therewith, a locking bolt threaded in the tubular extension, a key adapted to actuate said lock to move the latter into locking engagement with the end of the rod lying within the horizontal locking portion.

1,022,981. GATE OR DOOR LOCK. ELDO J. TANGEMAN, Keystone, Iowa. Filed Dec. 16, 1911. Serial No. 666,172. (Cl. 70—45.)



The combination with a door frame and a door having an eye, of a locking device pivotally secured to the door frame, said locking device comprising a bell-crank lever having its arm directed away from the eye on the door, the long arm having a shoulder, a hook pivotally secured to the end of the short arm and arranged to engage the eye of the door, and a spring carried between the hook and the shorter arm for maintaining the members in their shifted position, the movement of the long arm serving to bring the hook into engagement with said shoulder.

1,022,982. COMBINED MOP HOLDER AND WRINGER. FRED O. TARBOX, Haverhill, Mass. Filed July 31, 1911. Serial No. 641,401. (Cl. 15—43.)



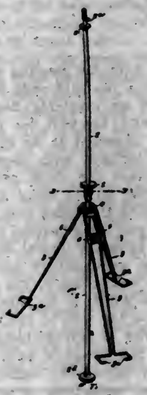
1. A self-wringing mop comprising a handle having a head fixed thereon, a distending frame having a transverse engaging bar, said frame being slidably mounted on said handle and held from rotation by said head, a rotatable wringing-device adjacent said head, and a mop-cloth connected to said wringing device and doubled about said bar, said bar being movable between the folds of the cloth from a point adjacent said head to the opposite end of the cloth, substantially as described.

2. A self-wringing mop comprising a handle having a head fixed thereon, a distending frame having a transverse

cloth, and a yielding extensible catch for holding said frame from sliding movement against the action of said wringing device, substantially as described.

4. A self-wringing mop comprising a handle having a head fixed thereon, a distending frame having a transverse engaging bar, said frame being slidably mounted on said handle and held from rotation by said head, a rotatable wringing-device adjacent said head, and comprising a rotary shaft and a loop pivotally connected to one end of said shaft, and a mop-cloth passing through said hook and doubled about said bar, said bar being movable between the folds of the cloth from a point adjacent said head to the opposite end of the cloth and said loop being arranged to swing into close proximity with said bar when the bar is in its position adjacent said head, substantially as described.

1,022,983. TRIPOD ATTACHMENT. OSCAR FREIVEN THUNBERG, Seattle, Wash. Filed Sept. 13, 1910. Serial No. 581,858. (Cl. 88—61.)



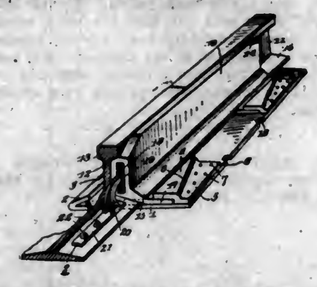
1. The improved tripod attachment comprising a pendent rod, a head which is slidable thereon, and means for securing it in any adjustment, arms pivoted to said head and formed at their outer ends as jaws adapted to engage the legs of a tripod, and means for adjusting the jaws to open or close the same, substantially as described.

2. The improved attachment comprising a pendent rod, a head slidable thereon, means for securing it in any adjustment, and arms pivoted to the head and formed of spring rods whose outer ends are formed as jaws adapted to engage the legs of a tripod, substantially as described.

3. The improved tripod attachment comprising a pendent rod, a head which is slidable thereon and provided with a threaded socket which is conical in its lower portion, arms pivoted to said head and adapted to engage the legs of the tripod, and a clamp screw adapted to slide on the rod and having its body screw-threaded and its lower

sisting of a head adapted to slide on said sleeve, means for clamping it in any desired adjustment, and arms pivoted to the head and adapted for detachable connection with the tripod legs, substantially as described.

1,022,984. AUTOMATIC CONTINUOUS RAIL-JOINT. CHARLES TROUP, Watseka, Ill. Filed Apr. 26, 1911. Serial No. 623,351. (Cl. 239—8.)

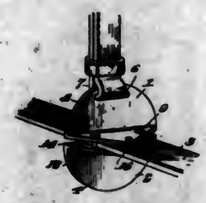


1. In combination with the meeting ends of the rails of a saddle plate beneath the said ends and provided at its inner side edge with an overlying flange extending substantially parallel with the rail for engagement by the base of the rail and provided at its outer side edge with an overlying flange inclined with respect to the rail, a fish-plate fitting against the outer face of the webs of the rails and rabbeted on its inner face to receive the tread, said plate having its upper face flush with the upper face of the tread and being beveled downwardly toward each end, said plate having a lateral flange provided with an inclined free edge substantially parallel with the inclined flange of the saddle plate, the flange of the fish plate being of greater width at its base than the distance between the plate and the web of the rail, the fish plate having a vertical series of ratchet teeth at the end adjacent to the base of the flange, a pawl for engaging the teeth, and means for adjustably connecting the pawl to the base, said means comprising a sectional plate provided at each side edge with an overlying flange for engaging the rail base, the meeting edges of the sections being inclined in the same direction, one of said edges having a groove and the other a rib fitting within the groove.

2. In combination with the meeting ends of the rails of a saddle plate beneath the said ends and provided at its inner side edge with an overlying flange extending substantially parallel with the rail for engagement by the base of the rail and provided at its outer side edge with an overlying flange inclined with respect to the rail, a fish plate fitting against the outer face of the webs of the rails and rabbeted on its inner face to receive the tread, said plate having its upper face flush with the upper face of the tread and being beveled downwardly toward each end, said plate having a lateral flange provided with an inclined free edge substantially parallel with the inclined flange of the saddle plate, the flange of the fish plate being of greater width at its base than the distance between the plate and the web of the rail, the fish plate having a vertical series of ratchet teeth at the end adjacent to the base of the flange, a pawl for engaging the teeth, and means for adjustably connecting the pawl to the rail.

3. In combination with the meeting ends of the rails of a saddle plate beneath the said ends and provided at its inner side edge with an overlying flange extending substantially parallel with the rail for engagement by the base of the rail and provided at its outer side edge with an overlying flange inclined with respect to the rail, a fish plate fitting against the outer face of the webs of the rails and rabbeted on its inner face to receive the tread, said plate having its upper face flush with the upper face of the tread and being beveled downwardly toward each end, said plate having a lateral flange provided with an inclined free edge substantially parallel with the inclined flange of the saddle plate, the flange of the fish plate being of greater width at its base than the distance between the plate and the web of the rail, the fish plate having a pawl connected to the rail, the fish plate having teeth for engagement by the pawl.

1,022,985. SPREADER FOR REINS. JUSTIN ALFONS TYCHON, Cloquet, Minn. Filed Aug. 10, 1911. Serial No. 643,433. (Cl. 54—73.)



1. An attachment of the character specified, comprising a plurality of sections, each section being composed of integral wings arranged at a right angle with respect to each other, a section being arranged with the wing of one section superposed on a wing of the other section and with their other wings in alinement, the superposed wings of the sections each having an opening at each side thereof, bolts passing through the openings for securing the sections together, one of the superposed wings having an opening between the said openings, the other of the superposed wings having a pin for engaging the said opening, the alined wing of one section having a slot and a strap engaging the slot.

2. An attachment for harness, comprising plates adapted to be superposed on each other with a driving line between the said plates, one of the plates having an opening on each side of the line, and an opening between the said openings, the other plate having pins for engaging the openings, one of the plates having a lateral lug provided with a slot, a strap engaging the slot for connecting the plates to a hame, and means for detachably securing the plates together.

3. An attachment for harness, comprising plates adapted to be superposed on each other with a driving line between the said plates, one of the plates having an opening on each side of the line, and an opening between the said openings, the other plate having pins for engaging the openings, a strap engaging one plate, and means for detachably connecting the plates.

1,022,986. CATTLE-BRANDING INSTRUMENT. IRVING RUDOLPH VAN WART, London, England. Filed Jan. 14, 1911. Serial No. 602,715. (Cl. 101—24.)

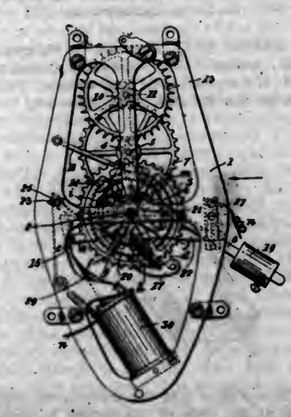


1. Apparatus for branding animals comprising, a holder consisting of detachably connected coacting members, there being an identification character part-formed in each of said members, a series of branding needles for demountable retention in said holder in the form of said identification character, and means for retaining said branding needles within said holder.

2. Apparatus for branding animals comprising a holder consisting of detachably connected co-acting members, there being an identification character part-formed in each of said members, a series of branding needles for demountable retention in said holder in the form of said identification character, said detachably connected co-acting members being provided with tapered and externally screw-threaded extremities, and means for detachably connecting said members.

3. Apparatus for branding animals comprising, a holder consisting of a pair of detachably connected co-acting members, there being an identification character part-formed in each of said members, a series of branding needles for demountable retention in said holder in the form of said identification character, said detachably connected co-acting members being provided with tapered and externally-screwthreaded extremities, a hand-piece taking on to one extremity of said holder and a clamping ring taking on to the opposite extremity of said holder, said hand-piece and said clamping ring serving to connect detachably the co-acting members forming said holder and also serving to clamp said branding needles in operative position therein.

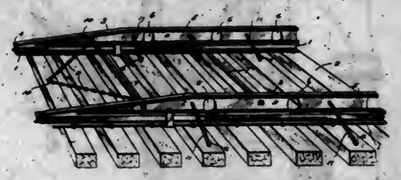
1,022,987. ELECTRIC CLOCK. SIDNEY C. VINCENT, Baltimore, Md., assignor to The Electro-Clock Company, a Corporation of Delaware. Filed June 16, 1911. Serial No. 633,560. (Cl. 58—41.)



1. In an electric clock movement, the minute arbor thereof provided with a loose ratchet wheel, and an adjacent tight spur gear wheel which constitutes the first wheel of the train of gearing, the said spur wheel having a horizontally projecting pin situated between its center and periphery, adapted to engage a portion of the ratchet wheel by which the spur wheel is driven, combined with a rocker hung loosely on the arbor and which comprises the following elements, a crown situated above the arbor depending sides which support an armature, a lever adapted to carry actuating weight, and an arm arranged to sustain a spring held pawl to drive the ratchet wheel, the said elements of the rocker being constructed as in one piece from sheet metal, substantially as specified.

2. In an electric clock movement, the minute arbor thereof provided with a loose ratchet wheel and an adjacent spur gear wheel which is tight on the arbor and constitutes the first wheel of the train of gearing, the said wheel having a horisontally projecting pin situated between the center of the wheel and its periphery, adapted to engage a portion of the ratchet wheel by which the spur wheel is driven, a rocker which is hung loosely on the arbor which comprises as elements thereof, a crown situated above the arbor, depending sides which support an armature, a lever adapted to carry an actuating weight and an arm having a spring held pawl to rotate the ratchet wheel, the said elements being constructed as of one piece from sheet metal, combined with a subsidiary rocker hung loosely on the arbor between the depending plates of the main rocker a cam formed as a part of the subsidiary rocker, a swinging spring held lever an insulated spring plate with which the end of the spring held lever is adapted to come in contact and close an electric circuit, a pin projecting from the said lever and in contact with the face of the cam, and screws which pass through the crown of the main rocker adapted to impart its motion to the subsidiary rocker, substantially as specified.

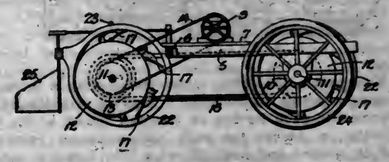
1,022,988. FIRE-HOSE CROSSING FOR RAILWAYS. THOMAS D. WALLER, Memphis, Tenn. Filed Aug. 25, 1911. Serial No. 645,947. (Cl. 104—7.)



1. In a device of the character described, in combination with a railway track, of castings provided with openings for the passage of fire hose and adapted to be clamped to the track rails in alinement therewith and upon opposite rails of the track, brace rods interposed between and having bearings against the inner faces of the casting, brace chains having their ends secured at points adjacent to the ends of the brace bars, the central portion of the chain being passed through rings permanently secured between the tracks, and brace rods or arms connected with the outer faces of the castings and adapted to have their free outer ends driven downward to effect a bracing for the outer faces of the casting, substantially as shown and described and for the purpose specified.

2. In a device of the character described, a casting adapted to be clamped to a railway rail, the said casting being provided upon its upper face with an inclined wheel track in alinement with the railway track, brace rods connected with the track and adapted to hold the same against lateral displacement, and clamping members adapted to pass under the base portion of the rail and its upper ends to engage lugs or extensions carried upon the inner and outer faces of the castings.

1,022,989. BOAT PROPULSION. JOSEPH R. WALTER, Brooklyn, N. Y. Filed May 20, 1911. Serial No. 628,478. (Cl. 115—60.)



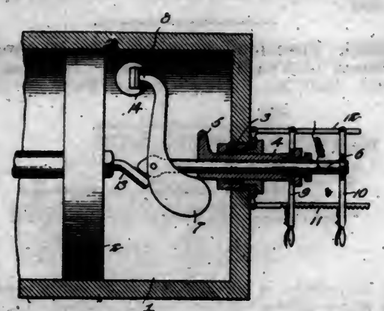
1. In a boat, the combination with a frame carrying a motor, of shafts journaled in the frame, hollow drums on the shafts, curved paddle blades conforming to the curvature of the drums and pivotally connected to the same, and means for folding the blades onto the drums on their upward movement.

2. In a boat, the combination with a frame carrying a motor, shafts journaled in the frame, driving means connecting the motor with the shafts, hollow drums on the shafts, wheels at the ends of the shafts, hinged blades on the drums, springs elevating the blades, and cam-rings carried by the frame and operating on the ends of the blades to close them.

1,022,990. ELECTRIC IGNITER FOR EXPLOSIVE-ENGINES. LEWIS E. WEGNER, Nebraska City, Nebr., assignor of one-fourth to Joshua Gilson, Nebraska City, Nebr. Filed June 10, 1911. Serial No. 632,405. (Cl. 123—162.)

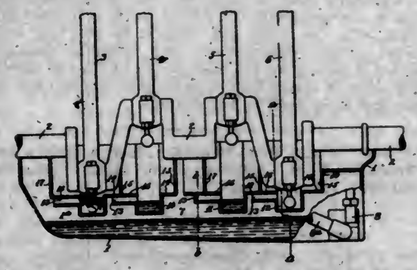
1. In sparking mechanism for internal combustion engines, the combination of a pivoted electrode, a support

therefor, means for adjusting the support to move the electrode to the required position, and an adjustable stop for limiting the movement of the pivoted electrode in one direction.



2. In sparking mechanism for internal combustion engines, the combination of a stem, an electrode pivotally mounted upon said stem, means for adjusting the stem and holding the same in an adjusted position, a sleeve mounted upon the stem and provided with a stop, and means for independently adjusting the sleeve to move the stop with reference to the electrode to fix the position of the latter.

1,022,991. OILING SYSTEM FOR AUTOMOBILES. ERNEST M. WHITE, Globe, Ariz. Filed July 29, 1911. Serial No. 641,299. (Cl. 184—13.)



1. The combination of a crank case having a main oil reservoir; a series of containers forming supplementary reservoirs and each having an overflow outlet at its forward side; a pocket for each supplementary reservoir placed to receive and hold oil when the forward end of the crank case is raised; with means for causing oil to flow from the main reservoir to the supplementary reservoirs.

2. The combination of a crank case having a main oil reservoir; a container forming a supplementary reservoir, in position to deliver oil to a crank; said supplementary reservoir having an overflow outlet at its forward side and being provided with a pocket placed to receive and hold oil when the forward end of the crank case is raised; with means for causing oil to flow from the main reservoir to the supplementary reservoir.

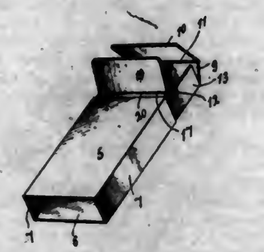
3. The combination of a crank case having a main oil reservoir; a container forming a supplementary reservoir placed to deliver oil to the crank and having an overflow; a pocket placed to receive oil when the forward end of the crank case is lowered and formed to deliver such oil to the supplementary reservoir when the crank case is restored to its normal position; with means for causing oil to flow from the main reservoir to the supplementary reservoir.

4. The combination of a crank case having a main oil reservoir; a container forming a supplementary reservoir placed to deliver oil to the crank; and having an overflow; a pocket placed to receive oil when the forward end of the crank case is lowered and formed to deliver the oil to the supplementary reservoir when said crank is restored to its normal position; a second pocket placed to receive oil when the forward end of the crank case is elevated and thereafter to deliver said oil to the supplementary reservoir when the crank case is returned to its normal position; with means for causing oil to flow from the main reservoir to the supplementary reservoir.

5. The combination of a crank case having a main oil reservoir provided with a series of transversely extending containers forming supplementary reservoirs, each of said containers having an overflow at its forward side and being provided with oil receiving pockets at both its forward and its rear sides, said pockets being in position to cause one of them to retain oil whenever the crank case is longitudinally inclined to the horizontal and thereafter return said oil to the main reservoir; with means for causing oil to flow from the main reservoir to the supplementary reservoirs.

[Claim 6 not printed in the Gazette.]

1,022,992. PAPER BOX. HOWELL G. WHITEHEAD, Wilson, N. C., assignor to P. Lorillard Company, Jersey City, N. J., a Corporation of New Jersey. Filed May 8, 1911. Serial No. 625,666. (Cl. 229—20.)



A blank for a sliding tray for paper boxes comprising a bottom, flaps at the ends of the bottom to form the end walls of the tray, said end flaps having infolded top flaps, flaps at the longitudinal edges of the bottom, said flaps being folded upwardly to form the side walls of the tray, and one of said last-mentioned flaps having an infolding intermediate flap provided with end flaps, said intermediate flap and the end flaps thereof forming the top of the tray, and the first-mentioned infolding top flaps extending beneath the aforesaid end flaps of the intermediate flap.

1,022,993. INSULATOR. GEORGE W. WILLIS, Beckley, W. Va. Filed Nov. 14, 1910. Serial No. 592,300. (Cl. 173—28.)



In combination with a tubular shell of disk metal corrugated to form exterior and interior screw threads, of a support having a threaded opening for receiving the shell, a threaded insulating bushing disposed within and engaged with the interior thread of the shell, and wire supporting means secured to said bushing.

1,022,994. WATERPROOF BOOT. GEORGE E. WYMAN, East Walpole, Mass., assignor to Charles S. Bird, East Walpole, Mass. Filed Aug. 3, 1911. Serial No. 642,152. (Cl. 36—4.)



1. A boot composed essentially of three layers, namely, an inner lining, an outer wear-resisting surface, and an intermediate highly-waterproof layer covering the foot portion and underlying the inner sole of the boot, the same being hermetically sealed by vulcanization within and between the other layers, and stopping short of the exposed edges of the boot structure, whereby a relatively cheap material may be employed for such waterproof layer.

2. A boot composed essentially of three layers, namely, an inner relatively light lining comprising a fabric impregnated with a vulcanizable material; an outer wear-resisting surface comprising a strong fabric likewise impregnated with or carrying a vulcanizable material; and an intermediate waterproof layer formed from sheet waterproof material capable of being vulcanized, said intermediate layer stopping short of any exposed edge of the boot, the various layers being vulcanized to unite the parts and to hermetically seal the intermediate layer.

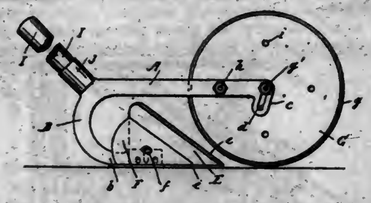
3. A boot composed essentially of three layers, namely, an inner lining composed of a series of sections having overlapping edges and formed from a relatively light fabric impregnated with a vulcanizable material and skimmed on that side adjacent to the next layer with rubber; an intermediate layer composed of a series of sections having overlapping edges and formed from a highly waterproof sheet material; and an outer wear-resisting surface or layer composed of a series of sections having overlapping edges, said sections being formed of duck treated with rubber, the various layers being vulcanized together whereby the interior waterproof layer will be hermetically sealed between the inner and outer layers and protected thereby.

4. A boot composed essentially of three layers, namely, an inner lining composed of a series of sections having overlapping edges and formed from a relatively light fabric impregnated with a vulcanizable material and skimmed on that side adjacent to the next layer with rubber; an intermediate layer composed of a series of sections having overlapping edges and formed from a highly waterproof sheet material; an outer wear-resisting surface or layer composed of a series of sections having overlapping edges, said sections being formed of duck treated with rubber; and a plurality of members formed from vulcanizable material overlying the joints of the outer sections, the various parts being vulcanized together, whereby the interior waterproof layer will be hermetically sealed between the inner and the outer layer and protected thereby, and the joints of the outer layer will be covered and protected.

5. A boot composed of the following members or parts vulcanized together under pressure, to wit: an inner lining composed of a series of sections of relatively light fabric treated with rubber on its outer face, an intermediate waterproof layer composed of a series of sections of a cheap waterproof material; an outer wear-resisting surface formed in section from duck treated with rubber, said outer surface having an inner and an outer sole of such material; an upper, the lower marginal portion of the upper being carried or flanged outwardly and overlying the outer sole; and strips overlying the joints of the outer surface.

[Claims 6 to 9 not printed in the Gazette.]

1,022,995. TURF-CUTTER. FRED A. YOUNG, Rutland, Vt. Filed Apr. 7, 1910. Serial No. 554,030. (Cl. 97—28.)



1. In a turf cutter, the combination, with a supporting frame having a slotted lug at its front end, and a lower cutter at the rear part of the said frame; of a front cutter, a bolt slidable in the said slotted lug and connecting the front cutter thereto and permitting it to be adjusted vertically, and a fastening device arranged eccentric of the said bolt and connecting the front cutter to the frame, thereby preventing the front cutter from being revolved upon the said bolt while it is being adjusted vertically.

2. In a turf cutter, the combination, with a supporting bar having an arm extending under its rear part, of a handle secured to the rear part of the said bar, a lower cutter secured to the said arm and having vertical and horizontal portions, a triangular plate secured in the angle between the vertical and horizontal portions of the lower cutter, and a vertical cutter secured to the front end portion of the said bar above and in front of the vertical portion of the lower cutter.

3. In a turf cutter, the combination, with a supporting bar having an arm extending under its rear part and having also a slot at its front end portion, of a handle secured to the rear part of the said bar, a lower cutter secured to the said arm and having vertical and horizontal portions, and a vertical cutter disk adjustable circumferentially and provided with a central bolt which is movable in the said slot, said disk being arranged above and in front of the vertical portion of the lower cutter and adjustable vertically with reference to it.

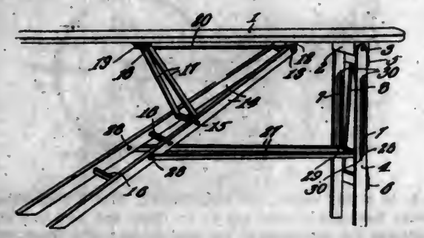
4. In a sod cutter, a frame bar of substantially U-shape having a slotted lug formed on one end thereof and adapted to receive and permit of vertical adjustment of an axle, an axle secured in the slot, a cutting disk mounted on the axle, and a locking bolt carried by U-bar and engaging the disk and adapted to serve as a pivot for the disk as the axle is adjusted.

5. A sod cutter, comprising a handle, a U-shaped frame member having a socket formed thereon to receive the handle, an angular knife blade secured to one end of the frame member, and a circular knife member at the other end of the frame member, said knife being provided with an eccentric pivot and with a vertically adjustable axial pivot for regulating the depth of cut of the knife member.

1,022,996. IRONING-TABLE. CARL E. ZEISINGER, Downing, Wis., assignor of one-half to Theodore J. Zeisinger, Downing, Wis. Filed Apr. 18, 1911. Serial No. 621,902. (Cl. 68—10.)

1. An ironing table comprising a board having across the bottom thereof, two fixed blocks and a fixed cleat, upright standards pivoted to one of said blocks and longitudinally slotted, oblique legs pivoted to the other of said blocks and connected by rounds, a truss pivoted to said legs and having a rod at its other end its rounded extremities moving in said slots, and a brace pivoted at one end on one of said rounds and having its other end resting normally against said cleat but adapted to fold within the upper portion of said legs.

2. An ironing table comprising a board, upright standards hinged beneath its head and longitudinally slotted, oblique diverging legs hinged beneath the board between its ends and connected by rounds, a truss comprising two bars pivoted at one end outside said legs and connected at their other end by a cross rod whose extremities are rounded and engage said slots, a cleat secured beneath the board, and a brace mounted pivotally on one of said rounds and with its upper ends removably engaged against said brace.



3. In an ironing table, the combination with the board, a block secured across its under face near its head, a second block secured across its under face adjacent the first, a cleat secured across its under face between the second block and the foot of the board, and a pair of wires connecting said cleat with the nearest block; of standards pivoted to the head-block, diverging legs pivoted to the next block, a truss pivoted to said legs and movably connected with said standards, a brace comprising brace bars pivotally connected with said legs, and a bar connecting the upper ends of said brace bars and extending between said wires and board, the length of the brace being such that it may fold within the portion of the legs between its lower end and the pivot-block of such legs.

4. An ironing table comprising a board having a cleat on the bottom thereof, upright standards pivoted to the said board which have longitudinal slots therein, oblique legs pivoted to the said board and connected by a round, a truss pivoted to said legs and having a rod at its other end fitting in said slots, and a brace pivoted at one end on the said round and having its other end resting normally against the said cleat and being adapted to fold within the upper portion of the said legs.

1,022,997. DIVING-SUIT. CLAY ANDERSON and MYRON SILVER, Passi, Philippine Islands. Filed Jan. 18, 1911. Serial No. 602,398. (Cl. 61—7.)

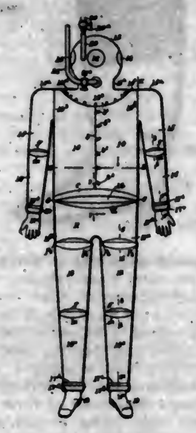
1. In a diver's suit, the combination with a body casing having a lateral opening at each shoulder, and a circularly-grooved flange at each of said lateral openings, of two arm casings, each having a lateral opening at the upper end thereof, and a circular rib defining said opening, each of said ribs engaging a corresponding grooved flange.

2. In a diver's suit, a hand covering, comprising two airtight and waterproof sections, one mounted on the other, in combination with an arm casing, and a universal joint connection between the arm casing and the hand covering.

3. In a diver's suit, a hand covering formed of airtight and waterproof material formed in two sections, one mounted upon the other, the outer section having finger and thumb coverings thereon.

4. In a diver's suit the combination with an arm casing section, and a concavo-convex flange thereon, of a hand covering in two sections, one mounted on the other, the outer section having finger and thumb coverings thereon, and the other section having a concavo-convex flange depending therefrom, which has air and water tight engagement with the similar flange on the other section.

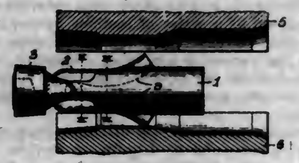
5. In a diver's suit, the combination of two tubular limb members pivoted together and each having at the front and rear flaring and curved flanges provided with ribs on their inner faces, one section having internal shoulders at the base of the flanges and the other external shoulders at the base of the flanges, two semi-circular bands mounted on the pivot of the sections and having ribs on their inner and outer faces adjacent to their edges, said bands sliding on the flanges of one limb member, and



two other semi-circular bands mounted on the pivot of the members and provided with ribs on their inner and outer faces adjacent to the edges thereof, said bands sliding on the first mentioned bands and the flanges of the other limb member.

[Claim 6 not printed in the Gazette.]

1,022,998. MANUFACTURING STAY-BOLTS. JAMES H. BAKER, Pittsburgh, Pa., assignor to Flexible Bolt Company, Pittsburgh, Pa., a Corporation of Delaware. Filed Feb. 10, 1911. Serial No. 607,800. (Cl. 29—148.)



1. As an improvement in the art of forming stay-bolts with interlinked head and shank, the method herein described, which consists in looping a strap through a link-formed head member, and simultaneously welding the ends of said strap upon a filler formed with tapered strap-engaging surfaces and reducing said strap ends and filler together to form a shank member.

2. As a step in the operation of forming stay-bolts with interlinked head and shank, the method herein described which consists in looping a strap and bringing its free ends into engagement with and upon opposite surfaces of a filler formed with tapered strap-engaging surfaces, heating the parts when so assembled, and progressively welding and swaging the assembled and heated blank from its smaller to its larger end.

3. The method herein described of forming the shank members of stay-bolts with interlinked head and shank, which consists in looping a strap and bringing its free ends into engagement with and upon opposite and outwardly inclined surfaces of a filler and progressively welding the parts so united by a welding stress applied in a direction angular to said surfaces of engagement.

4. As a step in the operation of forming stay-bolts with interlinked head and shank, the method herein described, which consists in looping a strap, crushing or contracting the loop so formed, and simultaneously welding the ends of said strap upon a filler having outwardly inclined strap-engaging surfaces and reducing said strap ends and filler together to form a shank member.

5. As a step in the operation of forming stay-bolts with interlinked head and shank, the method herein described, which consists in looping a strap and bringing its free ends into engagement with and upon opposite tapered and curved surfaces of a filler, heating the parts when so assembled, and progressively welding and swaging the assembled and heated blank, in the direction of the divergence of the said engaging surfaces.

1,022,999. AUTOMOBILE SHAFT-COUPLING. JOHN N. BASHAW, Lake Geneva, Wis. Filed Feb. 18, 1911. Serial No. 609,492. (Cl. 74—19.)

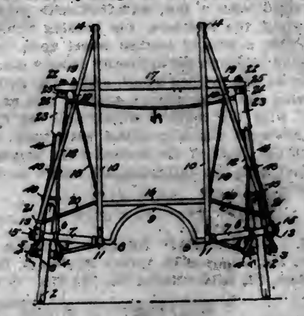


1. In a coupling for connecting a transmission shaft with a flexibly mounted driven shaft running at an angle thereto, the combination of a socket member having a cup-shaped socket cylindrical at its open end and hemispherical at its closed end and provided with a plurality of radial ribs extending along the cylindrical portion of the socket to the center of the hemispherical portion of the socket, and serving to present between them a plurality of pockets extending to the point of intersection of the ribs, and a ball member including a head having a substantially spherical body provided in its outer surface with a plurality of lugs of oval shape in plan and set eccentric to the axis of the body and forming segments of a circle of a larger diameter than the body and adapted to fit within said pockets of the socket member, and grooves between said lugs to receive said radial ribs, said grooves intersecting one another at the outer portion of the head and being contracted at the center and thence gradually widened toward their ends.

2. In a coupling for connecting a transmission shaft with a flexibly mounted driven shaft running at an angle thereto, a member having a cup-shaped socket cylindrical at its open end and hemispherical at its closed end, said socket being provided at the center of its hemispherical end with an axial recess and being provided with longitudinal radial ribs curved at their inner ends to correspond to the curvature of said hemispherical end and intersecting each other at said recess, said ribs forming tapering pockets between them, a ball member including a substantially spherical head inclosed in said sockets and provided with lugs and intervening grooves respectively engaging said pockets and receiving said ribs, said lugs being elliptical in plan set eccentric to the axis of the head, and forming segments of a circle of greater diameter than the head, and said grooves being contracted midway of their length and widened toward their opposite ends and having their side walls formed with sockets, springs seated in the sockets in the side walls of the grooves and bearing against the sides of the ribs, and a spring seated in the axial recess in the socket member and bearing upon the head at the point of intersection of said grooves.

1,023,000. AEROPLANE. ALCIDE E. BEAUDETT, Albuquerque, N. Mex. Filed Sept. 6, 1911. Serial No. 647,806. (Cl. 244—2.)

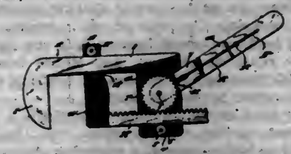
1. In combination with the frame of an aeroplane, of a shaft on the frame, spaced pairs of arms having bearings at one end engaging the ends of the shaft, an axle connected with the other ends of each pair of arms, a wheel on each axle, an upright supported by the shaft, at the inner side of each pair of arms, a brace between the top of each upright and the shaft at the outer side of the arms, a cross plate near the tops of the uprights, a cylinder pivoted at its upper end to each end of the cross plate, a tube pivoted to each end of each axle and extending into the adjacent cylinder, a plunger in each cylinder to which the tubes are connected, each cylinder having a vent opening above the plunger and a tube connecting the cylinders, the ends of the tube communicating with the vent openings of the cylinders.



2. In an aeroplane, the combination with the frame, of a shaft arranged transversely thereof, a pair of arms mounted to swing on each end of the shaft, a wheel journaled between each pair of arms, a cross plate above the shaft, a cylinder supported at each end of the cross plate, a plunger in the cylinder, and a rigid connection between each wheel and the plunger, each cylinder having a vent opening above the plunger, a cushion of rubber on the upper end of each plunger, and a connection between the vent openings of the cylinders.

3. In an aeroplane, the combination with the frame, of a shaft arranged transversely thereof, a pair of arms mounted to swing on each end of the shaft, a wheel journaled between each pair of arms, a cylinder connected with the frame above each wheel, a plunger in each cylinder, a rigid connection between each wheel and the plunger of the adjacent cylinder, and a communication between the cylinders for equalizing the pressure therein.

1,023,001. WRENCH. HARRY C. BENNETCH, Cocalico, Pa. Filed Dec. 20, 1910. Serial No. 598,824. (Cl. 81—133.)



1. A wrench, one of the essential parts of which being a toothed wheel, said toothed wheel mounted upon a pinion in a fixed relative position with one of the jaws, the toothed wheel to engage a rack of teeth on the second jaw, so that the revolution of the wheel moves such jaw to a near or far distance from itself according to the direction of the revolution, a single lever for said wheel, the end of which is mounted on the same pintle as the wheel, said lever having means whereby it may be secured to the wheel so that by locking the lever in one direction only repeated reciprocal motion of the same will, through the medium of the wheel, move the movable jaw its entire movable distance.

2. A wrench of the class described comprising a pair of members, one of said members comprising a housing formed with a jaw, the second member being also pro-

vided with a jaw, anti-frictional rollers within the housing bearing upon the second member, the said housing being provided with a pivoted toothed wheel, a handle having a bifurcated extremity mounted upon the pinion of the toothed wheel, a dog carried by the handle, means for forcing the dog into or out of engagement with the toothed wheel, the second jaw member having its shank formed with teeth adapted to mesh with the teeth of the toothed wheel, and anti-frictional bearings contacting the upper smooth face of the shank.

3. The herein described construction of wrenches embodying a pair of members, one of said members having a housing formed with a jaw, the second member being also provided with a jaw, anti-frictional rollers bearing upon both of the members, the housing being provided with a pintle, a pivoted toothed wheel upon the pintle, a lever having a bifurcated extremity loosely mounted upon the pintle for the toothed wheel, and a dog carried by the lever, spring means for forcing the dog into or out of engagement with the toothed wheel, and the first named member having a shank provided with teeth adapted to mesh with the teeth of the toothed wheel and to be forced into contact with the anti-frictional rollers as the lever is reciprocated.

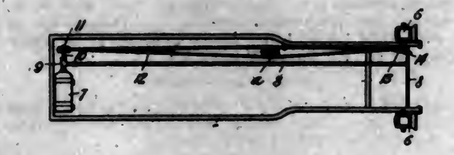
1,023,002. RIVET-HEAD DRILL. LINCOLN BENNETT, Renovo, Pa., assignor to Arthur P. Pfouts, Renovo, Pa. Filed Sept. 24, 1910. Serial No. 583,615. (Cl. 77—69.)



1. A rivet head cutting machine comprising a rotatable casing and a cap therefor, a centering element mounted in the casing, a cutter carried by the casing, said cutter and casing being rotatable and slidable relatively to the centering element, a guide member slidably mounted in the casing and engaging the head of the centering element, anti-friction bodies mounted intermediate the guide member and the centering element, and means intermediate the said guide member and the cap for limiting the movement of the cutter toward its work.

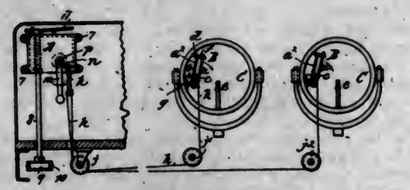
2. A rivet head cutting machine comprising a rotatable said guide members and centering element, and means mounted intermediate the said guide member and the head of the casing, said means adapted to limit the movement of the cutter relative to the centering element.

1,023,003. GAS-CONTROLLING APPARATUS FOR AUTOMOBILES. ALLEN G. BLACK, Springfield, Mass. Filed Jan. 13, 1911. Serial No. 602,380. (Cl. 240—123.)



The combination with an automobile having a lamp at its forward end, a gas supply tank having a location on the automobile to the rear of the lamp, a pipe connecting the tank with the lamp, provided with a valve having a rotative stem for operating it on which a wheel is affixed, another wheel mounted at the forward end of the automobile adjacent said lamp to be manually operated, a cord connected with both of the wheels, whereby the said gas valve may be conveniently opened and closed by a person from near the lamp, and means comprising a manually operated shaft located near the driver's seat, and operatively connected with said cord whereby the flow of gas to the lighted lamp may be diminished or shut off by a person riding in the vehicle.

1,023,004. GAS CONTROLLING AND LIGHTING APPARATUS FOR AUTOMOBILES. ALLEN G. BLACK, Springfield, Mass. Filed Feb. 17, 1911. Serial No. 609,225. (Cl. 67—20.)



1. The combination with a burner, of a support to one side of the burner and a lighting device consisting of a spring wire, the middle portion of which is made into a coil, while its extremities are extended therefrom in approximately parallel legs, one thereof having an abrading piece and the other a coöperative igniting piece, one of said legs being pivotally mounted on said support and

1,023,006. SELF-ADJUSTING ATTACHMENT FOR PIANO-PLAYERS. THOMAS H. CABASINO and THEODORE W. VRANA, New York, N. Y. Filed May 4, 1910. Serial No. 559,295. (Cl. 84—161.)



1. The combination with a frame, of a tracker slidingly mounted on said frame, a lever pivotally connected to said frame, connections between the opposite ends of said lever and said tracker, whereby said tracker is operated from said lever, and connections between said lever and said tracker, whereby the operation of said lever is controlled from said tracker.

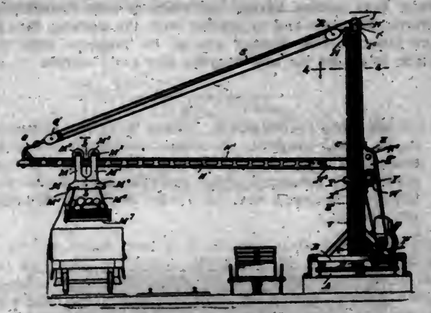
2. The combination with a frame, of a tracker movably mounted on said frame, a lever pivotally connected to said frame, connections between the opposite ends of said lever and the opposite ends of said tracker, whereby said tracker is moved by said lever, collapsible chambers for operating said lever, a suction pipe, said tracker having a plurality of openings therein, and connections between said openings and said suction pipe, whereby the connection and disconnection of said chambers with said suction pipe is controlled.

3. The combination with a frame, of a movable tracker on said frame, a lever pivoted intermediate its ends on said frame, connections between each end of said lever and each end of said tracker, whereby said tracker may be manipulated by said lever, and pneumatic means located on each side of the pivot point of said lever, for operating said lever.

4. The combination with a frame, of a movable tracker on said frame, a lever pivoted intermediate its ends on said frame, connections between each end of said lever and each end of said tracker, whereby said tracker may be manipulated by said lever, pneumatic means located on each side of the pivot point of said lever, for operating said lever, and means for controlling said pneumatic means from said tracker.

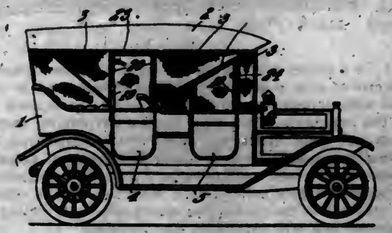
5. The combination with a frame, of a movable tracker on said frame having a plurality of duct openings arranged in series, a lever pivoted intermediate its ends on said frame, connections between each end of said lever and each end of said tracker, whereby said tracker may be manipulated by said lever, pneumatic means located on each side of the pivot point of said lever, for operating said lever, and means for controlling said pneumatic means from said tracker, comprising a series of alined openings disposed on each side of said tracker at an angle to said first-mentioned series of openings, adjacent the ends thereof, and connections between said pneumatic means and said openings.

end of the beam, and a second cable and pulley blocks about which the same passes and adapted to be con-



nected to said guide blocks for raising and lowering the inner end of the frame, as set forth.

1,023,007. AUTOMOBILE-DOOR. LUCIAN R. COLBERT, Massaponax, Va. Filed Apr. 8, 1911. Serial No. 619,883. (Cl. 21—62.)



1. The combination with the door of a vehicle, of spaced telescoped supports slidable vertically on the door; and a longitudinally extensible member terminally pivoted to the supports.

2. The combination with the door of a vehicle, of a longitudinally extensible support provided at its upper extremity with an angularly disposed longitudinally extensible supporting member, the support and the supporting member being movable within the contour of the door.

3. The combination with a door of a vehicle, of spaced guides thereon, one of which is provided with seats, and with slots extended entirely through said guide; a supporting member slidable in the guides and having a lug adapted to register in the seats, and to pass through the slots when the support is rotated to dispose the lug out of seat-engaging position; and a spring upon the other guide, adapted to bear against the lug, to maintain the same in the seat.

4. In a device of the class described, parallel members; a longitudinally extensible connection pivotally united adjacent its ends with said members, adjacent the upper ends of said members; and means for securing said members to

wardly to provide a working face and thence bent downwardly at an angle to the working face, and the said angular bent portion having its extremity bent inwardly to overlie the plate and to contact with the working face at the inner portion thereof and at its juncture with the plate, to render the said working face non-yieldable.

1,023,009. SLUDGE-TABLE. ORSON WINFIELD DUNHAM, Joplin, Mo., assignor, by mesne assignments, to The Braeckel Concentrator Company, Joplin, Mo., a Corporation of Missouri. Filed Jan. 10, 1910, Serial No. 537,294. Renewed Nov. 25, 1910. Serial No. 594,550. (Cl. 83—88.)



1. In a sludge table, a supporting mechanism comprising a series of sills, a head block pivotally connected to one of said sills, means for adjustably mounting said head block on the remainder of the sills, brackets extending upwardly from the head block, an intermediate supporting beam pivotally mounted on said brackets, a series of cross bars secured to the intermediate beam, a series of longitudinally-disposed stringers secured upon said cross bars, a table-top or deck above the supporting mechanism, and rolling supports for the deck carried by said stringers.

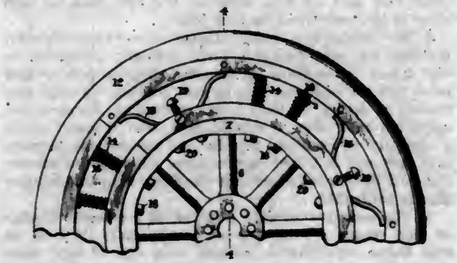
2. In a sludge table, a supporting mechanism comprising a series of sills, a head block pivotally connected to one of said sills, means for adjustably mounting said head block on the remainder of the sills, brackets extending upwardly from the head block, an intermediate supporting beam pivotally mounted on said brackets, a series of cross bars secured to the intermediate beam, a series of longitudinally-disposed stringers secured upon said cross bars, a table-top or deck above the supporting mechanism, flanged track sections spaced upon said stringer a series of connected rollers arranged in alinement below the table-top and rolling within the track sections, and flanged track sections carried by said deck and engaging said rollers.

3. In a sludge table, a supporting mechanism comprising a series of sills, a head block pivotally connected to one of said sills, means for adjustably mounting said head block on the remainder of the sills, brackets extending upwardly from the head block, an intermediate supporting beam pivotally mounted on said brackets, a series of cross bars secured to the intermediate beam, a series of longitudinally-disposed stringers secured upon said cross bars, a table-top or deck above the supporting mechanism, flanged track sections spaced upon said stringer a series of connected rollers arranged in alinement below the table-top and rolling within the track sections, flanged track sections carried by said deck and engaging said rollers, and a power driven head motion for longitudinally reciprocating the deck upon the supporting rollers.

5. In a sludge table, a supporting mechanism comprising a series of sills, a head block pivotally connected to one of said sills and adjustably connected to the remainder of said sills, brackets extending upwardly from the head block, an intermediate supporting beam arranged above the head block and provided with hangers, means for pivotally supporting said intermediate beam by means of said hangers to said brackets, a series of spaced cross bars secured to the intermediate beam, a series of stringers secured upon said cross bars, a table top or deck loosely supported upon said stringers, and means pivotally connected to the cross bars adjacent one end for tilting the intermediate beam upon said hangers as a pivot.

[Claims 6 to 18 not printed in the Gazette.]

1,023,010. SPRING-WHEEL. HARRY E. J. FORRSTER, St. Louis, Mo. Filed Sept. 30, 1911. Serial No. 652,065. (Cl. 152—37.)



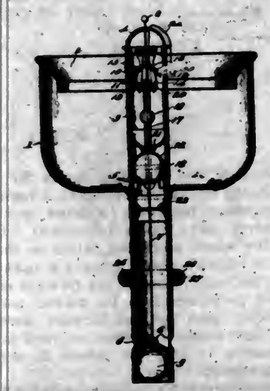
The combination with a wheel rim, of an externally channeled band mounted about said rim and having cross bridge pieces at intervals throughout its circumference, a tire supporting annulus arranged concentrically about the said band, inwardly bowed springs trained beneath the bridge pieces and having their ends frictionally engaging and supporting the annulus, locking screws threaded in the bridge pieces for securing the springs against longitudinal displacement, and adjusting screws threaded through the rim and band and engaging each spring at two points thereof spaced from its center.

1,023,011. HARVESTER ATTACHMENT FOR ENGINES. ORSON W. FOUST, Cogswell, N. D. Filed Mar. 24, 1911. Serial No. 616,646. (Cl. 56—100.)



receiving end portion, pinions fixed on said shaft within the slots of the plates meshing with the teeth thereof, a ratchet wheel carried by said shaft, and a pivoted pawl carried by one of said bars engaging said ratchet wheel.

1,023,012. AUTOMATIC FUNNEL. FRED E. GILBERT, Jacksonville, Fla. Filed Aug. 7, 1911. Serial No. 642,636. (Cl. 226—33.)



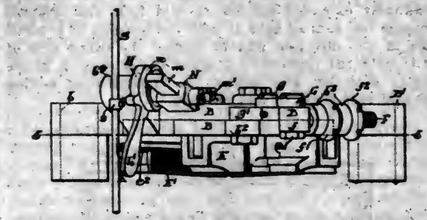
1. An automatic funnel comprising a bowl, a tube providing a nozzle, valves preventing liquid having access to the upper part of said tube, one of said valves preventing liquid having access to said nozzle, and valve actuating means, substantially as described.

2. In an automatic funnel, the combination of a tube constituting a nozzle and provided with a plurality of ports, a float in said tube, a valve in said tube adapted to control said ports, a valve seat carried by said tube located below said valve, a second valve seat in said tube above said valve, and a connection between said float and said valve, substantially as described.

3. In an automatic funnel, the combination of a tube constituting a nozzle and provided with a plurality of ports, a float in said tube, a valve in said tube adapted to control said ports, a valve seat carried by said tube located below said valve, a second valve seat in said tube above said valve, a connection between said float and said valve, a third valve seat in said tube above said second seat, and a valve coacting with said third seat, said valves when seated adapted to prevent liquid from flowing either up or down, substantially as described.

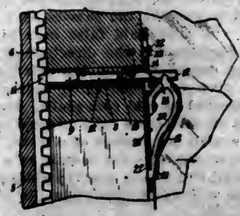
4. In an automatic funnel, the combination of a tube constituting a nozzle and provided with a plurality of ports, a float in said tube, a valve in said tube adapted to control said ports, a valve seat carried by said tube located below said valve, a second valve seat in said tube above said valve, a third valve seat in said tube above said second seat, a second valve coacting with said third seat, a tube carrying said second valve and provided with a

tappets on said rod for automatically turning the eccentric to move the cutter into and out of position as the cutter head moves past the tappets.



3. The combination in a bolt cutting machine, of a tappet rod, tappets thereon, guides, a cutter head mounted in said guides, a movable cutter, an eccentric controlling the movement of said cutter, an arm on the eccentric having a pin to engage the first tappet to project the cutter, and a portion of the eccentric adapted to strike the second tappet and still further move the cutter, and a stop on a bracket for limiting the movement of the cutter in the reverse direction.

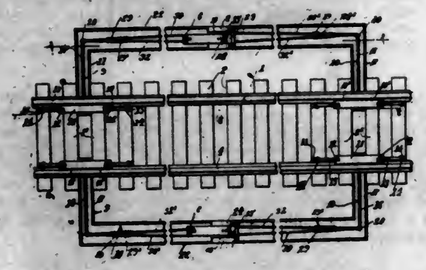
1,023,014. WINDOW-SASH LOCK. ALBERTUS E. HANSON, Mason City, Iowa. Filed Apr. 11, 1910. Serial No. 554,594. (Cl. 16—119.)



1. In combination with a window frame having a rack fixedly disposed therein and a sash slidable therein, a lock, comprising a bolt mounted in a perforation in said sash and adapted to engage the said rack in holding relation, said bolt extending inward beyond the stile of said sash, and said bolt having formed in the upper portion thereof a recess arranged to extend beyond the inner surface of said stile only when the said bolt is drawn from engagement with said rack; a sliding plate adapted to rest upon said bolt and arranged to drop into the said recess when the said bolt is retracted, said plate being provided with extended projections at the bottom of said plate to afford means for lifting the said plate; and a lifting rod guidedly mounted on said stile beneath the said projections on said plate.

2. In combination with a window frame having a rack fixedly disposed therein and a sash slidable therein, a lock comprising a bolt mounted in a perforation in said sash and adapted to engage said rack, said bolt being provided

the track and adapted to be moved by the flange of a wheel passing over said track, a rock-shaft journaled beneath said track, a U-arm secured to said rock-shaft, a downwardly extended portion on said false rail adapted to engage one arm of said U with the passage of a wheel flange in one direction and to engage the other arm of said U with the passage of a wheel flange passing in the opposite direction and means for transmitting motion from said rock-shaft to said barrier.



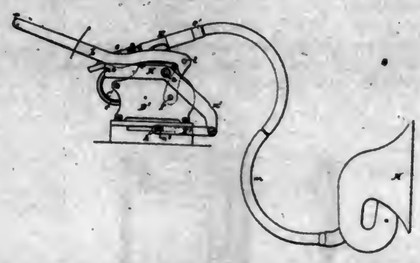
2. In a railway crossing guard, in combination, a barrier pivoted on one side of the crossing and adapted to close the same, false rails disposed on either side of the crossing and parallel and adjacent to the inner tread of a line rail, means whereby the passage of a wheel flange over said rail will cause said false rails to move longitudinally and downwardly, the direction of longitudinal movement being dependent upon the direction of motion of the wheel, rock-shafts journaled beneath said false rails, U-arms secured to said rock-shafts, downwardly extended portions on said cross rails adapted to engage one arm of said U's with the passage of a wheel in one direction and the other arm with the passage of a wheel in the opposite direction, and means whereby similar rotation of said rock-shafts will cause oppositely directed rotations of said barrier.

3. In a railway crossing guard, the combination, of a barrier pivoted on one side of the crossing and adapted to close the same, a grooved pulley mounted for rotation upon the pivot bolt of the barrier, and provided with a pin engaging said barrier, a catch for locking said pulley against rotation, a lever for releasing said catch, false rails carried by the line rails on either side of said barrier, levers pivoted intermediate their length and operable by said false rails, cables connecting upper arms of said levers with the pulley, and cables connecting the lower arms of said levers with the catch releasing lever.

4. In a railway crossing guard, the combination, of a barrier pivoted on one side of the crossing and adapted to fall by gravity to close the same, means for cushioning the fall of said barrier, said means also assisting in raising the same, a grooved pulley mounted for rotation upon the pivot bolt of the barrier and provided with a pin engaging with said barrier, a catch for locking said pulley against rotation, a lever for releasing said catch, false rails carried by the line rails upon either side of said barrier, levers pivoted intermediate their length and operable by said false rails, cables connecting the upper arms of said levers with the pulley, and cables connecting the lower arms of said levers with the catch releasing lever.

5. In a railway crossing guard, the combination of a barrier pivoted on one side of the crossing and adapted to close the same, a grooved pulley mounted for rotation upon the pivot bolt of the barrier, means coacting with said pulley to engage with said barrier, means for locking said pulley against rotation, means for releasing said locking means, false rails carried by the line rails on either side of said barrier, levers pivoted intermediate their length and operable by said false rails, cables connecting the upper arms of said levers with the pulley, and cables connecting the lower arms of said levers with the lock releasing means.

1,023,016. AUTOMOBILE-HORN. CHARLES RAYMOND HEIZMANN, Reading, Pa. Filed Aug. 25, 1910. Serial No. 578,875. (Cl. 181—2.)



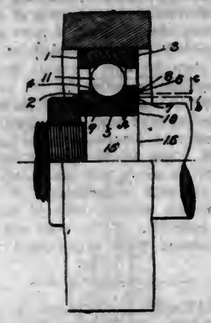
1. The combination in a signaling device for vehicles, of a sound producing mechanism including a record and a speaker in engagement therewith; a hand lever located adjacent the driver seat; means operatively connecting the lever and the sound producing device so that when the hand lever is initially moved forward a signal will be given and upon the continuance of the forward movement the speaker will be returned to its normal position to duplicate the signal upon the next forward movement of the hand lever, said hand lever when returned to its normal position tending to keep the carrier in engagement with the feeding means.

2. In a signaling device for vehicles having a horn, the combination of a speaker carrier, a record holder, a shaft; a hand lever keyed to the shaft; a ratchet wheel keyed to the shaft; a gear wheel loose on the shaft; a pawl on the gear wheel and engaging the ratchet when the latter is moved by the forward movement of the hand lever; means actuated by the gear wheel to move the record and to feed the carrier in one direction; means actuated by the forward movement of the hand lever to disengage the carrier from the feeding means; means independent of the gear wheel for moving the carrier in the opposite direction when the latter is disengaged from the feeding means; said hand lever operating to engage the carrier with the feeding means when returned to its normal position.

3. In a signaling device the combination of a horn; a record holder; a speaker carrier connected to the horn; a shaft; a hand lever keyed to the shaft; a ratchet keyed to the shaft; a pawl; means loose on the shaft and supporting the pawl; said pawl engaging the ratchet when the hand lever is initially moved forward to actuate the carrier; means actuated by the pawl supporting means for rotating the record to produce a sound; means actuated by the pawl supporting means to feed the carrier in one direction; means independent of the pawl supporting means for moving the carrier in the opposite direction; a pivotedly mounted double ended lever; means connecting one end of the double ended lever to the speaker carrier; means on the hand lever and engaging the double ended lever during the forward movement of the said hand lever to disengage the speaker from the feeding means; said hand lever engaging the double ended lever during the return movement to move the speaker carrier into engagement with the feeding means; said hand lever being so designed as to normally rest on the double ended lever and keep the speaker in positive contact with the carrier feeding means.

4. The combination in a signaling horn in automobiles or other vehicles of a sound producing device including a record and a speaker in engagement therewith; means for conveying the speaker over the record; a hand lever located adjacent the driver seat; means operatively connecting the lever and the sound producing device so that by pressing the lever forward a predetermined signal will be given and the speaker return to its normal position to duplicate the signal upon the next forward movement of the hand lever; a pivotedly mounted yoked lever; an arm on the speaker and extending through the yoked portion of the yoked lever; a pivotedly mounted double ended lever; and means connecting one end of the yoked lever with one end of the double ended lever; said hand lever being operable on said double arm lever to actuate the yoked lever to cause the speaker to engage or disengage the conveying means.

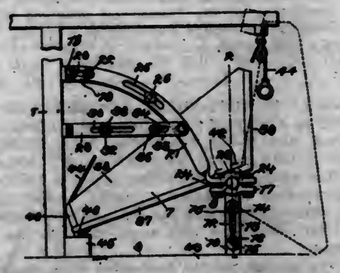
1,023,017. BALL-BEARING. HENRY HESS, Philadelphia, Pa., assignor to The Hess-Bright Manufacturing Company, Philadelphia, Pa., a Corporation of Delaware. Filed May 25, 1908. Serial No. 434,862. (Cl. 64—58.)



1. In a ball bearing, the combination of two bearing rings radially opposite, each ring being provided with a race of curved cross section, a series of balls in the races, one of the rings being cut away at one side to a depth slightly less than the adjacent ball tread to permit assembly by forcing, a retaining ring applied to the cut bearing ring and constructed and arranged to prevent the balls from coming in contact with the cut portion of said ring, means for retaining said locking ring permanently against said bearing ring, a shouldered support for said bearing ring and retaining ring, and a nut for clamping said rings against said shoulder.

2. The combination of two bearing rings provided with radially opposite races of curved-cross section, balls in the races, one of the races being cut away at one side to a depth less than the tread of the race, forming a lip, a retaining ring applied to the cut race and having a surface adapted to engage the balls and prevent their contact with the cut edge of the race and a locking sleeve permanently securing the bearing ring and retaining ring together.

1,023,018. FEED-TROUGH. SAMUEL H. HIMES, Windber, Pa. Filed May 6, 1911. Serial No. 625,460. (Cl. 119—61.)



1. The combination with the spaced uprights, of a horizontal rod, vertically adjustable supports for said rod, a trough pivotally mounted upon the rod, and adjustable braces pivotally supported at one of their ends upon the uprights, the other ends of said braces engaging the ends of said rod and co-acting with the supports to rigidly secure the ends of the rod upon said supports.

2. The combination with the spaced uprights, of a horizontally disposed rod, vertically adjustable supports, said rod being arranged on the supports at its ends, a trough adjustable upon said rod and pivotally movable thereon, and braces engaging upon the ends of said rod to retain the same upon the supports, said braces also acting to rigidly secure the supports in their adjusted positions.

3. The combination with the spaced uprights, of a pair of vertically adjustable supports, a horizontally disposed rod mounted at its ends upon said supports, a trough, clips adjustable in the bottom of the trough loosely embracing said rod, arms pivotally mounted on the uprights, curved bars engaging upon the ends of the rod, clamping bolts connecting said bars and the uprights, means adjustably connecting said bars and arms, and laterally extending adjustable braces secured to the uprights and to said bars.

4. The combination with the spaced uprights, of a pair of supports each consisting of stationary standards and plates vertically adjustable thereon, said plates having bearings formed on their upper ends, a horizontally disposed rod having its ends mounted in said bearings, arms pivoted at one of their ends upon said uprights, curved bars engaged at their lower ends upon the ends of the rod and rigidly secured to said adjustable plates, the upper ends of said bars being adjustably disposed upon said arms, means for rigidly securing the bars and arms together, braces connecting said bars and the uprights each consisting of relatively movable bars, means for rigidly securing said brace bars together, and a trough adjustably mounted upon said rod and pivotally movable thereon.

1,023,019. CAR-TRUCK. WALTER HOSSON, Philadelphia, Pa., assignor, by mesne assignments, to The Baldwin Locomotive Works, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Apr. 22, 1911. Serial No. 623,681. (Cl. 105—239.)



1. The combination in a car truck, of side frames; transoms connecting the side frames; axle boxes; each side frame being made of a top bar extending across the axle boxes; with four sets of plates secured to the top bar; two sets of plates forming the inner pedestals for the axle boxes; the other two sets of plates forming the outer pedestals; with gibs mounted between the plates of each pair and forming the guides for the axle boxes.

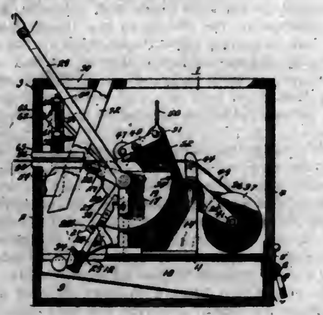
2. The combination in a truck of side frames and connecting transoms; each side frame being made of a solid longitudinal top bar; depending plates mounted on each side of each side bar and forming the pedestals of the truck; boxes mounted in the pedestals; gibs secured between the plates of each set and having projecting portions entering the grooves in the boxes; with bolts by which the gibs are detachably connected to the plates.

3. The combination in a car truck, of side frames and connecting transoms; axle boxes, each side frame consisting of a solid, longitudinal bar extending above the boxes; plates secured to each side of the bar and forming the pedestals; the inner pedestals being wider at the upper end; with angle braces extending under the transoms at the center of the frame and extending between the plates forming the pedestals and secured thereto at a point below the longitudinal bar.

4. The combination in a car truck, of two side frames; transoms connecting the frames; each frame having a longitudinal upper bar; with depending plates secured to each side of the bar and forming the pedestals; axle boxes mounted between the pedestals; gibs located between the plates and secured thereto and forming the guides for the axle boxes; each outer pedestal

plate having an open center; springs mounted under the top bar and within the open centers of the side plates; with equalising bars extending over the boxes and supporting the springs.

1,023,020. STAMP-VENDING MACHINE. JOHN FRANKLIN KINNEY, Shelby, Nebr. Filed Sept. 7, 1910. Serial No. 581,698. (Cl. 211—33.)



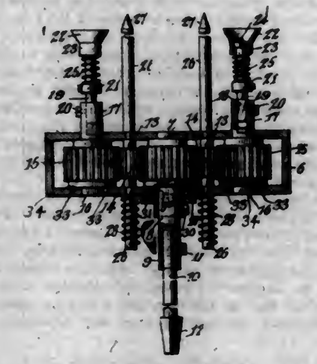
1. In vending apparatus for merchandise, a feeder for the merchandise including a shaft, a sleeve loosely mounted on the shaft, a member fixed to the sleeve, a member loose on the shaft and disposed opposite the first member, a ratchet wheel fixed to the shaft intermediate the said members, a pawl carried by the said members and engaging the ratchet wheel, a rock lever, means on said members for tilting the lever, means for holding the members and the lever respectively against movement, a gripper normally engaged with the merchandise, and means actuated by the feed roll shaft to release the gripper on movement of the feed roll shaft, to feed position.

2. In vending apparatus for merchandise, a feeder for the merchandise including a shaft, a pawl and ratchet mechanism for operating said shaft, means for locking said pawl and ratchet mechanism against movement, means for releasing said locking means, a gripper mechanism normally engaging the merchandise and released from engagement therewith upon the operation of said feed shaft, said gripper mechanism comprising a fixed bracket arranged in advance of the feed shaft, a horizontally disposed stationary jaw rigidly secured to said bracket, superimposed bearings carried by said bracket, a movable jaw slidably disposed in said bearings, a rock shaft carried by said bracket, a cam carried by said rock shaft and in engagement with said jaw, a pin wheel carried by said feed shaft, a crank arm disposed in the path of movement of the pin wheel, and a connection between said crank arm and said rock shaft whereby in the operation of the feed shaft the gripper mechanism is released from the merchandise.

3. In vending apparatus for merchandise, a feeder for the merchandise including a shaft, a pawl and ratchet mechanism for operating said shaft, means for locking said pawl and ratchet mechanism against movement, means for releasing said locking means, a gripper mechanism normally engaging the merchandise and released from engagement therewith upon the operation of said feed shaft, said gripper mechanism comprising a fixed bracket arranged in advance of the feed shaft, a stationary jaw rigidly secured to said bracket, superimposed bearings carried by the bracket, a movable jaw slidably disposed in said bearings, a spring intermediate said movable jaw and one of said bearings normally holding said jaws in engagement with the merchandise, a roller carried by said movable jaw, a rock shaft carried by the bracket, an actuating element secured to the rock shaft and engaging the roller, a crank arm operatively connected with said rock shaft, a pin wheel mounted upon said feed shaft, a crank arm arranged in the path of movement of the pin wheel, and a link connection between both of said crank arms, said pin wheel being adapted to actuate the last named crank arm in the operation of the feed shaft whereby the gripper mechanism is released from the merchandise.

4. In vending apparatus for merchandise the combination with a casing, of a feeder for the merchandise including a shaft, means for operating the shaft, means for locking said first named means against movement, means for releasing said locking means, a gripper mechanism normally engaging the merchandise and released from engagement therewith on the operation of the feed shaft, said gripper mechanism comprising a bracket fixed to the casing and arranged in advance of the feed shaft, a horizontally disposed stationary jaw secured to the bracket, superimposed bearings carried by the bracket, a movable jaw, a stem for said movable jaw slidably disposed in said bearings, a roller carried by said stem, a rock shaft carried by said bracket, an actuating element mounted upon one end of said rock shaft and engaging the roller, a crank arm journaled upon the opposite end of the rock shaft, a pin wheel mounted upon one end of the said feed shaft, a crank arm journaled in said casing and disposed in the path of movement of the pin wheel, and a link connection between both of said crank arms whereby in the operation of the feed shaft the gripper mechanism is released from engagement with the merchandise.

1,023,021. BIT-FRAME. EVERETTE S. LAGARDE and PETER A. ANGENEND, Jr., Houston, Tex. Filed Apr. 18, 1911. Serial No. 620,860. (Cl. 145—60.5.)



In a device of the kind described, a frame, a pair of bit holders one adjacent each end of said frame, gearing to simultaneously operate said bit holders, and three or more yieldable spring supported bars spaced widthwise and lengthwise of the frame and provided with prong ends whereby to engage and support a ceiling cleat and hold the same in place.

1,023,022. MANUFACTURE OF IMITATION HORN, SHELL, AND THE LIKE. FRANCOIS LEBEIL, Villeurbanne, and RAOUL DESGEORGE, Lyon, France. Filed Jan. 3, 1910. Serial No. 536,156. (Cl. 106—46.)

1. The process for the production of a plastic product which consists in adding to casein a small percentage of an acetone, subjecting the mixture to a temperature of over 100° centigrade and finely dividing the resulting material.

2. The process for the production of a plastic product which consists in adding to casein an acidulating material and a ketone in substantially equal proportions, subjecting the mixture to a temperature of over 100° centigrade and finely subdividing the resulting material while still hot.

3. The herein described process for the production of a plastic product which consists in adding to casein a small percentage of acetone and subjecting the mixture while under pressure greater than atmospheric pressure to the action of heat.

4. The herein described process for the production of a plastic product which consists in adding to casein a small percentage of acetone, subjecting the mixture while under pressure greater than atmospheric pressure to the action of heat and finely subdividing the resulting material while still hot.

5. The herein described process for the production of a plastic product which consists in adding to casein a small percentage of acetone, subjecting the mixture while under pressure greater than atmospheric pressure to a temperature of over 100° centigrade and finely subdividing the resulting material while still hot.

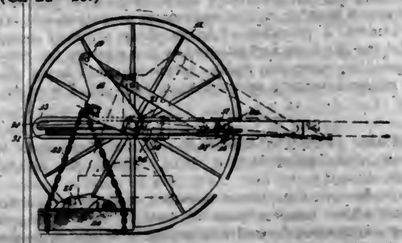
1,023,023. GEARING. GEORGE O. LEOPOLD, Philadelphia, Pa., assignor to North Bro's. M'f'g Co., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Sept. 14, 1910. Serial No. 581,928. (Cl. 74—40.)



1. The combination of a spindle having right and left hand grooves therein, a reciprocating carrier, two nuts mounted in the carrier having portions entering the spiral grooves and having teeth thereon and a pawl piece having short and long pawls thereon, means for shifting the pawl piece so that when it is in one position the long pawls only engage the ratchet nuts, allowing the carrier to be reciprocated, and when moved in the other position both sets of pawls will engage the ratchet nuts and lock the carrier to the spindle.

2. The combination of a spindle having right and left spiral grooves therein, a carrier mounted thereon, two nuts mounted in the carrier and having ratchet teeth, a pawl piece having short and long teeth, a pin projecting from the pawl piece, a slide secured to the pin, a spring tending to hold the pawl piece to the nuts, and a slotted casing inclosing the mechanism, said slide projecting through the slot in the casing.

1,023,024. STONE-TRUCK. CHARLES C. MCBRIDE, Bisbee, Ariz., assignor of one-half to James Milton Sparks, Bisbee, Ariz. Filed Nov. 22, 1910. Serial No. 593,633. (Cl. 21—19.)



1. A stone truck comprising a main frame, slots in opposite sides thereof, axles in the slots, wheels on the axles, a second frame in pivotal engagement with the said axles, a stone board carried by the said second frame, and means engaging the main frame and the second frame whereby, as the main frame is moved relatively to the second frame, the stone board will be elevated from the ground.

2. A stone truck comprising a main frame, axles carried at opposite sides thereof, wheels on the axles, the said axles being movable longitudinally of the said main frame, a second frame having one portion thereof connected to the said main frame and another portion thereof in engagement with the said axles, together with a stone board carried by the said second frame whereby as the main frame is moved relatively to the second frame, the said second frame and the stone board carried thereby will be elevated from the ground.

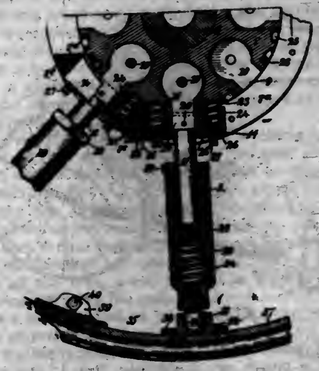
3. A stone truck comprising a U-shaped frame having slots at opposite sides thereof, axles mounted in the said slots and wheels carried on the axles, a second frame made up of parts which are engaged by the said main frame and the said axles, the said parts being movable relatively one to the other, a stone board carried on the said second frame whereby as the main frame is moved relatively to the second frame, the said axles will abut the ends of the said slots, and the said stone board will be elevated from the ground.

4. A stone truck comprising a main frame having slots at opposite sides thereof, axles carried in the said slots and movable therein, wheels on the said axles, a second frame having end portions pivotally engaged by the said axles, arms extending between the said second frame and the said main frame, a stone board carried by the said second frame whereby as the main frame is moved relatively to the second frame the said axles will engage the said slots at the outer end thereof, thereby carrying the said second frame and with it the stone board to an elevated position.

5. A stone truck comprising a main frame of U-shaped construction, a pair of shafts at one end thereof, the opposite sides of the said main frame being provided with slots, axles movably carried in the said slots, wheels on the axles, a second frame having a movable end portion in engagement with the axles, a member carried by the said end portion and having a stone board supported therefrom, arms in pivotal engagement with the said main frame, the other ends of the arms being in pivotal engagement with the said end portion whereby as the main frame is moved relatively to the said second frame, the said axles will be moved in the slots and the said movable end portion of the second frame and the stone board supported therefrom will be elevated.

[Claims 6 to 9 not printed in the Gazette.]

1,023,025. VEHICLE-WHEEL. BYRON W. MILLER, Colorado Springs, Colo. Filed June 12, 1909. Serial No. 501,742. (Cl. 152—28.)



1. In a wheel, a hub provided with radially disposed recesses extending out through the face of the hub, said recesses having enlarged circular inner ends and contracted outer ends whose walls are parallel, spokes hav-

ing enlarged circular inner ends fitting in the circular portions of said recesses, a face plate secured to the hub and retaining the spokes in said recesses, plates through which the spokes pass and to which they are secured, and springs interposed between the plates and hub.

2. In a wheel, a hub provided with radial recesses having enlarged circular inner ends and rectangular outer ends, the sides of the circular portions of the recesses tapering, spokes provided with enlarged circular and tapering inner ends, and rectangular portions adjacent the circular ends, fitting in the said recesses, a face plate secured to the hub and retaining the spokes in said recesses, plates through which the spokes pass and to which they are secured, and springs interposed between the plates and hub.

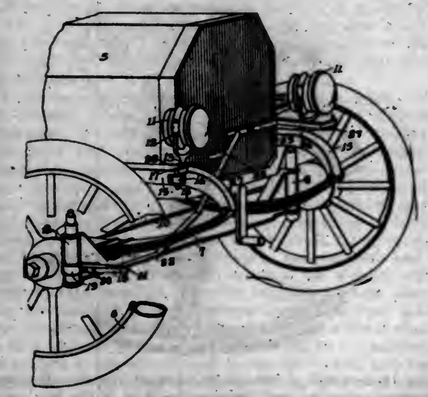
3. In a wheel, a hub having radially disposed recesses which extend through one of its faces, the enlarged inner terminals of the recesses being circular in shape, the sides of the terminals converging from the said face of the hub, spokes having enlarged circular terminals which converge from one side to the other so that they will fit snugly in the terminals of the recesses, the enlarged terminals being provided with orifices, a face plate which is disposed against the said face of the hub and having orifices therein, there being orifices in the hub which are in alinement with orifices in the spokes and in the face plate, bolts disposed in the said orifices, a rim, and resilient means connecting the spokes to the rim.

4. In a wheel, a hub provided with radially disposed recesses having enlarged circular inner ends, spokes having enlarged circular inner ends fitting in the circular portions of the recesses and provided with orifices, a face plate disposed against the face of the hub and having orifices therein, the hub being provided with orifices in alinement with the orifices of the face plate and spokes, bolts in said orifices, means for taking up loose motion between the hub and spokes, a rim provided with sockets, cylinders pivoted in the sockets and in which the outer terminals of the spokes project, and means for holding the spokes yieldingly laterally and radially.

5. In a wheel, a hub having recesses, a rim, spokes pivoted to rim and hub, plates having recesses which are in alinement with the recesses in the hub, the plates also having orifices through which the spokes are disposed, the spokes being secured to the plates respectively, springs disposed in the recesses in the plates, the springs extending to the recesses in the hub, and means for compressing the springs.

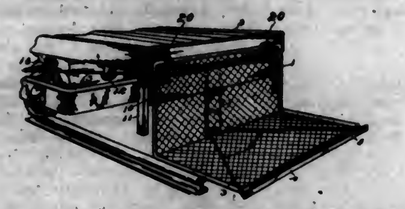
[Claims 6 to 8 not printed in the Gazette.]

1,023,026. AUTOMOBILE LIGHT-TURNER. WARD G. MOXLEY, Ravena, N. Y. Filed Aug. 26, 1911. Serial No. 646,281. (Cl. 240—62.)



In a motor vehicle, the combination with the connected steering wheel supports and movable lamp supports; of a rock arm detachably secured to one of said steering wheel supports, cranks adjustably secured to the lamp brackets and located above the frame of the vehicle, an extensible arm connecting the cranks and comprising overlapping sections connected by an eye bolt, and a rod having one end arranged in the eye bolt, and a pin and slot connection between the opposite end of the rod and the rock arm.

1,023,027. CAR-FENDER. WILLIAM NADLER and MORISS RESSLER, Montreal, Quebec, Canada. Filed July 8, 1911. Serial No. 636,686. (Cl. 105—250.)



1. In a car fender, a pair of channeled guides depending vertically one at each side of the car, a wheel guard slidable in said guides, a vertically swinging latch member pivoted at its upper end to the car body and propping said wheel guard to its uppermost position, a fender supported at the front of the car, and a trip mechanism carried by said fender and adapted to operate said latch member and allow the wheel guard to fall by gravity.

2. In a car fender, in combination, vertical slideways rigidly depending one at each side of the car, a wheel guard extending across the car and slidable in said slideways, a swinging latch member propping said guard to its uppermost position, a brake shoe adapted to operate on one of the car wheels, means connecting said brake shoe with said guard, and means for tripping said latch member whereby said guard falls by its own weight and thereby operates said brake shoe.

3. In a car fender, the combination with the car body and running gear, of a guard member operating by gravity, vertical frames secured to the car body forming slides for said guard member, a latch member having a step intermediate of the height thereof supporting said guard member and pivotally secured at its upper end to the car body, a fender member formed of an angle frame and secured to the front of the car body, a trip bar spring-held outwardly from the front bar of said fender member, and rods extending from said trip bar to said latch member.

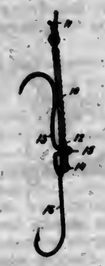
4. In a car fender, the combination with the car body and running gear, of a guard member operating by gravity, a latch mechanism supporting said guard member, a trip mechanism operating said latch mechanism, a brake shoe pivotally secured adjacent to a wheel of a running gear, and a cable operatively connecting said brake shoe and said guard member.

5. In a car fender, the combination with a car body and running gear, of a guard member vertically slidable and operating by gravity, a latch mechanism supporting said guard member, a trip mechanism operating said latch mechanism, a plurality of brake shoes pivotally secured under the car body and adapted to jam against the wheels on rotation, operating cranks secured to said brake shoes and cables attaching said cranks to said guard member.

1,023,028. FISHING-TACKLE. JOHN NORDLUND, Eureka, Cal. Filed Oct. 3, 1911. Serial No. 652,511. (Cl. 43—31.)

1. A device of the class described comprising a shank, formed of an integral piece of material and having the lower end thereof formed into a loop, a retaining member mounted to swing on the said loop and provided with an integral offset portion adapted to be frictionally received within the said loop, the free end of the said retaining member being curved and a hook mounted to swing on the

retaining member between the point of attachment of the retaining member to the said shank and the said offset portion.



2. A device of the class described comprising a shank provided with an integral loop at one end thereof, a retaining member mounted to swing on the said shank and provided with an offset portion adapted to partially extend through the said loop and a hook mounted to swing on the said retaining member.

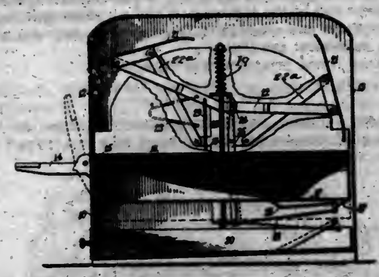
1,023,029. MATCH-RECEPTACLE. MARTIN OBRT, Melvin, Ill. Filed July 1, 1911. Serial No. 636,840. (Cl. 206—21.)



1. A match holder comprising a receptacle the lower end of which terminates in a chute through which the matches feed by gravity, a receiving tray carried by said receptacle springs carried by said receptacle and co-acting with said tray to block the passage of the matches from the chute, a roller rotatably mounted between the sides of said tray and bearing against said springs intermediate their length, and a plurality of alined, radially extending pins carried by said roller and adapted to engage with the matches to draw them past said springs.

2. A match holder comprising a receptacle having side, front and back walls, the lower end of the back wall being inclined and extending to form a chute, said extended end terminating in a tray, the lower end of said front wall being bent upwardly and outwardly in spaced relation to the chute to form a match passage, said front wall being provided adjacent its lower end with spaced slots, the turned-up portion of said front wall being also provided with spaced slots in alinement with the first mentioned slots, a plurality of leaf springs the upper ends of which are passed inwardly through the first mentioned slots and the lower ends of which are passed downwardly through the last mentioned slots to bear against the tray, and means carried by said tray for drawing matches past said springs.

1,023,030. POULTRY APPARATUS. EDWARD W. OLSON, Walla Walla, Wash. Filed Oct. 5, 1910. Serial No. 585,361. (Cl. 119—47.)



1. A poultry apparatus comprising a casing having an entrance and an exit, a vertically movable and spring actuated nest mounted in the casing and having an opening therein, a pivoted perch exterior of the casing and operated by the nest to swing it into approximately vertical position in front of the entrance to the casing when the nest is depressed by the entrance of a hen, swinging closures mounted in the casing for alternately opening and closing the entrance and exit of the casing, a movable egg receiving member below the opening of the nest, means whereby when an egg engages the said member the closures will be swung to close the entrance and open the exit, and means whereby when a hen leaves the nest the closures and perch will be swung to their initial positions.

2. A poultry apparatus comprising a casing having an entrance and an exit, a vertically movable and spring actuated nest mounted in the casing and having an opening in its bottom, a pivoted perch exterior of the casing adjacent to the entrance thereof and operated by the nest to swing it into approximately vertical position or into a horizontal position, swinging and spring actuated closures mounted in the casing for alternately opening and closing the entrance and exit of the casing and a pivoted spring actuated, egg receiving member below the opening of the nest, a locking device controlled by the egg receiving member for holding the closures in position to open the entrance and close the exit, and means controlled by the nest to swing the closures to their initial positions.

3. A poultry apparatus, comprising a casing having an entrance and exit, a vertically movable and spring actuated nest in the casing and having an opening therein, pivoted and spring pressed levers mounted in the casing, closures at the ends of the levers, a locking member engaging one of the levers to hold it in position, a movable egg receiving member mounted below the opening of the nest, a connection between the egg receiving member and the locking member whereby the locking member will be operated to release the said levers when the egg receiving member is depressed by an egg, and a member carried by one of the levers and adapted to be engaged by the nest in its upward movement.

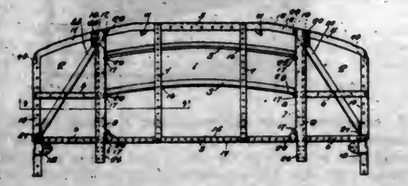
4. A poultry apparatus, comprising a casing having an entrance and an exit, a vertically movable and spring actuated nest mounted in the casing and having an opening therein, pivoted and spring pressed levers mounted in the casing, one of the levers being provided with a projection, closures mounted on the ends of the levers, a pivoted locking bar for engaging the said projection, a pivoted and spring actuated egg receiving pan mounted below the opening of the nest, a rod connecting the lower end of the locking bar with the pan, and a rod carried by one of the levers and adapted to be engaged by the nest in its upward movement.

5. A poultry apparatus, comprising a casing having an entrance and an exit, uprights in the casing, a vertically movable and spring actuated nest carried by the uprights and having an opening therein, levers pivoted to the uprights, one of the levers being provided with a projection, closures pivoted between the ends of the levers, links piv-

oted to said closures and uprights, a locking bar pivoted to the uprights, and adapted to engage the said projection, a pivoted and spring pressed egg receiving pan in the nest below the opening thereof, a rod connecting the pan with the lower end of the locking bar, and a rod secured to one of the levers and adapted to be engaged by the nest when in its uppermost position.

[Claim 6 not printed in the Gazette.]

1,023,031. CAST PLATFORM-HOOD. ALLEN E. OSTRANDER, Ridgewood, N. J. Filed Sept. 15, 1911. Serial No. 649,589. (Cl. 105—201.)



1. A cast metal platform hood for railway cars comprising a deck sill panel having integrally formed deck plate.

2. A cast metal platform hood for railway cars comprising a deck sill panel having integrally formed deck plate and lower deck carlines.

3. A cast metal platform hood for railway cars comprising a deck sill and panel having integrally formed end and side plates.

4. A cast metal platform hood for railway cars comprising a deck sill panel having integrally formed end and side plates, and an integrally formed deck plate.

5. In a platform hood for railway cars, an integrally cast member comprising a plurality of hood carlines and channel shaped hood purlins.

[Claims 6 to 33 not printed in the Gazette.]

1,023,032. METALLIC FLEXIBLE HOSE-PIPE. BRUNO MAX PECHSTEIN, Zwickau, Germany, assignor to The Firm of Gebrüder Jacob, Zwickau, Germany. Filed Feb. 3, 1910. Serial No. 541,716. (Cl. 137—75.)



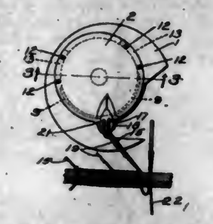
1. A metallic hose pipe in which the internal furrows of the hose are covered by means of a spirally wound flat band, whose windings overlap each other without being joined together and are provided with projections engaging loosely in the furrows of the hose.

2. A metallic hose pipe in which the internal furrows of the hose are covered by means of a spirally wound flat band, whose windings tightly overlap each other without being joined together and have the form of an overlap formed by the middle part of the outer band, so that the covering band and the outer band consist of one piece.

3. A metallic hose having grooves on its inner face, and provided with a lining formed of a spirally wound flat band having its convolutions overlapping and in engagement with one another, whereby the grooves of the hose will be wholly covered by said lining and a straight and flush inner surface given to the hose.

1,023,033. SEWING-MACHINE SHUTTLE. FREDERICK H. PERRY, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Jan. 6, 1911. Serial No. 601,215. (Cl. 2—23.)

1. A sewing machine shuttle, having, in combination, a discoidal shuttle body, a cup-shaped bobbin case rotatably mounted therein, a bobbin receiving post in the bobbin case, and a plurality of bobbins rotatably mounted on the post, substantially as described.



2. A sewing machine shuttle, having, in combination, a discoidal shuttle body, a cup-shaped bobbin case rotatably mounted therein, a bobbin receiving post in the bobbin case, and two bobbins rotatably mounted on the post, one of the bobbins being larger than the other, substantially as described.

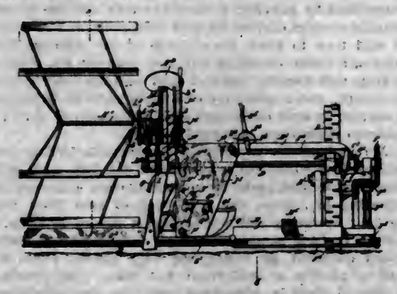
3. A sewing machine shuttle having provision for supporting two bobbins in axial alinement and having separate thread guides and tension devices for the thread drawn from the respective bobbins, substantially as described.

1,023,034. ENVELOP-SEAL. NANCY E. PETTITT, Junction, Tex. Filed Apr. 25, 1910. Serial No. 557,494. (Cl. 229—78.)



The combination in an envelop seal, of a pair of shells, a stud attached to one of said shells, a head formed upon said stud and connected thereto by a tapered neck, a disk secured to the other of said shells and provided with an opening for receiving said head, a pair of leaf springs secured to said disk and having their free ends in contact with each other, grooves formed in the terminals of said leaf springs and producing a circular aperture, said springs adapted to contact with the tapered neck of the head, and hold the shells rigidly with respect to each other.

1,023,035. GRAIN HARVESTER AND BINDER. ATHOL LINNWOOD POWELL, Alamo, Tenn. Filed Feb. 16, 1911. Serial No. 608,886. (Cl. 56—124.)



1. A machine of the class described, provided with swinging packing arms, a trip arm against which the grain is packed by said packing arms, a binding device having a needle, a knotter wheel, an intermittently rotating shaft carrying the knotter wheel, a mechanism connecting the said shaft with the said needle, a controlling device having a member connected with said trip arm and provided with a rigid projection and a roller arm, a cam on the knotter wheel shaft and engaged by said roller arm, a driven member loose on said knotter shaft, and a tension member for engagement with said driven member and normally engaged and withheld by said projection on said controlling device.

2. A machine of the class described comprising a main frame carrying a driven shaft, a supplemental frame slidably mounted through certain of the members of said main frame and provided with a crank shaft having connection with said driven shaft, said supplemental frame embodying upper horizontal bars and a lower horizontal binder table, manually controlled means engaging one of said frame bars to adjust the supplemental frame with respect to the main frame, packing arms pivoted at one end upon the other bar and having intermediate connection with the said crank shaft, a movable trip arm adjacent the binder table and against which the grain is packed by said packing arms, a binding device embodying a needle, a knotter wheel, an intermittently rotating shaft for actuating the knotter wheel and needle, and having connections with said crank shaft embodying an idle member, a clutch for engagement with said idle member, and connections between said trip member and said clutch and normally holding the latter against operation.

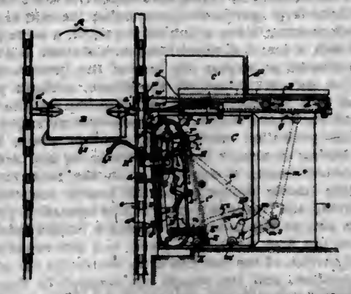
3. A machine of the class described, provided with swinging packing arms, a trip arm having a rock shaft and against which the grain is packed by the said packing arms, a binding device having a needle, a knotter wheel, an intermittently-rotating shaft carrying the knotter wheel, a mechanism connecting the said shaft with the said needle, and a controlling device having a gear wheel on the said rock shaft, a segmental gear wheel in mesh with the said gear wheel and provided with a fixed arm and a spring-pressed roller arm, a cam secured on the said knotter wheel shaft and engaged by the said spring-pressed roller arm, a driven ratchet wheel loose on the said knotter wheel shaft, a spring-pressed lever mounted on the said cam and normally engaged by the fixed arm of the said segmental gear wheel, and a pawl on the said lever for engagement with the said ratchet wheel when the lever is released.

4. A machine of the class described, provided with swinging packing arms, a trip arm having a rock shaft and against which the grain is packed by the said packing arms, a binding device having a needle, a knotter wheel, an intermittently-rotating shaft carrying the knotter wheel, a mechanism connecting the said shaft with the said needle and a controlling device having a gear wheel on the said rock shaft, a segmental gear wheel in mesh with the said gear wheel and provided with a fixed arm and a spring-pressed roller arm, a cam secured on the said knotter wheel shaft and engaged by the said spring-pressed roller arm, a driven ratchet wheel loose on the said knotter wheel shaft, a spring-pressed lever mounted on the said cam and normally engaged by the fixed arm of the said segmental gear wheel, a pawl on the said lever for engagement with the said ratchet wheel when said lever is released, and means for adjusting the tension of the spring on the said spring-pressed roller arm.

5. A machine of the class described comprising a main frame carrying a driven shaft, a supplemental frame slidably mounted through certain of the members of said main frame and provided with a crank shaft having connection with said driven shaft, said supplemental frame embodying upper horizontal bars, and a lower horizontal binder table provided with a cut-out portion, manually controlled means engaging one of said bars to adjust the supplemental frame with respect to the main frame, packing arms pivoted at one end upon the other bar and having intermediate connection with the said crank shaft, a movable trip arm adjacent the binder table and against which the grain is packed by the said packing arms, a binding device having a needle, a knotter wheel, an intermittently rotating shaft carrying the knotter wheel, a mechanism connecting said shaft with said needle, a controlling device having a member connected with said trip arm and provided with a rigid projection and a roller arm, a cam on the knotter wheel shaft and engaged by said roller arm, a driven member loose on said knotter shaft, and a tension member for engagement with said driven member and normally engaged and withheld by said projection on said controlling device.

[Claim 6 not printed in the Gazette.]

1,023,036. FEEDING MECHANISM FOR CONVEYERS. HOWELL D. PRATT, Philadelphia, Pa., assignor to Link-Belt Company, Chicago, Ill., a Corporation of Illinois. Filed July 7, 1911. Serial No. 637,310. (Cl. 193—8.)



1. The combination of a conveyer, carriers thereon, a frame, a reciprocating table mounted on the said frame and adapted to be moved into the path of the carrier, operating means for traversing the table, a shaft, a sprocket wheel thereon, a rocking frame also having a sprocket wheel, the chain passing around the two sprocket wheels, said shaft being connected to the means for operating the table, and means for shifting the rocking frame, so as to bring the chain in gear with the conveyer to rotate the shaft and to reciprocate the table.

2. The combination of a conveyer, carriers thereon, a frame, a reciprocating table mounted on the frame and adapted to carry bundles of paper or other material into the path of the carriers, a shaft, an arm on the shaft, mechanism connected to the arm and to the table, so that, on the rotation of the shaft, the table will be reciprocated, a sprocket wheel loose on the shaft, a hub fast on the shaft and adapted to be engaged by the sprocket wheel, a swinging frame, a sprocket wheel on the frame, a chain passing around both sprocket wheels, projections on the chain, with lugs on the conveyer arranged to engage the projections on the chain, and means for moving the frame carrying the sprocket wheel toward the conveyer, so that the lug on the conveyer will engage the said chain and rotate the shaft to cause the table to be reciprocated.

3. The combination of a conveyer, carriers thereon having slatted bottoms, a frame, a reciprocating table having a forked portion adapted to extend into the path of the carriers and so arranged as to allow the carriers to pass and remove bundles of papers or other material from the forked table, a shaft, an arm on the shaft, a hub secured to the shaft and having a projecting portion, a sprocket wheel on the shaft and having a lug engaging the projecting portion of the hub, a rocking frame, a sprocket wheel, the chain passing around both sprocket wheels and having one or more projections, a series of lugs on the conveyer, with means for moving the rocking frame so as to bring the projections of the chain into the path of the lugs on the conveyer in order to impart motion to the chain and to the sprocket wheels, which, in turn, rotate the shaft, causing the table to reciprocate.

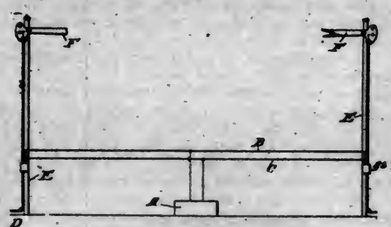
4. The combination of a conveyer, a series of carriers on the conveyer, a frame, a reciprocating table having a forked portion adapted to extend into the path of the carriers so that the carriers will transfer material from the table, a shaft, an arm on the shaft, a lever, a rod connecting the frame with the said lever, means connecting the said lever with the table, a hub secured to the shaft, a lever pivoted to the hub, a sprocket wheel loose on the shaft and having a lug adapted to contact with one arm of

the said lever, a rocking frame, a sprocket wheel on the frame, a chain passing around both sprocket wheels and having one or more projections, with lugs on the conveyer which come in contact with the said projections, an operating arm, a shaft upon which the arm is mounted, and a rock shaft connected to the said hand lever shaft and to the rocking frame so that, on the operation of the hand lever, the rocking frame will be thrown into position that its chain will be moved with the conveyer.

5. The combination of a conveyer, carriers thereon, a frame, a reciprocating table mounted thereon and adapted to be moved into the path of the carriers, a shaft, an arm on the shaft, a lever, a rod connecting the shaft with one arm of the lever, and means connecting the said arm with the reciprocating table, a hub on the shaft, a lever pivoted to the hub, a sprocket wheel loose on the shaft and having a lug adapted to engage one arm of the lever, a pivoted frame, a sprocket wheel on the frame, a chain passing around both sprocket wheels, a projection on the chain, a lug on one of the chains of the conveyer arranged to engage the projection on the said sprocket chain, a rock shaft having an arm, a link connecting the said arm with the pivoted frame, a second arm on the rock shaft, an operating handle connected to the loosely mounted arm for moving the frame into and out of operative position, a third arm on the rock shaft having a hooked latch, two pins on the first mentioned lever, one pin engaging the hooked portion of the latch to draw the frame out of operative position, and the second pin adapted to throw the latch out of engagement with the first mentioned pin.

[Claims 6 and 7 not printed in the Gazette.]

1,023,037. RECORDING SYSTEM FOR RAILWAY-SIGNALS. THOMAS J. PYLES, Columbia, S. C. Filed Apr. 7, 1911. Serial No. 619,618. (Cl. 234—43.)

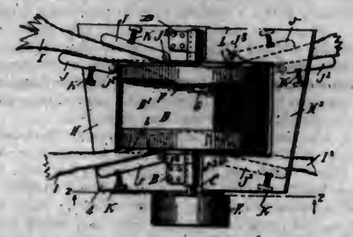


1. The combination with a signaling apparatus of a recording apparatus therefor comprising a pair of journaled reels, said reels adapted to have a strip wound thereon; a pivotally mounted arm having perforating means for said strip; an electro-magnet; an armature for the magnet; a member connecting the armature with one of said reels and adapted to actuate said reel; a member connecting said armature with the perforating arm adjacent the pivotal point thereof and adapted to withdraw said perforating means from the strip before said strip is advanced; and electrical connections between the signaling and recording apparatus, substantially as described.

2. The combination with a signaling apparatus, of a recording apparatus therefor comprising a casing; a pair of reels journaled in said casing, said reels adapted to have a strip wound thereon; a disk journaled in said casing; an arm mounted on said disk and having perforating means for said strip; an electro-magnet; a ratchet wheel secured to rotate with one of said reels; a bar having a pawl connected with the armature and adapted to actuate the winding reel; a bar connecting the armature and said disk adjacent the center thereof and adapted to withdraw said perforating means from the strip before said strip is advanced; and electrical connections between the signaling and recording apparatus, substantially as described.

3. The combination with a railway signaling apparatus, of a recording and announcing apparatus therefor comprising a casing; a pair of reels journaled in said casing; said reels adapted to have a strip wound thereon; a plate intermediate the reels adapted to actuate said strip; a pivotally mounted arm having a pointed end adapted to perforate the strip; an electro-magnet; an armature for the magnet connected with the perforating arm and adapted to actuate the same; a ratchet wheel secured to rotate with the winding reel; a bar having a pawl connected with the armature and adapted to actuate the winding reel; a bar connecting the armature and said perforating arm and adapted to withdraw the pointed end of said arm from the strip before said strip is advanced; a bell mounted on the casing; a pivotally mounted striker for said bell; and a finger on said armature adapted to engage with and actuate said striker, substantially as described.

1,023,038. GRAFTING-MACHINE. ALEXANDER ROBERTSON, Harrison Hot Springs, British Columbia, Canada. Filed Aug. 29, 1911. Serial No. 646,602. (Cl. 47—6.)



1. A grafting machine, comprising a vertically disposed revoluble cutter-head, substantially cylindrical in form and having flat ends, knives mounted in said cutter-head to project from its said ends, and a support, and means to guide a graft or scion angularly toward the said ends of the cutter-head.

2. A grafting machine, comprising a vertically revoluble cutter head provided at its end face with a slot, a beveling knife held on the said head and having its cutting edge projecting through the said slot beyond the end face of the cutter head, means for supporting a graft or scion and guiding it to the said cutting edge, and slitting knives held on the end of the cutter head and having their cutting edges at an angle to the face of the head.

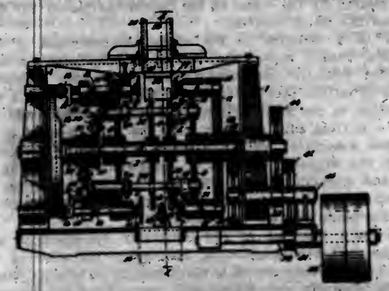
3. A grafting machine, comprising a revoluble cutter head, having each face provided with a slot leading to a beveled back on the cutter head, a beveling knife adjustably secured to each of the said backs and having its cutting edge projecting through the respective slot and beyond the respective end face of the cutter head, a fixed table for the graft or scion to rest on, and a guide pivoted on the said table and arranged at an angle to the cutting edge of the knife.

4. A grafting machine, comprising a revoluble cutter head having each face provided with a slot leading to a beveled back on the cutter head, a beveling knife adjustably secured to each of the said backs and having its cutting edge projecting through the respective slot and beyond the respective end face of the cutter head, a fixed table for the graft or scion to rest on, a guide pivoted on the said table and arranged at an angle to the cutting edge of the knife, and a spring pressing the free end of the guide inward toward the cutter head face.

1,023,039. DOUBLE-SEAMING MACHINE. FRANK RUDOLPHI, New York, N. Y., assignor to American Can Company, New York, N. Y., a Corporation of New Jersey. Filed Mar. 26, 1910. Serial No. 551,735. (Cl. 113—14.)

1. In a continuous, rotary, double seaming machine, the combination with a continuously rotating carrier, having a plurality of horisontally disposed can body receiving pockets rotating about a horisontal axis, of a plurality of pairs of axially rotatable can holder chucks on the carrier, and a plurality of sets of double seaming rollers

on the carrier, means for opening and closing the chucks as the carrier rotates, means for axially rotating the chucks as the carrier rotates and means for actuating the double seaming rollers as the carrier rotates, a can body feed chute and feeder and a can head feed chute and feeder, substantially as specified.



2. In a continuous, rotary double seaming machine, the combination with a continously rotating carrier having a plurality of horisontally disposed can body receiving pockets rotating about a horisontal axis, of a plurality of axially rotatable can holder chucks mounted on the carrier and a plurality of sets of double seaming rollers mounted on the carrier, substantially as specified.

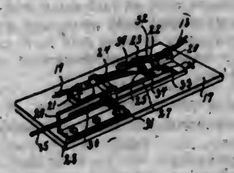
3. In a continuous, rotary double seaming machine, the combination with a continuously rotating carrier having a plurality of horisontally disposed can body receiving pockets rotating about a horisontal axis, of a plurality of axially rotatable can holder chucks mounted on the carrier, a plurality of sets of double seaming rollers mounted on the carrier, and stationary cams and connections for independently operating the double seaming rollers of each set as the carrier rotates, substantially as specified.

4. In a continuous, rotary double seaming machine, the combination with a continuously rotating carrier having a plurality of horisontally disposed can body receiving pockets rotating about a horisontal axis, of a plurality of axially rotatable can holder chucks mounted on the carrier and a plurality of sets of double seaming rollers mounted on the carrier, and a stationary cam and connections for reciprocating one of the can holder chucks of each pair as the carrier rotates, substantially as specified.

5. In a continuous, rotary double seaming machine, the combination with a continuously rotating carrier having a plurality of horisontally disposed can body receiving pockets rotating about a horisontal axis, of a plurality of axially rotatable can holder chucks mounted on the carrier, a plurality of sets of double seaming rollers mounted on the carrier, and a main gear, one of the can holding chucks of each pair having a spindle furnished with a gear meshing with said main gear for axially rotating the can holder chucks as the carrier revolves, substantially as specified.

[Claims 6 to 28 not printed in the Gazette.]

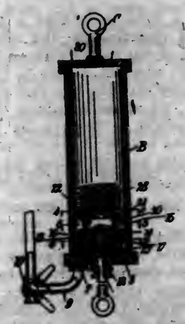
1,023,040. MINE SIGNALING DEVICE. JOHN RULE, Jackson, Cal. Filed July 28, 1911. Serial No. 640,981. (Cl. 177—10.)



1. In signaling means, a circuit closing device comprising a base, a relatively stationary contact point mounted thereon, a movable contact member coöperating with the contact point aforesaid, a bracket secured to said base having a slot therein, an operating member slidably mounted on the base having a laterally extending lug at one end thereof passing through the slot aforesaid to permit pivotal movement of said member, the other end having a beveled portion for moving the movable contact member into engagement with the stationary contact point when said operating member is moved in one direction, said beveled portion being also cut away at its under side to permit the operating member to return to operative position without engaging the movable contact point aforesaid, and means for actuating the operating member.

2. In signaling means, a circuit closing device comprising a base, a relatively stationary contact point thereon, a movable contact member normally spaced from said point and having a lateral pin projecting therefrom, a sliding operating member having a lug at one end beveled to engage beneath and raise said pin and contact member to operatively connect the contact member and contact point, said lug being beveled at its opposite extremity to engage over the pin of the contact member on the reverse movement of the operating member preventing connection of the contact member and point, and means for sliding the operating device connected thereto to permit slight pivotal movement of the latter on its reverse sliding movement.

1,023,041. COMPRESSED-AIR MACHINE. JACOB GILMORE SAURENMANN, Canadian, Tex., assignor of one-half to George Gerlach, Canadian, Tex. Filed June 30, 1911. Serial No. 636,241. (Cl. 121—19.)



1. In combination, a cylinder, a piston head reciprocating in said cylinder, a cage comprising a plate positioned above said head and a plate positioned below said head, and pins connecting said plates and passing through said head, said head movable on said pins, one of said plates having apertures extending therethrough, said head having apertures extending out of alinement with the apertures in said plate, said head and apertured plate being normally superposed to close the passage between all of said apertures.

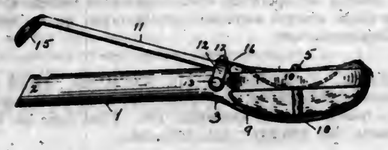
2. In combination, a cylinder, a piston head reciprocating in said cylinder, a cage comprising a plate positioned above said head and a plate positioned below said head, pins connecting said plates and passing through said head, said head movable on said pins, one of said plates having apertures extending therethrough, said head having apertures extending out of alinement with the apertures in said plate, said head and apertured plate being normally superposed to close the passage between all of said apertures, and a spring holding said apertured plate away from said piston head at one end of the stroke.

3. In combination, a cylinder, a piston head reciprocating in said cylinder, a cage comprising a plate positioned above said head and a plate positioned below said head, pins connecting said plates and passing through said head, said head movable on said pins, one of said plates having apertures extending therethrough, said head having apertures extending out of alinement with the apertures in

said plate, said head and apertured plate being normally superposed to close the passage between all of said apertures, a spring holding said apertured plate away from said piston head at one end of the stroke, and a spring acting at the opposite end of the cylinder to engage said apertured plate with said piston head.

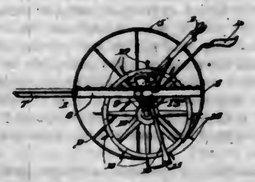
4. In combination with a cylinder, a piston head reciprocating in said cylinder, said head having apertures extending therethrough, an apertured plate positioned on one side of said head, a plate positioned on the opposite side of said head, pins connecting said plates and forming a guide for said head, compressed fluid means forcing said head and plates in one direction, means operable at the end of the stroke to disengage said apertured plate from said head, to permit the escape of the compressed fluid, means permitting the return of said head and plates to the initial position, and means at the initial position forcing said head and plates in contact, to close the apertures through said head.

1,023,042. SYRINGE. ALLEN E. SCOTT, San Francisco, Cal. Filed Dec. 27, 1909. Serial No. 535,049. (Cl. 128—25.)



In a syringe, a body comprising a cylindrical barrel having a channel therethrough and having an aperture in an end thereof, a cup united with an end of the barrel which contains the aperture, a bulb in the cup, said bulb having a neck fitted into the aperture of the barrel, the top edge of said cup extending above the center of the bulb, an arm pivotally secured to the barrel, a cap on said arm for closing an end of the barrel, and means connected with the arm and contacting the bulb for forcing the cap into contact with the end of the barrel.

1,023,043. SOIL-TILLING MACHINE. LOUIS E. SCOW, Portage La Prairie, Manitoba, Canada, assignor of one-fourth to George Charles Scow, one-fourth to Thomas Alfred Montgomery, and one-fourth to Thomas Edward Montgomery, Portage La Prairie, Canada. Filed Apr. 15, 1911. Serial No. 621,284. (Cl. 97—38.)



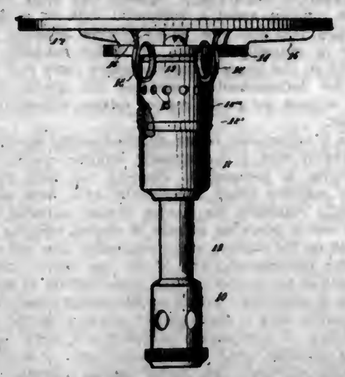
1. In a machine of the character described, a main frame, rotary supporting means for the same, a drum having a plurality of radially disposed blades extending longitudinally thereof, means for supporting said drum for rotation and for vertical adjustment with reference to the main frame, arms associated with the supporting means of the drum, a blade carried by the said arms in parallel relation to the axis of the drum, said blade being disposed approximately at right angles to the blades carried by the drum and means for adjusting the blade carrying arms independently of the adjustment of the drum and for retaining said arms in adjusted position.

2. In a machine of the character described, a main frame, rotary supporting means for the same, a drum having radially disposed blades, means for supporting said drum for rotation and for vertical adjustment with reference to the main frame, a ground engaging blade supported in parallel relation to the axis of the drum and associated with the latter for vertical adjustment, means for effecting vertical adjustment of the blade independently of the adjustment of the drum, and means for supporting said blade in a position where its upper face will be cleared by the edges of the blades carried by the drum when the latter rotates.

3. In a machine of the character described, a main frame, rotary supporting means for the same, a drum having radially extending blades, means for supporting said drum for rotation and for vertical adjustment with relation to the main frame, a ground engaging blade having a cutting edge coacting with the cutting edges of the blades associated with the drum, and means associated with the supporting means of the drum for adjusting the ground engaging blade independently of the vertical adjustment of the drum and for supporting said ground engaging blade tiltably and adjustably.

4. In a machine of the character described, a main frame, a rotary supporting means for the same, a vertically adjustable drum having radially extending blades, arms pivotally associated with the supporting means of the drum, means for tilting said arms independently of the adjustment of the drum, and an approximately horizontal blade supported by said arms in spaced relation to the drum and adapted to be swept by the radial blades of the drum.

1,023,044. CURLING-IRON HEATER. CHARLES P. SHINN, New York, N. Y. Filed Feb. 1, 1911. Serial No. 606,001. (Cl. 126—229.)

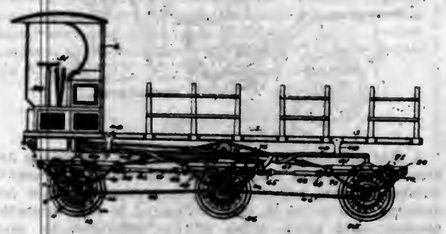


1. A curling iron support including an orificed attaching cap, a plate removably secured to the closed end of said cap, arms extending outwardly from said plate, a ring integral with the outer ends of said arms and arranged approximately in parallelism with and spaced from said plate, and a plurality of depending registering eyes on said arms positioned so that flame from the orifices in said cap may play thereupon.

2. A curling iron support including an attaching cap provided with a series of openings, a plate positioned on the closed end of said cap, a removable pin detachably securing together said plate and said cap, arms projecting outwardly from said plate, a baffle supporting ring carried on the outer ends of said arms, and arranged approximately parallel with said plate, and depending eyes on said arms projecting between said plate and said openings in the cap whereby flame from said openings may play upon said eyes.

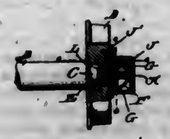
1,023,045. AUTOMOBILE-TRUCK. DAVID ELIANNA SHIPLEY, Joplin, Mo. Filed Oct. 14, 1908. Serial No. 457,731. (Cl. 21—90.)

1. In a truck of the character described, a main frame, end frames located beneath the main frame for vertical and swinging movement, an intermediate frame connected with said end frames for vertical movement, movable supporting means connecting the main frame with the end frames and with the intermediate frame, driven wheeled axles supported by the end frames and by the intermediate frame, a plurality of drums mounted upon said main frame intermediate the ends thereof and in alinement with said intermediate frame, flexible connections between said drums and said end frames, said connections being wound in relatively opposite directions on the drums, and means for operating the drums to swing said end frames in opposite directions independently of the vertical movement of the frames whereby to steer the truck.



2. In a truck of the character described, a main frame, end frames located beneath the main frame for vertical and swinging movement, an intermediate frame connected with the said end frames for vertical movement, brackets depending from said main frame, equalising bars mounted in said brackets for pivotal movement, said bars connecting the main frame with the end frames and intermediate frames and interconnecting said intermediate and end frames and permitting vertical movement of the said intermediate and end frames relative to the main frame, driven wheeled axles supported by the end frames and the intermediate frames, a plurality of drums mounted upon said main frame intermediate the ends thereof and in alinement with said intermediate frame, flexible connections between said drums and said end frames, said connections being wound in relatively opposite directions on the drums, and means for operating the drums to swing said end frames in opposite directions independently of the vertical movement of the end frames and intermediate frame whereby to steer the truck.

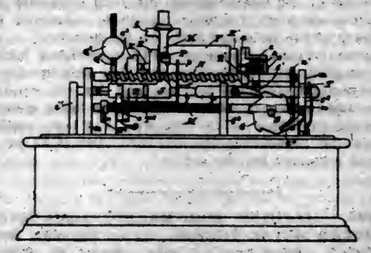
1,023,046. OIL CUP OR BOXING. EDMAN ARTHUR SMITH, Pineville, Ky. Filed Feb. 25, 1910. Serial No. 545,878. (Cl. 64—26.)



The combination with an axle having a wheel thereon, the end of said axle being recessed, the axle being also provided with peripheral recesses, a ball the ends of which are pivotally mounted in said recesses, said ball preventing the wheel from slipping from the axle, a cylindrical oil cup secured to the outer face of the wheel and inclosing said ball, and a filling tube carried centrally by the cup and extending in the recess in the end of the axle.

1,023,047. MULTIPLE-RECORD PHONOGRAPH. RICHARD B. SMITH, Sydney, New South Wales, Australia. Filed Feb. 8, 1906. Serial No. 300,027. (Cl. 181—4.)

1. In an apparatus of the class described, a record carrier, a traveler for a reproducer, a shaft geared to the record carrier, a slidable member in the path of the traveler, a pawl carried by the slide, and a ratchet mounted on the shaft and coöperating with said pawl.



2. In an apparatus of the class described, a record carrier, a traveler for a reproducer, a shaft geared to the record carrier, means actuated by the traveler for rotating the shaft with a step by step motion, and means controllable by the shaft for locking the record carrier in the intervals of the feed given thereto by the shaft.

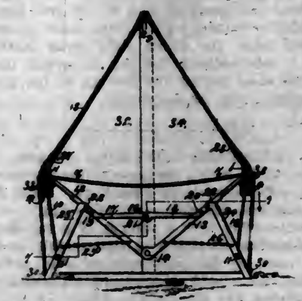
3. In an apparatus of the class described, feed and return screws, a slide rod, a reproducer traveler mounted to slide and turn on the rod and provided with arms, nuts carried by the arms for alternately engaging the screws, a collar on one end of the traveler and having limited turning movement independent of the traveler, said collar being provided with a weighted arm and with a finger, and a trip on each feed screw and adapted to engage the finger of the collar.

4. In an apparatus of the class described, feed and return screws, a slide rod, a reproducer traveler mounted to slide and turn on the rod and provided with arms, said traveler having a recess in one end, nuts carried by the arms for alternately engaging the screws, a collar loosely mounted on the traveler and having a stud working in the recess of the traveler, said collar being provided with a weighted arm and an arm carrying a finger, and a trip on each of the screws and adapted to engage the said finger.

5. In a machine of the class described, a record carrier provided with operating arms, means for operating the carrier, and means controllable by said arms for arresting the operating means.

[Claims 6 to 14 not printed in the Gazette.]

1,023,048. COVERED FOLDING COT. ROBERT SNYDER, Los Angeles, Cal. Filed July 12, 1911. Serial No. 638,129. (Cl. 5—5.)

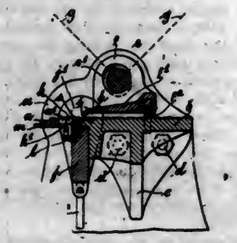


1. A cot for the purpose set forth comprising a fabric bottom constructed in sections, side rails comprising hinged sections and supporting each of the sections of the bottom, the sections of the said rails being connected together through the medium of rule joints, the said rule joints varying in size to permit the rail sections being folded compactly one upon the other, supporting members pivotally connected together and secured to the rail sections, a locking brace pivotally connected with each

of the supporting members, said locking brace comprising a pair of members connected together through the medium of a rule joint, leg members each pivotally connected with one of the supports, the brace members connected with the hinges of the rails and with the leg members.

2. A cot for the purpose set forth, comprising foldable and collapsible bottom sections and side sections for the bottom sections, foldable leg members for the cot, supporting and locking members for the legs, brace members connecting the sides of the cot with the legs, resilient elements for preventing the outward movement of the legs, and a canopy for the cot.

1,023,049. MACHINE FOR MAKING LOCK-JOINED ANGULAR METAL TUBING. JACOB STANDER, Brooklyn, N. Y. Filed Apr. 12, 1911. Serial No. 620,559. (Cl. 153—16.)



1. In a metal tube-forming machine, the combination of a flat platen, a clamp plate movable toward the platen and provided at one edge portion with a projecting clamping rib for binding engagement with the metal blank, a die plate having a hinged support at the front edge of the platen, said die plate presenting a flat top surface, normally flush with the platen of the machine, and having at its upper outer face a longitudinal groove that receives one of the first bent edges when the third or return bend is being made in the blank adjacent such edge.

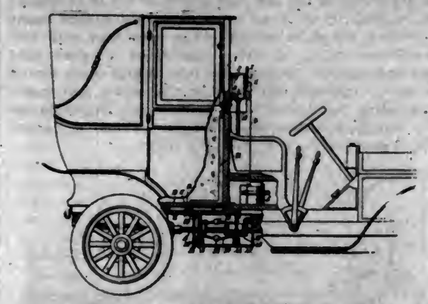
2. In a metal tube forming machine, the combination of a flat platen, a clamp plate movable toward the platen and provided at one edge portion with a downwardly projecting clamping rib, in the rear of which rib the said clamping plate has its underside cut away to provide a clearance space to receive the previously bent parts of the blank, a die plate having a hinged support at the front edge of the platen, said die plate presenting a flat top surface, normally flush with the platen of the machine and having in its upper outer face a longitudinal angular groove that receives one of the first bent edges when the third or return bend is being made in the blank adjacent such edge, the clamp plate being further provided with a substantially flat top to permit the blank to overlie the same during the making of the third and next succeeding bends, as set forth.

1,023,050. TAXIMETER CONTROL. JOSEPH D. SULSONA, New York, N. Y., assignor to Taximeter Control Company, a Corporation of New York. Filed Jan. 10, 1910. Serial No. 537,208. (Cl. 177—311.)

1. The combination with a vehicle, of a registering device on said vehicle, an alarm on said vehicle, and means brought in play by the movement of said vehicle for sounding said alarm, said means being controlled by said registering device.

2. The combination with a vehicle, of a registering device on said vehicle, a power shaft for driving said vehicle, an alarm on said vehicle, and means brought in play by the rotation of said shaft, for actuating said alarm, said means being controlled by said registering device.

3. The combination with a vehicle, of a registering device on said vehicle, an alarm on said vehicle, a driving member for driving said vehicle, means brought in play by the active movement of said member, for actuating said alarm, said means being controlled by the entrance of a passenger in said vehicle and by said registering device.

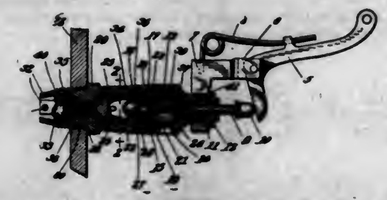


4. The combination with a vehicle, of a registering device on said vehicle, an alarm on said vehicle, a rotatable member on said vehicle, and a centrifugal governor for bringing said alarm in play, connected to said rotatable member, said alarm being further controlled by said registering device.

5. The combination with a vehicle, of a registering device on said vehicle, an alarm on said vehicle, an electrical circuit connected to said alarm and having a plurality of breaks therein, said registering device being adapted to control one of said breaks, another of said breaks being controlled by the entrance of a passenger in said vehicle, a rotatable member on said vehicle, and means on said rotatable member for controlling another of said breaks, brought in play by the rotation of said member.

[Claims 6 to 12 not printed in the Gazette.]

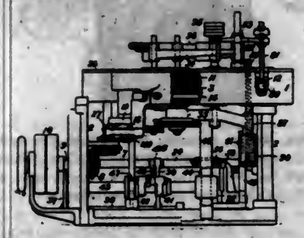
1,023,051. GAGE-COCK. ROSS B. SWINNY, Belpre, Ohio, assignor of one-half to Dora P. Shaw, Belpre, Ohio. Filed Nov. 1, 1911. Serial No. 658,040. (Cl. 136—3.)



1. In a gage cock, a casing comprising an inner and an outer section, the outer section having a nipple threaded into the inner section, a valve pocket secured to the end of the said nipple and having ports therein, a ball valve disposed within the said pocket and arranged to seat within the nipple, a push rod slidable through the outer section and having a valve head on its inner end seatable within the nipple, the said push rod in being forced inwardly unseating the said valve head and the ball valve, and a supplemental valve within the inner section, the said valve pocket having a finger projecting from the inner end thereof to normally unseat the said supplemental valve.

2. In a gage cock, a casing comprising an inner and an outer section, the outer section having a nipple threaded into the inner section, the bore of the nipple being counterbored at its inner end to form a shoulder within the nipple, a cup-shaped member fitting the bore of the nipple with its open end disposed inwardly and having a flange at its open end seating against the said shoulder and having an opening in the other end thereof, a valve pocket having its open end screw threaded into the counter-bore of the said nipple against the said cup shaped member and having ports in its other end, a ball valve arranged within the said pocket and seatable against the said cup-shaped member, a push rod slidable through the outer end of the outer section of the casing and passing through the opening in the cup shaped member and having a valve head on its inner end seatable against the said cup-shaped member, a supplemental valve within the inner section and seatable therein, and a finger projecting from the said pocket to normally unseat the said supplemental valve.

1,023,052. APPARATUS FOR THE MANUFACTURE OF PAPER VESSELS. ELMER ZEBLEY TAYLOR, London, England, assignor, by mesne assignments, to American Mono Service Company, Atlantic City, N. J., a Corporation of New Jersey. Filed Dec. 27, 1909. Serial No. 535,045. (Cl. 93—39.)



1. A machine for the making of paper receptacles comprising in combination, a plurality of structures having pockets for receiving the receptacles, means for rotating said pocket structures about their axes, means for feeding flanged bottom pieces into position relatively to said pockets, a crimping head for inwardly turning the lower edge of the receptacle to inclose the flange of the bottom piece, a head for rolling out such lower edge to the desired form, a second crimping head for inwardly turning the upper edge of the receptacle, a second rolling head for rolling out such upper edge to the desired form, and means for ejecting the completed receptacles from the pockets, substantially as and for the purpose specified.

2. A machine for making paper receptacles comprising in combination, a plurality of pocket structures having pockets and gear teeth, a loosely rotating ring provided with teeth meshing with the teeth of said pocket structures to rotate the same, a plunger for feeding flanged bottom pieces into position relatively to said pockets, a non-rotary crimping head for turning up the lower edge of the receptacle to inclose the flange of the bottom piece, a rotary rolling head for rolling out such lower edge to the desired form, a second non-rotary crimping head for turning the upper edge of the receptacle inwardly, a rotary rolling head for rolling out such upper edge to the desired form, and a reciprocating plunger for ejecting the completed receptacles out of said pockets.

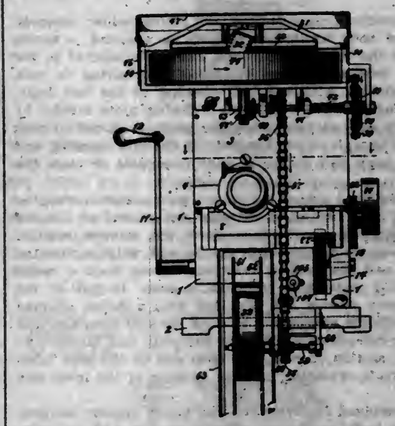
3. A machine for making paper receptacles comprising in combination, a plurality of pocket structures having pockets and gear teeth, a turret carrying said pocket structures, means imparting a step by step movement to such turret, a loosely rotating ring having teeth meshing with the teeth of said pocket structures, a reciprocating plunger for feeding flanged bottom pieces into position relatively to said pockets, a non-rotary crimping head for turning inward the lower edge of the receptacle to inclose the flange of the bottom piece, a rotary rolling head for rolling out such lower edge to the desired form, a non-rotating crimping head for turning in the upper edge of the receptacle, a rotary head for rolling out such upper edge to the desired form, and a plunger for ejecting the completed receptacles from said pockets.

4. A machine for making paper receptacles comprising in combination, a plurality of pocket structures having pockets for receiving the receptacles, means for feeding flanged bottom pieces into position relatively to said pockets, a crimping head for turning in the lower edge of the receptacle to inclose the flange of the bottom piece, a head for rolling out such lower edge to the desired form, a crimping head for turning in the upper edge of the receptacle, a head for rolling out such upper edge to the desired form, means for ejecting the completed receptacles from the pockets, means for intermittently rotating said pocket structures, spiders or frames for advancing said heads to operative positions, and means for raising and lowering such frames.

5. A machine for making paper receptacles comprising in combination, a plurality of pocket structures having pockets for receiving the receptacles, means for rotating said pocket structures, means for feeding flanged bottom pieces into position relatively to said pockets, a crimping head for turning in the lower edge of the receptacle to inclose the flange of the bottom piece, a head for rolling out such lower edge to the desired form, a crimping head for turning in the upper edge of the receptacle, a head for rolling out such upper edge to the desired form, means for ejecting the completed receptacles from the pockets, means for intermittently rotating said pocket structures, spiders or frames for advancing said heads to operative positions, and means being provided which will only permit the mechanism for lowering and raising the spider frames to operate when the pockets are in their proper position substantially as specified.

[Claims 6 to 22 not printed in the Gazette.]

1,023,053. MOVING-PICTURE MACHINE. CHARLES R. UEBELMESSER, New York, N. Y., assignor to American Moving Picture Machine Company, New York, N. Y., a Corporation of New York. Filed Apr. 28, 1908. Serial No. 429,790. (Cl. 88—18.)



1. A device of the class described comprising a ribbon roll carrier arranged to permit withdrawal of ribbon from the interior of the roll, a cross frame hinged to the carrier and extending across the ribbon roll, a horizontal ribbon guide on said frame, two edge guides depending from said frame, and means for drawing the ribbon out of the carrier over and between said guides, substantially as described.

2. A device of the class described comprising a fixed main framework having a fire proof chamber, a roll-inclosing box mounted upon said frame and communicating with said chamber by an opening and metal rollers set close together and substantially filling said opening, substantially as described.

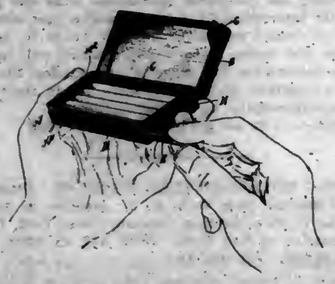
3. A device of the class described comprising a main frame having a fire proof chamber at each of its two extremities, a separate roll-inclosing box attached at each extremity of the frame and communicating with said chambers respectively by narrow openings and metal rollers set close together and substantially filling each opening, substantially as described.

4. A device of the class described comprising a frame having a fire proof chamber at one end, a roll-inclosing box mounted on said frame and communicating with said chamber through a narrow opening and a pivoted door inclosing said chamber on one side, substantially as described.

5. A device of the class described comprising a ribbon moving sprocket-wheel, a pair of grooved rollers adapted to hold a picture ribbon in engagement therewith, eccentrically mounted bearings for said rollers, and means for turning said bearings whereby said rollers may be adjusted with respect to said sprocket wheel.

[Claims 6 to 17 not printed in the Gazette.]

1,023,054. COMBINED CIGARETTE-BOX AND MATCH-HOLDER. ARTHUR Q. WALSH, New York, N. Y. Filed Jan. 9, 1912. Serial No. 670,167. (Cl. 206—48.)



1. A combined cigarette box and match holder, comprising a box body having an opening in one end, a match holder in the form of a tubular receptacle secured in the said box body at the bottom thereof and having an open end registering with the said opening in the box body, a cover for said box body, and a closing plate carried by said cover and adapted when the cover is closed to pass between the wall of the box body at the said opening, and the said open end of the tubular receptacle to close the latter.

2. A combined cigarette box and match holder, comprising a box body having an exterior section and an interior section extending a distance above the exterior section, the sections being provided at one end with registering openings and the sections forming between them a recess at the said registering openings, a cover hinged on the said exterior section and provided with a flange adapted to pass into the said recess to close the said openings, and a tubular receptacle in the said box body and fastened to the inner section thereof, one open end of the said tubular receptacle extending into the opening of the inner section.

3. A combined cigarette box and match holder, comprising a box body having an exterior section and an interior section, the said sections being provided with registering openings at one end of the box body, a match holder in the form of a tubular receptacle secured to the inside of the box body at the bottom and extending lengthwise of the box at one side thereof, the said receptacle having an open end arranged at the opening in the inner section of said box body, a cover for said box body, and a closing plate for the said open end of the match receptacle, the said closing plate being connected with the cover at the inside thereof and adapted when the cover is closed to extend between the sections of the box body at said registering openings.

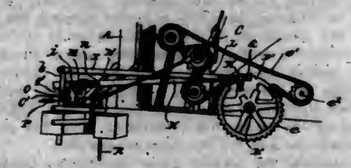
1,023,055. TREE-HEATER. LUTHER M. WILSON, Houston, Tex. Filed Oct. 31, 1911. Serial No. 657,771. (Cl. 126—59.5.)

A device of the character described including a cylindrical shaped body composed of wire mesh fabric, a fuel receptacle in the bottom of said body, a burner carried by said receptacle, a cylindrical shaped flue carried by the receptacle and surrounding the burner and having its upper end open, a circular shaped deflector secured above said flue and having its rim downwardly curved, a bail for said device extending across the top thereof and down



opposite sides, means securing the bail to the cylindrical body, a hook carried by each free end of said bail and a sleeve carried by the top of the fuel receptacle on each side in which the hooks of the bail engage.

1,023,056. TRAMPER-PRESS. RALPH E. WILSON, Dallas, Tex., assignor to Continental Gin Company, Birmingham, Ala., a Corporation of Delaware. Filed June 23, 1911. Serial No. 634,911. (Cl. 100—25.)



1. A controlling mechanism for tramper presses embodying a single power driven rotary disk, controlling means for a platen actuating mechanism and mechanism for both coupling the said controlling means and disk together and for uncoupling the same operated by the pressure of the accumulated material fed to the press.

2. A controlling mechanism for tramper presses embodying a single power driven rotary disk, a control lever for a platen actuating mechanism, a single control lever link, and means actuated by the accumulated material fed to the press for both coupling and uncoupling said disk and link.

3. A controlling mechanism for tramper presses embodying a power driven disk, a control lever for a platen actuating mechanism, a control lever link, a projection on the link adapted to engage with the disk for moving the lever in both directions, and means actuated by the accumulated material fed to the press for controlling the engagement of the projection and disk.

4. A controlling mechanism for tramper presses embodying a power driven rotary disk having recesses therein, a casing for the disk, a control lever for a platen actuating mechanism, a link associated with said lever, and having a projection thereon adapted to enter the recesses in the disk and be held therein by the casing, and a latch actuated by the accumulated material fed to the press and upon which latch the projection normally rests out of engagement with the disk.

5. A controlling mechanism for tramper presses embodying a power driven rotary disk having peripheral recesses therein, a casing for the disk having an opening therein, a control lever link for a platen actuating mechanism, having a projection adapted to engage in the recesses in the disk, a latch controlled by the accumulated material fed to the press and having a face for normally supporting the projection in the opening in the casing out of engagement with the notches in the disk.

[Claims 6 to 9 not printed in the Gazette.]

1,023,057. GRADING-MACHINE. CARL O. WOLD, Minneapolis, Minn. Filed May 22, 1911. Serial No. 628,752. (Cl. 37—7.)



1. In a grading machine, a frame, a scraper blade carried thereby, brackets projecting rearwardly from said frame, crank axles journaled in said brackets and having carrying wheels, levers pivoted on said brackets, rigid links pivotally connected at their upper ends to said levers and at their lower ends to said crank axles, the forward movement of said levers moving said links substantially into alinement with said levers and increasing the leverage thereof on said crank axles, and the backward movement of said levers moving said links away from the pivots of said levers and decreasing the leverage on said crank axles.

2. In a grading machine, a draw-bar, a frame mounted thereon and comprising end bars and cross bars between them, one of said cross bars having a series of holes therein, a plate also having a series of holes beneath said cross bar, a pin fitting within the holes in said cross bar and plate, and a corresponding hole in said draw-bar, and a scraper blade carried by said frame.

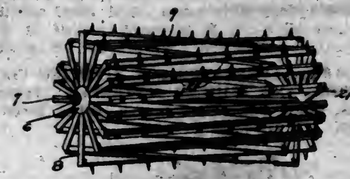
3. In a grading machine, a frame, a scraper blade carried thereby, rearwardly projecting brackets, crank axles journaled in the lower portions of said brackets, levers pivoted in the upper portions of said brackets near the rear ends thereof, said crank axles extending rearwardly to a point beneath said levers, carrying wheels mounted on said crank axles, and links pivotally connecting the rear portions of said crank axles with said levers.

4. The combination, with a frame, of a scraper blade, rearwardly projecting brackets, crank axles journaled in the lower middle portions of said brackets, carrying wheels mounted on the rear ends of said axles, levers pivoted on the upper rear portions of said brackets and having quadrants and locking latches therefor, links having their lower ends journaled on the rear ends of said axles and their upper ends adjustably attached to said levers above the pivots of said levers on said brackets.

5. In a grading machine, the combination, with a frame and draw-bar and a scraper blade and rearwardly projecting brackets, of crank axles having carrying wheels, levers pivoted on said brackets, rigid links connecting said levers with said axles and forming a toggle mechanism, the power of said levers increasing and the movement of said links decreasing with the movement of said levers in one direction, and the movement of said links increasing and the power of said levers decreasing with the movement of said levers in the opposite direction.

1,023,058. COMBINED HARROW AND ROLLER. WALTER E. YOUNGER, Port Arthur, Tex. Filed Oct. 27, 1910. Serial No. 589,310. (Cl. 55—24.)

1. In a harrow, a shaft, spokes projecting radially from said shaft, diagonally disposed bars secured to said spokes, said bars having slots formed in the rear edges thereof, pins having heads slidably engaged in said slots, said pins projecting outwardly from the bars, and U-shaped plates fitting over the rear portions of the bars, said plates having their forward edges bearing against the pins to prevent rearward movement of the pins in the slots, and bolts for removably securing the plates in position on the bars.



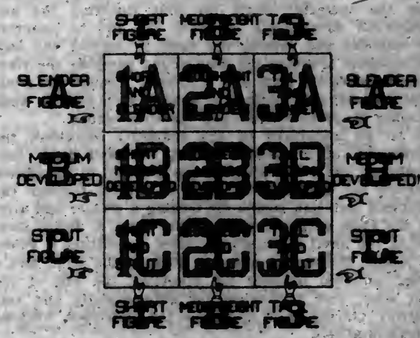
2. In a machine of the character described the combination with suitable wheels for contact with the ground to be operated upon, of bars forming a part of said wheels and having slots formed therein along their length, pins removably located within said slots, plates secured to the bars and provided with overlapping portions for contact with the pins, and bolts passed through said plates and through the bars for securing the plates in position.

1,023,059. BUILDING-MATERIAL CONSTRUCTION. ABRAHAM M. ZIMMERS, Baltimore, Md. Filed Mar. 7, 1911. Serial No. 612,870. (Cl. 189—40.)



A column for building construction, comprising a core of cruciform cross section composed of a single sheet of metal bent to form two radial wings of a single thickness, two radial wings of double thickness, fillers in the angular spaces between the adjacent wings, bolts passing through the fillers and core, said fillers being provided with recesses on one of their edges for the reception of the bolt heads, and a metallic tube inclosing said core and fillers.

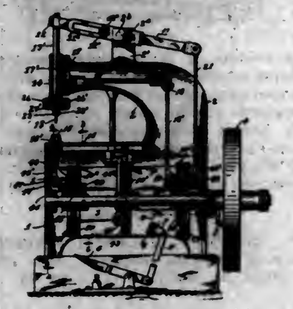
1,023,060. CORSET-FITTING CHART. SIGISMUND L. ADLER, New York, N. Y. Filed Mar. 10, 1910. Serial No. 548,415. (Cl. 11—19.)



The herein described corset fitting chart comprising a surface having a table of vertically and horizontally arranged figures printed thereon, each of the said figures comprising two characters, one of which refers to the height of the figure to be fitted, while the opposite character refers to the development of the figure to be fitted, the

first mentioned height indicating characters progressing horisontally and remaining the same in the vertical columns, while the second mentioned development indicating characters progress vertically and remain the same in all horisontal columns, and keys to the different characters printed upon the surface at the margin of the table opposite to the ends of those columns in which the characters remain unchanged.

1,023,061. APPARATUS FOR RIVETING CLOTH, LEATHER, AND SIMILAR MATERIAL. JAMES E. ARCHER, Chico, Cal. Filed June 6, 1910. Serial No. 565,212. (Cl. 218—2.)



1. A machine of the class described having in combination an awl for puncturing the material to be riveted, relatively movable clamping jaws for receiving and holding a rivet and associated means for placing the stem thereof through the punctured material, a reciprocating slide adapted to feed rivet washers, a device for forcing a washer onto the stem of the rivet, a hammer for heading the rivet's stem, and automatically actuated mechanism for successively throwing into action the said mentioned instrumentalities.

2. In an apparatus of the character described, the combination of a suitable frame, an operating shaft extended therethrough, a drive pulley loosely mounted thereon, means for placing the same into locked engagement with the operating shaft, an anvil block within the frame, a slide head, a plunger-rod carrying a puncturing awl and a plunger rod carrying a rivet receiving clamp vertically movable within the slide head, devices actuated from the operating shaft for shifting the slide-head for successively alining the puncturing awl and the rivet clamp with the anvil block, and mechanism actuated from the operating shaft for first throwing the awl plunger-rod downwardly to cause the awl to puncture the material and raising the same to extract the awl, and secondly lowering the plunger-rod carrying the rivet clamp to place the stem of a held rivet through the punctured material and holding the same in such position until a washer is applied thereto and the stem headed.

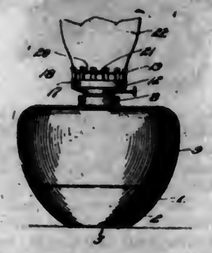
3. In an apparatus of the character described, the combination of a suitable frame, an anvil block held therein, an awl for puncturing the material to be riveted, a device for inserting the stem of a rivet through the punctured material, means for feeding a washer and alining the same with the stem of the rivet, a device movable in the anvil block which latter constitutes a guide, for placing the washer onto the stem of the rivet, and a spring actuated hammer for upsetting the end of the rivet stem, and mechanism for automatically and successively placing into operation the described working instrumentalities.

4. In an apparatus of the character described, the combination of a rivet runway, a rivet clamp for removing rivets from said runway, said clamp including oppositely disposed spring pressed jaws, devices controlling the opening and permitting the closing of said jaws, a puncturing awl, a slide head common to the awl and clamp for operatively positioning the same in turn, and means actuating said clamp to place the rivet carried thereby in the material to be riveted.

5. In an apparatus of the character described, the combination of means for puncturing the cloth to be riveted and inserting a rivet therethrough, of a guide, and devices for forcing a washer through said guide and onto the stem of the inserted rivet, and mechanism for upsetting the projecting end of the rivet, the said guide constituting an anvil block, substantially as and for the purpose described.

[Claims 6 to 24 not printed in the Gazette.]

1,023,062. SELF-RIGHTING LAMP. LOWELL ARTHUR BARTLETT, Danville, Vt. Filed Oct. 31, 1911. Serial No. 657,796. (Cl. 67—81.)



1. In a lamp, a tank, a neck projecting vertically therefrom, a shell-like body secured upon the neck and having its edges engaging the tank and its sides forming a continuation of the sides of the tank, and a burner removably secured to the body.

2. In a lamp, a tank, a neck projecting vertically therefrom, an inverted cup shape body removably secured to the neck and having its edges contacting with the tank, said body being separated from the tank by an air space, and a burner removably secured to the body.

1,023,063. WINDOW-SCREEN. LOWELL C. BASSFORD, La Grange, Ill. Filed Jan. 3, 1911. Serial No. 600,607. (Cl. 98—44.)



1. A window screen, comprising a framework formed of two registering sections, adapted to rest against the sides of the window casing, means for holding said sections in close engagement with one another, a metallic mesh surface fixedly secured to one of said sections, and a fiber mesh surface superimposed over the metallic mesh surface and held in position by the locking engagement of the two sections, and means for maintaining the fiber mesh surface in moist condition, substantially as described.

2. A window screen, comprising a surface of absorbent porous material, a reservoir for liquid provided with an elongated slit, the material being entered into said slit and clenched between the edges of the metal along said slit, and a framework in which said reservoir is mounted, substantially as described.

3. A window screen, comprising a framework formed of two registering sections, adapted to rest against the sides of the window casing, means for holding said sections in locking engagement with one another, a metallic mesh surface fixedly secured to one of said sections, the engaging surfaces of the upper and lower rails of said framework being grooved, a tube for containing liquid seated in each of said grooved surfaces, and a section of absorbent porous material secured to said tubes and maintained in moist condition by the liquid within said tubes, substantially as described.

4. A window screen, comprising a framework formed of two registering sections, adapted to rest against the sides of the window casing, means for holding said sections in locking engagement with one another, a metallic mesh surface fixedly secured to one of said sections, the engaging surfaces of the upper and lower rails of said framework being grooved, a tube for containing liquid seated within said grooves, said tube having an elongated slit, a section of absorbent porous material entered into said slit and clenched between the edges of the metal along said slit, substantially as described.

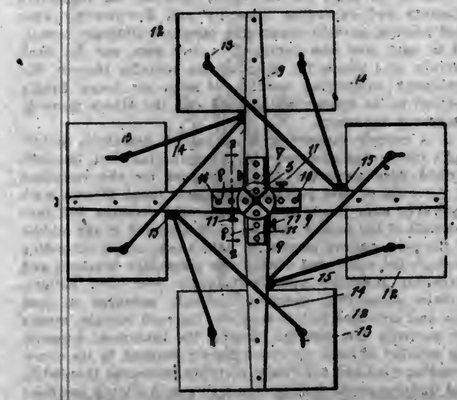
1,023,064. BARRETTE. WILLIAM S. BECHTOLD, New York, N. Y. Filed Nov. 6, 1911. Serial No. 658,685. (Cl. 132—22.)



1. The combination with a barrette including a back or body portion and a tongue or pin pivotally secured thereto, of a hook or keeper secured to said back or body portion and provided with a recess to retain said tongue, and resilient means integral with said keeper, extending rearwardly therefrom and in the plane of said keeper to reinforce the same.

2. The combination with a barrette including a back or body portion and a tongue or pin pivotally secured thereto, of a hook or keeper for said tongue secured to said back or body portion and comprising a plate provided at the forward portion with a suitable recess and at the rear portion with a narrow extension in the plane of said keeper, said extension resting upon the body portion to reinforce the said keeper.

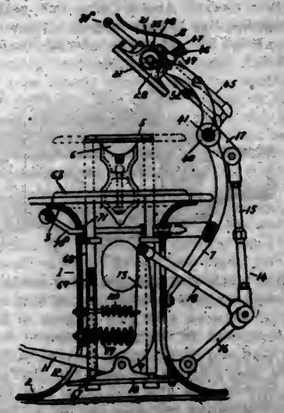
1,023,065. AIR-PROPELLER. JESSY H. BUCHANAN, Midway, Tex., assignor of one-fourth to Challey H. Buchanan, Midway, Tex. Filed Sept. 23, 1910. Serial No. 583,518. (Cl. 244—26.)



1. In an air propeller, a collar having a series of radiating arms, a series of blade supporting arms mounted on the arms of the collar, rectangular blades mounted on the ends of the second arms and braces connecting the blade of each arm with the adjoining arm.

2. In an air propeller, a collar having a series of radiating arms, a series of blade supporting arms adjustably secured to the collar arms, rectangular blades mounted on the ends of the blade supporting arms, eyes secured near the ends of the blades, eyes secured on the blade supporting arms and braces extending diagonally from the blade of each arm to an eye of the adjoining arm.

1,023,066. PRESSING-MACHINE. HENRY H. BURNS, Battle Creek, Mich., assignor, by mesne assignments, to T. D. Palmer, Syracuse, N. Y. Filed Feb. 18, 1909. Serial No. 478,673. (Cl. 68—9.)



1. In a garment pressing machine, the combination with a hollow presser head having a fluid-receiving chamber extending longitudinally thereof, of a casing forming a fluid-distributing member within said head, said fluid-receiving chamber having a plurality of vent openings positioned longitudinally thereof above the distributing member, said casing being separated from the side walls of said head by a relatively narrow space whereby the fluid is directed in opposite directions, an apertured pressing surface in the direct path of the fluid, and a gas burner entirely inclosed within said casing.

2. In a garment pressing machine, the combination with a hollow presser head having a fluid-receiving chamber extending longitudinally thereof, of a fluid-distributing chamber below said receiving-chamber, said last-mentioned chamber having a plurality of vent openings positioned longitudinally thereof communicating with the distributing chamber, a gas burner entirely inclosed within said head, and a drum also within said head inclosing said gas burner, and constituting a deflector for the fluid delivered into the distributing chamber.

3. In a garment pressing machine, the combination of a hollow head having a substantially flat pressing surface and a curevd top connecting at its sides with the sides of said pressing surface, the said top having a fluid inlet, a cylindrical casing within the head, the curved surface of which latter constituting with the inner surface of the top a distributing chamber, a partition within the head above said drum, the partition extending from one end to end of the head and having apertures therein, and means for introducing fluid into said head above the partition.

4. In a garment pressing machine, the combination of a hollow head having a substantially flat pressing surface and a curved top connecting at its sides with the sides of said pressing surface, the said top having a fluid inlet, a cylindrical casing within the head, the curved surface of which latter constituting with the inner surface the top a distributing chamber, a partition within the head above said drum, the partition extending from end to end of the head and having apertures therein, means for introducing fluid into said head above the partition, and a burner positioned within the drum and extending longitudinally of the latter.

5. In a pressing machine, a presser head having a substantially co-extensive longitudinally extending partition

with a series of apertures, an inlet in the head above the partition, a superheating chamber below the partition extending substantially from end to end of the head and separated from the upper wall of the head by a relatively narrow space, said superheating chamber constituting a deflector substantially as and for the purpose specified.

[Claims 6 and 7 not printed in the Gazette.]

1,023,067. SELF-LOCKING DRILL-CHUCK. WILLIAM HOUGHTON CASTER, Angels Camp, Cal., assignor to D. D. Demarest Co., San Francisco, Cal., a Corporation of California. Filed Dec. 19, 1910. Serial No. 598,024. (Cl. 125—3.)



1. A drill chuck comprising a head having a socket, a pair of complementary interchangeable drill clutching gibs having tapered backs, said gibs adapted to have a limited endwise movement in the socket, tapered wedges mounted in the head and engaging the tapered backs of the gibs, and a ring closely fitting the head and binding the wedges in place between the gibs and ring, said head and ring having corresponding engaging tapered surfaces.

2. A drill chuck comprising a suitable body member transversely chambered with an opening having its greater length parallel to the axis of the body and having a mouth in the end diametrically across the same communicating with said chamber, a pair of complementary interchangeable drill clutching gibs with tapered backs, means effective upon the gibs to close them on a drill shank, said means comprising wedges acting on the tapered backs of said gibs and a locking ring closely fitting the head and binding the wedges in place between itself and the gibs.

3. A drill chuck comprising a head provided with a diametrical slot extending therefrom and having a socket intersecting the slot, a pair of coöperative interchangeable drill-embracing gibs in the socket, wedge members engaging said gibs, means for locking the gibs against longitudinal movement relatively, said means comprising locking plates between the sides of the gibs and the side walls of the slot, said gibs having recesses in their sides to receive said plates, and a locking ring engaging the wedges and binding the gibs upon the drill to be clutched.

1,023,068. ROAD-SCRAPER. ERLE W. CHINN and JOSEPH T. HARRIS, Columbia, Mo. Filed Sept. 16, 1909. Serial No. 518,094. (Cl. 37—5.)



1. A road scraper comprising a pair of parallel bars having a scraping blade extending at an acute angle therefrom, blocks secured to the rear ends of said bars, clips secured in said blocks, provided with rack portions, uprights carried by said bars, an axle mounted in said uprights carrying a wheel, pinions fixed on said axle meshing with the rack portions of the clips and means for operating said axle.

2. A road scraper comprising a pair of bars, a scraping blade connected to said bars and extending therefrom, at an acute angle, clips carried by said bars and having rack portions, an axle, pinions mounted on the axle and adapted to engage said rack portions, and a wheel mounted upon said axle.

3. A road scraper comprising a pair of parallel bars having a scraping blade extending at an acute angle therefrom clips carried by said bars provided with rack portions, uprights carried by said bars, an axle mounted in said uprights carrying a wheel, pinions fixed on said axle meshing with the rack portions of the clips and means for revolving said axle.

4. A road scraper comprising a frame carrying a scraping blade, uprights carried by said frame, an axle loosely mounted in said uprights carrying a wheel, pinions fixed on said axle, clips provided with rack portions meshing with said pinions and a pawl and ratchet mechanism for turning said axle.

5. A road scraper comprising a pair of parallel bars having a scraping blade extending therefrom at an acute angle, a cross bar connecting said bars and blade, braces connected to the said cross bar and blade, chains carried by said braces, a bar connected to said chains, a double-tree adjustably mounted on said bar and a wheel for supporting the rear ends of said bars together with means for adjusting said bars with respect to the axle of the wheel.

[Claims 6 and 7 not printed in the Gazette.]

1,023,069. CURTAIN-SUPPORT. JAMES T. COLE, Baskerville, Va. Filed Feb. 7, 1912. Serial No. 676,015. (Cl. 156—20.)

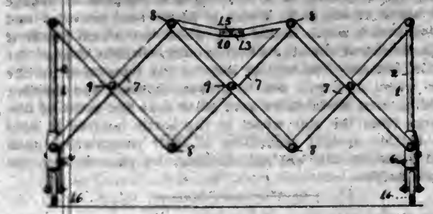


1. A curtain support of the character described, including a tubular pole formed with a longitudinal slot, brackets formed with upwardly facing recesses for the reception of the ends of said pole, said brackets being formed with apertured ears projecting up into said recesses and into the ends of the pole, a spacing block mounted in the middle of the pole, pulleys carried by said block, cables extending through the apertured ears of the respective brackets and extending inwardly and downwardly over said pulleys, curtain supporting members slidingly mounted in said pole and arranged in two sets, one for each curtain, and means for securing the curtains thereto, the innermost supporting member of each set being fixedly secured to its corresponding cord and the others movably connected therewith.

2. A curtain support of the character described, including a tubular pole formed with a longitudinal slot, brackets formed with upwardly facing recesses for the reception of the ends of said pole, said brackets being formed with apertured ears projecting up into said recesses and into the ends of the pole, a spacing block mounted in the middle of the pole, pulleys carried by said block, cables extending through the apertured ears of the respective brackets and extending inwardly and downwardly over said pulleys, curtain supporting members slidingly mounted in said pole and arranged in two sets, one for each curtain, means for securing the curtains thereto, the innermost supporting member of each set being fixedly secured to its corresponding cord and the others movably connected therewith, and limiting cords flexibly connecting said sliding members together.

1,023,070. CASKET TRUCK OR BIER. EDGAR EDMONSON, Greenfield, Ohio. Filed July 7, 1911. Serial No. 637,373. (Cl. 27—1.)

1. A folding truck for caskets, comprising end frames provided with tubular standards having foot blocks, lower transverse rods engaging said foot blocks, vertical rods having slidable engagement within said standards and provided with head blocks, and upper transverse rods engaging said head blocks, a lazy tongs at each side having pivotal connection with the transverse rods of said end frames, the lazy tongs having central sets of cross bars provided at their upper ends with transverse brace rods, foldable tie links connecting said brace rods and composed each of two sections, a bridge joint having opposite cheeks embracing and having pivotal connection with the adjacent ends of said sections, and stop means for said sections when in extended position.



2. A folding truck for caskets, comprising end frames provided with tubuluar standards having foot blocks, lower transverse rods engaging said foot blocks, vertical rods having slidable engagement within said standards and provided with head blocks, and upper transverse rods engaging said head blocks, a lazy tongs at each side having pivotal connection with the transverse rods of said end frames, the lazy tongs having central sets of cross bars provided at their upper ends with transverse brace rods, and automatically foldable bowed tie links connecting said brace rods and composed each of two sections, a bridge joint having opposite cheeks embracing and having pivotal connection with the adjacent ends of said sections and a pin connecting said cheeks, said ends when the tie links are extended having stop engagement with each other and against said pin to prevent further upward movement and brace the sections against strain.

1,023,071. THREAD-WAXING DEVICE. ANDREW EPPLER, Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 22, 1909. Serial No. 529,414. (Cl. 112—28.)



1. A thread waxing device, having, in combination, a support, a thread guide mounted thereon, a wax-pot mounted so as to be movable into or out of a position in which the thread is immersed in the wax, and a heating pipe passing through the wax-pot in a straight line and in the direction of the movement of the pot.

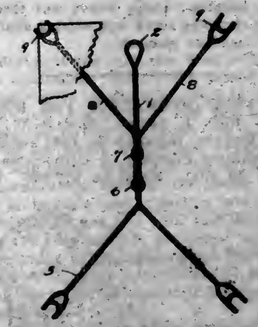
2. A thread waxing device, having, in combination, a support, a thread guide mounted thereon, a wax-pot, a heating pipe passing vertically in a straight line through the wax-pot and means for supporting the wax-pot so as to allow it to be moved longitudinally of the heating pipe into and out of a position in which the thread is immersed in the wax.

3. A thread waxing device, having, in combination, a wax-pot, a heating pipe passing through the wax-pot and emerging therefrom below the level of the wax, a thread guide to guide the thread through the wax in the wax-pot, and a tube loosely surrounding the heating pipe and attached to the pot at the point where the heating pipe emerges therefrom.

4. A thread waxing device, having, in combination, a support, a thread guide mounted thereon, a wax-pot, a heating pipe passing vertically in a straight line through the wax-pot, a tube loosely surrounding the heating pipe and attached at its lower end to the bottom of the pot, the upper end of said tube extending above the level of the wax, and means for supporting the wax-pot so as to permit it to be moved longitudinally of the heating pipe into or out of a position in which the thread is immersed in the wax.

5. A thread waxing device, having, in combination, a support, a thread guide mounted thereon, a wax-pot, a plurality of heating pipes passing in straight lines through the pot, a shut-off valve in one of the pipes, and means for supporting the wax-pot so as to permit it to be moved into or out of a position in which the thread is immersed in the wax.

1,023,072. PICTURE-HOLDER. EDWARD FLEMING, Columbus, Ohio, assignor, by direct and mesne assignments, of one-half to William M. Myers, Lockbourne, Ohio, and one-fourth to William D. Hopkins, Columbus, Ohio. Filed Apr. 17, 1911. Serial No. 621,623. (Cl. 40—145.7.)

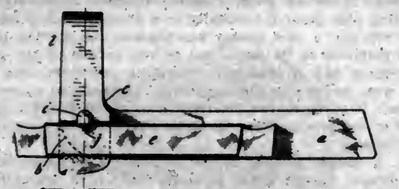


The combination with a single bar formed with a suspending loop at one end, and elastic, divergent legs each fashioned with an end gripping hook, of an adjustable member comprising a short bar formed with an end loop and an intermediate loop surrounding and frictionally engaging said single bar, and elastic arms diverging from the extensible member and provided with end gripping hooks.

1,023,073. YIELDING TOOL-HOLDER. ANDY FRITZ, Portland, Oreg. Filed Jan. 28, 1911. Serial No. 605,342. (Cl. 29—99.)

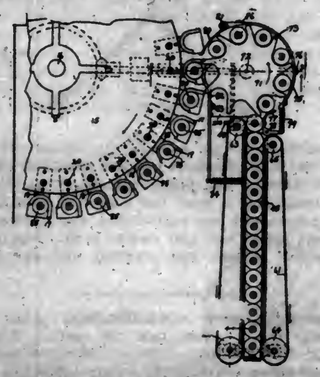
1. A tool holder consisting of a body comprising a shank having formed at its head-end a perpendicular member and the latter formed with an integral pendent member provided with tool holding means; said pendent member made with an aperture; a clamping screw inserted through such aperture and formed at its extremity to clamp the tool placed in said recess; the parts being adapted to permit the clamping screw to have lateral play in said circular aperture of the pendent member; and a sleeve nut threaded on the shank of the clamping screw and bearing against the inner face of said pendent member.

2. A tool holder consisting of a body comprising a shank having formed at its head-end a perpendicular member and the latter formed with an integral pendent member provided with a tool holding recess; said pendent member made with an aperture; a clamping screw inserted through such aperture and formed at its extremity to clamp the tool placed in said recess; the extremities of said clamping screw formed with a clamping head made with an oblique bearing face; the parts being adapted to permit the clamping screw to have lateral play in said circular aperture of the pendent member; and a sleeve nut threaded on the shank of the clamping screw and bearing against the inner face of said pendent member.



3. A tool holder consisting of a body comprising a shank having formed at its head-end a perpendicular member and the latter formed with an integral pendent member provided with a tool holding recess formed at the bottom with a shoulder, and such shoulder formed with an oblique bearing face; said pendent member made with an aperture; a clamping screw inserted through such aperture and formed at its extremity to clamp the tool placed in said recess; the extremities of said clamping screw formed with a clamping head made with an oblique bearing face; the parts being adapted to permit the clamping screw to have lateral play in said circular aperture of the pendent member; and a sleeve nut threaded on the shank of the clamping screw and bearing against the inner face of said pendent member.

1,023,074. FEED MECHANISM FOR BOTTLING-MACHINES. JOHN J. GAYNOR, EDWARD W. MILLER, and CLIFFORD REMLER, Indianapolis, Ind., assignors to Automatic Machinery Company, a Corporation of Indiana. Filed Mar. 30, 1911. Serial No. 617,960. (Cl. 193—1.)



1. The combination with a series of horizontally revolving bottle holders, a horizontal plate adjacent the path of the bottle holders at one point, a star wheel mounted on said plate for receiving the bottles and feeding them successively to the bottle holders, the arms of said star wheel projecting into the path of the bottle holders so as to be actuated thereby, an endless conveyer for conveying the bottles to said star wheel, and means for actuating the conveyer, of a yielding arm adapted to engage the bottle at the point where it leaves said conveyer and moves into a notch in the star wheel but which yields if a projection of the star wheel should centrally engage the bottle, whereby the bottles may be fed irregularly to the star wheel and will not be broken thereby.

2. The combination with a series of horizontally revolving bottle holders, a horizontal plate adjacent the path of the bottle holders at one point, a star wheel mounted on said plate for receiving the bottles and feeding them successively to the bottle holders, the arms of said star wheel projecting into the path of the bottle holders so as to be actuated thereby, an endless conveyer for conveying the bottles to said star wheel, and means for actuating the conveyer, of a yielding arm adapted to engage the bottle at the point where it leaves said conveyer and moves into a notch in the star wheel but which yields if a projection of the star wheel should centrally engage the bottle, whereby the bottles may be fed irregularly to the star wheel and will not be broken thereby, and another yielding arm mounted on said plate near the point of discharge from the star wheel to the bottle holders to hold the bottles upright regardless of their irregularity upon said plate as they are approaching and passing into the bottle holders.

1,023,075. CHURN. JOHN R. GILDA, St. Louis, Mo. Filed July 5, 1911. Serial No. 636,834. (Cl. 31—30.)



1. A churn or the like comprising a liquid-receptacle, a dasher reciprocable in said receptacle, means adapted to reciprocate said dasher in said receptacle, a base upon which said means is mounted, elongated supporting-legs depending from said base, and liquid-receptacle attaching members on said legs secured to said receptacle, said legs and their said attaching-members being adapted to support said base above and away from the top of said receptacle; substantially as described.

2. A churn or the like comprising a liquid-receptacle open at one end, a cover in said receptacle adapted to removably close the open end thereof and having a laterally-disposed aperture, a dasher reciprocable in said receptacle, a dasher-rod to which said dasher is connected passing through and movable in said cover-aperture, a dasher-operating-mechanism supporting-base, means mounted on said base to which said dasher-rod is connected adapted to reciprocate said dasher-rod and its carried dasher, elongated supporting-legs depending from said base, and liquid-receptacle attaching means on said supporting-legs secured to said receptacle, said supporting-legs and attaching-means being adapted to support said base above and away from the top of said receptacle, thereby providing a space between the top of said receptacle and said base wherein said cover may be vertically raised on said dasher-rod; substantially as described.

3. An operating-mechanism for churns and the like comprising a reciprocable dasher, means for reciprocating said dasher, a base upon which said means is mounted, elongated supporting-legs depending from said base, and liquid-receptacle attaching-means adjustably mounted in said legs; substantially as described.

4. An operating-mechanism for churns and the like comprising a reciprocable dasher, means for reciprocating said dasher, a base upon which said means is mounted, legs depending from said base, screws adjustably arranged in said legs, and clamping-members on the inner ends of said legs adapted to be clamped upon a liquid-receptacle to support said base thereabove; substantially as described.

5. An operating-mechanism for churns and the like comprising a reciprocable dasher, means for reciprocating said dasher, a base upon which said means is mounted, supporting-legs depending from said base, screws adjustably arranged in said legs, and liquid-receptacle clamping-members pivotally mounted on the inner ends of said screws; substantially as described.

[Claims 6 to 13 not printed in the Gazette.]

1,023,076. FREE-WHEEL BACK-PEDALING BRAKE. FRANZ GORBEL, Hann-Münden, Germany. Filed May 19, 1910. Serial No. 562,145. (Cl. 208—57.)



In a free-wheel back-pedaling brake, in combination, an axle, a hub mounted thereon, a brake-wheel on the hub, a free toothed-rim, means for transmitting forward motion of the latter to the hub, an eccentric on the axle, means for transmitting backward motion of the rim thereto, a strap on the eccentric, a lever adapted to be pivoted to the cycle frame and connected to the strap, and a band passing around the brake-wheel and having its ends attached to the lever at two points equidistant from its fulcrum; whereby on back-pedaling the eccentric strap depresses the lever and causes the band to be drawn tight upon its wheel both from above and below; substantially as described.

1,023,077. FUSE-CHANGER. ROBERT C. GROUT, Denver, Colo. Filed June 26, 1911. Serial No. 635,892. (Cl. 81—3.)



1. A device of the class described, consisting of a handle composed of insulating material, equipped at one extremity with a cartridge fuse-placing device, substantially as described.

2. A device of the class described, comprising a handle member equipped at one extremity with a pair of spring jaws, whose outer extremities are outwardly-curved, the jaws being provided at a suitable distance from their curved extremities with stops cut therefrom and adapted to be engaged by a fuse when inserted between the jaws, substantially as described.

3. A device of the character described, comprising a handle member equipped at one extremity with a pair of spring jaws, provided intermediate their extremities with inwardly bent lips forming stops to engage a cartridge fuse inserted between the jaws, substantially as described.

4. A tool of the class described, equipped at one extremity with a pair of spring jaws, whose free extremities are outwardly curved, the jaws being provided at a suitable distance beyond their curved extremities with inwardly bent lips located adjacent the opposite edges of the jaws.

5. A device of the class described, comprising a handle member equipped at one extremity with a pair of spring jaws, whose free extremities are outwardly-curved, the jaws being equipped intermediate their extremities with lips offset from the opposite edges of the jaws, the latter being bent edge-wise in opposite directions to bring the two jaw parts into coöperative alinement, substantially as described.

[Claim 6 not printed in the Gazette.]

1,023,078. FLUID-JET BLOWER. TEODORO GRUENWALD, Genoa, Italy. Filed Sept. 25, 1911. Serial No. 651,271. (Cl. 122—390.)



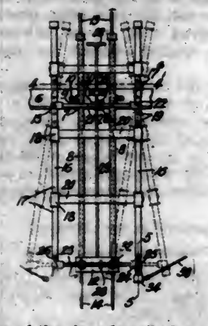
1. In a device of the character described, the combination with a multitubular boiler, of a mixing casing having an egress opening, a conducting means in communication with the fire box of said boiler and said casing whereby hot air from the former may enter the latter, a nozzle, having its egress means within said casing and directed toward the said egress opening of the latter, means forming a communication between the steam space of the boiler and said nozzle, and a flexible tube having a fluid tight connection at one end with said egress opening of said casing and adapted to be positioned with its free end in close proximity to the tubes of the boiler, the hot air and steam being thoroughly intermixed by passing through said mixing chambers, substantially as and for the purpose set forth.

2. In a device of the character described, the combination with a multitubular boiler, of a mixing casing having an egress opening, means in communication with the fire box of said boiler at a portion remote from the path of movement of the smoke, and communicating with said mixing chamber, whereby hot air from the fire box may enter the latter, a nozzle, having egress means within said casing and directed toward the said egress opening of the latter, means forming a communication between the steam space of the boiler and said nozzle, and a flexible tube having a fluid tight connection at one end with said egress opening of said casing and adapted to be positioned with its free end in close proximity to the tubes of the boiler, the hot air and steam being thoroughly intermixed by passing through said mixing chamber, substantially as and for the purpose set forth.

3. In a device of the character described, the combination with a multitubular boiler, of a wall for the fire box of said boiler provided with an elongated slot disposed adjacent to the gas passages of said tubes, a plurality of shutters for said slot each adapted to be independently opened or closed, mechanism in communication with the fire box of said boiler and the steam space thereof for intermixing the fluid of steam and hot air, and conducting

means in communication with said last mentioned mechanism adapted to be passed through said slot in said wall of the fire box, by opening one of said shutters for the accommodation thereof, whereby egress of hot air from the fire box and ingress of cold air to within the fire box, through the slot, is avoided.

1,023,079. SAWING-MACHINE. ELBRIDGE S. HAINES, St. John, New Brunswick, Canada. Filed Aug. 7, 1911. Serial No. 642,852. (Cl. 143—61.)



1. In a device of the class described, a supporting frame-work secured at top and bottom, an oscillating framework pivotally mounted thereon, a saw carried at the lower end of said oscillating framework, and means for holding the saw in one horizontal plane during the oscillation of the frame-work.

2. In a device of the class described, a supporting frame-work fixed at the top and bottom, an oscillating frame-work pivotally mounted thereon, a saw mounted at the lower end of said oscillating framework, said saw operating laterally, and means for preventing rise and fall of said saw, due to the oscillatory motion of the framework.

3. In a device of the class described, a supporting frame-work fixed at the top, adjustable stakes anchoring the bottom of said supporting framework, an oscillating frame-work pivotally mounted on the supporting framework, and a horizontally operating saw mounted at the lower end of said oscillating framework.

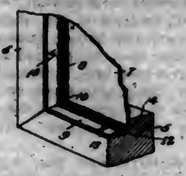
4. In a device of the class described, a foundation member, a pair of vertical tubes adjustably secured thereto, stakes vertically adjustable within said tubes to anchor the lower ends thereof, an oscillating frame-work pivotally mounted on the foundation, a saw moving in a horizontal plane, operated by said framework, and means for shifting said oscillating framework to feed the saw.

5. In a device of the class described, a supporting frame-work rigidly mounted at the top and bottom, a framework pivoted thereto and arranged to oscillate in a vertical plane, a saw mounted at the lower end of said latter framework arranged to operate in a horizontal plane, means carried by the supporting framework for maintaining the saw in a single horizontal plane during the oscillation of the pivoted framework, and means for shifting the pivoted framework from one vertical plane to another to feed the saw.

[Claims 6 to 10 not printed in the Gazette.]

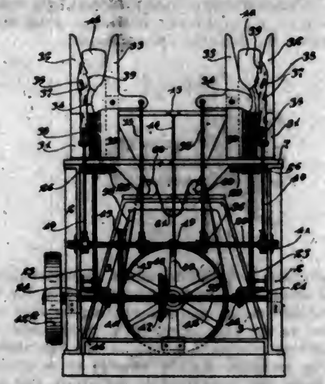
1,023,080. WINDOW-PANE FASTENER. ERVIN HILTON and ALBERT VAITL, Spearfish, S. D. Filed Feb. 25, 1911. Serial No. 610,704. (Cl. 20—56.4.)

The combination with a window sash and glass seated therein, of a fastener comprising side and end strips, each being formed from a single piece of rigid material bent to provide inner and outer angularly disposed flanges, instruck spurs formed on the outer flanges and adapted to engage in the window sash, tongue extremities formed on the end strips and engageable between the glass and the side strips, and outwardly bowed retractible spring fingers formed at opposite ends of the side strips and adapted to automatically engage the end strips for locking the



same against displacement in the window sash and also to sustain the side strips against displacement.

1,023,081. GRASS-TWINE MACHINE. THOMAS W. JERREMS, St. Paul, Minn., assignor of one-half to Emil H. Steiger, Oshkosh, Wis. Filed July 7, 1910. Serial No. 570,734. (Cl. 28—6.)



1. In a grass feeding mechanism for grass twine machines, the combination with a grass holder, of a main feed member having serrations arranged in and movable on the arc of a circle, and a movable toothed auxiliary feed device operative on the grass blades in the lower portion of said holder, to feed the same downward to the serrations of said main feed member.

2. In a grass feeding mechanism for grass twine machines, the combination with a grass holder, of a main feed member having serrations arranged in and movable on the arc of a circle, and a vibratory auxiliary feed device operative on the grass blades in the lower portion of said holder, to feed the same downward to the serrations of said main feed member.

3. In a machine of the kind described, the combination with a grass holder, of a primary grass feeding device having a fixed toothed member and a pivotally mounted toothed member, a vibratory auxiliary toothed member operative to feed the grass blades downward in said holder and to insure the initial engagement thereof by the said pivoted toothed member.

4. In a machine of the kind described, the combination with a grass holder, of a primary grass feeding device having a fixed toothed member and a pivotally mounted toothed member, a vibratory auxiliary toothed member operative to feed the grass blades downward in said holder and to insure the initial engagement thereof by the said pivoted toothed member, and means for alternately vibrating the said pivoted toothed member and auxiliary toothed member.

5. In a machine of the kind described, the combination with a coöperating fixed and a pivotally mounted toothed member constituting a primary feed device, the said members having upwardly diverging arms affording a grass holder, of an auxiliary toothed feed member mounted for movements with its teeth exposed adjacent to the arm of said fixed member, and means for alternately imparting operative feed movements to said pivoted feed member and to said auxiliary toothed member.

[Claims 6 and 7 not printed in the Gazette.]

1,023,082. DUST-COLLECTOR. GUSTAV A. KLUGE, Chicago, Ill. Filed Apr. 13, 1908. Serial No. 426,747. (Cl. 55—46.)



1. A dust collector comprising a cylindrical casing having a tangential inlet, a conical dust discharge secured to said cylindrical casing, a plurality of conical members dividing said cylindrical casing into upper, central and lower separating chambers, there being a plurality of passages connecting said chambers, formed to lead the air from one chamber to another without losing its whirling motion, a head secured to the top of said cylindrical casing, there being an axial opening in said head, for the escape of the purified air.

2. A dust collector comprising a cylindrical casing having a tangential inlet, a conical dust discharge secured to said cylindrical casing, a plurality of conical members dividing said cylindrical casing into upper, central and lower separating chambers, there being a plurality of passages connecting said chambers, formed to lead the air from one chamber to another without destroying its whirling motion, a head secured to the top of said cylindrical casing, there being an axial opening in said head for the escape of the purified air, a tubular guard mounted in said opening.

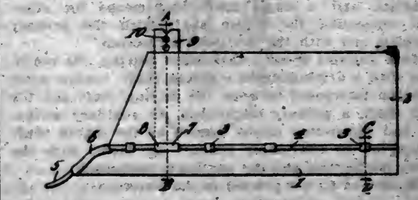
3. A dust collector comprising a cylindrical casing having a tangential inlet, a conical dust discharge secured to said cylindrical casing, a plurality of conical members dividing said cylindrical casing into upper, central and lower separating chambers, there being a plurality of passages connecting said chambers, formed to lead the air from one chamber to another without destroying its whirling motion, a head secured to the top of said cylindrical casing, there being an axial opening in said head for the escape of the purified air, a tapering tubular guard mounted in said opening.

4. A dust collector comprising a conical dust discharge, a cylindrical casing mounted thereon, said casing being divided into upper, central and lower separating chambers, there being a tangential inlet for the dust laden air, an annular plate secured to the inner walls of said cylindrical casing at a point above the tangential inlet, a truncated cone depending from said plate the lower portion thereof opening into the lower separating chamber, there being a plurality of tangential outlets from said cylindrical casing, an inverted cone secured to the side walls of the cylindrical casing forming an upper separating chamber, the top of said cone being in a plane above the tangential outlets, a pipe leading from said cone downwardly through the dust discharge, there being a plurality of tangential inlets in said upper separating chamber, suitable pipe connections connecting the tangential inlets in the upper separating chamber to the tangential outlets in the central separating chamber, a head secured to the top of said cylindrical casing, there being an axial opening therein for the escape of the purified air.

5. A dust collector comprising a conical dust discharge, a cylindrical casing mounted thereon, said casing being divided into upper, central and lower separating chambers, there being a tangential inlet for the dust laden air, an annular plate secured to the inner walls of said cylindrical casing at a point above the tangential inlet, a truncated cone depending from said plate the lower portion thereof opening into the lower separating chamber, there being a plurality of tangential outlets from said cylindrical casing, an inverted cone secured to the side walls of the cylindrical casing forming an upper separating chamber, the top of said cone being in a plane above the tangential outlets, a pipe leading from said cone downwardly through the dust discharge, there being a plurality of tangential inlets in said upper separating chamber, suitable pipe connections connecting the tangential inlets in the upper separating chamber to the tangential outlets in the central separating chamber, a head secured to the top of said cylindrical casing, there being an axial opening therein for the escape of the purified air, a tubular guard mounted in said opening.

[Claim 6 not printed in the Gazette.]

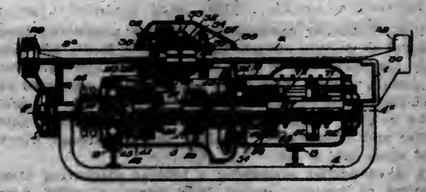
1,023,083. FENDER. FREDERICK N. LEPHART, Ansonia, Ohio. Filed Apr. 6, 1911. Serial No. 619,354. (Cl. 97—18.)



1. A fender for cultivators including a plate the lower portion of which constitutes a straight runner, the upper portion of the plate being bent abruptly to one side from the runner to constitute a leaf supporting shelf which merges into an upwardly extending guard, and a lifting finger extending along the front edge of the runner and downwardly and forwardly therefrom to a point below the runner.

2. A fender for cultivators including a plate the lower portion of which constitutes a straight runner, the upper portion of the plate being bent abruptly to one side from the runner to constitute a leaf supporting shelf which merges into an upwardly extending guard, and a lifting finger extending along the front edge of the runner and downwardly and forwardly therefrom to a point below the runner, said finger merging into a reinforcing rod extending longitudinally along the angle formed by the shelf and runner.

1,023,084. VARIABLE-SPEED MECHANISM. SAMUEL W. LUITWIELER, Rochester, N. Y. Original application filed Aug. 31, 1908, Serial No. 451,109. Divided and this application filed Mar. 11, 1911. Serial No. 613,752. (Cl. 74—58.)



1. In a variable speed transmission gearing, the combination with a driving shaft, of a primary mechanism, an auxiliary mechanism, change speed mechanism interposed between the driving shaft and the auxiliary mecha-

nism and between the driving shaft and the primary mechanism, and a single controlled means for operatively connecting the speed mechanism alternately with the primary mechanism and with the auxiliary mechanism.

2. In a variable speed transmission gearing, the combination with a driving shaft, of a primary mechanism, an auxiliary mechanism, a change speed mechanism interposed between the driving shaft and the primary mechanism, and between the driving shaft and the auxiliary mechanism, and a single controlling means for operatively connecting the speed mechanism alternately with the primary mechanism and with the auxiliary mechanism.

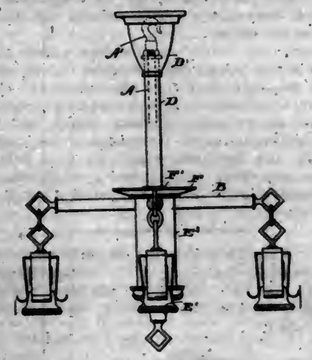
3. In a variable speed transmission gearing, the combination with a driving shaft, of primary mechanism, an auxiliary mechanism, a change speed mechanism interposed between the driving shaft and the primary mechanism, and between the driving shaft and the auxiliary mechanism, and a single controlling means movable in one direction for operatively connecting the speed mechanism with the primary mechanism, and in another direction for operatively connecting the speed mechanism with the auxiliary mechanism.

4. In a variable speed mechanism gearing, the combination with a driving shaft, of a driven shaft, change speed mechanism interposed between the driving shaft and the driven shaft, a primary mechanism, an auxiliary mechanism, and a single controlling means for alternately connecting the driven shaft with the primary mechanism and with the auxiliary mechanism.

5. In a variable speed transmission gearing, the combination with a driving shaft, a driven shaft, change speed mechanism interposed between the driving shaft and the driven shaft, a primary mechanism, an auxiliary mechanism, and controlling means carried by the driven shaft and adapted to alternately connect the latter with the primary mechanism and the auxiliary mechanism.

[Claims 6 to 12 not printed in the Gazette.]

1,023,085. FOLDING CHANDELIER. WILFRID LUMLEY, East Conneaut, Ohio, assignor to The Conneaut Company, a Corporation of Ohio. Filed Jan. 27, 1909. Serial No. 474,388. (Cl. 240—78.)



1. A chandelier comprising a tubular supporting stem adapted to contain electric light wires, a spider attached near the lower end of said stem, tubular arms adapted to contain electric light wires and pivotally supported on said spider, and supporting means for sustaining the said arms in their extended position, said tubular stem, said spider and arms having openings therein through which said wires may be led.

2. A chandelier comprising a tubular supporting stem adapted to contain electric light wires, a spider near the lower end of said stem, tubular arms pivotally supported by said spider and adapted to contain electric light wires, said tubular stem having openings therein, means establishing communication between said openings and said arms through which said wires may be led, and a crown plate surrounding the stem and adapted to rest on the upper face of the projecting arms when they are in their horizontal position, said crown plate being movable upwardly along the stem to allow said arms to be swung upwardly.

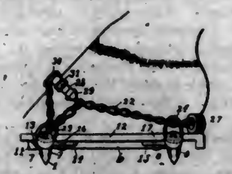
3. A chandelier for electric light fixtures comprising a stem and a spider carried thereby, tubular branch arms adapted to carry electric light wires and pivotally connected to said spider, means of communication between said stem and said tubular branch arms, a shell-like jacket supported beneath the spider and having notches in its upper edge fitted closely to the branch arms in their horizontal position.

4. A chandelier for electric light fixtures comprising a stem having a spider carried thereby, tubular branch arms adapted to carry electric light wires and pivotally connected to said spider, means of communication between said stem and said branch arms, a shell-like jacket supported beneath the spider and fitted closely to the lower face of the branch arms in their horizontal position, and a crown plate vertically movable along said stem and adapted to fit close to the upper faces of said arms when the arms are in their horizontal position.

5. A chandelier having a tubular stem, a spider on said stem, projecting arms connected to said spider, a jacket beneath the spider, said jacket being open at its upper end and having angular corners at said end, and a crown plate adapted to rest upon the upper edge of said jacket when the arms are in a horizontal position, said crown plate having circular bosses on the lower face thereof spaced to fit closely inside said angular corners of the jacket.

[Claims 6 to 11 not printed in the Gazette.]

1,023,086. OVERSHOE FOR HORSES AND OTHER HOOFED ANIMALS. JEREMIAH E. MACDONALD, Pittsfield, Mass. Filed Apr. 14, 1911. Serial No. 621,124. (Cl. 168—1.)



1. In an overshoe of the class described, a tread portion comprising a rigid frame adapted to be widened or lengthened relatively to the hoof and flexibly supported thereon, and removable contacts carried by the frame and extending across the hoof.

2. In an overshoe of the class described, the combination with a tread portion comprising an adjustable rigid frame arranged around the margin of the hoof, of means provided under the toe and heels of the hoof for widening and lengthening the frame.

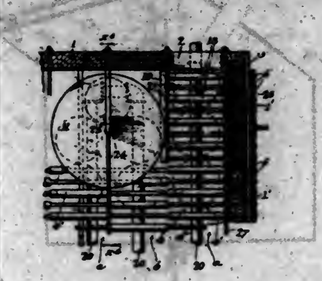
3. In an overshoe, a rigid quadrilateral frame comprising jointedly connected members intervening the hoof and the ground, and means provided at opposite ends of the hoof for widening or lengthening the frame.

4. In an overshoe, a tread portion having spaced contact elements, each of said elements being adjustable lengthwise of the hoof and including a receiving portion and a removable contact portion to serve as a calk and extending across the hoof.

5. In an overshoe of the class described, the combination with a tread portion intervening the hoof and the ground, of flexible supporting means arranged on the wall of the hoof and comprising an endless band about the periphery of the hoof wall and connected to the tread portion, and means provided on the toe of the hoof for taking up slack in the band at a plurality of points between adjacent tread connections.

[Claims 6 to 9 not printed in the Gazette.]

1,023,087. MEANS FOR CONVEYING CANS IN EXHAUSTERS, COOKERS, &c. LEWIS E. MCCANN, Ontario, Cal., assignor of one-half to William J. Schaefer, Ontario, Cal., and one-half to Los Angeles Can Company, Los Angeles, Cal., a Corporation of California. Filed Apr. 18, 1911. Serial No. 621,882. (Cl. 193—1.)



1. In combination with a casing, a conveyer therein comprising a plurality of shafts mounted side by side in said casing, each of said shafts having portions of different diameter at different portions of its length, means for driving all of said shafts in such manner that the adjacent shafts are driven in opposite directions, the shafts which are rotating in one direction having their enlarged portions extending in corresponding positions forming a series of conveyer elements arranged longitudinally in the casing, and the shafts which are rotating in the opposite direction having their enlarged portions extending in corresponding positions forming another series of conveyer elements arranged longitudinally of the casing parallel to the first named series.

2. The combination with a casing, of a conveyer means therein comprising a series of shafts journaled side by side in said casing, each of said shafts having an enlarged and a reduced portion, said enlarged and reduced portions alternating in opposite order along the series of shafts forming two series of conveyer elements, and driving means connected to all of said shafts to cause all of the shafts having their larger portions in corresponding positions to rotate in the same direction.

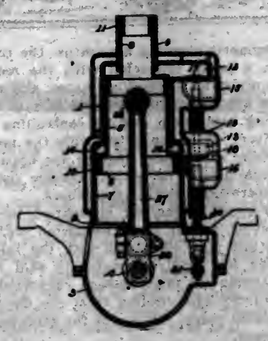
3. In combination with a casing, a series of shafts journaled therein, means for rotating all of said shafts in such manner that adjacent shafts rotate in opposite directions, alternate shafts having enlarged portions arranged in corresponding positions in the casing forming a series of conveyer elements rotating in the same direction, and the intermediate shafts in the series having enlarged portions arranged in corresponding positions to form a series of conveyer elements arranged parallel to the first named series and moving in the opposite direction, and means at the ends of the series of shafts for transferring articles from the delivery end of each series of conveyer elements to the receiving end of the next series of conveyer elements.

4. In combination with a casing, a series of shafts journaled therein, means for rotating all of said shafts in such manner that adjacent shafts rotate in opposite directions, alternate shafts having enlarged portions arranged in corresponding portions in the casing forming a series of conveyer elements rotating in the same direction, and the intermediate shafts in the series having enlarged portions arranged in corresponding positions to form a series of conveyer elements arranged parallel to the first named series and moving in the opposite direction, and means at the ends of the series of shafts for transferring articles from the delivery end of each series to the receiving end of the next series, each of said transferring means comprising a disk mounted to rotate on a vertical axis and extending over adjacent portions of the conveyer shafts, said shafts being cut away to receive said disk and the upper pieces of the said disk being flush with the tops of the enlarged portions of the shafts.

5. A conveyer comprising a series of parallel shafts mounted side by side and provided with larger and smaller portions arranged in sections, the said larger and smaller shaft portions being arranged in alternating order in each section of the series of shafts, and being arranged in reverse order in adjacent sections, and means for rotating said shafts in such manner that all of the shafts having their larger portions in the same sections rotate in the same direction and the intermediate shafts rotate in the opposite direction.

[Claim 6 not printed in the Gazette.]

1,023,088. EXPLOSIVE-ENGINE. JOHN W. MBAKER, Detroit, Mich. Filed June 9, 1910. Serial No. 565,908. (Cl. 123—57.)



1. In an explosive engine, an open ended cylinder having an enlarged lower portion and a contracted upper portion, an open ended sleeve reciprocable therein having portions that fit the corresponding portion of the cylinder, means for partially closing the bore of the sleeve, and a crank shaft operatively coupled to the sleeve.

2. In an explosive engine, an open ended cylinder having an enlarged lower portion and a contracted upper portion, an open ended sleeve reciprocable therein having portions that fit the corresponding portions of the cylinder, means for partially closing the bore of the sleeve, a valve chamber in communication with the annular space formed between the sleeve and cylinder, a crank shaft operatively connected to the sleeve, and intake and exhaust valves in the chamber operatively connected to the shaft to open in timed relation to the movement of the sleeve.

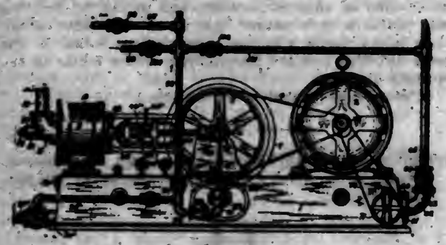
3. In an explosive engine, a closed base, open ended cylinders secured thereon, each cylinder having an enlarged lower portion and a contracted upper portion, an open ended sleeve reciprocable in each cylinder having portions that fit the corresponding portions of the cylinder, a crank shaft journaled in the base adjacent the cylinders and operatively coupled to each sleeve, and means for partially closing the bore of one or more of the sleeves.

1,023,089. SPRING FOR BEDS. JAMES ALEXANDER MOORE, Atlanta, Ga. Filed Apr. 12, 1911. Serial No. 620,714. (Cl. 5—21.)



In an individual spring and upper coil structure comprising an open peripheral bend jointed to a closed offset loop *d* terminating in a hook *e* spaced from said loop substantially as shown and described.

1,023,000. PNEUMATIC CLEANSING APPARATUS. ALBERT E. MOORHEAD, San Francisco, Cal., assignor to American Rotary Valve Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 28, 1908. Serial No. 459,945. (Cl. 230—32.)



1. In a pneumatic cleaning apparatus, the combination of a receiver, a pump connected with the receiver provided with a reversible controlling valve, and adapted to either exhaust air from or deliver air to said receiver, a motor actuating said pump and its controlling valve, return and delivery pipes connected with the receiver and valves controlling said pipes, whereby the apparatus may operate in connection with either vacuum operating or air pressure operating cleaning appliances.

2. In a pneumatic cleansing apparatus, the combination of a receiver, an air pump connected with the said receiver, a return pipe connected with the inlet of said receiver, means for supplying water to said receiver, a liquid pump having its inlet passage connected with the receiver, a delivery pipe leading from the discharge passage of said liquid pump, and means for actuating said air and liquid pumps.

3. In a pneumatic cleansing apparatus, the combination of a receiver, an air pump connected with the upper part of the receiver, an air pipe connected with the receiver, a liquid pump having its inlet passage connected with the lower part of the receiver, a delivery pipe leading from said liquid pump, a waste pipe leading from said liquid pump, valves in said delivery and waste pipes, and means for actuating said air and liquid pumps.

4. In a pneumatic cleansing apparatus, the combination of a receiver, an air exhaust pump connected with the top of the receiver, a return pipe connected with inlet of the receiver, a liquid pump for removing surplus water from the receiver, a waste pipe leading from the outlet of said liquid pump, and means for actuating said air and liquid pumps.

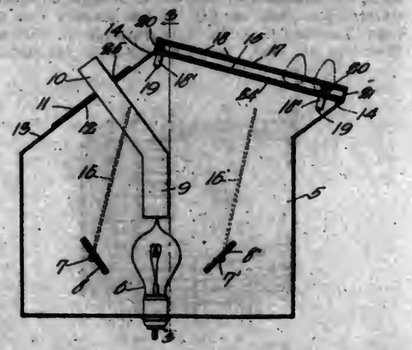
5. In a pneumatic cleansing apparatus, the combination of a receiver, an air exhaust pump connected with the top part of the receiver, a return pipe connected with the inlet of the receiver, a liquid pump for discharging surplus water from the receiver, a delivery pipe leading from the outlet of said liquid pump, a waste pipe leading from the outlet of said liquid pump, valves in said delivery and waste pipes, and means for actuating said air and liquid pumps.

[Claims 6 and 7 not printed in the Gazette.]

1,023,091. EGG-CANDLER. HARRISON R. MORRIS, Mapleton, Kans. Filed Aug. 10, 1911. Serial No. 643,422. (Cl. 99—6.)

1. In an egg tester, the combination of a casing having a sloping top with an opening therein, a cover slidable over the said opening up and down the said top and having a hole therein, a pipe slidable through the hole in the said cover and arranged at approximate right angles with the top of the casing and having the lower end thereof bent vertically, said casing being adapted to receive a light therein.

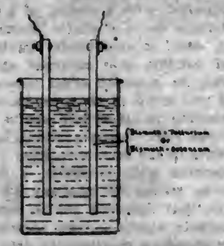
2. In an egg tester, the combination of a casing having means on the top thereof for holding a plurality of eggs for testing, a light within the casing, a shaft journaled within the casing, a hand lever at one end of same, and a reflector carried by the said shaft, whereby upon swinging the hand lever the rays of light reflected by the reflector can be focused on the various rows of eggs.



3. In an egg tester, the combination of a casing adapted to contain a light and having an opening in the top, a back stop for eggs over the said opening, and a yielding member disposed over the said stop and having egg receiving apertures therein.

4. In an egg tester, the combination of a casing adapted to contain a light therein and having an opening in the top thereof, a transparent back stop for eggs over the said opening, and a yielding member disposed over said back stop having egg receiving apertures therein.

1,023,092. ELECTROLYTIC RECTIFIER. WILLIAM MORRISON, Des Moines, Iowa. Filed Feb. 29, 1912. Serial No. 680,730. (Cl. 171—253.)



1. In an electrolytic rectifier, an anode of bismuth alloyed with an element of the periodic sulfur group having a higher atomic weight than sulfur, an electrolyte capable of reacting on bismuth to give an asymmetric film, and a cathode.

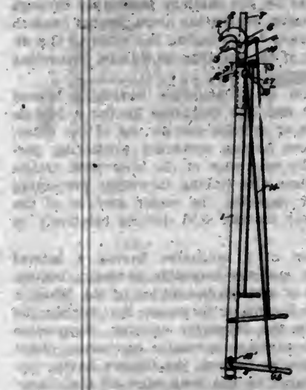
2. In an electrolytic rectifier, an anode of bismuth alloyed with tellurium, an electrolyte capable of reacting on bismuth to give an asymmetric film, and a cathode.

3. In an electrolytic rectifier, an anode of bismuth alloyed with an element of the periodic sulfur group having a higher atomic weight than sulfur, an electrolyte containing a soluble chromate, and a cathode.

4. In an electrolytic rectifier, an anode of bismuth alloyed with tellurium, an electrolyte containing a soluble chromate, and a cathode.

1,023,093. PRUNING IMPLEMENT. ARTHUR M. OTTINGER, Springtown, Ark. Filed July 20, 1911. Serial No. 639,622. (Cl. 30—11.)

1. In a pruning implement, a handle, a cutter carried thereby, said cutter having a shank formed with a guide way, a guide slot communicating with said guide way, an enlarged opening adjacent to the end of said guide slot, a saw having a stud and an operating bracket formed thereon, a pivotal bracket having an angular flange, a catch pivoted to said flange, said pivotal bracket having T-slot connection with the aforesaid handle and the catch communicating with the handle to lock the pivotal bracket in operative position; and an operating lever pivotally carried by said pivotal bracket and associated with the saw for operation thereof.



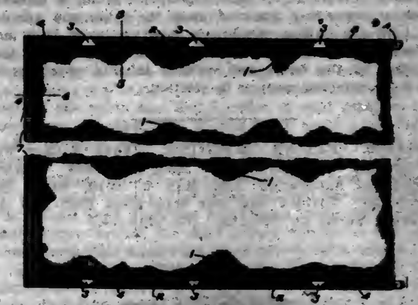
2. In a pruning implement, a handle, a cutter carried by said handle, a brush pivoted to said handle, an operating lever pivoted to the handle, a link connection between said brush and operating lever, a saw mounted for operation on said handle, and a catch coacting with said brush to lock the saw in inoperative position.

3. In a pruning implement, a handle, a cutter carried thereby, an operating lever pivoted to said handle and having link connection with the cutter for operation thereof, a shank carried by the aforesaid cutter and having a guide way and a guide slot communicating with said guide way and an enlarged opening adjacent to one end of said slot, a saw having a guide stud engaged by the aforesaid guide slot and an operating bracket extending from said saw, a pivotal bracket having T-slot connection with said handle, an angular flange and a catch pivotally connected to said flange coöperating with the handle to lock said pivotal bracket in position, an operating lever pivotally connected to said pivotal bracket having link connection with the aforesaid operating bracket, said operating lever coacting with the aforesaid angular flange to limit the movement of the lever, a brush pivotally connected to the aforesaid shank, an operating lever carried by the handle, a link pivotally connecting said brush and operating lever, means to lock said operating lever in inoperable position, and a spring catch coacting with the brush for locking the saw in inoperative position, substantially as set forth.

4. In a pruning implement, a handle, a cutter carried thereby, said cutter having a shank formed with a guide way, a guide slot communicating with said guide way, an enlarged opening therebetween adjacent to the end of said guide slot, a saw mounted in said guide way, a guide bolt carried by the saw and adapted to coöperate with said guide slot, a retaining head carried by the guide bolt and adapted to pass through the aforesaid opening when assembling the saw to the implement, an operating bracket also carried by the saw opposite to said guide stud, a pivot bracket having an angular flange, a catch pivoted to said flange, said pivot bracket having T-slot connection with the handle to lock the pivot bracket in position, and an operating lever carried by said pivot bracket and associated with the saw for operation thereof.

1,023,094. FOLDING UNITARY SCREEN. ISAAC E. PALMER, Middletown, Conn., assignor to The I. E. Palmer Co., Middletown, Conn., a Corporation of Connecticut. Filed Nov. 17, 1911. Serial No. 660,805. (Cl. 156—14.)

1. A folding unitary screen as an article of manufacture and sale consisting of a flexible strip of screen material having one edge at least provided with a hem, and a screen-securing slat inserted in said hem, said slat being formed of foldable sections having lengths conforming to desired folding lines of said flexible strip, said fabric being divisible into sections complete in themselves between said slat sections.



2. A folding unitary screen as an article of manufacture and sale consisting of a flexible strip of screen material having one edge at least provided with a removable screen-securing slat formed of foldable sections, said sections being of such length that their ends terminate at or adjacent to desired folding lines of said flexible strip.

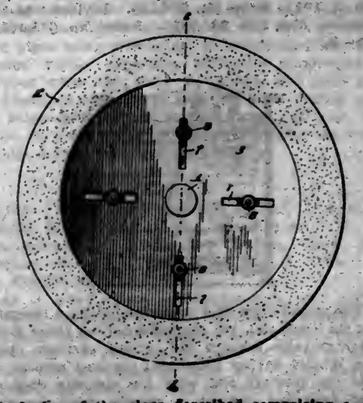
3. A folding unitary screen as an article of manufacture and sale consisting of a flexible strip of screen material having one edge at least provided with a hem and a screen-securing slat composed of wholly disconnected sections removably inserted in said hem.

4. A folding unitary screen as an article of manufacture and sale consisting of a flexible strip of screen material having one edge at least provided with a hem, and a screen-securing slat composed of wholly disconnected sections inserted in said hem and having securing formations, said sections having lengths conforming substantially to units of measurement of said flexible strip.

5. A folding unitary screen as an article of manufacture and sale consisting of a flexible strip of screen material having two opposite edges each provided with a removable slat formed of folding sections, the sections of each slat being of such length that their ends terminate at or adjacent to desired folding lines of the said flexible strip.

[Claim 6 not printed in the Gazette.]

1,023,095. SEWING-MACHINE ATTACHMENT. FRANK BENJAMIN POTTER, Connellsville, Pa. Filed Dec. 8, 1911. Serial No. 664,616. (Cl. 51—7.)



1. A device of the class described comprising a drum, means for attaching the same to a wheel, a buffing mem-

ber removably mounted on the drum, a grinding member removably mounted on the drum, and means to hold the grinding member in position, said grinding member holding the buffing member against removal.

2. A device of the class described, a flanged drum, adjustable means for securing the same to a wheel, a buffing member removably mounted upon the drum, a grinding member removably mounted upon the drum and adapted to hold the buffing member in position, said drum and grinding member having apertures and spring pressed pins carried by the drum and entered in said apertures to hold the grinding member in position.

1,023,096. FLYING-MACHINE. JULES RACLOT and CAMILLE ENDERLIN, St. Maur-des-Fossés, France. Original application filed May 2, 1910, Serial No. 558,753. Divided and this application filed May 18, 1911. Serial No. 628,119. (Cl. 244—14.)

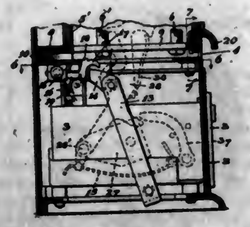


1. A vertical rudder for aeroplanes, comprising an approximately oval-shaped body pivotally mounted for bodily movement on the line of its maximum minor dimension, said body being longitudinally divided in rear of said pivot to provide sections and means for pivotally mounting said sections with relation to the body.

2. A vertical rudder for aeroplanes, comprising an approximately oval-shaped body pivotally mounted for bodily movement on the line of its maximum minor dimension, said body being longitudinally divided in rear of said pivot to provide sections, and means for pivotally mounting said sections with relation to the body, and means for simultaneously operating said sections.

3. A vertical rudder for aeroplanes, comprising a body having its side walls converging forwardly and rearwardly from a transverse line in advance of the longitudinal center of the body, a pivotal connection for the body as an entirety arranged on said maximum transverse line, said body being divided on the longitudinal central line in rear of said pivot to form sections, and means for pivotally mounting each of said sections.

1,023,097. CUP-VENDING MACHINE. ROLLAND ROBBINS, Crafton, Pa., assignor to The Sanitary Fountain and Vending Machine Company, Pittsburgh, Pa., a Corporation of Delaware. Original application filed Feb. 2, 1911, Serial No. 606,155. Divided and this application filed Feb. 28, 1911. Serial No. 611,461. (Cl. 211—8.)



1. The combination of a magazine having a lateral opening at its lower end, the magazine bottom being slotted, a carriage movable beneath the bottom, carriage operating means, latches having horizontal portions pivoted at one end to the carriage and with the opposite ends of the latches extending upward in register with the slots in the magazine bottom, and springs holding the latches normally elevated with their upturned ends projected through said slots.

2. The combination of a magazine having a lateral opening at its lower end with slots in the bottom of the magazine, a carriage slidable beneath the magazine, depressible latch devices on the carriage projecting through the slots of the magazine, oscillating arms pivoted beneath the carriage with means for swinging the arms in the direction of movement of the carriage, and links connecting the arms and carriage.

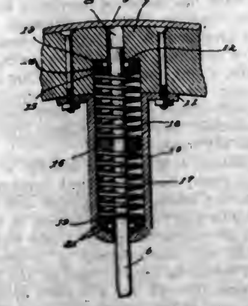
3. The combination of a magazine having a lateral opening at its lower end, the magazine having a bottom for supporting a pile of articles one on top of the other, article moving devices having upwardly projecting portions for engaging the rear edge of the lowermost article of the pile, said devices also having forwardly projecting rounded portions for engaging the under surface of the article, and means for moving said devices relatively to said lateral opening.

4. The combination of a magazine having a lateral opening at its lower end, the magazine having a bottom for supporting a pile of articles one on top of the other, a carriage beneath the bottom with means for moving the carriage relatively to the magazine opening, depressible latch devices on the carriage normally projecting above the plane of the magazine bottom, the latches having upright portions for engaging the rear edge of the lowermost article of the pile and also having forwardly extending rounded portions for engaging the under surface of the article, and carriage moving means.

5. In combination, a magazine having a lateral discharge and a bottom support for a pile of articles to be delivered, a horizontal central track arranged below said support, a carriage carried thereby, arranged transversely and slidable longitudinally thereof and at its opposite end portions provided with vertically swingable article engaging and forcing members projecting forwardly and upwardly from said carriage, and means for reciprocating the carriage.

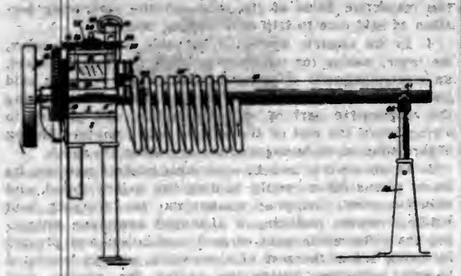
[Claim 6 not printed in the Gazette.]

1,023,098. SPRING-WHEEL. LOUIS SCHILLING, Macystown, Ill. Filed Sept. 22, 1910. Serial No. 583,262. (Cl. 152—53.)



A spring wheel comprising a hub, a rim, spokes connecting the rim and hub, said spokes being fixed at their inner ends to said hub, said rim being provided with a plurality of centrally located spaced openings receiving the outer ends of said spokes, each of said openings being formed with an annular shoulder intermediate the ends thereof, cylindrical shells fixed to the inner periphery of the rim and alining with the openings formed by said shoulders for surrounding the spokes, collars adjustably connected with the spokes within the shells, bearings abutting said shoulders and the closed ends of said shells, and surrounding said spokes, washers abutting said bearings, and springs interposed between said washers and the adjustable collars on said spokes.

1,023,099. HELIX-COILING MACHINE. FRANKLIN B. SHUSTER, New Haven, Conn.; Luella F. Shuster administratrix of said Franklin B. Shuster, deceased. Filed Oct. 28, 1910. Serial No. 589,563. (Cl. 153—65.)



A coiling machine comprising feed rolls and their shafts, an adjustable pitch roll, a coil supporting arbor rotatably and removably connected with one of the feed roll shafts, a roller bearing support for the opposite end of the arbor, said arbor substantially of the same diameter as the feed roll with which it alines, so that when coils are wound of larger diameter than the arbor, the coils will readily take to the arbor on leaving the feed roll and rotate with said arbor and thus reduce the strain on the feed rolls.

1,023,100. TRACK-SANDING APPARATUS. HARRY VISSERING, Chicago, Ill. Filed Dec. 18, 1911. Serial No. 666,604. (Cl. 105—263.)



1. In a duplex track sanding apparatus, the combination of a compressed fluid apparatus; a sand supply apparatus having front and rear sand discharge pipes; a valve device having a plurality of conduits to the said supply apparatus and a conduit from the compressed fluid apparatus and a valve casing interiorly divided into a plurality of chambers by a valve seat and connected to said conduits, and having a plurality of said conduits connected on one side of the valve seat and another of said conduits connected on the other side of the said valve seat; a regulating valve mounted in said casing and having a handle projecting therefrom for admitting fluid from said compressed fluid apparatus to said sand supply apparatus conduits in alternation; and alarm means between said fluid apparatus and the sanding apparatus and in communication with the inlet and with one of the outlet conduits and operative when the valve is opened in either direction and inoperative when the valve is closed, the several sand discharge pipes being alternately in communication through the sand supply apparatus with said compressed fluid apparatus when the valve is alternately opened.

2. In a duplex sanding apparatus, the combination of a compressed fluid apparatus; a sand supply apparatus having front and rear discharge pipes; a valve device having a plurality of conduits to the said supply apparatus and a conduit from the compressed fluid apparatus and a valve casing interiorly divided into a plurality of chambers by a valve seat and connected to said conduits, and having a plurality of said conduits connected on one side of the valve seat and another of said conduits connected on the other side of said valve seat; a regulating valve mounted in said casing and having a handle projecting therefrom and graduated means for admitting fluid from said compressed fluid apparatus to said sand supply apparatus conduits in alternation; the several sand discharge pipes being alternately in communication through the sand supply apparatus with said compressed fluid apparatus when the valve is opened.

3. In a duplex sanding apparatus, the combination of a compressed fluid apparatus; a sand supply apparatus having front and rear discharge pipes; a valve device having a plurality of conduits to the said supply apparatus and a conduit from the compressed fluid apparatus and a valve casing interiorly divided into a plurality of chambers by a valve seat and connected to said conduits, and having a plurality of said conduits connected on one side of the valve seat and another of said conduits connected on the other side of said valve seat; a regulating valve mounted in said casing and having a handle projecting therefrom and a series of ports graduated in size for admitting fluid from said compressed fluid apparatus to said sand supply apparatus conduits in alternation; the several sand discharge pipes being alternately in communication through the sand supply apparatus with said compressed fluid apparatus when the valve is opened.

4. In a duplex sanding apparatus, the compressed fluid apparatus; a sand supply apparatus having front and rear discharge pipes; a valve device having a plurality of conduits to the said supply apparatus and a conduit from the compressed fluid apparatus and a valve casing interiorly divided into a plurality of chambers by a valve seat and connected to said conduits, and having a plurality of said conduits connected on one side of the valve seat and another of said conduits connected on the other side of said valve seat; a regulating valve mounted in said casing and having a handle projecting therefrom and graduated means for admitting fluid from said compressed fluid apparatus to said sand supply apparatus conduits in alternation, and alarm means between said fluid apparatus and the sanding apparatus and in communication with one of the conduits, and operative when the valve is open and inoperative when the valve is closed; the several sand discharge pipes being alternately in communication through the sand supply apparatus with said compressed fluid apparatus when the valve is opened.

5. In a duplex track sanding apparatus, the combination with an engine having a truck pivoted thereto, of a compressed fluid apparatus; a sand supply apparatus having front and rear sand discharge members including sand delivery pipes carried by the engine and ejectors carried by the trucks; a valve device having a plurality of conduits to the said supply apparatus and the compressed fluid apparatus and a valve casing interiorly divided into a plurality of chambers by a valve seat and connected to said conduits, and having a plurality of said conduits connected on one side of the valve seat and another of said conduits on the other side of said valve seat; a regulating valve mounted in said casing and having a handle projecting therefrom for admitting fluid from said compressed fluid apparatus to said sand supply apparatus conduits in alternation, the several sand discharge pipes being alternately in communication through the sand supply apparatus with the compressed fluid apparatus when the valve is opened, and said several sand discharge pipes being provided with flexible connections between said sand delivery pipe and said ejector member, to compensate for the movement of the truck.

[Claim 6 not printed in the Gazette.]

1,023,101. HOSE-SUPPORTER STRIP. CHARLES J. WHITE, New Britain, Conn., assignor to C. J. White Manufacturing Company, New Britain, Conn., a Corporation of Connecticut. Filed Apr. 1, 1911. Serial No. 618,275. (Cl. 24—265.)

1. As a new article of manufacture, two strips of webbing to be joined together flatwise, a metallic clamp for joining said strips together, said clamp comprising a channeled portion receiving both of said strips, and two end ears arranged to press said strips down into said channeled portion to hold the same therein.

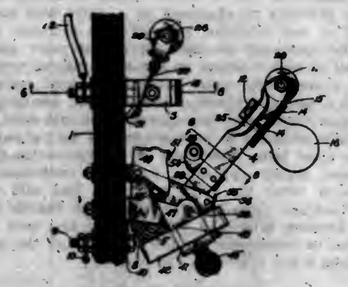
2. As a new article of manufacture, two strips of webbing to be joined together flatwise, a metallic clamp for

joining said strips together, said clamp comprising a channeled portion receiving both of said strips, two end ears arranged to press said strips down into said channeled portion to hold the same therein, and an intermediate presser bar between said ears and that part of the webbing in the channel.



3. As a new article of manufacture, a hose supporter comprising a main strip of elastic webbing, a non-elastic reinforcing strip therefor arranged to be joined to the main strip near one end thereof, a metallic clamp for securing said strips together, said clamp comprising a channeled portion, two end ears arranged to press both strips of said webbing down into said channeled portion, the lower part of the second strip being folded back to cover the back of said metallic clamp, including said ears, and means for securing said folded-back portion of the second strip to the end of the first mentioned strip.

1,023,102. CIRCUIT-BREAKER. CHARLES C. BADEAU, Boston, Mass., assignor to Sears B. Condit, Jr., Boston, Mass. Filed Feb. 20, 1909. Serial No. 479,203. (Cl. 175—268.)



1. In an electric switch, a movable contact member, its lever, a coöperating latch and catch having a mutual engaging width substantially coextensive with the width of the switch, and means for tripping said latch mechanism.

2. In an electric switch, a movable contact member, its lever, means for normally holding the switch closed, a flat spiral tripping coil, a U-shaped core secured at its middle to the center of said coil at one end of the latter and embracing the coil at each side thereof, and a tripping armature actuated by said core when energised by the coil.

3. In an electric switch, a movable contact member, its lever, means for normally holding the switch closed, a flat spiral tripping coil, a U-shaped core secured at its middle to the center of said coil at one end of the latter and embracing the coil at each side thereof, and a pivoted armature having side portions movable respectively in the respective fields of the said opposite embracing portions of said core to trip said holding means.

4. In an electric switch, a movable contact member, its lever, means for normally holding the switch closed, an electromagnetic tripping mechanism for tripping said holding means, including a U-shaped armature embracing the coöperative part of said mechanism, and pivoted to swing below the rest of the switch, said armature having a part adapted to be engaged for operating the same.

5. In an electric switch, a movable contact member, its lever, means for normally holding the switch closed, and electromagnetic tripping mechanism for tripping said holding means, including a U-shaped armature embracing the coöperating part of said mechanism and pivoted to swing below the rest of the switch, and an insulated handle projecting below the switch for moving said armature.

[Claims 6 to 21 not printed in the Gazette.]

1,023,103. PACKING-TABLE. ALONZO LINTON BAUSMAN, Chicopee, and DANIEL C. COTTREAL, Springfield, Mass., assignors to The National Equipment Company, Springfield, Mass., a Corporation of Massachusetts. Filed Oct. 31, 1911. Serial No. 657,848. (Cl. 193—2.)



1. A packing table comprising a frame, tracks mounted thereon at different levels, endless chains mounted in said frame, driving means therefor, trays, one end of each tray being fastened to said chains and the other end of each tray being supported on said tracks, rotating arms mounted in said frame, gear connections between said arms and said driving means, said arms being arranged to support the free ends of said trays when they leave the tracks at one level and carry them to the tracks at another level while the other ends of the trays pass from one set of tracks to the other by means of the chains, said arms making a half revolution while said chains change from the outward to the inward path of their cycle of operations, all arranged so that the trays remain level at all times.

2. A packing table comprising one upper and one lower set of tracks, the lower set terminating at one end in a semi-circular track, an endless chain, and sprocket-wheels mounted in the frame, the greater part of said chain arranged in close proximity to said tracks, trays with rollers adapted to ride on said tracks, one end of each tray being fastened to the chain and the other end being freely rotatable, arms mounted on the frame with gear connections to the sprocket-wheels, the trays and arms so arranged that at each half revolution of the arms they will engage the free end of one tray and transfer it from one set of tracks to the other, mechanism connected with some of the arms to coöperate in the transfer of the trays, the other arms coöperating with the semi-circular portion of the lower tracks, all for the purpose described, and a table portion mounted on said frame in close proximity to which the trays are adapted to pass.

3. A packing table comprising a frame, an endless conveyer mounted therein, driving means therefor, trays, one end of each tray fastened to said conveyer and the other end of each tray free from the conveyer and supported by the frame, rotatable members arranged to support the free end of a tray and transfer said free end from one level of the frame to another level while the conveyer transfers the other end of same tray between the two levels of the frame.

1,023,104. ALARM-VALVE. PAUL CARPENTER, Chicago, Ill. Filed July 22, 1909. Serial No. 508,966. (Cl. 105—268.)



1. A valve device comprising a casing, a conical valve member rotatable therein, connections in the casing to an inlet conduit, to a plurality of outlet conduits, and to an atmospheric alarm port, passages in said valve member adapted to register with said connections, means for operating said valve whereby said connections and passages may be brought into register and communication with said atmospheric alarm may be established when the valve is open and means for preventing longitudinal movement between said valve and casing.

2. A valve device comprising a casing, a conical valve member rotatable therein, connections in the casing to an inlet conduit, to an outlet conduit, and to an atmospheric alarm port, passages in said valve member adapted to register with said connections, means for operating said valve whereby said connections and passages may be brought into register and communication with said atmospheric alarm may be established when the valve is open and means for preventing longitudinal movement between said valve and casing.

3. A valve device comprising a casing, a conical valve member rotatable therein, connections in the casing to an inlet conduit, to an outlet conduit, and to an atmospheric alarm port, passages in said valve member adapted to register with said connections, means for operating said valve whereby said connections and passages may be brought into register, and communication with said atmospheric alarm may be established when the valve is open, a ring bearing on the plug and a cap screw threaded to the casing and bearing on the ring to prevent longitudinal movement between said valve and casing.

4. A valve device comprising a casing, a conical valve member rotatable therein, connections in the casing to an inlet conduit, to an outlet conduit, and to an atmospheric alarm port, passages in said valve member adapted to register with said connections, means for operating said valve whereby said connections and passages may be brought into register and communication with said atmospheric alarm may be established when the valve is open, and a spring operating at one end against the valve and at the other end against the casing.

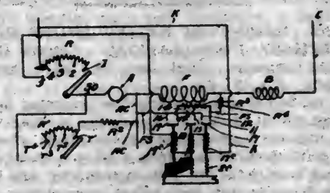
5. A valve device comprising a casing, a conical valve member rotatable therein, connections in the casing to an inlet conduit, to an outlet conduit, and to an atmospheric alarm port, passages in said valve member adapted to register with said connections, means for operating said valve whereby said connections and passages may be brought into register and communication with said atmospheric alarm may be established when the valve is open, a ring bearing on the plug and a cap screw threaded to the casing and bearing on the ring to prevent longitudinal movement between said valve and casing, the said ring having engagement with the casing to prevent rotation of the ring relative to the casing.

[Claims 6 to 16 not printed in the Gazette.]

1,023,105. VARIABLE-SPEED DYNAMIC CONTROL FOR ELECTRIC MOTORS. JOHN D. FIRMIN, Philadelphia, Pa. Filed May 31, 1911. Serial No. 630,513. (Cl. 172—179.)

1. An electric machine comprising an armature, a field in series therewith, a variable series resistance, a shunt circuit about the armature, a variable resistance therein, a shunt circuit about the field, and automatic means for varying the strength of the field dependent on the load applied to the armature.

2. In an electric machine, the combination of an armature, a series field, a variable series resistance, a shunt circuit around the armature excluding the field, a variable resistance in said armature shunt circuit, a shunt circuit about the field, a variable resistance for said field shunt circuit, and means controlled by a circuit in series with the armature and field for varying said field resistance and consequently varying the field strength.



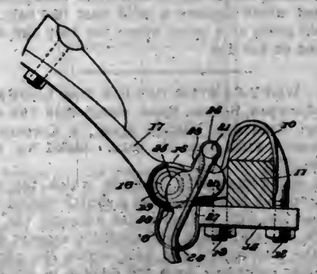
3. In an electric machine the combination of an armature, a field, a circuit in shunt relation to the armature, a circuit in shunt relation to the field, a variable resistance in the latter, and automatic electric switches in the line circuit for controlling said variable resistance.

4. In an electric machine the combination of an armature, a field in series with the armature, a closed armature circuit, a circuit in shunt relation to the field, a variable resistance therein, one or more switches to control said resistance, magnet coils corresponding to the switches, and a circuit in series with the line for said switch magnets, whereby different rotative loads applied to the armature cause the field strength to be varied and the lowering speed to be controlled.

5. In an electric machine, the combination of an armature, a field, a main resistance in series with the armature, an armature circuit, a resistance therein, a circuit in shunt relation to the field, a variable resistance therein, and automatic means for varying said resistance.

[Claims 6 and 7 not printed in the Gazette.]

1,023,106. THILL-COUPLING ATTACHMENT. FRANK M. FOOTE and CHARLES H. SCHABINGER, Marshall, Mich., assignors to Foote Axle Company, Marshall, Mich. Filed Jan. 7, 1911, Serial No. 601,456. Renewed Nov. 25, 1911. Serial No. 662,466. (Cl. 21—57.)



1. An anti-rattler for thill couplings comprising a bar having cams spaced apart and adapted to engage upon the shackle arms of a thill coupling, a lever arm connected to said bar, a lip on the lever arm adapted to bear over one end of the shackle pin of the thill coupling when the lever is disposed in closed position, and another lip on the lever adapted to bear over a shackle pin when the lever is disposed in partly released position and fully releasable only when the lever is moved into an unusual position.

2. The combination with a thill coupling including spaced shackle arms, of a pin extending through said arms and enlarged at one end, a thill shackle having a head located between said shackle arms and rotative upon said pin, a bar having cams spaced apart and engaging upon said shackle arms, a resilient member movably engaging said bar at one end and with a seat at the other end for

bearing against the head of the thill shackle, a lever arm extending from said bar, a lip upon said lever arm and extending over the enlarged end of the shackle pin when the lever is disposed in closed position, and another lip on the lever adapted to bear over a shackle pin when the lever is disposed in partly released position and fully releasable only when the lever is moved into an unusual position.

1,023,107. METHOD OF EXTINGUISHING FIRES IN TELEPHONE INSTALLATIONS. CONRAD GAUTSCH, Berlin, Germany. Filed Jan. 28, 1911. Serial No. 605,262. (Cl. 23—5.)

1. A method of extinguishing fires occurring in electric cable and circuit installation consisting in separately conveying different extinguishing gases which when mixed form a solid, dust-like salt, from a place of storage and introducing them to the fire to be extinguished, and in allowing the gases to mix just before encountering the fire whereby a solid dust-like salt is produced and deposited on the fire and upon the accessible adjacent parts of the installation.

2. A method of extinguishing fires in bundles of cables consisting in separately introducing different extinguishing gases, which when mixed form a solid dust-like salt, into the interior of the bundles of cables, and permitting the gases to unite in the interior of the bundles of cables to form a solid dust-like salt which is deposited upon said cables and upon the accessible adjacent parts of the installation.

3. A method of extinguishing fires occurring in bundles of electric cables consisting in conveying extinguishing gases which when mixed form a solid, dust-like salt, from a distant place through suitable conduits to the place where the fire has broken out, first expelling the air from the conduits by the gases passing through said conduits and in mixing the gases prior to their escape from the conduits.

4. Method of extinguishing fires occurring in bundles of electric cables, consisting in conveying extinguishing gases, which gases when mixed form a solid dust-like salt, from a distant place through suitable conduits to the place where the fire has broken out, and in mixing the gases prior to their escape from the conduits and in carrying off the excess of gases, substantially as described.

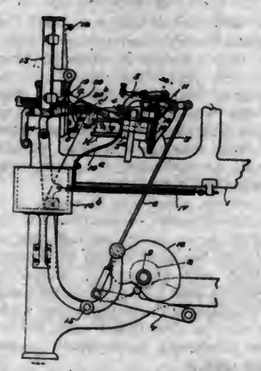
5. A method of extinguishing fires occurring in bundles of electric cables consisting in separately conducting gases which when mixed produce a solid dust like salt, and in mixing said gases at a point where the dust like salt will be deposited on the fire.

1,023,108. WEFT-PARTER DEVICE FOR LOOMS. SIMEON S. JACKSON, Boston, Mass., assignor to The Stafford Company, Readville, Boston, Mass., a Corporation of New Jersey. Filed Jan. 17, 1912. Serial No. 671,585. (Cl. 139—85.)

1. In a weft-replenishing loom in which the working shuttle is expelled forwardly from a shuttle-box on the lay, the combination with a weft-parter adjacent the selvage of the cloth, of a stationary weft or filling-support mounted adjacent the weft-parter and over which the portion of weft or filling extending from the selvage to the expelled shuttle is laid by the said shuttle as the latter falls in front of the lay, the said stationary support supporting said portion of weft or filling in position to be acted upon by the weft-parter.

2. In a weft-replenishing loom in which the working shuttle is expelled forwardly from a shuttle-box on the lay, the combination with a weft-parter adjacent the selvage of the cloth, of a weft or filling support mounted independently of the lay adjacent the weft-parter and over which the portion of weft or filling extending from the selvage to the expelled shuttle is laid by the said shuttle as the latter falls in front of the lay, the said support supporting the said weft or filling in position to be acted upon by the weft-parter.

3. In a weft-replenishing loom in which the working shuttle is expelled forwardly from a shuttle-box on the lay, the combination with a weft-parter located adjacent the selvage of the cloth, of a weft-support mounted independently of the lay, and a coöperating piece, as *g*, mounted upon the lay and projecting alongside the said weft-support, over both of which the portion of weft or filling extending from the selvage to the expelled shuttle is carried by the latter as it is expelled and falls in front of the lay, said weft-support adapted to sustain said portion of the weft or filling in position to be acted upon by the weft-parter, and the said piece being adapted to place the weft or filling forward upon the weft-support.



4. In a weft-replenishing loom in which the working shuttle is expelled forwardly from a shuttle-box on the lay, the combination with a weft-parter located adjacent the selvage of the cloth, of a stationary weft-support mounted independently of the lay, and a coöperating piece, as *g*, mounted upon the lay and projecting alongside the said weft-support, over both of which the portion of weft or filling extending from the selvage to the expelled shuttle is carried by the latter as it is expelled and falls in front of the lay, said weft-support adapted to sustain said portion of the weft or filling in position to be acted upon by the weft-parter, the said piece being adapted to place the weft or filling forward upon the weft-support.

5. In a weft-replenishing loom in which the working shuttle is expelled forwardly from a shuttle-box on the lay, the combination with a weft-parter adjacent the selvage of the cloth, of a stationary weft or filling-support mounted adjacent the weft-parter and over which the portion of weft or filling extending from the selvage to the expelled shuttle is laid by the said shuttle as the latter falls in front of the lay, the said stationary support supporting said portion of weft or filling and constructed to hold it forward in position to be acted upon by the weft-parter.

[Claim 6 not printed in the Gazette.]

1,023,109. DRAFT-GEAR. HARRY T. KRAKAU, Cleveland, Ohio, assignor to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed June 30, 1910. Serial No. 569,780. (Cl. 213—42.)



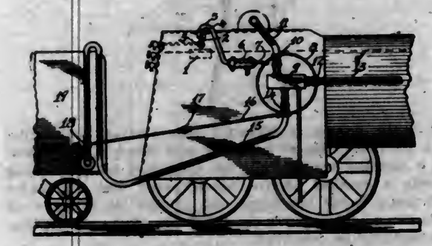
1. A draft gear having a segmental abutment supporting the forward end of the draft gear and rigidly secured to the car frame, a radially swinging draft member whose forward end portion is suspended from and has a buffing and pulling engagement with said abutment, and a draft rigging and coupler carried by said draft member, substantially as described.

2. A draft gear having a segmental abutment rigidly secured to the car frame, a radially swinging draft member having a portion extending below said abutment, and a draft rigging and coupler mounted on the draft member below the abutment, the draft member having a buffing engagement with the abutment above one end of the draft rigging, and a pulling engagement with the abutment above the opposite end of the draft rigging; substantially as described.

3. A draft gear, comprising a segmental abutment rigidly secured to the car frame, and a radially movable draft member pivoted behind the abutment and having a downwardly offset forward portion extending underneath the abutment and having upward projections which have a supporting and shock-transmitting engagement with the abutment, substantially as described.

4. A draft gear, comprising a segmental abutment, a pivoted radially swinging draft member extending below the abutment, and having a lip which has a sliding and supporting engagement with the forward edge portion thereof, said member also having an upward projection back of the rear edge of the abutment, and a filler piece carried by the draft member with a portion fitting between the projection thereof and the rear edge of the abutment, and also having a sliding engagement with the rear edge portion of the abutment, substantially as described.

1,023,110. AUTOMATIC INJECTOR FOR BOILERS. WILLIAM JESSIE LAMAR, Kansas City, Mo., assignor of one-half to John S. Kirkpatrick, Kansas City, Mo. Filed Jan. 26, 1911. Serial No. 604,918. (Cl. 162—2.)



1. In combination with a boiler, an injector, a discharge pipe leading from said injector into the boiler, a feed-water pipe communicating with said injector, a pipe containing fluid under pressure communicating with the injector to force the feed-water into the boiler, valves on said pipes, an annulus adapted to partially rotate and simultaneously actuate said valves, and means controlled by the water level in the boiler to actuate said annulus.

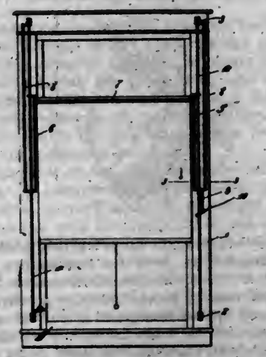
2. In combination with a boiler, an injector, a discharge pipe leading from said injector into the boiler, a feed-water pipe communicating with said injector, a pipe containing fluid under pressure communicating with the injector to force the feed-water into the boiler, valves on said pipes, an annulus for simultaneously actuating said valves, and a fluid controlled piston for actuating said annulus.

3. In combination with a boiler, an injector discharging into said boiler, a feed-water pipe communicating with said injector, two valves to control the flow of water through said feed-water pipe, an annulus having direct connection with one of said valves, a connecting-rod connecting said annulus with the other valve, a steam supply-pipe leading from the boiler to the injector, a valve to control the flow of steam through said steam-pipe and connected to the annulus, and means controlled by the water in the boiler to actuate said annulus.

4. In combination with a boiler, an injector discharging into said boiler, a feed-water-pipe leading to said injector, a valve to control the flow of water through said feed-water pipe, a steam-pipe leading from the boiler to the injector, a valve to control the flow of steam through said steam-pipe, an annulus operably-connected to said valves to simultaneously actuate the same, a piston operably-connected to said annulus to partially rotate the same, a cylinder inclosing said piston, a steam-pipe leading to said cylinder from the boiler, a shell within the boiler communicating with the inlet end of the last-mentioned steam-pipe and provided with a valve seat, a vertically-arranged valve-plug adapted to engage said seat, and a float controlled by the water level in the boiler to actuate said valve-plug.

5. In combination with a locomotive, a tender therefor, an injector mounted upon said locomotive, a feed-water pipe leading from the tender to said injector, a valve adjacent the tender to control the flow of water through said feed-water pipe, a valve adjacent the injector to control the flow of water through said feed-water pipe, a steam pipe leading from the locomotive boiler to the injector, a valve to control the flow of steam through said steam-pipe, a discharge pipe leading from the injector to the boiler, a valve to control the flow of fluid through said discharge-pipe, an annulus adjacent the injector and operably connected to the feed-water pipe valve, the steam-pipe valve, and the discharge-pipe valve adjacent said injector to actuate the same, a connecting-rod connecting the annulus and the feed-water pipe valve adjacent the tender, a reciprocable piston to partially rotate the annulus, a cylinder containing said piston, a steam-pipe leading from the boiler to said cylinder, a valve seat within the boiler communicating with said steam-pipe, a valve-plug adapted to engage said seat, a guide for said valve-plug to hold it in proper relation to its seat, and a float controlled by the water level in the boiler to actuate said valve plug, substantially as set forth and described.

1,023,111. SHADE-ROLLER SUPPORT. JOHN LAVIGNE, Everett, Wash. Filed Sept. 13, 1910. Serial No. 581,743. (Cl. 156—27.)



In a device of the class described, a support, guiding rods arranged on opposite sides thereof, substantially U-shaped guiding brackets slidably mounted on said members, means carried by said guiding brackets for holding the shade roller, a resilient connection between the guiding brackets and the support adapted to normally raise said brackets, a rod connected to the lower end of each bracket, and diagonally positioned binding plates carried by the rods and engaging the guide members to hold said guiding supports in adjusted position.

1,023,112. STOCK-RINGER. WILLIAM H. LEAVER and CHARLES H. SMITH, Chicago, Ill. Filed Mar. 1, 1909. Serial No. 480,519. (Cl. 128—54.)

1. In a stock ringer, the combination with a pair of jaws adapted to close an open ring, of a spring for positively closing and then positively opening said jaws to bend and release the ring, and a hand lever for initially energising said spring.

2. In a stock ringer, the combination with a tubular barrel, of a pair of hinged jaws attached to said barrel, a

coiled actuating spring carried by said barrel, and means for operating one of said jaws by the forward movement of the forward end of said spring.



3. In a stock ringer, the combination with a pair of hinged jaws, of a tubular support for said jaws, a coiled spring within said tubular support adapted by its forward expansion to close said jaws and a hand lever attached to the tubular support for compressing said spring.

4. In a stock ringer, the combination with a tubular barrel, of a pair of hinged jaws attached to said barrel, a coiled actuating spring located in said barrel, a movable rod upon which said spring acts extending through said spring, and a link connecting said rod with one of the jaws for operating said jaw.

5. In a stock ringer, the combination with a pair of hinged jaws, of a tubular support for said jaws, a coil spring located within the hollow portion of said support, an auxiliary hand lever to put said spring under compression, means to release said spring, and means to transmit energy from said spring to one of said jaws.

[Claims 6 to 20 not printed in the Gazette.]

1,023,113. FLAX AND OTHER GRAIN ATTACHMENT FOR HARVESTERS. FRANK LINKA, Minot, N. D. Filed Dec. 27, 1910. Serial No. 599,635. (Cl. 56—50.)



1. A flax or other grain dropping mechanism for harvesters including a table, teeth for holding long grain while forming into a bunch on the table, means for moving the teeth with respect to the table to permit the bunch of grain to drop off the same, and a leaf extending along the bottom edge of the table below and outside the said teeth for holding on the table the short grain that passes through the teeth and movable simultaneously with the teeth to permit the short grain to drop at the same time the bunch drops off the table.

2. A flax or other grain dropping mechanism for harvesters including a table, teeth for holding long grain while forming into a bunch on the table, means for operating the teeth for dropping the formed bunch, and means mounted independently of the teeth and located below the latter for holding and periodically dropping the short grain that passes through the teeth.

3. A harvester attachment of the class described comprising an inclined table, a set of teeth coöperating with the table for retaining long grain on the table until a bunch is formed, a shaft carrying the teeth and for moving the same to open and closed position to permit the bunch to slip off the table, a leaf normally disposed at an angle to the table at a point below and outside the teeth for retaining on the table the short grain that passes through the teeth, hinges connecting the leaf to the table to permit the leaf to swing downwardly from the lower edge of the latter, an arm on the shaft to move therewith, and a rod connected with the arm and leaf for moving the latter downwardly to drop the short grain at the same time the teeth move to drop the bunch of grain.

4. In a flax or other grain harvester, the combination of a discharge table, teeth for holding the long grain on the table, a single leaf on the table and arranged below and outside the teeth for holding the short loose grain passing through the teeth, and operating means between the teeth and leaf whereby both open and close together to drop the long and short grain simultaneously.

5. A harvester attachment of the class described comprising an inclined table, movable teeth over the table for holding relatively long grain thereon, a leaf hingedly connected with the table at a point below and outside the teeth and normally disposed in a closed position at right angles to the table for holding the short grain that passes through the teeth, said teeth being moved out of engagement with the long grain to permit the same to drop off the table, and means for moving the leaf to open position to permit the short grain to drop off the table with the long grain.

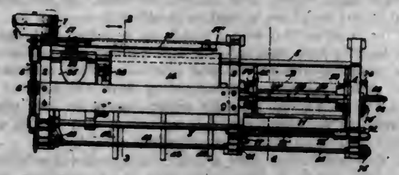
[Claims 6 to 11 not printed in the Gazette.]

1,023,114. BOTTLE. THOMAS MILLS, Bartlett, Ohio, assignor of one-half to Samuel L. Roseburg, Pittsburgh, Pa. Filed Oct. 6, 1911. Serial No. 653,147. (Cl. 215—77.)



A bottle having a thickened neck portion terminating in a shouldered lip at its upper end which forms a seat for a metallic sealing cap, the thickened portion having therein a vertical groove whose upper end terminates sufficiently below the upper end of said lip to leave an unbroken seating surface for the flange of the sealing cap, substantially as described.

1,023,115. MACHINE FOR MANUFACTURING SHEET-METAL PIPE. FRANK MAGIDSON, Pittsburgh, Pa., assignor to Royal Automatic Machine Company. Filed Feb. 1, 1911. Serial No. 605,889. (Cl. 78—51.)



1. In a machine for manufacturing sheet-metal pipe, the combination of mechanism for forming a pipe blank from a plate, mechanism for fastening together the longitudinal edges of the blank, a blank-moving carriage, and means for moving the carriage in one direction for removing the blank from the forming mechanism to the fastening mechanism and for moving the carriage in the opposite direction for removing the pipe from the fastening mechanism.

2. In a machine for manufacturing sheet-metal pipe, the combination of mechanism for forming a pipe blank, mechanism for riveting together the edges of the blank, a carriage for moving the blank from the forming mechanism to the riveting mechanism, pipe gripping means on the carriage, and means for moving the carriage in reverse directions for positioning the blank for riveting and for removing the pipe from the riveting mechanism.

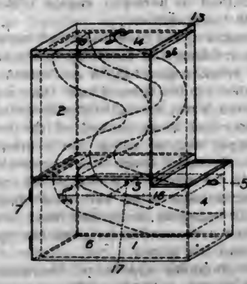
3. In a machine for manufacturing sheet-metal pipe, the combination of mechanism for forming a blank with longitudinal edges which are subsequently fastened together, a holder which said longitudinal edges engage as the blank emerges from the forming mechanism, the holder being shaped to permit the blank to slide longitudinally therefrom, means for thus sliding the blank, and fastening mechanism for receiving the blank as it is moved from the holder.

4. In a machine for manufacturing sheet-metal pipe, the combination of blank-forming mechanism, blank riveting mechanism, a carriage for moving the blank from the forming mechanism to the riveting mechanism and for removing the same from the latter, and mechanism for intermittently moving the carriage only at the completion of the forming and riveting operations.

5. In a machine for manufacturing sheet-metal pipe, the combination of blank forming mechanism, riveting mechanism including a mandrel and a hammer, a reversely movable carriage for placing the blank on the mandrel and for removing the same therefrom, and blank gripping means on the carriage for engaging the blank and causing it to move with the carriage.

[Claims 6 to 32 not printed in the Gazette.]

1,023,116. COOLING DEVICE FOR BOTTLES AND PACKAGES. GEORGE T. BAILEY, St. Petersburg, Fla. Filed Sept. 20, 1910. Serial No. 582,841. (Cl. 62—10.)



1. In a cooling apparatus for bottles and packages, a suitable case, an inclined chute extending from the top of said case near its rear end to the front end of the case near its bottom, an ice chamber in said case above the said inclined chute, a drain from said ice chamber to said chute, a downward projecting throat piece 15 at the front end of said ice chamber into the lower end of said chute, and a lid or cover for said ice chamber, all in combination with a plurality of cylindrical bottle or package cases provided to roll in said chute, substantially as set forth.

2. In a cooling apparatus for bottles and packages, a thimble made of a sheet of spring metal bent into the form of a hollow cylinder so that one longitudinal edge will overlap its opposite edge a distance approximating to the normal diameter of the respective cylinder, and provided to inclose a bottle or other package, in combination with a chute in which it is provided to roll downwardly, substantially as set forth, and for the uses specified.

3. In a cooling apparatus for bottles and packages, a rectangular case, an inclined chute within said case, an ice chamber within said case and above said chute, an opening in the top of said case above the lower end of said chute adapted to admit the human hand, a drain orifice in said ice chamber connecting with said chute, an overflow pipe in said case and above the lower end of the top wall or roof or said chute, and below the top of said opening, a downward projection 15, at the front end of said ice chamber and extending below the level of said overflow pipe, an opening in the upper end of said chute to the top of said case, all substantially as set forth.

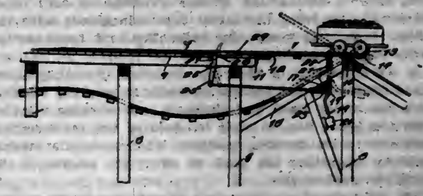
4. In a cooling apparatus for bottles and packages an extension section adapted to be placed upon the said cooling apparatus and having within it a serpentine shaped chute used as a magazine to receive and deliver packages of uniform shape and size, to the magazine in said cooling apparatus substantially as set forth.

5. In a cooling appliance for bottles or packages a suitable case, an inclined chute extending from the top of said case near its rear end to the front end of said case near its bottom, an ice chamber in said chute, and a lid or cover for said chamber, an extension section 2, upon said cooling appliance and having within it a serpentine shaped chute used as a magazine to receive and deliver packages, all substantially as set forth.

[Claims 6 to 9 not printed in the Gazette.]

REISSUES.

13,899. CAR-HANDLING APPARATUS. LAVALETTE L. LOGAN, deceased, Robertsdale, Pa., by Juna M. Logan, Falls township, Wyoming county, Pa., assignee by mesne assignments. Filed June 21, 1911. Serial No. 634,651. Original No. 753,719, dated Mar. 1, 1904, Serial No. 157,278. (Cl. 214—8.)



1. An apparatus of the class described including superposed tracks, a track section supported for oscillation between its ends, adapted normally to occupy a position in working relation with the upper track and shiftable into working relation with the lower track, a latch for holding said track-section in its normal position, and mechanism operative with the said track-section for moving the latch into its ineffective position.

2. An apparatus of the class described including superposed tracks, a track-section supported for oscillation between its ends, adapted normally to occupy a position in working relation with the upper track and shiftable into working relation with the lower track, a latch for holding said track-section in its normal position, mechanism operative with the said track-section for moving the latch into its ineffective position, and independent means for moving the latch into its operative position.

3. An apparatus of the class described including superposed tracks, a track-section supported for oscillation between its ends, adapted normally to occupy a position in working relation with the upper track and shiftable into working relation with the lower track, a latch for holding said track-section in its normal position, mechanism operative with the said track-section for moving the latch into its ineffective position, and car-operated means for moving said latch into its effective position.

4. An apparatus of the class described including superposed tracks, a track-section normally in working relation with the upper track, supported for oscillation between its ends and its inner branch being longer than its outer one, a latch for holding the track-section in its normal position, and automatic mechanism for throwing the said latch into its ineffective position, and for subsequently moving the track-section into working relation with the lower track.

5. An apparatus of the class described including superposed tracks, a track-section normally in working relation with the upper track, supported for oscillation between its ends, its inner branch being longer than its outer one and the latter having a car-stop, a latch for holding the track-section in its normal position, and auto-

matic mechanism for releasing said latch and subsequently moving the said track-section into working relation with the lower track.

6. An apparatus of the class described including superposed tracks, a track-section normally in working relation with the upper track, supported for oscillation between its ends and its inner branch being longer than its outer one, means for holding the track-section in its normal position, mechanism for moving the track-section into working relation with the lower track, and independent means for subsequently returning said track-section to its normal position.

7. An apparatus of the class described including superposed tracks, a track-section normally in working relation with the upper track, and automatically-operative mechanism for moving the track-section out of its normal position and into working relation with the lower track and for subsequently returning said track-section to its normal position.

8. An apparatus of the class described including superposed tracks, a track-section normally in working relation with the upper track, supported for oscillation between its ends and its inner branch being longer than its outer one, the latter having a stop for a car whereby when the car strikes said stop said inner branch can be elevated by the weight in the car, automatically-operative mechanism thrown into action by the elevation of said inner branch for lowering the latter into coincidence with the lower track, and means for returning said track-section to its initial position.

9. An apparatus of the class described including superposed tracks, a track-section normally in working relation with the upper track and shiftable into working relation with the lower one, a latch for holding the track-section normally in its working position, and automatic mechanism for operating the latch to effect the release of the shiftable track-section.

10. An apparatus of the class described including superposed tracks, a track-section normally in working relation with the upper track, supported for oscillation between its ends and its inner branch being longer than its outer one, and an operating device for moving the shiftable track-section into working relation with the lower track, connected to said track-section by means involving a loose joint.

11. An apparatus of the class described including superposed tracks, a track-section normally in working relation with the upper track, supported for oscillation between its ends, a weighted lever constituting a device for shifting the track-section into working relation with the lower track, and a longitudinally-slotted link connecting the track-section and weighted lever.

12. An apparatus of the class described including superposed tracks, a track-section normally in working relation with the upper track supported for oscillation between its ends and its inner branch being longer than its outer one, a weighted lever operatively connected with the said longer branch by means involving a loose joint, and a latch for holding the track-section in its normal position, operatively connected with said weighted lever said lever serving to throw the latch into its ineffective position.

13. An apparatus of the class described including superposed tracks, a track-section normally in working relation with the upper track, supported for oscillation between its ends and its inner branch being longer than its outer one, a weighted lever operatively connected with the said longer branch by means involving a loose joint, and a latch for holding the track-section in its normal position operatively connected with said weighted lever, said lever serving to throw the latch into its ineffective position, and means in position to be operated by a car upon the upper track for moving the latch into its effective position.

14. An apparatus of the class described including superposed tracks, a track-section normally in working relation with the upper track, supported for oscillation between its ends and its inner branch being longer than its outer one, a latch for holding the track-section in its normal position, a weighted lever, a longitudinally-slotted link connected with the longer branch of the track-section and also with the weighted lever, a rocker operatively connected with the latch, and a longitudinally-slotted rod also connected with the rocker and operatively connected with said lever.

15. An apparatus of the class described including superposed tracks, the lower one of which has first a downward and then an upward inclination, and an oscillatory track-section shiftable into working relation with the respective tracks.

16. An apparatus of the class described including superposed tracks, a track-section normally in working relation with the upper track, supported for oscillation between its ends and its inner branch being longer than its outer one, and independent means acting against the branches for moving said track-section in opposite directions.

17. An apparatus of the class described including superposed tracks, a track-section normally in working relation with the upper track, supported for oscillation between its ends and its inner branch being longer than its outer one, a weight carried by the outer branch, and a counterweighted lever connected with the inner branch by means including a loose joint.

18. An apparatus of the class described including superposed tracks, a track-section normally in working relation with the upper track, supported for oscillation between its ends, and its inner branch being longer than its outer one, a bracket supported below the free end of the upper track, having notches for the passage of the rails at the inner end of said track-section, and a latch supported by said bracket and adapted to normally engage under the inner free end of said track-section.

19. An apparatus of the class described including superposed tracks, a track-section normally in working relation with the upper track, supported for oscillation between its ends and its inner branch being longer than its outer one, a counterweighted lever, a longitudinally-slotted link connecting the lever and inner branch of the track-section, a rocker the upper arm of which has a branch disposed in proximity to the upper track, a rod connected with the lower branch of the rocker and operatively connected by means including a loose joint with said weighted lever, a latch normally engaging under the inner branch of the track-section, and a connection between the upper branch of said rocker and the latch.

20. In a car dumping apparatus, the combination of two superposed tracks, a track-section mounted for oscillatory movement about a horizontal axis and adapted and arranged to register successively with the said superposed tracks, to receive a car from one of them and discharge it onto the other, and means for receiving material from a car in an inclined position on the oscillatory track-section and conducting the said material to points out of vertical alinement with the point at which the material is received from the car.

21. In a car dumping apparatus, the combination of two superposed tracks, a track-section mounted for oscillatory movement about a horizontal axis and adapted and arranged to register successively with the said superposed tracks to receive a car from one of them and to discharge it onto the other, and means for receiving material from a car on the oscillatory track-section and conducting the said material to points out of vertical alinement with the point at which the material is received from the car.

22. In a car dumping apparatus, the combination of two superposed tracks, a track-section mounted for pivotal movement about a horizontal axis and automatically operative mechanism for moving the section to register successively with the said superposed tracks to receive a car from one of them and to discharge it onto the other, and subsequently to register with the first track to receive a second car therefrom, and means for receiving material from a car in an inclined position on the pivotally mounted track-section.

23. In a car dumping apparatus, the combination of two superposed tracks, a track-section mounted for pivotal movement about a horizontal axis, automatically operative means for moving the pivoted track-section to register successively with the said superposed tracks to receive a plurality of cars, one at a time from one of the tracks and discharge them, one at a time onto the other track, and means for receiving material discharged from the cars when they are on the pivoted track-section.

24. In a car dumping apparatus, the combination of a track-section, pivotally mounted for movement about a horizontal axis, two superposed tracks, with one of which the pivoted section is adapted to register to receive a car and with the other of which it is adapted to register to discharge a car, the second of the said superposed tracks being inclined downward away from the pivoted track-section, means for supporting the pivoted section in register with the first said track, automatically operative mechanism for causing the pivoted track-section to be disengaged from the supporting means and to be moved into register with the second said track, and means for receiving material from a car when it is in an inclined position on the pivoted track-section.

25. In a car dumping apparatus, the combination of a track-section, mounted for oscillatory movement about a horizontal axis, two superposed tracks, with one of which the pivoted section is adapted to register to receive a car and with the other of which it is adapted to register to discharge a car, the second of the said superposed tracks being inclined downward away from the pivoted track-section, and means for receiving material from a car when it is in an inclined position on the pivoted track-section and conducting the said material to points out of vertical alinement with the point at which the material is received from the car.

26. In a car dumping apparatus, the combination of a track-section, two superposed tracks, with one of which the pivoted section is adapted to register to receive a car and with the other of which it is adapted to register to discharge a car, the two superposed tracks converging at the ends adjacent the pivoted section, means for supporting the pivoted section in register with the first said track, automatically-operative mechanism for causing the pivoted-track-section to be disengaged from the said supporting means and to be moved into register with the second said track, and means for receiving material from a car when in an inclined position on the pivoted track-section.

27. In a car dumping apparatus, the combination of a pivoted track section, two superposed tracks with one of which the pivoted section is adapted to register to receive a car and with the other of which it is adapted to register to discharge a car, the said superposed tracks converging at the ends adjacent the pivoted section and lying parallel to each other at a point remote from the pivoted section, means for supporting the pivoted section in register with the first said track while a car is being received, automatic means for causing the pivoted section to be disengaged from the supporting means and to be moved into register with the second said track, means for supporting the section in register with the second track while the car is being discharged thereonto, and automatic means for causing the disengagement of the section from the last said supporting means and for causing the return movement of the section into register with the first track.

28. In a car dumping apparatus, the combination of an oscillatory track-section, and two superposed tracks with one of which the oscillatory section is adapted to register to receive a car, and with the other of which it is adapted to register to discharge a car, the said superposed tracks converging at the ends adjacent the oscillatory section and diverging from each other at a point remote from the oscillatory section.

29. In a car dumping apparatus, the combination of two tracks, extending in the same general direction in proximity to each other, a shiftable track-section for transferring a car from one of the said tracks to the other of the said tracks, the said section serving to incline the car into dumping position, automatically-operative mechanism for causing the operation of the shiftable track-section, the said automatically operative mechanism being additional to the car and additional to the track-section itself, and means for receiving material from the car when in the said inclined dumping position.

30. In a car dumping mechanism, the combination of a track system comprising a track for the supporting and guiding of cars moving in one direction, a track in the same vertical plane with the first track for the supporting and guiding of cars moving in the opposite direction, and an oscillatory track section for transferring cars from the first track to the second, a part of the said track system being adapted for supporting a car in an inclined dumping position, and means for receiving material from a car when in the said inclined dumping position.

31. The combination with a car handling mechanism comprising two superposed tracks and an oscillatory track-section adapted to register successively with the two tracks to transfer a car from one of them to the other, of means for receiving material from the car when in an inclined position on the said car handling mechanism and conducting the said material to points out of vertical alinement with the point at which the material is received from the car.

32. The combination with a car handling mechanism, comprising two superposed tracks, a pivoted track-section adapted to register successively with the two tracks to transfer a car from one of them to the other, and automatically-operative mechanism for causing the operation of the pivoted track-section, the said automatically operative mechanism being additional to the car and additional to the track-section itself, of means for receiving material from the car when in an inclined position on the said car handling mechanism.

33. In a car dumping apparatus, the combination of two superposed tracks, an oscillatory track-section mounted for movement to register first with the upper track to receive a car and subsequently to register with the lower track to discharge the car, the said track section being adapted and arranged to first support the car in a position in alinement with the upper track and then in a position inclined downward in the direction of its movement onto the section, and means for receiving material from the car when in the said inclined position.

34. In a car handling apparatus, the combination of two superposed tracks, a pivoted track-section mounted for movement to register first with the upper track to receive a car and subsequently to register with the lower track to discharge the car, the said track-section being arranged and adapted to first support the car in a position in alinement with the upper track, and then in a position inclined downward in the direction of its movement onto the section, automatically-operative means for moving the track-section, and means for receiving material from the car when in the said inclined position.

35. In a car dumping apparatus, the combination of two superposed tracks, a track-section pivoted to oscillate with its center in the vertical plane passing through the centers of the two superposed tracks into register with one of them to receive a car and into register with the other to discharge a car, and a chute located with its center line also in the said vertical plane and positioned to receive material from a car in an inclined position on the pivoted section.

36. In a car dumping apparatus, the combination of two superposed tracks, a track-section pivotally mounted to oscillate with its center in the vertical plane passing through the centers of the two superposed tracks into register with one to receive a car and into register with the other to discharge a car, a chute for receiving material from a car in an inclined position on the said pivoted section the chute having its center line in the same vertical plane, and means for temporarily retaining the car on the pivoted section in dumping position and for then permitting it to pass to the second of the superposed tracks.

37. In a car dumping apparatus, the combination of two superposed tracks, a track-section pivotally mounted to oscillate into successive register with the said tracks, a releasable latch for holding the section in register with the upper track during the passage of a car, and means for receiving material from a car when in inclined position on the pivoted section and conducting the said material

to points out of vertical alinement with the point at which the material is received from the car.

38. In a car dumping apparatus, the combination of two superposed tracks, a pivotally mounted track-section adapted to oscillate into successive register with the said tracks, a latch for holding the track-section in register with the upper track, means for receiving material from a car in an inclined position on the track-section, automatic means for causing the movement of the track-section from register with the lower of the superposed tracks to register with the upper of the superposed tracks, and automatic means for causing the latch to engage the track-section.

39. In a car dumping apparatus, the combination of two superposed tracks, an oscillatory track-section adapted to receive a car from one of the superposed tracks and to deliver it to the other of the superposed tracks, means for holding the oscillatory section in alinement with the superposed track from which the car is received, means for moving the section into alinement with the superposed track to which the car is discharged, and a chute for receiving material from the car when it is in an inclined position on the track-section and conducting the said material to points out of vertical alinement with the point at which the material is received from the car.

40. In a car dumping apparatus, the combination of two superposed tracks, an oscillatory track section adapted to register with one of the superposed tracks to receive a car therefrom and adapted to register with the other of the superposed tracks to discharge a car thereonto, automatically operative devices for successively supporting the track-section in register with the respective superposed tracks, means for causing the movement of the track-section from register with the first track to register with the second track, means for receiving material from a car when in an inclined position on the oscillatory track-section, and automatic gravity controlled means for causing the oscillatory track section to return from register with the second of the superposed tracks, to register with the first of the superposed tracks.

41. In a car dumping apparatus, the combination of two superposed tracks, an oscillatory track-section adapted to register with one of the superposed tracks to receive a car and with the other of the superposed tracks to discharge a car, a latch for holding the oscillatory track section in alinement with one of the superposed tracks, and means controlled by the movement of the car along the said superposed tracks to move the latch.

42. In a car dumping apparatus, the combination of two superposed tracks, an oscillatory track-section adapted to register with one of the tracks to receive a car and with the other of the tracks to discharge a car, a latch for holding the track section in alinement with the upper of the superposed tracks, and means depending upon the movement of the car along the last said upper of the tracks for moving the latch.

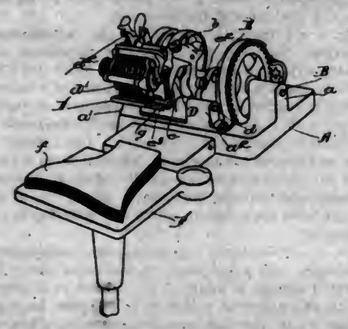
43. In car-dumping mechanism, the combination with two superposed tracks, of an oscillatory track-section adapted in different angular positions about its axis to register with said tracks respectively, the axis of said track-section being spaced from the end of the upper of said tracks and lying substantially on a line with the lower thereof.

44. In car-dumping mechanism, the combination with two superposed tracks; of an oscillatory track-section adapted in different angular positions about its axis to register with said tracks respectively, the axis of said track-section being spaced from the end of the upper of said tracks and lying substantially on a line with the lower thereof; and means normally retaining said track-section in register with such upper track.

45. In car-dumping mechanism, the combination with two superposed tracks; of an oscillatory track-section adapted in different angular positions about its axis to register with said tracks respectively, the axis of said track-section being spaced from the end of the upper of said tracks and lying substantially on a line with the lower thereof; and means normally retaining said track-section in register with such upper track, the weight of a car on said track-section being sufficient to depress the same into register with such lower track.

46. In car-dumping mechanism, the combination with a downwardly inclined track and an upwardly inclined track therebelow, of an oscillatory track-section adapted in different positions about its axis to register with said tracks, respectively, the axis of said track-section being spaced from the end of the upper of said tracks and lying substantially on a line with the lower thereof, whereby a car received on said track-section from such upper track is dumped and transferred onto said lower track.

13,400. BRUSH FOR POWER MARKING-MACHINES. WILLIAM W. MCCOY, Cincinnati, Ohio, assignor to Louis G. Freeman, Cincinnati, Ohio. Filed Oct. 18, 1911. Serial No. 655,447. Original No. 975,883, dated Nov. 15, 1910, Serial No. 579,835. (Cl. 101—83.)



1. A marking machine, comprising a holder for goods to be marked, a marker, a carrier therefor mounted to move the marker into and out of position for marking, and a cleaner mounted on said carrier to move with said marker in said operative movements and also mounted for separate movement to be moved in contact with the marker while out of operative position, and out of the way of the marker when it is in marking position.

2. A marking machine, comprising a marker mounted for reciprocating movement into and out of marking position and a cleaner coöperatively connected for timed operation relative to said marker, said cleaner being mounted to partake of the said movements of the marker and also being mounted for separate movements to be moved into contact with the marker while it is out of operative position and out of the way as the marker moves to marking position.

3. A marking machine, comprising a support for goods to be marked, a marker mounted for movement to and from marking position, a cleaner and an inker mounted to partake of the movements of said marker to and from its marking position, and also for separate movements to permit the cleaner and the inker to be moved into contact with the marker while out of operative position and then out of the way as the marker moves to marking position.

4. A marking machine, comprising a marker having a carrier adapted to move it alternately into and out of marking position, an inker and a cleaner connected for successive coöperation with said marker, in timed relation to the movements thereof, said cleaner and inker being mounted on said marker carrier to partake of the movements thereof, and also having separate movements adapted to bring them into contact with the marker while it is out of operative position and out of the way when it is in marking position.

5. A marking machine, comprising a marker, a reciprocating carrier therefor, a cleaner and an inker mounted on said carrier, said marker, cleaner and inker having a common driving means connected to operate the same in timed relation, and said cleaner and inker being mounted on said carrier to partake of the movements thereof, and also having separate movements transversely of the direction of marker movement to bring the cleaner and inker into contact with the marker while it is out of marking position and out of the way when it is in marking position.

6. A marking machine, comprising a holder for goods to be marked, a marker mounted for reciprocating movement to and from said holder, a cleaner and an inker mounted to partake of the movements of said marker, and also for movement in a direction transverse of the movement thereof to bring the cleaner and inker into contact with the marker while it is out of marking position and out of the way as it approaches marking position, and a common driving mechanism for said marker, cleaner and inker connected to cause relatively timed operation of said parts.

7. A marking machine comprising a rotatably adjustable marker mounted on a swinging carrier, a cleaner mounted to swing about the axis of adjustment of said marker, an inker in linked connection with said cleaner, and connections for producing timed operation of said parts to cause the cleaner and inker to contact with the operative portion of the marker while it is out of marking position and to move them out of the way as the marker moves to marking position.

8. In a power marking machine, the combination of a type bearing arm, type-wheels mounted upon said type-bearing arm, a brush-frame mounted upon the type-wheels, a brush carried by the frame and contacting with the wheels, a pad, a second arm adapted to carry the pad into contact with the wheels and a link connecting the frame and the second arm, whereby the brush distributes the ink over the type.

9. In a power marking machine, the combination of type-wheels, a shaft upon which the type-wheels are journaled, a lever arm upon which the shaft is mounted, a brush-frame pivoted upon said shaft, a brush mounted upon said frame, an inking pad, an arm at the outer ends of which said inking pad is mounted, links connecting the brush-frame and the arm of the inking pad and mechanism for actuating said lever arm and the arm of the inking pad, whereby the brush is carried over the type-wheels in advance of the pad and is carried back over the type-wheels in the rear of said pad.

10. In a power marking machine, the combination of a lever arm, type-wheels mounted at the forward end of said lever arm, an arm, an inking pad mounted at the forward end of said arm, links connecting the pad-bearing arm with the brush-frame, and the lever arm, a cam having an eccentric portion to contact with the lever arm, and effect a reciprocation of the type-wheels toward and from the goods to be marked, and a second cam having an eccentric portion to effect the reciprocation of the pad-bearing arm, said eccentric portions being in a position so that they are brought into contact with said parts consecutively, whereby the inking of the type and the distribution of the ink thereon, is effected while the type are out of contact with the goods.

13,401. HAMMOCK. ISAAC E. PALMER, Middletown, Conn. Filed Feb. 1, 1908. Serial No. 413,851. Original No. 905,816, dated Nov. 28, 1905, Serial No. 264,223. (Cl. 5—14.)



1. A hammock comprising a body portion of suitable flexible material, side rails from which the body portion depends, spreaders hinged to the opposite ends of the side rails for spacing them apart and suspension devices at the opposite ends of the hammock for suspending it from a suitable support.

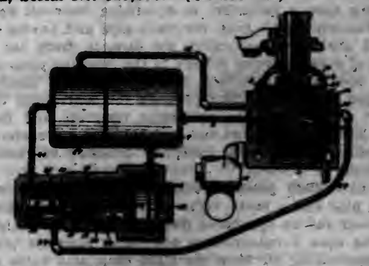
2. A hammock comprising a body portion of suitable flexible material, side rails from which the body portion depends, spreaders having a general U-shape and hinged at their ends to the side rails for spacing them apart, the said spreaders having a swinging movement into a position approximate to the plane of the side rails and suspension devices at the opposite ends of the hammock for suspending it from a suitable support.

3. A hammock comprising a body portion of suitable flexible material formed to present well defined sides and ends combined with side rails from which the body depends, spreading means at the ends providing fixed spacing of the side rails and defining the bottom outline at the ends, suspension means distributed along the spreading means and supporting the hammock at intervals transversely thereof, the hammock body being collapsible flatwise into the plane of the normally positioned side rails, while the spreading means continues to maintain the fixed spacing of the side rails.

4. A hammock comprising a body portion of suitable flexible material formed to present in use well defined sides and vertical ends combined with side rails from which the body depends, spreading means at the ends providing fixed spacing of the side rails and defining the bottom outline at the ends and maintaining in use the said ends vertical, suspension means distributed along the spreading means exterior to said ends and supporting the hammock at intervals transversely thereof, the hammock body being collapsible into the plane of the normally positioned side rails while the fixed spacing of the latter is preserved by said spreading means.

5. A hammock comprising a body portion of suitable flexible material, formed to present well defined sides and ends combined with side rails from which the body depends, spreading means at the ends, movable with respect to said side rails and into substantially the plane of the latter, said spreading means providing fixed spacing of the side rails and defining the bottom outline at the ends, and suspension means connected to the ends of the body portion, the hammock body being collapsible flatwise into the plane of the normally positioned side rails upon movement of said spreading means into substantially said plane, and without disturbing the spaced relation of said side rails.

13,402. ENGINEER'S BRAKE-VALVE DEVICE. WALTER V. TURNER, Edgewood, Pa., assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Feb. 29, 1912. Serial No. 681,017. Original No. 1,016,186, dated Jan. 30, 1912, Serial No. 629,197. (Cl. 188—7.)



1. In a fluid pressure brake, the combination with a train pipe and a brake valve provided with an equalizing reservoir and an equalizing discharge valve mechanism operating upon a reduction in equalizing reservoir pressure for discharging fluid from the train pipe, of a valve device subject to the opposing pressures of the equalizing reservoir and a constant pressure for controlling the release of air from the equalizing reservoir.

2. In a fluid pressure brake, the combination with a train pipe and a brake valve provided with an equalizing reservoir and an equalizing discharge valve mechanism operating upon a reduction in equalizing reservoir pressure for discharging fluid from the train pipe, of a valve device subject to the opposing pressures of the equalizing reservoir and a constant pressure for cutting off the re-

lease of air from the equalizing reservoir upon a predetermined reduction in pressure in the equalizing reservoir.

3. In a fluid pressure brake, the combination with a train pipe and a brake valve provided with an equalizing reservoir and an equalizing discharge valve mechanism operating upon a reduction in pressure in the equalizing reservoir for venting air from the train pipe, of a valve device subject to the opposing pressures of the equalizing reservoir and a chamber constantly containing fluid under pressure for limiting the release of air from the equalizing reservoir.

4. In a fluid pressure brake, the combination with a train pipe and a brake valve provided with an equalizing reservoir and an equalizing discharge valve mechanism operating upon a reduction in pressure in the equalizing reservoir for venting air from the train pipe, of a differential piston device comprising a valve for controlling an exhaust outlet from the equalizing reservoir, and a differential piston for operating said valve having two heads, one head subject to equalizing reservoir pressure and the other head subject to the pressure of a chamber constantly charged with fluid under pressure.

5. In a fluid pressure brake, the combination with a train pipe, an equalizing reservoir, an equalizing discharge valve mechanism operating upon a reduction in pressure in the equalizing reservoir for venting air from the train pipe, and a brake valve having ports adapted in service application position to release fluid from the equalizing reservoir, of a valve device comprising a differential piston having two piston heads, one piston head being subject to the pressure of the equalizing reservoir and the other to the pressure of a chamber continuously charged with fluid under pressure, and a valve controlled by said differential piston for closing communication through said ports upon a predetermined reduction in equalizing reservoir pressure.

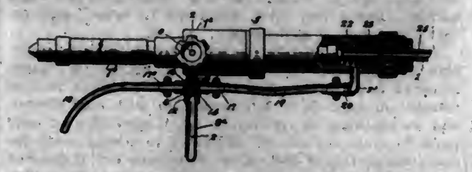
6. In a fluid pressure brake, the combination with a train pipe and a brake valve provided with an equalizing reservoir and an equalizing discharge valve mechanism operating upon a reduction in equalizing reservoir pressure for discharging air from the train pipe and having an exhaust port for discharging air directly from the train pipe, of a valve device subject to the opposing pressures of the equalizing reservoir and a chamber continually charged with fluid under pressure for controlling the exhaust of air from the equalizing reservoir and through said direct exhaust port.

7. In a fluid pressure brake, the combination with a train pipe and a brake valve provided with an equalizing reservoir and an equalizing discharge valve mechanism operating upon a reduction in equalizing reservoir pressure for discharging air from the train pipe and having an exhaust port for discharging air directly from the train pipe, of a valve device subject to the opposing pressures of the equalizing reservoir and a chamber continually charged with fluid under pressure for controlling the exhaust of air from the equalizing reservoir and through said direct exhaust port and adapted upon a predetermined reduction in equalizing reservoir pressure to close said exhaust.

8. In a fluid pressure brake, the combination with a train pipe and a brake valve provided with an equalizing reservoir and an equalizing discharge valve mechanism operating upon a reduction in equalizing reservoir pressure for discharging air from the train pipe, of a valve device subject to the opposing pressures of the equalizing reservoir and a chamber containing fluid at a constant pressure for cutting off the release of air from the equalizing reservoir upon a predetermined reduction in equalizing reservoir pressure.

13,403. DRILL-HOLE-CLEANING ATTACHMENT FOR HAMMER-DRILLS. DANIEL S. WAUGH, Denver, Colo., assignor to The Denver Rock Drill and Machinery Company, Denver, Colo. Filed Dec. 27, 1909. Serial No. 535,226. Original No. 907,430, dated Dec. 22, 1908, Serial No. 375,740. (Cl. 125—10.)

1. A drill body provided with a hollow drill bit, a conduit connected with the forward end of the drill body for delivering the drill-hole cleaning fluid to said hollow drill bit, a valve casing interposed between the forward and rear members of the said conduit and threaded into the body of the drill, the valve piece passage therein located in said valve casing, a connection between the motive fluid receiving portion of the drill body and the chamber of the valve, whereby motive fluid is supplied from the drill body to the valve, the valve being capable of adjustment to allow the motive fluid to pass through the forward member of the conduit while communication with the rear member is cut off, or to open communication between the two members of the conduit while the motive fluid is cut off, and suitable means for delivering motive fluid to the drill hole independently of the operation of the drill.



2. In a drill hole cleaning attachment for motive fluid actuated drills, the combination with a drill body provided with a main passage for delivering motive fluid through the drill steel to the drill hole, of a valve for controlling the flow of motive fluid through said passage independently of the motive fluid supply to the drill, and a water supply conduit in communication with the valve chamber, the valve being provided with openings whereby when it is properly adjusted, either motive fluid or the water may be delivered to the main passage leading to the drill hole.

3. The combination with a motive fluid actuated drill and means for supplying the motive fluid thereto, of a valve casing mounted on the body of the drill and in communication with the motive fluid supply thereto, said drill body and valve casing being provided with a main passage leading from the valve chamber to the drill steel, means for supplying water to the valve casing, a valve located therein and provided with openings, said valve being adjusted to allow either the water or the motive fluid to pass therethrough into the main passage leading to the drill steel.

4. The combination with a motive fluid actuated drill and means for supplying motive fluid thereto, of a valve casing mounted on the drill body and in communication with the motive fluid supply, the body of the drill and the valve casing being provided with a main passage connecting the valve casing with the drill steel, means for supplying water to the valve casing, a valve located in the said casing and provided with two passages, the valve being adjustable to bring the said passages alternately into communication with the main passage leading to the drill steel and the water or motive fluid supply as may be desired.

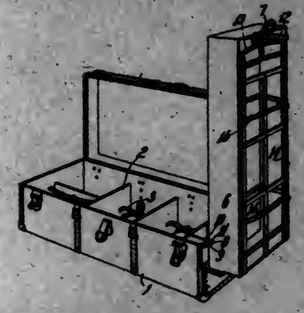
5. In mechanism of the character set forth, the combination with drilling mechanism including a motor and a drill bit, of a handle for turning the drilling mechanism, means for supplying a gaseous cleansing fluid and a liquid to the drill hole, and a common controlling valve for the fluid and liquid, said valve being carried by the handle.

6. In mechanism of the character set forth, the combination with drilling mechanism, including a motor and a drill bit, of a handle for turning the drilling mechanism, means for supplying a gaseous cleansing fluid and a liquid to the drill hole, and means mounted on the handle for controlling the supplies of gaseous cleansing fluid and liquid to said drill hole.

13,404. WARDROBE-TRUNK. GEORGE H. WHEARY, Racine, Wis., assignor to The Hartman Trunk Company, Racine, Wis. Filed Sept. 14, 1911. Serial No. 649,396. Original No. 939,575, dated Nov. 9, 1909, Serial No. 484,710. (Cl. 190—13.)

1. A trunk comprising a casing, a closure for the top thereof, a hinged panel normally flush with and constituting a portion of one wall of the casing, means movably

engaging the casing and panel to hold said panel at right angles to the end wall of the casing, and a wardrobe section mounted upon said panel, the panel constituting the bottom of the section when said section extends upwardly from the outwardly extending panel and with its outer face open, said outer face constituting the top of the section when the panel is in alinement with the end wall, said section being shiftable into the casing to constiute a tray.



2. A trunk comprising a casing, a closure for the top thereof, a panel hingedly connected to one end wall of the casing and normally flush therewith, means movably connecting the casing and panel for supporting said panel at right angles to the end wall of the casing, a wardrobe section mounted upon the panel, said panel constituting the bottom thereof, said section being shiftable into the upper portion of the casing to constitute a tray and into an upright position outside of the casing to constitute a wardrobe, the said section having an open face constituting the top thereof when the section is within the casing and the outer portion thereof when the section is in upright position outside of the casing, the closure being movable to shut position while the wardrobe section is outside of the casing.

3. A trunk, comprising a casing having an open top, a wardrobe section hinged to one end portion of the casing and movable to a position within the casing and through the open top to a vertical position outside of the casing, said wardrobe section being in the form of a tray when within the casing and having a bottom portion with side and end portions connected thereto and movable therewith and an open top, said open top facing outwardly from the casing when in vertical position and said tray bottom serving to support wearing apparel suspended within the section when said section is in a closed position, and a cover hinged to the side of the casing and adapted to cover the open top of the casing and the tray.

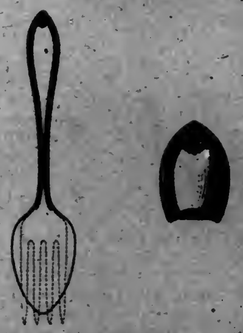
4. A trunk, comprising a casing having an open top, a cover for said casing, and a wardrobe section hinged to one end portion of the casing and movable to a position within the casing and through the open top to a vertical position outside of the casing, said wardrobe section being in the form of a tray when within the trunk and having a bottom portion with side and end portions connected thereto and movable therewith and an open top, said open top facing outwardly from the casing when in vertical position and said tray bottom serving to support wearing apparel suspended within the section when said section is in a closed position, said section when in a vertical position being out of the path of movement of the casing cover.

5. A wardrobe trunk, comprising a casing having an open top, a cover therefor, and a wardrobe section having the lower portion of one of its ends hinged to the upper portion of one of the ends of the casing, said wardrobe section being in the form of a tray when within the casing and having a bottom portion with side and end portions connected thereto and movable therewith and an open top, said open top facing outwardly from the casing when in vertical position and serving to support wearing apparel suspended within the section when said section is in a closed position, said cover having side and end flanged portions which overlap the upper portion of the wardrobe section when the section and the cover are in closed position.

6. A trunk comprising a casing having an open top and a cover for said casing, and a wardrobe section hinged to one end or side of the casing and movable to a position within the casing and through the open top to a vertical position outside of the casing, said wardrobe section having an open top and being in the form of a tray when within the trunk, said open top facing outwardly from the casing, when the section is in a vertical position, and the bottom of the tray serving to support wearing apparel suspended within the section, when said section is in closed position, the hinged connection between the casing and wardrobe section being so constructed and positioned that when the wardrobe section is swung to a vertical position, said section will be in advance of the end or side of the trunk, to thereby adapt the trunk proper to be left beneath a berth and the wardrobe section to extend vertically outside and alongside of said berth.

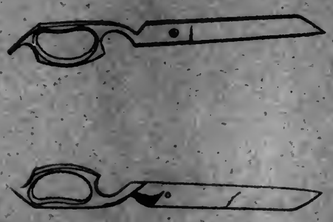
DESIGNS.

42,384. HANDLE FOR SPOONS, FORKS, OR SIMILAR ARTICLES. GROSVENOR N. ALLEN, Oneida, N. Y., assignor to Oneida Community, Limited, Oneida, N. Y. Filed Nov. 27, 1911. Serial No. 662,780. Term of patent 14 years.



The ornamental design for a handle for spoons, forks or similar articles as shown and described.

42,385. MEMBER OF A PAIR OF SHEARS. JOHN J. ALVORD and FRANK KARBITZ, Bridgeport, Conn. Filed Sept. 20, 1911. Serial No. 650,473. Term of patent 14 years.



The ornamental design for a member of a pair of shears, as shown.

42,386. LOCKET. CLIFFORD DAILEY, New York, N. Y. Filed Jan. 24, 1912. Serial No. 673,261. Term of patent 7 years.



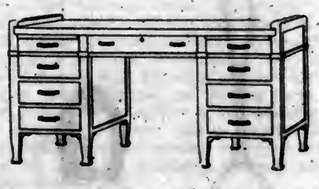
The ornamental design for a locket, as shown.

42,387. LOCKET. CLIFFORD DAILEY, New York, N. Y. Filed Jan. 24, 1912. Serial No. 673,262. Term of patent 7 years.



The ornamental design for a locket, as shown.

42,388. DESK. KERVIN R. DUNTON, Boston, Mass., assignor to Doten-Dunton Desk Co., Boston, Mass., a Corporation of Massachusetts. Filed Dec. 15, 1909. Serial No. 533,293. Term of patent 7 years.



The ornamental design for a desk as shown and described.

42,389. CANDLE-LAMP. PHILLIP EBELING, Moundsville, W. Va., assignor to Fostoria Glass Company, Moundsville, W. Va., a Corporation of West Virginia. Filed Jan. 19, 1912. Serial No. 672,237. Term of patent 14 years.



The ornamental design for a candle lamp, as shown.

42,390. RUBBER BRUSH. OTTO EICK, St. Louis, Mo. Filed Jan. 13, 1912. Serial No. 671,130. Term of patent 14 years.



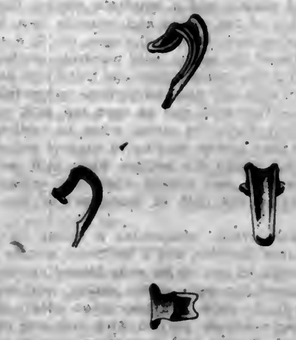
The ornamental design for a rubber brush, as shown.

42,391. PAPER-WEIGHT AND PEN-REST. GEORGE C. GEBELEIN, Wellesley, Mass. Filed Jan. 26, 1912. Serial No. 673,700. Term of patent 14 years.



The ornamental design for a paper-weight and pen-rest, as shown.

42,392. HANDLE FOR DISHES OR BOWLS OR SIMILAR ARTICLES OF TABLEWARE. CHARLES EDWARD HAVILAND, Limoges, France. Filed Mar. 17, 1911. Serial No. 615,119. Term of patent 14 years.



The ornamental design for a handle for a dish or bowl or similar article of tableware, as shown.

42,393. STOVE-FRONT. FRANK R. HENRY, St. Louis, Mo., assignor to Majestic Manufacturing Company, St. Louis, Mo. Filed Dec. 1, 1911. Serial No. 663,455. Term of patent 14 years.



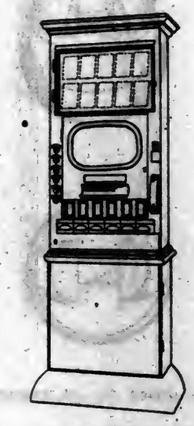
The ornamental design for a stove front, as shown.

42,394. OIL-CLOTH OR LINOLEUM. CHARLES F. HUMPHREYS, Lancaster, Pa., assignor to Armstrong Cork Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Oct. 23, 1911. Serial No. 656,341. Term of patent 7 years.



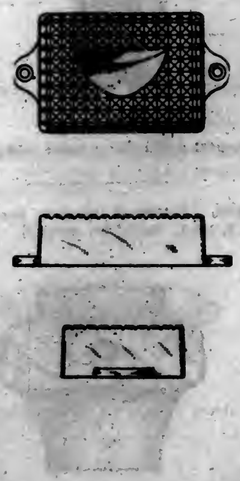
The ornamental design for oil cloth or linoleum as shown.

42,395. COMBINED AUTOMATIC VENDING APPARATUS. EDUARD LIESAUBE, Charlottenburg, Germany. Filed Jan. 27, 1912. Serial No. 678,947. Term of patent 7 years.



The ornamental design for a combined automatic vending apparatus as shown.

42,396. CHAUFFEUR'S HEEL-REST. JAMES L. LUCAS, Bridgeport, Conn. Filed Nov. 21, 1911. Serial No. 661,608. Term of patent 3½ years.



The ornamental design for a chauffeur's heel rest, as shown.

42,397. ENGRAVER'S BLOCK. ADOLPH MUHLMATT, Newport, Ky. Filed Feb. 6, 1911. Serial No. 607,003. Term of patent 14 years.



The ornamental design for an engraver's block, as shown.

42,398. TOWEL-CABINET. JACQUES ROUSSO, Chicago, Ill. Filed Jan. 5, 1912. Serial No. 669,709. Term of patent 14 years.



The ornamental design for a towel cabinet as shown.

42,399. VASE. ELMER O. SIMONS, Los Angeles, Cal. Filed Oct. 5, 1911. Serial No. 653,025. Term of patent 3½ years.



The ornamental design for a vase, as shown.

42,400. VASE. ELMER O. SIMONS, Los Angeles, Cal. Filed Oct. 5, 1911. Serial No. 653,026. Term of patent 3½ years.



The ornamental design for a vase, as shown.

42,401. VASE. ELMER O. SIMONS, Los Angeles, Cal. Filed Oct. 5, 1911. Serial No. 653,027. Term of patent 3½ years.



The ornamental design for a vase, as shown.

42,402. VASE. ELMER O. SIMONS, Los Angeles, Cal. Filed Oct. 5, 1911. Serial No. 653,028. Term of patent 3½ years.



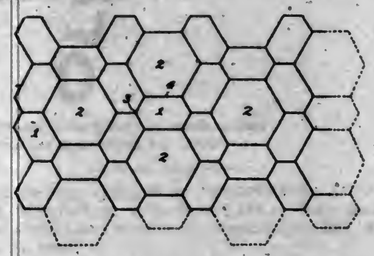
The ornamental design for a vase, as shown.

42,403. REFLECTOR-SHADE. JAMES HARVEY STRONG, Steubenville, Ohio. Filed Nov. 3, 1911. Serial No. 658,447. Term of patent 7 years.



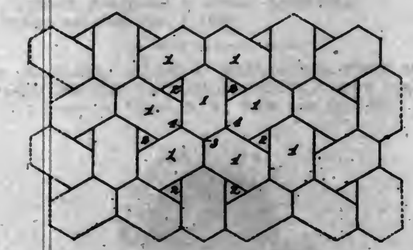
The ornamental design for a reflector shade as shown and described.

42,404. TILE-FACING. EMIL TALAMINI, New York, N. Y. Filed Nov. 10, 1911. Serial No. 659,659. Term of patent 14 years.



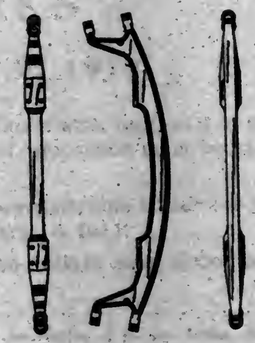
The ornamental design for a tile facing, as shown and described.

42,405. TILE-FACING. EMIL TALAMINI, New York, N. Y. Filed Nov. 11, 1911. Serial No. 659,838. Term of patent 14 years.



The ornamental design for a tile facing, as shown and described.

42,406. VEHICLE-AXLE. FRANK H. TERGO, Buffalo, N. Y. Filed Jan. 27, 1912. Serial No. 673,949. Term of patent 7 years.



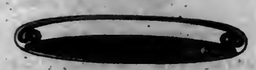
The ornamental design for a vehicle axle, as shown.

42,407. PURSE. EMANUEL H. WEIMER, Los Angeles, Cal. Filed Jan. 29, 1912. Serial No. 674,215. Term of patent 7 years.



The ornamental design for a purse as shown.

42,408. KNIFE-HANDLE. ANGELO W. WILLIAMS, New York, N. Y. Filed Jan. 22, 1912. Serial No. 672,789. Term of patent 7 years.



The ornamental design for a knife handle as shown.

TRADE-MARKS

PUBLISHED APRIL 9, 1912.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 31,154. (CLASS 46. MALT EXTRACTS AND LIQUORS.) OLYMPIA BREWING CO., Olympia, Wash. Filed Nov. 12, 1907.

OLYMPIA

Particular description of goods.—Beer.
Claims use since June 10, 1898.

Ser. No. 39,309. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE KANSAS CITY AUTOMOBILE SUPPLY CO., Kansas City, Mo. Filed Dec. 14, 1908.

ALLITE

Particular description of goods.—Spark-Plugs.
Claims use since Jan. 1, 1908.

Ser. No. 44,291. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) THE ITHACA GUN COMPANY, Ithaca, N. Y. Filed Aug. 21, 1909.



No claim is made to the words "Lightning Fast Lock Operates in 1/625 of a Second" as forming a part of the trade-mark herein referred to.

Particular description of goods.—Rifles, Shotguns, and Revolvers.
Claims use since on or about June 15, 1909.

Ser. No. 51,543. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HUNYADI LASZLO COMPANY, Chicago, Ill. Filed Aug. 25, 1910.



Particular description of goods.—Whole-Wheat Flour and Cereal Breakfast Food.
Claims use since July 1, 1910.

Ser. No. 51,827. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) R. STOCK & CO., SPIRALBOHRER- WERKZEUG UND MASCHINENFABRIK AKTIENGESELLSCHAFT, Marienfelde, near Berlin, Germany. Filed Sept. 15, 1910.

Electrit

Particular description of goods.—Spiral Drills, Reamers, and Milling-Cutters.
Claims use since Dec. 15, 1909.

Ser. No. 53,151. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) AMERICAN RECORDER COMPANY, Chicago, Ill. Filed Dec. 6, 1910.

UNIVERSAL

Particular description of goods.—Recording Apparatus.
Claims use since August, 1908.

Ser. No. 53,197. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEO. C. WHITMORE, Leadville, Colo. Filed Dec. 9, 1910.



The picture being fanciful.

Particular description of goods.—A Laxative and Cathartic Remedy.

Claims use since February, 1909.

Ser. No. 53,399. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) NORDDEUTSCHE WOLLKÄMMEREI & KAMMGARNSPINNEREI, Bremen and Delmenhorst, Germany. Filed Dec. 21, 1910.



Particular description of goods.—Toilet Soap.

Claims use since October, 1910.

Ser. No. 53,413. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) NORTHWESTERN ELECTRIC EQUIPMENT COMPANY, Brooklyn, N. Y. Filed Dec. 21, 1910.



Particular description of goods.—Bushings, Fuses, Knobs, Electric Cut-Outs, Friction-Tape, Switches, Electric Insulating Material, Sockets, Annunciator-Wires, Splicing Compound.

Claims use since Dec. 1, 1910.

Ser. No. 54,246. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HENRY K. WAMPOLE AND COMPANY INCORPORATED, Philadelphia, Pa. Filed Feb. 1, 1911. Under ten-year proviso.

WAMPOLE'S

Particular description of goods.—Suppositories; Vaginal Cones; a Beef-Juice Tonic; Laxatives; a Cascara Preparation; Cod-Liver Extract, a Remedy for Menstrual Disorders; a Remedy for Sleeplessness and Nervous Disorders; an Antiseptic and Germicide; a Preparation for the Treatment of Phthisis, Bronchitis, Anæmia, and General Debility; a Remedy for Scrofulous Affections; and a Remedy for Urinary Incontinence.

Claims use since 1880.

Ser. No. 54,265. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) MARSHALL FIELD & COMPANY, Chicago, Ill. Filed Feb. 2, 1911.



Particular description of goods.—Cotton Dress Goods.

Claims use since about July, 1908.

Ser. No. 54,406. (CLASS 12. CONSTRUCTION MATERIALS.) WILLIAM R. PETTY, Fort Worth, Tex. Filed Feb. 9, 1911.

SOMVIA

Particular description of goods.—Asphalt, Rock-Asphalt, Macadam, Rock-Macadam, Concrete, and Bituminous Paving.

Claims use since Dec. 1, 1910.

Ser. No. 55,663. (CLASS 34. HEATING, LIGHTING, AND VENTILATING APPARATUS, NOT INCLUDING ELECTRICAL APPARATUS.) AUTOFORCE VENTILATING SYSTEM, Pierre, S. D. Filed Apr. 11, 1911.

AUTOFORCE

Particular description of goods.—Ventilating Apparatus for Use in Withdrawing Air from Buildings, Cars, &c.

Claims use since January, 1899.

Ser. No. 55,744. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) WESTERN ELECTRIC COMPANY, Chicago, Ill. Filed Apr. 14, 1911.



Particular description of goods.—Electric Batteries.

Claims use since Jan. 1, 1906.

Ser. No. 55,758. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CARL HEINRICH FRANZ RICHTER, London, England. Filed Apr. 14, 1911.



The applicants undertake not to use the mark with the cross devices shown in red.

Particular description of goods.—Medicinal Tonics, Pills, and Ointments.

Claims use since 1883.

Ser. No. 55,961. (CLASS 20. MEASURING AND SCIENTIFIC APPLIANCES.) UNITED STATES LENS COMPANY, Geneva, N. Y. Filed Apr. 25, 1911.



Particular description of goods.—Lenses.

Claims use since Apr. 1, 1910.

Ser. No. 56,003. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) STRAUS, BODENHEIMER SADDLERY CO., Houston, Tex. Filed May 1, 1911.



Except the words "Straus, Bodenheimer Saddlery Co. Houston," which the applicant hereby disclaims as a part of its trade-mark.

Particular description of goods.—Horse-Collars.

Claims use since Feb. 15, 1911.

Ser. No. 56,483. (CLASS 12. CONSTRUCTION MATERIALS.) THE ATLAS PORTLAND CEMENT COMPANY, Northampton, Pa. Filed May 19, 1911.



The background being blue, as indicated, the words "Non-Staining White Portland Cement" forming no part of this mark.

Particular description of goods.—Portland Cement.

Claims use since on or about June 1, 1910.

Ser. No. 56,645. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) BERNDORF METAL WORKS ARTHUR KRUPP, Berndorf, Austria. Filed May 27, 1911.

EPNS BERNDORF AU AUSTRIA

The words "Berndorf Austria" being disclaimed.
Particular description of goods.—Table-Knives.
Claims use since May 25, 1903.

Ser. No. 56,646. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) BERNDORF METAL WORKS ARTHUR KRUPP, Berndorf, Austria. Filed May 27, 1911.

EPNS BERNDORF A AUSTRIA

The words "Berndorf Austria" being disclaimed.
Particular description of goods.—Table-Knives.
Claims use since May 25, 1903.

Ser. No. 58,356. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CHARTER OAK CITRUS ASSN., Charter Oak, Cal. Filed Aug. 24, 1911.

Red Riding Hood

Particular description of goods.—Oranges.
Claims use since May 22, 1911.

Ser. No. 58,407. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) MEYER W. SCHLOSS, New York, N. Y. Filed Aug. 26, 1911.

V-ON

Particular description of goods.—Ladies' Sanitary Belts and Men's Hose-Supporters.
Claims use since Aug. 23, 1911.

Ser. No. 58,497. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) DETROIT SANITARY SUPPLY CO., Detroit, Mich. Filed Sept. 1, 1911.

GLORIA

Particular description of goods.—Compression Bibs and Basin-Cocks, Fuller Bibs and Compression-Cocks, Compression Bath-Cocks, Fuller Bath-Cocks, Connected Wastes and Overflows, Basin-Wastes, Bath-Wastes, Basin Supply-Pipes, Bath Supply-Pipes, Elbows and T's and Bushings, Closet Flush-Valves.
Claims use since May 21, 1908.

Ser. No. 58,569. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FABRIK PHARMACEUTISCHER PRÄPARATE KARL ENGELHARD, Frankfort-on-the-Main, Germany. Filed Sept. 7, 1911.

Dialon

Particular description of goods.—Wound-Powder.
Claims use since 1908.

Ser. No. 58,694. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) MAC-KAE MANUFACTURING COMPANY, Jamaica Plain, Mass. Filed Sept. 16, 1911.

MACKAE

Particular description of goods.—Spark-Plugs, Terminals, Protectors, Clips, and Connectors.
Claims use since on or about Jan. 10, 1911.

Ser. No. 58,837. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) SANDERSON BROTHERS & NEWBOULD LIMITED, Sheffield, England. Filed Sept. 25, 1911.

INDEPENDENCE 1776

Consisting of the word and figures "Independence 1776."
Particular description of goods.—Lathes, Planing, Punching, Shearing, Riveting, Drilling, Screwing, Chasing, Shaping, Slotting, and Woodworking Machines, Twist, Mining, Rock-Boring, and Wood-Boring Drills, Milling, Slotting, Turning, Wheel, Dividing, Fluting, and Grooving Cutters, Machine-Knives, Shear-Blades, Machine-Tools, Files, Rasps, Chisels, Hammers, Adzes, Axes, Augers, Braces and Bits, Scythes, Sickles, Taps and Dies, Hatchets, Machetes, Swords, Bayonets.
Claims use since Feb. 17, 1910.

Ser. No. 58,936. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) ATLANTA AGRICULTURAL WORKS, Atlanta, Ga. Filed Sept. 29, 1911. Under ten-year proviso.

H. D. TERRELL
THICK CENTER

Particular description of goods.—Scrapers.
Claims use since July, 1890.

Ser. No. 58,967. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CECELIA A. FRANK, Lincoln, Nebr. Filed Oct. 2, 1911.



Particular description of goods.—Remedies for La Grippe, Catarrh, Hay-Fever, Asthma, Croup, Whooping-Cough, Tuberculosis, Diphtheria, and All Bronchial Affections, Headaches, Deafness, Piles, Erysipelas, Eczema, and Toothache.
Claims use since Sept. 21, 1911.

Ser. No. 58,974. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) JOHN C. NICHOLS HARNESS MANUFACTURING COMPANY, Janesville, Wis. Filed Oct. 2, 1911.



No claim being made to the words "The Master Brand."
Particular description of goods.—Harness.
Claims use since Apr. 17, 1909.

Ser. No. 58,996. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JOHN ALDEN STOUGHTON, East Hartford, Conn. Filed Oct. 4, 1911. Under ten-year proviso.

ROCKWELLS MILLS

Particular description of goods.—Wheat-Flour, Rye-Flour, Barley-Flour, Corn-Flour, and Cereal Breakfast Foods.
Claims use since Jan. 1, 1876.

Ser. No. 59,019. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) FOREIGN ELECTRICAL SUPPLY CO., New York, N. Y. Filed Oct. 6, 1911.

ENVOY

Particular description of goods.—Electrical Lamps, Fans, Motors, Clusters, Sockets, Brackets, Chandeliers, and Current-Transformers.
Claims use since Sept. 15, 1911.

Ser. No. 59,100. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) DAVID E. BEECHAM, Lapeer, Mich. Filed Oct. 11, 1911.



Consisting of my portrait.
Particular description of goods.—A Remedy for Dandruff, and a Remedy for Corns, Callous, Excessive Perspiration, and Offensive Odor of the Feet and for Galling and Chafing.
Claims use since Apr. 1, 1911.

Ser. No. 59,123. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HARRY P. STRASBAUGH, Aberdeen, Md. Filed Oct. 12, 1911.



Particular description of goods.—Canned Sugar-Corn.
Claims use since Oct. 6, 1911.

Ser. No. 59,302. (CLASS 15. OILS AND GREASES.) THE CLARKSON & FORD COMPANY, New York, N. Y. Filed Oct. 23, 1911.

SILENT KNIGHT

Particular description of goods.—Lubricating-Oil.
Claims use since about Sept. 7, 1911.

Ser. No. 59,381. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) CONTINUOUS RAIL COMPANY, Wilmington, Del., and New York, N. Y. Filed Oct. 27, 1911.

ROMAPAC

Particular description of goods.—Railroad-Rails.
Claims use since Sept. 5, 1911.

Ser. No. 59,382. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) CONTINUOUS RAIL COMPANY, Wilmington, Del., and New York, N. Y. Filed Oct. 27, 1911.

RAMLEDO

Particular description of goods.—Railroad-Rails.
Claims use since Oct. 13, 1911.

Ser. No. 59,554. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) AMERICAN IRON AND STEEL MANUFACTURING COMPANY, Lebanon and Reading, Pa. Filed Nov. 4, 1911.

A

Particular description of goods.—Structural Forgings and Bar-Iron and Bar-Steel.
Claims use since October, 1899.

Ser. No. 59,591. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) JOSEPH CORCOS, New York, N. Y. Filed Nov. 7, 1911.

LIXOL

Particular description of goods.—Furniture and Metal Polish.
Claims use since Nov. 1, 1910.

Ser. No. 59,607. (CLASS 37. PAPER AND STATIONERY.) REPUBLIC BAG & PAPER CO., New York, N. Y. Filed Nov. 7, 1911.

MOGUL FIBRE

No claim being made to the word "Fibre."
Particular description of goods.—Wrapping-Paper.
Claims use since Jan. 1, 1906.

Ser. No. 59,617. (CLASS 17. TOBACCO PRODUCTS.) HARTFORD BROS., Decatur, Ill. Filed Nov. 9, 1911.

PAP

Particular description of goods.—Cigars.
Claims use since June 25, 1911.

Ser. No. 59,716. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) JACOB J. HOFFMAN, New York, N. Y. Filed Nov. 14, 1911.

THE AERO GARTER

Consisting of the word "Aero," no claim being made to the word "Garter."
Particular description of goods.—Arm-Bands and Garters.
Claims use since Sept. 1, 1911.

Ser. No. 59,783. (CLASS 12. CONSTRUCTION MATERIALS.) COAL TAR PRODUCT COMPANY, Brooklyn, N. Y. Filed Nov. 18, 1911.



Particular description of goods.—Roofing-Cement Composed of Coal-Tar, Slate, and Asbestos.
Claims use since June 1, 1900.

Ser. No. 59,818. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) GRIFFIN WHEEL COMPANY, Chicago, Ill. Filed Nov. 20, 1911.

F C S

Particular description of goods.—Cast-Iron Car-Wheels.
Claims use since Jan. 1, 1911.

Ser. No. 59,877. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) SHOE CITY NOVELTY CO., Lynn, Mass. Filed Nov. 23, 1911.

CLINCH-ADJUSTO

No claim being made for the word "Clinch."
Particular description of goods.—Bows for Shoes.
Claims use since on or about Nov. 10, 1911.

Ser. No. 59,911. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) NÜRNBERGER ABZEICHENBILDER-FABRIK THOMER & BUCKERO, Nuremberg, Germany. Filed Nov. 25, 1911.

„Patato Quicko"

Particular description of goods.—Transfer-Pictures and Colored Transfer-Pictures.
Claims use since Oct. 6, 1911.

Ser. No. 59,966. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE RANDALL-FAICHNEY COMPANY, Boston, Mass. Filed Nov. 27, 1911.

B-Line

Particular description of goods.—Oil Containing and Applying Devices Known as "Oil-Grease Guns."
Claims use since on or about Feb. 1, 1906.

Ser. No. 60,029. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) JACOB LANDBOCK, Omaha, Nebr. Filed Dec. 1, 1911.



Particular description of goods.—Laundry and Toilet Soap.
Claims use since Oct. 1, 1911.

Ser. No. 60,104. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LEGGETT & BROTHER, New York, N. Y. Filed Dec. 6, 1911.



Particular description of goods.—Insecticides and Fungicides—Namely, Kerosene Emulsion, Cow-fly Oil, Moth-Camphor, Insect-Powder, Paris Green, Bordeaux-Mixture Paste, Lime-Sulfur Solution, Prepared Fish-Oil Soap for Use as an Insecticide, Prepared Bordeaux Mixture and Paris Green Combined, Dry Bordeaux Mixture, Hellebore, and Arsenite of Lime.
Claims use since 1887.

Ser. No. 60,119. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) AUTO SPECIALTY MANUFACTURING CO., INC., Indianapolis, Ind. Filed Dec. 7, 1911.



Particular description of goods.—Toy Vehicles.
Claims use since Oct. 21, 1911.

Ser. No. 60,128. (CLASS 17. TOBACCO PRODUCTS.) RODS & BRAND, INC., New York, N. Y. Filed Dec. 8, 1911.

AWONDA

Particular description of goods.—Cigars, Cigarettes, Smoking-Tobacco, Chewing-Tobacco, and Snuff.
Claims use since Dec. 1, 1911.

Ser. No. 60,190. (CLASS 39. CLOTHING.) THE TEL-TIL-TIP CO., Holland, Mich. Filed Dec. 12, 1911.

TEL-TIL-TIP

No claim being made to the word "Tip."
Particular description of goods.—Boots and Shoes Made of Leather and Leather Tips Therefor.
Claims use since Aug. 15, 1911.

Ser. No. 60,204. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) BYRON MORGAN, Middletown, N. Y. Filed Dec. 13, 1911.



Particular description of goods.—A Mixture of Mineral and Vegetable Oils as a Substitute for Linseed-Oil.
Claims use since Sept. 23, 1911.

Ser. No. 60,244. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CRESCENT MACARONI AND CRACKER CO., Davenport, Iowa. Filed Dec. 15, 1911.

MACRONETS

Particular description of goods.—Macaroni.
Claims use since Nov. 22, 1911.

Ser. No. 60,245. (CLASS 32. FURNITURE AND UPHOLSTERY.) GEORGE DAVIDSON, New York, N. Y. Filed Dec. 15, 1911.

KATOMIRROR

Particular description of goods.—Adjustable Supports for Mirrors.
Claims use since Oct. 1, 1909.

Ser. No. 60,308. (CLASS 32. FURNITURE AND UPHOLSTERY.) THE STAR RUBBER CO., Akron, Ohio. Filed Dec. 18, 1911.



Particular description of goods.—Chair-Tips.
Claims use since 1908.

Ser. No. 60,309. (CLASS 8. SMOKERS' ARTICLES, NOT INCLUDING TOBACCO PRODUCTS.) THE STAR RUBBER CO., Akron, Ohio. Filed Dec. 18, 1911.



Particular description of goods.—Tobacco-Pouches.
Claims use since 1908.

Ser. No. 60,405. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) AMERICAN IRON AND STEEL MANUFACTURING COMPANY, Lebanon and Reading, Pa. Filed Dec. 22, 1911.



No claim being made, however, for the words "American Iron and Steel M'f'g Co." "Lebanon, Pa. U. S. A.," or the figure representing a bolt and nut.
Particular description of goods.—Structural Forgings, Bar-Iron, and Bar-Steel.
Claims use since August, 1911.

Ser. No. 60,408. (CLASS 39. CLOTHING.) BLOOM & MILLMAN, New York, N. Y. Filed Dec. 22, 1911.

The Quaker Girl Waist

No claim is made to the word "Waists."
Particular description of goods.—Dress and Shirt Waists.
Claims use since Dec. 14, 1911.

Ser. No. 60,519. (CLASS 15. OILS AND GREASES.) BARRETT MANUFACTURING COMPANY, New York, N. Y. Filed Dec. 29, 1911.

Carbosota

Particular description of goods.—Coal-Tar Oils.
Claims use since on or about Dec. 20, 1911.

Ser. No. 60,522. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ARTHUR EDMUND HAWKES, London, England. Filed Dec. 30, 1911.



No claim is made to the expression "Chasse Tous Les Oiseaux."
Particular description of goods.—A Chemical Substance for Preserving Seeds Against the Voracity of All Kinds of Birds and Against Diseases Caused by Parasites, Not Being of the Nature of Soap of Any Kind.
Claims use since Feb. 19, 1909.

Ser. No. 60,505. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) W. P. WILLIS & Co., New York, N. Y. Filed Jan. 2, 1912.

HOLO

Particular description of goods.—Open-Weave Cloth.
Claims use since on or before Dec. 10, 1911.

Ser. No. 60,577. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MILES & Co. INC., Baltimore, Md. Filed Jan. 2, 1912.

AVIATION

Particular description of goods.—Fresh Oysters.
Claims use since Sept. 1, 1911.

Ser. No. 60,578. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MILES & Co. INC., Baltimore, Md. Filed Jan. 2, 1912.

BANNER

Particular description of goods.—Fresh Oysters.
Claims use since Sept. 1, 1911.

Ser. No. 60,580. (CLASS 12. CONSTRUCTION MATERIALS.) CHARLES S. BIRD, East Walpole, Mass. Filed Jan. 2, 1912.



The words "Water Proof" being disclaimed.
Particular description of goods.—Roofing, Waterproof Sound-Insulating and Heat-Insulating Papers.
Claims use since Feb. 19, 1910.

Ser. No. 60,597. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) ADRIANCE, PLATT & Co., Poughkeepsie, N. Y. Filed Jan. 4, 1912. Under ten-year proviso.

ADRIANCE

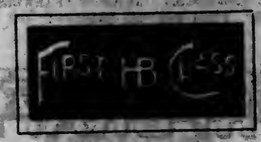
Particular description of goods.—Mowing-Machines, Reaping-Machines, Grain-Binding Machines, Corn-Binding Machines, Horse Hay-Rakes, and Harrows.
Claims use since 1878.

Ser. No. 60,674. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PLACIDE ALEXANDRE AETIER, Paris, France. Filed Jan. 8, 1912.

RIODINE

Particular description of goods.—A Substitute for Iodin and Iodids.
Claims use since Feb. 14, 1909.

Ser. No. 60,702. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HESS BROTHERS INC., New York, N. Y. Filed Jan. 9, 1912. Under ten-year proviso.



Particular description of goods.—Candy and Chocolates.
Claims use since 1894.

Ser. No. 60,726. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) ADOLPH L. MOCK, New York, N. Y. Filed Jan. 11, 1912.

Phoebe Snow

P.S.

The name "Phoebe Snow" appearing in the facsimile handwriting of the applicant.
Particular description of goods.—Toilet Soaps.
Claims use since prior to November, 1911.

Ser. No. 60,782. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) HERMAN L. HOHLFELD, Philadelphia, Pa. Filed Jan. 12, 1912.

Sleepy Hollow

Particular description of goods.—Hammocks, Couch-Hammocks, Settee-Hammocks, Folding Hammocks, and Baby-Hammocks.
Claims use since Nov. 15, 1911.

Ser. No. 60,802. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) B. HELLER & Co., Chicago, Ill. Filed Jan. 15, 1912.

Ambrosia

We disclaim the words "Trade-Mark Registered."
Particular description of goods.—A Preparation Used in Making Cake-Icings.
Claims use since Aug. 26, 1907.

Ser. No. 60,821. (CLASS 39. CLOTHING.) HIRTH-KRAUSE Co., Grand Rapids, Mich. Filed Jan. 15, 1912.

COPPER KING

Particular description of goods.—Leather Shoes.
Claims use since Feb. 24, 1909.

Ser. No. 60,874. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) JOHN V. FARWELL COMPANY, Chicago, Ill. Filed Jan. 17, 1912.

TRICRAFT HANDKERCHIEFS

No claim being made to the word "Handkerchiefs."
Particular description of goods.—Handkerchiefs.
Claims use since Dec. 1, 1910.

Ser. No. 60,882. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) GEO. B. CARPENTER & Co., Chicago, Ill. Filed Jan. 18, 1912. Under ten-year proviso.

OREGON

Particular description of goods.—Cotton Duck.
Claims use since about Jan. 1, 1895.

Ser. No. 60,885. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) GEO. B. CARPENTER & Co., Chicago, Ill. Filed Jan. 18, 1912. Under ten-year proviso.

LAKESIDE

Particular description of goods.—Awning-Stripes.
Claims use since about Jan. 1, 1895.

Ser. No. 60,905. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LEXINGTON MILL & ELEVATOR Co., Lexington, Nebr. Filed Jan. 22, 1912.

"DAVID HARUM"

Particular description of goods.—Wheat-Flour.
Claims use since Jan. 15, 1912.

Ser. No. 61,059. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) DENNY, HILBORN & ROSENBACH, Philadelphia, Pa. Filed Jan. 26, 1912.

TRIOLITE

Particular description of goods.—Ready-Mixed Decorative and Preservative Paints.
Claims use since about early May, 1907.

Ser. No. 61,060. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) DENNY, HILBORN & ROSENBACH, Philadelphia, Pa. Filed Jan. 26, 1912.

SAMURAI

Particular description of goods.—Ready-Mixed Decorative and Preservative Paints.
Claims use since about early June, 1907.

Ser. No. 61,061. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) DENNY, HILBORN & ROSENBACH, Philadelphia, Pa. Filed Jan. 26, 1912.

FLOWETTE

Particular description of goods.—Ready-Mixed Decorative and Preservative Paints.
Claims use since about the latter part of May, 1907.

Ser. No. 61,067. (CLASS 15. OILS AND GREASES.) STANDARD OIL COMPANY, Bayonne, N. J. Filed Jan. 27, 1912.

STANDOLITE

Particular description of goods.—Refined Oil for Lighting, Heating, and Power Purposes.
Claims use since Jan. 20, 1912.

Ser. No. 61,069. (CLASS 15. OILS AND GREASES.) STANDARD OIL COMPANY, Bayonne, N. J. Filed Jan. 27, 1912.

MYOSENE

Particular description of goods.—Refined Oil for Lighting, Heating, and Power Purposes.
Claims use since Jan. 20, 1912.

Ser. No. 61,071. (CLASS 15. OILS AND GREASES.) STANDARD OIL COMPANY, Bayonne, N. J. Filed Jan. 27, 1912.

AUTONAPH

Particular description of goods.—Gasolene and Naphtha.
Claims use since Jan. 20, 1912.

Ser. No. 61,072. (CLASS 15. OILS AND GREASES.) STANDARD OIL COMPANY, Bayonne, N. J. Filed Jan. 27, 1912.

BENZONAPH

Particular description of goods.—Benzin.
Claims use since Jan. 20, 1912.

Ser. No. 61,073. (CLASS 15. OILS AND GREASES.) STANDARD OIL COMPANY, Bayonne, N. J. Filed Jan. 27, 1912.

MOTANAPH

Particular description of goods.—Naphtha.
Claims use since Jan. 20, 1912.

Ser. No. 61,074. (CLASS 15. OILS AND GREASES.) STANDARD OIL COMPANY, Bayonne, N. J. Filed Jan. 27, 1912.

PREMAFLUID

Particular description of goods.—Naphtha.
Claims use since Jan. 20, 1912.

Ser. No. 61,077. (CLASS 37. PAPER AND STATIONERY.) A. W. FABER, Stein, Germany. Filed Jan. 27, 1912.

CONSUL

Particular description of goods.—Lead-Pencils, Colored Pencils, Copying-Pencils, and Ink-Pencils.
Claims use since Dec. 5, 1905.

Ser. No. 61,067. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) JACKSON-CHURCH-WILCOX CO., Saginaw, W. S., Mich. Filed Jan. 27, 1912.

Jacox

Particular description of goods.—Steering-Gears.
Claims use since Dec. 7, 1911.

Ser. No. 61,117. (CLASS 37. PAPER AND STATIONERY.) EAGLE PENCIL COMPANY, New York, N. Y. Filed Jan. 29, 1912.

CHROMO

Particular description of goods.—Lead-Pencils.
Claims use since 1876.

Ser. No. 61,191. (CLASS 38. PRINTS AND PUBLICATIONS.) DODGE PUBLISHING COMPANY, New York, N. Y. Filed Feb. 1, 1912.

The Calendar of Sunshine

Particular description of goods.—Calendars.
Claims use since 1910.

Ser. No. 61,192. (CLASS 38. PRINTS AND PUBLICATIONS.) DODGE PUBLISHING COMPANY, New York, N. Y. Filed Feb. 1, 1912.

A Calendar of Smiles

Particular description of goods.—Calendars.
Claims use since 1910.

Ser. No. 61,251. (CLASS 39. CLOTHING.) ANNA M. TAFT, Chicago, Ill. Filed Feb. 5, 1912. Under ten-year proviso.

Perham

Particular description of goods.—Robes and Manteaux.
Claims use since May 30, 1880.

Ser. No. 61,254. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) RUDY-PATRICK SEED CO., Kansas City, Mo. Filed Feb. 5, 1912.

Royal

Particular description of goods.—Poultry Feed.
Claims use since Oct. 1, 1911.

Ser. No. 61,261. (CLASS 17. TOBACCO PRODUCTS.) THE HAUTZENROEDER CO., Mansfield, Ohio. Filed Feb. 5, 1912.



The portrait being that of the historical character, Admiral Hopkins, the first commodore of the United States Navy.

Particular description of goods.—Cigars.
Claims use since June 8, 1897.

Ser. No. 61,291. (CLASS 30. CROCKERY, EARTHENWARE, AND PORCELAIN.) TOWER MANUFACTURING & NOVELTY CO., New York, N. Y. Filed Feb. 6, 1912.

N.T.Y.

Particular description of goods.—Crockery Pin-Cups and Crockery Pin-Trays.
Claims use since Mar. 1, 1908.

Ser. No. 61,340. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) HELLER & LONG, New York, N. Y. Filed Feb. 7, 1912.

REGAL

Particular description of goods.—Handkerchiefs.
Claims use since Jan. 8, 1912.

Ser. No. 61,350. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) LUCAS PRODUCE COMPANY, New York, N. Y., and Leipsic, Ohio. Filed Feb. 8, 1912.

C.F.L.

Particular description of goods.—Eggs.
Claims use since July 28, 1908.

Ser. No. 61,379. (CLASS 39. CLOTHING.) ADAMS SHOE COMPANY, Lynn, Mass. Filed Feb. 8, 1912.

PLAZA

Particular description of goods.—Leather Shoes.
Claims use since Sept. 1, 1908.

Ser. No. 61,428. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ATLANTIC MARITIME COMPANY, Kittery, Me., and Boston, Mass. Filed Feb. 12, 1912.



Particular description of goods.—Wheat-Flour.
Claims use since Jan. 3, 1912.

Ser. No. 61,671. (CLASS 28. JEWELRY AND PRECIOUS-METAL WARE.) UNTERMEYER-ROBBINS & COMPANY, New York, N. Y. Filed Feb. 23, 1912.

BIRTHSTONE

Particular description of goods.—Precious-Metal Sewing-Thimbles.
Claims use since Feb. 1, 1912.

Ser. No. 61,750. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) THE SCOUT SUSPENDER & SPECIALTY MFG. CO., Kalamazoo, Mich. Filed Feb. 26, 1912.

SCOUT

Particular description of goods.—Suspenders.
Claims use since Feb. 13, 1912.

Ser. No. 61,791. (CLASS 2. RECEPTACLES.) THE UNION BAG AND PAPER COMPANY, Jersey City, N. J., and New York, N. Y. Filed Feb. 28, 1912.

RHINOKRAFT

Particular description of goods.—Paper Bags.
Claims use since Feb. 2, 1912.

TRADE-MARKS

REGISTERED APRIL 9, 1912.

86,019. GLOVES. B. ALTMAN & Co., New York, N. Y. Filed December 16, 1911. Serial No. 60,280. PUBLISHED FEBRUARY 6, 1912.

86,020. CERTAIN ELECTRICAL APPARATUS. AMERICAN ELECTRICAL HEATER Co., Detroit, Mich. Filed June 24, 1911. Serial No. 57,285. PUBLISHED FEBRUARY 6, 1912.

86,021. CERTAIN AUTOMATIC ATTACHMENT FOR TYPE-WRITING MACHINES. AMERICAN FEEDOGRAPH COMPANY, Philadelphia, Pa. Filed November 16, 1911. Serial No. 59,746. PUBLISHED FEBRUARY 6, 1912.

86,022. CORRUGATED PAPER. AMERICAN PAPER PRODUCTS COMPANY, St. Louis, Mo. Filed August 19, 1911. Serial No. 58,279. PUBLISHED JANUARY 30, 1912.

86,023. MEDICINE FOR CERTAIN CHILDREN'S DISEASES. THE BARNES MANUFACTURING COMPANY, Dover, Del., and Baltimore, Md. Filed October 3, 1911. Serial No. 58,976. PUBLISHED JANUARY 30, 1912.

86,024. MEDICINE FOR HEADACHES, STOMACH TROUBLE, AND NERVOUSNESS. EDWARD L. BALDWIN, San Francisco, Cal. Filed December 5, 1910. Serial No. 53,267. PUBLISHED JANUARY 30, 1912.

86,025. COTTON PIECE GOODS. BATES MANUFACTURING COMPANY, Lewiston, Me. Filed December 16, 1911. Serial No. 60,282. PUBLISHED FEBRUARY 6, 1912.

86,026. HEATING-FURNACES. BERGSTROM STOVE COMPANY, Neenah, Wis. Filed October 26, 1911. Serial No. 59,365. PUBLISHED FEBRUARY 6, 1912.

86,027. ALPACA AND MOHAIR DRESS GOODS IN THE PIECE. JOSEPH BENN & SONS, INC., Greystone, R. I. Filed July 20, 1911. Serial No. 57,733. PUBLISHED FEBRUARY 6, 1912.

86,028. COTTON GOODS IN THE PIECE. BLACKSTONE MFG. COMPANY, Providence, R. I. Filed July 8, 1911. Serial No. 57,549. PUBLISHED FEBRUARY 6, 1912.

86,029. PAPER AND STATIONERY. J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908. Serial No. 35,503. PUBLISHED FEBRUARY 6, 1912.

86,030. PAPER AND STATIONERY. J. C. BLAIR COMPANY, Huntingdon, Pa. Filed June 17, 1908. Serial No. 35,573. PUBLISHED OCTOBER 26, 1909.

86,031. REMEDY FOR DISEASES OF THE FEET AND A DEODORIZER. G. M. BUDD, Homestead, Fla. Filed November 7, 1911. Serial No. 59,539. PUBLISHED JANUARY 30, 1912.

86,032. WINE OF THE BURGUNDY TYPE. CALIFORNIA WINE ASSOCIATION, San Francisco, Cal. Filed June 15, 1908. Serial No. 35,268. PUBLISHED FEBRUARY 6, 1912.

86,033. LIQUID VARNISH-CLEANERS. THE CARDINAL VARNISH CLEANER COMPANY, Akron, Ohio. Filed August 30, 1911. Serial No. 58,450. PUBLISHED FEBRUARY 6, 1912.

86,034. WHEAT-FLOUR. CARLYLE MILLING COMPANY, Carlyle, Ill. Filed December 19, 1910. Serial No. 53,353. PUBLISHED FEBRUARY 6, 1912.

86,035. TAPEWORM REMEDY. CHEMISCHE FABRIK HELFENBERG A. G. VORM. EUGEN DIETERICH, Helfenberg, Germany. Filed August 17, 1911. Serial No. 58,252. PUBLISHED JANUARY 30, 1912.

86,036. GINGER-ALE. THE CHICAGO CONSOLIDATED BOTTLING COMPANY, Chicago, Ill. Filed May 24, 1909. Serial No. 42,626. PUBLISHED FEBRUARY 6, 1912.

86,037. EXTERNAL REMEDY FOR CERTAIN DISEASES. JOHN B. COX, Maryville, Mo. Filed November 11, 1911. Serial No. 59,650. PUBLISHED JANUARY 30, 1912.

86,038. COOKING-RANGES, HEATING-STOVES, AND HOT-AIR FURNACES. HENRY N. CLARK Co., Boston, Mass. Filed February 25, 1910. Serial No. 48,028. PUBLISHED JULY 12, 1910.

86,039. FOOT-POWDER, FOOT-CREAM, FOOT-LOTION, AND FOOT-BATH TABLETS. CUMMINGS MANUFACTURING COMPANY, Morristown, N. J. Filed November 25, 1911. Serial No. 59,920. PUBLISHED JANUARY 30, 1912.

86,040. PEANUT-BUTTER. BYRON J. DOLPHIN, Seattle, Wash. Filed November 8, 1911. Serial No. 59,514. PUBLISHED FEBRUARY 6, 1912.

86,041. RAZORS. DURHAM DUPLEX RAZOR COMPANY, New York, N. Y. Filed April 3, 1911. Serial No. 55,492. PUBLISHED FEBRUARY 6, 1912.

86,042. SUITS OF CLOTHING FOR OUTER WEAR. EARNSDALE WORSTED COMPANY, Clinton, Mass. Filed August 21, 1911. Serial No. 58,292. PUBLISHED FEBRUARY 6, 1912.

86,043. MEN'S AND WOMEN'S HOSIERY. EDSON, MOORE & Co., Detroit, Mich. Filed April 29, 1905. Serial No. 3,558. PUBLISHED FEBRUARY 6, 1912.

86,044. MOWING-MACHINES. EMERSON-BRANTINGHAM COMPANY, Rockford, Ill. Filed November 10, 1911. Serial No. 59,646. PUBLISHED FEBRUARY 6, 1912.

86,045. COOKING COMPOUND COMPRISING COTTON-SEED OIL AND OLEO-STEARIN. THE N. K. FAIRBANK COMPANY, Chicago, Ill. Filed August 14, 1905. Serial No. 11,634. PUBLISHED JUNE 20, 1908.

86,046. COOKING COMPOUND CONTAINING COTTON-SEED OIL AND OLEO-STEARIN. THE N. K. FAIRBANK COMPANY, Chicago, Ill. Filed January 26, 1907. Serial No. 24,924. PUBLISHED JUNE 20, 1908.

86,047. COOKING COMPOUND CONTAINING COTTON-SEED OIL AND OLEO-STEARIN. THE N. K. FAIRBANK COMPANY, Chicago, Ill. Filed August 2, 1905. Serial No. 11,167. PUBLISHED JUNE 20, 1908.

86,048. CERTAIN CHEMICAL. FARBENFABRIKEN OF ELBERFELD COMPANY, New York, N. Y.
Filed November 29, 1911. Serial No. 59,995. PUBLISHED JANUARY 30, 1912.

86,049. ANTIARTHRITICUM. FARBENFABRIKEN OF ELBERFELD COMPANY, New York, N. Y.
Filed December 5, 1911. Serial No. 60,080. PUBLISHED FEBRUARY 13, 1912.

86,050. BUTTONS. MARSHALL FIELD & COMPANY, Chicago, Ill.
Filed December 16, 1911. Serial No. 60,287. PUBLISHED FEBRUARY 6, 1912.

86,051. CORSET-STIFFENERS. GAGE-DOWNS COMPANY, Chicago, Ill.
Filed November 13, 1911. Serial No. 59,705. PUBLISHED FEBRUARY 6, 1912.

86,052. CRACKERS. THE GREEN & GREEN COMPANY, Dayton, Ohio.
Filed November 16, 1911. Serial No. 59,759. PUBLISHED FEBRUARY 6, 1912.

86,053. CERTAIN CHEMICAL PREPARATIONS. GUSTAV GRETHER, Koblenz, Germany.
Filed October 30, 1911. Serial No. 59,434. PUBLISHED JANUARY 30, 1912.

86,054. WATERPROOF CLOTH. W. A. & J. C. HAARTS, Inc., Boston, Mass.
Filed September 2, 1911. Serial No. 58,514. PUBLISHED FEBRUARY 6, 1912.

86,055. LEATHER BOOTS AND SHOES. HANAN & SON, Brooklyn, N. Y.
Filed December 16, 1911. Serial No. 60,289. PUBLISHED FEBRUARY 6, 1912.

86,056. MILK, DRIED MILK, CREAM, BUTTER, AND CHEESE. JAMES B. HATMAKER, Paris, France.
Filed June 29, 1911. Serial No. 57,426. PUBLISHED FEBRUARY 6, 1912.

86,057. CHERRY BRANDY. PETER F. HEERING, Copenhagen, Denmark.
Filed October 2, 1907. Serial No. 30,348. PUBLISHED FEBRUARY 6, 1912.

86,058. CERTAIN PHARMACEUTICAL PREPARATIONS. HENRY'S CHEMICAL CO., Washington, D. C.
Filed May 20, 1905. Serial No. 6,137. PUBLISHED JANUARY 30, 1912.

86,059. VEILING. S. HOLLANDER & SON, New York, N. Y.
Filed November 22, 1911. Serial No. 59,845. PUBLISHED FEBRUARY 6, 1912.

86,060. REMEDIES FOR GRIPPE AND INFLUENZA. CHARLES W. HOLZHAUER, Newark, N. J.
Filed November 15, 1911. Serial No. 59,724. PUBLISHED JANUARY 30, 1912.

86,061. COTTON GOODS IN THE PIECE. HOPE COMPANY, Providence, R. I.
Filed June 29, 1911. Serial No. 57,366. PUBLISHED FEBRUARY 6, 1912.

86,062. CLEANING-POWDER. THE HYGIENIC PRODUCTS COMPANY, Canton, Ohio.
Filed May 19, 1911. Serial No. 56,482. PUBLISHED FEBRUARY 6, 1912.

86,063. BREAD. GEORGE F. JEFFERSON, Houston, Tex.
Filed September 11, 1911. Serial No. 58,602. PUBLISHED FEBRUARY 6, 1912.

86,064. BELT-HOOKS. E. JENCKES MANUFACTURING COMPANY, Worcester, Mass.
Filed November 1, 1911. Serial No. 59,484. PUBLISHED FEBRUARY 6, 1912.

86,065. BUTTER. KINGSLEY & SMITH, Hartford, Conn.
Filed April 3, 1911. Serial No. 55,485. PUBLISHED FEBRUARY 6, 1912.

86,066. SOLE-LEATHER AND BELTING-LEATHER. LEAS & MCVITTY, Inc., Philadelphia, Pa.
Filed November 25, 1911. Serial No. 59,918. PUBLISHED FEBRUARY 6, 1912.

86,067. CERTAIN FOODS. THE H. D. LEE MERCANTILE CO., Salina, Kans.
Filed November 13, 1911. Serial No. 59,686. PUBLISHED FEBRUARY 6, 1912.

86,068. ICE-CREAM. PAUL GODFREY LIEBMANN, Ardmore, Okla.
Filed July 5, 1911. Serial No. 57,482. PUBLISHED FEBRUARY 6, 1912.

86,069. FURNACE AND STOVE GRATES. THE LONG GRATE BAR COMPANY, Buffalo, N. Y.
Filed November 10, 1910. Serial No. 52,702. PUBLISHED JANUARY 23, 1912.

86,070. ILLUMINATING-OIL. LONGMAN & MARTINEZ, New York, N. Y.
Filed December 2, 1911. Serial No. 60,052. PUBLISHED JANUARY 30, 1912.

86,071. COTTON GOODS IN THE PIECE. LONSDALE COMPANY, Providence, R. I.
Filed June 22, 1911. Serial No. 57,252. PUBLISHED FEBRUARY 6, 1912.

86,072. COTTON GOODS IN THE PIECE. LONSDALE COMPANY, Providence, R. I.
Filed June 22, 1911. Serial No. 57,253. PUBLISHED FEBRUARY 6, 1912.

86,073. COTTON GOODS IN THE PIECE. LONSDALE COMPANY, Providence, R. I.
Filed July 8, 1911. Serial No. 57,550. PUBLISHED FEBRUARY 6, 1912.

86,074. BISCUITS. MANCHESTER BISCUIT CO., Sioux Falls, S. D.
Filed July 15, 1909. Serial No. 43,539. PUBLISHED MARCH 15, 1910.

86,075. LETTER-PAPER, ENVELOPS, AND PRINTING-PAPER. ARNOLD OTTO MEYER, Hamburg, Germany.
Filed July 28, 1911. Serial No. 57,913. PUBLISHED FEBRUARY 6, 1912.

86,076. WHEAT-FLOUR. MICHIGAN MILLING COMPANY, Ann Arbor, Mich.
Filed December 30, 1910. Serial No. 53,579. PUBLISHED AUGUST 22, 1911.

86,077. BISCUITS. NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y.
Filed December 9, 1911. Serial No. 60,146. PUBLISHED FEBRUARY 6, 1912.

86,078. CERTAIN PLUMBERS' SUPPLIES. NATIONAL COMMITTEE OF THE CONFEDERATED SUPPLY ASSOCIATIONS, New York, N. Y.
Filed September 8, 1911. Serial No. 58,591. PUBLISHED FEBRUARY 6, 1912.

86,079. VARNISH. NEW JERSEY WOOD FINISHING CO., Perth Amboy, N. J.
Filed June 22, 1907. Serial No. 28,315. PUBLISHED DECEMBER 19, 1911.

86,080. FRYING-PANS, SKILLETS, SPIDERS, AND GRIDDLES. NEW YORK STAMPING COMPANY, Brooklyn, N. Y.
Filed May 25, 1911. Serial No. 56,577. PUBLISHED SEPTEMBER 5, 1911.

86,081. RIBBONS OF SILK, COTTON, AND SILK AND COTTON. THE NONOTUCK SILK COMPANY, Northampton, Mass.
Filed November 22, 1911. Serial No. 59,853. PUBLISHED FEBRUARY 6, 1912.

86,082. BLENDED COFFEE, TEA, OLIVE-OIL, AND FLAVORING EXTRACTS. NORWINE COFFEE COMPANY, St. Louis, Mo.
Filed May 12, 1911. Serial No. 56,323. PUBLISHED JULY 18, 1911.

86,083. STICKY FLY-PAPER. C. H. OEHMIG-WEIDLICH, Zeitz, Germany.
Filed October 21, 1911. Serial No. 59,276. PUBLISHED FEBRUARY 6, 1912.

86,084. CANNED SALMON. PACIFIC AMERICAN FISHERIES, Chicago, Ill.
Filed April 8, 1910. Serial No. 48,922. PUBLISHED FEBRUARY 6, 1912.

86,085. CANNED SALMON. PACIFIC AMERICAN FISHERIES, Chicago, Ill.
Filed April 8, 1910. Serial No. 48,942. PUBLISHED FEBRUARY 6, 1912.

86,086. PREPARATION FOR TEMPERING STEEL. EDWARD REAVES, Banks, Ark.
Filed May 20, 1911. Serial No. 56,488. PUBLISHED JANUARY 30, 1912.

86,087. PERCOLATORS. THE REPUBLIC METALWARE COMPANY, Buffalo, N. Y.
Filed November 25, 1910. Serial No. 52,929. PUBLISHED FEBRUARY 6, 1912.

86,088. INDEX-CARDS. RONDO COMPANY OF NEW YORK, New York, N. Y.
Filed November 7, 1911. Serial No. 59,603. PUBLISHED FEBRUARY 6, 1912.

86,089. RAISINS. ROSENBERG BROS. & CO., San Francisco, Cal.
Filed July 27, 1911. Serial No. 57,856. PUBLISHED FEBRUARY 6, 1912.

86,090. RAISINS. ROSENBERG BROS. & CO., San Francisco, Cal.
Filed July 27, 1911. Serial No. 57,860. PUBLISHED FEBRUARY 6, 1912.

86,091. COFFEE. W. S. SANDERSON & BROTHER, Denver, Colo.
Filed September 29, 1909. Serial No. 45,002. PUBLISHED FEBRUARY 6, 1912.

86,092. CATHARTIC POWDER. WILLIAM J. SCHERER, Rochester, N. Y.
Filed November 25, 1911. Serial No. 59,914. PUBLISHED JANUARY 30, 1912.

86,093. RICE. SEABOARD RICE MILLING CO., Galveston, Tex.
Filed December 11, 1911. Serial No. 60,175. PUBLISHED FEBRUARY 6, 1912.

86,094. FRESH HERRING. SEACOAST CANNING CO., Eastport, Me.
Filed July 15, 1911. Serial No. 57,646. PUBLISHED FEBRUARY 6, 1912.

86,095. CERTAIN ELECTRICAL APPARATUS AND SUPPLIES. "SIEMENS" GESELLSCHAFT MIT BESCHRÄNKTER HAFTUNG, Berlin, Germany.
Filed July 1, 1911. Serial No. 57,439. PUBLISHED FEBRUARY 6, 1912.

86,096. BREAD. SHULTS BREAD COMPANY, New York, N. Y.
Filed November 20, 1911. Serial No. 59,808. PUBLISHED FEBRUARY 6, 1912.

86,097. CORDIALS. DR. J. G. B. SIEGERT & HIJOS, Port of Spain, Trinidad.
Filed September 18, 1909. Serial No. 44,773. PUBLISHED FEBRUARY 6, 1912.

86,098. MEN'S OUTER SUITS AND OVERCOATS. E. E. SMITH & CO., Boston, Mass.
Filed November 18, 1911. Serial No. 59,787. PUBLISHED FEBRUARY 6, 1912.

86,099. HIGH-SPEED TOOL-STEEL. SÖDERFORS BRUKS AKTIEBOLAG, Falun, Sweden.
Filed March 3, 1910. Serial No. 48,133. PUBLISHED FEBRUARY 6, 1912.

86,100. TOOL-STEEL. SÖDERFORS BRUKS AKTIEBOLAG, Falun, Sweden.
Filed March 3, 1910. Serial No. 48,134. PUBLISHED FEBRUARY 6, 1912.

86,101. TOOL-STEEL. SÖDERFORS BRUKS AKTIEBOLAG, Falun, Sweden.
Filed March 3, 1910. Serial No. 48,135. PUBLISHED FEBRUARY 6, 1912.

86,102. TOOL-STEEL AND ANVILS. SÖDERFORS BRUKS AKTIEBOLAG, Falun, Sweden.
Filed March 3, 1910. Serial No. 48,136. PUBLISHED FEBRUARY 6, 1912.

86,103. TOOL-STEEL. SÖDERFORS BRUKS AKTIEBOLAG, Falun, Sweden.
Filed March 3, 1910. Serial No. 48,137. PUBLISHED FEBRUARY 6, 1912.

86,104. ANVILS. SÖDERFORS BRUKS AKTIEBOLAG, Falun, Sweden.
Filed March 3, 1910. Serial No. 48,138. PUBLISHED FEBRUARY 6, 1912.

86,105. CERTAIN PAINTERS' MATERIAL. L. SONNEBORN SONS, Inc., New York, N. Y.
Filed October 17, 1911. Serial No. 59,191. PUBLISHED FEBRUARY 6, 1912.

86,106. CHEMICAL COMPOSITIONS FOR DESTROYING BLIGHT AND THE LIKE ON PLANTS. JOHN SOMLEY, Feilding, New Zealand.
Filed August 1, 1911. Serial No. 57,940. PUBLISHED JANUARY 30, 1912.

86,107. CERTAIN PHARMACEUTICAL PRODUCTS. E. R. SQUIBB & SONS, New York, N. Y.
Filed November 13, 1911. Serial No. 59,706. PUBLISHED JANUARY 30, 1912.

86,108. VEILINGS, NETTINGS, MALINES, CHIFFONS, AND VEILS. STEINER, ROSENSTEIN & TRAUB, New York, N. Y., assignor to Rosenstein & Traub, a Firm.
Filed March 17, 1910. Serial No. 48,513. PUBLISHED APRIL 19, 1910.

86,109. COSMETIC CREAM. REGINALD C. THOMAS, New York, N. Y.
Filed June 17, 1911. Serial No. 57,146. PUBLISHED JANUARY 30, 1912.

86,110. CERTAIN PAINTERS' MATERIALS. UNION PETROLEUM COMPANY, Philadelphia, Pa.
Filed September 11, 1911. Serial No. 58,630. PUBLISHED FEBRUARY 6, 1912.

86,111. CONDENSER-TUBES. WHEELER CONDENSER & ENGINEERING CO., Carteret, N. J., and New York, N. Y.
Filed December 20, 1911. Serial No. 60,285. PUBLISHED FEBRUARY 6, 1912.

86,112. ORGANS AND PIANOS. WILLIAMS ORGAN & PIANO CO., Chicago, Ill.
Filed November 30, 1906. Serial No. 23,692. PUBLISHED JANUARY 16, 1912.

86,113. PIANOS. THE RUDOLPH WURLITZER CO., Cincinnati, Ohio.
Filed December 26, 1911. Serial No. 60,459. PUBLISHED FEBRUARY 6, 1912.

86,114. REMEDY FOR CERTAIN AILMENTS. JOHN WYETH & BROTHER, Incorporated, Philadelphia, Pa.
Filed November 13, 1911. Serial No. 59,702. PUBLISHED JANUARY 30, 1912.

86,115. CERTAIN MEDICINE. JOHN WYETH & BROTHER, Incorporated, Philadelphia, Pa.
Filed November 13, 1911. Serial No. 59,701. PUBLISHED JANUARY 30, 1912.

LABELS

REGISTERED APRIL 9, 1912.

16,273.—*Title:* "EL GINERO." (For Cigars.) C. B. HENSCHEL MFG. CO., Milwaukee, Wis. Filed March 15, 1912.

16,274.—*Title:* "MARVELOUS CLEANER." (For Disinfecting-Cleaner.) MICHAEL J. DUNN, Pottsville, Pa. Filed February 29, 1912.

16,275.—*Title:* "LUNCHE-ON BISCUIT." (For Biscuits or Crackers.) GROCERS' BISCUIT COMPANY, Louisville, Ky. Filed March 13, 1912.

16,276.—*Title:* "LOTUS CHOCOLATES LOTUS BEAUTY." (For Chocolates.) THE J. D. RYAN CO., Cleveland, Ohio. Filed February 26, 1912.

16,277.—*Title:* "MARY ANN." (For Bleached Cotton.) J. M. ROBINSON, NORTON & CO., Louisville, Ky. Filed March 2, 1912.

16,278.—*Title:* "KAISER CLUB." (For Cigars.) THE MOEBUS LITHOGRAPHIC COMPANY, New York, N. Y. Filed February 12, 1912.

16,279.—*Title:* "RAPID COPPER POWDER." (For Metal and Marble Polish.) ALBERT T. SCHLICHTING, Newark, N. J. Filed March 4, 1912.

16,280.—*Title:* "VEGETABLE SALAD." (For Vegetable Salad.) VEGETABLE FOOD CO., Providence, R. I. Filed January 27, 1912.

16,281.—*Title:* "WHOLESOME." (For Coffee, Cereal, and Chicory.) C. F. BLANKE TEA & COFFEE CO., St. Louis, Mo. Filed March 4, 1912.

16,282.—*Title:* "FRENCH BREAKFAST." (For Coffee and Chicory.) C. F. BLANKE TEA & COFFEE CO., St. Louis, Mo. Filed March 4, 1912.

PRINTS

REGISTERED APRIL 9, 1912.

2,984.—*Title:* "SHIRLEY PRESIDENT SUSPENDERS." (For Suspenders.) THE C. A. EDGARTON MFG. CO., Shirley, Mass. Filed March 13, 1912.

2,985.—*Title:* "SHIRLEY PRESIDENT SUSPENDERS." (For Suspenders.) THE C. A. EDGARTON MFG. CO., Shirley, Mass. Filed March 13, 1912.

2,986.—*Title:* "SHIRLEY PRESIDENT SUSPENDERS." (For Suspenders.) THE C. A. EDGARTON MFG. CO., Shirley, Mass. Filed March 13, 1912.

2,987.—*Title:* "WELCH'S GRAPE JUICE." (For Grape-Juice.) THE WELCH GRAPE JUICE CO., Westfield, N. Y. Filed January 3, 1912.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

SMITH AND LARSEN *v.* HILL.

Decided September 14, 1911.

1. INTERFERENCE—PRIORITY—PATENTABILITY NOT CONSIDERED.

It is well settled that the patentability of the issue over the prior art is not a matter which can be raised at final hearing on priority, and, further, that no appeal lies from the refusal of the Examiners-in-Chief to make a recommendation as to the patentability under Rule 126. (*Welsh v. Hellbauer*, 94 O. G., 223; *Woods v. Waddell*, 106 O. G., 2017.)

2. SAME—SAME—RIGHT TO MAKE CLAIMS.

The record reviewed and *Held* that H. has a right to make certain of the claims in issue.

APPEAL from Examiners-in-Chief.

ALTERNATING-CURRENT SWITCH.

Mr. Park Benjamin and *Messrs. Byrnes, Townsend & Brickenstein* for Smith and Larsen.

Mr. A. D. Davis for Hill. (*Mr. Arthur A. Buck* and *Mr. Frank J. Seabolt* of counsel.)

MOORE, *Commissioner:*

This is an appeal by Smith and Larsen from a decision of the Examiners-in-Chief awarding priority of invention to Hill as to counts 7, 8, and 9, thereby affirming the decision of the Examiner of Interferences as to count 7 and reversing it as to counts 8 and 9. The appeal also assigns error in the decision of the Examiners-in-Chief in that they refuse to consider the patentability of counts 1 and 2 over the prior art, to hold these counts unpatentable, or to make a recommendation to this effect under the provisions of Rule 126.

It is well settled that the patentability of the issue over the prior art is not a matter which can be raised at final hearing on priority, and, further, that no appeal lies from the refusal of the Examiners-in-Chief to make a recommendation as to the patentability under Rule 126. (*Welsh* v. *Hellbauer*, 94 O. G., 223; *Woods* v. *Waddell*, 106 O. G., 2017.)

This case comes up under the provisions of Rule 120. Hill is the senior party, and Smith and Larsen, being under an order to show cause why judgment should not be rendered against them because their preliminary statement failed to overcome the filing date of Hill, brought a motion to dissolve, urging that counts 1 and 2 were unpatentable and that Hill had no right to make the claims corresponding to the remaining counts. The motion was denied by the Examiner as to both grounds. Judgment was thereupon rendered in favor of Hill. Thereafter this judgment was set aside as to counts 3 to 9, inclusive, upon motion by Smith and Larsen and the case set for final hearing under Rule 130. The Examiner of Interferences held that Hill had a right to make a claim corresponding to count 7, but no right to make claims corresponding to the other counts. Both parties appealed. The Examiners-in-Chief reversed the Examiner of Interferences as to counts 8 and 9, awarding priority to Hill as to counts 7, 8, 9 and to Smith and Larsen as to 3, 4, 5, and 6. From this judgment Smith and Larsen only have appealed. Counts 1 and 2 stand finally awarded to Hill and counts 3, 4, 5, and 6 to Smith and Larsen. The single question for consideration upon this appeal is the right of Hill to make the claims corresponding to counts 7, 8, and 9.

As to count 7 it is urged that the Hill construction does not embody—

> a loose joint * * * for permitting said core to be vibrated by current alternations in the magnet coil without imparting said motion to said circuit closing device.

The loose connection between the magnet-core and the switch-toggle as shown in the Hill construction must necessarily perform this function. It is true that the drawing shows the core in contact with the toggle at its upward limit of movement, but from the nature of the toggle device and the description of its purpose and operation as found in the specification it is clear that no pressure exists between these parts when the switch is closed and any drop of the core due to vibration thereof would increase the distance between these parts, while the solid abutment against which the core strikes within the magnet-coil must prevent its rising above the position shown or delivering a blow to the toggle-joint. It is believed that the tribunals below properly held that this claim reads upon the structure of Hill.

It is urged that Hill has no right to make claims corresponding to counts 8 and 9, because his magnet-core is not "equilibrated" as specified in these counts, and, further, that it does not assume the equilibrated position *after* the operation of the circuit-closing device. The magnet-core in the

Smith and Larsen construction is held in place by the force of the magnet during the time the switch is closed and is free to move up and down with fluctuations of the magnet-current. This is also true of the Hill device, except that the upper end of the core contacts with a fixed core within the magnet at the upper limit of movement. Both cores are held in position against the action of gravity by the magnetic force, and in both cases it is clearly contemplated that a slight up-and-down movement may occur due to fluctuations in this force without affecting the other parts of the switch. I agree with the Examiners-in-Chief that the expression "equilibrated" is as truly applicable to one of these arrangements as to the other.

As to the objection that the equilibrated position is not assumed in Hill's case *after* the closing of the switch, I do not find that the counts call for such an operation. The expression used is—

said core shall be raised to transmit motion through said mechanism to operate said circuit closing device to close circuit, and thereafter upon said core assuming an equilibrated position in the magnet the relative movement of said pin and plate due to vibration of said core * * * shall not be transmitted through said pin and plate to said circuit closing device.

It is clear that the word "thereafter" relates to the relative movement of the pin and plate and does not define the time at which equilibrium is secured. It must therefore be held that these claims properly read upon Hill's structure.

The appeal is dismissed so far as it relates to counts 1 and 2. The decision of the Examiners-in-Chief is affirmed as to counts 7, 8, and 9.

EX PARTE SHINOLA COMPANY.

Decided March 4, 1912.

TRADE-MARKS—DUPLICATE REGISTRATIONS.

Held that the Commissioner has authority to grant a second registration of a trade-mark to the same party and that where good and sufficient reasons are shown to justify such action the second registration should be granted.

ON APPEAL.

TRADE-MARK FOR SHOE-POLISH AND POLISHING-BRUSHES AND DAUBERS FOR APPLYING THE SAME.

Messrs. Osgood, Davis & Dorsey and *Mr. Geo. H. Evans* for the applicant.

BILLINGS, *First Assistant Commissioner:*

This is an appeal from a decision of the Examiner of Trade-Marks and Designs refusing to register to the Shinola Company the word "Shinola" as a trade-mark for shoe-polish.

Registration was refused for the reason that appellant's mark and goods are identical with the mark and goods shown in certificate No. 54,769, issued July 31, 1906, to the American Chemical Manufacturing and Mining Company.

It appears from the assignment records of this Office that the Shinola Company is the same entity as the American Chemical Manufacturing and Mining Company, the name of the company having been changed by order of a competent court. The Examiner of Trade-Marks ruled that registration to the Shinola Company can be granted only upon the condition that the registration to the American Chemical Manufacturing and Mining Company be canceled.

The appellant sets forth that there are many registrations in foreign countries now in force which have been effected under treaty provisions, that these registrations now stand in the name of the American Chemical Manufacturing and Mining Company, and that to cancel its registration in this country would *ipso facto* invalidate the foreign registrations. It is also submitted that other registrations are now sought by the appellant in foreign countries; that these foreign countries require that registration be first obtained by the appellant in this country; that some of them are not satisfied with the showing of registration in this country by the American Chemical Manufacturing and Mining Company and the submission of proofs that the name of that company had been changed by order of the court to the Shinola Company and require as a condition precedent to registration a certificate of registration in this country by the applicant Shinola Company. It is urged, therefore, that the new registration should be granted to the Shinola Company, provided the Trade-Mark Act of 1905 does not prohibit it.

The Examiner of Trade-Marks holds that the Patent Office having issued the registration to the American Chemical Manufacturing and Mining Company has exhausted its jurisdiction to issue another registration for the same trade-mark applied to the same goods to the same company under a different name.

The Examiner states:

With regard to (1) and considering the Trade-Mark Act of February 20, 1905, as amended, it appears therefrom that said act requires the Commissioner of Patents to issue a certificate of registration to the owner of a trade-mark upon the compliance of the latter with certain specified requirements. These requirements having been complied with and the Commissioner of Patents having issued a certificate of registration, then it seems to the Examiner that the authority conferred by this act on the Commissioner of Patents has been exhausted.

Section 1 of the Trade-Mark Act of 1905 provides, under conditions not necessary to state here, that "the owner of a trade-mark may obtain registration." Section 5 of the same act provides that a trade-mark which is otherwise registrable shall be refused registration when it is identical with or so nearly resembles a registered or known trade-mark as to be likely to cause confusion or mistake in the mind of the public, or to deceive purchasers, only when such registered or known trade-marks are "owned and in use by another."

Sections 1, 2, 3, and 4 also provide for the registration of trade-marks in this country by owners who reside in or are located in any foreign country which by treaty or law affords similar privileges to citizens of the United States. Where the applicant resides or is located in a foreign country, the registration or application for registration in that foreign country shall be established as a fact as a condition precedent to the registration of the same trade-mark in this country.

The provisions of these sections of the Trade-Mark Act are in accordance with the treaties entered into, respectively, by this country and by certain foreign countries which provide for similar privileges to citizens of the United States. This being so, the provisions of law relating to the registration of trade-marks in this country should not be so construed as to deprive residents or citizens of the United States from benefits of the treaty provisions unless the Trade-Mark Act clearly demands such a construction.

As above pointed out, the provisions of the Trade-Mark Act deny registration to the alleged owner of a mark which is otherwise registrable only when the same mark has been previously registered by or known to be used by another.

The same reasons which prohibit double patenting cannot be properly urged against the double registration of trade-marks, for the two laws are based on entirely different principles. In the construction of statutes it is a well-settled principle that a general act must be considered in its entirety and the separate provisions thereof brought into harmony with one another.

It has been urged by the Examiner that it would be against public policy to grant two separate registrations of the same mark to the same party under different names, notwithstanding the fact that the name has been changed by legal process. Whatever confusion might exist in the minds of the public by this second registration is greatly overbalanced by the actual wrong and hardship which would result from the refusal to again register the trade-mark to the same party under another name, which has been changed by judicial process, for the refusal to grant the second registration would deny to the applicant his right to register in foreign countries, which right would be retained to him by the grant of the second registration in this country.

It has been suggested by the Examiner that the mark may be registered only upon cancelation of the previous registration, and section 13 of the Trade-Mark Act has been referred to as authorizing this cancelation. Without deciding this question, for in the view which I take of this case it is not necessary to do so, it is observed that the cancelation of a trade-mark can be effected under section 13 only in the event that the applicant for cancelation shall deem himself injured by the registration of the trade-mark sought to be canceled.

In this particular case the Shinola Company, the appellant, instead of deeming itself injured by the registration of the trade-mark to the American Chemical Manufacturing and Mining Company would deem itself injured by the cancelation of that trade-mark. Appellant therefore could not set up the facts necessary to give the Patent Office jurisdiction to cancel the previous registration.

There is nothing in the trade-mark law to prohibit and much to justify the second registration of a trade-mark to a party where good and sufficient reasons are shown to justify the same. Such a showing has been made in this case.

The decision of the Examiner of Trade-Marks and Designs is reversed.

HUFF v. GULICK.

Decided May 4, 1911.

1. INTERFERENCE—PRIORITY—REDUCTION TO PRACTICE.

Where the claim constituting the issue of an interference is for a combination of elements, it must be considered as such, and in order to determine whether the invention in issue has been reduced to practice it is necessary to decide whether this combination was reduced to practice and not whether any element thereof is such that by itself the mere making thereof would constitute a reduction to practice.

2. SAME—SAME—SAME.

Evidence considered and *Held* insufficient to establish beyond a reasonable doubt that H. reduced the invention in issue to practice before G. filed his application.

APPEAL from Examiners-in-Chief.

MOTOR-VEHICLE.

Messrs. Foster, Freeman, Watson & Coit for Huff.

Messrs. Offield, Towle, Graves & Offield for Gulick.

(*Mr. Samuel N. Pond* of counsel.)

TENNANT, *Assistant Commissioner:*

This is an appeal by Huff from a decision of the Examiners-in-Chief affirming the decision of the Examiner of Interferences awarding priority of invention to Gulick.

The issue of the interference is as follows:

In a motor vehicle, the combination of axle-sections, differential gearing, a main casing about said gearing having inwardly-extended sleeves at its opposite ends surrounding said axle-sections, and end casings detachably fastened to the exterior of said main casing and having tubes or sleeves receiving said axle-sections and fitted in said main casing sleeves.

Gulick is a patentee, his patent having been granted November 24, 1908, upon an application filed August 9, 1907. Huff's application was filed April 28, 1909. His application having been filed after the grant of the patent to Gulick, it is incumbent upon him in order to prevail to establish his case beyond a reasonable doubt.

Huff alleges conception, the making of drawings, and disclosure in July, 1906, and reduction to practice in March, 1907. The Examiner of Interferences found that Gulick had established a conception prior to the earliest date claimed by Huff and that Huff had not established a reduction to practice prior to Gulick's filing date. No serious contention is made on behalf of Huff that this finding as to Gulick's date of conception is not correct. In fact, on appeal from the decision of the Examiner of Interferences the only error assigned, save the general one of error in awarding priority to Gulick, was that the Examiner of Interferences erred in holding that Huff had not established reduction to practice prior to Gulick's filing date, and this was the only point considered in the decision of the Examiners-in-Chief. It may therefore be taken as established that Gulick was the first to conceive the invention.

The invention in issue relates to a casing for transmission-gear designed for automobiles. Counsel for Gulick contends that the invention relates primarily to the means for retaining the oil in its casing, which consists in providing the main casing with inwardly-extending sleeves, or, as stated by him in reply to an objection to the cross-examination of Huff, (Huff's record, p. 19,)

that this is the novel or vitalizing feature of the claim of the issue. On the other hand, it is argued in behalf of Huff that, as appears from the record of Gulick's patent, the feature which rendered the claim patentable is—

end casings detachably fastened to the exterior of said main casings.

The claim is, however, for a combination and must be considered as such, and in order to determine whether the invention in issue has been reduced to practice it is necessary to decide whether this combination was reduced to practice and not whether any element thereof is such that by itself the mere making thereof would constitute a reduction to practice. This was the position taken by counsel for Huff during the taking of testimony, as appears from the following statement, (Huff's record, p. 20:)

By Mr. Watson: Counsel for Huff does not agree that the claim in issue is dependent upon any so-called "novel or vitalizing feature." The claim on its face and in fact is for a novel combination and arrangement of a number of elements.

According to Huff's testimony he conceived the invention in the summer of 1906, had drawings made during the latter part of that year, and in the early part of the year 1907 certain experimental "bridges," as the rear-axle construction comprising the invention in issue is termed, were assembled. He further testifies that these bridges were placed on cars for experimental purposes, that one of them was run from Detroit to Pontiac, and that one of them started from Detroit to Buffalo on a test run, which ended on March 30, 1907. He also testifies that the construction shown in his application was embodied by the Packard Motor Car Company in its 1908 models, which were delivered to dealers in July, 1907, the first delivery taking place on July 30, 1907.

There is no testimony corroborating Huff as to any of the experimental runs except that known as the Detroit-Buffalo run. It appears from the testimony that the bridge broke between Detroit and Toledo, that a new bridge was put in at Toledo, and the run was never finished, the car returning to Detroit. Both the Examiner of Interferences and the Examiners-in-Chief held that this test did not establish a reduction to practice of the invention in issue.

It is contended on behalf of Huff that this device is such that its mere construction constituted a reduction to practice.

It appears that one of the objects of this invention was to prevent the escape of the lubricating-oil along the axle, and according to Huff's testimony a further object was to make a stronger housing for the differential gearing.

I agree with the lower tribunals that this invention is not such that it could be determined from a mere inspection thereof that it constituted a reduction to practice, but is one of those inventions that requires a test to establish whether it was such or not.

In discussing this question the Examiners-in-Chief state:

In deciding whether an invention is of such a simple character that reduction to practice can be predicated upon an untested construction, the question is not whether an expert would feel satisfied, from a study of the principles of the invention as they might be gathered from drawings as well as from a full size device, that the invention was capable of embodiment in a practical form. Such is the test in determining whether drawings and specifications filed in the Patent Office may be given effect as constructive reduction to practice. But the question, when deciding whether a device is of such simple character that reduction to practice may be predicated thereon without any test thereof, is whether those skilled in the art could be certain from an inspection of the actual device that that particular device would not fail when tested. If there is any room for doubt a test is necessary, and this is true when the doubt is whether the embodiment is mechanically sufficient as well as when the doubt is whether the alleged invention is sound in principle.

We think that an inspection of the bridges assembled by the Packard Motor Car Company in the spring of 1907 did not inform the engineers of the company that these bridges were satisfactory in principle, or that these bridges would not break when tested through some weakness or defect in their construction. This conclusion is borne out by the fact that the engineers considered it necessary to make experimental bridges and to make tests of the same before proceeding with the construction of cars for commercial purposes.

It does not appear from any testimony in this case whether the device was satisfactory in preventing the escape of oil. So far as the strength is concerned it is not shown whether it was due to weakness of the device that it broke or whether it was merely because of an accident due to the peculiar condition of the roads at that time; nor does it appear anywhere, except in Huff's testimony, that no changes were made in the bridge after this test.

It is argued on behalf of Huff that his testimony as to the success of this device is corroborated by the testimony of Morgan and Bertoli, who when asked if they could mention any difference in construction between the bridge used on this trip and the prior bridge referred to the fact that the latter had the webs on the outside, whereas the experimental bridge was round on the outside and had the ribs on the inside. They do not testify, however, that there were no other differences; nor do they testify that the bridges which were put in the 1908 models were in all respects like the experimental bridge, or if different in what that difference consisted.

If it had been established that all the cars put out by the Packard Motor Car Company after July, 1907, embodied the invention in issue, that might be sufficient to justify a holding that bridges like the experimental bridge had been further tested and found satisfactory prior to Gulick's filing date; but there is no such testimony in the record, save that of Huff himself, and it is too well settled to need the citation of decisions that reduction to practice cannot be based upon the testimony of the inventor alone.

The publications introduced in evidence by Huff do not show the invention in issue, since they show only the exterior of the bridge.

It must be held, therefore, that Huff has failed to establish beyond a reasonable doubt that he reduced the invention of the issue to practice prior to Gulick's filing date.

In view of this holding it is unnecessary to consider whether Huff derived his knowledge of the invention from Gulick, as claimed by the latter, or whether, if it should be held that Huff had established a reduction to practice in March, 1907, Gulick would not still be entitled to an award of priority

on the ground that he was first to conceive the invention and was diligent in reducing it to practice at the time Huff entered the field and subsequently thereto.

The decision of the Examiners-in-Chief is affirmed.

DECISIONS OF THE U. S. COURTS.

Supreme Court of the District of Columbia.

TWITCHELL *v.* RUDOLPH & WEST COMPANY.

Decided October 26, 1911.

PATENTABILITY—INFRINGEMENT.

The patent to Twitchell, No. 927,298, *Held* valid and infringed.

SUIT in equity by Charles R. Twitchell against Rudolph & West Company for infringement of Patent No. 927,298, dated July 6, 1909, pressure-gage for pneumatic tires. On final hearing. Decree for plaintiff.

Mr. J. Nota McGill for the plaintiff.

Mr. C. D. Davis for the defendant.

CLABAUGH, *C. J.*, (orally:)

I do not believe that by taking this matter under consideration I can get any better understanding of the situation than I now have. It does seem to me that where a presumption of validity arises from the issuance of the patent, it requires a strong case to overcome that presumption; and the burden is the same in patent cases as well as in other cases. I was much impressed by the language of the Supreme Court in the recent case of *Diamond Rubber Co.* v. *Consolidated Rubber Tire Co.*, (220 U. S., 428.) In this case it seems to me there is more than a mere aggregation of parts that have been in use and are common to the public. Now that the plaintiff has produced the invention shown by the article in evidence, by putting together a lot of things that are somewhat similar, to say it is merely a mechanical aggregation is to my mind extraordinary. When a patentee has produced an arrangement which fulfils a long-desired want, namely, to ascertain the pressure in a tire—not as the air is being supplied, as in defendant's, but one which gives you the pressure after it is supplied—and in such a small compass and in such an absolutely novel manner, there must be more than a mere aggregation of parts. It is not only the work of the mechanic, but in this case it seems to me to be the novel combination which goes beyond mere mechanical putting together.

If there were any doubt about that, the very fact of the enormous sale—which is nothing by itself, as there might be a patent which was itself no good while the sale of the article might be very extensive, and yet this would be without weight—but when you find a new combination of parts, for which a patent has issued, and consider the importance of being able to readily, easily and accurately determine the pressure in a tire, and the introduction of the device is followed by such enormous sales, and the cost at such variance with any other article of this character, it seems to me that the evidence is overwhelming, and that the court is justified under these circumstances in upholding the patent. As far as I can see the whole matter is, in the main, similar to what is covered by the California decree. The case there seems to have been passed upon by Judge Wellborn after consideration of almost everything here present.

The device of the French patent is, as I understand it, out of the case. The only important part was in respect to the slip-joint shown in Figure 3. As I understand the law, where an invention has been conceived and used in this country this fact may be shown as a bar as against the effect of a foreign patent of a later date. If that is the point in issue, the mere fact that the slip-joint was joined with a well-known gage does not carry force. It seems that plaintiff has done all that is required under the law. It is the combination that gives patentability to the device, and as that is true, then there would be nothing to be urged against it in respect to this French patent.

ADJUDICATED PATENTS.

(U. S. C. C. A.) The Carmichael patent, No. 659,206, for a process of forming an attachment for and connecting the same to a natural tooth, is void for anticipation by the Williams patent, No. 347,544. *Carmichael* v. *Jackson*, 192 Fed. Rep., 937.

Changes in Classification.

(ORDER No. 1,967.)

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 28, 1912, as of December 30, 1911.

The following change in the classification of inventions is hereby directed, to take effect immediately:

In Division VII, class 88, Optics, abolish the following subclasses, with their definitions:

16. Kinetoscopes—
17. Continuous film—
18. Intermittent-feed,
19.5. Films,
19. Separate leaves,

and in lieu thereof establish the following subclasses and definitions:

16. Motion picture apparatus—
19. Picture-leaf,
17. Picture-strip—
18. Intermittent-feed,
19.5. Picture vehicles and elements.

16. MOTION PICTURE APPARATUS. Instruments for successively displaying pictures or for projecting images of objects in successively different positions with such rapidity that owing to the persistence of visual impressions upon the retina the illusion of the pictured objects in motion is produced, also such cameras for producing "motion pictures" as are adapted to be used also as exhibitors or projectors thereof.

Search Classes—
88—OPTICS, subclasses 28, Projecting apparatus, Magic lanterns, View changing devices, and 31, Stereoscopes, View changing.
40—CARD, PICTURE, AND SIGN EXHIBITING, subclass 28, Changeable exhibitors, and subclasses thereunder.

17. MOTION PICTURE APPARATUS, PICTURE-STRIP. Motion picture apparatus wherein the picture vehicle consists of a strip or sheet bearing the successive pictures adapted to be moved past a light-orifice of the apparatus.

18. MOTION PICTURE APPARATUS, PICTURE-STRIP, INTERMITTENT-FEED. Picture-strip apparatus having means to feed the strip rapidly step by step.

19. MOTION PICTURE APPARATUS, PICTURE-LEAF. Motion picture apparatus wherein the picture vehicle consists of a series of leaves or plates, the pictures being successively exposed to view by the rapid successive turning of the leaves.

19.5. MOTION PICTURE APPARARUS, PICTURE VEHICLES AND ELEMENTS. The structure of the picture-bearing elements of motion picture apparatus, arrangements of pictures thereon, and such other picture elements as are peculiar to motion picture machines.

Search Classes—

41—ORNAMENTATION, subclass 17, Surface type, and appropriate subclasses thereunder, for pictures and processes of making them of general application.

95—PHOTOGRAPHY, appropriate subclasses, for photographic methods of producing negative or positive pictures and for photographic surfaces.

EDWARD B. MOORE,
Commissioner.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 23, 1912.

Charles Civita, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of J. H. Zellin & Company, Inc., 306 and 308 Cherry street, Philadelphia, Pa., for registration of a trade-mark and trade-mark registered January 5, 1904, No. 41,812, to Charles Civita, 63 South Washington Square, New York, N. Y., and a notice sent by registered mail to said Charles Civita at the said address having been returned by the post-office undeliverable, notice is therefore hereby given that unless the said Charles Civita, his assigns or legal representatives, shall enter an appearance herein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 27, 1912.

Joseph H. Brown, his assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of The Great Atlantic and Pacific Tea Company, 180 Bay street, Jersey City, N. J., for registration of a trade-mark and trade-mark registered September 25, 1888, No. 15,907, to Joseph H. Brown, of Fort Worth, Tex., and a notice of such declaration sent by registered mail to said Joseph H. Brown at the said address having been returned by the post-office undeliverable notice is hereby given that unless said Joseph H. Brown, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 27, 1912.

Henrietta Newcomb Keith, her assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of J. H. Zellin & Company, Inc., 306 and 308 Cherry street, Philadelphia, Pa., for registration of a trade-mark and trade-mark registered November 3, 1891, No. 20,291, to Henrietta Newcomb Keith, 16 Exchange Place, New York, N. Y., and a notice of such declaration sent by registered mail to said Henrietta Newcomb Keith at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Henrietta Newcomb Keith, her assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 26, 1912.

Edward P. Miller, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Smith Brothers, of 202 North Green street, Baltimore, Md., for registration of a trade-mark and trade-mark registered April 26, 1910, No. 77,663, to Edward P. Miller, of Chicago, Ill., and a notice of such declaration sent by registered mail to said Edward P. Miller at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Edward P. Miller, his assigns or legal representatives, enter an appearance therein within thirty days from the first publication of this order the interference will proceed as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 16, 1912.

The Reed & Gere Manufacturing Co., its assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of B. T. Babbitt, 463 Washington street, Jersey City, N. J., 11 Broadway, New York, N. Y., for registration of a trade-mark and trade-mark registered April 7, 1896, No. 28,006, to The Reed & Gere Manufacturing Co., 613 Francis street, St. Joseph, Mo., and a notice of such declaration sent by registered mail to said The Reed & Gere Manufacturing Co. at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said The Reed & Gere Manufacturing Co., its assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 8, 1912.

Arabella G. Starke, her assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of Starke's Dixie Plow Works, Incorporated, 7 South Fifteenth street, Richmond, Va., for trade-mark registration and trade-mark registration No. 11,025, dated March 18, 1884, to Arabella G. Starke, of Richmond, Va., and the notice of such declaration sent by registered mail to the said Arabella G. Starke at the address given has been returned by the post-office as undeliverable.

Notice is therefore hereby given to the said Arabella G. Starke, her assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 8, 1912.

Arabella G. Starke, her assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of Starke's Dixie Plow Works, Incorporated, 7 South Fifteenth street, Richmond, Va., for trade-mark registration and trade-mark registration No. 11,541, dated September 30, 1884, to Arabella G. Starke, of Richmond, Va., and the notice of such declaration sent by registered mail to the said Arabella G. Starke at the address given has been returned by the post-office as undeliverable.

Notice is therefore hereby given to the said Arabella G. Starke, her assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., February 29, 1912.

Goodwin & Co., their assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of The Standard Cigar Company, 1209 West South street, Canton, Ohio, for a trade-mark and registration No. 10,200, dated April 17, 1883, to Goodwin & Co., of New York, N. Y., and the notice of such declaration sent by registered mail to the said Goodwin & Co. at the address given has been returned by the post-office undelivered.

Notice is therefore hereby given to the said Goodwin & Co., their assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

THE
OFFICIAL GAZETTE
OF THE
United States Patent Office.

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Printed copies of patents are furnished by the Patent Office at 5 cents each. For the latter, address the Commissioner of Patents, Washington, D. C.

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ISSUE OF APRIL 16, 1912.

Patents	673—No.	1,023,117 to No. 1,023,789, inclusive.
Designs	2—No.	42,409 to No. 42,410, inclusive.
Trade-Marks	82—No.	86,116 to No. 86,197, inclusive.
Labels	12—No.	16,281 to No. 16,292, inclusive.
Prints	6—No.	2,988 to No. 2,993, inclusive.
Reissues	2—No.	13,405 to No. 13,406, inclusive.
Total	777	

TO CITIZENS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	1	.....	North Carolina	7	.....
Arizona	.....	.....	North Dakota	.....	.....
Arkansas	1	.....	Ohio	42	2
California	26	5	Oklahoma	6	.....
Colorado	9	.....	Oregon	7	1
Connecticut	19	5	Pennsylvania	61	6
Delaware	1	.....	Rhode Island	3	.....
Florida	3	.....	South Carolina	3	.....
Georgia	5	3	South Dakota	2	.....
Idaho	1	.....	Tennessee	2	1
Illinois	51	7	Texas	13	2
Indiana	10	1	Utah	5	5
Iowa	9	.....	Vermont	3	.....
Kansas	9	.....	Virginia	8	.....
Kentucky	3	1	Washington	9	1
Louisiana	9	.....	West Virginia	2	.....
Maine	2	.....	Wisconsin	15	2
Maryland	4	3	Wyoming	2	.....
Massachusetts	38	7			
Michigan	15	2	Alaska, District of	.....	.....
Minnesota	10	1	Canal Zone	.....	.....
Mississippi	3	.....	District of Columbia	4	.....
Missouri	13	3	Hawaii Territory	.....	.....
Montana	1	.....	Philippine Islands	.....	2
Nebraska	6	1	Porto Rico	.....	.....
Nevada	.....	.....	U. S. Army	.....	.....
New Hampshire	1	.....	U. S. Navy	.....	.....
New Jersey	21	2			
New Mexico	2	.....	Total to citizens of the United States	576	95
New York	111	32			

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	1	.....	Netherlands	1	.....
Austria-Hungary	3	.....	Newfoundland	.....	.....
Belgium	.....	.....	New South Wales	.....	.....
Bermuda	.....	.....	New Zealand	.....	.....
Brazil	.....	.....	Norway	.....	.....
British West Indies	.....	.....	Queensland	.....	.....
Canada	15	.....	Roumania	.....	.....
Cape Colony	1	.....	Russia	.....	.....
Chile	.....	.....	Scotland	2	.....
China	.....	.....	South Australia	.....	.....
Costa Rica	.....	.....	Spain	1	.....
Cuba	.....	1	Sweden	4	.....
Denmark	1	.....	Switzerland	3	.....
Ecuador	.....	.....	Transvaal, South Africa	.....	.....
England	14	2	Victoria	.....	.....
France	8	.....	Western Australia	1	.....
Germany	39	2			
Ireland	2	.....	Total to citizens of foreign countries	99	6
Italy	1	.....			
Japan	.....	.....			
Mexico	2	.....			

Court of Appeals of the District of Columbia—Briefs—Appellee in Default in Filing.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., April 9, 1912.

The following communication from the clerk of the Court of Appeals of the District of Columbia is published for the information of those concerned.

EDWARD B. MOORE,
Commissioner of Patents.

OFFICE OF THE CLERK,
COURT OF APPEALS OF THE DISTRICT OF COLUMBIA,
Washington, D. C., April 8, 1912.

Honorable E. B. MOORE,
Commissioner of Patents.

DEAR SIR: Attention is invited to the following announcement of the court, made this morning, with reference to the filing of briefs:

"The Chief Justice announced from the bench that hereafter the rules governing the filing of briefs will be strictly enforced, and where appellee is in default, unless good cause is shown, he will not be heard."

Very respectfully yours,

HENRY W. HODGES,
Clerk.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business April 13, 1912.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended	
313	1. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Feb. 17	Feb. 23	542
126	2. Bee Culture; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Pneumatic Despatch; Pneumatics; Presses; Store-Service; Tobacco.	Feb. 15	Mar. 1	495
178	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Mar. 16	Mar. 29	182
232	4. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Metallic Building Structures.	Mar. 9	Mar. 9	415
167	5. Bookbinding; Harvesters; Jewelry; Music.	Feb. 3	Feb. 20	463
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	Mar. 14	Mar. 14	317
312	7. Educational Appliances; Clutches; Games and Toys; Mechanical Motors; Nut and Bolt Locks; Optics; Velocipedes.	Jan. 15	Feb. 20	670
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Mar. 18	Mar. 14	401
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Pumps; Wind-Wheels.	Mar. 7	Mar. 8	359
225	10. Carriages and Wagons.....	Feb. 7	Mar. 2	669
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Feb. 16	Feb. 16	463
334	12. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Feb. 15	Feb. 6	634
320	13. Arms, Projectiles, and Explosive Charges, Making; Belt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Turning.	Mar. 1	Mar. 9	431
207	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Feb. 17	Mar 11	415
262	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Liquid Coating Compositions; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastic Compositions; Plastics.	Feb. 2	Feb. 9	905
109	16. Telegraphy; Telephony.....	Mar. 1	Mar. 2	247
303	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	Mar. 13	Mar. 13	304
227	18. Injectors and Ejectors; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Boilers; Steam-Engines; Steam-Engine Valves.	Feb. 7	Mar. 14	273
236	19. Dampers, Automatic; Furnaces; Heat-Distributing Systems; Stoves and Furnaces.	Mar. 2	Mar. 5	464
179	20. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Feb. 8	Mar. 14	256
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Feb. 27	Mar. 6	350

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action.		No. of applications awaiting action.
		New.	Amended	
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Feb. 14	Mar. 13	294
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Feb. 20	Feb. 23	470
144	24. Apparel; Apparel Apparatus; Sewing-Machines.	Mar. 1	Mar. 1	493
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Mar. 18	Mar. 21	192
186	26. Electricity, Generation; Motive Power.	Nov. 3	Dec. 6	558
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Feb. 23	Feb. 27	459
85	28. Internal-Combustion Engines..	Jan. 22	Jan. 29	827
147	29. Cooperage; Fire-Escapes; Ladders; Roofs; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Wood-working; Woodworking-Tools.	Feb. 17	Mar. 13	476
182	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Jan. 13	Mar. 20	358
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	Feb. 7	Feb. 27	300
278	32. Carbonating Beverages; Curtains, Shades, and Screens; Dispensing Beverages; Dispensing-Cans; Ornamentation; Packaging Liquids; Refrigeration.	Jan. 8	Mar. 7	304
71	33. Cutlery; Domestic Cooking Vessels; Masonry and Concrete Structures; Paving; Tents, Canopies, Umbrellas, and Canes.	Jan. 15	Feb. 8	484
304	34. Railways: Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	Feb. 17	Mar. 4	499
244	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	Mar. 9	Mar. 12	762
264	36. Drafting; Driers; Engraving; Measuring Instruments; Photography.	Mar. 9	Feb. 23	555
107	37. Electric Lighting; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Feb. 1	Mar. 11	471
378	38. Animal Husbandry; Artesian and Oil Wells; Fishing and Trapping; Stationery; Stone-Working.	Jan. 17	Feb. 26	582
221	39. Water Distribution.....	Dec. 26	Jan. 11	627
220	40. Receptacles; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Mar. 13	Mar. 22	431
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	Feb. 21	Feb. 24	627
279	42. Electric Railways; Electric Signaling; Railway Signaling; Signals.	Feb. 20	Feb. 15	546
362	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Mar. 11	Mar. 12	316

Oldest new case, Nov. 3; oldest amended, Dec. 6.

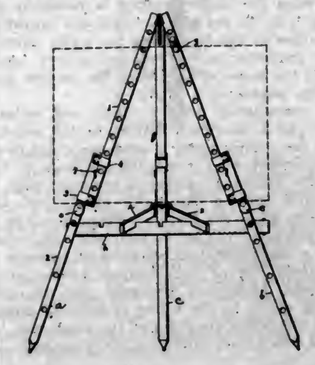
Total number of applications awaiting action 19,886

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks.....	Feb. 23	Mar. 5	1209
	Designs.....	Feb. 10	Mar. 4	389
	Labels and Prints.....	Apr. 8	Apr. 6	29

PATENTS

GRANTED APRIL 16, 1912.

1,023,117. EASEL. OSCAR ANDERSON, Gloucester, Mass. Filed Nov. 13, 1909. Serial No. 527,836. (Cl. 45—129.)



1. An easel comprising two legs connected together to swing toward and away from each other, a spacing bar provided with a projection at one end to engage one of said legs and having a projection adjustably mounted on the opposite end thereof for engaging the other leg, a third leg connected to the first two legs and adapted for swinging movement toward and away from said legs and laterally with respect thereto, and one or more arms secured to the last mentioned leg and supported by said spacing bar.

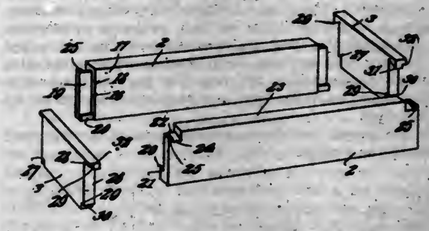
2. An easel comprising two legs connected together to swing toward and away from each other, a spacing bar extending between said legs provided with a projection at one end for engaging one of said legs, and a projection adjustably mounted at the opposite end for engaging the other leg, the upper edge of said bar having spaced notches, a third leg connected to the first two legs and adapted for swinging movement toward and away from said legs and laterally with respect thereto, and a pair of arms having a swinging connection with the last mentioned leg and supported in the notches on the spacing bar as and for the purposes specified.

3. An easel comprising front legs having a series of apertures therein, supporting pins mounted in said apertures and adapted to turn therein, and eccentric surfaces on said pins in combination with an abutment-piece mounted in one of said legs above said pins.

4. An easel comprising front legs having a series of apertures therein, supporting pins mounted in said apertures and adapted to turn therein, and eccentric surfaces on said pins in combination with an adjustably mounted abutment-piece mounted in one of said legs above said pins.

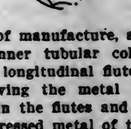
1,023,118. CEMENT VAULT. WILLIAM H. BALES, Farmland, Ind. Filed Aug. 21, 1911. Serial No. 645,072. (Cl. 72—7.)

A burial case including a side cut away upon its inner face to define a primary shoulder and a rectangularly disposed secondary shoulder, there being an inwardly projecting lower lug located adjacent the bottom of the side, in the angle defined by the primary and secondary shoulders, the upper face of the lug slanting downwardly and outwardly, the secondary shoulder terminating short of the upper face of the side, and having its upper face slanted downwardly and outwardly for a portion of its length only, to define an upper lug; and an end adapted to abut laterally against the primary shoulder and to abut terminally against the secondary shoulder, the end being provided in its end wall with a lower notch and with an upper notch, the lower faces of both of which



slant inwardly and upwardly, the lower notch defining a lug adapted to engage the lower lug of the side, and the upper notch defining a lug adapted to engage over the upper edge of the secondary shoulder behind the upper lug, the last named lug of the end having a recess to receive the upper lug of the side.

1,023,119. COLUMN. CHRISTOPHER C. BARRICK, Canton, Ohio, assignor to The Union Metal Manufacturing Company, Canton, Ohio, a Corporation of Ohio. Filed Jan. 22, 1908. Serial No. 412,169. (Cl. 189—38.)



1. As an article of manufacture, a sheet metal column consisting of an inner tubular column section formed with a plurality of longitudinal flutes and ribs, an outer tubular section having the metal thereof pressed into and snugly seated in the flutes and over the ribs of the inner section, the pressed metal of the outer tubular section stretching laterally under tension between the ribs of the inner section and fitting snugly the outer surface of said inner section.

2. As an article of manufacture, a sheet metal column consisting of an inner column section formed with a plurality of longitudinally disposed flutes and ribs, and an outer section of metal stretching laterally under tension between the longitudinal ribs and fitting snugly the outer surface of said inner section.

3. As an article of manufacture, a sheet metal column consisting of an inner column section formed with a plurality of longitudinally disposed flutes and ribs, and an outer covering of metal of greater malleability than the metal of the inner section, and stretching laterally and under tension between the longitudinal ribs and fitting snugly the surface of said inner section.

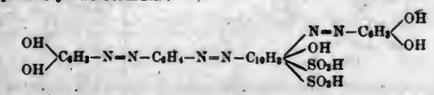
4. An improved article of manufacture consisting of a tapered hollow column formed of two sheets of fluted and ribbed metal, the ribs of the inner sheet of metal serving as a base between which the metal of the outer sheet stretches and is held under tension, the ribs and flutes of the column tapering from their bottom or lower ends toward their top ends.

5. As an article of manufacture, a sheet metal column consisting of an inner column section formed with a plurality of longitudinally disposed flutes and ribs, and an outer section of metal stretching laterally under tension between the longitudinal ribs and fitting snugly into and over the outer surface of said inner section.

1,023,120. AZO DYE. AUGUST BLANK, Leverkusen, near Cologne, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed June 1, 1911. Serial No. 630,647. (Cl. 8—1.)

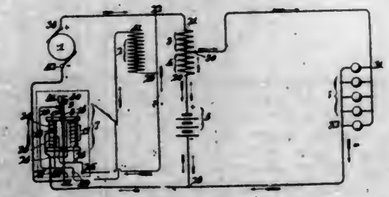
1. The herein described new azo dyestuffs which contain an amino-benzene-azo-1-amino-8-naphthol sulfonic acid as middle component and resorcin as at least one of its end components, which dyestuffs yield upon reduction with stannous chlorid and hydrochloric acid a phenylenediamin, a diaminonaphthol sulfonic acid and aminoresorcin and producing after dyeing and developing of the dye on the fiber with suitable diazo compounds valuable olive to brown shades which are very fast to washing and to light and can be discharged to a pure white, substantially as described.

2. The herein described new azo dyestuff having most probably the formula:



which is after being dried and pulverized a dark powder, yielding upon reduction with stannous chlorid and hydrochloric acid meta-phenylenediamin, 1.7-diamino-8-naphthol-3.6-disulfonic acid and aminoresorcin and producing after dyeing and developing of the dye on the fiber with suitable diazo compounds valuable yellowish-bronze shades which are very fast to washing and to light and can be discharged to a pure white, substantially as described.

1,023,121. ELECTRIC-LIGHTING SYSTEM. CHARLES E. BONINE, Philadelphia, Pa. Filed Nov. 8, 1910. Serial No. 591,296. (Cl. 171—313.)



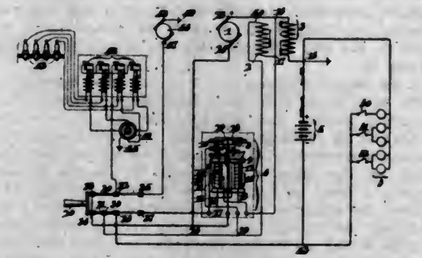
1. The combination with a shunt and series wound generator and a secondary battery in the series circuit, of automatic means adapted to open the series and the shunt circuit when the voltage of the battery is relatively high and the series circuit is open.

2. The combination with a shunt and series wound generator, of a secondary battery in the series circuit, and an automatic switch including a single armature, contacts controlled by said armature, a winding connected across the terminals of the battery and adapted to operate upon said armature to separate the contacts when the battery voltage rises above a predetermined point and the generator voltage is below that of the battery, a winding connected across the armature of the generator and acting upon the armature of the switch to close the contacts when the battery voltage is relatively low, and a winding lying in the series circuit and operating upon said armature to aid in holding the series circuit closed when the generator is charging the battery, and to aid in opening the series circuit when the battery discharges through the generator.

3. The combination with a shunt and series wound generator and a secondary battery in the series circuit, of means for automatically closing the shunt circuit and the series circuit when the battery voltage is relatively low and the generator voltage is relatively high and for automatically opening the series circuit and then the shunt circuit when the battery voltage is relatively high and the generator voltage is relatively low, said means including a single armature, magnets on opposite sides of said armature, one of said magnets having a coil connected across the battery terminals, and the other magnet having a coil in the series circuit and another coil connected across the armature of the generator.

[Claims 6 to 11 not printed in the Gazette.]

1,023,122. ELECTRIC LIGHTING AND ENGINE-STARTING SYSTEM. CHARLES E. BONINE, Philadelphia, Pa. Filed July 7, 1911. Serial No. 637,334. (Cl. 171—315.)



1. The combination of an engine; an electric machine connected thereto; a secondary battery; an automatic switch for controlling the charge of the battery by the electric machine; and a manually-operated switch for cutting out the automatic switch and connecting the battery to the electric machine, whereby the same may be

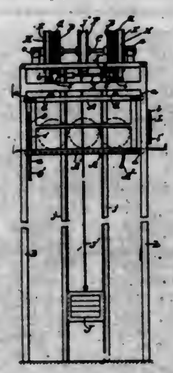
the electric machine when the same is operating as a motor; an automatic switch for controlling the charge of the battery by the electric machine; and a manually operated switch for cutting out the automatic switch and connecting the battery to the electric machine, whereby the same may be operated as a motor for starting the engine.

1,023,123. FIRE-ALARM. CARL GERHARD CARLSON, Chicago, Ill. Filed Aug. 26, 1911. Serial No. 646,089. (Cl. 177—303.)



A fire alarm comprising a normally open electric circuit; an alarm device in said circuit; an insulating base member; a contact member on said base member and in said circuit; a spring contact on said base and in said circuit and arranged to contact with said first mentioned contact to close said circuit; a hemispherical casing secured to said base and inclosing said contacts, there being two openings in the top of said casing; a frame secured to said base member and passing over said casing; and an inflammable cord tied in a loop passing over said frame, under said spring contact and through said openings, substantially as described.

1,023,124. ELEVATOR. JOHN T. CLARK, New York, N. Y. Filed Aug. 9, 1910. Serial No. 576,852. (Cl. 214—12.)



1. In an elevator, a car provided with means for discharging a load therefrom when said car reaches the limit attached to the car and separately coiled upon said winding drums, a counterweight operating to automatically elevate the car upon the discharge of a load therefrom, a separate drum on the shaft, a cable attached to the counterweight and wound on the separate drum in an opposite direction to that in which the car suspending cables are wound on said winding drums, brake drums fixed to the shaft, brake bands coöperating with said drums, a crank shaft to which the brake bands are attached, and means for operating said crank shaft.

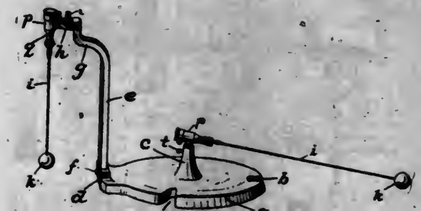
3. In an elevator, a car provided with a movable bottom, means for lifting the bottom to an inclined position for discharging the load when the car reaches the limit of its movement in one direction, guides between which the car travels and by which the car is limited to movement in a vertical direction, a shaft, winding drums on said shaft, cables attached to the car and coiled in one direction on said drums, a separate drum on the shaft, a counterweight cable coiled on the separate drum in an opposite direction to that in which the cage-suspending cables are coiled on the winding drums, a counterweight attached to the counterweight cable and operating to elevate the car when a load is discharged therefrom, and means for controlling the vertical movement of the car.

4. In an elevator, a car provided with a pivoted bottom, a leg depending from said pivoted bottom for moving the latter to an inclined position upon the descent of the car, a retaining bar pivotally mounted on said car to normally close the exit therefrom, and a leg depending from said retaining bar, whereby when the car reaches the limit of its downward movement said retaining bar will be withdrawn from the path of the load and said pivoted bottom will be elevated to discharge the load from the car through the exit controlled by said retaining bar.

5. A car provided with means for discharging a load therefrom, guide mechanism for restricting the movement of the car to a vertical path, a counterweight for said car, a retaining bar attached to the car and positioned in the path of the load, and means for elevating the retaining bar, when the car reaches the limit of its downward movement, whereby the retaining bar is withdrawn from the path of the load prior to the discharge of the load from the car.

[Claim 6 not printed in the Gazette.]

1,023,125. APPARATUS FOR PRACTISING GOLF. FRANK L. CONNABLE, Wilmington, Del. Filed July 17, 1911. Serial No. 638,796. (Cl. 46—4.)



lying hollow portion, a ball, a wire on which said ball is mounted, confining means for said ball at one end of said wire, base connecting means, a universal joint upon which said means are mounted, and securing means to secure the base connecting means in the central stud and in the overhanging of the upright.

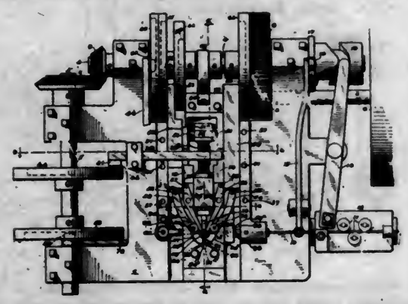
3. In an apparatus of the character described, in combination, a base having a vertically projecting central hollow stud and a socketed outer portion adapted to an upright, an upright secured in said socket, said upright having an overlying hollow portion, a ball, a wire on which said ball is mounted, confining means for said ball at one end of said wire, a stop on the opposite end of said wire, a cap, said cap having a flange, a spring surrounding said wire and confined between the last mentioned stop and the cap flange, a frame, means to secure the frame and cap together, a rod, a ball and socket joint in said frame for said rod.

4. In an apparatus of the character described, in combination, a base having a vertically projecting central hollow stud and a socketed outer portion adapted to an upright, an upright secured in said socket, said upright having an overlying hollow portion, a ball, a wire on which said ball is mounted, confining means for said ball, at one end of said wire, and a spring, against the action of which said wire moves, on the other end of said wire, a frame connected with said wire, a rod, a ball and socket joint for said rod, and means to secure said rod in said vertical hollow central stud and the overhanging of the upright.

5. In an apparatus of the character described, in combination, a base having a vertically projecting central hollow stud and a socketed outer portion adapted to an upright, an upright secured in said socket, said upright having an overlying hollow portion, a ball, a wire on which said ball is mounted, confining means for said ball at one end of said wire, base connecting means, a ball and socket joint upon which said means are mounted, and securing means to secure the base connecting means in the central stud and in the overhanging of the upright.

[Claims 6 to 13 not printed in the Gazette.]

1,023,126. WIRE-CHAIN MACHINE. JAMES COULTER, Bridgeport, Conn., assignor, by mesne assignments, to The Automatic Chain Company, Buffalo, N. Y., a Corporation of New York. Filed Oct. 4, 1905, Serial No. 281,271. Renewed Sept. 8, 1911. Serial No. 648,394. (Cl. 59—16.).



1. In a machine for forming chain, the combination of a vertically movable and laterally stationary former, means for positioning and holding a blank so that the center of the blank shall be opposite the center of the former, and means comprising independently operating link forming levers for bending the ends of the blank about the former and into welding contact while the latter remains in fixed position, said independently operating link forming levers acting to bend both ends of the blank equal amounts about corresponding portions of the stationary former in the same time, whereby tendency to displace the relative positions of the center of the blank and center of the former is prevented.

2. In a machine for forming chain, the combination of a former, means for feeding a blank and positioning it so that the center of the blank shall be opposite the center of the former, and devices acting simultaneously to turn each end of the blank partly around the former, said devices thereafter acting successively on the opposite end portions of the blank to roll the ends of the blank toward each other into alined relation.

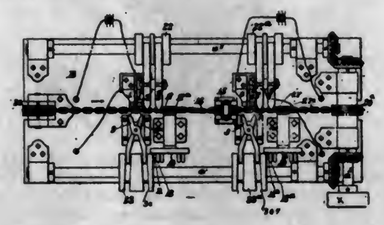
3. In a machine for forming chain, the combination of a former, means for placing and maintaining a blank symmetrical with reference to said former, and means movable about the former and acting to simultaneously roll the ends of the blank symmetrically with reference to and about said former and then to cease bending action on one end of the blank while the other end is being further bent and thereafter to complete the bend of the other end to bring the ends of the blank together.

4. In a machine for forming chain, the combination of a substantially oval former, means for placing the center of a wire blank on the minor axis of the oval of said former, and plural means relatively movable about the former and acting simultaneously along the end portions of the blank for bending the ends of said blank partially around said former in substantially the same time, said means being maintained symmetrical to each other relative to said axis, and thereafter acting successively to completely bend the ends of the blank about the former.

5. In a machine for forming chain, the combination of a former, means for feeding a blank so that the center of said blank is opposite the center of said former, means for clamping said blank at its central portion against said former, means acting independently upon the ends of the blank for bending the said blank about said former, said bending means acting simultaneously on both ends of the blank for part of the bending action and then acting successively on the ends of the blank to bring them into intimate contact for welding.

[Claims 6 to 49 not printed in the Gazette.]

1,023,127. ELECTRIC CHAIN-WELDING MACHINE. MICHAEL B. RYAN, Boston, Mass., assignor, by mesne assignments, to The Automatic Chain Company, Buffalo, N. Y., a Corporation of New York. Filed June 20, 1906, Serial No. 322,590. Renewed Sept. 8, 1911. Serial No. 648,395. (Cl. 219—4.)



1. In an electric welding machine, the combination of stationary electrodes, and means for pressing the end portions of a metal piece forming a closed figure against the electrodes with the joint of said end portions between said electrodes.

2. In an electric welding machine, the combination of a transformer, electrodes stationary relative to each other and to the secondary of the transformer, and means for moving the end portions of a metal piece forming a closed link or figure into contact with the stationary electrodes with the joint of said end portions between the electrodes.

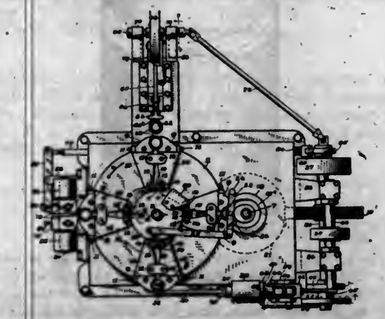
3. In an electric welding machine, the combination of a transformer, electrodes stationary relative to the secondary of the transformer, and means for pressing the work against the electrodes and for longitudinally squeezing the parts to be welded together.

4. In an electric welding machine, the combination of a transformer, electrodes stationary relative to the secondary of the transformer, means for pressing the work against the electrodes and for moving the parts to be welded toward each other substantially parallel to the faces of the electrodes.

5. In an electric welding machine, the combination of stationary electrodes, and jaws movable toward said electrodes and toward each other.

[Claims 6 to 45 not printed in the Gazette.]

1,023,128. ELECTRICAL WELDING-MACHINE. MICHAEL B. RYAN, Bridgeport, Conn., assignor to McKinnon Chain Company, a Corporation of New York. Filed Sept. 9, 1907, Serial No. 391,855. Renewed Sept. 8, 1911. Serial No. 648,396. (Cl. 219—5.)



1. In an electrical welding machine, an automatically and intermittently rotatable turret, grippers mounted thereon, means for opening and closing the grippers, a magazine for discharging an article to be welded into the grippers, a movable transformer carrying electrodes secured thereto, rotatable swaging hammers and suitable means for operating the same, said hammers being adapted to reduce the swell caused by welding, for the purpose set forth.

2. In an electrical welding machine, an automatically and intermittently rotatable turret, grippers automatically operated to open and close mounted thereon, a magazine for discharging the article to be welded into the grippers, electrodes for welding, swaging hammers for reducing the swell or bur caused by welding, and suitable means for operating said hammers all arranged and combined to operate, for the purpose set forth.

3. In an electrical welding machine, an automatically and intermittently rotatable turret, grippers automatically operated to open and close mounted thereon, means for automatically delivering an article to be welded into the grippers, a movable transformer carrying electrodes secured thereto, and means for actuating the transformer to carry the electrodes temporarily out of contact with the article to be welded, said transformer actuated by a gravity when released to bring the electrodes forcibly against the article to be welded, for the purpose set forth.

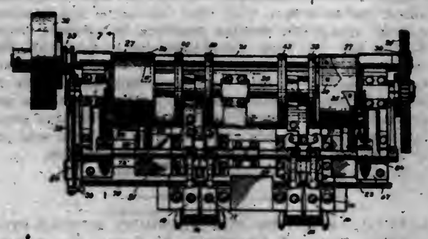
4. In an electrical welding machine of the character described, a gravity actuated transformer carrying electrodes, an automatically rotatable turret, and grippers for temporarily holding an article to be welded mounted thereon, for the purpose set forth.

5. In an electrical welding machine of the character described, a gravity actuated transformer, electrodes secured thereto, an automatically rotatable turret, and grippers for temporarily holding an article to be welded carried by the turret, for the purpose set forth.

[Claims 6 to 31 not printed in the Gazette.]

1,023,129. CHAIN-WELDING MACHINE. MICHAEL B. RYAN, Boston, Mass., assignor to McKinnon Chain Company, a Corporation of New York. Filed Dec. 27, 1907, Serial No. 408,281. Renewed Sept. 8, 1911. Serial No. 648,397. (Cl. 219—5.)

1. In a chain welding machine, the combination of two sets of stationary electrodes, two sets of means for presenting chain links to said stationary electrodes, and means for starting the welding operation by the electrodes successively after links have been presented thereto by the presenting means.



2. In a chain welding machine, the combination of two sets of welding devices including stationary electrodes, means for forcing links against said electrodes, means for starting one set to weld, means for starting the second set to weld before the first set has completed its operation, the first set being caused to complete the welding operation before the second set.

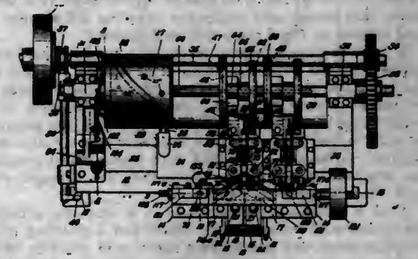
3. In a chain welding machine, the combination of two sets of stationary electrodes, two devices for forcing links of a chain against the respective electrodes, means for operating said two devices, and for turning on the current, first on one set of electrodes and then on the other, the current being maintained upon the first set until it is turned on upon the second set.

4. In a chain welding machine, the combination of electrodes, jaws for squeezing a link, and means for both moving said jaws toward and from said electrodes and for moving them in the direction of feed.

5. In a chain welding machine, the combination of electrodes, link-engaging jaws, means for advancing said jaws to engage a link, and means for moving said jaws to feed said link.

[Claims 6 to 20 not printed in the Gazette.]

1,023,130. ELECTRIC WELDING-MACHINE. MICHAEL B. RYAN, Boston, Mass., assignor to McKinnon Chain Company, a Corporation of New York. Filed July 10, 1908, Serial No. 442,822. Renewed Sept. 8, 1911. Serial No. 648,398. (Cl. 219—5.)



1. In an electric welding machine, a pair of electrodes, two pairs of jaws, mechanism for alternately moving each of said pairs of jaws to and from said pair of electrodes, and a press for removing the bur from a welded joint of work held by one pair of jaws while the other pair of jaws is holding work in operative relation with the electrodes.

2. In an electric welding machine, a pair of electrodes, two connected slides arranged to move in front of the same, two pairs of tongs mounted on said slides, each pair being arranged to move to and from said electrodes alternately.

3. In an electric welding machine, a pair of electrodes, two presses for removing the bur from the welded joint, two pairs of tongs adapted to move to position opposite the electrodes and presses and mechanism for alternately moving each of said pairs of tongs to and from said pair of electrodes, and to and from one of said presses.

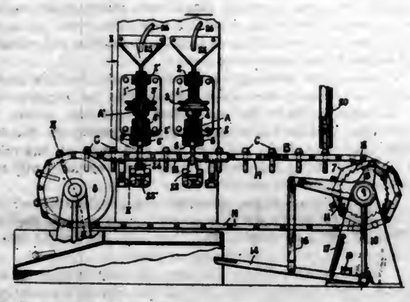
4. In an electric welding machine, two presses for removing the bur from the welded joint, a pair of elec-

trodes located between said presses, two pairs of tongs, and means for alternately moving each of said pairs of tongs to and from said pair of electrodes and to and from one of said presses.

5. In an electric welding machine, two presses for removing the bur from the welded joint, a pair of electrodes located between said presses, a main slide movable across the face of said electrodes, two cross slides arranged to move transversely upon said main slide, a pair of tongs secured to each of said cross slides, and means for moving each of said cross slides to and from said pair of electrodes, and to and from one of said presses.

[Claims 6 to 11 not printed in the Gazette.]

1,023,131. MACHINE FOR GRINDING BOTTLE-STOPPERS. LOUIS J. CRECELIUS, St. Louis, Mo., assignor to Charles A. Thompson, St. Louis, Mo. Filed May 1, 1911. Serial No. 624,292. (Cl. 51—53.)



1. In a stopper grinding machine, a rotatable grinding device having a socket for the reception of the stoppers, a carrier for conducting the stoppers to said grinding device, means for forcing the stoppers into said socket, and means for preventing the stoppers from rotating while they are acted on by the rotatable grinding device.

2. In a stopper grinding machine, a rotatable grinding device provided with a grinding block having a socket for the reception of the stoppers, a stopper carrier adapted to be moved intermittently to conduct the stoppers to a point below said socket, and means for elevating the stopper on said carrier to force them into said socket.

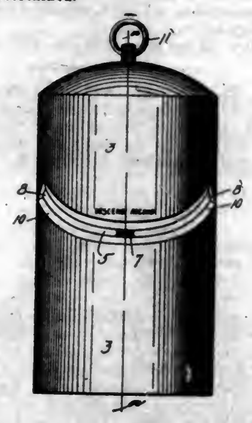
3. In a stopper grinding machine, a rotatable grinding device provided with a grinding block having a socket for the reception of the stoppers, a stopper carrier adapted to be moved intermittently to conduct the stoppers to a point below said socket, means for elevating the stoppers on said carrier to force them into said socket; and said stopper carrier being provided with means for preventing the stoppers from rotating while they are engaged with said rotatable grinding device.

4. In a stopper grinding machine, a rotatable grinding device provided with a hollow shaft and a grinding block fitted to the lower end of said shaft, said grinding block having a socket for the reception of the stoppers, means for conducting liquid to the interior of said hollow shaft, a stopper carrier for conveying stoppers to said grinding block, and means for forcing the stoppers into said socket.

5. A stopper grinding device comprising a flexible endless stopper carrier provided with non-circular stopper receiving openings, rotatable supports for said carrier, a grinding device above the carrier, and means for moving the stoppers into engagement with the grinding device.

1,023,132. INDICATOR FOR INDICATING THE ASCENDING AND DESCENDING MOVEMENTS OF AERIAL VEHICLES. LEVITT LUZERN CUSTER, Dayton, Ohio. Filed Dec. 15, 1909. Serial No. 533,305. (Cl. 116—31.)

1. In a device of the type specified, a casing having a chamber therein, a tube extending from, and opening into one side of said chamber, and communicating with the atmosphere, said tube containing a globule of matter by means of which the direction of the passage of air through the tube is ascertained.



2. In a device of the type specified, a casing providing an air chamber, a tube extending from an opening in one side of said chamber and communicating with the atmosphere on the other side, said tube being enlarged at its ends, and a globule in said tube the movement of which indicates the flow of air therethrough, said tube being depressed near the middle portion and gradually raised from said middle portion to its ends.

3. In a device of the type specified, a chamber, a tube communicating with said chamber and with the atmosphere, said tube having enlarged ends, and a globule in said tube serving to indicate the direction of the flow of air in said tube.

4. In a device of the type specified, a casing providing an air chamber, a tube having enlarged ends and provided with a passage extending to the chamber and another passage extending to the atmosphere, a globule within said tube adapted to indicate the direction of the flow of air in said tube, said globule being adapted to break by passing into the enlarged ends of said tube and to reform in the central portion thereof, said tube being depressed near the middle point and gradually rising from said middle point to its ends.

5. In a device of the type specified, the combination with a casing providing a chamber therein, of a tube supported on said casing with its ends elevated above the central portion thereof, one of said ends extending from and opening into said chamber and being adapted to receive air from the chamber, and the other of said ends being open and adapted to receive air from the atmosphere, said tube having within it a globule which is adapted to indicate the direction of air passing through the tube.

1,023,133. PRODUCTION OF NITRIC ACID. FREDRIK W. DE JAHN, New York, N. Y., assignor to General Chemical Company, New York, N. Y., a Corporation of New York. Filed May 2, 1910. Serial No. 558,831. (Cl. 23—1.)

1. The process which consists in stirring a nitrate and an acid together in a rarefied atmosphere while heating the material to a temperature at which the nitric acid distils off which temperature is below that at which the niter cake formed will melt.

2. The process which consists in stirring a nitrate and an acid together in a rarefied atmosphere while heating the material to a temperature at which the nitric acid distils off and below 384 degrees Fahrenheit.

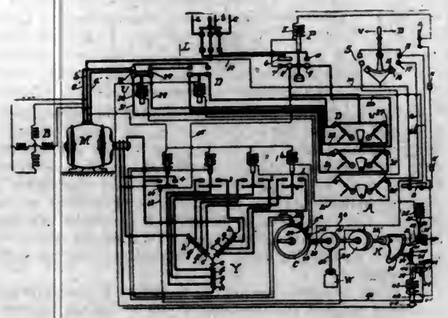
3. The process which consists in stirring a mixture of sodium nitrate and sulfuric acid together in a rarefied atmosphere while heating the materials to a temperature below the melting point of the niter cake formed and distilling off the nitric acid produced.

4. The process which consists in stirring a mixture of sodium nitrate and sulfuric acid together in a rarefied atmosphere while heating the material to a temperature below the melting point of the niter cake formed, distilling off the nitric acid so produced and obtaining the niter cake in pulverulent or friable condition.

5. The process which consists in stirring a mixture of sodium nitrate and sulfuric acid together in a rarefied atmosphere while heating the materials to a temperature below the melting point of the niter cake formed, driving off the nitric acid so produced, condensing the same and passing the escape gases therefrom through an absorbing tower.

[Claim 6 not printed in the Gazette.]

1,023,134. ALTERNATING-CURRENT-MOTOR-CONTROLLING APPARATUS. JOHN DILLON, Philadelphia, Pa., assignor to Otis Elevator Company, Jersey City, N. J., a Corporation of New Jersey. Filed Oct. 14, 1908. Serial No. 457,602. (Cl. 172—152.)



1. The combination with an electric motor, of a sectional resistance, reversing switches, a rotatable member, means associated therewith for controlling said resistance, a second rotatable member, means for rotating said second member, an electroresponsive device for holding said second member in rotated position, a manual switch in the circuit of said electroresponsive device, and an electromagnetic clutch connecting said members and having its magnet winding in circuit with the reversing switches.

2. The combination with an electric motor, of sectional starting resistance therefor, a series of electromagnetic relays controlling said resistance, a rotary controller controlling the circuits for the relay magnets, pawl and ratchet mechanism comprising an operating electromagnet for operating said controller, and a switch in the circuit of said operating magnet controlled by the last relay of said series.

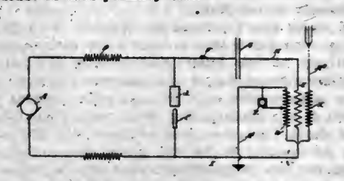
3. The combination with an electric motor, of a starting resistance therefor, relays controlling said resistance, a rotary controller controlling the circuits for said relays, pawl and ratchet mechanism comprising a ratchet member rotatable on a common axis with said controller, and an electro-magnetic clutch connecting said controller and ratchet member.

1,023,135. HIGH-FREQUENCY APPARATUS. WILLIAM DUBILIER, Seattle, Wash. Filed Nov. 21, 1910. Serial No. 593,365. (Cl. 178—319.)

1. In a wireless telephone apparatus, the combination with a primary coil connected with apparatus for intertransposing sound and electro-magnetic waves, an aerial, and secondary coils in series and upon opposite sides of said primary coil.

2. In a high frequency apparatus, the combination of a primary coil, an aerial, and a plurality of secondary coils in series and upon opposite sides of said primary coil.

3. In a wireless telephone apparatus, the combination of means for producing electric oscillations, means for varying said oscillations to correspond with the voice, a primary coil connected with said apparatus, an aerial, and a plurality of secondary coils in series and upon opposite sides of said primary coil.

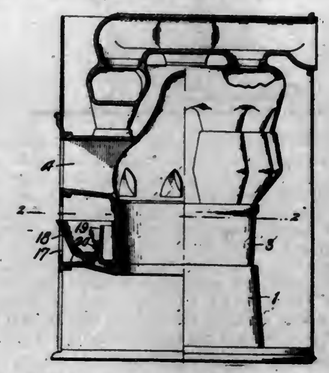


4. In a high frequency apparatus, the combination of an arc lamp, means for supplying said lamp with current, an oscillating circuit connected with the electrodes of said lamp, comprising an inductance and a capacity, means for varying said oscillations, an aerial, and secondary coils in series and mounted upon opposite sides of said hollow coil; that is, inside and outside of said hollow coil.

5. In a high frequency apparatus, the combination of means for producing electric oscillations, a primary coil in the form of a solenoid in circuit with said means, means for varying said oscillations, an aerial, and two secondary coils in series and in circuit with said aerial, said secondary coils being in the form of solenoids, one being placed within said primary coil and the other outside of said primary coil.

[Claims 6 and 7 not printed in the Gazette.]

1,023,136. FURNACE. LOUIS DUEMER, Hamilton, Ohio. Filed July 20, 1910. Serial No. 572,795. (Cl. 126—113.)



1. A furnace comprising, a fire-pot, a water-pan disposed against the fire-pot, said water-pan being open at the top, a partition forming the water-pan into a main outer compartment and a transversely thin inner compartment, an aperture being provided in the base of the partition between the two compartments, and the top of the partition being lower than the main walls of the pan so that the water may boil over from one compartment into the other without boiling over the sides of the pan, combined substantially as set forth.

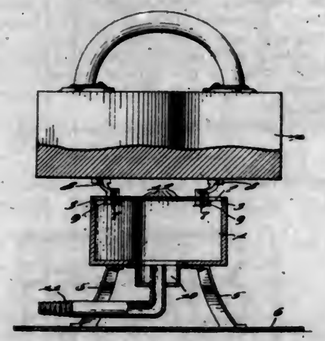
2. A furnace comprising a fire-pot, a water-pan disposed against the fire-pot, said pan comprising an inner portion lying against the fire-pot for a considerable part of the circumference thereof, and an outer part constituting a reservoir, the said inner part being deeper than the outer part, and a partition between the parts, there being a small perforation at the bottom of the partition leading from the outer to the inner part, the said inner part being open at the top.

3. A furnace comprising, a fire-pot, a water-pan disposed against the fire-pot, said water-pan being open at

the top, and a partition forming the water-pan into a main outer compartment and a transversely thin inner compartment, an aperture being provided in the base of the partition between the two compartments, the inner compartment having a side extension against the fire-pot and beyond the width of the main compartment, combined substantially as set forth.

4. A water pan for furnaces, open at the top and divided by a partition into a main outer compartment and a relatively narrow inner compartment, the said inner compartment being shaped to correspond to the wall of the furnace and provided with side extensions resting against the wall of the furnace, the inner compartment being of greater depth than the outer compartment, the partition having an opening in its base permitting communication between the two compartments and said partition terminating short of the upper edge of the pan to permit the water to boil over from one compartment into the other without boiling over the sides of the pan.

1,023,137. SAD-IRON HEATER. MARTHA J. DUFFIELD, Woodbury, N. J. Filed July 14, 1911. Serial No. 638,487. (Cl. 126—230.)



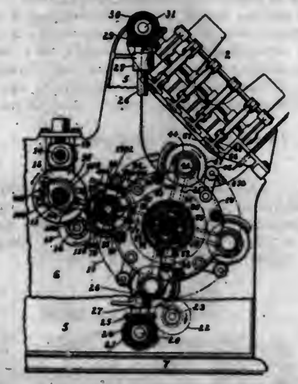
A sad iron heater comprising a hollow elongated body, legs supporting said body, and extending outwardly beyond the plane of the side walls of the body, a sad-iron shaped plate of smaller dimensions than an ordinary sad-iron, secured to the body and constituting the top of said body, said plate having a series of openings therein, conforming to the general outline of the plate, outwardly extending iron supporting arms removably secured to said body, means for supplying combustible fluid to said body, and said body having an air inlet in its bottom, whereby air may commingle with the combustible fluid in said hollow body and burn through the perforations in the top of the body, substantially as described.

1,023,138. BLANK-HANDLING MECHANISM. WILLIAM T. DULIN, Philadelphia, Pa. Filed June 9, 1911. Serial No. 632,176. (Cl. 101—41.)

1. Blank handling mechanism including in combination, a hopper adapted for receiving a pile of blanks, comprising side walls relatively adjustable toward and from each other, means for discharging blanks successively from said hopper, including a plurality of pairs of oppositely disposed blank supporting blades mounted for movement relative to said hopper and means for successively moving said blades into and out of supporting position relative to said hopper.

2. Blank handling mechanism including in combination, a hopper adapted for receiving a pile of blanks, means for discharging blanks successively from said hopper, including a plurality of pairs of oppositely disposed blank supporting blades mounted for movement relative to said hopper and means for successively moving said blades into and out of supporting position relative to said hopper.

3. Blank handling mechanism including in combination, a hopper adapted for receiving a pile of blanks, means for discharging blanks successively from said hopper, including a plurality of pairs of oppositely disposed blank supporting blades, the members of each pair of blades being mounted for reciprocation toward and from each other and means for reciprocating said blades successively in pairs.

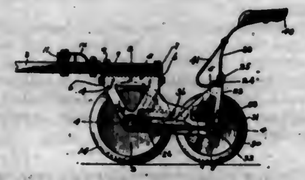


4. Blank handling mechanism including in combination, a hopper adapted for receiving a pile of blanks, opposite reciprocating blades for discharging blanks successively from said hopper, blank transfer means for receiving blanks from said hopper discharging means comprising a transfer cylinder having pneumatic blank holding means thereon, a rotatable carrier in which the transfer cylinder is rotatably mounted and means for rotating the carrier to move the transfer cylinder into coöperative relation with the hopper.

5. Blank handling mechanism including in combination, a hopper adapted for receiving a pile of blanks, opposite reciprocating blades for discharging blanks successively from said hopper, blank transfer means for receiving blanks from said hopper discharging means comprising a transfer cylinder, having pneumatic blank holding means thereon, a rotatable carrier in which the transfer cylinder is rotatably mounted, means for rotating the carrier and means for rotating the transfer cylinder to coact with the hopper.

[Claims 6 to 18 not printed in the Gazette.]

1,023,139. SOIL-PULVERIZER. WILEY J. DUNHAM, Berea, Ohio, assignor to The Dunham Company, Berea, Ohio, a Corporation of Ohio. Filed Mar. 27, 1911. Serial No. 617,123. (Cl. 55—77.)



1. In a soil pulverizer, the combination of a forward frame, a rear frame pivotally connected with the forward frame so as to have independent vertical movement, a pulverizer member mounted in each frame and an arm rigidly mounted at each side of the front frame, said arms being arranged to extend rearwardly in contact with the sides of the rear frame to prevent horizontal transverse movement of the rear frame in relation to the front frame.

2. In a soil pulverizer the combination of a front frame comprising end brackets, said brackets having journals formed on the inner faces thereof and trunnion forming

studs formed on the outer faces thereof and located immediately opposite said journals, bars connecting said end brackets, a shaft having its ends mounted in said journals on said end brackets, a pulverizer member mounted on said shaft, a rear frame comprising end brackets, said end brackets having arms rigid therewith which extend forwardly and are provided with openings in their ends to receive the studs on the end brackets of the front frame, means for holding said arms on said studs, a bar connecting said end brackets of the rear frame, a shaft extending between said brackets, and a pulverizer member mounted on said shaft.

3. In a soil pulverizer, the combination of a forward frame, a rear frame pivotally connected with the forward frame so as to have independent vertical movement, said frames consisting of end brackets connected by cross bars, a shaft mounted in each frame, a pulverizer member mounted on each shaft and an arm formed integral with each of the end brackets of the front frame and extending rearwardly in contact with the inner faces of the end brackets of the rear frame, the said arms being curved downwardly at their ends and a seat arranged on and wholly supported by the rear frame.

4. In a soil pulverizer, the combination of a forward frame comprising end brackets, bars connecting said end brackets, bosses formed on the inner faces of said end brackets and provided with journal forming sockets, a shaft having its ends journaled in said sockets, disks mounted on said shaft, studs formed on the outer faces of said brackets immediately opposite said bosses, each stud being provided with a bore which extends from the outer end thereof to said socket, a rear frame comprising end brackets, arms rigid with said brackets and extending forwardly therefrom and provided with openings to receive the studs on the forward end brackets, bolts for securing said arms on said studs, said bolts having their heads arranged in the sockets in the said bosses and having their shank portions extending through the bores in the said studs, nuts arranged on the ends of said bolts, a shaft extending between the end brackets of the rear frame and disks mounted on said shaft, for the purpose set forth.

1,023,140. ESCAPEMENT-REGULATOR. FREDERIC ECAUBERT, New York, N. Y. Filed Dec. 11, 1908. Serial No. 466,961. (Cl. 58—108.)



1. An escapement regulator comprising an oscillating arm extending radially from the axis of oscillation and attached to said arm the circumferentially extending member or members comprising a part yielding in radial directions and a rigid part united thereto, the inner and outer surfaces of said rigid part being so shaped that the outer or free end of the outer surface shall be nearer the axis of oscillation than the central line of an imaginary cylindrical zone defined by the movement of said rigid part about the axis of oscillation.

2. An escapement regulator comprising an oscillating arm extending radially from the axis of oscillation and attached to said arm the circumferentially extending member or members comprising a part yielding in radial directions and a rigid part united thereto, the inner and outer surfaces of said rigid part being so shaped that that part of the outer surface which is farthest away from the radial arm is nearer the axis of oscillation than that part of the outer surface where it adjoins the yielding part, and that the line defining the curvature of the inner surface of the rigid part from its outer extremity to a radial line drawn through the point of junction between the rigid and the yielding part is shorter than the corresponding line of the outer surface.

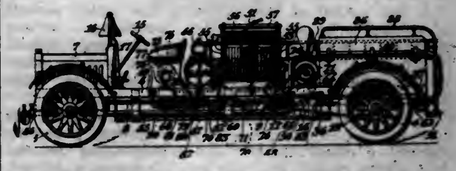
3. An escapement regulator comprising an oscillating arm extending radially from the axis of oscillation and attached to said arm, a circumferential member or members comprising a part yielding in radial directions and a rigid part united thereto, the outer and inner surfaces of said rigid part consisting of curved planes of which the outer plane is drawn with the radius shorter than that employed in drawing the inner surface.

4. An escapement regulator comprising an oscillating arm extending radially from the axis of oscillation, a flexible arm attached thereto in a circumferential direction, a weight carried by said flexible arm having an inner surface approximately concentric with the movement of the escapement, and a curved outer surface progressing from a point near the point of attachment between weight and flexible arm to a point farther away from the connection between the radial arm and flexible arm, said last named point being nearer the axis of oscillation than the point of connection between weight and flexible arm.

5. An escapement regulator comprising an oscillating arm extending radially from the axis of oscillation, a flexible arm attached thereto in a circumferential direction, a weight carried by said flexible arm having an inner surface shorter than the outer surface and a curved outer surface progressing from a point near the point of attachment between weight and flexible arm to points nearer the axis of oscillation than the point of attachment between flexible arm and weight.

[Claims 6 to 9 not printed in the Gazette.]

1,023,141. FIRE-FIGHTING APPARATUS. HARRY W. EISENBISE, Reading, Pa. Filed Apr. 5, 1911. Serial No. 619,093. (Cl. 169—19.)



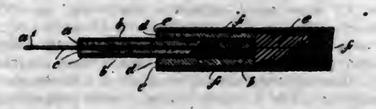
1. In a fire-fighting apparatus, the combination with a water pump having an inlet pipe, and an outlet pipe for connection with fire-hose, of a chemical reservoir, a second pump arranged to discharge said reservoir through suitable chemical fire-hose independent of the water fire-hose, and means operative to divert the flow of chemical solution and direct it through said outlet pipe with the water forced therethrough by said water pump.

2. In a fire-fighting apparatus, the combination with a self-propelled vehicle, of a water pump carried thereby and having a suction inlet and an outlet provided with a plurality of hose couplings, a chemical reservoir, a second pump connected to discharge chemical solution from said reservoir and provided with a bifurcated outlet having its branches respectively connected with a chemical fire-hose, and with the outlet of said water pump, and a three-way valve at the bifurcation of said chemical outlet operative to selectively direct the chemical solution through the chemical fire-hose or through the water outlet.

3. In a fire-fighting apparatus carried by a self-propelled vehicle, the combination with a water pump having inlet and outlet connections, of a hose reel having a hollow shaft connected with said outlet, a coil of hose connected with said hollow shaft to convey water from said pump, separate chemical tanks having outlets connected by a three-way valve to a single discharge, a chemical pump connected with said discharge and having a bifurcated outlet whose branches are controlled by a three-way valve and are respectively connected with a chemical hose-line, and with the outlet connection of said water pump, and arranged to direct chemical solution

from either of chemical tanks separately through said chemical hose or through said outlet connection to be mixed with the water forced therethrough by the water pump.

1,023,142. FUSE. HENRY E. ELLSWORTH, Simsbury, Conn., assignor to The Ensign-Bickford Company, Simsbury, Conn., a Corporation of Connecticut. Filed July 20, 1910. Serial No. 572,794. (Cl. 102—8.)



1. The method of manufacturing fuse which consists in covering with an impervious envelop a core comprising a burning medium and a casing surrounding the burning medium, said casing coated with a waterproof material and applying external pressure to the exterior of the impervious envelop while the waterproof material is soft and plastic in order to impregnate the casing with the waterproof material.

2. The method of manufacturing fuse which consists in winding strands under tension on a portion comprising a burning medium and a casing therefor, which portion has been covered with waterproofing material surrounded by an impervious covering; the winding being carried out while the waterproofing material is hot.

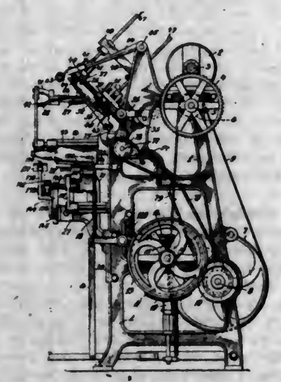
3. The method of manufacturing fuse which consists in winding strands under tension on a portion comprising a burning medium and a casing therefor, which portion has been covered, with a waterproofing material surrounded by an impervious flexible covering; the winding portion being carried out while the waterproofing material is soft and plastic.

4. The method of manufacturing fuse which consists in enveloping in paper a portion, comprising a burning medium, a casing therefor and waterproofing material covering the casing; and then winding strands under tension around the paper envelop while the waterproofing material is hot.

5. The method of manufacturing fuse which consists in enveloping in paper a portion comprising a burning medium, a casing therefor and waterproofing material covering the casing; and then winding strands under tension around the paper envelop while the waterproofing material is soft and plastic.

[Claims 6 to 20 not printed in the Gazette.]

1,023,143. BOTTLE-LABELING MACHINE. EDWARD ERMOLD, New York, N. Y. Filed Sept. 21, 1910. Serial No. 583,030. (Cl. 216—13.)

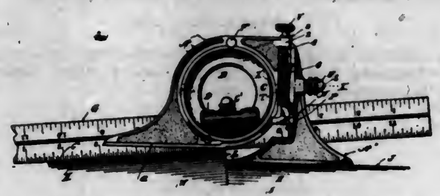


1. A bottle labeling machine comprising in combination a rest adapted to support a bottle or the like to be labeled, a plurality of gravity feeding label receptacles arranged above said rest, oscillatory picker means for transferring labels from said receptacles to articles on said rest, an oscillatory adhesive applying roll arranged to travel over the surfaces of said picker means, a presser adapted to hold a plurality of labels on articles on said rest, wiper mechanism for securing a plurality of labels to the article to be labeled, and operating means for said pickers arranged to return said pickers for new labels while the wiper mechanism is operating to secure the labels previously obtained to the article to be labeled.

2. A labeling machine comprising in combination a rest adapted to support a bottle or the like to be labeled, a plurality of gravity feeding label receptacles arranged above said rest, oscillatory picker means having raised portions thereon for transferring labels from said receptacles to articles on said rest, an oscillatory adhesive applying roll arranged to travel over the raised portions of said picker means, a presser adapted to hold a plurality of labels on articles on said rest, and wiper mechanism for securing a plurality of labels to said articles to be labeled.

3. A labeling machine comprising in combination a rest adapted to support a bottle or the like to be labeled, a plurality of gravity feeding label receptacles arranged above said rest, oscillatory picker means for transferring labels from said label receptacles to articles on said rest, the angle of oscillation of said picker means between said support and said label receptacles being less than ninety degrees, an oscillatory adhesive applying roll arranged to travel over the surface of said picker means and to apply adhesive thereto during the travel thereof toward the label receptacles, a presser adapted to hold a plurality of labels on articles to be labeled, and wiper mechanism for securing a plurality of labels to said articles.

1,023,144. BEVEL-PROTRACTOR. LOUIS J. FELLAY, Peoria, Ill. Filed Mar. 21, 1910. Serial No. 550,811. (Cl. 73—150.)



1. A tool of the character described comprising in its construction two associated members adapted to swing relatively to one another about a common axis, one of them having a working edge as its base, and a part carried by the other of the members and having a working edge as its base, said part being adjustable upon the member carrying it, the plane of said edge or base having a direction of movement perpendicular to the edge or base of the first described member when said edges or bases lie parallel to one another.

2. A tool of the character described comprising in its construction two associated members adapted to swing relatively to one another about a common axis, one of them having a working edge as its base, one of said members also having an indicating mark, the other having a series of indicating marks to associate with the mark of the first, and a part carried by one of the members and provided with a working edge as its base and movable on the member that carries it in a line perpendicular to the plane of its own base and perpendicular also to the plane of the base of the other member when both bases lie parallel to one another.

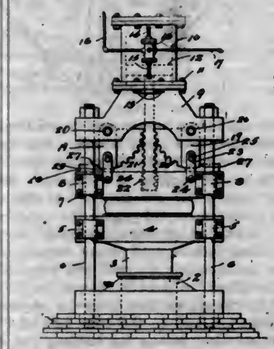
3. A tool of the character described comprising in its construction two associated members adapted to swing relatively to one another about a common axis, one of them having a working edge as its base, a part carried by the other member and adapted for a sliding movement thereon and having a working edge as its base, the direction of movement of the part being perpendicular to the plane of its base and perpendicular to the plane of the base of the first described member when the planes of both bases lie parallel to one another, said part and the member carrying it each having an indicating mark to associate with each other.

4. A tool of the character described comprising in its construction two associated members adapted to swing relatively to one another about a common axis, one of them having a working edge as its base, one of said members also having an indicating mark, the other having a series of indicating marks to associate with the mark of the first, a part carried by one of the members and adapted for a sliding movement thereon and having a working edge as its base, the direction of movement of the part being perpendicular to the plane of its base and perpendicular to the plane of the base of the first described part when the planes of both bases lie parallel to one another, the said part and the member carrying it each having an indicating mark adapted to associate.

5. A tool of the character described comprising in its construction two associated members adapted to swing relatively to one another about a common axis and each provided with a working edge, a third member carried by and adjustable upon one of said members in a direction perpendicular to the working edge of that member, and itself having a working edge, and means to adjust said third member.

[Claims 6 to 14 not printed in the Gazette.]

1,023,145. PRESS. DE LESLIE C. FITCH, Baton Rouge, La. Filed Nov. 7, 1911. Serial No. 659,017. (Cl. 100—9.)



1. In a press of the character described, a supporting structure, an upper movable platen, pivoted sectors disposed above the same, means connecting said sectors with the platen, elements rigidly mounted upon the platen and disposed in the path of travel of the sectors, a lower movable platen, means to move the sectors, and means to move the lower platen.

2. In a press of the character described, a supporting structure, an upper movable platen, pivoted sectors disposed above the platen, links connecting the sectors and platen said platen being provided upon its upper surface with a well, a rack bar operating in engagement with the sectors and adapted to engage the bottom of said well when said sectors have been swung to their lowermost positions, chairs rigidly mounted upon the platen and disposed in the path of travel of said sectors to define their lowermost positions, a lower platen, means to move the same, and means to move the rack-bar.

3. In a press of the character described, a supporting structure, a lower platen, an upper movable platen, pivoted sectors, means connecting the upper platen and sectors, chairs rigidly connected with the upper platen and disposed in the path of travel of said sectors, and means to move the sectors.

4. In a press of the character described, a supporting structure, co-acting platens, means connected with the supporting structure and adapted upon operation to first move one platen inwardly quickly, and subsequently rigidly lock the same platen with the supporting structure, and means to move the other platen inwardly.

5. In a press of the character described, a supporting structure, movable upper and lower platens, sectors pivotally connected with the upper platen, and elements rigidly connected with the upper platen and disposed in the path of travel of said sectors.

[Claims 6 and 7 not printed in the Gazette.]

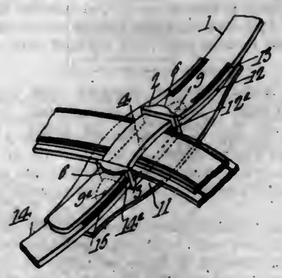
1,023,146. AIR-PRESSURE REGULATOR FOR FORCE-PUMPS. FRANK J. GILE, Lawrence, Mass. Filed Dec. 4, 1911. Serial No. 663,905. (Cl. 103—58.)



1. In the combination of a pressure pump, a pressure chamber having an interior float chamber with a mouth which opens near the bottom of the pressure chamber, with a float in the float chamber, a vent valve for the float chamber, and suitable connections between the vent valve and the float.

2. In the combination of a pressure pump, a pressure chamber, and a float chamber which has an outlet near the bottom of the pressure chamber, with a float in the float chamber, a vent valve in the float chamber, and suitable connections between the vent valve and the float.

1,023,147. HARNESS. JULIUS C. HARPHAM, Lincoln, Nebr. Filed Oct. 21, 1911. Serial No. 655,989. (Cl. 54—87.)

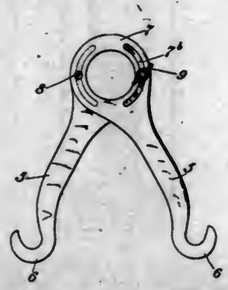


1. A harness comprising a breeching member, a back-strap, a keeper including a tongue-equipped plate-member having apertured end-extensions and outstanding end-loops adapted to receive said back-strap, said breeching member having apertured engagement with the tongue of said plate-member and being received between said end-loops, under said back-strap, and a base-member, a reinforcing member sandwiched between said back-strap and said base-member, and a shaft-attaching strap, all being

secured together, said apertured end-extensions receiving rivets effecting connection therebetween and said base-member, said reinforcing member and said shaft-attaching strap.

2. A harness comprising a breeching member, a back-strap, a keeper, including a tongue-equipped plate-member having apertured end-extensions and outstanding end-loops adapted to receive said back-strap, said breeching-member having apertured engagement with the tongue of said plate-member and being received between said end-loops, under said back-strap, and a base-member, a reinforcing member sandwiched between said back-strap and said base-member, and a shaft-attaching strap, all being secured together, said apertured end extensions receiving rivets effecting connection therebetween and said base-member, said reinforcing member and said shaft-attaching strap, said reinforcing member and said shaft-attaching member having their inner end-portions received within said end-loops respectively.

1,023,148. GAMBREL. JOHN HARTMAN and HENRY H. HARTMAN, Morral, Ohio. Filed Dec. 30, 1911. Serial No. 668,798. (Cl. 17—30.)

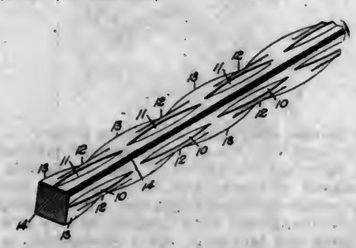


1. A gambrel hook including in combination, a pair of hook arms, having lapping open rings at their upper ends, said rings being adjustable on each other and means for locking said rings in adjusted position.

2. A gambrel hook including in combination, a pair of hook arms having open rings provided with serrated faces lapping upon each other, said rings each provided with a slot, a threaded bolt on each ring passing through the slot of the other, and clamping nuts on said bolts adapted to hold said rings engaged with each other.

3. A gambrel hook including, in combination, a pair of hook arms having open rings provided with faces constructed to interlock with each other, said rings each provided with an arc-shaped slot concentric with the center of the ring, a bolt on each ring passing through the slot of the other and clamping devices connected with said bolts adapted to hold said rings engaged with each other.

1,023,149. REINFORCING MEANS FOR COMPOSITE STRUCTURES. JOHN F. HAVEMEYER, Ardsley-on-Hudson, N. Y. Filed Mar. 23, 1908. Serial No. 422,604. (Cl. 72—111.)

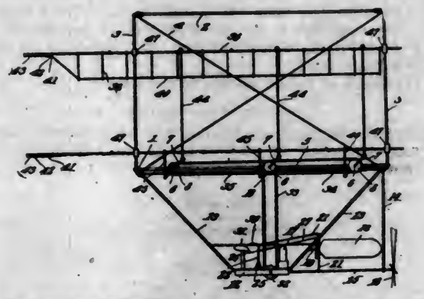


1. A reinforcing bar having projections formed side by side upon at least two adjacent faces and also having a flattened edge between said faces, the said edge itself being provided with projections staggered in relation to said face projections, whereby to produce a bar of uniform cross section throughout.

2. A reinforcing bar having shuttle-shaped projections formed side by side upon at least two adjacent faces and also having a flattened edge between said faces, the said edge itself being provided with tapering projections staggered in relation to said face projections and overlapping the same, whereby to produce a bar of uniform cross section throughout.

3. A reinforcing bar having a single line of tapering projections extending lengthwise upon each at least of two adjacent faces and also having a flattened edge between said faces, the said edge itself being provided with tapering projections overlapping the face projections and staggered in relation thereto so as to leave flat X-shaped spaces along said edge between the projections, whereby to produce a bar of uniform cross section throughout.

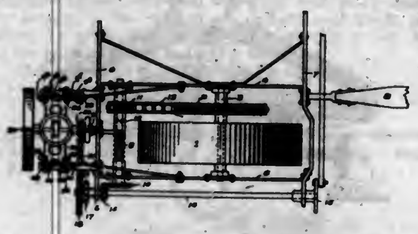
1,023,150. AERODROME. AMOS J. HELM, Floydada, Tex. Filed July 11, 1911. Serial No. 637,962. (Cl. 244—11.)



An aerodrome including upper and lower frames, parallel connections between the corner portions of the frames, a series of crank shafts journaled upon each side of the lower frame, the cranks of each shaft being oppositely disposed, means for rotating all of the shafts in unison, sleeves mounted to slide along the connections, upper and lower elevating planes connected, at their corners, to the sleeves, each of said planes including a frame, flaps extending transversely thereof and adapted to hang downwardly therefrom, a flexible connection between the lower ends of the flaps, an elastic device secured to one end of the connection and to the rear end of the frame, said device constituting means for holding the flaps normally folded together to close the space within the frame, pitman connections between the sides of the lower plane and one set of cranks at each side of the lower frame, pitman connections between the sides of the upper plane and the remaining cranks, said cranks and pitmen operating to move the planes in opposite directions simultaneously, and steering and propelling means supported below the frames.

1,023,151. COMBINED MOTOR AND TRACTION OPERATED IMPLEMENT. GILBERT O. HELVIG and ENVEN DANIELSON, Dawson, Minn., assignors to The Automatic Traction Implement Company, Minneapolis, Minn., a Corporation. Filed Nov. 25, 1908. Serial No. 464,485. (Cl. 56—33.)

1. In a combined motor and traction operated implement, the combination with a main frame, harvesting mechanism mounted thereon, a traction wheel mounted in said main frame, and means for transportation by horses, of an upwardly and rearwardly extending bracket secured to the rear portion of said main frame, a motor mounted upon said bracket, connecting means between said motor and the pitman shaft of said mechanism, a clutch controlling said connecting means, an auxiliary shaft connected to said pitman shaft, means connecting said auxiliary shaft to the drive wheel, and a clutch mounted upon said auxiliary shaft and adapted to control said connecting means to the drive wheel, substantially for the purposes set forth.

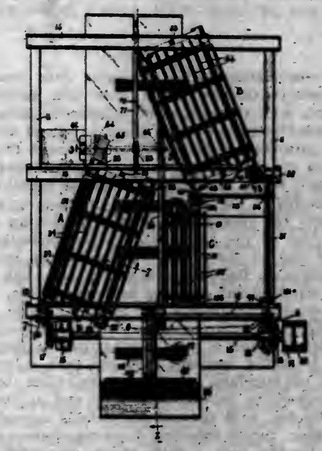


2. In a device of the character described, a main frame, a traction wheel connected therewith for supporting the same, harvesting mechanism mounted upon the main frame, means to operate the harvesting mechanism including a rotatable shaft extending longitudinally of the main frame, a counter-shaft disposed near and to one side of the first named shaft and having a clutch thereon, driving connecting means between the counter-shaft and the first named shaft, a motor mounted upon the main frame and including a crank shaft, said crank shaft having a second clutch thereon, a sprocket wheel loosely mounted upon the crank shaft and having rigid connection with a co-acting member of the second named clutch, the other co-acting member of the clutch being splined upon the crank-shaft for movement into and out of engagement with the first named co-acting member, a second sprocket wheel rigidly mounted upon the first named shaft, a sprocket chain connecting the first and second named sprocket wheels, a third sprocket wheel rigidly connected with the traction wheel for rotation therewith, a fourth sprocket wheel rotatably mounted upon the counter shaft and having rigid connection with one co-acting member of the first named clutch, and the other co-acting member of said second named clutch being splined upon the counter shaft for movement into and out of engagement with the other co-acting clutch member and a sprocket chain connecting the third and fourth sprocket wheels.

3. In a device of the character described, a main frame, an axle journaled through the main frame nearly intermediate the ends thereof, a traction wheel mounted upon the axle, a draft appliance attached to the forward end of the main frame, a motor including a driving shaft mounted upon the rear end of the main frame to counter balance said draft appliance, a clutch on the driving shaft, harvesting mechanism mounted on the main frame, a pitman shaft extending longitudinally of the main frame, a counter-shaft disposed near the actuating shaft and having a second clutch thereon, driving connecting means between the shafts, a sprocket wheel rigidly mounted upon said axle, a sprocket wheel rotatably mounted upon the counter-shaft and having rigid connection with a co-acting member of the second named clutch, the other co-acting member being splined upon the counter shaft for movement into and out of engagement with the first named co-acting member, a sprocket chain connecting said sprocket wheels, a third sprocket wheel rotatably mounted upon the driving shaft and having rigid connection with a co-acting member of the first named clutch, the other co-acting member of the first named clutch being splined upon the driving shaft for movement into and out of engagement with its co-acting member, a pair of sprocket wheels formed in a single casting and mounted upon said actuating shaft, a sprocket chain connecting the third named sprocket wheel and one of the sprocket wheels of said pair, and a sprocket chain forming driving connecting means between the other sprocket wheel of said pair and the harvesting mechanism.

4. In a device of the character described, a main frame, a traction wheel connected with the same for supporting it, harvesting mechanism mounted upon the main frame, a pitman shaft extending longitudinally of the main frame, a counter shaft disposed near the actuating shaft and disposed transversely of the main frame, said counter-shaft having a clutch thereon, driving connecting means between the counter shaft and the pitman shaft, a sprocket wheel rigidly connected with the traction wheel for rotation therewith, a sprocket wheel rotatably mounted upon the counter shaft and having rigid connection with a co-acting member of the clutch, the other co-acting member of the clutch being splined upon the counter shaft for movement into and out of engagement with its co-acting clutch member, a chain connecting the two sprockets, a pair of sprocket wheels formed in a single casting and rigidly mounted upon the pitman shaft, a sprocket chain connecting one sprocket wheel of said pair with operating parts of the harvesting mechanism, driving connecting means between the cutting implement of the harvesting mechanism and the actuating shaft, a motor mounted upon the main frame and including a driving shaft, a clutch on said driving shaft, a sprocket wheel rotatably mounted on the driving shaft and having rigid connection with a co-acting member of the second named clutch, the other co-acting member of the second named clutch being splined upon the driving shaft for movement into and out of engagement with its co-acting member, and a sprocket chain connecting the last named sprocket wheel and the other sprocket wheel of said pair.

1,023,152. MACHINE FOR DECORTICATING FLAX. WALTER J. HOLLIER, St. Louis, Mo., assignor of one-half to Robert H. McCord, Kansas City, Mo. Filed Dec. 12, 1910. Serial No. 596,868. (Cl. 13—21.)



1. In a machine for decorticating fibrous plants, a pair of decorticators, each comprising two revolving sets of parallel bars, said decorticators being inclined toward each other, and the front end of one being located substantially opposite the rear end of the other, and feed mechanism for conveying the material successively past the two decorticators.

2. In a machine for decorticating fibrous plants, a pair of decorticators, each comprising two revolving sets of parallel bars arranged to move in substantially parallel planes and having a tongue and groove relation, the one decorticator being located in advance of the other, and feed mechanism for conveying the material sidewise in a right line successively past the two decorticators.

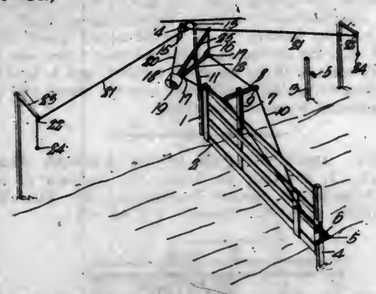
3. In a machine for decorticating fibrous plants, a pair of decorticators, the one being located in advance of the other, a thresher located opposite the forward decorticator and in advance of the rear decorticator, and feeding mechanism for conveying material into and past said thresher and decorticators.

4. In a machine for decorticating fibrous plants, a pair of decorticators inclined toward each other, the one being located in advance of the other, a thresher located opposite the forward decorticator and in advance of the rear decorticator, and feeding mechanism for conveying the material sidewise and in a right line into and past said thresher and decorticators.

5. In a machine for decorticating fibrous plants, a pair of decorticators arranged to operate from opposite ends of the plant, feeding mechanism for conveying the material successively past the decorticators, each of said decorticators comprising two revolving sets of parallel bars arranged to move in substantially parallel planes and corresponding bars of the two sets having a superimposed tongue and groove relation, and driving mechanism therefor.

[Claims 6 to 24 not printed in the Gazette.]

1,023,153. GATE. JOHN W. INGERSOLL, Jr., Belmont, Wis. Filed Nov. 28, 1911. Serial No. 662,893. (Cl. 39—14.)

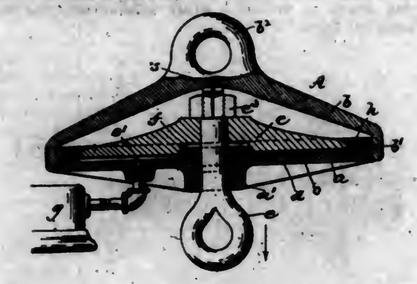


1. The combination with a swinging gate, separately movable latches thereon, and a cross arm mounted on and movable with the gate, of an attachment including a standard adapted to be secured to and to extend upwardly from the gate post, a guide sheave suspended from and swiveled on the standard, a weighted lever fulcrumed on the standard below the sheave, a flexible operating element connected to the weighted end of the lever and extending over the sheave, said element projecting beyond opposite sides of the gate post, flexible connections between one end of the lever and the latches, said connections engaging the cross arm on the gate, and guides upon the standard and engaging said connections.

2. The combination with a gate post, and a gate mounted to swing relative thereto, said gate including separately movable latches, and a cross member on the gate, of a standard extending upwardly from the post, a lever fulcrumed on the standard, a weight at one end of the lever, flexible connections between the other end of the lever and the latches, said connections slidably engaging the cross member, guides engaging the connections and connected to the standard, a guide sheave supported by the standard and swiveled thereon, and flexible actuating means mounted on the sheave and connected to the weighted end of the lever.

3. The combination with a post, a hinged gate connected thereto, a cross member on the gate, and separately movable latches carried by the gate, of a standard extending upwardly from the post, a guide sheave swiveled on and depending from the upper end portion of the standard, a cross arm secured to the standard below the sheave and disposed at an acute angle to the gate when the gate is at either limit of its movement, a lever pivotally and adjustably connected to the standard, a weight at one end of the lever, flexible connections between the other end of the lever and the latches, said connections being mounted upon the cross member on the gate, guide sheaves upon the cross arm and engaging the respective connections, and flexibly actuating devices extending in opposite directions from the gate and mounted on the guide sheave on the standard, said connections being secured to the weighted end of the lever.

1,023,154. HYDROSTATIC WEIGHING-MACHINE. WILLIAM H. KENNARON, Providence, R. I. Filed Sept. 29, 1909. Serial No. 520,079. (Cl. 73—23.)



The combination in a portable hydrostatic weighing-machine, of a main frame or chambered casing consisting of upper and lower members detachably connected together and adapted to be suspended from a suitable surface, a substantially flat, thin, flexible metal diaphragm secured in said lower member and forming with the latter a shallow recess arranged to connect with a pressure-gage and also adapted to hold therein a practically non-compressible fluid, as water, a disk-like member located within said casing superimposed upon said diaphragm, and means secured to and depending from said disk-like member adapted when in use to have the article or object being weighed suspended therefrom.

1,023,155. DEVICE FOR MENDING SHOES. JACOB KIEFER, Cleveland, Ohio. Filed Apr. 21, 1911. Serial No. 622,589. (Cl. 12—107.)



1. A device for mending shoes, comprising, in combination, a clamp comprising a base member adapted to be applied to the sole of a shoe, a rotatable key carried by said member and having a ratchet device associated therewith, a pawl engaging said ratchet, means for securing a wire to said key so as to be tightened upon the rotation thereof, and means for securing the other end of said wire to said base member so as to form a patch-engaging loop or bight.

2. A device for attaching a tip to a shoe, comprising, in combination, a wire loop adapted to surround the toe of the shoe and lie in the space between the welt and upper and to hold the tip in place, said loop being adapted to have its ends project through perforations in the shoe sole, and a clamp member adapted to be applied to the sole and to receive said ends, said clamp being provided with means for constricting said loop.

3. A device for mending shoes, comprising, in combination, a clamp member adapted to be affixed to the sole of a shoe, a rotatable key carried by said clamp member and having a ratchet device associated therewith, a pawl engaging said ratchet, and means for securing a wire to said key so as to be tightened upon the rotation thereof.

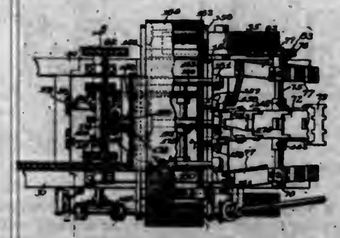
4. A device for mending shoes, comprising, in combination, a clamp comprising a base member adapted to be applied to the sole of a shoe and having a pair of arms defining a notch therebetween, a rotatable key journaled in said arms and traversing said notch, a wire adapted to be secured to said key opposite said notch, means for securing the other end of said wire to said base member so as to form a loop adapted to partially surround a patch, means for preventing the shifting of said base member as regards said sole, and means for preventing

the retrograde rotation of said key as the same is turned to tighten said wire.

5. A device for mending shoes, comprising, in combination, a clamp member adapted to be affixed to the sole of a shoe and comprising a base member having a pair of arms defining a notch therebetween, a rotatable key journaled in said arms and traversing said notch, means for securing a wire to said key opposite said notch, and means for preventing the retrograde rotation of said key as the same is turned to tighten said wire.

[Claims 6 to 10 not printed in the Gazette.]

1,023,156. DITCHING-MACHINE. CHARLES KOSMIN, Arlington Heights, Ill. Filed Aug. 10, 1910. Serial No. 576,506. (Cl. 37—24.)



1. In apparatus of the character described, the combination with supporting means of a boom, a main digging chain carried by said boom, auxiliary chains at the sides of said main chain, provided with cutting blades which bear against and cut the sides of the ditch and means for spreading the auxiliary chains at their upper ends so as to cause the cutters thereof to make oblique cuts.

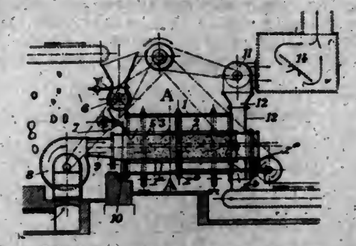
2. In apparatus of the character described, the combination with supporting means of a boom, a main chain on said boom, provided with transverse cutting blades adapted to cut transversely of the ditch, and with scoops to remove the spoils, auxiliary chains, provided with cutting blades arranged so as to bear against and cut the sides of the ditch, sprockets over which said several chains run, and means for shifting the relative positions of the auxiliary chain sprockets at one end of the boom, substantially as and for the purpose described.

3. In apparatus of the character described, the combination with a carriage and excavating apparatus supported thereon, of guide rods arranged longitudinally of said carriage, a conveyer upon which the excavating apparatus delivers comprising a frame consisting of two overlapping frame members and means for securing the same together, said frame members being slotted so that said frame is slidable transversely of the carriage upon said guide rods, sprockets carried on the ends of said frame, endless chains on said sprockets, an endless apron on said chains, and a shaft extending longitudinally of said carriage and provided with sprockets engaging with said chains; and means for driving said shaft.

1,023,157. DRYING APPARATUS FOR BAGASSE. JULES CHARLES FERNAND LAFEUILLE, Charmes, near La Fère, France. Filed Nov. 15, 1909. Serial No. 528,141. (Cl. 34—5.)

1. In a drier, the combination of a revoluble cylinder having imperforate walls, a perforated cylinder closed at one end and eccentrically mounted to revolve within the first-named cylinder, means for feeding material to the space between the cylinders and means for forcing air into said space through the walls of the inner cylinder and in contact with the said material.

2. In a drier, the combination of a revoluble cylinder having imperforate walls, a revoluble perforated cylinder closed at one end, eccentrically mounted within the first-named cylinder and provided with peripheral longitudinally arranged blades, means for feeding material to the space between the cylinders and means for forcing air into said space through the walls of the inner cylinder and in contact with the said material.



3. In a drier, the combination of a revoluble cylinder having imperforate walls interiorly provided with lifting blades, a revoluble perforated cylinder closed at one end and eccentrically mounted within the first-named cylinder, a stationary plate located in the space between the cylinders adapted to direct the material falling thereon from said blades to the top surface of the second-named cylinder, means for feeding wet material to said space between the cylinders and means for forcing air into said annular space through the walls of the inner cylinder and in contact with said material.

1,023,158. SLIPPER-SOLE. CHARLES LEVY, Worcester, Mass., assignor to Bickford & Sweet, Worcester, Mass., a Firm. Filed May 19, 1911. Serial No. 628,158. (Cl. 36—10.)



1. A foot covering having an upper consisting of textile fabric, a sole consisting of a body having an outer layer of leather with projecting portions embracing the edges of the body, a lining for the sole also embraced by the projecting portions of the outer layer, a tape attached to the inner surface of the sole also embraced by the projecting portions of the outer layer, and means for securing the upper to the sole.

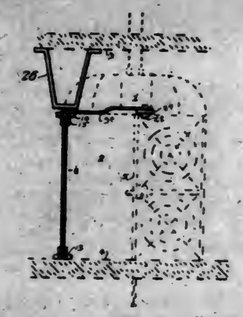
2. In a foot covering, a knitted or crochet upper, a sole therefor having a body of leather board, an inner lining for the body, a tape secured near the marginal edges of the sole from the inside thereof and an outer facing strip secured to the body and having projecting portions embracing the edges of the body and lining and engaging the tape and securing devices passing through the tape and strip and through the upper for securing the upper to the sole.

3. In a foot covering, a sole having a leather covering or facing, the edges of the leather covering extending beyond the edges of the body, a lining secured to the body, a tape extending around the sole on its inner surface near the marginal edge thereof and secured to said sole, means for securing the portions of the facing extending beyond the edges of the sole to the said tape, an upper of textile fabric, and means for securing the upper to the said tape.

1,023,159. ELEVATOR-LOCK. GEORGE LOCKHART, New York, N. Y. Filed Feb. 13, 1911. Serial No. 608,463. (Cl. 187—74.)

1. An elevator lock comprising a plurality of upright members spaced apart, a plate adjacent to each of the ends of said upright members, said plate being provided with a pivot member secured centrally within said plate

and a bearing member arranged to receive each said pivot member for the purpose set forth.

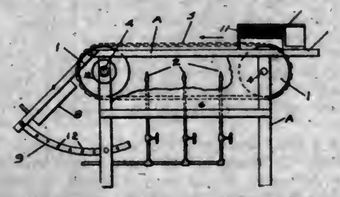


2. An elevator stop comprising a plurality of upright and tubular locking members, a disk arranged at the ends of two of said upright members, foot pieces supporting two other upright members and an adjustable member securing said upright members in operative relation, said adjustable member being arranged upon said upright members at a point between their ends as specified.

3. The combination with a door and a locking means arranged adjacent thereto of an elevator lock comprising a plurality of upright members spaced apart, a plate adjacent to each of the ends of said upright members, said plate being provided with a centrally disposed pivot for supporting said upright members, and a second pivot arranged eccentrically to the first said pivot, and a link connected to said eccentric pivot and operating the locking means adjacent to the door of the elevator as herein specified.

4. An elevator lock comprising a plurality of upright members spaced apart, plates adjacent to the ends of said upright members, said plates being provided with centrally disposed pivots, and a second pivot arranged in one of said plates eccentrically to the first said pivot, a link connected to said eccentric pivot and a locking member operable by said link, said locking member being provided with a plurality of downward projections arranged to allow an elevator door to pass between them.

1,023,160. DEVICE FOR ENAMEL-PRINTING. THEODORE LOVENDALE, Salt Lake City, Utah. Filed Aug. 23, 1911. Serial No. 645,674. (Cl. 91—59.)

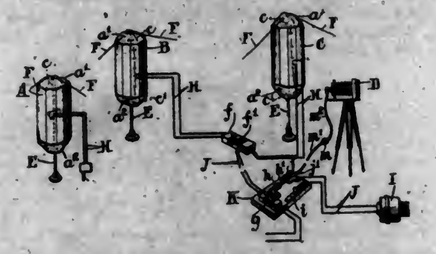


1. In a device of the class described the combination of a frame, drums mounted therein, means to rotate said drums, an endless belt screen inclosing said drums, heat elements between said drums and within said screen adapted to supply heat to and around the upper portion of said screen, a feeding box, and a brush across the open face of said box.

2. In a device of the class described the combination of a frame, drums mounted therein, means to rotate said drums, an endless metallic screen belt inclosing said drums, means to supply heat around the upper portion of said belt, a box at one end of said belt and having the side adjacent the belt open, and a brush across said open side of the box.

3. In a device of the class described the combination of two revoluble drums, an endless belt screen inclosing said drums, heat elements positioned between said drums and adapted to supply heat to and around the upper portion of said belt screen, means to automatically and uniformly apply enameling material to printed matter adjacent one end of said belt screen, and means to rotate said drums.

1,023,161. FLASH-LIGHT APPARATUS. IRVING G. MCCOLL, New York, N. Y. Filed Sept. 19, 1908. Serial No. 453,791. (Cl. 67—28.)



1. In a flash light apparatus, a smoke bag comprising a spreading rod formed of a plurality of sections and means whereby said sections may be separably connected, a collapsible frame carried by each of said sections, and a flexible covering of translucent material covering and secured to both of said frames whereby the opening of said frames will distend said material both laterally and longitudinally.

2. In a flash-light apparatus, a smoke-bag comprising a spreading rod formed of a plurality of sections and means whereby said sections may be separably connected, a collapsible umbrella frame carried by each said section, and a flexible covering of translucent material covering and supported between said frames having an opening therein, flaps adapted to close said opening, and fastening means whereby said flaps may be held so as to entirely close said opening and prevent the escape of smoke and gases therethrough.

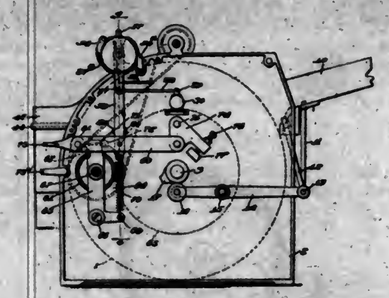
3. In a flash light apparatus, an igniter mechanism comprising a flash pan, a plurality of pins included in an electric circuit and adapted to be supported by, and project into, said pan, a fuse comprising contact rings insulated from each other and from the flash pan, said rings being adapted to have a close driving fit with said pins to make electric contact therewith, and a fusible member extending from one of said rings to the other and insulated from said pan, said fuse being adapted to be mounted in said pan by means of said pins, and a make-and-break mechanism within said circuit whereby said circuit may be controlled to time the ignition of the powder in said pan.

4. In a flash light apparatus, a powder pan having openings therethrough for the contact members of the firing mechanism and an igniting mechanism comprising a plate of electrically non-conductive material, pins carried by said plate and insulated one from the other, and adapted to pass through said opening in, without coming into electrical contact with, said pan, said pins forming adjacent terminals to a normally open electrical circuit, a fuse within said pan having electrically conductive rings adapted to encircle and engage said pins, and a connecting fusible member in contact with the powder, means whereby said plate may be detachably mounted on said pan, and a switch mechanism in said circuit.

5. In a flash light apparatus, a smoke bag comprising a spreading rod, collapsible frames at each end thereof, and a flexible covering of translucent material covering, and distended by and between said frames, the portion of said covering beyond the said frames being full, whereby additional space is afforded within said bag to accommodate the increased volume of gases due to the explosion of powder within said bag.

[Claim 6 not printed in the Gazette.]

1,023,162. COIN COUNTING AND PACKAGING MACHINE. EDDY T. MCKAIG, Chicago, Ill., assignor of one-half to Albert E. Silk and Henry Denninger, Chicago, Ill. Filed May 14, 1904. Serial No. 207,904. (Cl. 133—8.)



1. In a machine for the purpose described, the combination of a coin conveyer, a package holder for receiving the coins directly from said conveyer, means for holding a supply of coins accessible to said conveyer, a member arranged adjacent to said package holder for receiving the coins from said conveyer, and means on said member for ejecting and directing the coins from the conveyer.

2. In a machine for the purpose described, the combination of a coin conveyer, means for holding a supply of coins contiguous to said conveyer, a package holder for receiving the coins from the conveyer, a chute leading from the conveyer to the package holder for directing the coins into the latter and a projection on the chute for dislodging the coins from the conveyer when arriving at said chute.

3. In a machine for the purpose described, the combination of a rotary coin conveyer comprising a drum having its periphery provided with spaced blocks arranged in a plurality of circumferential series, to form sets therebetween adapted to receive the coins flatwise, partitions arranged between said series for dividing them from each other and for retaining the coins in the seats, means for holding a supply of coins contiguous to said pockets and package holders arranged opposite said series respectively for receiving the coins therefrom.

4. In a machine for the purpose described, the combination of a coin conveyer having grooved coin pockets, means for supplying said pockets with coins and a stripper engaging in said groove for dislodging the coins from said pockets.

5. In a machine for the purpose described, the combination of a coin conveyer having a plurality of rows of coin pockets, means for holding a supply of coins, common to all of said rows of pockets and a switch for diverting the coins from any one of said rows of pockets.

[Claims 6 to 11 not printed in the Gazette.]

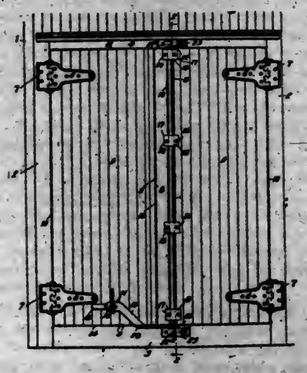
1,023,163. HOLLOW SECTION. PHILLIPS BATHURST MOTLEY, Westmount, Quebec, Canada, assignor to himself, Charles Nicholas Monsarrat, and John G. Sullivan, Westmount, Canada. Filed Feb. 2, 1911. Serial No. 606,219. (Cl. 72—51.)



1. A hollow member for use as a culvert of triangular cross section with interiorly rounded corners and each side whereof is straight inside and convex outside to present combined strut and beam formation.

2. A hollow member for use as a culvert of triangular cross-section and the sides whereof are each straight inside and convex outside to present combined strut and beam formation.

1,023,164. REFRIGERATOR-CAR DOOR AND MEANS FOR OPERATING SAME. JOHN F. O'CONNOR, Chicago, Ill., assignor to William H. Miner, Chicago, Ill. Filed May 26, 1910. Serial No. 563,544. (Cl. 20—21.)



1. The combination with a door, of an operating shaft flush with the outer face of the door and provided with a crank arm at its lower end, a keeper engaging said crank arm and a lever extending from said crank arm and having a portion adapted to fit against the outer face of the door and lie flat thereagainst when the door is in its open position, substantially as specified.

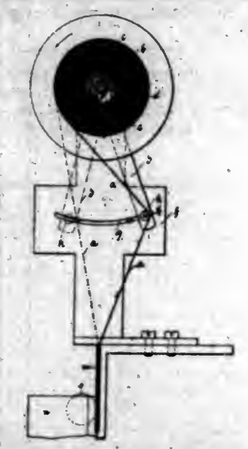
2. The combination with a door, of an operating shaft having its axis located below the outer face of the door, and provided with a crank arm at its lower end, a keeper engaging said crank arm, and an operating lever extending from said crank and adapted to fit against the outer face of the door, said operating shaft being adapted to be given a half turn by said lever, said lever comprising an upwardly extending portion adapted to lie flat against the door when the latter is swung back.

3. The combination with a car door frame, of a door hinged thereto, and provided on its outer face with a channel, an operating shaft located within said channel and provided with crank arms at its extremities projecting beyond the upper and lower ends of the door, keepers secured to said door frame and having jaw faces for engagement with said crank arms and a lever secured to the lower of said crank arms, said lever having horizontal and upwardly extending portions, the upwardly extending portion being adapted to lie flat against the door when swung back thereagainst, and the crank arms and horizontal portion of the lever assuming positions below the level of said outer face of the door when the lever is swung back against the door, whereby the door is adapted to lie snugly against the car side, substantially as and for the purpose described.

1,023,165. STRIP-FEEDING DEVICE. OSCAR OEHRING, Berlin, Germany, assignor to American Stamp & Ticket Vending Machine Co., New York, N. Y., a Corporation of New Jersey. Filed Mar. 22, 1910. Serial No. 550,831. (Cl. 242—75.)

1. A device of the character described comprising a frame, a web-feeding roll journaled thereon, intermittently actuated means for advancing said web and normally holding it taut, a guide tube in alinement with the axis of the feed-roll through which said web advances, and reciprocating means loosely mounted on the feed-roll shaft engaging the free length of said web, when said advancing means is inactive, to urge said web forwardly beyond the axis of said feed-roll, said reciprocating means

being being controlled by said intermittently advancing means.



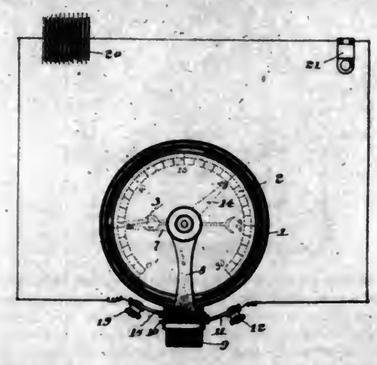
2. In a tension device comprising a frame, a strip-feeding drum mounted thereon and means for intermittently advancing said strip, the combination of a guide-tube through which said strip advances, alining with the axis of said drum, a journal way, a roller guided in said journal-way, said roller traversing said way in one direction to unwind a portion of said strip and thereby rotate said drum, means for holding said unwound portion bowed with respect to said guide and the axis of said drum, said advancing means causing said roller to traverse said way in the opposite direction to draw said web taut and thereby replace the rotation of said drum, and means carried by the drum shaft for actuating said roller when in its last-named position.

3. A device of the kind described comprising in combination a frame, a web-feeding drum mounted thereon, intermittent advancing means engaging said web, a journal way, reciprocating means adjacent said feed roll traversing said journal-way and causing a portion of said web to move therewith, said reciprocating means moving in one direction to rotate said drum but replacing said rotation when said advancing means is active, and means loosely mounted on the feed roll shaft, controlled by said advancing means, for actuating said reciprocating means.

4. A device of the kind described comprising a frame, a web-feeding drum revolubly mounted thereon, a guide tube traversed by the web, a spring-pressed reciprocating arm loosely mounted on the shaft of the feed-roll, a journal way, said tube alining with the axis of said feed roll and said journal-way being concentric therewith, a tension roller carried at the free end of said arm and traversing said journal-way, said roller when at one end of said way bowing said web with respect to said tube and the shaft of said drum, and means for drawing said web taut, thereby urging said tension roller to the other end of said way.

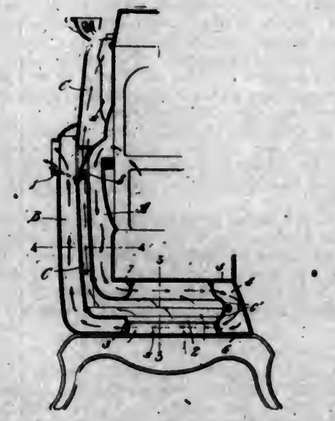
1,023,166. GAGE. HERMAN OENNING, Chicago, Ill. Filed Apr. 1, 1911. Serial No. 618,377. (Cl. 177—311.)

The combination with a gage having a scale and an indicator finger, of a glass face plate covering said scale and finger, said face plate being provided with a central performation; a perforated metallic stud passed through said opening and having a head secured against the inner side of said face plate; a contact secured to said head and extending radially therefrom, the outer end of said contact being bent inwardly into the path of said finger; a stem rotatable in the perforation of said stud; a contact secured to the inward end of said stem and extending radially therefrom, the outer end of said contact being bent inwardly; means for adjustably securing said stud and stem in position on said plate; a threaded stud on said gage; a metallic strip slotted at its end to embrace said first mentioned stud and perforated to embrace said threaded stud; insulating disks arranged on said threaded stud on each side of said metallic strip; a nut threaded on said threaded stud; a laterally extending arm



on said metallic strip; a binding post on said laterally extending arm; another laterally extending arm embracing said threaded stud and in electrical contact therewith; a binding post on said other laterally extending arm; and an electric circuit connected with said binding posts, substantially as described.

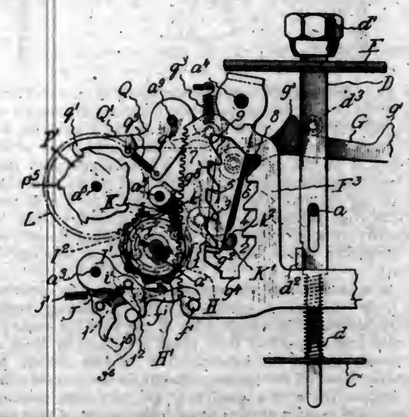
1,023,167. BASE-BURNER. PETER A. PAMPLIN, St. Louis, Mo., assignor to The Buck's Stove and Range Company, St. Louis, Mo., a Corporation of Missouri. Filed Nov. 8, 1909. Serial No. 526,796. (Cl. 126—69.)



1. A base-burner provided with a diving flue that leads from the rear side of the fire-pot downwardly and thence forwardly through the base of the stove, an uptake flue spaced away from said diving flue and leading from the front end of said diving flue rearwardly and thence upwardly at the back of the stove, said flues extending the entire width of the stove, an air-circulating flue lying between said diving and uptake flues and formed by the inner walls of same, and means at the front end of said air-circulating flue for directing cold air into same and for causing the products of combustion in the diving and uptake flues to travel in proximity to the side walls of the base of the stove which forms the side walls of the portions of the diving and uptake flues that extend through the base.

2. A base-burner provided with a diving flue, an uptake flue and an intermediate air-circulating flue arranged at the back of the stove and extending approximately the full width of same, a hollow base, a hollow member arranged inside of the base and spaced away from the walls thereof so as to form a continuous passageway for the products of combustion which travel through said diving and uptake flues, said hollow member communicating with the lower end of the air-circulating flue at the back of the stove, and means for directing cold air into said hollow member.

1,023,168. ADDING-MACHINE. WALTER J. PASINSKI, Detroit, Mich., assignor to Burroughs Adding Machine Company, Detroit, Mich., a Corporation of Michigan. Filed July 5, 1911. Serial No. 636,878. (Cl. 235—82.)



1. The combination with adding wheels relatively arranged for progressive registrations thereon; of carrying mechanism comprising a cam disk rotatively connected with a lower denomination wheel, an escapement disk rotatively connected with a higher denomination wheel, a spring applied to the latter disk and tensioned by the lower denomination wheel, and a pallet composed of relatively movable members one of which engages the cam disk and the escapement disk and the other of which engages only the escapement disk.

2. The combination with adding wheels relatively arranged for progressive registrations thereon; of carrying mechanism comprising a cam disk rotatively connected with a lower denomination wheel, an escapement disk rotatively connected with a higher denomination wheel, a spring applied to the latter disk and tensioned by the lower denomination wheel, and a pallet composed of relatively movable members one of which engages the cam disk and the escapement disk and the other of which engages only the escapement disk; the two members being interengaged for movement as one by the cam disk.

3. The combination with adding wheels relatively arranged for progressive registrations thereon; of carrying mechanism comprising a cam disk rotatively connected with a lower denomination wheel, an escapement disk rotatively connected with a higher denomination wheel, a spring applied to the latter disk and tensioned by the lower denomination wheel, and a pallet composed of relatively movable members one of which engages the cam disk and the escapement disk and the other of which engages only the escapement disk, the two members being interengaged for movement as one by the cam disks and a spring being applied to the first mentioned pallet member in opposition to the cam disk.

4. The combination with adding wheels relatively arranged for progressive registrations thereon; of carrying mechanism comprising a cam disk rotatively connected with a lower denomination wheel, an escapement disk rotatively connected with a higher denomination wheel, a spring applied to the latter disk and tensioned by the lower denomination wheel, and a pallet composed of relatively movable members one of which engages the cam disk and the escapement disk and the other of which engages only the escapement disk, the two members being interengaged for movement as one by the cam disks and a spring being applied to the first mentioned pallet member in opposition to the cam disk and the two members being spring-connected together.

[Claims 6 to 10 not printed in the Gazette.]

1,023,169. FIREARM. JOHN D. PEDERSEN, Jackson, Wyo. Filed May 5, 1910. Serial No. 559,546. (Cl. 42—21.)



1. The combination in a fire arm, of a reciprocating tubular action bar having at the rear an outlet opening for cartridges transverse to the length of said bar, a cartridge stop with reference to which the magazine reciprocates and arranged to deflect the rearmost cartridge into the outlet opening when the same is passing the cartridge stop, and a retainer forward from the cartridge stop to prevent the upward turning of the cartridge as the same enters the receiver, said retainer having a recess in the lower portion thereof adapted to receive the rim of a cartridge and allow said cartridge-stop to pass said rim from the rear to the front side thereof.

2. In a fire arm, a reciprocating action bar, a cartridge stop, in combination with a retainer located above the action bar and projecting into the receiver, said retainer having a recess in the lower side thereof adapted to receive the rim of the cartridge and allow the cartridge stop to pass the said rim from the rear to the front side thereof, and means for holding said retainer in position.

3. In a fire arm, a reciprocating action bar, a cartridge stop, in combination with a retainer having a beveled nose N^2, a recess N' on the upper portion thereof adapted to fit a shoulder on the receiver, a recess in the lower portion thereof between the nose N^2 and recess N' adapted to receive the rim of the cartridge and thereby allow the cartridge stop to pass the said rim from the rear to the front side thereof and means for holding the same in position.

4. In a fire arm, a retainer having a beveled nose N^2, a groove N^3 adapted to receive the rim of a cartridge, a forwardly projecting tongue N^4, and a recess N' between the groove N^3 and tongue N^4 and adapted to engage over a shoulder to hold the same in place.

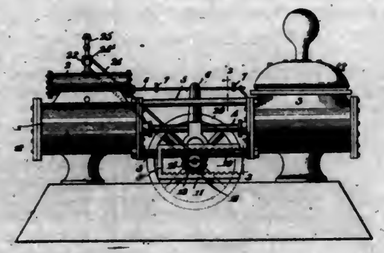
5. In a fire arm, a retainer having at one end a projecting nose, the other end thereof adapted to be engaged to secure the said retainer firmly in the fire arm, said retainer having a recess N^3 in the lower side thereof between said ends to receive the rim of a cartridge.

1,023,170. BAG-FASTENER. LOUIS B. PRAHAR, Massapequa, N. Y. Filed Jan. 29, 1912. Serial No. 674,079. (Cl. 70—116.)



The combination with a pair of jaws one of which has a slot therein, of a sheet metal box carried by said last-mentioned jaw and having interlocking engagement with the other jaw, said box having one side thereof provided with an integral extension folded back upon itself with the free end within the box and the fold projecting through said slot and a torsional spring within said last-mentioned jaw and extending through said fold.

1,023,171. SPEED-CONTROLLER FOR STEAM-PUMPS. PERLEY R. PRESCOTT, West Berlin, Mass. Filed May 13, 1910, Serial No. 561,088. Renewed Sept. 8, 1911. Serial No. 648,400. (Cl. 121—8.)

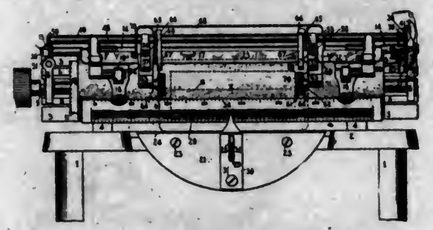


1. In a device of the class described, the combination with a steam pump piston, of a governor, a shaft belted to said governor, a plurality of oppositely acting gears mounted on said shaft, means controlled by the governor for admitting steam to the valve chest of said steam pump, a valve in the valve chest for controlling fluid pressure to the pump piston, a valve rod, a pair of collars adjustably secured to the valve rod, a cross head carried by the piston and adapted to alternately engage said collars for controlling the throw of the valve to both directions, and an arm carried by the cross head and having a pair of diagonally offset integrally connected rack bars arranged in engagement with the upper and under sides of the respective gears to alternately rotate the same in opposite directions to continuously rotate said shaft in one direction.

2. In a device of the class described, the combination with a steam pump, of a governor, a shaft connected with the governor for operating it, a plurality of oppositely acting gears mounted on said shaft, means controlled by the governor for admitting fluid pressure to the valve chest of the steam pump, and an arm carried by the crosshead of said steam pump and having a pair of diagonally offset rigidly connected rack bars arranged in engagement with the upper and lower sides of the respective gears to alternately rotate the same in opposite directions to continuously rotate said shaft in one direction.

3. In a direct acting reciprocating pump, the combination with the cylinder and piston, and a governor for controlling the admission of fluid pressure to the valve chest of the pump, of an arm reciprocating with the piston and having an upper and lower rack thereon out of vertical alinement with each other and rigidly connected, a shaft, a pair of gears rotatably mounted on said shaft, one meshing with one of said racks and the other with the other in all positions thereof, a pair of oppositely acting ratchet devices connecting said gears with the shaft, whereby the variable reciprocation of said rack will rotate said shaft constantly and uniformly in one direction, and means for connecting said shaft with the governor to operate the governor constantly in accordance with the rotation of said shaft.

1,023,172. TYPE-WRITING MACHINE. JOHN PURDY, New York, N. Y., assignor to The Monarch Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed Dec. 11, 1911. Serial No. 664,991. (Cl. 197—135.)



1. In a front-strike typewriting machine, the combination of a carriage, a rotative platen, supporting means coöperative with the bottom edge of a card for squaring the card and supporting it in a flat condition in front of the platen and at the printing line, and spring-pressed margin feed rollers arranged in front of the platen and adjacent to the printing line and coöperative with a card near the side edge portions thereof, said feed rollers being independent of said supporting means and independent of the means by which said supporting means receives its support.

2. In a front-strike typewriting machine, the combination of a carriage, a rotative platen, supporting means coöperative with the bottom edge of the card for squaring the card and supporting it in a flat condition in front of the platen and at the printing line, contact devices arranged in front of the platen adjacent to the printing line and coöperative with a card near the side edge portions thereof, said contact devices being independent of said supporting means and independent of the means by which said supporting means receives its support, and deflecting fingers which are arranged above said contact devices and extend downwardly and rearwardly toward the platen and coöperate with the upper edge of the card at the rear side thereof.

3. In a front-strike typewriting machine, the combination of a carriage, a rotative platen, supporting means coöperative with the bottom edge of the card for squaring the card and supporting it in a flat condition in front of the platen and at the printing line, a rod detachably connected to the carriage and separate from said card supporting means and separate from the means by which the card supporting means is supported, and spring-pressed feed devices arranged in front of the platen adjacent to the printing line and coöperative with the card near the side edge portions thereof, said feed devices being carried by and detachable with said rod.

4. In a front-strike typewriting machine, the combination of a carriage, a rotative platen, supporting means coöperative with the bottom edge of a card for squaring the card and supporting it in a flat condition in front of the platen and at the printing line, a rod carried by the carriage and separate from the card supporting means and separate from the means by which the card supporting means is supported, feed devices arranged in front of the platen adjacent to the printing line and coöperative with a card near the side edges thereof, and inclined deflecting fingers carried by said rod and coöperative with the card to guide it to the front of said rod.

5. In a front-strike typewriting machine, the combination of a carriage, a rotative platen, supporting means coöperative with the bottom edge of a card for squaring the card and supporting it in a flat condition in front of the platen and at the printing line, a rod detachably connected to the carriage and separate from the card supporting means and the means by which said card supporting means

is supported, spring pressed margin feed rollers carried by and detachable with said rod, said margin feed rollers being arranged in front of the platen adjacent to the printing line, and inclined deflecting fingers which are carried by and are detachable with said rod and extend downwardly and rearwardly therefrom toward the platen and coöperate with the upper edge of a card to guide it in front of said rod.

[Claims 6 to 25 not printed in the Gazette.]

1,023,173. SAGE-BRUSH-GRUBBING AND DITCHING MACHINE. SAMUEL M. RABER, Colony, Wyo. Filed May 22, 1911. Serial No. 628,889. (Cl. 37—5.)



In a device of the character described, the combination with a pair of pivotally mounted swinging beams, of means for raising and lowering the free ends of said beams, said beams terminating in forwardly projecting portions, an obliquely disposed blade; attaching feet, portions, of which are secured to the rear faces of said blade and other portions of which are attached to the forwardly projecting terminal portions of the beams, said attaching feet being of such shape as to maintain the blade at an acute angle to the vertical, and a board having its front face forwardly inclined from its lower edge upwardly, said board being secured to and supported by said feet and overlying said blade.

1,023,174. CORSET-SHIELD. BERTHA KING RICHARDSON, Attleboro, Mass. Filed Mar. 23, 1911. Serial No. 616,310. (Cl. 2—75.)

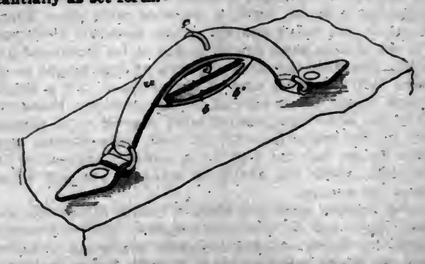


A corset shield formed of an integral piece of flexible fabric and comprising a pair of protective members separated by a vertical opening between them for a portion of their length to expose the clasps of the corset front and leaving a connecting web for the remainder of said length to form a lateral binding for the upper edge of the corset front, said members being folded upon each other along said web in central alinement with said opening whereby said shield may be applied to the edge of the corset front to inclose and cover the upper portion of said edge while leaving the remainder of the edge of the corset front exposed for the engagement of the fastenings thereof, substantially as shown and described.

1,023,175. HANDLE FOR SATCHELS, &c. ALBERT V. SAMMIS, Huntington, N. Y. Filed May 20, 1911. Serial No. 628,532. (Cl. 190—57.)

1. A hand grip for luggage handles consisting of a substantially rigid block having its upper surface adapted to fit against the under surface of the handle and its lower edge curved from its ends downwardly toward its middle, the upper portions of the opposite sides of the block being provided each with a longitudinal depression to receive the muscles of the fingers, and the lower portions of the opposite sides of the block being tapered downwardly and being also provided with longitudinal depressions to receive the muscles of the fingers, and means for detachably connecting the block to the handle.

2. A hand grip for luggage handles consisting of a separate substantially rigid block having its upper surface adapted to fit against the under surface of the handle, and a swinging link carried by the block and having an open hook portion adapted to engage over the handle, substantially as set forth.



3. A hand grip for luggage handles consisting of a substantially rigid body having the gripping portion of its lower edge curved downwardly toward its middle and the lower portions of its opposite sides tapered downwardly, these tapered faces being longitudinally depressed to receive the muscles of the finger, said block having the upper portions of its opposite sides made substantially parallel and each provided with a longitudinal depression to receive the muscles of the fingers, for the purpose set forth.

1,023,176. HUNTING GAME. CARL J. SCHUSTER, Milwaukee, Wis. Filed Jan. 3, 1912. Serial No. 669,214. (Cl. 46—62.)



1. A hunting game including a board, an adjustably mounted gun at one end of the board for firing a projectile over the board, a series of rigidly mounted stumps projecting upwardly from the board, a series of game figures hinged to the board and normally projecting upwardly therefrom, and a series of dogs also hinged to the board and projecting upwardly therefrom, the game figures and dogs being adapted to be knocked over by the projectile.

2. A hunting game including a board, an adjustably mounted gun upon the board for firing a projectile over the surface thereof, a series of stumps projecting upwardly from the board and rigid therewith, a hunter hinged to the board and projecting upwardly therefrom, and a series of game figures also hinged to the board and projecting upwardly therefrom, the hunter and game figures being adapted to be knocked down by the projectile, and the hunter being arranged behind one of the stumps while the game figures are openly exposed to the projectile.

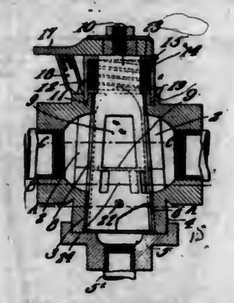
3. A hunting game including a board, a gun mounted upon the board for firing a projectile over the surface thereof, a series of rigid stump members projecting upwardly from the board, a series of small game members hinged to the board and projecting upwardly therefrom, and a series of large game members hinged to the board and projecting upwardly therefrom, both the small game

members and the large game members being adapted to be knocked over by the projectile and being openly exposed to the same.

4. A hunting game including a board, an adjustably mounted gun upon the board for firing a projectile over the surface of the board, a series of rigid stump members projecting from the board, a series of small game figures hinged to the board and projecting upwardly therefrom, a series of large game figures hinged to the board and projecting upwardly therefrom, a series of dogs hinged to the board and projecting upwardly therefrom, and a hunter hinged to the board and projecting upwardly therefrom, all of the said hinged figures being adapted to be knocked over by the projectile, and the small game figures, large game figures and the dogs being entirely exposed to the projectile, while the hunter is arranged entirely behind one of the stumps.

5. A hunting game including a board, a gun mounted upon the board for firing a projectile over the surface thereof, a series of fixed members projecting upwardly from the board, and a series of movable figures hinged to the board and normally projecting upwardly therefrom, the said board being provided with pockets corresponding in shape and size to the movable figures and adapted to receive the same when they are knocked down by the projectile, thereby leaving the board with a smooth surface after the movable figures have been knocked over.

1,023,177. VALVE. THOMAS SMITH, San Luis Potosi, Mexico, assignor of one-half to George T. Sharpton, San Luis Potosi, Mexico. Filed Apr. 10, 1911. Serial No. 620,041. (Cl. 137—7.).

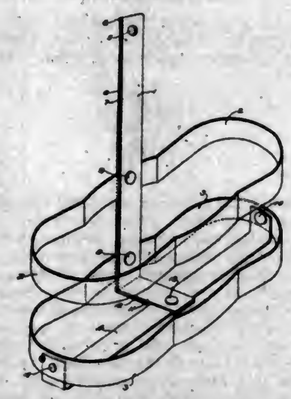


In a valve, a body having a conical bore extending therethrough and having an annular groove in its side adjacent the smaller end of the said bore and concentric with the bore, a cup-shaped member having its edge fitting snugly in the said groove, a conical head disposed within the bore having a circular stem projecting from one end thereof through the cup-shaped member, a coiled spring interposed between the cup-shaped member and the valve body, packing disposed within the cup-shaped member, said cup-shaped member being provided with an oil duct, a screw normally closing the said duct, and a handle fixed to the end of the stem, the cup-shaped member being forced against the said handle by the said spring.

1,023,178. BATTERY-HOLDER. HERBERT A. STEVENS, Malden, Mass. Filed Apr. 5, 1911. Serial No. 619,007. (Cl. 248—20.)

1. A battery holder, having, in combination, belts or bands adapted to surround and embrace the sides of a battery cell, a cross piece secured at its ends to the lowermost belt or band and adapted to support the bottom of the battery cell, and a hanger or back piece by which the battery holder is adapted to be hung from a support, said hanger or back piece comprising two separated parallel portions secured to opposite faces of the belts or bands and acting to support said belts or bands substantially as described.

2. A battery holder, having, in combination, belts or bands adapted to surround and embrace the sides of a battery cell, a cross piece secured at its ends to the lowermost belt or band and adapted to support the bottom of the battery cell, and a hanger or back piece by which the battery holder is adapted to be hung from a support, said hanger or back piece being secured to and acting to support the belts or bands and having its lower end turned forwardly to support the middle of the cross piece, substantially as described.



3. A battery holder, having, in combination, belts or bands adapted to surround and embrace the sides of a battery cell, a cross piece secured at its ends to the lowermost belt or band and adapted to support the bottom of the battery cell, and a hanger or back piece by which the battery holder is adapted to be hung, said hanger comprising a piece of metal bent over at the top to form two separated parallel depending portions between which the ends of the belts or bands are secured and the lower ends of which are bent forwardly and secured to the middle of the cross piece, substantially as described.

4. A battery holder, having, in combination, belts or bands of strap iron bent to conform to and adapted to surround and embrace the sides of a battery cell, a strap iron cross piece having upturned ends secured to the lowermost belt or band, and a hanger or back piece consisting of a single piece of strap iron doubled over at the top to form two separated parallel depending strips, the ends of the belts or bands being secured between and acting to separate the two strips of the back piece, and the lower end of the back piece being turned horizontally forward and secured to the middle of the cross piece, substantially as described.

1,023,179. PROCESS OF MAKING ANHYDROUS SULFITES AND BISULFITES. EMERSON H. STRICKLER, White Plains, N. Y., assignor to General Chemical Company, New York, N. Y., a Corporation of New York. Filed Jan. 4, 1908. Serial No. 409,278. (Cl. 23—13.)

1. The improvement in the art of manufacturing an anhydrous sulfite salt of sodium which consists in bringing together sulfur dioxid, and sodium carbonate suspended in a suitable vehicle.

2. The improvement in the art of manufacturing an anhydrous sulfite salt of sodium which consists in bringing together sulfur dioxid, and sodium carbonate suspended in a liquid vehicle, the affinity of which for said sulfur dioxid is not greater than that of sodium carbonate.

3. The improvement in the art of manufacturing an anhydrous sulfite salt of sodium which consists in bringing together sulfur dioxid, and sodium carbonate suspended in a sodium salt solution.

4. The improvement in the art of manufacturing an anhydrous sulfite salt of sodium which consists in bringing together sulfur dioxid, and sodium carbonate suspended in a solution of sodium sulfite.

5. The improvement in the art of manufacturing an anhydrous sulfite salt of sodium which consists in bringing together sulfur dioxid, and sodium carbonate suspended in a suitable liquid vehicle, removing the solid sodium salt thus formed and using the supernatant liquid as a vehicle for a fresh amount of sodium carbonate.

[Claims 6 and 7 not printed in the Gazette.]

1,023,180. IGNITION APPARATUS FOR HYDROCARBON-ENGINES. MILTON TIBBETTS, Detroit, Mich., assignor, by mesne assignments, to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Apr. 17, 1908. Serial No. 427,634. (Cl. 123—43.)



1. In an ignition system for hydrocarbon engines, the combination with the engine cylinders, of spark plugs thereon, high tension conducting wires supported above one another in an upwardly extending plane adjacent said plugs, each wire being inclined downwardly, switches for making contact with the spark plugs, and means for connecting the lowest wire adjacent each plug with the switch for that plug.

2. In an ignition system for hydrocarbon engines, the combination with the engine cylinders, of spark plugs thereon, posts on said cylinders adjacent said plugs, means on said posts for supporting high tension wires above one another and at an inclination to the horizontal, switches for making contact with the spark plugs, and means at each post for connecting the lowest wire with the corresponding switch.

3. In an ignition system for hydrocarbon engines, the combination with the engine cylinders, of spark plugs thereon having contact points, insulating posts on said cylinders adjacent said plugs, knife switches mounted on said posts in a position to make contact with the spark plugs, high tension wires carried by said posts and extending diagonally downward above one another, and means for connecting the terminal of the lowest wire at each post with the knife switch of that post.

4. In an ignition system for hydrocarbon engines, the combination with the engine cylinders, of spark plugs thereon, insulating posts on said cylinders adjacent said plugs provided with means for supporting wires one above the other, knife switches pivotally secured to said posts adjacent the lowest wire supporting means, and adapted to make contact with the corresponding spark plugs, and a wire terminal on each post for the lowest wire electrically connected to the knife switch on that post.

5. In an ignition system for hydrocarbon engines, the combination with the engine cylinders, of spark plugs thereon, insulating posts on said cylinders adjacent said plugs provided with means for supporting wires one above the other, knife switches pivotally secured to said posts adjacent the lowest wire supporting means and adapted to make contact with the corresponding spark plugs, a thimble-shaped conducting terminal for the end of the lowest wire on each post, and a conducting arm connecting said terminal with the switch on that post.

[Claims 6 to 12 not printed in the Gazette.]

1,023,181. KNOCKDOWN STAND, STOOL, OR THE LIKE. JOSEPH F. L. UHL, Toledo, Ohio, assignor to The Toledo Metal Furniture Company, Toledo, Ohio, a Corporation of Ohio. Filed July 17, 1911. Serial No. 638,881. (Cl. 248—41.)

1. In an article of the class described, a top member, legs for said member having their upper ends provided with opposing portions which coöperate to grip said member when one portion is engaged to said member and the legs are drawn inwardly to set up position, the lower of said portions having wedge-like coaction with the top member when the legs are drawn inwardly, and means for securing the legs in locked engagement with said member.



2. In an article of the class described, a top member, channeled metallic legs for said member, said legs having their upper end portions flattened to conform in cross-section to the shape of the coacting portions of said member and provided with opposing shoulders which coöperate to grip said member when one shoulder is engaged over the same and the legs are drawn inward to set-up position, and means for securing the legs in locked engagement with said member.

3. In an article of the class described, a rim having an inturned flange at its lower edge, legs having their upper ends hooked for engaging over portions of the rim and having shouldered portions adjacent said hooked portions for wedge-like engagement with the lower flanged edge of the rim when the legs are drawn inwardly from extended position with their hooked portions in engagement with the rim, and means separately attached to the legs for retaining the same in rim gripping position.

4. In an article of the class described, a rim formed of strap-metal and having its lower edge rolled inwardly to form an article supporting ledge, channeled legs having their upper end portions flattened to lie against the outer side of the rim and having portions hooked over the rim and portions extending under the rim to support the same, and means separately atached to the legs below said rim to retain the same in gripping engagement with the rim, said legs being adapted when released by said means and swung outwardly relative to the rim to release the latter.

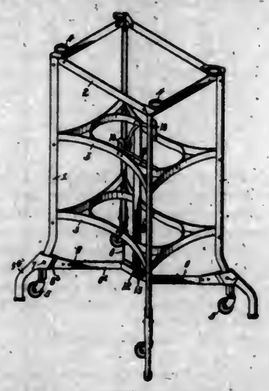
5. In an article of the class described, a top rim member, legs for such member having their upper ends adapted to separably engage portions thereof and also having subjacent portions which, when the legs are drawn inwardly from laterally extended position relative to the rim with their upper ends in engagement with the rim, coöperate with said leg ends to securely grip the rim, and means separably attached to the legs for holding the same in rim gripping position.

1,023,182. CASTER RAISING AND LOWERING MEANS FOR STANDS, &c. JOSEPH F. L. UHL, Toledo, Ohio, assignor to The Toledo Metal Furniture Company, Toledo, Ohio, a Corporation of Ohio. Filed July 17, 1911. Serial No. 638,882. (Cl. 16—166.)

1. In an article of the class described, the combination of main supporting legs, a frame connecting and rigidly bracing said legs and having an opening therein, casters for such legs, an angled lever pivoted to each leg adjacent to its lower end and being operable to raise or lower the main legs, the inner ends of said levers being bent to stand side by side in substantial parallelism, a bar rising through the opening in said frame with its lower end attached to the inner ends of said levers, and a crank shaft journaled in said frame with its crank attached to the upper end of said bar and operable to raise or lower the bar.

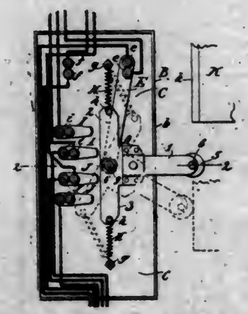
2. The combination with the legs of a stand, of leg raising and lowering levers pivoted to the legs, said levers each having its foot or outer end portion angling downward from the associated leg and of channel form with the upper end portion of its channel webs prolonged and

projecting inward to form a fork which straddles the leg and is pivoted thereto, and having a bar fixed at one end of said fork and projecting inward therefrom with its free end in adjacent position to the free ends of the other levers, and means attached to the free ends of said lever bars and operable to oscillate said levers to effect a raising or lowering of the stand legs.



3. The combination with the legs of a stand, of leg raising and lowering levers pivoted to the legs with portions extending outward and downward from the legs to form feet, said feet portions each being of channel form in cross-section with its end terminating adjacent to the leg to which it attaches and having the upper ends of its side walls extended laterally to form a fork for straddling the leg, and means connected to the inner ends of said levers and operable to oscillate them to effect a raising or lowering of the stand legs.

1,023,183. CIRCUIT-CLOSER. SIMEON P. WATSON, Brooklyn, N. Y. Filed Feb. 18, 1911. Serial No. 609,461. (Cl. 177—10.)

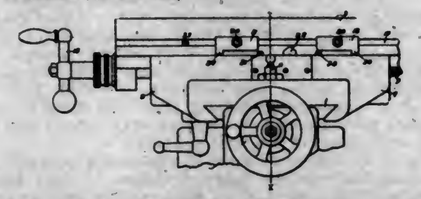


1. In a circuit closer, the combination, with a pivoted three-armed lever, mounted in a casing, one arm composed of insulating material and the other two of metal, said metal arms extended at right angles from the other arm at the pivotal point thereof and in opposite directions from each other, said metallic arms normally vertical, and the other said arm normally horizontal, and springs connected to the free ends of the metal arms and maintaining them in normal position, and a contact plate engaging said metal arms and having binding posts; of contacts adjacent to said metal arms and adapted for alternate engagement therewith, substantially as shown and described.

2. In a circuit closer, the combination, of a pivoted three-armed lever, mounted in a casing, one arm composed of insulating material and the other two of metal, said metal arms extending at right angles from the other arm at the pivotal point thereof and in opposite directions, said metal arms normally vertical, and the other said arm normally horizontal, and having a roller on its free end, and spiral springs extended on a line leading vertically through the pivotal point of the lever and connected to the free ends of the metal arms to maintain them in normal vertical position, and an electricity-conducting plate contacting with the metal arms at their point of intersection, and contacts adjacent to said metal arms and adapted for alternate engagement therewith, substantially as shown and described.

3. In a circuit closer, the combination, of a pivoted three-armed lever, mounted on an insulator in a casing, one arm of said lever composed of insulating material and the other two of metal, said metal arms extended at right angles from the other arm at the pivotal point thereof and in opposite directions, said metal arms normally vertical, and the other said arm normally horizontal, and spiral springs extended on a vertical line leading vertically through the point of intersection of the three arms, said springs respectively held at one end by pins and at the other end connected respectively to the free ends of the metal arms of the lever, and an electricity-conducting plate contacting with the metal arms, and a spindle extended through said plate and the three arms at the point of intersection thereof, and a spiral spring surrounding said spindle and bearing on the metal arms and on the lower surface of a nut threaded to the free end of said spindle for maintaining perfect contact between said arms and said conducting plate, and contacts adjacent to said metal arms and adapted for alternate engagement therewith, substantially as shown and described.

1,023,184. MILLING-MACHINE. CHARLES J. WATTS and FRANK J. EBERLE, Springfield, Ohio, assignors to The Owen Machine Tool Company, Springfield, Ohio, a Corporation of Ohio. Filed Jan. 30, 1911. Serial No. 605,562. (Cl. 90—21.)



1. In a milling machine, a movable table, power feeding mechanism for said table, hand feeding mechanism for said table, adjustable devices for throwing said power feeding mechanism out of operation, adjustable stops for limiting the hand feeding movement of said table, the arrangement and relation of said adjustable throw-out devices and said stops being such as to compel an adjustment of the same such as will cause said power feeding mechanism to be thrown out of engagement prior to the stoppage of the table by said stops.

2. In a milling machine, a movable table, a power feeding mechanism for said table, and feeding mechanism for said table, two adjustable devices for throwing said power feeding mechanism out of operation, two adjustable stops for said table, said throw-out devices and stops being arranged in pairs with one throw-out device and one stop to each pair, the throw-out device and stop of the same pair being so positioned and related with respect to each other that the setting of the stop in advance of the throw-out device is prevented, substantially as specified.

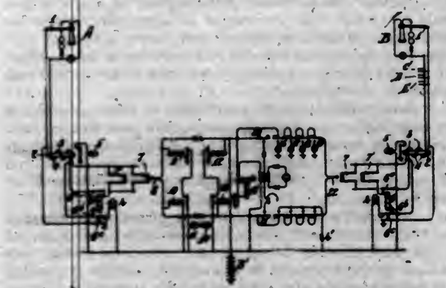
3. In a milling machine, a movable table, power feeding mechanism for said table, hand feeding mechanism for said table, throw-out devices for said power feeding mechanism and stops for said hand feeding mechanism adjustably secured to said table and arranged in pairs, one throw-out device and one stop to a pair, the throw-out device and stop of each pair being so arranged with respect to each other that they may be adjusted simultaneously and the setting of the stop in advance of the throw-out device prevented, substantially as specified.

4. In a milling machine, a movable table, power feeding mechanism for said table, hand feeding mechanism for said table, adjustable dogs on said table for throwing said power feeding mechanism out of operation, adjustable stops for limiting the movement of said table, said dogs and stops being arranged in two pairs with one dog and one stop to each pair, the dog and stop of each pair being integrally connected together with the dog in advance of the stop, for the purpose specified.

5. In a milling machine, a movable table, a power feeding mechanism for said table, adjustable tripping devices on said table for said power feeding mechanism together with devices for adjustably securing said tripping devices in position, and stops also located on said table for said tripping devices, substantially as and for the purpose specified.

[Claim 6 not printed in the Gazette.]

1,023,185. TELEPHONE-EXCHANGE SYSTEM. HARRY G. WEBSTER, Chicago, Ill., assignor, by mesne assignments, to Kellogg Switchboard & Supply Company, a Corporation of Illinois. Filed Dec. 13, 1907. Serial No. 406,351. (Cl. 179—58.)



1. A telephone exchange system comprising a telephone line extending from a substation to the exchange by two conductors only, a common source of current for said system, a signal controlling relay having differential windings, the said relay being operable by current from said source over said conductors in series, means normally rendering one of said windings inoperative, and means for rendering both of said windings operative whereby the differential effect is produced.

2. A telephone exchange system comprising a telephone line extending from a substation to the exchange by two conductors only, a common source of power, a signal controlling relay having differential windings, means controlled at the substation for causing a flow of current from said source over said conductors in series and through one of said windings to actuate said relay, apparatus for connection with said line and means operative responsive to said connection to cause a current flow from said source in the other winding to render the differentiality of said windings effective.

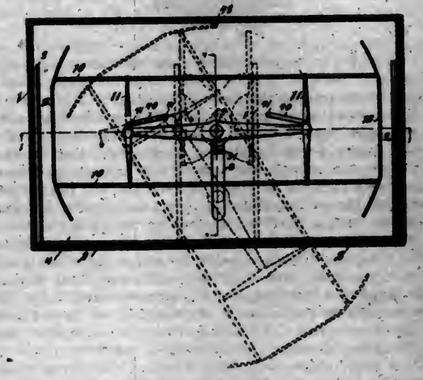
3. The combination with a telephone line, of a signal, a line relay for controlling said signal having differential windings, multiple jacks for said line, a cut-off relay for said line, means rendering one of said windings normally inoperable, and switch mechanism of said cut-off relay for rendering said winding operative.

4. A telephone exchange system comprising a telephone line extending from a substation to the exchange by two conductors only, a common source of power at the exchange, a signal controlling relay having differential windings, means rendering one of said windings normally inoperative whereby said magnet is operable by current from said source over said line conductors in series, a line-circuit at the exchange for connecting with said line, mechanism effective on connection made to render said normally inoperative winding effective and means operative responsive to said connection whereby differentiality is produced by current from said source.

5. A telephone system including a telephone line, a source of current, an electro-magnet for said line having differential windings, one in each line limb, a low resistance branch from one line limb extending from a point between the substation and a winding to said source, whereby said magnet is operable by current controlled at the substation, a relay associated with said magnet, and means for controlling said relay to open said branch.

[Claim 6 not printed in the Gazette.]

1,023,186. SHOW-CASE. LYMAN W. WELCH, Grand Rapids, Mich. Filed Feb. 10, 1912. Serial No. 676,758. (Cl. 211—16.)



1. In a show case of the class described, the combination of a suitable oblong case open at one side, a carriage, an oblong revoluble rack within the case and corresponding thereto, and a vertical pivotal support for said rack on said carriage, a base bar for said rack, a pair of guard rails disposed on said floor positioned to contact with the ends of said base bar and hold said rack out of contact with the walls of said case, and a central upright bar at the back of said case disposed to engage the ends of said rack before the base bar swings out of engagement with said guard rails, all coacting substantially as described and for the purpose specified.

2. In a show case of the class described, the combination of a suitable oblong case open at one side, a carriage, an oblong revoluble rack within the case and corresponding thereto, and a vertical pivotal support for said rack on said carriage, a base bar for said rack, and a pair of guard rails disposed on said floor positioned to contact with the ends of said base bar and hold said rack out of contact with the walls of said case, all coacting substantially as described and for the purpose specified.

3. In a show case of the class described, the combination of a suitable case open at one side, suitable doors therefor, a revoluble rack within the case corresponding thereto, a base bar for said rack, a carriage, transverse guide ways for the said carriage whereby the same may be reciprocated, a vertical pivot shaft fixed on said carriage, a sleeve carried by the base bar of the said rack, corresponding to and embracing the said vertical shaft and revoluble thereon, a circular disk with retaining notches in the periphery thereof fixed on said sleeve, and a yielding stop disposed to contact with the periphery of said disk and engage the said notches to retain the display rack yieldingly in position, all coacting substantially as described and for the purpose specified.

1,023,187. RELIEF-VALVE. CHARLES P. WHITE, Greensboro, N. C. Filed Sept. 13, 1910. Serial No. 581,899. (Cl. 121—117.)



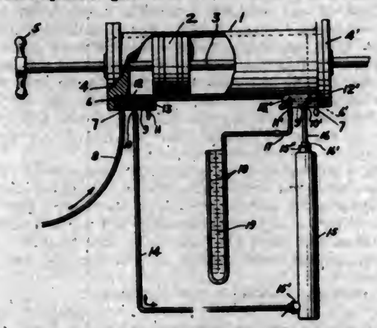
1. A relief valve, comprising a casing embodying a condensation chamber, and a fluid outlet chamber, and a partition separating the two, said partition being formed with an opening designed to establish communication between said chambers, the opening constituting a valve seat, a valve normally resting on the said seat to close the same, the valve being formed with oppositely extending guide stems, one of which is branched, for the purpose specified, the casing being further formed with a piston chamber, and a partition separating the piston chamber from the fluid outlet chamber, said last named partition being formed with an opening in which the other guide stem is mounted, said stem passing through said opening into the piston chamber, and a piston mounted in the piston chamber and arranged to engage said last named stem to unseat the valve, the casing being formed with a port in the piston chamber, for the purpose set forth.

2. A relief valve, comprising a casing embodying a condensation chamber and a fluid outlet chamber, a partition separating the two, the partition being formed with a valve seat adapted to establish communication between said chambers, a valve resting on said seat and normally closing the same, the valve being formed with a guide stem, the casing being further provided with a piston chamber and a partition separating the latter from the fluid outlet chamber, the guide stem of the valve passing through said last named partition into the piston chamber, a screw cap secured to the casing and closing said piston chamber, and a piston mounted in said chamber and adapted to engage the guide stem of the valve to unseat the latter, the piston being formed with a nipple adapted to engage the screw cap, for the purpose specified, the casing being formed in the piston chamber with a port for the inlet of fluid pressure.

3. A relief valve comprising a casing embodying a condensation chamber and a fluid outlet chamber, a partition separating the two and formed with a valve-seat, the said valve embodying also a piston chamber, a cap adjustably threaded into the lower end of the piston chamber, a valve resting normally upon the valve seat in the partition between the condensation and fluid outlet chambers, the valve having a stem projecting through the upper end of the piston chamber, a piston within the piston chamber against the upper face of which the lower end of the valve-seat rests, and a nipple upon the under side of the piston resting upon the cap.

1,023,188. MEANS FOR ANALYZING FLUE-GASES. HEARLEY HOWELL WILSON, Altoona, Pa. Filed May 12, 1911. Serial No. 626,680. (Cl. 23—3.)

1. The combination of a container for a substance adapted for absorbing a constituent of a gas, with means for drawing a predetermined quantity of gas and forcing it into said container, means for receiving gas delivered from said container and permitting it to expand to a predetermined volume, and a gage operated by the pressure of said expanded gas.



2. The combination of a cylinder, a piston therein, a passage connecting the ends of said cylinder, means in said passage for absorbing a constituent of a gas, and a passage connected with one end of said cylinder for delivering gas thereto.

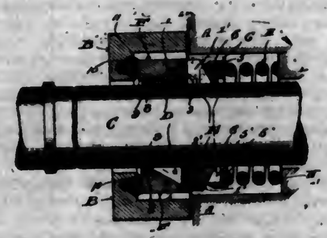
3. The combination of a cylinder, a piston therein, a passage connecting the ends of said cylinder, means in said passage for absorbing a constituent of a gas, a passage connected with one end of said cylinder for the introduction of said gas thereto, and means connected with the other end of said cylinder and operated by the pressure of the gas therein whereby the quantity of the constituent absorbed is determined.

4. The combination of a cylinder, a piston therein, a passage exhausted by said piston into one end of said cylinder, a valve for closing said passage, a pressure gage and a discharge passage connected with the other end of said cylinder, and a passage connecting the ends of said cylinder.

5. The combination of a cylinder, a piston therein, means for reciprocating said piston, means comprising a column of liquid through which gas can be forced by said piston from one end to the other end of said cylinder, a valved passage through which gas can be drawn by said piston into one end of said cylinder, and means comprising a tube containing a column of mercury connected with the other end of said cylinder and a valved passage by which gas can be discharged from the last named end of said cylinder.

[Claims 6 to 14 not printed in the Gazette.]

1,023,189. METALLIC PACKING. ERNEST WISCH, Milwaukee, Wis. Filed Sept. 18, 1911. Serial No. 649,942. (Cl. 121—109.)



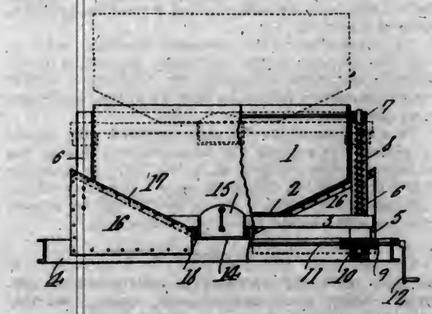
1. A metallic packing comprising an inner and an outer packing ring, each formed from sectors having oppositely inclined angular outer faces and inner flat faces in tongue and groove engagement, the ends of the sectors of the inner ring being spaced apart to form radially disposed contractile recesses in conjunction with the flat faces of the outer ring, female retaining rings having angular faces for engagement with the angular faces of the packing rings, and radial ribs extending from the angular face of one of the retaining rings for interlocked loose engagement with the spaced ends of the inner packing ring against which it impinges.

2. A metallic packing comprising an inner and an outer packing ring, each formed from sectors having oppositely inclined angular outer faces and inner flat faces in tongue and groove engagement the ends of the sectors forming the inner packing ring being spaced apart to permit contraction thereof, female retaining rings having angular faces for engagement with the angular faces of the packing rings, radially disposed ribs extending from the angular face of the inner retaining ring in loose interlocked engagement with the spaced ends of said inner packing ring against which it impinges, a coiled spring in opposition to said retaining ring, and a cap in opposition to the outer retaining ring, the cap being provided with a soft metallic seating gasket for engagement with said last named retaining ring.

3. A metallic packing comprising an inner and an outer packing ring each formed from sectors having oppositely inclined angular outer faces and inner flat faces in tongue and groove engagement the ends of the sectors being spaced apart to permit contraction thereof, female retaining rings having angular faces for engagement with the angular faces of the packing rings, one of the retaining rings being provided with a circular cup, a collar extending from one of the packing rings and engageable with the cup, and radially disposed ribs extending from the angular face of the cup-retained ring for loose interlocked engagement with the spaced ends of the sectors forming the collared packing ring.

4. A metallic packing comprising an inner and an outer packing ring each formed from sectors having oppositely inclined angular outer faces and inner flat faces in tongue and groove engagement the ends of the sectors being spaced apart to permit contraction thereof, female retaining rings having angular faces for engagement with the angular faces of the packing rings, one of the retaining rings being provided with a circular cup, a collar extending from one of the packing rings and engageable with the cup, ribs extending from the angular face of the cup-retaining ring for interlocked engagement with the spaced ends of the sectors forming the collared packing ring, a coiled spring in opposition to said retaining ring, and a cap in opposition to the other retaining ring whereby said retaining rings are held in nested engagement, the cap being provided with a soft metallic seat against which said last named retaining ring impinges.

1,023,190. SIDE-DUMP BODY. THOMAS WRIGHT, Jersey City, N. J. Filed Apr. 4, 1911. Serial No. 618,890. (Cl. 21—86.)

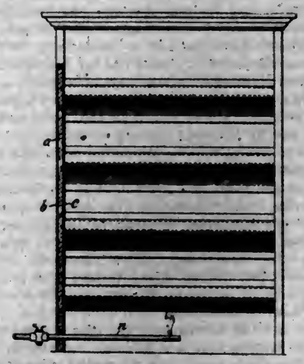


1. The combination with a vehicle frame and connected side beams adjustable relative thereto and supported thereabove, of a body having its body formed with a flat intermediate portion and converging end portions, said intermediate portion bearing on the side beams and having outlet openings at points beyond the side beams, lips supported entirely beyond the side beams and extending under said apertured portions of the bottom to receive material discharged through the outlet openings, means for controlling the discharge of material from the lips, there being a chute receiving space between the frame and the body, and a chute removably seated within said space and extending transversely of the frame, said lips constituting means for retaining the chute aginst longitudinal displacement while the body is in lowered position.

2. The combination with a vehicle frame and side beams spaced therefrom and adjustable relative thereto, of a body having its bottom formed with a flat intermediate portion and downwardly converging end portions, said intermediate portion bearing downwardly upon the side beams, supporting plates arranged in pairs at each side of the frame and secured to said frame, the plates of each pair being spaced apart and having downwardly converging upper edges constituting bearings for the inclined portions of the bottom of the body, there being a transversely extending chute receiving space between the frame and the side beams and below the body and between the inner or small ends of the supporting plates, a chute removably mounted within said space and extending transversely of the frame, and means on the body for holding the chute against longitudinal displacement when the body is in lowered position.

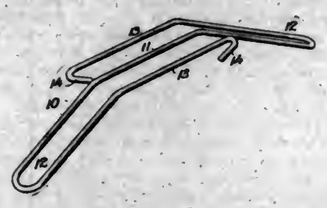
3. The combination with a vehicle frame and side beams spaced therefrom and adjustable relative thereto, of a body having its bottom formed with a flat intermediate portion and downwardly converging end portions, there being outlet openings within said intermediate portion and beyond the side beams, lips connected to said intermediate portion and supported entirely beyond the side beams, said lips extending under the outlet openings, means for controlling the discharge of material from the lips, and means for raising and lowering the body with the side beams, there being a transversely extending chute receiving space between said beams and the frame, between the lips and below the intermediate portion of the body, said lips constituting means for holding the chute against longitudinal displacement within said space.

1,023,191. DISH-WARMER. HENRY YOUNG, New York, N. Y. Filed Nov. 3, 1911. Serial No. 658,367. (Cl. 126—246.)



A dish warmer having double walled sides, top and back, a non-conducting material between the walls, the inner wall of the back being removed from the said material to provide a vertical chamber between them, shelves having double walls spaced to provide shelf chambers, said shelf chambers being in communication with the vertical chamber, said shelves, back and side walls affording compartments having open fronts, and a heater at the base of the warmer for supplying heat to the shelf chambers through the vertical chamber.

1,023,192. HANGER FOR FALSE WORK. ALBERT ARNN, Little Ferry, N. J. Filed Sept. 20, 1910. Serial No. 582,876. (Cl. 25—131.5.)



In a hanger for concrete molds, the combination with a wire frame comprising three horizontal members, of depending loops each connecting the middle member with one of the side members, and hooks at the end of each side member adapted to engage the beam to prevent the dislocation of the hanger.

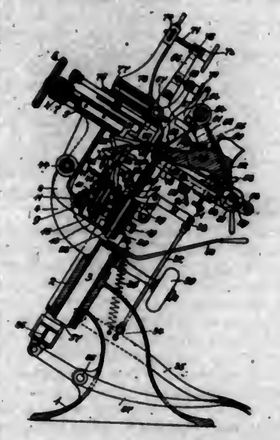
1,023,193. AIR-HEATING ATTACHMENT FOR STOVES. PSALM G. BERTHOLF, Goshen, N. Y. Filed Feb. 27, 1911. Serial No. 611,162. (Cl. 126—71.)



1. An air heating attachment for stoves comprising an air inlet and heating pipe adapted to be located in the fire box of a stove and opening through one side thereof, a circular head arranged on the upper end of said pipe, a transverse partition arranged in said head and having formed therein a series of radial hot air passages whereby said partition forms a stationary damper plate, a conical hood having a revoluble engagement with the upper end of said head, a base plate arranged in the lower end of said hood and having formed therein a series of passages adapted to be brought into alinement with the passages in said stationary damper plate whereby the discharge of hot air from the head into said hood is controlled, a hot air discharging tube connected with said hood and projecting through the upper portion of the stove, a cover plate arranged on said discharge tube and adapted to close the opening in the upper end of the stove, and means whereby said tube and hood are turned and the damper plate on the hood adjusted to regulate the hot air discharge passages in said head.

2. An air heating attachment for stoves comprising an air inlet and heating pipe whose outer end admits cold air and whose inner end is adapted to extend upward through the fire pot, a flat circular hollow head communicating with said inner end and having a surrounding flange and a fixed damper plate provided with openings, a conical hood having a base plate provided with openings adapted to be brought into alinement with those in said damper plate, the base plate resting revolubly thereon within said flange, and a discharge tube adapted to lead from the apex of the conical hood upward through the top of the stove and having notches in its upper end for the purpose set forth.

1,023,194. PULLING-OVER AND TOE-LASTING MACHINE FOR USE IN THE MANUFACTURE OF BOOTS AND SHOES. PAUL BOHAČEK, Frankfort-on-the-Main, Germany, assignor to Moenus Machine Works, Frankfort-on-the-Main, Germany. Filed July 11, 1911. Serial No. 637,972. (Cl. 12—4.)



1. In pulling over and toe lasting machines having a group of toe pincers suitably mounted, links 14, toggle links connecting link 14 to the upper jaws of each of said pincers, sliding blocks, other toggle links connecting said blocks to said link 14, a plate 27 engaged by said blocks, a pin 28, carrying said plate, a hollow projection in which said pin turns, a collar on said projection, a link 30 on said collar, a lever 31 supported by said lever 30, one arm of said lever 31 engaging the under side of said plate 27, a treadle and a rod and links connecting the other arm of said lever with said treadle.

2. In a pulling over and toe lasting machine, toe pincers, an adjustable link 14 supporting said toe pincers, a center pin upon which said link is mounted, a bolt pivoted to said link, a sleeve on said bolt, a collar slidably mounted upon said sleeve, said collar supporting one of said pincer-jaws and a spring mounted upon said sleeve and adapted to act upon said collar.

3. In a machine of the character described, a group of pincers, means to operate said pincers comprising a substantially horizontal pivotal support 5, a screw spindle 44, a spherical shaped piece 45, a supporting body 4 on which said piece 45 is mounted and through which said spindle passes, a spherical nut 46 which is also pierced by said spindle, arms carrying said nut, and a wheel to turn said spindle as described.

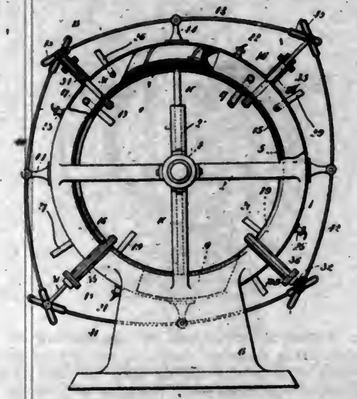
4. In a machine of the character described, rails on which the toe end of the last rests, articulated levers connecting said rails, a cross-bar 55 eccentrically formed on which said levers rest and a lever 91 to turn said cross-bar, as described.

5. In a machine of the character described, rails adjustably mounted to support the last, pincers engaging the shoe upper, means actuated by a foot lever to raise the last into the upper, an adjustable upper last presser mounted adjacent the shoe toe, a pivotal post 3, supporting said mechanism and a handle 88 to operate said post.

1,023,195. ROTARY INTERNAL-COMBUSTION ENGINE. JULES F. BOURLON, Everett, Mass. Filed Jan. 19, 1911. Serial No. 603,463. (Cl. 123—14.)

1. A rotary internal combustion engine comprising an annular cylinder, a plurality of pistons operating therein, radially movable abutments, and means whereby when an abutment in advance of a piston is moved outwardly the abutment to the rear of the piston is moved inwardly.

2. A rotary internal combustion engine comprising an annular cylinder, a plurality of pistons operating therein, a plurality of levers pivotally mounted on said cylinder, and a plurality of radially movable abutments each pivotally connected to the adjacent ends of contiguous levers.



3. A rotary internal combustion engine comprising an annular cylinder provided with a continuous slot in its inner periphery, a piston in said cylinder having a flange overlying said slot, a plurality of abutments adapted to coact with said flange to form an explosion chamber, and connections whereby when an abutment in advance of the piston is moved outwardly the abutment to the rear of the piston is moved inwardly.

4. A rotary internal combustion engine comprising an annular cylinder provided with a continuous slot on its inner periphery, a piston in said cylinder having a flange for overlying said slot, a plurality of radially movable abutments each adapted to coact with said flange, and means cooperating with said abutments whereby when the abutment in advance of the piston is moved radially outward, the abutment at the rear of the piston is simultaneously moved radially inward.

5. A rotary internal combustion engine comprising an annular cylinder provided with radially disposed arms, bearings secured to said arms, a plurality of pistons in said cylinder having radially disposed arms connected to a center boss, a shaft journaled in said bearings and carrying said boss, a plurality of radially movable abutments, and means operatively connecting said abutments whereby when the abutment in advance of a piston is moved radially outward, the abutment at the rear of the piston is simultaneously moved radially inward.

[Claims 6 to 11 not printed in the Gazette.]

1,023,196. NECKTIE. JOHN HENRY CARROLL, Montreal, Quebec, Canada. Filed Aug. 21, 1911. Serial No. 645,201. (Cl. 2—11.)

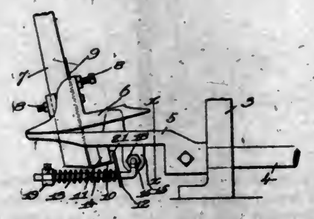


1. The combination with a necktie including two distinct portions, a member attached to one of the said portions, a second member attached to the other of the said portions, and means for securing such members together to form the complete necktie,—of a flexible portion connected to the securing means and through the medium of which portion the latter is displaced from its securing position.

2. The combination with a necktie comprising two distinct plain length portions, of engaging members carried by the ends of said portions, a locking pin, and a flexible portion distinct from both portions of the necktie, secured to and extending from the locking pin for displacing the latter.

3. A necktie comprising two distinct portions, a member carried by one of the said portions and presenting an aperture, a second member carried by the other portion, a bar presented by the second member and adapted to be placed beneath the said aperture, a locking pin adapted to be threaded between the apertured member and the said bar and a string secured to the locking pin, inserted between the plies of one portion of the necktie and extending therebetween to the free end of such portion.

1,023,197. PICKER-CHECK. HENRY COTÉ, West Warren, Mass., assignor to Ware Machine & Loom Company, Ware, Mass., a Corporation of Massachusetts. Filed Nov. 21, 1910. Serial No. 593,375. (Cl. 139—22.)



1. In a picker check, the combination with a rocker foot, of a rocker thereon, a picker stick secured to the rocker, a seat portion extending laterally from the picker stick beneath the rocker foot, a cushion member sustained on said seat and adapted to engage the under side of the rocker foot to check the movement of the picker stick, an extension from said seat, and a spring acting on said extension.

2. In a picker check, the combination with a rocker foot, of a rocker thereon, a picker stick secured to the rocker, a seat portion extending laterally from the picker stick beneath the rocker foot, a cushion member sustained on said seat and adapted to engage the under side of the rocker foot to check the movement of the picker stick, said seat having a downward extension, a rod carried by the rocker foot and extending through said extension, and a spring on the rod acting against the extension.

3. In a picker check, the combination with a rocker foot having a picker stick-receiving aperture, of a rocker thereon, a picker stick secured to the rocker and extending through said aperture in the rocker foot and below the latter, a plate secured to the picker stick and extending through the aperture in the rocker foot and below the lower end of the picker stick, the extending end of said plate being slotted, a rod rigidly secured to the inner end of the rocker foot and extending horizontally through the slot of said extension, a spring on the rod acting on the extension, and an adjustable collar on the outer free end of the rod against which the spring acts and by means of which its tension may be varied.

4. In a picker check, the combination with a rocker foot having a picker-stick-receiving aperture, of a rocker thereon, a picker stick secured to the rocker and extending through said aperture in the rocker foot and below the latter, a plate secured to the picker stick and extending through said aperture in the rocker foot and below the lower end of the picker stick, the extending end of said plate being slotted, a rod rigidly secured to the inner end of the rocker foot and extending horizontally through the slot of said extension, a spring on the rod acting on the extension, an adjustable collar on the outer free end of the rod against which the spring acts and by means of which its tension may be varied, and another spring confined between said extension and rocker foot.

1,028,198. CHAIN WRENCH. FRANK H. DICKSON, Oswego, N. Y. Filed Feb. 19, 1912. Serial No. 678,444. (Cl. 81—70.)



1. In a chain pipe wrench, the combination of a handle, two blocks each recessed to receive one end of the handle and each provided with two hooks, two jaws each recessed on its inner face to form seats for the blocks, two bolts, one passing through both jaws and blocks and the handle and the other through both jaws and blocks in advance of the handle, and a chain mounted on said last mentioned bolt and adapted to engage the hooks on the blocks.

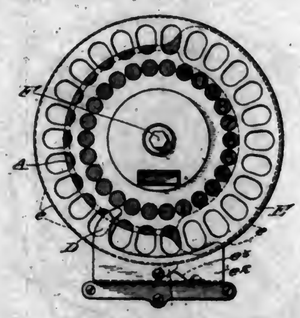
2. In a chain pipe wrench, the combination of a handle, two blocks each recessed to receive the handle between them, and each block provided with a projection shaped to form a hook, two jaws each recessed on its inner face to receive one block and the projection from the latter, two bolts one of which passes through both jaws and blocks, and the handle, and the other through both jaws and blocks, and a chain mounted on said last mentioned bolt and adapted to engage the hooks on the blocks.

3. In a chain pipe wrench, the combination of a handle, two blocks, each recessed on its inner face to receive the handle between them, and each provided with two projections each of the latter shaped to form a hook, two double reversible jaws each recessed on its inner face to receive a block, two bolts, one passing through both jaws, blocks and handle, and the other through both jaws and blocks in advance of the handle, and a chain mounted on said last mentioned bolt and provided with projecting pintles adapted to engage two oppositely disposed hooks on the blocks.

1,023,199. MANUFACTURE OF A NEW BETA-NAPHTHOL-ORTHO-OXY-AZO DYE. KARL ELBEL, Biebrich, Germany, assignor to The Firm of Kalle and Company, Aktiengesellschaft, Biebrich, Germany. Filed Sept. 18, 1911. Serial No. 649,958. (Cl. 8—1.)

As a new product the chloro-2-oxy-naphthalene-4-sulfonic acid-1-azo-beta-naphthol obtainable by combining the chloro-1-diazo-2-oxy-naphthalene-4-sulfonic acid with beta-naphthol, which dyestuff is in dry state a black powder, soluble in hot water with a bluish-red color, which on addition of alkali turns into a bright blue, and in concentrated sulfuric acid with a pure greenish-blue color, and dyeing wool in an acid bath with bluish-red tints turning by the treatment with bichromate into a dark blue, very fast against light and potting, and being decomposed on treatment with reducing agents into chloro-1-amino-2-oxynaphthalene-4-sulfonic acid on the one hand and 1-amino-2-oxy-naphthalene on the other hand.

1,023,200. ELECTRICAL-IMPULSE-TRANSMITTING DEVICE. JOHN ERICKSON, Chicago, Ill., assignor, by mesne assignments, to First Trust and Savings Bank, trustee, Chicago, Ill. Filed Aug. 23, 1906. Serial No. 331,700. (Cl. 179—90.)



1. In automatic telephony, the combination of means for transmitting electrical impulses, and means including a plurality of rotatable calling dials for operating said means, one of said dials being rotatable only in one direction.

2. In automatic telephony, the combination of means for transmitting electrical impulses, a calling dial for operating said means, and an outer supplemental dial, each dial being rotatable in a forward direction, but only the inner or calling dial being rotatable back to normal position to transmit the electrical impulses.

3. In automatic telephony, the combination of means for transmitting electrical impulses, an inner calling dial, a spring for returning said calling dial to normal position, an outer or supplemental dial, said dials rotatable together in a forward direction, and a locking device for holding the outer or supplemental dial against backward rotation.

4. In automatic telephony, the combination of a shaft, a spring for rotating the shaft back to normal position, a calling dial secured to said shaft, provided with a series of finger openings ranging from 1 to 0, an outer or supplemental dial loosely mounted upon the said shaft, provided with a circular row of finger openings, and also with a circular row of numeral openings, the finger openings of the inner or calling dial always being opposite a corresponding number of finger openings in the outer or supplemental dial when the two dials are at rest, the said numerals being always exposed to view by a corresponding number of numeral openings in the outer dial when the two dials are at rest, a finger stop for limiting the simultaneous forward rotation of the two dials, and a ratchet device for preventing back rotation of the outer or supplemental dial.

5. In automatic telephony, a subscriber's calling device comprising an apertured disk or calling dial rotatable only in one direction, and means rotatable in the opposite direction for transmitting the impulses.

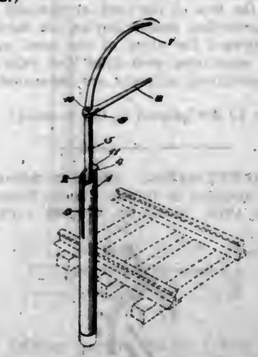
[Claims 6 to 13 not printed in the Gazette.]

1,023,201. MOLDING-MACHINE. KARL FRITZ, Wyomissing, Pa. Filed July 20, 1910. Serial No. 572,909. (Cl. 22—48.)

In a molding machine, the combination with a frame including spaced upright members and upper and lower cross pieces connecting said members, a press head, and connections between the frame and head for permitting the latter to be swung aside; of stems guided in said cross pieces, a table carried by said stems, a pattern plate upon the table and having its corners recessed, dowel pins rising from said plate, a flask fitting over said plate and having openings engaging said pins, a vertically movable bar, a guide on one cross piece inclosing said bar, an H-shaped spider carried by the bar, stems rising from the four arms of said spider through the recesses in the pattern plate and engaging said flask, and independent mechanisms for lifting said first-named stems to raise the table and for lifting said vertically movable bar to raise the flask off the pattern plate.



1,023,202. MAIL-CRANE. GEORGE L. GRAHAM, Florence, S. C. Filed Jan. 4, 1912. Serial No. 669,305. (Cl. 105—232.)

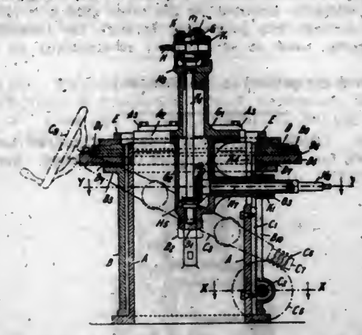


1. A mail crane, comprising a tubular member having descending upper edges thereon and provided with a vertical slot therein, said descending edges approaching the slot from opposite directions and terminating therein at the upper end of the same, an additional member slidably arranged in said tubular member and adapted to carry a mail bag, means carried on said additional member cooperating with said descending edges to raise and lower said additional member, and means to retain said additional member in its raised position.

2. In a device of the class described, the combination with a tubular member having descending upper edges thereon which terminate in a vertical slot therein, the highest point of elevation on the upper edge of said member being provided with a notch; of an additional member slidably arranged in said tubular member, means carried on said additional member adapted to be guided along said descending edge of the tubular member to raise and lower said additional member, said lug being also adapted to cooperate with the notch to retain said additional member in its raised position, and a cushioning means carried in the bottom of said tubular member.

3. In a device of the class described, the combination with a tubular member having descending upper edges thereon which terminate in a vertical slot in the side thereof, the highest point of elevation on the upper edge of said tubular member being provided with a notch; of a post slidably arranged in said tubular member and provided at its upper end with a bag carrying means, a lug carried on said post adapted to be guided along the descending edges of the tubular member into said slot and notch, and a spring cushioning means mounted in the bottom of said tubular member.

1,023,203. MACHINE-TOOL. JOHN HENDERSON HAMILTON, Manchester, England, assignor to Electromotors Limited, Openshaw, Manchester, England, and H. W. Kearns & Company Limited, Broadheath, near Manchester, England. Filed Nov. 22, 1909. Serial No. 529,467. (Cl. 77—27.)



1. In a machine tool, in combination;—a fixed frame having cross guides; a tool head carrying a rotary tool socket, a supporting pillar therefor, a carriage carrying the pillar and adapted to slide across said guides; means for rotating the said socket and for traversing its carriage; a shell adapted to slide relatively to the fixed frame in a direction normal to the guides; means for so sliding it; a turntable rotatably carried by the said shell and through which the drill head protrudes; and means for locating and holding the part to be machined concentrically on the turntable; substantially as described.

2. In a machine tool, in combination;—a fixed cylindrical frame having cross guides; a tool head carrying a rotary tool socket, a supporting pillar therefor, a carriage carrying the pillar and adapted to slide across the said guides; means for rotating the said socket and for traversing its carriage; a shell fitting the fixed frame and adapted to slide axially thereon; means for so sliding it; a turntable rotatably carried by the said shell and through which the pillar protrudes; a stepped face plate for receiving the part to be machined attached to the turntable; and means for locating the turntable in any predetermined angular position relatively to the axis of the tool socket; substantially as described.

3. In a machine tool, in combination;—a fixed cylindrical frame having cross guides; a tool head carrying a rotary tool socket, a supporting pillar therefor, a carriage carrying the pillar and adapted to slide across the said guides; means for rotating the said socket and for traversing its carriage; a shell fitting the fixed frame and adapted to slide axially thereon; a rack on the fixed frame, and a pinion and worm gear for rotating it, on the shell; a turntable rotatably carried by the said shell, a stepped face plate attached to the turntable and means for locating the turntable in any desired angular position relatively to the axis of the tool socket; said pillar protruding through the turntable and face plate; substantially as described.

4. In a machine tool in combination with the fixed frame having horizontal cross guides, the shell surrounding the fixed frame and adapted to slide axially on the same, means for so sliding it, and the turntable on the shell;—a carriage adapted to slide on the cross guides, a

pillar supported on the carriage, a tool head on the pillar, a tool socket rotatably carried by the head, a drive shaft journaled in the carriage gearing connecting the shaft to the socket; and means for rotating said shaft and feeding the carriage along the cross guides said pillar protruding through the turntable; substantially as described.

5. In a machine tool, in combination;—a fixed cylindrical frame having cross guides at the top thereof; a cylindrical shell surrounding said frame and capable of axial movement only relatively thereto; means for giving the said axial movement; a top plate attached to the shell; a turntable concentrically and rotatably mounted on the top plate and having a peripheral groove therein, keep plates engaging in said groove for holding the turntable in position; and means for rotating the turntable to any predetermined angular position on the top plate, a carriage slidingly mounted on the cross guides, a pillar on said carriage and protruding through the turntable, and a cutter head on said pillar; substantially as described.

[Claim 6 not printed in the Gazette.]

1,023,204. COMBINATION-CABINET. CAROLINE LUCY HUNTER, Los Angeles, Cal. Filed Oct. 15, 1909. Serial No. 522,877. (Cl. 45—5.)



1. A cabinet of the class described comprising, a series of compartments arranged in each end thereof, a series of drawers arranged between said end compartments, removable L-shaped members forming closures for said end compartments, one of said L-shaped members having an opening in the horizontal portion thereof, said opening being adapted to receive a projection from the horizontal portion of the opposite closure, a lever extending across said projection for locking said L-shaped members against displacement, and means carried by said horizontal portions for engaging said lever.

2. A cabinet of the class described having side and end compartments, said end compartments being provided with removable shelves, vertically disposed resilient strips mounted on each side of the end compartments, said strips being adapted to engage the outer edges of the shelves for locking the same in position.

1,023,205. WATER-CURRENT PROPULSION FOR VESSELS. FRANTZ JENSEN, Copenhagen, Denmark. Filed Mar. 28, 1910. Serial No. 551,872. (Cl. 115—14.)



1. In the propulsion of boats, the combination with means for producing a current of water under pressure, of an inlet tube therefor extending from the boat and having the axis of its intake portion directed downwardly and toward the bow of the boat and below the water line thereof, and an exhaust tube for said means having the axis of its discharge portion directed upwardly toward the bottom of the boat and in the direction of the stern thereof.

2. In the propulsion of boats, the combination with means for producing a current of water under pressure, of a plurality of inlet tubes therefor extending from the boat and having the axes of their intake portions directed downwardly and toward the bow of the boat and below the water line thereof, and a plurality of exhaust tubes for said means having the axes of their discharge portions directed upwardly toward the bottom of the boat and in the direction of the stern thereof.

3. In the propulsion of boats, the combination with means for producing a current of water under pressure, of an inlet tube therefor extending from the boat and having the axis of its intake portion directed downwardly toward the bow of the boat, an exhaust tube for said means having the axis of its discharge portion directed upwardly toward the bottom of the boat and in the direction of the stern thereof, and a keel-like structure separating said inlet and exhaust tubes whereby the concurring currents are separated one from another.

4. In the propulsion of boats, the combination with means for producing a current of water under pressure, of a plurality of inlet tubes therefor extending from the boat and having the axes of their intake portions directed downwardly and toward the bow of the boat, a plurality of exhaust tubes for said means having the axes of their discharge portions directed upwardly toward the bottom of the boat and in the direction of the stern thereof, and a plurality of keel-like structures separating said inlet and exhaust tubes whereby the concurring currents are separated one from another.

5. In the propulsion of boats, the combination with means for producing a current of water under pressure, of an inlet means therefor having its intake portion directed toward the bow of the boat, an exhaust means for said current producing means having its discharge portion directed toward the stern of the boat, and a keel-like structure separating said inlet and exhaust means whereby the concurring currents are saparated one from another.

[Claims 6 to 10 not printed in the Gazette.]

1,023,206. SAFETY-RAZOR. CHARLES JEREMIAS, Fremont, Ohio, assignor to Henrie Clauss, Fremont, Ohio. Filed July 8, 1910. Serial No. 570,969. (Cl. 30—12.)



1. In a safety razor, the combination of a blade supporting plate, a handle rigid with the blade supporting plate, a removable blade retaining plate adapted to be applied to the supporting plate, a blade adapted to be fitted between the blade retaining plate and blade supporting plate, and a locking lever carried by the blade retaining plate for engagement with the blade supporting plate to clamp the blade between the two said plates.

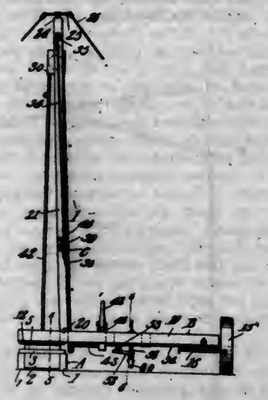
2. In a safety razor, the combination of a blade supporting plate, a handle rigid therewith, a removable blade retaining plate adapted to be applied to the blade supporting plate and provided at opposite ends thereof with ears, a blade adapted to be received between the two said plates, and a locking lever pivoted between the ears and adapted to engage the blade supporting plate to clamp the blade in position.

3. In a safety razor, the combination of a blade supporting plate, a stem projecting therefrom, a blade retaining plate adapted to be applied to the blade supporting plate and provided at opposite ends thereof with ears, and a locking lever pivoted upon the ears and constructed to engage the blade supporting plate to hold the blade retaining plate in position and grip the blade, the before mentioned stem constituting a stop for the locking lever to limit the movement thereof in one direction.

4. In a safety razor, the combination of a blade supporting plate, a blade retaining plate provided at opposite ends thereof with ears and at one side thereof with a flange, a blade adapted to be inserted between the two said plates so as to be properly positioned by the ears and flange, and a locking lever pivoted upon the ears and adapted to engage the blade supporting plate to hold the blade retaining plate in position and grip the blade.

5. In a safety razor, the combination of a blade supporting plate, a removable blade retaining plate adapted to be applied to the blade supporting plate, a blade adapted to be clamped between the two plates, and a locking lever carried by the blade retaining plate and removable therewith, the said locking lever being adapted to engage the back of the blade supporting plate to hold the blade retaining plate in position and cause the two plates to grip the blade.

1,023,207. WELL-DRILLING MACHINE. GREEN B. KELLEY, Las Cruces, N. Mex. Filed Feb. 28, 1910. Serial No. 546,438. (Cl. 166—3.)



1. A well drilling machine having a drill bar drum, a draft wheel, an operating device rotatable with the draft wheel, a latch mounted on the operating device for connecting the rotatable device with the drill bar drum, and a rotatable anti-friction device movable into and out of the path of said latch for releasing the same on each rotation of the draft wheel.

2. A well drilling machine having a draft wheel, a drum for the drill bar cable, a crank on the draft wheel, a crank on said drum, a latch for connecting said cranks with each other, and an adjustable wheel for releasing said latch.

3. A well drilling machine having a draft wheel, a drum for the drill bar cable, a crank on said draft wheel, a crank on said drum, a latch for connecting said cranks with each other, a wheel for periodically releasing said latch, and means for adjusting said wheel toward and from the latch.

4. A well drilling machine having a draft wheel, a drum for the drill bar cable, a latch for connecting said draft wheel and said drum, and an adjustable wheel for periodically releasing said latch.

5. A well drilling machine having a draft wheel, a drum for the drill bar cable, means for coupling said draft wheel up with said drum, and an adjustable wheel for periodically disconnecting said drum and draft wheel.

[Claims 6 to 8 not printed in the Gazette.]

1,023,208. PROCESS FOR THE PRODUCTION OF PYROPHOROUS SUBSTANCES FOR IGNITION AND ILLUMINATION. AUGUST LEBMÜLLER, Munich, Germany, assignor to Ludwig Weiss, Barmen-Rittershausen, Germany. Filed Dec. 30, 1908. Serial No. 470,124. (Cl. 75—1.)

1. The hereindescribed method of increasing the pyrophoric properties of a metallic alloy containing a metal of the cerium group of the so-called "rare earths," by combining the same with silicon.

2. The hereindescribed method of increasing the pyrophoric properties of a metallic alloy containing a metal of the cerium group of the so-called "rare earths" which consists in separating said metal of the cerium group by electrolysis and alloying the same with silicon.

3. The composition of matter consisting of a pyrophoric alloy combined with silicon, said alloy containing a metal of the cerium group of the "rare earth" metals.

1,023,209. MEANS FOR REGULATING RATE OF FLOW THROUGH A PASSAGE. CECIL LIGHTFOOT, Buffalo, N. Y. Filed Jan. 9, 1911. Serial No. 601,668. (Cl. 48—53.4.)



1. The combination with a pressure chamber to contain liquid and gas under pressure, and means for controlling the accumulation of gas in said chamber over the liquid therein, of a float having a chamber open at the bottom of the float and permanently closed at the top of the float, and means connecting the float with said gas controlling means, whereby the changes in pressure of gas on the surface of the liquid will vary the buoyancy of the float by displacement of the contents thereof and automatically operate said controlling means.

2. In regulating means of the character described, the combination with a pressure chamber, and controlling means, of a float having an opening in its lower portion and having its top permanently closed, said float adapted to be immersed in liquid subjected to pressure in the pressure chamber, whereby gaseous fluid is permanently confined within the float above the liquid therein, and means connecting the float with the controlling means, whereby said controlling will be substantially operated by the buoyancy of the float due to change of pressure in the pressure chamber and on the liquid in which the float is immersed.

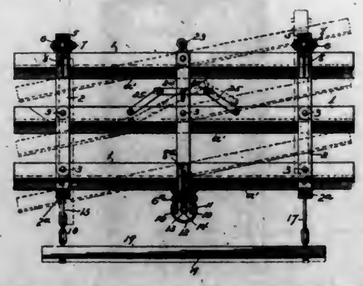
3. In regulating means of the character described, the combination with a pressure chamber adapted to contain liquid, a superimposed chamber, and a valve in the bottom of said superimposed chamber, of a separate chamber adapted to contain liquid and communicating with the pressure chamber, a float wholly immersed in the liquid in said separate chamber, said float having a permanently open bottom and a permanently closed top and adapted to entrap expansive fluid, said float connected with said

valve, whereby said valve will be operated by reason of varying pressure in the pressure chamber and on the liquid in which the float is immersed.

4. In regulating means of the character described, the combination with a pressure chamber adapted to contain liquid, a superimposed chamber, and a valve in the bottom of the superimposed chamber, of a separate chamber adapted to contain liquid and communicating with the pressure chamber so that the liquid in said separate chamber will be subjected to pressure from the pressure chamber, a float in said separate chamber and having a permanently open lower portion and a permanently closed top, and connections between said float and the valve in the bottom of the superimposed chamber.

5. In regulating means of the character described, the combination with a pressure chamber adapted to contain liquid, a superimposed receptacle communicating with the pressure chamber, and a valve for the superimposed receptacle, of a lower chamber below the pressure chamber and adapted to contain liquid, a tube communicating with the top of said lower chamber and open within the upper portion of the pressure chamber, a float having an open bottom disposed in the lower chamber so as to be immersed in the liquid therein, and a rod attached to said float and passing through said tube, said rod being attached to the valve of the superimposed receptacle.

1,023,210. SURFACE SCRAPER OR GRADER. LEMON M. LINDER, Matthews, Ind. Filed June 5, 1911. Serial No. 631,364. (Cl. 37—5.)



1. In a surface scraper or grader, the combination of a series of parallel scraper bars, cross bars, loose friction plates interposed between the scraper bars and cross bars each plate having a projection engaging the side of its respective bar for preventing the plate from turning, and a series of bolts each passing through a scraper bar and a cross bar and through two loose friction plates for locking said parts together.

2. In a surface scraper or grader the combination of a series of parallel scraper bars, a scraper blade removably secured to each bar, parallel cross bars, loose friction plates interposed between the scraper bars and cross bars, each loose plate having a projection adapted to engage the side of its bar for preventing the plate from turning, and bolts, each passing through a scraper bar and cross bar and through two loose friction plates for locking said parts together.

3. In a surface scraper or grader, the combination with a frame formed of a series of scraper bars and cross bars connecting the scraper bars, of carrying wheels for the rear portion of the frame, means for moving said wheels into and out of carrying position, a pilot wheel frame located under the scraper or grader frame at the front and forming a support or bearing on which the said latter frame rests when the scrapers are in their lowermost position, a pin or post fixed to said pilot wheel and passing upwardly through bearings on the scraper or grader frame, and a lever pivoted to said scraper or grader frame and having sliding bearing on the top of the pilot wheel frame, whereby the scraper or grader frame may be elevated or lowered.

4. In a surface scraper and grader, the combination with a main frame, of carrying wheels for the rear portion of said frame, means for moving said wheel into and out of carrying position, a pilot wheel frame located under the scraper or grader frame at the front and forming a support on which the said latter frame rests when the scrapers are in their lowermost positions, a pin or post fixed to said pilot wheel frame and passing upwardly through bearings on the scraper or grader frame, and a lever pivoted to said latter frame and having a cam at its lower end, the said cam bearing and sliding on the upper face of the pilot wheel frame, whereby the scraper frame may be elevated and lowered by actuating the cam and means for holding said latter lever against movement.

5. In a road scraper and grader, the combination with a series of parallel scraper bars, a series of parallel cross bars, and means for pivotally connecting said scraper and cross bars, of a brace bar pivotally connected to one cross bar, and other brace bars, each pivotally connected at its front end to one scraper bar on opposite sides of said cross bar, and pivotally connected at their rear ends to the brace bar pivoted to the cross bar, whereby when the scraper bars are set obliquely two of said brace bars will aline and form a straight brace.

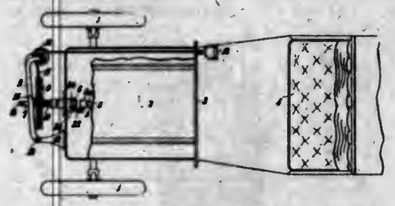
1,023,211. FOLDING UMBRELLA. FRANK AUGUST LUNDQUIST, New York, N. Y., assignor to Folding Umbrella Co., a Corporation of New York. Filed Sept. 21, 1909. Serial No. 518,857. (Cl. 135—25.)



A folding umbrella having ribs formed of two sections pivotally connected together by a hinge joint, a longitudinally split sleeve slidably mounted on the outer section of each rib for inclosing said hinge joint, a stretcher bar pivotally connected to the inner end of said sleeve, said sleeve being cut away to form a central circumferentially arranged spring tongue, adapted to engage the hinge joint of the sections, said sleeve having oppositely disposed inwardly projecting portions at its ends for engaging the edges of the rib sections.

1,023,212. STARTING MOTOR-VEHICLE INTERNAL-COMBUSTION ENGINES. CHARLES WILLIAM MALLINS, Liverpool, England. Filed Dec. 2, 1908. Serial No. 465,746. (Cl. 123—185.)

1. In combination with the shaft of an internal combustion engine, an axially movable starting shaft, a disengageable coupling adapted to transmit rotation in one direction only from the starting shaft to the engine shaft, a spring urging the shaft axially out of engagement with the engine shaft and for urging the pulley in opposition to the cable and means operated by the cable for moving the starting shaft axially into engagement with the engine shaft.



2. In combination with the shaft of an internal combustion engine; an axially movable starting shaft, a disengageable coupling adapted to transmit rotation in one direction only from the starting shaft to the engine shaft, a spring urging the shaft axially out of engagement with the engine shaft, a pulley on the starting shaft, an operating cable coiled on the pulley, said spring urging the pulley in opposition to the cable, and means operated by the cable for moving the starting shaft axially into engagement with the engine shaft; substantially as described.

3. In combination with the shaft of an internal combustion engine; an axially movable starting shaft, a disengageable coupling adapted to transmit rotation in one direction only from the starting shaft to the engine shaft, a spring urging the shaft axially out of engagement with the engine shaft, a pulley on the starting shaft, an operating cable coiled on the pulley, said spring urging the pulley in opposition to the cable, a lever engaging axially with the starting shaft, and a fair-lead pulley on the free end of the said lever around which the operating cable is deflected; substantially as described.

4. In combination with the shaft of an internal combustion engine; an axially movable starting shaft, a disengageable coupling adapted to transmit rotation in one direction only from the starting shaft to the engine shaft, a pulley on the starting shaft, an operating cable coiled on the pulley, means urging the shaft axially out of engagement with the engine shaft and for urging the pulley in opposition to the cable, and means for automatically disengaging the said coupling from the engine shaft if the rotation of the latter is reversed; substantially as described.

5. In combination with the shaft of an internal combustion engine, a disengageable device for rotating the engine shaft in the normal direction only, a crown cam rigidly fixed to the said device, and a spring controlled pawl mounted on a fixed pivot, engaging said cam and adapted to push the said cam axially away from the engine shaft if the rotation of the latter is reversed, substantially as described.

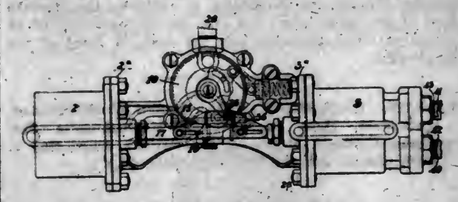
[Claims 6 to 8 not printed in the Gazette.]

1,023,213. DENTAL IMPRESSION-CUP. MIECISLAW MARCKS, Lübeck, Germany. Filed June 28, 1911. Serial No. 635,896. (Cl. 32—6.)



A dental impression cup comprising two oppositely arranged wire frames, the upper frame being provided with bars as *e* and the lower frame with transverse bars *f*, and a spring on each side of and pivotally connected to the frame.

1,023,214. MOTOR FOR PUMPS AND OTHER PURPOSES. JOHN G. MCDOWELL, Pittsburgh, Pa. Filed Jan. 7, 1909. Serial No. 471,080. (Cl. 121—9.)



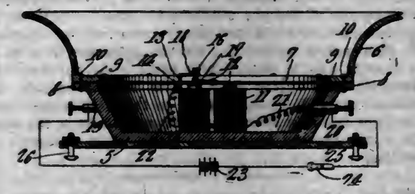
1. In a motor, a motor cylinder, a piston therein, an oscillatory valve for controlling said motor, a spindle or stem for said valve having a lost motion connection with the valve, an auxiliary motor supplied from the same source as the said motive cylinder, and having its piston connected to the said spindle or stem, and a lost motion connection between the valve stem and the main motor piston; substantially as described.

2. In a motor, a motor cylinder, a piston therein, a valve casing having ports extending therefrom to opposite ends of the cylinder, an oscillating valve controlling said ports, a valve spindle having a lost motion connection with the valve, a connection exteriorly of the valve casing between the spindle and the main piston, an auxiliary motive cylinder, a piston therein, an arm secured to the said spindle, and a connection between the last named piston and the said arm; substantially as described.

3. A motor having a cylinder and a piston therein, a valve casing having ports leading to the cylinder, an oscillating valve in said casing and controlling said ports, an oscillating valve spindle extending vertically through the top of the casing, a lost motion connection between said stem and the motor piston, an arm secured to the spindle within the casing and having a lost motion connection with the valve, and a valve throwing motor also connected to said spindle; substantially as described.

4. In a motor, a cylinder, a piston therein, and a controlling valve for the cylinder, said valve having a stem or spindle connection, means for starting said stem or spindle in motion by the stroke of the main piston, said stem or spindle having an eccentric arm attached thereto, and an auxiliary motive device connected to said arm and acting to complete the movement of the stem or spindle to throw the valve from one of its controlling positions to the other controlling position; substantially as described.

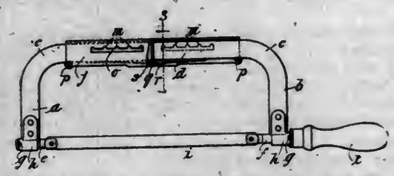
1,023,215. ELECTROMAGNETIC SOUNDING APPARATUS. CHARLES W. MCGONIGLE, Algona, Wash., assignor of one-half to George H. Miller, Port Orchard, Wash. Filed Aug. 9, 1910. Serial No. 576,337. (Cl. 177—7.)



A device of the class described comprising a flaring, sound-amplifying element, the inner surface of which is continuous and unbroken; a diaphragm located at the smaller end of the sound-amplifying element; and a means for adjusting the pulsations of the diaphragm, which

means is spaced from the sound-amplifying element and supported independently of the vibrating portion of the diaphragm, said means being located to the front of the diaphragm, within the sound-amplifying element, and being accessible for adjustment through the open end of the sound-amplifying element; the device including also an electromagnet rigidly supported to the rear of the diaphragm; an angular post secured to the magnet and protruding through the diaphragm to overhang the forward face of the diaphragm; the said means consisting of an adjusting screw threaded into the post, in front of the diaphragm.

1,023,216. HACKSAW-FRAME. JOSEPH W. MCQUILLAN, Springfield, Mass., assignor to Massachusetts Saw Works, Chicopee, Mass., an Association. Filed May 5, 1910. Serial No. 559,504. (Cl. 145—34.)

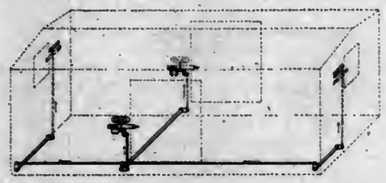


1. A hack saw frame comprising a pair of arm members for attaching the blade, a pin near the inner end of each arm, a U-shaped housing saddled upon the arm members and having two longitudinal slots in one side with recesses opening into the same to receive the pins on the arm members, the inner side of the housing being opposite the blade, a transverse pin connecting the sides of the housing at each end thereof adjacent its open side and on which the arm members may slide or be tilted, another transverse pin intermediate the ends of the housing and connecting the sides thereof, a single flat spring provided with a depression intermediate its ends which straddles said intermediate transverse pin, the ends of the spring normally diverging and adapted to engage the underside of the arm members to force the pins of the arm members outward into the recesses of the housing, said construction permitting the arm members to slide in the housing and to permit both arms to be tilted on the transverse pins at the ends of the housing against the action of the ends of said spring to throw the inner ends of both of the arm members downward through the open side of the housing toward the blade when adjusting, as described.

2. A hack saw frame comprising a pair of arm members for attaching the blade, a pin near the inner end of each arm, a housing saddled upon the arm members and having two longitudinal slots in one side with recesses opening into the same to receive the pins on the arm members, the housing having an open side opposite the blade, a transverse pin connecting the sides of the housing at each end thereof adjacent its open side and on which both of the arm members may slide or be tilted, a single flat spring secured intermediate its ends within the housing with its securing means disposed adjacent the inner ends of the arm members and with its ends projecting toward the outer ends of the housing and bearing normally against the underside of the arm members to force the pins of the arm members outward into the recesses of the housing, said construction permitting the arm members to slide in the housing and to permit both arms to be tilted on the transverse pins at the ends of the housing against the action of the ends of said spring to throw the inner ends of both of the arm members downward through the open side of the housing toward the blade, when adjusting as described.

1,023,217. REGISTERING MECHANISM FOR DOORS. JOHN R. MOODY, Salem, Oreg. Filed Aug. 7, 1911. Serial No. 642,800. (Cl. 235—91.)

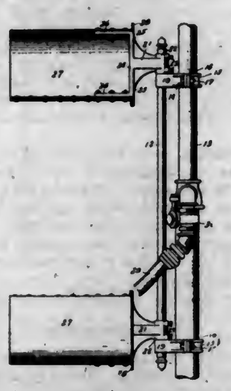
1. In combination with a plurality of doors and the like, a registering mechanism for each door, means connecting said several registering mechanisms with each other whereby the operation of any one of said registering mechanisms actuates the others.



2. In combination with a plurality of doors and their latch mechanisms, of a registering mechanism for each door with operating connections whereby the unlatching and opening of said door operates said registering mechanism, and operative connections between said several registering mechanisms, whereby the operation of any of said mechanisms operates to actuate the other registering mechanisms, for the purpose described.

3. A registering mechanism for car doors comprising a register for each door, means connecting said door and said register, and a series of connecting rods and bell cranks between said several registers whereby the operation of any of said registers operates to actuate all of the others, substantially as referred to.

1,023,218. HOSE-SUPPORT FOR FIRE-HOSE. PHILIP MUELLER and WILLIAM T. MASON, Decatur, Ill., assignors to H. Mueller Manufacturing Company, Decatur, Ill., a Corporation of Illinois. Filed Mar. 28, 1911. Serial No. 617,478. (Cl. 137—31.)



1. A hose support comprising a pair of vertically spaced jaw blocks mounted for circular and vertical adjustment upon a stand-pipe and having outstanding ears, a shaft journaled through the ears, a pair of registering bracket arms mounted for circular and longitudinal movement upon the shaft, said bracket arms being provided with cross pieces on their outer ends carrying outstanding rests, drums mounted upon the rests and extending outwardly therefrom and fastening means for the bracket arms to secure the same in the desired adjustment upon the shaft.

2. In a hose support a pair of spaced drums, a shaft, bracket arms carried by the drums adjustably engaging the shaft for longitudinal and circular adjustment thereon, and a pair of jaw blocks hinged upon the shaft and adapted for longitudinal adjustment thereon, said jaw blocks being adapted to adjustably engage a stand-pipe.

1,023,219. INDEX-TAB. VERRENICE MUNGER and CHAPEL S. CANTER, Ansonia, Conn., assignors, by direct and mesne assignments, to The H. C. Cook Company, Ansonia, Conn., a Corporation of Connecticut. Filed Jan. 11, 1910. Serial No. 537,525. (Cl. 40—11.)

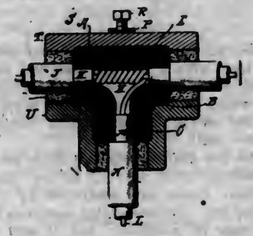


1. An index tab comprising a downwardly opening sheet metal spring clip having front and back plates, and a label holder having front and back sheet metal legs projecting upwardly on each side of the clip, and a label mounted on top of said clip and having its side edges respectively confined between said front and back legs, the said front plate and the said front legs being provided with longitudinally disposed adjacent coöperating edges arranged to pinch a leaf.

2. In an index tab a downwardly opening sheet metal spring clip having front and back plates, the latter being provided with an upwardly projecting spring tongue slit and bent inwardly from the face portion thereof, and a label holder having front and back sheet metal legs projecting upwardly on each side of the clip, the said front plate and front legs being provided with longitudinally disposed adjacent coöperating edges arranged to pinch a leaf and to coöperate with said tongue to twist said leaf within the clip.

3. An index tab comprising a downwardly opening sheet metal spring clip having front and back plates, and a label holder having front and back sheet metal legs projecting upwardly on each side of the clip, and a label mounted on top of said clip and having its sides edges respectively confined between said front and back legs, the said front plate and the said front legs being provided with longitudinally disposed adjacent coöperating edges arranged to twist a leaf.

1,023,220. JUNCTION-BOX. THOMAS E. MURRAY, New York, N. Y. Filed Sept. 11, 1911. Serial No. 648,797. (Cl. 173—268.)



1. A junction box for main and branch conductors, comprising a casing of refractory insulating material formed integrally of a tubular portion open at both ends and having a gap in its wall, and a tubular offset communicating with said tubular portion, a closing piece for said gap, an outer casing of metal inclosing said casing of insulating material and formed in separable sections, and means for securing together said sections.

2. A junction box for main and branch conductors, of the type in which the conductor has an insulating covering and an outer metal sheath, comprising a casing of refractory insulating material formed integrally of a tubular portion open at both ends and having a gap in its wall, and a tubular offset communicating with said tubular portion, a closing piece for said gap, and means for detachably securing said closing piece in said gap: the bores of said tubular portion and offset being of a diameter to fit the insulating cover of said conductors, and enlarged and shouldered at their ends to receive the metal sheath of said conductors and to provide a clearance space around the same, and packing of lead floss in said clearance spaces.

1,023,221. CLUTCH MECHANISM. FRANK R. PACKHAM, Springfield, Ohio, assignor to The American Seeding Machine Company, Springfield, Ohio, a Corporation of Ohio. Filed Aug. 19, 1911. Serial No. 644,944. (Cl. 192—6.)



1. In a clutch mechanism, a shaft, a continuously rotating ratchet wheel loose on said shaft having teeth on its outer periphery, a pawl arm connected with said shaft, a pawl on said pawl arm which stands in line with the teeth of said ratchet wheel, a circular track arranged about said pawl, said track having a recess to receive the free end of said pawl arm, and means for throwing said pawl into engagement with said ratchet wheel and to cause the pawl arm to travel around said track.

2. In a clutch mechanism, a shaft, a continuously rotating ratchet wheel loose on said shaft having teeth on its outer periphery, an arm pivotally connected with said shaft, a pawl on said arm, said pawl standing in line with the teeth of said wheel, a circular track arranged about said arm concentric with the axis of said shaft, said track having a recess to receive the outer end of said arm, and means for throwing said pawl into engagement with the teeth of said ratchet wheel and to cause the pawl arm to travel around said track.

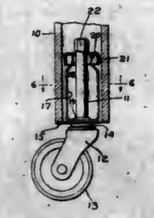
3. In a clutch mechanism, a shaft, a continuously rotating ratchet wheel on said shaft having teeth on its outer periphery, a pawl arm pivotally connected with said shaft so as to swing in a direction at right-angles to the axis thereof, a pawl on said arm, means for swinging said arm to cause said pawl to engage with the teeth of said ratchet wheel, a circular track arranged about said arm to receive the free end thereof and hold said pawl in engagement with said wheel, and a recess in said track to receive the free end of said arm to permit its disengagement from said wheel.

4. In a clutch mechanism, a shaft, a continuously rotating ratchet wheel thereon, a swinging pawl arm pivoted to said shaft, a pawl on said arm to engage the teeth of said ratchet wheel, a circular track having a recess, the free end of said arm normally lying in said recess, a pivoted switch adjacent said recess, operating devices for projecting said switch into said recess to throw said pawl into engagement with said wheel and to cause said arm to travel around said track, and means independent of said operating devices for holding said switch in said recess.

5. In a clutch mechanism, a shaft, a continuously rotating ratchet wheel on said shaft having teeth on its outer periphery, a swinging pawl arm rotatably connected with said shaft, a pawl connected with said arm, a circular track arranged about said arm, said track having a recess, a spring normally holding the free end of said arm in said recess, and devices for projecting the free end of said arm out of said recess against the tension of said spring to cause said pawl to be thrown in engagement with said wheel and said arm to travel about said track.

[Claims 6 to 8 not printed in the Gazette.]

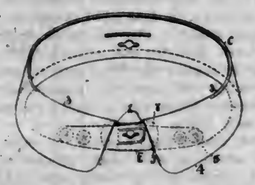
1,023,222. CASTER. HARRY A. PALMER, Meriden, Conn., assignor to Foster, Merriam and Company, Meriden, Conn., a Corporation of Connecticut. Filed Dec. 13, 1911. Serial No. 665,519. (Cl. 16—4.)



1. In a caster, the combination with a pintle, horn and washer, of spring arms loosely connected to the lower end of the pintle and extending upward, and a cap carried by the pintle for limiting the outward movement of the spring arms when the caster is detached.

2. In a caster, the combination with a pintle, horn and washer, of spring arms loosely connected to the lower end of the pintle and extending upward, the upper ends of said arms being bent inward and then upward and a cap loosely engaging the pintle and acting to limit the outward movement of the spring arms when the caster is detached.

1,023,223. COLLAR FOR NECKWEAR. ARTHUR H. PARSONS, Cleveland, Ohio, assignor to The Parsons & Parsons Company, Cleveland, Ohio, a Corporation of Ohio. Filed June 15, 1908. Serial No. 438,525. (Cl. 2—69.)



1. A lay-down collar and button hole extensions thereon tapered from their outer to their inner ends, and a plurality of rivets through the inner end of each extension and the band of the collar, said extensions having substantially the same width as the band of the collar at its transverse end edges, thereby covering said edges.

2. A collar having a band and a turn down portion, and button hole extensions permanently secured to said band by a plurality of rivets through their inner ends, said extensions gradually tapered from end to end and having their lower edges parallel and flush with the bottom edge of said band and their upper edges at an inclination thereto, whereby the transverse end edges of the bands are overlapped their entire width and the upper portion of the band within and behind the turn down portion is open and free to flex and bend.

3. A collar having separate buttonhole attachments rigidly secured to the ends thereof and embossed through both attachment and collar at the points of fastening to provide interlocking engagement between the parts.

4. A collar having a separate button-hole attachment at each end cemented in place upon the collar and embossed through the double thicknesses thereof to provide locking engagement between the parts.

5. A collar having button-hole members riveted thereto and having annular beads about said rivets raised out of the stock of the collar, thereby protecting the neck of the wearer.

[Claims 6 to 11 not printed in the Gazette.]

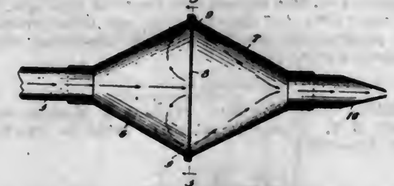
1,023,224. DOOR-SWITCH. JOHANN G. PETERSON, Hartford, Conn., assignor to The Arrow Electric Company, Hartford, Conn., a Corporation of Connecticut. Filed May 16, 1910. Serial No. 561,663. (Cl. 175—287.)



1. In a door switch, the combination of a rocker plate, a spring for moving said plate in one direction, a push button, and a spring that is stiffer than the first mentioned spring connecting the button and the plate.

2. In a door switch, the combination with the switch mechanism and the spring for throwing said mechanism, of a push button, and a spring that is stiffer than the first mentioned spring, arranged between the push button and the switch mechanism.

1,023,225. MUFFLER FOR AUTOMOBILES. MARIS SHLOSBERG, Chicago, Ill., assignor of one-half to McKenzie Cleland, Chicago, Ill. Filed June 22, 1911. Serial No. 634,713. (Cl. 121—116.)



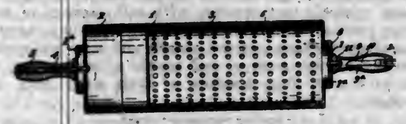
1. The muffler for automobiles and other self propelling vehicles, provided with a hollow cone the small end of which is joined to the exhaust pipe of the vehicle, and the large end of which is closed by a flat plate having its openings for the escape of the exhaust located near the periphery of the plate.

2. The muffler for automobiles and other self propelling vehicles, consisting of a pair of hollow cones secured together at their bases and separated by a divisional plate having the only communicating openings between the cones located near its periphery, one of said cones being joined at its small end to the exhaust pipe of the engine, and the other cone being connected at its small end to the escape nozzle.

1,023,226. CULINARY OR KITCHEN UTENSIL. ARTHUR B. SPANGLER, Avery Island, La. Filed June 5, 1911. Serial No. 631,471. (Cl. 107—50.)

1. In a culinary utensil, a hollow pin body, a perforated flour container slidably mounted therein and provided with a flour receiving opening at one end, a detachable head cover normally closing said opening, a hollow pin handle rotatably secured to said head cover, and a dough knife having a forked spring handle resting in said hollow handle and projecting therefrom.

2. A culinary utensil, comprising an open ended pin body, a cutter cup removably mounted in one end and provided with a bearing pin, a handle rotatably mounted on said pin, a perforated flour container slidably mounted within said pin body closed at its inner end and having a



flanged flour receiving opening at the outer end, a bearing head threaded over said flanged flour receiving opening, and a handle rotatably mounted on said bearing head.

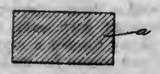
1,023,227. PROCESS OF MAKING PIPE-BENDS. JAMES HALL TAYLOR, Oak Park, Ill. Filed Oct. 3, 1910. Serial No. 585,008. (Cl. 153—69.5.)



1. The process of making bends in wrought metal pipe, which consists in expanding a portion of said pipe into a transverse bead tapered at both ends, and then straightening the metal thus stretched back into the substantial contour of the pipe.

2. The process of making bends in wrought metal pipe, which consists in expanding a portion of the pipe bound by lines converging at both ends at a common point, and then straightening the metal thus stretched back into the substantial contour of the pipe.

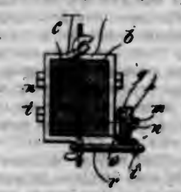
1,023,228. PROCESS OF MAKING NOZZLES. JAMES HALL TAYLOR, Oak Park, Ill. Filed Mar. 27, 1911. Serial No. 617,279. (Cl. 29—148.)



1. The process of forming nozzles which consists in first forming a cylindrical body with a flange, then stretching the body away from the flange and at the same time forming a concentric pocket on the top side, then smashing down the body to form a second flange, and then punching out that part of the remaining body in line with the pocket to form a complete tube.

2. The process of forming nozzles which consists in first forming a cylindrical body with a flange, then stretching the body away from the flange and at the same time forming a concentric pocket on the top side, then smashing down the body to form a second flange, and removing that part of the remaining body in line with the pocket to form a complete tube.

1,023,229. WIRE-FENCE-STRETCHING CLAMP. JOB WALLACE TAYLOR, Montreal, Quebec, Canada. Filed Oct. 16, 1909. Serial No. 522,991. (Cl. 30—53.)



1. A fence stretching clamp comprising a pair of plank-like members, a series of oscillatory devices of U-form carried by one of the members and each having one leg in crank form; a bar operatively connected to the other leg of each of the said devices, and means carried by the other clamp member and including a series of links adapted to be engaged by the said cranks, and means for reciprocating the bar.

2. A fence stretching clamp comprising a pair of plank-like members, a series of oscillatory devices of U-form carried by one of the members and each having one leg in crank form; a bar operatively connected to the other leg of each of the said devices, and means carried by the other clamp member and including a series of links adapted to be engaged by the said cranks, and means for reciprocating the bar consisting of a lever fulcrumed to the first mentioned clamp member and pivotally connected to the bar.

3. A fence stretching clamp comprising a pair of plank-like members, a plurality of hooks mounted upon one of the members, a bar of U-form embracing the other clamping member and presenting at opposite ends an eye and a hook, the eye being adapted to be engaged by the first mentioned hook, a series of links engaging the last mentioned hooks, a series of cranks mounted upon the first mentioned clamping member and adapted to engage the said links and coact therewith in exerting clamping force upon the said clamping members; and means for operating the said cranks simultaneously.

1,023,230. CAR-ROOF. JACOB H. WEISBROD, St. Louis, Mo. Filed Feb. 9, 1911. Serial No. 607,682. (Cl. 108—5.)



1. In a car roof the combination with inverted channel shaped carlines each provided on its upper portion with an oppositely disposed pair of inclined faces which carlines are continuous from one side of the car to the other of roof sheets arranged between said carlines, the transverse edges of which roof sheets are bent upwardly to correspond with and rest upon the inclined faces on the carlines, inverted V-shaped capping strips, that are continuous from one side of the car to the other, which strips are provided with re-folded edges which bear against the inclined edges of the roof sheets positioned on the carlines, saddle pieces positioned beneath the capping strip with their ends fitting in the grooves formed by the re-folded edges of said strip means for fastening the saddle pieces to the carlines and end caps inclosing the ends of the capping strips and which end caps are fixed to the top plate of the car body.

2. In a car roof the combination with inverted channel shaped carlines each provided on its upper portion with an oppositely disposed pair of inclined faces of roof sheets having their transverse edges bent upwardly at angles to correspond with the inclined faces on the carlines, an inverted V-shaped capping strip applied to each carline over the up-turned edges of the roof sheets, the edges of which capping strip are bent inwardly and upwardly to form resilient legs spaced apart from the body of said capping strip means positioned beneath the capping strip and extending downward through the top of the carline for yieldingly maintaining the resilient legs of the roof sheets on the carline and end caps inclosing the ends of the capping strips and which end caps are fixed to the side plates of the car body.

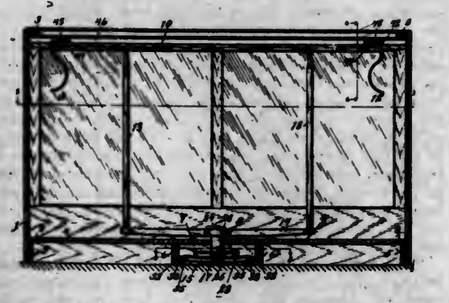
3. In a car roof the combination with carlines and roof sheets having their edges resting on said carlines, of capping strips each comprising an inverted V-shaped member extending continuously from one side of the car to the other, the edges of which inverted V-shaped member are folded inwardly and upwardly to form resilient legs spaced

apart from the body portion of the capping strip and which resilient legs engage the corresponding edges of the roof sheets, saddle pieces positioned beneath the capping strip and fitting in the grooves formed by the inwardly bent edges means passing through the capping strip and the top of the carline for fastening said saddle piece and maintaining the edges of the roof sheets on the carline and end caps inclosing the ends of the capping strips which end caps are fixed to the side plates of the car.

4. The herein described car roof comprising inverted channel shaped carlines extending from one side of the car to the other, the upper corners of which carlines are provided with oppositely disposed inclined faces laterally projecting flanges on the lower edges of said carlines for supporting the ends of the roof purlins, roof sheets arranged between the carlines, the edges of which roof sheets are bent upwardly to form inclined portions which bear directly upon the tops of the inclined faces on the inverted channel shaped carlines, capping strips extending from one side of the car to the other upon the carlines, which capping strips are of inverted V-shape in cross section, the legs of which are re-folded and bear directly upon the inclined edges of the roof sheets, means coöperating with the re-folded edges of the capping strips for holding the same in position and end caps inclosing the ends of the capping strips and which end caps are fixed to the side plates of the car body.

5. In a car roof, the combination with inverted channel shaped carlines each provided on its upper corners with oppositely disposed inclined faces which carlines extend from one side of the car body to the other, of roof sheets arranged between said carlines, the transverse edges of which roof sheets are bent upwardly to form inclined portions which rest directly upon the inclined faces at the upper corners of the carlines, and inverted V-shaped capping strips having under-turned, refolded edges which are spaced apart from the body portion of said strips to form resilient legs which yieldingly bear upon the inclined edges of the roof sheets.

1,023,231. SHOW-CASE. LYMAN W. WELCH, Grand Rapids, Mich. Filed Feb. 10, 1912. Serial No. 676,759. (Cl. 211—16.)



1. In a show case of the class described, the combination of a suitable oblong case open at one side, suitable doors for said case, a carriage, an oblong revoluble rack within the case and corresponding thereto, comprising side bars and end guards, and a vertical pivotal support for said rack on said carriage, arms projecting from the opposite ends of said guards at each corner of said rack with downwardly projecting stop members at their outer ends adapted to serve as handles, and an L-shaped angle bar disposed in the upper rear corner of the case beneath the top to coöperate with said stop members to protect the finished or glazed parts of said case from contact with said rack, as specified.

2. In a show case of the class described, the combination of a suitable oblong case open at one side, a carriage, an oblong revoluble rack on said carriage within the case and corresponding thereto, comprising side bars and end guards, and arms projecting from the opposite ends of said guards at each corner of said rack with downwardly projecting stop members at their outer ends adapted to serve as handles, as specified.

3. In a show case of the class described, the combination of a suitable oblong case open at one side, a carriage, an oblong revoluble rack movable with said carriage to and from a position within the case and corresponding thereto, comprising side bars and end guards, and arms projecting from the opposite ends of said guards at each corner of said rack with stop members at their outer ends, as specified.

1,023,232. FLUE-DAMPER. JOHN WHITE, Boise, Idaho. Filed Jan. 30, 1911. Serial No. 605,536. (Cl. 126—288.)



1. As an article of manufacture a block of fire resisting material having top, bottom, side and end faces and a central flue passage, a damper hingedly mounted in said passage along one edge and adjacent to one side wall, said block having a ledge on which said damper rests to close said passage, said damper swinging to its closed position under the influence of gravity, said block having a passage in one side wall, a flexible device passing through said passage and connected with said damper whereby said damper may be swung toward a vertical position to open said flue passage and means for limiting the movement of said damper to prevent its reaching a vertical position.

2. As an article of manufacture a block of fire resisting material having top, bottom, side and end faces and a central flue passage, a damper hingedly mounted in said passage along one edge and adjacent to one side wall, said block having a ledge on which said damper rests to close said passage, said damper swinging to its closed position under the influence of gravity, said block having a passage in one side wall, a flexible device passing through said passage and connected with said damper whereby said damper may be swung toward a vertical position to open said flue passage and means for limiting the movement of said damper to prevent its reaching a vertical position, and a second block having a chamber section fitted over said first mentioned block to form a continuation of the central passage thereof said second block being of less width than said first block.

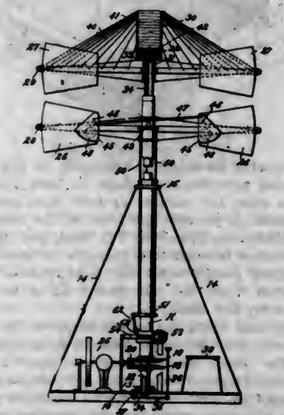
3. A fireplace flue structure including a wall inclosing a flue passage, a fire resisting block set into said wall to extend across said flue passage, said block having a flue passage through the same and including a ledge projecting into said passage, said block having side bearing grooves extending from the upper surface of said block down into said flue passage of the same and terminating opposite said ledge, a damper having trunnions held in said grooves and adapted to gravitate onto said ledge to close the passage of said block and a manually operated device connected with said damper and extending through an opening in the front wall of said block and an opening in the front wall of said fireplace, by means of which said damper may be swung on its pivot to open said block flue passage more or less.

4. In a fire-place, a flue damper, comprising a block of fire resisting material having side and end walls supported at the ends in the flue walls, said block having a flue passage, a damper plate pivotally mounted in the said passage and gravity dropped to close the said passage, and a flexible chain device attached to the damper plate and operable from the outside of the fire-place for swinging the damper plate to the vertical position said block having an opening through which said chain device projects.

5. In a fire-place, the combination with the main flue; of a building block of fire resisting material having a flue passage horisontally mounted in the fire-place in advance of but in communication with the main flue, a damper plate pivotally mounted in the block passage to close the same, a chain secured to said damper plate, said block having a passage extended through its front face, a tube mounted in the fire-place wall and alining with said passage through which said chain projects, and a hook on the outside of the said fire-place wall on which said chain may be engaged to hold said damper plate open.

[Claims 6 to 10 not printed in the Gazette.]

1,023,233. FLYING-MACHINE. JOHN NEWTON WILLIAMS, Derby, Conn. Filed Jan. 30, 1907. Serial No. 354,877. (Cl. 244—19.)



1. In a flying machine employing a plurality of propellers rotating in opposite directions; means for differentiating the superficial area of a propeller rotating in one direction from that of a propeller rotating in the opposite direction and thereby inducing rotation of the machine in a plane normal to the propeller axis.

2. In a flying machine having a plurality of propellers rotating in opposite directions about a common axis; means for differentiating the superficial areas of said propellers whereby one encounters greater resistance to rotation than the other and thereby induces rotation of the machine in a plane normal to the axis of the propellers.

3. In a flying machine having a plurality of propellers rotating in opposite directions about a common axis, means differentiating the superficial areas of said propellers while maintaining constant relationship of their pitch, whereby one is made to encounter greater resistance to rotation than the other and thereby induces rotation of the machine.

4. In a flying machine having a suitable support and propellers rotating in a horizontal plane; means for changing the area of one of the propellers, and means whereby said area-changing means may be operated from the support.

5. A flying machine of the helicopter type, having a plurality of propellers rotating in opposite directions about a common axis; said machine being adapted to have its center of gravity shifted to incline the axis of revolution of said propellers, to induce progression at an angle to the lifting direction and having means for differentiating the superficial area of one propeller relative to the other whereby said propellers encounter unequal resistance to rotation and thereby induce rotation of the machine and changed compass direction.

[Claims 6 to 18 not printed in the Gazette.]

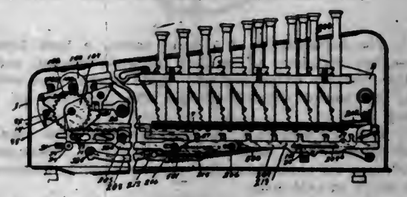
1,023,234. VIOLIN CHIN-REST. RICHARD SUGDEN WILLIAMS, Toronto, Ontario, Canada. Filed Sept. 11, 1911. Serial No. 648,657. (Cl. 84—74.)



1. A chin rest for violins comprising a base and a chin rest proper formed of solid, yet soft and flexible, rubber secured to the base and designed to have an elastic grip on the chin of the user, and means for securing the base to the violin, as and for the purpose specified.

2. A chin rest for violins comprising a base having a depressed portion and edge rim, of the rest proper formed of solid, yet soft flexible, rubber secured to the base and against the rim and designed to have an elastic grip on the chin of the user, as and for the purpose specified.

1,023,235. CALCULATING-MACHINE. GLENN J. BARRETT, Grand Rapids, Mich., assignor to Barrett Adding Machine Company, Grand Rapids, Mich. Filed June 24, 1911. Serial No. 635,061. (Cl. 235—60.)



1. In a calculating machine, the combination of reciprocating digit setting members carrying racks, keystems to limit the movement of said reciprocating members in one direction, sectors meshing with said racks, gear segments carried by said sectors, dial gears mounted axially with said sectors and in proximity to said segments, swinging locking pinions adapted to mesh simultaneously with both said segments and said dial gears and lock the same against relative movement, means for moving said locking pinions in and out of mesh with said gears and segments, and locating racks always in mesh with said locking pinions and connected to said reciprocating digit members, substantially as described.

2. In a calculating machine, the combination of reciprocating members having teeth, dial gears corresponding to said reciprocating members, locking pinions adapted to mesh simultaneously with said reciprocating members and said dial gears, means for throwing said locking pinions into and out of mesh with said reciprocating member and said dial gears, and means for alining the teeth of said locking pinions with the teeth of said reciprocating members, substantially as described.

3. In a calculating machine, the combination of reciprocating members having teeth, accumulating dials, dial actuating members having teeth, locking pinions adapted to mesh simultaneously with said reciprocating and said dial actuating members, means for throwing said locking pinions into and out of mesh with said recipro-

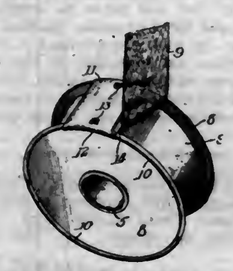
cating and said dial actuating members, and means for alining the teeth of said locking pinions with the teeth of said reciprocating members, substantially as described.

4. In a calculating machine, the combination of reciprocating members, dial actuating members and means for locking and unlocking said reciprocating members and said dial actuating members, consisting of locking pinions mounted on swinging arms and adapted to swing independently of the movement of said reciprocating members.

5. In a calculating machine, the combination of reciprocating members, dial actuating members, means for locking and unlocking said reciprocating members and said dial actuating members consisting of locking pinions mounted on swinging arms and adapted to swing independently of the movement of said reciprocating members, and a locating rack meshing with said pinion and pivotally connected to said reciprocating members.

[Claims 6 and 7 not printed in the Gazette.]

1,023,236. ADHESIVE-PLASTER SPOOL. PERRY S. BAUER, Chicago, Ill., assignor to Bauer & Black, Chicago, Ill., a Corporation of Illinois. Filed Feb. 2, 1911. Serial No. 606,231. (Cl. 206—59.)



1. The combination of a spool having a bead formed upon the periphery of each of the ends thereof, and a cutter slidably embracing said beads whereby the cutter may be moved entirely around the periphery of the spool.

2. The combination of a spool provided with parallel ends spaced apart, each of said ends having a peripheral bead upon its outer face, and a cutter slidably embracing the beads on said ends.

3. The combination of a spool having parallelly arranged ends provided with circumferential beads, and a cutter disposed longitudinally of the spool and having each end bent to embrace said beads whereby the cutter is slidably attached to the ends of said spool.

4. The combination of a spool having a bead formed upon the periphery of each of the ends thereof, and a cutter comprising a blade shaped to engage the periphery of the ends and having its extremities bent to slidably embrace the said bead.

5. The combination of a spool having a circular end provided with a bead formed upon its peripbery, and a cutter shaped to engage the said end, said cutter having an inwardly depending ear adapted to engage with the said end, and said cutter having its extremity beyond the said end bent to embrace the said bead.

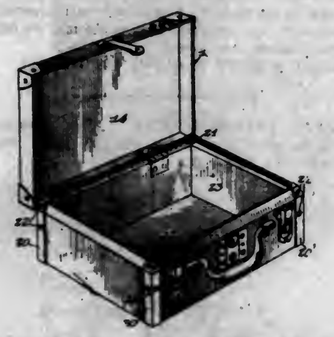
1,023,237. FASTENING DEVICE. JOSEPH RAYNE, Jr., New York, N. Y. Filed Apr. 4, 1911. Serial No. 618,887. (Cl. 40—24.)

A fastening device of the class described, comprising a wire bent centrally to form a doubled penetrating shank of predetermined length, the parts of which lie close together and from which said members then diverge to a predetermined point from which point side portions extend parallel, said parallel side portions being folded and the ends thereof extended toward the shank and bent back upon themselves to form two parallel hooks opening toward the shank, the ends of the wire being finally ar-



ranged close to the parallel side portions and inside the same.

1,023,238. SUIT-CASE. BENJAMIN F. BECKER, Glencoe, Ill. Filed Nov. 6, 1911. Serial No. 658,728. (Cl. 190—53.)



1. A composite blank for a suit case, or the like, comprising a body provided with flaps to form the ends and sides of the case, the corners of said flaps being formed on the diagonal to provide the bevel of the case, an outer covering, reinforcing pieces for the flaps, and metal frame members secured between the margins of said flaps and the reinforcing pieces which are arranged so that they may be united when the case is set up to form a rigid metal frame for the same.

2. A composite blank for a suit case, or the like, comprising a body provided with flaps to form the ends and sides of the case, the corners of said flaps being formed on the diagonal to provide the bevel of the case, an outer covering, and metal frame members secured to the margins of said flaps so that they may be united when the case is set up to form a rigid metal frame for the same.

3. A composite blank for a suit case, or the like, comprising a body provided with flaps to form the ends and sides of the case, the corners of said flaps being cut off on the diagonal to form the bevel of the case, reinforcing pieces for the flaps, sheet metal frame members secured between the margins of said flaps and the reinforcing pieces with their outer margins bent over so as to overlap the edges of said reinforcing pieces, and an outer cover which extends around the edges of said flaps, frame members and reinforcing pieces, substantially as described.

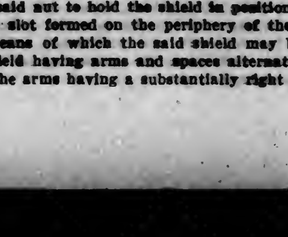
1,023,239. BALL-JOINTED CLEANING DEVICE FOR GAS-RECEIVERS. HUGO BOSENIUS, Bochum, Germany. Filed Feb. 6, 1911. Serial No. 606,747. (Cl. 48—88.)



1. In a device of the character described, a gas receiver having a plurality of circular cleaning ports, bearings secured to the receiver and having conical seats which are axially alined with said ports, said bearings being constructed to receive removable plugs to close the ports, an apertured rotatable ball adapted to be consecutively accommodated in the bearings upon the withdrawal of their respective plugs, a cleaning bar slidably engaging the ball aperture, and means on the bar for engaging the ball, whereby upon a withdrawal of the bar from the receiver, the ball is automatically removed from the bearing.

2. In a device of the character described, a gas receiver having a plurality of circular cleaning ports, bearings secured to the receiver and having conical seats which are axially alined with said ports, said bearings being constructed to receive removable plugs to close the ports, a socketed plug adapted to be consecutively fitted to the bearings upon the withdrawal of their respective solid plugs, an apertured ball rotatable in the plug-socket, a cleaning bar slidably engaging the ball aperture, and means on the bar for engaging the ball, whereby upon a withdrawal the socketed plug together with the ball is automatically removed from its seat.

1,023,240. POULTRY DRINKING-FOUNTAIN. WILLIAM BOWER, Mansfield, Ohio. Filed May 4, 1911. Serial No. 625,052. (Cl. 119—77.)



1. A poultry drinking fountain, comprising a transparent water receptacle provided with a removable cover, said cover having a flange portion provided in the bottom thereof, forming an outlet for the water in the receptacle; a floating valve for closing the outlet; a pan having a sleeve mounted within, and concentric with the rim thereof, said sleeve being adapted to support the water receptacle; fastening means for removably securing the receptacle to the sleeve, said fastening means comprising a nut secured to the sleeve and a set screw threadably engaging the same, and a removable shield, having arms and spaces alternated on its perimeter, engaging the sleeve and overlying the pan, to partially cover the same, substantially as, and for the purpose set forth.

2. In a poultry drinking fountain, the combination with a pan, having a sleeve mounted therein, said sleeve being concentric with the rim thereof, and a water receptacle supported by the said sleeve, of a removable cover for the water receptacle, said cover having its outer periphery closely fitted to the inner periphery of the said sleeve, and being provided with a downwardly depending flange portion forming an outlet for the water in the receptacle, and means for removably securing the said receptacle to the said sleeve, substantially as described.

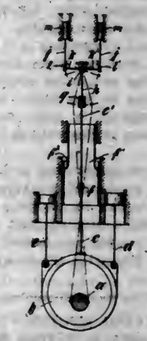
3. In a poultry drinking fountain, the combination with a pan, having a sleeve mounted therein, said sleeve being concentric with the rim thereof, and a water receptacle supported by the said sleeve, of a removable cover for the water receptacle, said cover having its outer periphery closely fitted to the inner periphery of the said sleeve, and being provided with a downwardly depending flange portion forming an outlet for the water in the receptacle, means for removably securing the receptacle to the said sleeve, said means comprising a nut secured to the sleeve and a set screw threadably engaging the same, a removable shield having a central aperture loosely engaging the said sleeve, and being adapted to normally engage the under surface of the said nut to hold the shield in position over the pan, and a slot formed on the periphery of the said aperture, by means of which the said shield may be removed, said shield having arms and spaces alternated on its perimeter, the arms having a substantially right angle bend at their outer ends adapted to loosely engage the rim of the said pan, substantially as described.

4. In a poultry drinking fountain, the combination with a pan, having a sleeve mounted therein, said sleeve being concentric with the rim thereof, and a transparent water receptacle supported by the said sleeve, of a removable cover engaging the said receptacle, and having a flange portion forming an outlet in the bottom of the said cover, and a floating valve for closing the outlet, so arranged that when the receptacle is placed in position in the sleeve, the valve will rise to the surface of the water, and the outlet will be opened, substantially as, and for the purpose set forth.

5. In a poultry drinking fountain, the combination with a pan, having a sleeve concentrically mounted therein, said sleeve having a series of openings formed therein, of a transparent water receptacle supported by the said sleeve, and having a removable cover provided therefor, said cover being provided with a flange portion on the top thereof, forming an outlet, said outlet being adapted to be closed by a floating valve, and a removable shield loosely fitted over the said sleeve, said shield having arms and spaces alternated on its perimeter to partially cover the said pan, substantially as, and for the purpose set forth.

[Claim 6 not printed in the Gazette.]

1,023,241. MEANS FOR DRIVING THE PUMPS OF INTERNAL-COMBUSTION ENGINES. HANS TH BRUNS, Nuremberg, Germany. Filed Jan. 24, 1911. Serial No. 604,494. (Cl. 123—105.)



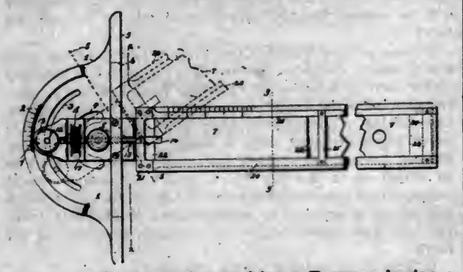
1. In an internal combustion engine, a lubricating pump, and fuel pumps therefor, a piston for each of said pumps, means comprising a single member, such as an eccentric, crank or the like, operative with a rotary part of the engine, a rod in connection therewith for actuating the piston of the lubricating pump, an extension of said rod beyond its point of engagement with said pump piston, and means, such as a double bell-crank lever, for positively coupling said rod extension with the piston rods of said fuel pumps.

2. In an internal combustion engine, a lubricating pump, and fuel pumps therefor, a piston for each of said pumps, means comprising a single member, such as an eccentric, crank or the like, operative with a rotary part of the engine, a rod in connection therewith for actuating the piston of the lubricating pump, an extension of said rod beyond its point of engagement with said pump piston, means, such as a double bell-crank lever, for positively coupling said rod extension with the piston rods of said fuel pumps, and a slot connection, positively connecting the said coupling means with the said extension.

3. In an internal combustion engine, a lubricating pump, and fuel pumps therefor, a piston for each of said pumps, means comprising a single member, such as an eccentric, crank or the like, operative with a rotary part of the engine, a rod in connection therewith for actuating the piston of the lubricating pump, an extension of said rod beyond its point of engagement with said pump piston,

means, such as a double bell-crank lever, for positively coupling said rod extension with the piston rods of said fuel pumps, a rocking shaft, supporting the said coupling means, and a slot connection operatively connecting said coupling means with the said extension.

1,023,242. DRAWING INSTRUMENT. EARL T. CHILDS, Coraopolis, Pa. Filed Oct. 10, 1911. Serial No. 653,763. (Cl. 33—14.)



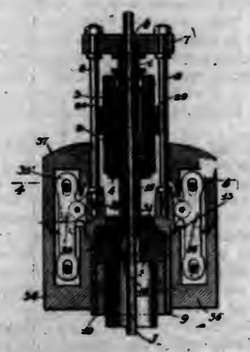
1. A combination tool comprising a T square having a blade and head, movable working edges adapted to move along the length of said blade and the means for adjusting said working edges and maintaining the same in adjusted position.

2. A combination tool comprising a T square having a blade and fixed head, working edges along the length of said blade and an adjusting screw for moving said working edges relative to the blade length.

3. A combination tool comprising a T square having a blade and fixed head, working edges along the length of said blade, an adjusting screw for moving said edges in either direction relative to the blade length, a movable head fixed to said blade by a pivot whereby said head may be turned at various angles with said blade and working edges.

4. A combination tool comprising a T square having a blade and fixed head, graduated working edges along the length of said blade, means for moving said edges along the length of said blade, a pivoted head connected to said blade, a protractor or spaced arc formed on said movable head and a pointer in line with the longitudinal center of the blade.

1,023,243. PILE-DRIVING ENGINE. AMASA B. CLARK, New York, N. Y. Filed Sept. 5, 1905, Serial No. 276,916. Renewed Nov. 18, 1909. Serial No. 528,767. (Cl. 61—39.)



1. A pile driving engine comprising a follower block adapted to rest on the end of the pile, a base resting on the follower block and having telescopic supporting engagement with the pile, and motor and hammer elements carried by the base in operative relation with the follower block.

2. A pile driving engine comprising a follower block forming the sole vertical support for the pile driving engine upon the end of the pile, a base movably resting on the follower block with a downward extension below the same forming the sole lateral support for the pile driving engine and motor and hammer elements carried by the base in operative relation to the follower block.

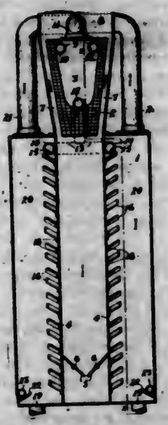
3. A pile driving engine comprising a pile-supported base extended downwardly below the top of the pile for lateral support on the sides thereof and independent of the hammer element in combination with a piston carried by the base, a reciprocating hammer cylinder inclosing the piston and means for conducting fluid pressure to the cylinder to reciprocate the same.

4. A pile driving engine comprising a base adapted for vertical support on a pile end and extended downwardly for engagement with the sides of the pile independent of the hammer element, in combination with a piston rod and piston on the base, a reciprocating hammer cylinder on the rod and piston, and valve gearing adapted to introduce fluid pressure into said cylinder alternately on opposite sides of the piston therein.

5. A pile driving engine comprising a base provided with an annular depending skirt adapted to engage the end of a tubular pile telescopically in combination with motor mechanism normally supported in the vertical direction upon the base, and a hammer element actuated by said mechanism to impart its energy to the pile independently of the base.

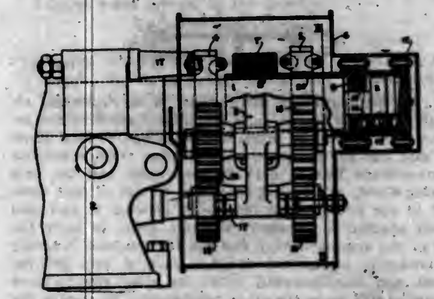
[Claims 6 to 37 not printed in the Gazette.]

1,023,244. DISTILLATION APPARATUS. JOHN T. DAVIS, Alameda, Cal., assignor to The Technical Development Company, San Francisco, Cal., a Corporation of Arizona. Filed May 8, 1911. Serial No. 625,687. (Cl. 196—8.)



The combination of walls forming a conduit for products of combustion, a longitudinal vessel or trough between the upper portions of said walls, having inner sides converging downward, the outer sides of said trough being spaced from the said walls to permit the passage of products of combustion, said trough having a closed top, means for admitting oil into the upper portion of said trough, a pipe connected with the top of said trough for drawing off the oil vapor, a pipe connected with the bottom of said trough for drawing off the residual oil, a series of troughs secured to the outer side of the lower portion of each of the first-named walls, said series of troughs being arranged to permit a liquid to flow therein from the upper to the lower portion of said wall, means for conducting the oil from the first-named trough on to the upper of each series, walls forming with said first-named walls closed vapor chambers, and means for conducting off the vapor from said chambers.

1,023,245. END-PLAY DEVICE. CHARLES A. FISCHER, Chicago, Ill., assignor to Allis-Chalmers Company, Milwaukee, Wis., a Corporation of New Jersey. Filed Oct. 14, 1911. Serial No. 654,719. (Cl. 74—7.)



1. In an end play device, a rotary shaft, a sleeve adjacent said shaft, means for rotating said sleeve at a different speed from that of said shaft, means for preventing axial displacement of said sleeve, and means between said shaft and said sleeve and coacting with said means for rotating said sleeve to move said shaft longitudinally relative to said sleeve.

2. In an end play device, a rotary shaft, a sleeve around said shaft, means for rotating said sleeve with said shaft and at a different speed, means for preventing axial displacement of said sleeve, and means between said shaft and said sleeve and coacting with said means for rotating said sleeve to reciprocate said shaft within said sleeve.

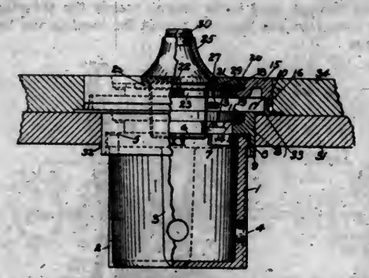
3. In an end play device, a rotary shaft member, a sleeve member around said shaft member, one of said members having a cam surface formed thereon, means for rotating said members at different relative speeds, means for preventing axial displacement of one of said members, and means between said members and coacting with said cam surface and with said means for rotating said members to reciprocate one of the members relative to the other.

4. In an end play device, a rotary shaft member, an abutment member adjacent said shaft member, one of said members having a plane surface inclined relative to the axis of said shaft member and located opposite an end surface of the other of said members, means for rotating said members at different relative speeds, means for preventing axial displacement of one of said members, means between said opposed surfaces for spacing said members, said spacing means including a spherical segment the plane surface of said spherical segment being slidable on said inclined surface, and means for axially moving one of said members so as to cause said spacing means to maintain contact with said opposed surfaces.

5. In an end play device, a rotary shaft member, an abutment member adjacent said shaft member, one of said members having a plane surface inclined relative to the axis of said shaft member and located opposite an end surface of the other of said members, means for rotating said members at different relative speeds, means for preventing axial displacement of one of said members, means for spacing said members, said spacing means comprising a spherical segment, the plane surface of said segment being slidable on said inclined surface, a member rotatable on an axis eccentric to said shaft axis and recessed for coaction with the spherical surface of said segment, and means for axially moving one of said first members so as to cause said spacing means to maintain contact with said opposed surfaces.

1,023,246. FLOOR-BOX. JOHN FOUNTAIN, Jr., Elizabeth, N. J., and BASSETT JONES, Jr., New York, N. Y.; said Jones assignor to said Fountain. Filed July 27, 1909. Serial No. 509,779. Renewed July 15, 1911. Serial No. 638,729. (Cl. 247—6.)

1. In a floor box, the combination of a box body, an open cover adjustably secured to the upper edge of said box body provided with a flange upon the under side of said cover loosely embracing the upper edge of said body, a top cover secured to said open cover and means in said top cover for supporting an electric fixture within said floor box.



2. In a floor box, the combination of a box body, an open cover adjustably secured to the upper edge of said box body provided with a circular flange upon the under side of said cover loosely embracing the upper edge of said body, a top cover secured to said open cover and means in said open cover for securing an electric fixture within said floor box.

3. In a floor box, the combination of a box body, an open cover adjustably secured to the upper edge of said box body provided with a circular flange upon the under side of said cover loosely embracing the upper edge of said body, a top cover secured to said open cover and means in the upper edge of said box body for supporting an electric fixture within said box body.

4. In a floor box, the combination of a cup-shaped box body having inwardly extending recesses in its upper edge, an open cover adjustably secured to the upper edge of said box body, said open cover having a downwardly extending flange to inclose the upper edge of said box body, and an outwardly extending flange to form a means for supporting said cover, a top cover secured to said open cover, said top cover having in its upper face a recessed aperture for receiving either an outlet nozzle or a closing disk, whereby said outlet box may be utilized for leading out electric wires or closed and abandoned for electric purposes.

5. In a floor box, the combination of a box body of cup-shape, said box body having lateral apertures through which electric circuit wires may be introduced into the interior of the box body, an adjustable open cover secured to the upper edge of said box body, said cover having means therein for affording a support to an electric fixture to be connected up with said electric circuits, a top cover secured to said open cover, said top cover designed to lie flush with the upper surface of a floor, said top-cover having a recessed aperture centrally located therein, and a conduit nozzle secured in said recessed aperture, whereby circuit wires may be led out from said floor box.

[Claims 6 to 19 not printed in the Gazette.]

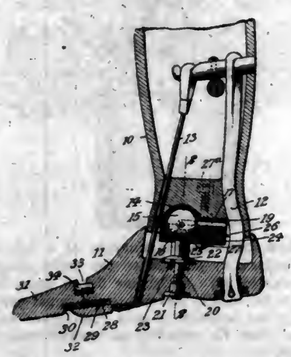
1,023,247. ARTIFICIAL LEG. CHANCY A. FREES, New York, N. Y. Filed May 8, 1911. Serial No. 625,703. (Cl. 3—3.)

1. An artificial leg provided with a leg portion, a foot, a socket arranged in proximity to the ankle joint between leg and foot, a slotted ball engaging said socket, an arm pivoted within the ball and extending outwardly through the slot thereof, and a bearing for the protruding end of said arm.

2. An artificial leg provided with a leg portion, a foot, a socket on the leg portion, a ball engaging the socket, means for non-rotatively securing the ball to the leg portion, a bolt secured to the ball, a collar fast on the bolt, and means for locking the collar to the foot.

3. An artificial leg provided with a leg portion, a foot, a socket on the leg portion, a slotted ball engaging the socket, an arm pivoted within the ball, a bearing on the leg portion for said arm, a bolt depending from the ball, a collar fast on the bolt, means for locking the collar to the foot, and a nut carried by the bolt.

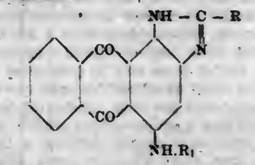
4. An artificial leg provided with a leg portion, a foot, an upper socket formed on the leg portion, a slotted ball engaging said socket, an arm pivoted within the ball, a bearing on the leg portion for said arm, a lower perforated socket beneath the ball, a bolt secured to the ball and passing through said lower socket, means for securing the lower socket to the leg, and means for locking the bolt to the foot.



5. An artificial leg provided with a grooved foot having a lower forwardly extending flange, a recessed toe, a flexible strip that is fitted within the foot-groove, and the toe-recess, and a spring within the joint between foot and toe, the lower flange of the foot extending across the toe joint and beneath the strip forwardly of said joint.

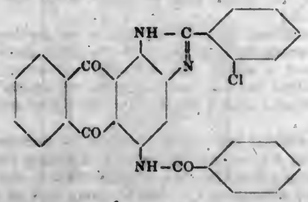
1,023,248. VAT DYE. HERMANN FRIEDMANN, Elberfeld, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Original application filed June 10, 1911, Serial No. 632,413. Divided and this application filed Nov. 10, 1911. Serial No. 659,539. (Cl. 8—1.)

1. The herein described new vat dyestuffs having most probably the formula:



(R meaning aryl and R_1 meaning acyl) which are yellow to orange powders soluble in concentrated sulfuric acid with a red color; yielding a red to brown vat, which dyes cotton from yellow to red-orange shades, on saponification furnishing the intermediate products from which they were produced by acylation, substantially as described.

2. The herein described new vat dyestuff having most probably the formula:



which may be obtained in red needles dissolving with a reddish-yellow coloration in concentrated sulfuric acid, yielding a red-brown vat with hydrosulfite and caustic soda lye which dyes cotton in a pure orange shade distinguished by its fastness to light, washing and ironing, substantially as described.

1,023,249. FRICTION-CLUTCH. NICHOLAS W. GALES, Waterloo, Iowa, assignor to William Galloway Company, Waterloo, Iowa. Filed July 27, 1910. Serial No. 574,136. (Cl. 192—8.)



1. In combination, a driven-shaft, a driving-wheel rotatably mounted thereupon, a hub loosely mounted and secured to said shaft to rotate therewith and to rock thereon, said hub having oppositely-projecting arms, removable friction-heads located between said arms and the said driving-wheel, and means connected to one of said arms and to the friction-head interposed between it and said wheel adapted to gradually separate them, to move the end of the arm outwardly and the friction-head inwardly to gradually engage the abutting face of said driving-wheel, and simultaneously cause the other arm to move inwardly and cause the other friction-head to engage the abutting face of the drive-wheel gradually.

2. In combination, a driven-shaft, a driving-wheel rotatably mounted thereon, a hub connected to said shaft suitably to both rotate therewith and rock thereon, said hub having oppositely-projecting arms, removable friction-heads located between said arms and the abutting face of said drive wheel, and an adjusting-screw movable in an interiorly threaded opening in one of said arms against the adjacent friction-head, and adapted when turned in one direction to gradually press said friction-head against said wheel, and to rock said arms to cause the other of said arms to press the other friction-head gradually against said wheel.

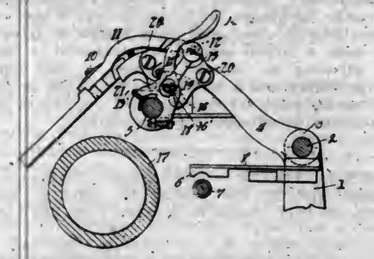
3. In combination, a driven-shaft, a cap-sleeve detachably secured upon one end thereof, a driving-wheel rotatably mounted upon said sleeve, a hub loosely mounted on said sleeve and secured thereto to both rotate therewith and rock thereon, said hub having oppositely-projecting arms, removable friction-heads located between said arms and the said driving-wheel, and means connected to one of said arms and to the friction-head interposed between it and the said wheel adapted to gradually separate them, to move the end of the arm outwardly and the friction-head inwardly to gradually engage the abutting face of said driving-wheel, and simultaneously cause the other arm to move inwardly and cause the other friction-head to engage the abutting face of the drive-wheel gradually.

4. In combination, a driven-shaft, a cap-sleeve detachably secured upon one end thereof, a driving-wheel rotatably mounted upon said sleeve, a hub loosely mounted on said sleeve and secured thereto to both rotate therewith and rock thereon, said hub having oppositely-projecting arms, removable friction-heads located between said arms and the abutting face of said driving-wheel, and an adjusting-screw movable in an interiorly-threaded opening in one of said arms against the adjacent friction-head, and adapted when turned in one direction to gradually press said friction-head against said wheel, and to rock said arms to cause the other of said arms to press the other friction-head gradually against the abutting face of said driving-wheel.

5. In combination, a driven-shaft, a cap-sleeve detachably secured on one end thereof, a driving-wheel having its hub rotatably mounted on said sleeve and having a friction web, a hub provided with an elongated bearing-opening and mounted upon said sleeve, means for securing said hub to said sleeve to both rotate therewith and rock thereon, said hub having oppositely-projecting arms, one of said arms having guide-studs extending toward said driving-wheel, a friction-head between said arm and said wheel and having sockets adapted to movably receive the studs on said arm, a friction-head between the other arm and said wheel, and having a socket on its outer face, an adjusting-screw movable through an interiorly-threaded opening in the latter arm to engage the adjacent friction-head movably in its socket, and adapted to gradually force said friction-head into engagement with the face of the web of said driving-wheel while rocking said arms to simultaneously cause the other arm to equally and gradually force its adjacent friction-head against the abutting face of the web of said driving-wheel.

[Claim 6 not printed in the Gazette.]

1,023,250. PHONOGRAPH. CHARLES L. HIBBARD, East Orange, N. J., assignor, by mesne assignments, to Thomas A. Edison, Incorporated, West Orange, N. J., a Corporation of New Jersey. Filed July 31, 1909. Serial No. 510,595. (Cl. 181—2.)



1. In a phonograph, the combination with the carrier arm and the rod upon which it is pivotally mounted, of a lift lever for said arm, a rod parallel to said first named rod, upon which said lever is pivotally mounted, and a link pivoted to said arm and lever, said link and lever constituting a toggle joint, substantially as described.

2. In a phonograph, the combination with the carrier arm and the back rod upon which it is pivotally mounted, of a front rod parallel to said back rod, a lever pivotally mounted upon and embracing said front rod, and a link pivotally connected to said arm and lever, said link and lever constituting a toggle joint, substantially as described.

3. In a phonograph, the combination with the pivotally mounted carrier arm, of a toggle for raising and lowering said arm, said toggle comprising a plurality of pivotally connected members, one pivoted to said arm and the other to a fixed part of the machine, substantially as described.

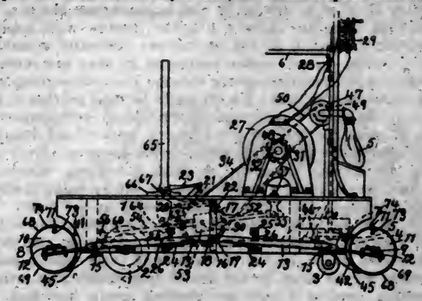
4. In a phonograph, the combination with the pivotally mounted carrier arm, of a toggle for raising and lowering said arm, and stop means for limiting the pivotal movement of said arm, said toggle comprising a plurality of pivotally connecting members, one pivoted to said arm and the other to a fixed part of the machine, substantially as described.

5. In a phonograph, the combination with the carrier arm and the back rod upon which it is pivotally mounted, of a front rod parallel to said back rod, a lever pivotally mounted upon and embracing said front rod, at the lower end of said lever, and a link pivotally connected to said arm and lever above said front rod, said link and lever constituting a toggle joint, said toggle straightening out to lift said arm and opening to lower it, and the pivotal connection of said link to said lever being so placed as to pass across the axis of said front rod in the movement of said toggle from one extreme position to the other, substantially as described.

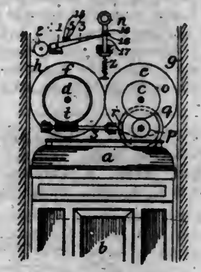
1,023,251. FLOOR-SURFACING MACHINE. EVAN E. HUGHES, Meriden, Conn. Filed June 1, 1908. Serial No. 435,939. (Cl. 51—13.)

1. The combination in a floor surfacing machine, of a car, a variable speed friction drive, a grinding-cylinder mounted on said car, means carried by said car to operate said cylinder, means to operate said friction-drive, and a worm and worm-wheel to transmit motion from the friction-drive to the car.

2. The combination in a floor surfacing machine, of a car, upward spring pressed arms pivoted intermediate their ends thereto, grinding-cylinders mounted on said arms, arm-actuating members slidingly mounted in said car and pivotally attached to said arms, levers to reciprocate said members, a fan, a variable-speed friction-drive, means to operate said fan, means to rotate said cylinders, means to operate said friction-drive from the cylinder operating means, and a worm and worm-wheel to transmit motion from said friction-drive to the car.



1,023,252. SAFETY-BRAKE FOR ELEVATORS, HOISTS, AND LIFTS. FERDINAND HUTH, Schiffbek, near Hamburg, Germany. Filed May 31, 1911. Serial No. 630,338. (Cl. 187—78.)



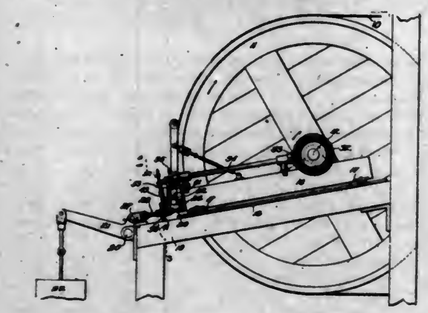
1. In an automatic elevator brake, the combintion with the car, intermeshing toothed wheels on top of the car and stationary racks in the elevator well with which said toothed wheels mesh, of rotary shafts *c*, *d* upon which said intermeshing toothed wheels *e*, *f* are secured, a toothed wheel gearing *o*, *p*, *q*, *r* adapted to be driven from one of said rotary shafts *c*, a worm gearing *s*, *t*, *u* driven from the said toothed wheel gearing, the worm wheel *u* of said worm gearing being loosely mounted upon the other of said rotary shafts *d*, clutch mechanisms *i* and *k* respectively on each of said rotary shafts *c*, *d*, a lever *m* governing said clutch mechanisms so that while one is coupled the other is uncoupled, a suspending element *n* on the top of the car vertically movable to a limited extent, and means controlled by said suspending element for actuating the clutch mechanisms, so that the worm wheel is fixed to its shaft and brakes the car by being gradually blocked in the worm should the hoisting rope or cable break or the speed of travel of the car become excessive, substantially as set forth.

2. In an automatic elevator brake, the combination with the car, intermeshing toothed wheels on top of the car and stationary racks in the elevator well with which said toothed wheels mesh, of rotary shafts *c*, *d* upon which said intermeshing toothed wheels *e*, *f* are secured, a toothed wheel *o* loosely mounted upon one of said rotary shafts *c*, a worm wheel *u* loosely mounted upon the other of said rotary shafts *d*, clutch mechanisms *i*, *k* for coupling either the said toothed wheel *o* or the said worm wheel *u* with its respective shaft, a lever *m* governing said clutch mechanisms so that one is active while the other is inactive, a toothed wheel gearing *p*, *q*, *r* meshing

with the said toothed wheel o which is under the influence of the clutch mechanism *i*, a worm gearing *s*, *t* driven from the said toothed wheel gearing imparting rotation to the worm wheel *u* at the same speed at which its rotary shaft *d* is driven by the intermeshing gears *e*, *f* traveling along the racks *g*, *h* in the elevator well, a suspending element *n* on top of the car vertically movable to a certain extent, means controlled by said suspending element for normally coupling through the intermediary of the clutch mechanism *i* the aforesaid toothed gearing *o*, *p*, *q*, *r* to its shaft *c* and means controlled by said suspending element for reversing the clutch mechanisms should the hoisting rope or cable break or the speed of travel of the car become excessive, so that the worm wheel *u* is fixed to its shaft *d* and brakes the car by being gradually blocked in the worm *t*, substantially as set forth.

3. In an automatic elevator brake, the combination with the car, intermeshing toothed wheels on top of the car, stationary racks in the elevator well with which said toothed wheels mesh, rotary shafts upon which said intermeshing toothed wheels are secured, gears including a worm for coupling together the said rotary shafts apart from the coupling effected by the intermeshing toothed wheels secured upon said shafts and alternately acting clutch mechanisms on the said rotary shafts, of a centrifugal governor 6, a vertically movable shaft 7 positioned by said governor, an inclined support 9 carried by said shaft 7, a slotted tube 8 entered by the said shaft so that the inclined support 9 is encircled thereby, a ball 10 placed on said support 9, an adjacent tube 11, a two-armed lever 12 entering said tube 11 through a slot therein, a dish carried by said two-armed lever 12 inside the tube 11 and means controlled by said two-armed lever 12 under the gravitating force of the ball 10 hitting the dish thereof for reversing the clutch mechanisms so that the worm wheel is blocked in the worm and the car gradually stopped thereby, substantially as set forth.

1,023,253. BELT-GUIDING MECHANISM. SIMEON C. KEITH, Jr., Somerville, Mass., assignor to H. J. Keith Company, Boston, Mass., a Corporation of Massachusetts. Filed Sept. 8, 1908. Serial No. 452,106. (Cl. 193—23.)



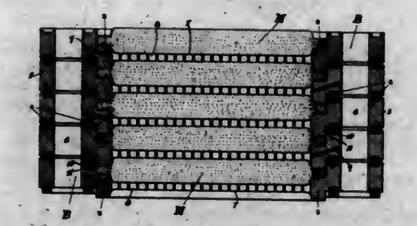
1. In an egg drying machine, a frame, a carrier belt, a drum therefor, independent carriages on said frame in which the drum shaft is journaled, a rock shaft, means for exerting rotative tension on said shaft, arms on said rock shaft, connections between said carriages and said arms, and automatic mechanism controlled by said belt for adjusting one of said carriages relatively to its connected arm to vary angularly the position of said drum.

2. In an egg drying machine, a frame, a carrier belt, a drum therefor, independent carriages on said frame in which the drum shaft is journaled, weighted means connected to said carriages for keeping the belt taut, and automatic mechanism controlled by said belt for adjusting one of said carriages relatively to the other to vary angularly the position of said drum.

3. In an egg drying machine, a frame, independent carriages movably supported thereon, a drum having its shaft journaled on said carriages, an endless carrier belt in part supported by said drum, a tensioned rock shaft, having arms thereon, independent connections between said arms and said carriages, one of said connections comprising a screw rod formed in two parts and a nut, and automatic mechanism controlled by the lateral movement of the belt for rotating said nut to vary the length of said screw rod.

4. In an egg drying machine, a frame, independent carriages movably supported thereon, a drum having its shaft journaled on said carriages, an endless carrier belt in part supported by said drum and automatic mechanism controlled by said belt for adjusting one of said carriages to vary angularly the position of said drum, said automatic mechanism comprising in part a pawl carrier, connections by which said pawl carrier is actuated by the drum, a ratchet adapted to be actuated by the pawl for adjusting one of said carriages, a pawl controller having fingers, and a stop carrier positioned by the belt and having stops for coacting with the fingers on said pawl controller to render the pawl active.

1,023,254. FILTER. KARL KIEFER, Cincinnati, Ohio. Filed Apr. 22, 1907, Serial No. 369,515. Renewed Feb. 23, 1911. Serial No. 610,388. (Cl. 210—13.)



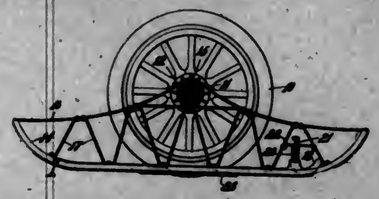
1. In a filter, juxtaposed frames and gaskets between them, each frame comprising a thin liquid-conducting structure and a thicker ledge surrounding the thin structure, each frame having its ledge telescoping the ledges of the adjacent ones, and each ledge having exterior extensions provided with registering openings, and layers of moist, fibrous pulp contained between the thin structures of adjacent frames, with edges supported by the adjacent telescoping parts of the frames.

2. In a filter, juxtaposed frames and gaskets between them, each frame comprising a thin liquid-conducting structure and a thicker ledge surrounding the thin structure, each frame having its ledge telescoping the ledges of the adjacent ones, and each ledge having exterior extensions provided with registering openings, and layers of moist, fibrous pulp contained between the thin structures of adjacent frames, said frames having passages from their registering openings to their thin structures and to the layers contained therebetween.

3. In a filter, juxtaposed frames and gaskets between them, each frame comprising a thin liquid-conducting structure and a thicker ledge surrounding the thin structure, whereby the frame is dished on both sides, each frame having its ledge telescoping the ledges of the adjacent ones, and each ledge having exterior extensions provided with registering openings, and layers of moist, fibrous pulp with marginal parts more compressed on both sides, the frames clamping the more compressed marginal parts of the layers between their ledges, and, where they are dished, receiving the less compressed parts of the layers against their thin structures.

1,023,255. ANTISKIDDING DEVICE FOR AUTOMOBILES. EDMUND KRON, Milwaukee, Wis. Filed Feb. 11, 1910. Serial No. 543,352. (Cl. 21—06.)

1. An anti-skidding attachment for automobiles, comprising a runner, a sleeve on the runner adapted for loose connection with the wheel hub, said runner operating in conjunction with the wheel by having its bearing surface slightly higher than the bearing surface of the wheel to become effective when the wheel sinks in snow and the like, and a guide plate carried by the runner and movable vertically thereon to remain in contact with an irregular road surface and prevent a lateral movement of the wheel on a slippery surface.



2. An anti-skidding attachment for automobiles, comprising a runner, a sleeve thereon adapted to fit upon the hub of the automobile wheel, said runner operating in conjunction with the wheel by having its bearing surface slightly higher than the bearing surface of the wheel to become effective when the wheel sinks in snow or the like, there being a slot extending longitudinally through the runner and a guide plate pivotally mounted in the slot and adapted to swing therethrough to maintain a contact with an irregular road surface and prevent lateral movement of the wheel on a slippery surface.

3. An anti-skidding attachment for automobiles, comprising a runner and sleeve connected thereto, a bushing loosely fitting within the sleeve and adapted to fit on the hub of the automobile wheel and be clamped thereon by the cap of said hub, said runner operating in conjunction with the wheel by having its surface slightly higher than the bearing surface of the wheel to become effective when the wheel sinks in snow or the like, the runner being provided with a longitudinal slot, and a guide plate pivotally mounted in the said slot to follow the irregularities of the road surface and to prevent lateral movement of the wheel on a slippery surface.

4. An anti-skidding attachment for automobiles, comprising a runner, adapted for connection with the automobile wheel and operating in conjunction with the wheel by having its bearing surface slightly higher than the bearing surface of the wheel to become effective upon the wheel sinking in snow or the like, and a guide plate pivotally connected to the runner to follow the surface of the road and provided with a downwardly projecting portion beneath the connection for the wheel for engagement with the road surface to prevent lateral movement of the wheel on a slippery surface.

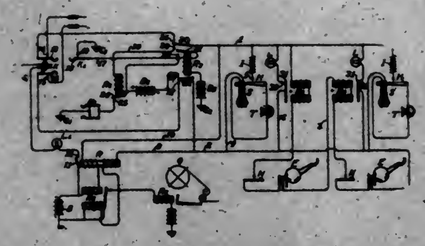
5. An anti-skidding attachment for automobiles, comprising a runner adapted for connection with the automobile wheel and operating in conjunction with the wheel by having its bearing surface slightly higher than the bearing surface of the wheel to become effective upon the wheel sinking in snow or the like, there being a longitudinal slot in the bearing surface of the runner, a guide plate pivotally mounted at one end in said slot to follow the surface of the road and prevent lateral movement of the wheel on a slippery surface, and a spring bearing on the other end of the guide plate.

[Claim 6 not printed in the Gazette.]

1,023,256. COMPOSITE ELECTRIC SYSTEM. ALBION D. T. LIBBY, Elyria, Ohio, assignor to The Dean Electric Company, Elyria, Ohio, a Corporation of Ohio. Filed Jan. 28, 1910. Serial No. 540,574. (Cl. 179—5.)

1. In a composite system consisting of a combined police and telephone system, the combination of a main station, substations, conductors connecting said stations, telephone instruments adapted to be connected in circuit with said instruments, a bridge of said conductors passing through a plurality of said substations, and police signal sending apparatus connected in said bridge.

2. In a composite system consisting of a combined police and telephone system, the combination of a main station, substations, conductors connecting said stations, telephone instruments adapted to be connected in circuit with said instruments, a bridge of said conductors passing through a plurality of said substations, and police signal sending apparatus connected in series in said bridge.



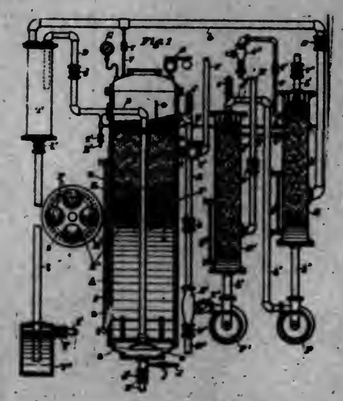
3. In a composite system consisting of a combined police and telephone system, the combination of a main station, a plurality of substations, a pair of line conductors connecting said stations, a third conductor connecting the substations and connected at its terminals to the circuit of the said pair of conductors, telephone instruments and police signaling apparatus adapted to operate over said conductors.

4. In a composite system consisting of a combined police and telephone system, the combination of a main station, a plurality of substations, a pair of conductors connecting said stations, a third conductor connecting the substations and connected at its terminals to the circuit of the said pair of conductors, telephone instruments adapted to be connected in bridge of said line conductors, and police signal sending apparatus connected in said third conductor.

5. In a composite system consisting of a combined telephone and police system, the combination of a main station, a plurality of substations, a pair of line conductors connecting the same, a third conductor connecting said stations and terminating in the circuit of said line conductors, signals at the substations and controlling means for said signals connected in the third conductor.

[Claims 6 to 17 not printed in the Gazette.]

1,023,257. STARCH-CONVERSION PROCESS. SAMUEL MORRIS LILLIE, Philadelphia, Pa. Filed Jan. 8, 1912. Serial No. 670,040. (Cl. 127—10.)



1. The intermittent or batch process of converting starch to produce a product the constituent parts of which have all approximately the same degree of conversion consisting in heating a starch liquor comprising a

suitable mixture of starch, water, and acid to the converting temperature under heating conditions to produce a heated starch liquor of only partial but practically uniform conversion; in delivering this heated liquor into a vessel, with as little admixture as may be in the vessel of the consecutive portions of the liquor as they pass into the vessel, until the liquor which first entered the vessel shows the degree of conversion desired for the product; in then stopping the inflow of heated liquor to the vessel and in withdrawing from the vessel the portions of the liquor in the same order in which they entered the vessel and at approximately the same rate of flow.

2. The intermittent or batch process of converting starch to produce a product the constituent parts of which have all approximately the same degree of conversion consisting in heating a starch liquor comprising a suitable mixture of starch, water, and acid to the converting temperature under heating conditions to produce a heated starch liquor of only partial but practically uniform conversion; in delivering this heated liquor into a vessel, with as little admixture as may be in the vessel of the consecutive portions of the liquor as they pass into the vessel; in stopping the flow into the vessel before the liquor which first entered the vessel shows the degree of conversion desired for the product; in allowing the charge to remain in the vessel until the liquor which first entered the same shows the degree of conversion desired for the product; in then withdrawing from the vessel the portions of liquor in the same order in which they entered the vessel and at approximately the same rate of flow.

3. The process of utilizing vapors released from the products of the conversion of starch liquors in which the respective conversions are consecutive consisting in heating the starch liquor to be used in one conversion by the vapors released from the products of a preceding conversion.

4. The process of heating starch liquor preparatory to converting the same at a high pressure consisting in heating the starch liquor in succession by vapors of progressively increasing temperatures.

5. The process of quickly reducing to comparatively low temperatures, with a corresponding disengagement of vapors, converted starch liquors produced at high temperatures, consisting in delivering the hot converted liquors into a chamber in which a vacuum i. e. pressure below atmospheric is maintained, and in adjusting the degree of vacuum in said chamber to produce the temperature desired in the converted liquor.

[Claims 6 and 7 not printed in the Gazette.]

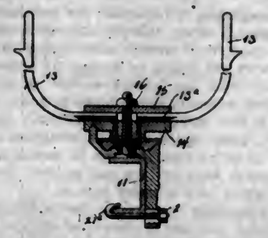
1,023,258. STAY FOR WIRE FENCES. HUGO LOEWENTHAL, Buenos Aires, Argentina, assignor to Süddeutsche Drahtindustrie Aktiengesellschaft, Mannheim-Waldhof, Germany. Filed May 2, 1910. Serial No. 558,967. (Cl. 39—112.)



1. In a stay for wire fences, the combination of a resilient coil, adapted to engage strands of a fence between its convolutions, a rigid rod passing through the interior of the coil and adapted to lock the fence strands within the convolutions of said coil, and ferrules on said rod, into which the ends of said coil are inserted.

2. In a stay for wire fences, in combination a resilient coil, a rigid rod, arranged in the interior of the said coil and means for securing the said coil to the upper and lower wire of the fence, consisting of two metallic ferrules, for retaining the ends of the coil, the ferrules having perforated bottoms and tapering notches on their edges, into which the uppermost and lowermost wires are placed, the whole being rigidly held together by means of said rod which passes through the ferrules and on to which rod a nut is screwed at its lower end.

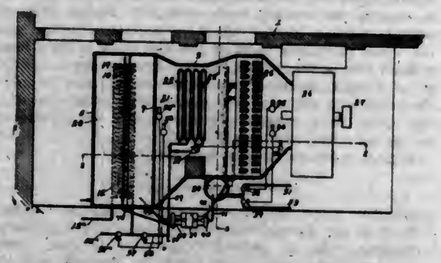
1,023,259. ADJUSTABLE BRACKET FOR LAMPS. THOMAS C. LUCE, Dalton, Mass., assignor to Luce Manufacturing Company, Dalton, Mass., a Corporation of Massachusetts. Filed Mar. 15, 1911. Serial No. 614,655. (Cl. 248—20.)



1. A lamp bracket comprising a body portion, clips supported thereon and adapted to clamp the body portion to the side of a vehicle frame, a clamping plate, and a pair of horns each having a vertical and a horizontal portion and supported between the clamping plate and the body portion, each horn being slidably adjustable in relation to the clamping plate.

2. A lamp bracket comprising a body portion, clips supported thereon and adapted to clamp the body portion to the side of a vehicle frame, said clips being adjustable vertically in relation to the body portion, a clamping plate, means for securing the clamping plate to the body portion, and a pair of horns each having a vertical and a horizontal portion supported between the clamping plate and the body portion and each horn being slidably adjustable in relation to the body portion.

1,023,260. AIR-TREATING APPARATUS. DANIEL M. LUEHRS, Toledo, Ohio, and WILLIAM S. CONANT, Detroit, Mich., assignors to McCreery Engineering Company, Toledo, Ohio. Filed May 16, 1910. Serial No. 561,691. (Cl. 98—43.)



1. In an air treating apparatus, the combination of a suitable casing; a reverse curved passage with an intake at the bottom with an upward arrangement of the passage whereby the air passes upwardly; spray means for forming the curtains of water within the said recurved passage for washing the air; a tempering chamber to which said recurved passage delivers; thermostatic means in the treated air supply to control the said tempering means; humidifying spray devices beyond the said tempering chamber; eliminator plates for extracting the free water; a sump-tank to receive said water; means to pass air through the said apparatus; a heating pipe and a cooling pipe for delivering a heating and a cooling medium to the said sump-tank; a pump for pumping water from the sump-tank to the humidifying spray devices; a hygrostat set at a predetermined point to control the cooling medium for cooling the contents of the sump-tank when the humidity rises above a certain point; and a hygrostat set at a predetermined point and connected to the heating pipe for controlling the heating medium to heat the contents of the sump-tank when the moisture drops below a predetermined point, all coacting substantially as described and for the purpose specified.

2. In an air treating apparatus, the combination of a suitable casing; a reverse curved passage with an intake at the bottom with an upward arrangement of the passage whereby the air passes upwardly; spray means for forming the curtains of water within the said recurved passage for washing the air; a tempering chamber to which said recurved passage delivers; thermostatic means in the treated air supply to control the said tempering means; humidifying spray devices; eliminator plates for extracting the free water; a sump-tank to receive said water; means to pass air through the said apparatus; a heating pipe and a cooling pipe for delivering a heating and a cooling medium to the said sump-tank; a pump for pumping water from the sump-tank to the humidifying spray devices; a hygrostat set at a predetermined point to control the cooling medium for cooling the contents of the sump-tank when the humidity rises above a certain point; and a hygrostat set at a predetermined point connected to the heating pipe for controlling the heating medium to heat the contents of the sump-tank when the moisture drops below a predetermined point, all coacting substantially as described and for the purpose specified.

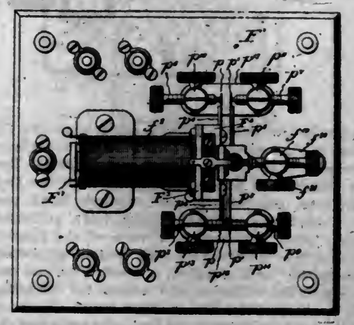
3. In an air treating apparatus, the combination of a suitable casing; a tempering chamber with tempering means within said casing and formed thereby; a thermostatic means in the treated air supply to control the said tempering means; humidifying spray devices beyond the said tempering chamber; eliminator plates for extracting the free water; a sump-tank to receive said water; means to pass air through the said apparatus; a heating pipe and a cooling pipe for delivering a heating and a cooling medium to the said sump-tank; a pump for pumping water from the sump-tank to the humidifying spray devices; a hygrostat set at a predetermined point to control the cooling medium for cooling the contents of the sump-tank when the humidity rises above a certain point; a hygrostat set at a predetermined point and connected to the heating pipe for controlling the heating medium to heat the contents of the sump-tank when the moisture drops below a predetermined point, all coacting substantially as described and for the purpose specified.

4. In an air treating apparatus, the combination of a suitable casing; a tempering chamber with tempering means within said casing and formed thereby; thermostatic means in the treated air supply to control the said tempering means; humidifying spray devices; eliminator plates for extracting the free water; a sump-tank to receive said water; means to pass air through the said apparatus; a heating pipe and a cooling pipe for delivering a heating and a cooling medium to the said sump-tank; a pump for pumping water from the sump-tank to the humidifying spray devices; a hygrostat set at a predetermined point to control the cooling medium for cooling the contents of the sump-talk when the humidity rises above a certain point; and a hygrostat set at a predetermined point and connected to the heating pipe for controlling the heating medium to heat the contents of the sump-tank when the moisture drops below a predetermined point, all coacting substantially as described and for the purpose specified.

5. In an air treating apparatus, the combination with a suitable air washing means, of a heating means; a thermostatic means in the treated air supply for regulating the said heating means, whereby the temperature of the air is controlled; spray humidifying devices beyond the said heating apparatus; means for heating or cooling the spray water to control evaporation thereof; and hygrostat means for controlling the heating and cooling means of the said spray water, coacting for the purpose specified.

[Claims 6 to 10 not printed in the Gazette.]

1,023,261. POLE-CHANGER. RAY H. MANSON, Elyria, Ohio, assignor to The Dean Electric Company, Elyria, Ohio, a Corporation of Ohio. Filed Jan. 16, 1906. Serial No. 296,309. (Cl. 171—253.)



1. In a pole changer, a motor magnet, a member adapted to be vibrated thereby, a base for rigidly supporting said parts, oppositely disposed contacts supported from such base, spring contacts carried by such vibrating member and adapted to make contact at the ends with said oppositely disposed contacts when such member is vibrated, such spring contacts assembled independently of such member and constituting a removable unitary structure.

2. In a pole changer, a motor magnet, a member adapted to be vibrated thereby, a base for rigidly supporting said parts, contacts included among the pole changer parts, supported by said base, spring contacts carried by such vibrating members and each adapted to make yielding contacts and a positive break with one of said contacts supported by the base during each half cycle of such vibrating member, such vibrating contacts assembled independently of such member and constituting a removable unitary structure.

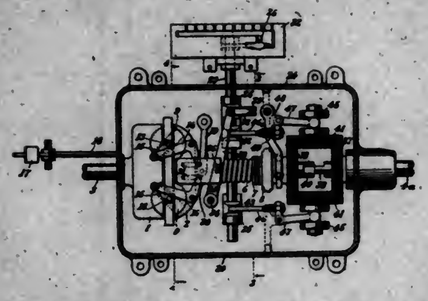
3. In a pole changer, the combination of a motor magnet, a member adapted to be vibrated thereby, a base supporting said parts, contacts supported by said base, spring contacts carried by said vibrating member and adapted to make contact with said contacts when said member is vibrated, rigid backing members associated with said spring contacts and means to clamp both said spring contacts and said backing members to said vibrating member.

4. In a pole changer, a base, a motor magnet, a pair of contacts forming an electric switch, one of which is a flexible spring, supports for said contacts connecting them to said base, one of said contacts adapted to be vibrated by said magnet together with parts of its support to open and close said switch, a rigid backing member associated with said flexible spring adapted to cause said spring to break away from the other contact with a sharp and positive break and means for clamping said spring and its associate backing member to said support.

5. In a pole changer, the combination of a base, a motor magnet, a set of contacts adapted to be vibrated thereby, another set of contacts mounted upon said base and adapted to coöperate with the first set of contacts, one set of contacts consisting of flexible springs and a plurality of rigid backing members for said spring coöperating therewith to cause a quick and positive break away from said other contacts, such spring contacts and backing members constituting a removable unitary structure.

[Claims 6 to 11 not printed in the Gazette.]

1,023,262. POWER-TRANSMISSION MECHANISM. HERBERT E. MARSHALL and ROBERT ISAKSEN, Brooklyn, N. Y. Filed June 8, 1911. Serial No. 631,999. (Cl. 74—26.)



1. A power transmission device comprising two friction elements having oppositely facing friction surfaces, an intermediate friction disk interposed between the two friction elements in peripheral contact with the two friction surfaces, the two friction surfaces being provided with a plurality of similar annular teeth arranged concentrically about the respective axes of the friction elements, and the intermediate disk having a plurality of circumferential teeth adapted to mesh with the teeth of the two friction surfaces, and means for adjusting the angular position of the intermediate disk.

2. A power transmission device comprising two friction elements each having an annular concave friction surface facing that of the complementary friction element, the two friction surfaces being provided with a plurality of similar annular teeth arranged concentrically with the respective annular friction surfaces, an intermediate friction disk interposed between the two friction elements and provided with a plurality of circumferential teeth adapted to mesh with the teeth of the two friction surfaces, and means for adjusting the angular position of the intermediate disk.

3. A power transmission device comprising a driving head having an annular concave friction surface concentric with its axis, a driven head having an annular concave friction surface concentric with its axis and facing that of the driving head, the two friction surfaces being provided with a plurality of similar annular teeth arranged concentrically with the respective friction surfaces, a transmission disk having a plurality of circumferential teeth adapted to mesh with the teeth of the two friction surfaces, the transmission disk being disposed between the two heads with its teeth meshing with those of both friction surfaces, and means for adjusting the angular position of the transmission disk to vary the speed of rotation imparted to the driven head.

4. A transmission device comprising a driving head having an annular concave friction surface concentric with its axis, a driven head having an annular concave friction surface concentric with its axis and facing that of the driving head, the two friction surfaces being provided with a plurality of similar annular teeth arranged concentrically with the respective friction surfaces, a transmission disk having a plurality of circumferential teeth adapted to mesh with the teeth of the two friction surfaces, the transmission disk being disposed between the two heads with its teeth meshing with those of both friction surfaces, means for engaging and disengaging the three members by movement toward and from each other, and means for adjusting the angular position of the transmission disk to vary the speed of rotation imparted to the driven head.

5. A power transmission device comprising a driving shaft and a driving head fixed thereon having an annular concave friction surface concentric with its axis, a driven shaft and a driven head slidably mounted thereon having an annular concave friction surface concentric with its axis and facing that of the driving head, the two friction surfaces being provided with a plurality of similar annular teeth arranged concentrically with the respective friction surfaces, two transmission disks each having a plurality of circumferential teeth adapted to mesh with the teeth of the two friction surfaces, the transmission disks being disposed on opposite sides of the driving shaft between the two heads and meshing with the teeth of the friction surfaces at corresponding radii, resilient means operative to normally hold the driven head in engagement with the transmission disks, means arranged to move the driven head out of engagement with the transmission disks and to move the transmission disks out of engagement with the driving head, and manually operative means to similarly adjust the annular disposition of the two transmission disks.

[Claims 6 to 18 not printed in the Gazette.]

1,023,263. HEDDLE FOR WIRE-WEAVING. GEORGE H. MAY, Parkhead, Glasgow, Scotland. Filed Apr. 20, 1911. Serial No. 622,194. (Cl. 139—73.)

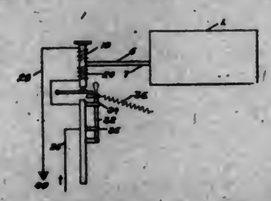


1. A heddle section or unit for wire weaving, adapted to be mounted on cross bars connected with harness frames, said heddle section or unit comprising a plurality of heddles provided at their ends with oblong link or clip connections through which said bars pass, one of said clip or link connections being formed of spring material and the sides thereof being provided with inwardly directed parts whereby it is divided into two portions.

2. A heddle section or unit for use in wire weaving, said section or unit comprising a plurality of heddles placed side by side, yoke-shaped members pivoted to the opposite end portions thereof and oblong link or clip members connected with said yoke-shaped members, one of said link or clip members being composed of spring material and the sides thereof being provided with inwardly directed portions whereby it is divided into two parts.

3. The combination with the crossbars of a wire weaving harness frame of vertically movable heddles mounted thereon, said heddles being provided at their upper end with oblong link members of spring material through which the upper crossbars pass, the sides of said link members being curved inwardly so as to divide the same into two portions whereby said members are adapted to hold said heddles in two different positions.

1,023,264. SWITCH. JAMES F. MCELROY, Albany, N. Y., assignor to Consolidated Car Heating Company, a Corporation of West Virginia. Filed Aug. 8, 1908. Serial No. 447,510. (Cl. 175—294.)



1. A switch comprising a core having coils traversed by the current, the coils exerting a force normally in opposition, said coils being responsive to an excess of current and also responsive to the shunting of the current through one of the coils to the ground.

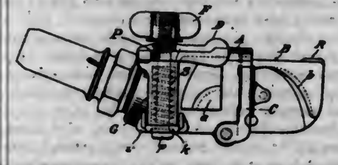
2. In a cut-out switch, means for opening said switch comprising current-carrying devices of unequal force and responsive to an excess of current, and also responsive to the shunting of the current through one of said devices by a ground.

3. In combination with a translating device, a cut out switch having coils traversed by the current passing through said device, one of said coils exerting a force counterbalancing a fraction of the force of the other coil and said coils being responsive to an excess of current, and also responsive to the shunting of the current through one of the coils by ground.

4. In combination with a translating device, a cut out switch having unequal differential coils traversed by the current passing through said device, said coils being responsive to an excess of current, and also responsive to the shunting of the current through one of said devices by a ground.

5. In a cut-out switch, differential controlling coils in series and normally inactive upon said switch, one coil having a greater number of turns than the other, and a translating device located in the circuit between said coils.

1,023,265. CAR-HEATING COUPLING. JAMES F. MCELROY, Albany, N. Y., assignor to Consolidated Car Heating Company, a Corporation of West Virginia. Filed Apr. 20, 1911. Serial No. 622,199. (Cl. 137—89.)



1. The combination with a coupler comprising two abutting parts with overlapping wings, of a lock on one part for the wing of the opposite part, said lock including a bolt and a lever that is movable into or out of locking position, means engaging the bolt for securing the lever in said locking position, and means for preventing rotary movement of the bolt.

2. The combination with a coupler comprising two abutting parts with overlapping wings, of a casing on one part, a bolt therein, a spring in said casing and coiled about said bolt, a lever on the upper end of said bolt for engaging the wing of an abutting part, locking means carried by the bolt for engaging said lever, and a holding clip carried by the lower end of said bolt.

3. The combination with a coupler comprising two abutting parts provided with overlapping wings, of a lock, a bolt on which the lock is movable into or out of locking position, a spring engaging the bolt for holding the lock against its bearings during such movement, and means engaging the bolt for securing the lock in locking position.

4. The combination with a coupler comprising two abutting parts with overlapping wings of a locking lever for the wing of one part mounted on the other part, a bolt on which said lever is mounted, a spring carried by the bolt for holding the lever against its bearings and means engaging the bolt for securing the lever in locking position.

5. The combination with a coupler comprising two abutting parts with overlapping wings of a lock having a dead movement into or out of locking position, said lock including a bolt and a lever, a nut engaging the bolt for securing the lever in said locking position and a holding clip carried by the bolt.

[Claims 6 to 12 not printed in the Gazette.]

1,023,266. GEARING. JAMES M. MERRITT, Los Angeles, Cal. Filed July 31, 1911. Serial No. 641,600. (Cl. 74—50.)

1. Driving mechanism for washing machines and the like, comprising a frame, a vertical shaft journaled on the frame, a gear on the shaft, a horizontal rack meshing with the gear, sliding supports for the rack, a lever pivoted on the frame, a fly-wheel mounted on the frame, the lever and rack being connected together, and connecting means between the lever and fly-wheel, whereby the oscillation of the lever will cause the movement of the rack and cause the rotation of the fly-wheel.



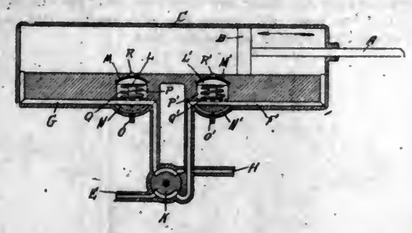
2. Driving mechanism for washing machines and the like, comprising a frame, a vertical shaft journaled on the frame, a gear on the shaft, a horizontally reciprocating rack mounted on the frame to mesh with the gear, a fly-wheel loosely mounted on the shaft below the gear, an oscillating lever pivotally mounted on the frame, connecting means between the rack and the lever, and connecting means between the fly-wheel and the lever.

3. Driving mechanism for washing machines and the like, comprising a frame, a vertical shaft journaled on the frame, a gear on the shaft, a horizontally reciprocating rack mounted on the frame to mesh with the gear, a fly-wheel loosely mounted on the shaft below the gear, a bevel gear on the under side of the fly-wheel, a gear mounted on a horizontal axis below the fly-wheel and meshing with the bevel gear thereon, a crank pin on the last mentioned gear, an oscillating lever mounted on the frame and pivotally connected with the rack, and a connecting rod between the end of the lever and the crank pin on the gear.

4. Driving mechanism for washing machines and the like, comprising a frame, a vertical shaft journaled on the frame, a gear mounted on the shaft; a horizontally reciprocating rack frame mounted on the first mentioned frame and having rack teeth engaging the gear, guide rods and bearings for supporting the rack frame; a standard beneath the lower end of the shaft, a fly-wheel loosely mounted on the shaft and resting on the standard, a bevel gear on the lower side of the fly-wheel, a horizontal pivot stud mounted on the standard, a gear on the stud and meshing with the bevel gear on the fly-wheel, a crank pin on the stud mounted gear, a connecting rod connected to the crank pin, an oscillating lever mounted on the frame and pivotally connected to the connecting rod and to the rack frame, and manually operable means to oscillate the lever.

5. Driving mechanism for washing machines and the like, comprising a frame, a vertical shaft journaled on the frame, a gear rigidly mounted on the shaft, a rack frame horizontally reciprocative on the main frame and having a rack thereon meshing with the gear, a bearing standard below the vertical shaft, a fly-wheel loosely mounted around the shaft and resting upon the standard, a bevel gear on the lower side of the fly-wheel, a bevel gear mounted on a horizontal axis on the standard below the fly-wheel and meshing with the fly-wheel gear, a lever pivotally mounted on the frame to oscillate in a plane determined by the axis of the vertical shaft and parallel to the plane of the bevel gear mounted on the standard, a connecting rod between the lever and the said bevel gear, and connection between the rack frame and the lever.

1,023,267. PISTON-ACTUATED MECHANISM. CHARLES M. MOCK, Kenilworth, and ARTHUR U. GERBER and HENRY CORDELL, Chicago, Ill. Filed Apr. 14, 1911. Serial No. 621,172. (Cl. 121—45.)



1. Mechanism of the class described including a cylinder having fluid entrance and exhaust passages communicating with opposite ends of the cylinder; a piston adapted to be reciprocated within the cylinder by fluid passing into the cylinder; a throttling plunger working within the exhaust passage; and a flexible diaphragm governing the position of the plunger and operating, when flexed from normal position, to cause the said plunger to throttle the exhaust passage; there being an opening in the cylinder intermediate of its ends through which the piston-actuating fluid may pass to the diaphragm to flex the same.

2. Mechanism of the class described including a cylinder having fluid entrance and exhaust passages communicating with opposite ends of the cylinder; a piston adapted to be reciprocated within the cylinder by fluid passing into the cylinder; a throttling plunger working within the exhaust passage; and a flexible diaphragm governing the position of the plunger and operating, when flexed from normal position, to cause the said plunger to throttle the exhaust passage; there being an opening in the cylinder intermediate of its ends through which the piston-actuating fluid may pass to the diaphragm to flex the same; and means for adjusting the extent to which the exhaust passage is throttled by the plunger when the plunger is actuated.

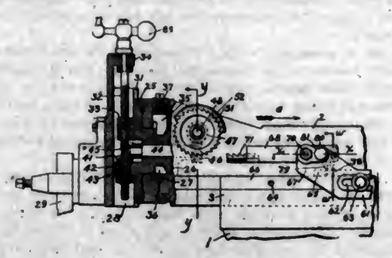
3. Mechanism of the class described including a cylinder having bifurcated entrance and exhaust passages communicating with opposite ends of the cylinder for admitting and emitting a fluid; a piston adapted to be reciprocated within the cylinder by fluid passing into the cylinder; a valve adjacent to the aforesaid bifurcated exhaust passage and serving, when actuated, to close one fork of the said bifurcated passage; and a flexible diaphragm governing the position of the plunger and operating, when flexed from normal position, to actuate the said valve; there being an opening in the cylinder intermediate of its ends through which the fluid may pass to the diaphragm to flex the same.

4. Mechanism of the class described including a cylinder having bifurcated entrance and exhaust passages communicating with opposite ends of the cylinder for admitting and emitting a fluid; a piston adapted to be reciprocated within the cylinder by fluid passing into the cylinder; a valve adjacent to the aforesaid bifurcated exhaust passage and serving, when actuated, to close one fork of the said bifurcated passage; there being an opening in the cylinder intermediate of its ends through which the fluid may pass to the diaphragm to flex the same; and means for varying the area of the unclosed fork of the bifurcated exhaust passage.

5. Mechanism of the class described, including a cylinder having fluid entrance and exhaust passages communicating with opposite ends of the cylinder; a piston adapted to be reciprocated within the cylinder by fluid passing into the cylinder; a valve chamber adjacent to the exhaust passage and communicating with the interior of the cylinder intermediate of its ends; and a valve in said chamber subject to the pressure of the fluid within the cylinder and serving to throttle the exhaust passage when actuated by the fluid.

[Claims 6 to 8 not printed in the Gazette.]

1,023,268. SHAPING-MACHINE. ARISTIDES REYNOLDS MURRAY, Cincinnati, Ohio, assignor to The Cincinnati Shaper Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Aug. 11, 1909. Serial No. 512,323. (Cl. 90—49.)



1. In a shaping machine, the combination with a reciprocating ram and a tool-slide, of a rotative part having operative connection with said tool-slide for adjusting the same on said ram, a ratchet-wheel mounted on said ram and having operative connection with said rotative part, a multi-tooth pawl with the successive teeth of which the successive teeth of said ratchet-wheel are arranged to make successive engagements, the reciprocations of said ram moving said ratchet-wheel into and out of juxtaposition with said multi-tooth pawl, and means for causing inoperative relation between said pawl and ratchet-wheel during said last-named relations.

2. In a shaping machine, the combination with a reciprocating ram and a tool-slide, of a rotative part having operative connection with said tool-slide for adjusting the same on said ram, a ratchet-wheel mounted on said ram and having frictional connection with said rotative part, a pawl with which the teeth of said ratchet-wheel are arranged to make successive engagements for feeding said tool-slide on said ram with a step-by-step movement, the reciprocations of said ram moving said ratchet-wheel into and out of juxtaposition with said pawl, said frictional connection between said ratchet-wheel and rotative part permitting cessation of movement of said tool-slide irrespective of continuing engagements between said ratchet-wheel and pawl.

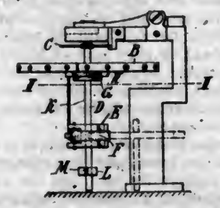
3. In a shaping machine, the combination with a frame, a reciprocating ram, and a tool-slide, of a rotative part having operative connection with said tool-slide for adjusting the same on said ram, a ratchet-wheel mounted on said ram having operative connection with said rotative part, a multi-tooth pawl supported from said frame, the teeth of which are located in a plane substantially parallel with the path of travel of said ram and coincident with the bottom of said ratchet-wheel for permitting engagements between successive teeth on said ratchet-wheel and pawl while said teeth on said pawl are maintained substantially in said plane during travel of said ram in one direction for effecting a step-by-step feed of said tool-slide, means for adjusting said multi-tooth pawl lengthwise for determining the number of teeth thereon engaged by said ratchet-wheel, and resilient means for permitting retraction of said multi-tooth pawl with relation to said ratchet-wheel during travel of said ram in the opposite direction, the reciprocations of said ram moving said ratchet-wheel into and out of juxtaposition with said multi-tooth pawl.

4. In a shaping machine the combination with a ram and tool-slide, of a rotative part having operative connection with said tool-slide for adjusting the same on said ram, a ratchet-wheel having operative connection with said rotative part, a multi-tooth pawl, an adjustable bracket on which the same is mounted, means between said pawl and bracket for normally urging said pawl into the range of said ratchet-wheel, and positioning means between said pawl and bracket for locating said pawl in inoperative position with relation to said ratchet-wheel.

5. In a shaping machine, the combination with a ram and tool-slide, of a rotative part having operative connection with said tool-slide for adjusting the same on said ram, a train of means for intermittently rotating said rotative part with a step-by-step movement coincident with the reciprocating movements of said ram, said last-named train of means comprising a friction drive-connection, and adjustable stopping means for said tool-slide causing stoppage of part of said train of means for causing relative movement between elements of said friction drive-connection while maintaining said friction drive-connection in driving relation.

[Claims 6 to 10 not printed in the Gazette.]

1,023,269. ESCAPEMENT. CARL AUGUST NORELL, Stockholm, Sweden. Filed Oct. 19, 1910. Serial No. 587,978. (Cl. 58—118.)



1. An escapement mechanism comprising in combination with a balance wheel and an arbor therefor having a pin, an escapement wheel, an anchor engaging said pin and escapement wheel, an element rigid on the arbor, a lever pivoted on said element with one end engaging the teeth of said escapement wheel, and a spring frictionally anchored on the balance engaging the free end of said lever.

2. An escapement mechanism comprising in combination with a balance wheel and an arbor therefor provided with a pin, an escapement wheel, an anchor engaging said pin and escapement wheel, an element rigid on said arbor and provided with a lever pivoted thereon with one end engaging the escapement wheel, and a spring carried by the balance and engaging the free end of said lever.

3. An escapement mechanism comprising in combination, an escapement wheel, an anchor coacting therewith, balance mechanism including a pin for engaging the anchor and an impulse support with an impulse transmitting member mounted thereon and coacting with said escapement wheel, and a spring frictionally mounted on the balance mechanism and coacting with said transmitting member.

4. An escapement mechanism comprising in combination, an escapement wheel, an anchor coacting therewith, a balance mechanism including a pin for engaging the anchor and an impulse support with an impulse transmitting member mounted thereon and coacting with said escapement wheel, and a spring carried by said balance mechanism and coacting with said transmitting member.

1,023,270. SPIRAL COIL FOR FASTENING WIRE-TERMINALS. PHILIP P. NUNGESSER, Cleveland, Ohio, assignor to The Nungesser Electric Battery Company, Cleveland, Ohio, a Corporation. Filed June 9, 1911. Serial No. 632,141. (Cl. 173—259.)



1. A device to fasten wires consisting of a spring metal coil normally open and provided with wire engaging portions at the edge of each convolution thereof and having a projection at one end to be rigidly fastened in position and a projection at the other end adapted to be engaged by hand to contract the coil.

2. A device to fasten wire terminals consisting of a metallic coil having a plurality of convolutions with open notches in corresponding edges adapted to receive the wire to be fastened.

3. A device to fasten wires consisting of a coil of otherwise flat spring metal having exposed terminals and wire engaging portions at two places in the edge of each convolution of the coil.

1,023,271. FASTENING DEVICE FOR WIRE-TERMINALS. PHILIP P. NUNGESSER, Cleveland, Ohio, assignor to The Nungesser Electric Battery Company, Cleveland, Ohio, a Corporation. Filed June 9, 1911. Serial No. 632,142. (Cl. 173—259.)



1. A fastener for wire terminals consisting of flat spring metal bent into a plurality of coils and having a plurality of holes through each coil adapted to be brought into alinement.

2. A fastener for wire terminals consisting of a sheet metal spiral spring with two or more coils adapted to be contracted and each coil provided with two openings, said openings being staggered when the fastener is normal and in line when contracted.

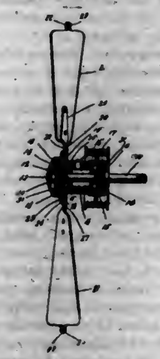
3. A coil for wire terminals formed from a strip of flat spring metal having a series of engaging portions spaced apart with slightly increasing spaces from base to outer end and said engaging portions approximately opposite each other and adapted to frictionally engage a wire thereby.

4. An electrical terminal fastening device comprising an open convolute spring provided with a series of gripping edges spaced apart at irregular intervals and adapted to be alined to insert or release an electrical terminal connection.

5. A fastener for wire terminals formed of spring sheet metal bent into a plurality of coils and said coils having holes approximately diametrically opposite in each coil.

[Claims 6 to 8 not printed in the Gazette.]

1,023,272. FAN. WILLIAM H. OAKES, Indianapolis, Ind. Filed Oct. 12, 1911. Serial No. 654,287. (Cl. 230—11.)



1. A fan structure comprising a flanged hub, a spider carrying a plurality of fan blades, the spider and the flange of the hub having interfitting projections and apertures, and a cap closing the end of the hub and clamping the spider and flange together and the projections and apertures in interlocking position.

2. A fan structure comprising a flanged hub, a spider carrying a plurality of fan blades, the spider and the flange of the hub having interfitting projections and apertures, and a cap clamping the spider and flange together and the projections and apertures in interlocking position.

3. A fan structure comprising a shaft, a flanged hub rotatably mounted thereon, a plurality of fan blades, said fan blades and the flange of the hub having interfitting projections and apertures, and a cap closing the end of the hub and clamping said projections and apertures in interlocking position.

4. A fan structure comprising a shaft, a flanged hub rotatably mounted thereon, a plurality of fan blades, said fan blades and the flange of the hub having interfitting projections and apertures, and a cap clamping said projections and apertures in interlocking position.

5. A fan structure, comprising a shaft, a hub rotatably mounted on the shaft and having a circular flange, a plurality of fan blades connected at their inner ends by a ring integral with the blades, said ring bearing against the flange on the hub, and said ring and flange having interfitting ears and openings, and a cap threaded on and closing the end of the hub and clamping said ring and flange together and said ears in said openings.

[Claims 6 to 9 not printed in the Gazette.]

1,023,273. DENTAL REGULATOR. HERBERT A. PULLEN, Buffalo, N. Y. Filed Oct. 18, 1909. Serial No. 523,205. (Cl. 32—19.)



1. In a dental regulator, the combination with an anchor-tooth attachment and an arching member, of a connecting part for supporting the latter in different angular positions of adjustment on the former and adapted to permit changes of such adjustment by a relative rotary movement of the parts.

2. In a dental regulator, the combination with an anchor-tooth attachment, of an arching member and a connecting member secured to each of the said parts respectively and composed of a material adapted to be distorted without breaking by a twisting action and arranged to support the arching member in different angular positions relatively to the anchor-tooth attachment when so torsionally adjusted.

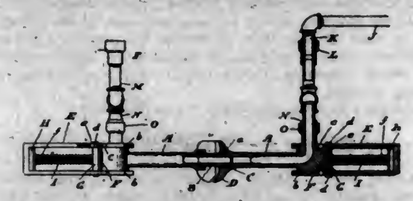
3. In a dental regulator, the combination with a metal anchor-tooth attachment and a metal arching member, of a connecting member secured to each of said parts and comprising a bar having a uniform cross sectional area and composed of a relatively softer metal adapted to be distorted by a relative twisting movement of the parts about it as an axis and to thus support the arching member in different angular positions of adjustment on the anchor-tooth attachment.

4. In a dental regulator, the combination with a band adapted to be attached to the anchor-tooth, of an arching member arranged tangentially to the band and a connecting member attached to the latter and to the arching member at points removed from the point of tangency.

5. In a dental regulator, the combination with a band adapted to be attached to the anchor-tooth, and an arching member arranged tangentially to the band, of means attached to the parts at points removed from the point of tangency for supporting the arching member in different angular positions of adjustment on the band such means being adapted to permit changes of such adjustment by a relative twisting movement of the parts transversely to the plane of the band.

[Claims 6 to 12 not printed in the Gazette.]

1,023,274. FLEXIBLE PIPE CONNECTION. JOHN W. ROBERTS, Sarnia, Ontario, Canada. Filed June 20, 1911. Serial No. 634,288. (Cl. 188—13.)



1. In pipe connections the combination of a connection pipe adapted at its outer end for engagement with a similar pipe; a support for said pipe on which the pipe is vertically trunnioned; a fixed part on which said support is slidable; and spring means engaging the pipe and the fixed part normally tending to extend the said support and at the same time tending to maintain the pipe in alinement with the support.

2. In pipe connections the combination of a connection pipe adapted at its outer end for engagement with a similar pipe; a support for said pipe on which the pipe is vertically trunnioned, the support being provided with longitudinally elongated bearings for the trunnions; a fixed part on which said support is slidable; and spring means engaging the pipe and the fluid part normally tending to extend the said support and at the same time tending to maintain the pipe in alinement with the support.

3. In pipe connections the combination of a connection pipe adapted at its outer end for engagement with a similar pipe; a support for said pipe on which the pipe is vertically trunnioned; a fixed part on which said support is slidable; an abutting piece formed on the inner end of the pipe; a follower suitably guided in the support and engaging the abutting piece; and spring means engaging the fixed part and the follower tending to extend the support and to maintain the pipe in alinement with the support.

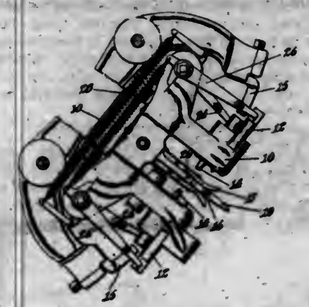
4. In pipe connections the combination of a connection pipe adapted at its outer end for engagement with a similar pipe; a support for said pipe on which the pipe is vertically trunnioned, the support being provided with longitudinally elongated bearings for said trunnions; a fixed part on which said support is slidable; an abutting piece formed on the inner end of the pipe; a follower vertically trunnioned in the support, the support being provided with longitudinally elongated bearings for the follower trunnions; and spring means engaging the fixed part and the follower tending to extend the support and to maintain the pipe in alinement with the support.

5. In pipe connections the combination of a connection pipe adapted at its outer end for engagement with a similar pipe; a support for said pipe on which the pipe is vertically trunnioned; a fixed part on which said support is slidable; an abutting piece formed on the inner end of the pipe; a follower suitably guided in the support and engaging the abutting piece, the said follower being vertically journaled in the support which latter is provided with longitudinally elongated bearings for the trunnions; and spring means engaging the fixed part and the follower tending to extend the support and to maintain the pipe in alinement with the support.

1,023,275. PUNCHING DEVICE. PEARLEY B. ROGERS, Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Dec. 1, 1911. Serial No. 663,397. (Cl. 164—118.)

1. A machine for punching sheet material having, in combination, a tubular punch, and a coöperating cutting block comprising a ball of greater diameter than the punch.

2. A machine for punching sheet material having, in combination, a tubular punch, and a coöperating cutting block comprising a ball having a radius of curvature substantially equal to the diameter of the punch.



3. A machine for punching sheet material having, in combination, a tubular punch, a holding pin disposed at right angles to the axis of said punch, a perforated ball mounted upon said pin in alinement with said punch, and means to force said punch against said ball to perforate the work.

4. A machine for punching sheet material having, in combination, a tubular punch, a hardened ball of a diameter not less than twice that of the punch located in alinement with said punch but loosely mounted in order that it may be automatically centered when engaged by said punch, and means for relatively moving said punch and ball.

5. A machine for punching sheet material having, in combination, a pair of opposed tubular punches, a ball located in alinement with and between said punches, and means for simultaneously advancing said punches toward opposite sides of the ball.

[Claims 6 and 7 not printed in the Gazette.]

1,023,276. TRICK CIGAR-CASE. FRANK L. ROUSE, Somerville, Mass. Filed Apr. 24, 1911. Serial No. 623,032. (Cl. 46—41.)

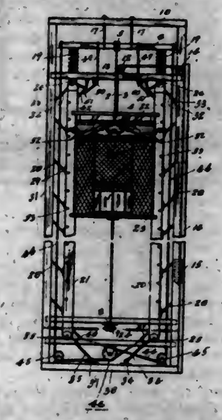


1. In a cigar case, the combination with the inclosing jacket, a false bottom therein having a central hole, and a key slidable by gravity between the true and false bottoms and having through it a key-hole opening whereof the larger end is adapted to register with said hole at one extreme of the movement of the key; of a drawer slidable longitudinally into the jacket, and a headed stud on the lower end of said drawer adapted to pass through said hole and be engaged by the opening in said key.

2. In a cigar case, the combination with the inclosing jacket, a false bottom therein having a hole, and a key slidable by gravity between the true and false bottoms and having through it a key-hole opening whereof the larger end is adapted to register with said hole at one extreme of the movement of the key; of a drawer slidable in the jacket, a headed stud on its closed lower end adapted to pass through said hole and be engaged by said key-hole opening, and a spring secured within the true bottom of the jacket and having its free end engaging said stud when the drawer is in place.

3. In a cigar case, the combination with the inclosing jacket having its true bottom resilient, a false bottom therein having a central hole, and a key slidable by gravity between the true and false bottoms and having through it a key-hole opening whereof the larger end is adapted to register with said hole at one extreme of the movement of the key; of a drawer slidable within the jacket and having an open top and closed ends, a headed stud projecting from the lower end and adapted to pass through the hole in said false bottom toward the true bottom, a slide having its top and lower end open and its sides movable between the sides of the drawer and jacket, and a spring within the space between the true and false bottoms having a knob at its free end pressing on the head of said stud when the drawer is in place.

1,023,277. SAFETY APPLIANCE FOR ELEVATORS. GERMAIN ROUSSEL, Floreffe, Pa. Filed May 16, 1911. Serial No. 627,392. (Cl. 187—73.)



1. The combination with an elevator car and its operating mechanism, of a pair of movable guide beams, stationary standards, means connected to said beams and engaging said standards for preventing outward lateral movement of the beams, and means for holding said beams against inward lateral movement.

2. The combination with an elevator car and its operating mechanism and an upper and lower stationary bar, of a pair of bodily movable guide beams, rollers at the ends of said beams engaging said bars, means for holding said beams against inward lateral movement, and means actuated by the disarrangement of the operating mechanism for releasing the holding means and drawing said beams into frictional contact with the elevator car.

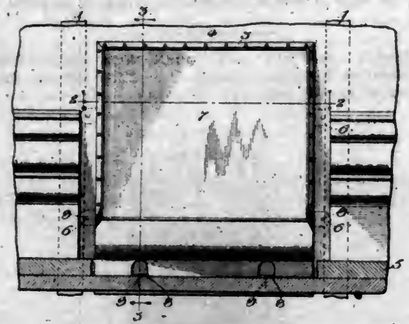
3. The combination with an elevator car, its operating mechanism, a pair of standards, and an upper and lower stationary bar, of a pair of bodily movable guide beams, rollers at the ends of said beams engaging said bars, means on the guide bars engaging said standards to prevent outward lateral movement of the beams, means for locking the beams against inward lateral movement, and means actuated by the disarrangement of the operating mechanism for unlocking said means and drawing the beams into frictional engagement with the elevator car.

4. The combination with an elevator car, a stationary support, a movable support held under tension, and a movable guide beam, of a device for locking the beam against inward lateral movement comprising a pivoted locking lever having yielding connection with said beam and positively engaging the beam, and a connection from said lever to the movable support whereby movement

of said support disengages said lever from said guide beam.

5. The combination with an elevator car and a movable support therefor held against tension, of a stationary standard, and a movable guide beam, anti-friction rollers at each end of said beam, cross bars forming tracks for said rollers, and locking latches pivoted on said guide beam engaging the standard, upper and lower pivoted locking levers engaging said beam, and separate connections from each locking lever to the movable support, whereby upward movement of the support pulls said beam inwardly.

1,023,278. STACK-HEAD FOR WALL-REGISTERS. ALBERT G. SCHERER, Chicago, Ill., assignor to Arthur W. Giessner, Chicago, Ill. Filed June 22, 1910. Serial No. 568,295. (Cl. 126—327.)



1. A stack head for wall registers comprising a section of substantially rectangular hot air conduit, and the front being inclined backwardly from the bottom to the top, a register opening in said front, and strips of tin cut and bent up from the body of the section and extending at right angles from the sides and front and adapted to contact respectively with the studding and rough flooring of a building for locating and securing said head horizontally and vertically.

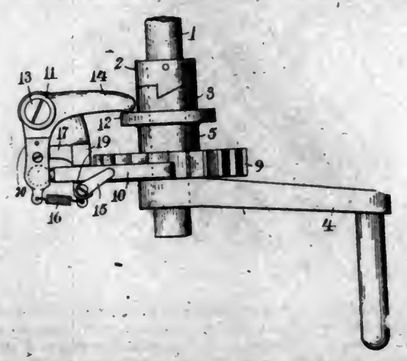
2. A stack head for wall registers comprising a double wall section of substantially rectangular hot air conduit, and the front being inclined backwardly from the bottom to the top, a register opening in said front, and tongues cut from the outer of said walls and adapted to be bent so as to extend at right angles from the sides and front for locating and securing said head horizontally and vertically.

3. A stack head for wall registers comprising a section of substantially rectangular hot air conduit, and the front being inclined backwardly from the bottom to the top, a register opening in said front, and arms cut and bent up from the bottom of the outer walls extending at right angles from the sides and front for locating and securing said head horizontally and vertically.

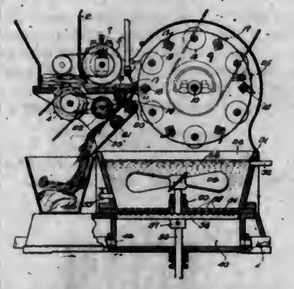
1,023,279. STARTER FOR INTERNAL-COMBUSTION ENGINES. GEORGE B. SINCLAIR, Medford, Mass. Filed Dec. 9, 1910. Serial No. 590,531. (Cl. 123—185.)

1. The combination with an internal combustion engine and its shaft, of a clutch member slidably mounted on said shaft, a clutch member normally engaging said slidable member and fixed on said shaft, said slidable clutch member having a shoulder, a bell crank lever suitably fulcrumed and having one arm engaging said shoulder, a ratchet wheel fixed on said slidable clutch member, and a pawl carried by the other arm of said bell crank lever and engaging said ratchet wheel.

2. The combination with an internal combustion engine and a shaft rotating therewith, of clutch members on said shaft, one fixed thereon and the other slidable thereon, a bell crank lever having one arm longer than the other, said longer arm being adapted to engage the slidable clutch member to force it out of clutch with the fixed member but to permit the latter's rotation, a ratchet wheel rotatable with said shaft, and a pawl carried by the shorter arm of said bell crank lever and adapted to engage said ratchet wheel.



1,023,280. PULP-SEPARATOR. FREDERICK F. STRONG, St. Petersburg, Fla. Original application filed June 10, 1910, Serial No. 566,221. Divided and this application filed July 25, 1911. Serial No. 640,462. (Cl 92—20.)



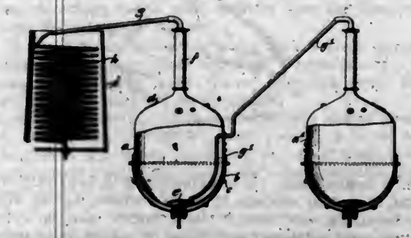
1. In an apparatus of the kind described, means to finely comminute the plant-material, gravity means for separating the chlorophyl and juices from the pulp mass; including a receptacle containing liquid for holding the comminuted plant-material in suspension, and a stirrer for facilitating the separation of the lighter parts from the heavier parts by gravity.

2. In an apparatus of the kind described, means to finely comminute the plant-material, gravity means for separating the chlorophyl and juices from the pulp mass, including a receptacle containing liquid for holding the comminuted plant-material in suspension, and a stirrer for facilitating the separation of the lighter parts from the heavier parts by gravity, said receptacle having a foraminous bottom and a squeezing and grinding plate mounted to rotate transversely of the holes of said foraminous bottom.

3. In an apparatus of the kind described, means to finely comminute the plant material, comprising a tank for holding the plant material in liquid suspension, said tank having a foraminous bottom, and a ridged plate mounted to rotate on the under side of said bottom, whereby the ridges of said plate operate with a scraping action against the outlet walls of the holes in the tank-bottom to cut off and scrape away the pulp material which settles into said holes from the contents of the tank.

4. In an apparatus of the kind described, means to finely comminute the plant material, comprising a tank for holding the plant material in liquid suspension, said tank having a foraminous bottom, and a spirally grooved plate mounted to rotate on the under side of said bottom, whereby the intervening ridges between said grooves operate with a scraping action against the outlet walls of the holes in the tank-bottom to cut off and scrape away the pulp material which settles into said holes from the contents of the tank, said scraped-off and severed pulp material being directed to the periphery of the plate by said spiral grooves and at the same time subjected to a further grinding action.

1,023,281. MANUFACTURE OF VOLATILE ORGANIC ACIDS FROM THEIR CALCIUM SALTS. RALPH STOTT SWINTON, Linden, N. J., assignor to W. J. Bush & Co., Incorporated, Dover, Del., a Corporation of Delaware. Filed Jan. 20, 1911. Serial No. 603,724. (Cl. 23—24.)



1. The improvement in the process of manufacturing volatile organic acids from their calcium salts by the use of sulfuric acid, which consists in subjecting the dry, granular calcium salt to the continuous progressive action, from the bottom upward, of sulfuric acid.

2. The improvement in the process of manufacturing volatile organic acids from their calcium salts by the use of sulfuric acid, which consists in superimposing the dry, granular calcium salt in a still above the sulfuric acid and subjecting the same to the continuous progressive action, from the bottom upward, throughout the mass, of sulfuric acid.

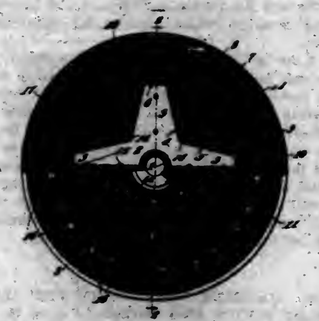
3. The improvement in the process of manufacturing volatile organic acids from their calcium salts by the use of sulfuric acid, which consists in mixing a small portion of the calcium salt with the acid in the bottom of the still to form a semi-liquid mass, and then superimposing the remainder of the charge of calcium salt in a dry, granular condition above the semi-liquid mass, so that the reaction begins at the bottom and gradually progresses through the mass.

4. The improvement in the process of manufacturing volatile organic acids from their calcium salts by the use of sulfuric acid, which consists in superimposing the calcium salt in a dry, granular condition above the acid in the still and continuously introducing steam at the bottom of the still so that the reaction begins at the bottom and gradually progresses throughout the mass.

5. The improvement in the process of manufacturing volatile organic acids from their calcium salts by the use of sulfuric acid, which consists in superimposing the calcium salt in a dry, granular condition above the acid in the still, introducing steam at the bottom of the still so that the reaction begins at the bottom and gradually progresses throughout the mass, and preventing condensation of the steam within the still by maintaining by external means the temperature within the lower part of the still.

1,023,282. WHEEL. JOSEPH LEE WALKER, Baton Rouge, La. Filed Oct. 6, 1911. Serial No. 653,233. (Cl. 21—69.)

1. A wheel comprising a hub having a stelliform web; minor sectors fitted in the web; primary annular parts inclosing the web and the minor sectors circumferentially; secondary annular parts inclosing the primary parts circumferentially, and breaking joints therewith; a tire inclosing the secondary annular parts circumferentially; inner major sectors located on both sides of the minor sectors and the web; outer major sectors located on both sides of the inner major sectors, the inner and outer major sectors being disposed in break-joint relation, and all of the major sectors extending from the hub to the rim.

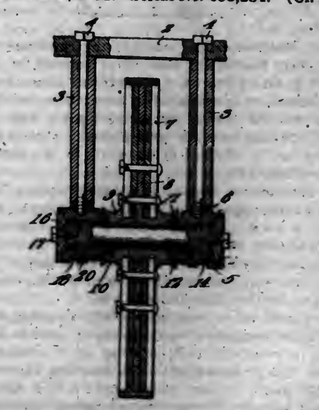


2. A wheel comprising a hub having a stelliform web; minor sectors fitted into the web; primary annular parts inclosing the web and the minor sectors circumferentially; secondary annular parts inclosing the primary annular parts circumferentially, and breaking-joints therewith; a tire inclosing the secondary annular parts circumferentially; and major sectors located on both sides of the minor sectors and the web, the major sectors extending from the hub to the rim.

3. A wheel comprising a hub having a stelliform web; minor sectors fitted into the web; annular parts inclosing the web and the minor sectors circumferentially; and major sectors located on both sides of the minor sectors and the web, the major sectors extending from the hub to the periphery of the annular parts.

4. A wheel comprising a hub; concentric annular parts located one beyond the other and disposed in break-joint relation; and sectors located upon both sides of the annular parts, and extended from the hub to the periphery of the outer of the annular parts.

1,023,283. AXLE. JOSEPH LEE WALKER, Baton Rouge, La. Filed Oct. 6, 1911. Serial No. 653,234. (Cl. 21—5.)

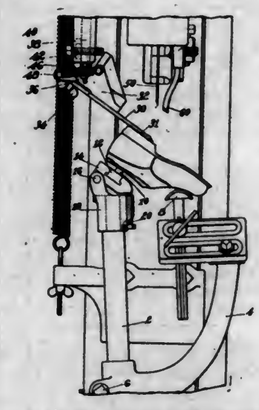


1. In a device of the class described, a frame; a short, separate axle for each wheel; a wheel upon each axle; bearings receiving the ends of each axle; tubular standards abutting against the bearings and against the frame; and members connected with the frame, the members fitting closely within the standards and having threaded portions engaged with the bearings.

2. In a device of the class described, a frame; a short, separate axle for each wheel; a wheel upon each axle; bearings receiving the ends of each axle, the bearings being provided with upstanding bosses; tubular standards surrounding the bosses and abutting against the body portions of the bearings and against the frame; and members extended through the frame and through the tubular standards, said members being threaded for engagement with the bosses.

3. In a device of the class described, a frame; a short, separate axle for the wheel; a wheel secured to each axle; bearings located on both sides of the wheel; bushings located within the bearings and receiving the axle for rotation; closure members removably secured to the ends of the axle and fitting within the bearings; bosses upstanding from the bearings; tubular standards surrounding the bosses and abutting against the bearings and against the frame; and members extended axially through the standards, said members being engaged with the frame, and being threaded into engagement with the bosses.

1,023,284. MACHINE FOR USE IN THE MANUFACTURE OF BOOTS AND SHOES. FRANK H. WARREN, Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed July 8, 1911. Serial No. 637,524. (Cl. 12—47.)



1. In a heel breasting machine the combination with a presser plate having its under face knurled, of means for supporting said plate at a substantial angle to the horizontal, and a knife arranged to be reciprocated in vertical plane across the end of the presser plate and having its bevel on the side next the heel being treated, whereby the breasting cut is effected at an angle to the tread surface approximating 45°.

2. A machine for breasting attached spring heels, comprising a last support adapted to hold a shoe in an inclined position, a vertically reciprocating knife having its bevel toward the heel to be breasted, a presser plate inclined at an angle in the vicinity of 45° and arranged to be pressed against the heel, and means for preventing relative movement between the plate and the heel.

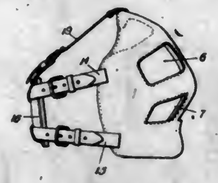
3. A machine for breasting attached spring heels, comprising a last support adapted to hold a shoe in an inclined position, a vertically reciprocating knife having its work engaging face at an angle to the direction of movement of the knife, and a presser plate inclined at a sharp oblique angle and mounted for vertical movement against the shoe, said plate having its under face provided with anti-slipping means.

4. A machine for breasting attached spring heels, comprising a last support adapted to hold a shoe in an inclined position, a vertically reciprocating knife having its bevel on the side next the heel to be breasted, a presser plate inclined to the plane of the tread face and provided with a roughened work engaging face and a support for said plate mounted for vertical movement.

5. In a machine for breasting attached spring heels, the combination of a work support, a knife, means for actuating the knife in a vertical plane, a presser plate to engage the tread face of the heel mounted for vertical movement and inclined to the horizontal at an angle approximating 45°, means for adjusting the plate to vary the angle, and means for actuating the plate to clamp the work upon the support.

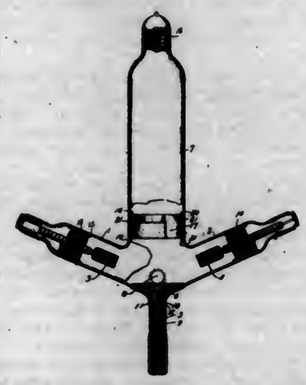
[Claims 6 to 10 not printed in the Gazette.]

1,023,285. BOXING-MASK. THOMAS J. WHITE, Chicago, Ill. Filed June 24, 1911. Serial No. 635,065. (Cl. 2—119.)



In a boxing mask, the combination of a relatively stiff frame shaped to conform to facial outlines, having sight and breathing apertures, a tough flexible material covering the outer surface of said frame, a padded lining covering the inner surface of the frame and forming a cushion, and means to support the mask in operative position.

1,023,286. VAPOR ELECTRIC APPARATUS. WILLIS R. WHITNEY, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Oct. 31, 1904. Serial No. 230,684. (Cl. 176—44.)



1. The combination of a fragile receiving or containing vessel, a body of fluid therein, a trough or lip for intercepting the fluid, and one or more openings in said trough or lip.

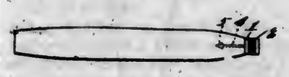
2. The combination of a fragile receiving or containing vessel, a body of fluid therein, and a resilient member carrying a plate or platform for intercepting the flow of fluid from its normal position.

1,023,287. MANUFACTURE OF BLEACHING LIQUIDS. HEINRICH WILSING, Bernburg, Germany. Filed Sept. 28, 1910. Serial No. 584,296. (Cl. 8—2.)

1. A process for the manufacture of bleaching liquids by the action of chlorin on alkaline lyes consisting in introducing chlorin into a liquid containing alkaline hydrate with alkaline carbonate.

2. In a process for the manufacture of bleaching liquids by the action of chlorin on alkaline lyes containing alkaline hydrate with alkaline carbonate proportioning the alkaline hydrate to alkaline carbonate so as to produce free hypochlorous acid in addition to hypochlorite of alkali in a proportion according to requirements.

1,023,288. CIGAR-HOLDER. JAMES LEWIS WOLLESON, Pittsburg, Kans. Filed Apr. 20, 1911. Serial No. 622,306. (Cl. 131—10.)

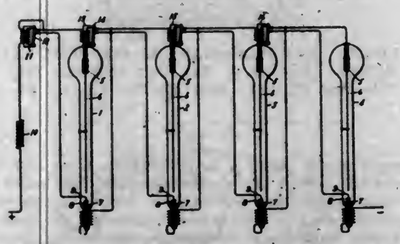


1. A cigar holder including a mouth piece, a stem projecting therefrom, and a head upon the stem for insertion into the end portion of a cigar.

2. A cigar holder including a flat mouth piece having transversely arranged tooth receiving depressions in the opposed faces thereof, and means extending from the mouth piece for insertion into a cigar.

3. A cigar holder including a mouth piece having transverse depressions in opposed faces thereof, a stem extending from the mouth piece, and an arrow head upon the stem, said stem and arrow head being insertible into one end portion of a cigar.

1,023,289. SERIES LIGHTING SYSTEM. LEO ARONS and MAX FUSS, Berlin, Germany, assignors to General Electric Company, a Corporation of New York. Filed Dec. 28, 1906. Serial No. 349,819. (Cl. 176—13.)



1. A system comprising vapor electric devices disposed in series, and automatic means whereby the lighting of one starts the next succeeding one.

2. In a lighting system, the combination of a plurality of mercury vapor lamps disposed in series, means for shunting each of said lamps before starting, and automatic means in circuit with one lamp for changing the voltage across the succeeding lamp to start the lamps successively.

3. In an electric lighting system, the combination of a plurality of mercury vapor lamps disposed in series, and a movable element controlled by current through one of said lamps for effecting automatically an increase in the voltage across the succeeding lamp after said first named lamp has started.

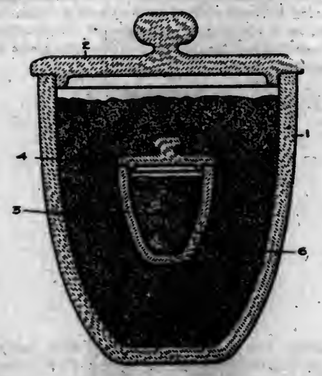
4. The combination of the plurality of vapor electric devices disposed in series, and starting means for the same operating to impress successively on the devices voltages higher than the normal running voltage.

5. The combination of the plurality of vapor electric devices in series, and means for starting each device in response to the starting of the preceding device in the series.

[Claims 6 and 7 not printed in the Gazette.]

1,023,290. REDUCTION OF OXIDS. WILLIAM C. ARSEM, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Jan. 6, 1909. Serial No. 470,918. (Cl. 23—13.)

1. The method of producing a low oxid of a metal which consists in introducing the higher oxid into a pervious receptacle, creating a heated atmosphere of carbon monoxid around the receptacle, and thereby reducing the higher oxid by diffusion of the carbon monoxid into the receptacle.



2. The method of producing a low oxid of a metal, which consists in introducing the higher oxid into a pervious receptacle, packing said receptacle in carbon, and heating to cause diffusion of carbon monoxid into the receptacle.

3. The method which consists in placing tungstic acid in a pervious receptacle, packing the receptacle in carbon, and heating to cause reduction of the tungstic acid by carbon monoxid diffusing into said receptacle.

4. The method of reducing an oxid which consists in heating it with a reducing agent separated from it by a pervious wall to cause gas to diffuse back and forth through the wall to reduce the oxid and be in turn reduced by said reducing agent.

5. The method of producing chemical changes between two substances which consists in heating them in proximity to one another with an intervening pervious wall to cause diffusion of gas reacting with them back and forth through said wall.

1,023,291. COLORING METALS. SALOMON AXELROD, Oberschöneweide, Germany, assignor to General Electric Company, a Corporation of New York. Filed Dec. 16, 1908. Serial No. 467,802. (Cl. 148—41.)

1. The process of producing a coating upon metals which consists in providing the metals with a surface coating of cobalt salt and subsequently heating the metals more or less strongly according to the shade desired.

2. The process of producing a brown to black surface coloration upon aluminium which consists in providing the aluminium with a surface coating of a cobalt compound, heating the metal, and repeating this process according to the shade desired.

3. The process of surface-coloring metals which consists in applying upon the metals a neutral solution of cobalt salts and heating the same more or less strongly according to the shade desired.

4. The process of surface-coloring metal which consists in applying upon the surface of a metal, a coating of a cobalt compound and then heating the metal more or less strongly according to the shade of color desired.

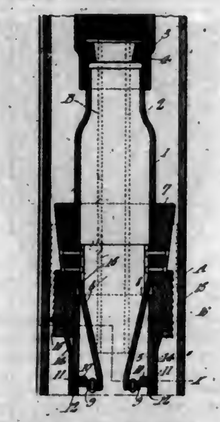
5. An aluminium article having a surface coating, chemically combined therewith, of an adherent cobalt compound.

[Claims 6 to 8 not printed in the Gazette.]

1,023,292. ANCHOR FOR WELL-TUBING. REUBEN C. BAKER, Coalinga, Cal. Filed Nov. 6, 1911. Serial No. 658,777. (Cl. 103—65.)

1. A tubing anchor including upper and lower sections, a tapered coupling therebetween, downwardly converging spring strips secured to the coupling and projecting into

the lower section, shoes carried by said strips and mounted within openings in the lower section, spring strips mounted upon the outer face of the lower section and adapted to be shifted outwardly by the shoes, and casing gripping elements carried by said strips, said elements being movable longitudinally of the section and against the coupling, said coupling constituting means for shifting the shoes radially during such movement.



2. A tubing anchor for attachment to a pump, including a tubular portion, spring elements mounted upon the outer face of said portion, gripping devices carried by the free ends of said elements, downwardly converging resilient devices within the tubular portion, and means carried thereby and movable through said tubular portion to engage the spring elements.

3. A tubing anchor including a tubular portion, means mounted for movement longitudinally therein under the force of the impact of a fluid thereagainst, casing gripping elements shiftable with said means, and means carried by said tubular portion for shifting said elements radially in opposite directions and into engagement with the casing during such longitudinal movement.

4. A tubing anchor including casing gripping elements shiftable radially, a spreading element, and means operated by impact upon fluid in the casing during the downward movement of the anchor and coöperating with said spreading element, for shifting said gripping elements into engagement with the casing.

5. A tubing anchor including casing gripping elements shiftable radially, a normally inclined flap pivotally mounted and shiftable longitudinally of the anchor, connections between the flap and the gripping elements, and means coöperating with said elements for shifting them radially during the movement of the flap relative to the anchor.

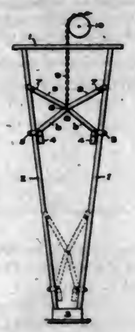
[Claims 6 and 7 not printed in the Gazette.]

1,023,293. ARC-LAMP. GUSTAV BALDAUF, Augsburg, and ERNST PRESSER, Berlin, Germany, assignors to General Electric Company, a Corporation of New York. Filed Oct. 30, 1909. Serial No. 525,416. (Cl. 176—65.)

1. In an arc lamp, the combination with converging guide-rods, of carbon holders sliding thereon, and cross-bars pivoted to said holders and to each other and guided at their ends on said rods.

2. In an arc lamp, the combination with converging guide-rods, of carbon holders sliding on said rods, and cross-bars pivoted to said holders and to each other at their point of intersection and guided at the ends opposite to the carbon holders on said guide rods, each of said cross-bars having two arms meeting at an obtuse angle.

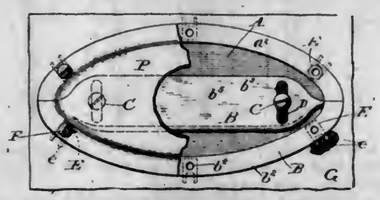
3. In an arc lamp, the combination with converging guide-rods, of carbon holders sliding thereon, and cross-bars pivoted to said holders and to each other at their point of intersection, the opposite end of said cross-bars engaging the opposite guide rods, all of the angles between the various arms of said cross-bars and their guide rods being equal.



4. In an arc lamp, the combination with converging guide-rods, of carbon holders sliding thereon, and cross-bars pivoted to said holders and to each other and guided on said rods, each bar comprising two arms meeting at an angle which is the supplement of that at which said rods would meet if extended.

5. In an arc lamp, the combination with converging guide-rods, of carbon holders sliding thereon, and cross-bars pivoted to said holders and to each other and guided on said rods, the arms of said bars abutting against each rod, making therewith an isosceles triangle at all points in the travel of said bars.

1,023,294. PEDESTAL-SUPPORT FOR RAILWAY-CAR SEATS. WALTER J. BENNETT, Michigan City, Ind. Filed Apr. 22, 1911. Serial No. 622,712. (Cl. 72—101.)



1. The combination with the floor frame of a railway car, of a pedestal support made in adjustable sections and attached to said frame, and a floor covering resting on said floor frame and surrounding the support.

2. The combination with the frame of a railway car floor, of a pedestal support made in sections having overlapping portions and adjustable relatively to each other, means for adjustably connecting the sections with the floor frame, devices carried by the support for connecting it with a car seat pedestal, and a floor covering resting on the frame of the floor, and surrounding the pedestal support.

3. The combination with the car floor frame of a pedestal support comprising two sections having flanged peripheries, nuts arranged in said flanged portions of the sections, and devices adjustably connecting the sections with the frame of the floor.

4. The combination with a car floor frame, of the pedestal support comprising two members having overlapping bases and overhanging flanges at their peripheries, nuts arranged in the flanged portions of the support and adapted to receive screws or bolts passing through the base of a car seat pedestal, and a floor covering resting on the floor frame and surrounding the pedestal support.

5. The combination with the floor frame of a railway car, of a pedestal support made in adjustable sections and attached to said frame, and a covering applied to the interior of the support and also resting on said floor frame and surrounding the support.

[Claims 6 and 7 not printed in the Gazette.]

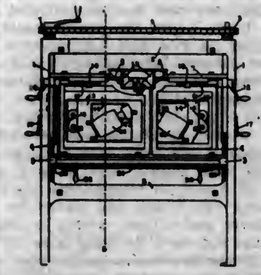
1,023,295. MANUFACTURE OF METALLIC FILAMENTS FOR INCANDESCENT ELECTRIC LAMPS. HARRY BRESLER, Charlottenburg, Germany, assignor, by mesne assignments, to General Electric Company, a Corporation of New York. Filed Jan. 9, 1909. Serial No. 471,532. (Cl. 176—132.)

1. A squirting mixture for the formation of filaments comprising material held in a binder of ammonium viscose.

2. A plastic paste for filament manufacture comprising finely divided tungsten held in a binder of ammonium viscose.

3. A plastic mixture for the production of filaments comprising finely divided material held in a solution of viscose.

1,023,296. WOOD-SAWING MACHINE. GEORGE H. BROWN, Jefferson, Tex. Filed Nov. 18, 1909. Serial No. 528,720. (Cl. 144—89.)



1. In a wood sawing machine, a frame, a work supporting frame adjustable vertically in the first named frame, intermediate frames independently adjustably mounted in the work supporting frame, arbor frames adjustable horizontally in the intermediate frames, and rotatable saws carried by the arbor frames.

2. In a wood sawing machine, a main frame, a work supporting frame mounted in the main frame, means for adjusting the work supporting frame vertically, intermediate frames mounted in the work supporting frame, means for adjusting intermediate frames vertically, arbor frames mounted in the intermediate frames, means for independently adjusting the arbor frames horizontally, rotatable saws carried by the arbor frames, and means for imparting motion to the saws.

3. In a wood sawing machine, a main frame, a work supporting frame mounted in the main frame, means for adjusting the work supporting frame vertically, intermediate frames mounted in the work supporting frames, means for vertically adjusting the intermediate frames independently of the work supporting frames, arbor frames mounted in the intermediate frames, means for horizontally adjusting the arbor frames longitudinally and independently of the intermediate frames, and rotatable saws carried by the arbor frames.

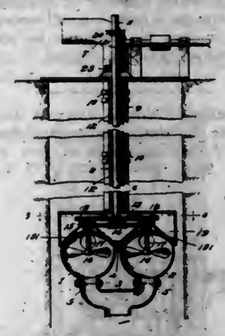
4. In a wood sawing machine, a main frame, a work supporting frame adjustably mounted in the main frame, laterally adjustable guides for receiving the work and carried by the work supporting frame, said guides being independently adjustable, intermediate frames independently vertically adjustable in the work supporting frame, arbor frames adjustable transversely to the adjustment of the intermediate frames, and rotatable saws carried by the arbor frames.

1,023,297. FILING-CASE. GEORGE A. CHAMBERS, New York, N. Y., assignor to Montague Mailing Machinery Company, New York, N. Y., a Corporation of Tennessee. Filed May 26, 1910. Serial No. 563,587. (Cl. 45—71.)



A filing case consisting of open end frames of wire, and metal sides having flanges extending from end frame to end frame, and formed integrally by doubling the metal of the sides upon itself, the vertical edges of the side plates between the horizontal flanges being bent around the vertical side portions of the end frames, the rear end frame being smaller than the forward end frame with the metal of the sides bent inwardly around the smaller rear frame and outwardly around the front frame, the said sides being substantially parallel and the said rear frame forming stops to limit the movement of the contained articles along the flanges, and a locking arm having a portion embracing the lower bar of the front frame and forming a pivot for said locking bar, the said locking bar, at its upper end, having a hook portion formed by bending said end to engage the upper bar.

1,023,298. PUMP. JOHN VICTOR CHAPMAN, Scott, Kans. Filed May 15, 1911. Serial No. 627,183. (Cl. 103—43.)



1. A pump comprising separated twin chambers arranged side by side and having a common supply pipe at their lower ends and a common discharge pipe at their upper ends, vertical shafts journaled in the tops of and depending in said chambers and having horizontally arranged blades therein within the chambers, a larger gear wheel horizontally arranged above said chambers, smaller gears fixed to the propelling shafts and meshing with the larger gear, means for driving the larger gear, and a water elevating pipe connected with the discharge pipes of said chambers.

2. A pump comprising separated twin chambers arranged side by side, vertical propelling shafts journaled in the tops of and depending into said chambers and carrying horizontally arranged blades thereon within the chambers, gear wheels fixed to said shaft soutside of and above

said chambers, an oil casing fitting upon the tops of both chambers inclosing said gears and having a ball bearing in the bottom thereof, a vertical tube extending centrally from the top of the casing and opening therein, a driving shaft mounted in said vertical tube, extending into said casing and mounted on said ball bearing, a gear on said driving shaft within the casing meshing with the gears on the propelling shafts, entrance and discharge pipes for each chamber, and means for connecting, bracing, and actuating said drive shaft.

3. A twin pump comprising a pair of substantially spherical, separate chambers mounted side by side, a Y fitting connecting a suction pipe with the bottom of each chamber, a Y fitting connecting each chamber on one side with a discharge pipe, an oil casing having two cones formed in its bottom and fitted over the top of the two chambers, a vertical tube extending upwardly from the top of the casing, a plate mounted in the casing on top of the cones, a ball bearing on the plate in line with the vertical tube, a shaft in the tube depending into the casing and supported upon the ball bearing, vertical shafts journaled in the plate and the tops of the casing and depending centrally into the chambers, propellers on the shafts in the chambers between their entrance and discharge openings, and gearing in the casing connecting the three shafts.

1,023,299. METHOD OF MAKING METER-JEWELS. HOWARD R. CONNELL, Brackenridge, Pa., assignor to General Electric Company, a Corporation of New York. Filed Jan. 5, 1909. Serial No. 470,849. (Cl. 204—62.)

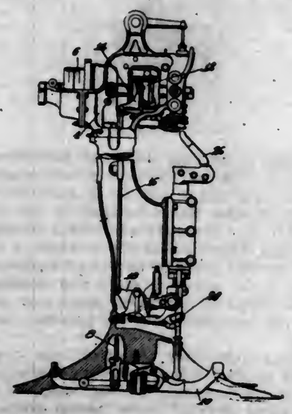
1. The method of making cupped meter bearings which consists in fusing a carburizable metal in a carbon mold, the external dimensions of which approximate the dimensions desired in the bearing.

2. The method of producing a cupped tungsten bead, which consists in fusing tungsten in a cup-shaped depression in a carbon block thereby shaping and hardening the tungsten.

3. The method of making cupped tungsten jewels which consists in fusing a dense homogeneous tungsten bead in the presence of carbon vapor while in a mold.

4. The method, which consists in heating tungsten to a high temperature in a carbon mold containing a small cavity, thereby causing the tungsten to take up carbon and assume a shape having a cupped or concave upper surface.

1,023,300. WORK-SUPPORT. JOHN F. DAVEY, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Jan. 2, 1909. Serial No. 470,472. (Cl. 1—41.)



1. In a machine of the class described, the combination with a work support, of operating mechanism therefor comprising a shaft intergeared at its ends with said support, a lever arranged to oscillate about said shaft between its ends, means for oscillating said lever, and means for clutching said lever to and unclutching it from said shaft.

2. A machine of the class described having, in combination, a work support and operating mechanism for said support comprising a shaft intergeared with said support, a lever mounted to turn concentrically with said shaft, means for operating said lever, and means operating upon a continuous movement in one direction to cause said lever to be clutched to and unclutched from said shaft.

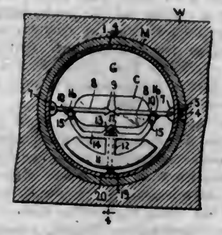
3. In a machine of the class described, the combination with a work support, yieldingly pressed normally into clamping relation to the work, of mechanism for intermittently depressing said work support comprising a shaft operatively connected at each of its ends with said support, a lever pivoted upon said shaft between the points of connection of said shaft with said work support and arranged to be clutched to said shaft, means for effecting the clutching of said lever to said shaft, and means for operating said lever including means for operating said clutching means.

4. In a machine of the class described, the combination with a work support, of operating mechanism therefor comprising a shaft intergeared with said support, a lever arranged to oscillate about said shaft, a clutch comprising a disk rigidly attached to said shaft and a shoe carried by said lever, means for pressing said shoe into clutching relation to said disk comprising a crank arm and a yielding fulcrum independent of said shoe about which said crank arm turns as a lever of the first class when operating said clutch.

5. A machine of the class described having, in combination, a work support yieldingly held normally in work clamping relation to the work, means for intermittently depressing said work support comprising a shaft intergeared therewith, means for intermittently oscillating said shaft comprising two levers, and means for oscillating one of said levers and a latch carried by said lever arranged to engage and carry the other lever with it during its movement in one direction, to move out of engagement with said lever at the end of the work support depressing movement of said lever and to yield to pass said lever upon its return movement.

[Claims 6 to 11 not printed in the Gazette.]

1,023,301. LEVEL. BURT F. DAVIS, Jackson, Ohio, assignor to Louis H. Hollberg, Jackson, Ohio. Filed Dec. 18, 1911. Serial No. 666,379. (Cl. 73—71.)



1. In an instrument of the class described, the combination with a stock, an open-ended cylinder passing through the body of the stock and having scales inscribed on its extremities, and a brake device within the wall of the cylinder; of a ring mounted loosely within said cylinder and having marks quartering to each other on both extremities, glass disks over said extremities, two hands pivoted at their outer extremities within said ring on a true diameter thereof, and a pendulum connected with the hands and adapted to bring their inner extremities in register.

2. In an instrument of the class described, the combination with a stock, an open-ended cylinder passing through the body of the stock and having scales inscribed on its extremities, and a brake device within said cylinder consisting of a shaft rotatably mounted in its wall parallel with its axis, an eccentric head secured upon the inner end of said shaft, and a thumb-piece on its outer end; of a ring mounted loosely within said cylinder and having marks on its extremities, two hands pivoted at their outer extremities within said ring on a true diameter thereof, and a pendulum connected with the hands and bringing their inner extremities into register when their pivots stand in a horizontal plane.

3. In a level, the combination with a stock having a transverse opening, a ring therein having eyes at diametrically opposite points, and two hands whereof each has its outer extremity pivoted in one of said eyes, its body provided with a longitudinal slot adjacent said pivot, and its inner end pointed; of a weight pivotally supported within said ring and having arms diverging laterally from the pivot and forked, and a pin through the fork of each arm and loosely engaging in one of said slots.

4. In a level, the combination with a stock having a transverse circular opening, a ring mounted therein and having pivots at diametrically opposite points, and two hands whereof each has its outer extremity mounted on one of said pivots, its body provided with a longitudinal slot adjacent said pivot, and its inner end pointed; of a standard rising from the bottom of said ring and having a knife edge at its upper end with two lugs rising from the edge thereof, a weight having a heavy arcuate lower end, an upright shank pierced with a triangular eye hung on said knife edge between the lugs, and two horizontal arms having their outer ends upturned and forked, and a pin through each fork and loosely engaging in one of said slots.

1,023,302. MANURE-SPREADER. HOWARD E. DINWIDDIE, Onawa, Iowa. Filed June 26, 1911. Serial No. 635,330. (Cl. 111—40.)



1. A manure spreader including a receptacle for manure, said receptacle having a bottom made up of a belt of flexibly connected sections, a distributer movable toward the bulk of the manure to discharge the same from the receptacle, means for advancing said distributer relative to the receptacle, means for operating the distributer to discharge the manure, and means for causing the sections of the bottom of the receptacle to successively withdraw from the manure at the discharge end of the bulk.

2. A manure spreader including a receptacle having its bottom made up of a belt of flexibly connected sections, a spreading element movable throughout the length of the receptacle, and means for automatically shortening the bottom of the receptacle from that end thereof nearest the spreading element.

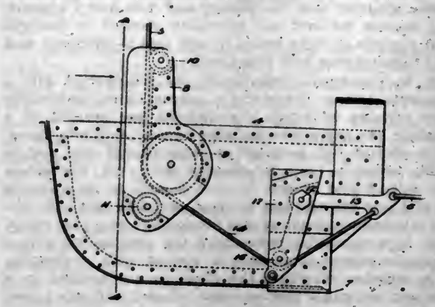
3. A manure spreader including a receptacle having a flexible bottom, a revoluble spreading element, means for gradually shortening the bottom of the receptacle and withdrawing from contact with the load the extremity of the bottom of the receptacle nearest the spreading element, and means for shifting said spreading element against the load during the shortening of said bottom.

4. A manure spreader including a receptacle having a flexible bottom, a revoluble spreading element, means for automatically shortening the bottom of the receptacle and withdrawing from contact with the load the extremity of the bottom nearest the spreading element, means for shifting the spreading element against the load, and means for rotating said element independently of said shifting movement.

5. A manure spreader including a receptacle, the bottom of said receptacle consisting of a belt of flexibly connected sections, means for successively withdrawing the sections from the discharge end of the receptacle to shorten the bottom from said end, and a distributing element actuated by said means to move longitudinally of and within the receptacle.

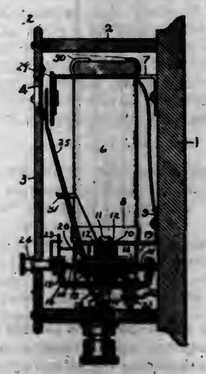
[Claims 6 to 11 not printed in the Gazette.]

1,023,303. EXCAVATING-SCRAPER. CHARLES H. DISHMAN, Henderson, Ky. Filed Aug. 9, 1910. Serial No. 576,330. (Cl. 37—54.)



In an excavating scraper, the combination with an excavating scoop, of swinging arms carried on one end part thereof, a sheave on the scoop, a suspending cable which runs over said sheave and thence angularly to its suspending stretch and is connected to the arms aforesaid and adapted to pull them in one direction, and a free pulling cable directly connected to the arms and adapted to pull them in the opposite direction, said arms being adapted for movement only by the combined paying out of one cable and the tension of the other cable to effect suspending or tilting of the scoop.

1,023,304. ELECTRICAL MEASURING INSTRUMENT. ALVARADO LE ROY ELLIS, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed July 29, 1907. Serial No. 385,974. (Cl. 171—95.)



1. In a measuring instrument, the combination with a magnetic system comprising concave pole pieces, a cylindrical core mounted concentric therewith to form an annular air-gap, and a fixed support connected to one end of said core to hold it in position, of a circular coil arranged in a plane at an angle to that axis of the core passing through said support, said coil being pivoted to encircle said core and swing in said air-gap.

2. In a measuring instrument, the combination with a magnetic system comprising a magnet with confronting

pole surfaces of which the elements are parallel to a straight line and a core mounted between said pole pieces with its axis substantially parallel to said line, of a pivoted coil mounted to encircle said core and to swing about an axis intersecting the axis of said core, and a supporting bracket for said coil movable parallel to the elements of said pole surfaces and at right angles to the second named axis to withdraw said coil from between the pole pieces.

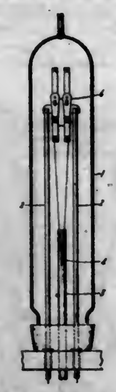
3. In a measuring instrument, the combination with a magnetic system comprising a magnet with confronting pole surfaces of which the elements are parallel to a straight line and a core mounted between said pole pieces, of a pivoted coil mounted to encircle said core and to swing about an axis intersecting said core, and a supporting bracket for said coil detachably secured to the core and movable at right angles to said axis to withdraw said coil from between said pole pieces.

4. In a measuring instrument, the combination with a magnetic system comprising a magnet with confronting pole surfaces of which the elements are parallel to a straight line and a core mounted between said pole pieces, of a pivoted coil mounted to encircle said core and to swing about an axis intersecting said core, and means for causing said bracket to move parallel to the elements of said pole surfaces and at right angles to said axis during relative movement of said bracket and said pole pieces.

5. In a measuring instrument, the combination with a magnetic system comprising a magnet with confronting pole surfaces of which the elements are parallel to a straight line and a core mounted between said pole pieces, of a pivoted coil mounted to encircle said core and to swing about an axis intersecting said core, a supporting bracket for said coil detachably secured to said core, and coöperating guides on said core and said bracket to maintain said bracket in definite relation to said pole surfaces during movement of the bracket.

[Claims 6 to 17 not printed in the Gazette.]

1,023,305. FILAMENT APPARATUS. SAMUEL FERGUSON, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Feb. 3, 1908. Serial No. 413,990. (Cl. 176—4.)



1. The method which consists in passing current through a suspended filamentary body to vaporize out a binder contained in it and consolidate the refractory residue, causing the filament to contract freely during the vaporization and initial consolidation and then causing a load to be imposed on the filament after removal of the binder.

2. The method which consists in passing current through a suspended metallic filament whereby it is heated and causing it first to contract freely and then to assume a load when further contracting under the influence of high temperature.

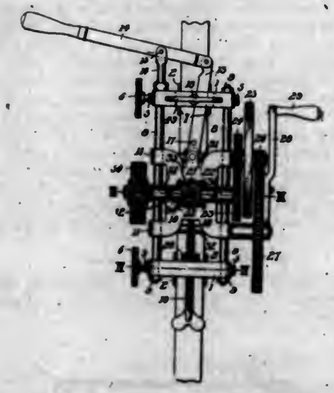
3. The combination of an envelop, means for supporting a metallic filament, means for passing current therethrough, means for suspending a weight or rider in the path of said filament to engage therewith when the filament shrinks.

4. The combination of a treating envelop, means for suspending a filament in the same, means for passing current therethrough, a tube and a rider suspended in said tube above the looped end of the filament.

5. The method which consists in passing current through a suspended metallic filament to heat and consolidate it, causing it to contract freely during its initial consolidation and then causing it to assume a gravitational load tending to give it a symmetrical form after it has consolidated sufficiently to bear such load.

[Claims 6 to 12 not printed in the Gazette.]

1,023,306. MORTISING-MACHINE. GUSTAV GERLACH, Carrick, Pa. Filed Mar. 19, 1910. Serial No. 550,459. (Cl. 144—70.)



In a mortising machine, a support carrying clamping jaws and having guide rods, a housing mounted for reciprocation on said rods, a lever pivotally mounted on the support and connected with said housing for reciprocating the latter, a cutter-carrying shaft rotatably-mounted in the housing to be reciprocated therewith, said shaft extending at right angles to the line of reciprocation of the housing and movable in the housing longitudinally under pressure while rotating and being reciprocated, means for limiting the longitudinal movement of said shaft in one direction, a drive gear carried by the support, gearing connecting said drive gear with the cutter-carrying shaft, and an adjustable stop carried by the support to be engaged by the housing to limit the movement of the housing in one direction.

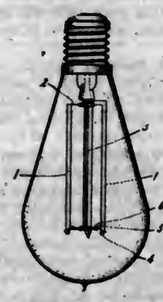
1,023,307. INCANDESCENT LAMP. LUDWIG GLASER, Pankow, Germany, assignor to General Electric Company, a Corporation of New York. Filed Mar. 3, 1908. Serial No. 418,960. (Cl. 176—39.)

1. A filament anchor having a pivotally supported movable part engaging with a filament loop and normally resting thereon to place the filament under tension proportional to the weight of the movable part.

2. A filament anchor comprising a hook rigidly mounted and a movable part engaging with the filament and spirally wound about said hook.

3. In an incandescent lamp, a filament anchoring device comprising two parts, one of which is fixed and the other of which hangs at an angle to the fixed part and is movable to move the filament laterally when the filament contracts.

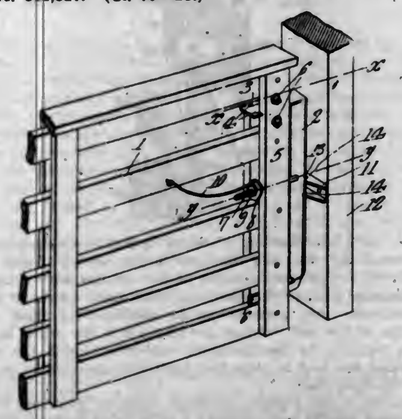
4. An anchor for a lamp filament consisting of two parts one of which is rigidly mounted, while the other is movable and by its weight tends to hold the filament in position, and a spring which comes into action only after a predetermined contraction of the filament.



5. A filament anchor comprising a rigidly mounted hook and a movable member engaging with the filament and spirally wound about said hook, said member having a spirally wound portion which acts as a spring after the filament has undergone a predetermined contraction.

[Claims 6 to 10 not printed in the Gazette.]

1,023,308. GATE-LATCH. GEORGE W. GOSS and CHARLES E. GOSS, Baltimore, Ohio. Filed July 31, 1911. Serial No. 641,517. (Cl. 70—28.)

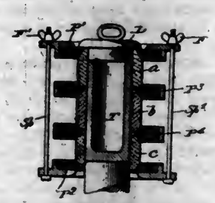


1. A gate-latch of resilient character and approximately U-form in outline, one arm of the U being connected to the gate and the other arm being dependable with respect to the gate slats, a keeper for engagement with said latch, and means for actuating said latch.

2. A gate-latch of resilient character and of approximately U-form, one arm being received within slots in upright gate-members, means for the retention of said latch-arm in effective position in said slots, a nut and washer equipped member having bearing upon the gate and secured to said latch, and means for the engagement of said latch from the gate post.

1,023,309. ELECTRICAL RESISTANCE FURNACE. HUGO HELBERGER, Munich, Germany. Filed Aug. 11, 1911. Serial No. 643,564. (Cl. 219—36.)

1. In an electric furnace, the combination with the cylindrical heating chamber adapted to be heated by the passage of an electric current through it, of a removable lining mounted in said cylinder with its exterior face in contact with the interior face of the cylinder, whereby oxidation of the latter is prevented, and a refractory heat insulating inclosure surrounding the outer wall of said cylinder, whereby oxidation of its outer face and radiation of heat therefrom are prevented.



2. In an electrical resistance furnace, the combination with the heating cylinder having circuit terminals connected therewith and heat insulating material inclosing said cylinder, of a removable lining for the cylinder formed of material having the property of becoming soft at high temperature, and means associated with said heating cylinder for removing said lining and protecting the inner face of the cylinder against oxidation when the lining is removed.

3. In an electrical resistance furnace, the combination with the heating cylinder open at top and bottom, of a removable crucible mounted within said cylinder with its outer face in contact with the inner face of the cylinder, whereby oxidation of the latter is prevented, a lifting mechanism for supporting said crucible within the cylinder, and a cover of refractory material for closing the upper end of the cylinder.

4. In an electrical resistance furnace, the combination with the heater formed by a cylindrical body open at top and bottom adapted to be heated by the passage of an electric current therethrough, and circuit terminals engaging said cylindrical body, of an inclosure of heat insulating refractory material surrounding said cylindrical body, a crucible mounted within the heater and with its outer face in position to protect the inner face of the cylinder against oxidation, a crucible lifting mechanism movable into and out of the lower end of the heater for supporting the crucible within the cylinder and lifting it up out of the cylinder, and means for closing the upper end of the heater.

5. In an electrical resistance furnace, the combination with the heater formed by a cylindrical body having annular circuit terminals coöperating therewith at different points longitudinally of the axis of the cylinder for supplying heating current to the cylinder, of a removable crucible mounted within and in intimate contact with the inner face of the heater, whereby oxidation of said face is prevented, and means for lifting said crucible, movable into and out of the lower end of the heater.

[Claims 6 to 9 not printed in the Gazette.]

1,023,310. OIL-SWITCH. EDWARD M. HEWLETT, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Nov. 14, 1904. Serial No. 232,603. (175—283.)

1. An electric switch comprising separable contacts, a closed chamber therefor containing insulating fluid, and immovable means located therein for confining the insulating fluid when put under pressure by the arc and directing the insulating fluid against the arc so as to extinguish it.

2. An electric switch comprising a closed chamber, separable contacts arranged to break therein, and an immovable partition therein located above the break point and provided with an opening for the passage of the movable contact.

3. An electric switch comprising separable contacts arranged to break under oil, a closed chamber for the oil, and immovable means located therein for confining the oil when put under pressure by the arc and directing it against the arc so as to extinguish it.

4. An electric switch comprising separable contacts arranged to break under oil, a closed chamber for the oil,

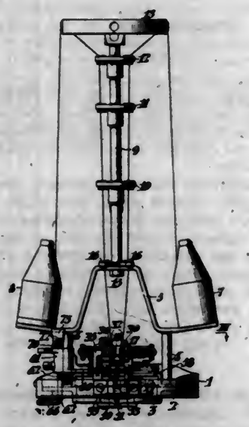
and an immovable apertured partition therein through which one of said contacts passes in drawing the arc.



5. An electric switch comprising a closed chamber containing oil, separable contacts arranged to break therein, and communicating means between different portions of said chamber arranged to cause the pressure produced by the arc to direct oil against the arc so as to extinguish it.

[Claims 6 to 18 not printed in the Gazette.]

1,023,311. PLATING DEVICE. EMIL A. HIRNER, Allentown, Pa. Filed Feb. 15, 1907. Serial No. 357,462. (Cl. 66—12.)



1. In a circular knitting machine, the elements of which have capacity for both rotary and reciprocatory knitting, a yarn guide by which a body yarn is fed continuously to the needles; an oscillating yarn eye, the yarn feeding portion of which is so related in position to the first mentioned yarn guide that at either extremity of its oscillation it feeds a plating yarn to the needles in such relation to the body yarn that said plating yarn lies on the shank of each needle immediately below the body yarn; and means for so oscillating said yarn eye, in relation to the body yarn guide during reciprocatory knitting as to cause said yarn eye to always lead the yarn guide sufficiently to compel the yarns to travel to the needles at distinct angles.

2. In a circular stocking knitter, a yarn guide by which a body yarn is fed continuously to the needles; a yarn eye oscillating in a horizontal plane above that of the yarn guide; means for feeding a plating yarn through the oscillating yarn eye to the needles; and means whereby the oscillation of said yarn eye is so timed during reciprocatory knitting as to always feed to the needles from a point sufficiently in advance of the yarn guide to throw the plating yarn onto the shank of the needle below the body yarn, so that it is knit into the face of the fabric.

3. In a circular stocking knitter, a yarn guide for a body yarn; an oscillating finger; a second yarn eye for the plating yarn carried by said oscillating finger; means for causing said finger to oscillate above the yarn guide an equal distance from one side of it, to the other, under control of the reciprocation of the needle cylinder, whereby at each change of reciprocation said oscillating finger is thrown to the advance extremities of its range of motion.

4. In a stocking knitter, means for simultaneously feeding two yarns to the needles for the knitting of plated fabric, in combination with guiding means for feeding said yarns to the needles, said guiding means for the plating yarn comprising a horizontally oscillating finger, and the guiding means for the body yarn consisting of an eye situated below the plane in which the finger oscillates and centrally between the extremities of its oscillation.

1,023,312. KNITTING-MACHINE. EMIL A. HIRNER, Allentown, Pa. Filed Dec. 12, 1908. Serial No. 467,131. (Cl. 66—26.)



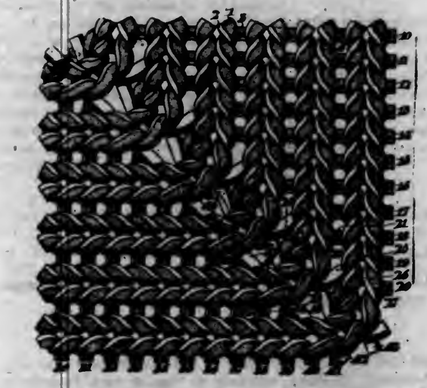
1. In a rib knitter, a needle cylinder provided with grooves for the web holders; a fulcruming projection within each groove; a series of web holders with notches engaging said projections and fulcrumed thereon; and coördinate cam surfaces acting continuously upon the backs of the web holders one above and the other below the fulcrum by the combined action of which the web holders are held in place and positively operated as levers of the first class.

2. In a rib knitter, a needle cylinder provided with grooves for the web holders; a fulcruming surface within said grooves; a series of web holders fulcrumed thereon; coördonate cam surfaces acting upon the backs of the web holders, one above and the other below the fulcrum, by the combined action of which the web holders are positively operated as levers of the first class; and an opening in the upper cam surface protected by a pivoted gate affording facility for the removal of any web holder from its groove.

3. In a rib knitting machine, the combination of a dial plate having a movable draw cam and means for retracting the draw cam to render the dial needles inactive during the formation of the web courses upon the cylinder needles; a cam cylinder provided with a stitch cam and automatically operated means for operating the stitch cam to produce loose transfer courses upon the cylinder needles; and independent automatically operated means for operating the stitch cam to produce loose welt courses.

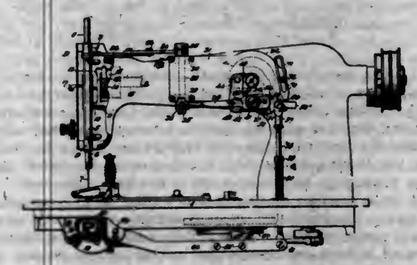
4. In a rib knitting machine, the combination of a cam cylinder provided with a stitch cam, and automatically operated means for operating the stitch cam to produce loose transfer courses; a separate and distinct automatically operated means for operating said cam to produce loose welt courses; a dial plate having a movable draw cam and means for retracting the said cam to render the dial needles inactive during the formation of the welt courses upon the cylinder needles; and connections between the two last mentioned means whereby both operations take place simultaneously.

1,023,313. ART OF KNITTING SEAMLESS PLATED HOSIERY. EMIL A. HIRNER, Allentown, Pa. Filed Dec. 1, 1910. Serial No. 595,017. (Cl. 66—4.)



The improvement in the art of knitting seamless plated hosiery, which consists in feeding simultaneously to the active needles, body thread and plating thread in different angular relation, with the body thread uppermost on the shank of the needle, and the plating thread occupying the flatter angle; continuing this operation to the point where the threads turn upon themselves to form the suture loops of the fashioned portion; and thereupon as the direction of the travel of the threads is reversed, throwing the plating thread to a reversed position at a similar flat angle, and throwing the body thread over the plating thread at a higher angle prior to the feeding of the thread to the first and succeeding needles of the active series, whereby the proper relation of the threads is maintained during the loops immediately succeeding reversal, and throughout the knitting operation.

1,023,314. OVERSEAMING MECHANISM FOR SEWING-MACHINES. JAMES T. HOGAN, Jersey City, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed June 17, 1911. Serial No. 633,695. (Cl. 112—4.)



1. In a sewing machine, the combination with a swinging needle-bar frame and a reciprocating needle-bar journaled therein and carrying a needle, of a vibrating link-bar, means for imparting to said link-bar uniform vibratory movements of one-half the frequency of the needle-bar reciprocations, guiding means for confining a point of said link-bar to movement in a path inclined to its length, a rock-shaft, an arm on said rock-shaft having an adjustable link connection with the needle-bar frame, and a second arm on said rock-shaft pivotally connected with said link-bar.

2. In a sewing machine, the combination with a reciprocating needle-bar carrying a needle, and a needle-bar frame adapted to swing upon an axis parallel with said needle-bar, of a vibrating link-bar, means for imparting to said link-bar uniform vibratory movements, guiding means for confining a point of said link-bar to movement in a path inclined to its length, a rock-shaft disposed parallel with the axis of movement of the needle-bar frame, a lateral arm fixed upon one end of said rock-shaft and having an adjustable link connection with the needle-bar frame, and a second and oppositely extending lateral arm fixed upon the other end of said rock-shaft and pivotally connected with said link-bar.

3. In a sewing machine, the combination with a reciprocating needle-bar carrying a needle, and a needle-bar frame adapted to swing upon an axis parallel with said needle-bar, of a vibrating link-bar provided at one end with a lateral stud and an adjacent slideway, a rock-shaft disposed parallel with the axis of movement of the needle-bar frame, a lateral arm fixed upon one end of said rock-shaft and having an adjustable link connection with the needle-bar frame, a second and oppositely extending lateral arm fixed upon the other end of said rock-shaft and pivotally connected with the end of said link-bar opposite that containing said stud and slideway, an angle-lever disposed in a plane parallel with said rock-shaft and having one arm carrying a stud entering the slideway of said link-bar and another arm carrying a second stud, an actuating cam in operative engagement with the second-named stud of said angle-lever, a pivotally mounted guide-lever formed with a transverse guideway entered by the stud of said link-bar, a spring-pressed controller-rod pivotally connected with said guide-lever and normally acting to shift the same to bring its guideway into extreme relation with the link-bar, and a cam acting in opposition to said spring for timing the shifting movements of the guide-lever.

4. In a sewing machine, the combination with a swinging needle-bar frame and a reciprocating needle-bar journaled therein and carrying a needle, of a vibrating link-bar, an operative connection between said link-bar and the needle-bar frame, means for imparting to said link-bar uniform vibratory movements, guiding means for confining a point of said link-bar to movement in a path inclined to its length, automatically controlled and spring-actuated means for shifting said guiding means to change the direction of movement of said link-bar under the action of its vibrating means, and an adjustable stop for limiting the range of movement of said shifting means under the action of its spring.

5. In a sewing machine, the combination with a swinging needle-bar frame and a reciprocating needle-bar journaled therein and carrying a needle, of a vibrating link-bar, an operative connection between said link-bar and the needle-bar frame, means for imparting to said link-bar uniform vibratory movements, guiding means for confining a point of said link-bar to movement in a path inclined to its length, an actuating spring for shifting said guiding means to change the direction of movement of said link-bar under the action of its vibrating means, a cam for controlling the timing of operation of the shifting means, and an adjustable stop for limiting the range of movement of said shifting means under the action of its spring.

1,023,315. METAL FILAMENT. MATTHEW A. HUNTER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed July 2, 1906. Serial No. 324,410. (Cl. 176—131.)

1. The process which consists in heating a filament of substantially pure tantalum in an atmosphere of nitrogen,

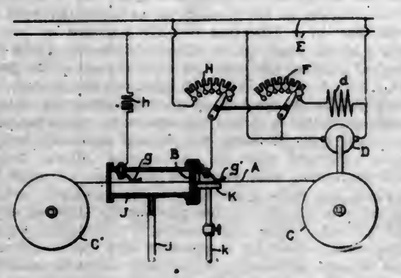
to cause chemical reaction between the nitrogen and the tantalum and thereby increase the electrical resistance of the filament.

2. The process which consists in glowing a tantalum filament in an atmosphere of nitrogen to increase the specific resistance of the filament.

3. A filament consisting substantially of tantalum, but having a specific resistance higher than that of pure tantalum because of the presence of a nitrogen compound.

4. A tantalum filament containing material produced by glowing said filament in an atmosphere of nitrogen, said filament having a specific resistance higher than that of pure metal.

1,023,316. APPARATUS FOR DRAWING WIRES. EUGEN HUBWITZ, Berlin, Germany, assignor to General Electric Company, a Corporation of New York. Filed Jan. 19, 1912. Serial No. 672,196. (Cl. 205—16.)



1. In an apparatus for drawing wire, in combination with the drawing die, driving means for drawing the wire through the die, means for heating the wire immediately before its passage through the die, means for varying the speed of the driving means, and means for automatically varying the heat energy supplied to the wire upon a variation of the speed of the driving means.

2. In an apparatus for drawing wire, in combination with the drawing die, driving means for drawing the wire through the die, means for supplying electric current to the portion of the wire just entering the die to heat it, means for varying the speed of the driving means, and means for automatically varying the current supplied to the wire upon a variation of the speed of the driving means.

3. In an apparatus for drawing wire, in combination with the drawing die, electrically operated driving means for drawing the wire through the die, means for supplying current to the portion of the wire just entering the die to heat it, switch contacts for varying the speed of the driving means, switch contacts for varying the amount of current supplied to the wire, and operative connections between the two sets of switch contacts for insuring their simultaneous operation.

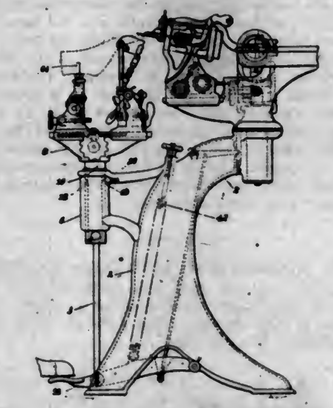
1,023,317. IMPLEMENT FOR MASHING POTATOES, &c. WILLIAM ALLAN JACKSON, Binghamton, N. Y., assignor to A. & J. Mfg. Company, Binghamton, N. Y., a Corporation of New York. Filed Mar. 14, 1910. Serial No. 549,298. (Cl. 146—15.)

1. An article of the character described comprising a handle, a guide-stem on which said handle is movable, formed with a shoulder, a spring within the handle on one side of said shoulder for restoring the handle to normal position, a cushioning spring in the handle on the opposite side of said shoulder, and a mashing-member carried by the handle independently of said guide-stem.

2. An article of the character described comprising a yoke, a guide-stem carried thereby, a handle movable on said stem, a mashing-member carried by said yoke, a mashing-member carried by the handle, and a spring arranged to restore the handle to normal position.



1,023,318. SHOE-SUPPORT. ARTHUR ERNEST JERRAM, Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Original application filed Sept. 26, 1904, Serial No. 225,968. Divided and this application filed May 8, 1911. Serial No. 625,688. (Cl. 12—127.)



1. In a machine of the class described, a shoe support comprising a spindle provided with longitudinal grooves and a locking device arranged to engage in the grooves for holding the shoe support against rotation, combined with means for depressing the shoe support and means for forcing the locking device out of the grooves to permit the shoe support to be turned when it has been depressed.

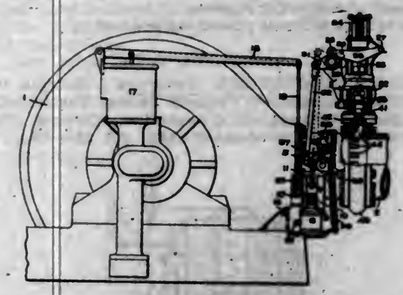
2. In a machine of the class described, a work support having a longitudinally grooved spindle, means for moving the post endwise, a guide for the spindle, and a spring-pressed locking device arranged to engage the grooves to prevent rotary movement of the work support, said grooves being formed at their upper ends to force the locking device out of holding engagement therewith upon endwise movement of the work support in one direction.

3. In a machine of the class described, the combination with a vertically movable shoe support arranged for angular movement, of means operated automatically by such vertical movement for effecting the locking and unlocking of the support.

4. A machine of the class described having, in combination, a work support having an endwise movable spindle provided with a longitudinal groove, a locking device arranged to engage said groove to restrain turning movement of the spindle, means to limit longitudinal movement of the spindle, and means to disengage the locking device automatically from the groove as the limit of longitudinal movement of the spindle is approached.

5. A machine of the class described having, in combination, a work support having an endwise movable spindle provided with a plurality of longitudinal grooves 18, a bearing for said spindle, a locking bolt 20 yieldingly mounted in said bearing, an incline 19 at the upper end of each groove to press the locking bolt into the bearing, means to move the spindle to present the incline to the bolt, and means to hold the spindle normally with the inclines away from the bolt.

1,023,319. GOVERNING MECHANISM FOR TURBINES. OSCAR JUNGGREN and EDGAR D. DICKINSON, Schenectady, N. Y., assignors to General Electric Company, a Corporation of New York. Filed Jan. 3, 1911. Serial No. 600,439. (Cl. 121—118.)



1. The combination with an elastic fluid turbine, of a low pressure steam main, a rotary valve controlling the main, means for rotating the valve, a high pressure steam pipe connected with the main, a valve controlling the high pressure pipe, a device for operating the high pressure valve, a governor, and mechanism controlled by the governor for actuating said means and device.

2. The combination with an elastic fluid turbine, of a low pressure steam main, a valve controlling the main, means for operating the valve, a valve chest mounted on the low pressure main, a high pressure steam pipe connected to the chest, a valve that controls the flow from the chest to the main, a cam for operating the high pressure valve that opens said valve after the low pressure valve has been opened, a governor, and mechanism controlled by the governor for actuating said means and cam.

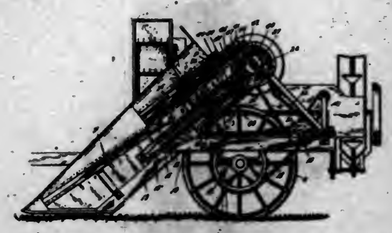
3. The combination with an elastic fluid turbine, of a low pressure steam main, a rotary valve controlling the main, a crank for moving the valve, governor controlled means for actuating the crank, a high pressure steam pipe connected with the low pressure main, a valve controlling said pipe, means for operating the high pressure valve, and a connection between the crank and said means.

4. The combination with an elastic-fluid turbine, of a low-pressure steam main, a valve controlling the main, a high-pressure steam pipe connected with said low-pressure main, a valve controlling said pipe, a cam for operating the high pressure valve, means for operating said low-pressure valve, and a connection between said means and the cam, said cam being inoperative with respect to the high-pressure valve until the low-pressure valve is at or near its wide open position.

5. The combination with an elastic-fluid turbine, of a low-pressure steam main, a butterfly valve controlling said main, a high-pressure steam pipe connected with said low-pressure main, a valve controlling said pipe, a crank for actuating said butterfly valve, a lever for actuating said high-pressure valve, means for actuating the crank, and a lost-motion device between the crank and said lever.

[Claims 6 and 7 not printed in the Gazette.]

1,023,320. CORN-PICKER. BURT J. KAULL, La Fayette, Ind. Filed Apr. 27, 1911. Serial No. 623,562. (Cl. 56—113.)



1. In a corn picker, the combination of means for delivering an upward blow to the corn ears, means for engaging the upper ends of the corn stalks to move the same forwardly with the machine, and means for engaging the stalk below said blow-delivering means to pull the stalk downwardly past the blow-delivering means.

2. In a corn picker, the combination of means for delivering an upward blow to the corn ears, means for engaging the upper ends of the corn stalks to move the same forwardly with the machine but at a slower rate, and means for engaging the stalk below said blow-delivering means to pull the stalk downwardly past the blow-delivering means.

3. In a corn picker, the combination of a vehicle, means carried thereby for delivering an upward blow to the corn ears upon standing stalks, and means carried by the vehicle for engaging the upper ends of the corn stalks to move the same forwardly with the machine but at a slower rate.

4. In a corn picker, the combination of a vehicle, means carried thereby for delivering an upward blow to the corn ears upon standing stalks, and means carried by the vehicle for engaging the upper ends of the corn stalks to move the same forwardly with the machine prior to and substantially until such blow is delivered.

5. In a corn picker, the combination of a pair of downwardly and forwardly inclined knocking rollers provided with means for delivering an upward blow to the corn ears between the rollers, means for driving the said rollers upwardly at their adjacent portions, gathering chains arranged in advance of the knocking rollers, means for driving said gathering chains at a speed greater than the forward movement of the machine, and means for engaging the upper end of a stalk after it is within the range of action of the knocking rollers to bend the upper end of said stalk forwardly.

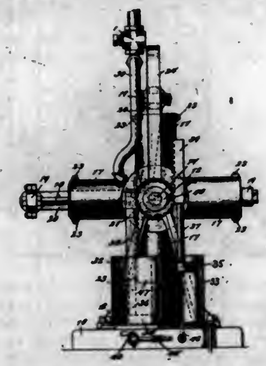
[Claims 6 to 8 not printed in the Gazette.]

1,023,321. ROTARY ENGINE. GEORGE F. LEIGER, Chicago, Ill., assignor, by direct and mesne assignments, to Chicago Octagon Rotary Engine Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 27, 1911. Serial No. 604,991. (Cl. 121—64.)

1. In a rotary engine, the combination of a spindle, a crank thereon adapted by a partial rotation of said spindle to be shifted from one side to the other of the axis of revolution of the engine whereby the engine is adapted to be driven in either direction, a cylinder, a piston therein, connections between said piston and said spindle whereby a stroke of said piston serves to shift said crank, and means for supplying fluid under pressure to said cylinder.

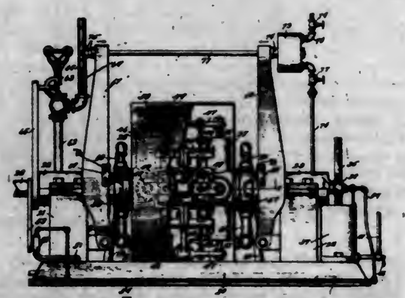
2. In a rotary engine, the combination of a spindle, a crank thereon adapted by a partial rotation of said spindle

to be shifted from one side to the other of the axis of revolution of the engine whereby the engine is adapted to be driven in either direction, a pinion non-rotatably mounted on said spindle, two cylinders, a piston in each cylinder, rack-bars connected with said pistons and adapted to mesh with said pinion on opposite sides thereof, and means whereby either of said cylinders may be supplied with fluid under pressure.



3. In a rotary engine, the combination of a spindle, a crank thereon adapted by a partial rotation of said spindle to be shifted from one side to the other of the axis of revolution of the engine whereby the engine is adapted to be driven in either direction, a pinion non-rotatably mounted on said spindle, two cylinders, a piston in each cylinder, rack-bars connected with said pistons and adapted to mesh with said pinion on opposite sides thereof, two pipes each of which is adapted to connect one of said cylinders with a suitable supply of fluid under pressure, and a stop and waste cock interposed in each of said pipes.

1,023,322. ROTARY ENGINE. GEORGE F. LEIGER, Chicago, Ill., assignor, by direct and mesne assignments, to Chicago Octagon Rotary Engine Company, Chicago, Ill., a Corporation of Illinois. Filed June 3, 1911. Serial No. 631,015. (Cl. 121—64.)



1. In a rotary engine, the combination with a revolubly-mounted hub, a cylinder mounted thereon, said hub being provided with a port leading into said cylinder, and a valve located next to said hub and adapted to communicate with said port, of other fluid-operated means for holding said valve in position next to said hub.

2. In a rotary engine, the combination with a revolubly-mounted hub, a cylinder mounted thereon, said hub being provided with a port leading to said cylinder, and a valve located next to said hub and adapted to communicate with said port, of other fluid-operated means for holding said valve in position next to said hub, and means for regulating the effective strength of said fluid-operated means in proportion to the amount of work being done by the engine.

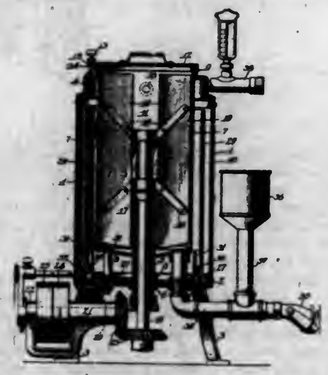
3. In a rotary engine, the combination with a revolubly-mounted hub, a cylinder mounted thereon, said hub being provided with a port leading to said cylinder, and a valve located next to said hub and adapted to communicate with said port, of other fluid-operated means for holding said valve in position next to said hub, and a governor adapted to regulate the admission of fluid under pressure to said fluid-operated means.

4. In a rotary engine, the combination with a revolubly-mounted hub, a cylinder mounted thereon, said hub being provided with a port leading to said cylinder, and a valve located next to said hub and adapted to communicate with said port, of fluid-operated means for holding said valve in position next to said hub, and means for regulating the pressure upon said valve by permitting the escape of a limited amount of fluid under pressure.

5. In a rotary engine, the combination with a revolubly-mounted hub, a cylinder mounted thereon, said hub being provided with a port leading to said cylinder, and a valve located next to said hub and adapted to communicate with said port, of fluid-operated means for holding said valve in position next to said hub, a governor adapted to regulate the admission of fluid under pressure to said fluid-operated means, and means for regulating the pressure upon said valve by permitting the escape of a limited amount of fluid under pressure.

[Claims 6 to 20 not printed in the Gazette.]

1,023,323. PASTEURIZER. FREDERICK J. MACNISH, Oak Park, Ill., assignor to Creamery Package Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 5, 1909. Serial No. 481,488. (Cl. 210—20.)



1. In a pasteurizer, in combination, a milk or cream container; a heating-medium container surrounding the first mentioned container; a partition surrounding said milk container within said heating-medium container; and inlet means for a heating medium in the lower part of the heating-medium container at the inner side of said partition, said inlet means causing a circulation of the heating medium upwardly at the inner side of said partition and downwardly at the outer side thereof.

2. In a pasteurizer, in combination, a milk or cream container; a heating-medium container surrounding the first mentioned container; inlet means for a heating medium comprising a series of nozzles in the lower part of the heating-medium container and arranged around the first mentioned container; and a partition surrounding the first mentioned container, said nozzles being located between said container and said partition, spaces being provided at the lower end of said partition for the passage of the heating medium from the outer side of said partition to the inner side thereof.

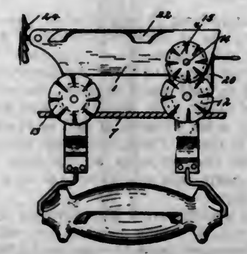
3. In a pasteurizer, in combination, a milk or cream container; a heating-medium container surrounding the first mentioned container; inlet means for the heating medium comprising a coil in the lower part of the second mentioned container and arranged around the first mentioned container; nozzles on said coil; and a partition attached to said coil, said nozzles being located between said partition and the milk or cream container, spaces being provided at the lower end of said partition for the passage of the heating medium from the outer side of said partition to the inner side thereof.

4. In a pasteurizer, in combination, a milk or cream container; a heating-medium container surrounding the first mentioned container; inlet means for the heating medium comprising a coil in the lower part of the second mentioned container and arranged around the first mentioned container, said coil being arranged to discharge said heating medium at a plurality of points; a nozzle surrounding each of said discharge points; and a partition surrounding the milk or cream container and being located adjacent to said coil, said partition having an opening therein opposite to and communicating with each of said nozzles.

5. In a pasteuriser, in combination, a milk or cream container; a heating-medium container surrounding the first mentioned container; a partition in the heating-medium container surrounding the milk or cream container; and means located within the space bounded by said partition for heating the heating medium, said partition being arranged to permit the flow of the heating medium from the outside of said partition to the inner side thereof.

[Claim 6 not printed in the Gazette.]

1,023,324. TOY. THURMAN J. MICHENER, Charleroi, Pa. Filed Feb. 15, 1911. Serial No. 608,861. (Cl. 104—154.)



1. A toy comprising a car mounted on centrally disposed grooved wheels, means for causing the rotation of said wheels, and bladed wheels mounted on the ends of the axles bearing said grooved wheels.

2. A toy comprising a car mounted on centrally disposed grooved wheels, means for causing the rotation of said wheels, bladed wheels mounted on the ends of the axles bearing said grooved wheels, and means for balancing said car upon a suspended cable.

3. A toy comprising a car mounted on centrally disposed grooved wheels, means for causing the rotation of said wheels, bladed wheels mounted on the ends of the axles bearing said grooved wheels, means for balancing said car upon a suspended cable, an axle mounted on said car above one of said grooved wheels.

4. A toy comprising a car mounted on centrally disposed grooved wheels, means for causing the rotation of said wheels, bladed wheels mounted on the ends of the axles bearing said grooved wheels, means for balancing said car on a suspended cable, an axle mounted on said car above one of the grooved wheels, a wheel fixedly mounted on said axle, and adapted to engage the grooved wheel thereunder.

5. A toy comprising a car mounted on centrally disposed grooved wheels, means for causing the rotation of said wheels, bladed wheels mounted on the ends of the axles bearing said grooved wheels, means for balancing said car on a suspended cable, an axle mounted on said car above one of the grooved wheels, a wheel fixedly mounted on said axle, and adapted to engage the grooved wheel thereunder, bladed wheels mounted on the ends of said axle.

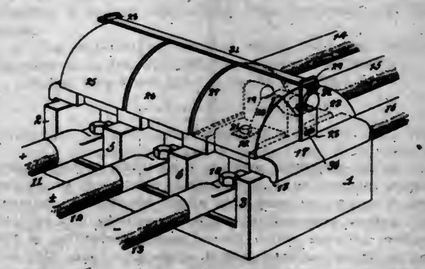
1,023,325. POULTRY-FEEDER. FRANK B. MILLER, Norwalk, Ohio. Filed Oct. 21, 1911. Serial No. 655,931. (Cl. 119—70.)



1. The combination, in a poultry feeder, having a discharge opening, a scoop pivoted underneath said opening, and tiltable on its pivot bearings, said scoop having a lateral discharge opening, a plate slidably and adjustably mounted upon the floor of the scoop and adapted to project beyond the edge thereof, and means for tilting the scoop operable by said poultry from a position underneath said scoop.

2. In a poultry feeder, in combination, a receptacle having a discharge opening in its lower end, a balanced scoop pivoted underneath said opening, said scoop having a discharge opening, a plate slidingly and adjustably mounted upon the floor of the scoop, means for limiting the swinging movement of the scoop, and a depending rod attached to said scoop at its upper end, said rod swinging with said scoop and operable by said poultry.

1,023,326. ELECTRIC CUT-OUT. THOMAS E. MURRAY, New York, N. Y. Filed Nov. 20, 1911. Serial No. 661,328. (Cl. 175—277.)



1. An electric cut-out, comprising a base block, having a plurality of pairs of recesses, contacts in said recesses, a substantially flat removable cover plate for said block extending over said recesses, a plurality of pairs of contacts depending from said plate and coöperating respectively with the contacts in said recesses, and fuses on the upper side of said plate, the terminals of each fuse being connected to a pair of said depending contacts.

2. An electric cut-out, comprising a base block, having two recesses, contacts in said recesses, a cover plate for said recesses, a pair of contacts on said plate, each member of said pair of contacts being formed with a U-shaped loop receiving an edge of said plate, and a depending projection coöperating with a contact in one of said recesses, and on the upper side of said plate a fuse having its terminals connected to the upper legs of said loops.

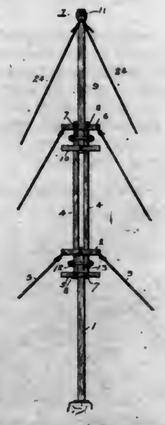
3. An electric cut-out, comprising a base block, having two recesses, contacts in said recesses, a cover plate for said recesses, a pair of contacts on said plate, each member of said pair of contacts being formed with a U-shaped loop receiving an edge of said plate, and a depending projection coöperating with a contact in one of said recesses, on the upper side of said plate a fuse having its terminals connected to the upper legs of said loops, and a connection extending through said cover plate and electrically uniting the arms of said loop.

4. An electric cut-out, comprising a base block, having two recesses, contact plates in said recesses extending to the tops thereof, a cover plate for said recesses, a pair of bent contacts on said plate, each of said bent contacts coöperating with a face and the upper edge of one of said recess contact plates, and on the upper side of said cover plate a fuse having its terminals connected to said bent contacts.

5. An electric cut-out, comprising a base block, a plurality of pairs of contacts thereon, a substantially flat removable cover plate for said block, having a rib on its upper surface, a plurality of fuses on said plate extending over said rib, and pairs of contacts on said plate connected to the fuse terminals and respectively coöperating with said block contacts.

[Claims 6 to 9 not printed in the Gazette.]

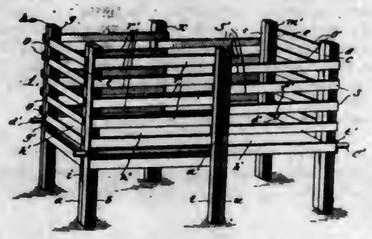
1,023,327. DERRICK. WALTER F. MUTH and EUGENE W. MUTH, Dayton, Ohio. Filed Feb. 6, 1911. Serial No. 606,758. (Cl. 212—14.)



1. In an extendible derrick, a plurality of telescoping sections longitudinally adjustable in relation to each other comprising two sections of a single longitudinal member each, and an intermediate section comprising two parallel members between which the adjacent extremities of the first mentioned sections project, cross arms connecting the parallel members of the intermediate section having slotted connections therewith, whereby the parallel members will be capable of movement to and from each other independent of the cross arms, and means for adjusting the parallel members toward each other whereby the extremities of the first mentioned sections may be clamped between the parallel members.

2. In an extendible derrick, a plurality of telescoping sections, the first section comprising a single member, parallel cross arms rigidly secured to the opposite sides of the member, adjacent to the upper end thereof, parallel longitudinally adjustable members located on opposite sides of the single first section member and between the cross arms thereof, cross arms connecting the parallel members having a yielding connection therewith, whereby the parallel members may be adjusted to and from each other, the said parallel members and cross arms forming the second section of the derrick and adapted to be projected above the first section by a sliding movement upon the first section member, and a third section comprising a single member adapted to be lifted to position between the parallel members of the second section and to be projected upward therefrom, and clamping members adapted to inclose the parallel members of the second section and draw said members toward each other whereby the extremities of the first and second sections will be clamped between said members.

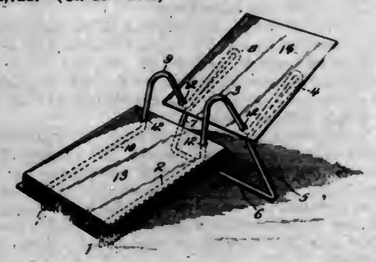
1,023,328. FOLDING EXTENSION-BED. EMMY ROSE NEUKIRCH, Claremont, near Cape Town, South Africa. Filed Apr. 4, 1911. Serial No. 618,980. (Cl. 5—9.)



1. A bed comprising in combination, four corner posts, the opposite pairs of which are provided with apertures in alinement with each other, oppositely disposed side structures secured to said posts, complemental side structures pivoted to said posts whereby the said side structures may be folded with respect to said first mentioned side structure, a rod for each of said pairs of corner posts and adapted to extend through the said apertures therein, and a member adapted to be rigidly held cross-wise by said rods to retain said side structures in a substantially rectangular form.

2. In a bed provided with sides forming substantially a rectangular form, of means pivoting said sides at the corners thereof whereby the same may be folded, and means retaining said bed in a substantially rectangular form, said means including rods carried by two of the parallel sides thereof, and a member adapted to be rigidly held cross-wise by said rods.

1,023,329. CALENDAR-SUPPORT. CHARLES H. PAYNE, Cincinnati, Ohio. Filed Feb. 18, 1910. Serial No. 544,721. (Cl. 40—120.)



1. A holder for calendar pads having apertured leaves consisting of a single piece of wire bent to form a frame having an open end and sides onto which the leaves of the pad may be threaded from the open end of the frame, the end portions of the frame constituting front and rear seats for the leaves of the pad and the sides of the frame intermediate their ends being bent upwardly to form filing arches connecting the seats.

2. In a holder for pad calendars having apertured leaves in combination, a pair of parallel wire filing arches, means for supporting and connecting the ends of the wire at one side of the arches, the ends of the wire at the other side of the arches being turned outwardly to form a frame having an open end onto which the leaves of a pad may be threaded and passed to the arches, and the said frame constituting a seat for the said leaves when filed on the arches.

3. A calendar support constructed of a single length of material bent at the respective terminals to form feet, projected therefrom to form spaced parallel seat bars, projected from the terminals of the seat bars to form connecting sections, projected from the terminals of the connecting sections to form auxiliary seat bars, projected from said auxiliary seat bars to provide a depending base, each auxiliary seat bar including a double strand of material, and the base being projected from the auxiliary seat bars adjacent their connections with the connecting sections.

1,023,330. VALVE FOR WIND MUSICAL INSTRUMENTS. WILLIAM C. REID, Elkhart, Ind., assignor to Elkhart Musical Instrument Company, Elkhart, Ind., a Corporation of Indiana. Filed Nov. 20, 1911. Serial No. 661,301. (Cl. 84—3.)



1. In a wind musical instrument, the combination with the valve, its casing, a stem for said valve, of a disk mounted on said stem and having a sliding non-rotating engagement therewith, and lugs projecting from said disk and interlocking with said casing against rotation, whereby the valve is free to reciprocate, but is locked against rotation in its casing.

2. In a wind musical instrument, the combination with the valve and its casing, of a stem for said valve having longitudinal grooves in its periphery, a disk slidably mounted on said stem, lugs projecting from said disk into the grooves of the stem thereby locking the stem and disk against relative rotation, and lugs projecting from the perimeter of said disk and having locking engagement with said casing, whereby the disk is locked in said casing against rotation.

3. In a wind musical instrument, the combination with the valve and its casing, of a stem for said valve provided with a head and having longitudinal grooves in its periphery, a disk slidably mounted on said stem, lugs projecting from said disks into the grooves of the stem, thereby locking the stem and disk against relative rotation, but leaving them free to slide relatively, and lugs projecting from the perimeter of said disk and having locking engagement with said casing, whereby the disk is locked in said casing against rotation, and a coil spring around said stem, one end of which is seated on said disk and the other end seated under said head.

4. In a wind musical instrument, the combination with the valve and its casing, seats in said casing of different sizes, of a stem for said valve having longitudinal grooves in its periphery, a head on said stem, a disk slidably mounted on said stem, lugs projecting from said disk into the grooves of the stem, thereby locking the stem and disk against relative rotation, and different sizes of lugs projecting from the perimeter of said disk adapted to be seated in the corresponding sizes of seats in the casing, whereby the disk is locked in said casing against rotation.

1,023,331. ALLOY OF MANGANESE AND TITANIUM AND METHOD OF PRODUCING THE SAME. AUGUSTE J. ROSSI, Niagara Falls, N. Y., assignor to The Titanium Alloy Manufacturing Company, New York, N. Y., a Corporation of Maine. Original application filed May 4, 1909, Serial No. 493,857. Divided and this application filed May 18, 1910. Serial No. 561,934. (Cl. 75—17.)

1. The method of producing the binary alloy of titanium with manganese, which comprises charging together oxid of manganese, oxid of titanium and carbon, and raising the temperature sufficiently to produce a bath of molten manganese, and reduction also of the titanium oxid, substantially as described.

2. The method of producing the binary alloy of titanium with manganese, which comprises reducing titanium oxid by carbon in a bath of molten manganese, substantially as described.

3. As a new article an alloy, or compound, consisting essentially of titanium and manganese alloyed together and containing also some carbon.

4. As a new article an alloy, or compound, consisting essentially of titanium and manganese alloyed together and containing also carbon in excess of 1%.

1,023,332. ALLOY OF THE PRECIOUS METALS AND METHOD OF INCREASING HARDNESS OF SUCH ALLOY. AUGUSTE J. ROSSI, Niagara Falls, N. Y., assignor to The Titanium Alloy Manufacturing Company, New York, N. Y., a Corporation of Maine. Original application filed May 6, 1910, Serial No. 559,656. Divided and this application filed Apr. 25, 1911. Serial No. 623,214. (Cl. 75—1.)

1. As a new article, a metallic substance composed principally of silver and a harder metal therewith alloyed, and containing also titanium.

2. As a new article, a metallic substance composed principally of silver and copper therewith alloyed, and containing also titanium.

3. The metallurgical method which comprises bringing together in molten state a precious metal, a harder metal, and titanium.

4. The metallurgical method which comprises bringing together in molten state silver, a harder metal, and titanium.

5. The metallurgical method which comprises bringing together in molten state silver, copper, and titanium.

[Claims 6 to 8 not printed in the Gazette.]

1,023,333. ALLOY OF TITANIUM, COPPER, AND SILICON. AUGUSTE J. ROSSI, Niagara Falls, N. Y., assignor to The Titanium Alloy Manufacturing Company, New York, N. Y., a Corporation of Maine. Original application filed Sept. 14, 1909, Serial No. 517,546. Divided and this application filed Jan. 25, 1912. Serial No. 673,357. (Cl. 75—17.)

1. As a new article of manufacture an alloy, or compound, of copper, silicon and titanium.

2. The aforesaid method for producing an alloy, or compound, of copper, silicon and titanium, which comprises bringing together, in desired proportions, a cupric material, oxid of silicon and oxid of titanium, and a reducing agent, and subjecting them to a temperature sufficient to reduce the oxids and produce as a resulting product the said alloy or compound.

3. The aforesaid method for producing an alloy, or compound, of copper, silicon and titanium, which comprises bringing together, in desired proportions, copper, oxid of silicon and oxid of titanium, and a reducing agent, and subjecting them to a temperature sufficient to reduce the oxids and produce as a resulting product the said alloy or compound.

4. The aforesaid method of producing an alloy, or compound, of copper, silicon and titanium, which comprises bringing together, in desired proportions, copper, oxid of silicon and oxid of titanium, and carbon, and subjecting them to a temperature sufficient to reduce the oxids and produce as a resulting product the said alloy or compound.

1,023,334. ALLOY OF THE PRECIOUS METALS AND METHOD OF INCREASING HARDNESS OF SUCH ALLOY. AUGUSTE J. ROSSI, Niagara Falls, N. Y., assignor to The Titanium Alloy Manufacturing Company, New York, N. Y., a Corporation of Maine. Original application filed May 6, 1910, Serial No. 559,656. Divided and this application filed Jan. 25, 1912. Serial No. 673,359. (Cl. 75—1.)

1. The metallurgical method which comprises bringing together in molten state gold, a harder metal, and titanium.

2. The metallurgical method which comprises bringing together in molten state gold, copper and titanium.

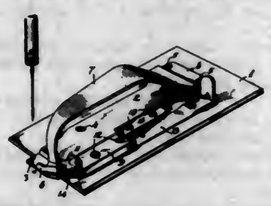
3. The method of producing an alloy of gold with a harder metal which comprises bringing together in molten state gold and an alloy of said harder metal with titanium.

4. The method of producing an alloy of gold with a harder metal which comprises bringing together in molten state gold and an alloy of copper with titanium.

5. As a new article, a metallic substance composed principally of gold, a harder metal therewith alloyed, and some titanium.

[Claim 6 not printed in the Gazette.]

1,023,335. GUIDE FOR SEWING-MACHINES. ALBERT RONTKE, Bridgeport, Conn., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Nov. 10, 1910. Serial No. 591,571. (Cl. 112—9.)



1. A fabric guide for sewing machines comprising an under edge-guide, a vertically adjustable upper edge-guide, and an adjustably mounted intermediate edge-guide provided with a fabric separator and with means for effecting vertically directed adjustments of said upper edge-guide.

2. A fabric guide for sewing machines comprising an under edge guide, a resiliently mounted and vertically movable upper edge guide, and an adjustably mounted intermediate edge-guide provided with a fabric separator and with means for effecting vertically directed movements of said upper edge-guide.

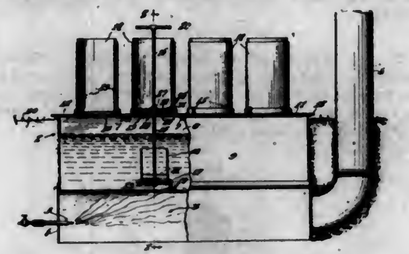
3. In a fabric guide for sewing machines an adjustably mounted intermediate guide, a base-plate, multiple edge-guides carried by said plate, and means for giving to one of said guides vertically directed adjustments for accommodating the insertion of a fabric intermediate superposed fabrics and for guiding the upper ply of the latter, said adjustably mounted intermediate guide being provided with a fabric separator and acting to guide the edge of said inserted fabric.

4. In a fabric guide for sewing machines an adjustably mounted intermediate edge-guide, a base-plate, vertically arranged edge-guides carried by said plate, and means for effecting adjustments of one of said guides for accommodating the insertion of a fabric intermediate superposed fabrics and for guiding the upper ply of the latter, said adjustably mounted intermediate edge-guide being provided with a fabric separator and acting to guide the edge of said inserted fabric.

5. A fabric guide for sewing machines comprising a lower guide, an intermediate guide whose guiding surface faces in a direction opposite to that of the guiding surface of said lower guide, and an upper guide, said lower and upper guides being relatively adjustable and provided with vertically arranged guiding elements, said intermediate guide being provided with a fabric separator and adjustable in a direction transverse to the relative adjustment of said upper and lower guides.

[Claims 6 to 8 not printed in the Gazette.]

1,023,336. APPARATUS FOR PRODUCING CONCRETE PIPE WITH WATERPROOF LINING THEREIN. GEORGE E. SALSBURY, Arcadia, Cal. Filed May 6, 1911. Serial No. 625,606. (Cl. 91—37.)



1. The combination of a tank, a cover plate for said tank having openings therein, means at said openings for retaining in position sections of concrete pipe, means for heating material in the tank, and a device for lining the interior of said sections of concrete pipe with said material, said device consisting of a rod, a brush at the lower end of said rod, a container on the rod for supplying the material to said brush, and a second brush on said rod disposed above the first mentioned brush, substantially as described.

2. The combination of a tank, a cover-plate over said tank having openings therein, means at said openings for retaining in position sections of concrete pipe, means for heating material in the tank, means for moving a portion of the heated material into the pipe and spraying it on the interior of said pipe to form a lining therein, and means to smooth down and even the surface of said lining.

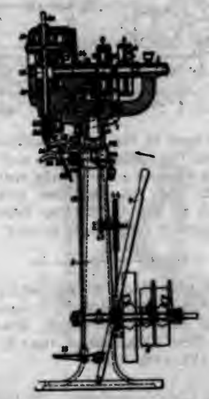
1,023,337. MACHINE FOR NAILING UPPERS TO SOLES. CARL SATTLER, Steglitz, Berlin, Germany. Filed Feb. 6, 1911. Serial No. 606,726. (Cl. 12—2.)

1. A machine for nailing uppers to soles, comprising in combination, a frame, a hammer, means for raising said hammer, resilient means for driving said hammer, nail feeding means operated by said hammer-driving means for presenting the nails singly below said hammer, a shoe rest and coöperating gripping means.

2. A machine for nailing uppers to soles, comprising in combination, a frame, a hammer, means for raising said hammer, means for driving said hammer, nail feeding means, a shoe rest, and means actuated by pressure on said shoe rest for gripping the shoe upper.

3. A machine for nailing uppers to soles, comprising in combination, a frame, a hammer, means for raising said hammer, means for driving said hammer, nail feeding means, a resiliently mounted shoe rest, means mounted adjacent said shoe rest for gripping the shoe upper, means whereby said upper gripping means will be automatically closed by pressure on the shoe rest, said pressure also acting on the rest to bring the shoe in nailing position.

4. A machine for nailing uppers to soles, comprising in combination, a frame, a hammer, means for raising said hammer, means for driving said hammer, nail feeding means, a resiliently mounted shoe rest, means mounted adjacent said shoe rest for gripping the shoe upper, means whereby said upper gripping means will be automatically closed by pressure on the shoe rest, and auxiliary means for manually actuating said gripper ahead of the automatic action of the shoe rest.



5. A machine for nailing uppers to soles, comprising in combination, a frame, a hammer, means for raising said hammer, resilient means for driving said hammer, nail feeding means, means operated by said hammer driving means for presenting the nails singly below said hammer a shoe rest and means for gripping a shoe-upper by pressure on said rest, said means for presenting nails singly below said hammer comprising a shaft revoluble longitudinally below said nail feeding means, a nail receiver on said shaft and movable transversely across the mouth of said feeding means, overlapping prongs extending inwardly across said mouth, said prongs forming a diagonal feed channel to said hammer, and a connection with said driving means.

[Claims 6 and 7 not printed in the Gazette.]

1,023,338. TROLLEY-WHEEL. WILLIAM H. SCHULTZE, Houston, Tex. Filed Oct. 31, 1911. Serial No. 657,793. (Cl. 191—37.)

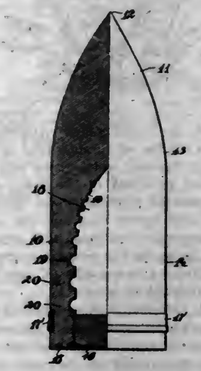


1. A device of the character described, including a trolley pole, whose free end is bifurcated, a trolley wheel secured between the fingers thereof, a plurality of jaws embracing said pole and wheel, an inwardly extending hook carried by each jaw, said hooks overhanging said trolley wheel, an inwardly extending fulcrum carried by each jaw beneath the trolley wheel, said fulcrums contacting with each other and means secured to the lower ends of the jaws for depressing said lower ends and causing the jaws to operate on said fulcrum to spread the upper ends thereof.

2. A device of the character described, including a trolley pole composed of detachable sections, a trolley wheel carried by the free end of said pole, a plurality of jaws embracing the free end of said pole and said wheel, an inwardly extending hook having its underside abruptly shouldered, carried by the upper end of each jaw, said hooks overhanging the trolley wheel, an inwardly extending shoulder carried by each jaw beneath the trolley wheel, said shoulders contacting with each other, a transverse shaft extending laterally through said jaws beneath the trolley wheel and securing the jaws together, a resilient member secured to each end of said shaft and resting against each respective jaw, a means secured to the lower end of the jaws for forcing said ends toward each other and overcoming the resistance of said resilient members whereby the upper ends of said jaws are forced apart.

3. A device of the character described, including a trolley pole whose free end is bifurcated, a trolley wheel having a peripheral groove secured between the fingers of said bifurcated ends, two opposing jaws embracing said trolley pole and wheel and depending therefrom, a shaft extending through the said jaws, fingers and wheel and securing the same together, an inwardly extending shoulder carried by each of said jaws beneath said wheel, said shoulders resting against each other, a shaft extending through an enlarged opening in said jaws beneath said wheel, a coil spring within said opening and surrounding said shaft whose opposite ends are secured, respectively, to the respective jaws, a resilient member carried by each end of the last mentioned shaft and pressing against the respective jaws and a means secured to the lower end of the jaws and depressing the same and causing the same to operate upon the said shoulders as fulcrums and overcome the resistance of said resilient members and spread the upper ends of said jaws.

1,023,339. SHELL. ALFRED J. SODEN, Newark, N. J. Filed May 9, 1911. Serial No. 626,010. (Cl. 102—26.)

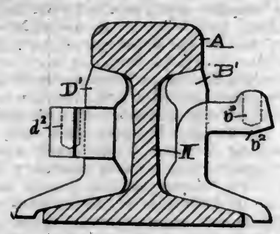


1. A projectile having an explosive chamber, the explosive chamber having a series of substantially transversely arranged grooves therein, the grooves becoming shallower toward the front of the projectile.

2. A projectile having a pointed end and being provided with an explosive chamber therein, the explosive chamber itself being narrower toward its front end and being provided with substantially transversely arranged grooves, the grooves becoming shallower toward the narrower or front portion of the explosive chamber.

3. A projectile having an explosive chamber therein, the explosive chamber being provided with a series of annular grooves, which grooves are substantially transversely arranged, the grooves becoming shallower and farther apart toward the front of the chamber.

1,023,340. SPLICE-BAR AND RAIL-BOND. CHARLES R. STURDEVANT, Worcester, Mass. Filed May 5, 1911. Serial No. 625,339. (Cl. 173—280.)



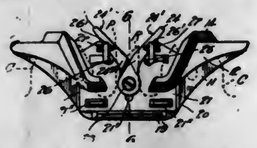
1. As an article of manufacture, a splice bar having a lug cast thereon and provided with a cavity extending down into the same, said splice bar having a rail bond conductor extending from the said cavity upwardly and out around the end of the splice bar.

2. As an article of manufacture, a splice bar having a portion thereof extending outwardly and provided with a hole therein extending downwardly from the top of said outwardly extending portion, and having a rail bond conductor extending out of the top of said hole and around the end of the splice bar.

3. As an article of manufacture, a splice bar having a lug cast thereon and provided with a bottomed cavity extending down into the same.

4. As an article of manufacture, a splice bar having a portion thereof extending outwardly and provided with a bottomed hole therein extending downwardly from the top of said outwardly extending portion.

1,023,341. SAW-TOOL. RICHARD H. SULLIVAN, La Conner, Wash. Filed Aug. 11, 1910. Serial No. 576,688. (Cl. 76—81.)



1. In a saw-tool, the combination with the tool-body, of a plate provided with the elongated hole, a pair of arms, a screw extending through said arms and also through said hole and a slot provided in the body, a nut for said screw, a pair of brackets provided upon the said plate and coöperating with said screw and nut for supporting the arms in various angular relations, and screws extending through threaded holes in the respective brackets to furnish gages to regulate the amount of swaging to be imparted to the raker-teeth of a saw.

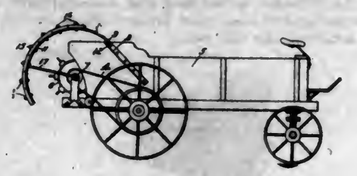
2. In a saw-tool, the combination with the tool-body, of a plate provided with an elongated hole, a pair of arms, a screw extending through said arms and also through said hole and a slot provided in the body, a nut for said screw, and a pair of brackets provided upon the said plate and coöperating with said screw and nut for supporting the arms in various angular relations.

3. In a saw tool, the combination with the tool-body, of a plate, means to detachably secure the plate to said body, a pair of members hingedly connected to each other and to said plate, and means for fixedly securing said members.

4. In a saw tool, the combination with the tool-body, of a pair of members hingedly connected to each other and to said body, and means for fixedly securing said members.

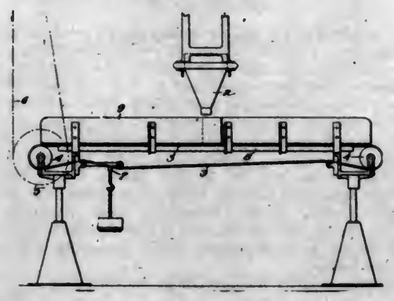
1,023,342. MANURE-SPREADER. RALPH H. THROCKMORTON, Homestead, Nebr. Filed Nov. 25, 1911. Serial No. 662,446. (Cl. 111—40.)

In a fertilizer distributer, the combination of a wagon body provided with bearings, a shaft journaled in the bearings, a rotary distributer drum mounted upon the shaft, means for driving the distributing drum, strips applied to opposite sides of the wagon body, a pair of curved brackets having the upper ends thereof detachably secured to the said strips, braces secured to the curved brackets and formed at the free ends with eyes adapted to



be fitted over the ends of the before mentioned shaft, and a shield connecting the curved brackets and carried thereby, the said shield extending around the rear of the rotary discharging drum and the fertilizer being discharged against the shield by the distributing drum so as to be broken up thereby as it falls to the ground.

1,023,343. PACKAGE-FILLING APPARATUS. EDWARD GEORGE TREMAINE, Hackensack, N. J., assignor to Automatic Weighing Machine Company, Newark, N. J., a Corporation of New York. Filed June 8, 1909. Serial No. 500,934. (Cl. 226—9.)



1. The combination with a package-filling apparatus of a continuously-driven conveyer passing beneath the point of discharge from said apparatus, a stop adapted to be projected into the path of a series of receptacles carried by said conveyer, and means operative with the filling of a receptacle for actuating said stop.

2. The combination with a package-filling apparatus of an endless conveyer belt arranged to run horizontally beneath the point of discharge from said apparatus, means for continuously driving said belt, a stop adapted to hold a receptacle on said belt in filling position, and means for actuating said stop.

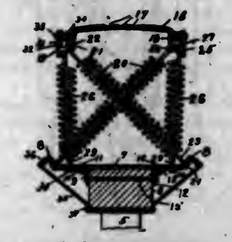
3. The combination with a package-filling apparatus having a discharge spout, of a continuously-driven conveyer arranged to transport a series of receptacles beneath said spout, one after another, a stop adapted to arrest the successive receptacles in filling position, a flap arranged to be operated by the passage of a charge of material through said spout, and connections between the flap and stop for actuating the latter.

4. The combination with a package-filling apparatus of a continuously-driven conveyer arranged to transport a series of receptacles beneath the point of discharge from said apparatus, one after another, a stop adapted to be projected into the path of said receptacles in position to hold the same successively in filling position, a spring normally maintaining said stop in operative position, a power-driven countershaft and connections between the same and the stop for withdrawing the latter, a latch normally arresting the rotation of the countershaft, and means operative with the passage of a charge of material into a receptacle for releasing said countershaft.

5. The combination with a package-filling apparatus of a continuously-driven conveyer belt arranged to transport a series of receptacles successively beneath the point of discharge from said apparatus, a stop adapted to be projected laterally into the path of said receptacles in position to hold the foremost empty receptacle in filling position, means for operating said stop, and lateral guides for the series of receptacles resting upon the conveyer belt, one of said guides being offset opposite the stop.

[Claims 6 to 10 not printed in the Gazette.]

1,023,344. ELASTIC TIRE FOR VEHICLE-WHEELS. CHARLES F. WALDMAN, Los Angeles, Cal. Filed Aug. 7, 1911. Serial No. 642,836. (Cl. 152—32.)



1. An elastic tire comprising inner and outer circular bands; radial edge springs arranged in pairs and connected to said bands at the outer edges thereof; springs connected to the outer edges of said bands and extending diagonally in radial planes between the edge springs, there being two diagonal springs reversely inclined between the adjacent pairs of edge springs; and means to secure the inner ring to the felly.

2. An elastic tire comprising an inner circular band having its edges formed into inverted V-shaped troughs, said band having holes therein as described; an outer tread band having at the edges thereof flanges that first project inwardly and then laterally, the laterally turned portions being slitted; radial edge springs arranged in pairs having their outer ends formed into hooks adapted to engage the flanges of the outer bands by being passed into the slots thereof, and having their inner ends threaded and adapted to pass through holes in the inner band; nuts on the inner ends of said springs; reversely inclined diagonal springs having ends like the edge springs and adapted to be secured to said bands in like manner, there being two of such springs between the adjacent pairs of edge springs; scalloped annular side plates having openings therein into which the outer edge of the outwardly turned portion of the flange of the tread plate is received; bolts uniting said plates and flanges; spacing washers on said bolts; and means to secure said inner band upon the felly of a wheel.

1,023,345. SHADE-FIXTURE. TORSTEN L. WALTER, Elmhurst, N. Y. Original application filed Oct. 24, 1910, Serial No. 588,881. Divided and this application filed Sept. 28, 1911. Serial No. 651,774. (Cl. 156—27.)

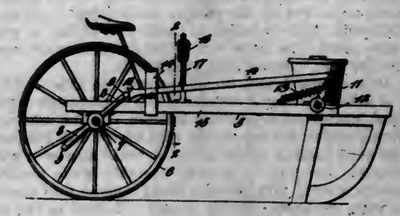
1. In a shade fixture, the combination of vertically slidable brackets, vertical guides therefor, top and bottom anchorages for said guides, raising and lowering cords attached to the brackets and thence extending upwardly, sheaves over which one of said cords passes and over one of which both cords pass, in the same direction and plane, and blocks for the sheaves held directly against the anchorages, said sheaves being pivoted in a horizontal plane.

2. In a shade fixture, the combination of vertically slidable brackets, guides therefor, operating cords for said brackets, blocks pivoted in a horizontal plane, sheaves over which one of said cords passes and over one of which both cords pass, carried by said blocks and a guide finger formed integral with the top portion of the block of the latter sheave and coöperating to hold the cords apart.



3. In a shade fixture, the combination of vertically slidable brackets, guides therefor, anchorages for said guides having horizontally extending upper portions, sheaves over which said cords pass, both cords passing over one of said sheaves, blocks for the sheaves pivotally held in a horizontal plane against the extending portion of said anchorages, the top wall of the block for said latter sheave being slitted and the material thereof bent downward to form a spacing finger coöperating with the sheave to guide the cords apart.

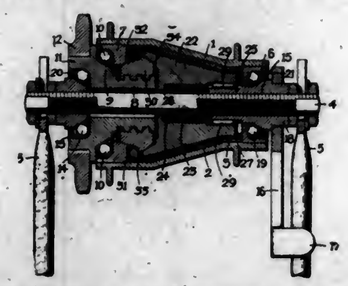
1,023,346. ATTACHMENT FOR PLANTING-MACHINES. LAMBERT WHEELER, Mount Vernon, Ohio. Filed Feb. 21, 1911. Serial No. 610,118. (Cl. 111—6.)



1. The combination with a wheel supported frame and seed dropping mechanisms mounted thereon and including a shaft, of a pitman connected to said shaft to oscillate the same, the pitman extending rearwardly from said shaft, means movable by and with the wheels for intermittently engaging said pitman whereby to move the same forwardly and actuate said shaft, means tending to move the pitman rearwardly, and foot operated means connected to said pitman whereby the downward movement of the operator's foot may raise the pitman out of the path of the pitman engaging means.

2. The combination with a wheel supported frame and seed dropping mechanisms mounted thereon and including a shaft, of a pitman operatively connected at its front end to said shaft to oscillate the same, means movable by and with the wheels for intermittently engaging the pitman whereby to move the same in one direction to oscillate the shaft, a pulley supported by and above the frame, and a cable connected at one end to the pitman and extending upwardly and transversely over the pulley with its free end depending therefrom, and a stirrup connected to said free end of the cable, whereby the operator by pressing downwardly with his foot on the stirrup may raise the rear end of the pitman out of the path of movement of the pitman engaging means.

1,023,347. BACK-PEDALING COASTER-BRAKE. JOSEPH H. WHITTINGTON, Buffalo, N. Y., assignor, by mesne assignments, to John H. Price, Akron, N. Y. Filed Dec. 17, 1903. Serial No. 185,533. (Cl. 208—57.)

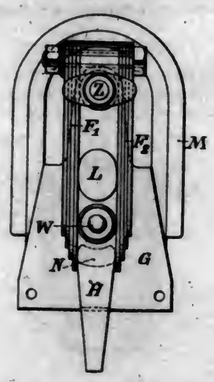


1. In a coaster brake, in combination, an axle, a wheel hub, a driver having a connected sleeve projected within the hub, anti-friction bearings between the hub and axle, a driving clutch for connecting said sleeve and hub upon the forward turning of the driver, a brake member carried by the hub, a laterally movable brake member, means for moving said movable brake member into engagement with the brake member carried by the hub upon the backward turning of the driver; said movable brake member having a deep longitudinal depression, a central longitudinal opening the greater portion of which is sufficiently larger than the axle to provide a deep annular recess between the axle and circular wall of the opening extending from one end of the brake member to near the opposite end and being contracted at the termination of the recess to fit fairly close around the axle and provide an annular shoulder, and a spring for normally maintaining the brake members out of frictional engagement; said spring being completely inclosed in the annular recess between the movable brake member and the axle and one of the cones of the anti-friction bearings having an extension which projects into the outer end of the central longitudinal opening in the movable brake member to hold the spring in place and also center the outer end of the movable brake member on the axle, substantially as set forth.

2. In a coaster brake, in combination, an axle, a wheel hub, a driver having a connected sleeve projected within the hub, anti-friction bearings between the hub and axle, a driving clutch for connecting said sleeve and hub upon the forward turning of the driver, a brake member rigidly attached to the hub, a laterally movable brake member, means for moving said movable brake member into engagement with the brake member rigidly attached to the hub upon the backward turning of the driver; said movable brake member having a deep longitudinal depression, a central longitudinal opening the greater portion of which is sufficiently larger than the axle to provide a deep annular recess between the axle and circular wall of the opening extending from one end of the brake member to near the opposite end and being contracted at the termination of the recess to fit fairly close around the axle and provide an annular shoulder, and a spring for normally maintaining the brake members out of frictional engagement; said spring being completely inclosed in the annular recess between the movable brake member and the axle and one of the cones of the anti-friction bearings having an extension which projects into the outer end of the central longitudinal opening in the movable brake member to hold the spring in place and also center the outer end of the movable brake member on the axle, substantially as set forth.

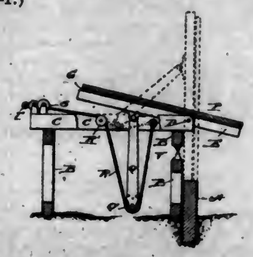
1,023,348. OPERATING MECHANISM FOR MAGNETO-GENERATORS. ARNOLD ZEHRINGER, Stuttgart, Germany, assignor to The Firm of Robert Bosch, Stuttgart, Germany. Filed Aug. 25, 1910. Serial No. 578,842. (Cl. 123—149.)

1. Actuating mechanism for magneto-generators in electric ignition systems, comprising an actuating lever fastened to the armature shaft, a pivotal support, a pair of spring arms mounted on said support, with their free ends embracing the armature shaft, a cam on the actuating lever at one side of the axis of the armature shaft and adapted to engage one or the other of the spring arms as the lever is turned, and a stop adapted to restrain the spring arm which is not engaged by said cam, whereby both spring arms are put under tension by the turning of the lever; substantially as described.



2. Actuating mechanism for magneto-generators in electric ignition systems, comprising an actuating lever fastened to the armature shaft, a pivotal support, a pair of spring arms mounted on said support with their free ends embracing the armature shaft, a cam on the actuating lever at one side of the axis of the armature shaft and adapted to engage one or the other of the spring arms as the lever is turned, and a stop symmetrically placed with respect to a line joining the center of the armature shaft and the center of the pivotal support, said stop being of such shape that it is closely embraced by the spring arms; substantially as described.

1,023,349. METHOD AND APPARATUS FOR CONSTRUCTING CONCRETE BUILDINGS. ROBERT H. AIKEN, Winthrop Harbor, Ill., assignor, by mesne assignments, to Aiken Engineering Company, a Corporation of Maine. Filed Nov. 4, 1907. Serial No. 400,896. (Cl. 25—1.)



1. The method of erecting a one-piece concrete building wall upon its foundation which consists in providing, alongside said foundation, an approximately horizontal platform pivoted to swing to vertical position upon an axis parallel to said foundation, forming upon said platform a concrete wall with an exposed margin parallel to the foundation and at approximately the same distance from the pivotal axis, and swinging the entire wall upon said axis to erect position upon the foundation.

2. The method of erecting the walls of concrete buildings which consists in forming one wall in approximately horizontal position at some distance above the support upon which it is to rest and extending on both sides of the vertical plane of such support, swinging said wall to vertical position about a horizontal axis above and near the plane of said support, and in like manner adding the remaining walls in succession.

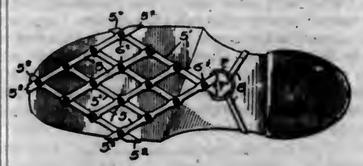
3. The method of erecting a one-piece concrete wall of a building upon its foundation which consists in providing a platform support alongside and extending above said foundation, mounting upon said support an approximately horizontal platform projecting over the foundation and pivoted to swing to vertical positon upon an axis parallel to the latter, forming upon the platform a concrete wall having one margin parallel to the foundation and at approximately the same distance from the pivotal axis, and swinging the platform about said axis to bring said margin into position to rest upon the foundation.

4. The combination with a suitable support, of a normally approximately horizontal platform pivoted between its opposite sides upon said support to swing vertically and adapted to carry the concrete wall of an ordinary dwelling or the like, means for swinging the platform about said axis to vertical position, and means for lowering the platform and wall after they have been swung upward.

5. The method of constructing and erecting walls which consists in forming the wall in a substantially horizontal position at an elevation directly over the permanent foundation to receive the same, then tilting the formed wall into vertical position over its seat on the foundation, and finally lowering the wall vertically onto its seat.

[Claims 6 and 7 not printed in the Gazette.]

1,023,350. ANTISLIPPING ATTACHMENT FOR FOOTWEAR. JULIUS M. ALEXANDER, Healdsburg, Cal., assignor of one-third to Charles W. Weaver, Healdsburg, Cal. Filed Nov. 9, 1911. Serial No. 659,334. (Cl. 36—62.)



1. In a device of the class described, the combination with a collapsible frame, comprising parallel spaced bars intersected by and pivotally mounted to other parallel spaced bars, sole engaging portions projecting from the frame and adapted to engage the sole of a shoe, studs projecting from the frame in an opposite direction from the sole engaging portions, and a flexible connection adapted to extend from the rear of the frame and around the rear of the shoe for collapsing the frame and forcing the sole engaging portions against the sole of a shoe.

2. In a device of the class described, the combination of a frame comprising parallel spaced bars intersected by and pivoted to other parallel spaced bars, sole engaging portions formed by the ends of certain of the bars, studs projecting from the pivotal points of the bars, and a flexible connection secured to the rear of the frame and adapted to extend around the rear of the shoe for collapsing the frame and forcing the sole engaging portions against the sole of a shoe.

3. In a device of the class described, the combiantion of a frame comprising parallel spaced bars intersected by and pivoted to other parallel spaced bars, the bars being arranged in angular relation to each other, sole engaging portions formed by the ends of certain of the bars, studs projecting from and their upper ends forming the pivots for the bars, a flexible connection secured to the rear of the frame and adapted to extend around the rear of the shoe for collapsing the frame and forcing the sole engaging portions against the shoe, and another flexible connection secured to the first mentioned flexible connection and adapted to extend around the upper front portion of the shoe for supporting the said flexible connection.

1,023,351. SEWING-MACHINE DRIP-PAN. EDWARD B. ALLEN, Bridgeport, Conn., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed May 21, 1907. Serial No. 374,977. (Cl. 112—13.2.)

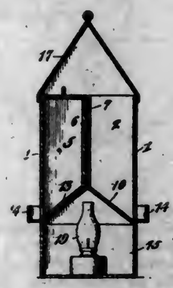


1. In a sewing machine, a frame comprising a flat cloth-plate and integrally formed depending flanges, an oil receptacle, and means including coacting catch-members for securing said receptacle within the inner walls of said flanges.

2. In a sewing machine, a frame comprising a flat cloth-plate and integrally formed flanges depending from the oppositely arranged longitudinal edges of said cloth-plate, an oil receptacle, and means including coacting catch members for securing said receptacle within the inner walls of said flanges.

3. In a sewing machine, a frame provided with a flat cloth-plate, an oil receptacle mounted in said frame, and means including coacting catch members for holding said receptacle in oil receiving position in said frame, one of said catch members being constructed and arranged to yieldingly hold said receptacle in crowded relationship with said frame.

1,023,352. COMBINATION FEEDER, FOUNTAIN, AND HEATER. LEO M. ANDERSON and MAY L. ANDERSON, Ramsey, N. J. Filed May 11, 1911. Serial No. 626,597. (Cl. 119—53.)



A combination fountain and heater for poultry, comprising a casing divided into a plurality of vertically elongated compartments meeting at the longitudinal center of the casing and formed with outwardly and downwardly inclined bottoms, the casing being provided with separate cups on its exterior at the bottom of the compartments and with openings leading outwardly into the cups, the casing being further formed with a heating compartment underneath the bottoms of the first named compartments and communicating with all of the said bottoms whereby the heat created in the heating compartment will act equally upon all of the first named compartments, the casing being also formed in one side with a relatively large opening extending to the upper edge of the casing, a water receptacle fitting in said opening and resting on the inclined bottom of one of the first named compartments and formed with an opening leading out into one of the cups, and a detachable cover for the top of the casing, said cover extending over the front of the water receptacle at the top thereof whereby to hold the water receptacle in position.

1,023,353. TOOL FOR CUTTING TEETH ON WORM-WHEELS. OSCAR T. ANDERSON, Waterloo, Iowa. Filed Feb. 4, 1910. Serial No. 542,038. (Cl. 29—103.)

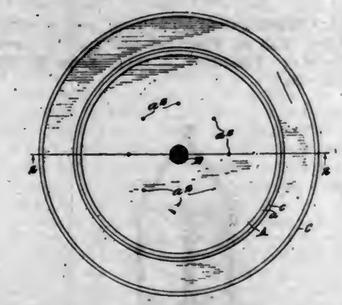


1. A tool for cutting teeth on worm-wheels, consisting of a rotary longitudinally-movable cutting-head provided with circumferential spiral threads running back from end cutting faces, said threads being progressively diminished in diameter in a direction running back from said cutting faces.

2. A tool for cutting teeth on worm-wheels, consisting of a spindle furnished with spiral threads extending from one end rearwardly, the cutting-end of each thread being approximately perpendicular to the axis of the spindle, and directed at an angle to the adjacent face of the next adjacent preceding thread.

3. A tool for cutting teeth on worm-wheels, consisting of a spindle furnished with spiral threads extending from its cutting end rearwardly, the threaded part of the spindle being widest at its cutting end and progressively diminishing in diameter rearwardly, the cutting end of each thread being set at an angle to the diameter of the spindle.

1,023,354. TABLE-PIECE AND FOUNTAIN. FREDERICK C. AUSTIN, Chicago, Ill. Filed Jan. 20, 1911. Serial No. 603,695. (Cl. 47—41.)



1. In a table fernery, a receptacle provided with a drain or offtake and a centrally arranged tube, a removable inner section surrounding said fountain in the receptacle, and a removable outer section surrounding said receptacle, said outer section having an inner flange which rests on the edge of said receptacle, and the inner section having outer portions which rest upon the said inner flange of the outer section, so that water from the fountain can fall into the outer section and then overflow therefrom and into said receptacle, the outer edge of said outer section being higher than said flange.

2. In a table fernery, a plurality of concentric sections, which sections have overlapping portions, each section being removable and the outer edge of the outer section being higher than the said overlapping portions, whereby the overflow from said outer section is between said sections.

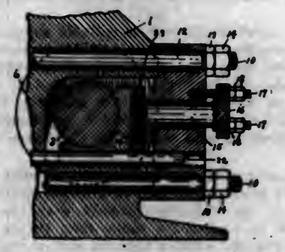
3. In a table fernery, a plurality of concentric receptacles constituting sections of the fernery in its entirety, and which sections are removable, whereby the diameter of said fernery may be changed at will.

4. In a table fernery, a plurality of concentric sections, which sections have overlapping portions, each section being removable, the outer edge of the outer section being higher than the said overlapping portions, whereby the overflow from said outer section is between said sections, and a tube at the center of the middle section, which tube is open at top and bottom and higher than the edges of said sections.

5. In a table fernery, a plurality of concentric receptacles constituting sections of the fernery in its entirety, which sections are removable, whereby the diameter of said fernery may be changed at will, and a tube at the center of the middle section, which tube is open at top and bottom and higher than the edges of said sections.

[Claims 6 to 19 not printed in the Gazette.]

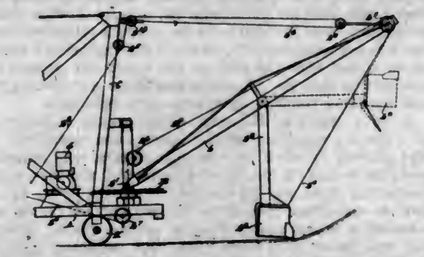
1,023,355. BEARING FOR MILL-ROLLS. WILLIAM M. BANCROFT, New Orleans, La. Filed Nov. 13, 1911. Serial No. 660,094. (Cl. 100—47.)



1. A bearing for the journals for the lower rolls of a three-roll mill, comprising a frame having a pocket to receive the journal, a quarter-box slidable therein, a pressure plate in contact with the rear side of the box, a cap extending over the pocket, a follower plate, bolts to adjustably secure the same in position, and a ram mounted in said cap and extending between the pressure-plate and follower.

2. In a grinding mill, a frame having pockets to receive the journal of a lower roll, a cap extending over a pocket and means to secure the same in position, a quarter-box for said journal and a pressure-plate bearing against the same, means to guide the plate and box, a follower, studs and nuts carried by the cap to adjustably hold the follower in position, said follower and pressure-plate having spherical seats, and a ram extending between said seats to transmit pressure from the quarter-box to said follower.

1,023,356. EXCAVATING-MACHINE. CHARLES E. BATHRICK, Chicago, Ill., assignor to Frederick C. Austin, Chicago, Ill. Filed Jan. 12, 1911. Serial No. 602,360. Renewed Sept. 5, 1911. Serial No. 647,799. (Cl. 37—16.)



1. In an excavator, a body, a turn-table with a drag-line bucket equipment at one end of said body, and a turn-table with a dipper equipment at the other end of said body.

2. In an excavator, a body, a ditching apparatus at the rear end of said body, and an excavating apparatus on the forward end of said body.

3. In an excavator, a body, a turn-table with a drag-line bucket equipment at one end of said body, a turn-table with a dipper equipment at the other end of said body, and a power plant and winding drum mechanism for the entire excavator, carried on the middle portion of said body.

4. In an excavator, a body, a ditching apparatus at the rear end of said body, an excavating apparatus on the forward end of said body, and a power plant and winding drum mechanism for the entire excavator, carried on the middle portion of said body.

5. In an excavator, a body, a turn-table with a drag-line bucket equipment at one end of said body, a turn-table with a dipper equipment at the other end of said body, a mast for each end of the excavator, and brace members connecting said masts together, wheels for said body, an engine near the forward end of the body, a winding drum mechanism between the engine and the rear end of the body, there being comprised in the foregoing a boom overhanging each end of said body.

[Claim 6 not printed in the Gazette.]

1,023,357. MOUNTING FILAMENTS. EDWARD P. BECKWITH, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed May 21, 1906. Serial No. 317,923. (Cl. 176—39.)



1. The process of manufacturing electric incandescent lamps having filaments made from plastic material, which consists in suspending the filament, while plastic, in loops on a supporting frame, treating said filament while on said frame to render the filament refractory and non-ductile, and then mounting said frame with said filament thereon in the lamp bulb.

2. The process of manufacturing electric incandescent lamps having filaments made from plastic material, which consists in suspending the filament, while plastic, in loops on a supporting frame in such manner as to give the loops a predetermined amount of slack, treating the filament while on said frame to take up the slack and to render the filament refractory, and then mounting said frame with said filament thereon in the lamp bulb.

3. The process of manufacturing electric incandescent lamps having filaments of complex configuration made from plastic material, which consists in so applying the filament while plastic to a supporting frame as to give the filament substantially the desired configuration, treating said filament while on said frame to render it non-ductile, and then mounting said frame with the filament thereon in the lamp bulb.

4. The process of manufacturing electric incandescent lamps having filaments made from plastic material composed of metal and a binder, which consists in suspending said filament, while plastic, on a supporting frame, treating said filament while on said frame to remove the binder and to convert the filament into brittle metal, and then mounting said frame with the filament thereon in the lamp bulb.

5. A method of manufacturing electric incandescent lamps having filaments made from plastic material consisting in stretching the filaments while in a plastic condition on the support subsequently employed for supporting them in the lamps, in completing the manufacture of the filaments while on said supports, and in inserting the supports with the finished filaments in the lamp bulbs.

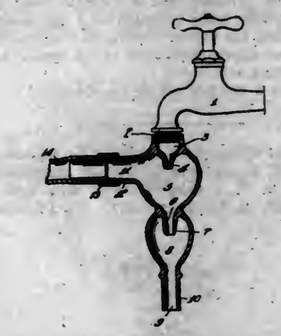
[Claims 6 to 8 not printed in the Gazette.]

1,023,358. FACE-MASK. LILLIAN M. BENDER, Seattle, Wash. Filed Feb. 9, 1911. Serial No. 607,665. (Cl. 128—8.)

A face mask comprising a sheet of elastic material provided with a mouth opening, an upper, an intermediate and a lower pair of tabs, said lower pair being of greater width than either of the other pairs, said upper pair being of greater length than any of the other pairs, a pair of laces each connected to an intermediate tab and extending through an upper tab, a hook-and-eye attachment mounted upon that portion of the laces between the upper and intermediate tabs and further adapted to connect the said portions together, and a single lace for adjustably connecting the lower tabs together.



1,023,359. INDUCED SUCTION FOR VACUUM-CLEANERS. JAMES BIRRELL and WILLIAM BIRRELL, Seattle, Wash., assignors, by mesne assignments, to Water Vacuum Cleaner Co. Inc. Filed May 8, 1911. Serial No. 625,805. (Cl. 230—13.)



In a device of the class described, a casing having an air inlet at one side and a water inlet at the top terminating in a nozzle depending into the chamber of the casing, the casing at its lower end terminating in a discharge nozzle, and a second casing integral at its upper end with the first-mentioned casing and terminating at its lower end in a discharge nozzle, the nozzle depending from the first-mentioned casing extending into the chamber of the second-mentioned casing, all of said nozzles being in direct vertical alinement with the axis of the chambers, and the side inlet of the first-mentioned casing being in a plane with the discharge nozzle of the water inlet.

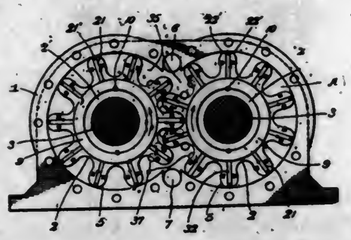
1,023,360. ROTARY ENGINE. AUGUST BRAUER, Independence, Mo. Filed Feb. 6, 1911. Serial No. 606,967. (Cl. 121—54.)

1. In a rotary motor, a piston member provided with three transverse grooves, packings in said grooves, and springs pressing outwardly upon the respective packings, one of said springs acting upon two of said packings.

2. In a rotary motor, a piston member provided with a radial groove in its end face, a packing in said groove, said packing having a chamber, and a duct through the piston member into said chamber; said duct being adapted to admit a motive fluid behind said packing.

3. In combination, a cylinder head provided with an annular groove in its inner face; packing rings in said groove, a spring pressing inwardly upon said rings, an oil tube passing through said rings, the innermost ring hav-

ing an annular oil chamber; a rotary piston having an annular recess; and a packing ring in said recess, contacting said chambered ring and rotating with the piston.

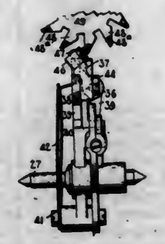


4. In combination, a cylinder head provided with an annular groove in its inner face; packing rings in said groove; a slidable rod contacting one of said rings; a spring pressing inwardly upon said rod; the innermost ring having an oil duct opening on its wear face; an oil tube entering said duct; a rotary piston having an annular recess; and a packing ring in said recess, contacting said innermost ring and rotating with the piston.

5. In a rotary motor, a cylinder, a pair of rotary pistons, each having intermeshing cogs adapted for propulsion within the cylinder, and a cylinder head provided with a pair of relief holes arranged on a line parallel with a line connecting the piston centers, and registering with a space between approaching cogs of the piston, and with a duct connecting said holes.

[Claims 6 to 8 not printed in the Gazette.]

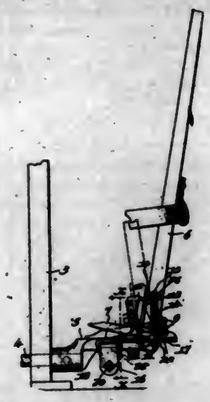
1,023,361. TYPE-WRITING MACHINE. DANIEL BRIGGS, New York, N. Y., assignor to Wyckoff, Seamans & Benedict, Ilion, N. Y., a Corporation of New York. Filed Nov. 15, 1906. Serial No. 343,567. (Cl. 197—82.)



In a typewriting machine, the combination of a carriage; and escapement mechanism therefor, said escapement mechanism comprising an escapement wheel, a dog rocker pivoted on an axis at right angles to the axis of the escapement wheel, a roller dog pivoted on the dog rocker and with the periphery of which the teeth of the escapement wheel are adapted to coöperate, the axis of the roller dog being inclined to the axis of the dog rocker and inclined to the axis of the escapement wheel when the axis of the roller dog is in the plane of the wheel.

1,023,362. PICKER-STICK CHECK. HENRY COTÉ, West Warren, Mass., assignor to Ware Machine & Loom Company, Ware, Mass., a Corporation of Massachusetts. Filed Apr. 8, 1911. Serial No. 619,652. (Cl. 139—22.)

1. In a picker stick check, the combination with a rocker foot, of a rocker thereon, a picker stick secured to the rocker, a U-shaped plate, one arm of which is clamped between the rocker and picker stick and the other arm of which extends downwardly at the side of the picker stick and the end of which is bent laterally and slotted, a vertically-disposed pin secured to the rocker foot and extending upwardly through said slot, and a spring sustained by said pin and bearing against the upper side of said arm.

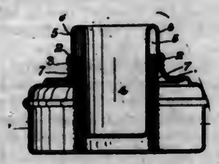


2. In a picker stick check, the combination with a rocker foot, of a rocker thereon, a picker stick secured to the rocker, a plate provided with a stem which is clamped between the picker stick and the rocker foot, and also provided with a downwardly-extending arm, the end of which extends laterally and is situated at the side of the picker stick, and a spring acting on said laterally-extending portion and serving to check the forward movement of the picker stick.

3. In a picker stick check, the combination with a rocker foot having a laterally and downwardly-extending lug, of a rocker thereon, a picker stick secured to the rocker, a laterally-extending arm associated with the picker stick, a plate secured to the laterally and downwardly-extending lug, a pin carried by said plate and extending above said arm and having a collar thereon, and a spring carried by the pin and acting at one end against said collar and at the other on the arm to cushion the forward movement of the picker stick.

4. In a picker check, the combination with a rocker foot, of a rocker thereon, a picker stick secured to the rocker, a plate clamped between the picker stick and rocker and provided with a horizontally-arranged slotted portion situated at one side of the picker stick, a pin fixedly secured to the rocker foot and extending vertically through said slot, a collar on the pin, and a spring interposed between the collar and the slotted portion of the plate.

1,023,363. BURNER FOR INFLAMMABLE VOLATILE FLUIDS. LEWIS B. CURTIS, Bridgeport, Conn. Filed Dec. 15, 1910. Serial No. 597,525. (Cl. 158—72.)



A burner of the type set forth, including a main body formed with an upwardly extending neck which is threaded at its free end, and a cap having an outer part which is formed with a lower threaded portion to engage said threads of the neck and having its upper part bent over and down to form an inner tubular part which latter extends parallel and in spaced relation to said outer part and terminates at a point slightly above the bottom of the body, said outer part being formed with openings adjacent its top, and an annular wick in the space between the inner and outer parts, said wick having its bottom engaging the bottom of the body and its upper end terminating below the openings of the outer part, the lower end of the wick forming the side walls of the temporary combustion chamber to initially heat the tubular part.

1,023,364. SAFETY-RAZOR. STEPHEN V. DILLON, Butler, Pa., assignor to The Dillon Safety Razor Co., a Corporation of Delaware. Filed Jan. 30, 1911. Serial No. 605,571. (Cl. 30—12.)



1. In a safety razor, a frame, a guard formed thereon, a blade holding member carried thereby, a blade secured in said member, a blade adjusting member pivotally mounted on said frame and adapted to be swung to an out-of-the-way position to permit the blade to be stropped, and detachable means to draw said adjusting member into engagement with the edge of the blade whereby the latter is sprung into more or less close engagement with the guard.

2. In a safety razor, a frame, a pivotally mounted blade holding member, a blade secured therein, a blade adjusting member adapted to hold said blade in operative engagement with said guard, said adjusting member comprising a pair of curved arms pivotally connected at their upper ends to said frame, a curved plate formed between the lower ends of said arms, an adjusting bolt loosely engaged in said plate, a revolubly mounted nut adapted to receive the threaded end of said bolt whereby the latter is actuated to draw said adjusting plates into forcible engagement with the edge of the blade whereby the latter is sprung into more or less close engagement with said guard.

3. In a safety razor, a frame, a toothed guard formed thereon and having formed therein a passage, a blade holding member pivotally mounted in said frame, a blade secured in said holding member, said blade having formed therein an aperture, a blade adjusting member, said member comprising a pair of curved arms pivotally connected at their outer ends to said frame, a curved plate formed between the lower ends of said arms, said plate being tapered toward its lower edge, a stud arranged in said plate, an adjusting bolt hingedly connected to said stud, said bolt having a threaded inner end adapted to project through the passage in said guard plate, a recessed nut attaching plate secured to the rear side of said guard plate, a nut having a revoluble engagement with said attaching plate and adapted to receive said threaded end of the bolt whereby the latter is screwed inwardly or outwardly, thus actuating said blade adjusting member, whereby the edge of the blade is sprung into more or less close engagement with said guard.

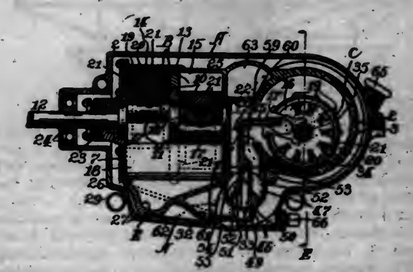
1,023,365. POULTRY FEEDER AND EXERCISER. FRANK ENOS, Jr., Norwich, Conn., assignor to The Norwich Automatic Feeder Co., Norwich, Conn., a Corporation of Connecticut. Filed May 4, 1911. Serial No. 624,913. (Cl. 119—70.)

In a poultry feeder, in combination with the hopper thereof having a tapering lower portion and a bottom formed with discharge openings and feed agitating means above the bottom, a shield formed of a square plate the corner portions of which plate are bent downwardly to extend at an angle to the center of the plate to form a series of depending legs, the free ends of which engage



the tapering lower portion of the hopper to support the plate.

1,023,366. POWER-TRANSMITTER. EDWIN FABIAN and FREDRICK WIDMARK, St. Paul, Minn. Filed June 6, 1910. Serial No. 565,396. (Cl. 138—3.)



1. A power transmitter comprising in combination, a driving element, a pump connected with said driving element, driven elements, motors connected with said driven elements, valved passageways communicating with said pumps and motors, a body of fluid connecting said pump and motors through said passageways and a fluid tight reservoir supported by said driven elements and surrounding said pump and motors.

2. A power transmitter comprising in combination, a drive shaft, a rotary power pump on said shaft, rotary fluid motors, a body fluid connecting said pump and motors, driven elements with which said motors are connected independently, adapting them to assume different speeds under the same fluid pressure and a fluid tight casing forming a combined jacket and oil reservoir surrounding said pump and motors.

3. In a power transmitter, a drive shaft, pump pistons on said shaft, driven shafts, motor pistons on said driven shafts, cylinders integral with each other surrounding said pump and motor pistons, passageways between said cylinders, a body of fluid connecting said pump and motor cylinders through said passageways, a single valve for controlling the flow of said fluid to rotate the motors in either direction, or prevent the operation of the same and a fluid tight casing surrounding said cylinders in communication therewith and supported by said driven shafts.

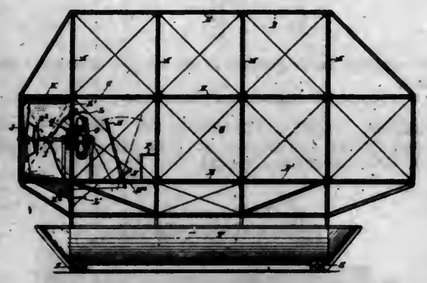
4. In a power transmitter a driving shaft, pump pistons on said shaft, driven shafts, motor pistons on said shafts, integral pump and motor cylinders for said pump and

motor pistons, passageways between the pump and motor cylinders, a body of fluid communicating with said cylinders through said passageways, a pipe cooler for said fluid, a valve for controlling the flow of the fluid whereby said motors may be operated in either direction at any desired speed and a fluid tight casing surrounding said cylinders in communication therewith and supported on said driven shafts.

5. A power transmitter comprising in combination, a driving element, a pump on said driving element, driven elements, motors on said driven elements adjacent to said pump, a body of fluid communicating with said pump and motors, a valve for controlling the flow of said fluid, a pipe cooler for the same and a fluid tight casing supported by said driven elements forming a combined jacket and reservoir surrounding said pump and motors.

[Claims 6 to 11 not printed in the Gazette.]

1,023,367. AIRSHIP. HERMANN FAEHRMANN, New York, N. Y. Filed Oct. 6, 1908. Serial No. 456,438. (Cl. 244—14.)



1. An airship provided with an aeroplane, a rotatable propeller for propelling the ship and for creating a current of air directly under and against the aeroplane and a device separate from said propeller for varying the velocity of said current.

2. An airship provided with an aeroplane, a propeller and a pressure chamber into which said propeller is arranged to force the air, said chamber communicating with a channel having a reduced outlet for conducting air under the aeroplane.

3. An airship provided with an aeroplane, a propeller for moving said ship, a channel for conducting air from the propeller under the aeroplane, and a valve located in said channel.

4. An airship provided with superposed aeroplanes, a chamber, channels having an outlet beneath each aeroplane and each communicating with said chamber and means in said chamber for discharging a current of air through each outlet of said channels.

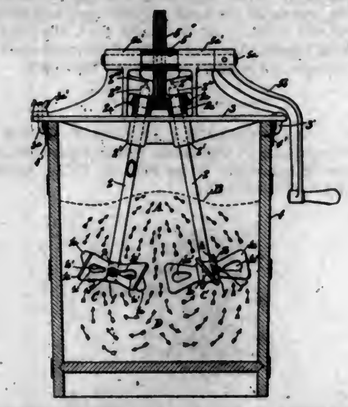
5. An air ship provided with superposed aeroplanes, means for creating a current of air and means separate from said aeroplanes for dividing said current of air and conducting it respectively beneath each plane.

[Claims 6 to 9 not printed in the Gazette.]

1,023,368. CHURN. ALPHEUS FAY, Louisville, Ky. Filed Jan. 16, 1911. Serial No. 603,020. (Cl. 31—44.)

1. In a churn, the combination with a vessel containing liquid, of agitators in said liquid, adapted to induce upwardly directed currents of said liquid inclined toward each other, and producing collision thereof in a region central of said vessel.

2. In a churn, the combination with a vessel containing liquid, of agitators positioned substantially midway of the depth of said liquid, and adapted to induce upwardly directed currents in said liquid colliding in a region central of the vessel, adjacent to the upper surface of said liquid, said agitators being separated to allow the passage of the collided liquid downward, and a space being left in the lower region of the vessel, whereby the collided liquid may deposit its fatty matter.



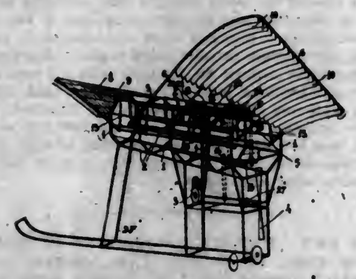
3. In a churn, agitators with helically disposed blades, said agitators being juxtaposed at such distance each from the other that their circles of rotation do not intersect, and the axis of rotation of each agitator being inclined to the axis of rotation of the other, and means for rotating said agitators, for the purposes set forth.

4. In a churn, agitators with helically disposed blades, and with axes of rotation each inclined toward the other upwardly, said agitators being juxtaposed at such distance apart that their circles of rotation do not intersect, and each having a tubular shaft leading from a region above to a region below its blades, for the purposes set forth.

5. In a churn, agitators, downwardly diverging shafts, on the lower ends of which said agitators are mounted, respectively, to rotate therewith, said agitators comprising blades adapted to impel liquid longitudinally of their respective shafts, the pitch of the blades on one of said agitators being opposite to the pitch of the blades on the other agitator, means for rotating said shafts and their agitators in opposite directions, and a vessel in which said agitators operate, for the purposes set forth.

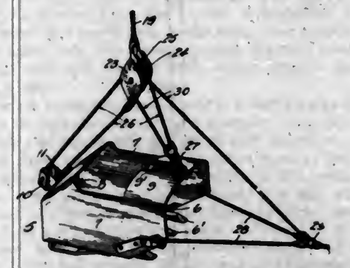
[Claims 6 and 7 not printed in the Gazette.]

1,023,369. APPARATUS FOR AERIAL NAVIGATION. MANFREDO FERRERO, Turin, Italy. Filed Jan. 17, 1908. Serial No. 411,294. (Cl. 244—20.)



In apparatus for aerial navigation the combination of wings for rising, shutters in said wings, a rigid frame for the wings, a propeller for propulsion, means for pivoting the wings about two axes which converge toward the front end of the apparatus, a motor for operating the wings and propeller, a bar on the lower part of the frame of the wings, means for connecting the bar to the motor, and springs for connecting the frame of the wings to the body of the apparatus, and adapted to balance the operating effort of the motor and to keep the wings pointing downward.

1,023,370. EXCAVATING-BUCKET. FRANCIS G. FAINE, Seattle, Wash. Filed Oct. 10, 1911. Serial No. 653,894. (Cl. 37—54.)



1. The combination with a bucket, a rope sheave attached to the rear end of the bucket, a hauling line secured to the forward end of the bucket, a hoisting line, a pulley block suspended from said hoisting line, a flexible sling having one end secured to the forward end of the bucket, thence passing over a sheave of said block and the aforesaid rope sheave and having its other end secured to said block, and a controller line having one of its ends secured to said hauling line, thence passing through said block and having its other end secured to the bucket near its forward end.

2. The combination of an excavating bucket, a rope sheave attached to the rear end of the bucket, a hauling line, draft lines connecting said hauling line with the bucket at opposite sides of the latter, a hoisting line, a pulley block supported by said hoisting line, a controlling line passing through said block and making operative connections between the forward end of the bucket and said hauling line, and a rope supporting the bucket at the opposite ends of the latter and making a running engagement with said block and with said rope sheave.

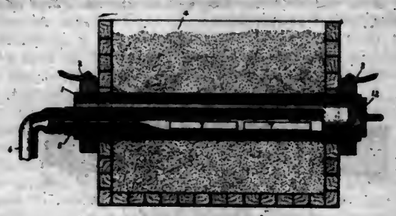
3. In apparatus of the class described, the combination with an excavating bucket, of a rope sheave attached to the rear end of said bucket, a hoisting line, a pulley block suspended from said line, a rope connected with the front end of the bucket and making a running engagement with both the rope sheave and the block, and a controlling line connected with the bucket adjacent its forward end and making a running engagement in the block.

4. The combination of a supported pulley block, a bucket, a rope sheave attached to the rear end of the bucket, a rope having its ends secured respectively to said block and to the forward end of the bucket and also making a running engagement with both the block and the rope sheave, and a controller line connected with the bucket near its forward end and passing through said block.

1,023,371. ELECTRIC FURNACE. CARL T. FULLER, East Orange, N. J., assignor to General Electric Company, a Corporation of New York. Original application filed Aug. 24, 1907, Serial No. 390,048. Divided and this application filed Dec. 30, 1908. Serial No. 470,022. (Cl. 219—36.)

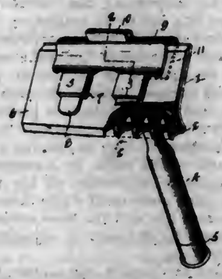
1. The combination of a carbonaceous resistance tube, means for supplying electrical energy thereto to heat the same, means for supplying hydrogen to said tube, and a charge protecting boat heated by said tube, said boat consisting in part of rutile.

2. The combination with a carbon tube resistance heater, of means for continuously supplying hydrogen thereto, and a charge protecting boat of carbon lined with rutile inclosed and heated by said tube and also protected by said hydrogen.



3. In an electric furnace, the combination of a carbonaceous tube, means for heating said tube, means for supplying hydrogen to one end of said tube, and a refractory boat, having marked affinity for carbon, mounted in said tube in the path of said hydrogen, said boat being open.

1,023,372. SAFETY-RAZOR. JEAN GARRET, Pittsburgh, Pa. Filed Jan. 31, 1911. Serial No. 605,708. (Cl. 30—12.)



1. In a safety razor, the combination of a base, a blade supported upon the base, and a holder comprising a clip for securing the blade upon the base, said clip having a portion partly cut therefrom and bent into a roll which extends from the clip to provide a finger piece.

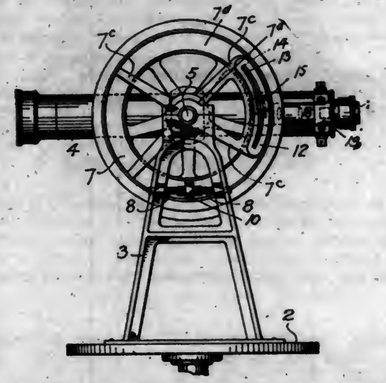
2. In a safety razor, the combination of a base provided with a keeper, a blade supported upon the base and having an opening for the passage of the keeper, and a holder having a tongue passing through said keeper and further provided with a clip to embrace the blade and base.

1,023,373. SURVEYING INSTRUMENT. EMERY E. GRAHAM, Denver, Colo. Filed May 12, 1910. Serial No. 560,863. (Cl. 88—2.)

1. In a surveying instrument, the combination with the rotatory telescope, of a relatively stationary element, and a refractive appliance movable with the said telescope, and having a sight opposite a surface of the said element, the said appliance being constructed to project an image of the portion of the said surface, opposite the sight, in the field of the telescope, and the said surface bearing lines which vary in position at consecutive points in the path of the sight, in accordance with the corresponding angles of inclination of the telescope, said lines being equidistantly disposed at opposite sides of an imaginary circular line.

2. In a surveying instrument, the combination with the rotatory telescope, of a relatively stationary element and a refractive appliance movable with said telescope and having a sight opposite a surface of the said element, the said appliance being constructed to project an image of the portion of the said surface, opposite the sight, in the field of the telescope and the said surface bearing lines which from a point opposite to the sight when the telescope is in a horizontal position, vary in spacing at consecutive

points in the path of the sight, in accordance with the corresponding angles of inclination of the telescope, said lines being equidistantly disposed at opposite sides of an imaginary circular line.



3. In a surveying instrument, the combination with the rotatory telescope, of a relatively stationary element and a refractive appliance movable with said telescope and having a sight opposite a surface of the said element, the said applinace being constructed to project an image of the portion of the said surface, opposite the sight, in the field of the telescope, and the said surface bearing two pairs of lines which from a zero line opposite to the sight when the telescope is horizontal, vary in spacing at consecutive points in the path of the sight, in accordance with the corresponding angles of inclination of the telescope, the lines of one pair being convergent while those of the other diverge from the zero line and the lines comprised in each pair being equidistantly disposed at opposite sides of an imaginary circular line.

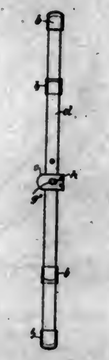
4. In a surveying instrument, the combination with the rotatory telescope, of a relatively stationary element and a refractive appliance movable with said telescope and having a sight opposite a surface of the said element, the said appliance being constructed to project an image of the portion of the said surface opposite the sight in the field of the telescope and the said surface bearing lines which from a point opposite to the sight when the telescope is in a horizontal position, vary in spacing at consecutive points in the path of the sight, in accordance with the corresponding angles of inclination of the telescope, and numbers placed alongside said lines at consecutive points in the path of the sight and respectively denoting the values of the constants for the angles with which said points correspond.

5. In a surveying instrument, the combination with the rotatory telescope, of a relatively stationary element, a refractive appliance including a lens and a prism, movable with the said telescope, the said appliance having a sight opposite a surface of said element and constructed to project an image of the portion of the surface opposite the sight in the field of the telescope, and the said surface bearing lines which vary in spacing at consecutive points in the path of the sight, in accordance with the corresponding angles of inclination of the telescope and means for adjusting the position of the said prism whereby the said image may be centered relative to a determinate line in the field.

[Claims 6 to 10 not printed in the Gazette.]

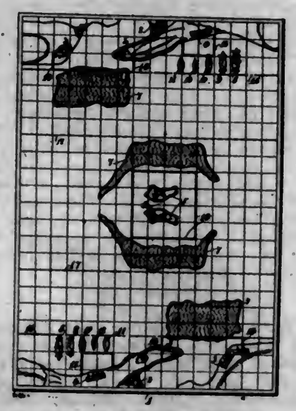
1,023,374. FASTENING DEVICE FOR CORSETS AND OTHER LIKE GARMENTS. ROBERT MAXIMILLIAN HAHN, London, England. Filed Nov. 12, 1910. Serial No. 591,994. (Cl. 24—204.)

1. A corset fastening device comprising a busk fastened to one side of the corset and having engaging parts at its ends and a latch provided with a hole therein hinged to the middle of said busk in combination with a busk fastened to the other side of the corset, such busk having free ends to coöperate with the engaging parts of the other busk, a stud at its middle to enter the hole in the hinged latch when folded into engagement therewith and a notch in said stud entered by said latch when tension is put upon the corset substantially as and for the purpose set forth.



2. A corset fastening device comprising a busk fastened to one side of the corset and having a hinged latch at its middle and carrying a socket at each end and at points between said terminal sockets and said hinged latch, in combination with a busk fastened to the other side of the corset and provided with a steel secured fixedly thereto, said busk and steel having a stud at their middle, the ends of the last mentioned busk entering the terminal sockets of the other busk, the ends of the steel entering the aforesaid intermediate sockets, and the aforesaid stud engaging the latch hinged to the first mentioned busk when folded over the other to hold the device securely against accidental opening, substantially as set forth.

1,023,375. NAVAL-WAR-GAME APPARATUS. JOHN HAYS HAMMOND, Jr., Gloucester, Mass. Filed Aug. 4, 1911. Serial No. 642,319. (Cl. 46—21.)



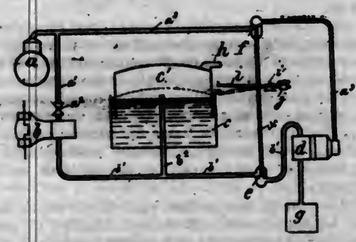
1. A game apparatus comprising a board divided into a plurality of spaces and having a plurality of land areas provided with forts, one of said areas being intermediate the others, a plurality if fog areas, one of said fog areas being adjacent to each of said forts, fleets of vessels, each comprising war vessels, colliers and torpedo boats, said war vessels having different ranges of movement and different ranges of action and said torpedo boats being effective only in fog areas.

2. A game apparatus comprising a board divided into a plurality of squares and having a plurality of land areas provided with forts, one of said land areas being arranged intermediate the others, a plurality of fog areas and fleets of vessels, each comprising war vessels, colliers and torpedo boats.

3. A game apparatus comprising a board divided into a plurality of squares and having a plurality of land areas provided with towns and forts, said forts having a predetermined effective capacity and range, and one of said forts being intermediate the others, a plurality of fog areas, fleets of vessels each comprising war vessels and torpedo boats, said war vessels having different ranges of movement and said torpedo boats being effective only in the fog areas.

4. A game apparatus comprising a board divided into a plurality of squares and having a plurality of forts on opposite sides of the board, said forts each having a predetermined effective capacity and range, a neutral fort subject to attack and capture, a plurality of fog areas, one fog area being adjacent to said neutral fort and another area being adjacent to one of the opposing forts, fleets of vessels each comprising war vessels, colliers and torpedo boats, said war vessels having different ranges of movement and different effective values, and said torpedo boats being effective only in the fog areas.

1,023,376. REGULATOR FOR STEAM-ACCUMULATORS. EMILE HARLÉ, Paris, France, assignor to Société Harlé & Cie., Paris, France, a Corporation of France. Filed Sept. 30, 1910. Serial No. 584,739. (Cl. 121—96.)



1. The combination, with a primary engine and a secondary engine, of a boiler, connections between the boiler and the primary engine whereby live steam may be supplied to the latter, connections between the boiler and the secondary engine, for supplying live steam to said secondary engine, means for supplying exhaust steam from the primary engine to the secondary engine, a volumetric steam accumulator arranged to be acted upon by said exhaust steam, valves in the respective live steam and exhaust steam inlets of the secondary engine, and means controlled by the steam accumulator for actuating said valves.

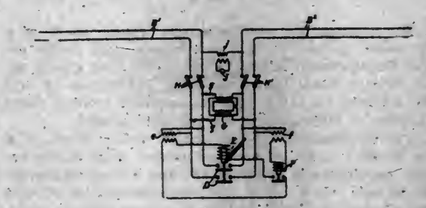
2. The combination, with a primary engine, of a volumetric steam accumulator, comprising a moving member arranged to be acted on by the exhaust steam from the primary engine, a secondary engine supplied with steam from both the accumulator and from another source, and means controlled by the moving member of said accumulator for regulating the delivery of steam to the secondary engine.

3. The combination, with a primary engine, and a volumetric steam accumulator arranged to be acted upon by exhaust steam by said primary engine, of a secondary engine, connections for supplying said secondary engine with the exhaust steam from the primary engine, connections for supplying said secondary engine with live steam, a throttle valve for throttling the exhaust steam supply to the secondary engine, and means controlled by the steam accumulator for adjusting said throttle valve.

4. The combination, with a primary engine, and a secondary engine arranged to receive the exhaust steam from the primary engine, of means for supplying live steam to said secondary engine, a valve for controlling said live steam supply, a valve for controlling the exhaust steam supply to the secondary engine, connections between said valves for moving them in opposite senses, substantially as described, a steam accumulator having a moving part acted upon by the exhaust steam from the primary engine, and means controlled by said moving part for operating the said valves.

5. The combination, with a primary engine, a secondary engine, arranged to receive the exhaust steam from the primary engine, and means for supplying live steam to the secondary engine, of valves for controlling the live steam and exhaust steam supply respectively, of the secondary engine, a steam accumulator having a moving part arranged to be acted upon by said exhaust steam, a governor actuated by the secondary engine, and means controlled by the moving part of the steam accumulator for putting the governor mechanism in operative relation with either the live steam supply valve of the exhaust steam supply valve.

1,023,377. AUTOMATIC SECTIONALIZING DEVICE. LAURENCE A. HAWKINS, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Sept. 18, 1911. Serial No. 649,977. (Cl. 175—294.)



1. In combination, a sectionalized transmission line, switch contacts for connecting adjacent sections directly together, means for passing a limited current from one section to the second while said switch contacts are open, a winding energized from said limited current in said second section under normal conditions of said second section, and means controlled by said magnet winding for closing said switch contacts.

2. In combination, a sectionalized transmission line, switch contacts for connecting adjacent sections directly together, an impedance in shunt to said switch contacts, and two windings, energized by the voltages on the two sections respectively, jointly controlling said switch contacts.

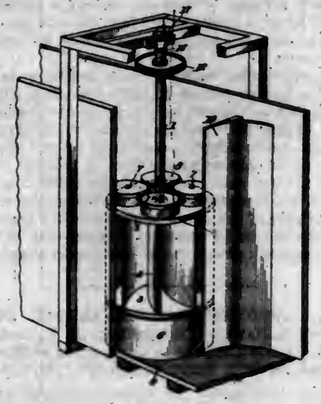
3. In combination, a sectionalized transmission line, switch contacts for connecting adjacent sections directly together, an impedance in shunt to said switch contacts, and two windings, energised by the voltages on the two sections respectively, jointly controlling said switch contacts, and manually operated switches for disconnecting all the above-mentioned apparatus from the line.

4. In combination, a sectionalized transmission line, switch contacts for connecting adjacent sections directly together, an impedance in shunt to said switch contacts, step-down transformers having their primaries connected across adjacent sections of the line, two windings energised from the secondaries of transformers connected to adjacent sections, and means controlled by both windings for controlling the switch contacts for connecting said adjacent sections together.

5. In combination, a sectionalized transmission line, switch contacts for connecting adjacent sections directly together, an impedance in shunt to said switch contacts, step-down transformers having their primaries connected across adjacent sections of the line, an actuating winding for said switch contacts energised from the secondary of a transformer connected to one section, and a relay controlling the circuit of said winding energised from a transformer connected to the adjacent section.

[Claim 6 not printed in the Gazette.]

1,023,378. TURBINE WATER-WHEEL. JOHN HAY, Junction City, Kans. Filed Dec. 15, 1909, Serial No. 533,208. Renewed Aug. 30, 1911. Serial No. 646,848. (Cl. 138—3.)



1. The combination, with a vertical rotary shaft, of a water wheel splined thereon and having rigid blades arranged longitudinally of said shaft, and a buoy rigidly secured to said wheel below the lower extremities of said blades whereby the latter may be supported entirely above the surface of the water for the purpose specified.

2. The combination, with a vertical rotary shaft, of a water wheel splined thereon and having rigid blades arranged longitudinally of said shaft, and a buoy rigidly secured to said wheel below the lower extremities of said blades whereby the latter may be supported entirely above the surface of the water for the purpose specified, and means for depressing said wheel so that its blades will be submerged.

3. The combination, with a vertical rotary shaft, of a water wheel splined thereon and having rigid blades arranged longitudinally of said shaft, and a buoy rigidly secured to said wheel below the lower extremities of said blades whereby the latter may be supported entirely above the surface of the water for the purpose specified, and means for depressing said wheel to various depths for regulating the power generated by the wheel.

4. The combination, with a vertical rotary shaft, of a water wheel splined thereon and having rigid blades arranged longitudinally of said shaft, and a buoy rigidly secured to said wheel below the lower extremities of said blades whereby the latter may be supported entirely above the surface of the water for the purpose specified, and removable weights for depressing said wheels to various depths for regulating the power generated by the wheel.

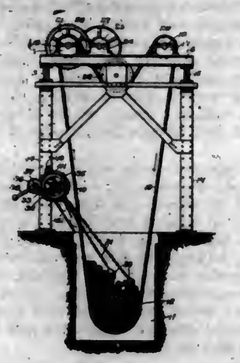
5. The combination, with a rotary shaft, of a water wheel splined thereon and comprising upper and lower disks, and blades arranged between said disks, a buoy beneath the lower disk adapted to support the wheel above the surface of the water when desired, and removable weights on the upper disk for holding said wheel submerged.

[Claims 6 to 12 not printed in the Gazette.]

1,023,379. BOILER-FLUE RATTLER. EDWARD T. HENDRIX, Chicago, Ill. Filed Jan. 13, 1911. Serial No. 602,369. (Cl. 51—14.)

1. A flue rattler comprising means for supporting a group of incrusted flues and rolling or tumbling them upon each other in abrasive contact, and supplemental abrasive means having means for loosely connecting the same to a fixed part of the rattler, and applied to the exposed surfaces of the flues at separated points for disrupting or breaking the incrustation or scale at localized areas along the flues.

2. A flue rattler comprising means for supporting a group of flues, with means for rolling the flues one upon the other in abrasive contact, and relatively stationary supplemental abrasive elements yieldingly supported upon the flues and adapted to drag thereover by relative movement of the flues and said elements.



3. A flue rattler comprising means for supporting a group of flues, with means for rolling or tumbling them in abrasive contact, and arranged to progressively shift the individual flues from the interior to the exterior of the group and supplemental abrasive means loosely supported on one side of the group of flues to be dragged thereover by relative movement of the flues and supplemental abrasive means.

4. A flue rattler comprising means for supporting a group of flues, with means for rolling or tumbling them upon each other in abrasive contact, and arranged to shift, the individual flues from the interior to the exterior of the group, weights supported on one side of the group of flues, flexible holding means attached to said weights and to a fixed part of the machine frame for holding the weights in relatively fixed position, whereby said weights are dragged over the flues by relative movement of the flues and weights.

5. A flue rattler comprising supporting means for a group or bundle of incrusted flues, consisting of endless traveling flexible carriers having looped portions in which the group is sustained, whereby upon movement of the carriers the flues are rolled one upon the other in abrasive contact and supplemental abrasive elements loosely supported on an exposed side of the group to be dragged over the flues by relative movement of said group of flues and said supplemental abrasive elements.

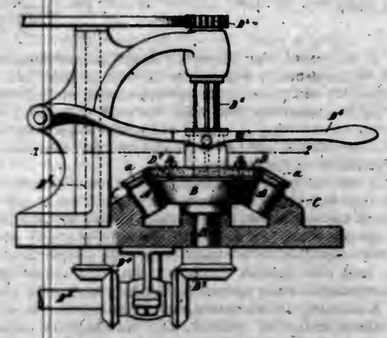
[Claims 6 and 7 not printed in the Gazette.]

1,023,380. AQUATIC LIFE-PRESERVER. EUGENE V. HENDERSON, Leavenworth, Kans. Filed Aug. 8, 1910. Serial No. 576,072. (Cl. 9—17.)



An apparatus of the character described, comprising two air-bags having open ends extending the full width thereof and adapted to be inflated by submerging said open ends, each bag being of such length when inflated as to extend almost half-way around the upper portion of the body, a space being left between the bags to allow free movement of the arms of the wearer, means for sealing the open ends of the bags after the same have been inflated, a plurality of loops at the upper sides of the bags, cords connecting the loops of one bag to the loops of the companion bag, a loop at the underside of each bag, a body-belt extending through the last-mentioned loops, and a crotch strap secured to said belt, substantially as shown and described.

1,023,381. MACHINE FOR FORMING GROOVES AND THE LIKE UPON THE SIDES OF ROLLERS, &c. HENRY HESS, Philadelphia, Pa., assignor to The Hess-Bright Manufacturing Company, Philadelphia, Pa., a Corporation of Delaware. Filed Oct. 14, 1910. Serial No. 586,991. (Cl. 51—4.)



1. The machine for forming grooves and the like upon the sides of rollers, or other objects, comprising means for mounting a plurality of the rollers in circular series and in the desired angular position, means for rotating the rollers individually, and means for applying a forming tool to the sides thereof.

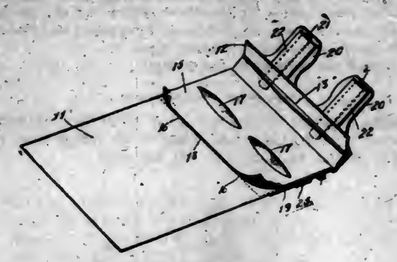
2. The machine for forming grooves and the like upon the sides of rollers for journal bearings, comprising means for mounting a plurality of rollers in the angular relation they occupy in the bearing, means for rotating the rollers individually, and means for applying a forming tool to the sides thereof while thus rotated.

3. The machine for forming grooves and the like upon the sides of rollers, or other objects, comprising means for sustaining the rollers in circular series, means for rotating them individually, and a grinding tool having a cutting edge or portion adapted to engage the sides of all the rollers simultaneously to form grooves therein.

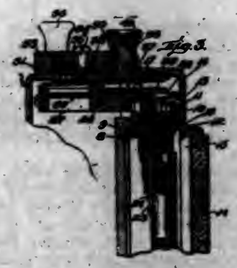
4. The machine for forming grooves and the like upon the sides of rollers, or other objects, comprising means for sustaining the rollers in circular series, means for rotating them individually, and a grinding tool having a cutting edge or portion adapted to engage the sides of all the rollers simultaneously to form grooves therein, the said tool being mounted within the space inclosed by the inner sides of the rollers.

1,023,382. ENVELOP. JOHN R. KIRKENY, Dysortville, N. C. Filed Oct. 20, 1910. Serial No. 588,112. (Cl. 229—72.)

An envelop comprising front and back sides having an opening at one edge, a flap having apertures and secured directly to one of the sides of the envelop between its apertures and one edge in the vicinity of the opening at the edge of the envelop, the opposite edge of the said flap carrying upon its under side an adhesive, a flap mounted upon the other side of the envelop and foldable over the edge thereof at the opening thereof and along the line of the securing edge of the first mentioned flap, the last mentioned flap carrying tongues which are insertible through the apertures in the first mentioned flap and which are adapted to be secured under the first mentioned flap and against the side of the envelop to which the first mentioned flap is attached by the adhesive carried upon the under side of the first mentioned flap.



1,023,383. CLOCK FOR AUTOMOBILES AND THE LIKE. HENRY W. MATALENE, New York, N. Y. Filed Dec. 9, 1910. Serial No. 596,431. (Cl. 58—46.)



1. The combination with a time-keeping mechanism comprising a rotatable winding stem, a pinion thereon, and a center in which said winding stem is journaled, of a casing containing said parts, a rotatable ring located at the front portion of the casing and exposed for operation from the exterior thereof, an annular rack carried by said ring and adapted to rotate said pinion, and a cover overlapping said ring and holding the same in place.

2. The combination with a time-keeping mechanism having a rotatable winding stem, a pinion thereon, and a center in which the stem is journaled, of a casing containing said parts and providing an annular space around said center, and means for closing the front of said annular space, comprising ring-shaped members mounted respectively on the front of the casing and the front of said center and a cover extending from one of the ring-shaped members to the other, one of said ring-shaped members being rotatable and having a rack adapted to rotate the pinion on the winding stem.

3. The combination with a stem-winding and setting watch movement of a casing containing the same, a rotatable ring located at the front portion of said casing, connections between said ring and the winding stem for rotating the latter, and means for moving the winding stem into and out of setting position.

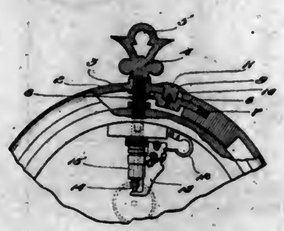
4. The combination with a watch movement having a winding and setting stem with a pinion mounted thereon, of a casing containing said movement, means for moving said stem into and out of setting position, a rotatable ring exposed for operation on the exterior of the casing, and a rack carried by said ring and arranged to rotate the pinion on the winding stem.

5. The combination with a watch movement having a winding and setting stem provided with a pinion and a spring adapted to move said stem outward into setting relation, of a casing containing said movement, means for moving said stem into winding relation from the ex-

terior of the casing, a spring-actuated catch adapted to hold said stem in winding relation, means operative from the exterior of the casing for releasing said catch, a rotatable ring located at the front portion of the casing, and an annular rack carried by said ring and adapted to rotate the pinion on the winding stem.

[Claim 6 not printed in the Gazette.]

1,023,384. STEM WINDING AND SETTING WATCH. HENRY W. MATALENE, New York, N. Y. Filed June 10, 1911. Serial No. 632,312. (Cl. 58—95.)



1. In a stem winding and setting watch, the combination of a sleeveless case, a natural-setting watch movement contained therein, and a catch member carried by the case and movable laterally into and out of retaining engagement with one side of the winding stem when the latter is in winding position, said catch member and stem being shaped to permit the stem to be pushed inward from setting position.

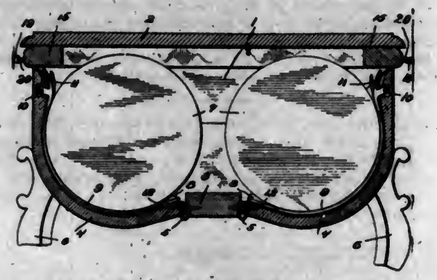
2. In a stem winding and setting watch, the combination of a sleeveless case, a natural-setting watch movement contained therein, a catch member carried by the case and movable laterally into and out of retaining engagement with one side of the winding stem when the latter is in winding position, said catch member and stem being shaped to permit the stem to be pushed inward from setting position, and means attached to the winding stem for suspending the watch.

3. In a stem winding and setting watch, the combination of a sleeveless case, a natural-setting watch movement contained therein, a winding stem mounted to rotate and to move inward and outward in the rim of the case and having an outwardly-facing abutment, and a spring-actuated catch member carried by the case and movable laterally into and out of positive locking engagement with the abutment when the winding stem is in winding position, said abutment and catch being shaped to force the catch backward by their engagement when the winding stem is moved inward from setting position.

4. In a stem winding and setting watch, the combination of a sleeveless case, a natural-setting watch movement contained therein, a winding stem mounted to rotate and to move inward and outward in the rim of the case and provided with an angular inner end adapted to enter the stem socket of said movement, and a spring-actuated catch member carried by the case and movable laterally into and out of retaining engagement with one side of the winding stem when said stem is in winding position, said catch member and stem being shaped to permit the stem to be pushed inward from setting position.

5. In a stem winding and setting watch, the combination of a sleeveless case, a natural-setting watch movement contained therein, a winding stem mounted to rotate and to move inward and outward in the rim of the case and provided with an angular inner end adapted to enter the stem socket of said movement, a spring-actuated catch member carried by the case and movable laterally into and out of retaining engagement with one side of the winding stem when said stem is in winding position, said catch member and stem being shaped to permit the stem to be pushed inward from setting position, and means attached to said stem for suspending the watch.

1,023,385. PHONOGRAPHIC-DISK CABINET. JOSEPH DI MEDIO, Camden, N. J. Filed Sept. 23, 1911. Serial No. 650,930. (Cl. 211—16.)

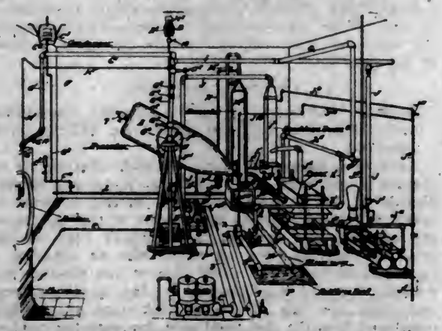


1. A device of the character described, comprising a table top, end pieces secured to the top, a cross bar fastened to the end pieces, disk holders hinged at their inner ends to the cross bar and with the said bar, end pieces, and top constituting a closed body, legs supporting said body, and hinged ejectors mounted in the disk holders, substantially as described.

2. A device of the character described, comprising a table top, end pieces secured to the top, a cross bar fastened to the end pieces, disk holders hinged at their inner ends to the cross bar and with the said bar, end pieces, and top constituting a closed body; legs supporting said body, said disk holders concentric with the curvature of a phonographic disk, partitions dividing each disk holder into a plurality of compartments, links connected to the end pieces and disk holders, and limiting the opening movement of the disk holders, and catches to hold the disk holders in closed position, substantially as described.

3. A device of the character described, comprising a table top, end pieces secured to the top, a cross bar fastened to the end pieces, disk holders hinged at their inner ends to the cross bar and with the said bar, end pieces, and top constituting a closed body, legs supporting said body, said disk holder concentric with the curvature of a phonographic disk, partitions dividing each disk holder into a plurality of compartments, links connected to the end pieces and disk holders, and limiting the opening movement of the disk holders, catches to hold the disk holders in closed position, hinged ejectors in each compartment, finger holds on the ends of said ejectors, the alternate finger holds of different lengths and elevations, and a spring under the inner end of each ejector, substantially as described.

1,023,386. PROCESS OF TREATING OLEAGINOUS MATERIALS. WILLIS C. MERRILL, Boston, Mass. Filed Aug. 5, 1908, Serial No. 447,085. Renewed Feb. 19, 1912. Serial No. 678,749. (Cl. 87—13.)



1. The herein-described process, which consists, first, in cooking the material in a closed vessel under fluid pressure to separate said material into its constituent parts, second, in cutting off the supply of fluid pressure, third, in removing the constituent of lightest specific gravity, fourth, in separately removing the inorganic solids and the cooked mass from said vessel, and lastly in depositing the cooked mass into a suitable receptacle in which the liquid constituents are separated.

2. The herein-described process, which consists, first, in cooking the material in a closed vessel under fluid pressure to separate said material into its constituent parts, second, in cutting off the supply of fluid pressure, third, in removing the constituent of lightest specific gravity, fourth, in separately removing the inorganic solids and the cooked mass from said vessel, fifth, in depositing the cooked mass into a suitable receptacle in which the liquid constituents are separated, and lastly in condensing and leading off the vapors arising from the material under treatment.

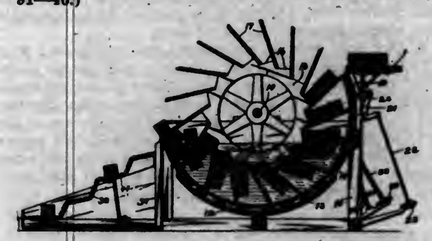
3. The herein-described process, which consists, first, in cooking the material in a closed vessel under fluid pressure to separate said material into its constituent parts, second, in cutting off the supply of fluid pressure, and lastly, in separately removing the cooked mass and the inorganic solids from said vessel.

4. The herein-described process, which consists, first, in cooking the material in a closed vessel under fluid pressure to separate said material into its constituent parts, second, in cutting off the supply of fluid pressure, third, in separately removing the cooked mass and the inorganic solids from said vessel, and lastly in condensing and leading off the vapors arising from the material under treatment.

5. The herein-described process, which consists, first, in cooking the material in a closed vessel under fluid pressure to separate said material into its constituent parts, second, in cutting off the supply of fluid pressure, third, in separately removing the cooked mass and the inorganic solids from said vessel, fourth, in condensing and leading off the vapors arising from the material under treatment, and lastly, in disinfecting the condensed vapors.

[Claims 6 to 11 not printed in the Gazette.]

1,023,387. DIPPING-TANK. GEORGE A. MEYER, St. Paul, Minn. Filed Nov. 21, 1910. Serial No. 593,363. (Cl. 91—46.)



1. In a dipping machine, the combination of a tank, a support rotatably mounted in the tank and comprising a plurality of members having a common axis and a plurality of arms carried by each of said members, said arms extending obliquely upward on one side for loading and downward on the other side for unloading.

2. In a dipping machine the combination of a tank, a rotatable support comprising a plurality of members having a common axis within the tank, said members being capable of lateral adjustment on said axis, a plurality of obliquely arranged arms carried by said members and a drainage receptacle adjacent to the tank and adapted to retain the drip from the treated articles.

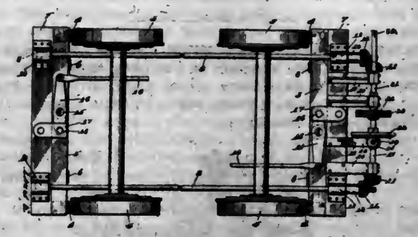
3. In a dipping machine, a tank, an adjustable support rotatably mounted in said tank, a plurality of obliquely arranged arms carried by said support, and a loading platform mounted on the tank, said platform being adapted to tilt upward when loading said arms.

4. In a dipping machine a tank and a rotatable support comprising a plurality of adjustable support members mounted in the tank, obliquely arranged arms on said members, said support being adapted to receive, dip and discharge the product while retaining a greater weight of the same on one side of the axis of the support than on the other to rotate the same by gravity.

5. In a dipping machine, the combination of a tank, an adjustable support rotatably mounted in said tank, a plurality of obliquely arranged arms on said support carried in pairs, and means for releasing and retarding the support to present the arms in suitable position for loading.

[Claims 6 to 21 not printed in the Gazette.]

1,023,388. BRAKE-RIGGING FOR RAILWAY-CARS. LOUIS E. OLIVER, Maywood, and ALBERT CURETON, Chicago, Ill. Filed Dec. 27, 1910. Serial No. 599,266. (Cl. 188—49.)



1. The combination with a brake rigging for railway cars comprising brake beams adapted in operation to be moved toward and from each other; means at each of said beams coöperating therewith for determining the slack of said beams; and connecting means establishing an operative connection between said slack determining means cooperating with the respective brake beams; of manually operable means coöperating with the last-mentioned connecting means whereby the positions of said slack determining means relative to said brake beams may be manually adjusted from a position other than one under the car, substantially as described.

2. The combination with a brake rigging for railway cars comprising brake beams adapted in operation to be moved toward and from each other; means at each of said beams coöperating therewith for determining the slack of said beams; and connecting means establishing an operative connection between said slack determining means cooperating with the respective brake beams; of rotatable means coöperating with the last-mentioned connecting means whereby the positions of said slack determining means relative to said brake beams may be manually adjusted from a position laterally of the car or within the car body, substantially as described.

3. The combination with a brake rigging for railway cars comprising brake beams adapted in operation to be moved toward and from each other; means at each of said beams coöperating therewith for determining the slack of said beams; and connecting means establishing an operative connection between said slack determining means coöperating with the respective brake beams; of rotatable means on said connecting means for adjusting the positions of said slack determining means relative to said brake beams; and rotatable means operatively connected with said last-mentioned rotatable adjusting means whereby the latter may be manually adjusted from positions laterally of the car or within the car body, substantially as described.

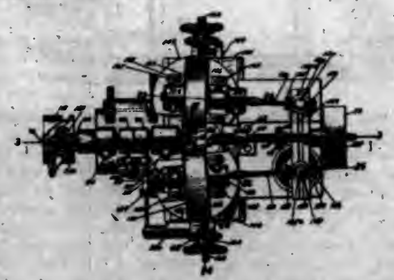
4. The combination with a brake rigging for railway cars comprising brake beams adapted in operation to be moved toward and from each other; means at each of said beams coöperating therewith for determining the slack of said beams; and connecting means establishing an operative connection between said slack determining means coöperating with the respective brake beams; of rotatable means threaded upon said connecting means for adjusting the positions of said slack determining means relative to said brake beams; and rotatable means opera-

tively connected with said screw threaded adjusting means whereby the latter may be manually adjusted from a position other than one beneath the car, substantially as described.

5. The combination with a brake rigging for railway cars comprising brake beams adapted in operation to be moved toward and from each other; and means at each of said beams coöperating therewith for determining the slack of said beams; of bars extending between and connecting said slack determining means coöperating with the respective brake beams; rotatable means threaded upon said bars for adjusting the positions of said slack determining means relative to said brake beams; and rotatable means operatively connected with said screw threaded adjusting means whereby the latter may be manually adjusted upon said bars from a position other than one beneath the car, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,023,389. GRINDING-MACHINE. SIMON DOKK OLSEN, Brooklyn, N. Y., assignor to Precision Glass Grinding Machine Company, Sioux Falls, S. D., a Corporation of South Dakota. Filed Sept. 1, 1910. Serial No. 580,063. (Cl. 51—3.)



1. The combination of a feed-tube mechanism; an automatic work-carrying mechanism operating to seize articles to be ground, successively at the feed-tube, and successively convey them to and thrust them into an automatic rotary work-holding and work-ejecting chuck; a work-chuck; and automatically fed and retracted grinding mechanism, said grinding mechanism comprising a pair of grinding wheels, one of coarser abrasive material than the other.

2. In a grinding machine, the combination of a work-chuck and reciprocating work-carrier adapted to convey articles to be ground to the chuck and thrust them successively into it; with a pair of grinding wheels one mounted at one side of the work-chuck and the other mounted at the other side thereof; means for continuously rotating both grinding wheels; and means for simultaneously vibrating them laterally while they are rotating.

3. In a grinding machine, the combination of an automatic chucking and work-ejecting mechanism; a work-carrying mechanism adapted to deliver articles to be ground successively to the chuck; a pair of grinding wheels each rotatively mounted one at one side and the other at the other side of the chuck; means for rotating the wheels simultaneously; an automatic mechanism common to both grinding wheels and adapted to vibrate them laterally during their simultaneous rotation; means for automatically feeding the grinding wheels one after the other to the work to be ground; automatic mechanism for successively moving the grinding wheels away from the work; automatic mechanism for arresting the rotation of the chuck; and automatic mechanism for reciprocating the carrier; said chuck mechanism comprising a fixed and loose power-transmitting device, and each grinding wheel being provided with a power-transmitting device; a main shaft provided with a power-transmitting device; and operative automatic connections between the shaft and said automatic means for vibrating the grinding wheels; operative automatic connections between the shaft and the fixed and loose pulley power-transmitting device; and operative connections between said shaft and said automatic chucking mechanism.

1,023,390. NOSE-PIECE FOR MICROSCOPES. HARVEY N. OTT and KONRAD LEUCHSENRING, Buffalo, N. Y., assignors to Spencer Lens Company, Buffalo, N. Y. Filed Jan. 2, 1912. Serial No. 668,929. (Cl. 88—39.)



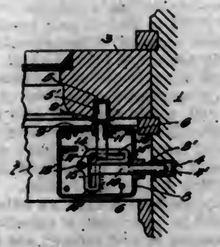
1. In a nose piece for microscopes, the combination with a rotatable member carrying objectives, and a member which supports said rotatable member, of stop screws adjustably secured on one of said members, and a catch carried by said other member and adapted to engage said stop screws for holding the objectives in position for use, substantially as set forth.

2. In a nose piece for microscopes, the combination with a rotatable member carrying objectives, and a member which supports said rotatable member, of a catch carried by one of said members, and stop devices which are arranged on said other member substantially perpendicular to radial lines extending from the stop devices to the axis of said rotatable member and have portions adapted to be engaged by said catch for holding said rotatable member in different positions, said stop devices being adjustable for changing the relative position of their catch engaging portions, substantially as set forth.

3. In a nose piece for microscopes, the combination with a rotatable member carrying objectives, and a member which supports said rotatable member, of a catch carried by one of said members, and stop screws which are arranged on said other member substantially perpendicular to radial lines extending from the stop screws to the axis of said rotatable member and have circumferential grooves in which said catch is adapted to engage for holding said rotatable member from turning, the relative position of said grooves being adapted to be changed by turning said stop screws, substantially as set forth.

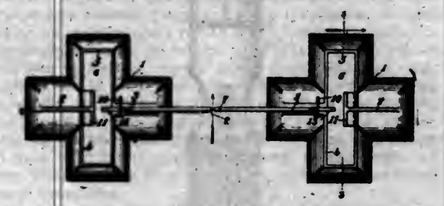
4. In a nose piece for microscopes, the combination with a rotatable member carrying objectives and having a circular rim, and a member which supports said rotatable member, of a catch secured to said supporting member, and stop screws arranged in said rotatable member in the relation of chords to said circular rim, said stop screws having grooves for the engagement of said catch and being adapted to be turned for changing the relative position of said grooves, substantially as set forth.

1,023,391. SASH-LOCK. CLARA PARSONS, Seattle, Wash. Filed July 17, 1911. Serial No. 638,876. (Cl. 16—99.)



In a sash lock, a casing, a bolt shifter of substantially L-shape and having an L-shaped slot therein, a relatively long and a relatively short bolt mounted in the casing at right angles to each other and projecting through the walls of the casing, said bolts having hooks at their inner ends engaged with the branches of the bolt shifter, a cover plate for said casing having an L-shaped slot therein, a stud connected to the bolt shifter and extending through said L-shaped slot, and web pieces on the underneath face of the cover plate acting as guides for said bolts.

1,023,392. METALLIC RAILWAY-TIE. WILLARD PENNOCK, Minerva, Ohio, assignor to The Canton Steel Foundry Company, Canton, Ohio, a Corporation of Ohio. Filed Aug. 2, 1911. Serial No. 642,004. (Cl. 238—6.)



1. In a metallic tie, the combination of railway rail supports, said supports provided with overhanging flanges, sockets formed in the upper portions of the supports, flanges provided with elongated slots, tie bars located between the flanges provided with the elongated slots, said tie bars provided with elongated slots and tongues, the tongues adapted to overlap the inner base flanges of the railway rail and a key adapted to connect the railway supports and tie bars together, substantially as and for the purpose specified.

2. In a metallic tie, the combination of railway rail supports, said supports provided with overhanging flanges, sockets formed in the upper portions of the supports, flanges provided with elongated slots, tie bars located between the flanges provided with elongated slots, said tie bars provided with elongated slots and tongues, the tongues adapted to overlap the inner base flanges of the railway rail and a key adapted to connect the railway supports and tie bars together, and cushioned blocks adapted for contact with the bottom of the railway rails, substantially as and for the purpose specified.

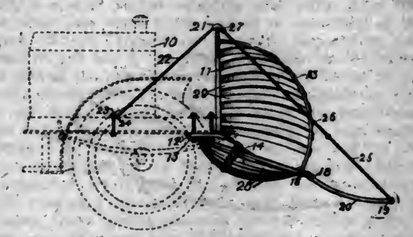
3. In a railway tie of the class described, the combination of bases provided with end and side flanges adapted to be seated in a railway bed, socket flanges located upon the upper faces of the bases, cushioned blocks adapted to be located in the sockets, flanges adapted to be seated upon the outer base flanges of the railway rails and means for tying the railway bases together, substantially as and for the purpose specified.

4. In a railway tie of the class described, bases provided with railway holding flanges, said bases provided with sockets formed in their upper faces, cushioned blocks located in the sockets, tie bar connecting flanges provided with vertical elongated slots, a tie bar provided with vertical elongated slots and tongues, the slots adapted to register with the vertical elongated slots formed in the tie bar flanges upon the bases and keys adapted to hold the tongues of the tie bars in contact with the inner base flanges of the railway rails, substantially as and for the purpose specified.

5. In a railway tie of the class described, bases provided with railway holding flanges, said bases provided with sockets formed in their upper faces, cushioned blocks located in the sockets, tie bar connecting flanges provided with vertical elongated slots, a tie bar provided with vertical elongated slots and tongues, the slots adapted to register with the vertical elongated slots formed in the tie bar flanges upon the bases and keys adapted to hold the tongues of the tie bars in contact with the inner base flanges of the railway rails, and the keys adapted to be secured in fixed position, substantially as and for the purpose specified.

[Claims 6 to 8 not printed in the Gazette.]

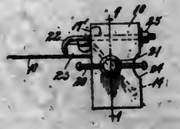
1,023,393. FENDER FOR AUTOMOBILES. WALDO F. PERRY, Tampa, Fla. Filed May 15, 1911. Serial No. 627,233. (Cl. 105—252.)



1. In a fender of the kind described, a main frame adapted for attachment to an automobile, a resilient main bottom section carried by said frame, resilient side guards adapted to extend in advance of the wheels of the automobile and carried by the frame, a supplemental frame hinged to the front of the bottom of the main frame, hinged rods connecting the upper part of the main frame with the free edge of the supplemental frame, a resilient bottom in said supplemental frame, and brace rods extending rearwardly from the top of the main frame and having their free ends adapted for attachment to the automobile.

2. In a fender of the kind described, a main frame adapted for attachment to an automobile, a resilient downwardly dished main bottom section carried by said frame, resilient inwardly dished side guards adapted to extend in advance of the wheels of the automobile and carried by the frame, a supplemental frame hinged to the front of the bottom of the main frame, hinged rods connecting the upper part of the main frame with the free edge of the supplemental frame, a resilient downwardly dished bottom guard in said supplemental frame, and brace rods extending rearwardly from the top of the main frame and having their free ends adapted for attachment to the automobile.

1,023,394. WIRE-STRETCHER. ARTHUR G. PHILLIPS, Foss, Okla. Filed Oct. 12, 1910. Serial No. 586,707. (Cl. 39—50.)

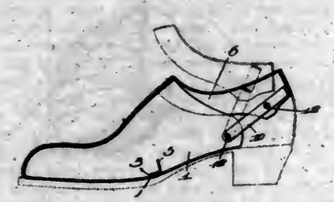


A wire stretcher comprising a pair of blocks each of which has one side recessed to receive a fence post and its opposite side straight, a clamping bolt removably mounted in each of said blocks whereby the ends thereof may be reversed with respect to the recessed and straight sides of the block, said clamping bolt having one end terminating in a hook to embrace a fence post and its other end threaded for the reception of a nut whereby said block and hook may be forced in opposite direction against a fence post, a shaft rotatably mounted in said blocks, means for rotating said shaft, and means for securing a plurality of wires to said shaft at spaced points thereon.

1,023,395. SHOE-FORM. LOUIS W. REINHARDT, Brockton, Mass., assignor to George E. Belcher Last Company, Stoughton, Mass., a Corporation of Massachusetts. Filed Oct. 12, 1911. Serial No. 654,266. (Cl. 12—128.)

1. A shoe form comprising a fore part, a cover part having its periphery conforming to the shape of the shoe upper, and a hinge member pivoted at one end to the lower rear end of the fore part and pivoted at an intermediate point to the rear portion of the cover part, and when the

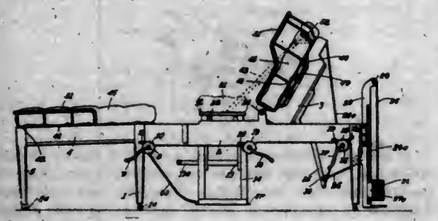
shoe form is in position bracing the rear edge of the cover part against the rear of the shoe upper to cause the shoe upper to fit against and conform to the edge of the cover part.



2. A shoe form comprising a fore part conforming to the shape of the fore part of the shoe, a cover part having a depending peripheral flange conforming to the shoe upper and fitting against the upper rear edge of the fore part, and a U-shaped hinge member pivoted at the ends of its legs to said fore part, and pivoted at intermediate points of its legs to the flange of the cover part, and having its curved center portion when the form is in position bracing the rear of the shoe upper near the top of the heel counter.

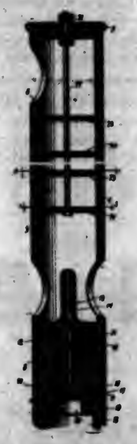
3. A shoe form comprising a fore part, a cover part and a U-shaped hinge member, the said fore part being a thin hollow shell of suitable material conforming to the fore part of the shoe, split longitudinally at the bottom and provided with means for expanding it laterally, the said cover part having a depending peripheral flange conforming to the shape of the shoe upper and fitting over the upper rear edge of the fore part and the said hinge member being pivoted at the ends of its legs to the sides of the fore part near the lower rear edges and being pivoted intermediate of its legs to the depending flange of the cover part near the rear thereof, and when the form is in position having its center portion braced against the rear of the shoe upper.

1,023,306. INVALID-BED. REINHARD ROESCH, San Jose, Cal., assignor of one-half to George G. C. Koenig, San Jose, Cal. Filed Nov. 3, 1910. Serial No. 590,472. (Cl. 5—12.)



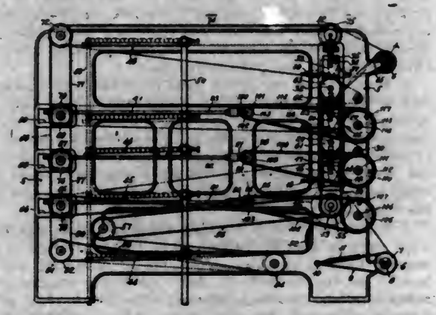
A device of the character described comprising a bed having a mattress support composed of two members capable of being moved apart and a means for inclining one of said members, said means comprising hinges connecting one end of said last named member to said bed and a projecting rod secured to the under side of said member, a roller mounted on a shaft disposed independently of said member, a ratchet wheel on said shaft, dogs adapted to engage said ratchet wheel, a cable secured to the free end of said member to be inclined and projecting around said roller and being connected to said rod, two rollers secured to the head of said bed and being spaced apart, a cable connected to said rod and projecting under one of said rollers and over the other, a weight on the end of said last named cable, a slotted guide on the head of said bed and a guide on said weight movable in said slotted guide, as described.

1,023,307. ATTACHMENT FOR CARBURETERS. HERVEY E. ROGERS, New London, Conn. Filed June 15, 1911. Serial No. 633,287. (Cl. 48—144.)



An attachment for carbureters, comprising a tube closed at one end and having an outlet port adjacent said end and oppositely disposed inlet ports adjacent its other end, means for supplying oxygen to the tube at a point between its inlet ports, a plurality of spaced apart baffle disks positioned in said tube between its inlet and outlet ports, and means for adjustably securing said tube to the carbureter with its outlet port adjacent the inlet port of the carbureter.

1,023,398. FABRIC-COATING MACHINE. WILLIAM SALISBURY, Stoughton, Mass. Filed Jan. 6, 1911. Serial No. 601,134. (Cl. 91—35.)



1. A fabric coating machine having, in combination, a plurality of sets of instrumentalities for coating the fabric, each of said sets consisting of a roller and a coöperating scraper acting on opposite sides of the fabric and means to impart a longitudinal feeding movement to said fabric, the distance from the first of said coating instrumentalities to the second along the path of the fabric being greater than the distance from the second to the third.

2. A fabric coating machine having, in combination, a plurality of sets of instrumentalities for coating the fabric, each of said sets consisting of a roller and a coöperating scraper acting on opposite sides of the fabric, means to impart a longitudinal feeding movement to said fabric, the distance from the first of said coating instrumentalities to the second, along the path of the fabric, being greater than the distance from the second to the third, and means to support and guide said web between said coating instrumentalities.

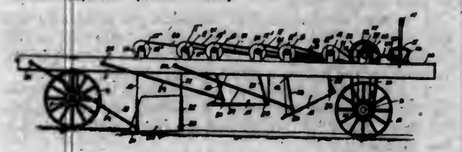
3. A fabric coating machine having, in combination, a plurality of sets of instrumentalities for coating the fabric, each of said sets consisting of a roller and a coöperating scraper acting on opposite sides of the fabric, means to impart a longitudinal feeding movement to said fabric, the distance from the first of said coating instrumentalities to the second, along the path of the fabric, being greater than the distance from the second to the third, means to support and guide said web between said coating instrumentalities, and means for adjusting said supporting and guiding means thereby to take up slack in said fabric.

4. A fabric coating machine having, in combination, a plurality of sets of fabric coating instrumentalities, each of said sets consisting of a roll and a coöperating scraper acting on opposite sides of the fabric, means to impart a longitudinal feeding movement to said fabric from one of said sets to another, drying means connecting said rolls, whereby all of said rolls coöperate to impart a feeding movement to said fabric the distance from the first to the second fabric coating instrumentalities being greater than the distance from the second to the third, and means whereby said fabric may be subjected to the action of heat while passing from one to another of said coating instrumentalities.

5. A fabric coating machine having, in combination, a plurality of sets of fabric coating instrumentalities located one above another, each of said sets consisting of a roll and a coöperating scraper acting on opposite sides of the fabric, a series of rolls to support and guide said fabric in a path to and fro between the first fabric coating instrumentalities and the second, a roll to support and guide said fabric in a path to and fro between the second and third fabric coating instrumentalities, and means for simultaneously adjusting opposite ends of one of said rolls thereby to take up the slack in the fabric.

[Claim 6 not printed in the Gazette.]

1,023,399. ROAD-GRADING MACHINE. PATRICK L. STACKER, Greenwood, S. C. Filed Dec. 7, 1911. Serial No. 664,389. (Cl. 37—33.)



1. In a road grading machine, the combination of a wheeled frame, a pair of spaced transverse shafts journaled thereon, a winding drum fixedly secured on each shaft, a scraper bucket, front and rear supporting elements respectively connected at one end to the bucket and having their other ends respectively connected to said shafts, a driven shaft supported transversely on said frame, a pair of hoisting drums loosely mounted on said driven shaft, a cable connecting each pair of winding and hoisting drums, clutches keyed on said driven shaft for respectively engaging each hoisting drum, separate actuating means for said clutches, and driving means connected to said driven shaft.

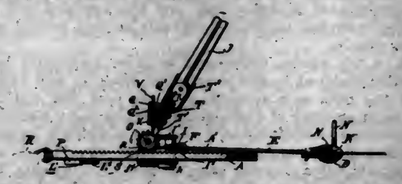
2. In a road grading machine, the combination of a wheeled frame including a rear axle, a pair of spaced transverse shafts journaled thereon, a winding drum fixedly secured on each shaft, a scraper bucket, front and rear supporting elements respectively connected at one end to the bucket and having their other ends respectively connected to said shafts, a driven shaft supported transversely on said frame, a pair of hoisting drums loosely mounted on said driven shaft, a cable connecting each pair of winding and hoisting drums, clutches keyed on said driven shaft for respectively engaging each hoisting drum, separate actuating means for said clutches, and a driving connection between the driven shaft and the rear axle of the frame.

3. In a road grading machine, the combination of a wheel frame, a pair of spaced transverse shafts journaled thereon, a winding drum fixedly secured on each shaft, a scraper bucket including side walls, front and rear pivot pins respectively secured to each wall of the bucket, flexible supporting elements respectively connected at one end to the front pivot pins of the bucket and having the other ends respectively connected to one of said shafts, other flexible connections respectively having one end connected to a rear pivot pin and having their other ends connected to the other of said shafts, holding rods respectively pivoted at one end to the frame in advance of the bucket and at its other end to a respective front pivot pin of said bucket, a driven shaft supported transversely on said frame, a pair of hoisting drums loosely mounted on said driven shaft, a cable connecting each pair of winding and hoisting drums, clutches keyed on said driven shaft for respectively engaging each hoisting drum, separate actuating means for said clutches, and driving means connected to said driven shaft.

4. In a road grading machine, the combination of a wheeled frame, a pair of spaced transverse shafts journaled thereon, a winding drum fixedly secured on each shaft, a scraper bucket, front and rear supporting elements respectively connected at one end to the bucket and having their other ends respectively connected to said shafts, a driven shaft supported transversely on said frame, a pair of hoisting drums loosely mounted on said driven shaft, a cable connecting each pair of winding and hoisting drums, clutches keyed on said driven shaft for respectively engaging each hoisting drum, a transverse bar supported by the frame in spaced relation to the driven shaft, shipper levers for the clutches respectively pivoted on said transverse bar, each lever including a crank arm, rack bars supported by the frame, hand lever fulcrumed on said rack bar, a link connecting the lever and the crank arm of the shipper lever for actuating the same upon movement in either direction of the hand lever, and driving means connected to said driven shaft.

5. In a road grading machine, the combination of a wheeled frame, a pair of spaced transverse shafts journaled thereon, a winding drum fixedly secured on each shaft, a scraper bucket, front and rear supporting elements respectively connected at one end to the bucket and having their other ends respectively connected to said shafts, a driven shaft supported transversely on said frame, a pair of hoisting drums loosely mounted on said driven shaft, a brake drum carried by each hoisting drum, a cable connecting each pair of winding and hoisting drums, clutches keyed on said driven shaft for respectively engaging each hoisting drum, a transverse bar supported by the frame below the brake drum, brake bands respectively disposed around the brake drum and having one end fixedly connected to said transverse bar, bell-crank levers respectively fulcrumed on the frame in alinement with said brake drum, one arm of each lever having connection with the free end of a respective brake band, separate means for alternately actuating each clutch and brake band, and driving means connected to said driven shaft.

1,023,400. WIRE-STRETCHER. EMERY ELLSWORTH SWARM, Hampton, Ill. Filed Oct. 5, 1911. Serial No. 652,982. (Cl. 39—57.)



1. A wire stretching apparatus comprising a rack bar adapted to be anchored to a stationary object, a boxing

movable upon the rack bar, a rotatable shaft mounted in the boxing, a wheel fixed to said shaft and having gear and ratchet teeth thereon, a socket member having a forked end which is pivotally connected to said shaft, a hollow casing secured to said socket member, a spring-pressed pawl movable within the casing and having a projection upon the shank portion thereof adapted to engage a projection upon the wall of the casing, the forked end of the pawl engaging the two series of ratchet teeth, a spring-pressed pawl carried by the boxing and adapted to engage the ratchet teeth, a clamping member, and rod connections between the same and said boxing, as set forth.

2. A wire stretching apparatus comprising a rack bar adapted to be anchored to a stationary object, a boxing movable upon the rack bar, a rotatable shaft mounted in the boxing, a wheel fixed to said shaft and having gear and ratchet teeth thereon, a socket member having a forked end which is pivotally connected to said shaft, a hollow casing secured to said socket member, a spring-pressed pawl movable within the casing and having a projection upon the shank portion thereof adapted to engage a projection upon the wall of the casing, the forked end of the pawl engaging the two series of ratchet teeth, a spring-pressed pawl carried by the boxing and adapted to engage the ratchet teeth and having a projection upon its shank portion adapted to engage over the edge of an aperture of the casing through which it passes, a clamping member, and rod connections between the same and said boxing, as set forth.

1,023,401. TOY ANIMAL. HELEN F. TROWBRIDGE, Port Washington, N. Y. Filed Mar. 4, 1911. Serial No. 612,184. (Cl. 46—40.)

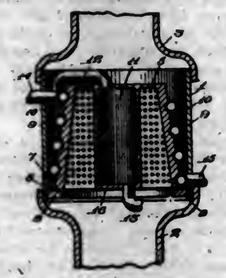


1. A toy animal comprising an inner incomplete body portion free from appendages and designed to give substantial shape to said animal, an outer removable covering of washable material completely inclosing said body portion and having appendages thereon to complete the natural appearance of said animal, said covering provided with detachable devices for being removably secured around said body portion.

2. A toy animal comprising an incomplete body portion free from appendages and designed to give substantial shape to said animal, an outer removable covering of washable material having the external appearance of said animal's coat and completely enveloping and closely conforming to the shape of said body portion, said outer covering being formed with the appendages for completing the natural appearance of said animal, and also provided with detachable devices for being removably secured around said body portion.

3. A toy animal comprising an inner incomplete body portion designed to give substantial shape to said animal but free from such appendages as the ears, feet and tail, an outer covering of washable material having the external appearance of said animal's coat and completely enveloping and closely conforming to the shape of said body portion, said outer covering being formed with the ears, feet and tail of said animal for completing its natural appearance, and also provided with detachable devices for being removably secured around said body portion.

1,023,402. FIXER FOR GASEOUS FUEL. HERMAN E. WHITING, Palmyra, N. Y., assignor to Garlock Auto Specialty Co., Palmyra, N. Y., a Corporation of New York. Filed Feb. 6, 1911. Serial No. 606,938. (Cl. 48—147.)



1. A fixer for gaseous fuel comprising a hollow fuel distributer having perforated side walls, and a heating device for the fuel passing from the distributer embodying a plurality of coils surrounding the distributer the distributer extending throughout all the coils and the latter being spaced from each other and from the fuel distributer but located at such a distance from the distributer that the mixture is permitted to pass between them directly from the distributer.

2. A fixer for gaseous fuel comprising a hollow frusto-conical perforated fuel-distributer closed at its small end and a heating-fluid conductor in the form of a plurality of coils surrounding the distributer and having their radii gradually decreasing in length toward the smaller end of the distributer, the coils being spaced from each other and from the distributer and having the mixture from the distributer passing between them.

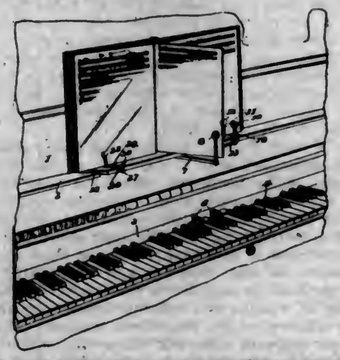
3. A fixer for gaseous fuels comprising a perforated fuel-distributer, spacing ribs on the exterior of said distributer, and a heating-fluid conductor embodying coils supported on the ribs in spaced relation to the distributer and spaced from each other to permit the mixture from the distributer to pass between them.

4. A fixer for gaseous fuel comprising a perforated hollow member, a heating device arranged within said hollow member, and a heating device on which the mixture is distributed by the hollow member arranged about the same.

5. A fixer for gaseous fuel comprising a hollow member having perforated side walls, a heating coil surrounding the same, and a heating member arranged within said hollow member.

[Claims 6 to 8 not printed in the Gazette.]

1,023,403. MUSIC-LEAF HOLDER AND CLAMP. OTTO B. WILLI, Youngstown, Ohio. Filed June 15, 1911. Serial No. 633,398. (Cl. 84—135.)

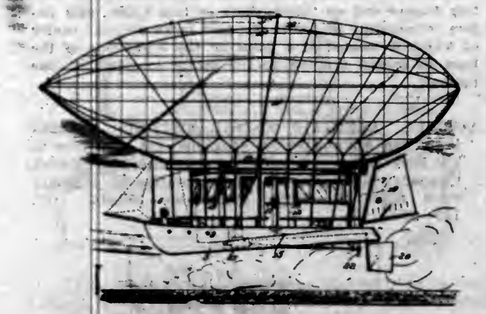


1. In combination with a leaf turning means mounted upon a support, a clamp comprising a spring pressed tube

slidably mounted upon the support, a finger carried by the tube, said support having a slot adapted to receive said finger, and a rod slidably mounted in the tube and carrying means for engaging the same to slide and turn the same.

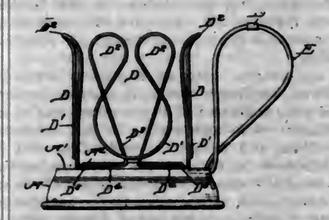
2. In combination with a leaf turning means mounted upon a support, a clamping means comprising a spring-pressed tube slidably mounted upon the support, said tube having at its inner end a head provided with a slot, a finger carried by the tube, said support having a slot adapted to receive said finger, and a rod slidably mounted in the tube and having a head adapted to enter the slot in the head carried by the tube.

1,023,404. COMBINED BOAT AND AIRSHIP. JOSEPH WYMORE, Seattle, Wash. Filed June 6, 1911. Serial No. 631,627. (Cl. 244—6.)



An air-ship including a hull, a cabin mounted on the hull and having the roof thereof extended laterally beyond the side walls of the cabin to form a marginal flange, braces forming a connection between the flange and hull, longitudinal reinforcing strips secured to the sides of the cabin and bearing against said flange and braces, respectively, a gas bag secured to the flange, a pipe extending through the roof of said cabin for conducting gas to said bag, a coupling engaging the lower end of the pipe and provided with a laterally extending discharge nipple opening through one side of the hull, a valve casing connected in the pipe, a valve for controlling the flow of gas to the gas bag, a second valve for permitting the escape of gas when deflating said bag, and a motor for propelling the hull when the gas bag is deflated.

1,023,405. GLASS-HOLDER. WILLIAM A. YOUNIE, Everett, Mass. Filed Jan. 21, 1911. Serial No. 603,950. (Cl. 65—61.)



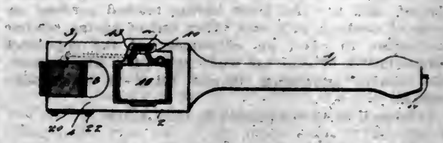
1. A glass holder comprising a base provided with bearings, and a plurality of frames each having spaced supporting members pivotally mounted in said bearings.

2. A glass holder comprising a base ring having bearings formed therein, resilient wire frames having spaced supporting members pivotally mounted in said bearings, and a handle secured to said base.

3. A glass holder comprising a base ring having a flange provided with a raised portion forming a support for a glass, said flange being provided with spaced oppositely disposed openings adjacent its outer edge, bearing blocks arranged under each flange provided with openings registering with the openings of said flange, spring wire frames provided with spaced supporting members pivotally mounted in said bearings, said frames having outwardly extending upper portions.

4. A glass holder comprising a base, a plurality of springs loosely mounted on said base, each frame comprising spaced loops connected by a loop at one end and provided with converging end portions, said end portions having outwardly extending ends provided with supporting members, each supporting member being pivotally mounted in said base.

1,023,406. ROTARY RASP. BERT ACKERMAN, Chester, Vt. Filed Dec. 7, 1911. Serial No. 664,360. (Cl. 20—76.)



A rotary rasp comprising a handle having on one end a head, bearing members arranged on said head, a bit supporting and operating shaft revolubly mounted in said members, a bit fixed on said shaft, a drive shaft revolubly mounted in said members, and having its outer end geared to the adjacent end of the bit supporting and operating shaft, means whereby said drive shaft is driven, a stop plate pivotally secured to one of said bearing members and an adjusting screw arranged in the adjacent end of the bit supporting and operating shaft and adapted to engage said stop plate whereby the bit supporting and operating shaft may be adjusted and held in its adjusted position to properly engage the geared end thereof with the gear on the adjacent end of the drive shaft.

1,023,407. WORK GAGING AND HOLDING MEANS. FREDERICK W. ALBRECHT, Toledo, Ohio, assignor of one-half to Charles H. Shields, Toledo, Ohio. Filed Apr. 27, 1911. Serial No. 623,790. (Cl. 164—10.5.)



1. In combination, a gage-block, a guide-bar for said block having a series of diagonally disposed teeth arranged longitudinally thereof, and means carried by the gage-block for co-acting with said teeth to hold the gage-block in adjusted position relative to the guide bar and being operable to effect an adjustment of the block intermediate the adjustment provided for by the bar teeth.

2. In a work gage, a guide-bar having a series of diagonally disposed teeth arranged longitudinally thereof and inclining from a plane which is transverse to the bar, a gage-block guided by said bar for reciprocal movements longitudinally thereof, a member movable with said block and having teeth for meshing with said bar teeth, and means for adjusting said member transversely of the bar.

3. In a work gage, a guide-bar having a surface thereof provided with a series of teeth which are angled relative to a plane transversely cutting the bar, a gage-block having a groove for receiving said bar to coöperate there-

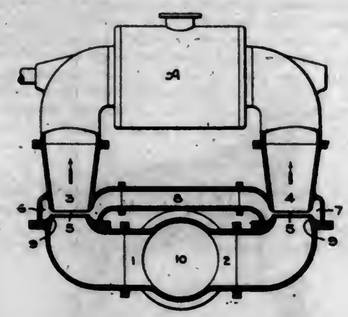
with to guide the movements of the block, a member carried by said block and having teeth adapted to mesh with the bar teeth at any position of adjustment of the gage-block relative to the bar, and a screw threaded through said member and operative to move the member transversely of the bar when in engagement with its teeth.

4. In a work gage, a guide-bar having a longitudinally extending series of diagonally extending teeth, a gage-block having a part fitting over said bar to permit the block to have shifting movements longitudinally of the bar, a screw rotatably mounted in said block and anchored against longitudinal movements therein, a member threaded upon said screw and having teeth adapted to mesh with the guide-bar teeth when the gage block is mounted thereon, said member being adjustable transversely of the guide-bar by a turning of said screw.

5. In a work gage, a guide-bar, a gage-block mounted for reciprocal movements on said bar longitudinally thereof, said bar and block having toothed portions capable of meshing with each other and of having relative movements to effect an adjustment of the gage-block longitudinally of said bar when said parts are in mesh, the relative movements thereof being in intersecting planes.

[Claims 6 to 11 not printed in the Gazette.]

1,023,408. CENTRIFUGAL ELASTIC-FLUID COMPRESSOR. KARL ALQUIST, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Dec. 11, 1911. Serial No. 664,943. (Cl. 230—13.)



1. Centrifugal compressing means through which the fluid to be compressed flows in parallel streams in combination with means acted upon by one of the streams for modifying the flow of another stream.

2. Centrifugal compressing means through which the fluid to be compressed flows in parallel streams in combination with conduits through which the fluid streams flow, and means located in each of the conduits for modifying the flow of fluid through another conduit when the volumes of the fluid streams tend to become dissimilar.

3. In combination, centrifugal compressors operating in parallel, suction conduits therefor, and means whereby an increase in the flow of fluid through one conduit causes the fluid flowing through another conduit to act on and decrease the flow of fluid in said first named conduit.

4. In combination, centrifugal compressors operating in parallel, suction conduits therefor, nozzles in said conduits, and means for conveying fluid from one nozzle to the other to equalize the flow of fluid therethrough.

5. In combination, centrifugal compressors operating in parallel, fluid carrying conduits therefor, a nozzle in each conduit comprising converging and diverging portions, a throat between said portions and chambers communicating with the throats, and a conduit connecting the said chambers for conveying fluid from one to the other when the flow of fluid through the throats is unequal.

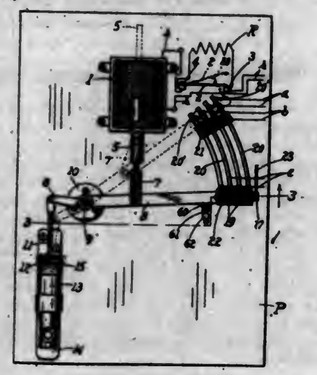
[Claims 6 to 9 not printed in the Gazette.]

1,023,409. COAL-PICK. JOSAF BATULIS, Antrim, Pa. Filed Nov. 27, 1911. Serial No. 662,649. (Cl. 125—14.)



A pick formed from a single casting including a shank and a head extending from said shank, said head having a flat rear face, a longitudinal flat lower edge and a forwardly diverging flat upper edge, the front face of the head being convexed from the shank to the forward end of the rear face, the forward end of the head being formed with a pair of spaced inwardly extending V-shaped longitudinal slots forming consequent upper and lower cutting fingers and an intermediate cutting finger, said fingers terminating in points disposed in an arc, the center of which is located at a point on the lower side of the head in spaced relation to the center longitudinal line thereof.

1,023,410. ELECTRIC SIGNAL-SWITCH. CHARLES BECK and ARTHUR BECK, St. Louis, Mo., assignors to The Beck Automatic Electrical Safety and Signal Switch Company, St. Louis, Mo., a Corporation of Missouri. Filed Sept. 17, 1910. Serial No. 582,509. (Cl. 175—279.)



1. In combination with a movable member provided with pairs of electrically connected contacts or brushes, pairs of rails composed of two sections spaced apart at their adjacent ends and insulated from one another, and means for actuating the movable member to cause its brushes to traverse the respective rail sections through unequal distances from the center of the space between the sections.

2. In combination with an oscillating lever provided with pairs of electrically connected, yielding brushes, pairs of curved rails composed of two sections spaced apart at their adjacent ends and leaving a non-conducting gap between them, and means for oscillating said lever to cause its brushes to traverse the respective rail sections through unequal distances from the center of the gap.

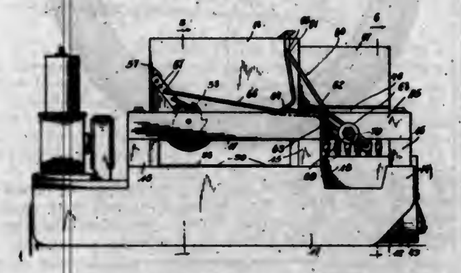
3. In combination with a reciprocating member provided with pairs of electrically connected brushes, pairs of rails composed of two sections spaced apart at their adjacent ends and insulated from one another, an insulated member at the outer terminal of one of the sections for engaging the brushes at the end of one stroke of the reciprocating member, and means for actuating the member to cause its brushes to traverse the rail sections.

4. In combination with a movable member provided with pairs of electrically connected contacts or brushes, pairs of rails composed of two sections spaced apart at their adjacent ends and insulated from one another, an energizing coil, and means operating in conjunction therewith for permitting the actuation of said member over one of the sections toward the space aforesaid at a given speed, and from the space at a relatively different speed.

5. In combination with an oscillating lever provided with pairs of electrically connected yielding brushes, pairs of curved rails composed of two sections spaced apart at their adjacent ends and leaving a non-conducting gap between them, an energizing coil, and means operating in conjunction therewith for permitting the movement of the lever over one of the sections toward the gap at a given speed, and from the gap at a relatively greater speed.

[Claim 6 not printed in the Gazette.]

1,023,411. FEED-REGULATOR. FREDRICH BEHRMANN, Ridgeville township, Henry county, Ohio. Filed Aug. 17, 1911. Serial No. 644,649. (Cl. 83—44.)



1. The combination with a hopper, of a partition located therein, and dividing the same into a pair of compartments, a hinged plate closing the lower end of one of said compartments, a wheel journaled in the lower end of the other of said compartments, a retarding plate located in the compartment above the wheel, and a lever for simultaneously rotating the wheel and tilting the plate.

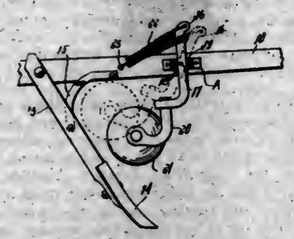
2. The combination in a device such as described of a hopper, a partition located within the hopper and dividing the same into compartments, a plate hinged to one end of one compartment and closing the same, a shaft supporting said plate, a lever keyed to said shaft, a feed wheel journaled in the other of said compartments, a retarding plate located above the said feed wheel, and means operatively connecting the feed wheel with the lever for rotating the same upon the operation of the plate.

3. The combination in a device such as described with a hopper, a partition extending through said hopper and dividing the same into two compartments, a shaft journaled transversely of one compartment, a plate secured to said shaft and closing said compartment, a lever keyed to the shaft, a feed wheel journaled transversely of the other compartment, a retarding plate located above the feed wheel and formed with a slot, a ratchet wheel keyed to the feed wheel, and means operatively connecting the ratchet wheel with the lever for operating the feed wheel upon the operation of the plate.

4. The combination in a device such as described, of a hopper, a transversely extending partition located within said hopper and dividing the same into two compartments, a shaft journaled transversely of one compartment adjacent one end thereof, a plate carried by said shaft, a lever keyed to the shaft, a feed wheel journaled in the other compartment, a shaft supporting said feed wheel, a ratchet wheel keyed to the shaft, a lever secured to the shaft, a pawl carried by the lever engaging the ratchet wheel and a link connecting the second mentioned lever substantially as and for the purposes set forth.

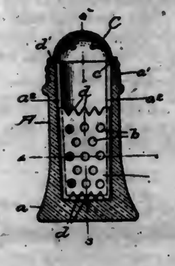
1,023,412. COLTER ATTACHMENT FOR PLOWS. JOSEPH M. CHAPMAN, Macedonia, Iowa. Filed Nov. 2, 1911. Serial No. 658,208. (Cl. 97—43.)

In a device of the character described, the combination of a plow beam, a standard depending from said beam, a plow mounted on the lower end of said standard, a U-shaped clip secured to the side of said beam forward of the standard, a pivot pin extending inwardly of the bight portion of said clip, a rock arm pivoted on said pin having its rocking movement limited by engagement with the inner faces of the arms of said U-shaped clip, a bracket



on the lower end of said arm, a colter disk rotatably supported by said bracket, and a spring having one end secured to the upper end of the rocker arm and its other end secured to the beam, said spring constantly tending to dispose the lower end of the rocker arm at the limit of its movement away from the standard.

1,023,413. CONDIMENT-HOLDER. GEORGE B. CLEMMER, Trenton, N. J. Filed Aug. 26, 1911. Serial No. 646,233. (Cl. 65—45.)



1. A condiment holder comprising a body provided with vertical guides on its inner side, a short movable partition-agitator in said body engaging said guides, said partition comprising a plate provided with points on its end and adapted to move edgewise in the guides, and a cover for the holder.

2. A condiment holder comprising a body provided with vertical grooves in its interior, a movable partition-agitator in said body engaging said grooves or guides, said agitator being shorter than the length of the holder and movable longitudinally thereof when the latter is shaken, and a hemispherical cover for the open end of the body and a flanged threaded collar detachably attaching said cover to the body.

3. A condiment holder comprising a body provided with vertical grooves in its interior, a movable partition-agitator comprising a plate provided with perforations and with notches or points on its ends and adapted to move edgewise in the grooves, said agitator being shorter than the length of the holder and movable longitudinally thereof when the latter is shaken; and a cover for the holder.

1,023,414. ARMOR FOR VEHICLE-TIRES. JEREMY B. COONROD, Rock Rapids, Iowa. Filed Feb. 25, 1911. Serial No. 610,892. (Cl. 152—17.)

1. An armor for resilient tires including a supporting member having spaced recesses therein, tread pieces seated in said recesses for engagement with the tread surface of the tire, and a covering extending over the outer faces of the tread pieces and the adjacent longitudinal edges of the

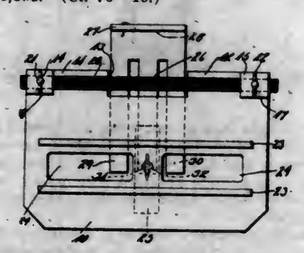
supporting member and secured to the tread pieces inwardly of said supporting member.



2. An armor for resilient tires, including a supporting member having spaced recesses therein, tread pieces slidably mounted in said recesses, a covering extending over the outer faces of the tread pieces and adjacent longitudinal edges of the supporting member, angular clamping members embracing the upper and lower faces of the supporting member and bearing against the covering for securing said covering to the supporting member, and retaining bands independent of the clamping members for securing the covering to the tread pieces inwardly of said supporting member.

3. An armor for resilient tires including a supporting member having spaced recesses therein, tread pieces adapted to rest on the tire and projecting through said recesses, a covering extending over the projecting ends of the tread pieces and the adjacent longitudinal edges of the supporting member, clamping members for securing the covering to said supporting member, and retaining bands independent of the clamping members for securing said covering to the tread pieces inwardly of said supporting member, there being folds formed in the covering on opposite sides of the armor between said clamping members and retaining bands to permit free movement of the tread pieces with respect to the supporting member.

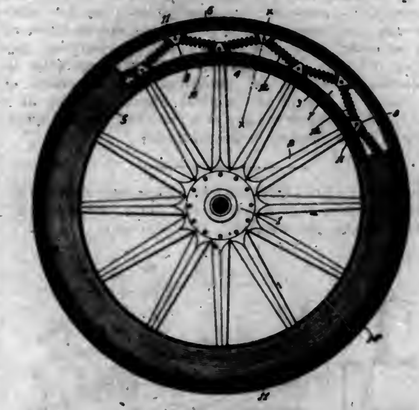
1,023,415. SAW GAGE AND JOINTER. JOHN E. CORMICAN, Glidden, Wis. Filed June 14, 1910. Serial No. 566,836. (Cl. 76—46.)



An implement of the class described, comprising a body having spaced lateral offsets and with a recess between the offsets, said body having a socket formed on its outer face, a bar slidable in said socket and extending beyond the same and terminating in a lateral offset operating within the recess, said offset having an aperture adapted to receive a raker tooth, said apertured offset having guides parallel to and spaced apart from said bar and arranged to operate upon the outer sides of the socket, and means for adjustably coupling said bar in its socket.

1,023,416. RESILIENT WHEEL. DANIEL L. CROSBIE, Sacramento, Cal., assignor of one-third to Joseph D. Cornell and Victor J. Bartels, Sacramento, Cal. Filed Jan. 16, 1911, Serial No. 602,828. Renewed Oct. 24, 1911. Serial No. 656,485. (Cl. 152—37.)

A resilient wheel comprising a wheel having a hub, spokes and felly, a tire attached to said felly, an auxiliary tire spaced from said first named tire and having side members slidable over said first named tire, projecting flanges on said first named tire and said auxiliary tire, those flanges on said first named tire being disposed in alternate order with respect to those on said auxiliary tire, each of said flanges being formed of two members spaced apart, a member of smaller diameter than said flanges disposed between each set of said flanges, projecting lugs on each side of said flanges, springs interposed between said flanges and fitting over said lugs, and curved ends on said springs disposed around said smaller members between said flanges, as described.



1,023,417. TIP-PROTECTOR FOR SHOES. THOMAS L. DE VORE, Jacksonville, Oreg. Filed June 14, 1911. Serial No. 633,161. (Cl. 36—72.)

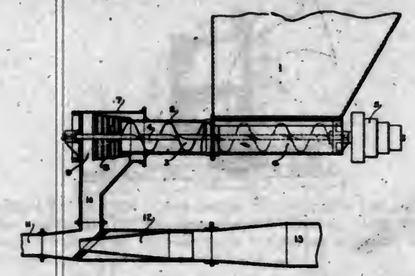


1. A tip protector for shoes comprising a cover for engaging over the tip, a binding strip L-shaped transversely and bearing against the lower edge of the cover and adapted to extend between the sole and the upper, and an attaching finger connected to the binding strip and bearing over the sole and inturned for engaging between the layers of the sole of the shoe.

2. A shoe protector comprising a cap engaging over the forward end of a shoe, a binding strip carried upon the lower edge of the cap and adapted to rest upon the sole extension of the shoe, an attaching finger carried midway of the ends of the attaching strip at the forward end of the cap for engagement with the sole extension, and spring fingers carried at the sides and at the rear edge of the cap and inturned at the ends and adapted to engage between the sole and upper of a shoe to hold the cap in position.

1,023,418. COAL-FEEDER. GEORGE F. DE WEIN, Milwaukee, Wis., assignor to Allis-Chalmers Company, Milwaukee, Wis., a Corporation of New Jersey. Filed Oct. 20, 1911. Serial No. 655,099. (Cl. 110—104.)

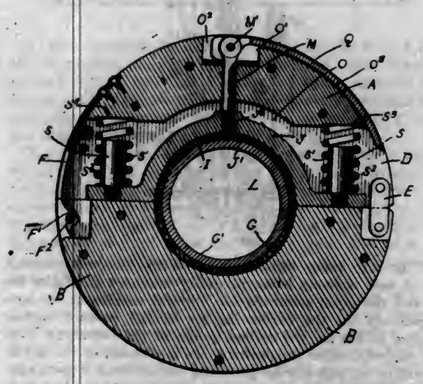
1. In a feeder, a housing, a stationary casing communicating with said housing, a shaft rotatable within said casing, a conveyer fixed to said shaft, and freely mounted within said housing a circular screen fixed to said shaft adjacent the end of said casing, said casing being adapted to discharge to the interior of said screen.



2. In a feeder, a housing having a discharge conduit, a continuously rotatable round screen freely mounted within said housing, and means for delivering therewithin intermittent charges of material, said screen being free to discharge over its edge and said discharge conduit being adapted to receive said discharge and the material passing through said screen.

3. In a feeder, a casing, a shaft rotatable within and relative to said casing, a conveyer fixed on said shaft, a screen fixed to said shaft adjacent the end of said conveyer, and a housing for said screen said housing having a discharge conduit, the end of said screen being spaced from said housing whereby material delivered to said screen will pass therethrough and over the end thereof to said discharge conduit.

1,023,419. WINDER-SHAFT COLLAR. GUY CARLTON DEWEY, Carthage, N. Y. Filed June 3, 1911. Serial No. 631,180. (Cl. 242—76.)



1. A sectional collar for winder shafts, comprising two sets of semi-cylindrical plates, links pivotally connecting same, fillers between each set of plates, a yoke mounted in a chambered portion between one set of plates, said yoke having end portions which are in alinement with each other and designed, when the sets of plates are in contact with each other, to rest against the filler between the other set of plates, an eye bolt fitted to the yoke, a cam lever pivoted to said bolt and designed to fulcrum against one of said fillers, as set forth.

2. A sectional collar for winder shafts, comprising two sets of semi-cylindrical plates, links pivotally connecting same, fillers between each set of plates, a yoke mounted in a chambered portion between one set of plates, said yoke having end portions which are in alinement with each other, and designed, when the sets of plates are in contact with each other, to rest against the filler between the other sets of plates, an eye bolt secured to the yoke, and movable through one of the fillers, a cam lever pivoted to said bolt and adapted to bear against the adjacent filler as the lever is swung outward, and springs interposed between the ends of the yoke and the filler which is between the plates having said chambered portion, as set forth.

3. A sectional collar for winder shafts, comprising two sets of semi-cylindrical plates hinged together, fillers between the sets of plates, a yoke mounted within a chambered portion between one set of said plates, said yoke having ends which are in alinement with each other and designed, when the two sets of plates are in contact with each other, to rest against the edge of the filler between the other set of plates, said yoke having threaded apertures therein, an eye bolt fitted in one of said apertures, and pins in the others, said bolt passing through an aperture in one of the fillers, a lever having a cam head pivoted to the eye bolt in a recess in one of the fillers, and designed, when swung on its pivot, to bear against the bottom of said recess, springs about said pins and bearing between the ends of the yoke and the recessed filler, as set forth.

1,023,420. TOY FIGURE. DRUSILLA EUNICE EATON, Syracuse, N. Y. Filed Jan. 29, 1912. Serial No. 674,044. (Cl. 46—40.)



1. A toy figure, comprising a main body portion and an auxiliary body portion, said portions connected by an integral foldable strip, the auxiliary body portion and said strip adapted to be bent and folded upon and adjacent the back of the main body portion, for bringing the said body portions parallel to each other, whereby the complete figure will stand upright, and a series of integral tie-strips for securing and holding said body portions rigidly in parallel relation.

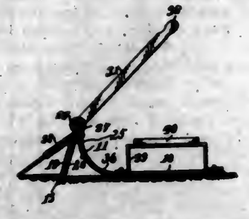
2. A toy animal, comprising a main and an auxiliary body portion, one being a complete representation of said animal, the other being a partial representation of said animal, said body portions connected by means of an integral tie-strip capable of being bent and folded upon and adjacent the rear side of the main body portion, so as to bring said body portions into parallel relation to each other, and integral tie-strips carried by the main body portion adapted to engage the auxiliary body portion for holding said parts in place.

3. A toy animal, comprising a main and an auxiliary body portion integrally joined together by means of intermediate tie-strips, said tie-strips capable of being bent in different directions for bringng said body portions into parallel relation to each other, and means for securing and holding said body portions in said parallel relation.

1,023,421. ROAD-DRAG. ROY W. EIFERT and CARL F. EIFERT, Huntsville, Ill. Filed Apr. 25, 1911. Serial No. 623,211. (Cl. 37—5.)

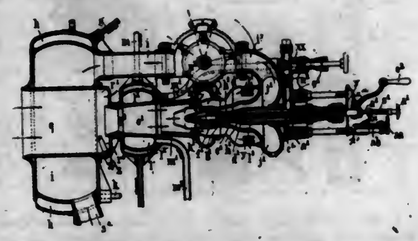
1. In a road drag, a platform adapted to engage the earth and having an upturned curved forward portion, a scraper blade having a sharpened forward engaging edge, said scraper blade being pivotally connected to the upper edge of the curved portion and extending forwardly thereof, said pivotal connections also forming bracing means for

the platform and blade and means carried by the blade for adjusting it at various angles relative to the earth and raising the same to an inoperative position.



2. A road drag comprising a metallic platform having an upwardly extended forward portion, a scraper blade, pivotal connections for the blade and platform and forming strengthening means therefor, a drag chain secured to the ends of the platform, a lever operatively supported by the scraper blade at its upper edge which is spaced from the forward edge of the platform, to permit pivotal movement thereof and a standing board supported upon the platform for an operator to permit operation of the lever.

1,023,422. HYDROCARBON-BURNER. ROBERT LUCIEN D'ESPUJOLS, Alfort, France. Filed May 5, 1909. Serial No. 494,153. (Cl. 158—73.)

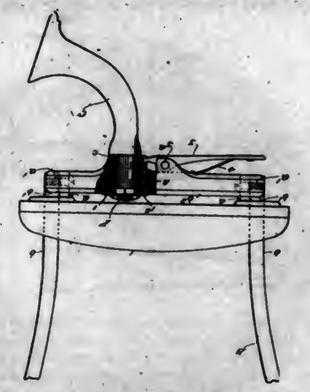


1. In an apparatus of the character described, a burner comprising a combustion chamber, a plurality of concentrically arranged conduits for conducting fuel, compressed air and free atmospheric air to the combustion chamber, means for heating the fuel and compressed air during their passage to the combustion chamber, and a controlling device for varying the proportions of fuel and air comprising a diffuser arranged to divide the fuel before reaching the combustion chamber, a rod carried by the diffuser, a spring acting upon said rod, and means for varying the stress of the spring.

2. In an apparatus of the character described, a burner comprising a combustion chamber, a plurality of concentrically arranged conduits for conducting fuel, compressed air and free atmospheric air to the combustion chamber, means for heating the fuel and compressed air during their passage to the combustion chamber, a controlling device for varying the proportions of fuel and air comprising a diffuser arranged to divide the fuel before reaching the combustion chamber, a rod carried by the diffuser, a spring acting upon said rod, and means for varying the stress of the spring comprising a block slidably mounted on the said rod and against which block one end of the spring bears, a second rod on which said block is also slidably mounted, and a micrometric screw engaging a threaded aperture in the said block.

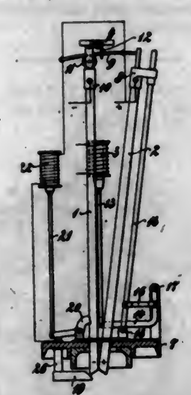
1,023,423. SEAT. JAMES R. GRAVES, Amesbury, Mass. Filed Feb. 17, 1912. Serial No. 678,273. (Cl. 155—22.)

The combination with a supporting arm and a seat-frame provided with a horizontal cross-bar having a socket fitted to an upright journal upon said supporting arm, of a locking plate held from turning movement relative to said supporting arm and provided with holes or sockets, a locking pin or bolt movable vertically through a hole in the said cross-bar which it fits and adapted to enter by



one end thereof into either of the said holes or sockets, and an actuating lever pivoted to the said cross-bar and operatively combined with the said bolt or pin.

1,023,424. ARC-LAMP. PAUL HANISCH, Cologne, and JOSEF ROSEMEYER, Cologne-Lindenthal, Germany. Filed Jan. 28, 1909. Serial No. 474,725. (Cl. 176—70.)



In an arc lamp having downwardly directed carbons, one of said carbons being pivotally mounted to strike the arc and the other mounted for vertical movement, an arc-shaped bar on the carbon holder of the pivoted carbon adapted to engage the carbon holder of the vertically movable carbon, means for limiting the movement of the pivoted carbon, an elbow lever pivotally mounted on a fixed support, an electro-magnet, a rod connecting said magnet with said elbow lever, a link connected to said elbow lever, and a pivotally mounted rod connected with said link and mounted to slide through an opening in the carbon holder of the pivoted carbon.

1,023,425. WALL-SAFE. JOSEPH J. HARRISON, Los Angeles, Cal. Filed Nov. 27, 1911. Serial No. 662,647. (Cl. 109—1.)

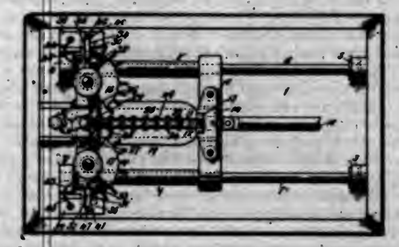
1. A wall safe comprising a casing having an open front and a pocket in the bottom thereof, a false botom normally closing the pocket, drawers movable into the casing over the false bottom and having means for engaging the front edge of the false bottom to retain the same in position, and a door for the casing.

2. A wall safe comprising a casing having an open front and a pocket in the bottom thereof, a slidable false bottom normally closing the pocket, a pair of drawers



hinged to the sides of the casing to swing into and out of the casing and having depending flanges on their front sides for engaging the said false bottom when swung into the casing, and a door for the casing.

1,023,426. MACHINE FOR INSERTING PUCKER-CORDS IN TUBULAR STRUCTURES. HERMAN JONSON, New York, N. Y., assignor, by mesne assignments, to Mantle Machinery and Patents Company, a Corporation of New York. Filed Aug. 7, 1906. Serial No. 329,554. (Cl. 112—17.)



1. In a machine for inserting a pucker cord in a tubular structure, a guide for supporting the structure, toothed sectors arranged to travel along on opposite sides of the guide with their teeth consecutively impinging the structure, and needles arranged to consecutively pierce the folds or gathers formed by the teeth.

2. In a machine for inserting a pucker cord in a tubular structure, series of pins spaced apart and arranged to receive around their exterior faces the structure to be operated upon, needles arranged to pass between the series of pins, and toothed sectors arranged to consecutively force the structure to be operated upon in the form of a fold or gather between the successive pins into position to be pierced by the needles.

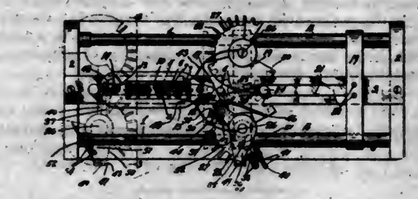
3. In a sewing machine of the class described, the combination of a toothed center member, toothed members acting on either side of the said center member, means for moving said side members in a direction longitudinally of the center member, so that the teeth of each side member may coact with the teeth on the adjacent side of the center member, and needle mechanism coöperating therewith.

4. The combination with a mandrel, of a rotary plait-forming device having a traveling axis of movement and a plurality of teeth that successively act upon the fabric to form plaits therein during such travel, means for effecting its rotation during the travel of its said axis, and means for passing a thread through the plaits formed thereby, said last mentioned means and mandrel being relatively movable.

5. The combination with a mandrel, of a rotary plait-forming device having a traveling axis of movement, and a needle that moves in substantially the same direction and simultaneously with the said axis.

[Claims 6 to 37 not printed in the Gazette.]

1,023,427. RUNNING-STITCH-SEWING MACHINE. HERMAN JONSON, New York, N. Y., assignor, by mesne assignments, to Mantle Machinery and Patents Company, a Corporation of New York. Filed May 22, 1907. Serial No. 375,182. (Cl. 112—17.)



1. The combination with a reciprocating needle and rotary shirring devices, of a thread-carrying device adapted to pass through the eye of the needle at a predetermined position thereof, and a needle support independent of the threading device and movable over the end of the needle substantially longitudinally thereto to engage said needle during the threading.

2. The combination with a plurality of reciprocating needles and shirring devices, of a bodily rotatable thread-carrying device moving therewith, and means for moving the thread-carrying device at each reciprocation of the needle in a direction transverse to its bodily movement through the eyes of the needles when at the end of the bodily movement.

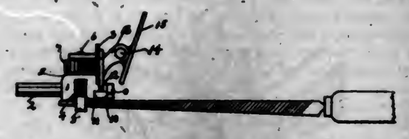
3. In a running stitch sewing machine, in combination with shirring devices and a reciprocatory needle, of a thread-carrying device operating through the needle eye at each reciprocation, said thread-carrying device having an eye and a stop spaced from but located across the eye to limit the length of thread passed through the eye.

4. In a running stitch sewing machine, shirring mechanism and needles coöperating therewith, and a thread carrying device comprising two eyes mounted on a bar and separated from each other, said eyes projecting from a base portion forming a thread stop and being movable through the needle eyes.

5. In a running stitch sewing machine, the combination with a fabric support, of shirring mechanism coöperating therewith, a needle that passes through the shirrs, a needle threader having a rack, a gear engaging the rack, and means for automatically operating the gear to move the threader when the needle reaches a predetermined position.

[Claims 6 to 19 not printed in the Gazette.]

1,023,428. SAW-FILE GUIDE. FRANK R. JORDAN, Ocean Beach, Cal. Filed Sept. 7, 1910. Serial No. 580,849. (Cl. 76—36.)

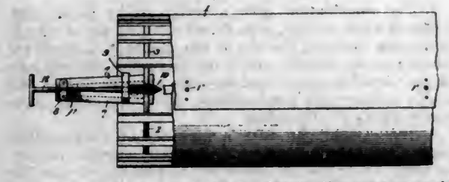


1. In a saw file guide, a file clamp, a finger hold therefor, and a guide bar carried by said file guide, said guide bar being pivoted to move in a plurality of planes substantially radial to the axis of the file to be held by the clamp, as set forth.

2. In a saw file guide, a block, a file clamp secured thereto, a finger hold extending from said block, a graduated segment plate extending substantially at right angles to the axis of the file being held in the clamp, an arm pivoted to said block and movable in a plane substantially at right angles to the axis of the file in said clamp, and a guide bar pivoted to said arm and movable in a plurality of planes substantially radial to the aforesaid axis, as set forth.

3. In a saw file guide, a block, a file clamp secured thereto, a graduated segment plate on said block and extending substantially at right angles to the axis of the file to be held in said clamp, an arm pivoted on an axis substantially parallel with the aforesaid file axis, a washer in contact with the arm and having points to prevent its rotation by said arm, and a guide bar pivoted to said arm on an axis transverse to the file axis whereby the guide bar is movable in a plurality of planes radiating from the aforesaid file axis, as set forth.

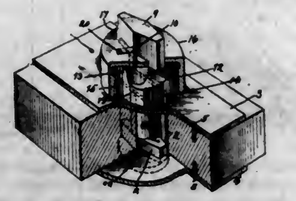
1,023,429. CORE FOR MAKING CONCRETE CULVERTS. JOHN W. KEMPF, Goehner, Nebr. Filed Nov. 22, 1911. Serial No. 661,831. (Cl. 25—128.)



1. A form for use in making culverts, the same comprising, in combination with the web of a culvert, of timbers pivotally connected at one of their ends and at their opposite ends carrying semi-circular disks or members, a wedge interposed between and longitudinally movable within grooves formed in the meeting faces of the timbers, and a key or rod for regulating the movement of the wedge to expand the said semi-circular members outward, as shown and described and for the purpose specified.

2. In a device for forming cores of culverts, comprising a web, two timbers pivotally connected at one of their ends, their opposite end provided with a wedge adapted to be moved longitudinally within grooves formed in the meeting faces of the timbers, a key or rod extended longitudinally between the timbers, one end of said rod being connected with the wedge, to effect a longitudinal movement of the same, semi-circular disks carried by the outer ends of the timbers and adapted to be moved laterally by the movement of the wedge, and supplemental former sections adapted to be connected with the outer periphery of the circle described by the semi-circular members carried by the timbers, substantially as shown and described and for the purpose specified.

1,023,430. BOLT AND NUT LOCK. ROBERT C. KIRBY, Rockford, Ill., assignor to Adam I. Wood, Rockford, Ill. Filed June 23, 1911. Serial No. 634,899. (Cl. 85—1.)



1. A lock comprising a bolt having a head at one end, and a cross projection at its other end, a nut provided with a central opening, and a cam face having edge serrations, a cap provided with a central opening fitted to the cross-projection of the bolt and having its inner face formed with serrations to engage the serrations of the nut, and a pin passing through the cross-projection to prevent the lengthwise movement of the cap.

2. A lock comprising a bolt having a head and projection at one end, and a cross-projection at its other end, a nut provided with a central opening and a cam face having edge serrations, a cap provided with a central opening fitted to the cross-projection of the bolt and having its inner face formed with serrations to engage the serrations of the nut, and a pin passing through the cross-projection to prevent the lengthwise movement of the cap.

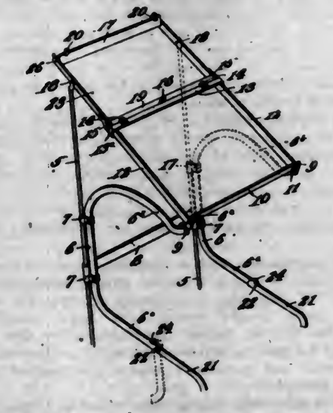
1,023,431. NON-SLIPPING OVERSHOE FOR HORSES. JOSEPH B. KOPF, Rockville Center, N. Y. Filed Nov. 7, 1911. Serial No. 658,989. (Cl. 168—30.)



1. A device of the character described, the combination of a pair of arms pivoted together intermediate of their lengths, and having anti-slipping devices on their under side, clamping members at or adjacent to the extremities of said arms, and a tightening strap extending across the hoof above the shoe and connecting the two adjacent clamping members of said arms, said strap having a beveled hoof-contacting face adapted to prevent movement of the tightened strap relative to the hoof.

2. A device of the character described, the combination of a horse's shoe, of a pair of pivoted arms adapted to overlie the underside of said shoe, the forward extremities of said arms having clamping members adapted to engage the edge of the forward portion of said shoe, the rear extremities of said arms having clamping members adapted to engage the rear edges of said shoe, a buckle attached to one of said rear clamping members and a strap attached to the other, said strap having a thickened portion at its lower edge to take beneath the rear portion of the horse's hoof, said strap and buckle being arranged to lie above the rear extremities of the shoe, whereby the device may be held securely in engagement with said shoe and hoof, and the strap may be prevented from slipping up or down on the hoof, said pivoted members having anti-slipping tread members on the underside.

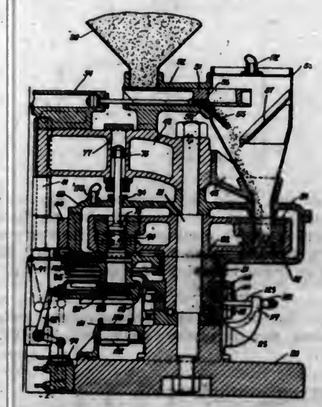
1,023,432. STENOGRAPHER'S DESK. JAMES C. LONG, Goldthwaite, Tex. Original application filed July 12, 1911, Serial No. 638,177. Divided and this application filed Nov. 6, 1911. Serial No. 658,901. (Cl. 120—33.)



1. In a device of the character described, the combination of a table, upstanding flanges at the sides thereof, a bar slidable on the flanges a marker hingedly connected to the said bar to swing to and from the table, and means for limiting the swing of the marker when swung upward, whereby the same forms a book rest.

2. In a device of the character described, the combination of a table, upstanding flanges at the sides thereof, a bar slidable on the said flanges, a marker hingedly connected to the said bar to swing to and from the table, and a stud projecting from the said marker to form a combined finger piece and stop and adapted to strike the bar when the marker is swung upward, whereby the marker forms a book rest.

1,023,433. BRIQUETING-MACHINE. WILLIAM A. LORENZ and EDWARD H. LORENZ, Hartford, Conn. Filed Aug. 4, 1910. Serial No. 575,602. (Cl. 25—63.)



1. In a briqueting machine, the combination of a vacuum chamber, a movable table containing a series of molds wholly inclosed therein, means for introducing loose material into said molds, and means for compressing it in said mold while still under said vacuum.

2. A machine for briqueting and pressing loose materials, comprising a vacuum chamber, means forming an air lock for introducing loose material into said vacuum chamber, a second vacuum chamber, a rotatable table carrying a series of molds inclosed therein, means for transferring loose material from said first vacuum chamber to said molds, means for compressing said material into briquets in said molds, and means for maintaining a vacuum in said chambers.

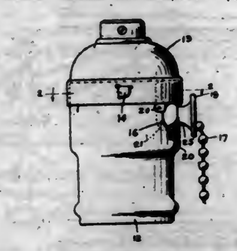
3. A machine for pressing and briqueting loose and granular materials, comprising a vacuum chamber, a series of molds therein, means forming an air lock for introducing loose material into said chamber, means for passing such material in a loose and free state through said chamber and into said molds, means for compressing the material in said molds to form briquets, means to remove said finished briquets from said molds into said chamber, means forming an air lock for removing said finished briquets from said chamber, and means for maintaining a vacuum in said chamber, whereby the manufacture of said briquets may be carried on in said vacuum continuously.

4. A machine for pressing and briqueting substances, comprising a vacuum chamber, means for introducing material into said chamber, said means forming an air lock, whereby the vacuum in said chamber is not broken during the introduction of said material, means whereby the material is passed through said chamber in a loose and free state, whereby the air may be extracted from between the particles thereof, a series of molds, wholly contained in a vacuum chamber, to which said air-free material is transferred, means for compressing said loose material in said mold, means forming an air lock, means for removing said compressed material from said mold and transferring it to said air lock, whereby said compressed material may be removed from said chamber, and means for continuously maintaining a vacuum in said chamber.

5. In a pressing and briqueting machine, the combination of a vacuum chamber, a charger forming an air lock, a series of molds wholly contained in said chamber into which the material charged into said chamber falls, a press for briqueting the material contained in said mold, said molds and press being also contained in a vacuum chamber, an ejector for removing the finished briquets from said molds into said second chamber, an air lock by which the finished briquets may be removed from said second chamber, and means for maintaining a vacuum in said chambers.

[Claims 6 to 8 not printed in the Gazette.]

1,023,434. DETACHABLE CHAIN-GUIDE FOR LAMP-SOCKETS. ANKER S. LYHNE, Bridgeport, Conn. Filed June 16, 1911. Serial No. 633,637. (Cl. 173—354.)



The combination with an electric socket shell comprising a body having in its wall a slot extending to the edge thereof and a detachable cap, of a chain guide comprising a base of a form and size substantially to fit said slot and to extend beneath the edge of said cap, said base forming a continuation of the wall of said body and having at its edges offset attaching lips embracing said wall at the edges of said slot, and a bell carried by said base beyond the edge of said cap and arranged at an angle to said base, substantially as described.

1,023,435. HERNIAL TRUSS-PAD. PETER C. MCEWEN and FREDERICK W. YOUNG, Detroit, Mich. Filed June 19, 1911. Serial No. 634,142. (Cl. 128—26.)



1. A hernial pad consisting of a base plate, an annular ring concentric with and rotatably secured thereto, anti-friction balls separating the two, a hernial pad rotatably and concentrically adjusted with said annular ring, and a felt washer secured between the two, substantially as described.

2. A hernial pad consisting of a base plate, an annular ring concentric with and rotatably secured thereto, anti-friction balls separating the two, a hernial pad rotatably and concentrically adjusted with said annular ring, a felt washer secured between the two, and an adjustable center pad, substantially as described.

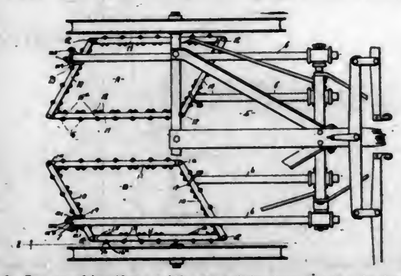
3. A hernial pad having in combination a base plate, an annular ring connected therewith and provided with a concentric cup member internally threaded, a pad having a threaded portion engaging the threads of the cup member, said threaded portion being also internally threaded, and a central pad having a threaded portion engaging the internal threads of said first mentioned threaded portion, substantially as described.

4. A hernial pad having in combination a base plate, an annular ring connected therewith and provided with a concentric cup member internally threaded, a pad having

a threaded portion engaging the threads of the cup member, a felt member held between said pad and said annular ring and tightened or loosened by the threaded connection of the annular ring with the pad, and a central pad having a threaded portion engaging with internal threads of said first mentioned threaded portion, substantially as described.

5. A hernial pad having in combination a base plate provided with a raised annular flange, an annular ring rotatably connected therewith and provided with a concentric cup member internally threaded, and with a raised annular flange, anti-friction balls engaging in the annular recess formed by the cup members and the two annular flanges, and a pad having a threaded portion engaging the threads of the cup member, substantially as described.

1,023,436. HARROW. MARTIN MERKEL, Celestine, Ind. Filed Aug. 17, 1911. Serial No. 644,523. (Cl. 55—89.)



1. In combination with a cultivator frame including a plurality of cultivator standards, a plurality of harrow frames each including end and side members, and means connected to the end members for rigidly connecting said frames to the standards.

2. In combination with a cultivator frame including a plurality of cultivator standards, a harrow frame including pivotally connected side and end members, and means each adjustably connected to the end members for rigidly connecting said frame to a certain pair of standards.

3. In combination with a cultivator frame including a plurality of cultivator standards, a harrow frame including pivotally connected side and end members, spikes carried by said members, and separate means each adjustably connected to the end members between a pair of spikes for rigidly connecting said frame to a certain pair of standards.

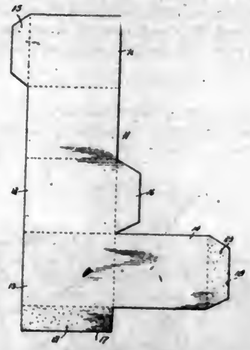
4. A harrow attachment for cultivator frames including a plurality of cultivator standards, consisting af a frame including end and side members, and means engageable with the end members for rigidly connecting the frame to a pair of standards.

5. A harrow attachment for cultivator frames including a plurality of cultivator standards consisting of a frame including end and side members, and means each adjustably connected to the end members for rigidly connecting said frame to a certain pair of standards.

[Claims 6 and 7 not printed in the Gazette.]

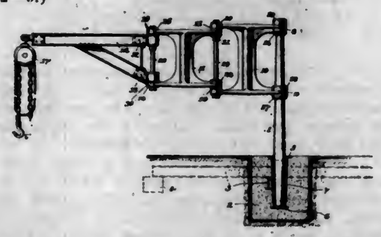
1,023,437. ENVELOP. AGNES MOSSOP, Harley, Ontario, Canada. Filed Sept. 17, 1910. Serial No. 582,506. (Cl. 229—75.)

A double walled envelop formed of a blank scored to form a series of four contiguous strips and a lateral strip all of the length and breadth of the envelop, the first strip of the series being gummed on one side, and the remaining strips of the blank being ungummed, the first strip of the series having an ungummed flap on one end edge, the third strip having a flap on the diametrically opposite end edge gummed on one side, the fourth strip having a flap on its longitudinal edge gummed on both sides, the lateral strip having a sealing flap on its free end edge of greater extent in all directions than the ungummed flap of said first strip and having a gummed face, the series of strips forming when folded the double front and back of the envelop, the gummed face of said first strip securing the strips of the envelop front



together as one, while the longitudinal flap with both sides gummed secures the strips forming the back marginally together with a resultant pocket therebetween, and said sealing and the ungummed flap of said first strip being folded as one and forming a double sealing flap.

1,023,438. CRANE. WALTER J. MUNCASTER, Cumberland, Md. Filed Jan. 11, 1910. Serial No. 537,466. (Cl. 212—9.)



1. In a crane, the combination of a support; an arm section pivoted on said support; a second arm section pivoted to the first arm section and approximately equal in length therewith; a third arm section pivoted to the second arm section and approximately equal in length to the first and second sections combined; and hoisting mechanism carried by the third section; the axes of all of the above named pivots being vertical.

2. In a crane, the combination of a support; an arm section pivoted on said support; a second arm section pivoted to the first arm section and approximately equal in length therewith; a third arm section pivoted to the second arm section and greater in length than either of the others; and hoisting mechanism carried by the third section; the axes of all of the above named pivots being vertical.

3. In a crane, the combination of a support; an arm section pivoted on said support; a second arm section pivoted to the first arm section; a third arm section pivoted to the second arm section and greater in length than the second section; and hoisting mechanism carried by the third section; the axes of all of the above named pivots being vertical.

4. In a crane, the combination of a support; an arm section pivoted on said support; a second arm section pivoted to the first arm section; a third arm section pivoted to the second arm section and greater in length than the first section; and hoisting mechanism carried by the third section; the axes of all of the above named pivots being vertical.

5. In a crane, the combination of a support; an arm section pivoted on said support; a second arm section pivoted to the first arm section; a third arm section pivoted to the second arm section and approximately equal in length to the first and second sections combined; and hoisting mechanism carried by the third section; the axes of all of the above named pivots being vertical.

[Claims 6 to 9 not printed in the Gazette.]

1,023,439. WIRE-FENCE FABRIC. JOHN WALLACE PAGE, Adrian, Mich. Filed Oct. 8, 1910. Serial No. 585,917. (Cl. 245—8.)



1. A wire fence fabric comprising strand and stay wires, the strand wires having short laterally deflected portions in a plane transversely of the fabric formed therein, said deflected portions in the successive strand wires standing in opposite directions, and the stay wires crossing between the strand wires and secured to said deflected portions thereof.

2. A wire fabric comprising strand wires and stay wires, said strand wires having lateral deflections therein in a plane transversely of the fabric, and means for joining said stay wires to the intermediate portions of said deflected parts of the strand wires, whereby a torsional strain is placed upon the stay wires when the strand wires are strained longitudinally.

3. A wire fabric comprising strand wires and stay wires, the strand wires having laterally deflected portions formed therein in a plane transversely of the fabric, said deflected portions in the succeeding strand wires standing in different directions, and said stay wires having portions thereof wrapped around the deflected portions of the strand wires.

4. A wire fabric comprising longitudinal and transverse wires, said longitudinal wires having portions deflected transversely to the plane of the fabric formed at intervals therein and said stay wires having portions thereof wrapped around the intermediate portions of the transverse deflections of said longitudinal wires to join said wires at their points of crossing.

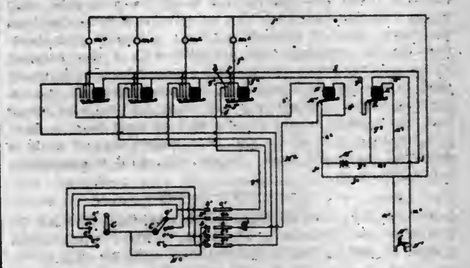
5. A wire fabric comprising strand and stay wires, said strand wires having deflections therein, and said stay wires having eyes which closely embrace the intermediate portions of said deflected parts of the strand wires.

[Claim 6 not printed in the Gazette.]

1,023,440. RAILWAY-SIGNAL. IRWIN W. PIERCE, New York, N. Y. Filed June 9, 1910. Serial No. 566,023. (Cl. 246—22.)

1. A shoe and a plurality of contact bars carried by a car, a lever mounted in the path of said shoe to be directly engaged and moved by said shoe, a plurality of fingers mounted on a different support from that of said lever for coöperation with the bars, means for actuating said fingers through the movement of the lever, and a signal actuated by the contact of said bars and fingers.

2. A shoe and contact-bars carried by a car, a lever mounted in the path of said shoe and arranged to be moved by the passage of said shoe, fingers connected to said lever and arranged to be moved into the paths of said contact bars by the movement of said lever, an electric switch operatively connected with said lever and operated by the movement of the latter in advance of the contact of the said fingers and contact bars, a circuit controlled by said switch and said fingers, and a signal actuated by the closing of said circuit.



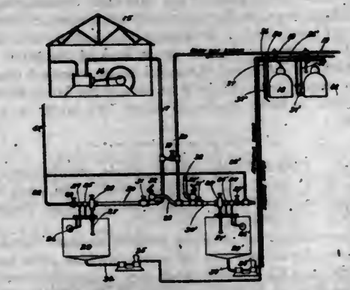
3. In an apparatus of the character set forth, a shoe carried by a car, a lever arranged to be moved by contact with said shoe, a shaft, a crank arm thereon, a rod connected to said lever and crank arm, contact means on the shoe, yielding means acting on said rod in the direction of its length, and a plurality of contact fingers movable with said shaft for coöperation with the contact means on said shoe.

4. In an apparatus of the character set forth, a shoe carried by a car, contact means carried by the car, a lever arranged to be moved by contact therewith of said shoe, a shaft, a crank arm thereon, a rod connected to said lever and crank arm, yielding means acting on said rod in the direction of its length, a plurality of contact fingers movable with said shaft for coöperation with said contact means, and an adjustable stop for limiting the movement of said shaft and fingers.

5. In an apparatus of the character set forth, a shoe carried by a car, a lever arranged to be moved by contact with said shoe, a shaft and a crank-arm thereon, a rod connected to said crank-arm and extending through said lever, abutments on said rod, springs on opposite sides of said lever on said rod, each abutting at one end against said lever and at the other against said abutments, and contact-fingers mounted on said shaft.

[Claims 6 to 13 not printed in the Gazette.]

1,023,441. HOT-WATER WASHING AND REFILLING SYSTEM FOR LOCOMOTIVE-BOILERS. WILLIAM A. POWERS, Topeka, Kans. Filed Nov. 27, 1909. Serial No. 530,131. (Cl. 122—396.)



1. In a device of the class described, two tanks, cold water conduits leading to each tank, a steam power plant, an exhaust steam supply pipe leading from said plant to one tank, a free exhaust valve connected thereto, a pipe connected to said free exhaust valve and leading therefrom to the other tank, another free exhaust valve opening to the outside atmosphere from said last mentioned pipe, jet condensers at the respective tanks to mingle the cold wa-

ter and exhaust steam and thermostatic means associated with each tank to regulate the supply of water and temperature thereof as it is delivered into each tank, respectively, said temperatures being different.

2. In a device of the class described, a steam power plant, a boiler refilling tank, a boiler washing tank, cold water conduits to both tanks, an exhaust steam pipe from the power plant to the refilling tank, a branch pipe therefrom to the washing tank provided with a free exhaust valve, another free exhaust valve opening from said branch pipe to the outer atmosphere, jet condensers at the respective tanks to mingle the cold water and exhaust steam and thermostatic means associated with each tank to regulate the supply of water and temperature thereof as it is delivered into each tank, respectively, said temperatures being different.

1,023,442. AUTOMATIC SASH-LOCK. EDWARD H. REMPE and FREDERICK M. ROSS, Oakley, Ohio. Filed Jan. 16, 1911. Serial No. 602,756. (Cl. 16—145.)



1. A window lock comprising a frame, a latch pivotally mounted on said frame and adapted to swing to occupy a set and a locked position, a handle pivotally mounted on said frame and provided with means for locking said latch in a locked position, and means for engaging said latch to cause said handle to move from a release to a set position, a keeper provided with an edge for engaging said latch and moving it from a set to a locked position, and a pin mounted on said keeper for engaging said latch and cooperating with said handle for locking said latch in a locked position.

2. In a sash lock, the combination of a casing for the lower sash, a keeper for the upper sash, two journaled pins mounted in the casing, a latch mounted upon the forward journaled pin in the casing and having a rearwardly extending projection, a handle mounted upon the other journaled pin in the casing having a cam face adjacent to the latch, the lower edge of the cam face terminating in a notch which engages the rearward extension of the latch in its set position, a detaining pin within the keeper adapted to contact with the upper face of the latch in its set position and to pass the latch in its released position, and the keeper being adapted to engage the latch when the upper sash is being closed to move the latch to its set position.

1,023,443. CONVEYER. CHARLES D. SEEBERGER, New York, N. Y., assignor to Otis Elevator Company, a Corporation of New York. Filed June 7, 1902. Serial No. 110,641. (Cl. 104—165.)

1. The combination with an endless movable carrier extending in an inclined run, of a side landing, said landing consisting of a fixed frame work and a traveling belt, and means for moving the upper surface of the belt in the same direction as and at a less speed than the moving carrier.

2. The combination with an endless movable stairway, of a side landing, said landing consisting of a fixed frame work and a traveling belt, and means for moving the upper surface of the belt in the same direction as and at a speed different from the speed of the moving stairway.

3. In a device of the class described, the combination with ways, providing carrying runs, of a series of steps or supports mounted to travel on said ways, and means for driving said steps at different rates of speed on different portions of said carrying runs.



4. In a device of the class described, the combination with the ways consisting of the horizontal portions at different levels and the inclined portion connecting the same, of a series of steps or supports mounted to travel on said ways, and means for driving said steps at a certain speed on the horizontal portions constituting the landings and at a greater speed on the inclined portion connecting the same.

5. In a device of the class described, the combination with ways, of a series of steps or supports mounted to travel on said ways, a plurality of cables driving said steps on different portions of the ways, and driving mechanism for operating said cables at different rates of speed.

[Claims 6 to 46 not printed in the Gazette.]

1,023,444. CAR-COUPLING. CHARLES H. STARK, Strasburg, Va. Filed Jan. 27, 1911. Serial No. 604,039. (Cl. 213—65.)



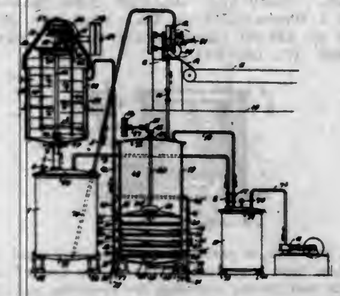
1. A car coupler of the character described comprising a draw bar and a recessed head, a pivoted knuckle in said head, a yieldable plunger adjacent to and opposite the knuckle adapted to move longitudinally of the draw bar and projecting beyond the complementary knuckle when coupled, and a coupling pin for holding the knuckle in coupled position, said coupling pin and plunger being provided with portions adapted to interengage to prevent longitudinal movement of the plunger.

2. A coupler of the character described comprising a draw bar and recessed head, a knuckle pivoted to said head, a yieldable plunger mounted on the draw bar and arranged opposite to said pivoted knuckle, a pin arranged to lie in the path of a portion of said knuckle to hold the same in closed position, and interengaging portions between the pin and plunger for locking the plunger against longitudinal movement.

3. A car coupler of the Janney type comprising a draw bar, a pivoted knuckle, a longitudinally yieldable plunger opposite the knuckle adapted to recede to permit entering of a complementary coupling member, a locking pin positioned along side of said yieldable plunger and movable to a position to lie in the path of the tail of the knuckle to hold the knuckle in closed position, said locking pin having a lateral play whereby as the knuckle is placed under strain the locking pin will be moved into engagement with said yieldable plunger to prevent longitudinal movement thereof.

4. A car coupler of the Janney type comprising a draw bar, a pivoted knuckle, a longitudinally yieldable plunger opposite the knuckle adapted to recede to permit entry of a complementary coupling member, a locking pin positioned along side of said yieldable plunger and movable to a position to lie in the path of the tail of the knuckle to hold the knuckle in closed position, said locking pin having a lateral play and the adjacent portion of said locking pin and plunger being provided with complementary portions adapted to interfit with each other when the knuckle is placed under strain to hold said plunger against longitudinal movement.

1,023,445. PLANT FOR PRODUCING PAPER-PULP AND FREEING IT FROM LIQUID. HEINRICH STRIETH, Nuremberg, Germany. Filed July 27, 1911. Serial No. 640,741. (Cl. 92—20.)



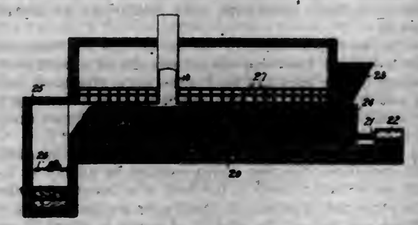
1. In a plant for producing paper pulp and freeing it from liquid, the combination with an apparatus adapted to receive a lye and raw materials and comprising an agitator with rotary knives for cutting up the raw materials so as to form a pulp, of a receptacle, means for discharging the contents from said apparatus into said receptacle, said receptacle being adapted to permit the chemicals to complete their action upon the pulp and to precipitate the heavier impurities, a press adapted to press the pulp for squeezing out the lye, means for passing the pulp from said receptacle to said press, means for carrying off from said press the pulp freed from lye, a reservoir for the lye separated by said press, means for passing the lye from said press to said reservoir, and means for passing the lye from said reservoir to said apparatus.

2. In a plant for producing paper pulp and freeing it from liquid, the combination with a first apparatus adapted to receive a lye and raw materials and comprising an agitator with rotary knives for cutting up the raw materials so as to form a pulp, of a receptacle, means for discharging the contents from said first apparatus into said receptacle, said receptacle being adapted to permit the chemicals to complete their action upon the pulp and to precipitate the heavier impurities, a press adapted to press the pulp for squeezing out the liquid, means for passing the pulp from said receptacle to said press, means for carrying off from said press the pulp freed from liquid, a second apparatus for the liquid separated by said press, means for passing the liquid from said press to said second apparatus, said second apparatus comprising an agitator for mixing the liquid with solvents for its impurities, filters, means for passing the liquid from said second apparatus to said filters, means for passing the purified lye from said filters to said first apparatus, and means for cleaning said filters.

3. In a plant for producing paper pulp and freeing it from liquid, the combination with an apparatus adapted to receive a lye and raw materials and comprising an agitator with rotary knives for cutting up the raw materials so as to form a pulp, of a closed receptacle adapted to receive the contents from said apparatus, to permit the chemicals to complete their action upon the pulp and to precipitate the heavier impurities, a press adapted to press the pulp for squeezing out the lye, means for carrying off from said press the pulp freed from liquid, a reservoir adapted to collect the separated liquid from said press, a source of compressed air, tubes connecting the several devices, means for opening said apparatus and discharging its contents into said closed receptacle, and means for opening and closing said source of compressed air so as to force by means of compressed air the pulp out of said receptacle to said press and the liquid out of said reservoir to said apparatus.

4. In a plant for producing paper pulp and freeing it from liquid, the combination with a first apparatus adapted to receive a lye and raw materials and comprising an agitator with rotary knives for cutting up the raw materials so as to form a pulp, of a closed receptacle adapted to receive the contents from said first apparatus, to permit the chemicals to complete their action upon the pulp and to precipitate the heavier impurities, a press adapted to press the pulp for squeezing out the liquid, means for carrying off from said press the pulp freed from liquid, a second apparatus adapted to collect the separated liquid from said press and provided with an agitator for mixing the liquid with solvents for its impurities, filters adapted to receive the mixture from said second apparatus and to turn it into pure lye while retaining the precipitate, a source of compressed air, tubes connecting the several devices, means for opening said first apparatus and discharging its contents into said closed receptacle, means for opening and closing said source of compressed air so as to force at will by means of compressed air the pulp out of said receptacle to said press, the liquid out of said second apparatus to said filters and the purified lye from said filters to said first apparatus or to force the lye from said second apparatus direct to said first apparatus, and means for cleaning said filters.

1,023,446. PROCESS OF MAKING ILLUMINATING-GAS. LELAND L. SUMMERS, Chicago, Ill. Filed Dec. 22, 1911. Serial No. 667,325. (Cl. 48—201.)

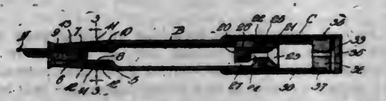


1. The herein described process which consists in introducing into a closed retort a mixture of coal and hydrocarbon and then simultaneously distilling the mixture and passing the volatilized products toward the source of heat.

2. The herein described process which consists in mixing coal and oil, introducing the mixture into a closed retort, heating the mixture and causing the products distilled at the lower temperatures to pass to zones of higher temperatures in immediate contact with products distilled from the mixture at the higher temperatures.

3. The herein described process which consists in mixing hydrocarbons which are volatilized at a comparatively high temperature with hydrocarbons which are volatilized at a comparatively low temperature, introducing the mixture into a closed retort, heating the mixture, and causing the products of distillation to pass toward the source of heat.

1,023,447. FOUNTAIN-PEN. JOSEPH A. VOGELMANN and CHARLES F. HOVEY, Brooklyn, N. Y., assignors of one-tenth to said Vogelmann and nine-tenths to said Hovey. Filed Apr. 27, 1911. Serial No. 623,739. (Cl. 120—48.)



1. In a fountain pen, the combination with a barrel having a manually-operated valve at its lower end and at its upper end an axial bore and an off-center hole whose upper extremity leads radially into said bore; of a ro-

tary plug comprising a shank journaled in said bore and having an annular groove, an enlarged knob resting against the upper end of the barrel, and packing within said groove, the shank and knob having a duct whose upper end is funnel-shaped and whose lower end has a lateral opening adapted to communicate with said hole.

2. In a fountain pen, the combination with the barrel, and manually-operated valves at its extremities; of a cap comprising an inner shell adapted to fit over either end of said barrel and having its upper end closed except for an opening, and an outer shell slidably mounted around the inner shell and having its upper end closed.

3. In a fountain pen, the combination with a barrel having a manually-operated valve at its upper end; of a cap comprising an inner shell adapted to be slipped over said upper end, the upper extremity of the shell being closed except for an opening, an outer shell slidably but closely surrounding the inner shell and having its upper extremity closed, and packing between the shells.

1,023,448. MANUFACTURE OF FERMENTED MALT BEVERAGES. ROBERT WAHL, Chicago, Ill. Filed Aug. 11, 1911. Serial No. 643,507. (Cl. 195—32.)

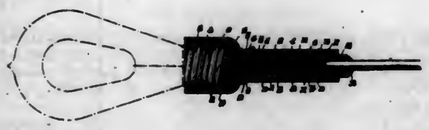
1. As an improvement in the art of brewing fermented malt beverages, involving the preparation of a malt-mash, drawing off the wort and boiling the same with hops, cooling and fermenting, the step which consists in adding to the matter under treatment an extract of malt in the form of a liquor acidulated with lactic acid propagated therein.

2. As an improvement in the art of brewing fermented malt beverages, involving the preparation of a malt-mash, drawing off the wort and boiling the same with hops, cooling and fermenting, the step which consists in adding to the mash an extract of malt in the form of a liquor acidulated with lactic acid propagated therein.

3. As an improvement in the art of brewing fermented malt beverages, the step which consists in adding to the mash an extract of malt in the form of a liquor acidulated with lactic acid propagated therein, in the proportions of about 5 per cent. of the acidulated liquor to about 95 per cent. of the mash.

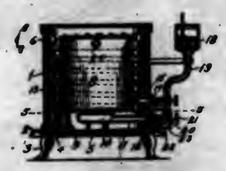
4. In the art of brewing, the process of producing an acidulated auxiliary mash, which consists in mashing the materials in a suitable way but employing therein only temperatures below 55° C., or thereabout, for inverting the starch and albumen, adding to said mash for inoculating the same an extract of malt in the form of a liquor acidulated with lactic acid propagated therein, and maintaining the temperature of the auxiliary mash at 55° C. to 45° C., or thereabout, until the desired degree of acidity is obtained.

1,023,449. PORTABLE-INCANDESCENT-LAMP HANDLE. LAWRENCE T. WASHINGTON, Mount Rainier, D. C. Filed Jan. 18, 1912. Serial No. 671,942. (Cl. 173—328.)



A portable lamp handle including an outer shell having an integral nipple provided with an opening in one side extending to about the central longitudinal diameter of the nipple, a sleeve on said nipple concealing said opening and forming a handle, a threaded metallic socket within the shell and insulated therefrom, a centrally located metallic contact within said metallic socket and insulated therefrom, a strip of insulating material in said nipple having a flat face exposed by said opening, binding screws on said exposed face, an electrical conductor connecting one of said binding screws with said metallic socket, and an electrical conductor connecting the other of said binding screws to said metallic contact.

1,023,450. COMBINED HEATER AND RADIATOR. MARY J. WHEELER, Dallas, Tex. Filed Mar. 10, 1910, Serial No. 548,341. Renewed Nov. 7, 1911. Serial No. 659,056. (Cl. 122—234.)



1. In a heater, a casing having openings near its upper end, a tank supported in the casing free of contact therewith and having provision for receiving and delivering water, a burner disposed between the tank and the casing and under the former, a second burner coiled about the tank within the casing, and means for conducting gas from the outside of the casing to the burners.

2. In a heater, a casing having openings near its upper end, a lining fitting the inside walls of the casing, a tank supported in the casing free of contact therewith and having provision for receiving and delivering water, a flat burner disposed between the tank and the bottom of the casing, a second burner in the form of a pipe coiled about the tank within the casing, fuel supply tubes leading from the burners and terminating outside the tank, and gas supplying means outside the tank in line with the outer ends of the tubes.

3. In a heater, a cylindrical casing having heat ejecting openings near its upper end, a base provided with legs and supporting the casing, a lining of fire resisting material fitting the inner side walls of the casing, a cylindrical tank of thin metal supported in the casing in concentric relation thereto, whereby an annular space is provided between the tank and the casing, means for supplying water to the tank, means for delivering water from the tank, a flat burner supported on the bottom of the casing under the tank, a tube extending from the burner through the side of the casing and terminating in a flaring mouth, a perforated burner pipe coiled upward around the tank in the annular space, a tube leading from the lower end of the pipe burner through the side of the casing and terminating in a flaring mouth, a stand in the casing supporting the burner pipe, and means for supplying gas to the flaring ends of the tubes.

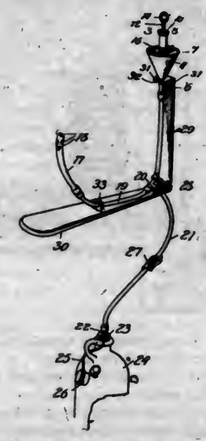
1,023,451. PROCESS FOR THE PREPARATION OF CHROME-LEATHER. ALBERT WOLFF, Cologne, Germany. Filed Oct. 24, 1911. Serial No. 656,387. (Cl. 149—5.)

A process for the preparation of chrome leather consisting in treating cleaned and pickled skins freed from hair with an aqueous solution of substantially pure chrominium formate.

1,023,452. CLYSTERIZING APPARATUS. ANTON G. ANDERSON, Chicago, Ill. Filed Oct. 25, 1911. Serial No. 656,629. (Cl. 128—25.)

1. In a clysterizing apparatus, the combination of a funnel provided with a central bearing, a clyster-pipe having a tube-connection with the funnel-spout, and a syringe-like pump releasably supported at its barrel in said bearing and provided on its inner end with a plug removably seating in the funnel at the junction of its spout and when seated permanently closing the pump to the body of the funnel, for the purpose set forth.

2. A clysterizing apparatus comprising, in combination, a pump-holding funnel having a tubular clyster-pipe connection with its spout, a branch-tube joined at one end to said connection and provided with means for opening and closing the passage through it, and a portable seat formed of folding sections and forming a support for the funnel with said connection and branch-tube, for the purpose set forth.



1,023,453. SURFACE-COOLER FOR AUTOMOBILES. LOUIS BACHTEN and JEAN GALLAY, Geneva, Switzerland. Filed Oct. 28, 1909. Serial No. 525,080. (Cl. 62—28.)



1. A radiator comprising radiator sections, and a front plate being provided with perforations, the edges of the perforations being turned inward so that the inturned edges of adjacent perforations will clasp the radiator sections.

2. A radiator comprising radiator sections, and a front plate having perforations to form air passages, the perforations having their edges turned to form wings, the wings being adapted to clasp the edges of the sections between them.

3. A radiator comprising radiator sections having downwardly and forwardly inclined corrugations, and a front plate having perforations with inturned edges, the inturned edges of adjacent perforations being adapted to clasp a radiator section between them.

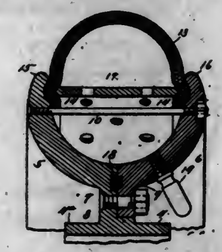
4. A radiator comprising a series of radiator sections, each section being formed of corrugated plates joined at their edges, and a front plate formed with perforations, the edges of the perforations being turned in to form wings, the adjacent wings of adjoining perforations being adapted to embrace the joined edges of the radiator sections.

5. A radiator comprising radiator sections of comparatively thin form, and a front plate having a series of perforations therein, each perforation being formed by bending down four triangular abutting parts, the triangular parts forming wings for clasping the edges of the radiator sections.

[Claim 6 not printed in the Gazette.]

1,023,454. PNEUMATIC TIRE FOR VEHICLE-WHEELS. ELERY EMMERSON BLACK, Detroit, Mich. Filed Mar. 4, 1911. Serial No. 612,243. (Cl. 152—13.)

1. A pneumatic tire having in combination, a rim having an upwardly projecting flange, a second flange bolted to said first mentioned flange through the two neck projections of the flanges, the said flanges being shaped to form an annularly channeled rim and each flange having on its inner surface a groove, bolts passed through the flanges near their free ends and adapted to securely brace the same, a flexible tread member seated in said annularly channeled rim and a ring contained within the flexible member of the channeled rim, adapted to press the flexible tread member into air-tight engagement with the said grooves of the flanges, the said channeled rim adapted to form the inner part of and the said flexible tread member adapted to form the outer part of the air containing chamber, substantially as described.



2. A pneumatic tire, having its air chamber formed in part by a channeled rim in two parts separately connected and provided with oppositely disposed seating grooves for a flexible tread member, a flexible tread member engaging along its edges in said seating grooves, a perforated included ring engaging along the edges of said flexible tread member and forcing said flexible tread member into said grooves, and tie bolts located near the edges of the said channeled rim and extending across the same to draw the rim members, the ring and the tread into close engagement.

1,023,455. BOLT FOR DOORS AND WINDOWS. FRIEDRICH CARL VOM BRUCK, Dusseldorf, Germany, assignor to The Firm of Friedr. Carl vom Bruck, Velbert, Germany. Filed Apr. 13, 1910. Serial No. 555,205. (Cl. 16—64.)



1. In a bolt of the character described, the combination, with a base plate, of a sliding bolt slidable thereon, and guiding means comprising a tensioned spring securing the bolt on, and pressing the bolt against, the base-plate, said guiding means being protected from dust by the bolt.

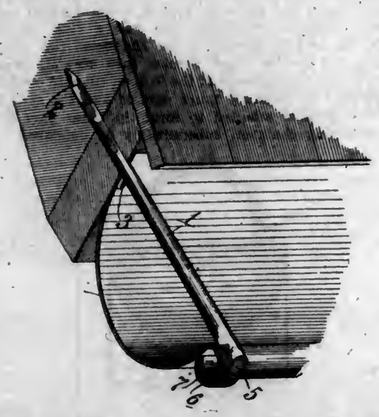
2. In a bolt of the character described, the combination, with a base-plate, of a sliding bolt slidable thereon, guide pins movably securing the bolt on the base-plate, and a spring carrying a projection, said spring being tensioned between said pins and pressing the bolt against the base-plate.

3. In a bolt of the character described, the combination of a base plate, a hollow, slotted bolt having recesses slidable thereon, two pins fixed on said base-plate projecting into said hollow bolt, and a spring carrying a projection, said spring being tensioned between said pins in said bolt, the projection being arranged to enter into said recesses in the end positions of the bolt.

1,023,456. EAVES-TROUGH FASTENER. HENRY CALLAHAN, Dayton, Ohio. Filed Oct. 2, 1911. Serial No. 652,401. (Cl. 108—29.)

The combination with an eaves trough, of a trough-hanger having an end driven through the inner side of the trough into the adjacent side of the building to support the inner portion of said trough, the outer end of

said hanger having a driving head in line with the penetrating end of the hanger, and a hook which incloses the outer side edge of the trough and supports the outer por-



tion of said trough, and a stop in the body of said hanger adapted to limit the penetration of the hanger and to clamp the inner side of the trough to the building.

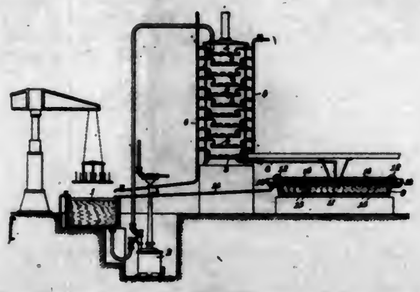
1,023,457. TALLY-CHART. HERMANN FRANCIS CUNTZ, Hartford, Conn. Filed Sept. 28, 1908. Serial No. 455,005. (Cl. 235—1.)



1. A record chart for automobile races or the like, comprising a field sub-divided vertically into graduations denoting speed and divided horizontally by graduations denoting time, a series of preponderating lines representing respectively the laps of the race applied to said graduations in a manner to be primarily visible, means for indicating on each of said lap curves the position of the individual contestants, respectively, based on the elapsed time, whereby the relative position of the contestants in the race is indicated in their regular sequence at the end of each lap by their proximity to one end of the lap lines, and simultaneously a record of speed is instantly readable therefrom.

2. A chart for graphically recording the result of races over a plurality of laps over a given course, comprising a field having relatively faint horizontal lines representing speed in miles per hour, relatively faint vertical lines representing elapsed time, preponderating curves each representing the total distance of the race at the end of the respective laps, means for recording on said field instantly the position of individual contestants, respectively, whereby their relative position with respect to one end of the curved lines indicates at a glance the relative standing in the race, and simultaneously records the speed of the individuals respectively.

1,023,458. PICKLING SHEETS, &c. SAMUEL E. DIESCHER, Pittsburgh, Pa. Filed Dec. 15, 1910, Serial No. 597,531. Renewed Sept. 9, 1911. Serial No. 648,496. (Cl. 148—42.)

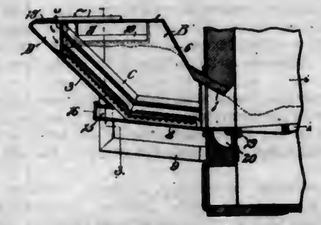


1. The method of regenerating a pickling bath, which consists in drawing liquor from the bath, removing therefrom a portion of the dissolved salts, and returning the treated liquor to the bath.

2. The method of regenerating a pickling bath, which consists in drawing liquor from the bath, reducing the saturation point of such liquor thereby permitting of the segregation of the excess of salts carried by the liquor and returning the clarified liquor to the bath.

3. The method of regenerating a pickling bath, which consists in drawing liquor from the bath, changing the relative proportions of the liquid and salts carried by the liquor to lower the point of saturation of the liquor, permitting of the segregation of the excess of salts, and returning the liquor to the bath.

1,023,459. COAL FURNACE AND STOVE. JOSEPH J. DIX, St. Louis, Mo. Filed Mar. 6, 1911. Serial No. 612,593. (Cl. 110—24.)



1. A furnace or stove comprising a combustion chamber, a coking compartment communicating with said combustion chamber and adapted to receive green fuel, an air flue, devices coöperating with said air flue for introducing air directly into the body of fuel in said coking compartment, a flue which supplies heated air to the under side of the grate in the combustion chamber, and a single valve for regulating the supply of air to both of said air flues.

2. A furnace or stove comprising a combustion chamber, a coking compartment communicating with said combustion chamber and adapted to receive green fuel, air flues which supply air to said coking compartment and to the under side of the grate in the combustion chamber, and a damper which regulates the supply of air to both of said flues, said damper being so constructed that some air can always enter the coking compartment.

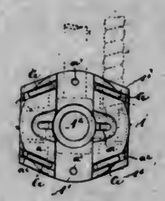
3. A furnace or stove comprising a combustion chamber, a coking compartment communicating with said combustion chamber and adapted to receive green fuel, an air passageway extending around the outer walls of said coking compartment and having outlets through which the air escapes into the lower portion of said coking compartment and circulates up through the fuel therein, air-supplying members communicating with said air passageway and arranged in such a manner that they are covered or partially covered by the fuel in said compartment, means whereby the fuel in said coking compartment may be fed onto the grate of the combustion chamber, and means for supplying air to said air passageway and to the under side of the grate of the combustion chamber.

4. A furnace or stove comprising a combustion chamber, a coking compartment communicating with said combustion chamber and adapted to receive green fuel, an air passageway extending around the outer walls of said coking compartment and having outlets through which the air escapes into the lower portion of said coking compartment and circulates up through the fuel therein, air-supplying members communicating with said air passageway and arranged in such a manner that they are covered or partially covered by the fuel in said compartment, said air-supplying members having air ports through which the air escapes into the fuel, ledges on said members arranged adjacent said air ports, means whereby the fuel in said coking compartment may be fed onto the grate of the combustion chamber, and means for supplying air to said air passageway and to the grate of the combustion chamber.

5. A furnace or stove comprising a combustion chamber, a coking compartment communicating with said combustion chamber and adapted to receive green fuel over which air circulates, means for preventing the fuel from clogging the passageway between said chamber and compartment, an air passageway arranged adjacent the outer wall of said coking compartment for receiving the air which circulates over the green fuel in said coking compartment, said air passageway being provided with outlets through which the air escapes directly into the bed of fuel in said coking compartment, air-supplying members arranged inside of said compartment and communicating with said air passageway, and means for supplying heated air to the grate under the fuel in the combustion chamber, said furnace being so constructed that separate piles or masses of fuel may be fed from said coking compartment into said combustion chamber.

[Claims 6 to 8 not printed in the Gazette.]

1,023,460. OUTLET-BOX. EDWARD J. DUSTMAN, New York, N. Y. Filed Dec. 6, 1909. Serial No. 531,490. (Cl. 247—5.)



1. An outlet box formed with a vertical groove in its rear face and having vertical passages for the reception of electric cables, and transverse recesses in the front face of the box between and communicating with said passages for the reception of wires from said cables.

2. An outlet box formed with a vertical groove in its rear face and having vertical passages therein for the reception of electric cables, and transverse recesses in the front face of the box between and communicating with said passages for the reception of wires from said cables, and centrally located means in said box for holding an insulating joint.

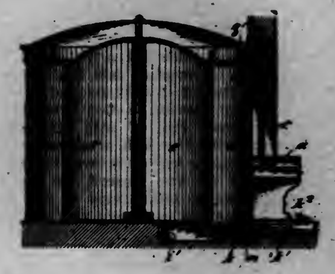
3. An outlet box formed with a vertical groove in its rear face and having vertical passages therein for the reception of electric cables, and transversely arranged recesses in the front face of the box between said passages for the reception of wires from said cables, and orifices of smaller diameter than said cables communicating between said passages and recesses.

4. An outlet box having a vertical groove in the rear face, constructed partially to inclose a gas pipe, and a central opening from said groove to receive a gas outlet from said pipe, vertical passages parallel with said groove for the reception of electric cables, and transverse recesses in the front face for the reception of wires from said cables.

5. An outlet box having a vertical groove in the rear face, constructed partially to inclose a gas pipe, recesses on each side of said groove constructed to receive lugs on said pipe, a central opening from said groove to receive a gas outlet from said pipe, vertical passages parallel with said groove for the reception of electric cables, and transverse recesses in the front face for the reception of wires from said cables.

[Claims 6 to 12 not printed in the Gazette.]

1,023,461. SAFETY DEVICE FOR CASH-DESKS. WALTER EICHELKRAUT, Zehlendorf, near Berlin, Germany. Filed Dec. 27, 1910. Serial No. 599,501. (Cl. 39—140.)



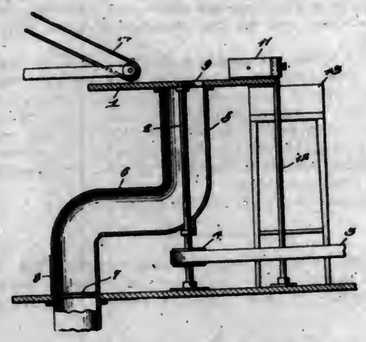
1. An apparatus for regulating and controlling the access of persons to cash desks, comprising, in combination, a movable winged door in front of the cash desk, a movable floor-plate in front of the cash desk, adapted to be depressed by the weight of the person thereon, locking means for preventing motion of said door in either direction, mechanical connections from said floor plate to said locking means, and means, operatable from the rear of the cash desk, for raising said floor plate and releasing the door.

2. An apparatus for regulating and controlling the access of persons to cash desks, comprising, in combination, a rotatable winged door in front of the cash desk, a pivoted floor plate in front of the cash desk, a pivoted lever supporting said floor plate near its free end, a bolt connected to said pivoted lever, an annular plate mounted on the door and having holes adapted to be engaged by said bolt, and a treadle lever extending to the rear of the cash desk and connected to said pivoted lever.

3. An apparatus for regulating and controlling the access of persons to cash desks, comprising, in combination, a rotatable winged door in front of the cash desk, a pivoted floor plate in front of the cash desk, a pivoted lever supporting said floor plate near its free end, a bolt connected to said pivoted lever, an annular plate mounted on the door and having holes adapted to be engaged by said bolt, a treadle lever extending to the rear of the cash desk and connected to said pivoted lever, ratchet teeth carried by said annular plate and a pawl engaging said teeth.

4. An apparatus for regulating and controlling the access of persons to cash desks, comprising, in combination, a movable winged door in front of the cash desk, a bolt automatically adapted to lock the door and prevent its motion in either direction, and means, operatable from the rear of the cash desk, for withdrawing said bolt, a casing surrounding the greater part of said door and auxiliary doors in said casing and adapted to open outwardly.

1,023,462. SEPARATOR. GORDON WYMAN ELDER, Malden, Mass. Filed Jan. 15, 1912. Serial No. 671,228. (Cl. 83—54.)



A separator of the character described, including a horizontally disposed revoluble disk, a vertical shaft carrying said disk, means for rotating said shaft to turn the disk, the disk being formed close to its center but eccentric thereto with an opening, a flue extending downwardly from the lower face of said disk and of a diameter to circumscribe the path of movement of said opening, a deflecting plate supported over the upper surface of the disk at the rim thereof, for the purpose specified, and a conveyer terminating at its discharge end outside of the path of movement of the opening in the disk, but close thereto.

1,023,463. TANK-HEATER. HENRY L. FERRIS, Harvard, Ill., assignor to Hunt, Helm, Ferris & Company, Harvard, Ill., a Corporation of Illinois. Filed Dec. 26, 1911. Serial No. 667,704. (Cl. 126—367.)

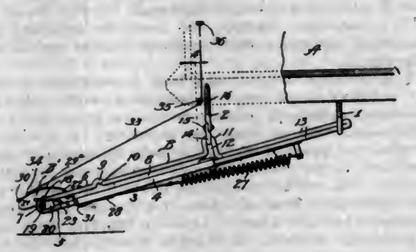


1. In a tank heater, a fire pot, a vertical air inlet flue at one end of the heater, an annular eduction flue encircling the entire heater and located in separated relation to said air inlet flue whereby the incoming air will not affect the temperature of the products of combustion passing through said eduction flue, the said heater being cast in two parts with flanges formed on the meeting faces of said parts, and means securing said flanges together.

2. In a tank heater the combination of a fire pot, a vertical air inlet flue, an annular eduction flue encircling the entire heater and located in separated relation to said air inlet flue whereby the incoming air will not affect the temperature of the products of combustion passing through said eduction flue, a removable section in said annular eduction flue under the grate, whereby access is afforded the said last named flue for cleaning the same, the heater and eduction flue being cast in two parts, flanges on the meeting faces of said parts, and means for securing said flanges together.

3. In a tank heater, a fire pot, a vertical air inlet flue at one end of the heater, and an annular eduction flue encircling the entire heater and located in separated relation to said inlet flue, whereby the incoming air will not affect the temperature of the products of combustion passing through said eduction flue.

1,023,464. GUARD OR FENDER FOR STREET-CARS OR THE LIKE. WILLIAM FONGER, Chicago, Ill. Filed Jan. 18, 1912. Serial No. 671,874. (Cl. 105—130.)



1. In a device of the character set forth, the combination with a supporting frame, of a normally-elevated, eccentrically-mounted, rearwardly-overturnable fender mounted thereon, an actuating spring for effecting reversal of said fender, and an automatically-tripped restraining device for said spring.

2. In a device of the character set forth, the combination of a supporting frame, a rearwardly-overturnable fender mounted thereon and adapted to swing so that its edge, which is normally presented rearwardly, will be carried downwardly and presented forwardly, a fender-reversing spring connected therewith, and a latch-member normally restraining said spring from action and adapted to be unlatched by said fender during initial rearward movement of the fender.

3. In a device of the character set forth, the combination of a fender-frame, a rearwardly-swinging reversible fender mounted thereon so that its rear edge will swing downwardly and be presented forwardly, a fender-reversing spring, a latch-member connected with said spring, and flexible connections between said latch-member and said fender, said latch-member being adapted to be released by initial rearward movement of the fender.

4. In a device of the character set forth, the combination of a fender-frame, an eccentrically-mounted rearwardly-somersaulting fender mounted thereon and adapted to have its rear edge carried downwardly and presented forwardly, a fender-reversing spring, a latch-member connected therewith and normally engaging the front portion of the frame to restrain said spring from action, and connections between said latch-member and said fender, said latch-member being adapted to be released by the fender when the fender is initially moved rearwardly.

5. In a device of the character set forth, the combination of a fender-frame, a rearwardly-somersaulting fender mounted thereon and adapted to have its rear edge carried downwardly and presented forwardly, a fender-reversing spring equipped with a trip-device and connected with the fender, said trip-device being adapted to be tripped during initial rearward movement of the fender, and manual means for tripping said device and adapted to be operated by the motorman.

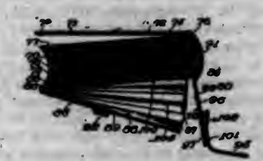
[Claims 6 and 7 not printed in the Gazette.]

1,023,465. MOLD FOR TANKS. EDGAR P. FOX, Greeley, Colo. Filed June 30, 1911. Serial No. 636,172. (Cl. 25—130.)



A mold apparatus for tanks comprising inner and outer sectional shells flaring in opposite directions, forming a tapering space intermediate the same, the sections of the inner shells having slits in the ends thereof forming a series of overlapping wings having slots therein, fastening means passing through registering slots within said overlapping wings and forming means for adjusting the lower contracted end of the inner shell, an adjustable band mounted about the lower contracted end of the inner shell, the upper portions of the sections of the inner shell adapted to overlap and provided with elongated slots, bolts passing through the latter, the upper ends of the sections of the outer shell being slotted and overlapping, and a slotted band adjustably held about the upper ends of the sections of the outer band, as set forth.

1,023,466. BOOKBINDING. JOHN G. GAREIS, Philadelphia, Pa. Filed Feb. 23, 1911. Serial No. 610,374. (Cl. 11—18.)



1. A cover for a book having one side arranged to form with said book a pocket, secured on one side of the cover at the edge opposite the back, means connecting the upper and lower ends of said pocket to the respective adjacent edges of said book, and the material of the back of said cover terminating in a flap for said pocket.

2. A cover for a book comprising boards secured to the sides of said book, a section of material secured to the inner side of one of said boards and extending rearwardly along and spaced from the outside face of said board, said material being secured at its ends to said board to form a pocket, and a flap for said pocket.

3. A cover for a book comprising boards secured to the sides thereof, the material of the back projecting to one side of said book, a section of material secured to the inner side of one of said boards and extending rearwardly along and spaced from the outside face thereof, said material being secured at its ends to said board to form a pocket, and a flap for said pocket comprising said projecting material.

4. A cover for a book comprising boards, the material of the back projecting freely at one side of said cover, a section of material secured to the inner side of one of said boards and extending rearwardly along and spaced from the outside face thereof, said material being secured at its upper and lower ends to the adjacent edges of said board by plaited sections, the lateral projection of said back material forming a flap for said pocket and means for securing said flap in a position to close said pocket.

5. A book having a flexible portion of the cover secured along the forward edge thereof and spaced therefrom, plaited means for securing the ends of said flexible cover portion to said book, and the material of the back of said cover projecting at one side and forming a flap for the pocket thus formed.

[Claims 6 to 15 not printed in the Gazette.]

1,023,467. ATTACHMENT FOR CHILDREN'S VEHICLES. RUSH S. GILKESON, Detroit, Mich. Filed Apr. 23, 1909. Serial No. 491,759. (Cl. 208—42.)



1. The combination with a child's vehicle and propelling mechanism therefor, of a cylinder adaped to be secured thereon having a head provided with a relief port, a whistle whose mouthpiece opens through said head, means within manual control of the vehicle's occupant for closing the relief port in the head momentarily, a cap secured on the other cylinder head at an interval from and in axial alinement with an aperture in the head, a piston in the cylinder and means to reciprocate the piston.

2. The combination with a child's vehicle and propelling mechanism therefor, of a cylinder adapted to be secured thereon, having a head provided with a relief port, a whistle whose mouthpiece opens through said head, a lever pivoted on the vehicle body one of whose ends is adapted to close the relief port, a handle for operating the lever, a cap secured on the other cylinder head at an interval from and in axial alinement with an aperture in the head, a piston in the cylinder, and means to reciprocate the piston.

3. The combination with a child's vehicle and propelling mechanism therefor, of a cylinder adapted to be secured thereon, having a head provided with a relief port, a whistle whose mouthpiece opens through said head and forms a support for the whistle, means within manual control of the vehicle's occupant for closing the relief port in the head momentarily, a cap secured on the other cylinder head at an interval from and in alinement with an aperture in the head, a guide plate, a piston in the cylinder, piston stem therefor in sliding engagement with the guide plate and means operatively connecting the stem to the vehicle driving mechanism.

4. The combination with a child's vehicle and propelling mechanism therefor, of a cylinder adapted to be secured thereon, having a head provided with a relief port, a whistle whose mouthpiece opens through said head and forms a support for the whistle, means within manual control of the vehicle's occupant for closing the relief port in the head momentarily, a cap secured on the other cylinder head at an interval from and in axial alinement with an aperture in the head, a guide plate, a piston in the cylinder, a piston stem therefor in sliding engagement with the guide plate and means operatively connecting the stem with the vehicle driving mechanism.

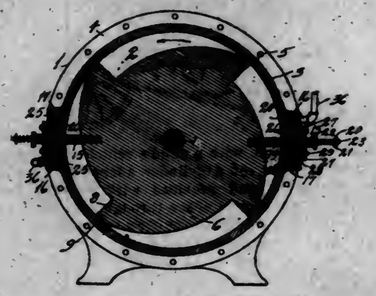
5. The combination with a child's vehicle and propelling mechanism therefor, of a cylinder adapted to be secured thereon, having a head provided with a relief port, a whistle whose mouthpiece opens through said head and forms a support for the whistle, a lever pivoted on the vehicle body one of whose ends is adapted to close the relief port, a handle for operating the lever, a cap secured on the other cylinder head at an interval from and in axial alinement with an aperture in the head, a guide plate, a piston in the cylinder, a piston stem in sliding engagement with the guide plate and means operatively connecting the stem with the vehicle driving mechanism.

[Claims 6 to 11 not printed in the Gazette.]

1,023,468. ROTARY ENGINE. FRANK P. HARMON, Dallas, Tex. Filed Aug. 5, 1911. Serial No. 642,440. (Cl. 121—71.)

1. In a rotary engine, a cylinder comprising side plates having their inner surfaces ground smooth, a flanged spacing member secured between the side plates having its in-

ner periphery ground smooth, a piston provided with wings and fitting in the cylinder, the piston having its sides ground smooth and in close contact with the inner surfaces of the side plates, a shaft extending through casing and on which the piston is fixed, and clamping members secured on the shaft and bearing against the outer sides of the side plates whereby the latter may be compressed.



2. In a rotary engine, a cylinder comprising side plates and a flanged spacing member secured between the side plates, a shaft extending through the side plates of the cylinder, a piston mounted on the shaft, gates operating in the cylinder, collars mounted on the shaft and held against rotation independently thereof, said collars impinging the side plates on the outside of the cylinder, and lock nuts threaded on the shaft and bearing against the collars.

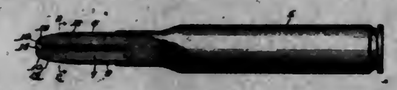
3. In a rotary engine, side plates, a flanged sectional spacing member secured between the side plates, bosses provided at the adjacent edges of the sections of the spacing member and spaced apart, pockets provided in the side plates coincident with the spaces between the bosses, coil springs disposed in the pockets, radial gates operating in the spaces between the bosses and engaging in the pockets, the coil springs being located in the path of the gates, other coil springs mounted on the side plates and bearing inward against the gates, a transverse shaft extending through the side plates, a piston fixed on the shaft between the side plates and within the spacing member, curved wings projecting from the piston in the path of the gates, and devices secured on the shaft arranged to force the side plates into close contact with the sides of the piston.

4. In a rotary engine, the combination with a cylinder having opposed peripheral bosses, and a winged piston mounted in the cylinder, of spring pressed radial gates slidable between the bosses of the cylinder and arranged to engage the piston, packings disposed in the bosses of the cylinder and contacting with the sides of the gates, and rockable followers mounted on said bosses and their inner ends turned down in engagement with the packings.

5. In a rotary engine, the combination with a cylinder, a transverse shaft mounted in the cylinder, and a winged piston within the cylinder fixed on the shaft, of spring pressed radial gates slidable into the cylinder and mounted in opposed relation, a valve mechanism for supplying fluid under presure simultaneously below one and above the other comprising, a valve casing having passages, supply pipes connected to some of said passages, connection pipes leading from the other passages to said cylinder, a valve mounted in the valve casing provided with intersecting ports disposed to register with the passages of the valve casing, and an operating connection between the piston shaft and the valve.

1,023,469. CARTRIDGE. JOHN D. S. HASLETT, Philadelphia, Pa. Filed Aug. 22, 1911. Serial No. 645,324. (Cl. 102—26.)

1. A bullet comprising a body of flexible material tapered toward its forward end, and an expanding wedge of small diameter relative to said bullet composed of a relatively harder material, comprising a conical head flush with the forward edge of said body converging into a substantially cylindrical shank extending into said bullet, and operative to be shifted into said bullet to expand the surrounding portion thereof after contact with an object struck.



2. A bullet comprising a body of ductile material, having a central bore of relatively small diameter terminating in a counter-sunk orifice at the forward end thereof, a jacket surrounding said bullet and terminating short of the forward end thereof, and an expanding wedge comprising a conical head flush with the forward end of said bullet, and a substantially cylindrical shank extended partly through said bore in frictional engagement with the walls thereof, to prevent its accidental displacement, and arranged to expand the portion of said bullet surrounding said wedge after contact with an object struck.

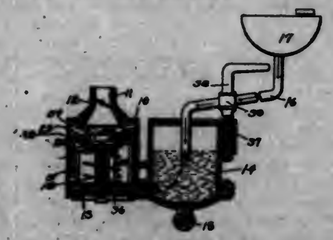
3. A bullet comprising a body of ductile material, having a cylindrical bore of relatively small diameter provided with a countersunk orifice, and an expanding wedge comprising a conical head flush with the forward end of said body merging into a substantially cylindrical shank fitted to slide in said bore after contact with an object struck.

4. A bullet having a relatively small elongated cavity countersunk at the forward end and forming a cutting edge arranged to cut a hole in the object struck by said bullet, and a wedge disposed wholly within said cavity and comprising a conical head merging into a cylindrical shank extending partially through said cavity, said wedge being operative to expand the forward end of said bullet after said cutting edge has engaged the surface of the object struck.

5. A bullet comprising a cutting edge at its forward end, and an expanding wedge having a cylindrical portion and a cone-shaped portion, the base of said latter portion being flush with the said cutting edge and the first mentioned portion extending in a recess provided in said bullet and frictionally maintained therein, said wedge being operative, at the moment of impact of said bullet upon the surface of an object at which it is fired, to move slightly away from said object, to permit the said cutting edge to cut through the surface thereof, the further longitudinal movement of said wedge being operative to symmetrically expand said bullet within the interior of said object.

[Claims 6 to 10 not printed in the Gazette.]

1,023,470. CARBURETER. RAYMOND S. HILL and OLIVER P. UNDERWOOD, Indianola, Iowa; said Underwood assignor to Herman C. Mills, Des Moines, Iowa. Filed Feb. 28, 1910. Serial No. 546,507. (Cl. 48—155.1.)



1. In a carbureter, the combination of a gasolene distributer, means for supplying gasolene to it, two plates adjacent to the distributer, each having an opening through its central portion and means for jointly moving said plates toward and from each other, the lower plate being of smaller diameter than the upper one so that air may pass around the sides of it and through the opening in the upper plate when the plates are separated.

2. In a carbureter, the combination of a gasolene distributer, means for supplying gasolene to it, two plates adjacent to the distributer, each having an opening through its central portion, means for jointly moving said plates toward and from each other, the lower plate being of smaller diameter than the upper one so that air may pass around the sides of it and through the opening in the upper plate when the plates are separated, and means for automatically moving said plates upon the pressure of air flowing through the carbureter and engaging the upper plate.

3. In a carbureter, the combination of a gasolene distributer, means for supplying gasolene to it, two plates adjacent to the distributer, each having an opening through its central portion, means for jointly moving said plates toward and from each other, the lower plate being of smaller diameter than the upper one so that air may pass around the sides of it and through the opening in the upper plate when the plates are separated, means for automatically moving said plates upon the pressure of air flowing through the carbureter and engaging the upper plate, and a spring for normally holding the plates in position adjacent to each other.

4. In a carbureter, the combination of a gasolene distributer, means for supplying gasolene to it, a plate above the gasolene distributer having an opening in its central portion and having its sides fitted close to the interior of the carbureter, a second plate below it of smaller diameter and having an opening through its center surrounding the gasolene distributer, guides fixed to the lower plate and extended upwardly through the opening in the upper plate, arms fixed to both plates and extended downwardly, a lever fulcrumed at its central portion, and pivoted to said arms, said parts being so arranged that when the plates are adjacent to each other all of the air passing through the carbureter will pass through the opening in the lower plate and close to the gasolene distributer and when the plates are separated a portion of the air will flow through the spaces between the plates.

1,023,471. AUTOMOBILE NUMBER-PLATE. PETER M. HOFFMAN, Chicago, Ill. Filed July 24, 1911. Serial No. 640,143. (Cl. 40—125.)



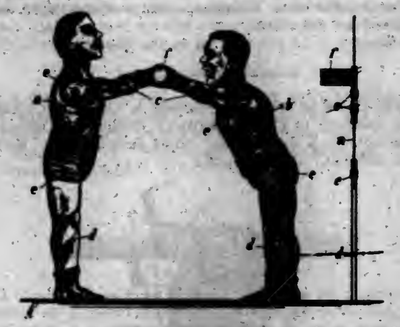
The combination with an automobile radiator having a mesh-work with air passages therethrough, of a number plate secured to the front face of the radiator in spaced relation thereto, said number plate being provided with openings therethrough adapted to aline with the air passages in the radiator whereby cooling of the radiator will not be affected by the number plate.

1,023,472. TOY. ARMIN KELBER, Strassburg, Germany. Filed Aug. 2, 1911. Serial No. 641,915. (Cl. 46—40.)

1. A toy, comprising two bodies, lower limbs freely movable thereon, a pair of connecting members jointed to said bodies, each such member consisting of one left and one right arm respectively of the facing figures, and a short operating stud rigidly secured to the rear connecting member, substantially as set forth.

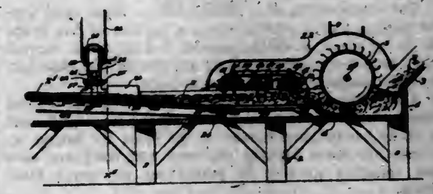
2. A toy, comprising two bodies, a pair of contiguous upper limbs and pairs of lower limbs jointed to said bodies, and an operating stud rigidly secured to one of the said contiguous pairs of upper limbs, substantially as set forth.

3. A toy, comprising two bodies, respectively contiguous pairs of arms and independent lower limbs jointed to said bodies, and an operating stud rigidly secured to, and rectangularly extending from, the rear pair of said contiguous limbs, substantially as set forth.



4. A toy, comprising two bodies, contiguous pairs of arms and lower limbs jointed to said bodies; and an operating stud rigidly secured to the middle of, and rectangularly extending from, the rear pair of said contiguous limbs, substantially as set forth.

1,023,473. FLAX-FELT MACHINE. JAMES E. LAPPEN, Le Roy, Minn., assignor to Le Roy Fibre Company, St. Paul, Minn., a Corporation of Minnesota. Filed Feb. 17, 1908. Serial No. 416,165. (Cl. 154—27.)



1. In a fiber board machine, the combination with a vessel adapted to contain commingled liquid and fiber, of an apron driving means, an inclined endless traveling apron extending from a point below to a point above the upper surface of said liquid and operative to carry the collected fiber from the liquid in the form of a sheet, and mechanical means independent of said apron driving means, operative to compact the fiber of said sheet approximately at the point where the same is carried out of said liquid, substantially as described.

2. In a fiber board machine, the combination with a vessel adapted to contain commingled liquid and fiber, of an inclined endless traveling apron extending from a point below to a point above the upper surface of said liquid and operative to carry the collected fiber from the liquid in the form of a sheet, a vibratory tamper operative to compact the sheet of fiber approximately at the point where it is carried from said liquid, and coöperating rollers operative on said sheet of fiber to further compress the same, substantially as described.

3. In a fiber board machine, the combination with a vessel adapted to contain commingled liquid and fiber, of an inclined endless traveling apron adapted to carry the wet fiber in the form of a sheet, and a vibratory tamping plate overlying said apron and adapted to press and compact the said sheet of fiber, substantially as described.

4. In a fiber board machine, the combination with a vessel adapted to contain commingled liquid and fiber, of an inclined open deck and an inclined endless traveling reticulate apron working over said deck, both extending from a point below to a point above the upper surface of the liquid, and a vibratory tamper operative to press and compact the sheet of collected fiber approximately at the point where it is carried from the liquid by said apron, substantially as described.

5. In a machine of the kind described, the combination with a liquid containing vessel, of a coöperating toothed cylinder and toothed concave arranged for action on the fiber at a point below the upper surface of the liquid, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

1,023,474. BRAKE-BEAM. ERNEST A. LE BEAU, Chicago, Ill., assignor to Chicago Railway Equipment Company, Chicago, Ill., a Corporation. Filed June 3, 1909. Serial No. 499,915. (Cl. 188—28.)



1. The combination of a brake beam, a brake head provided with a socket within which a portion of the brake beam extends, a spring-pressed locking block carried by the brake beam and so disposed with relation to said head that the forward wall of said socket is yieldingly forced toward the part of the brake beam on which the brake head is mounted.

2. The combination of a brake beam, a brake head provided with a socket within which a portion of the brake beam is mounted, a spring-pressed locking block carried by the brake beam and yieldingly adapted to force the bottom of the socket toward the brake beam.

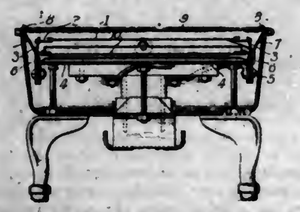
3. The combination of a brake beam, an adjustable head mounted thereon, said head having means for attachment of a brake hanger, and means on the beam for taking up the clearance space between the head and the beam, said means assisting gravity in preventing the parts from rattling.

4. The combination of a brake beam, a brake head mounted thereon, and means mounted on the beam for taking up clearance space between the head and the beam so that no lost motion will have to be overcome in applying the brakes.

5. The combination of a brake head having inwardly extending flanges, one of which is provided with a notch and a sleeve or member on the brake beam provided with a removable projection designed to pass through said notch in assembling or dismantling the beam.

[Claims 6 to 18 not printed in the Gazette.]

1,023,475. ELECTRIC HEATER. CHARLES P. MADSEN, Chicago, Ill., assignor, by mesne assignments, to Pelouze Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 4, 1911. Serial No. 612,425. (Cl. 219—19.)



1. In an electric heater, the combination of a heating element bent back and forth to provide a plurality of straight parts lying in one plane, and a resilient tension member of insulating material connected to said element and adapted to maintain said heating element taut independent of the expansion of said element.

2. In an electric heater, the combination of a heating element bent back and forth to provide a plurality of straight parts lying in one plane and a plurality of tension members of resilient insulating material connected to said heating element and adapted to maintain said heating element taut independent of the expansion of said element.

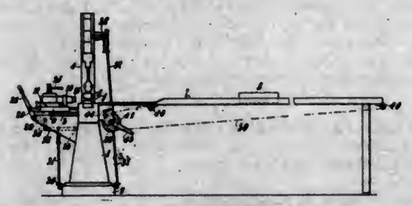
3. In an electric heater, the combination of a heating element, a tension member of insulating material, means coacting with said tension member and adapted to control the deflection characteristic of said tension member, said tension member being adapted to hold said heating element in alinement.

4. In an electric heater, the combination of a heating element, a tension member of insulating material, means for connecting said element with said tension member, said tension member being adapted to maintain said heating element taut under normal operating conditions, and means coacting with said tension member adapted to produce a volute spring characteristic.

5. In an electric heater, the combination of a heating element, and a strip of resilient insulating material mounted transversely to said heating element and adapted to hold said heating element taut during operation.

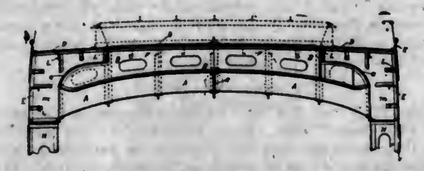
[Claims 6 and 7 not printed in the Gazette.]

1,023,476. MACHINE FOR FORMING AND SHARPENING DRILL-BITS AND THE LIKE. HARRY JOHAN HJALMAR NATHORST and GOTTHARD LUNDSTRÖM, Gellivare Malmfält, Sweden. Filed Jan. 3, 1911. Serial No. 600,633. (Cl. 76—5.)



In a machine for forming and sharpening cutting edges on drill bits and the like, the combination of a rotatably mounted stamp, means for subjecting the said stamp to pressure to impart longitudinal movement thereto, means for rotating the said stamp during working, and means for rotatably holding the drill bit up to the said stamp, at an angle to the same.

1,023,477. SHIP CONSTRUCTION. JOSEPH R. OLDHAM, Cleveland, Ohio. Filed July 19, 1911. Serial No. 639,366. (Cl. 114—125.)



1. In a ship or vessel having water ballast chambers and anti-rolling tanks along the upper wings of holds, a plurality of transverse girders, beneath the decks, constructed with a large hollow, lower flange, joining and supporting the anti-rolling tanks and water ballast chambers, and forming a strong and watertight conduit or channel adapted for the conveyance of free water between said anti-rolling tanks substantially as and for the purpose set forth.

2. In a steel vessel, the combination of water ballast chambers and anti-rolling tanks in the upper wings, transverse girders spanning the holds beneath the decks, constructed with a hollow flange connecting said anti-rolling tanks, constructed on opposite upper wings of the hull, and forming conduits or channels between said anti-rolling tanks, with brackets or knees extending longitudinally of the hull and suitable bars for strengthening and securing said transverse girders to the decks, between the hatchways, substantially as and for the purpose specified.

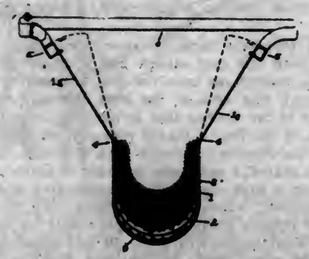
3. In a bulk cargo vessel, a combination of water ballast chambers and anti-rolling tanks, between said chambers, in the upper wings, with a plurality of transverse girders spanning the holds beneath the decks, having tubular bottom flanges, strengthening the decks and sides, and forming conduits between said anti-rolling tanks, on opposite sides of the hull, and secured thereto by bracket plates and bars substantially as set forth.

4. In a ship or vessel, a plurality of deep transverse plate girders with a top flange formed by heavy continuous angle bars secured to a metal deck, and a strong bottom flange of tubular form adapted for conveying water between the upper wing tanks located on opposite sides of the hull, bracket and knee plates, angle and channel bar stiffeners substantially as set forth.

5. In a bulk cargo vessel having close spaced hatchways and unobstructed cargo holds, the combination of horizontal transverse girders with top-flange secured to longitudinal deck frames supporting a single deck, strengthened by double hatch coamings and angle bars constituting the top flange of said transverse girder, with a tubular bottom flange, spanning the holds and connecting, free water, anti-rolling tanks located in both of the upper wings of the vessel, longitudinal and transverse brackets, knee plates and bars securing said elements together substantially as set forth.

[Claims 6 to 10 not printed in the Gazette.]

1,023,478. SUSPENSORY. MICHAEL E. O'REILLY, Portland, Oreg. Filed May 10, 1911. Serial No. 626,142. (Cl. 128—38.)



1. As a new article of manufacture, a wire having its central portion bent parallel with itself to form an elongated loop, the outer portions being bent forwardly to form retaining loops, whence they extend upwardly and outwardly, terminating in transverse strap engaging hooks,—and a flexible sack depending from said loop.

2. As a new article of manufacture, a wire having its central portion bent parallel with itself to form an elongated loop, the outer portions being bent upon themselves to form retaining loops, whence they extend upwardly and outwardly, terminating in strap engaging hooks,—a wire pivotally engaged in said retaining loops and depending therefrom,—a flexible sack secured by its upper edges to the extended loop and by its front edge to the depending pivoted member.

3. A suspensory comprising a frame work having parallel sides,—resilient arms extending upwardly and outwardly therefrom and terminating in transverse strap engaging hooks,—a strap uniting said hooks,—a pivoted member depending from the parallel sids,—and a sack secured upon said parallel sides and pivoted member.

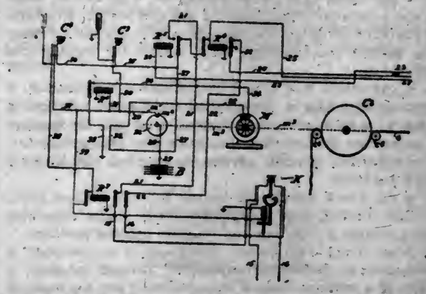
4. A suspensory comprising a resilient frame work having parallel sides,—a sheathing secured thereon,—said sides each being bent to form a retaining loop, whence they extend upwardly and outwardly, terminating in transverse strap engaging hooks,—a pivoted member depending from said retaining loops,—and a sack secured by its upper edges to said parallel sides and by its front edge to said pivoted member.

1,023,479. RETAINING DEVICE FOR WINDOW-PANES. ELEAZAR T. WILKINSON, Philadelphia, Pa., assignor to David Lupton's Sons Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed June 19, 1911. Serial No. 633,932. (Cl. 20—56.4.)



A device for holding a pane within its sash bars, consisting of a metal strip of L-shaped cross section, one wall of the same being provided with an inclined slot and with lugs which project below the corner formed with the other wall, and a pin projecting from the surface of the tongue of the sash bar and received within said inclined slot.

1,023,480. TELEPHONE-EXCHANGE SYSTEM. EDWARD E. CLEMENT, Washington, D. C. Filed Aug. 3, 1906. Serial No. 329,114. (Cl. 179—27.)



1. In a telephone exchange system, a plurality of lines to be connected, central office automatic switching apparatus for connecting the same, a body containing a permanent set of perforations adapted to work the switching apparatus to the highest number possible of selection, and means for producing modifying perforations in said body corresponding with any particular number wanted, substantially as described.

2. In a telephone system, the combination of automatic switching apparatus and controlling means comprising a body partially perforated for selective purposes, means controllable by an operator to complete the perforations to select any desired number, contacts controllable by the perforated body and connected in the switching circuits, and a motor for producing relative motion between the body and contacts, substantially as described.

3. In a telephone exchange system, line circuits terminating at a central office, automatic switching apparatus at the central office for interconnecting the lines, and controlling apparatus for the switches also at the central office and comprising the following instrumentalities: a perforated body, coöperating contacts and a suitable motor for producing relative motion therebetween, and means controlled by an operator for varying the perforations in the body in accordance with the number to be selected, substantially as described.

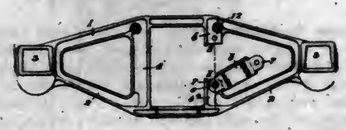
4. In a telephone system, a plurality of telephone lines to be connected, automatic switches for connecting said lines, and controlling means for said automatic switches comprising contact devices and a perforated tape, together with punching means controlled by an operator

for modifying the perforations in the tape according to the number to be selected, substantially as described.

5. In a telephone system, a plurality of telephone lines to be connected, automatic switches for connecting said lines, controlling means for said automatic switches comprising contact devices and a perforated tape, a locking key for connecting said controlling means to said switches, and automatic unlocking means for said key.

[Claims 6 to 12 not printed in the Gazette.]

1,023,481. CAR-TRUCK SIDE FRAME. OSWALD S. PULLIAM, Pittsburgh, Pa., assignor to Pittsburg Equipment Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Feb. 23, 1911. Serial No. 610,186. (Cl. 105—243.)



1. A car truck side frame having integral top and bottom members, a column having an opening, said column opening being adapted to permit a bolster to be passed therethrough, and means for closing the opening.

2. A car truck side frame having top and bottom members and a column connecting the top and bottom members, said column having an opening adapted to permit a bolster to be passed therethrough, and means for closing the opening.

3. A car truck side frame comprising a top-member, a bottom-member and a journal-box all formed integral, a portion of a column formed integral with the top-member and a portion formed integral with the bottom-member, and a separable column portion connecting the integral column portions.

4. A car truck side frame having top and bottom members each formed with a column portion, and a separable column portion connecting the integral column portions.

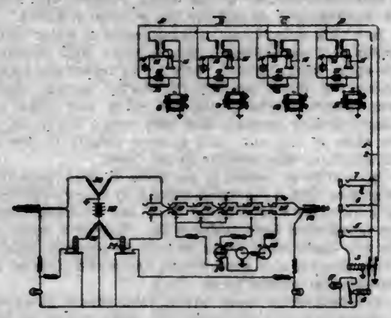
5. A car truck side frame comprising a top-member, a bottom-member and a journal-box all formed integral, a portion of a column formed integral with the top-member and a portion formed integral with the bottom-member, a separable column portion connecting the integral column portions, and means for securing the separable portion to the integral portions.

[Claims 6 to 9 not printed in the Gazette.]

1,023,482. PARTY-LINE SELECTIVE SIGNALING SYSTEM. CHARLES E. SCRIBNER, Jericho, Vt., assignor to Western Electric Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 18, 1908. Serial No. 427,955. (Cl. 179—86.)

1. A circuit extending from the central office of a telephone exchange to two different substations, each substation being provided with a ground branch, the respective ground branches each including a condenser having high non-inductive resistance about the same, and a ringer of high self-induction in circuit with the condenser, the ringers at the different substations being oppositely biased, in combination with means for sending pulsating current over said circuit of either negative or positive sign, whereby either ringer may be selectively signaled, and cross ringing prevented, substantially as described.

2. A circuit extending from the central office of a telephone exchange to two different substations, each substation being provided with a ground branch, the respective ground branches each including a condenser having high non-inductive resistance shunting same, and a biased ringer in circuit with the condenser, the ringers at the different substations being oppositely biased, in combination with means for sending pulsating current over said circuit of either negative or positive sign, the form of the pulsations being adapted to abruptly charge and gradually discharge the condensers, whereby either ringer may be selectively signaled, and cross-ringing prevented, substantially as described.



3. In a telephone exchange system, the combination with a metallic circuit telephone line, of four substations, each connected with a separate branch to ground, a different pair of said branch circuits being derived from the respective limbs of the metallic circuit, the apparatus at each substation of each limb including a condenser, a high non-inductive resistance shunted about the same, and a biased ringer, the ringers of the pair of a given limb being biased oppositely, in combination with a generator and switching apparatus at the central office adapted to direct pulsating current of either positive or negative sign over the different limbs, the said ringers being attuned or weighted to correspond with the rate of pulsations, an increase in the speed of the generator which increases the rate of the impulses serving also to increase the voltage, whereby cross ringing is prevented, substantially as described.

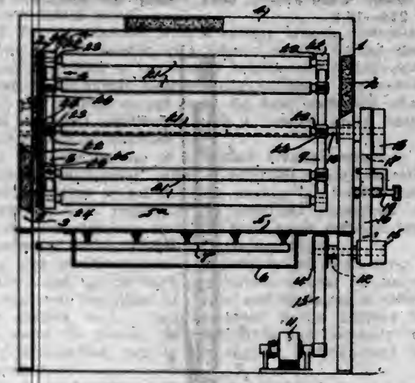
4. In a telephone exchange signaling system, the combination with the cord circuit and a telephone line extending to substations upon the line, of a source of pulsating current, and keys in the cord circuit for directing pulsations of the desired sign or direction over the different limbs of the line, a biased ringer at each of the substations, the ringers connected with the same limb being oppositely biased, a condenser included in series with each ringer, and a high resistance non-inductive shunt about each condenser, whereby either ringer may be operated and cross ringing prevented, substantially as described.

5. The combination with a key 19, of a generator having a brush 28 from which is derived a negative pulsating current, the limb 2 of a telephone circuit, switching apparatus for connecting the cord circuit with said limb, a subscriber's telephone station A provided with a condenser 12 and a high non-inductive resistance 13 shunting the same, and a biased ringer 8 in a ground branch from said limb in series with the condenser, said bell being biased to respond to negative pulsating current when connected with the generator, a second substation upon said line having apparatus and connections the same as at station A, except that the ringer 9 of said station B is biased oppositely to respond to positive pulsating current, whereby the ringer 8 may be operated without causing ringer 9 to give a false or cross ring.

[Claims 6 and 7 not printed in the Gazette.]

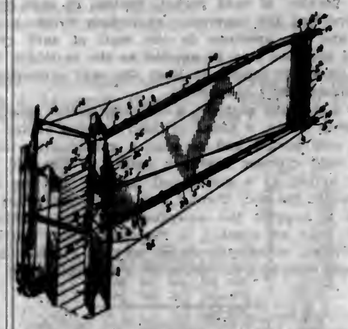
1,023,483. BAKING-OVEN. STEPHAN W. SCHUSTER, New York, N. Y. Filed Nov. 22, 1911. Serial No. 661,648. (Cl. 107—59.)

An improved baking over, comprising a box-like structure, having insulated walls, a shaft within said structure, means for rotating said shaft, heads carried by said shaft and located within said structure, brackets carried by said heads, spindles removably mounted in said brackets,



and means adapted to rotate said spindles about their axes.

1,023,484. AIRSHIP. BRUNO SITZENSTOK, Tompkinsville, N. Y. Filed July 31, 1911. Serial No. 641,422. (Cl. 244—12.)



1. In an airship heavier than air, a foldable elevating plane, foldable guide bars secured to the ship, guide members secured to the said plane slidably engaging around said guide bars, a rigid member connected to the outer edge of said plane and slidably engaging said guide bars, means on said bars to lock said rigid member in outward position, means for manipulating the said plane to unfold the same and means for releasing said rigid member.

2. In an airship heavier than air, a foldable elevating plane attached to the ship, sectional guide bars capable of tilting horizontally, guide members slidably engaging said guide bars, resilient members on the latter to secure the plane in stretched position, means for unfolding or stretching the said plane and means for contracting said resilient members to release the plane prior to folding it.

3. In an airship heavier than air, a buoyant hull-shaped body, an elevating plane secured to said body, sectional guide bars, secured to said body and the sections of which are pivotally connected to one another so that the outer sections are capable of tilting horizontally, guide members secured to said plane and slidably engaging around said guide bars, resilient means on the said guide bars for holding the plane in stretched position, flexible means connected to the said last named means for releasing the said resilient means and means for folding the plane.

4. In an airship heavier than air, a buoyant hull-shaped body, an elevating plane secured to said body, foldable guide bars, guide members secured to said plane and slidably engaging around said bars, a rotary member secured in the said hull, flexible means secured at one end to the said body and at the other end to the said plane, and guided over said bars, said means being adapted by turning said rotary member in a certain direction to unfold and stretch the said plane, means for preventing the backward movement of said rotary member and means for holding the plane in stretched position.

1,023,485. ILLUMINANT FOR ELECTRICAL INCANDESCENT LAMPS. ORLANDO M. THOWLESS, Newark, N. J. Filed Nov. 20, 1908. Serial No. 463,629. (Cl. 176—21.)



1. An illuminant for electrical incandescent lamps consisting of a refractory vitrified glower combined with a heating body composed essentially of refractory non-metallic conductive material.

2. An illuminant for electrical incandescent lamps consisting of a refractory vitrified body having a portion of the same coated with refractory non-metallic conductive material.

3. A heating body for electrical incandescent lamps composed essentially of refractory carbid.

4. A heating body for electrical incandescent lamps composed essentially of a carbid of silicon.

5. A heating body for electrical incandescent lamps composed essentially of non-metallic conductive substance.

1,023,486. CAR-UNDERFRAME. CHARLES T. WESTLAKE, St. Louis, Mo., assignor to Cast Steel Platform Company, St. Louis, Mo., a Corporation of Delaware. Filed July 5, 1910. Serial No. 570,448. (Cl. 105—76.)



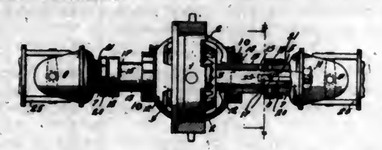
1. In a car underframe, a cast metal body bolster, a box-like extension integral with and projecting rearwardly from said body bolster, which extension comprises a top plate, vertical side walls, horizontally disposed bottom flanges, the corners of which extension are grooved longitudinally to receive the flanges of center sills, and there being a recess formed in the top of the body bolster immediately adjacent the extension for receiving a portion of the cover plate applied to the top of the extensions and to the adjacent ends of the center sills.

2. The combination with a cast metal body bolster having an integral box-like extension projecting rearwardly from its center portion, said extension comprising top, bottom and side walls, the corners of which extension are grooved to receive the top and bottom flanges of the center sills, flanged center sills, the webs of which are riveted to the vertical walls of the extension, top and bottom plates riveted to the top and bottom walls of said extension and to the horizontal flanges of the center sills and there being a recess formed in the top of the body bolster adjacent the extension for receiving a portion of the top cover plate so that the top surface thereof lies flush with the top surface of the bolster.

1,023,487. DIFFERENTIAL GEARING. OTTO ZACHOW, Clintonville, Wis., assignor to Four Wheel Drive Auto Company, Clintonville, Wis., a Corporation of Wisconsin. Filed May 8, 1911. Serial No. 625,674. (Cl. 74—34.)

1. The combination with the driving and driven members of a set of differential gears, of shaft members

rigidly connected to the respective driven members of said set, sleeve members rigidly connected to the driving member of said set, power transmitting members connected with the shaft members, and means for detachably connecting said power transmitting members with the sleeve members.

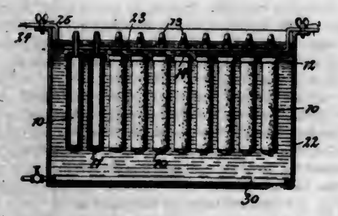


2. The combination with the driving and driven members of a set of differential gears, of shaft members rigidly connected to the respective driven members of said set, sleeve members rigidly connected to the driving member of said set, power transmitting members connected with the shaft members, and means for detachably connecting said power transmitting members with the sleeve members, said connecting means comprising collars engaged in notches in the respective power transmitting members, and movable longitudinally to also engage in notches in the sleeve members.

3. The combination with differential gearing of shaft sections rigidly connected with the driven members thereof, sleeve members on the shaft sections rigidly connected with the differential driving member, and notched at their outer ends, power transmitting sleeve members splined to the respective shaft sections and having notches registering with those of the first mentioned sleeve members, collars having internal keys engaging in the notches of the power transmitting sleeve members, and movable into the notches of the other sleeve members, and means for adjusting said collars to move their keys into and out of the notches in the first mentioned sleeve members.

4. The combination with differential gearing, of shaft sections rigidly connected with the driven members thereof, sleeve members on the shaft sections rigidly connected with the differential driving member, and notched at their outer ends, power transmitting sleeve members splined to the respective shaft sections and having notches registering with those of the first mentioned sleeve members, collars having internal keys engaging in the notches of the power transmitting sleeve members, and movable into the notches of the other sleeve members, and means for adjusting said collars to move their keys into and out of the notches in the first mentioned sleeve members, said collar adjusting means comprising a set of flanged nuts having right and left hand threaded engagement with the collars and power transmitting sleeves respectively.

1,023,488. PROCESS FOR STERILIZING FILTERS. EDWARD ZAHM, Buffalo, N. Y. Filed May 6, 1911. Serial No. 625,590. (Cl. 210—11.)



1. The herein described process of sterilizing a hollow filter core consisting in immersing the same in water heated at a sterilizing temperature, and sealing the opening leading to the interior of said core.

2. The herein described process of sterilizing a hollow filter core consisting in immersing the same in water heated at a sterilizing temperature and confining sterilized water in said core by closing the outlet thereof.

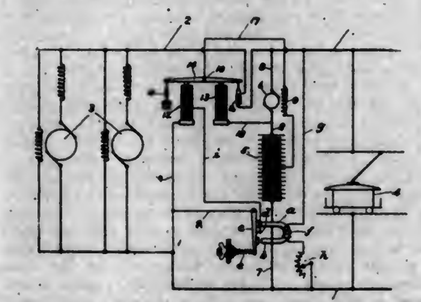
1,023,489. CARTRIDGE-POCKET FOR HUNTING COATS, JACKETS, &c. HARRY M. ALTICK, Dayton, Ohio. Filed July 1, 1911. Serial No. 636,475. (Cl. 224—16.)



1. In a shooting garment, the combination with an elongated pocket secured to the garment and adapted to receive a load of shells or cartridges, of a metal cylinder secured to the lower end of said pocket and forming the bottom portion of said pocket, devices in said cylinder for supporting the lowermost cartridges within said cylinder, and an aperture in the wall of said cylinder whereby pressure may be applied to the cartridge within said cylinder to release it from the said supporting devices, substantially as specified.

2. In a shooting garment, a cartridge pocket constructed of suitable fabric, a metal cylinder secured at the lower end of said pocket and forming a continuation of said pocket, said cylinder having a spring in the wall thereof and acting as a guide and retainer for the shells, and stops in the wall thereof, said spring and stops being adapted to support the lowermost cartridge within said cylinder, and an opening in the lower front portion of said cylinder, whereby pressure may be exerted on said lowermost cartridge to release it, substantially as specified.

1,023,490. BATTERY-CURRENT-LIMITING DEVICE. HAROLD M. BECK and CORNELIUS AMBRUSTER, Chicago, Ill. Filed Sept. 14, 1908. Serial No. 453,031. (Cl. 171—310.)



1. The combination of a battery branch containing a storage battery and its booster, a field for controlling the booster excitation having electrically connected with it a circuit including contacts which when opened and closed change the excitation of the booster, an electromagnetic device responsive to or operated by changes of electrical condition in the battery branch, and adapted to operate the contacts to cut down or weaken the booster excitation, and means for preventing such operation of the electromagnetic device until such changes reach a predetermined value.

2. The combination with a battery branch containing a battery and booster, of a magnet excited by the electrical conditions in the battery branch, and a make-and-break device having electrical connections to the booster field and adapted to cut down the field excitation when said electrical conditions reach a predetermined limit, substantially as described.

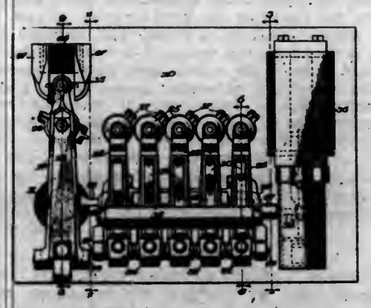
3. The combination of a battery branch containing a battery and booster, with a polarized electromagnetic device adapted to cut down or weaken the booster field excitation and responsive to electrical conditions of charge and discharge when the same reach different predetermined limits, substantially as described.

4. The combination of a battery branch containing a battery and booster with a polarized magnet responsive to electrical conditions of charge and discharge in different degrees, and a make-and-break device adapted to cut down the booster field excitation and responsive to a predetermined pull of the magnet, substantially as described.

5. In combination a source of electrical energy, a circuit containing a storage battery operatively arranged in respect to the source, apparatus responsive to the load on the source, and including a field coil for controlling the battery charge and discharge, and a make and break device electrically connected to the field coil and responsive to the electrical condition of the battery circuit and adapted to control the current in the field coil to limit said charge and discharge.

[Claims 6 to 15 not printed in the Gazette.]

1,023,491. ELECTRIC-MOTOR-STARTING DEVICE. CARL J. ANDERSON, Chicago, Ill. Filed July 14, 1910. Serial No. 571,891. (Cl. 172—288.)



1. The combination with a series of stationary contacts and a corresponding series of movable contacts, of a roller mounted upon pivoted arms, and an electro-magnetic device for moving said arms so as to cause the roller to close the movable to the stationary contacts in succession.

2. In a device of the character described, a series of movable contacts and supports therefor, a roller, pivoted arms upon which the roller is mounted, and an electric-magnetic device for moving the arms so as to cause the roller to engage the supports for the movable contacts.

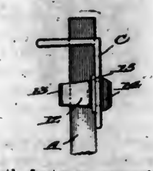
3. The combination with a series of stationary contact pieces, a corresponding series of movable contact pieces, pivoted levers upon which the movable contact pieces are supported, a pivoted bail adapted to engage the levers so as to move the same successively, and electro-magnetic means for operating the bail, of a part carried by the bail and serving to lock the levers so as to prevent them from being moved so as to cause accidental closure of the movable contact pieces to the stationary ones.

4. The combination with a series of contact devices, and a corresponding series of arms for closing them, of a spring supported cam pivoted to each arm, and an electrically controlled device for engaging said cams to operate said arms in succession.

5. A series of stationary contacts, a separate pivoted arm for each contact, a roller adapted to be moved simultaneously over said arms, cams carried by the arms and so arranged that upon the roller being moved over them the arms will be moved successively to engagement with their contacts, and a yielding connection between each cam and its arm.

[Claims 6 to 11 not printed in the Gazette.]

1,023,492. HARROW-TOOTH FASTENING. JOHN H. ANDERSON, St. Paul, Minn. Filed Jan. 7, 1911. Serial No. 601,376. (Cl. 55—94.)



1. A harrow tooth fastener, comprising, in combination, a harrow frame bar, a harrow tooth having its shank placed against a side of said bar, and a yoke connected to said bar and shank upon said tooth to connect it to said bar said yoke having ends shouldered on one side of said bar and upset on the opposite side and being broadened where it is connected to said bar to stiffen said connection.

2. A harrow tooth fastener, comprising, in combination, a harrow frame having a horizontal part and a vertical part in cross section, a harrow tooth having a square shank in connection with said frame, said horizontal part of the frame being apertured to receive and engage the square shank of said tooth, and a clamp embracing three sides of the square shank, passing through the vertical part of the frame and upset on the other side thereof to form a rigid union of said tooth and frame.

3. A support for a harrow tooth, comprising, in combination, an angle bar frame, a harrow tooth having a flat side, the angle bar frame having one flange apertured to engage said tooth with its flat side resting against the other flange of said frame, and a yoke connected to said angle bar and shrunk upon said tooth to connect it to said angle bar, said yoke having ends shouldered within the angle bar and upset without the angle bar and being broadened where it is connected to said angle bar to stiffen said connection.

4. A harrow tooth fastener, comprising, in combination, an angle bar frame having one flange recessed to receive a harrow tooth, a harrow tooth in said frame having a shank engaged by said recess with a flat side resting against the other flange of said frame, a cutting point on said tooth flattened diagonally thereof to present a cutting edge diagonal to said tooth and fixed in cutting position on said frame and a yoke connected to said frame and engaging said tooth to hold it rigid upon said frame.

1,023,493. SPARK-PLUG. FRANZ BARTL, New York, N. Y. Filed Nov. 19, 1909. Serial No. 528,875. (Cl. 123—169.)

1. In a spark plug for explosive engines having as one electrode a steel shell with an integral insulating refractory coating on the inside and an inner electrode with such coating on its outside surface, a sharp acute annular rim on the outer end portion of said shell, a tough insulating plug with a central bore reduced at the outer end engaging the sharp acute rim of the shell and having an inner reduced portion fitting loosely within same, a metal washer located centrally within the outer end of the plug having an inturned peripheral flange and an inwardly extending portion in the reduced outer end portion of the

bore and threaded on the inside, an inner electrode with threaded outer end portion engaging the thread of the washer, and a lock nut.



2. In a spark plug for explosive engines, a steel shell with an acute annular rim at its outer end portion, an inner annular shoulder near its middle portion, and an inward rim at the inner end, a tough fiber plug with central bore engaging the acute rim of the shell to form an oil-tight closure and having a reduced inner portion within the shell, a metal washer centrally within the outer end of the plug and threaded inside, an inner electrode threaded to engage the metal washer, a porcelain tube with a shoulder bearing loosely on the inner electrode, an elastic washer between the shoulders of the shell and the porcelain tube, and means for tightening the device.

3. In a spark plug of the type described a steel shell with an acute annular rim formed at its outer end, a tough fiber plug having a reduced inner portion fitting loosely into the outer end portion of the shell and engaging said acute rim, an inner annular shoulder in the shell, an inner electrode with a flanged inner end portion, an inwardly extending annular rim on said flange, a porcelain tube bearing loosely on the inner electrode extending partly into the plug and having on its inner portion an annular shoulder below the inner shoulder of the shell, an elastic washer between said shoulders, a second elastic washer within the inner rim of the inner electrode flange on which the porcelain tube rests, said acute annular rim and washer forming thus a tight closure, and means for tightening the device.

4. In a spark plug of the type described, a shell with an inner annular shoulder near its middle portion, an inner electrode threaded at the outer end and formed with an annular flange at the inner end with an annular inner rim thereon, a porcelain tube with shoulder loosely mounted on the inner electrode, an elastic washer between the shoulders of the shell and the porcelain tube, a second elastic washer within the inner rim of the inner electrode flange against which the end of the porcelain tube rests, and a lock nut.

5. In a spark plug of the type described, a steel shell, a tough fiber plug having an inner bore reduced at the outer end and an inner reduced portion extending into the shell, a metal washer located centrally within the outer end of the plug provided with an inturned peripheral flange and a central inwardly extending portion in the reduced outer end portion of the bore and threaded on the inside, an inner electrode passing through the washer, an outer electrode engaging the plug, and means for tightening the device.

1,023,494. CURRENT-MOTOR. DOMINIK BARTOSZEWICZ, St. Joseph, Mich. Filed Nov. 9, 1910. Serial No. 591,432. (Cl. 138—3.)

1. In a current motor, a pair of boats with tapered bows, a wheel between said boats, a flaring trough between the tapered bows of the said boats, a support for the inner end of said trough, means for raising and lowering said support, and means for raising and lowering the outer end of said trough.



2. In a current motor, a pair of boats having tapered bows, a wheel between said boats, a flaring trough between said tapered bows, wings in said trough, said wings being hinged to the boat, and means for raising and lowering the said trough independently of said wings, including a vertically movable support to which the inner end of said trough is hinged.

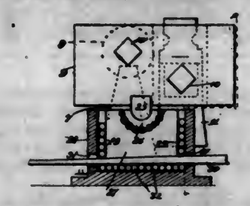
3. In a current motor, a pair of boats, a wheel between said boats, a vertically adjustable trough between said boats, adapted to deliver the water to said wheel, adjustable sides for said trough, said boats having flaring tapered bows, a flaring between said bows, adapted to deliver the water to said first-mentioned trough, means for raising and lowering said flaring trough, and wings inside of said flaring trough, the two troughs being connected at their ends.

4. In a current motor, a pair of boats, a wheel between said boats, and a sluice way with a bottom between said boats for delivering the water to said wheel, said sluice way having an adjustable intake or funnel for the intake end thereof, which funnel is movably supported at both ends thereof, and said sluice way being adjustable between the sides of said boats.

5. In a current motor, a pair of boats having the bows thereof each tapered to a point or apex in line with the outer side thereof, to provide a flaring intake the mouth of which is substantially as wide as the two boats, a wheel between the boats, means substantially within said flaring intake for regulating the flow of water to said wheel, said means comprising a funnel that conforms to the flare of the intake, and means for both raising and lowering said funnel bodily and changing the angle thereof, including a vertically adjustable support for the inner end of said funnel.

[Claims 6 to 15 not printed in the Gazette.]

1,023,495. WEIGHING-SCALE. HENRY M. B. BARY, Philadelphia, Pa. Filed Mar. 1, 1911. Serial No. 611,574. (Cl. 73—121.)



1. In weighing scales, the combination with weighing levers having knife edge fulcrum members and with bearings therefor of supplementary fulcrum members and supports therefor and means for bringing the supports for the supplementary fulcrum members in and out of operative position relatively to the supplementary fulcrum members while the said knife edge bearings remain stationary.

2. In weighing scales, the combination with weighing levers having knife-edge fulcrum members and with stationary bearings therefor and a platform, of supplementary fulcrum members and supports therefor located between said knife edges and the points of contact of the levers with the platform and means for alternately imposing the weighing levers on their knife edges and on the supplementary bearings.

3. In weighing scales, the combination with weighing levers having knife edge fulcrum members and with stationary bearings for said fulcrum members, of supplementary fulcrum members, adjustable supports for said supplementary fulcrum members and means for adjusting said adjustable supports.

4. In a weighing scales, the combination of weighing levers, a platform, pendulous contact blocks carried by the weighing levers and adapted to contact with said platform, main fulcrum members carried by the weighing levers, stationary bearings for said main fulcrum members, supplementary fulcrum members carried by the weighing levers between the said main fulcrum members and said contact blocks, movable supports for said supplementary fulcrum members and means for moving said supports into and out of operative position relatively to the supplementary fulcrum members.

5. In weighing scales, the combination of weighing levers, fulcrum members carried thereby, stationary bearings for said fulcrum members, supplementary fulcrum members also carried by the weighing levers, vertically movable supports for said supplementary fulcrum members wedges adapted to be moved under said supports to raise and lower the same, and means for moving said wedges.

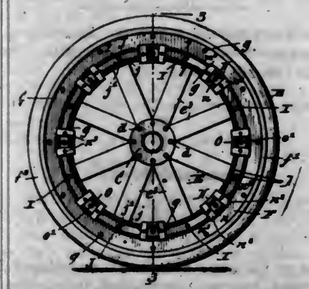
[Claim 6 not printed in the Gazette.]

1,023,496. WEIGHING-SCALE. HENRY M. B. BARY, Philadelphia, Pa. Filed Mar. 4, 1911. Serial No. 612,419. (Cl. 73—39.)



In weighing scales, the combination with a weighing lever having an open head with rabbets at each end, of detachable blocks fitting in said rabbets, bolts passing through said blocks and into said lever, the abutting surfaces of said rabbets and said blocks being formed with opposing recesses and knife-edge sections fitting between said opposing recesses and extending across the open portion of the head.

1,023,497. RESILIENT VEHICLE-WHEEL. FRANK H. BEAMER, Buffalo, N. Y. Filed Aug. 29, 1910. Serial No. 579,487. (Cl. 152—37.)



1. A vehicle wheel comprising an inner member, an outer member surrounding said inner member, and a plurality of trussed annular springs at each side of the wheel, the springs at opposite sides of the wheels being connected and serving as a means for yieldingly connecting the outer member to the inner member.

2. A vehicle wheel comprising an inner member having inwardly-facing curved surfaces, an outer member surrounding said inner member and also provided with inwardly-facing curved surfaces, and an annular spring having contact parts engaging said curved surfaces and yieldingly connecting said inner and outer members.

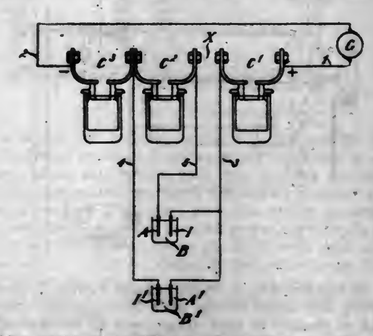
3. A vehicle wheel comprising an inner member having a rim and spokes converging from said rim toward the center of the wheel, said rim having curved notches formed in its inner peripheral edge, an outer member surrounding said inner member and having annular side members provided on their inner peripheral edges with curved notches, the rim of said inner member lying between said annular side members, and means for yieldingly connecting said members including contact parts in contact with said curved notches.

4. A vehicle wheel comprising an inner member having a hub, a rim, and spokes converging toward the center from said rim, an outer member surrounding said inner member and provided with two annular side members between which the marginal portion of said inner member is located, an annular spring in a plane outside of each side member, and means to connect said springs and against which the inner peripheral edge of the rim of said inner member and the inner peripheral edges of said annular side members bear.

5. A vehicle wheel comprising an inner member having a hub, a rim, and spokes converging toward the center from said rim, an outer member surrounding said inner member and provided with two annular side members between which the marginal portion of said inner member is located, an annular spring in a plane outside of each side member, bolts connecting said springs and against which the inner peripheral edge of the rim of said inner memuer and the inner peripheral edges of said annular side members bear.

[Claims 6 to 12 not printed in the Gazette.]

1,023,498. MEANS FOR CHARGING STORAGE-BATTERY CELLS. CHARLES W. BELL, Philadelphia, Pa., assignor to The Electric Storage Battery Company, Philadelphia, Pa., a Corporation of New Jersey. Filed Aug. 19, 1910. Serial No. 578,025. (Cl. 171—314.)



1. The combination with a series of storage cells of apparatus for changing the relative state of charge of a selected portion of the series comprising a device interposed in series with the selected portion, and adapted to permit a flow of current in one direction and prevent a flow in the opposite direction, and another device in shunt with the selected portion and the first named device and adapted to permit the passage of current in the direction opposed by the first named device but oppose a flow of current in the opposite direction.

2. The combination with a series of storage cells of apparatus for changing the relative state of charge of a selected portion of the series comprising an electrolytic valve interposed in series with the selected portion and

adapted to permit a flow of current in one direction and prevent a flow in the opposite direction, and another electrolytic valve in shunt with the selected portion and the first named electrolytic valve and adapted to permit the passage of current in the direction opposed by the first named electrolytic valve but oppose a flow of current in the opposite direction.

3. In combination, two branch circuits in parallel relation, each containing an electrolytic valve, said valves being oppositely connected, and a series of storage cells whereof a portion is connected in one of said branch circuits while the remainder is connected in series with both branch circuits, whereby current in one direction passes through the entire series of storage cells, while current in the other direction is shunted around the portion in the branch circuit.

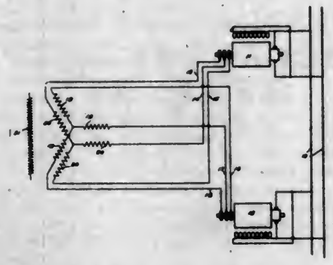
4. In combination, two branch circuits connected in parallel relation, automatic means for changing the proportionate division of current between them with change of direction of current flow, and a series of storage cells whereof a portion is connected in one of said branch circuits while the remainder is connected in series with both branch circuits whereby a greater proportion of the total current passes through the portion in the branch circuit in one direction than in the other.

1,023,499. COLLAPSIBLE CAPSULE. RALCY HUSTED BELL, New York, N. Y. Filed Sept. 20, 1910. Serial No. 582,811. (Cl. 128—22.)



A receptacle for a medicament formed of compressible material and having spray outlets normally closed by removable filaments.

1,023,500. SYSTEM OF ELECTRICAL DISTRIBUTION. LOUIS E. BOGEN, Milwaukee, Wis., assignor to Allis-Chalmers Company, a Corporation of New Jersey. Filed July 28, 1911. Serial No. 641,127. (Cl. 171—97.)

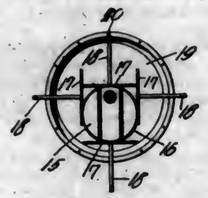


1. In combination, a direct current circuit, a plurality of rotary converters having their direct current ends connected in parallel to said circuit, and an alternating current generator having a separate generating winding connected to the alternating current end of each of said rotary converters.

2. In combination, an alternating current generator having a plurality of separate generating windings of equal voltage, a plurality of rotary converters the alternating current end of each of which is connected to one of said windings, and a direct current circuit to which the direct current ends of said rotary converters are connected in parallel.

3. In combination, two rotary converters interconnected on their direct current ends, and an alternating current generator having a separate winding connected to the alternating current end of each rotary converter.

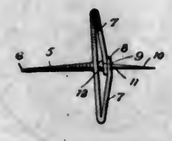
1,023,501. PROPELLER. GEORGE GORDON BOWER, Bainbridge, Ga. Filed Sept. 11, 1911. Serial No. 648,809. (Cl. 115—60.)



1. A propeller, having a casing composed of two concaved disks the peripheral portion of which provides a tapered in cross section water cutting surface, said casing being provided with a plurality of equi-distantly disposed radial slots through the periphery thereof, a shaft disposed concentrically of the casing and connected to the outer disk, a sleeve rotatably mounted upon said shaft and forming a bearing for the other disk of the casing, a cam keyed to and disposed eccentrically upon the sleeve within the casing, the casing and shaft being disposed to rotate in one direction at all times, and when in operable relation to be completely submerged, a plurality of frames disposed to ride upon the cam and within the casing, a blade to each slot of the casing connected to and carried by said frames to be retracted and projected through the respective slots of the casing due to the rotation of the casing.

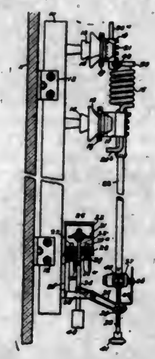
2. A propeller, having a casing composed of two concaved disks, the peripheral portion of which provides a tapered in cross section water cutting surface, said casing being provided with a plurality of equi-distantly disposed radial slots through the periphery thereof, a shaft disposed concentrically of the casing and connected to the outer disk, a sleeve rotatably mounted upon said shaft and forming a bearing for the other disk of the casing, a cam keyed to and disposed eccentrically upon the sleeve within the casing, the casing and shaft being disposed to rotate in one direction at all times, and when in operable relation to be completely submerged, a plurality of frames disposed to ride upon the cam and within the casing, a blade to each slot of the casing connected to and carried by said frames to be retracted and projected through the respective slots of the casing due to the rotation of the casing, the length of the said blades being greater than the width of the casing so that a portion thereof normally projects beyond the periphery of the casing when in retracted position, and a guard hood connected to and rotatable with the sleeve, said hood being disposed in an opposite position to the cam and fitting upon and about the portion of the casing to inclose the ends of the retracted blades.

1,023,502. FASTENING DEVICE. WILLIAM A. CALLANAN, Denver, Colo. Filed May 13, 1911. Serial No. 626,901. (Cl. 40—145.1.)



A device of the class described comprising a threaded shank member having a sharpened point, and a head formed of two strips doubled upon themselves and having alining openings in the end, and a pin provided with a head and having the shank thereof projecting outwardly through said openings.

1,023,503. HIGH-POTENTIAL RELAY. HERBERT W. CHENEY, Milwaukee, Wis., assignor to Allis-Chalmers Company, a Corporation of New Jersey. Filed Apr. 3, 1909. Serial No. 487,730. (Cl. 175—268.)



1. In a relay, a pair of insulators, a pair of connectors carried thereby, a high voltage coil secured to said connectors, a movable core for said coil, one of said connectors having a guide for said core, a low voltage switch, and means for operating said switch by a movement of said core.

2. In a relay, a pair of insulators, a pair of connectors carried thereby, a high voltage coil having its ends secured to said connectors, a movable core for said coil, the lower connector having a guide for said core, a low voltage switch below said coil, and means including a member associated with said core for operating said switch by a movement of said core.

3. In combination, a pair of insulators, terminal members secured to said insulators, one of said terminal members having a guide portion, a high voltage coil having its ends secured to said terminal members, a core for said coil, said core being guided by the guide portion of said terminal member, a low voltage switch located below the coil at a distance therefrom sufficient to insulate the high voltage coil from the switch, and means for operating said switch by a movement of the core comprising a rod extending downwardly from the core and operatively connected to the switch.

4. In combination, an insulating base, a pair of insulators secured thereto, connector blocks secured to the ends of the insulators, an open high voltage coil having its ends secured to said connector blocks respectively, a core for said coil, one of said connector blocks having a guide for said core, a switch supported by said base at a distance from the coil sufficient to prevent current leakage between the coil and switch, and means for operating said switch by a movement of said core comprising a rod extending downwardly from the core and operatively connected to the switch.

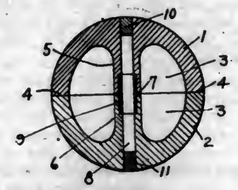
5. In combination, terminal connector blocks, one of which has a guiding portion, a high voltage coil secured to said blocks, a core for said coil, said core being guided by said guiding portion in one of said blocks, a low voltage switch, and an operating mechanism between said core and said switch.

[Claims 6 to 8 not printed in the Gazette.]

1,023,504. BALL. FRANK E. CHESTER, Providence, R. I. Filed Nov. 9, 1911. Serial No. 659,378. (Cl. 46—4.)

1. As a new article of manufacture a ball formed of two halves each having a hollow center portion and a peripheral meeting edge by which the halves are cemented together, a central hub on each half projecting inwardly to the parting line whereby the ball shell is stiffened a greater cementing area provided and a hollow central bearing formed for the reception of an arbor on which the outer surface is finished.

2. As a new article of manufacture, a cork ball formed of two hollow halves, each having a peripheral meeting edge by which the halves are cemented together, and an integral central hub projecting inwardly from each half to the meeting line.



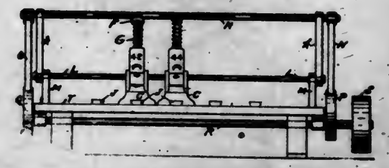
3. As a new article of manufacture, a cork ball formed of two hollow halves each having a peripheral meeting edge by which the halves are cemented together, an integral central hub projecting inwardly from each half to the meeting line, and means in said hubs for joining the parts together.

4. As a new article of manufacture, a cork ball formed of two hollow halves, each having a peripheral meeting edge by which the halves are cemented together, an integral central hub projecting inwardly from each half to the meeting line, and a threaded bushing screwed into each half hub for securing the parts together.

5. As a new article of manufacture, a hollow pressed cork ball formed of two halves each having a hollow central portion and a comparatively broad meeting edge by which said halves are cemented together, an integral central hub projecting inwardly to the center thereof from each half and at substantially right angles to said meeting edge whereby the ball is stiffened and a greater cementing surface is provided.

[Claim 6 not printed in the Gazette.]

1,023,505. DEVICE FOR MARKING GOODS. WILLIAM K. CLARK, Amsterdam, N. Y. Filed June 26, 1908. Serial No. 440,454. (Cl. 1—3.)



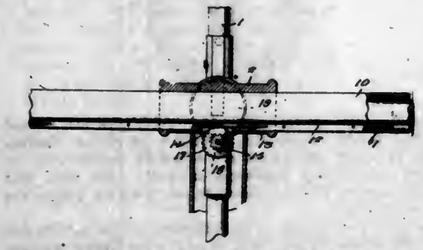
In a device for marking goods, the combination of a table; brackets attached thereto; a rod supported by said brackets; arms attached to said rod; a shaft secured to said arms and extending across the table; a power shaft supported beneath the table; eccentric straps secured to said power shaft; a pulley on said power shaft; rods connecting the shaft placed above the table with said eccentric straps; a series of stapling devices adapted to be placed under the shaft extending above and across the table; a means for guiding and retaining said stapling devices on the table.

1,023,506. FIRE-EXTINGUISHING APPARATUS. GEORGE J. COUTU, Lowell, Mass. Filed Sept. 1, 1911. Serial No. 647,218. (Cl. 169—18.)

1. In apparatus of the class described, a support comprising a head formed with a bore and a groove extending longitudinally of the wall of the bore, and a slot opening into the groove, a water-supply pipe slidably fitted through the bore, a rack upon the pipe slidable in the groove, a shaft journaled upon the head, a pinion carried by the shaft and projecting through the slot and meshing with the rack, and means for rotating the shaft.

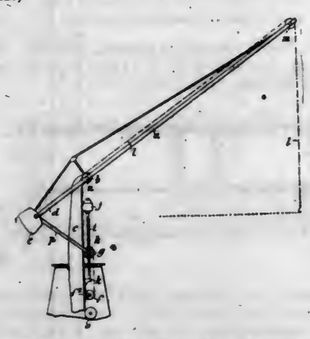
2. In apparatus of the class described, a support comprising a head having a bore and a groove extending longi-

tudinally of the wall of the bore and a slot opening into the groove, a water supply pipe slidably fitted through the bore, a rack upon the pipe extending longitudinally thereof and in the groove, a strip carried by the rack and resting upon one wall of the groove and spacing the teeth of the rack from said wall, a shaft journaled upon the head, a pinion carried by the shaft and meshing with the rack, the pinion projecting through the slot, and means for rotating the shaft.



3. In apparatus of the class described, a support comprising a head arranged for angular adjustment about a horizontal axis and formed with a bore and a groove extending longitudinally of the wall of the bore, and with a slot opening into the groove, a water supply pipe slidably fitted through the bore, a rack upon the pipe projecting into the groove, a shaft journaled upon the head, a pinion carried by the shaft and projecting through the slot and meshing with the rack, and means for rotating the shaft.

1,023,507. CRANE. PERCY RUGBY DAVISON, Gravesend, England. Filed July 13, 1911. Serial No. 638,353. (Cl. 212—12.)

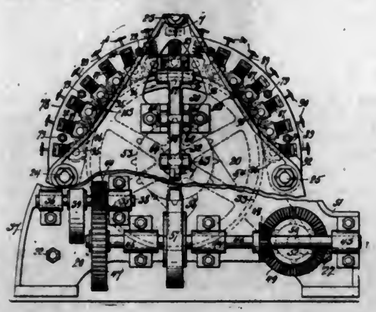


1. In a crane, the combination with a support, of a jib pivoted thereto, a series of fixed pulleys and a series of movable pulleys, the two sets of pulleys and the point at which the jib is pivoted to said support, being in the same plane, a rod connecting the movable pulleys to the jib, and means for moving the movable pulleys relatively to the fixed pulleys.

2. In a crane, the combination with a support, of a jib pivoted thereto, a series of fixed pulleys and a series of movable pulleys, the two sets of pulleys and the point at which the jib is pivoted to the support, being in the same plane, a rod connecting the movable pulleys to the jib, and a screw provided with a nut to which said movable pulleys are adapted to be fixed whereby by the rotation of said screw the said movable pulleys are caused to move relatively to the fixed pulleys.

1,023,508. DECORTICATING-MACHINE. ELIE DELAFOND, Mexico, Mexico. Filed June 9, 1910. Serial No. 566,063. (Cl. 13—21.)

1. In a decorticating machine the combination of a main housing, a drum shaft journaled therein, a crushing drum on said shaft, a second housing partially encircling the crushing drum and slidably connected up with the main housing, rolls journaled in the second housing, a side shaft journaled to the main housing, means between the side shaft and drum shaft to transmit rotation from the former to the latter, an oscillating strap rod connected up with the side shaft, a fulcrum pin for said rod, a connecting element connecting a pivot on one side of the fulcrum pin and the second housing, and a second element connecting a pivot on the other side of the fulcrum with the said drum shaft.



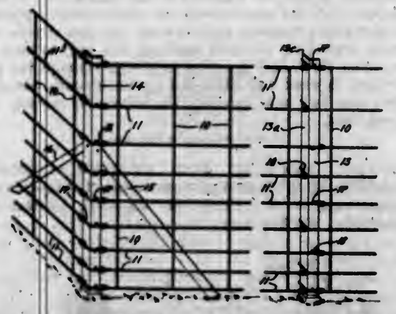
2. In a decorticating machine the combination of a crushing drum, crushing rolls journaled adjacent to the cylindrical surface of the drum, scrapers located between the lower portions of the accompanying surfaces of the rolls, and flexible means to maintain the scrapers in operative position against the rolls.

3. In a decorticating machine the combination of a main housing, a drum shaft journaled in the housing, a crushing drum on the shaft, a second housing partially encircling the crushing drum and having openings therein, bearings in said openings, crushing rolls connected up with said bearings, links pivoted on each opposite side of each bearing, scrapers between each pair of crushing rolls supported at opposite ends by a pair of said links, a spring on each scraper with one end thereof fastened thereto and the other end fastened to one of the links supporting the scraper.

4. In a decorticating machine the combination of a main housing, a drum shaft rotatably and slidably supported in the housing, a main crushing drum fastened to the drum shaft, a second housing slidably connected up with the main housing, a plurality of crushing rolls journaled in the second housing encircling the main crushing drum so as to decorticate material between the surface of the crushing drum and the surfaces of the crushing rolls, a side shaft journaled to the main housing, means connected up between the side shaft and the drum shaft to transmit rotation from the former to the latter, and means connected up between the side shaft and the drum shaft and also the second housing to reciprocate the drum shaft and the said second housing during the rotations of the drum shaft, and flexible adjusting means to regulate the pressure of the rolls on the material being decorticated.

5. In a decorticating machine the combination of a main housing, a pair of frames for the housing, a drum shaft rotatably and slidably supported in the frames, a main crushing drum fastened to the drum shaft, grooves on the drum, guide bolts connecting the said frames, a pair of frames of a second housing slidably supported on the guide bolts, tie bolts connecting the frames of the second housing, journal bearings located in openings of the frames of the second housing, roll shafts journaled in said journal bearings, rolls fastened to said roll shafts, grooves on the rolls, a spring located in each of said openings with one end bearing on the said journal bearings, a spring cap for each spring, a screw in threaded engagement with a threaded opening in the frames of the second housing and bearing on its accompanying spring cap, scrapers located between the rolls and adjacent to the surface of the main crushing drum, links with one end of each pivoted to the said journal bearings and the other ends thereof supporting the said scrapers, a side shaft journaled to one of the frames of the main housing, a longitudinal shaft journaled in the frames of the main housing, a gear on the side shaft and a gear on the longitudinal shaft, the said gears gearing with each other, a sprocket wheel on the longitudinal shaft, a sprocket wheel on the drum shaft, a sprocket chain connecting the sprocket wheels, a disk eccentrically connected to the side shaft, a strap rod fulcrumed to one of the frames of the main housing, a strap connected with said rod coacting with said disk, a link connecting the strap rod and the second housing and a link connecting the strap and the said drum shaft.

1,023,509. WIRE FENCE. JOHN HENRY DOWNS, New York, N. Y. Filed July 14, 1911. Serial No. 638,458. (Cl. 33—9.)



1. The herein-described improvement in wire fencing, including an angular post provided with a vertical row of holes in a face thereof set parallel to the adjacent fence wires, a fastening having a hook portion and a straight portion adapted for use in connection with each one of said holes, the former portion engaging the respective hole and the latter portion coiling around an adjoining fence wire away from said post, and a like fastening hooked over the remote edge of the angular post in a plane transverse to the fence wires and similarly coiled around an adjoining fence wire.

2. A wire-fence including an angle iron post having one of its legs set parallel to the fence and the other one of said legs in a plane transverse to the same, said post having a vertical row of holes in its said parallel leg, one hole for every other horizontal wire of the fence, fastenings composed each of a hook portion and a straight portion, the horizontal wires being anchored alternately one to a hole in said parallel leg of the post and one to its said transverse leg, the hook portion of one fastening engaging a hole, the hook portion of the next fastening engaging the remote edge of the transverse leg of the post, and the straight portions of the several fastenings being coiled around adjoining horizontal fence wires.

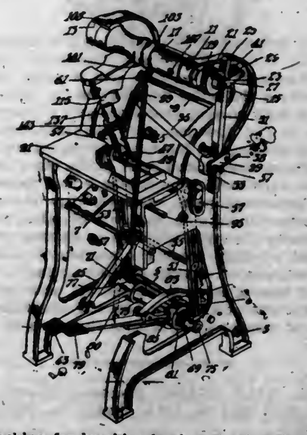
3. A wire-fence including an angle iron post having one leg set parallel to the fence and the other leg in a plane transverse thereto, a vertical row of holes provided in said parallel leg of the post for alternate horizontal fence wires, and fastenings having each a hook portion and a straight portion, the top and bottom horizontal fence wires being both anchored by the hook portions of said fastenings, one to a hole in said parallel leg of the post and one to the edge of the post's transverse leg, at both top and bottom, the straight portions of the fastenings being coiled in pairs around the same horizontal fence wires at top and bottom respectively, and the intermediate horizontal wires being similarly anchored by said fastenings but in alternate order only.

4. In a wire-fence, the combination of an angle iron post, a horizontal fence wire running parallel to and upon one leg thereof, a fastening having a hook portion and a straight portion disposed in the same horizontal plane, said hook portion engaging a hole in said leg of the post, and said straight portion being coiled away from the post around said fence wire in said plane.

5. In a wire-fence, the combination with an angle iron post and a horizontal wire running parallel to and upon one leg of the same, the other leg of said post being in a plane at right angles to said fence wire, of a fastening having a hook portion and a straight portion disposed in the same horizontal plane, said hook portion engaging the remote edge of said other leg of the post, and said straight portion being located on the outside of said last named leg and having its end portion coiled around the horizontal wire in said plane alongside and away from the post in proximity to its angular portion.

[Claim 6 not printed in the Gazette.]

1,023,510. MACHINE FOR BREAKING-IN SHOES. SEXTUS ASBERRY EDDINS, Charlottesville, Va., assignor to O. A. Miller Treeing Machine Company, Portland, Me., a Corporation of Maine. Filed Sept. 13, 1910. Serial No. 581,821. (Cl. 12—130.)



1. A machine for breaking-in shoes having, in combination, a shoe support, a tool projecting from said support and held immovably thereon during the breaking-in operation and adapted to operate upon the insole of a shoe, a coöperating roller arranged to bear against the outsole of the shoe, means for producing pressure between said tool and roller, and means for causing relative movement of the roller and shoe whereby depression of a selected area of the insole is produced by a kneading or rolling action.

2. A machine for breaking in shoes having, in combination, a roller, a support for a finished shoe, a projecting tool held immovably upon said support during the breaking-in operation and adapted to operate upon the insole of the shoe, manual means for oscillating one of said members, and means for applying pressure to said shoe.

3. A machine for breaking in shoes having, in combination, a roller, a support for a finished shoe, a projecting tool held immovably upon said support during the breaking-in operation and adapted to operate upon the insole of the shoe, means for oscillating one of said members and means under control of the operator for applying pressure to said shoe.

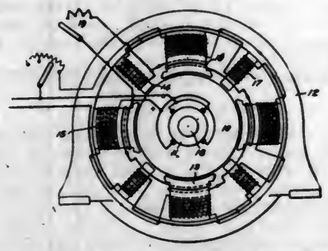
4. A machine for breaking in shoes having, in combination, a roller, a support for a finished shoe, a projecting tool held immovably upon said support during the breaking-in operation and adapted to operate upon the insole of the shoe, manual means for oscillating one of said members, and manual means for applying pressure to said shoe.

5. A machine for breaking in shoes having, in combina-

tion, a roller having areas of different contour, a support for a finished shoe, manual means for oscillating one of said members, and means permitting said shoe to be selectively presented to the desired area.

[Claims 6 to 46 not printed in the Gazette.]

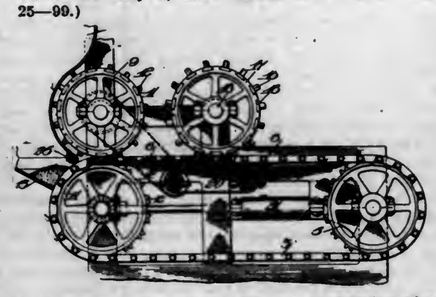
1,023,511. DYNAMO-ELECTRIC MACHINE. BUDD FRANKENFIELD, Los Angeles, Cal., assignor to Allis-Chalmers Company, a Corporation of New Jersey. Filed Apr. 15, 1910. Serial No. 555,588. (Cl. 171—228.)



1. In a dynamo-electric machine, a field member having a plurality of main poles and a plurality of commutating poles, series windings on both sets of poles, interconnections between the series windings on the main poles arranged to carry current around the axis of rotation of the machine in one direction, and interconnections between the series windings on the commutating poles arranged to carry current around such axis in the other direction.

2. In a dynamo-electric machine, a field member having a plurality of main poles, and a plurality of commutating poles, series windings on both sets of poles, interconnections between the series windings on the main poles which with said windings produce a number of ampere turns around the axis of rotation of the machine in one direction, and interconnections between the series windings on the commutator poles which with said windings produce a number of ampere turns around such axis in the other direction.

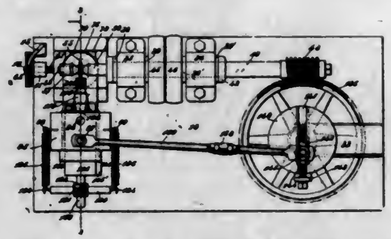
1,023,512. TILE-PRESS. SECONDO GILETTI, Oakland, Cal. Filed May 9, 1911. Serial No. 625,987. (Cl. 25—99.)



1. A continuously operating tile press consisting of an endless, slatted belt, the slats of said belt having matrix forming perforations, polygonal drums around which the belt passes, the polygonal faces of the drums supporting successive slats, a rotary plunger cylinder having projecting radial plungers corresponding to and fitting the respective perforations, but not extending clear through the perforations, said plunger cylinder disposed contiguous to and perpendicularly above one of said polygonal drums so that each plunger as it enters a perforation will compress the material to be acted on against a surface of said polygonal drum and said drum will directly resist the pressure of said cylinder, a hopper arranged at the end of the machine outside the belt and in the angle between the plunger cylinder and complementary drum, the slats of the belt forming an inclined feed floor for the hopper, and a scraper contiguous to the belt adjacent to the engagement of said plungers with the perforations.

2. A continuously operating tile press consisting of an endless, slatted belt, the slats of said belt having matrix forming perforations, polygonal drums around which the belt passes, the polygonal faces of the drums supporting successive slats, a rotary plunger cylinder having projecting radial plungers corresponding to and fitting the respective perforations, but not extending clear through the perforations, said plunger cylinder disposed contiguous to and perpendicularly above one of said polygonal drums so that each plunger as it enters a perforation will compress the material to be acted on against a surface of said polygonal drum and said drum will directly resist the pressure of said cylinder, a hopper arranged at the end of the machine outside the belt and in the angle between the plunger cylinder and complementary drum, the slats of the belt forming an inclined feed floor for the hopper, a scraper contiguous to the belt adjacent to the engagement of said plungers with the perforations, an ejector rotary plunger cylinder above the belt and between the two drums and having projecting plungers meshing the perforations in succeeding slats, said plungers extending through the perforations to eject the tiles, and an underneath conveyer inside the belt and between the drums to receive the ejected tiles.

1,023,513. MACHINE FOR CUTTING CONCAVE FACETS IN CUT DIAMONDS. JEAN LOUIS GONARD, Coytesville, N. J. Filed July 20, 1911. Serial No. 639,697. (Cl. 51—11.)



1. The combination of a rotary shaft, a cutter thereon, a swiveled work holder having its center of oscillation radial to said cutter, a diamond dop supported in said work holder, means for pushing said dop toward said cutter to hold the diamond in contact therewith, and intermediate mechanism between said cutter shaft and said work holder for oscillating the latter in unison with the former.

2. The combination of a rotary shaft, a disk shaped cutter thereon, a swiveled work holder, a sliding carriage for supporting said work holder adjustable parallel with said cutter shaft, a diamond dop supported in said work holder, means for pushing said dop toward said cutter to hold the diamond in contact therewith, and intermediate mechanism between said cutter shaft and said work holder for oscillating the latter in unison with the former.

3. The combination of a rotary shaft provided with a cutter and with a worm, a swiveled work holder, a diamond dop supported in said work holder, means for pushing said diamond dop toward said cutter to hold the diamond in contact therewith, a worm wheel meshing with said worm, a crank wheel on the shaft of said worm wheel, and a pitman connecting the wrist pin of the crank wheel with a stud on the work holder.

4. The combination of a rotary cutter shaft provided with a cutter, a carriage adjustable parallel with said shaft and having a tubular bearing radially disposed relative to said cutter, a swiveled work support comprising a spindle journaled in said bearing, an arm at right angles to said spindle and a sleeve on said arm, means for adjusting said spindle, a sliding mandrel in said sleeve, a dop carried by said mandrel, and means for oscillating said work support.

5. The combination of a rotary shaft provided with a cutter, a carriage adjustable parallel with said shaft and having a tubular bearing radially disposed relative to said cutter, a swiveled work support comprising a spindle journaled in said bearing, an arm integral with said spindle at right angles thereto, a sleeve on said arm, a sliding mandrel in said sleeve, a dop carried by said mandrel, means for oscillating said work support and means for pushing said mandrel toward said cutter to hold the work in contact therewith.

[Claims 6 to 12 not printed in the Gazette.]

1,023,514. GARMENT-FASTENING HOOK FOR WOMEN AND CHILDREN. MARGARET B. GOODWIN, Denver, Colo., assignor of one-half to Daniel W. Paine, Denver, Colo. Filed June 12, 1911. Serial No. 632,664. (Cl. 24—228.)



A garment hook formed of a single piece of wire, and comprising a tongue terminating in lateral fastening loops at its rear end; eye-engaging portions extending upward from the adjoining sides of said loops; and a divided bill extending forward from the eye-engaging portions and above and parallel with the tongue, said bill members being shouldered midway of their length, the ends of the wire forming the hook terminating under said shoulders.

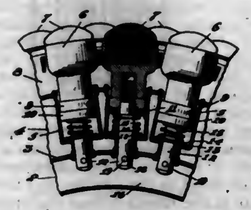
1,023,515. PROPELLING MECHANISM FOR VESSELS. EUGENE A. GRAVES, Rutland, Vt., assignor of forty-five one-hundredths to Frederick W. Savage, Granville, N. Y., and ten one-hundredths to Samuel Geno, Rutland, Vt. Filed June 22, 1910. Serial No. 568,258. (Cl. 115—16.)



1. The combination, with the hull of a vessel of a fore and aft tubular container extended longitudinally through the hull and open at its ends, said container being interrupted within the hull, annular bearings mounted externally on the container at such interrupted portion, the opposed faces of the bearings having alternate annular ribs and grooves thereon, a ring interposed between said bearings and having its opposite faces annularly ribbed and grooved to coöperate with the grooves and ribs, respectively, of the bearings, to form a water-tight joint while permitting rotation of the ring, the latter closing the interrupted portion of the container between the bearings, a screw-propeller within said ring and having the peripheral portion of its blades rigidly attached to the ring, and means operatively connected with the exposed portion of the propeller ring to rotate the same.

2. The combination, with the hull of a vessel, of a fore and aft tubular container extended longitudinally through the hull and open at its ends, said container being interrupted within the hull, annular bearings mounted externally on the container and longitudinally adjustable thereon at such interrupted portion, the opposed faces of the bearings having alternate annular ribs and grooves thereon, a screw-propeller having a rigidly attached ring inclosing the peripheries of its blades, said ring being interposed between the bearings and having its opposite faces annularly ribbed and grooved to coöperate with the grooves and ribs, respectively, of the bearings, to form a water-tight joint while permitting rotation of the propeller and its attached ring, axial supports for the propeller within the container, and means operatively connected with the exposed portion of the propeller ring to rotate the same, said ring closing the interrupted portion of the container between the bearings.

1,023,516. PNEUMATIC WHEEL. WILLIAM W. GUEST, Alameda, Cal. Filed June 8, 1911. Serial No. 632,014. (Cl. 152—28.)



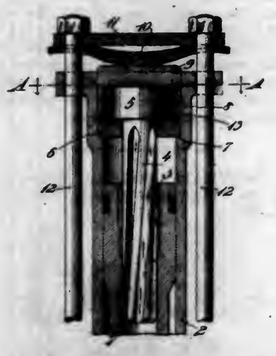
1. A wheel rim consisting of an annular chamber adapted to contain air under pressure, dash pots extending radially outward, plungers movable in the dash pots having stems extending into the compression chamber, joint forming leathers surrounding the plunger rod and fitting the piston, exterior treads and radially guided tread sockets therefor connected with the plungers, and grooves formed in the plunger rods normally connecting the compression chambers with the plunger chambers, said grooves being closable when the plungers are forced inwardly to increase the compression within the plunger chambers.

2. A vehicle wheel consisting of an annular chamber adapted to contain compressed air, a dash pot plate forming the outer periphery of said chamber, dash pots having the reduced inner ends fixed in said rim, plungers fitting said dash pots having plunger rods extending into the compression chamber, said rods having grooves made and extending from the compression chamber into the plunger chamber, stops limiting the outward movement of the plungers, and cup leathers surrounding the plunger rods and beyond which the grooves normally extend, said cup leathers forming stops to close the connection when the plungers are forced inwardly.

3. A vehicle wheel consisting of an annular closed chamber adapted to contain compressed air, plunger cylinders connected and radiating outwardly from said compression chamber, plungers fitting the cylinders and having rods extending into the compression chamber, and limiting stops therefor, treads adapted to travel upon the ground and guided sockets therefor connected with the plungers to force the latter inwardly under the stress of travel, connections between the inner compression chamber and the plunger cylinders, and cup leathers whereby said connections are automatically closed synchronously with the inward movement of the plungers.

4. A wheel including an annular compressed air chamber, radial dash pots conected therewith, plungers movable in said dash pots, treads carried by the plungers, and means to temporarily cut off connection with the dash pots and increase the compression therein in unison with inward movement of the plungers, said means including plunger rods having grooves which extend from the compressed air chamber into the chamber in which the plungers work, and cup leathers forming closures for the grooves.

1,023,517. ROTATION DEVICE FOR ROCK-DRILLS. CHARLES C. HANSEN, Easton, Pa., assignor to Ingersoll-Rand Company, New York, N. Y., a Corporation of New Jersey. Filed June 30, 1908. Serial No. 441,214. (Cl. 125—10.)



1. A drill comprising a cylinder, its piston and a rotation device therefor including a rifle bar, a coil spring having its coils in the same plane and having its inner end locked at all times to the rifle bar and arranged to clutch the rifle bar to and release it from the cylinder.

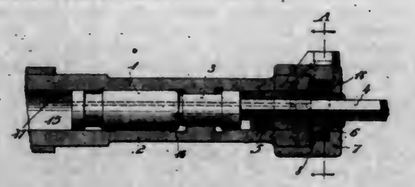
2. A drill comprising a cylinder, its piston and a rotation device therefor including a rifle bar, a slip ring and a coil spring having its coils in the same plane, arranged to directly clutch the rifle bar to and release it from the slip ring.

3. A drill comprising a cylinder, its piston, and a rotation device therefor including a rifle bar, a slip ring and a coil spring having its coils in the same plane and having its inner end locked at all times to the rifle bar and arranged to directly clutch the rifle bar to and release it from the slip ring.

4. A drill comprising a cylinder, its piston and a rotation device therefor including a rifle bar, a washer surrounding the rifle bar, a spring pressed back head, a slip ring interposed between the washer and back head and a coiled spring having its coils in the same plane, surrounding the rifle bar head and arranged to directly clutch the rifle bar to and release it from the slip ring.

5. A drill comprising a cylinder, its piston and a rotation device therefor including a rifle bar, a washer surrounding the rifle bar, a spring pressed back head, a slip ring interposed between the washer and back head and a coil spring having its coils in the same plane, surrounding the rifle bar head having its inner end locked at all times to said head and arranged to directly clutch the rifle bar to and release it from the slip ring.

1,023,518. ROTATION DEVICE FOR HAMMER-DRILLS. CHARLES C. HANSEN, Easton, Pa., assignor to Ingersoll-Rand Company, New York, N. Y., a Corporation of New Jersey. Filed June 30, 1908. Serial No. 441,215. (Cl. 125—10.)

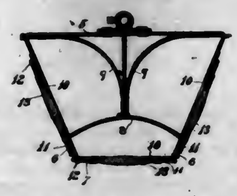


1. A rotation device for drills comprising an oscillating member, a drill steel holder and a coil spring having its coils in the same plane, surrounding said holder within the oscillating member and having its inner end locked to said holder and its outer end free, said spring being arranged to clutch the oscillating member to and release it from said holder.

2. A hammer drill comprising a cylinder, its piston, an anvil, a front head, a tool steel, its holding sleeve, an oscillating ring in the front head and a coil spring having its coils in the same plane, surrounding said sleeve within the oscillating ring, said spring being arranged to clutch the oscillating ring to and release it from the said sleeve.

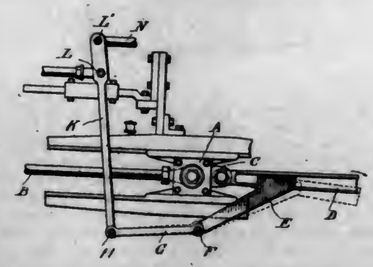
3. A hammer drill comprising a cylinder, its piston, an anvil, a front head, a drill steel, its holding sleeve, an oscillating ring in the front head and a coil spring having its coils in the same plane, surrounding said sleeve within the oscillating ring, said spring having its inner end locked to the sleeve and its outer end free whereby the oscillating ring is clutched to and released from the sleeve by said spring.

1,023,519. VEHICLE-LAMP. RICHARD G. HARRIS, Knoxville, Tenn., assignor of one-half to Frank M. Hambright, Knoxville, Tenn. Filed Apr. 28, 1911. Serial No. 623,912. (Cl. 240—46.)



In a head light, a body having a front, and forwardly converging sides, bull's eyes mounted in said front and sides of the body and reflector partitions mounted within the body rearwardly of the front and sides thereof, said partitions being inwardly bowed and the inner ends of two of the partitions being fixed to the medial portions of the back of the other partition whereby the light will be cast through said bull's eyes forwardly and at opposite sides of the body, substantially as described.

1,023,520. DEVICE FOR VALVE-GEAR. JAMES B. KINGAN and HUGO F. RIPKEN, Minneapolis, Minn. Filed Nov. 2, 1911. Serial No. 658,258. (Cl. 121—99.)



A valve gear regulating apparatus for locomotives, etc., comprising, in combination with a cross head, a frame in which the same reciprocates, a piston pivoted to the cross head, a lug projecting from the latter, a pitman pivotally connected to said lug, a plate fastened to the pitman and having a forwardly inclined integral arm projecting over one end of the cross head and frame, a lever, a radius rod to which one end is connected, pivotal link connections between the opposite end of the lever and said arm, and a rod pivotally connected to the lever intermediate its ends, as set forth.

1,023,521. ADJUSTABLE VALVE FOR DUST-COLLECTORS. PHILIP C. MILLER, Chicago, Ill. Filed July 25, 1907. Serial No. 385,472. Renewed Sept. 9, 1911. Serial No. 648,498. (Cl. 83—48.)



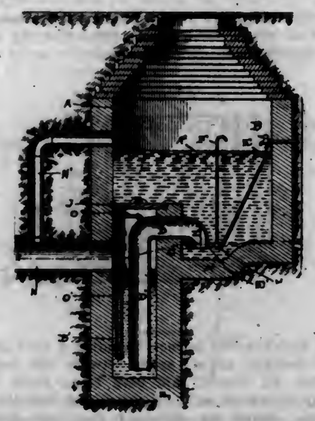
1. In a dust collector, having a purified air outlet in its head, a tubular guard depending from said outlet, deflectors secured to the inner wall thereof, a valve located within the tubular guard, the movement of said valve operating to restrict the area of the air outlet.

2. In a dust collector, having a restricted purified air outlet in its head, a tapering tubular guard depending from said outlet, deflectors secured to the inner wall thereof, a valve located within the tubular guard, the movement of said valve operating to restrict the area of the air outlet.

3. The combination with a dust collector, having a restricted purified air outlet, of a tubular guard depending therefrom, deflectors on the walls of said tubular guard, a rod, braces carrying said rod, a disk mounted and slidable upon said rod, means to permit the operator to regulate the position of said disk, for the purpose set forth substantially as described.

4. The combination with a dust collector, having a restricted purified air outlet, and a tubular guard depending therefrom, of adjustable means located within the tubular guard to vary the unobstructed area of said purified air outlet, means consisting of a rod, braces carrying said rod, a disk mounted and slidable upon the said rod, means to permit the operator to regulate the position of said disk, for the purpose set forth substantially as described.

1,023,522. FLUSH-TANK APPARATUS. HARMON D. MOISE, Sumter, S. C. Filed May 11, 1910. Serial No. 560,606. (Cl. 182—8.)



A flush tank apparatus having a well in the bottom thereof with the upper portion of the wall of the same extending above the bottom of the tank, an exit passageway leading from said wall, a vent pipe communicating between said passageway and the interior of the tank, a closure to said well, a siphon discharge pipe passing through said wall and having its long leg extending into said well and its short leg opening into the lower portion of the tank, a liquid seal trap communicating with the siphon and extending into the well with its lower end above the bottom of said passageway, a liquid supply pipe within the tank and communicating with the short leg of the siphon, and a vent pipe communicating with said supply pipe adjacent to its point of connection with the short leg of the siphon.

1,023,523. PROCESS FOR THE MANUFACTURE OF GLUES, &c. JAMES MILLAR NEIL, Toronto, Ontario, Canada, assignor to Alexander M. Hay, Toronto, Canada. Filed May 27, 1911. Serial No. 629,814. (Cl. 87—7.)

1. The improvement in the manufacture of glue, consisting in preparing a glue liquor, treating such liquor with acid to precipitate chondrin, separating the chondrin from the liquor, then treating the liquor with alcohol to precipitate glutin, separating the glutin from the liquor; and finally mixing the glutin and the chondrin in such proportion as will produce a glue of the desired strength.

2. The herein described glue, consisting of pure powdered chondrin and pure powdered glutin mixed dry, substantially as described.

1,023,524. PROCESS FOR THE PRECIPITATION OF PRECIOUS METALS FROM CYANID SOLUTIONS. JAMES MILLAR NEIL, Toronto, Ontario, Canada, assignor to Alexander M. Hay, Toronto, Canada. Filed Sept. 5, 1911. Serial No. 647,734. (Cl. 75—185.)

1. The herein described process of precipitating precious metals from cyanid solutions; consisting in adding to the cyanid solution a substance containing atomized lead, agitating the solution and adding thereto a finely divided metallic precipitant.

2. The herein described process of precipitating precious metals from cyanid solutions; consisting in adding to such a solution atomized lead, agitating the solution, and adding thereto a finely divided substance containing zinc.

3. The herein described process of precipitating precious metals from cyanid solutions; consisting in adding to a cyanid solution atomized lead, agitating the solution and while it is in agitation adding thereto atomized zinc.

4. The herein described process of precipitating precious metals from cyanid solutions; consisting in adding to such a solution finely divided lead, agitating the solution, and while it is in agitation successively adding thereto small quantities of a finely divided metallic precipitant, until the precious metals in the solution have been precipitated, then removing the barren solution and recovering the precious metals contained in the precipitates.

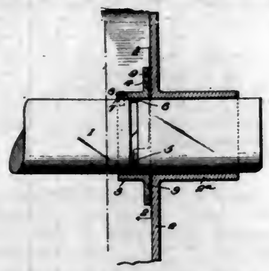
5. The herein described process of precipitating precious metals from cyanid solutions; consisting in adding to such a solution a quantity of finely divided lead, agitating the solution and adding thereto a finely divided substance containing zinc until the precious metals in such solution have been precipitated; then removing the barren solution; refilling the tank with fresh cyanid solution one or more times, agitating same, and adding more of the zinc substance until the precious metals in the fresh solution are precipitated, then removing the barren solution and recovering the precious metals contained in the precipitates.

[Claim 6 not printed in the Gazette.]

1,023,525. PACKING. JAMES NEWLIN, Burlington, N. C. Filed Aug. 8, 1911. Serial No. 643,020. (Cl. 121—109.)

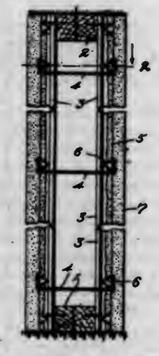
1. The combination with a casing wall and a rotary element journaled therein, of a packing collar mounted on said rotary element, a packing ring encircling said element within the collar and expanding against the inner wall of the latter, the collar being formed with an outstanding flange adapted to abut against said wall, and a

connection between said collar and rotary element permitting a limited longitudinal movement of the former, but compelling a simultaneous rotary movement of the two.



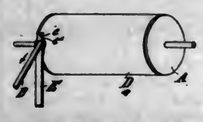
2. The combination with a casing wall and a rotary element journaled therein, of a packing collar snugly encircling the rotary element, but movable longitudinally thereon, said collar being formed with an outstanding annular flange adapted to abut against said wall and being formed in its opposite edge with a recess, the rotary element being formed with an annular groove, a packing ring mounted in said groove and expanding against the inner wall of the collar, and a pin secured to the rotary element and accommodated in said recess, for the purpose specified.

1,023,526. PARTITION AND WALL-FURRING. HENRY OLIVER, New York, N. Y. Filed Apr. 20, 1909. Serial No. 491,114. (Cl. 72—46.)



A construction for buildings and the like, comprising vertical studs arranged in two parallel rows spaced apart, with a stud in one row opposite a stud in the other row, transverse horizontal separators secured thereto and having an end projecting outside of said studs, a metal lathing and a stiffener interposed between said lathing and said studs providing a drying space, said stiffener and metal lathing and studs being secured together by said separator.

1,023,527. METHOD OF FORMING COMPOSITE STRIPS FOR MAKING METALLIC LETTERS. VICTOR CHARLES SMITH, Dayton, Ohio. Filed May 22, 1911. Serial No. 628,699. (Cl. 154—2.)



1. The herein described method of joining a fabric to a metal and forming the same into ribbons, consisting of winding a metal ribbon upon a cylinder, coating the outer surface thereof with an adhesive, surrounding the outer surface with a sheet of tearable fabric, coating the outer surface of said tearable fabric with an adhesive, and removing the ribbon and fabric by unwinding the metallic ribbon to simultaneously tear the sheet of fabric into corresponding width ribbons.

2. The herein described method of joining a fabric to a metal ribbon, consisting of winding a metal ribbon upon a cylinder, coating the outer surface thereof with an adhesive, surrounding the outer surface with a sheet of paper, coating the outer surface of the paper with an adhesive, and removing the ribbon and paper by unwinding the metallic ribbon to simultaneously tear the paper into corresponding width ribbons.

3. The herein described method of joining a fabric to a metal and forming the same into ribbons, consisting of winding a metallic ribbon upon a cylinder, surrounding the outer surface with a sheet of tearable fabric adhesively attached to the surface of the ribbon, and removing the ribbon and fabric by unwinding the metallic ribbon to simultaneously tear the sheet of fabric and remove a coextensive strip.

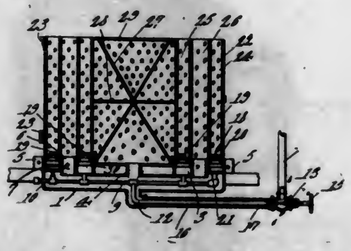
4. The herein described method of joining a fabric to a metal and forming the same into ribbons, consisting of winding a metallic ribbon upon a cylinder, surrounding the outer surface with a sheet of tearable fabric adhesively attached to the surface of the ribbon, coating the outer surface of said tearable fabric with an adhesive, and removing the ribbon and fabric by unwinding the metallic ribbon to simultaneously tear the sheet of fabric and remove a coextensive strip.

1,023,528. MANUFACTURE OF CREAM OF TARTAR. JEAN MARIE PERIGNY, Lyon, France, assignor to Gallia, Société Anonyme, Geneva, Switzerland. Filed Nov. 14, 1911. Serial No. 660,268. (Cl. 23—24.)

1. A process of manufacturing cream of tartar from crude material containing tartrates, which process consists in heating the crude material with a solution of a salt of aluminium, decolorizing the liquor, filtering it, crystallising the cream of tartar out of the liquor by cooling it, and utilizing the liquor for a new operation.

2. A process of manufacturing cream of tartar from crude material containing tartrates, which process consists in heating the crude material with a solution of an aluminium chlorid, decolorizing the liquor, filtering it, cyrstallizing the cream of tartar out of the liquor by cooling it, and finally using the liquor for a new operation.

1,023,529. OIL-BURNER. FRANK C. RICHARDSON and JOHN T. WOOD, Iola, Kans. Filed Nov. 21, 1911. Serial No. 661,563. (Cl. 158—89.)



1. A hydro-carbon burner including a base having concentric troughs, an air space between the troughs, and a central air nozzle, said base being made up of detachably connected sections, means for directing air into the base, means for directing fuel into the troughs, upstanding casings having spaces therebetween communicating with the troughs, and burner rings mounted within the troughs and discharging into the spaces between the

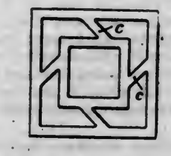
casings, each ring having a reduced fuel outlet slot extending continuously therein.

2. An oil burner including a base having concentric troughs thereon, there being an air space between the troughs and a central air nozzle, means for directing fuel into the troughs, means for directing air into the base, burner rings within the troughs and having reduced fuel outlet slots formed continuously therein, and casings upstanding from the troughs and adapted to receive fuel from the rings, each casing and trough and the base being made up of hingedly connected sections.

3. An oil burner including a base, concentric troughs thereon, there being an air space between the troughs and an air port surrounded by the troughs, means for directing fuel into the troughs, means for directing air into said space and port, burner rings removably mounted within the troughs, apertured casings supported by the rings and detachable therefrom, each of said casings consisting of movably connected sections, and an apertured mixing element removably mounted in the space surrounded by the inner casing, said element including upper and lower members having their sides diverging toward the outer ends of the members, said sides being apertured, and an apertured baffle plate surrounding the meeting portions of said members, said baffle plate and the upper and lower ends of the mixing element being extended throughout the transverse area of the space within the inner casing.

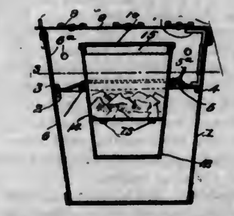
4. An oil burner including a base, upwardly converging devices supported thereby to form a fuel outlet slot, means for directing fuel into the base and below the slot, apertured portions upstanding from the base, said slot being interposed between the apertured portions, and means for supplying air to each of said apertured portions.

1,023,530. COMBINED SMOKE AND VENTILATION SHAFT. FRIEDRICH SCHOFER, Waiblingen, near Stuttgart, Germany. Filed Oct. 14, 1910. Serial No. 587,090. (Cl. 72—91.)



In a combined chimney and ventilation shaft, composed of a plurality of walls one within the other, the combination with said walls of a plurality of ties of greater length than the width of the space between the said walls, said ties being arranged at an inclination to the flat walls, all in the same torsional direction.

1,023,531. FISH-CAN. CHARLES E. SHAFER, Lewistown, Md. Filed Mar. 21, 1911. Serial No. 615,996. (Cl. 119—5.)



1. A can for use in shipping live fish, comprising a bucket, a perforated partition detachably mounted in the bucket intermediate the top and bottom edges thereof and formed with an opening, an ice receptacle suspended in said opening, a lid for the ice receptacle, and means secured to the top of the bucket for preventing the unauthorized removal of the ice receptacle and the other contents of the bucket.

2. A can for use in shipping live fish, comprising a bucket, a perforated partition arranged for detachable support in the bucket intermediate the top and bottom thereof, the bucket being formed above the plane of the partition support with perforations, the partition being formed with an opening, an ice receptacle mounted in said opening and suspended therein and spaced from the walls of the bucket, the ice receptacle being formed with a lid, and a rack formed of intersecting bars arranged for locking engagement with the top edge of the bucket.

1,023,532. FERTILIZER-DISTRIBUTER. SIMEON R. SIKES, Ocilla, Ga. Filed Oct. 19, 1911. Serial No. 655,579. (Cl. 111—33.)



1. A fertilizer distributer comprising a frame, a hopper, and a ground wheel located beneath the hopper the hopper having an open lower end, a discharge plate arranged under said lower end over the ground wheel and pivoted adjacent the forward side of the hopper, the plate having a rearwardly projecting discharge portion, a stirrup through which the discharge portion loosely passes, a tongue projecting downwardly from the underface of the plate, and transverse pins associated with the ground wheel to successively engage the tongue and thereby produce a rocking action of the plate.

2. A fertilizer distributer comprising a frame, a hopper, and a ground wheel the hopper having an open lower end, a discharge plate arranged under said lower end and pivoted adjacent the forward side of the hopper, the plate having a rearwardly projecting discharge portion, a stirrup through which the discharge portion loosely passes, a tongue projecting downwardly from the underface of the hopper, and transverse pins associated with the ground wheel to successively engage the tongue and thereby produce a rocking action of the plate, the stirrup being vertically adjustable whereby to increase or decrease the range of rocking movement of said plate.

3. A fertilizer distributer comprising a frame, a hopper and a ground wheel the hopper having an open lower end, a discharge plate arranged under said lower end and pivoted adjacent the forward side of the hopper, a pivotally supported lever, a stirrup hung from the lower end of the lever, the rear projecting portion of the discharge plate passing loosely through and being supported by the stirrup, the lever being operable to raise or lower the stirrup, and means acting in accordance with the revolutions of the ground wheel for rocking the plate.

4. A fertilizer distributer comprising a frame, a hopper and a ground wheel, the hopper having an open lower end, a discharge plate arranged under said lower end and pivoted adjacent the forward side of the hopper, a pivotally supported lever, a stirrup hung from the lower end of the lever, the rear projecting portion of the discharge plate passing loosely through and being supported by the stirrup, the lever being operable to raise or lower the stirrup, and means acting in accordance with the revolutions of the ground wheel for rocking the plate, the

means consisting of transverse pins associated with the ground wheel and a tongue projecting from the underface of the plate for successive engagement by said pins.

5. A fertilizer distributer comprising a frame, a hopper, and a ground wheel, the hopper having an open lower end and having a rectangular frame arranged at said lower end, a plate extending under the lower end of the hopper and pivoted to the forward end of the rectangular frame, the plate having upstanding side flanges adapted to overlie the sides of the frame and having a rearwardly projecting portion, a stirrup through which the rearwardly projecting portion of the plate loosely passes and which supports the latter, and means acting in accordance with the revolutions of the ground wheel for rocking the plate.

1,023,533. PIPE-WRENCH. HARRY R. SINCLAIR and CARL EKMAN, Worcester, Mass.; said Ekman assignor to said Sinclair. Filed Aug. 28, 1909. Serial No. 515,122. (Cl. 81—64.)

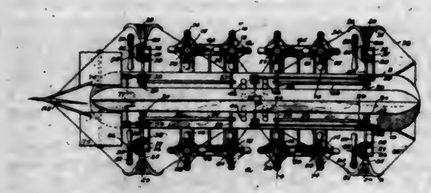


1. A pipe wrench comprising a handle having a head terminating in a nose and provided with two passages or throats, one of which is wedge shaped, a strap having one end extending once only through the wedge-shaped throat, and a wedge fitting said throat and having a serrated face to engage the strap, the other face of the wedge engaging the wall of the throat and said face and wall having coöperating means to prevent the wedge from twisting.

2. A pipe wrench comprising a handle having a head terminating in a nose and provided with two passages or throats, one of which is wedge-shaped and is provided with a groove extending from one end to the other thereof on the back side, a strap having one end extending once only through said wedge-shaped throat, and a wedge fitting the throat and provided with a serrated face to engage the strap and having a rib on its back side fitting said groove.

3. A pipe wrench comprising a handle having a head terminating in a nose and provided with two passages or throats, one of which is wedge-shaped, a strap having one end extending once only through the wedge-shaped throat and lying against the wall thereof adjacent the nose, and a wedge fitting said throat and having a serrated face to engage the strap, the opposite face of the wedge engaging the wall of the throat and said latter face and wall having one a depression and the other a raised portion to fit said depression.

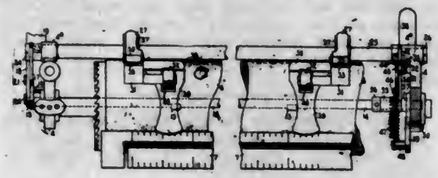
1,023,534. AEROPLANE. GEORGE NELSON SPENCER, Forest Grove, Oreg. Filed Mar. 9, 1910. Serial No. 548,253. (Cl. 244—13.)



1. In an aeroplane, lifting-screws, consisting of hubs rigidly attached to the upper ends of revoluble power shafts, radial blades pivoted at the rear edge by pivot rods rigidly attached at one end to the hubs, and pivoted near the other end to the blades, braces at the backs of the blades, and the pivot rods pivoted thereto by means of lugs on the end of the braces, substantially as set forth.

2. In an aeroplane, the combination of lifting-screws consisting of hubs rigidly attached to the upper ends of revoluble power shafts, radial blades pivoted at the rear edge by pivot rods rigidly attached to the hub at one end, and pivoted near the other end to the blades, braces at the back edges of the blades, and the pivot rods pivoted thereto by means of lugs on the end of the braces, with swinging-screw propellers for assisting the lifting-screws and carrying the aeroplane forward, consisting of radial blades attached to revoluble hubs which are hung to semi-circular stirrups, by an axle passing through the hub, and stirrup, said axle carrying a bevel gear, a horizontal power shaft provided with a gear meshing with the first named gear, a tilting bar attached at the end to a pulley loose on the horizontal power shaft, said tilting bar rigidly attached to the stirrup by cross bars pivoted to the power shaft where they cross, substantially as set forth.

1,023,535. TYPE-WRITING MACHINE. HERBERT H. STEELE, Marcellus, N. Y., assignor to The Monarch Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed Mar. 31, 1911. Serial No. 618,180. (Cl. 197—130.)



1. In a typewriting machine, the combination of a platen, a rock shaft, a paper finger on said rock shaft, means for turning said rock shaft to release said finger, said means comprising a crank arm connected to said rock shaft, a second crank arm on said rock shaft, a draw spring, and a link connecting said draw spring with said second crank arm.

2. In a typewriting machine, the combination of a platen, a rock shaft, a paper finger on said rock shaft, a bell crank fixed to said rock shaft, an operating key, a restoring spring, a link connecting said operating key with said bell crank, and a second link connecting said restoring spring with said bell crank.

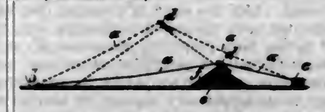
3. In a typewriting machine, the combination of a platen, a rock shaft, a paper finger on said rock shaft, key operated means for turning said rock shaft to release said paper finger, a draw spring, and means connecting said draw spring with said rock shaft, said draw spring normally maintaining said paper finger in operative position but operating when the paper finger is released to hold said paper finger in released position.

4. In a typewriting machine, the combination of a platen, a rock shaft, a paper finger on said rock shaft, key operated means for turning said rock shaft to release said paper finger, a draw spring, and connections between said draw spring and said rock shaft, said connections comprising a crank arm and a curved link connecting said crank arm with said draw spring, said curved link partly embracing said rock shaft when the paper finger is in released position.

5. In a typewriting machine, the combination of a platen, a feed roller, key controlled releasing means therefor comprising a rock shaft, a rotary paper finger rod, a plurality of paper fingers slidably mounted thereon, and means for turning said rod to release said paper fingers including a key pivoted on said rock shaft.

[Claims 6 to 8 not printed in the Gazette.]

1,023,536. CABLEWAY ARRANGEMENT FOR DUMPING-MOUNDS OR THE LIKE. WILHELM WEIHS, Allenstein, Germany. Filed Aug. 27, 1910. Serial No. 579,343. (Cl. 214—14.)



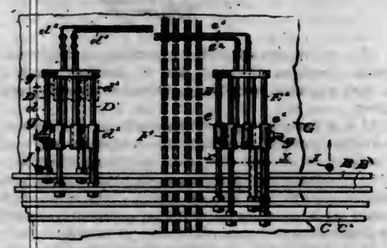
1. Mechanism for forming a spoil heap, mound or bank, comprising in combination, cables extending across the point on which the mound is to be formed, movable structure on the side of said mound adjacent the summit thereof for supporting the cables, a set of rails for said structure, means securing said structure to said rails, and a downwardly extending bracket for said structure, substantially as described.

2. Mechanism for forming a spoil heap, mound or bank, comprising in combination, cables extending across the point on which the mound is to be formed, a movable structure resting alongside the mound adjacent the summit thereof for supporting the cables, a set of rails for said structure, means to secure the rails to said structure, and a downwardly extending bracket for said structure embracing the summit and extending downwardly with respect thereto on that side opposite the side on which said structure is disposed, substantially as described.

3. Mechanism for forming a spoil heap, mound or bank, comprising in combination, cables extending across the point on which the mound is to be formed, a movable structure on the side of said mound adjacent the summit thereof for supporting the cables, a set of rails for said structure, means to secure the structure to said rails, a downwardly extending bracket embracing and extending over the summit of said mound, drums arranged on said structure, a cross-beam secured to chains wound on said drums, and means for rotating said drums.

4. Mechanism for forming a spoil heap, mound or bank, comprising in combination, cables extending across the point on which the mound is to be formed, a movable structure resting in an inclined position on said mound adjacent the summit thereof for supporting the cables, a set of rails for said structure, means to secure the structure to said rails, a downwardly extending bracket fixed to said rails and embracing the summit, chain or cable drums arranged on said structure, a cross-beam with chains secured thereto and wound on said drums, substantially as described.

1,023,537. LOOM FOR WEAVING WARP-PILE FABRICS. CHARLES BERNARD WHITE, Manchester, England, assignor to John Lindley Carr, James Carr, and Edward Hoyle Carr, Manchester, England. Filed Feb. 16, 1909. Serial No. 478,303. (Cl. 139—23.)



1. Apparatus for repeating warp pile or loop designs in a cloth, comprising in combination in a loom a set of two sliding bars, as many sets of loop forming wires as there are repeats attached to the said two bars and disposed on like sides of repeats, a second set of two sliding bars similarly carrying further sets of loop forming wires for the other sides of repeats, appliances for simultaneously operating the bars of a set to simultaneously withdraw all their wires from their loops and for separately operating such bars to insert their wires in the shed, and appliances for simultaneously moving all the wires of a set of bars outward, substantially as described.

2. Apparatus for producing repeat warp pile or loop designs in a cloth, comprising in combination a set of sliding bars, as many sets of loop forming wires as there are repeats attached to such bars and disposed on like sides of the repeats, a second set of sliding bars similarly carrying further sets of the loop forming wires for the other sides of the repeats, a rock shaft having fingers for moving the wires, cams and accessories for sliding the bars, a clutch for putting the cams in and out of action, and jacquard devices for operating the rock shaft and the clutch, all disposed arranged and operating substantially as described.

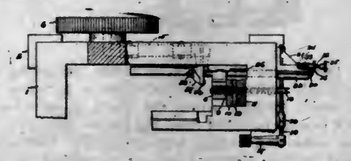
1,023,538. GARMENT-SUPPORTER. CHARLES J. WHITE, New Britain, Conn. Filed Apr. 19, 1909. Serial No. 490,946. (Cl. 241—1.)



1. As a new article of manufacture, a length of elastic webbing secured at one end to a support, a relatively short non-elastic coöperating element connected to said webbing near said end by means which do not cut the threads of the elastic and attached to the same support to limit the stretch of that part of the elastic webbing between said support and said connection, the balance of said webbing being unaffected by said relatively non-elastic coöperating element.

2. In a garment supporter, a strip of elastic webbing, a relatively short non-elastic coöperating element connected to said webbing near one end thereof by means which do not cut the threads of the elastic, in combination with a holding member directly connected by sewing to said webbing and non-elastic element, and another holding element connected to another part of said length of webbing at a point remote from said non-elastic element.

1,023,539. STOP MECHANISM. RICHARD LESTER WILCOX, Waterbury, Conn., assignor to The Waterbury Farrel Foundry and Machine Company, Waterbury, Conn., a Corporation of Connecticut. Filed June 14, 1910. Serial No. 566,785. (Cl. 10—11.)



1. In mechanism of the character described, the combination with a die; of a stop member; means for moving the same in a circular path substantially parallel with the face of said die; means, operative during the movement of said stop member, for limiting the relative position of said stop member toward and away from said die; and means, also operative during the movement of said stop member, for shifting the position of said stop member toward and away from said die without affecting said limiting means.

2. In mechanism of the character described, the combi-

nation with a die; of a stop member; means for moving the same, through a circular path, into and out of alinement with the opening in said die; means for limiting the position of said stop member in relation to said die; and means for shifting said stop member toward and away from the face of said die during its movement into and out of alinement with the opening in said die and without affecting said limiting means.

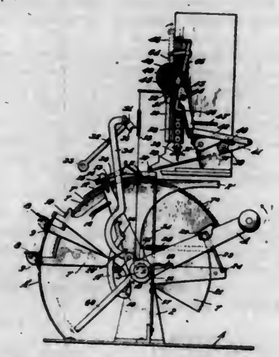
3. In mechanism of the character described, the combination with a die; of a slide movable in a path substantially parallel with the opening in said die; adjustable means for limiting the movement of said slide in one direction; a stop member; an operative connection between said slide and stop member, whereby the adjustment of said slide is transmitted to said stop member; and means for moving the said stop member, through a circular path, into and out of alinement with said die.

4. In mechanism of the character described, the combination with a die; of a stop member; means for imparting a movement to said stop member in a circular path substantially parallel with the face of said die; means for imparting a movement to said stop member in a path at substantially a right angle to the aforesaid circular path; and adjustable means for limiting the position of said stop member in one direction during said right angle movement.

5. In mechanism of the character described, the combination with a die; of a shaft; a stop member fixed thereon; means for imparting a rocking movement to said shaft; means for moving the same in a direction parallel with its axis during its rocking movement; and means for varying the terminal position of said shaft at one end of the movement parallel with its axis.

[Claims 6 to 18 not printed in the Gazette.]

1,023,540. PENCIL MARKING AND VENDING MACHINE. FREDERICK C. WILLIAMS, San Francisco, Cal. Filed Jan. 27, 1910. Serial No. 540,369. (Cl. 101—83.)



1. A pencil and like marking device, including a circumferentially slotted segmental case, a turnable shaft, a fixed sleeve through which the shaft is turnable, disk segments loosely mounted upon the sleeve, registering with the case slots and having keys projecting therethrough, said disks having duplicate sets of peripheral characters and said case having transverse slots through which corresponding characters may be simultaneously exposed.

2. A pencil and like marking device, including a circumferentially slotted segmental case, a turnable shaft, a fixed sleeve through which the shaft is turnable, disk segments loosely mounted upon the sleeve, registering with the case slots and having keys projecting therethrough, said disks having duplicate sets of peripheral characters, said case having transverse slots through which corresponding characters may be simultaneously exposed, an ink pad contiguous to the characters, an inking roller, and means actuated by the oscillation of the shaft to traverse the roller over the pad and one set of exposed characters.

3. A pencil and like marking device, including a circumferential slotted segmental case, a turnable shaft, a fixed sleeve through which the shaft is turnable, disk segments loosely mounted upon the sleeve, registering with the case slots and having keys projecting therethrough, said disks having duplicate sets of peripheral characters, said case having transverse slots through which corresponding characters may be simultaneously exposed, an ink pad contiguous to the characters, an inking roller, means actuated by the oscillation of the shaft to traverse the roller over the pad and one set of exposed characters, an impression bar movable in line with the exposed characters, and means actuated by the rotation of the shaft to impress an interposed article upon the type characters.

4. A pencil marking device comprising a segmental case, a shaft turnable therein, a fixed sleeve through which the shaft extends, segmental disks loosely turnable upon the sleeve, having duplicate sets of peripheral characters contiguous to the case, an inking pad, a roller movable over the pad and one set of characters, arms turnable about the shaft, in which arms the roller is journaled, a fulcrumed lever adapted to engage said arm, and a cam arm movable with the shaft and engageable to actuate the lever.

5. A pencil marking device comprising a segmental case, a shaft turnable therein, a fixed sleeve through which the shaft extends, segmental disks loosely turnable upon the sleeve, having duplicate sets of peripheral characters contiguous to the case, an inking pad, a roller movable over the pad and one set of characters, arms turnable about the shaft, in which arms the roller is journaled, a fulcrumed lever adapted to engage said arm, a cam arm movable with the shaft and engageable to actuate the lever in one direction, and a spring by which the arms and roller are returned to the pad when released from direct pressure.

[Claims 6 to 8 not printed in the Gazette.]

1,023,541. SUBMARINE OPERATING APPARATUS. CHARLES WILLIAMSON, Norfolk, Va. Filed Mar. 14, 1910, Serial No. 549,112. Renewed Sept. 6, 1911. Serial No. 648,128. (Cl. 61—3.)



1. In a submarine operating apparatus, a relatively low pressure operating chamber, and a relatively high pressure work chamber completely surrounding said operating chamber.

2. In a submarine operating apparatus, a substantially cylindrical operating chamber, and a circular work chamber completely surrounding said operating chamber.

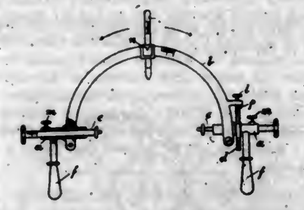
3. In a submarine operating apparatus, a substantially cylindrical operating chamber, and a circular work chamber, said work chamber surrounding completely said operating chamber and being concentric therewith.

4. In a submarine operating apparatus, an operating chamber open at the top and closed at the bottom, and a work chamber which completely surrounds said operating chamber at the bottom, said work chamber being closed at the top and open at the bottom.

5. In a submarine operating apparatus, an operating chamber, and a bell-shaped work chamber surrounding said operating chamber.

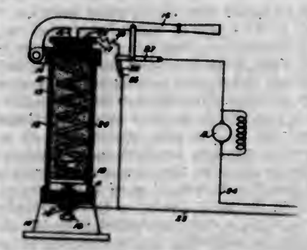
[Claims 6 to 23 not printed in the Gazette.]

1,023,542. INSTRUMENT FOR MEASURING BODIES. HEINRICH WINTER, Hamburg, Germany. Filed Sept. 14, 1910. Serial No. 582,017. (Cl. 73—16.)



In a measuring instrument of the character described for measuring the shapes of human heads and other bodies, the combination, with a two-part axle, of a semicircular bow revoluble thereon, a holding means attached to each part of the axle, a graduated pin movable longitudinally in each part of the axle, a slide movable along the bow, and a graduated pin adjustable radially relatively to the bow in the slide.

1,023,543. RESISTANCE ELEMENT. JAMES G. ZIMMERMAN, Milwaukee, Wis., assignor to Allis-Chalmers Company, a Corporation of New Jersey. Filed Aug. 11, 1911. Serial No. 643,614. (Cl. 219—58.)



1. In combination, a compressible resistance medium comprising granular particles, and means within said resistance medium to cause said particles to become less densely packed upon a change of pressure on said resistance medium.

2. In combination, a compressible resistance medium comprising granular particles, means for compressing said resistance-medium to decrease its effective resistance, and means within said resistance medium to restore said resistance medium to its initial effective resistance upon the removal of the pressure.

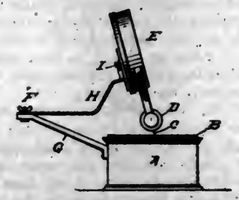
3. In combination, a compressible resistance medium comprising granular particles, means for compressing said resistance medium to vary the effective resistance thereof, and resilient means to cause the particles of said resistance medium to become less densely packed upon a decrease in pressure.

4. In combination, a compressible resistance medium comprising granular particles, and an insulated spring within said resistance medium adapted upon a decrease in pressure on said medium to loosen the particles thereof to increase its effective resistance.

5. In combination, a compressible resistance medium comprising conducting particles, means for compressing said resistance medium to decrease its effective resistance, and a spiral insulated resilient member embedded in said resistance medium and adapted upon the removal of pressure to loosen the particles of said resistance medium to increase the effective resistance thereof.

[Claims 6 to 13 not printed in the Gazette.]

1,023,544. ATTACHMENT FOR PHONOGRAPHS AND LIKE MACHINES. JOHN D. BARTER, New York, N. Y., assignor of one-half to Mary Barter, New York, N. Y. Filed June 29, 1911. Serial No. 636,006. (Cl. 181—8.)



1. The combination with the sound box of a sound reproducing machine, of a casing containing a perforated sounding board and a tubular connection between the casing and the sound box open at one end into the casing and at the other into the atmosphere.

2. The combination with the sound box of a talking machine, of a casing inclosing a perforated sounding board, a cell carried by the board and inclosing the perforations, and a tubular connection between the casing and the sound box, and open at one end into the casing and at the other end into the atmosphere.

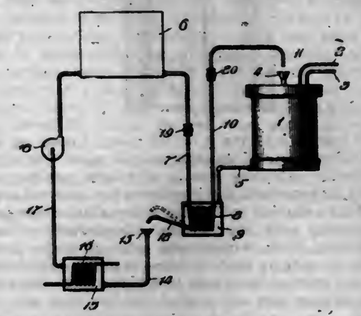
3. The combination with the sound box of a talking machine, of a casing inclosing a sounding board having a series of openings adjacent one edge, and a cell carried by the board and inclosing the openings therein.

4. The combination with the sound box of a talking machine, of a casing containing a sounding board in which are formed a number of perforations, arranged in a group located between the center of the board and its periphery, a tubular connection between the sound box and the casing, and a cell attached to the sounding board and inclosing the perforated portion thereof.

5. The combination with the sound box of a talking machine, of a casing containing a perforated sounding board, a tubular connection between the sound box and the casing, and a cell attached to the sounding board and inclosing the perforated portion thereof.

[Claims 6 to 10 not printed in the Gazette.]

1,023,545. ELECTROLYTIC PROCESS. HARRY H. BATES and FOLGER ADAM, Joliet, Ill. Filed June 12, 1911. Serial No. 632,657. (Cl. 204—60.)



1. The electrolytic process which consists in passing a flowing stream of liquor through a preheater and then through an electrolytic cell, and conducting the emerging stream of liquor containing heat into the preheater, the inflowing liquor being under the heating influence of the outflowing liquor just that interval of time necessary to raise the temperature of the inflowing liquor to the proper point for electrolytic dissociation within the electrolytic cell, and the voltage within the cell being just sufficient to effect dissociation of the liquor within the same, substantially as described.

2. The electrolytic process which consists in passing a stream of liquor through a preheater and then through an electrolytic cell, and conducting the emerging hot liquor from the cell into the preheater to preheat the incoming liquor, the stream of incoming liquor being under the heating influence of the outflowing liquor just the necessary length of time, corresponding to the magnitude of said stream of inflowing liquor, to heat said inflowing liquor to the desired point for entrance into the electrolytic cell, substantially as described.

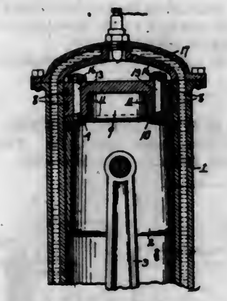
3. The electrolytic process which consists in passing a continuously flowing stream of liquor through a preheater and then through an electrolytic cell, and conducting the outflowing liquor from the cell containing an excess of heat to the preheater and bringing it into heating association with the inflowing liquor, whereby the temperature of the stream of inflowing liquor is raised to just that point desirable for entrance into the electrolytic cell, and whereby the stream of outflowing liquor is cooled to assist in precipitating its crystals, substantially as described.

4. The electrolytic process which consists in passing a continuously flowing stream of liquor through a preheater and then into an electrolytic cell, and conducting the outflowing liquor into the preheater and adjusting the time during which the outflowing liquor is in heating association with the stream of inflowing liquor to such a point that the inflowing liquor is preheated the desired amount, substantially as described.

5. The electrolytic process which consists in passing a continuously flowing stream of liquor through a pre-heater and then into an electrolytic cell, and adjusting the temperature of the inflowing liquor by regulating the amount of pre-heat, substantially as described.

[Claim 6 not printed in the Gazette.]

1,023,546. INTERNAL-COMBUSTION ENGINE. MADISON F. BATES, Lansing, Mich. Filed June 27, 1910. Serial No. 569,010. (Cl. 121—104.)

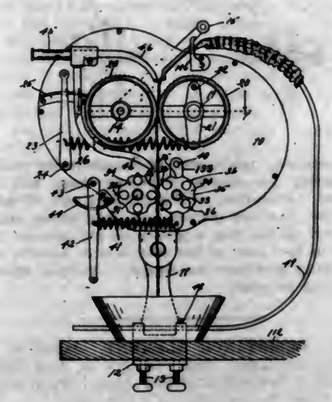


In an explosive engine, a hollow piston having an opening therethrough and provided at its upper end with a diametrically extending flange, a hollow packing head closed at its outer end, and having at its inner end an annular flange adapted to fit within the diametrical flange of the piston, said head having circumferential grooves and packing rings within said grooves, bolts passing through the packing head and into the diametrical flange at the end of the piston, and nuts upon said bolts engaging the packing head.

1,023,547. MACHINE FOR CLEANING INTESTINES. GUSTUS S. BILLMAN, Shelbyville, Ind. Filed June 15, 1911. Serial No. 633,228. (Cl. 17—12.)

1. In a machine for cleaning intestines a pair of rotary scrapers cylindrical in shape and with their peripheries provided with alternating grooves and projections, and means for mounting the two scrapers so that the projections of one scraper will enter the grooves of the other scraper as the same are rotated.

2. In a machine for cleaning intestines, a pair of rotary scrapers mounted so as to coöperate in their action on the intestine said scrapers being cylindrical in shape and having longitudinally arced grooves on their surfaces with a radially projecting longitudinally extending blade between each pair of grooves, and means for mounting said scrapers so that the blade of one scraper will project into the groove of the other scraper.



3. A machine for cleaning intestines including a pair of engaging feed rolls between which an intestine is adapted to be fed, rocking bars in which the ends of one of said feed rolls is mounted so that said feed roll may be moved toward and away from the other feed roll, a spring connected with one end of said rocking bars, a lever attached to the other end of said spring for controlling the tension of the spring and tending to force one feed roll against the other, means for holding said tension lever in a desired position, rotary cleaners mounted below said feed rolls and revoluble in the same direction, rocking arms in which one of said cleaners is mounted so as to be movable toward and away from the other cleaner, a spring extending from said rocking arms, a lever connected with the other end of said spring for adjusting the tension thereof and controlling the pressure between said cleaners, means for holding said last-mentioned lever in position, and means for driving the cleaners at a greater peripheral speed than the feed rolls.

1,023,548. METHOD OF RECOVERING AMMONIA IN THE CUPRAMMONIUM CELLULOSE PRECIPITATION. EMILE BRONNERT, Niedermorschweiler, Germany, assignor to Vereinigte Glanzstoff-Fabriken A. G., Elberfeld, Germany. Filed Jan. 17, 1911. Serial No. 603,094. (Cl. 23—21.)

1. The method of recovering from air ammonia set free in the precipitation of cellulose from a solution of cellulose in cuprammonium, which consists in passing said ammonia-bearing air in contact with liquor in which said cellulose-precipitate has been washed, and again separating the ammonia from said liquor.

2. The method of recovering from air ammonia set free in the precipitation of cellulose from a solution of cellulose in cuprammonium, which consists in passing said ammonia-bearing air in contact with alkaline liquor in which said cellulose-precipitate has been washed, and again separating the ammonia from said liquor.

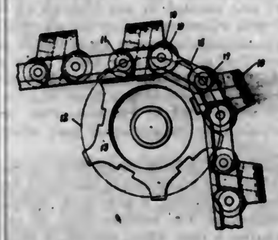
3. The method of recovering from air ammonia set free in the precipitation of cellulose from a solution of cellulose in cuprammonium, which consists in passing said ammonia-bearing air in contact with liquor in which said cellulose precipitate has been washed, and heating said liquor to expel the ammonia.

4. The method of recovering from air ammonia set free in the precipitation of cellulose from a solution of cellulose in cuprammonium, which consists in passing said ammonia-bearing air in contact with liquor in which said cellulose-precipitate has been washed containing copper hydroxid, and again separating the ammonia from said liquor.

5. The method of recovering from air ammonia set free in the precipitation of cellulose from a solution of cellulose in cuprammonium, which consists in passing said ammonia-bearing air in contact with liquor in which said cellulose-precipitate has been washed, to which have been added substances having an affinity for ammonia, and again separating the ammonia from said liquor.

[Claims 6 and 7 not printed in the Gazette.]

1,023,549. CUTTER-CHAIN FOR MINING-MACHINES. WILLIAM A. BUETTNER and ARTHUR SHELBURNE, Terre Haute, Ind. Filed Jan. 31, 1910. Serial No. 541,045. (Cl. 125—14.)

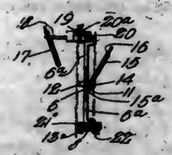


1. For combination with a standard cutter-chain-carrying sprocket wheel of mining machines, a bit-carrying chain comprising a plurality of bit blocks each of a length to fit between the teeth of said sprocket wheel, and a plurality of interspersed links connecting such bit blocks in spaced relation to permit such co-action with the sprocket wheel, a pivotal connection between each link and the adjacent block, the pivotal connection between the rear end of each block and the forward end of the associated link being of greater diameter and having its center farther from the adjacent end of the block than the pivotal connection between the forward end of the block and the rear end of the other associated link, the distance between the pivotal centers of each block being thus less than the distance between the pivotal centers of each link, for the purpose set forth.

2. For combination with a standard cutter-chain-carrying sprocket wheel of mining machines, a bit-carrying chain comprising a plurality of bit blocks each of a length to fit between the teeth of said sprocket wheel and each having a pair of transverse openings formed therethrough with the rear opening of larger diameter than the forward opening, a plurality of links connecting the several bit blocks for association with such sprocket wheel, each of said links comprising a pair of mating members each having formed integral therewith a large lug at its forward end and a small lug at its rear end, the large lug fitting the large opening in the rear end of the bit block and the small lug fitting the small opening in the forward end of the adjacent bit block, the distance between the centers of the block openings being less than the distance between centers of the link lugs, and means for retaining the link members in association with the bit blocks.

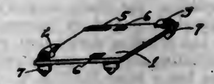
1,023,550. CROSSCUT-SAW GAGE. GEORGE A. COLVIN, Coquille, Oreg. Filed July 18, 1911. Serial No. 639,218. (Cl. 76—81.)

1. In a saw gage, a frame having an opening in one side thereof, flanges secured to the frame at the sides of the opening, a bridge attached to the inner ends of the said flanges and having transverse holes therein, a gage screw carried by the bridge, a reflector hinged to one side of the frame at the inner end of the said opening and having a stop to normally hold the reflector diagonally over the opening, the reflector being foldable against the frame, and a background on the opposite side of the said frame having projecting fingers entering the holes in the said bridge.



2. In a saw gage, a frame having an opening in one side thereof, a bridge over the said opening, a gage screw carried by the said bridge, a reflector hinged to one side of the frame at the inner end of the said opening and swingable to and from the said opening, and a removable background mounted on the other side of the frame and adjustable to and from the said opening.

1,023,551. RAILWAY-TIE PLATE. JAMES M. CONWAY, Bessemer, Ala. Filed Jan. 2, 1912. Serial No. 668,810. (Cl. 238—2.)



1. A railway track device comprising a plate having projections adapted to engage the base of a rail, which projections are disposed in a line oblique to a longitudinal plane through the plate and spaced equidistantly from said plane, and a shoulder opposite one of said projections and spaced therefrom sufficiently to receive the rail base between it and the opposite projection and while in engagement with the edge of the base to hold the plate and rail interlocked by means of said projections, substantially as described.

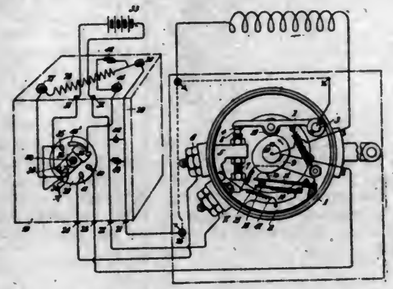
2. A plate upon which a railway track rail is adapted to rest, projections disposed in staggered relation on said plate and adapted each to overhang the rail base when the latter is in position on the plate, and a shoulder opposite one of said projections which is adapted to engage the rail base when seated on the plate between said shoulder and its opposite projection and hold the rail in interlocked engagement with said plate, substantially as described.

3. A plate upon which a railway track rail is adapted to rest, projections disposed in staggered relation to said plate and adapted each to overhang the rail base when the latter is in position thereon, a shoulder opposite one of said projections which is adapted to engage the rail base when seated on the plate and hold the latter in interlocked engagement therewith, and means to attach said plate to a cross tie which engage the rail base and pass down through the plate.

4. A railway track plate comprising a base plate having a number of depending pointed projections adapted to engage in a tie, top hook members disposed at diagonally opposite portions of the plate and spaced to receive between them and to overhang the base of a rail, and a shoulder adapted to engage the edge of the rail base when the latter has been interposed between the hook members and the plate moved until the shanks of said hook members engage the rail base, said shoulder holding the plate and rail interlocked, as and for the purposes described.

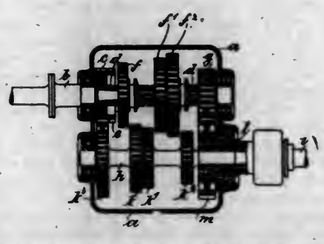
5. A railway track plate comprising a metal base adapted to receive and support a track rail, said base having inturned hook members so spaced that in one position of the plate the overhanging tops of the members will receive between them the rail base and in a second position said tops will both overhang the rail base with their shanks abutting against the side edges of the base, a shoulder on said plate adapted to engage a side edge of the base substantially opposite one of said shanks, and means to attach the rail and plate in assembled position to the track supports.

1,023,552. DUAL IGNITION SYSTEM. RICHARD H. CUNNINGHAM, New York, N. Y. Filed Jan. 29, 1910. Serial No. 540,781. (Cl. 123—148.)



In a dual system of electrical ignition, a circuit making and breaking device comprising a plurality of circuit breakers, and means for successively operating said circuit breakers, a switch, a battery, a magneto and an induction coil primary winding, the above recited elements being electrically connected up and so coöperating with said circuit making and breaking device that when the switch is in battery circuiting position, current will flow through said winding for but a small fraction of a recurrent time interval, and with the switch in magneto circuiting position, said device will permit of maximum current flow through the magneto armature during the major portion of said time interval, two of said circuit breakers being in series when the switch is in said battery circuiting position.

1,023,553. CHANGE-SPEED GEARING. PAUL DAIMLER, Cannstatt, Germany, assignor to Daimler Motoren-Gesellschaft, Stuttgart, Germany. Filed June 13, 1911. Serial No. 632,882. (Cl. 74—58.)



1. A change speed gearing comprising in combination, a driving shaft, a driven shaft out of alinement therewith, a transmission shaft in alinement with the driving shaft and adapted to be coupled therewith, gearing whereby the transmission shaft and driven shaft are in constant gear with one another, a counter shaft in alinement with the driven shaft, said counter shaft being in constant gear with the driving shaft, and change speed gear wheels on said counter shaft and transmission shaft whereby when said transmission shaft is uncoupled from the driving shaft, motion is transmitted to the transmission shaft from the driving shaft through said counter shaft.

2. A change speed gearing comprising in combination, a driving shaft, a driven shaft out of alinement therewith, a transmission shaft in alinement with the driving shaft and adapted to be coupled therewith, gearing whereby the transmission shaft and driven shaft are in constant gear with one another, a counter shaft in alinement with the driven shaft, said counter shaft being in constant gear with the driving shaft, gear wheels fixed on said counter shaft and gear wheels splined on said transmission shaft and adapted to be put into gear with the gear wheels fixed on said counter shaft.

3. A change speed gearing comprising in combination, a driving shaft, a driven shaft out of alinement therewith, a gear case, bearings in said gear case supporting the meeting ends of said driving and driven shafts, a gear wheel located in said gear case and in fixed relation with said driving shaft, a transmission shaft in alinement with said driving shaft and rotatably supported in said gear case, a counter shaft arranged in axial alinement with said driven shaft and rotatably supported in said gear case, a fixed gear wheel on one end of said counter shaft gearing with said gear wheel in fixed relation with the driving shaft, a gear wheel fixed at one end upon said transmission shaft, a gear wheel in fixed relation with the driven shaft, and gearing with said gear wheel on the transmission shaft, fixed change speed gear wheels on said counter shaft, change speed gear wheels splined on said transmission shaft and adapted to be put into gear with the fixed change speed gear wheels on said counter shaft, a coupling carried by the gear wheel in fixed relation with the driving shaft and adapted in one position of one of the change speed gear wheels splined on the transmission shaft to couple said driving shaft and transmission shaft, said last mentioned change speed gear wheel being capable of taking up an intermediate position in which the same is uncoupled from the gear wheel in fixed relation with the driving shaft while being at the same time out of gear with its corresponding change speed gear wheel fixed on the counter shaft.

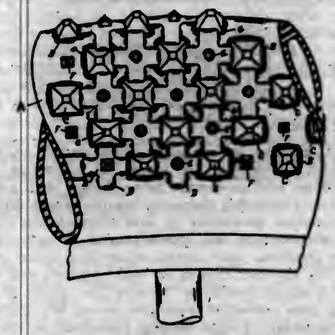
4. A change speed gearing comprising in combination, a driving shaft having an extension thereon, a driven shaft out of alinement therewith, a gear case, bearings in said gear case supporting the meeting ends of said driving and driven shafts, a gear wheel located in said gear case and in fixed relation with said driving shaft, a transmission shaft in alinement with said driving shaft and hollow at one end, a bearing in said gear case rotatably supporting the solid end of said transmission shaft, the hollow end of said transmission shaft, being rotatably supported on the extension of said driving shaft, a countershaft arranged in axial alinement with said driven shaft, a bearing in said gear case rotatably supporting one end of said counter shaft, a gear wheel in fixed relation with the driven shaft and having a hollow boss rotatably supporting the other end of said counter shaft, a fixed gear wheel on one end of said counter shaft gearing with said gear wheel in fixed relation with the driving shaft, a gear wheel fixed at one end upon said transmission shaft and gearing with the gear wheel in fixed relation with the driven shaft, fixed change speed gear wheels on said counter shaft, change speed gear wheels splined on said transmission shaft and adapted to be put into gear with the fixed change speed gear wheels on said counter shaft, a coupling carried by the gear wheel in fixed relation with the driving shaft and adapted in one position of one of the change speed gear wheels splined on the transmission shaft to couple said driving shaft and transmission shaft, said last mentioned change speed gear wheel being capable of taking up an intermediate position in which the same is uncoupled from the gear wheel in fixed relation with the driving shaft while being at the same time out of gear with its corresponding change speed gear wheel fixed on the counter shaft.

1,023,554. TIRE. MILTON E. DAVIS, Canastota, N. Y. Filed June 9, 1910. Serial No. 565,994. (Cl. 152—16.)

1. In a device of the character described, the combination of a tire having projections adapted to hold in place thereon a shield and said shield comprising plates with central projections and links to hold said plates together, the plates and links being adapted to receive the projections of the tire, substantially as described.

2. A tire having depressions and projections adapted to seat a shield and a shield composed of plates substantially cross shaped having central projections on one side receiving certain projections of the tire, and hooked prongs on the reverse side and links engaging the hooked prongs and receiving through them other projections of the tire whereby the projections hold the shield when the tire is inflated, substantially as described.

3. In a tire of the character described, the combination of a shield composed of plates having hooked prongs and portions oppositely disposed from said prongs, said plates held together by links engaging said hooked prongs and said chain held in assembled position upon said tire by the inflation thereof, the tire having depressions and projections to seat the plates and links of said chain guard, substantially as described.

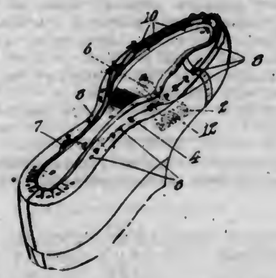


4. The combination of a shield having plates each with a central interior recess, links connecting the plates in a loose engagement and a tire formed with nubs projecting through the links to an elevation to provide portions of the riding surface.

5. The combination with an inflatable tire, of a shield formed of plates and links connecting them in yielding engagement, the plates and rings decreasing in size from the outer circumference of the tire toward the smaller circumference on each side, the tire being formed with nubs to set through the links whereby the shield is held in place when the tire is inflated.

[Claims 6 to 8 not printed in the Gazette.]

1,023,555. ART OF MAKING WELT-SHOES. WILFRED J. DARR, Catawissa, Pa., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Oct. 3, 1910. Serial No. 585,060. (Cl. 12—145.)



1. That improvement in the art of making shoes which consists in lasting the upper over the edge of the sole and securing it in lasted position by temporary fastening means, permanently uniting the upper and the sole by inserting individual fastenings through the upper and channel lip of the sole while the shoe is in its original lasted condition, removing the temporary fastening means, and then uniting the upper and sole with stitches.

2. That improvement in the art of making welt shoes which consists in lasting the upper over the insole, securing the upper in lasted position by tacks, pressing the upper and channel lip together at points located between the lasting tacks, uniting these parts by inserting permanent fastenings through said parts while so pressed together, removing the lasting tacks and then uniting the welt, upper and insole with stitches.

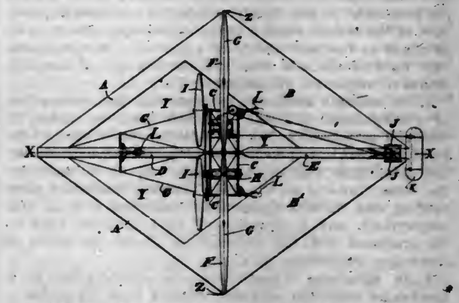
3. That improvement in the art of making welt shoes which consists in lasting the upper over the insole and securing the upper in lasted position by tacks in substantially the usual manner, permanently uniting the upper and the outer channel lip while the shoe is in its original lasted condition by inserting fastenings through these parts in locations outside the path of movement of the needle of the welter and at separated points between the lasting tacks, removing the lasting tacks and then uniting the welt, upper and insole with stitches.

4. That improvement in the art of making welt shoes which consists in lasting the upper over the edge of the insole and securing it in lasted position by tacks, permanently uniting the upper and insole by permanent fastenings inserted at separated points located between the lasting tacks and outside the path of movement of the needle of the welter, which fastenings remain as permanent parts of the shoe, removing the lasting tacks and then uniting the welt, upper and insole with stitches.

5. That improvement in the art of making welt shoes which consists in lasting the upper over the insole, confining the upper in lasted position by tacks driven through the body of the insole, uniting the upper and the channel lip while the shoe is in its original lasted condition by inserting permanent metallic fastenings through these parts at separated points located between the lasting tacks, above the body of the insole and below the inseam trimming line, then removing the lasting tacks and uniting the welt, upper and insole with stitches.

[Claims 6 to 10 not printed in the Gazette.]

1,023,556. AEROPLANE OR THE LIKE OR ANALOGOUS MACHINE OR DEVICE. ARTHUR HENRY EDWARDS, Stoke Newington, London, England. Filed Feb. 17, 1909. Serial No. 478,428. (Cl. 244—14.)



1. An aeroplane having rearwardly extending supporting plane means, two forwardly extending and converging planes the area of the former being greater than the combined areas of the latter and a triangular opening formed between said forwardly converging planes and said opening extending to a point near the extreme front end of said forwardly converging planes.

2. An aeroplane having a rearwardly extending plane, two forwardly extending planes arranged to converge forwardly the area of the former being greater than the combined areas of the latter and a triangular opening formed between said forwardly converging planes and said opening extending to a point near the extreme front end of said forwardly converging planes.

3. An aeroplane having rearwardly extending planes and forwardly extending planes, the latter being arranged to converge and their combined areas being less than the combined areas of the former and a triangular opening formed between said forwardly converging planes and said opening extending to a point near the extreme front end of said forwardly converging planes.

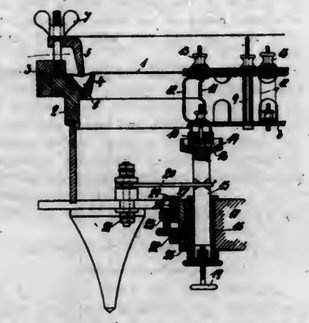
4. An aeroplane having rearwardly extending planes arranged to converge rearwardly, and forwardly extend-

ing planes, the latter being arranged to converge forwardly and an opening between said planes and said opening extending to a point near the extreme front end of said forwardly converging planes.

5. An aeroplane having rearwardly extending planes arranged to converge rearwardly and forwardly extending planes, the latter being arranged to converge forwardly and the combined areas of the latter being less than the combined areas of the former and an opening between said planes and said opening extending to a point near the extreme front end of said forwardly converging planes.

[Claims 6 to 9 not printed in the Gazette.]

1,023,557. MULTIPLE TELEPHONE-TRANSMITTER. CARL EMIL EGNÉR, Stockholm, and JOHAN GUNNAR HOLMSTRÖM, Saltsjö-Storängen, Sweden. Filed Aug. 18, 1909. Serial No. 513,409. (Cl. 179—131.)



1. In multiple telephone transmitters, the combination of a diaphragm uniformly strained from its center toward its periphery, a disk firmly secured to an extended surface of the central portion of the diaphragm, substantially as great as the said disk, and a plurality of rigid members fixed to the said disk and forming one of the electrodes of respective transmitter cells.

2. In multiple telephone transmitters, the combination of a diaphragm uniformly strained from its center toward its periphery, a disk fixed to the center part of the diaphragm, an interposed piece of hard material between the diaphragm and the said disk, and of substantially the same diameter as the disk, the said interposed piece bearing with its ends against the diaphragm and the disk respectively, and a plurality of rigid members fixed to the aforesaid disk and forming one of the electrodes of respective transmitter cells.

3. In telephone transmitters, the combination of a diaphragm uniformly strained outward from its center, a plurality of members forming one of the electrodes of respective transmitter cells, a disk fixed to the center part of the diaphragm and supporting the said electrode-members, and a hollow interposed piece of hard material between the diaphragm and the said disk, and arranged like a grating, substantially as described and for the purpose set forth.

1,023,558. FEEDING MECHANISM FOR MACHINES FOR CUTTING AND CREASING BLANKS. JOHN E. ERICKSON, St. Paul, Minn. Original application filed Jan. 10, 1911, Serial No. 601,772. Divided and this application filed May 4, 1911. Serial No. 625,074. (Cl. 101—36.)

1. In a machine for operating upon blanks, guideways upon which the blanks are moved to successive operative positions, said guideways being formed with interior, longitudinally-extended channels, and means housed and having independent movement in said channels for feeding a blank successively and intermittently to each of said operative positions, said means comprising hooks movable outside of said channels and guideways.

2. In a machine for operating upon blanks, guideways upon which the blanks are moved to successive operative positions, said guideways being formed with interior, longitudinally-extended channels, means housed and having independent movement in said channels for feeding a blank successively and intermittently to each of said operative positions, said means comprising oscillating hooks movable outside of said channels and guideways, and means positively to oscillate said hooks.



3. In a machine for operating upon blanks, guideways upon which the blanks are moved to successive operative positions, said guideways being formed with interior, longitudinally-extended channels, means housed and having independent movement in said channels for feeding a blank successively and intermittently to each of said operative positions, said means comprising hooks pivoted so as to be movable outside of said channels and guideways, and means positively to rock the hooks to bring the same into operative positions above the guideways at the beginning of each feeding movement of the feeding means.

4. In a machine for operating upon blanks, guideways upon which the blanks are moved to successive operative positions, said guideways being formed with interior, longitudinally-extended channels, means housed and having independent movement in said channels for feeding a blank successively and intermittently to each of said operative positions, said means comprising hooks pivoted so as to be movable outside of said channels and guideways, means positively to rock the hooks to bring the same into operative positions above the guideways at the beginning of each feeding movement of the feeding means, and means positively to lower said hooks below the guideways at the beginning of each non-feeding movement of the feeding means.

5. In a machine for operating upon blanks, guideways upon which the blanks are moved to successive operative positions, said guideways being formed with interior, longitudinally-extended channels, means housed and having independent reciprocating movement in said channels for feeding a blank successively and intermittently to each of said operative positions, means to reciprocate the feeding means, means positively to raise the hooks above the guideways at the beginning of each forward reciprocation, and means positively to lower the hooks below the guideways at the beginning of each backward reciprocation of the feeding means.

[Claims 6 to 27 not printed in the Gazette.]

1,023,559. CLASP. CHARLES P. EVANS, Milton, Mass. Filed Jan. 19, 1909. Serial No. 473,054. (Cl. 24—264.)



1. A clasp comprising a body, an arm connected thereto, a slot separating the body and the arm and a flange having one edge thereof connected throughout its length to the arm and having the other edge overlapping the body, substantially as described.

2. A clasp comprising a body, an arm connected thereto, a slot separating the body and the arm and a flange having one edge thereof connected throughout its length to the arm and having the other edge overlapping the body, and means for securing the fastener in place for use, substantially as described.

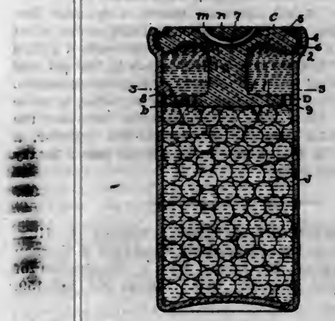
3. A clasp comprising a body, an arm connected thereto by a narrow flexible connection, there being a slot between the body and the arm, and a flange having one edge thereof connected throughout its length to the arm and having the other edge overlapping the body, substantially as described.

4. A clasp comprising a body, an arm connected thereto by a flexible connection, the arm tapering from the point of juncture with the connection to its end whereby a tapering opening is formed between the body and the arm, and a flange covering the opening, the flange being attached at one edge throughout its length to the arm and having the other edge overlapping the body, substantially as described.

5. A clasp comprising a body, an arm connected thereto by a flexible connection, the arm being curved on one face and tapering from the connection to its end and a flange attached at one edge throughout its length to the arm and having the other edge overlapping the body, substantially as described.

[Claim 6 not printed in the Gazette.]

1,023,560. FRUIT-JAR. ELIZABETH R. GLASER, North Dover, Ohio. Filed Aug. 24, 1911. Serial No. 645,817. (Cl. 215—80.)

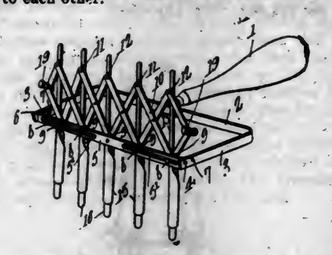


A fruit jar having an annular enlargement about its top with a seat about its inside for the cover and a plurality of inwardly projecting lugs within the upper portion of the jar below said seat and having bottom engaging surfaces, in combination with a cover on said seat having a stem and a disk thereon provided with notches in its edge adapted to pass said lugs through the same and having inclined surafces at one side of said notches adapted to ride beneath said lugs and lock the cover in the jar, and the said cover constructed on its top to engage a tool therewith to rotate the same, whereby the cover is removably and firmly secured upon the jar and a liquid space is provided between the said cover and the said disk which keeps the fruit submerged.

1,023,561. BLACKBOARD-MARKER. BYRON E. GREEN, Ilion, N. Y. Filed Oct. 27, 1911. Serial No. 657,113. (Cl. 73—113.)

1. In a device of the class described, a handle carried frame having spaced terminals, a bar pivotally connected to the terminals of said frame, means for limiting the pivotal movement thereof, and a plurality of crayon holding devices carried in spaced relation upon said pivotal bar and disposed to be thrown into and out of the plane of the connections of the terminals of the frame.

2. In a device of the class described, a handle carried frame having two spaced terminals, a bar pivotally connected to the terminals of said frame, means for limiting the pivotal movement thereof, a plurality of crayon holding devices carried in spaced relation upon said pivotal bar and disposed to be thrown into and out of the plane of the terminals and the connecting portion of the frame, and means for adjusting said crayon carrying devices with relation to each other.



3. A device of the class described, comprising a handle, a U-shaped frame carried by said handle, the portion connected to the handle being projected in opposite directions therefrom on a straight line, a bar pivotally connected between the terminals of said frame, a plurality of crayon carrying devices carried by said bar, said devices being adapted to be swung into and out of the plane of the straight connection of the frame, and means for holding the pivotal bar and crayon carrying devices when out of alinement with the frame.

4. A device of the class described, comprising a handle, a U-shaped frame carried by said handle, the portion connected to the handle being projected in opposite directions therefrom on a straight line, a bar pivotally connected between the terminals of said frame, a plurality of crayon carrying devices carried by said bar and adapted to be swung into and out of alinement with the straight connection of the frame, and means for holding the pivotal bar and crayon carrying devices when out of the plane of the frame, said crayon devices being laterally adjusted with relation to each other and longitudinally with relation to said pivotal bar.

5. A device of the class described, having a U-shaped frame, a handle carrying the same, a bar pivotally connected between the terminals of said frame and provided with elongated slots through the body thereof, a lazy tongs having all, but one of the lower pivotal points thereof mounted for sliding movement within the slots of the bar, the center pivot of the lazy tongs being rigidly connected to said bar, and a plurality of crayon carrying devices carried by said lazy tongs, means for locking the lazy tongs in adjusted position, said crayon devices being of such a length as when the lazy tongs are collapsed to have their ends with the U-shaped frame.

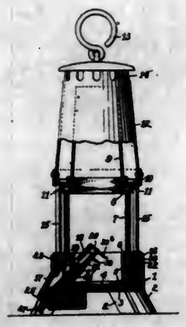
[Claims 6 to 12 not printed in the Gazette.]

1,023,562. FOLDING BED. ALTER HABERMAN, New York, N. Y. Filed Dec. 8, 1911. Serial No. 664,550. (Cl. 5—34.)



The combination, with a box-shaped structure, provided with a front door, and open at the rear end, of a top for said structure, a stationary head-section in the lower part of the box-shaped structure, an intermediate section pivoted to said box-shaped structure, a foot-section supporting said top and slidably connected with the intermediate section, cross-bars, one on the intermediate section and one on the foot-section, connecting the same together, supporting-members hinged to the box-shaped structure and extending betwen said cross-bars, and resting upon the cross-bar of the intermediate section, legs pivoted to the intermediate section, and pivoted braces connecting said legs to the box-shaped structure.

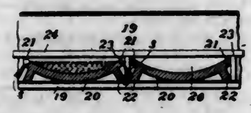
1,023,563. MINER'S SAFETY-LAMP. ERNEST ARTHUR HAILWOOD, Morley, England. Filed Jan. 28, 1907. Serial No. 354,502. (Cl. 240—18.)



1. In a miner's safety lamp, in combination, a casing, an oil reservoir, a wick tube extending from said reservoir within said casing, an insulating tube passing through said casing, and a combined wick snuffer and lighting pin movably supported within said insulating tube, said combined wick snuffer and lighting pin being operatively associated with the wick in said wick tube.

2. In a miner's safety lamp, in combination, a casing, an oil reservoir, a wick tube extending from said reservoir within said casing and a combined lighting pin, wick raiser and wick snuffer movably supported by said casing and insulated therefrom, said combined lighting pin, wick raiser and wick snuffer being operatively associated with the wick in said wick tube.

1,023,564. WATER-COOLING TOWER. BENJAMIN F. HART, Jr., Hoboken, N. J. Original application filed June 17, 1907, Serial No. 379,514. Divided and this application filed Mar. 11, 1908. Serial No. 420,384. (Cl. 62—2.)

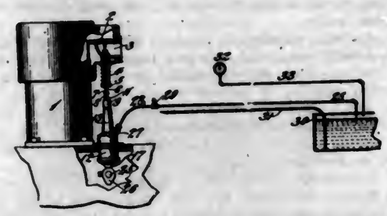


1. A deck for cooling towers comprising a plurality of slightly separated trays or troughs having means for allowing the water to flow from and between the trays in separate and independent streams, and inclined combined supports and diffusers on the underside of said trays or troughs, the support of one tray receiving substantially at right angles the impingement of the water from the adjacent tray.

2. A deck for cooling towers comprising a plurality of slightly separated trays or troughs having their adjacent sides provided with staggered overflow openings, and inclined combined supports and diffusers on the underside of said trays or troughs, the support of one tray receiving substantially at right angles the impingement of the water from the adjacent tray.

3. A deck for cooling towers comprising a plurality of slightly separated trays or troughs, means on the adjacent sides of the trays to sub-divide the overflowing water between the trays into separate and independent streams, and inclined supporting ledges or projections on the underside of the trays or troughs against which impinge at right angles the streams of water from the adjacent tray.

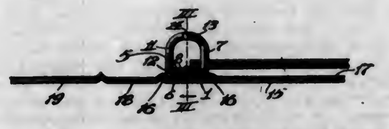
1,023,565. AIR-PRESSURE-CREATING DEVICE FOR GASOLENE-SUPPLY TO ENGINES, &c. WILLIAM P. HERBERT, Philadelphia, Pa. Filed Mar. 24, 1911. Serial No. 616,594. (Cl. 230—27.)



1. In a device of the character stated, a cylinder having one end open and provided with a valved outlet at its other end and formed with diametrically opposite guide-grooves in its bore, a piston reciprocable in said cylinder and formed with a recess in its outer end having a valved opening into the closed end of the cylinder, a pin transversely secured through the recessed portion of the piston and having projecting ends guided in the grooves of the cylinder, a roller journaled upon said pin within the recess, and a rotary cam engaging such roller.

2. In a device of the character stated, a cylinder having one end open and formed with a guide-extension at its other end, an outlet valve in said latter end, a piston in said cylinder and formed with a recess in its end and a rod at its other end movable in the guide-extension, means for retaining said piston against rotation, a valve in said piston controlling communication between the recess in the same and the interior of the cylinder, a roller journaled in the recess of the piston, and a rotary cam engaging such roller.

1,023,566. TEMPORARY BINDER. ADOLPH A. HUNZIKER, St. Louis, Mo., assignor to Woodward & Tiernan Printing Company, St. Louis, Mo., a Corporation of Missouri. Filed Jan. 28, 1911. Serial No. 605,159. (Cl. 129—11.)



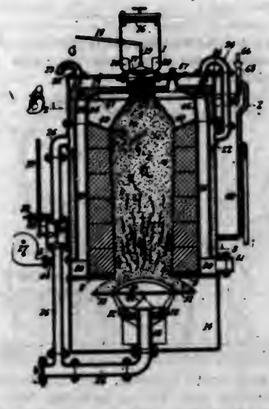
In a temporary binder, an anchor plate, a clamp secured to said plate and having an arched bearing, a stationary post having one end bent to form a lateral extension which extends through said bearing, and a movable post pivoted to the end of said lateral extension, said bearing being notched at the ends to receive said binder posts.

1,023,567. GAS-PRODUCER. WILHELM R. HÜTTINGER, Beverly, N. J. Filed May 16, 1906. Serial No. 317,053. (Cl. 48—67.)

1. A gas producer comprising a fuel chamber constituting a depositing chamber and a combustion space, a deflector wall at the upper part of the fuel chamber terminating in close proximity to the top of the depositing chamber so as to provide a restricted lateral outlet opening abruptly from the depositing chamber, and an expansion chamber on the outer side of the deflector wall, arranged so that the restricted lateral outlet opens into the top thereof.

2. A gas producer comprising a fuel chamber constituting a depositing chamber and a combustion space, the depositing chamber being of substantially greater diameter than the combustion space and having an inwardly-inclined bottom, and a restricted lateral outlet opening at

substantially right angles from the combustion chamber for the products of combustion near its top.



3. A gas producer comprising a fuel chamber provided with a central combustion space and an enlarged upper portion constituting a depositing chamber and provided with a bottom sloping toward the center, a substantially vertical side wall, a substantially horizontal water-cooled top provided with a central fuel inlet, and a restricted outlet for the products of combustion opening substantially at right angles to the vertical side wall from the upper part of the depositing chamber.

4. A gas-producer comprising a fuel-chamber, an upper vaporizing chamber jacketing the top thereof, a lower vaporizing chamber jacketing the walls thereof, the upper and lower vaporizing chambers being connected and the upper vaporizing chamber having an air-inlet and the lower vaporizing chamber being connected to the fuel chamber in advance of the point of combustion therein.

5. A gas-producer comprising a fuel chamber, an upper vaporizing chamber jacketing the top thereof, a lower vaporizing chamber jacketing the walls thereof, the upper and lower vaporizing chambers being connected and the upper vaporizing chamber having an air-inlet and the lower vaporizing chamber being connected to the fuel chamber in advance of the point of combustion therein, the fuel chamber having a restricted gas-outlet contiguous with the top thereof, and flues receiving the heated gases from each outlet and extending through the lower vaporizing chamber.

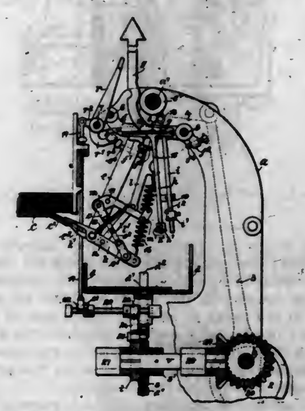
[Claims 6 to 19 not printed in the Gazette.]

1,023,568. SIGNATURE-GATHERING MACHINE. CHARLES A. JUENGST, Croton Falls, N. Y. Filed Feb. 10, 1911. Serial No. 607,829. (Cl. 11—25.)

1. In a signature gathering machine and in combination, grippers for taking the signature or sheets, a conveyer onto which the signatures or sheets are delivered, means for moving the conveyer, means for arresting the movement of the conveyer whenever an arbormal position of the grippers occurs, and means for preventing the grippers closing and becoming operative until after the conveyer is again in motion.

2. The combination in a signature gathering machine with a receptacle for signatures or sheets, grippers and gripper actuating devices for removing the signatures or sheets, a trough receiving the signatures or sheets from the grippers and a conveyer moving through the same, of devices controlled by the thickness of the material taken by the grippers, and other devices actuated by the aforesaid devices for disconnecting the conveyer, whereby the movement of the conveyer is arrested.

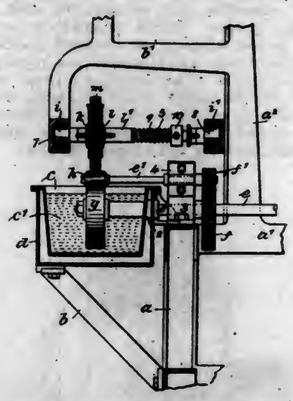
3. The combination in a signature gathering machine with receptacles for the signatures or sheets, grippers and gripper operating devices for removing the signature or sheets, a trough receiving the signatures or sheets and an endless conveyer moving through the trough, of a shaft and means for rotating the same, a driving sprocket for the endless conveyer mounted loosely upon said shaft, means for connecting said sprocket with said shaft for turning the sprocket, devices actuated by the gripper operating devices whenever an abnormal position of the grippers occurs and which devices are thereby shifted from an inoperative to an operative position and means associated with the endless conveyer coupling devices and into the path of movement of which a member of the aforesaid devices comes for effecting the disconnection of the endless conveyer and stopping the same.



4. The combination in a signature gathering machine, of grippers, adapted to be set for engaging a single signature or sheet, gripper supporting and operating devices, devices operatively associated with the latter devices which remain inactive so long as the grippers take the single signature or sheet for which they are set and which latter devices are operative when the grippers fail when an abnormal position of the grippers occurs, a shaft and a control lever operated by the movement of the latter devices, a shaft, a latch arm connected with said shaft, a crank arm on said shaft and a connecting rod and crank arm extending to the shaft of the control lever, an endless conveyer, a loose sprocket around which the same extends and a shaft to which said sprocket is connected, a hub on the latter shaft and a pawl and trip device pivoted to the loose sprocket and engaging the hub for the progressive movement of the endless conveyer and which trip is so positioned as to be in the path of the pawl on the aforesaid shaft when the same is lowered from the normal position, whereby the trip pawl is disengaged and the sprocket with its endless conveyer is disconnected from the power shaft.

5. The combination in a signature gathering machine, of a control lever, a shaft on which the same is mounted, a crank arm connected to the control lever and a connecting rod extending from the crank arm, a crank connected to the opposite end of the connecting rod, a shaft on which this crank is mounted, a latch arm also connected to the said shaft, a power shaft, a sprocket loose on said shaft, an endless conveyer passing around said sprocket and operated by the power shaft, a pawl and trip device pivotally connected to said sprocket, a hub fixed upon said power shaft and provided with a notch for the pawl of the trip device, the trip device being in the path of the aforesaid latch arm so that when the latch arm is dropped by the movement of the control lever, the pawl and trip device are swung on the pivot thereof by engagement with the latch arm, the sprocket and conveyer chain being thus released so that their movement is arrested.

1,023,569. DEVICE FOR APPLYING ADHESIVE MATERIAL TO THE BACKS OF BOOKS IN COVERING-MACHINES. CHARLES A. JUENGST, Croton Falls, N. Y. Filed Apr. 19, 1911. Serial No. 621,988. (Cl. 91—51.)



1. In a device for applying adhesive material to the backs of books, the combination with a vat for containing hot glue, a shaft in suitable bearings and a roller mounted therein and running in the vat of hot glue for applying the same to the backs of books or magazines, of an auxiliary roller occupying a position adjacent the aforesaid roller, with the periphery in proximity to the backs of the books or pamphlets and means for rotating the said roller in an opposite direction to the glue roller.

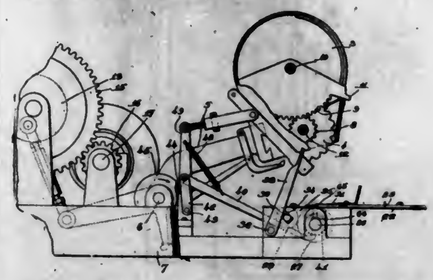
2. In a device for applying adhesive material to the backs of books, the combination with a vat for containing hot glue, a roller therein and means for actuating the roller to deliver the glue on the backs of books or pamphlets, of an auxiliary roller and shaft therefor located over a part of the glue vat and with its periphery adjacent to the backs of the books or pamphlets as they are moved off of the glue roller, a large gear on the shaft of the glue roller and a small gear on the shaft of the auxiliary roller, whereby the auxiliary roller is rotated in an opposite direction to the glue roller.

3. In a device for applying adhesive material to the backs of books, the combination with a vat for containing hot glue, a shaft in suitable bearings and a roller mounted therein and running in the vat of hot glue for applying the same to the backs of books or magazines, of an auxiliary roller occupying a position adjacent the aforesaid roller, with the periphery in proximity to the backs of the books or pamphlets, means for rotating the said roller in an opposite direction to the glue roller, and a scraper bearing upon the surface of the auxiliary roller for removing surplus glue.

4. In a device for applying adhesive material to the backs of books, the combination with a vat for containing hot glue, a shaft in suitable bearings and a roller mounted therein and running in the vat of hot glue for applying the same to the backs of books or magazines, of an auxiliary roller occupying a position adjacent the aforesaid roller, with the periphery in proximity to the backs of the books or pamphlets, means for rotating the said roller in an opposite direction to the glue roller, and a bifurcated scraper bearing upon the surface of the auxiliary roller for removing surplus glue.

5. In a device for applying adhesive material to the backs of books, the combination with a vat for containing hot glue, shaft in suitable bearings and a roller mounted therein and running in the vat of hot glue for applying the same to the backs of books or magazines, of an auxiliary roller occupying a position adjacent the aforesaid roller, with the periphery in proximity to the backs of the books or pamphlets, means for rotating the said roller, a scraper bearing upon the surface of the auxiliary roller for removing surplus glue, and a shield or plate beneath the scraper and covering the tank at one end for confining the heat and directing its escape against the auxiliary roller.

1,023,570. TAG-MARKING MACHINE. GEORGE H. LANG, Boston, Mass. Filed July 24, 1908. Serial No. 445,243. (Cl. 101—83.)



1. In a tag-printing machine, the combination with a pivotally mounted arm and a printing head connected thereto, of a fixed platen to support the tag while being printed, a feed roll situated to engage the tag, yielding means to hold the tag against the feed roll, a ratchet rigid with the feed roll, a pawl therefor, a member rigid with and turning about the same axis as the arm for operating the pawl, and edge guides extending from the feed roll some distance in the direction from which the work is being fed.

2. In a tag-printing machine, the combination with a pivotally-mounted arm and a printing head connected thereto, of a fixed platen to support the tag while being printed, a feed roll situated to engage the tag at a point substantially in line with the line on which the impression is made; yielding means to hold the tag against the feed roll, a ratchet rigid with the feed roll, a pawl therefor, a member rigid with and turning about the same axis as the arm for operating the pawl, and edge guides extending from the feed rolls some distance therefrom in the direction from which the work is fed.

3. In a tag-printing machine, the combination with a reciprocating printing head carrying adjustable type, of a fixed platen to support the tag while being printed, a positively-driven feed roll, a presser roll coöperating with the feed roll to feed the tag, a rock-shaft having slotted arms in which the presser roll is mounted and means to determine the position of the presser roll in the slots of said arms as the rock shaft is turned about its axis.

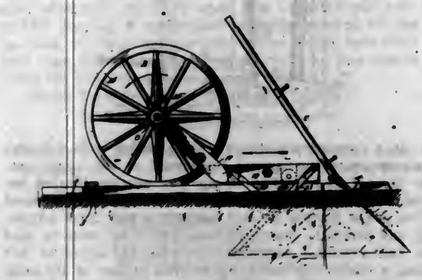
4. In a tag-printing machine, the combination with a reciprocating printing head carrying adjustable type, of a fixed platen to supoprt the tag while being printed, a positively-driven feed roll, a presser roll coöperating with the feed roll to feed the tag, a rock-shaft having slotted arms in which the presser roll is mounted, a spring acting on said arms to maintain the presser roll in yielding engagement with the feed roll and a frame having slots that incline in a direction opposite to those of the arms and in which the shaft of the presser roll is mounted.

5. In a tag-printing machine, the combination with a reciprocating printing head carrying adjustable type and a rock-shaft on which said head is mounted, of a platen to support the tag while being printed, a feed roll for feeding the tag forward, a ratchet wheel rigid with the feed roll, a cam on the rock-shaft, and a pawl actuated by the cam and engaging the ratchet.

[Claims 6 to 9 not printed in the Gazette.]

1,023,571. TRENCH-DIGGING MACHINE. JOHN LAPIN, New York, N. Y. Filed Jan. 12, 1911. Serial No. 602,143. (Cl. 37—89.)

1. In a trench-digging machine, an axle, traction wheels mounted on said axle, means by which the distance between said wheels is varied, a soil-cutting mechanism loosely mounted on said axle between said wheels, said mechanism comprising a pair of downwardly and rearwardly-inclined arms and horizontal members rigidly connected with and offset from said arms, roller bearings journaled in each of said horizontal members adapted to support the same, adjustable means holding said arms and horizontal members in their spaced apart position, a relatively short rearwardly-inclined sod-cutting knife carried by each of said horizontal members, and a relatively long forwardly-inclined trench cutting knife carried by each of said horizontal members.



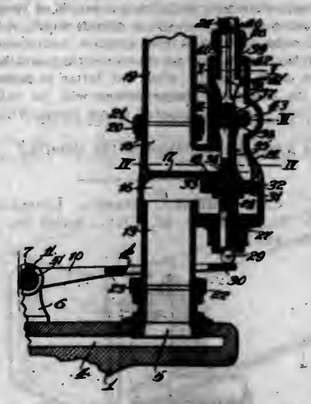
2. In a trench-digging machine, an axle, traction wheels mounted on said axle, means by which the distance between said wheels is varied, a soil-cutting mechanism loosely mounted on said axle between said wheels, said mechanism comprising a pair of downwardly and rearwardly-inclined arms and horizontal members rigidly connected with and offset from said arms, roller bearings journaled in each of said horizontal members adapted to support the same, adjustable means holding said arms and horizontal members in their spaced apart position, a relatively short rearwardly-inclined sod-cutting knife carried by each of said horizontal members, a relatively long forwardly-inclined trench cutting knife carried by each of said horizontal members, and a hand wheel rigidly mounted in each of the outer ends of said axle, whereby the machine is propelled.

3. In a trench-cutting machine, comprising traction wheels mounted on a screw-threaded axle, means holding said wheels in adjustable position on said axle, and a sod and soil-cutting mechanism loosely mounted on said axle between said wheels and comprising spaced-apart knives and adjustable means holding said knives in position, said adjustable means bracing said machine.

4. In a trench-cutting machine, an adjustable track, said track comprising a pair of parallel flat plates, means for automatically holding said plates to the ground, a rack mounted centrally and longitudinally of each plate, said machine having adjustable wheels mounted thereon, said wheels each having a rack about the periphery thereof adapted to engage the rack on the plates, said machine having a soil-cutting mechanism carried thereby, roller members mounted on said machine and adapted to roll on the plates adjacent the rack, and means for rotating the wheels of said machine to propel the same along the track.

1,023,572. SEAT-ACTUATED FLUSHING APPARATUS FOR WATER-CLOSETS. LOUIS D. LAWNIN, Edwardsville, Ill., assignor of one-half to N. O. Nelson Manufacturing Company, Edwardsville, Ill., a Corporation of Illinois. Filed Feb. 23, 1911. Serial No. 610,167. (Cl. 4—5.)

In an apparatus of the character described, the combination with flushing and discharge pipes, of a valve housing connecting said pipes, a priming pipe, an extension to said valve housing of larger diameter than said priming pipe, said extension being provided with a by-pass, and a valve for said by-pass, said valve being provided with wings slidably engaging the walls of said priming pipe, said wings being provided with enlargements within said extension, said enlargements forming shoulders for mounting a coiled spring between them and the end of said extension.



1,023,573. FINGER-EXERCISING MACHINE. HARRY G. LELAND, Howard Park, Md. Filed Nov. 18, 1910. Serial No. 593,018. (Cl. 128—16.)



1. A finger exerciser comprising a series of levers all of which operate simultaneously, a driven shaft, a bar connected to some of said levers, another bar connected to the remaining levers, and means connecting said bars to the driven shaft whereby when the latter is revolved one bar and its connected levers will be raised and the other bar and its connected levers will be lowered.

2. A finger exerciser comprising a series of levers all of which operate simultaneously, a bar connected to some of the said levers, another bar connected to the remaining levers, and means whereby when one bar and its connected levers is raised the other bar and its connected levers will be lowered.

3. A finger exerciser comprising a series of levers all of which operate simultaneously, a driven shaft, a bar connected to some of said levers, another bar connected to the remaining levers, and means connecting said bars to the driven shaft whereby when the latter is revolved one bar and its connected levers will be raised from the normal position and the other bar and its connected levers will be lowered to the normal position.

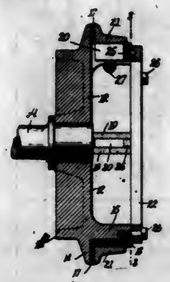
4. A finger exerciser comprising a series of levers all of which operate simultaneously and each lever operating in the opposite direction from the one adjacent thereto, a driven shaft, a bar connected to some of said levers, another bar connected to the remaining levers, and means connecting said bars to the driven shaft whereby when the latter is revolved one bar and its connected levers will

be raised and the other bar and its connected levers will be lowered.

5. A finger exerciser comprising a series of levers all of which operate simultaneously, a driven shaft, a bar connected to some of said levers, another bar connected to the remaining levers, and levers connecting said bars with the driven shaft whereby when the latter is revolved one bar and its connected finger levers will be raised and the other bar and its connected finger levers will be lowered.

[Claims 6 and 7 not printed in the Gazette.]

1,023,574. CAR-WHEEL. FREDRIK LINDBLAD, New York, N. Y. Filed Oct. 25, 1911. Serial No. 656,617. (Cl. 105—162.)



1. A car wheel having a metal body portion provided with a horizontally extended supporting flange, said flange having holding recesses formed therein; a flanged wearing shoe adapted for mounting upon said supporting flange, said shoe having lugs for disposition in said recesses; and an acoustic insulating material disposed between said shoe and the lugs thereof and said body portion and said recesses.

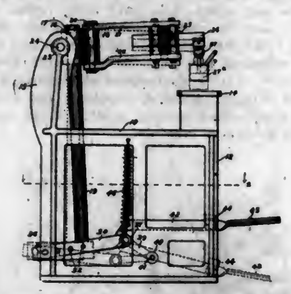
2. A car wheel having a metal body portion provided with a horizontally extended supporting flange, said flange having holding recesses formed therein; a flanged wearing shoe adapted for mounting upon said supporting flange, said shoe having lugs for disposition in said recesses; and a sound deadening pad shaped to fit between said body portion, said supporting flange, the sides of said recesses, and said wearing shoe and the lugs thereof.

3. A car wheel having a metal body portion and provided with a horizontally extended supporting flange, said flange having holding recesses formed therein; a metal wearing shoe adapted for mounting upon said flange and having lugs to extend within the recesses thereof; an acoustic insulating pad disposed between said body portion, said flange and said shoe; a bolting ring to hold said shoe in operative position; and a plurality of pads mounted on said ring to bear upon said lugs on said shoe.

4. A car wheel having a metal body portion and provided with a horizontally extended supporting flange, said flange having holding recesses formed therein; a metal wearing shoe adapted for mounting upon said flange and having lugs to extend within the recesses thereof; an acoustic insulating pad disposed between said body portion, said flange and said shoe; and a bolting ring adapted to be secured upon said body portion and having acoustic insulating pads mounted thereon to bear upon the lugs of said shoe.

5. A car wheel having a metal body portion and provided with a horizontally extended supporting flange, said flange having holding recesses formed therein; a metal wearing shoe adapted for mounting upon said flange and having lugs to extend within said recesses; an acoustic insulating pad disposed between said body portion, said flange, and said shoe; a bolting ring adapted to be secured upon said body portion and having acoustic insulating pads mounted thereon to bear upon the lugs of said shoe; and a plurality of spiral springs rigidly mounted on said supporting flange to bear against said lugs to form electric circuit between said shoe and said body portion.

1,023,575. PRESSING-MACHINE. HJALMAR LINDESTROM, Chicago, Ill. Filed Sept. 2, 1911. Serial No. 647,325. (Cl. 68—9.)



1. In a pressing machine, the combination with a frame, of an iron-carrying-support fulcrumed on the upper portion thereof and having an upright portion located between the sides of the frame, a foot adjustably secured on the lower portion of said upright, a foot lever adjustably and pivotally connected near one of its ends to said foot and extended forwardly between the sides of the frame, a connection pivotally secured at one of its ends to the lower portion of the frame and beneath the foot lever and similarly connected at its other end to a portion of the foot lever rearwardly of the first mentioned end of said connection.

2. In a pressing machine, the combination with a frame, of an iron-carrying-support fulcrumed on the upper portion thereof and having an upright portion located between the sides of the frame, a foot secured on the lower portion of said upright, a foot lever pivotally and adjustably connected near one of its ends to said foot and extended forwardly between the sides of the frame, a connection pivotally secured at one of its ends to the lower portion of the frame and beneath the foot lever and similarly connected at its other end to a portion of the foot lever rearwardly of the first mentioned end of said connection, and means to raise the foot lever from its depressed position.

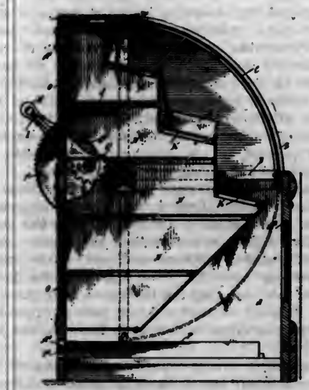
3. In a pressing machine, the combination with a frame, of an iron-carrying-support fulcrumed on the upper portion thereof and having an upright portion located between the sides of the frame, a foot secured on the lower portion of said upright, a foot lever pivotally connected near one of its ends to said foot and having a transversely disposed guard near its front end, a connection pivotally secured at one of its ends to the lower portion of the frame and beneath the foot lever and similarly connected at its other end to a portion of the foot lever rearwardly of its point of connection with the frame, and a spring secured at one of its ends to said lever and at its other end to the frame above the lever.

4. In a pressing machine, the combination with a frame, of an iron-carrying-support fulcrumed on the upper portion thereof and having an upright portion located between the sides of the frame, a horizontally disposed foot secured on the lower portion of said upright and having one or more sets of transversely and horizontally disposed openings therein, a foot lever having one or more transversely and horizontally disposed sets of openings near one of its ends and extended forwardly between the sides of the frame, a pin extended through one of the sets of openings of the foot lever and one of the sets of openings of said foot to pivotally connect them together, a transversely disposed guard on the foot lever near one of its ends and between the sides of the frame, a connection pivotally secured at one of its ends to the lower portion of the frame and below the foot lever and at its other end to a portion of said lever, and a spring secured at one of its ends to said lever and at its other end to the frame above the lever for the purpose of retracting the latter to its normal position.

5. In a pressing machine, the combination with a frame, of an iron-carrying-support fulcrumed on the upper portion thereof and having an upright portion located between the sides of the frame, a foot secured on the lower portion of said upright and having a horizontally disposed portion provided with one or more transversely and horizontally disposed sets of openings, a foot lever pivotally connected to said foot and located between the lower portion of the sides of the frame and having in its rear portion a longitudinally extended slot and provided near its rear end with one or more transversely disposed sets of openings, the said foot and lower portion of the upright part of the iron-carrying-support being located in the slot of the foot lever, a transversely disposed guard on said lever near one of its ends, lugs on said lever near its middle portion, a connection pivotally secured at one of its ends to the lower portion of the frame forwardly of said lugs and at its other end to the lugs, and means to raise the lever from its depressed position.

[Claim 6 not printed in the Gazette.]

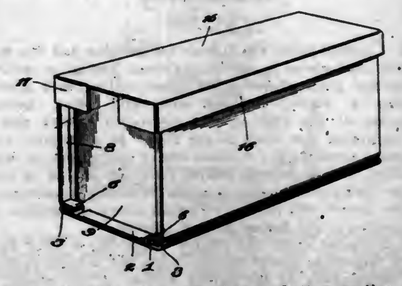
1,023,576. SHOW-CASE. THOMAS EUGENE LINDSAY, Jackson, Tenn. Filed Dec. 1, 1911. Serial No. 663,256. (Cl. 211—25.)



1. A show-case, comprising a casing having an opening in its upper front portion and a vertical slot in the back, a segmental toothed rack secured upright along said slot, a glass front for opening or closing the said opening, a shaft journaled in the casing and provided with arms carrying the said glass front, a spring connected with the said arms and normally holding said front in its upper closed position, a manually-controlled handle extending through the said slot, gear wheels in mesh with each other and one forming part of the said handle, the other being attached to the said shaft, a laterally swinging pawl pivoted on one side of said handle and adapted to engage said rack, shelves arranged in step form within the upper portion of the said casing, and storage compartments within the said casing in the rear of the said shelves.

2. A show-case comprising a casing having a lower section, and an upper section provided with a front opening, said casing also having doors in the rear thereof leading to both sections and a rear vertical slot, a segmental toothed rack secured upright along said slot, a support arranged vertically within the casing and comprising a front wall having rearwardly inclined upper and lower portions in the respective casing sections, and a series of superposed shelves in the rear of said front wall, forming storage spaces, said upper portion of said support wall being in stepped form, a segmental front normally closing the opening in the upper casing section, a shaft journaled through the casing and the said inner support and provided with arms carrying the said segmental front, whereby the latter may swing downwardly into the space between the casing front and the lower portion of the said front wall of said inner support, a spring connected with the said arms and normally holding said segmental front in its upper closed position, a manually controlled handle extending through the said slot, gear wheels in mesh with one another and one forming part of the said handle, the other of said gear wheels being attached to the said shaft, and a laterally swinging pawl pivoted on one side of said handle and adapted to engage the said rack whereby the said segmental front may be locked in its lower open position.

1,023,577. COLLAPSIBLE CRATE. ADOLPH LIST and WILLIAM A. DE MAINE, Cape Girardeau, Mo. Filed Jan. 10, 1912. Serial No. 670,471. (Cl. 220—17.)



1. A collapsible crate, comprising a bottom section provided with overlying side and end flanges thereon, side wall sections, the lower edges of which are provided with inwardly and outwardly bent flanges to engage the overlying side flanges of the bottom section, said side wall sections being also provided with end flanges bent to provide channel-ways thereon, said end flanges being also continued at right angles to the general trend of the side walls to form lateral flanges, end wall sections having outwardly bent flanges at the lower ends thereof adapted for engagement with the overlying end flanges of the bottom section, and also provided with outwardly bent side flanges adapted for engagement with the channel-ways formed at the end of said side walls, downwardly bent tongues formed on the upper edges of said end wall sections adapted for engagement with said lateral flanges formed at the ends of said side walls, and a cover for the device.

2. A collapsible crate, comprising a bottom section having overlying flanges on the side edges thereof extending the full length of the same, said bottom section being also provided with overlying flanges at the end edges thereof extending to points adjacent the side edges of the same, side wall sections, the lower edges of which are provided with flanges bent inwardly and thence outwardly to engage the overlying side edge flanges of said bottom section, said side wall sections being also provided with inwardly bent flanges at the end edges thereof to provide channel-ways at such points, the latter flanges being continued at right angles to the plane of the side wall sections to form lateral stop flanges, end wall sections having outwardly bent flanges at the lower edges thereof adapted for engagement with the overlying end flanges of said bottom section, said end wall sections being also provided with outwardly bent flanges at the side edges thereof adapted for engagement with the channel-ways formed by the flanges at the ends of said side wall sections, downwardly bent tongues formed on the upper edges of said end wall sections adapted for engagement with the lateral stop flanges of said side wall sections, said end walls being also provided with outwardly bent flanges at the upper edges thereof to form rests thereon, and a cover for the device adapted to rest on the upper edges of the side wall sections and on the rests formed on said end wall sections.

1,023,578. THREAD GUIDE AND CLEARING DEVICE. GEORGE F. MACFARLANE, Wilkes-Barre, Pa. Filed Jan. 7, 1910. Serial No. 536,896. (Cl. 28—20.)

1. A thread guide and clearer for spooling and like machines, consisting of a continuous block having a central

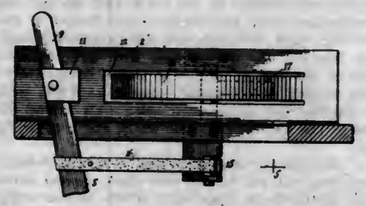
transverse guide groove in its upper surface, an opening at one side of said guide groove to receive means for attaching the block to the frame of a machine and a clearing device yieldingly mounted on the other side of the guide groove and having a blade within and extending transversely of said groove, for the purpose set forth.



2. A thread guide and clearer for spooling and like machines, comprising a continuous block having a central transverse guide groove in its upper surface, said groove having a flaring forward end, said block having a recess at one side of said groove to receive means for attaching the block to the frame of a machine and having a recess on the opposite side of said groove, in combination with a clearing device yieldingly seated in said latter recess and having a blade extending transversely of the groove and normally located above the bottom of the groove in the flaring portion thereof.

3. A thread guide and clearer comprising a block having a transverse groove flaring at one end, a blade extending transversely of the flaring portion of the groove, a plate arranged in a recess of the block and carrying said blade, a spring in said recess supporting the plate, and means for adjusting the plate and blade against the tension of said spring.

1,023,579. SHUTTLE-CHECK. PETER F. MARCANTE, Allentown, Pa. Filed Nov. 10, 1910. Serial No. 591,581. (Cl. 139—29.)



The combination with a shuttle, of a box for said shuttle, said box being formed of sheet metal and having an opening in the side thereof, an arcuate spring tongue formed integral with said box and being fixed thereto at one end, said tongue projecting through said opening so as to engage said shuttle in a sufficient degree to form a preliminary check for the same; a picker stick projecting into said box, an actuator comprising a vertical shaft, an arm secured adjacent the lower end of said shaft and projecting transversely beneath the box, an arm secured adjacent the upper end of said shaft and having an arched portion adapted to contact with the back side of said spring tongue, and a flexible strap secured at one end to said picker stick and at its opposite end to said first-mentioned arm, whereby the movement of said shuttle, when the end thereof comes against said picker stick, will manipulate said actuator, so as to force said second-mentioned arm into engagement with said spring tongue, and thereby flex said spring tongue so as to project the same a greater distance into said shuttle box and into tighter engagement with said shuttle, so that the pressure of the shuttle is proportionate to the force due to the motion thereof.

1,023,580. ANTISKID DEVICE. DOUGLAS J. MARTIN, New York, N. Y. Filed Jan. 20, 1911. Serial 603,634. (Cl. 152—14.)

1. In an anti-skid device, a series of endless chains adapted to be spaced apart about a tire, clamps connecting adjacent chains at the side of said tire, to keep the chains in open position, each clamp having a pair of clips pivoted to the opposite ends thereof, each clip having double jaws and teeth projecting inwardly from opposite jaws, the teeth of one jaw engaging the adjacent chain, said clips pivoted to the clamps whereby the jaws may be rotated to carry the attached chain to a new position, so that it may be grasped in the new position by the opposite jaw of the clip.

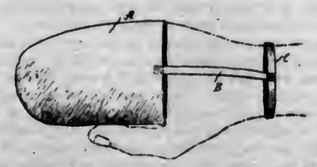


2. In an anti-skid device, a series of endless chains rectangular in plan, spaced apart on a tire and conforming to the configuration of the top and side of the same, a clamp fastening together adjacent corners of successive chains, said clamp comprising a rectangular casing having flat faces adapted to lie flat against the side of the tire and having alined apertures adjacent each end, U-shaped spring members engaging in said apertures, and a two-part spring jaw pivoted on the crotch of each member, one of said jaw portions engaging the adjacent chain.

3. In an anti-skid device, a series of endless chains adapted to be spaced about a tire, clamps between adjacent chains at the sides of the tire to keep the chains in open position, a clip on each end of the clamps, each clip having double spring jaws on each end of the same, and teeth projecting inwardly from the opposite jaws, the teeth of one jaw engaging the chains, so that the clip may be rotated to carry each chain to a new position in order that it may be grasped in a new position by the teeth of the other jaw.

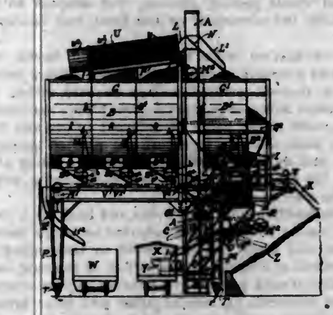
4. An anti-skid device comprising a series of endless chains spaced apart and forming gripping tread members adapted to be disposed across the tread portion of the tire, clamps positioned between adjacent members, each of said clamps having a double jaw clip pivoted at its center to opposite ends of the clamps, one jaw of each clip engaging the adjacent tread member, whereby the rotation of said clip will feed portions of said tread members across the wearing portions of the tire.

1,023,581. SWIMMING MITT OR GLOVE. THOMAS L. MONAGHAN, New York, N. Y. Filed Dec. 20, 1911. Serial No. 666,868. (Cl. 9—21.)



A mitt having a body of a length and width for accommodating the four fingers of a person's hand to hold the said fingers in extended position and one alongside the other, a retaining band extending longitudinally from the rear upper end of the mitt body, and a wrist band on the rear end of the said retaining band and adapted to encircle the wrist of the person using the mitt, the ends of the wrist band being provided with fastening means for holding the wrist band in closed position around the wrist of the user.

1,023,582. APPARATUS FOR SCREENING COAL. WILL K. MONROE, Cleveland, Ohio, assignor to The Brown Hoisting Machinery Company, Cleveland, Ohio. Filed Feb. 4, 1911. Serial No. 606,626. (Cl. 83—56.)



1. In a coal handling apparatus the combination of a primary bin, resizing bins, a general screenings bin, and a loading chute with a screening device adapted to receive coal from the primary bin and discharge into the loading chute, means for conveying the screenings from said screening device to a chute, a valve in said chute to direct said screenings into either the general screenings bin or into a resizing screen which latter is adapted to discharge several grades of the coal respectively into resizing bins.

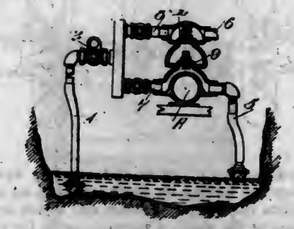
2. In a coal handling apparatus the combination of a primary bin, resizing bins, a general screenings bin, and a loading chute with a screening device adapted to receive coal from the primary bin and discharge into a loading chute, means for conveying the screenings from said screening device to a chute, a valve in said chute to direct said screenings into either the general screenings bin or into a resizing screen which latter is adapted to discharge several grades of coal respectively into the resizing bins, means adapted to receive coal from said general screenings and resizing bins and convey and deliver the same at points below, and means for accordingly drawing off and discharging coal from said bins into said conveying means, substantially as shown and described.

3. In a coal handling apparatus the combination of a primary bin, resizing bins, a general screenings bin, and a loading chute with a screening device adapted to receive coal from the primary bin and discharge into a loading chute, means for conveying the screenings from said screening device to a chute, a valve in said chute to direct said screenings into either the general screenings bin or into a resizing screen which latter is adapted to discharge several grades of coal respectively into the resizing bins, means adapted to receive and convey coal from said general and resizing bins and discharge the same into chutes that lead to loading, screening or storage points below, together with means for severally drawing off and discharging the contents of said last named bins into said last named means for conveying, substantially as shown and described.

4. In a coal handling apparatus, the combination of a primary bin, resizing bins, and a screening device adapted to receive coal from the primary bin, a loading chute adapted to receive the discharge from the screening device, means for elevating the screenings from said screening device, a resizing screen to receive the screenings from said elevating means, which latter is adapted to discharge several grades of the coal respectively into said resizing bins, and a common frame-work for supporting said devices, substantially as shown and described.

5. In a coal handling apparatus, the combination of a primary bin, resizing bins, and a screening device adapted to receive coal from the primary bin and discharge into a loading chute, means for conveying the screenings from said screening device to a resizing screen, which latter is adapted to discharge several grades of the coal respectively into said resizing bins, means adapted to receive coal from said resizing bins and convey and deliver the same at points below, and means for accordingly drawing off and discharging coal from said bins into said conveying means, substantially as shown and described.

1,023,583. INJECTOR ATTACHMENT FOR AIR OR STEAM PUMPS. FRANK S. MORGAN, Nevada City, Cal. Filed Mar. 15, 1910. Serial No. 549,504. (Cl. 103—76.)



In a pump, the combination of a suction chamber and a discharge chamber, a suction pipe for the former, a manifold having branches leading to the said chambers, valves in said branches, an injector connected to the manifold, and a suction pipe connected to the injector and adapted to supply water to prime the chambers when the injector is in operation.

1,023,584. SCREW-PROPELLER. ALBERT MÜHLBERG, Basel, Switzerland. Filed Dec. 31, 1908. Serial No. 470,167. (Cl. 115—46.)



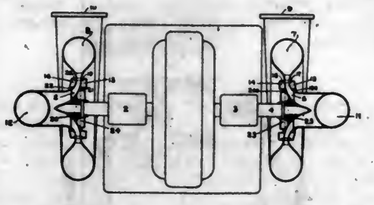
1. In blade screw propellers, a blade having a pressure surface of such concave shape that the angle of pitch which it forms with the plane of revolution, changes peripherally from point to point in a concentric blade section, but is nevertheless equally large, from entrance to exit, in a plane of intersection perpendicular to the radius vector of the entering point and to the plane of revolution, substantially as and for the purpose described.

2. In blade screw propellers of the kind described, blades, and a hub, from which the blades arise, the front part of which hub is formed in such a manner that the line of penetration of the hub and of the pressure surface of the blade forms a straight ascending line of the size and direction of a relative path issuing from the innermost point of entry, substantially as and for the purpose described.

1,023,585. HYDRAULIC TURBINE. ARNOLD PFAU, Milwaukee, Wis., assignor to Allis-Chalmers Company, Milwaukee, Wis., a Corporation of New Jersey. Filed Feb. 9, 1912. Serial No. 676,541. (Cl. 138—5.)

1. The combination of an energy absorber having two main bearings and having its shaft extended beyond one of said bearings, an overhung Francis turbine runner fixed against end thrust on the extension of the shaft, a turbine casing having its discharge angle remote from the nearer of said bearings, and means for end balancing the rotating parts.

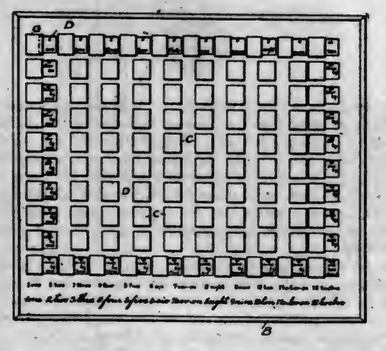
2. The combination of an energy absorber having two main bearings and having its shaft extended, an overhung Francis turbine runner fixed against end thrust on each of the extensions of the shaft, a turbine casing for each runner having its discharge angle remote from the nearer of said bearings, and means for end balancing the rotating parts.



3. The combination of an energy absorber having two main bearings and having its shaft extended, an overhung Francis turbine runner fixed against end thrust on each of the extensions of the shaft, a turbine casing for each runner having its discharge angle remote from the nearer of said bearings, and a plurality of means for end balancing the rotating parts, each of said end balancing means being adapted to balance one of said runners.

4. The combination of an energy absorber having two main bearings and having its shaft extended, an overhung Francis turbine runner fixed against end thrust on each of the extensions of the shaft, a turbine casing for each runner having its discharge angle remote from the nearer of said bearings, and means on either side of said absorber for end balancing the rotating parts whereby either runner or both may be operated.

1,023,586. EDUCATIONAL DEVICE. MICAJAH MULLINS, Junction City, Kans. Filed May 16, 1911. Serial No. 627,606. (Cl. 35—9.)



1. In a device of the character named, the combination with the covers and back, of a counting and grouping board having colored sliding blocks or disks, strips sliding beneath the surface of the board and bearing said blocks thereon, and printed matter of various colors on said strips adapted to be exposed to view upon the movement of the blocks.

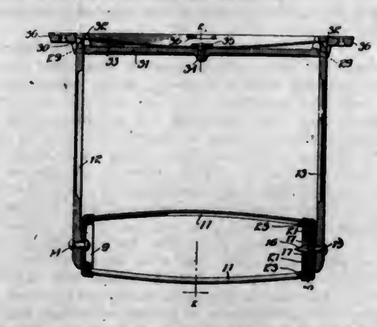
2. In a device of the character named, the combination with the covers and back, of a counting and grouping board having colored sliding blocks or disks, said blocks or disks being mounted on strips adapted to slide under the surface of the said board, and printed matter of various colors on said strips and adapted to be exposed to view upon the movement of said blocks.

3. In combination with the back and covers, of a grooved board having blocks of various colors mounted thereon, said blocks being slightly larger than the aperture over which they are mounted to form edges to engage with the grooves, strips whereupon said blocks are mounted having figures and words printed thereon, and adapted to slide forward with the movement of the block and be exposed to view.

4. In combination with the covers and backs, of a counting and grouping board having strips sliding beneath the surface thereof, printed matter on said strips, said printed matter being of various colors, blocks mounted on the strips, said blocks being of different colors and being adapted to slide sidewise to expose the printed matter on the strips, and figures and words of different colors at the bottom of the board, said figures and words being written in script as well as printed.

5. In combination with the covers and back, of a counting and grouping board, blocks mounted on strips thereon, said blocks and strips being adapted to slide along the board, numbers and words at the bottom of the said board, the other side of said board having charts thereon, comprising various numerals in regular order and color arrangement, said charts having single and double lines in various colors thereon to indicate different and various divisions of said figures on the charts.

1,023,587. HOLDER FOR TOILET-PAPER ROLLS. JOHAN NEDERLAND, New York, N. Y. Filed Sept. 7, 1911. Serial No. 648,045. (Cl. 211—31.)

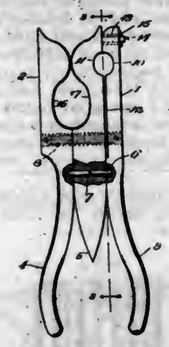


1. In a roll for toilet paper, an expansible roll, embodying a plurality of cup disk ends rigidly connected by resilient bowed arms; a plurality of slidably connected separable latch members having jaws to move each toward the other, supporting brackets for said roll, one of said brackets being pivotally connected with the standing structure and having a pointed head and an annular recess between said head and said bracket, to hold said jaws; and springs to normally close said jaws upon each other.

2. In a holder such as described, a support for a hollow-center roll of paper, comprising a plurality of cup-shaped disks adapted to fill the central opening of said roll, to prevent the insertion of an instrument within said central opening, one of said disks being centrally perforated; a bracket member adapted to be pivotally mounted upon a standing structure having a barbed head projection extended from the inner side of said bracket to rest within said perforation; and a spring jawed latch mounted on the inner side of said perforated disk to engage and hold said barbed head projection.

3. In a holder such as described, a spool having resilient sides to enter the center of a roll of paper and provided with solid cup-disk ends to fill the central opening, said ends forming pivotal bearings for the rotation of said roll, and mounted thereon; and brackets adapted for mounting on a standing structure, pivotally connected with said cup-disk ends, one of said brackets having a barbed ended projection, and a spring-closed latch mounted on one of said ends, at the inner side thereof, to engage said barbed ended projection.

1,023,588. COW-TAIL HOLDER. OSKAR NELSSON, Hampshire, Ill. Filed Sept. 11, 1911. Serial No. 648,594. (Cl. 119—105.)



In a device of the class described, a pair of jaws each provided with a recess near its forward extremity and terminating in handles, a pin having its extremities embedded in the said jaws, an apertured tongue mounted on the said pin between the jaws provided with recesses in alinement with the recesses of the jaws and terminating at one extremity in a point, a spring passing through the aperture in the said tongue and having its extremities embedded in the jaws and means carried at the forward extremity of the said tongue for locking it in engagement with one of the aforesaid jaws.

1,023,589. DANCING FIGURE. WILLIAM JOSEPH NICKERSON, New Orleans, La. Filed June 6, 1911. Serial No. 631,584. (Cl. 46—40.)



1. A keyboard attachment, comprising a support having means to engage certain of the keys of said keyboard, an articulated figure mounted on the said support, and depending actuating means on the back of the said support and connected with the said figure.

2. A keyboard attachment, comprising a support for attachment to sundry of the black keys of a keyboard, an articulated figure mounted on the said support, and rods connected with the movable members of the said figure and resting on sundry of the white keys of the keyboard.

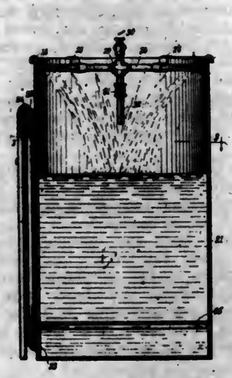
3. In combination with a keyboard, an articulated figure, and actuating means connected with a movable part of the figure and controlled by keys of the keyboard.

4. In combination with a keyboard, of a support having notches in engagement with sundry of the black keys of the said keyboard, an articulated figure mounted on the said support, and rods mounted to slide on the said support and connected with the movable members of the said figure, the said rods resting on white keys of the keyboard.

5. A dancing figure, comprising a support, an articulated figure having a body mounted to turn on the said support, a head and arms pivoted on the support and connected with the said body, legs pivoted on the said support, lugs mounted on the said body and adapted to be engaged by the said legs, and means for imparting a swinging motion to the said legs.

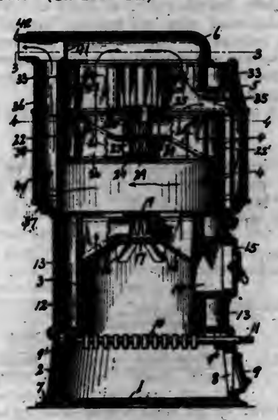
[Claims 6 and 7 not printed in the Gazette.]

1,023,590. PROCESS FOR THE PROPAGATION OF FISH. FRANK PARRY, Brightwater, British Columbia, Canada. Filed May 2, 1910. Serial No. 559,031. (Cl. 119—3.)



A process for the propagation of fish consisting in alternately stripping the female and male fish while held in a falling stream of water.

1,023,591. STEAM AND HOT-WATER HEATER. LOUIS K. PECK, Syracuse, N. Y. Filed June 16, 1909. Serial No. 502,537. (Cl. 122—14.)



1. In a steam and hot water heater, a horizontally disposed water section comprising a hollow central hub having a horizontal partition dividing the interior of the hub into lower and upper compartments, a hollow rim surrounding the hub some distance therefrom and having its interior of considerably greater vertical depth than that of either of the compartments, a set of hollow spokes connecting the lower compartment with the interior of the rim, and an additional set of similar hollow spokes connecting the upper compartment with the interior of the same rim.

2. In a steam or hot water heater, a horizontally disposed water section comprising a central hollow hub, a hollow circular rim concentric with and spaced apart some distance from the hub, said hub having a horizontal

partition dividing its interior into lower and upper compartments each of less vertical depth than the interior of the rim, and hollow radial spokes connecting the hub and rim, alternate spokes connecting the interior of the lower compartment with the interior of the rim and the remaining spokes connecting the upper compartment with the interior of the same rim.

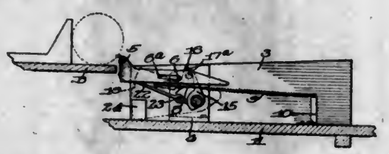
3. In a steam or hot water heater, a horizontally disposed water ring comprising a central hollow hub having a horizontal partition dividing its interior into lower and upper compartments, a hollow rim surrounding the hub some distance therefrom, and outwardly flaring hollow spokes connecting the hub and rim and spaced apart forming intervening fire passages, some of the spokes having their inner ends communicating with the lower compartment and the remaining spokes having their inner ends communicating with the upper compartment, the outer ends of the spokes being of greater vertical depth interiorly than the compartment with which they are connected.

4. In a steam or hot water heater, a horizontally disposed water section comprising a central hollow hub, a hollow rim surrounding, and spaced some distance from, the hub, a set of hollow spokes having their inner ends reduced in vertical depth and communicating with the interior of the lower end of the hub, and an additional set of hollow spokes alternating with the first named spokes and having their inner ends reduced in vertical depth and communicating with the interior of the upper portion of the hub, said spokes having their outer ends communicating with the interior of the hollow rim.

5. In a steam or hot water heater, a horizontally disposed water ring comprising a central hollow hub, a hollow circular rim concentric with and spaced apart some distance from the hub, said rim and hub being of substantially the same vertical height, a partition substantially midway between the ends of the hub and dividing its interior into lower and upper compartments, sets of alternating hollow spokes having their outer ends of substantially the same vertical depth as the hollow rim and communicating with the interior thereof and their inner ends reduced in vertical depth, the inner ends of one set of spokes communicating with the lower compartment and the inner ends of the other set communicating with the upper compartment.

[Claims 6 to 14 not printed in the Gazette.]

1,023,592. ATTACHMENT FOR LOGWAYS IN SAW-MILLS. EMIL PETERSON, Baraga, Mich. Filed Apr. 29, 1910, Serial No. 558,531. Renewed Jan. 20, 1912. Serial No. 672,478. (Cl. 143—96.)

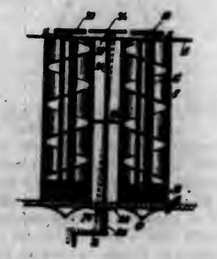


1. In a device of the class described, a log way, a pair of standards between the members of said log way, a shaft journaled in said log way and standards, a ram supported between said standards, a cam arranged on said shaft and adapted for engagement with said ram, stop blocks arranged on said shaft adjacent to the log way and a handle at one extremity of said shaft.

2. In a device of the class described, a log way, a pair of standards between the members of said log way, a shaft journaled in said log way and standards, a ram supported between said standards, means secured to said shaft between the standards for raising and advancing said ram, means secured to said ram for automatically returning the same to normal position, stop blocks arranged on said shaft adjacent to the log way and a handle 18.

3. In a device of the class described, a log way, a pair of standards between the members of said log way, a shaft journaled in said log way and standards, a ram having a longitudinal horizontal slot and a longitudinal vertical slot therein disposed between said standards, a teeter board pivoted between said standards and normally resting upon a block 24, a cam and finger arranged on said shaft and adapted respectively for engagement with said teeter board and ram through the medium of the vertical slot in the latter, a spring connecting said ram and a piece 10, stop blocks arranged on said shaft adjacent to the log way and a handle 18 for one end of the shaft.

1,023,593. ATTACHMENT FOR KITCHEN-CABINETS. FRANK E. P'POOL, Snyder, Tex. Filed Aug. 27, 1910. Serial No. 579,280. (Cl. 74—7.)



1. In an attachment for kitchen cabinets a driven shaft, a projecting member on the driven shaft, a second shaft movable relatively to the first-mentioned shaft, a projecting member on the second-mentioned shaft for engaging the projecting member on the first-mentioned shaft, a bearing in which the second-mentioned shaft is freely disposed, a plate having a guideway in which the second-mentioned shaft is disposed, and means for holding the plate yieldingly in a predetermined position relatively to the first-mentioned shaft.

2. In an attachment for kitchen cabinets a driven shaft, a projecting member on the driven shaft, a second shaft movable relatively to the first-mentioned shaft, a projecting member on the second-mentioned shaft for engaging the projecting member on the first-mentioned shaft, a bearing in which the second-mentioned shaft is freely disposed, a plate having an angular guideway in which the second-mentioned shaft is disposed, and means for holding the plate yieldingly in a predetermined position relatively to the first-mentioned shaft.

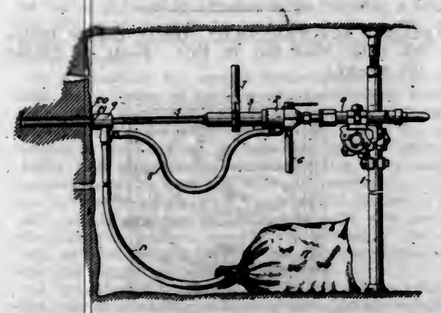
3. In an attachment for kitchen cabinets two driven shafts, a projecting member on each of the driven shafts, a third shaft movable relatively to the first-two-mentioned shafts, a projecting member on the third-mentioned shaft for engaging the projecting members on the said two driven shafts, a bearing in which the third-mentioned shaft is freely disposed, a plate having a guideway with two substantially parallel portions connected with a central portion in which the third-mentioned shaft is disposed, and means for holding the plate yieldingly in a predetermined position relatively to the first-two-mentioned shafts.

4. In an attachment for kitchen cabinets a casing, a driven shaft, a projecting member on the driven shaft, a second shaft movable relatively to the first-mentioned shaft, a projecting member on the second-mentioned shaft, for engaging the projecting member on the first-mentioned shaft, a bearing in which the second-mentioned shaft is freely disposed, a plate having two guideways, the second-mentioned shaft being disposed in one of the guideways, a member secured to the casing for traveling in the other guideway in the plate, and means for holding the plate in a predetermined position relatively to the case.

5. In an attachment for kitchen cabinets a plurality of shafts, a projecting member on each of the shafts, a driving shaft movable relatively to the first-mentioned shafts, a projecting member on the driving shaft for engaging the projecting members on the first-mentioned shafts, a bearing in which the driving shaft is freely disposed, a guideway for the driving shaft at one side of the bearing, and a plate on the other side of the bearing having a guideway in which the driving shaft is disposed.

[Claims 6 to 13 not printed in the Gazette.]

1,023,594. DUST-COLLECTOR FOR DRILLS. WILLIAM PRELLWITZ, Easton, Pa., assignor to Ingersoll-Rand Company, New York, N. Y., a Corporation of New Jersey. Filed Oct. 26, 1907. Serial No. 399,249. (Cl. 125—10.)



1. The combination with a drill having a hollow steel through which air is forced for ejecting the cuttings from the hole being bored, of a dust collector comprising a hollow casing located at the mouth of the hole being bored and an ejector controlled by the motive fluid of the drill for forcing the cuttings from the hollow casing to a predetermined point.

2. The combination with a drill having a hollow steel through which air is forced for ejecting the cuttings from the hole being bored, of a dust collector comprising a hollow casing located at the mouth of the hole being bored and an ejector controlled by the motive fluid exhaust from the drill for forcing the cuttings from the hollow casing to a predetermined point.

3. The combination with a drill, of a dust collector comprising a hollow casing located at the mouth of the hole being bored, a receptacle, a tube leading from the hollow casing to the receptacle and an ejector located between the hollow casing and receptacle and controlled by the motive fluid of the drill for forcing the cuttings from the hollow casing through the tube into said receptacle.

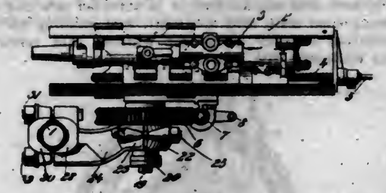
4. The combination with a drill, of a dust collector, comprising a hollow casing located at the mouth of the hole being bored, a receptacle, a tube leading from the hollow casing to the receptacle and an ejector located between the hollow casing and receptacle and controlled by the motive fluid exhaust from the drill for forcing the cuttings from the hollow casing through the tube into said receptacle.

5. The combination with a drill, of a dust collector comprising a hollow casing, a device for securing the casing to the hole being bored, a receptacle, a tube leading from the hollow casing to the receptacle and an ejector controlled by the motive fluid of the drill for forcing the cuttings from the hollow casing through the tube into said receptacle.

[Claims 6 to 8 not printed in the Gazette.]

1,023,595. MOUNTING FOR MINING TOOLS OR MACHINES. WILLIAM PRELLWITZ, Easton, Pa., assignor to Ingersoll-Rand Company, New York, N. Y., a Corporation of New Jersey. Filed May 6, 1909. Serial No. 494,446. (Cl. 125—10.)

1. A mounting for a mining tool comprising a main supporting arm and a shell supporting arm, the main supporting arm being provided with a plurality of half bearings at one end for engaging a primary support and a half bearing at its opposite end for receiving the shell supporting arm in swinging adjustment and half bearings and bolts arranged to coöperate with the half bearings on the main supporting arm.



2. A mounting for a mining tool comprising a main supporting arm provided with a plurality of half bearings at one end and with a half bearing at the opposite end, a shell supporting arm provided with a socket at one end and a stem at the opposite end extending at right angles to the socket, a worm wheel provided with a hub in which the said stem is seated, and half bearings and bolts arranged to coöperate with the half bearings on the arm.

3. A mounting for a mining tool comprising a shell supporting arm, a main supporting arm and a worm wheel hub, the shell supporting arm being provided with a shouldered stem seated within the worm wheel hub, the said worm wheel hub being formed as a segment of a sphere and provided with an annular groove and the main supporting arm being provided with a half bearing fitted to receive said hub, a half bearing arranged to co-act with said half bearing on the main supporting arm and bolts passing through the said half bearings and the groove in the hub.

1,023,596. GAS-REGULATOR. AMANDUS C. ROMSELER, Mineola, and WILLIAM A. ARMINGTON, New York, N. Y., assignors to Bay State Gas Company, (Delaware,) a Corporation of Delaware. Filed May 6, 1911. Serial No. 625,551. (Cl. 137—4.)



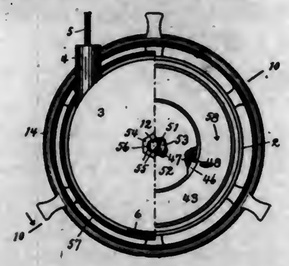
A gas regulator comprising a member having a passage therein, a plug intersecting said passage, said plug having a series of different sized openings at one point in the length thereof and a series of still different sized openings at another point in the length thereof, and means for turning the plug rotatively and shifting it longitudinally to bring the opening therein of the desired size into alinement with the passage aforesaid.

1,023,597. TROLLEY RETRIEVER AND CATCHER. ROBERT SHIELDS, South Boston, Mass., assignor to Frank Ridlon Company, Boston, Mass., a Corporation of Massachusetts. Filed Jan. 21, 1911. Serial No. 603,797. (Cl. 191—35.)

1. In a trolley retriever, a suitable casing member provided with a fixed axial member, a retriever disk revolubly mounted on said axial member, a spring arranged between said casing member and disk to actuate the latter in one direction, and means to lock said disk, against the action of said spring, to said casing member and to release it to such action and to rotate said disk on said axial member and wind said retriever spring, from a point exterior of the casing member.

2. In a trolley retriever, a casing consisting in part of a winding section, a retriever disk revolubly mounted in said casing, a spring arranged between a fixed part of said casing and said disk to actuate the latter in one direction, and means to lock said disk and winding section together and to unlock them.

3. In a trolley retriever, a casing consisting in part of a winding section provided with an abutment, a retriever disk revolubly mounted in such casing, a spring arranged between a fixed part of said casing and said disk to actuate the latter in one direction, and a latch carried by said disk and adapted to be actuated into and out of engagement with said abutment, said winding section constituting exterior means for winding said retriever spring while said disk is held by said latch.

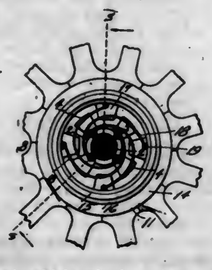


4. In a trolley retriever, a casing consisting in part of a winding section provided with an abutment, a retriever disk revolubly mounted in said winding section, a spring arranged between a fixed part of said casing and said disk to actuate the latter in one direction, and a latch carried by said disk and adapted to be actuated into and out of engagement with said abutment to lock said disk and winding section together and to unlock them.

5. In a trolley retriever, a stationary case section provided with a fixed stud, a case section mounted to rotate on said stationary section, a retriever disk revolubly mounted on said stud, a spring arranged between said stationary section and disk to actuate the latter in one direction, means to lock said rotatable section and said disk together and to unlock them, a spring-actuated reel also revolubly mounted on said stud, means operatively to engage said reel with said disk and to disengage such members, and a second stationary case section supported by said stud.

[Claims 6 to 17 not printed in the Gazette.]

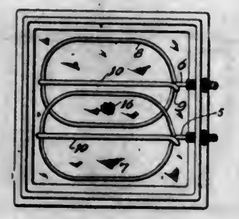
1,023,598. VEHICLE-WHEEL. LOUIS K. STEPHENS, Dallas, Tex. Filed Feb. 20, 1911. Serial No. 609,644. (Cl. 152—28.)



1. In a resilient vehicle wheel, a sleeve arranged to fit on an axle; flat springs extending from the sleeve in involute curves; lugs projecting from the sleeve; a spoke receiving member surrounding the sleeve, the springs and the lugs; lugs extending inwardly from the spoke receiving member into the path of the first named lugs; circular plates disposed on each side of the sleeve and member; fastening devices passing through the plates and lugs of the sleeve in close proximity to the sleeve; and attaching devices extending through the lugs of the member and connected with the outer ends of the springs.

2. In a resilient vehicle wheel, a sleeve adapted to fit on an axle, a spoke receiving member surrounding the sleeve, rings embedded in the member at each side, circular closure plates abutting the ends of the sleeve and having sliding contact with the rings and the member, radial lugs projecting from the sleeve, inwardly directed lugs projecting from the member between the first named lugs, bolts passing through the plates and radial lugs adjacent the sleeve and uniting the closure plates and sleeve in fixed relation, fastening rods passing through the rings and the inwardly directed lugs adjacent the spoke receiving member, and involute springs mounted between the sleeve and member on each side of the lugs and having their inner ends attached to the bolts and their outer ends secured to the fastening rods.

1,023,599. ELECTRIC TRAP. ISTVÁN TAKÁCS, Barberton, Ohio. Filed May 10, 1911. Serial No. 626,246. (Cl. 43—34.)



1. In an electric rat trap, a support having an upwardly projecting flange; a plurality of overlapping loops separated from each other and arranged within the planes of said flange and supported thereby in insulated relationship, said loops being connected to circuit connections extending through the flange.

2. In an electric rat trap, a support having a base and a flange projecting above the base to form a receptacle, a plurality of over-lapping loops separated from each other and arranged within the receptacle and supported thereby in insulated relationship, said loops being connected to circuit connections extending through said flange.

3. In an electric rat trap, a support having a base and a flange projecting above the base to form a receptacle, a plurality of overlapping wire loops separated from each other and arranged within the receptacle and supported thereby in insulated relationship, said loops being connected to circuit connections extending through said flange, the wire forming a loop being bent to provide a rod connecting the ends of the loop.

1,023,600. CONDENSER FOR SMELTER-FURNACE FUMES. CONSTANTINE E. M. TAMBACOPOLO, New York, N. Y. Filed Oct. 26, 1910. Serial No. 589,140. (Cl. 75—30.)



1. A condenser for smelter fumes, comprising a conduit for the passage of the smelter fumes, a separating chamber interposed in the conduit and having a curved partition extending from the top of the chamber to within a short distance of the bottom of the chamber, the inlet end of the conduit opening into the chamber near the top thereof at one side and the outlet end of the conduit leading from the opposite side of the chamber above the lower end of the said partition, a screen in the said outlet end of the conduit adjacent to the chamber, and a suction fan in the conduit in advance of the said screen.

2. A condenser for smelter fumes, comprising a conduit for the passage of the smelter fumes, a separating chamber interposed in the conduit and having a curved partition extending from the top of the chamber to within a short distance of the bottom of the chamber, the inlet end of the conduit opening into the chamber near the top thereof at one side and the outlet end of the conduit leading from the opposite side of the chamber above the lower end of the said partition, a screen in the said outlet end of the conduit adjacent to the chamber, a spraying pipe in the conduit for spraying steam on the said screen, and a suction fan in the conduit in advance of the said screen.

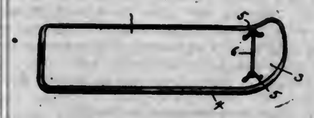
3. A condenser for smelter fumes, comprising a conduit and a series of washing and precipitating devices arranged in the conduit, one in front of the other, each washing and precipitating device having a well for containing a washing and precipitating liquid, a cylinder fitting into the said conduit and having a depending member extending into the well and terminating below the level of the liquid in the well, a valved plunger in the said cylinder adjacent to the end opposite that having the depending member, power means exterior of the conduit, and a connection between the said power means and the said plunger for actuating the latter.

4. A condenser for smelter fumes, comprising a conduit and a series of washing and precipitating devices arranged in the conduit one in front of the other, each washing and precipitating device having a well for containing a washing and precipitating liquid, a cylinder fitting into the said conduit and having a depending member extending into the well and terminating below the level of the liquid in the well, the entrance of a cylinder being connected with the well of a preceding washing and precipitating device, a valved plunger in the entrance end of the said cylinder, power means exterior of the conduit, and a connection between the said power means and the said plunger for actuating the latter.

5. A condenser for smelter fumes, comprising a conduit, a stack for containing in its base a washing liquid, a cylinder fitting the conduit adjacent the stack and having a depending member extending into the stack and terminating below the level of the liquid in the stack, a reciprocating valved plunger in the entrance end of the said cylinder, and spraying devices within the said stack above the level of the liquid in the base of the stack.

[Claims 6 to 8 not printed in the Gazette.]

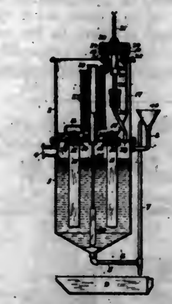
1,023,601. BEACH-COASTER. GEORGE W. SIMPSON, Pittsburgh, Pa. Filed Nov. 14, 1910. Serial No. 592,413. (Cl. 9—11.)



In a beach coaster, a wooden body formed from a relatively thin board having one end curved upward to form a head and a tube secured to the edges of the body and entirely surrounding said body.

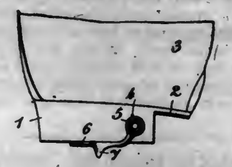
1,023,602. ELECTRIC STEAM-HEATING APPARATUS. JOHANN G. WALLMANN, Oakland, Cal., assignor, by mesne assignments, to Wallmann Electric Heater Company, San Francisco, Cal., a Corporation of California. Filed Sept. 8, 1910. Serial No. 580,279. (Cl. 219—40.)

1. In an electric water heater, a boiler having a casing thereon; a tube leading upwardly from said boiler into said casing, an escape valve connected to the upper end of said tube; an escape pipe leading upwardly from said valve; a cylinder of greater diameter than said escape pipe leading upwardly from said pipe; a piston in said cylinder, and a plug above said piston and operatively connected thereto, said plug having current conducting means extending downwardly therein and exposed to contact for transmitting the current into said casing.



2. In an electric water heater, a boiler having a casing provided with a top plate secured thereon; a tube leading upwardly from said boiler into said casing, a valve casing, a plug and a spring in said valve casing connected to said tube; a tube above said valve casing having its lower end opening into said valve casing; a cylinder opening into the upper end of said last mentioned tube; a piston in said cylinder; insulated pins projecting upwardly from said top plate; a plug above said piston and operatively connected thereto and having couplings engageable with said pins and wires leading to said couplings, and current conducting means leading downwardly from said pins and into said casing.

1,023,603. ICE-CREEPER. ERHARD WEGMANN-EGGMANN, Ennetbaden, near Baden, Switzerland. Filed Nov. 8, 1911. Serial No. 659,154. (Cl. 36—61.)



1. In an ice-creeper, a bow provided with spurs, eyes at the ends of the bow, and annular projections on the eyes mounted to turn in circular grooves of the heel.

2. In an ice-creeper, an elastic bow provided with spurs, eyes at the ends of the bow, and annular projections on the eyes mounted to turn in circular grooves of the heel, the projections being held in their positions by the elastic bow.

1,023,604. METAL-CASTING. EZECHIEL WEINTRAUB, Lynn, Mass., assignor to General Electric Company, a Corporation of New York. Filed June 30, 1911. Serial No. 636,270. (Cl. 75—62.)

1. The method of removing gases contained in molten metal with which boron does not readily combine which consists in adding thereto a boron material in an oxidizable state while said metal is molten.

2. The method of treating metal with which boron does not combine which consists in adding to the metal while molten a non-metalliferous boron material in a condition capable of combining with gaseous impurities, the amount of said material being slightly in excess of that required to eliminate the impurities.

3. The method of treating copper which consists in incorporating therein, while molten, a boron material in a condition capable of combining with oxygen and of a

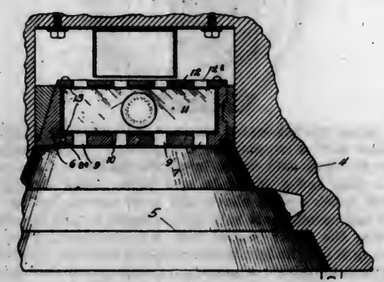
quantity sufficient to free the resulting product from undesired compounds and gases.

4. The method of treating molten copper bearing metal which consists in incorporating therewith boron material in a state of oxidation lower than boric anhydrid.

5. The method of treating molten copper containing impurities which consists in incorporating with said copper boron in a state of oxidation lower than boric anhydrid and proportioned to leave in the resulting product not to exceed one-tenth of one per cent. boron.

[Claims 6 to 12 not printed in the Gazette.]

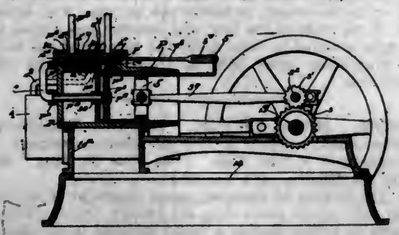
1,023,605. SAFE. PAUL E. WINDMUELLER, Chicago, Ill., assignor of one-fourth to William Seidel, Chicago, Ill. Filed Dec. 5, 1910. Serial No. 595,661. (Cl. 109—6.)



1. In a safe, an inner door formed of pliable material, a compartment within said door, openings through the front and rear walls of said door into said compartment, and a sealed receptacle containing a noxious substance retained within said compartment, said receptacle being formed of a material adapted to break when the safe is opened by force, whereby the noxious substance is released, substantially as described.

2. In a safe, a door provided with a compartment therein and with a grating upon the inner side thereof substantially equal in area to said side, a fragile receptacle within said compartment having two of its dimensions substantially equal to said grating, and a poisonous agent within said receptacle adapted when liberated to emanate through the said grating into the safe, substantially as described.

1,023,606. EXPLOSIVE-ENGINE. WILLIAM J. WRIGHT, Franklin, Pa. Continuation of application Serial No. 299,890, filed Feb. 7, 1906. This application filed May 1, 1911. Serial No. 624,288. (Cl. 123—59.)



1. In an explosion engine of the character described; a pair of working cylinders, each having an intake port and an exhaust port, a crank shaft, working pistons coupled to the crank shaft to reciprocate in alternate directions, a pump having a single discharge, a passage to each working cylinder intake coupled with the single discharge in the pump cylinder, a back check valve in each of said passages, an air and a working agent feed to the pump cylinder, a valve mechanism common to the air and the working agent feed, and an actuating means controlled by a moving part of the engine for shifting said valve to alternately lead the air and then the working agent to the pump and means within the pump cylinder for drawing in and holding an air charge and simultaneously forcing the working agent charge into the working cylinders alternately.

2. In an explosion engine of the character described in combination with a pair of working cylinders, each having a single intake port and an exhaust port and a pump mechanism which includes a means for forcing working agent alternately into the two explosion chambers and simultaneously drawing air into the pump cylinder as the working agent is discharged into the explosion chambers, a valve mechanism actuated from a movable part of the engine for alternately directing the air and working agent charges into the explosion chambers and an automatically actuating check valve in each passage from the pump cylinders to the intake ports of the explosion chambers, as set forth.

3. An explosion engine of the character described, comprising a pair of working cylinders, a piston in each cylinder, a drive shaft having a pair of diametrically opposite cranks with which the two working pistons connect, a pump mechanism constructed to simultaneously store an air charge as it expels a working charge and to expel the air charge as it stores a working charge, connections that joint the pump mechanism with the crank shaft for effecting two operations of said pump mechanism as either of the working pistons make a complete movement, and a valve mechanism automatically controlled from a moving part of the engine for leading the independent air and working charges from the pump alternately into one end of the working cylinders as set forth.

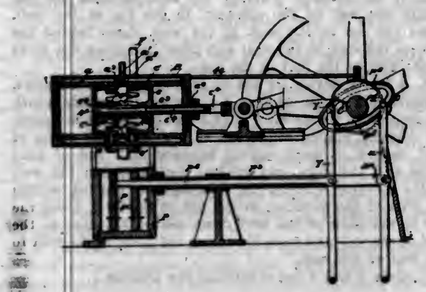
4. In an explosion engine of the character described, the combination with the crank shaft having diametrically oppositely projecting cranks, the pair of working cylinders closed at one end only, each having a single intake at the closed end, and an exhaust, of a means for storing up independent air and working charges, said means being connected with and actuated by the crank shaft and adapted to charge successively the independent air charge and then the independent working charge through the inlets of the working cylinders, the independent air and working charges first going to one working cylinder and then to the other cylinder, as set forth.

5. In an explosion engine of the character described, the combination with the crank shaft, the working cylinders and pistons, the latter being connected with the crank shaft to travel in opposite directions, each cylinder having an intake port at one end only, a main exhaust port, and a valved supplemental exhaust port, of a means for storing up independent charges of air and working agent, and expelling said air and working agent charges successively first through the intake port of one working cylinder and then through the intake port of the other cylinder and a means actuated from a moving part of the machine for tripping the valve for the supplemental exhaust port at a predetermined time after the main exhaust has been opened and again closed by the movement of the working piston, as set forth.

[Claims 6 and 7 not printed in the Gazette.]

1,023,607. EXPLOSIVE-ENGINE. WILLIAM J. WRIGHT, Franklin, Pa. Continuation of application Serial No. 299,892, filed Feb. 7, 1906. This application filed May 1, 1911. Serial No. 624,289. (Cl. 123—61.)

1. A gas engine, comprising a pair of working cylinders, pistons therein arranged to receive an explosive impulse at each end of the cylinders, the crank shaft, a pump including a common cylinder and a pair of coöperating pistons in communication with the opposite explosion ends of both working cylinders and connected with the crank shaft, valve mechanisms for controlling the working agent feed to the pump and from the pump to the cylinders and means actuated from the engine shaft for shifting the valve mechanism to open communication between the pump and the explosion ends of the working cylinders whereby to effect an explosion at each quarter revolution of the engine shaft.



2. An explosive engine comprising the following elements in combination; a pair of like constructed working cylinders and pistons therefor, a pump including a cylinder common to both working cylinders and a pair of coöperating pump pistons within said pump cylinder, the crank shaft, connections that join the two working pistons to the crank shaft, each of the working cylinders having a valved intake port at each end, mechanical devices geared with a crank shaft for opening the valves for the several intake ports for the working cylinders at predetermined times, gear connections that join the pump pistons with the crank shaft to effect two reciprocations thereof to one reciprocation of either of the working pistons, a working agent feed, valved leads therefrom to the pump, and means actuated from the crank shaft for opening the valves in the said leads at predetermined times, substantially as shown and described.

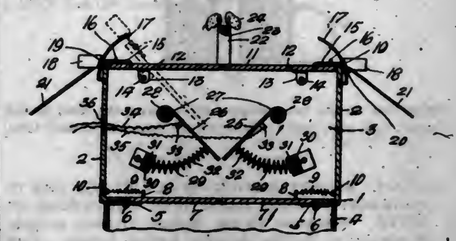
3. An explosive engine comprising a pair of working cylinders, their pistons, the crank shaft and connections joining said shaft and the working pistons set on quarters, said working cylinders each having a valved intake at each end, and centrally disposed exhausts controlled by the working pistons, automatic means for actuating the valves for the intakes at predetermined times, a working agent feed, pump mechanism constructed to expel a charge into the working cylinder and simultaneously draw in a new charge for that cylinder end next exhausting, and automatically acting valve mechanism for controlling the direction of the agent feed into the pump mechanism, said pump mechanism including a common pump cylinder and a pair of coöperating pistons.

4. The combination with two working cylinders, each having an automatic valve controlled intake in each end, a pair of exhausts centrally thereof controlled by the working pistons, the crank shaft and the working pistons; of a short stroke pump mechanism comprising a cylinder, two piston heads; said cylinder having a port at each end and one midway thereof, a valved lead pipe that joins the central port with the opposite ends of one working cylinder, a second valved lead pipe that connects the end ports with the ends of the other cylinder, a working agent feed pipe connected to both lead pipes, controlling valves in said feed pipe, means actuated by the crank shaft for reciprocating the two piston heads in the pump cylinder in opposite directions, and means operated from the engine shaft for actuating the several valves for the lead to the working cylinder intakes and in the feed pipe at predetermined intervals, as set forth.

5. In an explosive engine of the character described, the combination with the two working cylinders, their pistons and the crank shaft, said cylinders being arranged to have an explosion in each end; of a short stroke pump mechanism having a central valved lead to the opposite ends of one working cylinder, a valved lead connected with each end of the other working cylinder and each end of the pump cylinder, a pair of opposing piston heads in the pump cylinder, and means actuated from the crank shaft for actuating the opposing pistons to make two complete strokes to one stroke of either working piston, and a valved working agent feed in communication with the valved pipe leads to the pump cylinder, as set forth.

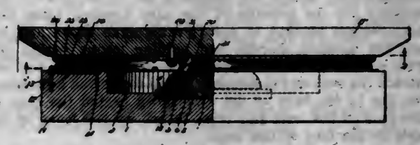
[Claim 6 not printed in the Gazette.]

1,023,608. ELECTRIC RAT-TRAP. WILLIAM ZANIEWSKI, Boston, Mass. Filed Dec. 9, 1911. Serial No. 664,698. (Cl. 43—84.)



In an electric rat trap, the combination with a suitable source of electrical energy, of a tank, a box located upon said tank and in communication therewith, tiltable top plates forming the top of said box, tiltable contact plates arranged in said box and in a normally open circuit with said source of electrical energy, guide bars arranged in said box, headed curved rods carried by said plates and extending into said bars, coiled springs encircling said rods between said bars and said contact plates, said headed rods capable of engaging said bars and constituting stops to arrest the movement of said contact plate to prevent the engagement thereof with each other, and means adapted to retain said tiltable top plates normally closed.

1,023,609. BALL-BEARING PIVOTED AND BALANCED DEVICE. LUTHER BADGER, St. Johns, Oreg. Filed Mar. 3, 1911. Serial No. 611,993. (Cl. 64—63.)

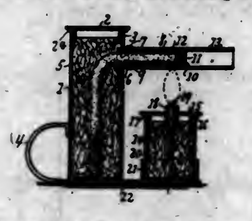


In a construction of the class described, a foundation member substantially circular in outline, a bed plate of integral construction at a central portion, the said bed plate being provided with a plurality of circular concentric steps, the outer portion of the said foundation member being provided with an annular ring of integral construction, the ring having concentric steps, together with a rotatable member having a concave cap at the central portion provided with circular concentric steps in its concave surface, and rotatable balls in engagement with the said steps and the steps on the said bed plate, the outer portion of the said rotatable member being provided with a circular member of concave construction having a plurality of circular concentric steps on the concave portion, together with balls resting between the said steps of the said ring and the steps on the concaved portion of the said circular member whereby a substantially frictionless balanced construction is produced.

1,023,610. TORCH. OTTO BARTEL, New York, N. Y. Filed Mar. 30, 1911. Serial No. 617,807. (Cl. 158—85.)

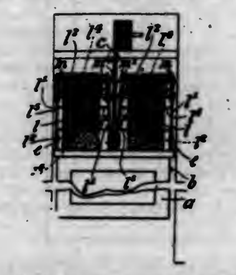
A torch comprising a fluid containing tank provided with a threaded opening, a wick tube inserted into the opening, a burner tube encircling the tube and having an open end projecting from the wick tube, a diaphragm with an opening located at the end of the wick tube for regulating

the flow of vapor into the burner tube; combined with a supplemental fluid containing tank having a burner located



below the burner tube adapted to vaporize the fluid in the burner tube and create a flame at the open end of said tube.

1,023,611. SAFETY DEVICE OR GUARD FOR USE IN CONNECTION WITH PASSENGER ELEVATORS OR LIFTS. BENJAMIN BATES, Belfast, Ireland, assignor of one-half to Maurice Goldring, Belfast, Ireland. Filed Aug. 21, 1911. Serial No. 645,200. (Cl. 187—55.)



1. A safety device for use in connection with elevators, comprising a guard made in two sections having a space therebetween, means for widening the space between the sections for the passage of the cage hoisting ropes and each section secured to the elevator cage above and below the opening therein, and guiding means within the well of the elevator whereby the said sections are led, within the well of the elevator, to the top of the well, along the top to the back of the well, down behind the cage to the foot of the well and from thence up the front of the well to the foot of the cage.

2. A safety device for use in connection with elevators, comprising a guard made in two sections having a space therebetween for the passage of the cage hoisting means, each section being secured to the elevator cage above and below the opening therein, means for widening the space between the sections in the vicinity of the cage hoisting means, and rotary guiding members within the elevator well around which members the said sections are led, within the well of the elevator, to the top of the well, along the top to the back of the well, down behind the cage to the foot of the well and from thence up the front of the well to the foot of the cage.

3. A safety device for use in connection with elevators comprising a guard made in a plurality of sections which are secured to the elevator cage above and below the opening therein, means for widening the space between the sections in the vicinity of the cage hoisting means, yielding connections between the cage and the sections of the guard, and guiding means within the well of the elevator whereby the said sections are led, within the well of the elevator, to the top of the well, along the top to the back of the well, down behind the cage to the foot of the well and from thence up the front of the well to the foot of the cage.

4. A safety device for use in connection with elevators, comprising a guard made in a plurality of sections which are secured to the elevator cage above and below the opening therein, chains connected to the marginal edges of each section, a yielding connection between each end of each chain and the cage, and guiding means within the well of the elevator whereby the said sections are led, within the well of the elevator, to the top of the well, along the top to the back of the well, down behind the cage to the foot of the well and from thence up the front of the well to the foot of the cage.

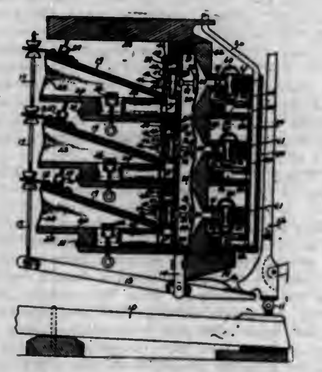
5. A safety device for use in connection with elevators, comprising a guard made in a plurality of sections which are secured to the elevator cage above and below the opening therein, chains connected to the marginal edges of each section, a spiral spring between each end of each chain and the cage, and guiding means within the well of the elevator whereby the said sections are led, within the well of the elevator, to the top of the well, along the top to the back of the well down behind the cage to the foot of the well and from thence up the front of the well to the foot of the cage.

[Claims 6 and 7 not printed in the Gazette.]

1,023,612. PROCESS FOR THE MANUFACTURE OF GALVANIC METAL REPRODUCTIONS OF ARTICLES OF THE PLASTIC ARTS. CARL BENSINGER, Mannheim, Germany. Filed Sept. 4, 1908. Serial No. 451,750. (Cl. 204—8.)

The hereindescribed process for the manufacture of galvanic reproductions of articles of the plastic art, which consists in dividing the selected model, making suitable molds from the parts thereof, blowing celluloid in these forms to produce a plurality of partial patterns of celluloid, uniting these celluloid parts to form a complete copy of the original, then coating said copy with a conducting substance and electro-depositing metal on the said conducting coating.

1,023,613. PNEUMATIC PIANO. WILLIAM G. BETZ, Steger, Ill., assignor to Steger & Sons Piano Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 11, 1910. Serial No. 554,850. (Cl. 84—178.)



1. In a pneumatic piano, the combination of a main suction chamber extending transversely of the piano, a plurality of primary suction chambers extending rearwardly therefrom and arranged one above the other and each in communiction at intervals with said main suction chamber, a valve for controlling each communication between said suction chambers and the main suction chamber, a vertical plate extending transversely of the piano and secured to the rear sides of said suction chambers and provided with a vertically disposed passageway in communication with said primary suction chamber near each valve, and a tracker board connection with each of said vertically disposed passageways in said plate.

2. A pneumatic piano including a plurality of horizontal rows of power pneumatics one located above the other, a main suction chamber extending continuously throughout the length of the piano with separate communications therefrom with each of said power pneumatics, a secondary valve controlling each of said communications, secondary pouches in the rear portion of said main suction chamber for actuating said secondary valves, a pouch port immediately to the rear of each of said secondary pouches, a plurality of primary valve chambers extending continuously throughout the length of the piano and immediately to the rear of said main suction chamber, one for each horizontal row of secondary valves and in communication with all of the pouch ports for such row, a primary valve for controlling the communication of each secondary pouch port with a primary valve chamber, and a primary pouch port in communication with the tracker bar.

3. A pneumatic piano including a main suction chamber with valve chambers in the front wall thereof, a removable plate secured to said front wall over each valve chamber therein, said plate having upper and lower openings through it, a valve in said valve chamber opposite said upper opening in said plate, means mounted in connection with said plate and located in said upper opening for regulating said valve, a power pneumatic with the base thereof thickened in the rear portion which portion is provided with a passageway leading through it to the power pneumatic, and screws extending horizontally through said thickened portion of the base of the power pneumatic for securing the same against said plate and to said main suction chamber so that the passageway through the lower part of the power pneumatic will register with the lower opening in said plate and be in communication with the valve chamber and the secured end of said power pneumatic be below the other opening in said plate, whereby the means for adjusting the valve will be readily accessible.

1,023,614. BALL-BEARING. JOSEPH BIERSCHENK, Ivry Port, France. Filed Oct. 27, 1905. Serial No. 284,614. (Cl. 64—59.)

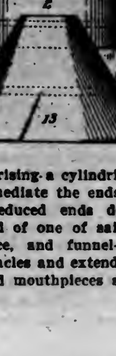


A ball bearing comprising two members concentrically arranged with respect to each other and having grooves in their adjacent faces, the depth and width of the groove in one of said rings being greater than that of the other of the said rings, the space between the adjacent faces of the rings adjacent the grooves being slightly less than the diameter of the balls, balls occupying the said raceway, and a ball-holding annulus having a radial depth less than the space between said adjacent ring faces and provided with pockets into which the balls are placed prior to the assembling of the bearing parts and having opposite openings through which the balls project to engage the grooves, the outer walls of the openings having an inwardly directed ball-retaining flange.

1,023,615. PILE-DRIVING HEAD. CARL P. BOHLAND, Seattle, Wash. Filed Aug. 19, 1911. Serial No. 644,982. (Cl. 61—37.)

1. A driving-head for sheet steel piling comprising a vertically disposed arm having a hook at its upper end for extending over and taking in the upper end of a metal sheet piling, and a hammer-receiving cushioned block carried by said arm at a point some distance above its lower end, said arm having a bearing surface engaging the piling for some distance beneath the block.

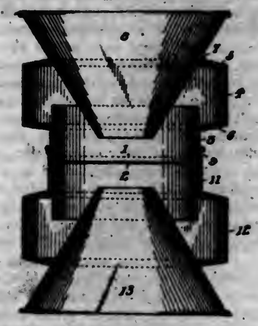
2. A driving-head for sheet steel piling comprising a vertically disposed arm hooked at its upper end to engage the upper end of a sheet piling and bent outwardly and diagonally upward forming an extension at its lower end, a seat secured to said arm and its extension, a blow-receiving block, and a cushion therefor interposed between the block and the seat.



3. A driving-head for sheet steel piling comprising a vertically disposed arm hooked at its upper end to engage the upper end of a sheet piling, said arm forming a guideway, a block mounted on said arm and projecting laterally therefrom, and a hammer guided by said arm and designed to engage said block.

4. A driving-head for sheet steel piling, comprising a vertically disposed member, parallel bars secured to the opposite side of the member to form in connection with the latter a vertical guideway, said bars being hooked at their upper ends to engage a piling sheet, and said member and bars being outwardly and upwardly extended at their lower ends, plates secured to said extension and to said bars forming a seat, a block, a cushion therefor interposed between the block and said seat, and means for securing the cushion to the seat.

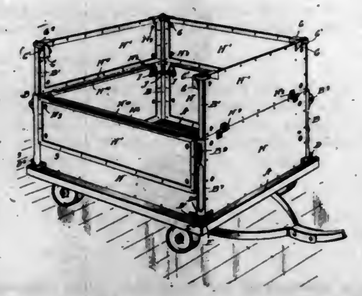
1,023,616. CUSPIDOR. MIKE BOLDIZS, Sterling, Ill. Filed Oct. 30, 1911. Serial No. 657,443. (Cl. 4—38.)



1. A cuspidor comprising a cylindrical center-piece having a partition intermediate the ends thereof, cylindrical receptacles having reduced ends detachably connected together with the end of one of said receptacles fitting upon said center-piece, and funnel-shaped mouthpieces carried by said receptacles and extending into said center-piece with one of said mouthpieces serving as a base of said cuspidor.

2. A cuspidor comprising a cylindrical center-piece, a partition arranged intermediate the ends thereof, cylindrical receptacles having reduced ends inclosing said center-piece, a bayonet slot and pin connection between the reduced ends of said receptacle and funnel-shaped mouth-pieces carried by said receptacles and extending into said center-piece in proximity to the partition thereof, with one of said mouthpieces serving as a base for said cuspidor.

1,023,617. TRUCK. SHEARMAN BOTTERSE, Washington, D. C. Filed May 17, 1911. Serial No. 627,730. (Cl. 21—65.)



1. The combination, substantially as described, of a platform having openings formed through it at its corners, standards having base sections provided with foot plates and with tenons projecting below the same through the openings in the platform, means engaging said tenons for securing the standards in position, the standards being made tubular and provided with longitudinal slots and at their upper ends with axial openings, top sections sliding through the axial openings in the base sections and provided with collars fitting and sliding within the base sections, box latches carried at the upper ends of the top sections of the standards, bearing frames mounted on the foot plates of the standards, sides having upper and lower sections hinged together and adapted to be engaged by the latches at the upper end of the sliding standard sections, pintles projecting from the lower sections of the sides and engaging with the bearing frames and fastening means carried by the main sections of the standards for engagement with the lower sections of the sides, all substantially as and for the purposes set forth.

2. The combination of a platform, standards thereon, bearing frames at the lower ends of the standards, sides provided with pintles engaging with the bearing frames and movable freely into and out of such engagement and means carried by the standards for holding the sides, when raised, to upright position, substantially as set forth.

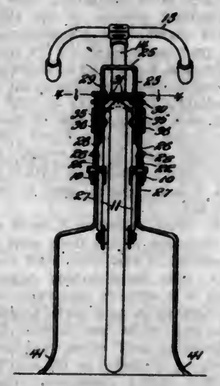
3. The combination, substantially as described, of a platform, sides hinged at their lower ends and composed of upper and lower sections adapted to be adjusted with the upper sections extended above or folded down against the lower sections, standards at the meeting ends of the sides and means carried by the standards for securing the sides in extended or folded position, substantially as set forth.

4. The combination of a platform, sides composed of upper and lower sections hinged together, standards composed of upper and lower sections slidable one along the other and fastening means for securing the sides in vertical position in connection with the standards, substantially as set forth.

5. The combination of the sides composed of sections adjustable relatively to each other and standards composed of base sections and upper sections sliding in the base sections and latch devices carried by the sliding sections for engaging with the sides, substantially as set forth.

[Claims 6 to 12 not printed in the Gazette.]

1,023,618. VEHICLE-SUPPORT. JOHN BOWRON, Roanoke, Va. Filed June 16, 1911. Serial No. 633,510. (Cl. 208—85.)



1. In a vehicle support the combination of a frame for attachment to the fork of the vehicle, the said frame being provided at its upper end with a series of notches, a plurality of supporting bars slidably mounted on the said frame and movable into positions above and below the tread of the vehicle wheel, a cross plate secured to the said supporting bars and slidable on the frame, locking levers mounted on the said cross plate and adapted to engage the notches on the said frame to retain the supporting bars in rigid position, a brake bar mountel to operate with the said supporting bars to engage the tread of the vehicle wheel and a retaining bar mounted to operate with the said supporting bars to engage the frame of the vehicle when the supporting bars are in supporting position.

2. In a vehicle support the combination of a frame for attachment to the fork of the vehicle, the said frame being provided at its upper end with a series of notches, a plurality of supporting bars slidably mounted on the said frame and movable into positions above and below the tread of the vehicle wheel, a cross plate secured to the said supporting bars and slidable on the frame, spring controlled locking means mounted on the said cross plate and adapted to engage the notches on the said frame to retain the supporting bars in rigid position, a brake bar mounted to operate with the said supporting bars to engage the tread of the vehicle wheel and a retaining bar mounted to operate with the said supporting bars to engage the frame of the vehicle when the supporting bars are in supporting position.

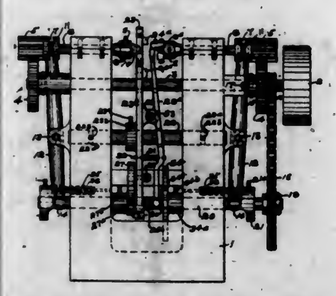
3. In a vehicle support the combination of a frame for attachment to the fork of a vehicle, supporting bars mounted to slide on the said frame and movable into supporting or nonsupporting position, a brake bar operable with the supporting bars to engage the tread of the vehicle wheel when the supporting bars are in supporting position, a retaining bar operable with the supporting bars to engage the frame of the vehicle when the supporting bars are in supporting position and means for retaining the supporting bars in supporting or non-supporting position.

4. In a vehicle support the combination of a frame for attachment to the fork of a vehicle, supporting bars mounted to slide on the said frame and movable into supporting or non-supporting position, a brake bar operable with the supporting bars to engage the tread of the vehicle wheel when the supporting bars are in supporting position, a retaining bar operable with the supporting bars to engage the frame of the vehicle when the supporting bars are in supporting position and locking means for retaining the supporting bars in supporting or non-supporting position.

5. In a vehicle support the combination of a frame for attachment to the fork of a vehicle, supporting bars mounted to slide on the said frame and movable into supporting or non-supporting position, a brake bar operable with the supporting bars to engage the tread of the vehicle wheel when the supporting bars are in supporting position, a retaining bar operable with the supporting bars to engage the frame of the vehicle when the supporting bars are in supporting position and spring actuated locking means for retaining the supporting bars in supporting or non-supporting position.

[Claims 6 to 10 not printed in the Gazette.]

1,023,619. MACHINE FOR CUTTING HAND-HOLES. CHARLES L. BRIGGS, Attleboro, Mass. Filed Nov. 27, 1911. Serial No. 662,739. (Cl. 144—11.)



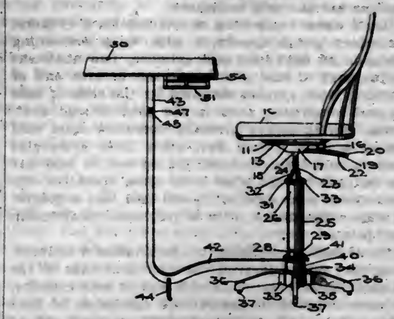
1. In a machine of the type described, the combination with cutter shafts standing in alinement and their inner ends spaced from each other, heads on said ends, a hollow auger in one head, a bit in the other of a size to pass into said auger, and mechanism for rotating said shafts and for moving them longitudinally inward and outward; of a work-holding plate having an oval hole surrounding one cutter and stops adjacent said hole, and a gripper jaw for pressing the work toward said plate and retracting it at intervals.

2. In a machine of the class described, the combination with a cutter-shaft and its tool; of a work holding plate having an oval hole surrounding the tool and stops adjacent said hole, a pivoted arm carrying said plate, a cam shaft having a cam acting on said arm, a gripper jaw opposite said plate, an arm carrying said jaw and pivoted to the work-holder arm, a spring for normally separating the lower ends of these arms, and a wide-faced cam on said shaft having at one point a radial projection for moving the gripper arm to temporarily release the gripper jaw from said plate.

3. In a machine of the class described, the combination with two alined cutter-shafts, a tubular cutter carried by one shaft and a solid bit by the other, and mechanism for rotating said shafts and for moving them inward and outward; of a work-holding plate having an oval hole surrounding one cutter and stops adjacent said hole, a pivoted arm carrying said plate, a cam shaft having a cam acting on said arm, a gripper jaw, and means for pressing the jaw toward said plate to grip the work and retracting it at intervals.

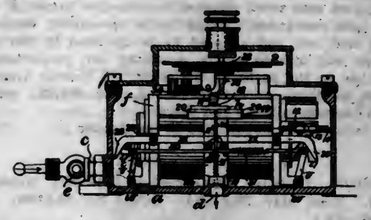
4. In a machine of the class described, the combination with two alined cutter-shafts, a tubular cutter carried by one shaft and a solid bit by the other, and mechanism for rotating said shafts and for moving them inward and outward; of a work-holding plate having an oval hole surrounding one cutter and stops adjacent said hole, a pivoted arm carrying said plate, a cam shaft having a cam acting on said arm, a gripper jaw opposite said plate, an arm carrying said jaw and pivoted to the work-holder arm, a spring for normally separating the lower ends of these arms, and a wide-faced cam on said shaft having at one point a radial projection for moving the gripper arm to temporarily release the gripper jaw from said plate.

1,023,620. COMBINED CHAIR AND DESK ATTACHMENT. JOSEPH E. BURGH, Denver, Colo. Filed Feb. 18, 1910. Serial No. 544,538. (Cl. 155—24.)



A tilting chair comprising a seat, a bracket formed from a single piece of metal and comprising a base portion being cutaway longitudinally to form tongues, said tongues being bent inwardly for engagement with the seat, the ends of said bracket being extended upwardly and at an angle to the base portion and secured to the seat, an arm having a pair of upturned parallel flanges adapted to rock within the cut-away portion of the base, said flanges being pivotally connected to the inwardly bent tongues of the base portion, an extension formed integral with the arm, a spring arranged between the extension and one of the extended ends of the bracket, means for holding the spring against accidental displacement, a stem secured to the arm and means for adjustably supporting said stem.

1,023,621. LIQUID-METER. DANIEL CAHILL, Belfast, Ireland. Filed Sept. 15, 1910. Serial No. 582,236. (Cl. 73—30.)



1. A liquid meter comprising in combination, a cylinder, a reciprocatory piston therein, a slide valve controlling the admission of fluid into said cylinder, two abutment rods in the path of said piston, one rod in each end of said cylinder, lever systems on the ends of said cylinder and comprising lever arms in the paths of said abutment rods, a reciprocatory bar, side lever arms also comprised in said lever syatems, projections on said bar lying in the path of said side lever arms, operative connections between said slide valve and said bar, diaphragms for packing said abutment rods, said diaphragms being distensible toward both sides of the planes in which their edges are fixed, indicators, and operating means between said reciprocatory bar and said indicators.

2. A liquid meter comprising in combination, a cylinder, a reciprocatory piston therein, a slide valve controlling the admission of fluid into said cylinder, two abutment rods in the path of said piston, one rod in each end of said cylinder, lever systems comprising arms in the path of said abutment rods, a reciprocatory bar, side lever arms also comprised in said lever systems, projections on said bar and lying in the path of said side lever arms, operative connections between said slide valve and said bar, a locking member, means on said slide valve to normally interlock with said locking member, side arms

opposite to the side lever arms of said lever systems, operative connections between said side arms and said locking member, indicators, and operative means between said reciprocatory bar and said indicators.

3. A liquid meter comprising in combination a cylinder, a reciprocatory piston therein, a slide valve controlling the admission of fluid into said cylinder, two abutment rods in the path of said piston, one rod in each end of said cylinder, lever systems mounted on the ends of said cylinder and comprising arms in the path of said abutment rods, locking means normally operative upon said slide valve, a reciprocatory bar, other lever arms also comprised in said lever systems, projections on said bar lying in the path of said other lever arms, operative connections between said slide valve and said bar, a pointer on said slide valve, and a scale in indicative relationship with said pointer.

4. A liquid meter comprising in combination a cylinder, a reciprocatory piston therein, two abutment rods in the path of said piston, one rod in each end of said cylinder, a slide valve adapted to control the admission of fluid into said cylinder, an oscillatory shaft on each end of the cylinder, each of said shafts carrying three arms, the intermediate one of which lies in the path of a corresponding abutment rod, a reciprocatory bolt, means on said valve to normally interlock with said bolt, two armed rocking levers operatively connected with said bolt and adapted to be operated by the arms on one end of said shafts, a sliding bar, projections on the latter in the paths of the respective outside arms opposite to those previously named, and driving connections between said bar and said valve.

5. A liquid meter comprising in combination, a cylinder, a reciprocatory piston therein, two abutment rods in the path of said piston one rod in each end of said cylinder, a valve adapted to control the admission of fluid into said cylinder, an oscillatory shaft on each end of the cylinder, each of said shafts carrying three arms the intermediate one of which lies in the path of a corresponding abutment rod, a flexible link connected between corresponding end arms of the shafts, a reciprocatory bolt, means on said valve adapted to normally interlock with said bolt, two-armed rocking levers operatively connected with said bolt and adapted to be operated by the arms on one end of said shafts, a sliding bar, projections on said bar in the paths of the respective outside arms opposite to those previously named, and driving connections between said bar and valve.

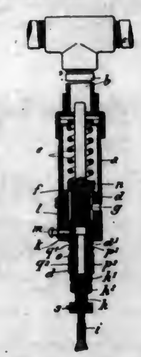
[Claims 6 to 9 not printed in the Gazette.]

1,023,622. TORCH. CHRISTIAN L. CHESTER, Monessen, Pa. Filed Mar. 20, 1911. Serial No. 615,690. (Cl. 158—33.)



A torch comprising a body portion for containing a hydrocarbon, a pipe arranged within and projecting from said body portion and having that part within the body portion enlarged and terminating in a goose neck, said enlarged part of said pipe holding a supply of hydrocarbon to permit of the operation of the device when it is inverted, said goose neck provided with an inlet, a regulatable burner connected to the upper portion of said pipe, a tool holder for positioning a tool relative to the burner, and an air pump carried by said body portion and opening into the upper end thereof.

1,023,623. AUTOMATIC EMERGENCY-BRAKE. MAX CHOUMBROT, Paris, France. Filed Aug. 5, 1911. Serial No. 642,446. (Cl. 188—2.)



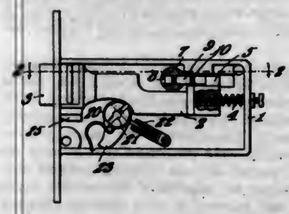
1. An apparatus for automatically applying the brakes in the event of an abnormal shock or the breakage of one of the car case supporting parts, comprising a valve the casing of which is secured on a vehicle and in communication with the brake pipes, an opening into the lateral surface of said casing, a slidable valve inside of said casing, a hollow valve rod connected to said valve by means of an interposed threaded sleeve, said valve rod extending downwardly so that its lower end is at a small distance above the lubricating box or the axle, in such a manner that in event of a violent shock the lubricating box or the axle strikes said valve rod which is pushed upward together with the valve thus connecting the interior of the casing with the atmosphere through the hole into the valve casing.

2. An apparatus for automatically applying the braking on the event of an abnormal shock or the breakage of one of the car case supporting parts, comprising a valve the case of which is secured on a vehicle and in communication with the brake pipe, an opening into the lateral surface of said casing, a slidable valve inside of said casing, a hollow valve rod connected to said valve by means of an interposed threaded sleeve, said valve rod extending downwardly so that its lower end is at a small distance above the lubricating box or the axle, and a set screw for securing said rod in adjusted position.

3. Apparatus for automatically applying the brakes on the event of an abnormal shock or the breakage of one of the car case supporting parts, comprising a valve the case of which is secured on a vehicle and in communication with the brake pipe, an opening into the lateral surface of said casing, a slidable valve inside of said casing, a hollow valve rod connected to said valve by means of an interposed threaded sleeve, said valve rod extending downwardly so that its lower end is at a small distance above the lubricating box or the axle, said rod being secured in its position by means of a set screw in such a manner that the adjustment cannot be put out of order accidentally nor by malevolence, the outer middle part of said valve being provided with grooves in which engages a spring controlled pawl preventing the valve from falling back after having been pushed in its raised position, said pawl being provided with a button for disengaging it, allowing the valve of falling back in its normal position.

4. An apparatus for automatically applying the brakes in the event of an abnormal shock or the breakage of one of the car case supporting parts comprising a valve the casing of which is secured on a vehicle and in communication with the brake pipe, an opening into the lateral surface of said case, a centrally perforated valve inside of said case, grooves on the outer surface of said valve, said grooves being engaged by a spring controlled pawl, a button for disengaging said pawl from the grooves, a hollow, downwardly extending valve rod connected to said valve by means of an interposed threaded sleeve, said rod being secured in its position on the sleeve by a set screw, an opening in said sleeve, said opening being located between two circular grooves disposed in the interior surface of the valve and communicating with the atmosphere so as to correspond to one of said grooves if it is displaced into an undesired position.

1,023,624. LATCH. ROSWELL F. COOK, New York, N. Y. Filed Apr. 1, 1911. Serial No. 618,481. (Cl. 70—29.)



In a device of the character described, a casing having spindle openings in the sides thereof with rearwardly extending slots, a spring pressed bolt slidably mounted in the casing and having a lug projecting therefrom and guided in one of the said slots, a knob spindle slidable through the spindle openings and having a longitudinal slot therein, and a T-shaped lever pivoted in the other slot and fitting within the slot of the spindle with the heel thereof engaging the said lug.

1,023,625. WINDOW-SCREEN. GEORGE W. COREY, San Francisco, Cal. Filed Dec. 5, 1910. Serial No. 595,685. (Cl. 156—14.)

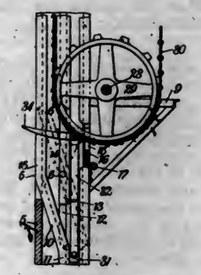


1. In combination with fixed top and bottom horizontal headed fastening devices arranged in pairs at opposite sides of a window, of a screen provided at opposite sides of the top and bottom of its frame with upper and lower slots having entrances at their lower ends to permit the headed fastening devices to be introduced into the upper and lower slots for detachably securing the screen in position, the lower slots being longer than the upper slots to permit the screen to be raised sufficiently to disengage the upper fastening device from the upper slots and to be swung outwardly at the top without disconnecting the lower portion of the screen from the window frame, the lower fastening devices forming pintles for the screen when the same is swung outwardly at the top.

2. In combination with fixed top and bottom horizontal headed fastening devices arranged in pairs at opposite sides of a window, of a screen provided at opposite sides of the top and bottom of its frame with upper and lower slots having entrances at their lower ends to permit the headed fastening devices to be introduced into the upper and lower slots for detachably securing the screen in position, said slots being inclined downwardly and inwardly for causing the screen to wedge itself against the window, and the lower slots being longer than the upper slots to permit the screen to be raised sufficiently to disengage the upper fastening device from the upper slots and to be swung outwardly at the top without disconnecting the lower portion of the screen from the window frame, the lower fastening devices forming pintles for the screen when the same is swung outwardly at the top.

3. In combination with fixed upper and lower horizontal headed fastening devices arranged in pairs at opposite sides of a window frame, of a screen having a frame composed of bars of rolled sheet metal and provided in its opposite sides at the top and bottom with upper and lower inclined slots adapted to cause the screen when engaged with the fastening devices to wedge itself against the window, and having lower entrances located at the lower ends of the slots and consisting of relatively short upright slots formed in the front portion of the sides of the screen frame, and short horizontal connecting slots or branches extending from the lower ends of the inclined slots to the said short upright slots and connected with the latter at points intermediate of the ends thereof, the lower slots being longer than the upper slots to permit the screen to be raised sufficiently to disengage the upper fastening devices from the upper slots and the screen to be swung outwardly without disconnecting the lower portion of the screen from the lower fastening devices, which form pintles for the screen when the same is swung outwardly at the top.

1,023,626. ELEVATOR. WILLIAM A. CRICHTON, Paris, Ontario, Canada. Filed July 1, 1911. Serial No. 636,371. (Cl. 193—8.)



1. In an elevator two guideways with a passage connecting the guideways, an arm, a fork secured to the arm, two guides spaced apart on the arm for traveling in one of the guideways, a pulley, a belt disposed around the pulley, and means connecting the arm with the belt for moving the two guides in one of the guideways, and one of the guides over the pulley and the other guide through the passage to the other guideway.

2. In an elevator, two guideways with a passage connecting the guideways, a pivoted switch commanding the passage, an arm, a fork secured to the arm, two guides spaced apart on the arm for traveling in one of the guideways, a pulley, a belt disposed around the pulley,

and means connecting the arm with the belt for moving the two guides in one of the guideways to the switch, and one of the guides against the switch and around the pulley to open the switch to permit the other guide to travel through the passage to the other guideway.

3. In an elevator a frame having two guideways with an intervening member, a switch pivoted to the frame and normally forming a continuation of the intervening member, two guide members normally disposed in one of the guideways, one in advance of the other, an arm connecting the guide members, a fork secured to the arm, and means to press the leading guide member against the switch to open the switch and permit the following guide member to pass from one guideway to the other.

4. In an elevator a frame having two guideways with an intervening member, a switch pivoted to the frame and normally forming a continuation of the intervening member, two guide members normally disposed in one of the guideways, one in advance of the other, an arm connecting the guide members, a fork secured to the arm, means to press the leading guide member against the switch to open the switch and permit the following guide member to pass from one guideway to the other, and resilient means for holding the switch normally in position.

5. In an elevator a frame having two guideways with an intervening member and bearings, a switch mounted on the frame, movable relatively thereto, and normally forming a continuation of the intervening member, two guide members disposed in one of the guideways, one in advance of the other, an arm connecting the guide members, a fork secured to the arm, a shaft journaled in the bearings, a wheel mounted on the shaft, a belt disposed around the wheel, and means for connecting the arm with the belt to move the leading guide member against the switch to open the switch for the other guide member.

[Claims 6 to 14 not printed in the Gazette.]

1,023,627. ARMOR FOR BATTLESHIPS. HARRIET G. DAWSON, Atlanta, Ga. Filed May 9, 1911. Serial No. 625,963. (Cl. 114—13.)



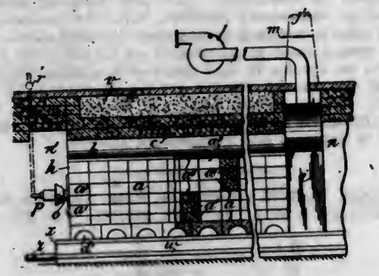
1. An armor comprising an inner steel plate, superimposed elastic belts embracing the plate, each belt comprising identically constructed sections having mitered end portions, and elastic fastenings connecting the belts with the plate and also connecting the sections with each other.

2. An armor comprising a metal plate, an elastic surface at one side of the plate, casings extending into the elastic surface and provided with cap portions, bolts extending through the metal plate and having piston-like portions disposed in the casings, and springs interposed between the caps of the casings and the said piston-like portions of the bolts.

1,023,628. OVEN FOR USE IN THE MANUFACTURE OF TILES, POTTERY, AND THE LIKE. CONRAD DRESSLER, Earl's Court, London, England. Filed Feb. 15, 1911. Serial No. 608,697. (Cl. 26—144.)

1. A tunnel oven comprising a main chamber through which goods to be heated can be caused to travel, and a heating chamber that is structurally independent of the side walls and roof of the oven and is arranged longitudinally within said main chamber at one side thereof and at a distance from the adjacent side and roof of said main chamber so as to form therewith an air circulating path extending around said heating chamber in the vertical direction.

2. A tunnel oven comprising a main chamber through which goods to be heated can be caused to travel, and heating chambers supported longitudinally within and at opposite sides of a portion of the main chamber and arranged at a distance from the side walls and roof thereof, said heating chambers being structurally independent of and capable of longitudinal expansion independently of the main chamber.



3. A tunnel oven comprising a main chamber through which goods to be heated can be caused to travel, heating chambers arranged longitudinally within and structurally independent of the main chamber at opposite sides of the passageway therethrough for goods and at a short distance from the side walls and roof of such main chamber so that heated air can circulate around such heating chamber, means for supplying combustible material with air to one end portion of each heating chamber and exhausting means for withdrawing products of combustion from the other end of each heating chamber.

4. A tunnel oven comprising a main chamber through which goods to be heated can be caused to travel, heating chambers arranged longitudinally within and structurally independent of said main chamber and at a distance from the side walls thereof, said heating chambers being each composed of slabs or blocks of refractory material arranged to form a hollow rectangular longitudinally disposed wall having a combustion chamber therein at one end and a zig-zag passageway therethrough for products of combustion, and exhausting means connected to said passageway.

5. A tunnel oven comprising a main chamber through which goods to be heated can be caused to travel, heating chambers arranged longitudinally within and structurally independent of said main chamber and at a distance from the side walls and roof thereof, said heating chambers being each composed partly of slabs or blocks of refractory material arranged to form a hollow rectangular longitudinally disposed wall having a combustion chamber therein at one end and a zig-zag passageway therethrough for products of combustion, and partly of longitudinally arranged rows of pipes connected at one end to said hollow wall, and exhausting means connected to the other end of the rows of pipes.

[Claims 6 to 11 not printed in the Gazette.]

1,023,629. PILLOW. THOMAS E. DROHAN, Schenectady, N. Y. Filed July 14, 1911. Serial No. 638,525. (Cl. 5—15.)

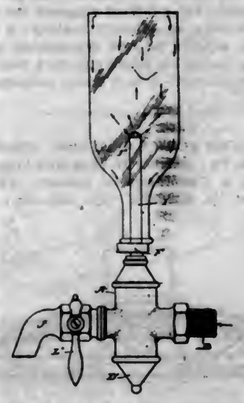


1. A device of the class described, comprising end members, a plurality of rods extending between the members, each rod having a threaded end, a nut on each threaded end, a tubular member in engagement with each threaded end, with each nut and with each end member, whereby movement of the nut along the threaded end will move the end members relatively to each other, together with a continuous band passing around the said end members.

2. A device of the class described, comprising end members, a plurality of rods extending between the members, each rod having a threaded end, a nut on each threaded end, a tubular member in engagement with each threaded end, with each nut and with each end member, whereby movement of the nut along the threaded end will move the end members relatively to each other, together with a connecting band extending around and inclosing the end members.

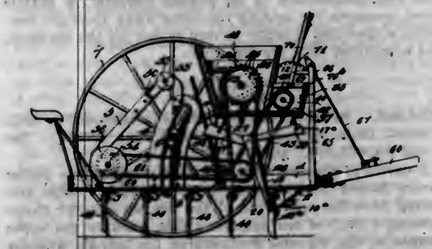
3. A device of the class described comprising cylindrical end members, a tubular member carried by each end member, a plurality of rods extending between the members, one end of each rod being threaded and having a thumb nut thereon, the said threaded end entering one of the said tubular members whereby movement of the nut will move the end members relatively to each other, there being a continuous band passing around the said end members.

1,023,630. RINSING-FAUCET. RANSOM M. ELKINS, Poplar Bluff, Mo. Filed Mar. 8, 1910. Serial No. 547,960. (Cl. 141—3.)



The combination in a rinsing apparatus of a valve tube, a collar applied to said tube and adapted to cooperate in connecting nozzle tubes therewith, the said collar being adapted to form a stop for a bottle when placed thereon and having cut away portions in its sides forming passages for the escape of water from a bottle placed against said collar, and a nozzle tube in connection with said collar and valve tube, substantially as set forth.

1,023,631. COMBINED HARROW AND SEED-PLANTER. JOHN A. ERICKSON, Fairview, Utah. Filed Feb. 16, 1911. Serial No. 608,881. (Cl. 111—1.)



1. In a combined harrow and seed planter, the combination with the main frame, a driving axle mounted on wheels, and mechanism for adjusting the height of the frame with respect to said axle; of a series of tooth-holding bars in said frame, harrow and cultivator teeth removably and adjustably carried by said bars, a seed planting mechanism mounted on the frame, feeding mechanism therein driven by the rotation of said axle, tapering troughs, hook-and-eye connections between them and the hopper of said planting mechanism whereby the troughs are rendered reversible end for end, tubes for conducting the seed from the smaller ends of said troughs to points in rear of certain of said harrow teeth, and means for detachably connecting the latter with the lower ends of said tubes.

2. In a combined harrow and seed planter, the combination with the main frame carrying the harrow teeth, a driving shaft journaled across the frame, guide frames rising from the main frame and having slots struck on a curve around said shaft, a wheeled axle extending through said slots, a sprocket-and-chain connection between said axle and driving shaft, and means for adjusting the height of the axle within said slots; of seed planting mechanism mounted on said frame and consisting of a hopper, tubes delivering the material from said hopper and connected at their lower ends with certain of said teeth, seed feeding mechanism within said hopper, and a sprocket-and-chain connection between this mechanism and said driving shaft.

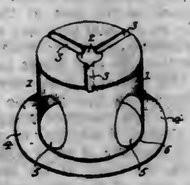
1,023,632. POCKET. ALFRED FANTL, New York, N. Y. Filed Nov. 16, 1909. Serial No. 528,300. (Cl. 2—153.)



1. A sleeve having a turned back cuff and provided with a pocket, one wall of which is formed by the turned back cuff and the said pocket having another wall located between the turned back cuff and the body of the sleeve, said intermediate wall of the pocket being secured at its lower edge and provided at its upper edge with fastening means, and the turned back cuff being provided opposite the said intermediate wall of the pocket with an opening relatively much smaller than the width of the pocket, whereby a watch may be held within the pocket and the dial of said watch supported on the outer side of the turned back cuff, with a shank extending through said relatively small opening, the turned back cuff forming a strong outer wall for the pocket and the body of the sleeve forming a reinforce for the intermediate wall of the pocket, substantially as set forth.

2. A sleeve cuff provided on its inner side with a pocket having an open mouth and means for closing the same, the said cuff being provided opposite the pocket with an opening relatively smaller than the said open mouth, substantially as set forth.

1,023,633. CHAPLET. JOSEPH I. FASY, Germantown, Pa. Filed Dec. 28, 1910. Serial No. 599,658. (Cl. 22—184.)



1. A chaplet consisting of a cylindrical body portion having a continuous unbroken flange at one end and pro-

vided with a head at the opposite end; there being openings in the sides of said body portion.

2. A chaplet consisting of a cylindrical body portion having a continuous unbroken outwardly projecting flange at one end and a head at the opposite end provided with a central opening and three or more gas passages radiating from said opening; there being holes in the body portion each placed between the outer ends of the adjacent pair of gas passages.

1,023,634. TARGET-BOARD. GEORGE W. FERGUSON, Sheboygan, Wis. Filed July 7, 1911. Serial No. 637,258. (Cl. 124—15.)



1. A target comprising a board having an opening therein, a plurality of independent parts suitably supported by one side of the board in successive position, one of the parts being adjacent the said opening, dislodgment of the said part from the opening permitting the next succeeding part to move adjacent the said opening.

2. A device of the class described comprising a board having an opening therein, a plurality of separate parts removably carried by the back of the board, each of the said parts bearing a suitable picture, the lowest part being in the rear of the said opening whereby the picture thereon may be seen through the opening, the said lowest part being capable of dislodgment and removal from view, the next succeeding part then coming into view.

3. A device of the class described comprising a board having an opening therein, the board containing any suitable scene, a plurality of parts independently and slidably positioned on the back of the board, each of the said parts containing a picture suited to the picture on the board, the lowest one of the said parts being in the rear of the said opening whereby the picture thereon may be seen, the said part being adapted to be dislodged and removed from view, the next succeeding part then coming into view.

4. A device of the class described comprising a board having an opening therein, a plurality of channels on the rear of the board, a plurality of separate parts slidably positioned within the channel, the lowest one of the said parts being positioned in the rear of the said opening whereby any picture on the said part may be seen through the opening, the channels being so constructed adjacent their lower portion that the said lowest part may be dislodged therefrom and removed from view, thereby permitting the next succeeding part to come into view.

5. A device of the class described comprising a board having an opening therein, a plurality of channels on the rear of the board, a plurality of parts slidably positioned within the channels, the front of the board containing any suitable scene, each of the said parts containing a picture suited to the scene, means for supporting the lowest part in position behind the said opening whereby the picture on the said part may be seen through the opening, the said channels being removed adjacent the said lowest part whereby it may be removed from view and dislodged, the next succeeding part then coming into view.

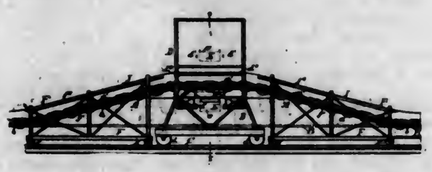
[Claims 6 to 10 not printed in the Gazette.]

1,023,635. WINDOW-INSERT FOR UMBRELLAS. ROBERT C. FLUBS, New York, N. Y. Filed May 6, 1911. Serial No. 625,480. (Cl. 135—35.)



As an article of manufacture, a window insert for umbrellas, comprising a flexible transparent section shaped to fit between the folds of an umbrella, the portions of said section on opposite sides thereof adjacent the edge thereof being provided with an adhesive coating; a plurality of fabric sections adhered to said transparent section, said fabric sections having an opening formed therein; and an adhesive surface formed on said fabric sections.

1,023,636. COVER FOR CONVEYERS. CHARLES A. FRY, Philadelphia, Pa., assignor to Link-Belt Company, Philadelphia, Pa., a Corporation of Illinois. Filed May 12, 1908. Serial No. 432,521. (Cl. 193—25.)



1. The combination of a conveyer, means for supporting said conveyer, means for deflecting the conveyer out of its straight course, a flexible cover mounted above the conveyer, and means for deflecting the cover simultaneously with the deflection of the conveyer.

2. The combination of a flexible cover adapted to be used with a conveyer and a traveling trimmer arranged to lift the cover.

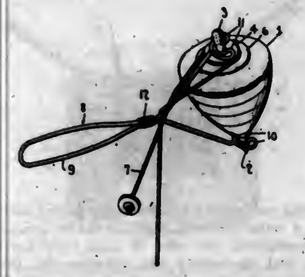
3. The combination of an endless conveyer, a flexible cover arranged above the conveyer, and a traveling trimmer for simultaneously lifting the conveyer and the cover.

4. The combination of an endless conveyer, a flexible cover, supports for holding the cover away from the conveyer, a traveling trimmer having guides for the conveyer, and supporting rails for the cover.

1,023,637. SPINNING-TOP. WILLIS BRIDGHAM GILMORE, Idaho Springs, Colo. Filed June 8, 1911. Serial No. 631,956. (Cl. 46—32.)

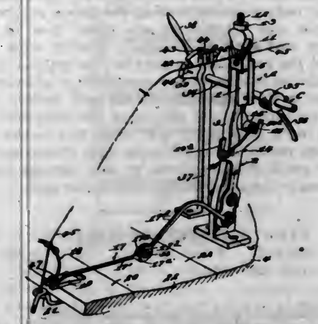
A device of the character described comprising a holder having forked ends, a spinning top having a spindle projecting from the upper end of the top, an annular flange forming a part of the spindle, a disk fixed to the upper surface of the top and surrounding the spindle whereby a tapering cord receiving annular groove is formed, an operating cord adapted to be located in the annular groove

thus formed, one portion of which is supported by the holder and having its opposite portion over-lapping the



other portion adjacent the handle of the holder and out of contact with the top.

1,023,638. ROVING-CLAMP. FLETCHER C. GRADDICK, Albemarle, N. C. Filed Apr. 15, 1911. Serial No. 621,318. (Cl. 118—12.)



1. The combination, with a roving clamp comprising fixed and movable members and a support therefor; of a rocking trigger provided with a U-shaped head, along the base portion of which the lower end of the movable clamping member is arranged to travel when said trigger is actuated, said base being formed with a notched lug adapted to normally engage the movable clamping member, for supporting the same in elevated position; and means for actuating said trigger.

2. The combination, with a roving clamp comprising fixed and movable members and a support therefor; of a rocking trigger provided with a U-shaped head, along the base portion of which the lower end of the movable clamping member is arranged to travel when said trigger is actuated, said base being formed with a lug having a notched apex adapted to normally engage the movable clamping member for holding the same in elevated position, and inclined side edges of unequal lengths; and means for actuating said trigger.

3. In a roving clamp, the combination of a standard; a fixed clamping member connected thereto and provided with a pair of spaced guides having upstanding guards at their upper ends; and a clamping member comprising a stem slidable vertically between said guides and provided with a guide eye for the roving, and a tapered head located upon the upper end of said stem, said head having its opposite side faces arranged to engage the adjacent side edges of said guards and formed with wings arranged to engage the adjacent faces of said guards.

4. The combination, with a roving clamp, a frame on which the same is mounted, and a trigger operatively associated with said clamp; of an element hinged to said frame for swinging movement in a vertical plane; a feeler pivotally connected to said element: and an actuating member loosely connected at one end with said feeler and at the other end with said trigger and extending above and across said frame and said element, said member consisting of a pair of sections pivoted together at their mutually-adjacent ends, whereby said member may be raised bodily when said element is to be cleaned, and the front section may be raised independently of the rear section during doffing.

5. The combination, with a roving clamp, a frame on which the same is mounted, and a trigger operatively associated with said clamp; of an element hinged to said frame for swinging movement in a vertical plane; a feeler pivotally connected to said element; and an actuating member loosely connected at one end with said feeler and at the other end with said trigger and extending above and across said frame and said element, said member consisting of a pair of alining sections pivoted together at their inner ends, whereby said member may be raised bodily when said element is to be cleaned, and the front section may be raised independently of the rear section during doffing, the inner end of one of said sections being provided with a pin, and that of the other section with a pair of stops interchangeably engaged by said pin, to limit the movements of said front section relative to the rear section.

[Claims 6 and 7 not printed in the Gazette.]

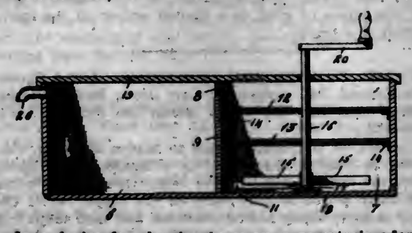
1,023,639. HOSE-CLAMP. JAMES S. GRAHAM, Magdalena, N. Mex., assignor of one-half to Oscar F. H. Redemann, Magdalena, N. Mex. Filed May 17, 1911. Serial No. 627,806. (Cl. 137—28.)



1. A hose clamp comprising a strip having at its side edges and in the vicinity of one end upstanding flanges provided with recesses which are of greater transverse dimension at their inner ends than at their outer ends, a flexible lever fulcrumed upon the other end portion of the strip and being curved longitudinally, said lever having at its side edges lugs adapted to enter the recesses in the flanges.

2. A hose clamp comprising a strip having at its side edges and in the vicinity of one end upstanding flanges provided with recesses which are of greater transverse dimension at their inner ends than at their outer ends, and a flexible lever fulcrumed upon the other end of the strip and being curved longitudinally, said lever having at its side edges lugs adapted to enter the spaces in the flanges, said lever being provided at its free end with an extremity disposed at an angle to the body portion of the lever and which is less in transverse breadth than the transverse breadth of the body portion of the lever.

1,023,640. BEESWAX-CLEANER. DANIEL GRANT, San Jacinto, Cal. Filed July 26, 1911. Serial No. 640,560. (Cl. 87—19.)



In a device for cleaning beeswax, a receptacle adapted to be arranged upon a heater and interiorly divided by a

vertical wall into a chamber for the wax to be cleaned, and a chamber for the cleaned wax which communicates with the first-named chamber through a screen covered opening in the upper portion of the side wall, a plurality of removable screens arranged one above the other in the first-named chamber, an agitator located below the screens and having a shaft journaled in the screens and in the bottom of the receptacle, a feed hopper and an inlet tube communicating with the space below the screens, and an outlet tube extending from the upper portion of the second-named chamber.

1,023,641. TOOTH-BRUSH HOLDER. GEORGE T. GEER, Roanoke, Va. Filed June 14, 1911. Serial No. 633,114. (Cl. 132—11.)



1. A tooth brush holder consisting of a container having a pair of elongated inwardly extending spring structures normally closing one of its ends and movable to permit of the introduction of a tooth brush; said structures normally forming a tapering guideway and engaging each other when the holder is empty.

2. A tooth brush holder consisting of a container having one of its ends closed by two inwardly extending separable oppositely placed spring tongues engaging each other along an extended line and movable from each other to permit of the introduction of a tooth brush; said tongues normally forming an inwardly extending guideway and completely closing the holder when the same is empty.

3. A tooth brush holder consisting of a container having two curved members normally closing one end, said members being formed of resilient material and being mounted with convex portions adjacent each other to permit of the introduction and withdrawal of a tooth brush.

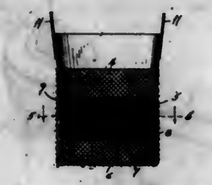
4. A tooth brush holder consisting of a body of sheet material folded up to form an elongated tube, said body of material including flaps for closing one end and spring tongues extending inwardly from the opposite end to form retaining means for a tooth brush.

5. A tooth brush holder consisting of an elongated closed container having inwardly extending spring tongues hinged to opposite portions of one of its ends, said tongues being separable to permit of the introduction of a tooth brush, and having cuts in certain of their edges to permit said edges to yield to a limited extent on the introduction of a brush.

1,023,642. COMPOSITION OF MATTER. LOUIS GROSS, Homestead, Pa., assignor to Carl Gross, McKees Rocks, Pa. Filed Oct. 15, 1906. Serial No. 338,977. (Cl. 75—62.)

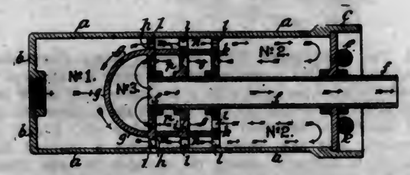
The method of treating copper to harden the same, consisting in heating the copper to a temperature slightly below the melting point of the same, then adding borax and finely powdered coal ashes to the copper while the latter is in its highly heated condition, and then subjecting the mass to a degree of temperature sufficient to melt the copper.

1,023,643. FEED-BAG. HUGO A. GRUBNER, Pittsburgh, Pa. Filed Apr. 25, 1911. Serial No. 623,161. (Cl. 119—65.)



A feed bag comprising an extensible flaring mouth piece formed of a relatively wide strip of fabric, means for adjustably connecting the ends of said strip together for increasing and decreasing the diameter of the mouth piece, supporting means for said bag connected to the periphery of said strip, a cylindrical receptacle forming throughout a wide mesh and including a bottom, an open top and a body portion of the same diameter throughout, said receptacle at its top extending over and secured to said mouth piece, a wire mesh shell open at its ends, positioned within and of a diameter as to engage the inner face of said receptacle, said shell supported upon the bottom of said receptacle and having its upper portion extending upon and secured to the inner face of said mouth piece, said shell of materially smaller mesh than the mesh of the receptacle to prevent the spilling of the feed through the bottom of the receptacle, a plurality of compression springs arranged within and having their lower ends connected to the bottom of the receptacle, and a relatively deep cup-shaped wire mesh feed holder having its bottom connected to the upper ends of said springs, said holder resiliently supported by said springs and of a mesh throughout finer than the mesh of the shell.

1,023,644. EXHAUST-MUFFLER. JOSEPH HALL, Manchester, England. Filed Nov. 22, 1910. Serial No. 593,743. (Cl. 121—116.)

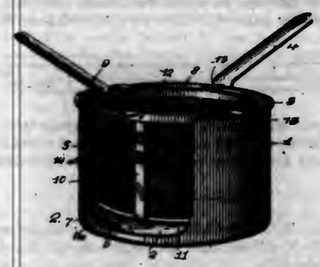


In an exhaust muffler, a cylindrical receptacle having an open end and a hole provided end, a lid closing the said open end, taper pins holding the said lid in position, a tube passing through the center of the said lid into the said receptacle, disks in the said receptacle secured to the said tube, two rows of holes in the said disks, an annular projection between the said rows of holes on each of the said disks, a hollow baffle head-piece in the said receptacle and secured to the said tube, and two rows of holes in the said baffle head-piece, all substantially as and for the purpose set forth.

1,023,645. COOKING UTENSIL. PINCKNEY W. HAMILTON, Pittsburgh, Pa. Filed Mar. 7, 1911. Serial No. 612,914. (Cl. 53—3.)

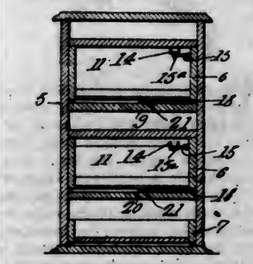
In combination, a receptacle, a foraminous basket, a series of reinforcing straps secured to the bottom of said basket and having vertically disposed portions terminating in lateral projections at the top of the basket to engage the top edge of the receptacle for suspending the basket above the bottom of the receptacle and with its top edge substantially in alinement with the top edge of said receptacle, channel shaped holders formed in spaced relation to each other upon the outer face of the vertical portions of each of said straps and arranged below said lateral projections, angle brackets capable of extending in and

projecting from said holders for engaging with the upper edge of the receptacle for adjustably supporting said



basket in an elevated position with respect to the receptacle, and a handle carried by the basket.

1,023,646. STERILIZER. WILLIAM T. HERNDON, Laurinburg, N. C., assignor of one-half to Gilbert H. Russell, Laurinburg, N. C. Filed July 19, 1910. Serial No. 572,747. (Cl. 45—7.)



The combination with a drawer and its housing, of spaced pins carried by the drawer, a J-shaped lever pivoted to the housing to swing in a plane parallel with the drawer bottom, the straight end of the lever extending between the pins and being in engagement therewith when the drawer is closed and out of engagement therewith when the drawer is opened, and a spring fastened at one end to the tail of the lever and its other end to the housing.

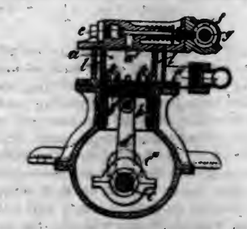
1,023,647. WINDOW-LOCK. EDWARD HILL, Salt Lake City, Utah, assignor of one-half to Thomas A. Hill, Denver, Colo. Filed Apr. 7, 1911. Serial No. 619,598. (Cl. 16—19.)



A window lock comprising a body portion formed substantially flat throughout, and beveled at one end for defining an entering point, and bent down centrally for defining a cord receiving groove and a central longitudinal bracing rib, a pointed end structure extending at an angle to the body portion and designed to cause the body portion to be positioned at an angle when in operation, and means extending from the body portion designed to be used when applying and removing the device.

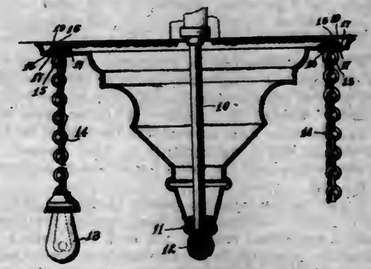
1,023,648. STEAM-ENGINE. ALEXANDER ALBERT HOLLE, Oist, Netherlands. Filed Jan. 9, 1909. Serial No. 471,504. (Cl. 121—23.)

1. In a steam engine the combination of a plurality of single-acting cylinders, axially arranged admission ports in the heads of the cylinders, admission valves in said ports, exhaust ports in the walls of the cylinders so located as to be opened by the pistons as they move toward the ends of their outward strokes and after the admission valves have closed, and mechanism for operating the admission valves so that they are opened only when the cranks have reached their angle of maximum leverage and are kept open for only an infinitesimal space of time, as set forth.



2. The combination in a steam engine of a plurality of single-acting cylinders, trunk pistons in said cylinders, a crank-shaft mounted in suitable bearings, connecting rods coupling the pistons with the crank-pins of the crank-shaft, admission ports centrally and axially arranged in the cylinder heads, valves in said admission ports, mechanical means for opening said valves momentarily, when the crank-pins of the crank-shaft are at their angle of maximum leverage, exhaust ports in the walls of the cylinders so located that they are opened by the pistons as they move on their outward strokes and after the admission valves have closed, and means for maintaining a vacuum at said exhaust ports, as set forth.

1,023,649. ATTACHMENT FOR ELECTROLIERS. FRANK I. HOLLINGSWORTH, Denver, Colo. Filed July 8, 1910. Serial No. 570,992. (Cl. 240—87.)



In combination, an outlet member adapted to be secured to a ceiling or other support, a support depending from said member, a hollow member surrounding said support and having a flange edge adapted to engage the ceiling, said edge being formed with a series of radially spaced openings, an insulating bushing disposed in each opening, an insulating washer engaging said bushing and said flange, hollow ring bolts disposed in said bushing, means for securing said bolts in place, means secured to said support and supporting said hollow member and chains depending from the bolt rings.

1,023,650. CURTAIN-ROD. MANUEL HOVAGIMIAN, Worcester, Mass. Filed Dec. 11, 1911. Serial No. 665,170. (Cl. 156—22.)

1. A curtain rod formed in tubular telescoping sections, a spring arranged in said sections and adapted to yieldingly connect the same together, supporting brackets having sockets to receive the ends of said rod, fastening screws adapted to secure the brackets onto the ends of the rod, frame engaging flanges formed on the inner sides of said

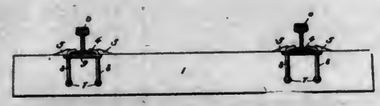
brackets, frame engaging screws having a threaded engagement with said flanges, and frame engaging spurs formed on said brackets and adapted to be forced into the edges of the window frame.



2. A curtain rod comprising yieldingly connected tubular sections, plugs arranged in the outer ends of said sections, said plugs having threaded bores, supporting brackets having on their outer ends inwardly extending sockets adapted to receive the outer ends of the sections of the rod, fastening screws arranged through said brackets and sockets and adapted to be screwed into the threaded bores of said plugs whereby the brackets are secured to the ends of the rod sections, heads formed on said screws and attaching devices formed on said brackets and adapted to be engaged with the window frame whereby the brackets are secured in position to support the rod.

3. In a curtain rod, a supporting bracket, means to detachably secure the brackets to the ends of the rod, frame engaging flanges formed on the inner sides of the brackets, said flanges having threaded apertures, frame engaging screws arranged in said threaded ends whereby the same are forced into the window frame, and frame engaging spurs formed on said brackets and adapted to be forced into the edges of the window frame.

1,023,651. RAIL-TIE. SOLOMON B. HUMBERT, Cedar Falls, Iowa. Filed Nov. 21, 1911. Serial No. 661,546. (Cl. 238—3.)



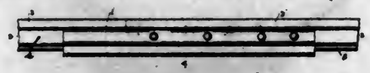
1. A rail tie comprising a reinforced plastic body having a rail seat, bail shaped rail clamping members pivoted on the body on opposite longitudinal sides of the seat, said body being recessed on opposite transverse sides of the seat, and clamping links surrounding the legs of said locking members and lying partially in said recesses, said links adapted to hold the locking members in engagement with the rail.

2. A rail tie comprising a plastic reinforced body having a rail seat, bearings projecting through the body on opposite longitudinal sides of the seat, bail shaped locking members journaled in the bearings and having rail engaging ends, said body being recessed on opposite transverse sides of the seat, and clips surrounding the legs of the bail shaped locking members, and lying beneath the rails and partially in the recesses, said clips adapted to hold the locking members in engagement with the rails.

3. A rail tie comprising a plastic body, a reinforcing member embedded in the body and having exposed rail seats, a recess in one of said seats, a threaded eye member secured in said recess, and bracing means extending from the eye member to the rail together with means to force the bracing member into engagement with the rail.

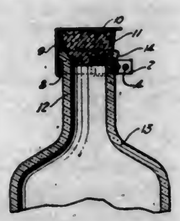
1,023,652. RAIL. AARON G. JONES and PETER K. MILLAR, Cornish, Okla. Filed May 20, 1911. Serial No. 628,465. (Cl. 239—8.)

The combination of the meeting ends of a pair of railway rails, one of said rails having enlarged longitudinally extending integrally formed webs, and base flange, the said enlarged portion being recessed to provide a pocket, the said pocket, comprising a straight wall, and an opposite shouldered wall, the reduced portion of the said shouldered wall including a portion of the head of said rail ends, the second rail end having its extremity laterally reduced to provide an extending tongue, the said tongue adapted to be received within the reduced portion of the



pocket, and the portion of the rail beyond the tongue adapted to be received within the enlarged portion of the pocket, and means for retaining the rail end within the pocket.

1,023,653. BOTTLE-CLOSURE. FELIKS KACZYŃSKI, Cohoes, N. Y. Filed Apr. 25, 1911. Serial No. 623,144. (Cl. 215—23.)



A bottle closure comprising a flat disk constituting a retaining cap for a cork, three equally spaced wide depending arms integral with the perimeter of said disk and each having its lower portion bent upwardly and bent at right angles to engage the inner face of its respective arms, to provide a vertically disposed relatively long and wide rectangular loop, said loops positioned below the bead of a bottle neck, with the right angular portion of each loop abutting against the lower edge of bead, a relatively wide flat band extending through said loops, said band being split and having each of its split ends bent outwardly at an angle with respect to said arms, and means for securing the angular ends of said band together whereby the latter is retained upon the neck of a bottle below the bead, thereby maintaining the cap in engagement with the cork.

1,023,654. DRILLING-MACHINE. JOHN PRUE KARNS, Boulder, Colo., assignor to J. P. Karns Tunneling Machine Co., Boulder, Colo. Filed May 25, 1909. Serial No. 498,246. (Cl. 125—14.)



1. In a drilling machine, a drill head provided with an elongated hub, a power shaft entering said hub and carrying the drill head, a bearing sleeve carried by said hub exterior thereto, and journal bearings for said sleeve.

2. In a drilling machine, a reciprocatory drill head provided with an elongated hub, a bearing sleeve carried by the hub exterior thereto, and journal bearings surrounding said sleeve and in which the sleeve is axially and rotatably movable.

3. In a drilling machine, a drill head provided with an elongated hub, journal bearings exterior to and supporting said hub and in which the hub is axially and rotatably movable, and a power shaft entering and secured

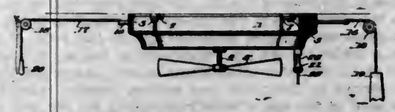
to the hub for imparting rotative and reciprocatory movement to the drill head.

4. In a drilling machine, a drill head provided with a hub elongated in the direction remote from the active face of the drill head, a sleeve carried by the hub, a rotatable cylinder surrounding the sleeve, connections between the sleeve and cylinder permitting the sleeve to move axially in the cylinder, but constraining the cylinder and sleeve to rotate about the longitudinal axis of the sleeve simultaneously, and a support for the cylinder in which the latter is rotatable and by which the cylinder is held against movement in the direction of the longitudinal axis of the sleeve.

5. In a drilling machine, a drill head provided with an elongated hub terminating at the free end in opposed wings or extensions, a sleeve carried by and exterior to the hub, a shaft entering the hub and provided with a circumferential flange with opposite flat sides adapted to enter between the wings or extensions of the hub and sleeve, and a journal bearing exterior to the sleeve and in which the sleeve, hub and shaft are rotatatively and longitudinally movable.

[Claims 6 to 11 not printed in the Gazette.]

1,023,655. FAN-DRIVING MECHANISM. HENRY M. KEITH, Eldorado, Ill. Filed Oct. 21, 1911. Serial No. 655,958. (Cl. 185—27.)



1. In a fan driving mechanism, a fan driving gearing including a shaft, a gear loose on said shaft, a clutch connection between the shaft and gear adapted to permit free revoluble movement of the gear in one direction, a rack engaging said gear, a traveling weight for operating the bar on its feed motion, and means for retracting the bar and raising the weight.

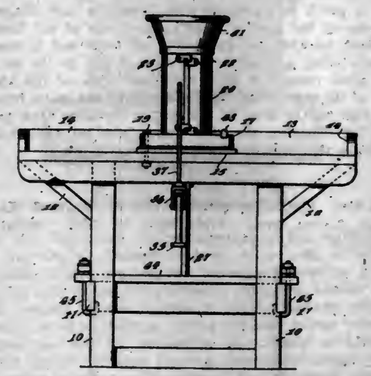
2. In a fan driving mechanism, a casing, fan driving gearing including a shaft, a gear loosely mounted on said shaft, a clutch for connecting the gear with the shaft and permitting free revoluble movement of said gear in one direction, a rack bar slidable through the casing and meshing with said gear, a traveling weight for operating the rack bar on its feed motion, and means for retracting the bar and raising the weight.

3. In a fan driving mechanism, a fan driving gearing including a shaft, a gear loose on said shaft, a clutch for connecting the gear with the shaft and permitting free revoluble movement of said gear in one direction, rack bars movable in parallel pairs and adapted to mesh with opposite sides of the gear, traveling weights for operating said rack bars, means for retracting each rack bar and raising the weight, a latch for holding either bar inoperative while the other rack bar is in motion, and means for releasing the latch when the operating rack bar reaches the limit of its feed motion to free the other rack bar for operation.

4. In a fan driving mechanism, a fan driving gearing including a shaft, a gear having a pawl and ratchet connected with the shaft, oppositely disposed, weight-impelled rack bars adapted to mesh with the gear, means for retracting each rack bar and raising the impelling weight thereof, and means for simultaneously locking each rack bar at the limit of its feed motion and simultaneously releasing the other rack bar for feed movement.

5. In a fan driving mechanism, a fan driving gearing including a shaft, a gear loosely mounted on and having a pawl and ratchet connected with the shaft, weight-impelled rack bars adapted to mesh with the gear, means for retracting each rack bar and resetting its actuating weight for operation, latches for holding the rack bars in retracted position, said latches being automatically controlled by the rack bars to lock either rack bar at the limit of its feed motion and release the other rack bar for operation, and means for manually controlling said latches to permit either one or both rack bars to be set in action.

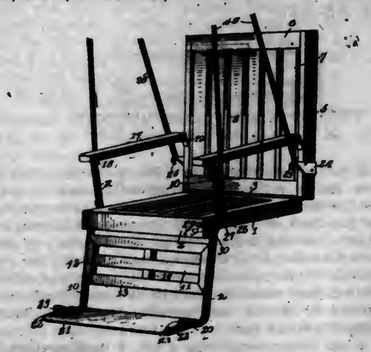
1,023,656. TILE-MOLDING MACHINE. ADAM KERN, Frankenmuth, Mich. Filed Mar. 15, 1911. Serial No. 614,649. (Cl. 25—30.)



1. A machine of the class described comprising a supporting frame, a deck on the frame, a base block superimposed upon the deck, a molding flask having an inturned flange formed on one end to prevent the plastic material from sticking to the base block, a clamping device on the block for holding the said flask, a core normally elevated in the flask, means for lowering the same, and a funnel-shaped member telescoping upon the upper end of the flask.

2. A machine of the class described, comprising a supporting frame, a deck on the frame, a molding flask mounted on the deck, a core normally elevated in the flask, a lever hinged to the frame and pivoted to the core, the free end of said lever being down turned and extended outwardly to form a foot tread, a locking member pivoted to the lever rearwardly of the foot tread, said locking member comprising a rod bent to form a nose and a handle, the nose being adapted to engage the deck for holding the core in elevated position.

1,023,657. RECLINING PORCH-SWING. EDWARD R. KING, Asheville, N. C. Filed Sept. 1, 1911. Serial No. 647,134. (Cl. 155—35.)

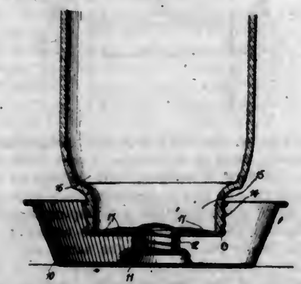


1. A porch swing, comprising a seat, a back hinged to the seat at the rear thereof, a strap at each side of the front of the seat, an arm rest pivoted at its front end to the top of each strap and hinged at its rear end to the

back, a foot plate connecting the straps at their lower ends and pivoted to each strap, hooks for the attachment of suspending means, said hooks being arranged one at each side of the back between the attachment of the arm rest and the seat, and one on each strap at the level of the seat, a threaded stud at each side of the seat near the front thereof, each strap having a slot for receiving the adjacent stud, and a nut on the stud for clamping the strap to the seat.

2. A porch swing comprising a seat, a back hinged to the rear of the seat, a strap at each side of the front of the seat, an arm rest pivoted at its front end to the top of each strap and hinged at its rear end to the back, a foot plate connected with the lower ends of the straps, each of the said straps having a lateral slot in its forward side edge at the level of the seat, a threaded stud on the seat for engaging the slot, and a nut on the stud for clamping the strap to the seat.

1,023,658. POULTRY-FOUNTAIN. WILLIAM G. KLUSSMAN, Irving, Oreg. Filed Sept. 25, 1911. Serial No. 651,156. (Cl. 119—77.)



A poultry fountain comprising a pan having a bottom, an upwardly extending wall, a threaded neck fixed to and rising from the central portion of the bottom of the pan, an inverted screw cap, a threaded socket depending from the inverted screw cap and detachably secured to said threaded neck, said screw cap having its crowned portion disposed below the plane of the upper edges of the wall of the pan and provided with an outlet opening, and a jar having its open end in detachable threaded engagement with the screw cap.

1,023,659. HAT-PIN. ALEXANDER B. KOKERNOT, New Orleans, La. Filed July 30, 1910. Serial No. 574,722. (Cl. 132—25.)



1. A hat holder comprising a pin, a manipulating head for the pin in which the corresponding end of the pin is movable longitudinally, means tending to maintain the pin at the limit of its outward movement with respect to the head, coacting means carried by the pin end of the head and by the hat for engagement to hold the pin to the hat with the pin interior to the hat and the manipulating head exterior thereto, and means adapted to be carried by the hat for engaging the pin to limit its movement into the hat.

2. A hat holder comprising a pin, a manipulating head for the pin having the butt end of the pin in telescoping relation thereto, means within the manipulating head tending to maintain the pin in a projected position and yieldable to a superior force, interlocking means carried by the head of the pin and by the hat, respectively, for holding the manipulating head and pin to the hat with the pin interior to the hat and the manipulating head exterior thereto, and means adapted to be carried by the hat for engaging the point of the pin to force the said pin into the manipulating head when the latter is in locked relation to the hat.

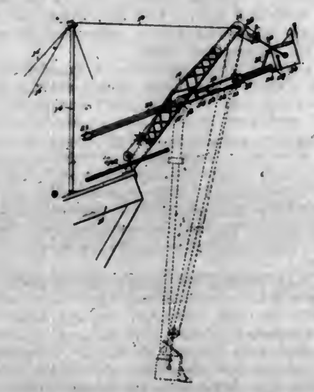
3. A hat holder comprising a pin, a hollow manipulating head for the pin receiving the shank end thereof and into which the shank end of the pin is movable, means within the hollow head for normally maintaining the pin in the projected position and yieldable to permit movement of the pin into the head, and means carried by the head and by a hat, respectively for securing the head and pin to the hat with the pin interior to the hat and the head exterior thereto.

4. A hat holder comprising a pin, a manipulating head therefor with relation to which the pin is longitudinally movable to an extent less than the length of the head, said manipulating head being provided with radial projections, keepers adapted to be attached to a hat in position to be engaged by the projections on the head of the pin only when the greater portion of the pin is interior to the hat, and means carried by the hat in the path of the pin for arresting the movement of the latter before the radial projections are in position to engage the keepers on the movement of the head toward said keepers.

5. A hat holder comprising a hat pin having a shank and a head, with the shank of the pin in telescoping relation to the head of the pin, yieldable constraining means for the shank of the pin for maintaining it normally in the projected position with relation to the head of the pin, a holder for the pin through which the latter is movable in the direction of its length, a lock having one member carried by the holder and another member carried by the head of the pin, a sustaining means for the free end of the pin adapted to be held in a hat in spaced relation to the holder, and a connecting member between the holder and the retaining member resistant to the constraining means for the shank of the pin to cause the latter to yield when the head of the pin is locked to the holder.

[Claims 6 to 8 not printed in the Gazette.]

1,023,660. DIPPER-DREDGE. ERNEST KREHER, Tampa, Fla. Filed Apr. 3, 1911. Serial No. 618,604. (Cl. 37—16.)



1. In a dipper dredge, a boom, a cannon pivotally mounted upon said boom at one end of said cannon, a dipper stick movable relatively to said cannon, a dipper carried by said stick, and means at the end of said cannon remote from its pivotal connection with said boom, for clamping said stick in any one of a plurality of positions relative to said cannon.

2. In a dipper dredge, a boom, a hollow cannon pivotally connected at its upper end with said boom, a dipper stick slidable in said cannon and freely movable through said cannon within the limits of the length of said stick and said cannon, and means at the lower end of said cannon for securing said stick relative to said cannon.

3. In a dipper dredge, a boom, a hollow cannon pivotally mounted at its upper end upon said boom, a dipper stick slidably mounted within said cannon and comprising spaced sides having therebetween at the upper end a stop, a stop within the lower end of said cannon and received between said sides, and means carried by said cannon adjacent to its stop, for locking said stick in any one of a plurality of positions, said stick having associated therewith a dipper.

4. In a dipper dredge, a boom, a cannon carried by said boom, a dipper stick slidable within said cannon, said stick having spaced sides, a dipper carried by said stick, an operating cable for controlling said dipper, said operating cable passing between said sides, and a releasable spring lock for holding together the sides of said stick, said lock being released by the engagement thereof with the end of said cannon.

5. In a dipper dredge, a boom, a cannon carried by said boom, a dipper stick slidable within said cannon, said stick having spaced sides, a dipper carried by said stick, an operating cable for controlling said dipper, said operating cable passing between said sides, and a spring lock for holding together the sides of said dipper stick at the rear end thereof, said lock consisting of pairs of releasably and pivotally connected spring arms adapted to be disengaged by the engagement thereof with said cannon, said cannon having therein a spreader for separating said arms after the same have been disengaged by the engagement thereof with said cannon.

1,023,661. PYROPHOROUS METAL. FERDINAND KRIEGER, Berlin, Germany, assignor to Zundmetall-Gesellschaft M. B. H., Berlin, Germany, a Firm. Filed Aug. 24, 1910. Serial No. 578,715. (Cl. 75—1.)

1. A pyrophorus metal, comprising an alloy of manganese and antimony containing more than 10 per cent. manganese.

2. A pyrophorus metal, comprising an alloy of manganese and antimony containing more than 10 per cent. antimony.

3. A pyrophorus metal, comprising an alloy of manganese and antimony, containing more than 10 per cent. manganese with an addition of other metal.

4. A pyrophorous metal, comprising an alloy of manganese and antimony, containing more than 10 per cent. antimony with an addition of other metal.

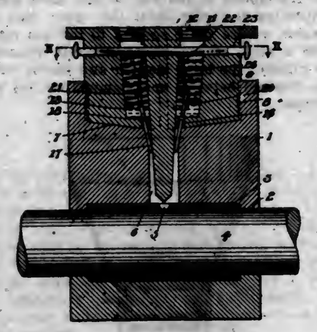
5. A pyrophorous metal, comprising an alloy of manganese and antimony, containing more than 10 per cent. antimony with additions of other metals.

[Claims 6 to 8 not printed in the Gazette.]

1,023,662. LUBRICATOR. JOSEPH KRIPINGER, Brainards, N. J. Filed Oct. 14, 1911. Serial No. 654,704. (Cl. 64—24.)

1. In a lubricator, a bearing, a plug detachably mounted in said bearing and having recesses formed therein adapted to contain a lubricant, a depending pin carried by said plug and extending into said bearing, said plug having ports formed therein establishing communication between said recesses and said bearing, spring pressed valves normally closing said ports, said plug having a transverse opening formed therein, and plungers arranged in said opening and having connection with said valves whereby when said plungers are pressed inwardly said valves will be elevated.

2. In a lubricator, a bearing having an opening formed therein, a plug detachably mounted in said bearing, said plug having lubricant recesses formed therein in communication with the opening of said bearing, valves arranged in said recesses for controlling the admission of lubricant to the opening of said bearing, and plungers arranged transversely of said plug and having connection with said valves whereby said valves can be opened.



3. In a lubricator, the combination with a bearing having an opening formed therein, of a plug detachably mounted in said bearing and having a depending pin extending into the opening thereof, said plug having lubricant recesses formed therein in communication with the opening of said bearing, spring pressed valves arranged in said recesses for controlling the supply of lubricant to the opening of said bearing, detachable plugs closing the upper ends of said recesses, and plungers arranged transversely of said plug and having connection with said valves whereby when said plungers are pushed inwardly said valves will be elevated to admit lubricant to the opening of said bearing.

1,023,663. HAT-PIN-POINT PROTECTOR. JOSEF KUBICEK, Prague, Okla. Filed Jan. 20, 1912. Serial No. 672,294. (Cl. 24—155.)



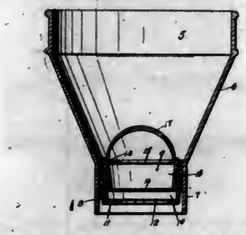
A hatpin point protector comprising a head, a cup located centrally thereof and having the inner walls thereof screw threaded, a sleeve screwed in said cup and having the outer end thereof provided with a funnel-shaped mouthpiece adapted to receive the pointed end of a pin, and diametrically opposed longitudinally grooved resilient members having the inner ends thereof anchored upon the bottom of said cup by the threaded end of said sleeve and adapted to retain the pointed end of a hatpin within said sleeve.

1,023,664. MILK-STRAINER. ASBURY F. LAITY, Madison, S. D. Filed Mar. 20, 1911. Serial No. 615,645. (Cl. 210—16.)

1. In combination with a funnel having a neck, of a strainer disposed within said neck consisting of inner and outer members, the outer member having a flared wall engaging the neck of the funnel, a wire gauze secured to the lower end of the wall, the inner member having a wall formed to correspond to the wall of the outer member, a wire gauze secured to the upper end of said inner member, and a strip of anti-septic material disposed over the lower edges of the inner member and having its marginal edges disposed between and clamped by the walls of said members.

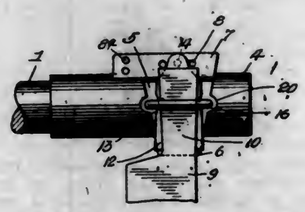
2. In combination with a funnel having a neck, of a strainer disposed within said neck consisting of inner and outer members, the outer member having a flared wall engaging the neck of the funnel, a flange projecting

inwardly from the lower edge of said wall, a wire gauze secured to said flange, the inner member having a wall formed to correspond to the wall of the outer member, a flange projecting inwardly from the upper edge of said inner member, a wire gauze secured to the last mentioned flange, and a strip of anti-septic material disposed over the lower edges of the inner member and having its marginal edges disposed between and clamped by the walls of said members.



3. In combination with a funnel having a neck, of a strainer disposed within said neck consisting of inner and outer members, the outer member having a flared wall engaging the neck of the funnel, a wire gauze secured to the lower end of the wall, the inner member having a wall formed to correspond to and fit within the wall of the outer member, a flange projecting inwardly from the upper edge of said inner member, a wire gauze secured to the last mentioned flange, an upwardly projecting bail also secured to said flange, and a strip of anti-septic material disposed over the lower edge of the inner member and having its marginal edges disposed between and clamped by the walls of said members.

1,023,665. SCYTHE. CHARLES LAMOREAUX, Glassport, Pa. Filed Sept. 22, 1911. Serial No. 650,738. (Cl. 56—27.)



1. In a fastening means for the blade of a scythe, a tubular holder cut and sheared to provide lateral lugs with one of said lugs having openings formed therein, an eye-bolt adjustably held within said holder, and a plate held by said eye-bolt and having projecting ribs adapted to adjustably and detachably engage and retain the shank of a scythe blade in engagement with said lugs.

2. In a fastening means for the blade of a scythe,

4. In a fastening means for a scythe blade, the combination with the blade having a tapering shank, of a holder, a clamping plate positioned upon and adjustably engaging with said holder, said plate provided with a pair of ribs converging in correspondence with the taper of the shank and engaging with the shank to prevent longitudinal movement thereof in one direction, and means for securing the shank and plate to said holder.

5. In a fastening means for a scythe blade, the combination with the blade having a tapering shank, of a holder, a clamping plate positioned against and adjustably engaging with said holder, said plate provided with a pair of ribs converging in correspondence with the taper of the shank and engaging with the shank to prevent longitudinal movement thereof in one direction, and an eye-bolt carried by the holder and engaging the plate and shank for connecting them to the holder.

1,023,666. COVER FOR PNEUMATIC TIRES. LUCIEN LIAIS, Paris, France. Filed Sept. 21, 1910. Serial No. 583,052. (Cl. 152—13.)

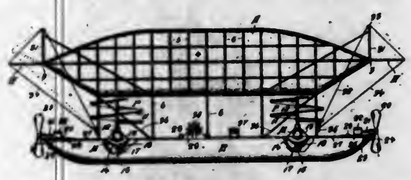


1. A pneumatic tire comprising an outer covering having a crescent-shaped tread portion, an internal backing formed of a number of superposed fabric layers arranged to lie against the inner face of the cover but not embedded therein, and a circumferentially disposed bolster of substantial thickness and of separate material from the tire, the bolster being arranged symmetrically at the thickened part of the tread of the cover and adjacent the inner face thereof, the bolster being formed and proportioned to provide an annular convex rib which bears against said backing and acts thereon to produce an original tensioning thereof and causes said backing to have an irregular and symmetrically curved cross-section, as and for the purpose set forth.

2. A pneumatic tire comprising an outer cover having a crescent-shaped tread portion, an internal backing formed of a number of superposed fabric layers and peripherally extending bolsters arranged symmetrically with respect to one another, said bolsters placing the backing in tension before inflation and at the same time causing the backing to have an original irregularly curved cross section, the central bolster being arranged between the intermediate fabric layers and the other bolsters being arranged between the backing and the adjacent portions of the cover.

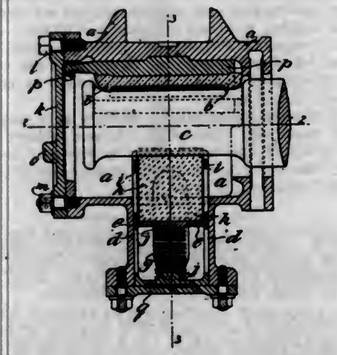
3. A pneumatic tire comprising an outer covering having a crescent-shaped tread portion, an internal backing formed of a number of superposed fabric layers arranged

a plurality of segments supported for oscillation intermediate the ends of the car, propellers and motors for driving the same supported by said segments, and means for adjusting the segments about their respective axes.



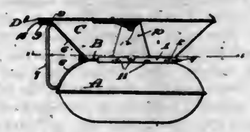
2. In an air ship, a car comprising longitudinally disposed tanks suitably spaced and connected to form an intermediate compartment, motors supported for oscillation in an approximately vertical plane between the ends and the middle portion of said compartment, propeller carrying driven shafts associated with said motors, base plates supported adjacent to the ends of the car for oscillation in an approximately horizontal plane, motors supported upon said base plates, propeller carrying shafts associated with said motors, means for connecting and actuating the base plates supported at the ends of the car to so adjust said base plates as to maintain the propeller carrying shafts of the motors associated therewith in an approximately parallel relation, and means for effecting independent adjustment of the motors intermediate the ends of the car.

1,023,668. LUBRICATING AXLE-BOX. JOHN MCLINTOCK, Glasgow, Scotland. Filed Apr. 16, 1910, Serial No. 555,963. Renewed Feb. 8, 1912. Serial No. 676,443. (Cl. 64—35.)



A lubricating box for axles having a main chamber into which the axle extends, said chamber being con-

1,023,669. SPITTOON-LIFTER. WILLIAM S. C. MCGILL, National Home, Wis. Filed Oct. 18, 1910. Serial No. 587,781. (Cl. 4—38.)

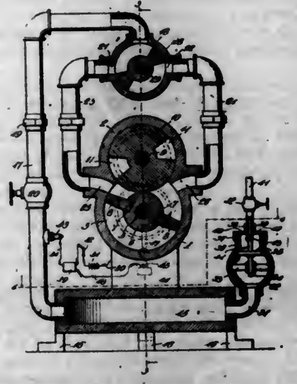


1. A spittoon lifter, comprising a flexible open end adjustable band adapted to be fitted to the waist of the vessel, securing means for the band ends, pairs of bail ears carried by said band, eyed links, in hinge connection with the upper ends of the ears, a bail having hook ends fitted within the link eyes, a triangularly shaped looped side handle in connection with the band, and a seat in the upper triangular corner of the side handle, in which seat the bail is adapted to rest when moved out of its working position.

2. In a beaded edge spittoon or the like, a flexible open end adjustable band fitted to the vessel's waist line, securing means for the band end, and a triangularly shaped looped side handle carried by the band having its upper corner interlocking the lipped edge of the vessel.

3. In a spittoon having a contracted waist-line and bell-shaped mouth provided with a beaded terminal edge; the combination of a side handle conforming to the contour of the spittoon, a securing band for the side handle fitted to the waist-line of said spittoon, and engaging means extending from the side handle interlocked with the beaded terminal edge of the aforesaid spittoon.

1,023,670. ENGINE. SAMUEL A. MILES, Philadelphia, Pa. Filed May 18, 1911. Serial No. 628,063. (Cl. 60—4.)



1. In an engine of the class described, a hollow base,

eratively mounted in said piston cylinder, radially projecting blades arranged on said piston, a rotary abutment arranged in said abutment cylinder, said abutment having formed therein radially disposed recesses adapted to receive the blades of said piston whereby the latter are permitted to pass said abutment, means whereby said abutment is geared to and operated by said piston, a reversing valve casing, fluid connecting pipes to connect the opposite sides of said casing with the opposite sides of the piston cylinder, an exhaust port formed in said casing, a combined fuel conducting pipe and explosion chamber to connect said hollow base with said reversing valve casing, a valve arranged in said casing and adapted to connect said combined fuel conducting pipe and explosion chamber with either of said fuel conducting pipes whereby the engine may be run in either direction, a controlling valve arranged in said combined fuel conducting pipe and explosion chamber, and an automatically operating intake valve connected with said hollow base.

3. An engine of the character described, comprising a hollow base forming a combustion chamber, a casing mounted upon said base, said casing having formed therein a rotary piston and abutment cylinder, a rotary piston rotatably mounted in said piston cylinder, a rotary abutment mounted in said abutment cylinder, radially arranged blades projecting from said piston and adapted to enter recesses in the abutment, fluid conducting pipes leading from the opposite sides of the piston cylinder, a reversing valve connected to said pipes and supported thereby, a fluid pipe connecting said hollow base with the top of the reversing valve, a contracting valve located in the said pipe, a carbureting valve also connected to the base, a sparking device for causing an explosion, and means for causing the piston and abutment cylinder to rotate simultaneously.

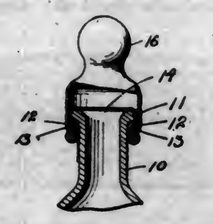
1,023,671. FOLDING STOOL. JOHN R. MOORE, Allegheny, Pa. Filed Sept. 13, 1910. Serial No. 581,884. (Cl. 155—32.)



1. A folding stool including pivotally united frames, a bracket pivotally mounted on one of the frames, a seat secured to and movable with the bracket, and a locking member depending from the free end of the seat and adapted to engage the other frame for holding said seat in operative position, said bracket being adapted to embrace the lock engaging frame for preventing spreading of the lower ends of said frames when the seat is swung downwardly to inoperative position.

2. A folding stool including pivotally connected frames, a substantially U-shaped bracket pivotally connected with the upper portion of one of the frames, a seat secured to and movable with the bracket, a transverse bar carried by the upper end of the other frame, spaced ears depending from the bottom of the seat and having their forward ends provided with recesses and their rear ends curved upwardly, and a locking member depending from the bottom of said seat and adapted to engage the lower edge of the transverse bar for supporting the seat in operative position, said bracket being adapted to embrace the upper portion of the bar carrying frame for preventing spreading of the lower ends of said frames when the seat is swung downwardly to inoperative position.

1,023,672. NURSING-BOTTLE ATTACHMENT. GENEVA MORAN, Thomaston, Me. Filed Aug. 15, 1911. Serial No. 644,215. (Cl. 215—117.)



An attachment for nursing bottles comprising an elastic band for encircling the mouth of the bottle below the lip thereof, and an elastic strip extending across the mouth of the bottle and secured at diametrically opposite points to said band, one end of said strip extending below said band, and adapted to extend below the nipple when applied, whereby air may enter between the neck of the bottle and the nipple.

1,023,673. CONSTRUCTION MATERIAL. JAMES MILLAR NEIL, Toronto, Ontario, Canada, assignor to Alexander M. Hay, Toronto, Canada. Filed May 27, 1911. Serial No. 629,813. (Cl. 106—30.)

1. A binding material, comprising a mixture of a dry soluble compound obtained by treating silicate of soda with an alkali and evaporating to dryness; and a dry soluble mixture of tri-saccharate of lime and an acid salt, substantially as set forth.

2. A composition for building and construction purposes, comprising a filler; a dry soluble compound obtained by treating silicate of soda with an alkali and evaporating it to dryness; and a dry soluble mixture of tri-saccharate of lime and an acid salt, substantially as set forth.

3. A binding material, comprising a mixture of a dry soluble compound obtained by treating silicate of soda with an alkali and evaporating to dryness; and a mixture of tri-saccharate of lime and bi-carbonate of soda, substantially as set forth.

4. A material comprising a mixture of a filler, a dry soluble compound obtained by treating silicate of soda with an alkali and evaporating to dryness; and a dry soluble mixture of tri-saccharate of lime and bi-carbonate of soda, substantially as set forth.

1,023,674. BINDING OR CEMENTING MATERIAL. JAMES MILLAR NEIL, Toronto, Ontario, Canada, assignor to Alexander M. Hay, Toronto, Canada. Filed May 27, 1911. Serial No. 629,815. (Cl. 106—30.)

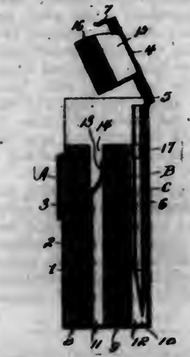
1. A composition for the purposes specified, comprising a filler bonded by a product of a mixture of acetate of lime and an alkaline silicate, substantially as described.

2. A binding material for the purpose described consisting of a mixture of a dry powdered alkaline silicate and dry powdered acetate of lime, substantially as described.

3. A composition for the purpose specified comprising a filler, and a mixture of a dry powdered alkaline silicate and dry powdered acetate of lime, substantially as described.

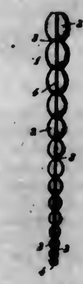
1,023,675. RECEPTACLE. BERT W. NEWMAN, Rocky Ford, Colo., assignor of one-half to A. L. Turnipseed, Creede, Colo. Filed June 15, 1910, Serial No. 567,024. Renewed Jan. 23, 1912. Serial No. 672,993. (Cl. 206—38.)

A portable receptacle having its front wall cut away on its upper end, a door hinged to the upper end of the front wall, said receptacle being adapted to contain postal cards so that their upper ends project above the upper end of the front wall, a closure hinged to the upper end of the back wall and provided with a depending tongue adapted to engage the upper edge of the door, and a stamp receptacle supported on the closure and having a bottom wall adapted to engage the door, and side walls having curved



front edges whereby said door will yield when engaged by the tongue of the closure, said bottom wall being supported in closed position so as to limit the vertical movement of postal cards in the receptacle.

1,023,676. SINKER. ZYOMUNT PANCOAST, Philadelphia, Pa. Filed Oct. 18, 1910. Serial No. 587,780. (Cl. 43—17.)



1. As a new article of manufacture, a sinker constructed from a single piece of metal of an increasing diameter from one end to the other and formed throughout to provide separable portions which may be used as individual weight units.

2. As a new article of manufacture, a sinker constructed from a single piece of metal of an increasing diameter from one end to the other and formed throughout to provide separable portions which may be used as individual weight units, the said metal having a continuous line kerf therein to permit of the engagement of the line therein and also provided whereby to permit the walls of the kerf of each weight unit to be compressed against the line to hold the weight unit against movement thereon.

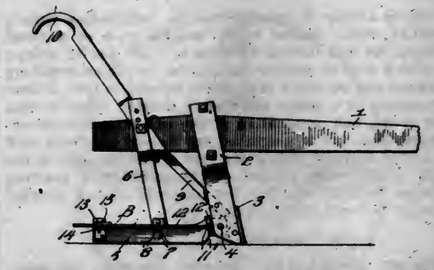
1,023,677. TOILET-HOOD. GRETEL J. PASS, Grenada, Miss. Filed Mar. 12, 1910. Serial No. 548,796. (Cl. 2—118.)

The herein described toilet hood comprising a fabric body adapted to fit over the head and face and open at both ends, one end of said body being contracted to cause the same to fit closely to the head while at the same time leaving space for the hair, the other end of said body being contracted to closely engage around the neck, one side of said body being so woven as to conform to the shape of the face, the other side of said body being provided with an opening extending downwardly from the reduced upper end and through the reduced lower end, and



means for adjustably securing the edges of said opening together.

1,023,678. PLOW ATTACHMENT. VALTA T. POST, Como, Tex. Filed Sept. 19, 1911. Serial No. 650,096. (Cl. 97—26.)

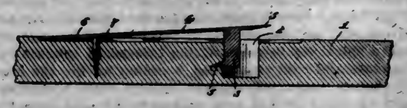


1. A plow beam having a bifurcated standard, a bed bar pivoted between the side members of said standard, a brace connecting the bed bar adjustably with the beam, and a laterally extending cutting member associated with the bed bar.

2. A plow beam having a bifurcated standard, a bed bar pivotally associated with said standard and having lugs directly in rear of said standard, a curved cutting member pivoted between said lugs, means for adjustably connecting said cutting member with the rear end of the bed bar, and means for adjustably connecting the bed bar with the beam.

3. A plow beam having a standard, a bed bar pivotally connected with said standard, said bed bar being provided with laterally extending lugs, a curved cutting member supported pivotally between said lugs, a brace connecting the cutting member with the rear end of the bed bar, said brace being composed of two overlapping adjustably connected members, and a brace adjustably connecting the bed bar with the beam.

1,023,679. BENCH-DOG. JOSEPH PAIMOS, Hammond, La. Filed Nov. 21, 1911. Serial No. 661,526. (Cl. 144—306.)



1. In a device for the purpose set forth, the combination with a work bench having a recessed portion, of a spring dog for the bench, said dog being formed with an L-shaped portion adapted to be received within the recessed portion of the bench and to engage one of the walls provided thereby, and means for maintaining the said offset portion in an adjusted position with relation to the top of the bench.

2. In combination with a work bench having a recessed portion, of a bench stop comprising a toothed resilient member means retaining the said member upon the bench, and also to permit of the longitudinal adjustment of the said member, said toothed member being provided with a substantially L-shaped depending portion, and the offset arm of the said L-shaped member adapted to engage with one of the walls of the depressed portion of the bench.

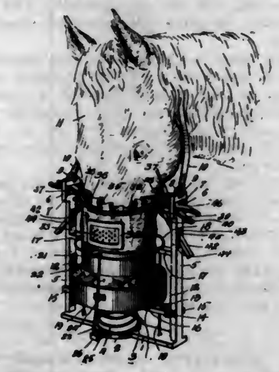
3. A bench stop comprising an elongated spring member having one of its ends formed with teeth, the said member being also provided with an L-shaped depending portion arranged adjacent its teeth, and the said spring member having its body formed with an elongated opening, substantially as and for the purpose set forth.

1,023,680. HASP-HOOK. HUGO E. PROTZ, Sparta, Wis. Filed May 5, 1911. Serial No. 625,404. (Cl. 70—83.)



As an article of manufacture the combination with a tubular casing, formed of an integral piece of material having one end thereof flattened to form a solid portion provided with an aperture adapted to receive an attaching member and the other end thereof reduced to form a bearing flange, of a shank mounted to slidably extend within the casing and terminating at one end thereof in an enlarged head and at the other end thereof in a hook and a spring mounted within the said casing, to encircle the said shank, with an end of the said spring abutting against the said head and the other end thereof abutting against the said bearing flange.

1,023,681. FEED-BAG. JOSEPH REGECZI, Ironwood, Mich. Filed Oct. 2, 1911. Serial No. 652,238. (Cl. 119—65.)



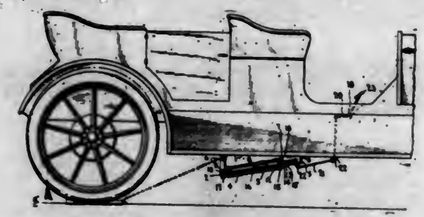
1. A feed bag comprising a base plate, uprights carried thereby and adapted to have the upper ends thereof suspended from a horse's head, a cross head slidably mounted between said uprights, a bottom plate carried by said cross head, a spiral compression spring interposed between said base plate and said cross head, a casing having the lower end thereof connected to said bottom plate, cylindrical shells arranged within said casing, guide rods supported by said base plate for guiding a movement of said cross head and said casing, and means including curved levers carried by the upper ends of said uprights for clamping the upper end of said casing upon the nose of a horse's head.

2. A feed bag comprising a base plate, uprights carried thereby, a cross head slidably mounted between said uprights, a compression spring interposed between said base plate and said cross head, a feed bag having the bottom thereof supported by said cross head, and means including curved gripping levers carried by the upper ends of said uprights and adapted to retain the upper end of said feed bag in engagement with a horse's nose.

3. A feed bag comprising a base plate, uprights carried thereby, a cross head slidably mounted between said uprights, a compression spring interposed between said base plate and said cross head, a feed bag having the bottom thereof supported by said cross head, means carried by said base plate for supporting said feed bag intermediate the ends thereof, and means including curved pivoted levers carried by the uprights and rack bars adapted to snugly hold the upper end of said feed bag in engagement with a horse's nose.

4. A feed bag comprising a base plate, uprights carried thereby, a bag arranged between said uprights, a spring carried by said base plate for normally holding the bottom of said bag in an elevated position, and means including pivoted levers and coupling members supported by the upper ends of said uprights and adapted to snugly hold the upper end of said bag in engagement with a horse's nose.

1,023,682. EMERGENCY-BRAKE. WILLIAM RAY RENO, Louisville, Ky. Filed Feb. 16, 1911. Serial No. 608,930. (Cl. 21—8.)



1. An emergency brake for motor vehicles, comprising casings having inclined longitudinally slotted bottoms, brake shoes slidably supported in said casings, shoe projecting plungers adapted to engage and project said shoes from the casings, shanks formed on said plungers and projecting through said slots, plunger operating springs connected to said shanks, catches arranged in said casings, catch lugs on said shoes to receive said catches and means whereby the latter are disengaged by the operator of the vehicle.

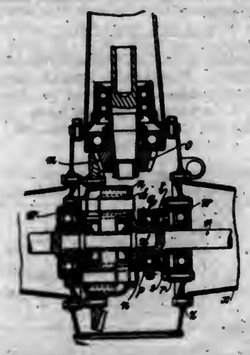
2. An emergency brake for motor vehicles, comprising casings, spring projected brake shoes arranged in said casings, catch lugs on said shoes, catches in said casings to engage said lugs and hold the shoes in operative position, a suitably mounted rock shaft, crank arms arranged on the ends thereof, flexible connections between said crank arms and said catches and an operating lever connected to said rock shaft whereby the same is actuated to release said catches.

1,023,683. TRANSMISSION-GEARING. FREDERICK HENRY ROYCE, Derby, England. Filed Oct. 27, 1911. Serial No. 657,155. (Cl. 74—34.)

1. The combination with a support or casing provided with bearings and having a screwthreaded sleeve, a cage for the differential gearing mounted in the said bearings, and a beveled toothed wheel secured to the said cage; of a revoluble screwthreaded housing engaging with the said screwthreaded sleeve, a thrust-bearing carried by the said housing and having one of its parts connected to the said cage, and a locking device which normally prevents the housing from being revolved in the said sleeve.

2. The combination, with a support or casing provided with bearings and having a screwthreaded sleeve, a cage for the differential gearing mounted in the said bearings and provided with a hub, and a beveled toothed wheel secured to the said cage; of a revoluble screwthreaded

housing engaging with the screwthreaded sleeve, a thrust-bearing carried by the said housing, a ring screwed on the said hub and securing one of the thrust-bearing mem-



bers to the said cage, and a locking device which normally prevents the housing from being revolved in the said sleeve.

1,023,684. ELECTRIC CLOCK-WINDING MECHANISM. GEORGE H. RUPLEY, Schenectady, N. Y., assignor, by mesne assignments, of one-half to Frank J. Seabolt and one-fourth to Edward C. Hall, Schenectady, N. Y., and one-fourth to Edward F. Pickford, Washington, D. C.; Mabel H. Hall executrix of said Edward C. Hall, deceased. Filed Aug. 10, 1908. Serial No. 447,808. (Cl. 58—41.)



1. The combination with clock mechanism, of operating means therefor comprising an electric motor, an endless driving chain arranged to form two loops, a weight movably suspended in one of said loops, and a circuit controlling device permanently biased to move in one direction connected to one of said loops.

2. The combination with clock mechanism, of operating means therefor comprising an electric motor, an endless driving chain arranged to form two loops, a weight movably suspended in one of said loops, and a rotary circuit controller permanently biased to rotate in one direction connected to one of said loops.

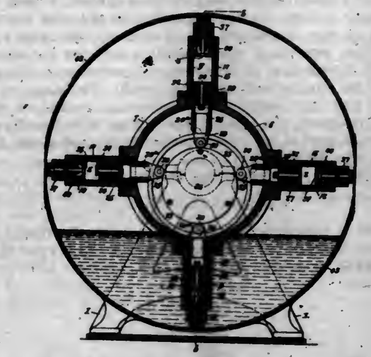
3. The combination with clock mechanism, of operating means therefor comprising an electric motor, an endless driving chain arranged to form two loops, a weight for actuating the clock mechanism movably suspended in one of said loops, and a circuit controlling device permanently biased to move in one direction connected to the other loop so as to be moved thereby and return when released.

4. The combination with clock mechanism, of operating means therefor comprising an electric motor, an endless driving chain arranged to form two loops, a weight movably suspended in one of said loops, and a rotary circuit controlling device for the motor permanently biased to rotate in one direction connected to one of said loops to be moved thereby continuously against the bias and return in response to the bias.

5. The combination with clock mechanism, of operating means therefor comprising an electric motor, an endless driving chain arranged to form two loops, a weight movably suspended in one of said loops, and a drum controlling device for the motor connected to one of said loops so as to be rotated in one direction against a bias and returned in response to the bias.

[Claims 6 to 21 not printed in the Gazette.]

1,023,685. COMPRESSOR-PUMP. WILLIAM F. RUWELL, Philadelphia, Pa. Filed May 10, 1911. Serial No. 626,183. (Cl. 230—31.)



1. The combination in a pump of a rotary casing having a plurality of cylinders and a drum; a free-rolling weight operative within the drum when the casing its turned; pistons operable within the cylinders, each of said pistons having a positive sliding connection to the said free-rolling weight, there being a valved passage connecting each cylinder with the interior of the drum.

2. The combination in a compressor pump of a cylindrical drum rotatably mounted with its axis in a horizontal position, a cylindrical weight of smaller diameter than and rotatably contacting by gravity with the lowest portion of the inner surface of the drum, cylinders providing compression chambers and carried by the drum, said weight having a groove, a piston adapted to each of the chambers and to the groove in the weight, whereby gas is admitted to the chambers.

3. The combination in a compressor pump of a rotatably mounted cylindrical drum, a weight in rotatable contact with the inner surface of the drum and having a groove, cylinders providing chambers and carried by the drum, a hollow piston adapted to operate within each of the cylinders and having extensions engaging the groove in the weight, an inlet valve normally closing the inner end of each piston, a discharge valve at the inner end of each chamber and in alinement with the inlet valve of its respective piston, said hollow pistons permitting communication between the chambers and the interior of the drum, discharge ports leading from the discharge valves and an inlet port leading to the interior of the drum.

4. The combination in a compressor pump of a supporting structure, a cylindrical drum having hollow trunnions rotatably mounted in the supporting structure, a grooved weight supported by the inner surface of the drum and in rotatable contact therewith, cylinders providing chambers and carried by the drum, a hollow piston adapted to

operate within each of the cylinders and having extensions engaging the groove in the weight, a valve casing carried by each of the pistons, an inlet valve mounted in each of said casings, a valve casing adjacent the inner end of each chamber, a discharge valve mounted on each of said latter casings and in alinement with the inlet valves, detachable caps closing the end of each cylinder, said hollow pistons permitting communication between the chambers and the interior of the drum and providing a contact surface for engagement with the weight, discharge ports leading from the discharge valve casings to one of the hollow trunnions, the other of said hollow trunnions forming an inlet port to the interior of the drum.

5. The combination in a compressor pump of a supporting structure, a cylindrical drum having hollow trunnions rotatably mounted in the supporting structure, a grooved weight supported by the inner surface of the drum and in rotatable contact therewith, cylinders providing chambers and carried by the drum, a hollow piston adapted to operate within each of the cylinders and having extensions engaging the groove in the weight, a valve casing carried by each of the pistons, an inlet valve mounted in each of said casings, a valve casing adjacent the inner end of each chamber, a discharge valve mounted in each of said latter casings and in alinement with the inlet valves, detachable caps closing the end of each cylinder, said hollow pistons permitting communication between the chambers and the interior of the drum and providing a contact surface for engagement with the weight, discharge ports leading from the discharge valve casings to one of the hollow trunnions, the other of said hollow trunnions forming an inlet port to the interior of the drum, and means for cooling said drum and cylinders.

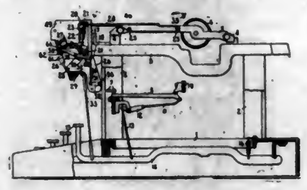
[Claim 6 not printed in the Gazette.]

1,023,686. COMBINATION CANE AND UMBRELLA. FOREST EUGENE SIGGINS, Clarksburg, W. Va. Filed Oct. 11, 1911. Serial No. 654,088. (Cl. 135—17.)



A combined cane and umbrella comprising a stick having upper terminus thereof screw threaded and further having a screw threaded portion at a point removed from its upper terminus, a cover and ribs therefor connected to said stick, a cylindrical handle having interior screw threads at each end thereof and further having its outer end formed with peripheral threads, a nut normally engaging with the interior screw threads at the outer end of the handle and provided with a centrally arranged opening having the wall thereof screw threaded for the reception of the threads at the upper end of the handle when the nut engages with the interior threads at the end of said handle, said nut capable of being secured to the interior screw threads at the inner end of the handle, said threaded opening of said nut adapted to receive the threaded portion of the stick when the nut is at the inner end of the handle, said nut provided with means to facilitate its removal from either end of the handle, a telescopic sectional casing capable of being positioned in said handle and adapted to have the section of smallest diameter connected to the stick when said casing is extended thereby inclosing the umbrella cover.

1,023,687. COMBINED TYPE-WRITING AND COMPUTING MACHINE. HERBERT H. STEELE, Marcellus, N. Y., assignor to The Monarch Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed Dec. 15, 1911. Serial No. 665,892. (Cl. 235—59.)



1. In a computing machine, the combination of keys, key actuated parts, a key arrester for preventing simultaneous operation of two keys, and means for rendering said key arrester operative and inoperative.

2. In a computing machine, the combination of keys, key actuated parts, a key arrester for preventing simultaneous operation of two keys, and means for moving said key arrester to an operative and to an inoperative position.

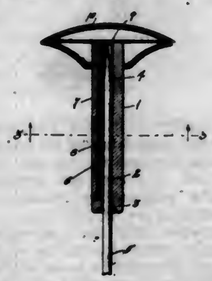
3. In a computing machine, the combination of keys, key actuated parts, a key arrester comprising a series of dogs for preventing simultaneous operation of two keys and a movable support for said dogs, and means for moving said support to bring said dogs into and out of operative position.

4. In a computing machine, the combination with keys and key actuated parts, of a key arrester movable as an entirety into and out of operative position.

5. In a computing machine, the combination of a series of keys, a series of levers operated by said keys, a series of key arrester dogs for coöperation with said levers, and a pivoted support on which said dogs are mounted, said support when moved about its pivot moving said dogs into and out of position to coöperate with said levers.

[Claims 6 to 23 not printed in the Gazette.]

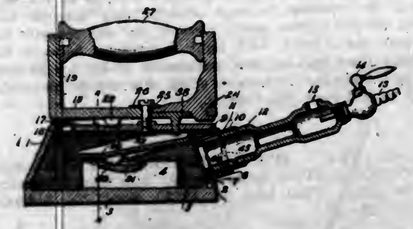
1,023,688. HAT-PIN-POINT PROTECTOR. MICHAL STRBA, Pittsburgh, Pa., assignor of one-half to Stanko Bartec, Pittsburgh, Pa. Filed June 23, 1911. Serial No. 634,900. (Cl. 24—155.)



In a hat pin point protector, a sleeve member having a bore provided with a concentric and an eccentric portion, said concentric portion arranged at the inner end of the sleeve and being relatively short with respect to the length of the sleeve, said eccentric portion extending from the concentric portion to the outer end of the sleeve and forming at its terminus with said concentric portion a shoulder, the inner portion of said concentric part of said

bore flaring, a head mounted upon the outer end of said sleeve and inclosing the outer end of the eccentric portion of said bore, and a yieldable gripping member mounted in and snugly engaging the wall of the eccentric portion of said bore, said member abutting against said shoulder and extending to the outer end of said eccentric portion of said bore, the said gripping member provided in its periphery with a groove extending from the inner end thereof to a point in close proximity to the outer end thereof, the inner end of said groove registering with the concentric portion of said bore.

1,023,689. SAD-IRON. MONROE SUNSHINE, New York, N. Y. Filed Oct. 26, 1910. Serial No. 589,276. (Cl. 158—23.1.)



1. In a sad iron, a hollow body having a longitudinally arranged upwardly extending rib on the floor thereof provided with a groove in its upper surface, a deflecting plate arranged above said rib and having a downward projection engaging said groove, a burner at one end of said body directed downwardly at an angle against one end of said rib, and said rib being sharpened to divide the flame directed against it.

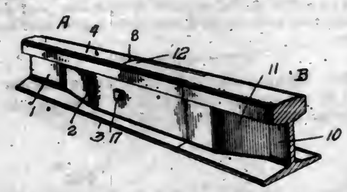
2. In a sad iron, the combination with a hollow body, of a burner discharging therein at one end, the body being provided with an outlet for products of combustion in its top near the other end, a handle plate extending over said top, and a shield on said top partially around said outlet extending up from said top toward said handle plate.

3. In a sad iron, the combination with a hollow body having an outlet for products of combustion in the top at the forward end, of a burner entering said body at the rear end, heat conducting means on the floor of said body for dividing and spreading the flame from said burner and directing it around opposite sides to said outlet, a handle plate above said body, and an upwardly extending shield around the forward side of said opening to direct the products of combustion to the rear under said handle plate.

4. In a sad iron, the combination with a hollow body open at its rear or heel, of a removable burner socket fitting in said open end, a longitudinal vertical flame spreading rib on the floor of said body in line with said socket, a removable deflecting plate within said body above said rib having interlocking connection with said socket at one end, a lug on the bottom of said plate resting on said rib, a removable handle plate having interlocking connection with said deflecting plate, and means for fastening said handle plate in place.

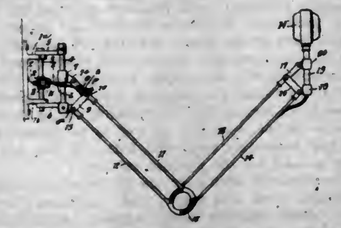
5. In a sad iron, the combination with a hollow body, a removable deflecting plate within said body, and a burner arranged at one end of said body and held in position by said plate, of a removable handle plate adapted to be secured to the top of said body and having a projection extending through the top of said body and engaging said deflecting plate, a fixed upright handle support at one end of said handle plate, a removable handle support at the other end of said handle plate having an upright portion and a horizontal portion, the said handle plate being provided with a groove, to receive and fit said horizontal portion, and with an opening, a lug on said removable support adapted to enter said opening to interlock the parts, and means for fastening said handle plate to said body adapted to engage the end of said horizontal portion.

1,023,690. RAIL-JOINT. ALTON B. TAYLOR, Washington, Pa., assignor of one-half to August P. Geiser, Washington, Pa. Filed Dec. 4, 1911. Serial No. 663,669. (Cl. 289—8.)



A rail joint comprising a socket rail, a tongue rail adapted to be connected to said socket rail, said socket rail having the web thereof provided with an enlargement connecting the head and base flanges of said rail, said socket having the walls thereof provided with longitudinal beveled portions and vertical beveled portions, whereby the inner end of the socket is larger than the remaining portions of said socket, said socket having the inner wall thereof intersected by a transverse opening with the walls of said opening screw-threaded at one end, said tongue rail having the web thereof provided with an enlargement and a tongue, said tongue having the side walls thereof cut away to provide longitudinal and vertical beveled portions corresponding to the longitudinal and vertical beveled portions of said socket rail, whereby said tongue can be fitted in the socket of the first mentioned rail, said tongue having the end thereof provided with a transverse groove adapted to register with the transverse opening of said socket rail, and a screw bolt screwed into said transverse opening to protect vertical displacement of said tongue rail relatively to said socket rail.

1,023,691. ELECTRIC SWITCH. GEORGE HENRY TAYLOR, Helena, Mont. Filed Apr. 7, 1911. Serial No. 619,551. (Cl. 172—15.)



1. The combination with a dental bracket having a stationary pivot rod and parts movable toward and away from said rod, of a switch secured to said stationary rod and having a connection with one of said movable members, the movement of said movable member away from the rod serving to close the switch and the movement toward the rod serving to permit the opening of the switch.

2. The combination with a dental bracket having a stationary pivot rod and a member movable toward and away from said rod, of a two-part switch, one part being secured to said stationary rod and being provided with a contact, and the other part being also provided with a contact having a yielding connection with said movable member, the movement of said movable member away from the rod serving to bring said contacts into engagement, and the movement of the movable member toward the rod serving to permit the contacts to be brought out of engagement.

3. The combination with a dental bracket having a stationary pivot rod and parts movable toward and away from said rod of a switch, said switch comprising two insulating members hinged together, a spring for normally keeping said hinged members apart, each of said hinged members being provided with a contact adapted

to engage the contact on the other member, one of said insulating members being secured to said stationary pivot rod and the other of said insulating members being provided with a loop encircling its companion member, a spiral spring secured to said loop, and a chain for connecting said spiral spring with one of said movable members.

1,023,692. GEAR FOR CHILDREN'S CARRIAGES. ARTHUR M. WALDEN, Hicksville, N. Y. Filed Dec. 3, 1910. Serial No. 595,419. (Cl. 21—83.)

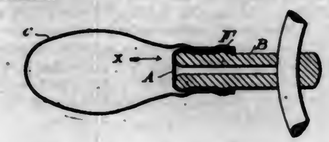


1. In combination with the frame of a baby carriage, of lugs depending from the sides of the frame, hooks upon one end of the frame, S shaped springs hingedly connected with the lugs, longitudinally extending side members connected with the hooks, rear wheels having short axles secured to the side members, front wheels also provided with short axles pivotally connected with the side members, transversely arranged brace members for the side members, each of said brace members comprising four sections, opposite end sections being connected with the side members and being connected with the inner sections through the medium of a rule joint, one of the inner members being provided with a tongue, the second inner member having its extremity bifurcated to engage with the tongue, a detachable spring member for securing the ends of the intermediate sections, longitudinally extending bars pivotally connected with the short axles of the front wheels, a transverse member removably and loosely connected with each of the bars, a steering rod pivotally connected with the transverse member, said steering rod having a circumferential depression, a collar upon the rod provided with a thumb nut engaging within the depression, said collar being formed with a depending ear, a link connected with the ear, a bracket secured to the frame of the carriage and removably connected with the link, all substantially as and for the purpose set forth.

2. In combination with a frame for baby carriages, of lugs depending from said frame, said lugs being provided with eyes, hanger bearings loosely connected with the eyes, S-shaped springs hingedly connected with the hanger bearings, side members secured to the springs, short axles connected with the side members, wheels for the axle, transverse braces for the side members, each of said braces comprising a pair of hinged members, means for connecting the meeting ends of the members, rule joints for the brace members, longitudinally extending bars projecting through the keepers, said bars having their front ends pivotally connected to the front short axles, a removable transverse lever connected with the opposite ends of the bars, and a steering lever connected with the transverse bars, substantially as and for the purpose set forth.

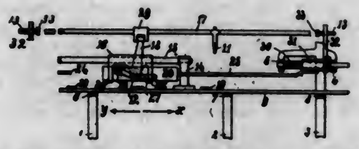
1,023,693. INFANT-PACIFIER. JAMES WALSH and ROBERT DAWSON KAY, London, England. Filed Mar. 23, 1910. Serial No. 551,148. (Cl. 128—28.)

1. A pacifier comprising in combination, a tubular rubber mouth piece closed at one end, a stem like element, a rubber cap inclosing the end portion of said stem like element, the said rubber cap and portion of said stem like element inclosed thereby, being inserted into said tubular rubber mouth piece at the end opposite the closed end thereof, with tight engagement between the mouth piece and cap for confinement of air within said mouth piece, means hermetically sealing said mouth piece to said cap, means securing said mouth piece and cap to said stem like element.



2. A pacifier comprising in combination, a tubular rubber mouth piece, closed at one end, a stem like element, a rubber cap inclosing the end portion of said stem like element, the said rubber cap and a portion of the said stem like element inclosed thereby being inserted into said tubular rubber mouth piece at the end opposite the closed end thereof, with tight engagement between the mouth piece and cap for confinement of air within said mouth piece, and means securing said mouth piece and cap to said stem like element.

1,023,694. SPEED-RETARDING DEVICE FOR THREAD-GUIDE BARS. CARL WALTHER, Chemnitz, Germany. Filed Mar. 25, 1911. Serial No. 616,982. (Cl. 66—12.)



1. In a knitting machine, knitting devices including a reciprocating driver bar having a constant traverse, a thread guide bar, stops for said bar, means to vary the position of said stops to vary the strokes of said bar, a friction driven slide for reciprocating said guide bar from said driver-bar, a movable connection between said slide and said guide bar, and an additional stop carried by said stop carrying means to adjust said connection to permit the bar to lag behind the slide when the guide bar approaches the end of its traverse.

2. In a knitting machine, a slur bar having a constant reciprocating movement, a post on said bar, a horizontal bar carried by said post, a friction box on said horizontal bar, a slide bar 20 having a curved slot, a crank lever journaled in said friction box whose lower end carries a pin engaged by said curved slot, a thread guide bar, a catch thereon engaged by the upper arm of said crank lever, an adjustable stop for said thread guide bar mounted on a nut movable on a fashioning screw and another stop on said nut to limit the movement on said bar 20.

1,023,695. DRIVING MECHANISM FOR THREAD-GUIDE BARS. CARL WALTHER, Chemnitz, Germany. Filed Mar. 25, 1911. Serial No. 616,983. (Cl. 66—12.)

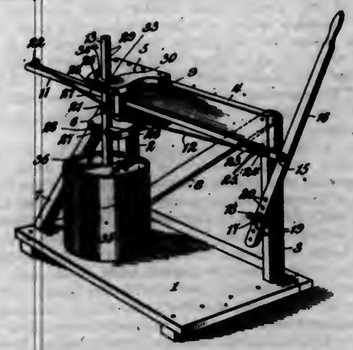


1. In a thread guide bar traverse mechanism for straight knitting machines, a primary bar having a constant reciprocating movement, a thread guide bar, a latch 4 on said primary bar to contact with and drive the thread guide bar, a stop for the thread guide bar and means to vary the position of said stop, and a second stop

19 carried by said means to unlock the latch before the thread guide bar encounters its stop, and a device carried by said stop positioning means to engage and move the thread guide bar against the stop.

2. In a thread guide bar traverse mechanism for straight knitting machines a primary bar on the machine frame having a constant reciprocating movement, a post on said bar, a bar 5 carried by said post, an arm 4 rotatable on said bar 5, a thread guide bar having a lug thereon by which said arm drives said thread guide bar, a head near the end of said thread guide bar, a frame carrying a fashioning screw, a crank lever fulcrumed on a nut carried by said screw, an incline on said primary bar engaged by a roller on the lower arm of said crank lever, a catch pivoted on the upper arm of said crank lever, adapted to engage behind the head of said thread guide bar and an adjustable stop for said thread guide bar also carried by said nut.

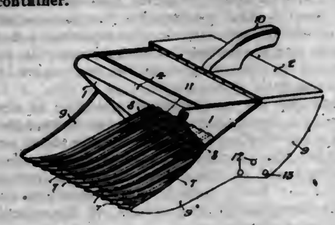
1,023,696. CHURN. CHARLES S. WAYBRIGHT, Staunton, Va. Filed Oct. 12, 1911. Serial No. 654,377. (Cl. 31—17.)



In a device of the class described, the combination with a support having upper and lower spaced bearing arms, of a vertically adjustable dasher provided with a stem having transverse perforations arranged at intervals, a stationary washer seated upon the upper arm of the support and forming a metallic bearing and having an opening receiving the stem of the dasher, and a rotating supporting and locking device consisting of a pin adapted to be arranged in any of the perforations of the stem of the dasher and split longitudinally to form two sides, and a resilient head consisting of a loop and connecting the sides forming a handle at one end of the supporting and locking device and maintaining the sides thereof in frictional engagement with the stem of the dasher, said device being provided at opposite sides of its center with lower terminal recesses receiving opposite portions of the washer and forming an intermediate depending projecting portion extending into the opening of the washer and providing shoulders for engaging the walls of the said opening, whereby the locking device is held against longitudinal movement and is retained in a perforation of the stem, said recesses also forming lower terminal bearing faces, which rest upon the upper face of the washer.

1,023,697. BERRY-PICKER. OTTO C. WEBER, Mullica township, Atlantic county, N. J. Filed Oct. 4, 1910. Serial No. 585,258. (Cl. 56—99.)

1. A berry picker consisting of a container provided with two side members and having teeth projecting from one of its edges; a handle mounted above and extending at right angles to the lines of said teeth for substantially the full width of the container; said handle lying between the side members and in front of the main portion of the container; with a second handle, in the form of a rearwardly extending bar, mounted on the cover of said container.



2. The combination in a berry picker of two side members; a curved back member joining the lower portions of said side members; a cover extending between the upper edges of the side members; a bottom member extending between the side members upwardly from the back member; a series of teeth projecting from said bottom member; a handle connecting the upper portions of the side members; with a second handle mounted on the cover piece and extending rearwardly from the same.

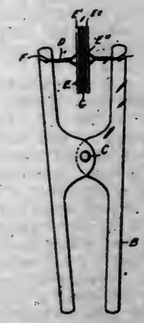
3. A berry picker consisting of a container having means whereby it may be held; and a series of teeth projecting from one edge of said container; said teeth being substantially T-shaped in section.

4. A berry picker consisting of a container having means whereby it may be held; and a series of teeth projecting from one edge of said container; said teeth being substantially flat on top and undercut from their upper edges.

5. A berry picker consisting of a container having means whereby it may be held; and a series of teeth projecting from one edge of said container; said teeth being substantially T-shaped in section and having their forward ends upturned.

[Claims 6 to 9 not printed in the Gazette.]

1,023,698. TOY. GEORGE LAMONT WEBSTER, Midlothian, Tex. Filed Aug. 5, 1911. Serial No. 642,454. (Cl. 46—14.)



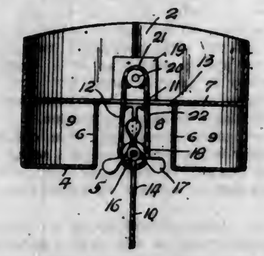
1. A toy comprising a wheel adapted to be whirled by the action of a string and comprising a spool having a hub and wheels at the ends thereof, the wheels being pierced and the hub being provided in its outer side with longitudinal grooves in alinement with the holes pierced in the end wheels for the passage of a string and a sounding bar fitting loosely upon the hub and adapted to vibrate between the end wheels of the spool, substantially as set forth.

2. A toy comprising a wheel adapted to be operated by a string and consisting of a hub, end wheels thereon and a sounding bar fitting loosely on the hub and adapted to vibrate between the end wheels, the spool having openings for the passage of the operating string, substantially as set forth.

3. A whirling toy comprising a handle having pivoted sections, a double length of string between the said sections, a spool having openings for the passage of such lengths of string, the said spool comprising a hub and end wheels, and a sounding bar fitting loosely on the hub and adapted to vibrate between the end wheels of the spool, substantially as set forth.

4. A whirling toy comprising two lengths of string, a spool having a hub and end wheels and having the said end wheels provided with openings for the string and the hub provided with longitudinal grooves in alinement with said openings and receiving said lengths of string, and a sounding bar fitting loosely on the hub and adapted to vibrate between the end wheels of the spool, substantially as set forth.

1,023,699. WATER-CRAFT. ANTHONY WILK, Evanston, Ill. Filed Jan. 4, 1912. Serial No. 669,369. (Cl. 115—39.)



1. In a motor boat, a hull having a flat bottom provided with a longitudinal opening extending from the bow of the hull to the stern thereof, a casing arranged over said opening and having a top plate connecting the sides of the hull and providing a floor, the top plate of said casing having an opening formed therein, a center board carried by the top plate of said casing and extending from the bow of said boat to the stern thereof, said center board having an opening formed therein in communication with the opening of the top plate of said casing, propellers revolubly mounted in the opening of said center board, and means carried by the plate of said casing adjacent to the opening thereof for imparting a rotary movement to said propellers.

2. A boat comprising a hull having a flat bottom provided with a longitudinal opening extending from the bow of said boat to the stern thereof, a casing mounted over the opening of said hull and having a top plate with the edges thereof connected to the side walls of said hull to provide longitudinal airtight compartments at the sides of said hull, a center board secured to the top plate of said casing and extending from the bow of said boat to the stern thereof, and revoluble propellers supported by said center board.

3. In a boat, a hull having a flat bottom provided with a longitudinal opening, a casing arranged in said hull over said opening and providing a water-way and airtight side compartments, a center board arranged in the water-way of said casing and extending from the bow of the boat to the stern thereof, revoluble propellers supported by said center board, and means carried by said casing and adapted to impart a rotary movement to said propellers.

1,023,700. TOMATO-PEELER. ANDREW J. WILLIAMS and CHARLES E. WILLIAMS, Sturgis, S. D., assignors to Robert W. McMillan and Leo G. Dessel, Vale, S. D. Filed July 19, 1911. Serial No. 639,289. (Cl. 146—14.)

1. In an apparatus for peeling tomatoes, a trough, a conveyer having flights mounted for movement upon the trough, reticulated side blades within the trough, a reticulated top plate arranged between the side blades and the flights being centrally provided with enlarged portions adapted to contact with the ends of the side blades to successively open the said ends.



2. In a device for the purpose set forth, a trough, an endless conveyer mounted for movement within the trough, flights for the conveyer, reticulated side blades within the trough, the said blades being arranged opposite each other and being provided with means for forcing their free ends toward each other, a reticulated top blade, a spring element connected with the top blade, means for regulating the tension of the spring element, and means provided by the flights for forcing the ends of the blades away from each other.

3. In an apparatus of the class described, a trough, an endless conveyer carried by the trough, means for actuating the conveyer, flights upon the conveyer, reticulated side blades arranged in pairs adjacent the sides of the trough, said blades being provided with spring elements which are connected to the sides of the trough, means for regulating the blades, to bring their ends toward or away from each other, a top blade overlying the side blades, said top blade having its outer extremity formed with an upturned portion, and means comprising the flights of the conveyer for separating the side blades.

4. In a device for the purpose set forth, a trough, an endless conveyer carried by the trough, flights upon the conveyer, said blades resiliently secured to the trough, means of forcing the free ends of the side blades toward each other, an upper substantially V-shaped blade arranged between the side blades, a tension element for the upper blade, means provided by the flights for forcing the free ends of the side blades away from each other, and an inclined delivery entrance for the trough.

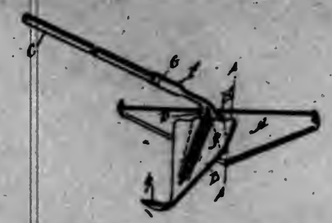
5. In an apparatus for the purpose set forth, a substantially rectangular trough, an endless conveyer within the trough, means for actuating the conveyer, the sides of the trough being provided with inclined slits arranged opposite each other, flattened spring members having one of their ends passing through the slits, means for removably connecting the spring members to the sides of the trough, each of said spring members connected to a substantially rectangular reticulated blade, adjusting elements carried by the sides of the trough to regulate the tension of the spring members and to normally force the ends of the blades toward each other, the trough being provided with connecting bars, a flattened off-set spring member removably connected with each of the bars, a substantially V-shaped reticulated blade connected with each of the springs, each of said blades adapted to normally lie between the side blades, means for regulating the tension of the springs of each of the top blades, and means provided by the flights of the conveyer for spreading the free ends of the side blades when the conveyer is in motion.

[Claim 6 not printed in the Gazette.]

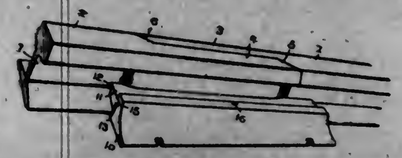
1,023,701. WEEDER AND FURROWER. NORMAN B. WINN, Tooele, Utah. Filed Aug. 7, 1911. Serial No. 642,815. (Cl. 55—39.)

1. In a hand cultivator the combination of a handle; a bifurcated shank attached to said handle; a triangular member with sharpened edges and upturned ends fastened to one of the bifurcated parts, at an angle to said shank, and providing a weeder; and a second member of convex triangular shape fastened to the other of said bifurcated parts intermediate of said weeder and handle, providing a furrower, substantially as described.

2. In a hand cultivator the combination of a handle; a bifurcated shank attached to said handle; a triangular weeder with sharpened edges and upturned ends fastened to one of the bifurcated parts, at an angle to said shank; a furrower of convex triangular shape fastened to the other of said bifurcated parts intermediate of said weeder and handle; and a tongue on said furrower toward which said furrower tapers, substantially as described.



1,023,702. RAILROAD-RAILS AND MEANS FOR SECURING THE MEETING ENDS THEREOF TOGETHER. JEFFERSON D. YOUNG, Chattanooga, Okla. Filed Jan. 20, 1911. Serial No. 603,751. (Cl. 238—8.)



The combination with the ends of two rails having overlapping extensions thickened and provided in the thickened portions with longitudinal grooves in their outer faces, of a chair having longitudinal ribs along its outer edge providing with longitudinal grooves in their inner faces, and longitudinal wedges between said rails and said ribs and provided with longitudinal flanges on each side engaging in the longitudinal grooves in the outer faces of the rail extensions and the inner faces of said ribs, said wedges being tapered and adapted to be entered from opposite ends of said chair and longitudinally adjustable therein, and means for limiting the longitudinal movement of said rails.

1,023,703. WARPING-CLEAVER FOR LOOMS. BENJAMIN F. ABBOTT, Lisbon Falls, Me. Filed June 27, 1911. Serial No. 635,652. (Cl. 139—75.)



1. In a loom, a cleaver comprising a frame pivotally mounted on said loom, a lever adjustable on said frame and having its lower end free and means designed to engage and operate said lever, substantially as described.

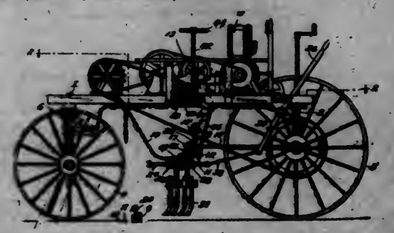
2. In a loom, a cleaver comprising a frame pivotally mounted on said loom, a lever having one end free and the other end provided with a loop embracing said frame, means for securing said loop on said frame and means designed to engage and operate said lever, substantially as described.

3. In a loom, a cleaver comprising a frame pivotally mounted on said loom, a bracket having a loop embracing said frame, means for adjustably securing said loop on said frame, a lever having one end connected to the bracket and the other end free and means designed to engage said lever and operate the cleaver, substantially as described.

4. In a loom, a cleaver comprising a frame pivotally mounted on said loom, a bracket having lugs and a loop embracing said frame, means for securing said loop on the frame, a lever having one end secured to the lugs of said bracket and its opposite end free and means designed to engage the free end of the lever and operate said lever and cleaver, substantially as described.

5. In a loom, a supporting framework, a cleaver comprising a frame pivotally mounted on said supporting framework, a bracket having a loop embracing said frame, lugs projecting from said bracket, means for securing said loop on the frame, a lever having one end secured between the lugs of said bracket and the other end free and means designed to engage the free end of the lever and operate the said lever and cleaver, substantially as described.

1,023,704. CULTIVATING-MACHINE. DELON H. ABBOTT, Vandemere, N. C. Filed Mar. 18, 1911. Serial No. 615,312. (Cl. 97—30.)



1. In a device of the class described, a motor driven frame having arch axles and supporting wheels, means whereby one of said axles is supported for rocking movement, an implement carrying yoke extending beneath the frame intermediate the axles, draft means including links connecting the implement carrying yoke with one axle, flexible elements connecting the implement carrying yoke with the frame in the vicinity of the other, rocking axle, and means for effecting vertical adjustment of the implement carrying yoke.

2. In a device of the class described, a motor driven frame having arch axles and supporting wheels, means whereby one of said axles is supported for rocking movement, an implement carrying yoke extending beneath the frame intermediate the axles, implement carrying heads laterally adjustable on the yoke, draft links slidably engaging the spindles of one axle and having hooks engaging the implement carrying heads, flexible elements connecting said heads with the frame in the vicinity of the other rocking axle, and means for effecting vertical adjustment of the implement carrying yoke.

3. In a device of the character described, a motor driven frame having arched axles and transporting wheels, an arched implement carrying member extending beneath the frame intermediate the axles, means for effecting vertical adjustment of the arch member, draft means connecting the implement carrying member with relatively fixed parts of the frame, oscillatory gang carrying heads associated with the arch member and including segment racks, reciprocatory rack bars engaging the segment racks, and means for actuating the reciprocatory rack bars to rotate the gang carrying heads.

4. In a device of the character described, a motor driven frame including arched axles and transporting wheels, a tool carrying member extending beneath the frame intermediate the axles, means for effecting vertical adjustment of the tool carrying member, means connecting the tool carrying member with relatively fixed parts of the frame, tiltable bracket members adjustably mounted upon the

tool carrying member and having guides, rack bars movable in the guides, gang carrying heads associated for oscillation with bracket members and having rack segments connected therewith, said rack segments being in engagement with the rack bars, and means for actuating the rack bars.

5. In a device of the character described, a motor driven frame including arched axles and transporting wheels, a vertically adjustable member connected with the frame and having laterally extending arms, tool carrying heads carried by said arms, draft links connected with one of the axles and having terminal hooks, connecting bolts extending through said hooks and through the tool carrying heads and the arms of the carrying member to assemble said parts, and flexible draft elements connecting the tool carrying heads with the frame in the vicinity of the other axle.

1,023,705. PIG-FORCEPS. EARNEST E. ADAMS and JOHN L. DUDEK, Schuyler, Nebr. Filed Aug. 2, 1911. Serial No. 641,988. (Cl. 128—27.)



An instrument of the class described comprising a tubular member having a flattened and upwardly curved portion at one extremity, the bore of the tube adjacent thereto being elongated, a rod fitted in the tube, a curved expansible gripping loop secured at its extremities to apertures in the adjacent extremity of the rod, a yoke lever pivotally secured to the opposite extremity of the tube and a link pivotally connected to the lever intermediate its ends and between its leg portions at one end and at its opposite end to the rod, said link being slidable in a slot formed in the tube.

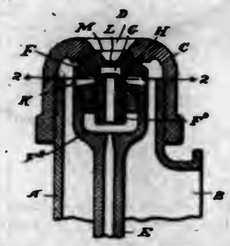
1,023,706. WIRE-CLAMP. GEORGE M. ANDERSON, Gordon, Nebr. Filed June 13, 1911. Serial No. 632,859. (Cl. 39—119.)



A wire clamp, comprising a bar increasing gradually in cross section from one end to the other, said bar having a plurality of longitudinally extending flattened surfaces, sundry of said surfaces being provided with teeth facing toward the small end of the bar, a ring slidable on the bar and coöperating with the flattened surfaces to grip a wire, said bar having means at its small end for permitting it to be attached to a support, said ring being of smaller diameter than the large end of the bar to prevent the ring moving over the said end.

1,023,707. HYDROCARBON-BURNER. ALFRED R. ANTHONY, New York, N. Y., assignor to The Anthony Company, New York, N. Y., a Corporation of New York. Filed June 1, 1910. Serial No. 564,377. (Cl. 158—16.)

1. In a hydrocarbon burner, the combination of a hydrocarbon supply pipe, a plug comprising an inner member communicating at one end with the supply pipe and closed at its outer end, said member having a plurality of lateral openings adjacent such closed end, and an outer member having an interior chamber, surrounding said openings in the inner member and provided with a discharge opening at its outer end, the outer plug member having a plurality of passages extending tangentially to said chamber through its side walls, and a casing inclosing the plug and having an air passage communicating with said tangential passages.



2. In a hydrocarbon burner, the combination of a casing having a suitable air inlet and an outlet, a liquid fuel supply pipe extending into the casing, a plug at the discharge end of the pipe separated from the walls of the outlet from the casing by an annular passage and comprising two members, one including an interior chamber that opens through the head of the plug and the other connecting the supply pipe with said chamber and communicating with the latter through a plurality of lateral openings, and a cap adjustably connected with the casing about the outlet therefrom and forming with the end of the plug an adjustable annular air outlet.

3. In a hydrocarbon burner, the combination of a supply pipe, a spraying plug comprising a member communicating with the supply pipe and adapted to discharge hydrocarbon in a plurality of laterally directed streams, and a member having an interior chamber to receive said streams of hydrocarbon, and provided with a discharge opening and a plurality of tangential air passages, and means for supplying air to said passages, substantially as and for the purpose described.

4. In a hydrocarbon burner, the combination of a mixing chamber having an outlet at one end, a liquid conduit extending into said chamber, an air conduit surrounding said chamber and communicating therewith through a plurality of tangentially arranged passages, and an adjustable closure for the air conduit adapted to contact with the outer surface of the end wall of the mixing chamber about the outlet therein.

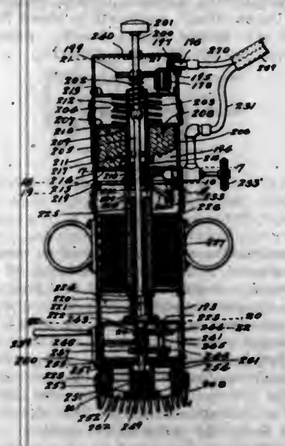
5. In a hydrocarbon burner, the combination of a supply pipe having its delivery or outlet end expanded, and a mixing plug secured to said expanded end of the pipe and forming therein a reservoir, said plug comprising an inner and an outer member, the latter having an interior chamber provided with a suitable outlet and a plurality of air inlets that extend laterally to the outside of the plug and open tangentially into said chamber, and the inner member providing a passage extending from said reservoir to said chamber and communicating with the latter through a plurality of lateral openings.

[Claims 6 and 7 not printed in the Gazette.]

1,023,708. SOAP-LATHER GENERATING AND APPLYING DEVICE. CLARENCE E. ARUNDEL, Washington, D. C., assignor of one-twelfth to Arthur A. Wright, one-twelfth to Ross L. Ray, and one-sixth to C. L. Parker, Washington, D. C. Filed Oct. 17, 1911. Serial No. 655,209. (Cl. 15—50.)

1. In a machine of the character described, the combination with a receptacle for holding soap, of a lather generating receptacle to receive the soap from the first named receptacle, a rotatable brush disposed in the lather generating receptacle, a rotatable face rubbing element, and means for conducting the lather from the lather generating receptacle to said rotatable face rubbing element.

2. In a machine of the character described, the combination with a lather generating receptacle, of a rotatable brush disposed therein, a rotatable face rubbing element, common means to rotate the brush and face rubbing element, and means whereby the rotation of the brush may be prevented during the rotation of said face rubbing element.



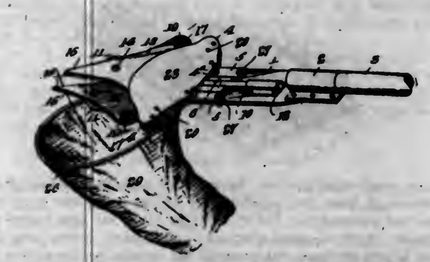
3. In a machine of the character described, the combination with a lather generating receptacle, of an annular outer brush disposed therein and held against movement, a rotatable brush disposed within the outer annular brush, means for supplying soap and water to the brushes, and means to rotate the inner brush.

4. In a machine of the character described, a casing comprising an upper soap containing chamber, an intermediate lather generating chamber and a lower lather collecting chamber, a rotatable brush disposed within the lather generating chamber, a rotatable face rubbing element disposed below the lather collecting chamber, and a rotatable shaft extending longitudinally within the casing and serving as common means for rotating the brush and face rubbing element.

5. In a machine of the character described, a casing, an outer annular brush disposed therein, a rotatable shaft disposed in the casing and extending through the annular brush, an inner brush disposed within the outer brush and loosely mounted upon the shaft, means to lock the inner brush to the shaft for rotation therewith, and means to supply soap and water to the brush.

[Claims 6 to 9 not printed in the Gazette.]

1,023,709. FRUIT-PICKER. CHARLES H. BAKER, Cedarville, Cal. Filed June 16, 1911. Serial No. 633,459. Cl. 56—99.)



1. A device of the character specified, comprising a plate provided at one end with a socket for receiving a handle, and at the other end with oppositely extending lateral ears, a bar slidable on the plate toward and from the socket and provided at its outer end with oppositely arranged lateral ears, and with a longitudinal passage between the ears, means for guiding the bar, a spring normally pressing the bar outwardly and holding it with the ears extended beyond the plate, a pair of oppositely arranged substantially triangular blades, each blade being pivoted to the adjacent ear of the bar and having a concave cutting edge at its inner side, the said edges crossing each other at their inner ends and diverging from each other at their outer ends, a link pivotally connecting each blade to the adjacent ear of the plate, a cover plate secured to the first named plate and overlying the bar, the links and the inner edges of the blades, a hoop detachably connected with the plate, and a chute having one end connected with the hoop.

2. A device of the character specified, comprising a plate provided at one end with a socket for receiving a handle, and at the other end with oppositely extending lateral ears, a bar slidable on the plate toward and from the socket and provided at its outer end with oppositely arranged lateral ears, and with a longitudinal passage between the ears, means for guiding the bar, a spring normally pressing the bar outwardly and holding it with the ears extended beyond the plate, a pair of oppositely arranged substantially triangular blades, each blade being pivoted to the adjacent ear of the bar and having a concave cutting edge at its inner side, the said edges crossing each other at their inner ends and diverging from each other at their outer ends, a link pivotally connecting each blade to the adjacent ear of the plate, and a cover plate secured to the first named plate and overlying the bar, the links and the inner edges of the blade.

3. A device of the character specified, comprising a plate provided at one end with a socket for receiving a handle, and at the other end with oppositely extending lateral ears, a bar slidable on the plate toward and from the socket and provided at its outer end with oppositely arranged lateral ears, and with a longitudinal passage between the ears, means for guiding the bar, a spring normally pressing the bar outwardly and holding it with the ears extended beyond the plate, a pair of oppositely arranged substantially triangular blades, each blade being pivoted to the adjacent ear of the bar and having a concave cutting edge at its inner side, the said edges crossing each other at their inner ends and diverging from each other at their outer ends, and a link pivotally connecting each blade to the adjacent ear of the plate.

4. A device of the character specified, comprising a plate provided at one end with a socket for receiving a handle and at the other with oppositely extending lateral ears, a bar slidable longitudinally of the plate and having oppositely extending lateral ears at its outer end and a longitudinal recess between the ears, means for guiding the bar, a spring normally holding the bar with the ears extended beyond the plate, a substantially triangular blade pivoted to each of the ears, the adjacent sides of the blades being sharpened and overlapping at their inner ends and being spaced apart at their outer ends, said adjacent sides being concave longitudinally, a link pivotally connecting the outer corner of each blade with the adjacent ear of the plate, and a chute supported below the said blades.

5. A device of the character specified, comprising a plate provided at one end with a socket for receiving a handle and at the other with oppositely extending lateral ears, a bar slidable longitudinally of the plate and having oppositely extending lateral ears at its outer end and a longitudinal recess between the ears, a cutting blade pivoted intermediate the ends of its cutting edge to each ear of the bar, a link connecting each blade with the adjacent ear of the plate and holding the said blade with the cutting edge in inclined position, said edges overlapping at their inner ends and diverging at their outer ends, and a spring normally holding the bar with the ears extended beyond the plate.

[Claim 6 not printed in the Gazette.]

1,023,710. HAT-PIN-POINT PROTECTOR. JOHN BALAZS, Michel, British Columbia, Canada. Filed Feb. 27, 1911. Serial No. 611,079. (Cl. 24—155.)

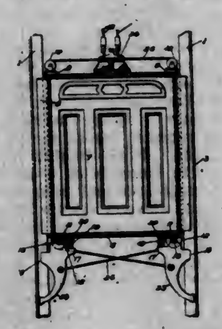
A hat pin point protector comprising a tapering guard body having its inner portion hollow, said hollow portion having its inner terminus provided with a reduced opening

for the entrance of the free end of the pin, said opening of less diameter than the inner diameter of said hollow portion, said hollow portion having the wall thereof longitudinally slitted to provide yieldable arms, a series of longitudinally alining spaced lugs projecting inwardly from the inner side of each of said arms, the lugs of said arms co-



operating with each other to provide a series of sets of gripping members adapted to frictionally engage the shank of the pin for connecting it to the guard body, the gripping members of one set being capable of gripping a pin of less diameter than the gripping members of the adjacent set.

1,023,711. SAFETY ELEVATOR DEVICE. JOHN BALAZS, Michel, British Columbia, Canada, assignor of one-fourth to Unoka Mihalj, one-fourth to Mandi Balint, and one-fourth to G. Hekkel, Michel, Canada. Filed Apr. 25, 1911. Serial No. 623,158. (Cl. 187—82.)



In an elevator safety device, the combination with guide rails provided with openings, and a cage slidably arranged between said rails, and hoisting cables for said cage, of sheaves carried by the roof of said cage, sheaves carried by the under side of the floor of said cage, shoes pivotally connected to the under side of the bottom of said cage, each shoe comprising a body, guide lugs carried by said body, and lateral extensions carried by said body and having spring sockets formed therein, coiled compression springs arranged between said lateral extensions and the floor of said cage, a bolt carried by said body, gripping arms carried by said body and having the lower ends thereof provided with heads adapted to engage in the openings of said guide rails, and cables attached to the bolts of said shoes and crossing beneath the floor of said case, said cables passing upwardly over the sheaves of said cage and connected to the hoisting cables of said cage, substantially as described.

1,023,712. TIRE FOR VEHICLE-WHEELS. JOHN BALAZS, Michel, British Columbia, Canada, assignor of one-fourth to Unoka Mihalj, one-fourth to Mandi Balint, and one-fourth to G. Hekkel, Michel, Canada. Filed June 17, 1911. Serial No. 633,661. (Cl. 152—10.)



1. The combination with the felly of a wheel and an outer tube adapted to be supported thereby, of a leather sheath arranged circumferentially of said felly, a rubber filler block arranged circumferentially of said sheath, and having its edges flush with those of the sheath, a rubber cushion arranged circumferentially of said filler block and adapted to support said outer tube, and leather strips circumferentially embedded in said cushion, and certain of said strips arranged closer to the outer face thereof than others of said strips and with their side edges lying in proximity to the side edges of the cushion.

2. The combination with the felly of a wheel, and the outer tube of the tire, of a sheath arranged upon said felly, a filler block arranged circumferentially of said sheath, a rubber cushion arranged circumferentially of said filler block and adapted to support said outer tube, and strips of leather embedded within said cushion with some of said strips closer to the outer surface of said cushion than the other of said strips.

1,023,713. METHOD OF MANUFACTURING LEAF METAL FOILS. HANS BEER, Munich, Germany, assignor to The Firm of Metallpapier-Broncefarben-Blatt-metallwerke Aktiengesellschaft, Munich, Germany. Filed Jan. 3, 1912. Serial No. 669,258. (Cl. 154—2.)

The method herein described of making metal foil in leaf form which consists in forming a sheet of liquid adhesive material in any suitable way upon a non-adhering surface, partially drying said sheet to a sticky but coherent condition, applying to said sheet when in such condition a covering of metal leaf and removing the leaf and sheet from the non-adhering surface and completing the drying substantially as described.

1,023,714. CANDY-HOLDING TRAY. ROBERT C. BOECKEL, York, Pa. Filed Dec. 16, 1911. Serial No. 666,178. (Cl. 229—42.)

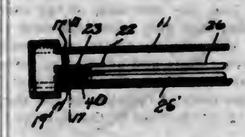


A candy-holding tray having two sets of bracing ribs depressed from the holding face of the tray, the ribs of one set intersecting the ribs of the other set and forming oblong candy-holding sections, and curved cleats struck out of the sections and bendable on certain portions of the ribs of each set and projecting above said ribs for engaging the candy at the ends and the sides of the sections.

1,023,715. LEAF-CARRIER FOR LOOSE-LEAF BINDERS. HAROLD B. BRISTOL, Maplewood, Mo. Filed Nov. 21, 1910. Serial No. 593,430. (Cl. 129—19.)

1. A device of the class described comprising an anchor member, a flexible adhesive coated leaf-engaging member,

and a protecting member carrying non-adhesive material adapted to prevent casual adhesion of said adhesive surfaces.



2. A device of the class described comprising spaced blanks of sheet material having opposed adhesive coated surfaces and a filler member secured therebetween and provided with non-adhesive portions disposed between said adhesive coated surfaces to prevent casual adhesion thereof.

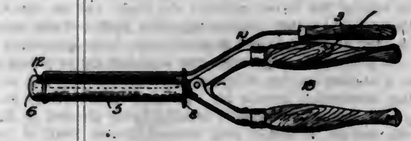
3. The combination with a carrier strip for loose leaf binders comprising an anchor portion adapted to be engaged in the binder, and a flexible portion having a gummed surface for attachment of a sheet to be bound, of a filler member adapted for similar engagement in a binder and having a semi-detached non-adhesive portion adapted to protect the adhesive surface of the carrier from casual adhesion with surfaces.

4. In a device of the class described a carrier comprising a strip of material doubled on itself, said strip having adhesive coated surfaces adjacent its edges and a filler member having its opposite faces coated with adhesive and adapted to be positioned within the fold of said strip, and a supplemental filler member disposed between adjacent carriers.

5. In a device of the class described, a carrier strip having adhesive portions near its edges, a non-adhesive portion between said adhesive portions and a filler adapted to be secured to one of said adhesive portions, and the other of said adhesive portions being adapted to be secured to a leaf.

[Claims 6 and 7 not printed in the Gazette.]

1,023,716. CURLING-IRON PROTECTOR. CHARLES HERBERT BROWN, New York, N. Y., assignor of one-third to Edmund D. Ferguson and one-third to Elias W. Ferguson, Bayonne, N. J. Filed Aug. 15, 1911. Serial No. 644,099. (Cl. 132—19.)



1. In a curling iron protector, the combination with a tube having a closed end, and an open end, of a handle at the open end and having a shank attached to the open end of the tube and encircling the closed end.

2. In a curling iron protector, the combination with a tube having a closed end, and an open end, of a flange at the open end, a non-conductive handle and a shank for the handle passing through a perforation in the flange and encircling the tube adjacent to the closed end.

1,023,717. CHAIR. CALVIN A. BUFFINGTON, Berkshire, N. Y. Filed Sept. 20, 1911. Serial No. 650,307. (Cl. 155—8.)

1. A chair comprising spaced members, a seat frame pivotally connected to the upper ends of the members and adapted to be folded to lie at times in parallel relation to the members and at times at right angles thereto, a seat pivotally supported by the frame, a back section pivotally connected to the said members and having inturned ends adapted to be engaged by the seat when at right angles to the said members, and cams formed on the inturned ends of the back section and acting upon the seat for automatically folding the same on pulling upon said back section.

2. A chair, comprising spaced members, a seat frame pivotally connected to the upper ends of the members and adapted to be folded to lie at times in parallel relation to the members and at times at right angles thereto, a seat pivotally supported by the frame, a back section pivotally connected to the said members and having inturned ends adapted to be engaged by the seat when at right angles to the said members, cams formed on the inturned ends of the back section and acting upon the seat for automatically folding the same on pulling upon said back section, and means connected with the members and the seat for sustaining the latter in contact with the cams.



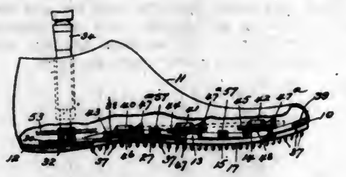
3. A chair, comprising spaced members, a seat frame pivotally connected to the upper ends of the members and adapted to be folded to lie at times in parallel relation to the members and at times at right angles thereto, a seat pivotally supported by the frame, a back section pivotally connected to the said members and having inturned ends adapted to be engaged by the seat when at right angles to the said members, cams formed on the inturned ends of the back section and acting upon the seat for automatically folding the same on pulling upon said back section, means connected with the members and the seat for sustaining the latter in contact with the cams, and means on the under face of the seat and engageable with the inturned ends of the back section for preventing the seat from lowering when disposed at right angles to the members.

4. A chair, comprising spaced members, a seat frame pivotally connected to the upper ends of the members and adapted to be folded to lie at times in parallel relation to the members and at times at right angles thereto, a seat pivotally supported by the frame, a back section pivotally connected to the said members and having inturned ends adapted to be engaged by the seat when at right angles to the said members, cams formed on the inturned ends of the back section and acting upon the seat for automatically folding the same on pulling upon said back section, means connected with the members and the seat for sustaining the latter in contact with the cams, means on the under face of the seat and engageable with the inturned ends of the back section for preventing the seat from lowering when disposed at right angles to the members, and wearing plates secured to the under face of the frame in alinement with the cams for engagement therewith.

1,023,718. SHOE-LAST. JOHN S. BUSKY, Jr., New York, N. Y. Filed July 22, 1911. Serial No. 639,950. (Cl. 12—141.)

1. The combination with a shoe last having a hollow lower portion, of a supporting plate secured in the lower portion of the last, two shaping plates, each movably held upon the underside of the supporting plate at the edge thereof and each of said shaping plates having a corrugated outer edge and a plurality of slots at spaced intervals therein, a rack, two arms, each having one of its ends pivotally held to one end of the rack and having its opposite end pivoted to one of said shaping plates, a

toothed wheel meshing with the teeth of the rack and having a key seat therein for reception of a key for moving the rack whereby the shaping plates may be moved to expanded or contracted positions with relation to the lower edge of the last, and a retaining device coöperating with the shaping plates and adapted to hold the edge of the vamp of a shoe or the like when fitted upon the last.



2. The combination with a shoe last having a hollow lower portion, of a supporting plate secured in the lower portion of the last, two shaping plates, each movably held upon the underside of the supporting plate at the edge thereof, and each of said shaping plates having an outer corrugated edge and a plurality of obliquely disposed slots at spaced intervals therein, means provided upon the supporting plate and adapted to move the shaping plates to expanded or contracted positions with relation to the lower edge of the last, and a retaining device coöperating with the obliquely disposed slots of the shaping plates and adapted to hold the edge of the vamp of a shoe or the like when fitted upon the last.

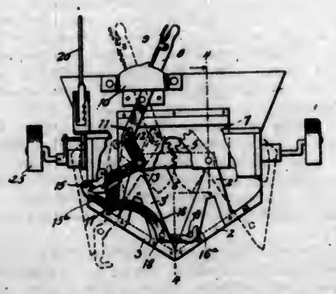
3. The combination with a shoe last having a hollow lower portion, of a supporting plate secured in the lower portion of the last, said supporting plate having a plurality of upwardly disposed projections, two shaping plates, each movably held upon the underside of the supporting plate at the edge thereof and each of said shaping plates having an outer corrugated edge and a plurality of slots at spaced intervals therein, a rack adapted to move the shaping plates to expanded or contracted positions with relation to the lower edge of the last, means provided upon the supporting plate and adapted to move the rack for moving the shaping plates to expanded or contracted positions with relation to the lower edge of the last, and a retaining device provided upon the projections of the supporting plate and having a plurality of sharpened pins disposed in the slots of the shaping plates, said retaining device being adapted to hold the vamp of a shoe or the like when fitted upon the last.

4. The combination with a shoe last having a hollow lower portion, of a supporting plate secured in the lower portion of the last, said supporting plate having a plurality of upwardly disposed projections, two shaping plates, each movably held upon the underside of the supporting plate at the edge thereof and each of said shaping plates having an outer corrugated edge and a plurality of obliquely disposed slots at spaced intervals therein, means provided upon the supporting plate and adapted to move the shaping plates to expanded or contracted positions with relation to the lower edge of the last, and a retaining device provided upon the projections of the supporting plate and having a plurality of sharpened pins disposed in the slots of the shaping plates, said device being adapted to be operated so that its sharpened pins will hold the vamp of a shoe or the like when fitted upon the last.

5. The combination with a shoe last having a hollow lower portion, of a supporting plate secured in the lower portion of the last, two shaping plates, each movably held upon the underside of the supporting plate at the edge thereof, and each of said shaping plates having an outer corrugated edge and a plurality of slots at spaced intervals therein, two lugs, one provided at corresponding parts upon the inner edge of each of the shaping plates, a rack, two arms, each having one of its ends pivotally held to one end of the rack and having its opposite end pivoted to one of said lugs, a toothed wheel meshing with the teeth of the rack and having a key seat therein for reception of a key for moving the rack whereby the shaping plates may be moved to expanded or contracted positions with relation to the lower edge of the last, a carrying plate disposed above the supporting plate, a plurality of sharpened pins projecting from the underside of the carrying plate, each of said sharpened pins being disposed through one of the slots of the shaping plates, and means provided upon the supporting plate and adapted to force the carrying plate so that the sharpened ends of the pins thereof may be guided inwardly of the slots of the shaping plates.

[Claims 6 to 12 not printed in the Gazette.]

1,023,719. DUMPING APPARATUS. WASHINGTON A. BUTLER, San Francisco, Cal., assignor of one-half to William W. Barton, San Francisco, Cal. Filed Apr. 27, 1911. Serial No. 623,684. (Cl. 21—20.)

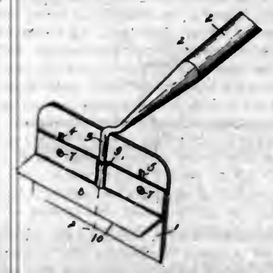


1. In a dumping apparatus, the combination of a receptacle, bottom sections therefor mounted for opening and closing movement, means connecting said bottom sections for simultaneous movement thereof, means for opening and closing said bottom sections, said means including a locking lever pivoted between its ends to the end of one of the bottom sections, the free end of said lever being formed with a hook, a projection carried on the end of the opposite bottom section and adapted to normally be engaged by said hook, a rocker arm pivotally carried by the wagon body and pivotally connected to said locking lever at the end of the latter opposite the hook, and an operating lever having link connection with said locking lever and rocker arm where the same are pivotally connected.

2. In a dumping apparatus, the combination of a receptacle, a bottom section therefor mounted for opening and closing movement, means for operating said bottom section, said means including a locking lever pivoted to the bottom section, a rocker arm carried by the body of the receptacle, said rocker arm and locking lever being pivotally connected, a locking projection, means carried by the locking lever adapted to engage said locking projection, and an operating lever having link connection with said latter lever and rocker arm where the latter are pivotally connected, said pivotal connection being adapted to be moved by said operating lever, substantially in a line with the respective pivots of the rocker arm and the locking lever, all for a purpose set forth.

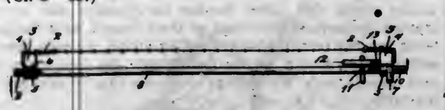
3. In dumping apparatus, the combination of a receptacle, bottom sections mounted for opening and closing movement thereof, means connecting said sections for simultaneous movement, a rock shaft mounted on the receptacle, rocker arms carried by said shaft and arranged adjacent to the opposite ends of one of the bottom sections, locking levers pivoted intermediate their ends to the last mentioned bottom section and connected at one end to the rocker arms and having locking hooks at their opposite ends, locking projections carried by the other of the bottom sections and adapted to be engaged by the locking hooks aforesaid, a link connected to one of the rocker arms and its adjacent locking lever at the point of connection of the same, an angle lever connected to said link, an operating lever operably connected to the angle lever, and means for locking the operating lever in a position such that the bottom sections are held closed.

1,023,720. HOE. HENRY W. CAUDELL, Homer, Ga. Filed Sept. 6, 1911. Serial No. 647,845. (Cl. 55—39.)



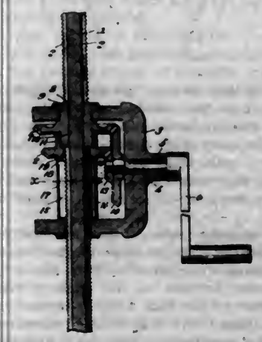
In combination with a hoe blade provided with the usual socket and the reinforcement upon its outer face, of an L-shaped stop blade, said stop blade being centrally provided with a bulging portion adapted to overlie the reinforcement of the hoe blade, and means for permitting the vertical adjustment of the stop blade upon the hoe blade.

1,023,721. BED-SPRING. SHELDON C. CHATHAM, Philadelphia, Pa. Filed Aug. 7, 1911. Serial No. 642,833. (Cl. 5—69.)



An extensible frame comprising transverse end bars, a bed bottom fabric connected therewith, a rod provided at its ends with right and left screw-threads operating within correspondingly screw-threaded openings formed through the transverse bars, handles attached to the rod for moving the same, and a forced latch pivotally connected with one transverse bar and movable into and out of engagement with a selected one of said handles.

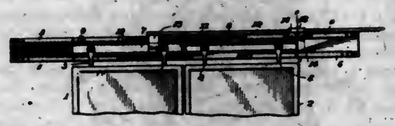
1,023,722. DRILLING-MACHINE. OLIVER CLUTS, WALTER SALISBURY, and JESSE W. TURALL, Cuba, Ill. Filed July 1, 1911. Serial No. 636,391. (Cl. 77—32.)



1. In a drilling machine, the combination of a frame, a drill shaft mounted in the frame, means for imparting rotary movement to the drill shaft, a feed nut mounted upon the drill shaft and comprising similar sections hingedly connected at one edge, a spring plate secured along one edge to one of the sections and having an engaging portion at its opposite edge to interlock with the other section of the feed nut, and means for imparting rotary movement to the feed nut.

2. In a drilling machine, the combination of a frame, a drill shaft mounted in the frame and adapted to have a rotary and a longitudinal movement imparted thereto, a gear wheel mounted upon the drill shaft and rotatable therewith and having the drill shaft freely movable therethrough, said gear wheel having hub portions upon opposite sides, one of said hubs being mounted in the frame, a second gear wheel mounted upon the opposite hub portion of the gear wheel and having projecting portions, a sectional feed nut mounted upon the drill shaft and having depressions receiving the projecting portions of said second gear wheel, an operating shaft mounted in the frame, and gear wheels secured to the operating shaft and in mesh with the first and second mentioned gear wheels.

1,023,723. OPERATING MECHANISM FOR SLIDING DOORS. MYRON COSSEY, Brooklyn, N. Y., assignor to Reliance Ball-Bearing Door Hanger Company, New York, N. Y., a Corporation of New York. Filed Nov. 27, 1909. Serial No. 530,264. (Cl. 39—94.)



1. In a device of the class described, the combination with two door or gate members movable laterally toward and from each other, of a trackway above said door members, a supporting bar connected to each door member and adapted to travel in said trackway, a rack bar having upwardly facing teeth secured to one of said supporting bars throughout substantially its entire length, a rack bar having teeth on its under surface secured to the other supporting bar at one end only and having its free end projecting over and parallel with the first mentioned rack bar, and two separated gear wheels between and engaging said two rack bars at a point substantially over the rear edge of one of said doors when it is pushed forward to closed position.

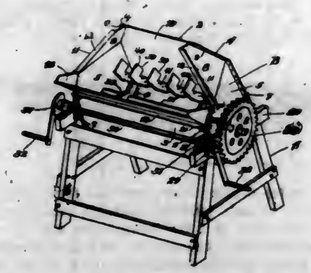
2. In a device of the class described, the combination with two door or gate members movable laterally toward and from each other, of a trackway above said door members, a supporting bar connected to each door member and adapted to travel in said trackway, a rack bar having upwardly facing teth secured to one of said supporting bars throughout substantially its entire length, a rack bar having teeth on its under surface secured to the other supporting bar at one end only and having its free end projecting over and parallel with the first mentioned rack bar, the length of said projecting portion being about twice the width of a door section, two separated gear wheels each engaging both of said racks substantially over the rear edge of one of said doors when closed, and a housing for said gears constituting a guide for the free end of said rack.

3. In a device of the class described, the combination with two door or gate members movable laterally toward and from each other, of an endwise movable bar above each door member, hanger connection between each bar and the door beneath it, trackways having parallel surfaces above and below said movable bars, antifriction devices between said surfaces and bars, a rack bar having upwardly facing teeth secured to one of said movable bars throughout substantially its entire length, a rack bar having downwardly facing teeth secured to the other movable bar at one end and having its free end projecting above and parallel with the first mentioned rack bar, and two separated rotatable toothed wheels between and engaging said toothed bars.

4. In a device of the class described, the combination with two door or gate members movable laterally toward and from each other, of a trackway above said door comprising upper and lower fixed members and an intermediate movable member, hangers supporting said doors from said movable members, a rack bar having upwardly facing

teeth secured to one of said movable members at the rear along the top, a rack bar having teeth on its under surface secured to the other movable member at one end only and having its free end projecting over and parallel with the first mentioned rack bar, two slightly separated gear wheels between and engaging said two rack bars having a bearing in the side of the upper fixed member, at a point substantially over the rear edge of one of said doors when it is pushed forward to closed position, and a housing constituting a guide for the free end of said rack secured to the upper fixed member and extending over said gear wheels and forming a supporting bearing therefor.

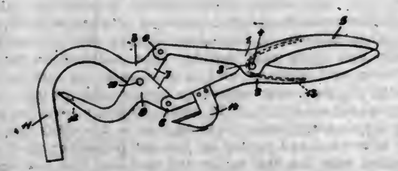
1,023,724. CONCRETE-MIXER. MELVIN E. CRANDALL, Northfield, Minn. Filed Nov. 29, 1911. Serial No. 663,062. (Cl. 83—73.)



1. In a mixing apparatus, the combination with a frame, of a trough mounted thereon comprising a body portion formed of a plate bent to constitute the back, bottom and front of the trough, the edges of the plates at the back converging toward each other, side walls for said trough having the ends thereof bent inward and attached to the inwardly converging edges of the back of the trough to form a delivery chute, a supply chute for the trough, means for holding the trough in a non-tilting position, mixing devices within the trough, and means for actuating the mixing devices.

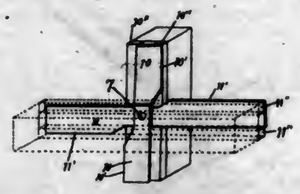
2. In a mixing apparatus, the combination with a frame, of a strut on the frame provided with a flange, a trough mounted upon the frame, a supply chute for said trough, said chute being provided with a longitudinally extending flange adapted to engage the flange on said strut in one position of the trough, an arm pivoted to the strut and provided with a latch adapted to engage the flange on the chute to lock the latter against movement, mixing devices within the trough, and means for actuating the mixing devices.

1,023,725. NAIL-EXTRACTOR. HAROLD E. DAVIS, Smock, Pa. Filed Apr. 13, 1911. Serial No. 620,788. (Cl. 145—45.)



A nail extractor, comprising a pair of pivoted handle members, means for normally holding the handle ends of said members apart, a curved lever member, a claw member pivoted thereto and having its claw end adapted to lie within the curve of the lever member, and a pivotal connection between the ends of the lever and claw member and the ends of the handle members.

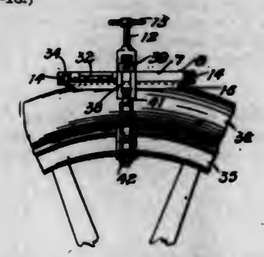
1,023,726. CONVERTIBLE WINDOW-SASH. HENRY F. EILERT, Cleveland, Ohio. Filed Mar. 20, 1911. Serial No. 615,569. (Cl. 20—49.)



1. The combination with a slidable sash, having divided vertical bars of a pivot connecting the sections of said sash together, packing strips on opposite side edges of the opposing faces of said sections, said packing strips having their inner ends beveled and extending beyond said pivot, a pair of interlocking metallic strips having oppositely extending flanges on the side edges thereof, the flanges on one strip being secured to the packing strips on one section of the sash and the flanges of the other section secured to the packing strips of the other of said sections.

2. The combination with a slidable sash, having divided vertical bars of a pivot connecting the sections of said vertical bars together, upper and lower packing strips on the edges of said sections, interlocking metallic strips having upper and lower flanges on opposite side edges thereof throughout a portion of their length, said flanges being secured to one of said packing strips, whereby when said sections are in vertical alinement, the free edges of said metallic strip will engage the inner edge of said packing strip.

1,023,727. VULCANIZER. CULLEN C. EVANS, Minneapolis, Minn. Filed Jan. 22, 1907. Serial No. 353,552. (Cl. 18—18.)



1. In a vulcanizer heater having a handle, a shoe removably secured to the heater, links on opposite sides of the heater, a transverse bar supporting the links and removable therein and engaging the outer face of the heater, a chain secured to the links and passing around the rim of the wheel, and screws carried by the links and forcing the transverse bar down and forcing the heater against the tire.

2. In a vulcanizing heater, a shoe removably secured to the heater, links on opposite sides of the heater, a transverse bar passing through the links above the heater, transverse plates secured to the ends of the bar, and holding the links on the bar, a chain secured to the links and passing around the rim of the wheel, and screws carried by the upper ends of the links, and engaging the upper face of the bar for forcing it down upon the heater, and holding the heater on the tire.

3. The combination, with a suitable plate whereon the portion of rubber to be vulcanized is placed, of a heater having a flattened surface to fit upon the rubber to be vulcanized and provided with connections for electric terminals, a bracket adjustably mounted on said plate and movable toward or from said heater, and pressure screws carried by said brackets and arranged to engage said heater to force its surface against the work, substantially as described.

4. The combination with a suitable plate for supporting the rubber to be vulcanized, of a heater having a vulcanizing surface to fit the rubber to be vulcanized and provided with connections for electric terminals, a stationary bracket on the plate on one side of the heater, a bracket adjustably mounted on said plate on the opposite side of the heater, and movable to or from the heater, and separate means carried by the brackets and arranged to engage the heater to force its surface against the work.

5. The combination with a suitable heater, means for clamping the same to the rubber to be vulcanized, said heater having socket in one side, a thermometer rotatably mounted in said socket, and a spring carried by the heater and engaging the thermometer, whereby the same is held in its rotated adjusted position.

[Claims 6 to 9 not printed in the Gazette.]

1,023,728. PNEUMATIC TUBE FOR VEHICLE AND OTHER WHEELS. CARROLL D. GALVIN, Merchantville, N. J., assignor of one-sixth to Charles Jacobsen, one-sixth to Eugene S. Cochran, and one-sixth to Amandus F. Jorss, Washington, D. C. Original application filed Dec. 6, 1911, Serial No. 664,139. Divided and this application filed Jan. 17, 1912. Serial No. 671,734. (Cl. 152—33.)



1. The combination with a pneumatic tube having a central annular pocket and inflatable portions at opposite sides of said pocket, of flanges projecting radially outward from said tube portion and integral with said tube, said flanges forming between them a pocket in communication with the first-named pocket.

2. As a new article of manufacture, a pneumatic tube having outer inflatable portions directed toward each other and the vertical center of the tube, whereby a pocket of substantially T-form in cross-section is formed by and within the outer portion of the tube, and also having the inner portions of the walls forming said pocket divided and the ends opposed to each other connected together.

3. As a new article of manufacture, a pneumatic tube having a central annular pocket and inflatable portions at opposite sides of said pocket, flanges projecting outwardly from said tube portion and secured to said tube, said flanges forming between them a pocket in communication with said first-named pocket, and flanges extending inwardly from said tube and secured thereto, and adapted to be secured to a felly.

4. The combination with a pneumatic tube having outer inflatable portions directed toward each other and the vertical center of the tube, whereby a pocket of T-form in cross-section is formed by and within the outer portion of the tube, of driving disks disposed at opposite sides of the tube and having outer annular flanges between which is formed a wedge-shaped pocket in communication with the first-named pocket, and also having inner annular flanges between which is formed a wedge-shaped pocket, said flanges being provided with enlarged terminals.

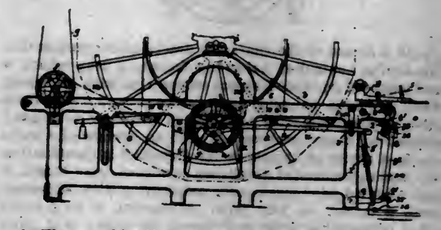
5. The combination of a pneumatic tube having outer inflatable portions directed toward each other and the vertical center of the tube, whereby a pocket of substantially T-form in cross section is formed by and within the outer portion of the tube, driving disks disposed at opposite sides of the tube, outer annular flanges secured to said driving disks between which is formed a pocket in communication with the first-named pocket, inner annular flanges between which is formed a pocket, the outer terminals of each of said flanges being enlarged, and said tube, driving disks and flanges being composed of fabric and rubber vulcanized together.

[Claims 6 to 11 not printed in the Gazette.]

1,023,729. MANUFACTURE, MOLDING, AND REMOLDING OF INDIA-RUBBER GOODS. THOMAS GARE, New Brighton, England. Filed Aug. 13, 1910. Serial No. 576,966. (Cl. 18—52.)

The method of manufacturing, molding, and remolding india rubber goods consisting in comminuting the rubber placing upon or against the comminuted rubber a sheet of a temporarily heat-insulating material and subjecting the rubber thus protected to compression by a presser member which has been previously heated to a temperature above ordinary vulcanization heat, to compress the rubber and expel the air therefrom, the interposition of said sheet serving to retard the transmission of heat from said presser member to the rubber until after the full compression of said rubber and expulsion of air from the same have been effected.

1,023,730. STOP-MOTION MECHANISM FOR WARPING-MACHINES. WALTER J. GAELICK, Paterson, N. J., assignor to Nicholas A. Hover and Emile Coene, Paterson, N. J.; Mary Hover executrix of said Nicholas A. Hover, deceased. Filed Oct. 10, 1910. Serial No. 586,131. (Cl. 28—31.)



1. The combination of a supporting means, rotary members from around the axis of one of which the thread is to be unwound and around the axis of the other of which the thread is to be wound, and electro-magnetic means for controlling the movement of one of said members comprising an electric circuit having a break therein, one of said members having an electro-conductive portion movable therewith to electrically bridge said break, substantially as described.

2. The combination of a supporting means, rotary members from around the axis of one of which the thread is to be unwound and around the axis of the other of which the thread is to be wound, and electro-magnetic means for controlling the movements of one of said members comprising an electric circuit having a break therein, one of said members having an electro-conductive centrifugally actuated portion movable therein to close said break, substantially as described.

3. In combination, with a warping machine comprising a rotary reel to be driven, electro-magnetic means for controlling the movement of said reel comprising an electric circuit having a break therein, a support, and a rotary spool-carrying electro-conductive member journaled in the support and electrically connected with one terminal of the circuit at said break, said member comprising a movable part engageable with the other terminal at said break, substantially as described.

4. In combination, with a warping machine comprising a rotary reel to be driven, electro-magnetic means for con-

trolling the movement of said reel comprising an electric circuit having a break therein, a support, and a rotary spool-carrying electro-conductive member journaled in the support and electrically connected with one terminal of the circuit at said break, said member comprising a centrifugally actuated movable part engageable with the other terminal at said break, substantially as described.

5. In combination, with a warping machine including a reel member and its driving member movable one into engagement with the other, an electro-magnetic warp-controlled controlling mechanism for the movable member comprising an electric circuit and means, operatively connected with the movable member, for moving the latter, said means being movable in one direction first to effect movement of the movable member into engagement with the other member and then to close said circuit, substantially as described.

1,023,731. SASH-BALANCING MECHANISM. EVAN GEORGEFF, Portland, Oreg. Filed July 28, 1911. Serial No. 641,153. (Cl. 16—150.)



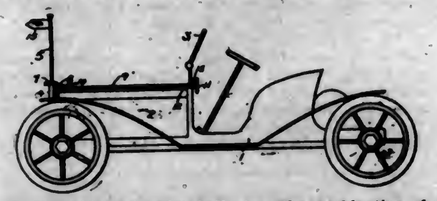
1. In a device of the character described in combination with spring controlled balancing means, a gear wheel, a hand operated pawl mechanism coöperating with said gear-wheel, a detent on said pawl mechanism, a tri-grooved spring coöperating with said detent to retain said pawl mechanism in any position required to operate the sash.

2. In a device of the character described in combination with spring controlled balancing means, a gear wheel, a hand operated pawl mechanism coöperating with said gear-wheel, a detent on said pawl mechanism, a tri-grooved spring coöperating with said detent to retain said pawl mechanism in any position required to operate the sash, and a hand operated dog for effecting the interlocking of said pawl mechanism with said gear wheel.

3. In a device of the character described in combination, a casing, a gear wheel rotatably hung in said casing and engaging a rack bar on the sliding sash, a sash balancing spring between said gear and said casing, a rock shaft journaled in said casing, a lock pawl rigid on said rock shaft, a lock pawl journaled on said rock shaft, coöperating spring actuated means for holding said pawls interlocked, means for oscillating said rock shaft to cause either of said pawls to engage the gear wheel, or to totally disengage said pawl mechanism from said gear wheel, means for yieldingly retaining said lock pawl in any one of its three positions, a circular handle attached to said rock shaft, a pointer, a scale on the window frame coöperating with said pointer to indicate the setting of the pawl mechanism, and a hand operated dog for effecting the interlocking of said pawl mechanism with said gear wheel.

1,023,732. VEHICLE DIRECTION-INDICATOR. JEREMIAH A. GIVENS, Los Angeles, Cal., assignor of one-half to George A. Richards, Los Angeles, Cal. Filed May 3, 1911. Serial No. 624,777. (Cl. 116—31.)

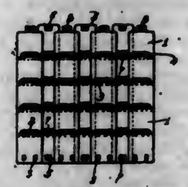
1. In a vehicle direction indicator: the combination of a boxing attached to the front of an automobile; a vertical shafting supported by said boxing; an indicator attached to the upper end of said shafting; a gear wheel attached to said vertical shafting; a horizontal shafting supported on the hood of an automobile; means for supporting said horizontal shafting; a gear on the front end of said horizontal shafting adapted to enmesh the gear attached to the vertical shafting; a rectangular shank formed on the back end of the horizontal shafting; a rectangular box 13 adapted to receive and retain the said rectangular shank; and a handwheel attached to said horizontal shaft.



2. In vehicle direction indicator: the combination of a vertical boxing attached to the front of an automobile; a vertical shafting supported by said boxing; an indicator attached to the upper end of said shafting; a gear wheel attached to said vertical shafting; a horizontal shafting extending along the top of the hood of an automobile; a gear wheel on the front end of said horizontal shaft adapted to engage and operate the said gear wheel attached to the said vertical shafting; a bearing adapted to retain the outer end of said horizontal shafting; a square shank formed on the back end of said horizontal shafting; an open square box adapted to receive and retain said square shank; an open round box in which the horizontal shafting is retained while being rotated; and a hand wheel attached to the back end of said horizontal shafting.

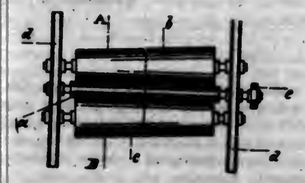
3. In a vehicle direction indicator: the combination of a vertical boxing attached to the front of an automobile; a vertical shafting supported by said boxing; an indicator attached to the upper end of said shafting; a bar attached to said vertical shaft; bumpers adapted to stop said bar when the indicator is pointed to either side position; a gear wheel attached to said vertical shafting; a horizontal shafting extending along the top of the hood of an automobile; a gear wheel on the front end of said horizontal shaft adapted to engage and operate the said gear wheel attached to the said vertical shafting; a bearing adapted to retain the outer end of said horizontal shafting; a square shank formed on the back end of said horizontal shafting; an open square box adapted to receive and retain said square shank; an open round box in which the horizontal shafting is retained while being rotated; and a hand wheel attached to the back end of said horizontal shafting.

1,023,733. VEHICLE-TIRE. JOSEPH E. GOODMAN and ELMUS S. RUFF, Stockton, Cal.; said Elmus S. Ruff assignor to Bessie S. Goodman, Stockton, Cal. Filed Jan. 22, 1912. Serial No. 672,755. (Cl. 152—18.)



A device of the character described comprising the combination with a pneumatic tire casing of an armor embedded in such casing, such armor being composed of two layers, one layer comprising a plurality of plates arranged in series, each plate having a projecting eye at one end and a pair of upwardly projecting eyes on its surface at the other end, the projecting eyes of one plate being adapted to project between the pair of eyes on its adjacent plate in each series, pins adapted to project through the alined eyes of all the series, the next layer comprising plates arranged in series adapted to overlap said first named series, such last named plates being each provided with a slot on one end and an upwardly projecting eye on the other end, and such eyes being adapted to project through said slots on their adjacent plates in each series, such pins also projecting through said last named eyes as described.

1,023,734. CALENDER FOR DYEING, STARCHING, AND MERCERIZING MACHINES. LAMBERT HAAS, Vienna, Austria-Hungary, assignor to Fritz Gebauer, Berlin, Germany. Filed Oct. 3, 1911. Serial No. 652,646. (Cl. 26—11.)



1. In an arrangement of rollers of calenders, machines for dyeing, starching, mercerizing, and the like, the combination of a pair of parallel conical rollers having their smaller ends disposed in opposite directions, means provided with a cylindrical surface in contact with both of said rollers as and for the purpose specified, and means for causing motion to be imparted to the rollers.

2. In an arrangement of rollers of calenders, and the like, the combination of a pair of parallel conical rollers having their smaller ends disposed in opposite directions, a cylindrical roller parallel to and in contact with both of said conical rollers as and for the purpose specified, and means for rotating one of the rollers.

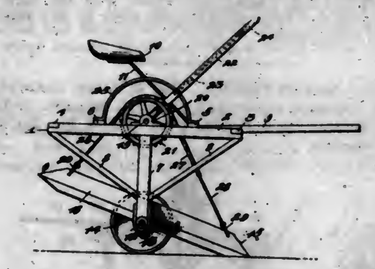
1,023,735. BOTTLE-STOPPER. JOHN EDWARD HAGER, New York, N. Y. Filed Jan. 13, 1911. Serial No. 602,390. (Cl. 215—55.)



A bottle having an outlet neck, a funnel-shaped valve housing mounted in said neck and having a flange resting upon the outer edge of said neck, a conical valve mounted in said valve housing, diverging arms extending from said valve, a sleeve rigidly mounted upon said outlet neck and provided with a flange at its outer end resting upon the flange of said valve housing and extending partially across said housing, the arms of said valve being adapted to engage said sleeve flange to limit the outward movement of said valve, and a perforated sleeve mounted upon said first mentioned sleeve.

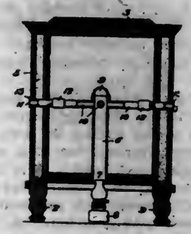
1,023,736. ROCK-PICKER FOR PICKING UP ROCKS, &c. JOSEPH HARMAN, Hambleton, W. Va. Filed June 14, 1911. Serial No. 633,035. (Cl. 55—17.)

A machine of the class described comprising a frame having means whereby it may be drawn and further provided with a pair of depending standards at its sides, a scoop medially pivotally mounted between the standards, supporting wheels for the machine, a rock shaft extending transversely on the main frame, bearings for the rock shaft, a lever to turn said rock shaft, locking means for the lever, sprocket wheels secured to the rock shaft, sprocket chains engaging the upper sides of the sprocket



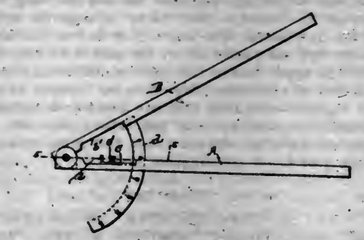
wheels and connections between the ends of the chains and the ends of the scoop, substantially as described.

1,023,737. MILK-TURNER. WILLAM THOMAS HAYNES, East Atlanta, Ga. Filed Sept. 1, 1911. Serial No. 647,283. (Cl. 126—350.)



In a milk turner, the combination with a box or casing, of an upright pipe within said box which opens through the bottom thereof and is provided with a removable cap on its upper end located within the box, lateral pipes detachably connected to said upright pipe within the box and extending through the walls of the box and opening to the exterior thereof, said lateral pipes being made in detachable sections, and couplings connecting said detachable pipe sections within the box.

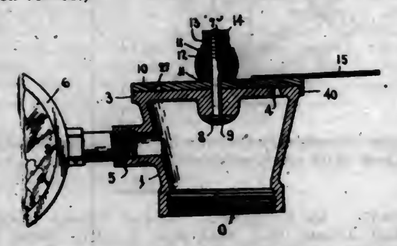
1,023,738. ADJUSTABLE-ARM PROTRACTOR. HARRISON B. HILL, East Providence, R. I. Filed Dec. 19 1911. Serial No. 666,852. (Cl. 33—1.)



An adjustable arm protractor comprising a stationary arm provided with a niche formed in its rear inner edge, and with a horizontally directed perforation disposed at right angles to the axial line of said arm perpendicular to said niche and opening into the latter, a movable arm having its rear end pivotally connected to the rear end of said stationary arm and provided with a niche in its rear inner edge arranged and adapted to register with the niche in said stationary arm, a quadrant carried on said movable arm and extending laterally from the inner edge of said arm and arranged and adapted to operate through

said perforation in said stationary arm, and a longitudinally slidable clamp seated in said niche in said stationary arm and arranged and adapted to contact with the edge of said quadrant to lock the protractor arms at any desired angle to each other.

1,023,739. METER-TESTER. ROY E. JOYCE, Coffeyville, Kans., assignor of one-half to W. H. Shepard, Coffeyville, Kans. Filed Aug. 1, 1911. Serial No. 641,851. (Cl. 73—51.)



1. The herein described meter tester comprising a casing whose bottom has a threaded opening adapted for attachment to the meter and whose top is pierced with an elongated outlet, a plate movably mounted on said top and pierced with a number of openings adapted to be brought successively over said outlet, a nipple projecting from the casing, and a gage removably attached to said nipple.

2. In a meter tester, the combination with a substantially cylindrical casing having an inlet opening through its base and a nipple through one side, a gage detachably connected with said nipple, and a plate closing the top of said casing and having an elongated curved outlet off its center; of a disk concentrically mounted upon said plate for rotation thereon and provided with a series of openings adapted to be brought successively into register with said outlet, and means for setting said disk.

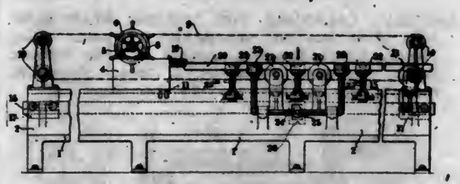
3. The herein described meter tester comprising a casing whose bottom has an opening adapted for attachment to the meter and whose top is ground flat and provided with an elongated outlet off its center, a post rising through the center of said top and sealed thereto, a disk having its lower face ground flat and centrally journaled on the post with said face resting on the upper face of the top, the disk being pierced with a series of apertures adapted to be brought successively in register with said outlet, a handle on the disk, and means for bearing the latter downward on the top with spring force.

4. The herein described meter tester comprising a casing whose bottom has an opening adapted for attachment to the meter and whose top is ground flat and provided with an outlet off its center, a post rising through the center of said top and seated thereto, a disk having its lower face ground flat and journaled on the post with said face resting on the upper face of the top, the disk being pierced with a series of apertures adapted to be brought successively in register with said outlet, a handle on the disk, two washers surrounding said post above the disk, an expansible rubber plug between them, and a nut and jam nut on the post above the washers.

1,023,740. SPACING-MACHINE. ANTON KOLASSA, Vienna, Austria-Hungary. Filed Jan. 30, 1911. Serial No. 605,402. (Cl. 164—117.)

1. In a machine of the character described, the combination of a frame having a bed plate, of a carriage slidable on the bed plate, brackets projecting from one side of the frame, a bar removably mounted in said brackets, upper and lower pins adjustably mounted on said bar, and means supported by the carriage for step-by-step engagement with one set of the pins to hold the carriage in adjustable position.

2. In a machine of the character described, the combination of a frame having a bed plate, of a carriage slidable on the bed plate, brackets secured to one side of the frame, a bar mounted in said brackets, a plurality of sleeves embracing the bar and having oppositely extending pins, the bar being removable from said brackets and replaceable therein to present either set of pins in position to form stops, means on the carriage to engage said pin-stops and thereby hold the carriage in adjusted positions on the bed plate.



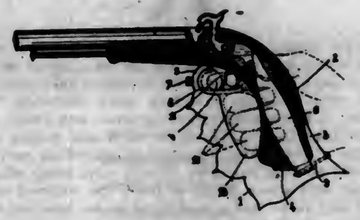
3. In a machine of the character specified, the combination with a frame having a bed plate, of a carriage slidably mounted on said plate, a bar extending parallel to one side of the machine, a plurality of stops adjustable along said bar, each stop comprising a sleeve embracing the bar and an upwardly extending pin, and a lever on said carriage, said lever having an eye intermediate its ends adapted to successively engage said stops and hold the carriage in adjusted position.

4. In a machine of the character specified, the combination with a frame having a bed plate, of a carriage slidably mounted on said plate, a bar extending parallel to one side of the machine, a plurality of sleeves slidable on said bar each sleeve having an upper pin and a lower pin in line with each other, and means on the carriage for successively engaging said upper pins to hold the carriage in adjusted position.

5. In a machine of the character specified, the combination with a frame provided with a bed plate, of a carriage slidably mounted on said plate, a lever, having an eye intermediate its ends, pivotally supported by said carriage, a plurality of stops adjustable along one of the edges of the bed plate, each said stop having an upwardly projecting pin adapted to be engaged by the eye in the lever, supporting rollers at the side of the machine opposite that where the stops are arranged, and presser rollers adapted to suitably retain the work piece.

[Claims 6 to 8 not printed in the Gazette.]

1,023,741. COMBINED FIREARM AND BOXER. BÉLA KREITH, Budapest, Austria-Hungary. Filed Feb. 11, 1909. Serial No. 477,433. (Cl. 42—53.)



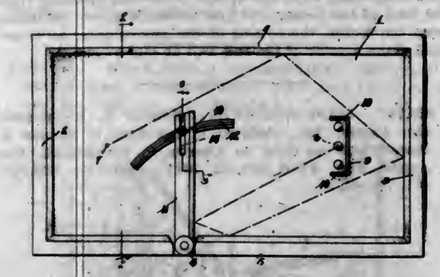
1. In a device of the class described, the combination of a pistol butt; a knuckle duster secured thereto and adapted for protection and passage of the fingers, the upper part of the duster forming a trigger guard; and a thrust blade pivoted to the lower part of the duster and adapted to be extended or to be folded against the side of the butt, in which position it may be held by the fingers and thumb holding the butt.

2. In a device of the class described, the combination of a pistol butt; a detachable knuckle duster secured thereto and adapted for the protection and passage of the fingers in front of the butt, the upper part of the butt forming a trigger guard and the lower end of the duster being extended rearwardly and engaging under and secured to the butt and provided with a recess; a pivot pin passing through said recess substantially perpendicularly to the butt; and a thrust-blade pivotally mounted on said pin perpendicular thereto and adapted to be moved in alinement with the butt or against and parallel to the side thereof, in which position it may be held in place by the thumb and finger grasping the butt.

3. In a device of the character described, the combination of a pistol butt; a detachable knuckle-duster secured thereto and provided with a series of openings, one for each finger, and with a rearward extension engaging under the butt and provided with a recess, the uppermost of said openings being horizontally elongated and forming the trigger guard; a pivot pin passing through said recess substantially perpendicular to the axis of the butt; and a thrust-blade pivotally mounted at its inner end on said pin perpendicular thereto and adapted to be moved in substantial alinement therewith, said blade being also adapted to be pivotally moved parallel to and flat against the side of the butt, in which position it may be held in place by the thumb and the ends of the fingers grasping the butt and duster.

4. In a device of the class described, the combination of a pistol-butt; a detachable knuckle-duster having an opening for each finger, and a rearward extension engaging under and secured to the lower end of the pistol-butt and provided at its lower part with a recess, the uppermost opening being elongated horizontally and forming the trigger guard, while the remaining openings are arranged in front of and approximately parallel to the pistol butt with the lowermost opening disposed slightly lower than the lower end of the butt; a pivot pin passing through said recess perpendicular to the axis of the butt; and a thrust blade pivoted at its inner end on said pivot-pin and adapted to be moved into alinement with the butt and also to be placed parallel with and flat against the side thereof in which position it may be held flat by means of the thumb and finger ends as the butt and duster are held.

1,023,742. GAME-BOARD. FRANK A. LEHR, Harrisburg, Pa. Filed July 20, 1911. Serial No. 639,587. (Cl. 46—12.)

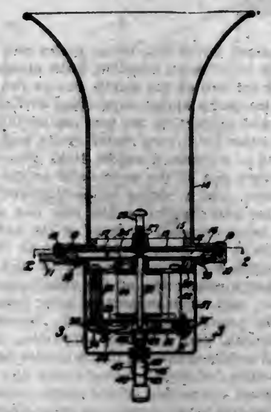


1. In a game board, the combination with a table having cushioned side and end rails, of an additional rail pivoted by one end to one of said rails and adapted to swing over the table, said rail also being cushioned, and means for clamping said additional rail in adjusted position.

2. In a game board, the combination with a table having parallel side rails and parallel end rails, all of said rails being cushioned, of an additional cushioned rail pivoted by one end to one of the side rails and adapted to swing over the table, and means for clamping said rail in adjusted position.

3. In a game board, the combination with a billiard table having a recessed side rail, of an additional rail pivotally secured by one end in the recess of the side rail and adapted to swing over the table, said additional rail being cushioned and having its under face recessed at its free end, said free end being also slotted longitudinally, an arcuate shaped guide member secured to said table and extending beneath the recessed end of said rail, said guide being slotted longitudinally, clamping means extending through the slot of the rail and engaging with said guide by means of its slot, and a shield secured to said table adjacent and parallel to one end thereof, said shield having wings parallel to the side rails of the table.

1,023,743. ELECTRIC SIGNALING DEVICE. ADAM LUNGEN, New York, N. Y., assignor to Edwards & Co. Inc., New York, N. Y., a Corporation of New York. Filed Sept. 24, 1910. Serial No. 583,570. (Cl. 116—19.)



1. An electric signaling device including a supporting bracket, having a recess in one face thereof, a diaphragm extending across said recess and secured to said bracket, a spring also extending across said recess substantially parallel to said diaphragm, an armature secured to said spring and an electro-magnet adjacent said armature for vibrating said spring for striking the diaphragm.

2. An electric signaling device including a supporting bracket, having a recess in one face thereof, a diaphragm extending across said recess and secured to said bracket, a spring also extending across said recess substantially parallel to said diaphragm, an armature secured to said spring and an electro-magnet adjacent said armature for vibrating said spring for striking the diaphragm, said electro-magnet, said spring and the said diaphragm being independently secured to said bracket.

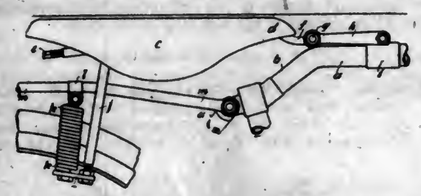
3. An electric signaling device, having a bracket including a plate portion, said plate portion having two concentric recesses in one face thereof, a diaphragm extending across said face to cover both recesses, a spring disposed within the larger recess extending there across, an armature carried by said spring and disposed within the smaller recess and an electro-magnet carried by said bracket and disposed adjacent said armature.

4. An electric signaling device, having a flat spring supported at both ends, an armature, a striker and a circuit breaker, all carried by said spring, a resonant body supported adjacent said striker, an electro-magnet for operating said armature and circuit closing contact members movable relatively to each other by said circuit breaker.

5. An electric signaling device, having a supporting member, a plate spaced therefrom and held substantially rigid therewith, a magnet disposed between said member and said plate and carried by the latter, circuit closing contact members carried by said plate, an armature at the opposite end of said magnet from said plate, a rod connected to said armature and extending through said plate for moving one of said contact members to break the circuit upon the energizing of the magnet, and a spring secured to said supporting member and carrying said armature and said rod.

[Claims 6 to 11 not printed in the Gazette.]

1,023,744. SADDLE FOR CYCLES, MOTOR-CYCLES, AND LIKE MACHINES. EDWARD LYCETT, Olton, England. Filed Apr. 15, 1911. Serial No. 621,325. (Cl. 208—100.)



1. In saddles for cycles, motor cycles and the like, the combination of a frame, a saddle, links pivoted at one end to the forward end of the saddle and at the opposite end to said frame, and a spring supporting device connected to the frame and supporting the rear end of the saddle.

2. In saddles for cycles, motor cycles and the like, the combination of a frame, a saddle, links pivoted at one end to the forward end of the saddle and at the opposite end to said frame, and a spring supporting device connected to the frame and supporting the rear end of the saddle, said links being disposed in front of the saddle nose and in substantially the same horizontal plane therewith.

3. In saddles for cycles, motor cycles and the like machines, a hinge connection of the saddle nose to the machine frame, said hinge connection being disposed in front of the saddle nose and in substantially the same horizontal plane therewith, and a spring supporting device at the rear of said saddle connected to the carrier or frame.

4. In saddles for cycles, motor cycles and the like machines a hinge connection of the saddle nose to the machine frame, said hinge connection being disposed in front of the saddle nose and in substantially the same horizontal plane therewith, and a spring supporting device at the rear of said saddle connected to the carrier or frame or a bracket thereon, said spring device comprising thrust rods from the rear of the saddle distending tension springs connected to the frame.

5. In saddles for cycles, motor cycles and like machines a hinge connection of the saddle nose to the machine frame, said hinge connection being disposed in front of the saddle nose and in substantially the same horizontal plane therewith, and a spring supporting device at the rear of said saddle connected to the carrier or frame or a bracket thereon, said spring device comprising thrust rods from the rear of the saddle distending tension springs, said springs being hingedly connected at their upper end to the frame.

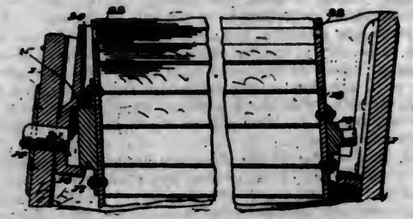
[Claim 6 not printed in the Gazette.]

1,023,745. PROCESS OF PRESERVING CUT TIMBER AND PRODUCT THEREOF. ROBERT ATHELSTAN MARR, Blacksburg, Va. Filed Feb. 4, 1910. Serial No. 541,964. (Cl. 99—12.)

1. The process of treating raw cut timber in its normal condition, to preserve it, which consists in successively subjecting it to the action of a bath of a preservative agent and a bath of paraffin, each at a temperature above the melting temperature of the paraffin, in one of which said agents a diatomaceous earth is carried in suspension.

4. The herein described product consisting of cut timber, the pores, ducts and cellular tissue of which contain diatomaceous earth deposited therein together with resolidified paraffin with which said timber has been treated.

1,023,746. WASHING-MACHINE. CHARLES J. MARTH, St. Louis, Mo., assignor to Wayne Manufacturing Company, St. Louis, Mo. Original application filed Dec. 28, 1910, Serial No. 599,776. Divided and this application filed Sept. 26, 1911. Serial No. 651,359. (Cl. 68—18.)



1. In a washing machine, the combination with a tub, of a cylinder adapted to be placed therein; the cylinder and tub having detachable bearings at one end, an operating member passing through the opposite end of the tub, the inner end of the shaft of which has a stud supporting socket and a radiating groove leading to said socket, and a stud carried by the end of the cylinder adjacent said socket, the stud adapted to enter the socket through the groove, and the socket and stud adapted to rotatively interlock.

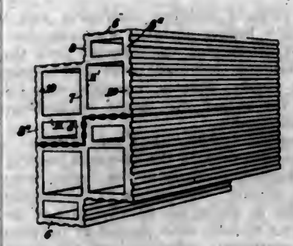
2. In a washing machine, the combination with a tub, of a cylinder adapted to be placed therein, the cylinder and tub having detachable bearings at one end, the opposite end of the cylinder having a stud, an operating shaft passing through that end of the tub adjacent said cylinder stud, the inner end of the shaft having a stud receiving and supporting socket having a surrounding horizontal stud supporting wall, and an arm projecting laterally from the wall of the socket, the arm having a groove radiating from the socket, the bottom of the groove being in a vertical plane outside of the end wall of said socket.

1,023,747. HASP-FASTENER. ROBERT E. MATTHEWS, San Angelo, Tex., assignor of one-third to Samuel L. Powell and one-third to Charles C. Kirkpatrick, San Angelo, Tex. Filed July 22, 1911. Serial No. 639,921. (Cl. 70—83.)



2. In a fastener constructed of an integral piece of material, a body portion having one end thereof bent to form an eye, the said end being then twisted around the said body portion and terminating in a finger grip and the other end of the said body portion being bent in a substantially U-shaped form having a finger grip at its outer end, a second finger grip formed at the other end of the said piece of material and disposed adjacent the inner end of the said loop and a shoulder formed on the said loop between the said finger grips.

1,023,748. BUILDING-BLOCK. EDWARD J. MCGETTIGAN, Cleveland, Ohio. Filed Dec. 7, 1910. Serial No. 596,038. (Cl. 72—31.)



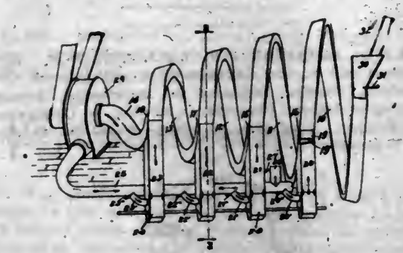
A building block comprising a main body and extensions at opposite sides of said body, said body and extensions being hollow longitudinally, an intermediate longitudinal web 7 in the main body, the middle of said longitudinal web being in line substantially with the surfaces of the inner wall of said extensions at opposite sides of the main body, intermediate longitudinal webs 11 in planes at a right angle to the said intermediate web, the middle of said webs 11 being substantially in line with the adjacent inner walls of the main body of the block, so that when the blocks are laid in courses the said inner walls of the blocks and of the extensions will be in line, vertically and horizontally, respectively, with the said intermediate webs of the blocks, in the respective courses, said extensions of each block being located respectively at opposite sides of the line of the intermediate web 7.

1,023,749. WIRE-FENCE STRETCHER. WILLIAM J. MONTGOMERY, Crenshaw, Miss. Filed May 11, 1911. Serial No. 626,413. (Cl. 39—53.)



the said clamping bar being provided with a bevel on its inner side at its lower end and being also provided on its outer side with a metallic reinforcing plate which extends from end to end of the clamping bar against which the ends of the clamping screws bear when the clamping bar is clamped against the stretcher bar.

1,023,750. GRADER. LAWRENCE N. MORSCHER, Enterprise, Kans., assignor to himself and William J. Ehrsam, cotrustees, Enterprise, Kans. Filed Apr. 13, 1908. Serial No. 426,734. (Cl. 83—54.)



1. In a grader, the combination, of a suction fan, a helical particle-laden-stream-defining conduit leading thereinto and having a particle outlet arranged in the normal trajectory of the particles under the action of the suction fan at the point of such outlet, and also having an increase of cross section toward the fan, a deflecting-stream-defining conduit leading into the first conduit adjacent but outside the particle outlet and substantially at the aforesaid increase of cross section, a particle-receptacle arranged in the trajectory of particles projected through the particle opening and beyond the deflecting-stream conduit in such manner that particles may pass through the particle opening to the particle chamber without meeting solid obstruction, and a conduit leading from the suction fan to the deflecting-stream-defining conduit.

2. In a grader, the combination, of a suction fan, a particle-laden-stream-defining conduit leading thereinto and having a particle outlet arranged in the normal trajectory of the particles under the action of the suction fan at the point of such outlet, and also having an increase of cross section toward the fan, a deflecting-stream-defining conduit leading into the first conduit adjacent but outside the particle outlet and substantially at the aforesaid increase of cross section, a particle-receptacle arranged in the trajectory of particles projected through the particle opening and beyond the deflecting-stream conduit in such manner that particles may pass through the particle opening to the particle chamber without meeting solid obstruction, and a conduit leading from the suction fan to the deflecting-stream-defining conduit.

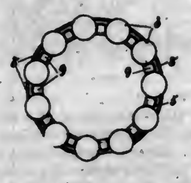
3. In a grader, the combination, of a suction fan, a helical particle-laden-stream-defining conduit leading thereinto and having a particle outlet arranged in the normal trajectory of the particles under the action of the suction

ticle opening and beyond the deflecting-stream conduit in such manner that particles may pass through the particle opening to the particle chamber without meeting solid obstructions, and a conduit leading from the suction fan to the deflecting-stream-defining conduit.

5. In a grader, a helical particle-laden-stream-defining conduit decreasing in radius from the feed end, a plurality of deflecting-stream-defining conduits leading into said first mentioned conduit at successive points, and means for simultaneously producing a fluid stream in said several conduits and maintaining the ratio of velocities of the particle-laden-stream and the deflecting streams.

[Claims 6 to 8 not printed in the Gazette.]

1,023,751. RETAINER FOR BALL-BEARINGS. HENNINO ADOLF OLSSON and SVEN GUSTAF WINQQUIST, Gottenborg, Sweden, assignors to Aktiebolaget Svenska Kullagerfabriken, Gottenborg, Sweden, a Corporation of Sweden. Filed Mar. 18, 1911. Serial No. 615,340. (Cl. 64—59.)



1. A retainer for ball bearings with two rows of balls, consisting of a ring of sheet metal located between the two rows of balls and provided at its outer edge with projections or teeth extending in both lateral directions and located in the spaces between the balls, outside the center point of same, the said teeth having such a width as allowing them to form outer supports to the balls, and which ring is provided, at its inner edge also, with projections or teeth extending in both lateral directions and coinciding substantially with the circle passing through the centers of all of the balls of each row respectively, the said teeth having a width corresponding to the shortest distance between the balls of the row, for the purpose of keeping the balls apart.

2. In ball bearings with two rows of balls, the combination of an inner ring provided with grooves for the respective rows of balls, and a ball retainer consisting of a ring of sheet metal located between the rows of balls and provided at its outer edge with projections or teeth extending in both lateral directions and having a greater width than the shortest distance between the balls, the said teeth together with the outer edges of the groove of the ring preventing the balls from falling out of the ring, teeth being provided at the inner edge of the ring of sheet metal and extending in both lateral directions and having such a position that they coincide substantially with the circle passing through the center point of the balls of the row and being concentric with the ring of sheet metal.

3. In ball bearings, the combination of an inner bearing ring having annular bearing grooves placed side by side, annular series of balls in said grooves; and an annular retaining cage disposed with its body part disposed about said ring and perpendicular to the axis thereof, said body part being provided at its inner edge with inner staggered teeth of substantially constant width and disposed between adjacent balls at the points of said balls nearest each other and intersecting the circles passing through the centers of all of the balls, to positively hold said balls apart, the outer edge of said body-part being provided with thin, outwardly yieldable staggered teeth of a greater width than said inner teeth and extending in substantially opposite directions near the outermost part of the balls and serving with the outer walls of said grooves to yieldably hold the balls in place.

1,023,752. COMBINED FERTILIZER-DISTRIBUTER AND COTTON-SEED PLANTER. LORENZA P. OSWALT, Bradley, Miss. Filed Aug. 29, 1911. Serial No. 646,563. (Cl. 111—31.)



1. A combined fertilizer distributer and seed planter comprising a hopper having a discharge opening therein, means for discharging the material from the opening, a sliding regulator mounted beneath the opening and including a member slidably connected with the supporting frame of the hopper, and means for holding the member against movement.

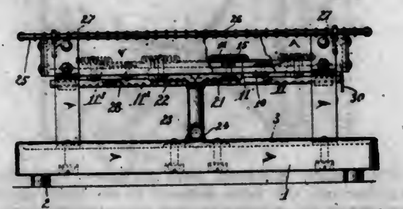
2. A hopper, a supporting frame therefor, a regulating member located beneath the discharge opening of the hopper, the supporting frame of the hopper including spaced side bars, parallel rods carried by the regulating member and slidable in one of the parallel bars of the supporting frame, and a slidable shaft carried by the regulating member and operatively adjustable in the opposite parallel bar of the supporting frame.

1,023,753. PROCESS FOR THE REDUCTION OF FATS AND UNSATURATED FATTY ACIDS. CARL PAAL, Erlangen, Germany, assignor to The Firm of Joseph Crosfield & Sons Limited, Bank Quay 1, Warrington, England. Filed Nov. 15, 1911. Serial No. 660,448. (Cl. 87—12.)

1. A method for the reduction of fats and unsaturated fatty acids which consists in causing hydrogen to act on these substances at temperatures below 100 degrees centigrade, in presence of small solid quantities of salts of the platinum metals.

2. A method for the reduction of fats and unsaturated fatty acids which consists in causing hydrogen to act on these substances at temperatures below 100 degrees centigrade, in presence of small solid quantities of salts of the platinum metals and solid neutralizing agents.

1,023,754. ELECTRIC COOKING UTENSIL. LEON F. PARKHURST and HARRY G. WEEKS, Binghamton, N. Y., assignors to Diamond Electric Company, Binghamton, N. Y., a Corporation of New York. Filed Sept. 24, 1910. Serial No. 583,564. (Cl. 219—19.)



1. An electrically heated cooking device comprising an insulating base having a crumb receptacle at its upper face, a skeleton frame supported from said base, a skeleton insulating support carrying one or more heating units supported in said frame, and a grid removably mounted in said frame over said heating units.

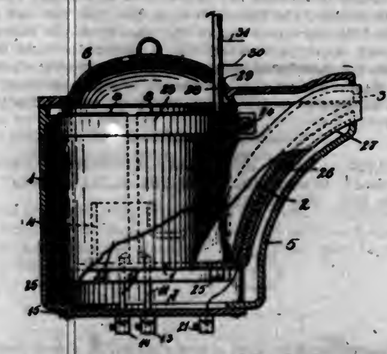
2. An electrically heated cooking device comprising a base molded of insulating material and having a crumb receptacle formed in its upper face, a frame supported from said base, a slab of insulating material supported in said frame and carrying a plurality of electric heating units, said slab having openings to permit the free passage of crumbs and the like to said crumb receptacle, and a screen or grid supported on said frame and having means to retain the same removably in position thereon.

3. An electrically heated cooking device comprising a frame, a plurality of supporting standards for said frame, said standards having offsets extending within the frame, an insulating slab supported upon said offsets within the frame and carrying a plurality of heating elements, terminal posts in said slabs to receive the terminals of said elements and adapted also to receive the terminals of the leading-in cable, and a grid carried by said frame.

4. An electrically heated cooking device comprising a frame, supports therefor, an insulating slab supported in said frame and carrying one or more electric heating units, said slab serving also as a terminal block for the resistance element of said unit, a grid removably supported on said frame, and a removable reflecting plate mounted beneath said heating units.

5. An electrically heated cooking device comprising a frame, supports therefor, an insulating slab supported in said frame and carrying one or more electric heating units, said slab serving also as a terminal block for the resistance element of said unit, a grid removably supported on said frame, and a removable reflecting plate mounted beneath said heating units and comprising a shallow pan having means to facilitate the insertion in and removal from the device.

1,023,755. ELECTRIC HEATING APPARATUS. LEON F. PARKHURST, Binghamton, N. Y., assignor to Diamond Electric Company, Binghamton, N. Y., a Corporation of New York. Filed Feb. 15, 1911. Serial No. 608,668. (Cl. 219—19.)



1. In electric heating apparatus, the combination with a vessel to be heated, said vessel having a throat for egress of the contents thereof, of one or more heating units applied to the walls of said vessel, a separate heating unit applied to the throat of said vessel, means for automatically regulating the degree of heat of said first named units and means for maintaining the heat of said second named unit constant, and a source of energy for said units.

2. In electric heating apparatus, the combination with a vessel to be heated, said vessel having a throat for the egress of the contents thereof, of one or more heating units, means for causing said units to conform to the shape of the walls of said vessel and holding the same in close relation thereto, a separate heating unit adjacent to said throat, means for holding said separate unit in close conformity to the shape of said throat, means for automatically regulating the degree of heat of said wall heating units and means for maintaining a constant heat for said throat heating unit, and a source of energy for said units.

3. In electric heating apparatus, the combination with a vessel to be heated, of one or more electric heating units, means to cause said units to conform to the shape of the walls of said vessel and to hold the same in close relation thereto, a thermostatic device to automatically regulate the degree of heat of said units in accordance with the predetermined degree of heat of the contents of said vessel, a throat for said vessel for the egress of the contents thereof, a separate heat unit, means to cause said unit to conform to the shape of said throat and to hold the same in close relation thereto, means constructed and arranged to maintain a comparatively high degree of heat in said separate unit, and a source of energy for said units.

1,023,756. EXERCISING APPARATUS. ARTHUR AUBRIOT PONS, New York, N. Y. Filed Feb. 20, 1911. Serial No. 609,799. (Cl. 46—69.)



1. In a device of the class described, a middle tube member, a pair of tubes telescopically arranged in relation thereto one at each end thereof, graduations suitably arranged on the exterior of certain of said tubes, handles on the outer ends of said pair of tubes and a coiled compression spring arranged within said tubes.

2. In a device of the class described, a hollow telescopic member, a pair of handles secured one at each extremity of said member, a helical compression spring within said member and means for detachably connecting each end of said spring to said handles.

3. In a device of the class described, a hollow telescopic member, means within said member for resiliently resisting the telescoping of said member, a pair of handles secured one at each extremity of said member and a spring grip device detachably secured to each of said handles.

4. In an exercising apparatus, an outer tube, a pair of tubes slidable one in each end of said outer tube and having graduations thereon, handles rigidly mounted on the outer ends of said pair of tubes, a coiled spring within said outer tube and connected at each end with the inner ends of said pair of tubes and a cross pin transversely through said outer tube and said spring intermediate of the length thereof.

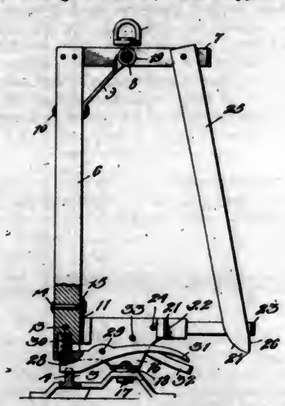
5. In an exercising apparatus, inner and outer tube members the former slidable in the latter, handles each having an annular recess therein and a central orifice therethrough, the outer ends of said tubes being secured in said recesses, a resilient member within said tube members carrying a bolt at each end thereof said bolts being secured in said central orifices.

[Claim 6 not printed in the Gazette.]

1,023,757. CATTLE-STANCHION. FREDERICK W. PRUESS, Whitelaw, Wis. Filed Dec. 2, 1910. Serial No. 595,266. (Cl. 119—150.)

The herein described stanchion embodying a relatively fixed bar, an upper bar secured at one end to the upper end of the fixed bar and having a pivoted support, a hollow lower bar having a socket at one end in which the lower end of the fixed bar is secured and further provided with a depending centrally located extension, and at the end opposite the fixed bar with a recess; a guide yoke projecting from the recessed end of the hollow bar and detachably secured thereto, a base bar having a vertical extension on which the depending extension of the hollow bar is pivotally mounted and being also provided with a transverse vertical notched flange; a catch pivotally mounted in the hollow bar, extending through the extension thereof, having means at one end to engage the notched flange of the base bar and provided at the opposite end with a cam arm; a movable bar pivoted at its upper end to the upper bar, the lower end of said mov-

able bar operating in the guide yoke and being provided on its inner side with a cam and on its outer side with a second cam, a U-shaped gravitating latch pivotally mounted in the hollow bar, and a spring bearing on the catch and causing the latter, when tripped, to press its



cam arm against the first mentioned cam of the movable bar and cause the second cam of the movable bar, by friction with the latch, to keep the latter in engagement with said movable bar so as to hold said movable bar in locked position.

1,023,758. PROCESS FOR THE MANUFACTURE OF CHLORINATED PHENOL ESTERS AND OF OXYBENZYL ALCOHOLS, OXYBENZALDEHYDES, AND OXYBENZOIC ACIDS. FRIEDRICH RASCHIG and MAX KÖBNER, Ludwigshafen-on-the-Rhine, Germany, assignors to Friedrich Raschig, Ludwigshafen-on-the-Rhine, Germany. Filed May 15, 1909. Serial No. 496,300. (Cl. 23—24.)

1. The process for the manufacture of phenols oxidized in the side chain, which consists in treating the acid-esters of the homologues of phenol with a chlorinating agent at an increased temperature, and causing saponifying agents to act on the phenol-esters thus obtained and chlorinated in the aliphatic side-chain.

2. The process for the manufacture of phenol-esters chlorinated in the side-chain, which consists in introducing an acid-radical into the hydroxyl group of the said phenol and treating the ester thus produced with chlorin.

3. The process for the manufacture of phenol-esters chlorinated in the side-chain, which consists in introducing an acid-radical into the hydroxyl group of the said phenol, melting the ester thus produced and treating it with a chlorin at an increased temperature.

4. The process for the manufacture of phenol-esters chlorinated in the side-chain, which consists in introducing an acid-radical into the hydroxyl group of the said phenol, melting the ester thus produced and treating it with chlorin at a temperature of 150 to 180° C. until the desired increase of weight has been produced.

5. The process for obtaining chemical compounds from phenols having side-chains, which consists in introducing an acid-radical into the hydroxyl group of the said phenyl, treating the ester thus produced with chlorin and saponifying the product.

[Claims 6 and 7 not printed in the Gazette.]

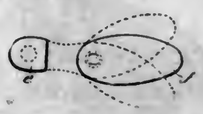
1,023,759. LIFE-SAVING DEVICE. JOHN J. HECTENWALD, Mount Oliver borough, Pa. Filed May 14, 1910. Serial No. 561,308. (Cl. 244—3.)

1. In a life saving device for an air craft, combined with the frame of an aeroplane, of a cage carried by and adapted to be separated from said frame, a normally deflated balloon detachably connected to said cage and adapted to be inflated and separated from the cage subsequent to the separation of the cage from the frame, a gas tank carried by said frame, means for supplying gas from the tank to the balloon to inflate the same prior to the separation of the cage from the frame, means whereby the balloon is separated from the cage subsequent to the separation of the cage from the frame, a buoyant conveyance connected to the cage, and means whereby the conveyance is separated from the cage subsequent to the separation of the balloon from the cage.



2. In a life saving device for an air craft, the combination with the frame of an aeroplane, of a cage supported by and adjustably connected with said frame, a normally deflated balloon detachably connected to said cage, a gas tank carried by said frame, means for supplying gas from the tank to the balloon to inflate the same prior to the separation of the cage from the frame, means for detachably connecting the balloon and said supply means, means whereby the balloon is separated from the cage subsequent to the separation of the cage from the frame, a buoyant conveyance detachably connected to said cage, means for detachably connecting the cage and the frame, and means whereby the conveyance is separated from the cage subsequent to the separation of the balloon from the cage.

1,023,760. LAST AND LAST-SUPPORT. THOMAS RENDLE, Ottawa, Ill. Filed Feb. 2, 1911. Serial No. 606,224. (Cl. 12—124.)



The combination with a last support, of a last member having a circular socket to coöperate with the support, said socket having on each side a V-shaped ridge and said support having a set of V-shaped grooves for coöperation with each ridge, whereby the last member may be securely held in different positions, substantially as described.

1,023,761. MOLD FOR MAKING PACKING-RINGS. CHARLES H. REYNOLDS, Rochester N. Y. Filed Feb. 4, 1911. Serial No. 606,619. (Cl. 18—42.)

1. In a mold the combination of a retaining member; a die mounted on said retaining member; a second die located and movable within said retaining member; a core engaging with said retaining and die members; and means on said core for engaging with and moving the second die to compress the molded article, substantially as described.

2. In a mold the combination of a retaining member; a die mounted on and projecting within said retaining member; a second die located and movable within said retaining member; a core engaging with said retaining and die members; and a shoulder on said core in contact with the second die member, and a shank on the core; said shoulder adapted to move the second die through said shank to compress the molded article, substantially as described.



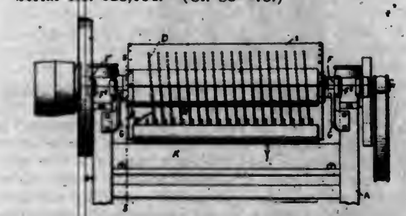
3. In a mold the combination of a retaining member; a die located and movable within said retaining member; a second die located and movable within said retaining member; a core engaging with said retaining and die members; and a shoulder on said core in contact with the second die; said shoulder adapted to move the second die through said shank to compress the molded article, substantially as described.

4. In a mold for making packing rings, the combination of a retaining member having a chamber; a member having a die head projecting within said chamber; a second die mounted wholly within and movable within the chamber; a core projecting through the retaining members and the dies; and a shoulder on the core engaging with the second die; said shoulder adapted to move the second die through pressure on the core to compress the molded article, substantially as described.

5. In a mold for making packing rings, the combination of a retaining member having a chamber with a recess in the base thereof; a member having a die head projecting within said chamber; a second die located wholly within and movable within said chamber; a core projecting through said retaining member and the dies; and a shoulder on said core fitting flush within the chamber recess, said shoulder engaging with and adapted to move the second die through pressure on the core to compress the molded article, substantially as described.

[Claim 6 not printed in the Gazette.]

1,023,762. PAPER-STOCK SHREDDER. GEORGE D. RYTHER, Carthage, N. Y., assignor to The Ryther & Pringle Company, Carthage, N. Y. Filed May 18, 1911. Serial No. 628,054. (Cl. 83—75.)



1. A paper stock shredding apparatus comprising, in combination with a rotatable arbor and frame in which the same is mounted, a series of shredding saws fixed to the arbor, parallel one to another and at inclinations to said arbor, a bed plate underneath the shredding saws, a series of stationary shredding knives mounted upon said bed plate and spaced apart parallel to one another and between which the saws of the arbor are adapted to have a wabbling motion as the arbor rotates, as set forth.

2. A paper stock shredding apparatus comprising, in combination with a rotatable arbor and frame in which the same is mounted, a series of shredding saws fixed to the arbor, parallel one to another and at inclinations to said arbor, a bed plate pivoted to the frame and positioned underneath the saws, means for adjusting said bed plate, a shoe upon the latter, stationary shredding knives mounted upon the shoe and spaced apart and between which the saws are adapted to have a wabbling motion as the arbor rotates, as set forth.

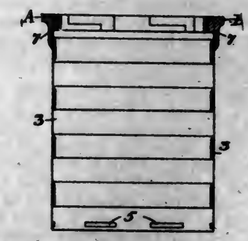
1,023,763. STRAIGHT-KNITTING FRAME. BRUNO SALZER and GUSTAV WALTHER, Chemnitz, Germany. Filed Apr. 2, 1908. Serial No. 424,721. (Cl. 66—30.)



1. In a straight bar knitting machine, a group of needles, jacquard apparatus provided with means for controlling said group of needles for producing openwork patterns, a shogging shaft, means automatically adjusted by the jacquard apparatus for regulating the extent and direction of the lateral movements of said shogging shaft, and a counter controlled by said jacquard apparatus to regulate the number of consecutive rows of plain stitches produced while the jacquard apparatus is out of action.

2. In a straight bar knitting machine, a group of needles, jacquard apparatus provided with means for controlling said group of needles for producing openwork patterns, a shogging shaft, means automatically adjusted by the jacquard apparatus for regulating the extent and direction of the lateral movements of said shogging shaft, a counter controlled by said jacquard apparatus to regulate the number of consecutive rows of plain stitches produced while the jacquard apparatus is out of action, and means operatively connected with and actuated by said shogging shaft for controlling a group of needles for producing slack courses and ladders.

1,023,764. RECEPTACLE OR PACKAGE OF COMPRESSED PAPER AND METHOD OF AND MEANS FOR MAKING THE SAME. RAMON SENAC, Madrid, Spain. Filed May 27, 1911. Serial No. 629,848. (Cl. 18—56.)



1. A method of making receptacles or packages of compressed paper, which consists in applying strips of paper coated with an adhesive to the interior of a mold until the desired thickness is obtained, and molding and compressing the article in the mold by fluid pressure acting through the intermediary of an elastic pressing member.

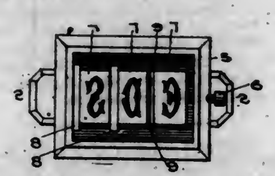
2. In a method of making receptacles of compressed paper by pressing and molding strips of adhesive paper in a mold, the use of an elastic pressing member which is inserted into said mold and is formed of a material capable of being expanded by the pressure fluid so as to adapt itself to the internal configuration of the mold and transmit the pressure to the article to be molded.

3. A mold for producing receptacles or packages of compressed paper, which mold is made in two parts provided with countersunk hooked catches for securing the mold halves together, and also provided with a double bottom supported on projections near the bottom of the mold, and with two-part lugs for lifting purposes.

4. An apparatus for compressing and molding receptacles or packages of compressed paper, comprising a pressing chamber, a lid for said chamber, means for securing the lid thereon in a fraction of a turn, an elastic vessel carried by said lid, a core secured to the lid so as to leave an annular space between the elastic vessel and the core, means for supplying pressure fluid to said annular space, and means for raising and lowering the lid and its appurtenances.

5. An apparatus for compressing and molding receptacles or packages of compresed paper, comprising a pressing chamber shaped to receive the mold, air-escape grooves on the internal walls of said chamber, a lid to close the pressing chamber, interrupted threads on the engaging surfaces of the lid and chamber so that the closure can be effected in the fraction of a turn, an elastic vessel carried by the said lid and capable of expanding to transmit the pressure to the article being compressed, a core secured to the lid so as to leave an annular space between the elastic vessel and its core, pipes and controlling means for supplying pressure fluid to the said annular space, a cross-bar revolubly connected to said lid, tongs pivotally connected to the cross-bar, uprights on which the cross-bar can slide up and down, and counterweighted cables and gearing for raising and lowering the cross-bar and its appurtenances.

1,023,765. MULTIPLE EMBOSSING-DIE. EDWARD D. SHERLOCK, Denver, Colo., assignor of one-half to George W. Van Nortwick, Denver, Colo. Filed May 20, 1908. Serial No. 433,832. (Cl. 101—169.)

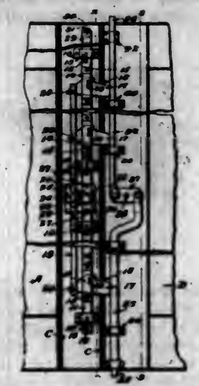


1. A multiple die for use in embossing comprising, in combination, a die holder, a plurality of dies shiftably secured thereon, means for setting said dies, and means for spacing the upper edges lying in a common horizontal plane whereby to eliminate inaccessible ink retaining localities, said spacing means comprising ledges interposed between said dies and ledge interposed between the end die and the side of the die-holder.

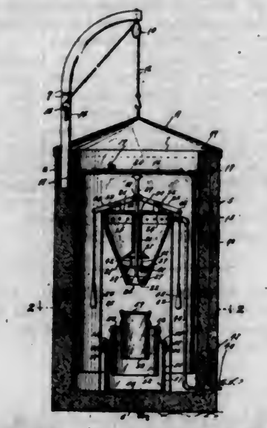
2. A multiple die for use in embossing comprising in combination, a die holder having a flange projecting beyond a surface thereof, die-members shiftably disposed upon said surface, means for spacing the upper edges of said members, lying in a common horizontal plane whereby to eliminate inaccessible ink retaining localities, said spacing means comprising ledges interposed between said dies, and means for clamping said members and said spacing means in their relative positions against said flange, the height of the latter above the said surface being less than the corresponding dimension of the said die-members.

1,023,766. LOCK. CHARLES M. SINCLAIR, New York, N. Y. Filed July 11, 1911. Serial No. 637,871. (Cl. 16—63.)

In a door lock, a vertically movable bar, a plurality of bolts fulcrumed thereon, said bolts passing through openings in the stile of a door, a second vertically movable bar carried by the inner ends of said bolts, said bar causing the bolts to assume a horizontal position when said first-mentioned bar is lowered, a lug carried by the door, a lug carried by the vertically movable bar engaging said lug carried by the door when said door is open and a trip carried by the casing of the door adapted to disengage said lugs from one another when said door is closed.



1,023,767. ACETYLENE-GAS GENERATOR. GARD W. SMITH, Markle, Ind. Filed Jan. 26, 1911. Serial No. 604,829. (Cl. 48—53.1.)

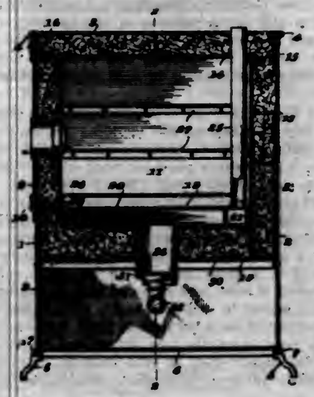


1. In a gas generator, the combination with a casing, of a gas-bell disposed therein, a carbid chamber having an outlet, a valve for the outlet, a valve-stem connected to the valve and disposed in the path of the movement of the bell, a secondary valve disposed above the first mentioned valve consisting of sections hingedly connected to the wall of the chamber, and means connecting the opposite ends of the sections to the valve-stem for operating the said secondary valve in unison with the first mentioned valve.

2. In a gas generator, the combination with a casing, of a gas-bell disposed therein, a carbid chamber having an outlet, a valve for the outlet, a valve stem connected to the valve and disposed in the path of movement of the bell, a secondary valve disposed within the chamber consisting of two semi-circular plates hingedly connected at their peripheries to the wall of the chamber, and links respectively and pivotally connected to the sections and to the stem for operating the said sections in unison with the first mentioned valve.

3. In a gas generator, the combination with a casing, of a gas-bell disposed therein, an inverted frusto-conical carbid chamber having an outlet opening at its lower end, a valve for the said opening, a valve stem connected to the valve and extending through and above the chamber for engagement with the bell, a deflector disposed around the stem above the outlet opening of the chamber, a transverse pin carried by the stem above the valve and below the deflector, a secondary valve disposed within the chamber consisting of two semi-circular plates hingedly connected at their peripheries to the wall of the chamber, and links respectively and pivotally connected to the sections and to the transverse pin for operating the said sections in unison with the first mentioned valve.

1,023,768. OIL AND GAS COOKER. NEWTON C. SPRAGUE, Minneapolis, Minn. Filed Oct. 10, 1910. Serial No. 586,369. (Cl. 126—39.)



1. In an apparatus of the character described, the combination with a suitable frame or exterior casing, of an oven therein having its side walls connected with said frame and having its bottom formed separately from said side walls, opposite edges of the bottom being bent to extend upward and laterally into the oven to form supports for an oven shelf or similar article, means for supporting said oven bottom and providing a heating chamber beneath it, and a burner adapted to heat said chamber.

2. In an apparatus of the character described, the combination of a sheet metal frame or casing having its interior divided by a horizontal partition and having an opening in its front wall above said partition, an oven attached to the metal frame and extending about said opening, the top and side walls of the oven being permanently connected and the bottom thereof being formed separately therefrom, a non-heat conducting packing in the spaces separating the oven and casing walls, a support for the bottom of the oven separated from said partition by non-heat conducting material and providing beneath the oven a circuitous passage for products of combustion, a burner communicating with said passage, and an escape flue leading from the passage beneath the oven to the exterior of the outer casing.

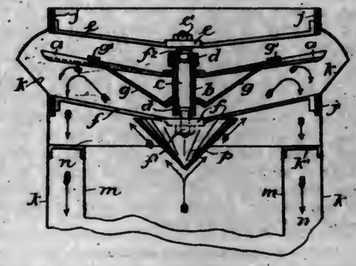
3. In an apparatus of the character described, the combination of an exterior sheet metal frame having an opening in its front wall and providing a suitable chamber in rear of said opening, an oven supported in said chamber and communicating with said opening in the front thereof, a door adapted to close said opening, non-heat conducting material separating the top, bottom and side walls of the oven from the adjacent walls of the exterior casing, the bottom of the oven being shorter than the top, a plate engaging the forward edge of the bottom and the front plate of the exterior casing at the lower edge of the opening for the oven door and forming the lower jamb for such door, a burner, and means for conducting products of combustion from the burner against the oven.

4. In an apparatus of the character described, the combination of an exterior sheet metal casing comprising front, rear and side walls and a top, the vertical walls being connected together and to the top by interlocking flanges and the front wall having an opening therein, a horizontal partition secured to opposite walls of said casing below the opening formed in the front wall, an oven having its top, side and rear walls permanently connected and suitably secured to the front wall of the casing and said partition, a frame supported by said partition within the side walls of the oven in rear of the front plate of the exterior casing and open at the top, inlet and discharge ducts communicating with the space inclosed by said frame, a plate supported by said frame and forming the bottom of the oven, opposite edges of said plate being bent to provide within the oven supports for a shelf, a burner communicating with said inlet duct, and a door adapted to close the opening to the oven.

5. In an apparatus of the character described, the combination of an exterior casing having an opening in its front wall, an oven supported within said casing in rear of said opening, the front edge of the bottom of the oven being separated from the front wall of the outer casing, the said bottom and front walls being bent to form grooves, a plate covering the space separating the front casing wall from the bottom and having its opposite edges extending into the grooves formed by bending said bottom and front wall, and a door for closing the opening in the front of the outer casing.

[Claims 6 to 8 not printed in the Gazette.]

1,023,769. SPARK-ARRESTER. GEORGE HENERY BENBOW STEELE, ARTHUR HAROLD BOULTER, and JOSEPH HARGREAVES, Perth, Western Australia, Australia. Filed Mar. 25, 1910. Serial No. 551,534. (Cl. 110—137.)

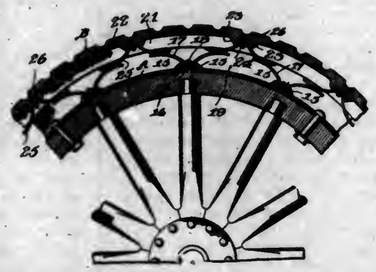


1. In a spark arrester, a funnel and a wall concentrically surrounding the same in spaced relation and projecting upwardly therebeyond, the said projecting wall portion defining a spark chamber, a fan supported in the spark chamber for rotation in a horizontal plane, the fan having its blades set at a slight upward inclination in a longitudinally continuous plane throughout their extent and extending over the passage which intervenes between the funnel and the wall, the said blades being formed to deflect the sparks striking thereagainst into the said passage, and a cone arranged in an inverted position coaxially under the fan, the cone being proportioned and positioned to deflect the sparks issuing from the funnel toward the outer ends of the blades of the fan.

2. In a spark arrester, a funnel and a wall concentrically surrounding the same in spaced relation and projecting upwardly therebeyond, the projecting portion of said wall defining a spark chamber and being bowed outwardly to afford an enlarged inclosure, a fan arranged in the inclosure and rotatable in a horizontal plane, the blades of the fan being disposed in a longitudinally continuous plane throughout their extent and projecting over the passage which intervenes between the funnel and the wall, and being formed to deflect the sparks striking thereagainst into the said passage, and a cone arranged in an

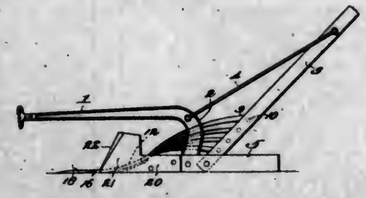
inverted position coaxially under the fan, the cone being proportioned and positioned to deflect the sparks issuing from the funnel toward the outer ends of the blades of the fan.

1,023,770. SPRING-TIRE. EMANUEL STEIMLE, Salt Lake City, Utah. Filed June 1, 1911. Serial No. 630,605. (Cl. 152—37.)



A spring tire comprising inner and outer ring members, the latter of which includes spaced side portions and a connecting portion, and the former an angularly disposed portion bearing against the outer face of one of the side portions of the outer ring member, a removable cover plate bearing against the outer face of the other side portion of the outer ring member and extending between the inner and outer ring members, a plurality of pairs of transversely disposed ribs and resultant grooves formed on the inner face of the connecting portion of the outer ring member, a plurality of V-shaped leaf springs having their apexes seated in respective grooves of the inner face of the connecting portion of the outer ring member, pins connecting the side portions of the outer ring members and disposed in said grooves to secure said leaf springs in place, a plurality of pairs of transversely disposed ribs and resultant grooves formed on the inner face of the portion of the inner ring member disposed parallel to the connecting portion of the outer ring member, a plurality of V-shaped leaf springs having their apexes seated in said last named grooves respectively and their arms in engagement respectively with adjacent arms of successive V-shaped springs carried by the outer ring member, and a plurality of bolts passing through the angular portion of the inner ring member and the cover plate and disposed in said last named grooves respectively to secure said last named leaf springs in place.

1,023,771. PLOW. WILLMAN H. STONE, Bayard, Nebr. Filed Apr. 8, 1911. Serial No. 619,856. (Cl. 97—18.)



1. In a plow the combination of a base support, a plow beam and a handle secured to said support, a share having an inclining rear portion secured to said support and having a horizontally disposed forward portion of greater width than said inclining portion and provided with a long cutting edge extending at an angle from one side edge of said inclining portion and a second cutting edge of shorter length extending from the opposite side edge of said horizontal portion, the two cutting edges lying in the same horizontal plane and terminating in a common point opposite the land side edge of said inclining portion, substantially as described.

2. In a plow the combination of a base support, a plow beam and a handle secured to said support, a share provided with a rear portion secured to said support and having a horizontally disposed flat forward portion of greater width than said rear portion forming a shoulder with the outer edge of said rear portion, and said horizontal forward portion being provided with a long and a short cutting edge lying in the same horizontal plane and converging outwardly and terminating in a common point in line with the outer edge of said rear portion, and a colter disposed alongside the land side edge of said rear portion and provided with a forward cutting edge in line with said common point, substantially as described.

3. In a plow the combination of a base support, a plow beam and a handle secured to said support, a share provided with a rear upwardly inclining portion secured to said base support and having a forward horizontal flat portion of greater width than said rear portion, said horizontal portion being provided with a forward cutting edge and with a slit at its position of joinder with the outer edge of said rear portion, and a colter alongside the land side edge of said rear portion and provided with a forward cutting edge seating in said slit, substantially as described.

4. In a plow the combination with a land side having an upwardly and rearwardly inclining laterally disposed forward plate, a plow beam and a handle attached to said land side, a plow-share provided with a flat rear portion secured to said lateral plate and a horizontal forward portion of greater width than said rear portion forming a projection having a slit adjacent the outer edge of said rear portion and provided at its forward portion with a long and a short cutting edge converging outwardly and terminating in a point disposed in line with said slit, a colter secured to said land side and having a forward cutting edge inserted in said slit, and a mold board comprising a plurality of slats secured at their lower end to said plate and bent upwardly and outwardly, and means for securing the upper ends of said slats to said handle in substantially vertical alinement, substantially as described.

1,023,772. COTTON-CONDENSER AND LINT-FLUE. WILLIE PRICE SUMMERROW, Austin, Tex. Filed May 18, 1911. Serial No. 627,955. (Cl. 13—17.)



1. A condenser comprising a casing, a lint guiding drum journaled for rotation therein, and circular air blast controlling devices spaced apart and adjustably mounted within the drum.

2. A condenser comprising a casing, a shaft journaled therein, a lint guiding drum mounted upon the shaft, a plurality of circular air blast controlling devices supported upon the shaft and each consisting of a hub, spokes radiating from said hub, and a circular band mounted at the outer ends of said spokes.

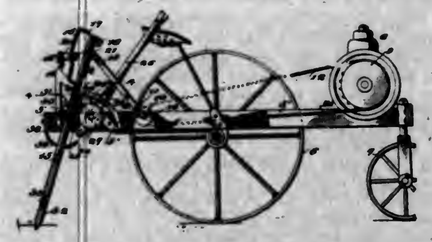
3. A condenser comprising a casing, having an upper semi-cylindrical portion and a lower chute portion provided with an outer opening, a hinged section forming one of the walls of said chute, said casing also having at its bottom an arcuate section, a lint flue arranged to discharge its contents in the upper portion of the casing at a tangent to the same, a hollow perforated drum journaled for rotation in the casing, baffles mounted upon the periphery of the drum and adapted to sweep across the inner surface of the said arcuate section of the casing as they pass over the same, said arcuate bottom section being less in length than the distance between the adjacent flights upon the drum.

1,023,773. APPARATUS FOR PRINTING ENGRAVINGS IN INTAGLIO. AUGUSTE VALENTIN, JEAN ZERREISS, and HENRI GEORGES, Puteaux, France. Filed May 29, 1911. Serial No. 630,181. (Cl. 101—100.)



In an apparatus for printing engravings in intaglio, a mandrel, a plurality of engraved sleeves mounted upon the mandrel, a cylinder, an elastic blanket stretched upon the cylinder, and bodies interposed between the blanket and the cylinder providing projections upon the surface of the blanket.

1,023,774. COMBINED SOIL-PULVERIZER AND CULTIVATOR. WILLIAM A. WILLIAMS, Newport, Ark. Filed Aug. 26, 1911. Serial No. 646,126. (Cl. 97—53.)



1. In a machine of the character described, a vertically reciprocable pulverizing blade and actuating means therefor, and a roller co-acting with said blade in its reciprocatory movement to impart a progressive bodily lateral movement thereto in its downward stroke.

2. The combination with a wheel supported frame, of a ground engaging blade vertically movable in said frame, a roller mounted in the frame, means carried by the blade co-acting with said roller to move the blade rearwardly in its downward movement, and means for adjusting said roller to regulate the extent of such rearward movement.

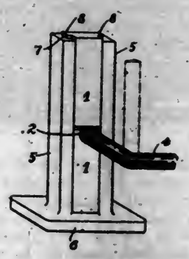
3. The combination with a wheel supported frame, of a blade vertically reciprocable in said frame, means for varying the stroke of the blade, an adjustable member mounted in the frame, means carried by the blade co-acting with said member to move the blade rearwardly in its downward stroke, the adjustment of said member regulating the extent of such rearward movement.

4. The combination with a wheel supported frame, of a vertically reciprocable earth engaging member mounted in said frame, a roller mounted in the frame, means carried by the blade co-acting with said roller to move the blade rearwardly in its downward stroke, means engaging the blade to yieldingly hold the roller engaging means in contact with the roller, and means for adjusting said roller to regulate the extent of rearward movement of the blade.

5. The combination with a wheel supported frame, a vertically reciprocable bar mounted in said frame, an earth engaging member removably secured to the lower end of said bar, means for reciprocating the bar, a block carried by said bar, means mounted in the frame engaging said block to effect the progressive rearward movement of the bar in its downward stroke, means co-acting with said bar to restrain such rearward movement, and means for adjusting said block engaging means to vary the extent of rearward movement of the bar.

[Claims 6 to 11 not printed in the Gazette.]

1,023,775. LIFTING-KEY. HENRY WILLSON, New York, N. Y. Filed Oct. 29, 1909. Serial No. 525,314. (Cl. 57—97.)



1. In lifting devices the combination of a pair of relatively movable members having adjacent faces, one of said faces being provided with a recess having an entirely open outer end and an open side toward the other one of said adjacent faces, said recess having substantially the shape of a segment of a cylinder greater than half of a cylinder; and a lifting key substantially the same shape as said recess and fitting therein and adapted to be turned to contact the face adjacent to the one provided with the recess, and to move said members relative to each other, said key being freely movable in the direction of its axis through said open end.

2. In lifting devices the combination of a pair of relatively movable members having adjacent faces, one of said faces being provided with a recess having an entirely open outer end and an open side toward the other one of said adjacent faces, said recess having substantially the shape of a segment of a cylinder greater than half of a cylinder; and a lifting key substantially the same shape as said recess and fitting therein and adapted to be turned to contact the face adjacent to the one provided with the recess, and to move said members relative to each other, said key being freely movable in the direction of its axis through said open end, said lifting action taking place from the circumference rather than from the center.

3. In lifting devices, the combination of a lower member having a flat upper face provided with a horizontally disposed recess having an entirely open outer end, an open upper side and having substantially the shape of a segment of a cylinder; an upper member having a lower flat face opposing and adapted to be moved toward and from said upper face; a lifting key of substantially the same shape as said recess and fitting therein and adapted when turned to contact and raise said lower face, and adapted to be freely moved longitudinally into and out of said recess; and means for rotating said key, said means being remote from the recess engaging face of the key.

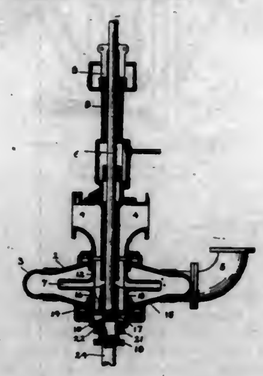
4. In lifting devices, the combination of a lower member having a flat upper face provided with a horizontally disposed recess having an entirely open outer end, an open upper side and having substantially the shape of a segment of a cylinder; an upper member having a lower flat face opposing and adapted to be moved toward and from said upper face; a lifting key of substantially the same shape as said recess and fitting therein and adapted when turned to contact and raise said lower face, and adapted to be freely moved longitudinally into and out of said recess; and means for rotating said key, said key being adapted to make a complete rotation in the recess in contact with the upper member.

5. In lifting devices, the combination of a lower member having a flat upper face provided with a horizontally

disposed recess having a closed inner end and an open outer end and upper side and having the shape of a segment of a cylinder; an upper member having a flat lower face opposing said flat upper face, a loose key having substantially the shape of said recess and movable freely horizontally into or out of said recess and having an angularly disposed handle at its outer end remote from the part engaging in said recess.

[Claim 6 not printed in the Gazette.]

1,023,776. CENTRIFUGAL PUMP. JOHN A. YEATMAN, Oakland, Cal., assignor to United Iron Works, Oakland, Cal., a Corporation of California. Filed Dec. 7, 1911. Serial No. 664,439. (Cl. 103—43.)



1. In a centrifugal pump, the combination of a case, a runner mounted upon a shaft and revoluble within the case, a suction inlet passage, a closed end cylindrical portion extending from the runner on the side opposite the suction inlet, a cylindrical chamber in the case into which said cylindrical portion extends and is revoluble, a central outlet passage through the case opening into said chamber and a central piston on said cylindrical portion for controlling said passage.

2. In a centrifugal pump, the combination of a case, a runner mounted upon a shaft and revoluble within the case, a suction inlet passage, a flange projecting from the runner on the side opposite the suction inlet, said flange being closed on the end, a chamber within the case into which said flange extends and is revoluble, an outlet passage through the case opening into said chamber, a hollow plug adjustably secured in said passage, and a piston attached to the runner controlling the outlet through said plug.

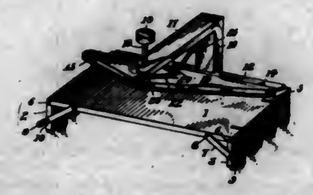
3. In a centrifugal pump, the combination of a case, an inclosed runner mounted upon a shaft and revoluble within the case, a suction inlet passage concentric with the shaft upon one side of the case, an annular flange projecting from the runner into said inlet forming a running joint therein, a corresponding flange projecting from the opposite side of the runner, a chamber within the case into which said flange extends and is revoluble, said case being provided with a passage opening into said chamber, and a piston attached to the runner for controlling said passage.

4. In a centrifugal pump, the combination of a case, a runner mounted upon a shaft and revoluble within the case, a suction inlet passage, a flange projecting from the runner on the side opposite the suction inlet, a plate closing the end of said flange, a cylindrical chamber into which said flange of the runner extends and is revoluble, said case being provided with a passage opening into said chamber, and a piston attached to said plate controlling said passage.

5. In a centrifugal pump, the combination of a case, a runner mounted upon a shaft and revoluble within the case, a suction inlet passage, a closed end cylindrical portion extending from the runner on the side opposite the suction inlet, a cylindrical chamber in the case into which said cylindrical portion extends and is revoluble, a hollow plug in said case forming an outlet to said chamber, said nipple being provided with a laterally extending aperture, and means attached to said cylindrical portion, engaging said plug for controlling the outlet through said aperture.

[Claims 6 to 9 not printed in the Gazette.]

1,023,777. ENVELOP-SEALING DEVICE. JOHN D. YOUNG, Leechburg, Pa. Original application filed July 8, 1911, Serial No. 637,428. Divided and this application filed Oct. 27, 1911. Serial No. 657,098. (Cl. 120—8.)

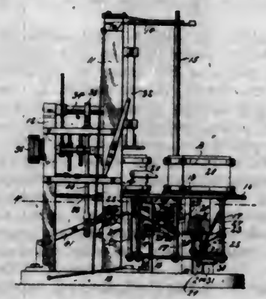


1. An envelop sealing device comprising a platform, a presser head hinged thereto, means for normally retaining said head in an elevated position, a transversely extending plate mounted in the upper face of said head and provided with a longitudinally extending groove, and a vertically movable means having its lower end riding in said groove for lowering the presser head to seal an envelop.

2. An envelop sealing device comprising a platform, a guide strip carried at the rear thereof, a presser head hinged to said guide strip, means for normally maintaining said head in an upright position, a plate mounted in the upper face of said head and formed with a longitudinally extending groove, and vertically movable means riding in said grooves for lowering said presser head, thereby sealing an envelop.

3. An envelop sealing device comprising a platform, an overhanging arm carried at the rear thereof, a guide strip positioned at the rear of said platform, a presser head, means for hinging the presser head to said guide strip, means connected to the presser head and to said arm for normally maintaining said head in an upright position, a plate mounted in the upper face of said head provided with a longitudinally extending groove, and vertically movable means mounted in said arms and riding in said groove for lowering said head to seal an envelop.

1,023,778. CONCRETE-BLOCK-MOLDING MACHINE. SAM ALLEN and FRANK L. BAILEY, Okmulgee, Okla. Filed Nov. 19, 1910. Serial No. 593,284. (Cl. 25—73.)



1. In a machine of the class described, the combination with a rotatably mounted table, of a series of molds mounted thereon, spring actuated cores mounted on the under side of said table and adapted to be projected into said molds, a tamper adapted to coöperate with each of said molds successively, means whereby said cores may be withdrawn from said molds after the tamping operation, automatically operating catches whereby said cores may be temporarily retained below the surface of said table, and means for positively releasing the cores from the retaining catches aforesaid.

2. In a machine of the class described, the combination with a rotatably mounted table, of a series of molds carried thereby, cores reciprocatingly mounted on the under side of said table and adapted to coöperate with said molds, spring actuated levers mounted on the under side of said table and pivotally connected to said cores adapted to project the latter into said molds, spring actuated catches carried by said levers, and means carried by the under side of said table adapted to engage said catches and retain said cores under said table.

3. In a machine of the class described, the combination with a rotatably mounted table, of a series of molds carried thereby, cores reciprocatingly mounted on the under side of said table and adapted to coöperate with said molds, spring actuated levers mounted on the under side of said table and pivotally connected to said cores adapted to project the latter into said molds, spring actuated catches carried by said levers, means carried by the under side of said table adapted to engage said catches and retain said cores under said table, and means disposed under said table adapted to successively engage said catches thereby releasing the same and permitting them to be projected into said molds.

4. In a machine of the class described, the combination with a rotatably mounted table, of a series of molds mounted thereon, spring actuated cores mounted on the under side of said table and adapted to be projected into said molds, a tamper adapted to coöperate with each of said molds successively, means for operating said tamper, and means operable by said last named means whereby the cores may be withdrawn from the molds after the tamping operation.

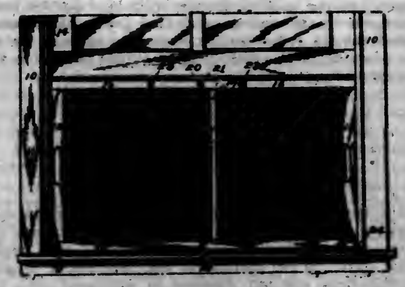
5. In a machine of the class described, the combination with a rotatably mounted table, of a series of molds mounted thereon, spring actuated cores mounted on the under side of said table and adapted to be projected into said molds, a tamper adapted to coöperate with each of said molds successively, means for operating said tamper, a lever pivoted below the level of said table adapted to operate each of said cores successively, a lever pivoted above said last named lever, a connection between said levers, and a projection carried by said tamper operating means adapted to contact with the upper of said levers thereby swinging the lower lever and successively removing the cores from said molds.

1,023,779. VEHICLE-TIRE. SHERMAN T. ALLEN, Detroit, Mich., assignor to Triplex Tire Company, Detroit, Mich., a Corporation. Filed Apr. 10, 1911. Serial No. 619,992. (Cl. 152—8.)



In a vehicle tire, the combination of a wheel felly, a resilient hoop member engaging thereabout, a plurality of cushion members of T shaped cross section arranged about said hoop member, with their end portions interlocking, a reinforcing metal piece in each of said cushion members, a series of independent flanged members engaging on each side of said felly and about the inner portions of said cushion members, against whose flanged edges the inner ends of said reinforcing metal pieces are adapted to engage, and bolt members for holding said flanged members in place, substantially as described.

1,023,780. ADJUSTABLE WINDOW-SCREEN. THOMAS B. FORD, Fairfield, Iowa. Filed Jan. 22, 1912. Serial No. 672,784. (Cl. 156—38.)



1. In a device of the class described, an upright supporting member designed to rest on the bottom of a window frame, under a raised sash, two screen sections slidingly mounted on said upright member to move in parallel planes, longitudinally with relation to each other.

2. In a device of the class described, an upright supporting member, parallel plates extending at right angles from each end thereof, parallel horizontal bars secured to each plate, two screen sections slidingly mounted on said plates to move in parallel planes longitudinally with relation to each other.

3. In a device of the class described, an upright supporting member, parallel plates extending at right angles from each end thereof, parallel bars secured to each plate, two screen sections having upright end members and parallel horizontal members connecting the upper and lower ends of the respective end members, said horizontal members being provided with grooves in which the respective bars on each of said plates are received to permit said screen sections to slide freely in parallel planes longitudinally with relation to each other.

4. In a device of the class described, an upright supporting member designed to rest on the bottom of a window frame, under a raised sash, two screen sections slidingly mounted on said upright member to move in parallel planes, longitudinally with relation to each other, each of said screen sections being comprised of two upright end members, parallel horizontal members connecting the upper and lower ends of the respective end members, and screen fabric, one of said end members of each section being an angle bar with one flange extending at right angles to said screen fabric, toward the vertical plane of the other section.

5. In a device of the class described, an upright supporting member, parallel plates extending at right angles from each end thereof, parallel bars secured to each plate, two screen sections having upright end members and parallel horizontal members connecting the upper and lower ends of the respective end members, said horizontal members being provided with grooves in which the respective bars on each of said plates are received to permit said screen sections to slide freely, in parallel planes longitudinally with relation to each other, and means for preventing the tilting of said screen sections when in their extended positions.

[Claim 6 not printed in the Gazette.]

1,023,781. BRIDGE STRUCTURE. AARON D. KERSTETTER, Oriental, Pa.; I. W. Kerstetter administrator of said Aaron D. Kerstetter, deceased. Filed Jan. 28, 1910. Serial No. 540,555. (Cl. 72—57.)

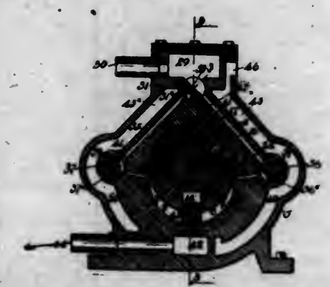
1. In culvert construction, the combination with supports, of arch sections resting thereon, and key members for interposition between the inner ends of the arch sections, said key members comprising a metal base portion having upstanding tongues cut centrally therefrom and having upwardly bent end portions, there being tongues cut from said upwardly bent portions and left in aline-

ment with the base plate, and a concrete casing molded on the base plate and formed with central inwardly beveled grooves to engage the ends of the culvert sections and having rectangular end portions lying between the tongue and the ends of the upwardly bent portion, said rectangular ends having stanchion receiving recesses formed therein and extending downward through the recess provided by the cutting away of the tongues in the upwardly bent portions.



2. A key member for use in culvert construction comprising a base plate having flaring tongues cut from the central portions thereof and bent upward at right angles to the plate, the end portions of the plate having tongues cut therefrom and left disposed in alinement with the plate, the end portions being bent or inclined upwardly and having their extreme ends bent to lie parallel to the base plate, and a concrete block molded on the base as a plate, said block having its central portion corresponding in shape to the shape of the upwardly bent tongues to provide longitudinally extending inward beveled recesses on each side of the key member and having its end portions of substantially rectangular shape and being included between the end tongue and the parallel end portion of the plate, the concrete at the ends having stanchion receiving sockets formed therein extending downward through the space provided by the cutting out of the end tongue in the diagonally extending portion of the plate, and the end tongues having apertures formed therein in alinement with the said stanchion sockets.

1,023,782. ROTARY ENGINE. FRANKLIN P. HUMMEL, Bellevue, Ohio, assignor of one-third to Frank A. Higgins, Bellevue, Ohio. Filed May 7, 1910. Serial No. 559,995. (Cl. 121—79.)



1. In a rotary engine, the combination of a casing having an elliptical bore and provided with opposed inlet passageways adapted to communicate with said bore, a single valve mechanism arranged to control the flow of fluid through either of said passageways to said bore and simultaneously to connect the other passage to the exhaust, a rotor mounted eccentrically in said bore, said rotor being of such conformation as to form a close fit with the bore for substantially half of its curved surface, piston blades slidably fitted to said rotor, and means, operative by the rotation of the rotor, for maintaining the outer edges of said blades substantially in contact with the interior of the cylinder bore.

2. In a rotary engine, the combination of a cylinder having a curved bore which is elongated in transverse section and is provided with opposed inlet passageways communicating with said bore, a rotor mounted eccentrically in said bore and of such conformation as to fit snugly the portion of the bore included between and at one side of said passageways, blades slidably supported by said rotor, and means independent of the inner wall of the cylinder whereby said blades may be positively moved inwardly and outwardly with respect to the rotor as the later rotates, the rotor and the blades being so arranged that the blades will not project beyond the outer surface of the rotor until each has reached the appropriate supply passageway in the cycle of the rotor.

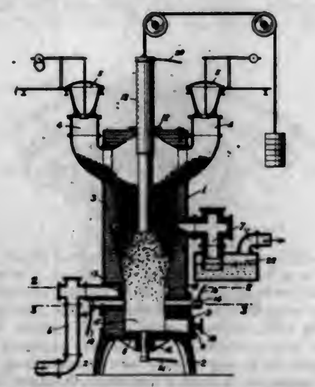
3. In a rotary engine, the combination of a casing, said casing being provided with a curved bore which is elongated in cross section and provided with opposed inlet ports, with means whereby fluid may be supplied through either of said ports to drive the engine in reverse directions and with an exhaust port located intermediate between the former ports, a rotor mounted in said bore at one side of the center thereof and arranged to conform to the adjacent surface of the bore for a substantial portion of its curved surface, blades slidably mounted in said rotor, and means independent of the inner wall of the cylinder for automatically and positively moving the blades inwardly and outwardly by the rotation of the rotor, the blades being so arranged that they are retained at the inner ends of their guideways while passing from one of said inlet ports to the other.

4. In a rotary engine, the combination of a casing, said casing being provided with a curved bore which is elongated in cross section and provided with opposed inlet ports, with means whereby fluid may be supplied through either of said ports to drive the engine in reverse directions, a rotor mounted in said bore at one side of the center thereof and arranged to conform to the adjacent interior surface of the bore for a substantial portion of its curved surface, a series of oppositely disposed blades slidably mounted in said rotor, and means independent of the inner wall of the cylinder for automatically moving the blades inwardly and outwardly by the rotation of the rotor, the number and arrangement of the blades being such that opposed blades are located on the same side of the ports and are retained at the inner ends of their guide-ways while passing from one of said ports to the other.

5. In a rotary engine, the combination of a cylinder having a bore, a rotor mounted eccentrically with respect to said bore, said rotor comprising a prismatic central body, a plurality of segmental blocks adjustably secured to said body, the adjacent blocks being spaced apart to form guide-ways therebetween, blades slidably mounted in said guide-ways, and means for moving the blades inwardly and outwardly in their guide-ways.

[Claims 6 to 20 not printed in the Gazette.]

1,023,783. PROCESS OF TREATING NATURAL GAS. ISAAC N. KNAPP, Ardmore, Pa., assignor to The United Gas Improvement Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Oct. 5, 1911. Serial No. 652,945. (Cl. 48—216.)



The process of treating natural gas which consists in passing it through an incandescent bed of carbon from which air is excluded and maintaining the temperature of the bed above that of the ordinary or atmospheric combustion thereof, whereby the methane or marsh gas of the natural gas takes on carbon and is converted into acetylene.

1,023,784. PRESERVED WOOD AND PROCESS OF MAKING SAME. ROBERT A. MARR, Blacksburg, Va. Original application filed Feb. 4, 1910, Serial No. 541,964. Divided and this application filed Apr. 29, 1911. Serial No. 624,220. (Cl. 99—12.)

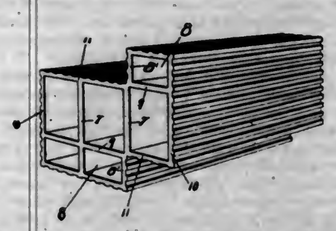
1. The process of treating cut timber to preserve it, which consists in impregnating the pores, cells and ducts of its tissue by subjecting the timber, in a suitable container, to the action of a mixture consisting of melted naphthalene and paraffin maintained in a melted condition at a temperature of less than 212 degrees F.

2. The process of treating cut timber to preserve it, which consists in impregnating the pores, cells and ducts of its tissue by subjecting the timber in a suitable container to the action of a mixture consisting of melted naphthalene and paraffin maintained in a melted condition at a temperature of less than 212 degrees F., and then allowing the bath to gradually cool, but not to the point of solidification, before removal of the timber treated.

3. The process of treating cut timber to preserve it, which consists in encysting the pores, cells and ducts of its tissue, with a film of paraffin and naphthalene applied thereto by saturation, in a melted condition, following by slow cooling of the timber treated.

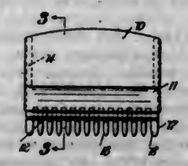
4. The product of the process described which is cut timber, the pores, cells and tissue ducts of which are encysted with a mixture of naphthalene and paraffin.

1,023,785. BUILDING-BLOCK. EDWARD J. MCGETTIGAN, Cleveland, Ohio. Original application filed Dec. 7, 1910, Serial No. 596,038. Divided and this application filed Nov. 16, 1911. Serial No. 660,667. (Cl. 72—31.)



A building block comprising a body hollow horizontally and having two intermediate vertical longitudinal webs, and extensions on the top and bottom of the body, the outer vertical faces of the respective extensions being flush with opposite side faces of the body and the inner vertical faces of the extensions being in line with one of the intermediate webs, the width of one extension being substantially twice that of the other extension.

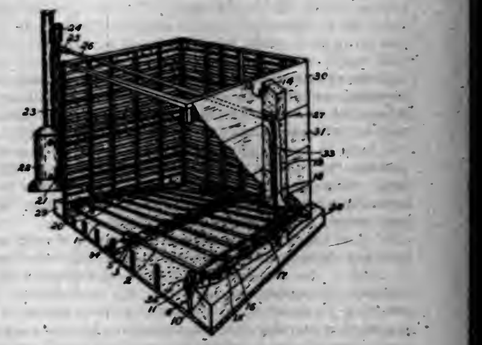
1,023,786. HAIR-CUTTER. SEBASTIAN PERRONE, New York, N. Y.; Louisa Perrone, New York, N. Y., administratrix of said Sebastion Perrone, deceased. Filed June 15, 1911. Serial No. 633,280. (Cl. 30—12.)



1. A hair cutter consisting of three parts only, one of said parts being the holder and comprising a thin, flat plate having a flat, angularly disposed offset constituting a blade socket and having the edge lying substantially in the plane of the plate, said plate being forwardly bent at the lateral margin, to form in-turned flanges, the second of said parts being a blade removably located in said socket and extending over the edge thereof, and the third of said parts being a thin, flat plate slidably and removably held under said flanges, against said holder and over said socket, said last-mentioned plate having a plurality of comb teeth, the end ones of said teeth being provided with projections adapted to engage at the ends of said blade and constituting stops therefor.

2. A hair cutter substantially as described, comprising a body portion consisting of a main plate whose lateral edges are returned to form keeper flanges, and having an offset constituting a blade socket, said flanges terminating at said socket, said plate having at the lateral edges of said socket upturned portions, said socket with its upturned ends serving to give rigidity to such portions of the body, and the lateral flanges of said body aiding in giving rigidity to such part of the body, a blade adapted to fit in said socket with its outer side or face substantially in a plane with that of the main plate, and a retaining plate removably held by said keeper flanges of said main plate and overlying the blade and having at its forward edge teeth projecting beyond the cutting edge of said blade.

1,023,787. KNOCKDOWN HEATING APPARATUS FOR CORN-CRIBS. LOUIS C. EMMONS, Cedar Falls, Iowa, assignor to Fanny J. Emmons, Cedar Falls, Iowa. Filed June 26, 1911. Serial No. 635,452. (Cl. 34—19.)



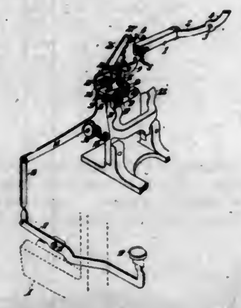
1. The combination with a repository and a boiler, of a plurality of pipes in detachable communication with each other and with said boiler and located in said repository near the floor thereof, the ends of the pipes extending outside of the repository, each pipe being composed of two alined sections, and fixed couplings adapted to detachably join the sections of said pipes by means of threaded connections therewith.

2. The combination with a repository covered on its sides, and a boiler, of removable boxes in communication with opposite ends of said repository near its floor, a plurality of communicating detachably united pipes whose communicating ends extend into said oppositely located boxes, a conduit communicating between the lower part of said boiler and the ends of said pipes adjacent thereto, a conduit communicating between the upper part of said boiler and the ends of said pipes farthest therefrom, each of said pipes composed of sections of equal length, and couplings for said sections having separable screw-thread connections therewith.

3. The combination with a repository having its sides inclosed and having removable boxes in communication with opposite ends thereof, of a plurality of communicating pipes in said repository located near its floor and having their communicating ends extended into said boxes,

their said ends being detachably connected, a conduit in communication between the lower part of said boiler and the adjacent ends of said pipes, a conduit in communication between the upper part of said boiler and the ends of said pipes farthest therefrom, each of said pipes being composed of two equal alined sections, squared couplings for said sections detachably joining them by means of screw-threaded connections, removable seats for said squared couplings adapted to retain them in place, detachably, and removable supporting-means adapted to raise the ends of said pipes farthest from the boiler to a greater height than the ends thereof which lie nearest said boiler.

1,023,788. TYPE-WRITING MACHINE. BENJAMIN P. FORTIN, Hartford, Conn., assignor to Underwood Typewriter Company, New York, N. Y., a Corporation of Delaware. Filed Oct. 21, 1910. Serial No. 588,233. (Cl. 197—91.)



1. In a typewriting machine, a carriage, a rack on the carriage, escapement mechanism coöperating with the rack to control the feed of the carriage, a dog movable into and out of engagement with the rack and movable with the rack to back space the same, a lever having a cam thereon for moving the dog into engagement with the rack, means for operating the lever, and means on the lever for moving the dog with the rack when the dog and rack are in engagement.

2. In a typewriting machine, a carriage, a rack on the carriage, escapement mechanism coöperating with the rack to control the feed of the carriage, a dog movable into and out of engagement with the rack and movable with the rack to back space the same, a lever having a cam for moving the dog into engagement with the rack, said lever having also a detent for engaging and moving the dog with the rack after the dog has been brought to the rack by the cam, and means for operating the lever.

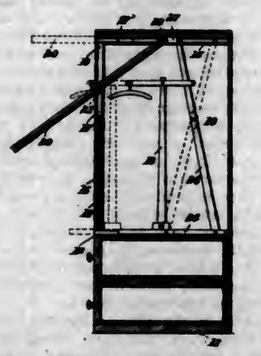
3. In a typewriting machine, a carriage, a rack on the carriage, escapement mechanism coöperating with the rack to control the feed of the carriage, a dog movable into and out of engagement with the rack and movable with the rack to back space the same, a lever having a cam for moving the dog into engagement with the rack, said lever having also means for engaging and moving the dog with the rack after the dog has been brought to the rack by the cam, and means for operating the lever.

4. In a typewriting machine, a carriage, a rack on the carriage, escapement mechanism coöperating with the rack to control the feed of the carriage, a dog movable into and out of engagement with the rack and movable with the rack to back space the same, a pivoted arm or lever on which the dog is pivotally mounted to swing into and out of engagement with the rack, the dog having also longitudinal movement on said arm or lever to move with the rack during the back spacing operation, and means for actuating the dog.

5. In a typewriting machine, a carriage, a rack on the carriage, escapement mechanism coöperating with the rack to control the feed of the carriage, a dog movable into and out of engagement with the rack and movable with the rack to back space the same, a support for the dog, the dog having a single pin and slot engagement with its support whereby it may swing on its support into engagement with the rack and may thereafter by virtue of the slot move longitudinally on its support with the rack in back spacing, and means for actuating the dog.

[Claims 6 to 21 not printed in the Gazette.]

1,023,789. DISPLAY-RACK. ANDREW E. MILLER, Baltimore, Md., assignor to Solomon Himmel, Baltimore, Md. Filed Sept. 21, 1911. Serial No. 650,609. (Cl. 211—16.)



1. The combination with a case provided at each end with angular guides, a door provided with rollers adapted to engage said guides, and a spring pressed plunger mounted in one branch of each guide and adapted to engage said door.

2. The combination with a case, of horizontal guides at each end thereof, vertical guides intersecting the first mentioned guides, a door provided with upper and lower rollers adapted to engage said guides, and counterbalancing means carried by the vertical guides and engaging the lower rollers for counterbalancing said door.

3. The combination with a case provided at each end with angular guides, a door provided with rollers adapted to engage said guides, a spring pressed plunger mounted in one branch of each guide and adapted to engage said door, and stops for limiting the movement of said plungers.

4. The combination with a case, and a reciprocable garment supporting rack mounted therein, of intersecting horizontal and vertical guides carried by said case, a door constructed to engage said guides, and means actuated by the door for reciprocating said rack, said door actuated means being constructed to permit limited movement of the door along said horizontal guides before imparting movement to the rack.

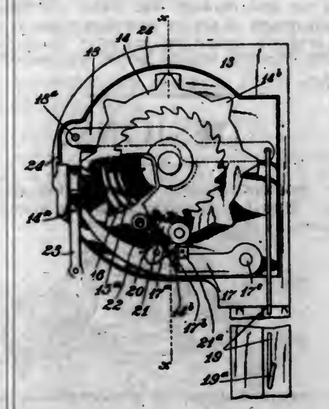
5. The combination with a case, and a reciprocable garment supporting rack mounted therein, of intersecting horizontal and vertical guides carried by said case, a door constructed to engage said guides, levers pivotally mounted in said case for reciprocating said rack, and slotted links connecting said levers with the upper end of said door, said links being approximately parallel with said horizontal guides.

REISSUES.

13,405. AUTOMATIC FIRE-RESISTING SHUTTER. EDWARD H. MCCLOUD, Columbus, Ohio. Filed Feb. 19, 1912. Serial No. 678,734. Original No. 987,154, dated Mar. 21, 1911, Serial No. 407,743. (Cl. 189—58.)

1. In combination with a counterbalanced shutter or curtain that is normally operative for raising and lowering, means for impelling the shutter or curtain to opening-closing position consisting of a spring actuated barrel with a dog thereon, means for normally retaining said dog inoperative to impel the shutter or curtain to opening-closing position and means operative by a dangerous rise of temperature for automatically releasing the dog to impel the shutter or curtain to opening-closing position.

2. In combination with a counterbalanced shutter or curtain that is normally operative for raising and lowering, means in connection therewith adapted to receive a dog or pawl, means for impelling the shutter or curtain to opening-closing position consisting of a spring actuated member carrying a dog or pawl said dog or pawl adapted to engage the said means to receive such member, means operative by a dangerous rise of temperature for normally retaining said dog or pawl inoperative to impel the shutter or curtain to opening-closing position, substantially as described.



3. In combination with a normally-operative counterbalanced shutter or curtain, means for disturbing said counterbalance and impelling the shutter or curtain to closing position, means for normally retaining said last-named means in inoperative condition adapted to be released for operation by a dangerous rise of temperature, and means for rendering said impelling means inert and restoring the counterbalanced condition after the shutter has reached closing position.

4. In combination with the rotary shaft of a shutter or curtain counterbalancing spring roller, a ratchet wheel fixed on said shaft, a barrel loose with reference to said shaft, a collar in which said shaft normally turns, a spring attached to said barrel and collar, a pawl on said barrel to engage said ratchet wheel, means to detain said barrel from rotation, means to detain said pawl disengaged from said ratchet wheel, means for releasing said pawl to engage the barrel and means for releasing said barrel adapted to be operated by a dangerous rise of temperature.

5. In combination with a rotary shaft of a shutter or curtain counterbalancing spring roller, a ratchet wheel fixed on said shaft, a barrel loose with reference to said shaft, a collar with reference to which said shaft normally turns, a spring attached to said barrel and collar, a pawl on said barrel to engage said ratchet wheel, means to detain said barrel from rotation, means to detain said pawl disengaged from said ratchet wheel and means for releasing said pawl to engage the ratchet, and means for releasing said barrel adapted to be operated by a dangerous rise of temperature, said releasing means adapted to release the pawl prior to the release of the barrel.

6. In combination with the rotary shaft of a shutter or curtain counterbalancing spring roller, a ratchet wheel fixed on said shaft, a barrel loose with reference to said shaft, a fixed collar with reference to which said shaft normally turns, a spring attached to said barrel and collar, a pawl on said barrel to engage said ratchet wheel, means to detain said barrel from rotation, means to detain said pawl disengaged from said ratchet wheel, and means for releasing said pawl to engage the ratchet and means for releasing said barrel adapted to be operated by a dangerous rise of temperature.

7. In combination with a rotary shaft of a shutter or curtain counterbalancing spring roller, a ratchet wheel fixed on said shaft, a barrel loose with reference to said shaft, a movable collar with reference to which said shaft normally turns, means for holding said collar from turning, a spring attached to said bafrel and collar, a pawl on said barrel to engage said ratchet wheel, means to detain said barrel from rotation, means to detain said pawl disengaged from said ratchet wheel, and means for releasing said pawl to engage the ratchet wheel and means for releasing said barrel adapted to be operated by a dangerous rise of temperature.

8. In combination with the rotary shaft of a shutter or curtain counterbalancing spring roller, a ratchet wheel fixed on said shaft, a barrel loose with reference to said shaft, a movable collar with reference to which said shaft normally turns, means for releasably holding said collar from turning, said means being accessible for operation at the lower portion of the opening in which the shutter or curtain is installed, a spring attached to said barrel and collar, a pawl on said barrel to engage said ratchet wheel, means to detain said barrel from rotation means to detain said pawl disengaged from said ratchet wheel, and means for releasing said pawl to engage the ratchet wheel, and means for releasing said barrel adapted to be operated by a dangerous rise of temperature.

9. In combination with the rotary shaft of a shutter or curtain counterbalancing spring roller, a ratchet wheel fixed on said shaft, a barrel loose with reference to said shaft, a movable collar with reference to which said shaft normally turns, means for releasably holding said collar from turning, said means being accessible for operation from either the interior or exterior of the building after the shutter or curtain is closed, and at the lower portion of the opening in which the shutter or curtain is installed, a spring attached to said barrel and collar, a pawl on said barrel to engage said ratchet wheel, means to detain said barrel from rotation, means to detain said pawl disengaged from said ratchet wheel, and means for releasing said pawl to engage the ratchet wheel and means for releasing said barrel adapted to be operated by a dangerous rise of temperature.

10. In means of the character set forth, the combination of a roller, a shutter connected therewith, a clutch-member connected with said roller, a normally-tensioned spring, a clutch-member connected with said spring and normally out of operative engagement with said first-named clutch-member, and restraining means for said spring equipped with a fusible member.

11. In means of the character set forth, the combination of a roller, a shutter connected therewith, a clutch member connected with said roller, a normally tensioned spring, a clutch-member connected with said spring and normally out of operative engagement with said first-named clutch member, restraining means for said spring equipped with a fusible member, and means for causing the engagement of said clutch members prior to the release of the spring.

12. In means of the character set forth, the combination of a roller, a shutter connected therewith, a clutch member connected with said roller, a normally tensioned spring, a clutch member connected with said spring and normally out of operative engagement with said first-named clutch member, thermally controlled restraining means for said spring, and means for causing the engagement of said clutch members prior to the release of the spring.

13,406. PROJECTILE. JOHN B. SEMPLE, Sewickley, Pa. Filed Feb. 16, 1912. Serial No. 678,111. Original No. 999,470, dated Aug. 1, 1911, Serial No. 594,508. (Cl. 102—29.)

1. The combination of a projectile provided with a chamber opening at the rear of the projectile, a combustible non-explosive pyrotechnic compound arranged in said chamber, means for igniting said compound on the dis-

charge of a gun and after the passing of the projectile from the muzzle thereof, and means, rendered ineffective on and by the discharge of a gun, for normally preventing operation of the said ignition means, substantially as described.



2. The combination with a projectile provided with a chamber, of a movable member adapted to be shifted by the expansion of the gases stored in said chamber, an igniter operated by said movable member, and means, rendered ineffective on and by the discharge of a gun, for normally holding said movable member from movement, substantially as described.

3. The combination of a projectile provided with a chamber containing combustible material, a friction primer for igniting said material, means operative to ignite the primer on reduction of the propelling pressure against the projectile, and means normally effective to prevent ignition of said primer, but rendered ineffective by the discharge when the projectile, equipped therewith, is fired from a gun.

4. The combination of a projectile, an ignitible substance carried thereby, an ignition device carried by said projectile, and means, rendered ineffective by heat, for normally preventing operation of said ignition device and carried by the projectile in a position exposed to the heat of discharge when the projectile is fired from a gun, substantially as described.

5. The combination of a projectile, an ignitible substance carried thereby, an ignition device carried by said projectile, and a member formed of combustible material normally preventing operation of said ignition device and carried by the projectile in a position exposed to the heat of explosion when the projectile is fired from a gun, substantially as described.

6. The combination of a projectile provided with a chamber, a port for the entrance of gases to said chamber, a movable member adapted to be shifted by the expansion of gases stored in said chamber, a primer ignitible by movement of said movable member and a member opposing by its own body the movement of said movable member and itself removable from such opposing position by or through the discharge, when the projectile equipped therewith is fired from a gun, substantially as described.

7. In combination with a projectile carrying an ignitible substance, of an ignition device including a member normally closing a chamber in said projectile and provided with connection to an ignition primer, such connection extending through said chamber, a combustible packing within said chamber engaging at once the chamber wall and the aforesaid connection, and a gas passageway to said chamber, substantially as described.

8. A projectile, an ignitible substance carried thereby, an ignition primer lying within said body of ignitible substance, a movable member, operative connection between said movable member and said ignition primer, means rendered ineffective by the firing of said projectile from a gun for preventing movement of said movable member, and means for applying the expansive power of gas to shift said movable member on the firing of said projectile from a gun and after the passing of the projectile from the muzzle thereof, substantially as described.

9. A projectile, provided with a chamber opening to the rear thereof, a body of tracer material held by a fusible wad to the anterior end of said chamber, a space within said chamber and to the rear of said wad, a gas passageway leading to said space, and a facing of refractory material covering the rear surface of said wad, substantially as described.

10. A projectile provided with a chamber opening to the rear thereof and closed rearwardly by a movable plate, a body of tracer material held by a fusible wad to the anterior end of said chamber, the wall of said chamber overlapping the margin of said wad to the rear thereof, means rendered ineffective on the discharge of the projectile from a gun for normally holding said plate in its position of closure for said chamber, and means for applying the expansive power of gas to move said plate on the firing of the projectile from a gun and after the passing of the projectile from the muzzle thereof, substantially as described.

DESIGNS.

42,409. ROCKING-HORSE. ADOLF W. PRESSLER, Keene, N. H. Filed Jan. 31, 1912. Serial No. 674,615. Term of patent 14 years.



The ornamental design for a rocking-horse, as shown.

42,410. COVERING FOR BOXES OR BOOKS. ISAAC O. VAN DUZER, New York, N. Y. Filed Dec. 14, 1911. Serial No. 665,816. Term of patent 7 years.



The ornamental design for a covering for boxes or books herein shown and described.

TRADE-MARKS

PUBLISHED APRIL 16, 1912.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 6,914. (CLASS 17. TOBACCO PRODUCTS.) SANCHEZ & HAYA CO., Tampa, Fla. Filed May 29, 1905.



No claim being made for the terms "Tampa" and "Cuba."

Particular description of goods.—Cigars.

Claims use since about 1887.

Ser. No. 30,266. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CALLISTO FRANCESCONI, Lucca, Italy. Filed Sept. 27, 1907.



The facsimile-signature therein being that of the firm-name of Callisto Francesconi and is the facsimile-handwriting of Diego Sani Francesconi, the sole member of said firm, no claim being made to the words "Specialty, Lucca Olive Oil, Callisto Francesconi, Extra 1, Lucca, Italy, Le latte non portanti la presente firma si dichiarano falsificate, Cans not bearing the present signature are declared adulterated, Med. d'oro Milano 1881, Roma med. d'oro Torino 1884, Roma 1883."

Particular description of goods.—Italian Olive-Oil.

Claims use since June 6, 1907.

Ser. No. 50,195. (CLASS 39. CLOTHING.) VOLUNTEER MFG. COMPANY, Nashville, Tenn. Filed June 8, 1910.

VOLUNTEER

Particular description of goods.—Overalls, Jumpers, Coats, Trousers.

Claims use since April, 1908.

Ser. No. 50,323. (CLASS 15. OILS AND GREASES.) STANDARD OIL COMPANY OF NEW YORK, New York, N. Y. Filed June 15, 1910. Under ten-year proviso.

BOULEVARD
GAS FLUID

Particular description of goods.—Naphtha.

Claims use since 1878.

Ser. No. 50,656. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) SCT. LUCASBADER BRUNNEN ACTIEN-GESELLSCHAFT, Hungary. Filed July 1, 1910.



No claim being made to the word "Kristaly."

Particular description of goods.—Natural Mineral Spring-Waters.

Claims use since 1899.

Ser. No. 51,080. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) J. W. SPEAR & SÖHNE, KOMMANDITGESELLSCHAFT, PAPIERWAREN- U. SPIELEFABRIK, Doos, near Nuremberg, Germany. Filed July 26, 1910.



Particular description of goods.—Toys and Games for In and Out Door Use.
Claims use since Apr. 19, 1910.

Ser. No. 52,728. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) SETH H. CONOVER, Plymouth, Wis. Filed Nov. 11, 1910.

GOLDEN RULE

Particular description of goods.—Cream-Cheese.
Claims use since Jan. 1, 1900.

Ser. No. 52,748. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) FONTANA-MASTE UND-TRÄGER-GESELLSCHAFT M. B. H., Berlin, Germany. Filed Nov. 12, 1910.



No claim being made to the mast or pole.
Particular description of goods.—Extensible Masts.
Claims use since Jan. 29, 1909.

Ser. No. 54,151. (CLASS 10. FERTILIZERS.) THE ANGLO-CONTINENTAL GUANO WORKS, London, England; Hamburg and Emmerch, Germany, and Antwerp, Belgium. Filed Jan. 27, 1911.



Particular description of goods.—Superphosphate of Lime, Nitrate of Soda, Sulfate of Ammonia, and Sulfate of Potash for Fertilizers.
Claims use since 1873.

Ser. No. 54,688. (CLASS 5. ADHESIVES.) AKTIENGESELLSCHAFT FÜR CHEMISCHE PRODUKTE VORMALS H. SCHEIDEMANDEL, Berlin, N. W., Germany. Filed Feb. 23, 1911.

Beticol

Particular description of goods.—Powder of Glue Soluble at Low Temperature, Plates of Glue Soluble at Low Temperature, and Liquid Glue.
Claims use since Nov. 19, 1910.

Ser. No. 55,636. (CLASS 47. WINES.) ALBERT CHARLES FREDERICK MORGAN, London, England. Filed Apr. 8, 1911. Under ten-year proviso.

DIXON'S

Particular description of goods.—Port-Wine.
Claims use since Aug. 13, 1872.

Ser. No. 56,125. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) MARK B. TISDALE, Bentonville, Ark. Filed May 2, 1911.



Particular description of goods.—A Beverage Consisting of Vanilla, Glycerin, Alcohol, Orange, Lemon, Coloring-Matter of Carmine, Caramel, Citric Acid, and Water.
Claims use since May 19, 1908.

Ser. No. 57,069. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) F. B. CHAMBERLAIN COMPANY, St. Louis, Mo. Filed June 15, 1911.

JACKFROST

Particular description of goods.—Table-Syrup, Sago, Tapioca, and Corn-Starch.
Claims use since about Jan. 1, 1898.

Ser. No. 57,181. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) DULUTH-SUPERIOR MILLING COMPANY, Duluth, Minn. Filed June 20, 1911.

ZENOTA

Particular description of goods.—Wheat-Flour.
Claims use since Sept. 4, 1902.

Ser. No. 57,490. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) WM. ENDERS MANUFACTURING COMPANY, Walden, N. Y., and St. Louis, Mo. Filed July 5, 1911.

OAK LEAF

Particular description of goods.—Razor-Strops, Razor-Hones, Flint-Paper, Emery-Paper, Emery-Cloth, Corundum-Wheels, Oilstones, Grindstones, Scythe-Stones, Sharpening-Paste, Stove-Polish, Metal-Polish, Butchers' Strops.
Claims use since May 26, 1911.

Ser. No. 57,504. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CARSTENS PACKING COMPANY, Tacoma and Seattle, Wash. Filed July 6, 1911. Under ten-year proviso.

WASHINGTON

Particular description of goods.—Hams, Bacon, and Lard.
Claims use since Jan. 1, 1894.

Ser. No. 57,724. (CLASS 39. CLOTHING.) RYFF & Co., Berne, Switzerland. Filed July 15, 1911.

MUMSY

Particular description of goods.—A Single Article of Clothing Which Protects the Lower Part of the Face and Neck, the Ears, and the Chest.
Claims use since January, 1911.

Ser. No. 57,796. (CLASS 38. PRINTS AND PUBLICATIONS.) GEORGE B. GAIENNIE, Chicago, Ill. Filed July 24, 1911.

$AVING$

Particular description of goods.—Magazines.
Claims use since July, 1905.

Ser. No. 58,115. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SOCIETY OF CHEMICAL INDUSTRY IN BASLE, Basel, Switzerland. Filed Aug. 10, 1911.

CIBANON

Particular description of goods.—Coal-Tar Colors.
Claims use since June, 1908.

Ser. No. 58,117. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SOCIETY OF CHEMICAL INDUSTRY IN BASLE, Basel, Switzerland. Filed Aug. 10, 1911.

Peristaltine

Particular description of goods.—A Pharmaceutical Product Obtained from the Bark of Cascara Sagrada, (*Rhamnus Purshiana,*) and Particularly Applicable as a Purgative.
Claims use since March, 1907.

Ser. No. 58,118. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SOCIETY OF CHEMICAL INDUSTRY IN BASLE, Basel, Switzerland. Filed Aug. 10, 1911.

PYROGEN

Particular description of goods.—Coal-Tar Colors.
Claims use since March, 1900.

Ser. No. 58,119. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SOCIETY OF CHEMICAL INDUSTRY IN BASLE, Basel, Switzerland. Filed Aug. 10, 1911.

Rosanthren

Particular description of goods.—Coal-Tar Colors.
Claims use since April, 1902.

Ser. No. 58,120. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SOCIETY OF CHEMICAL INDUSTRY IN BASLE, Basel, Switzerland. Filed Aug. 10, 1911.

Salenal

Particular description of goods.— A Pharmaceutical Ointment Containing a Liquid Mixture of Methylsalicylglycollate with Ethylsalicylglycollate and Particularly Applicable for Use Externally in Cases of Gout, Every Kind of Rheumatism, Acute and Chronic Arthritis; Lumbago, Torticollis, Rheumatic Neuritis.
Claims use since September, 1906.

Ser. No. 58,175. (CLASS 12. CONSTRUCTION MATERIALS.) HYDRAULIC PRESS BRICK CO., St. Louis, Mo. Filed Aug. 12, 1911.

BLACKSTONE

Particular description of goods.—Brick.
Claims use since about June, 1909.

Ser. No. 58,189. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) M. HARTLEY DODGE, Passaic, N. J., and New York, N. Y. Filed Aug. 14, 1911.



The background being red.
Particular description of goods.—Military and Sporting Rifles, Shotguns, Pistols, Metallic Cartridges, Metallic Shot Shells, Paper Shot-Shells, Empty Metallic and Paper Shells, Blank Cartridges, Caps, Primers, Wads, and Bullets.
Claims use since Feb. 1, 1911.

Ser. No. 58,190. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) M. HARTLEY DODGE, Passaic, N. J., and New York, N. Y. Filed Aug. 14, 1911.



The background being red. No claim is made for the word "Remington."
Particular description of goods.—Military and Sporting Rifles, Shotguns, Pistols, Metallic Cartridges, Metallic Shot-Shells, Paper Shot-Shells, Empty Metallic and Paper Shells, Blank Cartridges, Caps, Primers, Wads, and Bullets.
Claims use since Feb. 1, 1911.

Ser. No. 58,306. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) M. HARTLEY DODGE, Passaic, N. J., and New York, N. Y. Filed Aug. 21, 1911.



No claim is made for the word "Remington."
Particular description of goods.—Rifles, Shotguns, Cartridges, Caps, Primers, and Wads.
Claims use since June 1, 1911.

Ser. No. 58,504. (CLASS 11. INKS AND INKING MATERIALS.) THE PENCARBON CO. LTD., Leicester, England. Filed Sept. 1, 1911.

"Zanetic."

Particular description of goods.—Carbon-Papers, Pen Copying-Paper, and Type-Writer Ribbons.
Claims use since May 11, 1903.

Ser. No. 58,778. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THE CAMBRUNNEN TABLE WATER COMPANY, London, England. Filed Sept. 21, 1911.



CAMBRUNNEN

Particular description of goods.—Mineral and Aerated Waters, Natural and Artificial, including Ginger-Beer.
Claims use since January, 1901.

Ser. No. 58,945. (CLASS 25. LOCKS AND SAFES.) YORK SAFE AND LOCK CO., York, Pa. Filed Sept. 30, 1911. Under ten-year proviso.

YORK SAFES

Particular description of goods.—Safes and Vault-Doors.
Claims use since about January, 1884.

Ser. No. 59,041. (CLASS 39. CLOTHING.) INTERWOVEN STOCKING COMPANY, New Brunswick, N. J. Filed Oct. 7, 1911.



And which consists of a divided hosiery-form.
Particular description of goods.—Hosiery.
Claims use since about Sept. 27, 1911.

Ser. No. 59,146. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) HEINRICH TÜSHAUS, Borken, Germany. Filed Oct. 13, 1911.

SARTO

Particular description of goods.—Non-Alcoholic Beverages Prepared of Fruit-Juice and Acids Derived Therefrom.
Claims use since Nov. 3, 1910.

Ser. No. 59,358. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) HANS JOSEPH, Schöneberg, Germany. Filed Oct. 26, 1911.

Lasca

Particular description of goods.—A Game Consisting of Square Boards Having Divisions, Squares, or Spots Arranged in Rows for Use in Playing a Game and Round Pieces or Disks for Use on the Board in Playing the Game.
Claims use since July 3, 1911.

Ser. No. 59,456. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) C. M. MCCLUNG & CO., Knoxville, Tenn. Filed Nov. 1, 1911.



Particular description of goods.—Targets, Base-Balls, Base-Ball Masks, Lawn-Tennis Balls, Croquet Sets, Nose and Face Guards, Fishing-Tackle, Base-Ball Bats, Base-Ball Gloves and Mitts, Base-Ball Body-Protectors, Lawn-Tennis Rackets, Hammocks, Foot-Balls, Boxing-Gloves, Basket-Balls, Dumb-Bells, Toy Wagons, and Fishing-Reels.
Claims use since about 1882.

Ser. No. 59,557. (CLASS 31. FILTERS AND REFRIGERATORS.) TRAVERSE CITY REFRIGERATOR CO., Traverse City, Mich. Filed Nov. 4, 1911.

SERVICE

Particular description of goods.—Domestic Refrigerators, Domestic Ice-Boxes, Domestic Food and Provision Coolers, and Combined Domestic Refrigerators and Fireless Cookers.
Claims use since May, 1911.

Ser. No. 59,561. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) FRANKFURTER MUSIKWERKE-FABRIK J. D. PHILIPPS & SÖHNE A.-G., Frankfort-on-the-Main, Germany. Filed Nov. 6, 1911.

Ducanola

Particular description of goods.—Trumpets, Fifes, Flutes, Clarinets, Piccolos, Cornets, Alto and Bass Horns, French Horns, Violins, Violas, Harps, Zithers, Cellos, Banjos, Bass-Viols; Manually-Playing Chime-Bars, Cymbals; Chimes; Kettle-Drums; Drums; Holophones; Accordions; Organs; Harmoniums; Pianos; Hand-Organs; Pneumatic Roll-Playing Instruments, Disk and Cylinder Playing Instruments, Pocket Instruments; Reproducing-Orchestrions and Reproducing-Pianos; Mechanical, Pneumatic, and Mechanical-Pneumatic Musical Apparatus; Orchestrions and Pedal-Pianos; Valves and Bellows for Musical Instruments, Music-Stands; Music-Sheets for Mechanical, Pneumatic, and Mechanical-Pneumatic Apparatus; Self-Playing Apparatus and Auxiliary Devices for Organs, Harmoniums, and Pianos.
Claims use since June 24, 1911.

Ser. No. 59,595. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) C. M. MCCLUNG & CO., Knoxville, Tenn. Filed Nov. 7, 1911.



Particular description of goods.—Targets, Base-Ball Bats, Base-Ball Gloves and Mitts, Base-Ball Body-Protectors, Lawn-Tennis Rackets, Hammocks, Foot-Balls, Boxing-Gloves, Basket-Balls, Dumb-Bells, Toy Wagons, Fishing-Reels, Base-Balls, Base-Ball Masks, Lawn-Tennis Balls, Croquet Sets, Nose and Face Guards, and Fishing-Tackle.
Claims use since about 1893.

Ser. No. 59,841. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) ACT. GES. FÜR BÜRSTEN INDUSTRIE VORMALS C. H. ROEDNER, STRIEGAU & D. J. DU KAS, FREIBURG, I. B., Striegau, Germany. Filed Nov. 11, 1911.

Agebi

Particular description of goods.—Brushes, Dusters, and Brooms.
Claims use since June 14, 1911.

Ser. No. 59,856. (CLASS 39. CLOTHING.) PARAMOUNT KNITTING COMPANY, Chicago, Ill. Filed Nov. 11, 1911.

MOCCASIN

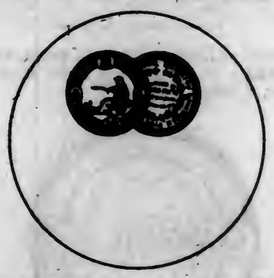
Consisting of the word "Moccasin."
Particular description of goods.—Hosiery.
Claims use since July 15, 1903.

Ser. No. 59,839. (CLASS 15. OILS AND GREASES.) STANDARD OIL CO. OF NEW YORK, New York, N. Y. Filed Nov. 21, 1911.

CENTENNIAL

Particular description of goods.—Illuminating-Oils.
Claims use since Aug. 26, 1879.

Ser. No. 59,925. (CLASS 47. WINES.) ALEX. D. SHAW & Co., New York, N. Y. Filed Nov. 25, 1911.



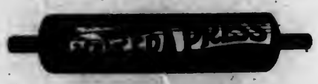
Particular description of goods.—Sherry-Wine.
Claims use since Jan. 1, 1886.

Ser. No. 60,023. (CLASS 17. TOBACCO PRODUCTS.) CARL J. PRINTZ, Toronto, Ontario, Canada. Filed Dec. 1, 1911.

"EST WISHES"

Particular description of goods.—Cigars.
Claims use since Nov. 20, 1911.

Ser. No. 60,204. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE REGINA COMPANY, Rahway, N. J. Filed Dec. 16, 1911.



No claim being made, however, to the exclusive use of the words "Press" and "Multi-Process" and to the representation of an inking-roller.
Particular description of goods.—Printing-Presses.
Claims use since Apr. 29, 1904.

Ser. No. 60,336. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) THE STUDEBAKER CORPORATION, South Bend, Ind. Filed Dec. 18, 1911.

E-M-F

Particular description of goods.—Automobiles.
Claims use since about Sept. 1, 1908.

Ser. No. 60,378. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EMILY C. MCRAE, Spokane, Wash. Filed Dec. 20, 1911.

Emily C. McRae

Consisting of a facsimile of my signature.
Particular description of goods.—For a Medicine in Capsule Form for Neuralgia, Headache, Rheumatism, Toothache, Lumbago, Sciatic, Muscular, and Articular Rheumatism, Rheumatic Pains, Acute or Chronic, and Also for Laxative Tablets.
Claims use since January, 1909.

Ser. No. 60,399. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) KENT MANUFACTURING COMPANY, New York, N. Y. Filed Dec. 21, 1911.

KENCO
KENT MANUFACTURING CO.
Style _____ Yds. _____

No claim being made to the words "Kent Manufacturing Co. Style—Yds.—."
Particular description of goods.—Muslins, Lawn, Nainsook, Batistes, Scrims, Voiles, Organdies, Silk, Silk Mulls, Piques, Repps, Marquisette, Linene, and Long-Cloth in the Piece.
Claims use since Nov. 23, 1911.

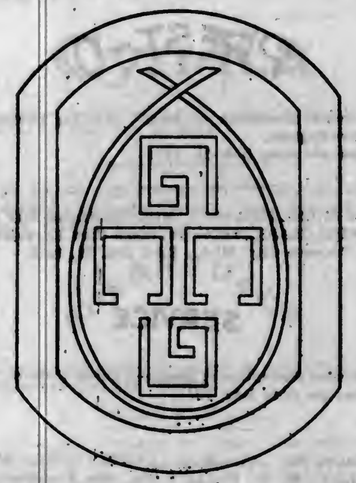
Ser. No. 60,520. (CLASS 17. TOBACCO PRODUCTS.) JAYNES DRUG COMPANY, Boston, Mass. Filed Dec. 29, 1911.

JAYNES LIMITED



No claim is made to the name "Jaynes."
Particular description of goods.—Cigars.
Claims use since June 12, 1911.

Ser. No. 60,537. (CLASS 32. FURNITURE AND UPHOLSTERY.) WM. A. FRENCH & COMPANY, Minneapolis, Minn. Filed Jan. 2, 1912.



Particular description of goods.—Desks, Bedsteads, Dressers, Chiffonniers, Chests, Tables, Sideboards, Buffets, Sofas, Davenports, Chairs, Bookcases, and Mirrors.
Claims use since Sept. 15, 1910.

Ser. No. 60,542. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NELSON L. TOWLE, Chicago, Ill. Filed Jan. 2, 1912.

SIONILLI

Particular description of goods.—Candies.
Claims use since Oct. 30, 1911.

Ser. No. 60,582. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WILLIAM SHERMAN TROWBRIDGE, Meadville, Pa. Filed Jan. 3, 1912.

Aero Puffs

No claim being made to the word "Puffs."
Particular description of goods.—Candy.
Claims use since Oct. 15, 1911.

Ser. No. 60,604. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) COLUMBIA PHONOGRAPH COMPANY, GENERAL, Washington, D. C. Filed Jan. 4, 1912.



Particular description of goods.—Sound-Record Blanks.
Claims use since Dec. 20, 1911.

Ser. No. 60,660. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) AKTIEBOLAGET SÖDERTELJE TÄNDSTICKSFABRIK, Örgryte, near Gothenburg, Sweden. Filed Jan. 6, 1912.



Particular description of goods.—Matches.
Claims use since Mar. 13, 1905.

Ser. No. 60,681. (CLASS 38. PRINTS AND PUBLICATIONS.) FUR NEWS PUBLISHING COMPANY, New York, N. Y. Filed Jan. 8, 1912.

FUR NEWS

Particular description of goods.—Magazines.
Claims use since January, 1905.

Ser. No. 60,682. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS. REUBEN A. HINE, New York, N. Y. Filed Jan. 8, 1912.

VAGITONE

Particular description of goods.—A Preparation for an Antiseptic Douche.
Claims use since Dec. 29, 1911.

Ser. No. 60,683. (CLASS 10. FERTILIZERS.) MORRIS & COMPANY, Chicago, Ill. Filed Jan. 8, 1912.

BIG TWO

Particular description of goods.—Bone-Meal Fertilizers.
Claims use since about Jan. 1, 1900.

Ser. No. 60,698. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) WRIGHT & DITSON, Jersey City, N. J. Filed Jan. 9, 1912.



Particular description of goods.—Golf-Clubs.
Claims use since about Jan. 3, 1912.

Ser. No. 60,793. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MERRELL-SOULE CO., Syracuse, N. Y. Filed Jan. 13, 1912.



Particular description of goods.—Mince-Meat, Infant Food, and Preserved Eggs.
Claims use since Feb. 17, 1910.

Ser. No. 61,024. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) FARBENFABRIKEN OF ELBERFELD COMPANY, New York, N. Y. Filed Jan. 25, 1912.

CORIPOL

Particular description of goods.—An Oil for Finishing Leather.
Claims use since Jan. 1, 1912.

Ser. No. 61,053. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE M. W. DUNTON COMPANY, Providence, R. I. Filed Jan. 26, 1912.



Particular description of goods.—Friction-Tape.
Claims use since June 11, 1909.

Ser. No. 61,086. (CLASS 12. CONSTRUCTION MATERIALS.) WILLIAM L. BARRELL CO., New York, N. Y. Filed Jan. 27, 1912.



Particular description of goods.—Canvas Roofing.
Claims use since Dec. 11, 1911.

Ser. No. 61,089. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE PREST-O-LITE COMPANY, Indianapolis, Ind. Filed Jan. 27, 1912.

PREST-O

Particular description of goods.—Starting Devices for Explosive-Engines.
Claims use since Nov. 15, 1911.

Ser. No. 61,124. (CLASS 50. MERCHANDISE NOT OTHERWISE CLASSIFIED.) TRAVERSE CITY REFRIGERATOR CO., Traverse City, Mich. Filed Jan. 29, 1912.

SERVICE

Particular description of goods.—Fireless Cookers.
Claims use since May, 1911.

Ser. No. 61,173. (CLASS 12. CONSTRUCTION MATERIALS.) W. P. FULLER & Co., San Francisco, Cal. Filed Feb. 1, 1912.



Particular description of goods.—Building and Insulating Paper.
Claims use since about Dec. 20, 1911.

Ser. No. 61,178. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE HUTCHINSON-KANSAS SALT COMPANY, Hutchinson, Kans. Filed Feb. 1, 1912.



Particular description of goods.—Salt.
Claims use since Oct. 5, 1911.

Ser. No. 61,259. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) GOLDEN GATE CO., Baltimore, Md. Filed Feb. 5, 1912.

Cyn-Ka

Particular description of goods.—Gin Compound.
Claims use since Jan. 25, 1912.

Ser. No. 61,260. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) GOLDEN GATE CO., Baltimore, Md. Filed Feb. 5, 1912.

SHERRYDALE

Particular description of goods.—Whisky-Blend.
Claims use since Jan. 25, 1912.

Ser. No. 61,310. (CLASS 11. INKS AND INKING MATERIALS.) INTERNATIONAL INK CO., Los Angeles, Cal. Filed Feb. 6, 1912.



No claim being made to the words "Safety Ink."
Particular description of goods.—Writing Fluid.
Claims use since Jan. 12, 1912.

Ser. No. 61,410. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE AMERICAN THER-OX CO., Chicago, Ill. Filed Feb. 10, 1912.

THER-OX

Particular description of goods.—Shampoo Preparations.
Claims use since January, 1909.

Ser. No. 61,427. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) ROBINSON BROS. & COMPANY, INCORPORATED, Portland, Me., and Malden, Mass. Filed Feb. 12, 1912.



The picture shown being fanciful and no claim being made to the word "Soap."
Particular description of goods.—Toilet Soap.
Claims use since Jan. 27, 1912.

Ser. No. 61,434. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE MORGAN DRUG CO., Brooklyn, N. Y. Filed Feb. 12, 1912.

MORDRUCO

Particular description of goods.—An Ointment, a Pomade, a Blood Remedy, and a Remedy for Malaria.
Claims use since May 25, 1911.

Ser. No. 61,435. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE MORGAN DRUG CO., Brooklyn, N. Y. Filed Feb. 12, 1912.

MORDRUCO

Particular description of goods.—A Toilet Soap, Medicinally Prepared, and a Salt-Water Soap.
Claims use since May 25, 1911.

Ser. No. 61,436. (CLASS 49. DISTILLED ALCOHOLIC LIQUORS.) C. BERRY & Co., Boston, Mass. Filed Feb. 12, 1912.

OLD
BERRYWOOD

Particular description of goods.—Straight Rye Whisky.
Claims use since Jan. 27, 1912.

Ser. No. 61,437. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) CHARLES A. DANIEL, Philadelphia, Pa. Filed Feb. 12, 1912.



The portrait being a fanciful representation of a Quaker.

Particular description of goods.—Rubber Tires and Pneumatic Tires.

Claims use since Aug. 5, 1911.

Ser. No. 61,468. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) WICK NARROW FABRIC COMPANY, Philadelphia, Pa. Filed Feb. 14, 1912.

Lania

Particular description of goods.—Flannel Piece Goods.

Claims use since June 1, 1911.

Ser. No. 61,470. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) HELLER & LONG, New York, N. Y. Filed Feb. 14, 1912.

PREMIER

Particular description of goods.—Handkerchiefs.

Claims use since Dec. 15, 1911.

Ser. No. 61,479. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) RICHARD HUDNUT, New York, N. Y. Filed Feb. 15, 1912.

SEC

Particular description of goods.—Soap, Solid and Liquid.

Claims use since some time prior to Jan. 1, 1900.

Ser. No. 61,495. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) RICHARD HUDNUT, New York, N. Y. Filed Feb. 15, 1912.

ROSE OF OMAR

Particular description of goods.—Soap, Solid and Liquid.

Claims use since Dec. 22, 1911.

Ser. No. 61,509. (CLASS 38. PRINTS AND PUBLICATIONS.) THE SUBURBAN PRESS, New York, N. Y. Filed Feb. 15, 1912.

THE MAGAZINE
FLOWERS

Particular description of goods.—A Magazine.

Claims use since Jan. 15, 1912.

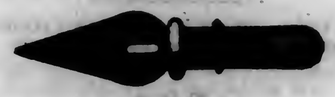
Ser. No. 61,529. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SMITH, KLINE & FRENCH COMPANY, Philadelphia, Pa. Filed Feb. 15, 1912.

Blue Danube

Particular description of goods.—Perfume and Talcum Powder.

Claims use since Dec. 1, 1911.

Ser. No. 61,576. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) "SOLO" ZÜNDWAREN- UND WICHSE- FABRIKEN ACT. GES., Vienna, Austria. Filed Feb. 17, 1912.



Particular description of goods.—Matches.

Claims use since Mar. 26, 1912.

Ser. No. 61,586. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE J. B. WILLIAMS COMPANY, Glastonbury, Conn. Filed Feb. 17, 1912. Under ten-year proviso.

BARBERS' FAVORITE

Particular description of goods.—Shaving and Toilet Soaps.

Claims use since about the early part of 1871.

Ser. No. 61,600. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BOSTON MOLASSES CO., Boston, Mass. Filed Feb. 19, 1912.

Honey Bee

Particular description of goods.—Molasses.

Claims use since Oct. 1, 1909.

Ser. No. 61,633. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) SOMMERS BROS. MATCH CO., Saginaw, Mich. Filed Feb. 20, 1912.

Bing

White letters being shown on a red background.

Particular description of goods.—Matches.

Claims use since Feb. 5, 1912.

Ser. No. 61,634. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) SOMMERS BROS. MATCH CO., Saginaw, Mich. Filed Feb. 20, 1912.

RAVEN

White letters being shown on a black background.

Particular description of goods.—Matches.

Claims use since Feb. 5, 1912.

Ser. No. 61,650. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) ROBINSON BROS. & COMPANY, INCORPORATED, Portland, Me., and Malden, Mass. Filed Feb. 21, 1912.

PRIDE
-OF-
BELL ROCK

Particular description of goods.—Toilet and Laundry Soap.

Claims use since Feb. 16, 1912.

Ser. No. 61,676. (CLASS 37. PAPER AND STATIONERY.) MARIE BROWN, New Brighton and New York, N. Y. Filed Feb. 23, 1912. Under ten-year proviso.

SAFETY

Particular description of goods.—Fountain-Pens.

Claims use since May, 1894.

Ser. No. 61,678. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE HERBIN SPICE COMPANY, Cincinnati, Ohio. Filed Feb. 23, 1912.



Particular description of goods.—Tea.

Claims use since Dec. 15, 1911.

Ser. No. 61,684. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) JÖNKÖPINGS OCH VULCANS TÄNDSTICKSFABRIKSAKTIEBOLAG, Jönköping, Sweden. Filed Feb. 23, 1912.



Particular description of goods.—Matches.

Claims use since April, 1894.

Ser. No. 61,685. (CLASS 9. EXPLOSIVES, FIREARMS, EQUIPMENTS, AND PROJECTILES.) JÖNKÖPINGS OCH VULCANS TÄNDSTICKSFABRIKSAKTIEBOLAG, Jönköping, Sweden. Filed Feb. 23, 1912.



Particular description of goods.—Matches.

Claims use since June, 1898.

Ser. No. 61,702. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ALART & MCGUIRE COMPANY, New York, N. Y. Filed Feb. 24, 1912.

EDELWEISS

Particular description of goods.—Pickles.

Claims use since Jan. 19, 1911.

Ser. No. 61,719. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GRAND RIVER CANNING COMPANY, Markesan, Wis. Filed Feb. 26, 1912.

TRIO

Particular description of goods.—Canned Vegetables.
Claims use since July 15, 1910.

Ser. No. 61,809. (CLASS 10. FERTILIZERS.) AMERICAN AGRICULTURAL CHEMICAL COMPANY, New York, N. Y. Filed Feb. 29, 1912.

BUCKEYE

Particular description of goods.—Fertilizers.
Claims use since 1876.

Ser. No. 61,818. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE SMITH MILLING AND GRAIN COMPANY, Warsaw, Ind. Filed Feb. 29, 1912.

EQUALITY

Particular description of goods.—Wheat-Flour.
Claims use since Jan. 15, 1912.

Ser. No. 61,823. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GRANGER & HOUGHTON, Binghamton, N. Y. Filed Feb. 29, 1912.

G. & H.

Particular description of goods.—Ice-Cream Cones.
Claims use since Jan. 1, 1910.

Ser. No. 61,827. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MAYFLOWER MILLS, Fort Wayne, Ind. Filed Feb. 29, 1912.

NEWVENO

Particular description of goods.—Wheat-Flour.
Claims use since Jan. 25, 1912.

Ser. No. 61,836. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MANATEE CITRUS GROWERS ASSOCIATION, Manatee, Fla. Filed Feb. 29, 1912.



The picture shown being fanciful.
Particular description of goods.—Oranges, Grape-Fruit, Tangerines, Lemons, and Limes.
Claims use since Nov. 4, 1911.

Ser. No. 61,876. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) THOMAS A. EDISON, INCORPORATED, West Orange, N. J. Filed Mar. 2, 1912.

Opera

Particular description of goods.—Phonographs.
Claims use since Nov. 24, 1911.

Ser. No. 61,987. (CLASS 37. PAPER AND STATIONERY.) THE REYNOLDS & REYNOLDS COMPANY, Dayton, Ohio. Filed Mar. 7, 1912.



Particular description of goods.—Paper Tablets and Note-Books.
Claims use since July 29, 1911.

Ser. No. 61,991. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) HARRY T. NEWMAN, Chicago, Ill. Filed Mar. 7, 1912.

SHO-FER

Particular description of goods.—Metal-Polish.
Claims use since Feb. 1, 1911.

Ser. No. 62,023. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE J. B. WILLIAMS COMPANY, Glastonbury, Conn. Filed Mar. 8, 1912. Under ten-year proviso.

BARBERS BAR

Particular description of goods.—Shaving and Toilet Soaps.
Claims use since about the early part of the year 1854.

TRADE-MARKS

REGISTERED APRIL 16, 1912.

86,116. FERTILIZERS. AMERICAN AGRICULTURAL CHEMICAL CO., New York, N. Y.
Filed November 18, 1911. Serial No. 59,779. PUBLISHED FEBRUARY 6, 1912.

86,117. FERTILIZERS. AMERICAN AGRICULTURAL CHEMICAL CO., New York, N. Y.
Filed November 18, 1911. Serial No. 59,780. PUBLISHED FEBRUARY 6, 1912.

86,118. BUNTING. ANNIN & Co., New York, N. Y.
Filed December 20, 1911. Serial No. 60,367. PUBLISHED FEBRUARY 13, 1912.

86,119. ELECTRIC SOCKETS AND ELECTRIC RECEPTACLES. THE ARROW ELECTRIC COMPANY, Hartford, Conn.
Filed November 2, 1910. Serial No. 52,574. PUBLISHED FEBRUARY 13, 1912.

86,120. SAWS, CORN-KNIVES, CANE-KNIVES, HAY-KNIVES, AND MACHETES. E. C. ATKINS & COMPANY, Indianapolis, Ind.
Filed March 9, 1911. Serial No. 54,964. PUBLISHED FEBRUARY 13, 1912.

86,121. LINIMENT. WILLIAM F. BAILEY, Macon, Ga.
Filed December 18, 1911. Serial No. 60,298. PUBLISHED FEBRUARY 6, 1912.

86,122. NOTTINGHAM COTTON-LACE CURTAINS MANUFACTURED BY MACHINERY. T. I. BIRKIN & Co., Nottingham, England.
Filed July 15, 1909. Serial No. 43,538. PUBLISHED FEBRUARY 13, 1912.

86,123. SOAP. GEO. BORGFELDT & Co., New York, N. Y.
Filed September 13, 1910. Serial No. 51,799. PUBLISHED FEBRUARY 13, 1912.

86,124. RUBBER HOSE, RUBBER PACKING, RUBBER BELTS, AND NON-METALLIC TIRES. BOWERS RUBBER WORKS, San Francisco, Cal.
Filed October 26, 1911. Serial No. 59,364. PUBLISHED FEBRUARY 13, 1912.

86,125. REMEDY FOR CERTAIN DISEASES. JOHN BOYD, Houston, Tex.
Filed July 7, 1911. Serial No. 57,562. PUBLISHED FEBRUARY 6, 1912.

86,126. CERTAIN PHARMACEUTICAL PREPARATION. CHAS. R. BOYD, Sacramento, Cal.
Filed November 7, 1911. Serial No. 59,587. PUBLISHED FEBRUARY 6, 1912.

86,127. METAL-POLISH. EDWARD BROWN, Omaha, Nebr.
Filed August 21, 1911. Serial No. 58,299. PUBLISHED FEBRUARY 13, 1912.

86,128. OILED DUCK. CHANDLER OIL CLOTH & BUCKRAM CO., Taunton and East Taunton, Mass.
Filed September 8, 1911. Serial No. 58,600. PUBLISHED FEBRUARY 13, 1912.

86,129. IMITATION MAPLE FLAVOR. CLOSSET & DEVERS, Portland, Oreg.
Filed November 20, 1911. Serial No. 59,820. PUBLISHED FEBRUARY 13, 1912.

86,130. FLOOR-COVERINGS. THE CORTICINE FLOOR COVERING COMPANY LIMITED, London, England.
Filed November 18, 1911. Serial No. 59,796. PUBLISHED FEBRUARY 13, 1912.

86,131. ALL STYLES OF LEATHER SHOES AND BOOTS. GEORGE R. DAVIS, Seattle, Wash.
Filed July 13, 1911. Serial No. 57,617. PUBLISHED FEBRUARY 13, 1912.

86,132. CIGARS. BERNARDO MORERA Y DREER, Habana, Cuba.
Filed July 22, 1910. Serial No. 50,907. PUBLISHED SEPTEMBER 6, 1910.

86,133. CREAM-CHEESE. MORRIS EISENBERG, New York, N. Y.
Filed September 8, 1910. Serial No. 51,717. PUBLISHED FEBRUARY 13, 1912.

86,134. SPRING-MATTRESSES, COUCH-BEDS, DIVANS, AND DAVENPORTS HAVING SPRING-MATTRESSES. ENGLANDER SPRING BED COMPANY, New York and Brooklyn, N. Y.
Filed September 7, 1911. Serial No. 58,567. PUBLISHED FEBRUARY 6, 1912.

86,135. CERTAIN KINDS OF PIECE GOODS. GEORGE J. GEER, New York, N. Y.
Filed January 5, 1912. Serial No. 60,648. PUBLISHED FEBRUARY 13, 1912.

86,136. CERTAIN KINDS OF PIECE GOODS. GEORGE J. GEER, New York, N. Y.
Filed January 5, 1912. Serial No. 60,651. PUBLISHED FEBRUARY 13, 1912.

86,137. ELASTIC VEHICLE-TIRES. THE GOODYEAR TIRE AND RUBBER COMPANY, Akron, Ohio.
Filed May 9, 1911. Serial No. 56,269. PUBLISHED FEBRUARY 13, 1912.

86,138. UNION SUITS OF TEXTILE MATERIAL. MARK M. HENDERSON, New York, N. Y.
Filed November 23, 1911. Serial No. 59,876. PUBLISHED FEBRUARY 13, 1912.

86,139. HOSIERY. LENA KAUFMAN, Philadelphia, Bridgeport, and Norristown, Pa.
Filed December 11, 1911. Serial No. 60,159. PUBLISHED FEBRUARY 13, 1912.

86,140. PREPARED STOCK FEED. KENTON-KRUEGER CO., Atlanta, Ga.
Filed November 23, 1911. Serial No. 59,867. PUBLISHED FEBRUARY 13, 1912.

86,141. ARTIFICIAL BUILDING-STONES. KINGSTONE ORNAMENTAL & CONSTRUCTION COMPANY, Los Angeles, Cal.
Filed July 27, 1909. Serial No. 43,828. PUBLISHED FEBRUARY 6, 1912.

86,142. HEADACHE REMEDY. KIRSHNER & BERMAN, Baltimore, Md.
Filed November 22, 1911. Serial No. 59,844. PUBLISHED FEBRUARY 6, 1912.

86,143. CIGARS. B. LEGARDA, Manila, Philippine Islands.
Filed August 3, 1911. Serial No. 58,001. PUBLISHED FEBRUARY 13, 1912.

86,144. CIGARS. B. LEGARDA, Manila, Philippine Islands.
Filed August 3, 1911. Serial No. 58,003. PUBLISHED FEBRUARY 13, 1912.

86,145. RAW OYSTERS. WILLIAM H. MCGEE, Baltimore, Md.
Filed November 23, 1911. Serial No. 59,872. PUBLISHED JANUARY 23, 1912.

86,146. GINGER-ALE AND MINERAL WATER. MILWAUKEE-WAUKESHA BREWING COMPANY, Milwaukee, Wis.
Filed December 29, 1911. Serial No. 60,511. PUBLISHED FEBRUARY 13, 1912.

86,147. WASHABLE FLAT PAINT TO BE MIXED WITH COLD WATER. THE MURALO COMPANY, New Brighton, N. Y.
Filed September 28, 1911. Serial No. 58,897. PUBLISHED FEBRUARY 13, 1912.

86,148. LYE. E. MYERS LYE CO., St. Louis, Mo.
Filed November 4, 1911. Serial No. 59,556. PUBLISHED FEBRUARY 6, 1912.

86,149. BEER. VICTOR NEUSTADTL, INC., New York, N. Y.
Filed June 29, 1911. Serial No. 57,384. PUBLISHED FEBRUARY 13, 1912.

86,150. NEGLIGÉE, DRESS, AND PLAITED SHIRTS. NEW COLUMBIA SHIRT COMPANY, New York, N. Y.
Filed April 15, 1911. Serial No. 55,778. PUBLISHED FEBRUARY 13, 1912.

86,151. SILK GOODS IN THE PIECE. THE NEW YORK SKIRT CO., New York and Cortland, N. Y.
Filed December 2, 1911. Serial No. 60,045. PUBLISHED FEBRUARY 13, 1912.

86,152. HARNESS, HORSE-SADDLES, AND HORSE-COLLARS. ORMAN PARTEE SADDLERY CO., Nashville, Tenn.
Filed October 7, 1911. Serial No. 59,035. PUBLISHED FEBRUARY 6, 1912.

86,153. CASINGS FOR LAMPS. PACKARD MOTOR CAR COMPANY, Detroit, Mich.
Filed October 22, 1909. Serial No. 45,464. PUBLISHED FEBRUARY 13, 1912.

86,154. PACKING COMPOSED OF RUBBER OR RUBBER COMBINED WITH FABRIC. PEERLESS RUBBER MANUFACTURING COMPANY, New Durham, N. J., and New York, N. Y.
Filed February 18, 1909. Serial No. 40,656. PUBLISHED FEBRUARY 13, 1912.

86,155. BATHING-SUITS. JACOB PFRENGER, New York, N. Y.
Filed December 28, 1911. Serial No. 60,486. PUBLISHED FEBRUARY 13, 1912.

86,156. BATHING-SUITS. JACOB PFRENGER, New York, N. Y.
Filed December 28, 1911. Serial No. 60,487. PUBLISHED FEBRUARY 13, 1912.

86,157. BATHING-SUITS. JACOB PFRENGER, New York, N. Y.
Filed December 28, 1911. Serial No. 60,489. PUBLISHED FEBRUARY 13, 1912.

86,158. MOVING-PICTURE MACHINES. PICTUREGRAPH COMPANY, New York, N. Y.
Filed September 13, 1911. Serial No. 58,653. PUBLISHED FEBRUARY 13, 1912.

86,159. BICYCLES. THE POPE MANUFACTURING COMPANY, Hartford, Conn.
Filed December 23, 1911. Serial No. 60,426. PUBLISHED FEBRUARY 6, 1912.

86,160. INFANTS', CHILDREN'S, MISSES', AND LADIES' DRESSES. A. ROSENBERG & SONS, Chicago, Ill.
Filed October 21, 1911. Serial No. 59,267. PUBLISHED FEBRUARY 13, 1912.

86,161. TEA AND COFFEE. ROYAL TEA COMPANY, San Antonio, Tex., assignor to Royal Tea & Coffee Company, San Antonio, Tex., a Firm.
Filed August 8, 1911. Serial No. 58,085. PUBLISHED FEBRUARY 13, 1912.

86,162. RODENT-TRAPS. C. S. SCHMIDT, DRAHTGEWEBE UND GEFLECHTEWERKE, Niederlahnstein, Germany.
Filed November 3, 1911. Serial No. 59,523. PUBLISHED FEBRUARY 13, 1912.

86,163. RODENT-TRAPS. C. S. SCHMIDT, Niederlahnstein, Germany.
Filed November 3, 1911. Serial No. 59,524. PUBLISHED FEBRUARY 13, 1912.

86,164. CERTAIN MUSICAL INSTRUMENTS. THE A. SCHOENHUT COMPANY, Philadelphia, Pa.
Filed February 4, 1907. Serial No. 25,118. PUBLISHED FEBRUARY 13, 1912.

86,165. TOILET-PAPER. SCOTT PAPER COMPANY, Philadelphia, Pa.
Filed December 27, 1911. Serial No. 60,472. PUBLISHED FEBRUARY 13, 1912.

86,166. OYSTER-SHIPPING CASES. THE SEALSHIPT OYSTER SYSTEM, INC., South Norwalk, Conn., assignor to Sealshipt Oyster System, Boston, Mass., a Corporation of New York.
Filed December 28, 1909. Serial No. 46,761. PUBLISHED FEBRUARY 6, 1912.

86,167. OYSTER-SHIPPING PACKAGES. THE SEALSHIPT OYSTER SYSTEM, INC., South Norwalk, Conn., assignor to Sealshipt Oyster System, Boston, Mass., a Corporation of New York.
Filed December 28, 1909. Serial No. 46,762. PUBLISHED FEBRUARY 6, 1912.

86,168. UNDERSHIRTS AND DRAWERS MADE OF TEXTILE MATERIAL. TANCHUM SILBERMAN, Baltimore, Md.
Filed December 27, 1911. Serial No. 60,473. PUBLISHED FEBRUARY 13, 1912.

86,169. COTTON AND MERCERIZED THREAD. ISAAC J. SILVERSTEIN, New York, N. Y.
Filed June 1, 1911. Serial No. 56,726. PUBLISHED FEBRUARY 13, 1912.

86,170. CANVAS. M. SIMIANSKY & Co., New York, N. Y.
Filed December 19, 1911. Serial No. 60,357. PUBLISHED FEBRUARY 13, 1912.

86,171. WRITING-INKS. S. S. STAFFORD INC., New York, N. Y.
Filed December 5, 1911. Serial No. 60,083. PUBLISHED FEBRUARY 13, 1912.

86,172. METALLIC BOTTLE-SEALS. STAR SEAL COMPANY, New York, N. Y.
Filed October 13, 1910. Serial No. 52,248. PUBLISHED FEBRUARY 13, 1912.

86,173. STEEL TAPES AND PARTS THEREOF. THE STANDARD RULE CO., Flint, Mich.
Filed December 2, 1911. Serial No. 60,044. PUBLISHED FEBRUARY 13, 1912.

86,174. INSULATION FOR ELECTRICAL CONDUCTORS. STANDARD UNDERGROUND CABLE COMPANY, Pittsburgh, Pa.
Filed December 19, 1911. Serial No. 60,358. PUBLISHED FEBRUARY 13, 1912.

86,175. GLOVES. STEINBERGER & KALISHER, New York, N. Y.
Filed November 21, 1911. Serial No. 59,840. PUBLISHED FEBRUARY 13, 1912.

86,176. DERMATINE TOILET PREPARATION. TOILET POWDER, AND TOILET CREAM. HELENE SWIFT, New York, N. Y.
Filed November 10, 1910. Serial No. 52,710. PUBLISHED FEBRUARY 6, 1912.

86,177. PORK ROLL. THE TAYLOR PROVISION COMPANY, Trenton, N. J.
Filed March 25, 1910. Serial No. 48,660. PUBLISHED FEBRUARY 13, 1912.

86,178. COMPOUND OF MAPLE-SUGAR AND CANE-SYRUP. CLAUDIUS M. TICE, Boston, Mass.
Filed November 29, 1911. Serial No. 59,997. PUBLISHED FEBRUARY 6, 1912.

86,179. COTTON AND LINEN PIECE GOODS. TRIPPE, BARKER & Co., New York, N. Y.
Filed January 5, 1912. Serial No. 60,640. PUBLISHED FEBRUARY 13, 1912.

86,180. COMPUTING-MACHINES. CHARLES TWINING, New York, N. Y.
Filed October 20, 1911. Serial No. 59,243. PUBLISHED FEBRUARY 6, 1912.

86,181. LUBRICATING-OILS. UTAH OIL REFINING COMPANY, Salt Lake City, Utah.
Filed December 26, 1911. Serial No. 60,453. PUBLISHED FEBRUARY 13, 1912.

86,182. KEROSENE. UTAH OIL REFINING COMPANY, Salt Lake City, Utah.
Filed December 26, 1911. Serial No. 60,454. PUBLISHED FEBRUARY 13, 1912.

86,183. LUBRICATING-OILS. UTAH OIL REFINING COMPANY, Salt Lake City, Utah.
Filed December 26, 1911. Serial No. 60,456. PUBLISHED FEBRUARY 13, 1912.

86,184. CUP-GREASES. UTAH OIL REFINING COMPANY, Salt Lake City, Utah.
Filed December 26, 1911. Serial No. 60,458. PUBLISHED FEBRUARY 13, 1912.

86,185. LUBRICATING-OILS. UTAH OIL REFINING COMPANY, Salt Lake City, Utah.
Filed January 2, 1912. Serial No. 60,570. PUBLISHED FEBRUARY 13, 1912.

86,186. SOAP. A. A. VANTINE & Co., New York, N. Y.
Filed May 9, 1911. Serial No. 56,267. PUBLISHED FEBRUARY 13, 1912.

86,187. CHEWING AND SMOKING TOBACCO. VOGT-APPLEGATE Co., Louisville, Ky.; Kansas City, Mo., and New Orleans, La.
Filed October 25, 1911. Serial No. 59,335. PUBLISHED FEBRUARY 13, 1912.

86,188. WATCHES AND PARTS OF WATCHES. WALTHAM WATCH COMPANY, Waltham and Boston, Mass.
Filed October 18, 1911. Serial No. 59,210. PUBLISHED FEBRUARY 13, 1912.

86,189. REMEDY FOR COUGHS, COLDS, NERVOUSNESS, AND FOR CONSUMPTIVES. WILLIAM P. WARD, Brooklyn, N. Y.
Filed May 27, 1911. Serial No. 56,670. PUBLISHED FEBRUARY 6, 1912.

86,190. MONTHLY MAGAZINE. WARD BROS. COMPANY, Philadelphia, Pa.
Filed December 13, 1911. Serial No. 60,205. PUBLISHED FEBRUARY 6, 1912.

86,191. ROOFING, SHEATHING, BUILDING, WATER-PROOFING, AND INSULATING FELTS AND PAPERS. WARREN CHEMICAL & MANUFACTURING COMPANY, New York, N. Y.
Filed July 8, 1911. Serial No. 57,536. PUBLISHED FEBRUARY 6, 1912.

86,192. ROOFING, SHEATHING, BUILDING, WATER-PROOFING, AND INSULATING FELTS AND PAPERS. WARREN CHEMICAL & MANUFACTURING COMPANY, New York, N. Y.
Filed July 8, 1911. Serial No. 57,537. PUBLISHED FEBRUARY 6, 1912.

86,193. BRICKS. WESTERN BRICK COMPANY, Danville, Ill.
Filed December 14, 1911. Serial No. 60,232. PUBLISHED FEBRUARY 6, 1912.

86,194. CERTAIN ELECTRICAL APPARATUS. WESTERN ELECTRIC COMPANY, Chicago, Ill., and New York, N. Y.
Filed January 21, 1911. Serial No. 54,003. PUBLISHED FEBRUARY 13, 1912.

86,195. LEATHER FOR THE UPPERS OF BOOTS AND SHOES. EDWARD L. WHITE, Boston, Mass.
Filed June 30, 1911. Serial No. 57,398. PUBLISHED FEBRUARY 13, 1912.

86,196. ELASTIC TIRES PARTLY OF METAL AND PARTLY OF RUBBER. CHARLES F. WREN, Cleveland, Ohio.
Filed December 14, 1911. Serial No. 60,233. PUBLISHED FEBRUARY 13, 1912.

86,197. EMBROIDERIES. ZENITH EMBROIDERY Co., New York, N. Y.
Filed September 14, 1911. Serial No. 58,802. PUBLISHED FEBRUARY 13, 1912.

TRADE-MARKS CANCELED.

70,565. SHEETS, BARS, TUBES, AND FORGINGS OF IRON. THE AMERICAN ROLLING MILL COMPANY, Middletown, Ohio.
Registered September 15, 1908. Canceled March 11, 1912.

71,888. MAPLE PRALINES. GEO. K. BROWN, Chattanooga, Tenn.
Registered December 22, 1908. Canceled March 11, 1912.

84,904. AN EXTERNAL REMEDY FOR PAINS AND ACHES. ERNEST W. GAUBE, Cleveland, Ohio.
Registered January 9, 1912. Canceled March 15, 1912.

LABELS

REGISTERED APRIL 16, 1912.

16,283.—*Title:* "BLACK SHIELD." (For Cigars.) A. C. HIRSCHEL & Co., Chicago, Ill. Filed March 15, 1912.

16,284.—*Title:* "KIRST'S J & L SPECIAL." (For Cigars.) C. AND L. KIRST, Buffalo, N. Y. Filed March 5, 1912.

16,285.—*Title:* "EL FAVO." (For Cigars.) C. B. HIRSCHEL MFG. CO., Milwaukee, Wis. Filed March 25, 1912.

16,286.—*Title:* "TUBULAR RIVETS." (For Tubular Rivets.) EDWIN B. STIMPSON COMPANY, New York, N. Y. Filed March 15, 1912.

16,287.—*Title:* "CERTAIN-TEED ROOFING." (For Roofing Materials.) GENERAL ROOFING MANUFACTURING COMPANY, East St. Louis, Ill. Filed February 12, 1912.

16,288.—*Title:* "GOTTMANN & KRETCHMER CHICAGO, U. S. A." (For Chocolate.) GOTTMANN & KRETCHMER, Chicago, Ill. Filed April 5, 1910.

16,289.—*Title:* "SILVER SEAL." (For Oranges.) ALEX. STRACHAN, Los Angeles, Cal. Filed March 28, 1912.

16,290.—*Title:* "GOLD SEAL." (For Oranges.) ALEX. STRACHAN, Los Angeles, Cal. Filed March 28, 1912.

16,291.—*Title:* "LOWNEY'S CHOCOLATES AND BONBONS." (For Chocolates and Bonbons.) THE WALTER M. LOWNEY COMPANY, Boston, Mass. Filed March 15, 1912.

16,292.—*Title:* "LOWNEY'S CHOCOLATES AND BONBONS." (For Chocolates and Bonbons.) THE WALTER M. LOWNEY COMPANY, Boston, Mass. Filed March 15, 1912.

16,293.—*Title:* "LOWNEY'S CHOCOLATES AND BONBONS." (For Chocolates and Bonbons.) THE WALTER M. LOWNEY COMPANY, Boston, Mass. Filed March 15, 1912.

16,294.—*Title:* "KING RAGS." (For Cigars.) ROBT. WHITELEY, Jr., Carlinville, Ill. Filed March 12, 1912.

PRINTS

REGISTERED APRIL 16, 1912.

2,988.—*Title:* "THE COLLIE KING AXE." (For the Collie King Ax.) THE AMERICAN AXE & TOOL CO., Glassport, Pa. Filed March 23, 1912.

2,989.—*Title:* "DRINK COCA-COLA." (For Coca-Cola.) THE COCA-COLA BOTTLING CO., Atlanta, Ga. Filed March 22, 1912.

2,990.—*Title:* "CREAM OF WHEAT FOR 'SAIL.'" (For Wheat Breakfast Food.) CREAM OF WHEAT CO., Minneapolis, Minn. Filed March 28, 1912.

2,991.—*Title:* "FOR MEN AND YOUNG MEN CURLEE CLOTHES ARE ALWAYS RIGHT." (For Clothes.) CURLEE CLOTHING CO., St. Louis, Mo. Filed March 28, 1912.

2,992.—*Title:* "KOLYNOS HOW CLEAN MY MOUTH FEELS." (For Dental Cream.) THE KOLYNOS CO., New Haven, Conn. Filed March 28, 1912.

2,993.—*Title:* "THE 'STAR BRAND' GIRL." (For Shoes.) ROBERTS, JOHNSON & RAND SHOE CO., St. Louis, Mo. Filed March 28, 1912.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

CRAMER AND HODGE *v.* CARRIER.

Decided January 13, 1912.

1. INTERFERENCE — PRELIMINARY STATEMENT — AMENDMENT—MATTERS OF RECORD.

It is well settled that where an amendment sought to be made to a preliminary statement merely sets up matters of record or the dates of applications on file in the Patent Office the rule respecting the showing required is applied less strictly.

2. SAME—SAME—SAME—DISCRETION OF THE EXAMINER OF INTERFERENCES.

The question of amending a preliminary statement is largely within the discretion of the Examiner of Interferences, and his decision on this question will not be disturbed unless it is shown that such discretion has been abused.

APPEALS on motions.

HUMIDITY AND TEMPERATURE REGULATOR.

Mr. D. C. Reinoehl and *Mr. H. G. Kimball* for Cramer and Hodge.

Messrs. Wilhelm, Parker & Hard for Carrier.

MOORE, *Commissioner:*

This case is before me upon appeals by both the parties to the above-entitled interference.

Cramer and Hodge appeal from the portion of the decision of the Examiner of Interferences denying their supplemental motion to amend their preliminary statement in respect to the dates of disclosure and the making of drawings of the invention of count 1.

The party Carrier appeals from the portion of the decision of the Examiner of Interferences granting the motion of Cramer and Hodge to amend their preliminary statement as to the date of constructive reduction to practice of count 1 of the issue.

The original preliminary statement of Cramer and Hodge alleged conception of the invention in March, 1906, disclosure in June, 1906, and in February, 1909, and reduction to practice in August, 1909. Their first motion, filed April 25, 1910, requested permission to amend their preliminary statement to allege a constructive reduction to practice on December 26, 1907, by reason of their filing on that date application Serial No. 408,049, which is referred to in the specification of their application involved in interference. They filed a supplemental motion on May 6, 1910, to further amend their preliminary statement by alleging the commencing of sketches and working drawings on May 27, 1907, and their completion prior to June 14, 1907, also disclosure to others on May 27, 1907.

In support of each motion is an affidavit of Kimball, the associate attorney. Said affidavits state that while affiant was abroad a letter was received asking him to take charge of the above-entitled interference; that he did not return until April 5, 1910, when he took up the matter at once, prosecuted it diligently, and on April 27, 1910, filed motions to dissolve the interference, to shift the burden of proof, and to amend the preliminary statement; that the first motion to amend was hastily prepared from the facts definitely in hand and that the delay in filing the second motion to amend was due to the necessity of his clients examining their records to ascertain the dates there alleged.

The record shows that action on the motions to amend was deferred by the Examiner of Interferences and the motion to dissolve was transmitted to the Primary Examiner. The interference was re-formed by the Primary Examiner as to counts 2 to 8, inclusive, and consequently the motions to amend apply only to present count 1. In the new preliminary statement called for respecting counts 2 to 8 Cramer and Hodge allege the dates that they now seek to insert by amendment in their original preliminary statement.

The Examiner of Interferences granted the motion to amend the preliminary statement by inserting that the invention was constructively reduced to practice on December 26, 1907, by reason of the filing of Cramer and Hodge's prior application, Serial No. 408,049, on condition that it can be shown that said application contains the invention in issue. He further held that the showing was insufficient to warrant the granting of the motions to amend the preliminary statements in the other particulars noted above.

Respecting the appeal of Carrier attention is called to the fact that it is well settled that the question of amending the preliminary statement is a matter largely within the discretion of the Examiner of Interferences and that his decision will not be disturbed unless it is shown that such discretion

has been abused. (*Karpenstein* v. *Hertzberg*, 127 O. G., 2393.)

It is well recognized that where the amendment sought to be made to the preliminary statement merely sets up matters of record or the dates of applications on file in the Patent Office the rule respecting the showing required is applied less strictly. In the case of *Emmet* v. *Fullagar*, (114 O. G., 1551,) where it was desired to amend the preliminary statement to obtain the benefit of the date of filing of an application on which a patent had issued, the Commissioner said:

This patent constitutes a printed publication of the invention covered thereby, and, as held in *Davis* v. *Ocumpaugh* v. *Garrett*, (C. D., 1903, 198; 104 O. G., 2440,) where an amendment is sought to be made to a preliminary statement by the insertion therein of a reference to a printed publication the showing usually required regarding the amendment of preliminary statements should not be applied with too great strictness.

It is to be noted that if the statement is not amended as requested with regard to this patent Fullagar will be unable to utilize whatever he might be able to show as to the disclosure of his own invention in this patent. Whether he is able to establish such a disclosure should not be decided on a motion to amend a preliminary statement, as this question cannot be properly determined in the absence of testimony regarding that disclosure. In the case of *Davis* v. *Ocumpaugh* v. *Garrett*, *supra*, it was said:

"The purpose of requiring preliminary statements made in ignorance of the dates of the opposing parties is to avoid the temptation to witnesses to make a case which will overcome that of the opposing parties. The temptation to fraud may be great where the difference in dates is slight and where the case depends upon the recollection of witnesses. In the case of record evidence, however, like the publication in this case, the reason for a statement made in secrecy has less force. The publication is something which is fixed and certain both as to date and subject matter and is not dependent upon the recollection of fallible witnesses. Under such circumstances the rule requiring that the utmost diligence be shown to have been exercised in preparing the original statement may be applied with less strictness."

Applying to this case the principles therein announced, the motion to amend with respect to the filing of the application on March 5, 1900, which resulted in the grant of Patent No. 655,414, should have been granted.

No error is found in the decision of the Examiner of Interferences permitting the amendment from which Carrier has appealed.

In considering the appeal of Cramer and Hodge it is noted that by the amendment to their statement they do not seek to advance the date of conception nor of their first disclosure, but merely the date of the making of drawings with respect to the invention of count 1 to correspond with the allegations in their subsequent preliminary statement as to the invention of counts 2 to 8, based upon their prior application, Serial No. 408,049. To restrict Cramer and Hodge to the allegations of their original statement concerning this count might result in an award of priority in favor of one party as to the invention of count 1 and to the other party as to the invention of the remaining counts and result in much confusion in case these inventions do not patentably differ. Drawings of the invention of application Serial No. 408,049 obviously must have been made at a date prior to the filing of said application, and under the circumstances of this case it is considered proper to admit the amendment to the statement as a whole, subject to the same conditions as that upon which the Examiner of Interferences granted the amendment respecting the constructive reduction to practice—namely, that said prior application be shown to contain the invention in issue.

Except as indicated above the decision of the Examiner of Interferences is affirmed.

WALTER BAKER & COMPANY, LTD., *v.* WORTH.

Decided January 6, 1912.

TRADE-MARKS—CANCELATION—REGISTRATIONS UNDER THE ACT OF 1870.

A petition for the cancelation of a trade-mark registration effected under the law of 1870 *Held* properly dismissed, since such registration was granted for a period of thirty years, and therefore if valid would have expired before the petition for cancelation was filed.

APPEAL from Examiner of Interferences.

TRADE-MARK FOR TEA AND COFFEE.

Messrs. Putnam, Putnam & Bell for Walter Baker & Company, Ltd.

Messrs. Munn & Co. for Worth.

MOORE, *Commissioner:*

This is an appeal by Walter Baker & Company, Ltd., from the decision of the Examiner of Interferences dismissing its application for cancelation of trade-mark registration No. 842, granted May 28, 1872, to J. G. Worth.

The Examiner of Interferences dismissed the application of appellant without forwarding a copy thereof to the registrant and without further proceedings in the case for three reasons, stated in his decision as follows:

1. The act of 1870 under which the registration referred to was granted was declared unconstitutional by the Supreme Court of the United States in the *Trade-Mark Cases*, (100 U. S., 82.) There was therefore no valid registration under that act and nothing of any effect ever existed or remains to be canceled.

2. Even had the registration been a valid one under a valid act it would have expired May 3, 1902, since the Act of 1870 provided that registrations should be effective for thirty years unless renewed. There was no renewal of the registration here involved. Having expired, nothing remains of the registration to be canceled.

3. In the case of *Funke* v. *Baldwin* the Commissioner held: "that section 13 of the act of 1905, providing for the cancelation of trade-mark registrations, applies only to those registrations made under that act."

As stated by the Examiner of Interferences, the Trade-Mark Act of July 8, 1870, was held unconstitutional because not limited to the registration of trade-marks used—

in commerce with foreign nations, and among the several States or with the Indian tribes,

by the United States Supreme Court in the *Trade-Mark Cases*, (100 U. S., 82.)

Registrations under the act of 1870 are not considered by the Patent Office a bar to the registration of a trade-mark under the present Trade-Mark Act. (*Ex parte Havana-American Company*, 132 O. G., 1839.)

Section 78 of the act of 1870 provided that registrations thereunder should remain in force for thirty years, with a right of renewal on application made six months prior to the expiration of the registration. Inasmuch as the registration of Worth was granted in 1872 for a term of thirty years and was not renewed, the registration, had it been a valid one, would have expired in 1902. Since the certificate of registration of a trade-mark, like a patent grant for an invention, is issued for a definite term, it necessarily follows that after the expiration of that term there is no valid existing registration on which a judgment for cancelation can operate.

Since the Worth registration is not a valid existing registration, the Examiner of Interferences rightfully dismissed the application for cancelation.

The decision in the case of *Funke* v. *Baldwin*, (127 O. G., 392,) cited by the Examiner as his third reason for dismissing the application, discussed and passed upon registrations only under the Trade-Mark Acts of 1881 and 1882 and under the act of 1905. It reached the conclusion that section 30 of the latter act exempts registrations under the acts of 1881 and 1882 from the operation of the cancelation section of the act of 1905. It apparently recognized the fact that no valid registration existed under the act of 1870.

Moreover, in the case of *De Ferranti* v. *Lindmark* (134 O. G., 515; 30 App. D. C., 417) the Court of Appeals of the District of Columbia said:

It is a general rule of statutory construction that, in the absence of language in a statute clearly expressing an intention to the contrary, statutes will be construed prospectively.

In view of the conclusion reached above, that there are no valid existing registrations under the act of 1870, it is unnecessary to consider whether the cancelation section of the present act could be construed retroactively to cover them.

The decision of the Examiner of Interferences is affirmed.

LE BROU *v.* NIX.

Decided August 2, 1911.

1. APPLICATION—RENEWAL—ATTORNEY OF RECORD HAS AUTHORITY TO FILE.

Held that the attorney of record in an application which was allowed and became forfeited has authority to sign and file a petition for the renewal of the same.

2. INTERFERENCE—PRIORITY.

Priority *Held* properly awarded to N., the senior party, since the junior party did not allege a date of invention prior to the original filing of N.'s application which became forfeited and was renewed.

ON PRIORITY.

PROCESS OF ARTIFICIAL INCUBATION.

Mr. J. Walter Douglass for Le Brou.

Mr. James L. Hopkins for Nix.

BILLINGS, *First Assistant Commissioner:*

This is an appeal by Le Brou from the decision of the Examiners-in-Chief affirming the decision of the Examiner of Interferences awarding priority of invention to Nix.

Judgment was rendered against Le Brou by the Examiner of Interferences because the date of conception alleged in his preliminary statement was subsequent to the filing date of Nix, and no cause was shown why such judgment should not have been entered. Le Brou had previously brought a motion to dissolve the interference on the ground that Nix has no right to make the claims; but this was denied by the Primary Examiner.

Le Brou is now urging the same contention at final hearing under Rule 130. The ground upon which he contends Nix has no right to make the claims is that his application, which is a renewal application, is legally insufficient by reason of the fact that the petition for renewal was signed by the attorneys of record rather than by the applicant himself, that it failed to make the original petition and power of attorney a part of the renewal papers, and was accompanied by no new power of attorney.

The original power of attorney in this case gave the attorneys authority, among other things—

to transact all business in the Patent Office connected herewith.

Such language has been specifically held, in *ex parte Agee*, (101 O. G., 1609,) to give the attorney authority to sign and file the petition for renewal of such application. That decision overruled in terms the holding in the cases of *ex parte Thomas* (92 O. G., 1035) and *ex parte Barri*, (97 O. G., 1176,) which were the authority for a contrary practice then existing. The reasons for the conclusion reached are fully and ably stated in the decision in *ex parte Agee*, *supra*, and need not be here repeated. The case is squarely in point and is believed to correctly state the law on this question. Furthermore, the Office has now followed the practice there indicated for many years, and numerous renewal applications have been filed in accordance therewith and patents thereon granted. Under these circumstances it would not be held that the practice was erroneous unless it were shown to be clearly in contravention of the law. This the appellant has not done.

The objection that the petition for renewal did not mention the original petition as one of the original papers which it was desired to have used in the renewal is also wholly without force, for the renewal petition itself supplied this element of the application. It was exactly in the form suggested in Form 12 accompanying the Rules of Practice and contained all the necessary features of such a petition.

I agree also with the suggestion of the Examiners-in-Chief that if a bare request for renewal accompanied by the fee had been received the Office would properly assume that the applicant intended to avail himself of all the privileges of Rule 176, which provides that—

the oath, petition, specification, drawing and model of the original application, may be used for the second application.

In either view of the case, therefore, the application is not without a petition and is considered to be in proper form to constitute a complete and valid application. To hold that it is fatally defective because the original petition is not particularly specified as one of the original papers to be used, although Rule 176 states that it *may* be, would be to force a strictness of interpretation upon the rule to which I cannot give my assent.

It may be noted here that the form of the renewal petition in this case is identical with that filed in the case of *ex parte Agee*, *supra*, as appears from an inspection of the file of that application, although appellant seems to have attempted to differentiate between the cases in this respect.

Since the renewal of Nix is valid and sufficient for the purposes of this interference, it follows that priority was properly awarded to him on the record.

The decision of the Examiners-in-Chief is affirmed.

EX PARTE MOORE.

Decided March 21, 1910.

PATENTABILITY—PAD FOR ARTIFICIAL TEETH.

Claims for a pad to be worn between the gums and a plate for artificial teeth *Held* unpatentable over the prior art.

APPEAL from Examiners-in-Chief.

PAD FOR ARTIFICIAL TEETH.

Messrs. Minturn & Woerner and *Mr. Ernest W. Bradford* for the applicant.

TENNANT, *Assistant Commissioner:*

This is an appeal from the decision of the Examiners-in-Chief finally rejecting the claims of this application, five in number, which are as follows:

1. A soft elastic pad or cushion of cotton to be worn between the gums and plates of artificial teeth.
2. The combination with a plate for artificial teeth of a pad or cushion of cotton interposed between said plate and the gums.
3. A pad or cushion to be worn between the gums and lower plate of artificial teeth comprising a roll of cotton reduced in thickness at its middle portion to facilitate the bending of the roll into U-shape to fit the contour of the plate.
4. As a pad or cushion to be worn between the gums and the lower plate of artificial teeth, a roll of cotton reduced in thickness at its middle portion to facilitate the bending of the roll into a U-shape to fit the plate, the ends of said roll being also reduced in thickness.
5. A pad or cushion for artificial teeth comprising cotton formed into a roll and bent into a U-shape to fit the plate for the teeth, the ends of said roll being reduced in diameter.

The reference cited is a patent to Stapleton, March 28, 1893, No. 494,393.

The alleged invention, as set forth in claims 1 and 2, comprises a pad or cushion of cotton to be worn between the plates of artificial teeth and the gums of the wearer. As set forth in claims 3, 4, and 5, it comprises a roll of cotton of reduced thickness at its middle portion adapted to fit the contour of the lower plate.

The patent to Stapleton discloses a flexible pad, "preferably of silk or similar fibrous material," adapted to be placed between a plate and the gums or the roof of the mouth, it being pointed out in the specification that—

> the construction of pad itself and manner of securing it to the plate are matters which may be varied to suit individual cases without departing from the spirit of my invention, and in some instances I have found the device to work perfectly without even securing the pad to the plate.

The disclosure in this patent clearly covers the alleged invention as stated in claims 1 and 2. As stated in claims 3, 4, and 5, the appellant's invention is restricted to a roll adapted to be used in connection with the lower plate. Such a construction is not believed to involve invention, especially in view of the disclosure in the Stapleton patent and the common use of rolls of cotton in the art of dentistry, as admitted by the applicant in his argument before the Examiner.

The particular form of the roll set forth in these claims is one which is obviously necessitated by the form of channel of the lower plate. Furthermore, it is obvious that any irregular depression formed by the receding of the gums after the plate was made would necessitate a somewhat different form of cushion. To construct a roll suitable to the exigencies of a particular case would, in my opinion, involve nothing more than the ordinary skill of persons familiar with the art of dentistry or, indeed, of a layman.

Several affidavits of dentists have been filed which state that, to the best of the knowledge of the affiants, no device such as appellant's invention has been employed in the art of dentistry. Even if this be true it is not believed that the production of the applicant's structure involved the exercise of the inventive faculties.

The decision of the Examiners-in-Chief is affirmed.

DECISIONS OF THE U. S. COURTS.

Court of Appeals of the District of Columbia.

THOMAS v. WEINTRAUB.

Decided February 5, 1912.

1. INTERFERENCE — PRELIMINARY STATEMENTS — AMENDMENT.

The rule requiring preliminary statements is a salutary one, its obvious object being to elicit from each of the parties certain vital information before any party is informed as to the statements of any other. Owing to the purpose of the rule, the exercise of the Commissioner's discretion in passing upon motions to amend such statements will not be disturbed unless it is plain that there has been an abuse of that discretion.

2. SAME—PRIORITY.

Priority *Held* properly awarded to W., since the earlier applications relied upon by T. did not disclose the invention in issue.

Mr. C. A. Terry for the appellant.

Mr. A. G. Davis, Mr. A. D. Lunt, and *Mr. Charles McClair* for the appellee.

ROBB, *J.:*

This is an appeal from a decision of the Commissioner of Patents in an interference proceeding in which priority of invention was awarded Weintraub, the senior party. The decision was an affirmance of that of the Examiners-in-Chief, whose decision in turn affirmed that of the Examiner of Interferences.

The issue is expressed in four counts, of which the following are sufficiently representative for the purposes of this opinion:

> 1. The combination of a source of single-phase alternating current, an exhausted receptacle, electrodes therefor one at least of which is of vaporizable material, connections between some of said electrodes and the terminals of said source a connection between another of said electrodes and a point of intermediate potential on said source, and means independent of said source for generating ionized vapor from the substance of the last mentioned electrode.
>
> 4. The combination of an exhausted envelop provided with electrodes, a source of single-phase alternating current, means independent of said source for rendering the interior of said envelop conducting for currents of a given direction, and means for causing energy derived from both polarity waves of the alternating current to flow through said envelop.

A preliminary question must first be considered: February 14th and February 26th, 1903, were respectively alleged by Thomas in his preliminary statement as his dates of conception and reduction to practice. These dates were found to be later than those alleged by Weintraub. Thereupon Thomas, before the taking of any testimony by Weintraub, moved for leave to amend his preliminary statement and substitute January 21st, 1903, as his date of conception and reduction to practice. Thomas contended that certain other applications

filed by him on the new date given disclosed the invention, and hence that he should be permitted to amend. The Examiner of Interferences denied his motion but proceeded to examine the prior applications which inspired it, reaching the conclusion that they did not disclose the issue. The Examiners-in-Chief agreed with the Examiner of Interferences that the earlier applications did not disclose the issue. The Commissioner, after an examination of these earlier applications, ruled that inasmuch as they did not disclose the invention, it was unnecessary to consider whether the motion to amend should have been granted by the Examiner of Interferences.

The rule requiring preliminary statements is a salutary one, its obvious object being to elicit from each of the parties certain vital information before any party is informed as to the statements of any other. Owing to the purpose of the rule, the exercise of the Commissioner's discretion in passing upon motions to amend such statements will not be disturbed unless it is plain that there has been an abuse of that discretion. In the present case, had the Commissioner been convinced that the earlier applications of Thomas really disclosed the invention, there was no apparent reason why the motion should not have been allowed. The Commissioner, however, proceeded to examine the earlier applications and reached the conclusion that they did not disclose the invention. We think, therefore, that this action of the Commissioner must be taken to mean that his reason for not allowing the amendment was because of his conclusion as to the scope of the disclosure in the prior applications.

The Examiner of Interferences thus describes the invention:

> In apparatus of this character it is well understood that the initial resistance is high, while the running resistance is low; but if current, when once started, ceases to flow for any period, however short, the initial high resistance of the apparatus is restored. So long as current flows from any source, there is no high initial resistance, but only the low running resistance, to the passage of current from every other source that makes the cathode of the existing current a cathode for current from such other source. Therefore, continuity of excitation of the cathode is essential. With polyphase currents the several impulses are so disposed relatively to each other, that, when once started, continuity of operation is maintained by the overlapped impulses themselves. But with single-phase currents some supplementary means for maintaining excitation must be provided; for, otherwise, the initial high resistance of the apparatus would be restored with each fall to zero of the current waves.
>
> Two practical means for maintaining excitation for single-phase rectifiers have been produced; in one, current from an independent source is used; in the other, an inductance is inserted in the circuit of the current which passes through the rectifier, which serves to delay the current impulses and so cause them to overlap. * * * In the present case both waves are rectified, and the exciting means derives its energy from a source entirely independent of the source of current to be rectified. This source is not the same in both cases. Weintraub uses a direct current supply, while Thomas shows an independent transformer.

Unless the invention is found in the earlier applications relied upon by Thomas in his motion to amend his preliminary statement, he cannot prevail. The application principally relied upon was filed January 21, 1903, and was patented October 13, 1908, Patent No. 901,306. Counsel for Thomas in his brief admits that the issue in this interference calls for—

> means independent of the main source for exciting the cathode.

He admits that—

> this battery is not actually shown in connection with the mercury vapor device 14, (in Fig. 1 of the patent,) but may be relied upon since the specification says: "The vapor device 14 may be similarly provided with means for keeping the device alive, that is to say, maintaining a continuous flow of current in any direction therethrough."

The specification, however, as originally filed, did not contain this quotation, which was not inserted until February 10, 1904. This we regard as material in view of the admission that the drawings did not, of themselves, disclose the present invention. The device to which Thomas alluded in his amendment being a three-phase tube was self-sustaining, without the use of any side branch, and it is argued by Weintraub that it was for this reason that no side branch was shown. It must also be remembered that at the time this amendment was inserted Weintraub's application had been on file for nearly a year. The Examiner of Interferences, whose opinion on this point was adopted by the Commissioner, closed his discussion of the question as follows:

> As heretofore stated, each and all of the counts specify as an element, means independent of the main source for maintaining activity of the rectifier, and each also calls for an envelop or receptacle within which the electrodes are placed. Counts 1 and 3 in addition specify that one of the electrodes is connected to the source at a point where its potential is intermediate the extremes. While Thomas in the applications referred to does disclose current from an independent source for maintaining the rectifiers active, and in Fig. 4 of his application, original No. 139,957, an arrangement which provides the connection to a point of intermediate potential, in none of the figures of either of the two applications does he disclose an arrangement upon which the issue reads. This is admitted by Thomas, but he contends that there would be no invention in bringing the several parts together so that the issue would read thereon. However, it must be held that while he does disclose means for utilizing both waves from a single-phase source, and while certain of the systems which he discloses may be capable of performing the functions of the rectifiers found in the applications involved therein, still, in every instance a plurality of envelops or receptacles are provided for the various electrodes; therefore none of the counts read thereon. While in Fig. 4 of his application, original No. 189,875, he does show a rectifier having a plurality of anodes, this is not shown alone in an operative system, but is combined with other rectifiers which coact therewith to carry out the design of the inventor.
>
> It is not seen that the disclosures of Thomas in the applications referred to, either separately or together, present the invention here in issue. Not only is the invention itself not disclosed, but it is not believed that the equivalent is found therein, for it is not apparent that Thomas, at the time he executed these applications, appreciated the possibility of constructing therefrom the subject-matter in issue.

This question involves complicated electrical devices and the expert tribunals of the Patent Office have been unanimous in their rulings. Under the rule uniformly adhered to in this court, their decision will not be disturbed unless for obvious error. (*Lindmark* v. *Hodgkinson*, 31 App. D. C., 612; *Weintraub* v. *Hewitt and Rogers*, present term.) While our minds are not entirely free from doubt, we are not convinced that Thomas, prior to the filing of Weintraub's application, had a conception of this invention.

We therefore affirm the decision of the Commissioner.

Affirmed.

ADJUDICATED PATENTS.

(U. S. C. C.) The Knight and Darley patent, No. 554,276, for a controller for a dynamo-electric ma-

chine, claim 6 *Held* not infringed by the device of the Stull patent, No. 873,805. *General Electric Co.* v. *Allis-Chalmers Co.*, 193 Fed. Rep., 58.

(U. S. C. C.) The Rowland reissue patent, No. 12,933, (original No. 907,407,) for a subaqueous rock-breaker, *Held* not anticipated, valid, and infringed. *Submarine Rock-Breaking Co.* v. *Submarine Co.*, 193 Fed Rep., 63.

(U. S. C. C.) The Hover patent, No. 922,144, for a warping and beaming machine, claims 1, 8, and 9 *Held* void for lack of invention. Claims 2 and 3 *Held* not infringed. *Hover* v. *Atherton Mach. Co.*, 193 Fed. Rep., 73.

(U. S. C. C.) The Thomas patent, No. 766,004, for improvements in automatic weighing-machines, *Held* infringed. *Automatic Weighing Mach. Co.* v. *Pneumatic Scale Corporation*, 193 Fed. Rep., 76.

Interference Notices.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 28, 1912.

Charles Civita, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of J. H. Zellin & Company, Inc., 306 and 308 Cherry street, Philadelphia, Pa., for registration of a trade-mark and trade-mark registered January 5, 1904, No. 41,812, to Charles Civita, 63 South Washington Square, New York, N. Y., and a notice sent by registered mail to said Charles Civita at the said address having been returned by the post-office undeliverable, notice is therefore hereby given that unless the said Charles Civita, his assigns or legal representatives, shall enter an appearance herein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 27, 1912.

Joseph H. Brown, his assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of The Great Atlantic and Pacific Tea Company, 150 Bay street, Jersey City, N. J., for registration of a trade-mark and trade-mark registered September 25, 1888, No. 15,907, to Joseph H. Brown, of Fort Worth, Tex., and a notice of such declaration sent by registered mail to said Joseph H. Brown at the said address having been returned by the post-office undeliverable notice is hereby given that unless said Joseph H. Brown, his assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 27, 1912.

Henrietta Newcomb Keith, her assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of J. H. Zellin & Company, Inc., 306 and 308 Cherry street, Philadelphia, Pa., for registration of a trade-mark and trade-mark registered November 3, 1891, No. 20,291 to Henrietta Newcomb Keith, 16 Exchange Place, New York, N. Y., and a notice of such declaration sent by registered mail to said Henrietta Newcomb Keith at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Henrietta Newcomb Keith, her assigns or legal representatives, shall enter an appearance therein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 26, 1912.

Edward P. Miller, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of Smith Brothers, of 202 North Green street, Baltimore, Md., for registration of a trade-mark and trade-mark registered April 26, 1910, No. 77,663, to Edward P. Miller, of Chicago, Ill., and a notice of such declaration sent by registered mail to said Edward P. Miller at the said address having been returned by the post-office undeliverable, notice is hereby given that unless said Edward P. Miller, his assigns or legal representatives, enter an appearance therein within thirty days from the first publication of this order the interference will proceed as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 2, 1912.

Arabella G. Starke, her assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of Starke's Dixie Plow Works, Incorporated, 7 South Fifteenth street, Richmond, Va., for trade-mark registration and trade-mark registration No. 11,025, dated March 18, 1884, to Arabella G. Starke, of Richmond, Va., and the notice of such declaration sent by registered mail to the said Arabella G. Starke at the address given has been returned by the post-office as undeliverable.

Notice is therefore hereby given to the said Arabella G. Starke, her assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 9, 1912.

Arabella G. Starke, her assigns or legal representatives, take notice:

An interference has been declared by this Office between the application of Starke's Dixie Plow Works, Incorporated, 7 South Fifteenth street, Richmond, Va., for trade-mark registration and trade-mark registration No. 11,541, dated September 30, 1884, to Arabella G. Starke, of Richmond, Va., and the notice of such declaration sent by registered mail to the said Arabella G. Starke at the address given has been returned by the post-office as undeliverable.

Notice is therefore hereby given to the said Arabella G. Starke, her assigns or legal representatives, that if they or any of them desire to contest the said interference they should immediately put themselves in communication with the Commissioner of Patents.

This notice will be published in the OFFICIAL GAZETTE for six consecutive weeks. If no appearance shall have been entered at the expiration of the period of publication, the interference will proceed as in case of default.

EDWARD B. MOORE, *Commissioner.*

THE
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ISSUE OF APRIL 23, 1912.

Patents	609—No.	1,023,790 to No.	1,024,488, inclusive.
Designs	17—No.	42,411 to No.	42,427, inclusive.
Trade-Marks	63—No.	86,198 to No.	86,260, inclusive.
Labels	14—No.	16,295 to No.	16,308, inclusive.
Prints	20—No.	2,994 to No.	3,013, inclusive.
Reissues	2—No.	12,407 to No.	13,408, inclusive.
Total	815		

TO CITIZENS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	7	1	North Carolina	3	....
Arizona	2	....	North Dakota	2	....
Arkansas	4	....	Ohio	46	2
California	42	3	Oklahoma	7	....
Colorado	8	....	Oregon	4	....
Connecticut	24	2	Pennsylvania	82	6
Delaware	....	....	Rhode Island	6	....
Florida	....	....	South Carolina	1	....
Georgia	4	2	South Dakota	2	....
Idaho	....	....	Tennessee	5	....
Illinois	64	7	Texas	17	1
Indiana	12	1	Utah	9	1
Iowa	7	....	Vermont	....	....
Kansas	10	1	Virginia	....	2
Kentucky	5	1	Washington	10	1
Louisiana	4	....	West Virginia	9	....
Maine	3	....	Wisconsin	9	2
Maryland	11	....	Wyoming	....	....
Massachusetts	40	1			
Michigan	13	....	Alaska, District of	....	....
Minnesota	16	1	Canal Zone	....	....
Mississippi	2	....	District of Columbia	9	1
Missouri	21	9	Hawaii Territory	1	....
Montana	2	....	Philippine Islands	....	....
Nebraska	10	....	Porto Rico	....	....
Nevada	....	1	U. S. Army	....	....
New Hampshire	3	....	U. S. Navy	1	....
New Jersey	25	14			
New Mexico	1	....	Total to citizens of the United States	631	86
New York	98	36			

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Algeria	....	....	Netherlands	....	....
Argentina	....	....	Newfoundland	....	....
Austria-Hungary	1	....	New South Wales	1	....
Belgium	4	....	New Zealand	1	....
Brazil	....	....	Norway	....	1
British West Indies	....	....	Peru	....	....
Canada	12	1	Roumania	....	....
Cape Colony	....	....	Russia	1	....
Chile	....	....	Scotland	2	....
China	....	....	South Australia	....	....
Costa Rica	....	....	Spain	....	....
Cuba	1	....	Sweden	1	....
Denmark	1	....	Switzerland	3	2
Ecuador	....	....	Turkey	....	....
England	16	2	Transvaal, South Africa	....	....
France	8	3	Trinidad	....	....
Germany	29	2	Victoria	....	....
Ireland	....	....			
Italy	3	....	Total to citizens of foreign countries	84	11
Jamaica	....	....			
Mexico	....	....			

Disclaimer.

856,414.—*Charles A. Mudge*, New York, N. Y. DYNAMO-ELECTRIC MACHINE. Patent dated June 11, 1907. Disclaimer filed April 13, 1912, by the assignee, *Electro-Dynamic Company.*

Enters this disclaimer with respect to said Letters Patent No. 856,414—

"To that part of the claims in said Letters Patent which is in the following words, to wit:

"2. A dynamo electric machine having spaces of different extent between the cores of the main field poles, and an interpole located in the larger inter-core space."

Interference Notice.

DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
Washington, D. C., March 28, 1912.

Charles Civita, his assigns or legal representatives, take notice:

An interference having been declared by this Office between the application of J. H. Zellin & Company, Inc., 306 and 308 Cherry street, Philadelphia, Pa., for registration of a trade-mark and trade-mark registered January 5, 1904, No. 41,812, to Charles Civita, 63 South Washington Square, New York, N. Y., and a notice sent by registered mail to said Charles Civita at the said address having been returned by the post-office undeliverable, notice is therefore hereby given that unless the said Charles Civita, his assigns or legal representatives, shall enter an appearance herein within thirty days from the first publication of this order the interference will be proceeded with as in case of default.

This notice will be published in the OFFICIAL GAZETTE for three consecutive weeks.

EDWARD B. MOORE, *Commissioner.*

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business April 20, 1912.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
313	1. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Mar. 4	Mar. 5	536
128	2. Bee Culture; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Pneumatic Despatch; Pneumatics; Presses; Store-Service; Tobacco.	Feb. 15	Mar. 7	505
175	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Mar. 21	Apr. 8	224
232	4. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Metallic Building Structures.	Mar. 11	Mar. 12	446
167	5. Bookbinding; Harvesters; Jewelry; Music.	Feb. 17	Mar. 1	462
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	Mar. 21	Mar. 21	341
312	7. Educational Appliances; Clutches; Games and Toys; Mechanical Motors; Nut and Bolt Locks; Optics; Velocipedes.	Jan. 25	Feb. 27	681
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Mar. 20	Mar. 22	319
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Pumps; Wind-Wheels.	Mar. 13	Mar. 11	352
235	10. Carriages and Wagons	Feb. 21	Mar. 2	680
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Feb. 24	Feb. 19	473
324	12. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Feb. 15	Feb. 13	635
329	13. Arms, Projectiles, and Explosive Charges, Making; Belt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Turning.	Mar. 11	Mar. 20	480
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware, Making; Tools; Wire Fabrics and Structure; Wire-Working.	Mar. 1	Mar. 15	438
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Liquid Coating Compositions; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastic Compositions; Plastics.	Feb. 10	Feb. 17	370
109	16. Telegraphy; Telephony	Mar. 7	Mar. 7	240
303	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	Mar. 18	Mar. 20	336
327	18. Injectors and Ejectors; Miscellaneous Heat-Engine Plants; Steam- and Vacuum Pumps; Steam-Boilers; Steam-Engines; Steam-Engine Valves.	Feb. 10	Mar. 14	266
236	19. Dampers, Automatic; Furnaces; Heat-Distributing Systems; Stoves and Furnaces.	Mar. 4	Mar. 7	471
179	20. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Safes; Undertaking.	Feb. 17	Mar. 20	266
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Mar. 2	Mar. 9	355

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Mar. 1	Mar. 20	309
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Mar. 1	Feb. 24	495
144	24. Apparel; Apparel Apparatus; Sewing-Machines.	Mar. 4	Mar. 5	506
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Mar. 25	Mar. 28	194
186	26. Electricity, Generation; Motive Power.	Nov. 6	Dec. 20	592
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Feb. 23	Mar. 2	467
65	28. Internal-Combustion Engines	Jan. 25	Feb. 2	829
147	29. Coopering; Fire-Escapes; Ladders; Rods; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Woodworking; Woodworking-Tools.	Feb. 26	Mar. 20	453
188	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Feb. 2	Mar. 20	384
172	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	Feb. 12	Mar. 8	305
278	32. Carbonating Beverages; Curtains, Shades, and Screens; Dispensing Beverages; Dispensing-Cans; Ornamentation; Packaging Liquids; Refrigeration.	Jan. 23	Mar. 21	202
71	33. Cutlery; Domestic Cooking Vessels; Masonry and Concrete Structures; Paving; Tents, Canopies, Umbrellas, and Canes.	Jan. 15	Feb. 20	491
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	Feb. 21	Mar. 8	533
244	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	Mar. 14	Mar. 14	727
264	36. Drafting; Driers; Engraving; Measuring Instruments; Photography.	Mar. 19	Mar. 13	573
107	37. Electric Lighting; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Feb. 5	Mar. 18	487
378	38. Animal Husbandry; Artesian and Oil Wells; Fishing and Trapping; Stationery; Stone-Working.	Jan. 17	Feb. 26	606
221	39. Water Distribution	Jan. 2	Feb. 6	642
220	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Mar. 20	Mar. 22	426
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	Mar. 2	Feb. 29	623
370	42. Electric Railways; Electric Signaling; Railway Signaling; Signals.	Feb. 26	Feb. 24	541
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Mar. 15	Mar. 13	342

Oldest new case, Nov. 6; oldest amended, Dec. 20.

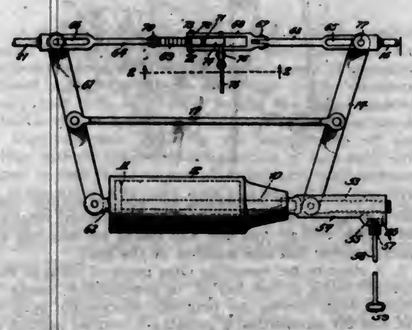
Total number of applications awaiting action 20,165

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	Mar. 11	Mar. 19	1196
	Designs	Feb. 10	Mar. 7	209
	Labels and Prints	Apr. 13	Apr. 8	30

PATENTS

GRANTED APRIL 23, 1912.

1,023,790. SLACK-ADJUSTER FOR BRAKES. JULIUS J. ACKER, Horton, Kans., assignor of fifty-one one-hundredths to Walter P. Murphy, Chicago, Ill., and twenty-four and five-tenths one-hundredths to Cyrus L. Bundy, Kingsland, N. J. Filed May 23, 1910. Serial No. 562,814. (Cl. 188—50.)

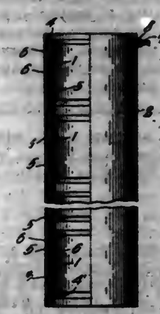


1. In combination, a push rod, means for actuating said push rod, a dog controlled ratchet movable in one direction with relation to said push rod, a cylinder lever pivotally connected with said ratchet, an adjusting rod having a slot therein, and with which said cylinder lever is connected, and a dog controlled ratchet for permitting movement of said adjusting rod in one direction only, the movement of the ratchet associated with the push rod by the cylinder lever compensating for the movement of the adjusting rod by said lever, substantially as described.

2. In combination, a push rod, means for actuating said push rod, a dog controlled ratchet movable in one direction with relation to said push rod, a cylinder lever pivotally connected with said ratchet, a live lever rod suitably connected with the brake shoes, means for pivotally connecting said live lever rod with said cylinder lever, an adjusting rod having a slot therein in which said connecting means is adapted to reciprocate, and a dog controlled ratchet limiting the movement of said cylinder lever and its associated live lever rod in one direction only, movement of said adjusting rod being compensated for by corresponding movement through said cylinder lever of the ratchet associated with said push rod, substantially as described.

3. In combination, a push rod, means for actuating said push rod, a dog controlled ratchet movable in one direction with relation to said push rod, a cylinder lever pivotally connected with said ratchet, a live lever rod suitably connected with the brake shoes, means for pivotally connecting said live lever rod with said cylinder lever, an adjusting rod having a slot therein in which said connecting means is adapted to reciprocate, and a dog controlled ratchet limiting the movement of said cylinder lever and its associated live lever rod in one direction only, movement of said adjusting rod being compensated for by corresponding movement through said cylinder lever of the ratchet associated with said push rod, and means for releasing the dogs associated with said ratchets in order to allow a full release of the brake shoes associated with said live lever rod, substantially as described.

1,023,791. UNIVERSAL ELECTRIC INDUCTION HEATING ELEMENT. JOHN L. ANDERSON, Ogden, Utah. Filed Oct. 30, 1911. Serial No. 657,574. (Cl. 219—47.)



1. An electric induction heating element having two nested members hermetically sealed at their respective ends and providing a coil retaining chamber therebetween, and a coil disposed in said chamber, and forming with the members a transformer.

2. An electric induction heating element, having two nested metallic members hermetically sealed at their respective ends and forming a compartment therebetween, both of said members constituting the closed magnetic circuit of a transformer, and a primary winding disposed within the compartment between the nested members and linked with the magnetic circuit of said members.

3. An electric induction heating element having two nested members hermetically sealed at their respective ends and providing a compartment therebetween, a primary winding mounted within the compartment, and terminal posts connected to said winding exteriorly of one of said nested members, whereby the two members constitute a closed magnetic circuit linking with the primary winding to cause magnetism to flow axially through the members.

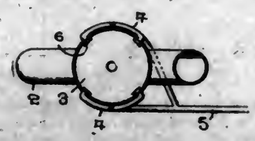
4. An electric induction heating element, having two nested members composed of magnetic metal and hermetically sealed at their respective ends to provide a coil receiving compartment, a primary coil disposed within said compartment with a fire proof insulation interposed between the coil and the adjacent portions of the nested members, and terminal posts carried by one of said members and connected to the coil, whereby an alternating field produces current in the respective members circumferentially thereof.

5. An electric induction heating element, having two nested members composed of magnetic metal and hermetically sealed at their respective ends to provide a coil-receiving compartment, a primary coil disposed in said compartment with a fire proof insulation interposed between the coil and the adjacent portions of the nested members,

whereby the nested members form a closed magnetic circuit linked with the said coil to cause magnetism to flow axially through the said nested members.

[Claim 6 not printed in the Gazette.]

1,023,792. SPARK-ARRESTER. OSCAR ANDERSON, East Lake, Minn. Filed Nov. 15, 1910. Serial No. 592,489. (Cl. 110—142.)



In a spark arrester, the combination with a locomotive smoke stack curved rearwardly, having a horizontal portion and terminating in an upwardly curved end; of a vertically disposed drum having the lower portion thereof interposed in said horizontal portion, the drum having a closed upper end and having a discharge opening in its lower end, a plurality of nozzles extending through the wall of said drum and pointing toward a common center, the nozzles being positioned in alinement with the confronting ends of the smoke stack, and means for supplying water to said nozzles.

1,023,793. HOT-WATER AND STEAM RADIATOR. GEORGE C. ANDREWS and EDWARD H. WILLIAMS, Minneapolis, Minn. Filed Sept. 3, 1910. Serial No. 580,394. (Cl. 237—18.)

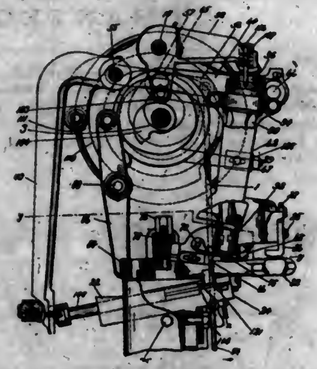


1. A radiator made up of laterally spaced sheet metal plates alternately bent so that the folds thereof are approximately V shaped in cross-section, the said plates being interlapped and spaced apart to form a zigzag chamber for the heating medium, and the upper and lower extremities or ends of the plates being formed with obliquely bent triangular portions, the edges of the triangular portions of the two plates being united by steam-tight joints.

2. A radiator made up of laterally spaced sheet metal plates, alternately bent, so that the folds thereof are approximately V-shape in cross-section, the said plates being interlapped and spaced apart to form a zigzag chamber for the heating medium, the vertical end edges of said plates being brought together and connected by welded joints, the upper and lower edges of the plates are notched with V-shape notches at alternate lines of bending of the plates into folds, the metal between the point of the notch and the other alternate line of bending 1^b between two notchets is bent on a line from the point of said notch to the intersection of line of bending 1^b with the edge of the metal sheet, to form an oblique triangle, and the edges of the said oblique triangles of the two plates being brought together and united by welded joints.

3. A radiator made up of laterally spaced sheet metal plates, alternately bent, so that the folds thereof are approximately V-shape in cross-section, the said plates being interlapped and spaced apart to form a zigzag chamber for the heating medium, and the upper and lower edges of the plates are notched with V-shape notches at alternate lines of bending of the plates into folds, the metal between the point of the notch and the other alternate line of bending 1^b between two notches is bent on a line from the point of said notch to the intersection of line of bending 1^b with the edge of the metal sheet, to form an oblique triangle, and the edges of the said oblique triangles of the two plates being brought together and united by welded joints.

1,023,794. MACHINE FOR ASSEMBLING PARTS OF BOOTS AND SHOES. ORRELL ASHTON, Lawrence, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Aug. 15, 1906. Serial No. 330,705. (Cl. 12—2.)



1. A machine for assembling an upper, a counter and a sole, having in combination means for adjusting relatively said upper, counter and sole and means for securing said upper, counter and sole together at the heel.

2. A machine for operating upon parts of boots or shoes arranged upon a last having in combination means for automatically moving an innersole rearwardly upon the last and for automatically pressing a counter against the end of the last and means for securing the counter to the innersole.

3. A machine for assembling parts of boots or shoes upon a last having in combination means for automatically moving an innersole rearwardly upon the last and for automatically pressing a counter against the end of the last, and means for automatically securing the counter to the innersole.

4. A machine for assembling parts of boots or shoes upon a last having in combination means for supporting the last and means for automatically moving an innersole rearwardly upon the last and for automatically pressing a counter against the end of the last.

5. A machine for securing a loosely arranged upper and counter to an innersole mounted upon a last preliminary to lasting, having in combination, means for moving said parts into assembled relation and means for automatically securing the upper and counter to the innersole at the extreme rear of the heel.

[Claims 6 to 48 not printed in the Gazette.]

1,023,795. SHOCK-ABSORBING DEVICE. ARDENGO BACCHI, Quincy, Mass. Filed Oct. 21, 1911. Serial No. 656,063. (Cl. 21—105.)

1. A shock absorber comprising a pair of frame members adapted to be secured respectively to parts having relative movement toward and from each other, a pair of oppositely disposed rolls mounted for transverse bodily movement toward and from each other in the one frame member, means for yieldingly retarding the bodily movement of said rolls away from each other, a pair of diverging tracks coöperating respectively with said rolls and carried by the other frame member, and means for holding said rolls against rotation during the movement of the frame members away from each other and permitting their rotation at other times.

2. A shock absorber comprising a pair of frame members adapted to be secured respectively to parts having relative movement toward and from each other, a pair of oppositely disposed rolls mounted for transverse bodily movement toward and from each other in the one frame member, springs acting to press said rolls toward each other, and means for simultaneously adjusting the compression of said springs without disturbing the position of said rolls with respect to said frame, and a pair of diverging tracks coöperating respectively with said rolls and carried by the other frame member.

3. A shock absorber comprising a pair of frame members adapted to be secured respectively to parts having relative movement toward and from each other, a pair of oppositely disposed rolls mounted for transverse bodily movement toward and from each other in the one frame member, springs acting to press said rolls toward each other, means for simultaneously adjusting the compression of said springs without disturbing the position of said rolls with respect to said frame, a pair of diverging tracks coöperating respectively with said rolls and carried by the other frame member, and means for holding the said rolls against rotation during the movement of the frame members away from each other and permitting their rotation at other times.

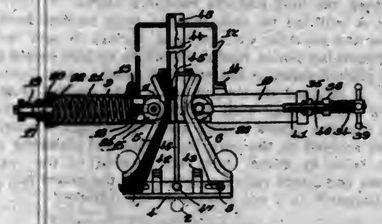
4. A shock absorber comprising a pair of frame members adapted to be secured respectively to parts having relative movement toward and from each other, a tubular section carried by the one frame transversely thereof, a pair of oppositely disposed plungers sliding in said tubular section, a pair of rolls carried respectively by said plungers near the middle of said section, helical springs surrounding said plungers and acting to move said rolls toward each other, means for simultaneously compressing said springs without disturbing their position relative to the frame, a pair of diverging tracks coöperating respectively with said rolls and carried by the other frame member.

5. A shock absorber comprising a pair of frame members adapted to be secured respectively to parts having relative movement toward and from each other, a tubular section carried by the one frame transversely thereof, a pair of oppositely disposed plungers sliding in said tubular section, a pair of rolls carried respectively by said plungers near the middle of said section, helical springs surrounding said plungers and acting to move said rolls toward each other, means for simultaneously compressing said springs without disturbing their position relative to the frame, a pair of diverging tracks coöperating respectively with said rolls and carried by the other frame member, and means independent of the devices acting to retard the transverse movements of the said rolls for retarding the movement of said frame members away from each other.

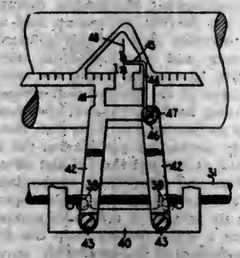
[Claim 6 not printed in the Gazette.]

1,023,796. TYPE-WRITING MACHINE. WALTER J. BARRON, New York, N. Y., assignor, by mesne assignments, to Union Typewriter Company, Jersey City, N. J., a Corporation of New Jersey. Filed Aug. 19, 1910. Serial No. 577,957. (Cl. 197—190.)

1. In a typewriting machine, the combination with a platen, of an indicating device extending lengthwise of the printing line and terminating above the printing point and in the line which contains the printing point and extends at right angles to the printing line, said device remaining constantly in indicating position.



2. In a typewriting machine, the combination with a platen, of an indicating device extending lengthwise of the printing line and above the same and terminating above the printing point in the same transverse line as the printing point, said transverse line being at right angles to the printing line, said device remaining constantly in indicating position.



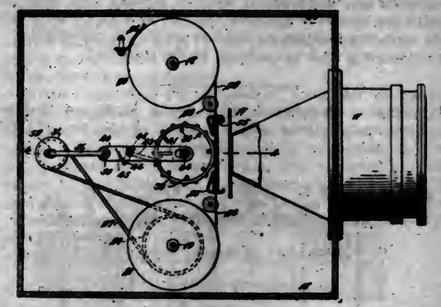
3. In a typewriting machine, the combination with a platen, of an angular indicating device having a portion extending transversely of the printing line at one side of the printing point and having another portion extending lengthwise of the printing line and terminating in a line which contains the printing point and is at right angles to the printing line, said device remaining constantly in indicating position.

4. In a typewriting machine, the combination with a platen, of an angular indicating device having a portion extending transversely of the printing line at one side of the printing point and having another portion extending lengthwise of the printing line and above the same and terminating in the same vertical line as the printing point, said device remaining constantly in indicating position.

5. In a typewriting machine, the combination of a platen, key controlled type bars, each type bar comprising a type block carrying a plurality of types, and an indicating device having a portion extending lengthwise of the platen and adapted at the printing moment to fit in the space between two types on the type block of the actuated type bar.

[Claims 6 to 14 not printed in the Gazette.]

1,023,797. MOVING-PICTURE APPARATUS. CHARLES S. BATDORF, Brooklyn, N. Y. Filed Dec. 15, 1910. Serial No. 597,558. (Cl. 88—18.)



1. An apparatus of the character described comprising a film to be carried by intermittent movements across an exposure opening, let-off and take-up mechanisms for said film, driving means connected with the take-up mechanism for causing the same to exert a pull on the film from the end thereof and effect thereby the travel of the film, and a two-part escapement mechanism connected with the driving mechanism and one part of which is independently movable to its operative position by the film.

2. An apparatus of the character described comprising a film having along its length spaced openings therein,

let-off and take-up mechanisms for said film, means connected with the take-up mechanism for causing the same to exert a pull on the film at the end thereof and effect thereby the travel of the film, and escapement mechanism engaging the film at the openings therein to arrest the same at predetermined intervals of its length and for predetermined periods at the exposure opening of the apparatus, said escapement mechanism comprising a stop operable from the driving mechanism and a coöperating independently movable member also connected with the driving mechanism and operable on its movement to its operative position by the film during its movements.

3. An apparatus of the character described comprising a film having along its length spaced openings therein, let-off and take-up mechanisms for said film, means connected with the take-up mechanism for causing the same to exert a pull on the film at the end thereof and effect thereby the travel of the film, and escapement mechanism in constant engagement with the film at successive openings therein for controlling its periods of rest, said escapement mechanism comprising a stop operable from the driving mechanism and a coöperating independently movable member also connected with the driving mechanism and operable on its movement to its operative position by the film during its movements.

4. An apparatus of the character described comprising a film to be carried by intermittent movements across the exposure opening and having therein along its length spaced openings, driving mechanism for drawing the film from one end thereof across said opening, and escapement mechanism operable from said driving mechanism engaging said film at the openings therein for controlling its periods of rest at said opening, said escapement mechanism comprising a stop operable from the driving mechanism and a coöperating independently movable member also connected with the driving mechanism and operable on its movement to its operative position by the film during its movements.

5. An apparatus of the character described comprising a film to be carried by intermittent movements across the exposure opening and having spaced openings therein along its length, driving means connected with one end of said film for drawing the same across said opening, escapement mechanism operable from said driving means engaging said film at the openings therein for arresting the same during its intended periods of rest, and means enabling the drive mechanism to continue in motion during the at-rest periods of the film and maintain a controllable tension thereon, said escapement mechanism comprising a stop operable from the driving mechanism and a coöperating independently movable member also connected with the driving mechanism and operable on its movement to operative position by the film during its movements.

[Claims 6 to 9 not printed in the Gazette.]

1,023,798. RAILROAD-TIE. DAVID S. BEACH, Bridgeport, Conn. Filed Aug. 15, 1910. Serial No. 577,357. (Cl. 238—3.)



1. A railroad tie comprising a body molded from concrete and provided with longitudinal supporting rods, recesses extending down to the supporting rods, springs in said recesses which rest upon the concrete and the supporting rods and rail carrying plates which rest upon the springs.

2. A railroad tie comprising a body molded from concrete and provided with recesses, springs in said recesses, carrying plates which rest upon the springs, clamping plates for rails and bolts extending through the clamping plates, the carrying plates and the body by which rails are secured to the carrying plates and the carrying plates are retained against displacement.

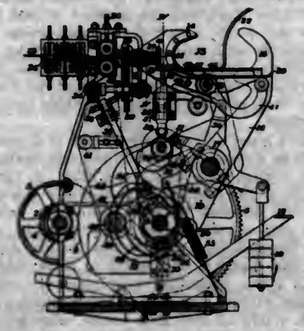
3. A railroad tie comprising a body molded from concrete and provided with recesses, springs in said recesses, carrying plates which rest upon the springs, clamping plates for rails, bolts extending upward through the body, the carrying plates and the clamping plates, for the purpose set forth, nuts on said bolts and spring washers between the nuts and the clamping plates.

4. A railroad tie comprising a body molded from concrete and provided with recesses, springs in said recesses, rail carrying plates resting upon the springs and a guard rail plate secured to the carrying plates.

5. A railroad tie comprising a body molded from concrete and provided with recesses, springs in said recesses, rail carrying plates resting upon the springs, a guard rail plate secured to the carrying plates and clamping plates and bolts by which rails are secured to the carrying plates and guard rails are secured to the guard rail plate.

[Claims 6 to 8 not printed in the Gazette.]

1,023,799. MACHINE FOR BUNDLING SCRAP. CHARLES W. BENNETT, Pittsburgh, Pa., assignor to American Sheet & Tin Plate Company, Pittsburgh, Pa., a Corporation of New Jersey. Filed May 17, 1909. Serial No. 496,468. (Cl. 100—31.)



1. In a machine for bundling scrap, a pocket or receptacle for the scrap to be bundled, mechanism for compressing or shaping the scrap into bundles, feed devices for feeding the forward end of a coil of tie wire around a formed bundle in said pocket, means for tying the bundle encircling wire into a loop and means for severing the formed loop from the coil; substantially as described.

2. In a machine for bundling scrap, a pocket or receptacle for the scrap to be bundled, members for compressing the scrap into a bundle, power means for actuating said compressing members, feed devices for passing the forward end of a coil of wire around the formed bundle, means for mechanically tying the end of the coil of tie wire around the formed bundles and mechanism for severing the tied wires from the coil; substantially as described.

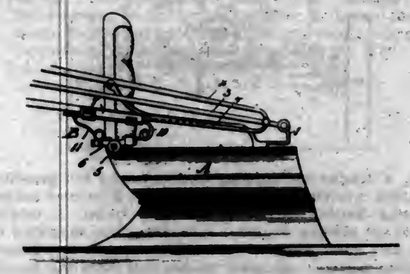
3. In a machine for bundling scrap, a pocket or receptacle for the scrap to be bundled, means for compressing scrap placed in said pocket or receptacle into a bundle, tie wire feeding mechanism arranged to pass the forward end of a coil of wire around the formed bundles, means for tying the bundle encircling wires into loops and means for severing said loops from the coil; substantially as described.

4. In a machine for bundling scrap, a pocket or receptacle for the scrap to be bundled, a series of compressing and forming levers having fingers extending at the rear of the pocket or receptacle, means for actuating said levers, tie wire feeding mechanism, a movable finger or arm for carrying the tie wire around the formed bundle, and twisting devices for the tie wire; substantially as described.

5. In a machine for bundling scrap the combination with means for shaping the scrap into bundles, of a plurality of tie wire feeding devices having twister heads through which the wires are passed, said devices feeding the forward ends of the coils of wire around the formed bundles, means for rotating said heads to twist the wires into bundle encircling loops or rings and means for severing the twisted wires from the coils; substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,023,800. BUGGY-TOP SUPPORT. JOSEPH BENNETT, Dayton, Ohio. Filed Oct. 23, 1911. Serial No. 656,248. (Cl. 21—61.)



1. A buggy top prop or support comprising a base adapted to fit on the prop bolt or stud of a buggy body, a bow rest, means for yieldingly supporting the front end of the bow rest on the base and connecting the rest and base together, and a yielding device connected with the base and slidably connected with the rear end of the rest.

2. A buggy top support comprising a base, a bow rest, means for connecting the front portion of the rest with the base, a member extending longitudinally of the rest at the rear end, and a spring connected with the base and connected with and slidable longitudinally of the member.

3. A device of the class described comprising a base, a bow rest, means for connecting the base and rest together for relative movement, a member extending longitudinally of the rest, a spring fastened to the base, and means on the free end of the spring connected with and movable longitudinally of the member as the rest moves up and down.

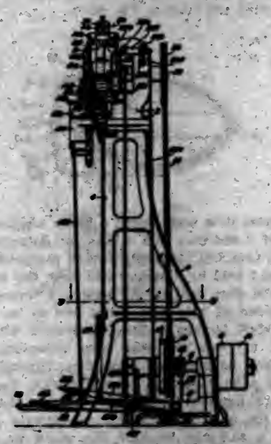
4. A device of the class described comprising a base element, a bow rest element, means for connecting the elements for relative movement, a spring having one end rigidly connected with one element and the other end slidably connected with the other element, a member extending longitudinally of and fastened to one element, and a spring secured to the other element and having an eye engaging the member and slidable longitudinally thereof as the rest moves up and down.

5. The combination of a base element, a rest element, means for connecting the elements together for relative movement, a pair of parallel members extending longitudinally of and rigid on one element, and a pair of springs fastened to the other element and having their free ends slidably connected with the said members.

[Claims 6 to 9 not printed in the Gazette.]

1,023,801. SOLE-CHANNELING MACHINE. FREDERIC E. BERTRAND, Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Apr. 30, 1908. Serial No. 430,118. (Cl. 12—27.)

1. In a machine for channeling soles, the combination with a lip forming cutter and step-by-step means for feeding the work comprising a feeding foot for engaging the sole face on which the lip is formed and an actuator having a constant throw for imparting movement to the feeding foot, of an adjusting mechanism, operable while the machine is running, for transmitting to the work feeding means more or less of the throw of the actuator, said adjusting mechanism being constructed and arranged to permit a substantial nullification of the throw of the actuator.



2. A power channeling machine, having, in combination, a work table for supporting a flat sole and over which the sole is fed, a lip forming cutter supported opposite said table, a reciprocatory head, a work feeding foot sustained thereby for engaging the sole adjacent the point of operation of said cutter, means for reciprocating said head to feed the sole step by step constructed and arranged to provide a relatively high speed of work feed, and provision for slowing down the speed of work feed a substantial amount during the operation of the machine and while cutting around the toe to facilitate the guiding of the sole by the operator relatively to the cutter.

3. In a machine for channeling soles, the combination with a cutter and means for feeding the work constructed and arranged to normally provide one speed of work feed, of means under control of the operator for varying the normal speed of work feed, and means for automatically reëstablishing the normal speed.

4. In a machine for channeling soles, the combination with a work support, a reciprocatory carrier opposed thereto, a cutter sustained by said carrier and a spring-pressed gage adapted to bear on the work also sustained by said carrier, of automatic means to reciprocate said carrier to feed the work by the pressure of said gage, and means under control of the operator to vary the amplitude of the carrier reciprocation.

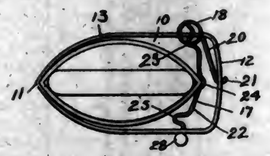
5. In a machine for channeling soles, an oscillatory carrier sustaining a presser gage adapted to engage the sole and feed it forward, of means to vary the amplitude of the carrier oscillations comprising a rock shaft having a slotted or chambered crank arm mounted thereon, means to rock said shaft, a link connected at one end to said carrier and at its other in said slot or chamber, and provision for varying the relation of said last named connection to the rock shaft.

[Claims 6 to 40 not printed in the gazette.]

1,023,802. SAD-IRON SHOE. HERMAN I. BLATTLE, Providence, R. I., assignor of two-thirds to Paul Newman, Providence, R. I. Filed Sept. 27, 1911. Serial No. 651,572. (Cl. 68—26.)

1. A sad iron shoe comprising a plate adapted to cover the bottom of a sad iron and means for detachably securing said shoe to a sad iron, said means comprising an arm having a forward spring tension and having one end held near the rear and on one side of the shoe and the opposite end free to be moved manually longitudinally backward whereby the shoe is permitted to receive the iron and said

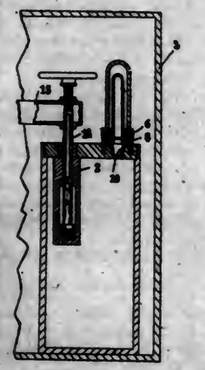
arm being then adapted to contact directly against the rear end of the said iron to hold the same by a forward spring pressure whereby irons of different sizes and shapes may be held in a single shoe, and means for retaining the free end of said arm to withhold the same from engagement with the iron in the shoe.



2. A sad iron shoe comprising a plate adapted to cover the bottom of a sad iron and means for detachably securing said shoe to a sad iron, said means comprising an arm having one end held by a spring coil near the rear and on one side of the shoe said spring having a forward tension the opposite end of said arm being free to be moved laterally, said shoe having a flange provided with a longitudinal slot through it, said arm extending laterally across the shoe its free end projecting through said slot and provided with a handle by which said free end may be swung back against its tension whereby the shoe may receive and the arm be permitted to directly engage the rear end of a sad-iron to hold the same by a forward pressure.

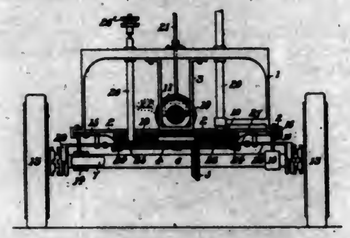
3. A sad iron shoe comprising a plate adapted to cover the bottom of a sad iron and means for detachably securing said shoe to a sad iron, said means comprising an arm having a spring coil held near the rear and on one side of the shoe and having a forward tension said shoe having a flange provided with a longitudinal slot therethrough and said slot being provided with a recess near its rear end said arm extending laterally across the shoe its free opposite end projecting through said slot and having a handle by which it may be swung back against its tension whereby it may receive and be permitted to engage the rear end of and retain sad-irons of different sizes and shapes with a forward pressure, said recess in said slot being adapted to receive the free end of said spring arm and retain the same in an inoperative position.

1,023,803. SUCKING-BOTTLE. CHARLES DE BOCK, Lele, Belgium. Filed Aug. 7, 1911. Serial No. 642,834. (Cl. 215—117.)



In combination with a nursing bottle, of a cover or stopper therefor having a conical opening therein and an annular threaded recess surrounding said opening, a threaded bushing secured in said recess and having an internal shoulder in the bore thereof, a conical cup seated in said conical opening and having outlets adapted to be closed thereby, said cup having a threaded portion connected with said bushing, a nipple projecting from said bushing and having a flange interposed between the shoulder of said bushing and said cup, and a cap inclosing said nipple and having threaded engagement with said bushing, substantially as described.

1,023,804. DRIVING AND STEERING MECHANISM FOR POWER-OPERATED VEHICLES. IRAM W. BOULD, Pittsburgh, Pa. Filed May 15, 1911. Serial No. 627,135. (Cl. 21—90.)



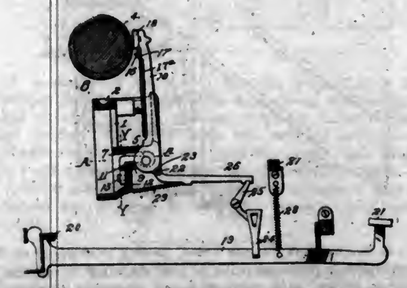
1. A driving and steering mechanism for self propelled vehicles involving suitable frame work; a circular flanged bearing member carried by the said frame; a tubular shaft for housing the axle; a circular table supported by the axle shaft adapted for rotation against the flanged bearing member; means for holding said table and flanged portion in operative position; a bevel gear mounted over the axle shaft; a double faced horizontally disposed bevel gear suitably supported for rotation the lower face of which meshes with the first mentioned bevel gear on the axle shaft and the upper face adapted to mesh with reversing bevel gears mounted on the power shaft; clutch means for forcing the last mentioned gears alternately into or out of engagement with the double faced gear; a circular inner toothed rack member carried by the said table surrounding the gearing; a shaft operated pinion meshing with said rack for revolving the table and turning the axle at any desired angle; a second inner toothed rack suitably supported for rotation beneath the first mentioned rack; a shaft operated pinion meshing with the said second rack to rotate same; and clutch means, involving suitable connections acting in conjunction with the movement of the said second rack, to throw the wheels into or out of engagement with the power driven shaft.

2. A driving and steering mechanism for self propelled vehicles involving suitable frame work; a circular flanged bearing member carried by the said frame; a tubular shaft for housing the axle; a circular table supported by the axle shaft adapted for rotation against the flanged bearing member; means for holding said table and flanged portion in operative position; a bevel gear mounted over the axle shaft; a double faced horizontally disposed bevel gear suitably supported for rotation, the lower face of which meshes with the first mentioned bevel gear on the axle shaft, and the upper face adapted to mesh with reversing bevel gears slidably mounted on the power shaft; lever operated clutch means for forcing the last mentioned gears alternately into or out of engagement with the upper portion of the double faced gear; a circular inner toothed rack member carried by the said table surrounding the gearing; a shaft operated pinion meshing with said rack for revolving the table thereby turning the axle in any desired angle; a second inner toothed rack suitably supported for rotation beneath the first mentioned rack; a slidable clutch on the axle shaft to mesh with a fixed clutch carried by the wheel; links connecting said second rack and slidable clutch; and a shaft operated pinion meshing with the said second rack to rotate same and operate the wheel clutch.

3. A driving and steering mechanism for power vehicles involving suitable gearing; a tubular shaft for housing the axle; lever operated clutch means for controlling the direction of drive; a frame for housing the gearing involving a circular flanged bearing portion; a

circular table supported by the axle shaft, adapted for rotation against the flanged bearing portion; means for holding said table and flanged portion in operative position; an interiorly positioned toothed rack carried by the table; a shaft operated pinion meshing with said rack for revolving the table and turning the axle; a second toothed rack suitably supported beneath the first mentioned rack adapted for rotation; a slidable clutch on the axle shaft to mesh with a fixed clutch carried by the wheel; links connecting said second rack and slidable clutch; and a shaft operated pinion meshing with said second rack to rotate same and operate the wheel clutch.

1,023,805. TYPE-WRITING MACHINE. HERBERT E. BRIDGWATER, Derby, Conn., assignor, by mesne assignments, to Secor Typewriter Company, Derby, Conn., a Corporation of Connecticut. Filed Jan. 26, 1909. Serial No. 474,348. (Cl. 197—41.)



1. In a typewriting machine, the combination of a series of segmentally arranged type-bars, radial heel-guides therefor and individual type-bar fulcrum supports adjustable independently interiorly of said guiding means and mounted exterior thereto.

2. In a typewriting machine, the combination of a series of segmentally arranged type-bars, radial heel-guides therefor partially inclosing an axial space and individual detachable type-bar fulcrum supports adjustable independently within said space and having their point of attachment exterior thereto.

3. In a typewriting machine, the combination of a series of segmentally arranged type-bars, radial heel-guides therefor providing a partially inclosed space and individual detachable type-bar fulcrum supports attached exteriorly of said space and extending thereinto.

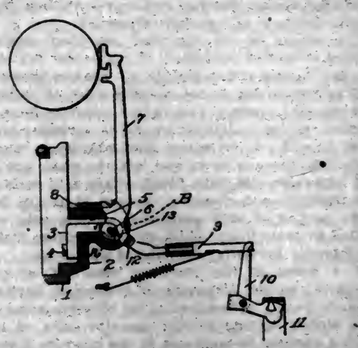
4. In a typewriting machine, the combination of a series of segmentally arranged type-bars, arched radial guiding means embracing the heel portions of said bars, pivotal supports for said bars comprising individual hangers independently mounted exteriorly of said guiding means and extending into axial relation therewith.

5. In a typewriting machine, the combination of a series of segmentally arranged type-bars, arched radial guiding means embracing the heel portions of said bars, individual detachable pivotal supports for said type-bars comprising hangers mounted exteriorly of said guiding means and extending into and in adjustable axial relation thereto.

[Claims 6 to 34 not printed in the Gazette.]

1,023,806. DETACHABLE TYPE-BAR FOR WRITING-MACHINES. HERBERT E. BRIDGWATER, Derby, Conn., assignor to Secor Typewriter Company, Derby, Conn., a Corporation of Connecticut. Filed Nov. 11, 1911. Serial No. 659,791. (Cl. 197—35.)

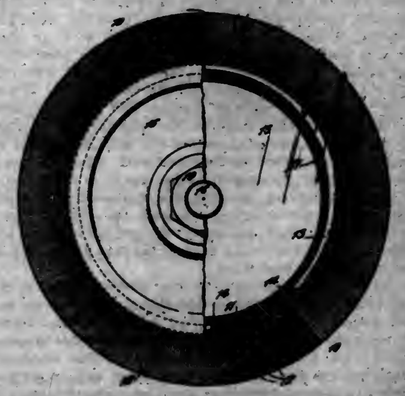
1. In a typewriting machine, a type bar slotted at its heel portion, a pivotal support for said type bar engaging said slotted portion, a peripheral abutment concentric to the axis of said pivotal support and adjacent to said type bar, a link for actuating said type bar upon its pivotal support, a pivot connecting said link to said type bar and a peripheral abutment concentric with the axis of said connecting pivot radially opposed to the first recited abutment whereby said type bar is secured to its pivotal support.



2. In a typewriting machine, a type bar slotted at its heel portion, a pivotal support for said type bar engaging said slotted portion, a peripheral abutment concentric to the axis of said pivotal support and adjacent to said type-bar, a link for actuating said type bar upon its pivotal support, a removable pivot connecting said link to said type bar and a peripheral abutment concentric with the axis of said connecting pivot radially opposed to the first recited abutment whereby said type bar is removably secured to its pivotal support.

3. In a typewriting machine, a pivotally mounted type bar having its heel portion slotted to engage its pivot support, a slotted member the slots of which form lateral guides for the movement of the type bar, said type bar having its heel portion extended beyond said slotted member in the direction of the open end of the slot in said heel portion, an actuating member for the type bar and a detachable connection between said heel extension and said actuating member, said connection having a greater width than that of the slots of the slotted member, whereby said connections form a stop to prevent the dismounting of said type bar from its pivot.

1,023,807. GRINDING AND BUFFING WHEEL. LOUIS H. BRINKMAN, Glen Ridge, N. J., assignor to American Oil & Supply Company, Newark, N. J., a Corporation of New Jersey. Filed Feb. 20, 1911. Serial No. 609,546. (Cl. 51—1.)



1. A wheel of the character described comprising a peripheral section composed of transverse flexible leaves

of cloth having a face-coating of abrasive substance and said section having in the opposite sides of its inner portion annular recesses, removable side-disks fitted within said recesses and receiving and clamping the inner annular portion of said peripheral section between them, and additional means securing said leaves at their inner portion to create a firm peripheral section.

2. A wheel of the character described comprising a peripheral section composed of transverse flexible leaves of cloth having a face-coating of abrasive substance and said section having in the opposite sides of its inner portion annular recesses and in the opposite faces of said recessed portion additional annular recesses, hoops fastened to said section within said additional recesses and projecting laterally therefrom into the main side recesses, and removable side-disks fitted within said main recesses and receiving and clamping between them the inner annular portion of said peripheral section, said side-disks having in their facing sides annular grooves fitting upon the laterally projecting portions of said hoops.

3. A wheel of the character described comprising a peripheral section composed of transverse flexible leaves of cloth having a face-coating of abrasive substance and said section having in the opposite sides of its inner portion annular recesses and in the opposite faces of said recessed portion additional annular recesses, hoops fastened to said section within said additional recesses and projecting laterally therefrom into the main side recesses, removable side disks fitted within said main recesses and receiving and clamping between them the inner annular portion of said peripheral section and having in their facing sides annular grooves fitting upon the laterally projecting portions of said hoops, and a wire rod on which said leaves are threaded and which has its ends connected together to form a ring, the inner edge of said peripheral section of leaves having a coating of glue to aid in binding the leaves together.

1,023,808. TYPE-WRITING MACHINE. ALEXANDER T. BROWN, Syracuse, N. Y. Filed Apr. 25, 1906. Serial No. 313,603. (Cl. 197—127.)



1. In a typewriting machine, the combination of a roller platen, a paper finger pressed against said platen and consisting of a band of sheet metal extending up and down and curved to fit the curvature of the platen, and an arm formed integral with said band and extending at an angle therefrom toward the middle of the machine, said arm consisting of two narrow strips connected at their outer ends and also connected at an intermediate point by a cross strip, all of said strips being integral with one another and with said band and said strips being so narrow as to permit of reading through said projecting arm.

2. In a typewriting machine, the combination of paper feed devices and releasing means for said paper feed devices, said paper feed devices and said releasing means being operatively disconnectible the one from the other.

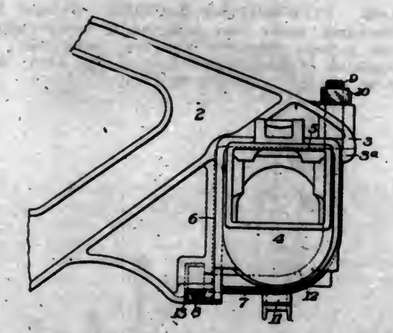
3. In a typewriting machine, the combination of a carriage truck, a platen frame mounted on said truck and movable on said truck, paper feed devices mounted on said platen frame, and releasing devices for said paper feed devices mounted on said truck.

4. In a typewriting machine, the combination of a carriage truck, a platen frame detachably mounted on said truck, paper feed devices carried by said platen frame, and releasing devices for said paper feed devices mounted on said truck, the construction being such that when said platen frame is detached from said truck, said paper feed devices are disconnected from their releasing devices.

5. In a typewriting machine, the combination of a carriage truck, a platen frame mounted on said truck and movable on said truck, paper feed devices mounted on said platen frame, and releasing devices for said paper feed devices mounted on said truck and operative on said feed devices when said platen frame is in one position and inoperative on said feed devices when said platen frame is in another position.

[Claims 6 to 16 not printed in the Gazette.]

1,023,809. JOURNAL-BOX-SECURING MECHANISM. ALBERT O. BUCKIUS, Jr., Chicago, Ill., assignor to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of California. Filed Jan. 8, 1912. Serial No. 670,008. (Cl. 105—243.)



1. A journal box for car axles, having a retainer at its lower portion provided with a side opening to receive a securing device, said retainer being arranged to prevent dropping away of the securing device; substantially as described.

2. A journal box for car axles, having a groove or recess to receive a securing device, said box having in its lower portion a retainer open at the side to receive the securing device, said retainer being arranged to prevent dropping away of said securing device; substantially as described.

3. A journal box for car axles having formed as a part thereof a retainer to receive a securing device, said retainer having a lateral opening to allow admission of the securing device without threading, said retainer being arranged to prevent dropping away of the securing device; substantially as described.

4. In a car truck, a side frame having a seat for a journal box opened at the bottom and side, a journal box having a retainer with a lateral opening, and a securing bolt or strap extending through the retainer and securing the box to the side frame; substantially as described.

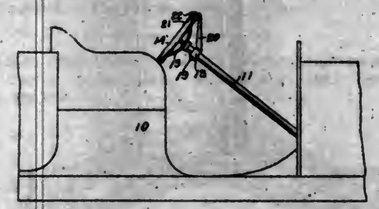
5. In a car truck, a side frame having a seat for a journal box opened at the bottom and side, a journal box having a retainer with a lateral opening, and a securing bolt or strap extending through the retainer and securing the box to the side frame, said strap or bolt having a head within an upwardly extending recess in the side frame; substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,023,810. AUTOMOBILE STEERING-GUIDE. CLAUDE BUGG, Clinton, Ky. Filed Sept. 6, 1910. Serial No. 580,476. (Cl. 21—90.)

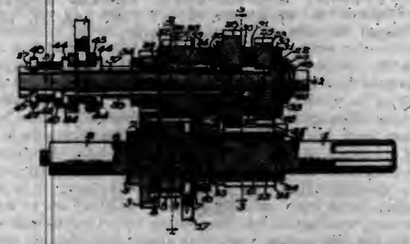
1. In a controlling device, a revoluble controller wheel, an indicator member adjacent the periphery thereof fixed against rotation with the wheel, said wheel having an annular grip portion disposed adjacent the indicator and means on the grip portions adapted to coöperate with the indicator to indicate the action of the wheel, said indicator member being movable into engagement with the wheel, said grip portion having portions disposed and adapted to be engaged by the indicator, and means for moving the indicator into engagement with the wheel to hold it against rotation.

2. A device of the class described comprising a body member adapted for engagement with the steering post of a motor vehicle and carrying an indicating member thereon adapted to be disposed adjacent the hand wheel, said indicating member being movable into locking engagement with the wheel at times, and means for moving the indicating member into such engagement, said means including a member adapted to be disposed in close spaced relation with the hand wheel, movable toward and away from the wheel, and adapted to be grasped with the wheel for the purpose described.



3. A device of the class described comprising a body member adapted for detachable engagement with motor vehicle steering posts, a movable indicator member carried thereby for coöperation with the steering controller to indicate the position of the steering wheels, and adapted for locking engagement with the controller at times, and a lever carried by the body member and engaged with and adapted for operation to move the indicator into locking position.

1,023,811. VARIABLE-SPEED TRANSMISSION MECHANISM. LEON J. CAMPBELL, Chicago, Ill., assignor to James T. Healy, trustee, Chicago, Ill. Filed June 17, 1911. Serial No. 633,699. (Cl. 74—59.)



1. A variable speed transmission mechanism, comprising a motor shaft, a driven shaft in axial alinement with the motor shaft, a gear rigidly secured on the driven shaft, a gear slidably mounted on the motor shaft and adapted to telescope with the gear on the driven shaft, an internal gear rigidly connected with the slide gear, a pinion loosely mounted on the motor shaft and adapted to be engaged by the internal gear, and mechanism operated by said pinion adapted to drive the driven shaft when the internal gear is in mesh with said pinion.

2. A variable speed transmission mechanism, comprising axially alined drive and driven shafts, an elongated pinion loosely mounted on the drive shaft having a clutch member on one end thereof, a gear slidably mounted on the drive shaft having a clutch member adapted to engage the clutch member on the pinion, a fixed gear on the driven shaft having external and internal teeth, the latter being adapted to be engaged by the slide gear, a transmission shaft, loose gears on the transmission shaft in mesh with said pinion, a loose gear on the transmission shaft in mesh with the slide gear, a fixed gear on the transmission shaft in mesh with the external teeth of the gear on the driven shaft, and means for locking the loose gears to the transmission shaft.

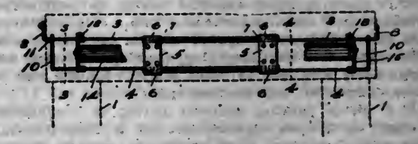
3. A variable speed transmission mechanism, comprising a motor shaft, a driven shaft in axial alinement with the motor shaft, a transmission shaft parallel with the motor shaft, permanently meshing loose gears on the motor and transmission shafts, permanently meshing fixed gears on the driven and transmission shafts, means for locking the loose gears on the transmission shaft to said shaft, and a clutch on the motor shaft adapted when in one position to engage the loose gear on the motor shaft and when in another position to engage the gear on the driven shaft.

4. A variable speed transmission mechanism, comprising a motor shaft, a driven shaft in axial alinement with the motor shaft, a transmission shaft parallel with the motor shaft and driven shaft, intermeshing gears on the motor and transmission shafts and on the driven and transmission shafts, a loose gear on the transmission shaft, and means on the motor shaft permanently in mesh with said loose gear and adapted when shifted in one direction to drive the driven shaft directly from the motor shaft and when shifted in the opposite direction to drive the driven shaft through the intermediary of the transmission shaft.

5. A variable speed transmission mechanism, comprising a motor shaft and a driven shaft in axial alinement, a transmission shaft parallel with said shafts, fixed intermeshing gears on the driven shaft and transmission shaft, loose gears on the transmission shaft, means adapted to lock any of said loose gears to the transmission shaft, a loose pinion on the motor shaft in mesh with part of said loose gears and means on the motor shaft adapted when in one position to engage the other loose gear and the fixed gear on the driven shaft, and when in another position to remain connected with said loose gear and be connected with said pinion.

[Claims 6 to 10 not printed in the Gazette.]

1,023,812. ADJUSTABLE SHADE-FIXTURE. THOMAS P. CAVE and JOHN M. BUCK, Columbus, Ohio, assignors of one-half to Fred Reichelsheimer and one-half to Solomon Roth, Columbus, Ohio. Filed Apr. 17, 1911. Serial No. 621,577. (Cl. 156—24.)



1. A supporting frame comprising two pairs of rods, an adjustable clip connecting the ends of the rods of each said pair, an attaching hook formed at the outer end of each upper rod, and an eye formed on the lower rod of each pair encircling the complementary upper rod.

2. A frame comprising two pairs of rods, an adjustable clip connecting the ends of the rods of each said pair, an attaching hook at the outer end of each upper rod, an eye formed on the lower rod of each pair encircling the complementary upper rod, shade brackets each formed with attaching sleeves, and means for adjustably clamping said brackets on said rods.

1,023,813. LOOSE-SPRING PISTON-PACKING EXPANDER. GEORGE CHRISTENSON, New York, N. Y., assignor to H. W. Johns-Manville Company, a Corporation of New York. Filed July 26, 1911. Serial No. 640,584. (Cl. 121—108.)



1. A piston packing expander having in combination a ring of elastic metal and a thin strip of sheet material loosely fastened to the ring and forming a flange thereon, extending at right angles to the plane of the ring.

2. A piston packing expander having in combination a ring of elastic metal and a thin strip of sheet material loosely wrapped around the ring and projecting at right angles to the plane of the ring to form a flange thereon.

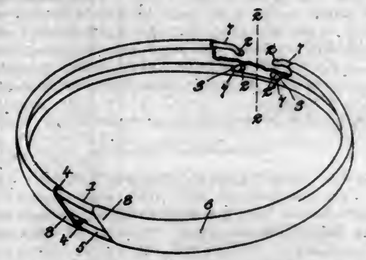
3. A composite piston packing expander formed of a ring of steel of high temper, and a strip of sheet metal of low temper and high ductility loosely fastened to the ring and forming a flange thereon, extending at right angles to the plane of the ring.

4. A composite piston packing expander formed of a ring of steel of high temper, and a strip of sheet metal of low temper and high ductility loosely bent around the ring and projecting at right angles to the plane of the ring to form a flange from the outer side of the ring.

5. A piston packing expander comprising in combination a ring of highly elastic material having abutting ends, and a ring shaped hollow envelop for said ring, also having abutting ends, the ring and its envelop being arranged to break joints.

[Claims 6 to 12 not printed in the Gazette.]

1,023,814. PISTON-PACKING EXPANDER. GEORGE CHRISTENSON, New York, N. Y., assignor to H. W. Johns-Manville Company, a Corporation of New York. Filed Nov. 22, 1911. Serial No. 661,783. (Cl. 121—108.)



1. A piston packing expander having in combination a thin strip of sheet material bent into a ring with abutting ends, and two rings of elastic material located within said first mentioned ring, the rings of elastic material being arranged to break joints with the ring of sheet material at their abutting ends.

2. A piston packing expander having in combination a thin strip of sheet material bent into a ring with abutting ends, and two rings of elastic material located within said first mentioned ring, one edge of said strip being bent around one of the rings, the rings of elastic material being arranged to break joints with the ring of sheet material at their abutting ends.

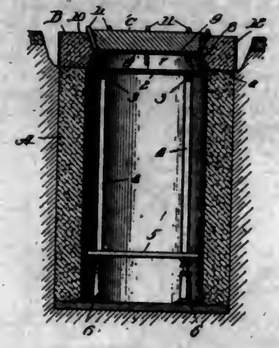
3. A piston packing expander having in combination a thin strip of sheet material bent into a ring with abutting ends, and two rings of elastic material located within said first mentioned ring, one edge of said strip being bent around one of the rings and the other edge of the strip being bent around the other ring, the rings of elastic material being arranged to break joints with the ring of sheet material at their abutting ends.

4. A piston packing expander having in combination a thin strip of sheet material bent into a ring with abutting ends, and two rings of elastic material located within said first mentioned ring, one edge of said strip being attached to one ring, the rings of elastic material being arranged to break joints with the ring of sheet material at their abutting ends.

5. A piston packing expander having in combination a thin strip of sheet material bent into a ring with abutting ends, and two rings of elastic material located within said first mentioned ring, one edge of said strip being attached to one ring and the other edge of the strip being attached to the other ring, the rings of elastic material being arranged to break joints with the ring of sheet material at their abutting ends.

[Claims 6 to 18 not printed in the Gazette.]

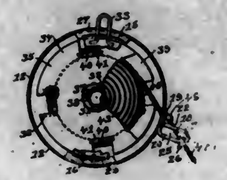
1,023,815. MANHOLE AND WELL FOR SUBWAYS. MICHAEL CLARKSON, Chicago, Ill. Filed Feb. 5, 1910. Serial No. 542,803. (Cl. 72—9.)



1. The combination with a well for subways, the upper edge of which terminates below the surface, of a reversible top-stone, having an opening therein the sides of which are beveled at the top and bottom and converge toward each other, and a cover fitting said opening and formed of concrete.

2. The combination with a well for subways, the upper edge of which terminates below the street datum, of a reversible top-stone having an opening therein which opening between the upper and lower surfaces of the top-stone is reduced in width from each surface toward the center of thickness of said stone, and a cover for said opening formed of cement.

1,023,816. HOLDER-REEL. CHARLES AUGUSTUS COGGESHALL, Providence, R. I. Filed Aug. 31, 1910. Serial No. 579,857. (Cl. 242—107.)

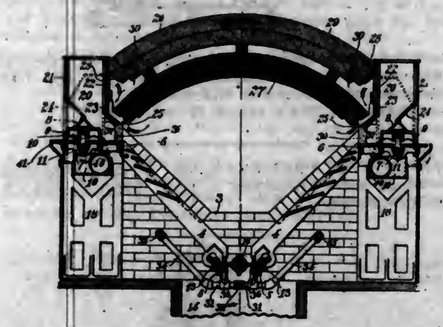


1. A holder-reel for eye-glasses and the like, comprising a casing having a key-hole opening, a spring actuated reel in the casing, a chain secured at its inner end to the reel and extending out through the key-hole opening on a line with the circumference of the reel, an enlargement on the chain adjacent its inner end and forming a check and a check operating device on the holder-reel over the key-hole opening in the casing adapted to coact with the check on the chain and constructed to have a base in which is a key-hole opening, two arms extending out from the base, an opening, two spaced arms, a narrow space, a space between the arms and a ring secured to the outer portion of the check operating device.

2. A holder-reel for eye-glasses and the like, comprising a casing, a spring actuated reel in the casing, a chain secured to the reel and extending out through an opening in the casing, a check on the chain and a check operating device on the casing, constructed to have a first point of contact for the check, an opening for the check, a second point of contact for the check, a second opening for the check, a third point of contact for the check and a return opening for the check.

3. A holder-reel for eye-glasses and the like, comprising a casing, a spring actuated reel in the casing, a chain secured to the reel and extending out through a key-hole opening in the casing, a check on the chain and a check operating device on the casing constructed of wire bent to form a key-hole shaped base, then bent outwardly at approximately right angles to the base forming two arms, then over and apart and then toward each other forming an opening, then parallel with the first mentioned arms forming two spaced arms, then toward each other forming a narrow space and then the ends carried down against the inner part of the base, forming in the base an opening in front of the spaced arms, the first mentioned arms and the spaced arms forming a space between the same and a ring secured to the arms at the outer portion of the check operating device.

1,023,817. FURNACE. ORVILLE D. COTTON and HERBERT M. COTTON, Dayton, Ohio. Filed Feb. 15, 1911. Serial No. 608,832. (Cl. 110—29.)

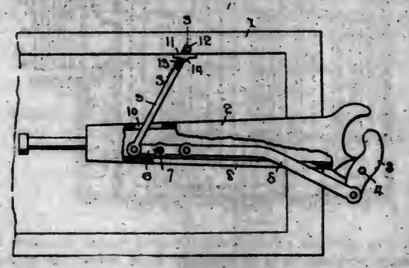


1. In a stoker furnace, the combination with a furnace including grates, a rear wall and coal magazines, of a main non-perforate steam-distribution pipe adapted to deliver steam at a point adjacent to said rear wall, a series of laterally extending perforated pipes adjacent to said rear wall and adapted to receive the steam from said main pipe and initially distribute it below the furnace grates adjacent to said rear wall, and to act on the slag tending to overhang said wall, and a longitudinal series of perforated steam distribution pipes extending forwardly below the grates and adapted to receive the steam from said laterally extending distribution pipes and to distribute it forwardly to the grates, whereby a steam distribution system is provided for effecting an initial delivery of steam at the rear wall below the grates, from which point it is distributed to the grates and wall at the rear portion of the furnace and thence forwardly underneath the surface of the grates, substantially as and for the purposes specified.

2. In a stoker furnace, the combination with a furnace including a rear wall, grate bearing, coal magazines, and a clinker bar, of a main steam feed pipe extending below said grates and adjacent to said rear wall, lateral extending perforated steam-distribution pipes lying below the grates and adjacent to said rear wall, said laterally extending perforated steam-distribution pipes lying below the grates and adjacent to said rear wall, said laterally extending pipes adapted to receive steam from said main feed pipe and initially distribute it at the rear of the furnace, outer perforated steam-distribution pipes extending longitudinally of the furnace below the grate bars, and perforated steam-distribution pipes inside of longitudinal grate bearing extending longitudinally of the furnace below the grates, said outer and inner longitudinally extending perforated pipes being adapted to distribute the steam to the clinker bar and grates forwardly of the point of its initial distribution, substantially as and for the purpose specified.

3. In a stoker furnace, the combination with a furnace having as component parts, a rear wall and grates, of a main steam-feed pipe adapted to deliver steam at a point adjacent to the rear wall, a laterally extending perforated pipe having its extended ends lying on inclines, said laterally extended pipe being adapted to receive steam from the main feed pipe, and initially distribute it below the grates adjacent to the rear wall 3, and a plurality of perforated steam pipes communicating with said initial distribution pipe and adapted to distribute the steam to the grates forwardly from the rear point of initial distribution, substantially as and for the purposes specified.

1,023,818. CAR-COUPLING. JOHN A. COWIE and JOHN C. MARSHALL, Summerset, Iowa. Filed Oct. 6, 1911. Serial No. 653,261. (Cl. 213—65.)



1. A car coupler comprising a draw head provided with an elongated slot on one side and a lever opening upon the opposite side, a knuckle pivoted to the draw head, a knuckle operating rod connected with the knuckle and adapted to work through the elongated slot in the draw head, a turn bar pivoted within the draw head and connected to the knuckle operating rod, a controlling lever connected to the turn bar and adapted to work through the lever opening in the draw head, and means for locking the parts against movement when the coupler is in closed position.

2. In a coupler for a car, a draw head adapted to be secured to the under side of a car, a turn bar carried within the draw head, a knuckle carried upon one end of the draw head, a connecting rod between the turn bar and the knuckle, a controlling lever connected with the turn bar for turning the bar and thus operating the knuckle through the connecting means, and means for locking the controlling means against accidental movement.

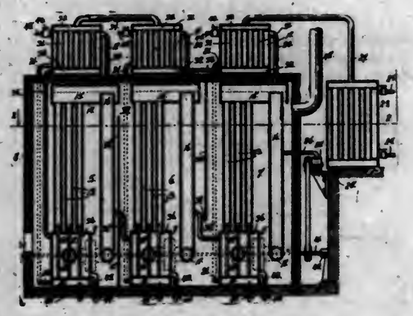
3. A coupler for cars comprising a draw head adapted to be secured to the under side of a car, a knuckle pivoted upon one corner of a projecting end of the draw head, a turn bar pivoted to the draw head, connections between the draw head and the knuckle, a controlling lever connected to the turn bar, a bracket secured to the under side of the car and depending therefrom, said bracket having an opening through which the lever is adapted to reciprocate, an operating and movement limiting handle carried by the controlling lever outwardly of the bracket, and a stop lug depending from the under side of the lever inwardly of the bracket and adapted for engagement thereagainst to prevent accidental turning of the turn bar.

1,023,819. POWER-PRODUCING PROCESS. PAUL DANCKWARDT, Galena, S. D. Filed Apr. 8, 1911. Serial No. 619,877. (Cl. 60—6.)

1. A process of producing power which consists in heating several circulating fluids and several gas-forming fluids to different temperatures, the gas-forming fluids having boiling points lower than the temperatures of the corresponding circulating fluids, causing the gases formed to react mechanically with the circulating fluids so that the latter will acquire velocity, utilizing the energy of the circulating fluids for the production of power, and condensing the gases in order to repeat the operation.

2. The process of producing power, which consists in introducing gas-forming fluids into several separate heated

bodies of circulating fluid having varying temperatures, thereby imparting motion to the latter, the gas-forming fluid introduced into each heated body of circulating fluid having a boiling point lower than the temperature of the said heated body of circulating fluid into which it is introduced, condensing the exhaust gases, and utilizing the energy of the motive fluid for the production of power, substantially as described.



3. The process of producing power which consists in heating portions of a circulating fluid below its boiling point, the temperature of the said portions gradually falling off, introducing into them portions of a mixture of other fluids, the boiling points of which are lower than that of the corresponding portions of the circulating fluid, thereby creating gas, condensing the gas continually, and utilising the gas pressure for the production of power.

4. The process of producing power which consists in heating circulating fluids and gas-forming fluids, the boiling points of the latter being lower than the temperatures to which the circulating fluids are heated, the temperatures of each gradually falling off allowing the fluids to react calorifically and mechanically on each other, so that the circulating fluids acquire velocity, condensing the exhaust gases, and utilising the energy of the moving fluids for the production of power.

5. The process of producing power which consists in heating a circulating liquid and a gas-forming fluid, the boiling point of the latter being lower than that of the former, allowing them to react calorifically and mechanically on each other, so that the circulating fluid acquires velocity, causing fresh amounts of gas-forming fluid of a lower boiling point than that of the first one to react calorifically and mechanically with fresh portions of circulating fluid, and a part of the old one, at a lower temperature than that of the first step, thereby creating more gas, repeating this as often as gas can be generated by the remaining heat, condensing the exhaust gases, and utilising the energy of the moving fluids for the production of power.

[Claims 6 to 11 not printed in the Gazette.]

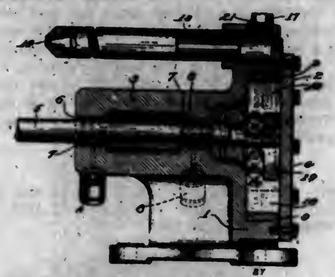
1,023,820. AIR-COMPRESSOR. WILBURN N. DENNISON, Merchantville, N. J., assignor to Victor Talking Machine Company, a Corporation of New Jersey. Filed Feb. 12, 1907. Serial No. 357,094. (Cl. 230—30.)

1. An air compressor having inlet and outlet ports, an elongated inlet duct having an inlet orifice with a diameter approximately equal to one quarter that of a transverse section of the duct.

2. An air compressor having inlet and outlet ports, an inlet chamber and an inlet duct opening into said chamber, said inlet duct having a reduced inlet orifice adapted to retard the inflow of air into said chamber, whereby a partial vacuum is formed in said chamber and duct.

3. An air compressor having an inlet duct provided with a reduced outer end and an opening for air in said outer end substantially smaller in area than the cross sectional area of said duct.

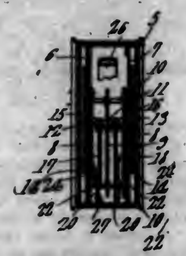
4. An air compressor having an inlet duct provided with a reduced outer end and an opening for air in said outer end substantially smaller in area than the cross sectional area of said duct, the opening in the end being less than half the area of the duct.



5. An air compressor having an inlet duct, provided with an inlet orifice substantially smaller in area than the cross sectional area of said duct.

[Claims 6 to 12 not printed in the Gazette.]

1,023,821. PRESSURE-GAGE. SAMUEL DINSMORE, Lyons, Kans. Filed Mar. 2, 1911. Serial No. 611,806. (Cl. 73—109.)



In a pressure gage, the combination with two axially alined spindles, an indicator carried by each, a gear also carried by each spindle, two spaced plates in which the respective spindles are journaled, two geared segments, one in mesh with each gear, an arm carried by each segment, a strip adjustably carried by the arm of each segment, a single pressure actuated member, and two links pivotally connected at the same point to the free end thereof and to their respective adjustable strips of the segments, one of said links being connected to the inner end of its strip and the other link being connected to the outer end of its strip, whereby the indicators are operated in opposite directions and in unison.

1,023,822. TEETHING-FINGER. ARTHUR DUBAY, Gardiner, Me. Filed July 13, 1910. Serial No. 571,872. (Cl. 128—28.)



A device of the class described comprising a supporting core of relatively hard material and having an encircling channel intermediate the ends, and a shell of relatively soft material bearing over the body between the channel and one end thereof and supported throughout thereby, the inner end of said shell being formed with an inwardly directed flange engaging in the channel, that portion of the supporting core covered by the shell being elliptical in section.

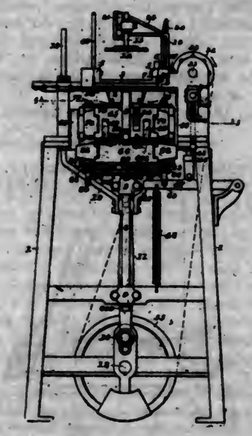
1,023,823. BUTTON FOR SUIT-CASE LOCKS. LOUIS M. DYSON, New Britain, Conn., assignor to The American Hardware Corporation, New Britain, Conn., a Corporation of Connecticut. Filed Feb. 24, 1912. Serial No. 679,685. (Cl. 70—27.)



1. In a suit case lock, a button having a hub formed from the metal displaced from the key hole and spun over to firmly secure a fastening plate in place, the fastening plate fitting over said hub and having a slot to register with the slot of the key hole in the button, and fingers projecting from the fastening plate for the purpose of securing the button to a locking bolt.

2. A button for a suit case lock having a hub formed from the metal displaced from the key hole and spun over to hold a fastening plate in place, the fastening plate fitting over said hub and having a slot wider than the slot of the key hole in the button, lugs projecting from said spun over portion into the space between the slot in the fastening plate and the slot in the key hole to hold said fastening plate against turning movement, and fingers projecting from the fastening plate to form a securing means for securing the button to a locking bolt.

1,023,824. WRAPPING-MACHINE. BRUCE V. EDWARDS, Bayonne, N. J. Filed Apr. 9, 1909. Serial No. 488,794. (Cl. 93—2.)



1. In a wrapping machine the combination of folding leaves or plates, folding flaps movable across said leaves or plates toward and from each other, and a carrier adapted to convey articles to be wrapped into position between said leaves or plates and provided with means for operating said flaps.

2. In a wrapping machine the combination of folding leaves or plates, folding flaps movable across said leaves or plates toward and from each other, a carrier adapted to convey articles to be wrapped into position between said leaves or plates and provided with means for operating said flaps, and means for removing packages from the wrapping mechanism.

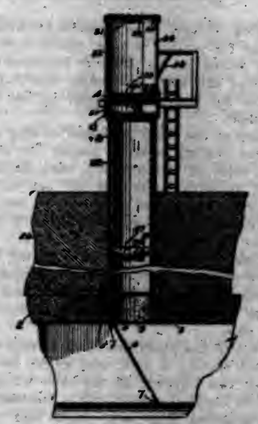
3. In a wrapping machine the combination of folding leaves or plates, folding flaps movable across said leaves or plates toward and from each other, a carrier adapted to convey articles to be wrapped into position between said leaves or plates and provided with means for operating said flaps, delivery mechanism for removing wrapped packages from the machine, and means for sealing the wrappers on the packages.

4. In a wrapping machine the combination of folding leaves or plates, folding flaps movable across said leaves or plates toward and from each other, and folding flaps movable toward and from each other between and lengthwise of said leaves or plates, and a carrier adapted to convey articles to be wrapped into position between said leaves or plates and provided with means for operating said flaps.

5. In a wrapping machine the combination of side folding leaves or plates, top folding flaps movable across said leaves or plates toward and from each other, bottom and side-end folding flaps, and a carrier adapted to convey articles to be wrapped into position between said leaves or plates and provided with means for operating said flaps.

[Claims 6 to 119 not printed in the Gazette.]

1,023,825. CAISSON. OLIVER CROMWELL EDWARDS, Jr., Troy, N. Y. Filed May 29, 1908. Serial No. 435,776. (Cl. 61—3.)



1. In an air lock, the combination with an upper lock section having a door-way, of a door slidingly mounted for closing said door-way, a bracket fixed to the lock section, and a pivotal connection between the door and said bracket for guiding the door in its sliding movement.

2. In combination, an air lock section having an imperforate top, a guide plate pivotally connected thereto, and a slidingly mounted door connected with said plate for being guided in its sliding movement.

3. In combination, an air lock section, a bracket depending therein, a door slidingly mounted in said section, and guiding means for the door connected to the door and pivotally connected to said bracket.

4. In combination, an air lock section, a vertically arranged door mounted to slide horizontally, a bracket depending from the top of the section, and means pivotally connecting the door with said bracket for guiding the door in its sliding movement.

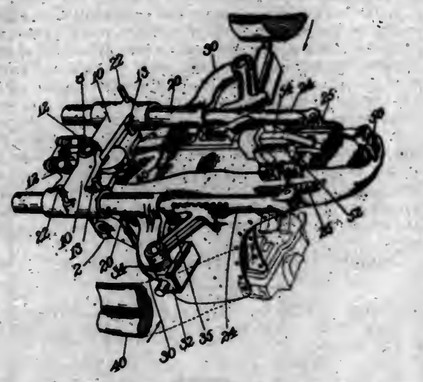
5. In combination, upper and lower air lock sections, a diaphragm plate therebetween formed with a passage opening, a door for closing said opening, and an arm movably connected to the door for closing the same.

[Claims 6 to 35 not printed in the Gazette.]

1,023,826. MACHINE FOR USE IN THE MANUFACTURE OF BOOTS AND SHOES. ARVID L. ENGBERG, Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 23, 1908. Serial No. 464,137. (Cl. 12—4.)

1. A machine of the class described having in combination means for resting a shoe, and measuring devices

supported for movement into and out of operative relation to the opposite sides of the shoe.



2. A machine of the class described having in combination means for resting a shoe, means for pulling the upper having provision for manual movement to adjust the upper about the last, and gages for indicating the relation of the tip line of the upper to the last at the sides of the shoe.

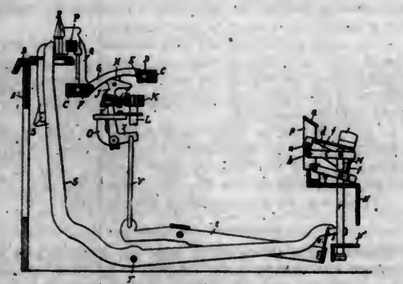
3. A machine of the class described having in combination means for resting a shoe, means for gripping the upper at the sides of the forepart, said machine having provision for relative movement of the last and the gripping means to adjust the upper on the last, and gages arranged to indicate at the opposite sides of the last the relation of the tip line to the last.

4. A machine of the class described having in combination means for resting a shoe, and gages arranged to measure at each side of the shoe from the heel end face of the last forwardly to indicate the relation of tip line to the length of the shoe.

5. A machine of the class described having in combination means for resting a shoe, and gages located at opposite sides of the forepart of the shoe while it is sustained by said resting means and a member which is operatively connected with said gages and is arranged to position the gages lengthwise of the shoe by contact with one end face of the last.

[Claims 6 to 35 not printed in the Gazette.]

1,023,827. TABULATING DEVICE FOR TYPE-WRITING MACHINES. RUDOLF FALLENSTEIN, Marseille, France, assignor to The Monarch Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed June 25, 1910. Serial No. 568,867. (Cl. 197—177.)



1. In a typewriting machine and tabulating mechanism, the combination of a plurality of column stops, a plurality of denominational stops, keys, and connections between said keys and said denominational stops for affording relative movement between said keys and said denominational stops enabling said keys to variably operate said denominational stops to coöperate with preselected column stops, intervening column stops being skipped or passed, said keys being mounted independently of said connections.

2. In a typewriting machine and tabulating mechanism, the combination of a carriage, a set of column stops, a set of denominational stops, releasing means for said carriage, keys, and connections between said keys and said denominational stops, said keys being mounted independently of said connections and said connections affording a relative movement between said keys and said denominational stops enabling said keys to variably actuate said releasing means.

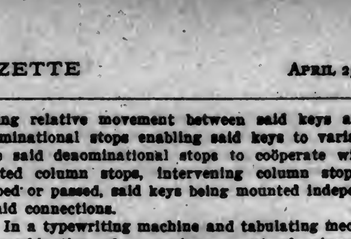
3. In a typewriting machine and tabulating mechanism, the combination of a carriage, a set of column stops, a set of denominational stops, releasing means for said carriage, keys, and connections between said keys and said denominational stops, said keys being mounted independently of said connections and said connections affording a setting movement of said keys independent of said denominational stops, said keys thereafter operating to actuate said denominational stops and variably release the carriage.

4. In a typewriting machine and in tabulating mechanism, the combination of a plurality of column stops, a coöperating stop, carriage releasing devices, and key controlled means for variably setting certain of said releasing devices to time the release of the carriage and cause said coöperating stop when actuated to co-act with a predetermined column stop, the keys of said means and the settable releasing devices being mounted independently of each other.

5. In a typewriting machine and in tabulating mechanism, the combination of a set of column stops, a set of key controlled denominational stops, releasing devices, and means controlled by the keys of said denominational stops for setting certain of said releasing devices independently of said denominational stops, the keys of said means and the settable releasing devices being mounted independently of each other.

[Claims 6 to 13 not printed in the Gazette.]

1,023,828. PRINTING-FRAME. DULANEY W. FAULK, Coatesville, Pa. Filed Nov. 2, 1910. Serial No. 590,304. (Cl. 95—77.)

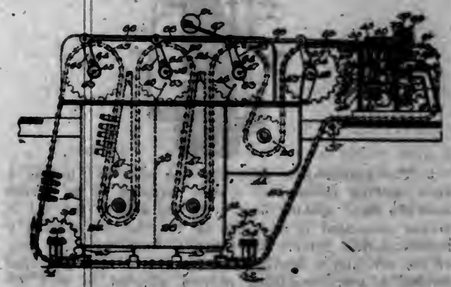


1. In a printing device the combination with a frame having an opening therethrough, of an L-shaped bar adjacent said opening, means to hold said bar in engagement with the frame under pressure, collars pivoted to the bar, an eccentrically mounted shaft extending through said collars adapted to raise the bar when the shaft is rotated, a clamp hinged to said frame, means to hold said clamp in its lowered position under tension and a spring adapted to swing the clamp upwardly when the holding means is released.

2. A printing frame comprising a base having an exposing opening, a block transversely secured to the base in position parallel with and at a short distance from one end of said opening, a clamp of substantially the thickness of the block adapted to cover the opening, having one end adjacent to the inner side of said block, a three-part hinge having one leaf secured to the clamp, a second leaf connected to the first by a pintle lying over the space between the clamp and block said second leaf being adapted to lie upon the top of the block, and the third leaf joined to the second by a pintle at the outer edge of the block and secured to the outer side of the block, the second leaf having an opening through it, a screw extended through said opening into the block, and a spring coiled around the body of the screw between its head and the leaf.

3. A printing frame comprising a base having an exposing opening, right angular shaped springs secured to one longitudinal side of the base extending upward and having their upper portions to substantial parallelism with the top of the base and slightly projecting over the exposing opening, an L shaped bar above the base having its longitudinal portion projecting over and parallel with one side of the opening and secured under and to the overhanging ends of the springs, bearings mounted on the base, a shaft above and parallel with the longitudinal portion of the L shaped bar and eccentrically journaled in said bearings, collars around the shaft having downward extensions, and ears on the L shaped bar, and pintles parallel with the shaft pivotally connecting the extensions with the ears.

1,023,829. COMBINED BOTTLE SOAKING, RINSING, AND CLEANING MACHINE. CHARLES E. FELT, Chicago, Ill. Filed Oct. 17, 1908. Serial No. 458,181. (Cl. 141—7.)

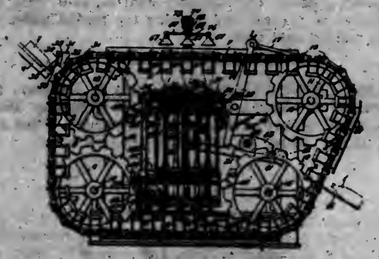


1. In an apparatus of the character described, the combination with a plurality of immersing tanks, of an endless chain conveyer, a plurality of sprocket wheels for movably supporting the conveyer, each of said sprockets having a ratchet secured thereto, pawl-carrying arms oscillatable respectively about the axes of said sprockets, a plurality of links connecting the outer ends of the pawl-carrying arms whereby said arms are caused to operate in unison, a bottle cleaning device, and a registering arm moving in unison with the pawl-carrying arms and engaging the links of said conveyer to cause the bottles to register with said bottle-cleaning device.

2. In an apparatus of the character described, the combination with a plurality of immersing tanks, sprockets mounted within said tanks, sprockets above the tanks, a ratchet lever for each of the latter said sprockets, a plurality of alined links connecting the outer ends of said ratchet levers, means for imparting a reciprocatory movement to said links, an endless conveyer supported by said sprockets, said conveyer having a horizontal portion extending from the last ratchet lever, a bottle cleaning mechanism arranged below said horizontal portion, and a registering arm pivotally connected to the last ratchet lever, said arm being provided with an extremity adapting it to engage the links of the endless conveyer.

1,023,830. BOTTLE-WASHING MACHINE. CHARLES E. FELT, Chicago, Ill. Filed Apr. 1, 1909. Serial No. 487,121. (Cl. 141—7.)

1. In a machine for the purpose described, the combination with an endless belt conveyer, of bottle holders carried by said conveyer, means for imparting intermittent motion to said conveyer, cleaning devices arranged to act upon the bottles at their periods of rest, a plurality of coupling caps below the bottle holders, and a plurality of caps above the bottle holders for resiliently clamping the bottles therebetween during the operation of the cleaning device, a cross bar from which said caps above the bottle holder are suspended resiliently, and means for adjusting both ends of said cross bar simultaneously with respect to the coupling caps below the bottle holder.



2. In a machine for the purpose described, the combination of an endless belt conveyer, bottle holders projecting inwardly from the inner face of the conveyer, said holders being adapted to carry the bottles inverted with their bottoms substantially flush with the outer face of the conveyer, means for delivering bottles endwise to said holders, said means being operable by each of said holders, cleaning devices coöperatively related to and encompassed by the conveyer, and means for alternately imparting movement to said conveyer and actuating said cleaning devices.

3. In a machine for the purpose described, the combination of an endless belt conveyer, bottle holders projecting inwardly from the inner face of the conveyer, said holders being adapted to carry the bottles inverted with their bottoms substantially flush with the outer face of the conveyer, means for delivering bottles endwise to said holders, said means comprising a chute, a plurality of pockets downwardly inclined for discharging bottles by gravity, and releasable means for retaining the bottles in said pockets until said pockets and bottle holders are in register, the last said means being operated by said endless belt conveyer to release the bottles from said pockets.

4. In a machine for the purpose described, the combination with an endless conveyer for bottles arranged in a vertical plane, said conveyer being adapted to receive bottles endwise in inverted position, of means for automatically feeding the bottles endwise thereto, said means comprising a chute arranged adjacent the conveyer, a second conveyer adapted to feed the bottles endwise under gravity to said chute, and provided with means for controlling the feed of said bottles, and means operated by the first said conveyer for automatically operating said feed controlling means.

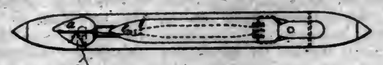
5. In a machine for the purpose described the combination of an endless series of bottle holders, means for imparting intermittent travel thereto, cleaning and rinsing devices for engaging the bottles while held in said holders, a feed chute arranged adjacent said holders for feeding the bottles thereto, means for temporarily detaining the bottles in the feed chute, and means operatively related to the said series of holders for automatically releasing said bottle detaining means.

[Claim 6 not printed in the Gazette.]

1,023,831. MECHANISM FOR THREADING SHUTTLES. JOHANNES GABLER, Mülhausen, Germany. Filed June 28, 1906. Serial No. 323,851. Renewed Sept. 8, 1911. Serial No. 648,402. (Cl. 139—46.)

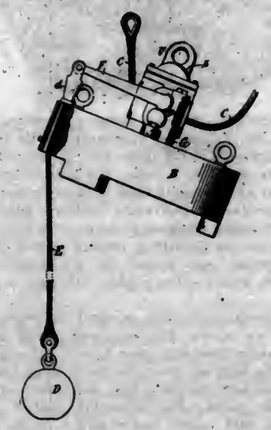
In a threading mechanism for loom shuttles, the combination of a threading block consisting of a length-wise slotted guide casing and a short tube fixed to said casing and extending in a direction at right angles to the slot of

the same, said tube having a helical slot of which the entrance opening is on the lower side of the shuttle block and tube and which extends diagonally upwardly and



outwardly toward the delivery end of said tube and adapted to be threaded by drawing the thread under and to the rear of said tube.

1,023,832. MINE-ANCHOR. CHARLES R. GABRIEL, New York, N. Y., assignor to E. W. Bliss Company, Brooklyn, N. Y., a Corporation of West Virginia. Filed June 10, 1910. Serial No. 566,233. (Cl. 102—3.)



1. The combination of an anchor, mooring cable and grip mechanism, the latter having a transverse passage through which the cable may play as the anchor descends, and having an eye for the cable arranged to one side of the center of gravity of the anchor, whereby, during launching, the anchor is presented obliquely to facilitate its descent.

2. The combination of an anchor, a grip mechanism applied thereon having an opening transversely therethrough, and a mooring cable passing through said opening, and means applied to the slack of said cable for keeping it above the anchor.

3. The combination with an anchor of a grip casing, having a transverse passage therethrough for the mooring cable above the anchor, gripping jaws therein, a slide movable in said casing and adapted to engage and operate said jaws, and a spring seated wholly in said casing for moving said slide whereby the casing and gripping mechanism are distinct from the anchor.

4. The combination of a grip casing, oscillatory shafts seated therein geared together, and formed with gripping jaws, and a key engaging grooves in said shafts to prevent endwise displacement thereof.

5. The combination of a grip casing, oscillatory gripping jaws mounted therein formed with intermeshing gear teeth, a sliding tubular plunger having rack teeth meshing with the gear teeth on one jaw for turning said jaws, and a spring housed within said plunger.

[Claim 6 not printed in the Gazette.]

1,023,833. FLUSH CAR-DOOR. FREDERICK F. GAINES, Savannah, Ga. Filed Feb. 6, 1911. Serial No. 606,762. (Cl. 20—23.)

1. The combination with the side of a car having a door opening therein, of a door adapted to be moved into the door opening flush with the side of the car, a keeper on the side of the car adjacent to the door opening, a locking lever mounted on the end portion of the door, said locking lever having an eccentric hook at its pivot end adapted to engage said keeper so as to effect the movement of the door into the door opening when the locking lever is moved in one direction, said eccentric hook being also adapted to bear against the keeper to move the door outward when the locking lever is moved in the reverse direction, and a lateral projection on said lever separate from said eccentric hook but correlated therewith and adapted to coöperate with the outer face of the lever-engaging portion of the keeper to effect the movement of the door out of the door opening when the lever is moved in said reverse direction.



2. The combination with the side of a car having a door opening therein, of a door adapted to be moved into the door opening flush with the side of the car, a keeper embedded in the side of the car and having a lever-engaging portion substantially flush with the side of the car, and a locking lever pivoted on said door and having a keeper-engaging portion adapted to pull the door into the door opening when it is moved into one of its positions and being also adapted to move the door outward when it is moved to its reverse position, said lever having a separate member in coöperative relation to said keeper-engaging portion and adapted to bear against the outer face of said lever-engaging portion of the keeper when the lever is moved to said reverse position to effect the withdrawal of the door from the door opening.

3. In a flush car door, the combination with a car door adapted to be moved into the door opening flush with the side of the car, of guide devices on the car adjacent to one side of the door opening at the top and bottom respectively, means on the end portion of the door adapted to engage said guide devices whereby that end portion of the door is moved into and out of the door opening as the door is respectively moved into and out of closed position, a recessed keeper countersunk into the side of the car adjacent to the opposite side of the door opening, said keeper having a horizontal bar across its opening substantially flush with the side of the car, a locking lever pivoted horizontally on the adjacent end portion of the door, said locking lever having an eccentric hooked portion adapted to engage the inner face of the cross bar of said keeper whereby that end portion of the door is moved into the door opening when the lever is moved in one direction, said hooked portion being adapted to bear against the bottom of the keeper to move the door outward when said lever is moved reversely, and a lateral projection on said locking lever having a shoe at its end adapted to bear against the outer face of said bar on the keeper so as to move that end of the door out of the door opening and the hooked portion of the lever free from the keeper.

4. The combination with the side of a car having a door opening therein, and a door adapted to be moved into the door opening substantially flush with the side of the car, of a recessed keeper countersunk into the side of the car adjacent to the side of the door opening, said keeper having a horizontal bar across its opening, a locking lever pivoted horizontally on the end of the door and having an eccentric hooked portion adapted to engage the inner face of the cross bar whereby the door is moved into the door opening when the lever is moved in one direction and also adapted to bear against the bottom of the keeper to move the door outwardly when the lever is moved reversely, said lever also having a laterally projecting shoe adapted to bear against the outer face of said cross bar when the lever is moved in said reverse direction whereby the door is moved out of the door opening and the hooked portion of the lever is moved free of the keeper, substantially as described.

1,023,834. BOOKBINDING. JOHN G. GABEIS, Philadelphia, Pa. Filed Mar. 3, 1911. Serial No. 612,047. (Cl. 11—18.)



1. A book cover having a board on one side, a back, a forward extension of the material of said back on the opposite side, a section of material folded alternately in opposite directions to form the other side of the cover, a partition and a lining for said extension.

2. A book cover having a board on one side, a back, a forward extension of the material of said back on the opposite side, a section of material folded alternately in opposite directions to form the other side of the cover, a partition and a lining for said extension, and gussets securing said extension to the other side of said cover, at the ends thereof.

3. A book cover having a board on one side, a back, a forward extension of the material of said back on the opposite side, a section of material folded alternately in opposite directions to form the other side of the cover, a partition and a lining for said extension, gussets securing said extension to the side of said cover at the ends thereof, a flap secured to said cover side, and means to secure the outer portion of said flap to said extension.

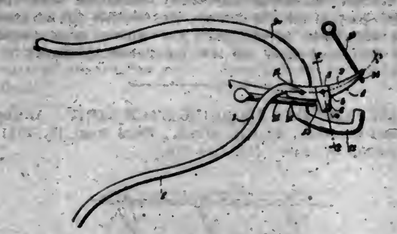
4. A book having flanges at the side edges thereof, one of said flanges being of greater width than the other, a cover board on the side of said book having the smaller of said flanges, and a forwardly opening pocket formed of layers of folded material on the opposite side of said book and abutting the greater of said flanges.

5. A book having flanges at the side edges thereof, one of said flanges being of greater width than the other, a cover board on the side of said book having the smaller of said flanges, a forwardly opening pocket formed of layers of folded material on the opposite side of said book and abutting the greater of said flanges, and a flap for said pocket secured to one of said layers and extending freely therefrom.

[Claims 6 to 12 not printed in the Gazette.]

1,023,835. SAW-SET. WILLIAM R. GARRETT, Chavies, Ala. Filed Dec. 29, 1910. Serial No. 599,817. (Cl. 76—71.)

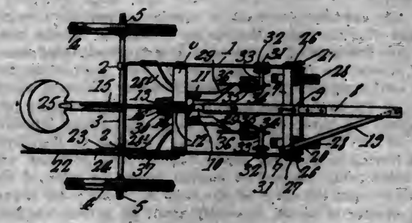
1. In a saw set, the combination with a stock having a shoulder formed on one face thereof, of a saw tooth retaining loop secured to said stock and adapted to be positioned over and to retain a saw tooth with its root portion parallel to said shoulder, an adjusting screw threaded into a tapped aperture in said stock, said screw projecting upwardly from said first named face, and means for applying force to the blade of said saw to rotate said blade about the root of said tooth as an axis.



2. In a saw set, the combination with a stock having a transverse shoulder formed on one face thereof, of a saw tooth retaining loop adapted to secure a saw tooth with its root portion lying over said shoulder, said loop being lined with soft metal an adjusting screw threaded into a tapped aperture in said stock and extending outwardly from said first named face, an adjustable stop secured in said stock and confronting the outer opening of said loop, and a lever pivoted to said stock and adapted to apply force to said blade to rotate the same with relation to said tooth.

3. A saw set, comprising a reversely curved handle portion terminating at one end in a head portion forming a stock, said stock being cut away intermediate its length to form a transverse shoulder, a saw tooth engaging loop secured to said stock adjacent said shoulder, an adjusting screw threaded into a tapped aperture in the free end of said stock and extending outwardly therefrom, an adjustable plug passed through an aperture in said arm and with its outer end opposed and adjacent to said loop, and a lever pivoted to said stock adjacent the arm end thereof and co-acting with said arm to form handles, said lever having a U shaped terminal extending beyond the pivotal point and adapted to bear against the blade of the saw to swing the same when the handles are moved toward each other.

1,023,836. BEET-PULLER. SQUIRE RALPH GIDDINGS, Timnath, Colo. Filed Dec. 5, 1910. Serial No. 595,650. (Cl. 55—106.)

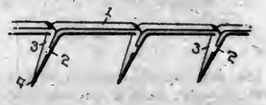


1. A beet puller comprising an approximately rectangular frame, wheels supporting the frame, standards attached to the sides of the frame, digging shares connected to said standards, standards adjustably connected with the sides of the frame and having inwardly disposed portions which terminate in downwardly disposed pintles, caster frames journaled upon the pintles of the last mentioned standards and colters journaled in said caster frames and located in advance of the digging shares and adapted to cut incisions in the soil beyond the outer sides of the digging shares.

2. A beet puller comprising an approximately rectangular frame, wheels supporting the same, standards attached to the frame, digging shares carried by the

standards, standards adjustably connected with the sides of the frame and located in advance of the first mentioned standards, the last mentioned standards having inwardly disposed portions which terminate in downwardly disposed pintles, caster frames journaled upon the pintles, colters journaled in the caster frames, and located in advance of the digging shares and beyond the sides thereof, standards adjustably connected with the forward portion of the frame and located in advance of the standards which carry the colters and ground wheels journaled upon the last mentioned standards.

1,023,837. LATHING-SECURING TACK-STRIP. ALMER HOMER GILMORE, Seattle, Wash. Filed Aug. 11, 1911. Serial No. 643,549. (Cl. 72—118.)



1. A lathing securing tack strip formed of a continuous wire looped to form parallel legs, the lower ends of said legs being pointed, and a tongue carried by one leg and extending around and disposed substantially flush with the other leg to lock said legs together.

2. A tack strip composed of a continuous wire having tongues pressed outwardly thereof, said wire being looped adjacent the tongues into pairs of parallel legs, the lower ends of said pairs of legs being pointed, each of the tongues being integral with one leg of each pair of legs and surrounding and embedded in the opposite leg, each pair of legs constituting a tack tapering to a sharp point, said tacks being of circular form in cross section.

1,023,838. CAN-OPENER. WALTER P. GISSKE, Los Angeles, Cal. Filed June 21, 1911. Serial No. 634,606. (Cl. 220—6.)



1. In combination with a can body having a cover placed over its end, a depression formed in the can body beneath the edge of the cover, and a cover engaging member pivoted to the can body on a pivot parallel to the can wall within the depression and having a portion which lies wholly within the depression and is covered by the edge of the cover and having a portion which projects out of the depression and beyond the edge of the cover and having a shoulder separating the two portions, the shoulder being adapted to engage under the edge of the cover to raise the cover off the body when the cover engaging member is moved upwardly about its pivotal support.

2. In combination with a can body having a cover placed over its end, a depression formed in the can body, the depth of said depression being perpendicular to the surface of the can body, lateral depressions on opposite sides of the first mentioned depression and on a common axis parallel to the edge of the can over which the cover fits, the cover fitting down over the edge of the can over the depression therein, and a cover engaging member having its upper end in said depression under the can cover and having lugs on its end engaging in the said lateral depressions, the lower end of the cover engaging member projecting downwardly alongside the can body and being offset from the upper portion to form an upwardly facing shoulder directly beneath the can cover edge.

1,023,839. TRANSFER MECHANISM FOR CALCULATING-MACHINES. JULIUS GRABER, New York, N. Y. Filed Oct. 21, 1911. Serial No. 655,953. (Cl. 235—133.)



1. In a device of the character described, a pinion, a finger adapted to engage the same, a slidable member operatively connected to said finger, a shipping lever engaging said member, a trigger actuating said lever, and a tappet adapted to engage said trigger.

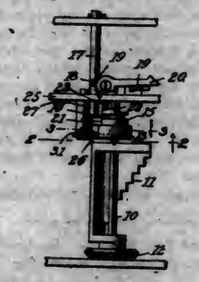
2. In a device of the character described, a grooved hub, a finger carried thereby, a fork engaging the hub groove, a slidable member carrying said fork, a shipping lever engaging the slidable member, a trigger actuating said lever, and a tappet adapted to engage the trigger.

3. In a device of the character described, a recessed block, a pin traversing the block recess, a shipping lever accommodated within said recess and turning on the pin, said lever being provided with a saddle-shaped section, and a spring secured to the block and adapted to engage said saddle shaped section.

4. In a device of the character described, a recessed block, a pin traversing the block recess, a shipping lever accommodated within said recess and turning on the pin, said lever being provided with a saddle-shaped section, a spring secured to the block and adapted to engage said saddle shaped section, a notched slidable member engaged by the lever, a fork on said member, a grooved hub engaged by the fork, a finger on the hub, and a pinion adapted to be engaged by said finger.

5. In a device of the character described, a block having a recess and a slot, a lever fulcrumed to the block and accommodated within the recess, said lever having a saddle-shaped section, a spring fitted into the block-slot and having a V-shaped portion that engages the saddle-shaped lever-section, a trigger actuating said lever, a notched slidable rod engaged by the lever, a slidable hub operatively connected to said rod, a finger on said hub, a pinion adapted to be engaged by said finger, and a registering dial actuated by said pinion.

1,023,840. TRANSFER MECHANISM FOR CALCULATING-MACHINES. JULIUS GRABER, New York, N. Y. Filed Dec. 15, 1911. Serial No. 665,902. (Cl. 235—133.)



1. In a device of the character described, a rotatable shaft, a transfer finger slidably mounted thereon, means

for shifting said finger on said shaft, and means for locking the finger against return to its initial position.

2. In a device of the character described, a rotatable shaft, a transfer finger slidably mounted thereon, means for shifting said finger on said shaft, and a latch for locking the finger against return to its initial position.

3. In a device of the character described, a rotatable shaft, a mutilated barrel slidable thereon, a transfer finger carried by the barrel, means for shifting the barrel on the shaft, and a latch coöperating with said barrel.

4. In a device of the character described, a rotatable shaft, a mutilated barrel slidable thereon, a transfer finger carried by the barrel, means for shifting the barrel on the shaft, and a spring-influenced latch coöperating with said barrel.

5. In a device of the character described, a rotatable shaft, a mutilated barrel slidable thereon, a transfer finger carried by the barrel, means for shifting the barrel on the shaft, a fixed stud, and a spring-influenced latch oscillatively mounted thereon and adapted to be engaged by the barrel.

[Claim 6 not printed in the Gazette.]

1,023,841. KEY MECHANISM FOR CALCULATING-MACHINES. JULIUS GRABER, New York, N. Y. Filed Dec. 26, 1911. Serial No. 667,576. (Cl. 235—130.)



1. In a device of the character described, a row of depressible keys, a train of links arranged in proximity thereto, and means intermediate said keys and links for maintaining the keys in their lowered position.

2. In a device of the character described, a row of depressible keys, a train of links arranged in proximity thereto, pivoted arms engaging said links, and means intermediate said keys and links for maintaining the keys in their lowered position.

3. In a device of the character described, a row of depressible keys having depending shanks, noses on said shanks, pins adapted to engage said noses, and links connecting said pins.

4. In a device of the character described, a row of depressible keys having depending shanks, noses on said shanks, pivoted arms arranged in proximity to the shanks, pins carried by the arms and adapted to engage the noses, and links connecting said pins.

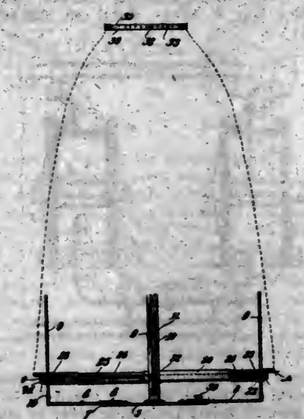
5. In a device of the character described, a row of depressible keys having depending shanks, noses on said shanks, pivoted arms arranged in proximity to the shanks, pins carried by the arms and adapted to engage the noses, links connecting said pins, and a spring operatively connected to said links.

[Claims 6 to 10 not printed in the Gazette.]

1,023,842. SKIRT-MARKER. ALICE A. HALL, Hollywood, Cal. Filed Jan. 30, 1911. Serial No. 605,514. (Cl. 78—48.)

1. A skirt marker comprising flat sections adapted to rest on the floor and capable of radial adjustment toward and from a common center, a socket upon each section opening radially outward, an L-shaped bracket whose inner arm removably enters said socket and whose upright arm is vertically slotted, a stretcher consisting of two members of L-shaped cross section and of equal curvature throughout their length, one member having its upright portion longitudinally slitted and sliding within the upright portion of the other member, a screw bolt passing through the inner end of the solid member, the slot in the other member, and the slot in the bracket, and a wing nut on its inner end.

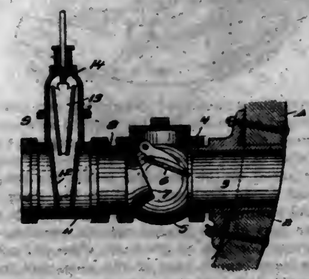
2. In a skirt marker, a stretcher made in sections each consisting of a solid member and a longitudinally slotted member telescoping therewith in a horizontal direction, a base made in sections radially adjustable from and toward a common point, a bracket having an upright portion carried by each base section, and means for securing each stretcher section to the upright portion of said bracket at a desired height and for simultaneously holding the members of the stretcher in their horizontally adjusted position; of a band for surrounding the lower edge of the skirt and binding it against the upright portions of the various stretcher-members beneath their horizontal portions.



3. In a skirt marker, the combination with a stretcher capable of distention in a horizontal plane, of a base upon which the wearer stands, L-shaped brackets having their lower arms removably secured to said base and their upright arms slotted, and unitary means engaging the slots therein for simultaneously holding the stretcher distended and supporting the same at the desired height from the base in the length of said slots.

4. In a skirt marker, the combination with stretcher sections each consisting of a horizontal portion and an upright portion depending from the inner edge of said horizontal portion, the upright portion of the outermost member being slotted longitudinally, and an upwardly projecting flange extending from the lower edge of one of said members, the said members being adjustable longitudinally upon each other, and means for supporting them; of a band for surrounding the lower edge of a skirt and binding it against the upright portions of the various members beneath their horizontal portions and above said flange.

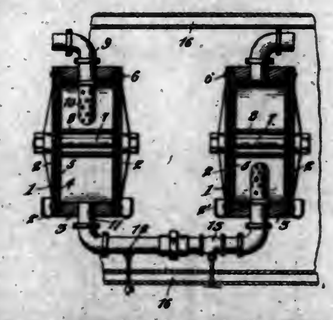
1,023,843. BILGE-DISCHARGING DEVICE. JOHN J. HALL, Bucksport, Me. Filed Feb. 16, 1909. Serial No. 478,174. (Cl. 114—183.)



A bilge discharging device consisting of a tubular outlet member adapted to be secured to a ship hull, a valve cas-

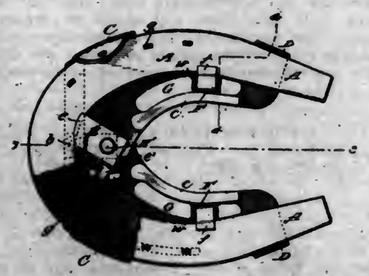
ing threaded on said member and provided with an inclined valve seat, a check valve pivoted in said casing to engage said valve seat and adapted to occupy when in a closing position an inclined relation to said valve casing and adapted to open outwardly of said valve seat, a cap threaded on said valve casing above said valve, a second valve casing threaded on the first valve casing and provided with downwardly converging valve seat guides, a valve V-shape in cross section movable between the valve seat guides and means for forcing the last valve in closing position.

1,023,844. WAX-PRESS. JULIUS HANSEN, Texas City, Tex. Filed May 6, 1911. Serial No. 625,585. (Cl. 210—13.)



A wax press comprising in combination a cylinder, having perforated end plates disposed relatively far apart, perforated metallic sheets disposed adjacent to said plates but spaced sufficiently apart therefrom to permit oil to flow therebetween, the perforations in said plates and sheets being out of registry with one another, straining members of fabric disposed on the inner side of said sheets and forming linings in the cylinder, an inlet and outlet for said cylinder, a strainer on the end of the inlet and extending therefrom into the central portion of said cylinder, said inlet and outlet being disposed in alinement with one another and in the side portions of said cylinder.

1,023,845. ANTISLIPPING OVERSHOE FOR HORSES. ARLINGTON L. HARDISTY, Silver Spring, Md. Filed Dec. 18, 1911. Serial No. 666,385. (Cl. 168—30.)



1. An overshoe attachment comprising two unitary side sections hinged at the toe about a vertical axis and having on the outer edge upturned flanges adapted to engage the outer edge of the horse's shoe and hoof, a toe locking member attached to the overshoe inside the horse's shoe and adapted to be projected against the inner edge of the shoe and locking bolts with overlapping heads arranged in the rear part of the hinged unitary overshoe sections inside the rear portions of the horse shoe and adapted to engage the inner, upper edge of the shoe, and means for adjusting said bolts in the unitary side sections longitudinally along the inner edges of the shoe.

2. An overshoe attachment having on its outer edges upturned flanges adapted to engage the outer edge of the horse's shoe and hoof, a toe locking member arranged in the overshoe inside the horse shoe and adjustable to and from the shoe, said toe locking member having a flange adapted to penetrate the space between horse shoe and hoof, an axial tightening bolt for the toe locking member, a rigid offsetting arm for said member and a guide in the overshoe for holding said arm.

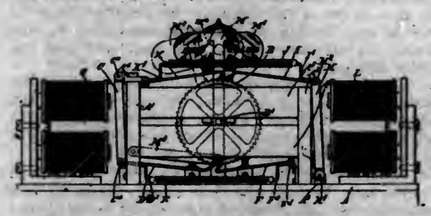
3. An overshoe attachment having on its outer edges upturned flanges adapted to engage the outer edge of the horse's shoe and hoof, a toe locking member arranged in the overshoe inside the horse shoe and adjustable to and from the shoe, said toe locking member having a flange adapted to penetrate the space between horse shoe and hoof, an axial tightening bolt for the toe locking member, a rigid offsetting arm for said member and a guide in the overshoe for holding said arm, said guide being formed by a slot in the overshoe and the arm being bent and extended through said slot and provided with a retaining head.

4. An overshoe attachment having on its outer edges upturned flanges adapted to engage the outer edge of the horse's shoe and hoof, a toe locking member arranged in the overshoe inside the horse shoe and adjustable to and from the shoe, said toe locking member having a flange adapted to penetrate the space between horse shoe and hoof, an axial tightening bolt for the toe locking member, a rigid offsetting arm for said member and a guide in the overshoe for holding said arm, a washer between the head of the bolt and the overshoe and the adjacent faces of the washer and overshoe being serrated to interlock.

5. An overshoe attachment having on its outer edges, upturned flanges, a toe locking member arranged in the overshie inside the horseshoe and adjustable to and from the shoe, an axial tightening bolt, a rigid offsetting stay arm for the toe locking member engaging the overshoe at one side of the axial bolt.

[Claims 6 to 11 not printed in the Gazette.]

1,023,846. APPARATUS FOR USE IN SYNCHRONOUSLY OPERATING COMBINED KINEMATOGRAPHS AND SOUND-PRODUCTION APPARATUS. CECIL MILTON, HEPWORTH, London, England. Filed June 23, 1909. Serial No. 503,902. (Cl. 177—337.)



1. The combination of a kinematograph and a device reciprocated in synchronism therewith, a sound-producing apparatus, and a second device reciprocated in synchronism therewith, and a rotatably mounted member having a shifting axis engaged by said reciprocating devices to cause the member to rotate about its axis when the kinematograph and sound-producing apparatus are in synchronism with each other and to cause the axis of said member to move in a lineal direction when they are not in synchronism with each other, substantially as described.

2. The combination of a kinematograph and a pawl reciprocated in synchronism therewith, a sound-producing apparatus and another pawl reciprocated in synchronism therewith, a ratchet wheel operated by said pawls and bearings adapted for the rotation and linear displacement of said wheel, substantially as described.

3. The combination of a kinematograph, an electro-magnet and a pawl carried by the armature of said electro-magnet, a sound-producing apparatus, a second electro-magnet and another pawl carried by the armature of said second electro-magnet, means for energizing the respective electro-magnets in synchronism with the motions of the kinematograph and sound-producing apparatus, a ratchet wheel operated by said pawls and stationary bearings adapted for the rotation and displacement of said wheel in a direction transversely of its axis, substantially as described.

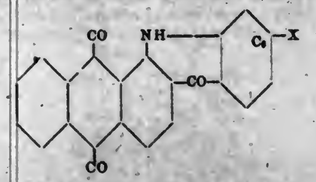
4. The combination of a kinematograph, an electro-magnet and a pawl carried by the armature of said electro-magnet, a sound-producing apparatus, a second electro-magnet and another pawl carried by the armature of said second electro-magnet, means for energizing the respective electro-magnets in synchronism with the motions of the kinematograph and sound-producing apparatus, a ratchet wheel operated by said pawls, stationary bearings adapted for the rotation and displacement of said wheel in a direction transversely of its axis and a pointer moved by said ratchet wheel, substantially as described.

5. The combination of a kinematograph, an electro-magnet and a pawl carried by the armature of said electro-magnet, a sound-producing apparatus, a second electro-magnet and another pawl carried by the armature of said second electro-magnet, means for energizing the respective electro-magnets in synchronism with the motions of the kinematograph and sound-producing apparatus, a ratchet wheel operated by said pawls, stationary bearings adapted for the rotation and displacement of said wheel in a direction transversely of its axis, a pointer moved by said ratchet wheel, transparent vanes on said pointer, and a source of illumination whereby one or other of said vanes is illuminated according to the direction of linear movement of said ratchet wheel, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

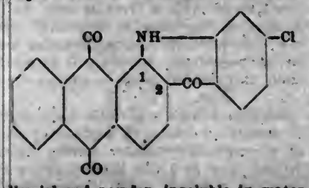
1,023,847. ALIZARIN-RED VAT DYESTUFF AND PROCESS OF MAKING SAME. MAX HESSENLAND, Höchst-on-the-Main, Germany, assignor to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany, a Corporation of Germany. Filed Nov. 21, 1910. Serial No. 593,539. (Cl. 8—1.)

1. As new products, the vat-dyestuffs being the 4-Bz-halogen-anthraquinone-1.2-acridones of the constitution:



wherein C_6 stands for an aryl residue and X for a halogen atom, being yellowish-red powders, insoluble in water, alcohol, ether, bensene, soluble in hot nitrobenzene, dissolving in concentrated sulfuric acid to yellowish-brown solutions, and in alkaline hydrosulfite to violet solutions, and dyeing from the vat cotton fast tints like those of the alizarin-red.

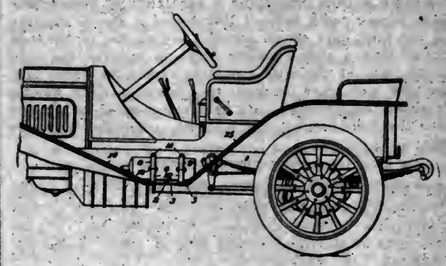
2. As a new product, the vat-dyestuff being the 4-Bz-chloroanthraquinone-acridone of the constitution:



being a yellowish-red powder, insoluble in water, alcohol, ether, and bensene, soluble in hot nitrobenzene, dissolving in concentrated sulfuric acid to a yellowish-brown solution, in alkaline hydrosulfite to a violet solution, and dyeing from the vat cotton fast tints like those of the alizarin-red.

3. The process, consisting in treating 5-chloro-2-carboxy-aryl-1-aminoanthraquinone with chlorosulfonic acid.

1,023,848. COMBINED TANK-BRACKET AND STEP FOR MOTOR-VEHICLES. RUSSELL HUFF, Detroit, Mich., assignor, by mesne assignments, to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Oct. 30, 1908. Serial No. 460,301. (Cl. 21—55.)



1. In a motor vehicle, the combination with the frame of a tank supporting bracket secured to the frame and having a seat for a pressure tank, means for securing a tank to said bracket, a step carried by the frame, and a connection between the tank bracket and the step for mutually bracing said bracket and step.

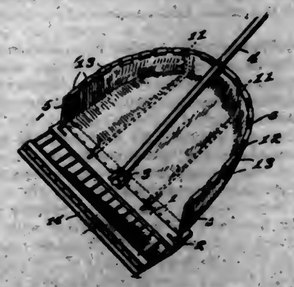
2. In a motor vehicle, the combination with the frame of two pressure tank supporting brackets having seats for a pressure tank, means for securing a tank to said brackets, a step supported from the frame by a connection arranged between said brackets, and connections between said brackets and the step for mutually bracing the brackets and step.

3. In a motor vehicle, the combination with the frame and a step arranged below the frame and offset therefrom, of a bracket connecting said frame and step, said bracket having a curved seat, a pressure tank resting on said seat, and a strap for securing said tank to said bracket.

4. In a motor vehicle, the combination with the frame, of a step carried by and extending outward from the frame, a bracket connecting the frame and step and having a curved seat, a pressure tank resting in said seat, and means for securely holding the tank upon its seat.

5. In a motor vehicle, the combination with the frame and the step, of a drop bracket hung from the frame and having an arm secured to the central portion of the step, a pair of brackets connecting the ends of the step with the frame, said brackets having curved seats formed therein, a pressure tank resting on said seats and straps for removably securing said tank to said pair of brackets.

1,023,849. RAKE. ORSON P. HUISH, Payson, Utah. Filed July 19, 1911. Serial No. 639,332. (Cl. 55—26.)

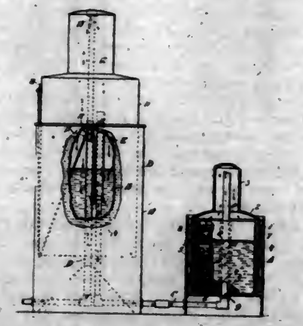


1. In an implement of the class set forth, the combination with a rake embodying a plate having teeth secured thereto, and a handle for the rake, of a frame constructed of a single strand of wire, said frame including a loop having depending ends which are secured adjacent the opposite ends of the plate, the loop being centrally provided with an eye through which the handle of the rake

passes and secured to the said handle, curved supports connecting the plate and the loop, a fabric carrier connected with the frame and with the plate, clips for securing the carrier upon the frame, and a detachable shovel member for the rake.

2. In an implement of the class set forth, the combination with a rake embodying a substantially rectangular plate having teeth secured thereto, of a shovel member for the rake, said shovel member having one of its ends formed with a pocket within which is received the ends of the teeth of the rake, the plate having its under face provided with turn buckles, the shovel member having its under face provided with openings adapted to register with the turn buckles, and a carrier connected with the rake.

1,023,850. ACETYLENE-GENERATOR. ALEXANDER FREDERICK JENKINS, Baltimore, Md., assignor to The Alexander Milburn Company, Baltimore, Md., a Corporation of Maryland. Filed Feb. 20, 1909. Serial No. 479,183. (Cl. 48—13.)



The combination of a gasometer tank, a bell mounted therein, an upright pipe for discharging gas into the bell, said pipe being located within the bell, a regulator arranged on the upper end of the pipe, a guide arranged at a fixed point within the tank and adjacent the regulator, a flexible element connected with the regulator for actuating the same by the movement of the bell, said element extending from the regulator over the guide and thence under the bottom edge of the bell and continuing upwardly therefrom between the tank and bell, and means for connecting the upper end of the element to the bell at a point above the top of the tank, with an acetylene generator connected with the said pipe and controlled automatically by the said regulator.

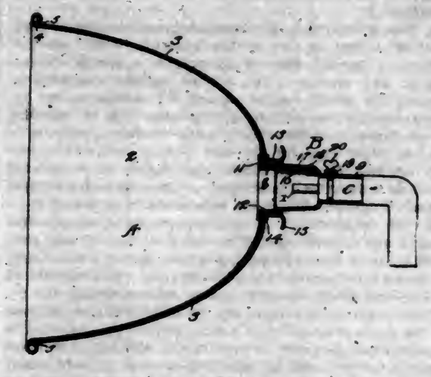
1,023,851. CONTRACTOR'S TORCH. ALEXANDER F. JENKINS, Baltimore, Md., assignor to The Alexander Milburn Company, Baltimore, Md., a Corporation of Maryland. Filed Dec. 8, 1910. Serial No. 596,243. (Cl. 240—103.)

1. A reflector, and a device for attaching the same to a burner, in combination with a protector in the form of a shell fitted to the outside of the reflector and held in place thereon solely by the said device.

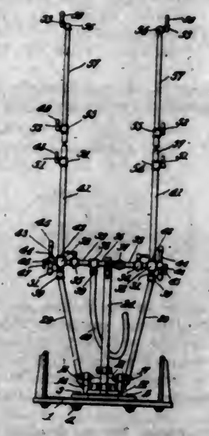
2. An open flame reflector, and a holder therefor having parts clamping the reflector, in combination with a protecting shell fitted to the exterior of the reflector and held fixed thereto by the said clamping parts of the holder.

3. A reflector having a central opening, and a holding device extending through the opening and having inner and outer clamping members, in combination with a protector fitted to the reflector and having an opening through which the said device passes.

4. A reflector having a central opening, and a holding device extending through the opening and having inner and outer clamping members, in combination with a protector fitted to the reflector and having an opening through which the said device passes, said protector being engaged between the said inner and outer members of the device and clamped to the reflector thereby.



1,023,852. FLUID-SPRAYING DEVICE. JOHN T. JOHNSON, Williamstown, W. Va. Filed Sept. 30, 1910. Serial No. 584,740. (Cl. 137—59.)



1. The combination with a movable body, and spraying pipes with nozzles, including a horizontal pipe at the bottom; of a turn-table embodying clamping members to embrace the horizontal pipe to retain it in position upon the turn-table, and pivoted loops to engage the clamping members.

2. The combination with a portable body, and spraying pipes with nozzles, including a horizontal pipe at the bottom; of a turn-table therefor having upwardly extending portions upon each side thereof, said portions embodying clamping members linked thereto and provided with pivotal locking loops to engage said clamping members.

3. The combination with a portable body, and spraying pipes including a horizontally disposed pipe, provided with nozzles; of a turn table therefor, a balance spring carried by said turn table, said spring having a connection with said horizontally disposed pipe.

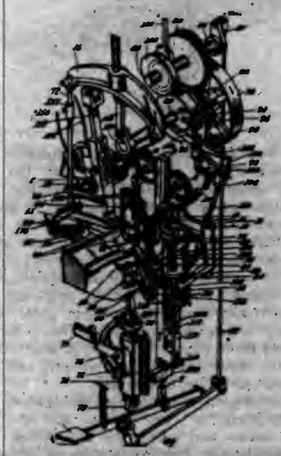
1,023,853. FISHING-REEL. STANLEY KADLA, Tullisville, Saskatchewan, Canada. Filed July 6, 1911. Serial No. 637,161. (Cl. 43—33.)



1. A fishing reel comprising a shaft, end plates suitably braced and rotatably receiving the ends of the shaft, means for manually rotating the shaft to wind the line thereon, a case on one end of the shaft, a sleeve also mounted on the shaft, a resilient member connecting the case and sleeve, means for holding the resilient member under tension and a lever adapted to hold said means in such position, said lever receiving the line and adapted to release the resilient member for actuation of the shaft when pull is exerted upon the line.

2. A fishing rod comprising end plates, braces connecting the end plates, a shaft rotatably mounted in the end plates, a hand crank having geared connections with the shaft, rims mounted upon the shaft, one of said rims having a flanged portion forming a casing, a ratchet sleeve mounted on the shaft within the case, a coiled spring connecting the sleeve and case, a pawl pivoted on the case and adapted to engage the teeth of the sleeve, a catch adapted to actuate the pawl and a lever mounted upon one of the braces, one end of the lever engaging the case and the other end adapted to receive a line wound on the drum, whereby pull exerted on the line will release the end of the lever from engagement with the case to permit winding of the shaft under the tension of the spring.

1,023,854. MACHINE FOR USE IN THE MANUFACTURE OF SHOES. EUGENE L. KEYES, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Apr. 30, 1908. Serial No. 430,137. (Cl. 12—67.)



1. A machine for working the upper into lasted position adjacent to the ends of the heel stiffener of a shoe having an outturned flange, comprising means constructed and arranged to engage the shoe stock at opposed sides of the shoe locally at or near the ends of said stiffener and tighten the upper over the edge of the last, and mechanism for fastening the upper.

2. A machine for working the upper into lasted position adjacent to the ends of the heel stiffener of a shoe having an outturned flange, comprising means constructed and arranged to engage the shoe stock at opposed sides of the shoe and force the upper over the last bottom simultaneously at the two sides, and mechanism operatively connected with said means for inserting fastenings in position to hold the upper.

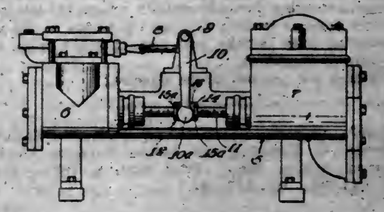
3. A machine for working the upper into lasted position adjacent to the ends of the heel stiffener of a shoe having an outturned flange, comprising means constructed and arranged to engage the shoe stock at opposed sides of the shoe and tighten the upper about the last, and automatically operated mechanism for inserting fastenings at the opposite sides of the shoe to secure the upper while it is held in tightened relation to the last.

4. A machine for working the upper into lasted position adjacent to the ends of the heel stiffener of a shoe having an outturned flange, comprising devices constructed and arranged to engage the shoe stock and force the upper inwardly and upwardly over the edge of the last at the two sides of the shoe and hold the upper under tension, and mechanism operating automatically to drive fastenings simultaneously for securing the upper at the two sides of the shoe.

5. A machine for working the upper into lasted position adjacent to the ends of the heel stiffener of a shoe having an outturned flange, comprising devices constructed and arranged to engage the flange at opposite sides of the shoe and tighten the upper over the edge of the last, and mechanism operating automatically to secure the upper while it is held tight at the two sides of the last.

[Claims 6 to 98 not printed in the Gazette.]

1,023,855. PUMP CROSS-HEAD. ALBERT K. KING and JAMES W. IRWIN, Maricopa, Cal. Filed May 31, 1911. Serial No. 630,376. (Cl. 121—106.)



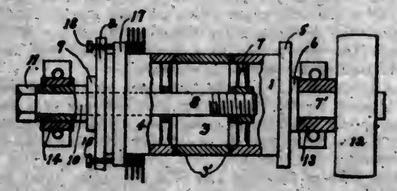
1. In combination with a pump having a reciprocating piston rod and an arm adapted to be moved by the reciprocation of the piston rod, a crosshead comprising a member adapted to be secured on the piston rod and having a pair of outer surfaces at unequal distances from the center of the rod, a transverse groove in the surface farther from the rod, the bottom of the groove curving around the member to the surface closer to the rod, and means for securing the member to the rod.

2. In combination with a pump having a reciprocating piston rod and an arm adapted to be moved by the reciprocation of the piston rod, a crosshead comprising a pair of members adapted to be clamped around the piston rod, one of said members having a pair of outer surfaces at unequal distances from the center of the rod, a transverse groove in the surface farther from the rod, the bottom of the groove curving around the member to the surface closer to the rod, and bolts for securing the two members around the rod.

1,023,856. SEEDING-ROLL. GOTTHOLD L. LANGER, San Francisco, Cal., assignor to Anderson, Barngrover Manufacturing Company, San Jose, Cal. Filed Jan. 17, 1910. Serial No. 538,538. (Cl. 146—5.)

1. In a raisin-seeding roll, a roll shell formed of several sections, a hollow spindle and a bolt passing through said hollow spindle and securing the several sections together, a series of annuli and a series of staples carried by said annuli, forming a substantially uniform pin surface, substantially as described.

2. In a fruit-seeder, the combination with a drum, of U-shaped pins mounted thereon, each with its sides normally separated to form an intervening space into which the meat of the fruit is pressed, the bights of the pins resting against the drum, and means extending circumferentially around the drum and through said bights and occupying the lower portion of the space between the inner sides of the pins for supporting the pins radially with relation to the drum.



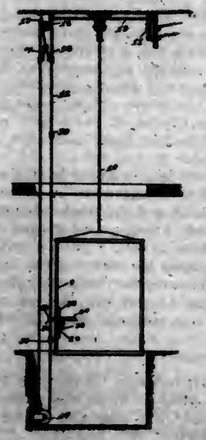
3. In a raisin-seeding roll, a roll shell having a journal to support it, a plurality of U shaped pins mounted thereon, annuli extending circumferentially around the roll and through the bights of the pins for supporting them radially with relation to the drum, and means whereby the entire series of annuli may be tightly forced together, substantially as described.

4. In a raisin seeding roll, a roll shell, a plurality of U shaped pins mounted thereon, annuli extending circumferentially around the drum and through the bights of the pins for supporting the pins radailly with relation to the roll, a heavy annulus at one end of the roll, and set screws bearing upon said heavy annulus to tighten the series of annuli against each other, substantially as described.

5. In a fruit seeder, the combination of a drum, a plurality of U shaped pins mounted thereon, and a plurality of annuli extending circumferentially around the roll, each alternate annulus passing through the bights of the pins for securing them radially with respect to the drum, substantially as described.

[Claim 6 not printed in the Gazette.]

1,023,857. SAFETY APPLIANCE FOR ELEVATORS. GEORGE W. LATHROP and JAMES WILLIAM POWLES, Ramsey county, Minn. Filed Sept. 8, 1911. Serial No. 648,256. (Cl. 187—35.)



1. A device of the class described, comprising an electrically driven car, an endless cable supported in position adjacent to the car, a grip on the car having blades surrounding said cable and handles in the car, a switch in circuit with a source of electric current, and a cord connecting said switch and cable, forming a stop for said cable to prevent damage to said switch and adapted to open the switch upon the movement of said cable in either direction.

2. A device of the class described, comprising an electrically driven car, an endless cable, guide pulleys for said cable, a grip vertically adjustable in the car in operative connection with said cable, stops on the cable in the path of said grip, a switch in circuit with a source of electric current, and connecting means between said switch and cable whereby said switch is opened by the movement of said cable in either direction.

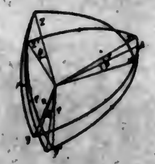
3. A device of the class described, comprising an electrically driven car, a movable endless cable supported in position adjacent to the car, a vertically adjustable grip in the car, stops on the cable in the path of said grip, a switch in circuit with a source of electric current and connecting means between said switch and cable whereby said switch may be opened by the movement of said cable.

4. A device of the class described, comprising an electrically driven car, an endless cable supported in position adjacent to the car, a grip on the car in operative connection with said cable, a switch in circuit with a source of electric current and connecting means between said switch and cable forming a stop for said cable to prevent destruction of said switch and adapted to open the switch upon movement of the cable in either direction.

5. A device of the class described, comprising an electrically driven car, an endless cable, guide pulleys for said cable, a grip in the elevator car in operative connection with said cable, a switch in circuit with a source of electric current, and a cord attached at one end to said switch for operating the same, and having two branches at its other end, said branches being connected to opposite sides of the cable whereby said cable is tied upon predetermined movement of said cable in either direction to prevent destruction of the switch.

[Claims 6 to 9 not printed in the Gazette.]

1,023,858. SPHERICAL GONIOMETER. CLÉMENT BONIFACE BASILE LAURÉS, Paris, France. Filed May 19, 1910. Serial No. 562,304. (Cl. 73—151.)



1. A spherical goniometer serving to measure angles of gyration relatively to the horizon and the magnetic meridian in aerial and submarine navigation, and comprising a magnetically responsive element, a gravity system, upon which said magnetically responsive element is mounted, a fixed part and a casing, the gravity system having two movements of rotation about two perpendicular axes attached together invariably and comprising a disk the motion whereof about one of the two axes relatively to the magnetically responsive element gives one of the required Euler angles, ϕ, and the motion whereof about the other axis gives the second angle θ, while the motion of the gravity system about the first axis and relatively to the fixed part gives the third angle ϕ.

2. A spherical goniometer serving to measure angles of gyration relatively to the horizon and the magnetic meridian in aerial and submarine navigation, and comprising a magnetically responsive element, a gravity system, upon which said magnetically responsive element is mounted, and a fixed part, said gravity system comprising a disk movable relatively to said fixed part, a mass of metal suspended from said disk and a bath of oil in which said mass of metal dips for damping the oscillations thereof.

3. A spherical goniometer serving to measure angles of gyration relatively to the horizon and the magnetic meridian in aerial and submarine navigation, and comprising a magnetically responsive element, a gravity system, upon which said magnetically responsive element is mounted, and a fixed part, said gravity system comprising a disk movable relatively to said fixed part, a mass of metal having channels or grooves on its lower part, suspended from said disk and a bath of oil in which said mass of metal dips for damping the oscillation thereof.

4. A spherical goniometer serving to measure angles of gyration relatively to the horizon and the magnetic meridian in aerial and submarine navigation, and comprising a magnetically responsive element, a gravity system, upon which said magnetically responsive element is mounted, a fixed part and a casing, the gravity system having two movements of rotation about two perpendicular axes attached together invariably and comprising a disk the motion whereof about one of the two axes relatively to the magnetically responsive element gives one of the required Euler angles ϕ, and the motion whereof about the other axis gives the second angle θ, while the motion of the gravity system about the first axis and relatively to a fixed part gives the third angle ϕ, said gravity system having a ball bearing between it and the fixed part.

5. A spherical goniometer serving to measure angles of gyration relatively to the horizon and the magnetic meridian in aerial and submarine navigation, and comprising a gravity element, a disk from which said gravity element is suspended, a magnetic element mounted upon and having movement relative to said disk, a frame within which said disk is pivoted and a fixed part in which said frame is pivotally mounted.

[Claims 6 and 7 not printed in the Gazette.]

1,023,859. VEHICLE-SPRING. WILLIAM S. LEE, Detroit, Mich., assignor, by mesne assignments, to Briggs-Detroiter Company, Detroit, Mich., a Corporation of Michigan. Filed Nov. 24, 1911. Serial No. 662,242. (Cl. 21—51.)

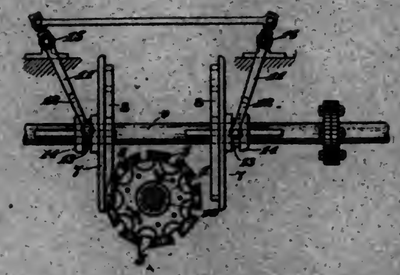


1. In a vehicle, the combination of a transverse spring secured to one end of the frame of the vehicle, an axle parallel thereto, short springs connected at one end to the axle and extending toward the ends of the transverse spring, connections between the ends of the springs, rigid arms extending from the axle in opposite directions from the short springs, movable arms connected thereto by vertical pivots and having balls at their outer ends, and bearings for said balls mounted on the frame.

2. In a vehicle, the combination of a transverse semi-elliptic spring secured at the middle to one end of the frame of the vehicle, an axle parallel thereto, short quarter-elliptical springs extending from the axle toward the ends of the transverse springs, yieldable connections between the adjacent ends of the springs, clamps connecting the short springs to the axle, connecting arms extending from said clamps oppositely to said short springs, and ball-and-socket bearings at the ends of said arms secured to the frame of the vehicle.

3. In a vehicle, the combination of a transverse semi-elliptic spring secured to one end of the frame of the vehicle, an axle parallel thereto, short quarter-elliptical springs secured to the axle and extending toward the ends of the transverse spring, connections between the ends of the springs whereby the weight on the transverse spring is transmitted to the short springs, and arms connecting to said axle at the short springs and to said frame, so as to permit the axle to move longitudinally with respect to the frame.

1,023,860. GEARING. PETER LORD, Montreal, Quebec, Canada, assignor of one-eighth to Louis A. Delorme, one-fourth to Joseph A. H. Hebert, one-fourth to Charles Leluau, and one-eighth to Gustave Itsweire, Montreal, Canada. Filed May 27, 1910. Serial No. 563,709. (Cl. 74—36.)



In combination, a power shaft, a transmission shaft mounted at right angles thereto, a disk revolubly mounted on said transmission shaft and provided with a plurality of radially projecting antifriction rings, means for clutching said disk to said transmission shaft, two oppositely fastened disks slidably keyed to said power shaft and arranged on opposite sides of said first named disk, each of said slidably keyed disks being provided with a convolute cam adapted to engage said antifriction rings, and means for simultaneously moving one slidable disk to operative and the other to inoperative position.

1,023,861. SECONDARY BATTERY. PASCAL MARINO, London, England. Filed Feb. 23, 1909. Serial No. 479,648. (Cl. 204—29.)

1. Active material for electrodes for storage batteries made from pure glycerin, a solution of alkaline silicate, a small quantity of soluble starch, and impalpable lead powder, the whole being thoroughly incorporated together into a homogeneous mass.

2. Active material for electrodes for storage batteries made from finely pulverised litharge, and an agglutinant composed of pure glycerin, a solution of alkaline silicate and soluble starch, and mixed with impalpable lead powder.

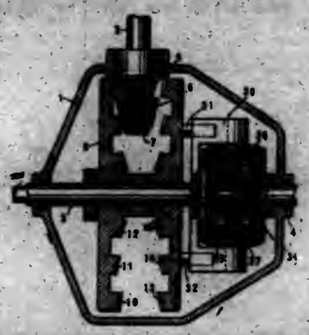
3. Material for conversion into a negative or spongy lead electrode for storage batteries, comprising: an adhesive agglutinant, which is a conductor of electric current, and consisting of pure glycerin, soluble starch, an alkaline silicate, and an impalpable lead powder, and an active material consisting of finely divided litharge combined with the aforesaid agglutinant.

1,023,862. TRANSMISSION-GEARING. HENRY C. McBRAIR, Middletown, N. Y., assignor to Direct Drive Gear Company, Paterson, N. J., a Corporation of New Jersey. Filed Apr. 28, 1909. Serial No. 492,676. (Cl. 74—58.)

1. In a transmission gearing, an axially movable driving shaft, a driven shaft, a plurality of gears rigidly connected with each other, mounted upon the driving shaft and movable axially therewith, a plurality of gears upon the driven shaft, each adapted for engagement with its mating gear upon the driving shaft, and means for shifting the gears along the driven shaft, the gears carried respectively by the driving and driven shafts being arranged as described, whereby when one mating set is in engagement all the others are positively maintained out of engagement.

2. In a transmission gearing, a driving shaft, a plurality of gears mounted thereon, a driven shaft, a plurality of concentrically arranged gears mounted thereon, and fixed with reference to each other, the gears of the driving shaft being axially movable, and connections for

moving the gears of the driven shaft axially with reference to said shaft, said means including toggle connections for locking the gears of the driven shaft in predetermined position.



3. In a transmission gearing, a driving shaft, a plurality of gears carried thereby, such gears being movable in the direction of the axis of the driving shaft, a driven shaft, a plurality of gears mounted thereon and arranged on opposite sides of the gears of the driving shaft, and connections for moving the gears of the driven shaft axially with reference to said shaft, such means including a double set of toggle connections engaging with the said movable gears from opposite sides.

4. In a transmission gearing, a driving shaft, a plurality of gears carried thereby, such gears being movable in the direction of the axis of the driving shaft, a driven shaft, a plurality of gears mounted thereon, a casing inclosing the said gears, and means for moving the gears of the driven shaft axially with reference thereto, including toggle connections between the said gears and the casing.

5. In a transmission gearing, a driving shaft, a plurality of gears mounted thereon, a driven shaft transversely arranged with reference to said driving shaft, a plurality of concentrically arranged gears arranged on opposite sides of the gears of the driving shaft mounted upon the said driven shaft, connections for shifting the gears of the driven shaft into and out of engagement with the gears of the driving shaft, a balance gear toward and from which the gears on the driven shaft are movable and adjustable power-transmitting connections between the said driven shaft gears and the balance gear.

[Claim 6 not printed in the Gazette.]

1,023,863. MEASURING-TAPE. JOHN W. MELVILLE, Los Angeles, Cal. Filed Feb. 25, 1911. Serial No. 610,836. (Cl. 73—49.)



1. A tape securing clamp, comprising a plate having means for engaging the tape, a locking slide adapted to hold the tape to said plate and means engaging both said slide and said plate for preventing the slide from moving with respect to said plate when the tape is pulled upon.

2. A detachable tape clamping fastener comprising a plate having studs for engaging apertures in a tape line, the said plate being provided with overhanging flanges and a slide adapted to engage said overhanging flanges for holding the tape upon said studs.

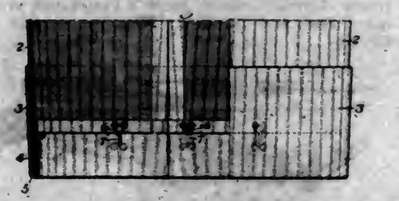
3. A tape end securing means comprising a plate having studs for engaging apertures in the end of a tape, said plate having overhanging beveled flanges, tapering from one end toward the other with respect to each other, a locking slide having tape engaging flanges and a tapered portion for engaging the overhanging flanges of the first plate, and means for locking the plates against longitudinal movement with respect to each other.

4. A tape end securing means comprising reciprocating plates having tape engaging means, and overhanging flanges engaging each other, the said plates having apertures adapted to coincide with each other when the plates are in their locked position, and a locking hook engaging said apertures for holding the plates in said position.

5. A tape end securing means comprising apertured tape receiving plates, one of which is provided with tape securing studs, while the other is formed with slots for engaging said studs and a locking hook adapted to pass through said plates and prevent their becoming disengaged.

[Claims 6 and 7 not printed in the Gazette.]

1,023,864. DETACHABLE CUFF FOR TROUSERS. JAMES SCOTT MILLER and WALTER MILLER, Beaver Falls, Pa. Filed Sept. 27, 1911. Serial No. 651,579. (Cl. 2—124.)



1. A continuous cuff for trousers or the like, having fastening devices arranged to engage coöperating fastening devices on the inside of the trousers' leg; substantially as described.

2. A continuous cuff for trousers, having shaped inner and outer folds, there being a space between the folds arranged to receive the bottom of a leg of a pair of trousers, and fastening devices connected to the inside of the inner fold arranged to engage coöperating fastening devices on the inside of the leg; substantially as described.

1,023,865. VEHICLE-SPRING. ALLISON MOFFITT, Galeton, Pa. Filed Sept. 23, 1911. Serial No. 650,911. (Cl. 21—103.)



1. A vehicle spring comprising upper and lower primary spring members and auxiliary spring members pivotally connected to said upper and lower spring members and independently movable thereof, said auxiliary spring members being also yieldingly connected at one of their ends to one of the primary spring members.

2. A vehicle spring comprising upper and lower spring members, said members comprising central members and auxiliary members, each of said central members comprising two spaced parallel spring members, a spacing block disposed between said members, said auxiliary members being pivotally secured between the ends of said central members, S-shaped springs having one end secured to the inner end of the upper auxiliary members and the other end secured to the spacing block, bumpers mounted on said spacing block and disposed beneath the inner ends of the auxiliary members, and coil springs disposed between the inner ends of the lower auxiliary member and the spacing block in the lower central spring member.

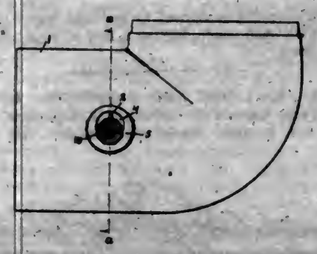
3. A vehicle spring comprising primary upper and lower central spring members, and auxiliary spring members pivotally connected to the ends of each of the primary spring members, and additional means connecting said primary and auxiliary spring members whereby the auxiliary members are yieldingly movable independently of the primary members.

4. A vehicle spring comprising upper and lower primary spring members, and auxiliary spring members pivotally connected to the primary members and yieldingly movable with respect to said primary members when subjected to abnormal pressure.

5. A vehicle spring comprising upper and lower primary spring members, auxiliary spring members pivotally mounted intermediate of their ends upon the ends of the primary spring members, and spring elements connecting the inner ends of the auxiliary members to the primary members whereby said auxiliary members are yieldingly held against pivotal movement independent of the primary members.

[Claim 6 not printed in the Gazette.]

1,023,866. DAMPER. LOUIS J. MUELLER, Jr., Milwaukee, Wis. Filed May 3, 1911. Serial No. 625,878. (Cl. 126—295.)



1. The combination with a flue provided with a substantially vertical elongated aperture, the lower part of which is of polygonal shape and the upper part of which is larger than the polygonal-shaped lower part, of a damper provided with a polygonal-shaped damper shank adapted to rest within the lower polygonal-shaped part of said aperture in the flue to hold the damper immovably locked in position, the said polygonal-shaped damper shank being adapted to be lifted into the upper larger part of said aperture and to be rotated therein, whereby the adjustment of the damper may be changed.

2. The combination with a flue provided with a substantially vertical elongated aperture, the lower part of which is of polygonal shape and the upper part of which is larger than the polygonal-shaped lower part, of a damper provided with a polygonal-shaped damper shank adapted to rest within the lower polygonal-shaped part of said aperture in the flue to hold the damper immovably locked in position, the said polygonal-shaped damper shank being adapted to be lifted into the upper larger part of said aperture and to be rotated therein, whereby the adjustment of the damper may be changed, and a flange on the damper shank to cover the aperture in the flue.

1,023,867. GEARING. HENRY M. NORRIS, Cincinnati, Ohio, assignor to The Cincinnati Bickford Tool Company, Cincinnati, Ohio, a Corporation of Ohio. Filed Oct. 24, 1910. Serial No. 588,601. (C. 74—59.)

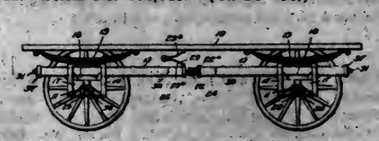


1. The combination of a spindle, a shaft, a driving gear, detachable change speed gear and clutch connections therefrom with the shaft, separate and detachable change speed gear and clutch connections from the shaft with the spindle, respective actuating levers with connections for said change speed gear and clutch connections, and a speed plate movable with one of said levers and adapted to indicate predetermined speeds of the spindle by the position of said other lever in relation thereto.

2. In a gearing, the combination of a spindle, a driving gear, a shaft journaled therein, detachable change speed gear connections therefrom, with the gear, and also detachable change speed gear connections from the shaft with the spindle, and a speed plate constructed and arranged for automatically indicating the different speeds of the spindle corresponding to the position of said connections.

3. In a gearing, a spindle, a driving gear, a plural number of detachable change speed gear connections between them, and a speed plate for separately and automatically indicating predetermined speeds of the spindle corresponding with different positions of the respective said connections.

1,023,868. PNEUMATIC CUSHION FOR VEHICLES. ABRAHAM J. OLING, Chicago, Ill., assignor of one-third to Isaac Kommers, Jr., Chicago, Ill. Filed June 21, 1911. Serial No. 634,646. (Cl. 21—50.)



1. The combination of a vehicle body, a tubular casing extending lengthwise of said body and secured to the same, a guide frame secured to said casing and having a pair of guide ways on either side of said casing, an axle extending transversely of said body and casing, a wheel on said axle, a guide block secured to said axle and having a pair of guide wings on either side thereof for coöperative engagement with said guide ways, a tubular pneumatic cushion in said casing, and a plunger extending upward from the center of said guide block through an elongated opening in said casing into engagement with said tubular cushion, the face of the plunger thus engaging said cushion being long and narrow and extending lengthwise of said casing and being curved convexly in the direction of and throughout its length with a curvature approximating that of the periphery of said wheel.

2. The combination of a vehicle body, a tubular casing extending lengthwise of said body and secured to the same, a guide frame secured to said casing and having a pair of guide ways on either side of said casing, an axle extending transversely of said body and casing, a wheel on said axle, a guide block secured to said axle and having a pair of guide wings on either side thereof for coöperative engagement with said guide ways, rubber cush-

ions at the upper ends of said guide ways for engagement by the upper ends of said wings, a rubber cushion on said guide block beneath said axle for engaging the latter upon the latter's reaching its lower limit of movement, a tubular pneumatic cushion in said casing, and a plunger extending upward from the center of said guide block through an elongated opening in said casing into engagement with said tubular cushion, the face of the plunger thus engaging said cushion being long and narrow and extending lengthwise of said casing and being curved convexly in the direction of and throughout its length with a curvature approximating that of the periphery of said wheel.

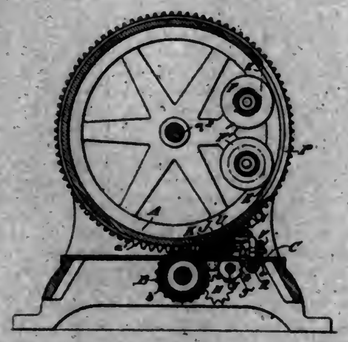
3. The combination of a vehicle body, a pair of tubular casings secured to said body at either side and extending lengthwise of the same, axles extending transversely of said body beneath the front and rear casings respectively, tubular pneumatic cushions in said casings, coöperating plungers on said axles for engaging said cushions through openings in said casings, and universal connections between the individual casings of each said pair.

4. The combination of a vehicle body, a pair of tubular casings secured to said body at either side and extending lengthwise of the same, axles extending transversely of said body beneath the front and rear casings respectively, tubular pneumatic cushions in said casings, coöperating plungers on said axles for engaging said cushions through openings in said casings, universal connections between the individual casings of each said pair, and a yielding connection between each said pair of casings and said body located in each instance adjacent to the associated universal connection.

5. The combination of a vehicle body, a pair of tubular casings secured to said body at either side and extending lengthwise of the same, axles extending transversely of said body beneath the front and rear casings respectively, tubular pneumatic cushions in said casings, coöperating plungers on said axles for engaging said cushions through openings in said casings, universal connections between the individual casings of each said pair, a leaf spring secured at one end to said body, a second leaf spring secured at one end to one of said casings near the associated universal connection, hinge disks secured to the other ends of said leaf springs, and pivoted together, and coöperating shoulders on said disks whereby the relative movement of said casings and body is unrestrained within certain limits and restrained when such limits are exceeded.

[Claims 6 to 9 not printed in the Gazette.]

1,023,860. PAPER-FEEDING MECHANISM. HENRY C. OSBORN, Cleveland, Ohio, assignor to The American Multigraph Company, Cleveland, Ohio, a Corporation of Ohio. Filed Dec. 21, 1908. Serial No. 468,636. (Cl. 101—36.)



1. In a paper feeding device, the combination with a pair of coacting feed rollers adapted to grip paper between them, one of which rollers is adapted to be at rest or rotated, of a stop roller pressed against said one, and partaking of its condition of rest or motion.

2. In a paper feeing device, the combination with a feed roller adapted to be stationary or rotated, of a stop roller spring pressed thereagainst and partaking of its condition of rest or motion, a second feed roller, and means for bringing said feed rollers into active coöperation while preserving the spring pressed engagement between the stop roller and the first mentioned feed roller.

3. In a paper feed, the combination of a feed roller, a stop roller pressed thereagainst, means for holding the feed roller normally stationary whereby the stop roller is also normally stationary, and a second feed roller adapted to engage the first feed roller on the same side as the stop roller, and means for concurrently causing said feed rollers to bear on each other and allow the first mentioned roller to rotate.

4. The combination of two coöperating feed rollers, means for driving one, means for holding the other stationary, means for relieving the hold mentioned, and a stop roller coöperating with the normally stationary roller.

5. In a paper feeding device, the combination of a constantly driven feed roller, a feed roller normally stationary and out or contact therewith, means for moving the last mentioned roller into engagement with the first mentioned roller, and a bodily movable roller in constant engagement with the normally stationary roller and partaking of its condition of rest or motion and adapted to form with it a stop for the paper.

[Claims 6 to 20 not printed in the Gazette.]

1,023,870. SPRING. WILLIAM R. PARK, Taunton, Mass., assignor to himself, as trustee. Filed Sept. 22, 1911. Serial No. 650,819. (Cl. 21—103.)



A vehicle spring composed of resilient leaves in sliding contact with each other, having a film of wax between adjacent leaves.

1,023,871. RAIL TIE AND FASTENER. EDWARD T. PAYNE and GEORGE F. COCHRAN, Albuquerque, N. Mex. Filed Nov. 4, 1911. Serial No. 658,566. (Cl. 238—5.)



1. A metallic railway tie having transverse corrugations in the bottom thereof and longitudinal corrugations in the top thereof and bearing downwardly upon the transverse corrugations.

2. A metallic railway tie having upper and lower corrugations extending in different directions respectively and contacting within the tie.

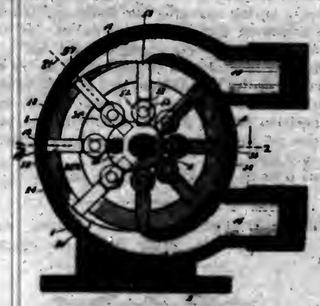
3. A metallic railway tie having upper and lower corrugations extending in different directions respectively and contacting within the tie, there being cushion receiving pockets in the top of the tie and bearing downwardly upon certain of the corrugations.

4. A metallic railway tie having transverse corrugations in the bottom thereof and longitudinal corrugations in the top of the tie and bearing downwardly upon the transverse corrugations, there being pockets within the top of the tie, the sides of the tie being depressed at the sides of the pockets.

5. A metallic railway tie having transverse corrugations in the bottom thereof and longitudinal corrugations in the top of the tie and bearing downwardly upon the transverse corrugations, there being pockets within the top of the tie, the sides of the tie being depressed at the sides of the pockets, cushioning blocks within the pockets, and protecting caps upon said blocks.

[Claims 6 and 7 not printed in the Gazette.]

1,023,872. REVERSIBLE LIQUID-MOTOR. WILLIAM E. PEARSON, Swampscott, Mass. Filed Dec. 2, 1910. Serial No. 595,319. (Cl. 138—3.)



1. A reversible rotary liquid motor, comprising a casing provided with induction and eduction ports, a rotary piston-carrier mounted to rotate within said casing and provided with grooves, a piston slidably mounted in each groove, a follower slidably mounted in each groove and adapted to engage the inner opposing face of the corresponding piston, a pair of cam rolls mounted on each follower, and a cam adjustably mounted on the inner face of each end wall of the casing adapted to coöperate with said cam rolls.

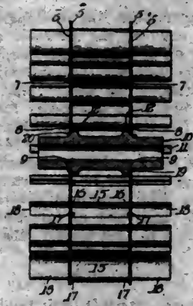
2. A reversible rotary motor, comprising a casing having its end walls provided with slots, a rotary piston carrier provided with longitudinally extending radial grooves, a piston slidably mounted in each groove, an independent follower slidably mounted in each groove and adapted to engage the inner opposing face of the corresponding piston, a pair of cam rolls mounted on each follower, a cam mounted on each end wall of the casing adapted to be engaged by said cam rolls to force said pistons outwardly into active position, said cams having studs projecting through said slots in the end walls, and means on the studs to hold the cams in adjusted position.

3. A reversible rotary motor, comprising a casing, a rotary piston carrier provided with longitudinally extending radial grooves, a piston slidably mounted in each slot, an independent follower slidably mounted in each groove and adapted to engage the inner opposing face of the corresponding piston, a pair of cam rolls mounted on each follower, and a cam which is bodily movable for adjustment mounted on each end wall of the casing and having an enlarged arcuate portion for engaging the cam rolls to force the pistons outwardly during the active portion only of their travel.

4. A reversible rotary motor, comprising a casing having two eccentrically disposed substantially semi-cylindrical portions, one of which forms the active chamber, a rotary piston carrier mounted to rotate concentric with the other of said portions of the casing, pistons slidably mounted on said carrier, independent followers for moving said pistons outwardly, a pair of cams which are bodily movable for adjustment coöperating with said followers, each cam being composed of two eccentrically disposed substantially semi-circular portions, one of said portions being enlarged to cause said followers to force the pistons outwardly while moving through the active chamber.

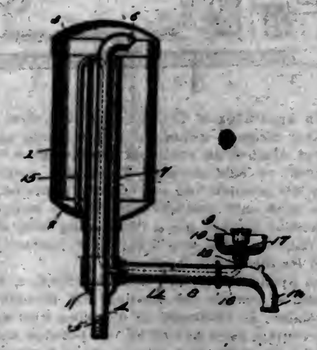
1,023,873. CENTRIFUGAL FAN-WHEEL. GEORGE ELLIOT PERRY, Chicago, Ill. Filed Apr. 7, 1911. Serial No. 619,456. (Cl. 230—11.)

1. A fan wheel structure comprising a series of blades, each having relatively small ends and intervening shoulders, perforated disks for receiving said blades and centrally perforated, and a shaft hub having shoulders separated correspondingly with the shoulders on said blades, against which said disks are held, and a means comprising a part of the shaft hub for holding said disks in place.



2. In a fan wheel structure, a blade-supporting device comprising a shaft-engaging hub and disks fixed thereto, said disks having therein a series of crescent-shaped openings, and a plurality of blades, of shape corresponding to that of the openings, said blades each providing at its ends a reduced portion to fit into the opening and a central shoulder portion, whereby said blades are positively held in assembled position by engagement between said disks.

1,023,874. DRINKING-FOUNTAIN. THOMAS J. PRICE, Oblong, Ill. Filed Oct. 12, 1911. Serial No. 654,281. (Cl. 137—11.)



1. In a drinking fountain the combination of a reservoir; a pipe entering the reservoir and adapted to communicate with the source of water supply; a drinking bowl; a pipe surrounding the supply pipe and supporting said bowl; and a siphon pipe leading from the reservoir to the bowl, substantially as described.

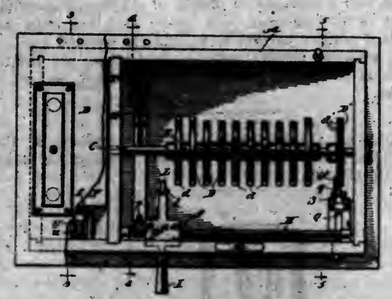
2. In a drinking fountain the combination of a reservoir; a pipe entering the reservoir and adapted to communicate with the source of water supply; a drinking bowl; a pipe having a vertical length inclosing the supply pipe and having a horizontal length supporting the bowl, said last named pipe providing an overflow for the reservoir; and a siphon pipe leading from the reservoir to the bowl, the discharge leg of said siphon pipe contained substantially wholly within said second pipe, substantially as described.

3. In a drinking fountain the combination of a closed reservoir; a pipe entering the reservoir and adapted to communicate with the source of water supply; a drinking bowl; a pipe having a vertical length inclosing the supply pipe, and a horizontal length supporting the bowl; a

spigot on said horizontal length providing an overflow with said second pipe; and a siphon pipe leading from the reservoir to the bowl and adapted to supply water to the latter, the discharge leg of said siphon pipe contained substantially wholly within said second pipe, substantially as described.

4. In a drinking fountain the combination of a closed reservoir; a pipe entering the reservoir and adapted to communicate with the source of water supply; a drinking bowl; a second pipe entering the reservoir and having a vertical length inclosing the supply pipe, and having a horizontal length providing a support for said bowl; a spigot secured to the end of said horizontal length and providing with said second pipe an overflow for the reservoir; a siphon pipe leading from the reservoir to the bowl and adapted to supply water to the latter, the discharge leg of said siphon pipe contained substantially wholly within the second pipe; and an overflow pipe for the drinking bowl leading to said spigot, substantially as described.

1,023,875. ELECTRIC SIGNAL APPARATUS. WILL S. REYNOLDS, Shelby, Ohio, assignor to The Autocall Company, Shelby, Ohio, a Corporation of Ohio. Filed Mar. 17, 1911. Serial No. 615,002. (Cl. 177—10.)



1. In an apparatus of the character described, a rotatable contact member, means for rotating said member, a stop on said member, an abutment mounted on a fixed support adjacent to said member, a movable contact piece having an idle position and one or more positions wherein it engages with said contact member, and means associated with said contact piece for moving said abutment into the path of said stop when said contact piece is brought to its idle position.

2. In an apparatus of the class described, a rotatable contact member, means for rotating said member, a stop on said member, an abutment for engaging with said stop, a movable contact piece having an idle position and one or more positions wherein it engages with said contact member, and means associated with said contact piece for moving said abutment into the path of said stop when said contact piece is brought to its idle position, said abutment being yieldable in a direction transverse to that portion of the path described by the stop while in the vicinity of the abutment.

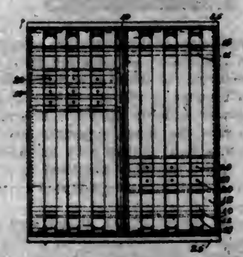
3. In an apparatus of the class described, a rotatable contact member, a stop arm projecting from said member, an abutment mounted on a fixed support adjacent to said member movable across the path of said stop arm, a movable contact piece having an idle position and one or more positions wherein it engages with said contact member, and means on said arm for moving said abutment into the path of said arm when said contact piece is brought into its idle position.

4. In an apparatus of the class described, a rotatable contact member, a stop projecting from said member, a sliding bar, an abutment pivoted to said bar so as to swing in the plane of movement of said stop, a spring for holding said abutment at one end of its limit of movement on said bar, a movable contact piece having an idle position and one or more positions wherein it engages with said contact member, and means including a wedge on said contact piece for moving said bar into a position to bring said abutment into the path of said stop when the contact piece is brought into the idle position.

5. In an apparatus of the character described, a rotatable contact member, a coöperating contact piece having an idle position and one or more working positions, a stop on said member, a bar slidably supported below the stop, an abutment hinged to the slide and projecting upwardly therefrom, a spring engaging the abutment and serving to hold the abutment upright and the bar at one limit of its movement, a lever loosely engaging said bar at one end and projecting toward said contact piece at its other end, and a wedge device on said contact piece arranged to engage with said lever when the contact piece approaches its idle position for the purpose of moving the bar against the tension of the spring to bring the abutment in the path of said stop.

[Claims 6 to 16 not printed in the Gazette.]

1,023,876. BED-SPRING. JULIUS ROETER, New York, N. Y. Filed Apr. 28, 1911. Serial No. 623,956. (Cl. 5—26.)



1. A bed spring comprising a base or frame, a series of parallel inelastic bands forming the bed spring surface, a separate rotatable guide or support for each band near its ends, and longitudinally expansible springs secured to the ends of the bands and to the frame of the bed spring.

2. A bed spring comprising a frame, a transverse shaft supported at each end of the frame, a series of rollers supported on the shafts, inelastic bands extending lengthwise of the frame and passing over the rollers, and a transverse support for the bands, said support being slidable longitudinally on the frame and having its top and bottom portions spaced apart by springs.

3. A bed spring comprising a base or frame, transverse shafts at the end portions of the frame, braces spaced apart to support the shaft, a series of rollers on each shaft, inelastic bands extending lengthwise of the frame and passing over the said rollers, and a pair of spiral springs for each band, said springs being attached to the ends of the band and to an adjacent support on the frame.

1,023,877. AUXILIARY HEEL-LINING. THURMAN S. ROGERS, Jackson, Mich. Filed Jan. 16, 1912. Serial No. 671,421. (Cl. 36—55.)



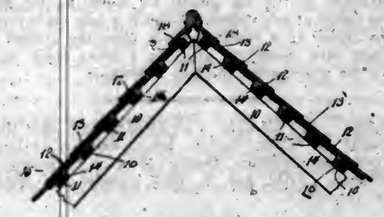
1. As a new article of manufacture, an auxiliary heel lining for shoes, comprising a front part made of anti-slipping material, and a backing secured thereto to give body to the lining and which is provided with an adhesive on its rear face.

2. As a new article of manufacture, an auxiliary heel lining for shoes comprising a front part made of anti-slipping material and a back part secured thereto by waterproof adhesive and which is provided with an adhesive on its rear face.

3. As a new article of manufacture, an auxiliary heel lining for shoes, having a straight lower edge and a curved upper edge joining the opposite ends of the lower edge and which comprises a front part made of anti-slipping material and a back part secured thereto and having an adhesive on its rear face.

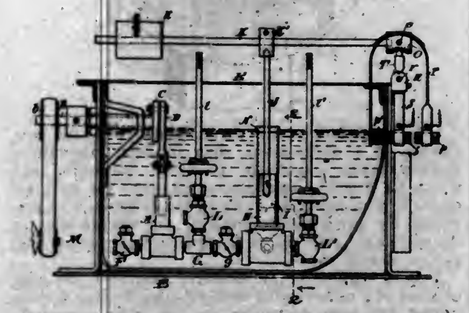
4. As a new article of manufacture, an auxiliary heel edge and which comprises a front part made of anti-slipping material and provided with horizontal grooves and corrugations and a back part secured thereto to give body to the lining.

1,023,878. ROOFING-TILE. HERMAN RONNAU, Evergreen Park, Ill., assignor of one-half to Ota P. Lightfoot, Chicago, Ill. Filed June 14, 1909. Serial No. 502,159. (Cl. 20—10.)



In roofing tiles adapted to form a multiple thickness, shingle like, over the entire area covered, a tile having the portion to be overlapped a plane plate adapted to extend over one roof rib, across the intervening space, and partially across the next rib above, and provided with a transverse hooked projection to engage the upper edge of the rib first mentioned while the tile overlaps more than half the length of the similar underlying tile next below; whereby each tile is held against outward lifting and downward sliding, the arrangement being such that it may be readily pushed upward to disengage the hooked projection.

1,023,879. CONTROLLING DEVICE. HOWARD W. ROYCE, Chicago, Ill., assignor to Semet-Solvay Company, Solvay, N. Y., a Corporation of Pennsylvania. Filed Apr. 9, 1910. Serial No. 554,553. (Cl. 161—25.)



1. The combination with an electric motor of a circuit opening and closing device, means operable by the movement of the motor to automatically and intermittently open and close the motor circuit thereby, whereby the motor is caused to alternately operate and remain at rest for predetermined periods, and means for varying the absolute and relative lengths of the periods of rest and operation of the motor.

2. In a motor controlling device the combination with a motor of a cylinder, a pump operable by the movement of the motor to be controlled to discharge liquid into the cylinder, a piston within said cylinder, means for controlling and varying the rate of movement of said piston in both directions of travel, and a circuit opening and closing device operable by the movement of said piston to open and close the motor circuit.

3. In a motor controlling device the combination with a motor of a cylinder provided with an opening for the discharge of liquid therefrom, means operated by the motor to be controlled for discharging liquid into said cylinder, and means the frequency of operation of which is determined by the rate of the flow of liquid into and out of said cylinder for intermittently opening and closing the motor circuit.

4. In a motor controlling device the combination with a motor of a cylinder having a piston therein, and provided with an adjustable opening for the discharge of liquid therefrom, a pump operated by the motor to be controlled and arranged to discharge liquid into said cylinder, an adjustable spill valve arranged to permit the waste of a portion of the liquid discharged by the pump toward said cylinder, and a circuit opening and closing device arranged to be operated by the movement of said piston.

5. In a motor controlling device the combination with a motor of a motor circuit, a snap switch interposed in the motor circuit and comprising an unstably mounted contact arm, a rocking member and a telescopic post interposed between said arm and said member, and means operated by the movement of the motor for imparting a reciprocatory movement to said rocking member, whereby the motor circuit is alternately opened and closed.

[Claim 6 not printed in the Gazette.]

1,023,880. FENCE-POST. WALTER L. RUBECK, St. Paul, Nebr. Filed Mar. 9, 1911. Serial No. 613,367. (Cl. 39—139.)



A fence post comprising a single section of sheet metal folded vertically at two points to provide a central and side sections, the side sections being parallel and formed with wire receiving slots, the lower portion of the metal being severed vertically on a line with the folding points to form tongues, the side tongues being bent inwardly in opposite directions to overlap each other and the central tongue being bent at right angles thereto and in contact therewith to form an anchor within the area of the lower portion of the post.

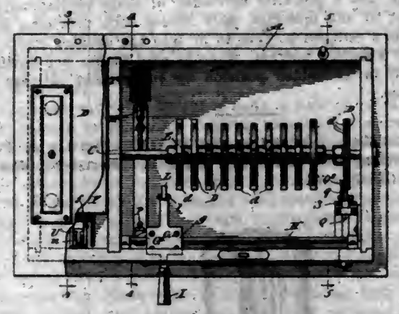
1,023,881. FRUIT-GATHERING DEVICE. BEULAH RUSSELL, Louisville, Tenn. Filed Jan. 4, 1912. Serial No. 669,300. (Cl. 56—99.)

1. In a fruit gathering device, the combination of a receptacle having a frame arranged in the open end thereof, said frame comprising an annular wire ring and a plurality of inwardly extending radial wires fixed thereto, a stationary horizontally disposed knife blade centrally arranged above said receptacle, said wires being rigidly

spigot on said horizontal length providing an overflow with said second pipe; and a siphon pipe leading from the reservoir to the bowl and adapted to supply water to the latter, the discharge leg of said siphon pipe contained substantially wholly within said second pipe, substantially as described.

4. In a drinking fountain the combination of a closed reservoir; a pipe entering the reservoir and adapted to communicate with the source of water supply; a drinking bowl; a second pipe entering the reservoir and having a vertical length inclosing the supply pipe, and having a horizontal length providing a support for said bowl; a spigot secured to the end of said horizontal length and providing with said second pipe an overflow for the reservoir; a siphon pipe leading from the reservoir to the bowl and adapted to supply water to the latter, the discharge leg of said siphon pipe contained substantially wholly within the second pipe; and an overflow pipe for the drinking bowl leading to said spigot, substantially as described.

1,023,875. ELECTRIC SIGNAL APPARATUS. WILL S. REYNOLDS, Shelby, Ohio, assignor to The Autocall Company, Shelby, Ohio, a Corporation of Ohio. Filed Mar. 17, 1911. Serial No. 615,002. (Cl. 177—10.)



1. In an apparatus of the character described, a rotatable contact member, means for rotating said member, a stop on said member, an abutment mounted on a fixed support adjacent to said member, a movable contact piece having an idle position and one or more positions wherein it engages with said contact member, and means associated with said contact piece for moving said abutment into the path of said stop when said contact piece is brought to its idle position.

2. In an apparatus of the class described, a rotatable contact member, means for rotating said member, a stop on said member, an abutment for engaging with said stop, a movable contact piece having an idle position and one or more positions wherein it engages with said contact member, and means associated with said contact piece for moving said abutment into the path of said stop when said contact piece is brought to its idle position, said abutment being yieldable in a direction transverse to that portion of the path described by the stop while in the vicinity of the abutment.

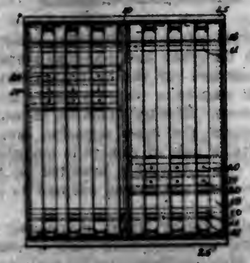
3. In an apparatus of the class described, a rotatable contact member, a stop arm projecting from said member, an abutment mounted on a fixed support adjacent to said member movable across the path of said stop arm, a movable contact piece having an idle position and one or more positions wherein it engages with said contact member, and means on said arm for moving said abutment into the path of said arm when said contact piece is brought into its idle position.

4. In an apparatus of the class described, a rotatable contact member, a stop projecting from said member, a sliding bar, an abutment pivoted to said bar so as to swing in the plane of movement of said stop, a spring for holding said abutment at one end of its limit of movement on said bar, a movable contact piece having an idle position and one or more positions wherein it engages with said contact member, and means including a wedge on said contact piece for moving said bar into a position to bring said abutment into the path of said stop when the contact piece is brought into the idle position.

5. In an apparatus of the character described, a rotatable contact member, a coöperating contact piece having an idle position and one or more working positions, a stop on said member, a bar slidably supported below the stop, an abutment hinged to the slide and projecting upwardly therefrom, a spring engaging the abutment and serving to hold the abutment upright and the bar at one limit of its movement, a lever loosely engaging said bar at one end and projecting toward said contact piece at its other end, and a wedge device on said contact piece arranged to engage with said lever when the contact piece approaches its idle position for the purpose of moving the bar against the tension of the spring to bring the abutment in the path of said stop.

[Claims 6 to 16 not printed in the Gazette.]

1,023,876. BED-SPRING. JULIUS ROEVER, New York, N. Y. Filed Apr. 28, 1911. Serial No. 623,956. (Cl. 5—26.)



1. A bed spring comprising a base or frame, a series of parallel inelastic bands forming the bed spring surface, a separate rotatable guide or support for each band near its ends, and longitudinally expansible springs secured to the ends of the bands and to the frame of the bed spring.

2. A bed spring comprising a frame, a transverse shaft supported at each end of the frame, a series of rollers supported on the shafts, inelastic bands extending lengthwise of the frame and passing over the rollers, and a transverse support for the bands, said support being slidable longitudinally on the frame and having its top and bottom portions spaced apart by springs.

3. A bed spring comprising a base or frame, transverse shafts at the end portions of the frame, braces spaced apart to support the shaft, a series of rollers on each shaft, inelastic bands extending lengthwise of the frame and passing over the said rollers, and a pair of spiral springs for each band, said springs being attached to the ends of the band and to an adjacent support on the frame.

1,023,877. AUXILIARY HEEL-LINING. THURMAN S. ROGERS, Jackson, Mich. Filed Jan. 16, 1912. Serial No. 671,421. (Cl. 36—55.)



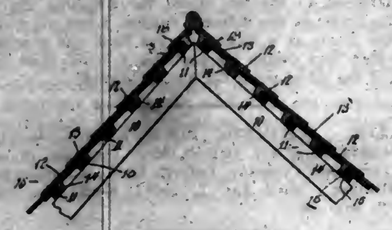
1. As a new article of manufacture, an auxiliary heel lining for shoes, comprising a front part made of anti-slipping material, and a backing secured thereto to give body to the lining and which is provided with an adhesive on its rear face.

2. As a new article of manufacture, an auxiliary heel lining for shoes comprising a front part made of anti-slipping material and a back part secured thereto by waterproof adhesive and which is provided with an adhesive on its rear face.

3. As a new article of manufacture, an auxiliary heel lining for shoes, having a straight lower edge and a curved upper edge joining the opposite ends of the lower edge and which comprises a front part made of anti-slipping material and a back part secured thereto and having an adhesive on its rear face.

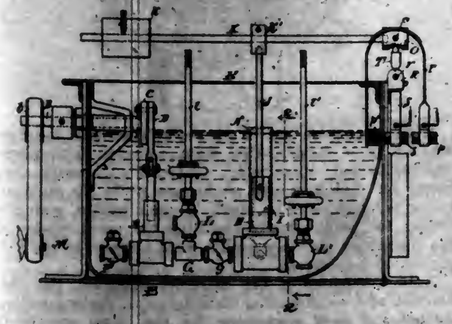
4. As a new article of manufacture, an auxiliary heel edge and which comprises a front part made of anti-slipping material and provided with horizontal grooves and corrugations and a back part secured thereto to give body to the lining.

1,023,878. ROOFING-TILE. HERMAN RONNAU, Evergreen Park, Ill., assignor of one-half to Ota P. Lightfoot, Chicago, Ill. Filed June 14, 1909. Serial No. 502,159. (Cl. 20—10.)



In roofing tiles adapted to form a multiple thickness, shingle like, over the entire area covered, a tile having the portion to be overlapped a plane plate adapted to extend over one roof rib, across the intervening space, and partially across the next rib above, and provided with a transverse hooked projection to engage the upper edge of the rib first mentioned while the tile overlaps more than half the length of the similar underlying tile next below; whereby each tile is held against outward lifting and downward sliding, the arrangement being such that it may be readily pushed upward to disengage the hooked projection.

1,023,879. CONTROLLING DEVICE. HOWARD W. ROYCE, Chicago, Ill., assignor to Semet-Solvay Company, Solvay, N. Y., a Corporation of Pennsylvania. Filed Apr. 9, 1910. Serial No. 554,553. (Cl. 161—25.)



1. The combination with an electric motor of a circuit opening and closing device, means operable by the movement of the motor to automatically and intermittently open and close the motor circuit thereby, whereby the motor is caused to alternately operate and remain at rest for predetermined periods, and means for varying the absolute and relative lengths of the periods of rest and operation of the motor.

2. In a motor controlling device the combination with a motor of a cylinder, a pump operable by the movement of the motor to be controlled to discharge liquid into the cylinder, a piston within said cylinder, means for controlling and varying the rate of movement of said piston in both directions of travel, and a circuit opening and closing device operable by the movement of said piston to open and close the motor circuit.

3. In a motor controlling device the combination with a motor of a cylinder provided with an opening for the discharge of liquid therefrom, means operated by the motor to be controlled for discharging liquid into said cylinder, and means the frequency of operation of which is determined by the rate of the flow of liquid into and out of said cylinder for intermittently opening and closing the motor circuit.

4. In a motor controlling device the combination with a motor of a cylinder having a piston therein, and provided with an adjustable opening for the discharge of liquid therefrom, a pump operated by the motor to be controlled and arranged to discharge liquid into said cylinder, an adjustable spill valve arranged to permit the waste of a portion of the liquid discharged by the pump toward said cylinder, and a circuit opening and closing device arranged to be operated by the movement of said piston.

5. In a motor controlling device the combination with a motor of a motor circuit, a snap switch interposed in the motor circuit and comprising an unstably mounted contact arm, a rocking member and a telescopic post interposed between said arm and said member, and means operated by the movement of the motor for imparting a reciprocatory movement to said rocking member, whereby the motor circuit is alternately opened and closed.

[Claim 6 not printed in the Gazette.]

1,023,880. FENCE-POST. WALTER L. RUBECK, St. Paul, Nebr. Filed Mar. 9, 1911. Serial No. 613,367. (Cl. 39—139.)



A fence post comprising a single section of sheet metal folded vertically at two points to provide a central and side sections, the side sections being parallel and formed with wire receiving slots, the lower portion of the metal being severed vertically on a line with the folding points to form tongues, the side tongues being bent inwardly in opposite directions to overlap each other and the central tongue being bent at right angles thereto and in contact therewith to form an anchor within the area of the lower portion of the post.

1,023,881. FRUIT-GATHERING DEVICE. BEULAH RUSSELL, Louisville, Tenn. Filed Jan. 4, 1912. Serial No. 669,300. (Cl. 56—99.)

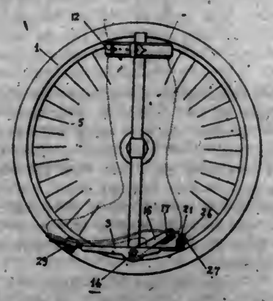
1. In a fruit gathering device, the combination of a receptacle having a frame arranged in the open end thereof, said frame comprising an annular wire ring and a plurality of inwardly extending radial wires fixed thereto, a stationary horizontally disposed knife blade centrally arranged above said receptacle, said wires being rigidly

secured to the knife blade at their inner ends, a movable knife blade pivotally mounted at one end upon the stationary blade, a spring connecting said movable blade to the stationary blade and normally holding said blades in spaced relation, a pole rigidly fixed to the stationary blade, and means mounted upon said pole and connected to the movable blade to actuate the same and sever the fruit.



2. In a fruit gathering device, the combination of a receptacle having a frame arranged in its open end, said receptacle comprising an annular metal ring and a plurality of radially disposed inwardly and upwardly inclined wires fixed to said ring, a stationary knife blade having a central enlarged portion, the inner ends of said radial wires being rigidly fixed to the knife blade, a movable knife blade pivotally connected to one end of the stationary blade, a spring connected at one end to the movable blade and at its other end to the enlarged portion of the stationary blade, a pole rigidly fixed at its upper end to the enlargement of the stationary blade, an operating wire extending along the side of said pole and having its upper end connected to said movable knife blade to actuate the same, a guide loop for said wire secured to one of the radial frame wires, a guide loop for the wire secured to said pole, a finger-piece on the lower end of said wire, and a stop member fixed to the handle to be engaged by the finger-piece and limit the movement of the pivoted knife blade in one direction.

1,023,882. MONOCYCLE SKATE. MARIO SCHIESARI, Turin, Italy. Filed Sept. 19, 1911. Serial No. 650,222. (Cl. 46—51.)



1. Road skate with a single wheel comprising in combination a wheel of large diameter, a frame on which said wheel is mounted and intended to be attached to the leg, and a sole plate to which the foot is secured pivoted to the said frame at a small distance from the ground and provided with a brake block engaging the rim of the wheel when the heel is lowered.

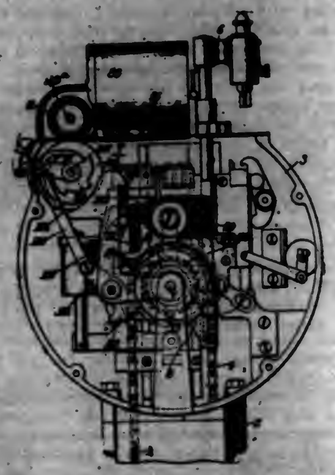
2. Road skate with a single wheel comprising in combination a wheel of large diameter, a frame on which said wheel is mounted, and intended to be attached to the leg, and a sole plate rigid with a spindle passing through a support fixed to the bottom end of the said frame, this spindle carrying an arm provided at its end with a brake block intended to engage the rim of the wheel when the heel is lowered.

3. Road skate with a single wheel comprising in combination a wheel of large diameter, a frame intended to be attached to the leg, a member fixed to said frame and acting as spindle for the wheel hub and a sole plate pivoted to said frame at a small distance from the ground and provided with means for causing a brake block to engage with the rim of the wheel when the heel is lowered.

4. Road skate with a single wheel comprising in combination a wheel of large diameter, a frame intended to be attached to the leg, a member fixed to said frame and connected to the spindle of the wheel hub, and a sole plate pivoted to said frame at a small distance from the ground and provided with means for applying a brake block on the rim of the wheel when the heel is lowered.

5. Road skate with a single wheel comprising in combination a wheel of large diameter, a frame intended to be attached to the leg, means for mounting the wheel on the frame at two different heights, a sole plate pivoted to the frame at a small distance from the ground and provided with means for applying a brake block on the rim of the wheel when the heel is lowered.

1,023,883. AUTOMATIC PIN-TICKETING MACHINE. BURTON W. SCOTT, Detroit, Mich., assignor to Detroit Typomarker Company, Detroit, Mich., a Corporation of Michigan. Filed Apr. 1, 1907. Serial No. 365,812. (Cl. 101—36.)



1. In a machine of the character described, the combination of a reciprocating main actuator, intermittent feed-mechanism operatively connected therewith, and means for disabling said mechanism while the main actuator is terminating its stroke in one direction, with provisions for automatically restoring the operativeness of the mechanism governed by the main actuator at the final portion of such stroke.

2. In a machine of the character described, the combination of a reciprocating main actuator, feeding devices, ratchet and pawl mechanism for the latter operatively connected with the main actuator, and means for disabling said mechanism while the main actuator is terminating its stroke in one direction, with provisions for automatically restoring the operative relation of the mechanism with the main actuator governed by the main actuator at the final portion of such stroke.

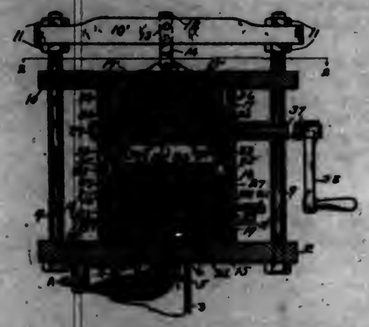
3. In a machine of the character described, the combination of a reciprocating main actuator, feeding devices, ratchet and pawl mechanism for the latter operatively connected with the main actuator, and means for disabling the pawl while the main actuator is terminating its stroke in one direction, with provisions for automatically restoring the pawl to operative relation with the main actuator governed by the main actuator at the final portion of such stroke.

4. In a machine of the character described, the combination of a reciprocating main actuator, a reciprocating member adapted to be actuated in one direction by a stroke of the actuator in one direction but independently movable in the other direction at the conclusion of such stroke, feeding devices, ratchet and pawl mechanism therefor operatively connected with the main actuator, and means for disabling said mechanism while the main actuator is terminating its movement in the one direction mentioned, with provisions for restoring the operative relation of the mechanism with the main actuator by the independent movement of the aforesaid reciprocating member.

5. In a machine of the character described, the combination of a reciprocating main actuator, a reciprocating member adapted to be actuated in one direction by the stroke of the actuator in one direction but independently movable in the other direction at the conclusion of such stroke, feeding devices, ratchet and pawl mechanism therefor operatively connected with the main actuator, and means for disabling the pawl while the main actuator is terminating its movement in the one direction mentioned, with provisions for restoring operative connection between the pawl and the main actuator by the independent movement of the aforesaid reciprocating member.

[Claims 6 to 10 not printed in the Gazette.]

1,023,884. CASTING APPARATUS. ORRIN M. SHERMAN, Syracuse, N. Y., assignor to E. B. Van Wagner Manufacturing Company, Syracuse, N. Y., a Corporation of New York. Filed Oct. 12, 1911. Serial No. 654,380. (Cl. 22—57.)



1. A device for making finished castings, comprising a die-section having a mold cavity formed therein, and having an ingate comprising an upwardly flaring opening formed through the said section, the said ingate being funnel-shaped, and having its broadest end disposed at the top adjacent the mold cavity, and its narrowest end disposed in the bottom side of said section, means for forcing the metal upwardly through said ingate for forming a casting and an integral sprue, and means for ejecting the cast metal upwardly without breaking or destroying the casting or sprue.

2. A casting apparatus, comprising a die, said die having a mold cavity formed in its upper side, an ingate, the said ingate being funnel-shaped, the largest mouth of said ingate disposed at its top end nearest the mold cavity, the smallest mouth of said ingate disposed at the bottom of said die, means for forcing the metal through the said ingate into said mold cavity for forming a casting and also a sprue in one integral part, and means comprising a pinion and a pair of racks for withdrawing the said casting and sprue as one part from the said die.

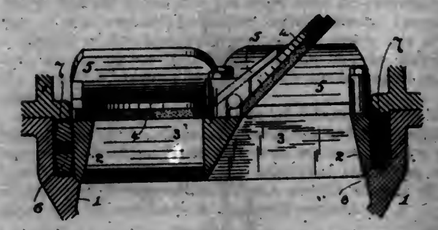
3. The combination of a pair of die-sections mounted one upon the other, the lowermost section having mold cavities formed near its upper side and having a central perforation comprising a funnel-shaped ingate passing downwardly through said section, the broadest end of said ingate disposed at the top of the lowermost die-section nearest the said cavities, and the narrowest end disposed at the bottom of said section, the upper die-section supporting a series of cores arranged to depend into said cavities, adapted to withdraw the castings and also the sprue from the lower section upon the parting of said sections, and means comprising a pinion and a rack for stripping the castings from the said cores.

4. The combination with a base having an ingate opening and the melting pot disposed beneath the base, said pot having a spout communicating with said opening for the passage of molten metal, of a pair of die-sections supported by said base, one of said die-sections having a mold cavity formed in its upper side and having an ingate comprising a funnel-shaped opening, arranged to coincide with the opening in the base, the said ingate having its largest end disposed in the top of said die-section adjacent the said mold cavity, and having its narrowest end disposed in the bottom of said die-section nearest the said spout adapted to permit the withdrawing of the casting and also the sprue from the lowermost die-section, and a pinion and a pair of racks for lifting the casting and sprue from the lowermost section.

5. A casting apparatus, comprising a table having a perforated base, a pair of dies mounted upon said base, the lowermost die having a mold cavity, the said cavity connecting with the perforation in said base by means of a downwardly extending funnel-shaped ingate, the said ingate disposed so that its largest mouth connects with the mold cavitity in the top of the lowermost die while the smallest mouth connects with the perforation in the base, the uppermost die adapted to close the upper side of the mold cavity, a series of reciprocating cores piercing the upper die and depending into said mold cavity, a plate for supporting and operating said cores, said plate disposed above said upper die, means for withdrawing the casting and also the sprue from the lowermost die as one part, a pair of racks connected to said core plate, and a pinion shaft, adapted to operate said racks and said plate for stripping the casting and sprue from said cores.

1,023,885. VALVE. WILLIAM H. SMYTH, Berkeley, Cal. Filed June 19, 1901. Serial No. 65,202. (Cl. 103—66.)

1. A valve comprising a rotatable seat and movably attached gate and means adapted to rotate the seat.



2. A valve comprising a rotatable seat having a multiplicity of openings and carrying a multiplicity of movably attached gates to control said openings and means adapted to rotate the seat.

3. A valve comprising a rotatable seat having a multiplicity of openings and carrying a multiplicity of movable radially attached gates to control said openings and means adapted to rotate the seat.

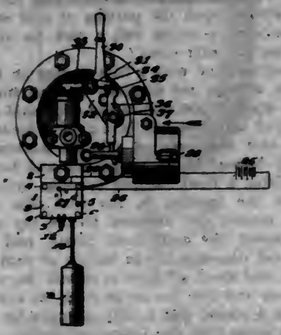
4. A valve comprising a rotatable seat having inclined vanes or wings adapted to rotate the seat by the flow of fluid, said seat carrying a movably attached gate.

5. A valve comprising a rotatable seat having inclined vanes or wings adapted to rotate the seat by the flow of

fluid, said seat having a multiplicity of openings and carrying a multiplicity of movably attached gates to control said openings.

[Claims 6 to 18 not printed in the Gazette.]

1,023,886. VIBRATION STOP-GOVERNOR. JOHN E. SNYDER, Swissvale, Pa., assignor, by mesne assignments, to The Colonial Trust Company, trustee, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Oct. 11, 1910. Serial No. 586,498. (Cl. 136—15.)



1. The combination with means for closing the fluid admission port to a motor, of operating means therefor comprising mechanism which will operate by vibration of a part of the motor.

2. The combination of means for closing the admission port to a motor and operating means therefor rendered effective by vibration of a part of the motor.

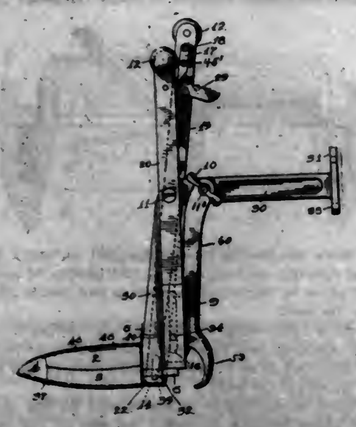
3. In combination with a cut off valve, a vibratory responsive device adapted to control said valve and rendered effective by a vibrating part of the motor.

4. Means for operating a cut off valve for a motor comprising mechanism sensitive to vibrations of a motor part.

5. Means for operating a cut off valve comprising an electrical circuit, a motor in the circuit, contacts in the circuit and means for causing said contacts to close upon vibration of a motor part.

[Claims 6 to 9 not printed in the Gazette.]

1,023,887. SHOE-HOLDER. LINCOLN SONNTAG, San Francisco, Cal. Filed June 1, 1910. Serial No. 564,473. (Cl. 12—128.)



1. In a shoe-holder having a front portion and a rear portion, a shaft in said front portion having a forwardly and inwardly inclined arm on each side thereof; a frame extending longitudinally in said front portion having depending end supports containing openings penetrated by said shaft and having sloping sides projecting therefrom containing slots extending through the side edges of said sides, and curved wings supported by said sloping sides and having blades resting in said slots interiorly secured to said wings and containing openings penetrated by said arms.

2. In a shoe-holder having a front portion and a rear portion, a shaft in said front portion having a forwardly and inwardly inclined arm on each side thereof and a sloping front end, a frame extending longitudinally in said front portion having a front end support depending therefrom containing an opening, the bottom of which is engaged by the sloping front end of said shaft, and having sloping sides projecting therefrom containing slots extending through the side edges of said sides and said frame having a rear end support depending therefrom containing an opening loosely penetrated by said shaft, and curved wings supported by the sides so projecting and having blades resting in said slots and interiorly secured to said wings and containing openings penetrated by said arms.

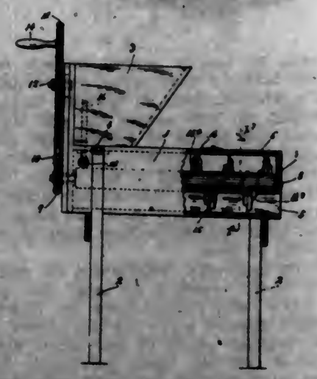
3. In a shoe-holder having a front portion and a rear portion, a shaft in said front portion having a sloping front end; a frame extending longitudinally in said front portion having its bottom sloping forwardly and engaged by said shaft and having a front end support depending therefrom containing an opening having its bottom engaged by the sloping front end of said shaft and a rear end support containing an opening loosely penetrated by said shaft.

4. In a shoe-holder having a front portion and a rear portion, a shaft in said front portion having a sloping front end, a frame extending longitudinally in said front portion having its bottom sloping forwardly and engaged by said shaft, and having a front end support depending therefrom containing an opening having its bottom engaged by the sloping front end of said shaft, and a rear end support containing an opening loosely penetrated by said shaft, and a toe-piece secured to the front end of said shaft having a leg projecting rearwardly from each side thereof and engaging the sloping bottom of said frame.

5. In a shoe-holder a bracket having a horizontally projecting arm; a lever pivoted to the outer end of said arm, and a heel piece depending from said arm rearwardly to said lever and having a slide containing a longitudinal slot connected to said lever.

[Claims 6 to 11 not printed in the Gazette.]

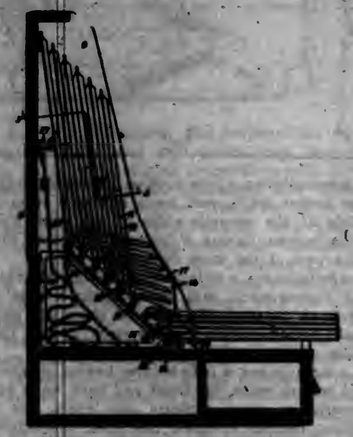
1,023,888. SMUT-MACHINE. SEVERIN N. SORENSEN, Minneapolis, Minn. Filed Mar. 9, 1910. Serial No. 548,138. (Cl. 193—13.)



1. In a machine of the kind described, a conveyer comprising a roller or shaft and a surrounding continuous and unbroken spiral feed blade constructed from a strip of sheet metal bent at various intermediate points to form spirally offset radially extended lifting shoulders.

2. In a machine of the kind described, a conveyer comprising a roller or shaft and a surrounding continuous and unbroken spiral feed blade constructed from a strip of sheet metal bent at various intermediate points to form spirally offset radially extended lifting shoulders, which lifting shoulders decrease in width materially in a direction radially outward from the said roller or shaft.

1,023,889. ACCOUNT-REGISTER. ALBERT F. STAPLES, Canisteo, N. Y. Filed Nov. 29, 1911. Serial No. 663,040. (Cl. 45—2.)



1. An account-register having, in combination, a plurality of bill-holder frames provided with pivots adjacent their lower edges, and means for supporting the frames when in use; said means comprising a series of pivotal bearings arranged in an inclined plane and adapted to receive the respective pivots of the bill-holder frames, and a series of guides extending to said bearings, respectively, first upwardly and rearwardly, and then downwardly, so as to receive the respective pivots and guide them first upwardly and then downwardly into the bearings when the frames are moved rearwardly into engagement with the supporting-means.

2. An account-register having, in combination, a support provided with a series of separate pivotal bearings arranged in an inclined plane, a plurality of bill-holder frames, with pivots adjacent their lower edges, adapted to be supported independently in said respective pivotal bearings and removable or replaceable therein independently of each other, guides extending rearwardly to said bearings and adapted to receive said pivots severally and guide them to their respective bearings, and means permanently secured to one of the frames for temporarily securing the frames together in a group when removed from the cabinet.

3. An account-register having, in combination, a plurality of bill-holder frames provided with pivots adjacent their lower edges, means for supporting the frames when in use, said means comprising pivotal bearings for the respective frames, arranged in an inclined plane; and means for guiding the frames severally into engagement with said bearings when the frames are applied to the supporting-means, said guiding-means being adapted to move the edges of the frames away from each other as the frames are introduced thereto.

4. An account-register having, in combination, a plurality of independent bill-holder frames provided with pivots adjacent their lower edges, means for supporting the frames in operative condition, said means comprising a series of pivotal bearings arranged in an inclined plane and separated by spaces substantially greater than the thickness of the frames, and a series of guides for receiving said pivots severally and guiding them to the respective bearings, said guides communicating, respectively, with the bearings and their forward ends being in approximate vertical relation and separated vertically by spaces approximately equal to the thickness of the frames, whereby the guides are adapted to receive the pivots of the several frames when the latter, in substantially horizontal superposed positions, are slid rearwardly.

1,023,890. PROCESS OF TREATING BRITTLE VEGETABLE FIBERS OF KAPOK AND OTHER PLANTS. EMIL GUSTAV STARK, Altchemnitz, near Chemnitz, Germany. Filed Mar. 14, 1910. Serial No. 549,232. (Cl. 22—4.)

1. The hereindescribed process of treating brittle vegetable fibers, *i. e.* the down or hair of the seed, of kapok (*Briodendron anfractuosum*), *Calotropis procera*, pseudochina, cotton silks, acundha, and of the group of *Asclepias* and the like, most of which are designated cotton silks, which consists in treating the fibers with a dilute, aqueous solution of glue, thereby dissolving a portion of the incrusting substances within the single hair, extracting the same therefrom and thereby shrinking the smooth surface of the fibers and converting it into a rough surface.

2. The hereindescribed process of treating brittle vegetable fibers, *i. e.* the down or hair of the seed, of kapok (*Briodendron anfractuosum*), *Calotropis procera*, pseudochina, acundha, and of the group of *Asclepias* and the like, most of which are designated cotton silks, which consists in treating the fibers with a dilute, slightly alkaline, aqueous solution of glue, thereby dissolving a portion of the incrusting substances within the single hair, extracting the same therefrom and thereby shrinking the smooth surface of the fibers and converting it into a rough surface.

3. The hereindescribed process of treating brittle vegetable fibers, *i. e.* the down or hair of the seed, of kapok (*Briodendron anfractuosum*), *Calotropis procera*, pseudochina, cotton silks, acundha, and of the group of *Asclepias* and the like, most of which are designated cotton silks, which consists in macerating the fibers with dilute tannin-liquor, and subsequently treating them with an aqueous solution of glue and thereby dissolving a portion of the incrusting substances within the single hair, extracting the same therefrom and thereby shrinking the smooth surface of the fibers and converting it into a rough surface.

4. The hereindescribed process of treating brittle vegetable fibers, *i. e.* the down or hair of the seed, of kapok (*Briodendron anfractuosum*), *Calotropis procera*, pseudochina, cotton silks, acundha, and of the group of *Asclepias* and the like, most of which are designated cotton silks, which consists in treating the fibers with an aqueous solution of glue containing coloring matter thereby dissolving a portion of the incrusting substances within the single hair, extracting the same therefrom and thereby shrinking the smooth surface of the fibers and converting it into a rough surface.

5. The hereindescribed process of treating brittle vegetable fibers of the character described, which consists in removing therefrom by means of an aqueous solution containing coloring matter, the adhering, incrusting substances and thereby shrinking the smooth surface of the fibers and converting it into a rough surface.

1,023,891. TYPE-WRITING MACHINE. HERBERT H. STEELE, Marcellus, N. Y., assignor to The Monarch Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed Nov. 6, 1909. Serial No. 526,560. (Cl. 197—127.)

1. In a typewriting machine, the combination of a single platen, a plurality of paper feeding devices for feeding sheets of paper separately or together, said sheets being arranged side by side at opposite end portions of the same platen, said devices coöperating with opposite end portions of the platen at the introductory side thereof, and means for separately controlling said devices.

2. In a typewriting machine, the combination of a single platen, a plurality of paper controlling devices, each cooperative with the platen to control a work sheet at the introductory side of the platen, and means for separately controlling said devices so that each may co-act directly with the platen to control its sheet independently, each of the work sheets either advancing with the platen when the platen is turned or else lying quiescent against the platen during the turning thereof.



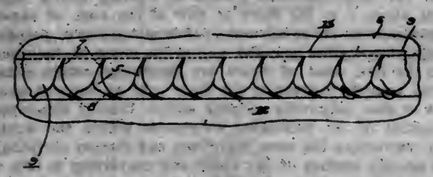
3. In a typewriting machine, the combination of a single platen, two sets of paper feeding devices, each coöperative with the said platen, and separate moving means for each set, each moving means being controlled by a single key which is operative to move the associate set as a whole into and out of coöperation with the platen while the other set remains in coöperation with the platen.

4. In a typewriting machine, the combination of a single platen, two paper controlling devices each for controlling a separate sheet at the introductory side of the said platen, and means for moving either one of said devices into and out of operative position independently of the other device, so that either one of said work sheets may advance as the platen is turned while the other work sheet lies quiescent against said platen during the turning of the same.

5. In a typewriting machine, the combination of a single platen, two paper controlling devices, each for controlling a separate sheet at the introductory side of the platen, and hand operated actuators each connected with one of said devices, and operative thereon so that either one of the work sheets may be fed with the platen when it is turned while the other work sheet remains quiescent against said platen during the turning of the latter.

[Claims 6 to 39 not printed in the Gazette.]

1,023,892. BLADE-LASHING MEANS. CHARLES E. SWEET, Wilkinsburg, Pa., assignor, by mesne assignments, to The Colonial Trust Company, trustee, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Aug. 26, 1909. Serial No. 514,748. (Cl. 121—87.)



1. In combination with a plurality of blades, a notched strip adapted to receive the blades and provided with tenons which project through openings provided in the blades and are riveted over or upset to positively lock the strip in place.

2. In combination with a plurality of blades notched at one edge, a strip projecting into the notches of the blades and provided with recesses in which the blades are located, and tenons formed on the strip extending through openings in the blades and riveted over to positively lock the strip to the blades.

3. In combination with a plurality of blades, a binding member provided with a plurality of recesses the edges of which correspond in curvature to the curvature of the working faces of the blades and in which the blades are located, and tenons formed on the strip extending through holes in the blades and riveted over to positively lock the strip to the blades.

4. In combination with a plurality of blades notched along one edge to receive a binding member, a binding member projecting into the notches in said blades and provided with recesses in which the blades are located, and tenons provided on the strip and extending through holes formed in the blades and riveted over to secure the blades in place.

5. In combination with a plurality of blades notched along one edge to receive a binding member, a binding member projecting into the notches of the blades and provided with spacing pieces located between the blades and provided with edges which correspond in curvature to the curvature of the working faces of the blades, and means for inter-engaging the blades to positively lock said strip to said blades.

1,023,893. METALLIC BOX. WASHINGTON I. TUTTLE, Baltimore, Md. Filed Aug. 16, 1909. Serial No. 513,147. (Cl. 206—41.)



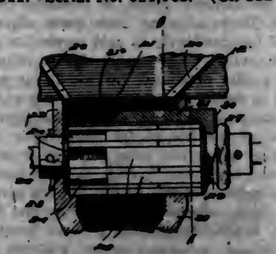
1. In a metallic box, a body-portion having integral front, back and bottom walls, said walls having a seam connection solely at the opposite sides of the front and back walls, the bottom having a portion extending into and forming a part of the seam connection.

2. In a metallic box, a body-portion having integral front, back and bottom walls, said walls having a seam connection solely at the opposite sides of the front and back walls, said bottom having tongues entering into the seam connection.

3. In a metallic-box, a body portion having integral front, back and bottom walls, the front and back walls having a seam connection along opposite side edges, the bottom wall having tongues entering the seam connections and having non-connecting edge contact with the front and back walls adjacent to and extending from said seams.

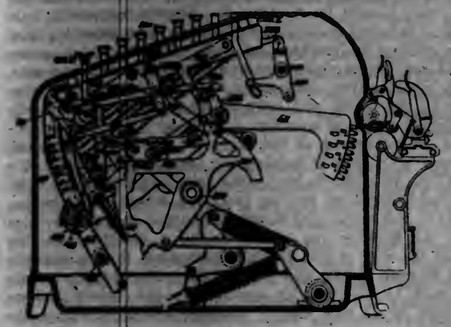
4. In a metallic box, a body portion having integral front, back and bottom walls, the front and back walls having a seam connection along opposite side edges, said front and back walls being curved in cross section adjacent the seam connections, said bottom wall having its side edges conforming in peripheral configuration to the curvature of the seamed back and front walls and being joined thereto solely by tongues entering into the seams.

1,023,894. SEED-PLANTING MECHANISM. CARL JABS, Hericon, Wis. Original application filed May 27, 1909, Serial No. 498,596. Divided and this application filed Mar. 13, 1911. Serial No. 614,063. (Cl. 111—17.)



A seeding mechanism for planters comprising a hopper, discharge casings carried thereby, a dropping roller rotatable in each casing, said roller being provided with longitudinal grooves, a shaft slidable through said rollers, a peripherally grooved disk fast on said shaft, adjacent to one end of each roller having arms telescopically engaging said grooves, a cut-off slide in each casing, each having a pendent end flange that engages the groove of a disk and means for moving said shaft longitudinally in said rollers to adjust said arms and slides.

1,023,895. ADDING-MACHINE. JAMES G. VINCENT, Detroit, Mich., assignor to Burroughs Adding Machine Company, Detroit, Mich., a Corporation of Michigan. Filed May 27, 1905. Serial No. 262,585. (Cl. 235—60.)



1. In an adding machine, the combination, with the totalizing, printing, and key mechanisms thereof and actuating means, of operating connections with the totalizing mechanism, means for rendering said connections inoperative when an amount or item is set up on the key mechanism, and means for retaining such connections in inoperative position during subsequent itemizing.

2. In an adding machine, the combination, with the totalizing, printing, and key mechanisms thereof and actuating means, of operating connections with the totalizing mechanism, means for rendering said connections inoperative when an amount or item is set up on the key mechanism, and a latch arranged to retain such connections in inoperative position during subsequent itemizing and adapted to be operated to release the connections upon operation of the actuating means without itemizing.

3. In an adding machine, the combination, with the totalizing, printing, and key mechanisms thereof and actuating means, of operating connections with the totalizing mechanism, means under the control of and actuated by the key mechanism for rendering said connections inoperative when an amount or item is set upon the key mechanism, and means for retaining such connections in inoperative position during subsequent itemizing.

4. In an adding machine, the combination, with the clearing and key mechanisms thereof and actuating means, of operating connections with the clearing mechanism, means for rendering said connections inoperative when an amount or item is set up on the key mechanism, and means for retaining the connections in inoperative position during subsequent itemizing.

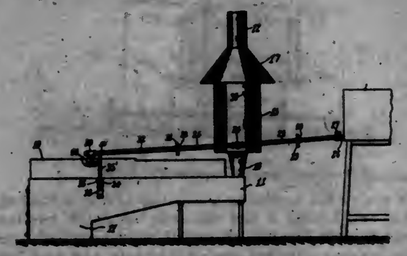
5. In an adding machine, the combination, with the clearing and key mechanisms thereof and actuating means, of operating connections with the clearing mechanism, means for rendering said connections inoperative when an amount or item is set up on the key mechanism, and a latch arranged to retain such connections in inoperative position during subsequent itemizing and adapted to be operated to release the connections upon operation of the actuating means without itemizing.

[Claims 6 to 69 not printed in the Gazette.]

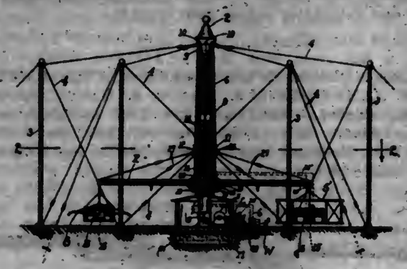
1,023,896. SAP-HEATER. LESLIE M. VOSS, Fillmore, N. Y. Filed June 14, 1910. Serial No. 566,864. (Cl. 127—9.)

1. A heater of the class described comprising an annular receptacle adapted to be arranged around a smoke stack with a laterally extended annular steam and vapor chamber at the upper end communicating with the interior of the receptacle, an intake pipe and a discharge pipe swingingly connected respectively to said tank, and supporting means for said pipes connected to said heater to maintain the pipes in inoperative position.

2. The combination with an evaporating apparatus including a supporting arch a smoke stack and an evaporating pan, of an annular receptacle arranged around said smoke stack, an intake pipe leading into said receptacle and adapted to be detachably connected to a source of supply, a discharge pipe leading from said receptacle in position to conduct the contents thereof to the pan, supporting means for said discharge pipe, means for adjusting said supporting means said pipes being adapted to be swung out of operative position, and means carried by said receptacle for holding said pipes when in inoperative position.



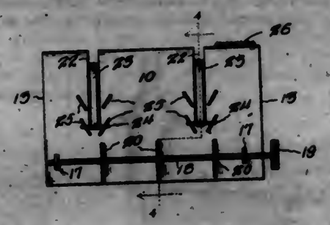
1,023,897. AEROPLANE-ROUNDABOUT. JAMES D. WALSH, St. Louis, Mo. Filed May 8, 1911. Serial No. 625,708. (Cl. 46—72.)



1. An aeroplane roundabout comprising a hollow central staff, a vertically sliding electric collector loosely encompassing the staff and provided with a horizontal platform, a counterweight within the staff, pulleys on top of the staff, suitable electrical connections between the staff and collector, a circular track on the platform, a horizontally rotatable frame provided with wheels running on the track, aeroplanes at the outer portions of the rotatable frame, propellers on the aeroplanes, a source of electric energy, means for conducting the current to the electric connections between the staff and collector and to the propeller motors, a hoisting drum at the base of the staff, and cable connections between the drum and counterweight, and between the counterweight and the collector, respectively, for the purpose set forth.

2. An aeroplane roundabout comprising a hollow central staff, a vertically sliding electric collector loosely encompassing the staff and provided with a horizontal platform, a counterweight within the staff, pulleys on the top of the staff, cables passing over the pulleys and connecting the counterweight with the collector, a trolley-wire on the staff, a trolley-wheel on the collector engaging the wire, a circular track on the platform, a horizontally rotatable frame provided with wheels running on the track, aeroplanes suspended from the outer portions of the rotatable frame, propellers for the aeroplanes, electric motors for driving the propellers, a source of electric energy, suitable conducting wires for leading the electric current through the trolley wires and trolley to the aeroplane motors, a hoisting drum at the base of the staff, and a cable connection between the drum and the bottom of the counterweight for the purpose of elevating or lowering said weight and correspondingly lowering or elevating the platform and the rotating frame carried thereby.

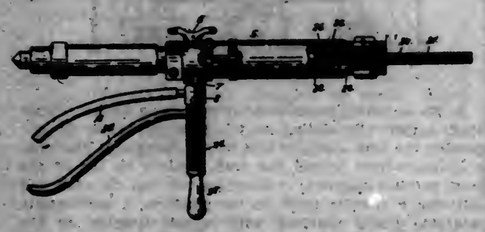
1,023,896. MATCH-BOX. NICHOLAS E. WASSILL, Saxon Hill, Saskatchewan, Canada. Filed May 18, 1911. Serial No. 628,136. (Cl. 206—22.)



1. A match box including a housing having a discharge opening, and having a slot the ends of which terminate adjacent to said opening, an elastic band terminally fixed to said housing adjacent one end of said slot and lying within said slot, a cross bar secured to the free end of said band, and pins arranged on opposite sides of the other end of said slot adapted to detachably engage said cross bar.

2. A match box including a housing having a discharge opening, and having a slot the ends of which terminate adjacent to said opening, an elastic band termially secured to said housing adjacent to one end of said slot and projecting through said slot, a cross bar secured to the free end of said band, and a plurality of pairs of pins arranged on opposite sides of the other end and adapted to selectively and detachably engage said cross bar.

1,023,899. DRILL-HOLE-CLEANING ATTACHMENT FOR HAMMER-DRILLS. DANIEL S. WAUGH, Denver, Colo., assignor to The Denver Rock Drill and Machinery Co., Denver, Colo. Filed May 26, 1908, Serial No. 435,113. Renewed July 14, 1909. Serial No. 507,584. (Cl. 125—10.)



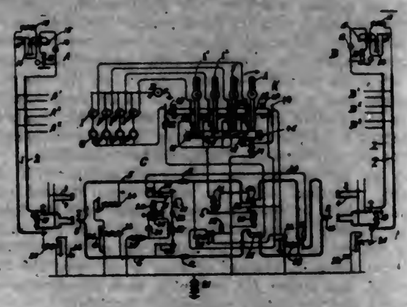
1. In a drill hole cleaning attachment for motive fluid actuated drills, the combination with the drill body, and means for supplying motive fluid thereto, of a valve casing connected with the drill body through which the motive fluid passes to the body of the drill, said drill body and valve casing being provided with a main passage leading from the valve chamber to the drill steel, a valve mounted in said casing, a water conduit connected with the casing, the valve being adjustable and provided with two openings, either of which may be brought into communication with the main passage, whereby when the valve is moved into one position, the motive fluid passes therethrough to the drill steel, while when the valve is moved into the other position the water flows through said passage, substantially as described.

2. The combination with a motive fluid-actuated drill and a motive fluid supply, of a valve chamber mounted on the valve body and in communication with the motive fluid supply, the valve casing and drill body being also provided with a main passage connecting the valve chamber with the drill steel, a water supply in communication with the valve chamber, the valve being provided with two openings for allowing water or motive fluid to flow therethrough to the main passage, a handle for rotating the drill body, the same being connected with the valve casing, a sleeve loosely mounted on the handle and connected in operative relation with the valve whereby the latter may be manipulated for the purpose of allowing either motive fluid or water to flow through the main passage to the drill steel as may be desired, substantially as described.

3. In mechanism of the character set forth, the combination with drilling mechanism including a motor and a drill bit, of a handle for turning the drilling mechanism having an internal motive fluid chamber communicating with the drilling mechanism and with the drill bit, a motive fluid conducting pipe connected to the chamber, and separate rotary valves controlling the outflow from the chamber to the motor and drill bit and having substantially coincident axes of rotation.

4. In mechanism of the character set forth, the combination with drilling mechanism, including a motor and a drill bit, of a handle projecting from one side of the drilling mechanism for turning the same, means for delivering fluid to the motor and to the drill bit, a controlling valve for the fluid to the motor having a handle projecting from the side of the drilling mechanism that is opposite the turning handle, and a valve for controlling the supply of fluid to the drill bit mounted in the handle and rotatable on an axis that is disposed longitudinally of the handle.

1,023,900. TELEPHONE SYSTEM. HARRY G. WEBSTER, Chicago, Ill., assignor, by mesne assignments, to Kellogg Switchboard & Supply Company, a Corporation of Illinois. Filed Mar. 19, 1909. Serial No. 484,467. (Cl. 179—58.)



1. A telephone system comprising a telephone line, a link-circuit for establishing connection with said line, a ringing current source, contacts for connecting said source to said line to transmit ringing current thereover, means normally operative to hold said contacts against operation, electromagnetic means for freeing said contacts in response to the connection of said link-circuit to said line, and circuit connections effective upon a subsequent operation of said contacts to cause said electromagnetic freeing means to lock said contacts in their actuated position.

2. A telephone system comprising a telephone line, a link-circuit for establishing connection to said line, a ringing current source, contacts for connecting said source to said line to transmit ringing current thereover, a stop for preventing the operation of said contacts, an electromagnet for removing said stop from is preventing position, circuit connections and a source of current for operating said magnet to remove said stop in response to the connection of said link-circuit to said line, and circuit connections effective upon a subsequent operation of said contacts to cause said magnet to lock said contacts in their actuated position.

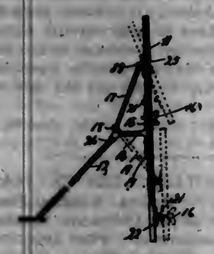
3. A telephone system comprising a telephone line, a link-circuit for establishing connection to said line, a ringing current source, a ringing key for connecting said source to said line to transmit ringing current thereover, a stop normally lying in the path of movement of said key to prevent its operation, an electromagnet for removing said stop from its normal position to permit the operation of said key, circuit connections and a source of current for operating said magnet upon the connection of said link-circuit and line, and circuit connections effective upon a subsequent operation of said contacts to cause said magnet to lock said contacts in their actuated position.

4. A telephone system comprising a telephone line, a link-circuit for establishing connection to said line, a ringing current source, contacts to connect said source to said line to transmit ringing current thereover, means normally operative to hold said contacts against operation, electromagnetic means for freeing said contacts by closing a circuit over a portion of the connected link-circuit and line, and circuit connections effective upon a subsequent operation of said contacts to cause said electromagnetic freeing means to lock said contacts in their actuated position.

5. A telephone system comprising a telephone line, a link-circuit for establishing connection to said line, a ringing current source, contacts to connect said source to said line to transmit ringing current thereover, a stop normally operating to prevent the operation of said contacts, electromagnetic means for removing said stop from its normal position in response to the connection of said link-circuit and line, and means responsive to the subsequent operation of said contacts to cause said electromagnetic means to again operate said stop to lock said contacts in their actuated position.

[Claims 6 to 21 not printed in the Gazette.]

1,023,901. WIND-SHIELD. JAMES WEBSTER, Chicago, Ill., assignor to Chicago Coach & Carriage Co., Chicago, Ill. Filed Feb. 4, 1907. Serial No. 355,655. (Cl. 21—81.)



1. In a wind-shield, in combination, a fixed section, a movable section, brackets attached to the fixed section one adjacent each end thereof, and a pair of links each attached to one of the brackets and to an end of the movable section by means of fixed pivots.

2. In a wind shield, in combination, a plurality of sections, lateral supports for one of the sections, and links pivoted to the other section and attached to the lateral supports by stationary pivots.

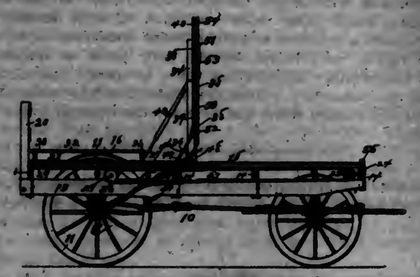
3. In a wind shield, in combination, a plurality of sections, one thereof being adapted for fixed attachment, brackets attached to such section and projecting above the same, locks for attaching the other section to such bracket extensions, and links pivoted to the other section and attached to the brackets by stationary pivots.

4. In a wind shield, in combination, a plurality of sections, one thereof being adapted for fixed attachment, brackets attached to such section and projecting above the same, locks for attaching the other section to such bracket extensions, links pivotally attached to the brackets and the last mentioned shield section, and engaging apertured bosses on opposite faces of the two shield sections and adapted to be secured together.

5. In a wind shield, in combination, a plurality of sections, one thereof being adapted for fixed attachment, brackets attached to such section and projecting above the same, locks for attaching the other section to such bracket extensions, links pivotally attached to the brackets and the last mentioned shield section, and stay rods attached to the brackets.

[Claims 6 to 15 not printed in the Gazette.]

1,023,902. HAY-RACK. WILLIAM WEHMILLER, Clarinda, Iowa. Filed Sept. 12, 1910. Serial No. 581,677. (Cl. 21—74.)

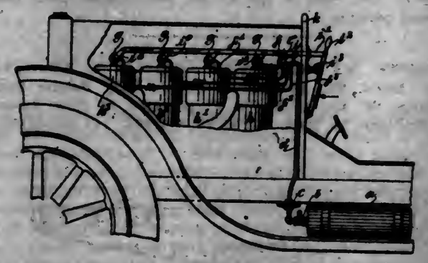


1. In a hay rack, the combination of a running gear having a traction wheel, a hay rack having driving connections constantly geared to said traction wheel, said hay rack having a stationary platform and a superposed movable platform, a hook on the movable platform adapted to engage said driving devices at times, and a rod arranged for manual actuation in one direction and spring-drawn in the other direction, which rod is pivoted to said hook

2. In a hay rack, a movable platform having a slot and a head gate superposed relative thereto, a hook on said movable platform adapted to engage a prime mover, a rod extending through said slot and engaging said hook, said rod slidably mounted on said head gate, and a guard overlying said slot and protecting the lower end portion of said rod.

3. In a hay rack, a movable platform having a slot and a head gate superposed relative thereto, a hook on said movable platform adapted to engage a prime mover; a rod extending through said slot and engaging said hook, said rod slidably mounted on said head gate, a guard overlying said slot and protecting the lower end portion of said rod, and stops limiting forward movement of said movable platform.

1,023,903. SELF-STARTING DEVICE FOR INTERNAL-COMBUSTION ENGINES. LOUIS T. WEISS, Jr., New York, N. Y. Filed Oct. 25, 1911. Serial No. 656,751. (Cl. 123—187.5.)



1. A self-starting device for an internal combustion engine having a plurality of cylinders comprising a source of supply of gas under pressure, a primary distributing valve connected to the source of supply, separate connections from said primary distributing valve to each of the cylinders, a secondary valve included in each of said separate connections with a gas chamber interposed between the primary distributing valve and each secondary valve and means to actuate said valves whereby the primary valve is opened and closed while the secondary valves are closed and the secondary valves are opened while the primary valve is closed.

2. A self-starting device for an internal combustion engine having a plurality of cylinders comprising a source of supply of gas under pressure, a primary distributing valve

connected to said source of supply, separate connections from said primary distributing valve to the several cylinders, a secondary valve included in each of said separate connections with a gas chamber interposed between the primary distributing valve and each of said secondary valves and a common actuating means connected to all of said valves, said valves having their ports so disposed that the primary distributing valve is opened and closed while the secondary valves are closed and the secondary valves are opened while the primary distributing valve is closed.

1,023,904. BALL. HORACE R. WEMPLE, Elizabeth, N. J. Filed July 2, 1910. Serial No. 570,144. (Cl. 46—4.)



1. A method of making an inflatable ball consisting in forming a wall of suitable elastic material, the wall having a general spherical form with a portion thereof depressed, inserting an inflating needle through the depressed portion of the wall and introducing an inflating fluid to force the depressed portion of the wall into the fair surface of the sphere.

2. The method of making an inflatable ball consisting in forming a wall of suitable elastic material, the wall having a general spherical form with a portion thereof depressed and of greater superficial area than the fair surface of the said spherical form, inserting an inflating needle through the depressed portion of the wall and introducing an inflating fluid sufficient to force the depressed portion of the wall into the fair surface of the sphere thereby sealing the hole formed by the inflating needle by the compression of the portion of the wall immediately surrounding said perforation.

3. An inflatable ball provided with a wall of elastic material, a portion of the elastic wall surrounding the point where an inflating needle was inserted to inflate the ball being compressed and held in a compressed condition by the outward pressure of the inflating fluid and the resistance of the wall of the sphere surrounding said compressed portion.

1,023,905. RAILROAD-CAR. CHARLES T. WESTLAKE, St. Louis, Mo., assignor to Double Body Bolster Company, St. Louis, Mo., a Corporation of New Jersey. Filed Sept. 15, 1909. Serial No. 517,888. (Cl. 105—192.)



1. The herein described end sill for railway cars comprising a cast metal member, having front and rear walls and top and bottom plates, a horizontally disposed flange integral with and projecting rearwardly from the lower portion of the rear wall of the body of the end sill, there being openings formed through the top plate end posts having their lower ends seated in said openings, outer and inner sheathing fixed on said post, and a water shed on top of the end sill between the inner and outer sheathing and between the end post opening.

2. The herein described end sill for railroad cars, comprising a hollow cast metal body having front and rear walls and top and bottom plates, which bottom plate is perforated, a flange integral with the rear wall of the cast metal body, and which flange extends rearwardly from the lower portion of said rear wall, there being openings formed through the top plate which openings are adapted to receive the lower portions of the end posts of the car body, longitudinally disposed ribs formed on the top surface of the top plate between said openings, and there being horizontally alined openings formed through the front and rear walls of the hollow body for the reception of the center and side stems of the buffer beam.

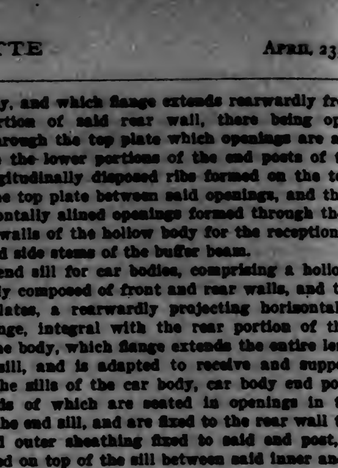
3. An end sill for car bodies, comprising a hollow cast metal body composed of front and rear walls, and top and bottom plates, a rearwardly projecting horizontally disposed flange, integral with the rear portion of the rear wall of the body, which flange extends the entire length of the end sill, and is adapted to receive and support the ends of the sills of the car body, car body end posts the lower ends of which are seated in openings in the top plate in the end sill, and are fixed to the rear wall thereof, inner and outer sheathing fixed to said end post, and a water shed on top of the sill between said inner and outer sheathing and between the openings for the end posts.

4. The combination with a hollow end sill for car bodies, of car body end posts, the lower ends of which extend through openings formed in the top of said hollow end sill and are rigidly fixed to said end sill, inner and outer sheathing fixed to said end posts and longitudinally disposed ribs forming water sheds, which ribs are integral with the top plate of the end sill, and are arranged between the inner and outer sheathing and between the openings in the top of the end sill, which receive the end posts.

5. The combination with a hollow end sill for car bodies having openings formed through its top plate, of car body end posts having their lower ends positioned in said openings and fixed to said end sill, inner and outer sheathing fixed to the end posts and means on top of the end sill between the openings therein for deflecting water and dust from the top of said end sill into the openings therein.

[Claims 6 and 7 not printed in the Gazette.]

1,023,906. CONTROLLING DEVICE FOR PLAYER-PIANOS. FRANK C. WHITE, Meriden, Conn., assignor to The Wilcox & White Company, Meriden, Conn., a Corporation of Connecticut. Filed Dec. 21, 1910. Serial No. 598,585. (Cl. 84—160.)



1. In a mechanical music playing instrument, a string, a power actuated hammer, a movable hammer rest rail for holding said hammer at different distances relatively to said string, means for moving said rail, and a single manually operable device for controlling both the power for actuating the hammer and the means for shifting the rail, said controlling device being movable horizontally and vertically, and a source of power.

2. In a mechanical music playing instrument, a string, a power actuated hammer, a movable hammer rest rail for holding said hammer at different distances relatively to said string, means for moving said rail, and a single controlling device for controlling independently the power for actuating the hammer and the means for shifting the rail, said controlling device being movable horizontally and vertically and a source of power.

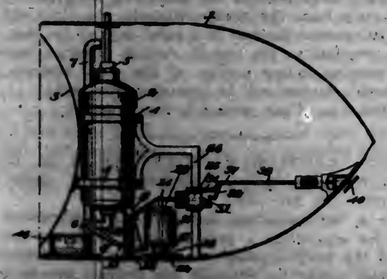
3. In a mechanical music playing instrument, a string, a mechanically actuated hammer and means for actuating the same, a movable hammer rest rail for holding said hammer at different distances relatively to said string, means for moving said rail, and a single controlling lever for independently controlling both the mechanism for actuating the hammer and also the means for shifting the rail.

4. In a mechanical music playing instrument, a string, a hammer, a hammer rest rail movable to and fro for holding said hammer at different distances from the rail, a pneumatic for actuating the hammer, a pneumatic for actuating said rail, an exhauster, a connection from said exhauster to said hammer rest rail pneumatic, a valve therein, another connection from said exhauster to said action pneumatic, a valve therein, and a single lever for controlling both of said valves independently.

5. In a mechanical music playing instrument, a string, a hammer, a hammer rest rail movable to and fro for holding said hammer at different distances from the rail, a pneumatic for actuating the hammer, a pneumatic for actuating said rail, an exhauster, a connection from said exhauster to said hammer rest rail pneumatic, a valve therein, another connection from said exhauster to said action pneumatic, a valve therein, and a single means for controlling both of said valves independently, said single means comprising a lever mechanically connected with one of said valves and pneumatically connected with another of said valves, and mechanical and pneumatic connections therefor.

[Claim 6 not printed in the Gazette.]

1,023,907. MECHANICAL AIR DEVICE FOR EXPELLING WATER OR OTHER LIQUIDS FROM THE HEADS OF TORPEDOES TO AID IN THE RECOVERY THEREOF AFTER FIRING. KENNETH WHITING and JAMES B. HOWELL, U. S. Navy. Filed July 22, 1910, Serial No. 573,270. Renewed Oct. 10, 1911. Serial No. 653,964. (Cl. 114—20.)



1. In an automobile torpedo provided with a head, the combination of an air flask located in said head and provided with a passage discharging in said head; a valve controlling said passage; a trigger lever controlling said valve; means controlling said trigger lever to retain said valve closed; additional means adapted to be actuated by pressure due to submergence for releasing said first mentioned means; and a discharge valve in said head adapted to permit water to escape therefrom, substantially as described.

2. In an automobile torpedo provided with a head, the combination of an air flask located in said head and provided with a passage discharging in said head; a valve controlling said passage; a trigger lever controlling said valve; a sear coacting with said trigger lever to retain said valve closed; means adapted to be actuated by the pressure due to submergence for controlling said sear, comprising a piston, a piston rod, a spring for actuating said rod and means for adjusting said spring; and a discharge valve in said head whereby the whole is adapted to cause the sudden and complete discharge of water from said head, substantially as described.

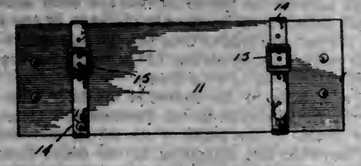
3. In a torpedo provided with a head, the combination of an air flask provided with a pipe discharging in said head; a valve controlling said pipe; a trigger lever controlling said valve; means comprising a hydrostatic pressure actuated device controlling said trigger lever; means comprising a water tripping device controlling said pressure device; and a discharge valve adapted to permit water under pressure to escape from said head, substantially as described.

4. In a torpedo provided with a head the combination of an air flask provided with a pipe discharging in said head; a valve controlling said pipe; a trigger lever controlling said valve; a spring for turning said lever and valve; a sear preventing said lever from turning; means comprising a hydrostatic pressure actuated device controlling said sear; means comprising a water tripping device controlling said pressure device; and a discharge valve adapted to permit water under pressure to escape from said head, substantially as described.

5. In a torpedo provided with a head, the combination of an air flask provided with a pipe discharging in said head; a valve controlling said pipe; a trigger lever controlling said valve; a spring for turning said lever and valve; a sear preventing said lever from turning; a hydrostatic pressure controlled device comprising a piston, piston rod, and spring controlling said sear; a locking device controlling said piston rod; a water tripping device comprising a bell crank lever for controlling said locking device; and a discharge valve in said head adapted to permit water under pressure to escape therefrom, substantially as described.

[Claim 6 not printed in the Gazette.]

1,023,908. BOX. ARTHUR F. WILCOX, Kalispell, Mont. Filed Sept. 25, 1908. Serial No. 454,735. (Cl. 217—15.)

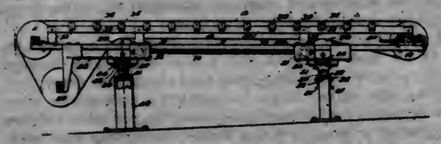


A box comprising in combination, a bottom, front and rear side walls hinged to the bottom, a top hinged to the upper edge of one of the side walls, and walls hinged to the rear side wall to swing inwardly, plates secured to the inner face of the end walls and having outwardly turned flanges extending over the forward edges of said walls and in spaced relation thereto and to the front side wall, plates carried by the inner face of the front side wall having resilient outer ends adapted to engage the flange portions of the first mentioned plates, and spring detents carried by the inner face of the front wall adapted to engage the plates carried by the end walls to lock the latter against inward movements, said second mentioned plates being centrally formed with longitudinal slots for receiving the free ends of the detents when the latter are disengaged from the first mentioned plates.

1,023,909. ORE-CONCENTRATOR. CARL J. WITT, Needles, Cal. Filed Jan. 27, 1911. Serial No. 605,057. (Cl. 83—83.)

1. In a machine of the character described, the combination of a frame braced at its central portion and having unobstructed openings between the sides at the ends.

rollers mounted in the said ends of the frame, a wiping roller supported below the frame, and an endless traveling belt passing around the end rollers and said wiping roller having its going and return portion both disposed above the frame, and having said return portion operating through the said spaces at the ends of the frame.



2. In a machine of the character described, the combination of a frame braced at its central portion and having unobstructed openings between the sides at the ends, rollers mounted in the said ends of the frame, a wiping roller supported below the frame, and an endless traveling belt passing around the end rollers and said wiping roller having its going and return portion both disposed above the frame, and having said return portion operating through the said spaces at the ends of the frame, and means for imparting a side shake to the frame acting upon the central braced portion of said frame.

3. In combination, a frame tiltable in one direction and reciprocable at right angles to the plane of its tilting movement, said frame being composed of parallel side members with bracing at the central portion only whereby an unobstructed space is left at each end of the frame, rollers at the ends of the frame within said spaces, an endless traveling belt operating over said rollers and having both ends of its return portion operating through said spaces, means acting upon the central braced portion of the frame for imparting a side shake to said frame and its supported belt, said belt having the central parts of its going and return portions both disposed above the frame and the bracing thereof, whereby the belt may be placed and renewed without detaching the frame members.

4. In a machine of the character described, the combination of a frame tiltable in one direction and reciprocable at right angles to the plane of its tilting movement, said frame being braced at its central portion and having return rollers at the ends of the braced portion, the part of the frame between the braced portion and outer ends being open and unobstructed to permit the ends of the belt to operate through the spaces thus formed, and means acting upon the central braced portion of the frame for imparting reciprocal movement to said frame.

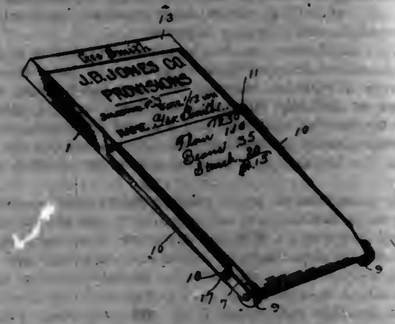
5. In a machine of the character described, the combination of a frame tiltable in one direction and reciprocable at right angles to the plane of its tilting movement, an endless traveling belt supported on the frame having its going and return portions both disposed above the horizontal plane of the frame, to facilitate the placing and renewing of the belt, bearings near opposite portions of and below the frame, said frame being tiltable on the bearing near one end as a fulcrum, and means for reciprocating the frame on said bearing in the direction of the axis of the fulcrum.

[Claims 6 to 11 not printed in the Gazette.]

1,023,910. MANIFOLDING SALES-BOOK. RODNEY J. WOOD, Dayton, Ohio, assignor to Fayette H. Wood, Dayton, Ohio. Filed Jan. 23, 1911. Serial No. 604,078. (Cl. 11—36.)

1. In a sales recording device, a holder having a plurality of stationary separable sales slips and a movable continuous record strip contained therein, means for moving the continuous record strip across the sales slips in a direction from the bottom to the top thereof whereby successive entries on the record strip may be made in a vertical column and transfer means for producing a duplicate record upon the uppermost of the separate sales slips.

2. In a sales recording device, a holder having a plurality of separable sales slips contained therein, a continuous record strip also contained in said holder, means adapted to feed the strip therefrom through successive movements of any desired length independent of its relation with the sales slips, a guide over which the continuous strip passes in a direction from the bottom to the top of the sales slip and over the same and transfer means whereby an entry made upon the continuous strip is reproduced upon the sales slip beneath.



3. In a sales recording device, a holder having a plurality of stationary separable sales strips contained therein, a continuous record strip also carried by said holder, a reel upon which the used portion of said strip is collected, a guide member overlying the separable sales strips in transverse relation therewith, means for causing the continuous strip to move in a path from the bottom toward the top of the sales slips and independent of said slips thence over said guide member and in the opposite direction from said guide member toward the bottom of the sales slips and transfer means whereby the entry made upon the continuous slip is reproduced upon the sales slip beneath.

4. In a sales recording device, a holder, having the supply portion of a continuous record strip contained in the holder, a reel journaled on the holder and adapted to receive the used portion of the record strip, said reel being located in a bight of the unused portion of the strip whereby the used portion thereof contained upon the reel will be concealed from view by the unused bight extending about the reel.

5. In a sales recording device, a holder, having the supply portion of a continuous record strip contained in the holder, a reel adapted to receive the used portion of the record strip, a guide for the continuous record strip, the reel being located between the guide and the point of exit of the strip from the holder, whereby the strip will be conducted around the reel to a point beyond the reel and thence returned to the reel in reverse direction beneath the advancing unused portion of the strip, whereby the used portion thereof will be concealed from sight.

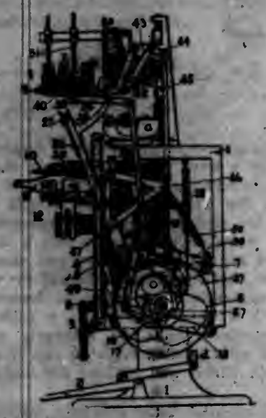
[Claims 6 to 14 not printed in the Gazette.]

1,023,911. LABELING-MACHINE. FRANK O. WOODLAND, Worcester, Mass. Filed Feb. 5, 1909. Serial No. 476,199. (Cl. 216—13.)

1. In a bottle-labeling machine, the combination of means for supporting a pack of labels with the bottom face of the pack exposed for feeding labels downward therefrom, means for gripping the exposed bottom label to the body of the pack, and means for applying adhesive substance to a portion of said exposed label while held by said gripping means.

2. In a bottle-labeling machine, the combination, of a top-charged open-bottomed label-holder having means for supporting a pack of labels, means for supporting said label-holder in an overhanging position, a pair of vertically reciprocating glue-applying pickers that contact with the respective end portions of the exposed label for gluing and taking said label from the pack, and a supplementary glue-applying means that moves underneath the label-holder across the face of the pack and distributes glue upon the central portion of the bottom of the pack.

3. In a labeling machine, the combination, of a top-charged bottom-delivering label-holder having means for supporting a supply of labels thereon, glue-applying pickers movable to and from said label-holder, and adapted for printing a film of glue upon portions of the under label and adhesively extracting labels, one at a time, from the label-holder, a glue-applying means that acts for spreading glue upon that part of the label not included by the pickers, and means for temporarily retaining the label from displacement by said glue-applying means.



4. In a labeling machine, in combination with means for affixing labels to bottles or the like, and a stationary bottom-delivering label-holder having stakes adapted for supporting a pack of labels at the edges, and for the delivery of the under label at a determined position; of a roller for gluing the under label on the pack, and a backwardly and forwardly moving carrier mechanism for advancing and retracting said gluing roller into and from alinement with the pack of labels, and means for varying the height at which said roller travels during its forward and backward movement.

5. In a labeling machine, the combination with the projecting work-supporting rest, vertically moving picker-carrier and pickers, centering clamp and laterally swinging downwardly acting wipers for affixing labels to bottles or the like, and a top-charged bottom delivering label-holder comprising means for supporting a plurality of packs of labels thereon, a label-gluing roller mounted upon a carrier that travels beneath said label-holder into and out of alinement with the labels and applies a coating of glue to the under label, in each of the several packs, while in the label-holder, mechanism for moving said carrier and said label-gluing roller backward and forward into and from alinement with the several packs upon the label-holder, and means for raising and lowering said roller into and from contact with the labels.

[Claims 6 to 22 not printed in the Gazette.]

1,023,912. REGISTER. ANDREW ZETTERVALL, Los Angeles, Cal. Filed Oct. 10, 1911. Serial No. 653,762. (Cl. 235—100.)

1. In a register, a base having a circular chamber in one face and a guide way extending laterally across the opposite face, a rotatable disk mounted in said chamber and having concentric rows of spaced slots with respect to its axis of movement, a coin gage movable in said guide way, registering mechanism mounted upon the base forwardly of said coin gage, a coin chute having communication with said gage, and means carried by the gage and operated by the disk for actuating said registering mechanism on the introduction of a coin into the chute.

2. In a register, a base having a circular chamber in one face and a guide way extending laterally across the opposite face, a rotatable disk mounted in said chamber and having concentric rows of spaced slots with respect to its axis of movement, a coin gage movable in said guide way, registering mechanism mounted upon the base forwardly of said coin gage, a coin chute having communication with said gage, means carried by the gage and operated by the disk for actuating said registering mechanism on the introduction of a coin into the chute, closure slides intersecting the coin chute above and below the said coin gage, and means on the disk for alternately opening and closing said closure slides.



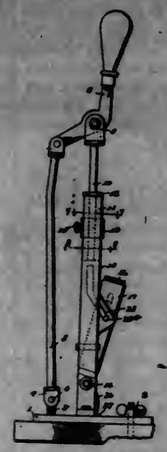
3. In a register, a base having a circular chamber in one face and a guide way extending laterally across the opposite face, a rotatable disk mounted in said chamber and having concentric rows of spaced slots with respect to its axis of movement, a coin gage movable in said guide way, registering mechanism mounted upon the base forwardly of said coin gage, a coin chute having communication with said gage, means carried by the gage and operated by the disk for actuating said registering mechanism on the introduction of a coin into the chute, closure slides intersecting the coin chute above and below the said coin gage, means on the disk for alternately opening and closing said closure slides, and a casing entirely inclosing the said registering mechanism and having a sight opening therein.

4. In a register, a base having a circular chamber in one face and a guide way extending laterally across the opposite face, a rotatable disk mounted in said chamber and having concentric rows of spaced slots with respect to its axis of movement, a coin gage movable in said guide way, registering mechanism mounted upon the base forwardly of said coin gage, a coin chute having communication with said gage, means carried by the gage and operated by the disk for actuating said registering mechanism on the introduction of a coin into the chute, closure slides intersecting the coin chute above and below the said coin gage, means on the disk for alternately opening and closing said closure slides, a casing entirely inclosing the said registering mechanism and having a sight opening therein, and means acting on the coin gage for moving the same to normal position upon the release of a coin therefrom.

5. In a register, a base having a circular chamber in one face and a guide way extending laterally across the opposite face, a rotatable disk mounted in said chamber and having concentric rows of spaced slots with respect to its axis of movement, a coin gage movable in said guide way, registering mechanism mounted upon the base forwardly of said coin gage, a coin chute having communication with said gage, means carried by the gage and operated by the disk for actuating said registering mechanism on the introduction of a coin into the chute, closure slides intersecting the coin chute above and below the said coin gage, means on the disk for alternately opening and closing said closure slides, a casing entirely inclosing said registering mechanism and having a sight opening therein, means acting on the coin gage for moving the same to normal position upon the release of a coin therefrom, and means for rotating the disk.

[Claims 6 to 10 not printed in the Gazette.]

1,023,913. RELOADING-TOOL. OLAFER ARNASON, Cottonwood, Minn. Filed Mar. 23, 1911. Serial No. 616,292. (Cl. 86—36.)



1. A reloading tool, comprising a base plate, a yoke shaped frame secured to the base plate, a second frame of similar shape pivotally secured to the first, an ejector carried by the second frame and operated upon the upward movement of the operating lever, an operating lever, a cross head slidably mounted in the frame and reciprocated by the operating lever, a loading block secured in the pivotally mounted frame, and means carried by the cross head for controlling the movement of the supplemental frame on its pivots.

2. A reloading tool, comprising a yoke shaped frame, a cross head slidably mounted therein, a supplemental frame pivotally secured within the main frame and of similar shape thereto, a loading block secured in the supplemental frame, said block and frame having alined bores, a solid exteriorly threaded abutment depending from the cross head, a supplemental abutment engaged on the said abutment and depending therefrom to provide an abutment ring, means for automatically regulating the position of the supplemental frame and the loading block, and an ejector operated by the outward movement of the loading block and frame.

3. A reloading tool, comprising a main frame, a supplemental frame pivotally secured to the main frame and of similar configuration to the main frame, a cross head slidably mounted in the main frame, means for reciprocating the cross head, a plate depending from the cross head and having an angular slot formed therein, and a pin projecting from pivoted frame and engaged in the slot, whereby the reciprocal movement of the cross head and plate causes the plate at the sides of the slot to cammingly engage the pin to adjust the supplemental frame on its pivot.

4. A reloading tool, comprising a main yoke frame, a supplemental inverted U-shaped frame pivoted within the main frame, said supplemental frame having a shell receiving aperture formed centrally thereof, a base for supporting the main frame, an ejector slidably secured to the supplemental frame and having an arm curving inwardly to the aperture of the supplemental frame, said ejector having a depending portion adapted to engage a block upon the base on outward swinging of the supplemental frame to force the ejector upward relative to the said frame, a cross head slidably engaged on the parallel portions of the main frame, means for reciprocally shifting the cross head, a pin laterally projecting from the supplemental frame, and an arm depending from the cross head and having an angular track for receiving the pin, whereby movement of the cross head and arm serves to swing the supplemental frame inward and outward.

1,023,914. APPARATUS FOR FORMING PHOTOGRAPHIC MATS AND MASKS. SAMUEL FORCE BADGLEY, Toronto, Ontario, Canada, assignor to Eastman Kodak Co., Rochester, N. Y., a Corporation of New York. Filed Oct. 2, 1909. Serial No. 520,663. (Cl. 164—41.)



1. In an apparatus of the character described, the combination with a work support having a channel therein and a knife coöperating with the support, of a work guiding stop on the latter comprising a split body portion slidable in the channel, means for spreading the same against the walls of the channel and a work abutting block carried on the body portion and extending transversely of the channel across the face of the work support.

2. In an apparatus of the character described, the combination with a work support and a knife coöperating therewith having a relatively angularly arranged cutting edge, of work guiding stops on one of said members arranged both within and without the angle of the cutting edges.

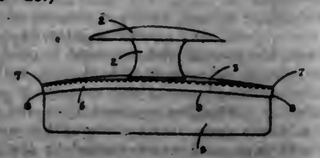
3. In an apparatus of the character described, the combination with a work support and a knife coöperating therewith having relatively angularly arranged cutting edges, of work guiding stops on one of said members arranged on opposite sides of one cutting edge and adjustable in parallelism therewith and toward and from the other cutting edge.

4. In an apparatus of the character described, the combination with a work support having a channel therein and a way extending parallel with the channel and a knife coöperating with the support and having a cutting edge parallel with the channel, of a guiding stop movable in the channel on one side of the knife, means for locking it therein, a bracket connected with the guide and supported in the way, said bracket extending downwardly within the way and thence beneath the knife and a second guiding stop on the bracket arranged on the other side of the knife.

5. In an apparatus of the character described, the combination with a work support having a shearing edge thereon, of a knife pivoted at one side thereof having relatively angularly arranged cutting edges diverging toward the axis of pivotal movement and conforming to the shearing edge of the support, said knife being arranged in bearings located at one end of each blade, and springs arranged in the bearings to act against the blades and yieldingly force them against the shearing edge of the work support.

[Claims 6 and 7 not printed in the Gazette.]

1,023,915. NAIL-BUFFER. HAMILTON C. BATES, Chester, Conn. Filed Apr. 19, 1911. Serial No. 622,128. (Cl. 30—23.)

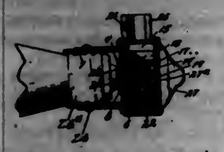


1. In a nail buffer, a removable polishing cover, a band having its upper edge extending outside of, and conforming in shape to, and flush with the face of the buffer-top, said band being curved upward in the center thereof to allow a slight spring action, whereby said band and polishing cover are tightly held in place.

2. In a nail buffer, a removable polishing cover, a band having its upper edge extending outside of, and conforming in shape to, and flush with the face of the buffer-top, said band tapering in cross section toward the lower edge thereof and being curved upward in the center thereof to allow a spring action to said band.

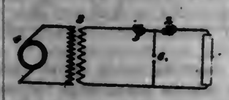
3. In a nail buffer, a removable polishing cover, an endless band having a contracted lower edge, said band being curved upward in the center thereof and having a continual spring action whereby the lower edge of the band is held embedded in said polishing cover in the position desired.

1,023,916. LAMP-SOCKET. REUBEN B. BENJAMIN, Chicago, Ill., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 16, 1907. Serial No. 362,743. (Cl. 173—358.)



The combination of a flattened base having a socket on one of its sides and recesses in its opposite side, binding-screws in said recesses, contacts associated with said socket, connections extending through the base from said contacts to said binding-screws, a housing for said base and socket, and means on said housing for making connection with a support or conduit for leading-in wires, said base having a notch adjacent said last-named means and channels extending from said notch into said recesses.

1,023,917. CONDUCTING MATERIAL AND METHOD OF PRODUCING THE SAME. EDWARD BENNETT, Pittsburgh, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed June 2, 1899, Serial No. 719,093. Renewed Feb. 19, 1902. Serial No. 94,821. (Cl. 219—63.)



1. The method of treating a solid body of conducting material to increase its specific resistance, which consists in subjecting it to the action of an oscillatory electric current of very high frequency, substantially as described.

2. The method of treating a solid body of conducting material to increase its specific resistance, which consists in subjecting it to the action of an oscillatory electric current of high potential and frequency, substantially as described.

3. The method of treating a solid body of conducting material to increase its specific resistance which consists in subjecting it to the action of an oscillatory electric current of very high frequency in approximately the direction in which electrical pressure is to be applied when the body is in service as a resistance medium.

4. The method of treating a solid electric conductor to increase its specific resistance which consists in subjecting it to the action of an oscillatory electric current of high potential and frequency in approximately the direction in which electrical pressure is to be applied when the conductor is in service as an impedance body.

5. The method of making a conducting body of normally high resistance which consists in forming a mixture of suitable conducting and non-conducting materials and a binder in suitable proportions, then compressing said mixture to form a rod or block, then baking the rod or block and finally subjecting the baked rod or block to the action of an oscillatory current of high frequency, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,023,918. SAMPLING DEVICE FOR ARTESIAN WELLS. WILLIAM I. BUTTS, Houston, Tex., assignor of one-half to John G. Gray, Vinton, La. Filed Aug. 11, 1911. Serial No. 643,548. (Cl. 166—3.)



1. A sampler for Artesian and other wells, comprising an upper tubular section adapted to be connected to the lower end of a drill pipe and having one or more lateral openings to connect with the well, and a lower section or sampling tube having a lower cutting edge and an opening at the top for the passage of liquid outwardly from the sampling tube as the sample rises in the tube.

2. The combination with a drill pipe, of a sampling device, comprising an upper tubular section attached to the bottom of the drill pipe and having one or more lateral openings for the passage of liquid into and out of the pipe, and a lower section or sampling tube connected with said upper section having a lower cutting edge and one or more lateral openings at the top communicating with the well.

3. A sampler for Artesian and other wells, comprising an upper tubular section adapted to be connected to the lower end of a drill pipe and having one or more lateral openings to connect with the well, and a lower section or sampling tube having a lower cutting edge and one or more openings at the top for the passage of liquid outwardly as the sample rises in the tube, and devices at the lower end of the sampling tube for assisting in holding the sample in the tube.

4. A sampling device for wells, comprising an upper tubular section adapted to be connected to the lower end of the drill pipe and having one or more lateral openings to connect with a well and a lower section or sampling tube having a lower cutting edge and one or more openings at the top for the passage of liquid outwardly as the sample rises in the tube, and a valve in the upper part of said sampling tube for preventing the passage of liquid downwardly into the tube.

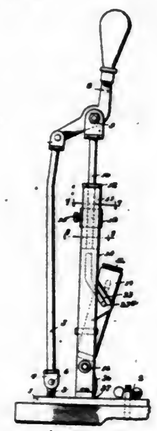
1,023,919. FOOD COMPOSITION. FRED M. BORCHERT, Chicago, Ill. Filed Nov. 23, 1910. Serial No. 593,856. (Cl. 99—11.)

1. The herein described composition for making beverages consisting of cocoa and cereals pulverized and mixed in approximately equal proportions by weight.

2. The herein described composition for making beverages consisting of cocoa, corn, oats, rice, and wheat pulverized and mixed, said cocoa comprising approximately one-half part by weight of the composition.

3. The herein described composition for making beverages consisting of cocoa, 16 parts by weight; corn, 4 parts; oats, 5 parts; rice, 5 parts; wheat, 2 parts, all of said ingredients being pulverized and mixed together.

1,023,913. RELOADING-TOOL. OLAFER ARNASON, Cottonwood, Minn. Filed Mar. 23, 1911. Serial No. 616,292. (Cl. 86—36.)



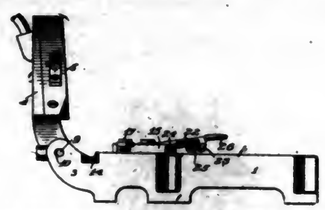
1. A reloading tool, comprising a base plate, a yoke shaped frame secured to the base plate, a second frame of similar shape pivotally secured to the first, an ejector carried by the second frame and operated upon the upward movement of the operating lever, an operating lever, a cross head slidably mounted in the frame and reciprocated by the operating lever, a loading block secured in the pivotally mounted frame, and means carried by the cross head for controlling the movement of the supplemental frame on its pivots.

2. A reloading tool, comprising a yoke shaped frame, a cross head slidably mounted therein, a supplemental frame pivotally secured within the main frame and of similar shape thereto, a loading block secured in the supplemental frame, said block and frame having alined bores, a solid exteriorly threaded abutment depending from the cross head, a supplemental abutment engaged on the said abutment and depending therefrom to provide an abutment ring, means for automatically regulating the position of the supplemental frame and the loading block, and an ejector operated by the outward movement of the loading block and frame.

3. A reloading tool, comprising a main frame, a supplemental frame pivotally secured to the main frame and of similar configuration to the main frame, a cross head slidably mounted in the main frame, means for reciprocating the cross head, a plate depending from the cross head and having an angular slot formed therein, and a pin projecting from pivoted frame and engaged in the slot, whereby the reciprocal movement of the cross head and plate causes the plate at the sides of the slot to cammingly engage the pin to adjust the supplemental frame on its pivot.

4. A reloading tool, comprising a main yoke frame, a supplemental inverted U-shaped frame pivoted within the main frame, said supplemental frame having a shell receiving aperture formed centrally thereof, a base for supporting the main frame, an ejector slidably secured to the supplemental frame and having an arm curving inwardly to the aperture of the supplemental frame, said ejector having a depending portion adapted to engage a block upon the base on outward swinging of the supplemental frame to force the ejector upward relative to the said frame, a cross head slidably engaged on the parallel portions of the main frame, means for reciprocally shifting the cross head, a pin laterally projecting from the supplemental frame, and an arm depending from the cross head and having an angular track for receiving the pin, whereby movement of the cross head and arm serves to swing the supplemental frame inward and outward.

1,023,914. APPARATUS FOR FORMING PHOTOGRAPHIC MATS AND MASKS. SAMUEL FORCE BADGLEY, Toronto, Ontario, Canada, assignor to Eastman Kodak Co., Rochester, N. Y., a Corporation of New York. Filed Oct. 2, 1909. Serial No. 520,663. (Cl. 164—41.)



1. In an apparatus of the character described, the combination with a work support having a channel therein and a knife coöperating with the support, of a work guiding stop on the latter comprising a split body portion slidable in the channel, means for spreading the same against the walls of the channel and a work abutting block carried on the body portion and extending transversely of the channel across the face of the work support.

2. In an apparatus of the character described, the combination with a work support and a knife coöperating therewith having a relatively angularly arranged cutting edge, of work guiding stops on one of said members arranged both within and without the angle of the cutting edges.

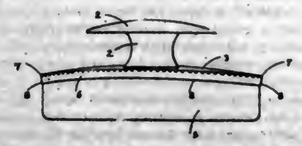
3. In an apparatus of the character described, the combination with a work support and a knife coöperating therewith having relatively angularly arranged cutting edges, of work guiding stops on one of said members arranged on opposite sides of one cutting edge and adjustable in parallelism therewith and toward and from the other cutting edge.

4. In an apparatus of the character described, the combination with a work support having a channel therein and a way extending parallel with the channel and a knife coöperating with the support and having a cutting edge parallel with the channel, of a guiding stop movable in the channel on one side of the knife, means for locking it therein, a bracket connected with the guide and supported in the way, said bracket extending downwardly within the way and thence beneath the knife and a second guiding stop on the bracket arranged on the other side of the knife.

5. In an apparatus of the character described, the combination with a work support having a shearing edge thereon, of a knife pivoted at one side thereof having relatiyely angularly arranged cutting edges diverging toward the axis of pivotal movement and conforming to the shearing edge of the support, said knife being arranged in bearings located at one end of each blade, and springs arranged in the bearings to act against the blades and yieldingly force them against the shearing edge of the work support.

[Claims 6 and 7 not printed in the Gazette.]

1,023,915. NAIL-BUFFER. HAMILTON C. BATES, Chester, Conn. Filed Apr. 19, 1911. Serial No. 622,128. (Cl. 30—23.)

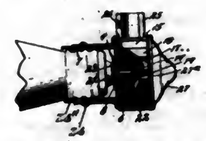


1. In a nail buffer, a removable polishing cover, a band having its upper edge extending outside of, and conforming in shape to, and flush with the face of the buffer-top, said band being curved upward in the center thereof to allow a slight spring action, whereby said band and polishing cover are tightly held in place.

2. In a nail buffer, a removable polishing cover, a band having its upper edge extending outside of, and conforming in shape to, and flush with the face of the buffer-top, said band tapering in cross section toward the lower edge thereof and being curved upward in the center thereof to allow a spring action to said band.

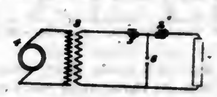
3. In a nail buffer, a removable polishing cover, an endless band having a contracted lower edge, said band being curved upward in the center thereof and having a continual spring action whereby the lower edge of the band is held embedded in said polishing cover in the position desired.

1,023,916. LAMP-SOCKET. REUBEN B. BENJAMIN, Chicago, Ill., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 16, 1907. Serial No. 362,743. (Cl. 173—358.)



The combination of a flattened base having a socket on one of its sides and recesses in its opposite side, binding-screws in said recesses, contacts associated with said socket, connections extending through the base from said contacts to said binding-screws, a housing for said base and socket, and means on said housing for making connection with a support or conduit for leading-in wires, said base having a notch adjacent said last-named means and channels extending from said notch into said recesses.

1,023,917. CONDUCTING MATERIAL AND METHOD OF PRODUCING THE SAME. EDWARD BENNETT, Pittsburgh, Pa., assignor to Westinghouse Electric & Manufacturing Company, a Corporation of Pennsylvania. Filed June 2, 1899. Serial No. 719,093. Renewed Feb. 19, 1902. Serial No. 94,821. (Cl. 219—63.)



1. The method of treating a solid body of conducting material to increase its specific resistance, which consists in subjecting it to the action of an oscillatory electric current of very high frequency, substantially as described.

2. The method of treating a solid body of conducting material to increase its specific resistance, which consists in subjecting it to the action of an oscillatory electric current of high potential and frequency, substantially as described.

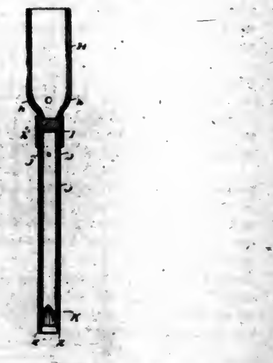
3. The method of treating a solid body of conducting material to increase its specific resistance which consists in subjecting it to the action of an oscillatory electric current of very high frequency in approximately the direction in which electrical pressure is to be applied when the body is in service as a resistance medium.

4. The method of treating a solid electric conductor to increase its specific resistance which consists in subjecting it to the action of an oscillatory electric current of high potential and frequency in approximately the direction in which electrical pressure is to be applied when the conductor is in service as an impedance body.

5. The method of making a conducting body of normally high resistance which consists in forming a mixture of suitable conducting and non-conducting materials and a binder in suitable proportions, then compressing said mixture to form a rod or block, then baking the rod or block and finally subjecting the baked rod or block to the action of an oscillatory current of high frequency, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,023,918. SAMPLING DEVICE FOR ARTESIAN WELLS. WILLIAM I. BETTIS, Houston, Tex., assignor of one-half to John G. Gray, Vinton, La. Filed Aug. 11, 1911. Serial No. 643,548. (Cl. 166—3.)



1. A sampler for Artesian and other wells, comprising an upper tubular section adapted to be connected to the lower end of a drill pipe and having one or more lateral openings to connect with the well, and a lower section or sampling tube having a lower cutting edge and an opening at the top for the passage of liquid outwardly from the sampling tube as the sample rises in the tube.

2. The combination with a drill pipe, of a sampling device, comprising an upper tubular section attached to the bottom of the drill pipe and having one or more lateral openings for the passage of liquid into and out of the pipe, and a lower section or sampling tube connected with said upper section having a lower cutting edge and one or more lateral openings at the top communicating with the well.

3. A sampler for Artesian and other wells, comprising an upper tubular section adapted to be connected to the lower end of a drill pipe and having one or more lateral openings to connect with the well, and a lower section or sampling tube having a lower cutting edge and one or more openings at the top for the passage of liquid outwardly as the sample rises in the tube, and devices at the lower end of the sampling tube for assisting in holding the sample in the tube.

4. A sampling device for wells, comprising an upper tubular section adapted to be connected to the lower end of the drill pipe and having one or more lateral openings to connect with a well and a lower section or sampling tube having a lower cutting edge and one or more openings at the top for the passage of liquid outwardly as the sample rises in the tube, and a valve in the upper part of said sampling tube for preventing the passage of liquid downwardly into the tube.

1,023,919. FOOD COMPOSITION. FRED M. BORCHERT, Chicago, Ill. Filed Nov. 23, 1910. Serial No. 593,856. (Cl. 99—11.)

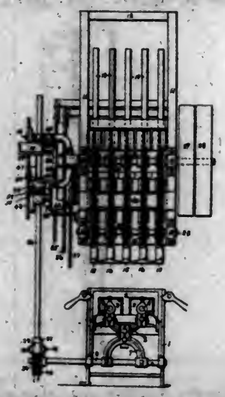
1. The herein described composition for making beverages consisting of cocoa and cereals pulverized and mixed in approximately equal proportions by weight.

2. The herein described composition for making beverages consisting of cocoa, corn, oats, rice, and wheat pulverized and mixed, said cocoa comprising approximately one-half part by weight of the composition.

3. The herein described composition for making beverages consisting of cocoa, 16 parts by weight; corn, 4 parts; oats, 5 parts; rice, 5 parts; wheat, 2 parts, all of said ingredients being pulverized and mixed together.

4. The herein described composition consisting of cocoa, corn, oats, rice and wheat pulverized and intimately mixed to form a non-perishable composition adapted for use in preparing a beverage.

1,023,920. CORE-ACTUATOR. CLAUS O. BRANDELL, South Bend, Ind., assignor to Ideal Concrete Machinery Company, South Bend, Ind., a Corporation of Indiana. Filed Feb. 2, 1911. Serial No. 606,116. (Cl. 25—45.)



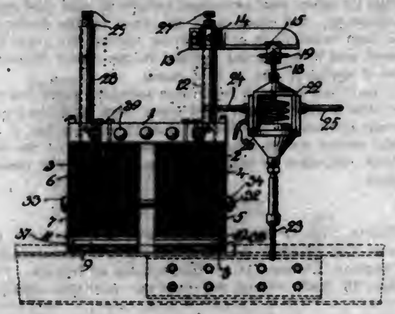
1. In a core-actuating mechanism for concrete block machines, the combination with a revolving shaft, of a crank and pin on the same, a yoke revolubly mounted on said shaft, a connecting rod slidable in said yoke, a crank connected to the operating shaft of the block machine and to said connecting rod and adapted to be reciprocated by said rod, whereby said cores are caused to move in unison with said rod, a lever to turn said connecting rod in said yoke, and a cross-head secured to said connecting rod and having flanged arms extending at such an angle from each other that either may be swung into the path of said crank pin to permit said connecting rod to be moved up or down by said crank-pin.

2. In a core-actuating mechanism for concrete block machines, the combination with an actuating shaft, a crank and crank pin on the same, a connecting rod, means to guide the same, means for connecting the connecting rod to the core-operating mechanism of the block machine, whereby said cores are caused to move in unison with said rod, a controlling lever, and a cross-head mounted on the connecting rod to engage the crank pin whereby the connecting rod may be moved longitudinally in either direction at will to actuate said cores.

3. In a core-actuating mechanism for concrete block machines, the combination with a revolving shaft, a connecting rod, means to guide the same, means connecting said rod to the cores of the block machine whereby the cores are caused to move longitudinally in unison with similar movements of the rod, a plurality of engaging devices between said rod and shaft, and means for moving either of said engaging devices into operative position whereby said connecting rod may be moved longitudinally in either direction at will.

4. In a core-actuating mechanism for concrete block machines, the combination with a revolving shaft, of a crank and crank pin on the same, a longitudinally movable connecting rod, a guide for the same revolubly mounted on said shaft, means connecting said rod to the cores of the block machine whereby the cores are caused to move longitudinally in unison with said rod, a cross-head secured to said rod, a plurality of flanged arms on said cross-head adapted to be engaged by said crank pin, a lever to swing said cross-head and arms to cause said crank pin to engage one or the other of said arms to move said rod longitudinally in either direction at will, means to limit the movement of the lever, and means to hold the rod at the end of one of its movements.

1,023,921. MAGNETIC RAIL-BONDING CLAMP. HAROLD P. BROWN, Montclair, N. J. Filed Apr. 2, 1907. Serial No. 365,971. (Cl. 77—11.)

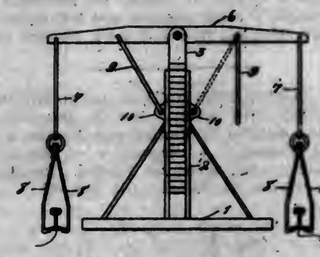


1. An electro-magnetic clamp provided with a non-inductive high resistance device having its circuit in parallel with the electro-magnetic clamp circuit.

2. An electro-magnetic clamp provided with a series of lamps having their circuit in parallel with the electro-magnetic clamp circuit.

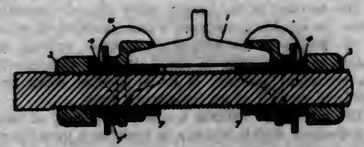
3. In combination, an electro-magnetic clamp, an electric drill and a non-inductive high resistance device having its circuit in parallel with the said clamp and drill circuits.

1,023,922. TRACK-LIFTING JACK. GLENN CARDEN, Phoenix, Ala. Filed Mar. 1, 1911. Serial No. 611,638. (Cl. 57—101.)



The herein described track lifting jack, comprising a base, a hollow column rising from the base and provided on opposite sides thereof with perforated ears, a toothed slide mounted within the hollow column for vertical movement, a lever pivoted upon the column and provided with a nose for engaging the toothed slide, a pawl engaging the toothed slide to prevent backward movement thereof, a beam carried by the slide, braces detachably connecting opposite ends of the beam to the ears, and track engaging members pendent from opposite ends of the beam, substantially as described.

1,023,923. INSULATING TIE-BAR. CHRISTIAN A. CHRISTOFFERSON, St. Paul, Minn., assignor to General Railway Signal Company, Gates, N. Y., a Corporation of New York. Filed Feb. 1, 1912. Serial No. 674,695. (Cl. 238—5.)



In a track device, a bar, means for fastening one end of said bar to one rail of a track, the other end being

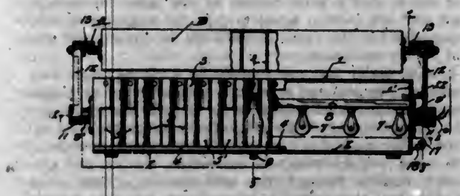
screw threaded and extending under the other rail, an insulating collar formed with a shoulder surrounding said rod, a member encircling said insulating collar and formed with strengthening ribs and a channel adapted to receive the inner base flange of the rail and bearing against one face of said shoulder on said insulating collar, a metallic washer bearing against the other face of said shoulder on said insulating collar, a screw threaded nut on the rod exerting pressure against said metallic washer, another insulating collar surrounding the rod and having a shoulder, another member encircling the insulating collar and formed with strengthening ribs and a channel adapted to receive the outer base flange of the rail and bearing against one face of said shoulder on said other insulating collar, another metallic washer bearing against the other face of said shoulder on said other insulating collar, another screw threaded nut on the rod exerting pressure against said other metallic washer, all so arranged and constructed that a movement of the nuts toward each other causes said flange engaging members to fit snugly against and grip the base flange of the rail tightly, whereby the two rails of the track are prevented from relative movement and from over-turning.

1,023,924. FLEXIBLE JOINT. EDWARD J. CORBETT, Sacramento, Cal. Filed July 18, 1911. Serial No. 639,142. (Cl. 137—34.)



A device of the character described comprising the combination of a first named casing and a second named casing, both of said casings being closed at one end, a shoulder on each of said casings against which the closed end of its adjacent casing abuts, a projecting threaded pin on each of said shoulders, a projecting circular lug on each of said casings, a washer disposed over each of said circular lugs, a flange on each washer, that flange on the washer disposed over the lug on one casing projecting over the threaded pin on the adjacent casing, a nut mounted on each of said threaded pins, each of said casings being provided with an orifice, said orifices communicating with each other, each of said casings being provided with a recess disposed within the line of the sides of orifices, a flexible washer disposed in said recesses, one of said casings being provided with an annular groove in its side, and an annular flange on the other of said casings, said flange being disposed in said annular groove as described.

1,023,925. BOTTLE-TRAY. EDWARD COURT, Milwaukee, Wis., assignor of one-half to Martin J. Fischbach, Milwaukee, Wis. Filed Nov. 6, 1911. Serial No. 658,742. (Cl. 88—14.)



1. In a bottle washing machine having supporting struts, a shaft mounted thereon, sprocket-wheels carried by the shaft, endless conveyer chains mounted upon the sprocket-wheels, and bottle racks carried thereby; the combination of a tiltable hollow receiving tray, a transversely apertured top closure for said tray, illuminating means located under the tray top, and tilting mechanism in connection with the tray under control of the washing machine.

2. A tray comprising a hollow body, a top therefor provided with a series of transversely disposed apertures constituting bottle seats, illuminating means located within the tray body, supporting trunnions associated with the tray ends, and means for tilting the tray.

3. A tray comprising a hollow body, a transversely fluted top therefor having apertures within the fluted indentures to constitute bottle seats, and illuminating means located within the tray body.

4. A tray comprising a hollow body, a transversely fluted top therefor having apertures within the fluted indentures to constitute bottle seats, illuminating means located within the tray body, supporting trunnions for the tray, and tilting mechanism for controlling the angular position of said tray.

5. In a bottle washing machine having supporting struts, a shaft mounted thereon, sprocket-wheels carried by the shaft, endless conveyer chains mounted upon the sprocket-wheels, and bottle racks carried thereby; the combination of a hollow receiving tray, trunnions extending from the tray, means for supporting the trunnions, a transversely apertured top closure for said tray, illuminating means located under the tray top, and tilting mechanism in connection with the tray under control of the washing machine.

1,023,926. COMPOUND FOR WATERPROOFING CEMENT AND THE LIKE AND PROCESS OF MAKING SAME. GEORGE P. DIECKMANN, Mason City, Iowa, assignor of one-half to Homer B. Hasbrouck, Mason City, Iowa. Filed Mar. 20, 1911. Serial No. 615,522. (Cl. 106—41.)

1. The herein described process consisting in first saponifying an oil with a suitable alkali, second mixing therewith a water solution of a soluble metallic salt, and third mixing therewith a quantity of calcium oxid and expelling the water from the mixture, producing a dry, insoluble, water repelling powder.

2. The process of producing an insoluble, water repelling substance, consisting in mixing a suitable alkali dissolved in water, with a saponifiable oil, and then mixing therewith a soluble metallic salt and calcium oxid, and expelling the water from the mixture and reducing the whole to a powder.

3. The process of producing an insoluble, water repelling substance, consisting in the mixture of sodium hydrate dissolved in water with a saponifiable oil, and while agitating the same, adding thereto a water solution of a soluble metallic salt, and finally adding to the mixture thus produced, powdered calcium oxid and expelling the water from the product.

4. The process of producing an insoluble, water repelling substance consisting in mixing substantially ten parts of sodium hydrate dissolved in fifty parts of water with one hundred parts of fish oil, then while agitating the same adding thereto forty parts of alum dissolved in one hundred and fifty parts of water, and finally adding to the product thus formed a suitable quantity of powdered calcium oxid and expelling the water from the product, substantially as and in the proportions set forth.

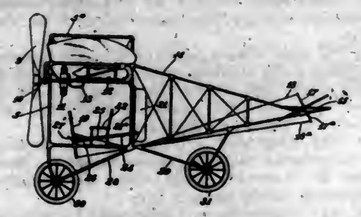
5. A composition of matter, comprising the combination of a soluble alkali, a saponifiable oil, a soluble metallic salt and calcium oxid, substantially as set forth.

[Claims 6 to 9 not printed in the Gazette.]

1,023,927. FLYING-MACHINE. JOHN C. DOTY, Mount Vernon, Ohio. Filed May 22, 1911. Serial No. 628,610. (Cl. 244—29.)

1. In a flying machine of the aeroplane type, the combination with the frame, of a pair of swinging upright steering and balancing planes supported on axes inclined

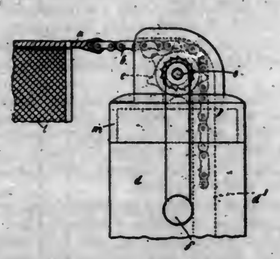
upwardly toward each other and meeting at approximately a common point and means for oscillating said planes on their axes in unison.



2. In a flying machine of the aeroplane type, the combination with the frame of a pair of swinging upright steering and balancing planes supported at their forward edges on axes inclined upwardly toward each other, the forward edges of said planes and the said axes meeting at approximately a common point.

3. In a flying machine of the aeroplane type, the combination with the main frame of a pair of swinging upright steering and balancing planes supported on upright axes inclined upwardly toward each other and meeting at their upper ends in approximately the normal horizontal axis of the machine.

1,023,928. STRETCHING DEVICE FOR LAWN-TENNIS NETS. WILLIAM SAUNDERS EDWARDS, Bridport, England. Filed Nov. 14, 1911. Serial No. 660,239. (Cl. 46—24.)



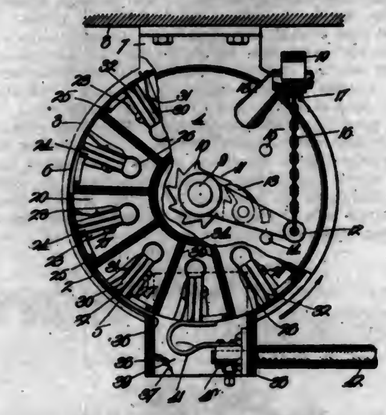
1. Apparatus for supporting lawn tennis nets and the like comprising a line, an extension on said line, a toothed wheel engaging with said extension, means for rotating said wheel and a device for preventing said wheel running back after the tension of the line has been adjusted to the desired degree.

2. Apparatus for supporting lawn tennis nets and the like comprising a line, a chain secured to the extremity of said line, a sprocket wheel for engaging said chain, means for rotating said wheel and a ratchet and pawl mechanism for preventing said sprocket running back after the tension of the line has been adjusted to the desired degree.

3. Apparatus for supporting lawn tennis nets and the like comprising a line, a chain secured to the extremity of said line, a sprocket wheel engaging with said chain, a worm gearing associated with said sprocket wheel and a handle for operating said worm gearing and imparting a rotary motion to the sprocket wheel.

1,023,929. ROTARY-MAGAZINE FUSE-BOX. LANDY D. EPPERSON, Kansas City, Mo., assignor of one-third to Charles H. Abbett, Kansas City, Mo. Filed Sept. 25, 1911. Serial No. 651,270. (Cl. 175—278.)

1. A rotary magazine fuse box, comprising a box, a rotary magazine therein, provided with a series of fuses spaced at regular distances around the magazine, contact brackets secured to the magazine and engaging the opposite ends of said fuses, contact terminals carried by the box and adapted for simultaneous engagement by the contact brackets of each fuse, a ratchet wheel rotatable with the magazine and provided with one less tooth than there are fuses in the magazine, one of said teeth being of double length, a lever having a range of movement sufficient to turn the ratchet wheel a distance equal to half the length of its long tooth, and a pawl carried by the lever for engagement with the ratchet wheel to turn the magazine step by step and bring the fuses successively, in circuit with the said contact terminals.



2. A rotary magazine fuse box comprising a box, a rotary magazine therein, provided with a series of fuses spaced at regular distances around the magazine, contact brackets secured to the magazine and engaging the opposite ends of said fuses, contact terminals carried by the box and adapted for simultaneous engagement by the contact brackets of each fuse, a ratchet wheel rotatable with the magazine and provided with one less tooth than there are fuses in the magazine, one of said teeth being of double length, a lever having a range of movement sufficient to turn the ratchet wheel a distance equal to half the length of its long tooth, a pawl carried by the lever for engagement with the ratchet wheel to turn the magazine step by step and bring the fuses successively in circuit with the said contact terminals, and suitably guided means for operating said lever to effect rotation of the magazine.

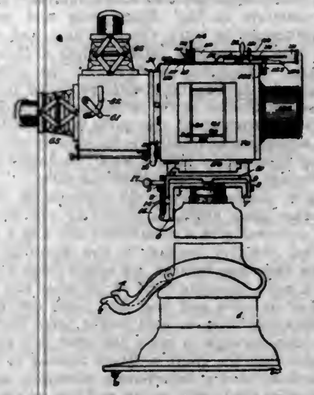
3. A rotary magazine fuse box, comprising a box having an opening, a rotary magazine in said box provided with a series of fuses spaced at regular distances around the magazine, contact brackets secured to the magazine and engaging the opposite ends of said fuses, a lug projecting from one of each set of said contact brackets and adapted for successive exposure through said opening of the box, contact terminals carried by the box and adapted for simultaneous engagement by the contact brackets of each fuse, a ratchet wheel rotatable with the magazine and provided with one less tooth than there are fuses in the magazine, one of said teeth being of double length, a lever having a range of movement sufficient to turn the ratchet wheel a distance equal to half the length of its long tooth, and a pawl carried by the lever for engagement with the ratchet wheel to turn the magazine step by step and bring the fuses successively in circuit with the said circuit terminals.

4. A magazine fuse box comprising a box having a door controlled opening and a second opening a rotary magazine therein provided with a series of fuses spaced at regular intervals around the magazine, contact brackets secured to the magazine and engaging the opposite ends of said fuses, contact terminals carried by the box and projecting therein through the said second opening, and adapted for simultaneous engagement by the contact brackets of each fuse, a ratchet wheel rotatable with the magazine and provided with one less tooth than there are fuses in the magazine, one of said teeth being of double length, a lever having a range of movement sufficient to turn the ratchet wheel a distance equal to half the length of its long tooth, a pawl carried by the lever for engagement with the ratchet wheel to turn the magazine step by step and bring the fuses successively in circuit with the said contact terminals, and a handle rotatable with the magazine and turning the same when the pawl is in engagement with the long tooth of the ratchet wheel.

5. The combination with a rotary magazine, of a pair of oppositely disposed contact brackets carried by the magazine provided with radial lugs, springs carried by said brackets and comprising perforated portions substantially paralleling and spaced from said radial lugs, and plates arranged in the spaces between said lugs and springs and provided with pins engaging the perforations of said springs.

[Claim 6 not printed in the Gazette.]

1,023,930. PHOTOGRAPHIC CAMERA. WILLIAM F. FOLMER, Rochester, N. Y., assignor to Eastman Kodak Co., Rochester, N. Y., a Corporation of New York. Filed July 16, 1908. Serial No. 443,768. (Cl. 95—11.)



1. The combination with a camera having two focusing openings adapted to relatively angular lines of vision, of a focusing screen directly viewable through one of said openings and means for reflecting an image cast thereon at a point in the line of vision for which the other opening is adapted.

2. The combination with a camera having two focusing openings adapted to relatively angular lines of vision, of a focusing screen directly viewable through one of said openings, means for reflecting the image thereof through the other and means for automatically closing one of them to the admission of light when the other is brought into use.

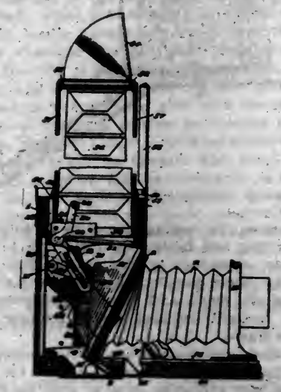
3. The combination with a camera having two focusing openings adapted to relatively angular lines of vision, of a focusing screen directly viewable through one of said openings and a movable mirror for reflecting an image cast thereon in the line of vision for which the other is adapted, said mirror being in position to close one opening against the admission of light into the camera when operatively arranged with respect to the other.

4. The combination with a camera, of means for exposing a sensitised area in different relative positions in the focal plane thereof, a relatively stationary focusing screen, means for regulating the field of the image cast thereon to correspond in shape with that of the sensitised area to be exposed and means for automatically controlling the position of said field to correspond to that of the area to be exposed.

5. The combination with a camera, of a rotatable holder for retaining a sheet of sensitised material in different relative positions in the focal plane thereof, a relatively stationary focusing screen, a device for regulating the field of the image cast thereon to correspond in shape and position with that of the sensitised sheet and means for controlling the regulating device through rotation of the holder to change the position of said field to accord with the changed position of the sensitised sheet.

[Claim 6 to 15 not printed in the Gazette.]

1,023,931. CAMERA. WILLIAM F. FOLMER, Rochester, N. Y., assignor to Eastman Kodak Co., Rochester, N. Y., a Corporation of New York. Filed Mar. 26, 1909. Serial No. 485,912. (Cl. 95—42.)



1. The combination with a camera having a movable flap arranged therein, of a latch coöperating with the flap, a yielding member coöperating with the latch and having a guide, a push rod operating in the guide, and coöperating cam elements on the push rod and yielding member, respectively, for operating the latch by means of the push rod through the medium of the yielding member.

2. The combination with a camera having a movable flap arranged therein, of a latch coöperating with the flap, a resilient member attached to a wall of the camera to coöperate with the latch and having parallel ears thereon, one of said ears being provided with an opening, and a push rod guided in the latter and provided with a cam engaging the other ear to operate the latch through the medium of the resilient member, said rod being also provided with an abutment engaging one of the ears to limit its movement.

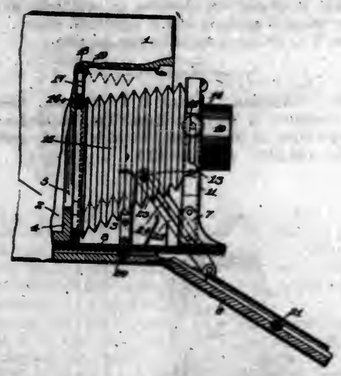
3. The combination with a camera having communicating longitudinal and transverse recesses in one of its walls, and a movable flap operating within the camera, of a latch coöperating with the flap, a resilient member attached to a wall of the camera to coöperate with the latch and having parallel ears thereon projecting within the transverse recess, one of said ears being provided with an opening, and a push rod guided in the latter and extending through the longitudinal recess in the camera wall to the exterior of the camera, said rod being provided with a cam engaging the other ear to operate the latch through the medium of the resilient member and with an abutment engaging one of the ears to limit its movement.

4. In a camera, the combination with an exposure chamber and a movable flap arranged therein, of a focusing chamber arranged adjacent thereto, and an operating member for the movable flap arranged in the focusing chamber.

5. In a camera, the combination with an exposure chamber and a movable flap operating therein, of a focusing chamber arranged adjacent thereto, and an operating member for the movable flap arranged in the focusing chamber and having a finger portion projecting exteriorly of both chambers.

[Claims 6 to 13 not printed in the Gazette.]

1,023,932. PHOTOGRAPHIC CAMERA. WILLIAM F. FOLMER, Rochester, N. Y., assignor to Eastman Kodak Co., Rochester, N. Y., a Corporation of New York. Filed Sept. 14, 1910. Serial No. 581,986. (Cl. 95—39.)



1. In a camera, the combination with a camera box or body and a rising and falling front movable toward and from the body, of vertical guides on the body, a frame movable in the guides parallel with the rising and falling movements of the front, and a bellows connected to the latter at its forward end and having its rear end connected to the frame.

2. In a camera, the combination with a camera box or body and a front movable toward and from the same, of guides on the body extending parallel with the front, and a bellows connected at its forward end to the front and having its rear end loosely mounted and freely movable in the guides.

3. In a camera, the combination with a camera box or body and a front movable toward and from the same, of guides on the body, a frame freely movable in the guides parallel with the front, and a bellows connected to the latter and to the frame.

4. In a camera, the combination with a box or body and a rising and falling front movable toward and from the same, of guides on the body, and a bellows having one end connected to the front and the other freely movable in the guides in a direction parallel with the rising and falling movements of the front.

5. In a camera, the combination with a box or body having an exposure opening therein and a storage chamber arranged forwardly of the opening and a front movable toward and from the body and adapted to assume a position within the storage chamber, of guides arranged within the body at opposite sides of the exposure opening and extending transversely of the path of the front during the aforesaid movement of the latter and a bellows having one end connected to the front and the other freely movable in the guides to surround the exposure opening.

[Claim 6 not printed in the Gazette.]

1,023,933. FILM-WINDING KEY FOR CAMERAS. WILLIAM F. FOLMER, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Filed Dec. 9, 1911. Serial No. 664,728. (Cl. 242—71.)

1. In a film winding device for cameras, the combination with a rotatable socket piece and a clutch for preventing rotation thereof in one direction, of a winding stem extending into the socket piece and rotatable relatively thereto and means for interlocking the stem and socket piece by an axial movement of the stem relatively to the socket piece.

2. In a film winding device for cameras, the combination with a rotatable socket piece and a clutch for preventing rotation thereof in one direction, of a winding stem extending through the socket piece and provided with a spool engaging head at its inner end and a thumb piece at its outer end, said stem being rotatable in both directions relatively to the socket piece and movable axially therethrough to carry the head into and out of engagement with the spool, and interlocking portions on the socket piece and stem engaged by an inward axial movement of the latter.



3. In a film winding device for cameras, the combination with a rotatable socket piece and a clutch for preventing rotation thereof in one direction, of a winding stem extending through the socket piece and provided with a spool engaging head at its inner end and a thumb piece at its outer end, said stem being rotatable in both directions relatively to the socket piece and movable axially therethrough to carry the head into and out of engagement with the spool, a spring tending to thrust the stem inwardly, coöperating surfaces on the stem and clutch member for holding the former retracted from the spool against the tension of the spring and engaged by a relative rotary movement of the parts, and interlocking portions on said parts automatically engaged by the action of the spring through an inward axial movement of the stem upon further relative rotation of the parts.

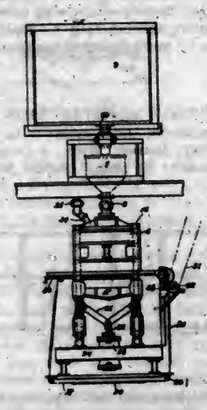
4. In a film winding device, the combination with a rotatable socket piece having a projecting tubular outer end portion provided with a diametrical slot and a clutch for preventing rotation thereof in one direction, of a winding stem extending through the socket piece and provided with a spool engaging head at its inner end and a thumb piece at its outer end, said stem being rotatable in both directions relatively to said socket piece and movable axially therethrough to carry the head into and out of engagement with the spool, a spring tending to thrust the stem inwardly and a transversely extending member on the stem arranged to ride on the end face of the tubular portion of the socket piece and hold the head retracted from the spool and to automatically drop into the slot and interlock the stem and socket piece upon further rotation allowing the head to move into engagement with the spool.

5. In a film winding device, the combination with a socket piece and a rotary stem extending therethrough and provided with a head at its inner end adapted to interlock with the film spool, said stem being longitudinally movable to retract the head from the spool, of a spring normally tending to thrust the stem inwardly toward the spool and coöperating surfaces on the stem and socket piece engaged by partial rotation of the stem when retracted for holding the latter away from the spool against the tension of the spring.

1,023,934. APPARATUS FOR MAKING PLASTER-BOARD. HERMAN S. HEICHERT, Ford City, Pa., assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed June 1, 1909. Serial No. 499,596. (Cl. 25—1.)

1. An apparatus for forming plaster board and the like, comprising, a pressure chamber, a foraminous screen therebeneath, a carrier movable over the screen, and a series of removable cloth screens detachably secured to the carrier.

2. An apparatus for forming plaster board, comprising in combination, a pressure chamber, a screening device at the bottom of said pressure chamber, means for supplying mixture to said pressure chamber, and a fixed baffle member above the screening device for receiving and spreading the mixture.

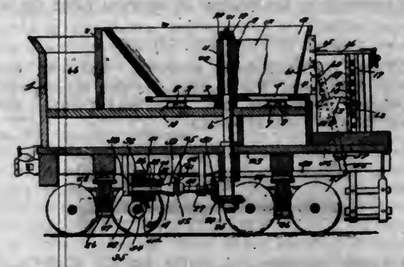


3. A movable screening device for plaster board forming apparatus, comprising in combination, a pair of traveling or advancable chains, and a series of muslin or cloth screening parts secured upon said chains, substantially as described.

4. An apparatus for forming plaster board and the like, comprising a pressure chamber, a screening device at the bottom of the chamber, cross arms above the screening device, and a pipe thereabove for admitting the mixture for forming the article, said pipe having at its lower end lateral openings arranged to discharge the mixture onto the said arms.

5. An apparatus for forming plaster board and the like comprising, a fixed pressure chamber provided with a reciprocable foraminous bottom member, means for supplying pressure to the said chamber, power means for raising the said bottom member, and a cloth screen mounted for movement over the said bottom member.

1,023,935. AUTOMATIC COAL-FEED FOR MOVING COAL-TENDERS. CHARLES HOCKER and BENJAMIN WENDHOLT, Huntingburg, Ind. Filed Feb. 9, 1912. Serial No. 676,612. (Cl. 105—260.)



1. In combination with a revoluble axle, of a coal tender having a coal receptacle, a revoluble disk constituting the bottom of the receptacle and acting as a feed to feed the coal from the receptacle, and connections between the disk and the revoluble axle.

2. In combination, a coal tender having a coal receptacle, a revoluble disk forming a bottom to the receptacle, the tender having a revoluble axle, and connections between the axle and the disk and including means adapted to throw the connections in and out of gear.

3. In combination, a moving coal tender having a coal receptacle, a vertical shaft journaled substantially in the center of the tender, an annular disk keyed to the shaft constituting a bottom for the receptacle, an arm plate for guiding the coal from the receptacle when the disk is rotated, one end of the arm plate constituting a bearing for the shaft, while the other end is fixed to a part of the tender, the tender having a revoluble axle, and means for imparting a revoluble movement from the axle to the shaft, whereby the disk is rotated to feed the coal against the arm plate.

4. In combination, a moving coal tender having a coal receptacle, a vertical shaft journaled substantially in the center of the tender, an annular disk keyed to the shaft constituting a bottom for the receptacle, an arm plate for guiding the coal from the receptacle when the disk is rotated, one end of the arm plate constituting a bearing for the shaft, while the other end is fixed to a part of the tender, the tender having a revoluble axle, means for imparting a revoluble movement from the axle to the shaft, whereby the disk is rotated to feed the coal against the arm plate, and a manually operated mechanism for throwing the means in and out of gear with the revoluble axle.

5. In combination, a moving coal tender having a coal receptacle, a vertical shaft journaled substantially in the center of the tender, an annular disk keyed to the shaft constituting a bottom for the receptacle, an arm plate for guiding the coal from the receptacle when the disk is rotated, one end of the arm plate constituting a bearing for the shaft, while the other end is fixed to a part of the tender, the tender having a revoluble axle, means for imparting a revoluble movement from the axle to the shaft, whereby the disk is rotated to feed the coal against the arm plate, and anti-frictional wheels arranged below the disk on which the disk revolves.

1,023,936. MECHANICAL INTERRUPTER FOR ELECTRICAL IGNITION SYSTEMS. GOTTLOB HONOLD, Stuttgart, Germany, assignor to The Firm of Robert Bosch, Stuttgart, Germany. Filed Oct. 4, 1911. Serial No. 652,702. (Cl. 123—166.)



1. A mechanical interrupter for electric ignition systems having axially movable interrupter contacts and a radially disposed actuating cam, in combination with intermediate mechanism actuated by the cam and adapted to transform the radial movement due to the cam into axially separating movements of the interrupter contacts.

2. A mechanical interrupter for electric ignition systems, comprising a radially disposed cam forming one element, axially separable interrupter contacts forming another element, one of said elements being normally stationary and the other of said elements being rotatable, and transmitting means intermediate of said elements comprising a member moving radially under the impulse of the cam and means for changing the radial movements of said member to axial movements of the movable interrupter contact.

3. A mechanical interrupter for electric ignition systems, comprising a normally stationary radially disposed cam, a pair of interrupter contacts, and rotatable transmitting means intermediate of the cam and the contacts for changing the radial movements imparted by the cam to axially separating movements of the interrupter contacts.

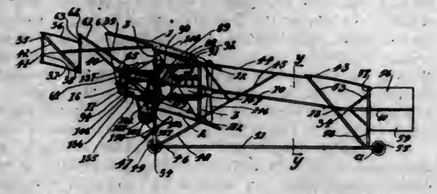
4. A mechanical interrupter for electric ignition systems, comprising a radially disposed actuating cam, a disk having a radially movable member provided with an inclined surface and arranged to be moved inwardly by the cam, an axially movable interrupter contact, and a transmitting member actuated by the inclined surface to impart axial movement to the interrupter contact.

5. A mechanical interrupter for electric ignition systems, comprising a radially disposed cam, a disk having a radially movable member provided with an inclined sur-

face and arranged to be moved inwardly by the cam, a rolling member resting on the inclined surface, a blade-spring on the rolling member, an axially disposed interrupter contact mounted on the blade-spring, and a coöperating interrupter contact.

[Claim 6 not printed in the Gazette.]

1,023,937. FLYING-MACHINE. JOHN A. JUNG, Cincinnati, Ohio. Filed May 25, 1910. Serial No. 563,314. (Cl. 244—14.)



1. In a flying machine, an aeroplane of substantially greater width than length and having a forward extension at its median portion and a rearward extension at each of its lateral portions, the said rearward extensions being spaced apart and drooping laterally and rearwardly toward their outer rear corners for presenting surfaces toward the atmosphere whose angles of inclination to the horizontal become gradually greater as said outer rear corners are approached, substantially as described.

2. In a flying machine, the combination of vertically separated aeroplanes each of which is of substantially greater width than length and is provided with a forward extension at its median portion and with a rearward extension at each of its side portions, the said forward extension of the lower one of said aeroplanes being of less length than the forward extension of the upper one of said aeroplanes, substantially as described.

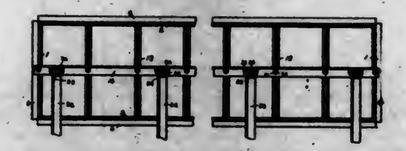
3. In a flying machine, the combination of an aeroplane, an elevating-member in forward position with relation to said aeroplane and comprising a pair of separated plane members, means for pivoting said elevating-member on a transverse axis, a normally vertically disposed rudder in rear of said aeroplane, means for pivoting said rudder on a normally upright axis, and a common controlling member for said elevating-member and rudder, said controlling member comprising a longitudinally movable forwardly extending rod having connection with said elevating-member for swinging the same on its transverse axis, a hand-wheel on said rod, and laterally extending connecting members between said hand-wheel and rudder, and constructed and arranged for controlling said elevating-member by axial movement of said hand-wheel and for controlling said rudder by the turning of said hand-wheel upon its axis, for the purpose described.

4. In a flying machine, the combination of vertically separated aeroplanes, an elevating-member comprising a plurality of separated planes located forwardly of said aeroplanes when extended, said elevating member arranged for swinging on a horizontal axis, a rear horizontal balancing plane located to rear of said aeroplanes, a rudder extending rearwardly of said rear horizontal balancing plane and having a normally vertically disposed blade and arranged for swinging on a normally upright axis, a longitudinally movable forwardly-extending rod having connection with said elevation-member, a hand-wheel thereon, laterally disposed connecting means between said hand-wheel and rudder, and constructed and arranged for swinging said elevating-member upon its axis by axial movement of said hand-wheel and for swinging said rudder by the turning of said hand-wheel about its axis, substantially as described.

5. In a flying machine, the combination of an aeroplane of substantially greater width than length and provided with a forward extension having a wider base than forward end, the said aeroplane being composed of separable plane-sections laterally disposed and means for rigidly connecting said plane-sections, the median plane-section comprising a portion of said forward extension and the plane sections adjacent thereto comprising other portions of said forward extension, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

1,023,938. WINDOW CONSTRUCTION. THOMAS HENRY KANE, Youngstown, Ohio, assignor to Trussed Concrete Steel Company, Detroit, Mich., a Corporation of Michigan. Filed Oct. 2, 1911. Serial No. 652,404. (Cl. 189—69.)



1. In a window construction, a sash comprising top, bottom and side bars and muntins, pivots secured to said side bars and muntins intermediate their ends, and supports for said pivots.

2. In a window construction, the combination of a sash, a series of supports for the same intermediate its ends, and a series of bearings mounted on said supports and connected to said sash intermediate its top and bottom.

3. In a window construction, the combination of a sash comprising top, bottom and side bars and muntins, a beam secured to said side bars and muntins equally distant from the top and bottom, bearings secured at intervals to said beam throughout its length, and supports for said bearings.

4. In a window construction, the combination of a frame comprising a series of posts and horizontal beams spaced at intervals along the roof of a building, a series of bearings mounted thereon, and a sash extending along said posts and pivotally mounted between its top and bottom edges on said bearings.

5. In a window construction, the combination of a sash comprising top and bottom members, and end-bars and muntins extending between them, a series of bolts formed with jaws on their outer ends to engage the end-bars and muntins, a longitudinal member secured to said sash midway between its top and bottom members by said bolts, bearings for pivotally mounting said longitudinal member, and supports for the bearings at intervals along the sash.

1,023,939. DETACHABLE ROLLER. ADAM W. KAUFMAN, Milwaukee, Wis., assignor to Res Manufacturing Company, Milwaukee, Wis. Filed May 6, 1911. Serial No. 625,419. (Cl. 211—31.)



A holder comprising apertured bracket arms, one of which apertures is provided with a counter sunk annular groove, a centrally apertured hollow shell fitted into the arm apertures, the shell being provided at one end with a head that abuts one of the bracket arms, the opposite end being open and fitted into the annular counter sunk groove of the opposite bracket arm, a plug fitted through the annular groove apertures of aforesaid bracket arm, the plug being extended into the open end of the shell and provided with a head that engages said last mentioned annular grooved bracket arm, a flat spring secured to said plug and a lug carried by the spring engageable with the shell aperture, whereby the same is locked within the bracket that constitutes fixed bearings for the shell.

1,023,940. BROOCH. CLIFFORD G. KING, Providence, R. I. Filed July 20, 1911. Serial No. 639,566. (Cl. 24—161.)

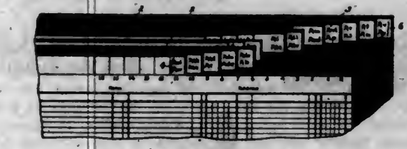


1. In a pin, a pin tongue formed of wire pointed at one end, intermediately bent upon itself, and having its other end flattened in a plane transverse to that of said bending, said flattened portion being provided with corrugations.

2. In a pin, a back plate provided with a slot at one end thereof, a transverse slot near each end of said back plate, a pin tongue having a flattened portion threaded through said slots, and means for binding the forward end of said flattened portion to said back plate.

3. In a pin, a back plate provided with an end slot and a transverse slot near each end thereof, a raised bridge formed between one of said transverse slots and said end slot, a pin tongue having a flattened portion passing under said bridge and through the other of said transverse slots and means for binding the forward end of said flattened portion to said back plate.

1,023,941. INDEX FOR LOOSE-LEAF RECORDS AND THE LIKE. SIMEON B. KIRTLEY, Columbia, Mo. Filed Nov. 23, 1909. Serial No. 529,588. (Cl. 11—7.)



1. An indexed record, comprising a section or subdivision of record leaves of full and uniform size having their edges cut away to form a stepped series of exposed portions, a primary index, having characters which are positioned so as to designate respectively the said stepped portions of the leaves, and a series of inserted record sheets placed between the said primarily indexed leaves, the inserted sheets being of less size than the indexed leaves, whereby when inserted they leave exposed the indexing portions of said leaves and being along their edges cut away to leave exposed portions thereof in a stepped series for indexing purposes.

2. An indexed record, comprising a sub-division or section of leaves having their edges cut away to form a stepped series of exposed portions, a primary index, having characters which are positioned so as to designate respectively the said stepped exposed portions of the leaves, and a series of inserted record sheets placed between the said primarily indexed leaves, the inserted sheets being of less size than the said indexed leaves, and another set of inserted sheets of full size inserted between the primary indexed leaves and cut away to a greater extent than are the said leaves between which they are inserted.

3. An indexed record, comprising a section or subdivision of leaves having their upper edges cut away to form a stepped series of exposed portions, a primary index, the characters of which are positioned so as to designate respectively the said stepped portions of the leaves, and a series of inserted record sheets of less height than the indexed leaves, and being along their upper edge cut away to leave exposed portions thereof in a stepped series, and the latter provided with sub-indexing characters.

1,023,942. LAMP-HOLDER. WILHELM KLEMENT, Neu-Finkenkrug-Falkenhain, Germany, assignor to Siemens-Schuckert Werke, G. M. B. H., Berlin, Germany, a Corporation of Germany. Filed Dec. 2, 1911. Serial No. 663,590. (Cl. 173—358.)



1. The combination with a lamp; of a lamp holder base having a central axial bore opening into chambers opening out of apertures in the side of the base, terminals in said chambers and a shield axially displaceable along the base and supported in normal position thereon by said lamp.

2. The combination with a lamp, of a lamp holder base having a central axial bore opening into chambers opening out of apertures in the side of the base, terminals in said chambers and a shield axially and non-rotatably displaceable along the base and supported in normal position thereon by said lamp.

3. The combination of a lamp-holder base having a central axial bore opening into chambers opening out of apertures in the side of the base, terminals in said chambers, and a shield axially displaceable along the base, said base having a screw-threaded bottom part, and a ring screwed on the bottom part for preventing the said shield being removed from the same.

4. The combination of a lamp-holder base having a central axial bore opening into chambers opening out of apertures in the side of the base, terminals in said chambers, and a shield axially and non-rotatably displaceable along the base, said base having a screw-threaded bottom part, and a ring screwed on the bottom part for preventing the said shield being removed from the same.

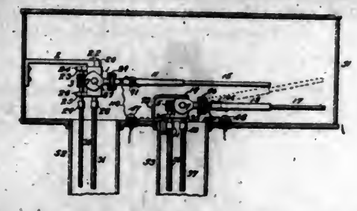
5. The combination of a lamp-holder base having a central axial bore opening into chambers opening out of apertures in the side of the base, terminals in said chambers, said base having grooves in the periphery thereof, a shield having projections entering into said grooves displaceable along the base, said base having a screw-threaded, downwardly projecting bottom part, a ring screwed on the bottom part for preventing the said shield being removed therefrom, and a lamp detachably carried by the bottom part, said shield normally resting on the lamp and covering the said apertures in the base.

[Claim 6 not printed in the Gazette.]

1,023,943. INDICATING AND PROTECTIVE DEVICE. DAVID R. KNAPP, Philadelphia, Pa. Original application filed Dec. 29, 1908, Serial No. 469,896. Divided and this application filed May 12, 1910. Serial No. 561,003. (Cl. 177—324.)

1. A system to indicate interference of guns for turrets comprising, in combination with the turret-turning gear and the gun-elevating gearing, a plurality of revoluble members designating turrets, revoluble elongated metallic members having insulated sections and designating guns, said elongated members being also proportioned to the dimensions of the guns, each of said members being operatively connected respectively with the turret-turning gear and the gun-elevating gearing so as to move in syn-

chronism with the respective turret and gun motions, and a supplemental signal system actuated upon the engagement of said elongated members.

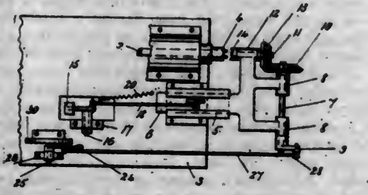


2. A system to indicate interference of guns for turrets comprising, in combination with the turret and gun controlling mechanism, a plurality of revoluble members designating turrets, revoluble elongated metallic members having insulated sections and designating guns, said metallic members being proportioned to the dimensions of the guns, plus a predetermined length representing gun fire, the said members being operatively connected with the turret and gun controlling members, and a supplemental electrical signal system actuated by engagement of said elongated members.

3. A system to indicate interference of guns for turrets comprising, in combination with the turret-turning gear, a plurality of revoluble members designating turrets, revoluble elongated metallic members designating guns and having insulated sections, said members being operatively connected with their respective turret-turning gear, and an electrical signal system actuated upon the engagement of the said elongated members, substantially as described.

4. In a gun indicating device, the combination with the guns and gun platforms, of sectional insulated metallic members each responsive to the movement of the guns and gun platforms and proportioned to the guns and gun platforms, and electrical signaling circuits adapted to be completed upon a predetermined movement of said members, substantially as described.

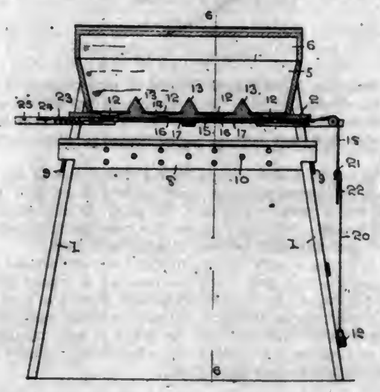
1,023,944. STARTING MECHANISM. JOHN S. LAUFMAN, Western, Nebr. Filed Oct. 13, 1911. Serial No. 655,406. (Cl. 123—185.)



The combination, with a main frame, and an engine shaft mounted thereon and provided with a clutch member at one end; of a guide secured to the main frame, a slide movable in the guide parallel to the engine shaft, a clutch shaft carried by the said slide and arranged in line with the said engine shaft and having a clutch member secured on it, means for sliding the slide to place the said clutch members in engagement, a spring for retracting the slide to separate the clutch members, a hand-lever pivoted to the main frame and provided with a retaining catch, a cross-shaft journaled on the said slide, a crank-arm secured on the said cross-shaft, beveled toothed wheels connecting the said cross-shaft and clutch shaft, and a connecting-rod between the said crank-arm and hand-lever.

1,023,945. POULTRY-FEEDING APPLIANCE. JOHN I. LEE, Huntersville, W. Va. Filed Feb. 9, 1911. Serial No. 607,683. (Cl. 119—70.)

The herein described self-acting feeding appliance for fowls, comprising a receptacle for the feed, suitable supporting legs therefor, a base plate supporting the feeding receptacle and having a plurality of apertures and closures therefor, deflecting partitions formed integral with said base plate, a coöperating movable releasing bar having graduated apertures therein to be brought into coöperation with the apertures in said plate, an apertured scattering board beneath said receptacle, a deflecting plate se-



cured to the top of said scattering board, a spring for controlling said releasing bar, means for adjusting said spring, and operating means comprising a lever adapted to respond readily to the weight of the fowl when placed thereon and removed, said controlling means being adapted to restore itself to the initial position at each operation.

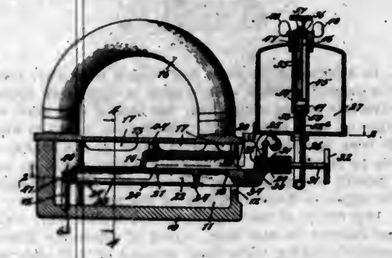
1,023,946. SECTIONAL WALL CONSTRUCTION. SAMUEL SOLOMON LEVY, Boston, Mass. Filed Mar. 21, 1911. Serial No. 615,928. (Cl. 72—29.)



A wall construction comprising a plurality of solid structural members, each member having parallel vertical rear recesses and a central dividing wall for said recesses, said wall being provided with a central vertical groove, the ends of the member being provided with vertical grooves, a plastic filling for said end grooves for engaging the grooves of adjoining members, a cover for the rear recesses provided with a central wall provided with a groove complemental to the rear groove of the member, and a plastic filling engaging the rear groove of the member and the groove of the cover.

1,023,947. SELF-HEATING FLAT-IRON. FRANK MAIWORM and CHARLES E. MITCHELL, Chicago, Ill. Filed Apr. 19, 1909. Serial No. 490,822. (Cl. 158—28.2.)

1. The combination of an iron having an open chamber therein and provided with an opening in one wall, a burner extending into the chamber, one end thereof resting upon the wall at the bottom of the opening, a support for the free end of the burner depending from said end and resting upon the bottom of the chamber, a fuel supply tank supported by the burner and located outside of the chamber, a closure for the chamber, and means whereby the closure will hold the burner against displacement by the weight of the fuel tank.



2. The combination of an iron having an open chamber therein and provided with an opening in one wall, a burner extending into the chamber, one end thereof resting upon the wall at the bottom of the opening, a support for the free end of the burner depending from said end and resting upon the bottom of the chamber, a fuel supply tank supported by the burner and located outside of the chamber, and a closure for the chamber, said burner being provided with a projection adapted to be engaged by the closure for pressing the said support against the bottom of the chamber to hold the burner against displacement by the weight of the fuel tank.

3. The combination of an iron having a chamber therein, a burner extending into the chamber, a mixing chamber in the burner, a fuel tank supported by the burner, a vaporizing tube the ends of which are removably secured to the burner adjacent one end, one end of the tube having communication with the tank for receiving a supply therefrom, means whereby the vapor from the other end of the tube will be discharged into the mixing chamber, said tube being of substantially U shaped formation and extending around the burner, and a support at the bend in the tube and upon which the tube rests.

4. The combination of an iron having a chamber therein, a burner extending into the chamber through the wall thereof, a mixing chamber in the burner, a vaporizing tube supported by the burner adjacent the latter, a fuel supply tank with which one end of the tube has communication, a vapor discharge outlet spaced from the mixing chamber arranged to discharge into the chamber and with which outlet the other end of the tube has communication, means for controlling the outlet, and an independent apertured member supported for free pivotal movement adapted to be inserted into and removed from the space between the said outlet and the mixing chamber and substantially filling said space with the aperture arranged in alinement with the inlet of the mixing chamber.

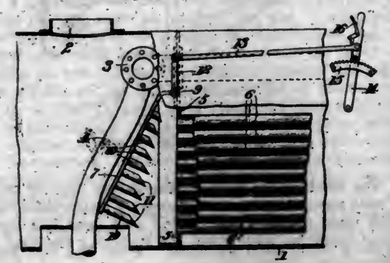
5. The combination of an iron having a chamber therein, a burner extending into the chamber through the wall thereof, a mixing chamber in the burner, a vaporizing tube supported by the burner adjacent the latter, a fuel supply tank with which one end of the tube has communication, a vapor discharge outlet spaced from the mixing chamber arranged to discharge into the chamber and with which outlet the other end of the tube has communication, means for controlling the outlet, a member pivotally supported by the iron and adapted to be inserted into and removed from the space between the outlet and the mixing chamber, said member having an aperture therethrough, a tubular extension surrounding the aperture and adapted to aline with the said outlet and substantially fill the said space, and means for preventing displacement of said member.

[Claims 6 to 8 not printed in the Gazette.]

1,023,948. PROCESS OF TREATING WOOD FOR USE IN SECONDARY BATTERIES. PASCAL MARINO, London, England. Filed Feb. 28, 1909. Serial No. 479,649. (Cl. 204—29.)

The method of rendering wood suitable for use as a separator in secondary batteries, the same consisting in treating the wood in the form of thin sheets or veneers, first with steam under pressure to free it from acetic acid then treating with hydrogen peroxid solution to oxidize the vasculose and finally extracting the oxidized products from the wood.

1,023,949. DRAFT-REGULATOR FOR FIRE-TUBE BOILERS. CHARNOCK H. MCCALL, Atlanta, Ga. Filed Feb. 11, 1911. Serial No. 607,943. (Cl. 110—163.)

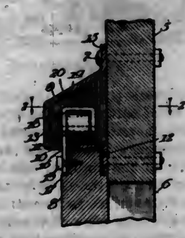


1. The combination with a fire tube boiler having a tube sheet, of a support pivotally mounted adjacent said tube sheet, and a plurality of plugs carried by said support, and arranged to enter the ends of the tubes as the support is swung on its pivot, the length of said plugs increasing in proportion to their distance from the pivot.

2. The combination with a fire tube boiler having a tube sheet, of a baffle plate arranged adjacent said sheet and hinged at one edge to the boiler, a plurality of plugs secured to said baffle plate and adapted to enter the tubes, the length of said plugs varying in proportion to their distance from such hinged edge, and means for swinging said plate on its hinges so as to force said plugs into said tubes to a greater or less extent.

3. The combination with a fire tube boiler of the locomotive type, of a horizontal shaft journaled adjacent the front tube sheet, a baffle plate secured at its upper edge to said shaft and arranged within the smoke box between the said tube sheet and the smoke stack, plugs carried by said baffle plate and adapted to enter the ends of the fire tubes, the length of said plugs increasing in proportion to their distance from said shaft, and means for rocking said shaft so as to swing said baffle plate toward and away from the tube sheet.

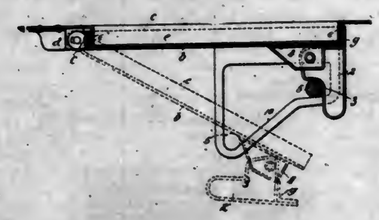
1,023,950. SLIDING-DOOR TRACK AND CAP. MICHAEL HENRY MCNAMARA, Chicago, Ill. Filed Oct. 23, 1911. Serial No. 656,309. (Cl. 16—7.)



A hooded track for sliding doors consisting of a horizontally disposed portion having at one of its edges a downwardly extended and an apertured flange and provided

near its other edge with a longitudinally disposed slot terminating at its ends inwardly of the ends of said portion and at the last named edge with a vertically extended portion, and an upwardly inclined portion extended from the upper portion of the vertical part and having at its so as to swing said baffle plate toward and away from the alleilsm with the first named flange.

1,023,951. TRAP-DOOR. OTTO WILLIAM MEISSNER, Westmount, Quebec, Canada. Filed Nov. 13, 1907. Serial No. 401,955. (Cl. 57—37.)



1. The combination with a flanged trap door of trough form with one end open of a downwardly displaceable flange carried upon the door for closing such open end, and a common operating mechanism for operating the door and flange.

2. The combination with a trap door, of a displaceable flange mounted upon and displaceable away from the door and adapted to seal the joint between one side thereof and the contiguous portion of the door frame, and a common mechanism for operating the door and flange.

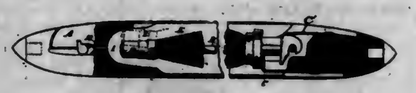
3. The combination with a trap door flanged to form a trough with one end open, of a valvular member movably secured to the door and adapted to close the said open end of the trough, and means for operating the said valvular member.

4. The combination with a trap door of a movable valvular member adapted to overlap and inclose one side of the door and the contiguous portion of the door frame when the door is closed and automatically move away from such side when the door is opened.

5. The combination with a trap door and a shaft for raising and lowering the door, of a valvular member for sealing the joint between one side of the door and the contiguous portion of the door frame, and means for operating the said valvular member, including an arm pivoted to the door and adapted to have the shaft bear thereon.

[Claims 6 to 12 not printed in the Gazette.]

1,023,952. LOOM-SHUTTLE. TIMOTHY MOONEY, Yorkville, N. Y. Filed Jan. 11, 1909. Serial No. 471,557. (Cl. 139—46.)



A shuttle provided with a bobbin cavity, a bobbin spindle pivoted at one end of said bobbin cavity, a spring tending to hold the same in horizontal or raised position, a bobbin catch adapted to engage the base of the bobbin to prevent axial movement on the spindle, and an overhanging wall at the delivery end of the bobbin cavity extending to the rear such a distance as to permit the end of the bobbin to just clear the rear edge of the overhanging wall when the bobbin is properly positioned on the spindle and the spindle is raised, but to catch the end of the bobbin if it has moved forward on the spindle and prevent the bobbin and spindle from being raised.

1,023,953. JOINT-MACHINE AND WELT-CUTTER. CARL S. NORDEN, Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Dec. 14, 1907. Serial No. 406,424. (Cl. 12—67.)



1. In a device of the class described, a slide way, a slide, a shoe support on said slide, a pair of oppositely disposed transversely acting slides near one end of said slide way, a finger on each slide having a thin edge which is adapted to bear between the welt and upper at the shank, and means to operate said transversely acting slides to cause the fingers to tighten the upper at the shank relatively to the upper in front and back of the shank.

2. In a device of the class described, a slide way, a slide, a shoe support on said slide, a pair of oppositely disposed transversely acting slides near one end of said slide way, a finger on each slide adapted to bear between the welt and upper at the shank, a cutting stop on each of said fingers, and means to operate said transversely acting slides.

3. In a device of the class described, a slide way, a slide, a shoe support hinged on said slide, a pair of oppositely disposed transversely acting slides near one end of said slide way, a finger on each slide adapted to bear between the welt and upper at the shank, a cutting stop on each of said fingers, and means to simultaneously operate said transversely acting slides to tighten the upper at the same time at opposite sides of the shoe and hold it while the upper is fastened and the welt cut against said stops.

4. In a device of the class described, a slide way, a slide, a yielding shoe support on said slide, a pair of oppositely disposed transversely acting slides near one end of said slide way, a finger on each slide adapted to bear between the welt and upper at the shank and tighten the upper at the shank with relation to the upper in front and back of the shank, and means to simultaneously operate said transversely acting slides, said yielding shoe support pressing the shank snugly upwardly against said fingers.

5. In a device of the class described, a slide way, a slide, a yielding shoe support hinged on said slide, a pair of oppositely disposed transversely acting slides near one end of said slide way, a finger on each slide adapted to bear between the welt and upper at the shank, a cutting stop on each of said fingers, and means to simultaneously operate said transversely acting slides to tighten the upper at the same time at opposite sides of the shoe.

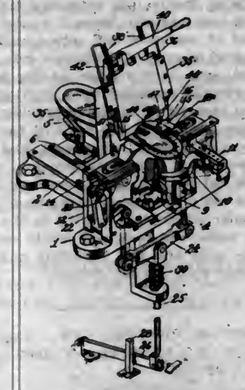
[Claims 6 to 25 not printed in the Gazette.]

1,023,954. MACHINE FOR USE IN THE MANUFACTURE OF BOOTS AND SHOES. CARL S. NORDEN, Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed May 1, 1908. Serial No. 430,332. (Cl. 12—67.)

1. A machine of the class described having means for tightening the upper of a welted shoe adjacent to the ends of the heel stiffener at the opposite sides of the shoe simultaneously and holding it under tension while it is operated upon combined with means for butting the welt.

2. A machine of the class described having means for butting a welt, devices movable transversely of the shoe and relatively to the butting means for positioning the welt relatively to the butting means, and operating means having provision for actuating said welt positioning devices repeatedly to effect proper positioning of the welt ends prior to the actuation of the butting means.

3. A machine of the class described having means for engaging a shoe in the welt crease, a welt butting cutter, actuating mechanism for causing the engaging means to tighten the upper over the last and hold it under tension while the welt is butted and the upper fastened, said actuating mechanism being arranged to permit repeated upper tightening operations prior to the actuation of the welt butting cutter.

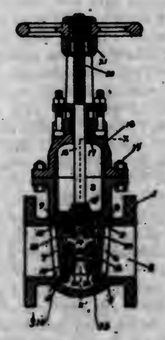


4. A machine of the class described having means for engaging a shoe in the welt crease to tighten the upper over a last and position the butt end of the welt, a cutter, and mechanism constructed and arranged to advance the cutter for butting the welt and then retract the cutter to permit the ends of the welt to be fastened while the shoe remains in a single position.

5. In a welt butting machine a shoe support, a cutter, a carrier for the cutter movable toward and from the shoe, and a connection between the carrier and the cutter arranged to permit the latter to rock relatively to the former during the cutting operation.

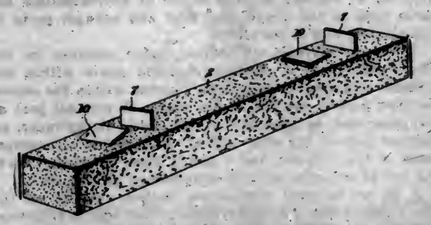
[Claims 6 to 27 not printed in the Gazette.]

1,023,955. VALVE. FRED K. NORTH, Boston, Mass. Filed Aug. 31, 1908. Serial No. 450,997. (Cl. 137—5.)



A gate valve comprising a vertically movable stem, a slotted head at the lower end thereof, valve gates at opposite sides of said head, bolts detachably connected to the backs of said gates respectively and passing through inclined slots in the head, said gates having a sliding movement on said head, inclined surfaces in the rear of said gates, rollers on said head engaging the inclined surfaces, valve seats having beveled faces arranged to cooperate with the beveled edges of the respectivel valve gates, said gates being adapted to be disconnected from the head and turned while in contact with the valve seats for regrinding, substantially as described.

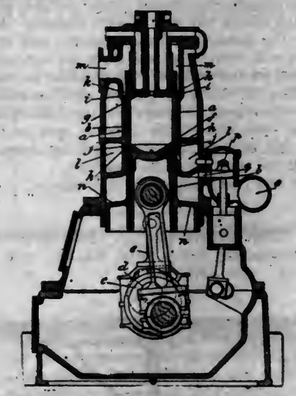
1,023,956. RAILWAY-TIE. JAMES D. OGDEN, Crawford, Tex. Filed May 31, 1911. Serial No. 630,511. (Cl. 238—4.)



1. A device of the character described, consisting of a cement or like material, railway tie, and a plurality of metallic plates bent or pressed at right angles, one end thereof embedded longitudinally therein, the other end forming an arm extending vertically thereto and adapted to adjustment on corresponding sides of parallel rails and to be bent in engagement with the flanges thereof; and a plurality of plates provided with elbows and an arm adapted to extend over the flange of a rail opposite the hereinbefore mentioned plates and in coöperative engagement therewith, substantially as and for the purposes set forth.

2. A railway tie consisting of cement or like material and a plurality of metallic plates bent or pressed at right angles, one end thereof embedded longitudinally therein, the other end forming an arm extending vertically thereto and adapted to adjustment on corresponding sides of parallel rails and to be bent in engagement with the flanges thereof; and a plurality of plates provided with elbows and an arm adapted to extend over the flange of a rail opposite the hereinbefore mentioned plates and in cooperation with the same, substantially as set forth.

1,023,957. INTERNAL-COMBUSTION ENGINE. JAMES COURTHOPE PEACHE, Rugby, England, assignor to Willans & Robinson, Limited, Rugby, England. Filed July 5, 1910. Serial No. 570,341. (Cl. 123—71.)



1. In an internal combustion engine working on the two-stroke cycle, the combination of a cylinder, a single sleeve within the cylinder open at both ends, a piston within the sleeve having a longer travel than the sleeve moving in the same direction therewith during each of its strokes and arriving at the end of each stroke at approximately the same time as the sleeve, an inlet port at one end of the sleeve, an exhaust port at the other end thereof, an inlet port at one end of the cylinder, and an exhaust port at the other end thereof.

2. In an internal combustion engine working on the two-stroke cycle, the combination of a cylinder, a single sleeve

within the cylinder open at both ends, a piston within the sleeve having a longer travel than the sleeve moving in the same direction therewith during each of its strokes and arriving at the end of each stroke at approximately the same time as the sleeve, and inlet and exhaust ports in the cylinder and in the sleeve.

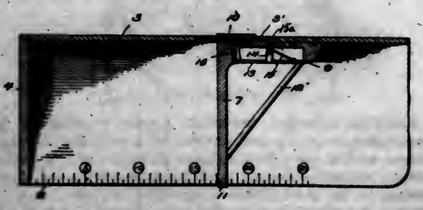
3. In an internal combustion engine working on the two stroke cycle, a cylinder, a single sleeve within the cylinder and open at both ends, a piston within the sleeve, an inlet port at one end of the sleeve, an exhaust port at the other end, an inlet port at one end of the cylinder, an exhaust port at the other end of the cylinder, an enlargement of the cylinder, and a piston upon the sleeve working in the enlargement and compressing air therein.

4. In an internal combustion engine working on the two stroke cycle, a cylinder open at one end, a single cylindrical sleeve fitting within the cylinder open at both ends, inlet ports at the open end of the cylinder and exhaust ports at the closed end, ports at the two ends of the sleeve at the same distance apart as the inlet and the outlet ports in the cylinder, a piston fitting within the sleeve, a crank shaft opposite the open end of the cylinder, a connecting rod extending from the piston to a crank on the crank shaft, connecting rods extending from the sleeve to cranks or eccentrics on this shaft so disposed that the sleeve is moved in phase with the piston but with a shorter travel and that the ports in the sleeve and the ports in the cylinder are closed to one another at the end of its inward stroke but are brought opposite to one another when the piston is at and near the end of its outward stroke and travels beyond them.

5. In an internal combustion engine working on the two stroke cycle, a cylinder open at one end, a single cylindrical sleeve fitting within the cylinder open at both ends, inlet ports at the open end of the cylinder and exhaust ports at the closed end, ports at the two ends of the sleeve at the same distance apart as the inlet and the outlet ports in the cylinder, a piston fitting within the sleeve, a crank shaft opposite the open end of the cylinder, a connecting rod extending from the piston to a crank on the crank shaft, connecting rods extending from the sleeve to cranks or eccentrics on this shaft so disposed that the sleeve is moved in phase with the piston but with a shorter travel and that the ports in the sleeve and the ports in the cylinder are closed to one another at the end of its inward stroke but are brought opposite to one another when the piston is at and near the end of its outward stroke and travels beyond them, an enlargement of the open end of the cylinder, an annular piston on the sleeve working in this enlargement and compressing air therein, a compressed air reservoir into which the inlet ports at the open end of the cylinder open and a valve controlling the delivery of compressed air from the enlargement of the cylinder to the reservoir.

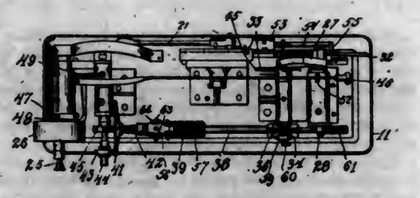
[Claims 6 and 7 not printed in the Gazette.]

1,023,958. COMPOSING-STICK. FREDERICK JACKSON PERRIN, Walworth, Wis. Filed Mar. 2, 1910. Serial No. 546,874. (Cl. 101—26.)



A printer's stick comprising a bottom provided with a type scale and a rear wall, said rear wall being provided with recesses on its inner face in accordance with the type scale, an angular knee movable on the stick having solid and hollow arms, the hollow arm being slidable adjacent the recessed face of the rear wall, while the solid arm cooperates with the type scale, the hollow arm having one of its walls provided with an elongated opening terminating at one end in an enlarged circular portion, the hollow arm having an aperture in its wall which slides adjacent the recessed inner face, a pin extending transversely of the hollow arm and centrally thereof, a sheet metal latch member formed of one piece and correspondingly shaped with the elongated opening of the hollow arm and adapted to fit the same, said latch member having laterally projecting ears pivotally mounted upon said pin, a projection secured on one end of the latch member and extending through the opening of the wall of the arm which slides adjacent the recessed inner wall, and adapted to engage said recesses, a spring connected to the pin and having its free end bearing against one end of the latch member to hold the projection in engagement with the recesses, an angular guide plate secured to the hollow arm and extending under the stick, and a clip secured to the free end of the solid arm and extending under the stick adjacent the type scale portion thereof.

1,023,959. SECTOR-CUTTING SAW. KARL PETERSON, Jamestown, N. Y. Filed Apr. 3, 1909. Serial No. 487,781. (Cl. 29—73.)



1. In a device of the character described, a cutting tool and means for giving a reciprocating movement thereto, holding means for the work alongside said cutting tool, and a rotary feed for said holding mechanism and work against the edge of said cutting tool and around a point adjacent said edge.

2. In a device of the character described, a saw and means for reciprocating the same, holding mechanism for the work alongside said saw, rotary feed for said holding mechanism and work against the cutting edge of said saw and around a point adjacent said cutting edge, and means for giving said rotary feed an intermittent movement.

3. In a device of the character described, a saw and means for reciprocally moving the same, a holding clamp revolubly mounted alongside said saw, a cam revolubly mounted adjacent to said holding clamp to raise the same, and means for turning said cam with an intermittent movement to raise said holding clamp and feed the work against said saw.

4. In a device of the character described, a saw and means for reciprocally moving the same, a first revolubly mounted shaft having an end adjacent said saw, a holding clamp on said adjacent shaft end, a second shaft revolubly mounted parallel to said first shaft, a cam on said second shaft adjacent said holding clamp to raise said clamp, a third shaft, a worm and gear connection between said second and third shafts, and means for intermittently moving said third shaft to give an intermittent motion to said cam and holding clamp.

5. In a device of the character described, a saw and means for reciprocally moving the same, a first revolubly mounted shaft having an end adjacent said saw, a sector shaped holding clamp on said adjacent shaft end, a second shaft revolubly mounted parallel to said first shaft, a cam on said second shaft adjacent said sector shaped holding clamp to raise the same, a third shaft revolubly and slidably mounted at right angles to said second shaft, worm and gear connection between said second and third shafts, and means for intermittently turning and reciprocally moving said third shaft.

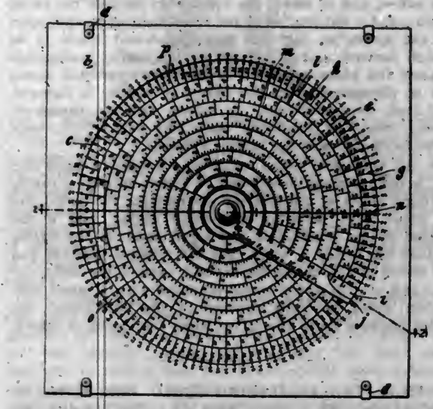
[Claims 6 to 9 not printed in the Gazette.]

1,023,960. METHOD OF MAKING IMITATION GOLD-LEAF. JESTUS G. POTTER, Brooklyn, N. Y. Filed Oct. 7, 1910. Serial No. 585,764. (Cl. 106—37.)

1. A composition for imitation gold leaf consisting of guncotton, one part; shellac one fourth part; glue one fourth part; ether three parts; and alcohol four parts combined with eight ounces of gold bronze and 2 and ⅞ ounces of alloy of gold.

2. A method for making a composition for use in making an imitation gold leaf which consists of forming a carlo stripping collodion comprising guncotton, one part, shellac one fourth part; glue one fourth part; ether three parts, and alcohol four parts, and combining therewith 8 ounces of gold bronze and 2 and ⅞ ounces of alloy of gold, the gold bronze and alloy of gold being in powdered form and stirred into the guncotton, shellac, glue and ether and alcohol to form a watery liquid.

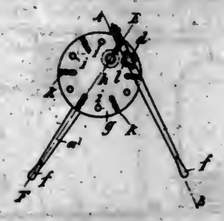
1,023,961. INSTRUMENT FOR OBTAINING AVERAGES. LYNN A. QUIVEY, Cozad, Nebr. Filed Nov. 2, 1911. Serial No. 658,221. (Cl. 235—70.)



The herein described instrument for obtaining averages comprising a back, a frame carried thereby and secured only at its edges thereto, the frame having a circular opening and inscribed around said opening with a series of graduations numbered serially, a disk pivoted to the back concentric with and larger than said opening and having a series of perforations struck on a circle slightly smaller than the opening and inscribed with a serial series of numbers starting with zero and extending away from each other around the disk opposite said perforations until they meet, the disk being divided on a diametric line passing through its center and said zero point, and its opposite halves differently colored, a series of concentric rings on the disk inside its perforations all inscribed with graduations differently spaced and serially numbered away from said zero line, and an index mounted on said pivot above the disk and longer than a radius of said opening, said index having an active edge truly radial to the disk and inscribed with graduations and numbers corresponding with said rings, the edge of the disk beyond its perforations extending under the frame and the outer end of the index extending also under said frame and over the edge of the disk, for the purpose set forth.

1,023,962. APPARATUS FOR SHAPING METAL ARTICLES. HERMANN RAHN, Charlottenburg, Germany. Filed Feb. 8, 1912. Serial No. 676,375. (Cl. 113—52.)

1. In apparatus for shaping thin rotating metal bodies by pressure, the combination with a frame for carrying the rotating body to be shaped, of a suitably supported manual presser lever and a manually guided tool lever fulcrumed on the presser lever.



2. In apparatus for shaping thin rotating metal bodies by pressure, the combination, with a frame for carrying the rotating body to be shaped, of a manual presser-lever comprising a handle at one end and a disk portion at the other fulcrumed on the frame, the fulcrum of the presser-lever being located within the periphery of the said disk, and a manually guided tool-lever fulcrumed on the said disk.

3. In apparatus for shaping thin rotating metal bodies by pressure, the combination, with a frame for carrying the rotating body to be shaped, of a manual presser-lever comprising a handle at one end and a disk portion at the other fulcrumed on the frame, the fulcrum of the presser-lever being located within the periphery of the said disk, the said disk having a plurality of holes at various distances from the fulcrum of the presser-lever, and a manually guided tool-lever detachably and exchangeably fulcrumed in one of the holes in said disk.

4. In apparatus for shaping thin rotating metal bodies by pressure, the combination with a frame for carrying the rotating body to be shaped, of a suitably supported manual presser lever and a manually guided tool lever readily detachably fulcrumed on the presser lever.

5. In apparatus for shaping thin rotating metal bodies by pressure, the combination, with a frame for carrying the rotating body to be shaped, of a manual presser-lever fulcrumed on the frame, a pivot rotatably mounted on the presser-lever, and a recessed, manually guided tool-lever fulcrumed on said pivot, said pivot entering into a recess in the tool-lever.

[Claims 6 to 8 not printed in the Gazette.]

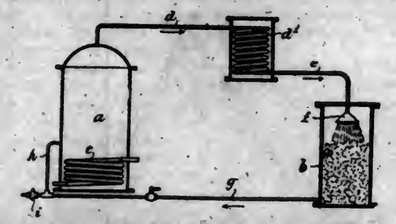
1,023,963. CURTAIN-POLE. FRED RAMMING, Sheboygan, Wis. Filed May 16, 1911. Serial No. 627,398. (Cl. 156—20.)



1. In a device of the class described, the combination with a hollow cylindrical pole having trackways and rollers adapted to travel over said trackways; of spring wires loosely coiled over said rollers and the ends thereof extending downwardly therefrom, and resilient spring actuated gripping jaws pivoted to the lower extremities of said suspending means.

2. Means for supporting draperies comprising in combination a hollow cylindrical pole having the underside thereof flattened and the adjacent edges bent upwardly and spaced to form a slot, rollers within said pole adapted to travel over the flattened portion of the latter, suspending means loosely mounted over said rollers and extending downwardly through the slot, and spring actuated gripping jaws pivoted to the lower ends of said suspending means.

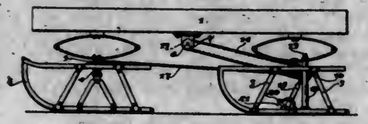
1,023,964. PREPARATION OF ZINCATE SOLUTIONS. CHARLES RANSON, Paris, France. Filed July 8, 1910. Serial No. 570,956. (Cl. 23—13.)



1. A continuous process of preparing concentrated solutions of alkali zincates from ores containing zinc oxid, comprising the following steps in repeated series; treating the ore with ammonia water, mixing the resulting solution with the solution of an alkali, distilling off the ammonia and steam from the mixture, and condensing the ammonia and steam to produce ammonia water, whereby the process is conducted as a continuous cycle, substantially as specified.

2. A continuous process of preparing concentrated solutions of zincate of soda from ores containing zinc oxid, comprising the following steps in repeated series; treating the ore with ammonia water, mixing the resulting solution with a solution of caustic soda and distilling off the ammonia and steam, and condensing the same to produce ammonia water, whereby the process is conducted as a continuous cycle, substantially as specified.

1,023,965. POWER-PROPELLED SLED. AARON REICHENSTEIN, Minneapolis, Minn. Filed July 20, 1911. Serial No. 639,485. (Cl. 21—47.)



1. In a power propelled sled, the combination with a pair of guides secured to said sled, of vertically movable, downwardly spring pressed bearings mounted in said guides, a crank shaft carried by said bearings and means for driving the same, propelling arms secured to the cranks of said crank shaft and having road engaging heads, and yielding thrust connections between said sled and said propelling arms, substantially as described.

2. In a power propelled sled, the combination with a driving shaft, of a yieldingly mounted crank shaft carried by said sled, driving connections between said driving shaft and said crank shaft, propelling arms secured to the cranks of said crank shaft and having tooth equipped road engaging heads, reach rods connecting said crank shaft to said sled, a thrust bar carried by said reach rods, and yielding thrust connections between said propelling arms and said thrust bar, substantially as described.

1,023,966. AUTOMATIC PISTOL. HENRI ROSIER, La Préalle-Herstal, near Liege, Belgium. Filed Jan. 18, 1912. Serial No. 671,940. (Cl. 42—3.)

1. An automatic pistol comprising a body, a fixed barrel, a reciprocating breech-bolt, a recoil spring, a casing containing the said spring and retained in place thereby and having a fore part capable of sliding on the body or barrel, and means for disengaging the said forward part from the body or barrel and for permitting of removing it, with the breech-bolt and the recoil spring, from the rear of the body.

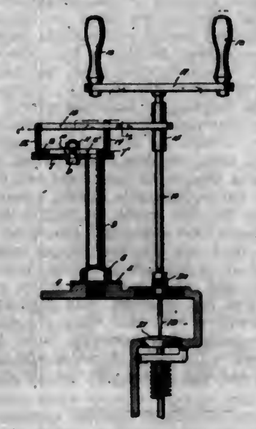
2. An automatic pistol comprising a body, a fixed barrel, a reciprocating breech-bolt, a recoil spring, a casing having a fore part in the form of a sleeve which surrounds the barrel and an upper part inclosing the recoil spring which tends to force the breech-bolt forward and to maintain the sleeve of the casing against the body, and means for disengaging the sleeve of the casing from the barrel and for then removing the casing, with the breech-bolt and the recoil spring, from the open rear part of the body.



3. An automatic pistol comprising a body, a fixed barrel, a reciprocating breech-bolt, a recoil spring, a casing having a fore part in the form of a sleeve which surrounds the barrel, and of which the upper part incloses the recoil spring, and a rod jointed to the breech-bolt and acted upon by the spring so that the said breech-bolt tends to be moved forward and the sleeve of the casing maintained against the body, in such a manner that the said sleeve can be disengaged from the barrel by sliding it forward, and then the breech-bolt, the spring, and the casing removed from the completely open rear part of the body after having turned the casing upward.

4. An automatic pistol comprising a body, a fixed barrel, a reciprocating breech-bolt, a recoil spring, a casing having a sleeve at the fore end surrounding the barrel and an upper part inclosing the recoil spring, and a rod jointed to the breech-bolt and acted upon by the spring so that the latter is taken into its forward position and the sleeve of the casing maintained against the body, the rear end of the casing being provided with a small projection which normally engages in the breech-bolt, but which engages above the latter when the casing is raised.

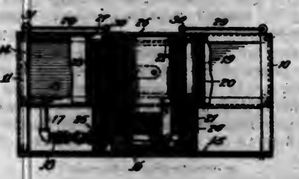
1,023,967. VALVE-GRINDING TOOL. JOHN SCHELLER, Milwaukee, Wis. Filed June 29, 1911. Serial No. 636,102. (Cl. 51—4.)



1. A valve-grinding tool comprising a post and means therewith for rigidly securing the same in a spark-plug socket of an internal-combustion engine, a horizontal rest rigid on the post, a support adjustable on the rest longitudinally of the same, means for holding the support in adjusted position, a vertical bearing having a horizontal shank in connection with the support, and a valve-grinding bit having a crank-controlled stock loose in the bearing.

2. A valve-grinding tool comprising a post and means therewith for rigidly securing the same in a spark-plug socket of an internal-combustion engine, a rest rigid on the post, an angular yoke adjustable on the rest, means for holding the yoke in adjusted position, a plate in hinge connection with one vertically extending end of the yoke and engageable with a recess in another similarly extending end of said yoke, a bearing for which the plate constitutes a shank, and a valve-turning bit having a crank-controlled stock loose in the bearing.

1,023,968. STOVE. WILLIAM E. SHARP, Chicago, Ill., assignor, by direct and mesne assignments, to Alcohol Heating & Lighting Company, Chicago, Ill., a Corporation of Delaware. Filed Jan. 20, 1911. Serial No. 603,722. (Cl. 126—93.)



1. A liquid fuel stove comprising a supporting frame, a fuel reservoir supported by said frame and having an aperture extending upwardly therethrough, a burner below said aperture, means for supplying fuel from said reservoir to said burner, a chimney within said aperture and spaced away from the wall of the latter, and a screen vertically movable in the annular space between the wall of said aperture and said chimney for preventing access of foreign material to said burner, substantially as described.

2. A liquid fuel stove comprising a supporting frame, a fuel reservoir supported by said frame and having an aperture extending upwardly therethrough, a burner below said aperture, means for supplying fuel from said reservoir to said burner, a chimney within said aperture and spaced away from the wall of the latter, a screen vertically movable in the annular space between the wall of said aperture and said chimney for preventing access of foreign material to said burner, and a second screen covering the upper end of said chimney and said annular space, substantially as described.

3. In a device of the character described, the combination of a supporting frame, a liquid fuel reservoir supported in the upper portion of said frame and having a passage extended upwardly through the same, a burner below said passage, a fuel-supplying connection between said burner and said reservoir, a screen slidingly mounted in said passage and adapted to surround said burner, and a removable screen fitted over the top of said passage, whereby the products of combustion may pass upwardly through said passage and top screen and the burner be protected by the screens, substantially as described.

1,023,969. THREAD-PROTECTOR. PETER J. SHRUM, Monaca, WILLIAM C. RAB, Pittsburgh, and JOSEPH W. RIPPER, Glenfield, Pa., assignors to Colona Manufacturing Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Jan. 25, 1911. Serial No. 604,614. (Cl. 137—91.)

1. A thread protector for pipes, etc. consisting of a continuously integral metal ring having a middle non-contacting portion and terminal inwardly pressed portions providing a flange and threaded portion respectively of less diameter than the middle portion, said flange extending inwardly beyond the outer diameter of the pipe to be protected, substantially as set forth.

2. A thread protector for pipes, etc. consisting of a continuously integral wrought metal ring having a middle non-contacting portion and terminal inwardly pressed portions providing a flange and threaded portion respectively of less diameter than the middle portion, said flange extending inwardly beyond the outer diameter of the pipe to be protected, substantially as set forth.



3. A thread protector consisting of a continuously integral wrought metal ring of substantially uniform thickness having a middle maximum diameter, an annular inwardly turned flange at one end extending inwardly beyond the outer diameter of the pipe to be protected, an interiorly threaded annular portion at the other end pressed inwardly beyond the maximum diameter, and an intervening outwardly bulging annular body portion providing the maximum diameter and an interior annular cavity outwardly beyond the greatest diameter of the threaded portion and longitudinally between it and the terminal flange, substantially as set forth.

4. A thread protector consisting of a continuously integral wrought metal ring of substantially uniform thickness having a middle maximum diameter, an annular inwardly turned flange at one end, an interiorly threaded annular portion at the other end pressed inwardly beyond the maximum diameter of the protector and of the pipe to be protected, and an intervening outwardly bulging annular body portion providing an interior annular cavity outwardly beyond the greatest diameter of the threaded portion and longitudinally between it and the terminal flange, the exterior of the protector being continuously rounded and smooth, substantially as set forth.

5. A thread protector consisting of a continuously integral metal ring of substantially uniform thickness having a middle maximum diameter, an annular inwardly turned flange at one end extending inwardly beyond the outer diameter of the pipe to be protected, an interiorly threaded annular portion at the other end extending inwardly beyond the maximum diameter, and an intervening outwardly bulging annular body portion providing the maximum diameter and an interior annular cavity outwardly beyond the threaded portion and longitudinally between it and the terminal flange, substantially as set forth.

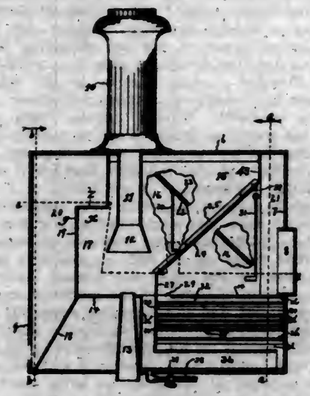
[Claim 6 not printed in the Gazette.]

1,023,970. LOCOMOTIVE SMOKE-BOX. BENJAMIN F. STANNARD and ABRAHAM AGINSKER, Omaha, Nebr. Filed Sept. 12, 1910. Serial No. 581,690. (Cl. 110—124.)

1. In combination with a horizontally disposed, cylindrical receptacle having a terminal flue-sheet providing a smoke-intake, a steam intake pipe and a discharge passageway; a horizontal partition in the receptacle to provide a lower compartment; adjacent, upright partitions disposed above and connecting the horizontal partition and the wall of the cylindrical receptacle and forming longitudinal side chambers opening upon the smoke intake with exit ports communicating with the lower compartment, and forming a separating chamber between the side chambers, said separating chamber communicating with the side chambers, the steam intake and the discharge passageway, and having an exit port and an intake port communicating with said lower compartment; and a screen mounted within the separating chamber and each side chamber, the arrangement being that the exit port of each side chamber is disposed between the screen therein and the smoke intake.

2. A smoke box for locomotives, comprising, in combination with a horizontally disposed, cylindrical receptacle

having at its rear terminal a transverse, apertured flue-sheet and provided with a discharge port and a steam intake, and having upper, side flue-chambers each provided with a screen 23 and opening upon the apertured flue-sheet; a separating compartment provided with a screen 24 and disposed between and opening upon the side flue-chambers, said separating compartment being in communication with the steam intake and the discharge port of the cylindrical receptacle; a lower compartment having intake ports communicating with the side flue-chambers rearwardly of screens 23, and having an intake port communicating with the separating compartment forwardly of screen 24, and provided with an exit port communicating with the separating compartment rearwardly of said screen 24; and a plurality of baffle-plates within and disposed between the intake ports and exit port of said lower compartment.



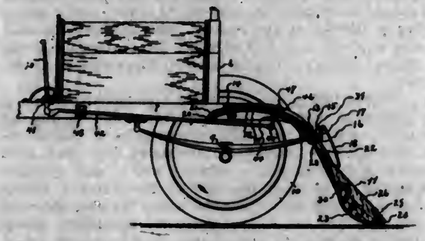
3. In combination with a horizontally disposed, cylindrical receptacle having a terminal flue-sheet providing a smoke-intake, a steam intake pipe and a discharge passageway; a horizontal partition in the receptacle traversed by the intake pipe and forming a lower compartment; adjacent, upright partitions disposed above and connecting the horizontal partition and the wall of the cylindrical receptacle and forming longitudinal side chambers opening upon the smoke intake with exit ports communicating with the lower compartment, and forming a separating chamber between the side chambers, said separating chamber communicating with the side chambers, the steam intake, the discharge passageway, and having an exit port and an intake port communicating with said lower compartment; stationary screens disposed inclinedly within the separating chamber and side chambers; weighted screens pivotally mounted adjacent to said stationary inclined screens, the exit ports of each side chamber being disposed between the screens therein and said smoke intake.

4. A smoke box for locomotives, comprising, in combination with a horizontally disposed, cylindrical receptacle having at its rear terminal a transverse, apertured flue-sheet and provided with a discharge port and a steam intake, and having upper, side flue-chambers opening upon the apertured flue-sheet each being provided with the stationary, inclined screen 23; a separating compartment disposed between and opening upon the side flue-chambers and provided with the stationary, inclined screen 24, said separating compartment being in communication with the steam intake and the discharge port of the cylindrical receptacle; a weighted frame-member pivotally mounted adjacent to each of the stationary, inclined screens of said side flue-chambers and separating compartment; a lower compartment having ports communicating with the side flue-chambers rearwardly of said screens 23 and having an intake port communicating with the separating compartment forwardly of screen 24, and provided with an exit port communicating with the separating compartment rearwardly of said screen 24; and a plurality of baffle-plates within and disposed between the intake ports and exit port of said lower compartment.

5. A locomotive smoke box, comprising, in combination with a horizontal, cylindrical container having an exit way, a steam intake pipe, and provided at its rear end with an upright, apertured flue-sheet, a horizontal partition in the container to provide a lower compartment; adjacent upright partitions connecting the horizontal partition and the upper part of the container to provide longitudinal side-chambers and an intermediate separating chamber, each of the longitudinal side-chambers opening upon the apertured flue-sheet and provided at its front terminal with a transverse, upright barrier-plate and having an exit way formed between said barrier-plate and said flue-sheet to communicate with said lower compartment, said separating chamber communicating with the exit way and intake pipe of the cylindrical container and with said side chambers and provided at its rear terminal with an upright, transverse barrier-plate and an exit way forwardly of said barrier-plate in communication with said lower compartment; a grate mounted upon the barrier-plates of the side chambers and said separating chamber; said lower compartment having an exit way communicating with the separating chamber rearwardly of the transverse barrier-plate thereof.

[Claims 6 to 10 not printed in the Gazette.]

1,023,971. AUTOMOBILE-FENDER. BENJAMIN F. STANNARD and ABRAHAM AGINSKER, Omaha, Nebr., assignors to National Automatic Vehicle Fender Company, Omaha, Nebr., a Corporation. Filed Sept. 21, 1910. Serial No. 583,065. (Cl. 105—255.)



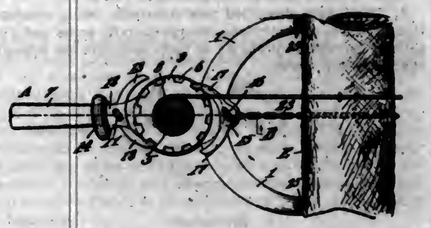
1. A fender of the class described comprising a pair of parallel, adjacently disposed, longitudinally-curved guides, a transverse supporting-plate mounted upon one of the terminals of said guides and provided with an upright dash; a pair of fender arms provided at one of their ends with a transverse buffer-bar, their opposite ends being seated in said guides; an apron of flexible material mounted upon and extending between the buffer-bar and said supporting plate; said fender-arms being adapted to have a slidable movement inwardly of said guides to fold and dispose said apron adjacent to said dash; and a hood adapted to overhang said apron.

2. A fender for automobiles comprising, in combination with the frame thereof, a pair of parallel, curved housing-tubes mounted upon the frame and having a transverse supporting plate connecting one of their terminals, spiral springs having means for adjustment and mounted in their opposite terminals; curved fender arms seated in said housing tubes, one of their terminals bearing upon said springs, their opposite ends being provided with a transversely-supported flexible apron, said springs being adapted to be compressed, the fender arms moving inwardly of the housing-tubes; and means for releasing the springs, the fender arms thereby moving outwardly of said housing tubes.

3. The combination with a vehicle frame, of a folding fender comprising curved guides disposed longitudinally of and rigidly mounted upon the frame; curved apertured fender-arms provided with a transverse buffer-bar and having end-portions mounted in said guides; means supported by the guides adapted to normally move the fender-arms forwardly of said guides; detent-bars supported by the frame and adapted to engage within the apertures of the fender-arms; a flexible apron interposed between the buffer-bar and said frame and attached thereto; a hand lever upon the vehicle frame; levers attached to said detent-bars and having pivotal connections with each other and with the hand lever so that a movement of said hand lever will cause the detent-bars to move outwardly from the apertures of the fender-arms.

4. The combination with a vehicle frame of a folding fender comprising curved, apertured housing-tubes disposed longitudinally of and secured to the frame; spiral springs mounted within said tubes; curved, apertured fender-arms provided with a transverse buffer-bar and having curved end-portions disposed within the tubes in engagement with said springs; detent-bars resiliently actuated to normally engage within the apertures of the housing tubes and fender-arms; a flexible apron interposed between the buffer-bar and said frame and attached thereto; and means for removing said detent-bars from the apertures of the fender-arms.

1,023,972. WIRE-STRETCHER. OLIVER P. STARNES, Cheyenne, Okla. Filed Nov. 18, 1911. Serial No. 659,998. (Cl. 39—32.)

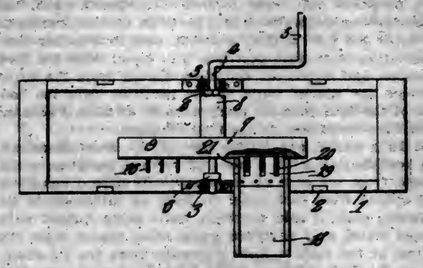


1. A wire stretcher including post engaging members, a body extending therefrom, means connected to the body for anchoring the members in engagement with the post to which the stretched wire is to be secured, a winding spool mounted for rotation relative to the body, an actuating lever, a reversible gravity operated pawl carried by the lever and coöperating with the spool to intermittently rotate the spool during the oscillation of the lever, and a reversible gravity operated detent carried by the body and coöperating with the spool to hold it against rotation in the opposite direction.

2. A reversible wire stretcher, including diverging post engaging members having reduced free ends, a body extending from said members, a winding spool carried by the body, an oscillatory actuating lever, a pawl carried by the lever and having oppositely extending similar arms, a weighted extension upon the pawl for holding one of the arms normally in engagement with the spool, a detent carried by the body and having oppositely disposed similar spool engaging arms, one of said arms constituting means for holding the other arm in engagement with the spool, and means for securing to the spool the end of the wire to be attached to the post engaged by the stretcher.

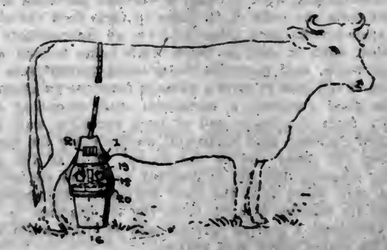
1,023,973. ROOT CUTTER AND SLICER. GUSTAV F. THIENE, Gowanda, N. Y. Filed Mar. 18, 1910. Serial No. 550,103. (Cl. 146—11.)

A device of the class described comprising a frame; a vertically movable shaft journaled upon the frame; a rotor secured to the shaft; chopping blades outstanding from the rotor and having the extremities of their cutting edges rounded to cause the vertical movement of said shaft when engaging an obstruction; a trough carried by the frame and having openings in its bottom, through which openings the rounded edges of the knives pass; and



operating means upon that end of the shaft which is remote from the trough.

1,023,974. MILKING-APRON. GUS W. VAHL, Donny brook, N. D. Filed Sept. 27, 1910. Serial No. 584,145 (Cl. 31—14.)



1. In a device of the class described, the combination with an apron having openings therethrough, of means to attach the apron to an animal and adjustable frame sections for the apron.

2. In a device of the class described, the combination with an apron having openings therethrough, of an adjustable frame at the edge of said apron, means to attach the apron to an animal and additional means to increase or decrease the size of the apron.

3. In a device of the class described, the combination with an apron having openings therethrough and means to adjustably secure the apron to an animal, of a shield depending below said apron and having a pair of openings therein and means to draw the lower edge of the shield in position around an object.

4. In a device of the class described, the combination with an apron, of a frame at the edge of the apron, said frame comprising a plurality of sections telescopically connected together, springs adapted to separate said sections to increase the size thereof and means to adjustably hold the frame sections together.

1,023,975. REFRIGERATOR SHOW-CASE. FRANK VAN DUYNE, St. Paul, Minn. Filed Oct. 12, 1910. Serial No. 586,665. (Cl. 62—10.)



1. In a show case refrigerator of the class described, the combination with a case, of vertical spaced partition

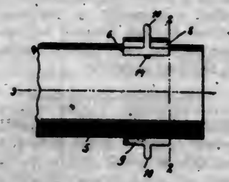
walls arranged therein forming an intermediate ice chamber, a food chamber adjacent one of said partition walls, said partition wall being formed with spaced walls, the space between the walls of said partition communicating at its upper end with said ice chamber, said ice chamber communicating below said partition wall direct with the food chamber, and means for deflecting the air from the space between the spaced walls of the partition into the bottom of the food chamber independently of the air passing from the ice chamber to the food chamber.

2. In a show case refrigerator of the class described, the combination with a case, of vertical partition walls spaced from the ends of the case to form food chambers and spaced from each other to form an intermediate ice chamber, each of said partition walls being formed with spaced walls, said partition walls being spaced from the bottom of the case to form a passage from the ice chamber to the food chamber and a horizontal wall extending outwardly from the lower end of each partition wall into the food chamber, said horizontal walls closing the spaces between the lower end of the spaced walls of the partitions whereby the air is directed from the spaces between said walls into the food chamber independently of the air passing directly from the ice chamber to the food chamber.

3. In a show case refrigerator of the class described, the combination with a case, of vertical partition walls spaced from the ends of the case to form food chambers and spaced from each other to form an intermediate ice chamber, each of said partition walls being formed with spaced walls, said partition walls being spaced from the bottom of the case to form a passage from the ice chamber to the food chamber, a horizontal wall extending outwardly from the lower end of each partition wall into the food chamber, said horizontal walls closing the spaces between the lower end of the spaced walls of the partitions whereby the air is directed from the spaces between said walls into the food chambers independently of the air passing directly from the ice chamber to the food chambers, a grating between said partition walls, and deflector plates below said grating.

4. In a show case refrigerator, the combination with a case, of vertical partition walls spaced from the opposite ends thereof to form food chambers and spaced to form an intermediate ice chamber, a plate removably supported upon the inner side of each partition wall and spaced therefrom, the space between said plate and wall communicating at its upper end with the ice chamber and at its lower end with the food chamber, and a horizontal wall extending outwardly from each partition wall and spaced from said removably supported wall.

1,023,976. BREECH-BLOCK. ALBERT WAKEFIELD, Washington, D. C. Filed Sept. 1, 1911. Serial No. 647,241. (Cl. 89—24.)



1. The combination of the breech of a gun having slots in its wall on opposite sides and opening into the bore of the gun, and breech blocks slidably mounted in said slots in the direction of their length, each of said breech blocks extending across one-half of the bore and together forming a closure therefor, the opposite longitudinal edges of the blocks being in sliding contact with each other.

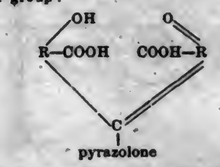
2. The combination of the breech of a gun having slots in its wall on opposite sides and opening into the bore of the gun, and a breech block which is in sections, said sections entering the bore from opposite sides of the gun and being slidably mounted in the aforesaid slots, in the direction of their length, and the opposite longitudinal edges of the sections being in sliding contact with each other.

3. The combination of the breech of a gun having slots in its wall on opposite sides and opening into the bore of the gun, and a breech block which is in sections, said sections entering the bore from opposite sides of the gun and being slidably mounted in the aforesaid slots in the direction of their length, the contiguous faces of the sections having a tongue and groove, respectively, which interlock.

4. The combination with the breech of a gun having slots in its wall on opposite sides and opening into the bore of the gun, said bore having grooves, and a breech block which is in sections, said sections entering the bore from opposite sides of the gun and being slidably mounted in the aforesaid slots in the direction of their length, the opposite longitudinal edges of the sections being in sliding contact with each other, and said sections also having tongues which fit in the aforesaid grooves.

1,023,977. DYE. MAX WEILER, Elberfeld, Germany, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Sept. 7, 1910. Serial No. 580,859. (Cl. 8—1)

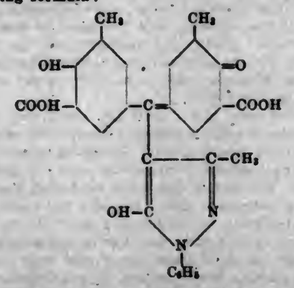
1. The herein described new dyestuffs, being condensation products of methylene-dioxycarboxylic acids and pyrazolones containing probably in their molecule the following characteristic group:



pyrazolone

in which R means an aryl radical which dyestuffs are dark powders soluble in dilute caustic soda lye generally with a red color, dyeing wool from acid baths generally from red to violet to brown shades, which can be chromed after dyeing, substantially as described.

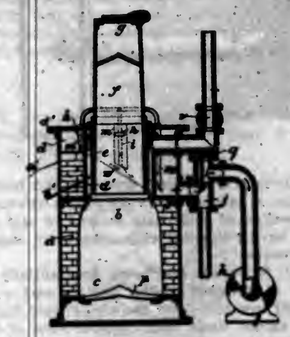
2. The herein described new dyestuff having probably the following formula:



which is a yellowish-brown powder soluble in caustic soda lye with an orange-red color, dyeing wool orange shades, which turn intense brownish-orange on chroming, substantially as described.

1,023,978. GAS-GENERATING APPARATUS. MATTHEW WHITE and JAMES HENRY WHITE, Luton, England. Filed Jan. 17, 1911. Serial No. 603,072. (Cl. 48—63.)

1. In a gas generator plant, the combination with a producer having an accumulating chamber formed at its upper end, of a second chamber, including an inclined floor, provided with inlet openings adjacent its upper end in communication with the said chamber in said producer, egress means disposed at the lowermost portion of said second mentioned chamber whereby the gas is drawn from the top to the bottom of the latter, elongated spray pipes, disposed within said second mentioned chamber and extending longitudinally in the path of movement of the gas, and means confining the currents of gas in close proximity to said spray pipes throughout its travel thereby, substantially as and for the purpose set forth.



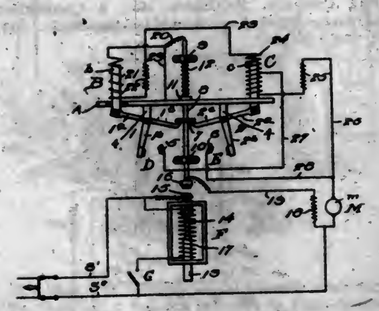
2. In a gas generator plant, the combination with a producer having an accumulating chamber formed at its upper end, of a second chamber, including an inclined floor, provided with openings in communication with said accumulating chamber in said producer, a plurality of spray pipes contained within said second mentioned chamber one in proximity to each of the said openings thereof to spray the incoming gases with fluid, and an outlet means at the lowermost portion of said second mentioned chamber adapted to separate the dust laden fluid and gases, substantially as described.

3. In a gas generator plant, the combination with a producer having an accumulating chamber formed at its upper end, of a second chamber provided with openings in communication with said accumulating chamber in said producer, spray pipes contained within said secodd mentioned chamber one in proximity to each of the said openings thereof to spray the incoming gases with fluid, means confining the current of gas in close proximity to said spray pipes throughout its travel thereby, and egress means for said second mentioned chamber separating the dust-laden fluid and gases, substantially as described.

4. In a generator plant, the combination with a producer having an accumulating chamber formed at its upper end, of a second chamber, including an inclined floor, provided with a plurality of openings in communication with the accumulating chamber in said producer, spray pipes contained within the said second mentioned chamber one in proximity to each of the said openings thereof to spray the incoming gases with fluid, and outlet means at the lowermost portion of said second mentioned chamber, including upper and lower branches extending above and below the axis of the opening at the communication with said second mentioned chamber the said upper branch forming egress means for the gases, and the said lower branch forming egress for the dust-laden fluid, and a liquid spray in said upper branch disposed in alinement with said lower branch to permit egress of the liquid emitted from the former to have egress through the said lower branch.

5. In a gas generator plant, in combination with a producer having an accumulating chamber formed at its upper end, of a second chamber, including an inclined floor, provided with inlet openings adjacent its upper end, in communication with the said accumulating chamber in said producer, egress means disposed at the lowermost portion of said second mentioned chamber whereby the gas is drawn from the top to the bottom of the latter, elongated spray pipes disposed within said second mentioned chamber and extending longitudinally in the path of movement of the gas, a dividing chamber including upper and lower branches extending above and below the horisontal, respectively, and in alinement with each other, and a spray in said upper branch, substantially as and for the purpose set forth.

1,023,979. STARTER FOR ELECTRIC MOTORS. GEORGE H. WHITTINGHAM, Pikesville, Md., assignor to Monitor Manufacturing Company, Baltimore, Md., a Corporation of Maryland. Filed Mar. 28, 1911. Serial No. 617,389. (Cl. 172—288.)



1. The combination with a motor starter having a movable member normally in starting position, and movable from said position to the running position, of a main switch adapted to establish and interrupt the flow of current through the armature circuit, said switch comprising a contact secured to said member and a coöperating contact connected to the supply circuit, and an electromagnetic device adapted to first move said latter contact into engagement with the contact on said member, and then move said member into the running position.

2. The combination with a motor starter having a movable member normally in starting position, and movable from said position to the running position, and a main switch contact secured to the member, of a coöperating contact connected to the supply circuit, an electromagnetic device having windings independent of the armature circuit, adapted to first move said latter contact into engagement with the contact on said member and then move said member into the running position, and a switch for controlling said device.

3. The combination with a motor starter comprising a member spring-pressed toward the stop position and movable from said position to the running position, of a main switch adapted to establish and interrupt the flow of current to the armature circuit, said switch comprising a contact secured to said member and a coöperating contact connected to the supply circuit, an electromagnetic device adapted to first move said latter contact into engagement with the contact on said member and then move said member against the action of its spring into the running position.

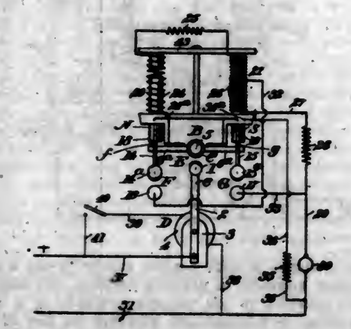
4. The combination with a motor starter comprising a member spring-pressed toward the stop position and movable from said position to the running position, and a main switch contact secured to the member, of a coöperating contact connected to the supply circuit and an electromagnetic device having windings independent of the armature circuit adapted to move said latter contact into engagement with the contact on said member and then move said member against the action of its spring into the running position and a switch for controlling said electromagnetic device.

5. The combination with a starter for electric motors comprising a switch member, adapted to cut out starting resistance, means for normally holding the same in open

position, regulating means, having coils in the armature circuit, for regulating the closing movement of said member, an electromagnetic device adapted, when energized, to first close the circuit through the coils of said regulating means and the armature and then move said holding means to release the switch member, and a switch for opening and closing the circuit through said electromagnetic device.

[Claims 6 to 10 not printed in the Gazette.]

1,023,980. MOTOR-STARTER. GEORGE H. WHITTINGHAM, Pikesville, Md., assignor to Monitor Manufacturing Company, Baltimore, Md., a Corporation of Maryland. Filed June 5, 1911. Serial No. 631,399. (Cl. 172—288.)



1. A starter for electric motors comprising a main switch for opening and closing the supply circuit, a normally open resistance-controlling switch and an electromagnetic device for regulating the closing movement of the latter switch, said device having a core or armature adjacent the contacts of the main switch and serving as a blow-out.

2. A starter for electric motors comprising a main switch for opening and closing the supply circuit, normally open resistance controlling switches, and electromagnetic devices for regulating the closing movements of the latter switches, said devices being arranged and connected so as to produce opposite poles adjacent the contact surfaces of the main switch.

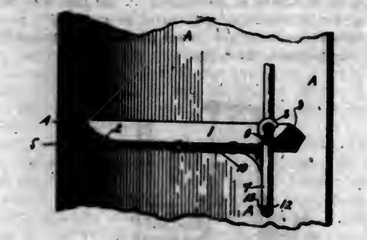
3. A starter for electric motors comprising a main switch for opening and closing the supply circuit, normally open resistance controlling switches, and electromagnetic devices for regulating the closing movements of the latter switches, said devices having windings in the armature circuit of the motor and being arranged and connected so as to produce opposite poles adjacent the contact surfaces of the main switch.

4. A starter for electric motors comprising a main switch for opening and closing the supply circuit, normally open resistance controlling switches, regulating solenoids having their windings in the armature circuit of the motor and having their cores operatively connected to the latter switches, the outer ends of said cores being arranged adjacent to and on opposite sides of the main switch contacts, and the windings of said solenoids being connected so as to produce opposite poles in said ends of the cores.

5. A starter for electric motors comprising normally open resistance-controlling switches, electromagnetic devices having cores or armatures connected to said switches and adapted to regulate their closing movements, and a main switch having its contact surfaces arranged between and adjacent the ends of said cores or armatures.

[Claims 6 to 14 not printed in the Gazette.]

1,023,981. ELEVATING ATTACHMENT. JOHN W. ASHWORTH, Peoria, Ill. Filed Sept. 5, 1907. Serial No. 391,409. (Cl. 193—8.)



1. In a conveyer of the class described and including a pan and chain, a pan having in its edge a cut-away portion and a section of said chain secured in said portion, said section having coupling ends adapted to engage any link in said chain.

2. A flight for conveyers, being substantially saucer shaped with a depressed central portion and a portion thereof cut-out inwardly from the edge of said flight, said edge having abrupt turns upon opposite sides of the cut-out portion and in proximity thereto.

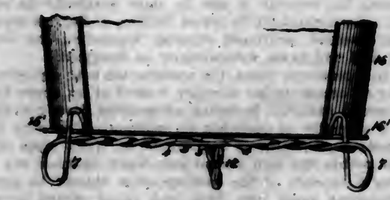
3. The combination with a conveyer-chain, of a flight approximately circular in outline provided with a central dished portion and its edge beveled downwardly and then inwardly.

4. A saucer shaped flight having its edge beveled and a portion of said edge cut out, and a link secured to said flight and projecting through the cut-out portion thereof.

5. As an article of manufacture, a flight pressed into form from a single piece of sheet metal, having a depressed body portion, and its edge partly cut away and beveled downwardly and inwardly.

[Claim 6 not printed in the Gazette.]

1,023,982. PAIL-PROTECTOR. THOMAS H. BARNES, Crawfordsville, Iowa. Filed Apr. 10, 1911. Serial No. 620,083. (Cl. 220—21.)



1. A wire support of the kind described, formed of a number of wires bent and twisted together to form radial arms, a depending loop, and an upright at the end of each arm, and means for engaging the flange at the bottom of a vessel placed upon said support.

2. A wire support of the kind described consisting of a number of wires bent and twisted together to form radial arms with a depending loop at the outer end of each arm, and a resilient projection located above the end of said arm.

3. In a wire support of the kind described, a number of wires twisted together to form a central triangular portion, twisted radial arms, and a depending loop at the outer end of each arm, and a vertical hook shaped end with a resilient arm above the outer end of each radial arm.

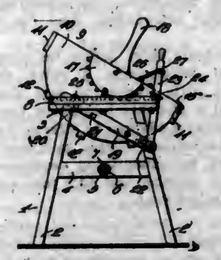
4. In a wire support of the kind described, a number of wires bent and twisted together to form a central portion,

radial arms, a depending support at the outer end of each of said arms, and resilient means at the outer end of each arm adapted to engage the flange of a metallic pail mounted on said support.

5. In a wire support of the kind described, a pair of wires bent to form diagonal smooth radial arms with a depending loop at the outer end of each arm, and a spring arm above the outer end of each arm, said wires being twisted together and extending from said radial arms to form a third radial arm, and said twisted radial arms being extended to form a twisted loop with a spring catch above the outer end of said twisted radial arm.

[Claim 6 not printed in the Gazette.]

1,023,983. SEED AND GRAIN SEPARATOR. THOMAS KENNEDY BARNETT, Shelby, N. C. Filed Nov. 20, 1911. Serial No. 661,373. (Cl. 130—15.)

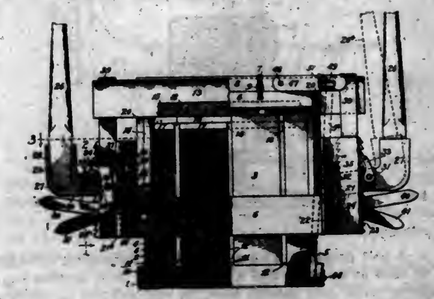


1. In a seed and grain separator, a supporting frame, a working body mounted to oscillate on said frame, locking mechanism for holding said body in position for filling or emptying said mechanism, comprising a locking bar pivotally secured intermediately of its ends to one side of the body and having a plurality of longitudinally spaced locking notches in one edge for engagement with a portion of said supporting frame, whereby the body may be held in a horizontal or in a tilted position, said bar having a curved slot therein, an operating lever slidably secured to one side of the body and having a pin loosely engaged with said curved slot whereby the bar is actuated to engage the notches therein with the supporting frame and to swing said bar to an inoperative position, and means for limiting the upward movement of said bar when swung to inoperative position and for holding it against wabbling.

2. In a seed and grain separator, a supporting frame, a working body mounted to oscillate on said frame, locking mechanism for holding said body in position for filling or emptying said mechanism, comprising a locking bar pivotally secured near one end to one side of the body and having a plurality of longitudinally spaced locking notches in one edge for engagement with a portion of said supporting frame, whereby the body may be held in a horizontal or in a tilted position, an operating lever slidably secured to one side of the body and having a bifurcated end straddling and loosely connected with the pivoted end of the bar, whereby the latter is actuated to engage the notches therein with the supporting frame and to swing said bar to inoperative position, means for locking said lever to hold the locking bar in inoperative position and a stop on said body for limiting the upward movement of said bar and holding it against wabbling when in inoperative position.

1,023,984. PAPER-BALER. ALBERT E. BEALL and CHARLES F. SEELLENGER, Clinton, Iowa, assignors to James C. Smith. Filed Mar. 6, 1911. Serial No. 612,691. (Cl. 100—6.)

1. In a baler, the combination of a frame work forming a baling chamber, a follower movable in said chamber, a pair of vertical racks secured to each end of the frame work, connecting members engaging the ends of the follower, a casting connected to the end of each member, four pawls carried by each casting and adapted to operatively engage the associated pair of racks to force the casting downwardly step by step, a lever movable in and out to operate said pawls and lower the follower, and means for holding said pawls out of engagement with the rack to permit raising of the castings to initial position.



2. In a baler, the combination of a frame work forming a baling chamber, a follower movable in said chamber, a pair of vertical racks secured to each end of the frame work, connecting members engaging the ends of the follower, an operating bell-crank associated with each pair of racks, four pawls carried by each bell-crank for engaging the teeth of the racks, and a handle movable in and out to cause movement of the bell-cranks step by step.

3. In a baler the combination of a frame work forming a baling chamber, a follower movable in said chamber, a pair of vertical racks secured to each end of the frame work, connecting members engaging the ends of the follower, a casting connected to the end of each member and having a slot, a pivot crossing said slot, a plurality of pawls carried by each casting and adapted to operatively engage the associated pair of racks to pull the casting downwardly step by step, a lever for operating each casting to lower the follower, and a pair of levers extending through the slot in each casting to move the pawls out of engagement with the rack when the levers are operated, so that the castings can be moved upwardly to initial position.

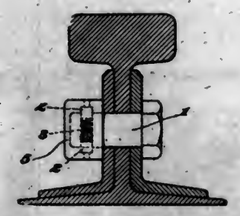
4. In a baler, the combination of a frame work forming a baling chamber, each end of the frame work having a slot, a follower adapted to move in said chamber and having end portions which project through said slots, a pair of racks secured to each end of the frame work on either side of the slot, said racks being each provided with outer and inner teeth, a substantially L-shaped casting associated with each pair of racks, two pairs of pawls pivoted to the horizontal portion of each casting, one pair of pawls engaging the outer teeth and the other pair of pawls engaging the inner teeth of the associated racks, a spring for normally holding said pawls against said teeth, a vertical member connected at its lower end to each of said castings and at its upper end adapted to engage one end portion of said follower, an operating lever connected to the vertical portion of each casting and movable in and out to rock the casting downwardly step by step, and a pair of bell-cranks pivoted to each casting for moving the pawls out of engagement with the teeth of the associated racks to permit raising of the casting to initial position.

5. In a baler, the combination of a frame work forming a baling chamber, each end of the frame work having a slot, a follower movable in said frame work and having end portions which extend through said slots, a pair of inverted U-shaped metallic bars adapted to engage the end

of the follower at their central portion, and actuating mechanism connected to the lower ends of said U-shaped bars and arranged to pull the follower downwardly.

[Claims 6 and 7 not printed in the Gazette.]

1,023,985. FISH-PLATE BOLT. LOUIS EMILE BEAULIEU, Sorel, Quebec, Canada. Filed May 29, 1911. Serial No. 630,003. (Cl. 85—1.)

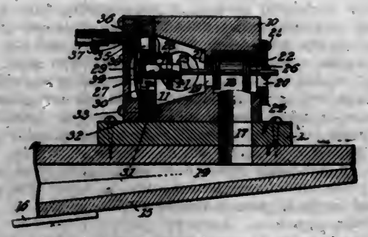


1. A bolt provided with a lateral bore extending through it to both of its sides and a cap provided with sockets registering with said lateral bore, in combination with two blocks arranged to slide in opposite directions in said lateral bore and to enter said sockets, and a spring arranged between said blocks to force the same apart and into said sockets, the said cap being adapted to permit the insertion from outside of means for forcing back said block within said bore to permit the separation of said bolt from said cap.

2. A threadless bolt provided with a lateral bore and a cap provided with sockets registering with said lateral bore and provided further with bores extending through its side walls and into said sockets, but of smaller diameter than the latter, in combination with two blocks arranged in opposite directions in said lateral bore and to enter said sockets and a spring arranged between said blocks and in direct engagement therewith to force the same apart and into said sockets.

3. A bolt provided near its end with a transverse bore, in combination with a spring in the middle part of said bore, two sliding parts in the ends of said bore forced outward by said spring in opposite directions and a cap fitting on the end of said bolt and having two lateral sockets registering with said bore to receive the said parts when thus forced outward.

1,023,986. PNEUMATIC ACTION FOR PLAYER-PIANOS AND SIMILAR MUSICAL INSTRUMENTS. GUSTAVE BJORKLAND, Bayonne, N. J. Filed Sept. 14, 1911. Serial No. 649,221. (Cl. 84—178.)



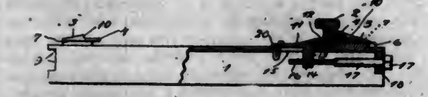
1. In a pneumatic valve action for player pianos and similar musical instruments, a valve chest having a vacuum duct, an air passage, a bleed permanently connecting said duct and passage, an air vent adapted to establish communication between the duct and passage in addition to the connection formed by the bleed, and a diaphragm controlling said vent.

2. In a pneumatic valve action for player pianos and similar musical instruments, a valve chest having a vacuum duct, an air passage, a bleed permanently connecting said duct and passage, an air vent adapted to establish communication between the duct and passage in addition to the connection formed by the bleed, a hammer actuating bellows, a valve controlling communication between the duct and said bellows, and a diaphragm coöperating with said valve and adapted to directly open and close said vent.

3. In a pneumatic valve action for player pianos and similar musical instruments, a valve chest having a vacuum duct, a diaphragm seat, a chamber opening into said seat, a diaphragm adapted to engage the seat and thereby separate the chamber from the duct, and a bleed for establishing permanent communication between the chamber and duct independent from the diaphragm-controlled vent.

4. In a pneumatic valve action for player pianos and similar musical instruments, a valve chest having a vacuum duct, a plate secured to said chest and having an opening and a chamber located in proximity to said opening, a diaphragm adapted to alternately establish and interrupt communication between said opening and chamber, and a bleed for establishing permanent communication between the chamber and duct independent from the diaphragm controlled vent.

1,023,987. METALLIC RAILWAY-TIE AND MEANS FOR SECURING A RAIL TO THE SAME. ALBERT C. BOSEL, Crosby, Minn. Filed Sept. 8, 1911. Serial No. 648,289. (Cl. 238—4.)



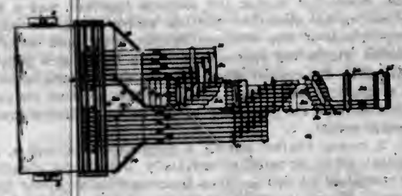
1. The combination with a tie having an opening formed through its upper face, of a relatively stationary clamp connected therewith, an adjustable clamp carrying a depending head adapted for insertion within the opening when the adjustable clamp is disposed transversely of the tie, and a substantially V-shaped spring element for insertion within the opening between the end wall thereof and the end of the adjustable clamp.

2. The combination with a tie having an opening formed through its upper face, of a relatively stationary clamp connected therewith, an adjustable clamp carrying a depending head for insertion within the opening, a substantially V-shaped spring inserted within the opening to engage the adjustable clamp, and an adjusting bolt to move the adjustable clamp.

1,023,988. [WITHDRAWN.]

1,023,989. MACHINE FOR MAKING FILLERS. LUTHER P. BROWN, Ramsey, N. J., assignor to Lillie Mae Brown. Filed Jan. 9, 1911. Serial No. 601,549. (Cl. 93—37.)

1. In a filler-making machine, means for feeding and spacing a plurality of webs of cardboard to form longitudinal filler members, means for feeding and spacing a plurality of webs of cardboard between said longitudinal members to form transverse filler members, means for uniting the opposite web margins of the transverse members to the opposite webs of the longitudinal members, and means for transversely severing the united webs into filler sections.



2. In a filler-making machine, means for feeding and spacing a plurality of webs of cardboard to form longitudinal filler members, means for feeding and spacing a plurality of webs of cardboard between said longitudinal members to form transverse filler members, means for longitudinally scoring the margins of the webs forming the transverse filler members, means for uniting the opposite web margins of the transverse members to the opposite webs of the longitudinal members, and means for transversely severing the united webs into filler sections.

3. In a filler-making machine, means for feeding and spacing a plurality of webs of cardboard to form longitudinal filler members, means for feeding and spacing a plurality of webs of cardboard between said longitudinal members to form traneverse filler members, means for longitudinally scoring the margins of the webs forming the transverse filler members, means for applying a plurality of longitudinal lines of adhesive to the webs forming the longitudinal filler members, said adhesive lines corresponding in number and position with the margins of the webs forming the transverse filler members, compressing means for adhesively uniting the webs forming the longitudinal and transverse filler members, and means for transversely severing the united webs into filler sections.

4. In a filler-making machine, the combination of a spindle for supporting a roll of cardboard, means for feeding the web of cardboard from said roll, means for longitudinally severing the web into sections for forming longitudinal and transverse filler members, means for longitudinally scoring the margins of the webs forming the transverse filler members, means for associating the several web sections, and means for transversely severing the associated webs into filler sections.

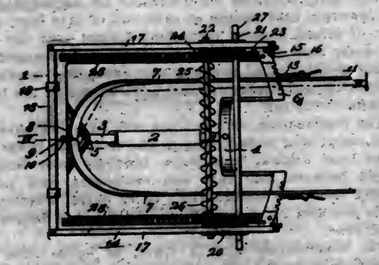
5. In a filler-making machine, the combination of a spindle for supporting a roll of cardboard, means for feeding the web of cardboard from said roll, means for longitudinally severing the web into sections for forming longitudinal and transverse filler members, means for laterally spacing and uniting the several web sections, and means for transversely severing the united webs into filler sections.

[Claim 6 not printed in the Gazette.]

1,023,990. HOOF-PARER. CHARLES BURRELL, Guymon, Okla. Filed Aug. 25, 1911. Serial No. 645,901. (Cl. 168—48.)

1. In a device of the character described, a frame, means to secure said frame in proper relation to a hoof, reciprocable cross-heads at opposite sides of said frame, a cutter journaled in said cross-heads, and means to rotate said cutter and actuate the cross-heads, so that they will carry the cutter to and fro over the hoof.

2. In a device of the character described, a frame, means to secure said frame to a hoof, cross-heads reciprocably mounted at opposite sides of said frame, a rotary cutter journaled in said cross-heads and adapted to travel to and fro over the hoof to pare the same, pinions to actuate said cutter, cog-wheels to drive said pinions and travel to and fro over the frame, rack-bars on the frame to coöperate with the cog-wheels, and a drive shaft carrying said cog-wheels and journaled in the cross-heads.



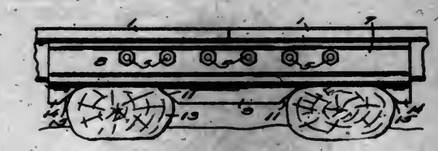
3. In a device of the character described, a main frame, means to secure said main frame to a hoof, a supplemental frame hinged to said main frame at one end so that it may be tipped upward therefrom, and a rotary cutter adapted to travel longitudinally over the supplemental frame and pare the hoof.

4. In a device of the character described, a main frame, means to secure said main frame to a hoof, a supplemental frame hinged to said main frame at one end so that it may be tipped upward therefrom a rotary cutter adapted to travel longitudinally over the supplemental frame and pare the hoof, and means to secure the supplemental frame in lowered position upon the main frame.

5. In a device of the character described, a main frame, means to secure said main frame to a hoof, a longitudinally-slotted supplemental frame hinged at one end to the main frame, so that it may be tipped upward therefrom, latches to secure the supplemental frame in lowered position upon the main frame, cross-heads reciprocably mounted in the slotted portions of the supplemental frame, a rotary cutter journaled in said cross-heads, and means to rotate said cutter and cause it to travel to and fro over the hoof to pare the same.

[Claims 6 and 7 not printed in the Gazette.]

1,023,991. ANTI-RAIL-CREEPER AND SPLICE-BAR. FIRM B. BYERS, New York, N. Y. Filed July 29, 1911. Serial No. 641,196. (Cl. 239—9.)



1. The combination with the meeting ends of rails, of splice bars or holders comprising webs having inwardly and downwardly inclined lugs, the opposite ends of each lug having angularly bent portions which engage the confronting sides of a tie.

2. The combination with the meeting ends of rails, of splice bars or holders comprising webs having central inwardly and downwardly inclined lugs, angularly bent tie engaging portions formed integral at each end of said lugs and upon which the rail bases rest, each web being further provided near its extreme outer ends with angular extensions, the upper edges of both the angular bent portions and extensions resting flush against the under surface of the rail bases, thereby forming tie engaging faces for contact with the confronting sides and outer sides of a pair of ties, and means for clamping said bars or holders to the rails.

3. The combination with a track rail, of a plurality of ties, splice bars or holders having a pair of inwardly and downwardly inclined lugs arranged in opposing relation, each lug being provided with angular tie engaging portions, inwardly bent flanges at each end of said lugs, and a pair of alined angular extensions formed near the extreme outer ends of the bars or holders, and arranged in opposing relation, said portions and extensions engaging a tie upon opposite sides, and means for clamping the bars or holders to the rail.

4. The combination with a track rail, of splice bars or holders comprising webs having downwardly and inwardly inclined lugs, angular extensions, inwardly bent flanges arranged between said lugs and extensions, and being gradually thickened toward their outer edges, whereby a space is provided for the reception of the usual flanges of the rail base.

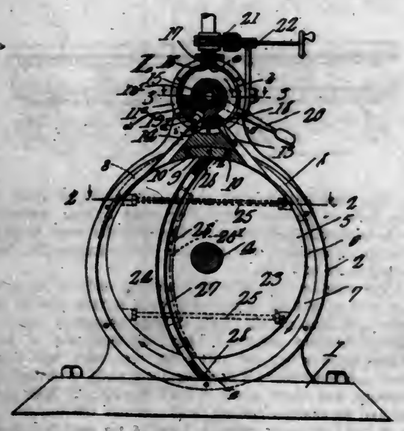
5. The combination with a track, of splice bars or holders formed each from a single piece of rolled metal, and comprising webs having formed at their central lower edges a pair of opposing lugs being so cut as to produce converging outer ends, which when bent form tie engaging faces, the outer edges of each lug being adapted to rest against the under side of a rail base, a pair of oppositely disposed angular extensions formed near the extreme outer end of each web, said extensions also having convergingly cut inner edges for engagement with the base of the rails, a pair of oppositely disposed flanges arranged between the outer ends of the lugs and inner edges of said extensions, said flanges having their opposite side edges cut convergingly during the sawing or cutting of the webs.

1,023,992. COMPOSITION OF MATTER FOR BELT-DRESSINGS. FRANK LEO CAVAGNARO, Winsted, Conn. Filed May 24, 1910. Serial No. 563,016. (Cl. 149—6.)

1. The herein described composition of matter, consisting of animal oil, cylinder oil, tallow, and slaked lime, substantially as described and for the purposes specified.

2. The herein described composition of matter, consisting of animal oil, six parts, cylinder oil, two parts, beef tallow, two parts, and slaked lime, eleven parts, substantially as described.

1,023,993. ROTARY ENGINE. ALBION P. CHARLES, Iola, Kans. Filed July 7, 1911. Serial No. 637,866. (Cl. 121—78.)



1. A rotary engine, having a rotor chamber, and a cylindrical rotor mounted eccentrically within the chamber and composed of two sections separated on a curved line, the ends of said line being disposed at diametrically opposite points upon the periphery of the rotor, coacting means carried by each section to provide a piston receiving space between the opposed faces of the sections of the rotor, means for locking the sections together, and a piston having an apertured portion surrounding the coacting portions of the sections of the rotor and slidably mounted within the space, said piston being of a greater length than the curved space between the opposed faces of the sections of the rotor and in position to have its ends project beyond the periphery of the rotor at diametrically opposite points.

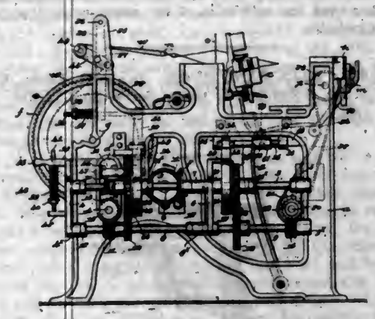
2. A rotary engine, having a rotor chamber, and a cylindrical rotor mounted eccentrically within the chamber and composed of two sections separated on a curved line, the ends of said line being disposed at diametrically opposite points upon the periphery of the rotor, coacting portions carried by each section to provide a piston receiving space between the opposed faces of the sections of the rotor, means for locking the sections together, and a piston having an apertured portion surrounding the coacting portions of the sections of the rotor and slidably mounted within the space, said piston being of a greater length than the curved space between the opposed faces of the sections of the rotor in position to have its ends project beyond the periphery of the rotor at diametrically opposite points, the edges of said piston being provided with cushioned packing strips to abut the peripheral wall of the rotor chamber.

3. A rotary engine, having a cylindrical chamber, and a cylindrical rotor mounted eccentrically therein and of a lesser diameter than the diameter of the rotor chamber, said rotor being composed of two separated sections having coacting curved faces, one of said sections being provided with a cavity while the other of said sections is provided with a projection to fit within the cavity and provide a segmental piston receiving space the ends of which terminate at diametrically opposite points upon the periphery of the rotor, a piston mounted within the space between the sections of the rotor and provided with an apertured portion to surround the projection of one of the sections, the length of said piston being greater than the length of the segmental space between the sections of the rotor, whereby the ends thereof will project beyond the rotor surface to engage the inner peripheral wall of the rotor chamber.

4. A rotary engine, having a cylindrical chamber, and a cylindrical rotor mounted eccentrically therein and of a lesser diameter than the diameter of the rotor chamber, said rotor being composed of two separated sections having coacting curved faces, one of said sections being provided with a cavity while the other of said sections is provided with a projection to fit within the cavity and provide a segmental piston receiving space the ends of which terminate at diametrically opposite points upon the periphery of the rotor, a piston mounted within the space between the sections of the rotor and provided with an apertured portion to surround the projection of one of the sections, the length of said piston being greater than the length of the segmental space between the sections of the rotor, whereby the ends thereof will project beyond the rotor surface to engage the inner peripheral wall of the rotor chamber, and packing strips secured to the edges of the piston to engage the respective walls of the rotor chamber.

5. A rotary engine, having a rotor chamber, and a cylindrical rotor mounted concentrically within the chamber and composed of two sections with their points of separation terminating at diametrically opposed parts of the periphery of the rotor, coacting means carried by opposed faces of each section to provide a piston receiving space between the opposed faces of said sections, means for retaining the sections together, and a piston having an apertured portion surrounding one of the coacting portions of the sections of the rotor and slidably mounted within the space between the sections, said piston being of greater length than the adjacent faces of the respective sections and having its end positioned to project beyond the periphery of the rotor to engage the wall of the rotor chamber at two points.

1,023,994. TAKE-UP MECHANISM FOR LOOMS. GEORGE A. COBURN, Hopedale, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Apr. 4, 1911. Serial No. 618,850. (Cl. 139—61.)



1. In a loom, in combination, a take-up device, a transmitting shaft positively connected therewith, a continuously rotating actuator, a connector concentric with said actuator and comprising a normally quiescent member geared to the transmitting shaft, a member normally rotating with the actuator, and gearing intermediate said members, a friction device to coöperate with the normally rotating member and stop rotation thereof, the intermediate gearing then acting to rotate the normally quiescent member and the transmitting shaft, and means governed by a moving member of the loom to control said friction device and through it effect intermittent operation of the take-up.

2. In a loom, in combination, a take-up device, a transmitting shaft positively connected therewith, a continuously rotating actuator, a lay, a positive and normally inactive connector between said shaft and the actuator, friction controlling means for the connector, a roll movable with the lay, a cam intermittingly engaged and moved by said roll, and a connection between the cam and said controlling means, to act through the latter and render the connector active on each forward beat of the lay and thereby cause take-up.

3. In a loom having a controlling rock-shaft to effect a change in the operation of the loom, in combination, a lay, a take-up device, a transmitting shaft operatively connected therewith, a continuously rotating actuator, a positively acting and normally inactive connector between said transmitting shaft and the actuator, friction controlling means for the connector, a roll, a support therefor fulcrumed on the lay, a spring acting through said support to maintain said roll normally in operative position, a cam adapted to be engaged intermittingly and moved by the operatively positioned roll, a connection between the cam and said controlling means, to act through the latter and render the connector active on each forward beat of the lay and thereby cause take-up, and means governed by the loom controlling rock-shaft to move the roll-support and roll into inoperative position when said rock-shaft is turned to effect a change in the operation of the loom, whereby take-up will be prevented at such time.

1,023,995. REVERSE-GEAR FOR STEAM-ENGINES. FRANCIS J. COLE, Schenectady, N. Y. Filed Nov. 20, 1911. Serial No. 661,371. (Cl. 121—97.)

1. In a steam engine reverse gear, the combination of an operating screw rotatable without longitudinal movement, a nut engaging said screw and fitted to move longitudinally but without rotation, and a reach rod connected to said nut, substantially in the axial line of the operating screw.



2. In a steam engine reverse gear, the combination of an operating screw rotatable without longitudinal movement, a nut engaging said screw and fitted to move longitudinally but without rotation, and a reach rod coupled by an articulated connection to said nut, substantially in the axial line of the operating screw.

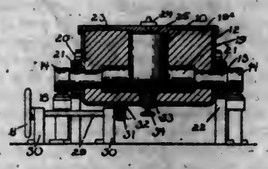
3. In a steam engine reverse gear, the combination of a support having a bearing at one end and a longitudinal guide parallel therewith, an operating screw fitted to rotate without end movement in said bearing, a nut engaging said screw and fitted to traverse longitudinally on said guide, a reach rod connected to said guide substantially in the axial line of the operating screw, and means for permitting movement of the reach rod, in a vertical plane, relatively to the guide.

4. In a steam engine reverse gear, the combination of a support having a bearing at one end and a longitudinal guide parallel therewith, an operating screw fitted to rotate without end movement on said bearing, a nut engaging said screw and fitted to move longitudinally on said guide, a reach rod, and an articulated connection coupling said reach rod to said nut, substantially in the axial line of the operating screw.

5. In a steam engine reverse gear, the combination of a support having a bearing at one end and a longitudinal guide parallel therewith, an operating screw fitted to rotate without end movement in said bearing, a nut engaging said screw and fitted to move longitudinally on said guide, a reach rod, and a hollow connecting member coupling said reach rod to said nut, substantially in the axial line of the operating screw.

[Claims 6 to 8 not printed in the Gazette.]

1,023,996. ELECTRIC FURNACE. MICHAEL H. CONLEY, New York, N. Y., assignor to J. Hedalie Florence, trustee, New York, N. Y. Filed Feb. 15, 1911. Serial No. 608,713. (Cl. 204—64.)

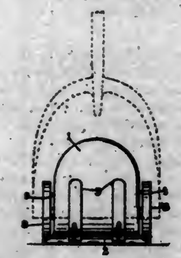


1. A resistance electrical furnace having a tilting body, a melting chamber or crucible carried by the body and of higher electric resistance than other parts of the body, and a lining for said crucible which lining is a non-conductor of electricity when cold but a conductor when highly heated.

2. An electric resistance furnace comprising an inclosing oscillating casing, a melting pot contained in the casing and arranged with its open top near the top of the casing, terminals connecting with the lower part of the pot and projecting outward through opposite walls of the casing, an insulating packing or filling between the pot and the casing wall, laterally extending switch arms on the ends of the terminals, and contacts to engage the switch arms.

3. In an electric furnace, the combination with the casing and its contained furnace, the latter having terminals extending through the casing walls, of an adjustable insulating support between the bottom of the furnace and the bottom wall of the casing.

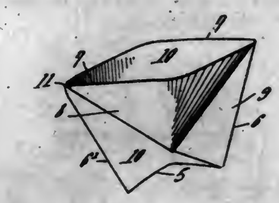
1,023,997. TRUCK. GUSTAVE F. DANIELSON, Youngstown, Ohio. Filed Mar. 5, 1910. Serial No. 547,571. (Cl. 21—65.)



1. A truck consisting of a body provided with a pair of ears to form bearings, wheels each formed of sheet-metal and having an integral central tubular hub, a ferrule tightly fitted into said hub and projecting beyond the same, said projections being journaled in said bearings, and an axle journaled in both of said ferrules and adapted to hold said ferrules within said bearings, and the wheel hub against the bearings.

2. A truck consisting of a sheet metal plate provided with a pair of ears integral therewith and having central out-turned annular flanges integral with the ears to form bearings, a pair of wheels each having a central hub flange adapted to abut the adjacent central ear-flange, a ferrule tight in each wheel-hub and journaled in the respective bearing and an axle extending through and journaled in the ferrules and having its ends expanded to form retaining beads for preventing outward movements of the ferrules.

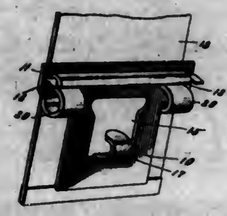
1,023,998. SANITARY DRINKING-CUP. FRANK H. ELLSWORTH, Benton Harbor, Mich. Filed July 11, 1911. Serial No. 637,960. (Cl. 229—55.)



1. A cup comprising two trapezoidal sides normally folded together and open at the longest of the parallel edges so that when the upper corners are pressed inwardly the said edges will be bowed outwardly at intermediate points to open the cup, the respective ends of the said edges lying in planes diverging inwardly from the upper corners when the sides are distended, and one upper corner being provided with a notch extending below the plane of the corresponding ends of the said edges when the sides are distended to permit the liquid to be poured from the cup without running over the said ends of the edges when the cup is tilted endwise.

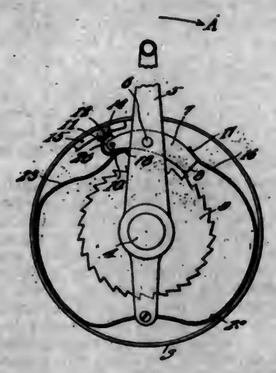
2. A cup formed from an approximately square blank folded on a diagonal line across opposite corners, the corners at the ends of the hypotenuse of the sections thus formed being folded inward, and the other corners of the said sections then being folded over the latter corners to provide two trapezoidal sides normally folded together and open at the longest of the parallel edges, so that when the upper corners are pressed inwardly the said edges will be bowed outwardly at intermediate points to open the cup, the respective ends of said edges lying in planes diverging inwardly from upper corners when the sides are distended, and one upper corner being provided with a notch extending below the plane of the corresponding ends of the said edges when the sides are distended to permit the liquid to be poured from the cup without running over the said ends of the edges when the cup is tilted endwise.

1,023,999. BACK-BAND HOOK. JAMES H. ESTES, Union City, Ga. Filed Oct. 2, 1911. Serial No. 652,453. (Cl. 54—54.)



A back band hook made of a flat plate cut or stamped from a flat sheet, said plate having a transverse slot at its top by means of which it is fastened to a band, a central opening with an upwardly projecting tongue bent to form a hook, and a strip at each side formed by straight cuts parallel with said sides and then rolled to form closed rings.

1,024,000. ENGINE-STARTER. WILLIAM D. EVERLY, Sanger, Tex. Filed May 26, 1911. Serial No. 629,609. (Cl. 123—185.)



1. In a device of the class described, a shaft; an operating member fulcrumed upon the shaft; a ratchet wheel secured to the shaft; a pawl pivoted intermediate its ends upon the operating member, and adapted at one end to engage with the ratchet wheel; a case; a shoe adapted to engage the case; a link connecting the shoe with the pawl to effect a tilting of the pawl out of engagement with the ratchet wheel, upon a reverse rotation of the shaft; a spring carried by the pawl and engaging the link to move the shoe circumferentially of the case; and means for causing the pawl to engage the ratchet and for holding the shoe engaged with the case.

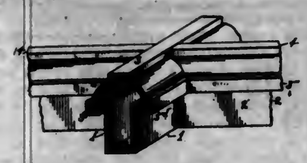
2. In a device of the class described, a shaft; a lever fulcrumed upon the shaft; a pawl pivoted intermediate its ends upon the lever; a ratchet wheel upon the shaft, with which one end of the pawl is adapted to engage; a link pivoted to the other end of the pawl; a shoe pivoted to the link; a case with which the shoe is adapted to engage; spring means for maintaining the shoe in engagement with the case; and spring means for moving the shoe circumferentially of the case, thereby to hold the pawl out of engagement with the ratchet wheel.

3. In a device of the class described, a shaft; a lever fulcrumed intermediate its ends upon the shaft; a ratchet wheel secured to the shaft; a pawl pivoted intermediate its ends upon the lever, and adapted at one end to engage with the ratchet; a case; a shoe adapted to engage with the case; means for pivotally connecting the shoe with the other end of the pawl; and a spring secured in its intermediate portion to the lever, upon the opposite side of the shaft from the pawl, the ends of the spring bearing against opposite edges of the pawl, upon opposite sides of the pivotal mounting of the pawl.

4. In a device of the class described, a shaft; a lever fulcrumed adjacent the shaft; a ratchet wheel secured to the shaft; a pawl pivoted intermediate its ends upon the lever, and adapted at one end to engage with the ratchet wheel; a case; a shoe adapted to bear against the case; a link pivotally connecting the shoe with the other end of the pawl; a spring secured to the pawl and bearing against the link, to move the shoe circumferentially of the case and to hold the pawl out of engagement with the ratchet, when the device is not in use; and spring means for maintaining the shoe in engagement with the case.

5. In a device of the class described, a shaft; a lever fulcrumed intermediate its ends upon the shaft; a ratchet wheel secured to the shaft; a pawl pivoted intermediate its ends upon the lever, and adapted at one end to engage with the ratchet wheel; a case; a shoe adapted to bear against the case; a link connecting the shoe with the other end of the pawl; a spring engaged in its intermediate portion with the lever, upon the opposite side of the shaft from the pawl, the spring, at its ends, bearing against opposite edges of the pawl, upon opposite sides of the pivotal mounting of the pawl; and an auxiliary spring, secured at one end to the pawl and at its other end bearing against the link, to move the shoe circumferentially of the case.

1,024,001. SHEET-METAL WINDOW-FRAME. WILLIAM D. FORSYTH, Youngstown, Ohio. Filed June 7, 1911. Serial No. 631,846. (Cl. 189—77.)



1. A sheet metal window frame consisting of series of parallel U shaped frame bars notched in their flanges and webs; a second series of parallel U shaped frame bars, notched in their webs only; said series of frame bars being pressed together at their respective notches so that the lower surfaces of their flanges are substantially in the same plane; continuous notched moldings mounted upon those bars which have notched flanges and webs and sectional moldings mounted between said continuous moldings upon those bars which have notched webs only.

2. A sheet metal window frame composed of two series of bars made from strips of sheet metal bent so that parts thereof forming the longer edges of said strips shall be in parallel planes and each of said parallel parts of said strips shall have a flange formed thereon; the bars of one of said series of bars formed from said strips being notched in their flanges and upper part of their parallel parts; the bars of other series of said bars being notched in the lower part of their parallel parts only; said series of bars being adapted when pressed together at said notches to form apertures in said frame for the reception of panes of glass with the under surfaces of the flanges of said bars in the same plane; continuous sheet metal moldings fixed to those bars which are notched in their flanges and parallel parts maintaining said bars of both of said series in position when pressed together at their notches as aforesaid and sectional sheet metal moldings fixed between said continuous moldings to those bars which are notched in their parallel parts only.

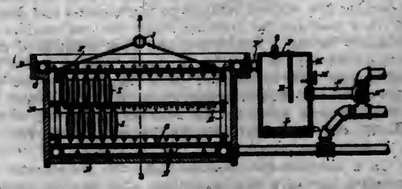
1,024,002. CLAMP-HOOK. EMERIC FOURNIER, San Diego, Cal. Filed Oct. 12, 1911. Serial No. 654,365. (Cl. 248—22.)



1. In a clamp hook, a body portion having cylindrical loops radially arranged thereon adapted to receive the ends of a series of ropes, an extension loop on one end of the body, and a supporting arm extending above said extension loop having an end conforming with said loop, substantially as set forth.

2. In a clamp hook, a body portion, a loop thereon adapted to engage with a suspension object, a supporting arm extending from the body adapted to bear against the suspension object and hold the hook at a substantially right angle thereto, and a series of cylindrical loops at the opposite end of the body adapted to receive and be secured to a series of rope-ends, substantially as set forth.

1,024,003. BLEACHING AND DYEING MACHINE. TOM FRUSHER, New York, N. Y. Filed Jan. 6, 1910. Serial No. 536,735. (Cl. 8—19.)



1. In a machine of the class described, the combination of a vat, a system of perforated pipes at the bottom of said vat, another system of perforated pipes at the top of said vat and apparatus connected with each of said systems but outside said vat for heating, mixing and circulating the dye, substantially as and for the purpose described.

2. In a machine of the class described, the combination of a vat, oppositely located systems of perforated pipes within said vat, and apparatus connected with each of said systems but outside of said vat for heating, mixing and circulating the dye, substantially as and for the purpose described.

3. In a machine of the class described, the combination of a vat, a system of pipes within said vat having a large number of apertures and adapted to introduce dye into the vat, another system of pipes within said vat having a large number of apertures for removing dye from the vat, an auxiliary dye chamber connected with each of said pipe systems, means for introducing steam into said chamber, and means for circulating the dye through the chamber and the two pipe systems, substantially as and for the purpose described.

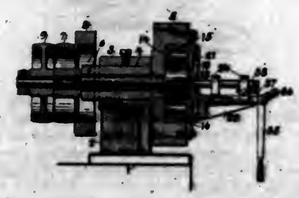
4. In a machine of the class described, the combination of a vat, a series of perforated pipes located at the bottom of said vat and a series of perforated pipes located at the top of said vat so as to include a free space be-

tween said pipes and means connecting the two series of pipes and comprising a mixing and heating chamber and a circulating pump.

5. In a machine of the class described, the combination of a vat, a system of perforated pipes at the bottom of said vat, another system of perforated pipes at the top of said vat, a frame for carrying the yarn, a dye mixing and heating chamber connected with each of said pipe systems, and means for circulating the dye through said chamber and the two pipe systems, substantially as and for the purpose described.

[Claim 6 not printed in the Gazette.]

1,024,004. RING-FORMING MACHINE. HENRY HENRICH, New York, N. Y. Filed May 23, 1910. Serial No. 562,826. (Cl. 29—8.)



1. In a machine for forming rings, the combination of a mandrel having a flaring portion, dies adapted to give the outer surface of the ring a convex shape, means for causing said dies to hammer on a ring blank while the latter is on said flaring portion of the mandrel, and means for holding the ring blank against said flaring portion of the mandrel.

2. In a machine for forming rings, the combination of a mandrel having a flaring portion, dies adapted to give the outer surface of the ring a convex shape, means for causing said dies to hammer on a ring blank while the latter is on said flaring portion of the mandrel, and means for causing the relative rotation of the mandrel and dies.

3. In a machine for forming rings, the combination of a mandrel having a flaring portion, dies adapted to give the outer surface of the ring a convex shape, means for causing said dies to hammer on a ring blank while the latter is on said flaring portion of the mandrel, means for holding the ring blank against said flaring portion of the mandrel, and means for causing the relative rotation of the mandrel and dies.

4. In a machine for forming rings, the combination of a mandrel having a flaring portion, dies having concave portions, means for causing said dies to hammer a ring blank when held on said flaring portion of the mandrel, and a sleeve adapted to bear against the ring blank and hold it against said flaring portion.

5. In a machine for forming rings, the combination of a mandrel having a flaring portion, dies having concave portions, means for causing said dies to hammer a ring blank when held on said flaring portion of the mandrel, a sleeve adapted to bear against the ring blank and hold it against said flaring portion, means for rotating said dies, and means for holding said mandrel from rotation.

[Claim 6 not printed in the Gazette.]

1,024,005. SPECTACLE OR EYEGLASS CASE. SOLOMON C. HIRSCHBERG, New York, N. Y. Filed Oct. 7, 1910. Serial No. 586,736. (Cl. 206—6.)

1. In combination with a spectacle or eyeglass case having a base and a lid hinged together, a spring within said case having portions pivotally engaging said case and provided also with clamping portions, and means for holding, when the case is open, said clamping portions either within said base or adjacent to the inside of said lid, substantially as and for the purpose described.

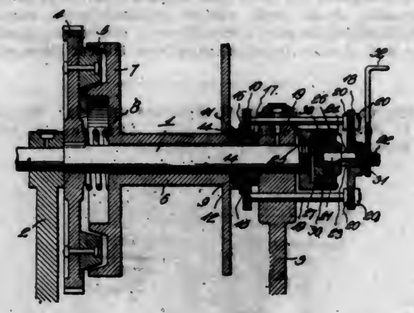
2. In combination with a spectacle or eyeglass case having a base and a lid hinged together, a spring within said case having portions pivotally engaging knuckles fixed to the case and provided also with clamping portions, and means for holding, when the case is open, said clamping portions either within the base or adjacent the inside of the lid, substantially as and for the purpose described.



3. In combination with a spectacle or eyeglass case having a base and a lid hinged together, a spring within said case having portions pivotally engaged with said case and provided also with clamping portions, means for pressing said clamping portions, when the case is open, either downwardly into the base or outwardly against the lid, and independent means for positively but detachably holding said clamping portions against said lid, substantially as and for the purpose described.

4. In combination with a spectacle or eyeglass case having a base and a lid hinged together, a spring within said case having portions pivotally engaged with said case and provided also with clamping portions, means for pressing said clamping portions, when the case is open, either downwardly into the base or outwardly against the lid, and a clip fixed to said lid for positively but detachably holding said clamping portions against said lid, substantially as and for the purpose described.

1,024,006. FRICTION-CLUTCH. HOWARD JOHNSON, Littell, Wash. Filed Sept. 21, 1911. Serial No. 650,634. (Cl. 192—8.)



1. In a device of the character described, the combination with a drive shaft of a driving gear fixedly mounted thereon, a clutch member arranged on said gear, a cable winding drum loosely mounted on said shaft, a clutch member arranged on said drum and adapted to co-act with the clutch member on said gear whereby said gear and drum are locked together in operative engagement, a drum shifting and clutch engaging mechanism, said mechanism comprising slidably mounted thrust plates, a shifting screw, means to loosely connect one end of said screw with the outer end of said shaft, means whereby said screw is held against turning, a shifting nut operatively engaged with the outer end of said screw and with one of said thrust plates whereby when said nut is turned in the proper direction said thrust plates and drum will be shifted and said clutch members brought into operative engagement to lock the drum with said driving gear, and a handle arranged on said nut.

2. In a device of the character described, the combination with a drive shaft of a driving gear fixed thereto a clutch member arranged on said gear, a cable winding drum revolubly mounted on said shaft, a clutch member formed on one end of said drum and adapted to co-act with the clutch member on said gear whereby said drum and gear are operatively connected together, a drum and clutch shifting mechanism, said mechanism comprising inner and outer slidably supported thrust plates, a ball bearing connection between said inner thrust plate and the adjacent side of the drum, a shifting screw, a ball bearing connection between the inner end of said screw and the adjacent end of said drive shaft whereby the screw is held and the shaft permitted to turn freely thereon, said screw having a squared portion adapted to engage said outer thrust plate whereby the screw is held against rotation, coarse threads formed on the outer end of said screw, a shifting nut having an operative engagement with said threaded end of the screw and with said outer thrust plate whereby when said nut is turned in the proper direction said thrust plates and drum will be shifted to bring the clutch members into operative engagement, and means whereby said nut is turned.

3. In a friction clutch and shifting mechanism for cable winding drums, a drive shaft, bearing standards to revolubly support said shaft, a driving gear fixedly mounted on one end of said shaft, a clutch member secured to one side of said gear, a cable winding drum revolubly mounted on said shaft, a clutch member arranged on one end of said drum and adapted to co-act with the clutch member on said gear whereby said drum is locked in operative engagement with the gear, a coiled spring adapted to disengage said clutch members and to normally hold the same out of engagement, a drum and clutch shifting mechanism, said mechanism comprising a flanged sleeve loosely mounted on said shaft adjacent to the outer end of said drum, an inner thrust plate arranged on said sleeve, a ball bearing connection between said plate and the flange on the sleeve, a retaining collar arranged on the outer end of said sleeve to hold said outer plate in position thereon, an outer thrust plate, a series of plate connecting rods slidably engaged with one of said standards whereby said thrust plates are operatively supported and are adapted to move in unison, a shifting screw, means to loosely connect said screw with the adjacent end of said shaft, a shifting nut operatively engaged with the outer end of said screw and with the outer thrust plate whereby when said nut is turned in the proper direction, said plates and drum will be shifted to bring the clutch members into operative engagement thereby locking the drum to said driving gear, and a handle secured to said nut.

4. In a friction clutch and shifting mechanism for cable winding drums, a drive shaft, bearing standards to revolubly support said shaft, a driving gear fixedly mounted on one end of said shaft, a clutch member secured to one side of said gear, a cable winding drum revolubly mounted on said shaft, a clutch member arranged on one end of said drum and adapted to co-act with the clutch member on said gear whereby said drum is locked in operative engagement with the gear, a drum and clutch shifting mechanism, said mechanism comprising inner and outer slidably supported thrust plates, said outer plates having a flat sided passage, a shifting screw, means to loosely connect said screw with the adjacent end of said drive shaft, said means comprising a casing having a threaded engagement with the end of said shaft, an apertured cap secured to said casing and adapted to receive the inner end of the screw holding plate arranged in said casing and having a threaded engagement with the inner end of said screw, a ball bearing connection between said plate and cap, a flat sided surface formed on said screw and adapted to engage the similarly shaped passage formed in the outer thrust plate whereby the said screw is held against turning, coarse threads formed on the outer end of said screw, a shifting nut having an operative engagement with said threads and with the adjacent side of the outer thrust plate whereby when said nut is turned in the proper direction, said thrust plates and drum will be shifted to bring said clutch members into operative engagement thereby locking the drum to said gear, and a handle arranged on said nut.

1,024,007. SAW-JOINTER. GEORGE J. KABLE, Buffalo, N. Y. Filed Apr. 10, 1911. Serial No. 620,048. (Cl. 76—47.)



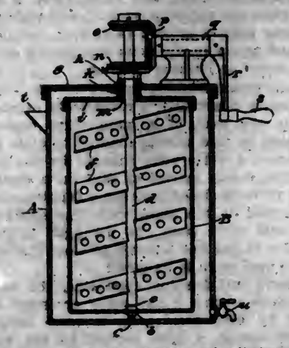
The herein described saw jointer, having a base plate provided with an enlarged overbalancing portion and a reduced portion terminating with a standard projecting upwardly and at right angles therefrom, an abrading element carying member having an integral shank offset from its back at one end thereof, said shank terminating in a pointed end, a screw pivotally connecting the shank to the standard, a wing nut disposed to coact with the screw to lock the shank and standard in adjusted position, and a lug formed integral with the standard in the path of to engage the pointed end of the shank to limit the elevation of the abrading element carrying member.

1,024,008. STAPLE. EMIT A. KIRKENDALL, Baker, Oreg. Filed Mar. 15, 1911. Serial No. 614,668. (Cl. 85—49.)



A staple having a neck integral with the curved portion thereof and flattened upon opposite sides, and a head integral with the neck portion and extending transversely for some distance in opposite directions beyond the flattened sides of the neck, said head being of circular form in cross section and beveled outwardly from the flat sides toward the opposite ends of the head.

1,024,009. BUTTER SUBSTITUTE AND PROCESS OF MAKING THE SAME. FERDINAND KRONENBERGER, Corona, N. Y., assignor to The Alladin Manufacturing Company, Brooklyn, N. Y., a Corporation of New York. Filed June 8, 1910. Serial No. 565,744. (Cl. 99—13.)



1. In the art of making butter substitutes, the process which consists in dissolving gelatin in a lacteal fluid and emulsifying this mixture with a suitable fat.

2. The process of making a butter substitute which consists in dissolving gelatin in milk, heating the mixture, dissolving a suitable fat therein, then stirring and cooling the combined ingredients.

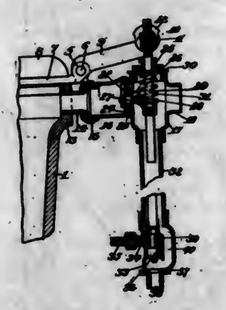
3. The process of making a butter substitute which consists in heating milk, adding gelatin thereto, adding butter to the heated mixture, and then stirring the resulting product while allowing it to cool.

4. The process of making a butter substitute which consists in heating milk, dissolving gelatin in the hot milk, then adding butter to the mixture of hot milk and gelatin whereby the latter is melted, and then quickly cooling the mixture while stirring the same.

5. The herein described substantially solid butter substitute consisting of a lacteal fluid, gelatin and a suitable fat.

[Claims 6 to 8 not printed in the Gazette.]

1,024,010. FLUSHING APPARATUS FOR WATER-CLOSETS. FRANCIS M. MACKIN, Baltimore, Md. Filed Jan. 25, 1912. Serial No. 673,283. (Cl. 4—28.)



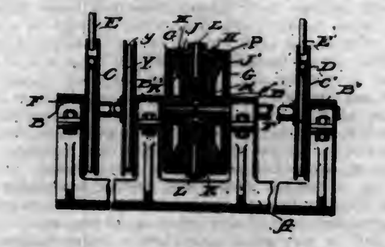
1. In water-closet flushing apparatus, the combination of a main valve casing, a flap valve adapted to close the outlet of said main valve casing, a supplementary valve casing, a valve in said supplementary valve casing adapted to control the inlet passage thereof, a valve stem carrying the last named valve, means carried by said valve stem for holding the flap valve in closed position when the valve in the supplementary valve casing is in open position.

2. In water-closet flushing apparatus, the combination of a main valve casing, a supplementary valve casing connected to the main valve casing, a valve stem passing through the main valve casing and into the supplementary valve casing, a valve carried by said stem and located in the supplementary valve casing, means for raising said valve stem, adapted to be operated by a closet seat, a spring arranged to lower said valve stem, a flap valve adapted to close the outlet passage of said main valve casing and means carried by said valve stem for locking said flap valve and releasing the same accordingly as the valve stem is in raised or lowered position.

3. In water-closet flushing apparatus, the combination with a swinging closet seat, a rearwardly extending arm, connected to the seat, of a main valve casing, a flap valve arranged in said casing adapted to close the outlet passage thereof, a valve stem engaged by the rearwardly extending arm, means carried by said valve stem for locking the flap valve in closed position, a supplementary valve casing connected to the main valve casing and a valve carried by said valve stem and arranged in the supplementary valve casing and adapted to close the inlet thereof when the flap valve is unlocked.

4. In water-closet flushing apparatus, the combination of a main valve casing, a flap valve arranged therein, a lug carried by said flap valve, a valve stem passing through said casing, a hook carried by the valve stem and adapted to engage with the lug carried by the flap valve, a supplementary valve casing connected to the main valve casing, a valve connected to said valve stem and arranged to close the inlet passage of the supplementary valve casing, a cross head carried by said valve stem, a seat hinge and rearwardly extending arms carried by said hinge and engaging said cross-head.

1,024,011. FLYING-MACHINE. ROY LOUIS MATTESON, Santa Maria, Cal. Filed Apr. 4, 1910. Serial No. 553,321. (Cl. 244—29.)

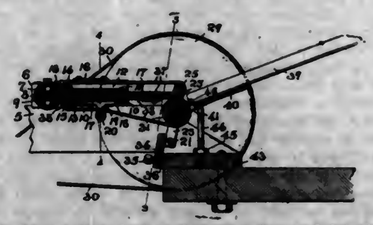


1. In a flying machine, the combination of two planes, differential gears and sheaves rotatable thereby, a series of ropes connecting the sheaves to the planes, a casing for said gears and movable therewith, said casing serving as sheaves, a lever system including pulleys, and connections between said pulleys and said movable casing, substantially as described.

2. In a flying machine, the combination of two planes, differential gears and sheaves rotatable thereby, a series of ropes connecting the sheaves to the planes for the purpose of automatically balancing them, a pulley connected to one of the sheaves and to one of the gears, a lever, a rope connecting the lever to the pulley, and a pawl and ratchet device for fixing said lever in various positions for the purpose of steering the machine, substantially as described.

3. In a flying machine, the combination of two planes, differential gears and sheaves rotatable thereby, a series of ropes connecting the sheaves to the planes, a casing for said gears and movable therewith, said casing serving as sheaves, a lever system including pulleys, connections between said pulleys and said movable casing, a second pulley connected to one of the sheaves and to one of the gears, a lever, a rope connecting the second lever to the second pulley, and a pawl and ratchet device for fixing each of said levers in various positions, substantially as described.

1,024,012. CONVEYER FOR WRAPPING AND LABELING MACHINES. NATH J. MATTHEWS, Newark, ROBERT LE GRAND JOHNSTONE, Glen Ridge, and ARTHUR W. CASH, Newark, N. J. Filed Nov. 5, 1909. Serial No. 526,342. (Cl. 193—4.)

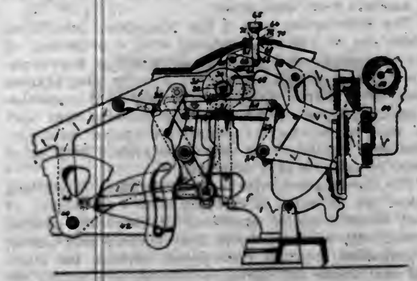


1. In conveyer-devices for wrapping and labeling machines, the combination with a platform of a pair of guide-members upon the upper surface of said platform, downwardly extending portions connected with the forward ends of said guide-members, idler-rollers journaled in said downwardly extending portions, a second pair of guide-members upon the lower surface of said platform, a pair of endless belts superimposed one above the other between said pairs of guide-members, and means for supporting and driving said endless belts, comprising a pivotally mounted frame-member, a driving-shaft journaled in said frame-member, a driving pulley secured upon said driving shaft, a driving-roller secured upon said driving shaft, adapted to drive one of said endless belts, a gear-wheel connected with said driving shaft, a second shaft journaled in said frame-member, a driving-roller secured thereon, said driving-roller being adapted to drive the other of said endless belts, and a gear-wheel secured on said second shaft and in mesh with said first-mentioned gear-wheel.

2. In conveyer-devices for wrapping and labeling machines, the combination with a platform of a pair of guide-members upon the upper surface of said platform, downwardly extending portions connected with the forward ends of said guide-members, idler-rollers journaled in said downwardly extending portions, a second pair of guide-members upon the lower surface of said platform, a pair of endless belts superimposed one above the other between said pairs of guide-members, and means for supporting and driving said endless belts, comprising a pivotally mounted frame-member, a driving-shaft journaled in said frame-member, a driving pulley secured upon said driving shaft adapted to drive one of said endless belts, a gear-wheel connected with said driving shaft, a second shaft journaled in said frame-member, a driving-roller secured thereon, said driving-roller being adapted to drive the other of said endless belts, a gear-wheel secured on said second shaft and in mesh with said first-mentioned gear-wheel, and means for regulating the tension of said endless belts, comprising a tongue or lugs extending downwardly from said frame-member, and an adjusting set-screw connected therewith, by means of which said frame-member may be moved on its fulcrum, substantially as and for the purposes set forth.

3. In conveyer-devices for wrapping and labeling machines, the combination with a platform of guide-members connected with said platform, a pair of endless belts superimposed one above the other between said guide-members, means for supporting and driving said endless belts, comprising a system of idler-rollers, a pivotally mounted frame-member, shafts journaled in said frame-member, a driving-pulley secured upon one of said shafts, driving-rollers mounted upon said shafts, intermeshing gear-wheels mounted on said shafts, and means for regulating the tension of said endless-belts, comprising a tongue or lug extending downwardly from said frame-member, and an adjusting set-screw connected therewith, by means of which said frame-member may be moved on its fulcrum, substantially as and for the purposes set forth.

1,024,013. ELIMINATING-KEY FOR ADDING-MACHINES. CHARLES N. MCFARLAND, Kingston, Pa., assignor to The Adder Machine Company, Kingston, Pa., a Corporation of Pennsylvania. Filed Sept. 20, 1906. Serial No. 335,357. (Cl. 235—60.)



1. In a machine of the class described, comprising racks, numeral wheels, each provided with a pinion adapted to engage a rack, and a depressible eliminating key, adapted by its depression directly to hold the pinions out of engagement with their respective racks.

2. In a machine of the class described, comprising racks, numeral wheels each provided with a pinion adapted to engage a rack, a depressible eliminating key adapted by its depression directly to hold the pinions out of engagement with their respective racks, and means for elevating said key to permit the pinions to be lowered into engagement.

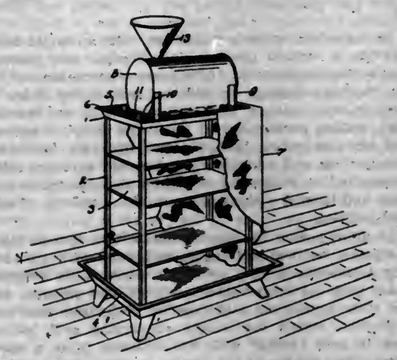
3. In a machine of the class described, comprising racks, numeral wheels, each provided with a pinion adapted to engage a rack, a depressible eliminating key adapted by its depression directly to hold the pinions out of engagement with their respective racks, and means for holding said key depressed.

4. In a machine of the class described, comprising racks, numeral wheels, each provided with a pinion adapted to engage a rack, a depressible eliminating key, adapted by its depression directly to hold the pinions out of engagement with their respective racks, and means for holding the key depressed or elevated at will.

5. In a machine of the class described, comprising racks, numeral wheels, each provided with a pinion adapted to engage a rack, the combination therewith of means adapted directly to hold the pinions out of engagement with racks, and a depressible key attached to said means.

[Claims 6 to 13 not printed in the Gazette.]

1,024,014. COOLER. OSCAR L. MEEKS, Abilene, Kans., assignor of one-half to John J. Meeks, Kansas City, Mo. Filed Apr. 21, 1911. Serial No. 622,620. (Cl. 62—10.)



The combination with a stand, having shelves, of a pan mounted on said stand over the shelves, a curtain hung over the stand and having its upper end located within the pan, a tank seated on the bottom of the pan, one end of the tank having an opening therein within the pan, and a tube having a passage of the same diameter as the opening, located within the tank, the lower end of the tube being projected through the end of said tank level with the opening and the upper end of the tube opening into the upper part of said tank.

1,024,015. SANDPAPER-HOLDER. OLE C. MILLER, Chicago, Ill. Filed Feb. 3, 1912. Serial No. 675,266. (Cl. 51—1.)

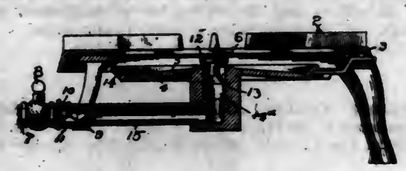


1. A holder comprising a base block, and a clamp associated therewith, said clamp comprising a plate having a

jaw at one of its edges, and a jaw at its opposite edge, between which jaws the block is received, the second mentioned jaw being hinged to the plate and comprising two hingedly connected sections which are foldable upon themselves between the plate and the block, and one of said sections having a gripping portion.

2. A holder comprising a base block, and a clamp associated therewith, said clamp comprising a plate adapted to be placed on the back of the block and having tongues engageable therewith, and said plate having jaws at its opposite edges between which the block is located, one of said jaws being hinged to the plate and comprising two hingedly connected sections which are foldable upon themselves between the plate and the block, and one of said sections having a gripping portion.

1,024,016. GAS-BURNER. ARCHIBALD B. MURRAY, Ross, Cal., assignor of forty-five one-hundredths to Emma R. Bowne, San Francisco, Cal. Filed Oct. 29, 1910. Serial No. 589,819. (Cl. 158—116.)



1. In a gas burner the combination with a central member having a vertical passage therethrough, said passage having a smaller diameter at its lower portion than at its upper portion whereby an internal supporting ledge is formed in said passage, of a tip comprising an annular tubular bottom portion seated upon said ledge, a pair of spaced arms extending inwardly and upwardly from said bottom portion, and a horizontally disposed spreader member supported by said arms of greater diameter than said passage and located a short distance above the top of said central member.

2. In a gas burner the combination with a central member having a vertical passage therethrough of a tip comprising a ring-like bottom portion, a horizontally disposed spreader plate of larger diameter than said passage, and spaced arms supporting said spreader plate from said bottom portion, means for loosely supporting said bottom portion in said passage with the spreader plate a short distance above the top of the central member, and a burner plate extending outwardly from the central member, said burner plate having a convex central portion.

3. In a gas burner the combination with a central member having a vertical passage therethrough, of a tip comprising a ring-like bottom portion, a horizontally disposed spreader plate of larger diameter than said passage, and spaced arms supporting said spreader plate from said bottom portion, means for loosely supporting said bottom portion in said passage with the spreader plate a short distance above the top of the central member, and a burner plate extending outwardly from the central member, said burner plate having a convex central portion, said burner plate terminating at its edge in an annular flaring flange.

1,024,017. SUCKER-ROD ELEVATOR. WILLIAM O'NEIL, near Los Angeles, EDWARD J. SCHNEIDER, Hollywood, and THOMAS N. KELLETT, Los Angeles, Cal., assignors to Amalgamated Oil Company, Los Angeles, Cal., a Corporation of California. Filed Apr. 21, 1910. Serial No. 556,868. (Cl. 166—7.)

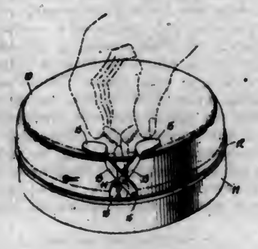
1. A sucker rod elevator comprising a stem, a swivel support for the stem, said stem comprising legs in movable relation to each other and provided with interlocking parts and with a seat for the sucker rod shoulder and means to hold the legs together.

2. A sucker rod elevator comprising a stem, a swivel support for the stem, said stem comprising legs in movable relation to each other and provided with interlock-



ing parts and also provided with screw-threaded portions to engage the threads of a sucker rod pin, and with a seat for the sucker rod shoulder and means to hold the legs together.

1,024,018. CAN. WILLIAM PERRY, Washington, D. C. Filed Sept. 1, 1911. Serial No. 647,253. (Cl. 220—6.)

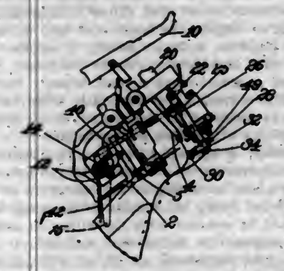


1. The combination with a can including interfitting members one of which is equipped with a projection, of a pair of crossed levers pivotally mounted at their crossing on the other of said members and adapted to exert a pressure against said projection whereby to separate said members from each other.

2. The combination with a box comprising interfitting members one of which is equipped with a projection, of a pair of crossed levers pivotally connected at their crossing to the other of said members, said levers being adapted to bear with their working ends against said projection and being equipped remote from said working ends with grips, said levers exerting a pressure against said projection upon movement of said grips toward each other whereby to separate said members.

3. The combination with a can including interfitting members one of which is equipped with a projection, of crossed levers mounted exteriorly of the other member and being adapted to bear with their working ends against said projection, a single rivet passed through the crossing of said levers and having a reduced neck snugly fitting in an orifice in said member, said levers terminating remote from their working ends in grips, said working ends being adapted to exert a pressure upon said projection during movement of said grips toward each other whereby to separate said members.

1,024,019. MACHINE FOR USE IN THE MANUFACTURE OF BOOTS AND SHOES. ANGELO PERRI, Haverhill, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Apr. 16, 1909. Serial No. 490,216. (Cl. 12—4.)



1. A pulling-over machine, having in combination, automatically operating means for pulling an upper over a last, having provision for a pause to permit inspection of the pulled shoe, and means adapted to be moved at the will of the operator into position to indicate the length of the shoe tip.

2. A pulling-over machine, having in combination, automatically operated means for pulling over an upper, additional means to adjust the upper about the last, and manually controlled means for measuring the tip.

3. A pulling-over machine, having in combination, automatically controlled means for pulling over an upper, and tip measuring means usually occupying in the machine an inoperative position remote from the shoe and movable manually into operative position after the operation of the pulling-over means.

4. A pulling-over machine, having in combination, mechanism for pulling-over an upper, additional means for effecting adjustment of the upper, and means associated with the adjusting means to indicate the length of the shoe tip.

5. A shoe tip measuring device comprising members for engaging the toe end of the shoe and for overlying the tip of the shoe in substantially the median line of the shoe, which members are movable together into and out of engagement with the shoe and are relatively movable in the use of the device angularly into and out of operative relation to one another.

[Claims 6 to 36 not printed in the Gazette.]

1,024,020. SPRING DRIVE OR POWER SHAFT COUPLING. WILLIAM PERRY and ALBAN SHORT JONES, Garden Hill, Wollongong, New South Wales, Australia, assignors to The Heil-Cushion Drive Limited, Sydney, Australia. Filed Oct. 24, 1910. Serial No. 588,878. (Cl. 64—13.)



1. A rotatively cushioning shaft coupling comprising alined shafts, a coupling member having movable screw-threaded connection with one of the shafts and mounted to slide along and to rotate with the other shaft, and a spring coöperative with the screw-threaded shaft and with the coupling member and arranged to receive and to resiliently transmit the rotative driving strain in either direction of rotation of the rotatively coupled shafts.

2. A rotatively cushioning shaft coupling comprising alined shafts, a coupling member having movable screw-threaded connection with one of the shafts and mounted to slide along and to rotate with the other shaft, a spring coöperative with the screw-threaded shaft and with the

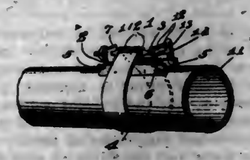
coupling member, and means for increasing the tension of the spring by reason of screw movement in either direction between the screw-threaded shaft and the coupling member.

3. A rotatively cushioning shaft coupling comprising an externally screw-threaded shaft, an internally screw-threaded tubular member movably receiving the screw-threaded shaft, a compression spring surrounding the shaft within the tubular member, abutment stops on the shaft confining the spring, the tubular member having abutment shoulders also confining the spring, whereby screw movement between the shaft and the tubular member in either direction will compress the spring, and a second shaft in alinement with the first and rotatively connected to the tubular member.

4. A rotatively cushioning shaft coupling comprising alined shafts one of which is externally screw-threaded, a two-part tubular coupling member having internal opposed shoulders and one of the parts having internal screw threads movably receiving the external screw threads of the screw-threaded shaft and the other part constituting a spring-containing box, means for rigidly securing together the parts of the coupling member, a spring-receiving stem projecting beyond the screw-threaded portion of the screw-threaded shaft and into the spring-containing box, spring-limiting abutments carried by the stem, a coiled thrust spring surrounding the stem and coöperative with the abutments and with the opposed shoulders so as to be compressed by screw movement in either direction between the screw-threaded shaft and the screw-threaded part of the coupling member, and means for connecting the spring-containing box and the other shaft to rotate together and to relatively slide longitudinally to provide for the thrust of the screw in compressing the spring.

5. A rotatively cushioning shaft coupling comprising alined shafts, a tubular coupling member having movable screw-threaded connection with one of the shafts and mounted to slide along and to rotate with the other shaft, a spring coöperative with the screw-threaded shaft and with the coupling member and arranged to receive and to resiliently transmit the rotative driving strain in either direction of rotation of the rotatively coupled shafts, a dust cover carried by each end of the coupling member and protecting the joints between the shafts and the coupling member, and a stop carried by the screw-threaded shaft and coöperative with the adjacent end of the coupling member and the corresponding dust cover to limit the tension of the spring.

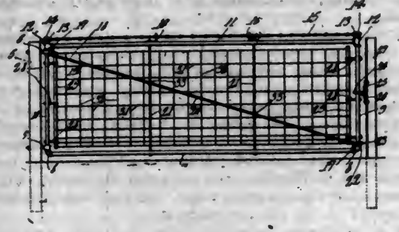
1,024,021. GROUND - CLAMP. HENRY W. PLEISTER, Westfield, N. J., assignor to Henry B. Newhall, Plainfield, N. J. Filed Nov. 3, 1910. Serial No. 590,546. (Cl. 173—273.)



1. A ground clamp comprising in combination a stool having downwardly extending substantially parallel arms, upwardly extending apertured ears, one of the ears being provided with one or more locking lugs, a key mounted within the ears, a band or strap, and means for connecting the band or strap to the key.

2. A ground clamp comprising in combination a stool having downwardly extending substantially parallel arms, upwardly extending apertured ears, one of the ears being provided with one or more locking lugs, a key provided at one end with left handed screw threads, and one or more nuts coöperating with the screw threads.

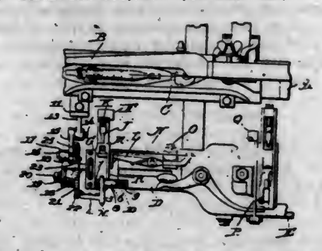
1,024,022. GATE. ALOIS POLZER, Albert, Kans. Filed Sept. 12, 1911. Serial No. 648,922. (Cl. 39—100.)



1. A gate frame comprising end uprights and an upper and a lower horizontal bar secured to the said uprights, and a trussing between the upper end corner of the gate and the lower free corner constituting a rod passed around the upper end of the upright at the hinged end of the gate, a stirrup on the adjacent end of the upper bar, the said rod piercing the stirrup, a stirrup on the lower bar at the free end of the gate, a plate on the outer side of the upright at the free end of the gate, a pair of rods secured to the ends of the former rod and piercing the latter stirrup and the said plate, and means for drawing said rods taut.

2. In combination, a gate frame comprising end uprights and an upper and a lower horizontal bar secured to the said uprights, a U-shaped stirrup on the upper bar at the hinged end of the gate, a U-shaped stirrup on the lower bar at the free end of the gate, and means piercing the said stirrup and connecting the upper end of the upright at the hinged end of the gate and the lower end of the upright at the free end of the gate, and adapted to be drawn taut to truss the frame.

1,024,023. FILLING-EXHAUSTION-INDICATING MECHANISM FOR LOOMS. ALONZO E. RHOADES, Hopedale, Mass., assignor to Draper Company, Hopedale, Mass., a Corporation of Maine. Filed Dec. 19, 1911. Serial No. 666,737. (Cl. 139—85.)



1. In a loom, a feeler adapted to coöperate intermittingly with the filling in the active shuttle and to bring about a change in the operation of the loom when substantial exhaustion of such filling is detected, a device to maintain the feeler at rest and prevent coöperation thereof with the filling, and means to render said device inoperative at predetermined intervals and thereby permit cooperation of the feeler and the filling at such times, combined with other means to restore automatically the feeler to the control of such device after each of such times of feeler activity occurring prior to substantial filling exhaustion.

2. In a loom, a yieldingly sustained reciprocating feeler to coöperate with the filling in the active shuttle and to bring about a change in the operation of the loom when substantial exhaustion of such filling is detected, a device to maintain the feeler at rest in retracted, inoperative position, means acting at regularly recurring intervals to render said device inoperative and thereby release the feeler from its control, and means whereby the released feeler is restored to the control of said device by coöperation with the filling on a subsequent beat up until a predetermined diminution of the filling in the shuttle has been reached.

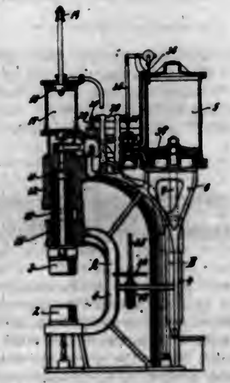
3. In a loom, a yieldingly sustained reciprocating feeler to coöperate with the filling in the active shuttle and to bring about a change in the operation of the loom when substantial exhaustion of such filling is detected, a detent pawl adapted to engage the feeler and hold it inoperative in retracted position, a device acting at regular intervals to trip said pawl and thereby release the feeler, the latter when released coöperating in normal manner with the filling, and means operating automatically after each release of the feeler to restore it to the control of the detent until substantial filling exhaustion is approached.

4. In a loom, a spring-projected, reciprocating feeler adapted to coöperate with the filling in the active shuttle and to bring about a change in the operation of the loom when substantial filling exhaustion is detected, the feeler being retracted by contact with the filling on the beat-up, a detent to engage the feeler and maintain it retracted and inactive with respect to the filling, automatically acting means to trip the detent at regular intervals and thereby effect release of the feeler to coöperate with the filling, and a moving member of the loom acting through such coöperation upon the beat-up to retract the feeler and effect reëngagement of the detent therewith until the filling has woven off to a predetermined extent, whereupon the feeler when released will continue to coöperate with the filling until substantial exhaustion thereof is detected.

5. In a loom, a yieldingly sustained feeler adapted to cooperate with the filling in the active shuttle and bring about a change in the operation of the loom upon substantial exhaustion of the filling, an adjustable device to maintain the feeler inactive with respect to the filling, and means to release the feeler from the control of such device at regular intervals and permit coöperation of said feeler and the filling in the shuttle, combined with means acting by and through such coöperation to replace the feeler under the control of said device after each release until the filling has woven off to a predetermined extent but short of substantial exhaustion, adjustment of said device fixing the extent to which the filling shall weave off when it ceases to restore the feeler to the control of such device.

[Claims 6 to 13 not printed in the Gazette.]

1,024,024. HYDRAULIC PRESS. MORITZ ROTHE, Deutz, near Cologne, Germany. Filed Aug. 27, 1908. Serial No. 450,478. (Cl. 138—17.)



1. In a hydraulic press having a steam intensifier, the combination of a frame of steam-hammer type supporting the pressure cylinder and an anvil, a flange of U-shaped cross section at the back of said frame, brackets on the shoulder of said frame, a steam cylinder for the intensifier mounted upon the brackets and a hydraulic cylinder for the intensifier mounted in the U-shaped flange.

2. In a hydraulic press having a steam intensifier, the combination of a frame of steam-hammer type supporting the pressure cylinder and an anvil, a U-shaped flange at the back of said frame, brackets on the shoulder of said frame, a cross-piece upon the U-shaped flange, a steam cylinder for the intensifier mounted on the brackets, a hydraulic cylinder for the intensifier mounted in the U-shaped flange beneath the steam cylinder, lugs upon said hydraulic cylinder engaging below the cross-piece and means for supplying steam to the lower end of the steam cylinder.

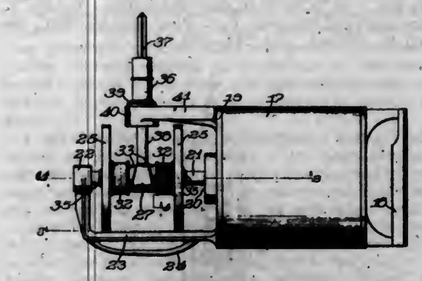
3. In a hydraulic press having a steam intensifier, the combination with the frame, pressure head, and steam and hydraulic cylinders and pistons of the intensifier of a steam controlling valve and a water controlling valve both arranged in proximity one to the other on the top of the frame and between the intensifier and the press whereby the connecting pipes between the parts are kept as short as possible.

4. In a hydraulic press having a steam intensifier, the combination with the frame, pressure head and steam and hydraulic cylinders and pistons of the intensifier of a steam controlling valve and a water controlling valve arranged adjacent to one another on the frame, a rocking shaft and levers thereon adapted to operate both valves, a hand lever near the base of the frame and connecting members between said hand lever and the rocking shaft.

5. In a hydraulic press having a steam intensifier, the combination with the pressure cylinder, the draw-back cylinder, the steam and hydraulic cylinders of the intesifier and the pistons thereof, of a steam slide valve, connections therefrom to the upper and lower parts of draw-back cylinder, a three-way cock in the connection to the upper part, and a pipe from said cock to exhaust, whereby the upper part of the draw-back cylinder may be directly connected to exhaust, to limit the lift of the pressure head for planishing.

[Claims 6 to 9 not printed in the Gazette.]

1,024,025. PERCUSSION DEVICE. GEORGE H. ROWE, Berwyn, Ill., assignor to Electro-Magnetic Tool Company, Chicago, Ill., a Corporation of Illinois. Filed May 16, 1910. Serial No. 561,696. (Cl. 125—10.)



1. In apparatus of the character described, the combination with a striking element, of driving means for the same comprising a rotating device, and means for producing a magnetic connection between said rotating device and said striking element.

2. In apparatus of the character described, the combination with a striking element, of driving means for the same comprising a rotating device to which said striking element is pivoted, and means for producing a magnetic connection between said rotating device and said striking element.

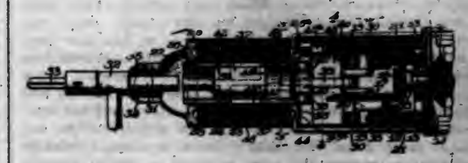
3. In apparatus of the character described, the combination with a striking element, of driving means for the same comprising a rotating device constituting an inertia wheel, and means for producing a magnetic connection between said rotating device and said striking element.

4. In apparatus of the character described, the combination with an impact receiving element, of a striking element, driving means for said striking element comprising a rotating device with which said striking element is pivoted so that centrifugal force tends to move said striking element into position at right angles to said impact receiving element, and means for producing a magnetic connection between said rotating device and said striking element for the purpose described.

5. In apparatus of the character described, the combination with an impact receiving element, of a rotating striking element comprising a pivotally mounted member, which centrifugal force tends to bring into position at right angles with said impact receiving element, driving means, and means for producing a magnetic connection between said driving means and said striking element.

[Claims 6 to 23 not printed in the Gazette.]

1,024,026. ELECTROMECHANICAL DEVICE. GEORGE H. ROWE, Berwyn, Ill., assignor to Electro-Magnetic Tool Company, Chicago, Ill., a Corporation of Illinois. Filed May 18, 1910. Serial No. 562,109. (Cl. 172—126.)



1. In a device of the character described, the combination with a driving element, of a driven element and a magnet for maintaining the latter element in floating and elastic relation with the former; one of said elements comprising a cylinder closed at one end and the other element being fitted into said cylinder so that a relative movement between said elements results in a compression of air between the same which modifies the effect of said magnet.

2. In a device of the character described, the combination with a driving element, of a driven element and a magnet for maintaining the latter element in floating and elastic relation with the former; one of said elements comprising a cylinder closed at one end and the other element being fitted into said cylinder so that a relative movement between said elements results in a compression of air between the same which modifies the effect of said magnet, said cylinder being formed with a vent.

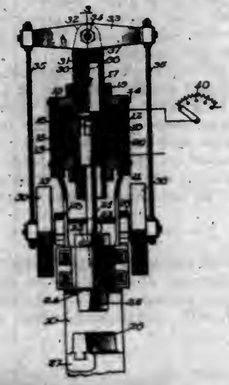
3. In a device of the character described, the combination with a sleeve, a plunger fitted within said sleeve, means for reciprocating the sleeve, means for producing a magnetic connection between said plunger and sleeve, and means which closes one end of the sleeve so as to provide an air cushion which supplements the magnetic connection between said plunger and sleeve.

4. In a device of the character described, the combination with a sleeve, a plunger fitted within said sleeve, means for reciprocating the sleeve, and means for producing magnetic connection between said plunger and sleeve, said plunger being formed at one end with a striking part and said sleeve being closed at the other end so as to provide an air cushion which supplements the magnetic connection between said plunger and sleeve when the plunger strikes its blow.

5. In a device of the character described, the combination with driving means, of a sleeve connected therewith at one end, a plunger in said sleeve, means which closes the sleeve at the end connected with the driving means, and means for producing a magnetic connection between said plunger and sleeve, comprising a magnet which is stationary relative to said sleeve and plunger, and which surrounds the same, said sleeve being formed with a vent in the side and a slot, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,024,027. ELECTROMECHANICAL DEVICE. GEORGE H. ROWE, Chicago, Ill., assignor to Electro-Magnetic Tool Company, Chicago, Ill., a Corporation of Illinois. Filed Apr. 26, 1911. Serial No. 623,442. (Cl. 172—126.)



1. In a device of the character described, the combination with a driving element, of a driven element, and a magnet for maintaining the latter element in floating and elastic relation with the former; one of the elements comprising a cylinder closed at one end and the other element being fitted into said cylinder so that a relative movement between the same produces a partial vacuum which supplements the action of said magnet.

2. In a device of the character described, the combination with a driving element having reciprocating movement, of a driven element, and a magnet for maintaining the latter element in floating and elastic relation with the former; one of the elements comprising a cylinder closed at one end and the other element being fitted into said cylinder so that a relative movement between the same produces a partial vacuum which supplements the action of said magnet.

3. In a device of the character described, the combination with a reciprocating sleeve, of a plunger fitted in said sleeve, a magnet which maintains said plunger in floating elastic relation with said sleeve intermediate the ends thereof, and means adapted to close one end of the sleeve so that a relative movement between the sleeve and plunger produces a partial vacuum which supplements the action of said magnet.

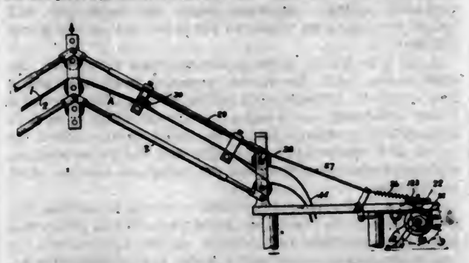
4. In a device of the character described, the combination with a reciprocating sleeve, one end of which is closed, of a plunger fitted in said sleeve, a magnet which maintains said plunger in floating elastic relation with said sleeve intermediate the ends thereof, and a check valve on the sleeve which permits outflow of air from the space between the plunger and the closed end of the sleeve while checking inflow.

5. In a device of the character described, the combination with a reciprocating sleeve which is closed at one end, a plunger fitted in said sleeve, a magnet which maintains said plunger in floating elastic relation with said sleeve intermediate the ends thereof, the closed end of said sleeve being formed with an air port which communicates with the interior of the sleeve at a distance from the end thereof, and a check valve controlling said air port which permits outflow while checking inflow.

[Claims 6 to 15 not printed in the Gazette.]

1,024,028. MAGAZINE-MAILING MACHINE. WILLIAM P. SARGENT, Philadelphia, Pa., assignor to The Curtis Publishing Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Sept 19, 1911. Serial No. 650,264. (Cl. 101—46.)

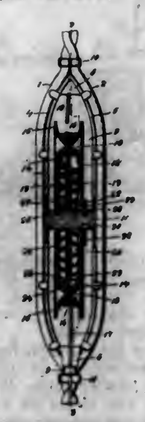
1. A machine of the type recited comprising the combination of continuously acting rolling mechanism, wrapper feeding mechanism, continuously acting book feeding mechanism, and mechanism adapted to engage books in order to time their feeding in respect to the operation of the rolling mechanism and adapted to throw the wrapper feeding mechanism into and out of operation and responsive to the passage of a book through the book feeding mechanism, whereby wrappers are fed only in response to the passage of books, substantially as described.



2. A machine of the type recited comprising the combination of a continuously driven belt in which a rolling loop is formed, a cam shaft and connections for opening and reforming the loop at intervals, a book feeder, a wrapper feeder having a wrapper feeder cam shaft and connections for operating it, a dial shaft moving synchronously with the first mentioned cam shaft and making one revolution for each cycle of operations of the machine, a clutch mechanism between the dial shaft and the wrapper feeder cam shaft, and means operated by the dial shaft and tending to disengage said clutch mechanism and said means restrained by the passage of a book through the book feeder to permit of the operation of the wrapper feeder, substantially as described.

3. In a machine of the type recited the combination of a book feeder, a wrapper feeder, a device for retarding books, mechanism for periodically and positively operating the retarder to time the release of books, and connections between said mechanism and wrapper feeder whereby the passage of a book in contact with the retarder insures the feed of a wrapper for said book.

1,024,029. ELECTRIC-LAMP HANGER. ELMER E. SCHELLENGER, Riverside, Cal. Filed June 10, 1911. Serial No. 632,449. (Cl. 242—109.)



A device of the class described comprising a frame adapted to be positioned between and having cheek pieces to engage the conductors, the intermediate portions of said cheek pieces being spaced apart and said cheek pieces being provided with means to engage the conductors and being also provided with non-circular openings, a shaft connecting the cheek pieces and having non-circular ends secured in the openings thereof, a hollow drum mounted on the shaft and comprising a pair of members secured together and having out-turned peripheral flanges forming a peripheral groove, coil springs spaced apart, disposed in the respective members of the drum, connected thereto at their outer ends and connected at their inner ends to the shaft, a disk between the said springs and secured to the shaft, suspending cords attached to and wound in the groove on the drum, and dogs pivoted to the drum and adapted to engage with oppositely disposed recesses in the shaft.

1,024,030. HANGER FOR ELECTRIC LAMPS. ELMER E. SCHELLENGER, Riverside, Cal. Filed Oct. 25, 1910, Serial No. 588,991. Renewed July 12, 1911. Serial No. 638,207. (Cl. 242—109.)



1. A suspending device for electric lamp cords comprising a frame adapted to be positioned between the wires forming the cord, and provided with securing means to engage said wires, a shaft having its opposite ends secured to the opposite sides of said frame, a spring-actuated drum rotatably mounted on said shaft, coöperating clutch devices associated with the shaft and drum, and flexible adjusting elements adapted to be secured at one end to spaced portions of the lamp cord and having their opposite end portions wound in same directions around said drum.

2. In a device of the class described, a frame, a shaft having its opposite ends secured to the opposite sides of said frame, an inner drum rotatably mounted on said shaft, a helical spring having one end secured to the shaft and its opposite end secured to the said inner drum, an outer drum rotatably mounted on the shaft and surrounding the inner drum, a helical spring having one end secured to the inner drum and its opposite end to the outer drum, flexible elements wound in same directions around said outer drum and coöperating clutch devices associated with the said outer drum and one end portion of said shaft.

3. In a suspending device for electric lamp cords, the combination with a frame positioned between the wires comprising said cord, a spring-actuated drum carried by said frame and flexible elements wound in the same directions around said drum; of clips arranged at the opposite ends of said frame and provided with means to engage said cords, and further provided with guides for the reception of said flexible elements.

4. In a suspending device for electric lamp cords, the combination with a frame positioned between the wires comprising said cord, a spring-actuated drum carried by said frame and flexible elements wound in same directions around said drum; of clips arranged at either end of said frame and including a body portion to be positioned between said wires, and further having bendable portions to embrace said wires, and still further having guides for the reception of said flexible elements.

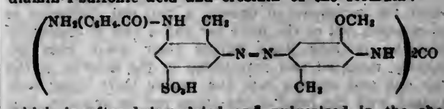
5. A device of the class described, comprising a frame, conductor cables extending over said frame, clips for holding the conductor cables in position relative to each other and to the frame, a shaft non-rotatably mounted in said frame, a plurality of drums loosely mounted upon the shaft, spring mechanism within the drums for actuating the latter, and suspending cords wound around the drums in like direction.

[Claims 6 to 8 not printed in the Gazette.]

1,024,031. AZO DYE. HUGO SCHWEITZER, Elberfeld, and ARTHUR ZART, Vohwinkel, near Elberfeld, Germany, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Dec. 30, 1911. Serial No. 668,582. (Cl. 8—1.)

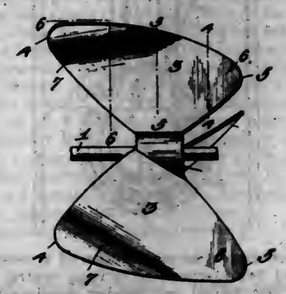
1. The herein described new dyestuffs being ureas of sulfonic acids of aminoaryl-acidylaminoazo compounds containing free amino groups, which dyes are after being dried and pulverized in the shape of their alkaline salts dark yellow powders soluble in water with a yellow and soluble in concentrated sulfuric acid with a reddish to violet color; yielding upon reduction with stannous chlorid and hydro chloric acid an aminoaryl-acidyldiamino sulfonic acid and an urea of a diamin, which is further decomposed into carbonic acid and a diamin; dyeing cotton yellow to orange shades which on being developed on the fiber become fast to washing, substantially as described.

2. The herein described new dyestuff being the urea of the azo compound from meta-aminobensoyl-2.6-toluylene-diamin-4-sulfonic acid and cresidin of the formula:



which is after being dried and pulverized in the shape of its sodium salt a dark yellow powder soluble in water with a yellow color and soluble in concentrated sulfuric acid with a violet color; yielding upon reduction with stannous chlorid and hydrochloric acid meta-aminobensoyl-2.6-toluylenediamin-sulfonic acid and the urea of aminocresidin which is further decomposed into para-methoxy-ortho-meta-diamino-toluene and carbonic acid; dyeing cotton yellow shades fast to washing after combination with diazotized para-nitranilin, substantially as described.

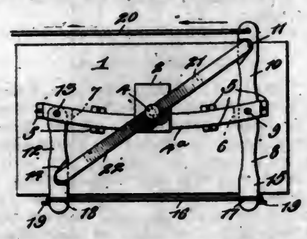
1,024,032. PROPELLER. BARTON W. SCOTT, San Jose, Cal. Filed Apr. 24, 1911. Serial No. 622,883. (Cl. 115—46.)



The herein described propeller having its hub mounted on an axle, and a series of blades whereof each is substantially triangular in plan with one corner connected to said hub and the other corners disposed forward and rearward thereof, the major portion of the body of the blade being disposed oblique to the shaft and substantially flat throughout and the rear corner thereof being curved forward in the direction of rotation around a line which if

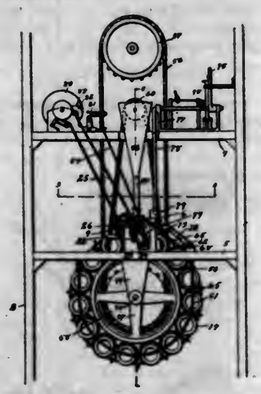
projected would meet the projected axis at a point far in rear of the propeller, the degree of curvature and the angle of convergence being such that the water will be forced away from said propeller on lines strictly parallel with its axis.

1,024,033. PUMP-JACK. GUY W. SEYBERT, Batson, Tex. Filed Feb. 28, 1911. Serial No. 611,375. (Cl. 74—5.)



In a pump jack, in combination with the platform, the pump standard, and the pump rod of an oil well, said pump rod having a head, a base beam detachably secured on the platform, a lever bar having its central portion pivotally mounted at one end of the base beam and being provided near one end with a recess in its upper side, a rocking arm pivotally connected to the opposite end of the base beam and provided in its upper side near its outer end with a recess, the said rocking arm extending in an opposite direction from the recessed end of the lever bar, a rod connecting the lever bar and the rocking arm together for movement in unison, a pull rod connected to the recessed end of the lever bar and a pair of oppositely extending inclined links having their lower ends detachably mounted and articulated in the sockets of the lever bar and rocking arm and having their upper ends engaged with the head of the pump rod on opposite sides of the latter.

1,024,034. PHONOGRAPH. CYRUS C. SHIGLEY, Grand Rapids, Mich., assignor of one-half to Patrick McLaughlin, Grand Rapids, Mich. Filed Dec. 2, 1910. Serial No. 595,283. (Cl. 181—4.)



1. In a phonograph, the combination of a record magazine; a sound box carriage; a carriage control member mounted for longitudinal and rocking movement; a feed screw for said carriage; an arm on said control member; a catch for said arm adapted to be released by said carriage at the end of its movement; means for rocking and returning said control member to its initial position on the disengaging of said catch; coacting mandrel members, one of said mandrel members being mounted for longitudinal movement; a spring adapted to yieldingly hold said longitudinally-movable mandrel members in its operative and inoperative positions; a tappet pin on said longitudinally movable mandrel member; a coacting tappet on said control member arm, said arm and tappet being adapted to coact with said pin in shifting said mandrel member past a central position; a record engaging tappet on said control member adapted to engage the record when the control member is shifted to its initial position; means for bringing said magazine to and locking it in operative position relative to said sound box carriage comprising a slidably mounted locking member, a return spring therefor; an arm connected to said locking member adapted to be engaged by said carriage whereby the locking member is engaged by the setting of said carriage; and catches on said carriage control member and on said arm adapted to engage when the control member is in its set position and to be disengaged when said control member is rocked to disengage the carriage from the feed screw.

2. In a phonograph, the combination of a record magazine; a sound box carriage; a carriage control member mounted for longitudinal and rocking movement; a feed screw for said carriage; an arm on said control member; a catch for said arm adapted to be released by said carriage at the end of its movement; means for rocking and returning said control member to its initial position on the disengaging of said catch; coacting mandrel members, one of said mandrel members being mounted for longitudinal movement; a tappet pin on said longitudinally movable mandrel member; a coacting tappet on said control member arm, said arm and tappet being adapted to coact with said pin in shifting said mandrel member; a record engaging tappet on said control member adapted to engage the record when the control member is shifted to its initial position; means for bringing said magazine to and locking it in operative position relative to said sound box carriage comprising a slidably mounted locking member; a return spring therefor; an arm connected to said locking member adapted to be engaged by said carriage whereby the locking member is engaged by the setting of said carriage; and catches on said carriage control member and on said arm adapted to engage when the control member is in its set position and to be disengaged when said control member is rocked to disengage the carriage from the feed screw.

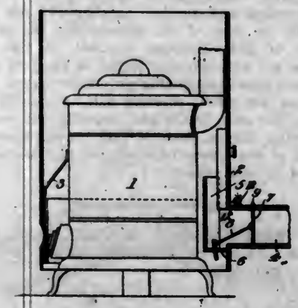
3. In a phonograph, the combination of a record magazine; a sound box carriage; a carriage control member mounted for longitudinal and rocking movement; a feed screw for said carriage; an arm on said control member; a catch for said arm adapted to be released by said carriage at the end of its movement; means for rocking and returning said control member to initial position on the disengaging of said catch; coacting mandrel members, one of said mandrel members being mounted for longitudinal movement; a spring adapted to yieldingly hold said longitudinally-movable mandrel member in its operative and inoperative positions; a tappet pin on said longitudinally movable mandrel member; a coacting tappet on said control member arm, said arm and tappet being adapted to coact with said pin in shifting said mandrel member past a central position; means for bringing said magazine to and locking it in operative position relative to said sound box carriage comprising a slidably mounted locking member; a return spring therefor; an arm connected to said locking member adapted to be engaged by said carriage whereby the locking member is engaged by the setting of said carriage; and catches on said carriage control member and on said arm adapted to engage when the control member is in its set position and to be disengaged when said control member is rocked to disengage the carriage from the feed screw.

4. In a phonograph, the combination of a record magazine; a sound box carriage; a carriage control member mounted for longitudinal and rocking movement; a feed screw for said carriage; an arm on said control member; a catch for said arm adapted to be released by said carriage at the end of its movement; means for rocking and returning said control member to its initial position on the disengaging of said catch; coacting mandrel members, one of said mandrel members being mounted for longitudinal movement; a tappet pin on said longitudinally-movable mandrel member; a coacting tappet on said control member arm, said arm and tappet being adapted to coact with said pin in shifting said mandrel member; means for bringing said magazine to and locking it in operative position relative to said sound box carriage comprising a slidably mounted locking member, a return spring therefor; an arm connected to said locking member adapted to be engaged by said carriage whereby the locking member is engaged by the setting of said carriage; and catches on said carriage control member and on said arm adapted to engage when the control member is in its set position and to be disengaged when said control member is rocked to disengage the carriage from the feed screw.

5. In a phonograph, the combination of a record holder; a sound box carriage; a carriage control member mounted for longitudinal and rocking movement; a feed screw for said carriage; an arm on said control member; a catch for said arm adapted to be released by said carriage at the end of its movement; means for rocking and returning said control member to its initial position on the disengaging of said catch; coacting mandrel members, one of said mandrel members being a driven member and the other being mounted for longitudinal movement; a spring adapted to yieldingly hold said longitudinally-movable mandrel member in its operative and inoperative position; a tappet pin on said longitudinally movable mandrel member; a coacting tappet on said control member arm, said arm and tappet being adapted to coact with said pin in shifting said mandrel member past a central position; and a record engaging tappet on said control member adapted to engage the record when the control member is shifted to its initial position.

[Claims 6 to 30 not printed in the Gazette.]

1,024,035. HEATING AND VENTILATING SYSTEM. CHARLES H. SMITH, Minneapolis, Minn. Filed Mar. 9, 1909. Serial No. 482,300. (Cl. 126—67.)



1. In a heating and ventilating system, a heating means, an open ended jacket surrounding the heating means in spaced relation thereto to form an air chamber between the heating means and the jacket, a cold air intake pipe communicating with the air chamber and adapted to convey cold air from an external source to the air chamber, a cold air box located in the cold air chamber and with which the cold air intake pipe communicates, the upper end of the cold air box being open and the lower end of the cold air box projecting below the cold air intake pipe and being open and at its lower end provided with a valve, said valve, when open, permitting passage of the air of the room through the box and the air chamber, said cold air intake pipe having a valve, and a connection between said valves so arranged that closing of the cold air intake pipe valve or partial closing of it will open the cold air box valve accordingly.

2. In a heating and ventilating system, the combination with the heating means, of an open-ended jacket surrounding the heating means to provide an air chamber, an open-ended valved cold air box arranged in the air chamber and having communication at each end with the latter, a valved cold air intake pipe communicating with said box to deliver air from an external source to the box from which latter it may pass into the air chamber through the upper end of the cold air box, the valve of the cold air chamber being located at the lower end thereof, and a connection between said valves so arranged that closing of the cold air intake pipe valve or partial closing of it will open the cold air box valve accordingly.

3. In a heating and ventilating system, a heating means, a jacket surrounding the heating means to form an air chamber, a cold air box disposed in the air chamber, said cold air box being open at its upper and lower ends, an intake pipe leading from an external source and communicating with the cold air box to deliver air to the latter from which the air passes into the air chamber from the upper end of the cold air box, a valve located at the lower end of the cold air box, a valve located in the cold air intake pipe, and a connection between said valves so arranged that closing movement of the intake pipe valve will move the cold air box valve to a corresponding open position whereby, if the cold air box valve is completely opened, the full capacity of air through said air chamber may be maintained and the temperature of the air chamber air varied.

4. In a heating and ventilating system, a heating means, a jacket surrounding the heating means to form an air chamber, a cold air box disposed in the air chamber and being open at its upper and lower ends, an intake pipe leading from an external source to the cold air box and communicating therewith to deliver cold air to the cold air box from which it may pass through the upper end into intermingling relation with the air of the room which passes continually through said air chamber, a valve in the cold air box at the lower end of the latter to open and close the lower end thereof, a valve in the cold air intake pipe, and a connection between said valve so arranged that closing movement of the intake pipe valve will move the cold air box valve to a corresponding open position, whereby, if the cold air box valve is completely open, the full capacity of flow of air through said air chamber may be maintained and the temperature of the air chamber air varied, a curved plate mounted on the intake pipe and having apertures, and an arm having connection with the intake pipe and provided with a finger adapted to interchangeably engage said apertures to hold the valves positively in adjusted position.

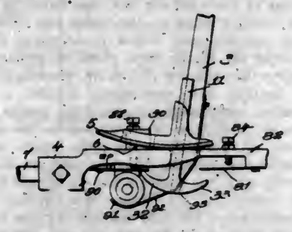
5. In a heating and ventilating system, a heating means, a jacket surrounding the heating means to form an air chamber, a cold air box disposed in the air chamber and open at its upper and lower ends for communication with the air chamber, an intake pipe leading from an external source and communicating with the cold air box to deliver cold air to the latter for passage through the upper end of said box into intermingling relation with the air which passes continually through the air chamber, a valve in the lower end of the cold air box to open and close the lower end of the latter, a valve in the intake pipe to open and close the passage therethrough and a connection between said valves so arranged that a closing movement of the intake pipe valve will move the cold air pipe valve to a corresponding open position, whereby, when the cold air box valve is completely open, the full capacity of flow of air through said air chamber may be maintained and the temperature of the air chamber air varied, and means constructed and arranged to positively hold the valves in different positions.

[Claim 6 not printed in the Gazette.]

1,024,036. PICKER-CHECK. HENRY COTE, West Warren, and RENCELER C. SNOW, Ware, Mass., assignors to Ware Machine & Loom Company, Ware, Mass., a Corporation of Massachusetts. Filed Jan. 6, 1910. Serial No. 536,679. (Cl. 139—22.)

1. In a loom, the combination with a rocker foot and a rocker, of a picker stick, a rocker tongue connected to the picker stick and provided with a laterally extending toe situated beneath the rocker foot and which moves

toward and from the rocker foot as the picker stick swings, and a cushion device situated between the toe and rocker foot and coöperating with said toe and rocker foot to check the movement of the picker stick.



2. In a loom, the combination with a rocker foot and a rocker, of a picker stick, a rocker tongue connected to the picker stick and provided with a laterally extending toe situated below the rocker foot, and a cushion device situated between the toe and the rocker foot and adapted to check the movement of the picker stick in both directions.

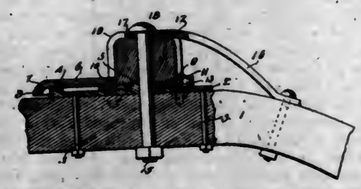
3. In a loom, the combination with a rocker foot and a rocker, of a picker stick, a rocker tongue connected to the picker stick and provided with a laterally extending toe, and a cushion device situated between the toe and the rocker foot and adapted to check the movement of the picker stick in both directions.

4. In a loom, the combination with a rocker foot and a rocker, of a picker stick, a projection extending laterally from the picker stick beneath the rocker foot and movable toward and from the rocker foot as the picker stick swings, and a cushioning member situated between said projection and said rocker foot and arranged to check the movement of the picker stick as it approaches the limit of its movement.

5. In a loom the combination with a rocker foot and a rocker, of a picker stick, a cushioning member situated beneath the rocker foot and means situated beneath the cushioning member and connected to the picker stick to move toward the rocker foot and coöperate with the cushioning member to check the movement of the picker stick as it approaches the limit of its motion in either direction.

[Claims 6 to 10 not printed in the Gazette.]

1,024,037. WHIFFLETREE-BEARING. LOUIS HENRY SOENS, Mancos, Colo. Filed Aug. 7, 1911. Serial No. 642,660. (Cl. 21—78.)



In a whiffletree bearing, the combination with the tongue, and the whiffletree; of a lower plate bolted on the tongue and having a tubular boss rising from its body and a lip from its front end, an upper plate whose front edge is rounded and provided with a depending shoulder passing over said lip and whose body has a transverse whiffletree groove in its upper face with a central hole surrounding said boss while its lower face rests upon the lower plate around the same, the pivot bolt passing through both plates and the tongue and whiffletree, the hammer strap engaging the upper end of this bolt and connected with the tongue, and clips passing over said whiffletree and with their arms taking through the upper plate forward and backward of its groove respectively and at either side of the lower plate, the whole for the purpose set forth.

1,024,038. NUT-LOCK. BENJAMIN E. D. STAFFORD, Pittsburgh, Pa., assignor to Keystone Nut Lock Manufacturing Company, Pittsburgh, Pa. Filed Aug. 14, 1909. Serial No. 512,813. (Cl. 151—52.)



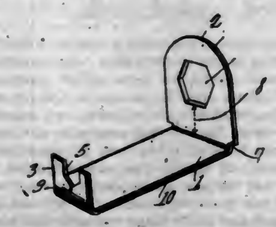
1. A nut lock comprising a metal disk having a bolt hole therein, a series of yielding protuberances having rounded edges which latter are substantially radial to the bolt opening, and projecting from the front face of the disk adjacent to the bolt opening therein, integral prongs for engaging a part to prevent the disk from turning and an integral nut holding tongue adapted to be turned to engage a face of the nut.

2. A nut lock comprising a metal disk having a bolt hole therein, a series of integral yielding protuberances having rounded edges which latter are substantially radial to the bolt opening, and projecting from the front face of the disk adjacent the bolt opening therein, an integral nut holding tongue adapted to be turned to engage the nut and integral prongs, the latter being located on opposite sides of the center of the nut holding tongue and adapted to engage a wood backing.

3. A nut lock embodying a disk having a bolt opening therein and having a portion thereof constituting a lock tongue adapted to extend in parallelism with respect to the side of a nut to lock the nut from turning and further having a plurality of protuberances having rounded edges, which latter are substantially radial to the bolt opening, said protuberances constituting a compressible means adapted to be compressed when a nut is screwed home for the positioning of one side of the nut opposite the inner face of said locking tongue.

4. A nut lock embodying a washer having a portion thereof constituting a locking wing adapted to extend in parallelism with respect to the side of a nut to lock the nut from turning and further provided on one face in proximity to the edge of the opening for the bolt, with a plurality of protuberances rounded at their edges, which latter are substantially radial to the bolt opening, said protuberances constituting an elastic means adapted to yield when the nut is screwed home to enable the positioning of one side of the nut opposite the inner face of said locking tongue, each of said protuberances being independent of the other and arranged in close proximity with respect to each other.

1,024,039. CHISEL-HOLDER. WILLIAM STEFN, Uhrichsville, Ohio. Filed July 18, 1911. Serial No. 639,193. (Cl. 125—19.)



1. A device of the class described, comprising a body provided with an outstanding flange and with an outstanding lip, there being an opening in the flange, located entirely within the contour of the same, and a notch in one edge of the lip.

2. A device of the class described comprising a body rounded transversely, and provided at one end with a lip, and at the other end with a flange, the lip and the flange standing substantially at right angles to the plane of the body; there being an opening in the flange, located entirely within the contour of the same, and a notch in the outer edge of the lip.

3. A device of the class described comprising a body provided at one end with a rectangular disposed flange, and at the other end with a rectangularly disposed lip; there being an opening in the flange, located entirely within the contour of the flange, and a notch in the outer edge of the lip; the distance between the body and the opening being greater than the distance between the body and the base of the notch, thereby to dispose at an angle to the body, a tool which the opening and the notch are adapted to receive for reciprocation.

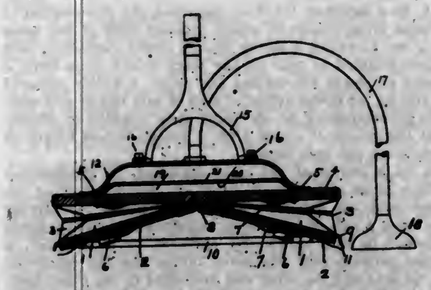
1,024,040. FABRIC CONSTRUCTED OF LAMINATED COHESIVE INTERWOUND MEMBERS. LAWRENCE A. SUBERS, Cleveland, Ohio. Filed Oct. 17, 1910. Serial No. 587,629. (Cl. 154—52.)



1. In an unwoven laminated fabric formed of cohering equally spaced fibrous bands crossing each other to form a two ply fabric, a rubber binding material in which said bands are incorporated, and a strip of open mesh fabric adhering to each band whereby the fibrous members of each band are bound together, the said rubber binding material filling the interstices in said open mesh fabric.

2. In a fabric, series of equally spaced parallel bands of threads cohering together, and laid in one direction, to form spaces and series of similar bands interlaid in alternately parallel and crossing layers therewith to form a ply fabric, and a fibrous binding means for the threads in each band, each band having a binding of rubber incorporated therewith and all bands cohering together and compressed to fill all spaces between said spaced bands.

1,024,041. PNEUMATIC CLEANER. JOHN C. TAUBER, Erie, Pa. Filed May 22, 1911. Serial No. 628,612. (Cl. 230—2.)



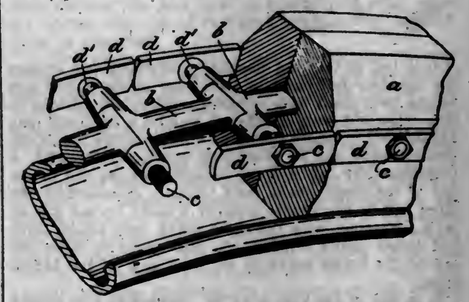
1. In a pneumatic cleaner, the combination of two bellows set end to end with the hinged ends adjacent, the bottoms of the bellows being fixed and set at an angle to each other with the adjacent ends above the outer ends, leaving a space for the insertion of a foot under the adjacent ends, the tops of the bellows being formed in a rigid piece and being in close proximity with the ends of the bottoms at the apex of the angle formed by the bottoms; a device under the bottoms adapted to be engaged by the foot of an operator; and a lever connected with said top and adapted to oscillate it as the lever is rocked.

2. In a pneumatic cleaner, the combination of two bellows set end to end with the hinged ends adjacent, the tops of the bellows being formed in a rigid piece, and the bottoms of the bellows being fixed and set at an angle to each other with the adjacent ends above the outer ends, the bottoms of said bellows forming the compression members of the frame; a tension member of the frame connecting the outer ends of the bottoms; and means for actuating the tops of the bellows.

3. In a pneumatic cleaner, the combination of two bellows set end to end with the hinged ends adjacent, the tops of the bellows being formed in a rigid piece, the bottoms of the bellows being fixed and set at an angle to each other with the adjacent ends above the outer ends, the bottoms of said bellows forming the compression members of the frame; a tension member of the frame connecting the outer ends of the bottoms, the bellows and tension member leaving an opening permitting the insertion of a foot of the operator so as to rest upon the tension member; and means for actuating the tops of the bellows.

4. In a pneumatic cleaner, the combination of two bellows set end to end with the hinged ends adjacent, the tops of said bellows being formed in a rigid piece and adapted to oscillate to actuate the bellows; valved openings on said top for each bellows; a box arranged on said top forming a manifold for said openings, said box being adapted to be opened and closed; and a handle secured to the box for actuating the top and adapted to act as a lever for opening and closing the box on said top.

1,024,042. ELASTIC TIRE. ALFRED WILLIAM TORKINGTON, Purley, England, assignor to Torkington Tires (Patent Syndicate) Limited, London, England. Filed July 3, 1908. Serial No. 441,905. (Cl. 152—9.)



1. In a solid rubber tire; the combination of an internal recess in said tire, an endless articulated band located in said recess and said articulated band formed of a series of links, transverse bolts journaled in said articulated band and each of sufficient length to pass completely through the tire from side to side and extending to the outside of the tire on each side, a series of oppositely disposed plates arranged externally on each side of said solid rubber tire the adjoining ends of said plates being unconnected, and means to secure said transverse bolts to thereby secure the said oppositely disposed plates in position, substantially as and for the purposes described.

2. In a solid rubber tire; the combination of an internal circumferential recess in said tire, an endless articulated band located in said recess and said articulated band formed of a series of links, transverse pivot bolts for connecting the adjoining ends of said links said pivot bolts being of sufficient length to pass completely through the tire from side to side and extending to the outside of the tire on each side, a series of oppositely disposed plates arranged externally on each side of the said solid rubber tire the adjoining ends of said plates being unconnected, and means to secure the said transverse bolts to thereby secure the said oppositely disposed plates in position, substantially as and for the purposes described.

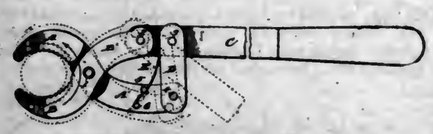
3. In a solid rubber tire the combination of an internal circumferential recess in said tire, an endless articulated band located in said recess, a series of oppositely disposed plates located externally on each side of the said solid rubber tire between the tread and the rim flanges so as to be clear of both and a series of transverse bolts passed from side to side right through the said articulated band and through the said externally located plates substantially as and for the purposes described.

4. In a solid rubber tire the combination of an internal circumferential recess in said tire, an endless articulated

band located in said recess, a series of oppositely disposed plates arranged externally on each side of the said solid rubber tire the adjoining ends of the plates being unconnected and a series of transverse bolts passed right through the said articulated band and through the said externally located plates substantially as and for the purposes described.

5. In a solid rubber tire the combination of an internal circumferential recess in said tire, an endless articulated band located in said recess, a series of oppositely disposed plates carried by said articulated band and located externally on each side of the said solid rubber tire between the tread and the rim flanges so as to be clear of both, and a series of transverse bolts passed from side to side right through the said articulated band and through the said external plates, substantially as and for the purposes described.

1,024,043. PIPE-WRENCH. HARRY ST. G. TUCKER, West Raleigh, N. C. Filed Sept. 25, 1911. Serial No. 651,180. (Cl. 81—91.)



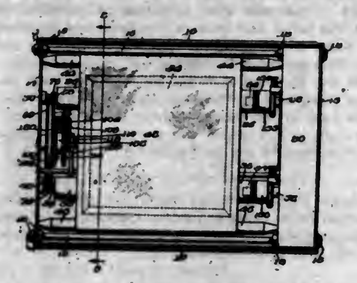
1. A tool of the kind described, comprising two crossed jaw members fulcrumed to each other in the middle and having their shank ends extended substantially parallel to each other and made of different lengths, a relatively long handle lever pivotally connected directly to the end of the shorter shank and in substantial alinement therewith, a transverse link bar pivotally connected at one end to the end of the longer shank, and pivotally connected at the other end to the handle lever at a point beyond the lever's connection with the short shank, said handle lever and longer shank being in the same plane to cause the end of the longer shank to act as a stop to the handle lever.

2. A tool of the kind described, comprising two crossed jaw members fulcrumed to each other in the middle and having their shank ends extended substantially parallel to each other and made of different lengths, a relatively long handle-lever pivotally connected directly to the end of the shorter shank and in substantial alinement therewith, a transverse link bar pivotally connected at one end to the end of the longer shank and pivotally connected at the other end to the handle lever at a point beyond the lever's connection with the short shank to form a normally straight tool and a spring connected to the longer shank member and extending inwardly in transverse relation to the tool and bearing outwardly against the link bar and lying within the plane of the same between the link bar and the end of the short shank and housed and protected thereby.

3. A tool of the kind described, comprising two crossed jaw members fulcrumed to each other in the middle and having their shank ends made of different lengths, a relatively long handle lever pivotally connected directly to the end of the shorter shank, a transverse link bar pivotally connected at one end to the end of the longer shank and pivotally connected at the other end to the handle lever at a point beyond the lever's connection with the short shank, and a spring arranged within the space bounded by the jaw shanks and link bar and adapted to close the jaws.

1,024,044. STREET AND STATION INDICATOR. JOHN R. TUCKER, Aurora, Ill., assignor to Ipson Indicator Company, Salt Lake City, Utah, a Corporation of Utah. Filed July 14, 1911. Serial No. 638,465. (Cl. 40—31.)

1. In a device of the class described, in combination with a name strip, rollers to which opposite ends of the name strip are attached, a source of power for driving one roller, and a device movable by the joint action of said rollers and directly proportional to the movement of the name strip adapted to disconnect the source of power after a predetermined length of name strip has been moved.



2. In a device of the class described, the combination of a name strip, rollers to which opposite ends of the name strip are attached, a source of power for driving one of the rollers, a gear moving in unison with each roller, a rockable lever carrying a pinion meshing with both of said gears in such a manner that its own rotation about its axis varies in accordance with the relative speeds of the two gears, with the result that the angular movement of the lever is uniform, and means operated by the lever adapted to disconnect the source of power, as and for the purposes set forth.

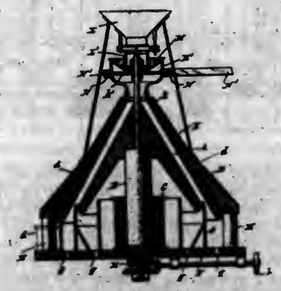
3. In a device of the class described, the combination with a name strip, rollers to which opposite ends of the name strip are attached, a source of power for driving one roller, a pair of bevel gears rotatable upon a common axis, one gear for each roller and positively rotated thereby, a lever upon the same axis as the bevel gears having pivoted thereto a bevel pinion meshing with each of said bevel gears whereby the rotation of said pinion and consequently the rotation of said lever is influenced by the speed of rotation of the respective bevel gears, and means set in motion by the angular movement of said lever about its center adapted to shut off the source of power from said power driven roller.

4. In a device of the class described, the combination of a name strip, rollers to which opposite ends of the name strip are attached, a spring tension device connecting said rollers adapted to take up any slack in the name strip, a source of power for driving one roller, a device operated jointly by the direct action of each of said rollers and movable proportionally to the name strip adapted to disconnect the source of power after a predetermined length of name strip has been moved.

5. In a device of the class described, in combination with a name strip, rollers to which opposite ends of the name strip are attached, a source of power for driving one roller a pair of concentric, independently moving gears adjacent to each other, one operated by each roller, a spring between said two gears having one end connected to one gear and the other end connected to the other gear, whereby a spring tension is placed upon the name strip, a pair of bevel gears having their toothed faces toward each other, one driven by each of said first mentioned gears, a bevel pinion meshing with said bevel gears, a lever journaled upon the same axis as said bevel gears and having said bevel pinion pivoted thereto, a cam carried by said lever, and means operated by said cam adapted to disconnect said source of power, whereby the name strip is stopped at the end of each predetermined length thereof, for the purposes set forth.

1,024,045. MAGNETIC SEPARATOR. JOSEPH WEATHERBY, Jr., and ANDREW J. DULL, Harrisburg, Pa.; said Weatherby assignor to said Dull. Filed Dec. 21, 1908. Serial No. 468,645. (Cl. 83—71.)

1. In a magnetic separator, the combination with a conical magnetic pole piece having its exterior conical face inclined to the vertical at an angle greater than the angle of repose of the material to be separated, whereby the material will flow down over said surface by gravity alone, of a conical rotary member of non-magnetic material surrounding said pole piece and uniformly spaced therefrom to form a conical passageway for the material to be separated, and a fixed conical pole piece surrounding and in proximity to the rotary member, the construction being such that the lines of magnetic force converge toward the outer fixed pole piece.



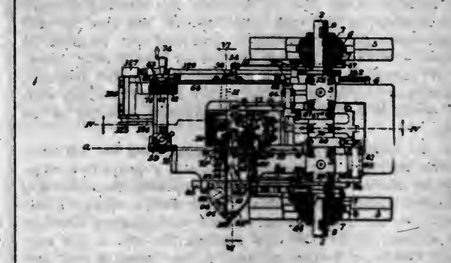
2. In a magnetic separator, the combination with a conical magnetic pole piece having an exterior conical face inclined at an angle greater than the angle of repose of the material to be separated, whereby the material will flow down over said surface by gravity alone, of a conical rotary member of non-magnetic material surrounding said pole piece and spaced therefrom to form a conical passageway for the material to be separated, a fixed conical magnetic pole piece surrounding and in proximity to the rotary member and having its inner face serrated whereby the lines of magnetic force are caused to converge outwardly and an annular partition interposed between the base of the inner conical pole piece and inner face of the rotary member, whereby the material passing downwardly in proximity to said faces will be separated in accordance with the magnetic susceptibility of the material.

3. In a magnetic separator, the combination with a fixed conical magnetic pole piece having its exterior conical face inclined at an angle greater than the angle of repose of the material to be separated, whereby the material will flow down over said face by gravity alone, of a conical rotary member of non-magnetic material surrounding said pole piece and spaced therefrom to form a conical passageway for the material to be separated, a fixed conical pole piece surrounding and in proximity to the rotary member and having its inner face spirally serrated from top to bottom, whereby the lines of magnetic force converge toward the rotary member, and an annular partition interposed between the lower ends of the inner conical pole piece and rotary member, whereby the material is separated into annular zones in accordance with its magnetic susceptibility, and the material of less susceptibility will be advanced by gravity and substantially free from mechanical agitation while the more susceptible material will be advanced by magnetic action, centrifugal force and gravity combined.

1,024,046. COLD-HEADING MACHINE. CHARLES S. WEEKS, Pittsburgh, Pa. Filed Dec. 8, 1906. Serial No. 346,926. (Cl. 10—12.)

1. In a heading machine, a rotary die carrier having a plurality of dies and a receiving station, two heading stations, heading mechanism at each of the heading stations and an ejecting station, an ejecting pin in each of the dies, a backing for said pins whereby they act as anvils at the heading stations, and a knock-out device working through the backing into the turret at the ejecting station, and means for actuating the knock-out device to carry the forward end of the ejecting pin through to the forward end of the die carrier to eject the finished articles, substantially as described.

2. In a heading machine, a rotary turret having a plurality of dies or holders, an actuating gear behind the turret and having openings corresponding to the dies, means for periodically actuating the gear, an abutment for the gear and turret, and a relief member seated in said abutment in line with one of said openings and dies; substantially as described.



3. In a heading machine, a rotary turret having a plurality of dies or holders, an actuating gear behind the turret and secured thereto, ejecting devices arranged to work through the gear into the dies, and a relief member in line with one of said openings and dies; substantially as described.

4. In a heading machine, a rotary die carrier having a plurality of dies, an ejecting pin in each die and free to move therein through to the outer face of the die, and means for actuating said pin, said pin and actuating means being arranged to permit the free intermittent rotary movement of the carrier; substantially as described.

5. In a cold heading machine, a rotary turret having a plurality of dies or holders therein and also having a plurality of peripheral seats extending obliquely to the axis of the turret, and locking teeth secured in said seats, said teeth having seating portions which fit the oblique seats in the turret and projecting portions which are parallel to the axis of the turret, said oblique seats and seating portions providing for a correct initial adjustment of the teeth, substantially as described.

[Claims 6 to 25 not printed in the Gazette.]

1,024,047. ADJUSTABLE HANDLE-CLAMP. GEORGE E. WHIPPLE, Brooklyn, N. Y. Filed Aug. 24, 1911. Serial No. 645,777. (Cl. 15—54.)



1. An adjustable brush holder comprising a disk having an opening therein and notches in the edge thereof, lugs carried on a side of the disk, a handle having an elongated opening therethrough, a positioning screw carried by the handle and adapted to coöperate with said notches, and a clamping bolt passing through said opening in the disk and the opening in said handle, the clamping bolt having a handle engaging portion and adapted to thereby clamp

a handle in position, the latter being caught between the aforesaid lugs and the handle engaging portion of the clamping bolt.

2. An adjustable brush holder comprising an auxiliary handle having a slot therethrough and being tapered adjacent to said slot, a disk having a notch in one side thereof and an opening therethrough, a handle engaging lug carried by the disk, a clamping bolt passing through the opening in the disk and through the slot in said handle and further having a clamping nut adapted to coöperate with the tapered portion on said handle, thereby frictionally retaining the holder in adjusted position, and means carried by said auxiliary handle coacting with the notch in said disk, thereby preventing rotation of the disk.

3. An adjustable brush holder comprising an auxiliary handle having a slot therethrough and a projection adjacent to said slot, a disk having an opening therethrough, a handle engaging lug carried by the disk, a clamping bolt having a handle engaging portion and passing through the opening in the disk and through the slot in the auxiliary handle, a washer carried by the clamping bolt and having a lateral extension formed with an indentation, said indentation being adapted to coöperate with the projection on said handle to prevent longitudinal movement of the handle, and means for preventing rotative movement of said disk.

4. An adjustable brush holder comprising an auxiliary handle having a slot therethrough and a projection adjacent to said slot, a disk having an opening therethrough, a handle engaging lug carried by the disk, a clamping bolt having a handle engaging portion and passing through the opening in the disk and through the slot in the auxiliary handle, and a washer carried by the clamping bolt and having a lateral extension formed with an indentation, said indentation being adapted to coöperate with the projection on said handle to prevent longitudinal movement of the handle.

1,024,048. MOUNTING OR SETTING. JOHN A. ABEL, Woodhaven, N. Y. Filed July 28, 1909. Serial No. 510,050. (Cl. 63—26.)

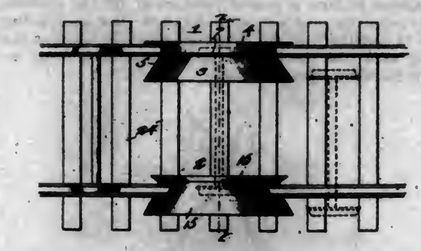


1. The combination of a stone, means for mounting said stone and a plurality of rims surrounding the latter, said rims being spaced apart to form in effect deep grooves between them, and having upper reflecting surfaces of considerable width, whereby the said rims are adapted to reflect the light and to increase the apparent size of the stone, said stone being held in fixed relation to said mounting and rims.

2. In a setting, means for mounting a stone, and a plurality of rims of the same general shape as said setting and surrounding the latter, said rims being spaced apart to form in effect deep grooves between them, and having upper reflecting surfaces of considerable width whereby the said rims are adapted to reflect the light and to increase the apparent size of the stone, said stone being held in fixed relation to said mounting and rims.

3. The combination of a stone, means for mounting said stone, and a plurality of rims of the same general shape as said stone and surrounding the latter, said rims being spaced apart to form in effect deep grooves between them, and having upper reflecting surfaces of considerable width whereby the said rims are adapted to reflect the light, and to increase the apparent size of the stone, and said rims being of graduated height, said stone being held in fixed relation to said mounting and rims.

1,024,049. CAR-RERAILER. WILLIAM H. ALLEN, Welch, W. Va. Filed Apr. 23, 1910. Serial No. 557,199. (Cl. 104—163.)



A car replacer having its lower portion cut away longitudinally whereby a means is provided for the reception of the rail and to permit the device to rest steadily upon the ties of the rail, and comprising an arched guide head, and a track-engaging web, the said guide head being inclined downwardly and toward the said track-engaging web, the said web having its inner face adjacent the guide head inclined upwardly, and the point of juncture of the said guide head and web forming a channel providing a means to prevent the wheels of the car from slipping off the replacer, the said guide head being of a hollow formation and being provided with a plurality of transversely arranged reinforcing members so as to effectively support the wheels of the car to be positioned thereon, and the lower extending portions of the device being of equal length and being provided with integral formed teeth, and further provided with alining eyes adapted for the reception of a removable bolt, the said bolt being adapted for the reception of the nuts whereby a means is provided to securely and quickly fasten the device upon the track and ties.

1,024,050. MESH FABRIC. THOMAS ALLSOPP, Newark, N. J., assignor to Allsopp & Allsopp, a Corporation of New Jersey. Filed Oct. 30, 1911. Serial No. 657,411. (Cl. 59—79.)



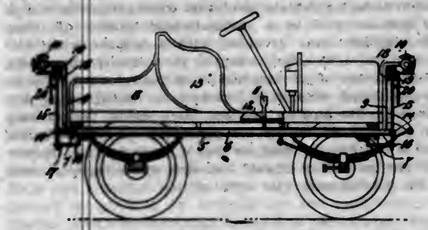
A mesh-fabric comprising a series of connected ornamental elements, each element consisting of a pair of oscillatorily connected members, each member being provided with a centrally disposed ring-like part, the ring-like part of the one member registering with the ring-like part of the other member, and means for connecting the said ring-like parts together, consisting of a pivot-post formed with a head upon one end, and a retaining-disk to which the other end of said post is secured, said head and disk and the said ring-like parts providing a chamber, and means within said chamber coöperating with said members to permit of the fabric to be stretched or expanded, and constructed to return the elements of the fabric automatically to their normal initial relations.

1,024,051. INDICATOR. SAMUEL T. APPLEGATE, Louisville, Ky. Filed Dec. 9, 1911. Serial No. 664,855. (Cl. 116—31.)

1. The combination with a vehicle; of a lamp-supporting member mounted thereon to rock transversely of the vehicle, an indicator and a lever pivoted to said member to swing transversely of the vehicle, an operating connection between the lever and the indicator, and means for operating the lever.

2. The combination with a vehicle; of a lamp-supporting member mounted thereon to rock transversely of the

vehicle; an indicator and a lever pivoted to said member to swing transversely of the vehicle, said lever having a longitudinal slot, a pin extending from the indicator into said slot, and means for operating the lever.

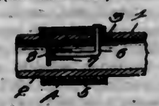


3. The combination with a vehicle; of a lamp supporting member mounted thereon to rock transversely of the vehicle, an indicator and a lever pivoted to said member to swing transversely of the vehicle, an operating connection between the lever and the indicator, a member mounted to rock transversely of the vehicle and having a slot into which the lever extends, and means for actuating the last-mentioned member.

4. The combination with a vehicle; of a horizontal member mounted thereon to rock transversely of the vehicle, and having a vertical lamp-support, a tubular member mounted on said horizontal member and free to rock thereon, means for actuating said tubular member, a slotted arm carried by the tubular member, a lever and an indicator pivoted to the aforesaid lamp-support to swing transversely of the vehicle, one end of the lever extending into the slot of the aforesaid arm, and its other end being slotted, and a pin extending from the indicator into the slot of the lever.

5. The combination with a vehicle; of a horizontal member mounted thereon to rock transversely of the vehicle, and having a vertical lamp-support, a tubular member mounted on said horizontal member and free to rock thereon, means for actuating said tubular member, a slotted arm carried by the tubular member, a lever and an indicator pivoted to the aforesaid lamp-support to swing transversely of the vehicle, one end of the lever extending into the slot of the aforesaid arm, and an operating connection between the lever and the indicator.

1,024,052. CIGAR AND CIGARETTE HOLDER. WESLEY ARCHER, Los Angeles, Cal. Filed Sept. 30, 1911. Serial No. 652,095. (Cl. 131—10.)



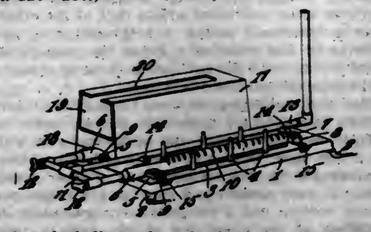
1. The combination with a cigar and cigarette holder having a slot therein; of a sleeve encircling said holder and slidably mounted thereon, a stem extending longitudinally within said holder, said stem having the inner end thereof bent through said slot and engaged with said sleeve, and a removable head for the outer end of said stem.

2. The combination with a cigar and cigarette holder having a slot in the body portion thereof; of a band mounted on said body portion and having a slot therein in alinement with the aforesaid slot, a sleeve member encircling said band, movably mounted thereon, and a stem extending longitudinally within said holder, the inner end of said stem being bent through the slots in said holder and band and engaged with said sleeve.

3. The combination with a cigar and cigarette holder having a slot in the body portion thereof; of a band mounted on said body portion and having a slot therein in alinement with the aforesaid slot, a sleeve member encircling said band movably mounted thereon, a stem extending longitudinally within said holder, the inner end of said stem being bent through the slots in said holder and band and engaged with said sleeve, and a removable head member for the free end of said stem.

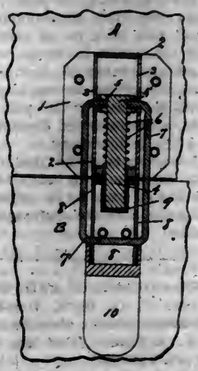
4. In a device of the class described, the combination with a holder having a spiral slot therein; of a metallic band mounted thereon and provided with a slot alining with the slot of said holder, a sleeve member slidably mounted on said band, a stem carried by said sleeve member and extending laterally through the slots in said band and holder, said stem being bent to extend longitudinally through said holder, and a removable cap member for the free end of said stem, comprising a sleeve member fitting said stem and a circular head portion on the free end of said sleeve, the outer face of said circular head member being adapted to be disposed substantially flush with the outer peripheral edge of the holder proper.

1,024,053. HYDROCARBON-STOVE. EDWARD B. BAKER, Paris, Tex. Filed Feb. 4, 1911. Serial No. 606,597. (Cl. 126—230.)



A stove including a base having a longitudinal recess in the upper face thereof and constituting a fuel holder, there being recesses in the top of the base and at the sides of the longitudinal recess, and iron supporting devices integral with the base and adjacent the sides of the longitudinal recess, a burner secured at its ends upon the base and bridging the longitudinal recess in the direction of the length thereof, said burner being detachable, a hood removably mounted on the base and bridging the burner and longitudinal recess, said hood having an iron receiving opening at one end and a handle receiving slot in its top extending from said opening, there being downwardly extending projections on the sides of the hood and adapted to be seated in the side recesses, the iron supporting devices projecting upwardly into the hood at opposite sides of the handle receiving slot, said longitudinal recess being located entirely within and extending throughout the length of the hood.

1,024,054. TRUNK-FASTENER. WALTER D. BARNES, Salt Lake City, Utah. Filed Dec. 1, 1911. Serial No. 663,462. (Cl. 70—103.)



In a clasp for trunks, suit cases and the like the combination of a base plate, a U-shaped barrel fastened

thereto, a plunger bolt operated within said barrel, a link pivotally secured in the side of said plunger bolt, a bracket shaped plate, a socket secured therein, and a lever pivoted to said bracket shaped plate having open slots in the edges of said lever adapted to hold said link in engagement therewith at times.

1,024,055. FRONT FOR ARTICLES OF JEWELRY. FRANK P. BARNEY, Chartley, Mass. Filed Mar. 3, 1911. Serial No. 612,021. (Cl. 63—2.)



1. As a new and improved article of manufacture, a solderless "front" for articles of jewelry, the same consisting of a pair of suitably shaped, oppositely disposed, peripherally flanged sheet-metal members, the flange of one member being positioned within that of the other and forming a chambered casing, a soft-metal core member conforming to and practically filling the casing's chamber, and having said flanges fitting in snug engagement with the adjacent surface of the core.

2. The improved solderless front for articles of jewelry, said front consisting of oppositely disposed sheet metal cup-shaped members having the peripheral side wall or flange of the upper or face member positioned within and snugly engaged by the corresponding wall or flange of the other or base member and forming a rigidless peripheral outer surface, and a soft-metal core practically filling the interior of the front and rigidly held in position therein by the inward pressure of said walls upon it.

3. The solderless "front" herein described, the same comprising a two-part hollow casing, each part provided with a peripheral rim or flange, one flange being inserted within the other, a soft-metal core positioned in and conforming to the casing's chamber, the said core being prevented from independent movement and the casing from lateral separation by bending the said walls inwardly against the contiguous surfaces.

4. The solderless "front" herein described, the same consisting of a suitably shaped casing comprising a top member and a base member, each having a peripheral side wall or flange, one flange being inserted within the other, a soft-metal core practically filling the interior of the casing and held in position by bending the flanges inwardly thereagainst, and having the outer or exposed surfaces of the thus bent flanges in alinement or flush with each other.

1,024,056. PROCESS OF PRESERVING THE YOLK OF EGGS. FRÉDÉRIC BELHOMMET, Brussels, Belgium. Filed Mar. 16, 1910. Serial No. 549,674. (Cl. 99—1.)

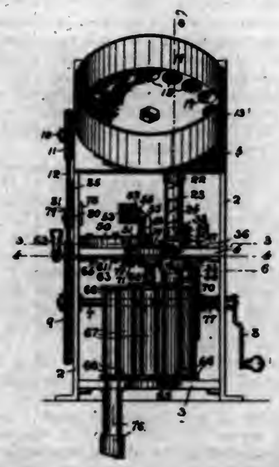
1. A process for preserving the yolk of eggs consisting in adding thereto chloroform to coagulate the white and then bringing said yolk back to its primitive fresh state by expelling said chloroform by means of heat.

2. A process for preserving the yolk of eggs consisting in adding thereto chloroform to coagulate the white and then bringing said yolk back to its primitive fresh state by removing said chloroform by distillation carried out in a vacuum at a low temperature.

3. A process for preserving the yolk of eggs consisting in adding thereto chloroform to coagulate the white and then bringing said yolk back to its primitive fresh state by passing it through a fabric and expelling the chloroform by distillation.

1,024,057. COIN COUNTING AND WRAPPING MACHINE. ALFRED C. O. BOCK, Brooklyn, N. Y., assignor to Donnellan-Bock Manufacturing Company, Brooklyn, N. Y., a Firm. Filed May 4, 1911. Serial No. 624,943. (Cl. 133—8.)

1. In a coin-counting and wrapping machine, a rotatable counter-disk provided with a series of depressions in its periphery adapted to be engaged by the periphery of a passing coin whereby said counter-disk is actuated, means for propelling coins into engagement with said counter-disk, a rotatable lock-disk geared with said counter-disk so as to make a complete revolution when said counter-disk has been actuated by a predetermined number of coins, said lock-disk being provided with a bolt-receiving cut-out portion, a lock bolt adapted to normally enter said cut-out portion of the lock-disk, a spring-returned lever or arm connected with said lock-bolt for withdrawing the same from its locking position, and means for causing said lock-bolt to engage the periphery of said lock-disk when withdrawn by said lever-arm so as to ride thereon until the revolution of said lock-disk again registers said cut-out portion with said lock-bolt.



2. In a coin-counting and wrapping machine, a rotatable counter-disk provided with a series of depressions in its periphery adapted to be engaged by the periphery of a passing coin whereby said counter-disk is actuated, means for propelling coins into engagement with said counter-disk comprising a rotatable kicker-disk provided with kicker-arms, a spindle upon which said kicker-disk is mounted, a pinion secured to said spindle, a driving shaft, a gear-wheel upon said shaft and meshing with said pinion, means for feeding coins to said propelling means, a total-adder or counting device geared with relation to said counter-disk, a rotatable lock-disk provided with a bolt-receiving cut-out portion geared with relation to said counter-disk so as to make a complete revolution when said counter-disk has been actuated by a predetermined number of coins, a lock-bolt adapted to normally enter said cut-out portion of said lock-disk, a spring-returned lever or arm connected with said lock-bolt for withdrawing the same from its locking position, and means for causing said lock-bolt to engage the periphery of said lock-disk when withdrawn by said lever or arm so as to ride thereon until the revolution of said lock-disk again registers said cut-out portion with said lock-bolt.

3. In a coin-counting and wrapping machine, a rotatable counter-disk provided with a series of depressions in its periphery adapted to be engaged by the periphery of a passing coin where said counter-disk is actuated, means for propelling coins into engagement with said counter-disk comprising a rotatable kicker-disk provided with kicker-arms, a spindle upon which said kicker-disk is mounted, a pinion secured to said spindle, a driving-shaft, a gear-wheel upon said shaft and meshing with said pinion, means for feeding coins to said propelling means, a total-adder or counting device geared with relation to said counter-disk, a rotatable lock-disk provided with a bolt-receiving cut-out portion geared with relation to said

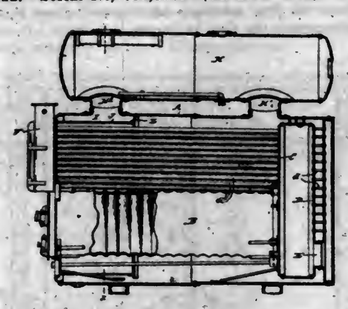
counter-disk so as to make a complete revolution when said counter-disk has been actuated by a predetermined number of coins, a lock-bolt adapted to normally enter said cut-out portion of the bolt-disk, a spring-returned lever or arm connected with said lock-bolt for withdrawing the same from its locking position, means for causing said lock-bolt to engage the periphery of said lock-disk when withdrawn by said lever or arm so as to ride thereon until the revolution of said lock-disk again registers said cut-out portion with said lock-bolt, and means for supporting coin-cartons or rolls into which the coins are propelled after operatively engaging said counter-disk.

4. In a coin-counting and wrapping machine a carrier-plate, a rotatable counter-disk mounted upon said carrier-plate and provided with a series of depressions in its periphery adapted to be engaged by the periphery of a passing coin whereby said counter-disk is actuated, means for propelling coins into engagement with said counter-disk comprising a rotatable kicker-disk provided with kicker-arms, a spindle upon which said kicker-disk is mounted, a pinion secured to said spindle, a driving-shaft, a gear-wheel upon said shaft and meshing with said pinion, means for feeding coins to said propelling means, a total adder or counting device geared with relation to said counter-disk, a rotatable lock-disk provided with a bolt-receiving cut-out portion geared with relation to said counter-disk so as to make a complete revolution when said counter-disk has been actuated by a predetermined number of coins, a lock-bolt adapted to normally enter said cut-out portion of the lock-disk, a spring-returned lever or arm conected with said lock-bolt for withdrawing the same from its locking position, means for causing said lock-bolt to engage the periphery of said lock-disk when withdrawn by said lever or arm so as to ride thereon until the revolution of said lock-disk again registers said cut-out portion with said lock-bolt, a coin-chute provided with a coin-passage in said carrier-plate, a series of revolving carton-holders, a shaft for supporting the same, a ratchet-wheel upon said shaft, means operated by the movement of said lever or arm for revolving said carton-holders to present one of the series of holders in registration with the coin-passage of said coin-chute, and a brake-device connected with said lever or arm for engaging said ratchet-wheel to prevent the movement of said carton-holders while coins are being delivered thereto.

5. In a coin-counting and wrapping machine, a carrier-plate, a rotatable counter-disk mounted upon said carrier plate and provided with a series of depressions in its periphery adapted to be engaged by the periphery of a passing coin whereby said counter-disk is actuated, means for propelling coins into engagement with said counter-disk comprising a rotatable kicker-disk mounted upon said carrier-plate said kicker-disk being provided with kicker-arms, a spindle upon which said kicker-disk is mounted, a pinion secured to said spindle, a driving shaft, a gear-wheel upon said shaft and meshing with said pinion, means for feeding coins to said propelling means comprising a revolving inclined hopper provided with a series of coin-holes or openings, a bed-plate provided with a coin-passage for supporting the same, a transmission for driving said hopper from said driving shaft, a tubular device registering beneath the coin-passage of said bed-plate adapted to receive a stack of coins, and a guide-plate at the bottom of said tubular device, said guide-plate having a coin-passage lying in the path of the kicker arms of said kicker-disk, a total adder or counting device geared with relation to said counter-disk, a rotatable lock-disk provided with a bolt-receiving cut-out portion geared with said counter-disk so as to make a complete revolution when said counter-disk has been actuated by a predetermined number of coins, a lock-bolt adapted to normally enter said cut-out portion of the lock-disk, a spring-returned lever or arm connected with said lock-bolt for withdrawing the same from its locking position, and means for causing said lock-bolt to engage the periphery of said lock-disk when withdrawn by said lever or arm so as to ride thereon until the revolution of said lock-disk again registers said cut-out portion with said lock-bolt.

[Claims 6 and 7 not printed in the Gazette.]

1,024,058. STEAM-BOILER. HARRY V. BRADY, South Framingham, Mass., assignor to Robb Engineering Company, Ltd., South Framingham, Mass. Filed June 21, 1911. Serial No. 634,547. (Cl. 122—410.)



1. In an internally fired boiler, the combination with the boiler shell, the internal fire box shell connecting the front and rear tube sheets and opening into a combustion chamber at the rear end, fire tubes connecting said front and rear tube sheets, a smoke box into which the tubes open at the front end of the boiler, a horizontal water and steam drum above the boiler shell, water necks connecting the proximate ends of the boiler shell and drum, and a circulating conduit extending from the front water neck down between the fire tubes and boiler shell to substantially the bottom of the boiler.

2. In an internally fired boiler, the combination with the boiler shell, the internal fire box shell connecting the front and rear tube sheets and opening into a combustion chamber at the rear end, fire tubes connecting said front and rear tube sheets, a smoke box into which the tubes open at the front end of the boiler, a horizontal water and steam drum above the boiler shell, water necks connecting the proximate ends of the boiler shell and drum, and circulating conduits extending from the front water neck on each side of the boiler, between the fire tubes and shell and opening at the bottom of the boiler.

3. In an internally fired boiler, the combination with the fire box shell and fire tubes, of a water and steam drum above the boiler, water necks connecting the drum and boiler shell, a curved plate bridging the front water neck opening and extending down on each side of the boiler to near the bottom of the shell and suitably spaced from the shell secured at the front to the front flue sheet, and an annulus or ring closing the space between the plate and boiler shell at the rear, whereby channels are formed leading from the front water neck to the bottom of the boiler.

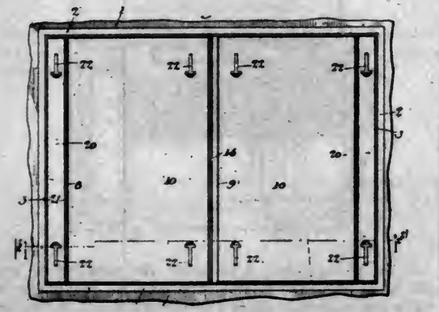
1,024,059. SIDEWALK-TRAP. THOMAS M. BRINTNALL, Oakland, Cal., assignor of one-half to W. D. Hammond, Los Angeles, Cal. Filed Aug. 28, 1911. Serial No. 646,542. (Cl. 94—7.)

1. A sidewalk trap, comprising two hinged members formed of cement panels, a metal frame surrounding each panel, a metal frame surrounding both panels, a hinge support at the outer edge of the metal frame on each panel and removable closures between the hinged edge of each panel and the outer frame.

2. A sidewalk trap, comprising two hinged members formed of cement panels, a metal frame surrounding each panel, a metal frame surrounding both panels, a hinge support at the outer edge of the metal frame on each panel and removable closures between the hinged edge of each panel and the outer frame, the metal frame around each panel being formed as a T-bar, a reinforcing means supported by the flange of the T-bar and embedded in the cement.

3. A sidewalk trap, comprising two hinged members formed of cement panels, a metal frame surrounding each panel, a metal frame surrounding both panels, a hinge support at the outer edge of the metal frame on each panel and removable closures between the hinged edge of

each panel and the outer frame, the outer edge of one of said panel frames having a flange and a wedge-shaped piece on the flange, the frame member of the other panel having a wedge-shaped piece on its edge, adapted to rest against the first named wedge-shaped piece to form a tight joint when the trap is closed.



4. A sidewalk trap, comprising two hinged members formed of cement panels, a metal frame surrounding each panel, a metal frame surrounding both panels, a hinge support at the outer edge of the metal frame on each panel and removable closures between the hinged edge of each panel and the outer frame, the metal frame around each panel being formed as a T-bar, a reinforcing means supported by the flange of the T-bar and embedded in the cement, a plate supporting the outer edge of each panel and having a vertical flange, said hinge means being secured to said plate, a bracket secured to said plate, an arm carried by said bracket extending over the hinge means in a direction opposite to the panel and a weight carried by said arm.

5. A sidewalk trap, comprising two cement concrete panels, a metal frame around the opening in the sidewalk, a frame-bar along the outer edge of each panel, hinge means between each frame-bar and the associated panel and below the upper surface of the panel, and removable filler means at the hinged edge of each panel and flush with the upper surface of the panels.

1,024,060. ELECTRIC ANIMAL-EXTERMINATOR. OMA NEWTON CALVERT, Kahoka, Mo. Filed May 5, 1911. Serial No. 625,200. (Cl. 43—34.)



1. An animal exterminator comprising a base having an opening therein and intersecting bars thereacross, a central contact plate secured on said bars at their point of intersection, and a plurality of contact plates insulated from the central contact plate and on a higher plane or level, said plates forming the terminals of an electric circuit.

2. An animal exterminator comprising a base having an opening, a central contact plate at the center thereof and a plurality of contact plates adjacent to and insulated from the central contact plate, said central and adjacent contact plates forming the terminals of an electric circuit.

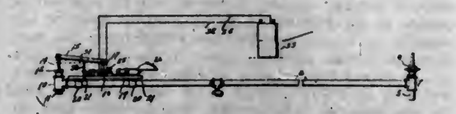
3. An animal exterminator comprising a base having an opening therein, bars extending across the opening, a central contact plate mounted thereon, a contact plate mounted on each of the bars adjacent to and insulated from the central contact member, said contact plates forming terminals for an electric circuit.

4. An animal exterminator comprising a base having an opening therein, bars extending across the opening, a central contact plate and a plurality of contact plates adjacent to and insulated from the central contact plate, positive and negative electric wires, the central contact forming a terminal for one of the wires and the adjacent plates serving as terminals for the other wires.

5. An animal exterminator comprising a base having a central contact plate and a plurality of contact plates adjacent to and insulated from the central contact plate, a binding post having wires leading therefrom to the adjacent contact plates, a binding post having a wire leading to the central contact plate, a positive electric wire connected to the binding post of the central contact plate, a negative electric wire, a binding post on the base to which the negative wire is connected, a removable cover having binding posts thereon electrically connected, said binding posts adapted to engage the binding post of the negative wire and the binding post of the adjacent contact plates, whereby the current of the negative wire will be conducted to the adjacent contact plates.

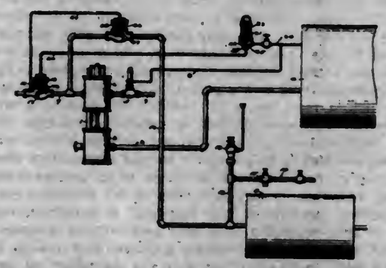
[Claims 6 and 7 not printed in the Gazette.]

1,024,061. ELECTRIC GAS-ALARM. CHARLES C. CLARK, Guyandotte, W. Va. Filed Nov. 29, 1910. Serial No. 594,750. (Cl. 177—311.)



In an alarm mechanism, a supply pipe, a pressure pipe connected therewith, a casing secured to one end of the pressure pipe and provided with a cap member, a piston operating in the casing, a plunger rod connected with the piston and extending through the cap, a contact bar pivoted to the plunger rod and extending longitudinally above the pressure pipe, a base clamped to the pressure pipe and insulated therefrom, a clip secured to the base and pivotally supporting one end of the contact bar, an alarm bell secured on the base, a contact post secured to the base and adapted to be engaged by the contact bar, a coiled spring arranged upon the plunger rod interiorly of the casing between the cap and the piston to hold the piston in a normally lowered position, conducting means connecting one of the terminals of the bell with the contact post, a wire connected with the bar supporting clip, and a generator connected to the other terminal of the bell and said wire.

1,024,062. CAR-HEATING SYSTEM. FRANK F. COGGIN, New York, N. Y., assignor to Economy Car Heating Company, New York, N. Y., a Corporation of Maine. Filed Feb. 15, 1908. Serial No. 416,075. (Cl. 237—12.)



1. In a car heating system the combination with a steam actuated air pump having an exhaust outlet to the atmosphere and a communication for supplying exhaust steam to the heating system, of valve mechanism governed by the pump pressure for automatically closing the atmosperic exhaust outlet, and operating to open the exhaust outlet to the atmosphere and to positively close said communication to the heating system when the pump pressure falls to a predetermined point.

2. In a car heating system the combination with a steam actuated air pump having an outlet to the atmosphere for exhaust steam, and a communication for supplying exhaust steam to the heating system, of a valve device governed by the pump pressure for opening and closing said exhaust outlet to the atmosphere, and means governed by the flow of exhaust steam to the atmosphere for closing said communication to the heating system.

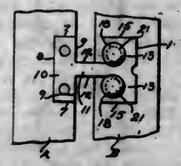
3. In a car heating system the combination with a source of exhaust steam, and atmosphere outlet therefor, and means of communication from said source to the heating system, of a valve device governed by the pump pressure for opening and closing the exhaust outlet to the atmosphere, and a valve means governed by the flow of the exhaust steam to the atmosphere for closing said communication to the heating system.

4. In a car heating system the combination with a steam actuated air pump having an atmospheric exhaust outlet, a reservoir into which said pump is adapted to compress air, and means for supplying exhaust steam from the pump to the heating system, of a valve for controlling communication from the exhaust steam outlet of the pump to the atmosphere, a movable abutment operated according to the degree of pressure in the reservoir for actuating said valve, and means operated by the flow of exhaust steam through said valve to the atmosphere for controlling communication from the exhaust steam outlet of the pump to the heating system.

5. In a car heating system, the combination with a steam actuated air pump having an atmospheric exhaust outlet, a reservoir into which said pump is adapted to compress air, and means for supplying exhaust steam from the pump to the heating system, of a valve for controlling communication from the exhaust steam outlet of the pump to the atmosphere, a movable abutment operated by the reduction in reservoir pressure to a predetermined degree for opening said valve, and means operated by the flow of exhaust steam through said valve to the atmosphere for closing communication from the exhaust steam outlet of the pump to the heating system.

[Claims 6 to 10 not printed in the Gazette.]

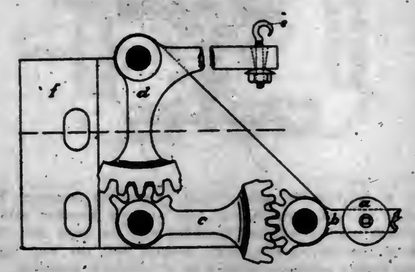
1,024,063. CORSET-FASTENER. DANIEL FRANKLIN CROSSMAN, Boston, Mass. Filed Apr. 21, 1909. Serial No. 491,383. Renewed Feb. 8, 1912. Serial No. 676,442. (Cl. 24—225.)



In combination with the meeting stays of a corset, of a fastener one member of which is provided with a base which is secured to one of said stays, a neck portion extending from said base of uniform width throughout its entire length, ears extending laterally and in opposite directions from said neck portion and having each an engaging curved edge extending from the opposite parallel edges of the neck portion, whereby a T shape member is formed, having inwardly projecting curved guiding ends, two studs rigidly fixed to the opposite meeting stay and provided with enlarged heads, the distance between said studs being substantially the same as the width of the neck of the opposite member of the fastening device, said studs being of sufficient height to allow the neck to be inserted between the studs below the head portions thereof,

the T shape portion of the first named member thus formed being resilient throughout its entire structure, whereby the same may be partially twisted independently of its securing base for connecting and disconnecting the stays, the neck portion being of sufficient length to hingedly connect the stays and also to permit them to move to and from one another without disengagement.

1,024,064. FRICTION LET-OFF. OCTAVIEN DALFOND, Fall River, Mass., assignor to The Standard Equipment Company, a Corporation of Massachusetts. Filed Dec. 12, 1910. Serial No. 596,934. (Cl. 139—58.)



1. In combination, a bracket adapted to be mounted on a loom frame, three levers pivotally mounted on said bracket, said levers being provided with intermeshing gear teeth and one of said levers being provided with a normally vertical and a normally horizontal arm, said horizontal arm being provided with an upwardly flaring hole near its end, a hook secured in said hole and an adjustable weight slidably mounted on one of said levers for adjusting the position of said hook.

2. In combination, a bracket adapted to be mounted on a machine frame, a bell crank lever mounted on said frame, one arm of said lever being provided with a set of gear teeth and the other having a flaring hole, a hook having a stem passing through said hole, a convex washer passed over said stem with its convex face toward said hole, a nut turned on said stem, a lever mounted on said bracket and having gear teeth meshing with the above gear teeth on one end and gear teeth on its other end, a lever mounted on said bracket and having gear teeth meshing with the last mentioned gear teeth and an adjustable weight slidably mounted thereon.

3. In combination, a bracket, a set of levers pivotally mounted on said bracket, a set of links connected by bolts for firmly holding said levers in proper position, a hook pivotally mounted in one of said levers, intermeshing gear teeth on said levers and a weight for adjusting the position of said hook.

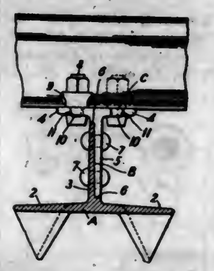
4. In combination, a bracket provided with perforations and adapted to be mounted on a machine frame, a series of links provided with perforations, a series of levers having hubs, a bearing sleeve passing through the bore in each hub, means passing through said links, sleeves and bracket for holding said parts firmly together in their proper positions, a hook mounted in one of said levers, an adjustable weight slidably mounted on another of said levers and means for locking said weight in any position of adjustment desired, said levers being provided with intermeshing gear teeth, substantially as, and for the purpose, set forth.

1,024,065. METAL RAIL-TIE. ALVA C. DINKEY, Pittsburgh, Pa. Filed July 18, 1911. Serial No. 639,163. (Cl. 238—5.)

1. A railroad tie comprising in combination a T-shaped member having leg portions bent gradually and increasingly downward from points below the rail seats toward the longitudinal center of the tie, a second T-shaped member superposed on said first T-shaped member, the legs of

the two members forming the web of the tie over-lapping, inter-fitting and being rigidly secured together.

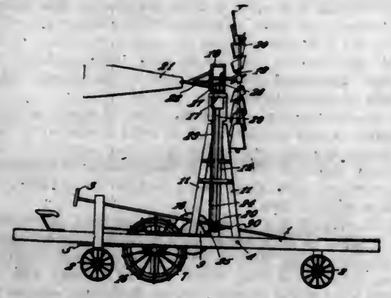
2. A railroad tie composed of two T-shaped members the legs whereof are overlapped and rigidly secured together, the overlapping legs being provided with offsets forming shoulders in the sides thereof, the marginal edge of each leg engaging in the shoulder of the other and the two rigidly united.



3. A railroad tie composed of two rolled members T-shaped in cross section, the legs of each member being provided with a seat or shoulder near its head for the end of the leg of the other member and the two legs being rigidly secured together in overlapping position.

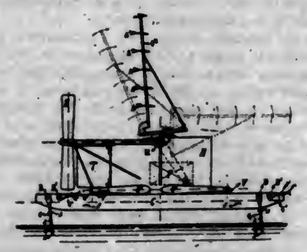
4. A railroad tie composed of two rolled members T-shaped in cross section, the legs of each member being provided with a seat or shoulder near its head for the end of the leg of the other member and the two legs being rigidly secured together in overlapping position, the members forming rail seats having rail clip openings and the other member forming the tie base having portions of its flanges bent gradually downwardly and inwardly from points below the rail seats toward the middle of the length of the tie.

1,024,066. TRACTION-VEHICLE. HENRY M. FLETCHER, Plainview, Tex. Filed Sept. 12, 1910. Serial No. 581,582. (Cl. 21—114.)



A traction vehicle including a wheel supported main frame, a supplemental frame pivotally mounted at its front end within the main frame at a point between the supporting wheels, said supplemental frame being movable about an axis extending transversely of the machine, a traction wheel connected to and supporting the rear end portion of the supplemental frame, a mast up-standing from the supplemental frame adjacent the pivot thereof, a wind operated motor carried by the mast, means for transmitting motion from said motor to the traction wheel, the weight of the motor and mechanism being adapted to hold the traction wheel in constant engagement with the ground and irrespective of the movement of the main frame, said mast constituting a lever for transmitting the force of head wind pressure received by the motor, through the traction wheel to the surface on which the wheel is mounted.

1,024,067. HYDROAEROPLANE. ENRICO FORLANINI, Milan, Italy. Filed July 26, 1907. Serial No. 385,675. (Cl. 114—66.5.)



1. In a water conveyance, the combination, with the body, of rods transmitting the supporting thrust thereto, supporting water blades rigidly connected to said rods, and steps on said rods as supports for the blades.

2. In a water conveyance, the combination, with the body, of rods depending therefrom and transmitting the supporting thrust to the body, of supporting water blades rigidly connected to said rods, said blades being strengthened where they are crossed by the rods.

3. In a water conveyance, the combination, with the body, of depending rods transmitting the supporting thrust to the body, and supporting water blades rigidly fixed to said rods, the said rods having notches for holding the blades without piercing them, and projecting portions above the notches as supports for the blades.

4. In a water conveyance, the combination with the body, of rods transmitting the supporting thrust to the body and weakened at an intermediate point of their lengths, and supporting blades rigidly secured to said rods.

5. In a water conveyance, the combination, with supporting water blades rigidly connected to rods transmitting the supporting thrust to the body of the apparatus, of notches in said rods creating successive points of fracture.

[Claims 6 to 12 not printed in the Gazette.]

1,024,068. WALL OR DAM CONSTRUCTION. CHARLES F. FRANCISCO, San Diego, Cal. Filed Aug. 23, 1911. Serial No. 645,592. (Cl. 61—24.)



1. A wall or dam construction comprising, a plurality of collar beams provided with a collar on each end, and a nipple mounted in each collar adapted for other collar beams, all substantially as set forth.

2. A wall or dam construction, comprising a plurality of reinforced concrete collar beams provided with a collar on each end, and a nipple mounted in each collar adapted for other collar beams, all substantially as set forth.

3. A wall or dam construction, comprising a plurality of reinforced concrete collar beams provided with a collar on each end, a groove in their top and bottom surfaces, a nipple mounted in each collar adapted for other collar beams, and a plurality of piles adapted to fit said nipples, all substantially as set forth.

4. A wall or dam construction comprising a plurality of collar beams, a plurality of nipples set into the collars in said collar beams and extending from the same, said collar beams to be connected together at their ends and placed one above the other, all substantially as set forth.

5. A wall or dam construction comprising a plurality of reinforced collar beams provided with a collar on each end, and an under-cut groove in their bottom surfaces, a plurality of nipples set into the collars in said collar beams, and extending from the same, said collar beams to be connected together at their ends and forming a circle and placed one above the other, and piles adapted to fit into said nipples and to be driven into the earth, all substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

1,024,069. PILE SPLICING AND DRIVING DEVICE. CHARLES F. FRANCISCO, San Diego, Cal. Filed Sept. 7, 1911. Serial No. 648,208. (Cl. 61—43.)



1. A pile splicing and driving device comprising, an ellipsoidal shaped piece made of plastic material, provided with a hole in each end, longitudinally and laterally reinforced, all substantially as set forth.

2. A pile splicing and driving device comprising, an ellipsoidal shaped concrete piece, provided with a hole in each end, extending nearly to the center, woven wire reinforcement near the outer surface of said plastic piece, longitudinal reinforcements between said holes and said outer surface and connecting reinforcements, all substantially as set forth.

3. In a pile splicing and driving device, the combination of an ellipsoidal shaped concrete or plastic material piece, provided with a flat surface on each end and holes therein and longitudinally and laterally reinforced by means of woven wire and twisted steel bars, and an elastic piece adapted to fit into one of the holes therein, all substantially as set forth.

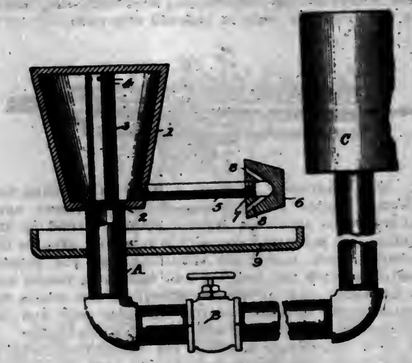
4. A pile splicing and driving device, comprising a reinforced ellipsoidal concrete body with flat ends, and a recess in each end thereof adapted to receive the end of a pile, all substantially as set forth.

5. A device of the kind described, comprising an ellipsoidal concrete body with both ends flat, longitudinal and radial reinforcing pieces therein, a net wire circumferential reinforcement therein, near the outer surface of said body, and a hole in each end of said body adapted to receive the end of a pile, all substantially as set forth.

[Claim 6 not printed in the Gazette.]

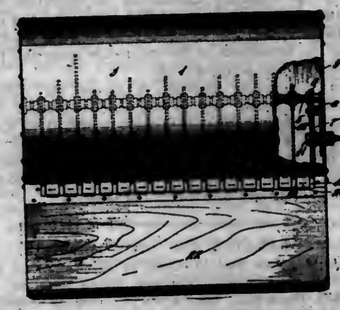
1,024,070. LIQUID-FUEL BURNER. JOSEPH GOMEZ, Jacksonville, Ill. Filed Aug. 31, 1911. Serial No. 647,048. (Cl. 158—71.)

In a liquid fuel burner, a retort, a supply pipe having its delivery end in the retort and formed with small delivery orifices through which the oil is sprayed against the walls of the retort, a burner pipe connected to the retort near its lower end and a block having a socket secured to the burner pipe and provided with outlet ducts inclined upwardly and downwardly from the socket and having



their delivery orifices above and below the burner pipe and directed toward the retort aforesaid.

1,024,071. TAX-CALCULATING DEVICE. GEORGE W. GOSS, Orla, Tex., assignor to Goss-Acrey Calculator Company, St. Louis, Mo., a Corporation of Missouri. Filed Aug. 26, 1910. Serial No. 579,072. (Cl. 235—61.



1. In an apparatus of the character described, the combination of a main operating shaft, a totalizer operated from said main shaft to indicate a principal number, a plurality of totalizers differentially operated from said main shaft for obtaining different percentages of the principal number registered in the first-mentioned totalizer, and means for making a record of said principal number and percentages.

2. In a device of the character described, a casing, having a portion of one wall broken away, a support plate attached to the casing across the opening formed therein, a series of counters mounted on said plate, a gear wheel connected to each counter, a shaft extending interiorly of the casing, a series of wheels of different sizes mounted on said shaft, sprocket chains connecting the wheels on the shaft with the corresponding wheels attached to the counters, a gear wheel mounted on said shaft adjacent the end wall of the casing, a coöperating gear wheel journaled within the end wall of the casing, and a handle positioned outside the casing and operatively connected to said latter wheel.

1,024,072. CALCULATING-MACHINE. GEORGE W. GOSS, St. Louis, Mo., assignor to Goss-Acrey Calculator Company, St. Louis, Mo., a Corporation of Missouri. Filed Feb. 23, 1911. Serial No. 610,345. (Cl. 235—60.)

1. In a calculating machine, a frame, a counting and indicating means arranged for sliding movement upon said frame, an extensible scale, a pointer carried by the

counting and indicating means, which pointer overlies the extensible scale, and means for simultaneously and proportionately moving the counting and indicating means and the extensible scale in opposite directions.



2. In a calculating machine, a frame, a counting and indicating means arranged for sliding movement upon said frame, an extensible scale, a pointer carried by the counting and indicating means, which pointer overlies the extensible scale, means for simultaneously and proportionately moving the counting and indicating means and the extensible scale in opposite directions, and means for registering the movement of the extensible scale and the movement of the counting and indicating mechanism.

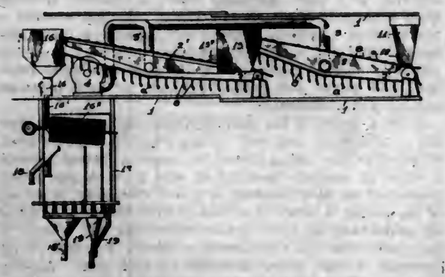
3. In a calculating machine, the combination with a movable counting mechanism, of an extensible scale, means whereby the movement of the extensible scale relative to the counting mechanism is indicated, and means including a rack and pinion for simultaneously and proportionately moving the counting mechanism and the extensible scale.

4. In a calculating machine, the combination with a movable counting mechanism, of an extensible scale, means whereby the movement of the extensible scale relative to the counting mechanism is indicated, means for simultaneously and proportionately moving the counting mechanism and the extensible scale, and means for indicating the movement of the extensible scale and counting mechanism actuating means.

5. In a calculating machine, a frame, an extensible scale thereon, means for moving said extensible scale, means for registering the movement imparted to the extensible scale, a counting mechanism arranged for movement on the frame and a pointer carried by said counting mechanism, which pointer overlies the extensible scale.

[Claims 6 to 12 not printed in the Gazette.]

1,024,073. APPARATUS FOR DRYING SUGAR. WILLIAM H. HANNAM and WARREN E. MURRAY, San Francisco, Cal., assignors to Western Sugar Refining Company, San Francisco, Cal., a Corporation of California. Filed June 22, 1911. Serial No. 634,766. (Cl. 34—12.)



1. An apparatus for the described purpose, the same comprising a chamber or receptacle for heated air, an endless conveyer consisting of a plurality of hinged open frames working over said receptacle, a feed hopper arranged above said conveyer for supplying sugar to the hinged frames thereof as brought into horizontal alinement, and means for supplying heated air under pressure within the mentioned receptacle.

2. In an apparatus for the described purpose, the combination with a fixed air containing receptacle, of an endless conveyer composed of a series of independent hinged open frames, a feed hopper arranged above the upper run of said conveyer, a cover for said receptacle provided with an outlet for the escape of air, said cover serving as a housing for the upper run of the conveyer, devices for imparting travel to the endless conveyer, and means for supplying heated air under pressure within the air containing receptacle.

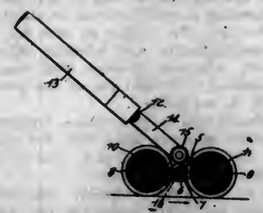
3. In an apparatus for the described purpose, the combination with a plurality of receptacles arranged one in advance of the other, of an endless conveyer consisting of a series of independent hinged open frames working over each of said receptacles, a feed device for delivering material to be dried onto one of said conveyers as the hinged frames thereof move into horizontal alinement, said conveyer delivering the material onto the conveyer arranged in advance thereof, devices for imparting travel to the said conveyers, and means for supplying heated air under pressure to each of the receptacles over which the conveyers work.

4. In an apparatus for the described purpose, the combination with a plurality of inclined receptacles arranged one in advance of the other, of an endless conveyer consisting of a series of independently hinged open frames, a cover for each receptacle provided with an outlet for the escape of heated air, said covers forming a housing for the upper run of each conveyer, a feed device for supplying material to be treated onto one of said conveyers as the frames thereof are brought into horizontal alinement, said conveyer delivering the material onto the conveyer arranged in advance thereof, and means for supplying heated air under pressure to each of the receptacles over which the conveyers work.

5. In an apparatus for the described purpose, the combination with a plurality of endless traveling conveyers, each composed of open mesh material and arranged one in advance of the other, of a hopper interposed between the discharge end of one conveyer and the receiving end of the other conveyer, an inclined grizzly within said hopper for receiving the discharge from one conveyer and delivering the same onto the surface of the advanced conveyer, a feeder for delivering material to be treated onto the receiving end of the first mentioned conveyer, heat containing devices over which said conveyers work, means for supplying heated air thereto under pressure, and mechanism for imparting travel to the endless conveyers.

[Claims 6 and 7 not printed in the Gazette.]

1,024,074. STROPPING DEVICE. JOSEPH A. HARRINGTON, South Boston, Mass., assignor of one-half to Michael J. Lydon, Boston, Mass. Filed June 3, 1911. Serial No. 630,996. (Cl. 51—16.)



1. A stropping device having, in combination, a support, a drum journaled on said support, a blade-holder mounted to rock about an axis to carry the blade into and out of contact with said drum, and a lever extending transversely of said axis pivoted directly to said support and connected to said blade-holder to force said blade against the periphery of said drum.

2. A stropping device having, in combination, a support, a drum journaled on said support, a blade-holder mounted to rock about an axis to carry the blade into and out of contact with said drum, and a lever pivoted directly to said support on an axis substantially parallel with the axis of said drum and connected to said blade-holder to force said blade against the periphery of said drum.

3. A stropping device having, in combination, a support, a pair of drums journaled on said support, a blade-holder mounted to rock about an axis between said drums to carry the blade into and out of contact with said drums, and a lever pivoted directly to said support on an axis substantially parallel with the axes of said drums and connected to said blade-holder to force said blade against the peripheries of said drums.

4. A stropping device having, in combination, a support, a drum journaled on said support, a blade-holder mounted to rock about an axis to carry the blade into and out of contact with said drums, a lever extending transversely of said axis and pivoted directly to said support, and means connecting said lever to said blade-holder whereby said blade may be forced by said lever against said drum.

5. A stropping device having, in combination, a frame, a pair of drums journaled on said frame, a blade-holder mounted on said frame to rock about an axis to carry the blade into and out of contact with said drums, a lever pivoted directly to said frame on an axis substantially parallel with the axes of said drums, and means connecting said lever to said blade-holder whereby said blade may be carried into and out of contact with said drums.

[Claims 6 to 8 not printed in the Gazette.]

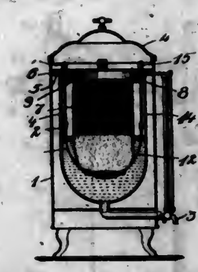
1,024,075. WRENCH. JOHN HEARON, Sault Ste. Marie, Mich., assignor of one-half to James R. Ryan, Sault Ste. Marie, Mich. Filed July 23, 1909, Serial No. 509,084. Renewed Jan. 9, 1912. Serial No. 670,299. (Cl. 81—169.)



1. A wrench, comprising a relatively movable jaw, a shank secured thereto and formed with screw threads, a hollow handle adapted to receive the shank and formed with interior screw threads designed to engage the screw threads of the shank, the handle being formed at one end with an exterior annular flange, a relatively stationary jaw mounted upon the shank and having oppositely disposed hooked lugs engaging the flange whereby to effect a swivel connection between such jaw and the handle, and a curved laterally extending locking member interposed between one of said lugs and the outer face of the flange and designed to wedge between said lug and flange face to lock the handle against movement, the ends of the locking member being turned outwardly that is away from the flange and designed to engage the side faces of said lug whereby to limit the movements of the locking member.

2. A wrench, comprising a relatively movable jaw, a shank to which said jaw is connected, the shank being formed with screw threads, a hollow handle adapted to receive the shank and formed with interior screw threads designed to engage the threads of the shank, the handle being formed with an exterior annular flange, a relatively stationary jaw mounted upon the shank and formed with oppositely disposed hooked lugs engaging the flange and connecting said jaw with the handle, and a curved locking member partially encircling said flange and extending laterally and interposed between the flange and one of the hooked lugs, said locking member tapering from one end to the other in thickness and the locking member being provided with a toothed edge to engage the flange.

1,024,076. APPARATUS FOR BREWING TEA, COFFEE, AND OTHER BEVERAGES. THOMAS J. HOWLETT, New York, N. Y. Filed Dec. 13, 1911. Serial No. 665,459. (Cl. 53—3.)



1. In an apparatus of the character described, a liquid receptacle having a discharge outlet near its lower end, a cover for said receptacle, a porous bag and means for connecting the same to said cover, and a combined agitator and lifting device, part of said agitator extending up through said cover whereby the contents of the bag may be agitated without removing the cover, said cover being apertured to permit of the passage therethrough of part of said agitator.

2. In an apparatus of the character described, a liquid receptacle having a discharge outlet near its lower end, a cover for said receptacle, a porous bag and means for connecting the same to said cover, a combined agitator and lifting device engaging said bag, part of said agitator extending up through said cover whereby the same may be agitated without removing said cover, and means for holding said agitator in an elevated position within the receptacle, said cover being apertured to permit of the passage therethrough of said part of said agitator.

3. In an apparatus of the character described, a liquid receptacle having a discharge outlet near its lower end, a cover for said receptacle, a porous bag and means for connecting the same to said cover, and an agitator having a stirrup-like portion extending under said bag and up on each side thereof and piercing said cover at two points, said cover being suitably apertured to permit said agitator to pass therethrough.

4. In an apparatus of the character described, a liquid receptacle having a discharge outlet near its lower end, a cover for said receptacle, a porous bag and means for connecting the same to said cover, and an agitator having a stirrup-like portion extending under said bag and up on each side thereof and piercing said cover at two points, said cover being suitably apertured to permit said agitator to pass therethrough, said cover also having an opening for the admission of liquid to the inside of the bag supported thereby.

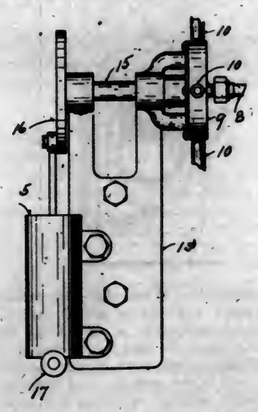
5. In an apparatus of the character described, a liquid receptacle having a discharge outlet near its lower end, a cover for said receptacle, a porous bag and means for detachably connecting the same to said cover, means whereby said bag and its contents may be agitated, said cover being suitably apertured to permit of the passage therethrough of part of said agitator, and a part of said agitator passing through said apertured portion of said cover whereby said agitator may be operated without removing said cover from said receptacle.

[Claims 6 to 8 not printed in the Gazette.]

1,024,077. STARTING DEVICE FOR INTERNAL-COMBUSTION ENGINES. CHARLES FRANCIS JENKINS, Washington, D. C. Filed June 18, 1910. Serial No. 567,683. (Cl. 123—180.)

The combination with a series of engine cylinders, of a carbureter, a reservoir, a pump drawing gas from the carbureter and forcing it into the reservoir, a valve preventing return of the gas to the carbureter, a valve normally preventing the return of the gas from the reservoir

to the pump, means whereby excess of pressure in the reservoir holds the last mentioned valve open, a distributer casing in open communication with said reservoir, conduits leading from the distributer to the cylinders,



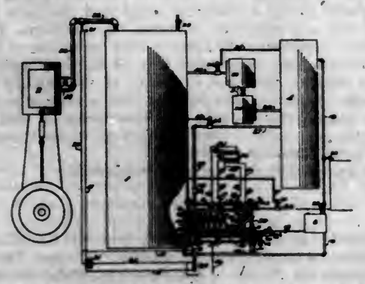
respectively, hand operated valves normally closing all said conduits, and a distributer valve in said casing adapted to keep said reservoir at all times in communication with at least one of said conduits.

1,024,078. TIRE-REPAIR DEVICE. CHARLES FRANCIS JENKINS, Washington, D. C. Filed Sept. 18, 1911. Serial No. 649,878. (Cl. 152—24.)



A single piece metal structure of lattice-like form having hooked ends adapted to engage opposite edges of pneumatic-tire rims, to confine a section of the tire thereunder.

1,024,079. INTERNAL-COMBUSTION GENERATOR. IRVING C. JENNINGS, South Norwalk, Conn. Filed Oct. 29, 1907. Serial No. 399,736. (Cl. 60—36.)



1. In an internal combustion generator, a combustion chamber, means for introducing fuel and air separately thereinto, means for raising the temperature within the chamber to a sufficient degree to ignite the fuel and air, and means for automatically igniting the said fuel and air when the said temperature falls below the ignition point.

2. In an internal combustion generator, a combustion chamber, an air jacket surrounding the same, a fuel nozzle projecting into the chamber, a pipe connecting said air jacket with said nozzle, means for introducing fuel through said nozzle and air through said pipe into the chamber, means for igniting said fuel and air, and a storage tank for receiving the products of combustion from said combustion chamber.

3. In an internal combustion generator, a combustion chamber, an air supply therefor, a fuel nozzle projecting into the chamber, a pipe coil within said chamber connecting said supply with said nozzle, means for introducing fuel through said nozzle and air through said pipe into the chamber, and means for heating said pipe to a degree sufficient to ignite said fuel and air.

4. In an internal combustion generator, a combustion chamber, an air jacket surrounding the same, a fuel nozzle projecting into the chamber, a pipe coil within said chamber connecting said jacket with said nozzle, means for introducing fuel through said nozzle and air through said pipe into the chamber, and means for heating said pipe to a degree sufficient to ignite said fuel and air.

5. In an internal combustion generator, a combustion chamber, an air jacket surrounding the same, a fuel nozzle projecting into the chamber, a pipe coil within said chamber connecting said jacket with said nozzle, means for introducing fuel through said nozzle and air through said pipe into the chamber, means for heating said pipe to a degree sufficient to ignite said fuel and air, and a storage tank for receiving the products of combustion from said combustion chamber.

[Claims 6 to 21 not printed in the Gazette.]

1,024,080. AZO DYE. HEINRICH JORDAN and WILHELM NEELMEIER, Leverkusen, near Cologne, Germany, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Nov. 10, 1911. Serial No. 659,571. (Cl. 8—1.)

1. The herein described new dyestuffs which are after being dried and pulverized in the shape of their alkaline salts dark powders soluble in water; yielding upon reduction with stannous chlorid and hydrochloric acid a para-diamin, a diamin, 2.7-diamino-8-oxynaphthalene-6-sulfonic acid and aminopyrazolone; dyeing cotton in green to greenish-blue shades, which on being diazotized and developed on the fiber with beta-naphthol produce dyeings very fast to washing and to light and capable of being discharged with hydrosulfite to a very pure white, substantially as described.

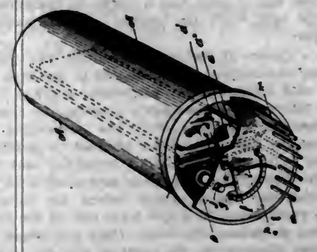
2. The herein described new dyestuff which is after being dried and pulverized in the shape of its sodium salt a dark powder soluble in water with a pure green color; yielding upon reduction with stanous chlorid and hydrochloric acid 1.4-phenylenediamin-6-sulfonic acid, 1.4-naphthylenediamin-6-sulfonic acid, 2.7-diamino-8-oxynaphthalene-6-sulfonic acid and 1-phenyl-3-methyl-4-amino-5-pyrazolone; dyeing cotton directly in bluish-green shades, which when diazotized and developed with beta-naphthol turn into slightly bluer shades of excellent fastness to washing and to light and capable of being discharged with hydrosulfite to a very pure white, substantially as described.

1,024,081. AZO DYE. HEINRICH JORDAN and WILHELM NEELMEIER, Leverkusen, near Cologne, Germany, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany, a Corporation of Germany. Filed Nov. 10, 1911. Serial No. 659,572. (Cl. 8—1.)

1. The herein described new dyestuffs which are after being dried and pulverized in the shape of their alkaline salts dark powders soluble in water; yielding upon reduction with stannous chlorid and hydrochloric acid a para-diamin, a diamin, 2.7-diamino-8-oxynaphthalene-6-sulfonic acid and aminomethylketol; dyeing cotton in green to greenish-blue shades, which on being diazotized and developed on the fiber with beta-naphthol produce dyeings very fast to washing and to light and capable of being discharged with hydrosulfite to a very pure white, substantially as described.

2. The herein described new dyestuff which is after being dried and pulverized in the shape of its sodium salt a dark powder soluble in water with a pure green color; yielding upon reduction with stannous chlorid and hydrochloric acid 1.4-naphthylenediamin-6-sulfonic acid, 2.7-diamino-8-oxynaphthalene-6-sulfonic acid and aminomethylketol; dyeing cotton directly in green shades, which when diazotized and developed with beta-naphthol turn into slightly bluer shades of excellent fastness to washing and to light and capable of being discharged with hydrosulfite to a very pure white, substantially as described.

1,024,082. FILTERING APPARATUS. DAVID J. KELLY, Salt Lake City, Utah, assignor to Kelly Filter Press Company, Salt Lake City, Utah, a Corporation. Filed Mar. 3, 1910, Serial No. 547,029. Renewed Jan. 3, 1912. Serial No. 669,237. (Cl. 75—86.)



1. The combination with a filter tank, of a supplemental filter within the same and upon which the solid material accumulates, means connecting with said supplemental filter and operating in the contents of the tank and serving as a compensating balance for said filter, and a visual means for indicating the cake thickness on the supplemental filter.

2. The combination with a filter tank having a main filter upon which the solid material accumulates, of a supplemental filter within the tank and upon which the solid material also accumulates, a buoyant member connecting with the supplemental filter and operating in the contents of the tank and serving as a compensating balance for the supplemental filter, and a visual indicator on the outside of the tank operated by the supplemental filter and buoyant member for disclosing the thickness of the caked material on said supplemental filter.

3. The combination with a tank having a main filter upon which the solid material accumulates, of a supplemental filter within the tank and upon which the solid material also accumulates, a float connected to move in unison with the supplemental filter, and a visual indicator on the outside of the tank operated by the rise and fall of the filter and float within the contents of the tank and for indicating the cake thickness on the filters.

4. The combination with a tank having a main filter upon which the solid material accumulates, of a supplemental filter within the tank and submerged therein and upon which the solid material also accumulates, a float connected to move in unison with the supplemental filter, a pipe to which the supplemental filter and float are connected, said pipe being turnably mounted, a pointer fixed to the pipe outside the tank, and a graduated scale outside the tank over which the free end of the pointer is movable.

5. The combination with a tank having a main filter upon which the solid material accumulates, a pipe turnably mounted in the tank and projecting both inside and outside thereof, a supplemental filter and a float both connected to said pipe inside the tank turnable in unison with the pipe, said pipe adapted to communicate with the interior of the supplemental filter, upon which latter the solid material also accumulates, a pointer fixed to the pipe outside the filter, a weight adjustable upon the pointer, and a graduated scale outside the filter over which the free end of the pointer is movable.

[Claims 6 and 7 not printed in the Gazette.]

1,024,083. CAR-COUPLING. WILLIAM KELSO and JOSEPH KELSO, Pittsburgh, Pa., assignors to McConway & Torley Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Sept. 8, 1909. Serial No. 516,768. (Cl. 213—10.)



1. In a car coupler, the combination with a coupler head and a knuckle pivotally mounted thereon, of a horizontally rotatable catch for locking said knuckle, and a horizontally rotatable supplemental lock pivotally connected to said catch.

2. In a car coupler, the combination with a coupler head and a knuckle pivotally mounted thereon, of means for locking said knuckle in coupled position, a supplemental lock pivotally mounted on said knuckle locking means, and yielding means interposed between the coupler head and said supplemental lock.

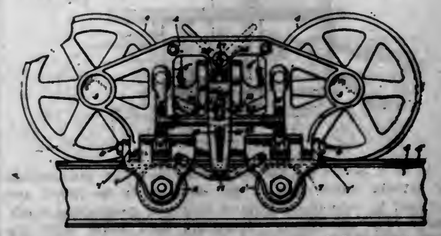
3. In a car coupler, the combination with a coupler head and a knuckle pivotally mounted thereon, of pivoted means for locking said knuckle in coupled position, a supplemental lock pivotally mounted on said knuckle locking means, and means for causing said supplemental lock to rotate upon said knuckle locking means and also to rotate about the pivotal point of said knuckle locking means.

4. In a car coupler, the combination with a coupler head and a knuckle pivotally mounted thereon, of a pivoted catch for locking said knuckle, a supplemental lock pivotally mounted upon said catch, and a device for moving said catch to an unlocked position, said device being movable with respect to said catch and supplemental lock and being adapted to actuate each.

5. In a car coupler, the combination with a coupler head and a knuckle pivotally mounted thereon, of a catch for locking said knuckle, a supplemental lock pivotally mounted on said catch, and a device for moving said catch to an unlocked position, said device including means forming a connection between the said catch and coupler head.

[Claims 6 to 12 not printed in the Gazette.]

1,024,084. TRACTION-INCREASING AND SAFETY DEVICE. ALCUIN E. KINTNER, Painesville, Ohio. Filed Apr. 21, 1910. Serial No. 556,793. (Cl. 105—99.)



1. In a traction system, a rail, a wheeled support movable on said rail, a traction increasing device movable with said wheeled support and normally operating on an opposing surface relative to the surface upon which said wheeled support moves, a brake mechanism adapted to engage a wheel or wheels of said wheeled support, with means for bringing into cooperation both the traction increasing device and the brake.

2. In a traction system, a rail, a wheeled support movable longitudinally of said rail, traction increasing devices

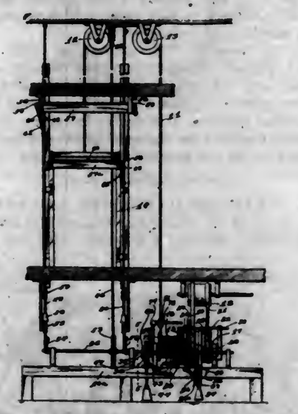
carried by said support, and normally operating on an opposing surface of said rail, a brake mechanism adapted to engage the wheels of said support and to co-act with the traction increasing device, with means for bringing into coöperation the traction increasing devices and the brake mechanism.

3. In a traction system, a rail, a wheeled support movable longitudinally to said rail and traction increasing device carried by or movable with said support and normally operating on an opposing surface relative to the surface upon which said wheeled support moves, said traction increasing devices having vertical and lateral movement to and from their normal position, a brake mechanism adapted to engage the wheels of said support and to coöperate with said traction increasing devices with means for bringing into action said coöperation for the purpose set forth.

4. In a traction system, a rail, a wheeled support movable on said rail, and traction increasing devices carried by said support and normally operating on an opposing surface of said rail, said devices having vertical and lateral movements to and from their normal position, brake mechanisms adapted to engage the wheels of said support, and a single motive mechanism for bringing into action the movements of the traction increasing device and the brake mechanism.

5. In a traction system, a rail, a wheeled support movable on said rail, a traction increasing device movable with said support and normally operating on the surface opposed to the surface upon which the wheeled support operates, said traction increasing device having a vertical and lateral movement to and from their normal position, with means for locking said device in operative position in relation or juxtaposition to the rail; said locking means being operated through the same motive power that operates to impart the movement to the traction increasing device.

1,024,085. SAFETY DEVICE FOR ELEVATORS. FRANK A. KRENZ, St. Paul, Minn., assignor of one-half to John B. Flanagan, St. Paul, Minn. Filed May 8, 1911. Serial No. 625,715. (Cl. 187—38.)



1. In a device of the class described, the combination of driving mechanism, a car adapted to be lifted and lowered by said mechanism, a rotatable controlling shaft, means for operatively connecting said shaft with the driving mechanism, a lever having a dual fulcrum, said lever being pivoted on one fulcrum when the car is ascending and upon the other when the car is descending, means for connecting said lever with the controlling shaft, a weight on the end of the lever, and manually operated means for rotating said shaft.

2. In a device of the class described, the combination of driving mechanism, a car adapted to be lifted and lowered by said mechanism, a rotatable controlling shaft, a lever having two fulcrums, said lever being pivoted on one fulcrum when the car is ascending and upon the other when the car is descending, means for connecting the lever with the controlling shaft, a weight on the end of the lever adapted to yieldingly hold the same in its normal position engaging said fulcrums, means for operatively connecting said shaft with the driving mechanism, and manually operated means for rotating said shaft to station and lock the lever out of its normal position and release the same from its locked position.

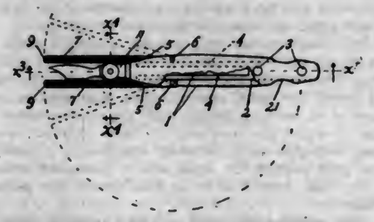
3. In a device of the class described, the combination of driving mechanism, a car adapted to be lifted and lowered by said mechanism, a rotatable controlling shaft, a lever in operative connection with said shaft and having a dual fulcrum, a weight on the lever, said lever being adapted to normally engage its fulcrums and pivot alternately thereon, means in operative connection with said shaft for starting, stopping and throwing the driving mechanism out of gear and a brake in operative connection with said shaft for locking said mechanism when out of gear.

4. In a device of the class described, the combination of driving mechanism, a car adapted to be lifted and lowered by said mechanism, a controlling shaft, a lever having two fulcrums for alternately pivoting the same, means for connecting the lever with the controlling shaft, a weight on the end of the lever adapted to yieldingly hold the same in its normal position engaging said fulcrums, means for operatively connecting said shaft with the driving mechanism, hand-operated means for rotating said shaft to station and lock the lever out of its normal position and to release the same from its locked position, and means adjacent to the path of the car in operative connection with said shaft and adapted to rotate the same for releasing said lever from its locked position.

5. In a device of the class described, the combination of driving mechanism, a car adapted to be lifted and lowered by said mechanism, a rotatable controlling shaft, a lever having two fulcrums, means for connecting the lever with the controlling shaft, a weight on the end of the lever adapted to yieldingly hold the same in its normal position engaging said fulcrums, means in operative connection with said shaft for controlling said driving mechanism, hand-operated means for rotating said shaft to station and lock the lever out of its normal position upon either fulcrum and to release the same from its locked position, and means in the car in operative connection with said shaft to rotate the same and release said lever from its locked position.

[Claims 6 to 16 not printed in the Gazette.]

1,024,086. BLADE-PROTECTING KNIFE. WALTER R. LAINE, Los Angeles, Cal. Filed Apr. 7, 1911. Serial No. 619,526. (Cl. 30—9.)

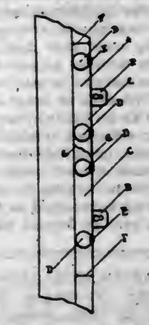


1. In a knife, a handle consisting of a member having resilient limbs and a pair of side plates covering said limbs, said plates having side portions extending laterally beyond said limbs, a double-edged blade attached to one end of said handle, and a pair of blade-protecting arms pivoted to and between the edge portions of said plates, each of said arms having a heel portion in engagement with one of said resilient limbs to hold said arm yieldingly in a blade-protecting position or in a completely retracted position.

2. In a knife, a pair of side plates, an elongated spring member having a solid portion secured between one end of said side plates and a pair of spring limbs projecting toward the other end of said side plates, said side plates extending laterally beyond said limbs, a blade attached to the end of the knife toward which said limbs extend, and a pair of pivoted blade-protecting arms, said arms having heel portions upon which said limbs operate to hold said arms yieldingly extended along the edges of the blade to protect the same, or oppositely extended in the folded position between said side plates.

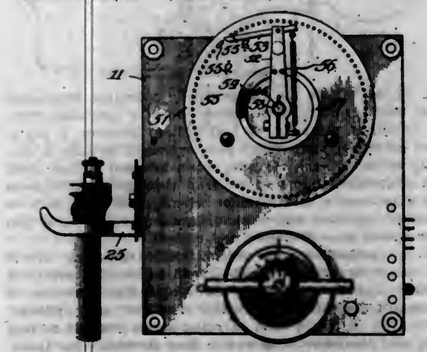
3. In a knife, a handle, a blade, means to secure said blade to one end of said handle, a protecting arm carried by said handle and adapted to swing into position parallel to said blade to protect an edge thereof, and a rotatable sleeve carried by said arm, said sleeve being adapted to operate as an anti-friction device in sharpening the knife.

1,024,087. CORSET-STEEL REINFORCER. LEMUEL W. LITCH, Lynn, Mass. Filed Mar. 12, 1909. Serial No. 483,074. (Cl. 2—76.)



A reinforcing member for corset-steels, comprising a spring strip of such length as to extend along a considerable portion of the length of the corset-steel, and a plurality of separate, independently formed, hard-tempered or rigid flanges attached to said spring strip, said flanges having one end spaced apart and lying in parallel relation to said spring strip.

1,024,088. SIGNAL-TRANSMITTER FOR TELEPHONE-EXCHANGES. GEORGE W. LORIMER, Piqua, Ohio, assignor, by mesne assignments, to Western Electric Company, a Corporation of Illinois. Filed Apr. 11, 1906. Serial No. 311,139. Renewed Aug. 7, 1911. Serial No. 642,818. (Cl. 179—90.)



1. In a signal transmitter for telephone exchanges, a spring-driven gear-train, manual winding means therefor, an electromagnetic escapment for said gear-train under control of the central office, a dial comprising adjacent series of contacts, a brush driven by said gear-train and adapted successively to engage all the contacts of said dial, a disk carried by said manual winding means and having a notch in its edge; and a bell crank lever normally engaging said disk in its notch and normally extending near a movable part of said escapement, said bell crank lever being adapted to be moved when said manual winding means is operated and then to be held by the edge of said disk in such position that it extends into the path of said movable part of said escapement whereby said escapement is mechanically locked against electromagnetic operation during the act of winding.

2. In a signal transmitter, a spring-driven gear-train, manual winding means therefor, an electromagnetic escapement for said gear-train, a dial comprising adjacent series of contacts, a brush driven by said gear-train and adapted successively to engage all the contacts of said dial, and a lever positioned to engage the movable part of said manual winding means and a movable part of said escapement, whereby by the movement of said winding means to institute a call, said lever is moved and said escapement is actuated mechanically to advance said brush from its normal position.

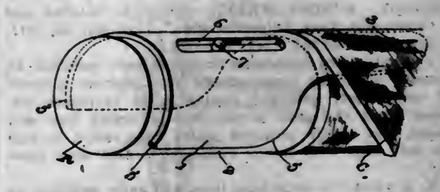
3. In a signal transmitter for automatic exchanges, a main-spring and a gear-train driven thereby, an electromagnetic escapement for said gear-train, a dial comprising adjacent series of contacts, a brush driven by said gear-train and adapted to engage the contacts of said dial, and manual winding means for said main-spring self-locking against return to normal position when said main-spring is partly wound and self-locking against further winding after return to normal position and before full operation of said gear-train.

4. In a signal transmitter for automatic exchanges, a main-spring and a gear-train driven thereby, an electromagnetic escapement for said gear-train, a dial comprising adjacent series of contacts, a brush driven by said gear-train and adapted to engage the contacts of said dial, and manual winding means for said main-spring self-locking against return to normal position when said main-spring is partly wound and self-locking against further winding after return to normal position and before full operation of said escapement.

5. In a signal transmitter for telephone exchanges, a main-spring, a gear-train driven thereby, an electro-magnetic escapement for said gear-train, a circuit for said escapement, a contact dial, a brush adapted successively to engage the contacts thereof, and manual winding means for said main-spring self-locking against return to normal position when said main-spring is partly wound and adapted to interrupt said escapement circuit when the winding means is not in normal position.

[Claims 6 to 12 not printed in the Gazette.]

1,024,089. CLOTH-ROLL GRIP. WALTER S. MAGEE, Bath, S. C. Filed Oct. 6, 1911. Serial No. 653,231. (Cl. 242—74.)



1. The combination with a cloth roller provided with a pin near the end thereof, of a resilient, open-sided roller embracing barrel having a slot formed therein, and a cloth engaging finger formed on the barrel, said pin being adapted to fit in the slot of the barrel.

2. The combination with a cloth roller provided with a pin near the end thereof, of a cloth grip embodying a resilient tubular body having an open side and provided with a slot, and a cloth engaging finger formed on the tubular body, said grip being adapted to embrace the roller with the slot in engagement with the pin.

1,024,090. ELASTIC TIRE. THOMAS BALLARD MARCHANT, ARTHUR GEORGE MARCHANT, and GEORGE PERCY MARCHANT, London, England. Filed Apr. 22, 1907. Serial No. 369,660. (Cl. 152—7.)



1. The combination with a vehicle wheel and its rim, of an elastic tire, rods passing through said tire, clamping rings wedge-shaped in cross-section arranged laterally of the rim and tire and provided with slots into which the rods project and having inclined surfaces against which the ends of the rods will bear and by which they are caused to move toward the rim of the wheel, and bolts passing through the rim of the wheel and said rings, all coöperating substantially as and for the purposes specified.

2. The combination with a vehicle wheel and its rim, of an elastic tire, rods passing through said tire, sleeves surrounding said rods, clamping rings wedge-shaped in cross-section arranged laterally of the rim and tire and provided with slots into which the rods project and having inclined surfaces against which the ends of the rods will bear and by which they are caused to move toward the rim of the wheel, and bolts passing through the rim of the wheel and said rings all coöperating substantially as and for the purpose specified.

3. The combination with a vehicle wheel and its rim, said rim having depressions M, of an elastic tire, rods passing through said tire, clamping rings wedge-shaped in cross-section arranged laterally of the rim and tire and provided with inclined surfaces against which the ends of the rods will bear and by which they are caused to move toward the rim of the wheel, and bolts passing through the rim of the wheel and said rings, all coöperating substantially as and for the purposes specified.

4. The combination with a vehicle wheel and its rim, of an elastic tire, rods passing through said tire, clamping rings wedge-shaped in cross section arranged laterally of the rim and tire and provided with slots into which the rods project and having inclined surfaces against which the ends of the rods will bear and by which they are caused to move toward the rim of the wheel, and said rings having depressions M' for the purpose stated, and bolts passing through the rim of the wheel and said rings, all coöperating substantially as and for the purpose specified.

1,024,091. SPRING-WHEEL. NOAH R. MARTIN and CLAYTON E. ROBY, Columbus, Ohio. Filed May 13, 1911. Serial No. 626,965. (Cl. 152—28.)

1. A wheel rim comprising inner and outer members, an annular perforated flange on the inner member, a series of transversely arranged slotted guide partitions disposed about the outer section and projecting over said flange, and axially arranged spring rods seated in said rib with their ends loosely connected to said outer member.

2. A wheel rim comprising inner and outer members, an annular perforated flange on the inner member, a series of transversely arranged integral slotted guide partitions disposed about the outer section projecting over said flange, a flexible member secured to the outer and inner members providing an inclosed lubricating space, and axially arranged metallic spring rods seated in said rib having their ends loosely connected to the outer member.

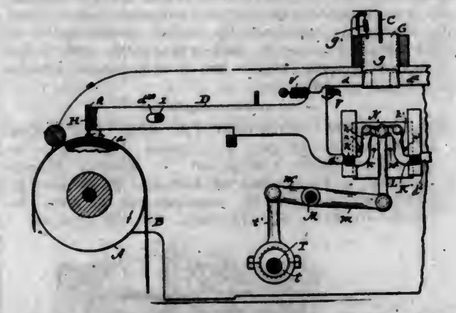
3. The combination with a wheel felly, of a wheel rim comprising an inner section formed with a base and an annular perforated flange, an outer section provided with a series of integral slotted transversely arranged partitions projecting over said flange, and axially arranged elastic rods seated in said flange and loosely connected to the outer member.



4. A wheel rim including an inner section formed with a base and an annular perforated flange, an outer section having a series of transversely arranged integral, slotted partitions projecting over said flange, and axially arranged metallic rods retained in said flange having their ends engaging recessed blocks in said outer section.

5. An inner rim including an inner section formed with a base and an annular perforated flange, an outer section having transversely arranged integral, slotted ribs projecting over said flange, oppositely disposed bearing blocks, having tapered recesses in said outer section, perforated bearing blocks in the perforated flange, and a series of axially arranged spring rods seated in the tapered recesses and passed through said perforated blocks.

1,024,092. MECHANISM FOR AUTOMATICALLY OPERATING LEVERS. THOMAS A. MCCALL, Cincinnati, Ohio. Filed July 22, 1911. Serial No. 639,997. (Cl. 197—20.)



1. In mechanism for automatically operating levers and other movable parts, the combination of a rotatable cylinder having a plurality of longitudinal grooves, a perforated controller strip which runs over said cylinder, a plurality of levers each carrying a pin adapted to rest upon said controller strip and to drop through holes therein into a groove on said cylinder whereby the lever will be displaced endwise, and mechanism adapted to engage the lever which is so displaced and rock it.

2. In mechanism for automatically operating levers and other movable parts, the combination of a rotatable cylinder having a plurality of longitudinal grooves, a perforated controller strip which runs over said cylinder, a plurality of levers each carrying a pin adapted to rest upon said controller strip and to drop through holes therein into a groove on said cylinder whereby the lever will be displaced endwise, mechanism adapted to engage the lever which is so displaced and rock it, and a slide associated with each lever and adapted to be moved thereby when the lever is rocked.

3. In mechanism for automatically operating levers and other movable parts, the combination of a rotatable cylinder having a plurality of longitudinal grooves, a perforated controller strip which runs over said cylinder, a plurality of levers each carrying a pin adapted to rest upon said controller strip and to drop through holes therein into a groove on said cylinder, whereby the lever will be displaced endwise, mechanism adapted to engage the lever which is so moved endwise and rock it, and means for returning the displaced lever to its normal position.

4. In mechanism for automatically operating levers and other movable parts, the combination of a rotatable cylinder having a plurality of longitudinal grooves, a perforated controller strip which runs over said cylinder, a plurality of levers each carrying a pin adapted to rest upon said controller strip and to drop through holes therein into a groove on said cylinder whereby the lever will be displaced, and a reciprocating depressor bar located behind all of said levers and adapted to engage a part of any lever which is displaced and to rock said lever.

5. In mechanism for automatically operating levers and other movable parts, the combination of a rotatable cylinder having a plurality of longitudinal grooves, a perforated controller strip which runs over said cylinder, a plurality of levers each carrying a pin adapted to rest upon said controller strip and to drop through holes therein into a groove on said cylinder whereby the lever will be displaced endwise, a depressor bar which lies behind all of the levers, two bell crank levers, to the lower end of which said depressor bar is fixed, two slides to which said bell crank levers are pivoted, means limiting the rocking movement of said bell cranks about their pivots, and means engaging the horizontal arms of said bell crank levers whereby they may be pushed up and down.

[Claims 6 to 9 not printed in the Gazette.]

1,024,093. COCK OR FAUCET. HENRY MUELLER, Decatur, Ill.; Ora B. Mueller and Adolph Mueller, executors of said Henry Mueller, deceased, assignors to H. Mueller Manufacturing Company, Decatur, Ill., a Corporation of Illinois. Filed Dec. 1, 1908. Serial No. 465,545. (Cl. 137—4.)



1. In a liquid shut off, the combination with the cock body, a valve seat therein, a valve, and a handle and shaft for moving the valve; of a cup within which the valve is slidably fitted with a permanently-open restricted passage between the cup and valve, and an open annular space between the cup and the cock body, said restricted passage forming the sole liquid feed and discharge to and from the interior of the closed end of the cup, the cup having its closed end behind the valve whereby it is held thereon by suction, the wall of the cup having perforations near its open end.

2. In a liquid shut-off, the combination with the cock body, a valve seat therein, an annular abutment exterior of said seat, a valve, and a handle and shaft for moving the valve; of a cup within which the valve is slidably fitted with a permanently-open restricted passage between the cup and valve, and an open annular space between the cup and the cock body, said restricted passage forming the sole liquid feed and discharge to and from the interior of the closed end of the cup, the cup having its closed end behind the valve whereby it is held thereon by suction, and having a body longer than the valve whereby its open end will engage said abutment before the valve strikes its seat, the wall of the cup having perforations near its open end.

3. In a liquid shut-off, the combination with a cock body, a valve seat therein, a valve whose stem projects loosely through said seat and is grooved, and a handle and shaft for moving said valve; of a cup within which the valve is slidably fitted with a permanently-open restricted passage between the cup and valve, and an open annular space between the cup and the cock body, said restricted passage forming the sole liquid feed and discharge to and from the interior of the closed end of the cup, the cup having its closed end behind the valve whereby it is held thereon by suction, the wall of the cup having perforations near its open end.

4. In a liquid shut-off, the combination with a cock body, a valve seat therein, an abutment exterior of said seat, a valve whose stem projects loosely through said seat and is grooved, and a handle and shaft for moving the valve; of a cup within which the valve is slidably fitted with a permanently-open restricted passage between the cup and valve, and an open annular space between the cup and the cock body, said restricted passage forming the sole liquid feed and discharge to and from the interior of the closed end of the cup, the cup having its closed end behind the valve whereby it is held thereon by suction, and having a body longer than the valve whereby its open end will engage said abutment before the valve strikes its seat, the wall of the cup having perforations near its open end.

5. In a liquid shut-off, the combination with the cock body, a valve seat therein, an annular abutment exterior of said seat, said seat projecting beyond the abutment toward the inlet, a valve, and a handle and shaft for moving the valve; of a cup within which the valve is slidably fitted with a permanently-open restricted passage between the cup and valve, and an open annular space between the cup and cock body, said restricted passage forming the sole liquid feed and discharge to and from the interior of the closed end of the cup, the cup having its closed end behind the valve whereby it is held thereon by suction, the wall of the cup having perforations near its open end.

[Claims 6 to 25 not printed in the Gazette.]

1,024,094. SELF-CLOSING FAUCET. JOHN MUELLER, Cleveland, Ohio. Filed Sept. 25, 1911. Serial No. 651,017. (Cl. 137—4.)

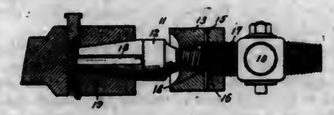


1. A faucet body and a cap thereon having an axial bore and studs at its top at each side of said bore, a valve stem extending through said cap between said studs and a handle pivotally engaged with said stem and operatively seated on said studs, the plane of connection between said handle and said valve stem being just be-

neath the top of said studs, whereby direct lift of the valve stem is promoted.

2. In self-closing faucets, a faucet body and a cap thereon having upward projections on its top, a lever handle having a head with side flanges provided with transverse holes and adapted to rest on said projections between said flanges, a valve stem having a hole coincident with the holes in said flanges and a pivot pin connecting the handle and stem through said holes a slight distance beneath the top of said projections.

1,024,095. DEVICE FOR MANIPULATING PIPE-FITTINGS. PHILIP MUELLER, Decatur, Ill., assignor to The H. Mueller Manufacturing Company, Decatur, Ill., a Corporation of Illinois. Filed Mar. 28, 1911. Serial No. 617,510. (Cl. 81—71.)



1. A device for manipulating pipe fittings comprising a stem member and a coupling member consisting of a screw threaded main body having a locking member midway its ends binding frictionally against the adjacent ends of the stem and the fitting.

2. A device for manipulating pipe fittings comprising a stem member and a coupling member, said coupling member being provided with threads in one direction engaging a pipe fitting, and threads in the opposite direction engaging the said stem member, and a locking member on the coupling member binding between the stem and the coupling members.

3. A device for manipulating pipe fittings comprising a stem member, and a coupling member for clamping the same to a fitting, said coupling member comprising a main body, and circular locking means provided with frictional surfaces for binding engagement between the adjacent ends of the stem and the coupling member.

4. A device for manipulating pipe fittings comprising a stem member, a clamping member screw threaded to the stem member and adapted for screw threaded engagement with the fitting, and a locking member within the clamping member and having a lost motion connection therewith, said locking member being positioned to frictionally engage the end of the fitting and the end of the stem at the same time.

5. A device for the manipulation of pipe fittings comprising a stem member, and a coupling member having oppositely threaded ends, and a locking member midway of the ends, said stem member having coöperating threads engaging one end of the coupling member and having a frictionally engaging surface binding against the locking member, said coupling member engaging in the pipe fitting at its opposite end and having its locking member binding thereagainst.

[Claims 6 to 8 not printed in the Gazette.]

1,024,096. TOOL FOR INSERTING CORPORATION-COCKS. PHILIP MUELLER, Decatur, Ill., assignor to The H. Mueller Manufacturing Company, Decatur, Ill., a Corporation of Illinois. Filed Jan. 24, 1912. Serial No. 673,249. (Cl. 29—84.)

1. A tool of the character described comprising a sleeve provided with a surface for engaging a mating surface of a corporation cock, a locking member located within said sleeve and adapted to be pressed directly against an adjacent abutting portion of said cock in order to lock the same relatively to said sleeve, a shank carried by said sleeve and movable relatively to the latter for actuating said locking member, and means for preventing the removal of said shank from said sleeve.

2. A tool of the character described comprising a sleeve provided with a surface for engaging a mating surface of a corporation cock, a locking member connected with said sleeve and adapted to be pressed into abutting engagement with said corporation cock, and a screw threaded shank within said sleeve and non-detachable relatively thereto.



3. A tool of the character described comprising a sleeve provided with a surface for engaging a mating surface of a corporation cock, a locking member mounted loosely within said sleeve and provided with a face for abutting directly against an adjacent face of the corporation cock, said locking member being further provided with a face disposed upon the opposite side thereof from said first-mentioned face, a shank extending into said sleeve and provided with means controllable by rotation of said shank relatively to said sleeve for forcing said shank directly against said locking member, and means for preventing the removal of said shank from said sleeve.

4. A tool of the character described comprising a sleeve provided with a thread of fine pitch for engaging a mating thread of a corporation cock, said sleeve being further provided internally with a thread of coarser pitch, a revoluble shank engaging said sleeve and provided with a thread having a pitch mating said coarser pitch, a locking member located within said sleeve and provided with a face for abutting directly against the face of the corporation cock, and means for preventing the removal of said revoluble shank from said sleeve.

5. A tool of the character described, comprising a sleeve provided with a surface for engaging a mating surface of a corporation cock, a locking member mounted within said sleeve and provided with a face for abutting directly against an adjacent face of the corporation cock, said locking member being further provided with a face disposed upon the opposite side thereof from said first mentioned face, the locking member being also provided with a peripheral groove whereby it is held in said sleeve by suitable retaining means, said retaining means being so positioned with reference to the peripheral groove and abutting surface of the locking member and sleeve carrying it, so as to be free from strain during the manipulation, and a shank extending into said sleeve, and provided with means for rotating said shank relatively to said sleeve in order to force said shank directly against the locking member, and means for preventing the removal of said shank from said sleeve.

1,024,097. NON-REFILLABLE BOTTLE. SYLVIO LAWRENCE POLITO, San Francisco, Cal. Filed Sept. 11, 1911. Serial No. 648,608. (Cl. 215—68.)

In a non-refillable bottle, a neck having its orifice disposed to one side and vertically in the upper portion thereof, a plurality of barrier members disposed in said neck and adjacent to and over one another, said barriers having one side relatively straight and horizontally disposed and another side concaved, the upper-most barrier having its horizontally disposed side adjacent to said orifice and provided with a plurality of grooves therein, the next adjacent member having its concaved side opposite the concaved side of the last mentioned member and provided with a plurality of grooves therein, another of said barriers vertically disposed beneath the last mentioned barrier and provided with a circular beveled hole therein, a ball disposed within the two last mentioned barriers and



arranged to close said hole, and another barrier disposed beneath the last mentioned barrier referred to and having its concaved side disposed under said opening, said member being provided with a beveled hole therein and a ball disposed within the chamber formed by said barrier and the barrier over the same, substantially as described.

1,024,098. OSCILLATING ENGINE. ISAAC T. PRICE, Holton, Kans. Filed Feb. 28, 1908. Serial No. 418,246. (Cl. 121—43.)



1. An oscillating engine comprising a pair of curved and communicating quadrantal cylinders, a steam chest bolted rigidly between said quadrantal cylinders and in common to both, a pair of curved pistons having curved piston rods extended and arranged to work in said curved quadrantal cylinders, the pistons on opposite sides of said steam chest being arranged to move in opposite directions, a pair of connecting rods having a connecting joint with said piston rod, a crank shaft having a pair of cranks at angles to each other and coupled to said connecting rods, a pair of independent swinging guide arms having loose connection with the joint between said piston rods and connecting rods, and an axis central to the pair of quadrantal cylinders, and upon which are loosely mounted the inner ends of said pair of swinging guide arms.

2. An oscillating engine comprising a pair of curved and communicating quadrantal cylinders, a steam chest bolted rigidly between said quadrantal cylinders and in common to both, a pair of curved pistons having curved piston rods extended and arranged to work in said curved quadrantal cylinders, the pistons on opposite sides of said steam chest being arranged to move in opposite directions, a pair of connecting rods, a loose joint securing said connecting rods to said piston rods, a crank shaft having a pair of cranks at angles to each other and coupled to said connecting rods, a pair of independent swinging guide arms having loose connection with the connecting joint between the said piston rods and connecting rods, an axis central to the pair of quadrantal cylinders loosely carrying the inner ends of the pair of swinging arms, and circular stationary guides in the frame-work which receive and guide the outer ends of the swinging arms.

3. An oscillating engine comprising a pair of curved and communicating quadrantal cylinders, a steam chest bolted rigidly between said quadrantal cylinders and in common to both, a pair of curved pistons having curved piston rods extended and arranged to work in said curved quadrantal cylinders, the pistons on opposite sides of said steam chest being arranged to move in opposite directions, a pair of connecting rods having connecting joints with said piston rod, a crank shaft having a pair of cranks at angles to each other and coupled to said connecting rods, a pair of independent swinging guide arms having connection with the connecting joint between said piston rods and connecting rods, an axis central to the pair of quadrantal cylinders loosely carrying the inner ends of the pair of swinging arms, circular stationary guides in the frame-work, which receive and guide the outer ends of the swinging arms, vertical slide valves for the inlet and exhaust ports of said steam chest, vertical rods for the same and cams arranged on said crank shafts to operate said valves.

4. An oscillating engine comprising a pair of curved and communicating quadrantal cylinders, a steam chest bolted rigidly between said quadrantal cylinders and in common to both, a pair of curved pistons having curved piston rods extended and arranged to work in said curved quadrantal cylinders, the pistons on opposite sides of said steam chest being arranged to move in opposite directions, a pair of connecting rods having connecting joints with said piston rods, a crank shaft having a pair of cranks at angles to each other and coupled to said connecting rods, a pair of swinging arms having connection with the connecting joint between said piston rods and connecting rods, an axis central to the pair of quadrantal cylinders carrying the inner ends of the pair of swinging arms, circular stationary guides which receive and guide the outer ends of the swinging arms, vertical slide valves for the inlet and exhaust ports of said steam chest, vertical rods for the same, cams arranged on said crank shaft to operate said valves, sliding gates between each of said quadrantal cylinders and the steam chest arranged to cut off the steam from both or either of said pistons and stems to guide the same.

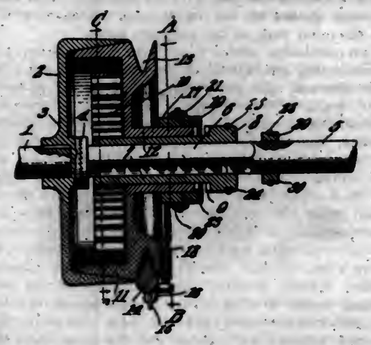
5. An oscillating engine comprising a pair of curved communicating quadrantal cylinders with pistons, a steam chest bolted rigidly between said curved quadrantal cylinders and forming a common clearance, and having inlet and exhaust ports, valves for the same and cut-off gates arranged to wholly cut off either cylinder from the steam chest.

[Claims 6 to 17 not printed in the Gazette.]

1,024,099. COMBINED ELASTIC CLUTCH AND ENGINE-STARTER. EDGAR U. G. REAGAN, San Antonio, Tex., assignor to Reagan Clutch Company, San Antonio, Tex., a Corporation. Filed Aug. 26, 1910. Serial No. 579,063. (Cl. 185—41.)

1. Mechanism of the class described including a drive shaft, a driven shaft, a clutch member mounted for rotation independently of the driven shaft, a spring connection between said member and shaft, means for holding the ends of the spring against movement relative to each other while under stress, means for placing one of the shafts in operative relation with the other shaft and then releasing the spring ends from their fixed relation, and means for automatically holding one of the spring ends against movement.

2. Mechanism of the class described including a motor shaft, a clutch member fixed relative thereto, a driven shaft, a clutch member loose thereon, a spring connection between the driven shaft and its clutch member, means for holding said connection inactive under stress, means for releasing the spring to actuate the motor shaft, means for automatically holding one of the spring ends against movement, and means operated by the motor shaft under its own power for storing energy in said spring.



3. Mechanism of the class described including a motor shaft, a driven shaft, a clutch member mounted for rotation independently of the driven shaft, a spring connection between said member and the shaft, means for holding the ends of the spring against relative movement while under stress, clutch members upon the shafts, means for successively shifting one of the shafts into engagement with the other shaft and releasing the spring ends from their fixed relation, and means for automatically holding one of the spring ends against movement.

4. Mechanism of the class described including a motor shaft, a driven shaft, coöperating toothed clutch members upon the shaft, a friction clutch member upon the motor shaft, a friction clutch member loosely mounted upon the driven shaft, a spring connection between said loose member and the driven shaft, means for holding said connection inactive while under stress, means for successively shifting the shafts into operative relation and for releasing the connection to actuate the driven shaft, and means for shifting the movable friction clutch member into engagement with the opposed member to store energy within said connection during the transmission of power from the motor to the driven shaft.

5. Mechanism of the class described including a motor shaft, a driven shaft, coöperating means upon the shafts for operatively connecting the same, a friction member fixedly connected to the motor shaft, a friction member loosely mounted upon the driven shaft, an elastic connection between the said loose member and the driven shaft, means for holding said connection inactive while under stress, means for successively placing the shaft in operative relation and releasing the connection to actuate the driven shaft, and means for placing the friction members in engagement to store energy within the spring connection during the rotation of the motor shaft under its own power.

[Claims 6 to 8 not printed in the Gazette.]

1,024,100. CAPSTAN-SCREW. ADOLPH C. RECKER, Oakville, Conn., assignor to Waterbury Mfg. Co., Waterbury, Conn., a Corporation. Filed Jan. 9, 1912. Serial No. 670,281. (Cl. 85—45.)

A capstan screw for use in piano actions, the said screw consisting of a threaded shank and an integral head, which latter comprises a cap or top and a plurality of peripherally arranged arms diverging from the shank and connecting the edge of the said cap with the said shank, and separated from each other by transversely arranged holes located directly beneath the said cap and extending to



the outer edges of the said arms and arranged at a right angle to the axis of the screw.

1,024,101. BRACELET. MEYER L. ROBBINS, New York, N. Y., assignor to Untermeyer-Robbins & Company, New York, N. Y., a Corporation of New York. Filed Dec. 16, 1911. Serial No. 666,101. (Cl. 63—7.)

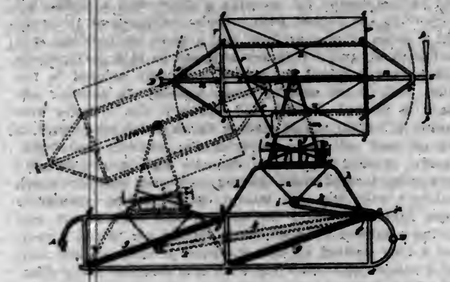


1. A bracelet comprising two hinged sections of tubular metal, a safety resilient band consisting of two strands of metal, one end of which band is secured tightly in one section, and the opposite free end of the band being located and movable within the other of said sections, one strand of the band near the fixed end of the latter being provided with a notch, and with a pin passing through the wall of its respective section, a pin secured within the section containing the free end of the band and inserted between the strands of the latter whereby to engage with the band to prevent its disengagement with the said section in which it moves, and a disk provided at the extreme end of the section in which said band moves, whereby said disk engages with said notch in the strand when the free ends of the two hinged sections are brought together, said disk having an opening therein, through which the band passes, of less width than said band when the strands of the latter are sprung apart.

2. A bracelet comprising two hinged sections formed of tubular metal, a safety resilient band comprising a continuous loop of metal, said band near one end having one strand thereof tightly secured in one of said hinged sections, the opposite strand near the same end of the band being provided with a notch, the opposite looped free end of the band being located and movable within the other of said hinged sections, said latter hinged section being provided at its extreme end with a disk formed with an opening through which the looped free end of the band passes, the opening in said disk being of less width than the band when the two strands of the latter are sprung apart, and a pin inserted and secured within the last-mentioned section and passing between the strands of said band whereby to prevent the latter from becoming disengaged from the section in which it moves, said disk located at the extreme end of one of the sections engaging said notch in the band when the free ends of the two hinged sections are brought together.

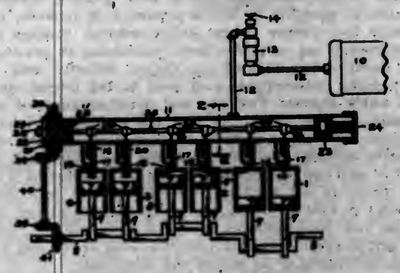
1,024,102. FLYING-MACHINE. ALEXIS ROGESTVENSKY, Moscow, Russia. Filed Sept. 2, 1909. Serial No. 515,840. (Cl. 244—2.)

1. The combination with a body and inclined parallel guides thereon; of a member slidable in the guides and maintained parallel to the body, elastic means between the member and body which are contracted upon starting and distended upon alighting, and flying mechanism carried by the member.



2. The combination with a body and inclined guides thereon; of a member slidable in the guides, resilient means between the member and body, a turn-table on the member and flying mechanism on the turn-table.

1,024,103. STARTING DEVICE FOR EXPLOSION-ENGINES. CHARLES C. ROTH, Indianapolis, Ind. Filed Sept. 25, 1911. Serial No. 651,142. (Cl. 123—181.)



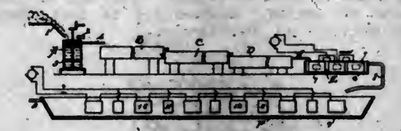
1. In a starter for explosion engines having a plurality of cylinders, the combination with spring-closed inlet valves, one for each cylinder, of a conduit, a separate tubular discharge from the conduit to each valve, a rod mounted to rotate in said conduit and having cams, means operated by the rotation of said cams for consecutively opening each valve, and means for supplying compressed air to the conduit.

2. In a starter for explosion engines having a plurality of cylinders, the combination of spring-closed inlet valves, one for each cylinder, of a conduit, a separate tubular discharge from the conduit to each valve, a rod mounted to rotate in said conduit and having cams, a wheel operatively connected with the crank-shaft of the engine, means for supplying compressed air to the conduit, means for operatively coupling the rod to said wheel, means for normally uncoupling the rod and wheel, means operated by the pressure of air in the conduit for operatively coupling the rod and wheel, and for starting the engine, and means operated by the rotation of the cams on said rod for consecutively opening each valve.

3. In a starter for explosion engines having a plurality of cylinders, the combination with spring-closed inlet valves, one for each cylinder, of a conduit, a separate tubular discharge from the conduit to each valve, a rod mounted to rotate in said conduit and having cams, said rod having longitudinal adjustment, a piston mounted on said rod and making an air tight fit with the inner walls of the conduit, a wheel operatively connected with the crank-shaft of the engine, means for operatively coupling the rod to said wheel, a spring to move the rod longitudinally and uncouple it from the wheel, means for supplying compressed air to the conduit to remove the piston and couple the rod to the wheel and to start the engine thereby causing said rod and its cams to rotate, and means operated by the rotation of the cams for consecutively opening each valve.

4. In a starter for explosion engines having a plurality of cylinders, the combination with spring-closed inlet valves, one for each cylinder, of a conduit, a separate tubular discharge from the conduit to each valve, a rod mounted to rotate in said conduit, and having cams, said rod having longitudinal adjustment, a disk operatively connected with the crank-shaft of the engine, a second disk mounted on said rod and having a pin to enter a hole in the other disk, means for directing the pin into its hole when the two disks are brought together, means operated by the rotation of said rod and cams for consecutively opening each valve, and means for supplying compressed air to the conduit.

1,024,104. METHOD OF SEPARATING AND PURIFYING FULLERS' EARTH AND ANALOGOUS MATERIALS. CHARLES C. RUPRECHT, Blakely, Ala. Filed Aug. 5, 1910. Serial No. 575,829. (Cl. 204—1.)



1. The process for separating fullers' earth from organic impurities consisting in mixing the earth with water, rendering the water electrically conductive, and then submitting the water to electrolytic action, whereby the organic impurities are destroyed and the earth precipitated.

2. A process for purifying and separating fullers' earth consisting in mixing the earth with water, decanting the mixture from sand and like impurities in suitable tanks, adding chemicals to render the liquid conductive, and electrolyzing the solution so formed.

3. An apparatus for separating and purifying fullers' earth comprising a device for mixing the earth with water, means for removing the sand by gravity, and means for electrolyzing the mixture of earth and water.

4. An apparatus for separating and purifying fullers' earth comprising a device for mixing earth with water, means for removing the sand by gravity, means for electrolyzing the mixture of earth and water, and means for decanting the water from the deposited earth.

5. A process for recovering fullers' earth from its suspension in water consisting in causing the earth and water to pass rapidly through an electrolytic cell, and afterward decanting the water and drying the deposited earth.

[Claims 6 to 11 not printed in the Gazette.]

1,024,105. SUPPORTER FOR PLUMES FOR HEADWEAR AND OTHER PURPOSES. FLORENCE A. SHAFER, Los Angeles, Cal. Filed Apr. 1, 1911. Serial No. 618,479. (Cl. 2—108.)

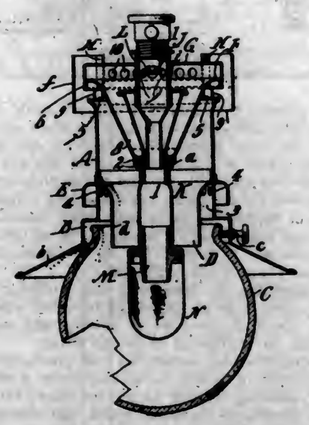


1. A supporter for plumes comprising a clamping portion provided with jaws having serrated ends adapted to hold the stem of plumes, and an adjusting bolt, removably fixed to one of the jaws of the said clamping portion, the opposite end of said bolt being screw-threaded to receive the clamping nut for compressing and releasing the

jaws of the said clamping portion from the stem of the plume; the said wire portion removably fastened at one end to the said clamping portion and the opposite end thereof removably secured to the article which the plume is adapted to ornament.

2. A supporter for plumes comprising a clamp provided with jaws adapted to be adjustably secured to the stem of the plume, the said ends of the clamp being serrated, a clamping bolt, screw-threaded at one end and the opposite end thereof removably fastened to one of the jaws of the clamp, a screw-threaded nut adapted to adjust the jaws of the clamp to stem of the plume, the wire portion of the supporter removably fastened to one of the jaws of the clamp at one thereof and the opposite end of the said wire removably secured to the article which the plume is designed to ornament.

1,024,106. WINDPROOF CASING FOR INVERTED INCANDESCENT GAS-BURNERS. KARL A. A. STAAHLGREN, New York, N. Y., assignor, by mesne assignments, to James F. Allee, Dover, Del. Filed Oct. 21, 1910, Serial No. 588,297. Renewed Aug. 24, 1911. Serial No. 645,723. (Cl. 240—35.)



1. A casing for "Bunsen" burners comprising a cylinder open at the bottom and having a lateral outlet leading through its upper part, a cap on said cylinder embodying an inwardly and downwardly directed deflector and an overhanging outwardly located hood having a lateral opening which registers with the said outlet of the cylinder, a dome fitted over said cap and having a lateral air-inlet and a centrally located vertical opening for engaging around a burner, and a ring secured to the periphery of the hood of said cap and having a recess communicating with said air-inlet, and partitions separating said air-inlet from said outlet, substantially as shown and described.

2. A casing for "Bunsen" burners comprising a cylinder flared at top and bottom, open at the bottom and having means for securing a globe, said cylinder having near its lower end an annular series of perforations, and an overhanging hood surrounding said perforations, and a chimney adjacent to said perforations and having a flared top which is secured to the inner wall of the said cylinder, the cylinder also having a lateral outlet leading through its upper part, a cap on said cylinder embodying an inwardly and downwardly directed cup-shaped deflector and an overhanging outwardly located hood having a lateral opening which registers with the said outlet-opening of the cylinder, a dome fitted over said cap and having a lateral air-inlet opening and a centrally located vertical opening for engaging a burner-tube, and a ring secured to the outer periphery hood of said cap and having a recess communicating with said air-inlet opening, and partitions separating said air-inlet opening from said outlet openings substantially as shown and described.

3. The combination, with an inverted incandescent gas burner of the "Bunsen" variety, of a casing comprising a cylinder flared at top and bottom, open at the bottom and having means for securing a globe, and a bridge for supporting the burner, said cylinder having near its lower end a series of perforations, and a hood surrounding said perforations, and a chimney adjacent to said perforations and having a flared top which is closely secured to the inner wall of the said cylinder, whereby an annular air-space is formed around said chimney, the cylinder also having a lateral outlet leading through its upper part, a cap on said cylinder embodying an inwardly and downwardly directed cup-shaped deflector and an overhanging outwardly located hood having a lateral opening which registers with the said lateral outlet of the cylinder, a dome fitted over said cap and around said burner and having a lateral air-inlet for supplying air to the burner, and a ring secured around the hood of said cap and having a recess communicating with said air-inlet and a channel which communicates with the said outlet of the cylinder and discharges above the level of said air-inlet, substantially as shown and described.

4. A casing for "Bunsen" burners comprising a cylinder flared at top and bottom, open at the bottom and having an interior bridge for supporting a burner, and means in its lower part for hanging a globe, said cylinder having an annular series of perforations, and a hood surrounding said perforations, and a chimney adjacent to said perforations and having a flared top which is closely secured to the inner wall of the said cylinder, whereby an annular air-space is formed around said chimney, the cylinder also having lateral outlet-openings through its upper part, a cap on said cylinder embodying an inwardly and downwardly directed cup-shaped deflector and an overhanging outwardly located hood having lateral openings which register with the said outlet-openings of the cylinder, a dome fitted over said cap and having lateral air-inlets and a centrally located vertical opening for engaging around a burner, and a ring secured around the hood of said cap and having recesses communicating with said air-inlets and vertical channels closed at their ends adjacent to said air-inlets, said channels open at top and bottom and communicating with said outlets of the cylinder, said channels extended above the level of the said air-inlets, substantially as shown and described.

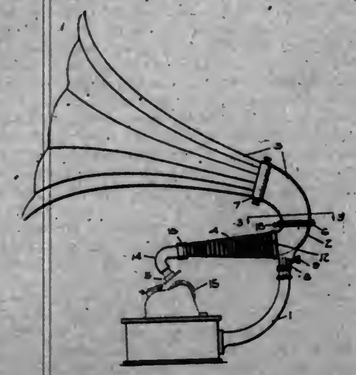
1,024,107. NUT-LOCK. EDWARD W. TAYLOR, Salt Lake City, Utah. Filed Aug. 7, 1911. Serial No. 642,708. (Cl. 151—23.)



1. A nut lock comprising in combination an externally threaded member and a member provided with an internally threaded bore engaged by said externally threaded member, one of said members being provided with a groove located adjacent the other member and extending parallel to the longitudinal central axis thereof, said groove having oppositely inclined flat bottom surfaces, and a pin located in said groove and engaging at one side against both of said flat, inclined bottom surfaces along separated lines of contact and at its opposite side against the other threaded member.

2. A nut lock comprising in combination an externally threaded member, and a member provided with an internally threaded bore engaged by said externally threaded member, one of said members being provided with a groove located adjacent the other member and extending parallel to the longitudinal central axis thereof, said groove having flat, bottom surfaces oppositely inclined at an angle of substantially 70° to a radial plane extending through the longitudinal central axis of said threaded members and a pin located in said groove and engaging at one side against both of said flat, inclined bottom surfaces along separated lines of contact and at its opposite side against the other threaded member.

1,024,108. HORN FOR TALKING-MACHINES. THOMAS H. TOWELL, Cleveland, Ohio, assignor to The United States Phonograph Company, Cleveland, Ohio, a Corporation of Ohio. Filed July 29, 1910. Serial No. 574,467. (Cl. 181—2.)



1. In a talking machine, the combination of a record support, a generally tapering amplifying horn proper mounted at its smaller end adjacent to said support, a flexible tubular extension to such smaller end consisting of coiled interlocking strips, such extension being tapered to conform with the taper of said amplifying horn and projecting over said record support, and a sound-box connected with the outer end of such extension.

2. In a talking machine, the combination of a record support, a curved amplifying horn proper of generally tapering form pivotally mounted at its smaller end adjacent to said support, a flexible tubular extension to such smaller end consisting of coiled interlocking strips of metal, such extension being tapered to conform with the taper of said amplifying horn and projecting over said record support, and a sound-box connected with the outer end of said extension.

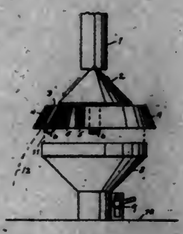
3. In a talking machine, the combination of a record support; a tubular elbow with substantially right angularly related openings mounted adjacent to said support with one such opening directed upwardly; a generally tapering amplifying horn proper connected with such upwardly directed opening; a flexible sound conveyer consisting of interlocking strips connected with the other opening in said elbow, said conveyer being tapered to conform with the taper of said amplifying horn and projecting over said record support; and a sound-box connected with the outer end of said conveyer.

4. In a talking machine, the combination of a record support; a tubular elbow with substantially right angularly related openings mounted adjacent to said support with one such opening directed upwardly; a generally tapering amplifying horn proper connected with such upwardly directed opening; a flexible sound conveyer consisting of coiled interlocking strips of metal connected with the other opening in said elbow, said conveyer being tapered to conform with the taper of said amplifying horn and projecting over said record support; and a sound-box connected with the outer end of said conveyer.

5. In a talking machine, the combination of a record support; a tubular elbow with substantially right angularly related openings mounted adjacent to said support with one such opening directed upwardly; a generally tapering amplifying horn proper pivotally mounted upon said elbow and connected with such upwardly directed opening; a flexible sound conveyer consisting of coiled interlocking strips connected with the other opening in said elbow, said conveyer being tapered to conform with the taper of said amplifying horn and projecting over said record support; and a sound-box connected with the outer end of said conveyer.

[Claims 6 to 11 not printed in the Gazette.]

1,024,109. METHOD AND APPARATUS FOR SEPARATING MATERIALS. DANIEL W. TROY, Montgomery, Ala. Filed Apr. 24, 1911. Serial No. 622,932. (Cl. 83—71.)



1. In apparatus of the class described, concentric rings of magnetic material forming parts of a magnetic circuit and separated by an inclined air-gap, means for feeding particles of non-magnetic material in a trajectory through said inclined air-gap, and a vertically adjustable receptacle beneath said air-gap adjustably adapted to intersect said trajectory, substantially as set forth.

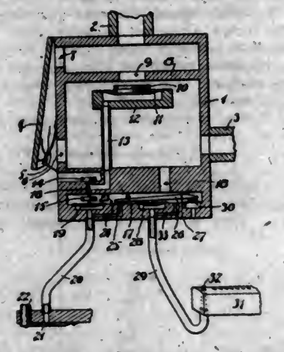
2. The method described, consisting in feeding a mixture of non-magnetic particles of different electrical conductivities in a plurality of mutually divergent and substantially parabolic trajectories through the locus of a magnetic field, varying said field in said locus and setting up eddy currents in said particles to vary the trajectories of the differently affected particles.

3. The method described, consisting in feeding a mixture of non-magnetic particles of different electrical conductivities in a plurality of substantially parabolic trajectories through the locus of a magnetic field, varying said field in said locus and setting up eddy currents in said particles to vary the trajectories of the differently affected particles.

1,024,110. EXPRESSION-BOX FOR AUTOPNEUMATIC MUSICAL INSTRUMENTS. FRANK C. WHITE, Meriden, Conn., assignor to The Wilcox & White Company, Meriden, Conn., a Corporation of Connecticut. Filed June 26, 1911. Serial No. 635,311. (Cl. 84—168.)

1. In a tension control for auto-pneumatic music playing instruments, a passage to be exhausted, an exhauster passage, a chamber connecting said passages, a pneumatic operating between said passages to vary the freedom of passage of air from the former to the latter depending upon whether said pneumatic is extended or collapsed, means for controlling said pneumatic comprising a duct leading from the interior of said pneumatic to the atmosphere, said duct having a branch leading into said space between said two first mentioned passages, a valve for said duct, and another valve for said branch, a carrier in common to said valves whereby only one of said valves at a time will operate to close its respective passage, a pneumatic for operating said valves, a valved passage leading from said pneumatic to the atmosphere, a bleed hole leading from the interior of said last mentioned pneumatic to the interior of said chamber, a relatively large passage also leading from the interior of said last mentioned pneumatic to the interior of said casing, a valve normally closing said passage, a pneumatic for

operating said valve and a duct leading from said pneumatic to a tracker board opening for note sheet control.



2. In an automatic music playing instrument, an action chest, an exhauster, a passage between the two for putting the same in direct communication, a valve for said passage, a pneumatic for controlling the position of said valve, a passage from said pneumatic to the atmosphere, and also to the air tension of the exhauster, valve mechanism for controlling said passage to put said valve controlling pneumatic in communication with one or the other, a pneumatic for controlling said valve mechanism, and means for controlling the last mentioned pneumatic, comprising a manually operable valve for opening and closing atmospheric communication to the interior of the last mentioned pneumatic, and an automatically controllable mechanism for controlling said pneumatic when the manually controllable valve stands open, and means whereby said automatic controlling mechanism is ineffective when said manually controllable valve is closed.

3. In an automatic music playing instrument, an action chest, an exhauster, a passage between the two for putting the same in direct communication, a valve for said passage, a pneumatic for controlling the position of said valve, a passage from said pneumatic to the atmosphere, and also to the air tension of the exhauster, valve mechanism for controlling said passages to put said valve controlling pneumatic in communication with one or the other, a pneumatic for controlling said valve mechanism, and means for controlling the last mentioned pneumatic comprising a manually operable valve for opening and closing atmospheric communication to the interior of the last mentioned pneumatic, an automatically controllable mechanism for controlling said pneumatic when the manually controllable valve stands open, and means whereby said automatic controlling mechanism is ineffective when said manually controllable valve is closed, and a low tension by-pass leading from said action to said exhauster operative at all times.

4. In an automatic music playing instrument, an action chest, an exhauster, a passage between the two for putting the same in direct communication, a valve for said passage, a pneumatic for controlling the position of said valve, a passage from said pneumatic to the atmosphere, and also to the air tension of the exhauster, valve mechanism for controlling said passage to put said valve controlling pneumatic in communication with one or the other, a pneumatic for controlling said valve mechanism, and means for controlling the last mentioned pneumatic, comprising a manually operable valve for opening and closing atmospheric communication to the interior of the last mentioned pneumatic, and an automatically controllable mechanism for controlling said pneumatic when the manually controllable valve stands open, and means whereby said automatic controlling mechanism is ineffective when said manually controllable valve is closed, and a low tension by-pass leading from said action to said exhauster operative at all times, and a pneumatic regulator for said low tension by-pass.

1,024,111. TURBINE. EMIL ANDERSON, New York, N. Y., assignor to H. Stanley Todd, New York, N. Y. Filed Aug. 20, 1910. Serial No. 578,182. (Cl. 121—58.)



1. In an engine of the type described, the combination with a casing having a cylindrical bore, of an impelling wheel mounted in the said bore provided with a plurality of parallel rings forming high pressure elements and low pressure elements at either side of the high pressure elements, the said engine having means for admitting motive fluid to the high pressure elements at a plurality of points around the impelling wheel, cross-over passages for conveying the exhaust motive fluid outward from the high pressure elements, in advance of each of the points at which the motive fluid is admitted thereto, to the low pressure elements of the said impelling wheel, and a single exhaust passage for receiving the exhaust motive fluid from the said low pressure impelling wheel elements.

2. In an engine of the type described, the combination with a casing having a cylindrical bore, of an impelling wheel therein mounted in the said bore and provided with high pressure rings and low pressure rings, and heads which divide the high and low pressure portions of the said impelling wheel into three chambers each respectively, the said engine having means for admitting motive fluid to the high pressure rings simultaneously in each of the three chambers, cross-over passages for conveying exhaust motive fluid from two of the high pressure chambers to the corresponding two low pressure chambers in advance thereof, a transfer passage for conveying the exhaust motive fluid from the rear of the two said low pressure chambers to the said chamber immediately in advance thereof, and a single exhaust passage for receiving the exhaust motive fluid from the latter of the two said low pressure chambers and from the low pressure portion of the impelling wheel in proximity to the third low pressure chamber.

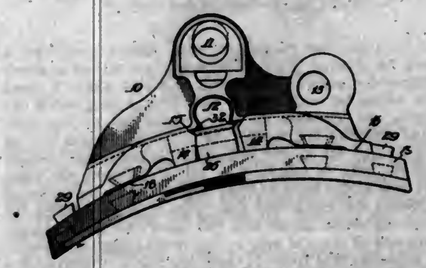
3. In an engine of the type described, the combination with an impelling wheel including two rings whose adjacent faces are recessed to form buckets and are spaced apart contiguous to the said bucket forming recesses to form an annular channel, of a casing in which the said impelling wheel is mounted, and a plate secured to the said casing and projecting within and closing a part of said channel, the said plate having a transverse oblique opening therethrough, and the said engine being provided with means for admitting motive fluid directly to the buckets in one of the said rings, the said opening through the plate being arranged to constitute a passage through which the motive fluid will pass in one direction from the buckets in the one of the said rings to the buckets in the other said ring, and beyond said plate through said annular channel, the back of said plate being arranged to deflect the motive fluid outward.

4. In an engine of the type described, the combination with an impelling wheel including two disks whose adjacent faces are recessed to form buckets and are spaced apart contiguous to said bucket forming recesses to form an annular channel, of a casing in which said impelling wheel is mounted, and a plate secured to the said casing and projecting within said channel, the said plate having an oblique transverse opening therethrough and the said engine being provided with a tangential peripheral nozzle for admitting motive fluid directly to the ends of the buckets in one of the said rings, the said oblique opening through the plate being arranged to constitute a passage through which the motive fluid will pass from the buckets in the one of the said rings, to the buckets in the other said ring.

5. In an engine of the type described, the combination with an impelling wheel including two disks whose adjacent faces are recessed to form buckets and are spaced apart contiguous to the said bucket forming recesses to form an annular channel, of a casing in which the said impelling wheel is mounted, a plate secured to the said casing and projecting within the said channel, the said plate having a transverse opening therethrough and recesses in advance of the said opening upon both sides of the said plate, and the said engine being provided with means for admitting motive fluid directly to the buckets in one of the said rings, the said opening through the plate being arranged to constitute a passage through which the motive fluid will pass from the buckets in the ring to which it is directly admitted as aforesaid, to the buckets in the other said ring.

[Claims 6 to 12 not printed in the Gazette.]

1,024,112. BRAKE-HEAD. CHARLES W. ARMBRUST, Crystal Lake, Ill., assignor of one-half to Harriet W. Armbrust, North Crystal Lake, Ill. Filed July 26, 1911. Serial No. 640,631. (Cl. 188—28.)



1. A brake head provided with locking recesses adapted to receive the locking lugs of a brake shoe and undercut to permit limited longitudinal movement of the shoe relatively to the brake head.

2. A brake head provided with locking recesses adapted to receive the locking lugs of a brake shoe, said recesses being provided with shoulders to prevent lateral displacement of the shoe relatively to the brake head.

3. A brake head having end prongs provided with locking recesses adapted to receive the locking lugs of a brake shoe, said recesses being undercut to permit limited longitudinal movement of said shoe relatively to the brake head and to prevent lateral displacement of said shoe.

4. A brake head having end prongs provided with recesses adapted to receive the locking lugs of a brake shoe, said recesses being provided with shoulders to prevent lateral displacement of the shoe relatively to the brake head.

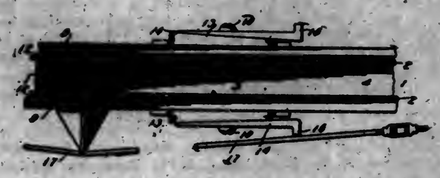
5. A brake head provided with locking recesses adapted to receive the locking lugs of a brake shoe, and having means integral therewith to prevent lateral displacement of the shoe relatively to the brake head.

[Claims 6 to 11 not printed in the Gazette.]

1,024,113. HOTBED-SASH. DWIGHT WILSON BENNETT, Somerton, Pa. Filed June 19, 1911. Serial No. 633,934. (Cl. 108—16.)

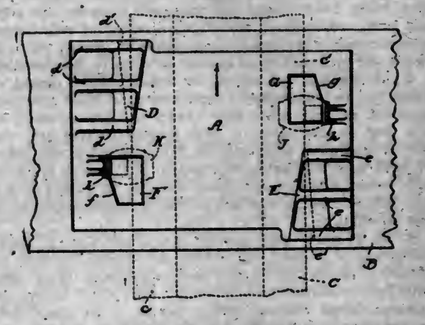
1. The herein described glass roof for hot beds comprising a supporting frame, a double set of panes of glass spaced from each other with the outer edges of the panes mounted in said frame and their inner edges abutting, glass strips overlapping said abutting edges and treated with a translucent coating impervious to air and water, and means for securing the edges of said panes to the frame in a water-tight manner.

2. A glass roof including a supporting frame having a plurality of panes of glass mounted therein with their meeting edges abutting, and glass strips arranged under the meeting edges of said panes and treated with a translucent solution of silicate of soda impervious to air and water.



3. A glass roof including a supporting frame having a plurality of panes of glass mounted therein with their meeting edges abutting, said panes lying in the same horizontal plane, glass strips arranged under the meeting edges of said panes and secured thereto, a solution of silicate of soda applied to said joints, and stiffening trusses secured to said frame.

1,024,114. COMBINED TIE-PLATE AND ANCHOR FOR RAILWAY-RAILS. BENJAMIN B. BETTS, St. Louis, Mo., assignor to Positive Rail Anchor Company, Louisville, Ky., a Corporation of Virginia. Continuation of application Serial No. 474,144, filed Jan. 25, 1909. This application filed Dec. 10, 1910. Serial No. 596,649. (Cl. 238—2.)



1. A combined tie-plate and rail anchor provided with diagonally opposite gripping jaws, said device having spike openings at its opposite ends, one at least of said spike openings being of a size greater in the direction of the length of the rail than the diameter of the spike for which said opening is intended and so as to permit the device to turn about the spike within the other spike opening in order to increase the gripping action of the jaws.

2. A one-piece combination tie-plate and rail anchor provided with diagonally opposite gripping jaws, said device having spike openings of a size greater than the diameter of the spike and adapted to permit the spikes to normally engage their forward or rear edges and to be free of their opposite edges, so that when the rail tends to creep in either direction said spikes will act as pivots, causing the gripping jaws to more firmly engage and anchor the rail, substantially as described.

3. A one-piece combination tie-plate and rail anchor provided with diagonally opposite gripping jaws, said device having elongated spike openings to normally engage their forward or rear edges and to be free of their opposite edges, so that when the rail tends to creep in either direction said spikes will act as pivots, causing the gripping jaws to more firmly engage and anchor the rail, substantially as described.

4. A combined tie-plate and rail anchor provided with opposite gripping jaws to engage the base flanges of the rail, said device having openings for spikes at opposite sides of the rail seating portion of the plate, one at least of said spike openings having an inclined outer wall

adapted to insure the increased gripping action of the opposite jaw as the device is shifted.

5. A combined tie-plate and rail anchor provided with a gripping jaw and a spike opening at each side of the rail seating portion of the plate, said spike openings being in size greater than the diameter of the spikes to be used therein and having inclined outer walls to increase the gripping action of the jaws as the device is turned.

[Claims 6 to 8 not printed in the Gazette.]

1,024,115. EYEGLASS-REEL. HERBERT B. BINGHAM, Nashua, N. H. Filed Aug. 3, 1911. Serial No. 642,146. (Cl. 242—98.)



1. An eyeglass reel having, in combination, a casing, a spring-actuated spool rotatably mounted within said casing and having a recess therein and a pawl within said casing pivoted to a stationary member, one end of said pawl being heavier than the other end thereof, said other end being adjacent to the path of travel of said recess, whereby said other end may be caused to project into said recess and lock said spool against rotation in one direction.

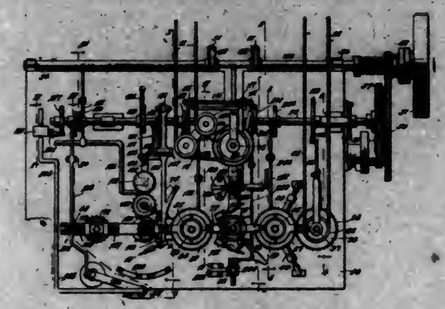
2. An eyeglass reel having, in combination, a casing, an arbor fast to said casing, a spring-actuated spool rotatably mounted on said arbor and having a recess therein, an arm fast to said arbor, a pawl pivoted to said arm, one end of said pawl being heavier than the other end thereof, said other end being adjacent to the path of travel of said recess, whereby said other end may be caused to project into said recess and lock said spool against rotation in one direction.

3. An eyeglass reel having, in combination, a casing consisting of a front and a back detachably fastened together, an arbor fast to said back, a spring-actuated spool rotatably mounted on said arbor, said spool having an annular flange thereon with a recess in its inner face, an arm fast to said arbor, a pawl pivoted to said arm, one end of said pawl being heavier than the other end thereof, said other end being adjacent to the path of travel of said recess, whereby said other end may be caused to project into said recess and lock said spool against rotation in one direction.

4. An eyeglass reel having, in combination, a casing, an arbor fast to said casing, a spool rotatably mounted upon said arbor, said spool consisting of a disk with a U-shaped flange on its periphery, a flexible member fast to said spool within said U-shaped flange and projecting through said casing, a spring located inside said U-shaped flange, one end fast to said spool the other to said arbor, an arm fast to said arbor and a pawl pivoted to said arm, one end of said pawl being heavier than the other end thereof, said other end being adjacent to the path of travel of a recess provided in said flange, whereby said other end may be caused to project into said recess and lock said spool against rotation in one direction.

1,024,116. MACHINE FOR MAKING VIALS AND THE LIKE. WILLIAM R. BURROWS, Newark, N. J., assignor to Glass Products Company, Newark, N. J., a Corporation of New Jersey. Filed Jan. 4, 1910, Serial No. 536,286. Renewed Oct. 18, 1911. Serial No. 655,419. (Cl. 49—7.)

1. In a machine for forming vials from a glass tube, a chuck for holding the tube with an end thereof exposed, a frame for carrying the chuck and tube along a given path, means for softening the ends of said tube, means for forming the vial-neck on the softened end of the tube, means effecting the feeding of a definite length of the tube through the chuck, and burners for severing such length from the tube and closing the adjacent ends of the same and the tube at the point of severance, the severed length constituting a vial; substantially as set forth.



2. In a machine for forming vials from a glass tube, a chuck for holding the tube with an end thereof exposed, a frame for carrying the chuck and tube along a given path, means for softening the ends of said tube, means for forming the vial-neck on the softened end of the tube, means effecting the feeding of a definite length of the tube through the chuck, burners for severing such length from the tube to constitute a vial and closing the adjacent ends of the same and the tube, a carrier clamp-frame to receive the end of the tube when it feeds through the chuck and retain the severed vial, means for flattening the closed end of the vial held by the clamp-frame, and means for actuating said frame to carry the vial to a point of discharge; substantially as set forth.

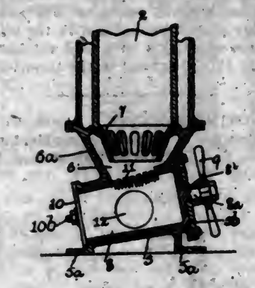
3. In a machine for forming vials from a glass tube, a chuck for holding the tube with an end thereof exposed, a frame for carrying the chuck and tube along a given path, means for softening the end of said tube, means for forming the vial-neck on the softened end of the tube, means effecting the feeding of a definite length of the tube through the chuck, burners for severing such length from the tube to constitute a vial and closing the adjacent ends of the same and the tube, a carrier clamp-frame to receive the end of the tube when it feeds through the chuck and retain the severed vial, means for flattening the closed end of the vial held by the clamp-frame comprising a plate to engage the exterior of said end and means for forcing air into the vial, and means for actuating said frame to carry the vial to a point of discharge; substantially as set forth.

4. In a machine for forming vials from a glass tube, a chuck for holding the tube with an end thereof exposed, a frame for carrying the chuck and tube along a given path, means for softening the end of said tube, means for forming the vial-neck on the softened end of the tube, means effecting the feeding of a definite length of the tube through the chuck, burners for severing such length from the tube to constitute a vial and closing the adjacent ends of the same and the tube, a carrier clamp-frame to receive the end of the tube when it feeds through the chuck and retain the severed vial, and means for actuating said frame to carry the vial to a point of discharge; substantially as set forth.

5. In a machine for forming vials from a glass tube, a chuck for holding the tube with an end thereof exposed, a frame for carrying the chuck and tube along a given path, means for softening the end of said tube, means for forming the vial-neck on the softened end of the tube, means effecting the feeding of a definite length of the tube through the chuck, burners for severing such length from the tube to constitute a vial and closing the adjacent ends of the same and the tube, a carrier clamp-frame to receive the end of the tube when it feeds through the chuck and retain the severed vial, means for actuating said frame to carry the vial to a point of discharge, and means for automatically withdrawing the vial from said frame and delivering it from the machine; substantially as set forth.

[Claims 6 to 29 not printed in the Gazette.]

1,024,117. APPARATUS FOR GENERATING OR PRODUCING GAS. ALLAN STEWARD CAMBRIDGE, Keighley, England. Original application filed Dec. 20, 1910, Serial No. 578,585. Divided and this application filed June 15, 1911. Serial No. 633,449. (Cl. 48—7.)



1. In a gas making apparatus, the combination of a producer having an inclined base chamber, a hollow valve rotatable therein and provided with an inlet opening in its side and a grated surface adjacent thereto, said valve having an open discharge end, and a pivotal plate connected to the base chamber for sealing the discharge end of the valve.

2. In combination, a gas producer having an inclined base chamber, said chamber having a closed upper end and an open lower end, a plate normally sealing said open end, a hollow valve rotatable in said chamber and having a closed upper end and an open lower end, said valve being provided with an inlet opening, a spindle carried by the closed end of the valve and projecting through and journaled in the closed end of the base chamber, and a handle carried by the outer end of the spindle and abutting the closed end of the chamber to prevent longitudinal movement of the valve.

3. In a gas making apparatus, a producer provided with a base chamber, a hollow valve rotatable in said chamber and provided with grate in its side and with an inlet opening adjacent the grate, said valve having a discharge outlet, and means pivotally connected to one end of said chamber for sealing the discharge outlet of the valve.

4. In combination, a gas producer having an inclined base chamber, said chamber having an open lower end and a closed upper end, said closed upper end being provided with a central outwardly projecting bearing sleeve, a hollow valve rotatable in the chamber and provided with a closed upper end, an open lower end, and a side inlet opening, a spindle carried by the upper end of the valve and projecting through and journaled in the bearing sleeve, a handle fast on said spindle and abutting the outer end of the bearing sleeve to prevent longitudinal movement of the valve, and means for normally closing the open end of the base chamber.

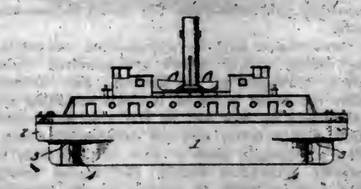
1,024,118. BUTTON-FASTENER. CLARK S. COMSTOCK, Sr., East Orange, N. J. Filed July 18, 1910. Serial No. 572,650. (Cl. 24—94.)



1. A button attaching member formed of a single piece of wire bent to substantially circular shape to form the head, and both ends of said wire being then bent inwardly toward the center of the head in substantially parallel lines and lying closely adjacent whereby said wires brace and support one another, one of said ends being then bent outwardly at substantially a right angle to the plane of the head to form the neck and the other end being then bent snugly around said neck, whereby said neck wire is reinforced and strengthened by said parallel wire and said encircling loop and is held firmly in place.

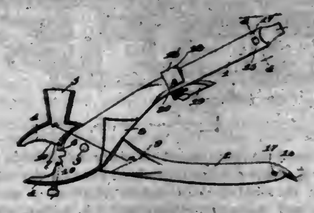
2. A button attaching member formed of a single piece of wire bent to substantially circular shape to form the head, and both ends of said wire being then bent inwardly toward the center of the head in substantially parallel lines and lying closely adjacent whereby said wires brace and support one another, one of said ends being then bent outwardly at substantially a right angle to the plane of the head to form the neck and the other end being then bent snugly around said neck forming a loop which begins on the side at which said looping wire enters the circle, whereby said neck wire is reinforced and strengthened by said parallel wire and said encircling loop and is held firmly in place.

1,024,119. TUGBOAT. THOMAS F. COX, Elizabeth, N. J. Filed Mar. 16, 1911. Serial No. 614,811. (Cl. 114—57.)



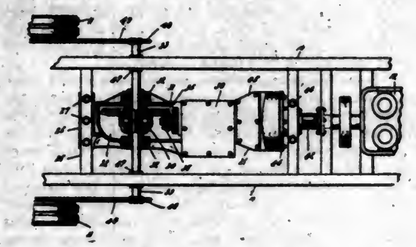
A hull for double-ended power boats having overhanging ends that project beyond the rudders and propellers both laterally and longitudinally, the major portion of the hull terminating in straight vertical portions beneath the inner ends of the overhanging ends, the bottoms of the overhanging ends being rounded and converging toward the longitudinal center thereof and the rear ends of said bottoms merging into the major portion of the hull on easy curves adjacent the straight ends of said major portion.

1,024,120. TOOL. JAMES W. CROSSLEY, Banks, Ark. Filed Nov. 11, 1910. Serial No. 591,883. (Cl. 81—47.)



In a tool of the nature described, two shanks pivotally held together, a pin as means whereby they are held in pivotal relation to each other, said pin extending through registering perforations in the shanks, each of said shanks provided with a jaw at its forward end, one of said shanks held in pivotal engagement with the other so that they may be separated at will, the means whereby they are held interlocked comprising a flange and reduced portion provided upon one shank, said flange and reduced portion being normally received by respective recesses in the other shank, said flange being engaged with its recess while the reduced portion is disengaged when the jaws are open to their full extent so that said shanks may be separated by a respective twisting movement.

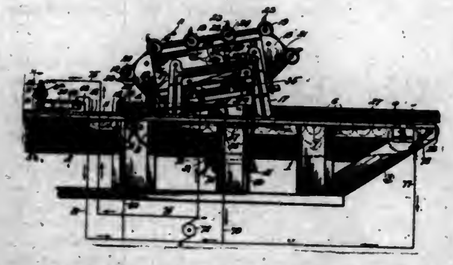
1,024,121. POWER-TRANSMISSION UNIT FOR AUTOMOBILES. CHARLES ETHAN DAVIS, Muncie, Ind., assignor to Warner Gear Company, Muncie, Ind., a Corporation of Indiana. Filed Apr. 11, 1910. Serial No. 554,679. (Cl. 21—90.)



1. In an automobile, the combination with the main frame, of a transmission unit comprising a suitable supporting frame and carrying clutching mechanism, transmission mechanism, and differential mechanism, said differential mechanism being formed to receive two readily removable shafts and the said unit presenting at its clutch end a shaft for attachment to a motor, and means for supporting said unit upon the frame independent of the shafts.

2. A transmission unit for automobiles, comprising an inclosing casing within which are mounted clutching mechanism, transmission mechanism, and differential mechanism connected in series, the said clutching mechanism presenting at one end of the unit a member for connection with a motor and the differential mechanism presenting at opposite sides of said unit portions to receive readily detachable shafts, and means associated with said unit by which it may be secured in place on the frame of an automobile independent of said shafts.

1,024,122. BRICKMAKING-MACHINE. JOHN R. DAWKINS and DENNIS PARKS, St. Louis, Mo.; said Parks assignor to said Dawkins. Filed Jan. 3, 1910. Serial No. 536,101. (Cl. 25—110.)



1. In a brick making machine, in combination with a support for a moving column of clay, means for cutting the clay while in motion into brick lengths, a source of electricity, and means for placing and maintaining the column of clay and said cutting mechanism in the circuit of the said source of electricity.

2. In a brick-making machine, in combination with a support for a moving column of clay, means for cutting the clay while in motion into brick lengths, an electric generator, said cutting means being connected with one side of said generator, and a conductor connected with the other side of said generator and adapted to be engaged by the moving column of clay.

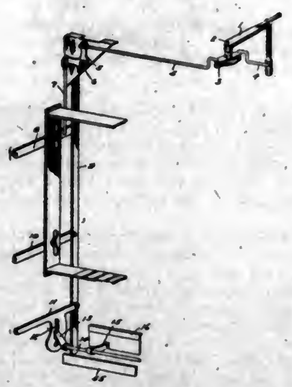
3. In a brick-making machine, in combination with a support for a moving column of clay, means for cutting the clay while in motion into brick lengths, an electric generator, said cutting means being connected with the negative side of said generator, and a conductor connected with the positive side of said generator, and adapted to be engaged by the moving column of clay.

4. In a brick-making machine, in combination with a support for a moving column of clay, means for cutting the clay while in motion into brick lengths, an electric generator, said cutting means being connected with the negative side of said generator, and a conductor mounted on said support and connected with the positive side of said generator, and adapted to be engaged by the moving column of clay.

5. In a brick-making machine, in combination with an endless carrier adapted to receive and be moved by a moving column of clay, cutting mechanism coöperating with said carrier for severing the column of clay into brick lengths, an electric generator, and means for connecting one side of said generator with the moving column of clay, and the other side with said cutting mechanism.

[Claims 6 to 12 not printed in the Gazette.]

1,024,123. VOTING-MACHINE. JAMES H. DEAN, Chicago, Ill., assignor to Empire Voting Machine Company, Jamestonwn, N. Y., a Corporation of New York. Filed Aug. 11, 1910. Serial No. 576,619. (Cl. 235—54.)



1. The combination in a voting machine of a plate, keys pivoted thereon, a dog operable by each of said keys, said dog being mounted separately from said keys and being loosely engaged thereby, a counter actuator controlled by said dog, a counter operable by said actuator, and means for causing relative movement between said counter and its actuator whereby when the key is in voted position, the dog will cause said counter actuator to operate its counter.

2. The combination in a voting machine of a plate, keys pivoted thereon, a dog operable by each of said keys, said dog being mounted separately from said keys and being loosely engaged thereby, an interlocking device connected to and controlling each of said dogs, a counter actuator controlled by said dog, a counter operable by said actuator, and means for causing relative movement between said counter and its actuator whereby when the key is in voted position, the dog will cause said counter actuator to operate its counter.

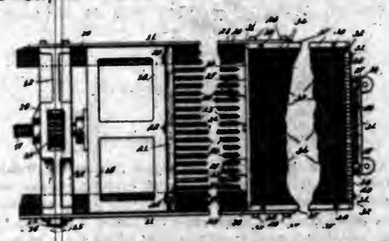
3. The combination in a voting machine of keys arranged in rows, a bar placed parallel to each row of keys, dogs, one for each key mounted to slide on said bar, each of said keys loosely engaging its dog, permitting the key to move idly for a part of its travel forward or back and interlocking straps attached to said dogs.

4. The combination in a voting machine of a pivoted voting key, a dog mounted to slide adjacent to said key and loosely engaged therewith for movement thereby, a counter and a counter actuator therefor operable by said dog when moved by its key to operate its counter.

5. The combination in a voting machine of keys arranged in rows, bars arranged between and on either side of said rows to reset and lock the keys in normal position, said keys being operable to either side of normal position, to voted or unvoted position respectively.

[Claims 6 to 20 not printed in the Gazette.]

1,024,124. RADIATOR-ASSEMBLING MACHINE. WILLIAM DIETZ, Chicago, Ill., assignor to McCord Manufacturing Company, Detroit, Mich., a Corporation of Maine. Filed Apr. 2, 1909. Serial No. 487,429. (Cl. 29—84.)



1. In a device of the class described, a support for a plurality of tubes, a holder for a plurality of fins, and means to move one of the parts with relation to the other to assemble their associated fins on the tubes.

2. In a device of the class described, a carrier for a plurality of tubes, a holder for a plurality of fins, and means to move the carrier with relation to the holder to assemble their associated fins on the tubes.

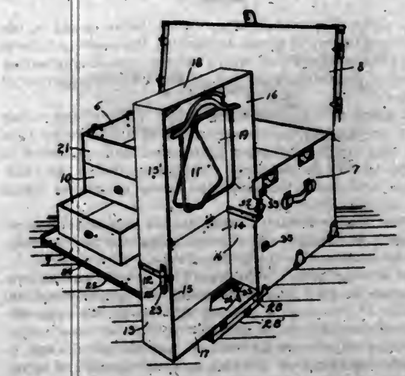
3. In a device of the class described, a truck, a carrier for a plurality of tubes detachably mounted on the truck, a holder for a plurality of fins, and means to move the truck with relation to the holder to assemble their associated fins on the tubes.

4. In a device of the class described, a bed plate, a truck movable thereon, a spindle-carrier on the truck, a fin-frame on the bed plate, and a fin-holder on the frame comprising a series of spaced comb-plates.

5. In a device of the class described, a bed plate, a truck movable thereon, a detachable spindle-carrier on the truck, a fin-frame on the bed plate, and a detachable fin-holder on the frame comprising a series of spaced comb-plates.

[Claims 6 to 27 not printed in the Gazette.]

1,024,125. WARDROBE-TRUNK. HARRY N. DRUCKER, Cincinnati, Ohio. Filed Feb. 20, 1911. Serial No. 609,614. (Cl. 190—13.)



1. A wardrobe trunk having a body with its ends, bottom and back fixed in relation to each other, a swinging front and a swinging cover, a compartment located within the lower part of the trunk and leaving a space between it and one end of the trunk, a wardrobe tray consisting of an upper and a lower section hinged together so that the upper section may be movable from an upright to a horizontal position, and the lower section being adapted to fit into said space while the upper part is supported upon said compartment, said tray being slidable into and out of the body of the trunk when the swinging front is open.

2. A wardrobe trunk consisting of a body having ends, a back and a bottom fixed in relation to each other, a swinging cover and a swinging front, a drawer compartment located at one end of the body of the trunk leaving a space adjacent to the opposite end of the trunk, and a wardrobe tray consisting of an upper and a lower section hinged together, the lower section being adapted to fit within the space and the upper section being adapted to rest upon the drawer compartment and to fit between it and the cover when the trunk is closed, and ways formed upon the front upon which the wardrobe tray may be moved when the front is in its open position.

1,024,126. WHEEL-DRESSER AND TOOL-HOLDER. MORRIS D. FLETCHER, Springfield, Mass., assignor to Frank E. Bidwell, Springfield, Mass. Filed July 17, 1911. Serial No. 638,854. (Cl. 29—96.)



A wheel-dresser and tool holder comprising a handle having a bore therethrough divided into sections of different diameters, a hollow shank fitted at one end into said bore and having a chuck at the other end for the implement to be held, the parts being so constructed that there is a passageway for such implement extending through such shank and beyond the same into said handle, and a nut arranged on said shank to engage such chuck and cause the same to grasp said implement.

1,024,127. RAILWAY-TRACK FASTENING. CHARLES J. GADD, Lebanon, Pa. Filed Aug. 29, 1911. Serial No. 646,635. (Cl. 238—4.)



1. In combination, a screw-spike the under side of the head of which is spherical in form and a washer having a spherical seat adapted to receive the spherical head of the spike and a hole through which the screw spike shank may pass.

2. In combination, a screw-spike the under side of the head of which is spherical and a washer having a spherical seat adapted to receive the spherical head of the spike and a hole concentric with said seat through which said spike may pass, the inner under side of said washer being adapted to engage the top side of the flange of a rail.

3. In combination, a screw-spike, the under side of the head of which is spherical, and a washer having a spherical seat and a hole concentric with said seat, the inner underside of said washer being adapted to engage the top of the flange of a rail, the front of said washer having a convex bottom adapted to rest upon a tie or tie-plate.

4. In combination, a screw-spike the under side of the head of which is spherical, and a washer having a spherical seat for the head and a hole for the shank of said spike, a tapered underside to engage the top of the flange of a rail, the front of said washer having a convex bottom adapted to rest upon a tie or tie-plate, said washer having shoulders to engage the side of the rail flange.

5. In combination, a screw-spike the under side of the head of which is spherical, a washer having a spherical seat for said head and a hole concentric with said seat for the shank of said spike, the under inner side of said washer being tapered to engage the top of the flange of a rail and having shoulders to engage shoulders on the plates, the front of said washer having a convex bottom to rest upon the tie plate.

1,024,128. GAS-PRODUCING OVEN. ARTHUR GOHMANN, Stettin, Germany, assignor to Stettiner Chamotte-Fabrik Actien-Gesellschaft vorm. Didier, Stettin, Germany, a Corporation of Germany. Filed June 21, 1911. Serial No. 634,578. (Cl. 202—9.)



1. A gas-producing oven provided with three ducts for the supply of gas and air and for the escape of the combustion gases respectively, connected heating flues each of which is connected with said ducts at the same end, and unitary means each controlling the connection of one of said flues with all three of the corresponding ducts.

2. A gas-producing oven provided with connected heating flues, ducts, connected with the free ends of said flues, for supplying a combustible mixture and carrying away combustion products respectively, and reversible unitary means each controlling all the ducts connected with one of said flues so that the combustion gases may be caused to travel through said flues in one direction or the other.

3. A gas-producing oven provided with connected heating flues, ducts for supplying a combustible mixture and carrying away combustion products respectively, connections from the free ends of the heating flues to said ducts, and valves each of which controls the alternate connection of one such free end with the supply and the escape ducts respectively.

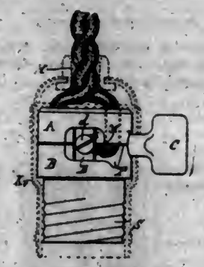
4. A gas-producing oven provided with a heating channel having ends adapted to serve alternately as an inlet and as an outlet respectively, ducts for supplying a combustible mixture and carrying away combustion products respectively, connections from said channel ends to said ducts, and valves each of which controls the connection of one such end with the supply and escape ducts respectively.

5. A gas-producing oven provided with a heating channel having ends adapted to serve as an inlet or as an outlet, ducts for supplying gas and air and for carrying away combustion products respectively, connections from said channel ends to said ducts, and valves each of which controls simultaneously the three connections of one channel end with the air supply, gas supply, and escape ducts respectively.

[Claims 6 to 15 not printed in the Gazette.]

1,024,129. ELECTRIC-LAMP SOCKET. GILBERT W. GOODRIDGE, Bridgeport, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a Corporation of Connecticut. Filed June 4, 1909. Serial No. 500,061. (Cl. 173—322.)

1. An electric lamp socket having an insulating body with lamp terminals on its lower face and with wire terminals on its sides, the insulating body having vertical holes through it for the passage of the wires near the periphery of the insulating body and at a little distance from the wire terminals.



2. An electric lamp socket having a two button insulating body with lamp terminals on its lower face and with wire terminals on the sides, the upper button having holes for the passage of the wires and the lower button having beveled recesses to form continuations of the holes adjacent to the wire terminals.

1,024,130. FLUID-PACKING PUMP-PISTON. JOHN HAHN, Los Angeles, Cal. Filed Jan. 4, 1911. Serial No. 600,821. (Cl. 103—63.)



1. A pump piston comprising a cage, valve means in the cage, a packing tube, means connecting the packing tube to and in telescopic relation with the cage, and compensating for contraction and expansion of the tube irrespective of the cage.

2. A pump piston comprising a cage, valve means in the cage, a packing tube, means connecting the packing tube to the cage and allowing for contraction and expansion of the tube relative to the cage; a spring to stretch the packing tube; and means to confine the spring within the limits of the packing tube.

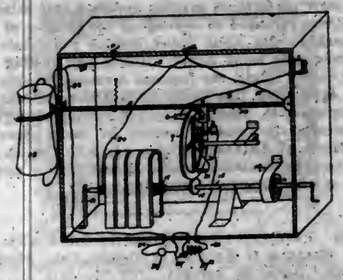
3. In a pump piston, a packing tube, a cage, a cylindrical extension on the cage, and a bushing slidable in the extension and connected to the packing tube.

4. In a pump piston, a packing tube, a cage, means connecting the packing tube to the piston, an upper cylindrical extension on the cage, a bushing slidable in the upper extension and connected to the packing tube, a lower extension on the cage, a plunger barrel fastened at one end to the lower extension, an annular inlet nut connected to the other end of the plunger barrel, and a supplemental packing tube surrounding the plunger barrel between the lower extension of the cage and the inlet nut.

5. In a pump piston, a packing tube, a cage, a cylindrical extension on the cage, a bushing in slidable relation to the extension and connected to the packing tube, a cross bar in the bushing, a rod fastened at one end to the cage and sliding through the cross bar, and means fastening the other end of the rod to the packing tube.

[Claims 6 to 22 not printed in the Gazette.]

1,024,131. DETECTOR FOR PARTY-LINE TELEPHONES. HARRISON Y. HALEY, Rushsylvania, Ohio, assignor of one-third to Harold F. Campbell, Rossburg, Ohio, and Charles D. Campbell, Bellefontaine, Ohio. Filed Feb. 24, 1908. Serial No. 417,379. (Cl. 179—28.)



1. In a telephone, the combination with the main circuit, comprising a call bell, of a magneto provided with driving means; a rotatable wheel in driven relation with said driving means, said wheel being electrically connected with the main circuit and the magneto and provided with a series of makes and breaks; and a receiver hook in circuit with said wheel and magneto, said hook being provided with means holding the wheel against rotation while the receiver is on the hook and releasing said wheel when the receiver is removed from the hook.

2. The combination with a telephone comprising a receiver and hook; of an attachment therefor comprising a power driven magneto and a rotating make and break member driven from the shaft of said magneto; and means carried by said hook normally holding said member against rotation but permitting a limited rotation when the receiver is removed from the hook.

1,024,132. CASING FOR UNIVERSAL JOINTS FOR AUTOMOBILES. JAMES G. HEASLET, Detroit, Mich., assignor of one-half to Walter B. Flanders, Pontiac, Mich. Filed July 27, 1910. Serial No. 574,131. (Cl. 74—19.)



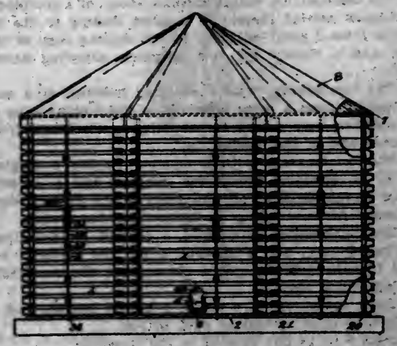
1. In a casing for universal joints, a casing member, a two sectioned housing coöperating therewith, a plurality of bolts connecting said sections, and resilient means cooperating with said bolts and one of said sections whereby said casing member and said housing may be moved relative to each other.

2. In a casing for universal joints, the combination of a fixed casing member, a housing member coöperating interiorly with said casing member, a second housing member coöperating exteriorly with said casing member, bolts connecting said housing members and spring washers cooperating with said bolts and the outer housing member whereby said housing members may be moved relative to said casing member.

3. In a casing for universal joints, the combination of a frame, a spherical casing member fixed to said frame, a spherical housing member interiorly adjacent and extending beyond said casing member, a second housing member comprising a spherical portion exteriorly adjacent to said casing member and overlying said first mentioned housing member, means comprising a plurality of bolts connecting said housing members, and resilient means coöperating with said bolts and one of said housing members whereby said housing member may be moved relative to said casing member.

4. In a casing for universal joints, the combination of a frame, a cap member secured to said frame, a casing member secured to said frame and cap and coöperating with the latter, a two sectioned housing member coöperating with said casing member, spaced apart members passing radially through said housing sections, and resilient means coöperating with said spaced apart members and one of said housing sections whereby said casing member and housing sections may be moved relative to each other.

1,024,133. KNOCKDOWN BIN OR TANK. MELVIN V. HOSTETTER, King county, Wash. Filed Jan. 3, 1911. Serial No. 600,636. (Cl. 20—1.2.)

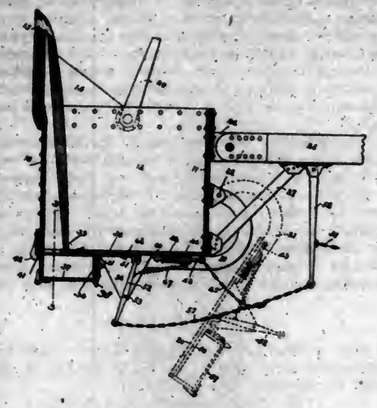


1. A knock-down bin having walls built in tiers of interlocking tongue and grooved boards, each board having a transverse notch extending from opposite edges at opposite ends half way across the board, the grooved edge of the end which is notched from the tongued edge having a transverse groove adapted to form an extension of the groove in the edge of the board of the same tier which interlocks therewith.

2. A knock-down bin having walls composed of tongue and grooved boards each having at one end, a transverse notch extending from the tongued edge half way across the board and at the other end having a notch extending from the grooved edge half way across the board, the grooved edge of the board having an auxiliary transverse groove extending opposite to and parallel with the walls of the notch in the tongued edge and adapted to receive the tongue of a board in the adjacent tier, the ends of said boards beyond their transverse notches having a bolt extending transversely therethrough from edge to edge, and a clip embracing the edge of the board and placed as a washer upon said bolt at its notched side.

3. As an article of manufacture, a tongue and grooved board having a notch at each end extending transversely thereof and half way across the board, said notches extending from opposite edges at opposite ends, the grooved edge having an auxiliary groove of like character and dimensions as the main groove and extending transversely thereof opposite the notch which extends from the tongued edge and in position to receive the tongue of a like board placed above and with its sides in the same planes as those of the side walls of said notch.

1,024,134. AUTOMATIC SAMPLING MECHANISM. FRANK S. INGOLDSBY, St. Louis, Mo. Filed Nov. 1, 1909. Serial No. 525,701. (Cl. 37—16.)



1. The combination with a suitable scoop, of a receptacle for samples carried thereby, a conduit leading to the receptacle from a point adjacent to the digging edge of the scoop, and a closure for the receptacle allowing access thereto.

2. The combination with a scooping member, of a conduit leading from a point adjacent to the digging edge of said member, and means for enabling a discharge from the other end of the conduit.

3. The combination with a member having a digging face, of an openable pocket for samples, and a conduit leading thereto from a point adjacent to the digging edge, and means for controlling discharge from the pocket.

4. The combination of a scoop, a conduit located along its forward face, and a receptacle for the material received in said conduit, and a closure for the receptacle allowing access thereto.

5. The combination of a scoop, a hinged bottom, and a sample receptacle carried by said bottom.

[Claims 6 to 14 not printed in the Gazette.]

1,024,135. WATERPROOF MATERIAL. FERDINAND JACOB, Cologne, Germany. Filed Apr. 18, 1911. Serial No. 621,933. (Cl. 38—7.)

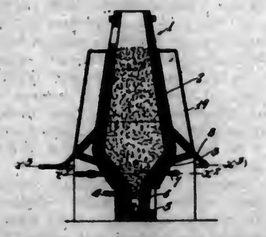


1. Waterproof material to be used for the manufacture of articles of any kind such as clothing, tent cloths, covers, wall coverings, and the like consisting in the fabric to be protected against the entrance of the air being provided with a layer of feathers entirely covering this fabric, the said feathers arranged to overlap in the manner of scales and attached with their upper end to the fabric only, their lower ends being loosely liftable and resting easily movable on the fabric.

2. Waterproof material to be used for the manufacture of articles of any kind such as clothing, tent cloths, covers, wall coverings, and the like consisting in the fabric to be protected against the entrance of the air being provided with a layer of feathers entirely covering this fabric, the said feathers arranged to overlap in the manner of scales and attached with their upper end to the fabric only, their lower ends being loosely liftable and resting easily movable on the fabric, the feathers arranged in rows overlapping each other like scales from above and the sides and secured with their quill ends to folded stripe of fabric secured in suitable manner at their upper edge to the fabric at distances corresponding to the length of the feathers.

3. Waterproof material to be used for the manufacture of articles of any kind such as clothing, tent cloths, covers, wall coverings, and the like consisting in the fabric to be protected against the entrance of the air being provided with a layer of feathers entirely covering this fabric, the said feathers arranged to overlap in the manner of scales and attached with their upper end to the fabric only, their lower ends being loosely liftable and resting easily movable on the fabric, the feathers arranged in rows overlapping each other like scales from above and the sides and secured with their quill ends to folded strips of fabric secured in suitable manner at their upper edge to the fabric at distances corresponding to the length of the feathers, the feathers secured in said fold by means of a layer of glue introduced therein.

1,024,136. PROCESS FOR REDUCING ORES AND METALS. WILLIAM H. KELLY, Los Angeles, Cal. Filed Aug. 17, 1908. Serial No. 448,971. (Cl. 75—44.)



1. The process of reducing and melting metals from ores which consists in subjecting the ores to the action of nascent oxygen and hydrogen at a high temperature.

2. The process of reducing and melting metals from ores which consists in subjecting the ores to the action of nascent oxygen and hydrogen at a temperature above the dissociating point of steam.

3. The process which consists in subjecting steam to a temperature sufficient to cause dissociation and conveying the resulting dissociated product into contact with metallic ore to cause reduction and melting of the metal in the ore.

4. The process which consists in heating steam to a sufficient temperature to cause dissociation and conveying the resulting oxygen and hydrogen while still in a nascent condition into contact with the metallic ore to reduce and melt the metal of the ore.

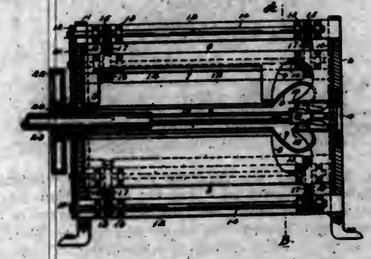
5. The process of reducing and melting metallic ores in a chamber which consists in applying at a portion of said chamber a supply of nascent oxygen and hydrogen to reduce the ore and applying at a lower portion of the chamber a supply of nascent oxygen and hydrogen obtained from dissociated steam to melt and purify the ore.

[Claims 6 and 7 not printed in the Gazette.]

1,024,137. BARK-STRIPPING MACHINE. JOHN KOKKO, Ellis Bay, Quebec, Canada. Filed Aug. 10, 1911. Serial No. 643,280. (Cl. 144—208.)

1. In a bark stripping machine, a plurality of inwardly slidable radial knife supports, forming guides for the logs and recessed toward one end thereof, knives fixedly secured to the inner edges of said supports beyond said recesses, standards at each end of said supports, and means for sliding said knife supports inwardly and outwardly in a radial direction.

2. In a bark stripping machine, the combination with a pair of standards having central openings therethrough, of a plurality of longitudinal beams forming knife supports and radially and slidably secured in said standards, one of said beams having a feed opening therethrough and all of said beams having recesses toward one end thereof, fixed knives having arc-shaped cutting edges secured to said beams beyond said recesses, radial beams secured in said standards outside of the aforesaid beams and in alinement therewith, and means supported by said outer beams for sliding said inner beams inwardly and outwardly.



3. In a bark stripping machine, the combination with a pair of standards having central openings therethrough, of a plurality of radial beams slidably arranged in said standards, one of said beams having a longitudinal feed opening therethrough and every second beam having a recess from the inner edge thereof and every other second beam having a recess from the inner edge thereof nearer to one of said standards, knives fixedly secured beyond said recesses to the inner edges of said beams and having arc-shaped cutting faces, one set of said knives being behind another set and overlapping in circumferential arrangement, and means for sliding said beams inwardly and outwardly.

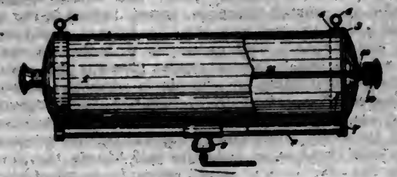
4. In a bark stripping machine, the combination with a pair of standards, of a plurality of radial beams slidably arranged in said standards, knives supported by said beams toward one end thereof, racks rigidly secured and extending laterally from said beams, rigid beams secured to said standards in alinement with the aforesaid beams, bearings supported by said rigid beams, shafts journaled in said bearings, pinions fixedly secured on said shaft coacting with said racks, and means for coincidently turning all of said shafts.

5. In a bark stripping machine, the combination with a pair of standards, of a plurality of radially arranged beams slidably secured in said standards, knives fixedly secured to said beams, racks extending laterally from the outer edges of said beams, rigid beams secured in said standards in radial alinement with the aforesaid beams, bearings secured to said rigid beams, shafts journaled in said bearings and extending at one end beyond the standard, pinions fixedly secured on said shafts and coacting with said racks, pinions secured at the ends of said shafts beyond said standard, a hollow bearing secured in one of said standards, a gear wheel turning on said bearing and engaging said pinions beyond the standard, and means for turning said gear wheel.

[Claim 6 not printed in the Gazette.]

1,024,138. HEATING DEVICE. JOHN WILSON MACDONALD, Wilkinsburg, Pa., assignor to The Paragon Heater Company, a Corporation of Arizona. Filed Nov. 15, 1910. Serial No. 592,573. (Cl. 126—85.)

A heater of the class described, comprising a cylindrical horizontally-disposed body-portion having a longitudinal opening extending its entire length, suitable perforted flanged heads at each end of said body-portion, a bolt connecting the one head with the other, a means comprising a spring and threaded nut at one end of said bolt to take up the expansion, each head provided with a lug adapted to be inserted in and maintain the longitudinal opening of the body-portion, a longitudinally disposed slotted burner arranged beneath and parallel with the longitudinal opening of the body-portion, and depending sockets formed integral with the heads to receive the ends of said burner and support the same in position.



1,024,139. CRANK MECHANISM. EDWIN H. MILLER, Los Angeles, Cal., assignor of one-half to John W. Melville, Los Angeles, Cal. Filed Nov. 9, 1910. Serial No. 591,434. (Cl. 74—33.)



1. In a device of the class described, in combination, a frame, a spindle rotatably mounted therein, said spindle having a hub with a plurality of circumferentially disposed sockets therein, a crank having a head movably engaging said hub, a pin guided longitudinally of said crank and adapted to engage said sockets, a spring pressing said pin toward said hub, a block sliding on said crank and connecting with said pin, and a rock member carried by said block for engaging said crank to lock said pin in a withdrawn position.

2. A crank mechanism, comprising a shaft having peripheral recesses formed therein, a crank arm having a bearing upon said shaft and formed with an internal bore, a spring pressed pin mounted in said bore and adapted to engage the peripheral recess of said shaft, a latch carrying projection secured to said pin, and fitting upon the outer surface of said crank arm and a detent carried thereby adapted to engage the crank arm for holding the said spring actuated pin out of engagement with the said shaft when the shaft is to be freed from the said crank arm.

3. A crank mechanism for tape lines, comprising a shaft adapted to wind up a tape line, a handle carrying the same, a crank arm having a bearing loop formed in its end adapted to fit upon the end of said shaft, the said shaft having peripheral recesses arranged to come within said loop, the crank arm having a central bore, a pin mounted in said bore, a spring normally tending to push the pin into engagement with said shaft, a slide mounted upon the outer surface of said crank arm, and having a rigid connection with the said pin, a rocking detent carried by said slide having a projection adapted to engage an opening formed in the said crank arm for holding the pin out of engagement with the shaft when the said shaft is to run free, and a handle adapted to turn the said crank arm.

4. A crank mechanism for tape lines comprising a shaft adapted to wind a tape, a frame holding the same, a crank arm movably mounted upon said shaft outside the frame, the said crank arm being hollow and having a spring pressed pin adapted to engage recesses formed in the said shaft, a slide mounted upon the outer surface of said crank arm and having a rigid connection with the pin within the same, a finger operated detent pivotally mounted on said slide for holding the said pin in adjusted position, a pivoted handle carried by said crank arm, the said handle being adapted to be turned into engagement with detents upon the shaft supporting frame, and detents projecting from said frame so as to receive said handle, the handle being also adapted to be turned outwardly to afford cranking means for turning the crank arm.

1,024,140. DELIVERY-PROTECTOR FOR VENDING-MACHINES. HERBERT S. MILLS, Oak Park, Ill. Filed Jan. 25, 1912. Serial No. 673,842. (Cl. 211—8.)



1. A delivery-protector for vending machines, comprising a support, a series of abutting independently-swinging shields hanging on said support to be turned, when depending in the path of delivery, out of said path by the delivery-operation, and independently-actuating cam-operated shifting means for each shield in so turning, whereby the turning of one shield will shift and lock against such turning the other or others in the series.

2. A delivery-protector for vending machines, comprising a bar provided with a series of cams, a support on said bar, and a series of shields hung to abut and swing independently on said support, with tongues on the shields normally registering with said cams to engage therewith, for the purpose set forth.

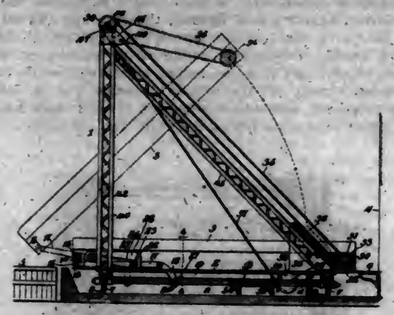
3. A delivery-protector for vending machines, comprising a bar provided with a series of inclined slots, a spring-pressed rod shiftably supported on said bar, and a series of shields hung to abut and swing indepenedently on said rod and confined thereon to shift with it, with tongues on the shields normally registering with said slots to engage therewith, for the purpose set forth.

4. A delivery-protector for vending machines, comprising a bar provided with a series of inclined slots, a longitudinally spring-pressed rod shiftably supported on said bar, and a series of shields having eyes, at which they are swingingly and abuttingly hung on said rod, and tongues normally registering with said slots to engage therewith, the shields being confined on the rod to shift with it, for the purpose set forth.

5. In combination with a vending machine, a delivery-protector therefor comprising a bar provided with a series of cam-slots and secured in place to extend over the delivery-opening of the machine, a longitudinally spring-pressed rod shiftably supported on said bar, and a series of shields abuttingly hung to swing independently of each other on said rod and confined thereon to shift with it, and tongues on the shields normally registering with said slots to engage therewith, for the purpose set forth.

1,024,141. TILTING-PAN COKE-DISCHARGING APPARATUS. WILLIAM C. MITCHELL, Sydney, Nova Scotia, Canada. Filed Oct. 11, 1910. Serial No. 586,521. Renewed Mar. 14, 1912. Serial No. 683,707. (Cl. 214—1.)

1. An apparatus for handling coke, etc., including a pivoted tiltable platform, hoisting mechanism comprising spaced drums, overhead pulleys, hoisting ropes arranged over the pulleys and connected with the drums and with the tiltable platform for raising and lowering the same, and means for automatically moving the platform outwardly and inwardly simultaneously with the up and down pivotal movements thereof.



2. An apparatus for handling coke, etc., including a frame having a derrick and provided at the front thereof with a guide, a tilting platform, means slidable in the said guide and having the front end of the platform pivoted to it, pulleys arranged, respectively, at the top of the derrick and at the rear end of the platform, a drum mounted in fixed relation with the frame, and a rope leading from the drum to the pulley at the top of the derrick and the pulley of the platform.

3. An apparatus for handling coke, etc., including a frame having a derrick and provided at the front and back thereof with guides, a tilting platform, means slidable in the front guide and having the front end of the platform pivoted to it, pulleys arranged, respectively, at the top of the derrick and the rear end of the platform, a drum mounted in fixed relation with the frame, a rope leading from the drum to the pulley at the top of the derrick and the pulley of the platform, and an anti-friction roller mounted at the end of the platform opposite the pivoted end thereof to engage with the rear guide.

4. An apparatus for handling coke, etc., including a pivoted tiltable platform, hoisting mechanism comprising spaced drums, overhead pulleys, hoisting ropes connected with the drums and arranged on the pulleys and having looped outer portions, pulleys mounted on the platform and arranged within the loops of the hoisting ropes, and means for automatically moving the platform outwardly and inwardly simultaneously with the upward and downward movement of the platform on its pivot.

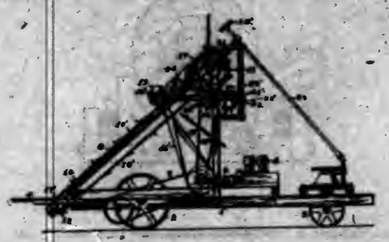
5. An apparatus for handling coke, etc., including a frame, a pivoted tiltable platform, means connected with the pivot for permitting an inward and outward movement of the platform, hoisting mechanism provided with a hoisting rope having an inclined portion connected with the platform and adapted to move the same upwardly and outwardly, and means for positively moving the platform inwardly when the same is lowered.

[Claims 6 to 24 not printed in the Gazette.]

1,024,142. BEET TOPPING AND LOADING APPARATUS. RALPH H. MOORE, Spreckels, Cal., assignor to Spreckels Sugar Company, San Francisco, Cal., a Corporation. Filed Oct. 10, 1910. Serial No. 586,199. (Cl. 146—11.)

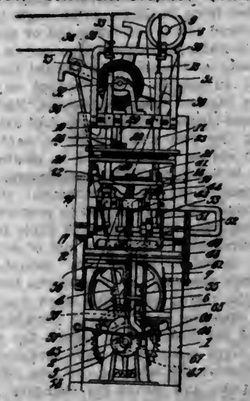
1. In a device of the character described, a beet feeder, means for supporting beets transversely thereon, a beet topper overlying the beet feeder, a division plate overlying the beet feeder and extending from directly in rear of the topper to the discharge end of said feeder, beet receiving means underlying the discharge end of said conveyer, and means positioned at one side of said division plate for preventing the passage of the beet tops onto said beet receiving means.

2. In a device of the character described, a beet feeder, means for supporting beets transversely thereon, a beet topper overlying the beet feeder, a division plate overlying the beet feeder and extending directly in rear of the topper to the discharge end of the beet feeder, a beet conveyer underlying the discharge end of the beet feeder and a deflector plate underlying the beet feeder and overlying the beet conveyer, said deflector plate being positioned at one side of the division member overlying the beet conveyer, so as to receive the tops of the beets.



3. In a device of the character described, an endless feeder, a topper knife positioned thereabove, a division plate positioned above the discharge end of the beet feeder and in alinement with the topper knife, shelves for supporting the beets carried by said feeder, and provided with rear walls for engaging the beets, said rear walls being provided with downwardly extending slots therein to permit the shelves to pass the topper and division plate.

1,024,143. WIRE-BASKET-FABRIC-MAKING MACHINE. VERNON D. MUNGER, Massillon, Ohio. Filed July 27, 1910. Serial No. 574,161. (Cl. 140—13.)



1. In a machine of the class described, means for holding wire strands in spaced relation one to the other, means for applying other wire strands transversely to the first-named strands, means for twisting the end portions of the second-named strands helically about the first-named strands, and means for forming the helical winding on one of the first-named strands of a length in excess of the winding on the other strand.

2. In a machine of the class described, means for holding wire strands in spaced relation one to the other, means for applying other wire strands transversely to the first-named strands, a plurality of twister heads, for twisting the end portions of the second-named strands helically about the first-named strands, said heads being driven at different speeds to produce a winding on one of the first-mentioned strands of a length in excess of the winding on the other of said first-mentioned strands.

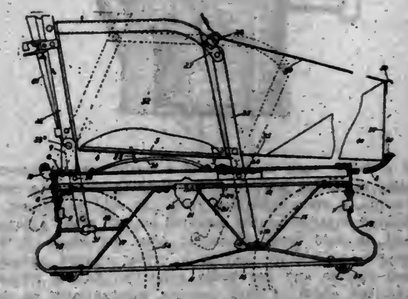
3. In a machine of the class described, means for holding a plurality of longitudinally disposed wire strands in spaced relation one to the other, means for applying other wire strands transversely to the first-named strands, and means for twisting the end portions of said transverse strands on said longitudinal strands to radially dispose said transverse strands from one of said longitudinal strands.

4. In a machine of the class described, longitudinally movable rotatable hollow shafts terminating in twisting heads, and connections for driving said shafts at different speeds one with relation to the other.

5. In a machine of the class described, longitudinally movable rotatable hollow shafts terminating in twisting heads, and means for delivering wire strands transversely to the longitudinal axes of the shafts in step-by-step order and in timed relation to the longitudinal and rotative movements of the shafts.

[Claims 6 to 8 not printed in the Gazette.]

1,024,144. PERAMBULATOR. FRANK A. NAUTS, Toledo, Ohio, assignor to Gendron Wheel Company, Toledo, Ohio, a Corporation of Ohio. Filed Dec. 14, 1907. Serial No. 406,441. (Cl. 21—83.)



1. In a collapsible perambulator, the combination with a frame, of wheels pivotally secured thereto, standards pivoted to said frame, arm-rests connecting said standards, a U-shaped spring having one end thereof connected to the side bars of the frame, a seat supported on said spring, sides for said seat secured at their upper edges to the arm-rests, and guide rods on the frame with which the lower edge of said sides engage.

2. In a collapsible perambulator, the combination of a frame, wheel frames pivoted to the first-mentioned frame, front and rear wheels carried by said frame, front and rear standards pivotally connected to said frame, links connecting said standards, means on said wheel frames coöperating with said standards for effecting the folding in of the wheel frames upon the folding of the standards, spring pressed means carried by said rear standards for automatically locking said standards in their vertical or normal positions, and cams on said perambulator frame for guiding said spring pressed means into inoperative position during the unfolding of said standards.

3. In a collapsible perambulator, the combination with the frame, of wheel frames pivotally secured to the opposite sides thereof, each of said pivotal frames comprising upper and lower longitudinally extending members, end connections for said members, and braces extending between the upper and lower members.

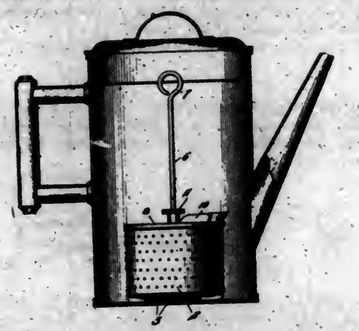
4. In a collapsible perambulator, the combination with the frame, of wheel frames pivotally secured to the opposite sides thereof, each of said pivotal frames comprising upper and lower longitudinally extending members, end connections for said members and transversely and longitudinally extending braces, front and rear connected standards pivoted to and extending below the perambulator frame and bearings carried by said longitudinally extending braces with which said standards engage in the open position of the wheel frames for preventing inward movement of the latter.

5. In a collapsible perambulator, the combination with a frame, of wheels pivotally secured thereto, standards

pivoted to said frame, arm rests connecting said standards, a spring secured to the frame, a seat supported on said frame, sides for said seat secured at their upper edges to the arm rests, and guide rods on the frame to which the lower edges of said sides are secured.

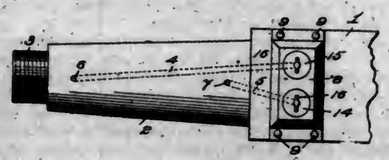
[Claims 6 to 9 not printed in the Gazette.]

1,024,145. COFFEE-COOKING DEVICE. HANS PAULSON, Orting, Wash. Filed July 25, 1911. Serial No. 640,503. (Cl. 53—3.)



In a device such as described a perforated receptacle, radially extending partitions for dividing same into compartments, a stem extending from the said partitions, a perforated cover rotatably mounted on said stem, a flange formed on said cover extending over the edges of the receptacle, said cover having a sector shaped opening formed therein and outwardly extending flanges formed around the edges of said opening substantially as described.

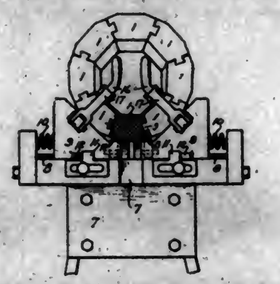
1,024,146. VEHICLE AXLE-SPINDLE LUBRICATOR. ABRAHAM L. RAMSEY, Vincennes, Ind. Filed Feb. 23, 1911. Serial No. 610,250. (Cl. 64—27.)



A lubricator for axle spindles comprising an axle having a spindle provided with separate lubricating ducts near the upper surface of said spindle, one of said ducts leading to an opening near the outer end of the spindle, and the other to an opening near the inner end of the spindle, said ducts diverging near their inner ends, said ducts having openings at their inner ends, said openings leading to the upper surface of the axle near the inner end of the spindle, a rectangular receptacle mounted on the axle above the last mentioned openings, said receptacle having circular screw threaded bores, said bores being concentric with the last mentioned openings, and communicating directly with them, and screw threaded presser covers fitted in said bores to move from top to bottom thereof, said presser covers each having a turn button on the upper side thereof.

1,024,147. ASSEMBLING-TABLE FOR CONICAL STAVE PORCH-COLUMNS. WILLIAM R. RIPLEY, Tacoma, Wash. Filed July 17, 1911. Serial No. 638,847. (Cl. 144—288.)

1. In an assembling table for conical stave columns, the combination of a table adapted to support three staves side-by-side, but lying in planes at an angle to each other; of two transversely yielding head-blocks at the receiving end of said table; and means for clamping the two side staves to said head-blocks, whereby said staves may be held in position while the middle stave is being inserted therebetween.



2. In an assembling table for conical stave columns, the combination of a table adapted to support three staves side-by-side but lying in planes at an angle to each other; of two transversely yielding head-blocks at the receiving end of said table; pivoted gage stops mounted on said head-blocks and each adapted to support the edge of the side staves to bring them to position; and means for clamping the two side staves to said head-blocks, whereby said staves may be held in position while the middle stave is being inserted therebetween.

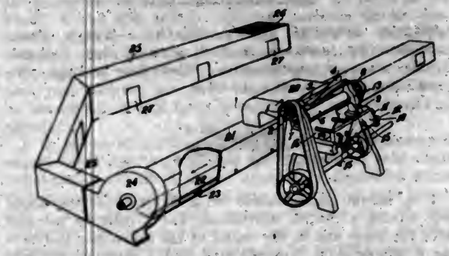
3. In an assembling table for conical stave columns, the combination of a table adapted to support three staves side-by-side but lying in planes at an angle to each other; a bracket secured to the receiving end of said table; two transversely movable head-blocks mounted on said bracket; springs pressing said head-blocks toward the central axis of the table; adjustable stops mounted on said bracket and engaging lugs on said head-blocks, limiting the motion of the head-blocks toward the central axis; and means for clamping the two side staves to said head-blocks, whereby said staves may be held in position while the middle stave is being inserted therebetween.

4. In an assembling table for conical stave columns, the combination of a table adapted to support three staves side-by-side but lying in planes at an angle to each other; a bracket secured to the receiving end of said table; two transversely movable head-blocks mounted on said bracket; springs pressing the head-blocks toward the central axis of the table; adjustable stops mounted on said bracket and engaging lugs on said head-blocks, limiting the motion of the head-blocks toward the central axis; pivoted gage stops mounted on said head-blocks and each adapted to support the edge of the side staves to bring them to position; and means for clamping the two side staves to said head-blocks, whereby said staves may be held in position while the middle stave is being inserted therebetween.

5. In an assembling table for conical stave columns, the combination of a table adapted to support three staves side-by-side, but lying in planes at an angle to each other; of two transversely yielding head-blocks at the receiving end of said table; means for clamping the two side staves to said head-blocks, whereby said staves may be held in position while the middle stave is being inserted therebetween; and a conveying chain adapted to force the middle stave longitudinally between said side staves.

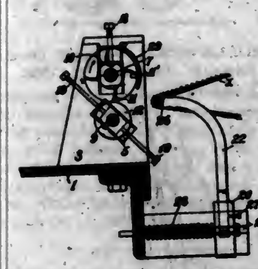
1,024,148. APPARATUS FOR COLLECTING AND ASSORTING FIBERS. MICHAEL EMMET RYAN, Fall River, Mass. Filed Apr. 22, 1909. Serial No. 491,460. (Cl. 38—9.)

1. In a device of the class described, a conduit, means for shaving the hairs of a pelt, means for delivering the shaved hairs in said conduit, an endless belt in said conduit adapted to receive and convey said shaved hairs, a blower at the point of return of said endless belt and disposed with its intake adjacent thereto, a second conduit connected to the delivery of said blower and said second conduit having openings for the removal of distributed hairs at predetermined points along said conduit.



2. In a device of the class described, a conduit, a receiver for hairs and suitably connected to deliver said hairs to said conduit, an endless belt in said conduit adapted to receive and convey said hairs, a blower at the point of return of said endless belt and disposed with its intake adjacent thereto, a second conduit connected to the delivery side of said blower and openings along said second conduit for the removal of distributed hairs at predetermined points.

1,024,149. SHAVING-MACHINE. MICHAEL EMMET RYAN, Fall River, Mass. Filed Dec. 29, 1910. Serial No. 599,870. (Cl. 38—12.)



1. In a machine for shaving the fibers of pelts, a rotary cutter, a rest roll in peripheral contact therewith, means for positively and continuously driving said cutter and said rest roll in opposite directions, the speed of said rest roll being greater than said cutter.

2. In a machine for shaving the fibers of pelts, a rotary cutter, a rest roll located below said cutter and having peripheral contact with said cutter, means for positively and continuously driving said cutter and said rest roll in opposite directions, the speed of said rest roll being greater than said cutter.

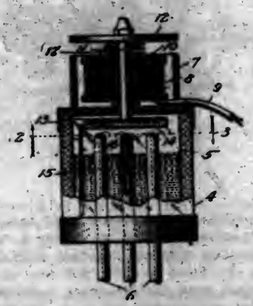
3. In a machine for shaving the fibers of pelts, a rotary cutter having spirally disposed blades spaced about said cutter, a rest roll located below said cutter and having peripheral contact with said blades, means for positively and continuously driving said cutter and said rest roll in opposite directions, the speed of said rest roll being greater than said cutter.

4. In a device of the class described a rotary cutter having spirally disposed blades, spaced about said cutter, a rest roll located below said cutter and having peripheral contact with said blades, means for positively and continuously driving said cutter and said rest roll in opposite directions but at different speeds, the speed of said rest roll being greater than said cutter and means for presenting the hairs of pelt between said cutter and roll.

5. In a device of the class described a rotary cutter having spirally disposed blades, spaced about said cutter, a rest roll located below said cutter and having peripheral contact with said blades, means for positively and continuously driving said cutter and said rest roll in opposite directions but at different speeds, the speed of said rest roll being greater than said cutter and means for presenting the hairs of pelt between said cutter and roll in the direction of their growth.

[Claims 6 to 9 not printed in the Gazette.]

1,024,150. LUBRICANT DEVICE. HENRY K. SANDELL, Chicago, Ill., assignor to Mills Novelty Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 25, 1912. Serial No. 673,338. (Cl. 184—64.)



1. An electro-automatic lubricant device comprising, in combination, an oil-cup provided with a discharge-tube for the oil having its receiving end above the oil-level in the cup, an electromagnet on the cup, a reciprocating armature, a pad of absorbent material connected with the armature to be reciprocated in the cup relative to said tube-end, and a wick depending in the cup from said pad.

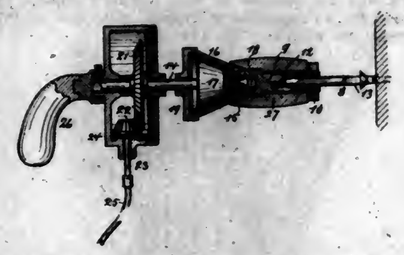
2. An electro-automatic lubricant device comprising, in combination, an oil-cup provided with a discharge-tube for the oil having its receiving end above the oil-level in the cup, a wick extending into the tube at said end, an electromagnet on the cup, a reciprocating armature, a pad of absorbent material carried by the armature to be reciprocated in the cup relative to said wick, and a wick depending in the cup from said pad.

3. An electro-automatic lubricant device comprising, in combination, an oil-cup provided with a discharge-tube for the oil having its receiving end above the oil-level in the cup, a wick extending into the tube at said end, a shield rising from the top of the cup, an electromagnet surmounting the cup in said shield, a spring-raised armature having a stem extending through the electromagnet-spool into the cup, a pad-covered head on the inner end of said stem, and a wick depending in the cup from said pad.

1,024,151. PORTABLE POWER-DRIVEN HAND-TOOL. EDWARD F. SMITH, Cincinnati, Ohio, assignor to The Smith Electric Tool Co., Cincinnati, Ohio, a Corporation of Ohio. Filed Sept. 7, 1911. Serial No. 648,054. (Cl. 144—32.)

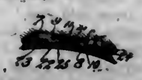
1. In a portable, power-driven hand-tool, the combination of a cylindrical bit-socket adapted to receive a tool-bit at one end and provided with an internal friction cone at its other end which has a shaft-bearing in its deepest part, a hand-hold loosely mounted upon the bit-socket, a cap fitted to close the internal cone and provided with a shaft bearing in its center, a driving shaft slidably fitted to the two shaft-bearings mentioned, a friction cone mounted on this shaft in a position to be within the internal friction cone, means to rotate this shaft, a spring supported on the shaft and positioned between the two cones to keep them yieldingly apart and a handle at the outer end of the shaft to hold the tool and to adjust the shaft lengthwise in its bearings and with reference to the internal friction cone.

2. In a portable hand-tool, the combination of a gear-case, a shaft mounted in the same, a gear-wheel on this shaft and within the case, a pinion supported in this latter to actuate the gear-wheel, means to rotate the pinion, a cap slidably carried on the shaft, an internal friction cone connected to this cap and provided with a bit-socket, a friction cone mounted on this shaft so as to be within the internal friction cone, a spring between the two cones to keep them yieldingly apart and a handle on the gear-case serving to hold the tool and to effect and adjust contact between the cones against the action of the spring between them.



3. In a portable, power-driven hand tool, the combination of a bit-socket adapted to receive a tool-bit at one end and provided with an internal friction-cone at its other end, a cap fitted to close this cone and a handhold loosely mounted upon the bit-socket, a driving-shaft upon which this internal friction cone and its cap are slidably fitted, supporting-means for this shaft and means to rotate it, a friction-cone mounted on this shaft in a position to be within the internal friction-cone, and a spring between the two cones to keep them apart, but adapted to yield when either of the cones is moved with reference to the other one, to permit them to contact with each other.

1,024,152. METHOD AND MEANS FOR PRODUCING DENTAL PLATES. HENRY J. SMITH, Philadelphia, Pa., assignor to H. D. Justi & Son, Philadelphia, Pa., a Copartnership. Filed Feb. 3, 1912. Serial No. 675,166. (Cl. 32—4.)



1. The method of making dental plates adapted to support yielding suction-disks, which consists in inclosing a non-corrosible flanged retainer-shell in a sectional mold, securing such sectional mold to the intaglio matrix of a dental mold, packing said matrix and the shell with rubber, and vulcanizing the rubber.

2. The method of making dental plates adapted to support yielding suction-disks, which consists in inclosing a non-corrosible flanged retainer-shell in a sectional mold, securing such sectional mold to the intaglio matrix of a dental mold, packing rubber into said matrix and shell, vulcanizing said rubber, and splitting the sectional mold to remove it from beneath the flange of the retainer-shell.

3. In a dental mold for forming plates adapted to support yielding suction-disks, a circular mold-disk having a central opening and formed with a central, circular recess in one face, and a circular cover fitting into said recess to be flush with the face of said mold-disk.

4. In a dental mold for forming plates adapted to support yielding suction-disks, a circular mold-disk formed with a central opening and with a circular recess in one face having an annular groove at the periphery of its bottom, and a circular cover fitting into said recess to be flush with the face of said mold-disk and having an annular peripheral flange engaging the annular groove.

5. In a dental mold for forming plates adapted to support yielding suction-disks, a circular mold-disk formed with a central opening and a circular boss upon one face and a circular recess in its other face having an annular groove in its bottom, and a circular cover adapted to fit within said recess and formed with a peripheral flange engaging the groove.

[Claim 6 not printed in the Gazette.]

1,024,153. DENTAL PLATE. HENRY J. SMITH, Philadelphia, Pa., assignor to H. D. Justi & Son, Philadelphia, Pa., a Copartnership. Filed Feb. 3, 1912. Serial No. 675,167. (Cl. 32—4.)

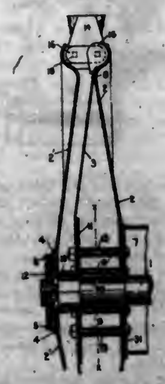


1. A dental plate formed with a recess in its upper side having a central depression, and a retainer integral with the plate and in the center of the depression and having a downwardly tapering stud and a laterally projecting flange.

2. A dental plate formed with a recess in its upper side having a central depression, a retainer-stud integral with said plate, and a metallic shell around said stud and formed with a flange around its upper end and having its lower end embedded in the body of the plate.

3. A dental plate formed with a recess in its upper side having a central depression, a downwardly tapering retainer-stud integral with the plate and projecting from the center of the depression, a downwardly-tapering retainer-shell of non-corrodible metal incasing said stud and having its lower end embedded in the plate and also having a laterally projecting flange around its upper end, and a soft rubber suction-disk having a central opening fitted upon said retainer.

1,024,154. VEHICLE-WHEEL. ROBERT THOMAS SMITH, Warrington, England. Filed Dec. 21, 1908. Serial No. 468,555. (Cl. 152—29.)



1. A wheel comprising dished plates having channeled edges, rubber blocks gripped between said edges and forming the tread, said channeled edges forming the bearing and support of the tread and resisting any inward thrust of the tread, and a hub provided with means for holding one of said plates and permitting a swinging motion thereof.

2. In a disk wheel the combination of dished plates, a series of rubber blocks gripped between the edges of said plates, said plates forming the bearing and support for said blocks, annular spacing members rigid with said plates, and end plates carried by said blocks adapted to protect the blocks.

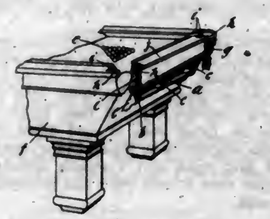
3. A wheel having dished plates provided with channeled edges, a tread gripped between said edges, a hub and a bushing carried thereby, and a ring carried by said bushing and engaging one of said plates for permitting a bodily swing of the same.

4. In a chain driven disk wheel the combination of tread and bracing dished plates, the tread dished plates having channeled rims integral therewith, blocks of rubber interposed between said rims to form the tread of the wheel, a hub and annular spacing members fixedly connected together and holding said plates at fixed distances, a chain ring for driving said wheel, bolts adapted to clamp said ring to two of said plates, and a sleeve on each bolt between the said two plates adapted to take up the thrust of said bolts, substantially as described and shown.

5. A wheel comprising dished plates having channeled edges, rubber blocks gripped in the channels of said edges and forming the tread of the wheel, said channeled edges forming the bearing and the sole support for said tread, and a hub provided with means engaging one of said plates and permitting a bodily swing of the same and for preventing the spreading of said plates at their edges.

[Claims 6 to 10 not printed in the Gazette.]

1,024,155. POOL-BALL-RACK ATTACHMENT. EDWARD P. SOMMERS, Portland, Oreg. Filed Jan. 16, 1912. Serial No. 671,538. (Cl. 46—6.)



In combination with a pool table having pockets provided with metallic supports, said supports being attached to the table by bolts; a detachable rack comprising one or more inclined shelves, guide strips for retaining the stored balls in position, and a top board provided with apertures through which pass the pocket retaining bolts of the table, said bolts thereby serving to clamp said rack on to said table.

1,024,156. COMPOSITION OF MATTER. THOMAS SOTTILE, Union, N. J. Filed Sept. 12, 1911. Serial No. 648,971. (Cl. 51—1.)

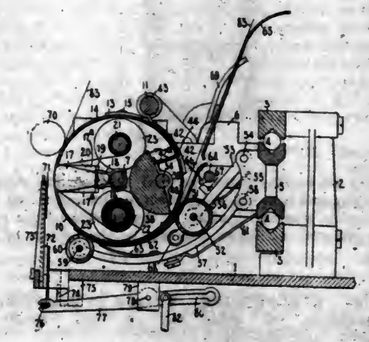
1. The herein-described composition of matter, consisting of water, powdered steel, axle grease, powdered glass, and anisette oil, substantially as described and for the purpose specified.

2. The herein-described composition of matter on razor strops, for sharpening razors for shaving, consisting of water, half glass; powdered steel, two pounds; axle grease, one and half pounds; powdered glass, small quantity; anisette oil, small quantity (perfume), substantially as described.

1,024,157. TYPE-WRITING MACHINE. HERBERT H. STEELE, Marcellus, N. Y., assignor to The Monarch Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed Dec. 31, 1909. Serial No. 535,744. (Cl. 197—103.)

1. In a typewriting machine, the combination of a platen movable lengthwise of the lines of print, means for feeding a ribbon past the printing point independently of the platen, and line spacing means for simultaneously advancing a work sheet over the platen, said line spacing means being operative independently of the platen.

2. In a typewriting machine, the combination of a platen, means for supporting a ribbon as wide at least as the length of the printing line, means for feeding said ribbon transversely of the printing line, line spacing means for advancing a work sheet from line to line independently of the platen, and means automatically operative by said line spacing means for feeding said ribbon transversely of the printing line.



3. In a typewriting machine, the combination of a platen, line spacing means operative independently of the platen for moving the paper relatively thereto, and ribbon feeding means operative automatically by said line spacing means.

4. In a typewriting machine, the combination of a platen movable lengthwise of the printing line, line spacing mechanism comprising a ratchet wheel operative independently of said platen for line spacing purposes, and ribbon feeding mechanism connected with said ratchet wheel.

5. In a typewriting machine, the combination of a platen movable lengthwise of the printing line, line spacing mechanism independent of said platen comprising a ratchet wheel and a shaft connected thereto but separate from the platen, and ribbon feeding means connected to said shaft.

[Claims 6 to 37 not printed in the Gazette.]

1,024,158. COMPOUND FOR USE IN BREWING FERMENTED BEVERAGES. LEO STEIN, New York, N. Y., assignor of one-half to John C. Dehls, Brooklyn, N. Y. Filed Feb. 2, 1912. Serial No. 674,994. (Cl. 195—32.)

1. A compound comprising calcium sulfate, a neutral hygroscopic salt and an acid salt, for improving the process of brewing fermented beverages.

2. A compound comprising calcium sulfate, a neutral hygroscopic salt and an acid salt of the alkali metal group, for improving the process of brewing fermented beverages.

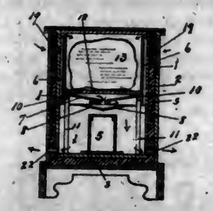
3. A compound comprising calcium sulfate, magnesium chlorid, and an acid salt of the alkali metal group, such as potassium monophosphate or biphosphate, or sodium monophosphate or biphosphate, or potassium bisulfate or sodium bisulfate, for improving the process of brewing fermented beverages.

4. A compound comprising calcium sulfate, and an acid salt of the alkali metal group for improving the process of brewing fermented beverages.

1,024,159. ROOM-COOLING APPARATUS. CARLTON J. STODDARD, Salt Lake City, Utah. Filed Nov. 6, 1911. Serial No. 658,886. (Cl. 62—22.)

A room cooling apparatus consisting of a casing having the walls thereof spaced apart and said space filled with nonheat-conducting material, vertically placed deflector sheets, spaced from the sides of said casing and extending from near the top to practically the middle of each side, ice supporting means in the upper portion of said casing adjacent the bottom of said deflector sheets, longitudinally placed and laterally inclined drain boards spaced apart and secured below said ice supporting means adapted to

direct air currents longitudinally central of said casing, a drain longitudinally and centrally located below said drain boards and adapted to direct the air currents toward the sides of said casing and below said deflector sheets, a



plurality of ingress pipes inserted through the sides of said casing and near the top thereof, a pipe connected with said ingress pipe and leading to the outside of the room, and a plurality of egress openings at the bottom of said casing.

1,024,160. ELECTROLIER. THOMAS P. STRITTMATTER, Philadelphia, Pa. Filed Aug. 10, 1911. Serial No. 643,316. (Cl. 240—81.)



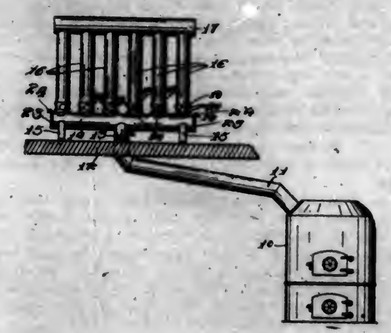
1. In an electrolier, a base having a recess therein, a plate seated in said recess and having an upwardly disposed horizontal reflecting surface, means to retain said plate in position, an illuminating device supported above said plate, a globe seated on said plate and inclosing said illuminating device, and a circumferential abutment secured to said base and adapted to prevent lateral movement of said globe.

2. In an electrolier, a base having a recess therein, a plate seated in said recess and having an upwardly disposed horizontal reflecting surface, means to retain said plate in position, an illuminating device supported above said plate, a globe seated on said plate and inclosing said illuminating device, and means to prevent lateral movement of said globe.

3. In an electrolier, a base having a recess therein, a reflecting plate seated in said recess having an opening therein, means to retain said plate in position, a socket passing through said opening and adapted to support an illuminating device above said plate, a flange bushing engaging said socket and adapted to retain said socket in position on said plate, a globe seated on said plate and inclosing said illuminating device, and means secured to said base and adapted to prevent lateral movement of said globe.

4. In an electrolier, a base having a recess therein, a horizontal reflecting plate seated in said recess having an opening therein, means to retain said plate in position, a socket passing through said opening and adapted to support an illuminating device above said plate, means for holding said socket in position on said plate, a globe seated on said plate and inclosing said illuminating device, and means secured to said base and adapted to prevent lateral movement of said globe.

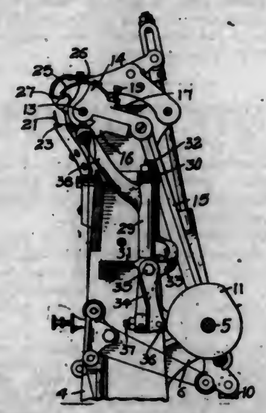
1,024,161. HEATING SYSTEM. WILLIAM HENRY SWETT, Berkeley, Cal. Filed July 15, 1911. Serial No. 638,707. (Cl. 126—183.)



1. A radiator comprising a lower cylinder, a plurality of vertical pipes leading from said cylinder, and provided with openings adjacent their lower ends, a collar surrounding each of said pipes and provided with openings adapted to be brought into registry with the openings in said pipe, and a cylinder connected with the upper ends of said pipes.

2. A radiator comprising a lower cylinder provided with vertical openings in its ends, and provided with tracks adjacent said openings, slides mounted in said tracks, a plurality of vertical pipes leading from said cylinder and provided with openings adjacent their lower ends, collars surrounding the lower ends of said pipes and provided with openings adapted to be brought into registry with the openings of said pipes, and a second cylinder connected with the upper ends of said pipes and provided with openings in its ends.

1,024,162. LEATHER-STITCHING MACHINE. BRUNO H. THEISEN and GEORGE S. KELLER, Minneapolis, Minn. Filed Mar. 30, 1907. Serial No. 365,541. (Cl. 112—20.)



1. The combination, with an oscillating needle jaw having a needle, of a pivoted awl jaw carried by said needle jaw and provided with an awl, said awl jaw having a lateral movement independently of said needle jaw, a spring device for normally holding said awl jaw at the limit of its lateral movement, an oscillating post having an arm arranged to engage said awl jaw at a predetermined point in its movement, a second arm provided on said post, and a cam device arranged to actuate said second arm and rock said post and said first named arm.

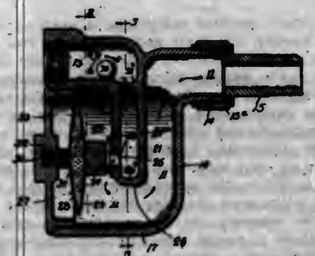
2. In a stitching machine, the combination, with a frame, of a post mounted therein, an arm mounted on said post, a lever carried by said arm, means for adjusting said lever toward or from said arm, a cam arranged to engage said lever and actuate said arm and post, a second arm provided on said post, a needle jaw and means for oscillating the same, a needle carried by said jaw, an awl jaw pivoted on said needle jaw and having an awl and adapted to swing on its pivot laterally with respect to said needle jaw and said awl jaw being in the path of the second arm on said post to be actuated thereby at predetermined intervals.

3. In a stitching machine, the combination, with a frame, of a post mounted therein, an arm thereon, a lever carried by said arm and capable of adjustment toward or from the same, a cam arranged to engage said lever to actuate said arm and post, needle jaw and a needle, an awl jaw pivoted on said needle jaw and having an awl and capable of movement sidewise with respect to said needle jaw.

4. In a stitching machine, the combination, with a frame, of a post mounted therein and having a projecting arm thereon, a lever pivoted on said arm, a revolving cam, means for adjusting said lever toward or from said cam to hasten or retard the time of engagement of said cam with said lever, a needle jaw and needle, an awl jaw pivoted on said needle jaw and having an awl, said post having means arranged to engage and oscillate said awl jaw when said post is rocked by the movement of said cam.

5. The combination, with a frame, of an oscillating needle jaw and needle, an awl jaw pivoted on said needle jaw and capable of movement toward and from the same, means yieldingly holding said awl jaw out of the plane of said needle jaw, an awl carried by said awl jaw, means for oscillating said jaws to punch a hole in the material, means for oscillating said awl jaw independently of said needle jaw to feed the goods, and a screw mounted in said needle jaw and fitting loosely into a socket provided in said awl jaw.

1,024,163. TRAP-VALVE. RICHARD H. THOMAS, Chicago, Ill., assignor to L. A. Thomas, Chicago, Ill. Filed Apr. 3, 1911. Serial No. 618,494. (Cl. 236—10.)



1. A hollow valve body comprising a receiving chamber for accumulating of water of condensation, said chamber having an inlet and an outlet out of direct communication with each other, and a hollow weir projecting down into said chamber from its top and extending from side to side thereof to form a trap therein, the passage in said weir leading to said outlet at its upper end, and opening into said chamber through a port at its lower end, in combination with a valve piece adapted to close said port, and contractible and expansible valve operating mechanism, actuated by the accumulation of water in said chamber to unseat said valve piece.

2. A hollow valve body comprising a receiving chamber, having an inlet and an outlet at the top of the chamber, out of direct communication with each other, and a hollow weir projecting down into said chamber from its top and extending across the side thereof from side to side to form a trap therein, the passage through said weir opening to the chamber through a horizontal port, and leading to the outlet, in combination with a valve piece for closing said port, and contractible and expansible valve operating mechanism within said chamber, actuated by the accumulation of water therein to open the port.

3. A hollow valve body comprising a receiving chamber for accumulating water of condensation, said chamber having inlet and discharge passages at the top of said chamber and out of direct communication with each other, a vertical hollow weir projecting down from the top of said chamber and forming a trap therein, the passage in said weir communicating with said discharge passage and opening to said chamber through a port, in combination with a valve piece, for covering and uncovering said port, and an expansible and contractible member, operating to seat and unseat said valve piece under the influence of temperature variations within said chamber.

4. A hollow valve body comprising a receiving chamber having an inlet and an outlet, and a hollow weir projecting down into the chamber at its top and extending from side to side thereof to form a trap therein, the passage in the weir leading to the outlet and opening into the chamber through a horisontal port, in combination with a laterally expansible and contractible member, and a valve piece carried thereby and arranged to open and close said port, said member acting to seat the valve piece under the influence of a high degree of temperature and to unseat the valve piece under the influence of a lower degree of heat.

5. A valve body, comprising a receiving chamber, a hollow vertical weir projecting down from the top of said chamber and extending across the same from side to side to form a trap therein, said chamber having an inlet passage, and having a discharge passage including a vertical passage through said weir, and opening into said chamber through a port surrounded by a vertical valve seat, in combination with a hollow, expansible member, containing an expansible fluid, and a valve piece carried by said member, and arranged to seat upon said valve seat, said member being arranged to expand and seat the valve piece when subjected to the influence of steam.

1,024,164. ANTITELESCOPING DEVICE FOR RAILWAY-CARS. JAMES S. THOMPSON, Chicago, Ill., assignor of one-half to J. B. Terbell, Chicago, Ill. Filed Mar. 6, 1911. Serial No. 612,624. (Cl. 213—3.)



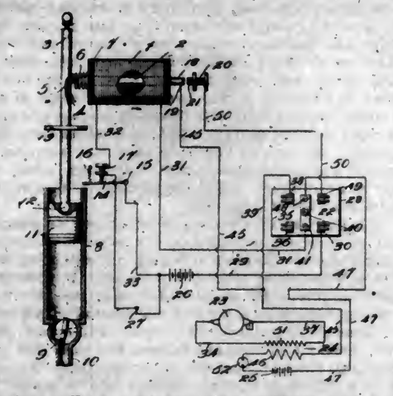
1. In combination with a railway-car, antitelescoping means comprising heads projecting beyond the end of a car at opposite sides of the longitudinal center of its base, one of said heads containing an open-sided recess and the other head having a wedge extending from it, for the purpose set forth.

2. In combination with a railway-car, antitelescoping means comprising heads projecting beyond the end of a car at opposite sides of the longitudinal center of its base, one of said heads containing a V-shaped open-sided recess and the other head having a V-shaped wedge extending from it, for the purpose set forth.

3. In combination with a railway-car, antitelescoping means comprising shouldered heads projecting beyond the end of the car at opposite sides of the longitudinal center of its base, one of said heads containing a V-shaped open-sided recess and the other head having a V-shaped wedge extending from it, for the purpose set forth.

4. In combination with a railway-car, antitelescoping means comprising beams extending lengthwise of the car at opposite sides of the longitudinal center of its base and socketed at their inner ends in the body-bolster and secured to said base, said beams terminating in heads projecting beyond the platforms and forming a pair at each platform, one head of each pair containing a V-shaped open-sided recess and the other head having shoulders on its end and a wedge extending from between the shoulders, for the purpose set forth.

1,024,165. X-RAY APPARATUS. HARRY F. WAITE, Harrison, N. Y. Filed Dec. 9, 1911. Serial No. 664,761. (Cl. 161—25.)



1. In an X-ray apparatus the combination of a timing device; a magnet controlling said device; a pair of contacts adapted to be closed by said magnet; a circuit passing through the coils of said magnet controlled by said timing device; a circuit controlling the currents passing through the X-ray tube controlled by said pair of contacts; and a switch adapted to control both of said circuits, substantially as described.

2. In an X-ray apparatus the combination of a timing device; means for regulating the period during which said device is active; a magnet controlling the operation of said means; a pair of contacts adapted to be closed by said magnet; a circuit passing through the coils of said magnet provided with a pair of contacts controlled by said timing device; a circuit controlling the currents passing through the X-ray tube controlled by said first mentioned pair of contacts; means for causing varying currents to traverse said last mentioned circuit; and a switch adapted to control both of said circuits, substantially as described.

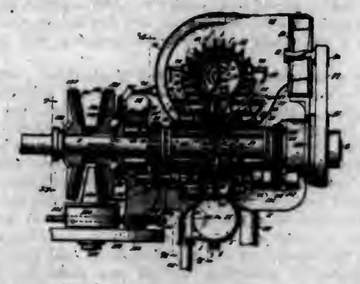
3. In an X-ray apparatus the combination of a timing device comprising a plunger adapted to fall under the influence of gravity; means to regulate the falling movement of said plunger; a solenoid provided with a reciprocating core adapted to control said plunger; a circuit in which said solenoid is included; a contact in said circuit adapted to be opened by the fall of said plunger; a second contact carried by said core; a second circuit passing through said second contact; and a switch lever controlling both said circuits, substantially as described.

4. In an X-ray apparatus the combination of a timing device; means to regulate the period of operation of said device; a solenoid having a core controlling said device; a non-magnetic extension on said core carrying a contact; a circuit controlled by said timing device in which said solenoid is included; a second circuit in which said contact is included; an X-ray tube; a secondary coil for sending currents through said tube; a primary coil in said second circuit; and means for controlling said circuits, substantially as described.

5. In an X-ray apparatus the combination of a timing device; a solenoid having a core controlling said device; a contact carried by said core; a circuit in which said solenoid is included; a second contact for controlling said circuit; a second circuit in which said first mentioned contact is included; a switch controlling said second circuit; and means in said second circuit adapted to generate high tension currents, substantially as described.

1,024,166. ROTARY MACHINE. HOWARD L. WEED, Los Angeles, Cal. Filed Feb. 15, 1911. Serial No. 608,804. (Cl. 123—11.)

1. An internal combustion rotary engine, comprising a shaft, a casing formed with a working chamber extending around said shaft, two differential members mounted to rotate independently on said shaft, an intermediate differential means connected to the aforesaid differential members and connected to rotate with the shaft, pistons connected to the respective differential members and arranged within the working chamber of the casing, means for supplying combustible mixture to said casing, outlet means for the discharge of exploded gases from said casing, ports for said inlet and outlet means controlled by the movement of the piston, ignition means in said casing and means for controlling the movement of said pistons to provide for suction of the mixture into the casing between the pistons, compression of the mixture so drawn in, separation of the pistons under the expansion of the ignited mixture and expulsion of the mixture from between the pistons.



2. In a rotary machine, the combination of a shaft, a casing surrounding the shaft and provided with a working chamber extending around the shaft, two differential members mounted to rotate independently on said shaft and provided with gears, an intermediate differential member secured on said shaft to rotate therewith and provided with gears engaging the gears of both the aforesaid differential members, carrier members mounted respectively on said differential members to rotate therewith but slidable longitudinally thereon, and pistons carried by said carrier members and fitting in said working chamber.

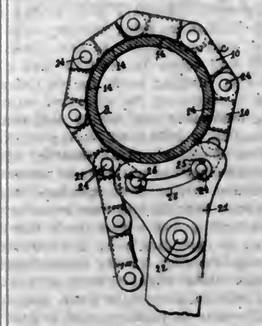
3. A rotary machine comprising a shaft, a casing extending around the shaft and formed in two parts divided on a plane transverse to the axis of the shaft, each of said parts having an outwardly extending flange, clamps extending over the flanges of said casing parts to hold said casing parts together, said two parts of the casing being formed with a chamber extending around the shaft, differential members mounted to rotate independently on said shaft and provided with gears, an intermediate differential member carried by said shaft and provided with gears engaging the gears of the aforesaid differential members, carriers mounted on said differential members to rotate therewith but capable of limited longitudinal motion thereon, and pistons carried by said carriers and working in said chamber in the said casing.

4. A rotary machine comprising a shaft, a casing extending around the shaft and formed in two parts divided on a plane transverse to the axis of the shaft, each of said parts having an outwardly extending flange, clamps extending over the flanges of said casing parts to hold said casing parts together, said two parts of the casing being formed with a chamber extending around the shaft, differential members mounted to rotate independently on said shaft and provided with gears, an intermediate differential member carried by said shaft and provided with gears engaging the gears of the aforesaid differential members, carriers mounted on said differential members to rotate therewith but capable of limited longitudinal motion thereon, pistons carried by said carriers and working in said chamber in the said casing, and packing rings extending between said parts of said casing and the adjacent piston carriers and between the said carriers.

5. An internal combustion rotary engine comprising a shaft, a casing formed with a working chamber extending around said shaft, two differential members mounted to rotate independently on said shaft, an intermediate differential means connected to the aforesaid differential members and connected to rotate with the shaft, carriers connected to said differential members, a set of pistons on each of said carriers and arranged alternately within the working chamber of the casing, said casing being provided with inlet means at one portion thereof and outlet means at another portion thereof, ignition means in the casing at the portion thereof intermediate between the inlet and outlet means, and means for holding one of said sets of pistons from backward movement after it passes the outlet means and before it passes the inlet means, whereby said pistons act as abutments during the advance movement of the other pistons under the action of the pressure due to the combustion.

[Claims 6 to 14 not printed in the Gazette.]

1,024,167. PIPE-WRENCH. LAWRENCE WHITCOMB, Brookline, Mass., assignor to The Cork Insert Company, a Corporation of Maine. Filed Sept. 26, 1910. Serial No. 583,725. (Cl. 81—66.)

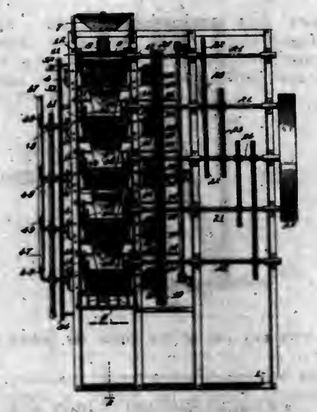


1. A pipe wrench of the class described, provided with a flexible member capable of encircling the pipe and composed of a plurality of connected links, each comprising a bottom plate, side pieces turned up from said bottom plate, end pieces turned up from said bottom plate and coöperating therewith and with said side pieces to form a socket closed at its bottom, and inserts of non-metallic material fitted into said sockets, and bearing against the bottoms thereof, substantially as described.

2. A pipe wrench of the class described, provided with a flexible member capable of encircling the pipe and composed of a plurality of connected links, each comprising a bottom plate, side pieces turned up from said bottom plate, end pieces turned up from said bottom plate and coöperating therewith and with said side pieces to form a socket closed at its bottom, inserts of non-metallic material fitted into said sockets, and bearing against the bottoms thereof, and means to prevent displacement of said end pieces, substantially as described.

3. A pipe wrench of the class described, provided with a flexible member capable of encircling the pipe and composed of a plurality of connected sheet metal links, each comprising a bottom plate, end pieces turned up from said bottom plate, and side pieces turned up from said bottom plate and having an offset end portion which coöperates with the end piece to lock the latter against outward movement, and pipe engaging surfaces of cork inserted into said sockets to bear against the bottom, side and end walls thereof and to project above said side and end walls and to contact with the outer circumference of the pipe, substantially as described.

1,024,168. MACHINE FOR CONVERTING FOOD MATERIALS INTO SHREDS OR FIBERS. WILLIAM E. WILLIAMS, Chicago, Ill. Filed Oct. 1, 1907. Serial No. 395,347. (Cl. 83—12.)



1. In apparatus of the class described, the combination with a pair of shredding rolls, of a second pair of shredding rolls delivering shreds, in the bight of the first pair, and means for arranging, delivered shreds across the grooves of the rolls first mentioned.

2. In a machine of the class described, the combination with pairs of co-acting shredding rolls mounted one pair above another in the same plane and one roll of each pair having circumferential grooves spanned by ungrooved portions of its companion, of a hopper above the first pair, spouts for directing shreds from each pair to the succeeding pair, and agitator arms arranged to move back and forth longitudinally above each pair of rolls below the first to distribute the shreds across the grooves.

3. The combination with a series of pairs of co-acting shredding rolls, a feeding hopper, and a receiving hopper, all mounted one above the other approximately in the same vertical plane, of a reciprocating distributing device moving above the central portion of the bight of the upper rolls, and means for limiting the distribution to a predetermined central portion of the rolls.

4. In a cereal shredding machine, the combination with parallel pairs of shredding rolls, one pair above another, of a hopper above the first pair and delivering thereto, spouts for guiding the shreds from each pair to the central portion of the next lower pair, agitators arranged to move back and forth from end to end of the effective portion of the rolls which receive shreds, and adjustable fenders near the ends, respectively of the path of each agitator.

5. In a machine of the class described, the combination with a series of sets of rolls mounted above one another, of agitators, for the different sets, respectively, a shaft extending along the different sets and actuating all of them, and a crank mounted above the axis of one set and arranged to drive the agitator shaft, substantially as shown.

[Claims 6 to 9 not printed in the Gazette.]

1,024,169. ATTACHMENT FOR PICTURE-FRAMES. JAMES H. ANDREWS, Washington, D. C. Filed Dec. 21, 1911. Serial No. 667,068. (Cl. 40—145.3.)

In combination with a frame including upper and lower bars and side bars, of a strip including a vertical row of hooks secured at its ends centrally to the upper and lower bars respectively, a pair of spaced guides secured

to the lower portion of each side bar, and an endless cord loosely mounted in the guides and adapted for en-



gagement with any one of the hooks for taking up said cord.

1,024,170. COMBINED SOLDERING-IRON AND BLOW-TORCH. WILLIAM P. BARTHOLOW, Minneapolis, Minn., assignor to The Dobbins Manufacturing Company, Minneapolis, Minn., a Corporation of South Dakota. Filed May 22, 1911. Serial No. 628,842. (Cl. 158—27.)



1. A device of the class described comprising an oil reservoir, a feed pipe leading therefrom, a burner having a needle valve, a retort having an oil inlet and discharge duct communicating respectively with said feed pipe and said burner, a soldering point disposed in front of said burner and eccentrically with respect to the burner nozzle, said point having a conical recess therein, the burner flame impinging on the wall of said recess on one side of the center of said point and being directed thereby against the opposite wall of the recess, said retort being located in the path of the flame deflected by said opposite wall.

2. A device of the class described comprising a reservoir and a feed pipe leading therefrom, a burner having a needle valve, a retort disposed at one side of said burner and projecting in front of the same, a soldering point mounted in front of said burner and having a conical recess in the path of the flame from said burner, said burner being on one side of the center of said recess and said retort on the opposite side of the center of said recess, the flame from said burner impinging on the wall of said recess on one side and being deflected thereby across the recess against the wall on the other side and from thence backwardly against said retort.

1,024,171. ALKYL ESTERS OF DIIODO FATTY ACIDS OF HIGH MOLECULAR WEIGHT. ANTONIO BASELLI, Basel, Switzerland, assignor to Society of Chemical Industry in Basle, Basel, Switzerland. Filed Sept. 12, 1910. Serial No. 581,711. (Cl. 23—24.)

1. As new products, the alkyl esters of di-iodo-fatty acids of high molecular weight corresponding to the general formula $C_nH_{n-3}I_2COO$:alkyl forming colorless crystals insoluble in water, but soluble in alcohol and remaining solid at temperatures which come into consideration in practice.

2. As a new product, the ethyl ester of di-iodo-brassidic acid corresponding to the formula $C_{22}H_{39}I_2.COO.C_2H_5$, forming colorless silky needles which melt at 37–38° C., being insoluble in water and difficultly soluble in cold alcohol but easily soluble in hot alcohol.

1,024,172. DRILL-CHUCK. OSCAR J. F. BERGSTEN, Worcester, Mass., assignor of one-half to Nils Bjork, Worcester, Mass. Filed Aug. 21, 1911. Serial No. 645,152. (Cl. 29—145.)



1. In combination, a drill head having an extension and an internal aperture, said head having a plurality of laterally entering openings, trunnions within said openings extending into said head aperture, bearing openings communicating with said head aperture, a dog within each bearing opening each dog having an extending snug, a collar revolubly held upon said head having tangentially extending slots said snugs being slidably held within said slots, means to hold said collar to said head, a spring to yieldingly hold said collar in position, and a drill collet having lengthwise running kerfs for co-action with said trunnions and a cannelure for co-action with said dogs, the dogs being removably held within said cannelure.

2. In combination, a drill head having an extension and an external stop shoulder and an internal aperture, said head being provided with a plurality of laterally entering openings, trunnions within said openings extending into said head aperture, bearing openings communicating with said head aperture, a dog within each bearing opening each dog having an extending snug, a collar revolubly held against said stop shoulder having tangentially extending slots said snugs being slidably held within said slots, means to hold said collar to said head, a spring to yieldingly hold said collar in position, and a drill collet having lengthwise running kerfs for co-action with said trunnions and a cannelure for co-action with said dogs, the dogs being removably held within said cannelure.

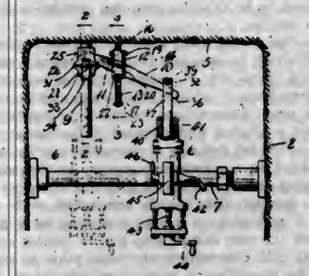
3. In combination, a drill head having an external stop shoulder and an internal aperture ending in a cone seat, said head further having a plurality of laterally entering openings, trunnions adjustable within said openings extending into said head apertures, bearing openings communicating with said head aperture, a dog within each bearing opening each dog having an extending snug, a collar revolubly held upon said head having tangentially extending slots said snugs being slidably held within said slots, means to hold said collar to said head, a spring to yieldingly hold said collar in position, a drill collet having lengthwise running kerfs for co-action with said trunnions and a cannelure for co-action with said dogs, the dogs being removably held within said cannelure, and a centering cone within said cone seat.

4. An apertured drill head having laterally entering trunnion openings and adjacent bearing openings communicating with said head aperture, trunnions adjustable within said openings and extending into said head aperture, a dog within each bearing opening each dog having an extending snug, a collar revolubly held upon said head having tangentially extending slots for co-action with said snugs, means to revolubly hold said collar to said head, a spring to yieldingly hold said collar in one position, and a drill collet having lengthwise running kerfs for co-action with said trunnions and a cannelure for co-action with said dogs.

5. In combination, an apertured drill head having laterally entering trunnion openings and adjacent bearing openings communicating with said head aperture, trunnions adjustably held within said openings and extending into said head aperture, a dog within each bearing opening each dog having a guide face and an extending snug said guide faces working against the walls of said collar recesses said snugs working within said slots, a spring to normally force said collar in one direction against said dogs, means to hold said collar to said drill head, a centering cone within said head aperture, and a drill collet having a cannelure for co-action with said dog and lengthwise running kerfs engaged by said trunnions said collet having a centering seat to hold said cone.

[Claims 6 to 9 not printed in the Gazette.]

1,024,173. DRILL-EXTRACTOR. BENJAMAN F. BETTS, Goldroad, Ariz. Filed Oct. 10, 1910. Serial No. 586,203. (Cl. 125—10.)



1. A mechanism of the class described, comprising in combination with a power drill having a detachable bit, of means for withdrawing the bit from its work comprising a clamp adapted to be fastened to the drill, a fulcrum capable of arrangement adjacent thereto, a lever having movable connection with said clamp and said fulcrum, and means operable by the drill for forcing the lever to withdraw the bit.

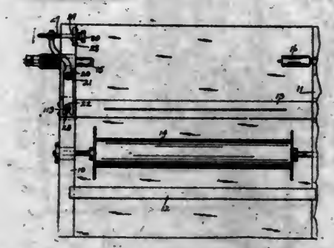
2. In combination with a power drill having a removable bit, a mechanism for withdrawing the bit comprising a clamp adapted to grip the bit, an adjustable fulcrum arranged adjacent thereto, a lever having movable engagement with the said clamp and the said fulcrum, and a member adapted to be driven by the said drill and having movable engagement with the said lever for operating the latter to withdraw the bit from its work.

3. In combination, a power drill having a removable bit adapted to be driven into a mine wall, means for supporting said power drill in alinement with said drill bit and at a point removed from alinement therewith, a clamp adapted to be attached to the drill bit, a lever pivotally attached to said clamp, a member engaging said lever and coöperating with the power drill to impart movement to said clamp, and an adjustable fulcrum block connected with said lever and disposed adjacent to said drill bit.

4. A mechanism for withdrawing drill bits comprising in combination with an adjustable drill and a movable drill bit, of a lever, a bit clamp pivotally mounted upon one end thereof, said lever being formed with a slot intermediate its length, a fulcrum device movably engaging said slot, and a thrust member having a yoke for engaging the free end of the lever, the said thrust member being adapted to be operated by the drill for causing the lever to withdraw the bit from a hole bored thereby.

5. In combination with a power drill and a removable bit adapted to be operated thereby, of mechanism for withdrawing the bit from its work comprising a lever, a bit engaging clamp pivoted upon one end of the lever, and having means for causing it to firmly grip the bit at any point along its length, adjustable fulcrum devices carried by said lever, the said lever having an elongated slot for accommodating itself to the positions of the said fulcrum, and a yoke member having a lever engaging bearing adapted to press upon the free end of the lever, the said yoke member being provided with lever retaining means for preventing its becoming disengaged from the yoke member, and means for supporting the power drill so that it may be disconnected from the drill and be made to operate the said yoke member for causing the lever to withdraw the bit.

1,024,174. TRACKING DEVICE FOR PNEUMATIC PIANOS. WILLIAM G. BETZ, Chicago Heights, Ill., assignor to Steger & Sons Piano Manufacturing Company, Chicago, Ill., a Corporation. Filed June 12, 1911. Serial No. 632,586. (Cl. 84—165.)



In a pneumatic piano, a frame provided with a dovetailed recess, a tracker bar slidably mounted in said recess in the frame, a lever fulcrumed to said frame and in operative connection with said tracker bar for laterally adjusting it, a screw mounted in the frame, and an oscillatory joint between the screw and lever whereby the screw will both actuate and hold the lever in position, substantially as set forth.

1,024,175. FAUCET. JAMES H. BOYE, Chicago, Ill., assignor to John L. Flannery, Chicago, Ill. Filed Sept. 7, 1911. Serial No. 648,232. (Cl. 137—26.)



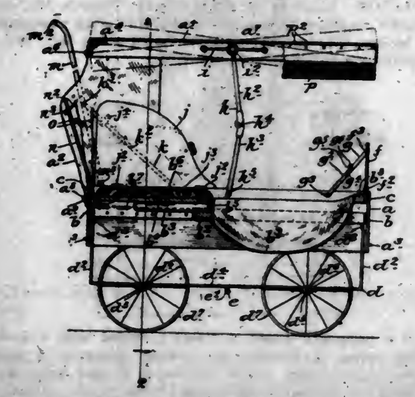
1. A device of the character set forth, comprising a mixing-chamber equipped with an outlet-passage and equipped with inlet-conduits, inwardly-seating valves in said conduits projecting into said mixing-chamber, a shaft extending into said mixing-chamber and equipped with valve actuating means comprising a pair of similar cams mounted on said shaft and adapted to contact with the respective valves, said cams having low portions disposed in angular relation to each other and having high portions provided with recesses, whereby either valve may be held in unseated position while the other valve remains in the seated position.

2. A device of the character set forth, comprising a cylindrical casing equipped with an outlet-spout and equipped with inlet-conduits communicating through the cylindrical wall of the casing, ball valves in said conduits projecting into the casing, a shaft extending into the casing and equipped with a pair of cams corresponding with said valves and having peripheral portions adapted to contact directly with said ball valves, and means for actuating said shaft.

3. A device of the character set forth, comprising a mixing chamber equipped with an outlet-spout and equipped with a pair of inlet conduits seating toward the mixing chamber and projecting thereinto, a handle-equipped shaft extending into the mixing-chamber and

equipped with a pair of cams located in the planes of the respective valves, said cams having low portions substantially 180° apart and high portions provided with recesses approximately 180° apart, for the purpose set forth.

1,024,176. GO-CART. WILLIAM BOYENS, Brooklyn, N. Y. Filed Apr. 4, 1911. Serial No. 618,636. (Cl. 21—83.)



1. A go-cart comprising an oblong box or casing open at the top and bottom and provided with a flexible detachable bottom and a top adapted to be raised to form a canopy, and said box or casing being provided with an internal frame which extends entirely around the same and which divides the said box or casing into top and bottom parts, a running gear construction pivoted in the bottom part of said box or casing and adapted to be folded thereinto and to be extended for use, a seat supported above said frame in the rear end of said box or casing and forwardly of which is a flexible bag construction, folding sideboards connected with the rear end part of said box or casing, a folding back plate connected with the rear end of the box or casing, a yoke-shaped folding handle pivoted to the sides of the rear end portion of said box or casing, folding brace rods pivoted to the sides of said handle and to the sides of the box or casing forwardly of the rear end thereof, a pivoted yoke-shaped device connected with said handle and adapted to engage the back plate, and folding devices connected with the box or casing and with the canopy for holding the latter in an elevated position.

2. A go-cart comprising a box or casing having a movable top and a movable bottom, said box or casing being provided with an internal frame which divides it into top and bottom parts, a running gear construction mounted in the bottom part of said box or casing and adapted to be folded thereinto and to be extended for use, a stationary spring supported seat arranged in the rear end portion of the top part of said box or casing and forwardly of which is a flexible bag construction, folding sideboards connected with the rear end part of said box or casing, a folding back plate connected with the rear end of said box or casing, and means for holding said sideboards and back plate in an upright position, said top being adapted to be raised to form a canopy.

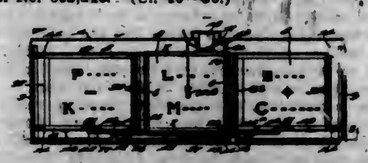
3. A go-cart comprising a box or casing having a movable top adapted to be raised to form a canopy and a movable bottom, said box or casing being provided with an internal frame which divides it into top and bottom parts, a running gear construction mounted in the bottom part of said box or casing and adapted to be folded thereinto and to be extended for use, a spring supported seat arranged in the rear end portion of the top part of said box or casing and forwardly of which is a flexible bag construction, folding sideboards connected with the rear end part of said box or casing, a folding back plate connected with the rear end of said box or casing, and means for holding said sideboards and back plate in an upright position, said box or casing being also provided at the front end thereof with a folding dashboard, and at the rear end thereof with a folding handle.

4. A go-cart comprising a box or casing having a movable top and a movable bottom, said box or casing being provided with an internal frame which divides it into top and bottom parts, a running gear construction mounted in the bottom part of said box or casing and adapted to be folded thereinto and to be extended for use, a spring supported seat arranged in the rear end portion of the top part of said box or casing and forwardly of which is a flexible bag construction, folding sideboards connected with the rear end part of said box or casing, a folding back plate connected with the rear end of said box or casing, and means for holding said sideboards and back plate in an upright position, the movable top being also adapted to be raised above the box or casing and to serve as a canopy.

5. A go-cart, comprising a box or casing having a movable top adapted to be raised to form a canopy and a movable bottom, said box or casing being provided with an internal frame which divides it into top and bottom parts, a running gear construction mounted in the bottom part of said box or casing and adapted to be folded thereinto and to be extended for use, a stationary spring supported seat arranged in the rear end portion of the top of said box or casing and forwardly of which is a flexible bag construction, folding side boards connected with the rear end part of said box or casing, a folding back plate connected with the rear end of said box or casing, and means for holding said side boards and back plate in an upright position, the movable top being also adapted to be raised above the box or casing and to serve as a canopy, and a detachable apron adapted to be connected with said canopy and with the rear end portion of the box or casing and to inclose the folding side boards and the folding back plate.

[Claim 6 not printed in the Gazette.]

1,024,177. ADVERTISING APPARATUS. WILLIAM H. BRADLEY, Philadelphia, Pa. Filed Jan. 12, 1911. Serial No. 602,246. (Cl. 40—86.)



1. In an apparatus of the character described, the combination with a casing, tracks in the casing, and a longitudinally positioned screw, of means for turning said screw in one direction, other means for turning said screw in the opposite direction, signs in said casing movable from end to end, a carriage in said casing adapted to be moved by said screw and constructed to engage the signs, and said carriage adapted to automatically throw into and out of operation said operating means, substantially as described.

2. In an apparatus of the character described, the combination with a casing, a plurality of signs in the casing adapted to be moved from end to end thereof, and a longitudinally positioned screw having rotary mounting in said casing, of a driving shaft, fast and loose pulleys on said screw, a straight belt and a cross belt connecting said driving shaft with said pulleys, a belt shifting frame, a sign carrier adapted to be moved by said screw, and means at the respective ends of said screw adapted to be engaged by said carriage whereby the belt shifting frame is moved to reverse the direction of turning of said screw, substantially as described.

3. In an apparatus of the character described, the combination with a casing, a plurality of signs in the casing adapted to be moved from end to end thereof, and a longitudinally positioned screw having rotary mounting in said casing, of a driving shaft, fast and loose pulleys on said screw, a straight belt and a cross belt connecting said driving shaft with said pulleys, a belt shifting frame, a sign carrier adapted to be moved by said screw, means at the respective ends of said screw adapted to be engaged by said carriage whereby the belt shifting frame is moved to reverse the direction of turning of said screw, and spring cushioned plates located in the ends of said casing and adapted to be engaged by said signs, substantially as described.

4. In an apparatus of the character described, the combination with a casing, a plurality of signs in the ends of the casing, tracks connecting the ends of the casing at front and rear, signs at front and rear of the casing interposed between the signs at the ends of the casing, cam plates at the ends of the casing, and means for moving said signs longitudinally on said tracks, and spring cushioned plates located in the ends of said casing and adapted to be engaged by said signs, substantially as described.

5. In an apparatus of the character described, the combination with a casing, tracks in the casing, and a longitudinally positioned screw, of means for turning said screw in one direction, other means for turning said screw in the opposite direction, signs in said casing movable from end to end, a carriage in said casing adapted to be moved by said screw and constructed to engage the signs, said carriage adapted to automatically throw into and out of operation said operating means, spring cushioned plates located in the ends of said casing and adapted to be engaged by said signs, substantially as described.

1,024,178. PROCESS OF TREATING PALO-AMARILLO AND SIMILAR GUMS. GEORGE B. BRADSHAW, Brooklyn, N. Y. Filed Apr. 29, 1910. Serial No. 558,450. (Cl. 18—50.)

1. The herein described process of extracting resin from rubber gum, which consists in coagulating the latex of the gum, removing at least 80% of water therefrom, adding to the gum a solvent for the rubber and resin therein, precipitating the rubber, and separating the same from the solvent.

2. The herein described process of extracting resin from rubber gums, which consists in treating the same with a solvent for both the rubber and resin, precipitating the rubber, separating the rubber from the solvent, and adding to the rubber ingredients to change its texture, whereby the same is converted into a commercial article.

3. The herein described process of extracting resin from rubber gums, which consists in treating the gum with a solvent for both the rubber and the resin, precipitating the rubber therefrom, drawing off the solvent, adding to the precipitate calcined magnesia for changing its texture, whereby the same is converted into a commercial article.

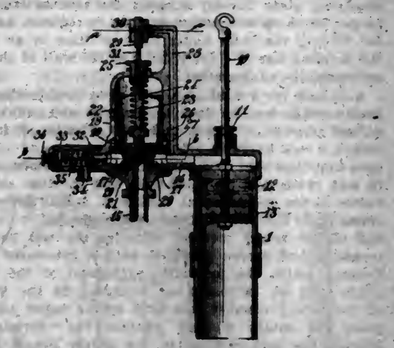
4. The herein described process of extracting resin from rubber gums which consists in partially drying the gum until about 10% of water remains, adding to the gum a solvent for the rubber and resin, precipitating the rubber, and separating the same from the solvent in the presence of water.

5. The herein described process of extracting resin from rubber which consists in treating the same with a solvent for both the rubber and the resin, precipitating the rubber, washing the same free from all solvent in the presence of water, and adding to the rubber an ingredient to change its texture whereby the same is converted into a commercial article.

[Claims 6 to 8 not printed in the Gazette.]

1,024,179. AUTOMATIC PUMP-REGULATOR. ELMER H. BRIDENBAUGH, Dayton, Ohio. Filed Apr. 17, 1911. Serial No. 621,449. (Cl. 170—67.)

1. In a device of the type specified, a pump, a reservoir, a discharge pipe leading from the reservoir to the pump, a cylinder having an outlet therein, a piston within said cylinder, a housing having a chamber therein, said chamber communicating with said cylinder and said reservoir, a valve mounted in said chamber and controlling the passageway between the reservoir and the cylinder, a guide cylinder mounted in said housing and forming a guide for said valve, a second valve mounted in said guide cylinder and adapted to seal the joint between the housing and guide cylinder when said first named valve is opened, and a third valve controlling the outlet of the cylinder and actuated by said first named valve.



2. In a pump regulator, the combination with a pump cylinder, a reservoir, and a discharge pipe forming a communication between said pump cylinder and said reservoir, a cylinder 13 having an outlet, and a piston in said cylinder, of a housing 18 forming a chamber which communicates with said cylinder and said reservoir, a valve 19 mounted in said chamber and controlling the communication between the reservoir and said cylinder 13, the valve 19 having an extended portion 22 forming a guide therefor, a spring-controlled stem 24 normally controlling said valve and extension, a valve 29—30 mounted above said housing 18, the stem of which is joined to the stem 24, said valve 29—30 being adapted to control the outlet to the cylinder 13, and a valve 26—27 moving in unison with the valve 19 and adapted to seal the joint around the valve extension 22, substantially as herein shown and described.

1,024,180. LOCK FOR FLUID-FEED PIPES. WILLIAM W. BRIDGES, Marine City, Mich. Filed May 20, 1911. Serial No. 628,434. (Cl. 137—7.)



1. A lock for a fluid pipe, having in combination, a casing provided with a socket having bolt cavities therein, a removable cock, a rotary member in said socket rotatably connected with said cock and provided with bolt cavities adapted at a certain part of the turn of said rotary member to register with the bolt cavities in the casing, spring pressed bolts engaging in said bolt cavities, means for forcing the bolts along their cavities so as to bring the dividing line of each set of bolts at the wall of the socket, yielding means for spacing the cock and rotary member and a removable plate for limiting the separation of said rotary member and cock, substantially as described.

2. A lock for a fluid pipe, having in combination a casing adapted to be fixed to the pipe and provided with a

fluid passage, a socket and bolt cavities off from said socket, a cock adapted to open and close said passage, a rotary member provided with bolt cavities and adapted to turn said cock, spring pressed bolts engaging in the bolt cavities, a plate adapted to overlie the end of the rotary member, a spring adapted to space the cock and the rotary member and press the latter against the said overlying plate thereby keeping the bolt cavities in the proper plane for companion cavities to register, and means for forcing the bolts along their cavities so as to bring the dividing line of a set of bolts at the wall of the socket, substantially as described.

3. A lock for a fluid pipe, having in combination with a casing adapted to be fixed to the pipe and provided with a fluid passage, a socket and bolt cavities off from said socket, a cock having a prismatic projection and adapted to open and close said fluid passage, a rotary member rotatable in said cavity and provided with bolt cavities, and a key-recess on its end adjacent said cock, spring pressed bolts engaging in the bolt cavities, a plate adapted to overlie the end of the rotary member opposite the end having the recess, a leaf spring provided with a prismatic aperture through which the prismatic projection of the cock engages, and an extension-key engaging in the key-recess of the rotary member, the said spring being adapted to press the rotary member against the overlying plate keeping the bolt cavities in the proper planes for companion cavities to register, and means for forcing the bolts along their cavities so as to bring the dividing line of a set of bolts at the wall of the socket, substantially as described.

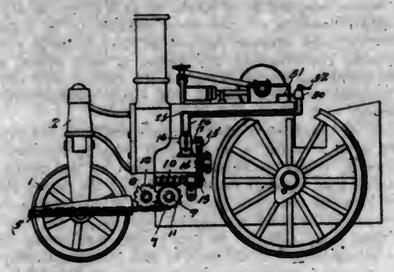
1,024,181. BATHING-SUIT. OSCAR CARRABINE, New York, N. Y. Filed Mar. 25, 1911. Serial No. 616,835. (Cl. 2—144.)



A one-piece bathing suit comprising a continuous unbroken body fitting garment made up into an upper sleeveless shirt portion with supporting shoulder straps one of which is separable into attachable tabs, and two distinct lower portions, the under portion being formed into legs, the outer portion forming a continuation of said shirt portion on all sides and loosely overlying said legs, said portions being fixedly united completely around the lower end of said shirt portion to present a symmetrical appearance on both sides and be reversible front to rear.

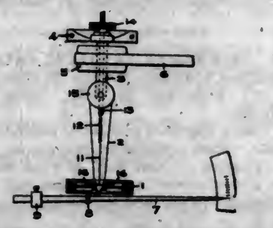
1,024,182. STEERING MECHANISM. WILLIAM E. CHRISTOPHER, Thomas, Ala., assignor of one-half to James R. Wilkerson, Ensley, Ala. Filed May 22, 1911. Serial No. 628,694. (Cl. 21—114.)

The combination with the steering mechanism of a traction engine including a shaft, a gear wheel, a winding reel and chain; a shorter shaft, a reel and a worm wheel thereon, said worm wheel engaging said gear wheel, a worm shaft and a worm and gear wheel thereon, a train of gears



meshing with said last-mentioned gear wheel, and means for actuating said train.

1,024,183. APPARATUS FOR DETERMINING THE ACCELERATION OF ROTATING BODIES. REGINALD C. CLINKER, Rugby, England, assignor to General Electric Company, a Corporation of New York. Filed Aug. 1, 1907. Serial No. 386,607. (Cl. 73—151.)



1. A device for determining the acceleration of rotating bodies, comprising a rotating mass disposed substantially in a plane at right angles to its axis of rotation and rotating at a speed which bears a definite relation to that of the body whose acceleration is to be determined, means for causing the mass to move along said axis and thereby change the position of its plane of rotation as its rate of acceleration changes, and a device for indicating the change in position of said mass.

2. A device for determining the acceleration of rotating bodies, comprising a mass adapted to be rotated at a speed which bears a definite relation to that of the body whose acceleration is to be determined, a means for suspending the mass and transmitting motion thereto, and means for indicating any change in the length of the suspension.

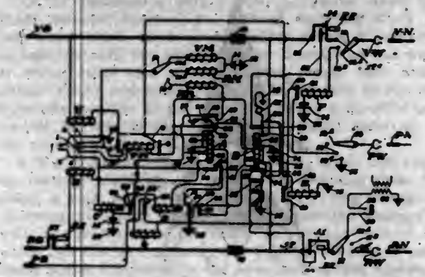
3. A device for determining the acceleration of rotating bodies, comprising a mass that is adapted to be rotated, a flexible member for supporting and at the same time rotating the mass, said member changing in length with change in the torque applied to it, sheaves over which the member passes, an indicating device which assumes different positions for different accelerations of said mass, and means connecting said mass and device.

4. A device for determining the acceleration of rotating bodies, comprising a rotating member that has a fixed plane of rotation, a revolving mass whose plane of movement changes with speed variations, a flexible connection attached to the member which supports the mass and also rotates it, said connection changing in length with changes in the torque applied to it, a means for adjusting the sensitiveness of the mass to speed changes, a device whose position is determined by that of the revolving mass, and means connecting said mass and device.

5. In an apparatus of the character described, the combination of a rotating member, a revolving mass, a quadrifilar suspension for the mass which is attached to the rotating member, an indicator which has a tendency to move in one direction, and a device moving with the said mass which controls the movement of the indicator.

[Claims 6 to 10 not printed in the Gazette.]

1,024,184. AUTOMATIC TELEPHONE-EXCHANGE SYSTEM. GERALD DRAKIN, Berkeley, Cal. Filed Feb. 2, 1911. Serial No. 606,216. (Cl. 179—17.)



1. In an automatic telephone exchange system, the combination of a calling telephone line, a called telephone line, a connector for completing connection from the calling line to the called line, trunk lines and a plurality of trunking switches for extending the connection from the calling line to said connector, a grounded source of current for energizing said connector and trunking switches, a means of grounding both sides of calling line, a means of releasing the connection following the grounding of both sides of the calling line only when said calling line is open and clear upon removal of said ground.

2. In an automatic telephone exchange system, the combination of a calling telephone line, a called telephone line, a connector for completing connection from the calling line to the called line, trunk lines and a plurality of trunking switches for extending the connection from the calling line to said connector, a grounded source of current for energizing said connector and trunking switches, a means of grounding both sides of calling line, a train of relays associated with said connector, arranged to release the connection following the grounding of both sides of the calling line, only when said calling line is open and clear upon removal of said ground.

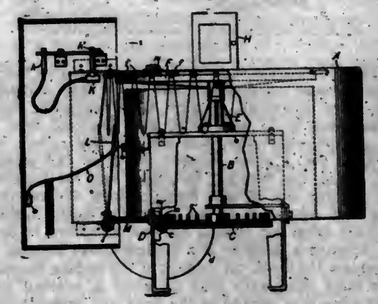
3. In an automatic telephone exchange system, the combination of a calling telephone line, a called telephone line, a connector for completing the connection from the calling line to the called line, trunk lines and a plurality of trunking switches for extending the connection from the calling line to said connector, a grounded source of current for energizing said connector and trunking switches, a means of releasing the connection following the grounding of both sides of the calling line providing said calling line is open and clear upon removal of said ground, but also arranged not to release the connection if, upon the removal of said ground a closed circuit is maintained between the wires of the calling line.

4. In an automatic telephone exchange system, the combination of a calling telephone line, a called telephone line, a connector for completing the connection from the calling line to the called line, trunk lines and a plurality of trunking switches for extending the connection from the calling line to said connector, a grounded source of current for energizing said connector and trunking switches, a train of relays associated with said connector arranged to release the connection following the grounding of both sides of the calling line, providing said calling line is open and clear upon removal of said ground, but also arranged not to release the connection if upon removal of said ground a closed circuit is maintained across the wires of the calling line.

5. In a connector for automatic telephone exchange systems, two bridged calling line relays, a double wound relay connected in series with said line relays, a source of current for energizing said relays, a connector release circuit, a train of relays controlling the connector release circuit, said train of relays being energized by the simultaneous operation of the line and double wound relays, thereby transferring one winding of said double wound relay from connection with the pole of said source of current to which it is normally connected to connection with the opposite pole of said source of current.

[Claims 6 to 31 not printed in the Gazette.]

1,024,185. MACHINE FOR FORMING FILAMENTS. LEONARD E. DEMPSTER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Dec. 18, 1911. Serial No. 666,544. (Cl. 176—3.)



1. An automatic machine for forming filament loops of plastic material, comprising means for squirting said material in a continuous filament, means for forming the continuous filament in a series of loops, and means for severing said continuous filament into separate loops.

2. An automatic machine for forming filament loops of plastic material, comprising means for squirting said material in a continuous filament, means for catching said filament as it is squirted and looping it in zig-zag form, and means for severing the zig-zag filament into separate loops.

3. In a machine for forming filament loops of plastic material, means for squirting said material in a continuous filament, a carrier, and projections on said carrier traveling in a path intersecting the filament as it is squirted and spaced apart by a distance approximately equal to the desired width of the loops.

4. In a machine for forming filament loops of plastic material, a carrier, means for stringing thereon a continuous filament of said material in a series of loops, and means operative when each loop reaches a predetermined point for directing on both sides of the loop simultaneously blasts of heat for severing the loop from the continuous filament.

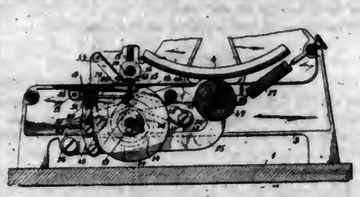
5. In a machine for forming filament loops of plastic material, a carrier, means for stringing thereon a continuous filament of said material in a series of loops, a pair of burners spaced apart approximately the width of a loop and projecting their flames into the path of the loops, and means for shielding the preceding side of a loop from the flame of the first burner it passes.

[Claims 6 to 10 not printed in the Gazette.]

1,024,186. STENCIL-DUPLICATING APPARATUS. ALBERT B. DICK, Lake Forest, Ill., assignor to A. B. Dick Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 4, 1911. Serial No. 600,686. (Cl. 101—36.)

1. The combination of a drum, a stencil secured thereon, a pressure-roller mounted adjacent to the drum and adapted to coact therewith, a sheet-feeding roller mounted parallel with but displaced from said drum and roller, means for rotating the drum and for rotating the sheet-feeding roller one revolution during each revolution of the drum, and a second sheet-feeding roller coacting with said sheet-feeding roller to feed sheets between them to the drum

and pressure-roller, one of said sheet-feeding rollers having a portion of greater radius than the remainder of the roller which portion only is adapted to coact with the other sheet-feeding roller to feed sheets to the drum and said portion being of such length that the sheet is released by the two rollers as soon as it is moved into coaction with the drum, substantially as set forth.



2. The combination of a drum, a stencil secured thereon, a pressure-roller mounted adjacent to the drum and adapted to coact therewith, a pair of sheet-feeding rollers mounted parallel to each other and displaced from the drum and pressure-roller, said sheet-feeding rollers being adapted to feed a sheet between the drum and pressure-roller, means for rotating the drum and for simultaneously rotating one of said feeding-rollers one revolution during each revolution of the drum, and means independent of the drum for causing the feeding-rollers to feed a sheet forward a definite and predetermined amount and then release the sheet, the amount of the feeding movement of the sheet being such that the sheet is released immediately after it is gripped by the drum and pressure-roller, substantially as set forth.

3. The combination of a drum, a stencil secured thereon, a pressure-roller mounted adjacent to the drum and adapted to coact therewith, a sheet-feeding roller mounted parallel and adjacent to said drum and roller, means for simultaneously rotating the drum and sheet-feeding roller at the same speed, a cam on the shaft of said sheet-feeding roller, a second sheet-feeding roller coacting with said roller to feed sheets between them to the drum and pressure-roller, one of said sheet-feeding rollers having a portion of greater radius than the remainder of the roller, which portion only is adapted to coact with the other sheet-feeding roller to feed sheets to the drum and said portion being of such length that the sheet is released by the two rollers as soon as it is moved into coaction with the drum, a stop for positioning a sheet for coaction with the feeding rollers, and means actuated by said cam for positioning said stop, substantially as set forth.

4. The combination of a rotatable drum, a pressure-roller movable toward and away from the drum, a pair of parallel sheet-feeding rollers mounted adjacent to the line of co-action of the drum and pressure-roller, one of said sheet-feeding rollers having a portion of greater radius than the remainder of the roller which portion only is adapted to coact with the other sheet-feeding roller to feed sheets to the drum and said portion being of such length that the sheet is released by the sheet-feeding rollers as soon as it is moved into coaction with the drum, means for simultaneously rotating the drum and the sheet-feeding rollers, a support for holding a sheet in position to be forwarded by said sheet-feeding rollers, a member adapted to coact with a sheet on said support and means dependent upon the coaction of said member with a sheet for controlling the position of the pressure-roller with respect to the drum, substantially as set forth.

5. The combination of a rotatable drum, a pressure-roller coacting therewith, means for moving the pressure-roller away from the drum to inoperative position once in each revolution of the drum, a pair of parallel sheet-feeding rollers mounted adjacent to the line of coaction of the drum and pressure-roller, means for simultaneously rotating the drum and one of said sheet-feeding rollers at the same speed, a support for holding a sheet in position to be forwarded by said sheet-feeding roller, a member adapted to coact with a sheet on said support and means dependent upon the coaction of said member with a sheet for locking the pressure-roller in inoperative position after it has been moved to that position, substantially as set forth.

[Claims 6 to 13 not printed in the Gazette.]

1,024,187. COMBINED ADVERTISING MEDIUM AND FLY-TRAP. WILLIAM W. DONALDSON, Kewanee, Ill. Filed Oct. 21, 1911. Serial No. 656,076. (Cl. 43—22.)



1. A device of the character described, including lateral and front foldable walls, together with a converging foldable bottom-member having a passage-forming tubular member at its point of convergence.

2. A device of the character described, combining an advertising medium and a fly-trap including lateral and front foldable walls, together with a converging foldable bottom-member, having a passage-forming tubular member at its point of convergence, said lateral walls having leg-forming downward extensions.

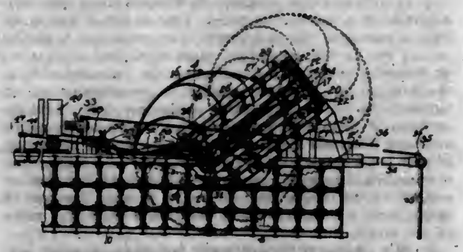
3. A device of the character described, combining an advertising medium and a fly-trap, including lateral and front foldable walls, together with a foldable converging bottom-member, said lateral and front walls being arranged in pyramidal outline and said bottom-member having a passage-forming tubular member at its point of convergence.

4. A device of the character described, combining an advertising medium and a fly-trap, including lateral and front foldable walls, together with a foldable bottom member, said lateral and front walls being arranged in pyramidal outline, said bottom-member also being of like outline, the tapering or converging upper portion of said bottom-member having applied thereto a passage-forming tubular member.

5. A device of the type described, including upwardly converging foldably-connected walls, and an upwardly converging bottom foldably connected to said walls, at their lower edges, said bottom having a passage-forming tubular member at its point of convergence.

[Claim 6 not printed in the Gazette.]

1,024,188. HYDRAULIC-POWER PLANT. JAMES T. DOUGLAS, Kenosha, Wis. Filed Sept. 10, 1910. Serial No. 581,426. (Cl. 138—3.)



1. The combination with a water wheel and shaft, of an inclined track therefor, a pinion upon said shaft, two independent opposing racks paralleling the track, and independent means for throwing each rack into or out of operative engagement with the pinion upon the shaft.

2. The combination of a water wheel, a hull whereon said wheel is mounted, means whereby the power of the wheel is applied to lift the wheel out of operative relation to the water, a pilot structure in front of the water wheel, movable by floating bodies in the water, and means operable by said pilot structure to initiate the self-elevation of the wheel.

3. The combination with a hull, of a water wheel and shaft mounted thereon, an inclined elevating track for said wheel shaft, means shiftable into or out of operative association with the wheel whereby rotation of the wheel is transformed into wheel-elevating power, and means automatically controlling the shifting of said means into operative relation to the wheel including a movable part located in front of the wheel for functional operation by the passage of floating bodies therepast.

4. The combination of a hull, a water wheel and shaft, an inclined elevating track therefor, a pinion upon the shaft, a rack paralleling the track, operating means for throwing said rack into or out of operative association with the pinion upon the shaft, antennæ in front of the wheel movable by the passage of floating bodies, and automatic means controlled by the movement of said antennæ to throw said rack into operative engagement with the pinion.

5. The combination with a hull, of an inclined elevating track, a water wheel, a shaft therefor bearing on said track, a pinion on said shaft, a rack paralleling the track movable into and out of association with said pinion, an operating lever for moving said rack, a spring tending to throw said lever to position to engage said rack with the pinion; a latch normally restraining the lever against such movement, a pilot structure in front of the wheel movable by the passage of floating bodies, and operative connections between said pilot structure and the latch whereby the movement of the antennæ releases the latch.

[Claims 6 and 7 not printed in the Gazette.]

1,024,189. RUBBER TIRE FOR VEHICLES. ALEXANDER DOW, New York, N. Y. Filed Dec. 6, 1911. Serial No. 664,152. (Cl. 152—1.)



A solid tire formed of rubber and having embedded therein separate layers of circumferentially extending fabric, said layers extending through the major portion of the cross section of the tire, each layer being formed into undulations whose crests extend diagonally of the tire, and each layer being formed from strips of fabric whose weave extends diagonally of the layer.

1,024,190. FIREARM. JOHN W. DOWDEN, Reeves, La., assignor of one-half to P. G. Gimnich, Reeves, La. Filed June 27, 1910. Serial No. 569,229. (Cl. 42—21.)

1. In a fire arm, the combination of a stock, a receiver, a barrel secured to said receiver, a breech block having a bifurcated arm, said breech block adapted to reciprocate within the receiver, the arm extending along the barrel, a rod threaded into the receiver extending between the parts of the arm, a circular nut threaded on said rod, a spring coiled about the rod, one end resting against the circular nut, and the opposite end against a portion of the arm, said nut adapted to regulate the tension of the spring, a fore stock covering said rod, a tip mounted on the outer end of the fore stock, a loading rod passing through the tip, the inner end thereof overlapping the end of the first named rod, and means for locking the loading rod.



2. In a fire arm, the combination of a stock, a receiver, a barrel secured to said receiver, a breech block having a bifurcated arm, said breech block adapted to reciprocate within the receiver, the arm extending along the barrel, a rod threaded into the receiver extending between the parts of the arm, a circular nut threaded on said rod, a spring coiled about the rod, one end resting against the circular nut and the opposite end against a portion of the arm, said nut adapted to regulate the tension of the spring, a fore stock covering said rod, a tip mounted on the outer end of the fore stock, a loading rod passing through the tip, the inner end thereof overlapping the end of the first named rod, a lock pivoted to the loading rod, its outer end normally engaging the tip, and resilient means for holding said lock in its normal position.

3. In a fire arm, the combination of a stock, a receiver, a barrel secured to said receiver, a breech block having a bifurcated arm, said breech block adapted to reciprocate within the receiver, the arm extending along the barrel, a rod threaded into the receiver extending between the parts of the arm, a circular nut threaded on said rod, a spring coiled about the rod, one end resting against the circular nut and the opposite end against a portion of the arm, said nut adapted to regulate the tension of the spring, a fore stock covering said rod, a tip mounted on the outer end of the fore stock, a loading rod passing through the tip, the inner end thereof overlapping the end of the first named rod, a knife blade lock having a nose formed from its inner end pivoted to the loading rod, a spring mounted within said rod, and a plunger secured to said spring engaging with the nose of the lock for normally holding said lock in engagement with the tip.

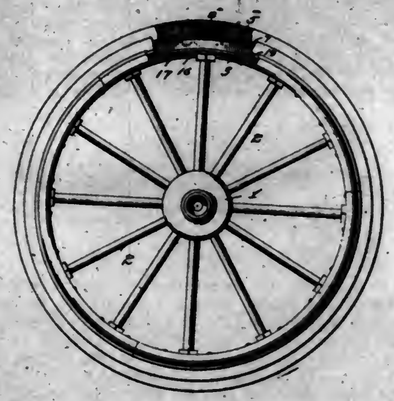
4. In a fire arm, the combination with a stock, a receiver and a barrel, of a breech block reciprocally mounted in said receiver, said breech block having a groove in the upper portion thereof, a spring mounted in said groove, and a roller journaled on the outer end of said spring, engaging the inner surface of the upper portion of the receiver.

5. In combination with a fire arm, a loading rod having two chambers leading from opposite ends, a spring mounted in one end of said chambers, a plunger mounted on said spring, a cap secured to the rod, a knife blade lock pivoted to the cap having a nose for engagement with the plunger.

1,024,191. SPRING-WHEEL. STILLMAN B. EDWARDS, Villisca, Iowa. Filed Nov. 7, 1911. Serial No. 658,994. (Cl. 152—37.)

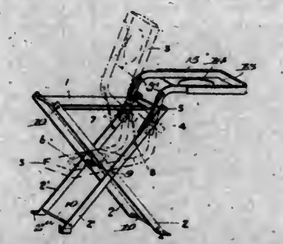
A vehicle wheel of the class described, comprising a rim, a tire consisting of an outer section of approximately U shaped form in cross section provided at the inner edges of its side walls with outwardly bent flanges, an inner section of less diameter than the outer section fitting within the latter and fastened to the rim of the wheel, strips of leather covering the edges of the rim and the inner edges of the tire sections with the outer edges of said strips folded in the flanges of the outer tire section, means for attaching the inner edges of the strips to the spokes of the wheel, clamping rings to hold the outer

edges of the strips in the flanges of the outer tire section, and a series of circumferentially placed coil springs



between the inner and outer tire sections, the coils of the several springs being graduated in size.

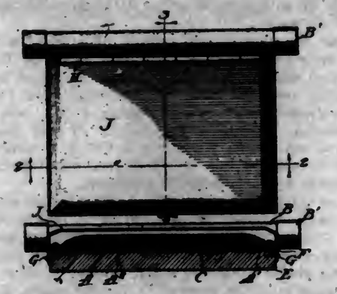
1,024,192. COMBINED FOLDING STOOL AND TABLE. ONORATO FLORIAN, Genoa, Italy. Filed June 17, 1911. Serial No. 633,822. (Cl. 155—6.)



1. A combined stool and table comprising in combination, a base structure including forward and rearward complementary legs, pivoted to each other intermediate their ends, whereby the structure may be folded or extended, a table or service portion, brackets provided with downwardly extending portions projecting below the face of said table or service portion and rigidly carried thereby, means pivoting the said downwardly extending portions of said brackets below the upper ends of two of the complementary legs of said base structure and intermediate the said legs, a rod carried by the said two complementary legs adjacent their upper ends and in proximity to engage said brackets to limit movement thereof in one direction, and a flexible seat portion of predetermined length connecting said rod at one end and the complementary legs opposite therefrom at the other end, whereby the said base structure is permitted to extend with the relative engagement of said rod and brackets positioning the latter to dispose said table or service portion in a plane substantially parallel to the plane of said seat portion.

2. A combined stool and table comprising in combination, a base structure including forward and rearward complementary legs, pivoted to each other intermediate their ends, whereby the structure may be folded or extended, a table or service portion, means pivoting said table or service portion to the said rearward complementary legs permitting the former to be swung rearward of said base structure to serve as a table with respect thereto, or to act as a back rest for the same, mechanism for retaining the said table or service portion in a table serving position with respect to said base structure, and a device adapted to rigidly connect said table or service portion and said rearward complementary legs, to retain the former in a position acting as a back rest for said base structure.

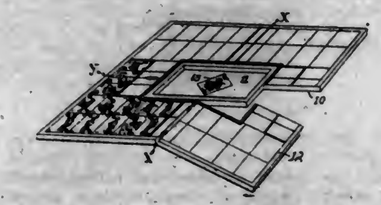
1,024,193. STAMP-PAD. HARRY S. FOLGER, Chicago, Ill. Filed Jan. 14, 1911. Serial No. 602,571. (Cl. 101—75.)



1. In a self-inking stamp pad, a base, an ink holding device located along the rear edge thereof and of greater length than the base having caps for inclosing the ends, a wick located within the ink-holder and extending therefrom, a plate having a series of inclined grooves, a pad of inking material, a clip for holding the pad in position, and a cover for said pad.

2. In a stamp pad, a base, a metal plate thereon having a series of parallel inclined grooves, said grooves being widest and deepest at their outer ends, a cylindrical reservoir located at the inner end of said metal plate, caps for closing the ends of said reservoir, an opening in the reservoir, a wick partly within said reservoir and extending therefrom through the opening and across the face of the plate, a pad of absorbent material located above and resting on that portion of the wick lying on the metal plate, a metal frame surrounding the base and secured thereto, having its upper edge bent inwardly and downwardly to form a clip for holding the upper layers of the pad material and the covering therefor, and a cover pivoted to the frame for inclosing the pad.

1,024,194. GAME APPARATUS. EDWARD M. FRANK, Chicago, Ill. Filed May 31, 1910. Serial No. 564,039. (Cl. 46—21.)



1. In a game apparatus, the combination of a board having distinguishably marked spaces, each for the reception of a card, similarly marked cards, one for each space upon the board, and dice having faces marked to correspond to certain of the spaces on the board and on the cards.

2. In a game apparatus, the combination of a board having designated spaces distinguishably marked, a pack of playing cards, each of size to rest upon one of the spaces of the board, and each marked for correspondence with its space of said board and no other, and dice having faces suitably marked for correspondence with designated cards of said pack and with spaces of the board.

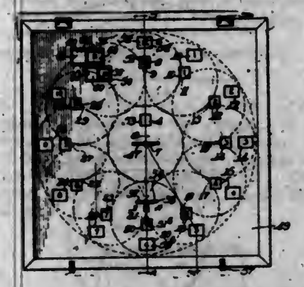
3. In a game apparatus, the combination of a board providing a plurality of distinguishably and individually designated spaces, cards corresponding with said individual spaces in size and designation, each said card bearing a value indication, and dice having upon the faces thereof value indications corresponding with those of some of the cards.

4. In a game apparatus, the combination of a board providing a central area for the throw of dice, and providing suitably designated spaces surrounding said area, each said space being clearly distinguished from every other space in design, cards corresponding in number with said spaces, and bearing fac-simile representations of the identifying designs of said spaces, and dice having faces bearing designs associating them with specific cards of the pack and spaces of the board.

5. In a game apparatus, the combination of a board providing a central dice tray in a lower plane and a surrounding field in a higher plane, said field being divided into spaces for the reception of cards, and each space bearing a picture, an indication of value, and an indication of suit, and a playing card pack whereof the cards are substantially equal in size to the spaces upon the field of said board, each card bearing a picture, an indication of value, and an indication of suit, associating it with one only of the spaces upon the board.

[Claims 6 to 16 not printed in the Gazette.]

1,024,195. MEANS FOR IMPARTING INSTRUCTION. NATHANAEL GÖTHBERG, Chicago, Ill., assignor of one-half to Elizabeth Grill, Chicago, Ill. Filed May 13, 1911. Serial No. 626,988. (Cl. 35—9.)



1. A means for imparting instruction including a center disk, a surrounding annular series of disks, the center disk having a direct operative drive connection with each of the annular series of disks, and each of the disks having upon one face thereof indicating data.

2. A means for imparting instruction including a center disk, a surrounding annular series of disks, the center disk having a direct operative drive connection with each of the annular series of disks, and each of the disks having upon one face thereof indicating data and a chart overlying all of said disks and having openings adapted to register with said indicating data.

3. A means for imparting instruction including a center disk, a surrounding annular series of disks, the center disk having a direct operative drive connection with each of the annular series of disks, and each of the disks having upon one face thereof indicating data, a chart overlying all of said disks and having openings adapted to register with said indicating data, and a face plate overlying said chart and being slotted for the purpose described.

4. In a device of the kind described and in combination, a center rotatable chart, an annular series of rotatable charts arranged about the center chart, each of said charts having characters thereon, the said annular series of charts overlying one another, and a gear connection between the various charts.

5. Means for imparting instruction, comprising a plurality of associated coöperating charts, provided with factors thereon, a movable overlying chart having openings to register with said factors and the overlying chart having factors thereon, and means for manipulating said charts to vary the factors disclosed.

[Claims 6 to 15 not printed in the Gazette.]

1,024,196. WIRE-ROPE MACHINE. EVAN GOUGH and EMIL H. MILLER, St. Louis, Mo. Filed June 28, 1911. Serial No. 635,808. (Cl. 28—21.)



1. In a wire rope machine, the combination with a hollow shaft adapted to receive a king wire, of a spool holding device for said shaft, said shaft having grooves formed in its periphery to receive the wires from said spool holders, and a sleeve surrounding said shaft and inclosing the wires in said grooves.

2. In a wire rope machine, the combination with a shaft, of a plurality of wire carrying means arranged in succession along said shaft, said shaft having a plurality of passages for the reception of the wires, said passages extending from points adjacent to each set of wire carrying means to the delivery end of the machine.

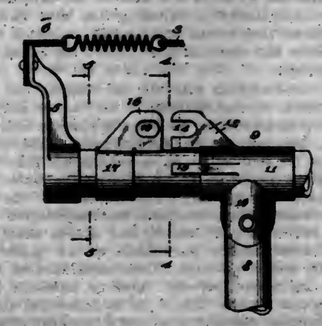
3. In a wire rope machine, the combination with a shaft, of a plurality of wire carrying means arranged in succession along said shaft, said shaft having formed in its periphery a plurality of continuous grooves for the reception of the wires, said grooves extending from points adjacent to each set of wire carrying means to the delivery end of the machine.

4. In a wire rope machine, the combination with a shaft, of a plurality of wire carrying means arranged in succession along said shaft, said shaft having formed in its periphery a plurality of grooves for the reception of the wires extending from points adjacent to each set of wire carrying means to the delivery end of the machine, and a sleeve surrounding said shaft and inclosing the wires in said grooves.

5. In a wire rope machine, the combination with a hollow shaft adapted to receive a king wire, a plurality of spool holders arranged in succession along said shaft, said shaft having grooves formed in its periphery extending from points adjacent to each set of spool holders to the delivery end of the machine, and a sleeve surrounding said shaft and inclosing the wires in said grooves.

[Claim 6 not printed in the Gazette.]

1,024,197. FOLDING LEG FOR COUCH-BEDS. MICHAEL J. HALPIN, New York, N. Y., assignor to The Englander Spring Bed Company, Brooklyn, N. Y., a Corporation of New York. Filed Mar. 30, 1911. Serial No. 617,875. (Cl. 5—5.)

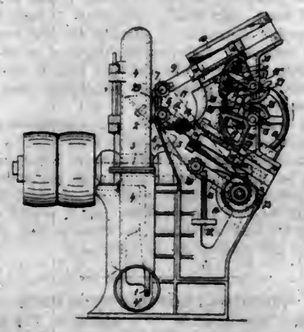


1. In a couch bed or divan having longitudinally extending side bars and corner brackets for supporting a me-

tallic fabric, folding legs having sleeves mounted on said side bars and each having a pair of single transversely projecting brackets laterally spaced apart, brackets independent of and located on the side bars between the corner brackets and the leg sleeve brackets and adjustable laterally relatively to said corner brackets so that the leg may be positioned perpendicularly, one of each pair of said independent brackets and leg sleeve brackets being adjustable on its side bar toward the other to have either of the transversely projecting brackets of the leg overlap said independent bracket, and means for rigidly clamping either of the leg sleeve brackets to the independent bracket thereby to secure the leg either in its upright or in its folded position.

2. In a couch bed or divan having longitudinally extending side bars and corner brackets for supporting a metallic fabric, folding legs having sleeves mounted on said side bars and each having a pair of single transversely projecting brackets laterally spaced apart, brackets independent of and located on the side bars between the corner brackets and the leg sleeve brackets and adjustable laterally relatively to said corner brackets so that the leg may be positioned perpendicularly, one of each pair of said independent brackets and leg sleeve brackets being adjustable on its side bar toward the other to have either of the transversely projecting brackets of the leg overlap said independent bracket, and means for rigidly clamping either of the leg sleeve brackets to the independent bracket thereby to secure the leg either in its upright or in its folded position, one of said overlapping brackets having an open-ended slot.

1,024,198. WOOD-BARKING MACHINE. NILS KNUT FREDRIK HANSON, Stockholm, Sweden. Filed May 15, 1911. Serial No. 627,372. (Cl. 144—208.)



1. In a wood-barking machine, the combination with a disk and knives carried thereby, of devices for maintaining a log in position with its side against the said disk, and means for automatically adjusting the said devices in such a manner that during the barking operation the distance between the center of the log and the center of the disk is constant.

2. In a wood-barking machine the combination with a disk and knives carried thereon, of two rollers adapted to engage a log and maintain the same in position against the said disk, and means for automatically adjusting the positions of the said rollers in such a manner that the distance between the center of the log and the center of the disk is constant irrespective of the diameter of the log.

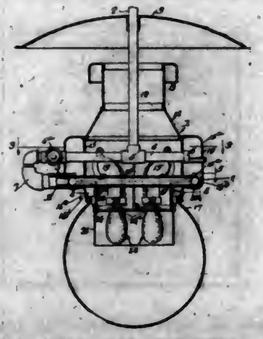
3. In a wood-barking machine, the combination with a disk and knives carried thereby and a disk shaft which is placed substantially horizontal, of an upper roller and a lower roller, the said rollers being adapted to bear against a log placed between them to maintain the log in position against the disk, slides to which the said rollers are connected, guides for the said slides fixed at such an angle to one another that the bisector of this angle is horizontal and passes through the longitudinal center of the log, and means co-acting with the said guides and slides for moving the said rollers from the disk when a log is placed in the machine, and then moving the said rollers back to position to bear against the log.

4. In a wood-barking machine, the combination with a rotary disk and knives carried thereby, of an upper roller and lower roller, said rollers being adapted to bear against the log and maintain the same in position with its side against the said disk, guides for the said rollers, means for moving the said rollers simultaneously from and toward the said disk, and a table or hollow upon or in which the log is placed in the machine after the said rollers have been moved from the said disk, the said log being then moved toward and into contact with the disk by the rollers when the same are moved in the opposite direction.

5. In a wood-barking machine, the combination with a rotary disk and knives carried thereby, of two rollers adapted to bear against a log to maintain the same forcibly against the said disk, slides in which the said rollers are mounted, guides in which the said slides move, the said slides and guides being placed at an angle to one another, racks on the said slides, sector wheels gearing with each other and with the said racks so that the said slides are moved simultaneously, and means for operating the said sector wheels.

[Claims 6 to 11 not printed in the Gazette.]

1,024,199. GAS-LAMP. SAMUEL B. HARVEY, Chicago, Ill. Filed Sept. 2, 1909. Serial No. 515,925. (Cl. 67—94.)



1. In a gas lamp, the combination with a centrally disposed stem or pipe, a cross-pipe secured to said stem, a horizontally arranged gas ring connected with said cross-pipe, a hand-valve to control the supply of gas to said ring, a casing inclosing said stem and located within said gas ring, an outer casing surrounding and inclosing said gas ring, both of said casings being supported from said ring, nozzles located on said gas ring, depending burner tubes secured to and opening through said inner casing opposite said nozzles, a horizontally disposed frame supported below said burner tubes, and mantles supported by said frame in line with said burner tubes.

2. In a gas lamp, the combination with a centrally disposed stem or pipe, a cross-pipe secured to said stem, a horizontally arranged gas ring connected with said cross-pipe, a hand-valve to control the supply of gas to said ring, an inner casing inclosing said stem and depending below said gas ring within said gas ring, an outer casing surrounding and inclosing said gas ring, both of said casings being supported on said gas ring, nozzles located on said gas ring, depending burner tubes secured to and opening through said casing opposite said nozzles, mantles supported below and in line with said burner tubes, and a globe surrounding said mantles, said globe being supported upon said outer casing.

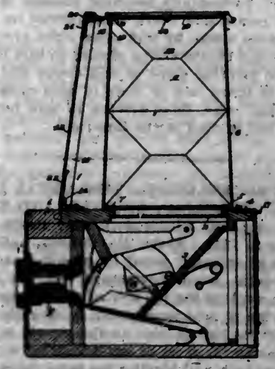
3. In a gas lamp, the combination with a centrally disposed stem or pipe, a cross-pipe secured to said stem, a horizontally arranged gas ring connected with said cross-pipe, a hand-valve adapted to control the supply of gas to said ring, and an inner casing inclosing said stem and depending below said ring and being located within said ring, an outer casing surrounding and inclosing said gas-ring, both of said casings being supported from said ring, nozzles located on said gas ring, depending burner tubes secured to and opening through said casing opposite said nozzles, a horizontally disposed frame supported below said burner tubes from said inner casing, mantles supported by said frame in line with said burner tubes, a circular, depending, translucent band surrounding said mantle and supported upon said frame, and a globe surrounding said mantle and supported below said outer casing.

4. In a gas lamp, burner tubes, mantles depending below said burner tubes, a globe surrounding said mantles, air openings above said globe, movable valve members adapted to close a predetermined number of said air openings, said valve members being normally in closed position but being adapted to yield inwardly, a stack located above said mantles, and nozzles adapted to supply gas to said burner tubes, each of said nozzles being provided with a jet orifice and having fingers projecting in front of said jet orifice.

5. In a gas lamp, burner tubes, mantles depending below said burner tubes, a globe surrounding said mantles, a translucent band surrounding said mantles and extending down to the neighborhood of the lower ends of said mantles, air openings above said globe, movable valve members adapted to close a predetermined number of said air openings, said valve members being normally in closed position but being adapted to yield inwardly, a stack located above said mantles, and nozzles adapted to supply gas to said burner tubes, each of said nozzles being provided with a jet orifice and having fingers projecting in front of said jet orifice.

[Claims 6 to 9 not printed in the Gazette.]

1,024,200. PHOTOGRAPHIC CAMERA. CHARLES E. HUTCHINGS, Rochester, N. Y., assignor, by mesne assignments, to Eastman Kodak Company, Rochester, N. Y., a Corporation of New York. Original application filed Oct. 22, 1906, Serial No. 339,911. Divided and this application filed Apr. 8, 1907. Serial No. 366,940. (Cl. 95—47.)



1. The combination with a focusing screen, of a tubular hood surrounding the screen, said hood being collapsible longitudinally in the direction of the latter to a position in which its intermediate portion is disposed as an entirety between its two extreme ends, a cover for the screen and for the hood when collapsed and means for automatically projecting the outer end of the hood from the screen when the cover is opened.

2. The combination with a focusing screen, of a tubular hood surrounding the screen, said hood being collapsible longitudinally in the direction of the latter to a position in which its intermediate portion is disposed as an entirety between its two extreme ends, a hinged cover for the screen and for the hood when collapsed, and means for automatically projecting the outer end of the hood to extend the latter in a direction substantially at right angles to the screen when the cover is raised.

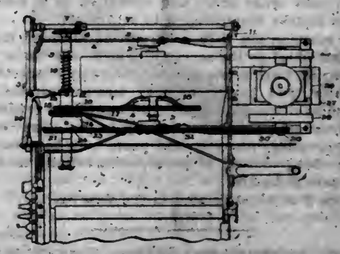
3. The combination with a focusing screen, of a tubular hood surrounding the screen, said hood being collapsible longitudinally in the direction of the latter to a position in which its intermediate portion is disposed as an entirety between its two extreme ends, a cover for the screen and for the hood when collapsed, and connections between the cover and the outer end of the hood for automatically extending the latter by the opening of the cover.

4. The combination with a camera focusing screen, and a hood surrounding the screen and collapsible in the direction thereof, of means for supporting the hood in extended position comprising a member hinged at one side of the screen and revoluble outwardly therefrom, and a rigid connecting link pivoted to the outer end of the hood and to the member permitting the hood to be folded to a position in which its intermediate portion is disposed as an entirety between its two ends.

5. The combination with a camera focusing screen, and a tubular hood surrounding the screen and collapsible into engagement therewith to a position in which its intermediate portion is disposed as an entirety between its two ends, of means for supporting the hood in extended position comprising a spring-operated member hinged at one side of the screen and revoluble outwardly therefrom, an arm pivotally connected at one end to the hood and at its opposite extremity to the member and a spring for rotating the arm outwardly away from the member.

[Claims 6 to 8 not printed in the Gazette.]

1,024,201. MOTOR ATTACHMENT FOR HARVESTING-MACHINES. ARTHUR JOHNSON, Chicago, Ill., assignor to International Harvester Company, a Corporation of New Jersey. Filed Dec. 23, 1909. Serial No. 534,596. (Cl. 56—33.)



1. A motor attachment for harvesting machines including, in combination, a wheeled frame, an axle, a traction wheel mounted upon said axle, a gear member secured to said traction wheel, a grain platform, a cutting apparatus carried by said grain platform, means for transmitting motion to said cutting apparatus, said motion transmitting means including a shaft mounted upon said wheeled frame, gearing connecting said shaft with the gear member secured to said traction wheel, a motor mounted on said wheeled frame, power transmitting means connecting said motor with said shaft, and an equalizing gear mechanism mounted upon said shaft and driven from both the motor and the traction wheel.

2. A motor attachment for harvesting machines including, in combination, a wheeled frame, an axle, a traction wheel mounted upon said axle, a sprocket wheel secured to said traction wheel, a grain platform, a cutting apparatus carried by said grain platform, means for transmitting motion to said cutting apparatus, said motion transmitting means including a transverse shaft mounted upon said wheeled frame, a sprocket wheel mounted upon said shaft and connected by a drive chain with the sprocket wheel secured to said traction wheel, a motor mounted upon said wheeled frame, a sprocket wheel deriving motion therefrom, a second sprocket wheel mounted upon said transverse

shaft and connected by a drive chain with said motor driven wheel, and an equalizing gear connecting the two sprocket wheels mounted upon said transverse shaft and operative in a manner to transmit motion therethrough to said shaft.

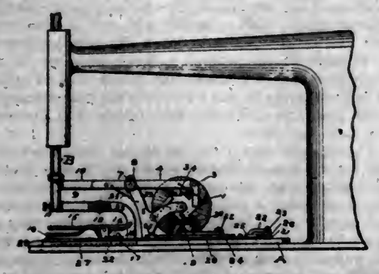
3. A motor attachment for harvesters including, in combination, a wheeled frame, an axle, a traction wheel mounted upon said axle, a sprocket wheel secured to said traction wheel, a grain platform, a cutting apparatus carried by said grain platform, means for transmitting motion to said cutting apparatus, said motion transmitting means including a transverse shaft mounted in bearings upon said wheeled frame in front of said traction wheel, a sprocket wheel mounted upon said shaft and a driving chain connecting it with the sprocket wheel secured to said traction wheel, a motor mounted upon said wheeled frame, a sprocket wheel deriving motion therefrom, a second sprocket wheel mounted upon said transverse shaft, and a driving chain connecting it with said motor driven sprocket wheel, and an equalizing gear connection between the two sprocket wheels mounted upon said transverse shaft and operative in a manner to transmit motion therethrough to said shaft.

4. A motor attachment for harvesters including, in combination, a wheeled frame, an axle, a traction wheel mounted upon said axle, a sprocket wheel secured to said traction wheel, a grain platform, a cutting apparatus carried by said grain platform, means for transmitting motion to said cutting apparatus, said motion transmitting means including a cross shaft mounted upon said wheeled frame in front of said traction wheel, a supplemental platform supported on the rear of said wheeled frame, a motor mounted upon said platform, power transmitting means connecting said motor with said cross shaft including a sprocket wheel mounted upon said cross shaft, a second sprocket wheel mounted upon said cross shaft and connected by means of a power transmitting chain with the sprocket wheel secured to said traction wheel, and an equalizing gear connecting the two sprocket wheels mounted upon said cross shaft and operative in a manner to transmit motion therethrough to said shaft.

5. In combination with a harvesting machine including a traction wheel as the source of power, of a motor, equalizing gearing having one member rotatably connected with said motor, and having another member rotatably connected to said traction wheel, and means for transmitting power from said equalizing gearing to the operative parts of the harvester, whereby said parts may be operated by either or both sources of power, substantially as and for the purpose described.

[Claims 6 to 8 not printed in the Gazette.]

1,024,202. BUTTON-SEWING ATTACHMENT. HARRY B. JOHNSTON, Salt Lake City, Utah, assignor, by mesne assignments, to Model Manufacturing Company, a Corporation of Utah. Filed Jan. 30, 1911. Serial No. 605,632. (Cl. 112—32.)



1. In a button sewing attachment for sewing machines the combination of a base plate, a staff secured thereto having a slot therein, a clamp bar adjustably secured to said staff and adapted to be fastened to the presser foot bar of a sewing machine, a walking lever, a detent pivoted on one end thereof, a horizontally placed shaft mounted in bearings on said base plate, cams carried on said shaft, a ratchet also carried on said shaft the teeth of which are adapted to be engaged by said detent, bell-crank levers adapted to be engaged by said cams, button clasps adapted to be moved by said levers in a lateral and in a longitudinal direction, and means to adjust said lateral and longitudinal movement.

2. A button sewing attachment for use on a sewing machine consisting of a base plate, bearing standards attached thereto, a shaft mounted in said standards, cams on said shaft, bell-crank levers pivoted to said base plate and moved by said cams, button clasps adapted to be moved by said levers, means to adjust the length of said movements, a walking lever pivotally mounted in one of said bearings and in transverse position to said shaft, a detent pivoted on one end of said walking lever, and a ratchet secured on said shaft the teeth of which are in engagement with said detent.

3. A button sewing attachment consisting of a base plate, bearings thereon, a walking lever pivotally mounted in one of said bearings and having one end thereof in engagement with the needle bar of a sewing machine and a detent pivoted on the other end, a horizontally placed shaft mounted in said bearings, cams carried on said shaft, a ratchet wheel secured on said shaft the teeth of which are engaged by said detent, a bell-crank lever one arm of which is engaged by said cams, links pivoted to said lever, button clasps pivoted to said links, another bell-crank lever pivoted to two of said links, and another lever adapted to be moved by one of said cams and having one arm pivoted to one of said links.

4. A button sewing attachment consisting of a base plate, bearing standards thereon, a walking lever pivoted on one of said standards and having one end in engagement with the needle bar of a sewing machine, a horizontally placed shaft mounted in said bearing stardards, cams on said shaft, a detent pivoted on said walking lever and engaging a ratchet on said shaft, bell-crank levers moved by said cams, links pivoted to said levers and to buttons holding clasps, and means to adjust the point of pivoting said links and said levers.

5. A button sewing attachment consisting of a base plate, a shaft horizontally mounted thereon, means to intermittently rotate said shaft, cams carried on said shaft, bell-crank levers moved by said cams, links pivoted to said bell-crank levers, button clasps pivoted to said links, means to adjust the pivoting point of said clasps and said links, and means to throw one or more of said cams out of enmoved by said, cams, links pivoted to said levers and to

[Claim 6 not printed in the Gazette.]

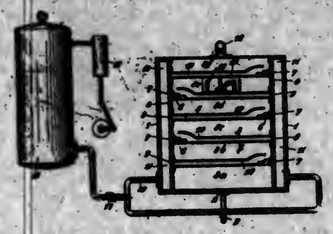
1,024,203. PROCESS OF INLAYING METAL IN MASSES SUCH AS CELLULOID, EBONITE, AND THE LIKE. JACOB KAUFMANN, Wilmersdorf, near Berlin, Germany. Filed May 2, 1911. Serial No. 624,657. (Cl. 41—35.)

A process of inlaying metal in plastic masses such as celluloid, ebonite, wood, pasteboard and the like, which consists in providing the top side of a solid sheet of metal with a drawing in acid-proof paint, in mounting the sheet of metal with its bottom side on the plastic mass, in subsequently placing the sheet of metal together with the mass in a corrosive bath and leaving the same therein until all the surface of the sheet unprotected by the paint has been dissolved, in removing the mass with the adhering metal from the bath, and in then pressing the metal left adhering to the mass into the latter.

1,024,204. DESTRUCTION AND DEODORIZATION OF SMOKE. JACOB KINDERMANN, Leipsig, Germany. Filed Aug. 1, 1910. Serial No. 574,998. (Cl. 110—183.)

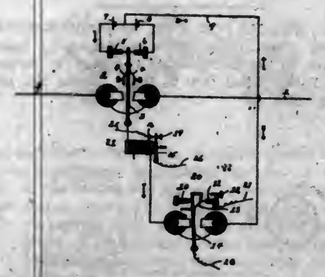
An improved device for the destruction and deodorization of smoke, comprising in combination with the exhaust for the smoke, a casing having an inlet in its bottom plate communicating with said exhaust, and an outlet

for the invisible gases in its top plate, hollow shelves extending alternately from opposite sides of the casing and leaving spaces between their free edges and the casing, the hollow shelves having an opening along their free edges for the outlet of compressed air fed to the space in the



shelves through holes in the casing communicating with compressed air chambers placed outside thereof, and baffles placed in the space between the outer edges of the shelves and the casing wall, substantially as described and shown and for the purpose set forth.

1,024,205. PRINTING TELEGRAPHY. ISIDOR KITSEE, Philadelphia, Pa. Filed Apr. 3, 1909. Serial No. 487,672. (Cl. 178—54.)



1. In telegraphy, a line of transmission, a polarized and biased relay inserted in said line of transmission, a local circuit for said relay, two sources of current for said local circuit; two relays inserted in said circuit; one of said relays answering to an impulse of positive as well as negative polarity, and one of said relays answering only to an impulse of one polarity, said second relay provided with means to translate an impulse of short duration into an impulse of comparatively long duration and an additional local circuit for each of said local relays.

2. In a telegraphic system, means to receive impulses of a like duration but opposite polarity and translate the same into dots and dashes, said means comprising a polarized line-relay, a biased armature for said relay, two contacts for said armature, the armature normally out of connection with any of said contacts; a source of current connected to each of said contacts; a local circuit for said sources; two relays for said circuit; one of said relays answering to an impulse of either direction; the second of said relays answering to an impulse only of one direction, and provided with means to translate said impulse into a dash.

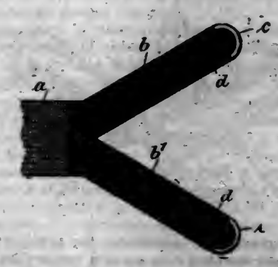
3. In telegraphy, means to translate received impulses of same duration but opposite polarity into dots and dashes, said means comprising a polarized line-relay, two contacts therefor, the tongue of said relay biased and normally out of connection with any of said contacts, the contacts connected each with a local circuit and source of current adapted to send an impulse of one direction through the contacting of the armature with one contact, and to send an impulse of opposite polarity through the contacting of the armature with the opposite contact; electro-magnetic means in said circuit to translate an impulse of one polarity into a dot and an impulse of opposite polarity into a dash.

4. In telegraphy, means to receive impulses of opposite polarity but of substantially the same duration and translate the same locally, said means comprising a line relay, two contacting points for said relay, a source of current connected to each contacting point, a local circuit connected to both of said sources and adapted to transmit therethrough an impulse of one direction through the contacting of the movable part of said relay with one contact, and adapted to transmit therethrough an impulse of opposite direction through the contacting of said movable part with the opposite contact; and means in said local circuit to translate an impulse of one direction into a dot and means in said local circuit to translate an impulse of opposite direction into a dash.

5. In combination with a line of transmission, a polarised relay, the armature normally at the sero position; two contacts for said armature, a local circuit for each of said contacts; two relays in said local circuit; one relay answering to an impulse of both polarities, one relay answering only to an impulse of one polarity, and means for each of said relays to operate a second local circuit.

[Claim 6 not printed in the Gazette.]

1,024,206. ELASTIC WEBBING AND METHOD IN WEAVING THE SAME. WALDEMAR KOPS, New York, N. Y., assignor to Kops Bros., New York, N. Y., a Firm. Filed Sept. 22, 1911. Serial No. 650,817. (Cl. 139—70.)



1. A length of flat webbing comprising alternate elastic sections of the desired length and width and intermediate divided diverging members or sections formed integral with the elastic sections, and which in the continuous strip diverge and converge.

2. The method herein specified of weaving a flat webbing having an elastic part and integral divided diverging members or parts at one end thereof consisting in weaving the elastic parallel-sided part in the ordinary manner and in weaving the divided diverging members of parts with two shuttles and additional weft-threads and movable fan-shaped reeds substantially set forth.

1,024,207. ELASTIC FABRIC. WALDEMAR KOPS, New York, N. Y., assignor to Kops Bros., New York, N. Y., a Firm. Filed Sept. 27, 1911. Serial No. 651,549. (Cl. 139—70.)



1. An elastic fabric woven with warp threads of suitable material and a rubber thread or strand as weft, or filling and a certain pre-determined portion of the warp

woven with an additional filling of suitable material so as to produce one or more inelastic sections.

2. An elastic fabric woven with warp threads of suitable material and a rubber thread or strand as filling or weft, and binding a certain pre-determined portion of the warp threads, and an additional filling of suitable material binding the remainder of the warp threads so as to produce an elastic webbing with in-elastic sections.

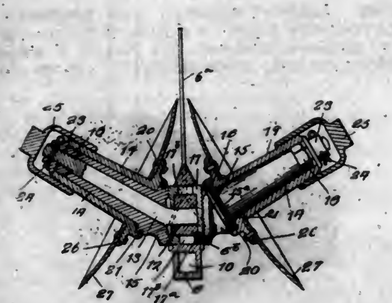
3. An elastic fabric woven with warp threads of suitable material and a rubber thread as weft or filling throughout the width of the fabric, and additional filling threads of suitable material binding certain pre-determined warp threads so as to produce one or more non-elastic sections.

4. A flat strip elastic fabric, comprising an elastic center of elastic weft and in-elastic margins or sewing sections.

5. A flat strip elastic fabric comprising in-elastic or sewing section margins and a central elastic section, the latter formed of warp threads and elastic weft or filling threads.

[Claims 6 to 9 not printed in the Gazette.]

1,024,208. PLANTER. RALPH R. LANGLEY, Lincoln, Nebr. Filed Sept. 10, 1909. Serial No. 517,094. (Cl. 111—11.)



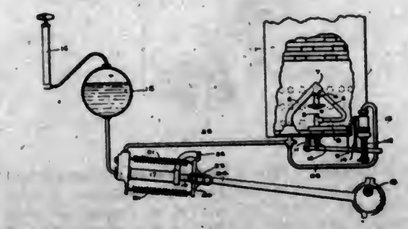
1. In an agricultural implement, the combination of a frame, an earth working tool, an arm supporting the tool, a mounting for the arm with respect to which it is free to have both rotative adjustment and translative sliding adjustment, a plate intermediate the arm and the mounting and adapted to have translative sliding adjustment with the arm, the plate being formed with rose plate serrations adapted to engage the arm which is formed with mating serrations, means for preventing the intermediate plate from rotation with respect to the mounting, and a single clamping means slidable with the arm and plate and adapted to bind rigidly together the arm, the plate and the mounting in any position of adjustment.

2. In a planter, the combination of a frame, an earth working rotatable disk, an arm upon which the disk is rotatably mounted, a mounting for the arm with respect to which it is free to have translative sliding adjustment and rotative adjustment about an axis inclined to the axis of the arm, a plate intermediate the arm and mounting and adapted to have translative sliding adjustment with the arm, the plate being formed with rose plate serrations adapted to engage the arm which is formed with mating serrations, means for preventing the intermediate plate from rotation with respect to the mounting, and a single clamping means slidable with the arm and the plate and serving to bind rigidly together the arm, the plate and the mounting in any position of adjustment.

3. In a planter, the combination of a frame, a seed delivering mechanism, two furrow opening disks, a bent axle arranged to support the disks symmetrically upon the two sides of the seed delivery mechanism the axle being threaded at each end, a central supporting frame for the axle having a vertical slot in which the axle can be adjusted either rotatively or vertically, axle boxes one at each side of the frame each having its inner end face radially serrated, two washers one at each side of the frame, the washers being radially serrated on their outer faces for engagement with the inner faces of the boxes and provided on their inner faces with devices coöperating with mating devices on the supporting frame to prevent rotation of the washer while permitting vertical movement thereof, and nuts on the threaded axle ends for clamping the axle, axle boxes, washers and supporting frame into one rigid structure, with the axle in any desired position of adjustment both vertically and angularly.

4. In a planter, the combination of a frame, a seed delivering mechanism, two furrow opening disks, a bent axle threaded at its ends and supporting the disks symmetrically upon the two sides of the seed delivery mechanism, a central supporting frame for the axle having a vertical slot in which the axle can be adjusted either rotatively or vertically and other vertical slots at the sides of the said axle slot, axle boxes, one on each side of the frame, each having its inner end face radially serrated, two washers, one at each side of the frame, the washers being radially serrated on their outer faces and provided on their inner faces with lugs adapted to enter the vertical slots in the supporting frame at the sides of the axle slot, and nuts on the threaded axle ends for clamping the axle, axle boxes, washers and supporting frame into one rigid structure with the axle in any desired position of adjustment both vertically and angularly.

1,024,209. REGULATOR FOR KEROSENE-BURNERS. HERMANN LEMP, Lynn, Mass., assignor, by mesne assignments, to General Electric Company, a Corporation of New York. Filed Oct. 2, 1902. Serial No. 125,667. (Cl. 158—29.)



1. In combination, a burner provided with an opening adapted to discharge a jet of vapor at high velocity, a fuel system arranged to automatically deliver fuel to the burner under high or low pressure in accordance with changes in the demand for fuel, and means for maintaining the velocity of the vapor jet which comprises a device controlled by the pressure of the fuel system and having a member arranged within the burner opening posterior to its outlet end for automatically varying the effective area of said opening.

2. In combination, a burner having an opening which discharges an unbroken stream of vapor, a fuel system arranged to supply fuel at a variable pressure, a valve situated below the burner opening and adapted to control the effective area thereof, and a device sensitive to the pressure on the fuel system which is arranged to move the valve in the direction of the stream when the pressure is decreased and in the opposite direction when the pressure is increased.

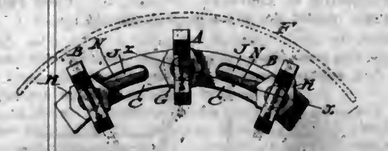
3. In combination, a burner having an opening which discharges an unbroken jet of vapor at high velocity, a fuel system arranged to deliver fuel to the burner under pressure, a regulator for the burner which is sensitive to the pressure variation of the fuel system which regulator varies the effective area of the burner opening without changing the velocity of the issuing jet and a means for rendering the regulator inoperative to permit the burner to operate with a fixed opening.

4. In combination, a burner of the jet type, a fuel tank connected therewith, means for imparting an initial pressure to the tank for causing fuel to flow automatically therefrom to the burner, a pump arranged to receive fuel from the tank and deliver it to the burner at a different pressure, and a regulator for the burner comprising means which is subjected to the action of said pressures but is sensitive to the pressure of the fuel due to the pump and substantially insensitive to the pressure due to the tank.

5. In combination, a burner having a nozzle, a fuel tank, a pump which increases the fuel pressure between the tank and the burner, said pump having means for limiting the pressure of its delivery, conduit connections between the tank and the pump and between the pump and the burner, and a regulator for the burner which is arranged on the inlet side of the nozzle and varies the effective area of the passage through the nozzle, said regulator being acted upon by the pressure of the fuel system to move it in a direction to increase said area.

[Claims 6 to 19 not printed in the Gazette.]

1,024,210. LAMP OR ILLUMINATOR FOR AUTOS AND OTHER VEHICLES. WILLIAM K. LENHART, Philadelphia, Pa., assignor to Lenhart Mfg. Co. Inc., a Corporation of Pennsylvania. Filed Mar. 17, 1911. Serial No. 615,011. (Cl. 240—44.)



1. In an illuminator of the character stated, a burner, means for stationarily supporting the same, a burner on the side of the first-named burner, a curved arm carrying the side burner, said arm being slotted, and means for movably supporting said arm, said slot and supporting means permitting adjustment of the side burner to and from the first-named burner and angularly with reference to a reflector.

2. In an illuminator of the character stated, a burner, means for stationarily supporting the same, a burner on the side of the first-named burner, an arm having a curved slot and carrying said side burner, means for pivotally mounting said arm on the support of the first-named burner as an axis, and means for securing said arm rotatably in position, said side burner being slidably mounted in the slot of said arm whereby it may be horizontally adjusted in a curved path to and from the first-named burner.

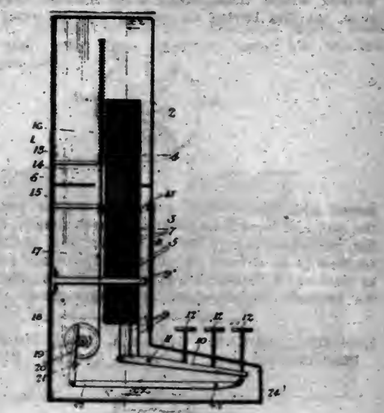
3. In an illuminator of the character stated, a central burner, burners on the sides of the same, means for supporting said central burner, arms having longitudinally-extending slots therein, and means for supporting said arms, said slots being adapted to movably receive members of the side burners thereon for adjustment of the latter to and from each other and angularly with reference to a reflector.

4. In an illuminator of the character stated, a central burner, arms pivotally supported on a member thereof, said arms having longitudinally-extending slots therein, burners on the side of said central burner, the same having members adjustably fitted in said slots, and means for securing said arms, and said side burners in set position.

5. In an illuminator of the character stated, a burner, means for stationarily supporting the same, an arm, means for pivotally mounting said arm, a burner slidably supported on said arm, nipples on said burners forming communications for the same, and flexible tubular connections for said nipples.

[Claim 6 not printed in the Gazette.]

1,024,211. KEY-OPERATED DIRECTORY. GEORGE I. LEONARD and WILLIAM C. CUTLER, Los Angeles, Cal., assignors to Isabel M. Cutler, Sawtelle, Cal. Filed Aug. 28, 1911. Serial No. 646,559. (Cl. 40—65.)



1. A series of cards slidably supported, a slidable card elevator extending underneath the cards, a series of detents engaging the respective cards, and key mechanism for operating a detent to release a card and depress said card elevator, and means for automatically lifting said card elevator to restore the card.

2. A case with a transparent panel, a series of cards slidably supported, a series of detents retaining the respective cards, a card elevator, key mechanism comprising a plurality of keys, a mechanism associated with each key for releasing the associated detent and pulling down the card elevator, and means operating automatically upon the release of a key for raising said card elevator and restoring the card.

3. A case with a transparent panel, a series of cards within the case, grooved ways supporting the cards, a card elevator slidable in the direction of said grooved ways, a spring for elevating said card elevator, a pulley, a pinion and shaft for operating said pulley, a rack engaging said pinion, a pivoted frame carrying said rack, a series of detents engaging the respective cards, a series of key levers extending over said frame and adapted to operate the frame, a connection from each detent to each key lever, and finger pieces for operating each key lever.

4. A case provided with a transparent panel, a series of cards above said panel, a series of detents and inclined projections engaging and retaining said cards in elevated position, a series of vertical rods with their ends extending under the inclined projections of the detents, a series of key levers for operating said rods to release the detents when a key lever is depressed, a card elevator extending under the cards, and means operated by each key lever upon being depressed to lower said card elevator, and spring means for raising said elevator when a key is released.

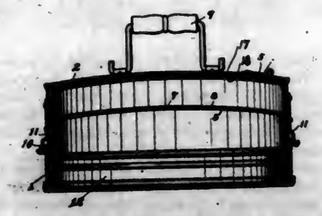
1,024,212. BOTTLE-CLOSURE. GEORGE LIEB, Newark, N. J. Filed Jan. 27, 1911. Serial No. 604,955. (Cl. 215—14.)

1. A closure for bottles comprising a disk of material adapted to be secured to the neck of a bottle, and a shutter pivoted to the center of the disk and having oppositely disposed arch-shaped recesses to form two oppositely extending wings, these wings being widened toward their ends, the disk having an arch-shaped perforation extending nearly to the center to be closed when either of the wings covers it and to be opened when a recess comes in register with it, the sides of the recess forming edges for engagement by the finger.

2. A closure for bottles comprising a disk of material adapted to be secured to the neck of a bottle, and a shutter pivoted to the center of the disk and having oppositely disposed arch-shaped recesses to form two oppositely extending wings, these wings being widened toward their ends, the disk having an opening with its outer edge adjacent and substantially concentric to the periphery of the disk and having its inner edge arch-shaped, said opening extending nearly to the center, the opening being adapted to be covered by either of the wings and opened by placing a recess in register therewith, the sides of the recesses forming edges for engagement by the finger.



1,024,213. COOKER. GEORGE A. LONG, Sturgis, Mich. Filed Dec. 24, 1909. Serial No. 534,798. (Cl. 53—2.)



1. In a cooker, the combination of a base open at the top and having imperforate bottom and side walls; a top portion open at the bottom, having imperforate side walls adapted to telescope into the side walls of the base; a dome-shaped inner wall open at the bottom arranged in said top portion to be vertically adjusted therein, the height of said inner wall being substantially less than that of the said top portion to permit its adjustment to change the size of the cooking chamber, said inner wall having frictional engagement with the side walls of the top portion whereby the said inner wall is supported in its adjusted positions in said top portion; and a removable holder comprising a band-like rim resting on said base, and a rack secured within said rim whereby it is supported above the bottom of said base, the side walls of said top portion and the inner wall thereof embracing said rim.

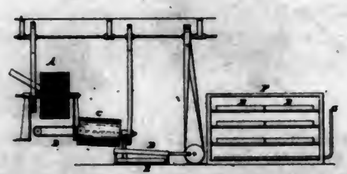
2. In a cooker, the combination of a base open at the top and having imperforate bottom and side walls; a top portion open at the bottom, having imperforate side walls adapted to telescope into side walls of the base; a dome-shaped inner wall open at the bottom arranged in said top portion to be vertically adjusted therein, the height of said inner wall being substantially less than that of the said top portions to permit its adjustment to change the size of the cooking chamber, the lower edge of said inner wall being turned outward to frictionally engage the side walls of the top portion whereby the said inner wall is supported in its adjusted position in said top portion and spaced therefrom.

3. In a cooker, the combination of a base open at the top and having imperforate bottom and side walls; a top portion open at the bottom, having imperforate side walls adapted to telescope into the side walls of the base, the top of said top portion having a vent opening therein and a closure for said vent opening; and a dome-shaped inner wall open at the bottom and having a vent in its top, arranged in said top portion to be vertically adjusted therein, the height of said inner wall being substantially less than that of the said top portion to permit its adjustment to change the size of the cooking chamber, said inner wall having frictional engagement with the side walls of the top portion whereby the said inner wall is supported in its adjusted positions in said top portion.

4. In a cooker, the combination of a base open at the top and having imperforate bottom and side walls; a top portion open at the bottom having imperforate side walls adapted to telescope into the side walls of the base; a dome-shaped inner wall open at the bottom arranged in said top portion to be vertically adjusted therein, the height of said inner wall being substantially less than that of the said top portion to permit its adjustment to change the size of the cooking chamber, said inner wall having frictional engagement with the side walls of the top portion whereby the said inner wall is supported in its adjusted positions in said top portion.

5. The combination with a cylindrical base portion open at its upper end and having cylindrical side walls, of a top portion having cylindrical side walls adapted to telescope into the side walls of said base, flange-like keepers on the side walls of said base, and a plurality of inverted T-shaped catches rigidly mounted on said top to project outwardly and downwardly over the upper edge of said side walls of said base portion and adapted to be engaged with either end of said keepers by a turning movement of said top in either direction, said catches and keepers coacting to provide stops.

1,024,214. PEARL-SAGO SUBSTITUTE AND METHOD OF MAKING THE SAME FROM CORN-STARCH. FREDERICK G. LORENZEN, Chicago, Ill. Filed July 31, 1911. Serial No. 641,423. (Cl. 99—11.)



1. As an improved article of manufacture, a substitute for pearl sago made from corn starch, said article being readily distinguished from genuine sago by its milky appearance and globular form.

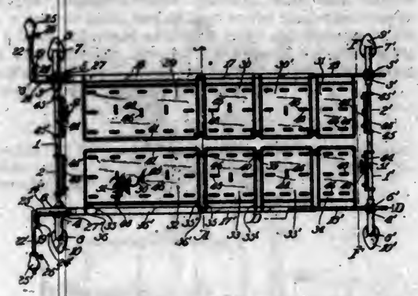
2. As an improved article of manufacture, a substitute for pearl sago made from corn starch and artificially colored, said article being readily distinguished from genuine sago by its non-transparent appearance when examined by transmitted light, and its globular contour.

3. The method of manufacturing a substitute for pearl sago and pearl tapioca, which consists in mixing corn starch with approximately 45 per cent. of water to a pasty consistence, then dividing the mass into flaky particles, then rolling these flaky particles into globular, shot-like, contour, then subjecting these particles to the action of moist heat to gelatinize and cook the same, then subjecting the particles to friction to separate the bodies, and finally heating the product by moderate heat to dry the same.

4. The method of manufacturing a substitute for pearl sago and pearl tapioca, which consists in mixing with corn starch coloring matter and sufficient water to form a pulp, then dividing the mass into flaky particles, then forming these flaky particles into globular, shot-like, contour, then subjecting these particles to the action of moist heat to gelatinize and cook the same, then subjecting these particles to friction to separate the same, and finally drying the product.

1,024,215. ADJUSTABLE FLORAL-DECORATION HOLDER. DAVID A. LYTLE, Indianapolis, Ind., assignor of one-fourth to William F. Lytle and one-fourth to John H. Lytle, Indianapolis, Ind. Filed Aug. 1, 1911. Serial No. 641,866. (Cl. 27—2.)

1. A floral decoration holder including two rotatably supported rails, each rail having a wing on one side for holding floral decorations and having also a counterweight on the opposite side for maintaining the wings temporarily in horizontal position.



2. A floral decoration holder including two rails provided each with a wing for holding floral decorations, means for rotatably supporting the rails, and two operating arms adjustably connected to the two rails respectively.

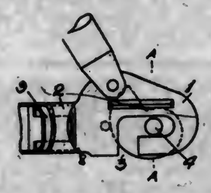
3. A floral decoration holder including two rails provided each with a wing for holding floral decorations, means for rotatably supporting the rails, and two operating arms detachably connected to the two rails respectively.

4. A floral decoration holder including two rails provided each with a wing for holding floral decorations, means for rotatably supporting the rails, and two operating arms connected to the two rails respectively and having each a weight adjustably secured thereto.

5. A floral decoration holder including two rails provided each with an operating arm, means for rotatably supporting the rails, and a plurality of wings mounted on the two rails respectively and having each a multiplicity of clasps on one side thereof for holding the decorations.

[Claims 6 to 13 not printed in the Gazette.]

1,024,216. REAR-WHEEL FITTING OF CYCLE-FRAMES. CECIL GEORGE MCKELLAR, Christchurch, New Zealand. Filed June 3, 1911. Serial No. 631,036. (Cl. 208—99.)

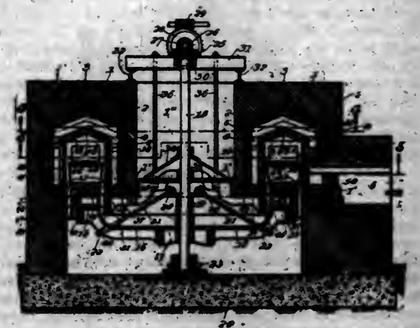


1. In an article of the character indicated, the combination with the rear fork of a cycle, of a plate provided with a slot to receive the rear axle and having a ridge projecting from its inner face, substantially as and for the purpose set forth.

2. As a new article of manufacture, a plate having a forwardly projecting shank adapted to be brazed within the tubing forming the rear fork of a cycle, a slot formed in said plate to receive the rear axle, and an indentation formed in the outer surface of said plate above said slot so as to produce a corresponding ridge upon the inner surface, the whole being stamped from sheet metal, substantially as and for the purpose set forth.

3. In an article of the character indicated the combination with the rear forks of a slotted plate adapted to form the mounting of the rear wheel, said plate being formed with a forwardly projecting shank adapted to fit within the tubing forming said fork, said shank being mounted so as to conform to the shape of the portion of the inner surface of such tubing to which it is secured, and a strip of metal bent to the required shape and wedged within the tubing so as to hold the shank in place during the brazing of the joint a portion of said metal strip being bent up so as to serve as a means of closing the end of the tubing, substantially as and for the purpose set forth.

1,024,217. ANNEALING-OVEN. ALBERT J. MEIER, Glendale, Mo. Filed June 5, 1911. Serial No. 631,284. (Cl. 148—16.)



1. An annealing oven including an annular heating chamber embodying a bottom formed of two spaced annuli, a side wall seating on each annulus, and a top composed of a series of pairs of spaced tiles having their inner ends meeting at a point and connected by a tongue and groove joint and having their lower ends seating on the upper ends of the side walls.

2. An annealing oven including an annular heating chamber embodying a bottom formed of two spaced annuli, a side wall seating on each annulus, a top composed of a series of pairs of spaced tiles having their inner ends meeting at a point and connected by a tongue and groove joint and having their lower ends seating on the upper ends of the side walls, an annealing chamber including side walls each formed of tiles having their lower ends connected to the adjacent portions of the two annuli by a tongue and groove joint, and a roof formed of series of pairs of tiles having their inner ends meeting in a point and connected by a tongue and groove joint and having their outer ends recessed and seating on and receiving the upper ends of said tiles forming the side walls of the annealing chamber.

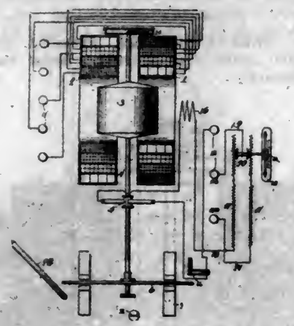
3. An annealing oven having a central opening, an annular annealing chamber having an open bottom, a vertical shaft arranged in said oven opening, a casting borne by said shaft having a horizontal portion and a depending apron formed with a horizontal ledge, said ledge being formed with a raised lip at its outer end, a series of tiles seating on said horizontal portion of the casting and formed with downwardly extending projections, and a series of tiles seating on said ledge and engaged with the lip thereof and having beveled upper ends engaged by said tile projections.

4. In an annealing oven, an annular heating chamber having an annular annealing chamber therein, said annealing chamber having an open bottom, a vertical shaft arranged in the center of the space defined by the annular heating chamber, a casing mounted on said shaft and arranged beneath the open bottom of the annealing chamber, a second casting on the shaft, and a series of diagonal rods each connected at their ends to the two castings.

5. In combination with an annealing oven having a central space and an annealing chamber surrounding said space, a shaft arranged in said space, a rotating carrier on the shaft projecting into said open bottom of the annealing chamber, a conical shield surrounding the shaft and closing the lower end portion of said central space of the oven, and means to support the shield from the oven.

[Claims 6 to 25 not printed in the Gazette.]

1,024,218. METER. WILLIAM J. MOWBRAY, Providence, R. I. Filed June 21, 1909. Serial No. 503,297. (Cl. 171—34.)



1. A commutator type, integrating, watt-hour meter having a field-coil adapted to be connected in series in one line of a circuit, a rotatable shaft, an armature mounted on said shaft in inductive relation to said field-coil, a resistance, wires connecting said resistance in series with said armature across the lines of the circuit, a movable contact for varying the amount of said resistance in circuit, a member on which said contact is mounted, means for securing the contact to said member in various positions of adjustment and means for adjusting the position of said member, substantially as set forth.

2. A commutator type, integrating, watt-hour meter having a field-coil adapted to be connected in series in one line of a circuit, a rotatable shaft, an armature mounted on said shaft in inductive relation to said field-coil, a disk upon said shaft, a permanent magnet in coöperative relation to said disk, a thermometer mounted adjacent to said disk, a resistance consisting of a material having a temperature coefficient of resistance which is substantially zero and having an ohmic value which is large relatively to that of said armature, wires connecting said resistance in series with said armature across the lines of the circuit, and a movable contact for varying the amount of said resistance in circuit, substantially as set forth.

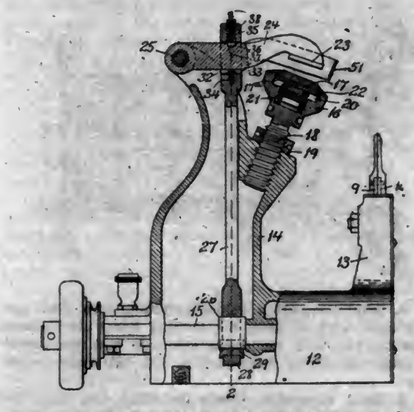
3. A commutator type, integrating, watt-hour meter having a field-coil adapted to be connected in series in one line of a circuit, a rotatable shaft, an armature mounted on said shaft in inductive relation to said field-coil, a disk on said shaft, a permanent magnet mounted in coöperative relation to said disk, a frame for the instrument, a compass mounted on said frame, and means for limiting the extent of movement of the needle of said compass, substantially as set forth.

4. A commutator type, integrating, watt-hour meter having a field-coil adapted to be connected in series in one line of a circuit, a rotatable shaft, an armature mounted on said shaft in inductive relation to said field-coil, a disk on said shaft, a permanent magnet mounted in coöperative relation to said disk, a frame for the instrument, a compass mounted on said frame, and means for precluding movement of the needle of said compass into parallelism with the lines of force of said field-coil, substantially as set forth.

5. A commutator type, integrating, watt-hour meter having a field-coil adapted to be connected in series in one line of a circuit, a rotatable shaft, an armature mounted on said shaft in inductive relation to said field-coil, a disk on said shaft, a permanent magnet mounted in coöperative relation to said disk, a frame for the instrument, a compass mounted on said frame, means for limiting the extent of movement of the needle of said compass, and a strip of magnetic material mounted adjacent to the needle of said compass and immovable with respect to said needle, substantially as set forth.

[Claims 6 and 7 not printed in the Gazette.]

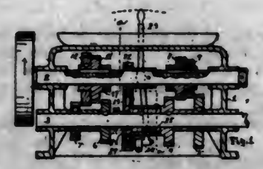
1,024,219. BEADING-MACHINE. JAMES H. NANGLE, Lynn, Mass. Filed Sept. 30, 1911. Serial No. 652,041. (Cl. 12—53.)



1. In a machine of the character stated, a frame having a standard, a driving shaft journaled in the frame, a hammer bed mounted on the standard, a lever fulcrumed at one end on the standard and having a hammer at its opposite end, a cam on the driving shaft and a connecting rod engaged at one end with the cam and having a slot in its opposite end through which the lever passes, and opposed bearings for the lever located in said slot, one of said bearings being adjustable to compensate for wear, and provided with means for locking it to the lever.

2. In a machine of the character stated, a frame having a standard, a driving shaft journaled in the frame, a hammer bed mounted on the standard, a lever fulcrumed at one end on the standard and having a hammer at its opposite end, a cam on the driving shaft and a connecting rod engaged at one end with the cam and having a slot in its opposite end through which the lever passes, a lower bearing for the lever in the lower end of the slot, and a screw adjustably engaged with the lever and projecting into the upper end of the slot, said screw having a terminal constituting an upper bearing for the lever, and a lock nut whereby the screw may be secured in any position to which it may be adjusted.

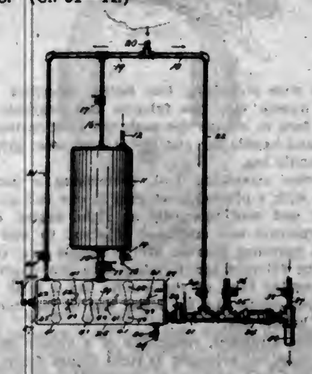
1,024,220. GEARING. HENRY M. NORRIS, Cincinnati, Ohio, assignor to The Cincinnati Bickford Tool Co., Cincinnati, Ohio, a Corporation of Ohio. Filed Dec. 16, 1910. Serial No. 597,715. (Cl. 74—58.)



1. A gearing comprising, a shaft, gears splined thereon, oppositely disposed studs parallel with the shaft, sleeves slidably mounted thereon and formed with arms engaging with the respective gears, parallel links each formed with a central notch and secured to the respective sleeves, a lever for engaging with the notch in either link for moving the corresponding sleeve and gear longitudinally, and a stationary slotted member for maintaining the lever within the notch.

2. A gearing comprising a casing formed with parallel slots having a central passage between them, a shaft within the casing parallel with the slots, gears splined thereon, oppositely disposed studs projecting within the casing parallel with the shaft and the slots, sleeves slidable thereover, and each formed with an arm engaging with the respective gears, parallel links each formed with a central notch and secured to the respective sleeves, and a lever fulcrumed at a fixed point and movable in the slots and laterally through the passage for alternately engaging with the notch in the respective links for shifting the sleeves with the gears on the shaft.

1,024,221. GROUTING-MACHINE. DANIEL A. OSGOOD, Jersey City, N. J. Filed Jan. 3, 1911. Serial No. 600,478. (Cl. 91—44.)



1. In a grouting machine; in combination; a supply tank having an inlet pipe in the top thereof and through which may be passed material; a discharge pipe having one end connected to the opposite end of the supply tank and having a cut-off valve interposed therein; a tank connected to the opposite end of the discharge pipe and disposed transversely with respect to the supply tank; a distributing pipe having one end connected to one end of the receiving tank; an air inlet pipe having one end connected to the end of the supply tank opposite to said discharge pipe and having a valve interposed therein; a main supply pipe held to the opposite end of said air inlet pipe and adapted to transmit air under pressure to the air inlet pipe from a source of air supply; and means provided within the receiving tank and adapted to mix material when forced therein from the supply tank through said discharge pipe.

2. In a grouting machine; in combination; a supply tank having an inlet pipe in one part of the top thereof for the passage therethrough of material and having in one part of the bottom a valve controlled discharge nozzle; a discharge pipe having one end connected also to the bottom of the supply tank and having a cut-off valve interposed therein; a receiving tank connected to the opposite end of the discharge pipe and disposed transversely with respect to the supply tank; a distributing pipe having one end connected to one end of the receiving tank; an air inlet pipe having one end connected to the top of the supply tank and having a valve interposed therein; a main supply pipe held to the opposite end of said air inlet pipe and adapted to transmit air under pressure from a source of air supply to the supply tank through the air inlet pipe; means adapted to transmit air under pressure from the main supply pipe to the end of the receiving tank opposite to the distributing pipe; and means provided within the receiving tank and adapted to mix material when forced therein from the supply tank through said discharge pipe.

3. In a grouting machine; in combination; a supply tank having an inlet pipe in one part of the top thereof for the passage therethrough of material and having in one part of the bottom of said supply tank; a discharge pipe having one end connected also to the bottom of the supply tank and having a cut-off valve interposed therein; a receiving tank connected to the opposite end of the discharge pipe and disposed transversely with respect to the supply tank; a distributing pipe having one end connected to one end of the receiving tank; and an air inlet pipe having one end connected to the top of the supply tank and having an air pressure regulating valve interposed therein; a main supply pipe held to the opposite end of said air inlet pipe and adapted to transmit air under pressure from a source of air supply to the supply tank through the air inlet pipe; means adapted to transmit air under pressure from the main supply pipe to the end of the receiving tank opposite to the distributing pipe; means provided within the receiving tank and adapted to mix material when forced therein from the supply tank through said discharge pipe; and means adapted to transmit air under pressure from the opposite end of the main supply pipe to the distributing pipe.

4. In a grouting machine; in combination; a supply tank having an inlet in one part of the top thereof for passage of material and having in one part of its bottom a valve controlled nozzle; a discharge pipe having one end connected also to the bottom of the supply tank and having a cut-off valve interposed therein; a receiving tank connected to the opposite end of the discharge pipe and disposed transversely with respect to the supply tank; a distributing pipe having one end connected to one end of the receiving tank; a main supply pipe adapted to transmit air under pressure from a source of air supply; means adapted to transmit the compressed air from the main supply pipe to the supply tank; means adapted to transmit the compressed air from one end of the supply pipe to the end of the receiving tank opposite to the distributing pipe; means provided within the receiving tank and adapted to mix material when forced therein from the supply tank through said discharge pipe; and means adapted to transmit the compressed air from the opposite end of the main supply pipe to the distributing pipe.

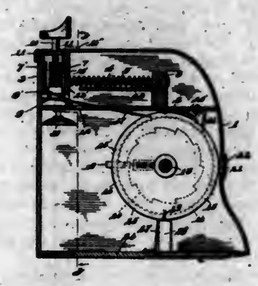
5. In a grouting machine; in combination; a supply tank having an inlet pipe in one part of the top thereof for passage of material and having in one part of its bottom a valve controlled nozzle; a discharge pipe having one end connected also to the bottom of the supply tank and having a cut-off valve interposed therein; a receiving tank connected to the opposite end of the discharge pipe and disposed transversely with respect to the supply tank; a distributing pipe having one end connected to one end of the receiving tank; a main supply pipe adapted to transmit air under pressure from a source of air supply; valve controlled means adapted to transmit the compressed air from the main supply pipe to the supply tank; an air feed pipe having one end connected to one end of the main supply pipe and its other end connected to the end of the receiving tank opposite to the distributing tube and having an air pressure regulating valve interposed therein; a second feed pipe having one end connected to the opposite end of the main supply pipe and its other end connected to the distributing pipe; and means provided within the receiving tank and adapted to mix material when forced therein from the supply tank through said discharge pipe.

[Claims 6 to 9 not printed in the Gazette.]

1,024,222. COIN SAVINGS-BANK. RUFUS T. PARKER, Chicago, Ill., assignor of one-half to Charles J. Watson, Chicago, Ill. Filed Dec. 21, 1911. Serial No. 667,077. (Cl. 235—100.)

1. In a coin savings bank, a hollow body having a coin admission slot; a slidable member having a recess adapted for registartion with said coin admission slot; depressible means for locking said slidable member in position with said recess registering with said slot; and depressible operating means for moving said slidable member, said operating means being normally inoperative, a coin de-

posited into said slot and passing into said recess being adapted to establish an operative connection between said operative means and said locking means for effecting release of said slidable member, substantially as described.



2. In a coin savings bank, a hollow body having a coin admission slot; a slidable member having a recess adapted for registration with said coin admission slot; depressible resilient means for locking said slidable member in position with said recess registering with said slot; and depressible operating means for depressing said locking means and for moving said slidable member, said operating means being normally inoperative, a coin deposited into said slot and passing into sail recess being adapted to established an operative connection between said operating means and said locking means for effecting depression of the latter and release of said slidable member, substantially as described.

3. In a coin savings bank, a hollow body having a coin admission slot; a slidable member having a recess adapted for registration with said coin admission slot; depressible means for locking said slidable member in position with said recess registering with said slot; spring controlled depressible operating means for depressing said locking means and for moving said slidable member, said operating means being normally inoperative to depress said locking means, a coin deposited into said slot and passing into said recess being adapted to establish an operative connection between said operating means and said locking means for effecting depression of said locking means, substantially as described.

4. In a coin savings bank, a hollow body having a coin admission slot; a slidable member having a recess adapted for registration with said coin admission slot; resilient means for normally maintaining said slidable member in a position with said recess registering with said slot; depressible means for locking said slidable member in said position; and depressible operating means for depressing said locking means and for moving said slidable member, said operating means being normally inoperative to depress said locking means, a coin deposited into said slot and passing into said recess being adapted to establish an operative connection between said operating means and said locking means for effecting depression of said locking means, substantially as described

5. In a coin savings bank, a hollow body having a coin admission slot; a slidable member having a recess adapted for registration with said coin admission slot; resilient depressible means for locking said slidable member in position with said recess registering with said slot; a presser member for depressing said locking means and for operating said slidable member, said presser member being normally inoperative to effect depression of said locking means, a coin deposited in said slot and passing into said recess being adapted to establish an operative connection between said operating means and said locking means for effecting depression of said locking means and release of said slidable member; a coin receiving chamber in the lower end portion of said body, there being a coin admission opening leading to said chamber registerable with said coin recess in said slidable member; and means for limiting the movement of said slidable member to effect the deposit of the coin therefrom into said last mentioned coin receiving slot when said slidable member is operated, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

1,024,223. WIRE-STRETCHER. JAMES PITRE, Cut Off, La. Filed Nov. 18, 1911. Serial No. 661,044. (Cl. 39—54.)

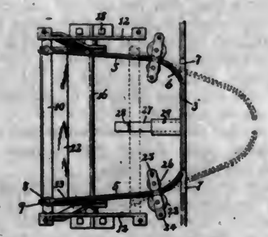


1. The wire stretching tool herein described, comprising the handle bar, the fulcrum bar provided with a serrated face to engage the post, the hook formed on the fulcrum and handle bar and the pivoted lever grip carried by the handle bar.

2. A wire stretching tool, comprising a handle bar provided with a pivoted lever grip at one end and having its other end bent upwardly at right angles, combined with a fulcrum bar arranged adjacent to and parallel with the upturned portion of the handle bar, the upper end of the fulcrum bar forming with the upper portion of the angular bend of the handle bar a hook or claw, and a strut connecting the lower end of the fulcrum bar with the handle bar.

3. A wire stretcher, consisting of a handle bar, a serrated fulcrum bar arranged at right angles thereto, means for engaging the wire to be stretched, and an angular strut connecting the lower end of the fulcrum bar with the handle bar.

1,024,224. BURGLAR-TRAP. ISAAC RAFFEL, Baltimore, Md. Filed Nov. 14, 1911. Serial No. 660,210. (Cl. 43—23.)

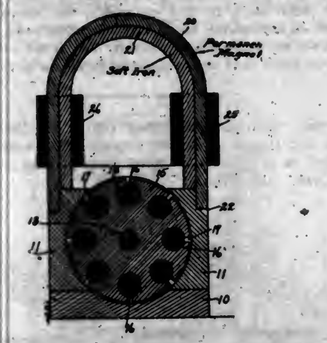


1. In an apparatus of the character set forth, the combination of a counter; two gripping arms concealed below the top of the counter and the inner ends of both arms being pivoted to a slidable bar; means to move said bar and cause the arms to project from their place of concealment, and means to swing said arms on their pivots toward each other, this mechanism being under the control of and operable by a person behind the counter.

2. In an apparatus of the character set forth, the combination with a counter, of two gripping arms concealed below the counter and movable outwardly; means for thrusting said arms outward from their place of concealment, means for swinging the outwardly-thrust ends of the arms toward each other, and a treadle device for imparting motion to said outward-thrusting means and operable by a person behind the said counter.

3. In an apparatus of the character set forth, the combination of a counter; two movable gripping arms below the top of the counter; a slidable bar to which one end of both grip-arms are jointed leaving the other ends of said arms free; levers to move said slidable bar and cause both arms to be thrust outwardly; means for swinging the free ends of the arms toward each other as they are thrust out; and a treadle device connected with said levers.

1,024,225. ELECTRIC GENERATOR. BENJAMIN P. REMY, FRANK I. REMY, FRANKLIN P. MCDERMOTT, Jr., and IRVING J. REUTER, Anderson, Ind., assignors to Remy Electric Company, Anderson, Ind., a Corporation. Filed Jan. 16, 1911. Serial No. 602,997. (Cl. 171—209.)



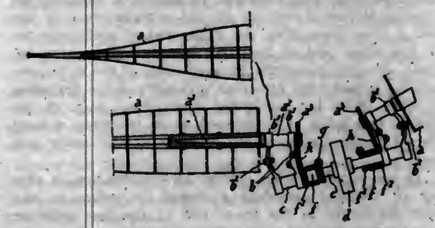
1. An electric generator provided with a permanent field magnet and a soft iron field magnet parallel with the permanent magnet, an armature between both ends of both sorts of magnets, and a field coil surrounding the magnetic circuit of the soft iron field magnet.

2. An electric generator provided with a permanent field magnet, a soft iron field magnet parallel with the permanent magnet, an armature between both ends of both sorts of magnets, and a field coil surrounding the magnetic circuits of both the soft iron and permanent field magnets.

3. An electric generator provided with a permanent field magnet, a soft iron field magnet located within said permanent field magnet, an armature between both ends of both sorts of magnets, and a field coil surrounding both sorts of magnets.

4. An electric generator provided with a horseshoe permanent field magnet, a horseshoe soft iron field magnet located within the permanent magnet, a pair of oppositely located pole pieces each pole piece in contact with the adjacent ends of both sorts of magnets, an armature between said pole pieces, and a field coil surrounding said magnets.

1,024,226. APPARATUS COMPRISING FANS FOR GENERATING PROGRESSING AND ASCENDING MOVEMENTS OF A BODY IN A FLUID MEDIUM. MAX RAYMOND, Payerne, Switzerland. Filed Oct. 1, 1910. Serial No. 584,826. (Cl. 115—57.)



1. A propelling apparatus comprising a main shaft, a fan shaft, a fan connected to the fan shaft, means secured to the main shaft and in which the fan shaft is journaled, the said means being adjustable to vary the inclination of the fan shaft relatively to the main shaft, and means connecting the main and fan shafts in such a manner that the fan shaft and its fan are turned half a revolution every time the main shaft is turned a complete revolution.

2. A propelling apparatus comprising a main shaft, a fan shaft, a fan connected to the fan shaft, adjustable arms secured at one end to the said main shaft, bearings at the opposite ends of said adjustable arms and in which the said fan shaft is journaled, and means connecting the main and fan shafts in such a manner that the fan shaft and its fan are turned half a revolution every time the main shaft is turned a complete revolution.

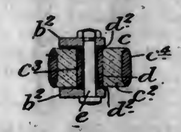
3. A propelling apparatus comprising a main shaft, a fan shaft, a fan connected to the fan shaft, adjustable arms secured at one end to the said main shaft, bearings at the opposite ends of said adjustable arms and in which the said fan shaft is journaled, a sleeve loosely mounted on the said main shaft, a gear connected to the said sleeve, other gears connecting the aforesaid gears with the said fan shaft, and means for holding the said sleeve in position during the revolution of the main shaft.

4. A propelling apparatus comprising a main shaft, a fan shaft, a fan connected to the fan shaft, adjustable arms secured at one end to the said main shaft, bearings at the opposite ends of the said adjustable arms and in which the said fan shaft is journaled, a sleeve loosely mounted on the said main shaft, a gear connected to the said sleeve, other gears connecting the aforesaid gears with the fan shaft, and means for holding the said sleeve stationary during the turning of the main shaft and also for adjusting the position of the said sleeve relatively to the main shaft.

5. A propelling apparatus comprising a main shaft, a fan shaft, a fan connected to the fan shaft, adjustable arms secured at one end to the said main shaft, bearings at the opposite ends of the said adjustable arms and in which the said fan shaft is journaled, a sleeve loosely mounted in the said main shaft, a gear connected to the said sleeve, other gears connecting the aforesaid gears with the fan shaft, a worm wheel connected to the said sleeve and a worm meshing with the said worm wheel to hold the sleeve stationary during the turning of the main shaft and also to adjust the position of the said sleeve relatively to that of the main shaft.

[Claims 6 to 9 not printed in the Gazette.]

1,024,227. CASTER-WHEEL. IVAN ROCIC, Hoboken, N. J. Filed Nov. 27, 1911. Serial No. 662,572. (Cl. 16—75.)



A caster roller, comprising a main body part of insulating earthy material provided with an inner elastic bushing within which is a metallic sleeve, and an outer annular bearing member of elastic material.

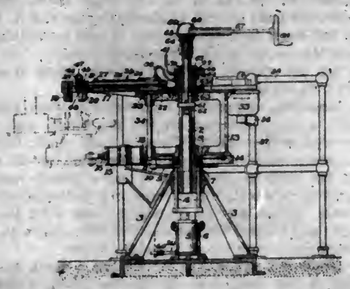
1,024,228. GLASS-GATHERING MACHINE. ALEXANDER L. SCHRAM, Hillsboro, Ill. Filed Feb. 28, 1910 Serial No. 546,312. (Cl. 49—62.)

1. A suction gathering machine for glass having interchangeable plugs arranged to vary the amount of the measured batch; substantially as described.

2. A suction gathering machine for glass having interchangeable plugs arranged to vary the amount of the measured batch, each of said plugs having a valve passage through it; substantially as described.

3. A gathering cup having a suction passage, a changeable plug through which the passage extends, and a valve for the passage arranged to be closed by the entering glass; substantially as described.

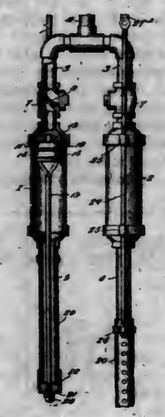
4. A suction-gathering cup having a plurality of separable parts, connections for opening and closing the parts, and a removable plug forming a top for the cup, said plug by reason of its removability, whereby plugs of different thickness may be employed, providing means for varying the depth of the cup, substantially as described.



5. A suction gathering cup having an open bottom and made in two or more separable parts, mechanism for opening and closing the parts, a removable plug within the cup parts forming the top of the cup and removably attached to one of its parts, and a suction channel extending through said plug; substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

1,024,229. PUMP. ELI M. SMITH, Union, Nebr. Filed Jan. 10, 1912. Serial No. 670,428. (Cl. 103—81.)

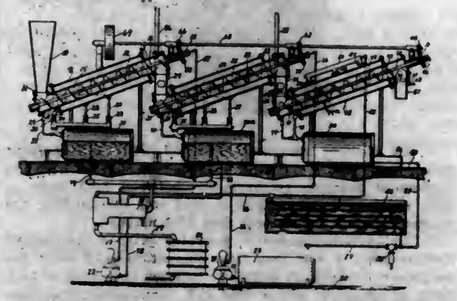


1. In a pump of the character described, a main water conducting pipe, valved branch pipes connected to said main pipe, cylinders connected to said branch pipes, inner perforated piston guiding pipes connected to lower end of said cylinders, outer perforated piston guiding pipes slidably engaged with said inner pipes, valved pistons slidably engaged with said cylinders and having an operative connection with said outer guide pipes and means to reciprocate said outer pipes and pistons.

2. In a pump of the character described, a main water conducting pipe, valved branch pipes connected to said main pipe, cylinders connected to said branch pipes, inner perforated piston guiding pipes connected to the lower end of said cylinders, outer perforated piston guiding pipes slidably engaged with said inner pipes, valved pistons slidably engaged with said cylinders, piston rods extending downwardly from said pistons through said inner guide pipes and having an operative connection at their lower ends with said outer pipes, operating balls connected to said outer pipes and means whereby said balls and pipes are operated to reciprocate said pistons.

3. In a pump of the character described, a pump stock, having a discharge spout, a main water elevating pipe connected with said stock, branch pipes connected to the lower ends of said main pipe, check valves in said branch pipes, cylinders connected with the latter, inner perforated piston guiding pipes secured to the lower ends of said cylinders, outer perforated piston guiding pipes, slidably mounted on said inner pipes, valved pistons slidably mounted in said cylinders, piston rods to connect said pistons with said outer guiding pipes whereby the pistons are reciprocated in said cylinders, operating balls connected with said outer pipes, guide brackets to slidably secure said balls to the cylinders, an operating lever pivoted on said pump stock and operating rods to connect said lever with said balls whereby the latter are actuated to reciprocate said outer guiding pipes to pistons.

1,024,230. OIL-EXTRACTING DEVICE. CHARLES TURNER and HARRY J. FLOOD, Chicago, Ill.; said Flood assignor to said Turner. Filed June 5, 1911. Serial No. 631,440. (Cl. 87—6.)



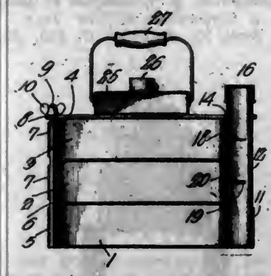
1. In an oil extracting device, in combination, an inclined cylinder, a jacket inclosing a portion of the cylinder, the cylinder walls inclosed within the jacket being foraminous, a hopper delivering to the lower end of the cylinder, a conveyer for advancing material upwardly through the cylinder, means for introducing a solvent into the cylinder and a drain pipe leading from the jacket at a point elevated above the connection of the hopper with the cylinder.

2. In an oil extracting device, in combination, an inclined cylinder, a jacket inclosing a portion of the cylinder, the portion of the cylinder walls inclosed within the jacket being foraminous, a hopper delivering to the lower end of the cylinder, a tubular shaft mounted on the axis of the cylinder and having lateral perforations, a spiral conveyer carried by the shaft, means for delivering a solvent to the upper end of the shaft and a drain pipe leading from the jacket at a point above the connection of the hopper with the cylinder.

3. In an oil extracting device, in combination, a pair of inclined cylinders arranged in series, a feed hopper delivering to the lower end of the cylinder first in the series, a pipe connecting the upper end of such cylinder with the lower end of the next cylinder, means for advancing material upwardly through each of the cylinders, means for introducing a solvent into each of the cylinders and drain pipes for conveying liquid from each of the cylinders and being so positioned as to maintain a level of liquid above the receiving opening at the lower end thereof.

4. In an oil extracting device, in combination, a plurality of inclined cylinders arranged in series, a feed hopper delivering to the lower end of the first cylinder of the series, tubular connections between each of the cylinders and the next succeeding cylinder in the series, a discharge spout at the upper end of the last cylinder of the series, means for conveying material upwardly through each of the cylinders, means for delivering a solvent to the first and intermediate cylinders, means for draining liquids from such last named cylinders and for maintaining a level of liquid therein above the receiving apertures at their lower ends, means for delivering steam to the last cylinder of the series, downwardly inclined nipples for delivering steam to the receiving aperture of such cylinder, upwardly inclined nipples for delivering steam into the discharging aperture at the upper end of the last named cylinder and means for conveying vapors laterally from said cylinder.

1,024,231. DINNER-PAIL. JOSEPH B. TUTTLE, Asheville, N. C., assignor of one-half to Robert P. Robinson, Asheville, N. C. Filed Dec. 26, 1911. Serial No. 667,640. (Cl. 220—52.)



1. A dinner pail comprising upper and lower members; an element connecting the members adjacent one end; a tube connecting the other ends of the members; a receptacle mounted for swinging movement upon said element, the receptacle having a finger arranged to engage the tube to maintain the receptacle alined with the upper and lower members, the finger entering terminally into the tube.

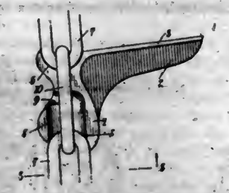
2. A dinner pail comprising upper and lower members; an element connecting the upper and lower members at one end; a tube connecting the upper and lower members at the other end; intermediate receptacles mounted for swinging movement upon said element; the intermediate receptacles having fingers adapted to enter openings in the opposite sides of the tube, whereby, when an article is inserted between the wall of the tube, and one finger, such article will prevent a withdrawal of the other finger from the tube.

3. A dinner pail comprising upper and lower members; an element connecting the upper and lower members at one end; a tube connecting the upper and lower members at the other end; intermediate receptacles mounted for swinging movement upon said element; the intermediate receptacles having fingers adapted to engage the tube, to maintain the receptacles and said members in alinement, the fingers entering openings in the opposite sides of the tube, whereby, when an article is inserted between the wall of the tube and one finger, such article will prevent a withdrawal of the other finger from the tube, and prevent a lateral swinging of the receptacles.

4. A dinner pail comprising a lower receptacle; an intermediate receptacle; a rod secured to the lower receptacle; a bearing upon the intermediate receptacle adapted to receive the rod; a top mounted to swing upon the rod; means upon the rod to engage the top; a tube secured to the lower receptacle and protruding through an opening in the top; removable means for holding the top and the tube together; and a finger upon the intermediate receptacle adapted to engage the tube to maintain the intermediate receptacle alined with the top and with the lower receptacle.

5. A dinner pail comprising a lower receptacle; an intermediate receptacle; a rod secured to the lower receptacle; a bearing upon the intermediate receptacle adapted to receive the rod; a top mounted to swing upon the rod; means upon the rod to engage the top; a tube secured to the lower receptacle and protruding through an opening in the top; a movable means for holding the top and the tube together; and a finger upon the intermediate receptacle; adapted to enter an opening in the tube, the finger engaging the tube to maintain the intermediate receptacle alined with the top and with the lower receptacle.

1,024,232. CONVEYER-CLEAT. FRANK EDWARD TUXWORTH, Fullerton, La. Filed Nov. 6, 1911. Serial No. 658,735. (Cl. 193—8.)



1. A conveyer cleat having a portion thereof formed with pockets at opposite ends, the said portion being adapted to be inserted into a link with the pockets in engagement with the ends of adjacent links, there being a recess on the side of the said portion whereby movement of one of the adjacent links relatively to the said portion is permitted.

2. A cleat for conveyers comprising a portion having pockets therein at opposite points thereof, the said portion being adapted to be positioned within a link of a chain, with the pockets in engagement with the ends of adjacent links, the side of the said portion being provided with a recess whereby one of the links may be moved out of one of the pockets in order to permit the cleat to be withdrawn.

3. A cleat for conveyer chains comprising a portion having pockets at opposite ends thereof, the said pockets being adapted to receive the ends of adjacent links when the portion is inserted into one link, there being a recess in the side of the said portion whereby one of the said adjacent links may be moved relatively to the said portion in order to permit the cleat to be withdrawn from the said link.

4. As a new article of manufacture, a conveyer cleat having pockets at opposite ends thereof, the side of the cleat between the pockets being provided with a recess.

5. As a new article of manufacture, a conveyer cleat having pockets at opposite ends thereof, one side of the cleat being provided with a recess, one end of the recess communicating with one of the pockets and the other end of the recess being intermediate of the said pockets.

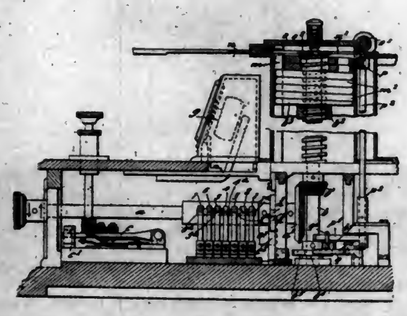
[Claim 6 not printed in the Gazette.]

1,024,233. APPARATUS FOR CONTROLLING THE TRAFFIC ON SINGLE-LINE RAILWAYS. EDWARD TYER, Dalston, London, England. Filed Oct. 10, 1910. Serial No. 586,166. (Cl. 246—56.)

1. In electrically controlled apparatus for working traffic on the tablet system on single line railways, in combination with local electric circuits, a magazine adapted to hold a series of tablets side by side in row and means for shifting the tablets as a column within the magazine a distance equal to the thickness of a tablet, said means comprising a rotatable commutator spindle adapted to control the local electric circuit, a rotatably mounted member correlated with the tablets within the magazine and a connection between the commutator spindle and rotatable member operating to turn the latter and cause the tablets to move as a column the desired distance when the commutator spindle is given half a turn to commutate the connections in the local circuits.

2. In electrically controlled apparatus for working traffic on the tablet system on single line railways, in combination with local electric circuits, a series of tablets each having a central aperture which is screw-threaded, a

magazine adapted to hold the tablets side by side and means for shifting the tablets as a column within the magazine a distance equal to the thickness of a tablet, said means comprising a rotatable commutator spindle adapted to control the local electric circuits, a rotatable screwed spindle having threads of a pitch equal to the thickness of a tablet and adapted to turn in the apertures of the tablets and gearing connecting the commutator spindle and the screw-threaded spindle and operating to impart a complete turn to the latter to shift the tablets as a column the desired distance when the commutator spindle is given a half turn to commutate the connections in the local circuits.



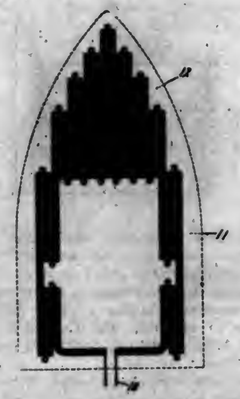
3. In electrically controlled apparatus for working traffic on the tablet system on single line railways, in combination with local electric circuits, a magazine adapted to hold a series of tablets side by side in a row and means for shifting the tablets as a column within the magazine a distance equal to the thickness of a tablet, said means comprising a rotatable commutator spindle adapted to control the local electric circuits, a rotatably mounted screw-threaded spindle having threads of a pitch equal to the thickness of a tablet, a guided traversing nut mounted on the screw-threaded spindle and engaging the rear of the row of tablets, and gearing connecting the two spindles and operating to impart a complete turn to the screw-threaded spindle and thereby shift the guided nut and the tablets as a column a distance equal to the thickness of a tablet when the commutator spindle is given a half turn to commutate the connections in the local circuits.

4. In electrically controlled apparatus for working traffic on the tablet system on single line railways, in combination with local electric circuits, a series of tablets each having a central aperture, a vertical cylindrical casing adapted to hold the tablets superposed one on the other and means for shifting the tablets as a column within the magazine a distance equal to the thickness of a tablet, said means comprising a rotatable commutator spindle adapted to control the local circuits, a vertical screw-threaded spindle extending through the central apertures of the tablets and having threads of a pitch equal to the thickness of a tablet, a guided traversing nut mounted on the screw-threaded spindle and engaging the rear of the row of tablets, and gearing connecting the said two spindles and operating to impart a complete turn to the screw-threaded spindle and thereby shift the guided nut and the tablets as a column a distance equal to the thickness of a tablet when the commutator spindle is given a half turn to commutate the connections in the local circuits.

5. In electrically controlled apparatus for working traffic on the tablet system on single line railways, in combination with local electric circuits, a series of tablets each having a central aperture, a vertical cylindrical casing adapted to hold the tablets superposed one on the other and means for shifting the tablets as a column within the magazine a distance equal to the thickness of a tablet, said means comprising a rotatable commutator spindle adapted to control the local circuits, a vertical screw-threaded spindle extending through the central apertures of the tablets and having threads of a pitch equal to the thickness of a tablet, a guided traversing nut mounted on the screw-threaded spindle, a platform having an inclined upper surface, surrounding the nut and adapted to support the superposed tablets in a correspondingly inclined position for the purpose described and gearing connecting the said two spindles and operating to impart a complete turn to the screw-threaded spindle and thereby shift the guided nut and the tablets as a column a distance equal to the thickness of a tablet when the commutator spindle is given a half turn to commutate the connections in the local circuits.

[Claims 6 to 8 not printed in the Gazette.]

1,024,234. ELECTRIC HEATING UNIT. TYCHO VAN ALLER, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed May 11, 1908. Serial No. 432,023. (Cl. 219—63.)



1. A resistance unit comprising an insulated helical resistance conductor flattened on itself and bent back and forth to cover a desired area.

2. A resistance unit comprising a flattened helical resistance conductor bent back and forth in parallel lines to cover a desired area.

3. A resistance unit comprising a flattened helical resistance conductor bent back and forth in parallel lines of unequal length to cover a desired area.

4. A resistance unit comprising an insulated resistance conductor formed into a closed flattened helix and bent back and forth to cover a desired area.

5. A resistance unit comprising a coil having a surface insulation of the oxid of its own metal, the opposite sides of each turn of the coil being in contact with each other.

1,024,235. PIANO TONE-MODIFIER. PHILIP WALES, Covington, Ky. Filed Oct. 29, 1910. Serial No. 589,739. (Cl. 84—143.)

1. A piano tone modifier comprising a horizontally disposed support rail, a plurality of shanks having hammer heads mounted in vertical alinement therein, and a piano hammer adapted to strike any of said shanks as desired, substantially as set forth and for the purposes specified.

2. A piano tone modifier comprising a horizontally disposed and vertically slidable support rail, shanks each having a striking head mounted thereon and a piano hammer adapted to strike any of said shanks in the order desired, for the purposes set forth, substantially as specified.

3. A piano tone modifier comprising a horizontally disposed and vertically slidable support rail, a series of shanks arranged in vertical alinement thereon, each having a striking head and means adapted to strike any of said shanks.

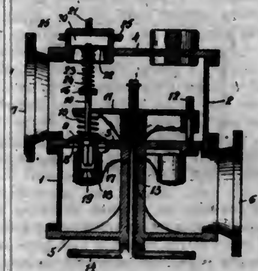
4. A piano tone modifier, comprising a horizontally disposed and vertically movable support rail, shanks mounted in said support rail, a striking head on each shank, a piano hammer adapted to strike any one of said shanks as desired, and means whereby said shanks may be adjusted to bring them into the path of said piano hammer for the purposes specified.



5. A piano tone modifier comprising a movable support rail, a plurality of series of shanks carried on said movable support rail and each having a striking hammer, and piano hammers adapted to strike said shanks when said movable support rail is moved to proper position, substantially as set forth and for the purposes specified.

[Claim 6 not printed in the Gazette.]

1,024,236. VALVE. AXEL B. WALLEM, Cynwyd, Pa., assignor to Harrison Safety Boiler Works, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Aug. 1, 1911. Serial No. 641,730. (Cl. 121—96.)



1. A valve comprising a casing having a passageway therethrough provided with a valve-seat, a valve-member movable toward and away from said seat to close and open said passageway, said valve-member being adapted to rest normally upon its seat and to be raised therefrom by fluid pressure thereon, a second movable valve-member mounted upon said casing, a connection from the second valve-member to the exterior of said casing so that the second valve-member will be acted upon by the pressure of the atmosphere exterior to the valve, and means permitting the second valve-member to operate the first valve-member, substantially as set forth.

2. A valve comprising a casing having a passageway therethrough provided with a plurality of valve-seats, a plurality of movable valve-members, springs acting on said valve-members to hold them yieldingly upon their seats, a plurality of auxiliary valve-members movable upon the casing, means for subjecting all of the auxiliary valve-members to atmospheric pressure, and means connecting each of the auxiliary valve-members to one of the first-named valve-members so that the latter will be operated thereby, substantially as set forth.

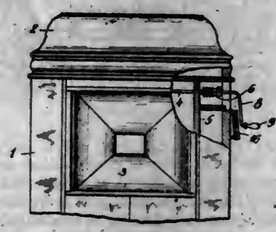
3. A valve comprising a casing having a passageway therethrough provided with a valve-seat, a valve-member movable toward and away from said seat to close and open said passageway, a spring for holding the member yieldingly upon its seat, a chamber formed in the casing and connected to atmosphere, an auxiliary valve-member in the chamber of substantially the same area as said valve-member, and a connection between said valve-members to permit the auxiliary valve-member to close the main valve-member under predetermined conditions, substantially as set forth.

4. A valve comprising a casing having a passageway therethrough provided with a plurality of valve-seats, a plurality of movable valve-members, springs acting on said valve-members to hold them yieldingly upon their seats, a pressure-plate, means operated from outside the casing for moving said plate to regulate the tension of all said springs simultaneously, a plurality of auxiliary valve-members movable upon the casing, means for subjecting all of the auxiliary valve-members to atmospheric pressure, and means connecting each of the auxiliary valve-members to one of the first-named valve-members so that the latter will be operated thereby, substantially as set forth.

5. A valve comprising a casing having a passageway therethrough provided with a plurality of valve-seats, a plurality of movable valve-members, springs acting on said valve-members to hold them yieldingly upon their seats, a pressure-plate, means operated from outside the casing for moving said plate to regulate the tension of all said springs simultaneously, means operated by movement of said plate for raising all the valve-members from their seats, a dash-pot connected to each valve-member, a plurality of auxiliary valve-members movable upon the casing, means for subjecting all of the auxiliary valve-members to atmospheric pressure, and means connecting each of the auxiliary valve-members to one of the first-named valve-members so that the latter will be operated thereby, substantially as set forth.

[Claims 6 to 9 not printed in the Gazette.]

1,024,237. MOTOR-WINDING MECHANISM. ALEXANDER H. WELKER, Berlin, Ontario, Canada. Filed May 5, 1911. Serial No. 625,144. (Cl. 185—39.)



1. In a talking-machine, the combination of a casing having a compartment therein, a door closing said compartment, a winding-shaft projecting into said compartment, a winding-crank applied to said shaft, and means permitting movement of said crank to an inoperative position within said casing and permitting closure of said door or to an operative position in which it extends beyond said casing, substantially as set forth.

2. In a talking-machine, the combination of a casing having a compartment therein, a door closing said compartment, a winding-shaft whose end projects into said compartment, a winding-crank pivotally connected to said end of the shaft and movable relatively to the shaft to inoperative position in which it lies within the casing and permits closure of said door or to an operative position in which it extends beyond said casing, and means for securing the crank against movement relatively to the shaft

when the crank is in operative position, substantially as set forth.

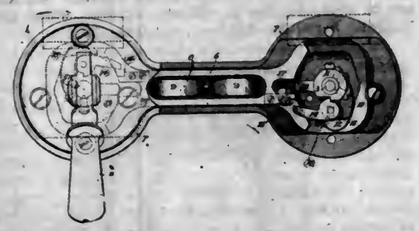
3. In a talking-machine, the combination with a casing having a compartment therein, a door closing said compartment, a winding-shaft whose end projects into said compartment, a winding-crank pivotally connected to said end of the shaft and movable relatively thereto to inoperative position within the casing and permitting closure of said door or to operative position in which it extends beyond the casing, said crank when in operative position extending from said shaft in a radial direction beyond the wall of said compartment, and means for securing the crank against movement relatively to the shaft when the crank is in operative position, substantialy as set forth.

4. In a talking-machine, the combination of a casing having a compartment therein, a door closing said compartment, a winding-shaft whose end projects into said compartment, and a crank connected to said end of the shaft and movable relatively thereto in the direction of the length of the shaft and about an axis transverse to said length, the movement of the crank about said axis carrying the crank to inoperative position within the casing and permitting closure of said door or to operative position projecting through said opening and beyond the casing, and the movement of the crank in the direction of the length of the shaft coupling the crank to or uncoupling it from the shaft, substantially as set forth.

5. In a talking-machine, the combination of the winding-shaft, the crank, the walls on the shaft between which the handle is pivotally mounted by a pin-and-slot connection, so that the crank may move relatively to the winding-shaft in the direction of the length of the shaft in addition to moving about its pivotal connection to the winding shaft, the pin on the crank coacting with notches in said walls to prevent turning of the crank relatively to the winding-shaft, and the spring to hold said pin yieldingly in connection with said notches, substantially as set forth.

[Claim 6 not printed in the Gazette.]

1,024,238. INTERLOCKING DEVICE FOR REMOTE-CONTROL SWITCHES. CARL WILER, Chicago, Ill., assignor, by mesne assignments, to General Electric Company, a Corporation of New York. Filed Oct. 19, 1908. Serial No. 458,384. (Cl. 175—282.)



1. The combination with a plurality of switches each having two operative positions and an inoperative position between the operative positions, of a movable locking member coöperating with said switches, means whereby said member is moved to locking and unlocking positions respectively with reference to one switch when the other switch is moved to either operative position but is unmoved when the switch is moved to the inoperative position.

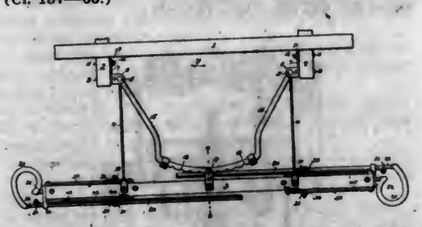
2. In a rotary switch, the combination with the shank thereof, of a collar fixed to said shank, a slidable plate mounted in an operative relation to said collar, a dog carried by said collar and means provided for said plate adapted to coöperate with said dog, whereby the movement of said switch to a closed position will operate said plate in one direction and the subsequent movement of said switch to the open position will return the plate to its initial position; and a second switch mounted in position to be locked or unlocked in its off position by the one of the other positions, respectively, of said plate.

3. In a rotary switch, the combination with the shank thereof, of a collar fixed to said shank, a spring-pressed dog carried by said collar, a slidable plate mounted in position to be engaged and operated by said dog upon the rotation of said switch to the closed position, said plate being provided with a cam surface coöperating with said collar to return said plate to its normal position upon the rotation of said switch to the open position, and a second switch mounted in position to be locked or unlocked in its off position by the forward or backward movement, respectively, of said plate.

4. In an associated group of rotary switches, the combination with the operating shanks of said switches, of a collar carried by each shank, a dog pivotally mounted upon the collar, a locking lug projecting radially from the collar, and a slidable plate interconnecting said switches, said plate being provided at each switch with a loop inclosing the shank thereof, said loops being each provided with a recess in line with said shanks, each of said recesses being adapted to receive, in the off position of a switch, the locking lug of the corresponding collar, and each of said loops being provided with a surface adapted to be engaged by the dog, upon the closure of a switch, to move the plate into locking engagement with the locking lugs of the remaining switches, and also with a cam surface adapted to be engaged by said collar, upon the subsequent movement of the operated switch to the open position, to release said plate from engagement with said locking lugs.

5. The combination with a plurality of switches, of an interlocking member movable between said switches, an operating dog movable as each switch is actuated to bring the interlocking member into and out of engagement with another switch, and a locking dog movable with each switch into a position to be engaged by and disengaged from the interlocking member.

1,024,239. PLANT-SPRAYING MACHINE. LELAND WILLIS, Grenloch, N. J., assignor to Bateman Manufacturing Company, Grenloch, N. J., a Corporation of New Jersey. Filed Sept. 14, 1909. Serial No. 517,610. (Cl. 137—63.)



1. The combination, in a plant spraying machine, of oppositely disposed spray pipes disposed at a right angle to the line of draft of the machine and each having a plurality of laterally separated spraying nozzles, means for sliding said spray pipes from and toward one another, means for laterally moving the entire group of nozzles while still retaining the spray pipes at a right angle to the line of draft of the machine, and means for locking said last mentioned means in different positions of lateral adjustment.

2. The combination, in a plant spraying machine, of oppositely disposed spray pipes disposed at a right angle to the line of draft of the machine and each carrying a plurality of laterally spaced spraying nozzles, with means for sliding said spray pipes from and toward each other, vertically adjustable means for laterally moving the entire group of nozzles as a unit while still retaining the spray pipes at a right angle to the line of draft of the machine, and means for locking said last mentioned means in different positions of lateral adjustment.

3. The combination, in a plant spraying machine, of a spray pipe having a spraying nozzle thereon, an outer spraying nozzle, means for laterally adjusting said spray pipe, and means whereby said lateral adjustment of the spray pipe is caused to effect lateral adjustment of the outer spraying nozzle independently of the spray pipe.

4. The combination, in a plant spraying machine, of a spray pipe having a plurality of spraying nozzles, laterally separated from one another, an outer spraying nozzle, means for laterally adjusting said spray pipe, and means whereby said lateral adjustment of the spray pipe is caused to effect lateral adjustment of the outer spraying nozzle independently of the spray pipe.

5. The combination, in a plant spraying machine, of a rigid, continuous spray pipe having a plurality of spraying nozzles laterally separated from one another, an outer spraying nozzle independent of the spray pipe, and means for effecting simultaneous lateral movement of said spray pipe and said outer nozzle, the latter to a greater extent than the spray pipe.

[Claims 6 to 17 not printed in the Gazette.]

1,024,240. CULINARY IMPLEMENT. WILLIAM THOMAS WOOD, Nashville, Tenn. Filed Jan. 5, 1912. Serial No. 669,619. (Cl. 146—7.)



1. A culinary implement of the character and for the purpose stated consisting of a pair of attaching ears, a rib connecting the ears and having teeth and an open portion forming a cutter for bunching and removing the kernels after the action of the teeth.

2. A culinary implement, having attaching means, teeth arranged between and connecting said attaching means for cutting the grains of corn and a member for bunching and drawing the kernels from the grains of corn.

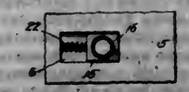
3. A culinary implement composed of a single casting having a pair of attaching ears, a transverse connecting rib having teeth, and an open cutting portion; the teeth cutting the grain of corn and the open cutter removing and discharging the kernels.

4. A culinary implement having a curved portion to fit the ear of corn and formed with teeth to cut the grains and a V-shaped terminating cutter to remove and discharge the kernels after the action of the teeth.

5. A culinary implement having a pair of attaching ears, a connecting rib formed with teeth and curved to conform to the ear of corn and an angular open cutter for bunching and discharging the kernels after the action of the teeth.

[Claims 6 to 8 not printed in the Gazette.]

1,024,241. CRANKING DEVICE FOR INTERNAL-COMBUSTION ENGINES. MASON G. WORTH, New York, N. Y. Filed Feb. 23, 1911. Serial No. 610,156. (Cl. 123—185.)

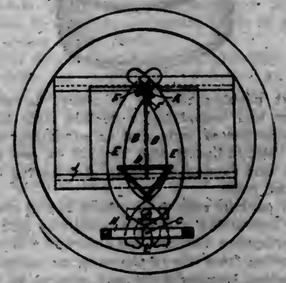


1. In a cranking device for internal combustion engines, the combination with an engine shaft having a clutch face at its end, of a spring pressed crank having a clutch face co-acting with the clutch face of said engine shaft, a projection carried by said crank shaft, a sleeve revolubly mounted upon said engine shaft having teeth at one end co-acting with the clutch face of the engine shaft and provided with a slot, a spring pressed block mounted in said slot, a toothed stationary member, and a pawl carried by said block co-acting with the teeth of the stationary member for locking said sleeve upon the back firing of said engine whereby said sleeve will be forced outwardly into engagement with said projection to disengage said clutch faces.

2. In a cranking device for internal combustion engines, the combination with a supporting frame, of a casing provided with a neck secured in said supporting frame, said casing being provided with internal teeth, a sleeve mounted in said casing provided with a dog for engaging said teeth, said sleeve being provided with teeth at one end, a shaft extending through said sleeve provided with co-acting teeth, a spring for normally holding said teeth in engagement, said shaft being provided with a clutch face, and a spring pressed shaft having a clutch face co-acting with the clutch face of said engine shaft for rotating said shaft in one direction, said clutch faces being disconnected by said sleeve when said shaft is rotated in a reverse direction.

3. In a cranking device, the combination with a support, of a cylindrical casing having a neck portion secured in said support, said casing being provided with internal teeth, a sleeve mounted in said casing provided with an elongated opening, a spring actuated block mounted in said opening, a spring actuated dog carried by said block co-acting with the teeth of said casing, an engine shaft extending into said sleeve provided with a clutch face at its end, said sleeve having teeth at one end, co-acting teeth carried by said engine shaft, a crank shaft having a clutch face adapted to engage the clutch face of said engine shaft, a spring surrounding said crank shaft for normally holding said clutch faces out of engagement, and a sleeve carried by said crank shaft adapted to be engaged by said first mentioned sleeve.

1,024,242. ADVERTISING-MACHINE. HERBERT ATHERTON, Wimbledon Park, England. Filed Apr. 19, 1911. Serial No. 622,142. (Cl. 88—1.)



1. In a device of the character described, the combination with the transparently covered aperture adapted to contain an advertisement or display, the longitudinally sliding shutters adapted to cover and reveal said aperture, the spring actuated lever arms pivoted upon said shutters, and means for opening and closing said lever arms to move said shutters to cover or reveal said aperture, said means comprising a conical headed button mounted in an opening between the lower ends of said lever arms, the shank of said button being adapted to receive the actuating pressure and the conical head serving to enter the aperture between the said lever arms and force the same apart.

2. A device for displaying advertisements or displays, comprising a transparently covered aperture, a pair of shutters slidable in grooves or tracks to cover said aperture, a pair of scissor-shaped lever arms having slotted upper ends pivoted to said shutters and lower ends pivoted upon the device, a slotted rack upon said device, a conical headed actuating button mounted in said slotted rack and adapted to enter the opening between the lower ends of said lever arms and force the same apart, and means

for closing said shutters upon the discontinuation of the actuating pressure upon the button.

3. A device of the character described, comprising a transparently covered aperture, a pair of shutters slidable in grooves or tracks to cover said aperture, a pair of scissor-shaped lever arms having slotted upper ends pivoted to said shutters and lower ends pivoted upon the device, a slotted rack upon said device, a conical headed actuating button mounted in said slotted rack and adapted to enter the opening between the lower ends of said lever arms and force same apart, and means for closing said shutters upon the discontinuation of the actuating pressure upon the button, said means consisting of a triangular series of springs secured upon the inner faces of the lever arms.

4. A machine for displaying advertisements or the like, consisting of the transparently covered display opening, the longitudinally sliding shutters mounted in grooves in said machine, and adapted to cover and reveal said aperture, the scissor-shaped actuating levers pivoted at their lower ends to the machine and having their upper slotted ends secured to said shutters, the slotted rack secured upon said machine the actuating button mounted in said slotted rack secured to said machine and having a conical head adapted to enter an opening formed between the lower ends of said lever arms to force same apart, and means for closing said lever arms when the pressure upon said button is discontinued.

1,024,243. HAT PACKING-RING. PETER BERG, Enderlin, N. D. Filed Dec. 27, 1910. Serial No. 599,450. (Cl. 206—9.)



1. A hat packing ring to be placed in and removed from a hat and embodying a flexible strip having overlapping disconnected ends, and an expanding spring strip extending longitudinally and secured to one side of the body strip said expanding spring also having overlapping disconnected ends.

2. A hat packing ring to be placed in and removed from a hat and embodying a flexible, relatively stiff body strip having overlapping disconnected ends and a size indicating scale extending from one of the ends, an expanding spring strip extending longitudinally and secured to one side of the body strip, said expanding spring strip being disposed medially on one side of the body strip, and a cover strip, covering the expanding spring strip and secured to the body strip said expanding spring also having overlapping disconnected ends.

1,024,244. ATTACHMENT FOR DISPLAY-FIGURES. WILLIAM H. BEYETTE, Houston, Tex. Filed Aug. 26, 1911. Serial No. 646,115. (Cl. 211—13.)

1. An attachment for display figures comprising a yoke to be mounted upon a figure, and a pair of arm sections connected to oppositely disposed portions of said yoke and supported thereby.

2. An attachment for display figures comprising a yoke provided with a central opening for receiving the neck portion of a display figure, said yoke being further provided with arm sections connected with the opposite edges of said yoke and supported thereby.

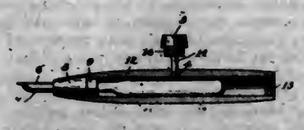
3. An attachment for display figures comprising a yoke having suitable conformity to fit upon a figure representing the human body, said yoke being provided with a centrally disposed opening for encircling the neck portion of said figure, a pair of arm sections connected with opposite sides of said yoke and adapted to serve as arms for said figure, a sleeve mounted upon said yoke and encircling one of said arm sections, and filling members mounted within said sleeve.



4. An attachment for display figures comprising a yoke of suitable conformity to fit upon the upper portion of a figure representing the human body, said yoke being provided with a central opening for encircling the neck of said figure, a sleeve section connected with said yoke, and a plurality of cloth webs mounted within said sleeve and of different lengths for the purpose of filling out said sleeve.

5. An attachment for display figures comprising a yoke of suitable form to fit upon the upper portion of a figure representing the human body, said yoke being provided with an opening for encircling the neck of said figure, a sleeve connected with said yoke and adapted to encircle an arm of said figure, and a plurality of cloth webs mounted within said sleeve and of different lengths, the texture of said cloth webs being such as to enable them to fill out said sleeve.

1,024,245. FOUNTAIN-PEN. MARTIN O. BORBECK, Tracy, Minn. Filed May 15, 1911. Serial No. 627,129. (Cl. 120—46.)



A fountain pen consisting of a cylindrical barrel open at both ends and having a small opening in its side, and a collapsible ink reservoir contained in the barrel, and a presser-bar extending along one side of the barrel, with a tube shaped projection on its upper surface which extends upwardly into the opening in the side of the barrel in close proximity to the surface thereof, and having threads on the inside; and a presser-button which is attached to one of the open ends of the barrel by means of threads on its exterior engaging corresponding threads on the interior of said ends of the barrel, said presser-button having a pin or projection extending downwardly, which has threads on its end adapted to be attached to the presser-bar by means of said threads engaging the threads on the inside of the tube of the presser-bar.

1,024,246. WINDING AND MEASURING MACHINE. FRED MCLAUREN BROOKES, Fayetteville, Ark. Filed Mar. 21, 1911. Serial No. 615,925. (Cl. 73—9.)

1. In a winding and measuring machine, a pivoted cutting and splicing beam provided with means for holding the end of a fabric, a pivoted measuring device above the said beam, and means for drawing a fabric over the beam to operate the measuring device.

2. A winding and measuring machine, comprising a frame, an unwinding roller for carrying a roll of fabric material and journaled on the said frame, a winding up roller journaled on the said frame, manually-controlled means for turning the said winding up roller, a measuring, cutting and splicing beam pivoted on the said frame intermediate the said rollers, and having means whereby the end of a fabric may be held, and a measuring device opposite the measuring, cutting and splicing beam and having an actuating wheel operated by the fabric passing over said beam, said measuring device being mounted to swing on the said frame into and out of operative position relative to the said beam.



3. A winding and measuring machine, comprising a frame, an unwinding roller for carrying a roll of a fabric material and journaled on the said frame, adjustable collars on the said unwinding roller, a winding up roller having a sectional body, and trunnions journaled in the said frame, the sectional body being removably connected with the said trunnions, a beam pivoted on the said frame intermediate the said rollers, the said beam having a longitudinal groove and retaining means for holding one end of the fabric, and a measuring device having arms pivoted on the said frame for swinging the measuring device into and out of operative position relative to the said beam.

4. A machine of the class described, comprising a frame, an unwinding roller journaled on the said frame, a winding up roller journaled on the said frame, and a pivoted cutting and splicing beam mounted on the said frame intermediate the said rollers, the cutting and splicing beam having a groove in one side, retaining means on one edge for engagement by one end of a fabric to be spliced to another fabric.

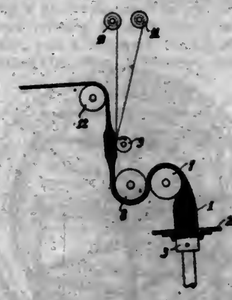
5. A machine of the class described, comprising a frame, two unwinding rollers for carrying different fabrics fixed bearings on the frame for one of the unwinding rollers, bearings hinged on the said frame for the other unwinding roller, a second set of bearings carried by the hinged bearings, a guide roller journaled on the frame, a beam pivoted on the said frame adjacent the said guide roller, and a winding up beam having a body and trunnions detachably connected with the said body, the said trunnions being journaled on the frame, and the said guide roller and the said beam being intermediate the said unwinding roller and the said winding up roller.

[Claims 6 to 11 not printed in the Gazette.]

1,024,247. LACE FABRIC. HERMANN BUSCHER, Langerfeld, near Barmen, Germany. Filed Feb. 17, 1911. Serial No. 609,216. (Cl. 28—25.)

1. A textile fabric consisting of longitudinal parallel threads and pairs of additional threads passing in zigzag arrangement and opposite directions about said longitudinal threads and each other, auxiliary longitudinal threads 4 and 6, one of which is arranged within the border of each set of threads aforesaid and in proximity to the inner longitudinal thread of that series and another auxiliary thread 5 extending in zigzag course from side to side of the space between the two longitudinal series first named and engaging alternately looped portions of auxiliary threads 4 and 6, which portions extend inward between the inner longitudinal thread on each side and that part of one of the said additional threads passing around the same substantially as shown.

2. A textile fabric consisting of longitudinal threads, additional threads arranged in pairs passing in reverse zigzag arrangement about said longitudinal threads at the borders of the fabric, auxiliary threads within the borders of the fabric and a zigzag thread which crosses from one border to the other alternately engaging said auxiliary threads and drawing them through the proximate parts of the nearer members of the zigzag additional threads first above mentioned.

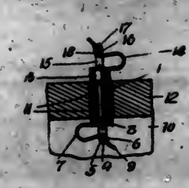


3. A textile fabric consisting of longitudinal threads, additional threads passing in reverse zigzag arrangement about said longitudinal threads at the borders of the fabric, auxiliary threads engaging said additional threads and a zigzag thread which crosses from one border to the other engaging alternately said auxiliary threads and drawing them through the proximate parts of the zigzag additional threads first above mentioned.

4. A fabric provided with closing threads comprising four closing interlocking elements, the latter consisting of longitudinal threads, additional threads passing in a zigzag line about them, auxiliary threads in the two borders and a zigzag thread which passes from border to border alternately engaging said auxiliary threads and drawing them through the proximate parts of said zigzag auxiliary threads as set forth.

5. A textile fabric consisting of a plurality of sets of an odd number of longitudinal threads, an auxiliary thread passing in longitudinal zigzag fashion around several of said longitudinal threads, including the central one thereof, another auxiliary thread passing in zigzag fashion around the remainder of said longitudinal threads and the central longitudinal thread of each set and interlocking through the loop of the other auxiliary thread at the point of intersection with the central longitudinal thread of each set, and threads connecting said sets of longitudinal threads.

1,024,248. COMBINATION BINDING-POST. PHILLIP H. CAPPER and LOUIS F. MCCREARY, Pittsburgh, Pa. Filed Aug. 9, 1911. Serial No. 643,173. (Cl. 173—259.)

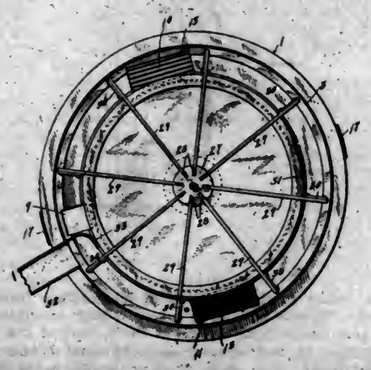


1. In a binding post, a bolt, a resilient clip formed integral with one end of said bolt and adapted to retain a wire in engagement with said bolt, a nut screwed upon the opposite end of said bolt, a stem carried by said nut, and a resilient clip formed integral with said nut and adapted to retain a wire in engagement with said stem.

2. In a combination binding post, a bolt, a head carried by one end of said bolt, a resilient clip formed integral with said head and adapted to retain a wire in engagement

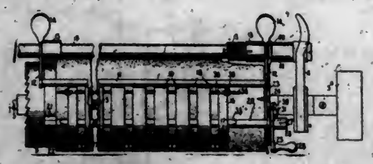
with said bolt, a nut screwed upon the opposite end of said bolt, a stem carried by said nut, and a resilient clip formed integral with said nut and adapted to retain a wire in engagement with said stem.

1,024,249. SIFTER AND SEPARATOR. JESSE CHILDS, Russellton, Pa., assignor of one-half to John McHarg, Harmarville, Pa. Filed Apr. 25, 1911. Serial No. 623,147. (Cl. 83—56.)



A machine for the purpose set forth, comprising a circular table having a pair of diametrically opposed openings and further having an opening equally spaced between the openings of said pair, a pair of vertically disposed circular members arranged one within the other upon said table and forming a trough communicating with said openings, a bearing positioned centrally of said inner member, a circular plate supported upon said bearing and said inner member, a shaft extending in said bearing, a hub keyed to the shaft and mounted upon said plate, radially disposed arms fixed at their inner ends to said hubs and having their outer ends projecting over said trough, a circular bearing ring mounted upon the perimeter of said plate and connected to the outer portions of said arm and moving the said hub, rectangular plates carried by the said arms and depending into said trough, a set of parallel space bars arranged near each of the openings of said pair of openings and each set constituting a screen, chutes communicating with each of said openings, and means for rotating said shaft, thereby shifting the plates through the trough.

1,024,250. TYPE-WRITING MACHINE. JACOB FELBEL, New York, N. Y., assignor, by mesne assignments, to Union Typewriter Company, Jersey City, N. J., a Corporation of New Jersey. Filed Jan. 26, 1911. Serial No. 604,809. (Cl. 197—136.)



1. In a typewriting machine, the combination of a platen, a clamp mounted thereon and comprising a plurality of spring tongues supported outside of the platen and extending from their support part way around the face of the platen, and a paper stop supported on the platen independently of said clamp and extending transversely of said tongues.

2. In a typewriting machine, the combination of a platen, a clamp mounted thereon and comprising a plurality of spring tongues movable independently of each other and of the platen, and a paper stop supported on the platen independently of said clamp.

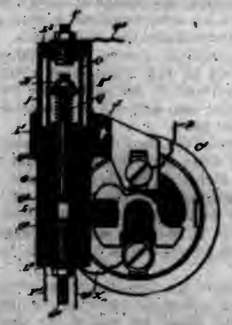
3. In a typewriting machine, the combination of a platen, a clamping device mounted thereon and pressing normally against the platen, a paper stop separate from said clamp, and means for moving the clamping device away from the platen independently of turning movements of the platen; the paper stop being constructed and arranged to come automatically into operative position when the clamp is moved away from the platen.

4. In a typewriting machine, the combination of a platen, a clamp, means for moving the clamp away from the platen independently of turning movements of the platen, and a stop or gaging device separate from said clamp but constructed and arranged to come automatically into operative position simultaneously with the moving of the clamp away from the platen.

5. In a typewriting machine, the combination of a platen, a clamp which normally presses against the platen, a paper stop or gage movable into and out of operative position, and a cam bar for moving the clamp to inoperative position independently of turning movements of the platen; the paper stop or gage being separate from the clamp but arranged to move into operative position automatically during the camming off of the clamp.

[Claims 6 to 17 not printed in the Gazette.]

1,024,251. SWITCH FOR PROGRESSIVE LIGHTING. GEORGE T. FIELDING, Jr., New York, N. Y. Filed Feb. 28, 1911. Serial No. 611,368. (Cl. 175—281.)



1. In a switch for progressive lighting, a cylindrical housing provided with a conducting head at one end and an insulating head at the opposite end, a tube disposed centrally of said housing, a coil wound around said central tube, a cylinder within said housing, a permanent core carried by said conducting head and arranged to extend within the central tube, a movable core having a coil spring at one end and being provided at the other end with a plunger, said plunger being disposed within said cylinder, and a spiral spring surrounding said movable core, one end of said spiral spring bearing on said plunger and the opposite end bearing on the end of the cylinder.

2. In a switch for progressive lighting, a cylindrical housing provided with a conducting head at one end and an insulating head at the opposite end, a tube disposed centrally of said housing, a coil wound around said central tube, a cylinder within said housing; a permanent core carried by said conducting head and arranged to extend within the central tube, means for permitting the adjustment of the position of the permanent core, a movable core having a coil spring at one end arranged to engage said permanent core and being provided at the other end with a plunger, said plunger being disposed within the cylinder, and means for normally holding said movable core away from said permanent core.

3. In a switch for progressive lighting, a cylindrical housing provided with a conducting head at one end and an insulating head at the opposite end, a tube disposed centrally of said housing, a coil wound around said central tube, a cylinder within said housing, a permanent core carried by said conducting head and arranged to extend within the central tube, a movable core having a resilient conductor at one end and being provided at the other end with a plunger, said plunger being disposed within said cylinder, means arranged to engage the plunger for normally keeping said movable core away from said permanent core, and means permitting the adjustment of the position of said permanent core with respect to the movable core.

1,024,252. ADVERTISING DEVICE. JOSEPH E. FIKO and MAXIMILIAN KILLIAN, Pittsburgh, Pa. Filed Mar. 30, 1911. Serial No. 617,999. (Cl. 101—62.)



1. An advertising machine comprising a portable body, a tiltable frame pivoted centrally thereof upon said body, a printing roll revolubly supported at each end to said frame, means supported upon said frame and driven from a movable part of said body and operatively connected with said rolls for driving them in unison, and means for tilting said frame during the travel of said body for shifting one of said rolls into printing position.

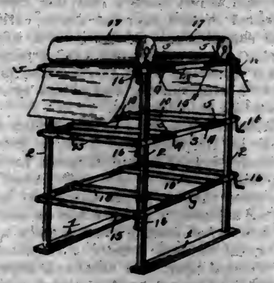
2. An advertising machine comprising a portable body, a tiltable frame pivoted centrally thereof upon said body, a printing roll revolubly supported at each end to said frame, means supported at each side of said frame and driven from a movable part of said body and operatively connected with said rolls for driving them in unison, and supports carried by said frame, sets of inking rolls carried by said supports, each set operatively arranged with respect to a printing roll, and means for tilting said frame thereby shifting one of said printing rolls into operative position to print.

3. An advertising machine comprising a portable body, a tiltable frame pivoted centrally upon said body, a shaft journaled at each end to said frame, a printing roll carried by each of said shafts, an operating shaft carried by the frame and provided with a crank at each end, means operatively connected with said cranks and the shafts of the printing rolls for driving these latter in unison when the operating shaft is actuated, means driven from a movable part of said body for actuating said operating shaft, and means for tilting said frame thereby shifting one of said printing rolls into printing position.

4. An advertising machine comprising a portable body, a tiltable frame pivoted centrally upon said body, a shaft journaled at each end to said frame, a printing roll carried by each of said shafts, an operating shaft carried by the frame and provided with a crank at each end, means operatively connected with said cranks and the shafts of the printing rolls for driving these latter in unison when the operating shaft is actuated, means driven from a movable part of said body for actuating said operating shaft, means for tilting said frame thereby shifting one of said printing rolls into printing position, a set of inking rolls associated with each of said printing rolls, and supporting means for the inking rolls carried by said frame.

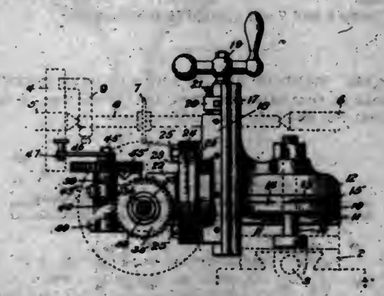
1,024,253. DISPLAY-RACK. RAYMOND B. FORD, Cuba, N. Y., assignor to Lillie F. Bates, Cuba, N. Y. Filed Apr. 6, 1911. Serial No. 619,236. (Cl. 211—13.)

1. In a display rack the combination with a base of a series of standards rising therefrom, a series of horizontal bars supported in pairs on said standards, all of said bars having longitudinally disposed slots adjacent to the ends thereof, slides mounted on the horizontal bars at the end portions thereof, each of said slides comprising a vertical portion disposed over one side of said slot and having an opening for the reception of the pintle of a roller and an additional opening for the passage of a bolt, a horizontal portion embracing the top portion of the bar, and a downwardly extending flange embracing the opposite side of the bar from that having the opening, a roller having a pintle mounted in one of said openings, a securing bolt passing through the other opening and through the slot, and a nut upon the opposite end of said bolt for clamping the parts in adjusted position.



2. In a display rack the combination with a frame, including a pair of parallel bars having longitudinal slots adjacent to the ends thereof, angular slides mounted at the slotted end portions of the bars, each slide having a depending flange, said slides each also having a plurality of openings therein, a roller having a pintle at each end adapted to extend into the aliining opening of the adjacent slide, and means extending through a second opening of each slide for holding said slide in adjusted position on the bar.

1,024,254. LATHE ATTACHMENT. ROBERT E. GARRETT, Nashville, Tenn. Filed May 16, 1911. Serial No. 627,591. (Cl. 90—11.)



1. In a lathe attachment, the combination with a main frame, of a slide rest carried thereby, means for limiting the upward movement of the slide rest, a swivel head adjustably secured upon said frame, a rotatable spindle on the head and provided with a central opening, a rotatable mandrel having a shank removably secured in said opening, means carried by said mandrel for supporting a blank, a worm wheel carried by one end of the spindle, a shaft vertically disposed at right angles to the spindle and carrying a worm at its lower end meshing with the said worm wheel on the spindle, a removably mounted gear wheel carried by the upper end of said shaft, an adjustable block slidably mounted on the swivel head, a pinion carried thereby meshing with the removably mounted gear wheel of the vertical shaft, means for adjusting and retaining

said block in position, a stub shaft secured to the said pinion and in coaxial alinement with the vertical shaft, a crank carried thereby, and means for retaining said crank in position after it has been given a revolution.

2. In a lathe attachment, a base provided with a main frame, a slide rest mounted thereon, means for controlling the forward movement of said slide rest, a stop carried by the main frame immediately above the slide rest, and a stop screw for adjustably limiting the upward movement of the slide rest to provide for a uniform depth of cut.

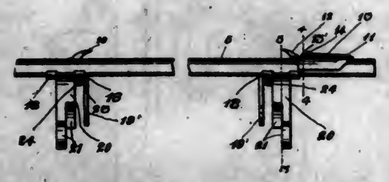
3. In a lathe attachment, a base provided with a slide rest, a flange on the slide rest, a swivel head having a graduated flange secured to said flange on the slide rest, a rotatable spindle provided with a central opening mounted in said swivel head, a rotatable mandrel having a shank secured in said opening, means carried by said mandrel for supporting a blank, a worm wheel on said spindle, a shaft upon said swivel head arranged at right angles to said spindle, a worm thereon meshing with said worm wheel on said spindle, and means carried by said shaft for rotating said mandrel.

4. In a lathe attachment, a base provided with a slide rest, a flange on the slide rest, a swivel head having a graduated flange secured to said flange on the slide rest, a rotatable spindle mounted in said swivel head, a rotatable mandrel mounted therein, means carried by said mandrel for supporting a blank, a worm wheel on said spindle, a shaft upon said swivel head, a worm thereon meshing with said worm wheel on said spindle, a removably mounted gear wheel secured upon said shaft, an adjustable block mounted upon said swivel head, a pinion carried thereby meshing with said removable gear wheel, and means for adjusting and retaining said block with reference to said swivel head and gears.

5. A lathe attachment, comprising a base, a swivel head adjustably secured in said base for movement transversely of its axis, a mandrel adapted to support a blank and mounted to rotate in said head, a gear upon said mandrel, a worm shaft meshing with said gear, a gear secured to said worm shaft, an adjustable block mounted upon the swivel head, a crank shaft carried by said block and having a pinion meshing with said gear, and means for retaining said crank shaft in fixed position, said means comprising a depending lug carried by the crank and an upstanding lug formed on the adjustable block and having a depression adapted to be engaged by the depending lug.

[Claims 6 and 7 not printed in the Gazette.]

1,024,255. WINDOW SHADE AND CURTAIN FIXTURE. JESSE D. GILLENWATER, Peru, Ind. Filed Dec. 4, 1911. Serial No. 663,725. (Cl. 156—23.)



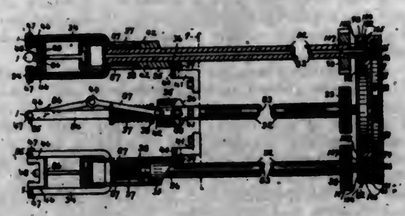
1. In combination, a body bar of channel form in cross section having spaced spurs formed on one end and a plurality of openings in its intermediate portion at its other end, an attaching member of U-shaped form in cross section slidable upon said body bar provided with spurs upon one end, a resilient retaining element carried by said attaching member and adapted to be projected through any one of the openings in said body bar to retain said member in its adjusted position upon said bar, and supporting brackets longitudinally adjustable on said bar.

2. In combination, a body bar of channel form in cross section having spaced spurs formed on one of its ends and a longitudinal series of openings in its intermediate portion at its other end, an adjustable attaching member longitudinally movable upon said body bar provided with spaced spurs on one end and a hook on its other end to be disposed through any one of said openings in the body bar, a spring wire fixed at one end to said member and having an angularly disposed portion to be projected through one of the openings in the body bar and hold said member in its adjusted position, and supporting brackets longitudinally adjustable on the body bar.

3. The combination with a body bar of channel form in cross section and means for attaching the same to a window frame, said body bar having oppositely extending flanges on its longitudinal edges, one of said flanges being provided with spaced notches, of combined roller and pole supporting brackets longitudinally adjustable upon said bar and having means engaging over the flanges thereon to retain the brackets upon the bar, and a resilient retaining member carried by said brackets to engage in any one of the notches in the flange of the body bar and hold the brackets in their adjusted positions.

4. The combination with a body bar of channel form in cross section having its intermediate portion disposed against a window frame and means for attaching said bar to the frame, the free longitudinal edges of said bar being flanged in relatively opposite directions, the flange on the lower edge of said bar being provided with a plurality of spaced notches, of supporting brackets having portions engaging said flanges to retain the brackets on the bar for sliding movement, said brackets also each having a recess to register with the notches in the flange of said body bar, and a spring wire fixed at one end to the bracket and having a longitudinally extending portion provided with a spring coil, the free end of said wire having an eye formed thereon to be received in the notches of the body bar to retain the supporting bracket in its adjusted position thereon.

1,024,256. WORK-HOLDER. AUGUSTINE E. GREENE, Hartford, Conn. Original application filed Feb. 20, 1911, Serial No. 609,562. Divided and this application filed July 20, 1911. Serial No. 639,657. (Cl. 51—4.)



1. A work-holder, for spherical objects, comprising rotary object-holding means, and means to impart a conical rotation to the axis of rotation of said first-mentioned means.

2. A work-holder, for spherical objects, comprising rotary object-holding means, and means to impart a changing conical rotation to the axis of rotation of said first-mentioned means.

3. A work-holder, for spherical objects, comprising object-holding means, means to rotate said object-holding means on a principal or main axis, and means to impart an oscillatory rotation around said principal or main axis to said object-holding means.

4. In a machine for acting on spherical objects, an intermittently rotating member, a chuck carried by said member, and means to energize said chuck automatically at predetermined intervals.

5. In a machine for acting on spherical objects, an intermittently rotating member, a chuck carried by said member, means to energize said chuck automatically at predetermined intervals, and means to impart a gyratory motion to said chuck.

1,024,257. ELECTRODE. JOHANNES HIRSCH, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Apr. 27, 1905. Serial No. 257,580. (Cl. 176—133.)

1. A composite arc-light electrode containing carbid of boron.

2. A composite arc-light electrode containing a preponderating amount of carbid of boron.

3. A composite arc-light electrode composed of carbon, carbid of titanium and carbid of boron.

4. A composite arc-light electrode containing carbon and carbid of boron.

5. A composite arc-light electrode containing carbid of titanium and carbid of boron.

1,024,258. ENVELOP. JOHN SOLOMON HEELEY, Gallatin, Pa. Filed Jan. 24, 1911. Serial No. 604,414. (Cl. 229—68.)



An envelop comprising a body, end flaps carried thereby and adapted to be folded upon said body, a bottom flap carried by the lower edge of said body and adapted to be adhesively connected to said end flaps, said bottom flap having longitudinal slits providing a strap, a lining for said envelop comprising a body, end flaps and a bottom flap adapted to be adhesively connected to said end flaps to provide an inclosure for matter, said lining further including a top flap having a tongue provided with perforations and gummed and capable of being passed under said strap and adhesively secured to said bottom flap, and a sealing flap carried by the envelop body and provided with perforations and adhesive material whereby said sealing flap can be adhesively connected to the top flap and tongue of said lining and to the end flaps and bottom flap of the first envelop body, substantially as, and for the purpose herein described.

1,024,259. CAPSULE. WILLIAM HENDERSON and ALEXANDER M. HENDERSON, Aurora, Ill. Filed Nov. 2, 1910. Serial No. 590,401. (Cl. 167—2.)



1. A soluble capsule comprising a hollow body that has an opening with an inwardly turned flange.

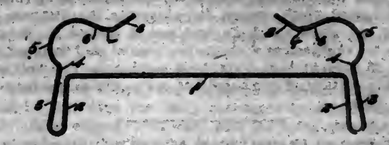
2. A soluble capsule comprising a hollow body with an exterior that is rounded and which is elongated and has at one end an opening with an inwardly turned flange.

3. A soluble capsule comprising a hollow body with an exterior that is rounded and which is elongated, and has at one end an opening with an inwardly turned flange, and a tapering extension at the other end.

4. A soluble capsule comprising a hollow body with an exterior that is rounded and which is elongated and has at one end an opening with an inwardly turned flange, a removable cap for said end, and a tapering extension at the other end.

1,024,260. SPACING AND SUPPORTING DEVICE FOR REINFORCING-BARS. HARVEY H. HICKMAN, St. Louis, Mo., assignor to Corrugated Bar Company, St. Louis, Mo., a Corporation of Missouri. Filed Oct. 12, 1911. Serial No. 654,323. (Cl. 72—122.)

1. A spacing and supporting device for reinforcing bars comprising a horizontal connecting member having supporting legs, upwardly extending shoulders, and hook portions overhanging the body portion adjacent to the respective shoulders to hold the reinforcing bars.



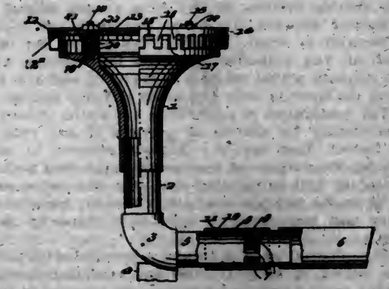
2. A supporting and spacing device for reinforced concrete construction comprising a straight body portion of wire whose opposite end portions are looped downward to form supporting legs, then extended upward to form shoulders, and then bent to form hooks to coöperate with the respective shoulders and body portion adjacent thereto to hold reinforcing bars.

3. A spacing device for reinforcing bars of concrete structures comprising a straight body portion having extensions forming shoulders adjacent to the opposite ends of said body portion, and hooked to coöperate with the respective shoulders and the adjacent body portion, said hook portions being curved outwardly from said shoulder portions, then inwardly, and then extending in a straight line toward the body portion at an inclination.

4. A supporting and spacing device for reinforcing bars of a concrete structure comprising a metal strip of high elastic limit, the end portions of said strip being bent to form an upwardly projecting shoulder adjacent to each end of the device, then bent on a curve outward from the ends and then inwardly, then toward the body and then away from the body.

5. A spacing and supporting device for reinforcing bars of concrete structures comprising a horizontal strip of metal bent downward and rebent at its ends to form supporting legs and extended upward and hooked above the body portion to receive the bars.

1,024,261. GAS-BURNER. GEORGE H. HUSTON, Cincinnati, Ohio. Filed Dec. 14, 1910. Serial No. 597,386. (Cl. 158—117.)

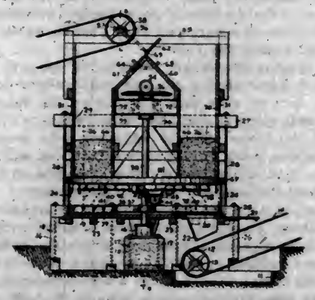


1. In a gas burner, a body formed with seats on its interior, screws extending up from the seats, washers received over the screws and engaging on the seats, a burner cap composed of a top plate and a series of depending rectangular teeth which engage over the burner body, said top plate being formed with openings and with collars which surround the openings and depend from the top plate of the burner cap, said collars seating on the uppermost of said washers, and nuts engaging the screws and the top face of the top plate of the burner cap.

2. In a gas burner, a body having horizontal seats on its interior, screws extending up from the seats, washers received over the screws and engaging on the seats, a burner cap having openings to receive the screws and being supported from said washers, a slotted rim depending from the cap and engaging over the body, and lugs carried by the cap for engagement with the body to restrict the downward movement thereof.

3. In a gas burner, a body having an upwardly extending flange, a top plate having a depending flange engaging over said flange of the body, said plate flange being formed with spaced teeth, means for adjusting the distance between the plate and body, and means carried by the top plate for engagement with the top edge of said flange of the body to prevent said plate from seating on the body and thereby cutting off the supply of gas to the spaces between said teeth.

1,024,262. CLAY-CLEANING MACHINE. BERNARD JACQUART, South River, N. J., and JOHN V. V. BOORAEM, New York, N. Y. Filed Dec. 22, 1910. Serial No. 598,676. (Cl. 83—6.)



1. The combination of a turntable provided with projecting portions, a supporting plate resting upon said projecting portions, a knife plate detachably secured to said supporting plate, means for adjusting said supporting plate and said knife plate relatively to said projecting portions, a knife carried by said knife plate, a trap member carried by said turntable and disposed adjacent to said knife for the purpose of supporting a pebble lodging against said knife, and means controllable by the rotation of said turntable for shifting the position of said trap member in order to dislodge said pebble.

2. The combination of a turntable, a knife carried thereby for shaving portions of clay from a mass thereof, a trap member disposed adjacent to said knife and co-acting therewith to remove a pebble from against the edge thereof, an arm connected with said trap member, and means disposed within the path of travel of said arm for tripping the latter in order to actuate said trap member.

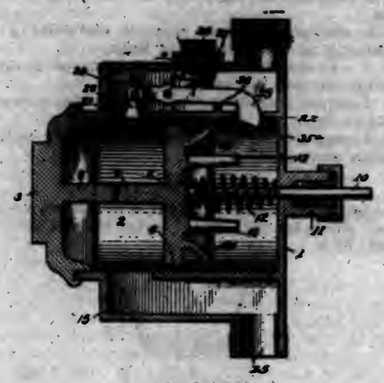
3. The combination of a turntable, a plurality of knives carried thereby for shaving off portions of clay from a mass thereof, trap members disposed adjacent to said knives for the purpose of temporarily supporting pebbles separated by said knives from said clay, and means controllable by the rotation of said turntable for periodically tripping said trap members in order to discharge said pebbles.

4. The combination of a turntable provided with slots, knives carried by said turntable and extending through said slots for the purpose of shaving off portions of clay from a mass thereof, as said turntable is revolved, trap members disposed adjacent to said slots for the purpose of temporarily supporting pebbles separated from said clay by said knives, arms connected with said trap members, a link connecting one of said arms with another in order that a plurality of said trap members may be actuated at the same time, and means controllable by rotation of said turntable for periodically actuating said trap members.

5. The combination of a turntable, knives carried thereby for shaving portions of clay from a mass thereof, trap members disposed adjacent to said knives for temporarily supporting pebbles separated by said knives from said clay, means controllable by the rotation of said turntable for periodically tripping said trap members in order to discharge said pebbles, and mechanism controllable at will for temporarily throwing said means out of action.

[Claims 6 and 7 not printed in the Gazette.]

1,024,263. AUTOMATIC VALVE FOR WATER-HEATERS. RICHARD R. JAMES, Brooklyn, N. Y. Filed Dec. 27, 1911. Serial No. 668,170. (Cl. 126—351.)



1. In a gas valve operating device the combination of a casing having a piston chamber, a piston operating in said chamber, water inlet and outlet passages exterior to said chamber and both communicating with said chamber upon the same side of said piston, said inlet passage being in substantially free communication with said chamber, an outlet valve normally closing the communication from said chamber to said outlet passage, and means actuated by said piston for opening said outlet valve when the gas valve has been opened by said piston.

2. In a gas valve operating device the combination of a casing having a piston chamber, a piston operating in said chamber, a water inlet passage freely communicating with one end of said chamber, a water outlet passage exterior to said chamber communicating with both ends of said chamber, an outlet valve normally closing the communication from the inlet end of said chamber to said outlet passage, and means actuated by said piston for opening said outlet valve when the gas valve has been operated by said piston.

3. The combination of a casing having a piston chamber, a piston operating in said chamber, a water inlet passage communicating with one end of said chamber upon one side of said piston, a water outlet passage exterior to said chamber communicating with both ends of said chamber upon opposite sides of said piston, an outlet valve normally closing the communication from the inlet end of said chamber to said outlet passage, and a valve operating device mounted in said outlet passage and projecting into said chamber in position to be actuated by said piston.

4. In a gas valve operating device the combination of a casing having a piston chamber, a water inlet passage communicating with one end of said chamber, and a water outlet passage communicating with both ends of said chamber, a piston operating in said chamber, an outlet valve normally closing the communication from the inlet end of said chamber to said outlet passage, a pivotally mounted valve supporting lever, and means connected with said piston for operating said lever to open the valve when the gas valve has been operated by said piston.

5. The combination of a casing having a piston chamber, a water inlet passage communicating with one end of said chamber, and a water outlet passage communicating with both ends of said chamber, with a piston operating in said chamber, an outlet valve normally closing the communication from the inlet end of said chamber to said outlet passage, and a valve supporting lever mounted in said outlet passage and projecting into said chamber in position to be operated by said piston.

[Claims 6 to 9 not printed in the Gazette.]

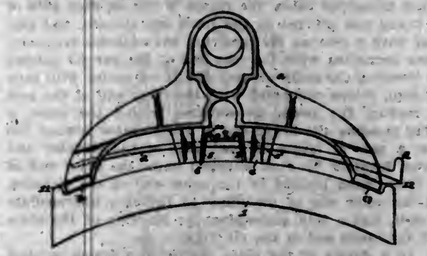
1,024,264. METHOD OF MAKING REFLECTORS. LOUIS KAUFFELD, Star City, W. Va. Filed Apr. 15, 1911. Serial No. 621,270. (Cl. 49—80.)



1. The method of making a reflector, which consists in forming, by blowing and manipulation of a bulb of molten glass, a double-walled hollow member of concavo-convex form, producing the true form of the reflector by filling out the cavities of a mold with the bulb of glass so as to form a concave outer face on one wall and a convex outer face on the other wall, forming a projection extending outwardly from said concave face, substantially at the center thereof, and subsequently removing said projection so as to form an opening through said wall having said concave outer face.

2. The method of making a reflector, which consists in forming, by blowing and manipulation of a bulb of molten glass, a double-walled hollow member of concavo-convex form, producing the true form of the reflector by filling out the cavities of a mold with the bulb of glass so as to form a concave outer face on one wall and a convex onter face on the other wall, forming a projection extending outwardly from said concave face, substantially at the center thereof, also forming a projection extending outwardly from the concave outer face substantially at the center thereof, and subsequently removing the whole of said first-mentioned projection to form an opening through one of said walls, and removing a portion of said second-mentioned projection to form a lip extending upwardly from said coaver face, with an opening therethrough extending in alinement with said first-mentioned opening.

1,024,265. BRAKE-SHOE. JOHN J. KISSER, Pittsburgh, Pa., assignor to Pittsburgh Brake Shoe Company, Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Feb. 27, 1911. Serial No. 611,142. (Cl. 188—28.)



1. In combination with a hanger and its connecting key, of a brake shoe having a lug of sheet metal fixed to the back of said shoe for being connected to said hanger by said key to support said shoe, said lug being provided with open ends, and an inwardly extending spring bearing on said lug for being adapted to engage with and conform to said key.

2. In combination with a hanger and its connecting key, of a brake shoe having a lug of sheet metal fixed to the back of said shoe for being connected to said hanger by said key to support said shoe, said lug being provided with open ends, legs on the sides of said lug and around said key for engaging with and extending out from said back, and an inwardly extending spring bearing on said lug for being adapted to engage with and conform to said key.

3. In combination with a hanger and its connecting key, of a brake shoe having a lug of sheet metal fixed to the back of said shoe for being connected to said hanger by said key to support said shoe, said lug being provided with open ends, inclined legs on the sides of said lug and around said key for engaging with and extending out from said shoe back, and an inwardly extending spring bearing on said lug for being adapted to engage with and conform to said key.

4. In combination with a hanger and its connecting key, of a brake shoe having a lug of sheet metal fixed to the back of said shoe for being connected to said hanger by said key to support said shoe, said lug being provided with open ends, legs on the sides of said lug and around said key for engaging with and extending out from said back, said legs being adapted to be passed through slots in said back and turned against the same, and an inwardly extending spring bearing on said lug for being adapted to engage with and conform to said key.

5. In combination with a hanger and its connecting key, of a brake shoe having a lug of sheet metal fixed to the back of said shoe for being connected to said hanger by said key to support said shoe, said lug being provided with open ends, inclined legs on the sides of said lug and around said key for engaging with and extending out from said shoe back, said legs being adapted to be passed through slots in said back and turned against the same, and an inwardly extending spring bearing on said lug for being adapted to engage with and conform to said key.

[Claims 6 to 12 not printed in the Gazette.]

1,024,266. PACKAGE OR PAPER HOLDER FOR MAIL-BOXES OR THE LIKE. VIRGIL C. KOONS, Colorado Springs, Colo. Filed Nov. 1, 1910. Serial No. 590,209. (Cl. 24—66.)



1. A holder for mail matter and the like, comprising a case, a laterally swingable gripping arm at one end portion pivotally joined to said case, said arm extending therefrom in longitudinal continuation thereof, and a coiled retractive spring arranged in longitudinal continuation of said arm and at one end attached to the pivoted end of the arm to one side of the axis on which the arm swings and at its other end attached to said case, said spring being arranged in said case and exerting its pull on said arm to yieldingly hold the same laterally in normal gripping position.

2. A holder for mail matter comprising a case adapted to be fixed to the exterior of a mail box, and an elongated letter gripping arm at one end having a lateral shank arranged in one end of the case and at its outer end hinged to the outer wall of said case, and a coiled retractive spring in said case and having end attaching devices detachably coupled to a wall thereof and to said shank to normally and yieldingly hold said arm at its limit of movement toward the exterior surface of the box.

3. A holder for mail matter comprising a case adapted to be fixed to the exterior of a letter box, a laterally swingable mail gripping arm adapted to grip mail matter against the exterior of the box, said arm extending from said box and having a lateral shank closing one end of the case and at its extremity hinged to said case, and a coiled re-

tractive spring arranged longitudinally in said case and at one end coupled thereto and at its opposite end coupled to said shank to swing said arm toward said box.

4. A holder for mail matter comprising an elongated mail gripping arm at one end having an out-turned lateral shank pivotally mounted at its outer end portion to cause the arm to swing on a transverse axis, a coiled retractive spring applied to said shank inwardly beyond its axis and pulling on said arm in the line of its length to yieldingly hold the arm in normal mail gripping position and attaching devices for the arm and spring.

1,024,267. VACUUM DUST-SUCKER. GUSTAV LINDENBERG, Barmen, Germany. Filed Dec. 15, 1911. Serial No. 666,057. (Cl. 83—47.)



1. In combination with the suction chamber of a vacuum cleaner and means for establishing suction therein, a filtering chamber which receives the dust-laden air before this passes to the said suction chamber, filtering material within said filtering chamber and a pipe making connection between the two chambers above named, said pipe being arranged in the said filtering chamber to hold the said filtering material in position and having its side-wall closed on the side toward the material, but open on the opposite side in order that air may freely enter it from said filtering chamber, though particles of said material will be excluded.

2. In a dust cleaner, the combination of suction devices, a horizontal filtering chamber arranged to receive the dust-laden air drawn by said devices, a vertical pipe within said chamber, a removable sponge arranged within said chamber on one side of said pipe and in the line of draft thereto, the opposite side of said pipe being cut away from the top downward to provide an inclined face and an ample air opening and the lower end of said pipe being arranged to supply said suction devices.

1,024,268. PIN-GUARD. HENRY W. MATTONI, New York, N. Y., assignor of one-half to Mary F. Lynch, New York, N. Y. Filed Jan. 28, 1911. Serial No. 605,182. (Cl. 24—155.)



1. A pin guard comprising a head, a clutch carried thereby and serving to attach said head removably to a pin, said clutch being fashioned from wire formed into spring coils intermediate its sides, whereby said clutch comprises two parts tending to spring apart, said clutch having other coils constituting openings for the reception of the pin, the planes of said openings being normally at an angle, whereby said clutch tends to bind upon the pin.

2. A pin guard comprising a head, a clutch fashioned from wire and consisting of a U-shaped member, the sides whereof tend to spring apart, the sides of said member being formed into coils intermediate their ends, for the reception of the pin, a flaring guide associated with said clutch and having a reduced part mounted in the opening of one of said coils, and a cushion point protector opposite the second coil carried by said head and adapted to receive the point of the pin.

3. A pin guard comprising a head, a clutch fashioned from wire secured to one face thereof and consisting of a U-shaped member the sides whereof tend to spring apart, the sides of said member being formed into coils intermediate their ends, for the reception of the pin, a flaring guide associated with said clutch and having a reduced part mounted in the opening of one of said coils.

1,024,269. POTATO-DIGGER. PETER MCGRATH, Denver, Colo. Filed Aug. 3, 1909. Serial No. 511,017. (Cl. 55—135.)



1. In a device of the class described, a wheel supported frame, a rod supported below the frame at the front and at each side thereof, a substantially U-shaped plow having its apex downward between the rods, said plow having oppositely extending trunnions, U-shaped hangers having their arms secured to the rods, a bar pivoted by one end to the front arm of each hanger, said bar having a bearing intermediate its ends for receiving the adjacent trunnion, arms secured to the trunnions, an elevator having its lower end adjustably connected with the rods, a toggle on each side of the elevator and comprising levers pivoted together at one end, the outer end of one lever being pivoted to the upper end of the elevator, and the outer end of the other to the adjacent arm intermediate its ends, a link connecting the levers at their junction with the elevator, a lever connected with the outer ends of the arms for moving the same, a spring pressing the lower end of the elevator toward the plow, and a lever connected with the end of the bar for raising and lowering the same.

2. In a device of the class described, a frame, a plow having trunnions below the frame, a bar on each side of the frame and pivoted by the front end thereto, and provided with a bearing for receiving the adjacent trunnion, means connected with the rear end of the bar for raising and lowering the same, an arm rigidly connected with each trunnion, means connected with the other end of the arm for moving the same, an elevator behind the plow, a spring pressing the lower end of the elevator toward the plow, a pair of levers on each side of the elevator and pivoted together by their adjacent ends, the outer end of one lever being pivoted to the upper end of the elevator, and the outer end of the other to the arm intermediate its ends, and a link connecting the junction of the arms with the lower end of the elevator.

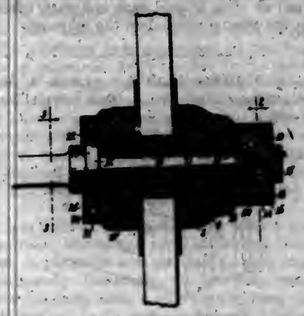
3. In a device of the class described, a frame, a plow below the frame, an elevator behind the plow, a spring pressing the lower end thereof toward the plow, an arm rigidly connected with each side of the plow, a pair of pivoted levers at each side of the elevator, the outer end of one member of each pair being pivoted to the upper end of the elevator, and the outer end of the other to the adjacent arm intermediate its ends, a link connecting the pivot of the levers with the lower end of the elevator, and means for swinging the arms.

4. In a device of the class described, a plow, an elevator, springs pressing the adjacent end of the elevator toward the plow, an arm rigid with the plow, means for swinging the arm, and a connection between the arm and each end of the elevator.

5. In a device of the class described, a plow, an elevator, an arm rigid with the plow, means for swinging the arm, and a connection between the arm and each end of the elevator.

[Claims 6 to 16 not printed in the Gazette.]

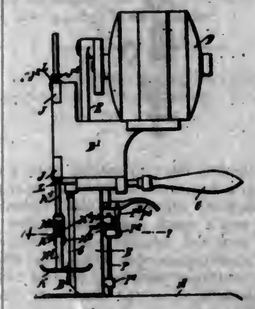
1,024,270. WHEEL-HUB. JOHN J. MCGUIRE, New York, N. Y. Filed Aug. 4, 1910. Serial No. 575,413. (Cl. 64—26.)



1. A wheel hub, comprising a metal hub casing having an externally projected box-like end portion, said portion having formed adjacent the outer edge thereof an internal screw thread; a cap for said box-like portion provided with a peripheral screw thread to engage the screw thread in said box-like portion, and a box-like lining having cylindrical and radial flanges, the former constructed to form a seat for said cap and the latter to form a seat for the holding nut of said hub, said lining being removable from said hub.

2. In a wheel hub, an oil box having provided adjacent the open end thereof a screw thread; a lining for said box having cylindrical side walls and a bottom portion, said bottom portion being perforated to extend about the axle within said box and to rest under the holding nut of said axle; and a screw threaded closure cap for said box threaded to engage the screw threads of said box and to seat on the outer edge of said lining.

1,024,271. CLOTH-CUTTING MACHINE. AMIN MERHIGE and CLARENCE FRED COOKSON, New York, N. Y.; said Cookson assignor to said Merhige. Filed Nov. 21, 1911. Serial No. 661,525. (Cl. 164—75.)



1. A cloth-cutting machine, comprising a base, a standard mounted to turn on the said base, cloth-cutting mechanism mounted on the said standard, and a manually-controlled locking bar mounted to slide on the standard for locking the said standard against turning on the said base.

2. A cloth-cutting machine, comprising a base having a circular guideway and a ball bearing, a standard having a disk at its lower end, the disk being provided with an annular flange fitting into the said guideway and the said disk resting on the said ball bearing, a retaining ring on the said base and engaging the said flange and provided on top with spaced recesses, and a manually-controlled locking bar mounted to slide on the said standard and adapted to engage one of the said recesses.

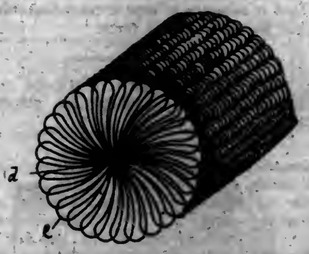
3. A cloth-cutting machine having a base, disks mounted to turn on the under side of the base and provided at the under side with rollers to hold the base a distance above the cutting table, the base having a pivoted front point adapted to rest with its terminal on the cutting table to readily pass under the material on the said table.

4. A cloth-cutting machine having a base, disks mounted to turn on the under side of the said base, rollers carried by the said disks, and ball bearings between the base and the said disks.

5. A cloth-cutting machine having a base provided at the under side with an annular guideway, a disk having an annular flange engaging the said guideway, a retaining ring on the under side of the base and engaging the said flange, a ball bearing between the disk and base, and a roller journaled on the under side of the disk.

[Claims 6 to 13 not printed in the Gazette.]

1,024,272. PROCESS OF MAKING IMITATION-FEATHER ARTICLES. DAVID METZGER, New York, N. Y. Filed Apr. 17, 1911. Serial No. 621,659. (Cl. 41—10.)



1. The herein described method of making imitation feather articles by weaving a series of strands of suitable material back and forth so as to form a weft with a warp at each edge of the weft and then twisting the warps upon each other so that the warps form a core and the weft radiates in a series of loops in all directions from the core.

2. The herein described method of making an imitation feather article consisting of weaving a number of strands of suitable material back and forth with a warp on each edge and a wire in the warp and then twisting the opposite wires upon each other so as to form one central core with the weft extending in loops in all directions from said center core.

3. The herein described method of making an imitation feather trimming by weaving a series of silk strips known as ribboxine back and forth over two warp wires and then twisting the two warp wires upon each other so as to have a central wire core with the ribboxine strips radiating in loops in all directions.

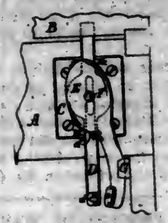
4. The herein described method of making imitation feather articles by weaving a series of strands of suitable material back and forth so as to form a weft with a warp at the edge of the weft, and then twisting the warps to form a core, the weft radiating in all directions from the core.

5. The herein described method of making imitation feather articles, by weaving a series of strands of suitable material back and forth so as to form a weft with a warp, and then twisting the warp so that the warp forms a core and the weft radiates in a series of loops in all directions from the core.

1,024,273. WINDOW-FASTENER. FREDERICK G. MICHEL, Albany, N. Y. Filed Feb. 14, 1912. Serial No. 677,579. (Cl. 16—52.)

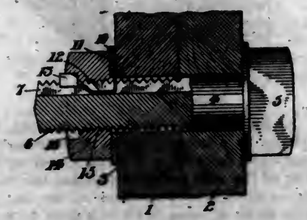
1. A window fastener consisting of a plate attached to the upper side of the lower window sash, a bolt having an elongated slot slidably pivoted upon said plate and adapted to operate in recesses in the upper window sash, and a lock pivoted to said plate over said bolt and adapted to operate in notches in the window frame.

2. In a window fastener a plate attached to the upper side of the lower sash, a bolt having an elongated slot therein slidably mounted upon said plate, a lock pivoted to said plate over said bolt, a recess in the under surface of said lock, a lug upon the upper surface of said bolt adapted to operate in the recess in said lock, holes in the



upper window sash adapted to receive the end of said bolt, a strip attached to the window frame having notches therein adapted to receive said lock, means for operating said bolt whereby said lug will enter the recess of said lock and hold it securely in said notches, substantially as described for the purposes set forth.

1,024,274. NUT-LOCK. ANDREW D. MILLER, Johnstown, Pa. Filed Dec. 4, 1911. Serial No. 663,690. (Cl. 151—13.)



A nut locking device comprising the combination with a bolt having its threaded portion provided with a longitudinally extending groove, of a washer mounted upon said bolt and having its inner face provided with a longitudinally extending groove, a resilient locking member including a longitudinally extending body portion seated in the groove of the bolt and having projecting from its inner end a right-angular extension seated in the groove of the washer, said member further provided with an upwardly curved outer portion projecting from said body portion and terminating in a beveled tooth, and a nut mounted upon said bolt against said washer and having its outer face provided with teeth adapted to be engaged by said tooth, whereby the latter and said extension will prevent the turning of the nut and washer with respect to the bolt.

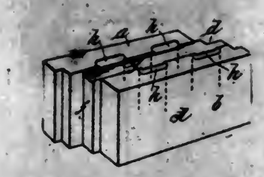
1,024,275. SPECTACLES. FRANCES MORTON, Buffalo, N. Y. Filed Sept. 18, 1911. Serial No. 649,117. (Cl. 88—41.)



1. In spectacles, the combination with the lenses, the lens mounting and the temples pivotally connected with the lens mounting, of means for holding the temples in a folded position across the lenses.

2. In spectacles, the combination with the lenses, the lens mounting provided with ears at the outer ends of the lenses and temples pivotally connected with said ears and capable of being either projected rearwardly from the lenses or folded across the rear side of the lenses, of hooks one arranged on each of said ears and each adapted to be engaged by the temple pivoted on the other ear.

1,024,276. BUILDING-BLOCK. ALFRED S. NASH, Williamsett, Mass. Filed Feb. 1, 1911. Serial No. 606,033. (Cl. 72—38.)



A building block having at one end a plurality of step shaped faces having their recedence from the rear toward the forward side of the block and having at its other end a plurality of step shaped faces which have their recedence from the front toward the rearward side of the block, coöperative blocks, the ends of which are to be adjoined to those of the above named block, having a plurality of step shaped faces which are non-complemental to the faces of the first named block whereby the structure has at the junctions of the blocks a plurality of vertical spaces therein in lines between the front and rear surfaces thereof, and a binder of cement in one of the spaces between each pair of the blocks, other of such spaces being left vacant to form vertical air ducts.

1,024,277. AUTOMATIC GAS-LIGHTER. JOHN A. NELSON, Davenport, Iowa. Filed Dec. 15, 1911. Serial No. 665,949. (Cl. 67—20.)



1. In a gas lighter, the combination with a gas burner, of a yieldable arm supported alongside of said gas burner, an abrading member carried by said yieldable arm, a swinging arm, and a spark producing member carried by said swinging arm and adapted upon movement thereof to engage the abrading member carried by said yieldable arm and upon continued movement of said swinging arm to flex said yieldable arm and pass over the abrading member thereof.

2. In a gas lighter, the combination with a gas burner, of a yieldable arm carried by said burner, said arm inclining outwardly away from the burner and the upper end thereof being provided with an abrading member, a swinging arm pivotally supported beneath said yieldable arm, and a spark producing member carried by said swinging arm and adapted upon movement of said arm to engage and pass over the abrading member carried by the yieldable arm.

3. In a gas lighter, the combination with a gas burner, of a yieldable arm, an abrading member carried by the upper portion of said yieldable arm and positioned adjacent the top of the burner, an oscillating valve controlling the flow of gas to said burner, an arm rigidly connected to said valve so as to oscillate therewith, and a spark producing member carried by said arm and adapted upon movement thereof to engage the abrading member carried by the yieldable arm and to bead the yieldable arm and pass over the abrading member thereof.

4. In a gas lighter, the combination with a gas burner, of a yieldable arm supported by the burner, said arm inclining outwardly from the bottom to the top thereof away from said burner, an abrading member carried by the upper end of said arm and positioned adjacent the top of the burner, a valve for the burner positioned below said yieldable arm, a swinging arm movable with said valve, and a spark producing member carried by said arm and adapted upon movement thereof to engage and pass over the abrading member carried by the yieldable arm.

5. In a gas lighter, the combination with a gas burner, a clip removably secured to said gas burner adjacent the top thereof, a yieldable arm carried by said clip and extending outwardly therefrom, an abrading member carried by said yieldable arm, a valve controlling the flow of fuel to said burner, and a member movable with said valve and provided with a spark producing material adapted upon movement of the valve to engage and traverse the abrading member carried by said yieldable arm.

1,024,278. TRAP. JOSEPH D. NIEDERLITZ, Jersey City, N. J. Filed Aug. 24, 1911. Serial No. 645,702. (Cl. 48—19.)



A trap, comprising an elongated open-ended body, a central partition dividing said trap into two compartments, a hinged door at each of said open ends for normally closing the same, springs maintaining said doors in closed position, a wire lever pivoted to the side of said casing in each compartment, one short end of said lever adapted to engage each door, a bait-holding lever in each compartment adjacent said partition, and a nose on said lever adapted to engage the long arm of said wire lever, to maintain said door in open position.

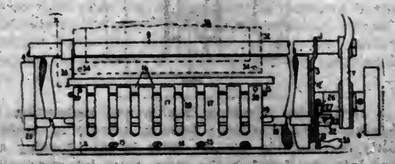
1,024,279. SWITCH-THROWING DEVICE. DAVID OSBURN, Horning, Pa. Filed July 24, 1911. Serial No. 640,208. (Cl. 104—25.)



1. A switch throwing device comprising frames, straps carried by said frames, spaced rollers supported by said frames, an arm pivotally supported between said straps, a lever mounted between said rollers and connected to said arm, a coiled retractile spring having one end thereof attached to said lever and the opposite end thereof supported by one of said straps, and means including a pin adapted to be located in said frames to hold said lever against one of said rollers.

2. A switch throwing device comprising frames, straps carried by said frames, an arm pivotally mounted between said straps, spaced rollers carried by said frames and adapted to actuate a switch tongue, a lever pivotally connected to the upper end of said arm and supported between said frames, a coiled retractile spring having one end thereof connected to said lever and the opposite end thereof connected with one of said straps, and adjustable means carried by the frames for holding said lever against one of said rollers.

1,024,280. TYPE-WRITING MACHINE. MORRIS W. POOL, New York, N. Y., assignor, by mesne assignments, to Union Typewriter Company, Jersey City, N. J., a Corporation of New Jersey. Filed Feb. 1, 1911. Serial No. 605,964. (Cl. 197—136.)



1. In a typewriting machine, the combination of a platen, a paper clamp mounted on the platen and comprising a device for positively engaging a work sheet through an opening therein, and means for moving said device in and out through said opening.

2. In a typewriting machine, the combination of a platen, and a clamping plate provided with a plurality of parallel spring clamping fingers extending transversely of the platen and engageable with one edge of a work sheet, certain of said fingers being provided with projections for positively engaging said work sheet, the platen being provided with depressions for receiving the ends of said projections.

3. In a typewriting machine, the combination with a platen, a leading end stop, and a side edge guide, of a stencil clamp mounted on the platen comprising a clamp proper provided with devices for positively engaging openings in the leading end portion of the work sheet.

4. In a typewriting machine, the combination with a platen, a leading end stop, and a side guide, of a stencil clamp mounted on the platen comprising a clamp proper having devices for positively engaging openings in the leading end portion of the work sheet, and also hand controlled means for at will opening and closing the clamp.

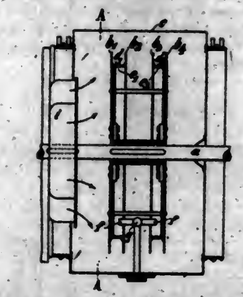
5. In a typewriting machine, the combination of a platen, a stop bar mounted on the platen and provided with integral stop projections, and a plurality of spring clamping fingers formed on a common support, said fingers being coöperative with the platen between said projections.

[Claims 6 and 7 not printed in the Gazette.]

1,024,281. DEVICE FOR SPRAYING LIQUIDS AND MOISTENING AIR. CARL HEINRICH PRÖTT, Rheydt, Germany. Filed Jan. 18, 1912. Serial No. 671,780. (Cl. 98—46.)

1. A device for spraying liquids and moistening air comprising in combination a housing containing liquid, a plurality of revoluble annular disks in said housing and dipping into the liquid in the same, rings interconnecting said annular disks in pairs at a short distance from their inner edges and thereby forming annular channels, means for supplying liquid to said channels, means for driving air among and between said annular disks and means for rotating said revoluble annular disks.

2. A device for spraying liquids and moistening air comprising in combination a housing containing liquid, a plurality of revoluble annular disks in said housing and dipping into the liquid in the same, rings interconnecting said annular disks in pairs at a short distance from their inner edges and thereby forming annular channels, means for conducting back to said channels liquid deposited outside the housing and fresh liquid, means for driving air among and between said annular disks, and means for rotating said revoluble annular disks.



3. A device for spraying liquids and moistening air comprising in combination a housing containing liquid, a plurality of revoluble annular disks in said housing and dipping into the liquid in the same, rings interconnecting said annular disks in pairs at a short distance from their inner edges and thereby forming annular channels, means for supplying liquid to said channels, a fan for driving air among and between said annular disks and means for rotating said revoluble annular disks.

4. A device for spraying liquids and moistening air comprising in combination a housing containing liquid, a plurality of revoluble annular disks in said housing and dipping into the liquid in the same, rings interconnecting said annular disks in pairs at a short distance from their inner edges and thereby forming annular channels, means for supplying liquid to said channels, means for driving air among and between said annular disks, a plurality of baffle-plates in proximity to the peripheries of the annular disks, and means for rotating said revoluble annular disks.

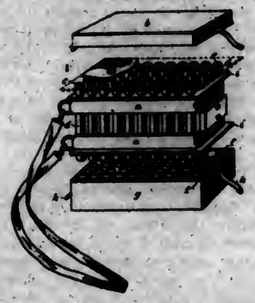
5. A device for spraying liquids and moistening air comprising in combination a housing containing liquid, a plurality of revoluble annular disks in said housing and dipping into the liquid in the same, rings interconnecting said annular disks in pairs at a short distance from their inner edges and thereby forming annular channels, means for supplying liquid to said channels, means for driving air among and between said annular disks, a plurality of baffle-plates in proximity to the peripheries of the annular disks and a plurality of vertical plates *m* at a short distance from said disks, and means for rotating said revoluble annular disks.

1,024,282. DEVICE FOR COLLECTING SAMPLES OF FINELY-DIVIDED MATERIAL. JOHN NICHOLAS REED, Cienfuegos, Cuba. Filed Sept. 19, 1910. Serial No. 582,714. (Cl. 73—151.)

1. A device of the character described, comprising frames for holding tubes, a box to be connected with one of said frames, a plurality of vessels carried by said box, a plurality of tubes mounted within said frames and extending into said vessels, and scraping members carried by said tubes for facilitating the discharge of material from a trier into said tubes.

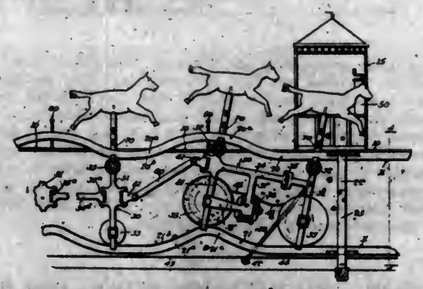
2. A device of the character described, comprising a plurality of vessels open at one end, a plurality of tubular filling members, and means to support said members with one of their open ends extending into the open ends of said vessels, said filling members having integral lips at their opposite ends and extended inwardly toward their axes, for the purpose described.

3. A device of the character described, comprising frames for holding tubes, a box to be connected with one of said frames, a plurality of vessels carried by said box, a plurality of tubes mounted within said frames and extending into said vessels, scraping members carried by said tubes for facilitating the discharge of the material



from a trier into said tubes, and a member of sheet material disposed over the outer ends of the tubes and adapted to be punctured in alinement with each of the tubes by the trier, when the latter is inserted in the tube whereby to indicate the tubes which have received the fillings.

1,024,283. AMUSEMENT DEVICE. ALVA M. RICKS, Los Angeles, Cal. Filed Nov. 21, 1911. Serial No. 661,509. (Cl. 104—111.)



1. In combination, a pair of rails arranged one above the other and each having raised curved portions therein, a truck comprising a frame having a horizontally swinging pivoted joint therein, forward and rear wheels on the truck bearing on each of the rails, and a motor on the truck and mechanically connected to one of the wheels.

2. In combination, a platform, a track comprising a pair of rails arranged one above the other and beneath the platform, each rail having raised curved portions therein, and a hurdle mounted on the platform adjacent the curved portions of the rails; a truck comprising a frame having a horizontally swinging pivoted joint therein and having upright members at its forward and rear ends, upper and lower wheels on each of the upright members of the truck and bearing on the upper and lower rails, an electric motor mounted on the truck and mechanically connected to one of the lower wheels, equestrian figures mounted above the platform and supported on the truck, and means including a controller to supply electrical energy to the electric motor on the truck.

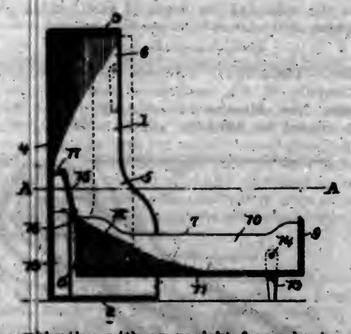
3. In combination, a platform, a track comprising a pair of rails arranged one above the other beneath the platform, each rail having raised curved portions therein; a plurality of trucks each comprising a frame composed of forward and rear upright members and a horizontal connecting member between the uprights, there being a horizontally swinging pivoted joint in the horizontal connecting member, wheels on the upper and lower ends of each of the uprights and bearing on the upper and lower rails, mechanically connecting means between the several trucks, an electric motor mounted on one of said trucks and mechanically connected to one of the lower wheels thereof; an upright post extending upwardly from each of the truck uprights, there being a slot in the platform through which the upright posts pass, a carriage mounted upon the upper end of each upright, hurdles on the platform adjacent the curved portions of the track, and means including a controller for supplying electrical energy to the motor on the truck.

4. In combination, a pair of rails arranged one above the other and curving in vertical and horizontal planes, a truck arranged substantially in a vertical plane and including a frame having a horizontally swinging joint therein, forward and rear pairs of wheels bearing on the upper and lower tracks, means to prevent lateral horizontal movement of the wheels from the tracks, and a motor on the truck frame connected to one of the wheels.

5. In combination, a pair of rails arranged one above the other and curving in vertical and horizontal planes, a truck arranged substantially in a vertical plane and including a frame having a horizontally swinging joint therein, upwardly projecting posts carrying equine figures above the frame, forward and rear pairs of wheels bearing on the upper and lower tracks, and means to prevent lateral horizontal movement of the wheels from the tracks.

[Claims 6 and 7 not printed in the Gazette.]

1,024,284. FOLDING BED. FRANK C. ROBERTS, Nashville, Tenn. Filed Sept. 12, 1910, Serial No. 581,491. Renewed Dec. 2, 1911. Serial No. 663,476. (Cl. 5—37.)



The combination with an upright frame having a stop strip in the back thereof, a bed frame having its head portion pivotally mounted between the sides of the upright frame so that the said bed frame may be folded up into the upright frame or extended outwardly therefrom, and a slide or rest disposed for vertical and angular movement in the upright frame between the side walls of said upright frame, the lower portion of the said slide or rest being hinged directly to the head of the bed frame so that said slide may be operated by said bed frame, said slide being provided at its upper side with a rearwardly extending stop flange to bear on the upper side of the stop strip when the bed frame is folded up within the upright frame.

1,024,285. HOSE-COUPLING. VINCENT SANPHY, South Bend, Wash. Filed Aug. 4, 1911. Serial No. 642,311. (Cl. 137—28.)

1. In a coupling a coupling member having a passageway therethrough with a thread in the passageway, a companion coupling member having a shoulder disposed in the first coupling member, a threaded sleeve meshing in the thread in the first coupling member, and a propeller blade secured to the sleeve and adapted to be engaged by a fluid flowing from one coupling member to the other to rotate the sleeve in the direction of the shoulder.

2. In a coupling a coupling member having a passageway with a thread in the passageway, a companion coupling member having a shoulder disposed in the first coupling member, a threaded sleeve meshing in the thread in the first coupling member, a propeller blade secured to the sleeve and adapted to be engaged by a fluid flowing from one coupling member to the other to rotate the sleeve in the direction of the shoulder, there being a longitudinal opening through one end of one of the coupling members



which is connected with a transverse opening in the said member, and an annular projecting member on the other member adapted to be introduced in the longitudinal opening so that when one of the coupling members is rotated relatively to the other, the coupling members will be held together while the sleeve will prevent the fluid from escaping through the openings between the coupling members.

1,024,286. TOOL FOR HANDLING ELECTRIC GLOBE-LAMPS. ANGELO SANTILLI, New York, N. Y., assignor to Gaspare Moretto, New York, N. Y. Filed Jan. 5, 1912. Serial No. 669,701. (Cl. 240—101.)



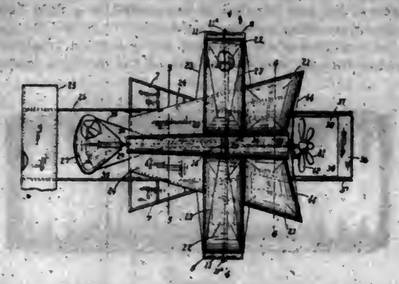
1. A tool such as described, comprising an elongated tubular stem; a flexible cup mounted at the end thereof, said cup shaped to partly surround an electric globe, and said cup having a thin resilient edge to expand when manually pressed upon said globe; and means for rarefying the air in said cup.

2. A tool such as described, comprising a suction cup shaped to receive an electric light globe, said cup provided with an expansible edge, the normal diameter of which is less than the greatest diameter of said globe, to extend over and rest upon said globe above the greatest diameter thereof; and means for rarefying the air in said cup.

3. A tool such as described, having a suction cup shaped to receive the enlarged end of an electric light globe, and to extend thereover above the line of greatest dimension of said globe; means formed on said cup to close the passage between said globe and said cup above said line of greatest dimension; and means for rarefying the air in said cup.

4. A tool such as described, having a suction cup shaped to receive the enlarged end of an electric light globe, and to extend thereover above the line of greatest dimension of said globe; means formed on said cup to close the passage between said globe and said cup above said line of greatest dimension; and means for rarefying the air in said cup, said means embodying an air displacing member and a rigid tubular stem in open communication with the interior of said cup.

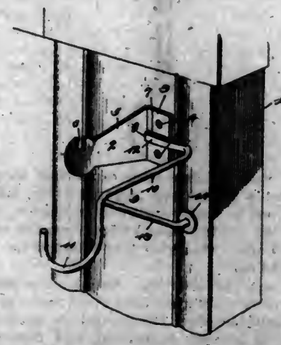
1,024,287. MULTIPLANE AIRSHIP. EUGENE H. SARAIL, St. Louis, Mo. Filed Nov. 25, 1910. Serial No. 594,028. (Cl. 244—12.)



1. An air-ship constructed with a braking fixed concave parachute at its forward end, a horizontally swinging combined parachute and vertical rudder connected to the rear of the machine, suitable planes at the rear of said braking parachute, planes located below said first mentioned planes, opposite balancing planes movably connected to the said lower planes, and a suitable rudder at the front of the machine.

2. An air-ship constructed with two front concave parachutes, a separate plane in the rear of each parachute, a concave backbone separating said parachutes and said planes, suitable rudders, two planes below said first mentioned planes, opposite balancing wings hinged to the said lower planes, and a boat extending longitudinally of the machine centrally of and beneath said lower planes forming a backbone therefor and arranged as a receptacle for passengers and goods.

1,024,288. CURTAIN-FIXTURE. PETER R. SCHMALTZ, Pittston, Pa. Filed Dec. 18, 1911. Serial No. 666,458. (Cl. 156—24.)

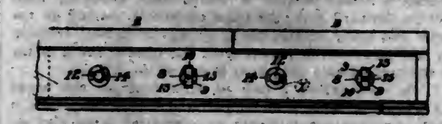


1. A curtain fixture, comprising an angular body plate having a slot in one face thereof, and a notch in the other face aliming with said slot, and a curtain pole bracket having a laterally extending arm thereon, said arm being designed arcuately with respect to the main arm of the bracket and adapted to be received in said slot and notch of the body plate.

2. A curtain fixture, comprising an angular body plate adapted to be applied to a stationary object, the one face of said plate being provided with a horizontal slot and the other with a notch in alinement with said slot, a curtain pole bracket comprising a main arm having a laterally extending portion thereon, said laterally extending portion being designed arcuately and adapted to be received through the slot and in yielding engagement with the walls of said notch, and a bracing arm for the main arm of said bracket.

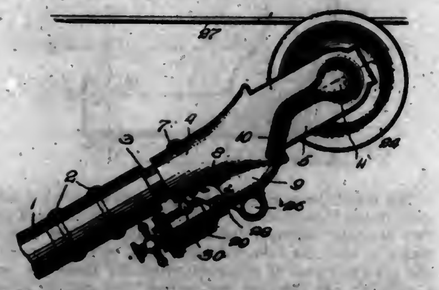
3. A curtain fixture of the class described, comprising an angular body plate, one face of which is provided with a horizontal slot and the other face having a notch therein in alinement with said slot, and a curtain pole bracket comprising a main arm having a laterally extending portion thereon, said lateral portion being designed somewhat arcuately and disposed through said slot and into yielding engagement with the walls of said notch, and a bracing arm for the main arm of said bracket, said bracing arm being provided with a head on the free end thereof.

1,024,289. RAIL-JOINT. JOHN SCHUCK, Moon Run, Pa. Filed Nov. 10, 1911. Serial No. 659,648. (Cl. 239—11.)



In a rail joint, a pair of rails having the opposing ends thereof overlap each other, the webs of said rails positioned in parallelism and provided with registering rectangular slots, bosses formed integral with the outer faces of each of said webs at each alternate opening and formed with integral and vertically disposed grooves, longitudinal grooves registering with the slots, locking pins each provided with a head at one end and a rectangular bar at its other end, said pins mounted in said slots and said bars positioned in said vertical grooves for locking the webs together, resilient locking members interposed between the webs and the heads of said locking pins for maintaining said bars in said vertical grooves.

1,024,290. TROLLEY. CHARLES C. SNODGRASS, New Martinsville, W. Va., assignor of one-half to Isaiah D. Morgan, New Martinsville, W. Va. Filed Nov. 24, 1911. Serial No. 662,168. (Cl. 191—39.)



1. In a trolley, a harp body, oppositely disposed arms carried thereby, an enlargement carried by the under side of said harp body, said enlargement and one of said arms having a duct formed therein, a journal pin mounted in said arms and having ducts formed therein in communication with the duct of said enlargement and said arm, a trolley wheel revolubly mounted upon said pin, and a pressure lubricator carried by said enlargement and in communication with the duct thereof.

2. In a trolley, a harp body, oppositely disposed arms carried thereby, an enlargement carried by the under side of said harp body, said enlargement and one of said arms having a duct formed therein, a journal pin mounted in said arms and having ducts formed therein in communication with the duct of said enlargement and said arm, a trolley wheel revolubly mounted upon said pin, a pressure lubricator carried by said enlargement and in communication with the duct thereof, and an arm carried by the under side of said harp body for bracing said pressure lubricator.

3. In a trolley, a harp body, oppositely disposed arms carried thereby, an enlargement carried by the under side of said harp body, said enlargement having a duct

formed therein extending into one of said arms, a journal pin extending through one of said arms and having the end thereof mounted in the arm provided with the extended duct of said enlargement, said pin having ducts formed therein in communication with the duct of said enlargement, a trolley wheel revolubly mounted upon said pin, a cotter pin extending through the end of said journal pin and engaging in the outer wall of one of said arms to prevent said journal pin from rotating, and a pressure lubricator carried by said enlargement and in communication with the duct thereof.

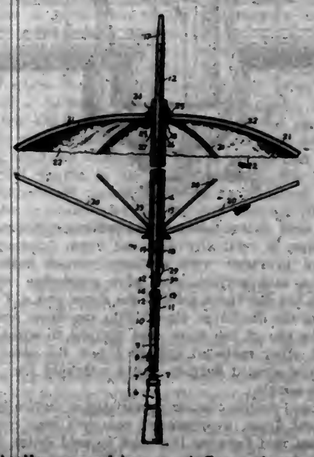
4. In a trolley, a harp body, oppositely disposed arms carried thereby, an enlargement carried by the under side of said harp body, said enlargement having a duct formed therein extending into one of said arms, a journal pin extending through one of said arms and having the end thereof mounted in the arm provided with the extended duct of said enlargement, said pin having ducts formed therein in communication with the duct of said enlargement, a trolley wheel revolubly mounted upon said pin, a cotter pin extending through the end of said journal pin and engaging in the outer wall of one of said arms to prevent said journal pin from rotating, a pressure lubricator carried by said enlargement and in communication with the duct thereof, an arm carried by the under side of said harp body for bracing said lubricator, and an eye carried by the under side of said enlargement.

1,024,291. NUT-LOCKING DEVICE. PETER W. STEIN, Homestead, Pa. Filed Nov. 24, 1911. Serial No. 662,150. (Cl. 151—54.)



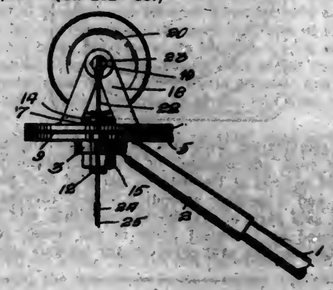
In a nut locking device, the combination with bolts provided with nuts, of a locking bar arranged upon said nuts and having openings with the walls thereof provided with angle recesses to receive the angle faces of said nuts, said bar having the ends thereof bent and apertured to receive the ends of some of said bolts, and cotter pins extending through said bolts for retaining the malleable ends of said bar in engagement therewith.

1,024,292. UMBRELLA. THEODOR SUSSMIHL and CHARLES P. CARRINGTON, New York, N. Y. Filed Nov. 26, 1910. Serial No. 594,294. Renewed Nov. 7, 1911. Serial No. 659,068. (Cl. 135—20.)



An umbrella, comprising a staff, a sleeve slidably mounted thereupon and provided with a slot, a pin mounted upon said staff and extending through said slot for limiting the travel in one direction of said sleeve on said staff, a latch mounted upon said staff and disposed in registry with said slot for the purpose of extending therethrough in order to limit the travel of said sleeve in a direction opposite the direction of travel first-mentioned, a runner slidably mounted upon said staff and adapted to engage the adjacent end of said sleeve, another latch mounted upon said sleeve for normally preventing said runner from moving away from said sleeve, ribs pivotally connected with said sleeve, stays pivotally connected with said runner and with said ribs, and a cover mounted upon said ribs.

1,024,293. TROLLEY. PETER SZUMINSKY, Hamilton, Ontario, Canada. Filed Dec. 4, 1911. Serial No. 663,738. (Cl. 191—39.)



In a trolley, the combination with a pole having the upper end thereof provided with a horizontal bearing, of a circular trolley base mounted upon said bearing and having an annular ball race formed therein, anti-friction balls arranged in said race, a circular trolley plate revolubly mounted upon said balls, a bolt extending through said trolley plate, said base and said bearing, a head carried by the upper end of said bolt, anti-friction balls interposed between said head and said harp plate, a nut screwed upon the lower end of said bolt, A-frames carried by said trolley plate, a journal pin mounted in said A-frames, a trolley wheel revolubly mounted upon said pin, diametrically opposed apertured ears carried by said trolley base, branch cords extending through said ears and having the upper ends thereof connected to the ends of said journal pin, a single cord connecting the lower ends of said branch cords, and means carried by said trolley base and engaging said bearing for preventing said base from rotating relatively to said bearing.

1,024,294. PACKING-RING. WERNER TISCHMACHER, Werden-on-the-Ruhr, Germany. Filed June 19, 1911. Serial No. 633,956. (Cl. 64—22.)

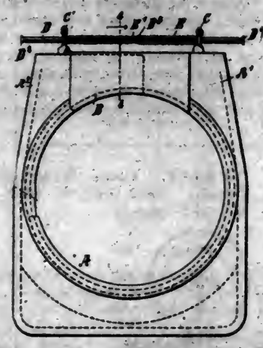
1. A packing for journal boxes and the like, comprising a split ring provided at its ends with apertured lugs, a guide rod extending through the lugs, and spring-pressed means engaging said lugs and secured to the middle of the guide rod.

2. A packing ring for journal boxes and the like, comprising a split ring provided at its ends with apertured lugs, a guide rod slidably engaging said lugs, and a spring coiled upon the said guide rod intermediate the said lugs, the spring being attached to the lugs and to the middle of the guide rod.

3. A packing for journal boxes and the like, comprising a split ring provided at its ends with apertured lugs, a guide rod slidably engaging the said lugs and projecting beyond the same, the ends of the guide rod having stops to limit the relative movement of the lugs and guide rod, and a spring coiled on the said guide rod intermediate the said lugs, the spring being attached to the lugs and also to the middle of the guide rod.

4. In a packing, a split ring provided at its ends with lugs having apertures therethrough, a guide rod extending

through said lugs and movable relatively to the same, said guide rod being provided at its ends with limiting stops for said lugs, and a spring mechanism secured to said rod and engaging said lugs for the purpose of forcing the ends of said split ring toward each other.



5. The combination with two elements movable toward and away from one another, of a spring extending between, and secured at its ends to, parts of said movable elements, and a member extending loosely through, and guided by, said parts of said movable elements, said spring being secured at a central point to the center of said member, between the said parts of said movable elements.

1,024,295. TRIPPING-BLOCK FOR TYPE-WRITING MACHINES. OTTO THIEME, St. Louis, Mo., assignor to Moon-Hopkins Billing Machine Company, St. Louis, Mo., a Corporation of Missouri. Filed Sept. 23, 1910. Serial No. 583,431. (Cl. 197—70.)



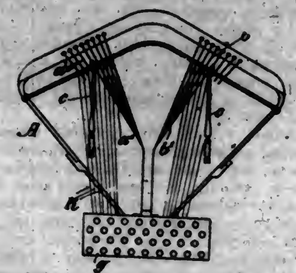
1. In a device of the class described, the combination of a rack bar provided with teeth upon its edge, a slidable block mounted upon said rack bar, a slot in the upper portion of said block, said slot extending through a part of one side of said block, a latch member pivotally mounted in said slot, said latch member being provided with a latching portion adapted to contact with the teeth of said rack and to lie within the part of said slot extending through the side as specified, and an engaging portion upon said latch member.

2. A device of the class described comprising a rack bar provided with teeth, a block mounted to slide upon said rack bar, said block being provided with a slot in its upper face, a latch member pivotally mounted within said slot and provided with a latching portion adapted to coöperate with said teeth, a movable member and an engaging portion arranged upon said latch member in such manner as to contact with the movable member to force said latch member against said rack bar.

1,024,296. MATRIX-SETTING DEVICE. RUDOLF THOMAS, Charlottenburg, Germany. Filed May 16, 1910. Serial No. 561,585. (Cl. 199—8.)

1. A device of the character described having two groups of matrix bars provided with two different and complementary series of matrix surfaces adapted to be correspondingly positioned with respect to line casting means, each of said matrix bars being provided with a single supporting means.

2. A device of the character described having two groups of matrix bars the opposite edges whereof are provided, respectively, with different and complementary series of matrix surfaces adapted to be correspondingly positioned with respect to line casting means, each of said matrix bars being provided with a single supporting means.



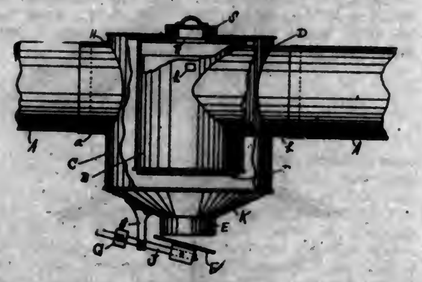
3. A device of the character described having two groups of matrix bars the opposite edges whereof are provided, respectively, with different and complementary series of matrix surfaces adapted to be correspondingly positioned with respect to line casting means, and a single supporting member for each matrix bar whereby the said matrix bars may be supported in reverse relation to such line casting means.

4. A device of the character described comprising two groups of matrix bars, the opposite edges whereof are provided, respectively, with different and complementary series of matrix surfaces adapted to be correspondingly positioned with respect to line casting means, each of said matrix bars being provided with a single supporting means.

5. A device of the character described comprising two groups of matrix bars, each bar being provided with a single supporting member, the bars of each group being provided with complementary series of matrix surfaces, the bars of one group being capable of interchange with the bars of the second group.

[Claim 6 not printed in the Gazette.]

1,024,297. SEED-COTTON CLEANER. HENRY THOMPSON, Valera, Tex. Filed Dec. 27, 1910. Serial No. 599,622. (Cl. 13—19.)



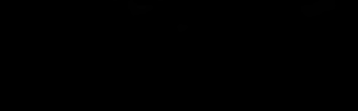
1. A seed cotton cleaner comprising a pneumatic conveyer pipe, a vertically disposed drum intercepting said pipe and provided with a funnel-shaped bottom and a nozzle in said bottom, said pipe projecting within said drum at the discharge side of the drum and a T-joint connected to the discharge pipe within the drum and connected to the top of the drum and serving to spread the cotton and other material and to throw the same down on said funnel-shaped bottom, and a weighted trap door closing said nozzle.

2. A seed cotton cleaner comprising a vertically disposed cylindrical drum, a pneumatic conveyer pipe connected to said drum and forming the inlet to said drum, said drum having a funnel-shaped bottom and a nozzle in said bottom, a weighted trap door closing said nozzle, a cylindrical drum vertically disposed within said first named drum and attached to the top thereof and being open at the lower end, and a pneumatic conveyer pipe projecting within said first named drum and connected to said last named drum and forming the discharge from said drums and forming a continuation of said first named conveyer pipe.

3. A seed cotton cleaner comprising a vertically disposed exterior cylindrical drum having a funnel-shaped bottom and a nozzle in said bottom, a vertically disposed cylindrical drum within said exterior drum and attached to the upper end thereof and having its lower end open, a pneumatic conveyer pipe intercepted and having the approaching portion connected to said exterior drum and the leaving portion projected within said exterior drum and connected to said interior drum and forming the discharge from said drums, a trap door closing said nozzle, a pivoted bar carrying said door on one end, and an adjustable weight carried on the other end of said bar.

4. A seed cotton cleaner comprising a vertically disposed exterior cylindrical drum having a bottom and discharge nozzle therein for trash and other matter, a door for said nozzle, a vertically disposed interior cylindrical drum attached to the upper end of said exterior drum, a pneumatic conveyer pipe intercepted and the approaching section connected to and communicating with said exterior drum and the discharging end projected within said exterior drum and connected to and communicating with said interior drum, a telescopic member within said interior drum for varying the length of said interior drum, and means for holding said telescopic member at different vertical adjustments.

1,024,298. REVERSING DRIVING MECHANISM. FRANCIS DU PONT THOMSON, Wheeling, W. Va. Filed Oct. 22, 1907. Serial No. 398,610. (Cl. 74—59.)



1. In a reversing driving apparatus, a pair of shafts in endwise alinement, one of said shafts being connected to the device to be driven, a motor secured to the other shaft, an induction clutch having a driving and driven member arranged to connect said shafts, a tubular shaft arranged to rotate about the axis of the first shaft, a motor secured to the tubular shaft, and an induction clutch connection between the tubular shaft and the first shaft, the induction clutch connections providing means to increase the torque in proportion to the slip between the clutch members; substantially as described.

2. In a reversing driving apparatus, a pair of shafts in endwise alinement, a motor and a fly wheel secured to one shaft, a sleeve rotatably mounted on the other shaft, a motor and a fly-wheel connected to the sleeve, an induction clutch having a driving and a driven member arranged to connect the sleeve and the shaft on which it is mounted, and an induction clutch connection between the pair of shafts in endwise alinement, the induction clutch connections providing means to relatively increase the torque in proportion to the slip between the clutch members; substantially as described.

1,024,299. METALLIC RAILROAD-TIE. THOMAS T. TONG, Gordon, Nebr. Filed Dec. 16, 1911. Serial No. 666,115. (Cl. 238—4.)

1. A metallic railroad tie provided near each end with a pair of integral lugs between which extends a track rail, each lug fitting against the head and base of the rail and each lug being provided at its inner face with recesses, and blocks for engagement with the sides of the rail, and having projections fitting into the said recesses.

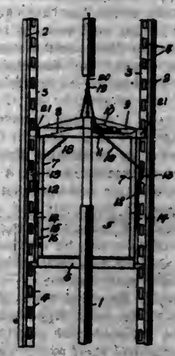
2. A metallic railroad tie provided near each end with a pair of integral lugs between which extends a track rail, each lug fitting against the head and base of the rail and each lug being provided at its inner end with recesses and blocks for engagement with the sides of the rail, and having projections fitting into the sides of the said recesses, and square bolts extending through the said lugs and the said projections to hold the blocks against lengthwise movement.



3. A metallic railroad tie provided near each end with a pair of integral lugs between which extends a track rail, each lug fitting against the head and base of the rail and each lug being provided at its inner face with recesses and blocks for engagement with the sides of the rail, and having projections fitting into the said recesses, and bolts passing through the said blocks of the rail webs of adjacent rails.

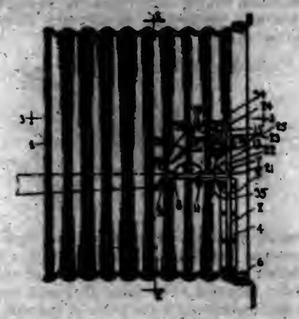
4. A metallic railroad tie provided near each end with a pair of integral spaced lugs for engagement with the head and base of the rail extending between the said lugs, the lugs being provided at their inner opposite faces with V-shaped recesses, clamping blocks fitting against the sides of the rail webs, the under side of the rail head and the top of the rail base, the clamping blocks having V-shaped projections fitting into the rail lug recesses, and means for fastening the said blocks in place on the lugs and rails.

1,024,300. ELEVATOR SAFETY DEVICE. JOHN TÖZSÉR, New York, N. Y., assignor of one-third to Steve Konyha and one-third to Lajos Imrecze, New York, N. Y. Filed Jan. 4, 1912. Serial No. 669,400. (Cl. 187—83.)



An elevator safety device comprising the combination with vertical guides provided with vertically disposed and inwardly extending webs each formed with a vertical row of openings, and a hoisting cable, of a cage slidably mounted between said guides and comprising a platform, vertical and rectangular frames, said rectangular frames having the oppositely disposed sides thereof inclined downwardly, gripping members pivotally connected to said vertical frames and having hook-shaped upper ends offset to engage in the openings of said webs, means carried by said vertical frames and engaging said gripping members for maintaining them in engagement with said webs, bearings carried by the inclined sides of said rectangular frame, pulleys mounted in said bearings and chains connected at one end to said hoisting cable and extending over said pulleys and connected to the offset upper ends of said gripping members for maintaining said members out of engagement with said webs.

1,024,301. BRIDGE-WALL FOR FURNACES. ROBERT WAGNER, Jersey City, N. J. Filed Aug. 10, 1911. Serial No. 643,424. (Cl. 110—75.)



1. In a boiler furnace, a transverse vertical bridge wall supporting plate provided at its upper end with a perforated horisontal, inwardly extending shelf, and a back casting having a vertical portion above and in substantially the vertical plane of the supporting plate, said back casting being also provided with a horisontal inwardly projecting portion resting on the shelf of the supporting plate having longitudinal slots, and bolts passing through these slots and the perforations of the horisontal shelf to adjustably and removably secure these parts together.

2. In a boiler furnace, a transverse vertical bridge wall supporting plate provided at its upper end with a perforated horisontal inwardly extending shelf, and a back casting having a vertical portion above and in substantially the vertical plane of the supporting plate, said back casting being also provided with a horisontal inwardly projecting portion resting on the shelf of the supporting plate having longitudinal slots, bolts passing through these slots and the perforations of the horisontal shelf to adjustably and removably secure these parts together, and vertical longitudinally disposed bridge wall sections resting upon the horisontal portion of the back section removably secured to the upper portion thereof and thereby adjustably and removably held with relation to the bridge wall supporting plate.

3. In a boiler furnace, a vertical transverse bridge wall supporting plate adapted to be secured to the furnace wall provided with an inwardly extending horisontal shelf, at its upper edge, a back casting having a vertical and a horisontal portion, the latter resting upon and removably and adjustably secured to the shelf and adapted to support the rear inner ends of the grate bars, and bridge wall sections arranged vertically side by side on the horisontal portion of the back casting and removably secured to the upright portion of said back casting.

4. In a boiler furnace provided with corrugated walls, a vertical transverse bridge wall supporting plate adapted to be secured to the furnace wall provided with an inwardly extending horisontal shelf at its upper edge, a back casting having a vertical and a horisontal portion, the latter resting upon and removably and adjustably secured to the shelf and adapted to support the rear inner ends of the grate bars, and bridge wall sections arranged vertically side by side on the horisontal portion of the back casting and removably secured to the upright portion of said back casting, the furnace wall being corrugated and the end sections of the bridge wall having vertical flanges adapted to fit into the corrugations of the wall.

5. In a boiler furnace, a vertical transverse bridge wall supporting plate adapted to be secured in the furnace and having a horisontal, inwardly extending shelf at its upper edge, a back casting having a horisontal portion resting upon and removably and adjustably secured to said shelf and shaped to support the rear inner ends of the grate bars, and a vertical portion in substantially the vertical plane of the supporting plate and provided with bolt holes, bridge wall sections arranged side by side resting upon the horisontal portion of the back casting and against the vertical portion thereof and provided with recesses in their rear edges and a depending lug in each recess, a single transverse clamping bar engaged in all of the recesses of the bridge wall sections inside of said lugs, and bolts projecting from the clamping bar out of the recesses and through the bolt holes of the vertical portion of the back casting.

[Claim 6 not printed in the Gazette.]

1,024,302. SIGNAL-LAMP. HENRY C. WAGNER, Brooklyn, N. Y. Filed Nov. 8, 1911. Serial No. 659,218. (Cl. 240—24.)

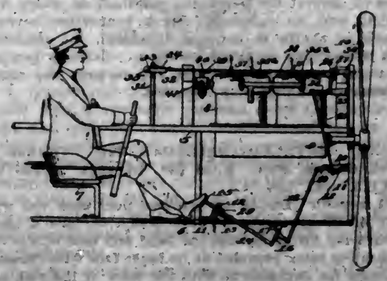


1. The combination in an automobile signal lamp having an opening therein; of a rotatable frame mounted in said lamp between the opening and the burner, a glass plate and opaque plate each having different colors detachably mounted on said frame and movable over the lamp opening to display each of said colors, a manually operable lever located adjacent to the seat of a vehicle, and a mechanism connecting said lever with said rotatable frame in the lamp.

2. The combination in an automobile signal lamp having an opening therein; of a frame rotatably mounted in said lamp, a glass plate having different colors mounted on said frame, a detachable opaque plate having different colors mounted on said frame over said glass plate, a manually operable lever located at the seat of a vehicle, and an operative mechanism connecting said lever with said rotatable frame.

3. The combination in an automobile signal lamp having an opening therein; of a rotatable frame mounted in said lamp, a glass plate having different colors mounted on said frame, an opaque plate having different colors and detachably mounted on said frame over said glass plate, the upper end of said plates being movable past the lamp opening, a notched plate located adjacent the seat of a vehicle, a beveled gear wheel on said plate, a handle hinged to said wheel and projecting upward adjacent to the driver's seat, and a gear mechanism connecting said beveled wheel with the rotatable frame in the lamp.

1,024,303. AEROPLANE-ENGINE-CONTROLLING MECHANISM. HUGH L. WILLOUGHBY, Philadelphia, Pa. Filed Aug. 28, 1911. Serial No. 646,300. (Cl. 244—25.)



1. In controlling mechanism for aeroplane engines, the combination with the engine throttle valve and the spark plug circuit, of a slide connected to the throttle valve, a

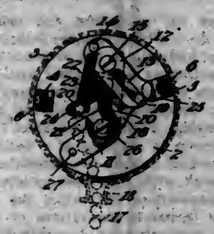
pedal device connected to the slide and having means for restoring the same to normal position when released, and a contact included in the sparking plug circuit and slidably engaged directly by a portion of the pedal device to control the sparking circuit, the pedal device being operable to completely shut off the throttle valve prior to the breaking of the spark plug circuit and the portion of the pedal device engaging the contact being wholly shiftable off the latter.

2. In controlling mechanism for aeroplane engines, the combination with the engine throttle valve and the spark plug circuit, of a slide connected to the throttle valve, a pedal device connected with the slide of the throttle valve to operate the throttle valve to partially or wholly close and open the latter and provided with means for maintaining and breaking the sparking circuit and also operable to wholly shut off the throttle valve prior to breaking the sparking circuit.

3. In controlling mechanism for aeroplane engines, the combination with the engine throttle valve and the spark plug circuit, of a slide connected to the throttle valve, the slide being provided at one extremity with automatically operating locking means to hold the same against movement when the throttle valve is completely closed, and foot operated mechanism connected to the slide to partially or wholly close or partially or wholly open the throttle valve and operable to fully close the throttle valve prior to breaking the sparking circuit.

4. In controlling mechanism for aeroplane engines, the combination with the engine throttle valve and the sparking circuit, of a slide connected to the throttle valve and having an automatically locking extremity, the slide being locked against movement when the throttle valve is fully closed independent of manual retention, and foot operated mechanism connected to the slide and adapted to be actuated to partially or wholly close or open the throttle valve and subsequent to the closing of the latter to break the sparking circuit.

1,024,304. ELECTRICAL PULL-SOCKET. DAVID P. WOLHAUPTER, Washington, D. C. Filed June 17, 1911. Serial No. 633,859. (Cl. 173—354.)



1. A pull socket switch including a member mounted to have a back and forth movement, a fixed pivot, a shifter member mounted upon the fixed pivot and formed upon opposite sides of the longitudinal axis thereof with notches to engage the same, one end of the shifter member having an operative connection with the first mentioned member, a pull element connected to the opposite end of the shifter member, and means for moving the shifter member to bring its opposite notches into engagement with the fixed pivot between consecutive manipulations of the pull element.

2. A pull socket switch including a member mounted to have a back and forth movement, a fixed pivot, a shifter member mounted upon the fixed pivot and formed upon opposite sides of the longitudinal axis thereof with notches adapted to engage the same, one end of the shifter member having an operative connection with the first mentioned member, a pull element connected to the opposite end of the shifter member, and a tension spring connecting the shifter member and first mentioned member, the said spring serving to move the shifter member to alternately bring the opposite notches into engagement with the fixed pivot between consecutive manipulations of the pull element.

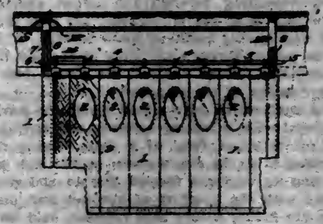
3. A pull socket switch including a member mounted to have a back and forth movement, a fixed pivot, a shifter member formed between the ends thereof with a lateral slot connecting at the extremities thereof with pivot notches, the fixed pivot being adapted to extend into the slot and engage either of the notches and one end of the shifter member having an operative connection with the first mentioned member, a pull element connected to the opposite end of the shifter member, and a tension spring connecting the said opposite end of the shifter member and the first mentioned member, the said spring serving to move the shifter member to alternately bring the opposite notches into engagement with the fixed pivot between consecutive manipulations of the pull element.

4. A pull socket switch including a switch member mounted to have a back and forth movement, a shifter member formed between the ends thereof with a lateral slot connecting at its extremities with pivot notches, a fixed pivot adapted to pass through the slot and engage either of the pivot notches, one end of the shifter member having an operative connection with the first mentioned member, a fixed guide, a pull element passing through the fixed guide and connected to the opposite end of the shifter member, and a tension spring connecting the first mentioned member and shifter member, the said spring serving to move the shifter member to alternately bring the opposite notches into engagement with the fixed pivot between consecutive manipulations of the pull element.

5. A pull socket switch including a pivotally mounted switch member, a fixed guide, a fixed pivot arranged between the guide and the pivot of the first mentioned member and in a straight line therewith, a shifter member mounted upon the fixed pivot and provided upon opposite sides of the longitudinal axis thereof with notches adapted to engage the same, one end of the shifter member having an operative connection with the pivotally mounted member, a pull element passing through the fixed guide and passing through the opposite end of the shifter member, and a tension spring connecting the pivotally mounted member and shifter member, the said spring serving to move the shifter member to alternately bring the opposite notches into engagement with the fixed pivot between consecutive manipulations of the pull element.

[Claims 6 to 16 not printed in the Gazette.]

1,024,305. VEHICLE-CURTAIN. CLARENCE S. APPLAR, Moline, Ill. Filed Jan. 19, 1912. Serial No. 672,063. (Cl. 156—41.)



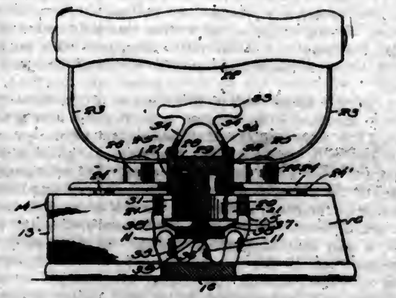
1. The combination with a vehicle top, of an adjustable curtain attachment comprising a curtain proper, a rod on which it is adapted to slide, and a device secured to said top and serving as a pivot and slide for the rod, and means for supporting the rod in horisontal position, substantially as described.

2. The combination with a vehicle top, of an adjustable curtain attachment comprising a curtain proper, a rod on which it is adapted to slide, a bracket attached to the said top at one side and extending up along the same, an eye of the rod being adapted to swing and slide on the bracket, and means for supporting the free end of the rod together with the curtain folded against it, as shown and described.

3. The combination with a vehicle top and an adjustable curtain attachment comprising a curtain proper and a rod on which the curtain is adapted to slide, means for supporting the rod horizontally, a spring clasp attached to the rod at one end and extending along the same, its free end bearing on the rod and thus serving to hold the curtain in folded and vertical position, and means connected with the vehicle top for supporting the free end of the rod, substantially as described.

4. The combination with a vehicle top having a bow extending transversely of the same and vertically on the sides, a bracket guide secured to said bow at its bend, a rod having an eye adapted to swing and slide on the bracket, a curtain provided with rings adapted to slide on the rod, whereby it may be extended or folded thereon, and straps attached to the middle portion of the bow and provided at their free ends with engaging devices, whereby they are adapted to inclose the curtain and rod and support them in horizontal position contiguous to the vehicle top, as shown and described.

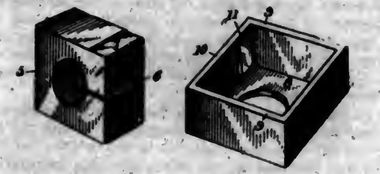
1,024,306. SAD-IRON. AUGUST H. BICKEL, Bridgeport, Conn. Filed July 21, 1910. Serial No. 573,085. (Cl. 68—28.)



1. The combination with a hollow sad iron having a top plate, said plate having a circular aperture formed therein with a pair of radiating slots extending from diametrically opposite points on the periphery of the aperture, of a plate resting on the top of the sad iron and having a handle secured thereto, said plate having an aperture formed therein to lie above the aperture of the top plate and having an annulus surrounding said aperture and formed with an upper cam face, and a standard depending through the alined apertures and having a cam head bearing against the cam face of the annulus and having resilient arms secured to its lower end to be passed through the slots of the sad iron plate and clampingly forced against the under face of said plate by rotation of the standard.

2. The combination with a hollow sad iron having a top plate formed with a central aperture and having recesses formed in its upper face, of a plate having depending a central aperture surrounded by an annulus having a cam upper edge, a standard passing downward through the aperture in the plate and having a cam head adapted to ride on the cam edge of the annulus; said standard having resilient arms for engaging a sad iron upon rotation of the standard relative to the plate and annulus, and a handle pivoted to the cam head of the standard for rotating the standard.

1,024,307. NUT-LOCK. ROBERT BOLES, Eldersville, Pa. Filed Feb. 1, 1912. Serial No. 674,641. (Cl. 151—19.)



In a nut locking device, the combination with a bolt, of a washer, integral walls carried thereby, a wedge carried by the inner side of one of said walls, a slit nut arranged in said washer and having a beveled facet engaged by the wedge of said washer, said nut and said washer being screwed upon said bolt whereby said washer will clamp said nut upon said bolt.

1,024,308. MANUFACTURE OF AZO COLORING-MATTERS CONTAINING A CARBAZOLE DERIVATIVE. HANS BUCHERER, Biebrich, Germany, assignor to The Firm of Kalle and Company, Aktiengesellschaft, Biebrich, Germany. Filed Apr. 1, 1910. Serial No. 552,877. (Cl. 8—1.)

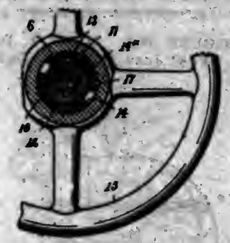
1. The process for producing azo coloring matters which consists in treating heteronucleo-beta-amino derivatives of 1-naphthol-3-sulfonic acid with aryl-hydrazins in presence of a compound containing the sulfurous acid radical and combining the obtained products with diazo compounds.

2. The process for producing azo coloring matters which consists in treating 2-amino-5-naphthol-7-sulfonic acid with an aryl-hydrazin in the presence of a compound containing the sulfurous acid radical and combining the obtained carbazole compound with a diazo compound.

3. Process for producing azo coloring matters which consists in treating 2-amino-5-naphthol-7-sulfonic acid with phenyl-hydrazin in presence of a compound containing the sulfurous acid radical and combining the obtained carbazole compound with diazotized xylidin.

4. As new compositions of matter the dye stuffs obtained from the carbazole derivatives of the hetero-nucleal beta-amino derivatives of 1-naphthol-3-sulfonic acid with diazo compounds constituting in dry state red to brown to black more or less crystalline powders, soluble in water with a yellowish-red to bluish-green color; soluble in concentrated sulfuric acid with a violet blue to

1,024,309. ADJUSTING DEVICE FOR FEED-SHAFTS. EDWARD P. BULLARD, Jr., Bridgeport, Conn. Filed Mar. 31, 1911. Serial No. 618,240. (Cl. 77—82.)



1. In an adjusting device of the class described the combination with a fixed indicator member, of a rotary shaft, a graduated member mounted upon the shaft to be read in conjunction with the fixed member, a sleeve mounted upon the shaft and having pockets and shoulders, a wheel mounted loosely upon the sleeve and having shoulders within and susceptible of a limited amount of lost motion with reference to the sleeve and adapted to be turned against the shoulders of the sleeve to knock the same and adjust the shaft.

2. In an adjusting device of the class described, the combination of a rotary shaft having a squared portion, a removable sleeve slid upon the squared portion of the shaft and having pockets therein, a wheel loosely mounted upon the sleeve and having teeth that fit into the pockets of the sleeve and that are of a less arcuate dimension than the pockets to insure a limited amount of lost motion of the teeth within the pockets and to permit said teeth to be turned against the shoulders of the sleeve to knock the same and adjust the shaft.

1,024,310. APPARATUS FOR BORING WELLS. ROGER H. CANFIELD, Mooringsport, La. Filed Oct. 14, 1911. Serial No. 654,680. (Cl. 166—3.)



an inner column secured at its lower end to said head, a series of rings mounted between the abutting ends of the drill pipe sections comprising the outer column, and a series of collars on the inner column, said rings being adapted to engage said collars, substantially as described.

3. In a well boring apparatus, the combination with a column of drill piping composed of a series of sections of pipe connected together, of a perforated head attached to the lower end of said column, a bit secured to said head, a hollow inner column secured at its lower end to said head, and means for locking the drill pipe to the inner column, substantially as described.

4. In a well boring apparatus, the combination with a column of drill piping composed of a series of sections of pipe connected together, of a perforated head attached to the lower end of said column, a bit secured to said head, a hollow inner column secured at its lower end to said head, a series of rings mounted between the abutting ends of the drill pipe sections composing the outer column, and a series of collars on the inner column, said rings being adapted to engage said collars, substantially as described.

5. In a well boring apparatus, the combination with a column of drill piping composed of a series of sections of pipe, with screw-threaded sleeves connecting said sections together, of a perforated head attached to the lower end of said column, a bit secured to said head, an inner column secured at its lower end to said head and provided with set collars, and means for locking the drill pipe to the inner column, consisting of rings mounted in said sleeves between the ends of said drill pipe sections, said rings being adapted to engage said set collars on said inner column, substantially as described.

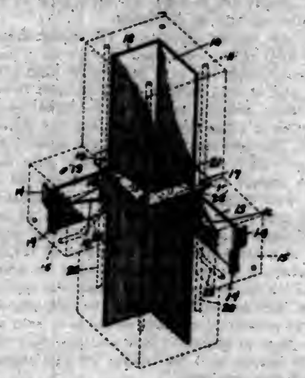
[Claims 6 to 8 not printed in the Gazette.]

1,024,311. ELECTRIC-LIGHT-SOCKET HANDLE. FRED CLAPHAM, Glen Mills, Pa. Filed Sept. 5, 1911. Serial No. 647,502. (Cl. 240—88.)



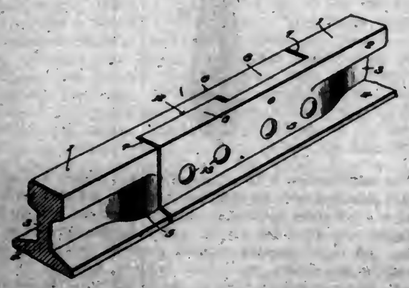
The combination with an electric lamp socket having a nipple provided with an external thread, of a sleeve formed with a contracted internally threaded portion detachably engaging the threaded nipple, and a handle formed with

2. In a concrete stiffening medium a bar adapted to be embedded in a column, outwardly projecting wings formed on the bar and adapted to be embedded in the ends of concrete girders joining and at substantially right-angles to such column, reversely outturned anchoring ears on the ends of the wings, a plate surrounding the bar and resting on the wings and adapted to receive reinforcing rods within such column, the said bar being provided with perforations adapted to receive truss-rods embedded in said girders.



3. In a concrete stiffener a bar of angular contour adapted to be embedded in a column, outwardly projecting wings formed on and extending beyond the free longitudinal edges of said bar and adapted to be embedded in the ends of concrete girders joining and at substantially right-angles to such column, and reversely outturned anchoring ears on the ends of said wings the said wings being of less depth than said girders and provided with openings for locking engagement in the girders.

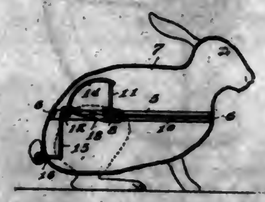
1,024,313. RAIL-JOINT. CLARENCE M. CORLEW, Sioux Falls, S. D., assignor of one-third to John Mundt, Sioux Falls, S. D. Filed June 14, 1911. Serial No. 633,160. (Cl. 239—8.)



1. A rail section formed at one end with a longitudinal tongue, and locking members rigid with and projecting from the inner face of the tongue at diagonally opposite corners thereof, the tongue being formed at the remaining corners of its inner face with seating recesses for the reception of the members of the mating tongue.

2. A rail section formed at one end with a longitudinal tongue and locking members rigid with and projecting from the inner face of the tongue at diagonally opposite corners thereof, the tongue being formed at the remaining corners of its inner face with seating recesses, a filler member conforming to one of the tongues and provided with projections at its diagonally opposite corners to seat in the seating recesses of said tongue, and clamping devices bearing upon opposite sides of the tongue and filler member and extending in advance of the same and adapted to bear over the adjacent portion of an abutting rail.

1,024,314. FIGURE TOY. HARRY T. DENLINGER, Lancaster, Pa. Filed June 16, 1911. Serial No. 633,453. (Cl. 46—9.)



1. A toy comprising a body, having an open bottom, a propelling arm pivoted within the body, a spring for moving the propelling arm and a tail carrying member pivoted within the body and provided with means for holding the propelling arm against the action of the spring.

2. A toy comprising a body having an open bottom, an arm pivoted within the body adapted to swing through the open bottom to propel said body, a spring for moving said arm through said open bottom, and a catch for holding said arm against the action of the spring and provided on one end with a tail.

3. A toy comprising a body having an open bottom, propelling means movable through said open bottom and pivoted upon the said body and adapted to move the same, a spring connected with said propelling means and provided with a lever and a tail piece coöperating with said lever to hold said propelling means against the action of the spring.

1,024,315. AUTOMATICALLY-STABILIZED SUPPORTING-PLANE FOR AEROPLANES AND THE LIKE. PIERRE OCTAVE DETABLE, Paris, France. Filed Aug. 23, 1910. Serial No. 578,580. (Cl. 244—12.)

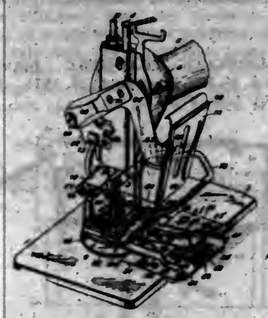


1. A supporting plane of the character described comprising a front plane and a trapesoidal rearward prolongation thereof in the same plane, together with untensioned fabric on each side of the latter forming on expansion a substantially semi-conical supporting surface with its point toward the front.

2. A supporting plane of the character described comprising a front plane and a trapesoidal rearward prolongation thereof in the same plane, together with untensioned fabric on each side of the latter forming on expansion a substantially semi-conical supporting surface with its point toward the front, said conical surface having a rearward prolongation of different contour.

3. A supporting plane of the character described comprising a front plane and a trapesoidal rearward prolongation thereof in the same plane, together with untensioned fabric on each side of the latter forming on expansion a substantially semi-conical supporting surface with its point toward the front, in combination with a second plane above the front plane, and oblique planes diverging from front to rear secured to said upper and lower front planes and serving to hold the upper plane in position.

1,024,316. STRIP FOLDING AND GUIDING ATTACHMENT FOR SEWING-MACHINES. ALBERT H. DE VOE, Westfield, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed July 29, 1911. Serial No. 641,253. (Cl. 112—9.)



1. In a fabric guide for sewing machines, a lower strip-folding guide adjustably mounted on the bed-plate of the sewing machine and provided with means for folding the oppositely arranged longitudinal edges of a lower facing strip, a fold-retaining element, a fold-positioning element and a body fabric edge-guide carried by said lower strip-folding guide, in combination with an adjustably mounted upper strip-folding guide provided with means for folding the oppositely arranged longitudinal edges of an upper facing strip and coacting with means for forming a fold across the end of said upper facing strip, and means for positioning said last mentioned fold in operative relationship with the stitch-forming mechanism.

2. In a fabric guide for sewing machines, a lower strip-folding guide secured to a carrying plate adjustably mounted on the bed-plate of the sewing machine, said lower strip-folding guide being provided with means for folding the oppositely arranged longitudinal edges of a lower facing strip, a fold-retaining element, a fold-positioning element and a body fabric edge guide carried by said lower strip-folding guide, in combination with an adjustably mounted upper strip-folding guide carried by the cloth-presser carrying bar and provided with means for folding the oppositely arranged longitudinal edges of an upper facing strip and coacting with means for forming a fold across the end of said upper facing strip, and means for positioning said last mentioned fold in stitching relationship with the previously positioned facing strip and body fabric.

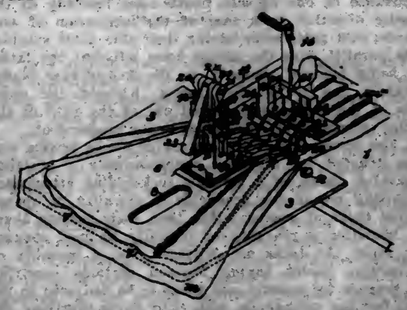
3. In a fabric guide for sewing machines, a cloth-presser mechanism, a lower strip-folding guide adjustably mounted on the bed-plate of the sewing machine and provided with means for folding the oppositely arranged longitudinal edges of a lower facing strip, a fold-retaining element, a fold-positioning element, and a body fabric edge-guide carried by said lower strip-folding guide, in combination with an adjustably mounted upper strip-folding guide provided with means for folding the oppositely arranged longitudinal edges of an upper facing strip and coacting with means carried by said cloth-presser mechanism for forming a fold across the end of said upper facing strip, and means for positioning said last mentioned fold in operative relationship with the stitch-forming mechanism.

4. In a fabric guide for sewing machines, a cloth-presser mechanism including compensating cloth-pressers, a lower strip-folding guide adjustably mounted on the bed-plate of the sewing machine and provided with means for folding the oppositely arranged longitudinal edges of a lower facing strip, a fold-retaining element, a fold-positioning element and a body fabric edge-guide carried by said lower strip-folding guide, in combination with an adjustably mounted upper strip-folding guide provided with means for folding the oppositely arranged longitudinal edges of an upper facing strip and coacting with means for forming a fold across the end of said upper facing strip, and means for positioning said last mentioned fold in operative relationship with the stitch-forming mechanism.

5. In a fabric guide for sewing machines, a cloth-presser mechanism including compensating cloth-pressers, one of which is provided with oppositely arranged adjustably secured edge-guides, a lower strip-folding guide adjustably mounted on the bed-plate of the sewing machine and provided with means for folding the oppositely arranged longitudinal edges of a lower facing strip, a fold-retaining element, a fold-positioning element and a body fabric edge-guide carried by said lower strip-folding guide, in combination with an adjustably mounted upper strip-folding guide provided with means for folding the oppositely arranged longitudinal edges of an upper facing strip and coacting with means for forming a fold across the end of said upper facing strip, and means for positioning said last mentioned fold in operative relationship with the stitch-forming mechanism.

[Claim 6 not printed in the Gazette.]

1,024,317. MULTIPLE-TUCK FOLDER FOR SEWING-MACHINES. JOHN DOUGLAS, Newark, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Feb. 12, 1908, Serial No. 415,561. Renewed Aug. 28, 1911. Serial No. 646,544. (Cl. 112—12.)



1. The combination with a sewing machine provided with stitch-forming mechanism comprising a plurality of reciprocating needles, of a multiple tuck-folding attachment comprising means for producing a plurality of spaced parallel tucks overlying the body of the fabric and of greater width than their spacing apart, and a presser-foot provided with a plurality of needle-holes and a plurality of curved guide-slots each embracing a needle-hole upon one side and formed with side walls correspondingly inclined forwardly and rearwardly of the needle-hole.

2. A multiple tuck-folding attachment for sewing machines comprising upper and lower fluted plates having a plurality of rearwardly converging intermeshing ribs and grooves extending substantially in the direction of feed of the work of a depth at their delivery ends greater than their spacing apart, said ribs merging at their delivery ends into laterally inclined tongues and presenting at their receiving ends slightly sinuous lines to facilitate the introduction of the material between the forward edges of the plate in substantially flat condition, a plurality of fold-turning blades having their body portions overlying said inclined tongues and provided with flanges extending intermediate the bases of said tongues, and a presser-foot having a heel portion with continuous work-engaging face extending across the same and formed with a series of forwardly projecting fingers each provided with a needle-hole and affording intermediate tuck-guiding spaces in alinement with the forward extremities of said blades, the sides of said fingers being inclined rearward of the needle-holes to lay the tucks flat for engagement of the heel portion of the presser-foot after the stitching operation, whereby the tucks are delivered in flat condition.

3. A multiple tuck-folding attachment for sewing ma-

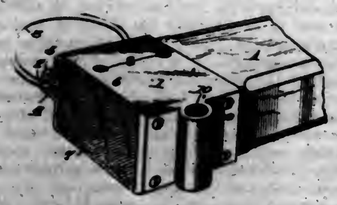
chines, comprising upper and lower fluted plates having a plurality of rearwardly converging intermeshing ribs and grooves extending substantially in the direction of feed of the work and of a depth at the delivery ends greater than their spacing apart, said ribs extending in advance of the upper plate and merging into laterally inclined tongues, a plurality of fold-turning blades having their body portions overlying said inclined tongues and provided with flanges extending intermediate the bases of said tongues, and means in alinement with the delivery ends of said tongues for deflecting the folds delivered by said tongues laterally in the opposite direction from their inclination to expose the bases of the adjacent tucks for stitching.

4. The combination with a multiple needle sewing machine adapted for stitching simultaneously a plurality of parallel seams, of a multiple tuck-folding attachment comprising means for producing a plurality of spaced parallel tucks of greater width than their spacing apart and including a plurality of laterally inclined tongues over which the tucks are delivered, and a plurality of fold-turning blades having inclined portions overlying said tongues for causing said tucks to be delivered to the stitch-forming mechanism with their bases overlying the body of the fabric, and a presser-foot provided with a plurality of needle-holes and a corresponding number of guide-slots each extending from the front of said foot in advance of one of said needle-holes laterally in the opposite direction from that of the inclination of said tongues, said guide slots having their side walls substantially parallel with the needle holes adjacent the latter and being inclined similarly to the fold-turning blades forwardly and rearwardly thereof, whereby the outer edges of the tucks are deflected out of the path of the needles entering said needle-holes in the presser-foot.

5. The combination with a multiple needle sewing machine adapted for stitching simultaneously a plurality of parallel seams, of a multiple tuck-folding attachment comprising means for producing a plurality of spaced parallel tucks of greater width than their spacing apart and including a plurality of laterally inclined tongues over which the tucks are delivered, and a plurality of fold-turning blades having inclined portions overlying said tongues for causing said tucks to be delivered to the stitch-forming mechanism with their bases overlying the body of the fabric, and a presser-foot provided with a plurality of needle-holes and a corresponding number of curved guide-slots each extending from the front of said foot in advance of one of said needle-holes to a point behind the same and embracing the latter upon the side opposite the direction of inclination of said tongues, whereby the outer portions of the tucks are laterally deflected to expose the bases of the adjacent tucks for passage of the needles and are thereafter restored to initial relation with the bodies of the tucks to conceal the stitching upon the bases thereof.

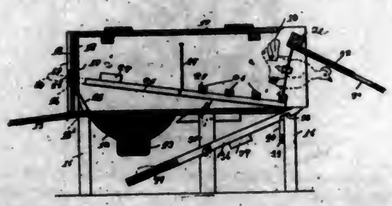
[Claims 6 to 8 not printed in the Gazette.]

1,024,318. EVENER-BAR. ELMER DUSCHEN, Silver Springs, N. Y. Filed July 11, 1911. Serial No. 637,862. (Cl. 21—78.)



A draft pole, a doubletree extending across the pole, a clip embracing the intermediate portion of the doubletree, a bolt extending through the clip and through the pole, a plurality of pairs of ears formed upon the rear of the clip, a clevis having eye portions fitted between the ears, bolts extending through the ears and through the eye portions of the clevis, and a stop member secured to the pole at a point rearwardly of the doubletree and slidably receiving the said clevis and operable to limit the pivotal movements of the doubletree.

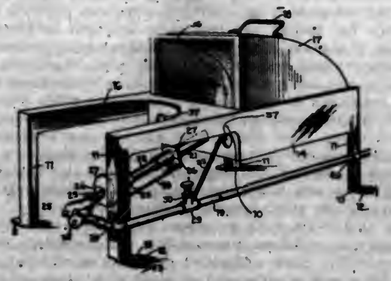
1,024,319. AUTOMATIC TRAP-NEST. JOHN E. DUSTIN, Pittsfield, N. H. Filed Sept. 18, 1911. Serial No. 649,778. (Cl. 119—47.)



1. A nest including a casing, a vertically movable entrance trap door, a tilting platform within the casing, an extension on said platform engaged through a slot in said entrance door and operating upon depression of said platform to lift said entrance door to open position, a swinging departure door pivoted adjacent to its upper corners to the casing, and a connection between said departure door and said platform operating to swing said departure door to open position upon depression of said platform.

2. In a nest an entrance door, operating means therefor, a tilting platform, a swinging departure door, a connection between said platform and said departure door operating to swing the latter open upon depression of said platform, said departure door being provided with a depending slotted extension, a pivoted latch below the nest having one end lockingly engaged in the slot of said extension, an egg chute adapted to direct an egg from the interior of said casing to the free end of said latch whereby the weight of said egg rocks said latch and releases the same from said departure door, and a weight assembled with said departure door serving to rock the door partly open upon release of said latch and prior to the operation of said tilting platform.

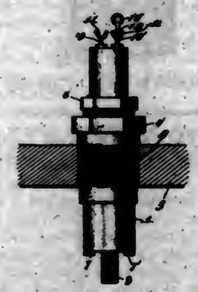
1,024,320. SOLDERING-IRON HEATER. RUBIN EISENBERG, Baltimore, Md., assignor of one-half to Isaac Drukman, Baltimore, Md. Filed May 10, 1911. Serial No. 626,313. (Cl. 158—118.)



1. A burner of the class described comprising a burner pipe, a fuel supply pipe, a fuel mixing bell provided with a discharge pipe, said discharge pipe adjustably fitted in said burner pipe, said bell being provided with an inlet opening in alinement with the discharge end of the supply pipe, a substantially U shaped supporting bracket connecting the discharge end of the supply pipe with the burner pipe for holding said supply pipe and burner pipe in their correct relative position, and a controlling valve for said supply pipe.

2. A burner of the class described comprising a burner pipe, a fuel supply pipe, a fuel mixing bell provided with a discharge pipe, said discharge pipe adjustably fitted in said burner pipe, said bell being provided with an inlet opening in alinement with the discharge end of the supply pipe, an elongated bracket provided with upwardly extending angle ends, one of said ends engaging said supply pipe, a collar carried by the other end and engaging said discharge pipe for holding said pipes in their correct spaced relation and valve means carried by said supply pipe.

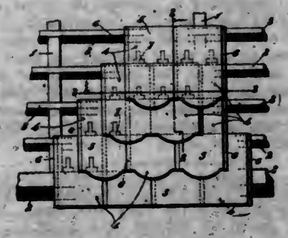
1,024,321. SPARK-PLUG. WILLIAM ELLIS, Harrod, Ohio. Filed May 12, 1911. Serial No. 626,713. (Cl. 123—169.)



1. In a spark plug, a shell having a plurality of inturned prongs at its lower end, and an insulating plug in the shell having a downwardly extending web forming a partition between the prongs, electrodes extending through the plug, said electrodes terminating at opposite sides of the web, each electrode adapted to spark to one of the inturned prongs, and each electrode having switch engaging means at its upper end, and a resiliently supported switch lever to alternately engage the switch engaging means of the several electrodes.

2. In a spark plug, a shell having prongs at its lower end, an insulating plug having a downwardly extending web forming a partition between the prongs, electrodes extending through the plug at opposite sides of the web and terminating adjacent to the prongs, each of said electrodes being provided with switch engaging means at its upper end, a resilient supporting member, a switch lever, an insulating block connecting the switch lever with the supporting member, said lever being adapted for alternate engagement with the electrodes, and a binding post and a handle upon the switch lever.

1,024,322. ROOFING-TILE. JOHN BAPTISTE FIROBEN, Columbus, Ohio. Filed Feb. 7, 1911. Serial No. 607,044. (Cl. 108—10.)



In combination, supporting stripe, ribs mounted upon said supporting strips, tile bodies resting upon the supporting strips, lugs formed integral with the tile bodies and having flanges to engage beneath the ribs to lock the tile bodies in position upon the supporting strips, a reinforcing plate covering the face of the lugs and the flanges, and tongues formed on said reinforcing plates and being substantially embedded in the lugs to prevent disengagement of the plates.

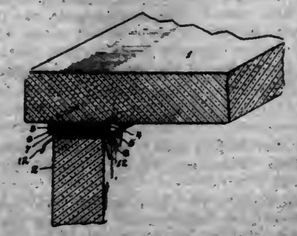
1,024,323. COUNTER DISPLAY AND STORAGE CASE. LOUIS FRANK, Wilkes-Barre, Pa. Filed May 11, 1911. Serial No. 626,581. (Cl. 211—7.)



1. In a display case, a case proper, transparent sliding doors constituting the front of the case, a vertical longitudinal partition spaced from said front, shelves arranged between said partition and said sliding doors, a horizontal partition extending entirely across said case proper from said sliding doors to the rear of the case proper, said horizontal partition being positioned above said vertical partition, a drawer extending for the full depth of said case proper and located above said horizontal partition, and a plurality of receptacles arranged below said drawer and in the space opposite said vertical partition.

2. In a display case, a base portion, upright corner members mounted thereon, end members for the case, a top supported by the corner members, slidable transparent doors constituting part of the front of the case, a vertical longitudinal partition spaced from the front, forming compartments, and terminating below the top, reflecting means mounted on the front of the partition, adjustable brackets also mounted thereon, transparent shelves carried by the brackets, a horizontal partition connected with the top of the vertical partition, receptacles in one of the compartments formed by the vertical partition, and a display device mounted above the horizontal partition and extending substantially the full width of the case, such device having a transparent front wall and said case having a transparent panel at the front of the horizontal partition and constituting the front of the upper portion of the case.

1,024,324. SHOW-CASE. FRANCIS X. GANTER, Baltimore, Md. Filed June 23, 1910. Serial No. 568,499. (Cl. 211—25.)



1. A show case embodying adjoining plates of glass, a transparent coating of sizing applied directly to the sur-

face of one of the plates, a deposited metallic layer on said sizing and showing therethrough, a protective coating of shellac covering said metallic layer, a second protective coating of mineral paint over said shellac coating, and a cementitious binder between said second protective layer and the other plate.

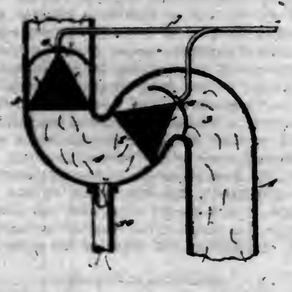
2. A show case embodying adjoining plates of glass, a transparent coating of sizing applied directly to the surface of one of the plates, a deposited metallic layer on said sizing and showing therethrough, a protective covering over said metallic layer, a cementitious binder between said protective layer and the other plate, said binder comprising separable leaves having a connecting fold, and means disposed between said leaves for cutting through said fold.

1,024,325. HAT-PIN PROTECTOR OR GUARD. CHARLES H. GIESE, Jr., Newark, N. J. Filed May 22, 1911. Serial No. 628,761. (Cl. 24—155.)



A hat pin guard comprising a cylindrical tube having one end directed inwardly with its inwardly directed end provided with a central perforation and having slots radiating from the perforation to provide the inner end of the tube with gripping fingers and a spring member in the tube for engagement with the fingers to movably force them into binding engagement with the pin and thereby reinforce the gripping action of said fingers on said pin.

1,024,326. SMOKE-PURIFIER AND DUST-COLLECTOR. ARTHUR GOWDEN, Riverside, Cal. Filed Jan. 19, 1911. Serial No. 603,464. (Cl. 110—142.)



In a smoke purifier and dust collector, the combination with a stack having an S-shaped bend therein forming a pocket, of a screen cone located within the stack and in the bend, a second screen received in the stack beyond the bend, said first named screen placed to receive the smoke upon its outer surface and said second screen adapted to receive the smoke upon its inner surface, rotary sprays located at the apexes of the screens, and a water outlet formed in the pocket.

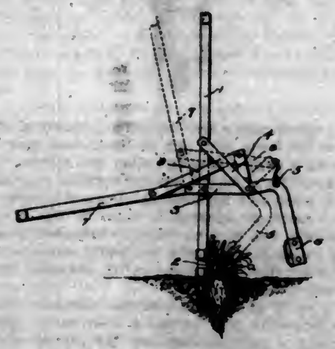
1,024,327. CINDER-GUARD. HARRY S. GRIMES, Portsmouth, Ohio. Filed Aug. 25, 1911. Serial No. 645,920. (Cl. 98—21.)

In a cinder-guard for car windows, the combination with a bracket comprising a back plate and inwardly-extending wings slightly removed therefrom, and presenting a centrally-located longitudinal slot between their adjacent edges, of a fender provided with oppositely-extending flanges adapted to slide into the space and slot of the bracket, the fender resting by its own weight in the bracket, and one of said members having means thereon



for retaining the fender in place by gravity in the bracket.

1,024,328. ROOT-PULLER. MICHAEL E. GROSSER, Waterville, N. Y. Filed Nov. 27, 1911. Serial No. 662,608. (Cl. 55—148.)



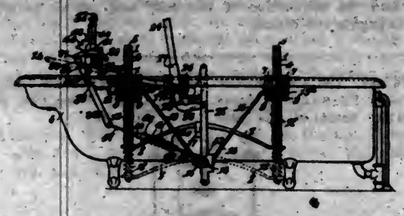
1. In an implement of the class described, a spade member, an arm carried thereby, brace means for said arm, a gripping member movably carried by said arm and adapted to move against said spade member, and means for actuating said gripping member, said brace means acting as a guide for the last mentioned means and said gripping means.

2. In an implement of the class set forth a spade member, an arm carried thereby, spaced brace members for said arm, a gripping member carried by said arm and adapted to move between and be guided by said brace members, an operating lever for said gripping member, and connections between said lever and gripping member.

3. In an implement of the class set forth, a spade member, an arm projecting in opposite directions from said member, spaced brace members for said arm, a gripping member carried by said arm and adapted to move between and be guided by said brace members, an operating lever carried by said arm on the opposite side of said spade member, and spaced connecting members between said lever and gripping member, said connecting members passing on each side of said spade member and between said brace members.

1,024,329. SANITARY ATTACHMENT FOR BATH-TUBS. ARCHIE L. GROW, Beaumont, Kans. Filed Mar. 18, 1911. Serial No. 615,398. (Cl. 4—27.)

1. A bath tub attachment including a vertically movable support, springs for maintaining the support in an elevated position within the bath tub and having sufficient power to elevate the bather, and operating mechanism for forcing the support downward to lower the same within the bath tub.



2. A bath tub attachment including a support movable upwardly and downwardly, springs arranged exteriorly of the bath tub and connected with the support for maintaining the same in an elevated position within a bath tub and having sufficient power to elevate a bather, operating mechanism connected with the support for forcing the same downward within the bath tub against the action of the springs, and locking mechanism for holding the support in its lowered position.

3. A bath tub attachment comprising a vertically movable supporting frame provided at spaced points with exterior vertical slidable portions, springs connected with the vertically slidable portions for maintaining the supporting frame in an elevated position and having sufficient power to elevate a bather, and operating mechanism connected with the supporting frame and having means for depressing the same against the action of the springs and for holding the supporting frame in a depressed position.

4. A bath tub attachment comprising a supporting frame including spaced transverse supports composed of approximately U-shaped platform receiving portions arranged to extend within a bath tub, and exterior vertically slidable portions, guiding means for the latter, a platform carried by the U-shaped portions, springs connected with the exterior vertically slidable portions for raising the platform, and operating mechanism for compressing the springs to lower the platform within the bath tub.

5. A bath tub attachment comprising a supporting frame including spaced transverse supports connected with each other and composed of inner platform receiving portions arranged to extend within a bath tub, and outer vertical rods, guides receiving the rods, yieldable means connected with the supporting frame for moving the same upwardly and for maintaining the supporting frame in an elevated position, and operating mechanism for depressing the supporting frame.

[Claims 6 to 39 not printed in the Gazette.]

1,024,330. MIXTURE SUITABLE FOR BAKING-POWDER. REINHOLD GRÜTER, Charlottenburg, Germany. Filed Dec. 2, 1911. Serial No. 663,548. (Cl. 99—10.)

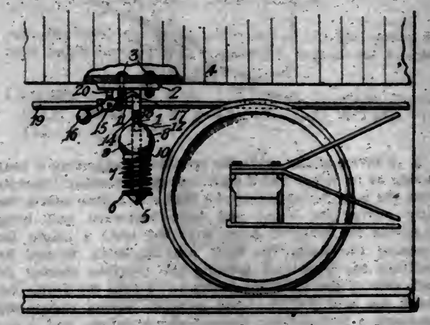
1. The herein described baking powder, the constituents of which react only at the higher temperature obtained in baking and which consists of a mixture of anhydrous organic oxy-acids and a salt of carbonic acid.

2. The herein described baking powder, the constituents of which react only at the higher temperature obtained in baking and which consists of a mixture of the anhydrous acid derivatives of organic oxy-acids and a salt of carbonic acid.

1,024,331. SAFETY AIR-BRAKE APPLIANCE FOR RAILWAY-CARS. JOHN ALFRED GILLENBERG, Baker, Oreg., assignor of one-half to John L. Rand, Baker, Oreg. Filed Feb. 9, 1911. Serial No. 607,626. (Cl. 188—2.)

1. A safety air brake appliance including a brake valve having an oscillatory operating arm, an actuating weight normally supported in an inert position, and means for connecting the weight with the arm when the device is subjected to violent vertical movement to cause the weight to actuate the arm and open the valve.

2. A safety air brake appliance including a brake valve having an oscillatory operating arm, an actuating weight normally supported in an inert position, means for connecting the weight with the arm when the device is subjected to violent vertical movement to cause the weight to actuate the arm and open the valve, and means arranged in the path of the arm for locking the valve in its open position.



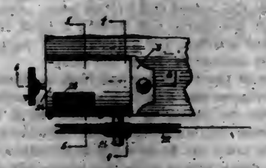
3. A safety air brake appliance including a brake valve having an operating lever connected at an intermediate point with the valve and provided at one of its arms with a weight for holding the valve normally in its closed position, another weight normally supported in inoperative relation with the lever, and means for automatically connecting it with the lever when the device is subjected to violent movement.

4. A safety air brake appliance including an air brake valve having operating means, a weight normally located below the operating means and provided with means for engaging the same, and means for throwing the weight upward into engagement with the valve operating means when the appliance is subjected to violent movement incident to the wheels of a car leaving the track, whereby the valve will be opened and the brake applied.

5. A safety air brake appliance including a brake valve having operating means, a weight normally located beneath the operating means and provided with means for engaging the same, and a spring normally supporting the weight and adapted when the latter is subjected to violent movement to throw the weight upwardly into engagement with the valve operating means to cause the weight to open the valve and apply the brakes.

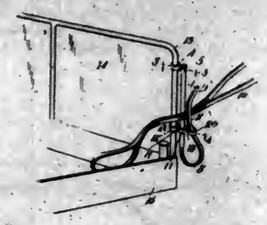
[Claims 6 to 17 not printed in the Gazette.]

1,024,332. THREADOMETER. CLARENCE A. HAMMOND-KNOWLTON, New York, N. Y. Filed May 12, 1910. Serial No. 560,977. (Cl. 235—117.)



In a threadometer, an actuating stub shaft having a socketed end, a setting shaft having one end freely engaging said socketed end and having a ratchet groove therein, a series of registering disks mounted on said setting shaft, a pinion secured to each face of each disk, the pinions on one side of each disk having the full complement of teeth and the pinions on the opposite side having two teeth, a driving shaft, pinions mounted on said driving shaft, each pinion meshing with a set of pinions between adjacent disks, means holding said pinions against displacement, and an inwardly-projecting pawl carried by each disk and adapted to engage said ratchet groove.

1,024,333. LINE-HOLDER. GEORGE B. HARLESTON, Stuttgart, Ark. Filed Feb. 21, 1912. Serial No. 679,110. (Cl. 21—127.)



1. A device of the character specified, comprising a body having at its upper end a split bearing extending laterally from the body for engaging the frame of a dash-board, the body having its lower end bent backward and lying alongside the body to form with the body a clamp for grasping the lines, the split bearing being formed by splitting the body and bending the portions thereof on each side of the split outwardly to engage the frame between the said portions, said portions having registering openings, a bolt passing through the openings, and a nut engaging the bolt, a clamp on the body between the split bearing and the connection of the body and return portion for engaging the frame, said clamp comprising a bearing for the body and a connected split bearing for the frame, means for clamping the split bearing on the frame, and a plate secured to the clamp by the said means and having a hook for engaging the return bent portion.

2. A device of the character specified, comprising a body having at its upper end a split bearing extending laterally from the body for engaging the frame of a dash-board, the body having its lower end bent backward and lying alongside the body to form with the body a clamp for grasping the lines, the split bearing being formed by splitting the body and bending the portions thereof on each side of the split outwardly to engage the frame between the said portions, said portions having registering openings, a bolt passing through the openings, and a nut engaging the bolt, a clamp on the body between the split bearing and the connection of the body and return portion for engaging the frame, and a plate secured to the clamp and having a hook for engaging the return bent portion, the extremity of the said portion being inclined outwardly from the body.

3. A device of the character specified, comprising a body having at its upper end a split bearing extending laterally from the body for engaging the frame of a dash-board, the body having its lower end bent backward and lying alongside the body to form with the body a clamp for grasping the lines, means for clamping the bearing on the frame, a clamp for connecting the body to the frame arranged near the lower end of the body, a plate secured to the body at the clamp and having a hook for engaging the return bent portion, the extremity of the said portion being inclined outwardly from the body.

4. A device of the character specified, comprising a body having at its upper end a split bearing extending laterally from the body for engaging the frame of a dash-board, the body having its lower end bent backward and lying alongside the body to form with the body a clamp for grasping the lines, means near the lower end of the body for engaging the frame, and means intermediate the ends of the body for engaging the body and the return bent portion, the extremity of the said portion being inclined outwardly away from the body.

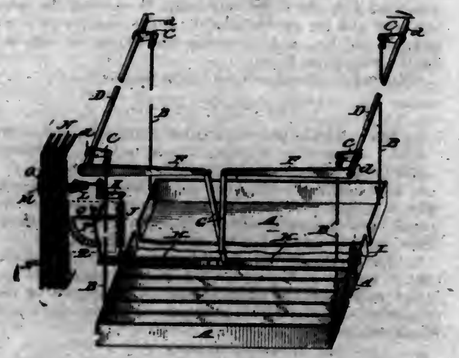
5. A device of the character specified, comprising a body having at its upper end a split bearing extending laterally from the body for engaging the frame of a dash-board, the body having its lower end bent backward and lying alongside the body to form with the body a clamp for grasping the lines, the split bearing being formed by splitting the body and bending the portions thereof on each side of the split outwardly to engage the frame between the said portions, said portions having registering openings, a bolt passing through the openings, and a nut engaging the bolt, and a clamp on the body between the split bearing and the connection of the body and return portion for engaging the frame.

1,024,334. INCANDESCENT-MANTLE CHIMNEY. BENJIMAN FRANKLIN HARMAN, Tulsa, Okla. Filed Feb. 25, 1910. Serial No. 545,899. (Cl. 240—96.)



An incandescent lamp chimney comprising a hollow mica body, bands secured to and reinforcing the upper and lower ends of the body, a perforated sheet metal cylinder depending from the lower end of the body and of less diameter than said body, a perforated horizontal flange connecting the upper edge of the cylinder with the lower reinforcing band, said cylinder being provided with slits in its sides adjacent said flange, and longitudinal reinforcing strips secured to the reinforcing bands and having offset portions extending beneath the horizontal flange and through the slits into the cylinder and down upon the inner side thereof, and secured at their lower ends to the lower edge of the cylinder.

1,024,335. WEIGHING APPARATUS FOR REFRIGERATORS. FRANK B. HARRINGTON, Elk City, Okla. Filed Oct. 23, 1911. Serial No. 656,344. (Cl. 73—46.)



1. The apparatus adapted for the use specified, comprising a pan, parallel rock-shafts arranged over the pan, and means for suspending the latter therefrom, an indicating lever arranged between the pan and the rock-shafts and having a fixed fulcrum, a supporting spring, and a movable index connected with the free end of the indicator, the said rock-shafts having long lever arms, and push-rods connected at their free ends with the indicator lever, whereby a weight imposed on the pan depresses the indicating lever correspondingly, substantially as described.

2. The combination of parallel horizontal rock-shafts, brackets attached to a fixed support and on which the rock-shafts are supported rotatably, lever arms projecting inward from the rock-shafts, an indicating lever pivoted on a fixed fulcrum below the rock-shafts, and push-rods connecting the same with the lever arms, a spring support for the free end of the lever, and means for supporting and adjusting the spring vertically, as shown and described.

1,024,336. RESILIENT TIRE. NOAH HARRIS, Indianapolis, Ind. Filed Nov. 28, 1910. Serial No. 593,821. (Cl. 152—5.)



In a resilient tire, the combination of a troughed rim, a cover having a soft major portion and hard edge portions of increased width extending laterally outward beyond the major portion and also having the hard edge portions arranged in the troughed rim, resilient cushioning material arranged in the cover, hoops surrounding the said edge portions of the cover and arranged in the seats or grooves thereof, and a cover support formed by a solid mass of resilient material, of less width than the rim, surrounding the said rim and interposed between the edges of the cover and also interposed between the rim and the cushioning material, whereby it is adapted to form a bed or rest for said cushioning material and is also adapted to serve as an auxiliary cushion.

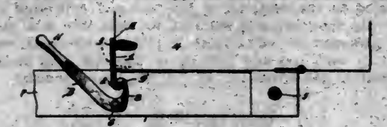
1,024,337. HAT-PIN PROTECTOR. CHARLES A. HUFFMASTER, San Leandro, Cal. Filed Nov. 6, 1911. Serial No. 658,795. (Cl. 24—155.)



A guard and protecting device for hat pins, said device comprising an inner tube having a slot therein, an outer casing having an opening therethrough in substantial alinement with said slot, a cam fulcrumed in the slot in the inner tube and having an arm extending through the opening in the outer casing, a collar upon the inner tube, and a spring acting between the bottom of the casing and the collar to force the inner tube forward and cause the cam to grip the pin.

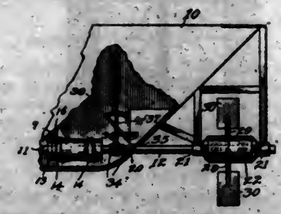
1,024,338. LOCKING DEVICE FOR DUMP-CARTS. GREENE HULING, Hampton, Conn. Filed Oct. 24, 1911. Serial No. 656,383. (Cl. 21—20.)

In a dump cart, an axle having a forwardly extending beam, a cart body including a sill hingedly connected with the axle, and a locking device comprising a plate secured upon the front end of the sill and having at its lower extremity a rearwardly extending hook member, and a lever pivoted upon the beam and having an upwardly extending heel portion terminally hooked to engage the hook member of the plate, said lever having also a forwardly extending handle portion provided with a laterally projecting flange engaging the upper face of the beam upon which the lever is fulcrumed; the opposed faces of the hook members



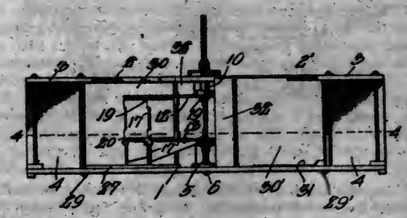
upon the lower end of the plate and on the heel end of the lever being beveled to automatically engage one another.

1,024,339. PROPELLER. CHARLES H. JOHNSON, Eureka, Utah. Filed May 16, 1911. Serial No. 627,386. (Cl. 115—45.)



A device of the character described comprising a drive shaft, a driven shaft, a coupling connecting said shafts, said coupling comprising a plurality of sections, each of said sections provided with registering longitudinally extending grooves, laterally extending lugs formed upon said driven shaft and working in said grooves, a rack formed upon each side of said driven shaft propeller hub sections, propeller blade shafts carried between the abutting ends of said propeller hub sections, each of said propeller blade shafts provided with an enlarged collar formed thereon, a segmental gear carried near the inner end of said propeller blade shaft and meshing with said rack gears upon said driven shaft for adjusting the angle of said propeller blades when said driven shaft is reciprocated within said coupling.

1,024,340. HYDRAULIC MOTOR. NIEL VICTOR JOHNSON, Seattle, Wash. Filed Aug. 8, 1911. Serial No. 642,971. (Cl. 138—12.)

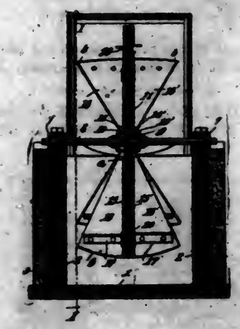


A hydraulic motor having a wheel, composed of two circular disks spaced apart, two series of radially swinging blades disposed therebetween, one of each series forming a radius of the wheel when in water receiving position, a plate secured by the pivot of each outer blade to the outer edge of the lower disk and having a depending apron peripherally of the disk, a collar centrally of and below the lower disk, a rod having its ends journaled in each apron and upon said collar, and a swingingly depending blade journaled upon each rod and of reduced area toward the center of the wheel.

1,024,341. WATER-MOTOR. NIEL VICTOR JOHNSON, Tacoma, Wash. Filed Aug. 17, 1911. Serial No. 644,642. (Cl. 138—12.)

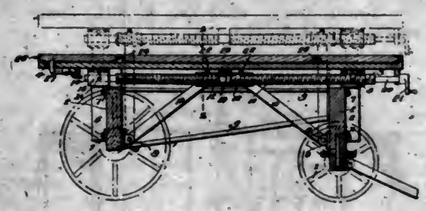
1. A water wheel comprising a shaft, a sectional hub mounted thereon and providing a concentric cavity there-

about, a circular disk clamped between the sections of the hub to the shaft, a series of rods having their lower ends connected to the sections of the hub and extending radially out upon opposite sides of the disk, the said rods being arranged in radial pairs, a paddle swingingly connected to each rod and radially of the disk, and means for limiting the extension of the respective paddles.



2. A water wheel comprising a shaft, a sectional hub mounted thereon and providing a concentric cavity thereabout, a circular disk clamped between the sections of the hub to the shaft, a series of rods having their lower ends connected to the sections of the hub and extending radially out upon opposite sides of the disk, the said rods being arranged in radial pairs, a paddle swingingly connected to each rod and radially of the disk, said disk being provided with elongated apertures through the body thereof, and an arm carried by each of said paddles and adapted to project through the opening of the disk and lock the paddles in extended position.

1,024,342. BAGGAGE-TRUCK. ROBERT W. KIDSTON, Youngstown, Ohio. Filed Mar. 8, 1911. Serial No. 613,083. (Cl. 21—65.)



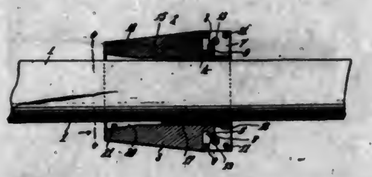
A baggage truck of the character described, comprising a wheel supported framework, including transversely extending frame members, vertically disposed guides secured to said frame members at the front and rear of the framework, respectively, guide bars mounted for a vertical sliding movement in said guides and provided at their upper ends with horizontally disposed longitudinally extending hollow bosses, a floor to which the upper ends of said guide bars are fastened, the guide bars being arranged in pairs, the members of each pair being laterally spaced from each other, links pivotally connected at their lower ends to the framework, yokes to which the upper ends of said links are pivotally connected, the yokes being formed with two end bearings and an intermediate bearing, respectively, guide rods passing through said end bearings and secured at their ends in the said bosses, an actuating rod having right and left-hand screw threaded portions working in the intermediate bearings of the respective yokes, and a rotary connection between said actuating rod and the floor.

1,024,343. FARE-REGISTER. ARTHUR J. LALAND, Mobile, Ala. Filed Oct. 28, 1910. Serial No. 589,638. (Cl. 235—99.)



The combination with a vehicle having a stationary platform, and a fare register for passengers; of members on the vehicle for providing a constricted passageway on said platform; a platform section movably mounted within the constricted passageway of the stationary platform, and having the surface thereof flush with the surface of said stationary platform; a rectangular frame of channel bar construction secured to the underside of the stationary platform and surrounding said movable section; a pair of bars of angle iron construction secured to said rectangular frame and disposed in parallel relation immediately beneath said movable section; a plurality of bolts secured to the movable section and passing through apertures in said parallel bars; spiral springs surrounding said bolts and disposed between said parallel bars and the movable section and resiliently supporting the latter; a bar secured to the underside of said movable section and projecting therefrom; and means connecting said projecting bar and fare register operable to actuate the latter through the movements of the former, substantially as described.

1,024,344. CLUTCH-COLLAR. DESIRE LANGEVIN, Rumford, Me. Filed Dec. 18, 1909. Serial No. 533,873. (Cl. 74—8.)

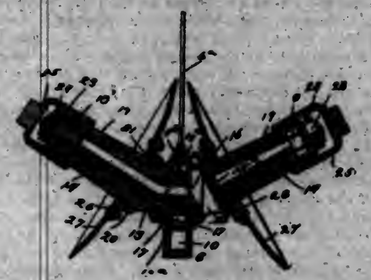


In combination, a sleeve adapted to be mounted upon a shaft and to be moved the full length thereof and formed with a longitudinally-split and thickened end and provided with external screw threads, a collar mounted upon the sleeve and formed with an external shoulder on one end thereof, one end of the bore of said collar being enlarged to receive the thickened end of the sleeve and provided with an inwardly directed lug adapted to prevent relative movement between said sleeve and collar, a sectional ring interlocking with the external shoulder of said collar and rotatable thereon and provided with internal screw threads adapted to engage the screw threads of the sleeve and move said sleeve within said collar to force the split end of said sleeve in clutching relation to the shaft, and screws connecting the sections of the ring.

1,024,345. LISTER-PLANTER. RALPH R. LANGLEY, Lincoln, Nebr. Filed Mar. 17, 1910. Serial No. 550,070. (Cl. 111—11.)

1. In a planting machine, the combination with a seed tube shank having formed therein a vertical slot, of an axle comprising an intermediate portion and end portions

integral with the intermediate portion and projecting at an angle therefrom, said intermediate portion being mounted in the said vertical slot, furrow opening disks carried by the end portions of the axle, and two sleeves interposed between the disks and the axle, and having lugs on their inner ends, the said tube shank being formed with vertical guideways to receive the said lugs whereby the disks may be adjusted vertically while maintaining a single permanent angular relation to the lines of travel of the machine.



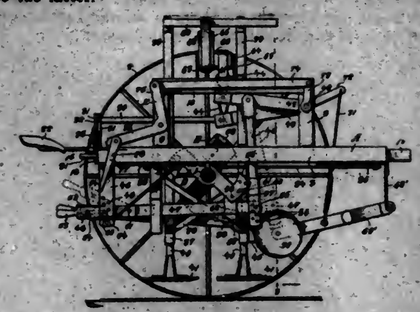
2. In a planting machine, the combination with a seed tube shank having formed therein a vertical slot, of an axle comprising an intermediate portion and end portions integral with the intermediate portion and projecting at an angle therefrom, said intermediate portion being mounted in the said vertical slot and capable of vertical adjustment therein, of devices upon the axle engaging the said tube shank in such a manner as to permit vertical adjustment of the axle and to prevent angular movement of the axle, and locking devices for releasing the said adjusting device for permitting vertical adjustment without permitting angular movement, and furrow opening disks carried by the two end portions of the axle.

3. In a planting machine, the combination with a seed tube shank formed with a vertical slot, of an axle comprising an intermediate portion and an end portion rigid with the intermediate portion and projecting at an angle therefrom, said intermediate portion being mounted in the said vertical slot and being vertically adjustable therein, axle boxes one upon each end of the axle and each being rigidly secured to its inner end, devices mating with cooperating parts upon the said tube shank so as to permit vertical adjustment of the axle while preventing angular movement thereof, nuts, one for each end of the axle, the axle being threaded to receive the same, said nuts being adapted to hold the said axle boxes in engagement with the said tube shank, and furrow opening disks carried by the two end portions of the axle.

4. In a planting machine, the combination with a seed tube shank formed with a vertically extending transverse slot, of an axle having a portion extending horizontally through the slot and adjustable therein, and an end portion rigid with the first named portion and projecting at an angle therefrom, an axle box upon the said end portion of the axle and provided with devices at its inner end for engaging with coöperating parts on the tube shank to permit vertical adjustment of the axle while preventing angular movement thereof, a furrow opening disk carried by the said axle and axle box, and means for clamping the said axle and axle box in vertically adjusted position upon the shank.

1,024,346. COTTON-CHOPPER. CARL W. LEUENBERGER, McGregor, Tex. Filed Aug. 15, 1911. Serial No. 644,095. (Cl. 97—45.)

1. In a cotton chopper, a main frame, a wheel carrying axle supporting said frame, a tiltable frame supported upon the main frame, a hoe carrying rocking frame supported for oscillation upon the tiltable frame, pivotally supported bars having anvil blocks, tappet members extending from the axle for engagement with the anvil blocks, and means connecting the anvil carrying bars with the hoe carrying rocking frame to impart oscillatory motion to the latter.



2. In a cotton chopper, the combination with suitable supporting means, of a hoe carrying rocking frame, an axle supported for rotation and having tappet arms arranged approximately at right angles to each other adjacent to opposite sides of the axis of the rocking frame, pivotally supported anvil carrying bars mounted in registry with the tappet arms, suitably supported levers having terminal stirrups, links connecting said levers with the anvil carrying bars, rock shafts supported adjacent to the sides of the rocking frame, each rock shaft being provided with a drum and with a cam member, flexible elements connecting the drums with the stirrups, and a flexible element connected intermediate its ends with the rocking frame and terminally connected with the cam members.

3. In a cotton chopper, a main frame, a tilting frame supported therein, means for adjusting the tilting frame, a rocking frame supported for oscillation upon the tilting frame and including vertically disposed socket members, hoe carrying shanks adjustable in the socket members, and means for oscillating the hoe carrying rocking frame, said means including an axle, tappet arms extending therefrom, pivotally supported anvil carrying bars disposed for engagement by said tappet arms and means connecting said bars with the rocking frame.

4. In a cotton chopper, a rocking frame, and means for imparting oscillatory motion thereto, said means including an axle, tappet arms extending therefrom, bracket members having supporting pins, anvil carrying bars disposed for engagement by said tappet arms and having slots engaging said pins, latch members pivotally connected with the bars and having notches to engage the pins, and means connecting the free ends of the anvil carrying bars with the rocking hoe carrying frame.

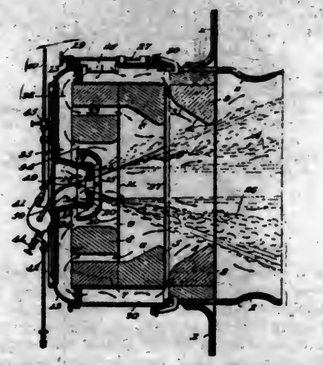
5. In a cotton chopper, a rocking hoe carrying a frame, means for imparting oscillatory motion to said frame, and means for setting up vibration in said frame at the end of each stroke, said means including frame bars, rods connecting the same, spring actuated slides mounted upon said rods and confining between them a member of the rocking frame, and tubular cushions supported upon the rods between the slides and lying in the path of the rocking frame member.

1,024,347. OIL-FED FURNACE. ARTHUR H. LIGHT, Los Angeles, Cal. Filed Mar. 29, 1910. Serial No. 552,151. (Cl. 158—1.)

1. In an oil fed furnace the combination of a plurality of refractory rings provided with inclined walls and with air passages leading to said walls; an additional front ring; a burner located in the aperture of said ring in front of its inner wall whereby it is shielded from the heat by the same; a shield surrounding said burner leaving an air passage between the wall of said aperture and said shield; and means for regulating the air flowing to all of said passages, substantially as described.

2. In an oil fed furnace, the combination of a refractory lining; a burner adapted to deliver a cone-shaped flame against said lining; passages for delivering a constant sup-

ply of air at a plurality of points to the exterior of said cone shaped flame and also to the interior of said flame; and means for supplying a uniform mixture of oil and steam to said burner, substantially as described.



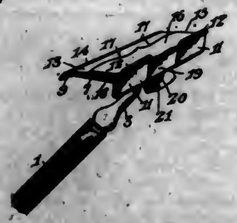
3. In an oil fed furnace the combination of a refractory lining; a burner adapted to deliver a cone-shaped flame against said lining; passages for delivering a constant supply of air at a plurality of points to the exterior of said cone-shaped flame and also to the interior of said flame; and means for supplying a uniform mixture of oil and steam to said burner, comprising a centrifugal mixing chamber adapted to contain oil in which said steam enters tangentially, substantially as described.

4. In an oil fed furnace, the combination of a refractory lining provided with air passages; a burner adapted to deliver a cone-shaped flame against said lining; an air passage associated with said burner adapted to deliver air to the interior of said cone-shaped flame; and an oil and steam mixer adapted to deliver a uniform fuel mixture to said burner comprising a mixing chamber, a tangential entrance thereinto, and delivery pipes leading substantially from the center of said chamber, substantially as described.

5. In an oil fed furnace, the combination of a refractory lining provided with air passages; a burner adapted to deliver a cone-shaped flame against said lining; an air passage associated with said burner adapted to deliver air to the interior of said cone-shaped flame; a shield surrounding said burner and providing an air passage on the outside of said burner; a T connection adapted to be used as an oil and steam mixer and adapted to deliver a uniform fuel mixture to said burner comprising a mixing chamber, a tangential entrance thereinto, and delivery pipes leading from substantially the center of said chamber, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,024,348. SAFETY-RAZOR. JENS N. LORENZEN, Fremont, Ohio. Filed Jan. 28, 1911. Serial No. 605,311. (Cl. 30—12.)



1. In a safety razor, a blade support having a handle fast thereto, and a blade holder readily attachable to and separable from the blade support and adapted to receive a wafer blade, the blade holder being provided with a locking member and the blade support being provided with a coacting locking portion into engagement with which the locking member of the blade holder is movable in a direction substantially perpendicular to the plane of the blade support, the locking member on the blade holder and the coacting locking portion of the blade support constituting the sole locking means for holding the blade holder and blade to the blade support.

2. In a safety razor, a blade support having a handle permanently fast thereto and provided with a guard at one edge and spaced extensions at the other edge constituting abutments, and a blade holder adapted to receive a wafer blade and provided with a tongue projecting therefrom intermediate of the length of the blade holder and at an angle thereto, the blade holder with its tongue coacting with the abutments and with a blade in said holder to constitute the sole locking means for holding the blade and blade holder to the blade support.

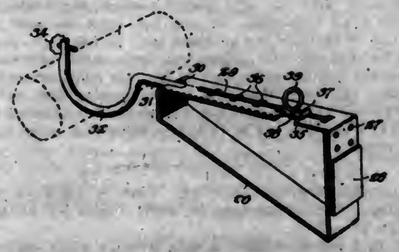
3. In a safety razor, a blade support having one edge provided with a flange with spaced extensions thereon returned on the flange and terminating beyond the active face of the support, and a holder for a razor blade having a tongue adapted to the space between the extensions of the flange of the support, said blade holder and its tongue coacting with the flange and flange extensions of the support to lock the holder with a blade to the support.

4. A safety razor having a blade support in the form of a plate provided at one edge with a guard and at the other edge with a flange directed away from the active face of the support and formed with return extensions in spaced relation to the flange and to each other and terminating in outturned edges beyond the active face of the support, and a blade holder comprising a plate having spaced return portions constituting clips for grasping the blade, said plate having formed thereon intermediate of the clips a tongue with an inset portion, said blade holder coacting with the return extensions of the flange of the blade support to lock the blade holder to the support by the inset portion of the flange of the blade holder.

5. In a safety razor, a blade holder comprising a body portion provided with clips returned on the body portion to embrace the edge of the blade remote from the cutting edge thereof when the blade is in the holder with the cutting edge projecting therefrom, and a blade support for receiving the blade holder and a blade therein with the cutting portion of the blade in engagement with said support and with the rear edge of the blade spaced by the clips from the support, the blade holder being provided with a depending elastic locking means contiguous to and on the same side of the holder as the clips for engaging the blade support to secure the blade holder and blade to the support.

[Claim 6 not printed in the Gazette.]

1,024,349. CURTAIN-HOLDER. AUGUST MATTERN, Baltimore, Md. Filed Mar. 1, 1911. Serial No. 611,549. (Cl. 156—24.)



1. A curtain pole support, comprising a frame formed from a single piece of metal bent into substantially triangular shape, one end of the metal being secured spaced from its other end, the free end of the metal being bent to form an offset extension for detachable engagement with the shade bracket, the said frame being formed with a slot in its top and front, a pole holder having a shank passed through the slot in the front of the frame, and means engageable in the slot in the top of the frame and carried by the shank for locking the holder in adjusted position in the frame.

2. A curtain pole support, comprising a frame formed from a single piece of metal bent into substantially triangular shape, one end of the metal being secured spaced from its other end, the free end of the metal being bent to form an offset extension for detachable engagement with the shade bracket, the said frame being formed with a slot in its top and front, a pole holder having a shank passed through the slot in the front of the frame and having an upturned nib, the said frame being provided in its top with notches in alinement with each other and opening into the said slot for receiving the nib, and a member swiveled in the shank of the holder and working in the slot for locking the nib to sustain the pole holder in adjusted position in the frame.

1,024,350. TOY PISTOL. RAPHAEL A. MOORE, Portsmouth, Ohio. Filed June 21, 1911. Serial No. 634,512. (Cl. 42—57.)

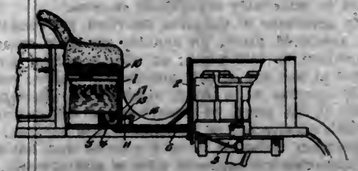


1. A pistol comprising a handle and barrel, the latter made in half sections, and a lid for one side of the handle pivotally held at one end to the handle by an end of one half section of the barrel.

2. A pistol comprising a handle, a sectional barrel, said handle having a magazine therein, and a lid pivotally connected to the handle for closing the magazine, one section of the barrel connected to the handle, and the other section adapted to engage the lid for holding it in pivotal engagement with the handle.

3. A pistol comprising a handle and a sectional barrel, said handle having a magazine therein, a lid pivotally connected to the handle for closing the magazine, one section of the barrel connected to the handle, and the other section adapted to engage the lid for holding it in pivotal engagement with the handle, and means for connecting the two sections of the barrel together.

1,024,351. FUEL-FEED SYSTEM. FREDERICK M. MURPHY, Chicago, Ill. Filed Nov. 18, 1911. Serial No. 661,126. (Cl. 158—46.5.)

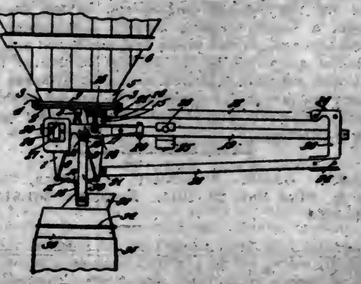


1. In an automobile fuel feed system, a motor, a main fuel reservoir, an auxiliary fuel reservoir in the line of feed between the main fuel reservoir and the motor, a valve controlling communication between said reservoirs, said valve being adapted in its open position to permit flow of fuel from one reservoir to the other and in closed position to cut off the flow of fuel between said reservoirs and admit of the access of air to the auxiliary reservoir, and means for locking said valve in closed position.

2. In a fuel feed system for automobiles, a motor, a main fuel reservoir, an auxiliary fuel reservoir in the line of feed between the main reservoir and motor, a valve controlling communication between said reservoirs, said valve being operative in one position to establish communication between the reservoirs and in another position to close communicaton between the reservoirs and open communication between the auxiliary reservoir and the atmosphere, a lever for operating the valve, and means for locking said lever to said stationary bracket member to hold the valve closed.

3. In an automatic fuel feed system, a motor, a main fuel reservoir, an auxiliary fuel reservoir in the line of feed between the main fuel reservoir and the motor, a valve casing in the line of feed between said reservoirs, said casing having an air inlet, a valve in said casing provided with a passage adapted when in open position to tablish communication between the atmosphere and the in closed position to register with said air inlet and establish communication between the atmosphere and the auxiliary reservoir, an operating member for adjusting said valve, and means for locking said operating member in valve-closing position.

1,024,352. SCALE. WALTER D. NASH, Atlanta, Ga., assignor to Atlanta Utility Works, Atlanta, Ga. Filed Jan. 18, 1911. Serial No. 602,444. (Cl. 73—38.)



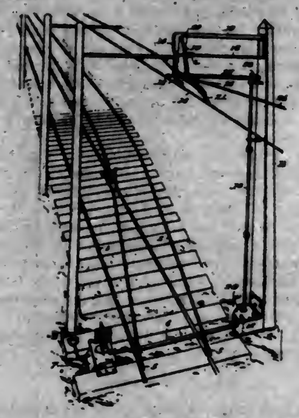
In a device of the class described, a hopper; swing rods pivotally connected with the hopper; a closure for the bottom of the hopper, carried by the swing rods, the lower end of the hopper and the closure being disposed in an arc of which the pivotal mounting of the swing rods is a center; a scale beam; a yoke connected with the scale beam and having diverging arms extended upon the outside of the swing rods; means for pivotally connecting the yoke with the hopper; suspension members pivotally connected with the yoke, and located upon the outside of the swing rods; a hood secured to the lower ends of the swing rods; and a handle secured to the closure and located between the suspension members, when the closure is extended across the bottom of the hopper.

1,024,353. COMBINED TRACK AND TROLLEY SWITCH OPERATING MECHANISM. JOHN EDWARD NICHOLSON, Elkhart, Ill., assignor of one-half to Darrel Nicholson, Dexter, Kans. Filed Feb. 15, 1911. Serial No. 608,732. (Cl. 191—11.)

1. In a trolley line, the combination of an arm, means for connecting the conductor with said arm, a hanger pivotally connected at its upper end with said arm, means for connecting a trolley switch with the lower end of said hanger, and a second arm forming a guide for said hanger.

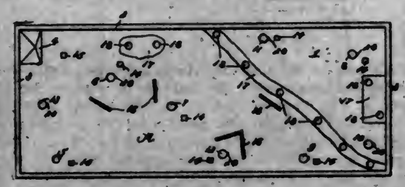
2. In a trolley line, the combination of an arm, means for connecting the conductor with said arm, a hanger pivotally connected at its upper end with said arm, means for connecting a trolley switch with the lower end of said hanger, a second arm having an opening through which the hanger passes and is directed in its movements thereby, and a spring located in the opening

of the second arm and exerting a lateral pressure against the hanger to hold the trolley switch in engagement with the conductor.



3. In a trolley line, the combination of an arm having a pendent portion at one end, a second arm forming a brace for the pendent portion and having an opening therein, a hanger passing through the opening of the second arm and pivoted to the first mentioned arm, a main conductor supported by the pendent portion of the first mentioned support, a branch conductor attached to said hanger, and means for operating the hanger to throw the branch conductor into or out of engagement with the main conductor.

1,024,854. GAME. WILLIAM C. O'DONNELL, Plainfield, N. J. Filed Nov. 22, 1911. Serial No. 661,815. (Cl. 46—62.)

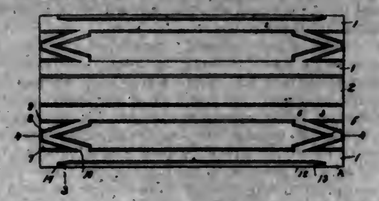


In a game of the class described, a box formed to provide a golf course and having openings formed therein to receive the golf balls, covers mounted in said openings and removable therefrom, means attached to said covers for removing the same, a receptacle below said box and provided with an inclined bottom to facilitate the convenient recovery of the balls, and said box having an opening formed therein to permit of such recovery of the balls.

1,024,855. FACING-TILE. JOHN B. OWENS, Zanesville, Ohio. Filed Sept. 16, 1911. Serial No. 649,592. (Cl. 72—18.)

1. A tile provided upon its rear surface with a holding bar, a gripping element formed at each end of said holding bar, pairs of spaced parallel triangular-shaped gripping members formed upon the rear surface of the tile and spaced from said gripping elements, and a positioning bar formed upon the rear face of the tile at the longitudinal edge thereof and in parallel relation with said holding bar.

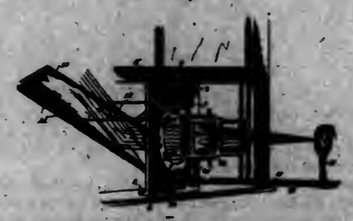
2. A tile provided upon its rear surface with a holding bar, gripping elements formed at each end of said holding bar, pairs of triangular-shaped gripping elements formed upon the rear surface of the tile and substantially inclosing said gripping elements and spaced therefrom, and a positioning bar formed upon the rear face of the tile at the longitudinal edges thereof and in parallel relation with said holding bar.



3. A tile provided upon its rear surface with a holding bar, a gripping element formed at each end of said holding bar, and pairs of triangular-shaped gripping members formed upon the rear surface of the tile for coöperation with said gripping elements in the application of the tile to a support.

4. A tile provided upon its rear surface with a holding bar, a gripping element formed upon said holding bar, and pairs of triangular shaped gripping members formed upon the rear surface of the tile for coöperation with said gripping element in the application of the tile to a support.

1,024,856. PROJECTING APPARATUS. HERBERT F. PATTON, Cleveland, Ohio. Filed Sept. 9, 1910. Serial No. 581,192. (Cl. 88—24.)



1. In apparatus of the character described the combination of an apertured plate; an annulus rotatably secured in the aperture in said plate; a mirror pivotally attached at one end to said annulus, said mirror having a plurality of recesses disposed at intervals along the sides thereof; and extensible connections between said annulus and mirror, said connections being adapted to detachably engage said recesses.

2. In apparatus of the character described, the combination of an apertured plate; an annulus rotatably secured in the aperture in said plate; an oblong mirror pivotally attached at one end to said annulus, said mirror having a plurality of similarly disposed sets of recesses along the sides thereof; and extensible connections between said annulus and mirror, said connections being adapted to detachably engage said recesses.

3. In apparatus of the class described, the combination of an apertured plate; an annulus rotatably secured in the aperture in said plate; an oblong mirror pivotally attached at one end to said annulus; a member mounted in said annulus at a point substantially diametrically opposite to the point of attachment of said mirror and adjustable transversely of the plane of said annulus; and a fork pivotally attached to said member and having its arms connected with opposite sides of said mirror.

4. In apparatus of the class described, the combination of an apertured plate; an annulus rotatably secured in the aperture in said plate; an oblong mirror pivotally attached at one end to said annulus and having a similar series of spaced engaging elements on each side; a member mounted in said annulus at a point substantially diametrically opposite to the point of attachment of said mirror and adjustable transversely of the plane of said annulus; and a wire fork pivotally attached to said member and having the ends of its arms formed to engage selected engaging elements on the sides of said mirror.

5. In apparatus of the class described, the combination of an apertured plate; an annulus rotatably secured in the aperture in said plate; a rod detachably secured to one face of said plate so as to extend at substantially right angles, and adapted to support light-projecting means; means on the corresponding face of said annulus adapted to detachably hold a lens; means on the other side of said annulus adapted to support a mirror in adjustable position relatively to the aperture in said plate; and means on the same side of said plate adapted to optionally support a lamp.

[Claim 6 not printed in the Gazette.]

1,024,857. MOLD. EMIL PFEIFER, Mascoutah, Ill. Filed Sept. 23, 1911. Serial No. 650,873. (Cl. 25—118.)



A mold including side bars and end bars, means for moving said end bars longitudinally of the side bars so as to vary the length of the mold, said end bars including relatively movable sections provided with alining elongated slots, a combined positioning and adjusting screw adapted to engage the slots of one of said end bars to hold the sections in adjusted position, and a block adapted to be engaged by the said screw and adapted to be positioned within the mold to form a slot or cut out portion in the material being molded, means adapted to engage the slots in the sections of the other end bar, the sections of said end bars permitting the lateral adjustment of the said side bars.

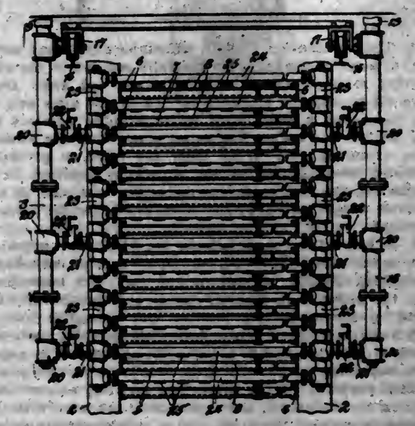
1,024,858. FRUIT-PICKER. KIRK D. PIERCE, Hillsboro, and SIDNEY C. ELLIS, Keene, N. H. Filed Sept. 25, 1911. Serial No. 651,119. (Cl. 56—99.)



1. A fruit picker of the class described comprising a socket formed from a blank sheet of material and being provided with a pair of rolled portions constituting guide ways, a loop portion carried by the upper end of said socket, and being bent at right angles to said socket, clamping means pivotally secured to said loop portion and adapted to fit over the same for clamping the bag upon said loop portion and a fruit engaging member working in said guide ways and overhanging said first mentioned loop portion for separating fruit from the tree and depositing the same within said bag.

2. The combination with a pole, of a socket having rolled portions on each side thereof extending the entire length of said socket, a receptacle carried by said socket, a fruit engaging member slidably mounted in said rolled portions and having its lower end partially encircling said pole for forming a guiding loop for said fruit engaging member whereby said loop will be held in engagement with said pole, and means engaging said guiding loops for reciprocating the same within said rolled portion.

1,024,859. SLIME-CONCENTRATOR. EDWARD CARPENTER PORTER, Morenci, Ariz. Filed Mar. 2, 1911. Serial No. 611,887. (Cl. 83—89.)



1. In a slime concentrator, a series of superposed tables for extracting the values from pulp flowed thereon, and means for washing off the deposit from said tables comprising headers on opposite sides of the tables, travelers supporting said headers, and spray pipes connecting said headers and arranged to receive water from both headers simultaneously.

2. In a slime concentrator, a series of superposed tables, and a reciprocable grid of spray pipes in transverse relation to said tables, said grid being composed of a plurality of sets of spray pipes, each set comprising a plurality of spray pipes connected in multiple at both ends by headers.

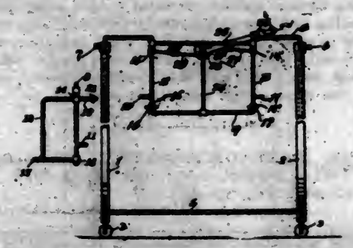
3. In a slime concentrator, a series of superposed tables, and a reciprocable grid of spray pipes in transverse relation to said tables, said grid being composed of a plurality of sets of spray pipes each set comprising a plurality of spray pipes connected in multiple at both ends by headers, each connection between a set of spray pipes and a respective header including a valve.

4. In a slime concentrator, a series of superposed tables, the several tables being in substantially parallel relation one to the other, tracks above the series of tables in parallel relation thereto, travelers adapted to said tracks, a header pipe structure on each side of the series of tables supported by and in depending relation to the respective traveler, a plurality of sub-headers for each main header, a valved connection between each sub-header and the respective main header, and spray pipes each extending transversely of a table and connected at each end to a respective sub-header, each sub-header carrying a plurality of spray pipes.

5. In a slime concentrator, a series of superposed tables, a grid of spray pipes in traversing relation to the tables and adapted to be moved lengthwise of the tables, and extended supports for the head ends of the tables into relation to which the grid of spray pipes is movable to leave the tables free from obstruction to their removal.

[Claims 6 to 12 not printed in the Gazette.]

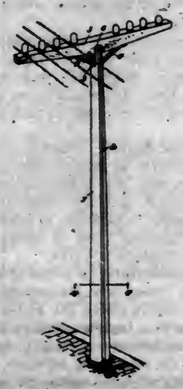
1,024,360. BAG-HOLDER. ABRAHAM REIMER, Steinbach, Manitoba, Canada. Filed Feb. 27, 1911. Serial No. 611,075. (Cl. 83—26.)



1. The combination with an adjustable supporting member, of a set of similar arms pivotally secured to the supporting member and swingable toward and away from each other, gripping members carried by the arms and by the supporting member, such latter gripping members being located in a higher horizontal plane than the former, bars extending rearwardly from the arms, a pivotally mounted lever carried by the supporting member, links connecting the lever with the respective bars, and an adjustable weight carried by the lever, as and for the purpose specified.

2. A bag holder comprising a set of similar opposing legs suitably interconnected at the bottom, an adjustable supporting member carried by the legs and telescoping into the upper ends thereof, opposing arms pivotally secured to the supporting member and swingable toward and away from each other, removable gripping jaws secured to the arms and to the supporting member in pairs, bars extending rearwardly from the arms, a stub shaft located centrally of the supporting member, a lever pivoted on the stub shaft, links connecting the lever with the extending ends of the arms, and a weight adjustably secured to the lever, as and for the purpose specified.

1,024,361. POLE. OAKIE F. REYNOLDS, Petersburg, Okla. Filed Jan. 20, 1912. Serial No. 672,382. (Cl. 189—33.)

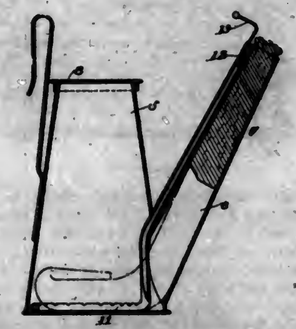


1. A pole formed from sheet metal provided at its upper end with slits, the material between which is bent outwardly forming braces, and an arm secured between the opposite side portions of the pole and connected with the free end portions of the material which is bent from between the slits.

2. A pole formed from sheet metal provided at its upper end with parallel slits the material between which is bent outwardly, an arm inserted between the opposite portions of the pole, bolts passing transversely through the arm and the opposite side portions of the pole and serving as means for drawing the side portions of the pole in close contact with the arm, the free end portions of the slits being connected with the arm at the opposite sides of the pole.

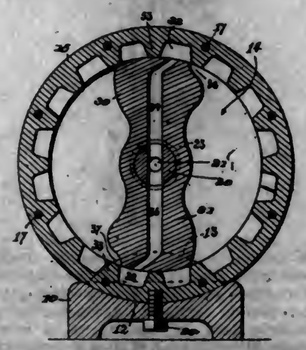
3. A pole formed from sheet metal having its edges overlapped forming a seam which extends the entire length of the pole, said pole provided at its upper end with slits the material between which is bent outwardly, an arm inserted at its intermediate portion between the opposite side portions of the pole and connected with the free end portions of the material removed from between the slits, and securing devices passing transversely through the arm and the opposite side portions of the pole at the opposite sides of the seam.

1,024,362. MINER'S LAMP. WILLIAM P. RICE, Shelbiana, Ky. Filed Jan. 14, 1911. Serial No. 602,627. (Cl. 67—26.)



In a miner's lamp, a frusto-conical-shaped body having a wick projecting outwardly and upwardly therefrom, a wick disposed within the tube, an air tube coextensive with the wick tube and contiguous thereto, the inner end of the said air tube being extended interiorly of the body and terminating in a circular perforated end resting upon the bottom of the said body, and a wire rotatably mounted in the outer end of the air tube and having an outturned end adapted to be swung into and out of the path of the flame of the wick when ignited.

1,024,363. ROTARY ENGINE. GEORGE W. RICHARDSON, Bellingham, Wash., assignor of one-half to Phineas C. Williams, Bellingham, Wash. Filed Aug. 31, 1911. Serial No. 647,099. (Cl. 121—61.)



1. A rotary engine comprising a shaft having a longitudinal bore, a piston including oppositely directed portions and rotative with said shaft, said piston having steam passages communicating with the bore of the shaft and external recesses concentric to the shaft, a stationary shell surrounding the shaft and its piston and provided with concentrically arranged exhaust ports over which the piston recesses operate, and a chamber having an opening and inclosing the exhaust ports of the shell.

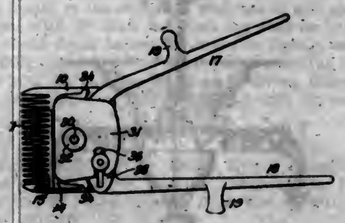
2. A rotary engine comprising a shaft having a longitudinal bore, a piston including oppositely directed portions and rotative with said shaft, said piston having steam passages communicating with the bore of the shaft and external recesses concentric to the shaft, a stationary shell surrounding the shaft and its piston and provided with concentrically arranged exhaust ports over which the piston recesses operate, and a chamber having an opening and inclosing the exhaust ports of the shell.

3. A rotary engine comprising a shaft having a longitudinal bore and counterbored at one end, a piston including oppositely directed portions and rotative with said shaft, said piston having steam passages communicating with the bore of the shaft and external recesses concentric to the shaft, a base having a standard, a stationary shell surrounding the shaft and its piston and provided with concentrically arranged exhaust ports over which the piston recesses operate and connected to said base, a sleeve carried by said standard and reduced at one end for engaging in the counter-bore of the shaft, and means for supplying steam to said sleeve.

4. A rotary engine comprising a shaft having a longitudinal bore, a piston including oppositely directed portions and rotative with said shaft, said piston having steam passages communicating with the bore of the shaft and external recesses concentric to the shaft, a base having a standard, a stationary shell surrounding the shaft and its piston and provided with concentrically arranged exhaust ports over which the piston recesses operate and connected to said base, a sleeve carried by said standard, means for coupling said sleeve at one end to said shaft, and means for supplying steam to said sleeve.

5. A rotary engine comprising a shaft having a longitudinal bore, a piston including oppositely directed portions and rotative with said shaft, said piston having steam passages communicating with the bore of the shaft and external recesses concentric to the shaft, a base having a recess and a vertical bearing rib, a stationary shell surrounding the shaft and its piston and provided with concentrically arranged exhaust ports over which the piston recesses operate, said shell bearing in said base recess and against said bearing rib, and fastening means extending through said base and bearing rib and into said shell.

1,024,364. HAIR-CLIPPER. RALPH ROMANO, Brooklyn, N. Y. Filed Sept. 9, 1911. Serial No. 648,481. (Cl. 30—1.)



1. In barbers' clippers, the combination with a base piece, of a handle detachably connected with same, a pivoted handle, a reciprocating plate operated by the pivoted handle, and a cap securing the plates and the handle.

2. In barbers' clippers, the combination with a base piece, of handle secured thereto, a reciprocating toothed plate, a pivoted handle operating the toothed plate, and a cap secured to the base piece and retaining the toothed plate and the pivoted handle.

3. In barbers' clippers, the combination with a base piece having a vertical stud, of a rigid handle secured to the base piece by means of projections, a reciprocating toothed plate, a movable handle pivoted to the rigid handle and operating the toothed plate, and a cap secured by the stud and retaining the toothed plate and the rigid handle on the base piece.

1,024,365. PULL-SOCKET. FRANK L. ROWNTREE, Hartford, Conn., assignor to The Arrow Electric Company, Hartford, Conn., a Corporation of Connecticut. Filed Oct. 24, 1911. Serial No. 656,389. (Cl. 173—354.)



1. A pull socket having insulating buttons spaced apart, an interposed switch mechanism, a displaceable spindle upon which said switch mechanism is mounted, a center lamp contact with perforated base in the switch circuit, a hollow securing rivet passing through said base to hold said contact in position, and an insulating bushing lining said rivet and forming a bearing for the adjacent end of the switch spindle, substantially as described.

2. A pull socket having insulating buttons spaced apart, an interposed switch mechanism, a displaceable spindle upon which said switch mechanism is mounted, a center lamp contact on the lamp side of one of said insulating buttons, a switch contact on the other side of said button, a hollow rivet passing through said lamp and switch contacts and serving to electrically connect the same and also to secure them to said button, and an insulating bushing lining said rivet and forming a bearing for the adjacent end of the switch spinde.

3. In a pull socket, an insulating button recessed on opposite faces, a center lamp contact having its base in the recess on one face thereof and a switch contact having its base in the recess on the opposite face of said button, in combination with a hollow rivet passing through said button and serving not only to mechanically secure said contacts thereto but also to electrically connect said contacts, substantially as described.

4. In a pull socket, an insulating button, a center lamp contact on one face thereof and a switch contact on the opposite face of said button, in combination with a hollow rivet passing through said button and serving not only to mechanically secure said contacts thereto but also to electrically connect said contacts, together with an insulating bushing lining said rivet and a switch spindle journaled in said bushing, for the purpose described.

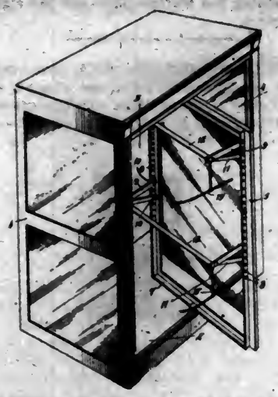
5. In a pull socket, an insulating button, a center lamp contact on one face thereof and a switch contact on the opposite face of said button, in combination with a hollow rivet passing through said button and serving not only to mechanically secure said contacts thereto but also to electrically connect said contacts, together with a flanged bushing lining said rivet, a switch spindle passing through said bushing and a return spring on said spindle bearing against the flange of said bushing.

[Claim 6 not printed in the Gazette.]

1,024,366. CLOTHING-CABINET. PAUL SCHIEVER, San Diego, Cal. Filed Oct. 14, 1911. Serial No. 654,701. (Cl. 211—16.)

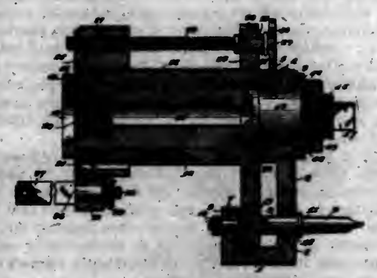
In combination a cabinet having an open front, a door for closing the front of the cabinet, a metal frame secured to the inner side of the door for stiffening and strengthening the same, journals secured to the upper and lower

horizontal portions of the metal frame, and sockets fitted to the upper and lower portions of the cabinet above and



below the door opening and receiving the respective journals.

1,024,367. PORTABLE CRANK-PIN TURNER. LOUIS G. SCHWEINEBRATEN, Birmingham, Ala., assignor, by direct and mesne assignments, of one-third to T. C. Lancaster, Birmingham, Ala., and one-third to J. D. Pearce, Jefferson county, Ala. Filed May 9, 1910. Serial No. 560,252. (Cl. 82—4.)



A machine for turning crank pins consisting of a base having a vertical post with a bearing sleeve at its upper end, a horizontal fixed sleeve detachably mounted in said post and formed at its forward end with an annular flange having a flaring opening with a threaded socket at the rear thereof, and a reduced elongated opening communicating with said threaded socket, a bushing rotatably mounted on said sleeve and formed at its rear end with a gear wheel, a driving mechanism connected with said gear wheel, a cylindrical tool carrying head keyed to the forward end of said bushing and slidable thereon, a feed shaft projecting at one end through said head and connected at its other end to the gear wheel of the bushing, a star wheel mounted on the rear end of said feed shaft, a number of posts located at intervals apart on the upper end of the sleeve supporting post and adapted to engage said star wheel, and a tool holder arm mounted on said slidable ring shaped head on the bushing.

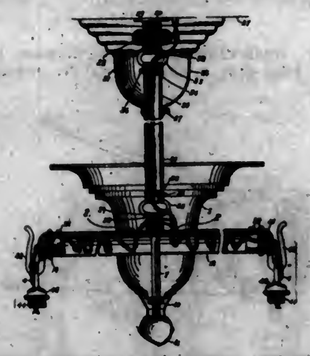
1,024,368. TROLLEY. WILLIAM SCHWEPPE, Pittsburgh, Pa. Filed Aug. 30, 1911. Serial No. 646,839. (Cl. 191—37.)

1. The combination with a trolley harp and the wheel thereof, of pins arranged in the arms of said harp, yokes loosely mounted over the arms of said harp and having the ends thereof loosely mounted upon said pins, journal pins carried by the upper ends of said yokes, wheels revolubly mounted upon said journal pins and extending into close proximity to each other above said trolley wheel, and flat springs carried by the outer sides of said harp and extending above said harp into the outer sides of said yokes.



2. The combination with a trolley harp having the arms thereof provided with a journal pin and a wheel revolubly mounted upon said pin, of pins carried by the arms of said harp, yokes loosely mounted over the arms of said harp and having the inner ends thereof pivotally mounted upon said pins, journal pins carried by the upper ends of said yokes, beveled wheels revolubly mounted upon said journal pins and extending in proximity to each other above the groove of said trolley wheel, flat springs counter-sunk in the outer sides of the arms of said harp and having the upper ends thereof protruding above the arms of said harp into said yokes, and means for simultaneously holding said springs and the journal pin of the trolley wire in engagement with said harp.

1,024,369. CHANDELIER. ALBERT SECHRIST, Denver, Colo., assignor to The Albert Sechrist Manufacturing Company, Denver, Colo., a Corporation of Colorado. Filed Aug. 28, 1911. Serial No. 646,436. (Cl. 240—78.)



1. In a chandelier, the combination with the fixture body, of a tube arm passed transversely through the fixture body and suitably connected therewith, the opposite protruding extremities of the tube arm being equipped with detachable recessed members through which wires are adapted to pass, for the purpose set forth.

2. The combination with a fixture body, of a lamp supporting tube arm passed horizontally through openings formed in the opposite sides of the fixture body, and suitable means for connecting the tube arm within the fixture body to a suspension tube vertically disposed in the fixture body, substantially as described.

3. The combination with a fixture body, of a lamp supporting tube arm passed transversely through openings formed in the fixture body and having its opposite extremities equipped with readily detachable lamp supporting members, the said members having shoulder nipples or end fittings slipped into the opposite extremities of the tube arms and secured thereto by suitable fastening devices, and a vertically disposed suspension member entering the fixture body and to which the portion of the pipe within the fixture body is secured.

4. The combination with a fixture body and a canopy, of a suspension means extending below the canopy and into the fixture body, and a lamp supporting tube passed horizontally through the fixture body and secured against the lower extremity of the suspension means, for the purpose set forth.

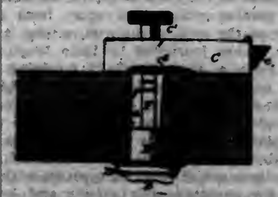
5. The combination with a fixture body and a canopy, of a suspension tube stem, means for connecting the upper extremity of the suspension stem with the ceiling, including a coupling having nipples protruding from its opposite extremities, one nipple having a threaded connection with the member above it, while the other has a slip connection with the upper extremity of the suspension tube stem below the coupling, and means for connecting the fixture body with the suspension stem, including a coupling whose upper extremity has a slip connection with the lower end of the suspension stem and whose lower extremity is interiorly and exteriorly threaded, and a vertically-disposed member within the fixture body with which the threaded nipple of the coupling is connected, substantially as described.

1,024,370. SEAL FOR RECEPTACLES. HARRISON B. SMITH, Bayside, N. Y. Filed June 10, 1911. Serial No. 632,488. (Cl. 215—9.)



The combination with a receptacle having an external bead or projection, of a cap provided with a resilient circumferential flange of less normal diameter than the beaded portion of the receptacle, said flange having diametrically disposed circumferential slots formed therein to receive the bead and permit the cap to be placed at an angle upon the mouth of the receptacle with one of said slots in engagement with the bead, to reduce the distance between the side of the flange having the said slot therein and the diametrically opposite side of the bead, whereby the latter-named side of the cap is adapted to be sprung downward to bring the slot therein into engagement with the bead.

1,024,371. NIGHT-LATCH. FRANK SOLEY, Philadelphia, Pa., assignor to Miller Lock Co., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Nov. 8, 1910. Serial No. 591,220. (Cl. 70—46.)



1. The combination in a door having an opening, of a locking device mounted in one end of the opening, a projection on the locking device extending through the opening forming an adjustable attaching device adapted to be bent over the wall of the opening at the opposite side of the door and secured to the door.

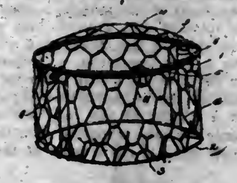
2. The combination in a lock, of a casing inclosing locking mechanism adapted to be inserted in an opening in a door, and having a flexible projection at its inner end of such a length as to extend through the opening and to be turned down on the opposite side of the door to hold the lock casing in place.

3. The combination in a lock, of a casing, locking mechanism therein, an attaching device having a disk at one end located within the lock casing, and perforated at its opposite end.

4. The combination in a lock, of a casing, locking mechanism contained therein, an attaching device having a disk bent at right angles to the body portion of the locking device and mounted within the casing of the lock, a headed tongue, the head of the tongue mounted within the casing, and a disk in which the head is mounted, said tongue extending through the disk of the attaching device.

5. The combination of a door, a latch casing secured to one side of the door, latch mechanism in the casing, said door having an opening, a lock casing mounted in the opening, wards within the said casing controlling the movement of a key, means for attaching the said casing to the door, and means connecting the locking mechanism with the latch mechanism.

1,024,372. HEN'S NEST. NETTIE J. SOLOMON, Pekin, Ill. Filed June 4, 1910. Serial No. 564,993. (Cl. 220—136.)



A hen's nest comprising upper and lower rings, a meshed fabric forming the bottom and sides of the nest, the said bottom and sides being secured to the lower ring and the said sides having the upper edge of the fabric passing through the upper ring, thence over and around the same, a ring of lighter material than the upper ring having the upper edge portion of the fabric bent around the same and engaging under the said upper ring, and loops interlaced with the fabric forming the sides of the nest and having their lower ends bent around the lower ring and their upper ends outwardly curved to form suspending hooks and handles.

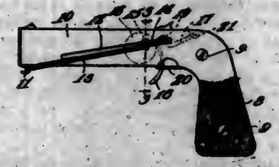
1,024,373. SHELL CONSTRUCTION. CHARLES J. SOWARDS, Marinette, Wis., assignor of one-half to Henry McBride, Marinette, Wis. Filed Dec. 26, 1911. Serial No. 667,683. (Cl. 102—16.)



1. In a device of the kind described, a paper body, a metallic base having a flange thereround within which said body is engaged, a plurality of longitudinal straps extending from said flange, and spaced loops connecting said straps.

2. In a device of the kind described, a paper body, a metallic base having a flange thereround within which said body is engaged, a plurality of longitudinal straps extending from said flange, and spaced loops engaging said straps, said straps and loops being embedded flush with the surface of the paper body.

1,024,374. TOY PISTOL. GEORGE W. STAMBAUGH, Chicago, Ill. Filed Oct. 9, 1911. Serial No. 653,596. (Cl. 124—14.)

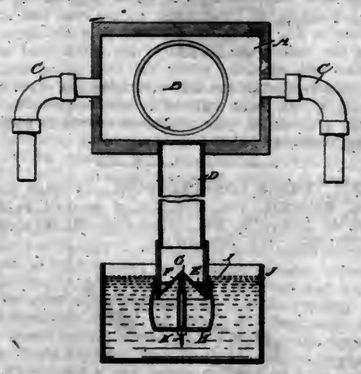


1. A toy piston for shooting disk projectiles embodying a muzzle having diagonal slots in its sides inclined upwardly from the front of the muzzle, a projectile prompter passing through the said slots, and means for actuating the said prompter to eject the projectile and impart a revoluble motion thereto.

2. A toy pistol embodying a muzzle having diagonal slots in its sides inclined upwardly from the front of the muzzle and a hook at the forward end thereof, a projectile prompter passing through the said slots, a rubber band connecting the ends of the prompter and engaging over the said hook, and a trigger at the rear end of the muzzle adapted to engage the prompter upon the same being drawn rearwardly against the tension of the said rubber band.

3. A toy pistol embodying a muzzle having flattened sides and diagonal slots in the sides thereof inclined upwardly from the front of the muzzle, a hook at the lower portion of the forward end thereof, lugs projecting inwardly from the sides of the muzzle and adapted to frictionally receive a disk projectile, a projectile prompter passing though the said slots, and a flexible member connecting the ends of the prompter and engaging over the said hook, and a trigger at the rear end of the muzzle adapted to engage the said prompter upon the same being drawn rearwardly against the tension of the said flexible member.

1,024,375. EXHAUST-CONTROLLING MECHANISM. STERLING STANLEY STEVENSON, Washington, D. C. Filed Aug. 7, 1911. Serial No. 642,651. (Cl. 121—96.)



1. An exhaust controlling mechanism, substantially as herein described, comprising a chamber having an inlet for the exhaust and provided with the outlet pipes opening to the atmosphere, a main discharge pipe leading from said chamber and of an area, combined with that of the outlet pipes opening to the atmosphere, less than that of the exhaust inlet, a valve controlling the discharge end of the main outlet pipe, a spring pressing said valve to its seat, and means for submerging said valve, all substantially as and for the purposes set forth.

2. An exhaust controlling mechanism comprising a chamber having an inlet for exhaust and an unobstructed discharge to the atmosphere relatively smaller than the exhaust inlet, a main outlet pipe leading from the said chamber, a valve controlling the discharge from said outlet pipe and means for submerging the said valve, substantially as set forth.

3. An exhaust controlling mechanism comprising a chamber receiving the exhaust from the engine and having an unrestricted discharge to the atmosphere of limited area, a main outlet or discharge from said chamber, a valve controlling such discharge, and means for submerging said valve, substantially as set forth.

4. An exhaust controlling mechanism comprising a chamber having an inlet for the exhaust, an outlet pipe leading from said chamber, a valve controlling the discharge from said outlet pipe and means for submerging the said valve, substantially as set forth.

5. In an apparatus, substantially as herein described, the combination of a chamber for the reception of exhaust, an outlet pipe leading from said chamber, a valve seat in said pipe, preferably at the discharge end of said pipe and a valve fitting to said seat, and means for supporting and actuating the valve, and means for submerging the valve, substantially as set forth.

1,024,376. HYDRAULIC PROPELLER. JAMES F. STRUBLE, Hanston, Kans., assignor of one-half to James Burns, Burdett, Kans. Filed Feb. 3, 1910. Serial No. 541,698. (Cl. 138—11.)



1. A device of the class described comprising a frame composed of upper and lower oppositely arranged sets of channel bars, an upright connecting the ends of the bars at each side, a shaft journaled transversely of the frame in each pair of uprights, a wheel near each end of each shaft, each wheel having a groove on the inner edge of its periphery, and an overlying flange on the outer edge spaced apart from the periphery, an endless carrier supported on the wheels and comprising a plurality of transverse parallel rods, a bearing block at each end of each rod, and in which the rod is journaled, a threaded socket pivoted to each end of each block, a stem threaded into each socket and having at its outer end a socket, said stem being divided longitudinally into similar sections, and a link provided at each end with a ball received in the sockets of adjacent stems, a vane journaled by its longitudinal center on each rod, a spring normally retaining the vane in vertical position, guide blocks on the ends of each rod and moving in the channels of the channel bars, said bars being slotted to permit the entrance and exit of the blocks, cables running in the grooves of the wheels, and engaging the edges of the vanes to hold them in substantially horizontal position against the resistance of the springs, rollers engaging the lower runs of the cables, and holding them out of engagement with the blades, and means for raising and lowering the rollers.

2. In a device of the class described, an endless carrier comprising parallel rods spaced apart from each other, guide blocks on the ends of the rods, guides in which the blocks move, vanes journaled by their longitudinal centers on the rods, a spring normally retaining each blade in vertical position, a flexible connection between the rods at each end, wheels for supporting the carrier over which the rods move, cables running on the wheels and normally holding the blades in substantially horizontal position, rollers engaging the lower runs of the cables and holding them out of engaging position with the vanes, and means for simultaneously raising and lowering the rollers.

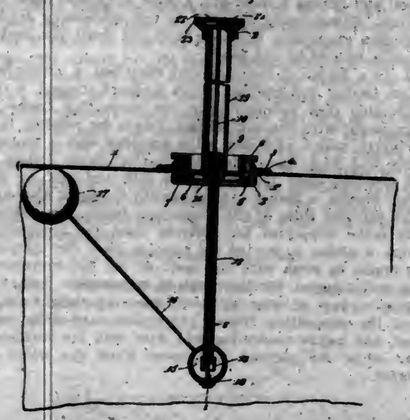
3. In a device of the class described, an endless carrier comprising parallel rods spaced apart from each other, guide blocks on the ends of the rods, guides in which the blocks move, vanes journaled by their longitudinal centers on the rods, a spring normally retaining each blade in vertical position, a flexible connection between the rods at each end, wheels for supporting the carrier over which the rods move, cables running over the wheels and engaging the edges of the blades to hold them in substantially horizontal position, and rollers engaging the lower runs of the cables, and holding them out of engagement with the blades.

4. In a device of the class described, an endless carrier comprising parallel rods spaced apart from each other, guide blocks on the ends of the rods, guides in which the blocks move, vanes journaled by their longitudinal centers on the rods, a spring normally retaining each blade in vertical position, a flexible connection between the rods at each end, wheels for supporting the carrier over which the rods move, cables running on the wheels and engaging the vanes to hold them in substantially horizontal position, and means for holding the lower runs of the cables out of engagement with the blades.

5. In a device of the class described, an endless carrier comprising spaced substantially parallel rods, vanes on the rods, bearing blocks at the ends of the rods in which the rods are journaled, a threaded socket pivoted to each end of each block, a stem threaded into each socket, and provided at its outer end with a socket, said stem being divided longitudinally into similar sections, and a flexible strand at each end with a ball received in the socket of a stem for connecting adjacent bearing blocks.

[Claims 6 to 18 not printed in the Gazette.]

1,024,377. GAGE OR INDICATOR FOR LIQUID-TANKS. STEVEN P. SUBBER, San Antonio, Tex. Filed Oct. 31, 1911. Serial No. 657,860. (Cl. 73—82.)



1. In a device of the character described, a tank having an opening in the top thereof, a diaphragm supported to obstruct said opening and having a stuffing box, a substantially vertical shaft rotating in the stuffing box, a tube associated with the diaphragm and extending downwardly to form an air chamber surrounding the shaft, and a float operatively connected to the shaft by coacting gears.

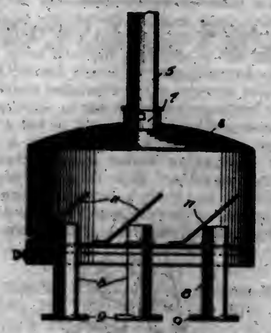
2. In a device of the character described, a tank having an opening in the top thereof, a diaphragm supported to obstruct said opening and having a stuffing box, a substantially vertical shaft rotating in the stuffing box, a float operatively connected to the shaft by coacting gears, a tube associated with the diaphragm and extending downwardly, said tube constituting an air chamber surrounding the shaft, a dial having an indicator, and means for transmitting motion from the shaft to the indicator.

3. In a device of the character described, a tank having an opening in the top thereof, a diaphragm supported to obstruct said opening and having a stuffing box, a substantially vertical shaft rotating in the stuffing box, a dial, an air chamber surrounding the shaft, an indicator associated with the dial and actuated by the shaft, and a float operatively connected to the shaft by coacting gears.

4. In a device of the character described, a tank having an opening in the top thereof, an annular casting secured adjacent to said opening and having an inwardly extending supporting flange, a diaphragm supported on said flange and having a stuffing box, a threaded ring engaging the annular casting to retain the diaphragm in position, a substantially vertical shaft rotating in the stuffing box, a downwardly extending tube connected with the diaphragm and constituting an air chamber surrounding the shaft, a bracket mounted upon the lower end of the tube, said bracket affording a bearing for the lower end of the shaft, a bevel gear supported for rotation upon the bracket and having a float carrying arm secured thereto, and a pinion on the shaft meshing with said bevel gear.

5. In a device of the character described, a diaphragm having a stuffing box, a shaft rotating therein, a downwardly extending tube connected with the diaphragm and constituting an air chamber surrounding the shaft, a bracket mounted upon the lower end of the tube, said bracket affording a bearing for the lower end of the shaft, a bevel gear supported for rotation upon the bracket and having a float carrying arm, a pinion upon the shaft meshing with said bevel gear, a tube extending upwardly from the diaphragm, a dial supported at the upper end of the tube, and a hand connected with the shaft and movable over the dial.

1,024,378. INCANDESCENT LAMP. AUGUSTUS F. THOMPSON, Huntington, W. Va. Filed Apr. 18, 1911. Serial No. 621,815. (Cl. 67—94.)

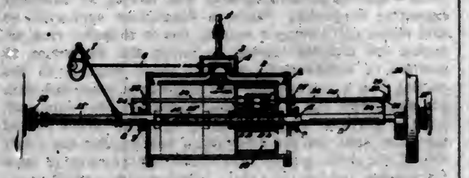


A lamp comprising a mixing chamber, a tubular arm mounted in the bottom of said chamber and having one end extending interiorly thereof and its opposite end depending exteriorily thereof, means carried by said exterior end for supporting a burner, a central supply pipe communicating with said mixing chamber and the top thereof, means in said pipe for regulating the flow of air into said chamber, and a baffle plate fixed to the bottom of said chamber and extending diagonally over the inner end of the tubular arm for spreading the combustible mixture entering said tubular arm from the communicating chamber.

1,024,379. ENGINE. AGOSTINO TOSCO and ATTILIO CAMINO, San Francisco, Cal. Filed Sept. 25, 1911. Serial No. 651,034. (Cl. 121—45.)

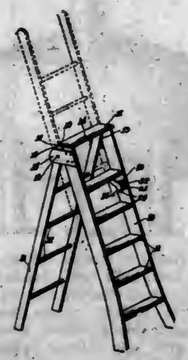
1. A reciprocating engine, comprising a cylinder, a valve chamber, a slide valve and ports connecting with the cylinder ends, a hollow piston having tubular sleeves extending from its ends through the cylinder heads, a turnable shaft with oppositely crossed spiral grooves between the cylinder heads and exterior thrust bearing, a

plurality of sleeves inclosing the shaft within the piston having spiral ribs engaging the spiral of the shaft, a cylinder fixed within the piston and anti-friction bearings between said cylinder and the sleeves, ratchets fixed to the sleeves, pawls suspended upon a shaft above the center of the piston contained cylinder, and engaging the ratchets upon opposite sides of their centers, and means to disengage either of said pawls from its ratchet.



2. A reciprocating engine, comprising a cylinder, a valve chamber, a slide valve and ports connecting with the cylinder ends, a hollow piston having tubular sleeves extending from its ends through the cylinder heads, a turnable shaft with oppositely crossed spiral grooves between the cylinder heads and exterior thrust bearings, a plurality of sleeves inclosing the shaft within the piston having spiral ribs engaging the spirals of the shaft, a cylinder fixed within the piston and antifriction bearings between said cylinder and the sleeves, ratchets fixed to the sleeves, pawls suspended upon a shaft above the center of the piston contained cylinder, and engaging the ratchets upon opposite sides of their centers, means to disengage either of said pawls from its ratchet, said means including a crank-shaft extending through the piston and cylinder head, and an exterior lever by which the engagement of the pawls and the action of the engine may be reversed.

1,024,380. LADDER. PAUL E. VIERHELLER, Victoria, Tex. Filed Dec. 8, 1910. Serial No. 596,281. (Cl. 228—19.)



A combination step and extension ladder comprising a pair of ladder sections, one constituting the main section and the other the prop and extension section, plates secured to the legs of the main section, channel brackets swiveled upon the said plates, the legs of the extension and prop section being slidable in the channel brackets, a plate connecting the upper ends of the legs of the main section and extending beyond the sides thereof and constituting stops to engage the ends of the prop and extension section when the same constitutes a prop, thereby limiting its upward movement when the ladder is in the form of a step ladder, pawls pivoted to the main ladder section to engage the rungs of the other section when the same constitutes an extension section, and stops engaging the pawls for limiting their movement in one direction substantially as and for the purposes set forth.

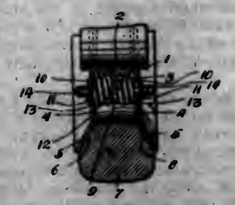
1,024,381. WASHING-MACHINE. FRANK L. WALKER, Chattaroy, Wash. Filed Dec. 31, 1910, Serial No. 600,224. Renewed Sept. 30, 1911. Serial No. 652,178. (Cl. 68—19.)



1. In a device of the character described, a supporting frame, a disk mounted thereon for rotation in a horisontal plane and having an upstanding toothed flange and lugs provided with clamp screws, a tub mounted on the disk and held by the clamp screws, a frame and an upright rising at diametrically opposite sides of the supporting frame, a pinion supported upon the upstanding frame in mesh with the teeth of the tub supporting disk, a wheel supported for rotation upon the upstanding frame and having a rack to intermittently engage the pinion when the wheel is rotated, a disk operatively connected with the wheel and having a wrist pin, a lever fulcrumed upon the upright diametrically opposite to the upstanding frame, a pitman connecting the lever with the wrist pin, and a pounder carried by the lever.

2. In a device of the character described, a supporting frame having anti-friction rollers mounted thereon, a tub supporting disk mounted upon the supporting frame in engagement with the anti-friction rollers for rotation in a horizontal plane, said disk being provided with a toothed flange and with upstanding lugs having clamp screws, a tub mounted upon the supporting disk and held by the clamp screws, a frame and an upright rising at diametrically opposite sides of the supporting frame, a mutilated gear wheel supported for rotation upon the upstanding frame, a pinion supported for rotation upon the upstanding frame in mesh with the teeth of the tub supporting disk and adapted for intermittent engagement with the mutilated gear, a lever fulcramed upon the upright rising from the supporting frame, a pounder carried by said lever, and means connecting said lever with the mutilated gear wheel for rocking said lever when the wheel is rotated.

1,024,382. TIRE FOR AUTOMOBILES. OSCAR H. WECKESSER, Ross township, Allegheny county, Pa. Filed Sept. 6, 1911. Serial No. 647,808. (Cl. 152—8.)

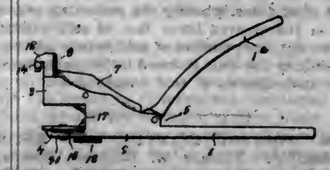


1. In a tire an annular rim having a flat outer face, an outwardly projecting bar positioned against the outer face of said rim centrally thereof, outwardly projecting flat annular rim members having their inner edges positioned against the outer face of the rim at opposite sides of the bar and of greater cross-sectional length than the cross-sectional length of the bar, a tire seated between the outer portions of said rim members and spaced from the outer edge of said bar, and tie rods arranged at intervals transversely with respect to and extending through said bar and rim members and each including an integral yieldable portion interposed between one side of the bar and an inner face of a rim member.

2. A tire for wheels comprising an annular rim having a flat outer face, a T-bar positioned against the outer face of said rim centrally thereof and having one leg projecting outwardly and disposed at right angles with respect to the outer face of the rim, outwardly projecting rim members in the form of flat annular bands having their inner edges positioned against the outer face of the rim, each of said rim members positioned at one side of the bar and inwardly of an edge of the rim, said members having angularly disposed outer portions, the outer portion of one member extending in an opposite direction with respect to the outer portion of the other member and said portions forming a tapering tread member seat, a resilient tread member having a portion of each side thereof beveled, said beveled portions of the tread member mounted against said seat and transversely extending tie rods projecting through said rim members and bar and each having a pair of yieldable portions, each yieldable portion being disposed between one side of the bar and the inner face of one of said rim members, said yieldable portions permitting said rim members to shift laterally upon the rim with respect to each other when the resilient tread member is shifted relatively to said rim.

3. A tire comprising an annular rim having a flat outer face, an outwardly projecting bar positioned against the outer face of the rim centrally thereof, outwardly projecting rim members in the form of annular bands having their inner edges positioned against the felly at each side of said bar, a resilient tread member seated between the outer portions of said rim members and spaced from the outer edge of said bar, tie rods extending through said rim members and bar and each having two portions of its length coiled to provide yieldable elements, each of said yieldable elements interposed between one side of the bar and one of said rim members permitting of the lateral shifting of the rim members upon the rim with respect to each other when the tread member shifts relatively to the rim, and means carried by said bar and extending through said rim members for preventing one rim member from shifting circumferentially on the rim with respect to the other rim member.

1,024,383. WATCHMAKER'S TOOL. JAMES H. WEISMANN, Stillwater, Okla. Filed July 22, 1911. Serial No. 639,945. (Cl. 81—6.)



1. A watch maker's tool comprising a relatively fixed member and an operating member pivoted to the fixed member and having a projecting portion, the fixed member embodying a head and a handle, the head having an opening forming a support and a guide and having an opening in its outer side, a lever pivotally mounted in the opening of the head and having its rear end engaging the projecting portion of the operating member, a plunger mounted in the guide portion of the head to operate across the opening thereof and engaged by the forward end of the lever, said plunger having openings in its lower end and provided near its upper end with an arm in which is formed a longitudinal opening to receive a pin removing punch.

2. In a tool of the character described, the combination of a support, a rotary table mounted upon the support and having two openings, said table having its under side cut away adjacent the inner opening, a bed piece having a tapered projection to enter the inner opening of the table and a pin to enter the outer opening of said table, and a plunger adapted to receive a punch for coöperation with the bed piece.

3. A watch maker's tool comprising a relatively fixed member, an operating member pivoted thereto, a fixed member comprising a head having an opening to form a guide and a support, a plunger mounted in said guide and having a projecting arm, connecting means between the plunger and operating member, a rotary table mounted upon the support and having a plurality of openings at different distances from the outer edge thereof, two of the openings having a radial arrangement and said table having its under side cut away adjacent the inner one of the said radially alined openings, and a bed piece having a tapered projection to enter the said inner opening and a pin to enter the outer opening.

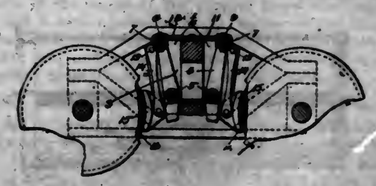
1,024,384. WIRE-WINDING DEVICE. CHARLES C. WILKINSON, Coleman, Tex. Filed May 12, 1911. Serial No. 626,882. (Cl. 140—98.)



1. An appliance for wrapping wire about a bar or like part to be strengthened, the same comprising a frame embodying spaced longitudinal bars having their end portions inwardly stepped and their extremities brought together and secured to form handles, rods connecting the stepped portions of the bars, guide rollers mounted upon the outer rods, the inner rods forming guides, other rods connecting the longitudinal bars intermediate of their stepped end portions, a spool mounted upon one of the last mentioned rods, and a tension device for engaging the spool to offer a greater or less resistance to the rotation thereof.

2. An appliance of the character described for wrapping wire about a bar or like part to be strengthened the same comprising a frame having extensions at opposite ends forming handles, guide rollers at opposite ends of the frame, a spool mounted upon the frame and adapted to have wire wound thereon, a guide rod mounted upon the frame, and a tension device adapted to engage an end portion of the spool with a greater or less pressure.

1,024,385. BRAKE MECHANISM. SAMUEL M. WRATTEN, Washington, Ind. Filed Nov. 22, 1910. Serial No. 593,717. (Cl. 188—24.)



In a device of the class described, the combination with a truck having track wheels mounted thereon and a bolster, of an independent brake hanger for each wheel, independent rock levers to operate each brake, said levers being free of the hangers, means for connecting opposite rock levers on the same side of the bolster, a brake rod, a lever pivoted on each connecting means, a connection between one end of one of said levers and the bolster, a connection between the opposite end of said lever and the other lever, and a brake rod pivoted to the opposite end of the other lever.

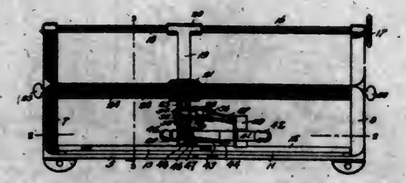
1,024,386. LICENSE-TAG HOLDER. JOHN W. YOCHEM, Tiffin, Ohio. Filed Sept. 18, 1911. Serial No. 649,786. (Cl. 40—129.)



1. In a device of the character described the combination of a perforated wall plate having a pair of transversely and rearwardly extending channels formed therein, holding lugs vertically mounted on said plate, one for each of the ends thereof, the upper end of each of which is provided with a transversely extending recess, the side walls of which are parallel with the general plane of said plate, and with a vertically operating thumb screw which passes therethrough and enters said recess; and the lower end of each of which lugs is provided with a rearwardly projecting bifurcated arm, the several members of which are each provided with a bolt receiving aperture which extends vertically therethrough, and between which members is provided a horizontally extending nut receiving slot; a nut in said slot together with an adjusting bolt, the upper end of which is made to operate through said apertures, and to threadedly engage said nut, and the lower end of which is provided with a suitably curved or bent finger; all substantially as and for the purpose set forth.

2. In a device of the character described the combination of a perforated wall plate having a pair of transversely and rearwardly extending channels formed therein, the rear walls of which are each severally provided with a perforated extension; holding lugs vertically mounted thereon and carried thereby, one for each of the ends of said plate, the upper end of said lug being provided with a transversely extending recess, the side walls of which are parallel with the general plane of said plate, and with a vertically operating thumb screw which passes therethrough and enters said slot; and the lower end thereof being provided with a suitably curved or bent finger; all substantially as and for the purpose set forth.

1,024,387. SAW-FILING MACHINE. HANS ANDELL, Missoula, Mont. Filed Jan. 10, 1911. Serial No. 601,804. (Cl. 76—31.)



1. In a saw filing machine, the combination with a frame, of a hanger slidably mounted thereon including a shaft, a sleeve adjustably secured to the shaft, a second sleeve pivotally mounted upon the first sleeve, a bar slidably mounted in the second sleeve, depending arms secured to the ends of the bar and having slots therein of different lengths, and a file holder slidably mounted in said slots and having free vertical movement in one of them.

2. In a saw filing machine, a frame, means to clamp a saw within the frame, a feeding screw journaled in the frame, a supporting bar removably carried by the frame, a hanger slidably mounted upon said bar and connected to the feeding screw, a universally mounted file holder support carried by the hanger, and a file holder slidably mounted in the support and being adapted for vertical movement therein.

3. In a saw filing machine, a frame, means to clamp a saw within the frame, a feeding screw journaled in the frame, a supporting bar removably carried by the frame, a hanger slidably mounted upon said bar and connected to the feeding screw, a universally mounted file holder support carried by the hanger, and comprising in part depending arms having different sized slots therein, and a file holder slidably mounted in said slots and having vertical movement in one of them.

4. In a saw filing machine, a frame, means to clamp a saw within the frame, a feeding screw journaled in the frame, a supporting bar removably carried by the frame, a hanger slidably mounted upon said bar and connected to the feeding screw, a file holder support, means for adjusting said support to determine the angular horizontal relation of the file with the saw blade, means to adjust the support to determine the angular relation of the same with the saw blade, said support having slots of different lengths and a file holder slidably mounted in said slots and adapted for vertical movement in one of them.

1,024,388. TOOL-HOLDING BOX. GEORGE H. BARTLETT, New London, Conn. Filed Mar. 30, 1911. Serial No. 617,981. (Cl. 206—17.)

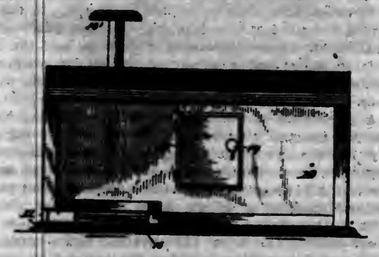


In a tool receptacle, the combination of an open-ended box, comprising a bottom provided with a flat inner surface, two side walls and an end wall carried by said bottom, a cover hinged to one of said side walls and provided with a flat inner surface, an end wall carried by said cover for closing the open end of said box, and a partition extending between the flat inner surfaces of said bottom and cover and provided along the entire length of its upper and lower faces with grooves of sufficient depth to inclose tools, said partition terminating at a space from the open end of said box, whereby the projecting ends of tools inclosed in the grooved lower face of said partition will rest on the flat inner surface of said bottom and be equally as accessible as the tools inclosed in the upper face of said partition upon opening of said hinged cover.

1,024,389. POSTAGE STAMPING AND RECORDING APPARATUS. THOMAS M. BELKNAP, Omaha, Nebr. Filed Sept. 24, 1910. Serial No. 583,699. (Cl. 101—70.)

1. A postage imprinting apparatus, including a casing having an opening for the insertion of mail matter, a reciprocating imprinting device, a rotatable member disposed within the casing and having an abutment thereon, means for giving a step by step rotation to said member upon each actuation of the imprinting device whereby to carry the abutment in a circular path from an initial position to a final position, and a stop projecting into the path of movement of the abutment and so disposed as to engage the abutment when it reaches its final position and prevent the further movement of the rotatable member in the same direction, said stop being shiftable out of said path of movement whereby to permit the rotatable member to be shifted to carry the abutment from its final position to its initial position.

2. A postage imprinting apparatus, comprising a casing having an opening for the insertion of mail matter and being provided with a door on one side, a reciprocating imprinting device within the casing, a rotatable member, a step by step mechanism for actuating said rotatable member upon each actuation of the imprinting device, a stud projecting from the rotatable member, a spring-actuated pawl for preventing a reverse movement of said member, and a stop formed with a hooked end, the hooked end projecting into the path of movement of said stud, the hooked end of said stop being shiftable out of said path of movement.



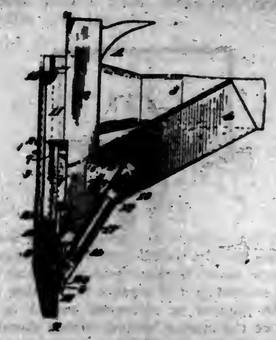
3. A postage imprinting apparatus, including a casing having an opening for the insertion of mail matter, a reciprocating imprinting device, a rotatable member inclosed within said casing, a stud projecting from said member, means for giving a step by step movement to said rotatable member on each actuation of the imprinting device whereby to carry the stud in a circular path from an initial position to a final position, and a stop having a hooked end disposed in the path of movement of said stud and so located as to engage the stud when it reaches its final position, said stop being shiftably supported and thereby adapted to be moved out of the path of movement of the stud whereby to permit the rotatable member to be shifted in the same direction to carry the stop from its final position to its initial position.

4. A postage imprinting apparatus, comprising a relatively rectangular casing having a slot for the insertion of mail matter, a reciprocating imprinting device within the casing, a support for said device forming a stop for positioning the mail matter with regard to said imprinting device, a train of multiplying gears located within the casing, a ratchet wheel forming a driving means for said multiplying gears, a spring-actuated pawl engaged with said ratchet wheel to prevent reverse movement thereof, a lever having engagement with the imprinting device and provided with a spring-actuated pawl for giving movement to the ratchet wheel upon each reciprocation of the lever, a stud projecting from the last gear of the train of multiplying gears, and a stop projecting into the path of movement of said stud.

5. A postage imprinting apparatus, comprising a rectangular casing having an opening at one corner for the insertion of mail matter, a stop for positioning said matter within the casing, a reciprocating imprinting mechanism located within the casing, a ratchet wheel, a lever engaging with said imprinting mechanism and reciprocated thereby, a pawl mounted on the lever and engaging the ratchet wheel, a pawl also engaging the ratchet wheel to prevent its reverse movement, a multiplying train of gear wheels driven from the ratchet wheel, a stud on the last gear wheel of the train, a stop having a hooked end normally projecting into the path of movement of the stud, said stop being mounted to permit its hooked end to be shifted out of said path of movement, the casing being provided with a door open adjacent to the stop.

1,024,390. HAMMER. CLARENCE S. BOSEN, San Francisco, Cal. Filed Jan. 28, 1911. Serial No. 604,104. (Cl. 1—45.)

1. An apparatus for driving nails comprising a suitable head, and resilient means for temporarily clasping the nail below the operative driving end of the head, said means including a resiliently supported detent longitudinally slidable at an incline on the hammer and having its lower end extending below the head of said hammer.



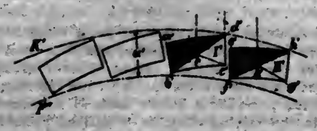
2. An apparatus for driving nails comprising a hammer having a driving head, and resiliently mounted means upon said head for temporarily holding a nail against the operative face of the hammer-head during the driving of the nail, said means including a resiliently supported inclined detent longitudinally slidable on the hammer and having its lower end extending below the hammer head and a yielding member opposing the lower end of the detent.

3. An apparatus for driving nails comprising a suitable hammer, a nail driving face on one end of the hammer, and means resiliently mounted upon the hammer adapted to temporarily hold the nail in position against the driving face of the hammer and to recede as the nail is driven home, said means including a resiliently supported inclined detent, longitudinally slidable on the hammer and having its lower end extending below the hammer head and having a grooved seat in said lower end.

4. A hammer having a suitable handle, an operative driving face formed on one end of the hammer, a plunger for delivering nails into position below the driving face movably mounted upon the hammer, and means for temporarily supporting the nail below the driving face of the hammer, said means including a resiliently supported detent mounted at an incline on the hammer and having its lower end and extending below the hammer head, said plunger having a recess, and a spring mounted in said recess and opposing said detent.

5. A self feeding hammer comprising a suitable head, a handle attached thereto, a nail chute mounted upon the hammer and adapted to deliver nails to the hammer-head, a plunger for successively feeding individual nails from the chute, said plunger having a recessed lower portion, means for carrying the nails in to position against the driving end of the hammer, and means including a spring operable in the recess of the plunger below the hammer-head and a detent mounted at an incline on the hammer having a lower end extending below the hammer-head and opposing said spring, for temporarily supporting the nails in position below the driving end of the hammer.

1,024,391. NOZZLE OF AXIAL-FLOW TURBINES. HEINRICH BOLTSHAUSER, Zurich, Switzerland, assignor to Aktiengesellschaft der Maschinenfabriken Escher Wyss & Cie., Zurich, Switzerland. Filed Jan. 26, 1911. Serial No. 604,787. (Cl. 121—57.)



Nozzle ring for axial-flow turbines and turbo-compressors having the separate nozzle sections turned somewhat in regard to each other out of their middle circle in the same direction as the rotor rotates.

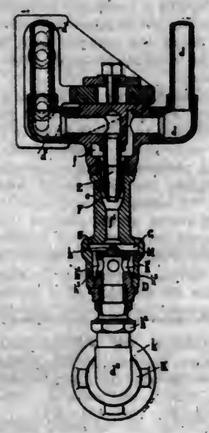
1,024,392. MATCH-BOX. JASPER N. BRANYAN, Blue Springs, Miss. Filed Jan. 25, 1911. Serial No. 604,616. (Cl. 206—26.)



1. A match box comprising a casing having a match dispensing opening therein, a spring projected plunger adapted to force a single match through said opening at each operation, means carried by the plunger for closing said opening when the plunger is retracted, means to flex said plunger so that the closing means carried thereby will be thrown out of alinement with the opening so as to allow the projection of a match therefrom, said means serving to lock the plunger in its retracted position.

2. A match box comprising a casing having a match dispensing opening therein adjacent its lower extremity, a spring operated projecting plunger adapted to force a single match through said opening at each operation, means carried by the plunger for closing said opening when the plunger is retracted, means to flex said plunger so that the closing means will be thrown out of the path of projection of the match, said means serving to lock the plunger in its retracted position, the upper end of said casing being provided with a flaring opening adapted to receive the open lower end of an ordinary match carton so as to admit of the feeding of matches into the casing, and means for retaining the carton in its applied position and for supporting the device as a whole.

1,024,393. GAS-BURNER. EDMUND RUSSELL BRAYSHAW, Manchester, England. Filed Mar. 17, 1911. Serial No. 615,075. (Cl. 158—118.)

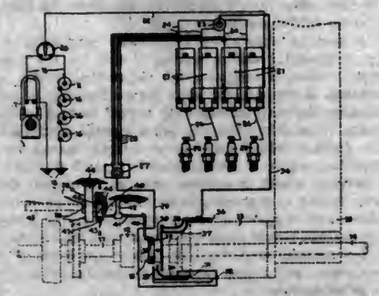


1. A gas burner of the type set forth comprising a casing having gas and air admission means, a receiving passage f' for the gas and air passed by said means, and a mixing chamber communicating with the discharge end of the receiving passage; a hollow baffle H arranged concentrically in the mixing chamber in spaced relation to the adjacent wall of the latter and provided at its upper end with a conical projection and on its sides with openings which afford communication between the mixing chamber and the interior of the baffle; and a delivery pipe d^3 for conducting the mixed air and gas from the interior of the baffle to the furnace.

2. A gas burner of the type set forth comprising a casing having gas and air inlets, a receiving passage f' for the gas and air and a mixing chamber G communicating with the discharge end of the receiving passage; a nozzle E connected to the air inlet and passing the air in the form of a jet to the receiving passage, the burner casing having a space concentric to the nozzle and communicating at one end with the gas inlet and at the other end with the receiving passage; a hollow baffle H arranged concentrically in the mixing chamber in spaced relation to the adjacent wall of the latter and having openings which afford communication between the mixing chamber and the interior of the baffle; and a delivering pipe d^3 for conducting the mixed air and gas from the interior of the baffle to the furnace.

3. A gas burner of the type set forth comprising a casing having gas and air admission means, a receiving passage f' for the gas and air passed by said means, and a mixing chamber communicating with the discharge end of the receiving passage and having an annular pocket at the upper end thereof; a hollow baffle H arranged concentrically in the mixing chamber in spaced relation to the adjacent wall of the latter and provided at its upper end with a conical projection to deflect the gas and air issuing from said passage into said pocket, and on its sides with openings which afford communication between the mixing chamber and the interior of the baffle; and a delivery pipe d^3 for conducting the mixed air and gas from the interior of the baffle to the furnace.

1,024,394. AUTOMOBILE STARTING DEVICE. EDWARD R. BRODTON, Boston, Mass., assignor of one-half to Joseph A. Gartland, Boston, Mass., and one-fourth to E. M. Stephens, Hackettstown, N. J. Filed Sept. 26, 1911. Serial No. 651,404. (Cl. 123—184.)



1. In an internal combustion engine, a plurality of timers, a cranking device, and means controlled by said cranking device to render either of said timers operative.

2. In an internal combustion engine, a normally active timer, a normally inactive timer, a cranking device, and means controlled by said cranking device for rendering the normally active timer inactive and the normally inactive timer active.

3. In an internal combustion engine starter, a clutch device comprising a plurality of members, a sparking device including a normally open circuit closer carried by one member of the clutch, and means to close said circuit closer carried by another member of the clutch.

4. In an internal combustion engine starter, a clutch device including a movable operating member, a sparking device including a normally active timer mechanism, and a normally inactive timer mechanism, each of said timer mechanisms including a circuit closer, and means on said operating member for selectively closing either of said circuit closers.

5. In an internal combustion engine, a normally inactive timer including a fixed portion and a revolving portion, a cranking device, and means movable by the cranking device for moving one timer portion to and from the other portion.

[Claim 6 not printed in the Gazette.]

1,024,395. FLUID-OPERATED TOOL. JOHN W. CANTY, Florence, Colo. Filed Mar. 9, 1908, Serial No. 420,082. Renewed Feb. 20, 1912. Serial No. 678,958. (C. 125—14.)



1. Fluid operated mechanism of the class described comprising a housing, and independently movable fluid compressing and tool-operating elements arranged in alinement in said housing, said housing forming means for confining fluid until highly compressed by said compressing element and having a ported passage adapted to be periodically covered and uncovered by one of said elements for conducting the highly compressed fluid to the tool-operating element to drive the latter on its forward stroke at a speed greater than the corresponding movement of the compressing element, and means separate from and driven by said fluid-compressing element for developing fluid pressure and for conducting it to said tool-operating element to retract the latter.

2. A machine of the class described comprising a suitable casing having a cylinder, tool operating and fluid-compressing pistons independently reciprocable therein, the cylinder casing having a by-pass provided with ports communicating with the cylinder at opposite sides of the compressing element, and a valve controlling one of said ports for permitting escape of air from between said pistons as they approach and for creating a vacuum between them as the movement of one of the pistons is reversed for retracting the tool operating piston.

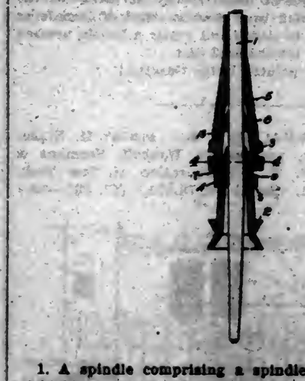
3. A machine of the class described comprising a casing provided with a cylinder, tool operating and fluid-compressing elements mounted to reciprocate independently therein, the casing of the cylinder being provided with a by-pass closed to the atmosphere and communicating with the cylinder at opposite sides of the fluid-compressing piston, and a controlling valve for permitting the escape of air confined between the pistons as they approach into a space at the opposite side of the fluid-compressing piston, said valve closing to create a vacuum between said pistons as the direction of movement of the compressing piston is reversed.

4. A machine of the class described comprising a casing provided with a cylinder, tool operating and fluid-compressing pistons independently reciprocable therein, the casing being provided with a by-pass closed to the atmosphere and having a port entering the cylinder at or in proximity to one end, a second port entering the cylinder at a point between the tool operating and fluid-compressing pistons when the latter is in retracted position, and a third port entering the cylinder at a point between the tool operating and fluid-compressing pistons when the tool operating piston is at the end of its power stroke, and a valve controlling the last mentioned port for permitting escape of air confined between the pistons as the latter approach one another and for creating a vacuum as the compressing piston is retracted.

5. A machine of the class described comprising a casing provided with a cylinder, tool operating and fluid-compressing pistons independently reciprocable therein, the casing being provided with a by-pass permanently closed to the atmosphere and having ports for conducting compressed fluid from one side of the compressing piston to a space between the latter piston and the tool operating piston, and for means including an additional piston for developing and conducting fluid to the tool operating piston for retracting the latter.

[Claims 6 to 18 not printed in the Gazette.]

1,024,396. BOBBIN-CLUTCHING SPINNING-SPINDLE. JOHN V. CUNNIFF, Fall River, Mass., assignor to James K. Lanning, Boston, Mass. Filed Jan. 3, 1911. Serial No. 600,562. (Cl. 118—31.)



1. A spindle comprising a spindle blade; a whirl unyieldably mounted thereon; a downwardly flaring, open-ended, inherently expansive and divided bobbin supporting and centering shell, independent of said whirl, also rigidly mounted on said spindle blade, said shell being of increasing expansive resiliency toward and to its lower open end; and a fixed bobbin seat adjacent the lower end of said shell to determine the lowermost position of a bobbin pressed downward thereon and over and to contract said supporting shell.

2. In combination with a spindle structure having a blade and a whirl unyieldably mounted thereon; a downwardly flaring, open-ended, inherently expansive and divided bobbin supporting and centering member rigidly mounted on said spindle structure above the driving portion of the whirl, said member being of increasing expansive resiliency toward and to its lower open end, and a fixed bobbin seat adjacent the lower end of said member to determine the lowermost position of a bobbin pressed downward thereupon and over and to contract said supporting member.

3. In combination with a spindle structure having a blade and a whirl unyieldably mounted thereon; a downwardly flaring, open-ended, inherently expansive bobbin supporting and centering device rigidly mounted on said spindle structure above the driving portion of the whirl, said device being of increasing expansive resiliency toward and to its lower open end, and a fixed bobbin seat adjacent the lower end of said device to determine the lowermost position of a bobbin pressed downward thereupon and over and to contract said supporting device, the latter extending into close proximity to said seat and having narrow slots extending to its lower end, thereby substantially to exclude lint.

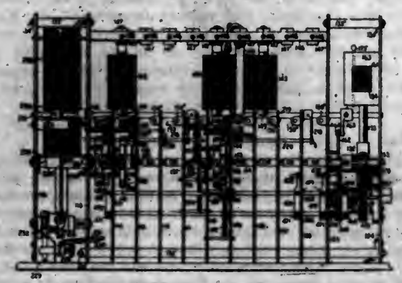
4. In combination with a spindle structure having a blade, a band-whirl unyieldably mounted thereon and a fixed seat above the band receiving portion of the latter to limit the lowermost position of a carried bobbin; a downwardly flaring, clutching and centering device to engage the bobbin interiorly at the lower portion, rigidly mounted on said spindle structure above said seat, said device having an upper band portion exteriorly engaging said spindle structure and also having a plurality of radially symmetrically arranged members dependent from said upper band portion and free at their lower ends and of increasing resiliency downward, and inherently expansive to clutch and center a bobbin pressed downward thereover toward said seat.

5. In combination with a spindle structure having a blade, a band-whirl unyieldably mounted thereon, and a fixed seat above the band receiving portion of the latter to limit the lowermost position of a carried bobbin, a downwardly flaring, clutching and centering device, open at its lower end, and adapted interiorly to engage the

bobbin-case chamber wall, said device having an upper band portion rigidly mounted on said spindle structure and also having a plurality of radially symmetrically arranged members dependent therefrom, with their outer surfaces normally spaced diametrically in excess of the diameter of said bobbin base chamber, and of increasing resiliency downward to clutch and center a bobbin pressed downward thereover toward said seat.

[Claims 6 to 8 not printed in the Gazette.]

1,024,397. ADDING-MACHINE, &c. ALBERT H. ELLIS, New York, N. Y., assignor to Wyckoff, Seamans & Benedict, Ilion, N. Y., a Corporation of New York. Filed Oct. 16, 1901. Serial No. 78,834. (Cl. 235—59.)



1. The combination of a series of figure keys, a series of adding wheels, a selective controlling device coöperative with each of said keys and having a plurality of relatively fixed controlling points governing said adding wheels selectively, and changeable connections between said controlling points and said adding wheels.

2. The combination of a series of figure keys, a series of adding wheels, a controlling device coöperative with each of said keys and having a plurality of controlling points governing said adding wheels for the purpose of selecting the adding wheel to be operated, said controlling points differing in number from said adding wheels.

3. The combination of a series of figure keys, a series of adding wheels, a controlling device coöperative with each of said keys and having a plurality of controlling points governing said adding wheels and greater in number than such adding wheels, and changeable connections between said controlling points and said adding wheels.

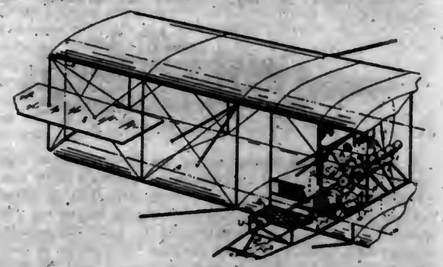
4. The combination of a series of figure keys, a series of adding wheels, a controlling device coöperative with each of said keys and having a plurality of controlling points governing said adding wheels and greater in number than such adding wheels, and a permutation connector system between said controlling points and said adding wheels for connecting with said adding wheels any series of points less than all of said controlling points.

5. The combination of a series of figure keys, a series of electrically-selected adding wheels, an electrical controller coöperative with each of said keys and controlling said wheels, selectively, and a switch-board for varying the connections between said controller and the adding wheel.

[Claims 6 to 224 not printed in the Gazette.]

1,024,398. EQUILIBRATOR FOR AIRSHIPS. DIGHTON B. ELLSWORTH, Portland, Oreg., assignor of one-third to C. E. Houston and one-third to H. L. Lane, Portland, Oreg. Filed Dec. 13, 1910. Serial No. 597,099. (Cl. 244—29.)

1. In an aeroplane propelled by a motor, the combination with a magnetic clutch comprising a shaft; a magnet wheel slidably keyed to said shaft and two oppositely rotating circular armatures, said armatures actuated by the propelling motor and running loose on said shaft; of a spool rigidly mounted on said clutch shaft, and means for balancing the aeroplane by connections to said spool; a block wheel rotatable on a stationary shaft parallel to the clutch shaft; means rotating the block wheel by the rotation of said clutch shaft; and a block and a pendulum independently rotatable on the stationary shaft.



2. In an aeroplane propelled by a motor, the combination with a magnetic clutch comprising a shaft; a magnet wheel slidably keyed to said shaft and two oppositely rotating circular armatures; said armatures actuated by the propelling motor and running loose on said shaft, of a spool rigidly mounted on said clutch shaft; and means for balancing the aeroplane by connections to said spool; a block wheel rotatable on a stationary shaft at right angles to the clutch shaft; means rotating the block wheel by the rotation of said clutch shaft; and a block and a pendulum independently rotatable on the stationary shaft.

3. In an aeroplane propelled by a motor, the combination with a magnetic clutch comprising a shaft; a magnet wheel slidably keyed to said shaft and two oppositely rotating circular armatures, normally running loose on said shaft, said magnet wheel consisting of two sets of magnets radially arranged on either side of the wheel and respectively connected with collector rings and a source of electric energy; of a spool; a block wheel rotatable on a stationary shaft; means rotating the block wheel by the rotation of said clutch shaft; a block rotatable on the stationary shaft and normally attached to said block wheel, electric terminals on said block, a circuit including said terminals, the electromagnets of said clutch and a source of electrical energy; and a pendulum rotatable on the stationary shaft mounted between said terminals and adapted to make or break the contact.

4. In an aeroplane propelled by a motor, the combination with a magnetic clutch comprising a shaft, a magnet wheel, slidably keyed to said shaft and two oppositely rotating circular armatures, said armatures actuated by the propelling motor and running loose on said shaft; of a spool rigidly mounted on said clutch shaft; movable wings connected to, and adjusted by means of said spool for balancing the aeroplane; a block wheel rotatable on a stationary shaft; means rotating the block wheel by rotation of said clutch shaft; a block rotatable on the stationary shaft and normally attached to said block wheel; electric terminals on said block, a circuit including said terminals, the electro-magnets of said clutch, a source of electrical energy; and a pendulum rotatable on the stationary shaft, mounted between said terminals and adapted to make or break the contact.

5. In an aeroplane propelled by a motor, the combination with a magnetic clutch and a shaft on which it is mounted, of a spool rigidly mounted on said clutch shaft; a block wheel rotatable on a stationary shaft; means rotating the block wheel by the rotation of said clutch shaft; a block rotatable on the stationary shaft; means for adjusting the relation of said block to the block wheel; electric terminals on said block; and a pendulum rotatable on the stationary shaft mounted between said terminals and adapted to make or break the contact.

[Claims 6 to 17 not printed in the Gazette.]

1,024,399. ADJUSTABLE REAMER. JOHN A. ETHOLD and RAYMOND H. NORTH, Detroit, Mich. Filed July 5, 1910. Serial No. 570,514. (Cl. 77—76.)



In an adjustable reamer, the combination of a spindle having a tapered portion intermediate its ends and having a key-way at one end; a centrally bored barrel formed with a tapered bore intermediate its ends, one end of said barrel being threaded and having a slot, the tapered portion of said barrel formed with a plurality of radial slots, each of said slots having one end beveled; a shouldered adjusting screw; a cap nut received on the threaded end of said barrel and having its end apertured; a pilot sleeve slidably mounted on one end of said barrel and having an inwardly projecting pin passing through the slot of said barrel and into a key-way of said spindle, one end of said pilot sleeve being internally beveled; a fixed sleeve secured to the opposite end of said barrel, and a plurality of reamer blades formed with beveled ends, said blades received in the slots of said barrel.

1,024,400. GATE. HENRY HARDING, Buffalo, Ohio. Filed Aug. 9, 1911. Serial No. 643,132. (Cl. 39—25.)



1. In a gate of the class described, a hinge connection for connecting the upper rear end portion of the gate to a post comprising a plurality of hook-shaped pieces each having a hole therein, a member formed from a single piece of material of uniform cross section having its end portions bent to form parallel legs and adapted to be disposed in the holes in the hooked portions of said pieces, and to catch on the sides thereof, its central portion being formed into a ring, means for engagement with said ring for securing said member to a post or the like, and means for pivotally securing said pieces to the gate.

2. In a gate of the class described, a hinge connection for connecting the upper rear end portion of said gate to a post, comprising a plurality of hook-shaped pieces, each having a hole therein, a member formed from a piece of material of uniform cross section having its end portions bent to form parallel legs and adapted to be disposed in the hole in each hooked portion of said pieces and to catch on the sides thereof, its central portion being formed into a ring, means engaging with said ring for securing said member to a post, means for pivotally securing said pieces to the gate and means for actuating said pieces so that said legs can be readily moved through said holes and means for keeping the hooked portions of said pieces adjacent to one another.

1,024,401. CLOTHES-STICK. SAMUEL HARDING, Buffalo, N. Y. Filed Aug. 16, 1909, Serial No. 513,149. Renewed Oct. 4, 1911. Serial No. 652,845. (Cl. 68—6.)

1. A clothes stick comprising a handle having a head formed from a single piece of wire secured on one end thereof, said head including a plurality of transversely arranged fingers at the end of the handle and oppositely arranged clothes supporting arms at an intermediate point of the handle.

2. A clothes stick comprising a handle having a head formed from a single piece of wire, said wire head being secured at its center to the end of the handle, the wire then extending in opposite directions and bent to form a plurality of fingers, the wire then being bent rearwardly and inwardly toward and secured to the said handle.



3. A clothes stick comprising a handle, and a wire head secured to the said handle and formed from a single piece of wire, the center of the wire being secured to the end of the handle, the wire extending in opposite directions from the handle and bent to form substantially W-shaped portions, one portion being upright and the other reversed, the bends of each portion constituting fingers which are arranged in the same plane, the free ends of the wire then being respectively bent rearwardly and inwardly toward and arranged along the handle for a certain distance and secured thereto by a fastening means, the free ends of the wire being respectively bent outwardly to form substantially V-shaped clothes supporting arms, and the extreme ends of the wire being bent inward and arranged to engage the handle.

4. A clothes stick comprising a handle, a wire secured to the handle and bent to form a series of fingers arranged at opposite sides of the handle and all in the same plane, and clothes-supporting arms made of wire secured to the handle at opposite sides of an intermediate portion thereof, the said arms being arranged at right angles to the fingers.

5. A clothes stick comprising a handle, a wire head at the end of the handle having a plurality of oppositely arranged fingers arranged in the same plane at right angles to the handle and forming a flat extended surface for pushing the clothes down into the water, an extension or brace at each end of the head for connecting it with the handle, and arms extending from opposite sides of the handle in the same plane as the extensions or braces, said arms being shorter than the latter and coöperating therewith to provide an extended support for the clothes when removing them from the boiler.

1,024,402. SAFETY-RAZOR. HARRY HESS, Frankfort, Germany, assignor to Herman Strauss, New York, N. Y. Filed Oct. 11, 1910. Serial No. 586,480. (Cl. 30—12.)



A safety razor comprising a handle and guard, the guard provided with a depression at the edges of which ridges are formed, the guard also provided with key-hole slots extending lengthwise thereof, a spring adapted to

fit within the depression, a blade adapted to bridge across the depression and bear against the center of the spring, and a bridge plate having studs which extend through the orifices in the blade, spring and guard, and which are adapted to move endwise therein whereby to hold the parts assembled.

1,024,403. BOTTLE-OPENER. ELWIN K. HILL, Cleveland, Ohio. Filed Apr. 27, 1909, Serial No. 492,478. Renewed Oct. 23, 1911. Serial No. 656,216. (Cl. 65—46.)



1. In an implement for opening disk closures the combination of a member arranged for engagement with the closure, to hold the same against rotation, and an additional member for slitting the closure.

2. In an implement for opening disk closures the combination of a member arranged for engagement with the upper surface of the closure, to hold the same against rotation, and an additional member provided with means arranged to slit the closure and to engage the under surface thereof.

3. In an implement for opening disk closures the combination of a member arranged for engagement with one surface of the closure, to hold the same against displacement, an additional member provided with means arranged for engagement with the other surface of the closure, and means whereby the second-named member may be rotated, to effect such engagement.

4. An implement for opening disk closures comprising a rotatable member provided with means arranged to incise the closure and engage the under surface thereof, a handle to which said member is secured, and a member loosely mounted upon the handle for engagement with the upper surface of the closure, to hold said closure against rotation during the rotation of the first-named member.

5. An implement for opening disk closures having a sheet metal member slit and bent to provide a series of downwardly-inclined teeth, each tooth having a portion thereof cut away to form a shoulder.

[Claims 6 to 12 not printed in the Gazette.]

1,024,404. RAZOR-STROPPING DEVICE. JOHN W. HORNER, Chicago, Ill. Filed Aug. 2, 1911. Serial No. 641,935. (Cl. 51—16.)



1. In a device of the class specified, the combination of a frame comprising a cross portion and side portions substantially at right angles to the cross portion, a rotatable member extending between and arranged substantially centrally on said side portions adjacent to said cross portion and rotatable members arranged on said side portions to each side of the first rotatable member, a pair of said rotatable members being substantially oppositely disposed near the end of said side portions remote from the first rotatable member and a pair of said rotatable members being arranged intermediate of said first rotatable member and the first pair of rotatable members and substantially in alinement with the latter, a razor blade holder pivotally mounted substantially centrally near the end of said side portions remote from the first rotatable member and having side pieces thereon, a pair of rotatable members extending between and disposed substantially oppositely on said side pieces and arranged nearer together than said first pair of rotatable members, and a strop arranged to pass over the first rotatable member and having the exterior side of its end portions in contact with the second and last mentioned pairs of rotatable members and having the interior side of said end portions in contact with the first mentioned pair of rotatable members, substantially as shown and described.

2. In a device of the class specified, the combination of a frame consisting of a single strip of stamped out metal formed to provide a cross portion and side portions substantially at right angles to the cross portion, a rotatable member extending between and arranged substantially centrally on said side portions adjacent to said cross portion and rotatable members arranged on said side portions to each side of the first rotatable member, a pair of said rotatable members being substantially oppositely disposed near the end of said side portions remote from the first rotatable member and a pair of said rotatable members being arranged intermediate of said rotatable member and the first pair of rotatable members and substantially in alinement with the latter members, a razor blade holder pivotally mounted on said frame, a pair of rotatable members on said bladeholder, and a strop arranged to pass over the first rotatable member and having the exterior side of its end portions in contact with the second and last mentioned pairs of rotatable members and having the interior side of said end portions in contact with the first mentioned pair of rotatable members, substantially as described.

3. In a device of the class specified, the combination of a frame, a razor blade holder pivotally mounted on said frame and formed to provide side portions, a portion extending between the side portions, and jaws bent to extend from said portion in a direction opposite to that of the side portions and having their free ends spaced near together, oppositely disposed rotatable members extending between and arranged at the end of said side members remote from said portion, and a strop arranged movably on said frame and adapted to contact with said rotatable members to move the blade holder to throw said jaws toward the strop when one end of the strop is pulled, substantially as described.

4. In a device of the class specified, the combination of a frame, a razor blade holder pivotally mounted at the lower end of said frame, said razor blade holder formed to provide side portions, a portion extending between the side portions, and jaws extending in a direction opposite to that of the side portions, oppositely disposed members extending between and arranged at the end of said side members remote from said portion, and a strop arranged movably on said frame and adapted to contact with said members to move the blade holder to throw said jaws toward the strop when said strop is pulled.

5. In a device of the class specified, the combination of a frame formed to provide a cross portion and side portions substantially at right angles to the cross portion, a rotatable member extending between and arranged substantially centrally on said side portions adjacent to said cross portion, rotatable members arranged on said side portions to each side of the first rotatable member, a pair of said rotatable members being substantially oppositely disposed near the end of said side portions remote from the first rotatable member and a pair of said rotatable members being arranged intermediate of said first rotatable member and the first pair of rotatable members and substantially in alinement with the latter members, a razor blade holder pivotally mounted substantially centrally near the end of said side portions remote from said first rotatable member, said razor blade holder formed to provide side pieces, a portion extending between said side pieces, and jaws bent to extend from said portion in a direction opposite to that of the side pieces and having their free ends spaced near together, a pair of rotatable members extending between and disposed substantially oppositely on said side pieces and arranged nearer together than said first pair of rotatable members, a strop arranged to pass over the first rotatable member and having the exterior side of its end portions in contact with the second and last mentioned pairs of rotatable members and having the interior side of said end portions in contact with the first mentioned pair of rotatable members.

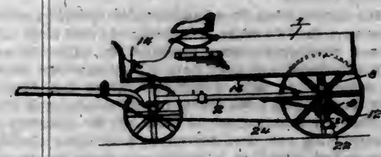
1,024,405. PROCESS OF PRODUCING A FILLER FOR WHITE ENAMELS. IGNAZ KREIDL, Vienna, Austria-Hungary. Filed May 29, 1911. Serial No. 630,157. (Cl. 49—91.)

1. The process of producing a filler for white enamel consisting in freeing powdered silicate of zirconium from coloring matter by treatment with acid, then mixing it with four times the weight of caustic alkali, heating to a temperature of from 500 to 600 degrees centigrade, treating with a fluid to remove the alkali, drying and glowing.

2. The process of producing a filler for white enamel, consisting in freeing powdered silicate of zirconium from coloring matter by treatment with acid, then mixing it with caustic alkali, heating to between 500 and 600 degrees centigrade, washing out the alkali, drying and glowing.

3. The process of producing a filler for white enamel consisting in freeing powdered silicate of zirconium from coloring matter by treatment with acid, then mixing it with four times the weight of caustic soda, heating to between 500 and 600 degrees centigrade, washing out the alkali, drying and glowing.

1,024,406. HORSE-HITCHING WEIGHT. WILLIAM D. LEE, Denver, Colo., assignor of one-half to George G. Ewell, Phillips county, Kans. Filed July 14, 1911. Serial No. 638,585. (Cl. 21—165.)



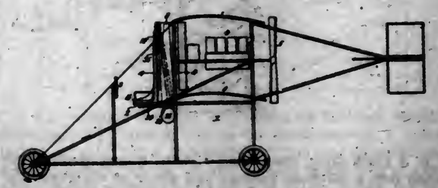
1. In a device of the character described, the combination with a vehicle, of a bracket connected therewith, a drum rotatably mounted on said bracket, ratchet members connected with said drum, a pawl for rotating said drum in one direction, a second pawl for preventing a reverse rotation of said drum, means for moving said first mentioned pawl, a cable for said drum, a weight connected with said cable, means operable by said first mentioned pawl for releasing both of said pawls in order to permit said weight to drop by gravity and unwind said drum, and a hitching cable connected with said weight.

2. In a device of the character described, the combination with a vehicle, of a hitching cable, a weight connected therewith, a lifting cable connected with said weight, a drum for winding the lifting cable, a ratchet wheel connected with said drum for rotating the same, a pawl for rotating said ratchet wheel, means for operating said pawl, a second pawl for preventing the rotation of said ratchet wheel, and a pair of pawl shifting arms adapted to engage both of said pawls for raising the same from said ratchet wheel when said first mentioned pawl has been moved to its extreme forward position, whereby said ratchet wheel and drum are permitted to rotate in a reverse direction and said weight is permitted to fall by gravity.

3. In a device of the character described, the combination with a vehicle, of a hitching cable, a weight connected therewith, a lifting cable connected with said weight, a drum connected with said lifting cable for winding the same and raising said weight, means connected with said vehicle for supporting said drum, a ratchet wheel rigidly connected with said drum, a pawl engaging said ratchet wheel, means for moving said pawl for causing the same to rotate said ratchet wheel, a second pawl engaging said ratchet wheel for preventing a reverse movement thereof, and a pair of pawl disengaging arms formed with cam surfaces adapted to engage said pawls and move the pawls out of engagement with said ratchet wheel upon an extreme forward movement of said first mentioned pawl, whereby said ratchet wheel is released and said weight may drop under the action of gravity.

4. In a device of the character described, the combination with a vehicle, of a hitching cable, a weight connected therewith a lifting cable connected with the weight, a drum supported by said vehicle and engaging said lifting cable, oscillating means for rotating said drum for winding said lifting cable, and means operated by said oscillating means when moved to an extreme position in one direction for releasing said drum and permitting said weight to drop to the ground.

1,024,407. SAFETY DEVICE FOR AEROPLANES. WALTER LEWIS, Philadelphia, Pa. Filed Oct. 9, 1911. Serial No. 653,563. (Cl. 244—21.)



1. The combination of an aeroplane; a parachute safety device consisting of a tube secured to the aeroplane and having a telescopic projecting device; a weight attached to the said telescopic device; a parachute resting upon the telescopic device but otherwise free therefrom; and cords leading from the parachute in position to be used by the aviator when necessary to descend independently of the aeroplane.

2. The combination of an aeroplane having an aviator's seat; a tubular casing located near said seat; a series of tubes within the casing, one telescoping within the other; cords attached to the tubes; a weight suspended from the cords; a parachute having a stem located on the inner telescopic tube; rope sheaves on two of said tubes; ropes passing around the sheaves and attached to the inner and the intermediate tubes; a weight to which the lower ends of the ropes are attached; means at the aviator's seat for retaining the weight in inoperative position; and cords leading from the parachute outside of the tube and in position to be used by the aviator when the bolt is withdrawn to release the weight.

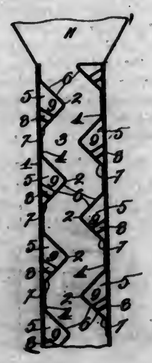
3. The combination of an aeroplane having a seat for the aviator; a casing back of the seat; a series of telescopic tubes located in the casing; cords attached to the tubes and to a weight; a bolt for retaining the weight in inoperative position; a parachute having a stem carried by the telescopic projecting means; cords leading from the parachute outside of the casing; a ring to which the cords are attached; and a seat section connected to the ring and occupying a position above the seat of the aeroplane.

4. A detachable safety device for aeroplanes, consisting of a casing arranged to be attached to the aeroplane; a telescopic projecting device located within the casing; a weight for projecting the said device; means for retaining the weight in inoperative position; a parachute mounted

within the tube and having a stem located above the telescopic device; and a ring and seat section connected to the parachute so that when the weight is released it will project the parachute which will detach itself from the aeroplane.

5. A parachute having a stem; ribs pivotally mounted at the upper end of the stem; a runner mounted on the stem; brace rods connecting the runner with the ribs; and means adapted to carry the aviator secured to the runner, so that when the parachute is ejected the runner will be drawn away from the pivot of the ribs, thus opening the parachute by the weight of the aviator.

1,024,408. GRAIN-DRIER. VALENTINE LUCAS and CHRISTIAN BAUER, Kansas City, Mo.; said Bauer assignor to Hugh J. Puckett, Kansas City, Mo. Filed May 10, 1911. Serial No. 626,637. (Cl. 34—37.)



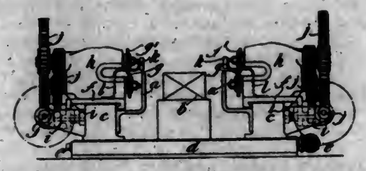
1. A grain drier, comprising a chute, means dividing the chute into a tortuous passage and series of chambers disposed at opposite sides of said passage and in staggered relation to each other; the dividing means being of foraminous material, means for discharging air into said chambers, and air-escape pipes extending upwardly and outwardly through said chambers and communicating at their inner ends with the tortuous passage and at their outer ends with the atmosphere.

2. A grain drier, comprising a chute, perforated deflectors secured within and at opposite sides of the chute and arranged in staggered relation to form a tortuous passage and two series of chambers in staggered relation to each other, one end wall of the chute having openings communicating with said chambers, means for discharging air through said openings into said chambers, and means extending upwardly and outwardly through said chambers for the escape of air from the tortuous passage to the atmosphere.

3. A grain drier comprising a chute, perforated V-shaped deflectors arranged horizontally within and secured to opposite walls of the chute to partition the same into a tortuous passage and two series of chambers, the lower portions of the deflectors being provided with openings, and one end wall of the chute with openings communicating with said chambers, means for supplying air to said chambers through the openings in the said end wall, and pipes extending upwardly and outwardly and establishing communication between the tortuous passage and the atmosphere.

4. A grain drier comprising a chute in the form of a tortuous passage, provided with a hopper bottom having an opening in the lower end of one side, an adjustable slide arranged within the chute and upon the side of the bottom provided with said opening, and means for agitating grain in the lower end of the tortuous passage at a point adjacent to the said opening of the bottom.

1,024,409. SHEARING-MACHINE. WILLIAM H. LUTHER, Glasgow, Scotland. Filed Dec. 14, 1910. Serial No. 597,254. (Cl. 164—62.)



1. The combination in a machine for operating simultaneously on the two edges of a sheet, of a bed plate; two elongated structures thereon; means for adjusting said structures toward and from each other; housings respectively mounted on said structures; means for simultaneously moving said housings on the structures parallel to each other; a tool carried by each of the housings; and fixed means for holding the sheet stationary while said housings with their tools move along its opposite sides and operate thereon.

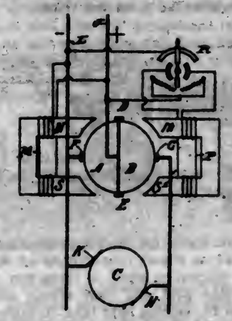
2. The combination in a machine for operating simultaneously on the two edges of a sheet, of a bed plate; two elongated structures thereon; means for adjusting said structures toward and from each other; housings respectively mounted on said structures; means for simultaneously moving said housings on the structures parallel to each other; a tool carried by each of the housings; means for simultaneously driving said tools from the same source of power; and a series of fixed electro-magnets for holding the sheet stationary while the housings with their tools are moved to operate thereon.

3. The combination in a machine for operating simultaneously on the two edges of a sheet, of a bed plate; two elongated structures thereon; means for adjusting said structures toward and from each other; housings respectively mounted on said structures; means for simultaneously moving said housings on the structures in lines parallel to each other; a tool carried by each of the housings; an elongated, stationary sheet-supporting rail mounted on each of the supporting structures and extending in position to assist in carrying the sheet operated on by the tools; and means for holding the sheet stationary on said rails while the housings and their tools are moved to operate thereon.

4. The combination in a machine for operating simultaneously on the two edges of a sheet, of a bed plate; two elongated structures thereon; means for adjusting said structures toward and from each other; housings respectively mounted on said structures; means for simultaneously moving said housings on the structures parallel to each other; a tool carried by each of the housings; a sheet-supporting rail mounted on each of the supporting structures and extending in position to assist in carrying the sheet; means for holding the sheet stationary while it is being operated on by the tools; with a sheet-engaging device on each of the housings for moving the said sheet after it has been operated on.

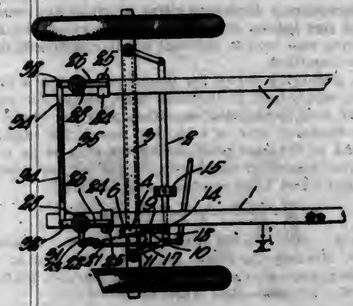
1,024,410. ROTARY ELECTRIC TRANSFORMER AND MOTOR-GENERATOR. JAMES COLQUHOUN MACFARLANE and HARRY BURGE, Arc Works, Chelmsford, England, assignors to The Firm of Crompton and Company Limited, Arc Works, Chelmsford, England. Filed Feb. 7, 1910. Serial No. 542,484. (Cl. 172—239.)

An electric motor control system comprising supply mains, a direct current ring armature adapted to rotate within four polar limbs, a pair of main brushes to said armature, a pair of short-circuited auxiliary brushes arranged at right angles to said main brushes and connected to one of said supply mains and dividing said armature into two portions, a constant separate excitation to one portion of said armature, a variable reversible separate excitation to the second portion of said armature serving to change the direction of the flow of the current through two of said polar limbs when the secondary voltage is raised above the voltage of the mains, a direct current motor, brushes to said direct current motor, one of said motor brushes being connected to the other of said supply



mains and to one of said main brushes, and the other of said motor brushes being connected to the other of said main brushes.

1,024,411. HEADLIGHT FOR AUTOMOBILES. JAMES B. MCKEE, Marshall, Tex. Filed Oct. 26, 1911. Serial No. 656,854. (Cl. 240—62.)



1. In a device of the class described, a member adapted to be removably secured to the steering rod of a vehicle; a member adapted to be removably secured to a fixed portion of the vehicle; a vertical sleeve supported for rotation upon the second specified member and provided with upper and lower eccentric portions; a link pivotally uniting the lower of said portions with the rod-carried member; and means for operatively connecting the upper of said portions with a movably mounted, vehicle-carried lamp.

2. In a device of the class described, a member adapted to be removably secured to the steering rod of a vehicle; a member adapted to be removably secured to the axle of a vehicle; a vertical sleeve supported for rotation upon the axle-carried member and provided with upper and lower eccentric portions; a link pivotally uniting the lower of said portions with the rod-carried member; a rotatably mounted lamp support; and a connection between the lamp support and the upper of said eccentric portions, the connection being yieldable intermediate its point of connection with the lamp support and with the upper of said eccentric portions.

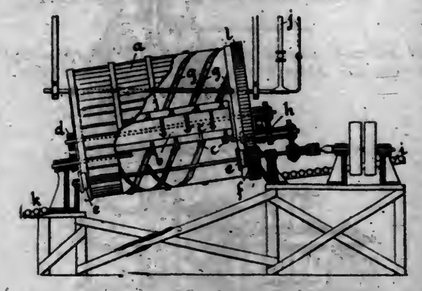
3. In a device of the class described, a clamp adapted to be secured to the steering rod of a vehicle; a clamp adapted to be secured to the axle of a vehicle; a spindle fixed to and rising from the axle clamp; a sleeve rotatable upon the spindle; means for operatively connecting the sleeve with a rotatably mounted, vehicle-carried lamp; an arm projecting from the sleeve; and a link pivotally connecting the arm with the rod clamp.

4. In a device of the class described, a movably supported operating member having a fulcrum; means for operating said member; lamp-controlling mechanism; and interengaging elements upon the lamp-controlling mechanism and upon the movable member, for removably connecting the lamp-controlling mechanism with the movable member; one element being at the fulcrum of the movable member, and another element being eccentrically disposed with respect to the fulcrum.

5. In a device of the class described, a movably supported operating member having a fulcrum; means for operatively connecting said member with the steering rod of a vehicle; lamp-controlling mechanism; and interengaging elements upon the lamp-controlling mechanism and upon the movable member, for removably connecting the lamp-controlling mechanism with the movable member; one element being located at the fulcrum of the movable member, and another of said elements being eccentrically disposed with respect to the fulcrum.

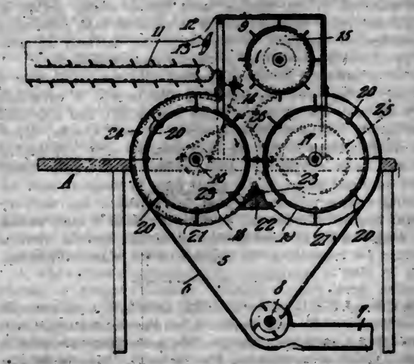
[Claims 6 to 10 not printed in the Gazette.]

1,024,412. HOG-SCRAPING MACHINE. WILLI E. P. MEIER, Grenaa, Denmark. Filed Mar. 19, 1910. Serial No. 550,520. (Cl. 17—11.)



A hog scraping machine, comprising an inclined rotable drum, spirally arranged ribs on the inside thereof, a roller inside of said drum supported by the counterbalanced arms, said roller having its axis parallel to the axis of said drum, spring scrapers fitted on said roller, means for rotating the drum in one direction, means for rotating the roller in the other direction, means for feeding the carcass through the drum past the scraping roller, and means for discharging water and steam upon the carcass during the scraping operation, substantially as set forth.

1,024,413. ALFALFA-FEED CUTTER AND GRINDER. WALTER MIKS, Mayfield, Kans. Filed Sept. 28, 1906. Serial No. 454,988. (Cl. 146—29.)

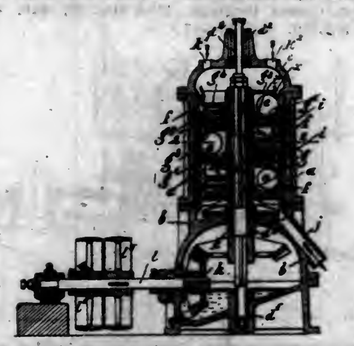


1. In a device of the class described, a housing provided with an opening; a conveyer positioned to discharge into the housing, through the opening; a beater supported for rotation above one end of the conveyer, and upon the outside of the housing, adjacent the top of the opening;

a second beater supported for rotation inside of the housing, adjacent the bottom of the opening; a third beater supported for rotation in the housing opposite the opening, and above the second beater; and cutting mechanism within the housing, below the second and third beaters.

2. In a device of the class described, a housing having an opening; means upon the outside of the housing for delivering the material through the opening; a beater supported for rotation in the housing, below the opening; a second beater, of larger diameter than the first, supported for rotation above the first beater, and located opposite to the opening; cutting cylinders supported for rotation in the housing below the beaters; and a concave located between the cylinders, and positioned directly beneath the second beater.

1,024,414. VERTICAL TUBULAR MILL FOR FINE GRINDING. CHARLES MOREL, Domène, Isère, France. Filed Sept. 14, 1910. Serial No. 582,022. (Cl. 83—45.)



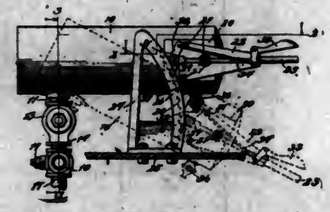
1. In a ball-mill for fine grinding, the combination of a vertical casing, annular grinding tracks and a revoluble shaft therein, stages mounted on said shaft and provided with radial compartments opening on said tracks, alternate compartments having top-closures and containing grinding balls adapted to roll against said tracks under action of centrifugal force, the said remaining compartments of each stage being adapted to receive and deliver material to said grinding tracks.

2. In a ball-mill for fine grinding, the combination of a vertical casing, annular grinding tracks and a revoluble shaft therein, stages mounted on said shaft and provided with radial compartments opening on said tracks, alternate compartments having top-closures and containing grinding balls adapted to roll against said tracks under action of centrifugal force and partitions in each of said remaining compartments adapted to facilitate the delivery to said tracks of material received by each compartment.

3. In a ball-mill for fine grinding, the combination of a vertical casing, annular grinding tracks and a revoluble shaft therein, stages mounted on said shaft and provided with radial compartments opening on said tracks, alternate compartments having top-closures and containing grinding balls adapted to roll against said tracks under action of centrifugal force, partitions in each of said remaining compartments adapted to facilitate the delivery to said tracks of material received by each compartment, and diaphragms intermediate said stages having central openings for regulating the fineness of the material ground.

1,024,415. LIQUID-MEASURING DEVICE. ALFRED D. MOSBY, Chicago, Ill., assignor to Marsh-Capron Manufacturing Company, Chicago, Ill., a Corporation of Illinois. Original application filed Feb. 23, 1911, Serial No. 610,154. Divided and this application filed Sept. 29, 1911. Serial No. 651,914. (Cl. 73—163.)

1. A measuring device for liquids comprising a supply and a discharge pipe a pivotally mounted tank having a port constituting an inlet and outlet, means for putting said port into communication either with the supply or discharge pipe as desired and means for setting said tank in different angular positions so as to trap more or less of the liquid, substantially as described.



2. A measuring device for liquids comprising a pivotally mounted tank having a port constituting an inlet and outlet, supply and discharge pipes, a three-way valve interposed between said port and said supply and discharge pipes, and means for setting said tank in different angular positions so as to trap more or less liquid, substantially as described.

3. A measuring device for liquids comprising a tank, a pipe through which said tank is adapted to fill and discharge and upon which the tank is pivotally mounted, and means for setting said tank at different angular positions for the purpose described.

4. A measuring device for liquids comprising a tank, a pipe section tapped into the bottom thereof, supply and discharge pipes, a three-way valve, a swivel joint connecting said pipe section and said three-way valve, and means for setting said tank in different angular positions, for the purpose described.

5. A measuring device for liquids comprising a pivoted tank, a supply and a discharge pipe, means for putting the tank into communication either with the supply pipe or the discharge pipe, a rack, and means for supporting said tank at different positions on the rack so as to give it different degrees of angularity, for the purpose described.

[Claims 6 and 7 not printed in the Gazette.]

1,024,416. SEWING-MACHINE NEEDLE. ALBERT P. MYER, Minneapolis, Minn., assignor of one-half to Owen T. Dougherty, St. Paul, Minn. Filed Mar. 26, 1910. Serial No. 551,629. (Cl. 112—11.)

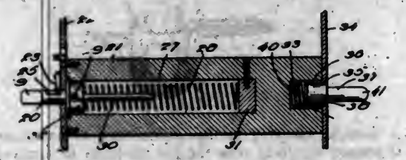


A needle having an eye extending longitudinally of the needle, a slit extending diagonally through one wall of said eye, one portion of the slitted wall and the opposite wall being axially twisted.

1,024,417. ELECTRIC-LIGHT ATTACHMENT. ARTHUR J. PAGNOD, New York, N. Y. Filed July 26, 1911. Serial No. 640,543. (Cl. 248—10.)

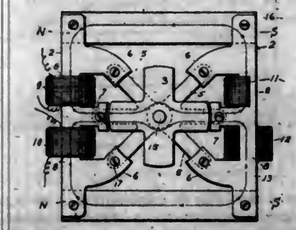
In an electric-light fixture, a casing having a threaded nipple for engagement with a socket, a hinged cover on the casing, a nipple for the passage of electric wire there-

through, an insulated bushing in one end of said casing, a drum within the casing on which the wires are adapted to be wound, said drum having a disk mounted in one end, pawls pivotally mounted on said disk, stop lugs struck up from said disk for engagement of the said pawls, a pintle in the said end of the drum, said pintle having recesses for engagement of the ends of said pawls, a disk mounted on the end of the drum, an inwardly directed flange surrounding a central opening in said disk in the end



of said drum having a recess formed therein to receive said flange, a pintle slidable within said flange, a stop collar on the inner end of the pintle for engagement with the flange, a spring within the recess to hold the pintle normally outward, and an insulated bushing arranged in the opposite end of said casing from the first named bushing having a central opening to receive said pintle and an open-ended slot, whereby said pintle can be engaged within said opening against the tension of said spring.

1,024,418. INDUCTOR-ALTERNATOR. EMIL PODLESAK, Tiffin, Ohio. Filed Mar. 14, 1911. Serial No. 614,347. (Cl. 171—209.)



1. An inductor alternator comprising a field structure including a pole piece having outer and middle polar projections and connecting limbs forming cores, windings around the said cores, there being a pair of windings on each pole piece at opposite sides of the middle polar projection, and an inductor having a plurality of arms disposed in such relation that the flux will pass through the middle polar projection and one path through the inducter when the latter is in one position and through both outer polar projections and two paths through the inductor when the latter is in another position.

2. An inductor alternator comprising a polygonal field structure including a plurality of interconnected magnets and pole pieces, said pole pieces having polar projections diametrically and diagonally arranged, windings on the portions of the pole pieces between the said projections, there being a plurality of windings on each pole piece, and an inductor having arms so arranged that all of them will be opposite to the diagonal polar projections when the inductor is in one position and only half the arms will be opposite the diametrical polar projections when the inductor is in another position.

3. An inductor alternator comprising a polygonal field structure including a plurality of bar magnets and bar pole pieces connected together, outer and intermediate polar projections on each pole piece and disposed at an angle to each other, a pair of windings on each of the pole pieces, and an inductor having a less number of arms than the polar projections, said arms being disposed at an angle to each other equal to the angle between the outer polar projections of each pole piece.

4. An inductor alternator comprising a pair of permanent magnets, a pair of bar pole pieces connecting like poles of the magnets together, outer and intermediate polar projections extending inwardly from each pole piece, the outer projections being disposed at forty-five degrees to the intermediate polar projections, a cruciform unwound inductor movably related to the polar projections, and a plurality of windings on each of the pole pieces through which the flux passes when two oppositely disposed arms of the inductor are in line with the intermediate polar projections and outside of which the flux passes when all the arms of the inductor are in line with the outer polar projections.

5. A generator field structure comprising a pole piece composed of alternately arranged long and short bars so disposed as to provide recesses in the ends of the pole pieces, and magnets composed of bars having their ends set edgewise into the recesses of the pole piece with the side faces of the magnet bars in contact with the side faces of the long bars of the pole piece and the edges of the magnet bars in contact with the ends of the short bars of the pole piece.

[Claims 6 to 39 not printed in the Gazette.]

1,024,419. BOAT. FRANCIS X. RESCH, Wanette, Okla. Filed Sept. 12, 1911. Serial No. 648,944. (Cl. 115—23.)



In a boat propelling mechanism, the combination with a gunwale, of plates secured to the upper and lower sides of the said gunwale, the plates secured to the upper side of said gunwales being provided with depressions, U-shaped gunwales engaging members adapted to span said gunwales, inwardly extending lugs carried by the upper horizontal arms of said U-shaped gunwale engaging members, adapted to engage the depressions of the plates aforesaid, clamping means carried by the lower horizontal arms of said gunwale engaging members, U-shaped vertical standards carried by the upper horizontal arms of said gunwale engaging members, outwardly extending bearings carried at the upper terminals of said standard, shafts rotating in said bearings, hubs carried at the outer terminals of said shafts, paddle blades detachably secured to said hubs, a train of gears operating between the vertical arms of said standards, and adapted to operate said shaft, and means whereby said gears may be rotated.

1,024,420. STORE-FRONT CONSTRUCTION. VERNON ROSS, Kansas City, Mo. Filed Mar. 7, 1910. Serial No. 548,204. (Cl. 189—78.)

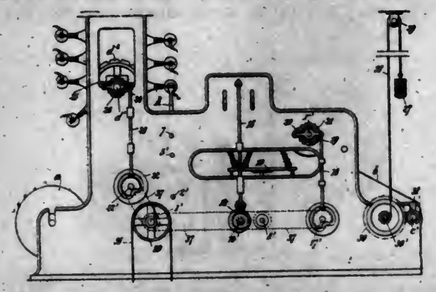
A store front construction, comprising a pair of glass plates, a front clamping member overlapping adjacent edges of said plates at their front sides and formed at its side edges with rearwardly-turned inwardly-opening hooks, a rear clamping member arranged rearward of the front clamping member and at the opposite side of said plates and consisting of a central arched portion formed at its side margins with shoulders and resilient flanges, the latter engaging the rear faces of said plates, a front reinforce member bridging the space between the glass plates

and fitting at its side edges in the hooks of the front clamping member, a rear reinforce member engaging the shoulders of the rear clamping member, a headed bolt extending through the reinforce plate, the rear clamping



member and the rear reinforce member, a nut engaging said bolt and the rear side of the rear clamping member, and a nut engaging said bolt and the rear side of the rear reinforce member.

1,024,421. METHOD OF PREPARING WARP FOR MANUFACTURING PILE FABRIC. PAUL SABONADIÈRE, Eaubonne, and ETIENNE D'EAUBONNE, Neuilly-sur-Seine, France. Filed Jan. 26, 1909. Serial No. 474,272. (Cl. 139—66.)



1. A process of obtaining a pile warp, consisting in successively introducing series of separate pile threads end to end between the sides of a series of parallel longitudinally-folded bands, so as to form a series of transverse rows of threads, advancing said bands in unison after the formation of each row, securing said threads in position in said bands, and winding said bands synchronously upon a beam.

2. A process of obtaining a pile warp, consisting in successively introducing series of separate pile threads of different colors end to end, in the order in which the corresponding colors appear in the pattern to be woven, between the sides of a series of parallel longitudinally-folded bands, so as to form a series of transverse rows of threads, advancing said bands in unison after the formation of each row, securing said threads in position in said bands, and finally removing said bands.

3. A process of obtaining a pile warp consisting in successively introducing series of separate pile threads end to end between the sides of a series of parallel longitudinally-folded bands of cingalette muslin, so as to form a series of transverse rows of threads, intermittently advancing said bands in unison, moistening said bands to soften the same, subsequently heating said bands and forcing the sides thereof together to cause them to securely hold said threads therebetween, and finally winding said bands upon a beam.

4. A process of producing a warp or weft for use in the manufacture of fabrics which consists in arranging separate threads of various colors that are to constitute the pattern of the fabric longitudinally, one after another, in the order in which the corresponding colors appear in said pattern, to form a continuous band.

5. A process of producing a warp or weft for use in the manufacture of fabrics which consists in securing upon a band the variously-colored threads that are to constitute the pattern of the fabric longitudinally, one after another, in the order in which the corresponding colors appear in said pattern.

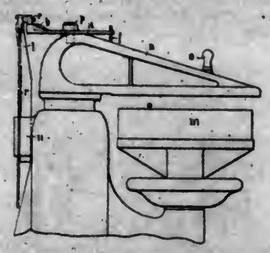
[Claims 6 to 9 not printed in the Gazette.].

1,024,422. MEDICAL SPRAYING-SYRINGE. MORITZ SAENGER, Magdeburg, Germany. Filed Oct. 17, 1910. Serial No. 587,598. (Cl. 128—2.)



A medical spraying syringe comprising in combination a U shaped capillary tube for the liquid to be sprayed, a horisontal branch at the front end of said capillary tube, a tube for the air under pressure arranged above said capillary tube and surrounding the horisontal front end of the same, and an air inlet at the rear end of said air tube, substantially as described and shown and for the purpose set forth.

1,024,423. PRESS PROVIDED WITH AN OSCILLATING PRESSING-ARM. JULIUS SANDT, Pirmasens, Germany. Filed Oct. 11, 1911. Serial No. 654,139. (Cl. 164—23.)



1. A press comprising in combination, a swinging press arm, a cam pivotally mounted on said arm, means for locking said cam in its adjusted position, and a pivotally mounted power lever having a roller adapted for actuation by said cam upon swinging movement of said arm, substantially as and for the purpose set forth.

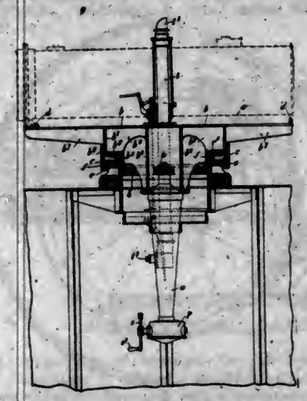
2. A press comprising in combination, a swinging press arm, a cam pivotally mounted on said arm, means for locking said cam in its adjusted position, and an adjustably mounted pivotal power controlling lever adapted for actuation by said cam upon swinging movement of said arm, substantially as and for the purposes set forth.

3. A press comprising in combination, a swinging press arm, a cam mounted on said arm, and a power controlling means disposed in the field of movement of said cam, substantially as and for the purposes set forth.

1,024,424. TORPEDO-LAUNCHING TUBE. EUGÈNE SCHNEIDER, Le Creusot, France. Filed May 15, 1911. Serial No. 627,160. (Cl. 114—238.)

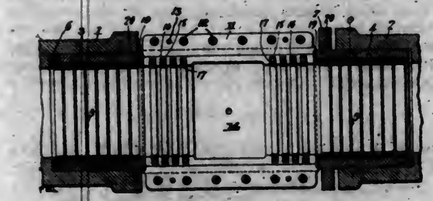
1. In combination, a revoluble torpedo carriage provided with a torpedo launching tube fast thereto, and adapted to be mounted on the deck of a vessel, training mechanism sheltered below said carriage and beneath the deck for turning said carriage and training said tube on an object and a periscopic sighting device mounted on said carriage and means for operating said device below said platform whereby the sighting of the object and aiming of the torpedo tube is made independent of the direction of the vessel's course.

2. In combination, a revoluble torpedo carriage adapted to be mounted on deck of a vessel comprising a platform adapted to support a torpedo launching tube and a sleeve depending from said platform and provided with training mechanism, a circular saddle for revolubly supporting said platform and having a fixed rack engaging said training mechanism and a periscopic sighting device



mounted on said carriage and having means for operating the same sheltered below said platform all arranged whereby the sighting of the object and aiming of the torpedo tube is independent of the direction of the vessel's course.

1,024,425. METALLIC PACKING FOR PUMPS. EUGENE M. SCOVILLE, Waipahu, Hawaii. Filed Oct. 31, 1911. Serial No. 657,779. (Cl. 103—61.)



1. A metallic packing for pumps comprising, two metallic bushings, and a coupling box in halves bolted together between the ends of said bushings, said coupling box containing metallic half rings, substantially as described.

2. A metallic packing for pumps comprising, two metallic bushings, a coupling box between said bushings provided with lips overlapping the outer ends of the bushings, and means for sealing the joints between the bushings and coupling box.

3. A metallic packing for pumps comprising, two bushings one of which is provided with a flange and setting-up screws, said bushings adapted to fit in the stuffing boxes of the two pump chambers, a plunger working in said bushings, a coupling box surrounding the plunger between the bushings and containing metallic packing rings in segments with means for pressing the segments against the plunger, and means for sealing the joints between the bushings and stuffing boxes and between the bushings and coupling box.

4. In a metallic packing for pumps, two bushings, a coupling box between said bushings containing metallic packing spring pressed segments, packing interposed between the ends of said bushings and the coupling box, and means for moving one bushing toward the other bushing so as to compress said packing.

5. A metallic packing for pumps comprising, two bushings, one of said bushings provided with a flange and setting-up screws, a coupling box between said bushings having a grease chamber and spring pressed packing ring segments between the grease chamber and the ends of the coupling box, and means for sealing the joints between the bushings and the coupling box.

1,024,426. HORSESHOE. RICHARD L. TAYLOR, Pine Bluff, Ark. Filed Sept. 11, 1911. Serial No. 648,598. (Cl. 168—22.)



A horse shoe such as described comprising a pair of segmental sections, calks upon the rear extremities thereof, a pair of rods hinged to the segmental sections adjacent the calks, a turn buckle connecting the ends of the rods, the meeting ends of the segmental sections having registering openings formed therein, a front calk, a bolt passing through the registering slots and the front calks and connecting the sections and retaining the calk thereon, plates hinged to intermediate portions of the sections, a plate hinged to the meeting end of one of the sections, fastening means passing through the said plates and sections for engagement with the hoof of an animal and traps secured to the side plates for engagement with the hoof.

1,024,427. LOCK-NUT. ALBERT J. THREM, Beans Creek, Tenn. Filed July 13, 1910. Serial No. 571,803. (Cl. 151—9.)



The combination with a bolt having a longitudinal recess in its threaded portion, of a T-shaped plate of resilient metal having its head seated in the recess of the bolt with the terminals thereof extending beyond the same at opposite sides, and a nut having a recess in one face provided with inwardly directed abutments in the walls of the recess, said nut being engaged upon the bolt and said abutments engaged by the locking plate.

1,024,428. BRIQUETING. WARREN R. VALENTINE, Ford City, Pa. Filed Apr. 27, 1911. Serial No. 623,708. (Cl. 75—73.)

1. A briquet having a binder containing an organic element and effective to maintain the coherence of the mass at a temperature approximately the melting point of the metallic elements of the briquet.

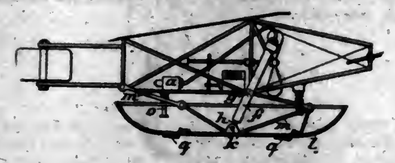
2. A briquet having in combination broken or comminuted material and a binder consisting of a flux, an alkali and an organic acid.

3. A briquet having in combination broken or comminuted material and a binder consisting of material adapted when mixed with the broken or comminuted material to combine and generate sufficient heat to eliminate a large percentage moisture from the mass.

4. The method of making briquets which consists in mixing the materials to be united with a flux an alkali and a solution containing an organic acid.

5. A briquet having in combination broken or comminuted material, soda ash, limestone and glutrin.

1,024,429. STARTING DEVICE FOR FLYING-MACHINES. KARL VÖLLER, Dusseldorf, Germany, assignor to Rheinische Metallwaaren- und Maschinenfabrik, Dusseldorf-Derendorf, Germany, a Corporation of Germany. Filed July 27, 1911. Serial No. 640,778. (Cl. 244—2.)



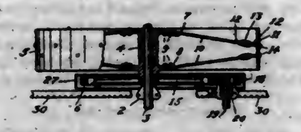
1. In a flying machine, a starting device carried by the flying machine, a boat pivotally suspended from the flying machine and between which latter and the boat there is a relative movement in starting, and means forming a pivotal connection between the starting device and the boat.

2. In a flying machine, a starting device carried by the flying machine, a boat, links pivotally suspending the boat from the flying machine and between which latter and the boat there is a relative movement in starting, and means forming a pivotal connection between the starting device and the boat.

3. In a flying machine, a starting device carried by the flying machine, a boat pivotally suspended from the flying machine and between which latter and the boat there is a relative movement in starting, means forming a pivotal connection between the starting device and the boat, and folding spurs on the under side of the boat.

4. In a flying machine, a starting device carried by the flying machine, a boat pivotally suspended from the flying machine and between which latter and the boat there is a relative movement in starting, a pivotal connection between the starting device and the boat, and spring bolts on the boat adapted to be under compression when the flying machine is at rest and to assist the launch of the machine.

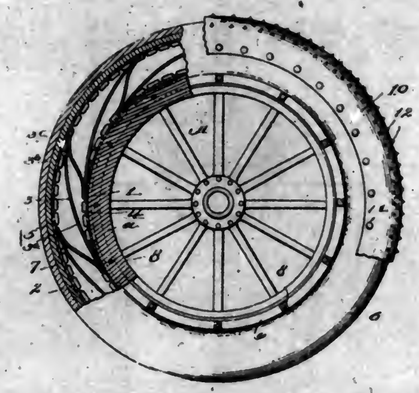
1,024,430. HOUSING FOR TRACTION-ENGINE GEARING. EDWIN M. WHEELOCK, Minneapolis, Minn. Filed June 18, 1909. Serial No. 502,936. (Cl. 74—56.)



1. In combination, a supporting frame-work, a gear casing comprising a lower portion secured to a portion of said framework, and an upper portion provided with means adapting the same to be removably secured to said frame-work, said upper portion being provided with a lap-strip extending about the margin thereof in parallel spaced relation to said margin so as to form a socket for receiving the upper edge of said lower half of the casing thereby to form a tight joint therewith.

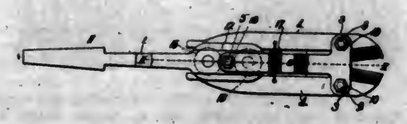
2. In combination, a supporting framework, a two-part casing, an auxiliary frame piece to which one portion of said casing is permanently secured, the other portion of said casing being removably secured to the main frame-work, said removable portion being provided with a lap-strip surrounding the margin thereof in parallel spaced relation with the walls of said margin so as to form a socket for receiving the edge of said first named portion of the casing thereby to form a tight joint therewith.

1,024,431. VEHICLE-TIRE. THEODORE H. BANKS, San Antonio, Tex. Filed Oct. 23, 1911. Serial No. 656,221. (Cl. 152—8.)



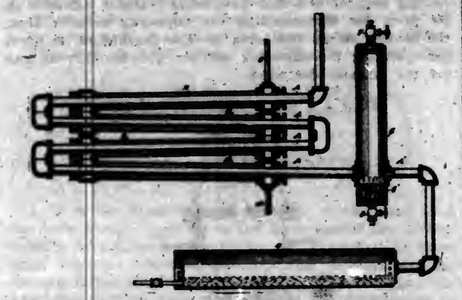
In a vehicle tire of the type set forth, in combination, inner and outer relatively shiftable rims and a series of V-shaped springs confined between said rims, each spring having a longer leg and a shorter leg and each leg being joined at its ends to the ends of the legs adjacent thereto, the joined ends of said legs being clenched together through a distance approximating their width and thereby having a relatively wide and flat bearing against one another and against the adjacent rims.

1,024,432. BOLT-CLIPPER. MILES K. BARRON, Coffeyville, Kans. Filed Sept. 14, 1910. Serial No. 582,070. (Cl. 81—197.)



A bolt clipper comprising a T-shaped handle of which the inner face of the head lies inward of the corresponding side of the stem, a pivot bolt 5 secured to the stem of the handle bolts 3 secured to and near the ends of the said head; a T-shaped strap 8, of which the head is secured to bolts 3 and the stem on said pivot bolt; said stem being bent to provide a wider space between it and the stem of the handle than exists between said heads, a handle 11 provided with a head 12, fitting snugly between the stem of the first-named handle and strap and pivoted on the pivot bolt and provided with a groove surrounding the pivot bolt and occupying the plane of the space between the heads of the first-named handle and the strap, anti-friction rollers carried by head 12 within said groove forward and rearward of the pivot bolt and of such diameter that the head projects beyond the peripheries of the rollers at all points, a pair of cutting jaws pivoted on bolts 3 between the heads of the first-named handle and the strap and also fitting in the groove of head 12 at opposite sides of the pivot bolt and adapted to engage opposite sides of both rollers simultaneously when the jaws are open and adapted to engage different rollers when the jaws are closed, and a retractile spring connecting the jaws rearward of their pivotal points and tending to hold their cutting ends apart, substantially as described.

1,024,433. ACCUMULATOR AND SEPARATOR ATTACHMENT FOR GAS-LIQUEFYING APPARATUS. FRED C. BELL, Alameda, Cal., assignor to Pacific Refrigerating Machine Company, San Francisco, Cal., a Corporation of California. Filed Sept. 6, 1910. Serial No. 580,892. (Cl. 62—6.)



1. An accumulator and separator for gas liquefying apparatus comprising a vertically disposed cylinder, an inlet to said cylinder connecting with a condenser, an outlet to said cylinder connected with a liquid receiver, said inlet and said outlet being disposed a substantial distance above the bottom of said cylinder, the space in the cylinder above the inlet and outlet forming a gas receptacle and the space below the inlet and outlet forming a liquid reservoir.

2. An accumulator and separator for gas liquefying apparatus, comprising a vertically disposed cylinder, an inlet to said cylinder connecting with a condenser, an outlet to said cylinder connecting with a liquid receiver, said inlet and said outlet being disposed a substantial distance above the bottom of said cylinder, the space in the cylinder above the inlet and outlet forming a gas receptacle, and the space below the inlet and outlet forming a liquid reservoir, a valved opening in the top of said cylinder for the escape of gases, and a valved opening in the bottom of said cylinder for the escape of liquid.

1,024,434. EYEGLASS-HOLDER. FREDERICK R. BISHOP, North Attleboro, Mass. Filed Jan. 11, 1912. Serial No. 670,587. (Cl. 242—98.)



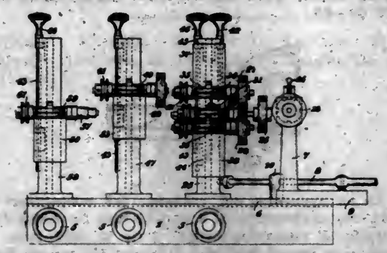
1. In combination with the casing and spring reel of an eye glass holder, a disk soldered to the back of the casing and formed with two pairs of opposite U-shaped slits, the material in said U-shaped slits being bent upwardly at right angles to the disk to form a long and a short pair of projections, the short pair of projections being disposed at right angles to the plane in which the long pair of projections lie, a ring having a flange at its bottom notched to receive said short pair of projections, said ring being formed with a slot to receive an end of the spring of the reel, and the reel being received over said long pair of projections, the free ends of the long pair of projections being bent outwardly to engage the adjacent face of the reel to secure the latter in position.

2. In combination with the casing and spring reel of an eye glass holder, a disk secured to the back of the casing and formed with a long and a short pair of projections, a spring holding device for the spring of the reel having notches to receive said short pair of projections, the reel being received over said long pair of projections and the free ends of the latter being bent outwardly to engage an adjacent face of the reel.

3. In combination with the casing and spring reel, a device having a long pair and a short pair of projections secured to the casing, the long pair of projections receiving the reel and being bent into engagement therewith, and means held by the short pair of projections to retain one end of the spring of the reel.

4. In combination with the casing and spring reel, a member secured to the back of the casing and formed with a pair of projections, and a device having notches to receive said projections and also having a slit to receive one end of the spring of the reel.

1,024,435. GRINDING PEN-NIBS. JOSEPH BISSELL, Birmingham, England. Filed Sept. 21, 1911. Serial No. 650,507. (Cl. 51—10.)



1. A machine for grinding pen nibs comprising in combination a bed plate; a member mounted on said bed plate and adapted to hold a nib during grinding; means for moving said member along the bed plate; means for supporting grinding means, said supporting means being adjustable relative to the bed plate; and means for producing relative angular adjustment between said grinding means and the nib holder.

2. A machine for grinding pen nibs comprising in combination a bed plate; a rigid member mounted on said bed plate and adapted to hold a nib, maintaining it at a fixed distance from the bed plate during grinding; standards mounted on said bed plate; grinding means adjustably mounted on said standards and adapted to be firmly fixed in position thereon, and means for causing the nib holding member to travel along the bed plate in front of said standards so as to bring the nib into position for the operation of the grinding means thereon, the fixed relation between the nib holder and the bed plate, and between the grinding means and the bed plate determining the extent of the grinding operations.

3. A machine for grinding pen nibs comprising in combination a grinding wheel adapted to operate upon the end of the point of the nib which is held in a radial position relative to the wheel during the operation; a pair of wheels for grinding the sides of the nib point, these wheels being arranged a short distance apart in the same plane, so as to receive the point of the nib between them; and a wheel for grinding the under surface at the end of the point, this wheel being adapted to operate upon the nib when placed approximately tangential to its periphery; a member adapted to hold a nib during grinding; means for causing said member to move into position before each of the sets of grinding means in succession.

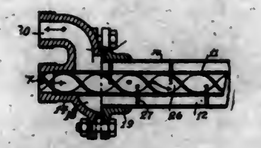
4. A machine for grinding pen nibs comprising in combination a grinding wheel adapted to operate upon the end of the point of the nib which is held in a radial position relative to the wheel during the operation; a pair of wheels for grinding the sides of the nib point, these wheels being arranged a short distance apart in the same plane, so as to receive the point of the nib between them; a wheel for grinding the under surface at the end of the point, this wheel being adapted to operate upon the nib when placed approximately tangential to its periphery; a grinding wheel adapted to round or bevel off the sloping edges of the nib point; a member adapted to hold a nib during grinding; means for causing said member to move into position before the sets of grinding means in succes-

sion; and means for producing relative angular adjustment between the said nib holding member and the grinding means.

5. A machine for grinding pen nibs comprising in combination a bed plate; grinding means supported from said bed plate; a standard adapted to travel along said bed plate in front of said grinding means; a member rotatably mounted in said standard; means for locking said member in any one of a number of angular positions in said standard; and nib holding means carried by said member.

[Claims 6 to 8 not printed in the Gazette.]

1,024,436. APPARATUS FOR CHANGING THE TEMPERATURE OF LIQUIDS. PAUL JOSEPH CARTAULT, Paris, France. Filed Mar. 19, 1910. Serial No. 550,400. (Cl. 62—30.)



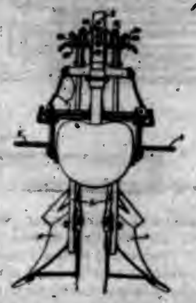
1. In an apparatus for changing the temperature of liquids, the combination of a central tube for conducting the liquid, a removable helical plate in said tube, an exterior tube spaced from and receiving the central tube, a casting at each end of the central tube and having a small opening receiving the end of the central tube, a larger opening receiving the exterior tube and a lateral opening communicating with the larger opening, said tubes being removable therefrom, and means for holding the tubes in spaced relation.

2. In an apparatus for changing the temperature of liquids, the combination of a central tube for conducting the liquid; a removable helical plate in said tube; an exterior tube spaced from and receiving the central tube; a casting at each end of the central tube and each provided with a smaller shouldered opening receiving the adjacent end of the central tube, and with a larger opening concentric with the smaller opening and receiving said exterior tube, each casting being provided with a lateral opening communicating with the exterior tube, one end of the exterior tube being provided with a side opening registering with the adjacent lateral opening; a removable packing means between one end of the central tube and the adjacent smaller openings, and a removable packing means between the other end of the exterior tube and the adjacent larger opening.

1,024,437. SULKY-PLOW. AURIN M. CHASE, Syracuse, N. Y., assignor to Syracuse Chilled Plow Company, Syracuse, N. Y., a Corporation of New York. Filed Nov. 23, 1906. Serial No. 344,677. (Cl. 97—36.)

1. In a sulky plow, a frame element, an element for controlling the direction of the line of draft of the plow pivoted to the frame element, an adjusting member carried by one of said elements and connected to the other element for changing the relative position of said elements and thereby changing the line of draft, means for operating the adjusting member, and means for holding said member in its adjusted position, the operating means being initially movable relatively to the adjusting member to disconnect the adjusting member and the holding means and being movable with the adjusting member after said member has been released from the holding means, the movement of the operating means with the adjusting member being a continuation of the initial movement thereof, substantially as and for the purpose specified.

2. In a sulky plow, a frame element, an element for controlling the direction of the line of draft of the plow pivoted to the frame element, an adjusting member pivoted to one of said elements and connected to the other element for changing the relative position of said elements and thereby changing the line of draft, operating means for rocking the adjusting member on its pivot, and means for holding said member in its adjusted position, the operating means including a pivoted part having its pivot arranged parallel to the pivot of the adjusting member and said part being initially movable on its pivot for disconnecting the adjusting member from the holding means and being movable farther on its pivot for operating the adjusting member, substantially as and for the purpose described.



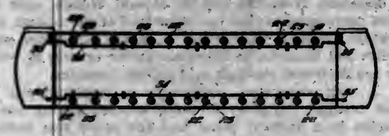
3. In a sulky plow, a frame element, an element connected to the frame element for controlling the direction of the line of draft of the plow, an adjusting member pivoted between its ends to one of said elements and connected to the other element, and being movable on its pivot for changing the relative position of said elements and thereby changing the line of draft, means for rocking the adjusting member on its pivot including operating parts pivoted to the adjusting member on opposite sides of the pivot of said member, each operating part being provided with a pawl tooth and ratchet teeth fixed from movement with the adjusting member and coöperating with said pawl teeth, substantially as and for the purpose set forth.

4. In a sulky plow, a frame element, an element pivotally connected to the frame element for controlling the direction of the line of draft of the plow, an adjusting member pivoted between its ends to one of said elements and connected to the other element and being movable on its pivot for changing the relative position of said elements and thereby changing the line of draft, means for rocking the adjusting member on its pivot including operating parts pivoted to the adjusting member on opposite sides of the pivot thereof, each of said parts being provided with a pawl tooth, and ratchet teeth fixed from movement with the adjusting member and coöperating with the pawl teeth each operating part being initially movable on its pivot relatively to the adjusting member to disengage its pawl tooth from the ratchet teeth and being thereafter movable with the adjusting member for shifting said member and the other operating part relatively to said ratchet teeth, substantially as and for the purpose specified.

5. In a sulky plow, a frame element, an element connected to the frame element for controlling the direction of the line of draft of the plow, an adjusting member pivoted between its ends to one of said elements and connected to the other element and being movable on its pivot for changing the relative position of said elements and thereby changing the line of draft, means for rocking the adjusting member on its pivot including operating parts pivoted to the adjusting member on opposite sides of the pivot thereof, each of said parts being provided with a pawl tooth, ratchet teeth fixed from movement with the adjusting member and coöperating with the pawl teeth each operating part being initially movable on its pivot relatively to the adjusting member to disengage its pawl tooth from the ratchet teeth and being thereafter movable with the adjusting member for shifting said member and the other operating part relatively to said ratchet teeth, and springs interposed between said operating parts and the adjusting member, substantially as and for the purpose described.

[Claims 6 to 24 not printed in the Gazette.]

1,024,438. CAR-VENTILATING SYSTEM. DWIGHT I. COOKE, Chicago, Ill., assignor to Vacuum Car Ventilating Company, Chicago, Ill., a Corporation of Illinois. Filed Oct. 19, 1909. Serial No. 523,455. (Cl. 98—23.)



1. In a car ventilating system, the combination of a car body having openings in the floor thereof for the admission of air, means for forcing air through said openings, registers composed of fixed and movable sections for regulating the flow of air through said openings, rods extending parallel with said registers and terminating in vestibules of the car, an actuating lever attached to each of the ends of said rods, arms extending from the movable sections of each of the registers and connected to said rods, means for securing an independent adjustment of each of said arms toward and from the axial center of said movable sections, thus regulating their movements and admitting a relatively large or small volume of air, and means located at the top of said car body for exhausting the air, substantially as described.

2. In a car ventilating system, the combination of a car body having openings in the floor thereof for the admission of air, means for forcing air through said openings, registers composed of fixed and movable sections for regulating the flow of air through said openings, rods extending parallel with said registers and terminating in the vestibules of the car, an actuating lever attached at each of the ends of said rods, arms extending from the movable sections of the registers and connected to said rods, the movable sections having radially extending slots formed therein adapted to receive a square pin on said arm, the arms having longitudinally extending slots through which is inserted a set screw threaded into the body portion of the rod, and means located at the top of the car body for exhausting the air, substantially as described.

1,024,439. CAR-VENTILATING SYSTEM FOR SLEEPING-CARS. DWIGHT I. COOKE, Chicago, Ill., assignor to Vacuum Car Ventilating Co., Chicago, Ill., a Corporation of Illinois. Filed Dec. 5, 1910. Serial No. 595,628. (Cl. 98—23.)



1. In a ventilating system for sleeping cars, elongated air ducts within and adjacent the opposite sides of the car floor, fresh air intakes disposed adjacent to and beneath the car floor for receiving and conveying fresh air into said ducts, a plurality of air supply pipes in communication with said ducts and disposed within the car walls with their discharge ends positioned at a point to open into the car for ventilating the lower sleeping car berths.

2. In a ventilating system for sleeping cars, elongated air ducts within and adjacent the opposite sides of the car floor, fresh air intakes disposed adjacent to and beneath the car floor for receiving and conveying fresh air into said ducts, a plurality of air supply pipes in communication with said ducts and disposed within the car walls with their discharge ends positioned at a point to open into the car for ventilating the lower sleeping car berths and mechanical means for exhausting the vitiated air from the car.

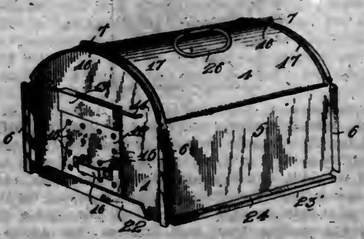
3. In a ventilating system for sleeping cars, elongated air ducts within and adjacent the opposite sides of the car floor, said ducts being formed in several independent sections, air intakes communicating with the several duct sections, said intakes being disposed adjacent to and beneath the car floor for receiving and conveying the admitted fresh air up into said ducts, a plurality of air supply pipes positioned within the car walls and between the windows, said supply pipes communicating at their lower ends with the respective duct sections, their upper ends opening into the car at a point suitable for ventilating the lower sleeping car berths and heater casings in communication with said ducts through which the fresh air may pass beneath the seats of the car.

1,024,440. ENGINE. JACKSON G. CROWDES, Boston, Mass. Filed Nov. 25, 1910. Serial No. 594,005. (Cl. 121—41.)



An engine having a pair of pistons one of which is hollow and closed at both its ends and within which is mounted the other of said pistons; a stationary guide cylinder formed a pair of inlet ports and a pair of exhaust ports, said ports being substantially centrally arranged; a power-transmitting device connected to one end of said hollow piston; and a power-transmitting device which passes slidably through the opposite end of the latter and is connected to the other of said pistons slidably mounted therein; said hollow piston being formed with centrally-disposed inlet and exhaust ports arranged to be brought into register respectively with the inlet and exhaust ports of said guide-cylinder.

1,024,441. KNOCKDOWN CHICKEN-COOP. IRWIN DAVIS, Kirksville, Mo. Filed Mar. 23, 1911. Serial No. 616,467. (Cl. 119—19.)



1. A knock-down chicken coop comprising a bottom piece having its side edges bent downwardly to form vertical

supporting flanges to raise the bottom and horizontal flanges extending outwardly from said supporting flanges, side pieces provided with outwardly projecting horizontal flanges, said side pieces and flanges being seated in the outer angle of the vertical and horizontal flanges of the bottom, and a locking member slidable upon and embracing the joint between the bottom and each side comprising a horizontal box inclosing the two horizontal flanges and a vertical flange inside the vertical flange of the bottom reaching to and serving to support the bottom.

2. A knock-down chicken coop comprising a bottom provided on its ends with flanges, extending downwardly and then upwardly to form supports for the bottom and channels outside of said supports, ends seated in said channels, one of the ends having a doorway, a horizontal track bar secured to and spaced away from the front face of the end piece above the doorway and extending beyond the sides thereof, and a door provided with a horizontal, vertically elongated loop embracing said track bar and slidable laterally and vertically thereon, the bottom of the door when closed or laterally opened, resting in the channel of the bottom flange.

3. A knock-down chicken coop comprising a bottom provided on its ends with flanges, extending downwardly and then upwardly to form supports for the bottom and channels outside of said supports, ends seated in said channels, one of the ends having a doorway, and a door mounted to swing outward, move vertically and slide laterally before said doorway, the lower edge of the door resting when closed in the channel between the flanges of the bottom.

4. A knock down chicken coop comprising front and rear end pieces, combined top and side pieces, and a raised bottom piece adapted to be inserted into said side and end pieces, said front end piece having formed therein a door opening, a slidably and hingedly connected door adapted to open and close said opening, said door having formed on its upper edge an elongated transversely disposed guide loop, a track bar secured to the front end of the coop and adapted to receive the looped upper end of the door whereby the latter is slidably and pivotally supported at its upper end and may be slipped laterally to a partly open position whereby the door will be supported when swung upwardly to an open position, and means to hold the lower edge of the door in its closed and partly open positions.

1,024,442. COIN-SEPARATOR. ARTHUR B. FLAGG, Worcester, and WALTER H. LIVERMORE, Boston, Mass., assignors to Livermore Pay Station Company, Boston, Mass., a Corporation of Maine. Original application filed Dec. 26, 1905, Serial No. 293,175. Divided and this application filed June 9, 1909. Serial No. 501,203. (Cl. 133—3.)



1. A coin separator, comprising a longitudinally inclined trough triangular in cross section, with its apex at the bottom to form a track for the edge of a coin, having one of its sides in a substantially vertical plane and the other side inclined therefrom, an oblong opening for the delivery of a coin through said vertical side, and a curved deflector extending from said inclined side across said trough at a predetermined distance above the bottom of the trough in position to engage the upper edge of a coin and impart a twisting movement thereto by which it is deflected through said opening.

2. A coin separator, comprising a longitudinally inclined trough triangular in cross section, with its apex at the bottom to form a track for the edge of a coin, having one of its sides in substantially a vertical plane and the other side inclined therefrom, said vertical side having multiple oblong openings for the delivery of coins therethrough, and curved deflectors extending from the inclined side of said trough opposite each of said openings, at varying distances from the bottom of said trough, said distances decreasing toward the lower end of the trough, said deflectors arranged in position to engage the upper edges of coins and impart a twisting movement thereto by which they are delivered through said oblong openings.

3. A coin separator, comprising a longitudinally inclined trough triangular in cross section, having one of its sides in a vertical plane and the other side inclined therefrom, said inclined side having an oblong opening for the delivery of a coin, a curved deflector extending from said inclined side across the trough at a predetermined distance from its bottom and adapted to engage the upper edge of a coin and impart a twisting movement thereto, and a spur projecting into said trough from its vertical side and in advance of said deflector.

4. A coin separator, comprising a longitudinally inclined trough triangular in cross section, with one side in substantially a vertical plane, with the other side inclined therefrom, openings in the vertical and inclined sides for the delivery of coins, deflecting means for each of said openings whereby coins are deflected from the inclined side of the trough through said opening, a separator plate beneath said trough and channel plates on each side of said separator plate adapted to receive the coins as they are delivered through opposite sides of the trough.

5. A coin separator, comprising a longitudinally inclined trough having openings in its opposite sides for the delivery of coins therefrom, means for deflecting coins through said openings, a separator plate beneath said trough, and a series of coin channels on opposite sides of said separator plate corresponding with the openings in said trough.

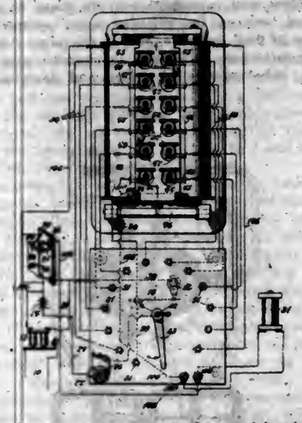
1,024,443. GAS-BURNER. FRANK W. GAULT, Jr., Louisville, Ky., assignor to F. W. Gault, Jr., Brazing & Manufacturing Company, a Corporation of Kentucky. Filed Jan. 24, 1910. Serial No. 539,767. (Cl. 158—109.)



In a gas burner, in combination, a nozzle and a spraying cap therein; said cap having one or more openings in its side adapted to direct gas against the side of said nozzle, one or more openings in its top adapted to direct gas diagonally against the side of said nozzle directly above said lateral openings, and one or more other openings in its top adapted to direct gas into said nozzle; said nozzle extending far enough beyond said spraying cap to contain said diagonal columns of gas.

1,024,444. AUTOMATIC SIGNAL-OPERATOR. EDWIN R. GILL, Yonkers, N. Y., assignor, by mesne assignments, to Howard E. Merrell, New York, N. Y., and Orlo J. Hamlin, Smethport, Pa. Filed Oct. 17, 1908. Serial No. 458,204. (Cl. 179—85.)

1. A device of the class described comprising in combination an automatic sender of electrical impulses, an automatic arrester therefor, a pause controller, circuits connecting the devices aforesaid, and line setting means adapted to prevent operation of said arrester at will, substantially as described.



2. A device of the class described comprising in combination an automatic sender of electrical impulses, an automatic arrester therefor, a pause controller, a freeing device, circuits connecting the devices aforesaid, and line setting means adapted to prevent operation of said arrester at will, substantially as described.

3. A device of the class described comprising in combination an automatic sender of electrical impulses, an automatic arrester therefor, a pause controller, circuits connecting the devices aforesaid, and means for altering said circuits at will for rendering the arrester inoperative, substantially as described.

4. A device of the class described comprising in combination an automatic sender of electrical impulses, an automatic electro-magnetic arrester therefor, a pause controller comprising a number of switches, circuits connecting said switches with said arrester, and a line setting switch for controlling all of said circuits, substantially as described.

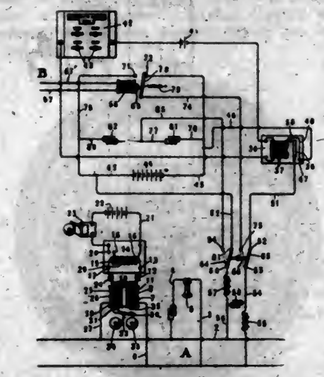
5. A device of the class described comprising in combination an automatic sender of electrical impulses, an automatic arrester therefor, a pause controller, electro-magnetic resetting means for said pause controller and appropriate circuits for automatically operating said resetting device after each operation of the automatic sender, substantially as described.

[Claims 6 to 22 not printed in the Gazette.]

1,024,445. SELECTIVE SIGNALING SYSTEM. EDWIN R. GILL, Yonkers, N. Y., assignor, by mesne assignments, to Howard E. Merrell, New York, N. Y., and Orlo J. Hamlin, Smethport, Pa. Filed Dec. 8, 1909. Serial No. 532,051. (Cl. 179—84.)

1. In a signaling system, in combination, a telephone line, a polarized signaling device connected in bridge of said line, a local circuit connected across said telephone line, a pair of condensers in said local circuit, said condensers being adapted to be alternately charged and discharged, current supplying means for charging said condensers, a telegraph line, and a relay interposed between said local circuit and said telegraph line and adapted to be operated by electrical impulses impressed upon the latter.

2. In a signaling system, in combination, a telephone line, a polarized signaling device connected in bridge of said line, a local circuit connected to the opposite sides of said line, a pair of condensers so connected in said local circuit that each when discharged impresses a current in said local circuit in a direction opposite to that in which it is impressed by the discharge of the other condenser, current supplying means in said local circuit adapted alternately to charge said condensers, a telegraph line, and a relay interposed between said telegraph line and said local circuit and adapted to be operated by electrical impulses impressed upon the former.



3. In a signaling system, in combination, a telephone line, a polarized signaling device connected in bridge of said line, a local circuit connected to the opposite sides of said telephone line, current supplying means connected in said local circuit, a pair of condensers connected in said local circuit, said current supplying means exerting a constant potential on one or the other of said condensers, a telegraph line, and a relay operated by electrical impulses impressed upon the telegraph line for opening and closing said local circuit to cause said condensers to alternately discharge whereby the electrical impulses impressed on the local circuit will operate said polarized relay in consonance with the impulses impressed upon the telegraph line.

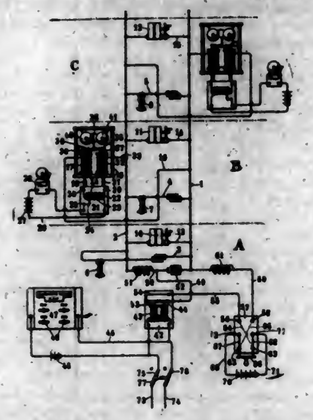
4. In a signaling system, in combination, a main telephone line, a polarized ringer in bridge of said line, a local circuit connected to opposite sides of said telephone line, a pair of condensers connected in said local circuit so that when said condensers are alternately discharged current will be alternately impressed in opposite directions in said local circuit, a battery connected in said local circuit so as to alternately exert potential upon said condensers, a telegraph line, and a relay actuated by impulses impressed on the telegraph line for opening and closing said local circuit whereby said condensers are alternately charged and discharged and electrical impulses are impressed upon said local circuit in consonance with those impressed upon the telegraph line, thereby operating said polarized signaling device.

1,024,446. SIGNALING SYSTEM. EDWIN R. GILL, Yonkers, N. Y., assignor, by mesne assignments, to Howard E. Merrell, New York, N. Y., and Orlo J. Hamlin, Smethport, Pa. Original application filed Dec. 8, 1909, Serial No. 532,052. Divided and this application filed Apr. 5, 1911. Serial No. 619,017. (Cl. 179—86.)

1. In a system of the class described, in combination with a telephone line, a biased signaling device connected in bridge of said line, a battery for applying a current to said line to operate said biased signal, a relay, and a telegraph line, the sides of which are adapted to be connected to said relay, whereby said biased bell may be operated in accordance with impulses impressed upon the telephone line from said telegraph line.

2. In a system of the class described, the combination of a telephone line including a sending station, and a plurality of receiving stations, a selector, a biased signaling device connected in bridge of the line, at each of the various stations, a source of current supply, a relay for applying said source of current to the line, means for impressing selective signaling impulses upon the line connected with said relay, a telegraph line adapted to be connected with said relay, and to cause the same to impress impulses upon the line to actuate said biased sig-

naling devices, and means for reversing the polarity of the source of current supplied to the telephone line.



3. In a system of the class described, the combination with a telephone line, of a selector and a biased signal connected in bridge of the line and in series with each other, a battery for supplying current to said line, and a telegraphically operated relay for applying said battery to the line.

4. The combination with a telephone line, of a selective signal operator and a biased signal connected in bridge of the line and in series with each other, a battery for supplying current to the line, a pole changer for reversing the polarity of said battery to the line, a relay adapted when operated to impress impulses upon the line, means connected with said relay for applying impulses upon the line to operate said selective signaling operator, and a telegraph line adapted to operate said relay to impress impulses upon the line to operate said biased signal.

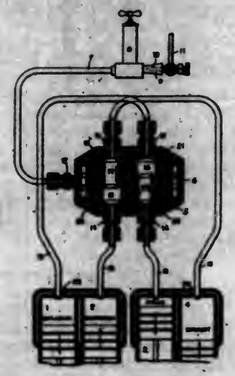
5. The combination with a telephone line, of a selector and a biased signal connected in bridge of the line and in series with each other, a local circuit including a signal adapted to be closed by the operation of said selector, a telegraph line, sending apparatus, a relay common to said telegraph line and said sending apparatus, a battery adapted to be applied to the line by said relay, and means for reversing the polarity of said battery to said line.

[Claims 6 to 9 not printed in the Gazette.]

1,024,447. STARTING DEVICE FOR INTERNAL-COMBUSTION ENGINES. EDWARD A. HALBLEIB, Rochester, N. Y., assignor to Northeast Electric Company, Rochester, N. Y., a Corporation. Filed Sept. 6, 1910. Serial No. 580,785. (Cl. 123—180.)

1. The combination with a plurality of cylinders, of a distributer having a corresponding number of ducts communicating with said cylinders, respectively, and having also passages that afford communication between said ducts and extraneous means adapted to charge them with an explosive mixture; valves in said passages, respectively, adapted to pass fluid under pressure only in the direction of said ducts; and valve means subjected to the fluid pressure exerted by the compression strokes of the cylinders, and adapted to be operated thereby to open communication between the cylinders and passages leading to said source of explosive mixture, as and when the cylinders are brought under compression, and at other times to close the communications between said passages and cylinders; substantially as shown and described.

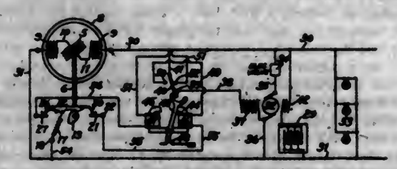
2. The combination with a plurality of cylinders, of a distributer having valve chambers with sliding valves therein, and having ducts in each valve-chamber each of which leads to a different cylinder, and having passages equal in number to the ducts leading from each valve-chamber to a source of explosive mixture, the ducts and passages of each valve-chamber being so arranged with reference to each other that the valves are subjected to the fluid-pressure exerted by the compression strokes of the cylinders and caused thereby to move to open communication between the cylinder under compression and the source of fluid pressure, and at the same time to close the communications between such chamber and the other cylinders; substantially as shown and described.



3. The combination with a plurality of cylinders, of a distributer having a chamber adapted to receive the explosive mixture from a source of supply, valve chambers with sliding valves therein, each valve-chamber having ducts that lead in each case to a different chamber, and passages equal in number to the ducts leading from each valve-chamber to the chamber for the explosive mixture, the ducts and passages of each valve-chamber being so arranged with reference to each other that the valves are subjected to the fluid pressure exerted by the compression strokes of the cylinders and caused thereby to move to open communication between the cylinders under compression and the chamber for fluid mixture, and at the same time to close the communication between such chamber and the other cylinders; substantially as shown and described.

4. In a starting device for internal-combustion engines, a distributer comprising a body having a straight valve-passage therethrough terminating in two outlet-openings adapted to be connected respectively with two cylinders of an engine, said body being provided with oppositely-disposed valve-seats adjacent the ends of said passage, and a valve-member movable in said passage and having its opposite extremities formed to engage and seat against said valve-seats alternatively to control the outlet-openings, the body being provided further with an inlet-passage adapted to be connected with a source of combustible mixture, the inlet-passage opening transversely into said valve-passage and being controlled by a check-valve to prevent the return of combustible mixture therethrough.

1,024,448. BATTERY-CHARGING APPARATUS. EDWARD A. HALBLEIB, Rochester, N. Y., assignor to Northeast Electric Company, Rochester, N. Y., a Corporation. Filed Apr. 3, 1911. Serial No. 618,743. (Cl. 171—314.)



1. In combintion with a storage-battery, battery-charging apparatus comprising a source of electricity, a field-winding, a coil movable between the poles of the field produced by said winding, connections between the field-winding, the coil and the storage-battery, whereby the field-winding and the coil are constantly energized by current from the battery, circuit-controlling contacts mechanically connected with, and actuated by, the coil, said contacts being engaged when the coil has moved through a predetermined distance in one direction and being disengaged when the coil has returned through a predetermined distance in the opposite direction, and connections between said contacts, the source of electricity and the battery, whereby the charging of the battery is controlled in accordance with the movements of the coil.

2. In combination with a storage-battery, battery-charging apparatus comprising a source of electricity, means for producing a magnetic field, a coil movable between the poles of the field, connections between the coil and the storage-battery, whereby the coil is constantly energized by current from the battery, a rotatable trip connected with, and actuated by, the coil and provided with a lug, a contact-bar resting on the trip and having a lug coöperating with the lug on the trip, a spring connected with the contact-bar and tending both to maintain the contact-bar in engagement with the trip and to move the bar longitudinally, coöperating contacts, one of which is carried by the contact-bar, and connections between said contacts, the source of electricity and the battery, whereby the charging of the battery is controlled in accordance with the movements of the coil.

3. In combination with a storage-battery, battery-charging apparatus comprising a source of electricity, volt-meter connections between the volt-meter and the storage-battery whereby the volt-meter is constantly energized by current from the battery, two pairs of circuit-controlling contacts mechanically connected with, and actuated by, the volt-meter so as to be alternatively closed by the opposite movements thereof, a relay device comprising a plurality of magnets connected with, and controlled by, said pairs of contacts respectively, a circuit-controller actuated by said magnets and comprising coöperating contacts connected in series with said magnets, respectively, and arranged to break the circuit through each magnet upon the movement resulting from the energization of said magnet, connections between the battery and said magnets whereby the magnets are energized under the control of said contacts, and connections between the source of electricity and said circuit-controller, whereby the charging of the battery is controlled by the relay device.

4. In combination with a storage-battery, battery-charging apparatus comprising a source of electricity, a field-winding, a coil movable between the poles of the field produced by said winding, connections between the field-winding, the coil and the storage-battery, whereby the field-winding and the coil are constantly energized by current from the battery, a rotatable trip connected with, and actuated by, the coil, a contact-bar coöperating with the trip, the trip and the bar being provided with coöperating lugs, a spring connected with the contact-bar and arranged both to hold the bar in engagement with the trip and to move the bar longitudinally, coöperating contacts, one of which is carried by the contact-bar, and connections between said contacts, the source of electricity and the battery, whereby the charging of the battery is controlled in accordance with the movements of the coil.

1,024,449. GONG-STRIKING MECHANISM. HENRY J. HERNEY, Brookline, Mass., assignor to Holtzer-Cabot Electric Company, a Corporation of Massachusetts. Filed Sept. 30, 1909. Serial No. 520,356. (Cl. 177—288.)

1. In a gong striker, a rotatable shaft; a hammer connected with said shaft; a motor to operate said shaft; a stop carried by said shaft; a yielding cushioning member connecting the said stop with the said shaft; and a double detent engaging directly with said stop to release and arrest the said rotatable shaft.

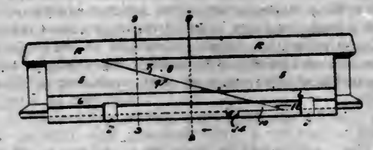
2. In a gong striker, a rotatable shaft, a hammer mounted on a radial arm pivotally connected with said rotatable shaft; a motor adapted to rotate said shaft; a cam surface controlling the path of movement of said hammer; a stop member mounted concentrically with and carried by said shaft; a spring connecting said stop member with said shaft; a double detent engaging directly with said stop member; and means for controlling the movement of said detent.



3. A gong striker comprising a shaft; a clock train connected with said shaft to operate the same; a hammer mounted on a radial arm pivotally connected with said shaft; a cam surface against which said arm bears during its movement; a disk bearing on said shaft and normally traveling therewith, but being capable of rotary movement with relation thereto; a spring connecting said disk with said shaft; a stop on said disk; a double detent engaging directly with said stop; and an electro-magnet controlling the operation of said detent.

4. In a gong striker, a revolving hammer; a shaft; means for giving complete rotation to said shaft and hammer; a stop member carried by said shaft; a shoulder fixed with relation to said shaft; a spring connected with said stop member and said shaft to hold the stop member in engagement with said shoulder and thereby constitute a yielding connection between the stop member and the shaft; a double detent engaging directly with said stop member; and means for operating said double detent to release and arrest the hammer shaft.

1,024,450. RAIL-JOINT. STEPHEN JAMES, Youngstown, Ohio. Filed Feb. 15, 1912. Serial No. 677,874. (Cl. 239—6.)

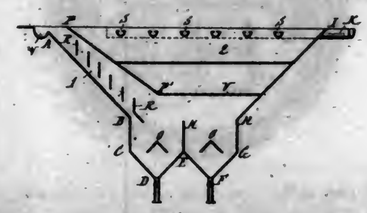


1. A boltless rail-joint comprising, in combination with the rails, a pair of duplicate joint-members, each of which consists of a rail-chair having opposite side angle-bar portions, one of which is provided with an inclined bearing seat and a projecting beveled tenon at the lower end of said seat, and the other of which side angle-bar portions is cut away at its under side at an oblique angle to form an extended wedge-shaped joint-tongue overlying said seat of the other joint-member, and with a wedge-shaped mortise that receives the said tenon of the other joint-member.

2. A boltless rail-joint, comprising, in combination with the rails, a pair of duplicate joint-members, each of which consists of a rail chair having a rail-supporting base-plate provided at its inner end with a base-plate extension overlapping the joint between the meeting ends

of the rails, said chair also having opposite side angle-bar portions, one of which is provided along its upper edge with an inclined bearing seat and a projecting beveled tenon at the lower end of said seat, and the other of which side angle-bar portions is cut away at its under side to form an extended wedge-shaped joint-tongue fitting beneath the rail-heads and overlying said seat of the other joint member, and with a wedge-shaped mortise that receives the said tenon of the other joint-member.

1,024,451. APPARATUS FOR THE MECHANICAL TREATMENT OF IMPURE WATER AND OTHER LIQUIDS. LUCIEN LINDEN, Brussels, Belgium. Filed May 16, 1911. Serial No. 627,567. (Cl. 210—5.)



1. Apparatus for the mechanical treatment of impure water or other liquids, comprising a tank for the descending water, the section of which increases from top to bottom, a second tank for the rising water, the section of which increases from bottom to top, and baffling means, in the first named tank, so disposed that the section left above said baffles increases in the direction of the descending flow.

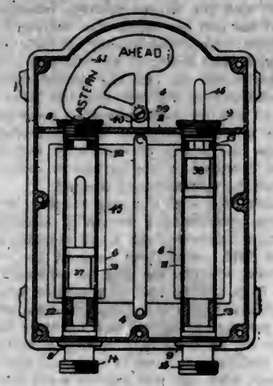
2. Apparatus for the mechanical treatment of impure water or other liquid, comprising a tank the section of which increases from top to bottom, a second tank the section of which increases from bottom to top, and parallel vertically disposed baffling plates, arranged at a substantially uniform distance from the lower wall of the first named tank.

3. Apparatus for the mechanical treatment of impure water or other liquids, comprising a tank divided into two compartments by an immersed partition rising above the liquid, said partition being disposed in such a way that the section of the compartment by which the liquid descends into the tank increases from top to bottom, while the section of the compartment in which the liquid rises increases from bottom to top; parallel vertically disposed baffling plates, arranged at a substantially uniform distance from the lower wall of the first named compartment, and collecting channels, arranged at the upper part of the second named compartment, said channels having a removable perforated cover and containing a filtering medium.

1,024,452. INDICATING DEVICE. ALEXANDER MCNAB, Bridgeport, Conn., assignor to The McNab Company, Bridgeport, Conn., a Corporation of Connecticut. Filed Sept. 25, 1911. Serial No. 651,278. (Cl. 116—31.)

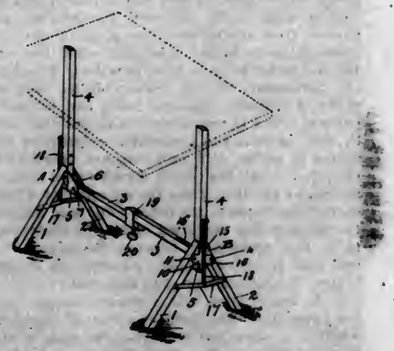
1. An indicating apparatus, comprising a motor, an agitator driven positively with said motor, an air tight casing, indicator tubes within said casing and communicating therewith and having therein freely movable visual indicator plungers, and pipes connecting the agitator and indicator tubes and constituting closed air trains whereby the plungers are driven upward and assisted downward by the pulsations in the pipes and the entrance of outside air is prevented.

2. An indicating system, comprising a motor, an agitator driven positively with said motor, an air tight casing, indicator tubes in said casing and having communication therewith, freely movable indicator plungers within said tubes and having pin extensions, a gravity operating semaphore pivoted within said casing and adapted to normally rest within the path of one or the other of said



extensions, and pipes connecting the agitator and indicator tubes and constituting closed air trains.

1,024,453. FOLDING PEDESTAL. PAUL F. MEYER, Gary, Ind. Filed Nov. 5, 1910. Serial No. 590,818. (Cl. 45—117.)



1. In a folding pedestal, a hinge bracket, a bar pivoted on said bracket and adapted to extend horizontally therefrom when in operative position, means adapted to support the outer end of said bar, a pair of legs pivoted on opposite sides of the bracket and adapted to diverge outwardly and downwardly therefrom, a standard hinged on the top of the bracket and adapted to rest on the inner end of the bar between the upper ends of said legs, toggle bars pivotally connected at their inner ends and pivoted at their outer ends to said legs, and a bar pivoted to the joint between said toggle bars and hinged to the standard above said bracket.

2. A folding pedestal, comprising a pair of hinge brackets, connecting bars hinged to said brackets and adapted to fold downwardly from a horizontal position when folding the pedestal, a pair of laterally swinging legs hinged to each bracket and having inclined upper ends, toggle bars connecting the legs of each pair, standards hinged on said brackets adapted when in operative position to rest on the connecting bars between the inclined ends of the legs, and bars hinged on said standards and pivotally connected with the joints of the toggle bars.

3. A folding pedestal, comprising a pair of hinge brackets, connecting bars hinged to said brackets, standards hinged to the brackets and adapted to be normally held perpendicularly to the connecting bars, legs hinged to the brackets and normally diverging from the lower ends

of the standard, toggle bars connecting the legs of each bracket, and an operating bar connecting each standard with the toggle bars of the adjacent legs and adapting the legs, standards and connecting bar on each bracket to be simultaneously folded to parallel relation at one operation.

4. A folding pedestal, comprising a pair of independently folding sections, and each section comprising a connecting bar, downwardly and outwardly diverging legs hinged at the outer end of said bar, a standard hinged at the outer end of the bar and adapted to rest thereon between the upper ends of the legs, a spring adapted to lock the standard in an upright position, toggle bars pivotally connected to the legs and pivotally connected together, an operating bar hinged at one end to the standard and pivoted at its other end to the joint in the toggle bars and adapting the standards to fold outwardly and downwardly against the connecting bar and to simultaneously fold the legs against the connecting bar.

1,024,454. DUST-CATCHING ATTACHMENT FOR BROOMS. WILLIAM A. MEYER, Chicago, Ill. Filed Dec. 17, 1910. Serial No. 597,794. (Cl. 65—20.)



In a dust catching attachment for brooms, the combination of a dust receiving member, a pair of rods extending horizontally from the upper end of said member and formed with inturned pivot trunnions, an oval contractible collar adapted to encompass the main body of a broom and formed with orifices for the pivot trunnions aforesaid, and means for contracting said collar upon the body of a broom, substantially as set forth.

1,024,455. PNEUMATIC COTTON-PICKER. EUGENE MURRAY, Washington, D. C., assignor to Llewellyn Jordan, Fort Gibson, Miss. Filed Feb. 17, 1908. Serial No. 416,354. (Cl. 56—117.)



1. A nozzle for pneumatic cotton picking apparatus comprising a revolving cylinder and a revolving picking tube.

2. A nozzle for pneumatic cotton picking apparatus comprising a casing, a revolving cylinder within said casing, a picking tube, and means for revolving said cylinder and said tube.

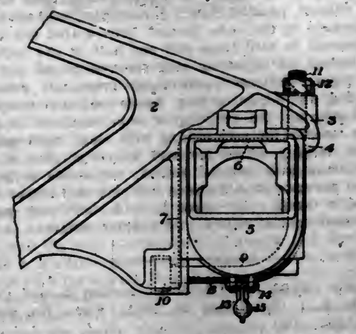
3. A nozzle for pneumatic cotton picking apparatus, comprising a casing, a revolving cylinder within said casing, a picking tube, and blades secured to said cylinder for revolving the same and said tube.

4. A nozzle for pneumatic cotton picking apparatus comprising a casing having air inlets, a cylinder revolubly mounted in said casing, a picking tube, and means operated by the air suction to revolve the cylinder and picking tube.

5. The combination in a device of the character described, of a rotatable picking tube, and picking fingers extending inwardly and curved rearwardly from the forward end thereof, and means for causing a current of air therethrough.

[Claims 6 to 23 not printed in the Gazette.]

1,024,456. JOURNAL-BOX-SECURING MECHANISM. HENRY F. POPE, Cleveland, Ohio, assignor to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed Jan. 3, 1912. Serial No. 669,189. (Cl. 105—243.)



1. A removable journal box for car axles, a securing device therefor, and a movable retainer attached to the journal box and arranged to normally rest below but in position to support the retaining device in case of its becoming loosened; substantially as described.

2. A journal box for car axles arranged to be held in place by a securing device extending beneath the box, and a removable retainer attached to the box and having means for normally holding it below the securing device and in position to support the securing device in case it becomes loosened, substantially as described.

3. A journal box for car axles aranged to be held in place by a securing device and a retainer pivoted to the bottom of the box and having means for normally holding it in position below the securing device and in position to hold the securing device in case of its loosening; substantially as described.

4. A journal box having a hook-retainer pivoted to its lower portion and provided with a counterweight arranged to normally hold the retainer in operative position; substantially as described.

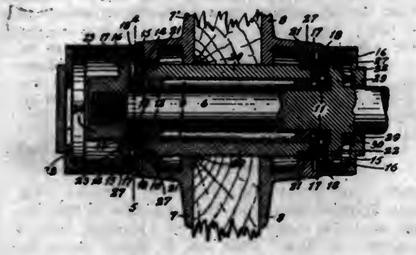
5. In a car truck, a side frame having a seat for a journal box open at one side and the bottom, and a strap or bolt securing the box to the side frame, said box having a movable retainer in its lower portion which is normally held in operative position underneath the strap or bolt; substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,024,457. THRUST-BEARING. WILLIAM H. RUSSELL, Newcastle, New Brunswick, Canada. Filed Dec. 26, 1908. Serial No. 469,255. (Cl. 64—50.)

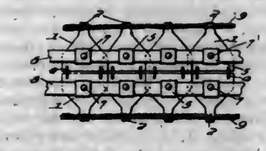
1. A roller bearing comprising in combination with a shaft, a pair of rings, parallel rollers between said rings, balls pivoting said rollers between said rings, a second pair of rings concentric with said first pair, radial frusto-

conical rollers between said concentric rings, balls pivoting said frusto-conical rollers between said concentric rings, a sleeve surrounding said parallel rollers, thrust collars on the ends of said sleeve engaging said frusto-conical rollers, and a second pair of thrust collars carried by said shaft and engaging said frusto-conical rollers.



2. A roller bearing comprising in combination with a shaft, a pair of rings, having pockets in the adjacent sides thereof, parallel rollers surrounding said shaft, having pockets in the ends thereof, balls seated one half in the pockets in said rings and one half in the pockets in said rollers, an adjusting ring screwed to the second of said rings, sectional outer rings concentric with said first ring, and adjusting ring, frusto-conical rollers, binder rings securing the sections of said sectional rings together, means for maintaining said rings rigid and concentric, locking means for said adjusting ring, a sleeve surrounding said parallel rollers, adjustable thrust collars on the ends of said sleeve engaging said frusto-conical rollers, a thrust collar fixed to said shaft and engaging said frusto-conical rollers, and annular collars.

1,024,458. TIRE-PROTECTOR. JOSEPH SAVOIE, Central Falls, R. I. Filed Oct. 26, 1911. Serial No. 656,821. (Cl. 152—16.)



1. In a protective armor for tires, a series of overlapping sections on each side of the tire, each section having a hook-shaped outer end, links connecting the inner ends of the sections, a leather strap engaging about the sections of each series, said straps being arranged in relative spaced relation, U-shaped washers seating on the straps, rivets passed through the washers, straps and the sections, and a wire rope on each side of the tire engaging through the hook-shaped ends of the sections to hold the latter in position.

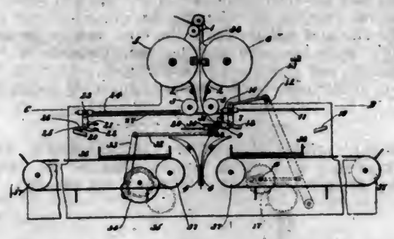
2. In tire armor, two opposed series of sections having their inner ends connected to one another, a leather strip for each series connected to each section thereof, and washers having portions which seat on their outer faces of the strips, and further having sides that extend along the sides of said strips.

3. In tire armor, two series of sections having their inner ends connected to one another, a leather strip for each series disposed on the outer faces of the sections of each series, washers on the outer face of each strip, and means passed through the washers, strips and sections to secure said parts together.

4. In tire armor, two opposed series of sections having their inner ends connected to one another, a flexible strip for each series of sections disposed on the outer faces of the sections of each series, and means to connect the sections to the strips.

5. In tire armor, two opposed series of sections having their inner ends connected to one another, a flexible strip for each series of sections disposed on the outer faces of the sections of each series, said flexible strips being disposed on opposite sides of the points of connection between the opposed series and having connection with their respective series.

1,024,459. FOLDING-MACHINE. RALPH C. SEYMOUR, Larchmont, N. Y., assignor to Goss Printing Press Company, Chicago, Ill., a Corporation of Illinois. Filed May 6, 1908. Serial No. 431,252. (Cl. 101—47.)



1. A folding machine including in combination, a plurality of sets of traveling folding jaws, a reciprocating, non-rotating device coöperating with a plurality of said sets of jaws to fold a sheet thereinto, and means for opening a set of jaws to release its sheet at a delivery point in the travel of the jaws.

2. A folding machine including in combination, a plurality of sets of reciprocating folding jaws, means for presenting the material at the place of folding, and a reciprocating device coöperating with each set of jaws to fold a sheet thereinto.

3. A folding machine including in combination a plurality of sets of traveling folding jaws, a folding device reciprocating in a straight path to fold the material into different sets of jaws in succession, and means for receiving the folded sheets from the jaws.

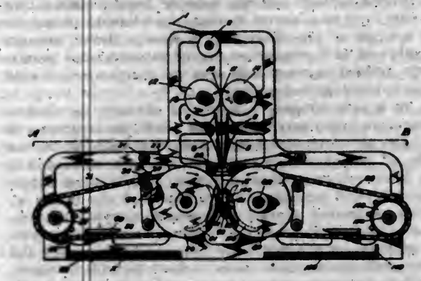
4. A folding machine including in combination a plurality of sets of traveling folding jaws, means acting to hold each set of jaws yieldably in the closed position, a device coöperating with each set of jaws to tuck a sheet thereinto against said yieldable holding means to fold same and means for opening the jaws to release the sheet.

5. A folding machine including in combination a plurality of sets of traveling folding jaws, reciprocating means coöperating with a plurality of said sets of jaws to fold a sheet thereinto, and means moving independently of the aforesaid means to bring the material to the place of folding.

[Claims 6 to 43 not printed in the Gazette.]

1,024,460. SHEET-HANDLING MACHINE. RALPH C. SEYMOUR, Larchmont, N. Y., assignor to Goss Printing Press Company, Chicago, Ill., a Corporation of Illinois. Filed June 15, 1910. Serial No. 567,103. (Cl. 101—29.)

1. A sheet handling machine including in combination means for supplying a web, means for cutting the web into sheets, two cylinders adjacent to each other, means for directing the sheets between said cylinders, grippers on each of said cylinders for taking the alternate fed sheets, one on one cylinder and the next on the other, each of said grippers collecting two sheets, sprocket wheels at each end of each cylinder, and concentric with said cylinders, sprocket chains engaging said sprocket wheels and extending away from the opposite cylinder, said sprocket chains being slightly less in length than twice the circumference of said cylinder, a plurality of sprocket wheels located away from said cylinders, one of said sprocket chains passing over each of said last mentioned sprocket wheels, a support extending across between the two sprocket chains coöperating with the same cylinder, grippers carried up said support, and means for opening and closing said grippers.



2. A sheet handling machine including in combination web supplying means, means for cutting the web into sheets, two cylinders adjacent to each other, means for directing the sheets between said cylinders, sheet collecting means on said cylinders for taking alternate sheets as they are cut from the web, sprocket wheels at each end of each cylinder, sprocket chains passing over said sprocket wheels and traveling at a less speed than the surface speed of said cylinders, and sheet taking means carried by the pair of chains associated with each cylinder, said sheet taking means passing over the surface of said cylinder and receiving the sheets from said sheet collecting means upon said cylinders.

3. A sheet handling machine including in combination web supplying means, means for cutting the web into sheets, two cylinders adjacent to each other, means for directing the sheets between said cylinders, sheet collecting means on said cylinders for taking alternate sheets as they are cut from the web, sprocket wheels at each end of each cylinder, sprocket chains passing over said sprocket wheels and traveling at a different speed than the surface speed of said cylinders, and sheet taking means carried by the pair of chains associated with each cylinder, said sheet taking means passing over the surface of said cylinder and receiving the sheets from said sheet collecting means upon said cylinders.

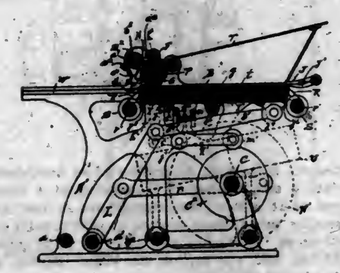
4. A sheet handling machine including in combination web supplying means, means for cutting the web into sheets, two cylinders adjacent to each other, sheet grippers upon each cylinder for taking and collecting the sheets, grippers mounted on a traveling carrier and passing over one of said cylinders to receive the collected sheets from the cylinder grippers, and other grippers mounted upon a traveling carrier and passing over the other cylinder to receive the collected sheets from the cylinder grippers.

5. A sheet handling machine including in combination web supplying means, means for cutting the web into sheets, two cylinders adjacent to each other, sheet grippers upon each cylinder for taking and collecting the sheets, grippers mounted on a traveling carrier and passing over one of said cylinders to receive the collected sheets from the cylinder grippers, and other grippers mounted upon a traveling carrier and passing over the other cylinder to receive the collected sheets from the cylinder grippers, one of said traveling grippers delivering to one place of delivery and the other of said traveling grippers delivering to another place of delivery.

[Claims 6 to 18 not printed in the Gazette.]

1,024,461. MULTIPLE TYPE-WRITER PRESS. JOHN STAFFORD and OTIS C. CURRIE, Detroit, Mich.; said Currie assignor to said Stafford. Filed Jan. 10, 1910. Serial No. 537,345. (Cl. 101—4.)

1. In a multiple typewriter press, a reciprocating, type carrying bed, an ink ribbon carried thereby, means for automatically moving the ribbon over the face of the type, a platen mounted in the framework that supports the bed, said platen being positively rotated during the printing movement of the bed, a clutch adapted to rotate the platen prior to the completion of the return movement of the bed, means coacting with the platen during its rotation by the clutch adapted to place an end of an impression sheet between the platen and the bed, and means for producing pressure between the platen and the bed during the printing movement of the bed, substantially as shown and described.



2. In a multiple typewriter press having a suitable framework and operating means, of a reciprocating bed mounted in the framework, a type tray carried by the bed, a platen mounted in the framework and adapted to feed paper on to the type bed during the printing movement thereof, means for rotating the platen prior to the printing movement of the bed, means coacting with the platen to feed paper to the printing position prior to said printing movement of the bed, an ink ribbon carried by the bed, and means for producing pressure between the platen and the bed, substantially as shown and described.

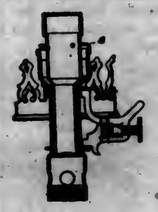
3. In a multiple typewriter press, a reciprocating bed mounted in a framework and adapted to hold the printing form, an impression ribbon carried by the bed, a platen reciprocatingly mounted in the framework, means for reciprocating the platen whereby pressure is intermittently produced between the printing surface and the platen, means on the platen whereby it may be rotated prior to the printing movement of the bed, means coacting with the platen whereby said rotation feeds paper into printing position, and means for moving the ribbon over the printing form, substantially as shown and described.

4. In a multiple typewriter press, a framework, a reciprocating bed mounted in ways therein, a tray adapted to hold the printing form, said bed being adapted to receive said tray, an ink ribbon carried by the bed and arranged to be intermittently moved across the printing surface, a platen mounted in the framework, a feed roller held in coöperative relation with the platen, means for intermittently producing pressure between the platen and the printing surface, means for rotating the platen and feed roller prior to the printing movement of the bed thereby causing the impression sheet to be fed to printing position, and means for rotating the platen during the printing movement of the bed thereby feeding the impression sheet on to the type form, substantially as shown.

5. In a multiple typewriter press, a framework, a reciprocating bed mounted therein, a tray adapted to hold the printing form, said bed being adapted to receive said tray, an ink ribbon carried by the bed and arranged to be intermittently moved across the printing surface both longitudinally and transversely thereof, a platen mounted in the framework, a feed roller held in coöperative relation with the platen, means for intermittently producing pressure between the platen and the printing surface, means for rotating the platen and feed roller prior to the printing movement of the bed thereby causing the impression sheet to be fed to printing position, and means for rotating the platen during the printing movement of the bed thereby feeding the impression sheet on to the printing form, substantially as shown and described.

[Claims 6 to 20 not printed in the Gazette.]

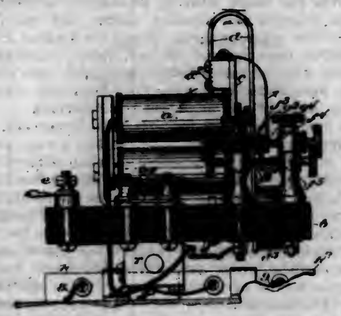
1,024,462. INCANDESCENT GAS-BURNER. HEINRICH SÜSSMANN, Berlin, Germany, assignor to Deutsche Gasglühlicht Aktiengesellschaft (Auergesellschaft), Berlin, Germany, a Corporation of Germany. Filed Oct. 7, 1910. Serial No. 585,896. (Cl. 67—96.)



1. A fitting for converting the burner of an incandescent gas light into a smaller burner, consisting of a tubular part adapted to fit within the mixing tube of the larger burner, a smaller burner head carried by said tubular part, and projections on the tubular part adapted to be engaged between the cap and the top of the larger burner, substantially as described.

2. A fitting for converting the burner of an incandescent gas light into a smaller burner, consisting of a tubular part adapted to fit within the mixing tube of the larger burner, a smaller burner head carried by said tubular part a projection on the tubular part adapted to rest on the top of the mixing tube of the larger burner, and projections on the tubular part adapted to be engaged between the cap and the top of the burner, substantially as described.

1,024,463. POLE-CHANGER. EGMONT MAX TORMIN, Brookline, Mass., assignor to Holtzer-Cabot Electric Company, a Corporation of Massachusetts. Filed Feb. 1, 1909. Serial No. 475,446. (Cl. 171—253.)



1. In a pole-changer, a battery; a vibrating member movable between stationary circuit controlling contacts, there being two of such contacts at each side of the vibrator, one of said contacts at each side being connected with the positive terminal of the battery and the other with the negative terminal thereof; contact members carried by the vibrating member and connected respectively with the terminals of an external circuit; two condensers adapted to be alternately included in closed circuits beyond the battery; stationary contacts at opposite sides of the vibrator controlling the condenser circuits; and contacts on the vibrator coöperating with said stationary contacts and arranged to maintain the condenser circuits closed until after the battery circuit has been broken.

2. In a pole changer, the combination with separate terminals for one conductor of a circuit, and a single return terminal for the other conductor thereof; of a source of current; conductors leading from opposite poles of said source of current to said single return terminal; a vibrating contact carrying member having contacts on one side to close a circuit through one of said conductors, and contacts on the other side to close a circuit through the other of said conductors; and two condensers permanently bridged between said separate terminals and said common terminal respectively.

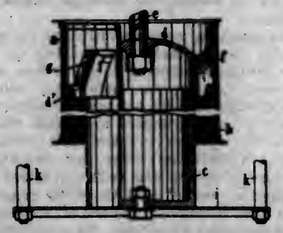
3. In a pole-changer, a source of current; an electromagnet; an armature; a vibrating pendulum consisting of a single piece of spring-tempered steel secured to the frame of the electro-magnet and extended upward and then downward in the form of a bow; an adjustable weight secured to said pendulum to regulate and steady the vibrating movement thereof; a contact carrying arm secured to said pendulum and extending transversely thereto and provided on one side with four contact terminals and on the other side with three contact terminals; corresponding stationary contact terminals located at opposite sides of said arm; and circuits controlled by the movable and stationary terminals.

4. In a pole changer, a source of current; a terminal for positive intermittent current; a terminal for negative intermittent current; a terminal for alternating current; a return terminal; circuits leading respectively from the positive and negative terminals of the source of current to the terminals for the positive and negative intermittent currents; a single circuit controller in each of said circuits; circuits leading respectively from the positive and negative terminals of the battery to the return terminal; two circuit controllers in each of said circuits; branch circuits leading from the circuits last named at a point between the two circuit controllers to the terminal for alternating current; and condensers bridged between the terminal for positive alternating currents and the return terminal, and the terminal for negative alternating currents and the return terminal, respectively.

5. In a pole changer, a source of current; switch contacts located in circuits from said source of current; a vibrating member to control said switch contacts; external circuits, to receive currents modified by the action of said switch contacts; condensers permanently bridged across said external circuits; and means whereby the action of said switch contacts breaks the condenser circuits at each break in the battery circuit through the direct action of the vibrating member.

[Claims 6 to 9 not printed in the Gazette.]

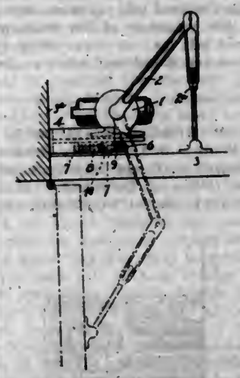
1,024,464. CEMENT-PIPE-STAMPING MACHINE. W. LOTHAR VELTEN, Weil-im-Dorf, near Stuttgart, Germany. Filed Aug. 28, 1911. Serial No. 646,352. (Cl. 25—37.)



1. In a cement pipe stamping machine a vertically movable and rotatable stamping member placed upon an axially slidable core, said core projecting into a hollow mold and being adapted to be downwardly withdrawn from said mold, a receptacle for the material to be stamped, formed in the upper end of said stamping member and inclined passages in the stamping member, leading downwardly to the stamping face of the stamping member and extending in a direction opposite to the direction of rotation of said stamping member.

2. In a cement pipe stamping machine a vertically movable and rotatable stamping member, an axially slidable core, a hollow mold, a receptacle for the material to be stamped formed in the upper part of the stamping member, passages in said stamping member serving to convey the material to be stamped to the stamping face of said stamping member, and wiping bars provided at those edges of the outlet openings of said passages, which are the rearmost in regard to the direction of rotation of said stamping member, said wiping bars preventing that at the rotation of the stamping member the material to be stamped can pass between the outer wall of the stamping member and the inner wall of the hollow mold.

1,024,465. DOOR-CHECK CUSHION-STOP. HENRY G. VOIGHT, New Britain, Conn., assignor to Russell & Erwin Manufacturing Company, New Britain, Conn., a Corporation of Connecticut. Filed July 19, 1911. Serial No. 639,263. (Cl. 16—88.)



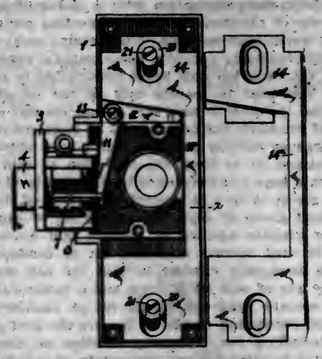
1. In a combined door closer and stop, the combination of a bracket secured to a door casing; a door closer casing secured to said bracket and provided with a rotatable shaft; an arm mounted on said shaft and pivotally connected to a door; and a buffer mounted on said bracket in the plane of lateral movement of the closer arm during outward or opening movement of the door and adapted to be engaged by said arm to prevent further outward movement of the door.

2. In a combined door closer and stop, the combination of a bracket secured to a door casing; a door closer casing secured to said bracket and provided with a rotatable shaft; an arm mounted on said shaft and pivotally connected to a door; and a yielding plunger slidably mounted in said bracket and provided with a buffer head extending into the plane of lateral movement of the closer arm during outward or opening movement of the door, and adapted to be engaged by said arm to prevent further outward movement of said door.

1,024,466. LOCK. HENRY G. VOIGHT, New Britain, Conn., assignor to Russell & Erwin Manufacturing Company, New Britain, Conn., a Corporation of Connecticut. Filed Aug. 3, 1911. Serial No. 642,158. (Cl. 70—51.)

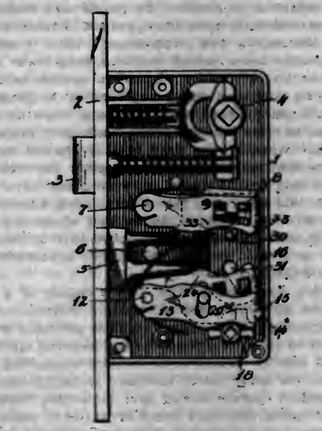
1. In a latch of the character described, a latch bolt, a latch slide, a mounting for the aforesaid parts, a weight carried by said mounting and operating to project said latch bolt, and another weight operating to project the latch slide.

2. In a latch of the character described, a latch bolt, a latch slide, a mounting for the aforesaid parts, a weight carried by said mounting and operating to project said latch bolt, and another weight operating to project the latch slide, said mounting including two side plates adjustable to and fro, the connections between said latch



slide and latch and between said latch projector and said latch permitting said plates to be adjusted to and fro.

1,024,467. LOCK. HENRY G. VOIGHT and NORMAN B. HURD, New Britain, Conn., assignors to Russell & Erwin Manufacturing Company, New Britain, Conn., a Corporation of Connecticut. Filed Oct. 26, 1911. Serial No. 656,843. (Cl. 70—71.)



1. In a lock, the combination with a casing, of a dead bolt, two sets of tumblers therefor, one of said sets including an emergency tumbler provided with a part adapted to be so positioned as to block the operation of said dead bolt by certain keys, connecting means for said tumblers, a key-hole at one side only of said casing, a plurality of keys including a maid's, housekeeper's, guard and emergency key, said key-hole being constructed to receive certain of said keys in normal position only to operate directly upon the upper set of tumblers and being constructed to receive other of said keys in inverted position only to operate directly upon the lower set of tumblers, said first mentioned keys operating directly upon said upper set of tumblers being bitted as to so position the emergency tumbler, in projecting the dead bolt, as to block operation of the other keys, said maid's and housekeeper's keys being so bitted as to position the emergency tumbler, in projecting the dead bolt, as to permit retraction thereof by any of the keys, and a thumb-turn on the side of the lock opposite the key-hole provided with means for projecting and retracting the dead bolt and constructed and arranged to position the

emergency tumbler, in projecting the dead bolt, to prevent retraction thereof by any except said first mentioned keys.

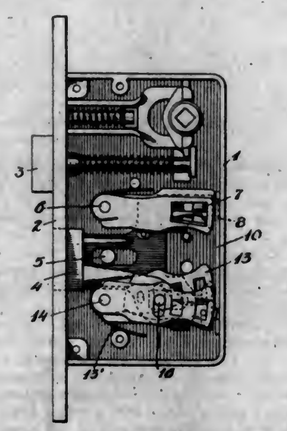
2. In a lock, the combination with a casing of a dead bolt, two sets of tumblers therefor, connecting means for said sets, a key-hole at one side of said casing only, a plurality of keys including a maid's, housekeeper's, guard and emergency key, said key-hole being constructed to receive certain of said keys to operate only on one set of said tumblers, and the other of said keys to operate only on the other set of tumblers, one of said sets of tumblers including an emergency tumbler provided with a part adapted to be so positioned as to block the operation of said dead bolt by certain keys and adapted to be operated by the first mentioned group of keys to prevent retraction of the bolt by the second group of keys, the second set of tumblers including a tumbler adapted to operate said connecting means to in turn operate said first set of tumblers including the emergency tumbler so that the bolt may be retracted by any of said set of keys, and a thumb-turn arranged to operate upon the second set of tumblers and through said connecting means to operate the first set of tumblers, including the emergency tumbler, so that the dead bolt may be retracted only by certain of said keys.

3. In a lock, the combination with a casing of a dead bolt, an upper and lower set of tumblers therefor, one of said sets including an emergency tumbler provided with a part adapted to be so positioned as to block the operation of said dead bolt by certain keys, a pair of connecting bars for said tumbler sets, a key-hole at one side only of said casing, a thumb-turn roll-back operable only from the opposite side of said casing, a plurality of keys including a maid's, housekeeper's, guard and emergency key, said key-hole being adapted to receive the guard and emergency keys to operate directly upon the upper set of tumblers and to receive the maid's and housekeeper's keys to operate directly upon the lower set of tumblers, said lower set of tumblers including a tumbler adapted to operate said connecting bar to raise said emergency tumbler in projecting the dead bolt, said guard and emergency keys being so bitted as not to raise the emergency tumbler in projecting the dead bolt whereby the dead bolt is blocked against operation by said maid's and housekeeper's key and may be retracted only by the guard and emergency keys when projected by said keys, said thumb-turn being arranged to project the dead bolt without raising said emergency tumbler whereby said bolt may be retracted only by the said thumb-turn or by said guard or emergency keys when projected by said thumb-turn.

4. In a lock, the combination with a casing of a dead bolt, an upper and lower set of tumblers therefor, one of said sets including an emergency tumbler provided with a part adapted to be so positioned as to block the operation of said dead bolt by certain keys, tumbler connecting bars for said sets, the lower set of tumblers including tumblers each arranged to operate one of said connecting bars, one only of said connecting bars being arranged to raise said emergency tumbler, a plurality of keys including a maid's, housekeeper's, guard and emergency key, one side of said casing only having a key-hole, said key-hole being adapted to receive said guard and emergency keys to operate directly upon the upper set of tumblers and being adapted to receive the maid's and housekeeper's key to operate directly upon the lower set of tumblers, said guard and emergency keys being so bitted as to project the dead bolt without raising the emergency tumbler, said maid's and housekeeper's keys being so bitted as to raise the emergency tumbler through the agency of one of the tumblers of the lower set and one of said connecting bars whereby the bolt is blocked against operation by said maid's and housekeeper's key and may be retracted only by the guard or the emergency key when projected by said keys, and a thumb-turn arranged to operate said lower set of tumblers and thereby one of said connecting bars to operate said upper tumblers, with the exception of said emergency tumbler, whereby the bolt may be retracted by the guard or emergency keys from the outside or by the thumb-turn from the inside only, when projected by the thumb-turn from the inside.

5. In a lock, the combination with a casing of a dead bolt, two sets of tumblers therefor, one of said sets including an emergency tumbler provided with a part adapted to be so positioned as to block the operation of said dead bolt by certain keys, a pair of connecting bars for said sets of tumblers, a second set including tumblers each adapted to operate one of said connecting bars, said casing having a key-hole upon one side only and said lock having a thumb-turn roll-back provided with a thumb-turn at the opposite side only of said casing, a plurality of keys including a maid's housekeeper's, guard and emergency key, said key-hole being adapted to receive said guard and emergency keys in normal position only to operate directly upon the upper set of tumblers to project the dead bolt without raising the emergency tumbler, said key-hole being adapted to receive the maid's and housekeeper's keys in inverted position only to operate upon the lower set of tumblers directly and to operate the upper set, including the emergency tumbler, through the agency of one of said connecting bars whereby when the dead bolt is projected by the guard and emergency keys it is blocked against retraction by the maid's or housekeeper's keys, said thumb-turn being adapted to operate one only of said connecting bars in projecting the dead bolt to operate the upper set of tumblers, with the exception of the emergency tumbler, whereby the dead bolt may be retracted by the guard or emergency keys or the thumb-turn when projected by said thumb-turn.

1,024,468. WARDROBE-DOOR LOCK. HENRY G. VOIGHT and NORMAN B. HUBD, New Britain, Conn., assignors to Russell & Erwin Manufacturing Company, New Britain, Conn., a Corporation of Connecticut. Filed Oct. 27, 1911. Serial No. 657,058. (Cl. 70—71.)



1. In a lock, the combination with a casing, of a dead bolt, two sets of tumblers therefor, one of said sets including an emergency tumbler, a connecting bar for said tumbler sets, the second set including a tumbler for operating said bar to actuate said other set of tumblers, said casing having a keyhole on one side thereof, a plurality of keys including guest, maid's, housekeeper's, guard and emergency keys, said keyhole being adapted to receive said guest, guard and emergency keys to operate directly upon one set of said tumblers, said guest key being so bitted as to project the dead bolt and simultaneously raise the emergency tumbler, said guard and emergency keys being so bitted as to project the dead bolt without raising said emergency tumbler, said emergency tumbler having means to block said guest key whereby said dead bolt cannot be retracted thereby when projected by the guard or emergency keys, said maid's and housekeeper's keys being so bitted, and the tumblers operated thereby being so constructed, that said keys may project the dead bolt but cannot retract the same.

2. In a lock, the combination with a casing, of a dead bolt, two sets of tumblers therefor, one of said sets including an emergency tumbler, a connecting bar for said sets, the second set of tumblers including a tumbler for operating said bar to actuate the tumblers of said first set, said casing having a keyhole on one side only thereof, a series of keys including guest, maid's, housekeeper's, guard and emergency keys, said guest, guard and emergency keys being adapted to operate directly upon said upper set of tumblers, said guest key being so bitted as to raise the emergency tumbler in projecting the dead bolt, said guard and emergency keys being so bitted as to project the dead bolt without raising the emergency tumbler, said emergency tumbler having means to block the guest key whereby the dead bolt cannot be retracted thereby when projected by the guard or emergency keys, said maid's and housekeeper's keys being so bitted and said tumblers being so constructed that said keys may project the dead bolt but cannot retract the same, said second set of tumblers and said connecting bar being so arranged that the emergency tumbler will be raised by the projection of the bolt by said maid's and housekeeper's keys, whereby the bolt may be retracted by the guest key when so projected.

3. In a lock, the combination with a casing, of a dead bolt, two sets of tumblers therefor, one of said sets including an emergency tumbler, a connecting bar for said sets, said tumblers of the lower set being arranged to actuate said bar to operate the other set of tumblers, said casing having a double-ended keyhole, a plurality of keys including guest, maid's, housekeeper's, guard and emergency keys, said keyhole being adapted to receive the guest, guard and emergency keys in normal position to operate directly upon one set of tumblers, the guest key being so bitted as to raise the emergency tumbler in projecting the dead bolt, the guard and emergency keys being so bitted as to project the dead bolt without raising the emergency tumbler, said emergency tumbler having means to block the guest key whereby the dead bolt cannot be retracted thereby when projected by the guard or emergency keys, said keyhole being adapted to receive the maid's and housekeeper's keys in inverted position to operate directly upon the other set of tumblers, said keys being so bitted, and said tumblers being so constructed, that said maid's and housekeeper's keys may project the dead bolt but cannot retract the same, and said connecting bar and second set of tumblers being so constructed and arranged that operation thereof will simultaneously actuate the upper set of tumblers and raise the emergency tumbler, whereby the bolt may be retracted by the guest, guard and emergency keys.

4. In a lock, the combination with a casing, of a dead bolt, two sets of tumblers therefor, one of said sets including an emergency tumbler, a connecting bar for said sets, the second set including means for actuating said bar to actuate said first set of tumblers, said casing having a keyhole on one side only, a key-post opposite one end of said keyhole, a plurality of keys including guest, maid's, housekeeper's, guard and emergency keys, said guest, guard and emergency keys being of the drill pin type, said maid's and housekeeper's keys being of the solid pin type, said keyhole and key-post being so constructed and arranged that the guest, guard and emergency keys may be inserted to actuate one set only of the tumblers directly, and to receive the maid's and housekeeper's keys to actuate only the other set of tumblers directly, the guest key being so bitted as to raise the emergency tumbler in projecting the dead bolt, the guard and emergency keys being each so bitted as to project the dead bolt without raising the emergency tumbler, said emergency tumbler having means to block the guest key whereby the dead bolt cannot be retracted thereby when projected by the guard or emergency key, the maid's and housekeeper's keys being so bitted, and the tumblers of the set operated thereby being so constructed and arranged, that the dead bolt may be projected by these keys but cannot be retracted thereby, said second set of tumblers and said connecting bar being so constructed and arranged that projection of the dead bolt by the maid's and housekeeper's keys will raise the emergency tumbler so that said dead bolt may be retracted by the guest key as well as by the guard or emergency keys.

1,024,469. TRUCK. BERT A. BALLINGER, Los Angeles, Cal. Filed May 6, 1911. Serial No. 625,635. (Cl. 21—65.)



1. A truck comprising a frame provided with a pair of wheels and a pair of casters, a guard pivoted in the rear end of said frame, and provided with a lip, means to hold said guard in upright position, means to release the forward end of said guard to cause same to drop below the surface of said frame, a handle in said frame, and extensible relatively thereto, means to lock said handle at various points of extension and means to secure said handle in upright position.

2. A truck comprising a frame having a pair of wheels and a pair of casters, said frame consisting of side strips and connecting strips, each of said side strips having a longitudinal groove and vertical notches in the forward ends thereof, and a channel communicating with said groove, a handle between said side strips provided with pins arranged to slide in said grooves, said handle being arranged to be entirely withdrawn when the pins are in register with said channel, the pins of said handle being arranged to be inserted in said notches whereby to rigidly secure said handle in upright position.

3. A truck comprising a frame having a pair of wheels and a pair of casters, said frame consisting of side strips and connecting strips, each of said side strips having a groove, a handle between said side strips and provided with pins arranged to slide in said grooves, said handle being extensible relatively to and withdrawable from said side strips, means to lock said handle at various points of extension, means on said side strips to hold said handle in upright position relatively to said frame, a guard pivoted on said side strips and removable therefrom, said guard coöperating with said handle when in upright position, and being provided with a lip, and means to hold said guard rigidly in upright position.

4. A truck comprising a frame having a pair of wheels and a pair of casters, said frame consisting of side strips and connecting strips, each of said side strips having a groove, a guard pivoted on said side strips, said guard having a connecting rod normally lying in the grooves of said side strips, and a lip extending beyond and free of the ends of the side strips, the pivots for said guard being withdrawable to cause the lip end thereof to drop below the surface of said side strips, said guard being entirely removable from said side strips, and means to hold said guard in upright position.

1,024,470. METALLIC RAIL-TIE AND FASTENER THEREFOR. ARTHUR C. CANDLAND, Provo City, Utah. Filed May 27, 1911. Serial No. 629,787. (Cl. 238—5.)

1. A railway tie comprising U-shaped end members, arcuate plates connecting said end members, rail seats

comprising side walls and top, the top being extended without the side walls and means to secure one of said rail seats within each of said U-shaped members,



2. A railway tie comprising U-shaped end members and arcuate plates connecting the end members, the upper edges of the plates being provided with horizontally disposed reinforcing flanges.

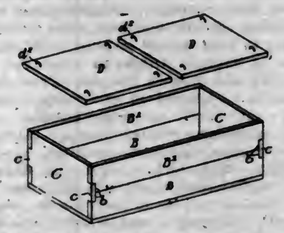
3. A railway tie comprising U-shaped end members and arcuate plates connecting the end members, the upper edges of the side plates of the U-shaped members and the upper edges of the arcuate plates being provided with horizontally disposed reinforcing flanges, and the bottom plates of the U-shaped members being disposed in a plane below the lower edges of the arcuate plates.

4. A railway tie comprising U-shaped end members and arcuate plates connecting the end members, the upper edges of said end members being provided with horizontally disposed flanges, rail seats comprising side walls and top, the top being extended without the side walls, and means to secure said rail seats to the said flanges.

5. A railway tie comprising U-shaped end members and arcuate plates connecting the end members, the upper edges of the plates being provided with horizontally disposed reinforcing flanges, rail seats secured to said flanges consisting of top and side walls with the side walls resting on the bottom of said U-shaped member.

[Claims 6 to 8 not printed in the Gazette.]

1,024,471. BURIAL-BOX. WILLIAM J. DRUMMOND, Philadelphia, Pa. Filed Nov. 3, 1908. Serial No. 460,870. (Cl. 72—7.)



The combination in a burial structure made up of a series of molded slabs of concrete, of two bottom slab sections, each slab having reinforcing means including transverse and diagonal bars of metal embedded therein, metallic loops projecting from the upper surface of said bottom slab sections having portions embedded within said slabs and anchored below the metal reinforcing bars, the sides of said structure being made up of two longitudinal slab sections cemented together and to the bottom sections, each side section having its ends notched or rabbeted to form recesses when said sides are assembled, end sections having centrally disposed tongues projecting therefrom in opposite directions and adapted to interconnect with the recessed ends of the side sections, said side and end sections having longitudinally disposed metal rods forming reinforcing means, those of the side sections extending substantially the full length of the same so as to overlap the tongues of the end sections and reinforce the reduced ends of said side sections and top slab sections of concrete reinforced by metal bars or rods, said top sections also having metallic loops or eyes projecting from the upper surface of said sections and having portions within said slabs anchored below the metal reinforcing bars; the slab sections forming the completed structure being cemented together at their several edges.

1,024,472. LOOSE-LEAF BINDER. EDWARD H. ELDER, Chicopee Falls, Mass., assignor to National Blank Book Company, Holyoke, Mass., a Corporation. Filed Jan. 31, 1911. Serial No. 605,785. (Cl. 129—12.)

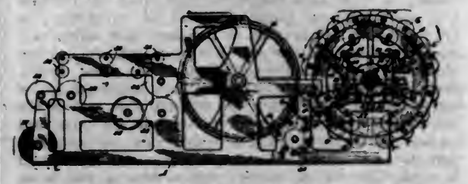


1. A loose leaf binder comprising two back members to which the binder covers are attached, metal posts fixed in one of said members at right angles thereto to receive perforated sheets of paper, said second movable member having holes therethrough whereby it may be fitted over said posts to bind the sheets of paper together, two structurally separate locking slides in said movable member one to bear against each post, means loosely connecting the slides and means extending outside of said movable member to move the connecting means whereby said slides may be moved against said posts simultaneously in the same direction.

2. A loose leaf binder comprising two tubular back members to which the binder covers are attached, metal posts fixed in one of said members at right angles thereto to receive perforated sheets of paper, said second movable member having holes therethrough whereby it may be fitted over said posts to bind the sheets together, locking slides in said movable member to bear against the same side of each post, said slides comprising movable arms extending lengthwise of said member, and whose inner ends are adjacent one another; an equalizing bar to which said ends are connected, and means to actuate said bar in either direction lengthwise of said member.

3. A loose leaf binder comprising two tubular members to which the covers are attached, posts fixed in one member and extending loosely through the other, and a locking device in said second named back member to secure it to said posts, said locking device comprising two arms, an equalizing bar to which the inner ends of said arms are pivotally connected, and a screw rod threaded loosely into said equalizing bar between the pivoted ends of said arms whereby by the actuation of said screw-rod said arms may simultaneously be moved in the same direction against said posts.

1,024,473. PRINTING-PRESS. JOSEPH L. FIAM, Berwyn, Ill., assignor to The Goss Printing Press Company, Chicago, Ill., a Corporation of Illinois. Filed Jan. 3, 1911. Serial No. 600,424. (Cl. 101—89.)



1. In a printing press, the combination of a rotatable form cylinder; a plurality of rotatably and revolubly mounted inking rollers adapted to successively contact said form cylinder; ink fountains; ductor rollers adapted to transfer ink from said fountains to said inking rollers; and means for moving said ductor rollers so that each will supply only one of said inking rollers, substantially as described.

2. In a printing press, the combination of a rotatable form cylinder; a plurality of rotatably and revolubly mounted inking rollers adapted to successively contact said form cylinder each at a particular location thereof; ink fountains; ductor rollers adapted to transfer ink from said fountains to said inking rollers; and means for actuating said ductor rollers so that each will deliver ink to only one set of said inking rollers, substantially as described.

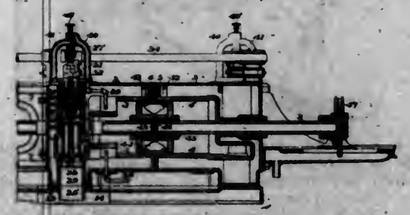
3. In a printing press, the combination of a rotatable form cylinder; a plurality of rotatably and revolubly mounted inking rollers adapted to successively contact with said form cylinder, the path of revolution of said inking rollers being of the same length as the circumference of said form cylinder; ink fountains; ductor rollers adapted to transfer ink from said fountains to said inking rollers; and means for actuating said ductor rollers so that each will deliver ink to only one set of said inking rollers, substantially as described.

4. In a printing press, the combination of a rotatable form cylinder; a plurality of rotatably and revolubly mounted inking rollers arranged laterally of and parallel with said form cylinder and adapted to successively contact therewith, the path of revolution of said inking rollers being of the same length as the circumference of said form cylinder; ink fountains; ductor rollers adapted to transfer ink from said fountains to said inking rollers; and cams and levers for actuating said ductor rollers so that each will deliver ink to only one set of said inking rollers upon each revolution of the latter, substantially as described.

5. In a printing press, the combination of a rotatable form cylinder; a plurality of rotatably and revolubly mounted inking rollers arranged in cylindrical conformation laterally of and parallel with said form cylinder, said inking rollers being adapted to successively contact with said form cylinder when the latter is rotated and said inking rollers are revolved, the path of revolution of said inking rollers being of the same length as the circumference of said form cylinder; ink fountains; ductor rollers adapted to transfer ink from said fountains to said inking rollers; and means for actuating said ductor rollers so that each will deliver ink to only one set of said inking rollers upon each revolution of the latter, substantially as described.

[Claims 6 to 9 not printed in the Gazette.]

1,024,474. MOTOR-COOLING SYSTEM. EDWARD GRAY, Oil City, Pa., assignor to Riverside Engine Company, Oil City, Pa., a Corporation of Pennsylvania. Original application filed Apr. 8, 1907, Serial No. 366,896. Divided and this application filed Nov. 25, 1907. Serial No. 403,500. (Cl. 123—177.)



1. A gas engine having a cylinder made in two sections, a cylinder head formed integrally with each of said sections, a water jacket within each cylinder head and surrounding its cylinder section, a hollow valve in each cylinder head, there being an inlet to each of said valves and an outlet from each of the cylinder sections, a closed water circulating connection between each of the valves and their respective cylinder heads, the arrangement being such that water is first circulated through the valves and then through the respective cylinder sections; substantially as described.

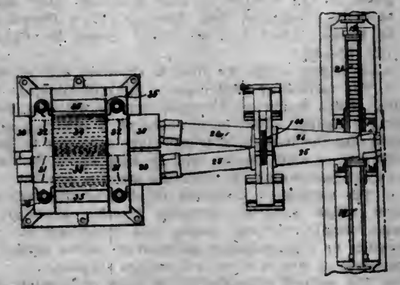
2. A double-acting gas engine having a cylinder made in two sections, a cylinder head formed integrally with each section, a water jacket within each of the cylinder heads and surrounding the adjacent cylinder sections, a hollow inlet and exhaust valve in each cylinder head, a water arch above each of said valves, each of said water arches having an inlet, there being a water circulating connection between each of the arches and the interior of their respective valves and between the interior of the valves and the water jacket of their cylinder heads, a water outlet leading from each of the cylinder jackets, the arrangement being such that water is first circulated through the valves and then through the respective jackets within the cylinder heads; substantially as described.

3. A gas engine having a water jacketed cylinder made in sections, a cylinder head integral with each end section, hollow valves within each cylinder head, a stationary water arch above each cylinder head, a stationary water pipe extending from the water arch into the body of each valve, a water inlet pipe connected to each water arch, a connection between each water arch and its respective cylinder jacket, and means to control the circulation of water through each water arch and the stationary pipe within the valve; substantially as described.

4. A gas engine having a jacketed cylinder, a water arch having a circulating connection with a cylinder jacket, a hollow valve arranged to control communication between a port and the cylinder, a valve stem connected to the hollow valve and extending within the water arch, said valve stem having openings through the walls thereof communicating with the interior of the valve, and a stationary pipe connected to the arch and extending into the hollow valve stem, said pipe having a connection with the water supply pipe; substantially as described.

5. A gas engine having a jacketed cylinder, a water arch having a circulating connection with a cylinder jacket, a hollow valve arranged to control communication between a port and the cylinder, a valve stem connected to the hollow valve and extending within the water arch, said valve stem having openings through the walls thereof communicating with the interior of the valve, a stationary pipe connected to the arch and extending into the hollow valve stem, said pipe having a connection with the water supply pipe, and a valve for controlling the flow of the water from the water supply pipe; substantially as described.

1,024,475. TWO-HIGH REVERSING ROLLING-MILL AND LIKE MACHINE. ANDREW LAMBERTON, Coatbridge, Scotland. Filed Oct. 28, 1911. Serial No. 657,318. (Cl. 80—33.)



1. In a two-high reversing rolling-mill of the type having housings carrying the pair of rolls normally in a vertical plane, gables carrying the housings, and means for rotating the housings within the gables through 180 degrees; means for driving the rolls comprising a gear shaft parallel with the roll axes coupled to one thereof and lying in a horizontal plane intermediate the planes of the roll axes, a driving shaft for said gear shaft and universal couplings between said driving and gear shafts.

2. In a two-high reversing rolling-mill of the type having housings carying the pair of rolls normally in a vertical plane, gables carrying the housings, and means for rotating the housings within the gables through 180 degrees; means for driving the rolls comprising a gear shaft parallel with the roll axes coupled to one thereof and lying in a horizontal plane intermediate the planes of the roll axes, a second similarly arranged gear shaft coupled to the second roll, means for driving said gear

shafts and universal couplings between said gear shafts and said means.

3. In a two-high reversing rolling-mill of the type having housings carrying the pair of rolls normally in a vertical plane, gables carrying the housings, and means for rotating the housings within the gables through 180 degrees; means for driving the rolls comprising a gear shaft parallel with the roll axes coupled to one thereof and lying in a horizontal plane intermediate the planes of the roll axes, a second similarly arranged gear shaft coupled to the second roll, a driving shaft, universal couplings between said shaft and one gear shaft, a pinion on said driving shaft, a second driving shaft, a pinion thereon gearing with the pinion on the first driving shaft, and universal couplings between said second driving shaft and the other gear shaft.

4. In a two-high reversing rolling-mill of the type having housings carrying the pair of rolls normally in a vertical plane, gables carrying the housings, and means for rotating the housings within the gables through 180 degrees; means for driving the rolls comprising a gear shaft parallel with the roll axes coupled to one thereof and lying in a horizontal plane intermediate the planes of the roll axes, a second similarly arranged gear shaft coupled to the second roll, means for driving said gear shafts, universal couplings between said gear shafts and said means, and a counterbalancing device between said gear shafts comprising a flexible member connected to said shafts and a fixed pulley over the shafts and over which said flexible member passes.

5. In a two-high reversing rolling-mill, a pair of shaping rolls, means for rotating the same around a common axis to reverse their relative positions for the purpose described, in combination with a gear shaft lying in a horizontal plane intermediate the planes of said roll axes in working position, an intermediate transmission member and universal couplings connecting the latter at one end to said gear roll and at the other end to one of said shaping rolls.

1,024,476. ARTICLE COMPOSED ESSENTIALLY OF TITANIUM AND SILVER AND METHOD OF PRODUCING THE SAME. AUGUSTE J. ROSSI, Niagara Falls, N. Y., assignor to The Titanium Alloy Manufacturing Company, New York, N. Y., a Corporation of Maine. Filed Jan. 30, 1912. Serial No. 674,257. (Cl. 75—17.)

1. As a new article an alloy of titanium with silver.

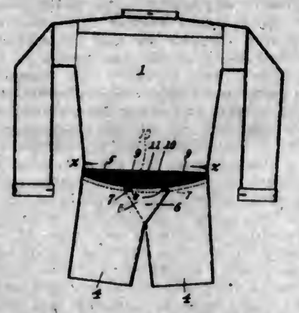
2. The method of producing an alloy of titanium with silver which comprises incorporating titanic acid into a bath of molten silver in presence of a reducing agent, subjecting the bath to a temperature sufficient to insure reduction of said titanic acid by said agent, and withdrawing and cooling the resulting metallic product.

3. The method of producing an alloy of titanium with silver which comprises bringing together argentic material, titanic acid and carbon, and subjecting the combination to a temperature sufficient to insure production therefrom of molten silver and molten aluminum.

4. The method of producing an alloy of titanium with silver which comprises bringing together oxid of silver, oxid of titanium and carbon, and subjecting the combination to a temperature sufficient to insure reduction of said oxids by said carbon and then withdrawing and cooling the resulting metallic product.

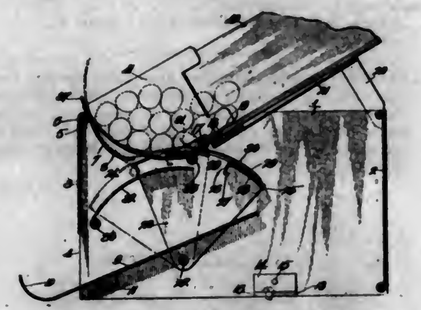
1,024,477. COMBINATION-GARMENT. PHILIP R. STRAUS, New York, N. Y., assignor to Charter Shirt Company, Newark, N. J., a Corporation of New Jersey. Filed Aug. 22, 1911. Serial No. 645,403. (Cl. 2—144.)

1. A one-piece garment for men's wear comprising an overshirt and a pair of drawers, and elastic means of connection between said overshirt and drawers at the back thereof, and forming a portion of the seat of the garment, said drawers being open in the crotch and comprising flaps overlapping one another at the crotch and at the rear, said flaps being made up in part of the elastic connecting means between the overshirt and drawers, substantially as set forth.



2. A one piece garment comprising shirt and drawers portions, the drawers portion being provided with an open seat, elastic connecting means being made up of two overlapping sections forming a portion of the open seat and having the ends thereof cut on the bias and being provided on said bias cut ends with an unyielding binding extending at a substantial angle to each side of the vertical, substantially as set forth.

1,024,478. COIN-CONTROLLED CIGAR-VENDING MACHINE. GEORGE L. VAN BUREN, Kansas City, Mo., assignor, by mesne assignments, to National Cigar Company, Kansas City, Mo., a Corporation of Delaware. Filed Nov. 16, 1911. Serial No. 660,732. (Cl. 211—8.)



1. A vending machine, comprising a casing having a discharge opening and a delivery plate extending downwardly and forwardly through said opening, an oscillatory ejector arranged to oscillate longitudinally of the machine above the delivery plate and provided with a peripheral ejector opening over said delivery plate, an inverted arched plate pivoted at its rear end to the oscillatory ejector and at its pivoted end forming the front side of the ejector opening, and bearing forward of said pivoted end upon the upper front portion of the casing, and a bottom arranged within the casing and extending into said ejector and terminating at its rear end below the pivoted end of the inverted arched plate when the ejector is at its rearward limit of movement.

2. A vending machine, comprising a casing having a discharge opening and a delivery plate extending downwardly and forwardly through said opening, an oscillatory ejector arranged to oscillate longitudinally of the machine above the delivery plate and provided with a peripheral ejector opening over said delivery plate and an inverted arched plate pivoted at its rear end to the oscillatory ejector and at its pivoted end forming the front side of the ejector opening and bearing forward of said pivoted end upon the upper front portion of the casing, and a vertically adjustable arched bottom arranged within the casing and extending into said ejector and terminating at its rear end below the pivoted end of the inverted arched plate when the ejector is at its rearward limit of movement.

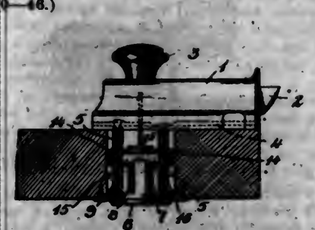
3. A vending machine comprising a casing having a discharge opening and a delivery plate extending downwardly and forwardly through said opening, an oscillatory ejector arranged to oscillate longitudinally of the machine above the delivery plate and provided with a peripheral ejector opening over said delivery plate an inverted arched plate pivoted at its rear end to the oscillatory ejector and at its pivoted end forming the front side of the ejector opening and bearing forward of the said pivoted end upon the upper front portion of the casing, a vertically adjustable arched bottom arranged within the casing and extending into said ejector and terminating at its rear end below the pivoted end of the inverted arched plate when the ejector is at its rearward limit of movement, a lever connected to the front end of the arched bottom for swinging the same upward or downward, and means for securing the lever at the desired point of adjustment.

4. A vending machine, comprising a casing having a discharge opening at its front end, a delivery plate extending downwardly and forwardly through said discharge opening, an oscillatory ejector attached for swinging forwardly and rearwardly over the delivery plate and provided with an ejector opening, an inverted arched plate pivoted at its rear end to the ejector and resting near its free end upon the upper front portion of the casing and forming at its pivoted end the front side of said ejector opening, a plate secured to the ejector and adjustable toward and from the pivoted end of the said inverted arch plate to vary the width of the ejector opening, and a vertically adjustable bottom projecting into the ejector and terminating at its rear end below the pivoted end of the said inverted arched plate when the ejector is at the rearward limit of its movement.

5. A vending machine, comprising a casing having a discharge opening and a delivery plate extending downwardly and forwardly through said opening, an oscillatory ejector arranged to oscillate longitudinally of the machine above the delivery plate and provided with a peripheral ejector opening over said delivery plate, an inverted arched plate pivoted at its rear end to the oscillatory ejector and at its pivoted end forming the front side of the ejector opening, and bearing forward of said pivoted end upon the front portion of the casing, a bottom arranged within the casing and extending into said ejector and terminating at its rear end below the pivoted end of the inverted arched plate when the ejector is at its rearward limit of movement, and a magazine extending downwardly and forwardly in the upper part of the casing, the bottom of the magazine terminating vertically above the ejector opening when the ejector is at the rearward limit of its movement so that the undermost cigars forward of such end shall at such time rest upon the inverted arched plate.

[Claims 6 and 7 not printed in the Gazette.]

1,024,479. NIGHT-LATCH. HENRY G. VOIGHT, New Britain, Conn. Filed Sept. 13, 1911. Serial No. 649,038. (Cl. 70—46.)



1. In a mechanism of the character described, a night-latch mechanism, a cylinder lock, means for rigidly connecting said parts at various positions of adjustment relatively to each other whereby said parts may be simultaneously applied to a door from one side, said connecting means including means whereby said cylinder lock may be inverted to permit said mechanism to be applied to right or left-hand doors.

2. The combination with a night-latch mechanism having a fixed back-plate, of a pair of screws carried by said back-plate, a cylinder lock mechanism mounted on said screws, and means for adjusting said cylinder lock mechanism upon said screws and relatively to said night-latch mechanism to accord with the thickness of the door to which said latch is to be applied, said parts being arranged whereby the assembled structure may be bodily applied to a door from one side thereof.

3. The combination with a night-latch mechanism including a bolt and rotatable bolt operator, of a cylinder lock mechanism including a concentric key-plug and roll back stem, said bolt operator and stem being in alinement, means for rigidly connecting said cylinder locking mechanism to said night-latch mechanism, including means for adjustment, whereby said parts may be applied to doors of different thicknesses and may be reversed for right and left-hand doors, and whereby said parts may be simultaneously applied to a door from one side thereof.

4. In a mechanism of the character described, a night-latch mechanism, a cylinder lock mechanism, a screw rigidly carried by one of said parts and projecting toward the other, said last-mentioned part being slidable on said screw, and a lock nut for locking said last mentioned means on said screw at different positions of adjustment.

1,024,480. DOOR-LOCK TRIMMING. HENRY G. VOIGHT and NORMAN B. HURD, New Britain, Conn., assignors to The American Hardware Corporation, New Britain, Conn., a Corporation of Connecticut. Filed Nov. 14, 1911. Serial No. 660,264. (Cl. 70—16.)



1. In a door lock trimming of the character described, one member arranged to be sunken in a recess in the surface of a door, a coacting member with means for securing the same to the first mentioned member, holding means carried by the first mentioned member and movable outwardly from the edge thereof to engage with the material of the door to hold the first mentioned member in place.

2. In a door lock trimming of the character described, one member arranged to be sunken in a recess in the surface of a door, a coacting member with means for securing the same to the first mentioned member, holding means carried by the first mentioned member and movable outwardly from the edge thereof to engage with the material of the door to hold the first mentioned member in place, said second member coacting with said holding means to hold the same in their operative position when the parts are assembled.

3. In a door lock trimming of the character described, one member arranged to be sunken in the surface of a door, a threaded recess in the outer end of said member,

perforations in the side walls of said member, holding devices standing in said perforations and arranged to be moved laterally relatively to the axis of said member, a second member threaded to fit within the threaded recess of said first mentioned member, and arranged to engage said holding devices to hold the latter in their operative positions.

4. In a door lock trimming of the character described, one member arranged to be sunken in the surface of a door, a threaded recess in the outer end of said member, perforations in the side walls of said member, holding devices standing in said perforations and arranged to be moved laterally relatively to the axis of said member, a second member threaded to fit within the threaded recess of said first mentioned member, and arranged to engage said holding devices to hold the latter in their operative positions, said second member being constructed to force said holding devices into operative position.

1,024,481. CAR DRAFT-GEAR. CHARLES T. WESTLAKE, St. Louis, Mo., assignor to Transom Draft Gear Company, St. Louis, Mo., a Corporation of Delaware. Filed Dec. 5, 1910. Serial No. 595,692. (Cl. 213—42.)



1. In a car draft-gear the combination with the body bolster and draw bar, of a member pivotally connected to the body bolster, a yoke connected to the end of the draw bar, and forming a connection between said draw bar and the pivotally mounted member, and springs interposed between the end of the pivotally mounted member and the ends of the yoke and draw bar.

2. In a car draft-gear, the combination with the car body bolster and the draw bar, of a member pivotally mounted on the body bolster, and having interlocking connection therewith, there being an opening formed through said member, a yoke extending through said opening and connected to the end of the draw bar, and springs interposed between the end of the pivotally mounted member and the ends of the yoke and draw bar.

3. In a car draft gear the combination with a body bolster, of a member pivotally connected to said body bolster, interlocking lugs on said bolster and member, which lugs are concentric with the king pin opening through the body bolster, a draw bar, a yoke forming a connection between the draw bar and the pivotally mounted member and springs interposed between the yoke, the draw bar and the pivotally mounted member.

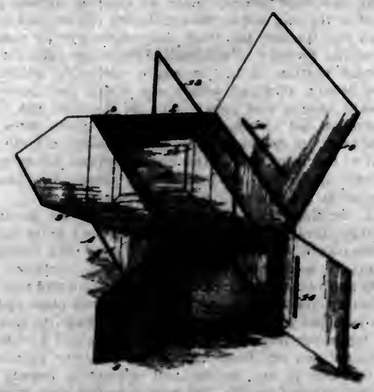
4. In a railroad car, the combination with the car body-bolster, of draft-gear comprising a coupler, a draw-bar, a yoke coupled to the said bar, a "draft" spring and a "buffing" spring inclosed by the said bar and yoke, and a member located between and engaged by the front and rear ends respectively, of the said springs, the said member and other parts of the said gear being movable radially to the pivotal center of the said bolster.

5. In a car draft-gear the combination with a body bolster, having horizontal flanges, of lugs on said flanges, which lugs are radially arranged and concentric with the king pin opening of the body bolster, a member provided with lugs, which engage behind the lugs on the body bolster, and a draw bar yieldingly connected to said member.

[Claim 6 not printed in the Gazette.]

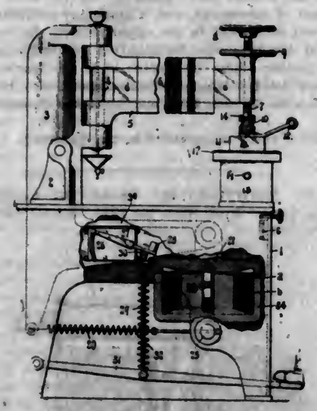
1,024,482. BOX. FRANK KAYE and ROBERT W. ROGERS, Meridian, Miss. Filed Feb. 24, 1911. Serial No. 610,495. (Cl. 229—23.)

1. The combination with an outer and an inner receptacle, said outer receptacle made from a single piece of material comprising sides and bottom, an end flap connected to the bottom having an opening formed therein adapted to be bent to an upright position between the sides, end flaps connected to the sides, the end flaps at one end of the receptacle being connected together for closing one end thereof, said inner receptacle extending through the opening in the end member, flanges on the inner receptacle connected to the end flap in which is the opening and to the end flaps of the closed end of the outer receptacle, top flaps connected to the upper edges of the sides for closing the top of the outer receptacle, the other end flaps adapted to be connected together for closing the opening in the end flap and the inner receptacle.



2. The combination of an outer and inner receptacle, said outer receptacle comprising sides and end flaps, the end flaps of one end of the receptacle being connected together for closing one end thereof, said inner receptacle connected to the closed end of the outer receptacle, an end flap connected to one of the sides having an opening therein, flanges on the inner receptacle connected to the ends of the outer receptacle for supporting the inner receptacle within the outer receptacle, whereby a space is formed entirely around the inner receptacle, the other end flaps connected to the flap having the opening for supporting the said flap in an upright position and for closing the opening therein and the inner receptacle.

1,024,483. CLOTH-PRESSING MACHINE. HAROUTIUN K. KOUYOUMJIAN, St. Louis, Mo. Filed Dec. 26, 1908. Serial No. 469,344. (Cl. 68—9.)



1. In a machine of the character described, the combination of a pivotally supported main lever, a horizontally swinging extensile arm mounted thereon, a vertically adjustable member mounted on the end of said arm, means for locking said vertically adjustable member in adjusted position, a sad iron connected to the lower end of said vertically adjustable member by means of a ball and socket joint, and a resilient connection between said member and said sad iron on each side of said joint.

2. In a cloth pressing machine, the combination with a pivotally supported main lever, of a horizontally swinging arm carried thereby, a vertically adjustable member mounted on said horizontally swinging arm, a sad iron, the lower end of said member and said iron being connected through a ball and socket joint, and a resilient connection between said member and said iron, comprising a plate on the member, studs attached to the said iron passed through holes in the plate, and springs interposed between nuts on the studs, and the plate.

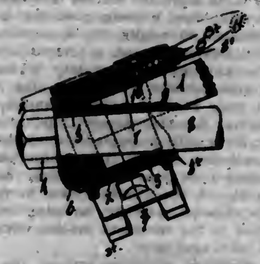
3. In a cloth pressing machine, the combination of a main lever and its carried sad iron, pivotally mounted means for exerting variable pressure upon said main lever, manually operable means for controlling the variation of said pressure, said manually operable means being yieldingly connected to said main lever whereby when it is operated it exerts an overbalancing pressure upon the main lever before said manually operable lever reaches a position to control the variable pressure upon said main lever.

4. In a machine of the character described, the combination with a main lever, of means for exerting a variable pressure upon said main lever, and manually operable means yieldingly connected to said main lever for controlling the variation of said pressure whereby, when said manually operable means is operated to increase the pressure on the main lever through said first mentioned means, its initial movement will exert an independent pressure on the said main lever.

5. In a machine of the character described, the combination with a main lever, of means for exerting a variable pressure upon said main lever and manually operable means for controlling the variation of said pressure, said manually operable means, when operated to increase said pressure, exerting an auxiliating pressure upon said main lever.

[Claims 6 and 7 not printed in the Gazette.]

1,024,484. BRAKE-BEAM. ERNEST A. LE BEAU, Chicago, Ill., assignor to Chicago Railway Equipment Company, Chicago, Ill., a Corporation of Illinois. Filed July 24, 1911. Serial No. 640,091. (Cl. 188—28.)



1. In a brake beam, the combination of a part of the brake beam on which the head is mounted, said part having a key-way extending in a direction longitudinally to the beam, a brake head mounted on said part, and a wedge-shaped locking block or key arranged in said key-way and engaging said head.

2. In a brake beam, the combination of a part of the brake beam on which the head is mounted, said part having an inclined key-way, a brake head mounted on said part, and a wedge-shaped locking block or key arranged in said key-way and engaging said head; said locking block being located at the rear side of the brake beam so as to take up wear between the front face of said part, in which it is mounted, and the brake head.

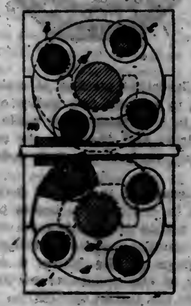
3. In a brake beam, the combination of a part of the brake beam on which the head is mounted, said part having an inclined key-way and locking block arranged in said key-way, a head mounted on said part coöperating with said locking block, and means for exerting pressure against said locking block so as to wedge the same between the head and the part on which the head is mounted.

4. In a brake beam, the combination of a part of the brake beam on which the head is mounted, said part having an inclined key-way and locking block arranged in said key-way, a head mounted on said part coöperating with said locking block, and means for exerting yielding pressure against said locking block so as to wedge the same between the head and the part on which the head is mounted.

5. In a brake beam, the combination of a part of the brake beam on which the brake head is mounted, a brake head mounted on said part, said head having serrations on the inner face of its socket and a longitudinally movable wedge-shaped locking block having serrations on its outer face to engage the serrations on the head.

[Claims 6 to 14 not printed in the Gazette.]

1,024,485. ROLLING-MILL. ADOLF ALEXANDER KARL NOWAK, Bous-on-the-Saar, Germany. Original application filed Apr. 21, 1910, Serial No. 556,831. Divided and this application filed May 16, 1911. Serial No. 627,541. (Cl. 80—11.)



1. In a rolling mill of the character described, a rotatable roll carrier, rolls displaceably mounted thereon, and guides spaced radially apart with relation to the roll carrier axis and arranged to engage the roll spindles between the juxtaposed faces of said guides during the working portion of the stroke of the rolls.

2. In a rolling mill of the character described, a rotatable roll carrier, rolls displaceably mounted thereon, and guides spaced radially apart with relation to the roll carrier axis and arranged to engage the roll spindles between the juxtaposed faces of said guides during the working portion of the stroke of the rolls, said outer guide being arranged to meet said roll spindle at the approach to its working travel and lead it inward to the inner guide.

3. In a rolling mill of the character described, a rotatable roll carrier, rolls displaceably mounted thereon, and guides spaced radially apart with relation to the roll carrier axis and arranged to engage the roll spindles between the juxtaposed faces of said guides during the working portion of the stroke of the rolls, said outer guide being arranged to meet said roll spindle at the approach to its working travel and lead it inward to the inner guide, and said inner guide being shaped to force said roll outward toward the end of its working travel to its extreme outer position, whereby shock incident to the meeting and leaving of said guides by the roll is minimized, substantially as described.

4. In a rolling mill of the character described, a frame, a roll carrier rotatable therein, rolls displaceably mounted in said carrier, and roll guides arranged directly on said frame and spaced apart to embrace the roll spindles during the working portion of the stroke of the rolls.

5. In a rolling mill of the character described, a frame, a roll carrier rotatable therein, rolls displaceably mounted in said carrier, and roll guides arranged directly on said frame and spaced apart to embrace the roll spindles during the working portion of the stroke of the rolls, said guides being shaped to displace said rolls inward on the carrier to the working portion of their strokes, determine the working travel thereof and then lead said rolls outward on said carrier, substantially as described.

1,024,486. METHOD OF MAKING BIFOCAL-LENS BLANKS. WALTER I. SEYMOUR, Chicago, Ill., assignor, by mesne assignments, to United Bifocal Company, New York, N. Y., a Corporation of New York. Filed June 7, 1909. Serial No. 500,626. (Cl. 49—82.1.)



1. The herein described method of making bifocal lens blanks consisting in uniting two bodies of glass differing in kind or index in a suitable mold while such bodies are in a plastic condition and changing the contour of a portion of the uniting surfaces of such bodies while in the mold.

2. The herein described method of making bifocal lens blanks consisting in uniting two bodies of glass differing in kind or index within a suitable mold while such bodies are in a plastic condition and imparting to a portion of the uniting surfaces of the bodies a contour differing from the contour of the remaining portion of such uniting surfaces while the bodies are still in the mold.

3. The herein described method of making bifocal lens blanks consisting in superposing on a body of glass within a suitable mold a second body of glass differing from the first in kind or index and imparting to a portion of the contacting surfaces of said bodies the curvature desired in the finished lenses while both bodies are still in the mold.

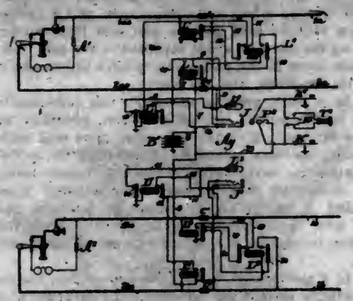
4. The herein described method of making bifocal lens blanks consisting in uniting two bodies of glass differing in kind or index while in a plastic condition within a suitable mold, changing the contour of a portion of the uniting surfaces of said bodies while still in the mold and removing by breaking away a portion of one of the layers around their uniting surfaces.

5. The herein described method of making bifocal lens blanks consisting in uniting two bodies of glass differing in kind or index within a suitable mold while said bodies are in a plastic condition, separating portions of said bodies around their uniting surfaces while both bodies are still in the mold and breaking away portions of one of said layers at its points of separation from the other layers.

[Claims 6 to 10 not printed in the Gazette.]

1,024,487. TELEPHONE-EXCHANGE SYSTEM. EDWARD E. CLEMENT, Washington, D. C. Filed Nov. 13, 1907. Serial No. 402,028. (Cl. 179—27.)

1. In a telephone exchange system, the combination with a central office automatic switching equipment, of a plurality of subscribers' lines connected thereto, a subscriber's station equipped with a common battery telephone set on each line, an auxiliary station or branch exchange common to said subscribers' lines, a source of current, an individual signal for each line, and switching means for each line in the auxiliary station, together with means whereby the auxiliary operator may effect connection through its switching means with a calling line, and may transmit suitable current impulses over the line to the central office, to effect the desired connection.



2. In a telephone exchange system, the combination with a central office switching equipment, of a plurality of lines connected thereto, a subscriber's station equipped with a common battery telephone set on each line, an auxiliary station or operator's position common to said lines and equipped with a telephone set and means for controlling the automatic switches, signaling means at the operator's position responsive to the acts of the several subscribers in calling, a source of current for the operator's position and a common source of current for the lines, and means to connect the operator's telephone and controlling device to any line when calling, all connections from the operator's position to the lines being made outside of the line terminals in the automatic switching equipment, whereby each line is afforded direct access to the operator, who may thereafter transmit suitable current impulses over the lines to the automatic switches to effect any desired connection therethrough.

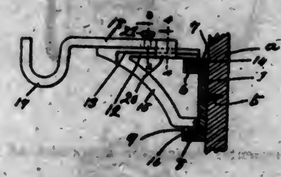
3. In a telephone exchange system, the combination with a central office automatic switching equipment, of a plurality of subscribers' lines terminating therein and connected thereto, an auxiliary station or operating position common to said lines, a common source of current for the lines adapted to supply the subscribers with both signaling and talking current, a bridged relay connected to each line entering the auxiliary station, signaling means controlled by said relays, switching terminals for the several lines in the auxiliary station, coöperating switching means for the operator, and a telephone set and number transmitting apparatus connected to said coöperating switching means, the connections from the auxiliary station to the several lines being directly effected outside of the line terminals in the automatic switching equipment, whereby incoming calls over the lines will pass to the operator's station without affecting the central office equipment.

4. In a telephone exchange system, the combination with a plurality of lines to be connected, of centralized automatic switching apparatus containing permanently connected terminals of the lines for incoming as well as outgoing calls thereover, a sub-station on each line equipped with a telephone, an auxiliary station with means for controlling the automatic switching apparatus, and a switch adapted to connect said auxiliary station equipment directly with the line in response to calls thereover, without initial actuation of the centralized automatic switching apparatus.

5. In a telephone exchange system, the combination with a line circuit, of automatic switching apparatus permanently connected thereto and containing terminals of other lines, a substation telephone connected to said line, an auxiliary station equipped with a telephone set and also with means for controlling the automatic switching apparatus, and a switch adapted to connect the auxiliary station equipment directly with the line outside of its connection with the automatic switching apparatus.

[Claims 6 and 7 not printed in the Gazette.]

1,024,488. COMBINED CURTAIN POLE AND ROLLER FIXTURE. LEON LEWANDOWSKI, Cleveland, Ohio, assignor of one-third to Narcys Radzyminski, Cleveland, Ohio. Filed Dec. 23, 1911. Serial No. 667,514. (Cl. 156—24.)



1. In a combined curtain pole and shade fixture, a plate provided with a forwardly projecting ear at its upper end and at its lower end, said ears being provided with sockets, a bracket arm provided with a downwardly extending stud adapted to fit in the socket in the ear at the upper end of said plate, said bracket arm having a longitudinally extending flange at each side, a bar provided with a hook at its forward end arranged on top of said bracket arm, said bar having a pair of L-shaped flanges at its opposite end adapted to engage the flanges on the bracket arm and a screw mounted on said bar and adapted to engage with said bracket arm and a brace bar formed integrally with said bracket arm and provided with a stud adapted to fit into the socket in the ear at the bottom of the plate, for the purpose set forth.

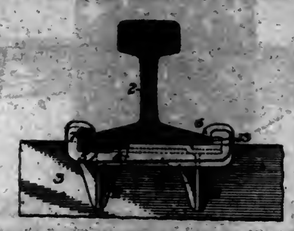
2. In a combined curtain pole and shade fixture, a plate provided with an integrally formed arm extending sidewise from said plate at a right angle thereto, said arm having a longitudinally extending flange at each side thereof, a standard adapted to support one end of the shade roller and having a pair of L-shaped flanges adapted to engage the flanges on said arm and having a lip which extends over said arm, a set screw mounted in said lip and adapted to engage said arm, said plate having a forwardly projecting ear at its upper end and at its lower end, said ears being provided with sockets, a bracket arm provided with a downwardly extending stud adapted to fit in the socket in the ear at the upper end of said plate, said bracket arm having a longitudinally extending flange at each side, a bar provided with a hook at its forward end arranged on top of said bracket arm, said bar having a pair of L-shaped flanges at its opposite end adapted to engage the flanges on the bracket arm and a screw mounted on said bar and adapted to engage with said bracket arm and a brace bar formed integrally with said bracket arm and provided with a stud adapted to fit into the socket in the ear at the bottom of the said plate, for the purpose set forth.

REISSUES.

13,407. RAIL-ANCHOR. JACOB J. BYERS, Chicago, Ill., assignor to The National Malleable Castings Company, Cleveland, Ohio, a Corporation of Ohio. Filed Dec. 20, 1911. Serial No. 667,032. Original No. 978,110, dated Dec. 6, 1910, Serial No. 557,530. (Cl. 238—4.)

1. A rail anchor comprising two parts or sections having a longitudinal wedging engagement with each other at each side of the rail base and at the outer edges thereof and arranged to grip the base of the rail, each section having at one side means for engagement with the base flange of the rail, and at the opposite side a portion which forces the other section into gripping engagement with the rail; substantially as described.

2. A rail anchor, comprising two parts or sections, each extending transversely underneath the rail base, each of said parts or sections having means for engaging one edge of a rail base, and the sections having a longitudinal wedging engagement with each other at the outer edges of the rail base; substantially as described.



3. A rail anchor comprising two parts or sections, each extending transversely underneath the rail base, one of which is arranged to slide longitudinally upon the other, and having coacting wedging surfaces in the horizontal plane of the rail base, each of said sections having a rail base gripping portion, and one of said sections having a tie-engaging portion; substantially as described.

4. A rail anchor comprising two parts or members, each of said members having at one edge a wedge-shaped lip or flange, and at the other edge an overhung flange formed with a wedging or tapered outer wall, the overhung flange of one section being arranged to engage the raised lip or flange of the other section; substantially as described.

5. A rail anchor comprising two parts or members, each of said members having at one edge a wedge-shaped lip or flange, and at the other edge an overhung flange formed with a wedging or tapered outer wall, the overhung flange of one section being arranged to engage the raised lip or flange of the other section, and one of said raised ribs or flanges having a serrated inner rail-gripping surface; substantially as described.

6. A rail anchor comprising two parts or members having a sliding and wedging engagement with each other at each side of the rail base and at the outer edges thereof, and provided each with a rail base gripping portion, and one of said members having a depending tie-engaging portion; substantially as described.

7. A rail anchor, comprising a plurality of cast parts having sliding horizontal wedging engagement with each other, said parts being arranged to grip the ordinary bottom flanges of a rail, and one of said parts having bearing upon the tie near its opposite side edges to hold said part against endwise movement when the other part slides relatively to it; substantially as described.

8. A rail anchor, composed of a plurality of castings having a sliding horizontal wedging engagement with each other at the sides of the rail base, one of said castings having depending separated projections with reinforcing webs and arranged to engage different portions of the tie; substantially as described.

13,408. DRILL-HOLDER. DAVID A. SINE, Rochester, N. Y., assignor of one-half to Allis M. Sine, Rochester, N. Y. Filed Mar. 11, 1912. Serial No. 683,000. Original No. 1,018,729, dated Feb. 27, 1912, Serial No. 575,289. (Cl. 206—17.)

1. A drill holder comprising a plurality of members each having a plurality of drill holding devices, and transverse pieces at the ends of said members, one of said pieces having the other members pivoted thereto, and the other piece carrying securing means for the free ends of the pivoted members.

2. A drill holder comprising a plurality of members having a plurality of drill holding devices and pieces secured transversely of one of said members at the ends thereof, one of said pieces having the other members pivoted thereto and the other of said pieces being of U-shape in cross section and serving to guide the free ends of the pivoted members.

3. A drill holder comprising a plurality of members each having a plurality of drill holding devices, and pieces of U-shaped cross section secured transversely of one of said members, one of said pieces having the other members pivoted thereto and the other of said pieces serving to guide the pivoted members.



4. A drill holder comprising a plurality of members, each having a plurality of drill holding devices, a device secured to and extending transversely of an intermediate one of said members and projecting beyond both sides thereof near one end, the other members being pivoted to said device, and locking means carried by the other end of said member.

5. A drill holder comprising a plurality of members each having a plurality of drill-holding devices, pivotal connection between one of said members and the others, and a grooved device carried by said member and receiving portions of the other members.

6. A drill holder member comprising a pair of horizontal plates provided with coincident openings, and a vertical plate connecting them and formed from a single piece of sheet material therewith, uprights depending from horizontal plates, a base piece connecting the lower ends of the uprights, and an inclined rest arranged above the base piece and between uprights.

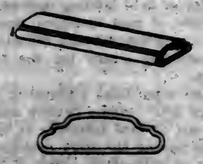
7. A drill holder comprising a plurality of members each of which has a plurality of drill holding devices, transverse pieces of U-shaped cross section arranged at opposite ends of one of said members, one of said pieces having the other member pivoted thereto on opposite sides of the member by which said piece is carried, and latches carried by the other piece to hold said pivoted members against movement.

8. A drill holder comprising a plurality of relatively movable members, each embodying a rest, uprights at the ends of the rests, and drill sustaining portions connecting the uprights and projecting beyond the same, and means for connecting the projecting portions on both sides of the uprights.

9. A drill holder comprising a plurality of relatively movable members each consisting of a pair of horizontal pieces provided with coincident openings, rests each arranged below one of said pairs of pieces and uprights supporting said rests, the horizontal pieces projecting beyond the uprights, means pivotally connecting the projecting ends on one side of the uprights, and means for securing the other projecting ends on the other side of the uprights.

DESIGNS.

42,411. TUBULAR STOCK FOR JEWELRY OR SIMILAR ARTICLES. HERBERT C. BLISS, Attleboro, Mass. Filed Mar. 10, 1911. Serial No. 613,668. Term of patent 7 years.



The ornamental design for tubular stock for jewelry or similar articles as shown and described.

42,412. BRACELET. HERBERT C. BLISS, Attleboro, Mass. Filed Mar. 10, 1911. Serial No. 613,669. Term of patent 7 years.



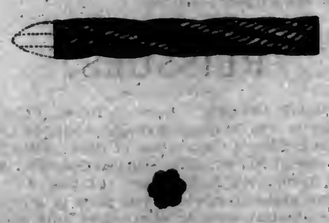
The ornamental design for a bracelet as shown and described.

42,413. FABRIC. KATE BLOODWORTH, New York, N. Y., assignor to The Pantasote Company, New York, N. Y., a Corporation of West Virginia. Filed Dec. 22, 1911. Serial No. 667,415. Term of patent 14 years.



The ornamental design for a fabric as shown.

42,414. CIGAR OR SIMILAR ARTICLE. JOHN K. BRODERICK, St. Louis, Mo. Filed Apr. 7, 1911. Serial No. 619,630. Term of patent 14 years.



The ornamental design for a cigar, or similar article as shown and described.

42,415. CASING FOR CARPET SWEEPERS AND CLEANERS. FRANCIS MILLS CASE, Canton, Ohio, assignor to The Hoover Suction Sweeper Company, New Berlin, Ohio, a Corporation of Ohio. Filed Sept. 25, 1911. Serial No. 651,301. Term of patent 7 years.

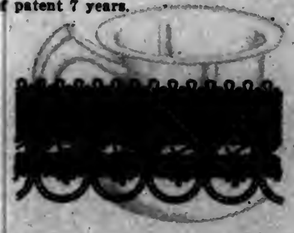


The ornamental design for a casing for carpet sweepers and cleaners, as shown.

42,416. FABRIC. CORNELIA E. GILBERT, New York, N. Y., assignor to The Pantasote Company, New York, N. Y., a Corporation of West Virginia. Filed Dec. 22, 1911. Serial No. 667,418. Term of patent 14 years.

The ornamental design for a fabric as shown.

42,417. LACE EDGING. WALTER E. KEACH, Cumberland, R. I. Filed Feb. 17, 1912. Serial No. 678,378. Term of patent 7 years.



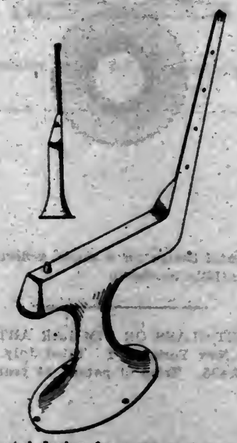
The ornamental design for lace edging, as shown.

42,418. FABRIC. ISABEL C. KEYES, New York, N. Y., assignor to The Pantasote Company, New York, N. Y., a Corporation of West Virginia. Filed Dec. 22, 1911. Serial No. 667,416. Term of patent 14 years.



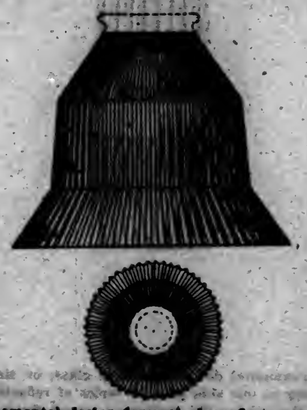
The ornamental design for a fabric as shown.

42,419. CAR-SEAT SUPPORT. ROBERT B. LIDDELL, Philadelphia, Pa., assignor to The J. G. Brill Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Jan. 30, 1912. Serial No. 674,403. Term of patent 14 years.



The ornamental design for a car seat support, as shown.

42,420. SHADE, REFLECTOR, OR SIMILAR ARTICLE. OTIS A. MYGATT, New York, N. Y. Filed June 5, 1908. Serial No. 437,017. Term of patent 14 years.



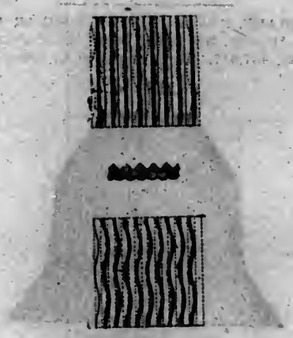
The ornamental design for a shade, reflector, or similar article, substantially as shown.

42,421. SHADE, REFLECTOR, OR SIMILAR ARTICLE. OTIS A. MYGATT, New York, N. Y. Filed June 5, 1908. Serial No. 437,014. Term of patent 14 years.



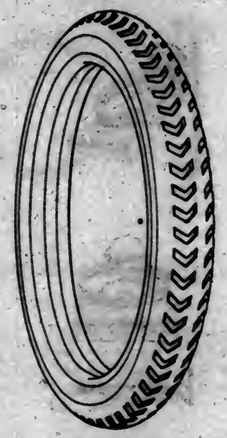
The ornamental design for a shade, reflector, or similar article, substantially as shown.

42,422. SHEET-GLASS OR SIMILAR ARTICLE. OTIS A. MYGATT, New York, N. Y. Filed July 1, 1909. Serial No. 505,495. Term of patent 14 years.



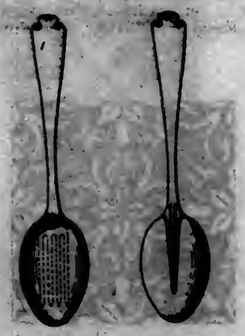
The ornamental design for sheet glass, or similar article, having on one side parallel series of reflecting prisms and on the other side lenticular waved flutes, substantially as shown and described.

42,423. ELASTIC TIRE FOR VEHICLES. WILLIAM F. PFEIFFER, Akron, Ohio, assignor to The Miller Rubber Company, Akron, Ohio, a Corporation of Ohio. Filed Feb. 18, 1912. Serial No. 677,866. Term of patent 14 years.



The ornamental design for an elastic tire for vehicles, as shown.

42,424. HANDLE FOR SPOONS, FORKS, OR SIMILAR ARTICLES. ALBERT ANGELL SOUTHWICK, New York, N. Y. Filed Oct. 20, 1911. Serial No. 655,811. Term of patent 14 years.



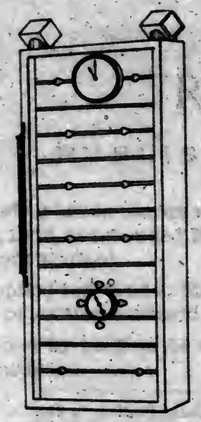
The ornamental design for a handle for a spoon, fork, or similar article, as shown.

42,425. GLASS-HOLDER. EDMUND A. STRAUSS, Los Angeles, Cal. Filed Dec. 4, 1911. Serial No. 663,959. Term of patent 7 years.



The ornamental design for a glass holder as shown.

42,426. DISPLAY-BOARD. WALTER E. TRAUTWEIN, Fort Wayne, Ind. Filed Sept. 25, 1911. Serial No. 651,298. Term of patent 14 years.



The ornamental design for a display board, as shown and described.

42,427. MERCHANDISE-DISPLAY RACK. SAMUEL M. WINKLER, New York, N. Y. Filed Dec. 16, 1911. Serial No. 666,271. Term of patent 7 years.



The ornamental design for a merchandise display-rack, as shown.

TRADE-MARKS

PUBLISHED APRIL 23, 1912.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 40,446. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE JOHN W. M. CLARK CO., Athol, Mass. Filed Feb. 9, 1909.

PAINADINE

Particular description of goods.—A Remedy for Neuralgia, Sciatica, Toothache, Rheumatism, Lumbago, Cold in the Head, Headache, Colic, and Bites of Insects.
Claims use since 1906.

Ser. No. 47,002. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) CARLISLE, CROCKER & CO., Montevideo, Uruguay. Filed Jan. 8, 1910.

EL OBISPO



Particular description of goods.—Silk Piece Goods, Cotton Piece Goods, Satin Piece Goods, Linen Piece Goods, Woolen Piece Goods, Carpets, and Textile Rugs.
Claims use since May, 1908.

Ser. No. 50,324. (CLASS 15. OILS AND GREASES.) STANDARD OIL COMPANY OF NEW YORK, New York, N. Y. Filed June 15, 1910. Under ten-year proviso.

CALCIUM LIGHT OIL

Particular description of goods.—Refined Petroleum for Illuminating, Heating, and Power Purposes.
Claims use since 1878.

Ser. No. 50,571. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LYDIA TRATTLES COATES, Kalamazoo, Mich. Filed June 25, 1910. Under ten-year proviso.

ZOA-PHORA

Particular description of goods.—Digestive Tablets, Anti-constipation-Pills, Medicinal Tonics, Ointments for the Treatment of Cuts, Burns, Bruises, Cold-Sores, Chilblains, Eruptions and Diseases of the Scalp, and Remedies for Piles, La Grippe and Colds, Neuralgia, Rheumatism, Asthma, Hay-Fever, and Bronchitis, and for Diseases of Women, Diseases of Nerves, Blood, Skin, Liver, Kidneys and Bladder, Stomach and Bowels, and Throat and Lungs.
Claims use since 1880.

Ser. No. 50,615. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BLANCHE W. MOE, New York, N. Y. Filed June 28, 1910.

LUXTONE

Particular description of goods.—Face Powders and Rouges, Creams, Salves, and Lotions for the Skin, Nail-Polishes, Perfumes, Tablets for the Blood, and Hair-Tonics.
Claims use since Feb. 1, 1909.

Ser. No. 50,943. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) C. P. MATTHEWS & SONS INC., Scranton, Pa. Filed July 20, 1910.

LUCKY LOAF

Particular description of goods.—Wheat-Flour.
Claims use since Nov. 1, 1909.

Ser. No. 51,268. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BLANCHE W. MOE, New York, N. Y. Filed Aug. 5, 1910.



Particular description of goods.—A Foot-Powder.
Claims use since Feb. 1, 1909.

Ser. No. 52,892. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) DETROIT INSULATED WIRE COMPANY, Detroit, Mich. Filed Nov. 21, 1910.

"DETROIT" RUBBER COVERED WIRES

No claim being made to the words "Detroit Rubber Covered Wires."
Particular description of goods.—Insulated Electric Wires.
Claims use since Sept. 1, 1907.

Ser. No. 54,097. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEORGE K. CUMMINGS, New York, N. Y. Filed Jan. 26, 1911.

LOMO

Particular description of goods.—Cereal Breakfast Foods.
Claims use since July 1, 1910.

Ser. No. 54,357. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE SEVEN GRAIN FOOD COMPANY OF SAN DIEGO, San Diego, Cal. Filed Feb. 6, 1911.



No claim being made to the words "The Grain Food Company, The Symbol of Perfection."
Particular description of goods.—A Coarse Meal Made of a Combination of Seven Different Kinds of Grains, a Coffee Substitute Made from Said Seven Grains, and a Breakfast Food of Said Meal.
Claims use since Dec. 10, 1910.

Ser. No. 54,427. (CLASS 37. PAPER AND STATIONERY.) ESTERBROOK STEEL PEN MAN'F'G. CO., Camden, N. J. Filed Feb. 10, 1911. Under ten-year proviso.

R. ESTERBROOK & CO'S 048

The exclusive use of the word "Falcon" being disclaimed.
Particular description of goods.—Writing-Pens of All Kinds.
Claims use since 1863.

Ser. No. 54,433. (CLASS 37. PAPER AND STATIONERY.) ESTERBROOK STEEL PEN MAN'F'G. CO., Camden, N. J. Filed Feb. 10, 1911. Under ten-year proviso.

ESTERBROOK'S MAMMOTH
No. 240

The exclusive use of the word "Falcon" being disclaimed.
Particular description of goods.—Writing-Pens of All Kinds.
Claims use since June, 1881.

Ser. No. 54,548. (CLASS 39. CLOTHING.) BOSTON RUBBER SHOE COMPANY, Boston, Mass. Filed Feb. 16, 1911. Under ten-year proviso.

TROJAN

Particular description of goods.—Rubber Boots and Shoes and Rubber-Soled Shoes.
Claims use since Jan. 5, 1889.

Ser. No. 54,672. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATCHEZ PACKING COMPANY, Natchez, Miss. Filed Feb. 22, 1911.

MORNING GLORY

Particular description of goods.—Smoked Hams, Smoked Bacon, Smoked Sausages, Summer-Sausages, Lard, and Oleo-Oils.
Claims use since Jan. 2, 1911.

Ser. No. 54,674. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATCHEZ PACKING COMPANY, Natchez, Miss. Filed Feb. 22, 1911.

SUCCESS

Particular description of goods.—Smoked Meats, Smoked Hams, Smoked Bacon, Smoked Sausages, Summer-Sausages, Lard, and Oleo-Oils.
Claims use since Jan. 2, 1911.

Ser. No. 54,962. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ANTON DEPPE SÖHNE, Hamburg, Germany. Filed Mar. 9, 1911.

Eulimen

Particular description of goods.—Limonenes.
Claims use since June 1, 1910.

Ser. No. 54,993. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) OAKFORD AND FAHNESTOCK, Peoria, Ill. Filed Mar. 10, 1911.

WHITE OAK



Particular description of goods.—Condensed Milk, Evaporated Milk, Peanut-Butter, Honey, Maple-Sugar, Powdered Sugar, Spices, Flavoring Extracts, Lemon-Peel, Orange-Peel, Crushed Fruit-Nuts, Cocoa, Chocolate, Shredded Cocoanut, Peanuts, Mixed Nuts, Nut-Meat, Chocolate Candies, Cream Candies, Candied Cherries, Candied Pineapple, Teas, Olives, Tomato Catsup, Pepper Sauce, Chilli Sauce, Distilled Vinegar, Puré Cider Vinegar, Horse-Radish, Celery-Salt, Mince-Meat, Salad-Oil, Salad-Dressing, Tapioca, Gelatin, Rice, Poultry Food, Vermicelli, Spaghetti, Egg-Noodles, Macaroni, Breakfast Food of Granulated Wheat, Corn-Flakes, Rolled Oats, Celery-Seed, White-Mustard Seed, and Mixed Bird-Seeds.
Claims use since June 29, 1910.

Ser. No. 55,535. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) ED. DÖRRENBERG SÖHNE, Runderoth, Germany. Filed Apr. 5, 1911.



JANUS.

Particular description of goods.—Steel Bars, Plates, Castings, Forgings, and Ingots.
Claims use since Aug. 12, 1875.

Ser. No. 56,500. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) EDWARD H. WAGNER, Mineral Wells, Tex. Filed May 20, 1911.

MIN-ALA

Particular description of goods.—Medicinal Salts, Tooth-Paste, Salve, Skin and Scalp Cream, Hair-Tonic, and a Remedy for the Relief of Indigestion, Rheumatism, Gout, and Affections of the Liver, Kidneys, and Bladder.
Claims use since Apr. 1, 1910.

Ser. No. 56,601. (CLASS 15. OILS AND GREASES.) STANDARD OIL CO. OF NEW YORK, New York, N. Y. Filed May 26, 1911.

Sylvan

Particular description of goods.—Illuminating-Oils.
Claims use since 1879.

Ser. No. 56,684. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) THE TRENTON POTTERIES COMPANY, Trenton, N. J. Filed May 29, 1911.

SIWELCLO

Particular description of goods.—Sanitary Water-Closets.
Claims use since October, 1910.

Ser. No. 57,469. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) WM. ENDERS MANUFACTURING COMPANY, Walden, N. Y., and St. Louis, Mo. Filed July 5, 1911.

OAK LEAF

Particular description of goods.—Hammocks, Fishing-Rods, Fishing-Reels, Fishing-Lines, Fishing-Seines, Artificial Fish-Baits, Fish-Hooks, Fish-Buckets, Base-Ball Bats, Catchers' Masks, Bat-Bags, Bases, Body-Protectors, Lawn-Tennis Rackets, Lawn-Tennis Balls, Racket-Cases, Lawn-Tennis-Court Markers, Portable Court-Tapes, Croquet Sets, Foot-Balls, Head-Harness, Shin-Guards, Nose-Masks and Mouthpieces, Elbow-Guards, Striking-Bag Platforms, Shoulder-Pads, Ankle-Supporters, Hockey-Sticks, Polo-Sticks, Hockey-Pucks, Ice-Skates, Roller-Skates, Basket-Balls, Basket-Ball Goals, Striking-Bags, Indian Clubs, and Dumb-Bells.
Claims use since May 26, 1911.

Ser. No. 57,675. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) A. W. GRUBER, Philadelphia, Pa. Filed July 17, 1911.

PHONSE

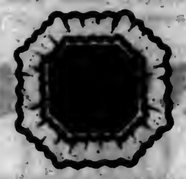
Particular description of goods.—Furniture, Hard-Wood, and Enamel Polish.
Claims use since June 6, 1911.

Ser. No. 57,919. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) WILLIAM SPEER, London, England. Filed July 28, 1911.

R. S. W

Particular description of goods.—Tooth-Brushes.
Claims use since Jan. 1, 1880.

Ser. No. 58,018. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) JAMES R. KEISER, INC., New York, N. Y. Filed Aug. 3, 1911.



Particular description of goods.—Handkerchiefs and Kerchiefs.
Claims use since on or about July 22, 1911.

Ser. No. 58,247. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) THOMAS L. FINNEY, Birmingham, Ala. Filed Aug. 17, 1911. Under ten-year proviso.

Ala-

No claim is made to the word "Cola" as forming a part of the trade-mark sought to be registered.
Particular description of goods.—A Syrup for Beverages.
Claims use since Feb. 1, 1894.

Ser. No. 58,531. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) BLUFF CITY GROCER CO., Poplar Bluff, Mo. Filed Sept. 5, 1911.



Particular description of goods.—Canned Fruits and Vegetables and a Compound of Corn and Sugar Syrup.
Claims use since May, 1911.

Ser. No. 58,550. (CLASS 39. CLOTHING.) HAYNES HENSON SHOE COMPANY, Knoxville, Tenn. Filed Sept. 6, 1911.

CORNER-STONE

Particular description of goods.—Leather Boots and Shoes.
Claims use since about July 24, 1906.

Ser. No. 58,566. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GRAND VIEW FARMS PRODUCE COMPANY, Lancaster, Pa. Filed Sept. 7, 1911.



Particular description of goods.—Butter, Eggs, Fresh Vegetables and Fruits, and Dressed Poultry.
Claims use since July, 1911.

Ser. No. 58,764. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) FRANCIS H. LEGGETT & CO., New York, N. Y. Filed Sept. 21, 1911.

Honeymoon

Particular description of goods.—Chocolates.
Claims use since Apr. 1, 1903.

Ser. No. 59,010. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) C. J. VAN HOUTEN & ZOON, Weesp, Holland. Filed Oct. 6, 1911.

RONA

Particular description of goods.—Cocoa.
Claims use since January, 1911.

Ser. No. 59,120. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CITROLAX CO., Valparaiso, Ind. Filed Oct. 12, 1911.

CITROLAX

Particular description of goods.—Compound Laxative Preparations.
Claims use since Sept. 20, 1911.

Ser. No. 59,145. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MANINE MEDICINE COMPANY, St. Louis, Mo. Filed Oct. 13, 1911.

Gastrine

Particular description of goods.—A Remedy for Dyspepsia, Indigestion, Fermentation, Flatulency, Gastric Inertia, Hepatic Disorders, Jaundice, Acidity of Stomach, and Stomach Derangements.
Claims use since July, 1907.

Ser. No. 59,204. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) S. A. MINIERE SCISTI BITUMINOSI DI MERIDE E BESANO, Meride, Switzerland. Filed Oct. 17, 1911.

OATROLO

Particular description of goods.—Ichthyol-Surrogate and Mineral Oils.
Claims use since Feb. 10, 1911.

Ser. No. 59,221. (CLASS 39. CLOTHING.) CHARLES EISENMAN COMPANY, Cleveland, Ohio. Filed Oct. 18, 1911.



Particular description of goods.—Blouses, Dress-Shirts, Negligée Shirts, Work-Shirts, Rompers, and Children's Frocks.
Claims use since Aug. 15, 1911.

Ser. No. 59,235. (CLASS 35. BELTING, HOSE, MACHINERY PACKING, AND NON-METALLIC TIRES.) MORRIS ROSENTHAL, Buffalo, N. Y. Filed Oct. 19, 1911.



Particular description of goods.—Rubber Tires.
Claims use since February, 1911.

Ser. No. 59,339. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHEMISCHE FABRIK AUF ACTIEN (VORM. E. SCHERING), Berlin, Germany. Filed Oct. 25, 1911.

Paratophan

Particular description of goods.—Remedies for the Treatment of Gout and Rheumatism.
Claims use since about May, 1911.

Ser. No. 59,443. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) E. R. THOMAS MOTOR CAR CO., Buffalo, N. Y. Filed Oct. 31, 1911.



No claim being made for the words "Thomas" and "Nothing Counts Like Service."
Particular description of goods.—Automobiles.
Claims use since Aug. 26, 1911.

Ser. No. 59,482. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HALTIWANGER-TAYLOR DRUG CO., Atlanta, Ga. Filed Nov. 1, 1911. Under ten-year proviso.



Particular description of goods.—A Remedy for Coughs, Colds, Croup, Whooping-Cough, Hoarseness, and Affections Arising from the Inflamed Condition of the Throat and Lungs.
Claims use since about Jan. 1, 1881.

Ser. No. 59,623. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MAURICE M. FEINBERG, New York, N. Y. Filed Nov. 9, 1911.

B-HAP-E

Particular description of goods.—A Corn Remedy, a Foot-Tablet for Relieving Aching, Sweaty, Painful, Tired, and Swollen Feet, and a Foot-Powder.
Claims use since Jan. 10, 1911.

Ser. No. 59,739. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) EIMER & AMEND, New York, N. Y. Filed Nov. 15, 1911.



Particular description of goods.—Sphygmomanometers.
Claims use since Aug. 1, 1911.

Ser. No. 59,777. (CLASS 39. CLOTHING.) THE BROWN SHOE COMPANY, St. Louis, Mo. Filed Nov. 17, 1911.

MOTHER'S

Particular description of goods.—Women's Leather, Canvas, Cloth, and Rubber Shoes.
Claims use since Sept. 1, 1911.

Ser. No. 59,800. (CLASS 39. CLOTHING.) MT. PLEASANT GLOVE MANUFACTURING CO., Mount Pleasant, Iowa. Filed Nov. 18, 1911.



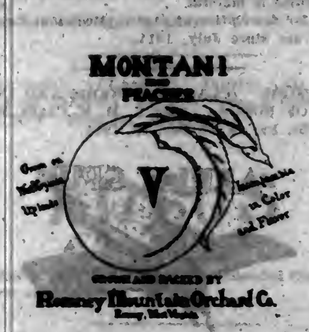
Particular description of goods.—Leather, Cloth, and Knit Gloves apd Mittens.
Claims use since about Sept. 1, 1911.

Ser. No. 59,827. (CLASS 50.) MERCHANDISE NOT OTHERWISE CLASSIFIED.) JOHN W. BAKER, Stamford, Conn. Filed Nov. 21, 1911.

PLAY-D-DRAPH

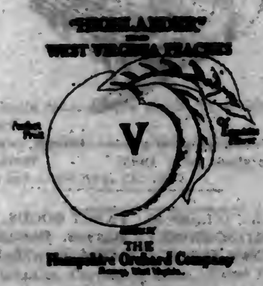
Particular description of goods.—Game-Scoring Boards.
Claims use since Sept. 14, 1911.

Ser. No. 59,858. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE ROMNEY-MOUNTAIN ORCHARD COMPANY, Romney, W. Va. Filed Nov. 22, 1911.



No claim being made to the legend "Brand," "Peaches," "Grown on West Virginia Uplands," "Incomparable in Color and Flavor," "Grown and Packed by Romney Mountain Orchard Co., Romney, West Virginia," nor to the representation of a peach with the letter "V" thereon.
Particular description of goods.—Fresh Peaches.
Claims use since Aug. 30, 1911.

Ser. No. 59,859. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE HAMPSHIRE ORCHARD COMPANY, Romney, W. Va. Filed Nov. 22, 1911.



No claim being made to the representation of the peach, nor to the representation of the peach with the letter "V" thereon, nor to the words "Brand," "West Virginia Peaches," "Perfect Fruit Of Exquisite Flavor Grown by the Hampshire Orchard Company, Romney, West Virginia."
Particular description of goods.—Fresh Peaches.
Claims use since Aug. 30, 1910.

Ser. No. 59,887. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JUJIRO IWASAKI, Tokyo, Japan. Filed Nov. 23, 1911.



Particular description of goods.—Japanese Soy.
Claims use since July 18, 1885.

Ser. No. 60,004. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) HARRY S. THORPE, Norfolk, Nebr. Filed Nov. 29, 1911.



Particular description of goods.—Furniture-Polish.
Claims use since on or about June, 1911.

Ser. No. 60,039. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) PAUL KRATZ, Louisville, Ky. Filed Dec. 1, 1911.

XOTOL

Particular description of goods.—A Compound of the Radical Salicyl and Carbonic with Soda.
Claims use since Oct. 18, 1911.

Ser. No. 60,153. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILFRED MANUFACTURING CO., Terre Haute, Ind. Filed Dec. 9, 1911.

DENTOLINE

Particular description of goods.—An Antiseptic and Disinfectant.
Claims use since about Jan. 21, 1911.

Ser. No. 60,166. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE DELANO COMPANY, INCORPORATED, Syracuse, N. Y. Filed Dec. 11, 1911. Under ten-year proviso.

DELANOS RHEUMATIC CONQUEROR

The portrait being that of Samuel T. Delano.

Particular description of goods.—A Remedy for Rheumatism and Diseases Resulting from Rheumatism, Rheumatoid Anthritis, Gout, Neuralgia, Kidney Trouble, Stomach Trouble, and Liver Trouble.

Claims use since October, 1894.

Ser. No. 60,236. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ARMIN BERKOWITZ, Hamilton, Ohio. Filed Dec. 15, 1911.

BERKIE'S

Particular description of goods.—Candies and Chocolates.

Claims use since Sept. 26, 1911.

Ser. No. 60,241. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) EDWIN L. GAGE, Portland, Oreg. Filed Dec. 15, 1911.

Gageweigh

Particular description of goods.—Truck-Scales.

Claims use since July, 1909.

Ser. No. 60,273. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE UNCLE SAM'S MACARONI CO., Tecumseh, Mich. Filed Dec. 15, 1911.

UNCLE SAM'S

Particular description of goods.—Vermicelli, Noodles, Alphabets, and Short Cuts.

Claims use since about Sept. 1, 1904.

Ser. No. 60,274. (CLASS 12. CONSTRUCTION MATERIALS.) VENESTA LIMITED, London, England. Filed Dec. 15, 1911.

COMPOLITE

Particular description of goods.—Compound Sheets of Wood.

Claims use since Mar. 13, 1909.

Ser. No. 60,248. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEORGE E. LATOUR, Burlington, Vt. Filed Dec. 19, 1911.



The picture is fanciful.

Particular description of goods.—Medicinal Tonics.

Claims use since July, 1911.

Ser. No. 60,349. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE L. M. S. CANDY MFG. CO., Meadville, Pa. Filed Dec. 19, 1911.



No claim being made to the word "Spun."

Particular description of goods.—Chocolate Chips.

Claims use since Nov. 1, 1911.

Ser. No. 60,380. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed Dec. 20, 1911.



Particular description of goods.—Biscuit.

Claims use since July, 1883.

Ser. No. 60,415. (CLASS 40. FANCY GOODS, FURNISHINGS, AND NOTIONS.) WATSON, PORTER, GILES & Company, New York, N. Y. Filed Dec. 22, 1911.

OXO

Particular description of goods.—Horn and Bone Buttons, Horn and Bone Toilet-Combs, Shoe and Corset Laces.

Claims use since about Nov. 1, 1911.

Ser. No. 60,485. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) MALCOLM BRIDGMAN MOYER, Montevideo, Minn. Filed Dec. 28, 1911.



Particular description of goods.—Hay, Feed, or Litter Carriers.

Claims use since Mar. 5, 1911.

Ser. No. 60,583. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ROSS W. WEIR & COMPANY, New York, N. Y. Filed Jan. 3, 1912.

LOTUS

Particular description of goods.—Blended Coffee.

Claims use since Apr. 12, 1906.

Ser. No. 60,601. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) MCKINNEY TRACTION CULTIVATOR CO., St. Louis, Mo. Filed Jan. 4, 1912.



No claim is made to the words "The Wheel That Gripe the Earth."

Particular description of goods.—Traction-Machines and Parts Thereof.

Claims use since Aug. 21, 1911.

Ser. No. 60,603. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEORG LEO NICOLAUS, Cleveland, Ohio. Filed Jan. 4, 1912.

OMNALINE

Particular description of goods.—Pharmaceutical Preparations for the Treatment of Rheumatism, Neuralgia, and Lumbago.

Claims use since Dec. 3, 1909.

Ser. No. 60,636. (CLASS 2. RECEPTACLES.) THERMOS-AKTIENGESELLSCHAFT, Berlin, Germany. Filed Jan. 5, 1912.

Demo

Particular description of goods.—Double-Walled Vessels of Sheet Metal for the Conveyance and Storing of Liquids.

Claims use since Feb. 21, 1911.

Ser. No. 60,720. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) STEVENSON & SON, LTD., Dungannon, Ireland. Filed Jan. 10, 1912.

"NON KRUSH"



The words "Non-Krush" appearing on the drawing forming no part of the trade-mark.

Particular description of goods.—Linen Goods in the Piece.

Claims use since Nov. 17, 1909.

Ser. No. 60,722. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEORGE G. GREEN, Woodbury, N. J. Filed Jan. 10, 1912. Under ten-year proviso.

AGUE CONQUEROR

Particular description of goods.—A Remedy for Headache, Intermittent, Remittent, and Bilious Fevers, Chills, Ague, Dumb Ague, Bilious Diseases, and Diseases Originating from Malaria or Derangement of the Liver.

Claims use since 1879.

Ser. No. 60,729. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) J. JUDD MASON & CO., East Orange, N. J., and New York, N. Y. Filed Jan. 11, 1912.

CROLASIN

Particular description of goods.—Castor-Oil.

Claims use since July, 1911.

Ser. No. 60,786. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JAMES F. BALLARD, St. Louis, Mo. Filed Jan. 13, 1912. Under ten-year proviso.



The picture being that of Wm. Renne, deceased.

Particular description of goods.—A Preparation (Used Internally and Externally) for the Treatment of Inflammation of the Body-Tissues, Sprains, Sores, Ulcers, Eczema, Sciatica, Bronchitis, Pneumonia, Burns, Scalds, Cuts, Stings of Insects and Reptiles, Bruises, Rheumatism, Neuralgia, Diphtheria, Colds, Sore Throat, Pleurisy, Indigestion, Colic, Cholera Morbus, and Stomach-Ache.

Claims use since about July 1, 1855.

Ser. No. 60,852. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) KANSAS CITY COTTON MILLS COMPANY, Kansas City, Kans. Filed Jan. 16, 1912.

MOKAN

Consisting of the word "Mokan."

Particular description of goods.—Cotton Duck.

Claims use since about Oct. 1, 1911.

Ser. No. 60,855. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) WILLIAM MACK, New York, N. Y. Filed Jan. 16, 1912.

PEPTOAST

Particular description of goods.—Food for Birds and Poultry.

Claims use since Mar. 10, 1909.

Ser. No. 60,868. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) OUTCAULT ADVERTISING CO., Chicago, Ill. Filed Jan. 17, 1912.



Particular description of goods.—Fresh Apples.

Claims use since Jan. 10, 1912.

Ser. No. 60,869. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) OUTCAULT ADVERTISING CO., Chicago, Ill. Filed Jan. 17, 1912.



Particular description of goods.—Fresh Apples.

Claims use since Jan. 10, 1912.

Ser. No. 60,897. (CLASS 12. CONSTRUCTION MATERIALS.) AXEL W. NILSSON, Fort Washington, N. Y. Filed Jan. 18, 1912.

FEARNOUGHT

Particular description of goods.—Composition Floor-Tiling.

Claims use since Jan. 15, 1912.

Ser. No. 60,976. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) J. & J. COLMAN LIMITED, London, England. Filed Jan. 23, 1912. Under ten-year proviso.

J. & J. Colman

Particular description of goods.—Mustard, Whether in Powdered or in Liquid State.

Claims use since 1867.

Ser. No. 61,021. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FRANCIS M. CRISWELL, Washington, D. C. Filed Jan. 25, 1912. Under ten-year proviso.

HEADACHE-SELTZER

Particular description of goods.—A Preparation for Stomach Disorders, Headache, Nervousness, Sleeplessness, Indigestion, Overbrainwork, Mental Exhaustion from Any Cause, and General Debility.

Claims use since July, 1894.

Ser. No. 61,058. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FLORASEL MANUFACTURING COMPANY, New York, N. Y. Filed Jan. 26, 1912.

FLORASEL

Particular description of goods.—Salts and Crystals for Use in Softening and Perfuming Water for Bath and Toilet Purposes.

Claims use since Apr. 1, 1911.

Ser. No. 61,143. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE HOPKINS CO., INC., Manassas, Va. Filed Jan. 31, 1912.



Robt E. Lee

The portrait is that of Robt. E. Lee, deceased.

Particular description of goods.—Candy.

Claims use since Jan. 28, 1912.

Ser. No. 61,144. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) RODERICK LEAN MANUFACTURING COMPANY, Mansfield, Ohio. Filed Jan. 31, 1912.

EVOLUTION

Particular description of goods.—Cultivators, Harrows, and Drills.

Claims use since Sept. 1, 1911.

Ser. No. 61,190. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) EDWARD H. WEST, Birmingham, Ala. Filed Feb. 1, 1912.

BILL BOARD

Particular description of goods.—Sheet Metal.

Claims use since October, 1909.

Ser. No. 61,269. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE SIGNATURE COMPANY, New York, N. Y. Filed Feb. 5, 1912.

SIGNAGRAPH

Particular description of goods.—Machines for Writing a Plurality of Signatures or Inscriptions.

Claims use since July, 1907.

Ser. No. 61,313. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) MYER KAMENSTEIN, New York, N. Y. Filed Feb. 6, 1912.

SAMSON

Particular description of goods.—Washboilers.

Claims use since Feb. 1, 1912.

Ser. No. 61,329. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) PIEDMONT MFG. CO., Piedmont, S. C. Filed Feb. 7, 1912.



Particular description of goods.—Sheetings and Drillings.

Claims use since Jan. 1, 1897.

Ser. No. 61,334. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) AMERICAN WOOLEN COMPANY, Jersey City, N. J., and Boston, Mass. Filed Feb. 7, 1912.

PURITAN 1620 SERGE

No claim being made to the word "Serge."

Particular description of goods.—Woolen Cloth Known as "Piece Goods."

Claims use since on or about Jan. 1, 1912.

Ser. No. 61,335. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) AMERICAN WOOLEN COMPANY, Jersey City, N. J., and Boston, Mass. Filed Feb. 7, 1912.

BROADCLOTH "1915"

No claim being made to the word "Broadcloth."

Particular description of goods.—Woolen Cloth Known as "Piece Goods."

Claims use since on or about Feb. 1, 1911.

Ser. No. 61,336. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) AMERICAN WOOLEN COMPANY, Jersey City, N. J., and Boston, Mass. Filed Feb. 7, 1912.

OLIVAUTO CLOTH

No claim being made to the word "Cloth."
Particular description of goods.—Woolen Cloth Known as "Piece Goods."
Claims use since on or about Jan. 1, 1909.

Ser. No. 61,337. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) AMERICAN WOOLEN COMPANY, Jersey City, N. J., and Boston, Mass. Filed Feb. 7, 1912.

SERGE 90-45-71

No claim being made to the word "Serge."
Particular description of goods.—Woolen Cloth Known as "Piece Goods."
Claims use since on or about Feb. 1, 1911.

Ser. No. 61,339. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) AMERICAN WOOLEN COMPANY, Jersey City, N. J., and Boston, Mass. Filed Feb. 7, 1912.

FORESTRY CLOTH

No claim being made to the word "Cloth."
Particular description of goods.—Woolen Cloth Known as "Piece Goods."
Claims use since on or about Jan. 1, 1909.

Ser. No. 61,349. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) WRIGHT & DITSON, Jersey City, N. J., and Boston, Mass. Filed Feb. 8, 1912.



The picture being that of Dorothy M. Myrick.
Particular description of goods.—Golf-Balls.
Claims use since about Jan. 1, 1912.

Ser. No. 61,386. (CLASS 25. LOCKS AND SAFES.) LANCASTER FOUNDRY COMPANY, Lancaster, Pa. Filed Feb. 9, 1912.

RED ROSE

Particular description of goods.—Padlocks, Door-Locks, Rim-Locks, Night-Latches, Window-Catches.
Claims use since Jan. 1, 1912.

Ser. No. 61,444. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL STARCH CO., New York, N. Y. Filed Feb. 12, 1912. Under ten-year proviso.

KINGSFORD'S OSWEGO

Particular description of goods.—Corn-Starch.
Claims use since 1857.

Ser. No. 61,454. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) EISENMANN & Co., London, England. Filed Feb. 14, 1912.

EINCO

Particular description of goods.—Toys.
Claims use since Dec. 4, 1908.

Ser. No. 61,463. (CLASS 48. MALT EXTRACTS AND LIQUORS.) JOHN JACOB WOLF, Philadelphia, Pa. Filed Feb. 14, 1912.

WOLF'S HEAD

Particular description of goods.—Beer.
Claims use since Sept. 4, 1902.

Ser. No. 61,531. (CLASS 36. MUSICAL INSTRUMENTS AND SUPPLIES.) MILTON PIANO COMPANY, New York, N. Y. Filed Feb. 15, 1912.

Comreid

Particular description of goods.—Pianos, Player-Pianos, and Actions Therefor.
Claims use since Nov. 1, 1911.

Ser. No. 61,566. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) JACOB MANOWITZ, New York, N. Y. Filed Feb. 17, 1912.



The word "Brand" being disclaimed.
Particular description of goods.—Canvas in the Piece.
Claims use since Sept. 2, 1908.

Ser. No. 61,629. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) JOSEPH A. HART, Rocky Ford, Colo. Filed Feb. 20, 1912.

Victor

Particular description of goods.—Cantaloup-Seeds.
Claims use since Feb. 8, 1912.

Ser. No. 61,690. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) ELMER H. ROWLEY, Pittsburgh, Pa. Filed Feb. 23, 1912.

EHR

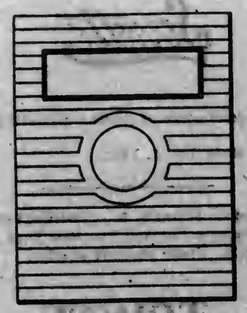
Particular description of goods.—Artificial Limbs.
Claims use since Feb. 1, 1912.

Ser. No. 61,751. (CLASS 2. BROOMS, BRUSHES, AND DUSTERS.) ZAN BROS. INC., Portland, Oreg. Filed Feb. 26, 1912.

Z

Particular description of goods.—Brooms.
Claims use since Feb. 1, 1909.

Ser. No. 61,752. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) ZAN BROS. INC., Portland, Oreg. Filed Feb. 26, 1912.



The alternate stripes being gold and green.
Particular description of goods.—Brooms.
Claims use since Feb. 1, 1909.

Ser. No. 61,783. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed Feb. 28, 1912.

RYKON

Particular description of goods.—Biscuit.
Claims use since Feb. 8, 1912.

Ser. No. 61,897. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE SILVEX COMPANY, Chicago, Ill. Filed Mar. 4, 1912.

JOY RAGS

Particular description of goods.—Polishing-Cloths.
Claims use since July, 1911.

Ser. No. 61,898. (CLASS 4. ABRASIVE, DETERGENT, AND POLISHING MATERIALS.) THE SILVEX COMPANY, Chicago, Ill. Filed Mar. 4, 1912.

GLAD RAGS

Particular description of goods.—Polishing-Cloths.
Claims use since July, 1911.

Ser. No. 61,913. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) DENNE, HERRON & ROSENBACH, Philadelphia, Pa. Filed Mar. 4, 1912.

CAMEO

Particular description of goods.—Dry Colors, Colors Mixed in Varnish, and Ready-Mixed Decorative and Preservative Paints.
Claims use since about the middle of May, 1908.

Ser. No. 61,948. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) BARR BROS., New York, N. Y. Filed Mar. 5, 1912.

EDUCATOR.

Particular description of goods.—Stovepipe-Enamel, Household-Enamel, Furniture-Polish, Gold and Aluminum Bronzes, Varnish-Stain, Bath-Tub Enamel, Gold and Aluminum Paints, and Bronzing Liquids.
Claims use since Feb. 1, 1912.

Ser. No. 61,996. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) M. EWING FOX & Co., New York, N. Y. Filed Mar. 7, 1912.

VICTORITE

Particular description of goods.—Calcimines.
Claims use since Feb. 1, 1912.

Ser. No. 62,038. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) WILLIAM ODDY, Bradford, Yorkshire, England. Filed Mar. 8, 1912.

SYDDO

Particular description of goods.—Piece Goods of Cotton, Wool, and Hair; Wool and Hair; and Cotton and Hair.
Claims use since 1900.

Ser. No. 62,044. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) SILVERBERG IMPORT CO., New York, N. Y. Filed Mar. 8, 1912.

MARJORIE

Particular description of goods.—Hair-Nets.
Claims use since June 15, 1910.

Ser. No. 62,045. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) SILVERBERG IMPORT CO., New York, N. Y. Filed Mar. 8, 1912.

Fedora

Particular description of goods.—Hair-Nets.
Claims use since Oct. 1, 1911.

Ser. No. 62,048. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) SILVERBERG IMPORT CO., New York, N. Y. Filed Mar. 8, 1912.

Grand Opera

Particular description of goods.—Hair-Nets.
Claims use since June 15, 1910.

Ser. No. 62,068. (CLASS 7. CORDAGE.) AMERICAN MANUFACTURING COMPANY, Boston, Mass., and New York, N. Y. Filed Mar. 9, 1912.

BEAVER

Particular description of goods.—Twine Manufactured from Vegetable Fiber.
Claims use since Jan. 26, 1911.

Ser. No. 62,070. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) AMERICAN MANUFACTURING COMPANY, Boston, Mass., and New York, N. Y. Filed Mar. 9, 1912.

ACORN

Particular description of goods.—Bagging for Baling Cotton.
Claims use since July 20, 1910.

Ser. No. 62,071. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) AMERICAN MANUFACTURING COMPANY, Boston, Mass., and New York, N. Y. Filed Mar. 9, 1912.

REX

Particular description of goods.—Bagging for Baling Cotton.
Claims use since June 16, 1910.

Ser. No. 62,073. (CLASS 32. FURNITURE AND UPHOLSTERY.) TOWLE MANUFACTURING COMPANY, Newburyport, Mass. Filed Mar. 9, 1912.

HOPECHEST

Particular description of goods.—Chests and Cabinets for Precious-Metal Ware.
Claims use since Feb. 16, 1912.

Ser. No. 62,091. (CLASS 32. FURNITURE AND UPHOLSTERY.) THE MCGRAW MANUFACTURING COMPANY, McGraw, N. Y. Filed Mar. 9, 1912.

Serviette

Particular description of goods.—Revolving Table-Servers.
Claims use since Jan. 1, 1912.

Ser. No. 62,094. (CLASS 5. ADHESIVES.) TOWER MANUFACTURING & NOVELTY CO., New York, N. Y. Filed Mar. 11, 1912. Under ten-year proviso.

TOWER

Particular description of goods.—Mucilage.
Claims use since 1871.

Ser. No. 62,111. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) CHANNELL CHEMICAL COMPANY, Chicago, Ill. Filed Mar. 11, 1912.

O-Cedar

Particular description of goods.—Mops.
Claims use since June 1, 1907.

Ser. No. 62,165. (CLASS 17. TOBACCO PRODUCTS.) SIG C. MAYER & COMPANY, Philadelphia, Pa. Filed Mar. 14, 1912.

Rey-Oma

Particular description of goods.—Cigars.
Claims use since June 6, 1911.

Ser. No. 62,167. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed Mar. 14, 1912.

ARISTOCRACY

Particular description of goods.—Biscuit.
Claims use since June 13, 1895.

Ser. No. 62,210. (CLASS 15. OILS AND GREASES.) VACUUM OIL COMPANY, Rochester, N. Y. Filed Mar. 16, 1912.

LAUREL

Particular description of goods.—Illuminating-Oils.
Claims use since Mar. 13, 1912.

Ser. No. 62,233. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) HERMANN W. FACHMANN, Indianapolis, Ind. Filed Mar. 18, 1912.

TREE THE POSSUM

Particular description of goods.—Games.
Claims use since Mar. 1, 1912.

Ser. No. 62,237. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) BERNHARD WILMSEN, Philadelphia, Pa. Filed Mar. 18, 1912.

CRINGLE CRANGLE

Particular description of goods.—Toys.
Claims use since Mar. 8, 1912.

TRADE-MARKS

REGISTERED APRIL 23, 1912.

86,198. CERTAIN PLUMBERS' SUPPLIES. American Pin Company, Waterbury, Conn.
Filed August 27, 1910. Serial No. 51,582. PUBLISHED FEBRUARY 20, 1912.

86,199. ROSIN EMPLOYED AS A PAPER-SIZE. The Arabol Mf'g. Co., New York, N. Y.
Filed October 4, 1911. Serial No. 58,982. PUBLISHED FEBRUARY 20, 1912.

86,200. PAPER ROOFING. Atlantic Coast Hardware Co., Boston, Mass.
Filed April 11, 1911. Serial No. 55,672. PUBLISHED FEBRUARY 13, 1912.

86,201. PREPARATION OF COD-LIVER OIL. Harry Balshiser, New York, N. Y.
Filed July 28, 1911. Serial No. 57,899. PUBLISHED FEBRUARY 13, 1912.

86,202. SPECIALLY-PREPARED COMPOUND FOR THE PRESERVATION OF THREAD. Henry A. Bates, Middletown, Conn.
Filed December 7, 1911. Serial No. 60,118. PUBLISHED FEBRUARY 20, 1912.

86,203. CERTAIN PAINTERS' MATERIALS. George Benda, New York, N. Y.
Filed November 3, 1911. Serial No. 59,519. PUBLISHED FEBRUARY 20, 1912.

86,204. CERTAIN PAINTERS' MATERIALS. George Benda, New York, N. Y.
Filed November 3, 1911. Serial No. 59,520. PUBLISHED FEBRUARY 20, 1912.

86,205. CERTAIN CHEMICAL PREPARATIONS. Burke & James, Chicago, Ill., assignors to Burke & James, Inc., Chicago, Ill., a Corporation of Delaware.
Filed November 29, 1910. Serial No. 53,023. PUBLISHED FEBRUARY 13, 1912.

86,206. BOTTLED NATURAL DRINKING-WATER. John G. Burton, Hopewell, N. J.
Filed November 20, 1911. Serial No. 60,007. PUBLISHED FEBRUARY 20, 1912.

86,207. CANNED FRUITS, PRESERVED FRUITS, AND CANNED VEGETABLES. The Coast Products Company, St. Louis, Mo.
Filed May 21, 1910. Serial No. 49,842. PUBLISHED FEBRUARY 13, 1912.

86,208. NATURAL MINERAL WATERS. Compagnie Fermière de l'Établissement Thermal de Vichy, Paris, France.
Filed June 6, 1911. Serial No. 56,862. PUBLISHED FEBRUARY 20, 1912.

86,209. NATURAL MINERAL WATERS. Compagnie Fermière de l'Établissement Thermal de Vichy, Paris, France.
Filed June 6, 1911. Serial No. 56,863. PUBLISHED FEBRUARY 20, 1912.

86,210. MEDICINES FOR DISEASES OF THE SKIN. Corona Chemical Company, Chicago, Ill.
Filed November 28, 1911. Serial No. 59,991. PUBLISHED FEBRUARY 13, 1912.

86,211. SEDATIVE, ANTISPASMODIC, AND NERVE-TONIC. Jno. B. Daniel, Atlanta, Ga.
Filed November 2, 1911. Serial No. 59,512. PUBLISHED FEBRUARY 20, 1912.

86,212. DISINFECTANT. Farbenfabriken of Elberfeld Company, New York, N. Y.
Filed December 28, 1911. Serial No. 60,481. PUBLISHED FEBRUARY 20, 1912.

86,213. SILK SHIRTINGS. Finn and Meyers, New York, N. Y.
Filed December 13, 1911. Serial No. 60,201. PUBLISHED FEBRUARY 20, 1912.

86,214. CATHARTIC PREPARATION. Walter E. Gillam, New York, N. Y., and Philadelphia, Pa.
Filed December 9, 1911. Serial No. 60,136. PUBLISHED FEBRUARY 13, 1912.

86,215. PREPARATION FOR NICKEL-PLATING METAL. Horace Proctor Gorman, Hazleton, Pa.
Filed August 28, 1911. Serial No. 58,415. PUBLISHED FEBRUARY 20, 1912.

86,216. FACE-POWDER. Dr. Goetz Chemical Company, New York, N. Y.
Filed January 2, 1912. Serial No. 60,568. PUBLISHED FEBRUARY 20, 1912.

86,217. INTERNAL-COMBUSTION ENGINES. The Gyro Motor Co., Washington, D. C.
Filed December 6, 1911. Serial No. 60,093. PUBLISHED FEBRUARY 13, 1912.

86,218. MATCHES. Haldens Tændstikfabrik, Fredrikshald, Norway.
Filed November 4, 1911. Serial No. 59,542. PUBLISHED FEBRUARY 13, 1912.

86,219. LINIMENT FOR RHEUMATIC AFFLICTIONS, SPRAINS, AND BRUISES. Byron C. Hall, Oakland, Cal.
Filed March 20, 1911. Serial No. 55,215. PUBLISHED FEBRUARY 20, 1912.

86,220. TRADING-STAMPS. Anton H. Hansen, Cleveland, Ohio.
Filed December 5, 1911. Serial No. 60,075. PUBLISHED FEBRUARY 13, 1912.

86,221. TWINE AND CORD. The A. H. Hart Co., Paterson, N. J.
Filed October 21, 1911. Serial No. 59,275. PUBLISHED FEBRUARY 13, 1912.

86,222. REMEDY FOR RHEUMATISM, SCIATIC PAINS, INDIGESTION, AND MALARIA. Granville H. Henson, Evona, Ky.
Filed November 3, 1911. Serial No. 59,526. PUBLISHED FEBRUARY 20, 1912.

86,223. PURGATIVE. Isadore Hermann, Columbus, Ga.
Filed December 14, 1911. Serial No. 60,222. PUBLISHED FEBRUARY 13, 1912.

86,224. REMEDY FOR DISEASES OF THE STOMACH. George A. Johnson, Attica, Ind.
Filed December 15, 1911. Serial No. 60,255. PUBLISHED FEBRUARY 20, 1912.

86,225. CERTAIN GOODS IN THE PIECE. Kent Manufacturing Company, New York, N. Y.
Filed November 3, 1911. Serial No. 59,528. PUBLISHED FEBRUARY 20, 1912.

86,226. MEN'S, WOMEN'S, AND CHILDREN'S CLOTHING. Edouard Leurent, Tourcoing, France.
Filed June 22, 1909. Serial No. 48,181. PUBLISHED DECEMBER 19, 1911.

86,227. CERTAIN PHARMACEUTICAL PREPARATION. ARTHUR LOEBER, New York, N. Y.
Filed November 22, 1911. Serial No. 59,849. PUBLISHED FEBRUARY 20, 1912.

86,228. PREPARATION FOR RESTORING GRAY HAIR TO ITS ORIGINAL COLOR. LU-E-SA REMEDY CO., Hales Corners, Wis.
Filed September 1, 1910. Serial No. 51,653. PUBLISHED FEBRUARY 13, 1912.

86,229. HAIR-RESTORER. MARION MILLAR, Winnipeg, Manitoba, Canada.
Filed June 28, 1911. Serial No. 57,351. PUBLISHED FEBRUARY 20, 1912.

86,230. NEWSPAPERS AND MAGAZINES PUBLISHED MONTHLY. WM. J. MILLIKEN, Salt Lake City, Utah.
Filed October 9, 1911. Serial No. 59,087. PUBLISHED FEBRUARY 13, 1912.

86,231. HORSE-COLLARS. MINNESOTA HARNESS FACTORY, INCORPORATED, Winona, Minn.
Filed November 20, 1911. Serial No. 59,813. PUBLISHED FEBRUARY 13, 1912.

86,232. CHEMICAL COMPOSITION OR PREPARATION TO FINISH OR DRESS TEXTILES. DR. FRITZ MÜLLER, BASLER CHEMISCH-TECHNISCHES LABORATORIUM, Basel, Switzerland.
Filed December 15, 1911. Serial No. 60,262. PUBLISHED FEBRUARY 20, 1912.

86,233. CORSET-STAYS. NATIONAL WHALEBONE CO., New York, N. Y.
Filed June 20, 1911. Serial No. 57,199. PUBLISHED FEBRUARY 20, 1912.

86,234. IRON AND STEEL WIRE. NEGRETTI & ZAMBRA, London, England.
Filed November 30, 1910. Serial No. 53,045. PUBLISHED FEBRUARY 20, 1912.

86,235. ANTISEPTICS, DISINFECTANTS, AND INSECTICIDES. MILFORD HERBERT OACHS, New York, N. Y.
Filed May 13, 1911. Serial No. 56,355. PUBLISHED FEBRUARY 13, 1912.

86,236. HAIR-REMOVER. THE OBUR COMPANY, New York, N. Y.
Filed October 12, 1911. Serial No. 59,128. PUBLISHED FEBRUARY 20, 1912.

86,237. REMEDY FOR CERTAIN DISEASES. PAUL PARNITZKY, New York, N. Y.
Filed December 29, 1911. Serial No. 60,513. PUBLISHED FEBRUARY 20, 1912.

86,238. ANTIPHLOGISTIC PREPARATION. EMERSON J. POTTS, San Francisco, Cal.
Filed November 21, 1911. Serial No. 59,838. PUBLISHED FEBRUARY 20, 1912.

86,239. FOOT-POWDERS. GEORGE A. REYNOLDS, Syracuse, N. Y.
Filed October 27, 1911. Serial No. 59,375. PUBLISHED FEBRUARY 13, 1912.

86,240. CERTAIN SURGICAL APPLIANCES. ROTHSCHILD, MEYERS & CO., New York, N. Y.
Filed March 10, 1911. Serial No. 54,989. PUBLISHED FEBRUARY 13, 1912.

86,241. TOOTH-POWDER, LIQUID ROUGE, FACE-CREAM, AND TALCUM POWDER. RUBISCO COMPANY, St. Louis, Mo.
Filed May 18, 1911. Serial No. 56,428. PUBLISHED FEBRUARY 20, 1912.

86,242. CERTAIN VEHICLES. ADOLPH SAURER, Arbon, Switzerland.
Filed March 11, 1911. Serial No. 55,037. PUBLISHED FEBRUARY 13, 1912.

86,243. LEAD-PENCILS AND COLORED PENCILS. SCHWANHÄUSSER, LATE GROSSBERGER & KURZ, Nuremberg, Germany.
Filed October 18, 1911. Serial No. 59,211. PUBLISHED FEBRUARY 6, 1912.

86,244. REMEDIES FOR COUGHS, CORNS, HEADACHE, NEURALGIA, INSOMNIA, AND FATIGUE. JOSEPH B. SCUREMAN, Nanticoke, Pa.
Filed March 20, 1911. Serial No. 55,196. PUBLISHED FEBRUARY 13, 1912.

86,245. REMEDY FOR GONORRHEA. WILLIAM SILVERMAN, Philadelphia, Pa.
Filed December 20, 1911. Serial No. 60,383. PUBLISHED FEBRUARY 20, 1912.

86,246. SALVES. FRANK P. SIMPSON, Norfolk, Va.
Filed December 18, 1911. Serial No. 60,334. PUBLISHED FEBRUARY 20, 1912.

86,247. GLUE. SOLVA WATERPROOF GLUE CO., Chicago, Ill.
Filed March 5, 1910. Serial No. 46,212. PUBLISHED FEBRUARY 13, 1912.

86,248. DISINFECTANT. L. SONNEBORN SONS, INC., New York, N. Y.
Filed November 8, 1910. Serial No. 52,666. PUBLISHED FEBRUARY 13, 1912.

86,249. TONIC FOOD. SOUTHALL BROS. & BARCLAY, LIMITED, Birmingham, England.
Filed May 17, 1911. Serial No. 56,396. PUBLISHED FEBRUARY 13, 1912.

86,250. REMEDY FOR SWEATY, TIRED, SWOLLEN, ACHING, ODORIFEROUS, CALLOUSED FEET. CHARLES I. STEPHENS, Chicago, Ill.
Filed November 20, 1911. Serial No. 59,807. PUBLISHED FEBRUARY 13, 1912.

86,251. COTTON PIECE GOODS, SHEETINGS, SHIRTINGS, AND DRILLS. SUFFERN & COMPANY, New York, N. Y.
Filed October 14, 1911. Serial No. 59,155. PUBLISHED FEBRUARY 20, 1912.

86,252. LAXATIVE TABLET. THE SULFOSOL CO., New York, N. Y.
Filed December 14, 1911. Serial No. 60,231. PUBLISHED FEBRUARY 20, 1912.

86,253. NERVE AND TISSUE TONIC. THE VANADIUM CHEMICAL CO., Pittsburgh, Pa.
Filed February 6, 1911. Serial No. 54,327. PUBLISHED FEBRUARY 20, 1912.

86,254. PREPARATION FOR EXTERNAL USE AS AN ANTISEPTIC. THE VANADIUM CHEMICAL CO., Pittsburgh, Pa.
Filed February 6, 1911. Serial No. 54,328. PUBLISHED FEBRUARY 20, 1912.

86,255. FRENCH HAIR-TONIC. MATHILDA VANDAME, Goldfield, Nev.
Filed December 18, 1911. Serial No. 60,339. PUBLISHED FEBRUARY 20, 1912.

86,256. LAXATIVE TABLETS. EDWARD H. WAGNER, Mineral Wells, Tex.
Filed June 15, 1910. Serial No. 50,311. PUBLISHED FEBRUARY 13, 1912.

86,257. CUTICLE-REMOVER IN LIQUID FORM. NORTHAM WARREN, New York, N. Y.
Filed November 15, 1911. Serial No. 59,730. PUBLISHED FEBRUARY 20, 1912.

86,258. PREPARATION FOR PREVENTING HARDENING OF THE ARTERIES. CARL WEINREBEN FABRIK PHARMACEUTISCHER PRÄPARATE, Frankfort-on-the-Main, Germany.
Filed February 21, 1911. Serial No. 54,628. PUBLISHED FEBRUARY 13, 1912.

86,259. TWIST-DRILLS. THE WHITMAN & BARNES MANUFACTURING CO., Akron, Ohio.
Filed January 4, 1912. Serial No. 60,613. PUBLISHED FEBRUARY 20, 1912.

86,260. SKIN SALVE, AND A REMEDY FOR SEASICKNESS. WILLIAM F. WORTHINGTON, San Francisco, Cal.
Filed September 7, 1911. Serial No. 58,562. PUBLISHED FEBRUARY 13, 1912.

LABELS

REGISTERED APRIL 23, 1912.

16,295.—*Title:* "TENFORONE." (For Calcimine.) THE A. WILHELM COMPANY, Reading, Pa. Filed March 15, 1912.

16,296.—*Title:* "GOLDEN ANCHOR." (For Cigars.) BOEHEN BROS., Lawrence, Kans. Filed March 30, 1912.

16,297.—*Title:* "CANADAY'S WEED KILLER." (For Weed-Killer.) ALLEN M. CANADAY, Morris, Ill. Filed April 4, 1912.

16,298.—*Title:* "LANDSEER." (For Cigars.) C. B. HENSCHEL MFG. CO., Milwaukee, Wis. Filed March 15, 1912.

16,299.—*Title:* "HORSE TONIC." (For Horse-Tonic.) JOHN C. EDWARDS, Mobile, Ala. Filed February 20, 1912.

16,300.—*Title:* "SPARKLING FIZZ." (For Non-Alcoholic Beverage.) LIQUID FOOD BOTTLING COMPANY, Kansas City, Mo. Filed September 11, 1911.

16,301.—*Title:* "McBRADY'S BEAUTY CAKE." (For Complexion-Cream.) JOHN E. MCBRADY, Chicago, Ill. Filed April 1, 1912.

16,302.—*Title:* "McDUFF'S MALT WHISKEY." (For Malt Whiskies.) MCDUFF MERCANTILE CO., St. Louis, Mo. Filed March 30, 1912.

16,303.—*Title:* "CONVALESCENT RYE WHISKEY." (For Rye Whisky.) FRED. SCHWARZ, New York, N. Y. Filed April 1, 1912.

16,304.—*Title:* "KESERÜ GYÓGY BOR." (For Bitters.) FRED. SCHWARZ, New York, N. Y. Filed April 1, 1912.

16,305.—*Title:* "OLD DYER." (For Whisky.) SELF & BINSWANGER, St. Joseph, Mo. Filed March 18, 1912.

16,306.—*Title:* "PEDERIKA." (For Antiseptic Powder for the Feet.) L. M. TEBBEL, Spokane, Wash. Filed March 20, 1912.

16,307.—*Title:* "NO. 920 USHCO." (For Hames.) U. S. HAME COMPANY, Buffalo, N. Y. Filed April 5, 1912.

16,308.—*Title:* NO. 910 USHCO." (For Hames.) U. S. HAME COMPANY, Buffalo, N. Y. Filed April 5, 1912.

PRINTS

REGISTERED APRIL 23, 1912.

2,994.—*Title:* "THE SPIRIT OF CLEANLINESS." (For Soap.) JAMES S. KIRK & COMPANY, Chicago, Ill. Filed April 1, 1912.

2,995.—*Title:* "CAMPBELL'S SOUP." (For Soups.) JOSEPH CAMPBELL COMPANY, Camden, N. J. Filed April 6, 1912.

2,996.—*Title:* "CAMPBELL'S SOUP." (For Soups.) JOSEPH CAMPBELL COMPANY, Camden, N. J. Filed April 6, 1912.

2,997.—*Title:* "CAMPBELL'S SOUP." (For Soups.) JOSEPH CAMPBELL COMPANY, Camden, N. J. Filed April 6, 1912.

2,998.—*Title:* "CAMPBELL'S SOUP." (For Soups.) JOSEPH CAMPBELL COMPANY, Camden, N. J. Filed April 6, 1912.

2,999.—*Title:* "CAMPBELL'S SOUP." (For Soups.) JOSEPH CAMPBELL COMPANY, Camden, N. J. Filed April 6, 1912.

3,000.—*Title:* "CAMPBELL'S SOUP." (For Soups.) JOSEPH CAMPBELL COMPANY, Camden, N. J. Filed April 6, 1912.

3,001.—*Title:* "CAMPBELL'S SOUP." (For Soups.) JOSEPH CAMPBELL COMPANY, Camden, N. J. Filed April 6, 1912.

3,002.—*Title:* "CAMPBELL'S SOUP." (For Soups.) JOSEPH CAMPBELL COMPANY, Camden, N. J. Filed April 6, 1912.

3,003.—*Title:* "CAMPBELL'S SOUP." (For Soups.) JOSEPH CAMPBELL COMPANY, Camden, N. J. Filed April 6, 1912.

3,004.—*Title:* "CAMPBELL'S SOUP." (For Soups.) JOSEPH CAMPBELL COMPANY, Camden, N. J. Filed April 6, 1912.

3,005.—*Title:* "CAMPBELL'S SOUP." (For Soups.) JOSEPH CAMPBELL COMPANY, Camden, N. J. Filed April 6, 1912.

3,006.—*Title:* "CAMPBELL'S SOUP." (For Soups.) JOSEPH CAMPBELL COMPANY, Camden, N. J. Filed April 6, 1912.

3,007.—*Title:* "HYSTERONE." (For Uterine Sedative.) MALDEHYDE CHEMICAL COMPANY, St. Louis, Mo. Filed March 1, 1912.

3,008.—*Title:* "COLSPIRIN." (For Tablets for Grippe.) MALDEHYDE CHEMICAL COMPANY, St. Louis, Mo. Filed March 1, 1912.

3,009.—*Title:* "NUXOTONE." (For a Tonic.) MALDEHYDE CHEMICAL COMPANY, St. Louis, Mo. Filed March 1, 1912.

3,010.—*Title:* "NASAL TABLETS." (For Nasal Tablets.) MALDEHYDE CHEMICAL COMPANY, St. Louis, Mo. Filed March 1, 1912.

3,011.—*Title:* "DRYFOOT." (For Hosiery.) THE NORFOLK HOSIERY AND UNDERWEAR MILLS CO., Norfolk, Va. Filed February 8, 1912.

3,012.—*Title:* "PLEASE ORDER BY THE NUMBER SHOWN ON EACH BAND." (For Cigar-Labels.) STEPHENS, JONES AND CO., New York, N. Y. Filed March 15, 1912.

3,013.—*Title:* "CRÈME ELCAYA." (For a Toilet Preparation.) THE W. F. POWERS COMPANY, New York, N. Y. Filed March 8, 1912.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

MADAME IRENE *v.* SCHWEINBURG.

Decided January 5, 1912.

1. TRADE-MARKS—ABANDONMENT.

It is well settled that the mere non-use of a trade-mark does not establish abandonment thereof, but that one who contends that the mark has been abandoned must establish that the original owner of the mark not only discontinued its use but intended to abandon the same. (*Boglin et al. v. Cusenier*, 221 U. S., 580, 597, and cases therein cited.)

2. SAME—INTERFERENCE—RIGHT OF JUNIOR PARTY TO REGISTRATION.

Registration *Held* properly refused the junior party, since the senior party was the first to adopt and use the mark in issue and the evidence did not establish that he had lost his rights thereto by abandonment.

ON APPEAL.

TRADE-MARK FOR CORSETS.

Messrs. Robertson & Johnson for Madame Irene.

Mr. C. P. Goepel for Schweinburg.

MOORE, *Commissioner:*

This is an appeal from the decision of the Examiner of Interferences holding that the firm of Madame Irene is not entitled to the registration for which it has made application.

The interference involves the application of the firm Madame Irene for registration of the word "Irène" as a trade-mark for corsets and two registrations of Schweinburg of the word "Irene" and the words "The René," the word "The" being written in small letters in the upper curve of the "R" as trade-marks for the same goods.

The record shows that Schweinburg adopted these trade-marks prior to the dates of his registrations in 1890 and 1892, respectively, and that the firm of Madame Irene did not adopt its mark until some years later, the testimony being conflicting as to whether it was adopted in 1901, 1903, or 1904. The only question in the case is whether Schweinburg abandoned his marks and that in view of such abandonment Madame Irene is entitled to registration. This question the Examiner of Interferences decided adversely to Madame Irene, holding that abandonment had not been established.

It is contended on behalf of Madame Irene that there is no interference in fact between the mark "Irène" and the mark "The René." The Examiner of Interferences held otherwise, pointing out that the word "René" in appearance was quite similar to "Irène" and that the public inquiring for goods bearing this mark would probably pronounce this word similarly to "queen," or as if it were spelled "reen."

As it will appear hereinafter, it is not necessary to decide this question, but it is deemed proper to refer to the statement in the brief on behalf of Schweinburg that this question had previously been decided by the Office on a motion to dissolve. (Brief for Schweinburg, pp. 9 and 17.) The record does not bear out this statement. A motion to dissolve the interference as to the mark "The René" was brought on behalf of Madame Irene some time after the declaration of the interference. Transmission of this motion was refused on the ground that it was brought late and that the failure to bring the motion earlier was the result of deliberate election on the part of Madame Irene. On appeal the decision of the Examiner of Interferences refusing to transmit the motion to dissolve was affirmed, but the question of the conflict between the marks "Irène" and "The René" was not considered on the motion to dissolve by any of the tribunals of the Patent Office.

As stated above, the record shows that Schweinburg adopted and used the marks "Irene" and "The René" long before any date of adoption claimed by Madame Irene. It appears that Schweinburg was an importer of corsets manufactured by the firm of Zoeppritz, Cantz & Ziegler, of Cannstatt, Germany; that he placed certain trade-marks on these corsets; that corsets marked "Irene" were sold exclusively to the firm of J. Lichtenstein & Sons, and, after their failure, to the firm of Journeay & Burnham, and that corsets marked "The René" were sold exclusively to the firm of Ehrich Bros. It also appears that in 1901 certain contracts were entered into between Schweinburg and B. Altman & Co. and between Schweinburg, B. Altman & Co., and Zoeppritz, Cantz & Ziegler, by which B. Altman & Co. became the distributers of the corsets manufactured by the latter firm which had been formerly handled by

Schweinburg. One of these contracts contained the provision that it might be terminated at the end of five years upon notice by B. Altman & Co. under certain circumstances. After the making of these contracts Schweinburg handled no more corsets, and at the end of five years B. Altman & Co. gave notice that the contracts would be considered as terminated. Schweinburg thereafter brought suit against B. Altman & Co. for the royalties due him under these contracts for one year.

It further appears that no corsets marked "Irene" were sold by B. Altman & Co. after 1903 or 1904 and possibly no corsets marked "The René" sold after that time. The testimony is somewhat conflicting as to how long corsets bearing these trade-marks continued on sale. It appears that the firm of Journeay & Burnham became involved, that, with Schweinburg's consent, B. Altman & Co. ceased to sell corsets to them some time prior to their failure in 1907, and that in May of that year the left-over stock of that firm of "Irene" corsets were sold at a receiver's sale to the firm of Edwards & Son, of Syracuse, N. Y., by whom they were closed out. There is some testimony to show that the firm of Ehrich Bros. bought no corsets from B. Altman & Co. bearing the mark "The René" later than 1903, and that when in 1909 and 1910 attempts were made by employees of Madame Irene to purchase corsets bearing this mark they were informed that while Ehrich Bros. had such corsets on hand they were merely left-over corsets which they sold at reduced prices and they were not keeping that line of corsets "up to date."

It is contended on behalf of Madame Irene that these facts show an absolute abandonment by Schweinburg of the marks, and that therefore registration should be accorded to the former. On behalf of Schweinburg it is contended that there is no proof of an intent to abandon the mark, it being pointed out that the testimony shows that Schweinburg, while having no actual place of business, kept on hand his forms and stamps, that B. Altman & Co. had on hand labels bearing the marks "Irene" and "The René," and that the suit brought by Schweinburg against B. Altman & Co., while in form a suit for royalties due under the contracts, must, in effect, result in a determination whether or not Schweinburg has the right to use his mark.

It is well settled that the mere non-use of a trade-mark does not establish abandonment thereof, but that one who contends that the mark has been abandoned must establish that the original owner of the mark not only discontinued its use but intended to abandon the same. (*Baglin et al.* v. *Cusenier*, 221 U. S., 580, 597, and cases therein cited.) It is true that it is not necessary that it be proved that the original owner of the mark has stated that he intended to abandon the mark. Such intent may be proved by his actions and the circumstances of the case.

In my opinion an intent by Schweinburg to abandon either the mark "Irene" or the mark "The René" has not been established in this case. As pointed out by the Examiner of Interferences, the record shows that Schweinburg kept on hand his forms and labels, and the question of the liability of B. Altman & Co. to Schweinburg is still in litigation. Schweinburg positively testifies that he never intended to abandon these marks and denies that he told the agent of R. G. Dunn & Co. that he had given up his business and sold out all interest therein.

In reaching this conclusion I have not overlooked the fact that the contracts above mentioned referred to the "Z-Z" and "Au-Coeur" brands of corsets more fully than to the "Irene" and "The René" brands and that apparently under one of these contracts B. Altman & Co. were not required to sell the "Irene" corsets to other parties should the firm to whom Schweinburg had given the exclusive handling of these corsets go out of business.

In view of the holding that abandonment has not been established it is not necessary to consider whether there is an interference in fact between the marks "Irene" and "The René."

The record of this case is long drawn out, and the testimony consists in large part of references to irrelevant and immaterial matters. Questions were asked witnesses over and over again in substantially the same form. A fair example of a large part of the testimony is found in the cross-examination of Mrs. Kann, (record for Madame Irene, pp. 61 and 62,) two pages of which relate to the time when her previous deposition when testifying on behalf of Schweinburg was closed, whether at one o'clock or two o'clock in the afternoon. Such a record as this not only greatly adds to the expense of the proceeding, but very greatly increases the labor of all the tribunals who have to consider the case.

The decision of the Examiner of Interferences is affirmed.

IN RE STEBLER.

Decided January 27, 1912.

1. OWNER OF APPLICATION FOR PATENT—BANKRUPT—TITLE OF TRUSTEE.

Where the owner of an application for patent is declared a bankrupt, *Held* that the title to the interest in the patent about to be granted is transferred by operation of law to the trustee in bankruptcy.

2. SAME—SAME—PROSECUTION OF APPLICATION AND ISSUANCE OF PATENT.

Where the trustee in bankruptcy sells certain applications for patent owned by a bankrupt, and that sale is confirmed by a court of competent jurisdiction, and the order of the court and the bill of sale by the trustee are recorded in this Office, *Held* that the transferee should be recognized in the prosecution of the application and the patent thereon be issued to him.

ON PETITION.

Messrs. Lyons & Hackley for the petitioner.

BILLINGS, *First Assistant Commissioner:*

This is a petition by Fred Stebler, of Riverside, Cal., that his right be recognized to control and prosecute two applications for patent filed by Charles C. McIntosh, and that the patents when granted be issued to him as assignee.

The principal question raised by this petition—namely, whether under the Bankruptcy Act of July 1, 1898, the interests of a bankrupt in an application for patent pass to the trustee by operation of law—has been before the courts at least three times, and the published decisions rendered in these cases show that the courts are not in agreement thereon.

The first reported decision was rendered by District Judge Shiras in the case of *in re McDonnell*, (N. D. Iowa, 101 Fed. Rep., 239,) who held that a trustee in bankruptcy takes no title to a patent for an invention granted to the bankrupt after the date of the adjudication in bankruptcy, although the application for such patent was made before the adjudication of bankruptcy and was pending at the time of the said adjudication.

The second reported decision was rendered by District Judge Seaman, Northern District of Illinois, in the case of *in re Dann*, (129 Fed. Rep., 405.) In this case the court held that the bankrupt's incorporeal interest in an alleged invention covered by an application for patent does not pass to his trustee in bankruptcy under the Bankruptcy Act.

It is therefore seen that these two decisions are to the same effect.

The third reported decision was rendered by District Judge Hale, District Court, District of Maine, in the case of *in re Cantelo Mfg. Co.*, (185 Fed. Rep., 276.)

In the third and last case reported the court came to a different conclusion from the adjudications in the two cases previously cited, holding that applications for patents constituted property which passed to the corporation's trustee in bankruptcy under the Bankruptcy Act of July 1, 1898. While it is to be noted that the three decisions were rendered by courts of equal jurisdiction, yet the court in the last case had the benefit of the two previously-cited cases and discussed them quite fully in its opinion. After carefully considering each one of the opinions above cited, it is quite clear that the ruling in the case of *in re Cantelo Mfg. Co.* should be followed by the Patent Office in such cases.

The facts leading up to this petition are as follows:

Charles C. McIntosh, of Los Angeles, Cal., filed in the Office two applications for patent, one, No. 520,952, on October 4, 1909, the other, No. 574,102, on July 27, 1910. Each of these applications for patent was assigned by McIntosh to H. K. Miller Mfg. Co., of Los Angeles, Cal., a corporation of California. These assignments were duly recorded in the Patent Office, and a request is made therein by McIntosh that the patents issue to the assignee, the H. K. Miller Mfg. Co. Subsequently the H. K. Miller Mfg. Co., the assignee of McIntosh, was adjudged a bankrupt by a court of competent jurisdiction, and a trustee in bankruptcy was appointed. The trustee in bankruptcy sold to Fred Stebler, of Riverside, Cal., all the patents and patent rights and applications belonging to the bankrupt company. A certified copy of the order adjudging the H. K. Miller Mfg. Co. to be a bankrupt, appointing a trustee in bankruptcy, and ordering the trustee to make an appropriate conveyance, also a bill of sale by the trustee in bankruptcy and a certified copy of the order of the court confirming this sale, have been recorded in the Patent Office.

The Bankruptcy Act of July 1, 1898, (c. 541, sec. 70a; 30 Stat., 565; U. S. Comp. St., 1901, p. 3451,) provides that the trustee—

> shall in turn be vested by operation of law with the title of the bankrupt, as of the date he was adjudged a bankrupt. * * * to all * * * (2) interests in patents, patent rights, copyrights, and trade-marks, * * * (5) property which prior to the filing of the petition he could by any means have transferred or which might have been levied upon and sold under judicial process against him.

As stated by the court in the McDonnell case:

> In the construction of statutes, it is a well-recognized rule that regard may be had to all statutory provisions touching a given subject, as aids in arriving at the legislative intent. * * *.

Section 4895 of the Revised Statutes provides in part:

> Sec. 4895. Patents may be granted and issued or reissued to the assignee of the inventor or discoverer; but the assignment must first be entered of record in the Patent Office.

It is therefore seen that the law specifically provides for the transfer of the inchoate rights or interests in an alleged invention described and claimed in an application for patent before the patent is actually granted. It is true that the right to recover damages for infringement does not become effective until the grant; but that there is property in an invention which is covered by an application for a patent pending in the Patent Office cannot be gainsaid. The assignee company enjoyed the use and benefit and the right to obtain a patent and must have derived some of its credit upon that right. In the case of the *Cantelo Co.*, *supra*, the court said:

> Clearly the trustee in bankruptcy should not be deprived of their benefit if, under a fair construction of the law, they may be held to be a part of the bankrupt estate. In spite of the well-considered opinion in the McDonnell case, I think it not altogether clear but that the interests in the inventions which have become the subject of patent applications may fairly be held to be an "interest in patents" within the meaning of the law; but whether or not these inventions may be so held, it seems to me, under subdivision 5 of section 70a, they may be held to be "property" which could be transferred.

In analyzing the decision in the Dann case, *supra*, Judge Hale said that the court in its opinion in the Dann case reasoned that:

> * * * the interest of the bankrupt in the alleged invention cannot be reached through the general terms of clause 5, in the face of the specific provision for patent interests in clause 2. His theory appears to be that, in clause 2, the law-making power disposed of the question of "patent rights" and "interests in patents," and when they came to item 5 they did not intend by the term "property" to include anything in relation to interests in patents or patent rights.

The court (in the Cantelo case, *supra*,) then said:

> It seems to me that, after providing in clause 2 that the bankrupt should be vested by operation of law with the title of bankrupt in interests in patents and patent rights, Congress proceeded in clause 5 to extend somewhat the meaning of clause 2, to cover by very general words the whole subject of "property," and to include in the term every vested right and interest attaching to, or growing out of, property. It seems to me that subdivision 5 embraces, and is meant to embrace, much of the property that is designated under the other subdivisions; that it is meant to include everything that can properly be the subject of a lawful transfer, whether it be corporeal or incorporeal. It seems to me that, instead of allowing clause 2 to limit and constrain the meaning of clause 5, the court should give to the latter clause a meaning as broad and inclusive as it was possible for the law-making power to make it.

That the inchoate right to the interest in the patent to be granted is a proper subject of a legal and equitable transfer cannot be well disputed in face of the direct provision in section 4895 of the Revised Statutes for transfers of that kind, and the authority thereby vested in the Commissioner of Patents to act in granting the patent in accordance with the provisions of that transfer. (*Gayler* v. *Wilder*, 10 How., 477; *Railroad Company* v. *Trimble*, 10 Wall., 367; *Consolidated Electric Light Co.* v. *Edison Electric Light Co.*, 25 Fed. Rep., 719; *Harrison* v. *Morton*, 76 O. G., 1275; 83 Md., 476.)

It is difficult to follow the reasoning in the Dann case—to wit, that the law-making power disposed of the question of "patent rights" and "interests in patents" in clause 2 of the Bankruptcy Act and for that reason did not intend that the "property" which is defined in clause 5 could by any means be construed to include anything relating to interests in patents or patent rights.

The Court of Appeals of the District of Columbia said, through Chief Justice Shepard, in *Browne* v. *Dyson and Land*, (173 O. G., 866–867:)

> The right to the patent is a species of property the title to which is claimed exclusively by each party as against all of the others. * * *

I am unable, therefore, to acquiesce in the reasoning that an inchoate interest in a patent about to be granted is excluded from transfer under clause 2 of the Bankruptcy Act, because it is neither a "patent right" nor the "interests in patents" contemplated, and at the same time is to be excluded from the general transfer of "property" under clause 5 of the same act, on the theory that the "property" therein specified does not relate to patents.

It is necessarily either an interest in a patent or it is not. If it is, it comes under clause 2, and if it is not I fail to see what clause 2 has to do with the matter at all. In the latter case it would be a "species of property," the title to which is capable of transfer, and it would therefore come under clause 5.

There is nothing in the bankruptcy law to indicate that Congress had any intention thereby to exclude the transfer by operation of law to the trustee in bankruptcy of title to the "species of property" which Chief Justice Shepard has so aptly called the right to obtain a patent.

For the purpose of this decision it is immaterial which one of the two clauses operates to transfer the particular property in question to the trustee in bankruptcy. It is only necessary to determine whether or not such property is transferred by operation of law to the trustee under the Bankruptcy Act. I have no difficulty in reaching the conclusion announced by District Judge Hale in his opinion in the case of *In re Contelo*, *supra*—namely, that the title to the interest in a patent about to be granted is transferred by operation of law to the trustee in bankruptcy.

It has been suggested that inasmuch as the Supreme Court of the United States in the case of *Gayler* v. *Wilder* (10 How., 477) has held that the title to a patent granted to an inventor, "his heirs or assigns," vests immediately in the assignee, the safe practice to follow in such cases as the present one, where there is conflict in the opinions of courts of equal jurisdiction, is to grant the patent to the inventor, his heirs or assigns.

It appears from the record that the District Court of the Southern District of California, holding the bankruptcy court, has ratified the sale of the trustee in bankruptcy to the petitioner. The court would not be justified in thus ratifying this sale had it not been of the opinion that the trustee in bankruptcy took title to the property transferred by him under the provisions of the Bankruptcy Act. Should the Patent Office now disregard this ruling of the court and issue the patent to the inventor, his heirs or assigns, the petitioner would be under the necessity of seeking the court, in effect, to again ratify the sale which has already been ratified. For the Patent Office to take such action would result in delay and expense to the petitioner and cause unnecessary litigation.

Inasmuch as McIntosh made a legal transfer of his inchoate right to the H. K. Miller Mfg. Co. and requested the patent to issue to that company and the H. K. Miller Mfg. Co. is adjudged a bankrupt, the title of the bankrupt to the inchoate right is vested by operation of law in the trustee in bankruptcy under the provisions of the Bankruptcy Act, and the trustee in bankruptcy having made a sale of the property in question to the petitioner and that sale having been approved by a court of competent jurisdiction it is held that the petitioner should be recognized in the prosecution of the above-entitled applications and that when patents are granted thereon they shall issue to the petitioner as assignee.

The petition is granted.

HERBERT *v.* PAYNE AND SIMMS *v.* FRIEDLANDER.

Decided March 9, 1912.

INTERFERENCE—MOTION TO DISSOLVE—TRANSMISSION.

A motion to dissolve the interference on the ground of non-patentability of the issue *Held* sufficiently definite in view of the character of the invention.

APPEAL on motion.

EYEGLASSES.

Mr. Harry H. Stull and *Mr. H. Bartis* for Herbert. (*Mr. H. K. Parsons* and *Mr. F. J. Church*, *Mr. Melville Church*, and *Mr. Willard Rich* of counsel.)

Messrs. Church & Rich for Payne and Simms.

Messrs. Owens & Fairbank for Friedlander.

TENNANT, *Assistant Commissioner:*

This is an appeal by Herbert from the decision of the Examiner of Interferences refusing to transmit an amended motion for dissolution filed January 20, 1912.

The record shows that on December 24, 1911, orders were issued against Herbert and Payne and

Simms to show cause why judgment on the record should not be rendered against them. On December 23 Herbert presented a motion to dissolve, based upon the ground that the issue was not patentable, ten references being cited. The Examiner of Interferences on January 9, 1912, refused to transmit this motion, upon the ground that it was not sufficiently definite in respect to the application of the references. His decision concludes as follows:

> Should an amended motion be presented it should be filed within the time allowed for appeal.

The limit of appeal was fixed for January 19, 1912. On January 20, 1912, an amended motion was filed by Herbert, accompanied by a motion to transmit the same. The Examiner of Interferences in a decision rendered January 31, 1912, held that, notwithstanding the motion was filed one day late, in view of the fact that it was filed within the time allowed to the parties to show cause why judgment should not be rendered against them it was received in sufficient time. He, however, refused to transmit the motion, upon the ground that the same was not sufficiently specific in its application of the references to the counts of the issue.

An inspection of the issue of the interference shows that there are but three counts. They differ in phraseology, but each includes a bridge, a lever pivoted thereto, a spring for swinging the lever, and a "cup" or "container" or "wall" movable with the lever for receiving and concealing the spring.

The preamble to the discussion of the references is as follows:

> Counts 1, 2 and 3. These three counts may be considered together in applying the several patents of the prior art as the inventive idea in all three of these counts lies in fashioning the lever in such a way as to constitute a cup, container, or wall which will hold and conceal the spring, the function or purpose of the structure of these counts being to provide means on the lever itself which will hold the spring and at the same time conceal it from view. This construction broadly is not new in the art.

Following this general statement, each of the patents cited is discussed in respect to the application of the features thus mentioned to the particular structure shown in that patent.

The invention involved in this controversy is exceedingly simple in character, and the application of the references would appear to be obvious upon their inspection. In my opinion the general statement above quoted when read in connection with the specific discussion of each patent is ample to apprise the other parties and the Examiner of the application of the respective references to the claims.

This interference is one of a series of interferences motions for dissolution in one or more of which have already been transmitted to the Examiner and in connection with which the question of the pertinency of the references cited herein will be considered.

In view of all the circumstances of the case I am of the opinion that the present motion for dissolution should be transmitted.

The decision of the Examiner of Interferences is reversed.

DECISIONS OF THE U. S. COURTS.

Supreme Court of the United States.

THE NEW MARSHALL ENGINE COMPANY AND MARSHALL *v.* THE MARSHALL ENGINE COMPANY, BY VAN BLARCOM, ITS RECEIVER.

Decided February 19, 1912.

1. PATENTS—FEDERAL COURTS—JURISDICTION.

"The Federal courts have exclusive jurisdiction of all cases arising under the patent laws, but not of all questions in which a patent may be the subject-matter of the controversy. For courts of a State may try questions of title, and may construe and enforce contracts relating to patents. (*Wade* v. *Lawder*, 165 U. S., 627.)"

2. SAME—SUIT TO COMPEL ASSIGNMENT—JURISDICTION OF STATE COURT.

A suit to compel assignment of a patent because the patent is an improvement on an earlier one and included in a covenant to convey all such improvements is based on general principles of equity and is within the jurisdiction of the State court.

3. SAME—SAME—SAME.

Where the injunction granted against sale of articles manufactured under a patent is only an incident to a decree for specific performance of a contract to convey the patent as an improvement of an earlier one, the relief is appropriate and is within the jurisdiction of the State courts.

Mr. Edmund A. Whitman, *Mr. Lyman W. Griswold*, and *Mr. Frank J. Lawler* for the plaintiffs in error.

Mr. Walter H. Bond for the defendant in error.

STATEMENT OF THE CASE.

On June 1, 1886, Letters Patent 342,802, were issued to Frank J. Marshall for an improvement in pulp-beating engines. Shortly before the patent expired he organized the Marshall Engine Company, and on September 15, 1908, assigned to it the patent and "all improvements thereon and renewals of the same." Marshall was elected president of the company, but neglected to have the assignment recorded within the time required by law. It contained, however, a provision for further assurance, and on October 8, 1904, after the patent had expired, Marshall executed an additional instrument whereby, after reciting the former assignment, he transferred the patent and "all further improvements thereon and renewals thereof."

In September, 1908, at the time the first assignment was made, Marshall had on file an application for a patent on—

> an improvement on Patent 411,251, granted to E. R. Marshall, and embodies features shown in Patent 342,802, granted in 1886 to myself.

There is no further reference in the record to Patent 411,251. Marshall's application was granted, and on April 14, 1903, Letters Patent 725,349 were granted to him.

No formal assignment was made, but it is found as a fact that, between September 15, 1908, and the receivership, the complainant manufactured nine or ten engines embodying the improvement covered by Patent 725,349.

On June 13, 1905, a receiver was appointed for the Marshall Engine Company. Immediately thereafter, Marshall organized under the laws of Massachusetts a new company bearing his name, and assigned to it this Patent 725,349. The New Marshall Engine Company took with notice of the complainant's right.

The Marshall Engine Company, of New Jersey, claimed title to this Patent 725,349 as an "improve-

ment" on Patent 342,802, which passed by virtue of the assignment of September 15, 1902. It thereupon filed, through its receiver, a bill in the superior court of Franklin county, Mass., asserting this title and praying that the defendants, Marshall and the New Marshall Engine Company, should be required to execute and deliver to it an assignment in due form to Patent 725,349, so as to entitle it to be recorded in the Patent Office, and also that the defendants, their successors and assigns, should be enjoined from manufacturing or selling machines covered by Patent 725,349.

The defendants answered, admitting or denying the several allegations of the bill, but setting up no affirmative defense. The case was referred to a master, who found in favor of the complainant. Thereupon the defendant moved to dismiss the bill because—

it presents questions involving an inquiry as to the construction and scope of the patents therein mentioned, of which questions the Federal courts have exclusive jurisdiction.

The motion was overruled, and a final decree was entered in favor of the complainants. The decision was affirmed by the supreme judicial court of Massachusetts, and the case was brought here by writ of error.

Mr. Justice LAMAR, after making the foregoing statement, delivered the opinion of the Court.

The Federal courts have exclusive jurisdiction of all cases arising under the patent laws, but not of all questions in which a patent may be the subject-matter of the controversy. For courts of a State may try questions of title, and may construe and enforce contracts relating to patents. (*Wade* v. *Lawder*, 165 U. S., 627.) The present litigation belongs to this class. The controlling fact for determination here is whether Patent 725,349 belongs to the Marshall Engine Company, of New Jersey, or to the New Marshall Engine Company, of Massachusetts. The complainant did not, by its bill in the State court, raise any question as to the validity or construction of the patent, nor did it make any claim for damages for infringement. The suit was an ordinary bill for specific performance to compel Marshall to assign to complainant the improvement on Patent 342,702, in compliance with his covenant for further assurance. If Patent 725,349 was an improvement thereon, as on the face of the application and Letters Patent it appeared to be, then the complainant was entitled to a decree requiring Marshall to make a conveyance which could be properly recorded for the protection of the true owner.

Marshall had, however, in violation of his contract, previously assigned Patent 725,349 to the New Marshall Engine Company, which took with notice of the prior transfer. This company, therefore, held the legal title as trustee for the complainant. Under the circumstances the State court had jurisdiction to pass on the question of ownership, and to enter a decree requiring Marshall, as patentee, and the New Marshall Engine Company, as trustee, to make an assignment in due form to the complainant. This jurisdiction was based on general principles of equity jurisprudence, and did not present a case arising under the patent law.

It is, however, urged that the State court was ousted of the jurisdiction to enter a decree for specific performance, because the bill went farther and prayed that the defendants, and each of them, should be enjoined from manufacturing or selling the machines covered by Patent 725,349. It is claimed that this was, in effect, an application and decree for injunction against infringement, and could only be granted by a Federal court.

But the allegations of the complainant's bill do not involve any construction of the meaning or effect of Patent 725,349, nor does it charge that the manufacture or sale of engines by the defendants would be an infringement of the patent, or of any right of the complainant, if, in fact, Patent 725,349 belonged to the New Marshall Engine Company. The injunction was asked for only as an incident of a finding that the title was vested in the complainant.

The bill must be regarded and treated as a proceeding to enforce the specific execution of the contract referred to, and not as one to protect the complainants in the exclusive enjoyment of the patent right. * * * It is to prevent fraudulent violation of this contract that the complainant seeks the aid of the court and asks for an injunction. (*Brown* v. *Shannon*, 20 How., 56, 57.)

As said in *Wilson* v. *Sanford*, (10 How., 99)—

the injunction is to be the consequence of a decree sanctioning the forfeiture. He alleges no ground for an injunction unless the contract is set aside.

Here the injunction asked for is to be the consequence of the decree sustaining the complainant's title. It alleges no ground for injunction unless that title is established.

The State court had jurisdiction of the subject-matter of the controversy. The relief granted was appropriate to the cause of action stated in the bill. The decree must therefore be affirmed.

ADJUDICATED PATENTS.

(U. S. C. C. A.) The Crampton patent, No. 531,782, for a railroad-switch, *Held* not infringed. *American Automatic Ry. Switch Co.* v. *Shepherd Automatic Switch Co.*, 193 Fed. Rep., 406.

(U. S. C. C. A.) The Tyden patent, No. 675,577, for a locking device for pedestal-tables, *Held* valid and infringed. *Arnold* v. *Tyden*, 193 Fed. Rep., 410.

(U. S. C. C. A.) The Crutchlow patent, No. 625,150, for a knuckle-joint for a Jacquard loom, *Held* valid and infringed. *Ferrary Bros. Co.* v. *Rigby*, 193 Fed. Rep., 413.

(U. S. C. C. A.) An order granting a preliminary injunction against infringement of the Decker patent, No. 521,773, for a nursing-bottle, affirmed. *Western Bottle Mfg. Co.* v. *Decker*, 193 Fed. Rep., 414.

(U. S. C. C.) The Wolhaupter patents, No. 538,809, claim 8, No. 601,322, claims 1, 2, and 3, No. 721,644, claims 7 and 9, each for a railroad tie-plate, *Held* not infringed. *Railroad Supply Co.* v. *Hart Steel Co.*, 193 Fed. Rep., 418.

(U. S. C. C.) The Fessenden patent, No. 706,736, for a system of transmission of energy by electromagnetic waves, *Held* valid and infringed on motion for preliminary injunction. *National Electric Signaling Co.* v. *Telefunken Wireless Telegraph Co.*, 193 Fed. Rep., 424.

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ISSUE OF APRIL 30, 1912.

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Designs	22—No.	42,428 to No. 42,449, inclusive.
Trade-Marks	97—No.	86,261 to No. 86,357, inclusive.
Labels	12—No.	16,309 to No. 16,320, inclusive.
Prints	7—No.	3,014 to No. 3,020, inclusive.
Reissues	5—No.	13,409 to No. 13,413, inclusive.
Total	768	

TO CITIZENS OF THE UNITED STATES.

States.	Patents and Designs.	Trade-Marks, Labels, and Prints.	States.	Patents and Designs.	Trade-Marks, Labels, and Prints.
Alabama	8	1	North Carolina	2	....
Arizona	1	....	North Dakota	2	....
Arkansas	9	....	Ohio	41	4
California	16	4	Oklahoma	5	....
Colorado	9	2	Oregon	4	....
Connecticut	16	1	Pennsylvania	78	7
Delaware	2	1	Rhode Island	11	1
Florida	4	1	South Carolina	....	....
Georgia	3	1	South Dakota	....	....
Idaho	1	1	Tennessee	2	1
Illinois	52	8	Texas	13	1
Indiana	11	2	Utah	1	....
Iowa	5	2	Vermont	2	....
Kansas	8	....	Virginia	6	....
Kentucky	1	....	Washington	7	5
Louisiana	4	....	West Virginia	2	....
Maine	2	4	Wisconsin	9	1
Maryland	2	....	Wyoming	....	....
Massachusetts	30	7			
Michigan	25	1	Alaska, District of	....	....
Minnesota	9	1	Canal Zone	1	....
Mississippi	1	....	District of Columbia	3	....
Missouri	12	....	Hawaii Territory	....	....
Montana	....	....	Philippine Islands	....	....
Nebraska	8	1	Porto Rico	....	....
Nevada	1	....	U. S. Army	....	....
New Hampshire	2	....	U. S. Navy	....	....
New Jersey	42	8			
New Mexico	1	1	Total to citizens of the United States	543	104
New York	80	37			

TO CITIZENS OF FOREIGN COUNTRIES.

Countries.	Patents and Designs.	Trade-Marks.	Countries.	Patents and Designs.	Trade-Marks.
Argentina	....	....	Mexico	....	....
Austria-Hungary	3	....	Netherlands	....	1
Belgium	3	....	Newfoundland	....	....
Bermuda	....	....	New South Wales	....	....
Brazil	....	....	New Zealand	1	....
British West Indies	1	....	Norway	1	....
Canada	10	2	Queensland	....	....
Cape Colony	....	....	Roumania	....	....
Chile	....	....	Russia	1	....
China	....	....	Scotland	1	1
Costa Rica	....	....	South Australia	....	....
Cuba	2	3	Spain	....	1
Denmark	1	....	Sweden	1	....
Ecuador	....	....	Switzerland	4	....
England	21	1	Transvaal, South Africa	3	....
France	10	1	Victoria	1	....
Germany	27	2	Western Australia	....	....
India	1	....			
Ireland	....	....			
Italy	2	....	Total to citizens of foreign countries	94	12
Japan	....	....			

Important Information.

This Office has no printed copies of foreign patents for sale.

In ordering photographic copies of drawings of foreign patents cited as references, applicants must state the date and number thereof, and name of the patentee, the country in which each patent was granted, and the class and subclass in which the patent is classified. If the class and subclass were not given in the Office letter citing the patent, the applicant must state the serial number of the application in which it was cited, the number of the action therein, the name of the inventor, and the title of the invention.

The photoprints will be furnished more expeditiously if the number of the division is also given in which they may be found. A separate order should be made for each drawing, for which the Office will furnish blanks gratuitously upon request.

BOUND VOLUMES CANNOT BE USED FOR MAKING PRINTS.

Failure to give the fullest data whereby the mounted drawing may be found will cause unnecessary delay and correspondence.

Applicants and attorneys are strongly urged to file a set of prints, small size, 8 by 12½ inches, or order them to be made by the Office, 15 cents per sheet, at the time of filing an application. Such procedure will save delay later, if correction of the drawing is desired or required.

Access to Pending Applications.

Hereafter no person except the applicant, the assignee whose assignment is of record, or the attorney of record will be permitted to have access to the file of any application, except as provided for under the interference rules, unless written authority from the applicant, assignee, or attorney, identifying the application to be inspected, is filed in the case to become a part of the record thereof, or upon the written order of the Commissioner, which will also become a part of the record of the case.

APPLICATIONS UNDER EXAMINATION.

Condition at Close of Business April 27, 1912.

Room No.	Divisions and subjects of invention.	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
313	1. Fences; Harrows and Diggers; Plows; Seeders and Planters; Trees, Plants, and Flowers.	Mar. 6	Mar. 12	628
126	2. Bee Culture; Dairy; Label Pasting and Paper Hanging; Paper Files and Binders; Pneumatic Despatch; Pneumatics; Presses; Store-Service; Tobacco.	Feb. 20	Mar. 7	617
176	3. Annealing and Tempering; Electric Heating and Rheostats; Electrochemistry; Metal-Founding; Metallurgy; Shaping Fluid Metal.	Mar. 28	Apr. 15	207
232	4. Bridges; Conveyers; Cranes and Derricks; Excavating; Hoisting; Hydraulic Engineering; Loading and Unloading; Metallic Building Structures.	Mar. 25	Mar. 13	449
167	5. Bookbinding; Harvesters; Jewelry; Music.	Feb. 17	Mar. 8	452
318	6. Bleaching and Dyeing; Chemicals; Explosives; Fertilizers; Medicines; Preserving; Sugar and Salt.	Mar. 28	Mar. 28	307
312	7. Educational Appliances; Clutches; Games and Toys; Mechanical Motors; Nut and Bolt Locks; Optics; Velocipedes.	Jan. 29	Mar. 8	650
131	8. Beds; Chairs; Furniture; Kitchen and Table Articles; Store Furniture; Supports.	Mar. 28	Mar. 27	274
142	9. Air and Gas Pumps; Fluid-Pressure Regulators; Hydraulic Motors; Pumps; Wind-Wheels.	Mar. 18	Mar. 25	336
235	10. Carriages and Wagons	Feb. 26	Mar. 4	695
154	11. Boot and Shoe Making; Boots, Shoes, and Leggings; Button, Eyelet, and Rivet Setting; Harness; Leather Manufactures; Nailing and Stapling; Whips and Whip Apparatus.	Mar. 2	Feb. 23	466
324	12. Elevators; Journal-Boxes, Pulleys, and Shafting; Lubrication; Machine Elements.	Feb. 21	Feb. 26	634
329	13. Arms, Projectiles, and Explosive Charges, Making; Belt, Nail, Nut, Rivet, and Screw Making; Boring and Drilling; Button Making; Chain, Staple, and Horseshoe Making; Driven, Headed, and Screw-Threaded Fastenings; Gear Cutting, Milling, and Planing; Metal Drawing; Metal Forging and Welding; Metal Rolling; Metal Tools and Implements, Making; Metal Working; Needle and Pin Making; Turning.	Mar. 11	Mar. 23	430
307	14. Compound Tools; Cutting and Punching Sheets and Bars; Farriery; Metal-Bending; Metal-Ornamenting; Sheet-Metal Ware Making; Tools; Wire Fabrics and Structure; Wire-Working.	Mar. 1	Mar. 27	416
308	15. Bread, Pastry, and Confection Making; Coating; Fuel; Glass; Laminated Fabrics and Analogous Manufactures; Liquid Coating Compositions; Paper-Making and Fiber Liberation; Plastic Block and Earthenware Apparatus; Plastic Compositions; Plastics.	Feb. 12	Mar. 4	843
109	16. Telegraphy; Telephony	Mar. 13	Mar. 15	216
303	17. Matrix-Making; Paper Manufactures; Printing; Type-Bar Making.	Mar. 27	Mar. 27	333
327	18. Injectors and Ejectors; Miscellaneous Heat-Engine Plants; Steam and Vacuum Pumps; Steam-Boilers; Steam-Engines; Steam-Engine Valves.	Mar. 9	Mar. 30	261
236	19. Dampers, Automatic; Furnaces; Heat-Distributing Systems; Stoves and Furnaces.	Mar. 11	Mar. 20	413
179	20. Artificial Limbs; Builders' Hardware; Dentistry; Locks and Latches; Sewer; Undertaking.	Mar. 1	Mar. 22	245
112	21. Brakes and Gins; Carding; Cloth-Finishing; Cordage; Felt and Fur; Knitting and Netting; Silk; Spinning; Weaving; Winding and Reeling.	Mar. 2	Mar. 23	350

Applications Under Examination—Continued.

Room No.	Divisions and subjects of invention	Oldest new application and oldest action by applicant awaiting office action. New.	Amended	No. of applications awaiting action.
249	22. Aeronautics; Air-Guns, Catapults, and Targets; Ammunition and Explosive Devices; Boats and Buoys; Firearms; Marine Propulsion; Ordnance; Ships.	Mar. 8	Mar. 27	285
379	23. Acoustics; Coin-Handling; Horology; Recorders; Registers; Time-Controlling Mechanism.	Mar. 4	Mar. 6	499
144	24. Apparel; Apparel Apparatus; Sewing-Machines.	Mar. 4	Mar. 12	491
315	25. Butchering; Mills; Threshing; Vegetable Cutters and Crushers.	Mar. 26	Apr. 3	173
166	26. Electricity, Generation; Motive Power.	Dec. 2	Dec. 21	583
372	27. Brushing and Scrubbing; Grinding and Polishing; Laundry; Washing Apparatus.	Mar. 5	Mar. 18	469
68	28. Internal-Combustion Engines.	Jan. 27	Feb. 8	825
147	29. Coopering; Fire-Escapes; Ladders; Rods; Wheelwright-Machines; Wooden Buildings; Wood-Sawing; Wood-Turning; Wood-working; Woodworking-Tools.	Feb. 29	Mar. 26	501
159	30. Illuminating-Burners; Illumination; Liquid and Gaseous Fuel Burners; Type-Writing Machines.	Feb. 2	Mar. 20	407
173	31. Alcohol; Ammonia, Water, and Wood Distillation; Charcoal and Coke; Gas, Heating and Illuminating; Hides, Skins, and Leather; Hydraulic Cement and Lime; Mineral Oils; Oils, Fats, and Glue.	Feb. 24	Mar. 11	301
278	32. Carbonating Beverages; Curtains, Shades, and Screens; Dispensing Beverages; Dispensing-Cans; Ornamentation; Packaging Liquids; Refrigeration.	Feb. 7	Mar. 28	259
71	33. Cutlery; Domestic Cooking Vessels; Masonry and Concrete Structures; Paving; Tents, Canopies, Umbrellas, and Canes.	Jan. 15	Feb. 27	456
304	34. Railways; Railway-Brakes; Railway Rails and Joints; Railway Rolling-Stock; Railway Ties and Fasteners.	Mar. 2	Mar. 15	526
244	35. Buckles, Buttons, Clasps, Etc.; Card, Picture, and Sign Exhibiting; Garment-Supporters; Toilet.	Mar. 14	Mar. 18	724
264	36. Drafting; Driers; Engraving; Measuring Instruments; Photography.	Mar. 25	Mar. 18	563
107	37. Electric Lighting; Electricity, Conductors; Electricity, Conduits; Electricity, General Applications.	Feb. 15	Mar. 25	465
378	38. Animal Husbandry; Artesian and Oil Wells; Fishing and Trapping; Stationery; Stone-Working.	Jan. 17	Mar. 11	681
221	39. Water Distribution	Jan. 22	Feb. 10	646
220	40. Baggage; Bottles and Jars; Check-Controlled Apparatus; Cloth, Leather, and Rubber Receptacles; Deposit and Collection Receptacles; Metallic Shipping and Storing Vessels; Package and Article Carriers; Paper Receptacles; Special Receptacles and Packages; Wooden Receptacles.	Mar. 27	Apr. 5	399
125	41. Railway Draft Appliances; Resilient Tires and Wheels.	Mar. 11	Mar. 6	505
279	42. Electric Railways; Electric Signaling; Railway Signaling; Signals.	Mar. 1	Mar. 4	536
382	43. Baths and Closets; Electricity, Medical and Surgical; Fire-Extinguishers; Sewerage; Surgery; Water Purification.	Mar. 20	Mar. 27	304

Oldest new case, Dec. 2; oldest amended, Dec. 21.

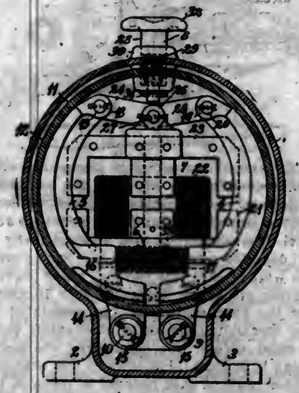
Total number of applications awaiting action 19,618

161	TRADE-MARKS, DESIGNS, LABELS AND PRINTS:			
	Trade-Marks	Mar. 16	Mar. 19	1117
	Designs	Feb. 12	Mar. 11	365
	Labels and Prints	Apr. 20	Apr. 23	15

PATENTS

GRANTED APRIL 30, 1912.

1,024,489. WHEEL-BRAKE. CHRISTIAN AALBORG, Wilkinsburg, Pa., assignor, by mesne assignments, to Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa., a Corporation of Pennsylvania. Filed Apr. 10, 1906. Serial No. 426,314. (Cl. 74—70.)

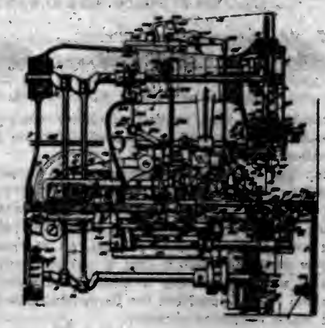


1. A symmetrical wheel brake comprising a flanged pulley or sheave, a pair of contact shoes having cylindrically curved outer surfaces lying in concentric arcs within the pulley flange, said shoes being pivotally mounted at one end in a single plane, a pair of links joining the free ends of the shoes, an interposed spring acting directly upon the shoes and tending to force them into engagement with the pulley flange, and an electro-magnet and a manually operated thrust rod which are severally adapted to break the toggle joint formed by the two links.

2. The combination with a rotatable pulley or sheave having an annular flange, a pair of symmetrically disposed brake shoes pivotally supported outside of the annular flange and having cylindrically curved outer surfaces which are adapted to make frictional engagement with the inner surface of said flange, an interposed compression spring acting directly on the shoes adjacent to their pivots and tending to separate them, a pair of links connecting the shoes at one end, an electro-magnet centrally disposed relative to the pulley flange and comprising a stationary core member, a magnet winding and a movable core member, said movable member being secured to the point of connection between the two links, and a manually-operated thrust rod for breaking the toggle joint formed by the two links.

1,024,490. BUTTONHOLE-STITCHING MACHINE. EDWARD B. ALLEN, Bridgeport, Conn., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Dec. 28, 1909. Serial No. 535,340. (Cl. 112—4.)

1. In a buttonhole stitching machine, the combination with overseaming stitch-forming mechanism, turning mechanism therefor, and feeding mechanism for producing relative feeding movements between the stitch-forming mechanism and the work and including means for determining the number of edge-stitches to be formed, whereby an eyelet-end buttonhole comprising a series of edge-stitches and a plurality of barring stitches at the smaller end may be produced, of controlling means, ineffective during the production of the edge-stitches, whereby the number of barring stitches may be varied independently of the number of edge-stitches.



2. In a buttonhole stitching machine, the combination with overseaming stitch-forming mechanism, means for rotating the stitch-forming mechanism for stitching the eye of the buttonhole, and mechanism for producing relative feeding movements between the stitch-forming mechanism and the work and including means for determining the number of edge-stitches to be formed, of barring mechanism, and means independent thereof, and acting independently of the controlling means for the edge-stitches, whereby the period of action of the barring mechanism, and hence the number of barring stitches, may be varied irrespective of the number of edge-stitches.

3. In a buttonhole stitching machine, the combination with overseaming stitch-forming mechanism, means for rotating the stitch-forming mechanism for stitching the eye of the buttonhole, and mechanism for producing relative feeding movements between the stitch-forming mechanism and the work, of barring mechanism including means for increasing the length of overseam stitches for the bar, and means whereby the number of barring stitches may be varied independently of the number of edge stitches.

4. In a buttonhole stitching machine, the combination with overseaming stitch-forming mechanism, means for imparting a semi-rotation thereto, and feeding mechanism for producing relative feeding movements between the stitch-forming mechanism and the work and including means for determining the number of edge-stitches to be formed, whereby an eyelet-end buttonhole comprising a series of edge-stitches and a plurality of barring stitches at the smaller end may be produced, of controlling means, ineffective during the production of the edge-stitches, whereby the number of barring stitches may be varied irrespective of the number of edge-stitches, and positively acting means for imparting a semi-rotation to the stitch-forming mechanism to bring the same to initial position at the completion of the barring operation.

5. In a buttonhole stitching machine, the combination with overseaming stitch-forming mechanism, a work-clamp, barring mechanism comprising clamp-jogging means, mechanism for imparting relative feeding and side shifting movements between the stitch-forming mechanism and

work-clamp, and means for imparting a relative semi-rotation between the stitch-forming mechanism and the work-clamp, whereby an eyelet-end buttonhole with a plurality of barring stitches at its smaller end may be produced, of controlling means whereby the number of barring stitches may be varied independently of the number of edge stitches, and means acting at the completion of the barring operation for imparting a relative semi-rotation between the stitch-forming mechanism and the work-clamp to establish the initial relation of the same.

[Claims 6 to 71 not printed in the Gazette.]

1,024,491. STOP-BAR. JOHN SELLERS BANCROFT and MAURITZ C. INDAHL, Philadelphia, Pa., assignors to Lanston Monotype Machine Company, Philadelphia, Pa., a Corporation of Virginia. Filed Aug. 8, 1911. Serial No. 642,942. (Cl. 101—200.)



1. A stop-bar for type casting machines comprising a body or locking section and a relatively movable jaw engaging section.

2. A stop bar for type casting machines comprising a body or locking section, a relatively movable jaw engaging section and yielding connections between said sections.

3. A stop bar for type casting machines provided with a body or guiding and locking section, an independently movable jaw engaging section, and a yieldable connection between said sections tending to maintain the same in a predetermined relative position but permitting independent movement under excessive pressure.

4. A stop bar for type casting machines provided with a slotted body or guiding and locking section, a jaw engaging section mounted to reciprocate longitudinally of said body section within the slot therein, and yieldably retaining means interposed between said jaw engaging and body sections.

5. A stop bar for type casting machines comprising a body or guiding and locking section, provided with a longitudinal slot or opening; a jaw engaging section supported to reciprocate in said slot and removably applied thereto; and yieldable tensioning means carried by said jaw engaging section and adapted to engage the body section to yieldably maintain said jaw engaging section in a predetermined relation to the body section.

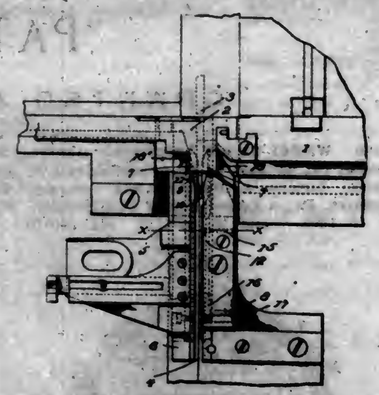
[Claim 6 not printed in the Gazette.]

1,024,492. TYPE CASTING AND COMPOSING MACHINE. JOHN SELLERS BANCROFT and MAURITZ C. INDAHL, Philadelphia, Pa., assignors to Lanston Monotype Machine Company, Philadelphia, Pa., a Corporation of Virginia. Filed Aug. 12, 1911. Serial No. 643,690. (Cl. 101—200.)

1. In a type assembling device or mechanism, provided with a line channel and a grooved type carrier, the latter reciprocating transversely of the line channel, and in combination therewith, a yielding jaw at the entrance to the line channel and projecting into the groove or way in the carrier, and a fixed guard located to one side of said jaw and extending into the groove of the carrier.

2. In a type assembling device or mechanism provided with a line channel the entrance whereof is equipped on opposite sides with yielding type sustaining jaws and guards projecting beyond said line channel, and in combination therewith, a type carrier reciprocating transversely of the line channel and recessed for the passage of said jaws and guards, and an ejector for discharging a contained type from the carrier between said jaws into the line channel.

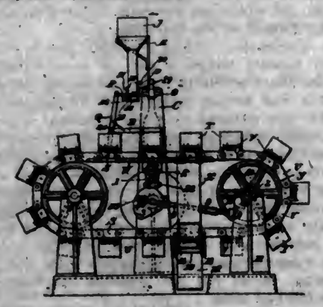
3. In a type assembling device or mechanism such as described, the combination with the reciprocatory type carrier, ejector, and line channel, of a pair of opposed type sustaining jaws, located at the entrance to the line channel, each of said jaws being provided with parallel sustaining ribs symmetrically disposed on or near opposite edges of a flat spring metal body portion.



4. In a type assembling device or mechanism such as described, and in combination with the line channel thereof, a pair of opposed type sustaining jaws located at the entrance to the line channel and each provided at one end with parallel type sustaining ribs symmetrically disposed at or near opposite edges of its flat spring-metal body portion, one wall of said line channel being provided with a nick-receiving rib and a recess in rear thereof for the reception of the body portion of the associated jaw.

5. A type assembling device or mechanism such as described provided with a line assembling channel and opposed yielding type sustaining jaws at the entrance thereto, whereof one wall of said channel is recessed longitudinally for the reception of the shank of the associated jaw, and provided with a cover plate equipped with a nick-rib in the plane of the shank of said jaw.

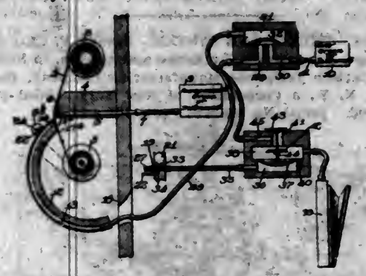
1,024,493. BOTTLE-CAPPING MACHINE. ASSID M. BABOODY, Richmond, Va. Filed Apr. 22, 1911. Serial No. 622,752. (Cl. 113—115.)



1. In a bottle capping machine, the combination of a traveling belt provided with bottle holders and projecting pins, means to advance the belt step by step, a reciprocating plunger over which the belt passes, said plunger being movable into and out of the holders to lift a bottle therein as the holders are successively registered with the plunger, a die and cap holder located in the line of movement of the bottle so lifted, a chute for caps, a plunger movable from said chute to said cap holder to successively advance caps from the chute to the holder, and a lever connected to the plunger and located in position to be struck by the pins on the belt to operate the plunger.

2. In a bottle capping machine, the combination of a traveling belt provided with a series of bottle holders, each holder consisting of opposite sides hinged to the belt and springs tending to press said sides together, the holders being open at the bottom, a track over which the upper run of the belt passes, the said track having an opening in the bottom thereof, a reciprocating plunger working up and down through said opening and into each holder as it is located thereover, and acting to lift a bottle in the holder, and a cap holder located above the carrier and in the line of movement of the bottle and adapted to apply a cap to the bottle when it is lifted.

1,024,494. AUTOMATIC PLAYING ATTACHMENT FOR MUSICAL INSTRUMENTS. ROBERT J. BENNETT, Moline, Ill. Filed May 9, 1910. Serial No. 560,263. (Cl. 84—161.)



1. In an apparatus for the purpose described, the combination of a traveling record sheet having two records thereon running side by side in the same direction, two series of tracker devices arranged to engage on opposite sides of the sheet and operate simultaneously, and separate note-sounding instrumentalities operatively connected with the said two series of tracker devices respectively.

2. In an apparatus of the class described, the combination of a traveling record sheet, spools upon which said sheet is wound, a tracker board engaging one side of said sheet, a second tracker board engaging the opposite side of said sheet and curved partially around one of said spools, means whereby the last said tracker board is capable of swinging partially around said spool to disengage it from said record sheet, and note sounding instrumentalities controlled by said tracker boards respectively.

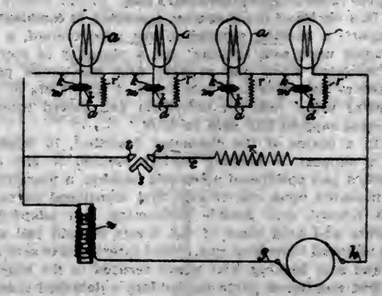
3. In an apparatus of the class described, the combination of a record sheet, having two series of note openings running side by side in the same direction, a series of tracker ducts arranged to register with one series of said note openings, a second series of tracker ducts arranged to register with the other series of said note openings, said two series of tracker ducts engaging opposite sides of said sheet simultaneously, means whereby the one of said series of tracker ducts may be moved away from the record sheet, separate note sounding instrumentalities operatively connected with said tracker ducts respectively, and means for closing communication between the movable series of said tracker ducts and one of said note sounding instrumentalities at will.

4. In an apparatus of the class described, the combination of a traveling record sheet, a tracker board having tracker ducts engaged by said sheet, said sheet having a series of note openings adapted to register with said tracker ducts, note sounding instrumentalities connected with and controlled by said tracker ducts and record sheet, a second tracker board movable with relation to said record sheet and adapted to engage the same, said second tracker board also having tracker ducts and the record sheet having a second series of note openings adapted to register therewith, note sounding instrumentalities controlled by said second tracker board and record sheet, a lock for holding said tracker board against movement, and means operatively connected with said lock for disconnecting the operative connection between the second said tracker board and second said note sounding instrumentalities when said lock is released.

5. In an apparatus of the class described, the combination of a traveling record sheet, a series of tracker ducts arranged in operative relation thereto, said record sheet having note openings adapted to register with said tracker ducts, note sounding instrumentalities operatively connected with and controlled by said tracker ducts and record sheet, a second series of tracker ducts arranged in operative relation to said record sheet, the record sheet having a second series of note openings adapted to register with the second series of tracker ducts, note sounding instrumentalities operatively connected with and controlled by said series of tracker ducts and record sheet, pneumatically operative means for disconnecting the second series of tracker ducts with said note sounding instrumentalities including means for creating a degree of vacuum therein, said pneumatic means being adapted to operate when said vacuum is broken or reduced, and a manually controlled valve for breaking or reducing said vacuum at will.

[Claims 6 to 9 not printed in the Gazette.]

1,024,495. ELECTRIC-LIGHTING SYSTEM. EDGAR BOOTH and NORMAN RUSSELL BOOTH, Halifax, England. Filed Oct. 26, 1910. Serial No. 589,254. (Cl. 171—97.)



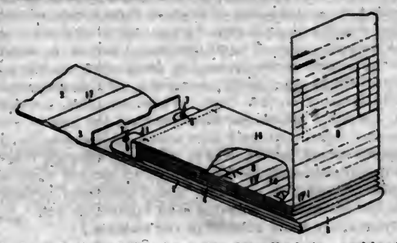
1. In a system of series incandescent electric lighting, a main circuit, a plurality of incandescent lamps arranged in series in said circuit, each lamp having a shunt circuit from said main circuit, a pair of adjacently arranged metal pieces in each shunt circuit, insulating material arranged between said metal pieces, a shunt wire across said main circuit, means for opening and closing the circuit including said shunt wire, an electromagnet included in said main circuit and in the circuit including said shunt wire, said circuit including said shunt wire being normally open whereby when said circuit is closed and again opened the extra current induced from said electro-magnet breaks down the said insulation material and permits current to flow through one of said first-named shunt circuits.

2. In a system of series incandescent electric lighting, a main circuit, a plurality of incandescent lamps arranged in series in said circuit, each lamp having a shunt circuit from said main circuit, a pair of adjacently arranged metal pieces in each shunt circuit, insulating material arranged between said metal pieces, a shunt wire across said main circuit, a switch arranged on said shunt wire, an electromagnet included in said main circuit and the circuit including said shunt wire, and means operated by said electro-magnet for opening and closing the circuit including said shunt wire.

1,024,496. MANIFOLDING SALES-BOOK. EDWARD KIRBY BOTTLE, Niagara Falls, N. Y., assignor to The Carter-Crume Company, Limited, Niagara Falls, N. Y., a Corporation. Filed May 16, 1911. Serial No. 627,490. (Cl. 11—23.)

1. In a device of the character described, in combination, a pair of hinged members, a pad directly associated with one of said members, and a filing pin permanently connected with one of said members and positioned thereon to perforate and hold sheets of said pad after being torn therefrom and placed between said hinged members.

2. In a device of the character described, in combination, a pair of fixedly connected members, a pad associated with one of said members, and a pin permanently secured to the other of said members adapted to perforate and hold the leaves of said pad when detached therefrom and placed between said members.



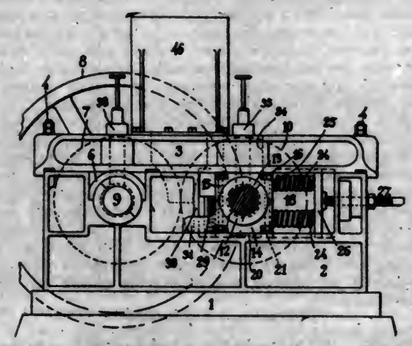
3. In a device of the character described, in combination, a support, a backing flexibly secured to one edge thereof, a pad positioned upon said backing, and a plurality of pins mounted upon said support adapted to hold some of the sheets in position between the support and said backing after being removed from said pad.

4. In a device of the character described, in combination, a support, a backing secured to one edge thereof, a pad positioned upon said backing, and a plurality of inclined pins mounted upon one of said first mentioned parts, adapted to perforate and hold some of the sheets of said pad after being removed therefrom and placed intermediate said support and said backing.

5. In a device of the character described, in combination, a support, a backing flexibly secured to one edge thereof, a pad positioned upon said backing, a plurality of pins mounted upon one of said first mentioned parts, inclined toward said flexible connection and adapted to perforate and hold some of the sheets of said pad after being removed therefrom and placed intermediate said support and said backing, and means secured to the other of said first mentioned parts for holding a detached sheet in position thereon until the same is perforated by said pins on closing the device.

[Claims 6 to 13 not printed in the Gazette.]

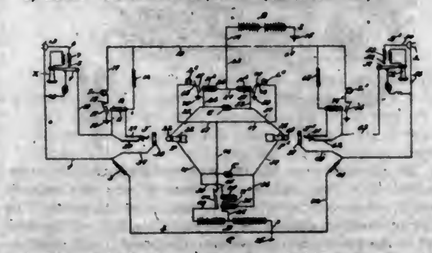
1,024,497. CRUSHING-MACHINE. CHARLES G. BUCHANAN, Brooklyn, N. Y. Filed Dec. 27, 1907. Serial No. 408,246. (Cl. 83—12.)



1. The combination with a frame, of a crushing roll mounted therein, a slide mounted to reciprocate in said frame, a bearing member having formed upon it a bearing ing surface for the shaft of said roll, the parts of said member being fixed with relation to each other, means for securing said member but permitting turning thereof with relation to said slide, and a resilient abutment between said member and said frame, said abutment bearing against said member independently of any bearing in which said member turns with relation to said slide.

2. In a crushing machine the combination with side frames, of a pair of crushing rolls supported thereby, boxes for said crushing rolls, the boxes of one of said rolls being pivotally and bodily movable with relation to said frames, a top frame securing the said boxes and forming, with the side frames, slots within which the boxes of the movable roll are adapted to slide, a slide upon one side only of each of the slots and adapted to slide along the same, and resilient abutments between the movable boxes and the frames, each of the movable boxes being pivoted at one side to one of said slides and upon the other side having a bearing contact with the portion of the frame forming the opposite side of the slot, the sides of the slots with which the movable boxes come in contact forming bearing surfaces for said boxes upon which said boxes may turn with relation to said frames.

1,024,498. TELEPHONE SYSTEM. HENRY P. CLAUSEN, Chicago, Ill., assignor, by mesne assignments, to Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y., a Corporation of New York. Filed Feb. 3, 1902. Serial No. 92,279. (Cl. 179—71.)



1. In a telephone system, the combination of substations and a central station and line connections between the same, a source of current supply connected with the lines, line relays, circuit-changing devices at the substations for closing the line circuits in which said relays are located, normally open local circuits including said source of current supply, said local circuits having switch-points controlled by said relays, line lamp signals located in said local circuits, jacks connected with the lines, an operator's cord-circuit provided with a pair of plugs, each jack being provided with a pair of tip springs forming a normally open shunt around one of said relays, and said plugs being provided with tip contacts adapted to engage said springs, so as to close said shunts.

2. In a telephone system, the combination of a subscriber's line, an electro-magnet in the line, a normally open shunt in the line around said magnet, and a two-way operator's cord-circuit having a plug provided with a tip adapted to be inserted in the normally open point or gap in said shunt together with a talking and signaling battery bridged across the cord circuit.

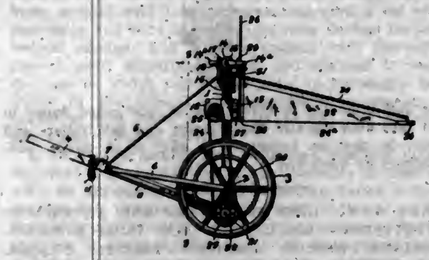
3. In a telephone system, the combination of a subscriber's line, a line relay in the line, a local circuit including a source of current, a line lamp signal in said local circuit, a circuit-changing device for closing the line circuit, and thereby energizing said relay, so as to close said local circuit, a normally open shunt in the line around said relay, and a two way operator's cord circuit having a plug provided with a tip adapted to close the normally open point in said shunt together with a talking and signaling battery bridged across the cord circuit.

4. In a telephone system, the combination of a substation and a central station and suitable line connection between the same, a central source of current connected with the line, a jack connected with the line, a line relay located in the line, a local circuit controlled by said relay and including said source of current, a line lamp signal located in said local circuit, said jack being provided with a pair of contact springs included in a shunt around said relay, and an operator's cord-circuit provided with a plug having tip and sleeve contacts, the tip contact of said plug being adapted to engage said springs and close said shunt.

5. In a telephone system, the combination of a substation a central station and a line connected between the same, a line signal, a circuit-changing device at the substation for effecting the operation of the said line signal, a normally open shunt in the line, and a circuit-changing device for closing said shunt, so as to restore said signal together with a pair of talking strands connected with said last-mentioned circuit changing device, and a talking and signaling battery bridged across said talking strands.

[Claims 6 to 17 not printed in the Gazette.]

1,024,499. TEA-HARVESTER. HARRY T. COLDWELL, Newburgh, N. Y. Filed Sept. 22, 1909, Serial No. 518,990. Renewed Sept. 26, 1911. Serial No. 651,464. (Cl. 56—33.)



1. In a tea harvesting machine, the combination with the main frame, having an elevated horizontally disposed portion, and separated vertical portions depending therefrom, and supporting wheels secured to the said vertical portions, of cutting mechanism carried by the main frame and comprising a stationary knife and a rotary cutter, means for holding said knife and cutter at all times in operative relation to each other, means for vertically adjusting said cutting mechanism bodily with respect to the main frame, driving connections extending from the rotary cutter to a supporting wheel, and a leaf receptacle carried by the main frame, for receiving the severed portion of the leaves from the rotary cutter.

2. In a tea harvesting machine, the combination with the main frame having an elevated horisontal portion and separated vertical portions depending therefrom, of supporting wheels secured to said depending portions, a horizontally disposed cutter frame having a vertical sliding engagement with the vertical portions of the main frame, a stationary knife and a rotary cutter carried by the cutter frame, operative mechanism for driving the rotary cutter, mechanism for simultaneously adjusting the opposite ends of said cutter frame vertically with respect to the main frame, and a leaf receiving device for receiving the severed portions of the plants from the rotary cutter.

3. In a tea harvesting machine, the combination with the main frame, having an elevated horizontal portion and separated vertical portions depending therefrom, of supporting wheels secured to said depending portions, a horizontally disposed cutter frame having a vertical sliding engagement with the vertical portions of the main frame, a stationary knife and a rotary cutter carried by the cutter frame, operative mechanism for driving the rotary cutter, mechanism for simultaneously adjusting the opposite ends of said cutter frame vertically with respect to the main frame, a leaf receiving device for receiving the severed portions of the plants from the rotary cutter, having one end adjacent to the cutter, and means for vertically adjusting said leaf receiving device, with respect to the main frame to accommodate it to the adjustments of the cutter frame.

4. In a tea harvesting machine, the combination with the main frame, having an elevated horisontal portion and separated vertical portions depending therefrom, of supporting wheels secured to said vertical portions, a horizontally disposed cutter frame having a vertically sliding engagement with the vertical portions of the main frame, an adjustable mechanism secured to the main frame, and operatively connected to each end of the cutter frame for adjustably supporting the cutter frame at different elevations with respect to the main frame, a stationary knife and a rotary cutter mounted in the cutter frame, adjustable driving connections between the cutter bar and a supporting wheel of the main frame, and a horizontally disposed leaf receiving device supported by the main frame and having one end adjacent to the rotary cutter.

5. In a tea harvesting machine, the combination with the main frame, having an elevated horizontal portion and separated vertical portions depending therefrom, of supporting wheels secured to said vertical portions, a horizontally disposed cutter frame having a vertically sliding engagement with the vertical portions of the main frame, a stationary knife and a rotary cutter mounted in the cutter frame, devices connected to opposite ends of said cutter frame for positively and simultaneously lifting both ends of the frame, means for maintaining said frame in its vertically adjusted positions, driving mechanism for the rotary cutter, and a leaf receiving device.

[Claims 6 to 10 not printed in the Gazette.]

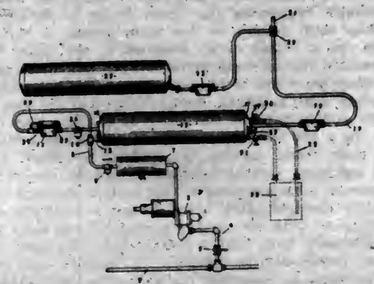
1,024,500. WEED-PULLER. JACOB DAHL, Columbus, Ohio, assignor of one-third to Martin Dahl and one-third to Richard W. Poelma, Chicago, Ill. Filed Aug. 18, 1911. Serial No. 644,844. (Cl. 55—48.)



1. A weedpuller comprising a staff terminating at its lower end in a blade, a lever pivoted to said blade and carrying a grappling jaw upon its lower end adapted to coöperate with said blade, a sleeve telescopically mounted upon the upper end of said staff, a handle carried upon the upper end of said sleeve, a rod pivoted to the upper end of said lever and operatively connecting said sleeve and said lever, and a spring normally holding said sleeve in its non-telescoping position; whereby a downward pressure upon said handle will effect a downward thrust of said blade and will simultaneously throw open said grappling jaw against the tension of said spring.

2. A weed-puller comprising a staff terminating at its lower end in a blade having a slot near its upper end, a lever extending through said slot and pivoted to said blade, said lever carrying a grappling jaw upon its lower end, a coil spring secured at its upper end to said staff and at its lower end to said lever above its pivotal point, a sleeve telescopically mounted upon the upper end of said staff, a handle carried upon the upper end of said sleeve, and a rod secured to said sleeve and pivoted at its lower end to the upper end of said lever.

1,024,501. LIGHTING APPARATUS. ROBERT M. DIXON, East Orange, and GEORGE E. HULSE, Jersey City, N. J., assignors to The Safety Car Heating & Lighting Company, a Corporation of New Jersey. Filed Oct. 15, 1906. Serial No. 338,983. (Cl. 48—145.)



1. In apparatus of the class described, in combination, a car having mounted thereon an air-braking system, a lighting system and a carbureter, connections between said air-braking system and said carbureter and between said carbureter and said lighting system, whereby said carbureter is supplied from said braking system and supplies said lighting system, means positioned in said first connection adapted to regulate the air supply in accordance with the temperature thereof, and means positioned in said second connection adapted to maintain substantially constant the pressure of the fluid passing therethrough.

2. In apparatus of the class described, in combination, a car having mounted thereon an air-braking system, a lighting system and a carbureter, connections between said air-braking system and said carbureter and between said carbureter and said lighting system, whereby said carbureter is supplied from said braking system and supplies said lighting system, means positioned in said first connection adapted to regulate the air supply in accordance with the temperature and pressure thereof, and means positioned in said second connection adapted to maintain substantially constant the pressure of the fluid passing therethrough.

3. In apparatus of the class described, in combination, a carbureter, an air supply pipe leading thereto, a gas discharge pipe leading therefrom, means in said first pipe adapted to decrease the air supply in accordance with a decrease in the temperature thereof, and means in said second pipe adapted to maintain substantially constant the pressure of the gas discharged therethrough.

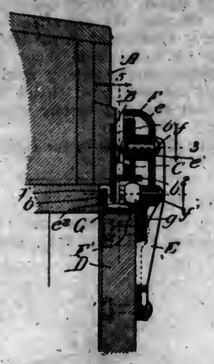
4. In apparatus of the class described, in combination, a carbureter, an air supply pipe leading thereto, a gas discharge pipe leading therefrom, means in said first pipe adapted to regulate the air supply in accordance with the temperature and pressure thereof, and means in said second pipe adapted to maintain substantially constant the pressure of the gas discharged.

5. In apparatus of the class described, in combination, a carbureter, a source of compressed air supply, and means interposed between said carbureter and said source of supply adapted to increase the air supply in accordance with an increase in the temperature thereof.

[Claims 6 to 22 not printed in the Gazette.]

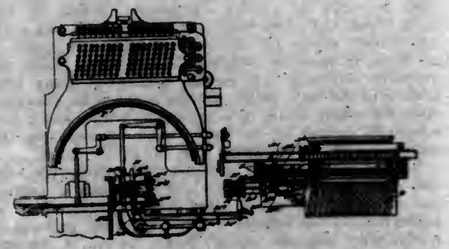
1,024,502. CAR-DOOR MECHANISM. PERCY M. ELLIOTT, Chicago, Ill. Filed Oct. 11, 1911. Serial No. 654,178. (Cl. 20—22.)

The combination with a car body, of a T shaped rail extending above the door opening of the car body and comprising a vertically disposed base flange abutting against and bolted to the side of the car, a track flange projecting horizontally from the lower portion of said base flange and a guard flange extending downwardly at the rear of said track flange, a door, hanger brackets secured to said door and having rollers engaging the upper face of said track flange and having inwardly projecting guides arranged to engage the lower face of said track flange, and a bar secured to the upper edge of said



door and extending upwardly behind said guard flange to hold said door against displacement and said rollers and guides in position relatively to said track flange, substantially as described.

1,024,503. LINE-MEASURING AND AUTOMATIC JUSTIFYING MECHANISM FOR COMPOSING-MACHINES. RICHARD CORNELIUS ELLIOTT, Clapham, London, England, assignor to Lanston Monotype Machine Company, Philadelphia, Pa., a Corporation of Virginia. Filed Sept. 30, 1908. Serial No. 455,541. (Cl. 101—200.)



1. In a type making and composing machine such as described provided with key controlled selector assembling mechanism, a type casting mechanism controlled by the assembled selectors and provided with an adjustable mold, and line measuring and space counting devices controlled by the selector keys, and in combination therewith an automatic justifying mechanism including a feeler coupled with the mold adjusting devices and a series of inclined surfaces of relatively different pitch and movable relatively to the feeler in two directions by the line measuring and space counting devices.

2. In a type making and composing machine such as described, provided with a mold and primary adjusting means for varying the dimensions thereof, and in combination therewith, supplemental adjusting devices for the mold normally out of engagement with the latter, a line measuring and space counting mechanism, an automatic justifying mechanism controlled by the line measuring and space counting mechanism for determining the set of said supplemental mold adjusting devices, and means for coupling the primary and supplemental mold adjusting devices to cause them to act in unison for the production of justifying spaces.

3. In a type making and composing machine such as described provided with a key controlled preliminary composing mechanism and a type casting mechanism provided with an adjustable mold and supplemental mold adjusting devices and in combination therewith the following elements, to wit; line measuring and space counting devices coupled with said keys, to register the amount of matter composed thereby and the number of justifying spaces contained in said composed matter; and an automatic justification or space dimensioning mechanism the latter including means coupled with the line measuring and space counting mechanism and with said supplemental mold adjusting device to set the latter proportionally to the product of the line deficiency or shortage divided by the number of spaces.

4. In a composing machine such as described the combination of the following elements, to wit; a type casting mechanism provided with an adjustable mold and supplemental adjusting devices for varying the dimensions of the spaces; key controlled line measuring and space counting devices; a longitudinally movable revoluble drum or cylinder equipped with a series of cam or wedge surfaces of progressively varying pitch, said drum or cylinder being coupled with the line measuring devices for rotary movement and with the space counting devices for longitudinal moving; and a feeler coupled with the supplemental mold adjusting devices and adapted to engage the cam or wedge and at the point in its length determined by the rotary and longitudinal movements imparted to said drum or cylinder by the line measuring and space counting devices.

5. In a type making and composing machine such as described the combination of the following elements, to wit; an adjustable mold; an adjusting device normally inactive but capable of being coupled with the mold to dimension the latter; a plurality of wedges or inclined surfaces of relatively different pitch arranged in series; a feeler; a line measuring mechanism operating to advance the wedges longitudinally relatively to the feeler; and a space counting mechanism operating to advance the series of wedges laterally relatively to said feeler.

[Claims 6 to 8 not printed in the Gazette.]

1,024,504. TIP-MEASURING APPARATUS. DAVID EDWARD GALLOWAY, Clifton Heights, Pa., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Oct. 24, 1911. Serial No. 656,416. (Cl. 73—64.)



1. A machine of the class described having, in combination, pulling over means and a tip measurer comprising a graduated transparent plate movable relatively to the pulling over means into operative position over the tip seam.

2. A machine of the class described having, in combination, means for working an upper over a last and a tip measurer comprising a transparent graduated plate supported relatively to said means to be applied to the shoe so that the relation of the tip seam to the graduations can be seen through said plate.

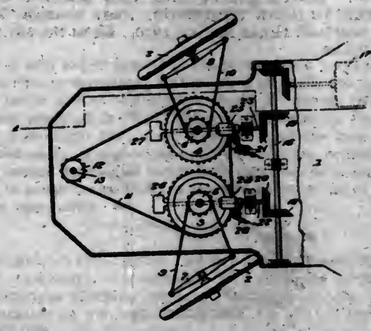
3. A machine of the class described, having, in combination, pulling over means, and a tip measurer comprising a toe end abutment and a transparent plate and having graduations, said measurer being supported relatively to said means for movement into operative relation to the forepart of a shoe while the upper is held by the pulling over means.

4. A machine of the class described having, in combination, pulling over means, and a tip measurer mounted for movement in time relation therewith and comprising a toe end abutment and a transparent plate and having graduations relatively to which the position of the tip seam of the pulled upper can be seen through said plate.

5. A machine of the class described having, in combination, pulling over means, and a tip measurer comprising a toe end abutment and a thin flexible transparent celluloid plate on which is marked a graduated scale, and connections on which the measurer is movable into and out of engagement of said abutment and plate respectively with the end and top face of the toe portion of an upper held by the pulling over means.

[Claims 6 to 40 not printed in the Gazette.]

1,024,505. STEERING-GEAR FOR VEHICLES. JAMES M. GILSTRAP, Fresno, Cal. Filed June 21, 1910. Serial No. 568,197. (Cl. 21—90.)



In a steering gear for vehicles, the combination with ground steering wheels, of independent wheels having an operative connection with each other, operative connections between the respective independent wheels and the respective ground wheels, whereby all of said wheels will turn in unison, bodily shiftable power-operated shafts, wheels carried by the respective shafts adapted, respectively, to engage the independent wheels aforesaid, and pivoted levers respectively operatively connected to the respective power-operated shafts aforesaid, whereby either of the power driven wheels may be engaged with one of the independent wheels aforesaid, said driving wheels being adapted to turn in opposite directions.

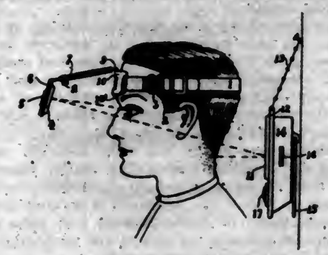
1,024,506. COMBINATION OF REFLECTING MEANS FOR ENABLING ONE TO SEE THE BACK OF THE HEAD OR NECK. GEORGE E. GRAHAM, Candor, N. Y., assignor to William J. Payne, Candor, N. Y. Filed June 24, 1911. Serial No. 635,158. (Cl. 45—99.)

1. A reflecting mirror of the class described, comprising an adjustable elastic head band having suitably attached thereto a radially adjustable telescopic supporting means having reflecting means adjustably arranged thereon, said reflecting means being adapted to be adjusted in any desired angle of vision.

2. A reflecting mirror of the class described, comprising an adjustable elastic head band having suitably attached thereto a radially adjustable telescopic supporting means having reflecting means adjustably arranged thereon, said reflecting means being adapted to be adjusted in any desired angle of vision, and being adapted to be folded into a compact package for the purpose set forth.

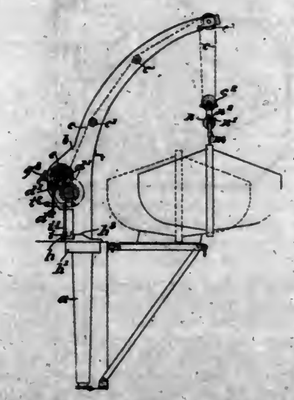
3. In a device of the character specified, comprising adjustable elastic head band, said band having slidably arranged thereon a substantially flat swiveled bracket, said

bracket arranged to adjustably support an outwardly extending angularly adjustable telescopic member, said telescopic member having adjustable reflecting means attached



to the outer end thereof and at substantially right angles thereto, said reflecting means being adapted to be locked in any adjusted position for the purpose set forth.

1,024,507. BOAT'S DAVIT AND THE RAISING AND LOWERING GEAR THEREFOR. JOHN GRAHAM, Glasgow, Scotland. Filed May 31, 1910. Serial No. 564,199. (Cl. 9—22.)



1. A ship's davit comprising, in combination, a single davit turning upon a vertical axis and from which the boat is slung centrally by a single rope, winding gear on the davit for lowering and raising the boat, means for locking the davit in the outmost lowering position and also in the inboard position and spring means at the bottom of the davit for checking the movement of the davit.

2. A ship's davit comprising, in combination, a single davit turning upon a vertical axis and from which the boat is slung centrally by a single rope, winding gear on the davit for lowering and raising the boat, means for locking the davit in the outmost lowering position and also in the inboard position, a socket in the bottom of the davit and spring means in the socket for checking the movement of the davit.

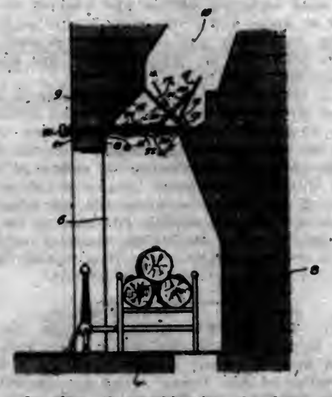
3. A ship's davit comprising, in combination, a single davit turning upon a vertical axis and from which the boat is swung centrally by a single rope, winding gear on the davit for lowering and raising the boat, means for locking the davit in the outmost lowering position and also in the inboard position, a socket in the bottom of the davit, a fixed base with projecting pin entering said socket and a spring interposed between the base and the socket so as to check the movement of the davit.

4. A ship's davit comprising, in combination, a single davit turning upon a vertical axis and from which the boat is slung centrally by a single rope, winding gear on the davit for lowering and raising the boat, means for automatically locking the davit in the outmost lowering position and also in the inboard position, a socket in the bottom of the davit, a fixed base with vertically projecting pin, a projection on the base, a projection in the socket, and a spiral spring wound around said pin and whose ends bear against said projections.

5. A ship's davit, comprising, in combination, a single davit turning upon a vertical axis and from which the boat is slung centrally by a single rope, winding gear on the davit for lowering and raising the boat, means for automatically locking the davit in the outmost lowering position and also in the inboard position, a socket in the bottom of the davit, a fixed base with a vertically projecting pin, a projection on the base, a projection in the socket, a spiral spring wound around said pin and whose ends bear against said projections, and a washer interposed between said spring and the upper end of the socket.

[Claims 6 and 7 not printed in the Gazette.]

1,024,508. FIREPLACE. WALTER W. GUY, Chicago, Ill., assignor to Colonial Fireplace Co., Chicago, Ill., a Corporation of Illinois. Filed Oct. 2, 1909. Serial No. 520,643. (Cl. 126—288.)



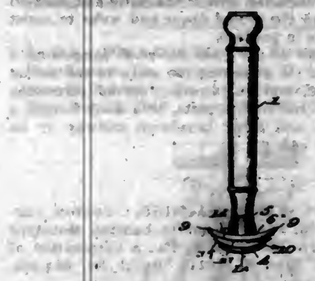
1. In a fire-place, the combination of a dome, a damper movably mounted in the dome and mechanism for adjusting the damper comprising a handle at the front of the fire-place, a screw operated by the handle, a runner longitudinally movable on the screw, a pivot at each side of the runner, and a link connection between the damper and the runner comprising members pivoted to the damper and connected to the oppositely disposed pivots on the runner respectively.

2. In a fire-place, the combination of a dome, a damper movably mounted in the dome and mechanism for adjusting the damper comprising a handle at the front of the fire-place, a transversely extending shaft to which the handle is secured, a sleeve removably mounted on the shaft and having a screw thereon, a pin extending through the sleeve and the shaft for removably securing the shaft and sleeve together, a runner on the screw and a link-connection between the runner and the damper.

3. In a fire-place, the combination of a dome, a damper movably mounted in the dome and mechanism for adjusting the damper comprising a handle at the front of the fire-place, and having its rear end supported by the dome, a sleeve mounted on the shaft and having a screw thereon, a runner longitudinally movable on the screw and having side-lugs and separated cross-ribs for engaging the screw, and a double link having its members pivotally connected to the side-lugs respectively and to the damper.

1,024,509. MULTIBLADED RAZOR. HERBERT C. HARRISON, Lockport, N. Y. Filed Nov. 13, 1909. Serial No. 527,896. (Cl. 30—12.)

1. A razor provided with a plurality of superposed blades, and with means for rigidly securing the cutting edges of said blades in such a close relation to each other that said edges may be simultaneously used for shaving the same spot, substantially as described.



2. A razor provided with a plurality of overlying blades and with means for rigidly securing the cutting edges of said blades one slightly behind the other and in such a close relation to each other that said edges may be simultaneously used for shaving the same spot, substantially as described.

3. A razor provided with a plurality of superposed removable blades, means for spacing said blades, and means for rigidly securing the cutting edges of said blades in such a relation to each other that said edges may be simultaneously used for shaving, substantially as described.

4. A safety razor provided with a guard, a plurality of overlying blades, and with clamping means for rigidly securing the blades in such a relation to each other that their cutting edges may be simultaneously used for shaving, substantially as described.

5. In a safety razor the combination of a plurality of superposed removable blades with curved clamping means, comprising a distance piece, for rigidly securing the blades in such a relation to each other that their cutting edges may be simultaneously used for shaving, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

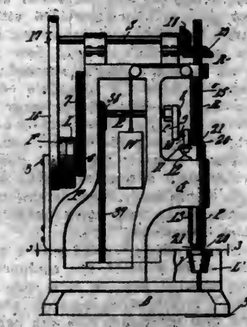
1,024,510. DUPLEX HAND-MIRROR. TORSTEN HOLMDAHL, New York, N. Y. Filed Apr. 6, 1911. Serial No. 619,210. (Cl. 45—99.)



A portable folding hand mirror device comprising a pair of rectangular mirrors, a plate for each mirror, a tight hinged joint between one edge of each mirror and its plate providing a means whereby the mirror may be held in any position desired, a lazy-tongs frame comprising a plurality of bars between said plates of a length corresponding with the width of the mirrors, and of such a circumference and width as to occupy when folded a space substantially equal to the length of the mirrors, each of said plates being constructed with a longitudinal and a transverse slot; pins projecting from the central portion of the end bars of said frame through the longitudinal slots in the plates, and othe pins projecting from said end bars of the frame through the transverse slots, said mirrors being adapted to be swung over and to cover opposite sides of the lazy-tongs frame when folded.

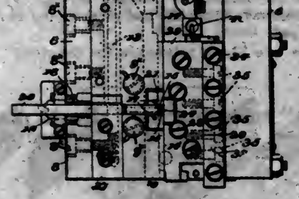
1,024,511. POTTERY-MACHINE. FRANK KAYSER, Toledo, Ohio. Filed Feb. 16, 1911. Serial No. 608,917. (Cl. 25—26.)

In a pottery making machine, the combination of a base, a frame disposed thereabove, a power shaft, a horizontal shaft journaled at the upper end of the frame, another horizontal shaft shorter in length and journaled below and parallel to the first horizontal shaft within the frame, both of said horizontal shafts being operably connected to the power shaft, a vertical shaft operably connected to the first horizontal shaft and capable of a vertical reciprocatory movement, a plunger secured to the said vertical shaft and in which said vertical shaft is permitted to rotate, a rod connected to said plunger, a crank carried by the second horizontal shaft connected to the other



end of said rod to impart to the plunger and vertical shaft a vertical reciprocatory movement, a male die carried upon the lower end of the vertical shaft, a counter balancing means mounted in the frame and connected to the plunger, a sectional female die disposed upon the base, a rod connected to said sections, and an eccentric connected to the second horizontal shaft and said rod to actuate the rod to cause the sections of the female die to move to and from each other.

1,024,512. TYPE-MOLD. AMOS L. KNIGHT and WILLIAM N. CLEMENTS, Philadelphia, Pa., assignors to Lanston Monotype Machine Company, Philadelphia, Pa., a Corporation of Virginia. Filed Dec. 11, 1911. Serial No. 665,005. (Cl. 101—200.)



1. In a type mold provided with a base plate, front abutment and squaring plate and in combination therewith a floor plate provided with a vertical extension along its inner margin, two guide blocks mounted upon the floor plate between its vertical extension or limb and the squaring plate, said blocks spaced to form a channel and each provided with an off-set extension overlying and projecting beyond the vertical extension of the floor plate; a movable cross-block engaging said floor plate and provided with a mold plate engaging the extensions of the guide block, and a mold blade movable within the channel between the guide block extensions and provided with a carrier located between the guide blocks.

2. A short body type mold for type casting and composing machines provided with a mold cavity opposing sides whereof are equipped with parallel ribs adapted to form side grooves in the produced type, a partial closure for the base of said cavity provided with an inwardly projecting rib to form a nick in the base of the type, said nick extending part way across the latter, a movable mold plate forming one wall of said cavity, and an opposing movable mold blade constituting the fourth side wall of said

cavity and grooved on the sides and bottom to fit the aforesaid side and bottom ribs.

3. A short body type mold for type casting machines provided with a base plate containing a jet opening, a front abutment and a squaring plate, and in combination therewith, an L-shaped floor plate secured to the base and squaring plates with its vertical limb remote from and parallel with said squaring plate; two guide blocks secured in the angle between the horisontal and vertical limbs of the floor plate and each provided with an offset extension or flange overlying and projecting beyond the top face of the vertical limb of said floor plate, said blocks being spaced to form a guiding channel; a movable mold blade located between the proximate edges of the guide block extensions and engaging the upper face of the floor block extension; a carrier for said mold blade guided in the channel between the guide blocks; and a movable cross-block interposed between the front abutment and floor plate provided with a base extending beneath the overhanging edges of the guide block extensions and containing a jet passage, and a mold plate engaging the edges of said guide block extensions.

4. A short body type mold provided with a mold cavity, two opposed side walls whereof are equipped with inwardly projecting parallel ribs, to form side grooves in the produced type, a nick-forming inwardly projecting rib parallel with said first mentioned ribs and partially closing one end of said cavity, a movable mold blade interposed between said side walls and grooved to fit upon said ribs, a movable mold plate opposed to the mold blade and constituting a fourth or removable side wall of said cavity, and a cross block movable beneath said cavity and provided with a jet opening adapted in one position of adjustment to register with the end of said cavity.

5. A short body mold for type casting and composing machines provided with a mold cavity formed by relatively adjustable opposed side walls in parallel relation and each equipped with an inwardly projecting rib, a movable mold blade and an opposed movable mold plate, a nick pin parallel with said ribs and partially closing the end of said mold cavity, a mold blade fitting and movable longitudinally of said ribs and pin to vary the setwise dimensions of the produced type and discharge the same from the mold cavity, and a member movable transversely of said mold cavity beneath the nick pin and containing a jet opening or passage through which molten metal is conducted into the end of the mold cavity around the nick pin.

[Claims 6 to 13 not printed in the Gazette.]

1,024,513. PIG-EXTRACTOR. LEONARD LARSON, Stanton, Iowa. Filed Aug. 9, 1911. Serial No. 643,170. (Cl. 128—27.)

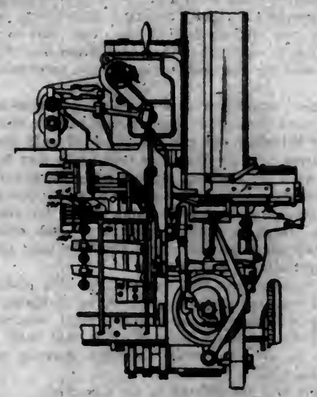


1. A pig extractor of the class described comprising a thin and somewhat flexible finger plate provided with a concave inner surface to conform with the second finger of the hand and provided with a central opening near its outer end to engage the flesh, an inwardly curved hook provided with a pointed outer end, formed at the outer end of the finger plate, and means for attaching the plate to the second finger of the hand of the operator.

2. A pig extractor of the class described comprising a thin and somewhat flexible metal plate adapted to fit the second finger of the hand and provided at its outer end with a central opening to receive or pinch a portion of the flesh of finger, a resilient finger clip having one end attached to one edge of the finger plate at a point directly opposite said opening with its free end over-lapping the opposite edge of the plate, an inwardly curved extracting hook formed at the outer end of the finger plate, and an attaching cord passed through the eyes of the plate and adapted to be passed around the second finger and wrist to assist in holding the plate in position.

3. A pig extractor of the class described comprising a finger plate, means for attaching the plate to the second finger of the hand, and an inwardly curved extracting hook at the outer end of the plate, said hook having a pointed outer end and being broadened midway of its length to its outer end.

1,024,514. TYPE-CASTING MACHINE. BURTON LEFFINGWELL, Clifton, Pa., assignor to Lanston Monotype Machine Company, Philadelphia, Pa., a Corporation of Virginia. Filed June 20, 1911. Serial No. 634,269. (Cl. 100—200.)



1. In a type casting machine such as described, provided with an actuating member, and a plurality of trips responsive to separate designating signals and operating to couple the pump lock-out devices with said actuating member, and in combination therewith, a locking member acted upon by one trip to retain the latter in its advanced or engaging position in relation to the actuating member, and means controlled by the associated trip during its advance to engaging position for retracting said locking member to release the engaged trip.

2. In a type casting machine such as described, and in combination with its actuating member and separately movable trips for the pump lock-out mechanism, a locking member for retaining one of said trips in operative relation to the actuating member, and means controlled by the associated trip for releasing the first named trip.

3. In a type casting machine such as described, provided with an actuating member, and a plurality of trips responsive to separate designating signals for individually coupling said actuating member and lockout mechanism and in combination therewith, a retainer for one of said trips, and means whereby the engagement of said retainer is effected by the movement of one trip and its disengagement by a movement of an associated trip.

4. In a type casting machine equipped with pump lock-out mechanism, galley trip mechanism, an actuating member and a plurality of controllable trips each operating to couple said pump lock-out and galley trip mechanisms with said actuating member, and in combination therewith, a movable retainer for one of said trips, and means controlled by one trip for effecting the engagement and by the other trip for effecting the disengagement of said retainer.

5. In a type casting machine such as described, and in combination with the actuating lever and two pump lock-out controlling trips thereof, a retainer mounted on the actuating lever in position to be displaced by and prevent the return of one trip when advanced to engaging position and to be displaced by the other trip during its advance to release the engaged trip.

[Claim 6 not printed in the Gazette.]

1,024,515. SODA-FOUNTAIN. FISHER H. LIPPINCOTT, Philadelphia, Pa., assignor to A. H. & F. H. Lippincott, Inc., Philadelphia, Pa., a Corporation of Pennsylvania. Filed Oct. 19, 1910. Serial No. 587,798. (Cl. 225—26.)



1. In a soda fountain, a soda duct, a syrup duct, a nozzle having several passages therethrough, baffling means in one of said passages, and valve mechanism for controlling the flow from said ducts to said passages, said mechanism comprising a rotary valve adapted for connecting said soda duct with said baffled passage and a port for connecting said syrup duct with the other of said passages.

2. In a soda fountain, a soda duct, a syrup duct, a nozzle having several passages therethrough, and valve mechanism for controlling the flow from said ducts to said passages, said mechanism comprising a rotary valve having several ports for connecting said soda duct with one of said passages and several ports for connecting said soda duct and said syrup duct with the other of said passages.

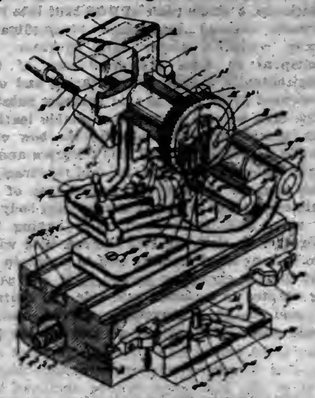
3. In a soda fountain, a soda duct, a syrup duct, a valve seat having a soda port communicating with said soda duct and a syrup port communicating with said syrup duct, and a rotary valve having a port adapted to communicate with said soda port and a port adapted for simultaneous communication with said syrup port, said first named valve port and said soda port having different sizes and being arranged so that full soda can be maintained during a limited movement of said valve.

4. In a soda fountain, a faucet having several discharge passages, baffling means in one of said passages, a valve having several ports communicating with each of said passages, and a valve seat having a port with which said baffled passage is adapted to communicate through each of the several valve ports communicating with said baffled passage, said valve seat having a port with which the other of said passages is adapted to communicate through each of the several valve ports communicating with said other passage.

1,024,516. MOLD-FORMING MACHINE. THOMAS LUND, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Apr. 10, 1906. Serial No. 426,281. (Cl. 159—8.)

1. In a machine of the class described; mechanism for de-forming articles of the class described; mechanism arranged to receive a male pattern form; and mechanism to support a blank for an intaglio form, female die or similar article and means controlled by said male pattern form to cause relative movement of said blank and de-forming mechanism for the de-formation of said blank in like proportion to said male pattern form.

2. In a machine of the class described; de-forming mechanism; a support for an intaglio workpiece; and a form movable with, and to control the movement of, said work relatively to said de-forming mechanism.



3. In a machine of the class described; de-forming mechanism; an abutment; a support for an intaglio work-blank; and a relief form movable with said work-blank and arranged to engage and be displaced by said abutment, and by said displacement to move said work-blank relatively to said de-forming mechanism.

4. In a machine of the class described; de-forming mechanism; a work-blank support and a form connected to constitute a unitary structure movable bodily relatively to said de-forming mechanism; and means to be engaged by said form during said movement to control the de-formation of said blank by said de-forming mechanism.

5. In a machine of the class described; de-forming mechanism; a work-blank support and a form movable together relatively to said de-forming mechanism; and adjustable means to be engaged by said form under the influence of gravity during said movement to control the de-formation of said blank by said de-forming mechanism.

[Claims 6 to 53 not printed in the Gazette.]

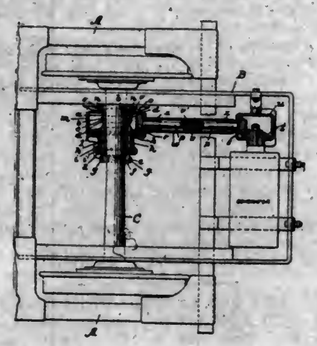
1,024,517. BOW FOR LADIES' LOW-CUT SHOES, SLIPPERS, AND THE LIKE. ABRAHAM MANHEIMER, St. Louis, Mo. Filed Nov. 8, 1911. Serial No. 659,175. (Cl. 36—1.)



1. An ornamental bow for low-cut shoes, slippers, and the like comprising an elongated substantially rectangular non-metallic stiffener, a flexible metallic strip secured lengthwise longitudinally and substantially centrally across and having a width less than the width of said stiffener, a body-portion adapted to form the side loops of the bow folded longitudinally around and over said stiffener and metallic strip and secured to said stiffener, and having a width substantially the same as the width of said stiffener, a pliable strip adapted to provide attaching-tabs for the bow extending longitudinally across said stiffener and secured substantially midway its ends to said stiffener, and a facing-strip adapted to form the central loop of the bow folded transversely around said body-portion, stiffener, metallic strip, and pliable strip and having its ends secured together on the rear side thereof, said metallic strip being adapted to be bent longitudinally and to maintain the bow in a longitudinally curved or arched form and said stiffener being adapted to maintain said side and central loops distended; substantially as described.

2. An ornamental bow for low-cut shoes, slippers, and the like comprising an elongated substantially rectangular piece of buckram, a single piece of wire bent into two separated strands secured lengthwise longitudinally and substantially centrally across said buckram, a body-portion adapted to form the side loops of the bow folded longitudinally around said buckram and over said wire and secured at its ends to said buckram substantially midway the ends of said buckram, a pliable leather strip adapted to provide attaching-tabs for the bow extending longitudinally across one side of said buckram and secured substantially midway its ends to said buckram, and a facing-strip adapted to form the central loop of the bow folded transversely and centrally around said body-portion, buckram, wire, and leather strip and having its ends secured together on the rear side thereof, said wire being adapted to be bent longitudinally and to maintain the bow in a longitudinally curved or arched form and said buckram being adapted to maintain said side and central loops distended and to be transversely curved on opposite sides of said wire; substantially as and for the purposes described.

1,024,518. MEANS FOR TRANSMITTING POWER FROM THE AXLES OF RAILWAY-CARS. WILLIAM T. MARTENSTECK, Sharon, Pa. Filed Apr. 28, 1911. Serial No. 623,930. (Cl. 105—23.)



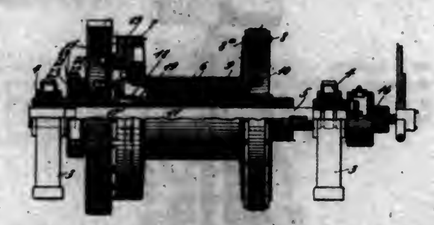
In combination with the axle of a railway car and the shaft of a device to be driven, a positive transmission between the two including a bevel gear encircling the axle, a transmitting bevel gear engaging the same to one side of the axle, the said gear having rolling connection with said axle gear, connections between the gear and the part to be driven, the axle gear having longitudinal movement on the axle and vertical movement therewith, substantially as described.

1,024,519. PIPE-WRENCH. HENRY L. MARTY, Orrville, Ohio. Filed Apr. 4, 1911. Serial No. 618,857. (Cl. 81—96.)



A wrench comprising a solid handle having a fixed jaw and teeth along one edge; a movable jaw slidable upon the handle and projecting beyond the teeth, the movable jaw being open from end to end opposite the teeth; the handle having a lug housed within the movable jaw; a spring housed completely in the movable jaw and transversely insertible thereinto, the spring abutting against the lug; a rod slidable in the lug and passing entirely through the spring, one end of the rod protruding beyond one end of the movable jaw to provide for a removal of the rod; means for securing one end of the rod to the movable jaw, the said means constituting an abutment for the spring; and a wheel journaled in the movable jaw and meshing into the teeth.

1,024,520. HOISTING-ENGINE. THOMAS SPENCER MILLER, South Orange, N. J. Filed Oct. 27, 1909. Serial No. 524,776. (Cl. 57—83.)



1. In a hoisting apparatus, a shaft free to revolve, a driving element and a drum mounted on the shaft for free revolution independently thereof and of each other, said driving element and drum being slidable lengthwise of the shaft, means for connecting and disconnecting said driving element and drum by movement of one of the same longitudinally of the shaft, and means independent of said first named means for coupling one of said elements to the shaft when said elements are connected to cause said elements and shaft to revolve together.

2. In a hoisting apparatus, a freely rotatable shaft, a driving element and a drum mounted on the shaft for free revolution independent thereof and of each other, and for movement longitudinally of the shaft, said driving member being adapted to be driven independently of the shaft, means for coupling the drum and driving member adapted to be set and unset by movement of one of said elements longitudinally of the shaft, means other than said first named means for connecting one of said members to, and disconnecting it from, the shaft, and means whereby said second named means is set by the clutching of said members to each other and is unset when said members are unclutched.

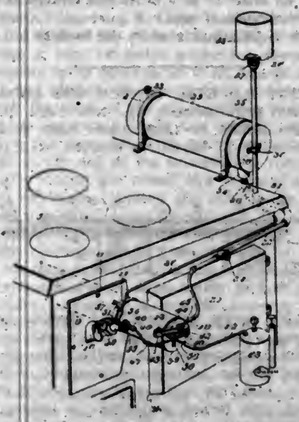
3. In a hoisting apparatus, a shaft free to revolve, a driving element mounted thereon to revolve independently thereof, a drum on the shaft free to revolve independently of the shaft and of the driving element and movable longitudinally of the same, friction means for connecting the driving element with the shaft to cause the driving element to turn the shaft, friction means other than said first named means for connecting the driving element and the drum, and means for simultaneously placing both of said friction means in operative condition to connect the driving element with the shaft and drum, respectively, by movement of the drum longitudinally of the shaft.

4. In a hoisting apparatus, a shaft free to revolve, a driving member and a drum mounted on the shaft for revolution independently thereof, and for movement longitudinally of the shaft, clutch members on the adjacent faces of said member and drum for connecting same by movement of one of the same longitudinally of the shaft, a clutch element fixed to the shaft on the opposite side of the driving element from the drum, and means for moving the driving member and drum longitudinally of the shaft to couple the same and engage the driving member with said clutch element.

5. In a hoisting apparatus, a shaft free to revolve, a driving gear and a drum mounted on the shaft for revolution independently thereof, and for movement longitudinally of the shaft, said gear being adapted to be driven independently of the shaft, co-acting clutch surfaces on the adjacent faces of said gear and drum for connecting the same by movement of one of the same longitudinally of the shaft, a clutch element fixed to the shaft on the opposite side of the driving gear from the drum, and means for moving the driving gear and drum longitudinally of the shaft to couple the same and engage the driving gear with said clutch element.

[Claims 6 to 10 not printed in the Gazette.]

1,024,521. STEAM-GENERATOR. VIRGIL H. MILLS and JOHN H. T. MILLS, Hubbard, Tex. Filed Oct. 5, 1910. Serial No. 585,415. (Cl. 122—10.)



1. In a device of the class described, a steam generator, a burner connected with the generator, means for feeding water to said generator, and means for forcing air through the generator to the burner.

2. In a device of the class described, a steam generator, a burner connected with the generator, a removable cap forming a closure for one end of said generator, and means for supplying air through the cap and generator to the burner.

3. In a device of the class described, a steam generator, a burner connected with the generator, a water supply tank, a conductor connected with the water supply tank and provided with a nozzle extending within said generator and having a discharge orifice, and means for forcing air through the generator to said burner.

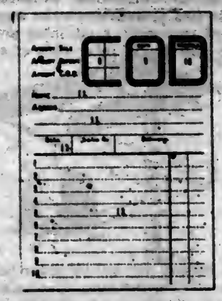
4. In a device of the class described, a steam generator, a burner connected with the generator, a removable cap forming a closure for one end of said generator and provided with a safety valve communicating with the interior of the generator, means for feeding water to said generator, and a locking bail pivotally mounted on the generator and adapted to engage the cap for holding the latter in closed position.

5. In a device of the class described, a steam generator, a burner connected with the generator, means for feeding water to the generator, a cap forming a closure for one end of said generator and provided with an inclined rib, there being a passage formed in the cap and communicating with the interior of the generator, a safety valve normally closing said passage, and a locking bail pivotally mounted on said generator and adapted to engage the rib of the cap for holding said cap in closed position.

[Claims 6 to 12 not printed in the Gazette.]

1,024,522. SALES-SLIP. ALEXANDER G. MOWAT, Toronto, Ontario, Canada, assignor to The Carter-Crume Company, Limited, Niagara Falls, N. Y., a Corporation. Filed Apr. 28, 1911. Serial No. 623,894. (Cl. 11—11.)

1. A sales slip having printed thereon a plurality of large letters associated one with another and having collectively a meaning, said slip and letters being formed to provide blank spaces in the letters adapted to receive an entry, and headings printed upon said slip in relatively small type respectively associated with said blank spaces to indicate the character of the data to be inscribed thereon.



2. A sales slip having printed thereon a plurality of large letters associated one with another and having collectively a meaning, said slip and letters being formed to provide blank spaces in the letters adapted to receive an entry, and headings printed upon said slip in relatively small type respectively associated with said blank spaces to indicate the character of the data to be inscribed thereon, said large letters being printed in a distinctive color with respect to the headings.

3. A leaf or sheet of the character described formed to provide two superposed portions and having between said portions a transferring medium, each of said portions having printed thereon matter of identical size and disposition, said matter comprising a plurality of large letters associated one with another and having collectively a meaning distinct from their separate meanings, and said letters being formed to provide blank spaces adapted to receive entries of a character associated with said meaning.

4. A sales slip having provided thereon a plurality of letters associated one with another and of such size and form as to provide blank spaces within their inner outlines adapted to receive an entry, said letters having collectively a meaning different from their individual meanings and indicative of the character of certain data to be inscribed therein, and headings printed upon said slip in relatively small type respectively associated with said blank spaces and indicating data to be inscribed therein of a character related to the collective meaning of said letters.

5. A sales slip having provided thereon a plurality of large letters associated one with another and formed to provide blank spaces in the letters adapted to receive an entry, said large letters having collectively a meaning distinct from their individual meanings and indicative of the character of certain data to be inscribed therein, and headings printed upon said slip in relatively small type respectively associated with said blank spaces to indicate the character of the data to be inscribed therein.

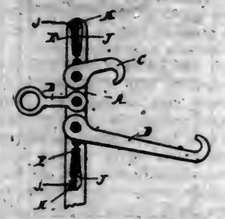
[Claim 6 not printed in the Gazette.]

1,024,523. STRAINING APPLIANCE. FRANCIS TEMPLE PAGE, Otaki, New Zealand. Filed June 1, 1911. Serial No. 630,720. (Cl. 39—61.)

1. In a straining appliance, the combination of a lever handle, straining hooks pivoted to said lever handles, and means yieldably holding said hooks in a certain normal position relative to the lever handle and permitting each of the hooks to be yieldably moved in either direction of its pivotal movement from said normal position.

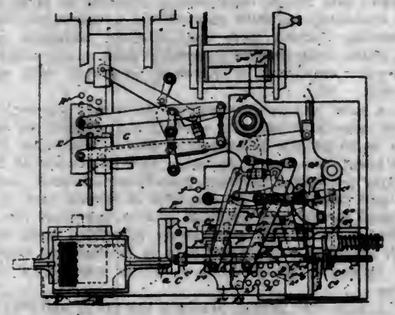
2. In a straining appliance, the combination of a lever handle, a pair of inwardly turned straining hooks pivoted to the lever handle and having the same plane of movement and springs yieldably holding each hook laterally projecting from the lever handle in a certain normal position relative to the lever handle and permitting yieldably movement of the hook away from said normal position in either direction of its pivotal movement.

3. In a straining appliance, the combination of a lever handle, a pair of inwardly turned hooks pivoted to the handle and projecting therefrom on the same side and in the same plane of movement, a straining piece pivoted on the lever handle between the inner ends of said hooks and



projecting on the opposite side of the lever handle, and springs engaging said hooks and of themselves adapted to yieldably hold the same projecting from the lever handles in certain normal positions nearly at right angles to the lever handle and permitting yieldable movement on either side of said normal position.

1,024,524. TYPE-CASTING MACHINE. FRANK HINMAN PIERPONT, Horley, England, assignor to Lanston Monotype Machine Company, Philadelphia, Pa., a Corporation of Virginia. Filed Aug. 6, 1910. Serial No. 575,905. (Cl. 101—200.)



1. In a pattern controlled type setting or casting machine, the combination with a compound or sectional magazine or die case having connected therewith a revoluble draw rod provided with a plurality of stops, of a reciprocating rod, a double ended pawl or latch mounted thereon, and automatic means controlled from the pattern for projecting one or the other end of the latch to effect rotation of the draw rod.

2. In a pattern controlled type setting or casting machine, the combination with a rotatable draw rod provided with two stops, a compound or sectional magazine or die case, and a reciprocating rod carrying a double-ended latch, of two motors each controlling one end of the latch, a record strip or pattern, and mechanism controlled from the record strip or pattern to operate the motors successively.

3. In a type setting or casting machine, the combination with the rotatable draw rod provided with stops D D', of a compound or sectional magazine or die case, a reciprocating rod carrying a double ended latch and lever mechanism adapted to be engaged by the opposite ends of the latch to operate the draw rod.

4. In a type setting or casting machine, the combination with a sectional magazine or die case and separately acting stops, one for each section, of a positioning mechanism, a record strip, a reciprocating pawl or latch controlled from the record strip to interchange the stops in the path of said positioning mechanism, and mechanism controlled by the pawls to delay the interchange of the stops from one cycle of the machine to another.

5. In a die-case adjusting or centering mechanism, the combination of the following elements, to wit; a movable die case; a positioning mechanism provided with a series of gages and a pair of oppositely movable jaws; and translating devices intermediate the die-case and said jaws, the same including a rotatable draw rod coupled with the die case and provided with translating members disposed at an angle to each other and located at different points longitudinally of said rod.

[Claims 6 to 18 not printed in the Gazette.]

1,024,525. LOCKING DEVICE FOR LOOSE-LEAF BINDERS. JOHN SCHAPE, Jr., New York, N. Y., assignor of one-half to Louis Fink, New York, N. Y. Filed Apr. 4, 1911. Serial No. 618,878. (Cl. 129—12.)



1. A locking device for loose leaf binders comprising back rods and a movable binding plate, split or divided locking plates connected to said binding plate at one side of the divided portion, leaving the remainder of the plates free to move, said free portions of the locking plates being provided with forked projections, a locking rod extending longitudinally of the binding plate and having a worm at one end meshing with the projections on one locking plate and a circumferential groove coöperating with the projections on the other locking plate, whereby rotation of the rod about its own axis clamps and unclamps the locking plates.

2. A locking device for loose leaf binders comprising back rods and a movable binding plate bent along its longitudinal length into U shaped form, locking devices in the form of split or divided washers encircling the back rods and mounted on the binding plate between the sides thereof, projections on the movable portions of said locking devices, a locking rod extending longitudinally of the binding plate and located in the groove formed at the back of the U shaped binding plate, a worm at one end of the locking rod and a groove at the other end engaging the projections on the locking devices respectively, and means for rotating said locking rod about its longitudinal axis to tighten and loosen the locking devices.

1,024,526. CHAIR. GEORGE R. SCHWEIKERT, Irvington, and WILLIAM E. HEINZ, Newark, N. J. Filed July 25, 1911. Serial No. 640,487. (Cl. 155—30.)



1. A chair comprising a frame having its upper part forming the back of the chair, a seat hinged to the frame and having a rear extension heavier than the seat so as to fall by gravity to trip a holding means, braces hinged

to the frame above the hinges of the seat, an adjustable engaging means for fixing the seat and braces in different positions, a catch for holding the extension against the back of the chair whereby the seat is held substantially alined with the back of the chair, and a holding means on the back of the chair for securing the braces when they are released from the engaging means, said holding means being tripped by the descent of the seat extension to permit the engagement of the braces and the engaging means.

2. A chair comprising a frame having its upper part forming the back of the chair, a seat hinged to the frame and having a rear extension projecting therefrom, said rear extension being offset so as to fit against the back of the chair and permit the seat to be in substantial alinement with the back of the chair, braces pivoted at the top ends to the frame above the pivotal connection of the seat, a rod connecting the braces, adjustable engaging means on the end of the extension to receive the rod to hold the braces, the frame and the seat in adjusted positions, means for holding the seat in its folded position, and a holding means for securing the braces when they are released from the engaging means.

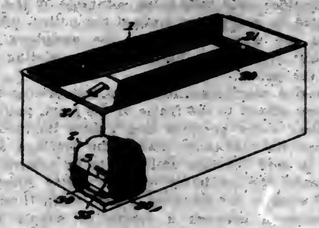
3. A chair comprising a frame having its upper part forming the back of the chair, a seat hinged to the frame, a rear extension on the seat, braces pivotally connected to the frame, a holding means for securing the braces when the extension of the seat is raised, a catch for securing the extension of the seat against the back of the chair, a tripping means on the back adapted to release the holding means when the extension of the seat falls by gravity, and engaging means on the extension to secure the braces when the holding means is released.

4. A chair comprising a frame having its upper part forming the back of the chair, a seat hinged to the frame and having a rear extension projecting therefrom, said rear extension being adapted to fit against the back of the chair and permit the seat to be in substantial alinement with the back of the chair, a catch on the back of the chair for engaging the extension to hold it in its folded position, braces pivoted at their top ends to the frame above the pivotal connection of the seat, a rod connecting the braces, an arm extending from the back of the chair and having a notch therein, the arm having a slight spring action, the notch being adapted to receive the rod connecting the braces to hold the braces, the seat portion when released from its catch descending by gravity and engaging the arm to release the braces from the notch therein, and an engaging means on the extension of the seat for engaging the rod when it is released from the arm.

5. A chair comprising a frame having its upper part forming the back of the chair, a seat hinged to the frame and having a rear extension projecting therefrom, said rear extension being adapted to fit against the back of the chair and permit the seat to be in substantial alinement with the back of the chair, a catch on the back of the chair for engaging the extension to hold it in its folded position, braces pivoted at their top ends to the frame above the pivotal connection of the seat, a rod connecting the braces, an arm extending from the back of the chair and having a notch therein, the arm having a slight spring action, the notch being adapted to receive the rod connecting the braces to hold the braces, the seat portion when released from its catch descending by gravity and engaging the arm to release the braces from the notch therein, a series of hooks on the extension of the seat portion adapted to be engaged by the rod of the braces, and a fender to receive the rod when it is released from the arm and guide it to one of the hooks to hold the chair in position.

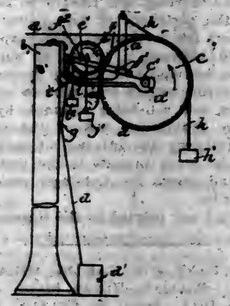
1,024,527. BURIAL-VAULT. FRANK CUMMINGTON SEARLS, Wilmington, Del. Filed June 25, 1910. Serial No. 568,925. (Cl. 72—7.)

1. In burial vaults, and the like, comprising mold boxes having supports on the doors thereof carrying casket boxes, each support having an elevated ledge to receive a casket box and by which the casket box is held spaced from the floor of the mold box and vertical stop portions to hold the casket box centered on the support and spaced from the vertical walls of the mold box.



2. In a burial vault, or the like, bottom corner supports for a casket box, each provided with elevated angularly arranged supporting flanges on which the bottom of the box is adapted to rest with angularly arranged vertical stop walls adapted to engage the side and end walls of the box at the corners thereof to hold the box against lateral displacements.

1,024,528. TENSION MECHANISM FOR LOOMS. EDWIN E. SIBLEY, Chelsea, Mass. Filed July 16, 1910. Serial No. 572,276. (Cl. 139—58.)



1. In a loom, a let-off for elastic warps comprising in combination a warp supply means, a support, a warp roller journaled in the support, an auxiliary roller, means to cause said auxiliary roller to yieldingly bear upon said warp roller, means for braking said rollers, the warps passing from the supply means between the two rollers and over a sufficient extent of the periphery of the warp roller to cause said warp roller to be rotated by the friction and pull of the warps, said warps passing thence to the heddles, said auxiliary roller being adapted to yieldingly pinch the warps against the warp roller approximately at the point where they take on to said roller, said warps being thereby left free to creep over the surface of said warp roller beyond said pinch point.

2. In a loom, a let-off for elastic warps comprising in combination a warp supply means, a support, a warp roller journaled in the support, an auxiliary roller, means to cause said auxiliary roller to yieldingly bear upon said warp roller, means for braking said rollers, the warps passing from the supply means over the auxiliary roller about the substantially entire periphery of the warp roller and thence to the heddles, said auxiliary roller being adapted to yieldingly pinch the warps against the warp roller at the point where they take onto said warp roller, said warps being thereby left free to creep over the surface of said warp roller beyond said pinch point.

3. A tension mechanism for looms, comprising hangers having bases affixed to the frame of the loom, pulley bearings at their outer portions and guides inclined downwardly from the said bases toward the bearings, a pulley journaled in said bearings and free to be rotated by the warp threads, the periphery of said pulley constituting a movable support for portions of said warp threads and

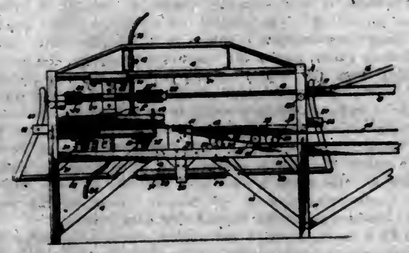
being interposed between a source of supply of said threads and the weaving and take-up mechanism of the loom, a pressure roll having trunnions in rolling contact with said guides, said rolls being rotatable by the threads and movable by gravitation toward the pulley, means for presenting the warp threads to the periphery of the pressure roll, and means for yieldingly resisting the rotation of the pulley.

4. A tension mechanism for looms, comprising hangers having bases affixed to the frame of the loom, pulley bearings at their outer portions and guides inclined downwardly from the said bases toward the bearings, a pulley journaled in said bearings and free to be rotated by the warp threads, the periphery of said pulley constituting a movable support for portions of said warp threads and being interposed between a source of supply of said threads and the weaving and take-up mechanism of the loom, a pressure roll having trunnions in rolling contact with said guides, said roll being rotatable by the threads and movable by gravitation toward the pulley, weights suspended from said trunnions and adapted to force the roll toward the pulley, means for presenting the warp threads to the periphery of the pressure roll, and means for yieldingly resisting the rotation of the pulley.

5. A tension mechanism for looms, comprising hangers having bases affixed to the frame of the loom, pulley bearings at their outer portions and guides inclined downwardly from the said bases toward the bearings, a pulley journaled in said bearings and free to be rotated by the warp threads, the periphery of said pulley constituting a movable support for portions of said warp threads and being interposed between a source of supply of said threads and the weaving and take-up mechanism of the loom, a pressure roll having trunnions in rolling contact with said guides, said roll being rotatable by the threads and movable by gravitation toward the pulley, means for yieldingly resisting the rotation of said roll, means for presenting the warp threads to the periphery of the pressure roll, and means for yieldingly resisting the rotation of the pulley.

[Claims 6 and 7 not printed in the Gazette.]

1,024,529. MACHINE FOR MAKING MICA-BOARD OR THE LIKE. WILLIAM HENRY SILLS, Chicago, Ill. Filed Apr. 19, 1911. Serial No. 622,112. (Cl. 154—1.)



1. A machine for making mica board or the like, comprising in combination, a receptacle for mica films, a support for the mica board, a movable carrier for transferring a layer of films from the receptacle to the support, and means actuated by the carrier for bringing the carrier into engagement with the films and the support.

2. A machine for making mica boards or the like, comprising in combination, a receptacle for mica films, a support for the mica board, a reciprocating carrier for transferring a layer of films from the receptacle to the support, and means actuated by the carrier at the ends of the stroke for bringing the carrier into engagement with the films and the support respectively and for maintaining said engagement, as long as the carrier remains in the end position.

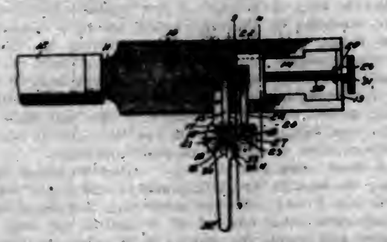
3. A machine for making mica boards or the like, comprising in combination, a receptacle for films, a support for the mica board, a movable carrier for transferring a layer of films from the receptacle to the support, and means for displacing the films and support respectively to come into engagement with the carrier.

4. A machine for making mica boards or the like, comprising in combination, a receptacle for films, a support for the mica board, a movable carrier for transferring a layer of films from the receptacle to the support, means for displacing the receptacle and support respectively with respect to the carrier and for returning the same to normal position.

5. A machine for making mica board or the like, comprising in combination, a receptacle for films, a support for the mica board, a movable carrier, means for applying an adhesive to the face of the carrier and means for bringing the carrier successively to the application of the adhesive into engagement with the films and the support.

[Claims 6 to 28 not printed in the Gazette.]

1,024,530. WATCHMAKER'S TOOL. JOHN ELMER SMITH, Turlock, Cal. Filed Aug. 2, 1911. Serial No. 642,017. (Cl. 81—7.)



1. A tool of the class described, comprising a plate having a guide slot opening through one end thereof, laterally extending arms on and projecting from opposite faces of the said plate, slotted sleeves at the free ends of the said arms, a movable member fitted in the guide slot of said plate, arms projecting laterally from the said member at opposite sides thereof in parallel relation with respect to the first-named arms, slotted sleeves formed at the free ends of the said last-named arms, centering pins removably fitted in the said slotted sleeves on the first and last named arms, and a scale bar carried by the said plate and extending medially between the first-named arms.

2. A tool of the class described, comprising a plate having a guide slot opening through one end thereof, laterally extending arms on and projecting from opposite faces of the said plate, slotted sleeves at the free ends of the said arms, a movable member fitted in the guide slot of said plate, arms projecting laterally from the said member at opposite sides thereof in parallel relation with respect to the first-named arms, slotted sleeves formed at the free ends of the said last-named arms, centering pins removably fitted in the said slotted sleeves on the first and last named arms, a scale bar carried by the said plate and extending medially between the first-named arms, and means for adjusting the said member.

3. A tool of the class described, comprising a plate having a guide slot opening through one end thereof, laterally extending arms on and projecting from opposite faces of the said plate, slotted sleeves at the free ends of the said arms, a movable member fitted in the guide slot of said plate, arms projecting laterally from the said member at opposite sides thereof in parallel relation with respect to the first-named arms, slotted sleeves formed at the free ends of the said last-named arms, centering pins removably fitted in the said slotted sleeves on the first and last named arms, a scale bar carried by the said plate and extending medially between the first-named arms, means for adjusting the said member, and means engaging the slotted sleeves for binding the same about the pins.

4. In a tool of the class described, a supporting plate terminating at one end in a handle, means projecting from opposite faces of the said plate, and means mounted in the first-named means for centering a pallet and escapement wheel of a watch with relation to each other.

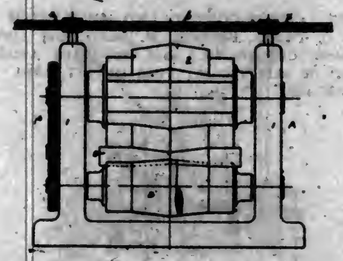
5. In a tool of the class described, a supporting plate terminating at one end in a handle, means projecting from opposite faces of the said plate, means mounted in the first-named means for centering a pallet and escapement wheel of a watch with relation to each other, and means for independently adjusting the position of the escapement wheel with respect to the pallet.

[Claim 6 not printed in the Gazette.]

1,024,531. PROCESS OF MAKING WOOD-STAIN. WILLIAM H. SMITH, Minneapolis, Minn. Filed Feb. 14, 1910. Serial No. 543,869. (Cl. 134—48.)

The process of making wood stain which consists first, in mixing together creosote oil, gas drips, benzin and kerosene, and allowing the same to stand and settle, then separating the settlings from the clear liquid and subsequently mixing therewith boiled linseed oil, paint ground in oil and silica.

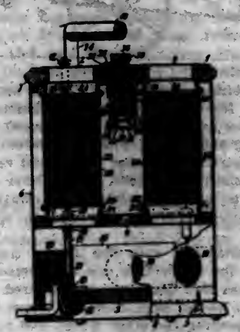
1,024,532. APPARATUS FOR FORMING AXLES. DANIEL W. STROUP, North Braddock, Pa. Filed Sept. 16, 1907. Serial No. 393,006. (Cl. 80—23.)



1. A mill for forming axles involving supports and comprising roughing and finishing rolls, the top roll or rotary press of the roughing portion having upon its working part double centrally disposed cut-out eccentric portions, having different radii, and following each other in consecutive relationship, and having also eccentrically disposed reducing surfaces at the ends respectively for elongating and reducing the ends of the blank, after the central reduction has ceased, the said last mentioned eccentric surfaces being on the side of the roll opposite to that on which the centrally disposed eccentric portions are formed, said central portion also being so shaped that the portion which is upon the part of the member which performs the last part of the rolling can remain in engagement with the blank without materially elongating and reducing the central portion of said blank, the top roll or rotary press of the finishing rolls having a non-reducing concentric portion, and a plurality of eccentrically disposed reducing surfaces formed on the ends, in successive relation, and adapted to successively act upon the blank to form wheel bearings, journal bearings, and collars thereon.

2. A mill for forming axles involving supports and comprising roughing and finishing rolls, the roughing roll having upon its working part double centrally disposed cut-out eccentric portions having different radii and following each other in consecutive relationship, and having, on the opposite side of the roll to the central eccentric portions, also eccentrically disposed reducing surfaces adjacent the ends respectively, adapted to engage and reduce the blank immediately after the central reducing eccentric surface has ceased to act, said central portion also being so shaped that the portion which is upon the part of the member which performs the last part of the rolling can remain in engagement with the blank without materially elongating and reducing the central portion of said blank, the finishing roll having a non-reducing concentric surface intermediate of the ends, and a plurality of eccentrically disposed reducing surfaces adjacent the ends thereof, adapted to successively act upon the blank to form wheel bearings, journal bearings, and collars, and lower rolls having similar configuration to the upper rolls but without the eccentric features; substantially as described and shown.

1,024,533. OZONIZER. HARVE R. STUART, Wilkinsburg, Pa., and WILBUR H. THOMPSON, Springfield, Mass., assignors, by direct and mesne assignments, to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed May 9, 1911. Serial No. 626,082. (Cl. 204—32.)



1. A condenser for ozonizers and the like comprising an insulating tube having lateral bosses adjacent to its ends, a conducting member supported by the tube between the bosses, and another member adjacent to the opposite face of the tube.

2. A condenser for ozonizers and the like comprising an insulating tube having lateral bosses and recesses adjacent to its ends, a conducting member supported by the tube between the bosses, and another member adjacent to the opposite face of the tube and secured in the recesses therein.

3. A condenser for ozonizers and the like comprising an insulating tube having lateral bosses and recesses adjacent to its ends, a conducting member supported by the tube between the bosses, and a tubular conducting mesh adjacent to the opposite face of the tube and secured in the recesses therein.

4. An ozonizer comprising a transformer, a plurality of condensers each having one terminal connected to one secondary terminal of the transformer and one of them having its remaining terminal connected to the other secondary terminal of the transformer, and means for successively connecting the remaining terminals of the condensers to the said other secondary terminal of the transformer.

5. An ozonizer comprising a casing having top and bottom members and a partition, the top member and the partition having apertures, and a tubular condenser disposed between the partition and the top member and having its ends registering with the apertures therein.

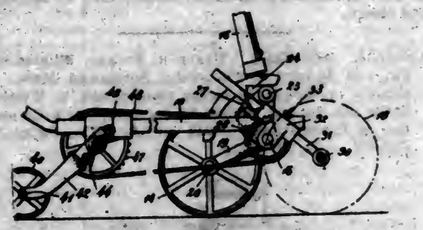
[Claims 6 to 8 not printed in the Gazette.]

1,024,534. PLOW. RUDOLPH E. SUCHOLTZ, Detroit, Mich. Filed Oct. 4, 1911. Serial No. 652,772. (Cl. 97—36.)

1. The combination with the frame, and a pair of ground-wheels for supporting one end thereof, of a shaft extending across said frame, an arm secured to said shaft and supporting one of said wheels, a sleeve loose on said shaft and supporting the other wheel, and means for rotating both, the shaft and sleeve, simultaneously and in opposite directions.

2. The combination with the frame, and a pair of ground-wheels for supporting one end thereof, of a shaft

extending across said frame, an arm secured to said shaft and supporting one of said wheels, a sleeve loose on said shaft and supporting the other wheel, and a single lever directly connected with one of said members for rotating both, the shaft and sleeve, simultaneously and in opposite directions.



3. The combination with the frame, and a pair of ground-wheels for supporting one end thereof, of a shaft extending across said frame, an arm secured to said shaft and supporting one of said wheels, a sleeve loose on said shaft and supporting the other wheel, and reverse-gearing between said shaft and sleeve, and a lever directly connected with one of said members for rotating both, the shaft and sleeve, simultaneously and in opposite directions.

4. The combination with the frame, and a pair of ground-wheels for supporting one end thereof, of a shaft extending across said frame, an arm secured to said shaft and supporting one of said wheels, a sleeve loose on said shaft and supporting the other wheel, and reverse-gearing between said shaft and sleeve, and a lever directly connected with said shaft for rotating both, the shaft and sleeve, simultaneously and in opposite directions.

5. The combination with the frame, and a pair of ground-wheels for supporting one end thereof, of a shaft extending across said frame, an arm secured to said shaft and supporting one of said wheels, a sleeve loose on said shaft and supporting the other wheel, and means for rotating both, the shaft and sleeve, simultaneously and in opposite directions, a trailer, and means for positioning said trailer to correspond to one of said ground-wheels.

[Claims 6 and 7 not printed in the Gazette.]

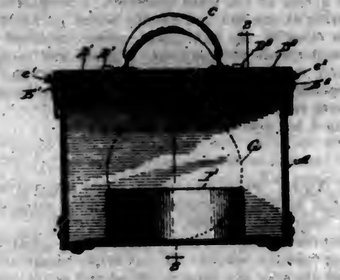
1,024,535. NOODLE-CUTTER. CHARLES E. SWARTZBAUGH, Toledo, Ohio. Filed Jan. 23, 1911. Serial No. 604,023. (Cl. 107—51.)



1. In a device of the described character, a shaft, a series of cutting disks on the shaft, a handle having portions in which the ends of the shaft are supported, a slotted plate pivotally carried by the handle, and means upon the plate for detachably engaging the handle to prevent the plate from swinging upon its pivot.

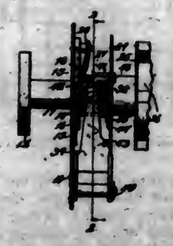
2. A device of the described character comprising in its construction a shaft, equi-distant cutting disks mounted on the shaft, a wire bent at its middle to form a loop with converging sides and being further bent to engage the opposite ends of said shaft, a plate pivoted upon said wire and having slots for the reception of the disks, an extension upon said plate adapted to engage the converging portions of the handle and to hold the plate in operative position, and a thumb-guard mounted upon said plate in proximity to the series of disks.

1,024,596. TRAVELING-BAG FOR BOWLERS. LLOYD B. TAYLOR, Chicago, Ill. Filed Mar. 20, 1911. Serial No. 615,760. (Cl. 190—51.)



In a bag for containing bowlers' accessories, the combination with rigid end, side and bottom walls, of a hinged cover forming the entire top of the bag, the width of the bag being slightly greater than the diameter of a bowling-ball, and means secured to the bottom of the bag at substantially the center thereof for engaging a bowling ball and preventing its movement within the bag.

1,024,537. CHECK-CONTROLLED MECHANISM. CLARENCE C. TRAVIS, BETHUEL M. DAVIS, and ALFRED D. ANTOINE, Chicago, Ill.; said Davis and Antoine assignors to said Travis. Filed Oct. 17, 1910. Serial No. 587,436. (Cl. 194—93.)



1. In a device of the character described, the combination with check controlled mechanism embodying a check conveyer, and means for operating the latter, of means movable independently of the conveyer for delivering a commodity and having a constant direction of movement, means for operating the last said means, and means whereby the operation of the check conveying means will create a tension on the last recited operating means.

2. In a device of the character described, the combination with check controlled mechanism embodying a check conveyer and having a constant direction of movement and means for operating the latter, of means movable independently of and having a constant direction of movement in the same direction as the check conveyer for delivering a commodity, means for operating the last said means, and means whereby the operation of the check conveying means will create a tension on the last recited operating means.

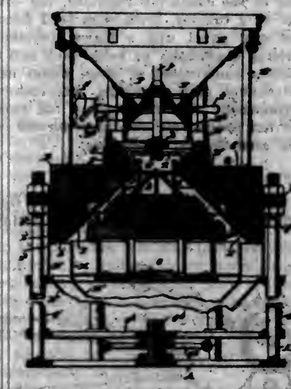
3. In a device of the character described, the combination with check controlled mechanism embodying a check conveyer and means for operating the latter, of means having a constant direction of movement and movable independently of the check conveyer for delivering a commodity, means for operating the last said means, means embodying a retainer for locking the commodity delivering means against operation whereby the operation of the check conveyer will create a tension upon the last recited operating means, and means whereby the retaining means will be actuated by the check to release the commodity delivery means.

4. In a device of the character described, the combination with check controlled mechanism embodying a check conveyer and means for operating the latter, of means having a constant direction of movement and movable independently of the check conveyer for delivering a commodity, elastic means for operating the last said means, means embodying a retainer for locking the commodity delivering means against operation whereby the operation of the check conveyer will create a tension upon the said elastic means, and means whereby the retaining means will be actuated by the check to release the commodity delivering means.

5. In a device of the character described, the combination with means for delivering a commodity and having a constant direction of movement, of check controlled mechanism embodying a check conveyer also having a constant direction of movement and means for locking the commodity delivering means against operation, and means rendered operative by the actuation of the check conveyer for actuating the said commodity delivering means when the said locking means is tripped to release the latter.

[Claims 6 to 22 not printed in the Gazette.]

1,024,538. MAGNETIC SEPARATOR. JOSEPH WEATHERBY, Jr., New Cumberland, Pa., assignor to Andrew J. Dull, Harrisburg, Pa. Filed Sept. 16, 1910. Serial No. 582,334. (Cl. 83—71.)



1. The improvement in separating comminuted materials of different magnetic susceptibility, which consists in feeding the more susceptible and separated material by centrifugal force and the less susceptible and unseparated material by gravity alone transversely through and away from fields of magnetic intensity arranged in succession in proximity to each other and in mechanically retarding the movement of the less susceptible and unseparated material at a point in proximity to one of said fields of magnetic intensity to prevent slightly susceptible material from being carried through the magnetic field by momentum.

2. The improvement in separating comminuted materials of different magnetic susceptibility, which consists in feeding the more susceptible and separated material by centrifugal force and the less susceptible and unseparated material by gravity alone transversely, through and away from fields of magnetic intensity arranged in succession in proximity to each other and in mechanically retarding the movement of the less susceptible and unseparated material at points in proximity to each of said fields of magnetic intensity to prevent slightly susceptible material from being carried through the magnetic fields by momentum.

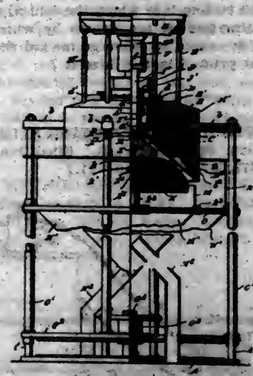
3. The improvement in separating comminuted materials of different magnetic susceptibility, which consists in continuously feeding the more susceptible material by centrifugal force and the less susceptible material by gravity, through and away from annular fields of magnetic intensity arranged in succession in proximity to each other and in temporarily mechanically retarding the movement of the less susceptible material at a point in proximity to one of said fields of magnetic intensity whereby its momentum is checked and interference thereby with magnetic action prevented.

4. A magnetic separator embodying a circular magnet having internal annular pole pieces of opposite sign with inner frusto-conical faces substantially in alinement with each other, a rotary conical screen located within the pole pieces and a substantially conical armature forming a guide within the screen whereby all the material to be separated is caused to travel between the armature and screen and past and in proximity to the pole pieces in succession.

5. A magnetic separator embodying annular magnetic pole pieces with frusto-conical inner faces substantially in alinement with each other, a rotary conical screen located within the pole pieces and a guide within the screen having a substantially conical outer face with shoulders thereon for retarding the flow of material under the influence of gravity.

[Claims 6 to 10 not printed in the Gazette.]

1,024,539. MAGNETIC ORE-SEPARATOR. JOSEPH WEATHERBY, New Cumberland, Pa., assignor to Andrew J. Dull, Harrisburg, Pa. Filed Aug. 25, 1911. Serial No. 645,958. (Cl. 83—71.)



1. A magnetic separator embodying a field magnet having continuous annular pole pieces of opposite sign, forming a downwardly diverging or conical chamber having a feed opening at the apex, an imperforate conical screen journaled to rotate within the chamber in proximity to the faces of the pole pieces and an armature having a conical face arranged within the screen in proximity to the faces of the pole pieces, said conical face at both top and bottom merging into curved faces extending gradually away from the pole pieces in a vertical plane, the arrangement being such as to distribute the lines of magnetic force on the armature and cause them to converge toward the pole pieces.

2. A magnetic separator embodying an annular field magnet having continuous annular pole pieces of opposite sign with continuous annular tips in different horizontal planes whereby a downwardly diverging or conical chamber is formed, a conical screen journaled to rotate in said chamber in proximity to the pole tips and having a feed opening at the apex, a circular armature adjustable to fixed positions in said chamber, said armature having a conical face parallel with the screen said face merging at both top and bottom into curved faces extending gradually away from the screen and pole tips in a vertical plane and a conical guide of non-magnetic material located centrally above the armature.

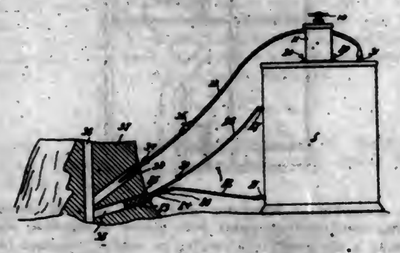
3. A magnetic separator embodying an annular field magnet having continuous annular pole pieces of opposite sign with their tips in different horisontal planes and defining a downwardly diverging chamber, the outer pole piece being of less thickness than the inner pole piece whereby the magnetic conductive capacity of the two pole pieces is equalized, a conical imperforate screen journaled to rotate within the field magnet and a circular armature within the screen and having a conical face in proximity to the faces of the pole pieces.

4. A magnetic separator embodying an annular field magnet having continuous annular concentric pole pieces of opposite sign with their tips in different horisontal planes, a conical screen mounted to rotate within the pole pieces and in proximity to the tips thereof and a conical armature located within the screen and having a maximum diameter greater than the diameter of the inner portion of the outer pole piece, the top and bottom of the armature being above and below the tips of the inner and outer pole pieces respectively, whereby the lines of magnetic force may distribute themselves vertically on the peripheral portion of the armature.

5. In a magnetic separator the combination with a field magnet having annular concentric pole pieces of opposite sign, the outer pole piece having a tip formed by a removable ring and said pole pieces having conical faces in alinement with each other, an imperforate conical screen journaled to rotate within the pole pieces in proximity to said conical faces and an armature within the screen, said armature having a conical face extending parallel with the faces of the pole pieces and rounded faces at top and bottom into which the conical face merges without the formation of projections by which the lines of force would be caused to converge toward the armature.

[Claim 6 not printed in the Gazette.]

1,024,540. METHOD OF DESTROYING STUMPS. WARREN E. WHITE, Spokane, Wash. Filed Jan. 27, 1912. Serial No. 673,757. (Cl. 110—21.)



1. The process of burning tree-stumps which consists in making holes in the stump and a vent therefor, injecting into the stump, through one of the holes, burning liquid fuel and air under pressure, and injecting into the stump, through the other hole, an inflammable liquid.

2. The process of burning tree-stumps which consists in making a central downward hole in the stump and side holes extending to the bottom of the central hole, injecting into the stump, through one of the side holes, burning liquid fuel and air under pressure, and injecting into the stump, through the other side hole, an inflammable liquid.

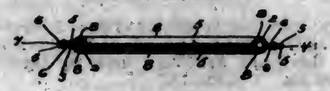
1,024,541. KNIFE-CLEANER. CLEMENT ARTHUR WILD, Oldham, England. Filed May 29, 1911, Serial No. 630,198. Renewed Mar. 11, 1912. Serial No. 683,091. (Cl. 51—6.)

In knife cleaners of the kind described the one disk having slots right through the same together with indentations on both disks and pads, means for feeding the emery or polishing powder into the center of the said disks and pads, means for guiding the emery or polishing powder on to the flat portion of the said disks and pads and prevent-



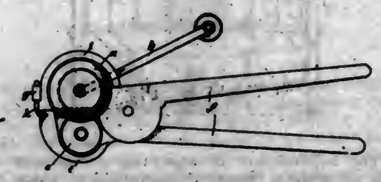
ing the accumulation of the same in the feeding hopper substantially as herein described.

1,024,542. SIGN-SUPPORT. GEORGE WIESING, Baltimore, Md. Filed Dec. 22, 1910. Serial No. 598,803. (Cl. 40—156.)



In a device of the character described, the combination with a panel, of a tubular, cylindrical bead formed about the edges of said panel, and a frame surrounding said panel comprising a plurality of rails, each rail composed of two members constructed of sheet metal having flat abutting extensions, and coinciding semi-circular extensions for engagement with the bead of the panel, rivets piercing said flat extensions, and teeth formed on the interior of the semi-circular extensions.

1,024,543. CAN-OPENER. ERNST WÖLFER, Gotha, Germany. Filed Apr. 29, 1911. Serial No. 624,076. (Cl. 30—3.)



1. In a can opener the combination of a pair of tongs, a circular cutter and a conical friction wheel rigidly connected thereto mounted on one arm of the tongs, crank mechanism adapted to rotate the cutter, and a second friction wheel mounted on the other arm of the tongs and adapted to engage the first cutter for the purpose set forth.

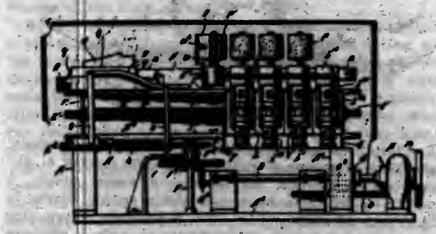
2. A can opener comprising a pair of tongs, a cutter rotatably mounted on one branch of the tongs, a lever rigidly connected to said cutter, a friction wheel on the branch which carries the cutter, and a second friction wheel mounted on the other branch of the tongs for the purpose set forth.

3. A can opener comprising a pair of tongs, a cutter rotatably mounted on one branch of the tongs, a lever rigidly connected to said cutter, a friction wheel secured to the cutter, and a second friction wheel mounted on the other branch of the tongs for the purpose set forth.

4. A can opener comprising a pair of tongs, a cutter rotatably mounted on one branch of the tongs, a lever rigidly connected to said cutter, a friction wheel secured to the cutter, a second friction wheel mounted on the other branch of the tongs, and a protective ledge for the cutter and friction wheels for the purpose set forth.

5. A can opener comprising a pair of tongs, a cutter rotatably mounted on one branch of the tongs, a lever rigidly connected to said cutter, a friction wheel secured to the cutter, a second friction wheel mounted on the other branch of the tongs, a protective ledge for the cutter and friction wheels, and a fixed cutter secured to a bracket on one branch of the tongs for the purpose set forth.

1,024,544. SHOE-POLISHING MACHINE. JAMES N. WOOD, Richmond, Va., assignor, by mesne assignments, to International Machine Corporation, a Corporation of Virginia. Filed June 12, 1908, Serial No. 438,227. Renewed Sept. 15, 1911. Serial No. 649,560. (Cl. 15—61.)



1. In a shoe polishing machine, the combination with a shoe support, a traveling brush carriage movable around the same, means for guiding the brush carriage in its travel around the shoe support, said brush carriage being provided with a vertically movable part, and a tilting rotatable part pivotally connected with the vertically movable part, a rotary brush carried by said tilting part, means for elevating said vertically movable part during a portion of the travel of the brush carriage and means for rotating the said tilting part to secure the rotation of the brush, substantially as described.

2. In a shoe polishing machine, the combination with a shoe support, of a traveling brush carriage, means for guiding the same around the shoe support, said brush carriage being provided with a vertically movable rotatable part, and a tilting rotatable part pivotally and operatively connected to said vertically movable part, a rotatable brush carried by said tilting part, a stationary part in the path of the traveling brush carriage, adapted to engage a part connected with the vertically movable part to elevate the brush and means for rotating the said vertically movable part to impart rotary motion to the brush, substantially as described.

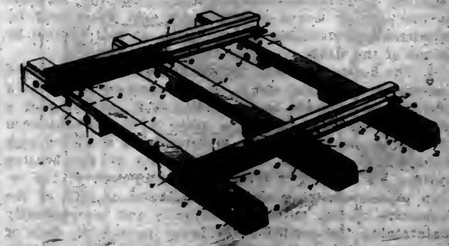
3. In a shoe polishing machine, the combination with a shoe support, of a traveling brush carriage, means for guiding the same around the shoe support, said brush carriage being provided with a vertically movable rotatable part, and a tilting rotatable part pivotally and operatively connected to said vertically movable part, a rotatable brush carried by said tilting part, means for elevating the said vertically movable part during a portion of its travel, stationary guiding means engaging said tilting part and means for rotating the brush carried thereby, substantially as described.

4. In a shoe polishing machine, the combination with a shoe support, of a traveling brush carriage, means for guiding the same around the shoe support, said brush carriage being provided with a vertically movable rotatable part, and a tilting rotatable part pivotally and operatively connected thereto, a rotatable brush carried by said tilting part, a stationary guide having portions for maintaining said tilting part in substantially vertical position, during part of the travel of said brush carriage, a stationary cam for engaging a part connected with the said vertically movable part for elevating it and said tilting part, and a stationary guide adjacent to said stationary device for holding the said tilting part in position to enable it to properly engage the toe portion of a shoe on said support, substantially as described.

5. In a shoe polishing machine, the combination with a shoe support, of a rigid track arranged around the same, a carriage frame mounted thereon and movable around said track, a brush supporting device carried by said carriage frame and provided with a rotatable part movable vertically with respect to the carriage frame, and a tilting rotatable part pivotally and operatively connected to said vertically movable part, a revoluble brush carried by said tilting part, means for elevating said vertically movable part and said tilting part during a portion of the travel of said carriage frame, and means for rotating said vertically movable part to secure the rotation of the brush, substantially as described.

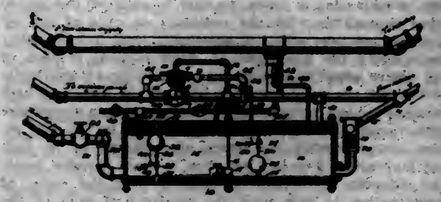
[Claims 6 to 22 not printed in the Gazette.]

1,024,545. RAILWAY-TIE. ERNEST WYCKOFF, Hightstown, N. J. Filed Apr. 17, 1911. Serial No. 621,465. (Cl. 238—5.)



A railway tie comprising a T-iron extending throughout the length of the tie and having its horisontal flanges at its upper edges, blocks supporting said T-iron at its ends, four blocks being employed, and a block positioned at each side of the iron at the ends of the iron, and below the upper horisontal flanges of the iron, said blocks projecting out beyond the flanges, and bolts and nuts securing said blocks to the vertical web of said T-iron, substantially as described.

1,024,546. METHOD OF OPERATING STEAM-HEATING SYSTEMS. CHARLES A. BALL, Philadelphia, Pa., assignor to Warren Webster & Co., Camden, N. J., a Corporation of New Jersey. Filed Nov. 6, 1902. Serial No. 130,330. (Cl. 237—0.)



1. In a steam heating system, the method of operating the same, which consists in supplying steam to the supply side thereof, maintaining a vacuum in the return side thereof in excess of the requirements, maintaining a lesser vacuum of the desired degree at a point contiguous to the heating point, said lesser vacuum being controlled by the greater vacuum, utilizing the said lesser vacuum to withdraw air and water of condensation from the heating point, and utilizing said greater vacuum to aid in returning the water of condensation to the source of steam supply.

2. In a steam heating system, the method of operating the same, which consists in supplying steam to the supply side thereof, maintaining a vacuum in the return side thereof in excess of the requirements, maintaining a lesser vacuum of the desired degree at a point contiguous to the heating point, said lesser vacuum being controlled by the greater vacuum, utilizing said lesser vacuum to withdraw air and water of condensation from the heating point, separating the water and air by gravity, discharging the air by means of one of the vacuums, utilizing said greater

vacuum and the steam supply to aid in returning said water to the source of steam supply, and applying a constant suction distinct from the vacuums as the primary means of return for said water.

3. In a steam heating system, the method of operating the same, which consists in supplying steam to the supply side thereof, maintaining a vacuum in the return side thereof in excess of the requirements, maintaining a lesser vacuum of the desired degree at a point contiguous to the heating point, said lesser vacuum being controlled by the greater vacuum, utilizing said lesser vacuum to withdraw air and water of condensation from the heating point, separating the water and air by gravity, discharging the air by means of one of the vacuums, intermittently moving the water on its return by means of the greater vacuum to a position to be returned to the source of steam supply, applying a constant suction distinct from the vacuums as the primary means of return for said water, and intermittently controlling the operation of said suction by means of the steam supply or the atmospheric air.

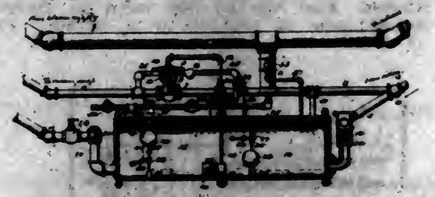
4. The herein described method of steam heating, which consists in supplying steam from a common source to a plurality of separate heating units each consisting of a large number of radiators or coils in multiple between the supply and return pipes, maintaining a source of high vacuum in excess of the requirements of the heating system, maintaining a lower vacuum in each of the return pipes connecting with the radiators or coils of the respective heating units, automatically and independently maintaining the conditions of lower vacuum in each of the return pipes substantially constant by automatically controling the communication between the source of high vacuum and low vacuums in the return pipes in accordance with variations in the extent of vacuum in the said return pipes, causing the water of condensation in each heating unit to flow to a separate receiver therefor under the influence of the low vacuum, and causing the water of condensation to flow from the receivers of each of the heating units under the influence of the common high vacuum.

5. The herein described method of steam heating, which consists in supplying steam from a common source to a plurality of separate heating units each consisting of a large number of radiators or coils in multiple between the supply and return pipes, maintaining a source of high vacuum in excess of the requirements of the heating system, maintaining a lower vacuum in each of the return pipes connecting with the radiators or coils of the respective heating units, automatically and independently maintaining the conditions of lower vacuum in each of the return pipes substantially constant by automatically controlling the communication between the source of high vacuum and low vacuums in the return pipes in accordance with variations in the extent of vacuum in the said return pipes, causing the water of condensation in each heating unit to flow to a separate receiver therefor under the influence of the low vacuum, causing the water of condensation to flow from the receivers of each of the heating units under the influence of the common high vacuum, and independently controlling the discharge of the water from the respective receivers by the level of the water therein.

[Claims 6 and 7 not printed in the Gazette.]

1,024,547. STEAM-HEATING SYSTEM. CHARLES A. BALL, Philadelphia, Pa., assignor to Warren Webster & Company, a Corporation of New Jersey. Filed Nov. 6, 1902. Serial No. 130,331. (Cl. 237—9.)

1. In a steam heating system, the combination of a plurality of independent heating units each consisting of a number of radiators, a steam supply main having branches for delivering steam to the respective heating units, a vacuum main extending from a source of vacuum in excess of the requirements of part at least of the several heating units, a separate vacuum return pipe leading from each of the heating units and connecting with the vacuum main, independent automatic means for each of the heating units operating under the control of the vacuum in the respective return pipes for maintaining substantially constant partial vacuums in said return pipes in accordance with the requirements of the respective heating units, and independent means for each of the heating units for removing the water of condensation from the return pipe thereof, said means consisting of a steam trap located at the lowest portion of the heating unit and having a float actuated valve controlling communication with the vacuum main.



2. In a steam heating system, a source of steam supply, a plurality of groups of radiators or coils located at different distances from said source of steam supply, a common supply main from said steam supply source to said groups of radiators or coils, a separate return pipe leading from each group of radiators or coils, a separate vacuum maintaining means connected to the return pipe of each group of radiators or coils at a point adjacent to its said group of radiators or coils to remove the air and water therefrom and comprising in combination a high vacuum chamber, and a low vacuum chamber communicating with the return pipe for the group of radiators or coils, means for creating and maintaining a vacuum equal to or in excess of the requirements of the system and maintaining a low vacuum in the low vacuum chamber, and means for separately governing the communication between said chambers according to the requirements for transferring the water of condensation from the low vacuum chamber to the high vacuum chamber.

3. In a heating system, a source of steam supply, a plurality of independent groups or units of radiators or coils, a common supply main from said source of steam supply and having branch supply pipes for supplying steam respectively to the plurality of independent groups or units of radiators or coils, a common main in which is maintained a high vacuum in excess of the requirements of the heating units, return pipes separate from the branch supply pipes each leading from a different one of the plurality of independent groups or units of radiators or coils for receiving the water of condensation and air therefrom, intermittently operating steam traps respectively adjacent to the lower end of each one of the return pipes for receiving the water of condensation therefrom and intermittently discharging it from the heating system said steam traps having means under the control of the water therein for controlling a suction between the said steam traps and the common high vacuum main for causing the water of condensation to be intermittently removed from the traps, separate pipe connections respectively between the common high vacuum main and each of the plurality of independent groups or units of radiators or coils and communicating therewith through the respective return pipes above the level where the water of condensation collects in the steam traps, and an automatic controller in each of said pipe connections for separately and independently controlling the extent of the vacuum within the respective return pipes and maintaining said vacuums substantially constant and at a relatively lower vacuum than in the high common vacuum main whereby each of the units may be operated under different degrees of vacuum while being dependent upon a common source of steam supply and of high vacuum.

4. In a steam heating system, the heaters, a steam supply pipe for delivering steam to the heaters, and a return pipe for the air and water from the heaters and in which a partial vacuum is maintained, in combination with a high vacuum main in which a vacuum in excess of the requirements of the return pipe is maintained, a pipe connection between the high vacuum main and the return pipe, an automatic controller in said pipe connection for controlling the extent of the vacuum within the return pipe and maintaining said vacuum substantially constant at a relatively lower vacuum than in the high vacuum main, a steam trap connected with the lower part of the return pipe for receiving the water of condensation therefrom and having a communication with the high vacuum main and also provided with means controlled by the level of the water in the trap to intermittently open and close the communication with the high vacuum main whereby the water of condensation is intermittently withdrawn from the trap under the influence of the high vacuum.

5. In a steam heating system, a source of steam supply, a steam supply main, radiators or coils connecting with the steam supply main, a water of condensation receiving device, a return pipe separate from the steam supply main extending from the radiators or coils and connecting with the water of condensation receiving device, means for maintaining a partial vacuum in the return pipe, a steam pipe leading from the steam supply main to the water of condensation receiving device, means intermittently operated by the rise and lowering of the water level in said water of condensation receiving device to establish communication alternately between said device and the steam pipe and the means for maintaining the partial vacuum, means for closing communication between the return pipe and the steam pipe when said steam pipe is discharging into the water of condensation receiving device, and means for drawing the water from the water of condensation receiving device.

[Claims 8 to 12 not printed in the Gazette.]

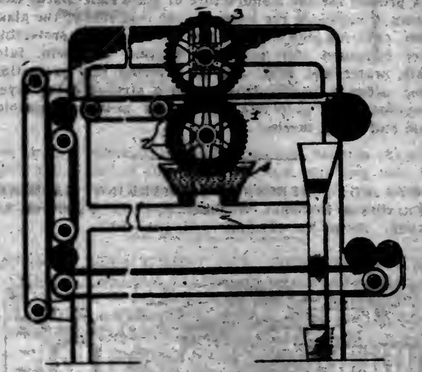
1,024,548. MILK OR CREAM BOTTLE RECEPTACLE. ERNEST W. BAUER, Chicago, Ill. Filed Apr. 11, 1910. Serial No. 554,683. (Cl. 232—42.)



1. In a device of the class described, a receptacle comprising a fixed bottom and vertical side walls, one of said side walls being provided with a removal opening and another of said walls being cut away for a greater portion of its height, a closure comprising a vertical portion and a horizontal top portion rigidly connected thereto, said vertical portion being hinged on a horizontal axis above the upper edge of the cut away wall of the receptacle and having its lower end extending into the lower portion of said receptacle, said lower end being inclined inwardly and then turned back at right angles to the vertical portion terminating in a vertical flange adapted to abut the adjacent wall of the receptacle, substantially as described.

2. In a device of the class described, a receptacle comprising a fixed bottom and vertical side walls, one of said walls being provided with a removal opening and another of said walls being cut away for a greater portion of its height, a closure comprising a vertical portion and a horizontal top portion rigidly connected thereto, said vertical portion being arranged to complete the cut away side wall when in closed position and being of less width than the distance between the side walls adjacent said cut away wall, said closure being hinged upon a horizontal axis, a plate fixed to said vertical portion above the upper edge of said cut away wall and extending the full width of the device and the edges of said plate being provided with inturned flanges to engage said adjacent side walls, substantially as described.

1,024,549. METHOD OF ORNAMENTING PREPARED ROOFING. MATHIAS B. BECKER, Chicago, Ill. Filed Feb. 1, 1912. Serial No. 674,820. (Cl. 91—67.9.)



1. The hereindescribed method of ornamenting prepared asphaltum roofing having a grit coated surface, which consists in applying on various parts of the grit coated surface a solution of a substance having the property of dissolving the asphaltum coating and in drying to become amalgamated therewith, said solution being waterproof when dry and being of a different color from the grit and applied in such quantity as to cover and penetrate through said grit coating and envelop the grit particles.

2. The hereindescribed method of ornamenting prepared asphaltum roofing having a grit coated surface, which consists in applying on various parts of the grit coated surface a cool solution of a substance having the property of dissolving the asphaltum coating and in drying to become amalgamated therewith, said solution being waterproof when dry and being of a different color from the grit and applied in such quantity as to cover and penetrate through said grit coating and envelop the grit particles.

3. The hereindescribed method of ornamenting prepared asphaltum roofing having a grit coated surface, which consists in applying on various parts of the grit coated surface of the roofing when cool, a cool solution of a substance having the property of dissolving the asphaltum coating and in drying to become amalgamated therewith, said solution being waterproof when dry and being of a different color from the grit and applied in such quantity as to cover and penetrate through said grit coating and envelop the grit particles.

1,024,550. PREPARED ROOFING. MATHIAS B. BECKER, Chicago, Ill. Filed Feb. 1, 1912. Serial No. 674,821. (Cl. 154—51.)



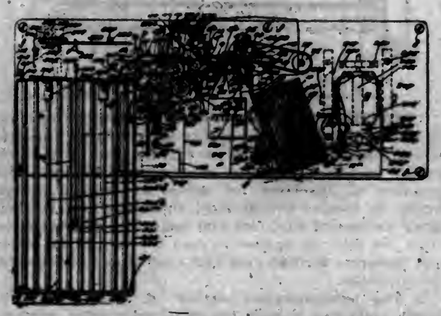
Prepared roofing comprising a sheet of fibrous material impregnated and coated with a waterproof material, said coating being varied in thickness in various fields, a coating of granular grit partially embedded in said coating in the fields of least thickness, and a similar coating completely embedded in the fields of greater thickness.

1,024,551. PROCESS FOR THE MANUFACTURE OF GLASS SIGN-BOARDS. ENGELBERT BÖSINGER, Dresden, Germany. Filed Nov. 9, 1908. Serial No. 461,789. (Cl. 40—125.)



A process for the manufacture of glass sign boards consisting of attaching the letters to the rear side of the glass sheet, covering this side and the letters with a protecting layer composed of a paste-like mixture of casein, talc, chalk, water and milk, and in covering this protecting layer, after it has hardened, with a strengthening layer composed of a paste-like mixture of powdered marble, alum and liquid casein.

1,024,552. ELECTRO POSTMARKING-MACHINE. FRANCIS G. BOSWELL, Washington, D. C. Filed Feb. 13, 1909. Serial No. 477,522. (Cl. 101—82.)



1. In a mail-marking machine; an electric two-part driver having a continuously closed circuit between the parts; a die-cylinder carried by one of said parts; intermittently released means for retarding the part carrying the cylinder; and means for operating the driver.

2. In a mail-marking machine; a driver comprising a leader and a follower; one having a bearing within the other; said leader having a continuously closed circuit for actuating the follower; a die-cylinder carried by said follower; and means for intermittently retarding the follower.

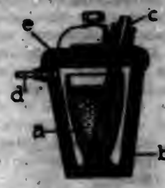
3. In a mail-marking machine; a driver having a continuously closed electric circuit consisting of a leader and a follower; a die-cylinder carried by said follower; means for intermittently retarding the follower; and means for operating the retarding means to cause the follower to be attracted by the leader.

4. In a mail-marking machine; a driver comprising a leader and a follower having a continuously closed electric circuit between them; a die-cylinder carried by said follower; means for retarding the follower; means for operating the retarding means to cause the follower to be attracted by the leader; and means for furnishing a current to the leader.

5. In a mail-marking machine; a driver comprising a leader and a follower having a continuously closed electric circuit between them; a die-cylinder carried by said follower; means for retarding the follower; means for operating the retarding means to cause the follower to be attracted by the leader; said retarding means having means for cushioning said follower when retarded; and means for furnishing a current to the leader whereby the follower may be attracted.

[Claims 6 to 104 not printed in the Gazette.]

1,024,553. DELIVERY-PIPE FOR CASTING APPARATUS. FRANZ DE BUIONZ, Magdeburg, Germany. Filed Oct. 14, 1911. Serial No. 654,782. (Cl. 22—69.)



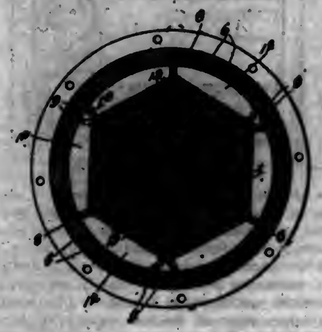
1. The combination, in a casting apparatus, of a crucible mounted in a pressure chamber, a delivery pipe located in said crucible and expanded internally in the direction of the delivery end from a point situated within the zone of heating thereof and a connection with said pressure chamber for forcing the molten metal of the crucible into the delivery pipe, substantially as and for the purposes described.

2. The combination, in a casting apparatus, of a crucible of refractory material mounted in a chamber provided with a cover, so arranged as to form a gas-tight closure therefor, a delivery pipe located in the crucible and internally expanded, in conical form, in the direction of the delivery end from a point situated within the zone of heating and a pipe connection with the pressure chamber for forcing the molten material of the crucible into the delivery pipe, substantially as and for the purposes described.

3. In a casting apparatus, a pipe for delivery of molten metal thereto and expanded internally from a point situated within the zone of heating, substantially as and for the purposes described.

4. In a casting apparatus, a pipe for delivery of molten metal thereto and expanded internally, in conical form, from a point situated within the zone of heating, substantially as and for the purposes described.

1,024,554. HEATING OR COOLING APPARATUS. LEMUEL A. CARTER, JAMES CORNELIUS JONES, and JAMES C. SPOTTS, New Orleans, La. Filed June 23, 1911. Serial No. 634,986. (Cl. 122—166.)



1. In a water heating or cooling apparatus, the combination of a cylinder; a shell located within said cylinder and spaced therefrom; ribs on said shell providing series of chambers, the chambers of each series being disposed in straight alinement and arranged in staggered relation with respect to the chamber of the next adjacent series; tubes passing through the shell and connecting opposite sides of said chambers; and means for conveying liquid to and causing the same to traverse said chamber and tubes and drawing off said liquid, substantially as described

2. In a water heater or cooling apparatus, the combination of a cylinder; a polygonal sided shell located within said cylinder and spaced therefrom; ribs on each of the sides of said shell providing a series of chambers disposed in straight alinement, the chambers of each of said series being arranged in staggered relation with respect to the chambers of the next adjacent series; tubes passing through the shell and secured to opposite parallel sides thereof, and connecting opposite alternate pairs of said chambers; and means for conveying liquid to and causing the same to traverse all of said chambers and tubes, and drawing off the liquid, substantially as described.

3. In a water heating or cooling apparatus, the combination of a cylinder; a polygonal sided shell located within said cylinder and spaced therefrom; radially disposed ribs on said shell arranged lengthwise thereof; longitudinal ribs connecting said radial ribs and forming series of chambers therewith, the chambers of one of said series being disposed in straight alinement and arranged in staggered relation with respect to the chambers of the next adjacent series; tubes arranged in parallel series passing through the shell and secured to the opposite parallel sides thereof, and connecting opposite alternate pairs of said chambers; and means for conveying the liquid to and causing the same to traverse all of said chambers and tubes, and drawing off the liquid, substantially as described.

4. In a water heating or cooling apparatus, the combination of a cylinder; a polygonal sided shell located within said cylinder and spaced therefrom; radially disposed ribs on said shell located at the meeting edges of said sides and disposed lengthwise therewith, some of said ribs arranged in pairs and providing liquid passageways; longitudinal ribs connecting said radial ribs and providing series of liquid chambers therewith; the chambers of each of said series disposed in straight alinement and arranged in staggered relation with respect to the chambers of the next adjacent series; tubes arranged in parallel series passing through the shell and secured to opposite parallel sides thereof, and connecting opposite alternate pairs of said chambers; and means for conveying liquid to and causing the same to traverse all of said chambers, passageways and tubes, and drawing off the liquid, substantially as described.

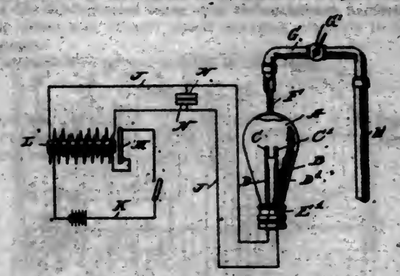
5. In a water heating or cooling apparatus, the combination of a cylinder; a polygonal sided shell located within said cylinder and spaced therefrom; radially disposed ribs on said shell located at the meeting edges of said sides and disposed lengthwise therewith; some of said ribs arranged in close angular relation and providing liquid passageways; longitudinal ribs connecting said radial ribs and providing series of liquid chambers therewith; the chambers of each of said series disposed in straight alinement and arranged in staggered relation with respect to the chambers of the next adjacent series; tubes arranged in parallel series passing through the shell and secured to opposite parallel sides thereof, and connecting opposite alternate pairs of said chambers; and means for conveying liquid to and causing the same to traverse all of said chambers, passageways, and tubes, and drawing off the liquid, substantially as described.

[Claims 6 and 7 not printed in the Gazette.]

1,024,555. MANUFACTURE OF VACUUM LIGHTNING-ARRESTERS. FRANK S. CHAPMAN, Toledo, Ohio, assignor to The National Electric Specialty Company, Toledo, Ohio, a Corporation of Ohio. Filed Nov. 16, 1910. Serial No. 592,665. (Cl. 176—2.)

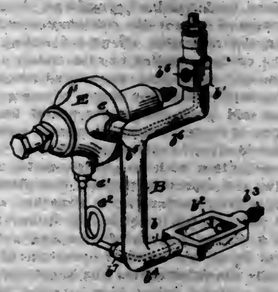
1. The process of manufacturing articles of the class described which comprises establishing a spark gap in a container to be exhausted, and in multiple with a spark gap of definite and initially lower resistance than said first named spark gap, causing a current of a character to establish a spark across said last named gap to pass over the circuit so established, exhausting said container until the sparking at said gap ceases, then sealing said container without further substantial change of pressure therein.

2. The process of manufacturing a vacuum lightning arrester of the character herein described, which comprises connecting the electrodes in the vacuum chamber in multiple with a pair of electrodes in the air spaced apart so that said air gap has a resistance a trifle greater than the resistance between the electrodes in the vacuum chamber with the pressure therein at substantially the point of lowest electrical resistance, causing electrical discharges to be sent over said circuit of a character to spark across



the air gap, exhausting the air from said vacuum chamber until the spark at the air gap ceases, stopping said exhausting process before the sparking at said gap recommences, and thereupon sealing said vacuum chamber.

1,024,556. ATTACHMENT FOR ANESTHETIZING-MACHINES. GRAHAM CLARKE, Cleveland, Ohio, assignor to The Ohio Chemical & Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Jan. 25, 1912. Serial No. 673,310. (Cl. 128—13.)



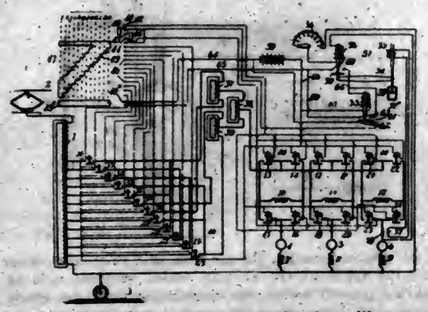
An attachment for anesthetising machines, comprising a rigid frame member which has at its lower end a horizontal arm terminating in a yoke in which the discharge neck of a gas tank may be secured and having also a vertical upper end whereon one side is flat, said frame also having two laterally projecting lugs and the frame also containing ducts, one of which extends from the flat face of the upper end to and through the upper laterally projecting lug, and the other duct extends through the lower arm of said attachment from the inner end of the yoke to and through the lower laterally extended lug, and an automatic gas pressure regulator which is secured to and supported by the upper laterally extended lug, and is connected by a pipe with the lower laterally extended lug.

1,024,557. SYSTEM OF ELECTRIC-MOTOR CONTROL. FRANK CONRAD, Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Sept. 19, 1910. Serial No. 582,675. (Cl. 172—179.)

1. In a system of control, the combination with a source of energy, an electric motor having a field magnet winding and an armature winding, means for controlling the energy applied to said motor and means dependent on armature voltage and field current for limiting the speed of said motor to a predetermined value, means dependent upon the operation of said last named means for affecting the operation of said controlling means.

2. In a system of control, the combination with a source of energy, a plurality of electric motors, means for con-

trolling the energy supplied thereto and means dependent upon predetermined speed conditions for causing a change in the supply of energy, of means for rendering further changes in the supply of energy dependent upon predetermined conditions.



3. In a system of control, the combination with a source of energy, an electric motor having a field magnet winding and an armature winding, means for controlling the energy applied to said motor, and electro-responsive means dependent upon the ratio of armature voltage to field current for effecting a change in the supply of energy, of means dependent upon said electro-responsive means for causing further changes in the supply of energy to be dependent upon predetermined conditions.

4. In a system of control, the combination with a source of energy, an electric motor, circuit-controlling means for governing the energy supplied to said motor, and electro-responsive means dependent upon predetermined speed conditions for interrupting the supply of energy, of means dependent on said electro-responsive means for rendering further supply of energy dependent upon a predetermined operation of said circuit-controlling means.

5. The combination with an electric motor and means for controlling the operation thereof, of a plurality of relay coils respectively responsive to armature voltage and field current and adapted to act in opposition at the opposite ends of a pivotally mounted arm, and a third relay coil dependent upon the resultant operation of the aforesaid relay coils for interrupting the supply of energy to said motor.

[Claims 6 to 11 not printed in the Gazette.]

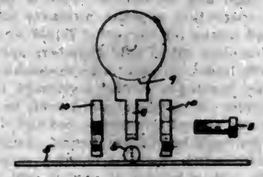
1,024,558. DIAL FOR WATCHES OR CLOCKS. FRANK S. CORNWELL, New Haven, Conn. Filed Dec. 18, 1911. Serial No. 666,321. (Cl. 58—127.)



1. A dial for a time piece, divided into hour quadrants, and a plurality of hour indications for each quadrant respectively, the successive hour indications being arranged in successive quadrants.

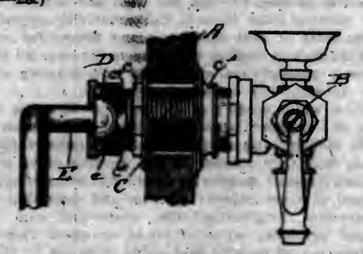
2. A dial for a time piece, divided into hour quadrants, a plurality of hour indications for each quadrant respectively, the successive hour indications being arranged in successive quadrants, and a plurality of minute graduations for each quadrant.

1,024,559. TROWEL. BONY C. CURRENCE, Tiffin, Ohio. Filed June 27, 1910. Serial No. 569,034. (Cl. 72—136.)



In a device of the character indicated, the combination of a blade provided with a centrally arranged longitudinally extending rib larger at its top than at its base and a handle comprising a grip piece, a shank portion having flat sides and a detachable jaw arranged at each side of said shank portion and extending down below said shank portion, the inner face of each jaw being shaped to conform to the shape of the side of the said rib and a bolt extending through the said shank and the said jaws so as to clamp said jaws against said rib, substantially as described and for the purpose set forth.

1,024,560. SELF-PACKING CONNECTION FOR PIPES OR THE LIKE. WILLIAM B. DALE, Chicago, Ill., assignor to Street & Kent Mfg. Co., a Corporation of Illinois. Filed Nov. 23, 1908. Serial No. 463,970. (Cl. 137—28.)



1. A pipe connection, embodying a pipe, a head mounted thereon and spherically rounded in part, a second pipe having an inwardly tapering but straight faced seat in which said head is adapted to engage as to its spherical part, the relative sizes of said head and seat being such that said head contacts with the outer edge only of said seat, and a follower nut engaging said head and adapted to have threaded engagement with said second pipe.

2. A pipe connection, embodying a pipe, a head mounted thereon and spherically rounded in part, a second pipe having an inwardly tapering but substantially straight faced seat in which said head is adapted to engage as to its spherical part, the relative sizes of said head and seat being such that said head contacts with the outer edge only of said seat, and a follower nut engaging said head and adapted to have threaded engagement with said second pipe.

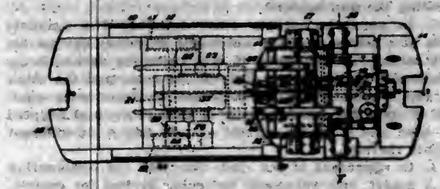
1,024,561. COMPOSITION OF MATTER. JOHN J. DAVOREN, Denver, Colo., assignor of one-half to William T. Davoren, Denver, Colo. Filed May 26, 1911. Serial No. 629,732. (Cl. 75—1.)

1. The herein described composition of matter consisting of copper, lead and phosphorus.

2. The herein described composition of matter consisting of copper fifty pounds, lead fifty pounds and phosphorus one ounce.

3. The herein described composition of matter consisting of copper and lead in equal proportions and phosphorus.

1,024,562. GEARING. WILLIAM F. ECKERT and WILLIAM C. WHITCOMB, Rochelle, Ill., assignors to George D. Whitcomb Company, a Corporation of Illinois. Filed Dec. 27, 1910. Serial No. 599,619. (Cl. 74—89.)



1. In combination, intermediate and driven rotatable members, two trains of gears connecting said members, the gears of the two trains being relatively differently proportioned in size, a clutch controlling each train of gears, the two clutches being movable in opposite directions to engaging position, a shipper lever, connection between the shipper lever and both of the said clutches, a pair of oppositely rotating power wheels, a clutch between each of the said wheels and the said intermediate rotatable member, such two clutches being movable in opposite directions to engaging position, a second shipper lever, connection between the last named shipper lever and both of the said last named clutches, the arrangement being such that both of the said last named clutches are disengaged when the last named shipper lever is in mid position, a lock for holding the first named shipper lever against movement, and means acting on the lock operated by the second mentioned shipper lever whereby the lock is released only when the second mentioned shipper lever is in mid position.

2. In combination, intermediate and driven rotatable members, two trains of gears connecting said members, the gears of the two trains being relatively differently proportioned in size, a clutch controlling each train of gears, the two clutches being movable in opposite directions to engaging position, a shipper lever, connection between the shipper lever and both of the said clutches, a pair of oppositely rotating power wheels, a clutch between each of the said wheels and the said intermediate rotatable member, such two clutches being movable in opposite directions to engaging position, a second shipper lever, connection between the last named shipper lever and both of the said last named clutches, the arrangement being such that both of said last mentioned clutches are disengaged when the said last named shipper lever is in mid position, and interlocking connection between the two shipper levers whereby the first mentioned shipper lever is released for movement only when the second mentioned shipper lever is in mid position and the second mentioned shipper lever is released for movement only when the first mentioned shipper lever is in its extreme positions.

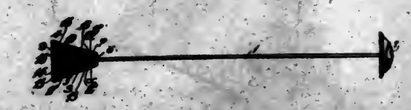
3. In transmission gearing, in combination, a pair of reversing clutches, a pair of speed-changing clutches, a pair of parallel longitudinally reciprocable shipper bars, one controlling the reversing clutches and the other controlling the speed changing clutches, the shipper bar controlling the speed-changing clutches being provided with a pair of lateral notches, an oscillatable locking bolt engageable with either of the said notches, said bolt being provided with a cam slot having two equal but oppositely inclined portions, and a stud mounted on the shipper bar controlling the reversing clutches running in the said cam slot.

4. In transmission gearing, in combination, a pair of reversing clutches, a pair of speed changing clutches, unitary means for operating the clutches of each pair in alternation, a lock for holding the speed changing clutches against movement, said lock being controlled by the said means provided for operating the reversing clutches and the arrangement being such that said lock is released only when both of the said reversing clutches are disengaged.

5. In transmission gearing, in combination, a pair of reversing clutches, a pair of speed changing clutches, unitary means for operating the clutches of each pair in alternation, a lock for holding the reversing clutches against movement, said lock being controlled by the said means provided for operating the speed changing clutches and the arrangement being such that said lock is released only when one of said speed changing clutches is fully engaged.

[Claims 6 to 11 not printed in the Gazette.]

1,024,563. HAT-PIN PROTECTOR. EMMA B. ECKHART, Philadelphia, Pa. Filed June 26, 1911. Serial No. 635,301. (Cl. 24—155.)



1. In a device of the character stated, a casing having an opening, a spring within said casing having converging side members forming gripping jaws and spring arms between the wall of the casing and said side members having one end free for said sliding engagement with one of said last two mentioned elements and exerting tension upon the side members at the ends of the gripping jaws for increasing the tension thereof.

2. In a device of the character stated, a casing having an opening, a spring within said casing having converging side walls and meeting at a suitable point in line with the opening, means between the wall of said casing and said side members for increasing the tension thereof, and a body of elastic material between said side members for receiving the pointed end of the hat pin.

3. In a device of the character stated, a casing having an opening, a spring within said casing having converging side members forming gripping jaws, the ends of said members being outwardly and rearwardly extending and abutting the wall of said casing to be compressed thereby, for increasing the gripping action of said jaws.

4. In a device of the character stated, a casing having an opening, an elastic member therein adapted to receive the pointed end of the hat pin, and a spring having converging side members on opposite sides of said elastic member, said side members forming gripping jaws and having their ends outwardly and rearwardly extending and abutting the walls of said casing whereby the same are compressed to increase the gripping action of said jaws.

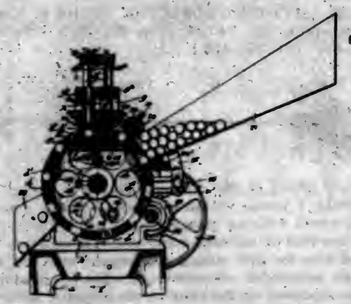
5. In a device of the character stated, a casing having an opening, an elastic member therein having a suitable seat, and a spring in said seat having converging side members on opposite sides of said elastic member, said side members forming gripping jaws and having their ends outwardly and rearwardly extending and abutting the wall of said casing whereby the same are compressed to increase the gripping action of said jaws.

1,024,564. FRUIT-PITTING MACHINE. JOHN B. FOOTE, Oak Park, Ill. Filed May 26, 1910. Serial No. 563,610. (Cl. 146—5.)

1. In a pitting machine, the combination of a drum having series of cells longitudinally disposed therein, the cells of alternate series being off-set or staggered with respect to the cells of the adjacent series, a receptacle for containing fruit in bulk and disposed to deliver the fruit onto the drum so that the fruit will fall into the cells as the drum is rotated, knives for removing the pits from the fruit in the cells, and mechanism for operating said knives.

2. In a pitting machine, the combination of a drum having series of cells longitudinally disposed therein, the cells of alternate series being off-set or staggered with respect to the cells of the adjacent series, a receptacle for containing fruit in bulk and disposed to deliver the fruit onto the drum so that the fruit will fall into the cells as the drum is rotated, a plural series of knives for removing the pits from the fruit in the cells, and mechanism for operating said knives.

3. In a pitting-machine, the combination of a drum having a plural series of cells therein, mechanism for rotating the drum, a plural series of knives, the series of knives being in staggered relation to one another, the series of cells being correspondingly disposed in the drum, a stationary die in the drum through which the knives pass, and mechanism for operating the plural series of knives to simultaneously remove the pits from corresponding series of cells in the drum.

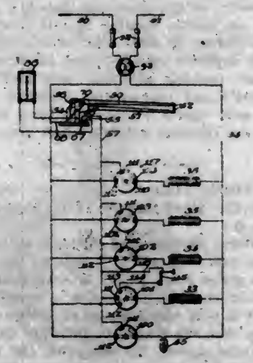


4. In a pitting-machine, the combination of a drum having a series of bottomless cells therein, a stationary support within the drum for holding the fruit in the cells, pitter-knives for removing the pits from the fruit in the cells, mechanism for rotating the drum, and mechanism for operating the knives.

5. In a pitting-machine, the combination of a drum having a series of bottomless cells therein, a stationary support within the drum for holding the fruit in the cells, pitter-knives for removing the pits from the fruit in the cells, mechanism for rotating the drum, mechanism for operating the knives, and means for delivering the fruit to the cells in the drum.

[Claims 6 to 29 not printed in the Gazette.]

1,024,565. CONSTANT-TEMPERATURE BATH. THOMAS B. FREAS, Chicago, Ill., assignor to V. Weber & Company, Chicago, Ill., a Corporation of Illinois. Filed Mar. 22, 1911. Serial No. 616,207. (Cl. 219—35.)



1. In apparatus of the class described, the combination of a bath receptacle, an electric heater therefor, an automatic switch subject to the temperature within the bath, and a second automatic switch subject to the temperature outside of the bath, one of said switches being adapted to open the circuit of said heater at one point, and the other adapted to open said circuit at another point, said heater being therefore unenergised unless both of said switches are closed.

2. In apparatus of the class described the combination with a bath receptacle of a heater, means responsive to the temperature outside of said receptacle for controlling said heater and means independent of the first and responsive to the temperature within the bath also for controlling the said heater.

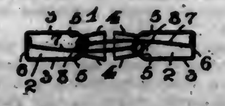
3. In apparatus of the class described the combination of a heater, and two automatic switching devices for controlling the same, one of said switching devices being responsive to the temperature of the room and the other to the temperature of the bath, said switches being capable of operating independently of each other, and adapted to open and close the circuit of said heater at different points therein.

4. In apparatus of the class described the combination of a heater, two automatic switching devices for controlling the same, one of said switching devices being responsive to the temperature of the room and the other to the temperature of the bath, and a second heater, controlled by one and not the other of the aforesaid switching devices.

5. In apparatus of the class described the combination with a bath receptacle of an electric heater, a thermostatic switch responsive to the temperature outside of said receptacle for closing the circuit through said heater, and a second thermostatic switch responsive to the temperature within said receptacle for closing the circuit through the first thermostatic switch, whereby the opening of either of said switches turns off said heater.

[Claims 6 to 12 not printed in the Gazette.]

1,024,566. COUPLING DEVICE OR CLASP. CHARLES A. GIFFORD, Newark, N. J. Filed Apr. 10, 1911. Serial No. 620,201. (Cl. 24—230.)



1. A holding device or catch comprising separable hollow body-portions open at one end, a spring-like arm within each hollow body-portion, each spring-like arm having a portion projecting beyond the open end of the hollow body-portion in which it is arranged, a retaining nosing within the interior of each body-portion, and means upon the projecting end-portion of said spring-like arms adapted to be brought into holding engagement with the said retaining nosings when the said hollow body-portions are caused to assume their interconnected or holding relations, substantially as and for the purposes set forth.

2. A holding device or catch comprising separable hollow body-portions open at one end, a centrally disposed longitudinally extending spring-like arm secured within the interior of each body-portion and projecting beyond the open end thereof, a rib or nosing within the interior of each hollow body-portion, and a lock-piece or bar connected with the free end of each spring-like arm, said lock-pieces or bars engaging said ribs or nosings of the opposed body-portions, and said lock-pieces or bars being maintained in such engagement by their respectively opposite spring-like arms, substantially as and for the purposes set forth.

1,024,567. AUTOMOBILE-FRONT. ALBERT E. GOODERHAM, Toronto, Ontario, Canada. Filed Aug. 13, 1907. Serial No. 388,298. (Cl. 21—81.)

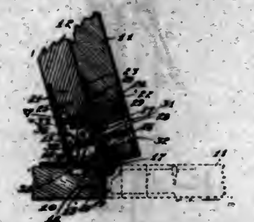
1. An automobile front comprising a lower member, an upper member arranged to be moved into the same vertical plane as the lower member, or into a plane at an inclination thereto, so as to present an opening between the top edge of the lower member and the bottom edge of the upper member, foldable means for pivotally supporting, and other means for holding, the upper member in its adjusted position, said last mentioned means consisting of stay rods, brackets slidable on the stay rods, and braces pivotally connected to the brackets and upper member.

2. An automobile front comprising a lower sash, a supporting frame consisting of two lower sections, two upper sections, hinge members connecting the lower sections to the upper sections, and bracing sleeves slidable on the supporting frame inclosing the hinge members and engaging the lower and upper sections to hold them rigidly alined, an upper sash pivotally connected to the upper sections of the supporting frame and arranged to be moved into the same vertical plane as the lower sash, or into a plane at an angle to the vertical plane, so as to present an opening between the top edge of the lower sash, and the bottom edge of the upper sash, or into a plane parallel with the vertical plane, stay rods connected to the lower sections of the supporting frame, brackets slidable on the stay rods, braces pivotally connected to the brackets and to the upper sash, and stops connected to the upper sash to engage the lower sash when in the same vertical plane as the latter.

4. An automobile front comprising a lower sash, a supporting frame consisting of two lower sections, two upper sections, hinge members connecting the lower sections to the upper sections, and bracing sleeves slidable on the supporting frame inclosing the hinge members and engaging the lower and upper sections to hold them rigidly alined, an upper sash pivotally connected to the upper sections of the supporting frame and arranged to be moved into the same vertical plane as the lower sash, or into a plane at an angle to the vertical plane, so as to present an opening between the top edge of the lower sash and the bottom edge of the upper sash, or into a plane parallel with the vertical plane, stay rods connected to the lower sections of the supporting frame, brackets slidable on the stay rods, braces pivotally connected to the brackets and to the upper sash, stops connected to the upper sash to engage the lower sash when in the same vertical plane as the latter, and locking means to fasten the upper sash to the lower sash when the former is lowered into a parallel plane against the latter.

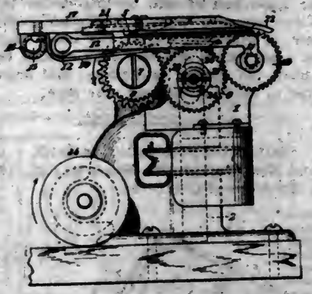
1,024,568. CLOSET-SEAT. WILLIAM S. HAMM, Hubbard Woods, and THOMAS A. LEGGE, Chicago, Ill., assignors to The Adams & Westlake Company, a Corporation of Illinois. Filed Oct. 9, 1911. Serial No. 653,634. (Cl. 4—18.)

1. In a closet seat, in combination, a support, a three-part hinge having one of its members fixed to the support, a spring latch pivoted on the intermediate member and engageable with the third member, the latch having a stem engageable with a trip pocket in the first-named hinge member, a seat attached to the third-named hinge member, and a cover attached to the intermediate hinge member.



2. In combination, a support, a three-part hinge having one of its members fixed to the support, and a spring latch pivoted on the intermediate member and engageable with the third member, the latch having a stem engageable with a trip on the first-named hinge member.

1,024,569. SKIVING-MACHINE. FRANK L. HARMON, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed May 22, 1903. Serial No. 484,312. (Cl. 69—16.)



1. A machine of the class described, having in combination, a shaft, a knife fixed to the upper end thereof, a feed roll, means for rotating said knife shaft at comparatively high speed, and a train of gears connecting said knife-shaft with said feed roll whereby said roll is driven from said shaft at reduced speed.

2. A machine of the class described, having in combination, a shaft, a knife fixed to the upper end thereof, a feed roll, means for rotating said knife shaft at comparatively high speed and a train of positively engaging gears connecting said knife shaft with said feed roll whereby said roll is driven from said shaft at reduced speed.

3. A machine of the class described, having in combination, a shaft, a knife fixed to said shaft, means for rotating said shaft, a feed roll, and a train of gears connecting said shaft and roll, whereby said roll is driven from said shaft, said gears being constructed and arranged to permit the distance of said roll from said shaft to be varied.

4. A machine of the class described, having in combination, a shaft, a knife fixed to the upper end thereof, means for rotating said shaft, a feed roll, a train of gears between said shaft and roll by which said roll is driven from said shaft, and means whereby one of said gears may be adusted to permit relative bodily movement between said shaft and roll while maintaining the mesh of said gears.

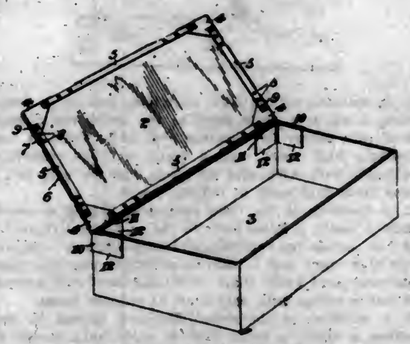
5. A machine of the class described, having in combination, a shaft, a knife mounted upon the upper end thereof, a feed roll, means for actuating said knife and roll, a presser foot and means whereby the relative positions of said foot and roll with respect to said knife may be simultaneously varied.

1,024,570. SAFETY-RAZOR. MARTIN HAUSER, Richmond Hill, N. Y. Filed Dec. 5, 1910. Serial No. 595,591. (Cl. 30—12.)



In a safety razor, the combination of a tubular handle having at its rear part a longitudinal slot and having a closed upper end having an elongated slot, a blade holding frame carried on said handle and provided at its lower edge with guard teeth and corner guards, a blade having its lower corners received in said corner guards, a holding device having a flat shank extending through said elongated slot and having its lower end bent rearwardly, a set-screw passing through said longitudinal slot and screwed into said shank, a spiral spring interposed between said set-screw, and the closed upper end of the handle, the upper end of said holding device being bent forwardly over the rear edge of said blade and provided with a pair of divergent fingers the inner finger being adapted to engage over the rear edge of said blade and press the blade flat against said frame, said fingers being also adapted to embrace the said rear edge.

1,024,571. BOX-LID-ATTACHING MEANS. LOUIS I. HEILBRUN, New York, N. Y. Filed May 25, 1911. Serial No. 629,306. (Cl. 217—58.)



1. Box-lid attaching means comprising a lid-frame and box-attaching means connected thereto, said frame consisting of corner-members adapted to fit over the lid corners and being provided with locking clips, and tie-members connecting said corner members and each having a series of openings to receive the locking clips of the latter for effecting detachable and adjustable connection therewith.

2. Box-lid attaching means comprising a lid-frame and box-attaching means hinged thereto, said frame consisting of corner members adapted to fit over the lid corners and being provided with locking clips, and U-shaped tie-members connecting the corner members and each having a series of openings adjacent its opposite ends to receive the locking clips of said corner members for effecting detachable and adjustable connection therewith.

3. Box-lid attaching means comprising a lid-frame and box-attaching means hinged thereto, said frame consisting of corner members adapted to fit over the lid corners and being provided with locking clips at opposite sides thereof, and U-shaped tie-members adapted to fit over the edges of the lids and each being provided at its opposite ends with a pair of oppositely disposed arms each having a series of openings to receive the locking clips of said corner members for effecting detachable and adjustable connection therewith.

4. Box-lid attaching means comprising a frame consisting of corner members provided with locking clips, and tie-members connecting said corner members and each having a series of openings to receive the locking clips of the latter for effecting detachable and adjustable connection therewith.

1,024,572. MAGNETIZABLE WEDGE FOR DYNAMO-ELECTRIC MACHINES. RUDOLF E. HELLMUND, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Aug. 2, 1909. Serial No. 510,839. (Cl. 171—206.)



1. The combination with a core member of a dynamo-electric machine having core slots for the reception of coils, of magnetizable wedges located in the openings of the slots and having laterally projecting side pieces of greater length than the body portions that project beyond the ends of the core slot, and bands for holding the wedges in position.

2. In a dynamo-electric machine, the combination with a magnetizable core member having a plurality of coil-containing slots, of wedges for holding the coils in position each of which comprises a magnetizable strip having side pieces the ends of which project beyond the body portions and the ends of the core slots, and bands surrounding the projecting ends of the wedges for preventing their displacement.

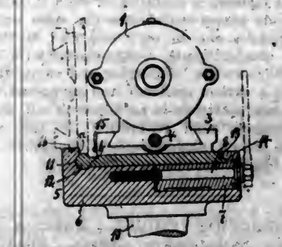
3. In a dynamo-electric machine, the combination with a magnetizable core member having teeth which form slots for the reception of coils and are provided with grooves in their sides and adjacent to their free ends, of wedges for holding the coils in position in the slots each of which comprises a magnetizable strip having centrally located longitudinal slots and side pieces projecting beyond the core member, and a plurality of convolutions of band wire surrounding the projecting ends of the side pieces for preventing their displacement.

1,024,573. ELECTRIC ILLUMINATING DEVICE. ROBERT H. HENDERSON, East Orange, N. J., assignor to Westinghouse Lamp Company, a Corporation of Pennsylvania. Filed May 19, 1909. Serial No. 497,058. (Cl. 240—6.)



A mounting for tubular electric lamps, comprising a shade, a plurality of insulators extending the full width of the cross section of said shade, secured to said shade and properly spaced apart, said insulators having a central opening adapted to receive a connecting device for succeeding lamps, which consists of a hollow tubular conducting member provided with an integral boss at one end, a rod slidably mounted in said conducting member and means adapted to maintain said rod in a given position, the integral boss of said conducting member engaging a recessed terminal of a lamp, while the adjustable rod engages a recessed terminal of another lamp.

1,024,574. DEVICE FOR THE FACILITATION OF THE EXCHANGE OF BORES IN ROCK-DRILLS. FREDRIK CHRISTIAN ANDREAS HERSTAD, Finspång, Sweden. Filed Jan. 4, 1910. Serial No. 536,267. (Cl. 125—10.)



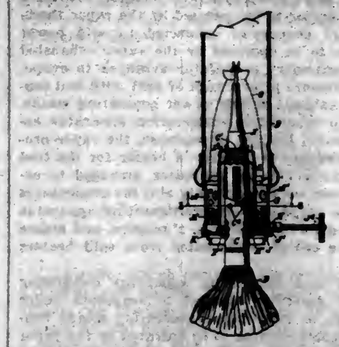
1. In a device of the class described, in combination, a drill and a bed upon which said drill is mounted, said bed being provided with a rounded groove and said drill being provided with a rounded portion engaging said groove, whereby said drill may be rotated with respect to said bed, said groove and said rounded portion extending parallel to the axis of the drill bar, said groove and said rounded portion lying to one side of a vertical plane passing through the longitudinal axis of the drill bar.

2. In a device of the class described, in combination, a drill and a bed upon which said drill is mounted, said bed being provided with an arc-shaped groove and said drill being provided with an arc-shaped portion engaging said groove, whereby said drill may be rotated with respect to said bed, said groove and said portion extending parallel to the axis of the drill and said groove comprising an arc greater than a semi-circumference whereby lateral movement of the drill with respect to the bed is prevented.

3. In a device of the class described, in combination, a drill and a bed upon which said drill is mounted, said bed being provided with a rounded groove and said drill being provided with a rounded portion engaging said groove, whereby said drill may be rotated with respect to said bed, said groove and said rounded portion extending parallel to the axis of the drill, said rounded portion being longitudinally slidable with respect to said groove.

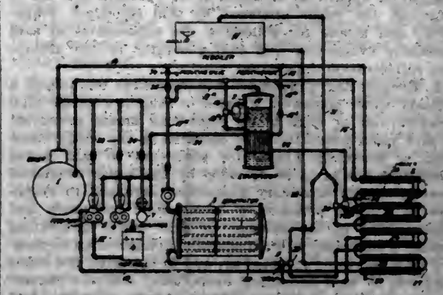
1,024,575. VAPOR-BURNER. MATHIAS SOMA HERZOG, New York, N. Y. Filed May 18, 1908. Serial No. 433,525. (Cl. 67—45.)

The combination of a vapor chamber, the outer wall of which is formed with inwardly bent portions, a wall surrounding said outer wall and provided with outwardly bent portions in registry with said inwardly bent portions and forming therewith mixing tubes open at the bottom to receive air, said surrounding wall being further provided with a perforated portion at its top for the discharge of the mixture of vapor and air, a wick tube located concentrically of said vapor chamber and having openings in communication therewith, means for heating the volatile substance fed by the wick, a pressure chamber provided with outlets arranged to discharge jets of vapor into said mixing tubes, an outlet tube extending from a point above the bottom of the vapor chamber and arranged



for connection with said pressure chamber and a valve controlling said connection.

1,024,576. EVAPORATING APPARATUS. NICOLAI H. HILLER, Carbondale, Pa. Filed Feb. 5, 1912. Serial No. 675,642. (Cl. 203—5.)



1. Evaporating and condensing apparatus comprising a primary vapor generator adapted to evaporate under high pressure, one or more power-generating means connected to said vapor generator to be operated by the vapor therefrom, a secondary evaporator connected to said power generating means to be operated by the vapor exhausted therefrom, said secondary evaporator arranged to evaporate at a lower pressure by exchange of heat with and condensation of the exhaust of said power generating means, a generator of an absorption refrigeration apparatus arranged to be operated by, and to condense, the vapor produced by said secondary evaporator, and means for collecting the condensates of said secondary evaporator and said generator of the absorption refrigeration apparatus.

2. Evaporating and condensing apparatus comprising a primary vapor generator adapted to evaporate under high pressure, one or more power-generating means connected to said vapor generator to be operated by the vapor therefrom, a secondary evaporator connected to said power generating means to be operated by the vapor exhausted therefrom, said secondary evaporator arranged to evaporate at a lower pressure by exchange of heat with and condensation of the exhaust of said power generating means, a generator of an absorption refrigeration apparatus arranged to be operated by, and to condense, the vapor produced by said secondary evaporator, a reboiler, and means for conveying thereto the condensates from said secondary evaporator and said generator of the absorption refrigeration apparatus.

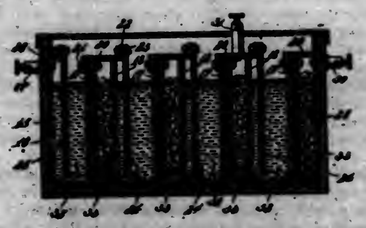
3. Evaporating and condensing apparatus comprising a primary vapor generator adapted to evaporate under high pressure, one or more power-generating means connected to said vapor generator to be operated by the vapor therefrom, a secondary evaporator connected to said power generating means to be operated by the vapor exhausted therefrom, said secondary evaporator arranged to evaporate at a lower pressure by exchange of heat with and condensation of the exhaust of said power generating means, a generator of an absorption refrigeration apparatus arranged to be operated by, and to condense, the vapor produced by said secondary evaporator, a heater for the feed supply of said primary vapor generator arranged to exchange heat between such feed supply and the condensates of said secondary evaporator and refrigerating apparatus generator, under different pressures, a reboiler, and means for conveying the cooled condensates from said heaters to said reboiler.

4. Evaporating and condensing apparatus comprising a primary vapor generator adapted to evaporate under high pressure, one or more power-generating means connected to said vapor generator to be operated by the vapor therefrom, a secondary evaporator connected to said power generating means to be operated by the vapor exhausted therefrom, said secondary evaporator arranged to evaporate at a lower pressure by exchange of heat with and condensation of the exhaust of said power generating means, a direct connection, including pressure reducing means, between said primary vapor generator and said secondary evaporator, a generator of an absorption refrigeration apparatus arranged to be operated by, and to condense, the vapor produced by said secondary evaporator, and means for collecting the condensates of said secondary evaporator and said generator of the absorption refrigeration apparatus.

5. Evaporating and condensing apparatus comprising a primary vapor generator adapted to evaporate under high pressure, one or more power-generating means connected to said vapor generator to be operated by the vapor therefrom, a secondary evaporator connected to said power generating means to be operated by the vapor exhausted therefrom, said secondary evaporator arranged to evaporate at a lower pressure by exchange of heat with and condensation of the exhaust of said power generating means, a generator of an absorption refrigeration apparatus, arranged to be operated by, and to condense, the vapor produced by said secondary evaporator, a direct connection, including pressure reducing means, between said primary vapor generator and the generator of said refrigeration apparatus, and means for collecting the condensates of said secondary evaporator and said generator of the absorption refrigeration apparatus.

[Claims 6 and 7 not printed in the Gazette.]

1,024,577. PRIMARY BATTERY. CHARLES E. HITE, Burlington, N. J. Filed July 27, 1907. Serial No. 385,921. (Cl. 204—51.)

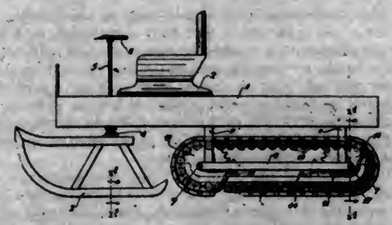


1. In a galvanic battery, the combination of a receptacle, a plurality of non-porous non-conducting partition plates permanently sealed into the sides and bottom of the receptacle forming a plurality of cells therein, porous carbon electrode plates sealed into the sides and bottom of said receptacle, one in each cell and dividing each cell into two compartments, a zinc electrode in one compartment of each cell, a slotted conducting and supporting member secured to a carbon electrode and disengageably connected with and supporting a zinc electrode in an adjacent cell.

2. In a galvanic battery, the combination of a receptacle, a plurality of non-porous non-conducting partition plates permanently sealed into the sides and bottom of the receptacle forming a plurality of cells therein, porous carbon electrode plates sealed into the sides and bottom of said receptacle, one in each cell and dividing each cell into two compartments, a zinc electrode in one compartment of each cell, a conducting and supporting member secured to a carbon electrode and connected with and supporting a zinc electrode in an adjacent cell, the said conducting and supporting member also resting upon and supported by a non-porous non-conducting partition plate.

3. In a galvanic battery, the combination of a receptacle, a plurality of non-porous non-conducting partition plates permanently sealed into the sides and bottom of the receptacle forming a plurality of cells therein, porous carbon electrode plates sealed into the sides and bottom of said receptacle, one in each cell and dividing each cell into two compartments, a zinc electrode in one compartment of each cell, a conducting and supporting member secured to a carbon electrode and connected with and supporting a zinc electrode in an adjacent cell, an electrolyte in the compartment containing the zinc electrode, and a soluble crystal depolarizer in the other compartment, as and for the purpose specified.

1,024,578. TRACTION-VEHICLE. HENRY A. HOWARD, Lloydminster, Saskatchewan, Canada. Filed Apr. 15, 1911. Serial No. 621,237. (Cl. 21—47.)

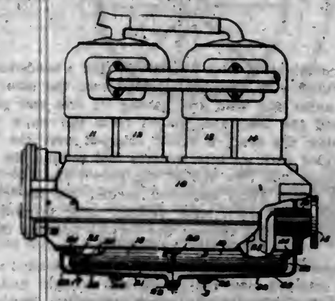


1. A vehicle having a traction mechanism comprising a pair of shafts having mounted thereon pairs of relatively large and relatively small sprocket wheels located between said relatively large sprockets, a wide faced tread belt or endless apron made up of a multiplicity of parallel and transversely connected sprocket chains, the outer of which chains are arranged to run over said relatively large sprocket wheels, sprocket chains arranged to run over said relatively small sprocket wheels, and anti-friction rollers carried by said sprocket chains and extending substantially the full width of said wide faced tread belt or endless apron, said tread belt and anti-friction rollers being independent one from the other.

2. A vehicle having a traction mechanism comprising a pair of shafts having mounted thereon pairs of relatively large and relatively small sprocket wheels located between said relatively large sprockets, a wide faced tread belt or endless apron made up of a multiplicity of parallel and transversely connected sprocket chains, the outer of which chains are arranged to run over said relatively large sprocket wheels, sprocket chains arranged to run over said relatively small sprocket wheels, anti-friction rollers carried by said sprocket chains and extending substantially the full width of said wide faced tread belt or endless apron, said tread belt and anti-friction rollers being independent one from the other, guide rails on which said anti-friction rollers travel on their lower run, and a flexible belt or apron interposed directly between said tread belt and said anti-friction rollers.

3. A combination with a vehicle body, of a traction mechanism comprising transverse shafts, fixed and loose sprockets on said transverse shafts, endless chains arranged to run over said loose sprockets, and provided with an endless series of anti-friction rollers, fixed rails on which the said rollers travel on their lower run, and a wide faced jointed traction belt arranged to run over said fixed sprockets and around the said endless series of anti-friction rollers, and a flexible belt or apron interposed directly between the said tread belt and the anti-friction rollers.

1,024,579. CRANK-CASE. RUSSELL HUFF, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Filed Aug. 7, 1911. Serial No. 642,712. (Cl. 184—13.)



1. In an engine, the combination with a crank case having a plurality of compartments, of a duct formed on the interior of the bottom wall of the crank case and communicating with said compartments, and one of said compartments having a duct connecting the portions thereof on opposite sides of said first mentioned duct.

2. In an engine the combination with a crank case having a plurality of compartments, of a longitudinally extending duct formed on the interior of the bottom wall of the crank case and communicating with said compartments at their remote ends, and said compartments having ducts arranged transversely of said first mentioned duct and connecting the portions of said compartments on the opposite sides of said first mentioned duct.

3. In an engine the combination with a crank case having a plurality of compartments, of a longitudinally extending duct formed on the interior of the bottom wall of the crank case and communicating with said compartments at their remote ends, and said compartments having ducts arranged transversely of and below said first mentioned duct and having communication with said compartments adjacent the walls of said first mentioned duct.

4. In an engine, the combination with a crank case having a plurality of compartments, of a longitudinally extending duct formed on the interior of the bottom wall of the crank case and in communication with said compartments, and each of said compartments having a duct arranged below said first mentioned duct and communicating with the compartment on the opposite sides of said first mentioned duct, and a drain opening in said second mentioned duct.

5. In an engine, the combination of a crank case having a plurality of compartments adapted to contain oil, of a passage extending longitudinally of said crank case and having openings communicating with said compartments at their remote ends and adapted to equalize the level of the oil in said compartments, and means adapted to prevent oil from being splashed into said openings when they are above the surface of the oil.

[Claims 6 to 14 not printed in the Gazette.]

1,024,580. ROLLER-CLUTCH. HUGH M. HUNTER, Cleveland, Ohio, assignor to The National Acme Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Mar. 30, 1911. Serial No. 617,830. (Cl. 192—22.)

1. A roller clutch comprising a cylindrical member and a disk-shaped member fitting therein, said members rotatable one relatively to the other, an oscillatory pocket carried by said disk-shaped member and having a runway, a roller carried by said pocket, and means for oscillating said pocket to bring the roller into engagement with the cylindrical member.



2. A roller clutch comprising a cylindrical member and a disk-shaped member fitting therein, said members rotatable one relatively to the other, an oscillatory pocket carried by said disk-shaped member and having a runway, a roller carried by said pocket, means for oscillating said pocket to bring the roller into engagement with the cylindrical member, and means for oscillating said pocket in the opposite direction.

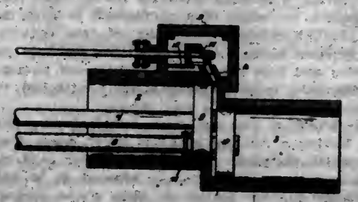
3. A roller clutch comprising a cylindrical member and a disk-shaped member fitting therein, said members rotatable one relatively to the other, an oscillatory pocket carried by said disk-shaped member and having a runway, a roller carried by said pocket, means for oscillating said pocket to bring the roller into engagement with the cylindrical member, and means for oscillating said pocket in the opposite direction, said means comprising a spring pressed plunger.

4. A roller clutch comprising a cylindrical member and a disk-shaped member fitting therein, said members rotatable one relatively to the other, a pair of oppositely disposed oscillatory pockets carried by said disk-shaped member, each having a runway, a roller carried by each pocket, and means for oscillating said pockets to bring the rollers into engagement with the cylindrical member.

5. A roller clutch comprising a cylindrical member and a disk-shaped member fitting therein, said members rotatable one relatively to the other, a pair of oppositely disposed oscillatory pockets carried by said disk-shaped member, each having a runway, a roller carried by each pocket, and means for oscillating said pockets to bring the rollers into engagement with the cylindrical member, said disk-shaped member and pockets constructed to permit the choking of the roller when in one position thereof whereby one member may rotate freely forward but is prevented from rotating backward.

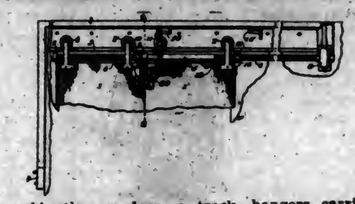
[Claims 6 to 14 not printed in the Gazette.]

1,024,581. RECIPROCATING ENGINE. ANDREW J. JACKSON, Chicago, Ill., assignor of one-tenth to Norman V. Christensen, Chicago, Ill. Filed July 6, 1911. Serial No. 637,140. (Cl. 121—41.)



The combination of a cylinder having inner and outer longitudinal piston chambers open at their outer ends, and offset from and communicating with one another, said cylinder also having an inlet port leading thereinto between said chambers, pistons in the respective chambers, one piston having a bearing to one side of its center through which the rod of the other piston passes.

1,024,582. DOOR-OPERATING MECHANISM. SHERMAN JONES, Newark, N. J. Filed Aug. 17, 1910. Serial No. 577,573. (Cl. 39—94.)



In combination, a door, a track, hangers carried by the door and traveling upon said track, a motor, a threaded shaft connected to and operated by said motor, an interiorly threaded sectional fitting carried by the door and engaging the threads of the shaft whereby the door is shifted when the shaft is operated, means whereby the sections of said fitting can be shifted to disengage the threads thereof from the threads of the shaft to permit of the shifting of the door manually, electrical means for throwing said motor into operation, means carried by one of the hangers and engaging with said electrical means for controlling automatically the distance of door travel, and means for changing the direction of current to the motor.

1,024,583. PHOTOGRAPH-HOLDER. FREDERIC B. KIP, Montclair, N. J. Filed Aug. 5, 1910. Serial No. 575,712. (Cl. 40—158.)



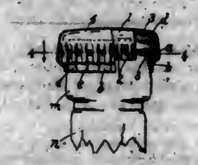
1. A device of the character described comprising a frame having a binding with its inner edges free and under which the edges of a photograph or card may be placed, a flat retainer having pockets to receive and hold the edges of contiguous photographs or cards, said retainer being slidably attached to the frame.

2. A device of the character described comprising a frame having a binding with its inner edges free and under which the edges of a photograph or card may be placed, a flat retainer consisting of two sections fastened together along a longitudinal line to form pockets to receive and hold the edges of contiguous photographs or cards, said retainer being slidably attached to the frame.

3. A device of the character described comprising a frame having a binding with its inner edges free and under which the edges of a photograph or card may be placed, and a movable retainer adapted to be inserted between and to cover contiguous edges of the photographs or cards and to slide between said binding and frame.

1,024,584. BOTTLE-CROWN SHIELD. HENRY E. KNAUST, St. Louis, Mo. Filed Nov. 22, 1911. Serial No. 661,717. (Cl. 215—10.)

1. In combination with a bottle provided with a crown crimped over the mouth thereof, and having its free edge spaced from the outer walls of the bottle, a shield crimped to the crown and having its lower edge extending beyond the corresponding edge of the crown and in engagement with the walls of the bottle, and having an intermediate fold formed behind the edge of the crown spaced from the bottle and sealing said space.



2. In combination with a bottle having a beaded mouth, and provided with a crown crimped over the mouth and brought under the bead and having its free end projecting beyond the bead and spaced from the walls of the bottle below the bead, a shield crimped over the crown and provided with an intermediate fold sealing the clearance between the free end of the crown and the bottle-wall, the shield being extended beyond the sealing fold and hugging the bottle wall, and an outer terminal fold on the shield folded against the portion hugging the bottle-wall.

3. In combination with a bottle having a beaded mouth, a crown crimped over the mouth and brought under the bead, the free edge of the crown extending beyond the bead and spaced from the bottle-wall, thereby leaving a clearance below the bead between the crown and bottle-wall, and a shield crimped over the crown and having a portion brought into said clearance thereby sealing the same against access of dirt thereinto.

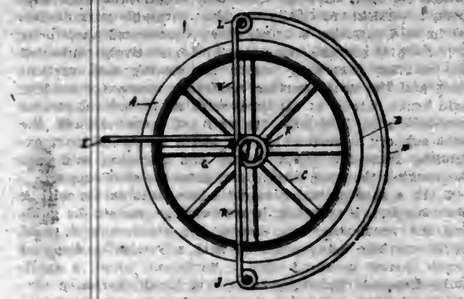
1,024,585. GAS-STOVE. MARTIN LACHNER, Brunswick, Germany. Filed Dec. 6, 1909. Serial No. 531,566. (Cl. 126—85.)



A gas stove comprising a helically-coiled tube of small bore and having such length that during continuous heating the temperature of the combustion gases escaping therefrom will not be much above the temperature of the room being heated, a relatively large bell at the base of said tube, said bell being adapted to be placed over a burner, condensed water discharge tubes leading from each convolution of the helical tube and situated at equidistant points in said tube, a plate having heat reflectors arranged above the bell and the coiled tube as set forth, and an outlet pipe arranged behind the said plate and with which outlet pipe the discharge tube of each of the separate coils of the coiled tube communicate.

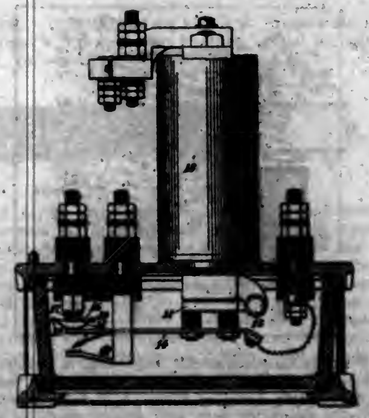
1,024,586. CLOTHES-LINE PULLEY. GEORGE A. LE BARON, Sherbrooke, Quebec, Canada. Filed Jan. 26, 1912. Serial No. 673,631. (Cl. 57—34.)

In a clothes line pulley a wheel having a grooved rim, a solid hub forming journals, a U shaped hanger whose free ends surround the journals and are bent outwardly at right angle to the sides to form offsets, a line guard formed of two sections each made of a single piece of wire coiled and bent to form journal bearings for the wheel,



supporting arms and connecting means for joining the sections together and the guard proper extending over the rim of the wheel; the bent ends of the hanger being adapted for engagement with the arms of the guard, thereby holding said guard against rotation with the wheel.

1,024,587. ELECTRIC-CIRCUIT-CONTROLLING APPARATUS. THOMAS L. LEE, Jr., Westfield, N. J., assignor to The Hall Signal Company, a Corporation of Maine. Filed June 29, 1910, Serial No. 569,425. Renewed Dec. 19, 1911. Serial No. 666,839. (Cl. 175—281.)



1. In an electric circuit controlling apparatus, a contact device comprising a contact member having a rough, broken or interrupted surface, a second contact device having a relatively soft or quickly wearing coacting surface, and a supporting member for the first contact member consisting of two supporting arms having an elastic tendency to separate, the first contact member and the two supporting arms having hooking portions adapted to be hooked together and held in hooked engagement by the separating tendency of the supporting arms.

2. In an electric circuit controlling apparatus, a contact device comprising a flexible contact member having a rough, broken or interrupted surface, a second contact device having a relatively soft or quickly wearing coacting surface, and a supporting member for the first contact member consisting of two supporting arms having an elastic tendency to separate, the first contact member and the two supporting arms having hooking portions adapted to be hooked together and held in hooked condition by the separating tendency of the supporting arms.

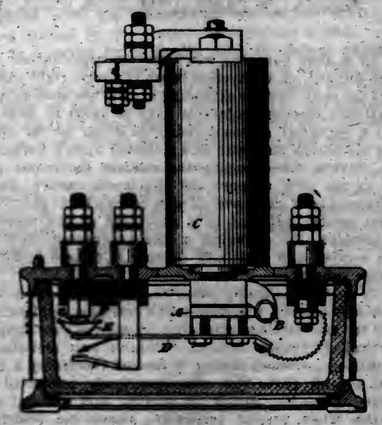
3. In an electric circuit controlling apparatus, a contact device comprising a contact member having a rough, broken or interrupted surface, a second contact device having a relatively soft or quickly wearing coacting surface, and a mounting for the first contact member consisting of two supporting members having an elastic tendency to separate and having recessed supporting ends, the first contact member having hooking portions arranged to detachably hook in such recessed ends.

4. In an electric circuit controlling apparatus, a contact device comprising a flexible contact member having a rough, broken or interrupted surface, a second contact device having a relatively soft or quickly wearing coacting surface, and a mounting for the first contact member consisting of two supporting members having an elastic tendency to separate and having recessed supporting ends, the first contact member having hooking portions arranged to detachably hook in such recessed ends, the first contact member being held under tension and in hooked engagement with the supporting members by the elastic tendency of the supporting members to separate.

5. In an electric circuit controlling apparatus, a contact device comprising a wire gauze contact member adapted to be supported at two points like a bridge, a reinforcing member for each supporting point of the contact member, and a mounting for the contact member including two supporting arms having an elastic tendency to separate, the supporting arms each having a hooking portion adapted to be detachably hooked to a reinforcing member of the contact member and to be held in hooked connection therewith by the elastic separating tendency of the supporting arms.

[Claims 6 to 10 not printed in the Gazette.]

1,024,588. ELECTRIC-CIRCUIT-CONTROLLING APPARATUS. THOMAS L. LEE, Jr., Westfield, N. J., assignor to The Hall Signal Company, a Corporation of Maine. Filed Feb. 12, 1910, Serial No. 543,540. Renewed Dec. 19, 1911. Serial No. 666,840. (Cl. 175—281.)



1. Electric circuit-controlling apparatus comprising two contact devices movable only toward and from each other, one of such contact devices having a flexible contact surface yieldingly held under tension.

2. Electric circuit-controlling apparatus comprising a contact device with a relatively soft surface, a second contact device with a rough, broken or interrupted surface adapted to wear contact recesses into the soft surface of the first said device, and means for pressing said devices together.

3. Electric circuit-controlling apparatus comprising a flexible contact device under tension and having a rough, broken or interrupted contact surface, a second contact device with a relatively soft surface, and means for press-

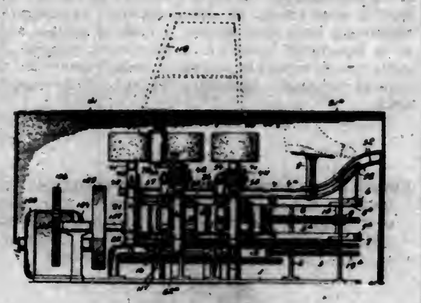
ing the two devices together to bring the second device into contact with the prominent points on the surface of the flexible device.

4. Electric circuit-controlling apparatus comprising a contact device with a relatively soft or quick wearing surface, a second and flexible contact device having a rough, broken or interrupted surface adapted to wear contact recesses into the soft surface of the first contact device, and means for pressing the contact devices together.

5. Electric circuit-controlling apparatus comprising two contact devices movable only toward and from each other, one contact device of relatively soft or quick wearing material, and the other contact device having a yielding flexible contact surface adapted to conform itself to the surface of the first contact device and to wear contact recesses into the soft surface of the first contact device.

[Claims 6 to 14 not printed in the Gazette.]

1,024,589. SHOE-POLISHING MACHINE. WILLIAM H. MCCONNELL, Richmond, Va., assignor to International Machine Corporation, Richmond, Va., a Corporation of Virginia. Filed Dec. 13, 1909, Serial No. 532,834. Renewed Sept. 15, 1911. Serial No. 649,561. (Cl. 15—61.)



1. In a shoe polishing machine, the combination with a shoe support, of a traveling brush carriage, rigid guiding means for said carriage extending around the shoe support, a vertically disposed rotatable part mounted in said carriage, a vertically disposed rotatable brush carrier operatively connected therewith and mounted upon a horizontal pivot, devices for changing the relative horizontal positions of the shoe support and the brush carrier, during a portion only of the travel of said carriage and stationary devices located adjacent to a part only of the travel of the carriage, for engaging a part connected with the brush carrier, and positively rocking it toward and from the shoe support.

2. In a shoe polishing machine, the combination with a shoe support, of a traveling brush carriage, rigid guiding means for said carriage extending around the shoe support, a vertical, vertically movable, rotatable part mounted in said carriage, a brush carrier connected thereto by a horizontal pivotal connection and operatively connected for rotation therewith, means for moving said vertical part and the brush carrier vertically, means for positively rocking said brush carrier toward and from the shoe support and means for driving said vertical part to effect the rotation of the brush carrier.

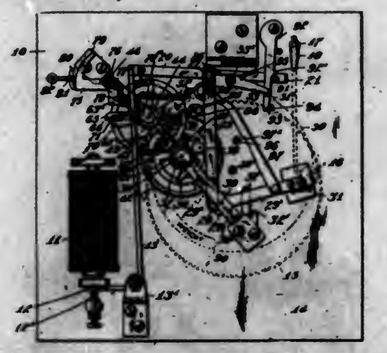
3. In a shoe polishing machine, the combination with a shoe support, of a traveling brush carriage, rigid guiding means for said carriage extending around the shoe support, a vertical, vertically movable, rotatable part mounted in said carriage, a brush carrier connected thereto by a horizontal pivotal connection and operatively connected for rotation therewith, means for moving said vertical part and brush carrier vertically, means for holding said brush carrier at all times with its horizontal pivotal connection in line with its path of travel around the shoe support, means for positively rocking the brush carrier toward and from the shoe support, and driving means for the said vertical part.

4. In a shoe polishing machine, the combination with a shoe support, of a traveling brush carriage, rigid guiding means for said carriage extending around the shoe support, a vertical, vertically movable, rotatable part mounted in said carriage, a brush carrier connected thereto by a horizontal pivotal connection and operatively connected for rotation therewith, means for moving said vertical part and the brush carrier vertically, means for holding said brush carrier at all times with its horizontal pivotal connection in line with its path of travel around the shoe support, a stationary cam and a horizontal part extending from the brush carrier and engaging said cam for rocking the same toward and from the shoe support.

5. In a shoe polishing machine the combination with a shoe support, a traveling brush carriage, means for guiding the brush carriage around the shoe support, said brush carriage being provided with a vertically disposed brush carrier mounted upon a horizontal pivot, a vertically disposed rotary brush on said brush carrier, a stationary lifting cam track for elevating the brush carrier with respect to the other portions of the brush carriage, a part connected with the pivoted brush carrier for rocking the same toward and from the shoe support, and provided with a cam engaging portion, and a second stationary cam track adjacent to the first mentioned cam track for engaging the said cam engaging portion.

[Claims 6 to 31 not printed in the Gazette.]

1,024,590. SELECTIVE SIGNALING MEANS. JUDSON MCFELL, Chicago, Ill. Filed July 27, 1910. Serial No. 574,157. (Cl. 177—332.)



1. Selective signaling means comprising, in combination, an impulse receiver; mechanism impulsively movable thereby including a step-up device; a movable motor part operatively associated with said step-up device to be restrained thereby except at predetermined number-indicating release-positions of the step-up device, positive restraining means for said motor part arranged to be actuated by the impulse-receiver to release the said motor part, and retarding means operatively associated with said restraining means to retard its releasing movement.

2. Selective signaling means comprising, in combination, an impulse-receiver, a vibratable lever moved thereby, a step-up device actuated by the vibratable lever, a movable motor part, means for positively restraining movement of the motor part, movable with the step-up device, and arranged to release the motor part at predetermined number-indicating positions; other positive restraining means for said motor part movable by the vibratable lever to release the motor part; and a retard device arranged to retard the releasing movement of the last said restraining means.

3. Selective signaling means comprising in combination a magnet; an armature lever therefor; a step-up device actuated by said armature lever, said lever having a movement in excess of that necessary to operate the step-up device; retard mechanism arranged to delay the excess movement of the armature lever; a movable motor part; an annunciator mechanism controlled by said motor part; positive restraining means for the motor part, movable with the step-up device, and arranged to release the motor part at predetermined positions; and other positive restraining means for the motor part associated with the armature lever for movement thereby to releasing position only when said lever effects its excess movement against the action of the retard mechanism.

4. Selective signaling means comprising in combination a part to be moved; motor means to move it; a rotatable controller governing the operation of said motor means; a step-up device coacting with said controller, arranged to restrain or release the controller according to the position of the step-up device; mechanical retarding means for said controller part; and an impulse-receiver arranged to actuate both the step-up device and the retarding means.

5. Selective signaling means comprising in combination a part to be moved; motor means to move it; a rotatable controller governing the operation of said motor means and providing a plurality of stops; a step-up device providing a movable wall having therein a plurality of openings, arranged to restrain or release said controller according to the relation of the wall-openings to the controller stops; other positive restraining means for said controller; a retard device arranged to delay the releasing operation of the last said restraining means; and an impulsive receiver arranged to actuate both the step-up device and the other said restraining means.

[Claims 6 to 26 not printed in the Gazette.]

1,024,591. DISINFECTING DEVICE. GEORGE MICHELS, Astoria, N. Y. Filed Mar. 22, 1910. Serial No. 550,847. (Cl. 167—3.)



1. A disinfecting device consisting of a container, a compartment for disinfectant in one end of said container, a perforated compartment for mineral wool in said container and a supporting member adapted to lie flat against said device, said device being pivotally connected to said member.

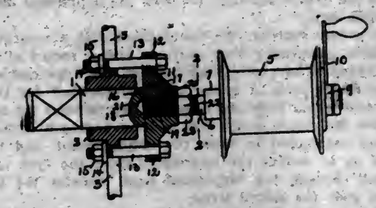
2. A disinfecting device consisting of a container, a compartment for disinfectant in one end of said container, a perforated compartment for mineral wool in said container and a supporting member adapted to lie flat against said device, said device being pivotally connected to said member and be rotated thereon, whereby the flow of disinfectant from said disinfectant compartment may be stopped.

3. A disinfecting device consisting of a container, a compartment for disinfectant in one end of said container, a perforated compartment for mineral wool in said container and a supporting member adapted to lie flat against said device, said device being pivotally connected to said member and be rotated thereon, whereby the flow of disinfectant from said disinfectant compartment may be stopped, means for securing the ends of said device to said supporting member.

1,024,592. DEVICE FOR ATTACHING REELS TO ENGINES. FRED JOSEPH MOSER, Kane, Pa. Filed May 20, 1911. Serial No. 628,601. (Cl. 242—45.)

1. In a device for attaching reels to engines having an engine shaft, the combination of a plate adapted to seat on the face of the shaft; a clamp for securing the plate on the face of the shaft; a reel comprising a reel shaft of small diameter compared to the engine shaft; and means for attaching the reel to the plate.

2. In a device for attaching reels to engines having an engine shaft, the end of said shaft having a centering surface at its axis, the combination of a plate adapted to seat on the end of the shaft; a clamp for securing the plate on the face of the shaft; means adapted to operate upon the centering surface for centering the plate in relation to the shaft; a reel having a shaft of small diameter compared to the engine shaft; and mechanism for attaching the reel to the plate.

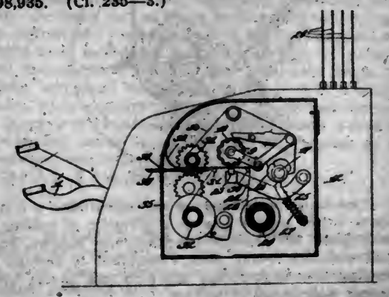


3. In a device for attaching reels to engines having an engine shaft, said shaft having a centering surface at its axis, the combination of a plate adapted to seat on the end of the shaft, said plate having a screw threaded perforation at its center; a clamp for securing the plate on the end of the shaft; a reel shaft of small diameter compared with the diameter of the engine shaft having an end adapted to operate upon the centering surface of the shaft to center the plate, said reel shaft being provided with screw threads for operating upon the screw threaded perforation in the plate; and a reel on the reel shaft.

4. In a device for attaching reels to engines having an engine shaft with a centering surface on its end at its axis; a plate for supporting a reel, said plate having a perforation at its center; means for securing the plate to the engine shaft; a device operating through the perforation and upon the centering surface for centering the plate; a reel, comprising a reel shaft of small diameter compared with the diameter of the engine shaft; and means carried by the plate for supporting a reel.

5. In a device for attaching reels to engines having an engine shaft, the combination of a plate adapted to seat and center on the end of the shaft; a clamp for securing the plate on the end of the shaft; and a reel comprising a reel shaft of small diameter compared with the engine shaft, said reel shaft being supported by said plate.

1,024,593. CASH-REGISTER. WILLIAM H. MUZZY, New York, N. Y., assignor to The National Cash Register Company, Dayton, Ohio, a Corporation of Ohio, (incorporated in 1906.) Filed May 28, 1909. Serial No. 498,935. (Cl. 235—3.)



1. In a cash register, the combination with a recording mechanism comprising type carriers and a record strip, means for taking an impression upon the record strip from the type carriers, and a check having transferring material upon one side interposed between the type carriers and the record strip so as to receive the impression

from the type carriers and through means of the transferring material reproduce the impression upon the record strip.

2. In a cash register, the combination with a recording mechanism comprising type carriers and a record strip, of an inking ribbon interposed between the type carriers and the record strip, means for taking an impression from the type carriers through the ribbon upon the record strip, and a check having a carbonized back interposed between the inking ribbon and the strip so as to receive the impression from the type carriers and through the carbonized back transfer the impression upon the record strip.

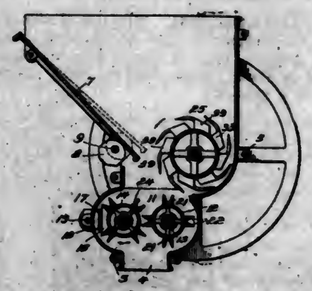
3. In a cash register, the combination with a recording mechanism comprising type carriers and a record strip, of an inking ribbon interposed between the type carriers and the record strip, a spring operated hammer for taking an impression from the type carriers through the ribbon upon the record strip, and a check having a carbonized back interposed between the inking ribbon and the strip so as to receive the impression from the type carriers and through the carbonized back transfer the impression upon the record strip.

4. In a cash register, the combination with a recording mechanism comprising type carriers and a record strip, of an inking ribbon, means for taking an impression from the type carriers through the ribbon upon the record strip, and a check having transferring material upon one side of a different color than the ribbon, interposed between the ribbon and the strip so as to receive the impression from the type carriers and through means of the transferring material reproduce the impression upon the record strip, which reproduction will be of a different color, than when the impression is made upon the strip in the absence of the check.

5. In a cash register, the combination with a recording mechanism comprising type carriers and a record strip, means for taking an impression upon the record strip from the type carriers, a check interposed between the type carriers and the strip so as to receive the impression simultaneously with the strip, said impression means making the impression upon the strip in a different color in the absence of the check.

[Claims 6 to 9 not printed in the Gazette.]

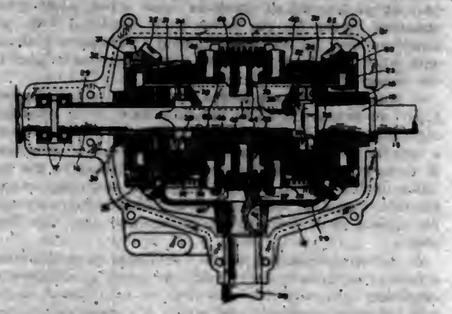
1,024,594. MACHINE FOR CUTTING UP ICE. EDWARD E. NOLAN and WILLIAM H. PIERCE, Chicago, Ill., assignors to George S. Blakeslee, Chicago, Ill. Filed June 28, 1909. Serial No. 504,804. (Cl. 83—63.)



1. A machine for cutting up ice, comprising a hopper, a rotary cutter therein having a plurality of cutting devices disposed at intervals longitudinally thereof, and a pair of coacting rotary cutters arranged to receive material from the hopper, the latter cutters having blades extending longitudinally thereof.

2. A machine for cutting up ice, comprising a hopper, a rotary cutter therein having a plurality of cutting devices disposed at intervals longitudinally thereof, and a pair of coacting rotary cutters arranged to receive material from the hopper, the latter cutters having blades extending longitudinally thereof and arranged in pairs.

1,024,595. COMBINED FRICTION AND JAW CLUTCH. HENRY F. NOYES, Bridgeport, Conn., assignor to The Black Rock Machine Company, Bridgeport, Conn., a Corporation of Connecticut. Filed July 17, 1911. Serial No. 638,905. (Cl. 192—4.)



1. The combination with a driving element and a driven element, of a friction clutch connecting said elements, a positive clutch connecting said elements, a shaft, means for turning said shaft, and cams on said shaft for separately controlling the engagement of said clutches.

2. The combination with a driving element and a driven element, of a friction clutch connecting said elements, a positive clutch connecting said elements, clutch forks for operating said clutches, a shaft, means for turning said shaft, and cams on said shaft for operating said clutch fork.

3. The combination with a driving element and a driven element, of a friction clutch connecting said elements, a positive clutch connecting said elements, and cams for separately controlling said clutches to cause their successive engagement.

4. The combination with a driving element and a driven element, of a friction clutch connecting said elements, a positive clutch connecting said elements, and cams for controlling said clutches to cause their successive engagement and the subsequent disengagement of said friction clutch.

5. The combination with a driving shaft and a driven shaft, of a sleeve fast on one of said shafts, a sleeve loose on the other of said shafts, said sleeves being provided with clutch projections, a combined clutch and gear ring carried by each of said sleeves, a gear connecting said rings, means on said last named shaft for engaging said clutch projections, and other means on said last named shaft for frictionally engaging said rings.

[Claims 6 and 7 not printed in the Gazette.]

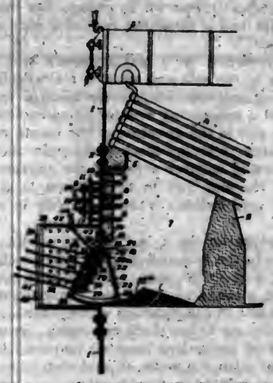
1,024,596. APPARATUS FOR BURNING LIQUID FUEL. WILLIAM EDWARD OAKLEY, Millbury, Mass. Filed Apr. 9, 1908. Serial No. 426,008. (Cl. 158—4.)

1. An apparatus for burning liquid fuel, having a combustion chamber provided with an opening, fuel pans supported in a horizontal position in said opening, and means for varying the distance between said pans without disturbing the horizontal position of said pans.

2. In an apparatus of the class described, the combination with a combustion chamber provided with an opening, of fuel pans supported on parallel bars pivotally hung in said opening, means for swinging said bars, hinged dampers arranged to close the apace between said pans, and means for swinging said dampers.

3. In an apparatus of the class described, the combination with a combustion chamber provided with an opening, of a rocking frame pivotally hung in said opening, fuel pans supported by said frame and a bowl shaped receptacle attached to the bottom of said frame.

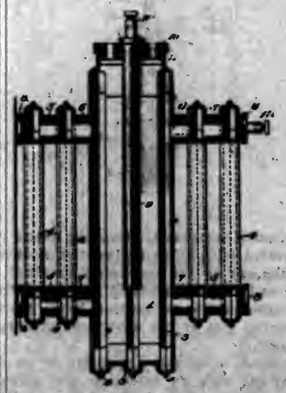
4. In an apparatus of the class described, the combination with a combustion chamber provided with an opening, of a rocking frame pivotally hung in said opening, fuel pans supported by said frame and a bowl shaped receptacle attached to the bottom of said frame, with the bottom of said opening provided with a bowl shaped surface in contact with said bowl shaped receptacle.



5. An apparatus for burning liquid fuel, having a combustion chamber provided with an opening, fuel pans supported in a horizontal position in said opening, and means for simultaneously adjusting said pans to vary the distances between them without disturbing the horizontal position of said pans.

[Claims 6 to 8 not printed in the Gazette.]

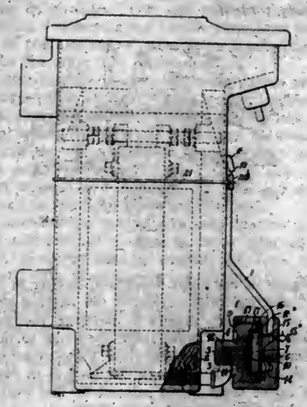
1,024,597. ELECTROLYTIC CELL. OSCAR H. PIEPER and ALPHONSE F. PIEPER, Rochester, N. Y. Filed Oct. 9, 1908. Serial No. 456,922. (Cl. 171—253.)



An electrolytic cell comprising a hollow electrode chamber and radiating chambers with passageways connecting them at the tops and bottoms and also connecting them with electrode chamber, the bottom of the latter being lower than the bottom of the other chambers and forming a sediment collecting pocket, said chambers and passageways being formed in an integral casting having apertures in alinement with the passageways and clean out plugs fitted in said apertures.

1,024,598. SEPARATING APPARATUS FOR LIQUIDS. KARL C. RANDALL, Edgewood Park, and CHARLES B. GIBSON, Wilkinsburg, Pa., assignors to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed July 13, 1910. Serial No. 571,785. (Cl. 210—16.)

1. The combination with a receptacle for electrical apparatus and insulating liquid, of means for withdrawing water from said receptacle comprising a hollow body provided with a filtering partition, means for connecting the chamber at one side of the partition to the interior of the receptacle near its bottom, and a water-filled pipe projecting from the other chamber approximately to the surface of the liquid in the receptacle.



2. The combination with a receptacle for electrical apparatus and a body of insulating liquid, of a hollow body in open communication with the bottom of said receptacle, and having a partition which, in a state of saturation, is impervious to said insulating liquid but is pervious to water, and means for maintaining said partition in a saturated condition.

3. The combination with a tank for electrical apparatus and insulating liquid, of a hollow body communicating with an opening near the bottom of said tank, a body of porous material in said hollow body that is pervious to water but, when saturated therewith, is impervious to said insulating liquid, and means for maintaining said material in a saturated condition.

4. The combination with a tank containing two non-miscible liquids of different specific gravities, of a separating device communicating with the bottom of said tank and comprising a hollow body, a partition of porous material therein, said material having the property, when saturated with the liquid of greater specific gravity, of being pervious to that liquid but impervious to the other of said liquids, and a stand-pipe for the heavier liquid.

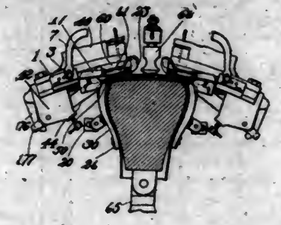
5. The combination with a tank for electrical apparatus and insulating liquid, of means for withdrawing water from the bottom of said tank comprising a two-part hollow body, the inner part of which is connected to the tank near its bottom and the outer part of which is adapted to fit tightly over said inner part, a partition of porous material disposed between said outer and inner parts to form inner and outer chambers and composed of a material which, when saturated with water, is pervious thereto but is impervious to said insulating liquid, and a stand-pipe projecting upwardly from said outer chamber to a predetermined height and filled with water.

[Claims 6 to 8 not printed in the Gazette.]

1,024,599. MACHINE FOR USE IN THE MANUFACTURE OF BOOTS AND SHOES. ARTHUR L. RUSSELL, Hyde Park, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed June 8, 1908. Serial No. 437,341. (Cl. 12—67.)

1. A machine of the class described, having in combination welt butting knives arranged to operate simultaneously at opposite sides of a shoe, means to position the shoe relatively to said knives to cause their operation to take place at predetermined points on the shoe, and means for actuating said knives transversely of the shoe to butt the welt ends widthwise.

2. A machine of the class described, having in combination means for holding the end portion of the welt of a lasted and welted shoe in a plane substantially parallel to the plane of the shoe bottom, a welt butting knife arranged for movement widthwise of the welt and in a plane at an oblique angle to the face of the welt, and means for actuating said knife to sever the end portion of the welt from the body thereof.



3. A machine of the class described, having in combination a welt butting knife arranged for cutting movement widthwise of the welt, means to position the shoe relatively to said knives to cause their operation to take place at predetermined points on the shoe, a guard arranged between the welt and the upper in the inseam in position to protect the upper from being injured by the welt butting knife, and means for actuating the knife.

4. A machine of the class described, having in combination a welt butting knife arranged for movement widthwise of the welt; welt holding means including a plate to extend between the welt and the upper in the inseam in position to protect the upper from being injured by the welt butting knife, and an opposed relatively yielding clamping member; and means for actuating the knife over the plate and transversely of the shoe to butt the welt.

5. A machine of the class described, having in combination a welt butting knife, means for actuating the knife transversely of the shoe to cut the welt by a stroke from the outer edge of the welt toward the inseam, and a guard plate movable transversely of the shoe into an operative position in the welt crease.

[Claims 6 to 92 not printed in the Gazette.]

1,024,600. LAST. GEORGE W. SAMPSON, Whitman, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Nov. 27, 1908. Serial No. 464,558. (Cl. 12—139.)



1. A last having a slot extending through its heel part in the direction of the height of the last, and opening rearwardly therefrom, and a reinforcing member positioned in said slot, said member having a spindle receiving opening therein and being as thin at any point as is the slot behind said point, whereby said member may be inserted in the slot from the rear of the last.

2. A last having a slot extending from the cone to the sole and opening rearwardly from its heel part, a metallic reinforcing member constructed and shaped to be inserted in said slot in the direction of the length of the last, said member having integral top and heel plates engaging the top and bottom of the last and having a spindle receiving opening therein, and means for securing said member in the last.

3. A last having a slot extending from the cone to the sole and opening rearwardly from its heel part and having its upper and lower edges beveled, a reinforcing member shaped to fit snugly within said slot and to be inserted from the rear of the last, said member having top and bottom plates integral therewith to engage the top and bottom of the last and a fastening receiving plug positioned in said member.

4. The combination in a last having a slot extending from the cone to the sole and opening rearwardly from its heel part, of a metallic body, comprising a top plate a heel plate and a connecting member, constructed to be inserted in said slot in the direction of the length of the last, with a fastening receiving block secured in the rear end of said connecting member arranged for engagement with the walls of the slot and to be removed in a direction transverse of said member when said body is withdrawn from the last.

5. The combination in a last having a slot extending from the cone to the sole and opening rearwardly from its heel part, of a metallic body, comprising a top plate a heel plate and a connecting member, constructed to be inserted in said slot in the direction of the length of the last, and a fastening receiving block removably secured in the rear end of said connecting member and held in position by engagement with the walls of said slot.

[Claim 6 not printed in the Gazette.]

1,024,601. TERMINAL-ATTACHMENT-ENGAGING DEVICE. JOSEPH E. SCHAEFER, Jr., Detroit, Mich., assignor, by mesne assignments, to American Ignition Company, Detroit, Mich., a Corporation of Michigan. Filed Aug. 18, 1910. Serial No. 577,792. (Cl. 173—259.)

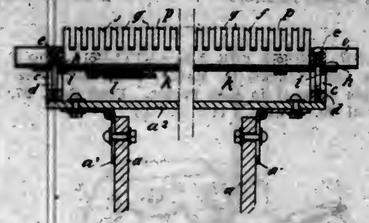


1. A terminal attachment engaging device consisting of a nut provided with an extension, the portion of said extension adjacent to the nut being spherical shaped and the upper end of said extension being cylindrical shaped, the said spherical shaped portion being provided with a circumferential slot at the upper end adjacent to the cylindrical portion.

2. A terminal attachment engaging device consisting of a nut provided with an extension, one portion of which is cylindrical shaped and the other portion spherical shaped, the said spherical portion being provided with a circumferential slot, for the purpose set forth.

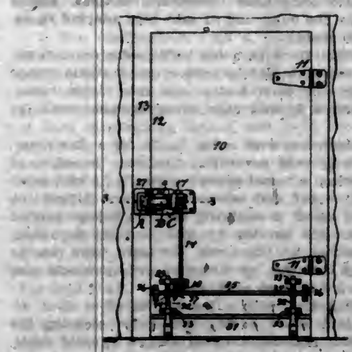
1,024,602. DEVICE FOR FACILITATING BASKET-MAKING. RICHARD SCHANZ, Heidenau, Germany. Filed Sept. 25, 1911. Serial No. 651,171. (Cl. 139—2.)

1. A device for facilitating basket-making, comprising a rotatable shaft, two disks mounted thereon, a plurality of adjustable cross-bars arranged on said disks to form a drum, forked brackets for holding said cross-bars on the disks, springs tending to hold the cross-bars against the bottom of the brackets, spring-actuated slides on the cross-bars having cross-pins adapted to engage notches in the brackets so as to hold the cross-bars in the outer ends of the brackets, the cross-bars carrying double-rows of teeth allowing the canes to be wound on and between them, and a loose bar having teeth adapted to mesh with the former teeth for depressing the canes between them so as to allow the stakes to be inserted in position, substantially as set forth.



2. A device for facilitating basket-making, comprising a rotatable shaft, two disks mounted thereon, a plurality of cross-bars arranged on said disks to form a drum, means for adjusting the distance between said cross-bars and the shaft, means for setting the cross-bars at different angles relative to the shaft, double-rows of teeth connected to said cross-bars so as to allow the canes to be wound on and between them, and a loose bar having teeth adapted to mesh with the former teeth for depressing the canes between them so as to allow the stakes to be inserted in position, substantially as set forth.

1,024,603. DOOR-LOCKING MEANS. FREDERICK SCHMIDALL, Cincinnati, Ohio. Filed June 9, 1911. Serial No. 632,123. (Cl. 70—49.)



1. In door-locking means, the combination of a keeper attached adjacent to a door, a latch provided on one end with two fingers and with a slot at its other end, a housing in which it is pivotally mounted and whereby it is attached to said door, an angle-lever also pivotally mounted in said housing and provided at one end with a pin which occupies the slot in the latch and at its other end shaped to form a handle for manipulation and whereby when said angle lever is moved on its pivotal connection the latch may be actuated to co-act by means of either of the fingers thereon with the keeper to either seat or unseat the door.

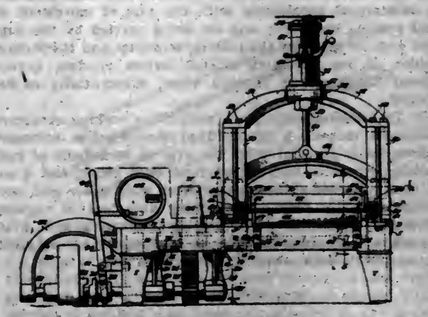
2. In door locking means, the combination of a keeper attached adjacent to a door, a latch provided with a socket adapted to co-act therewith to either seat or unseat the door, a housing attached to said door in which this latch is pivotally supported, a handle also mounted in said housing to operate the latch, a locking-pin adapted to drop into the socket on the latch mentioned after the same has been moved to position for unseating the door to hold the same in this position while the door is open, an arm fulcrumed in the housing on which this pin is supported and means provided on the keeper and adapted to co-act with this arm for the purpose of releasing the latch from the locking pin when the door is moved into closing position.

3. In door-locking means, the combination of a latch pivotally mounted on a door, an angle-lever in operative engagement therewith, and having one of its members formed to constitute a manipulating handle whereby the latch may be operated from one side of the door and a supplementary manipulating handle connected to the other member of the angle-lever permitting manipulation of the latch from the other side of the door.

4. In door-locking means, the combination of a rocker-rod supported in a vertically fixed position adjacent to the edge of a door and parallel thereto, a plurality of locking latches pivotally mounted on said door between the edge thereof and the rod mentioned, levers rigidly mounted on said rod and whereby all these latches are operatively connected thereto and a handle on this rod whereby all latches may be simultaneously manipulated.

5. In door-locking means, the combination of a keeper attached adjacent to a door, a latch adapted to co-act therewith to either seat or unseat the door, it being in engagement with the keeper when holding the door seated, a housing attached to the door in which this latch is pivotally supported, a key-controlled lock-screw carried in this housing and a socket provided in the latch and so located, as to be opposite the end of the lock-screw and adapted to receive the same when the latch is in engagement with the keeper.

1,024,604. HOSE-MAKING MACHINE. SAMUEL J. SILL, Buffalo, N. Y., assignor of one-half to Herbert H. Hewitt, Buffalo, N. Y. Filed Jan. 8, 1908. Serial No. 409,767. (Cl. 154—7.)



1. A machine of the character described comprising a plurality of rolls between which a mandrel may be mounted, means for imparting rotation to said rolls and guides between the top and bottom rolls at their ends, said guides being adjustable toward and from each other for accurately locating the mandrel.

2. A machine of the character described comprising a plurality of rolls between which a mandrel may be mounted, means for imparting rotation to said rolls and guides between the top and bottom rolls at their ends, said guides being removable and serving to accurately locate the mandrel.

3. A machine of the character described comprising a plurality of rolls between which a mandrel may be mounted, means for imparting rotation to said rolls and guides between the top and bottom rolls at their ends, said guides having inwardly projecting studs which engage the ends of the mandrel and are of approximately the diameter of said mandrel.

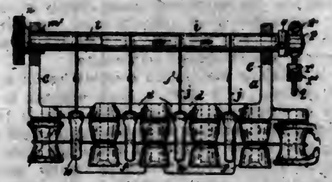
4. A machine of the character described comprising a support over which the fabric will be fed, a plurality of rolls between which a mandrel may be mounted, means

for imparting rotation to said rolls and a pressure device extending over said support, said pressure device being mounted to move vertically with the top roll and being movable independently thereof.

5. A machine of the character described comprising a plurality of rolls between which a mandrel may be mounted, means for imparting rotation to said rolls and a swinging pressure device mounted to move with the top roll.

[Claims 6 to 8 not printed in the Gazette.]

1,024,605. TENSION DEVICE. GEORGE SINGLETON, Dover, N. J. Filed June 16, 1911. Serial No. 633,566. (Cl. 242—153.)



1. In combination, with a support, a rocking structure journaled therein, and two coacting sets of thread-guides arranged to alternate with each other and each disposed in substantial parallelism with the axis of movement of said rocking structure, one set being carried by the support and the other by the rocking structure and the thread-guides of one set being yielding to the thread independently of each other, substantially as described.

2. In combination, with a support, a rocking structure journaled therein, and two coacting sets of thread-guides arranged to alternate with each other and each disposed in substantial parallelism with the axis of movement of said rocking structure, one set being carried by the support and the other by the rocking structure and the thread-guides of one set being elastic devices yielding to the thread independently of each other, substantially as described.

3. In combination, with a support, a rocking structure journaled therein, a set of fixed thread-guides arranged substantially parallel with the axis of movement of said rocking structure and spaced from each other, and a set of elastic thread-guides spaced from each other and projecting radially from said rocking structure in registry with the spaces between and coacting with said first-named thread-guides, said elastic thread-guides being yielding to the threads substantially as described.

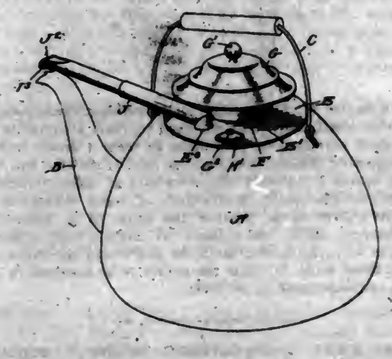
1,024,606. PRINTER'S FURNITURE. SAMUEL STEPHENS, West Somerville, Mass. Filed Oct. 25, 1911. Serial No. 650,632. (Cl. 101—179.)



1. Printers' furniture consisting of a series of spaces and quadrats all of the same body measurement, and all based as to width upon the width of a printers' point, said spaces being of increasing width in an arithmetical progression, and said quadrats each being a multiple as to width of a selected one of said spaces, which is itself a multiple of said printers' point.

2. Printers' furniture consisting of a series of spaces and quadrats all of the same body measurement, and all based as to width upon the width of a printers' point, said spaces being at least six in number and of increasing width in an arithmetical progression ranging from one to six, and said quadrats being as to width progressively increasing multiples of said six-point space, whereby any width of said body measurement may be supplied by two pieces of said furniture.

1,024,607. COVER FOR TEA-KETTLES. OTTO F. TURNER and WARREN H. MAPLE, Pendleton, Oreg.; said Maple assignor to said Turner. Filed Sept. 27, 1910. Serial No. 584,101. (Cl. 53—9.)



1. The combination with a tea kettle, of a cover therefor, a steam escape pipe carried eccentrically by said cover, said pipe comprising telescoping sections, and a hook carried by the outer end of said pipe adapted to engage the kettle spout.

2. The combination with a tea kettle, of a cover therefor, a filling vessel carried by said cover, a steam escape pipe carried by the cover and to one side of the vessel, and means carried by said pipe for engagement with the kettle spout.

3. The combination with a tea kettle, of a flat cover, means carried by said cover for clamping the edges of the kettle opening, a vessel carried centrally by said cover and projecting above and below the cover, a hinged top carried by said vessel, a vertically movable bottom carried by the vessel, lips carried by said bottom, depending guide pins carried by the cover, the said pins passing loosely through said lips, springs arranged upon said pins bearing upwardly against said lips.

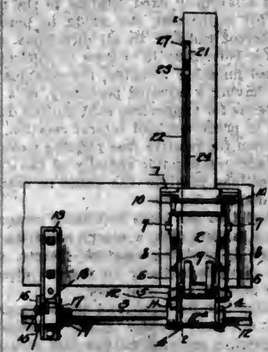
4. The combination with a tea kettle, of a cover arranged over said kettle having means for securing the same in position thereon, a vessel carried by said cover, a sectional steam escape pipe carried by said cover having means for connecting the same to the spout of the kettle, said pipe being closed at its end and partly cut out on top adjacent the end.

5. The combination with a tea kettle, of a disk arranged over the filling opening of the same, adjustable clamping members carried by said disk for securing the same in position thereon, a conical vessel carried by said disk provided with a cover, a pipe section carried by said disk, communicating with said vessel, a valve for closing said pipe section, and a steam escape pipe formed of telescoping sections carried by said disk having means at its end for connecting the same to the spout of the kettle.

1,024,608. CAR-STAKE AND POCKET. CORNELIUS H. VANDONK, Wells, Mich. Filed Nov. 8, 1911. Serial No. 659,106. (Cl. 105—173.)

1. In a device of the kind described, a stake pocket having a downwardly swinging front portion, a hook carried by said front portion, a pivoted hook member carried by the side of the pocket and adapted to engage the first mentioned hook member, an arm carried by the second

hook member, a pivoted arm carried by the side of the pocket, the said arms having interlocking faces, a shaft, and a hook member rotatable with said shaft and adapted to normally engage a portion of the last mentioned arm and hold the same against movement.



2. In a device of the kind described, a stake pocket having a hinged front member, means for locking said member to the sides of the pocket, a stake adapted to fit said pocket, chain holding means carried by said stake, chain releasing means carried by the stake and extending into said pocket, and normally held by the pocket in inoperative position, a shaft, and means carried by the shaft for holding the said locking devices in locked position, said devices being released upon rotation of the shaft.

3. The combination with a stake pocket, said pocket having a downwardly swinging front member, interlocking means carried respectively by the pocket sides and by said hinged member, a rotatable shaft, means carried by and rotating the shaft and adapted to engage a portion of said interlocking means and hold the same against relative movement, a stake having recesses at its upper and lower ends and a groove connecting said recesses, chain holding means arranged in the upper recess, a link pivoted in the lower recess said link being held in an oblique position when the stake is in the pocket, and the rod connecting the outer lower end of said link with the chain holding means, the said interlocking devices and the chain holding means being released upon rotation of the said shaft, in the manner described.

4. In a device of the kind described, a pocket having a hinged front member and having depending plates integral with its side members, a hanger arranged adjacent said pocket having suitable bearings, a shaft, a bushing on the shaft rotatably journaled in the hanger bearings, a sleeve upon said shaft rotatably mounted in the depending plates, a stop carried by the bushing, a pawl carried by the hanger and engaging said stop, pocket locking means carried by the pocket, and a hook carried by said sleeve and adapted to engage a portion of said pocket locking means thereby holding them in interlocking position.

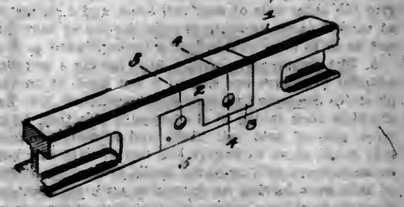
5. The combination with a pocket of the kind described, a car stake having upper and lower recesses, chain holding means pivotally secured in the upper recess, an operating rod pivotally connected to said holding means, the stake being provided with a groove connecting the recesses and in which said rod works, and a link pivoted in the lower recess having its one end pivotally connected to the rod, said link being of greater length than the width of the pocket, thereby requiring said link to occupy an oblique position when the stake is in the pocket, said link when in said position holding the chain holding means in operative position, and means for releasing the stake from the pocket, thereby permitting said link to assume a transverse position releasing the chain holding means.

1,024,609. FIRE-BUCKET. ALBERT E. WAGGONER, Chicago, Ill., assignor of three-fourths to George W. Lyndon, Chicago, Ill. Filed Mar. 9, 1908. Serial No. 419,902. (Cl. 169—16.)



In a fire bucket, the combination of a body, a top at its upper edge to form the outer and inner walls of a sealing channel, a cover having a flange fitting into said channel, and separate flexible holders disposed in slits formed in said top and held between the body of said top proper and the outer wall of the channel formed thereon, said holders being adapted to be bent to removably hold the cover in position to close the bucket.

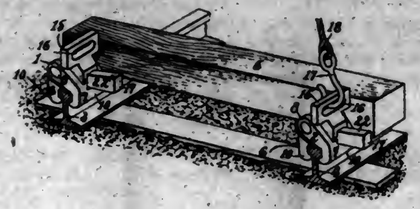
1,024,610. RAIL-JOINT. JOHN WHITE, Beaumont, Tex. Filed June 21, 1911. Serial No. 634,410. (Cl. 238—8.)



1. A rail joint comprising in combination the end of a rail having its end portion provided with a U-shaped web, the sides of said web extending down from the upper surface of the rail, a second rail end having its end portion provided with a channel web arranged to engage with a portion of the first mentioned rail adjacent to the U shape portion and having a portion of its web removed in order to permit the base part of the U shape portion to be inserted therein, said end base having holes therethrough, and means disposed in said holes for securing said ends together.

2. A rail joint comprising in combination a rail end having its end portion U shaped, the base of said U shape being integrally formed with the web of said rail, said end having its flanged portion removed, another rail end having its end portion channel shaped, said channel being arranged to embrace the sides of said web, and the web of said second end being removed for a short distance back from said channel portion in order to permit the base portion of said U shaped piece to fit therein, the U shaped portion fitting over the web of said second end, its ends resting on the flanges of the second rail, and the web of the second rail extending to and supporting the upper portion of the U shape piece, the upper portion of said second rail being removed in order to permit the first mentioned rail to rest therein and to form a uniform rail surface, and said ends having holes therethrough and means for securing said ends together.

1,024,611. RAIL CLAMP OR STAY. WILLIAM H. BATES, Empire, Canal Zone. Filed Dec. 22, 1911. Serial No. 667,326. (Cl. 104—49.)



1. The combination with a pair of jaws, movably connected together, and having openings therein, of a wedge for forcing said jaws together, to grip a rail head, by entering said openings, said openings being so located that said wedge on entering said openings will be exposed on one side, so as to engage the top of said rail head, to cooperate with said jaws to grip the same.

2. The combination with a pair of jaws pivotally connected together, and having openings therein, facing each other on the same side of said pivot, of a wedge for causing certain parts of said jaws move toward each other, by passing between certain other parts of said jaws through said facing openings.

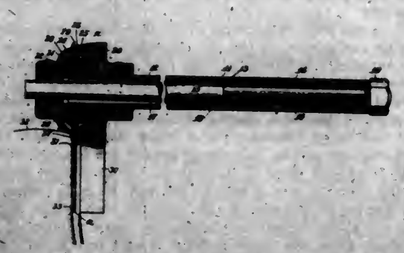
3. The combination with a pair of pivotally connected jaws having gripping portions formed so as to grip the sides of a rail head of a wedge connected to said jaws, so as to force said jaws into engagement with said rail head by swinging said gripping portions toward each other.

4. The combination with a jaw, having a gripping hook adapted to engage one side of a rail head, of another jaw pivotally connected to said first mentioned jaw, having a gripping hook facing in the opposite direction, to grip the other side of said rail head, and a wedge connected to said jaws, so as to engage the top of said rail head, and so as to force said gripping hooks toward each other.

5. The combination with a jaw, having a gripping hook adapted to engage one side of a rail head, of another jaw, pivotally connected to said first mentioned jaw, having a gripping hook facing in the opposite direction, to grip the other side of said rail head, and a wedge connected to said jaws, so as to engage the top of said rail head, and so as to force said gripping hooks toward each other, one of said jaws having an extension with an opening therethrough, forming a means of connection to some extraneous device.

[Claims 6 to 11 not printed in the Gazette.]

1,024,612. TOOL FOR FINISHING THE HEELS OF BOOTS AND SHOES. ZOTIQUE BEAUDRY, Lynn, Mass., assignor to United-Xpedite Finishing Company, Berwick, Me., a Corporation of Maine. Filed Mar. 8, 1906. Serial No. 304,880. (Cl. 12—49.)



1. In a heel finishing machine, the combination with a milling disk having a serrated periphery for making a line of indentations around the edge of a heel, of means for guiding said milling disk laterally with relation to the heel seat end of the heel, comprising a guide formed to enter the rand crease, and means for supporting the crease guide to permit yielding movement thereof radially in all directions with respect to the milling disk for bottoming in creases of different depths.

2. In a heel finishing machine, the combination with a milling disk having a serrated periphery, of a rand crease guide having a laterally fixed relation to the milling disk, and means for supporting the guide to permit yielding movement thereof radially in all directions with respect to the disk for bottoming in creases of different depths.

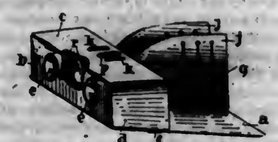
3. In a heel finishing machine, the combination with a milling disk having a serrated periphery, of a rand crease guide, and means for supporting said milling disk and rand crease guide in predetermined lateral relation, said means having provision for relative free yielding movement of the milling disk and crease guide radially of the disk in a plurality of directions to allow the guide to bottom in rand creases of different depths.

4. A finished tool for boots and shoes comprising in its construction a milling disk, a rotary polishing wheel rotatably mounted in working relation thereto, and a rand guide freely movable radially in several directions relatively to the periphery of said disk.

5. A finishing tool for boots and shoes comprising in its construction a rotary hollow shaft, a polishing wheel mounted thereon, a serrated milling disk rotatably mounted in working relation with said wheel, a spring mounted within said shaft, and a rand crease guide carried by said spring, said spring being adapted to permit the guide to yield radially in a number of directions relatively to said milling disk.

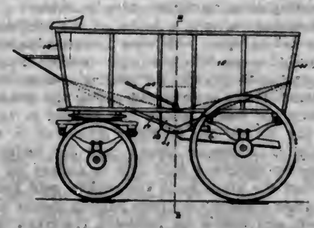
[Claims 6 to 10 not printed in the Gazette.]

1,024,613. FOLDING STEREOSCOPE. FRITZ BENGER, Berlin, Germany. Filed July 24, 1911. Serial No. 640,294. (Cl. 88—29.)



A folding stereoscope comprising plates hinged together, some of these plates being provided with slotted ears adapted to engage in corresponding slots in other ones of said plates and thereby hold the apparatus in position of use, hooks pivoted to the other or second of said plates, said hooks being adapted to secure said slotted ears of the first plates in said slots of the second plates, and two wings hinged to the second plates, said wings being adapted to act both as partitions between the pictures and as holders for the same.

1,024,614. TRUCK. WILLIAM A. BRANDENBURG, New York, N. Y. Filed Nov. 3, 1911. Serial No. 658,368. (Cl. 21—86.)

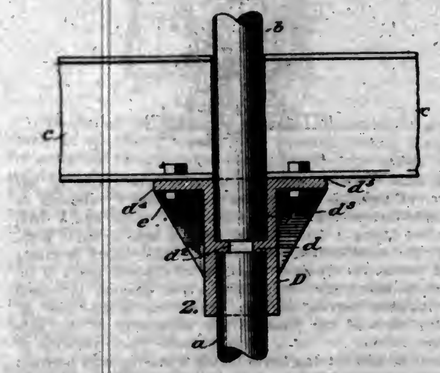


1. A truck having side and end walls and a bottom formed of two sections each inclined downwardly toward the other and each inclined laterally toward one side of the truck and an outlet in one side wall adjacent the lowermost portion of said bottom.

2. A truck having side and end walls and a bottom formed of two sections inclined downwardly toward each other and inclined laterally toward one side of the truck and an outlet in said bottom at its lowermost portion and closely adjacent one side.

3. A truck body having side and end walls all terminating at their lower edges in substantially the same plane and a bottom including two sections rigidly connected to said sides and ends, the edges of said sections at the ends of said body being above the lower edges of said end walls and the transverse meeting line of said sections terminating adjacent to the lower edge of one of said side walls and below the lower edge of the opposite side wall and said last-mentioned side wall having a triangular extension substantially in its own plane and provided with an outlet opening.

1,024,615. SOCKET-JOINT. RALPH H. BROWN, Worcester, Mass. Filed Oct. 30, 1911. Serial No. 657,394. (Cl. 189—36.)

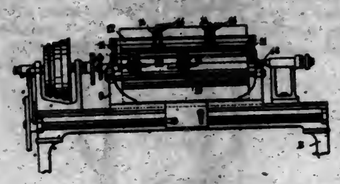


The combination with a lower column, of a socket piece having a cylindrical body provided with a concentric downwardly opening socket fitting the top of said column, a diaphragm about midway between the top and bottom of the socket piece resting on the top of said column, and an upwardly opening cylindrical socket of substantially the same size as the lower socket, whereby it has cylindrical vertical walls bounding both sockets and integral with the diaphragm, said walls extending from the bottom of the socket piece materially above the diaphragm in the form of a uniform hollow cylinder, said socket piece being provided with a horisontal platform flush with its top and integral therewith, triangular webs extending from a point just below the diaphragm up to the platform and integral with both and having their widest dimension at the top, an upper column projecting about half way to the bottom of the socket piece and resting on said diaphragm, and beams resting on the top of said platform entirely above the socket piece and having their ends substantially in contact with the upper column and directly over the entire thickness of the vertical walls of the socket piece.

1,024,616. MACHINE FOR THE ELECTROMECHANICAL REPRODUCTION OF DRAWINGS, WRITINGS, PHOTOGRAPHS, BLOCKS, AND THE LIKE. HENRI CARBONNELLE, Uccle, Belgium. Filed Sept. 8, 1909. Serial No. 516,809. (Cl. 159—6.)

1. In transmitting station apparatus for distance transmission, a stylo record and an original record, means for moving both records, and dust-collecting tanks, one adjacent the stylo record and the other adjacent the original record, each for containing non-conducting liquid into which the corresponding record will dip, while in motion, for continuously moistening both records with non-conducting liquid.

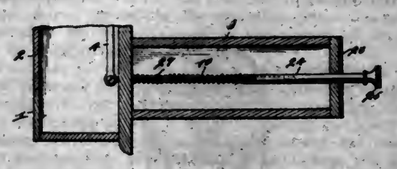
2. In an apparatus employed in distance transmission, a transmitter stylo and a resilient plate non-conductively connected with said stylo, and broader than usual deep depressions in an original record, for brushing said original during transmission.



3. In an apparatus employed in distance transmission, a telephone receiver having a magnet, a diaphragm located near said magnet, a spring normally tending to move said diaphragm away from said magnet, an oppositely-acting spring normally resting against that first-named, and a set screw for adjusting the pressure of the second-named spring against that first-named.

4. In an apparatus employed in distance transmission, a telephone receiver having a magnet, a diaphragm located near said magnet, a spring tending to move said diaphragm away from said magnet, a second spring tending to resist the action of that first named upon said diaphragm, and means for adjusting the resistance of the second-mentioned spring.

1,024,617. MAIL-BOX. HARRY CHAMBERS, Lakewood, N. J. Filed Jan. 13, 1912. Serial No. 670,982. (Cl. 232—23.)



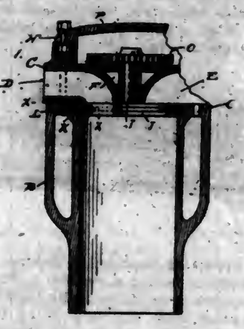
In a device of the character described, the combination of a body having a door hinged to one side thereof, a keeper member secured to said door, a bell crank lever pivotally mounted within said body having a catch formed on the outer end thereof to engage the keeper member on the door, a guide casing secured to the rear of said body, a horisontal rod disposed within said casing, an eye formed on one end of said rod and pivotally connected to the lower end of said lever, a tubular rod threaded on the other end of said rod, a coil spring mounted on said tubular rod, a sleeve mounted on the tubular rod to inclose said spring, an annular flange formed on the tubular rod disposed within said sleeve and adapted to bear against one end of the spring, and a thumb piece formed on the outer end of the tubular rod adapted to be pressed to reciprocate said rods and actuate the bell crank lever to release the catch from the keeper member.

1,024,618. EXPLOSION-ENGINE. HOWARD E. COFFIN, Detroit, Mich. Filed June 27, 1910. Serial No. 569,063. (Cl. 136—7.)

1. In an explosion engine, the combination of a cylinder, a separable head therefor, and a rotary disk valve seated upon said head and packing means for said valve protecting the joint between the head and cylinder.

2. In an explosion engine, the combination of a cylinder, a separable head therefor, a rotary disk valve seated upon said head, and packing means at the periphery of said valve for protecting the joint between said head and cylinder.

3. In an explosion engine, the combination of a cylinder, a separable head therefor, a rotary disk valve seated on said head and forming a break joint with said cylinder.

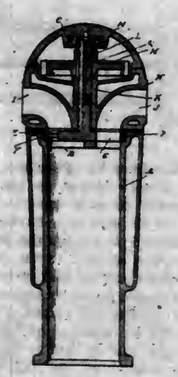


4. In an explosion engine, the combination with an engine cylinder, of a separable head therefor, a rotary disk valve seated on said head, and a packing ring engaging the periphery of said disk.

5. In an explosion engine, the combination with a cylinder, of a separable head therefor, a rotary disk valve seated on said head, and a packing ring engaging a groove in the periphery of said disk.

[Claims 6 and 7 not printed in the Gazette.]

1,024,619. EXPLOSION-ENGINE. HOWARD E. COFFIN, Detroit, Mich. Filed Apr. 20, 1911. Serial No. 622,291. (Cl. 136—7.)



1. In an explosion engine, the combination of a cylinder having an integral head, and a detachable head with registering ports therein, of a rotary valve disk arranged between said integral and detachable heads.

2. In an explosion engine, the combination with a cylinder having an integral head, and a detachable head with registering ports therein, a valve disk arranged in a recess in said integral head and having opposed bearing faces on said head and the detachable head.

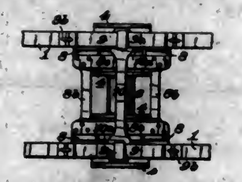
3. In an explosion engine, the combination with a cylinder having an integral head with a recess in its outer face, of a valve disk located in said recess and provided with a port for registering with the ports in said head, and a detachable head having a central journal bearing for the stem of said valve.

4. In an explosion engine, the combination with a cylinder having an integral ported head provided with a recess in its outer face, a valve disk located in the recess in said head, a packing ring in the periphery of said disk engaging the peripheral wall of said recess, a detachable head having ports registering with said integral head, and a rotary stem for said valve disk passing through said detachable head and journaled therein.

5. In an explosion engine, the combination with a cylinder having an integral ported head with a recess in its outer face, of a circular valve disk located in said recess, a detachable head secured to said cylinder adjacent to the opposite face of said valve disk and provided with a central journal bearing, a rotary stem for said valve disk passing outward through said journal bearing, a drive wheel for said stem, and a detchable cap for housing said drive wheel and stem secured to said detachable head.

[Claim 6 not printed in the Gazette.]

1,024,620. LOCOMOTIVE-ENGINE. FRANCIS J. COLE, Schenectady, N. Y. Filed Dec. 20, 1911. Serial No. 666,909. (Cl. 105—17.)



1. The combination, with a locomotive frame of bar type, of pedestal jaws which are inwardly extended to provide increased driving box bearing surface, and a driving box fitting a driving axle between said pedestal jaws.

2. The combination, with the two side frame members of a locomotive frame of bar type, of opposite pairs of inward pedestal jaw extensions, which provide increased driving box bearing surface, transverse connections securing each of the pedestal jaw extensions of one side frame member to the opposite pedestal jaw extension of the other, and driving boxes fitting a driving axle between the frame pedestal jaws and the adjoining faces of the pedestal jaw extensions.

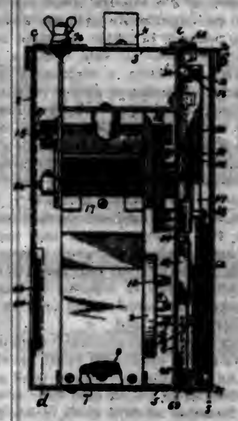
3. The combination, with a locomotive frame of bar type, of opposite pairs of inwardly extended pedestal jaws, driving boxes fitting, independently one of the other, in said pairs of pedestal jaws, springs whose longitudinal central planes are spaced at a greater distance apart than the middle planes of the driving boxes, and means for applying weight borne by the springs to the driving boxes, at substantially equal distances from their ends.

4. The combination, with a locomotive frame of bar type, of opposite pairs of inwardly extended pedestal jaws, transverse connections securing each of the extended pedestal jaws of one side frame member to the opposite extended pedestal jaw of the other, driving boxes fitting, independently one of the other, in said pairs of pedestal jaws, springs whose longitudinal central planes are spaced at a greater distance apart than the middle planes of the driving boxes, and means for applying weight borne by the springs to the driving boxes, at substantially equal distances from their ends.

5. The combination with the two side members of a locomotive frame of bar type, of a U shaped member having a pair of pedestal jaw extensions at each of its ends, the inner faces of which extensions aline with those of the pedestal jaws of a side frame, to provide increased driving box bearing surface, connections securing said U shaped member to the side frame members, driving boxes fitting, independently one of the other, in the frame pedestal jaws and extensions, springs whose longitudinal central planes are spaced at a greater distance apart than the middle planes of the driving boxes, and means for applying weight borne by the springs to the driving boxes, at substantially equal distances from their ends.

[Claims 6 to 12 not printed in the Gazette.]

1,024,621. MEANS FOR EXPLODING CHARGES. CHARLES I. DODSON, Pittsburg, Kans., assignor to The Dodson Manufacturing Company, Phoenix, Aris., a Joint Stock Company. Filed Apr. 25, 1910. Serial No. 557,490. (Cl. 161—25.)



1. In means for exploding charges, a mechanical generator of electricity located in a working circuit, means for operating the generator, means for short circuiting the generator during the initial part of its operation, means for locking the operating means against movement to the operative position, and time controlled means controlling the operation of the locking means.

2. In means for exploding charges, a mechanical generator of electricity located in a working circuit, means for operating the generator, means for locking the operating means against movement into the operative position, a time piece, and means controlled by the time piece for controlling the locking means.

3. In means for exploding charges, a mechanical generator of electricity located in a working circuit, means for operating the generator, and time controlled means for locking the operating means against movement to the operative position and for controlling passage of current through said circuit.

4. In means for exploding charges, a mechanical generator of electricity, means for operating the generator, means for holding the operating means inactive when in the operative position, a latch for holding the operating means from movement into the operative position, and time controlled means for releasing the holding means.

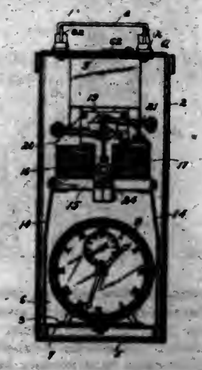
5. In means for exploding charges, a mechanical generator of electricity, means for operating the generator, means for holding inactive the operating means when in the operative position, a latch for holding the operating means from movement into the operative position, and time controlled means for releasing the holding means and operating the latch.

[Claims 6 to 11 not printed in the Gazette.]

1,024,622. MEANS FOR EXPLODING CHARGES. CHARLES I. DODSON, Pittsburg, Kans., assignor to The Dodson Manufacturing Company, Phoenix, Aris., a Joint Stock Company. Filed Sept. 26, 1910. Serial No. 583,653. (Cl. 171—76.)

1. In means for exploding charges, an electric circuit, a generator of electricity located in said circuit, means for operating the generator, means for holding the operating means inactive when it has been moved into operative position, means for closing the circuit and releasing the holding means, and means for locking the operating means against movement to the operative position when the circuit is closed and the holding means is in the released position.

2. In means for exploding charges, an electric circuit, a current generator, in said circuit, circuit controlling means in circuit with said generator, means for operating said circuit controlling means, means for holding said operating means inactive when it has been moved into operative position, means for locking the operating means against movement into the operative position, and means for releasing the operating means from the holding means and for operating the locking means to lock the operating means after the circuit controlling means has been operated.



3. In means for exploding charges, an electric circuit, a current generator in said circuit, circuit controlling means in circuit with the generator, means for operating the circuit controlling means, means for holding the operating means inactive when it has been moved into operative position, means for locking the operating means against movement to the operative position, and a lever for actuating the holding and locking means.

4. In means for exploding charges, an electric circuit, a current generator in said circuit, circuit controlling means in circuit with the generator, means for operating the circuit controlling means, a latch for holding the operating means inactive when the operating means has been moved into operative position, a latch for locking the operating means from movement to the operative position, and means for moving the locking latch into the locking position and the holding latch to the release position.

5. In means for exploding charges, an electric circuit, a current generator in said circuit, circuit controlling means in circuit with the generator, means for operating the circuit controlling means, a latch for holding the operating means inactive after the operating means has been moved into the operative position, a latch for locking the operating means from movement to the operative position, and a lever for actuating said latches.

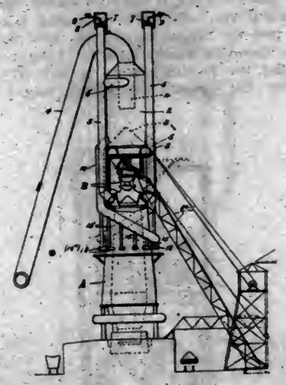
1,024,623. FURNACE-CHARGING DEVICE. JOHN W. DOUGHERTY, Steelton, Pa. Filed Sept. 3, 1910. Serial No. 580,463. (Cl. 75—114.)

1. The combination with a reducing furnace; of a dust collector mounted above the furnace, means to deliver flue dust from said furnace tangentially into said collector, pipes connected at the bottom of the collector into which said collector discharges by gravity, and means to force charges of flue-dust into the furnace below its stock line and supplied with dust from said pipes.

2. The combination with a reducing furnace; of a dust collector, means to discharge the dust therefrom in a continuous stream, pockets to entrap the dust from said stream, means to force the dust entrapped in said pockets during its travel into the furnace, and means to receive any flue-dust in excess of the capacity of said pockets.

3. The combination with a furnace; of a dust collector above the furnace, a pipe into which the dust collector discharges dust and having a spiral portion intermediate its

ends, a receptacle at the end of the pipe, means to force charges of dust into the furnace and supplied from said spiral portion as the dust descends by gravity through said pipe to the receptacle.

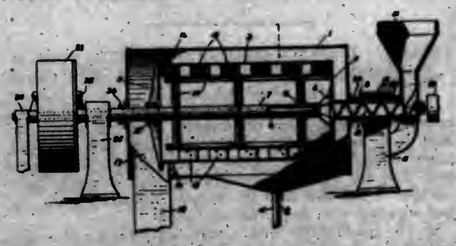


4. The combination with a reducing furnace; of a dust collector above the top of the furnace, means to discharge dust therefrom by gravity continuously, pockets to entrap the dust during its discharge, means to continuously force the dust collected in said pockets into the furnace, and means to collect and store any dust in excess of that entrapped by the pocket.

5. The combination with a reducing furnace; of a dust collector mounted above the same and having a conical bottom, a down-comer having its entrance centrally within and below the top of the collector, a plurality of pipes extending from above the stock line of the furnace and discharging tangentially into the collector and above the entrance to the down-comer, two pipes connected to the dust collector at its bottom and into which the dust is discharged by gravity, said pipes having spiral portions extending substantially half way around the furnace, a receptacle into which both of said pipes discharge, short substantially vertical pipes forming pockets connected to said spiral portions and means to force the dust entrapped in said pockets into the furnace.

[Claims 6 to 10 not printed in the Gazette.]

1,024,624. REMOVAL OF ACIDS FROM NITROCELLULOSE AND CENTRIFUGAL MACHINE THEREFOR. FRANCIS I. DU PONT, Wilmington, Del, assignor to The E. I. du Pont de Nemours Powder Company, Wilmington, Del., a Corporation of New Jersey. Filed Apr. 14, 1909. Serial No. 489,773. (Cl. 127—3.)



1. In a centrifugal machine the combination of a horizontal cylinder carrying shaft, a feeder carrying sleeve mounted thereon, a revoluble drum or pulley concentric with said sleeve and shaft, a fixed gear wheel concentric with said pulley or drum, an internally toothed wheel revolubly carried by said pulley or drum and meshing with said fixed gear wheel, and intermeshing gear wheel interposed between said internal gear wheel and said shaft and sleeve and provided with the requisite number of teeth for imparting the required differential speed to said shaft and sleeve, substantially as described.

2. A continuous working centrifugal machine comprising the combination of a horizontal shaft provided with a spider and with an imperforate cylinder head and with an intake tube, a pedestal in which said tube is revoluble, a sleeve revolubly mounted on said shaft, a pedestal in which said sleeve is revoluble, a perforated cylinder carried by said head and having a spider revoluble on said sleeve, scraper blades carried by said sleeve and arranged for coöperation with the interior of the curved wall of the cylinder and arranged at an inclination to the axis thereof, a revoluble pulley or drum concentric with the axis of the sleeve and shaft, a pedestal carrying a spud on which said pulley is revoluble and which is provided with a fixed gear wheel, an internal toothed wheel revolubly mounted on the pulley or drum and meshing with said fixed gear, and intermeshing gear wheels interposed between the drum and said shaft and said sleeve and having the requisite difference in number of teeth for producing the required differential speed of said sleeve and shaft, substantially as described.

3. A continuous working centrifugal machine comprising the combination of a horizontal shaft provided with a spider and with an imperforate cylinder head and with an intake tube, a pedestal in which said tube is revoluble, a sleeve revolubly mounted on said shaft, roller bearings interposed between the shaft and sleeve, a pedestal in which said sleeve is revoluble, a perforated cylinder carried by said head and having a spider revoluble on said sleeve, a roller bearing interposed between the spider and sleeve, scraper blades carried by said sleeve and arranged for coöperation with the interior of the curved wall of the cylinder and arranged at an inclination to the axis thereof, a revoluble pulley or drum concentric with the axis of the sleeve and shaft, a pedestal carrying a spud on which said pulley is revoluble and which is provided with a fixed gear wheel, an internal toothed wheel revolubly mounted on the pulley or drum and meshing with said fixed gear, and intermeshing gear wheels interposed between the drum and said shaft and said sleeve and having the requisite difference in number of teeth for producing the required differential speed of said sleeve and shaft, substantially as described.

4. In apparatus for the removal of acids from nitrocellulose the combination of a perforated cylinder rotatable at a high enough velocity to produce centrifugal force, a conveyer adapted to move the solid material longitudinally through this cylinder moving at a velocity differing but slightly from the velocity of the cylinder so that with reference to the cylinder the conveyer moves slowly, and an inclosing casing which prevents moisture of the atmosphere from affecting the materials in the apparatus, substantially as described.

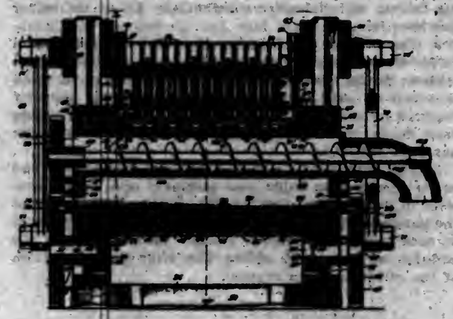
5. Apparatus for the removal of acids from nitrocellulose which comprises the combination of a perforated centrifugal drier, a conveyer running relatively slowly in respect to the surface of the drier for passing the nitrocellulose through the centrifugal drier, and means for maintaining the whole out of contact with the atmosphere, substantially as described.

1,024,625. FRUIT-PITTING MACHINE. JOHN B. FOOTE, Oak Park, Ill. Filed May 24, 1911. Serial No. 629,172. (Cl. 146—5.)

1. In a pitting machine, the combination of an element having cells therein, a series of pitter-knives mounted to operate through the fruit in the cells, separate elastic dies in the cells, separate washers for holding said dies in the cells each having its inner edge bent to press into its die, mechanism for rotating the element, and mechanism for operating the knives.

2. In a pitting-machine, the combination of an element having a cell therein, a pitter-knife, an elastic die through which the knife operates, a removable superposed spring washer in said cell for holding the die in operative position, and means for operating the knife through the die.

3. In a pitting-machine, the combination of an element having a cell therein, a pitter-knife, an elastic die through which the knife operates, a removable superposed split spring washer in said cell for holding the die in operative position, and means for operating the knife through the die.

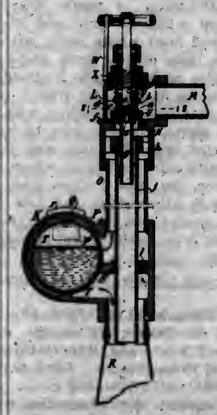


4. In a pitting-machine, the combination of an element having a series of cells therein, a separate elastic die for each cell, removable spring washers in the element for holding the elastic dies, means in the element for separately supporting the dies, pitter-knives, mechanism for rotating the element, and mechanism for operating said knives through the cells.

5. In a pitting-machine, the combination of a drum having cells therein, a fruit pan pivotally sustained to swing substantially about the axis about which the drum rotates, mechanism for vibrating said pan, and mechanism for operating the drum.

[Claims 6 to 16 not printed in the Gazette.]

1,024,626. CONVERTIBLE STEAM CAR-HEATER. EDWARD E. GOLD, New York, N. Y. Filed May 20, 1910. Serial No. 562,397. (Cl. 237—12.)



A steam heating system for cars including in combination a radiator, a train pipe, a branch pipe leading from the train-pipe to the radiator, an automatic admission valve C in said branch pipe, a discharge pipe M from said radiator, the system having two outlet passages from said discharge pipe, a thermostat K actuating said admission valve and including an expansible vessel exposed to the action of the discharge through one of said outlet passages, the second outlet passage comprising a conduit extending within the first-named passage to a point beyond said expansible vessel, a hand-operated discharge valve which when opened permits the steam to discharge freely through said first-named passage and to operate said thermostat, and which when closed cuts off the steam from the thermostat, said hand-operated discharge valve having a restricted drip orifice which communicates with said second passage and which is always open through said discharge valve so as to permit the escape of water without substantial loss of steam and without effect upon the thermostat when said valve is closed.

1,024,627. HOSE-COUPLING. EGBERT H. GOLD, Chicago, Ill. Filed June 5, 1911. Serial No. 631,252. (Cl. 137—89.)



1. A hose coupling comprising mating coupler heads, gaskets composed of material which expands under the influence of heat and arranged in said coupler heads with their inner ends abutted against the same so that when cold substantially no pressure exists between them, while when expanded under the heat of the steam they are pressed closely together to form a steam tight joint, a locking pin mounted in one of said coupler heads, a thread formed on said head, a handle on the pin, and a notched wing on the pin adapted to engage said thread, the end of the pin being substantially cylindrical and adapted to engage with a part of the complementary coupler head.

2. A hose coupling comprising mating coupler heads, gaskets composed of material which is expansible under the influence of heat arranged in said coupler heads, so that when cold substantially no pressure exists between them, while when expanded under the heat of the steam they are pressed closely together to form a steam tight joint, a locking pin on one of said heads, and means for projecting the end of said pin by a spiral movement above a part of the complementary head, the end of said pin being formed with a cylindrcial surface and part being formed with a tapered surface, substantially as and for the purpose described.

3. In a hose coupling, the combination with mating coupler heads made of metal, of means for engaging said coupler heads rigidly one with the other, and gaskets of rubber composition arranged within and at the outer ends of the steam ports of said coupler heads, the meeting faces of which stand in non-closing relation with each other when the gaskets are cold and which are brought together to form a steam-tight joint between said gaskets, solely by the expansibility of said gaskets under the influence of steam.

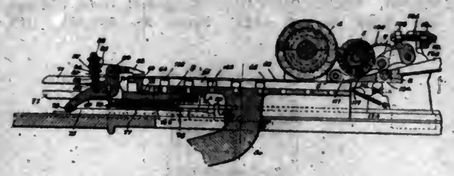
4. In a hose coupling, the combination with mating coupler heads made of metal having their steam ports enlarged at the outer ends to form gasket recesses, of means for engaging said coupler heads rigidly one with the other, and gaskets of rubber composition arranged within and filling said recesses, the inside diameters thereof being substantially the same as the diameters of the steam ports of the coupler heads, and the meeting faces of which stand in non-closing relation with each other when said gaskets are cold and are brought together to form a steam-tight joint solely by the expansibility of said gaskets under the influence of steam.

5. In a hose coupling, the combination with mating coupler heads made of metal, of means for engaging said coupler heads rigidly one with the other, and gaskets of rubber composition arranged within and at the outer ends of the steam ports of said coupler heads, the meeting faces of which stand in non-closing relation with each

other when the gaskets are cold and which are brought together to form a steam-tight joint by the expansibility of said gaskets under the influence of steam, one of each of said coupler heads being provided with a locking pin having a threaded engagement therewith and formed with a cylindrical end adapted to be projected over a part of the other head.

[Claims 6 to 11 not printed in the Gazette.]

1,024,628. BUFFING-MACHINE. GEORGE B. GROVER, Lynn, Mass. Filed Mar. 23, 1911. Serial No. 616,426. (Cl. 51—17.)



1. A buffing machine, comprising a buffing roll and a work support, having a recess entirely surrounded by the material of the support, the rim of which is beveled, and means for causing said work-support to travel reciprocatively past the roll in a straight line.

2. A machine for buffing the skived surfaces of articles having skived or beveled edges, comprising a buffing roll, and a work support, the latter consisting of a plate having an opening through it of a form substantially the same and an area less than, the form and area respectively of the article.

3. In a machine of the character and for the purpose described, a work supporting plate having an opening through its entire thickness and beveled at the edge of the opening.

4. In a buffing machine the combination with a buffing roll of a work carriage, a guide connected with the carriage and extending in the direction of movement of the latter, a work clamp held by such guide and movable therein relatively to the carriage, and a yielding means connected with the clamp and carriage tending to place and retain the former in its opperative position.

5. A buffing machine comprising in combination a reciprocating work carriage, means for moving such carriage back and forth, a clamping means associated with the carriage for securing articles to be buffed thereon, a buffing roll mounted in close proximity to the supporting portion of the carriage, a holding roll arranged adjacent to and beyond the buffing roll for holding the advancing ends of the articles as they pass the buffing roll, means for driving said roll with its peripheral speed substantially the same as the speed of the table, a lifter having an edge arranged in close contact with the supporting surface of the carriage, and feed rolls arranged to grasp the blank as it passes over such lifter and remove it therefrom.

[Claims 6 to 16 not printed in the Gazette.]

1,024,629. METHOD OF TREATING IRON ORES. BIRGER FJELD HALVORSEN, Christiania, Norway. Filed Mar. 25, 1909. Serial No. 485,817. (Cl. 204—68.)

1. The process of producing iron and iron alloys and suffur dioxid, consisting in smelting together a suitable mixture of purified sulfid ores and oxid ores in an electric furnace without the addition of basic fluxing materials until the expelling of the sulfur is almost finished, and then refining the product by raising the temperature, stirring the mass and at last adding a strongly basic fluxing material, as lime.

2. The process of producing iron and iron alloys and sulfur dioxid consisting in smelting in an electric furnace without fluxing material a mixture of concentrated sulfid ores and an oxid ore of iron in excess of the quantity required for the formation of the sulfur dioxid and blowing air through the mixture.

3. The process of producing iron and iron alloys and sulfur dioxid, consisting in smelting in an electric furnace without fluxing material a mixture of concentrated sulfid ores and an oxid ore of iron in excess of the quantity required for the formation of the sulfur dioxid, and adding fluxing material after substantially all of the sulfur has been removed.

4. The process of producing iron and iron alloys and sulfur dioxid, consisting in smelting in an electric furnace without fluxing material a mixture of concentrated sulfid ores and an oxid ore of iron in excess of the quantity required for the formation of the sulfur dioxid, and adding basic fluxing material after substantially all of the sulfur has been removed.

5. The process of producing iron and iron alloys and sulfur dioxid from sulfid ores and oxid ores, which consists in dressing the ores to remove the greater part of the gangue and then smelting together a suitable mixture of such purified ores in an electric furnace without the addition of fluxes and adding flux after the elimination of the sulfur has been effected.

1,024,630. GATE. JAMES S. HENDRICKS, Colville, Wash. Filed May 27, 1911. Serial No. 629,771. (Cl. 39—29.)



1. In a sliding gate, the combination with the gate and its guides, and the manipulating mechanism; of a drum moved by the latter, a toggle lever having the outer end of one link pivoted to the gate and the outer end of the other link provided with a toothed head, a toothed sector whose teeth engage those on the head, and a rod connecting the sector with the drum.

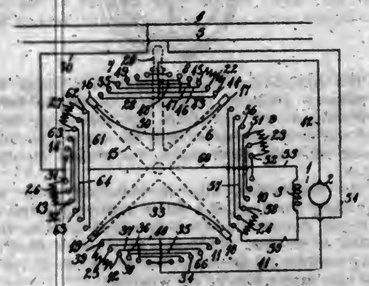
2. In a sliding gate, the combination with a gate and its guides, a tooth sector, a toggle lever having one extremity connected with the gate and the other provided with a toothed head whose teeth mesh with those of said sector, the links of this lever standing in alinement with each other when the gate is closed, and means for swinging the sector on its pivot from a remote point.

3. In a sliding gate, the combination with a gate and its guides, a tooth sector, a toggle lever having one of its extremities connected with the gate and the other extremity provided with a toothed head, whose teeth engage those on said sector, the links of this lever standing in alinement with each other when the gate is closed, a casing under the ground and a drum journaled therein, rods connecting this drum with the two sectors, and means for closing the gate.

1,024,631. CONTROL SYSTEM FOR ELECTRIC MOTORS. HENRY D. JAMES, Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pennsylvania. Filed Sept. 26, 1910. Serial No. 583,861. (Cl. 172—179.)

1. In a control system, the combination with a source of energy, an electric motor and a plurality of resistance sections, of a controller comprising a plurality of circumferentially disposed sets of stationary contact terminals and a plurality of movable contact members to cooperate therewith, said controller being adapted, when operated in either direction, to connect said source of energy, said motor, and said resistances in series circuit and to cut out said resistances, step-by-step, and, when returned to its neutral position, to insert said resistances, step-by-step, establish a local closed circuit through said motor and said resistances, and cut out said resistances, step-by-step.

2. In a control system, an electric motor, a plurality of sections of resistance, and a controller to adjust the circuits of said motor and resistance, and adapted, when operated in either direction from its neutral position, to establish a series circuit through said motor and said resistance, and to successively eliminate said resistance from the circuit, and, when returned to its neutral position, to successively cut said resistance into circuit, establish a local closed circuit through said motor and said resistance and successively eliminate said resistance from circuit, operation on opposite sides of the neutral positions effecting connections for opposite directions of motor rotation.



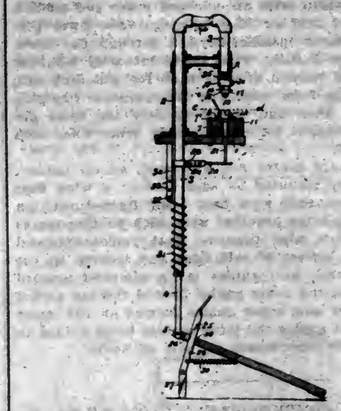
3. In a control system, the combination with an electric motor, a plurality of sets of circumferentially disposed stationary contact terminals, a rocker member rotatable in either direction and having a plurality of contact members to coöperate with said sets of stationary contact terminals and electrically connected in pairs, and a plurality of resistance sections connected to said sets of contact terminals, of electrical connections associated with said stationary contact terminals and said motor, such that movement of said coöperating contact members in either direction from the neutral position, establishes ineffective circuit connections on the first portion of said contact terminals, but establishes operative motor connections for speed control on the last portion of said contact terminals, while movement of said coöperating contact members toward the neutral position effects speed controlling motor connections on said last portion of contact terminals and establishes dynamic braking connections on said first portion of contact terminals.

4. In a control system, an electric motor and a controller therefor comprising a plurality of sets of stationary contact terminals disposed in an arc of a circle, a plurality of rigidly associated neutrally disposed movable contact members to coöperate with each adjacent set of contact terminals and a plurality of resistance sections associated with a portion of several sets of contact terminals, the arrangement of connections being such that the terminals of each set adjacent to the neutral positions are adapted for dynamic braking and the farthest removed terminals of each set for speed regulating motor operation.

5. In a control system, an electric motor, a plurality of resistance sections and a controller for said motor comprising relatively stationary and movable coöperating contact members, the arrangement of parts being such that accelerating motor connections for clockwise rotation are established by movement of said coöperating contact members in one direction from their neutral positions, and decelerating motor connections for clockwise rotation and regulating dynamic braking connections are successively established by movement to their neutral positions, while movement from their neutral positions in the opposite direction establishes similar motor connections for counter-clockwise rotation and the return movement to the neutral positions effects corresponding counter-clockwise motor connections and dynamic braking connections.

[Claims 6 to 13 not printed in the Gazette.]

1,024,632. CIGAR-MOLDING MACHINE. WILLIAM E. JENKINS, Kansas City, Mo., assignor of one-half to Charles A. Kopp, Kansas City, Mo. Filed Oct. 26, 1909. Serial No. 524,612. (Cl. 131—9.)



In cigar molding machines, the combination with two coöperating mold members, of a plunger carrying one of said members, a spring for moving the plunger in one direction, means of adjustment by which the tension of said spring may be changed, a spring for limiting the movement of the plunger in said direction and operating against the other spring, means for moving the plunger in the opposite direction, bunch ejecting means coöperating with one of the mold members, and means adjustable lengthwise of the plunger for actuating the bunch ejecting means.

1,024,633. ORCHARD-HEATER AND VAPORIZER. CARL W. JOHNSON, St. Joseph, Mo. Filed Apr. 26, 1911. Serial No. 623,549. (Cl. 126—59.5.)



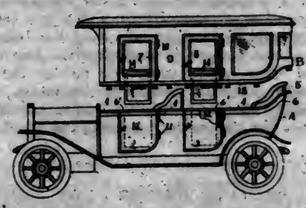
1. An oil holder, adapted to hold burning oil therein, said holder having air inlet openings formed through the upper edge portion thereof; a drum mounted on said holder, said drum having an enlarged lower end portion formed therewith and a plurality of projections on the outer surface thereof, said enlarged portion being adapted to cover said air inlet openings and having damper openings formed through the lower edge portion thereof; an annular wind shield adapted to shield said air inlet openings from wind, said shield being rotatably mounted on said enlarged portion of said drum and having a plurality of notches formed in the inner upper edge thereof, said notches being adapted to be lifted into engagement with said drum projections for rotating said drum; a water pot provided with a plurality of supporting projections extended radially from the upper edge thereof with open spaces between them for egress of heated air therethrough the outer ends of said projections resting on the upper edge of said drum for supporting and holding said

water pot in said drum; a wick in said oil holder, and supporting means for supporting said wick.

2. In an orchard heater and vaporizer, an oil holder having air inlet openings formed through the upper edge portion thereof; a drum mounted on said holder said drum being provided with an enlarged lower end portion adapted to cover said air inlet openings, said lower portion having damper openings formed through the lower edge thereof; an annular wind shield rotatably mounted on said enlarged portion of said drum for shielding said air inlet openings from wind and disengageable engaging means on said drum and shield whereby the same are disengageably engaged for rotating said drum when said shield is rotated.

3. In an orchard heater and vaporizer, an oil holder; a drum rotatably mounted on said holder; a wick float in said oil holder, said wick float being formed with an open bottom and being provided with wick holding means adapted to hold a wick thereon; float guides extended across the open bottom of said float and secured to the lower edge thereof, said guides being extended upward therefrom and having lower guides formed thereon guided in said oil holder and upper guides formed on the upper ends of said float guides the latter guides being guided in said drum and air inlet means for said oil holder.

1,024,634. CONVERTIBLE AUTOMOBILE. ALBERT KLELL, West Park, Ohio, assignor of one-half to Henry Baracs, Cleveland, Ohio. Filed Sept. 21, 1910. Serial No. 582,968. (Cl. 21—62.)

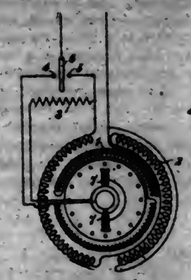


1. An automobile body having a laterally projecting border about its top, a detachable top seated on said body and having a border portion overlapping the border on said top, and coincident barrels 16 and 19 respectively in said borders having annular recesses in their outer portions open outward, in combination with locking bolts adapted to extend bodily through said barrels and provided at one end with heads 20 adapted to rest in the recesses of the upper of said barrels and substantially T shaped lower ends adapted to be rotated and to be locked in the recesses in the lower of said barrels, and confining plates 22 over the heads of said bolts flush with the top surface of the top border.

2. In automobiles, a body having a laterally projecting border about its top provided with vertical openings therethrough at intervals open from beneath and barrels permanently fixed in said openings having recesses in their bottom, in combination with a top having a border portion seated upon said body border and provided with openings and barrels therein matching those in the said body border, the said barrels in both sets having bores substantially elliptical in cross section, and locking bolts through said barrels having substantially T shaped lower ends adapted to be rotated partway around and to lock in the said recesses in the lower of said barrels.

1,024,635. REVERSIBLE INDUCTION-MOTOR. FRED R. KUNKEL, Edgewood Park, Pa., assignor, by mesne assignments, to Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa., a Corporation of Pennsylvania. Filed July 6, 1908. Serial No. 442,177. (Cl. 172—279.)

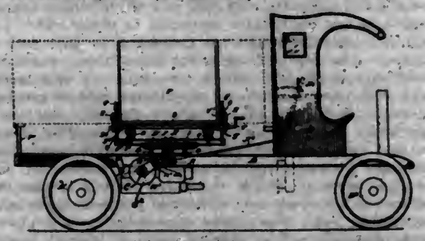
1. The combination with an induction motor having two primary windings, of a single resistance connected between the extremities of the said windings, and a switch member for making external circuit connection to the one extremity or the other of the resistance.



2. The combination with an induction motor having two primary windings, of a phase modifying device, a centrifugal switch, and means for connecting the said device and switch in series with the one or the other of the said windings, according to the desired direction of rotation.

3. The combination with an induction motor having two primary windings, of a phase modifying device and a centrifugal switch connected in series between the extremities of the said windings, and a switch member for making external circuit connection to the one or the other of the said extremities of the windings.

1,024,636. SIDE-DUMP AUTOTRUCK. GEORGE WASHINGTON LALLY, Boston, Mass. Filed Apr. 9, 1910. Serial No. 554,505. (Cl. 21—20.)



1. In a device of the kind described, a frame comprising parallel beams, a second frame at right angles to and above the first mentioned frame, a bearing ring mounted upon the first mentioned frame, a second ring mounted upon the first, the second mentioned ring supporting the second mentioned frame, a bearing member centrally arranged in the first mentioned frame and supported therefrom, and a second bearing member centrally arranged in the second mentioned frame, turning upon the bearing member of the first mentioned frame, and means imparting rotation to the second mentioned ring.

2. In a truck of the kind described, parallel beams mounted transversely upon the truck, a bearing ring supported upon said beams, a centrally placed bearing member having laterally extending arms secured to said beams, a second ring adapted to turn upon the first, a frame carried by said second mentioned ring, and normally at right angles to the beams, a second bearing member adapted to turn upon the first mentioned bearing member and having laterally extending arms secured to the said frame, and means for rotating the second mentioned ring, as and for the purpose set forth.

3. The combination with an auto truck, of beams mounted on the frame of the truck, a turn table mounted on said beam, carrying a ring gear, gears meshing with said ring gear, a shaft carrying gears meshing with the last mentioned gears, a power shaft for driving said shaft through the medium of sprockets and chains, and lever controlled arms carrying idle gears for connecting said gears.

1,024,637. METHOD OF COOKING ARTICLES OF FOOD. CARL LAMPERT, Frankfort-on-the-Main, Germany. Filed Mar. 31, 1900. Serial No. 486,847. (Cl. 99—8.)



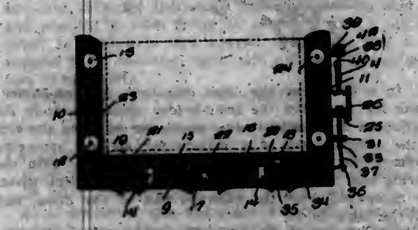
The method of cooking articles of food, which consists in inclosing the articles in a paper bag which is grease and water tight, closing the bag and subjecting the same to heated air in an airtight receptacle, while the bag is free of contact with the sides or walls of the receptacle.

1,024,638. PROCESS OF SEALING AND PROTECTING PERISHABLE PRODUCTS. WILLIAM A. LEVERING, Chicago, Ill., assignor to The Standard Asphalt and Rubber Company, Chicago, Ill., a Corporation of New Jersey. Filed Sept. 8, 1911. Serial No. 648,332. (Cl. 99—8.)

1. The process of protecting perishable products such as means, which consists in first covering the product with a cloth or absorbent covering, then dipping or coating the covered product in an air blown asphaltic compound, formed from dehydrated and oxidized petroleum of a solid or semisolid consistency and markedly higher in its content of asphaltene and lower in its pertolene content than the residuum from which said asphaltic compound is formed, then withdrawing the coated product, then allowing the coating to cool and then dusting the coating with powder composed of talcum and lime dust.

2 The process of protecting packages containing perishable products, such as foods, which consists in first covering the product with a cloth or absorbent cover, then applying a coating of air blown petroleum residuum which is first heated to a fluid or semifluid condition, said coating being formed from petroleum residuum which has been previously blasted with air for a considerable length of time until oxidized and dehydrated, so that such coating will retain its consistency and will not disintegrate or flow when subjected to extremes of weather conditions.

1,024,639. SCALE ATTACHMENT FOR VEHICLES. JOHN H. LEVILLAIN, Loring, La. Filed Apr. 5, 1910. Serial No. 553,520. (Cl. 73—8.)

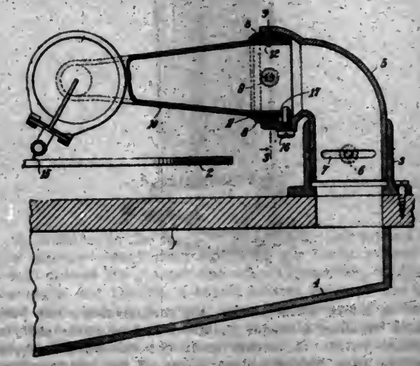


1. In a wagon scale, a channeled bolster, a channeled stirrup housing said bolster, a pair of levers fulcrumed on said bolster and pivotally connected at one end, a pivoted arm connected at one end with said levers, and a yielding connection between said bolsters and arm and serving to hold the free ends of said levers in engagement with said stirrup.

2. In a wagon scale, a support having hollow vertical portions, rollers journaled on said portions and projecting inwardly thereof, a pair of levers pivotally connected to each other at their inner ends, pivot supports for the outer ends of the levers, a weight holder engaging the outer ends of the levers and having vertical portions engaging the rollers, an arm pivotally connected with the inner ends of the levers and pivoted to said support, and a weight indicating device connected with said arm, whereby the outer ends of the levers are held in normal engagement with the weight holder.

3. In combination, a support having hollow vertical portions, rollers journaled on the inner walls of said hollow vertical portions, a wagon bed having vertical sides engaging said rollers, arms pivotally connected to each other and pivotally supported below said wagon bed, a lever pivotally supported below said wagon bed and having pivot connection with the inner ends of the arms, indicating means connected with said lever and a spring coöperating with said indicating means adapted to hold said wagon bed in a normally elevated position.

1,024,640. SUPPORT AND SOUND-DUCT FOR SOUND-BOXES. THOMAS H. MACDONALD, Bridgeport, Conn., assignor to American Graphophone Company, Bridgeport, Conn., a Corporation of West Virginia. Filed May 14, 1910. Serial No. 561,312. (Cl. 181—3.)



1. The combination with the sound-box of a talking machine, of a support and sound-duct therefor comprising a tubular member journaling in a fixed bearing, a second tubular member both journaled and pivoted in the first member and carrying the sound-box, and means for normally preventing said second member from journaling on its axis.

2. The combination with the sound-box of a talking-machine, of a support and sound-duct therefor, comprising a tubular member journaled in a fixed bearing, and a second tubular member carrying the sound-box and both journaled and also pivoted in the first member, whereby said second member with the sound-box may be rotated on its own longitudinal axis and may also be swung in a vertical plane.

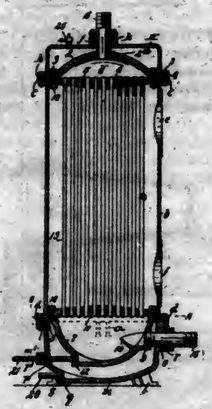
3. The combination with the sound-box of a talking-machine, of a support and sound-duct therefor comprising a tubular elbow-member journaled in a fixed bearing and having at its other end a spherical mouth, a ring of corresponding shape fitted in said mouth and secured therein by a horizontal journal, and a second substantially horizontal tubular member journaled in said ring and carrying the sound-box.

4. The combination with the sound-box of a talking-machine, of a support and sound-duct comprising a tubular elbow-member journaled in a fixed bearing and having at its other end a spherical mouth, a ring of corresponding shape fitted in said mouth and secured therein by a horizontal journal, a second substantially horizontal tubular member journaled in said ring and carrying the sound-box, and means for normally preventing said horizontal member from journaling in said ring.

5. The combination with a talking-machine, of a sound-box-support and sound-conveyer comprising a tubular elbow-member journaled in a fixed bearing with vertical axis and having a flaring spherical mouth at its horizontal end, a ring of corresponding shape fitted in said mouth

on a horizontal pivot and provided with a longitudinal slot, a tapering tubular member carrying the sound-box at its outer end and journaled in said ring and provided with a longitudinal slot registering with the first-named slot and also provided with a partial annular slot, a pin carried by said ring and extending into the last-named slot, and a second pin carried by said elbow-member and extending into the two first-named slots.

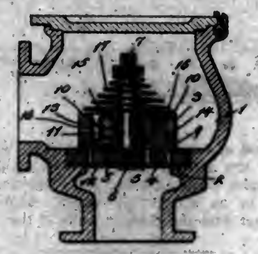
1,024,641. FEED-WATER HEATER. JOHN MCQUAT MACKIE, Montreal, Quebec, Canada. Filed June 25, 1907. Serial No. 380,822. (Cl. 62—30.)



1. In a feed water heater, the combination of an outer casing forming a steam chamber, and a water carrying member within the steam chamber; the water carrying member being formed independently of the casing, removable bodily therefrom without disturbing the steam connections, and comprising a pair of perforated plates or sheets each entirely free from contact with the outer casing, water tubes having their ends connected with said plates, a chambered cap carried by the plate at one end of the member and forming with such plate a water receiving chamber having water inlet thereto, and a chambered cap carried by the plate at the other end of the member and forming with such plate a delivery chamber having water outlet therefrom; and the outer casing being composed of a body portion, having steam inlet and outlet openings, and chambered end portions carried by the body portion and provided with openings to allow the connection of water supply and water outlet pipes with the water carrying member.

2. In a feed water heater, the combination of an outer casing constituting a steam heating chamber, and a water carrying member within the heating chamber removable bodily therefrom without disturbing the steam connections; the casing being formed of a flanged cylindrical portion, provided with inlet and outlet openings for steam, and flanged end caps, identical in form and each having an opening therein, bolted to the cylindrical portion and perforated for the passage of a water pipe therethrough; the water carrying member being composed of two perforated disk plates or sheets each of a sufficiently smaller diameter than the interior of the casing to leave a free space between its edge and such casing, a plurality of water tubes extending between said disks and secured in the perforations thereof, and two identically formed concave heads each of which has an opening therein and is bolted to one of the said disk plates; and water inlet and outlet pipes passing slidably through the openings in the end caps of the casing and tapped into the openings in the headers of the water carrying member, substantially as described.

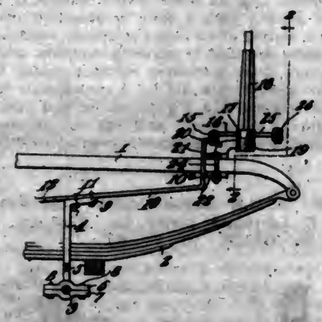
1,024,642. PUPPET-VALVE. ROBERT MARLATT, Carnegie, Pa., assignor of one-half to James Connell, Carnegie, Pa. Filed Nov. 8, 1910. Serial No. 590,494. (Cl. 137—32.)



1. A puppet valve consisting of a seat, a stem thereon, a sliding bushing on said stem, a valve member removably fixed to said bushing, said valve member consisting of removably connected hard and soft metal plates.

2. A puppet valve consisting of a seat, a stem thereon a bushing on said stem, a valve member fixedly mounted on said bushing, said valve member and bushing having vertical movement on said stem, said bushing being removable from said valve member, said valve member consisting of hard and soft metal plates removably connected by means of arms on said soft metal plate passing through openings in said hard metal plate and their ends spread into flares in said openings.

1,024,643. CONNECTOR FOR LAMPS. JAMES B. MCKIEL, Marshall, Tex. Filed May 18, 1911. Serial No. 627,988. (Cl. 240—62.)



1. In a device of the class described, a lamp-holder; means for mounting the lamp-holder upon a vehicle for rotation; a flat resilient arm; means for securing the arm to the steering rod of a vehicle for vertical springing movement only but for movement bodily along with the steering rod in a horisontal direction; and a link pivotally connected with the forward end of the arms, and with the lamp holder.

2. In a device of the class described, the combination with the steering rod of a vehicle and a rotatably mounted, vehicle-carried lamp holder, of a standard secured to the steering rod and upstanding above the same; a spring arm connected at its rear end to the standard and having its forward end carried upwardly; and a link pivotally connecting the forward end of the arm with the lamp holder.

1,024,644. MUD-GUARD SUPPORT. ESRY MILLER, Fredericton, New Brunswick, Canada. Filed May 8, 1911. Serial No. 625,912. (Cl. 21—23.)

1. In combination, a bent supporting arm consisting of a vertical part and a horizontal part, a substantially vertical arm supporting a mud-guard, a detachable coupling device whereby the latter arm is mounted on the horizontal part of the former arm, an axle, a bar connected to the vertical part of said bent arm, a tubular axle nut engaging said axle and receiving said bar within it, means for preventing the independent turning of the latter and means for connecting said nut to said bent arm.



2. In combination, an axle, a bent supporting bar provided with a horizontal bar at one end and having an integral horizontal part at the other end, a substantially vertical mud guard supporting bar, means for mounting said bar detachably on said horizontal part, and a connecting device for said axle and said bent bar, which device receives said horizontal bar within it substantially as set forth.

3. In combination with an axle and a bar carried thereby for supporting a mud guard, an axle-nut internally screw-threaded to engage said axle and also externally screw-threaded, a clamping nut 8 engaging the external screw-threads of said axle-nut, a plate attached to said arm and held in contact with said clamping nut 8 and a bar fixed to said arm, slidably engaging the end of said axle to prevent its independent turning and received in the said axle-nut, the said clamping-nut serving to draw said bar into the end of said axle by its engagement with the latter.

4. In combination with an axle having a slotted end, a bar having a tenon on its end fitting into said slot, a bent arm to which said bar is attached, a nut engaging said axle, and clamping means for drawing said bar into said nut and axle and holding said arm in place.

5. In combination, a supporting arm, an axle, a tubular axle nut threaded thereon, a bar connected to said arm and adapted to slide freely in said axle nut, a plate secured to said arm and spaced therefrom, and a nut adapted to be threaded upon said axle nut to engage the face of said plate.

[Claim 6 not printed in the Gazette.]

1,024,645. BRAD FEEDING AND DRIVING APPARATUS. ROBERT J. MORRISON, Wayne, Pa. Filed July 28, 1911. Serial No. 641,057. (Cl. 1—46.)

1. A device of the character described, comprising a plunger having a brad passage therethrough, a shell around the plunger and spaced therefrom, a barrel located between the shell and the plunger, a spring around the plunger exerting downward pressure on the barrel, a bar movable across the passage in the plunger, a spring pressed lever engaging said bar, said shell having a slot therethrough, and a block secured to the barrel, and engaging the lever, said block having an inclined outer edge, substantially as described.

2. A device of the character described, comprising a plunger having a brad passage therethrough, a shell around the plunger and spaced therefrom, a barrel located between the shell and the plunger, a spring around the plunger exerting downward pressure on the barrel, a bar movable across the passage in the plunger, a spring pressed lever engaging said bar, said shell having a slot therethrough, a block secured to the barrel, and engaging the lever, said block having an inclined outer edge, a pivotal support for said lever consisting of a collar clamped around the shell, bolts clamping said collar, and one of said bolts constituting a pivot for said lever, substantially as described.



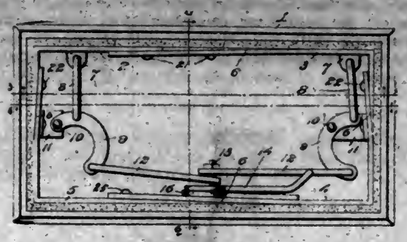
3. A device of the character described, comprising a hollow plunger constituting a passage for brads, a shell secured around the plunger and spaced therefrom, said shell having a slot therein, a barrel located between the shell and the plunger, a spring exerting downward pressure on the barrel, a pivoted lever, a bar, said shell and plunger having openings for the reception of the bar, said barrel having a slot for the reception of said bar, said lever connected at its free end to said bar, a spring exerting inward pressure on the lever, and a wedge block fixed to the barrel and projecting through the slot in the shell and engaging said lever, substantially as described.

4. A device of the character described, comprising a hollow plunger constituting a passage for brads, a shell secured around the plunger and spaced therefrom, said shell having a slot therein, a barrel located between the shell and the plunger, a spring exerting downward pressure on the barrel, a pivoted lever, a bar, said shell and plunger having openings for the reception of the bar, said barrel having a slot for the reception of said bar, said lever connected at its free end to said bar, a spring exerting inward pressure on the lever, a wedge block fixed to the barrel and projecting through the slot in the shell and engaging said lever, a handle on the upper end of said plunger, and a reservoir secured in said handle and constructed to direct brads into the passage of said plunger, substantially as described.

5. A device of the character described, comprising a hollow plunger constituting a passage for brads, a shell secured around the plunger and spaced therefrom, said shell having a slot therein, a barrel located between the shell and the plunger, a spring exerting downward pressure on the barrel, a pivoted lever, a bar, said shell and plunger having openings for the reception of the bar, said barrel having a slot for the reception of said bar, said lever connected at its free end to said bar, a spring exerting inward pressure on the lever, a wedge block fixed to the barrel and projecting through the slot in the shell and engaging said lever, the lower end of said barrel having a restricted spring mouth through which said brads are driven, and a cushion secured to the lower end of said barrel, substantially as described.

[Claim 6 not printed in the Gazette.]

1,024,646. MOLD FOR CONCRETE CURBS FOR GRAVES. JEREMIAH MUCKEY, Gorin, Mo. Filed June 24, 1911. Serial No. 635,103. (Cl. 25—130.)

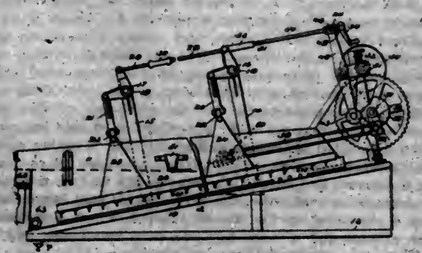


1. A mold for molding rectangular concrete curbing comprising a mold box and a collapsible core comprising a plurality of members having beveled ends, curved levers, pivoted upon lugs secured to the members at opposite ends of the core upon the inside thereof, latches connected to said levers and to the members forming one side of said core, links pivoted to said curved levers and a lever provided with a circular head, the fulcrum of the lever being eccentric to the head for expanding and contracting said members.

2. A mold for concrete curbing comprising a mold box, a collapsible core comprising four members having beveled ends mounted to slide one upon the other, curved levers pivoted to the lugs secured to the members at opposite ends of the core, upon the inside thereof the end members, latches connected to said curved levers and removably connected to the members at one side of said core, links connected to said curved levers, said links being pivoted at their inner ends to a bolt secured to a lever having an eccentrically fulcrumed circular head said lever being secured to one side of the core, a lever provided with a circular head, the fulcrum of the lever being eccentric to the head for operating the core and a link having a strap passing around the eccentrically mounted head of the last mentioned lever, the shank of said link adjustably connected to one of the side members.

3. A mold for concrete curbing of rectangular form comprising a mold box, a collapsible core comprising four angular members having beveled ends mounted to slide one upon the other, curved levers pivoted to members at opposite ends of the core for operating said members, links connected to said curved levers, latches connected to said levers and to lugs upon the members forming one side of said core, a lever having an eccentrically mounted circular head for operating said links, and a link having a strap passing around the eccentrically mounted head of the last mentioned lever said link being adjustable on one side of the core.

1,024,647. ORE CONVEYER AND CLASSIFIER. DAVID J. NEVILL, Denver, Colo., assignor to John Van Nostrand Dorr, Lead, S. D. Filed Nov. 5, 1908. Serial No. 461,211. (Cl. 193—11.)

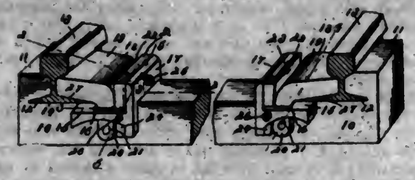


1. An ore conveyer and classifier, comprising a settling trough, a rake mounted to reciprocate therein, bell crank levers, means for operating them, and links or hangers connecting the bell crank levers with the rakes and which have universal joints therewith.

2. In an ore conveyer and classifier, the combination of a settling trough, a rake mounted to reciprocate therein, bell-crank levers mounted at opposite ends of the trough, jointed connections between the rake and the levers, a rod connecting the bell-crank levers, an operating lever, a rod connecting this lever with the bell-crank lever at the delivery end of the apparatus, and means for adjusting the length of the rod whereby both bell-crank levers may be moved simultaneously to raise the rake in the trough and to thus adjust its position therein.

3. In an ore conveyer and classifier, the combination of a settling trough, a rake mounted to reciprocate therein, bell crank levers mounted at opposite ends of the trough, jointed connections between the rake and the levers, a rod connecting the bell crank levers, devices for adjusting the length of the rod, an operating lever, a rod connecting this lever with the bell crank lever at the delivery end of the apparatus, and means for adjusting the length of the rod whereby both bell crank levers may be moved simultaneously to raise the rake in the trough and to thus adjust its position therein.

1,024,648. RAIL-CLAMPING DEVICE. JAMES PATTERSON, Rockwell, Fla. Filed Aug. 2, 1911. Serial No. 642,015. (Cl. 238—5.)



1. A rail clamping device comprising a tie, an end flange formed on the tie and provided with a recess adapted to receive a rail with one side of the web of the rail abutting against the said end flange, side flanges formed on the said tie and provided with slots, a brace extending transversely to the tie at one end of the said side flanges, a clamping bar pivotally mounted on the said tie with portions of the said clamping bar extending through the slots in the said side flanges and another portion of the said clamping bar for engagement with the other side of the web of the rail, a wedge for engagement with the said brace and said clamping bar and set screws mounted to extend through the said brace and through one of the said side flanges to engage the said wedge for operating the same to move the said clamping bar into clamping engagement with the said rail.

2. A rail clamping device comprising a tie, an end flange formed on the tie and provided with a recess adapted to receive the rail with one side of the web of the rail abutting against the said end flange, side flanges formed on the said tie and provided with slots, a brace extending transversely to the tie at one end of the said side flanges, a clamping bar pivotally mounted on the said tie with portions of the said clamping bar extending through the slots in the said side flanges and another portion of the said clamping bar for engagement with the other side of the web of the rail, a wedge for engagement with the said brace and said clamping bar and adjusting means mounted on the said tie for operating the said wedge to move the said clamping bar into clamping position with the said rail.

3. A rail clamping device comprising a tie, an end flange on the said tie, side flanges on the said tie, a clamping bar pivotally mounted on the said tie and engaging the said side flanges, a head on the said clamping bar for engagement with a rail mounted to abut against the said end flange and a wedge for engagement with the said tie and the said clamping bar to retain said clamping bar in clamping position with the said rail.

4. A rail clamping device comprising a tie, an end flange on the said tie, side flanges on the said tie, a clamping bar pivotally mounted on the said tie and engaging the said side flanges, a head on the said clamping bar for engagement with a rail mounted to abut against the said end flange and means mounted on the said tie and engaging the said clamping bar for retaining the said clamping bar in clamping engagement with the said rail.

5. A rail clamping device comprising a tie, an end flange on the said tie and adapted to be engaged by a rail, a clamping bar mounted to swing on the said tie and capable of being moved into clamping engagement with the said rail, a wedge for engagement with the said tie and the said clamping bar and set screws to move the said clamping bar into clamping engagement with the said rail.

[Claims 6 and 7 not printed in the Gazette.]

1,024,649. ANIMAL-RELEASING MEANS. PETER PEEL, Salinas, Cal. Filed May 16, 1910. Serial No. 561,774. (Cl. 119—115.)



1. A device of the character described, comprising a slotted keeper having a pocket on its interior opening to the slot, a fastening device having a base portion and a projecting portion adapted to enter the slot, an actuating rod, and a seat on said rod for the base portion of the fastening device, said seat having a portion adapted to engage the said base portion to carry the same out of the pocket of the keeper, substantially as described.

2. A device of the character described, comprising a slotted keeper having a pocket on its interior opening to the slot, a fastening device having a base portion and a projecting portion adapted to enter the slot, an actuating rod, and a seat on said rod for the base portion of the fastening device, said seat having portions adapted to engage the base portion to carry the same out of the pocket of the keeper, and to retain the base portion in the keeper, substantially as described.

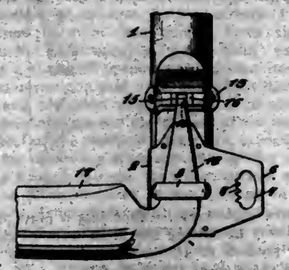
3. A device of the character described, comprising a slotted keeper having a pocket on its interior opening to the slot, a fastening device having a base portion and a projecting portion adapted to enter the slot, an actuating rod, and a seat on said rod for the base portion of the fastening device adapted to engage the latter to shift the same into and out of the pocket of the keeper, said seat having flanged ends and the base portion of the fastening device being flanged to seat between said ends and be engaged thereby.

4. A device of the character described, comprising a slotted keeper having a pocket on its interior opening to the slot, a fastening device having a base portion and a projecting portion adapted to enter the slot, an actuating rod, and a seat on said rod for the base portion of the fastening device adapted to engage the latter to shift the same into and out of the pocket of the keeper, said seat having flanged ends and the base portion of the fastening device being flanged to seat between said ends and be engaged thereby, the intermediate portion of the seat being curved transversely and the flanged base correspondingly curved.

5. A device of the character described, comprising a slotted keeper having a pocket on its interior opening to the slot, a fastening device having a base portion and a projecting portion adapted to enter the slot, an actuating rod, and a seat on said rod for the base portion of the fastening device adapted to engage the latter to shift the same into and out of the pocket of the keeper, said seat having flanged ends and the base portion of the fastening device being flanged to seat between said ends and be engaged thereby, the intermediate portion of the seat being curved transversely and the flanged base correspondingly curved in opposite directions.

[Claims 6 to 8 not printed in the Gazette.]

1,024,650. MEANS FOR SECURING SCYTHE-BLADES ON HANDLES. JOSEPH REAL, East Highgate, Vt. Filed Oct. 23, 1911. Serial No. 656,104. (Cl. 56—27.)



1. The combination with a snathe member, a sleeve mounted on one end thereof, said sleeve and snathe member being provided with alining cross channels, a clamping bolt extending through said snathe member and provided with a head adapted to fit in said cross channels, and a shank formed on said sleeve, said shank being provided with a slot, one of the walls of which is provided with teeth, said bolt and slot being adapted to coöperate with one another to retain a blade having a longitudinally extending tang thereon to the handle member; of means also adapted to coöperate with said bolt for retaining a blade having an angular tang to said snathe member.

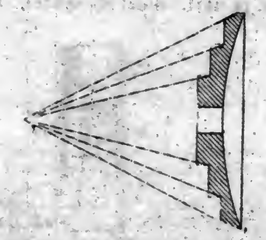
2. A device of the class described, comprising a snathe member, a sleeve mounted on one end thereof, said sleeve and snathe member being provided with horisontally and vertically arranged intersecting channels, a bolt extending through the snathe member at the point of intersection of said channels, said bolt being provided with a band-like head adapted to fit in said channels and project therebeyond, means to clamp said bolt to the snathe member, means carried on said snathe member adapted to coöperate with said bolt when disposed in the vertical channel for adjustably securing a blade having a longitudinally extending tang to the snathe member, and additional means carried on the snathe member adapted to coact with said bolt and the head thereof disposed in the horisontal channel to adjustably secure a blade having an angular tang to said snathe member.

3. A device of the class described, comprising a snathe member, a sleeve secured to one end thereof, said sleeve and snathe member being provided with a pair of intersecting channels, a bolt extending through said snathe member at the point of intersection of said channels, said bolt being provided with an enlarged band-like head adapted to fit within either of said channels, means to securely clamp the bolt to the snathe member, a pair of blades, one of which is provided with a longitudinally extending tang and the other with an angular tang, means coöperating with the bolt when the same is disposed in one slot for retaining the blade having the longitudinal tang thereon to the snathe member, and additional means coöperating with the bolt when the same is disposed in the opposite slot for retaining said other blade to the snathe member.

4. In a device of the class described, the combination with a snathe member having a pair of cross channels adjacent one end thereof, said member being also provided with an opening therethrough at the point of intersection of said channels; of a bolt extending through the opening and provided with a head adapted to partially enter said channels one at a time, a blade having a tang thereon

adapted to be received through the head of said bolt, means to secure the bolt to the snathe member, and means on said snathe member to engage the free end of said tang and aid in retaining the blade in various adjusted positions.

1,024,651. TARGET. IRA L. REEVES, South Natick, Mass. Filed June 20, 1911. Serial No. 634,338. (Cl. 124—5.)



1. An infrangible target comprising a plurality of steps of progressively increasing size from front to rear thereof, the lateral portion of at least one front step being connected with the step at the rear of it.

2. A target comprising a plurality of steps of progressively increasing size from front to rear thereof, the lateral portion of each front step being connected with the step at the rear of it, and the lateral portion of the rearmost step merging into the back of the target, said lateral portions being of progressively increasing angles.

3. A target having a central hole comprising a bull's eye and also having a plurality of steps of progressively increasing size from front to rear thereof, the lateral portion of at least one step being connected with the step at the rear of it.

4. An integral, infrangible target having a central hole constituting a bull's eye and also having a plurality of steps of progressively increasing size from front to rear thereof, the lateral portion of at least one front step being connected with the step at the rear of it, the lateral portion of each front step being connected with the step at the rear of it and the lateral portion of the rearmost step merging into the back of the target, said lateral portions being of progressively increasing angles.

1,024,652. MOTOR ROAD-VEHICLE. FREDERICK HENRY ROYCE, Derby, England. Filed Oct. 28, 1911. Serial No. 657,342. (Cl. 21—90.)



In a motor car, the combination, with a frame provided with a crossbar, an axle casing provided with a longitudinal member, a universal joint connecting the said member and crossbar, an axle mounted in the said casing, and road wheels carried by the said axle; of leaf springs having their middle parts pivotally connected to the frame between the said crossbar and axle, links pivotally connecting the front ends of the said springs with the frame, and rollers, for the rear end portions of the said springs to run or bear on, said rollers being supported by the said axle-casing.

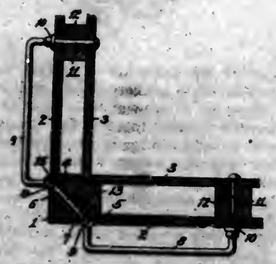
1,024,653. LANDING-NET HOLDER. FRANK J. SARGENT, Medina, Ohio. Filed Apr. 17, 1911. Serial No. 621,601. (Cl. 224—5.)

1. A landing-net holder adapted to be pinned on the back of a fisherman, comprising a substantially rigid metallic plate, a spring clip mounted centrally and rotatably thereon, a flexible strip secured to one side of said plate and having holes in its ends and a wire fastening pin to secure the holder to a garment having pointed ends adapted to engage through the holes in said flexible strip into a suitable support.



2. A landing-net holder for fishermen, comprising a rigid substantially flat backing-plate, a flexible strip of greater length than said plate secured thereto, a spring clamping member having a rivet support rotatably mounted in said plate and a spring wire pinning device having a central coil about said shank and pins at its ends adapted to be engaged through said flexible strip in the garment on the fisherman.

1,024,654. CAR-LADDER. WILLIAM S. SCHROEDER, Austin, Ill. Filed Oct. 20, 1911. Serial No. 655,758. (Cl. 105—195.)



1. In a car, a corner post, a side ladder and an end ladder, bolts passing diagonally through said corner post from the side of the car to the end thereof, each of said bolts securing one end of one of the steps of the side ladder and one end of one of the steps of the end ladder.

2. In a car, a corner post having opposed inclined faces upon its end and side surfaces, side steps and end steps, each of said side and end steps having a lug at its outer end extending at an angle to the step and conforming to one of the inclined faces upon the corner post, bolts passing diagonally through said posts from the outside of the car at the end to the outside of said car at the side thereof, each of said bolts engaging the outer end lug of one of said side steps and the outer end of one of said end steps.

3. In a car, corner posts, outer and inner sheathing forming double walls at the sides and ends of the car, said posts being rabbeted to receive the abutting edges of said sheathing, the recesses formed by rabbeting the outer sides of said posts having opposed inclined surfaces, side steps and end steps, each of said side and end steps having a lug at its outer end extending at an angle to the step and conforming to one of the inclined faces upon the corner post, bolts passing diagonally through said posts from the outside of the car at the end to the outside of the car at the side thereof, each of said bolts engaging the outer end lug of one of said side steps and the outer end of one of said end steps.

1,024,655. SCISSORS. WILLIAM H. SPENCE and VIVA B. SPENCE, Underwood, Ind. Filed May 19, 1911. Serial No. 628,344. (Cl. 30—13.)

1. In combination, a pair of shear blades each having a pivot opening, a bolt within said openings to pivotally connect said blades, a knife blade having its tang recurved and held parallel to the blade the recurved portion of the blade extending outward of the bottom face of its blade to serve as a stop flange, said blade and tang having registering openings engaged by said bolt, the bottom face of said blade working upon one of said shear blades, and a nut threaded upon said bolt to yieldingly clasp said shear and knife blades and tang, as and in the manner set forth.



2. In combination, a pair of shear blades each having a pivot opening, a bolt within said openings to pivotally connect said blades, a knife blade having its tang recurved and held parallel to the blade the recurved portion of the blade extending outward of the bottom face thereof to serve as a stop flange which has a part stamped out to form an ear, said blade and tang having registering openings engaged by said bolt, the bottom face of said blade working upon one of said shear blades, a nut threaded upon said bolt to yieldingly clasp said shear and knife blades and tang, the shear blade carrying said knife blade having a socket engaged at times by said ear, said outstanding flange arranged to lie against the edge of the adjacent blade when said knife blade is at right angles to the shear blade.

1,024,656. BORING-BAR. ISAAC W. SPRINK, Oak Park, Ill., assignor to Armstrong Brothers Tool Company, Chicago, Ill., a Corporation of Illinois. Filed June 16, 1909. Serial No. 502,458. (Cl. 77—76.)



1. In a tool of the character described, a socketed member having slots formed through its walls; cutters mounted in said slots; a washer mounted in the socket of said member and having wings extending into said slots, said wings being arranged to contact the adjacent portions of said cutters; means for forcing said wings against said cutters, said washer and wings being free to rock to accommodate themselves to inequalities in the size of the cutters; and means for moving said cutters.

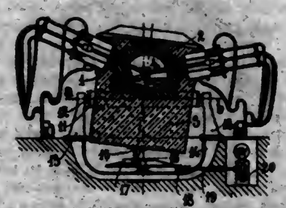
2. In a tool of the character described, a socketed member having slots extending through its walls; cutters mounted in said slots; a washer mounted in the socket of said member and having wings extending into said slots; a cap having a screw-thread engagement with one end of said socketed member for forcing said washer and said wings into contact with said cutters, the surfaces of said wings and washer contacted by said cap being convex and the contacting portions of the cap being concave to permit said washer and wings to rock to accommodate themselves to inequalities in the size of the cutters; and means for moving said cutters.

3. In a tool of the character described, a head having an axial opening extending from one end of said head and having radial slots formed through its walls; cutters mounted in said slots; a cylindrical block slidably mounted in said axial opening and having radial slots therein to receive the inner ends of said cutters, the bottoms of the slots in said block being inclined to form inclined planes and the inner ends of the cutters being chamfered; a washer mounted in said axial opening and having wings extending into the slots in said head to lie in contact with said cutters, the surfaces of said washer and wings adjacent said cutters being alined to provide a support for said cutters throughout substantially the entire length of the latter; a cap having a screw-thread engagement with the open end of said head, said cap comprising an annular flange adapted to bear against said wings and an end wall adapted to bear against said washer, said end wall and the edge of said flange being concave and the adjacent sides of said wings of said washer being convex to permit said washer and wings to rock to accommodate themselves to inequalities in the size of the cutters; a stem fixed to said block and slidably mounted in the axial opening in said head; and a screw mounted in a threaded opening intersecting the last mentioned axial opening in said head, said screw having a conical inner end and said stem having a chamfered inner end for engagement by the conical end of the screw.

4. In a tool of the character described, a head having an axial opening extending from one end thereof and having radial slots formed through its walls, cutters mounted in said slots, a block mounted in the opening in said head and having wedging surfaces at one end arranged to bear against said cutters, means for moving said block, a washer arranged to bear against said cutters at the side opposite said block, said washer having wings adapted to lie in said slots, said head having external screw threads at one end, and a cap having an annular internally-screw-threaded flange adapted to be turned on the threaded portion of said head and bear against said washer, the inner side of said cap and flange being concave and the adjacent portions of said washer and said wings being convex to permit said washer to adjust itself to inequalities in the sizes of said cutters.

5. In a tool of the character described, a head having an axial opening extending from one end thereof and having slots cutting through its walls, the inner end of said opening being reduced in size, cutters mounted in said slots, a cylindrical block slidably mounted in said opening and having a stem slidable in the reduced inner end of said opening, said block having slots therein in which the inner ends of said cutters lie, the bottom walls of said slots providing inclined faces and the inner ends of said cutters being chamfered and engaging said faces, said head having a longitudinal groove therein, a set screw extending through the wall of said head and into said groove for preventing rotation of said block, means for longitudinally sliding said block to adjust said cutters, and a cap having a screw thread engagement with said head, said cap being adapted to clamp said cutters in their adjusted positions.

1,024,657. ELECTRIC FURNACE. ERNESTO STASSANO, Turin, Italy. Filed Aug. 7, 1911. Serial No. 642,837. (Cl. 204—64.)



1. In an electric furnace a closed melting chamber arranged in a casing mounted to oscillate in a ring, pivots supporting said ring at an angle of 90° with respect to the pivots of the casing, an arm depending axially from the lower end of the chamber and engaged by a rotating member in an eccentric point of said rotating member.

2. In an electric furnace a closed melting chamber of spheroidal form with the lower portion cut away by a plane constituting the bottom of the chamber, said cham-

ber being arranged in a casing mounted to oscillate in a ring, pivots supporting said ring at an angle of 90° with respect to the pivots of the casing and an arm depending axially from the lower end of the chamber and engaged by a rotating member in an eccentric point of said rotating member.

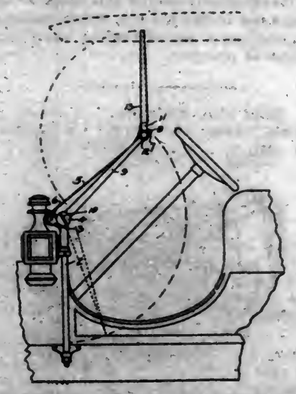
3. In an electric furnace a closed melting chamber arranged in a casing mounted to oscillate in a ring, pivots supporting said ring at an angle of 90° with respect to the pivots of the casing, an arm depending axially from the lower end of the chamber and engaged by a rotating member in an eccentric point of said rotating member, electrodes mounted in chambers provided with water jackets, flexible cables for feeding the current to the electrodes and flexible piping for feeding the water to the water jackets of the electrodes chambers.

4. In an electric furnace a closed melting chamber arranged in a casing mounted to oscillate in a ring, pivots supporting said ring at an angle of 90° with respect to the pivots of the casing, an arm depending axially from the lower end of the chamber and engaged by a rotating member in an eccentric point of said rotating member, electrodes mounted in chambers provided with water jackets, an annular piston sliding in the water jacket, means for connecting said piston with the electrode and means for operating the piston by controlling the circulation of water in the water jackets.

5. In an electric furnace a closed melting chamber arranged in a casing mounted to oscillate in a ring, pivots supporting said ring at an angle of 90° with respect to the pivots of the casing, an arm depending axially from the lower end of the chamber and engaged by a rotating member in an eccentric point of the said member, electrodes mounted in chambers provided with water jackets, an annular piston sliding in the water jackets, hollow rods connecting the said annular piston with the cross bars of the electrodes, each of said hollow rods communicating with one of the two portions separated by the piston in the water jacket, and means for controlling the circulation of water in said two portions of the water jackets.

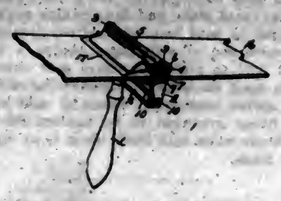
[Claims 6 and 7 not printed in the Gazette.]

1,024,658. FOLDING STORM-FRONT FOR AUTOMOBILES. JAMES E. STEVENSON, Puyallup, Wash. Filed Oct. 19, 1909. Serial No. 523,532. (Cl. 21—81.)



In a storm-front for vehicles, the combination of a pair of shaped pieces fixedly secured to each side of the vehicle; a pair of roller brackets formed integral on said shaped pieces; a spring roller removably mounted on said brackets across the vehicle; an apron mounted on said roller; pivots formed on said fixed shaped pieces; a pair of radius arms mounted on said pivots and adjustable thereabout; hooks formed on the outer ends of said radius arms; loops secured to the corners of the free end of said apron and adapted to engage said hooks; a stiffener mounted across the apron adjacent said loops whereby the apron is held taut between the loops and the spring roller; an extension shield of flexible material; pockets formed in the side edges of the extension shield; a pair of outer arms pivotally mounted on the free ends of said radius arms and adjustable relative thereto and adapted to be inserted in said pockets whereby the extension shield is held in adjustable relation to the vehicle and the apron; and a flap extending downward from the extension shield and covering the upper end of the apron.

1,024,659. STROPPING-MACHINE. RICHARD M. WATSON, Detroit, Mich., assignor to Gibford Specialty Co., Detroit, Mich., a Corporation of Michigan. Filed Aug. 26, 1911. Serial No. 646,128. (Cl. 51—16.)



1. A stropping machine comprising a frame, a blade holder journaled therein, a rock shaft also journaled in said frame below the blade holder, a bed mounted on said shaft and movable radially thereon, a roller abutment above said bed, a strop lying between said bed and roller, means for urging the bed in the direction of said roller, and means for connecting said rock shaft with the blade holder to swing said holder as said bed oscillates.

2. A stropping machine comprising a frame, a blade holder journaled therein, a rock shaft journaled in said frame below the blade holder, an oscillatory bed mounted upon said rock shaft to move radially thereon, a roller journaled in the frame above the bed, a strop interposed between said bed and roller, a spring interposed between the rock shaft and bed to urge said bed in the direction of said roller against the under face of said strop, a sector gear on the rock shaft, a pinion engaging said gear, and a gear connected with the blade holder engaging said pinion.

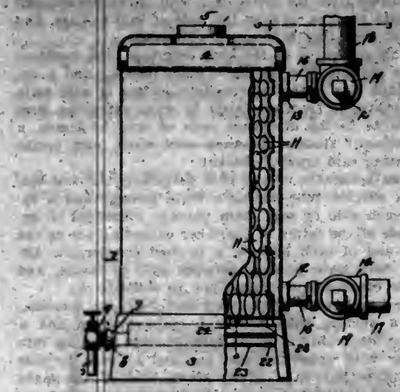
3. A stropping machine comprising a frame, a blade holder journaled therein, a squared rock shaft journaled in the frame below the blade holder, an oscillatory bed, said bed having end pieces provided with slots which receive said shaft and through the medium of which the shaft is rocked as the bed oscillates, a roller abutment above said bed, a strop interposed between said bed and roller, a spring engaging the bed to urge it against the under face of said strop, and means connecting the rock shaft with the blade holder to actuate said holder as said shaft is rocked.

1,024,660. HOT-WATER OR STEAM HEATER. WILLIAM A. WIEDERSUCH, Fairmont, W. Va. Filed Mar. 20, 1911. Serial No. 615,513. (Cl. 122—225.)

1. A heater formed of a plurality of hollow sections, each section being provided with abutting projections upon its sides, said projections decreasing in size from the bottom upwardly.

2. A heater formed of a plurality of hollow water sections, each section having its side walls corrugated to form staggered arranged projections, the projections of one section registering with the projections of the adjacent section.

3. A heater comprising a plurality of rectangular hollow water sections, the side walls of each water section being corrugated to form staggered arranged oval shaped projections, the projections terminating short of each edge of said sections.



4. A water section for a heater comprising a rectangular casing having its sides corrugated to form a plurality of staggered arranged oval shaped projections terminating short of each edge to form a water column the full width of each section at each edge.

5. A water section for heaters comprising a rectangular casing having its side walls corrugated to form a plurality of different sized projections terminating short of each edge.

[Claims 6 to 9 not printed in the Gazette.]

1,024,661. PROJECTING-MACHINE FOR MOVING PICTURES. FREDERIC WARREN WRIGHT, Yonkers, N. Y. Filed Nov. 18, 1911. Serial No. 661,149. (Cl. 88—18.)



1. In a kinetoscope, mechanism for positively engaging the film to form a loop between the delivery reel and the exposure aperture, means for operating said mechanism controlled through the operation of the receiving reel, and dependent thereupon.

2. In a kinetoscope, mechanism for producing a loop between the aperture and the delivery reel, and means for intermittently operating said mechanism upon the diminishing of the size of the loop.

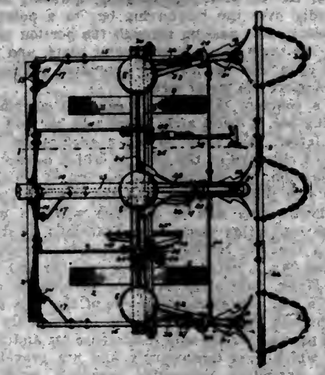
3. In a kinetoscope, means adapted to positively engage the film to form a loop between the exposure aperture and the delivery reel, intermittent mechanism for operating said loop-forming mechanism, and a controlling device for operating said mechanism from the receiving reel, said controlling device being in turn controlled by the amount of film which has passed the exposure aperture.

4. In a kinetoscope, means for forming a loop between the delivery mechanism and the aperture, said means being driven by the film itself, as it is wound on to the receiving reel, and means for intermittently operating the receiving reel.

5. In a kinetoscope, a sprocket roller for engaging the film to form a slack adjacent to the delivery reel, a sprocket roller engaged by the film and rotated thereby adjacent to the receiving reel, a controlling device securing its movement by the amount of slack formed between the aperture and the receiving reel, and adapted, upon a predetermined slack being obtained, to cause the actuation of the receiving reel.

[Claims 6 to 8 not printed in the Gazette.]

1,024,662. PLANTING-MACHINE. RUDOLPH JOSEPH ALTGELT and HERMAN ERNEST ALTGELT, South Bend, Ind., assignors to Oliver Chilled Plow Works, South Bend, Ind. Filed May 7, 1910. Serial No. 559,944. (Cl. 111—6.)



1. The combination with carrying wheels, an axle and a tongue, of a fixed frame supported by the axle and the tongue, an upper horizontal beam disposed above the axle and frame and supported thereby, furrow opener beams pivotally connected at their forward ends with the forward portion of said frame, supporting means for the rear portions of the furrow opener beams, mounted on said upper horizontal beam, grain hoppers supported on said horizontal beam, furrow openers at the rear ends of the furrow opener beams, and conveying means communicating with said grain hoppers and discharging behind the furrow openers.

2. The combination with a rigid frame and carrying wheels, of a series of furrow opener beams, furrow openers carried by the rear ends of said beams, seed discharging devices, a cross beam supported by the rear ends of said furrow opener beams and chain coverers attached to said cross-beam.

3. The combination with a rigid frame and carrying wheels, of a series of furrow opener beams attached at their forward ends to said rigid frame, furrow openers carried by rear ends of said beams, a transverse beam comprising longitudinally adjustable sections supported by the furrow opener beams, and chain coverers attached to the sections of said transverse beam.

4. The combination with a rigid frame and carrying wheels, of a series of furrow opener beams, furrow openers at the rear ends of said beams, means adjustably and pivotally connecting two of said beams with the forward portion of the rigid frame, a series of chain coverers, means for adjusting said chain coverers laterally, and means for discharging seed behind the furrow openers and in front of said chain coverers.

5. The combination with a rigid frame and carrying wheels, of a beam attached at its forward end to the frame, a furrow opener, a standard connecting the fur-

row opener with the rear end of the beam, a vertically adjustable arm projecting from said standard, a transverse beam in rear of the furrow-opener and connected with said adjustable arm, a chain coverer attached to said transverse beam, and seed discharging means.

1,024,663. REINFORCEMENT. ASHER ATKINSON, New Brunswick, N. J. Filed Sept. 27, 1911. Serial No. 651,499. (Cl. 72—122.)



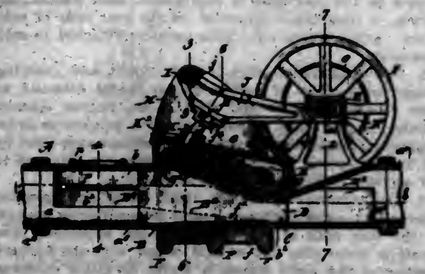
1. In a spacing and supporting device for concrete reinforcements comprising a bar, a metal strip below said bar and supporting the same, a member bent together at one end to project through a perforation in the metal strip and having arms curved first upwardly and then downwardly over the reinforcing bar to a point beyond a horizontal plane passing through the portion projecting through the perforation in the metal plate, and supporting legs upon said downwardly extending portion of the arm to support the metal strip.

2. In a concrete reinforcing means, in combination, a reinforcing bar, a metal strip below said bar and supporting the latter, said strip having a perforation adjacent said bar, a clip, one of the ends of which passes through the perforation, the intermediate portion of which passes over the said reinforcing bar and the other end of which passes downwardly and is provided with an upwardly extending supporting member, substantially as described.

3. In a concrete reinforcing means, in combination, a reinforcing bar, a metal strip below said bar and supporting the latter, said strip having a perforation adjacent said bar, a clip comprising arms one of the ends of which passes through the perforation, the intermediate portion of which passes over the said reinforcing bar and the other ends of which pass downwardly and are provided with upwardly extending supporting members, substantially as described.

4. In a device of the character described, a bar, a metal strip below said bar and supporting the same, a clip comprising curved arms, said arms converging at one end and adapted to enter a perforation in said metal strip, said arms diverging at the other end and extending substantially below said metal strip, and supporting legs extending upwardly from the last named ends adapted to support the metal strip.

1,024,664. SUCTION-TUBE FOR HYDRAULIC DREDGING-MACHINES. LOUIS J. BALTZ, Buffalo, N. Y. Filed Nov. 30, 1910. Serial No. 594,929. (Cl. 37—9.)



1. In an apparatus of the kind described, the combination of a suction tube restricted at one point, a pivoted crusher-jaw wholly confined within said tube and arranged adjacent said restricted point, and means for oscillating said crusher-jaw.

2. In an apparatus of the kind described, the combination of a suction-tube having a main passage and a by-pass opening with opposite ends into said main passage and separated from the latter by a wall, a crusher-element in the main passage between the ends of said by-pass, and means for operating said crusher-element.

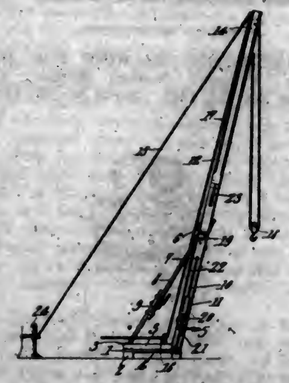
3. In an apparatus of the kind described, the combination of a suction tube having a main passage and a by-pass at each side of the intermediate portion of said main passage separated from the latter by walls extending from the entrance to the discharge ends of said by-passes, a crusher-element situated between said walls, and means for operating said crusher-element.

4. In an apparatus of the kind described, the combination of a suction tube having a main passage and a by-pass at each side of said main passage connected to opposite ends of the latter, a guard-bar extending across the entrance end of each by-pass, a pivoted crusher-jaw situated in said main passage between said by-passes, and means for causing said crusher-jaw to oscillate.

5. In an apparatus of the kind described, the combination of a suction tube having a main passage and a by-pass at each side of said main passage opening into the latter with opposite ends, one end of each by-pass having its bottom in a plane above that of the main passage and inclined downwardly therefrom toward its opposite end, a crusher-element situated between said by-passes, and means for actuating said crusher-element.

[Claims 6 and 7 not printed in the Gazette.]

1,024,665. DERRICK. VANESS O. BARLOW and JOHN HOLMAN, Carney, Mich. Filed Oct. 24, 1910. Serial No. 588,874. (Cl. 212—14.)

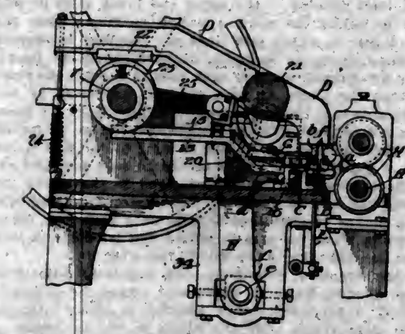


1. A derrick, comprising a base, a pair of spaced mast sections having their lower ends pivoted to the base, adjustable braces connected to the sides and rear of the mast sections and base, a vertically movable top mast section, and flexible means for raising said top mast section and holding it as an extension of the spaced mast sections.

2. A derrick, comprising a base, a pair of spaced lower mast sections held spaced apart at their upper ends, and pivoted at their lower ends to the base, an adjustable brace connected to each member thereof and the base an extensible brace connected to the base and the upper end of the sections and operating in a direction of the pivotal movement of the sections, a top mast section, and means connected to said top mast section and the spaced sections for elevating and locking the top mast section in elevated position.

3. The combination with a portable support, of a spaced mast section having its lower end pivoted for movement transverse of said support, an extensible brace pivotally connected at its respective ends to the support and section, means for extending and retracting the sections of said brace to permit various angles of the mast section to the support, side brace rods connected to the support and to the mast section, a second mast section pivotally connected near one end between the members of the spaced mast section and having a movement from the inclined or collapsed position to an alined or extended position, a winding drum disposed between the spaced mast section, and a flexible connection between said drum and the short end of the swinging mast section for moving the swinging section from an inclined to an alined position.

1,024,666. SPIKE-MACHINE. GEORGE BARR, Pittsburgh, Pa. Filed Feb. 8, 1907. Serial No. 356,418. (Cl. 10—57.)



1. In a spike-machine the combination with a drive-shaft, a rock-shaft, a gripping-member and sets mounted on said rock-shaft and bodily reciprocable to and from the work in an arc of a circle struck from the pivot of said rock-shaft, of an unjointed heading-lever integral throughout its length adapted to bodily rock to and from the work, said lever actuated direct from said drive-shaft.

2. In a spike-machine the combination with a suitable frame, a drive-shaft, a rock-shaft, an anvil, and a gripping member and sets mounted on said rock-shaft and bodily reciprocable to and from the anvil in an arc of a circle struck from the pivot of said rock-shaft, of an unjointed heading-lever integral throughout its length adapted to bodily rock to and from the work, said lever actuated direct from said drive-shaft.

3. In a spike-machine the combination with a drive-shaft, a rock-shaft, a gripping-member and sets mounted on said rock-shaft and bodily reciprocable to and from the work in an arc of a circle struck from the pivot of said rock-shaft, an unjointed heading-lever integral throughout its length, and a pitman having one end connected to said header and its opposite end connected to said drive-shaft and adapted to bodily rock said header to and from the work.

4. A spike machine comprising means for feeding the spike blanks longitudinally into the machine, heading devices, a transverse horizontally disposed gage-bar reciprocable in a fixed plane which determines the extent of the initial movement of the blank before it is operated on by the heading devices, guide-bearings for said bar near each end thereof having guide-openings that are wider than said bar, means for keeping said bar normally against one side of said bearing, a set-screw in the bearing nearest the path of said spike-blank and having engagement with said gage-bar, and means for reciprocating said bar.

5. A spike machine comprising means for feeding the spike blanks longitudinally into the machine, heading devices, a gage-bar reciprocable in a fixed plane which determines the extent of the initial movement of the blank before it is operated on by the heading devices said gage-bar having a lateral offset near the end thereof farthest from said blank, guide-bearings for said gage-bar near each end thereof having guide-openings that are wider than said bar, means for keeping said bar normally against one side of said bearing, a set-screw tapped into said bearing nearest the path of the spike blank and having engagement with the bar, and means for reciprocating said bar.

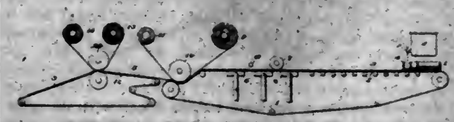
1,024,667. PULLEY-COVERING. WILLIE C. BEAM, Rockford, Ill. Filed Feb. 3, 1911. Serial No. 606,354. (Cl. 64—45.)



1. A pulley having a rim and a plurality of openings through one of the margins of the rim, said openings being located at intervals entirely around the rim, and a covering for the rim comprising a strand wrapped about said rim in a number of coils that are located side by side, one end portion of the said strand being threaded back and forth through the openings and presenting a series of stops above the rim of the pulley throughout its extent against which the adjacent coil may bear and is held against slipping from the rim.

2. A pulley having a rim, and sets of openings through both margins of the rim, said openings being located at intervals entirely around the rim, and a covering for the rim, comprising a strand wrapped about the said rim in a number of coils that are located side by side, the end portions of said strand that are located at the opposite margins of the rim being threaded back and forth through the openings and presenting at both margins a series of stops above the rim throughout its extent against which the adjacent coils may bear and are held against slipping from the edges of the rim.

1,024,668. PRODUCTION OF PECULIAR COLOR EFFECTS ON TEXTILE FABRICS. MAX BECKE, Höchst-on-the-Main, Germany, assignor to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany, a Corporation of Germany. Filed Mar. 24, 1909. Serial No. 485,511. (Cl. 91—68.)



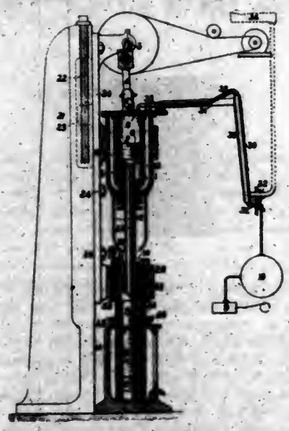
The process of producing peculiar color-effects on textile fabrics, which consists in transmitting a coloration-effect, primarily produced on a wet paper-web by means of color-changing agents, to textile fabrics, by bringing them into contact with said wet colored paper-web, substantially as hereinbefore described.

1,024,669. PNEUMATIC PERCUSSIVE APPARATUS. HANS CHARLES BEHR, Johannesburg, Transvaal. Filed Nov. 9, 1910. Serial No. 591,480. (Cl. 83—57.)

1. A structure comprising in combination a reciprocable cylinder member, a second reciprocable member furnished with a piston working in said cylinder, one of said members being provided with a stamp head, means for positively reciprocating one of said members, means for maintaining a body of air at a pressure always higher than

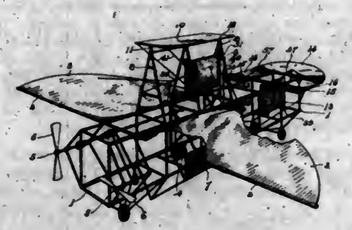
that of the atmosphere on one side of the piston, said structure having a restricted passage way for maintaintaining a body of air on the other side of the piston at an average pressure higher than that of the atmosphere.

2. A structure comprising in combination, a reciprocable cylinder member, a second reciprocable member embodying a piston working in said cylinder and also a pis-



ton rod, one of said members being provided with a stamp head, means for maintaining on the side of the piston unoccupied by the piston rod a permanent body of air at a pressure always higher than that of the atmosphere, said structure having a restricted passage way for maintaining a body of air on the other side of the piston at an average pressure higher than that of the atmosphere.

1,024,670. FLYING-MACHINE. ALBERT H. BLOUNT, Detroit, Mich. Filed Oct. 4, 1910. Serial No. 585,207. (Cl. 244—12.)



1. An aeroplane comprising a main frame with its main axis extending in the direction of the line of flight, main sustaining planes extending laterally from said frame and supported to turn upon a horizontally extending axis angularly to the line of flight, lines running from the main frame to the upper side of each of said planes, lines running from the main frame to the lower side of each of said planes, means for forming loops in said lines to shorten the same and turn the planes, and means for operating the loop forming means to simultaneously let out the lines running to one side of the planes and take up the lines running to the other side of said planes.

2. An aeroplane comprising angularly adjustable planes, a main frame to which the planes are attached, a frame pivotally supported upon an axis extending longitudinally of the main frame to swing transversely of said frame upon the tilting of the aeroplane, means attached to said frame for adjusting said planes when the said pivoted frame swings, a pendulous weight carrying member pivoted to swing upon an axis coincident with the axis of said pivoted frame, and means for adjustably connecting said pivoted frame and pendulous member to cause the same to turn together upon the tilting of the aeroplane.

3. An aeroplane comprising angularly adjustable planes, a main frame, a pendulous member supported on the main frame to turn upon an axis extending longitudinally of the main axis of said frame, a drum turning upon an axis coincident with the axis upon which said pendulous member turns and rotatable independently of said member, and lines secured at one end to said drum to be wound thereon and at their opposite ends to said planes, to adjust the same, said lines being also operatively attached to said pendulous member to be operated thereby upon the swinging of said member.

4. An aeroplane comprising a main frame, a main sustaining plane pivoted to turn angularly to the line of flight, lines running to the upper and lower sides of said plane to adjust the same, a pendulous frame upon the main frame to which said lines are attached to operate the plane upon the swinging of said pendulous frame, means for forming loops in said lines to shorten the same and turn the plane, an arm pivotally supported at one end to turn in a vertical plane longitudinally of the main frame, a short line attached to said arm and to the means for forming the loop in the line running to one side of the plane, a pulley, and a line attached to said arm and extending over said pulley and attached to the means for forming the loop in the line extending to the other side of the planes to simultaneously actuate both loop forming means when the arm is turned and let out one loop in one line and take up the loop in the other line.

5. An aeroplane comprising two angularly adjustable planes, a main frame to which said planes are pivotally attached, a pendulous frame adapted to swing laterally of the main frame upon the tilting of the aeroplane, a drum arranged to turn upon an axis coincident with the axis of the pivotal support of the pendulous frame, lines attached at one end to said planes and at the opposite end to said drum to wind thereon and operatively connected to said pendulous frame to be operated by the swinging of said frame to adjust said planes, means for turning said drum independently of said frame, and means for forming a loop in each of said lines simultaneously shorten the same and adjust the planes independently of the operation of said drum and pendulous frame.

[Claims 6 to 9 not printed in the Gazette.]

1,024,671. SOCKET-SHELL. TONJES AUGUST CARL BOTH, New York, N. Y., assignor to Ida S. Rosenheim, New York, N. Y. Filed May 2, 1911. Serial No. 624,554. (Cl. 173—362.)



1. In socket shells the combination of a shell, a cap, and rotative means extending longitudinally of the shell for securing the cap and shell together.

2. In socket shells the combination of a cap provided with inwardly extending ears, a shell provided with apertures, screws extending longitudinally of the shell and cooperating with the ears of the cap, to secure the cap and shell together.

3. In electric light pull sockets the combination of a shell provided with a slot, a removable chain guide having means to coöperate with the walls of the slot, a cap to prevent the movement of the chain guide in one direction, and means for securing the cap and shell together.

4. In electric light pull sockets the combination of a shell provided with a slot, a removable chain guide having means to coöperate with the walls of the slot, a cap to prevent the movement of the chain guide in one direction, and means extending longitudinally of the shell for securing the cap and shell together.

5. In electric light fixtures the combination of a husk provided with an opening, a cap for securing the husk in position, a removable chain guide adapted to removably pass through the opening in the husk and removably engage the walls of the slot in the shell, a shell provided with walls to coöperate with the engaging means carried by the removable chain guide, and securing means to hold the shell and cap together.

[Claims 6 to 11 not printed in the Gazette.]

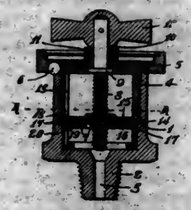
1,024,672. LUBRICANT-CUP. GEORGE W. BOWEN, Auburn, N. Y. Filed May 24, 1909. Serial No. 497,855. (Cl. 184—38.)



1. In a lubricant cup, a cap having a threaded inner face, and a base comprising a hollow stem and a head, the stem having a non-circular upper portion and a peripheral shoulder projecting from the lower part of said portion, and the head consisting of a pair of spaced apart metal disks of unequal diameter, and an intermediate disk of flexible fibrous material, said disks having central openings corresponding to the non-circular portion of the stem and being mounted on said non-circular portion, the metal disk of smaller diameter engaging the peripheral shoulder of the stem, and a space being interposed between the periphery of said disk and the inner face of the cap, the metal disk of larger diameter having a threaded periphery coacting with the threaded inner face of the cap, and the intermediate disk of flexible fibrous material being of substantially the same diameter as the metal disk of larger diameter, and pressing into the threads of the inner face of the cap, the margin of the intermediate disk extending with its lower face normally in a plane substantially coincident with the upper face of the metal disk of smaller diameter, and the lower face of said margin being free to enter the space between the periphery of said disk of smaller diameter and the inner face of the cap, said non-circular portion of the stem having means associated therewith for holding the three disks in position toward the shoulder.

2. In a lubricant cup a cap having a threaded inner face, and a base comprising a hollow stem and a head, the stem having an upper head receiving portion and a peripheral shoulder projecting from the lower part of said portion and the head consisting of a pair of spaced apart metal disks of unequal diameter and an intermediate disk of flexible fibrous material, said disks having central openings for receiving said upper portion of the stem and being non-rotatably mounted thereon, the metal disk of smaller diameter engaging the peripheral shoulder of the stem, and a space being interposed between the periphery of said disk and the inner face of the cap, the metal disk of larger diameter having a threaded periphery coacting with the threaded inner face of the cap, and the intermediate disk of flexible fibrous material being of substantially the same diameter as the metal disk of larger diameter, and pressing into the threads of the inner face of the cap, the margin of the intermediate disk extending with its lower face normally in a plane substantially coincident with the upper face of the metal disk of smaller diameter, and the lower face of said margin being free to enter the space between the periphery of said disk of smaller diameter and the inner face of the cap, and the stem having means associated therewith for holding the three disks in position toward the shoulder.

1,024,673. GREASE-CUP. GEORGE W. BOWEN, Auburn, N. Y. Filed Aug. 7, 1911. Serial No. 642,746. (Cl. 184—38.)



1. A grease cup comprising a receptacle including a barrel portion and a head, the barrel portion being cylindrical in general outline and having an internal lengthwise groove, a plunger reciprocally movable in the receptacle lengthwise thereof and comprising a flexible member having its margin bent to conform to the inner face of the barrel portion, the plunger also including a rigid member having means for pressing a portion of such margin into the groove, and rotary means carried by the head of the receptacle for reciprocally moving the plunger in the receptacle, substantially as and for the purpose set forth.

2. A grease cup comprising a receptacle including a barrel portion and a head, the barrel portion being cylindrical in general outline and having an internal lengthwise groove, a plunger reciprocally movable in the receptacle lengthwise thereof and comprising a flexible member having a down-turned margin conforming to the inner surface of the barrel portion, and a rigid disk arranged beneath the central portion of the flexible member and having a rigid peripheral projection for pressing a portion of said downturned margin into the groove, and rotary means carried by the head of the receptacle for reciprocally moving the plunger in the barrel portion, substantially as and for the purpose specified.

3. A grease cup comprising a receptacle including a barrel portion and a head, the barrel portion being cylindrical in general outline and having an internal lengthwise groove, a plunger reciprocally movable in the receptacle lengthwise thereof and comprising a flexible member having a downturned margin conforming to the inner surface of the barrel portion, and a lower rigid disk having a downturned projection formed with an offset portion of less width than the lengthwise groove for pressing a portion of said downturned margin into the groove, and rotary means carried by the head of the receptacle for reciprocally moving the plunger in the barrel portion, substantially as and for the purpose set forth.

4. A grease cup comprising a receptacle including a barrel portion and a head, the barrel portion being cylindrical in general outline and having an internal lengthwise groove, a plunger reciprocally movable in the receptacle lengthwise thereof and comprising a rigid portion formed with a projection for entering the groove, and a flexible portion of greater diameter than the barrel portion of the receptacle and having its margin bent to conform to the inner surface of the barrel portion, the plunger also including a rigid member having means for forcing a portion of the flexible member into the groove, and rotary means carried by the head for reciprocally moving the plunger in the barrel portion, substantially as and for the purpose described.

5. A grease cup comprising a receptacle including a barrel portion and a head, the barrel portion being cylindrical in general outline and having an internal lengthwise groove, a plunger reciprocally movable in the receptacle lengthwise thereof and comprising an upper rigid disk

formed with a projection entering the groove, a flexible member having a downturned margin conforming to the inner surface of the barrel portion, and a lower rigid disk having a projection for pressing a portion of said downturned margin into the groove, and rotary means carried by the head of the receptacle for reciprocally moving the plunger in the barrel portion, substantially as and for the purpose specified.

[Claim 6 not printed in the Gazette.]

1,024,674. POCKET-CASE. FRANCIS W. BRIGGS, Hendrum, Minn. Filed Jan. 9, 1912. Serial No. 670,292. (Cl. 206—43.)



1. In a device of the class described, a case open at one end; a rack open at the front and slidably inserted into the case; a tray pivotally connected with the rack, adjacent the inner ends of the tray and the rack; and adapted to swing outwardly through the open front of the rack; the tray having an article-supporting bottom provided with article-holding tongues, there being an article-receiving opening in the bottom, alined with one tongue.

2. In a device of the class described, a case open at the top; a rack open at the front and slidable within the case; a tray pivotally connected with the rack, adjacent the inner ends of the tray and the rack; spring means for swinging the tray outwardly, through the open front of the rack; and means upon the tray for holding an article upon the tray when the tray is actuated by the spring means.

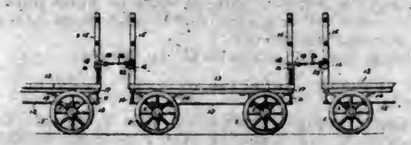
3. In a device of the class described, a case open at the top; a rack open at the front and slidable within the case; a tray pivotally connected with the rack, adjacent the inner ends of the tray and the rack; article-holding means upon the tray; spring means for swinging the tray outwardly, through the open front of the rack; interengaging elements upon the rack and the case, to prevent a complete withdrawal of the rack from the case; and a locking device upon the rack, adapted to engage the case to maintain the rack within the case.

4. In a device of the class described, a case; a rack slidably mounted in the case; a tray pivotally connected with the rack, adjacent the inner ends of the tray and the rack; the tray consisting of a back, side walls and a bottom, the bottom being equipped at its outer edge with a plurality of upstanding spring tongues, and the back being corrugated to form article-receiving seats, alined with the tongues.

5. In a device of the class described, a case; a rack slidably inserted into the case; and a tray pivotally connected with the rack, adjacent the inner ends of the tray and the rack; the tray consisting of a back and an outstanding bottom, the bottom being equipped at its outer edge with an upstanding, article-engaging tongue, there being a depressed, article-receiving seat in the back, alined with the tongue, and an opening in the bottom alined with the tongue and adapted to receive the point of the article; the rack having a bottom, adapted to protect the point of the article, the bottom being formed with an upstanding spring tongue, adapted to bear against the tray, to swing the tray away from the rack.

[Claims 6 and 7 not printed in the Gazette.]

1,024,675. COMBINED COUPLING AND STEERING MECHANISM. TRACY V. BUCKWALTER, Altoona, Pa., assignor of one-half to Axel S. Vogt, Philadelphia, Pa. Filed Mar. 9, 1911. Serial No. 613,379. (Cl. 21—93.)



1. A pair of trucks each having wheels at its ends, knuckles whereby said wheels are adapted to oscillate on vertical axes, steering mechanism connecting said wheels, and operating means comprising a journaled member having a vertical axis offset from the center at each end thereof, in combination with mechanism comprising a connecting lever whereby either end of one truck can be coupled to either operating means of the other.

2. A truck having end wheels adapted to turn on vertical axes and steering mechanism for shifting said wheels simultaneously, said mechanism comprising a journaled post, a coupling mechanism fixed thereto, and a lever having a coupling member connected to said coupling member first named, in combination with a second truck and means carried by said second truck for engaging said lever.

3. A truck having steering mechanism comprising a journaled post, a journaled bearing fixed thereto, a second truck having a shoe thereon, and a lever having means for connecting said journal bearing and shoe whereby said second truck steers said first truck.

4. A truck having steering mechanism comprising a journaled post with coupling means thereon, a second truck having a shoe comprising a hook and an abutment, and a lever having means for engaging said coupling means and means for engaging said abutment and hook.

5. A truck having steering mechanism comprising a journaled post with a hook thereon, a second truck having a shoe comprising a hook and an inclined abutment, and a lever having means for engaging said first named hook and an eye for engaging said abutment and said second named hook.

1,024,676. SAFETY DEVICE FOR FLYING-MACHINES. CHARLES HENRY BURFORD, Meade, Kans. Filed July 25, 1911. Serial No. 640,404. (Cl. 244—21.)

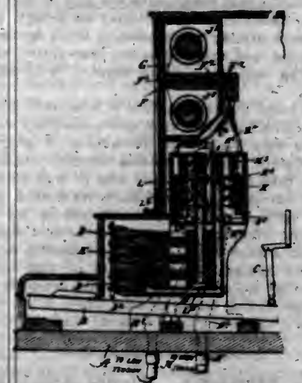


1. In a device of the character described, the combination of a frame mounted on traction wheels, a tubular base mounted on said frame, a tubular receptacle having its lower end disposed in said base, a parachute disposed in said tubular receptacle, a cable secured to the lower end of said parachute, a drum rotatably mounted in the lower end of said receptacle on which said cable is wound, means for holding said drum against backward movement, and means for forcing said parachute out of the tubular receptacle when said drum is released.

2. In a device of the character described, the combination of a frame mounted on traction wheels, a tubular base mounted on said frame, a tubular receptacle having its lower end disposed in said base, a horizontal shaft disposed in the lower end of said receptacle, a drum mounted on said shaft, a ratchet wheel mounted on one end of said shaft, a dog pivotally mounted adjacent said wheel and adapted to engage the same to hold said drum against backward movement, a parachute disposed within said tubular receptacle, a cable secured to said parachute and adapted to be wound on the drum, and means for forcing said parachute out of the receptacle when said dog is released from the ratchet.

3. In a device of the character described, the combination of a frame, a tubular base mounted on said frame, a tubular receptacle having its lower end disposed in and secured in said base, a drum rotatably mounted in the lower end of said receptacle, means for preventing backward movement of said drum, a horizontally disposed circular plate mounted in said receptacle just above said drum, a coil spring mounted on said plate, a parachute normally disposed in said receptacle and bearing on said spring, a cable secured to said parachute and adapted to be wound on the drum to hold said spring compressed, means for releasing said drum to allow the coil spring to force the parachute out of the receptacle.

1,024,677. SOLO-PLAYING AUTOMATIC PIANO. MELVILLE CLARK, Chicago, Ill. Filed May 17, 1911. Serial No. 627,740. (Cl. 84—178.)

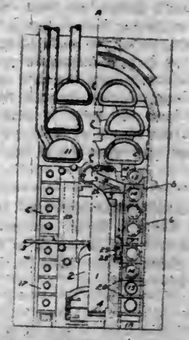


1. In an automatic musical instrument, in combination with a key striker and a motor pneumatic operatively connected therewith, a duct leading from said motor pneumatic and having two branches, each branch being provided with two apertures, one of said apertures in each branch being positioned to communicate with the atmosphere at normal pressure, the other apertures communicating with separate sources of air at different pressures, respectively, other than normal pressure, a valve in each branch adapted for closing alternately the two apertures thereof, a primary pneumatic operatively connected with each of said valves, a supplemental valve adapted for closing the normal pressure aperture of one of the branch ducts, means for moving said valve simultaneously with the valve of the other branch duct, a tracker board provided with a duct corresponding to each of the primary pneumatics, and means connecting the latter with their respective ducts.

2. In an automatic musical instrument, in combination with a key striker and a motor pneumatic operatively connected therewith, a duct leading from said motor pneumatic and having two branches, each branch being provided with two apertures, one of said apertures in each branch being positioned to admit atmosphere at normal pressure, the other apertures connecting, one with a low vacuum and the other with a source of higher vacuum, a valve for each branch adapted for closing alternately the two apertures thereof, a primary pneumatic operatively connected with each of said valves, a supplemental valve adapted for closing the normal pressure aperture of one of the branch ducts; means for moving said valve simultaneously with the valve of the other branch duct, a check valve in the duct communicating with the low vacuum, a tracker board provided with a duct corresponding to each of the primary pneumatics, and means connecting the latter with their respective ducts.

3. In an automatic musical instrument, in combination with a key striker and a motor pneumatic operatively connected therewith, a duct leading from said motor pneumatic and having two branches, each branch being provided with two apertures, one of said apertures in each branch being positioned to admit atmosphere at normal pressure, the other apertures connecting, one with a low vacuum and the other with a source of higher vacuum, a valve for each branch adapted for closing alternately the two apertures thereof, a primary pneumatic operatively connected with each of said valves, a supplemental primary pneumatic, a leak port connecting the same with one of said vacuums, a duct connecting the supplemental primary with the primary which operates the valve controlling said vacuum, a valve carried by the movable wall of the supplemental primary, in position for closing the normal pressure aperture of the duct which connects with the other vacuum, a tracker board provided with a duct corresponding to each of the first two primary pneumatics, and means connecting the latter with their respective ducts.

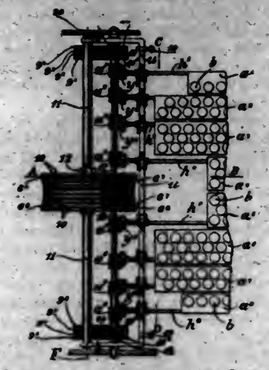
1,024,678. PROCESS FOR INCREASING THE TEMPERATURE OF COMBUSTION IN GAS-FIRED FURNACES. HENRY L. DOHERTY, New York, N. Y. Filed Mar. 31, 1909. Serial No. 486,888. (Cl. 48—203.)



1. In the operation of a gas bench, the process which consists in passing a portion of the waste combustion gases from the retort-oven of said gas bench first through a recuperator for raising the temperature of the producer gas from the gas producer of said gas bench, then through a recuperator for heating the air to be used for burning said gas, burning the so-heated gas and air in the retort oven of said gas bench, and introducing another portion of the waste combustion gases into the gas-producer of said gas bench for the purpose of regulating the temperature thereof, substantially as described.

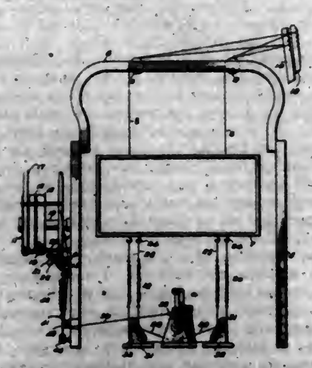
2. In the operation of a gas-bench the process which consists in dividing the products of combustion leaving the retort-oven of said gas bench into two portions, introducing one portion, at substantially the temperature at which it leaves the retort-oven of said gas bench, into the gas producer of said gas bench for the purpose of regulating the temperature thereof, and passing the other portion of said products of combustion first through a recuperator for raising the temperature of the producer gas leaving the said gas producer, and then through a recuperator for heating the air for the combustion of said producer gas, and burning the so-heated producer gas and air in the retort-oven of said gas bench, substantially as described.

1,024,679. SYLLABLE-WRITING MACHINE. PAUL DE CASSALADE DU PONT, Paris, France, assignor of one-half to Gabriel Escarras, Paris, France. Filed July 19, 1909. Serial No. 508,509. (Cl. 197—7.)



A syllable-writing machine in which for each group of keys a type sector is provided and in which the juxtaposed type sectors are mounted upon revolving shafts which are independent the one of the others and telescoped the one in the others, comprising in combination one driving shaft for each group of keys, an angle lever at each end of said axle, a planet pinion of a differential carried in the end of the one arm of said lever and a roller mounted at the end of the other arm, a beveled pinion of the differential mounted upon the driving shaft, an auxiliary shaft mounted in alinement with the driving shaft, a second pinion of the differential keyed upon said auxiliary shaft and a pinion mounted on the end of said auxiliary shaft, stops for immobilising the two beveled pinions of the differential, an oscillating frame carrying the axles of the type sectors, means for operating said type sectors, pinions mounted upon the axle around which said frame pivots, telescopic tubes in said frame and toothed crowns mounted upon the ends of said telescopic tubes and meshing with the pinion of the type sectors, substantially as described and shown and for the purpose set forth.

1,024,680. HARNESS-STOP-MOTION DEVICE. FRANK EHINGER, New Bedford, Mass., assignor of one-third to Harry Bloomingdale and one-third to William W. Levy, New Bedford, Mass. Filed Apr. 13, 1911. Serial No. 620,913. (Cl. 139—52.)



1. In a loom, the combination of a harness frame, driving mechanism, tension means operatively connecting said driving mechanism with said frame, a movable member, tension means connecting said movable member with said frame and adapted to normally hold said member stationary and to coöperate with said first-mentioned tension means to reciprocate said frame, automatic means for stopping said driving mechanism, a latch device for normally holding said stopping means inoperative, means for moving said movable member when one of said tension means breaks, and means whereby the movement of said movable member releases said latch device.

2. In a loom, the combination of a harness frame, driving mechanism, a plurality of tension members operatively connecting said driving mechanism with said frame, a member mounted on a fixed pivot, a plurality of resilient tension members connecting said pivotally mounted member with said frame and adapted to coöperate with said first-mentioned tension members to reciprocate said frame, automatic means for stopping said driving mechanism, means for normally holding said stopping means inoperative, and means whereby said stopping means is rendered operative by a swinging movement of said pivotally mounted member.

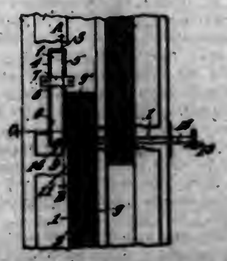
3. In a loom, the combination of a harness frame, driving mechanism, tension means operatively connecting said driving mechanism with said frame, a movable member, tension means connecting said movable member with said frame and adapted to move said member when said frame becomes disarranged and to coöperate with said first-mentioned tension means to reciprocate said frame, means for stopping said driving mechanism, a spring for actuating said stopping means, a latch device for normally preventing said spring from operating, and means arranged in the path of said movable member and adapted to be moved by the latter for releasing said latch device.

4. In a loom, the combination of a harness frame, driving mechanism, tension members connecting said driving mechanism with said frame, a lever, resilient tension members connecting said frame with one arm of said lever and adapted to normally hold said lever stationary, means for stopping said driving mechanism, a latch device for normally holding said stopping means inoperative, and means for releasing said latch device adapted to be actuated by said lever.

5. In a loom, the combination of a harness frame, driving mechanism, tension members connecting the top of said frame with the driving mechanism, a lever mounted on a fixed pivot, resilient tension members connecting the bottom of said frame with one arm of said lever and arranged to normally hold said lever stationary, means for stopping said driving mechanism, means for normally holding said stopping means inoperative, a second lever mounted on a fixed pivot, means for releasing said holding means, and means connecting both of said levers with said releasing means whereby the said releasing means is actuated by moving either of said levers.

[Claims 6 and 7 not printed in the Gazette.]

1,024,681. SASH-LOCK. CHARLES NATHANIAL ESTES, Atlanta, Ga., assignor, by direct and mesne assignments, of one-half to Rufus B. Estes and one-half to John F. Wylie, Atlanta, Ga. Filed Jan. 12, 1912. Serial No. 670,959. (Cl. 16—18.)

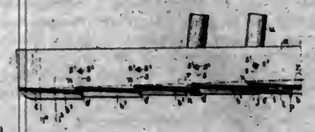


1. A sash lock including spaced fixed and movable members, a sash engaging element carried by the movable member, means slidable against the movable member for shifting it out of engagement with the sash, and means revoluble into position between the two members for holding the movable member in engagement with the sash, said last mentioned means being shiftable back of and into engagement with the fixed member for holding the movable member out of engagement with the sash.

2. A sash fastener including a U-shaped element having spring arms normally spaced apart, means for holding one of the arms fixed, a sash engaging device upon the other arm and movable with it, a slidable and revoluble actuating device, means operated by said device during its sliding movement for shifting said movable arm out of engaging position, and a wing carried by said device and revoluble therewith into engagement with the fixed arm to hold the movable arm in or out of sash engaging position.

3. The combination with a frame having a recess therein and a sash having a notch therein, of spaced spring arms seated within the recess, means for holding one of the arms against movement, means upon the other arm for engaging the notched sash, an actuating device mounted to slide and rotate within the frame at one side of the sash, means on said device for shifting the sash engaging means during the longitudinal movement of the actuating means, and means upon the actuating means and coöperating with the fixed arms for locking the sash engaging means in or out of engagement with the sash.

1,024,682. CONSTRUCTION OF BOATS AND SHIPS. WILLIAM HENRY FAUBER, Nanterre, France. Filed Sept. 13, 1909. Serial No. 517,480. (Cl. 114—66.5.)



1. A hydroplane boat provided with a plurality of hydroplanes arranged in stepped relation and forming the flotation surface of its bottom, at least one of said hydroplanes consisting of two hydroplane members arranged at opposite sides of the center line of the bottom and inclined laterally and downwardly toward said center line; said hydroplane members having their angle of rearward inclination at said center line less than their angle of rearward inclination at their outward lateral margins.

2. A hydroplane boat provided with a plurality of hydroplanes arranged in stepped relation and forming the flotation surface of its bottom, at least one of said hydroplanes consisting of two hydroplane members arranged at opposite sides of the center line of the bottom and inclined laterally and downwardly toward said center line; said hydroplane members being transversely concaved and having their angle of rearward inclination at the center line less than their angle of rearward inclination at their outer, lateral margins.

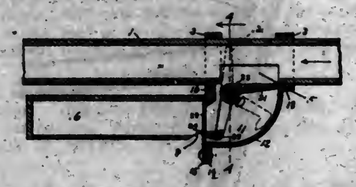
3. A hydroplane boat provided with a plurality of hydroplanes arranged in stepped relation and forming the flotation surface of its bottom, the hydroplane adjacent to the bow of the boat consisting of two hydroplane members which are arranged at opposite sides of the center line of the bottom and forming hydroplane surfaces that are inclined laterally and downwardly toward said center line and are extended to and intersect the sides of the hull at their outer lateral margins, so as to form angles at the bilge lines; the angle of rearward inclination of said hydroplane surfaces at the said outer lateral margins, or at the bilge lines, being greater than the angle of rearward inclination thereof at the center or keel line; the bow of the boat being provided forward of the said hydroplane members with a narrow keel-like portion having upright lateral faces, and the transversely inclined surfaces of the hydroplane members gradually merging into the upright faces of said keel-like portion.

4. A hydroplane boat provided with two hydroplanes arranged one at the rear of the other and in stepped relation and having their bottom surfaces at their forward ends continuous with the flotation surface of the hull, said hydroplanes each consisting of two hydroplane members arranged at opposite sides of the center line of the bottom and inclined laterally and downwardly toward said center line; the said hydroplane members of the rearmost hydroplane having a less degree of lateral inclination than the hydroplane members of the forward hydroplane.

5. A hydroplane boat provided with two hydroplanes arranged one at the rear of the other and in stepped relation, and having their bottom surfaces at their forward ends continuous with the flotation surface of the hull; said hydroplanes each consisting of two hydroplane members, which are arranged at opposite sides of the center line of the bottom, are inclined laterally and downwardly toward said center line and are transversely concaved, and the said hydroplane members of the rearmost hydroplane having a less degree of lateral inclination than the hydroplane members of the forward hydroplane.

[Claims 6 to 29 not printed in the Gazette.]

1,024,683. WHISTLE. EMMET P. GRAY, Detroit, Mich. Filed Dec. 22, 1910. Serial No. 598,719. (Cl. 116—69.)



1. In a whistle, the combination with a pipe having an opening in its side, of a hollow body portion secured to said pipe over said opening and having a side which is at substantially right angles to the pipe said side having a slot, a revoluble shaft in said body, an arm on said shaft, a valve on the end of the arm within the body, means to normally hold the valve to close said slot, means to move said valve from said slot, and a tube mounted on said body adjacent said slot and formed with an opening to permit the fluid passing from said slot to so affect the tube as to produce a musical note.

2. In a whistle, the combination with a pipe having an opening in its side, of a hollow body portion secured to said pipe over said opening, a tube secured to said body and having a wall cut partially away next the body portion which is provided with an aperture near said wall where it is cut away, a valve to open and close the aperture in the body, and a gate connected to said valve and mounted to swing out into the pipe through the opening therein.

3. In a whistle, the combination of a hollow body having an inlet opening and a flat side having a slot, a shaft revolubly mounted within the body, an arm connected to said shaft, a wedge-shaped valve mounted on the arm and adapted to close said slot, a resonant shell mounted on the body adjacent said slot and having an aperture adjacent thereto, and means to turn said shaft to swing the valve out of said slot.

4. In a whistle, the combination of a hollow body having an inlet opening and an outlet slot, a valve normally closing said slot, a resonant shell mounted on the body adjacent said slot and having an aperture adjacent thereto, means to move the valve out of the slot, and a shield extending from the body parallel to the resonant shell to screen the opening thereof.

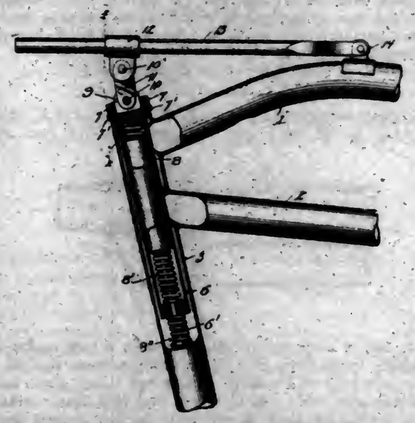
5. In a whistle, the combination of a hollow body having an inlet opening and an outlet slot, a pivotally mounted valve normally closing said slot, a resonant shell mounted on the body adjacent said slot and having an aperture adjacent thereto, a gate connected to said valve and normally extending across the inlet opening, and means to swing the valve inwardly to open said outlet slot, and the gate outward from the inlet opening.

[Claims 6 to 8 not printed in the Gazette.]

1,024,684. SEAT-SUPPORT. WILLIAM S. HARLEY, Milwaukee, Wis. Filed Aug. 26, 1911. Serial No. 646,234. (Cl. 208—61.)

1. In a vehicle frame having a horizontally disposed bar, an oblique seat-mast in union therewith, a spring

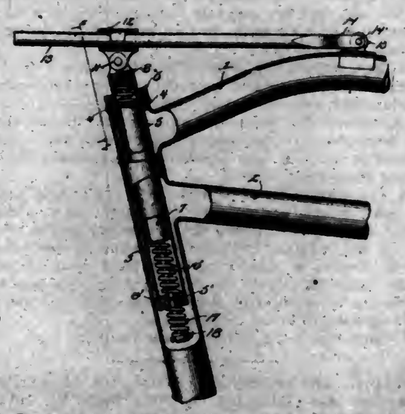
controlled seat post in telescopic connection with the seat-mast and a saddle bar pivotally secured to said horizontal frame bar; the combination of a bifurcated head carried by the seat post, the cross-sectional dimensions of the head being such that it is capable of entering the seat-mast, a bifurcated ear carried by the saddle-bar adjacent to its free end, a link having its ends pivotedly connected to the bifurcated saddle-bar ear and bifurcated head, the pivoted ends of the link being fitted between the bifurcated head of the seat post and saddle bracket ears, said link being of such width as to permit its entrance into the seat-mast.



2. In a vehicle frame having a horizontally disposed bar, an oblique seat-mast in union therewith, a spring controlled seat post in telescopic connection with the seat-mast, and a saddle bar pivotally secured to said horizontal frame bar; the combination of a head carried by the seat-post to slide therewith in the seat mast, and a bracket carried by the saddle-bar in link connection with the seat-post head.

3. In a vehicle frame having a horizontally disposed bar, a seat-mast in union therewith, a spring-controlled seat-post in telescopic connection with the seat-mast, and a saddle-bar pivotally secured to the horizontally disposed frame-bar; the combination of a link having its ends in pivotal connection with the seat-post and saddle-bar.

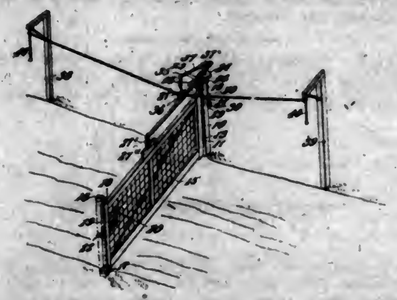
1,024,685. SEAT-SUPPORT. WILLIAM S. HARLEY, Milwaukee, Wis. Filed Nov. 2, 1911. Serial No. 658,263. (Cl. 208—61.)



1. In a vehicle frame having a horizontally disposed bar, an oblique seat-mast in union therewith, a spring-controlled seat-post in telescopic union with the seat-mast, and a saddle-bar having one end pivotally secured to said horizontal frame-bar; the combination of a bearing-sleeve in sliding engagement with the free end of the saddle-bar, a head carried by the seat-post, and a pivot connection between the seat-post head and bearing-sleeve.

2. In a vehicle frame having a horizontally disposed bar, an oblique seat-mast in union therewith, a spring-controlled seat-post in telescopic union with the seat-mast, and a saddle-bar having one end pivotally secured to said horizontal frame-bar; the combination of a bearing-sleeve in slidable engagement with the free end of the saddle-bar, an apertured ear extending from the sleeve, an apertured head carried by the seat-post, and a pivot-pin in engagement with the sleeve ear and head apertures whereby said bearing-sleeve is capable of oscillation in one direction incidental to movement of the free end of the saddle-bar.

1,024,686. FARM-GATE. JAMES S. HENDRICKS, Colville, Wash. Filed Apr. 28, 1911. Serial No. 623,867. (Cl. 39—14.)



1. In a gate operating mechanism, a support, a gate mounted on said support, said gate being capable of a swinging and a vertical movement, a link for imparting vertical movement to said gate, a lever for swinging said gate, bars arranged one above the other, means for drawing said bars together, a rod actuated by one of said bars, said rod having an operative connection with said link to cause a vertical movement of the gate, and an operative connection between the other of said bars and said lever, means for drawing said bars together and imparting a vertical and swinging movement to said gate.

2. In a gate operating mechanism, a support for said gate, a gate mounted for a swinging and a vertical movement, a plate arranged on said support, a pulley arranged on said plate, a lever supported for swinging movement on said plate said lever having an operative connection with said gate, a cable transmitting the movement of said pulley to said lever, bars supported to rotate with said pulley, means actuated by one of said bars to impart vertical movement to said gate, and means for swinging said bars to impart a swinging movement to said gate.

3. In a gate operating mechanism, a support for said gate, said gate being mounted for a vertical and a swinging movement, a plate arranged on said support, a pulley mounted on said plate, a lever mounted for swinging movement on said plate, said lever having an operative connection with said gate and said pulley, a plurality of hingedly connected bars supported by said pulley and means for drawing said bars together and imparting a vertical and a swinging movement to said gate.

4. In a gate operating mechanism, a support for said gate, said gate being mounted for a vertical and a swinging movement, a plate arranged on said support, a pulley arranged on said plate, a lever mounted on said plate, said lever having an operative connection with said gate, a cable transmitting the movement of said pulley to said lever, a link arranged to impart vertical movement to said gate, a rod pivotally connected to said link, said rod extending through said plate and said pulley, hingedly connected bars arranged one above the other, one of said bars being rigidly secured, to said pulley, the other of said bars being arranged for contact with the end portion of said rod, and means for drawing said bars together to depress said rod and to rotate said pulley, the rotation of said pulley transmitting a swinging movement to said gate.

1,024,687. METHOD OF MAKING STRUCTURAL ELEMENTS. WILLIAM M. JANFOLE, Los Angeles, Cal. Filed Apr. 12, 1911. Serial No. 620,690. (Cl. 154—2.)



1. A method of making structural elements consisting of first providing a body, next coating the body with a hot plastic material, next applying previously heated strips of wood or the like to the hot plastic material and permitting absorption of the latter by the former under gravity of the former, and finally pressing the strips into final position in the plastic coating.

2. A method of making structural elements consisting of first providing a body, next coating the same with a hot plastic composition of asphaltum and carbonate of lime and infusorial earth or the like, next applying previously heated strips of wood or the like to the hot plastic coating and permitting absorption of the latter by the former under gravity of the former, then pressing the strips of wood or the like into final position in the plastic coating, and finally dusting the still warm coating with pulverulent infusorial earth.

1,024,688. MUFFLER. EDWARD DUDLEY LEWIS, Elmira, N. Y., assignor to Heater-Muffler Co., Elmira, N. Y., a Corporation of New York. Filed Aug. 9, 1911. Serial No. 643,229. (Cl. 121—116.)



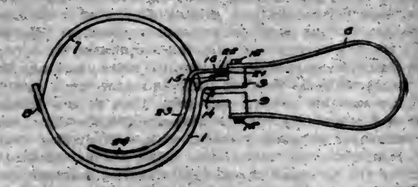
1. In a muffler, the combination of a plurality of intercommunicating hollow sections each formed of two identical oppositely-disposed centrally-perforated concave members having flanged edges, the members of the sections being all inter-changeable and each section containing a perforated central partition-plate which is clamped in place by the flanges of its members; substantially as shown and described.

2. A muffler having, in combination, a plurality of oppositely-disposed concave members with adjoining edges, and rings of U-shaped cross-section embracing and clamping said edges together.

3. A muffler having, in combination, two oppositely-disposed concave members with outwardly-projecting peripheral flanges, an intermediate baffle-plate with its periphery embraced between said flanges, and a clamping-ring of U-shaped cross section embracing the flanges and securing said members and the baffle-plate together.

1,024,689. TRAP. WILLIAM LUNDSTROM, Margie, Minn. Filed May 12, 1911. Serial No. 626,750. (Cl. 43—23.)

A trap comprising upper and lower spring pressed jaws, the lower jaw having a slot formed throughout its length and in which the upper jaw operates, an enlargement formed upon the upper end of the upper jaw to prevent the same from passing out of the slot, a locking pin pivotally connected to the inner end of the upper jaw, and having a head, the rear surface of which is beveled, a shoulder carried by the head, a slot formed near the inner end of the lower jaw and having a lip projecting therein, a trip lever pivotally connected in the recess formed in the lower jaw the pivoted end of the lever being bent outwardly and adapted to rest against the upper end of



the inclined rear surface of the head of the pin when the shoulder carried thereby rests upon said lip, whereby when pressure is applied to said lever, the outwardly bent end thereof will ride downwardly upon the beveled surface of the head of the pin and force said shoulder from engagement with the lip thereby springing both jaws.

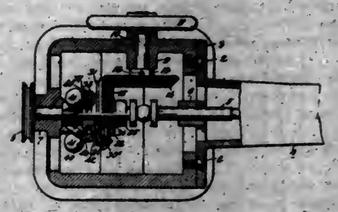
1,024,690. HOLDER FOR HORSES' MANES. BERNARD C. MCDONALD, Rockford, Ill. Filed Oct. 12, 1911. Serial No. 654,372. (Cl. 54—1.)



1. A mane holder comprising a strap, a plate secured to each end of the strap, a coiled spring supported by each plate, the two springs located in the lengthwise direction of the strap, and means for holding the springs extended.

2. A mane holder comprising a strap, two plates secured to the strap and having notches, a slide movable in connection with each plate and adapted to engage a notch in the plate, a coiled spring for each plate having one end connected to a slide and its other end to the plate.

1,024,691. SEWING-MACHINE. GEORGE E. MOLYNEUX, Bayonne, N. J., assignor to The Singer Manufacturing Company, a Corporation of New Jersey. Filed Aug. 9, 1911. Serial No. 643,079. (Cl. 112—20.)



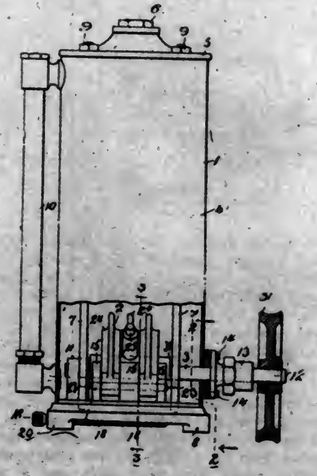
1. In a sewing machine, the combination with a frame comprising a hollow standard and a tubular arm extending laterally therefrom, and a rotary driving shaft journaled in and extending longitudinally of said arm and transversely through said standard, of a driven shaft disposed in angular relation with the driving shaft and journaled in said standard, a hand-wheel and a driven gear-wheel fixed upon the driven shaft, a driving gear loosely mounted upon the driving shaft in permanent driving relation with the driven gear and carrying the driven member of a friction clutch, a driving clutch-member slidingly mounted upon the driving shaft for movement into and out of operative relation with the driven clutch-member and connected to rotate with said shaft, and a centrifugal governor rotating with said driving shaft and connected with the driving clutch-member for automatically shifting

the latter out of and into operative relation with the driven clutch-member while the driving shaft is in motion.

2. In a sewing machine, the combination with the frame, a rotary driving shaft journaled therein and sustained against endwise movement in relation thereto, and a driven shaft also journaled in said frame and in angular relation with said driving shaft, of a driven gear fixed upon said driven shaft, a driving gear loosely mounted upon the driving shaft in permanent operative relation with the driven gear and carrying one member of a friction-clutch, a collar slidingly mounted upon but connected to rotate with the driving shaft and carrying a clutch-member movable toward and from that of the driving gear and adapted for operative engagement therewith, and a centrifugal governor rotating with said driving shaft and connected with said sliding collar for automatically shifting the same out of and into operative relation with the first-named member, respectively, as the speed of rotation of the main-shaft exceeds or falls below a predetermined limit.

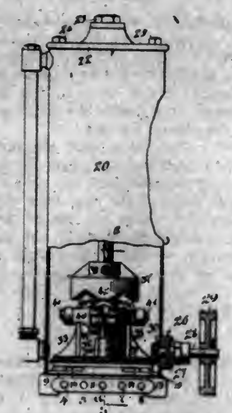
3. In a sewing machine, the combination with the frame comprising a hollow standard and a tubular arm extending laterally therefrom, and a rotary driving shaft journaled in and extending longitudinally of said arm, of a driven shaft disposed in angular relation with the driving shaft, a hand-wheel and a driven gear-wheel fixed upon the driven shaft, a collar fixed upon the driving shaft and provided with an annular peripheral seat and an adjacent peripheral groove upon one side and a shoulder upon the other side of said seat, a driving gear having its hub fitted loosely upon said seat of the fixed collar and arranged in permanent driving relation with said driven gear and formed in one face with a conical clutch member, an annular locking washer having a lateral opening at one side and fitted within said groove and extending beyond the peripheral seat of said fixed collar, a sliding collar mounted upon and connected to rotate with the driving shaft and carrying a conical clutch-member adapted for operative engagement with that of said driving gear, and a centrifugal governor rotating with said driving shaft and operatively connected with said sliding collar for shifting the latter toward and from said driving gear.

1,024,692. HYDRAULIC LUBRICATOR. FRANK MUELLER, New York, N. Y., assignor to American Eagle Motor Car Company, New York, N. Y., a Corporation of New York. Filed Jan. 18, 1909. Serial No. 472,902. (Cl. 184—27.)



In a device of the class described, a reservoir, lugs extending inwardly from the bottom of said reservoir, and ports in said lugs, pins passing through said lugs, pumps trunnioned on said pins and having ports registering with the ports in said lugs when in certain positions, said pumps each consisting of an oscillating frame with a reciprocating piston moving therein, an eccentric sleeve fixed to each of said pistons, a common eccentric driving each of said sleeves whereby each piston is reciprocated and each frame is oscillated and means for mounting and driving said eccentric.

1,024,693. HYDRAULIC LUBRICATOR. FRANK MUELLER, New York, N. Y., assignor to American Eagle Motor Car Company, New York, N. Y., a Corporation of New York. Filed July 23, 1910. Serial No. 573,421. (Cl. 184—33.)



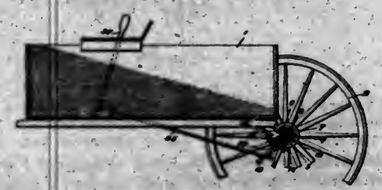
1. In a device of the class described, a base with a boss thereon, passages with openings and projections, said projections being mounted concentric with said boss, a shaft fixed on said boss and concentric therewith, a rotor mounted on said boss, a spring carried by said rotor, a spring cap fixed on said shaft and provided with cams, a yoke carried by said rotor and means for mounting the same so that it oscillates under the influence of said cams, a pump in said rotor driven by said yoke and means for driving said rotor.

2. In a device of the class described, a base with a boss thereon, an odd number of passages with openings and projections, said projections being mounted concentric with said base, a shaft fixed in said boss and concentric therewith, a rotor mounted on said boss, a spring carried by said rotor, a spring cap fixed on said shaft and provided with cams corresponding to said projections, a yoke carried by said rotor and means for mounting the same so that it oscillates under the influence of said cams, a pump in said rotor driven by said yoke and means for driving said rotor.

1,024,694. VEHICLE-BRAKE. MATTHEW C. MUIR, Philadelphia, Pa. Filed Sept. 18, 1911. Serial No. 649,869. (Cl. 21—8.)

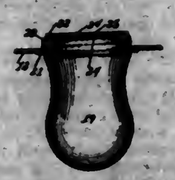
1. The combination with a collar adapted to be secured on a wheel hub, and a bracket adapted to be secured to an axle adjacent the wheel hub, of a pivot bolt secured in said bracket, an arm fulcrumed on said pivot bolt and having a cam face at its fulcrum end, a strap positioned around the collar and secured at one end to the cam face of said arm, a chain connecting the other end of said strap with said arm, said bracket having a bifurcated end adapted to receive the axle, a chain secured at one end to said bracket and adapted to be passed around the axle and through an opening in said bracket, and a pin on said bracket to receive a link of said chain, substantially as described.

2. The combination with a collar adapted to be secured on a wheel hub, and a bracket adapted to be secured to an axle adjacent the wheel hub, of a pivot bolt secured in said bracket, an arm fulcrumed on said pivot bolt and having a cam face at its fulcrumed end, a strap positioned around the collar and secured at one end to the cam face of said arm, a chain connecting the other end of said strap with said arm, a pin on said arm, a spring secured to said pivot bolt bearing against said pin and holding the arm in normal position, said bracket having a bifurcated end adapted to receive the axle, a chain secured at one end to said bracket and adapted to be passed around the axle and through an opening in said bracket, and a pin on said bracket to receive a link of said chain, substantially as described.



3. The combination with a vehicle axle, a vehicle body, a wheel mounted to turn on said body, and a collar secured to the hub of said wheel and having flanges at its edges, of a bracket secured to the axle, said bracket having a slot therein, a pivot bolt adjustably secured in said slot, an arm fulcrumed on said bolt and having a cam at its fulcrum end, a strap secured at one end to said cam portion of the arm and positioned around the collar, a bolt adjustable in said arm, a chain connecting said bolt with the other end of said strap, a spring secured to said bolt and holding said arm in normal position, a lever on the body, and a rod connecting said lever and said arm, substantially as described.

1,024,695. ILLUMINATED SIGN. HUGH MULHOLLAND, New York, N. Y. Filed Mar. 24, 1911. Serial No. 616,687. (Cl. 240—106.)



1. A sign having an apertured wall, a bulb closing the aperture therein, and having a cylindrical, exteriorly-threaded neck and a sheet metal collar having an interiorly and exteriorly-threaded body portion to receive said neck and to be received within the aperture, said body portion having an inwardly directed flange at the inner end of the bulb and an outwardly extending flange for engagement with the outer surface of the wall.

2. A sign having an apertured wall, a bulb closing the aperture therein, and having a cylindrical, exteriorly-threaded neck, a color disk of gelatinous material, closing the inner end of said bulb, a sheet of transparent non-combustible material protecting said color disk, and a collar encircling said neck, and having an inwardly directed flange for holding said color disk and said transparent sheet in engagement with the end of the bulb upon the removal of the bulb from the wall.

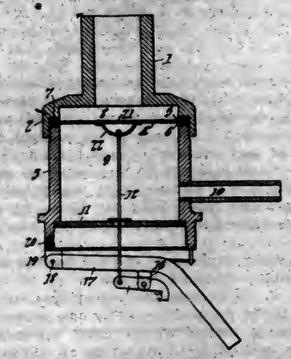
3. A sign having an apertured wall, a bulb having a neck, a color disk closing the end of said bulb, and a collar encircling said neck and holding said color disk in engagement with said bulb upon the removal of the bulb from the wall, and said collar being exteriorly threaded to retain the same within the aperture, and having a flange for limiting the movement of the bulb through the aperture.

4. A sign having a hollow bulb, a color disk closing the end of said bulb, and a collar encircling said bulb and having a flange for retaining said color disk in engagement with the end of the bulb, said collar being exteriorly threaded to facilitate the attachment of the bulb and collar to a supporting wall.

5. A sign having an apertured wall, a collar disposed within the aperture therein, and having a flange in engagement with the outer surface of the wall, and an inwardly directed flange at the opposite end of the collar, a color disk within the collar adjacent to the surface of said flange, and a hollow bulb extending into said collar and retaining said color disk in position.

[Claim 6 not printed in the Gazette.]

1,024,696. SOUND-REPRODUCER. ALEXANDER N. PIERMAN, Newark, N. J., assignor, by mesne assignments, to Thomas A. Edison, Incorporated, West Orange, N. J., a Corporation of New Jersey. Filed Sept. 13, 1909. Serial No. 517,510. (Cl. 181—10.)



1. In a sound reproducer, the combination with a sound box of a flat divided diaphragm supported within the same, and means for vibrating said diaphragm in accordance with sound vibrations under conditions of normal pressure and for causing said diaphragm to open more or less to permit the passage of fluid therethrough in accordance with sound vibrations, under conditions of abnormal pressure, substantially as described.

2. In a sound reproducer, a flat diaphragm capable of vibration in accordance with sound vibrations under atmospheric pressure, and capable of opening more or less in accordance with sound vibrations to form a port for the passage of fluid therethrough under forced fluid pressure, substantially as described.

3. In a sound reproducer, a flat diaphragm formed of a plurality of parts adapted to act as a simple diaphragm under normal atmospheric pressure, but to act as a valve under abnormal or forced fluid pressure, substantially as described.

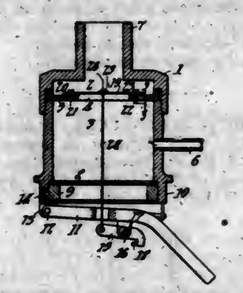
4. In a sound reproducer, the combination with a sound box of a diaphragm of elastic material supported within the same and formed of a plurality of parts supported and fitting together in contact throughout their adjacent edges so as to vibrate as a diaphragm under normal pressure, but said parts being adapted to separate to form a port opening under forced pressure, and means for vibrating said diaphragm under normal pressure or causing said parts to separate more or less under forced fluid pressure, in either case in accordance with sound vibrations, substantially as described.

5. In a sound reproducer, the combination with a sound box of a diaphragm supported within and dividing the

same into two chambers, said diaphragm being of elastic material and being slit across the same, and means for flexing said diaphragm in accordance with sound vibrations to cause said diaphragm to open at said slit to a greater or less extent, said diaphragm when at rest having no openings therein, substantially as described.

[Claims 6 to 14 not printed in the Gazette.]

1,024,697. PHONOGRAPH-REPRODUCER. ALEXANDER N. PIERMAN, Newark, N. J., assignor, by mesne assignments, to Thomas A. Edison, Incorporated, West Orange, N. J., a Corporation of New Jersey. Filed Sept. 18, 1909. Serial No. 518,415. (Cl. 181—10.)



1. In a sound reproducer, the combination of a hollow body containing chambers communicating through a plurality of ports, members of elastic material seated upon and covering said ports, means for holding rigidly one extremity of said members, means located at the other extremity of said members for preventing all except longitudinal movement of said extremity, and permitting longitudinal movement, and means for flexing the said members in accordance with sound vibrations, substantially as described.

2. In a sound reproducer, the combination of a hollow body containing chambers communicating through a port, a member of elastic material seated upon and covering said port, means for holding rigidly one extremity of said member, means located at the other extremity of said member for restricting all movement of said extremity to movement in the plane normally occupied by said member and means for flexing said member in accordance with sound vibrations, substantially as described.

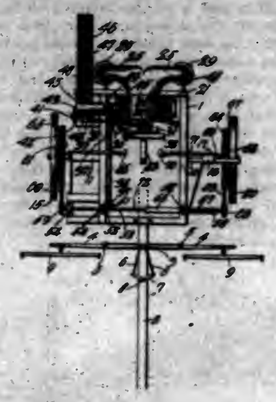
3. In a sound reproducer, the combination with a sound box and means for conveying a fluid therethrough, of a vibratory thin strip interposed in the path of said fluid and held rigidly at one end, means located adjacent the other end of said strip for restricting all movement of said end to movement in the plane normally occupied by said strip, and means for flexing said strip in accordance with sound vibrations to be reproduced, to produce corresponding undulations in said fluid, substantially as described.

4. In a sound reproducer, the combination with a sound box and means for conveying a fluid therethrough, of a vibratory thin strip interposed in the path of said fluid, means holding said strip rigidly at one end, means located adjacent the other end of said strip for restricting all movement of said strip to movement longitudinal of said member, and means acting upon said strip substantially midway between said holding and restricting means for causing the same to flex in accordance with sound vibrations to be reproduced, to produce corresponding undulations in said fluid, subetantially as described.

5. In a sound reproducer, the combination with a sound box and means for conveying a fluid therethrough, of flexible means interposed in the path of said fluid for producing undulations therein by its flexure, means permitting slip of said flexible means at one end thereof in the plane normally occupied by said flexible means, but preventing all other movement of said end, and means for flexing the said flexible means in accordance with sound vibrations, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,024,698. INSECT-DESTROYER. WILLIAM C. PENSON, Hermitage, Ark. Filed Oct. 9, 1911. Serial No. 653,654. (Cl. 43—1.)



1. A device of the class described comprising a wheel-mounted frame; suction mechanism thereon; a collection receptacle; a tubular discharge casing forming a reduced communication between the suction mechanism and the collection receptacle and insect-destroying means rotatable in a fixed plane within the discharge casing; the casing serving to direct the insects against said means, at right angles to its plane of rotation.

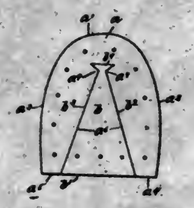
2. A device of the class described comprising a wheel-mounted frame; suction mechanism thereon; a collection receptacle; a tubular discharge casing forming a reduced communication between the suction mechanism and the collection receptacle; a shaft journaled for rotation in the discharge casing; and fixed radial elements upon the shaft, mounted to rotate at right angles to the axis of the casing.

3. A device of the class described comprising a frame; a longitudinally extensible axle carried by the frame; ground wheels upon the axle; a longitudinally extensible drive shaft carried by the frame; clutch mechanism carried by the frame and adapted to connect one ground wheel operatively with the drive shaft and including an extensible operating element; suction means carried by the frame; and mechanism for operatively connecting the drive shaft with the suction means.

4. A device of the class described comprising a frame; transversely separable ground wheels thereon; suction mechanism upon the frame, including an actuating shaft; a tubular discharge casing communicating with the suction mechanism; a shaft journaled in the casing longitudinally of the casing; blades upon the last mentioned shaft disposed transversely of the casing; an auxiliary shaft journaled upon the frame; means for operatively connecting the auxiliary shaft with the actuating shaft and with the blade-carrying shaft; an extensible drive shaft operatively connected with the auxiliary shaft; and means for operatively connecting the drive shaft with the ground wheels.

5. A device of the class described comprising a frame; suction mechanism thereon, including an actuating shaft; a collection receptacle; a casing forming a communication between the suction mechanism and the collection receptacle; a shaft journaled for rotation in the casing; blades upon the last mentioned shaft; fixed blades in the casing, with which the blades of said shaft coöperate; a secondary shaft journaled upon the frame; intermeshing pinions upon the secondary shaft and the blade-carrying shaft; an auxiliary shaft journaled upon the frame; intermeshing pinions operatively connecting the auxiliary shaft with the secondary shaft; a flexible element operatively connecting the auxiliary shaft with the actuating shaft; a drive shaft journaled upon the frame; intermeshing pinions connecting the drive shaft with the auxiliary shaft; a ground wheel carried by the frame; a pulley supported for rotation upon the frame; a flexible element operatively connecting the pulley with the drive shaft; and clutch mechanism for connecting the pulley with the ground wheel.

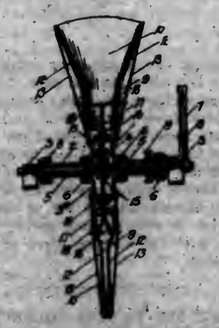
1,024,699. PIECED HEEL. ALFRED C. REDDEN, Millis, Mass. Filed Aug. 23, 1910. Serial No. 578,543. (Cl. 36—34.)



1. A pieced-heel lift comprising an outer lift-section having a symmetrically curved edge-portion, corresponding in length and curvature to the edge of the whole lift and having a medial cut therein, extending from the middle of its breast edge to a point adjacent the middle of the heel portion thereof, and a transverse cut extending from said medial cut adjacent its inner end, and a V-shaped inner section having a transverse projection at its apex, and constructed to have its main portion fit into said medial cut and its projection into said transverse cut when the portions of said outer lift section are spread apart, substantially as described.

2. A pieced-heel lift comprising an outer lift-section having a symmetrically curved edge-portion corresponding in length and curvature to the edge of the whole lift, and having a medial cut therein extending from the middle of its breast edge to a point adjacent the middle of the heel portion thereof and a transverse cut extending perpendicularly to said medial cut at its inner end, and at each side thereof, and a V-shaped inner section having a dovetail shaped head at its apex, oppositely disposed to the main portion thereof, said inner section being constructed to have its main portion fit into said medial cut and its head portion into the opposite portions of said perpendicular cut, when the portions of said outer section are drawn apart to shape said outer section into lift form, substantially as described.

1,024,700. PROPELLER. JOHN L. RIKHOFF, Denver, Colo. Filed Feb. 21, 1911. Serial No. 609,876. (Cl. 244—28.)



1. A propeller comprising a rotary hub, a relatively stationary, circular member, disposed eccentric to the axis thereof, vanes extending radially from the said hub and each comprising a pair of ribs pivotally connected with the hub, and a sail attached to the said ribs, rods movable on the said hub, in engagement with the said eccentric member, and toggle connections between the said rods and the ribs of the respective vanes.

2. A propeller comprising a rotary hub, a relatively stationary circular member disposed eccentric to the axis thereof, rings mounted to move circumferentially upon the said member, vanes extending radially from the said hub and each comprising a pair of ribs pivotally connected with the same, and a sail attached to the said ribs, rods movable on the said hub, in connection with the respective rings, and toggle connections between the said rods and the ribs of the respective vanes.

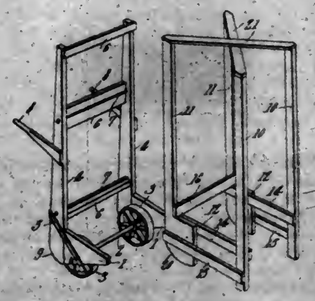
3. A propeller comprising in combination with a relatively stationary shaft, a circular member supported thereon, eccentric to its axis, a hub rotatably mounted on the shaft, and encircling said eccentric, vanes extending radially from the said hub and each comprising a pair of ribs pivotally connected with the hub, and a sail attached to the said ribs, rods movable on the said hub in engagement with the said eccentric member, and toggle connections between the said rods and the ribs of the respective vanes.

4. A propeller comprising in combination with a relatively stationary shaft, a circular member supported thereon, eccentric to its axis, a hub rotatably mounted on the shaft, and encircling said eccentric, vanes extending radially from the said hub and each comprising a pair of ribs pivotally connected with the hub, and a sail attached to the said ribs, rods movable on the said hub in engagement with the said eccentric member, toggle connections between the said rods and the ribs of the respective vanes, and means for changing the position of the eccentric in a plane transverse to its axis, by rotation of the said shaft.

5. A propeller comprising a rotary hub, a relatively stationary circular element disposed eccentric to the axis thereof, and vanes extending radially from the said hub and each comprising a folding frame including a member mounted to follow the periphery of the said element during rotary movement of the hub, the said frames being constructed to be folded and unfolded by movement of said member toward and from the axis of said eccentric element.

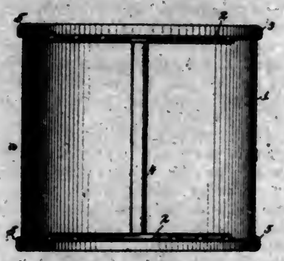
[Claim 6 not printed in the Gazette.]

1,024,701. TRUCK. BYRD C. ROCKWELL. Malvern, Ark. Filed June 3, 1910. Serial No. 564,796. (Cl. 224—29.)



A rack including posts, certain of which are cut away at their lower ends and at their outer edges to permit the rack to clear a support when the rack is tilted on a truck; and oppositely disposed braces connecting pairs of the posts upon both the inner and outer sides of the posts, whereby the arms of a truck may be engaged with the braces either between or upon the outside of the pairs of posts; the braces upon the inner sides of the posts being at a different elevation from the braces upon the outer sides of the posts; the posts which are cut away being provided with extensions to which the braces are secured; and a tie connecting the last named posts and the braces and resting upon the extensions.

1,024,702. CAN. GEORGE RUSSELL, McKeesport, Pa. Continuation of application Serial No. 451,639, filed Sept. 4, 1908. This application filed June 30, 1911. Serial No. 636,182. (Cl. 220—98.)



1. A metal can having its inner surface provided with a coating of flexible enamel, the coating of enamel being thicker on the portions of the metal forming the joints to form a tight connection.

2. A metal can formed of black sheet iron or steel having its inner surface provided with a coating of flexible enamel, the coating of enamel being thicker on the portions of the metal forming the joints to form a tight connection.

3. A metal can having its inner surface provided with a coating of flexible enamel and having a second coating of enamel on the portions of the metal forming the joints to form a tight connection.

4. A metal can formed from black sheet iron or steel having its inner surface provided with a coating of flexible enamel, and a second coating of enamel on the portions of the metal forming the joints to form a tight connection.

5. A metal can having the inner and outer faces of the same provided with a coating of flexible enamel, and a thicker coating of said enamel on a portion of said faces for the joints of said can to form a tight connection.

[Claims 6 to 8 not printed in the Gazette.]

1,024,703. EXHAUST-MUFFLER. AUGUSTUS G. SNYDER, Utica, N. Y. Filed Oct. 13, 1911. Serial No. 654,504. (Cl. 121—116.)

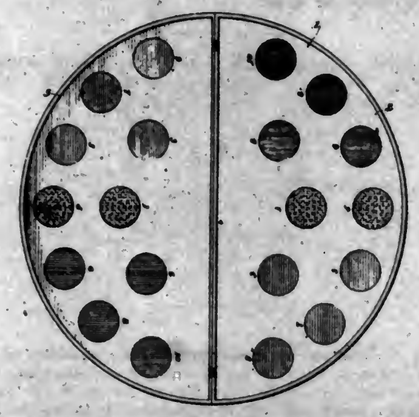


1. An exhaust muffler, for internal combustion engines, consisting of a hollow discoidal body having oppositely arranged inlet and outlet ports or passages and provided with numerous pins which are disposed transversely to or across the chamber of the muffler and across the path of movement of the exhausted gases, some or all of said pins being encircled by loose coils of wire.

2. An exhaust muffler, for internal combustion engines, consisting of a hollow discoidal body closed at one side by a cap or cover part 16 provided with numerous pins 14 extending across the chamber of the muffler and across the path of movement of the exhausted gases, and loose coils of wire encircling said pins.

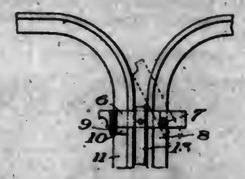
3. An exhaust muffler, for internal combustion engines, having a flattened body portion provided with oppositely arranged inlet and outlet ports and enlarged laterally between said ports, said muffler being provided in the chamber thereof with numerous pins which are disposed transversely to or across the chamber of the muffler and across the path of movement of the exhausted gases, and some or all of which pins are encircled by loose coils of wire.

1,024,704. ARITHMETICAL GAME-BOARD. WILLIAM HENRY SNYDER, Penn Yan, N. Y. Filed Feb. 25, 1911. Serial No. 610,611. (Cl. 46—21.)



An arithmetical game apparatus comprising a board of a circular formation, the said board being divided into two sections, the said sections being hingedly connected together and having their edges formed to provide a continuous wall, each of the said sections having ten irregularly arranged spaces, the said spaces having distinguishing features or colors, each of the said spaces being provided with a numeral, the said numerals ranging from one to ten, disks for covering the said spaces, the said disks each having one of their faces made blank and having their opposite faces provided with a distinguishing feature corresponding to the distinguishing features of the spaces.

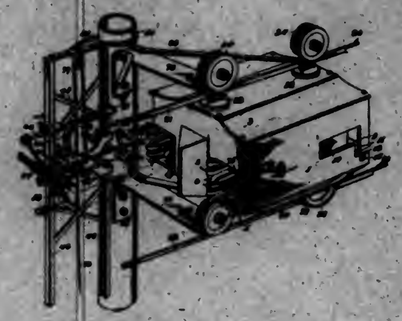
1,024,705. GATE-LATCH. ARTHUR W. SPRAGUE, La Grange, and THOMAS E. MULROYAN, De Kalb, Ill., assignors to The American Steel and Wire Company of New Jersey, Hoboken, N. J., a Corporation of New Jersey. Filed Oct. 19, 1908. Serial No. 458,399. (Cl. 70—28.)



A gate latch for double swinging gates having an arm on each side of the adjoining end bars of the gate frames, said arms having wedge-shaped front ends, a pivot pin passing through both arms of the latch and the end bar of one of said gate frames, the arms of the latch extending across the side faces of the end bar to which the latch is pivoted and of the adjoining end bar on the other gate frame, and a keeper engaging with the wedging faces on the latch arms beyond the end bar of the gate frame to which the keeper is secured, said keeper having wedging faces co-acting with the wedging faces on the ends of the arms of said latch.

1,024,706. MAIL AND PARCEL COLLECTION AND DELIVERY SYSTEM. RUFUS G. STARKWEATHER, Jordanville, N. Y., assignor of one-sixth to Jennie Starkweather, Jordanville, N. Y. Filed Aug. 10, 1911. Serial No. 643,430. (Cl. 104—146.)

1. In apparatus of the character described, the combination of a suitable track, a car adapted to travel thereon and having a compartment to contain a receptacle for delivery therefrom, and a pick-up device for automatically receiving the receptacle delivered from the car, said device having means controlled by the car for automatically setting it in operative position.



2. In apparatus of the character described, the combination of a suitable track, a car adapted to travel thereon and having a compartment to contain a receptacle for delivery therefrom, and a pick-up device for automatically receiving the receptacle delivered from the car, said device having means controlled by the car for automatically setting it in operative position during the passage of the car and for returning it to inoperative position after a delivery of such receptacle.

3. In apparatus of the character described, the combination of a track, a car adapted to travel thereon and having a compartment to contain a receptacle for delivery therefrom, a stationary receiving wire for the receptacle, a picker cooperative with said wire, and means controlled by the car for setting the picker in position to receive the receptacle delivered from the car and to transfer it to said wire.

4. In an apparatus of the character described, the combination of a track, a car adapted to travel thereon and having a compartment to contain a receptacle for delivery, a picker mounted on a stationary support, means for moving the picker to and holding it in an inoperative position, and means for setting the picker in operative position to receive the receptacle delivered from the car, embodying an arm operatively connected to the picker and a cam rail on the car cooperative with said arm.

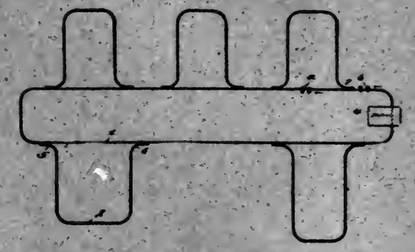
5. In an apparatus of the character described, the combination of a track, a car adapted to travel thereon and having a compartment to contain a receptacle for delivery, a picker, a spring normally holding the picker in inoperative position, a reciprocatory rod having a cam portion cooperative with the picker, an arm operatively connected to said rod, and means on the car cooperative with said arm for moving the picker into position to remove the receptacle from the car.

[Claims 6 to 15 not printed in the Gazette.]

1,024,707. MAIL AND PARCEL COLLECTING AND DISTRIBUTING SYSTEM. RUFUS G. STARKWEATHER, Jordanville, N. Y. Original application filed Aug. 10, 1911, Serial No. 643,430. Divided and this application filed Nov. 15, 1911. Serial No. 660,404. (Cl. 104—180.)

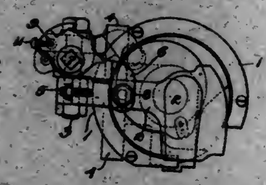
1. In an apparatus of the class described, the combination of a main line rail, a branch line rail, a car having two sets of laterally spaced wheels, either set adapted to travel on the branch line rail, and a switch operative to guide one set of wheels onto the branch line rail and to remove the other set of wheels from the main line rail.

2. In apparatus for collecting and distributing mail and parcels, the combination of a single main line track rail, a single branch line track rail, a car provided with two sets of laterally spaced grooved wheels, either of said sets of wheels being adapted to cooperate with the main line track rail, and one of said sets of wheels being adapted to cooperate with the branch line track rail, and a switch at one side of the main line rail and operative to mount one of said sets of wheels on the branch line rail and to remove the other set of wheels from the main line rail.



3. In an apparatus of the character described, the combination of a single main line track rail, a single branch line track rail, a switch placed at one side of the main line rail and leading to the branch line rail, and a car having two sets of laterally spaced wheels adapted to travel respectively on the main and branch line rails.

1,024,708. BOBBIN-HOLDING DEVICE FOR LOCK-STITCH SEWING-MACHINES. JOSEPH E. THAYER, East Bridgewater, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Feb. 15, 1905. Serial No. 245,697. (Cl. 112—23.)



1. A lock-stitch sewing machine, having, in combination, a bobbin, a bobbin holding arm pivotally mounted to swing toward and from the bobbin, and a latch constructed to engage and positively hold the bobbin holding arm in operative position, said latch being provided with an adjusting screw by means of which the position of the surface of engagement with the bobbin holding arm may be determined, substantially as described.

2. A lock-stitch sewing machine, having, in combination, a bobbin, a bobbin holding arm pivotally mounted to swing toward and from the bobbin, an adjustable stop to determine the operative position of said arm and a latch constructed to engage and positively hold the bobbin holding arm in operative position, said latch being provided with an adjustable screw by means of which the position of the surface of engagement with the bobbin holding arm may be determined, substantially as described.

3. A lock stitch sewing machine, having, in combination, a bobbin, a bobbin holding arm pivotally mounted to swing toward and from the bobbin, a latch constructed to engage and positively hold the bobbin holding arm in operative position and a spring pressed locking device movable into and out of locking position to hold the latch in engagement with the bobbin holding arm, substantially as described.

4. A lock stitch sewing machine, having, in combination, a bobbin, a bobbin holding arm pivotally mounted at one side of the bobbin to swing toward and from the bobbin, and a latch constructed to engage the bobbin holding arm on the same side of the pivot as the bobbin and hold the bobbin holding arm in operative position, said latch being

pivotally mounted upon a pivot having its axis at right angles to the axis of the bobbin holding arm and being arranged to engage the surface of the arm away from the bobbin, substantially as described.

5. A lock stitch sewing machine, having, in combination, a bobbin, a bobbin holding arm pivotally mounted to swing toward and from the bobbin, a latch pivotally mounted upon a pivot having its axis at right angles to the axis of the bobbin holding arm, and a spring pressed locking device to engage the latch when the latch is in position to engage and hold the bobbin holding arm in operative position, substantially as described.

1,024,709. ELECTRIC AUTOMOBILE-CLOCK. WILLIAM HENDERSON THOMPSON, Memphis, Tenn., assignor to Thompson Electric Clock Company, Memphis, Tenn., a Corporation of Tennessee. Filed June 6, 1911. Serial No. 631,637. (Cl. 58—41.)



In a clock, the combination with the train, of a driving shaft therefor, a driving disk secured to the shaft, a ratchet wheel having a loose relationship to the shaft and disk aforesaid, a spring interposed between the ratchet wheel and the aforesaid disk and affording a connection therebetween, an actuating disk having a pawl engaged with the ratchet wheel aforesaid, a driving spring engaged with the actuating disk, a contact member carried by the actuating disk, an electro-magnet, an armature therefor, a lever which carries said armature, and a contact carried by the lever which is adapted to be engaged by the contact member aforesaid on the unwinding of the driving spring, said contacts being in the circuit of the electro-magnet.

1,024,710. SPARKING IGNITER. LUTHER H. WATTLES, Providence, R. I., assignor of one-half to Matie C. Messler, Pawtucket, R. I. Filed Dec. 3, 1910. Serial No. 595,422. (Cl. 123—149.)



1. In an electric sparking ignition mechanism, the combination with a spark plug provided with a piston chamber having means for communication with the cylinder, of a piston in the chamber, a generator and an armature in the generator in alinement with and rotatable with the piston, and means for transforming the reciprocating motion of the piston into rotary motion.

2. In an electric sparking ignition mechanism, the combination with a spark plug provided with a piston chamber having communication with the cylinder, of a piston in the chamber, a generator, an armature in the generator in alinement with the piston and directly connected therewith, and means to transform the reciprocating motion of the piston into rotary motion.

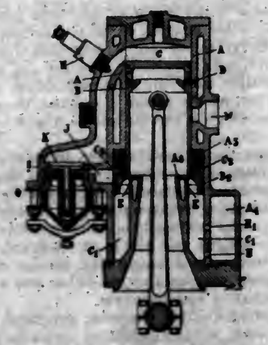
3. In an electric sparking ignition mechanism, the combination with a spark plug provided with a piston chamber having communication with the cylinder, of a piston in the chamber, a generator mounted upon the sparking plug, an armature in the generator in alinement with and rigidly connected with the piston and movable in the generator both rotatably and longitudinally, and means to transform the reciprocating motion of the piston into rotary motion.

4. In an electric sparking ignition mechanism, the combination with a spark plug provided with a piston chamber having communication with the cylinder, of a piston in the chamber, a generator mounted upon the sparking plug, an armature in the generator in alinement with and rigidly connected with the piston and movable in the generator both rotatably and longitudinally, means to transform the reciprocating motion of the piston into rotary motion, and a dashpot on the generator adapted to receive the end of said armature.

5. In an electric sparking ignition mechanism, the combination with an engine cylinder and an ignition circuit, of an electric generator in the circuit, a longitudinally reciprocating armature mounted in the generator, means in alinement with and rigidly connected to said armature and actuated by the charge of the cylinder for rotating and operating the armature, and means to transform the reciprocating motion of said first-named means into rotary motion.

[Claims 6 to 18 not printed in the Gazette.]

1,024,711. INTERNAL-COMBUSTION ENGINE. HARRY WHIDBOURNE, Plymouth, and JOHN JAMES LISHMAN, Salcombe, England. Filed Aug. 24, 1911. Serial No. 645,820. (Cl. 123—71.)

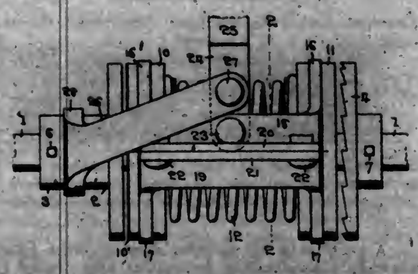


1. An internal combustion engine of the two-stroke cycle type, comprising, a cylinder having two portions of different diameters, one of the portions serving as a main working cylinder, a piston having two parts of different diameters arranged to work in said two portions of the cylinder respectively, a sleeve arranged concentrically within the cylinder and forming with one of the portions of the cylinder an annular chamber which is divided into two separate compartments by one of the two piston parts, means for admitting an explosive mixture into one of the compartments, means for admitting an inert gas into the other compartment, means for connecting the latter compartment with the main working cylinder, and means for connecting the two compartments with each other near the end of the outward stroke, whereby the working of the piston in said annular chamber causes a charge of inert gas contained in one of the compartments to be forced into the main working cylinder by and in front of the charge of explosive mixture admitted and compressed in the other compartment of the annular chamber, substantially as described.

2. An internal combustion engine of the two-stroke cycle type, comprising, a cylinder having two portions of different diameters, one of the portions serving as a main working cylinder, a piston having two parts of different diameters arranged to work in said two portions of the cylinder respectively, a sleeve arranged concentrically within the cylinder and forming with one of the portions of the cylinder an annular chamber which is divided into two separate compartments by one of the two piston parts, passages formed in the sleeve within the cylinder for the admission of an explosive mixture into one of the compartments, means for admitting an inert gas to the other compartment, means for connecting the latter compartment with the main working cylinder, an additional chamber, and passages between the latter and the annular chamber, whereby the working of the piston in the annular chamber causes a charge of inert gas contained in one of the compartments to be forced into the main working cylinder by and in front of the charge of explosive mixture admitted in the other compartment from which it is expelled into the inert gas compartment past the additional chamber and through the passages between the latter and the annular chamber, substantially as described.

3. An internal combustion engine of the two-stroke cycle type comprising a cylinder having two portions of different diameters, one of the portions serving as a main working cylinder, a piston having two parts of different diameters arranged to work in said two portions of the cylinder respectively, a sleeve arranged concentrically within the cylinder and forming with one of the portions of the cylinder an annular chamber which is divided into two separate compartments by one of the two piston parts, passages in the sleeve within the cylinder for admitting an explosive mixture into one of the compartments said passages being provided near the inner stroke end of the piston part arranged to work in the portion of the cylinder which forms an annular chamber with the sleeve, a conduit leading to the other compartment, a non-return valve for admitting an inert gas to the latter conduit and compartment, a passage for connecting said conduit with the main working cylinder, a non-return valve in said passage, means for connecting together the two compartments of the annular chamber, and an exhaust port in the main working cylinder, whereby the explosive mixture is admitted into one of the compartments toward the end of the instroke of the piston, compressed therein during the outward stroke of the same, and forced thence into the other compartment toward the end of the outward stroke, the inert gas being drawn into its compartment during the outward stroke of the piston and forced thence into the main working cylinder by the compressed explosive mixture while the exhaust port is open, and the explosive mixture being forced from the inert gas compartment into the working cylinder while the exhaust port is closed, substantially as described.

1,024,712. ENGINE-STARTER. WILLIAM H. WILLIAMS, Statesboro, Ga. Filed Jan. 30, 1912. Serial No. 674,811. (Cl. 185—41.)



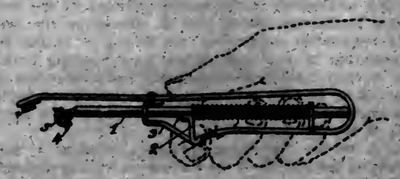
1. In an engine starter, the combination with an engine shaft, of coöperating disks, means for connecting the coöperating disks, a spring positioned between the disks and having its opposite ends secured thereto, means connected with the connecting means for shifting the disks longitudinally of the shaft, means carried by the shaft for rotating one disk to wind the spring, means for holding the other disk stationary during the winding of the spring, means for releasing the second disk to allow the same to be rotated by the spring during unwinding of the latter, and means for transmitting rotary motion from the last disk to the shaft.

2. An engine starter comprising coöperating disks upon a shaft, collars carried by said disks, means for connecting the collars, means for shifting the collars and disks longitudinally upon the shaft, a spring positioned between the disks and connected to the latter, means carried by the shaft for rotating one of the disks and thus winding the spring, means for preventing reverse rotation of the disk, a power transmitting disk carried by the shaft, one of the coöperating disks being adapted for engagement against the power transmitting disk to rotate the latter during unwinding of the spring to impart rotary motion to the shaft.

3. An engine starter comprising the combination with a shaft, of coöperating disks, collars carried by the disks, means for connecting the collars, a lever connected with the connecting means, means for forming a pivot point for the lever, said lever being adapted to shift the connecting means longitudinally of the shaft to move the collars and disks, a spring between the disks and having one end connected with each disk, a friction disk carried by the shaft for rotating one of the coöperating disks, means for preventing backward rotation of the last mentioned disk, means for holding the other disk of the coöperating disks stationary during the rotation of the first disk by the friction disk to wind the spring, means for releasing the second disk of the coöperating disks to allow the same to be rotated by the spring, and means for transmitting the motion of the second disk to the shaft to rotate the latter during the unwinding of the spring.

4. A device of the class described comprising coöperating disks positioned upon a shaft, means for spacing the disks from one another, each of the coöperating spaced disks having a circumferential groove in its periphery, collars within the grooves, means for connecting the collars, a lever pivoted to the connecting means, means connected with the lever and positioned over the shaft to form a pivot point for the lever, said lever being adapted to shift the connecting means, collars and coöperating disks longitudinally of the shaft, a spring between the coöperating disks and connected with the latter, a friction disk carried by the shaft outwardly of one of the coöperating disks, a power transmitting disk having ratchet teeth rigidly secured to the shaft outwardly of the other coöperating disk, means carried by one coöperating disk, and collar for preventing backward rotation of the coöperating disk, and an operating pawl carried by one of the coöperating disks for engagement with the teeth of the power transmitting disk to revolve the latter.

1,024,713. IGNITING DEVICE. WILLIAM S. ANDREWS and TYCHO VANN ALLER, Schenectady, N. Y. Filed Mar. 30, 1911. Serial No. 617, 870. (Cl. 67—6.)



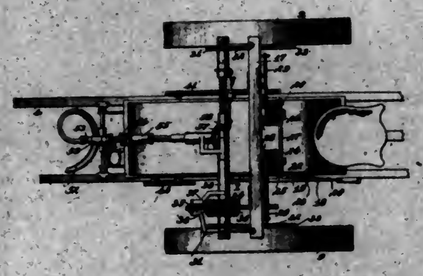
1. The combination with a pyrophoric igniting device, of a recessed support, a block of alloy seated therein, a thin plate interlocking with the body of block, means for securing the plate to the support and a spring retracted striker to engage the block.

2. The combination with a pyrophoric igniting device, of a support, a block of pyrophoric alloy interlocking therewith in the body of the block, a forked lock piece

securing the block to the support engaging grooves therein and a spring retracted striker to engage the block.

3. The combination with a pyrophoric igniting device, of a support, a block of pyrophoric alloy grooved near its base and entering a recess in the support, a thin forked plate entering the grooves, a set screw securing the plate to the support, and a spring retracted striker to engage the block.

1,024,714. COTTON-HARVESTING MACHINE. JOHN F. APPLEBY, Chicago, Ill., assignor to Dixie Cotton Picker Co., Redfield, S. D., a Corporation of South Dakota. Original application filed Jan. 8, 1906, Serial No. 295,100. Divided and this application filed Apr. 13, 1906, Serial No. 311,592. Renewed Mar. 9, 1912. Serial No. 682,753. (Cl. 56—32.)



1. A cotton harvesting machine including a casing, operating mechanism of the machine carried by the casing, a hand lever for raising and lowering the casing, a locking quadrant or rack, a locking device carried by the lever cooperating with said rack, whereby the casing may be maintained in the position to which it may be adjusted, and spring mechanism taking part in supporting the casing, said mechanism comprising two helices of spring metal terminating in outwardly extending supporting branches and having connection by means of said branches with the casing.

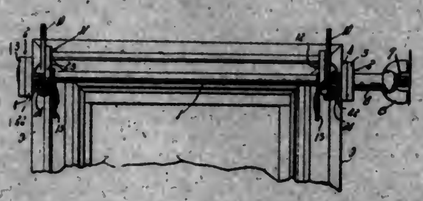
2. A cotton harvesting machine including a casing, operating mechanism of the machine carried by the casing, a hand lever for raising and lowering the casing, a locking quadrant or rack, a locking device carried by the lever cooperating with said rack, whereby the casing may be maintained in the position in which it may be adjusted, spring mechanism taking part in supporting the casing, said mechanism comprising two helices of spring metal terminating in outwardly extending supporting branches and having connection by means of said branches with the casing, and an adjusting device interposed between the remaining ends of the helices for adjusting the tension of the coiled springs.

3. A cotton harvesting machine including a casing, operating mechanism of the machine carried by the casing, spring mechanism taking part in supporting the casing, said mechanism comprising two helices of spring metal terminating in outwardly extending supporting branches and having connection by means of said branches with the casing, and an adjusting device interposed between the remaining ends of the helices for adjusting the tension of the coiled springs.

4. A cotton harvesting machine including a casing, operating mechanism of the machine carried by the casing, spring mechanism taking part in supporting the casing, said mechanism comprising two helices of spring metal terminating in outwardly extending supporting branches and having connection by means of said branches with the casing, an adjusting device interposed between the remaining ends of the helices for adjusting the tension of the coiled springs, and lever mechanism for raising and lowering the casing.

5. A cotton harvesting machine including a casing, operating mechanism of the machine carried by the casing, spring mechanism taking part in supporting the casing, said mechanism comprising two helices of spring metal terminating in outwardly extending supporting branches and having connection by means of said branches with the casing, and a connecting device interposed between the remaining ends of the helices.

1,024,715. SHADE AND CURTAIN FIXTURE. KNUTE BERVEN, Portland, Oreg. Filed June 15, 1911. Serial No. 633,289. (Cl. 156—24.)



1. In a device of the character described, the combination with a rod adapted to be secured to a window, of a holder comprising a body member having means for engaging a shade roller, and having a lateral extension on its upper edge, said extension terminating in a tongue which extends rearwardly upwardly and then forwardly to form a loop for the reception of said rod, said body member having a rearward extension adapted to bear against said window and prevent turning of the holder upon said rod, and a bolt passed through the free end of said tongue and said lateral extension whereby to clamp said holder to said rod.

2. In a device of the character described, the combination with a rod adapted to be clamped to a window casing, of a combined curtain and shade supporting holder clamped thereto, said holder comprising a body member having means for engaging a shade roller and having a lateral extension upon its upper edge, said extension terminating in a tongue which extends rearwardly upwardly and then forwardly to form a loop through which the rod is passed, a curtain holder formed of wire one end of which is bent to form a hook, the other end of which is bent to form a loop at right angles to the hook, a bolt passed through the free end of the tongue lateral extension and loop of the curtain holder and a nut engaging over said bolt whereby the shade holder and curtain holder are clamped to each other and to the rod.

1,024,716. ORDER-GUIDE. ELMER J. BLISS, Edgartown, Mass. Filed Apr. 21, 1909. Serial No. 491,868. (Cl. 11—19.)



1. A guide sheet for ordering shoes or other articles, embracing a substantially rectangular area divided into vertical and horizontal columns which intersect to form a series of number-receiving spaces, one of said sets of columns being bordered by a progressive series of size-indicating inscriptions, the other set of columns which extend across the size-indicating columns being bordered by inscriptions denoting different widths, the different portions of said sheet being made with distinctive backgrounds in accordance with and indicative of the relative demand for the different sizes and widths to be ordered, substantially as described.

2. A guide sheet for ordering shoes or other articles, embracing a substantially rectangular area divided into vertical and horizontal columns intersecting to form a series of number-receiving spaces, said number-receiving spaces being divided into sub-divisions or sections, one of said sets of columns being bordered by a progressive series of size-indicating inscriptions, the other set of columns extending across the size-indicating columns being bordered by inscriptions denoting different widths, the different portions of said sheet being differently colored to accord with and indicate the relative demand for the different sizes and widths to be ordered, substantially as described.

1,024,717. SAFETY-PIN. LEON BRODY, New York, N. Y. Filed May 20, 1909. Serial No. 497,252. (Cl. 24—162.)



1. The combination in a safety pin, of a frame having side bars and provided with guiding eyes at one end, and a pin slidable through one of the guide eyes of the frame between the side bars and having a guide bar slidable through the other guide eye of the frame and provided with an eye slidable on one of the said side bars.

2. The combination in a safety pin, of a frame and a pin, the frame being constructed of a single piece of wire bent upon itself intermediate its length to form side bars, with one of said bars bent crosswise of the frame into U-form, the inner arm of the U portion being connected to the other side bar and the outer arm of the U portion having a guiding eye intermediate its length and a guiding eye at its extremity, and the pin being constructed of a single piece of wire bent upon itself to form in connection with the pin a guide bar, with the guide bar slidable through the eye at the extremity of the arm of the U portion and having an eye slidable on one of the side bars of the frame and the pin slidable through the other guiding eye between the side members of the frame.

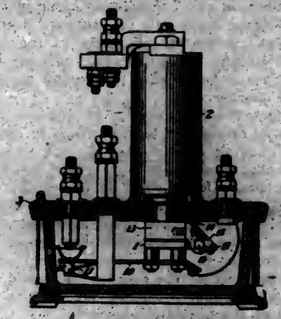
3. The combination in a safety pin, of a frame having side bars and provided with a keeper and a guide respectively disposed at opposite ends and a pin slidable through the guide of the frame between the side bars and having a guide bar slidably engaged with one of the side members of the frame to direct the pin, said pin having a hump in its length arranged to throw the point of the pin outwardly as the hump passes through the guiding eye of the frame and over the bearing or inner arm of the frame.

1,024,718. ELECTRIC CONTACT DEVICE. CLARENCE W. COLEMAN, deceased, Westfield, N. J., by Katharine Coleman, administratrix, Westfield, N. J., assignor to The Hall Signal Company, a Corporation of Maine. Original application filed Sept. 10, 1910, Serial No. 581,409. Divided and this application filed Jan. 14, 1911, Serial No. 603,381. Renewed Dec. 19, 1911. Serial No. 666,845. (Cl. 64—10.)

1. In a movable contact closer, a hinge device comprising two relatively movable parts, one of the parts having two communicating bores substantially at right angles to each other, a pin having a circumferential groove therein and situated in one bore, and a locking member in the other bore in engagement with the recess in the pin, the other part having pivotal engagement with the pin.

2. In a movable contact closer, a hinge device comprising two relatively movable parts, one of the parts having a split clamp, a pin held in the split clamp and having a circumferential groove therein, and a clamping member for the split clamp arranged to engage in the groove in the pin, the other part having pivotal engagement with the pin.

3. In a movable contact closer, a hinge device comprising two relatively movable parts, one of the parts having two pairs of communicating bores, the bores of each pair being substantially at right angles to each other, and for each pair of communicating bores a pin having a circumferential groove therein and situated in one bore, and a locking member in the other bore in engagement with the recess in the pin, the pins pivotally engaging the other part at opposite ends thereof.

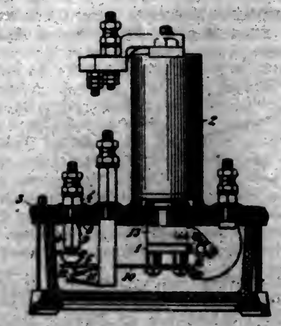


4. In a movable contact closer, a hinge device comprising two relatively movable parts, one of the parts having two split clamps, and for each split clamp a pin held therein and having a circumferential groove therein and a clamping member arranged to engage in the groove in the pin, the pins pivotally engaging the other part at opposite ends thereof.

5. In a movable contact closer, a hinge device comprising a removable trunnion pin having a circumferential groove therein, a support for the trunnion pin, a movable trunnion-pin-locking member in the support adapted to engage in the groove of the trunnion pin, and a trunnion journaled in the trunnion pin.

[Claims 6 to 9 not printed in the Gazette.]

1,024,719. ELECTRIC CONTACT DEVICE. CLARENCE W. COLEMAN, Westfield, N. J.; Katharine Coleman, administratrix of said Clarence W. Coleman, deceased, assignor to The Hall Signal Company, a Corporation of Maine. Filed Sept. 10, 1910, Serial No. 581,409. Renewed Dec. 19, 1911. Serial No. 666,846. (Cl. 173—259.)



1. A contact stop comprising, in combination with a support having locking portions on opposite sides and having a bore therethrough, a contact-post member extending through the bore, a locking member on the contact-post member releasable by relative rotation between the two members and engaging the locking portion on one side of the support, and a second locking member on the contact-post member engaging the locking portion on the other side of the support and releasable by longitudinal move-

ment relatively to the contact-post member and locking the contact-post member against rotation.

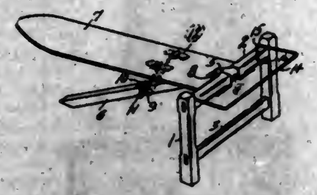
2. A contact stop comprising, in combination with a support having locking recesses in opposite sides thereof and having a bore therethrough communicating with the locking recesses, a contact post member extending through the bore, a locking member on the contact post member releasable by relative rotation between the two members and engaging in one locking recess in the support, a second locking member on the contact-post member engaging in the other locking recess in the support and releasable by longitudinal movement relatively to the contact-post member and locking the contact-post member against rotation, and means for locking the second member on the contact-post member.

3. A contact stop comprising, in combination with a support having recesses of locking shape in opposite sides thereof and having a bore therethrough communicating with the locking recesses, a contact-post screw extending through the bore, a locking nut on the contact-post screw engaging in one locking recess in the support, a second locking member on the contact-post screw engaging in the other locking recess in the support and releasable by longitudinal movement relatively to the contact-post screw in the support and locking the contact-post screw against rotation, and a detachable resilient ring for locking the second member on the contact-post screw.

4. A contact stop comprising, in combination with a support having locking portions on opposite sides thereof and having a bore therethrough, a contact-post member extending through the bore, a locking member on the contact-post member releasable by relative rotation between the two members and engaging one locking portion on the supporting member, a lock washer on the contact-post member engaging the other locking portion on the support, and a resilient ring adapted to lock the lock washer on the contact-post member.

5. A contact stop comprising, in combination with a support having recesses of locking shape in opposite sides thereof and a bore therethrough communicating with the two recesses, a contact-post screw extending through the bore and having one projecting end screw-threaded and a non-circular portion on the other end and a circumferential groove interrupting such non-circular portion, a nut of locking shape on the screw threaded end of the contact post screw and engaging in one recess, a lock washer on the non-circular portion of the screw and engaging in the other recess, and a resilient ring encircling the groove of the screw and locking the lock washer in position.

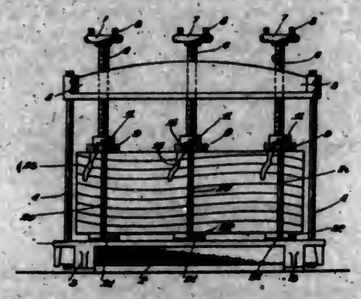
1,024,720. IRONING-BOARD. JOHN B. COTTLE, Rosebud, Tex. Filed May 16, 1911. Serial No. 627,403. (Cl. 68—10.)



1. A folding ironing board comprising, a supporting member having a cross bar, an inclined brace member having its upper end hinged to the center of the cross bar, a board having its inner end engaging under the cross bar and provided with a recess receiving the upper hinged end of the brace member, a supporting bracket hinged and confined to the brace member and the board, and a rack hinged to the supporting member and having angular portions located to receive the cross bar of said member.

2. In a folding ironing board, a supporting member, a cross bar in the member, a brace member hingedly secured to the cross bar, a board having a recess located to receive the brace member, a hinged bracket secured to the brace member and the board, a rack hinged to the supporting member and adapted to be swung down upon the board, the board, supporting member and brace member being arranged to be folded together, and a locking bar engaging between the rack and the supporting member.

1,024,721. PRESS. JOHN E. DAVIS, Cortland, N. Y. Filed June 21, 1911. Serial No. 634,531. (Cl. 144—281.)



1. A device of the character described comprising a supporting foundation, a press frame, a plurality of screws mounted in said frame, a plurality of retaining clamps carried by said screws, supporting bars, a plurality of clamping rods threaded at their upper ends engaging said supporting bars and said retaining clamps, apertures formed in said retaining clamps, a plurality of split nuts mounted in said apertures adapted to engage the threaded ends of said clamping rods, and a plurality of eccentric levers pivotally mounted in said retaining clamps adapted to engage the said split nuts.

2. A device of the character described comprising a supporting foundation, a superimposed frame mounted thereon, manually controlled actuating screws mounted in said frame, retaining clamps mounted on said screws, supporting bars adjacent to said platform, retaining rods provided with threaded ends engaging said supporting bars and said retaining clamps, apertures cut in said retaining clamps, split nuts mounted in said apertures adapted to engage the threaded ends of said retaining rods, and a plurality of levers provided with eccentric locking heads pivotally mounted in said retaining clamps adapted to engage said split nuts when in their locked positions.

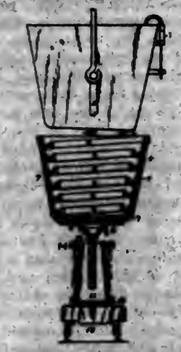
3. A device of the character described including a clamping means for presses comprising retaining clamps supporting body, slots cut therein adapted to receive retaining rods provided with threaded ends, reception apertures cut therein adjacent to said retaining rods provided with beveled reception surfaces, split nuts mounted in said apertures adapted to engage the threaded ends of said rods and the tapered reception surfaces in said retaining clamps, cam locking surfaces formed on one portion of said split nuts, eccentric locking levers pivotally mounted in said retaining clamps provided with cam-shaped locking heads adapted to engage said cam-shaped locking surfaces on said split nuts.

1,024,722. PROCESS AND APPARATUS FOR CASTING INGOTS. JACOB ENSELEN, Pittsburgh, Pa. Filed Sept. 16, 1911. Serial No. 649,677. (Cl. 22—79.)

1. The process of casting ingots which consists in introducing the metal downwardly through the top of the ingot mold and discharging the same at a point near the bottom of said mold and causing the metal to flow upwardly from the bottom to fill the mold, for the purpose described.

2. The process of casting ingots, which consists in first eliminating or liberating the gases from the fluid metal by passing the latter in a shallow flow over an extended surface, and then discharging the metal into the mold.

3. The process of casting ingots which consists in first passing the fluid metal in a relatively shallow flow over an extended surface, and, second, introducing the metal through the top of the mold and discharging said metal into the interior of the mold at a point adjacent to the bottom thereof, and causing the metal to flow upwardly from the bottom to fill the mold.

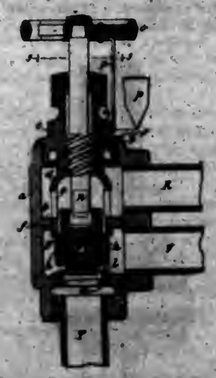


4. The process of casting ingots which consists in admitting the metal downwardly through the top of the mold through the metal accumulated in said mold and discharging the newly admitted metal beneath the accumulated metal, whereby the metal flows upwardly from the bottom to fill the mold, thus maintaining a substantially uniform temperature in the mold during the operation of pouring.

5. In apparatus for casting ingots, a gas eliminator adapted to be interposed between the ladle and the ingot mold and consisting of a receptacle adapted to receive the metal from the ladle and means for passing said metal in the form of a shallow stream over the side wall of said receptacle, for the purpose described.

[Claims 6 to 8 not printed in the Gazette.]

1,024,723. VALVE FOR STEAM-HEATING SYSTEMS. EDWARD E. GOLD, New York, N. Y. Filed Dec. 15, 1909. Serial No. 533,249. (Cl. 237—12.)



1. A valve for steam heating systems having a pair of radiator units and a single supply pipe, said valve comprising a casing having side openings at different heights adapted for connection to the respective radiator units and having a bottom opening adapted for connection with said supply pipe and provided with a valve seat, a bonnet in the top of said casing, a cylindrical extension of said bonnet having lateral openings and the lower part of which constitutes a ring fitting the casing and providing an upper valve seat, a valve proper having a stem screwing through said bonnet and having an upper face adapted to engage said upper seat and close the passage to the upper side opening when the valve proper is raised and having a lower face adapted to engage the seat in the bottom of the casing and close the supply passage when the valve proper is lowered.

2. A valve for steam heating systems having a pair of radiator units and a single supply pipe, said valve comprising a casing having side openings at different heights adapted for connection to the respective radiator units and having a bottom opening adapted for connection with said supply pipe and provided with a valve seat, a bonnet in the top of said casing, a cylindrical extension of said bonnet having lateral openings and the lower part of which constitutes a ring fitting the casing and providing an upper valve seat, a valve proper having a stem screwing through said bonnet and having an upper face adapted to engage said upper seat and close the passage to the upper side opening when the valve proper is raised and having a lower face adapted to engage the seat in the bottom of the casing and close the supply passage when the valve proper is lowered, the thread of said stem being of a rapid pitch so that by less than a complete turn of the stem the valve proper is shifted from its highest to its lowest position, whereby the angular position of the stem indicates the position of the valve proper.

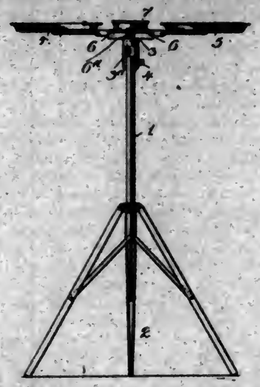
3. A valve for steam heating systems having a pair of radiator units and a single supply pipe, said valve comprising a casing having side openings at different heights adapted for connection to the respective radiator units and having a bottom opening adapted for connection with said supply pipe and provided with a valve seat, a bonnet in the top of said casing, a cylindrical extension of said bonnet having lateral openings and the lower part of which constitutes a ring fitting the casing and providing an upper valve seat, a valve proper having a stem screwing through said bonnet and having an upper face adapted to engage said upper seat and close the passage to the upper side opening when the valve proper is raised and having a lower face adapted to engage the seat in the bottom of the casing and close the supply passage when the valve proper is lowered, and means for impositively locking said stem in its intermediate position.

4. A valve for steam heating systems having a pair of radiator units and a single supply pipe, said valve comprising a casing having side openings at different heights adapted for connection to the respective radiator units and having a bottom opening adapted for connection with said supply pipe and provided with a valve seat, a bonnet in the top of said casing, a cylindrical extension of said bonnet having lateral openings and the lower part of which constitutes a ring fitting the casing and providing an upper valve seat, a valve proper having a steam screwing through said bonnet and having an upper face adapted to engage said upper seat and close the passage to the upper side opening when the valve proper is raised and having a lower face adapted to engage the seat in the bottom of the casing and close the supply passage when the valve proper is lowered, the thread of said stem being of a rapid pitch so that by less than a complete turn of the stem the valve proper is shifted from its highest to its lowest position, whereby the angular position of the stem indicates the position of the valve proper, and an indicator for marking the angular positions of the stem corresponding to the raised, intermediate and lowered positions of the valve proper.

1,024,724. TABLE. JOSEPH GRAS, New York, N. Y. Filed Nov. 16, 1911. Serial No. 660,575. (Cl. 45—31.)

1. In a table of the foldable type, a head, means for supporting the head, arms pivoted to the edges of the head and adapted to be swung from a horizontal to a vertical position, opposed arms carrying trays at their outer por-

tions, one tray being of less diameter than two opposed trays, the smaller tray being adapted to fit between the two opposed trays when the trays and arms are in a vertical position.



2. In a table of the foldable type, a head, means for supporting the head, arms pivoted to the edges of the head and adapted to be swung from a horizontal to a vertical position, opposed arms carrying trays at their outer portions, one tray being of less diameter than the two opposed trays, the smaller tray being adapted to fit between the two opposed trays when the trays and arms are in a vertical position, the smaller tray acting as a stop for the larger trays when extending between the latter.

1,024,725. FUSIBLE LINK. JOHN R. HAMILTON, Yonkers, N. Y., assignor to Automatic Sprinkler Company of America, New York, N. Y., a Corporation of New York. Filed June 21, 1911. Serial No. 634,633. (Cl. 236—16.)



1. The fusible connecting link having attaching means at its opposite ends and comprising a pair of link members each formed of sheet metal and provided with a reinforcing ferrule around the axial attaching means at one end and provided with an integral pivot stamped from the sheet metal and located away from the axis of the link member and adjacent its free end, a sheet metal strut interposed between said link members and provided with diagonally arranged sockets engaged by the pivots of the link members and having automatic disengaging action in the plane of the link members and provided with curved relieved ends comprising pivot shoulders on the diagonal corners of the strut adjacent said pivots and comprising curved relieved edges on the other diagonal corners of the strut, said parts being releasably connected by fusible solder to firmly retain the parts in normal holding position and to allow their emergency release.

2. The fusible connecting link having attaching means at its opposite ends and comprising a pair of link members each formed of sheet metal and provided with an integral pivot stamped from the sheet metal and located away from the axis of the link member and adjacent its free end, a sheet metal strut interposed between said link members and provided with diagonally arranged sockets engaged by the pivots of the link members and having automatic disengaging action in the plane of the link members and provided with relieved ends comprising curved relieved edges on the unpivoted diagonal corners of the strut, said parts being releasably connected by fusible solder to firmly retain the parts in normal holding position and to allow their emergency release.

3. The fusible connecting link having attaching means at its opposite ends and comprising a pair of link members each formed of sheet metal and provided with an integral pivot stamped from the sheet metal and located away from the axis of the link member and adjacent its free end, a sheet metal strut interposed between said link members and provided with diagonally arranged sockets engaged by the pivots of the link members and having automatic disengaging action in the plane of the link members and provided with relieved ends, said parts being releasably connected by fusible solder to firmly retain the parts in normal holding position and to allow their emergency release.

4. The releasable link comprising a pair of link members each provided with a pivot located away from the axis of the link member and adjacent its free end, a strut interposed between said link members and provided with diagonally arranged sockets engaged by the pivots of the link members and having automatic disengaging action in the plane of the link members and provided with relieved ends, said parts being releasably connected to firmly retain the parts in normal holding position and to allow their emergency release.

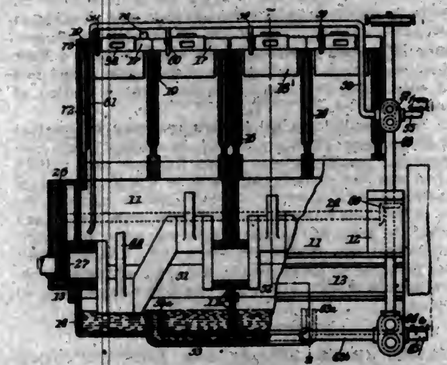
[Claims 6 to 9 not printed in the Gazette.]

1,024,726. WHEEL-HUB AND BEARING-SLEEVE. LUD HOLLAND-LEITZ, Chicago, Ill., assignor to International Harvester Company, a Corporation of New Jersey. Filed Jan. 2, 1912. Serial No. 669,024. (Cl. 21—31.)



A wheel including, in combination, spokes, a cylindrical shell having the inner ends of said spokes secured thereto, a bearing sleeve received by said shell, said sleeve being provided with a flange portion adapted to engage with the end of said shell, boss portions forming part of said flange and having surfaces that are inclined toward the ends of the sleeve, said boss portions being provided with radially arranged open ended slots, and bolts having angularly disposed portions at opposite ends thereof that are adapted to be received by openings in the wall of said shell and by said open ended slots.

1,024,727. LUBRICATING SYSTEM FOR MOTORS. RUSSELL HUFF, Detroit, Mich., assignor to Packard Motor Car Company, Detroit, Mich., a Corporation of Michigan. Original application filed July 2, 1909, Serial No. 505,735. Divided and this application filed Dec. 14, 1911. Serial No. 665,700. (Cl. 184—11.)



1. In an oiling system, the combination with a casing comprising a plurality of compartments forming oil pockets, of an equalising conduit connecting the pockets, means for supplying oil to the pockets, and a discharge outlet opening into one of the pockets at the normal oil level.

2. In an oiling system, the combination with a casing comprising a plurality of compartments forming oil pockets, of an equalising conduit connecting the pockets, an oil supply, a pump supplying oil from the supply to the pockets, a discharge outlet opening into one of the pockets at the normal oil level, and a pump connecting the outlet and the supply.

3. In an engine, a crank case section constructed to form a plurality of oil pockets, an equalising conduit connecting the pockets and terminating in risers, a discharge outlet terminating in a riser located adjacent one of the risers, said conduit and risers being cast integrally with the body of the section.

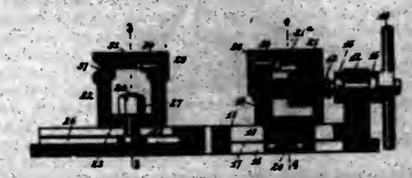
4. In an engine, a crank case section constructed to form a plurality of oil pockets, an equalising conduit connecting the pockets and terminating in risers, a discharge outlet terminating in a riser, said conduit and risers being integral with the body of the section.

5. In an engine, a crank case constructed to form a plurality of oil pockets, an equalizing conduit connecting the pockets and terminating in risers having openings at their upper ends, said risers being spaced from the sides and ends of the compartments, and a discharge outlet opening into one of the compartments beside the riser and at substantially the level of the opening in the riser, for the purpose described.

[Claim 6 not printed in the Gazette.]

1,024,728. VISE. CHARLES J. JACKSON, Vineland, N. J. Filed Sept. 11, 1909. Serial No. 517,242. (Cl. 81—4.)

1. A vise of the character described comprising a bed having parallel upper and lower faces and two slots in alinement with one another; a movable forward jaw mounted upon the upper face of said bed and having an upper face extending parallel with the upper face of said bed and a depending portion adapted to move within one of said slots to thereby form a guide for the jaw, a screw located above the upper face of said bed and engaging said forward jaw for moving the same along said bed; a bracket carried by said bed and which bracket supports and provides a fixed bearing for said screw; a rear jaw having a flat lower face provided with an opening and mounted upon the flat upper face of said bed and adjustable longitudinally thereupon toward and from said forward jaw, and also capable of angular adjustments about an axis at right angles to the upper face of said bed, said rear jaw having an upper face extending parallel with the upper face of said bed, a bolt extending through the opening aforesaid of said rear jaw and the head of which is slidable in the second of said slots, and which bolt serves as an axle about which said rear jaw may be adjusted; and a removable supplemental jaw secured to the flat upper face of each of said first mentioned jaws and each of which supplemental jaws is angularly adjustable about a vertical axis.



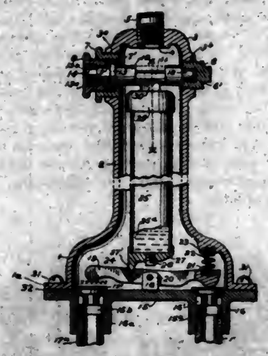
2. A vise of the character described comprising a bed having parallel upper and lower faces, two slots in alinement with one another and an opening between the ends of said slots; a movable forward jaw mounted upon the upper face of said bed and having a depending portion adapted to move within one of said slots to thereby form a guide for the jaw; a screw located above the upper face of said bed and engaging said forward jaw for moving the same along said bed; a bracket carried by said bed and which bracket supports and provides a fixed bearing for said screw; a rear jaw rectangular in outline and having a flat lower face provided with an opening and mounted upon the flat upper face of said bed and adjustable longitudinally thereupon toward and from said forward jaw, and also capable of angular adjustment about an axis at right angles to the upper face of said bed; a bolt extending through the opening aforesaid of said rear jaw and the head of which is slidable in the second of said slots, and which bolt serves as an axle about which said rear jaw may be rotated, said rear jaw having a vertical groove extending throughout one of its faces and a horizontal groove formed in another of its faces.

1,024,729. THERMOSTATIC VALVE FOR WATER. JAMES J. LAWLER, Pelham, N. Y. Filed Apr. 18, 1911. Serial No. 621,887. (Cl. 236—5.)

1. A thermostatic valve comprising a casing having an outlet at one end, a cold water supply and a hot water supply communicating with the other end of said casing, controlling valves for said water supplies, a pivotally-mounted bar disposed to have its respective ends lie over the controlling valves for said hot water supply and said cold water supply, a spring acting on the bar to normally hold the same in engagement with the controlling valve for the cold water supply, an eccentric journaled in the casing near the outer end thereof and adjustable exteriorly of the casing, and a thermostatic member mounted in the casing and supported at its ends by said eccentric and bar respectively.

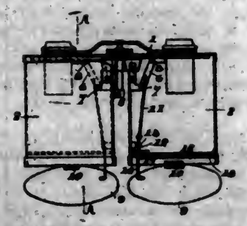
2. In a thermostatic valve, the combination with a supporting member having a cold water inlet and a hot water inlet, and a controlling valve for each of said inlets, of a casing mounted on the supporting member and having an enlarged end communicating with said inlets, an outlet at the other end of said casing, an eccentric journaled in the casing near its outer end and adjustable exteriorly of

the casing, a regulating bar pivotally-mounted on the supporting member and having its ends projecting on opposite sides of the pivotal point to lie over the respective controlling valves, a spring engaging said controlling bar at one end, and a thermostatic member mounted within the casing and supported at its ends by said eccentric and said bar, said member engaging the bar on the side of the pivot point opposite to that engaged by the spring.



3. In a thermostatic valve, the combination with a cold water supply and a hot water supply, and a valve for each of said supplies, of a casing with which said supplies are in communication, said casing provided with an outlet, an eccentric supported within the casing near the outlet, a pivoted bar mounted in the casing near the said inlets and having its respective ends lying over the said inlets, a spring acting against one of said ends, and a thermostatic member mounted in the casing and supported at its ends by said eccentric and said bar, said thermostatic member acting against the other end of said bar.

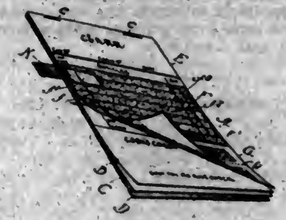
1,024,730. FOLDING OPERA-GLASS. ARTHUR LÉVY, Paris, France. Filed June 8, 1911. Serial No. 631,960. (Cl. 88—35.)



1. A folding opera-glass, comprising in combination two tubular cases, an intermediate adjusting pin, an eye-glass carrier, a member slidably arranged on said pin, hinges between the tubular cases and said slidable member, links pivotally connected to the eye-glass carrier and the inner walls of the tubular casings, and means for automatically closing and opening the ends of the folded opera-glass, substantially as set forth.

2. A folding opera-glass, comprising in combination two tubular cases, an intermediate adjusting pin, an eye-glass carrier, a member slidably arranged on said pin, hinges between the tubular cases and said slidable member, links pivotally connected to the eye-glass carrier and the inner walls of the tubular casings, shutters, hinged to the object ends of the tubular cases and suitable connections between said shutters and the said links whereby the shutters are automatically closed and opened, substantially as set forth.

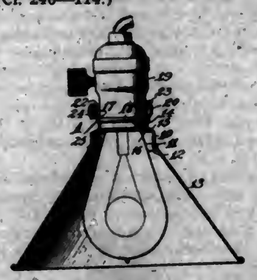
1,024,731. MANIFOLDING SALESMAN'S CHECK. EDWARD ZOVER LEWIS, Chicago, Ill., assignor to The General Manifold and Printing Company, Franklin, Pa., a Corporation of Pennsylvania. Filed Apr. 8, 1911. Serial No. 619,649. (Cl. 11—23.)



1. In a manifolding sales check including an original and one or more duplicate checks, an original check consisting of a sheet provided on its top face with a light colored wax-like coating adapted to be written upon, and said sheet being provided on its back with a coating of transfer material.

2. In a manifolding sales check including an original and one or more duplicate checks, an original check consisting of a sheet provided on its top face with a light colored wax-like coating adapted to be written upon, said wax-like coating covering the intermediate part of the face of the sheet which is designed to be written upon and leaving the parts of the sheet above and below said intermediate part free of said wax-like coating, and said sheet being provided on its back with a coating of transfer material located directly beneath the said wax-like coating on its face.

1,024,732. SHADE-HOLDER FOR ELECTRIC-BULB SOCKETS. CLARENCE W. LUCAS, Decatur, Ill., assignor to Faries Manufacturing Company, Decatur, Ill., a Corporation of Illinois. Filed Oct. 2, 1911. Serial No. 652,465. (Cl. 240—114.)

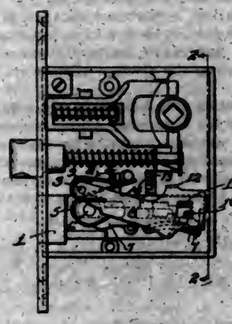


1. A shade holder having a lower portion permanently attached at its end to a lamp shade and an integral upper portion of less diameter that the lower portion designed to receive a lamp socket and formed with an external circumferential bead that provides an internal groove in which fits a bead on said lamp socket, said upper portion being divided into a number of fingers by vertical slots, each finger having a laterally projecting lip on its upper end and an external lug or cam below the plane of said lip, and a rotatable ring between the circumferential bead and said lips with interior surfaces arranged to engage said lugs or cams and press said fingers inwardly when the ring is turned.

2. A shade holder having a lower portion formed with a folded flange at its end between which folds a lamp shade is adapted to be permanently attached, an integral upper portion of less diameter than the lower portion designed to receive a lamp socket and formed with an external circumferential bead that provides an internal groove in which fits a bead on said lamp socket, said upper portion being divided by spaced vertical slots into a number of resilient fingers each finger having an outwardly projecting lip on its upper end and an external lug or cam below the plane of said lip, and a loose rotatable ring between the aforesaid external bead and said lips having inner and outer walls, and surfaces on said inner wall arranged to engage said lugs or cams on the fingers and press them inwardly when the ring is rotated.

3. A shade holder formed of resilient sheet metal having a folded lower edge for permanently attaching a lamp shade thereto, the upper portion of said holder being of less diameter than the lower portion and connected thereto by a bridge, through which holes may be made for the escape of heated air, an exterior bead surrounding the reduced upper portion above said bridge within which is a groove, said shade holder being divided into a number of upwardly projecting fingers by means of narrow spaced slots extending below said bridge, each finger having an outwardly extending horizontal lip and an exterior lug or cam below the plane of said lip, the whole being of integral construction, and a clamping ring rotatably mounted on said shade holder having faces on its inner surface to engage said lugs or cams to fasten the shade holder on a lamp socket.

1,024,733. LOCK. GEORGE N. MASON, Reading, Pa., assignor to Reading Hardware Company, Reading Pa., a Corporation of Pensaylvania. Filed July 25, 1911. Serial No. 640,489. (Cl. 70—69.)



In a lock the combination of a casing, a locking bolt, a series of bolt operating keys, a set of tumblers, a supplemental tumbler secured to the locking bolt, a locking post in the casing, adapted to be engaged at two different points by the supplemental tumbler, depending on the key with which the bolt was operated, and adapted, when operated by one certain key of the series to hold it securely against operation by any other of the series than the said key.

1,024,734. ARRANGEMENT FOR THE PROJECTION OF LANTERN-PICTURES. RICHARD MASSOHN and JULIUS STRATHUS, Hamburg, Germany; said Massohn assignor to said Strathus. Filed July 26, 1910. Serial No. 574,011. (Cl. 88—24.)



1. In an optical projecting apparatus, a source of light, a primary lens system positioned in operative relation with respect to said source for collecting the main light rays for the projection of a picture upon a suitable surface, a secondary lens system positioned in operative relation with respect to said source for collecting and projecting some of the rays thrown from said source which are useless for projection in the primary lens system, means whereby these latter collected rays can be utilized for illuminating or for projecting of the representation of a curtain, title or decoration, and shiftable shutters associating with said systems and constituting means whereby the rays collected by one system can be projected while the projecting of the rays collected by the other system is shut off, the shutter for the secondary system provided with a pair of openings, one of which is adapted to allow of the projecting of the light rays therethrough simultaneously with the projecting of the light rays by the primary system.

2. In an optical projecting apparatus for utilising some of the rays thrown from a source of light which are not used in the projecting of the picture, a source of light, a primary lens system for collecting the main light rays for the projecting of a picture, a secondary lens system arranged adjacent to the primary lens system and including a condensing lens angularly-disposed with respect to the primary and adapted to collect and project those rays thrown from said source which are useless for picture projection whereby the said collected rays can be utilised for illuminating or other purposes, a pair of shiftable shutters associating with said systems and constituting means whereby the rays collected by one system can be projected while the projecting of the rays collected by the other system are shut off, a special shutter on the secondary shutter which is adapted to allow of the projecting of the light rays simultaneously with the projecting of the light rays by the primary system.

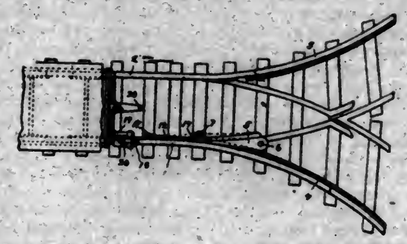
3. In an optical projecting apparatus, a source of light, a primary lens system positioned in operative relation with respect to said source for collecting the main light rays for the projecting of a picture upon a suitable surface, a secondary lens system positioned in operative relation with respect to said source for collecting and projecting some of the rays thrown from said source which are useless for picture projection, means whereby these latter collected rays can be utilized for illuminating or for projecting of the representation of a curtain, title or decoration, and shiftable shutters associating with said systems, and constituting means whereby the rays collected by one system can be projected while the projecting of the rays collected by the other system is shut off, one of said shutters provided with a curtain opening and the other with a picture opening, said shutters arranged in such relation with respect to each other whereby as that shutter provided with the picture opening is shifted to allow of the projecting of the picture the effect produced will be that as of a curtain being raised behind which the picture appears, and means whereby the title of the picture can be projected simultaneously with the projecting of the picture.

4. In an optical projecting apparatus for utilizing some of the rays thrown from a source of light which are not used in the projecting of a picture, a source of light, a primary lens system for collecting the main light rays for the projecting of a picture, a secondary lens system arranged adjacent the primary lens system and including a condensing lens angularly-disposed with respect to the primary and adapted to collect and project some of the rays thrown from said source which are useless for picture projection whereby the said collected rays can be utilized for illuminating or other purposes, a pair of shiftable shutters associating with said systems and constituting means whereby the rays collected by one system can be projected while the projecting of the rays collected by the other system are shut off, and the special shutter on the secondary shutter which is adapted to allow of the projecting of the light rays simultaneously with the projecting of the light rays by the primary system, and stops on the guiding pieces for the secondary shutter adapted to engage the special shutter with the secondary shutter.

5. In an optical projecting apparatus, a source of light, a primary lens system positioned in operative relation with respect to said source for collecting the main light rays for the projection of a picture upon a suitable surface, a secondary lens system positioned in operative relation with respect to said source for collecting and projecting

some of the rays thrown from said source which are useless for projection in the primary lens system, means whereby these latter collected rays can be utilized for illuminating or for projecting of the representation of a curtain, title or decoration, and shiftable shutters associating with said systems and constituting means whereby the rays collected by one system can be projected while the projecting of the rays collected by the other system is shut off, said secondary shutter provided with means to allow of the projecting of light rays therethrough simultaneously with the projecting of the light rays by the primary system.

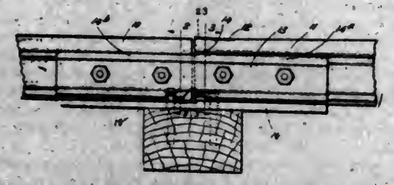
1,024,735. SWITCH-OPERATING DEVICE. DAVID H. MCDANIELS, Lancaster, Pa. Filed Apr. 14, 1911. Serial No. 621,009. (Cl. 104—24.)



1. A switch operating device of the class described, comprising a tongue member pivoted to the track, an extension pivoted to the free end of said tongue member, means for limiting both the swing of said tongue and said extension, means for normally retaining the free end of said extension in an opposite direction from the free end of said tongue, and means for reversing their positions by the movement of said tongue member.

2. In a switch operating device of the class described, the combination with a switch tongue actuating device carried by the car, of a tongue member pivoted upon the track, said tongue member formed with a tapered recess in the body thereof, an extension member pivoted to the free end of said tongue and within said recess, and means mounted within said tongue member and attached to said extension member for normally retaining said extension at the extreme of its swing and for reversing its position.

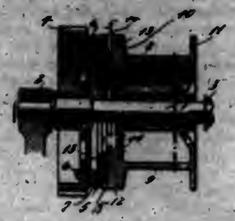
1,024,736. RAIL-JOINT. JAMES G. MCMICHAEL, Chicago, Ill. Filed Feb. 28, 1910. Serial No. 546,374. (Cl. 239—6.)



1. The process of repairing worn railway joints to restore the concaved surface of the worn rail to normal alinement, which consists in raising and supporting the end of the worn rail of two substantially identical similar rails, with the lowest concave surface of the worn rail in the same horisontal plane as the upper surface of the adjoining rail, by reversing the worn fish plates or angle bars, side for side and end for end, and retaining said rails in said relative positions by means of a base plate having rail-receiving surfaces of different altitudes corresponding to the relative heights of the bases of said rails.

2. In a rail joint, the combination, with the meeting ends of two rails, one whereof has its upper surface worn concave, said worn rail being suitably raised and supported by reversal, side for side and end for end, of the worn fish plates; of an offset base plate 16 to positively maintain said rails in said relative position.

1,024,737. FRICTION-CLUTCH MECHANISM. THOMAS SPENCER MILLER, South Orange, N. J. Filed Jan. 10, 1910. Serial No. 537,175. (Cl. 192—8.)



1. In combination, a driving element, a driven element, friction surfaces for connecting said elements to drive the driven element, and means carried by one of said elements for truing one of the friction surfaces.

2. In combination, a driving element, a driven element, friction surfaces for connecting said elements to drive the driven element, one of said surfaces being of a material softer than the other of said surfaces, and means carried by said softer surface for truing said other surface.

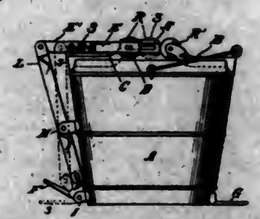
3. In combination, a driving element, a driven element, a cast iron friction surface on one of said elements, a cast steel friction surface on the other of said elements, and truing devices on the element carrying the cast iron surface for truing the cast steel surface.

4. In combination, a driving element, a driven element, friction surfaces for connecting said elements to drive the driven element, and radial truing devices on one of said elements for truing the friction surface on the other of said elements.

5. In combination a driving element, a driven element, friction surfaces for connecting said elements to drive the driven element, and means carried by one of said elements in normal engagement with the friction surface on the other of said elements for truing said surface.

[Claims 6 to 17 not printed in the Gazette.]

1,024,738. MOP-WRINGER. JOSEPH P. MORIN, Laconia, N. H., assignor of one-half to Thomas Morin, Laconia, N. H. Filed Mar. 10, 1910. Serial No. 548,435. (Cl. 15—12.)



1. A mop-wringer consisting of a pair of rollers, one of which is movable relatively to the other; a pail on which said rollers are mounted; a bent lever fulcrumed on the side wall of said pail at the bottom thereof and supported by said pail; and an operating lever fulcrumed on the side wall of said pail near the middle thereof and over the pivoted end of said bent lever and having its lower end in engagement with one arm of said bent lever and its upper end connected to the movable one of said pair of rollers; the other arm of said bent lever serving as a pedal.

2. A mop-wringer consisting of a pair of rollers, one of which is movable relatively to the other and is spring-controlled; a pail on which said rollers are mounted; a bent lever fulcrumed on the side wall of said pail at the bottom thereof and supported by said pail; and an operating lever fulcrumed on the side wall of said pail near the middle thereof and over the pivoted end of said bent lever and having its lower end in engagement with one arm of said bent lever and its upper end connected to the movable one of said pair of rollers; the other arm of said bent lever serving as a pedal.

1,024,739. CASTING-REEL. JOSEPH MURGAS, Wilkes-Barre, Pa. Filed Dec. 21, 1911. Serial No. 667,128. (Cl. 43—15.)



1. A device of the class described comprising a support provided with a spool stud, a circular casing fixed on said support, a spool arranged on said stud and having one flange within said casing, a spring member having one end secured to the support and its opposite end arranged to bear against the hub of the spool, and means, carried by said support and bearing against said spring member, adapted to vary the pressure of the spring member on the spool.

2. In a device of the class described, the combination of a support provided with a spool stud, a circular casing fixed on said support, a spool arranged on said stud and having one flange within said casing, a spring member having one end secured to said support and its other end surrounding said stud and arranged to bear against the hub of the spool, and a slide, carried by said support and engaging said spring, adapted to move radially with respect to said stud, to vary the pressure of the spring member on the spool.

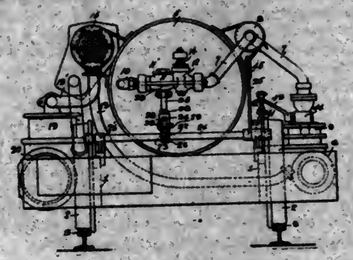
3. In a device of the class described, the combination of a support having a laterally projecting arm thereon, a circular casing carried by said arm, the arm being diametrically disposed with respect to the casing, a stud projecting laterally from said arm at the center of the casing, a spool rotatably mounted on the stud and having one flange within the casing, means for holding the spool on the stud, a spring having one end fixed to said arm and arranged between the arm and the spool and adapted to engage the hub of the spool, a longitudinal slot in said arm, and a member, slidably mounted in said slot and engaging said spring, adapted to vary the pressure of said spring against the spool.

4. In a device of the class described, the combination of a support having a laterally projecting arm thereon, a circular casing carried by said arm, the arm being diametrically disposed with respect to the casing, a stud projecting laterally from said arm at the center of the casing, a spool rotatably mounted on the stud and having one flange within the casing, means for holding the spool on the stud, a spring having one end fixed to said arm near the casing and having its free end convexly formed with respect to the spool and surrounding the stud and bearing against the spool, the intermediate portion of the spring being inclined with respect to the arm, a longitudinal slot in said arm, and a member, slidably mounted in said slot and engaging the inclined portion of the spring adapted to increase the pressure of the spring against the spool when moved toward said stud.

5. In a device of the class described, the combination of a support provided with a spool stud, a spool arranged on said stud, a spring member having one end secured to said support and its other end bearing against the hub of the spool, and a member, slidably mounted on said support and engaging said spring, adapted to vary the pressure of the spring on the hub when moved.

1,024,740. COMPRESSED-AIR ENGINE. DANIEL B. MURPHY, Fredericktown, Pa., assignor to H. K. Porter Co., Pittsburgh, Pa., a Corporation of Pennsylvania. Filed July 31, 1911. Serial No. 641,526. (Cl. 230—35.)

1. In compressed air engines, the combination of a compressed air reservoir, an engine cylinder, a connection leading from said reservoir to said cylinder, a reducing valve in said connection, a throttle valve in said connection between said reducing valve and said cylinder, a stop valve in said connection between said reducing valve and said reservoir, and a throttle lever controlling said throttle valve and provided with mechanical means for moving said stop valve when actuated.



2. In compressed air engines, the combination of a compressed air reservoir, an engine cylinder, a connection leading from said reservoir to said cylinder, a reducing valve in said connection, a throttle valve in said connection between said reducing valve and said cylinder, a stop valve in said connection between said reducing valve and said reservoir, a throttle lever actuating said throttle valve, a cam actuated by said throttle lever, and a valve rod connected to said stop valve and actuated by said cam, substantially as described.

3. In compressed air engines, the combination of a compressed air reservoir, an engine cylinder, a connection leading from said reservoir to said cylinder, a reducing valve in said connection, a throttle valve in said connection between said reducing valve and said cylinder, a stop valve in said connection between said reducing valve and said reservoir, a throttle lever controlling said throttle valve, a shaft actuated by said lever and provided with a cam, and a lever actuating said stop valve and movable by said cam, substantially as described.

4. In compressed air engines, the combination of a compressed air reservoir, an engine cylinder, a reducing valve in said connection, a throttle valve in said connection between said reducing valve and said cylinder, a stop valve in said connection between said reducing valve and said reservoir, a throttle lever controlling said throttle valve, a shaft journaled in the engine frame, carrying said throttle lever and provided with a cam, and a lever actuated by said cam and connected to said stop valve, substantially as described.

5. In compressed air engines, the combination of a compressed air reservoir, an engine cylinder, a connection leading from said reservoir to said cylinder, a reducing valve in said connection, a throttle valve in said connection between said reducing valve and said cylinder, a stop valve in said connection between said reducing valve and said reservoir, a throttle lever controlling said throttle valve, a shaft journaled in the engine frame, carrying said throttle lever and provided with a cam, a lever, and an adjustable fulcrum carrying the same, said lever being movable by said cam, and said stop valve having a stem pivoted to said lever.

[Claims 6 and 7 not printed in the Gazette.]

1,024,741. WATER-METER. LEWIS HALLOCK NASH, South Norwalk, Conn. Filed July 23, 1910. Serial No. 573,368. (Cl. 73—37.)

1. The combination in a water meter, of a piston, means whereby the piston has a motion of rotation on its axis and a motion of revolution, a magnet fixed to the piston so as to rotate and revolve in the same manner as the piston, and a magnetic register driven by said magnet.

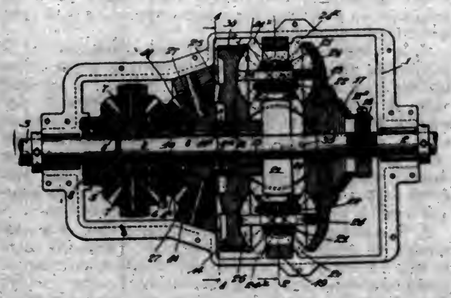
2. The combination in a water meter, of a piston, means whereby the piston has a motion of rotation on its axis and a motion of revolution, a spindle rigidly secured to said piston, a magnet driven by said spindle so as to rotate

and revolve in the same manner as the piston, and a magnetic register driven by said magnet.



3. The combination in a water meter, of a piston, means whereby the piston has a motion of rotation on its axis, and a motion of revolution, a spindle rigidly secured to said piston, a magnet rigidly mounted on the spindle so as to rotate and revolve in the same manner as the piston, and a magnetic register driven by said magnet.

1,024,742. POWER-TRANSMISSION MECHANISM. DAVID NETTENSTROM, Chicago, Ill., assignor of one-half to Charles H. Eder, Chicago, Ill. Filed July 27, 1910, Serial No. 574,036. Renewed May 17, 1911. Serial No. 627,792. (Cl. 74—34.)



1. A power transmission mechanism, comprising a driving shaft; a differential gear train consisting of an initial gear, a final gear, an idler gear connecting them, and a carrier for the idler mounted for rotation about the common axis of the initial and final gears; and driving connections from the shaft to the initial gear and to the idler carrier of the train, adapted for rotating them both in the same direction, one of said connections comprising two wheels on the shaft, one mounted for rotation therewith and the other loose thereon, and frictional idler wheels operatively connecting them.

2. A power transmission mechanism, comprising a driving shaft; a differential gear train consisting of an initial gear, a final gear, an idler gear connecting them, and a carrier for the idler mounted for rotation about the common axis of the initial and final gears, driving connections from the shaft to the initial gear and to the idler carrier of the train, adapted for rotating them both in the same direction, one of said connections comprising two wheels on the shaft, one mounted for rotation therewith and the other loose thereon, frictional idler wheels operatively connecting them, and means for adjusting the parts of said frictional connection for varying the speed communicated thereby.

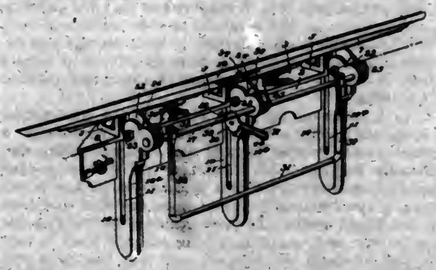
3. A power transmission mechanism, comprising a driving shaft; a differential gear train consisting of an initial gear, a final gear, an idler gear connecting them, and a carrier for the idler mounted for rotation about the common axis of the initial and final gears; driving connections from the shaft to the initial gear and to the idler carrier of the train, adapted for rotating them both in the same direction, one of said connections comprising two wheels on the shaft, one mounted for rotation therewith and the other loose thereon, frictional idler wheels operatively connecting them, and means for adjusting said idlers for varying the speed communicated thereby.

4. A power transmission mechanism comprising a driving and a driven shaft; a differential gear train connecting said shafts; means for actuating the initial gear wheel of the differential gear train from the driving shaft comprising a positive speed-accelerating connection and a frictional speed-varying connection and means for adjusting the latter.

5. A power transmission mechanism comprising a driving and a driven shaft; a differential gear train connecting said shafts; means for actuating the initial gear wheel of the differential gear train from the driving shaft comprising a gear wheel loose on the driving shaft, and direction-reversing gear-connections from said loose gear to said initial gear; a wheel mounted for rotation with the driving shaft, and frictional direction-reversing transmission devices from said last-mentioned wheel to said loose gear wheel.

[Claims 6 to 12 not printed in the Gazette.]

1,024,743. SAW-CLAMP. BENJAMIN F. PADRICK, Portland, Oreg. Filed Mar. 30, 1910. Serial No. 552,308. (Cl. 76—78.)



1. In a saw clamp, opposed longitudinally extending resilient jaws, the side faces of said jaws being concave and said faces being formed with corrugations extending from one edge of the jaw to the other.

2. In a saw clamp, opposed longitudinally extending resilient jaws, one of said jaws being bowed outward from end to end, the inner faces of said jaws being concave and formed with corrugations crossing said concave face.

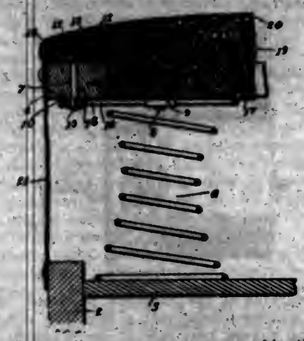
3. In a saw clamp, opposed longitudinally extending resilient jaws, one of said jaws being bowed outward from end to end and tapering from the middle toward each end, the side faces of said jaws being concave and formed with transverse corrugations extending from one edge of the jaw to the other edge thereof.

4. In a saw clamp, a longitudinally extending angle iron adapted to be attached to a bench, a longitudinally extending fixed jaw supported on the angle iron, a plurality of brackets depending from the angle iron below the fixed jaw and having upwardly extending bifurcated arms, a movable jaw opposed to the fixed jaw and having a plurality of lugs received in said bifurcated arms, a plurality of cams mounted in the bifurcated arms to engage said lugs, a shaft on which the cams are mounted, and a handle for operating said shaft.

5. In a saw clamp, a longitudinally extending angle iron adapted to be attached to a bench, upwardly extending supports on the angle iron, a longitudinally extending jaw mounted on said supports, brackets depending from the angle iron and having upwardly extending arms bifurcated at their upper ends, a longitudinally extending bowed resilient jaw opposed to the fixed jaw and having lugs extending into the bifurcations of the brackets, cams mounted in the bifurcated brackets engaging said lugs, a shaft extending through the said brackets on which the cams are mounted, and a handle for operating said cams.

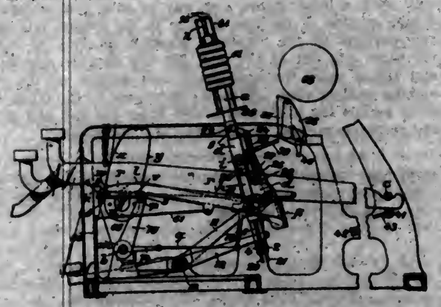
[Claims 6 to 15 not printed in the Gazette.]

1,024,744. UPHOLSTERED FURNITURE. ERNEST PETERSON, New Haven, Conn. Filed Feb. 18, 1911. Serial No. 609,351. (Cl. 5—29.)



In an article of furniture, the combination with a coiled spring and a frame supported thereon, of a bolt passing through the frame and having an enlarged many sided extremity formed with a head at its termination, and a spring clip for holding the bolt from rotation relative to the frame and engaging the bolt with the spring comprising a metal strip folded to provide parallel wings embracing the wire of the spring, one wing bearing against the face of the frame, the outer wing being longer than the inner wing and being angularly bent over the end of the other wing, said angularly bent end being serrated, both of said wings being formed with alining, many sided perforations through which the many sided enlarged portion of the bolt passes.

1,024,745. TYPE-WRITING MACHINE. OTTO PFEIFFER, Cassel, Germany. Filed Sept. 26, 1907. Serial No. 394,604. (Cl. 197—50.)



1. In a typewriting machine, the combination with a rocking type-cylinder carrier and means to rock said carrier, of a type-cylinder rotatable on said carrier, a pinion for rotating said type-cylinder, a rack movable on said type-cylinder carrier and meshing with said pinion, a driver having a loose or pivotal engagement with said rack, and means for moving said driver in either direction to different positions.

2. In a typewriting machine, the combination with a rocking type-cylinder carrier, and means to rock said carrier, of a type-cylinder rotatable on said carrier, a toothed sector pivoted to said carrier and adapted to rotate said type-cylinder, a pivot secured to said sector on its periphery, a driver engaging said pivot and means to move said driver in either direction to different positions.

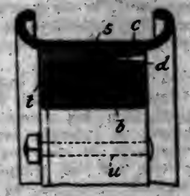
3. In a typewriting machine, the combination of a rock-frame, a plurality of key-levers adapted to rock said frame on their depression, a type-cylinder carrier rigidly secured to said rock-frame, a type-cylinder rotatable on said carrier, a pinion for rotating said type-cylinder, a toothed sector pivoted to said type-cylinder carrier and meshing with said pinion, a pivot secured to said sector on its periphery, a driver engaging said pivot and means to move said driver in either direction to different positions.

4. In a typewriting machine, the combination, with a rocking type-cylinder carrier and means to rock said carrier, of a rotatable type-cylinder mounted on said carrier, a spindle rigidly secured to said type-cylinder, a pinion mounted on said spindle, a toothed sector mounted on said type-cylinder carrier and having engagement with said pinion, and an actuating rod pivoted to said sector, said pivot and the meshing point of the sector with the pinion being located substantially in the axis of the fulcrum of the rocking type-cylinder carrier.

5. In a typewriting machine, the combination with a rocking type-cylinder carrier and means for rocking said carrier, of a type-cylinder rotatable on said carrier, rack and pinion mounted on said carrier and adapted to rotate said type-cylinder, a plurality of key-levers, a frame adapted to be brought into different positions by said key-levers, and a rod connecting said frame and said rack and having its direction of motion in each position substantially transverse to the axis of the fulcrum of said rocking type-cylinder carrier.

[Claims 6 to 29 not printed in the Gazette.]

1,024,746. DEMOUNTABLE WHEEL-RIM. HARRY HINE REPLOGLE, Montreal, Quebec, Canada. Filed Apr. 22, 1910. Serial No. 556,983. (Cl. 152—21.)



1. In a wheel the combination with a felly of uniform oblong rectangular cross section; of a band encircling and fixed to the felly and having a plurality of T-shaped recesses in its periphery one portion of each recess extending transversely of the band and the other portion extending circumferentially centrally thereof and tapering symmetrically throughout its length; a detachable rim having a plurality of fixed lugs each of which is adapted to enter and is sufficiently wide to become tightly wedged in a circumferential portion of a recess; a series of segmental plates having wedging keys projecting laterally from one side of same to enter the transverse portions of the recesses and force said lugs into the circumferential portions thereof, and means for securing said plates to the side of the felly, substantially as described.

2. The combination with a wheel felly, a band encircling same having recesses comprising transverse and circumferential portions in its periphery, a rim having wedge lugs on its inside surface adapted to enter and be wedged in the circumferential portions of said recesses,—of locking keys of double wedge-form adapted to be inserted in the transverse portions of the recesses, to force the lugs tightly into position, to also effect a tight wedging radially between the band and the rim and to retain the several parts in their locked positions.

1,024,747. CAMERA-BACK. ALFRED A. RUTTAN and CHARLES E. HUTCHINGS, Rochester, N. Y, assignors to Eastman Kodak Co., Rochester, N. Y., a Corporation of New York. Filed Jan. 11, 1911. Serial No. 602,049. (Cl. 95—40.)

1. The combination with a camera back comprising a pair of separable frames between which the plate holder may be accommodated, of a link pivotally connected to

both frames and having an extension beyond one such pivot and a tension device coöperating with the link extension.



2. The combination with a camera back comprising a pair of separable frames between which the plate holder may be accommodated, of a link pivotally connected to both frames and having an extension beyond the pivot of one of them provided with an abutment, a tension device slidably engaged by said abutment during the relative movements of the frames and a locking abutment on the tension device with which the other abutment coöperates to hold the frames in a separated condition of predetermined extent.

3. The combination with a camera back comprising a pair of separable frames between which the plate holder may be accommodated, of a link pivotally connected to each frame and a tension device coöperating with the link tending to normally move the frames together comprising an intermediately pivoted lever and a spring, one arm of the lever being engaged by the link and the other by the spring.

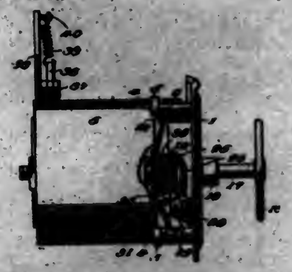
4. The combination with a camera back comprising a pair of separable frames between which the plate holder may be accommodated, of a link pivotally connected to each frame and having an extension beyond the pivot of one frame provided with an abutment and a tension device coöperating with the link tending to normally move the frames together, comprising an intermediately pivoted lever and a spring, one arm of the lever being engaged by the spring and the other by the link, said last mentioned arm having a locking abutment thereon with which the abutment on the link coöperates to maintain the frames in a separated condition of predetermined extent.

5. The combination with a camera back comprising a pair of separable frames between which the plate holder may be accommodated and one of which is foldable within the other, of a carrying plate secured to one frame between the inner edge face of one of them and the outer edge face of the other, a link pivoted to the plate and to the other frame and adapted to lie between the frames and adjacent to the plate when the frames are folded, an intermediately pivoted lever on the plate having one arm coöperating with the link and a spring on the plate coöperating with the other arm tending, through the medium of said link and lever, to move the frames together.

[Claim 6 not printed in the Gazette.]

1,024,748. COIN-CONTROLLED APPARATUS. HENRY SCHORSKE, New York, N. Y. Filed Oct. 31, 1911. Serial No. 657,884. (Cl. 194—93.)

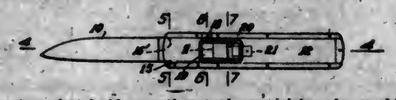
1. An apparatus of the character described, including a revoluble member provided with a coin way formed with a longitudinal slot, said member being provided with a cam surface terminating at the bottom of the coin way, a latch arm automatically movable toward said member and provided with two pins, one of which is adapted to ride on said cam surface to normally hold the other pin in spaced relation to said slot, and permitting said last-named pin to enter the slot upon an initial movement of the revoluble member without a coin inserted therein, the coin way being so shaped that upon the introduction of a coin it will pass behind said last-named pin and cause it to rotate thereover out of the coin way upon the movement of the revoluble member with the coin in it.



2. An apparatus of the character described, including a revoluble member formed with a coin way, a latch arm spring-pressed toward that face of the revoluble member in which the coin way is formed, said latch arm being provided with means for normally holding its locking portion in inoperative relation to the revoluble member, means being provided for moving said latch arm in a direction to effect its locking engagement with the revoluble member upon the initial movement of the latter without a coin inserted therein, the coin way being so formed that upon the introduction of a coin therein, it will occupy a position back of the locking portion of the latch arm, so as to cause the same to ride thereon out of engagement with the locking portion of the revoluble member, for the purpose specified.

3. An apparatus of the character described, including a revoluble member provided with a coin way in its rear face and with an undulating cam surface extending from the bottom of the coin way, means for turning the revoluble member, a latch arm spring-pressed toward the coin way and carrying pins positioned in spaced relation to each other, the coin way being formed in its bottom wall with a longitudinal slot, one of said pins engaging a high portion of the cam surface in the normal inoperative position of the revoluble member, whereby to hold the other pin out of the slot, for the purpose specified, and riding upon the undulating cam surface of the revolving member upon the initial movement of the latter so as to permit the said other pin to enter the slot and lock the revoluble member against further movement.

1,024,749. POCKET-KNIFE AND THE LIKE. CARL A. SJOBERG, Providence, R. I. Filed Sept. 8, 1911. Serial No. 648,281. (Cl. 30—10.)



1. A pocket knife or other tool comprising, in combination, a sheath, a blade movable endwise into and out of the sheath, and a removable pin inserted between one edge of the sheath and the adjacent edge of the blade in a direction perpendicular to the sides of the blade, and engaging both of said adjacent edges, thereby forcing them apart and forcing the other edge of the blade against the other edge of the sheath and preventing movement of the blade relative to the sheath.

2. A pocket knife or other tool comprising, in combination, a sheath and a blade movable endwise into and out of the sheath and a tapered pin inserted transversely between one edge of the sheath and one edge of the blade, and there being a bearing for the other edge of the blade against the other edge of the sheath, the blade thus being wedged by the pin between the two edges of the sheath.

3. A pocket knife or other tool comprising, in combination, a sheath and a blade movable endwise into and out of the sheath, and a pin inserted transversely between one edge of the sheath and one edge of the blade, engaging both the sheath and the blade, thereby holding both together to prevent said endwise movement; there being in each of said edges a notch, which notches, when placed together, form a hole into which the pin may enter.

4. A pocket knife or other tool comprising, in combination, a sheath and a blade movable endwise into and out of the sheath, and a pin inserted transversely between one edge of the sheath and one edge of the blade, engaging both the sheath and the blade, thereby holding them both together to prevent said endwise movement; there being in each of said edges a notch, which notches, when placed together, form a hole into which the pin may enter; a lever holding the pin and set in the exterior of the sheath; and a spring pressing the lever normally in direction to drive the pin into such hole.

5. A pocket knife or other tool comprising, in combination, a sheath and a blade movable endwise into and out of the sheath, there being a notch in the interior of an edge of the sheath and one or more notches in the adjacent edge of the blade adapted to coöperate therewith to form a hole into which a pin may enter transversely, said pin or hole being of tapering form; whereby, on insertion of the pin, the blade and sheath are bolted against endwise motion relative to each other and the blade is forced edgewise against the other edge of the sheath; and means set in the sheath, for controlling the pin.

1,024,750. HAT. LESLIE STEVENS, Glen Ridge, N. J. Original application filed June 3, 1909, Serial No. 499,904. Divided and this application filed Apr. 14, 1910. Serial No. 555,416. (Cl. 2—108.)



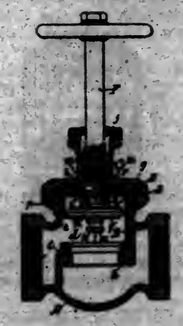
1. A one-piece extension-crown hat having a crown base extending inwardly and slanting upwardly and away from the side of the crown, and an inset head band connecting the crown base with the brim and located a substantial distance from the side of the crown with its upper extremity at a substantial distance from the plane of the base of the crown.

2. A one-piece extension-crown hat having a crown base extending inwardly and slanting upwardly and away from the side of the crown, and an inset head band connecting the crown base with the brim and located a substantial distance from the side of the crown, and having the inner portion of the brim slanting upwardly beneath the crown base.

3. A one-piece extension-crown hat having a crown base extending inwardly and slanting upwardly and away from the side of the crown, and a head band connecting the crown base with the brim at a substantial distance from the side of the crown, said crown base and head band being movable to lie inside or outside the lower extremity of the crown to form a hat with inset or outstanding head band.

1,024,751. GLOBE-VALVE. WILLIAM STEWART, Providence, R. I., assignor of one-half to Joseph J. Scholfield, Providence, R. I. Filed May 7, 1910. Serial No. 560,059. (Cl. 137—4.)

In a globe valve, the combination of the outer shell provided with flat upper and lower annular seats, with a removable valve chamber member resting upon the said upper and lower seats, and provided with an opening at one side for the outward passage of the fluid from the valve chamber, and also with an interior beveled seat, a bonnet provided with a beveled seat fitting the said interior seat of the valve chamber member, and with an internal screw thread, a valve spindle fitting the said screw thread of the bonnet, and provided with a recess at its end, with a valve having a stem provided



with a circumferential groove, and loosely held in the said recess, by means of the said groove.

1,024,752. SPECTACLE-CASE. EMIL SUHR, West Hoboken, N. J., assignor of one-third to Ernst Haverkamp and one-third to Charles Ehrenberg, Kings county, N. Y. (Filed July 27, 1911. Serial No. 640,938. (Cl. 206—6.)



1. A spectacle case consisting of two hinged sections having engaging lips distinct from the hinges and out of contact therewith, said lips being adapted to yieldingly hold said sections partly open in one position, but to operate by resiliency to complete the opening or closing of said case on the movement of a section out of said position.

2. A spectacle case cover having a resilient lip, in combination with the body of said case having a corresponding lip in contact therewith, said cover and body being hinged together, said lips being distinct from said hinges and out of contact therewith, and the aforesaid resiliency acting to expedite the opening or closing of the case.

3. A spectacle case consisting of two sections hinged together and provided with a pair of coöperating resilient lips, one of which is nearly at right angles to the plane of its section, and the two being arranged to maintain continual contact and to exert resilient action in completing the opening and closing of the case, but to leave it free from such action when the sections are in a certain intermediate position.

1,024,753. RESILIENT TIRE. JACOB THISSEN, Kane, Pa. Filed Sept. 6, 1911. Serial No. 647,991. (Cl. 152—8.)

1. A spring tire, embodying an inner rim provided with a plurality of transversely extending channels, pins projecting outwardly in a radial direction from said rim in said channels, tubes mounted in said channels over the pins and held in the channels, an outer sectional rim, pins projecting inwardly from the sectional rim and working in the outer ends of said tubes, and springs encircling said pins and tubes.

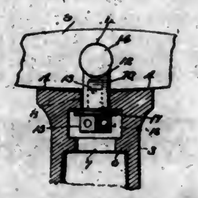
2. A tire, embodying an inner rim provided with a plurality of transversely extending channeled blocks, an outer sectional rim provided with a plurality of correspondingly

located blocks, the sides of said blocks being formed with apertures, chains having hooked ends engaging in the sides



of the channeled blocks, the chains extending obliquely, as specified, and springs interposed between said rims.

1,024,754. DETACHABLE PICK-POINT. ALEXANDER WALKER, What Cheer, Iowa, assignor to What Cheer Tool Co., What Cheer, Iowa. Filed June 6, 1911. Serial No. 631,523. (Cl. 125—19.)



1. A miner's pick including a handle socket having a many sided passage in its end, a many sided locking member disposed within and fitting the socket and having an enlarged head projecting from the socket, a pick point having a laterally extending many sided recess in its side and lower face in which the locking member engages, and means disposed within the socket for drawing the locking member toward the socket to clamp the pick point thereto.

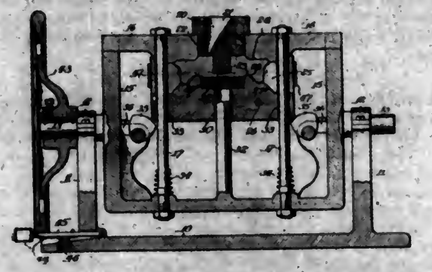
2. A miner's pick comprising a handle socket, a longitudinally movable, non-rotatable, interiorly threaded locking member having an enlarged head in its outer end, said locking member being disposed in and projecting from the end of said socket, a screw threaded member disposed within the socket and engaging with the interior screw threads of said locking member to draw it toward the socket, and a pick point having a transversely extending recess on one side of its under face, said recess receiving the locking member and being enlarged at one end to accommodate the enlarged head of the locking member.

3. A miner's pick comprising a handle socket having a transverse recess near one end and a longitudinally extending many sided passage in its end communicating with said recess, a pick point having a transversely extending many sided recess upon one face and opening upon the under face of the point, the inner end of said recess being enlarged, a locking member having an enlarged head engaging the enlarged end of said recess and having a many sided, interiorly screw threaded shank fitting said recess, said shank extending through and fitting the longitudinal passage at the end of the socket, and a screw having its head disposed in the transverse recess of the socket and its shank extending through the longitudinal passage and engaging the screw threads of the locking member.

4. A miner's pick comprising a hollow handle socket, the outer end of the socket having a transverse recess extending through from one side of the socket to the other, the recess being separated from the interior of the socket by a wall formed with an opening in its middle, the end of the socket being formed with a longitudinally extending, many sided passage opening into said recess, a pick point having a transversely extending, many sided recess opening upon the under face of the point and extending in from one side face of the point, said recess being enlarged at its inner end, a locking member having an enlarged head engaging the enlargement of the recess and having a many sided shank extending through the longitudinal passage in the end of the socket, said shank being interiorly screw threaded, and a screw having a many sided head disposed in the recess in the socket, the shank of said screw extending through the longitudinal passage and engaging the locking member.

5. A miner's pick including a handle socket having its outer end concavely curved, a longitudinally movable locking member having an enlarged outer end forming a cylindrical head, said locking member being disposed in and having its head projecting from the end of said socket, said head extending transversely of the socket, means for drawing the locking member toward the socket, and a pick point having a laterally extending recess in its side and lower face fitting said locking member, said recess at its inner end being enlarged to receive and fit the cylindrical head of the locking member.

1,024,755. WHEEL-CASTING MACHINE. JOHN B. WALKER, Ensley, Ala. Filed Jan. 6, 1912. Serial No. 669,730. (Cl. 22—94.)



1. A casting machine comprising, in combination, a base, a frame pivoted on said base, chills carried by said frame, said chills having a casting space therebetween, one of said chills being immovable and the other movable with relation to said frame, fastening means for securing said chills in casting relation and for permitting the separation thereof under the action of gravity, means for ejecting the casting formed between said chills and means for rotating said frame to discharge said casting, substantially as described.

2. A casting machine comprising, in combination, a base, a frame rotatably mounted on said base, chills, one thereof being rigid with said frame and the other being movable toward and from the rigid chill, a plunger normally projected in a vertical line and adapted to extend through the movable chill, means for permitting said movable chill to fall by the action of gravity and means for rotating said frame to discharge a finished casting from the maching, substantially as described.

3. A casting machine comprising, in combination, a base, a frame rotatably mounted on said base, said frame having the cope member of a chill formed as a part thereof, a movable drag constituting the other member of the chill, a plunger secured to said frame and projecting through an opening in said drag said plunger acting as an ejector, and means for rotating said frame into a horizontal position to cause the discharge of a casting formed in said chills, substantially as described.

4. A casting machine comprising, in combination, a base, a frame rotatably mounted on said base and carrying two opposed chill members, one of which is rigid with the frame and the other movable in a vertical line when said frame is in its normal upright position, triggers adapted to hold said movable member in elevated position and permit the fall thereof by gravity after a casting has been formed, a plunger projecting through said movable member and adapted to cause the ejection of a casting, and means for rotating said frame, substantially as described.

5. A casting machine comprising, in combination, a base, a frame rotatably mounted on said base, a chill formed in three parts, one part being rigidly secured to said frame and the other part being movable toward and from said rigid part, said chills having a casting space therebetween, one of said movable parts having a perforation therethrough, which perforation is enlarged at its upper end to form a seat for a core, a plunger projected into said perforation, means for tripping said drag and allowing the same to fall by gravity with a casting formed in the casting space and means for rotating said frame to discharge said casting, substantially as described.

[Claim 6 not printed in the Gazette.]

1,024,756. BUFFER-BEAM. CHARLES T. WESTLAKE, St. Louis, Mo., assignor to Davis Locomotive Wheel Company, St. Louis, Mo., a Corporation of Delaware. Filed July 31, 1911. Serial No. 641,646. (Cl. 105—17.)



1. A buffer beam having the end portions of its rear wall inset, a strengthening web between the inset end portions of the rear wall and the corresponding portions of the front wall and a top plate overhanging the inset ends of said rear wall.

2. A buffer beam having an inset rear wall at its ends, and a top plate overhanging the inset ends of said rear wall.

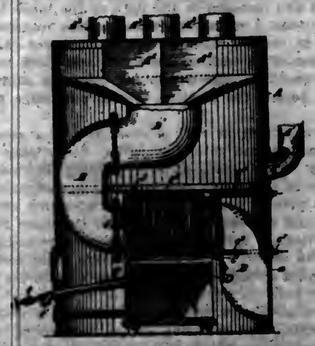
3. A buffer beam having the end portions of its rear wall inset and integral strengthening webs connecting the inset portions of the rear wall and the front wall.

4. A buffer beam having the end portions of its rear wall inset, and which inset end portions are provided with openings adapted to receive the forward ends of the piston rod extensions.

5. A hollow cast metal buffer beam having the end portions of its rear wall inset, which inset rear portions are provided with openings adapted to receive the forward ends of the piston rod extensions, and the bottom plate of which beam is cut away in front of the openings in the inset portions of the rear wall.

[Claims 6 and 7 not printed in the Gazette.]

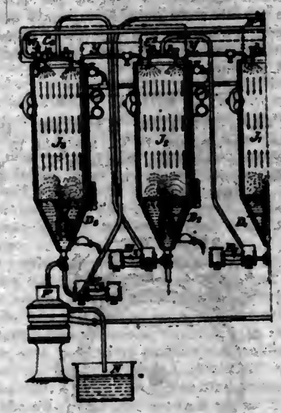
1,024,757. GAS-BURNING HOT-AIR FURNACE. JAMES L. WHITNEY, Cleveland, Ohio. Filed Dec. 5, 1910. Serial No. 595,584. (Cl. 126—116.)

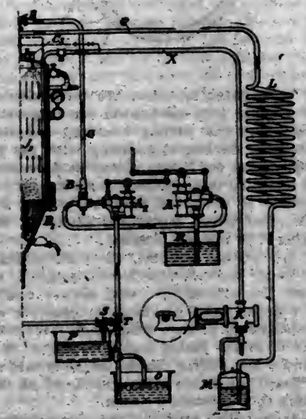


1. In a gas-burning hot-air furnace, the combination of an outer inclosing casing, a single air duct traversing the interior of said casing, a plurality of complementary members mounted within said outer casing and forming a combustion chamber, said chamber being open above and below and surrounding a portion of said air duct, a gas-burner beneath said chamber, said casing being provided with an outlet for the gases of combustion, a second portion of the air duct being located above said combustion chamber, the walls of said complementary members forming a water-chamber, and inlet and outlet connections for the latter.

2. In a gas-burning hot-air furnace, the combination of an outer inclosing casing, a single air duct traversing the interior of said casing and comprising two substantially horizontal portions intersecting the same vertical plane, a separate casing comprising a plurality of spaced complementary members within said outer casing and forming a combustion chamber surrounding the lower of said horizontal portions and having an opening below, a gas-burner beneath said opening, said combustion chamber having an opening at the top into said casing, and the latter being provided with an outlet for the gases of combustion, the upper of said horizontal portions being located directly above said top opening, the walls of said complementary members forming a water chamber, and inlet and outlet connections for the latter.

1,024,758. PROCESS FOR CONVERTING FATS, OILS, AND FISH-OILS INTO LIKE BODIES OF HIGHER MELTING-POINT. MOSES WILBUSCHEWITSCH, Nischni-novgorod, Kanavino, Russia. Filed Jan. 12, 1911. Serial No. 602,322. (Cl. 87—12.)





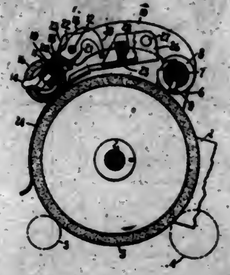
1. A process for converting fats, oils or fish oils into like bodies of higher melting point, which process con-

sists in first intimately mixing the fat with the catalyst and then injecting the mixture in finely sprayed condition into a heated autoclave under pressure and at the same time hydrogen under pressure into the autoclave in the direction opposed to that of the said mixture.

2. A process for converting fats, oils or fish oils into like bodies of higher melting point, which process consists in first intimately mixing the fat with the catalyst, then injecting the mixture in a finely sprayed condition into a heated autoclave and at the same time introducing into the autoclave a current of hydrogen under pressure in the direction opposite to that of the said mixture, the said current of hydrogen being adapted to spray like a fountain into the autoclave the mixture falling to the bottom thereof, then pumping the mixture if necessary into further autoclaves in which it is subjected to the like treatment until the desired melting point has been attained then separating the oil from the catalyst and then returning the catalyst to the process and at the same time causing the hydrogen to pass through the purifying apparatus to return to the process.

3. A process for converting fats, oils or fish oils into like bodies of higher melting point, which process consists in first intimately mixing the fat with the catalyst, then injecting the mixture in a finely sprayed condition into a heated autoclave under pressure, which autoclave is the last of the series, and at the same time introducing into the autoclave a current of hydrogen under pressure in the direction opposite to that of the mixture, then pumping the mixture from the said autoclave into the next autoclave and allowing the hydrogen under pressure in the said last autoclave to enter the said next autoclave under an increased pressure.

1,024,759. TYPE-WRITING MACHINE. HORACE L. WOODWARD, Washington, D. C., assignor to The Monarch Typewriter Company, Syracuse, N. Y., a Corporation of New York. Filed Oct. 27, 1911. Serial No. 657,146. (Cl. 197—139.)



1. In a typewriting machine, the combination wtih a platen, of a paper feed mechanism for coöperation with said platen above the writing line and comprising two paper controlling devices coöperating with the paper independently, means for lifting one of said devices off the paper and retaining it in released position and a lost motion connection to the other paper controlling device for lifting said other paper controlling device off the paper and retaining it in released position.

2. In a typewriting machine, the combination with a platen, of paper feed devices for coöperation with the platen above the writing line, said devices comprising a roller and a paper finger arranged to coöperate with said platen independently of each other, means for lifting said roller away from the platen and retaining it in released position, and a lost motion connection from said means to said paper finger for lifting said paper finger off the platen and retaining it in released position.

3. In a typewriting machine, the combination with a platen, of paper feed mechanism adjustable as a whole longitudinally of said platen and comprising a roller, a paper finger, independent spring means for pressing said roller and paper finger toward the platen, the roller being movable away from the platen without disturbing the operative position of the paper finger, and means whereby at will both the roller and the paper finger may together be moved away from the platen and retained in inoperative position.

4. In a typewriting machine, the combination with a platen, of a paper finger and associated devices comprising a rigid arm on which said paper finger is mounted, a pivoted frame on said arm provided with means for lifting said paper finger off the platen, and means for holding said pivoted frame in released position.

5. In a typewriting machine, the combination with a platen, of a paper finger and associated devices comprising a rigid arm on which said paper finger is pivoted and spring-pressed toward the platen, a roller and carrier, said carrier pivoted to said arm and spring-pressed toward the platen, and means whereby a motion of said roller-carrier lifts said paper finger to released position.

[Claims 6 to 15 not printed in the Gazette.]

1,024,760. SPRING-SWINGLETREE. GETTIS WARD YATES, Tampa, Fla., assignor of one-half to Frank Badger Wilder, Tampa, Fla. Filed June 15, 1911. Serial No. 633,364. (Cl. 21—75.)



1. The combination with the cross bar of a shaft, of a trace engaging and releasing device, comprising two sections pivoted intermediate of their ends to the cross bar, each section having a trace engaging outer end, two frames one to each section pivoted to the cross bar and disposed in the path of the inner free ends of the sections, a spring carried by each frame and normally in contact with its respective inner end of the sections, means for locking the frame in such engaging position, and means for releasing said locking means to permit the sections to swing to trace releasing position.

2. The combination with the cross bar of a shaft, of a trace engaging and releasing device, comprising a plate carried by the bar, two sections pivoted intermediate of their ends to said plate, and having trace engaging outer ends, two pivoted frames, one to each section, carried by the plates and disposed in the path of the inner free ends of the sections, a spring cushioned section retarding block normally in contact with its respective inner end of the section, means for locking the frame and block in section engaging position, and means for releasing said locking means to permit the sections to swing to trace releasing position.

3. The combination with a cross bar of a shaft, of a trace engaging and releasing device, comprising a plate carried by the bar, two sections pivoted intermediate of their ends to said plate and having trace engaging outer ends, two pivoted frames, one to each section carried by the plate and disposed in the path of the inner free ends of the sections, a spring cushioned section retarding block normally in contact with its respective inner end of the section, and a spring actuated catch pivoted to the bar and opposed to hold its respective frame.

4. The combination with a cross bar of a shaft, of a trace engaging and releasing device, comprising two sections pivoted intermediate their ends to said bar and having trace engaging outer ends, two pivoted frames, one to each section carried by the bar and disposed in the path of the inner free ends of the sections, a spring cushioned section retarding block normally in contact with its respective inner end of the section, one carried by each of said pivoted frames, a catch for locking said pivoted frames in section engaging position, and means to release said catches to permit said sections to release the traces.

5. The combination with a cross bar of a shaft, of a trace engaging and releasing device, comprising two sections pivoted intermediate of their ends to said bar and having trace engaging outer ends, two pivoted frames connected to the bar, one to each section, a spring cushioned block carried by each pivoted frame and in the path of the inner free end of each section, and spring actuated catches, one to each frame, pivoted to the bar and adapted to hold said frames in section engaging position.

[Claims 6 and 7 not printed in the Gazette.]

1,024,761. LOAD-SUPPORTING COLUMN FOR BUILDING STRUCTURES. ADOLF F. ANDERSON, Chicago, Ill. Filed July 28, 1911. Serial No. 640,976. (Cl. 189—42.)



1. A load-supporting column for building structures, comprising an upright integral metal tube diametrically slotted at its upper end, and an angle bracket comprising a vertical web-member engaging said slot and formed on its lower edge with a single integral depending tenon engaging the inner surface of the tube below the lower end of said slot, and a horisontal cap-plate overlying and resting upon the upper end of said tube, substantially as described.

2. A load-supporting column for building structures, comprising an upright integral metal tube diametrically slotted at its upper end, an angle bracket comprising a web-member engaging said slot and a cap-plate overlying and resting upon the upper end of said tube, and a bonding ring embracing the upper end of the slotted portion of said tube, substantially as described.

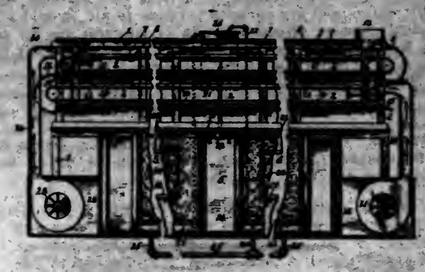
3. A load-supporting column for building structures, comprising an upright integral metal tube diametrically slotted at its upper end, an angle bracket comprising a web-member engaging said slot and formed on its lower edge with a single integral depending tenon engaging the inner surface of the tube below the lower end of said slot and a cap-plate overlying and resting upon the upper end of said tube, and means for bonding the upper end of the slotted portion of said tube, substantially as described.

1,024,762. PIN-POINT GUARD. JOSEPH ANDERSON, Providence, R. I. Filed Mar. 20, 1911. Serial No. 615,466. (Cl. 24—155.)



The combination of a tubular guard member, a plurality of spring jaws arranged within the guard member and having their outer ends fastened thereto for gripping a pin point inserted in the guard member, said jaws being normally out of contact with the guard member at their inner ends and throughout the major portion of their length and yieldable laterally in opposition to their resiliency upon the insertion of the pin, each jaw having a portion of greater diameter than the middle portions and whose external face conforms to the shape of the internal surface of the guard member to bear thereagainst as the pin point is fully inserted thereby producing a jamming friction between said pin and jaws.

1,024,768. AIR-COOLING APPARATUS FOR FRUIT. WILLIAM C. ANDERSON, San Jose, Cal. Filed Oct. 24, 1910. Serial No. 588,702. (Cl. 62—22.)



1. An apparatus of the character set forth comprising a housing having a plurality of compartments for the material to be cooled, a plurality of separate air cooling chambers one of said chambers for each one of the first mentioned compartments, and each provided with means for cooling air, and means for conveying air from each one of the cooling chambers respectively to one of the material cooling chambers.

2. An air-cooling apparatus comprising a housing having a chamber for the material to be cooled and a separate chamber for cooling the air, said last named chamber having an intake communication with the outer air; a fan having a suction-conduit communication with the air-cooling chamber, and a discharge-conduit communication with the material-cooling chamber; a series of vertical curtains in said air-cooling chamber with which the air in its flow from the intake to the suction-conduit of the fan is brought in contact; means for keeping said curtains wet with water; and a separate series of vertical dry curtains pervious to air, in said air cooling chamber, disposed therein to intercept the air in its flow from the wet curtains to the suction-conduit of the fan and cause said air to pass through them.

3. An air-cooling apparatus comprising a housing having a chamber for the material to be cooled and a separate chamber for cooling the air, said last named chamber having an intake communication with the outer air; a fan having a suction-conduit communication with the air cooling chamber, and a decharge-conduit communication with the material-cooling chamber; a series of spaced wet curtains disposed within the air cooling chamber in the vicinity of the air intake and between which the air from said intake first flows; and a series of dry curtains pervious to air, in said chamber disposed between the series of wet curtains and the suction-conduit of the fan and arranged to effect the passage of the air through said dry curtains.

4. An apparatus of the character set forth comprising a housing having a chamber divided into two compartments for the material to be cooled, a traveling carrier in one of said compartments with means for supplying material to one end thereof, a second traveling carrier in the other of said compartments with means for receiving the material from the other end of the first named carrier and means for discharging said material from its end opposite to that at which it receives it, and means for supplying a blast of air to the first compartment of the material cooling chamber at the delivery end of the carrier therein, and to the second compartment at the delivery end of the carrier in said compartment.

5. An air-cooling apparatus comprising a housing having a chamber for the material to be cooled and a separate chamber for cooling the air, said last named chamber having an intake communication with the outer air; a traveling carrier in the material-cooling chamber; means for supplying material to the carrier at one end; a fan having a suction-conduit communication with the air-cooling chamber, and a discharge-conduit communication with the material-cooling chamber at that end of the carrier therein opposite to its material-receiving end, whereby the flow of

air is directed against the travel of earth material; curtains in said air cooling chamber with which the air in its flow from the intake to the suction-conduit of the fan is brought in contact; means for keeping said curtains wet with water; and dry curtains pervious to air, in said air cooling chamber disposed therein to intercept the air in its flow from the wet curtains to the suction-conduit of the fan and cause said air to pass through them.

[Claims 6 to 15 not printed in the Gazette.]

1,024,764. CLOTH-MEASURING MACHINE. OSCAR S. BLAKESLEE, Lansing, Mich. Filed June 24, 1911. Serial No. 635,185. (Cl. 242—55.)



1. A cloth measuring machine comprising a table, means near one end thereof for tumbling a bolt of cloth, a pair of coöperating feed rolls near the other end, means operatively connecting the rolls and tumbling means to travel at equal speeds and a reciprocating cloth folder operated by the feeding rolls.

2. In a cloth measuring machine, a table, tumbler rolls transversely journaled near one end thereof with their axes lying in a curved plane, an endless carrier belt traveling around the rolls, an idler at the end of the table adjacent the rolls, a pair of feeding rolls near the other end of the table, means operatively connecting the rolls and tumbler belt to travel at the same peripheral speed, and a reciprocable folder on the table adjacent the feeding rolls adapted to travel at the same speed as the peripheries of the rolls.

3. In a cloth measuring machine, a table, tumbler rolls transversely journaled near one end thereof with their axes lying in a curved plane, an idler roll journaled transversely across one end thereof in substantially tangential relation to the face of the table, a pair of feeding rolls journaled transversely across the tabe near the other end thereof with the line of contact in substantially the plane of the table, means for rotating the feeding rolls, and means operatively connecting the feeding rolls and tumbler rolls to travel at equal peripheral speed.

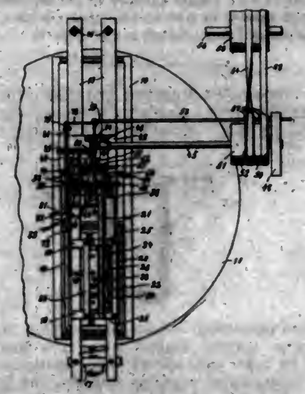
4. In a cloth measuring machine, a table, tumbler rolls transversely journaled near one end thereof with their axes lying in a curved plane, an idler roll journaled transversely across one end thereof in substantially tangential relation to the face of the table, a pair of feeding rolls journaled transversely across the table near one end thereof with the line of contact in substantially the plane of the table, means for rotating the feeding rolls, means operatively connecting the feeding rolls and tumbler rolls to travel at equal peripheral speed, and reciprocating folding means on the table near the feeding rolls adapted to travel at a speed equal to the peripheral speed of the feeding rolls.

5. In a cloth measuring machine having a table with cloth measuring means thereon, means for feeding cloth from a bolt past the measuring means consisting of bolt tumbling means on one side of the measuring means, a pair of coöperating feed rolls on the other side thereof, means operatively connecting the rolls and tumbling means to travel at equal speeds and a reciprocating folding device operated by the rolls to travel with a speed equal to the peripheral speed of the rolls.

[Claim 6 not printed in the Gazette.]

1,024,765. AUTOMATIC REVERSING MECHANISM. GEORGE W. CAMERON, Hondo, Tex. Filed June 10, 1911. Serial No. 632,362. (Cl. 64—4.)

1. The combination with a reversible driving means, of means for reversing the driving means, said reversing means comprising a reciprocating rod operatively connected to said driving means, a shaft having a crank to which the rod is connected, a second crank on said shaft, a rocker arm, a stem connected to the last-mentioned crank and having a sliding connection with the rocker arm, a shaft having a pair of rocker arms, means for actuating one of said arms, and a connection between the other one of the last-mentioned rocker arms and the first-mentioned rocker arm.

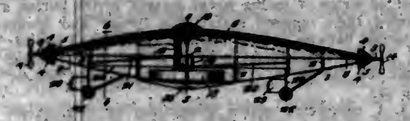


2. The combination with a reversible driving means, of means for reversing the driving means, said reversing means comprising a reciprocating rod operatively connected to said driving means, a shaft having a crank to which the rod is connected, a second crank on said shaft, a rocker arm, said rocker arm having a perforated ear, a stem connected to the last-mentioned crank and passing loosely through the perforation of the ear, an abutment on the stem, a spring between the abutment and the ear, a shaft having a pair of rocker arms, means for actuating one of said rocker arms, and a connection between the other one of the last-mentioned rocker arms and the first-mentioned rocker arm.

3. The combination with a reversible driving means, of means for reversing the driving means, said reversing means comprising a reciprocating rod operatively connected to said driving means, a shaft having a crank to which the rod is connected, a second crank on said shaft, a rocker arm, a stem connected to the last-mentioned crank and having a sliding connection with the rocker arm, a shaft having a pair of rocker arms, means for actuating one of said arms, a connection between the other one of the last-mentioned rocker arms and the first-mentioned rocker arm, a rock shaft, arms extending from the rock shaft, a connection between one of the arms and the first-mentioned crank, and locking means engageable with the other arm.

1,024,766. FLYING-MACHINE. OSCAR R. CASSELL, New York, N. Y. Filed Apr. 8, 1910. Serial No. 554,217. (Cl. 244—6.)

1. A flying machine embodying an elongated substantially cigar-shaped frame, an aerostat occupying the upper half of the frame, said aerostat comprising a sectional gas reservoir and a casing therefor, the lower surface of said casing forming an aeroplane, aeroplanes arranged in the lower portion of the frame in front and rear of the transverse center thereof, said aeroplanes being arranged in tandem relation and inclined downwardly and rearwardly, a car arranged within and supported by the frame below the juxtaposed ends of said tandem aeroplanes, coupling members connecting the frame elements at the front and rear of the frame and provided with stability fins and bearings, a shaft journaled in the frame and coupling bearings and extending longitudinally between the aerostats and aeroplanes, propellers upon the front and rear ends of the shaft, a motor on the car, and gearing for driving the shaft from the motor.



2. A flying machine embodying a substantially cigar-shaped frame composed of curved longitudinal stringers and a series of transversely arranged bands connecting and reinforcing the same, coupling bearings connecting the front and rear converging ends of the stringers, vertically and longitudinally disposed fins at each end of the frame held by the coupling bearings, adjacent ends of the stringers and contiguous bands, a flotation body occupying the upper half of said frame and extending longitudinally thereof, said body forming a gas reservoir and an aeroplane surface at the base thereof, a shaft extending beneath said surface and journaled in said coupling, propellers mounted upon said shaft, and means for driving the shaft.

1,024,767. ROACH-TRAP. JOHN DEMPSTER, Knoxville, Tenn. Filed Feb. 3, 1912. Serial No. 675,367. (Cl. 43—22.)



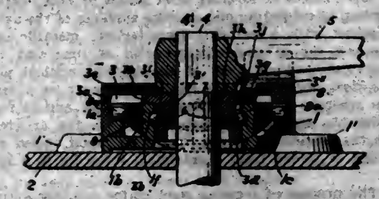
A roach trap comprising a receptacle having a flat horizontal bottom, an upwardly converging imperforate wall, said wall being provided at the top with a downwardly and inwardly sharply inclined smooth narrow flange, a platform supported centrally within the receptacle upon the bottom with its top in a substantially horizontal plane between the lower edge of the flange and the bottom, said platform being within reaching distance of the roach from the top of the trap so that it will enter the trap designedly, the marginal flange defining at its lower edge a central opening of a diameter slightly less than that of the receptacle and greater than the diameter of the platform, whereby a roach may pass over the interspace from the flange to the platform and from the platform to the bottom downwardly but cannot pass from the platform to the flange upwardly, and a bait receptacle arranged centrally on the platform and provided with a cover having openings for exposing the bait.

1,024,768. CORN-PLANTER. SAMUEL K. DENNIS, Chicago, Ill., assignor to International Harvester Company, a Corporation of New Jersey. Filed May 25, 1911. Serial No. 629,270. (Cl. 111—6.)



A valve mechanism for corn planters having, in combination, a seed conduit, a rock shaft, a rocking gate valve mounted in the upper end of said seed conduit, a lever arm carried by said rock shaft and engaging directly with said gate valve, a box-like valve having its upper rear corner pivotally mounted in the lower end of said seed conduit, said box-like valve being open at its upper end and along its front side, a longitudinally movable bar having its upper end connected with said lever arm and its lower end normally closing the front side of said box-like valve in a manner forming an extension of said seed conduit, said bar engaging with said box valve in a manner to open and close it simultaneously with an opening and closing movement of said gate valve.

1,024,769. CONTROLLER-REGULATOR. CYRUS P. EBERSOLE, Philadelphia, Pa., assignor to American Automotoneer Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Sept. 8, 1911. Serial No. 648,312. (Cl. 172—179.)



1. In a controller regulator, a stationary member, a revoluble member, a plunger, a bearing fixed relatively to one of said members in which said plunger is adapted to reciprocate, stopping devices fixed relatively to the other of said members with which said plunger is adapted to engage, and means operated by said revoluble member for moving said plunger into engagement with said devices.

2. In a controller regulator, a base, a member fulcrumed therein, a revoluble hood provided with ratchet teeth, means whereby said hood tilts said member, and a reciprocating device operated by said member for engaging said ratchet teeth.

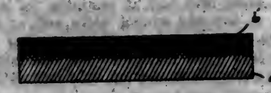
3. In a controller regulator, a base, a hood revoluble thereon, ratchet teeth and cams on one of said parts, a member fulcrumed on the other of said parts and adapted to be tilted by said cams, and a plunger operated by said member for engaging said ratchet teeth.

4. In a controller regulator, a base, a hood revoluble thereon, means fulcrumed on one of said parts, cams and ratchet teeth disposed in concentric circles on the other of said parts, said cams engaging and tilting said means, and a plunger moved by said means into the path of said ratchet teeth and withdrawn therefrom by gravity.

5. In a controller regulator, a stationary member, a revoluble member, and a lever fulcrumed on and a plunger guided by one of said members, said lever being tilted by and said plunger thereby caused to engage the other of said members.

[Claims 6 to 14 not printed in the Gazette.]

1,024,770. PROCESS FOR MANUFACTURING STEEL PLATES. FREDERICO GIOLITTI, Rome, Italy, assignor to Societa Anonima Italiana Cio. Ansaldo Armstrong & Co., Genoa, Italy, a Corporation of Italy. Filed Sept. 6, 1906. Serial No. 333,408. (Cl. 148—40.)



1. The process of forming steel plates or other articles, consisting in subjecting one or more surfaces of the article to contact with a certain characteristic metal steel component, and at the same time to a material capable

of varying the proportion of carbon in the article, for a considerable period of time and at a temperature regulated to cause diffusion into the article for a considerable distance to form a zone in the article in which the percentage of the component metal united with the steel is graded from a maximum to a minimum and in which zone the proportion of carbon is varied from the original quantity.

2. The process of forming steel plates or other articles, consisting in subjecting one or more surfaces of the article to contact with a certain characteristic metal steel component and to a suitable decarbonizing material for a considerable period of time and at a temperature sufficient by itself to cause diffusion into the article for a considerable distance to form a zone in the article in which the percentage of the component metal united with the steel is graded from a maximum inwardly to a minimum and in which the proportion of carbon in the said zone is less than the original quantity.

3. The process of forming steel plates or other articles consisting in subjecting one or more surfaces of the article to contact with a certain characteristic metallic steel component, for a considerable period of time and at a temperature between that of the highest critical point of the steel employed and a temperature near its point of fusion whereby to cause diffusion into the article for a considerable distance to form a zone in the article in which the percentage of the component metal united with the steel is graded from a maximum inwardly to a minimum.

4. The process of forming steel plates or other articles consisting in subjecting one or more surfaces of the article to contact with a certain characteristic metal steel component, and at the same time to a material capable of varying the proportion of carbon in the article, for a considerable period of time and at a temperature between that of the highest critical point of the steel employed and a temperature near its point of fusion whereby to cause diffusion into the article for a considerable distance to form a zone in the article in which the percentage of the component metal united with the steel is graded from a maximum to a minimum and in which zone the proportion of carbon is varied from the original quantity.

1,024,771. CONCERTINA-ACTION. ERNEST GLASS, Chicago, Ill. Filed Mar. 17, 1911. Serial No. 615,080. (Cl. 84—1.)



1. An action for a concertina or other similar musical instrument comprising a plurality of keys each consisting of a key bar made of a single solid piece of metal and provided at one end with a valve and at the other with a button, and a wire on which the key bars are mounted, the bars being perforated for this purpose and having at the perforation spacing hubs integrally formed with the bar.

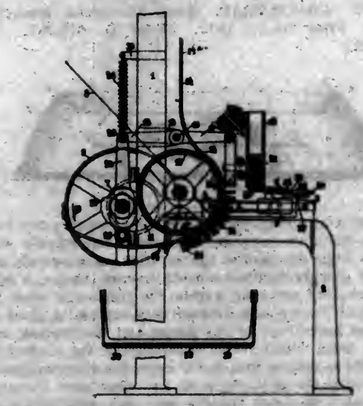
2. An action for a concertina or other similar musical instrument comprising a plurality of keys each consisting of a key bar made of a single solid piece of metal which is capable of being bent and of retaining its bent shape and provided at one end with a valve and at the other with a button, and a wire on which the key bars are mounted, the bars being perforated for this purpose and having at the perforations spacing hubs integrally formed with the bar.

3. A key bar for a concertina or like action consisting of a single integral aluminum casting formed at opposite sides with laterally projecting spacing hubs, and with a preforation extending through said bar and hubs.

4. A key for a concertina or like action comprising a pivoted key bar provided with a valve, a button and a pair of strips of spring metal secured to the button and having their opposed extremities spread and pivotally attached flatwise against opposite sides of the key bar so as to take a frictional hold upon the same tending to keep the button in a definite position with respect to the bar.

5. A concertina action comprising in combination a key board, an upper bank of keys each consisting of a key bar formed of a single piece of metal provided at one end with a button and at the other end with a valve and being formed with integral spacing hubs, a second bank of shorter, similarly formed, keys arranged below the first mentioned bank, wires on which said keys are mounted, metal supports on the key board for the wires, and a metal bridge intervening between the upper and lower banks of keys and forming a stop for the former.

1,024,772. SPLINT-POSITIONING DEVICE FOR MATCH-MACHINES. HENRY ALFRED GSELL, Paris, France. Filed Mar. 10, 1911. Serial No. 613,631. (Cl. 144—64.)



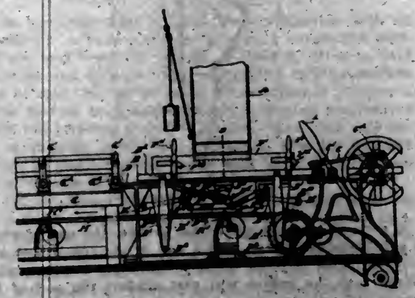
1. In a splint positioning device, the combination with a frame, of a splint magazine in said frame, a series of carriers guided in said frame and having each superposed rows of holes for the splints and the holes in any horizontal row alternating with the holes in the neighboring rows, means for intermittently feeding downward said carriers, a slide guided in said frame beneath said magazine and having in its upper surface a series of parallel grooves of various depth corresponding with their bottoms to the lower sides of the holes in several superposed rows in said carriers, means for reciprocating said slide, and means for reducing the depth of the deeper grooves to that of the shallow grooves for one extreme position of said slide beneath said magazine and for reëstablishing their full depth for the other extreme position in proximity of said carriers.

2. In a splint positioning device, the combination with a frame, of a splint magazine in said frame, a series of carriers guided in said frame and having each superposed rows of holes for the splints and the holes in any horizontal row alternating with the holes in the neighboring rows, means for intermittently feeding downward said carriers, a slide guided in said frame beneath said magazine and having in its upper surface a series of parallel grooves of various depth corresponding with their bottoms to the lower sides of the holes in several superposed rows in said carriers, parallel ejectors horizontally guided in said slide and adapted to fill up the deeper grooves to a depth like that of the shallow grooves each arranged for receiving a single splint and to withdraw from the grooves whereby the single splints are permitted to drop on the bottoms of the deeper grooves, means for reciprocating said slide, and means for moving said ejectors during the motion of said slide.

3. In a splint positioning device, the combination with a frame, of a drum loose in said frame, a series of carriers so guided in said frame as to come in contact with said drum and to take it along with them before leaving it, said carriers having each superposed rows of holes for the splints, an operating shaft parallel to said drum and mounted to turn in said frame, a splint magazine in said frame, a slide guided in said frame beneath said magazine and adapted to receive therefrom splints and to drive them into several superposed rows of holes in said carriers, means operated from said operating shaft for reciprocating said slide, a pusher vertically guided in said frame and adapted to strike and push downward the splints just driven into any of said carriers whereby the latter are intermittently fed, and means operated by said operating shaft for reciprocating said pusher.

4. In a splint positioning device, the combination with a frame, of a drum loose in said frame, a series of carriers so guided in said frame as to come in contact with said drum and to take it along with them before leaving it, said carriers having each superposed rows of holes for the splints, an operating shaft parallel to said drum and mounted to turn in said frame, a splint magazine in said frame, a slide guided in said frame beneath said magazine and adapted to receive therefrom splints and to drive them into several superposed rows of holes in said carriers, eccentrics on said operating shaft, eccentric rods connecting said eccentrics with said slide, cam disks on said operating shaft, a shaft parallel to said drum mounted in said frame to rock, two-armed levers on said shaft, rods pivotally connected at one end with arms of said two-armed levers and guided on said operating shaft, rollers at the other ends of said rods adapted to roll on said cam disks, springs for pressing said rollers on said cam disks, and a pusher guided in said frame and pivotally connected with the other arms of said two-armed levers, whereby said pusher is adapted to strike and push downward the splints just driven into any of said carriers so that the latter are thereby intermittently fed.

1,024,773. MACHINE FOR STACKING TOOTHPICKS AND THE LIKE. ALBERT H. HALL, Peru, Me., assignor to Forster Manufacturing Company, Dixfield, Me., a Corporation of Maine. Filed Apr. 22, 1911. Serial No. 622,668. (Cl. 144—191.)



1. In a machine for stacking toothpicks and like objects, the combination of a tray having a transversely slotted bottom, a framework of slats mounted to play up and down in the slots of the tray bottom, a stacker provided with transverse partitions to register with the movable slats of the tray, and means to secure the stacker to the tray and to vibrate both together.

2. In a machine for stacking toothpicks and like objects, the combination of a tray having a transversely slotted bottom, a framework of slats mounted to play up and down in the slots of the tray bottom, spring controlled supports for the framework of slats to urge the same upward, a stacker provided with transverse partitions to register with the movable slats of the tray, and means to secure the stacker to the tray and to vibrate both together.

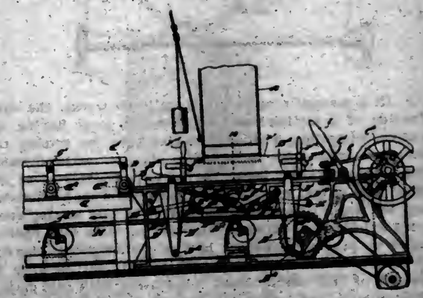
3. In a machine for stacking toothpicks and like objects, the combination of a tray having a transversely slotted bottom, a framework of slats mounted to play up and down in the slots of the tray bottom, a stacker provided with transverse partitions to register with the movable slats of the tray, and with longitudinal partitions, and means to secure the stacker to the tray and to vibrate both together.

4. In a machine for stacking toothpicks and like objects, the combination of a tray having a transversely slotted bottom, and inclined blocks arranged along the sides of the tray between the slots in the bottom, a framework of slats mounted to play up and down in the slots of the tray bottom, a stacker provided with transverse partitions to register with the movable slats of the tray, and means to secure the stacker to the tray and to vibrate both together.

5. In a machine for stacking toothpicks and like objects, the combination of a tray having a transversely slotted bottom and inclined blocks arranged along the sides of the tray between the slots in the bottom, a framework of slats mounted to play up and down in the slots of the tray bottom, spring controlled supports for the framework of slats to urge the same upward, a stacker provided with transverse partitions to register with the movable slats of the tray, and means to secure the stacker to the tray and to vibrate both together.

[Claims 6 to 12 not printed in the Gazette.]

1,024,774. MECHANISM FOR STACKING AND CONVEYING TOOTHPICKS. ALBERT H. HALL, Peru, Me., assignor to Forster Manufacturing Company, Dixfield, Me., a Corporation of Maine. Filed Apr. 24, 1911. Serial No. 622,904. (Cl. 144—191.)



1. In a machine of the character described, the combination with a support for a tray or the like, of a wayframe adjacent to the support, having two ways, one an outgoing way adapted to receive a tray from the support, the other an ingoing way provided with active tray-propelling means directed toward the support, and transferring means at the end of the ways remote from the support, automatically responsive to the weight of a tray, to transfer a tray from the outgoing way to the propelling means of the ingoing way.

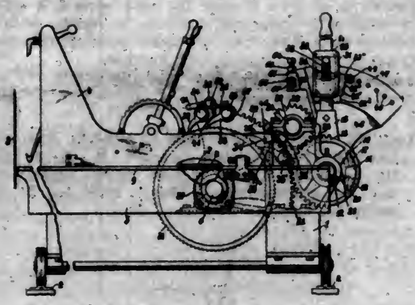
2. In a machine of the character described, the combination with a support for a tray or the like, of a wayframe adjacent to the support, having two ways, one an outgoing way adapted to receive a tray from the support, the other an ingoing way provided with active tray-propelling means directed toward the support except at the end adjacent to the support, and having passive tray holders at that end and transferring means at the end of the ways remote from the support, automatically responsive to the weight of a tray, to transfer a tray from the outgoing way to the propelling means of the ingoing way.

3. In a machine of the character described, the combi-

nation with a support for a tray or the like, of a way-frame adjacent to the support, having two ways, one adapted to receive a tray from the support, the other provided with active tray-propelling means directed toward the support, and a pivoted cradle automatically responsive to the weight of a tray to transfer a tray from the outgoing way to the propelling means of the ingoing way.

4. In a machine of the character described, the combination with a support for a tray or the like, of a way-frame adjacent to the support, having two ways, one an outgoing way adapted to receive a tray from the support, the other an ingoing way provided with active tray-propelling means directed toward the support, and transferring means at the end of the ways remote from the support, automatically responsive to the weight of a tray, to transfer a tray from the outgoing way to the propelling means of the ingoing way and a tray lifter having tray holding members movable from the level of the ingoing way to a level above the said support.

1,024,775. SAWMILL SET-WORKS. LOUIS J. HANHART, Cincinnati, Ohio, assignor to J. A. Fay & Egan Company, Cincinnati, Ohio, a Corporation of West Virginia. Filed Sept. 25, 1909. Serial No. 519,591. (Cl. 143—114.)



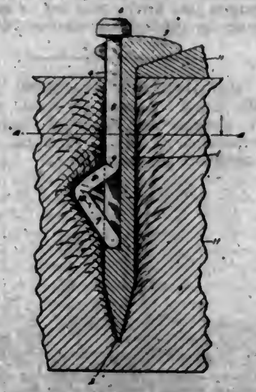
1. In a manually operated sawmill set-works, the combination of a setting-knee, an operating lever having operative connection with said setting-knee for setting the same, an adjustable permanent stop, a major-division stop, said operating lever having angular movement between said stops, means for adjusting said major-division stop for major divisions of movement of said setting-knee, a contact-block mounted on and moving with said operating lever, said contact-block having contact-points thereon for minor divisions of movement of said setting-knee at one side of said contact-block coöperating with said major-division stop, and means for adjusting said block on said lever for placing selective ones of said contact-points into contacting range with said major-division stop for controlling minor divisions of movement of said setting-knee, and said contact-block having a contact-face at its opposite side contacting said permanent stop at similar lever positions throughout the range of adjustments of said contact-block.

2. In a manually operated sawmill set-works, the combination of a setting-knee, an operating lever having operative connection with said setting-knee for setting the same, a stop for major divisions of movement of said setting-knee, means for adjusting said stop for said major divisions, a block, said block and operating lever having a guide-way therebetween extending lengthwise of said lever and movable with said lever, said guide-way comprising a guide-face movable into various angular distances with relation to said stop, said block provided with contact-faces, and means for adjusting said block on said guide-face and lever for placing said contact-faces on said block selectively in range with said stop for minor adjustments of movement of said setting-knee, and the said guide-way arranged for receiving the blow of contact of said block with said stop in a direction substantially perpendicular to said guide-face.

3. In a manually operated sawmill set-works, the combination of a setting-knee, an operating lever having operative connection with said setting-knee for setting the same, a stop for major divisions of movement of said setting-knee, means for adjusting said stop for said major divisions, a block, said block and operating lever having a guide-way therebetween extending lengthwise of said lever and movable with said lever, said guide-way comprising a guide-face movable into various angular distances from said stop, said block provided with superposed contact-faces, and means for adjusting said block lengthwise of and on said operating lever for placing said contact-faces on said block selectively in range with said stop for minor divisions of movement of said setting-knee.

4. In a manually operated sawmill set-works, the combination of a setting-knee, an operating lever having operative connection with said setting-knee for setting the same, a stop for major divisions of movement of said setting-knee, means for adjusting said stop for said major divisions, a block, said block and operating lever having a guide-way therebetween extending lengthwise of said lever and movable with said lever, said guide-way comprising a guide-face movable into various angular distances with relation to said stop, said block provided with superposed stepped contact-faces, said contact-faces being located in the angle between said stop and guide-face, and means for adjusting said block lengthwise of and on said operating lever for placing said stepped contact-faces on said block selectively in range with said stop for minor divisions of movement of said setting-knee, and the said guide-face arranged for receiving the blow of contact of said block with said stop in a direction substantially perpendicular to said guide-face.

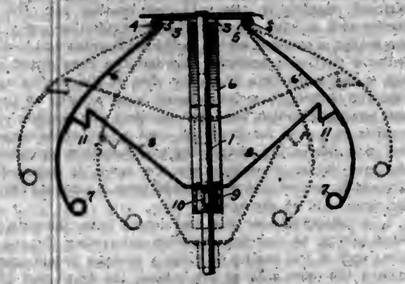
1,024,776. SPIKE. THOMAS C. HANSON, Rockford, Ill. Filed June 17, 1911. Serial No. 633,896. (Cl. 85—23.)



A spike having a longitudinal groove, the end of which is substantially square, and a key fitting the groove and provided with notches on opposite faces so that when driven into the groove will rest against the end of the groove and will be bent out laterally in V shape.

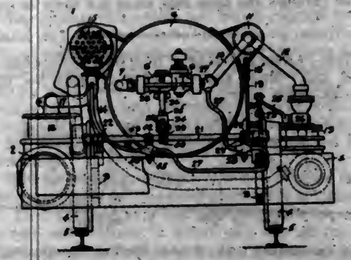
1,024,777. DISPLAY-STAND. CATHERINE L. HICKEY, Saginaw, Mich. Filed Feb. 3, 1912. Serial No. 675,245. (Cl. 211—24.)

1. A display device for hats and the like, comprising a vertical rod, a plate at the upper end of the rod adapted to support the crown of the hat, horizontal stripe extending radially beneath the plate, having their outer ends curved downwardly then upwardly, curved ribs of resilient metal having their upper ends curved to fit within the ends of the horizontal stripe, an adjustable sleeve on the vertical rod, and stays of resilient sheet metal connecting the sleeve with the ribs.



2. A display device for hats and the like, comprising a vertical rod, a plate at the upper end of the rod adapted to support the crown of the hat, horizontal strips extending radially beneath the plate, having their outer ends curved downwardly then upwardly, curved ribs of resilient metal having their upper ends curved to fit within the ends of the horizontal strips, an adjustable sleeve on the vertical rod, stays of resilient sheet metal connecting the sleeve with the rigs, and provided with bends or offsets.

1,024,778. COMPRESSED-AIR ENGINE. CHARLES B. HODGES, Pittsburgh, Pa., assignor to H. K. Porter Co., Pittsburgh, Pa., a Corporation of Pennsylvania. Filed July 31, 1911. Serial No. 641,506. (Cl. 230—35.)



1. In compressed air engines, the combination with an air reservoir, a high pressure cylinder, a connection leading from said reservoir thereto, a throttle valve in said connection and another valve controlling said connection ahead of said throttle valve, of a low pressure cylinder a by-pass leading from said connection between said valves to said low-pressure cylinder, a valve controlling said by-pass, a throttle lever, and mechanism directly movable thereby to simultaneously open said throttle valve and close said controlling valve.

2. In compressed air engines, the combination with an air reservoir, a high pressure cylinder, a connection leading from said reservoir thereto, a throttle valve in said connection and another valve adapted to close said connection ahead of said throttle valve, of a low pressure cylinder, a by-pass leading from said connection between said valves to said cylinder, a normally operative valve controlling said by-pass, and mechanical means controlling said throttle valve and arranged to directly open said last mentioned valve when the throttle valve is closed, and to insure its closing when the throttle valve is open, substantially as described.

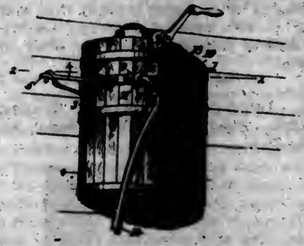
3. In compressed air engines, the combination with an air reservoir, a high pressure cylinder, a connection leading from said reservoir thereto, a throttle valve in said connection and another valve adapted to close said connection ahead of said throttle valve, of a low pressure cylinder, a by-pass leading from said connection between said valves to said cylinder, a manually operative valve in said by-pass, another valve controlling said by-pass, a throttle lever connected to said throttle valve, and mechanical means closing said first aforementioned valve in said reservoir connection, and opening said last mentioned valve controlling said by-pass when said controlling lever is moved to close said throttle valve, and opening said by-pass connection when said throttle lever is oppositely moved.

4. In compressed air engines, the combination with an air reservoir, a high pressure cylinder, a connection leading from said reservoir thereto, a throttle valve in said connection and another valve adapted to close said connection ahead of said throttle valve, of a low pressure cylinder, a by-pass leading from said connection between said valves to said cylinder, a throttle lever controlling said throttle valve, a shaft actuated by said lever and provided with a finger, and a valve controlling said by-pass and opened by said finger when the throttle valve is closed.

5. In compressed air engines, the combination with an air reservoir, a high pressure cylinder, a connection leading from said reservoir thereto, a throttle valve in said connection and another valve adapted to close said connection ahead of said throttle valve, of a low pressure cylinder, a by-pass leading from said connection between said valves to said cylinder, a rotary shaft, a throttle lever carried thereby and controlling said throttle valve, means carried thereby operating said first aforementioned valve, two valves arranged in said by-pass, the first of which is manually operative, and a finger carried by said shaft arranged to open the second of which valves when the throttle valve is closed, and to permit its closing when the throttle valve is open.

[Claims 6 and 7 not printed in the Gazette.]

1,024,779. SUPPORTING ATTACHMENT FOR ICE-CREAM FREEZERS. ISABELLA GIBBS HOPKINS, St. Augustine, Fla. Filed Jan. 19, 1909, Serial No. 473,087. Renewed July 1, 1911. Serial No. 636,513. (Cl. 62—4.)



1. In a device of the class described, a band, a member secured to one end of said band, a spout carried by said member and adapted to be received by an outlet opening of an ice cream freezer, a keeper located at the other end of said band, and means on said member for removably locking said keeper thereto.

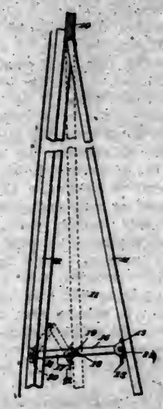
2. In a device of the class described, a band, a member secured to one end of said band, a spout carried by said member and adapted to be received by an outlet opening of an ice cream freezer, a keeper located at the other end of said band, means on said member for removably locking said keeper thereto, and means for securing said band to a support.

3. In a device of the class described, a band adapted to be arranged about an ice cream freezer, hooks on said band for securing said freezer to a support, and means for locking said band on said freezer, said means consisting of a member secured to one end of said band, a keeper secured to the other end of said band, and a lever on said member for engaging the end of said keeper, said lever being operable to tighten said band on said freezer.

4. The combination with an ice-cream freezer, of a band adapted to encircle the same, and provided with a spout projecting upon each side of the band and adapted to be received by an outlet opening in the freezer, and means for locking the ends of the band together.

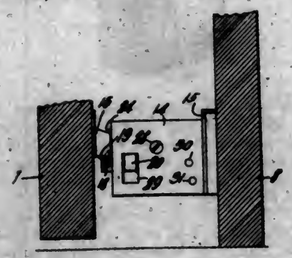
5. The combination with an ice-cream freezer, of a band for inclosing the same and provided with a spout for registering with an outlet opening in the freezer and means for securing the band in place.

1,024,780. SASH HOLDER AND LOCK. WILLIAM M. HOTCHKISS, New Rockford, N. D. Filed Feb. 25, 1911. Serial No. 610,872. (Cl. 16—22.)



A combined sash holder and lock comprising coacting arms hingedly united at one end and adapted to be pivoted at their other ends respectively to a window frame and to a sash, the outer ends of the arms being semi-circular and the pivots concentric to the rounded ends, a locking lever swinging upon the terminal pivot of one of the arms, and an overhanging lip extending laterally from said lever and concentric to said rounded ends and bearing over the rounded ends of both arms when the same are disposed side by side.

1,024,781. DOOR-CATCH. MARION HUGHES, Bartlesville, Okla. Filed Feb. 3, 1912. Serial No. 675,328. (Cl. 16—78.)

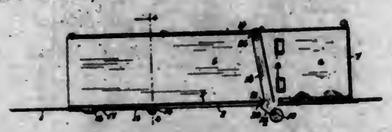


1. In a device of the character described, an open sided casing having a latch opening in the front end thereof, a pin projecting from the side of the casing at the rear end thereof, a latch pivoted on the pin and projecting through the latch opening, the latch having lateral lugs, a supplemental pin projecting from the side of the casing below the former pin, a wire spring having its intermediate portion coiled around the supplemental pin and having its arms bearing against the bottom of the casing and the latch to yieldingly force the latch upward, and a removable cover for the open side of the casing, the cover and side of the casing having elongated openings therein through which the said lugs pass, the latch opening extending to the cover, whereby the latch and spring may be removed from the pins through the open side of the casing when the cover is removed.

2. A combined door stop and detent comprising an openside casing having a cushion socket at front end opening toward the open side of the casing and a constricted opening in the said end leading into the said socket and a latch opening therein extending away from the socket, a cushion seated in the said socket and having a reduced portion projecting through the constricted opening, a pin projecting from the side of the casing at the rear end thereof, a spring pressed latch pivoted on the pin and passing through the latch opening, the cushion socket serving as a stop for the latch, and a removable cover for the open side of the casing, the said openings extending to the said cover, whereby when the cover is removed the latch and cushion may be removed from the casing through the open side of the casing.

3. A combined door stop and detent comprising an open sided casing, an angular partition connecting the top and front end of the casing to form a cushion socket opening toward the open side of the casing, the front end of the casing having a constricted opening therein leading into the cushion socket and having a latch opening therein extending downward from the cushion socket, a pin projecting from the side of the casing at the rear end thereof, a latch pivoted on the pin and projecting through the latch opening, the latch having lateral lugs, a supplemental pin projecting from the side of the casing below the former pin, a wire spring having its intermediate portion coiled around the supplemental pin and having its arms bearing against the bottom of the casing and the latch to yieldingly force the free end of the latch against the cushion socket, and a removable cover for the open side of the casing, the cover and side of the casing having elongated openings therein through which the said lugs pass, and the said openings in the front end of the casing extending to the cover, whereby the cushion latch and spring may be removed through the open side when the cover is removed.

1,024,782. ANIMAL-TRAP. WILLIAM G. JACKSON, Santa Rosa, Cal. Filed Oct. 11, 1911. Serial No. 654,147. (Cl. 43—24.)

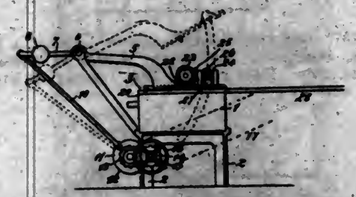


1. In an animal trap, a base having an opening therethrough, a trap door pivotally connected to said base to swing on a transverse axis dividing the door into unequal parts, the longer part extending over and being adapted to swing through said opening, a supoprt for the shorter part of the door, the portion of the door extending over said support being heavier than that extending over said opening, walls on said base at the longitudinal sides of said opening, said longitudinal walls also extending along the longitudinal sides of said support, walls forming a bait chamber on said base in line with said door, the interior of said chamber being visible to an animal on said door, a top on said longitudinal walls, and a trigger pivotally supported at the top, and having a portion of its front edge beveled to engage the door, the angle of the bevel being such that, upon sufficient downward pressure on the door, said trigger is pushed away from said door.

2. In an animal trap, a base having an opening therethrough, a trap door pivotally connected to said base to swing on a transverse axis dividing the door into unequal parts, the longer part extending over and being adapted to swing through said opening, a support for the shorter part of the door, the portion of the door extending over said support being heavier than that extending over said opening, walls on said base at the longitudinal sides of said opening, said longitudinal walls also extending along the longitudinal sides of said support, walls forming a bait chamber on said base in line with said door, the interior of said chamber being visible to an animal on said door, a top on said longitudinal walls, and a trigger pivotally supported at the top, and having a portion of its front edge beveled to engage the door, the angle of the bevel being such that, upon sufficient downward pressure on the door, said trigger is pushed away from said door, the lower portion of the trigger, below said beveled edge, being suitably beveled to permit said downwardly swinging portion of the door to return to its original position.

3. In an animal trap, a floor having an opening therethrough, a trap door pivotally connected to said floor so that a portion of said door extends over and is adapted to swing through said opening, a movable support for an edge of said portion remote from said pivot, means for resisting the movement of said support, said support having a beveled surface upon which said edge rests, the angle of the bevel being such that, upon sufficient downward pressure on the door, said support is moved away from said edge against the resistance of said means, and means for supporting a bait in sight of an animal moving on said door from said pivot toward said edge.

1,024,783. PROCESS OF TREATING LAC. JAMES JOHANNES, Calcutta, India. Filed Aug. 19, 1911. Serial No. 645,026. (Cl. 134—81.)



1. The process of treating lac, which consists in heating the same and when in a sufficiently pliable condition drawing it out until it assumes a thread-like fibrillous form.

2. The process of treating lac, which consists in heating the same until in a somewhat pliable condition, placing thereon a relatively cold surface to which said lac adheres, then separating the surfaces to draw out the lac into fibrillous threads, and finally separating the thread lac from the surfaces.

3. The process of treating lac, which consists in spreading the same on a flat heated surface until softened by the heat, then bringing into contact with said lac a smooth relatively cold surface to which said heated lac adheres, separating said surfaces to draw out the lac in fine thread-like condition, and finally removing the lac from said surfaces.

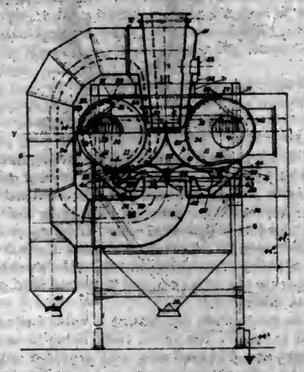
4. The process of treating lac, which consists in placing said lac between two surfaces, one of which is movable, softening the lac by heating one of said surfaces, then separating the surfaces to draw the same into fibrillous thread-like form, and finally separating the fibrillous lac from the surfaces.

5. The process of treating lac, which consists in subjecting a sheet or mass of lac to contact with and withdrawal from a heated surface and converting the same into a fibrillous form and removing the fibrillous lac.

1,024,784. DRY CLEANER FOR GAS. MARK W. JOHNSON, Jr., Birmingham, Ala. Filed July 26, 1909. Serial No. 509,511. (Cl. 75—30.)

1. In an apparatus for the cleaning of gas by combined electric and centrifugal means, a cleaning chamber having deflecting surfaces causing the gas discharged thereinto to flow with a vortex movement about an axis, electrical means to agglomerate the dust in the gas to facilitate its centrifugal concentration at or near said surfaces, deflecting means at one or more points in said surfaces to divert an outer stratum or strata of the flowing gas from the whirling body of gas, and means to draw off the clean gas from or near the axis of the vortex.

2. In an apparatus for cleaning gas comprising a chamber in which the gas is caused to whirl about a central axis with a vortex movement, means to deliver the uncleaned gas tangentially into the whirling body of gas, means to draw off the cleaned gas from the center of the whirling mass, deflecting means acting on the outer portion of the whirling body of gas to deflect a stratum therefrom in which the dust particles are centrifugally concentrated, a receptacle, means acting upon said deflected stratum of gas to cause the deposit in said receptacle of more or less of the dust therein, and means to return said deflected stratum of gas from said receptacle to the whirling mass of gas in the cleaner at a point where it will be caused to again flow past said deflecting means, as and for the purposes described.



3. In an apparatus of the character described, a cleaning chamber, means to deliver thereinto a stream of fluid in a direction which will cause same to whirl therein about an axis, means to skim off the outer stratum of the fluid, a receptacle into which skimmed fluid flows and deposits foreign matter in suspension therein, means to return the fluid from said receptacle to said cleaning chamber, and means to draw off the cleaned fluid from the center of the whirling mass, substantially as described.

4. In an apparatus of the character described, a cleaning chamber, means to deliver thereinto a stream of fluid in a direction which will cause same to whirl therein about an axis, a deflector consisting of a continuous knife-edge disposed transversely to the flowing fluid which acts to skim off the outer stratum of the fluid, means to draw off the cleaned fluid from said chamber, means acting upon the fluid skimmed off to separate the impurities therefrom, and means to return said latter fluid with the impurities not removed by said treatment, into the cleaning chamber.

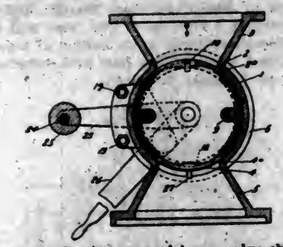
5. In an apparatus of the character described, a cleaning chamber having a curved deflecting surface, a nozzle which approaches said chamber at a tangent having a narrow elongated jet orifice disposed so as to deliver a jet of gas in a shallow stream tangentially against said surface which causes the gas to whirl about an axis in said chamber, and a cutting edge to deflect from said flowing gas the impurities therein which become concentrated near said deflecting surface.

[Claims 6 to 30 not printed in the Gazette.]

1,024,785. FURNACE GAS-VALVE. MARK W. JOHNSON, Jr., Ensley, Ala., assignor of one-half to Karl Landgrebe, Ensley, Ala. Filed July 31, 1911. Serial No. 641,458. (Cl. 137—7.)

1. A valve mechanism for furnace gases comprising a valve casing having a valve chamber therein, there being an inlet port in a curved wall of the chamber and an outlet port, circular seats in said casing, a rotatable valve having a curved valve face to correspond to said curved wall and having circular bearing faces disposed eccentrically in said seats, and means which urge the valve in its operating positions toward said inlet port, substantially as described.

2. A valve mechanism comprising a valve chamber having inlet and outlet ports, a rotatable valve therein having its valve face curved on an arc struck from its axis, movable journal supports for said valve, and means to shift the valve bodily and force it against the portion of said chamber as a seat which surrounds the inlet port, and means to rotate the valve to open or close said port, substantially as described.



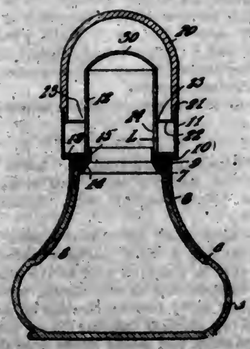
3. A valve mechanism comprising a valve chamber, there being an inlet port in a curved side wall thereof and an outlet port, a valve having a curved valve face adapted to move over the curved side of the chamber containing the inlet port as its seat, movable supports in which the axes of the valve are journaled, means to swing the valve against its said seat while it swings free from said chamber elsewhere, and means to operate the valve to open and close said port, substantially as described.

4. A valve mechanism comprising a valve casing having an open end to receive the valve, there being in said casing an outlet port and a curved side wall provided with an inlet port, and a rotatable valve adapted to be inserted in the chamber and having a valve face curved to correspond to said curved wall of the chamber, said valve being bodily adjustable toward said inlet port, means to urge the valve in its several operating positions to seat against said curved portion of the chamber, packing about the valve to close the said open end of the chamber, and means to operate the valve, substantially as described.

5. A valve of the character described comprising a casing having a cylindrical valve chamber open at its ends and having oppositely facing inlet and outlet ports in its curved wall, a cylindrical ported valve disposed eccentrically in said chamber, packing means surrounding the ends of the valve to close the open ends of said chamber, means to urge said valve bodily toward the inlet port to give it a tight seat there, and means to rotate the valve to open or close said inlet port, substantially as described.

[Claims 6 to 19 not printed in the Gazette.]

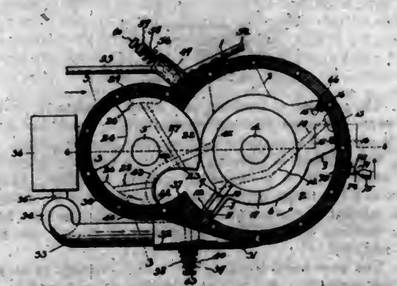
1,024,786. SYRUP-PITCHER. JAMES SAMUEL JONES, Harrison, Ark. Filed Apr. 29, 1911. Serial No. 624,231. (Cl. 65—81.)



1. In a syrup pitcher, a vessel having a neck, a jacket encompassing the neck and extending above the mouth thereof, the said jacket being extended outwardly at the mouth of the neck to form a flange and the portion thereof above the said flange forming a drip cup, a cylindrical spout arranged within the drip cup and having a flange resting on the said flange of the jacket and having a slot therein above the said flange, a strainer secured at its periphery to the drip cup above the slot in the spout and having the inner edge thereof spaced from the said spout, a cover for the spout, and a cap seating on the upper end of the drip cup to inclose the said cover and the spout.

2. In a syrup pitcher, the combination of a spout having a pair of ears projecting from one side thereof, one of the said ears having a non-circular socket therein, a cover for the spout having a fork depending from the edge thereof between the said ears, a pin passing through the said ears and the said fork and having a non-circular head adapted to engage in the non-circular socket, and a coiled spring arranged on the said pin between the arms of the fork having one end thereof secured to the said pin and the other end thereof bearing against the said fork, whereby upon the pin being slid outwardly the head thereof may be disengaged from the said socket to permit the pin to be rotated to increase or decrease the tension of the spring.

1,024,787. ROTARY ENGINE. JASON C. KING, La Junta, Colo., assignor of one-third to William H. Biebes, La Junta, Colo. Filed Feb. 25, 1911. Serial No. 610,725. (Cl. 121—51.)



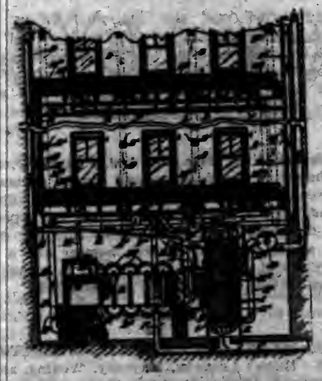
1. In a rotary engine, a duplex casing comprising two communicating cylinders, a piston mounted in each cylinder, one of said pistons having lugs extending from its periphery, the other piston formed with recesses to receive the lugs on the first-mentioned piston, one of said lugs formed with an expansion-chamber in its outer face, said lug and piston formed with a duct extending from said expansion-chamber to the rear of the other lug, substantially as shown and described.

2. In a rotary engine, a duplex casing comprising two communicating cylinders, a piston mounted in each cylinder, one of said pistons having lugs extending from its periphery, the other piston formed with recesses to receive the lugs on the first-mentioned piston, the last-mentioned piston formed with expansion-chambers in its periphery and ducts extending from said chambers to one of the recesses aforesaid, substantially as shown and described.

3. In a rotary engine, a duplex casing comprising two communicating cylinders, a piston mounted in each cylinder, one of said pistons having lugs extending from its periphery, the other piston formed with recesses to receive the lugs on the first-mentioned piston, one of said lugs formed with an expansion-chamber in its outer face, said lug and the piston provided with a duct connecting said chamber with the rear of the other lug, the recessed piston also formed with expansion-chambers in its periphery and ducts connecting said chambers with the recesses formed to receive the last-mentioned lug on the other piston, substantially as shown and described.

4. In a rotary engine, a duplex casing comprising two communicating cylinders, a piston mounted in one cylinder having two lugs on its periphery, one of said lugs being relatively wider than the other, the wider lug having an expansion-chamber formed in its outer face and the lug and piston provided with a duct extending from said expansion-chamber to the rear side of the narrower lug, the other piston formed with recesses in its periphery to receive the lugs on the first-mentioned piston, the recess to receive the narrower lug being smaller than the other recess, said recessed piston formed with expansion-chambers in its periphery, and ducts connecting said chambers and the smaller recess, substantially as shown and described.

1,024,788. HEATING SYSTEM. JOSEPH MOSES WARD KITCHEN, East Orange, N. J. Filed Mar. 13, 1907. Serial No. 362,162. (Cl. 237—2.)



1. In a heating system, the combination of (1) a steam generator and a system of steam radiating pipes, (2) a heat economizing feed water cooler and air heater, said economizing cooler and heater being constructed to receive steam and water of condensation from said system at high levels in said economizer and for the heating of air progressively by the passing of air from a low level to a high level in said economizer, first through said water of condensation and then through said steam, (3) means for maintaining the water of condensation at a selected high level in said economizer, (4) means for drawing upwardly said air through said economizer and for its heating by passing said air first through said water of condensation, and then through said steam, and (5) means for conveying said water of condensation after its cooling to the steam generator, said combination being for the economisation of low degrees of heat by the cooling of feed water to a point that will allow of a larger degree of heat being absorbed in said generator and for giving variation and increase of heat to the air pre-heated in the cooling of said water of condensation.

2. In a heating system, the combination of (1) means for economising both the waste heat of combustion and of effete respired and heated air, (2) a motor actuated mechanism for drawing through said means for economising the heat of the mediums carrying said waste heat of combustion and effete air, and also (3) a motor-actuated mechanism for drawing fresh unrespired air through said means for economising, said means for economising being constructed to transfer said waste heat to said fresh air without contamination of said air in the travel of said air through said economising means.

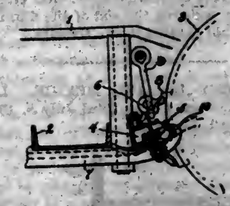
3. In a heating system, the combination of means for heating fresh air for respiration and for heating with effete air of respiration and of heat radiated in the space heated by said system, without contaminating said fresh air with said effete air, said means comprising an economiser arranged to pass fresh air in vertically rising currents through tubes in said economiser and for drawing the effete heated air downward through said economiser in counter-current to the travel of the fresh air, and having effete air conduits for drawing air from relatively high levels in the occupied spaces heated, downward to and through said economiser and finally through an exhaust conduit to the outer air through the action of a ventilating fan, and comprising also another ventilating fan and fresh air conduits for drawing the fresh air through said economiser and distributing said air equally into the habited spaces heated, the fresh air entering such spaces at low levels therein.

4. In a heating system, the combination of (1) means for generating steam, (2) means for distributing the heat of said steam, and (3) means for economizing the waste heat of gases of combustion, water of condensation and of effete air of respiration, said economising means comprising an induction fan, means for controlling the flow of waste heat bearing mediums through sections of said economizing means, and for heating fresh air for respiratory and heating purposes.

5. In a heat economising system, the combination of (1) a steam generator, (2) means comprising a system of steam pipes for radiating the steam generated in said generator, (3) means provided with a cavity for collecting and holding respired effete heated air, (4) means for conveying said effete heated air from said cavity to a means for utilising the heat of said effete heated air, and (5) means for utilising the heat in said effete heated air, said combination being for the regenerative use of heat in the heating of air for such purposes as for combustion or for respiration, and for thus economising heat that is usually wasted in heating processes.

[Claims 6 to 15 not printed in the Gazette.]

1,024,789. BRAKE-BEAM SAFETY-SUPPORT. DAVID M. KNOX, St. Louis, Mo., assignor of one-half to William J. KNOX, Dubois, Pa. Filed Aug. 30, 1911. Serial No. 646,867. (Cl. 105—114.)



1. In a car truck, side frames in the form of trusses with the car wheels at their ends, a cross tie between the central portions of the side frames, a brake beam, shoes carried thereby, and a safety bracket on the cross tie intermediate the brake shoes and positioned so as to support the brake beam in case of a failure of the means for suspending the brake beam.

2. In a car truck, side frames, a cross tie between the side frames, a brake beam, shoes carried thereby, and a pair of safety brackets secured to the bottom of the cross tie with their free ends projecting beneath the brake beam so as to support the brake beam in case of a failure of the means for suspending the brake beam.

3. In a car truck, a brake beam, shoes carried thereby and stop means carried by the frame-work of the truck intermediate the shoes for preventing undue endwise movement of the brake beam.

4. In a car truck, a brake beam, shoes carried thereby and a pair of stop members lying between the shoes for preventing undue endwise movement of the brake beam.

5. In a car truck, a brake beam, shoes carried thereby, a safety bracket carried by the framework of the truck intermediate the brake shoes and positioned so as to support the brake beam in case of a failure of the means for suspending the brake beam, and means on the bracket intermediate the shoes for preventing undue endwise movement of the brake beam.

[Claims 6 to 10 not printed in the Gazette.]

1,024,790. REEL MECHANISM FOR PICTURE-MACHINES. JAMES G. LAKE, Danville, Pa. Filed Apr. 12, 1909. Serial No. 489,378. (Cl. 88—17.)



1. A reel for moving picture machines, comprising a base and a top having a circular spring for securing it upon the base.

2. A reel for moving picture machines, comprising a base, a top arranged over the base and a circular spring carried by the top for engaging the base and for locking the end of the film.

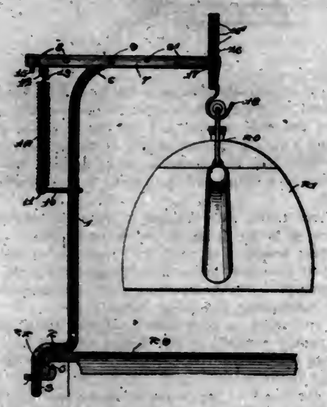
3. A reel for moving picture machines comprising a bottom member and a top member, said top member having a circular spring secured thereto, adapted to engage the bottom member and forming means for securing the end of the film thereto.

4. A reel for moving picture machines comprising a top member and a bottom member, said bottom member having a central tube portion adapted to receive the tube portion of the top member and a circular spring carried by the top member for engaging said tubular portion, said circular spring having overlapping ends forming means for securing the ends of the film thereto.

5. A reel for moving picture machines comprising a bottom formed of a disk having a central tubular portion and a top member formed of a disk having a central tubular portion adapted to fit over the tubular portion of the bottom member said bottom member being provided with a conical portion and a circular spring having overlapping ends carried by the top member adapted to fit over the conical portion of the bottom member, said circular spring forming means for securing the end of the film thereto.

[Claims 6 to 8 not printed in the Gazette.]

1,024,791. SAFETY BOILING DEVICE. LYNN ORRIN LAYMAN, Fort Collins, Colo. Filed July 6, 1911. Serial No. 637,212. (Cl. 53—1.)



1. A device for suspending a cooking utensil over a fire, consisting of a vertical rod, having means at its lower end for securing it in elevated position, a tilting arm pivotally mounted between its ends to the upper end of said rod, a rack pawl slidably mounted upon said rod, a coil spring connected at one end to said rack pawl, and at its other end to one end of said tilting arm, and means at the other end of said tilting arm for suspending a cooking utensil.

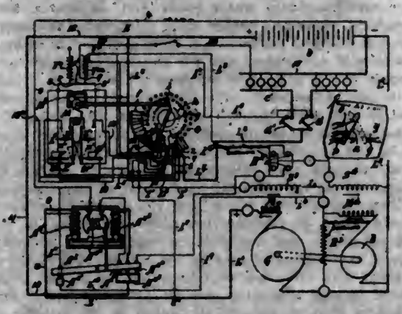
2. A device for supporting a cooking utensil over a range consisting of a vertical rod, having a shouldered lower end, a clamping bar adjustably mounted on the lower end of said rod and engaging a support, a tilting arm pivotally mounted between its ends to the upper end of said rod, a rack pawl slidably mounted on said rod, a coil spring connected at one end to said rack pawl and detachably connected at its other end to said tilting arm, and a vertical arm adjustably mounted in the outer end of said tilting arm, and having a hook adapted to engage the bail of a cooking utensil.

1,024,792. RUNNER ATTACHMENT FOR VEHICLES. JOHN FRED. LEITH, Cleveland, Ohio. Filed Apr. 5, 1911. Serial No. 619,076. (Cl. 21—96.)



In a device of the class described, a runner formed of a bar U-shaped in cross-section and curved at one end to fit the front wheel of a vehicle and provided adjacent its other end with a pair of apertures in its opposite side walls, a fastening member detachably engaging said apertures, a spring attached to said member and a hook on the opposite end of said spring adapted to engage the hub of the rear wheel, substantially as described.

1,024,793. MEANS FOR REGULATING ELECTRIC CIRCUITS. HENRY LEITNER, Maybury, Woking, and RICHARD NORMAN LUCAS, Dartnell Park, Byfleet, England. Filed Jan. 5, 1905. Serial No. 239,791. (Cl. 171—313.)



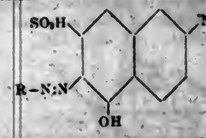
1. In a system of electric lighting, the combination with the lamps, of a battery of accumulators, in a parallel circuit with said lamps, a dynamo connected with said battery and lamps, a switch for making and breaking the circuits through said lamps, a rheostat for controlling the lamp circuit, a voltmeter for controlling the rheostat, two circuits for supplying current to said voltmeter, a resistance in one of said circuits, said lamp switch being constructed to cut out the said resistance circuit when the lamp switch is closed, whereby the voltmeter works on a higher scale when the lamps are out of circuit, substantially as described.

2. In a system of electric lighting, the combination with the lamps, of a battery of accumulators, in a parallel circuit with said lamps, a dynamo connected with said battery and lamps, a switch for making and breaking the circuit through said lamps, a rheostat for controlling the lamp circuit, a voltmeter for controlling the rheostat, means for supplying current to the voltmeter, a resistance for said voltmeter, means actuated by the closing of the lamp switch for cutting out said resistance, whereby the voltmeter works on a higher scale when the lamps are out of circuit, substantially as described.

3. In a system of electric lighting, the combination with the lamps, of a battery of accumulators for supplying current to said lamps, an electric generator for supplying current to said battery and lamps, a rheostat in the lamp circuit, an electric motor for operating said rheostat, two circuits of opposite directions for operating said motor, a circuit changer for controlling said circuits, a voltmeter for controlling said circuit changer, two circuits of different resistances for supplying current to said voltmeter and means for throwing the current of the voltmeter through a circuit of less resistance when the lamps are in circuit, whereby the volt-meter is caused to operate on a higher and lower scale, substantially as described.

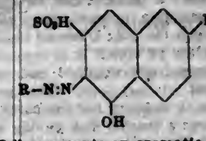
1,024,794. MANUFACTURE OF AZO DYESTUFFS. HERBERT LEVINSTEIN and MAX WYLER, Blackley, Manchester, England, assignors to Levinstein Limited, Blackley, Manchester, England, a Limited Liability Company. Filed Oct. 18, 1910. Serial No. 587,700. (Cl. 8—1.)

1. The process of producing monoazo dyestuffs of the general formula



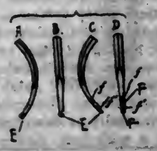
where "R" represents an aromatic substituent by combining a diazo compound with the urethane of 2.5-amidonaphthol-7-sulfonic acid, substantially as herein before described.

2. New monoazo dyestuffs having the general formula



where "R" represents an aromatic substituent.

1,024,795. MACHINE-AWL. WILLIAM F. LEWIS, Lynn, Mass. Filed Apr. 3, 1911. Serial No. 618,609. (Cl. (112—11.)

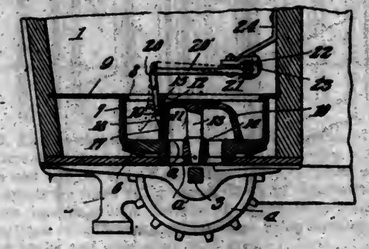


A machine-awl provided, at its lower end, with a knife edge, with two longitudinal notches adjacent said lower end, and with a tooth separating said notches; substantially as and for the purposes described.

1,024,796. ADJUSTABLE CONE FOR FERTILIZER-FEED. CHARLES E. LUTZ, Marion, Ind. Filed July 17, 1911. Serial No. 638,927. (Cl. 111—34.)

1. The combination of a hopper, a rotary cylinder, a stationary cone mounted in the cylinder and providing an annular channel about the cone, said cone having one wall cut vertically and provided with an aperture substantially in line with the path of travel of the fertiliser in the annular channel, a projection carried by the cone adjacent one end of the vertical wall and projecting to restrict the annular channel at the far side of the aperture, a closure hinged to the top of the cone to swing into and out of aperture closing position, and means for operating said closure.

2. The combination of a hopper, a rotary cylinder, a stationary cone mounted in the cylinder and providing an annular channel about the cone, said cone having one wall cut vertically and provided with an aperture substantially in line with the path of travel of the fertiliser in the annular channel, a projection carried by the cone adjacent one end of the vertical wall and projecting to restrict the annular channel at the far side of the aperture, a pair of lugs formed integral with the top of the cone and projecting beyond the vertical wall, a closure provided with lugs adapted to register with the lugs of the cone and disposed to normally close the aperture by gravity, and means connected to the closure for swinging the same away from the aperture and out into the annular channel.



3. The combination of a hopper, a rotary cylinder, a stationary cone mounted in the cylinder and providing an annular channel about the cone, said cone having one wall cut vertically and provided with an aperture substantially in line with the path of travel of the fertiliser in the annular channel, a projection carried by the cone adjacent one end of the vertical wall and projecting to restrict the annular channel at the far side of the aperture, a closure of substantially the same length as the vertically cut wall having its upper edge hingedly connected to the top of the cone and disposed to swing to and from the vertical wall of the cone with one edge abutting the projection, and means for actuating the closure.

4. The combination of a hopper, a rotatable cylinder therein, a stationary U-shaped in plan cone provided with an aperture in the flat wall thereof, said cone being mounted within the cylinder to provide a fertiliser conducting channel around the cone, a projection formed upon the flat wall of the cone at one end thereof and projecting outwardly to restrict the channel about the cone at that point and act as a means to guide the fertiliser to the aperture of the cone, a closure hinged to the upper edge of the flat wall of the cone and having one edge acting substantially against the projection to coact therewith in guiding the fertilizer through the aperture, and means for actuating and holding the closure at the desired adjustment.

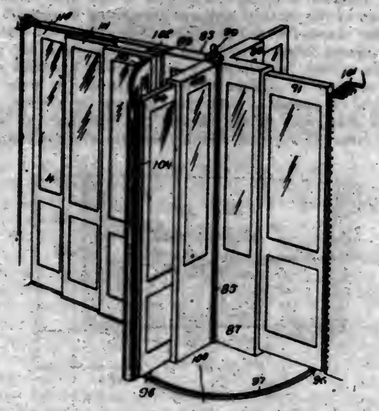
1,024,797. CAR-DOOR. FRANCIS X. MALOCSAY, Jersey City, N. J., assignor to William H. Heulings, Philadelphia, Pa. Original application filed Sept. 1, 1908, Serial No. 451,161. Divided and this application filed Dec. 9, 1908. Serial No. 466,619. (Cl. 20—21.)

1. In a device of the class described, a car door consisting of panels, protrudable sliding panels movable with and adapted to move between said panels and means for pivoting said panels so that they will move about a common axis while carrying said sliding panels.

2. In a device of the class described, a car door consisting of panels arranged at substantially right angles to each other, protrudable sliding panels adapted to move in said panels and transversely of each other and means for mounting said panels so that they will revolve about a common axis.

3. In a device of the class described, a car door consisting of panels and a pivot for supporting the same, protrudable sliding panels mounted in said pivot and means for causing said sliding panels to move in the direction of their width through said pivot.

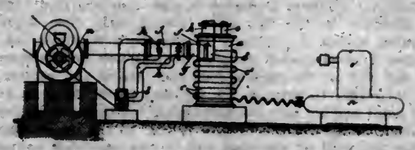
4. In a car door or similar device, panels and means for pivotally mounting the same, protrudable sliding panels adapted to move through the pivot of the panels, one through the other, and means for causing said slides to move relatively to each other.



5. In a device of the class described, a car door in the form of a turnstile with panels disposed at substantially right angles to each other and composed of parallel members mounted upon a common pivot and protrudable slidable panels freely movable between the members of said panels.

[Claims 6 to 11 not printed in the Gazette.]

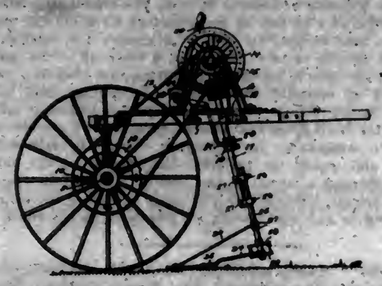
1,024,798. APPARATUS FOR PREPARING A MIXTURE OF AIR AND SULFUR DIOXID. RENÉ MAROT, Paris, France. Filed Dec. 29, 1910. Serial No. 599,954. (Cl. 23—1.)



A device for expanding sulfur dioxid and thoroughly mixing the latter with air, comprising: a box; series of tubes in said box, the diameter of which increases from bottom to top; bent tubes connecting said tubes together in each vertical row; a connection piece on the lowest tube in each vertical row, for connecting it to a bottle containing liquid sulfur dioxid; a steam inlet aperture in the wall of said box; a chamber at the upper part of said box, connected with each vertical row of tubes; a partition in said chamber to act as a baffle; an inclined portion at the upper edge of said partition; an air inlet aperture in the wall of said chamber; a lateral aperture in the wall of the latter for the discharge of the mixture of expanded sulfur dioxid and air.

1,024,799. COTTON-CHOPPER ATTACHMENT. CHARLES W. MATHUS, Wichita Falls, Tex. Filed Oct. 3, 1911. Serial No. 652,615. (Cl. 97—47.)

In combination with a wheel mounted frame, a cotton chopper comprising a forwardly and downwardly disposed bar journaled for rotation, means for rotating the same, a resiliently supported blade carried at the lower end portion of the bar and arranged to approach the surface of the soil as it passes behind the bar and arranged to move away from the surface of the soil as it moves in front of the bar, and a brace connected at its outer end with the outer end of the blade and journaled at its



inner end upon the bar, said bar carrying collars which receive said brace between them.

1,024,800. TENSION DEVICE. JOHN O. MCKEAN, Westfield, Mass., assignor to Foster Machine Company, Westfield, Mass., a Corporation of Maine. Filed Dec. 26, 1911. Serial No. 667,854. (Cl. 242—150.)



1. In a tension device, a support for the parts, a vertical pin mounted thereon; a tension disk having a hollow axial extension, extending upward, by which it is mounted and balanced upon the pin; a second tension disk having an axial perforation by which it is mounted upon the conical, axial extension, all combined and operating substantially as described.

2. In a tension device, a support for the parts; a vertical pin mounted thereon; a tension disk having a hollow outwardly conical axial extension extending upward by which it is mounted and balanced upon the pin; a second tension disk having an axial perforation by which it is mounted upon the conical axial extension, all combined and operating substantially as described.

3. In a tension device, a support for the parts; a vertical pin mounted thereon; a tension disk having a hollow outwardly conical axial extension extending upward by which it is mounted and balanced upon the pin; a second tension disk having an axial perforation by which it is mounted upon the conical axial extension and a guard extending over the conical axial extension to retain the parts against accidental displacement, all combined and operating substantially as described.

1,024,801. BLAST-FURNACE. MAX MCMURRAY, Cleveland, Ohio. Filed Nov. 16, 1911. Serial No. 660,676. (Cl. 75—116.)

1. In a blast-furnace, the combination of an outer shell forming the support for the superstructure of furnace-top; an inner shell forming with said outer shell, an intervening free space; and means in said space for distributing water upon the inner shell; said outer shell adapted to protect the water so distributed from the action of air currents.

2. In a blast-furnace, the combination with an outer shell; of an inner shell arranged so as to be capable of movement vertically relatively to and independently of said outer shell.

3. In a blast-furnace, the combination with an outer shell forming the direct support for the superstructure or furnace-top; of an inner shell arranged so as to be capable of movement vertically relatively to and independently of said outer shell.

4. In a blast-furnace, the combination with an outer shell composed of plates suitably secured to each other, and forming the direct supporting element for the furnace-top or superstructure; of an inner shell arranged so as to be capable of vertical movement relatively to said outer shell.



5. In a blast-furnace, the combination of an outer shell; an inner shell and lining therefor, spaced from said outer shell; a series of pipes surrounding said inner shell connected with a water supply and provided with discharge openings; and supports for such pipes secured to said outer shell.

[Claims 6 to 8 not printed in the Gazette.]

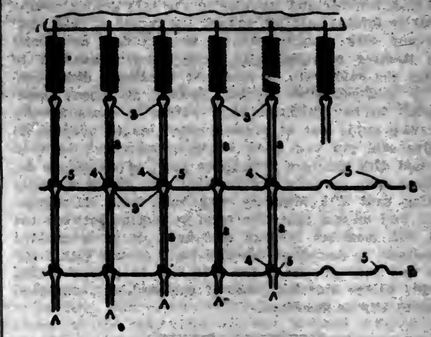
1,024,802. FLUE-EXPANDER. JOHN F. MEEKER, Stamps, Ark. Filed Oct. 14, 1911. Serial No. 654,608. (Cl. 153—90.)



A flue expanding tool, including a body portion, comprising tapered sectoral sections, each having a concave inner face and a convex outer face, the sections being formed near their ends with transversely extending grooves, and intermediate of said grooves with a shouldered portion and with longitudinally extending outwardly facing openings intersecting the shouldered portion, contractile springs encircling the grooves of the sections, rollers held in the longitudinally disposed openings of the respective sections with peripheries in open relation to each other, and a tapering mandrel insertible through the sectional body portion in direct engagement with the rollers, as and for the purpose set forth.

1,024,803. LINK BED-BOTTOM FABRIC. GEORGE A. MELLON, St. Louis, Mo. Filed Oct. 25, 1911. Serial No. 656,684. (Cl. 245—5.)

1. The combination in a bed-bottom fabric, of longitudinal rows of links, each link having an eye at one end and a hook at the other end, and transverse spacer wires spanning said links in series and having crimps therein in engagement with both the eyes and hooks of adjoining links.



2. The combination in a bed-bottom fabric, of a plurality of chains comprising links each having a hook at one end and an eye at the other end, the hooks and eyes of adjoining links being connected, and transverse spacer wires having crimps therein at intervals located in the junctions of said links, said crimps being confined within said hooks and embracing said eyes.

1,024,804. ADJUSTABLE SUPPORT. FRIEDRICH MERGNER, Neumarkt, Oberpfals, Germany. Filed Feb. 23, 1911. Serial No. 610,304. (Cl. 45—109.)



1. In an adjustable supporting mechanism, the combination with coacting locking elements connected to a base and to a part to be supported, means normally maintaining said locking elements in locked relation against return movement when one element is moved in one direction within a predetermined field of adjustment with respect to the companion member, and automatic means, actionable upon movement of the part to be supported beyond said predetermined field of movement, for throwing and retaining said elements out of locked relation permitting return movement of the article supported.

2. An adjustable support comprising, a disk member having radial ratchet teeth formed on the face thereof and diametrically disposed shoulders, a second disk member having ratchet teeth adapted to engage the said teeth of said first mentioned disk to hold the latter against movement in one direction, and diametrically disposed shoulders adapted to engage the said shoulders of said first mentioned disk member to throw the said teeth out of engagement upon movement through an arc of predetermined length, means normally holding said disk members with the said teeth in engagement with each other, and means operative upon engagement of the said diametrically disposed shoulders to hold said disk members out of engagement until they are returned to the starting point of the said arc of adjustment, the said disk members being adapted for connection to the base and structure supported, combined substantially as described.

3. An adjustable support comprising, a disk member having radial ratchet teeth formed on the face thereof, and a concentrically disposed groove, a pin carried by said disk member and movable in the said groove, means normally forcing said pin toward the center of said disk, a second disk member, pivoted to said first mentioned disk member provided with ratchet teeth, adapted to engage the said teeth of said first mentioned disk member to hold said disk members against movement therebetween in one direction, and having a concentrically described guide slot of predetermined length adapted to receive said pin and allow engaging movement between the said disk members through an angle of magnitude dependent upon the length of the said slot, means normally holding said disk members with said teeth in engagement, and means, operative upon movement between the said disk members through said angle of predetermined magnitude, to disengage the said teeth of said disk members and said pin from the said slot to permit return thereof to the starting point of the said slot, combined substantially as described.

1,024,805. NUT-LOCK. ELMER L. MINNIG, Harrisburg, Pa. Filed Nov. 16, 1911. Serial No. 660,715. (Cl. 151—25.)



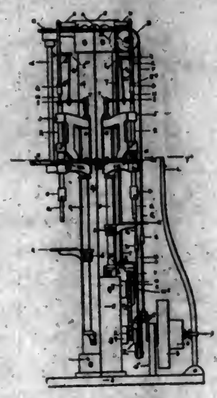
1. In a nut lock, the combination of a threaded bolt, a nut adapted to be screwed thereon, and a locking member mounted on said nut comprising a cam having a thread engaging portion transversely beveled and longitudinally inclined with respect to the threads of the bolt.

2. In a nut lock, the combination of a threaded bolt, a nut adapted to be screwed thereon, a pin projecting from the said nut, a pawl eccentrically mounted on the pin, the inner end of said pawl comprising a wedge-shaped thread engaging cam, said cam being transversely beveled from opposite sides thereof whereby unauthorized unscrewing of the nut tends to wedge said cam into the threads, the outer end of the pawl constituting a projection for engagment with a wrench to release said pawl, and a spring mounted on the pin aforesaid and secured to the pawl to hold the same in normal operative position.

1,024,806. VALVE-SEATING AND SURFACE-LAPPING MACHINE. OSCAR A. OLSON, Lincoln, Nebr. Filed Apr. 11, 1911. Serial No. 620,487. (Cl. 51—4.)

1. In a valve seating machine, the combination with a supporting frame, a driven wheel pivoted therein, operating tools pivoted in the frame, wheels for the operation of said tools, chains for the operation of said wheels, means oppositely connecting said chains with the driven wheel whereby the operating tools are alternately turned in opposite directions, of an oscillating beam pivoted to said frame, means connecting the beam with the operating tools for raising and lowering the tools, a cam operated by said driven wheel and means connecting the cam with the oscillating beam for giving it the oscillating motion, substantially as described.

2. In a valve seating machine, the combination with a supporting frame and a driven wheel pivoted therein, of operating tools pivoted in said frame, wheels for the operation of said tools, chains for the operation of said wheels, means oppositely connecting said chains with the driven wheel whereby the operating tools are alternately turned in opposite directions, an oscillating beam pivoted to the frame, means connecting the beam with the operating tools for raising and lowering the tools, a cam wheel operated by said driven wheel and a rod operated by the cam wheel and connected to the oscillating beam for giving the beam the oscillating motion, substantially as described.



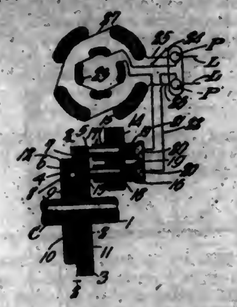
3. In a valve seating machine, the combination with a supporting frame, a driven pulley pivoted therein, a shaft with oppositely disposed crank-arms thereon operated by the pulley, tools for seating the valves, means connecting the tools with the crank-arms whereby the tools are alternately turned in opposite directions, of an oscillating beam pivoted to the frame, means connecting the beam with the tools for raising and lowering the tools, a cam wheel operated by the driven pulley and a push rod operated by the cam wheel and pivoted to the oscillating beam for giving the beam the oscillating motion, substantially as described.

4. A valve seating machine consisting of a supporting frame, a shaft having oppositely disposed crank arms thereon pivoted in the frame, a driven pulley for the operation of said shaft, links pivoted to the crank arms, chains secured to said links, pulleys on which the chains operate pivoted to the frame, a sprocket wheel operated by the chains, a shaft driven by the sprocket wheel, pulleys operated by the shaft, screw drivers rotated by the pulleys for seating the valves, a cam wheel driven by said crank shaft, a walking beam pivoted to the frame, a push rod operated by the cam wheel and pivoted to the walking beam for oscillating the walking beam, spindles pivoted to the walking beam and connected to the screw drivers for giving the screw drivers a vertical movement, means for adjusting the length of the spindles and for releasing them from operation of the screw drivers, whereby the screw drivers are alternately turned in opposite directions and intermittently raised from the valves, and tables for the support of the valves, substantially as specified.

5. A valve seating machine consisting of a supporting frame, a shaft having oppositely disposed crank arms pivoted in the frame, a driven pulley for the operation of the shaft, links pivoted to the crank arms and driven thereby, chains secured to said links, pulleys pivoted to the frame on which the chains operate, a sprocket wheel driven by the chains, a shaft driven by the sprocket wheel, a drive pulley secured to said shaft, a belt operated by said pulley, pulleys pivoted to the frame and driven by said belt, screw drivers connected to and rotated by said pulleys for seating the valves a cam wheel driven by the crank shaft, a walking beam pivoted to the frame, a push rod operated by the cam wheel and pivoted to the walking beam to oscillate the walking beam, spindles pivotally connected to the walking beam and to the screw drivers to give the screw drivers a vertical movement, means for releasing the spindles from operating the screw drivers and means for adjusting the length of the spindles, whereby the screw drivers are alternately turned in opposite directions and intermittently released from operation, and tables for the support of the valves, substantially as specified.

[Claim 6 not printed in the Gazette.]

1,024,807. AUTOMATIC STARTING DEVICE FOR SINGLE-PHASE INDUCTION-MOTORS. PAUL J. RAY, Lakewood, Ohio. Filed Jan. 25, 1912. Serial No. 673,340. (Cl. 172—279.)



1. The combination in a self-starting single phase induction motor, of main and starting coils, and a centrifugal cut-out device therefor connected in series with the starting coils of said motor and rotatable therewith, said cut-out comprising two concentric bodies of insulation, a contact plate carried by each body, said bodies being provided with an interposed annular channel, and a fluid circuit closer occupying a portion and within the channel to close the circuit through the plates when the motor is stationary and to open the circuit due to centrifugal force when the motor acquires speed.

2. The combination in a self starting single phase induction motor, of main and starting coils, and a centrifugal cut-out device therefor connected in series with the starting coils of said motor, and rotatable therewith, said cut-out comprising two concentric bodies of insulation, a contact plate carried by each body, said bodies being provided with an interposed annular channel, and mercury occupying a portion of and within said channel to close the circuit through the plates when the motor is stationary and to open the circuit due to centrifugal force when the motor acquires speed.

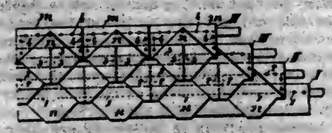
3. The combination in a self starting single phase induction motor, of main and starting coils, and a centrifugal cut-out device therefor connected in series with the starting coils of the motor and rotatable therewith, said cut-out comprising two concentric bodies of insulation, a contact plate carried by each body, said bodies being provided with an interposed annular channel, and a fluid circuit closer occupying a portion thereof and within the channel to close the circuit through the plates when the motor is stationary and to open the circuit due to centrifugal force when the motor acquires speed.

4. The combination in a self starting single phase induction motor, of main and starting coils, and a centrifugal cut-out device therefor connected in series with the starting coils of the motor and rotatable therewith, said cut-out comprising two concentric bodies of insulation, a contact plate carried by each body, said bodies being provided with an interposed annular channel, and mercury occupying a portion of and within said channel to close the circuit through the plates when the motor is stationary and to open the circuit due to centrifugal force when the motor acquires speed.

5. The combination in a self starting single phase induction motor, main and starting coils; and a centrifugal cut-out device for the motor carried by and rotatable with the rotor thereof and connected in series with the said starting coils and provided with an inclosed annular channel, said cut-out having two circular contact surfaces insulated from each other, and a fluid circuit closer occupying a portion of and within the channel, whereby when the motor is stationary, the fluid circuit closer will contact both circular plates and when the motor is rotating to acquire speed will, due to centrifugal force, be moved out of contact with said circular plates.

[Claim 6 not printed in the Gazette.]

1,024,808. ROOF. HEINRICH SCHWARZ, Vienna, Austria-Hungary. Filed Aug. 4, 1911. Serial No. 642,315. (Cl. 108—17.)



1. A roof composed of horisontal layers secured upon the building, said layers comprising sheets, plates having recesses at the rear sides of their inclined lower edges formed by bending backward and upward said lower edges, the lower angles of said plates being bent squarely backward and upward so as to form recesses wider than those at the sides of said plates, said plates being adapted to overlie said sheets and to engage in their inclined recesses the inclined lower edges of said sheets and to engage in their horizontal recesses the lower edges of the next lower layer.

2. A roof composed of horisontal layers secured upon the building, said layers comprising sheets, quadrangular in their upper portions and tapering in their lower portions, plates having recesses at the rear sides of their inclined lower edges formed by bending backward and upward said lower edges, the lower angles of said plates being bent squarely backward and upward so as to form recesses wider than those at the sides of said plates, said plates being adapted to overlie said sheets and to engage in their inclined recesses the inclined lower edges of said sheets and to engage in their horisontal recesses the lower edges of the next lower layer.

1,024,809. CHANDELIER. ALBERT SECHRIST, Denver, Colo., assignor to The Albert Sechrist Manufacturing Company, Denver, Colo., a Corporation of Colorado. Filed Nov. 4, 1911. Serial No. 658,543. (Cl. 240—78.)



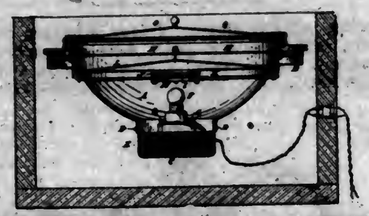
1. The combination with a hollow fixture body and means for suspending the same, of brackets composed of tube arms, end fittings and ornamental arms through which electrical conductors may be threaded, the tube arm members of the brackets being adapted to enter openings formed in the fixture body, a pipe entering the fixture body from below, its upper extremity being connected with the means for suspending the fixture body, a connector mounted on the said pipe and centrally located within the fixture body, the connector having lateral openings, and a top opening for receiving the electrical conductors, the connector also having shouldered nipples adapted to receive the inner extremities of the bracket tube arms, the latter being adapted to fit over the said nipples, and means applied to the tube arm extremities and attached to the connector for detachably securing the tube arms to the connector, for the purpose set forth.

2. In a device of the class described, the combination with a hollow fixture body, of a pipe entering the same from below, a tube stem extending downwardly from the ceiling and entering the fixture body from above, suitable means located within the fixture body for connecting the said pipe with the tube stem, a connector located within the fixture body and having a vertical opening to receive the said pipe which passes therethrough, a spacing sleeve interposed between the bottom of the connector and the bottom of the fixture body for supporting the connector in place, a nut applied to the said pipe just below the means for connecting the pipe with the tube stem, a spacing sleeve interposed between the said nut and the bottom of the connector, brackets each composed of a tube arm, an end fitting and an ornamental arm through which electrical conductors are adapted to be passed, and suitable means for detachably securing the tube arm extremities of the said brackets to the said connector, substantially as described.

3. The combination with a hollow fixture body and means for suspending the same, including a joint, a connector centrally supported and mounted within the fixture body, a pipe entering the fixture body from below and having its upper extremity connected with the means for suspending the said fixture body, said pipe passing through the connector and entirely free therefrom, and brackets composed of tube arms, the extremities of which are adapted to enter the fixture body through openings in the sides thereof and support the connector therein, substantially as described.

4. The combination with a hollow fixture body, of means for suspending the same, including a joint member to allow the canopy and its attachments to assume a proper position, brackets adapted to enter openings with which fixture body is provided, each bracket consisting of a tube arm, an end, and an ornamental arm, the three parts constituting substantially an integral device, and means supported in the fixture body for securing the tube arms in place, for the purpose set forth.

1,024,810. MARINER'S LIQUID COMPASS. LOUIS A. SHERMAN, Pembroke, Mass. Filed Jan. 12, 1911. Serial No. 602,536. (Cl. 73—125.)



1. The herein described mariner's compass comprising a bowl having a source of light interiorly, a lens projecting the rays of light from said bowl, an illuminated inclosure confining the compass card and a surmounted movable reflector adapted to deflect said light rays upon the rhumbs depicted on the reading surface of the compass card.

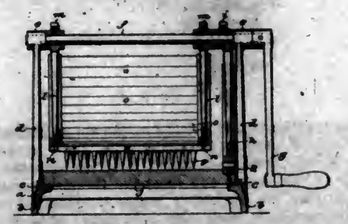
2. The combination with a compass having a detachable weighted cup provided with means for the illumination of the compass interior of a removable slidable reflector having a broken perimeter to render visible any desired segment of the compass card, a centrally apertured disk supporting said card, a sustaining diaphragm, a lens thereby supported for the projection and diffusion of light throughout the interior of the compass.

3. In a mariner's compass a bowl containing means for the artificial illumination of the bowl interior, a diaphragm bearing a light admitting attachment, a disk adapted to support the compass card and having a central opening for the penetration of the light, a compass card having a light penetrating aperture and means for the reflection of light downward upon the face of said card.

4. A compass bowl adapted for interior illumination and having a source of light producing energy, means permitting the penetration of the rays of light upward, a disk adapted to support the compass card, and a slidable reflector having a reëntering aperture extending from its perimeter through which certain of the rhumbs of the compass card are read by reflected light.

5. The herein described mariner's compass comprising, the following instrumentalities, to wit:—a bowl having a detachable weighted cup, a base mounted on said weight and provided with means for the illumination of said bowl interior, a diaphragm and means centrally located therein for admission of artificial light upward, a disk supporting the compass card and permitting the expansion of said diaphragm, a reflector reflecting the light against the reading surface of the compass card, said reflector having an opening to expose any segment of the compass card.

1,024,811. MEAT CHOPPER AND TENDERER. WILLIAM M. STANTON, Milwaukee, Wis. Filed Feb. 19, 1912. Serial No. 678,659. (Cl. 17—29.)



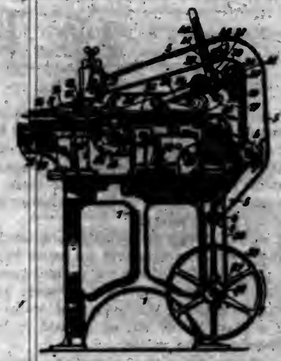
1. In a meat chopper and tenderer the combination of a frame having standards and parallel horizontal ways at the sides, a reciprocating table fitted to slide on said ways and provided on one side with a rack, a cross shaft having bearings in said standards and provided at one end with a crank, a segment gear fixed on said shaft and meshing with said rack, a segment wheel mounted on said shaft and provided on its periphery with a plurality of separated fiber severing blades arranged to pierce meat placed on said table.

2. In a meat chopper and tenderer the combination of a frame having a pair of opposite standards and parallel horizontal ways at the sides, a table fitted to reciprocate on said ways and provided at one side with a rack, a cross shaft rotatably supported above said table in said standards and provided at one end with a crank handle, a segment gear fixed on said shaft in mesh with said rack, a pair of segment wheels mounted on said shaft adjacent to said standards, and a plurality of cross plates each provided with a series of sharp blades and detachably fastened at the ends to the rims of said wheels.

3. In a meat chopper and tenderer the combination of a frame having two opposite standards and parallel horizontal ways at the sides, a reciprocating table fitted to slide on said ways and provided at one side with a rack, a cross shaft rotatably mounted in said standards above said table and provided at one end with a crank handle, a segment gear fixed on said shaft and meshing with said rack, and a segment wheel mounted on said shaft and provided on its periphery with staggered radial cutting blades arranged to closely pierce a piece of meat carried on said table underneath said wheel.

4. In a meat chopper and tenderer the combination of a frame having two opposite standards and parallel horizontal ways at the sides, a reciprocating table fitted to slide on said ways and provided with a longitudinal rack at one side, a cross shaft rotatably mounted in said standards and provided at one end with a crank handle, a segment gear fixed on said shaft and meshing with said rack, a pair of segment wheels mounted on said shaft adjacent to said standards, and cross plates detachably fastened at the ends to the rims of said wheels side by side and each provided with a row of cutting blades, the blades of each plate alternating with those of the adjoining plate or plates.

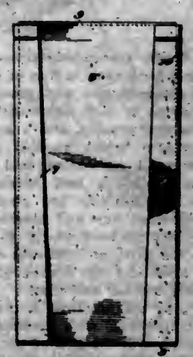
1,024,812. MACHINE FOR CUTTING EMBROIDERIES. ALOIS TSCHUDIN, Rorschach, Switzerland, assignor to The Firm of Henri Levy, Rorschach, Switzerland. Filed Sept. 13, 1911. Serial No. 649,071. (Cl. 164—49.)



1. In a machine for cutting embroidery background along the edge of the embroidery, a knife, a pair of superposed endless bands movable in parallel horizontal planes at each side of the knife, adapted to feed the embroidery along the edge of the knife and to stretch the background in a direction perpendicular to its direction of travel, the bands at the back of the knife being higher than the bands opposite the edge of said knife.

2. In a machine for cutting embroidery background along the edge of the embroidery, a knife blade lying in substantially the plane of the background, two superposed endless bands movable in parallel horizontal planes at each side of the knife and adapted to feed the background in a straight line along the knife at an angle to the edge of the latter and to stretch the background in a direction perpendicular to its direction of travel, said bands diverging in the direction of their travel, the bands at the back of the knife being higher than the bands opposite the edge of said knife.

1,024,813. SHIRT-ENVELOP. GEORGE WORDINGHAM, Milwaukee, Wis. Filed Jan. 4, 1911. Serial No. 600,822. (Cl. 229—87.)



1. A wrapper comprising a relatively stiff back section and a relatively flexible front section, the front section being secured at its rear edge portions to the corresponding edge portions of the back section, the portion of the front section between its outer edge portions being of greater width at one end than the said back section, whereby to afford a pocket between the sections tapering from end to end.

2. A wrapper comprising a relatively stiff back section and a relatively flexible front section, the front section being secured at its lateral edge portions to the corresponding edge portions of the back section, the portion of the front section between its attached edge portions being of greater width at one end than the back section at the corresponding end and at its other end being of substantially the same width as the back section at the corresponding end, whereby to afford a pocket between the sections tapering from end to end.

3. A wrapper comprising a relatively stiff back section and a relatively flexible front section, the front section being secured at its lateral edge portions to the corresponding edge portions of the back section, the portion of the front section between its attached edge portions being of greater width at one end than the back section at the corresponding end and at its other end being of substantially the same width as the back section at the corresponding end, whereby to afford a pocket between the sections tapering from end to end, the said front section at its end edge portions being unattached to the back section.

1,024,814. BRIDGE-SPRING FOR EYEGLASSES. LEO F. ADT, Albany, N. Y. Filed June 26, 1906. Serial No. 323,923. (Cl. 88—45.)



1. In eyeglasses, the combination with the lenses, and the nose-guards, of a bridge spring for connecting the lenses embodying a central portion adapted to span the wearer's nose, resilient loops at the ends of the central portion and stops arranged to cooperate with the outer sides of the bridge intermediate of its central portion and its attached portion.

2. In eyeglasses, the combination with the lenses, and the nose-guards attached thereto, of a bridge spring connecting the lenses embodying a central portion, and resilient loops arranged in planes transverse of the lenses beyond the central portion, fulcrums being arranged to cooperate with the outer sides of the bridge between its central portion and said loops to prevent inward movement of the inner ends of the lenses when the latter are turned to operate the guards.

3. In eyeglasses, the combination with the lenses, and the nose-guards movable therewith, of a bridge spring embodying a central portion, and resilient loops arranged in planes transverse to the lenses, portions of the bridge beyond the loops being arranged to engage at the outer side of the bridge at points between its central and looped portions.

4. In eyeglasses, the combination with the lenses provided with suitable attaching devices, and nose-guards connected thereto, of a bridge spring adapted to connect the lenses and having resilient loops near each end embracing their respective attaching devices and having their ends attached thereto, portions of the spring being arranged to engage other portions thereof at points between the loops and its central portion to serve as centers for the turning movement of the lenses and guards.

5. In eyeglasses, the combination with the lenses, and a bridge for connecting the lenses embodying a forwardly bowed central portion and resilient portions at the ends of the central portion, of stops arranged to engage the outer sides of the central portion to limit the swinging of the lenses.

[Claims 6 to 9 not printed in the Gazette.]

1,024,815. RAZOR-SHARPENING MACHINE. PAUL AMADEO, Shenandoah, Pa. Filed Oct. 31, 1911. Serial No. 657,393. (Cl. 51—16.)

1. In a machine of the character described, the combination with a table, of a projection on the table, a hone

holder, having a central recess therein to receive said projection and support the holder slightly above the table, a hone in said holder, and means for moving a razor blade over said hone, substantially as described.



2. In a machine of the character described, the combination with a table, of a projection on the table, a hone holder having a central recess therein to receive said projection and support the holder slightly above the table, a hone in said holder, a shaft projecting through the table, a razor blade holder above the table and having a crank connection with said shaft, and means in said holder for securing a razor in position with its blade on said hone, substantially as described.

3. In a machine of the character described, the combination with a table, of a projection on the table, a hone holder having a central recess therein to receive said projection and support the holder slightly above the table, a hone in said holder, a shaft projecting through the table, a razor blade holder above the table and having a crank connection with said shaft, means in said holder for securing a razor in position with its blade on said hone, said holder mounted to turn, and means exerting downward spring pressure on said holder, substantially as described.

4. In a machine of the character described, the combination with a table, of a projection on the table, a hone holder having a central recess therein to receive said projection and support the holder slightly above the table, a hone in said holder, a shaft projecting through the table, a razor blade holder above the table and having a crank connection with said shaft, means in said holder for securing a razor in position with its blade on said hone, a ring on said holder, a hinged arm, a spring connecting said ring and arm, and a cam lever engaging said arm regulating the tension of said spring on the holder, substantially as described.

5. In a machine of the character described, the combination with a table, of a projection on the table, a hone holder having a central recess therein to receive said projection and support the holder slightly above the table, a hone in said holder, a shaft projecting through the table, a razor blade holder above the table and having a crank connection with said shaft, means in said holder for securing a razor in position with its blade on said hone, a ring on said holder, a hinged arm, a spring connecting said ring and arm, a cam lever engaging said arm regulating the tension of said spring on the holder, said spring located at an angle and tending to move the holder in one direction, a pivoted block, a roller on said block against said holder, and a catch holding said block with its roller against the holder, substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,024,816. WAVE-FORCE-UTILIZING DEVICE. EMMER B. ARNOLD, Los Angeles, Cal. Filed May 31, 1911. Serial No. 630,518. (Cl. 61—49.)

1. A device comprising a tapering inclosure arranged to be submerged, and being open at one end, said inclosure having a yielding top, and an outlet contiguous with said inclosure.

2. A device of the character described, comprising an inclosure arranged to be partially submerged, said inclosure being open at one end, and having a yielding top, said inclosure having at its other end a constricted passageway, divided into a plurality of compartments.



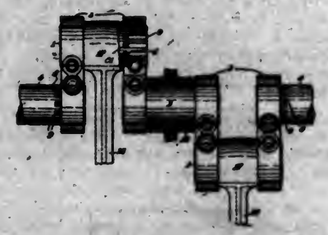
3. A device of the character described, comprising an inclosure arranged to be partially submerged, said inclosure being open at one end, and terminating at its other end in a constricted passage way, divided in compartments, valves to control the outlet from one or more of said compartments, and a flexible top on said inclosure arranged to yield to the thrust of waves.

4. A device of the character described, comprising an inclosure having a yielding top, said inclosure being open at one end for the reception of the waves, and terminating at its other end in a constricted passageway, valves in said passageway to prevent the return of water to said inclosure, and a plurality of valves in said inclosure to prevent the rebound of the water.

5. A device of the character described, comprising a tapering inclosure having a top movable relatively thereto, and a constricted passageway, divided into a plurality of compartments, an outlet for said compartments, valves to control the outlet from one or more of said compartments, and a means to prevent the rebound of water in said inclosure.

[Claims 6 to 8 not printed in the Gazette.]

1,024,817. CRANK-SHAFT. HORACE L. ARNOLD, New York, N. Y. Filed Oct. 7, 1909. Serial No. 521,506. (Cl. 74—5.)

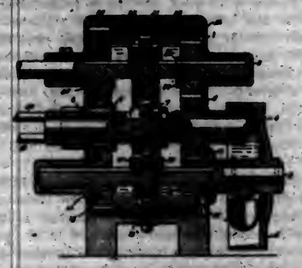


1. In a crank shaft, the combination with a pair of crank shaft end members, each having at one end a series of longitudinally disposed ribs and grooves, a series of wrist pins each having at each end a series of longitudinally disposed ribs and grooves, and a series of pairs of crank arms, each arm being provided with a pair of bores disposed in axial parallelism and in the portion between said bores with a kerf extending from one to the other in substantially the plane of the axes and a pair of combined key and binding bolt seats in said portion disposed perpendicularly to said kerf and each opening into the adjacent bore, each of the bores having a series of grooves and ribs mating with the ribs and grooves on the shaft member and pins.

2. As an article of manufacture, a crank arm having a pair of eyes each provided with a series of grooves and ribs disposed parallel with the axis of the eye, there being an opening connecting the eyes disposed in the plane of the axes of said eyes, and a pair of transversely disposed key bolt seats passing through said intervening portion of the arm intersecting the said opening and cutting into the eyes.

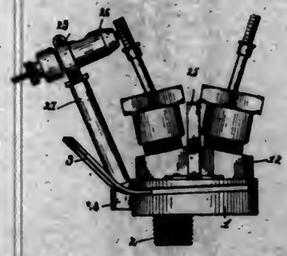
3. As an article of manufacture, a crank arm having a pair of eyes disposed in axial parallelism, each eye having a series of uniform grooves and uniform ribs disposed parallel with its axis, the portion of the arm between the eyes being provided with a kerf connecting the eyes and disposed in about the plane of the said axes, and a pair of combined key and binding bolt seats in said between portion of the arm disposed transversely of said kerf one of said seats opening into one of the eyes and the other of said seats opening into the other eye.

1,024,818. VARIABLE-SPEED GEARING. JOHN S. BARNES, Rockford, Ill., assignor to W. F. & John Barnes Company, Rockford, Ill., a Corporation of Illinois. Filed Oct. 30, 1911. Serial No. 657,670. (Cl. 74—58.)



A variable speed gearing comprising a driving-shaft, a driven-shaft, an intermediate-shaft, three spur-gears fixedly connected to the intermediate-shaft, a spur-gear slidably mounted on the driving-shaft and provided with clutch members on both faces, two-spur-gears loosely mounted on the driving-shaft, and each provided with a clutch face, means for moving the clutch members of the slidable gear on the driving-shaft into engagement with either of the clutch faces of the gears loosely mounted thereon, a spur-gear slidably mounted on the driven-shaft and provided with clutch members on both faces, two spur-gears loosely mounted on the driven shaft and each provided with a clutch face, and means for moving the clutch members of the slidable-gear on the driven-shaft into engagement with either of the clutch faces of the gears loosely mounted thereon.

1,024,819. SPARK-PLUG HOLDER AND SPARK-INDICATOR. EDWARD HARRON BENN, Weymouth, Mass. Filed Nov. 29, 1910. Serial No. 594,797. (Cl. 123—169.)



1. In combination with a spark indicator, a spark plug holder, means for locking said spark plug holder in a rigid position, said spark plug holder consisting of a body portion having a rotatable member mounted thereon to hold a pair of spark plugs in an oppositely inclined position, means for limiting the movement of said rotatable member.

2. In combination with a spark indicator, a spark plug holder, means for locking said spark plug holder in a rigid position, said spark plug holder consisting of a body portion having a rotatable member mounted thereon, said member adapted to hold a pair of spark plugs in an oppositely inclined position, means for limiting the movement of said rotatable member, said locking means consisting of a ring having oppositely screw-threaded portions on its inner and outer surface, said outer screw-threaded portion adapted to engage said body member, said inner screw-threaded portion adapted to engage said rotatable member.

3. In combination with a spark indicator, a spark plug holder, means for locking said spark plug holder in a rigid position, said spark plug holder consisting of a body portion having a rotatable member mounted thereon, said member adapted to hold a pair of spark plugs in an oppositely inclined position, means for limiting the movement of said rotatable member, said locking means consisting of a ring having oppositely screw-threaded portions on its inner and outer surface, said outer screw-threaded portion adapted to engage said body member, said inner screw-threaded portion adapted to engage said rotatable member, means for rotating said ring thus causing it to act in different directions upon said body member and said rotatable member.

4. In combination with a spark indicator, a spark plug holder, means for locking said spark plug holder in a rigid position, said spark plug holder consisting of a body portion having a rotatable member mounted thereon, said member adapted to hold a pair of spark plugs in an oppositely inclined position, means for limiting the movement of said rotatable member, said locking means consisting of a ring having oppositely screw-threaded portions on its inner and outer surface, said outer screw-threaded portion adapted to engage said body member, said inner screw-threaded portion adapted to engage said rotatable member, means for rotating said ring thus causing it to act in different directions upon said body member and said rotatable member, means for sealing one of said plugs against fouling when not in use.

5. In combination with a spark indicator, a spark plug holder, means for locking said spark plug holder in a rigid position, said spark plug holder consisting of a body portion having a rotatable member mounted thereon, said member adapted to hold a pair of spark plugs in an oppositely inclined position, means for limiting the movement of said rotatable member, said locking means consisting of a ring having oppositely screw-threaded portions on its inner and outer surface, said outer screw threaded portion adapted to engage said body member, said inner screw-threaded portion adapted to engage said rotatable member, means for rotating said ring thus causing it to act in different directions upon said body member and said rotatable member, means for sealing one of said plugs against fouling when not in use, said spark indicator having a spring-operated ball therein.

[Claims 6 to 10 not printed in the Gazette.]

1,024,820. PILING CONSTRUCTION. EDWARD BIGNELL, Lincoln, Nebr. Filed July 31, 1911. Serial No. 641,608. (Cl. 61—41.)



1. An improvement in piling comprising an elongated upright stem of adhesive material having an outwardly tapered member mounted upon its lower terminal and

formed with a longitudinal aperture with transverse branch apertures opening upon its sides; a main tubular member seated in and extending the entire length of the longitudinal aperture; secondary tubes disposed in the branch apertures communicating with the main tubular member; and a member communicating with and adapted to convey a supply of water to said main tubular member near the upper terminal of said main tubular member.

2. An improvement in piling comprising an upright elongated body of adhesive material with a main tubular member disposed longitudinally therein, secondary tubes opening at longitudinal intervals of and upon the sides of said elongated body in communication with said main tubular member; a member communicating with and adapted to convey a supply of water to said main tubular member; a rotatable tubular shaft disposed in said main tubular member and provided with a perforated drill-head; and a tubular member for conducting water in communication with the upper part of said rotatable, tubular shaft.

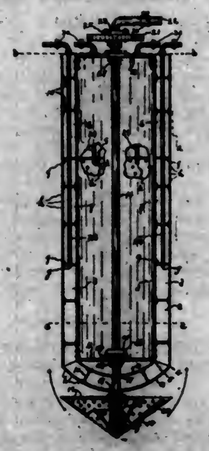
3. An improvement in piling comprising an upright, elongated body provided with a longitudinal aperture and with transvese apertures opening upon the longitudinal aperture and upon the sides of the elongated body, a conducting pipe mounted upon the elongated body and in communication with the longitudinal aperture thereof; a tubular rotatable shaft disposed within said longitudinal aperture; a cone-shaped drill-head disposed below and supported by the elongated body, said drill-head being coupled with and provided with a discharge pipe in communication with said tubular shaft.

4. A pile provided with a central longitudinal tube with transverse branches for conveying water to be discharged outwardly of its sides; a drill-head disposed outwardly of one of the terminals and supported by the pile; and a rotatable shaft connected with and adapted to rotate the drill-head.

5. A pile provided with a longitudinal tube with transverse branches for conveying water to be discharged at longitudinal intervals outwardly of its sides; an apertured drill-head disposed below and supported by the pile; and a rotatable shaft disposed in the tube and mounted upon the drill-head, said shaft being tubular to convey water to said apertured drill-head.

[Claims 6 to 8 not printed in the Gazette.]

1,024,821. CAISSON CONSTRUCTION. EDWARD BIGNELL, Lincoln, Nebr. Filed July 31, 1911. Serial No. 641,609. (Cl. 61—8.)



1. A caisson comprising an upright, elongated receptacle; a rotatable, tubular shaft longitudinally traversing the receptacle; a hollow drill-head having a perforated wall disposed below the receptacle and mounted upon the shaft; said tubular shaft and drill-head forming a conduit for the passage therethrough of a liquid element.

2. A caisson comprising an elongated, outer receptacle formed at longitudinal intervals with perforations, an elongated receptacle disposed within the perforated receptacle and forming therebetween an annular chamber; tubular members disposed in said chamber to provide conduits for the passage therein of a liquid element, a rotatable tubular shaft longitudinally traversing said receptacle; a hollow drill-head having a perforated wall disposed below the outer receptacle and mounted upon the shaft; said tubular shaft and drill-head providing a conduit for the passage therethrough of a liquid element.

3. A caisson comprising an upright, cylindrical receptacle, a rotatable tube disposed within and extending through the bottom thereof; a hollow drill-head formed with a perforated wall rigidly mounted upon said tube and disposed below the receptacle, said tube and drill-head providing a passageway for a fluid element.

4. A caisson comprising an upright, cylindrical receptacle provided upon its inner wall with transversely disposed supporting-bars; a tubular member longitudinally traversing the receptacle and journaled in the supporting-bars, said tubular member having a discharge port below the bottom of the receptacle and providing a passageway for a fluid element.

5. A caisson comprising a cylindrical, outer receptacle formed at longitudinal intervals with perforations, a cylindrical receptacle provided upon its inner wall with supporting-bars and disposed within the perforated receptacle to form a chamber therebetween; tubular members disposed in said chamber to provide conduits for the passage therein of a fluid element; a rotatable shaft longitudinally traversing the receptacles and journaled in the supporting-bars; a hollow drill-head having a tapered perforated wall, said drill-head being disposed below the outer receptacle and mounted upon the shaft; said shaft and drill-head providing a passageway for a fluid element.

[Claims 6 to 9 not printed in the Gazette.]

1,024,822. SHEET-PILING. EDWARD BIGNELL, Lincoln, Nebr. Filed Aug. 19, 1911. Serial No. 644,964. (Cl. 61—41.)



1. An improvement in piles consisting of an elongated, perforated, metallic casing formed substantially rectangular in cross-section with a tapered terminal; a partition disposed transversely within the casing to form compartments therein; a conducting-pipe having a discharge port within one of said compartments, and a tubular member traversing said compartments and having a discharge port outwardly of the tapered terminal of said casing.

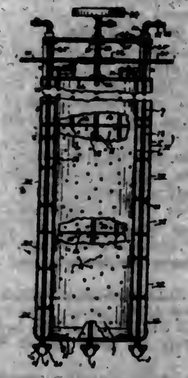
2. An improvement in piles, consisting of an elongated, perforated metallic casing formed substantially rectangular in cross-section with an outwardly convergent terminal; a plurality of partitions disposed transversely within the casing to form compartments therein; conducting-pipes having discharge ports within said compartments; tubular members traversing said compartments and having discharge ports adjacent to the convergent terminal of said casing.

3. An improvement in piles, comprising, in combination an elongated receptacle formed rectangular in cross-section with perforations in its sides and bottom, said receptacle being provided with a longitudinal slot in one of its sides, its opposite side having lugs thereon; partitions disposed transversely in the receptacle to form compartments; conducting pipes having discharge ports within the compartments; tubular members traversing the compartments and having discharge ports adjacent to the bottom of said receptacle.

4. An improvement in metallic piles, consisting of an elongated receptacle formed rectangular in cross-section, with perforated sides and an outwardly tapered bottom, said receptacle being provided at longitudinal intervals on one of its sides with lugs, its opposite side being formed with a longitudinal slot; a conducting-pipe having a discharge terminal within the receptacle; tubular members longitudinally traversing the receptacle and having discharge ports outwardly of said tapered bottom.

5. An improvement in sheet piling, comprising an elongated, hollow perforated casing rectangular in plan with interlocking devices upon two of its sides, and formed at one of its terminals with a convergent part, its opposite terminal being provided with a removable cap; conducting-pipes provided with check-valves traversing the cap and having discharge ports within the casing; tubular members provided with check-valves; said members traversing said cap and casing and having discharge ports disposed outwardly of the convergent part of said casing.

1,024,823. SELF-SINKING CAISSON. EDWARD BIGNELL, Lincoln, Nebr. Filed Aug. 19, 1911. Serial No. 644,965. (Cl. 61—8.)



1. A caisson consisting of a longitudinally apertured, cylindrical container having an outer and inner perforated wall; and a water conducting member having a discharge port disposed between said perforated walls.

2. An improvement in caissons, consisting of a longitudinally apertured cylindrical casing having its outer and inner walls formed with perforations; a transverse partition disposed between said outer and inner walls to form annular chambers; and pipes for conducting water having discharge ports in said chambers.

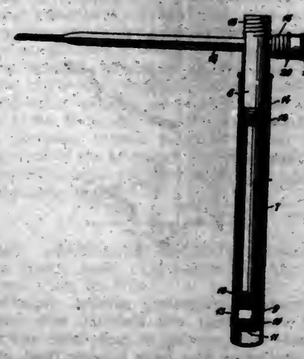
3. A caisson comprising a first, upright, metallic, cylindrical, perforated casing; a second metallic cylindrical perforated casing disposed within said first casing to form an annular chamber therebetween and to provide a central passageway opening upon the upper and lower ends of the casings, said casings having their lower edges connected by a downwardly convergent perforated wall; conducting-pipes having discharge ports within said chamber; and a plurality of braces disposed transversely within said chamber and bearing upon the cylindrical casings.

4. A caisson comprising a first, upright, metallic, cylindrical casing; a second metallic, cylindrical, perforated casing disposed adjacent to and within said first casing, said casings having their lower edges connected by a downwardly convergent perforated wall; partitions disposed transversely between and at longitudinal intervals of and bearing upon said casings to form annular compartments; and conducting-pipes having discharge ports within said annular compartments.

5. A caisson, consisting of a pair of perforated, tubular members of different diameters, one being disposed within the other to form an annular chamber therebetween, annular partitions between said members to divide the chamber into compartments; conducting-pipes leading to and having discharge ports within said compartments, and means upon said conducting-pipes for the control of said discharge ports.

[Claims 6 to 15 not printed in the Gazette.]

1,024,824. CLINICAL-THERMOMETER CASING. CLARE W. BOMAN, New York, N. Y., assignor to Charles J. Tagliabue, Brooklyn, N. Y. Filed Sept. 8, 1911. Serial No. 648,364. (Cl. 73—52.)



1. A device for returning the mercury to the bulb of a thermometer comprising two sections movable relatively to each other, one of said sections forming a thermometer carrying section and being provided with a means for removably connecting a thermometer therewith, means for moving said thermometer carrying section relatively to the other section and means for arresting the movement of said thermometer carrying section.

2. A device for returning the mercury to the bulb of a thermometer comprising two sections movable relatively to each other, one of said sections being provided with a means for removably connecting a thermometer therewith, a normally inactive means connected with each section and adapted to be brought to an active condition by a relative movement of said sections and then to move said thermometer carrying section to return the mercury to the bulb and means for arresting the movement of said sections.

3. A device for returning the mercury to the bulb of a thermometer comprising two sections movable relatively to each other, one of said sections being provided with a means for removably connecting a thermometer therewith, a normally inactive means connected with each section and adapted to be brought to an active condition by a movement of the thermometer carrying section in one direction and then to move said thermometer carrying section in another direction to return the mercury to the bulb and means for arresting the movement of said thermometer carrying section in both directions.

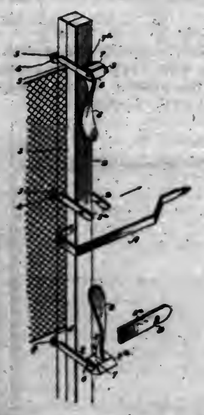
4. A device for returning the mercury to the bulb of a thermometer comprising two sections rotatable relatively

to each other, one of said sections being provided with means for supporting a thermometer with its axis extending across the axis of said section, means arranged to rotate the thermometer carrying section relatively to the other section and a stop for arresting the movement of said thermometer carrying section.

5. A device for returning the mercury to the bulb of a thermometer comprising two sections rotatable relatively to each other, one of said sections being provided with means for supporting a thermometer with its axis extending across the axis of said section, means arranged to rotate the thermometer carrying section relatively to the other section and a stop connected with said thermometer carrying section for arresting the movement thereof.

[Claims 6 to 12 not printed in the Gazette.]

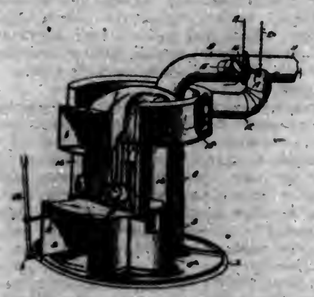
1,024,825. WIRE-CLAMP FOR WIRE-STRETCHING MACHINES. DAVID C. BROGDEN, Paragould, Ark. Filed Nov. 9, 1909. Serial No. 527,036. (Cl. 39—53.)



A wire stretcher comprising parallel, oppositely disposed bars of relatively soft material, said bars being freely movable with relation to each other and adapted to clamp a section of wire fence between them, clamping devices freely movable longitudinally upon the bars and including oppositely disposed side clips, each clip being screw threaded at one end and having an angular notch at the other, a transverse bar having perforations through which the screw threaded ends of the clip pass, a nut on the screw threaded end of each clip for adjusting it relative to the transverse bar, and a cam block disposed between each pair of clips and having oppositely disposed trunnions at its ends detachably engaging in said notches in the side clips, said cam block having at one side flat faces which converge toward each other at equal angles, said block also having at its side and disposed approximately at right angles a laterally extending handle.

1,024,826. FURNACE AND STOVE STRUCTURE. WILLIAM F. BRUNSWICK, Akron, Ohio, assignor to The Reverse Draft Furnace Co., a Corporation of Ohio. Filed Dec. 10, 1909. Serial No. 532,371. (Cl. 126—99.)

1. In a combined direct and indirect draft furnace, the combination of an ash pit, a combustion chamber located over the ash pit, a smoke pipe, a direct draft and indirect draft inlet pipe leading from the top of the combustion chamber to the smoke pipe and provided at an intermediate point in the length thereof with an indirect draft inlet opening, valve means controlling the said indirect draft inlet opening, a damper arranged in the direct draft and indirect draft inlet pipe at a point between the draft inlet opening and the smoke pipe, a U shaped and horizontally disposed radiator extending around the combustion chamber, vertical flues leading from the arms of the U shaped radiator to opposite sides of the ash pit, and an indirect draft pipe leading from the curved end of the U shaped radiator to the smoke pipe, the before mentioned direct draft and indirect draft inlet pipe serving to convey fresh air to the combustion chamber when the device is used as an indirect draft furnace, and also serving to carry the products of combustion directly to the smoke pipe when the device is used as a direct draft furnace.



2. In a combined direct and indirect draft furnace, the combination of an ash pit, a combustion chamber located over the ash pit, a smoke pipe, a direct draft and indirect draft inlet pipe having an elbow formation, one of the arms thereof communicating with the top of the combustion chamber while the opposite arm thereof is substantially horizontal and leads to the smoke pipe, the latter mentioned arm being formed with an indirect draft inlet opening, valve means for controlling the said indirect draft inlet opening, a damper arranged in the direct draft and indirect draft inlet pipe at a point between the draft inlet opening and the smoke pipe, a U-shaped and horizontally disposed radiator extending around the upper portion of the combustion chamber, vertical flues leading from the arms of the U-shaped radiator to opposite sides of the ash pit, and an indirect draft pipe arranged under the direct and indirect draft inlet pipe and also having an elbow formation, one of the arms of the indirect draft pipe being substantially horizontal and communicating with the middle portion of the U-shaped radiator while the opposite arm thereof extends upwardly and communicates with the smoke pipe, the before mentioned direct draft and indirect draft inlet pipe serving to convey fresh air to the combustion chamber when the device is used as an indirect draft furnace, and also serving to carry the products of combustion directly to the smoke pipe when the device is used as a direct draft furnace.

1,024,827. GRAB-BUCKET. JAMES L. BUTLER, Alliance, Ohio. Filed July 30, 1909. Serial No. 510,348. (Cl. 37—30.)

1. In a device of the character described, the combination with a pair of pivotally connected buckets, of mechanism for raising and lowering the same, and means for opening and closing the buckets, comprising a swinging member pivotally carried by said raising and lowering mechanism and having a cam engagement with said buckets.

2. In a device of the character described, the combination with a pair of pivotally connected buckets, of mechanism for raising and lowering the same, and means for opening and closing the buckets comprising a swinging member carried by said raising and lowering mechanism and having a cam engagement with the pivotal connection of said buckets.

3. In a device of the character described, the combination with raising and lowering mechanism, of a pair of buckets pivoted to one another independently of said raising and lowering mechanism, a swinging cam carried by the raising and lowering mechanism, and a connection between said cam and said buckets for opening and closing the same by the swinging movement of the cam.

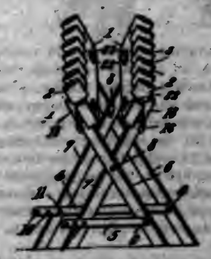


4. In a device of the character described, the combination of a pair of oppositely-arranged buckets hinged together, a shaft, links connecting said shaft to said buckets, a cam rotatable on said shaft, a roller on said bucket hinge connection coöperating with said cam, an actuating arm rotatable on said shaft and adapted to be connected to suitable hoisting and lowering mechanism, and a latch adapted to detachably connect said arm and cam whereby the companion buckets may be closed together when the cam is swung on the shaft by means of said arm and latch and may swing open when the cam is unlatched from said arm, substantially as described.

5. In a device of the character described, the combination of a pair of oppositely-arranged buckets hinged together, a cam rotatably mounted on said buckets, means associated with the bucket hinge connection and coöperating with said cam or eccentric, a swinging operating arm adapted to be connected to a hoisting and lowering appliance, the center of gravity of said arm being at one side of the line through its swinging attachment and the part adapted for securing to the hoisting appliance, and means to secure and break operative connection between said arm and cam or eccentric, whereby said arm and cam control the opening and closing of said buckets, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

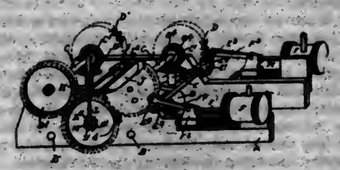
1,024,828. TILE-UNLOADING MACHINE. ROBERT M. CAMPBELL, Fort Dodge, Iowa. Filed May 16, 1910. Serial No. 561,640. (Cl. 193—1.)



1. In a tile unloader, a pair of beams, sockets secured to the beams, rollers journaled on the upper edges of the beams, and a pair of crossed and pivoted legs having their upper ends engageable in the said sockets.

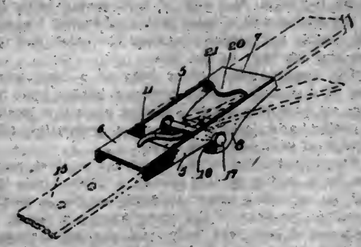
2. In a tile unloader, a pair of beams, rollers journaled on the upper edges thereof and of diameter greater than the thickness of the beams, and a pair of crossed and pivoted legs adapted to support the said beams to permit them to be swung on a lower pivotal point.

1,024,829. RAIL-BENDING MACHINE. JOHN HUNTER CASSIDY, Sault Ste. Marie, Ontario, Canada. Filed July 14, 1911. Serial No. 638,468. (Cl. 153—54.)



In a rail bending machine, the combination with the main frame conected intermediately of its length by upper and lower cross projecting guide-ways, and a block held between each of the upper and lower projecting guide-ways, of a vertical spindle journaled between the said guiding blocks, a roller mounted thereon and designed to bear against one side of the rail, threaded spindles journaled to the main frame and extending through the projecting guide-ways and threaded through the blocks, an operating ratchet and lever, suitable gears connecting the ratchet and lever to said spindles so as to operate the threaded spindles in unison, a rail supporting roller journaled in the main frame to the front and rear of the aforesaid roller, suitably journaled vertical spindles also located to the front and rear of the aforesaid roller, and rollers journaled thereon designed to bear against the opposite side of the aforesaid rail, and means for driving the supporting roller and feeding roller in unison, as and for the purpose specified.

1,024,830. CROSS-LINE BUCKLE. ARTHUR L. COOK, North Heath, Mass. Filed July 18, 1911. Serial No. 638,360. (Cl. 24—178.)



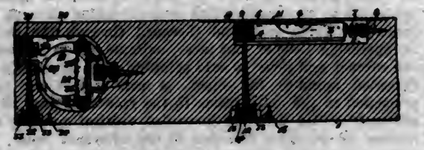
1. A cross line buckle including a frame having spaced vertical side bars connected by horizontal end bars, one of which is provided with an inwardly extending guard lip defining spaced recesses, there being ears depending from the side bars and provided with transversely alined bearings having inclined slots communicating therewith, a cross bar journaled in said bearings and having its opposite ends reduced to form terminal heads bearing against the outer faces of the ears, and a tongue rigidly secured to the cross bar and adapted when swung rearwardly normally to engage the guard lip, the free end of said tongue being movable laterally on either side of the guard lip and downwardly through either recess to permit the removal of the tongue supporting bar through the slots in the ears.

2. A cross line buckle including a frame having spaced vertical side bars connected by horizontal end bars, said side bars having their intermediate portions provided with depending ears having transversely alined elongated bearing formed therein and provided with inclined slots communicating with the bearings, one of the end bars of the

frame being formed with an inwardly extending guard lip defining spaced recesses, a cross bar having its opposite ends reduced and journaled in the bearings, and a tongue rigidly secured to the cross bar and adapted when swung rearwardly normally to engage the guard lip, said cross bar being movable longitudinally within said bearings so as to permit the free end of the tongue to clear the guard lip and register with either recess when said tongue is swung rearwardly and downwardly to permit the release of the cross bar through the slots in said ears.

3. A blank for cross line buckles including a flat metallic body portion having its opposite longitudinal edges extended laterally to form enlargements pierced by openings constituting bearings, there being slots formed in the enlargements and communicating with said openings, and a slot formed in the center of the blank and defining oppositely disposed end bars, the inner edge of the metal constituting one of the end bars being cut-away to form an inwardly extending lip defining spaced recesses.

1,024,831. LEVEL. WILLIAM L. COUTURE, San Francisco, Cal., assignor of one-tenth to Zovaida Moore, San Francisco, Cal. Filed July 27, 1911. Serial No. 640,818. (Cl. 73—70.)



1. In combination with a body of a level, a bubble tube, a casing therefor, and a coiled spring, the axis of which is in line with the casing, one end of which is secured to said casing and the other end to the level body, the casing being otherwise free at the end connected to said spring.

2. The combination with the body of a level, of a bubble tube, a casing for said tube, a coiled spring secured to an end of said casing and supported at the other end by the body of the level, the axis of said spring being in line with the casing, and a coiled spring extending transversely to the casing and secured between the other end of said casing and the body of the level.

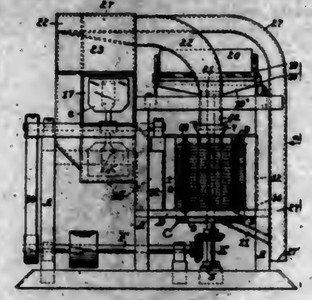
3. The combination with a body of a level having a recess, of a casing in said recess, a bubble tube in said casing, an adjusting screw abutting against a portion of said casing, and locking means for preventing the displacement of said adjusting screw.

4. The combination with a body of a level having a recess, of a casing in said recess, a bubble tube in said casing, an adjusting screw abutting against a portion of said casing, the head of the screw having a recess, and a screw screwed into said body, and passing through said recess to prevent the adjusting screw from turning, said body having a recess to receive the head of the screw, said recess being of greater depth than the thickness of said head, whereby the head is protected from accidental displacement.

5. In a level, in combination, a bubble tube, a sheet of soft rubber surrounding an end of said tube, a casing, copper wire surrounding said soft rubber, and solder connecting said wire to the casing.

1,024,832. APPARATUS FOR TREATING GRAIN. EZEKIEL B. COX, Newtown, Pa., assignor to E. B. Cox Manufacturing Co., Hopewell, N. J. Filed Oct. 5, 1911. Serial No. 653,074. (Cl. 33—29.)

1. In an apparatus for separating impurities from grains and seeds, a vertical mill having an exterior wall provided with passages throughout its circumference and length, adapted to permit the passage of air and to exclude the grain or seeds, and having also an interior abrading surface, in combination with a revolving interior abrading cylinder having openings throughout its length for the transverse passage of air from side to side, means for distributing grains and seeds to the annular space and means for applying an air current across the mill throughout its length, substantially as described.



2. In an apparatus for cleaning grains and seeds, a vertical mill comprising an exterior wall composed of a series of rings having interior abrading surfaces, and spaces between said rings adapted to permit the passage of air and to exclude the grains, a central shaft carrying a series of disks thereon, having peripheral abrading surfaces adapted to coact with the wall, the upper disk having radial ridges for distributing grain, and comprising also means for maintaining a current of air across the mill, substantially as described.

3. In an apparatus for cleaning grain and seed, a vertical mill comprising an outer wall having interior abrading surfaces and an opening for the passage of air throughout its length, a shaft carrying abrading and distributing disks, said disks being separated to permit the passage of the air, an air box inclosing the wall in combination with a hopper for conveying the grain to the upper disk, a chute for conveying grain from the bottom of the mill and an exhaust fan connected with the box which incloses the mill for maintaining a current of air across the mill, said fan also having connections with the hopper and with the chute leading from the bottom of the mill, substantially as described.

1,024,833. CABLEWAY LOGGING APPARATUS. JOSEPH H. DICKINSON, Montclair, N. J. Filed May 20, 1909. Serial No. 497,281. (Cl. 214—14.)



1. In a conveying apparatus, in combination, a spar, a hauling device, an outhaul and supporting rope connected at one end to said hauling device, a load carriage supported solely on and movable along said rope, the other end of the rope passing over a guide on the spar and being connected to the carriage, a skidding line having one end connected to a hauling device and the other end extended over a guide on the carriage, said lines being operable by the hauling device to raise and convey the carriage, and means for preventing slacking of the hauling rope when the skidding line is slackened.

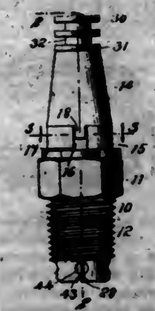
2. In a conveying apparatus, in combination, a spar, a hauling device, an out-haul rope connected at one end to said hauling device, a load carriage supported solely on and movable along said rope, the other end of the out-haul rope passing over a guide on the spar and connected to the carriage, a skidding line passing over guides on the spar and the load carriage respectively, and a carriage holding line passing over a guide on the spar and connected to the carriage, and operable in conjunction with the out-haul rope to maintain the elevation of the carriage when the skidding line is slackened.

3. In a conveying apparatus, in combination, head and tail spars, a hauling device, an out-haul rope connected at one end to the hauling device, a load carriage supported solely on and movable along said rope, the other end of the out-haul rope passing over a guide on the tail spar and connected to the carriage, a skidding line passing over guides on the head spar and the load carriage respectively, and a carriage holding line passing over a guide on the head spar and connected to the carriage, and operable in conjunction with the out-haul rope to maintain the elevation of the carriage when the skidding line is slackened.

4. In a conveying apparatus, head and tail spars, a hauling device, an out-haul and supporting rope connected at one end to the hauling device and passing over guides on the head and tail spars and spanning the space between said spars, a carriage supported solely on and movable along said rope, the other end of the hauling rope from that connected to the hauling device being connected to the carriage, a second hauling device, a skidding rope connected thereto and passing over guides on the head spar and the carriage respectively, a third hauling device, and a carriage holding rope connected thereto and passing over a guide on the head spar and secured to the carriage.

5. In a conveying apparatus, head and tail spars, a hauling device, an out-haul and supporting rope connected at one end to the hauling device and passing over guides on the head and tail spars, a carriage supported solely on and movable along said rope, the other end of the hauling rope from that connected to the hauling device being connected to the carriage, a second hauling device, a skidding rope connected thereto and passing over guides on the head spar and the carriage, a take-up device, and a carriage holding rope connected thereto and passing over a guide on the head spar and secured to the carriage.

1,024,834. SPARK-PLUG. LOUIS J. DIBRAND, Torrington, Conn., assignor of one-half to Charles H. Carlin, Torrington, Conn. Filed Nov. 20, 1907, Serial No. 402,998. Renewed Aug. 30, 1911. Serial No. 646,846. (Cl. 123—169.)



1. A sparking device, comprising a plug-member having an L-shaped slot at one end and a screw-threaded portion adapted to be attached to the engine cylinder and provided with an eccentrically arranged opening therein, and insulating-sleeve provided with a peripheral groove adapted to be alined with the L-shaped slot, and a locking device having a handle movable around the plug-member and provided with an inward-projecting tooth adapted to enter the groove of the sleeve and detachably lock said sleeve to the plug.

2. A sparking device, comprising a plug-member having an L-shaped slot at one end and a screw-threaded portion adapted to be attached to the engine cylinder and provided with an eccentrically arranged opening therein, an insulating-sleeve provided with a peripheral groove adapted to be alined with the L-shaped slot, and a locking device rotatable on the plug-member and having an operating handle and a part adapted to enter the groove of the sleeve and detachably lock said sleeve to the plug.

3. A sparking device, comprising a plug-member forming one terminal and having an eccentrically arranged opening therein and a cylindrical boss at one end provided with an L-shaped slot having one part thereof extending peripherally, said member having a screw-threaded portion for attachment to the engine cylinder and provided with intersecting slots at its other end, an insulating-member fitting the opening of the plug-member and having a peripheral groove adapted to be alined with a part of the L-shaped slot, a locking device having a handle and fitting the boss of the plug-member so as to rotate thereon and provided with an inward-projecting tooth adapted to enter the groove of the insulating-member and detachably hold said insulating-member to the plug-member, a conductor passing through the insulating-member and having a reduced end forming a terminal adjacent to the intersecting slots of the plug-member, nuts for holding the conductor to the insulating-member, and a detachable device having members adapted to slip over the body of the nuts and connect an electric wire to the conductor.

4. A sparking device, comprising a plug-member forming one terminal and having an eccentrically arranged opening therein and a cylindrical boss at one end provided with an L-shaped slot having one part thereof extending peripherally, said member having a screw-threaded portion for attachment to the engine cylinder and provided with intersecting slots at the other end, an insulating-member fitting the opening of the plug-member and having a lug fitting the L-shaped slot and a peripheral groove adapted to be alined with a part of the L-shaped slot, a locking device held on the boss of the plug-member so as to rotate thereon and provided with an inward-projecting tooth adapted to enter the groove of the insulating-member and detachably hold said insulating-member to the plug-member, a conductor passing through the insulating-member and having a reduced end forming a terminal adjacent to the intersecting slots of the plug-member, and nuts for holding the conductor to the insulating member.

5. A sparking device, comprising a plug-member forming one terminal and having an eccentrically arranged opening therein and a cylindrical boss at one end provided with an L-shaped slot having one part thereof extending peripherally, said member having a screw-threaded portion for attachment to the engine cylinder and provided with intersecting slots at the other end, an insulating-member fitting the opening of the plug-member so as to provide a chamber within the plug-member adjacent to the intersecting slots and having a peripheral groove adapted to be alined with a part of the L-shaped slot, a locking wrench fitting the boss of the plug-member so as to rotate thereon and provided with an inward-projecting tooth adapted to enter the groove of the insulating-member and detachably hold said insulating-member to the plug-member, a conductor passing through the insulating-member and having a reduced end forming a terminal adjacent to the intersecting slots of the plug-member, and means for holding an electric wire to the conductor.

[Claims 6 and 7 not printed in the Gazette.]

1,024,835. ROLLER-SKATE. JAMES G. DOAK, Philadelphia, Pa. Filed Apr. 6, 1907. Serial No. 366,733. (Cl. 46—51.)



1. A bearing for ball rollers, comprising a central section having laterally open cup-shaped chambers in their

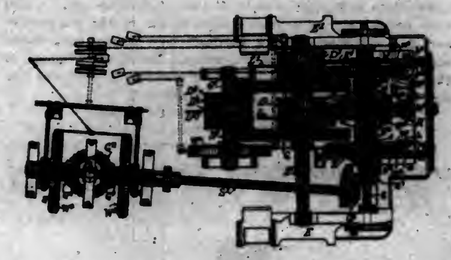
opposite ends, circular vertically-disposed ball races being formed in the lateral walls of said chambers, supplemental sections one on each side of said central section each formed with a cup-shaped chamber provided with a vertically disposed ball race, circular series of bearing balls running in said races, ball rollers supported by and between two circular series of bearing balls, and means for connecting the supplemental sections to the central section to form sockets around the ball rollers.

2. The combination with the supporting block of a roller skate, of a bearing comprising a central section secured to said block, and hollowed out at each end to provide cup-shaped chambers each formed with a vertically disposed circular ball race, supplemental sections formed on their inner sides with cup-shaped chambers having vertically disposed circular ball races, confronting those of the central section, means for detachably connecting said sections to form sockets, ball rollers within said sockets, and circular series of bearing balls running in said ball races and by and between which the ball rollers are supported.

3. The combination with the supporting block of a roller skate, of a bearing comprising a central section secured to said block, and hollowed out at the under side of each end to provide cup-shaped chambers, each formed with a vertically disposed circular ball race in its innermost wall, supplemental sections formed in their inner sides wth cup-shaped chambers havng vertically disposed circular ball races confronting those of the central section, spacing washers between the central section and supplemental sections, means for securing the latter and the washers to the central section, ball rollers within said chambers, and circular series of bearing balls running in the ball races and supporting the ball rollers.

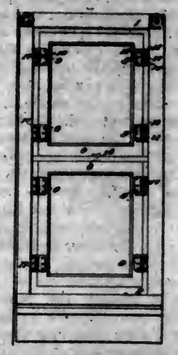
4. A roller skate comprising a supporting block, a section secured to the under side of the supporting block and having its ends formed with concave chambers and circular vertically disposed ball races, in said chambers, end sections each having one face formed with a concave chamber opposed to a chamber in the first-mentioned section and having a vertically disposed circular ball race, circular series of balls running in said races, ball rollers supported by and between the circular series of balls, spacers between the first-mentioned section and each of the end sections, and means for securing the spacers and the several sections together, the opposed concave chambers forming sockets around the ball rollers whereby said rollers are exposed for only a small portion of their surfaces below the sections.

1,024,836. MECHANISM FOR OPERATING CRANES. JOHN P. DOWD, Cleveland, Ohio, assignor to The Brown Hoisting Machinery Company, Cleveland, Ohio, a Corporation. Filed Jan. 11, 1912. Serial No. 670,671. (Cl. 57—83.)



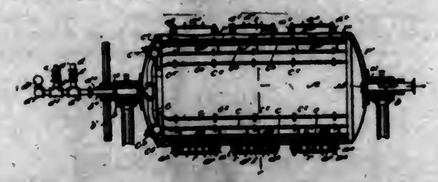
The combination, with a main driving-shaft having sleeves loosely mounted thereon provided with oppositely related gear wheels at the inner ends of the same, of a brake-wheel loosely mounted on said shaft intermediately of said gear-wheels, suitably mounted drums provided with gear-wheels for rotating the same, diametrically arranged pinions on said brake-wheel in mesh with said gear-wheels on the sleeves, pinions on said sleeves in mesh, respectively, with said gear-wheels on said drums, together with suitable means for severally clutching said sleeves to said driving-shaft, and for braking said brake-wheel against rotatory movement around said shaft, substantially as shown and described.

1,024,837. HINGE. JOSEPH A. DUPUIS, Portland, Oreg. Filed Mar. 21, 1911. Serial No. 615,930. (Cl. 16—11.)



A hinge of the character described, comprising complemental plates one of which is formed with two pairs of apertured ears, the ears of each pair being spaced from each other and one pair of ears being spaced from the other, bolts mounted for longitudinal movement in the respective pairs of ears, springs mounted between the ears of each pair and encircling the bolts and tending to move said bolts outwardly whereby the outer ends of the bolts will protrude outwardly from the outermost ears, the bolts being provided at their adjoining ends with finger-pieces and the other plate being formed at its ends with apertured ears spaced apart a distance to overlap the outer sides of and contact with the outermost ears of the first-named plate and designed to be engaged by the protruding ends of the bolts.

1,024,838. APPARATUS FOR EXTRACTING GREASE AND OILS. CHARLES EDGERTON, Philadelphia, Pa. Filed Feb. 5, 1912. Serial No. 675,609. (Cl. 87—6.)



1. An apparatus of the kind described, comprising a horizontal rotary drum with hollow trunnions at each end and man holes on the side, external steam and solvent pipes communicating with one of the hollow trunnions, a transverse pipe arranged within the drum near its head and communicating with the hollow trunnion, perforated pipes arranged longitudinally in the drum and communicating with the outer end of the transverse pipe, a valve in the transverse pipe having operating connections extending to the exterior of the drum, a longitudinally arranged vapor offtake conduit having strainers in it between the interior of the drum and the conduit and a transverse vapor conduit extending from the longitudinal conduit to the hollow trunnion opposite the steam and solvent inlet.

2. An apparatus of the kind described, comprising a horizontal rotary drum having at one end a hollow trunnion and man holes in the side, a pipe connecting with said hollow trunnion and arranged within the drum near its head, a valve arranged in said pipe and having operating connections extending to the exterior through the drum, and perforated pipes arranged longitudinally within the drum near its side wall and communicating with said valved pipe.

3. An apparatus of the kind described, comprising a horizontal rotary drum having at one end a hollow trunnion, and man holes in the side, a pipe connecting with the hollow trunnion and arranged within the drum near its head, a valve arranged in said pipe and having operating connections extending to the exterior through the head of said drum, a curved transverse pipe communicating with the outer end of said valved pipe, and parallel longitudinally arranged perforated pipes arranged within the drum near its side and communicating with the curved transverse pipe.

4. An apparatus of the kind described, comprising a horizontal rotary drum having at one end a hollow trunnion and man holes in the side, separate steam and naphtha pipes, with valves communicating exteriorly with the hollow trunnion, two oppositely extending transverse pipes communicating with the hollow trunnion and arranged within the drum and near its head, valves arranged in each of said pipes and having operating connections extending to the exterior through the drum, and two sets of perforated pipes arranged longitudinally within the drum near its side walls and communicating respectively with the two valved pipes.

5. An apparatus of the kind described, comprising a horizontal rotary drum having at one end a hollow trunnion and man holes in the side, separate steam and naphtha pipes, with valves communicating exteriorly with the hollow trunnion, two oppositely extending transverse pipes communicating with the hollow trunnion and arranged within the drum and near its head, valves arranged in each of said pipes and having operating connections extending to the exterior through the drum, and two sets of perforated pipes arranged longitudinally within the drum near its side walls and communicating respectively with the two valved pipes, the drum being provided with two sets of man holes on opposite sides, and the perforated pipes on each side of the drum being arranged in two spaced apart groups on opposite sides of each set of man holes.

[Claims 6 to 8 not printed in the Gazette.]

1,024,839. PHONOGRAPHIC RECORDING-STYLUS. THOMAS A. EDISON, Llewellyn Park, Orange, N. J., assignor, by mesne assignments, to Thomas A. Edison, Incorporated, West Orange, N. J., a Corporation of New Jersey. Filed Jan. 3, 1907, Serial No. 350,647. Renewed Oct. 7, 1909. Serial No. 521,490. (Cl. 181—10.)



1. A recording stylus comprising a disk-like head having a curved periphery formed with a notch therein to present a cutting edge, the plane surface of which is transverse to the plane of said periphery, substantially as set forth.

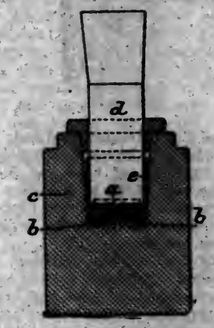
2. A recording stylus comprising a disk-like head with a notch cut in said head said notch being formed with two converging substantially plane surfaces connected by a curved surface, substantially as set forth.

3. A recording stylus comprising a shank and a disk-shaped head increasing in thickness from its periphery toward its center and formed with a notch presenting a curved cutting edge, substantially as set forth.

4. A recording stylus consisting of a jewel having a rounded periphery and formed with a notch which presents a substantially circular cutting edge having a diameter of less than two one-hundredths of an inch, substantially as set forth.

5. A recording stylus consisting of a jewel formed with a shank and a disk-shaped head which increases in thickness from its periphery toward its center, said head being formed with a notch which presents a substantially circular cutting edge having a diameter of less than two one-hundredths of an inch, substantially as set forth.

1,024,840. MANUFACTURE OF CARTRIDGE-CASES OF BRASS OR OTHER ALLOYS OF COPPER. HEINRICH EHRHARDT, Dusseldorf, Germany, assignor to Rheinische Metallwaaren- und Maschinenfabrik, Dusseldorf-Derendorf, Germany, a Corporation of Germany. Filed Dec. 15, 1905. Serial No. 291,938. (Cl. 86—18.)



1. The improved process of manufacturing tubular bodies from substantially iron free alloys of copper and zinc, which consists in preliminarily forging by compression while at a red heat and finishing by drawing while cold.

2. The improved process of manufacturing cartridge cases from substantially iron free alloys of copper and zinc, which consists in compressing a solid mass of the wrought metal while hot in a matrix to form a cup-shaped body and then finishing by drawing.

3. The improved process of manufacturing cartridge cases from substantially iron free alloys of copper and zinc, which consists in compressing a solid mass of the metal while red hot in a matrix to form a cup-shaped body with an excess of material at the base, and then finishing by drawing.

4. The improved process of manufacturing cartridge cases from substantially iron free alloys of copper and zinc, which consists in compressing a solid mass of the metal while at a red heat in a matrix to form a cup-shaped body having an amount of material at the base sufficient to supply the flange and walls of the detonator chamber, and then drawing when cool to form the attenuated walls of the case.

5. The improved process of manufacturing cartridge cases from substantially iron free alloys of copper and zinc, which consists in compressing by means of a die a solid mass of the material at a red heat in a matrix having a diameter as great as that of the heated metal to form a cup-shaped body having a base with a profile corresponding generally with that of the finished case but with an excess of material sufficient to supply the flange and detonator chamber, and then drawing when cool to form the attenuated walls of the case.

[Claims 6 to 12 not printed in the Gazette.]

1,024,841. BAIL FOR PAINT-BUCKETS AND THE LIKE. ARTHUR G. EMERY, Alliance, Ohio. Filed July 24, 1911. Serial No. 640,263. (Cl. 91—66.)

1. In a device of the character described, the combination of a bucket, a bail connected to said bucket, said bail provided with integral spaced handle holding loops, a wire connected to said bail, said wire bent to form a suspending hook, loops located at the base of the sus-

pended hook and the wire extended from the loops located at the base of the loop and connected to the bucket, substantially as and for the purpose specified.



2. In a device of the character described, the combination of a bail provided with handle holding loops, a bucket suspending wire consisting of hook and brace portions, loops located at the base of the hook portion and the bail extended through said loops, said brace portion extending rearward and connected to the bucket, substantially as and for the purpose specified.

3. In a device of the character described, the combination of a bail provided with handle holding loops, a bucket suspending wire consisting of hook and brace portions, loops located at the base of the hook portions and the bail extending through said loops, said brace portion extending rearward and connected to the bucket, and bolt receiving loops and a bolt located through said loops, substantially as and for the purpose specified.

4. In a device of the character described, the combination of a bucket, a bail secured to said bucket, said bail provided with handle holding loops, a bucket suspending wire consisting of hook and brace portions, loops adapted to receive the bail and a second set of loops, a bolt located through said second set of loops and eyelets located upon the bolt and in the second set of loops, substantially as and for the purpose specified.

1,024,842. WELTING MECHANISM FOR FLAT HOSIERY-FRAMES. MORITZ SAMUEL ESCHER, Chemnitz, Germany. Filed May 17, 1909. Serial No. 496,492. (Cl. 66—32.)



1. The combination with the frame needles of a flat hosiery frame, of a series of hooked needles supported above and adapted to be moved in the cross vertical planes of said frame needles, each of said hooked needles terminating in a lateral tongue normally on one side of the corresponding frame needle so as to be adapted to engage loops of the fabric and guide them from the frame needles into the bends in the hooked needles.

2. The combination with the frame needles of a flat hosiery frame, of a bar supported above said frame needles and adapted to be moved, and a series of hooked needles depending from said bar and movable in the cross vertical planes of said frame needles and each terminating in a lateral tongue normally on one side of the corresponding frame needle so as to be adapted to engage loops of the fabric and guide them from the frame needles into the bends in the hooked needles.

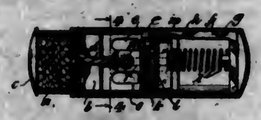
3. The combination with the frame needles of a flat hosiery frame, of a bar adapted to rock on the support for the narrowing needles of the frame, a mechanism for moving said bar, means for engaging and disengaging said mechanism, and a series of hooked needles depending from said bar and movable in the cross vertical planes of said frame needles and each terminating in a lateral tongue normally on one side of the corresponding frame needle so as to be adapted to engage loops of the fabric and guide them from the frame needles into the bends in the hooked needles.

4. The combination with the frame needles of a flat hosiery frame, of a series of hooked needles supported above and adapted to be moved in the cross vertical planes of said frame needles, each of said hooked needles having a longitudinal groove formed in the outer surface of the shorter limb of its hook adapted to receive the free end of a frame needle and each hook terminating in a lateral tongue normally on one side of the corresponding frame needle and adapted to engage loops of the fabric and guide them from the frame needles into the bends in the hooked needles, the parts being so arranged that such loops are adapted to be again transferred from the hooked needles to the frame needles solely by the relative movements of said needles.

5. The combination with the frame needles of a flat hosiery frame, of a bar supported above said frame needles and adapted to be moved, and a series of hooked needles depending from said bar and movable in the cross vertical planes of said frame needles, each of said hooked needles having a longitudinal groove formed in the outer surface of the shorter limb of its hook adapted to receive the free end of a frame needle and each hook terminating in a lateral tongue normally on one side of the corresponding frame needle and adapted to engage loops of the fabric and guide them from the frame needles into the bends in the hooked needles, the parts being so arranged that such loops are adapted to be again transferred from the hooked needles to the frame needles solely by the relative movements of said needles.

[Claim 6 not printed in the Gazette.]

1,024,843. AUTOMATIC CIGAR-LIGHTER. GEORGE W. EVERETT, New York, N. Y., assignor to Charles Doblin, New York, N. Y. Filed May 15, 1911. Serial No. 627,225. (Cl. 67—8.)

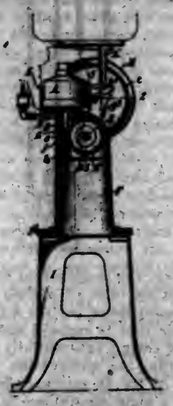


In an automatic lighter, a two-part telescoping casing, means to hold the parts normally extended, a reservoir in one part of the casing, a wick in said part, a pyrophoric substance in said part in advance of the wick, and an angular member of which one arm is disposed longitudinally against the wall of the other part of the casing and carries a file across the pyrophoric substance, and the other arm of which rests transversely against the end of said other part of the casing.

1,024,844. CENTRIFUGAL LIQUID-SEPARATOR. HARVEY FELDMEIER, Little Falls, and RALPH K. MINER, Oriskany Falls, N. Y., assignors to D. H. Burrell & Company, Little Falls, N. Y. Filed Oct. 18, 1909. Serial No. 523,312. (Cl. 127—20.)

1. In a centrifugal liquid separator, the combination with the bowl and drive mechanism therefor including an operating shaft, of a supporting casing having bearings for said operating shaft, a supporting bracket for a milk can, and screws securing said bracket to said casing, which screws are located above said bearings and provided with oil passages leading to said bearings, substantially as set forth.

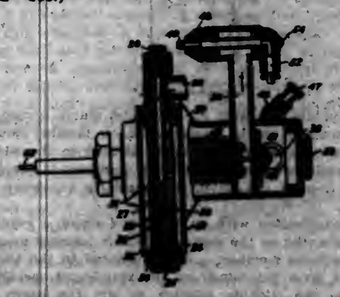
2. In a centrifugal liquid separator, the combination with the bowl and drive mechanism therefor including an operating shaft, of a supporting casing having bearings for said operating shaft, bushings in said bearings, a supporting bracket for a milk can, and screws securing said bracket on said casing, which screws also secure said bushings in said bearings and are provided with oil passages, substantially as set forth.



3. In a centrifugal liquid separator, the combination with the bowl provided with a vertical spindle, and drive mechanism therefor comprising an operating shaft, an intermediate shaft, and gearing connecting said intermediate shaft to said operating shaft and to said spindle, of a supporting casing comprising upper and lower parts united by a separable horizontal joint and together forming a housing for part of said driving mechanism, the upper part of said casing carrying all of the bearings for said drive mechanism and the upper bearing for the spindle, and the lower part of said casing carrying the lower bearing for the spindle, substantially as set forth.

4. In a centrifugal liquid separator, the combination with the bowl provided with a vertical spindle, and drive mechanism therefor, of a casing comprising separable hollow upper and lower parts which are united by a horizontal joint and together form a housing for part of said drive mechanism, said upper and lower casing parts respectively carrying upper and lower bearings for the spindle, and a bowl case which surrounds the bowl and is detachably secured to the top of said upper part of the casing, substantially as set forth.

1,024,845. STEAM-GENERATOR. LOUIS W. G. FLINT, Rochester, N. Y., assignor to Domestic Appliances Company, Rochester, N. Y., a Corporation of New York. Filed Apr. 10, 1911. Serial No. 620,113. (Cl. 122—448.)



1. A feed-water regulator having, in combination, a fixed stem provided with a tapered groove, a piston perforated to receive the stem with a close sliding fit, a cylinder in which the piston moves provided with inlet and outlet openings on opposite sides of the piston, and a spring engaging the piston and tending to move it in the direction of the larger extremity of the groove in the stem.

2. A feed-water regulator having, in combination, two valve-members having coöperating surfaces of which one is provided with a tapered groove constituting a water-passage between said members, one member being movable relatively to the other in the general direction of the length of said groove so as to vary the cross-sectional area of the water-passage, and said member being subject, in opposite directions, to the pressures on opposite sides of the water-passage so as to be moved in accordance with the difference in said pressures.

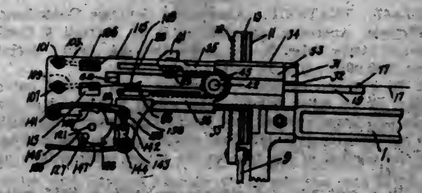
3. A feed water controlling-valve adapted to connect a steam-generator with a source of water supply under pressure, comprising two valve members having coöperating surfaces with a communicating water-passage of graduated size decreasing in area in the direction of the boiler, one of said members being movable with reference to the other and thereby varying the area of said water passage, the movable member being subjected on one side of said water passage to the pressure of the source of water supply and on its opposite side to the steam pressure of the boiler, whereby a continuous flow of water of uniform quantity is had for all differences between the prevailing pressure in the source of water supply and the prevailing steam pressure in the boiler.

4. A feed water controlling-valve adapted to connect a steam-generator with a source of water supply under pressure, comprising two valve members having coöperating surfaces with a connecting water-passage of graduated size decreasing in area in the direction of the boiler, one of said members being movable with reference to the other and thereby varying the area of said water passage, the movable member being subjected on one side of said water passage to the pressure of the source of water supply and on its opposite side to both the steam pressure of the boiler and an established yielding resistance, whereby a continuous flow of water of uniform quantity is had to the boiler for all differences between the prevailing pressure in the source of water supply and the prevailing steam pressure in the boiler.

5. A feed water controlling-valve adapted to feed water to a steam generator continuously and in uniform quantity from a source of water supply under pressure, comprising a suitable casing having separated ports for connection with the source of water supply and the generator, respectively a rod secured in said casing, a piston that fits water tight within the casing and is subjected to the joint and opposing pressures of the source of water supply and the steam in the generator, said rod and piston having a water passage between them of graduated size decreasing in area in the direction of said port leading to the generator.

[Claims 6 and 7 not printed in the Gazette.]

1,024,846. SHEDDING MECHANISM. GEORGE FORTIER, Warren, R. I., assignor of one-half to Joseph Geoffroy, Warren, R. I. Filed Jan. 5, 1911. Serial No. 600,864. (Cl. 139—79.)



1. In a shedding motion for looms, the combination with a frame and a draw rod slidable therein, of a finger pivotally connected with said rod and provided at one

end with a hook and intermediate its ends with a pair of notches, one of which is located above and in advance of the other, a reciprocating knife arranged for interchangeable engagement in said notches, to advance said finger, and a locking bar pivoted to said frame and arranged to engage said hook when said finger is in its advanced position.

2. In a shedding motion for looms, the combination, with a frame, a shaft journaled therein, and means for reciprocating said shaft, of a pair of gears mounted on said shaft, a pair of reversely-toothed racks engaged by each gear for movement thereby in opposite directions, a transversely arranged knife connecting the corresponding racks of each pair, a chain shaft journaled in said frame, a ratchet wheel secured to the chain shaft, a plate connected to one of said racks, and a pair of pawls pivoted to said plate and having a knuckle joint connection with each other, said pawls being provided with reversely-arranged teeth adapted to engage said ratchet wheel for rotating the latter one step during each movement of said plate.

3. In a shedding motion for looms, the combination with a frame and a draw-rod slidable therein, of a pair of superposed fingers pivoted to said rod, a pair of transversely arranged superposed members adapted to engage said fingers for advancing the same, means for reciprocating said members in opposite directions, a chain shaft journaled in said frame, a ratchet wheel secured to said shaft, a reciprocating plate connected with said reciprocating means for operation thereby, and a pair of pawls pivoted to said plate and having a knuckle joint connection with each other, said pawls being provided with reversely-arranged teeth adapted to engage said ratchet wheel for rotating the latter one step during each movement of said plate.

4. In a shedding motion for looms, the combination with a frame and a draw-rod slidable therein, of a pair of superposed fingers pivoted to said rod, a pair of transversely-arranged superposed members adapted to engage said fingers for advancing the same, means for reciprocating said members in opposite directions, a chain shaft journaled in said frame, a ratchet wheel secured to said shaft, and a reciprocating plate connected with said reciprocating means for operation thereby and provided with a pair of reversely-arranged pawls engaged with said ratchet wheel for rotating the latter one step during each movement of said plate.

5. In a shedding motion for looms, the combination, with a frame, and a draw-rod slidable therein, of a pair of superposed fingers pivotally connected with said rod and provided each at one end with a hook and intermediate its ends with a notch, a pair of transversely-arranged superposed knives arranged to engage said notches for advancing said fingers, mechanism for reciprocating said knives in opposite directions comprising two pairs of elements with which the knives are pivotally connected, one of said pairs of elements moving at a greater speed than the other, whereby said knives are free to assume inclined positions during the movements of said elements, and a pair of superposed locking bars pivoted to said frame and arranged to engage said hooks when said fingers are in their advanced positions.

[Claims 6 to 7 not printed in the Gazette.]

1,024,847. TEAT-CUP. ALEXANDER GILLIES, Heidelberg, Victoria, Australia, assignor to D. H. Burrell & Company, Little Falls, N. Y. Filed Dec. 24, 1910. Serial No. 599,090. (Cl. 31—102.)

1. In a teat cup, the combination with a rigid outer casing, of an inner flexible tube which is secured at its upper and lower ends to said casing and constructed with two opposing flexible flat sides extending practically from one end portion of the tube to the other, substantially as set forth.

2. In a teat cup, the combination with a rigid outer casing, of an inner flexible tube which is secured at its upper and lower ends to said casing and constructed with two opposing flexible flat sides, the side portions of the tube converging downwardly in the lower part of the tube, substantially as set forth.



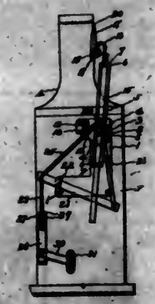
3. In a teat cup, the combination with an outer casing and an inner flexible tube, of a rigid mouthpiece having an outwardly turned lower portion with which the upper end of the flexible tube is engaged and which is arranged within said outer casing, substantially as set forth.

4. In a teat cup, the combination with an outer casing having near its top an internal shoulder and an inner flexible tube, of a rigid mouthpiece having an outwardly turned lower portion with which the upper end of the flexible tube is engaged and which is seated on said shoulder together with said inner tube, substantially as set forth.

5. In a teat cup, the combination with an outer casing and an inner flexible tube, of a rigid mouthpiece having an upper outwardly bulging portion which is concave on its inner side and forms an annular air chamber, the latter provided with an air inlet and said mouthpiece having an outwardly turned lower portion with which the upper end of the flexible tube is engaged, substantially as set forth.

[Claims 6 to 8 not printed in the Gazette.]

1,024,848. HARDY-OPERATING DEVICE. HIRAM C. GIST, Redkey, Ind. Filed Dec. 12, 1911. Serial No. 665,244. (Cl. 78—7.)



1. In combination with an anvil and stand, a revoluble member mounted on the stand, a bar secured to said revoluble member mounted on the revoluble member, a hardy secured to the slidable member, and means to actuate said members to place the hardy on top of the anvil, substantially as shown and described.

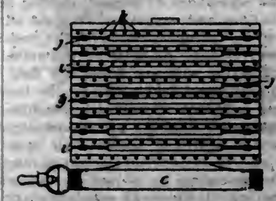
2. In combination with an anvil and stand, a revoluble member mounted on the stand, a slidable member mounted on the revoluble member, a hardy secured to the slidable member, a lever fulcrumed on the stand and operatively secured to the slidable member to lift the hardy and place it in position on the anvil, substantially as shown and described.

3. In combination with an anvil and stand, a revoluble member mounted on the stand, a bar secured to said revoluble member mounted on the stand, a bar secured to said revoluble member having outturned perforated ears, a bar slidably mounted in said ears, a hardy secured to the last-mentioned bar, and means to actuate the last-mentioned bar to raise the hardy and place it on top of the anvil, substantially as shown and described.

4. In combination with an anvil and stand, a revoluble member mounted on the stand, a bar secured to said revoluble member having outturned perforated ears, a bar slidably mounted in said ears, a hardy secured to the last-mentioned bar, a lever fulcrumed on the stand, a rod pivotally secured to said lever and to the last-mentioned bar, a spring secured to the lever and to the last-mentioned bar and normally tending to lower the bar and hardy, and means to actuate the lever to raise the bar and hardy, substantially as shown and described.

5. In combination with an anvil and stand, a plate secured to the stand, a revoluble member mounted on the plate, a spring secured to the plate and revoluble member and normally tending to rotate the member toward the front of the anvil, a bar secured to said revoluble member having outturned perforated ears, a bar slidably mounted in said ears, a hardy secured to the last-mentioned bar, a lever fulcrumed on the stand, a rod pivotally secured to said lever and to the last-mentioned bar, a spring secured to the lever and to the last mentioned bar and normally tending to lower the bar and hardy, a pedal mounted on the stand and operatively secured to the lever, substantially as shown and described.

1,024,849. GAS-BURNER. HENRY ELLIS HARRIS, London, England. Filed Feb. 13, 1911. Serial No. 608,323. (Cl. 158—99.)



1. A gas burner comprising a body provided with a tapered vertical passage, a series of tapered lateral passages communicating with said tapered vertical passage, burner openings provided in said tapered lateral passages, and a mixing chamber provided at the lower end of said tapered vertical passage.

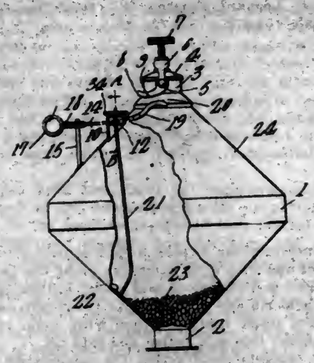
2. A gas burner comprising a rear section provided with a mixing chamber, a tapered vertical passage communicating with said mixing chamber, a series of lateral grooves communicating with said passage, a front section provided with burner openings which register with said lateral grooves and suitable means connecting the sections.

3. A gas burner comprising a rear section provided with a mixing chamber, a tapered vertical passage communicating with said mixing chamber, a series of tapered lateral grooves communicating with said vertical passage, a front section provided with burner openings which register with said tapered lateral grooves, and suitable means connecting the sections.

1,024,850. INDICATOR FOR ACETYLENE-GAS GENERATORS. JOEL EDGAR HILL, near Lexington, N. C. Filed Aug. 7, 1911. Serial No. 642,604. (Cl. 116—31.)

1. In a device of the class described, a receptacle; an indicator movably connected with the exterior of the receptacle; means within the receptacle, and under the control of the receding carbid, for moving with the indicator in one direction; a closure for the receptacle; movable means for retaining the closure upon the receptacle; and an element upon said means adapted to engage the indicator, to move the same in an opposite direction.

2. In a device of the class described, a receptacle; an indicator movable upon the exterior of the receptacle; means within the receptacle, and controlled by the receding carbid, for moving the indicator; a closure for the receptacle; a tiltable member pivotally connected with the receptacle; means carried by the tiltable member to engage the closure, to retain the same upon the receptacle; and an element upon the tiltable member, adapted to engage the indicator, to reset the same.



3. In a device of the class described, a receptacle; a rock shaft journaled therein; an indicator secured to the rock shaft and operating upon the outside of the receptacle; an arm secured to the rock shaft and extended within the receptacle, for engagement by the carbid; a finger secured to the rock shaft and located upon the outside of the receptacle; a closure for the receptacle; a member tiltably secured to the receptacle, and having means for holding the closure in place; and an element upon the tiltable member, adapted to engage with the finger.

4. In a device of the class described, a receptacle; a series of radially disposed elements, two of which are located upon the outside of the receptacle, the third of which is located within the receptacle; means for pivoting said elements to the receptacle at a common point; a closure for the receptacle; and a tiltable member connected with the receptacle and adapted to maintain the closure in place, the tiltable member having means to engage with one of the exterior, radially disposed elements.

1,024,851. ROLLER-BEARING. HENRY C. HODGES, Detroit, Mich. Filed Dec. 27, 1909. Serial No. 535,089. (Cl. 64—50.)

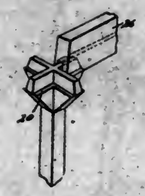


1. A pivotal bearing comprising a cage provided with a plurality of sector shaped chambers having socket cavities at their narrow ends, a roller engaging in each chamber having a globular head freely socketed in each cavity and adapted thereby to permit the said roller to oscillate through the limits of said chamber.

2. The combination of a segmental cage having a plurality of sector shaped chambers, each provided with a semispherical cavity, and a neck passage connecting said cavity with the narrow end of said chamber, a detachable

cap plate having semispherical cavities registering with the semispherical cavity of the cage, a roller provided with a globular head socketed in said spherical cavity and adapted to be limited by the swing of the body portion within said chamber.

1,024,852. REINFORCED CONCRETE STRUCTURE. PER HOLMBERG, Glencoe, Ill., assignor of one-half to Arthur G. Leonard, Chicago, Ill. Filed Nov. 23, 1908. Serial No. 464,079. (Cl. 72—15.)



1. A concrete pillar formed with a corbel on the upper end thereof and with a rib extending along the upper face of said corbel and the top of said pillar, and shoulders adjacent to said rib and parallel with the longitudinal axis thereof, said pillar being provided with metal reinforcement extending into said corbel and said rib.

2. In a concrete construction the combination with a concrete supporting device provided with integral ribs, said ribs having reinforcing rods embedded therein, of concrete beams which are channeled on their under surfaces so as to fit over said ribs, said beams provided with longitudinal reinforcing rods sagged in the center and projecting from the ends of said beams near the top and means within the space between the ends of opposed beams for connecting together the corresponding rods of said beams.

3. In a concrete construction the combination with a concrete pillar provided on top with integral intersecting concrete ribs, of metal reinforcements in said pillar and ribs, concrete beams channeled and supported end to end on said pillar over said ribs so as to abut said intersecting ribs, reinforcing rods which run longitudinally through said beams and project from the ends of the same near the top, and means arranged in the space between said beams for connecting together corresponding rods of opposed beams.

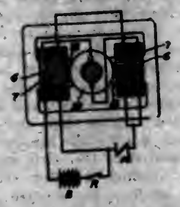
4. In a concrete construction the combination with a concrete pillar provided at its upper end with integral corbels and integral ribs on said corbels, of reinforcing rods which run through said pillar, corbels and ribs, concrete beams which are channeled so as to be supported on said corbels over said ribs, reinforcing rods running longitudinally through said beams and projecting from the ends thereof, and means for connecting together corresponding rods of opposed beams.

5. In a concrete construction the combination with a concrete pillar provided at its upper end with integral corbels and integral ribs on said corbels, of reinforcing rods which run through said pillar, corbels and ribs, concrete beams which are channeled so as to be supported on said corbels over said ribs, reinforcing rods running longitudinally through said beams, projecting therefrom near the top and provided with engaging hooks, and turn buckles arranged in the space between the ends of the beams which connect together corresponding rods of opposed beams.

[Claim 6 not printed in the Gazette.]

1,024,853. MEANS FOR OPERATING SEMAPHORES. WINTHROP K. HOWE, Rochester, N. Y., assignor to General Railway Signal Company, Gates, N. Y., a Corporation of New York. Filed Apr. 30, 1909. Serial No. 493,216. (Cl. 246—21.)

1. The combination, with a semaphore having a normal position, a set position, and a bias to its normal position, of a rotary electric motor for moving the semaphore to and holding it in set position, the motor having the usual windings in its field and armature together with supplementary windings in one of said members, and means controlled by the position of the semaphore for connecting the supplementary windings in series with the usual windings to automatically regulate the energy supplied to the motor while the semaphore is held in its set position thereby, the torque of the armature being sufficient to hold the semaphore in such position after the supplementary windings have been introduced.



2. A semaphore having a normal and a set position and having a bias to the normal; a rotary electric motor for moving the semaphore to the set position having the usual field windings and supplementary field windings; and means controlled by the position of the semaphore for connecting the supplementary field windings in series with the usual field windings for automatically regulating the energy supplied to the motor, the torque of the armature being sufficient to hold the semaphore in the set position when the windings are so connected.

3. A semaphore having a normal and a set position and having a bias to the normal; a rotary electric motor for moving the semaphore to the set position having the usual field windings and supplementary field windings; a switch operated in correspondence with the position of the semaphore; and electric connections controlled by said switch for connecting said supplementary field windings in series with said usual field windings, the torque of the armature being sufficient to hold the semaphore in the set position when the windings are so connected.

4. A semaphore having a normal and a set position and having a bias to the normal; a rotary electric motor for moving the semaphore to the set position and having the usual armature windings and supplementary armature windings; and means controlled by the position of the semaphore for connecting the supplementary armature windings in series with the usual armature windings, the torque of the armature being sufficient to hold the semaphore in the set position when the windings are so connected.

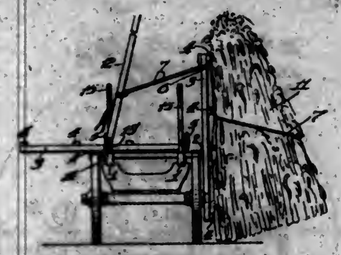
5. A semaphore having a normal and a set position and having a bias to the normal; a rotary electric motor for moving the semaphore to the set position and having the usual armature windings and supplementary armature windings; a switch controlled by the position of the semaphore; and electric connections controlled by said switch for connecting said supplementary armature windings in series with said usual armature windings, the torque of the armature being sufficient to hold the semaphore in the set position when the windings are so connected.

[Claims 6 and 7 not printed in the Gazette.]

1,024,854. BUNDLE-LOADING DEVICE. SAMUEL HUG, Highland, Ill. Filed Oct. 26, 1911. Serial No. 656,863. (Cl. 214—2.)

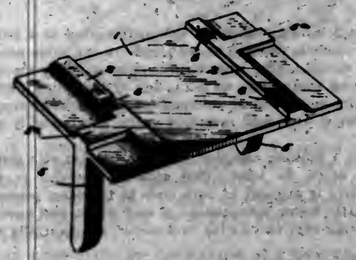
1. The combination with a wagon having spaced side rails, of a loading frame pivotally connected to one of said rails with one end of said frame resting upon the other side rail when in loaded position, and a snap latch projecting upwardly from said other side rail, said latch being adapted to automatically engage the loading frame and to be released by pressure.

2. The combination with a wagon having spaced side rails, of a pair of loading frames swingingly mounted on said rails to overhang on opposite sides of said wagon, said frames being adapted to normally assume upright positions and each, when in horizontal position, having



its upper end adjacent the other side rail, and a resilient latch carried by said other side rail for releasably engaging the upper end of the frame.

1,024,855. RAIL-SUPPORTING PLATE. KAZIMIER JASIECKI and KASIMIERZ GLOWACKI, Philadelphia, Pa. Filed Feb. 10, 1912. Serial No. 676,733. (Cl. 238—2.)



1. A plate of the character described having integral parallel enlargements on its upper face spaced apart a distance equal to the width of the base of an ordinary rail, integral spikes on the bottom of said plate at its ends, said plate enlarged on its upper face from the first-mentioned enlargements to its outer ends above the said integral spikes, substantially as described.

2. A plate of the character described having integral parallel enlargements on its upper face spaced apart a distance equal to the width of the base of an ordinary rail, integral spikes on the bottom of said plate at its ends, said plate enlarged on its upper face from the first-mentioned enlargements to its outer ends above the said integral spikes, said plate at its first-mentioned enlargements having spike receiving openings therein, and said spike receiving openings out of alinement with the first-mentioned spikes, and said first-mentioned spikes out of alinement with each other, substantially as described.

1,024,856. RAIL-JOINT. KAZIMIER JASIECKI and KASIMIERZ GLOWACKI, Philadelphia, Pa. Filed Feb. 10, 1912. Serial No. 676,734. (Cl. 239—8.)



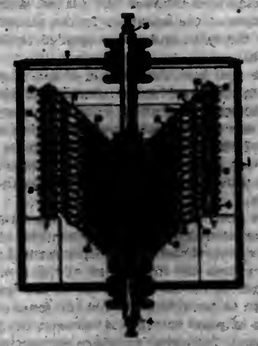
1. A rail joint comprising two members, parallel bars on the end of one member, upwardly projecting parallel tongues on the inner faces of said bars located centrally of the bars and shorter than the bars, and the other member of said joint having recessed enlargements to receive said tongues, substantially as described.

2. A rail joint comprising two members, parallel bars on the end of one member, upwardly projecting parallel tongues on the inner faces of said bars located centrally of the bars and shorter than the bars, and the other member of said joint having recessed enlargements to receive said tongues, lugs on the free ends of said bars at their lower edges, and said last-mentioned member having recesses receiving said lugs, substantially as described.

3. A rail joint comprising two members, parallel bars on the end of one member, upwardly projecting parallel tongues on the inner faces of said bars located centrally of the bars and shorter than the bars, the other member of said joint having recessed enlargements to receive said tongues, and a tongue integral with the last-mentioned member projecting between the said bars and of substantially the same length as the bars, substantially as described.

4. A rail joint comprising two members, parallel bars on the end of one member, upwardly projecting parallel tongues on the inner faces of said bars located centrally of the bars and shorter than the bars, and the other member of said joint having recessed enlargements to receive said tongues, lugs on the free ends of said bars at their lower edges, and said last-mentioned member having recesses receiving said lugs, and a tongue integral with the last-mentioned member projecting between the said bars and of substantially the same length as the bars, substantially as described.

1,024,857. PROTECTIVE DEVICE. ALLEN G. JONES, San Francisco, Cal., assignor to General Electric Company, a Corporation of New York. Filed Oct. 10, 1911 Serial No. 653,848. (Cl. 175—30.)



1. An electrolytic cell comprising electrodes having electrolyte between them, said electrodes being shaped to form a tortuous path for electrolyte flowing radially of said electrodes, whereby the escape of said electrolyte from between said electrodes is hindered.

2. An electrolytic cell comprising electrodes having electrolyte between them, said electrodes having obstructions in the space between said electrodes to hinder radial flow of said electrolyte from between said electrodes.

3. An electrolytic cell comprising electrodes mounted with their surfaces substantially parallel and having electrolyte between them, said electrodes having circumferential wavy portions which form baffles to hinder radial flow of said electrolyte from between said electrodes.

4. An electrolytic cell comprising electrodes mounted with their surfaces substantially parallel and having electrolyte between them, said electrodes being crimped to hinder escape of said electrolyte from between said electrodes.

5. An electrolytic cell comprising electrodes with substantially parallel surfaces and having electrolyte between them, each electrode being creased near the edge to form

a circumferential trough in one surface and a projection on the other surface of said electrode, said projections and troughs being in registry to form baffles for radially flowing electrolyte.

[Claims 6 to 8 not printed in the Gazette.]

1,024,858. FENCE-POST. JAMES M. KISSINGER and SAMUEL H. J. HEFFNER, Pottsville, Pa. Filed Dec. 6, 1911. Serial No. 664,298. (Cl. 39—135.)



1. A fence post including a pair of spaced plates formed with corresponding openings adapted to receive fence rails, a longitudinal strip of wood interposed between the plates at one side thereof, fastening members connecting the plates, and a base applied to the lower ends of the plates.

2. A post including a pair of spaced plates having corresponding openings therein adapted to receive fence rails, connecting members between the plates, seats connecting the lower edges of the openings in the plates and serving as a rest for the rails, and a base applied to the lower ends of the plates.

3. A fence post including a pair of spaced plates having corresponding openings formed therein for the reception of fence rails, tongues projecting from the lower edges of the openings of one of the plates and extending across to the lower edge of the corresponding openings in the opposite plate to provide seats for the fence rails, connecting means between the plates, and a base applied to the lower ends of the plates.

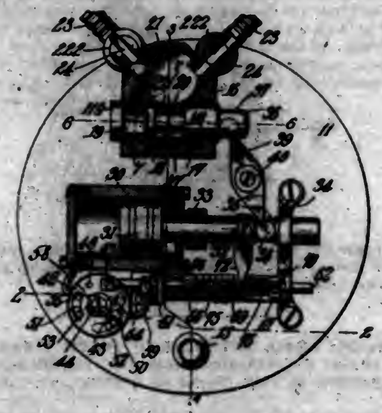
4. A fence post including a pair of spaced plates having corresponding openings formed therein for the reception of fence rails, one of the plates being formed with tongues which project from the lower edge of the openings therein and extend across to the lower edge of the openings in the opposite plate to provide seats for the fence rails, a longitudinal strip of wood interposed between the plates at one side of the post, fastening members connecting the plates, and a base applied to the lower ends of the plates.

5. A fence post including a pair of spaced plates having corresponding openings therein for the reception of fence rails, one of the plates being formed with tongues projecting from the lower edges of the openings therein and extending across the space between the plates to the lower edges of the corresponding openings in the opposite plate, the said tongues forming rests for the rails, a longitudinal strip of wood interposed between the plates at one side of the post, bolts connecting the plates at the opposite side of the post, spacing sleeves applied to the bolts and interposed between the plates, and a base applied to the lower ends of the plates.

[Claim 6 not printed in the Gazette.]

1,024,859. MILKING-MACHINE. DANIEL KLEIN, Spokane, Wash., assignor to D. H. Burrell & Co., Little Falls, N. Y. Filed Dec. 5, 1907. Serial No. 405,161. (Cl. 31—99.)

1. In a milking machine, the combination of a pulsator valve which is exposed at both ends to the same pressure and which applies suction intermittently, and a double-acting pneumatic motor separate from said valve and connected therewith for actuating the same, substantially as set forth.



2. In a milking machine, the combination of a pulsator valve which is exposed at both ends to the same pressure, and a double-acting pneumatic motor separate from said valve and comprising an actuating cylinder and piston, a reversing valve and an escapement mechanism connecting said piston with said reversing valve, substantially as set forth.

3. In a milking machine, the combination of a pulsator piston valve, an open-ended cylinder therefor in which said valve is exposed at both ends to the same pressure, a pneumatic motor independent of said valve, and means for connecting said valve with said motor, substantially as set forth.

4. The combination of a milk pail, a cover therefor, an open-ended valve cylinder arranged on the cover and having both ends exposed to the atmosphere, said cylinder being provided with a suction port connecting said cylinder with the pail and with an air inlet port, an inspection chamber communicating with said cylinder and having a plurality of connections for individual teat-cup tubes, and a pulsator valve arranged in said cylinder and comprising heads which fit in the same and a reduced connecting portion forming a chamber for placing the inspection chamber in communication with the outer air, one of said heads having an air inlet port for placing the inspection chamber in communication with said air inlet port of the cylinder, substantially as set forth.

5. In a milking machine, the combination of a pulsator valve, a pneumatically actuated piston and rod for operating the same, a cylinder in which said piston is arranged, a reversing valve for controlling the flow of the actuating fluid to the cylinder, a valve rod provided with tappets, locking arms engaging said tappets, a releasing device for said arms, and reversing springs acting on said valve rod, substantially as set forth.

[Claim 6 not printed in the Gazette.]

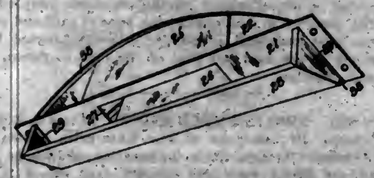
1,024,860. LIFTING-JACK. JACOB Y. KLINE, Florin, Pa. Filed Apr. 26, 1911. Serial No. 623,387. (Cl. 57—98.)

In a lifting jack of the class described, the combination with a hollow standard and base formed with a bracket and guide arm and having a lifting bar movably mounted in said standard and guide arm, of a check link mounted on said lifting bar adjacent to said guide arm and formed with a bifurcated end engaged by said bracket, shoulders formed on said bracket for engaging the bifurcated end of said check link and limiting the downward movement of the same, a lifting link mounted on said lifting bar below said check link, said lifting link formed with a bifurcated end engaging said bracket to prevent said link from turning, a projection formed on said link, a hand lever pivoted to said bracket, and a bifurcated end formed on said



hand lever for engaging the projection on said link for lifting the same.

1,024,861. VENTILATOR. WILLIAM LINTERN, Cleveland, Ohio, assignor of one-half to The Nichols-Lintern Company, Cleveland, Ohio, a Corporation of Ohio. Filed May 15, 1911. Serial No. 627,229. (Cl. 98—22.)



1. In a ventilator, the combination of a plate with an aperture, a guard on the outer side of said plate having a portion standing some distance beyond it, and end portions connected with it and spaced members connecting the guard with the plate and terminating short of an end portion of the guard.

2. In a ventilator, the combination of a front plate with an aperture, a guard on the outer side of said plate having end portions and a portion standing some distance outside of the front plate, and top and bottom plates connecting the guard with the front plate, said top and bottom plates terminating short of the ends of the guard.

3. In a ventilator, the combination of a plate with an aperture, a guard on the outer side of said plate, and connected with it, top and bottom members connecting the guard with said plate above and below the aperture, respectively, at least one of said members terminating short of an end portion of a guard and an upwardly extending deflector on the inner side of said plate.

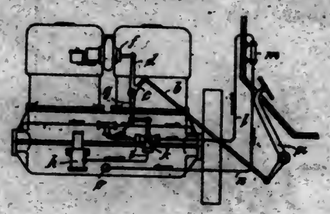
4. In a ventilator, the combination of a front plate with an aperture, a guard on the outer side of said plate and having a portion standing some distance beyond it, and end portions connected with it, top and bottom plates connecting the intermediate portions of the guard with the front plate, said top and bottom plates terminating short of the ends of the guard, and an upwardly extending deflector on the inner side of the front plate.

5. In a ventilator, the combination of a front plate having an aperture, a vertical guard plate carried on the outer side of the front plate and spaced from it, and connected with it at its ends and substantially horizontal plates connecting the intermediate portion of the guard plate with the outer side of the front plate, said guard having its ends spaced from the ends of the top and bottom plates.

[Claims 6 to 13 not printed in the Gazette.]

1,024,862. INTERNAL-COMBUSTION ENGINE. ERNST MOSWES, Marienfelde, near Berlin, and ALFRED VISCHER, Cannstatt, Germany, assignors to The Firm of Daimler Motorengesellschaft, Untertürkheim, near Stuttgart, Germany. Filed Jan. 7, 1911. Serial No. 601,423. (Cl. 123—196.)

1. In an internal combustion engine, the combination of an accelerator-lever a throttle valve connected therewith and controlling the hydrocarbon fuel supply from the carbureter to the engine, a lubricating oil-container supplying oil to the parts to be lubricated, a regulator controlling the oil supply, and an interconnection between said regulator, accelerator-lever and throttle-valve, whereby the oil supply regulator may be controlled simultaneously with the controlling of the hydrocarbon fuel supply from the carbureter so that the oil supply is dependent on the supply of fuel from the carbureter to the engine.



2. In an internal combustion engine, the combination of an accelerator-lever connected with and controlling the carbureter, a lubricating oil-container, a main oil circuit supplying oil from said oil-container to the parts to be lubricated, an oil-pump in said circuit a branch oil circuit communicating with said main oil circuit and a regulating valve for controlling the supply of oil to the parts to be lubricated, said regulating valve being operated simultaneously with the controlling of the carbureter so as to vary the supply of lubricating oil in accordance with the variation in the supply of combustible from said carbureter to the engine.

3. In an internal combustion engine, the combination of an accelerator lever connected with and controlling the carbureter, a lubricating oil-container, a main oil-circuit supplying oil from said oil-container to the parts to be lubricated, an oil-pump in said circuit, a branch oil circuit communicating with said main oil circuit, a regulating valve for controlling the supply of oil to the parts to be lubricated, said regulating valve being operated simultaneously with the controlling of the carbureter so as to vary the supply of lubricating oil in accordance with the variation in the supply of combustible from said carbureter to the engine, and a sight-glass in said branch oil circuit.

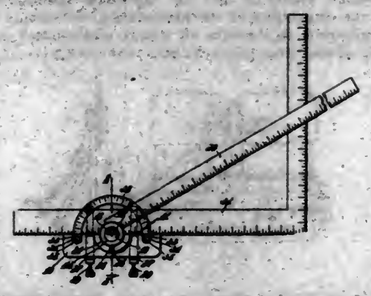
4. In an internal combustion engine, the combination of an accelerator-lever connected with and controlling the carbureter, a lubricating oil-container, a main oil-circuit supplying oil from said oil-container to the parts to be lubricated, an oil-pump in said circuit, a branch oil circuit communicating with said main oil circuit, and a regulating valve in said branch circuit for controlling the supply of oil to the parts to be lubricated, said regulating valve being operated simultaneously with the controlling of the carbureter so as to vary the supply of lubricating oil in accordance with the variation in the supply of combustible from said carbureter to the engine.

5. In an internal combustion engine, the combination of an accelerator-lever connected with and controlling the carbureter, a lubricating oil container, a main oil circuit supplying oil from said oil-container to the parts to be lubricated, an oil-pump in said circuit, a branch oil circuit communicating with said main oil circuit, a regulating valve for controlling the supply of oil to the parts to be lubricated, said regulating valve being operated simultaneously with the controlling of the carbureter so as to vary the supply of lubricating oil in accordance with the variation in the supply of combustible from said carbureter to the engine, and a sight glass in said branch oil circuit, said regulating valve being arranged in said branch oil circuit and in proximity to said sight glass.

1,024,863. CARPENTER'S LAYING-OUT TOOL. GURNEY MYERS, Lansdale, Pa. Filed June 16, 1911. Serial No. 633,578. (Cl. 73—80.)

1. In a device of the character described, a slide head, a stud carried thereby, said stud having an aperture extend-

ing therethrough, means for visually indicating the center of said stud, a blade pivotally mounted on said stud adapted to swing about the center thereof, and removable clamping members mounted in dovetail slots on the under side of said slide head.



2. In a device of the character described, a slide head, a threaded stud carried thereby, said stud having an aperture extending therethrough, means for visually indicating the center of said stud, a blade pivotally mounted on said stud and adapted to swing about the center thereof, a washer mounted on said stud over said blade, means to prevent rotary motion of said washer, and a knurled hand nut threaded on said stud adapted to clamp the blade against pivotal movement.

3. In a device of the character described, a slide head, a stud carried thereby, said stud having an aperture extending therethrough, means for visually indicating the center of said stud, a blade pivotally mounted on said stud and adapted to swing about said center thereof, and removable clamping members mounted in dovetail slots on the under side of said slide head, said clamping members each having a hook extension at one end adapted to engage one edge of a carpenter's square and carrying a clamping screw at the other end bearing against the outer edge of the slide head.

4. In a device of the character described, a slide head having a straight working edge, a stud carried by said slide head, said stud having a semi-circular aperture extending therethrough, and a flat side of said semi-circular aperture being in a plane coincident with the straight working edge of the slide head, an index mark on said flat side of said aperture, said index mark being coincident with the center of said stud, and a graduated scale blade pivotally mounted on said stud and adapted to swing about said index mark as a center.

5. In a device of the character described, a slide head having a straight working edge, a stud carried by said slide head, said stud having a semi-circular aperture extending therethrough, and the flat side of said semi-circular aperture being in a plane coincident with the straight working edge of the slide head, an index mark on said flat side of said aperture, said index mark being coincident with the center of said stud, and a graduated scale blade pivotally mounted on said stud and adapted to swing about the said index mark as a center, said graduated scale blade having a graduated edge in alinement with the said mark.

[Claims 6 to 9 not printed in the Gazette.]

1,024,864. IMPREGNATION OF WOOD. JOHANN POLIVKA and BERTALAN HACKER, Budapest, Austria-Hungary, assignors to The Firm of "Impragnator" impragnating Company Limited, Budapest, Austria-Hungary. Filed Oct. 2, 1908. Serial No. 455,903. (Cl. 99—12.)

A process of impregnating wood, which consists in first treating the wood in a bath of heated oil in a partial vacuum, drawing off the oil, again creating a vacuum, forcing in the impregnating medium and again impregnating under pressure, drawing off the superfluous impregnating medium and recreating the vacuum.

1,024,865. COLLAR-SUPPORTER. FRANK B. REYNOLDS, Providence, R. I. Filed Dec. 17, 1910. Serial No. 597,782. (Cl. 2—91.)



As an improved article of manufacture, a collar-supporter, consisting of a flexible resilient tube, open at its ends and formed from suitable, helically coiled wire, the end portions of the tube being normally bent at an angle with relation to the other portion of the tube, and a headed fastening or attaching-pin having its shank adapted to be readily inserted in and engage the bore of said end portion of the tube and held therein by pressure caused by the tendency of the said end part of the tube to return to its normal position.

1,024,866. REELING MECHANISM. ALVAH C. ROEBUCK, Chicago, Ill., assignor to The Enterprise Optical Mfg. Company, Chicago, Ill., a Corporation of Illinois. Filed May 22, 1911. Serial No. 628,837. (Cl. 88—17.)



1. The combination of a kinetoscope, upper and lower film magazines, an intermediate arm carrying said magazines, and means for detachably mounting said arm on the frame of the kinetoscope.

2. The combination of a kinetoscope, upper and lower film magazines, an intermediate arm carrying said magazines, means for detachably mounting said arm on the frame of the kinetoscope and an operative connection between a rotating shaft of the kinetoscope and the reel-carrying shaft of the lower magazine.

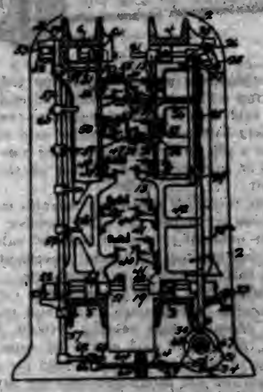
3. The combination of a kinetoscope, a bracket secured to said kinetoscope, upepr and lower film magazines, an intermediate arm carrying said magazines, and means for detachably securing said arm to said bracket.

4. The combination of a kinetoscope, a bracket secured to said kinetoscope, upper and lower film magazines, an intermediate arm carrying said magazines, means for detachably securing said arm to said bracket, and an operative connection between a rotating shaft of the kinetoscope and the reel-carrying shaft of the lower magazine.

5. The combination of a kinetoscope, a bracket secured to said kinetoscope, upper and lower film magazines, an intermediate arm carrying said magazines, and means for detachably securing said arm to said bracket, the same comprising a transverse stud on one part and an open recess or socket on the other part.

[Claims 6 to 21 not printed in the Gazette.]

1,024,867. EMBROIDERING-MACHINE. MORRIS SCHOENFELD, Rorschach, Switzerland. Filed Feb. 16, 1910. Serial No. 544,197. (Cl. 112—7.)



1. An embroidering machine comprising a longitudinal stationary frame, embroidering elements carried by longitudinally disposed superimposed carrying members, and a plurality of upright members uniting said carrying members in a rigid movable frame, said upright members being disposed at intervals along the embroidering machine, stationary longitudinal members disposed free of the embroidering surface, for supporting said upright members and upright reciprocating driving means adapted to operate the said movable frame.

2. An embroidering machine comprising a longitudinal stationary frame, embroidering elements carried by longitudinally disposed superimposed carrying members and a plurality of upright members uniting said carrying members in a rigid, movable frame, said upright members being disposed at intervals along the embroidering machine, stationary longitudinal members disposed free of the embroidering surface, for supporting said upright members, and levers mounted on the stationary frame adapted to reciprocate said movable frame and upright reciprocating elements adapted to operate the movable frame through said levers.

3. An embroidering machine comprising a longitudinal stationary frame, embroidering elements carried by longitudinal superimposed carrying members and a plurality of upright members uniting said carrying members in a rigid, movable frame, said upright members being disposed at intervals along the embroidering machine and supported by said stationary frame, levers mounted on the stationary frame and adapted to operate on the upper and lower portions of the movable frame, to move the same laterally of the machine, and upright reciprocating means for operating said levers.

4. An embroidering machine comprising a stationary frame, embroidering elements and a movable frame mounted to be movable laterally of the stationary frame and embodying a plurality of longitudinal carrying members for the embroidering elements, laterally swinging bellcrank levers on the stationary frame connected with the upper and lower portions of the movable frame, pitmen connecting the bell-crank levers, a power shaft and operating rods for the pitmen, operated from said power shaft.

5. An embroidering machine comprising a longitudinal stationary frame, embroidering elements carried by longitudinal superimposed bars, and a plurality of upright supporting members uniting said bars in a rigid, movable frame, said upright members being disposed at intervals along the embroidering machine, shafts by which the upright members are supported end laterally guided on the stationary frame, levers on the stationary frame adapted to operate on the upper and lower portions of the movable frame to reciprocate the same laterally of the machine and upright reciprocating means for operating the levers.

[Claims 6 to 10 not printed in the Gazette.]

1,024,868. HYDROCARBON-BURNER. ALVIN G. SHERMAN, Detroit, Mich. Filed July 15, 1911. Serial No. 638,618. (Cl. 158—90.)



1. A heavy hydro-carbon heater, having in combination a burner formed of concentric circular channels comparatively well spaced to afford ample air spaces, and a sub-burner formed of concentric circular channels comparatively well spaced to afford ample air spaces and located in substantial registry below the channels of the upper burner so that the flames of the sub-burner channels will register with the surfaces of the channels above, substantially as described.

2. A heavy hydro-carbon heater, having in combination, a burner having a ring-shaped open channel, the diameter of the inclosed circular air space being comparatively large with respect to the channel width to afford ample air for combustion, a fuel pipe adapted to deliver fuel to said channel, a valve for controlling the fuel pipe, a ring-shaped starting burner located under said first mentioned burner and inclosing a circular air space comparatively large with respect to the width of the ring of the burner, the said starting burner being in substantial registry with the upper burner, whereby the flame of the starting burner will uniformly heat the under surface of the channel of the first mentioned burner and independent means for supplying the starting burner with the starting fuel, substantially as described.

1,024,869. SHOE-STRETCHER. WILLIAM L. SMITH, Indianapolis, Ind. Filed May 18, 1911. Serial No. 627,009. (Cl. 12—182.)



1. A shoe stretcher including two counterpart members hingedly connected together at one end thereof, an expanding-spool operatively connected with the two members, and a cord connected with the expanding-spool.

2. A shoe stretcher including two counterpart members comprising each a shank and an approximately spoon-shaped main portion, a pivot-pin connecting the shanks of the two members together and having a handle on one end and a spike on the opposite end thereof, and an expanding-spool arranged between and operatively connected with the two members.

3. A shoe stretcher including two counterpart members hingedly connected together at one end thereof, the opposite end portions of the members being approximately spoon-shaped and having each a plurality of apertures therein, a boss having projections thereon removably inserted in two of the apertures, an expanding-spool arranged between and operatively connected with the two members, and a cord connected with the expanding-spool.

4. A shoe stretcher including two counterpart members hingedly connected together at one end thereof and having each a guideway therein, an expanding-spool operatively connected with the two members, and a cord connected to the expanding-spool and extending movably through the guideways.

5. A shoe stretcher including two counterpart members hingedly connected together and provided each with an axial rod, one of the rods being screw-threaded, and an expanding-spool rotative on the rods between the members, the expanding-spool having screw-threads therein engaging the screw-threads on the rod.

[Claims 6 to 9 not printed in the Gazette.]

1,024,870. VENDING-MACHINE. THEODORE B. TERTELING, Detroit, Mich., assignor to Lion Machine Company, Detroit, Mich., a Corporation of Michigan. Filed Apr. 21, 1911. Serial No. 622,453. Renewed Mar. 16, 1912. Serial No. 684,221. (Cl. 194—57.)



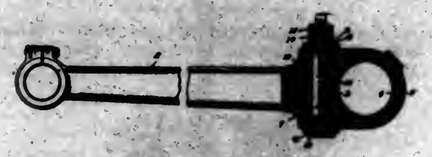
1. A vending machine, comprising a face plate provided with a vertical slot, a coin chute adapted to discharge a coin in front of said slot, a plunger member provided with a projection extending in front of said slot and a coin receiving wedge-shaped portion at the side thereof said plunger member being also provided with a main and lateral slot, guide pins carried by said face plate and extending into said main and lateral slots, springs for holding said plunger in its normal position, and a rotatable shaft provided with arms adapted to be projected through the vertical slot in said face plate in coöperative relation to said plunger member and coin chute.

2. A vending machine, comprising a casing, a face plate provided with a vertical slot, a coin chute terminating above said slot, a coin actuated plunger member in cooperative relation to said slot and chute, a rotatable shaft having arms adapted to pass through said slot in cooperative relation to said plunger member, means for preventing the rearward rotation of said shaft and means for locking said plunger member as against the forward rotation of said shaft when no coin is played.

3. A vending machine, comprising a casing, a face plate provided with a vertical slot, a coin guide member, a plunger member provided with guide slots and projecting in front of said slot, a rotatable shaft having arms adapted to be projected through said slot and to engage said plunger member when no coin is played, guide pins cooperating with said guide slots for locking said plunger member as against actuation by said arms and for releasing the same when a coin is played, and means for preventing the rearward movement of said shaft.

4. A vending machine, comprising a casing, a rotatable shaft provided with coin engaging arms, a coin chute carried by said casing and terminating in a face plate provided with a vertical coin arm receiving slot, a coin guide member on said plate at the side of said slot, a coin actuated plunger member extending in front of said slot and provided with guide slots, guide pins extending through and coöperating with said guide slots for locking said plunger member as against direct actuation by said engaging arms, and means for manually rotating said rotatable shaft.

1,024,871. BEARING-ADJUSTING MEANS. ROBERT D. VALENTINE and HENRY S. BATTER, Minneapolis, Minn., assignors to Imperial Machinery Company, Minneapolis, Minn., a Corporation. Filed Oct. 5, 1911. Serial No. 653,081. (Cl. 74—17.)



1. The combination, with a connecting rod and strap, of a bolt fitting within a hole in said rod and connecting the ends of said strap, eccentric cones on said bolt, the rotation of said bolt operating to draw said strap toward said rod, and a gib having a face on one side to bear on the end wall of said rod and a surface on the other side to fit said bolt.

2. A bearing including separately movable members, one of said members straddling the other member, a rotating, eccentric bolt extending through both of said members, and a gib having freedom for lateral movement interposed between said bolt and one of said members.

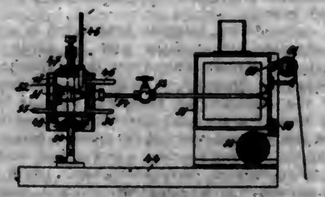
3. The combination, with a connecting rod having a transverse opening therethrough at one end and a bearing strap, of an eccentric bolt passing through the hole in said rod and the ends of said strap, the rotation of said bolt operating to draw said strap toward the end of said rod, and a floating gib interposed between said bolt and the end wall of said rod

4. The combination, with a connecting rod having a bearing surface at one end and a transverse hole or opening near said bearing and a strap adapted to move toward or from the end of said rod, of an eccentric bolt passing through the ends of said strap and through the hole in said rod, said bolt fitting loosely in said rod, eccentric cones carried by said bolt and engaging the ends of said strap, and a loose gib interposed between the shank of said bolt and the end wall of said rod and having a curved face on one side to fit the surface of said bolt and a flat face on the opposite side to bear on the wall of said rod, said gib being capable of lateral movement in said opening to adapt itself to the rotary adjustment of said bolt.

5. The combination, of a connecting rod having a square hole extending transversely therethrough at one end, a strap coöperating with the end of said rod to form a bearing, the end of the rod being inserted between the ends of said strap, a bolt fitting within the hole in said rod, eccentric cones on said bolt fitting corresponding sockets in the ends of said strap, and means having a bearing on said rod and on said bolt, said means having a transverse movement in said hole to accommodate itself to the rotation of said bolt.

[Claims 6 and 7 not printed in the Gazette.]

1,024,872. OIL-TESTING MACHINE. PAUL WENDT, Hamburg, Germany, assignor to Oelwerke-Stern Sonneborn Actiengesellschaft, Hamburg, Germany, a Company. Filed Oct. 26, 1911. Serial No. 656,881. (Cl. 73—51.)



1. In a machine for testing oil and fat, a container, a closure for said container, a plurality of pans within said container and adapted to receive the material to be tested, a plurality of tubes leading from said pans, means for supporting a recording strip in proximity to the ends of said tubes, and means for supplying steam to said container.

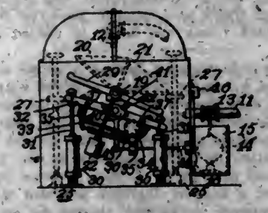
2. In a machine for testing oil and fat, a container, a closure for said container, a plurality of pans within said container and adapted to receive the material to be tested, a plurality of tubes leading from said pans, means for supporting a recording strip in proximity to the ends of said tubes, means for supplying steam to said container, and valve means in said tube for controlling the supply through said tubes.

1,024,873. KNOT-TIER. VALORUS S. WESTCOTT, Pawtucket, R. I. Filed Aug. 8, 1910. Serial No. 576,030. (Cl. 28—33.)



The improved knot-tying device herein described, the same comprising a base member adapted to be secured or attached to a flexible band or other support, a U-shaped looper extending outwardly from and rigidly secured to said base, and an integral combined hook and cutter element also secured to the base, said element being disposed edgewise below and substantially parallel with one arm of the looper, the hook part being uppermost, and terminating at its outer end portion in a hight having its inner edge adapted to be employed for cutting or severing the looped portion of the knotted cord.

1,024,874. MACHINE FOR WEIGHING LIQUIDS. CHARLES J. WILDER, Auburn, Mass. Filed Dec. 26, 1911. Serial No. 667,629. (Cl. 73—178.)



1. In a machine for weighing liquids, the combination with a tank, of a swinging hopper mounted therein for receiving liquid and discharging it into the tank as the hopper swings back and forth, a lever movable with the hopper, and a dash pot having a plunger projecting therefrom into position to be engaged by said lever as the hopper swings to one of its limiting positions, said lever being independent of said plunger, whereby it will not retard the return motion of the hopper.

2. In a machine for weighing liquids, the combination with a tank, of a swinging hopper for receiving liquid and discharging it into the tank, means for retarding the swinging motion of the hopper during the last part of its motion in one direction, and means movable with the hopper in position to engage and operate said retarding means as the hopper swings, said means movable with the hopper being independent of said retarding means, so that the return motion of the hopper will not be retarded thereby.

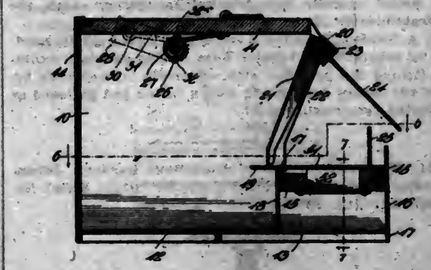
3. In a machine for weighing liquids the combination with a tank, of a two-part pivoted hopper for receiving liquid discharged therein and discharging the liquid into the tank, a pair of vertically adjustable positive stops for opposite sides of the hopper, means for retarding the swinging motion of the hopper on its pivot during the last part of said motion, and a lever movable with the hopper in position to engage and operate said retarding means alternately as the hopper swings, said lever being independent of said retarding means, whereby the return motion of the hopper will not be retarded thereby.

4. In a machine for weighing liquids, the combination with a tank, of a two-part hopper pivotally mounted therein for receiving liquid and discharging it into the tank, a lever fixed with respect to said hopper and projecting on opposite sides of the pivot thereof, a pair of dash-pots, and plungers projecting upwardly therefrom into position to be engaged by said lever as the hopper swings, said lever being independent of said plungers, whereby the return motion of the hopper will not be retarded thereby.

5. In a machine for weighing liquids, the combination with a tank, of a two-part hopper pivotally mounted therein for receiving liquid and discharging it into the tank, a lever fixed with respect to said hopper and projecting on opposite sides of the pivot thereof, a pair of dash-pots having plungers projecting upwardly therefrom into position to be engaged by said lever as the hopper swings, said lever being independent of said plungers, a second lever below the first named lever connected with said dash-pot plungers for raising one when the other is lowered by the swinging of the hopper, and means connected with the second lever for moving the lowered plunger away from the first named lever toward the end of its stroke.

[Claims 6 to 10 not printed in the Gazette.]

1,024,875. ANIMAL-TRAP. WASHINGTON I. WOLVERTON, Holton, Kans. Filed June 9, 1911. Serial No. 632,266. (Cl. 43—24.)

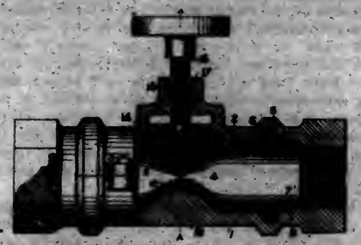


1. In a trap, a compartment, a swinging door normally closing the same, a runway, a bar mounted above the runway, sweep fingers projecting from the bar, a spring impelled shaft, connection between the shaft and the bar, means for normally holding the shaft against rotation, a trigger plate arranged in the runway, and connection between the trigger plate and the said means for releasing the latter when the former is depressed.

2. In a trap, a compartment, a swinging door normally closing the same, a runway, a bar mounted above the runway for rocking movement, a spring actuated shaft, connection between the shaft and the bar, an arm upon the shaft, a latch finger normally engaging the arm to hold the shaft against rotation, a gravity actuated detent, a projection from the latch finger normally engaging the detent, and a trigger plate arranged in the runway and having operative connection with the detent.

3. In a trap, a compartment, a swinging door normally closing the same, a runway, a bar mounted above the runway for rocking movement, a spring actuated shaft, connection between the shaft and the bar, an arm upon the shaft, a latch finger normally engaging the arm to hold the shaft against rotation, a gravity actuated detent, a projection from the latch finger normally engaging the detent, a trigger plate arranged in the runway and having operative connection with the detent, and means upon the detent arranged to engage with the projection of the latch finger whereby to return the detent quickly to normal position after actuation.

1,024,876. VALVE. JAMES A. BARBOUR, Johannesburg, Transvaal. Filed Nov. 21, 1910. Serial No. 593,466. (Cl. 137—4.)

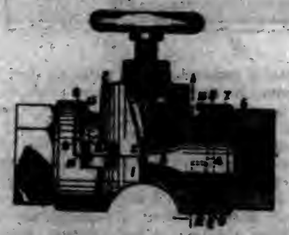


1. The combination with a divided casing of a hollow resilient liner providing the passage for fluid through the valve, said casing providing surfaces opposing outward movement of the ends of the liner and against which the liner abuts to make fluid tight joints between itself and the casing, the liner being initially greater in diameter than the interior of the casing whereby closure of the casing forces the liner against said surfaces and means for compressing a part of the liner to control the area of the passage.

2. The combination with a divided casing of a hollow resilient liner removably positioned therein providing the passage for fluid through the valve, the liner being formed with tapered ends and the casing with corresponding conical surfaces, the liner being initially larger than the cavity of the casing and being circumferentially compressed by closure of the latter, whereby its tapered ends are forced endwise into jointing engagement with the conical surfaces of the casing.

3. A resilient liner for a valve of the kind herein specified of substantially tubular form having external retaining flanges and provided with outwardly tapered ends beyond the flanges for jointing with a casing and flattened at a median compressing point.

1,024,877. VALVE. JAMES ALEXANDER BARBOUR, Johannesburg, Transvaal. Filed Sept. 19, 1911. Serial No. 650,154. (Cl. 137—4.)



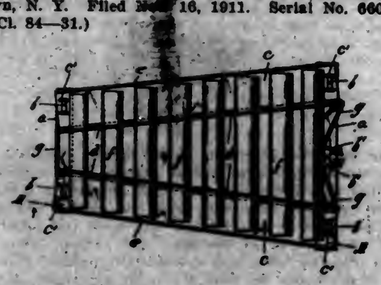
1. The combination of a casing comprising a separable cover, a resilient liner therein having flanged ends, the casing providing seatings for said ends, and rigid rings behind the flanges having inclined rear faces coöperating wedgewise with adjacent parts to force the rings and flanges toward the seatings.

2. The combination of a casing comprising a separable cover formed with inclined faces, a resilient liner therein having flanged ends, the casing providing seatings for said ends, and rigid rings behind the flanges having inclined rear faces coöperating wedgewise with adjacent parts including the aforesaid inclined faces of the cover, to force the rings and flanges toward the seatings.

3. The combination of a casing comprising a separable cover formed with inclined faces, a resilient liner therein having flanged ends, the casing providing seatings for said ends, rigid rings behind the flanges having inclined rear faces and bodies forced between said rear faces of the rings and the casing proper, said rear faces of the rings cooperating wedgewise with said bodies and the inclined faces of the cover to force the rings and flanges toward the seatings.

4. The combination of a casing comprising a separable cover formed with inclined faces, a resilient liner therein having flanged ends, the casing providing seatings for said ends, rigid rings behind the flanges, said rings being of increasing thickness from the top adjacent to the cover to the bottom, and bodies forced between the bottoms of the rings and the casing proper, said rear faces of the rings coöperating wedgewise with said bodies and the inclined faces of the cover to force the rings and flanges toward the seatings.

1,024,878. MUSICAL TOY. WILLIAM BARTHOLOMAE, New York, N. Y., assignor to Harry Zimmerman, Brooklyn, N. Y. Filed [illegible] 16, 1911. Serial No. 660,563. (Cl. 84—31.)



1. A musical instrument having a series of sounding bars; and a support for the same provided with retaining devices opposed to the ends of said bars for retaining the latter against endwise displacement; said bars being loosely mounted and free to slide endwise on said support.

2. A musical instrument having a series of sounding members; and a support therefor provided with retaining devices opposed to the ends thereof for retaining the same against endwise displacement and with retaining means through which said members pass free to slide endwise and which retain the latter in spaced relation to one another.

3. A musical instrument having a series of sounding members; and a support therefor provided with walls opposed to the ends thereof for retaining the same against endwise displacement and with retaining means through which said members pass free to slide endwise and which retain the latter in spaced relation to one another.

4. A musical instrument having a series of sounding members; and a support therefor provided with walls formed with openings through which said members pass free to slide endwise and which retain the latter in spaced relation to one another.

5. A musical instrument having a series of sounding members; and a support therefor provided with a pair of channel members in which lie the ends of said sounding members.

[Claims 6 to 9 not printed in the Gazette.]

1,024,879. PROTECTOR FOR MILK-BOTTLES. JAMES R. CARTER, West Newton, Mass. Filed Aug. 25, 1911. Serial No. 646,041. (Cl. 215—10.)



A protector for milk bottles, comprising a paper cap having a flat top and an elastic skirt to embrace the external rib at the top of the neck of the bottle, the margin of the skirt being turned outwardly and upwardly, said skirt and its turned margin being crimped and having a normal diameter less than that of said annular rib to cause the skirt to hold the flat top seated on the top of the bottle, said outwardly turned margin increasing the contractile force of the skirt and presenting a channel for a spring ring.

1,024,880. FERTILIZER AND PROCESS OF PRODUCING THE SAME. LEONARD ROBERTS COATES, Baltimore, Md. Filed Aug. 23, 1911. Serial No. 645,586. (Cl. 71—7.)

1. As a new fertilizing material, a neutral composition comprising insoluble available calcium phosphate in the form of an impalpable powder and having the characteristics of heated material, intimately commingled with calcium sulfate.

2. As a new fertilizing material, a neutral composition comprising insoluble available calcium phosphate in the form of an impalpable powder and having the characteristics of heated material, intimately commingled with a calcium salt having fertilizing value.

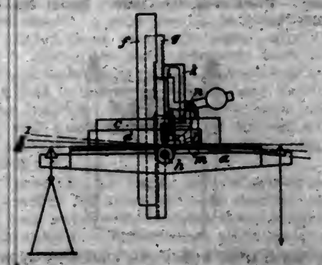
3. The process of making fertilizers which comprises calcining intimately commingled calcium phosphate and calcium carbonate at a temperature and under conditions converting the latter into readily slaking form, and slaking and neutralizing the calcines, neutralization being done with an acid giving salts having fertilizing value.

4. The process of making fertilizers which comprises calcining intimately commingled calcium phosphate and calcium carbonate at a temperature and under conditions converting the latter into readily slaking form, and slaking and neutralizing the calcines, neutralization being performed with sulfuric acid.

5. The process of making fertilizers which comprises calcining intimately commingled calcium phosphate and calcium carbonate at a temperature and under conditions converting the latter into readily slaking form, and slaking and neutralizing the calcines with water containing an acid giving salts having a fertilizing value, merely sufficient liquid being employed to give a dry product.

[Claims 6 to 9 not printed in the Gazette.]

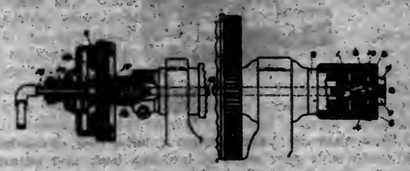
1,024,881. AUTOMATIC BALANCE WITH SLIDING WEIGHTS. GEORG DARMSTÄDTER, Darmstadt, Germany. Filed Jan. 18, 1912. Serial No. 671,984. (Cl. 73—3.)



1. In an automatic scale, a balance beam, a pair of sliding weights carried thereby, a pair of toothed driving weights, means for operatively connecting the driving weights to the sliding weights, a first pawl movably mounted on the balance beam and adapted to engage one of the driving weights, means controlled by said pawl for locking the other driving weight against descent, and a second pawl fast on the beam and adapted to engage said last named driving weight.

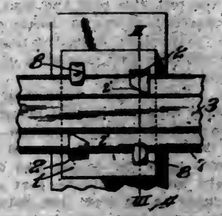
2. In an automatic scale, a balance beam, a pair of sliding weights carried thereby, a pair of toothed driving weights, means for operatively connecting the driving weights to the sliding weights, a first pawl movably mounted on the balance beam and adapted to engage one of the driving weights, a heel on the other driving weight, a hook on the first pawl adapted to engage said heel, and a second pawl fast on the beam and adapted to engage the last named driving weight.

1,024,882. CHUCK FOR PISTON-RINGS. DAVID F. DOMIZI, Franklin, Pa. Filed Mar. 18, 1911. Serial No. 615,379. (Cl. 29—107.)



A chuck for piston rings consisting of a body adapted to be attached to the live spindle of a machine tool and having a clamping face perpendicular to the axis of said spindle, ring-centering means affixed to said face and arranged to secure the proper position of the periphery of a piston ring by contact with a portion of its inner face, a longitudinally-movable clamping rod passing through said body and provided upon its outer end with a head consisting of laterally-projecting lugs, a clamping-plate adapted to be engaged by said rod head, and having a central opening arranged for the passage of said head, and means for longitudinally actuating said rod for the purpose set forth.

1,024,883. RAIL-CHAIR. HENRY ELLIOT, St. Louis, Mo., assignor to Elliot Frog & Switch Company, East St. Louis, Ill., a Corporation of Illinois. Filed Apr. 22, 1911. Serial No. 622,707. (Cl. 238—2.)

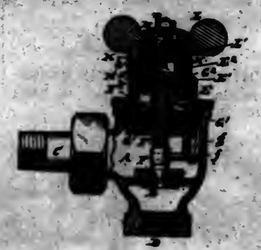


A rail chair comprising a base plate provided with projecting ribs extending around the perimetral edge thereof and longitudinal and transverse central ribs extending across said base plate between said perimetral ribs to divide said base plate into four sections, a pair of clamping claws stamped from the base plate in diagonally opposite sections of said base plate, said claws being provided with parallel clamping walls and having the outer edges thereof cut on an inclination to said clamping walls at a distance from each other slightly less than the width of said base flange, whereby said chair is adapted to hang from the rail flange at any angle and to be shifted into clamping relation with said base flange.

1,024,884. VALVE. JAMES L. FITTS, Pennsauken township, Camden county, N. J., and RUDOLPH M. HUNTER, Philadelphia, Pa., assignors to Warren Webster & Company, a Corporation of New Jersey. Filed Jan. 28, 1908. Serial No. 412,953. (Cl. 137—4.)

1. In a valve, a bonnet and a body having a valve-seat, combined with a rotatable part screwed into the bonnet and adjustable to or from the valve-seat, a valve-piece screwed into and guided by the rotatable part, means on the bonnet independent of the body to hold the valve-piece against rotation, means for rotating the rotatable part consisting of a packed part extending into the bonnet and having a hand-wheel on the outside, and a detent

device supported by the bonnet for engaging the hand-wheel in different positions of adjustment.



2. In a valve, a body having a valve-seat, combined with a rotatable part screwed into the body and adjustable to or from the valve-seat, a valve-piece screwed into and guided by the rotatable part, means to hold the valve-piece against rotation, means for rotating the rotatable part consisting of a packed part extending into the body and having a hand-wheel on the outside, a ring adjustably secured to the valve-body, and a detent device carried by the ring for engaging the hand-wheel in different positions of adjustment.

3. In a valve, a body, a bonnet screwed onto the body and having an internal screw-threaded part, a rotatable part within the bonnet and engaging the internal screw-thread thereof, a valve-piece having a smooth stem guided in the rotatable part and also having a screw connection therewith, means for holding the valve-piece from rotating, and means for rotating the rotatable part.

4. In a valve, a body, a bonnet screwed onto the body and having an internal right handed screw-threaded part, a rotatable part within the bonnet and engaging the internal screw-thread thereof, a valve-piece having a smooth stem guided in the rotatable part and also having a left handed screw connection therewith, means on the bonnet for holding the valve-piece from rotating, and means for rotating the rotatable part consisting of a handle and a packed extension through the bonnet.

5. In a valve, a bonnet and a body structure having a valve-seat, combined with a valve-part movable to or from the valve-seat and held against rotation by a sliding connection with the bonnet, a hand operated rotatable part adjustably screwed upon the bonnet and also upon the valve-part whereby both the rotatable part and valve-part simultaneously move to or from the valve-seat but in which the valve-part moves with greatest speed, and means for indicating the position of the valve-part, said means acting upon the hand operated portions of the rotatable part.

[Claim 6 not printed in the Gazette.]

1,024,885. HOISTING APPARATUS. LOUIS O. FORMAN, South Orange, N. J., assignor to Gillis & Geoghegan, New York, N. Y., a Firm. Filed Apr. 8, 1911. Serial No. 619,697. (Cl. 212—15.)

1. In a hoisting apparatus, a fixed tubular post, a tubular standard inclosed in said post and constructed to be raised or lowered telescopically therein, a rack in said standard, means for securing the rack to the standard, a train of gearing carried by said post and constructed to move said standard by engagement with said rack, said standard having a slot in front of the rack through which said train of gearing projects to engage the rack and means on the support of said train of gearing for engagement with one of said gears for preventing descent of the standard.

2. In a hoisting apparatus, a fixed tubular post, a vertically-slotted tubular standard inclosed by said post and constructed to be raised or lowered therein, a rack inclosed in said standard with its teeth presented to such slot, a train of gearing carried by said post and constructed to engage said rack, a coupling at the upper end of said standard, a sleeve secured in said coupling, a frame, a downwardly projecting leg on said frame received in said sleeve, a plate engaged with the lower end of said sleeve, a screw extending through said plate and into said leg, and a winding-spool and operating mechanism therefor carried on said frame.



3. In a hoisting apparatus, a fixed tubular post, a tubular standard inclosed in said post and carrying a rack, a train of gearing carried by said post and projecting through a slot in said standard to engage said rack, means on the support of said train of gearing for engagement with one of said gears for preventing descent of the standard, and means on the upper end of said standard for raising and lowering a load.

4. In a hoisting apparatus, a fixed tubular post having oppositely located holes in the upper portion thereof, a vertically-slotted tubular standard inclosed in said post and constructed to be raised or lowered therein, a rack inclosed in said standard with its teeth presented to such slot and having a notch in its lower end, a train of gearing carried by said post and constructed to move said standard by engagement with said rack, a pin adapted to be thrust through said holes in said post and through said notch to support said standard, and means on the upper end of said standard for raising or lowering a load.

1,024,886. METER. ADOLPH FRANK, Charlottenburg, Germany. Filed Aug. 31, 1909. Serial No. 515,415. (Cl. 235—1.)

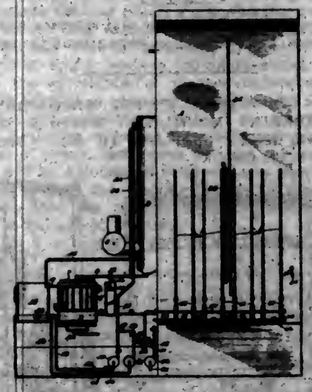


1. The combination with a gas, electricity or other like meter comprising a sealed mechanism for indicating the number of units consumed, of means for ascertaining the local value of the consumption during a certain period of time comprising an outer local value scale mounted thereon without tampering with the sealed mechanism, an adjustable pointer adapted to register with said scale and adjustable relatively to the sealed indicator and a key locking device for locking said pointer in position.

2. The combination with a gas, electricity or like meter comprising a sealed mechanism for indicating the number of units consumed, of means for ascertaining the local value of the consumption during a certain period of time comprising an outer local value scale mounted thereon without tampering with the sealed mechanism, a ledge surrounding said local value scale, an adjustable pointer adapted to be movable on said ledge and to register with said scale, said pointer being adjustable relatively to the sealed indicator, and a key locking device for locking said pointer in position on the ledge.

3. The combination with a gas, electricity or like meter comprising a sealed mechanism for indicating the number of units consumed, of means for ascertaining the local value of the consumption during a certain period of time comprising an outer local value scale, mounted thereon without tampering with the sealed mechanism, a ledge surrounding said local value scale an adjustable pointer adapted to be movable on said ledge and to register with said scale, said pointer being adjustable relatively to the sealed indicator, and a key operated cam carried by said pointer and adapted to engage said ledge, said cam being adapted in one position to enable said pointer to be moved on said ledge and in another position to clamp the pointer in position on the ledge.

1,024,887. APPARATUS FOR DRYING AIR. ALBERT GAIDE, Chicago, Ill. Filed Nov. 7, 1910. Serial No. 591,058. (Cl. 62—21.)



1. An apparatus for drying air comprising an inlet chamber; means for sprinkling said chamber with cool water; a main water outlet for said chamber located near the bottom thereof; a supplemental water outlet for said chamber located above said main water outlet; a tank arranged to receive the water from said main outlet; a valve for said main outlet; a float controlled by a level in said tank and arranged to operate said valve; a refrigerating chamber in communication with said inlet chamber; and means for passing air through said inlet and then through said refrigerating chamber, substantially as described.

2. An apparatus for drying air comprising an inlet chamber; means for sprinkling said chamber with cool water; a main water outlet for said chamber located near the bottom thereof; a supplemental water outlet for said chamber located above said main outlet; a cooling tank arranged to receive the water from said main outlet; means for supplying the water from said cooling tank to said sprinkling means; a valve for said main outlet; a float controlled by the level in said tank and arranged to operate said valve; a refrigerating chamber in communication with said inlet chamber; and means for passing air through said inlet and then through said refrigerating chamber, substantially as described.

3. An apparatus for drying air comprising an inlet chamber; means for sprinkling said chamber with water; a main water outlet for said chamber located near the bottom thereof; a supplemental water outlet for said chamber located above said main outlet; a cooling tank arranged to receive the water from said main outlet; means for supplying the water from said cooling tank to said sprinkling means; a valve for said main outlet; a float controlled by the level in said tank and arranged to operate said valve; a refrigerating chamber in communication with said inlet chamber; a sprinkling system for said refrigerating chamber; means for supplying the water from said supplemental outlet to the refrigerating chamber sprinkling system; and means for passing air through said inlet and then through said refrigerating chamber, substantially as described.

4. An apparatus for drying air comprising a plurality of separate refrigerating chambers; individual air and water discharges for each of said chambers; means for opening or closing said discharges; a separate sprinkler system for each of said chambers; means for supplying warm water to each of said sprinkler systems separately; and means for passing air through said chambers, substantially as described.

5. An apparatus for drying air comprising a plurality of refrigerating chambers; cooling fluid coils in said chambers; a cooling system for said coils located above them; a tank located above said cooling system and connected with the bottoms of said coils; and means for forcing the fluid from said coils through said cooling system and into said tank, substantially as described.

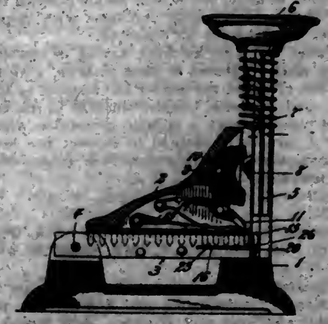
[Claims 6 and 7 not printed in the Gazette.]

1,024,888. BOOT AND SHOE LACE GUIDE. ALOIS FREIHERR V. GILLERN, Vienna, Austria-Hungary. Filed Aug. 21, 1909. Serial No. 514,000. (Cl. 24—145.)



An improved lacing guide formed of a single plate of sheet metal shaped to form an elongated tubular guide body curved in the direction of its length, said guide body having tubular fastening shanks formed from a part of the metal of the body and projecting at right angles from the axis of said body, the free margins of said body being disposed in flush edge to edge abutting relation and being arranged on that side of the body opposite to the shanks.

1,024,889. STAPLING-MACHINE. EDWIN T. GREENFIELD, Kiamesha, N. Y., assignor to Greenfield Automatic Fastener Company, New York, N. Y., a Corporation of New York. Filed June 23, 1911. Serial No. 634,949. (Cl. 1—48.)



1. In a stapling machine of the type described, a staple severing and staple driving plunger for severing and driving two pronged staples from a staple strip; a slidable rod provided with yielding staple holding means adapted to normally rest beneath the prongs or teeth of each staple

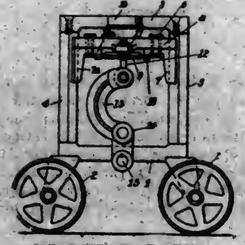
when the plunger is in its upper or normal position, substantially as described.

2. In a stapling machine of the type described, a staple holding device for the last staple of the strip embracing a staple supporting guide-way, a rod slidingly located below the staple strip carried by said guide-way and having an inclined face located in the path of the plunger; together with yielding means for holding said rod in its forward position so that the free or holding end thereof will lie in the path of the last staple when the plunger assumes its normal position, substantially as described.

3. In a stapling machine of the type described holding means for the last staple of the strip embracing a slidable rod having angular faces adapted to support the staple in the outlet and a spring for holding said rod in its advanced position; the outer end of said rod having an inclined face adapted to be acted upon by the plunger as it descends, substantially as described.

4. In a stapling machine of the type described a holding device for preventing the last staple of the staple strip from clogging the outlet of the machine embracing a staple supporting guide-way, a slidable rod carried by said guide-way, yielding means carried by the rod and adapted to lie normally in the outlet, said rod having an inclined face located under the staple driving plunger; together with yielding means for normally holding the rod in its advanced position, substantially as described.

1,024,890. PATTERN-STRIPPING MACHINE. WILLIAM F. GRILL, Detroit, Mich. Filed July 27, 1911. Serial No. 640,792. (Cl. 22—52.)



1. A pattern stripping machine, having in combination a stripping plate supported in a fixed position, a vertically movable plate arranged thereunder and adapted to support a pattern, vertical guides, brackets adapted to run on said guides and connected with said movable plate by bolts engaging in slots, and a turn buckle adapted to connect two brackets and adjust the same with respect to their guides, substantially as described.

2. A pattern stripping machine, having in combination a stripping plate supported in fixed position, a vertically movable plate arranged thereunder and adapted to support a pattern, vertical guides, brackets adapted to run on said guides and provided with a slidable connection with said plate, and a turnbuckle adapted to connect two brackets and adjust the same with respect to their guides, substantially as described.

1,024,891. DECORATED FABRIC. JOSEPH A. GROEBLI, New York, N. Y. Filed Apr. 3, 1911. Serial No. 618,681. (Cl. 2—147.)

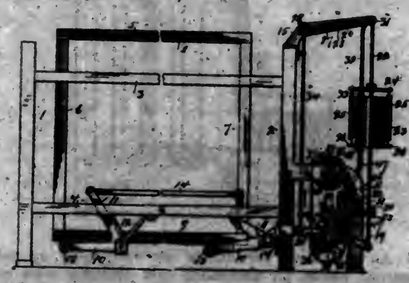
1. A decorated fabric consisting of a foundation fabric, stitching formed in the fabric and a decorative thread, passed under and over said stitching, said thread being passed two or more times under said stitching and thence over the same and transverse loops formed of said thread above the fabric.

2. A decorative fabric consisting of a foundation fabric, stitching formed in the fabric, a superimposed decorative cord extending in the same general direction as the stitching and a holding thread passing under said stitching and over the said cord and stitching, said holding thread,



passing two or more times under said stitching and thence over said cord, thereby forming loops around the said cord.

1,024,892. COUNTERBALANCING MECHANISM FOR EMBROIDERING-MACHINES. JOSEPH A. GROEBLI, New York, N. Y. Filed July 11, 1911. Serial No. 638,011. (Cl. 112—7.)



1. In an embroidering machine, the combination of a movable tambour frame and means for counterbalancing the same, comprising a spring for counterbalancing the weight of the tambour frame, compensating mechanism adapted to restore the tension of the spring upon the movement up or down of the tambour frame, and means operated by said compensating device and requiring greater force to operate it in one direction than another, and arranged whereby it will have the effect of equalizing the burden on the said compensating device in its different movements when restoring the tension of the spring.

2. In an embroidering machine the combination of a movable tambour frame, means for causing the tambour frame to move in parallelism throughout, and means for counterbalancing the tambour frame through said parallel motion device, comprising a spring for counterbalancing the weight of the tambour frame, compensating mechanism adapted to restore the tension of the spring upon the movement up or down of the tambour frame, and means operated by said compensating device and requiring greater force to operate it in one direction than another, and arranged whereby it will have the effect of equalizing the burden on the said compensating mechanism in its different movements when restoring the tension of the counterbalancing spring.

3. In an embroidering machine, the combination of a movable tambour frame and means for counterbalancing the same, comprising a spring for counterbalancing the weight of the tambour frame, compensating mechanism

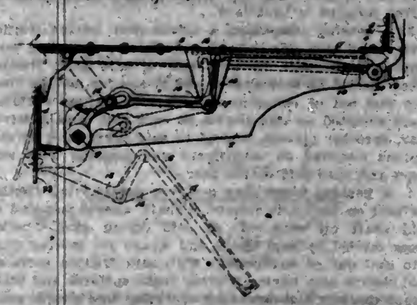
adapted to restore the tension of the spring upon the movement up or down of the tambour frame, and means operated by said compensating device and requiring greater force to operate it in one direction than another, and arranged whereby it will have the effect of equalizing the burden on the said compensating mechanism in its different movements when restoring the tension of the spring, said compensating mechanism, being adapted to be automatically controlled by the movements of the tambour frame.

4. In an embroidering machine, the combination of a movable tambour frame, and means for counterbalancing the same, comprising a spring for counterbalancing the weight of the tambour frame, a compensating device adapted to expand and contract the spring, reversely to the expansion and contraction caused by the movements of the tambour frame, whereby the compensating device will restore the equilibrium of the counterbalancing spring, and a weight adapted to be raised by the compensating device when the latter operates to contract the counterbalancing spring, whereby the burden on the compensating device in its different movements will be more equal.

5. In an embroidering machine the combination of a movable tambour frame, and means for counterbalancing the same, comprising a spring for counterbalancing the weight of the tambour frame, a compensating device adapted to expand and contract the spring reversely to the expansion and contraction caused by the movements of the tambour frame, whereby the compensating device will restore the equilibrium of the counterbalancing spring, a weight adapted to be raised by the compensating device when the latter operates to contract the counterbalancing spring, means for operating the compensating device from a source of power, and means whereby the compensating device will be automatically thrown into operation upon the movement of the tambour frame and thrown out of operation upon the restoration of the counterbalancing spring to its normal tension.

[Claims 6 to 10 not printed in the Gazette.]

1,024,893. FLUSH CAR-DOOR. LEVIN GREGFORD HAMER, Rutherford, N. J., assignor to Frederick H. Gibbs, New York, N. Y. Filed June 23, 1910. Serial No. 568,554. (Cl. 105—14.)



1. In a device of the class described, a door, an operating shaft, a locking bolt carried upon said door, rigid rockable connections betwen said locking bolt and said operating shaft and means for sliding said bolt longitudinally to positively locked position.

2. In a car of the class described, a door, a fixed socket in proximity to said door, an operating shaft, toggle connections between said shaft and said door, and a longitudinally slidable locking bolt adapted to be actuated by said toggle.

3. In a device of the class described, the combination comprising a door, a latch socket, a latch carried by said door, a bell crank for closing said door and for subsequently thrusting said latch.

4. In a car provided with flush bottom doors, longitudinally slidable locking means, and a rockable bell crank for pushing said doors upwardly to closed position automatically and positively sliding said locking means to lock the doors in such closed position.

5. In a device of the class described, the combination of sills, a series of doors suported in proximity to said sills, an operating shaft beneath said doors, door lifting and locking means including a bell crank lever connecting said shaft with said doors and longitudinally slidable means operable by said bell crank lever for locking said doors in a closed position.

[Claims 6 to 88 not printed in the Gazette.]

1,024,894. CARAFE AND STOPPER. ALBERT HEINEMANN, Berlin, Germany. Filed July 18, 1911. Serial No. 639,080. (Cl. 215—13.)

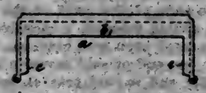


1. The combination with a glass bottle having a collar at the upper end of its neck and a rounded female thread in its neck, of a glass stopper having a collar, a rounded male thread and an opposite thread between the collar and the male thread, and a cork ring fitting the opposite thread of said stopper, the two collars being adapted to compress said cork ring.

2. The combination with a glass bottle having a collar at the upper end of its neck, and a rounded female thread in its neck, of a glass stopper having a collar, a rounded male thread and an opposite thread between the collar and the male thread, and a cork ring fitting the opposite thread of said stopper there being a recess adapted to receive the cork ring, the two collars being adapted to compress said cork ring.

3. The combination with a glass bottle having a collar at the upper end of its neck and a rounded female thread in its neck, of a glass stopper having a collar with an inner annular recess, a rounded male thread and an opposite thread between the male thread and the bottom of the recess, and a cork ring fitting the opposite thread and the annular recess of said stopper, the two collars being adapted to compress said cork ring.

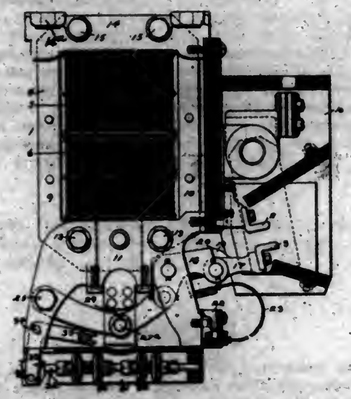
1,024,895. BAG-FRAME. CHRISTIAN HIERING and ALBERT FULLER, Newark, N. J., assignors to The J. E. Mergott Company, Newark, N. J., a Corporation of New Jersey. Original application filed Apr. 22, 1909, Serial No. 491,565. Divided and this application filed Aug. 20, 1909. Serial No. 513,747. (Cl. 150—29.)



In a device of the character described, a pair of U-shaped bag frame members having sharp angular corners, means for hinging said bag frame members together each of said frame members comprising a main body portion

and hinge members extending at an angle therefrom, said body portion and hinge members being formed from an unbroken flat piece of sheet metal, and a continuous flange extending around the outer edges of said main body frame member and the hinge members, the flange extending along the edge of the main body portion of one of said frame members being of greater width than the flange extending from the hinge members of said frame member, thereby forming a lip or flange to overlie the other frame member.

1,024,896. ELECTROMAGNETICALLY-OPERATED SWITCH. GEORGE H. HILL, Schenectady, N. Y., assignor to General Electric Company, a Corporation of New York. Filed Jan. 4, 1906. Serial No. 294,503. (Cl. 175—281.)



1. In an electromagnetically-operated switch, fixed and movable switch members, a toggle connected to said movable switch member and arranged to operate the same, an electromagnet having a plunger movable in the field thereof, and a lost motion connection between said plunger and said toggle whereby when the switch is closed said plunger is substantially relieved from pressure tending to move it out of the field of the magnet.

2. In an electromagnetically-operated switch, fixed and movable switch members, a toggle connected to said movable switch member for operating the same, an actuating coil, a plunger movable in the field thereof, an extension from said plunger having a hole therein, and a pin in said toggle passing through said hole and considerably smaller than the hole in said extension.

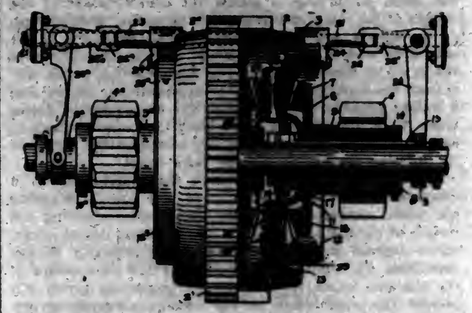
3. In an electromagnetically-operated switch, a laminated U-shaped magnet frame, an energizing coil housed between the arms of said frame, a plunger movable in said coil in a direction parallel to said arms, a movable switch member connected to said plunger, and brackets respectively at the free ends of the arms of the magnet frame and at the opposite end of said frame for clamping the laminæ together, said movable switch member being supported upon the brackets at one end of said frame and the other brackets serving as a main support.

4. In an electromagnetically-operated switch, a laminated U-shaped frame, an energizing coil housed between the arms of said frame, a plunger movable within said coil in a direction parallel to the arms of said frame, brackets clamping the free ends of the arms of the magnet frame together, a fixed switch member, a movable switch member pivotally supported upon said brackets, a toggle pivotally supported at one end of said movable switch member and at the opposite end to said bracket, and a loose connection between said toggle and said plunger.

5. In an electromagnetically-operated switch, an electromagnet having a movable plunger, a fixed switch member mounted upon one side of the electromagnet, a movable switch member, an operative connection between such movable switch member and the plunger of the electromagnet, auxiliary contacts including fixed and movable members located beneath the lower end of said plunger, and an operative connection between the movable member of said auxiliary contacts and said plunger.

[Claims 6 to 10 not printed in the Gazette.]

1,024,897. GEARING. ANTON I. HOVLAND, St. Paul, Minn. Filed Nov. 12, 1910. Serial No. 592,110. (Cl. 74—34.)



1. A gearing comprising a driven gear having a friction surface, a shaft, a sleeve having a bearing on said shaft, friction shoes carried by said sleeve and means for moving them into and out of engagement with said friction surface, and a pinion geared to said sleeve and to said driven gear.

2. A gearing comprising a driven gear having a friction surface, a shaft a sleeve mounted thereon, friction shoes carried by said sleeve, means for moving said shoes into and out of engagement with said friction surface, said sleeve having a friction brake surface and a brake strap therefor and means for operating the same, a gear, a sprocket pinion secured thereon, and beveled pinions carried by said sleeve and meshing with said gear and with said driven gear, whereby said sprocket pinion may be driven forward or backward.

3. A gearing comprising a driven gear having friction surfaces on each side thereof, a shaft, sleeves having bearings on said shaft on each side of said gear, friction shoes carried by said sleeves and means for moving them into and out of engagement with said friction surfaces, gears mounted on said sleeves on each side of said driven gear, sprocket pinions secured to said gears, and beveled pinions mounted on said sleeve and meshing with said gears and with said driven gear.

4. A gearing comprising a driven gear having friction surfaces on each side thereof, a shaft, sleeves mounted on said shaft on each side of said driven gear, friction shoes carried by said sleeve and means for moving them into and out of engagement with said friction surfaces, said sleeves also having friction brake surfaces and brake straps therefor and means for operating said straps, gears journaled on said sleeves, sprocket pinions secured to said gears, and beveled pinions carried by said sleeves and forming driving connections between said gears and said driven gear, whereby said sprocket pinions may be driven forward by the engagement of said friction shoes with said friction surfaces and backward by releasing said shoes and setting said brake straps.

5. A gearing comprising a driven gear having friction surfaces, a shaft, independent gears journaled on each side of said driven gear, pinions secured to said gears, friction shoes and means for moving them into and out of engagement with said friction surfaces, means operatively connecting said friction shoes with said pinions for driving said pinions in one direction, and means having a driving connection with said gears and said driven gear for reversing the movement of said pinions.

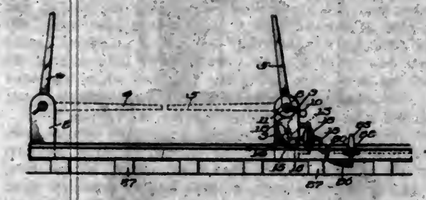
[Claims 6 and 7 not printed in the Gazette.]

1,024,898. FILAMENT-SUPPORT. JOHN W. HOWELL, Newark, N. J., assignor to General Electric Company, a Corporation of New York. Filed Dec. 17, 1906. Serial No. 348,127. (Cl. 176—39.)



A supporting means for filaments comprising a metal wire standard with a flattened end portion having the form of a tube and a resilient member held in said tube.

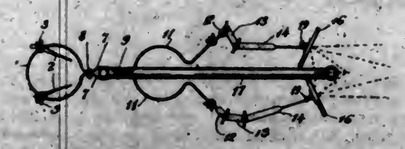
1,024,899. CROSSING-GATE. IENS CHREST JOHNSON, Tonica, Ill. Filed Aug. 28, 1911. Serial No. 646,527. (Cl. 39—37.)



1. The combination with swinging crossing gates or arms of a contact-lever or toe to be operated by the wheel of a car or vehicle, pneumatic means to be controlled by said toe or lever and connected with said gates or arms, said means causing vibratory or up and down movements in said gates or arms while closing and while in substantially closed position.

2. The combination with the crossing gate or arm, of a mechanism for swinging same between open and closed positions, said mechanism being operable by a passing car to close said gate or arm and vibrate same in its closed position, and to automatically restore said gate or arm to its normally open or raised position.

1,024,900. REFLECTOR-SUPPORT. MARTIN J. KANE, Bayonne, N. J. Filed Nov. 22, 1911. Serial No. 661,715. (Cl. 240—117.)



1. A reflector support having a plurality of embracing parts of different accommodation, two reflector supporting arms each comprising a plurality of sections fastened together for swinging movements in different planes, a substantially closed spring loop uniting the coöperating embracing parts and a plurality of braces adjustably fastened at their inner ends to said loop and having fastening means at their outer ends.

2. A reflector support having a central lamp-embracing portion, a reflector-supporting arm extending from one side of the lamp-embracing portion, and a balancing extension from the other side of said portion, the balancing extension including a pipe-embracing portion; substantially as described.

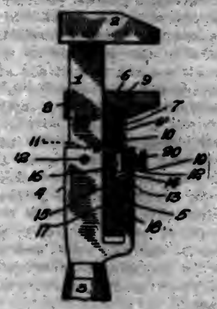
3. A reflector support having a central lamp-embracing portion, a reflector-supporting arm extending from one side of the lamp-embracing portion, and a balancing extension from the other side of said portion, the balancing extension including a pipe-embracing portion and having means adapted to brace the reflector-support when it is attached to a pipe and to serve as steadying means when the support is attached to a lamp; substantially as described.

4. A reflector support having a central lamp-embracing portion, a reflector-supporting arm extending from one side of the lamp-embracing portion, and a balancing extension from the other side of said portion, the balancing extension including a pipe-embracing portion and a spring loop beyond the pipe-embracing portion; substantially as described.

5. A reflector support having a central lamp-embracing portion, a reflector-supporting arm extending from one side of the lamp-embracing portion, and a balancing extension from the other side of said portion, the balancing extension including a pipe-embracing portion and a spring loop beyond the pipe-embracing portion, and braces attached to said loop to brace the reflector-support when it is attached to a pipe and to serve as steadying means when the support is attached to a lamp; substantially as described.

[Claims 6 to 8 not printed in the Gazette.]

1,024,901. WRENCH. FERENCS KOVACS, Hannibal, Mo. Filed Feb. 9, 1912. Serial No. 676,588. (Cl. 81—136.)

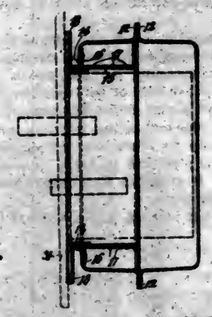


1. A wrench comprising a shank, a fixed jaw carried by the outer end thereof, a handle carried by the inner end of said shank, a bracket arm carried by the front side of said shank, a jaw slidably mounted upon the front side of said shank, a yoke carried by said jaw and embracing said shank, a stem carried by said jaw and extending between said shank and said bracket arm, said stem having a longitudinal groove in the front side thereof with the inner wall of said groove toothed, a locking pawl pivotally connected to said bracket arm and extending into the groove of said stem, a flat spring connected to said bracket arm and engaging one end of said locking pawl for retaining said pawl normally out of engagement with said stem, and a screw arranged in the end of said bracket arm and adapted to be adjusted to shift said pawl into engagement with said stem and lock said stem relatively to said shank.

2. A wrench comprising a shank, a fixed jaw carried by the outer end thereof, a handle carried by the inner end of said shank, a bracket arm carried by the front side of said shank, a jaw slidably mounted upon the front side of said shank, a yoke carried by said jaw and embracing said shank, a stem carried by said jaw and extending between said shank and said bracket arm, said stem having a longitudinal groove in the front side thereof with the inner wall of said groove toothed, a locking pawl pivotally connected to said bracket arm and extending into the groove of said stem, a flat spring connected to said bracket arm and engaging one end of said locking pawl for retaining said pawl normally out of engagement with said stem, a screw arranged in the end of said bracket arm and adapted to be adjusted to shift said pawl into

engagement with said stem and lock said stem relatively to said shank, and straps secured to the sides of said shank and said bracket arm for guiding said stem between said shank and said bracket arm.

1,024,902. SWITCH-BOX. JOH KRONBERGER, Coney Island, N. Y., assignor of one-half to Leo Z. Schulhof, New York, N. Y. Filed Jan. 20, 1910. Serial No. 539,009. (Cl. 247—6.)



1. In a switch box, a portion provided with an angular opening, a resilient sleeve fitting in said opening and provided with outwardly opening inwardly closed spaced grooves, parallel to the plane of the front edge of the sleeve, and pawls secured to said box and each having a transversely elongated end adapted to engage in said grooves and simultaneously against both the closed ends thereof.

2. In a switch box, a top portion having an angular opening, a resilient sleeve fitting in said opening and having notches at opposite ends, and means carried by the top piece for engaging in said notches.

3. In a switch box, a top portion having an angular opening, a resilient sleeve fitting in said opening and having notches at opposite ends, and means carried by the top piece for engaging in said notches, said sleeve being adapted to be sprung to move said notches away from said means.

4. In a switch box, a top portion having an opening, a sleeve adjustably fitted in said opening and provided with a series of outwardly opening notches, and a projection carried by said top portion and engaging in said notches, the part of said sleeve carrying said notches being adapted to be bent inwardly toward the axis of the sleeve whereby said projection is disengaged from the notches.

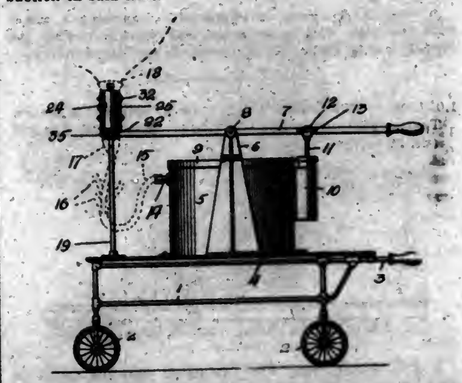
5. A switch box comprising, a base portion, a top portion secured thereto and having a rectangular opening, pawls secured to the top portion at the ends of said opening and projecting parallel to the axis thereof, and a sleeve of rectangular cross-section snugly engaging in said opening, the end walls of said sleeve being provided each with a series of notches adapted to engage each of said pawls, said end walls being resilient and adapted to be bent to move the notches out of engagement with the pawls.

[Claims 6 to 8 not printed in the Gazette.]

1,024,903. MILKING DEVICE. ELLIS LVAY, Ennis, Tex. Filed Feb. 3, 1912. Serial No. 675,223. (Cl. 31—96.)

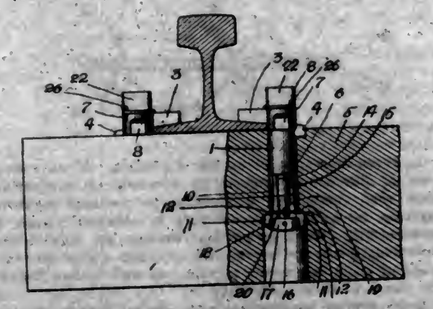
1. A milking device comprising a tank, a guide post adapted to be positioned under a cow, a hose connected to said tank and having branches, nipples carried by the branches of said hose and adapted to be placed upon the teats of a cow, stationary members carried by said post and engaging said nipples, movable members associated with said stationary members and adapted to be moved to press said nipples, and means including yokes, sleeves and an operating lever for actuating said movable members.

2. A milking device comprising a tank, a guide post adapted to be positioned under a cow, a hose connected to said tank and having branches, nipples carried by the branches of said hose and adapted to be placed upon the teats of a cow, stationary members carried by said post and engaging said nipples, movable members associated with said stationary members and adapted to be moved to press said nipples, means including yokes, sleeves and an operating lever for actuating said movable members, and means associated with said tank and actuated by the lever of the first mentioned means for producing a suction in said hose.



3. A milking device comprising a tank, a guide post adapted to be positioned under a cow, a hose connected to said tank and having branches, nipples carried by the branches of said hose and adapted to be placed upon the teats of a cow, stationary members carried by said post and engaging said nipples, movable members associated with said stationary members and adapted to be moved to press said nipples, means including yokes, sleeves and an operating lever for actuating said movable members, means associated with said tank and actuated by the lever of the first mentioned means for producing a suction in said hose, and means carried by said post for preventing a vertical movement of said movable members relatively to said stationary members.

1,024,904. EXPANSION-SPIKE. ALBERT MARTIN, Newark, N. J. Filed Jan. 24, 1912. Serial No. 673,114. (Cl. 85—23.)



1. An expansion spike comprising a body, resilient arms carried by the lower end thereof and provided with jaws, a pin rotatably mounted in said body, a cross head carried by the lower end of said pin and adapted to engage the jaws of said arms for expanding said arms, a head carried by the upper end of said pin, and means carried by said head for locking said pin relatively to said spike body.

2. An expansion spike comprising a body, resilient arms carried by the lower end thereof and provided with jaws, a pin rotatably mounted in said body, a cross head carried by the lower end of said pin and adapted to engage the jaws of said arms for expanding said arms, a head carried by the upper end of said pin, means carried by said head for locking said pin relatively to said spike body, and means carried by said resilient arms and engaging the lower end of said pin for limiting the movement of said pin.

3. An expansion spike comprising a body, a clamping head carried by the upper end thereof, resilient locking arms carried by the lower end thereof, a pin rotatably mounted in said body, a cross head carried by the lower end of said pin and adapted to contact with and expand the lower end of said arms, a head carried by said pin, and means including a pivoted latch carried by said head for locking said pin relatively to said body.

4. An expansion spike comprising a body, a clamping head carried by the upper end thereof, resilient locking arms carried by the lower end thereof, a pin rotatably mounted in said body, a cross head carried by the lower end of said pin and adapted to contact with and expand the lower ends of said arms, a head carried by said pin, means including a pivoted latch carried by said head for locking said pin relatively to said body, and means including check members carried by said arms for limiting the movement of said pin relatively to said body.

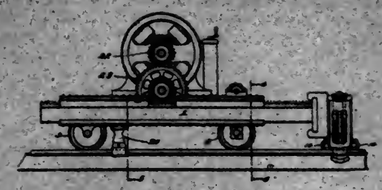
5. An expansion spike comprising a body, a clamping head carried thereby, a check lug carried by said body, resilient arms carried by the lower end of said body, jaws carried by the lower ends of said arms, a pin rotatably mounted in said body, a cross head carried by the lower end of said pin and adapted to engage said jaws to expand the lower end of said arms, a head carried by the upper end of said pin, a spring pressed latch carried by said head for locking said pin relatively to said body, and means carried by the lower ends of said arms for limiting the movement of said pin in said body.

1,024,905. CURTAIN-STRETCHER. KATHARINE S. MCKELVEY, Pittsburgh, Pa. Filed Jan. 24, 1911. Serial No. 604,416. (Cl. 45—24.)



A curtain stretcher comprising top, bottom and end rails, said top and bottom rails formed of sections and united by a substantially V-shaped tongue and groove connection each provided with pin receiving kerfs upon the front faces thereof said top and bottom rails each having the inner edge thereof formed with a groove extending from end to end, said end rails provided with tongues extending in said grooves, clamping members secured to the rear faces of the end rails at the top thereof, and straddling the top rails, means extending through said clamping members and engaging the top rails for securing them to the end rails, rearwardly projecting lugs carried at the lower portions of the clamping members, supporting legs pivotally connected to said lugs, clamping members secured to said bottom rails and straddling the end rails, means extending through said clamping members and engaging the end rails for securing them to the bottom rails, a shiftable stretching member formed of a front and back section, a tongue on the ends of said front sections to engage the grooves in the top and bottom rails, said back section extending beyond the edge of the rails at the top and bottom thereof, and means carried by said back section and straddling the top and bottom rails for slidably connecting said member to the said rails.

1,024,906. APPARATUS FOR WORKING ON THE UPPER OR WEARING PORTIONS OF COMPOUND TRAM-RAILS. JOHN NOLL, New York, N. Y., assignor to Continuous Rail Company, Wilmington, Del., a Corporation of New York. Filed Nov. 16, 1911. Serial No. 660,551. (Cl. 153—28.)



1. In an apparatus for working on compound rails, the combination of a main frame, means for supporting the frame on the rails, a member mounted on the frame so as to reciprocate relative to the frame in the direction in which the rail to be worked upon extends and opposed rotary means on the reciprocating member to engage opposite portions of the rail.

2. In a device of the class described, the combination of a main frame, means for clamping the frame to a rail, a longitudinally movable member having connected thereto and movable therewith and thereby, opposed rotary tools adapted to engage opposite side portions of the rail and means on the frame for moving the member longitudinally.

3. In a device of the class described, the combination of means which may be fixedly secured relative to a rail, means movable longitudinally along the rail having opposed rotary tools thereupon to engage opposite portions of the rail and means between the means fixedly secured relative to the rail and the tools whereby the latter will be moved longitudinally along the rail, the rotary movement of the tools being caused by the movement of the carriage along the rail.

4. The combination of a main frame having supporting wheels at the rear portion thereof and supporting wheels at the forward portion thereof, a reciprocating rod slidably mounted on the frame, said rod carrying at the forward end thereof coöperating compression rollers to engage the side portions of a rail and anti-friction rollers to engage the top surface portion of a rail, means for reciprocating the rod relative to the frame and means for causing the wheels at the forward end of the frame to be raised relative to the wheels at the rear portion of the frame and the anti-friction rollers at the forward portion of the rod whereby the entire weight of the apparatus and the load thereupon will be carried by the rear wheels and the anti-friction rollers.

5. The combination of a main frame having supporting wheels at the rear portion thereof and supporting wheels at the forward portion thereof, a reciprocating rod slidably mounted on the frame, said rod carrying at the forward end thereof coöperating compression rollers to engage the side portions of a rail and anti-friction rollers to engage the top surface portion of a rail, means for reciprocating the rod relative to the frame, means for causing the wheels at the forward end of the frame to be raised relative to the wheels at the rear portion of the frame and the anti-friction rollers at the forward portion of the rod whereby the entire weight of the apparatus and the load thereupon will be supported by the rear of the frame and the anti-friction rollers, and a clamp on the frame adapted to secure the frame to the rail.

[Claims 6 to 9 not printed in the Gazette.]

1,024,907. WRENCH. MATTI PIETILAINEN, Pittsburgh, Pa. Filed Aug. 17, 1910. Serial No. 577,556. Renewed Mar. 14, 1912. Serial No. 683,706. (Cl. 81—161.)

A wrench comprising a shank, a stem carried by the inner end of said shank, and provided with threads upon the front and rear sides thereof, a stationary jaw carried by the outer end of said shank, a sleeve slidably mounted

on said shank and provided with a jaw to coöperate with the jaw on said shank, depending arms carried by said sleeve and provided interiorly thereof with screw threads, a threaded collar at the lower ends of the arms, a handle formed of two sections to inclose the inner end of said shank and said arms, an adjusting member arranged intermediate the threaded stem of the shank and the depending arms carried by the sleeve, the adjusting member being externally threaded upon two opposite sides thereof adapted for engagement with the opposite threads



of the shank stem and also being externally threaded upon four sides and adapted to engage the interrupted threads of the said arms, all of the threads of the adjusting member being capable of disengagement with all other threads upon a relative turning of the adjusting member with respect to the arms and stem, and means arranged exteriorly of said handle in engagement with said adjusting member and revoluble therewith, substantially as described.

1,024,908. ROTARY VALVE. CHARLES LOUIS POWELSEN, Sharon, Pa., assignor of one-half to Charles Schauweker, Sharon, Pa. Filed May 19, 1911. Serial No. 628,232. (Cl. 137—26.)



1. In a valve, a valve body having ports formed therein, a bushing arranged in said valve body and having ports formed therein in communication with the first mentioned ports, said bushing having a tapering seat formed therein, a plug valve rotatably fitted upon the seat of said bushing and having ports formed therein and a bore adapted to be placed in communication with the first mentioned ports, a plug mounted in the inner end of said plug valve, a projecting stem carried thereby, a cup shaped member loosely mounted upon said stem and normally engaging the inner end of said bushing, nuts carried by the inner end of said plug valve, a projecting stem carried thereby, and a coiled compression spring encircling said stem between said member and said nuts.

2. In a valve, a valve body having ports formed therein, a bushing arranged in said valve body and having ports formed therein in communication with the first mentioned ports, said bushing having a tapering seat formed therein, a plug valve rotatably fitted upon the seat of said bushing and having ports formed therein and a bore adapted to be placed in communication with the first mentioned ports, a plug mounted in the lower end of said plug valve, a projecting stem carried thereby, a cup shaped member loosely mounted upon said stem and normally engaging the inner end of said bushing, nuts carried by the inner end of said stem, a coiled compression spring encircling said stem between said member and said nuts, a longitudinal rib carried by said valve body and having an equalizing port formed therein establishing communication between the outer and inner ends of said valve body, and means including a valve stem having a head loosely engaging in the outer end of said plug valve and adapted to rotate said plug valve to establish communication between the various ports of said valve body.

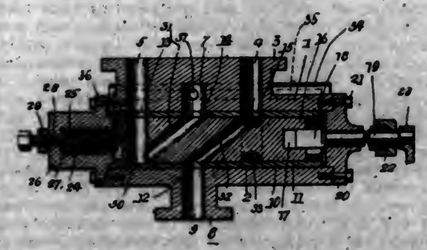
3. In a valve, a valve body having a longitudinal bore, said valve body having an inlet port, an outlet port, and an exhaust port, a rotary valve mounted in the valve body having a longitudinally-extending central port, and transverse ports communicating therewith, said rotary valve closed at its ends, and an equalizing port disposed longitudinally of the valve body and in communication with the bore of the valve body at each end of the valve and with the exhaust port of said body.

4. In a valve, a valve body having a longitudinal bore, said body having an inlet port, an outlet port, and an exhaust port, a rotary valve mounted in the body having a longitudinally-extending port and transverse ports communicating with said longitudinal port, said rotary valve closed at its ends, means yieldingly engaging the valve for holding the same seated, and a longitudinally-extending equalizing port in communication with the valve body bore at the ends of the valve and also in communication with the exhaust port of said body.

5. In a valve, a valve body having a longitudinal bore, a bushing fitted in said bore of less length than the valve body, said valve body provided with an inlet port, an outlet port, and an exhaust port, a rotary valve fitted in said bushing and provided with a central longitudinal port closed at the ends of the valve, said bushing provided with transverse ports registering with the ports in the valve body and said valve having transverse ports communicating with the longitudinal port and yielding means mounted in the bore of the valve body and engaging the valve for maintaining the latter seated in the bushing.

[Claims 6 to 8 not printed in the Gazette.]

1,024,909. HYDRAULIC VALVE. CHARLES LOUIS POWELSEN, Sharon, Pa. Filed May 19, 1911. Serial No. 628,233. (Cl. 137—26.)



1. A valve comprising a valve body having a longitudinal bore formed therein, a bushing arranged in the bore of said valve body and having a tapering seat, said valve body and said bushing having outlet ports, an inlet port and an exhaust port formed therein, a plug valve rotatably fitted in the seat of said bushing, said plug valve having an annular groove formed therein in communication with one of said outlet ports, said plug having an angularly disposed port formed therein communicating with said annular groove and adapted to alternately communicate with said inlet port and said exhaust port, said plug having a transverse port formed therein adapted to communicate with the other of said outlet ports and a second angularly-disposed port communicating with said transverse port and adapted to alternately communicate with said inlet port and said exhaust port.

2. A valve comprising a valve body having a longitudinal bore formed therein, a bushing arranged in the bore of said valve body and having a tapering seat, said valve body and said bushing having outlet ports, an inlet port and an exhaust port formed therein, a plug valve rotatably fitted in the seat of said bushing, said plug valve having an annular groove formed therein in communication with one of said outlet ports, said plug having an angularly disposed port formed therein communicating with said annular groove and adapted to alternately communicate with said inlet port and said exhaust port, said plug having a transverse port formed therein adapted to communicate with the other of said outlet ports and a second angularly-disposed port communicating with said transverse port and adapted to alternately communicate with said inlet port and said exhaust port, caps carried by the ends of said valve body, a tension device carried by one of said caps and adapted to hold said plug seated in said bushing, and a valve stem carried by the other of said caps adapted to rotate said plug in said bushing.

3. A valve comprising a valve body having a longitudinal bore formed therein, a bushing arranged in the bore of said valve body and having a tapering seat, said valve body and said bushing having outlet ports, an inlet port and an exhaust port formed therein, a plug valve rotatably fitted in the seat of said bushing, said plug valve having an annular groove formed therein in communication with one of said outlet ports, said plug having an angularly disposed port formed therein communicating with said annular groove and adapted to alternately communicate with said inlet port and said exhaust port, said plug having a transverse port formed therein adapted to communicate with the other of said outlet ports and a second angularly-disposed port communicating with said transverse port and adapted to alternately communicate with said inlet port and said exhaust port, caps carried by the ends of said valve body, a tension device carried by one of said caps and adapted to hold said plug seated in said bushing, a valve stem carried by the other of said caps adapted to rotate said plug in said bushing, a longitudinal rib carried by said valve body and having an equalizing port formed therein in communication with said exhaust port and with the ends of said bushing, substantially as described.

4. In a valve, a hollow valve body provided with a tapering valve seat, said valve body and valve seat having outlet ports, an inlet port and an exhaust port, a plug valve rotatably fitted in the tapering valve seat, said plug valve having an annular groove in communication with one of said outlet ports, said valve further having an angularly-disposed port communicating at one end with said annular groove and adapted to alternately communicate at its other end with said inlet port and said exhaust port, a transverse port in said valve adjacent one end adapted to communicate at one end with the other of said outlet ports, a second angularly-disposed port in the valve, said last named angularly-disposed port communicating with the other end of said transverse port and adapted to alternately communicate with said inlet port and said exhaust port.

5. In a valve, a valve body having a longitudinal bore provided with a valve seat, said valve body and seat having outlet ports, an inlet port, and an exhaust port, a valve rotatably fitted to the valve seat of said body, said valve having an annular groove in communication with one of said outlet ports, said valve further having an angularly-disposed port communicating at one end with said annular groove and adapted to alternately communicate at its other end with said inlet port and said exhaust port, a transverse port in said valve adjacent one end adapted to communicate at one end with the other of said outlet ports, a second angularly-disposed port in the valve, said last-named angularly-disposed port communicating with the other end of said transverse port and adapted to alternately communicate with said inlet port and said exhaust port.

[Claims 6 to 9 not printed in the Gazette.]

1,024,910. SKELETON COLUMN. MELVIN E. SANFORD, Cedar Springs, Mich., assignor of one-third to James H. Worden, Antigo, Wis., and one-third to Casper Faust, Oshkosh, Wis. Filed Dec. 1, 1911. Serial No. 663,335. (Cl. 189—24.)



1. A post comprising a series of longitudinally corrugated struts, inner and outer spirally wound wire strands connecting the struts, the inner and outer coils being wound in opposite directions and seated within the strut indentures, said coils being in solder connection with their strut-seats.

2. A post comprising a series of longitudinally corrugated wire struts, and a single wire strand coiled within said struts and thereafter coiled about the outer edge of said struts in an opposite direction from the inner coil, each inner and outer coil being seated within the indentures formed by the corrugated struts.

3. A post comprising pairs of longitudinally disposed looped struts, the struts being corrugated throughout their length, and a single strand in connection with the struts, the strand being coiled within said struts and thereafter coiled about the outer edges of the struts in an opposite direction from the inner coil, each inner and outer coil being seated within the indentures formed by the corrugations of the aforesaid struts.

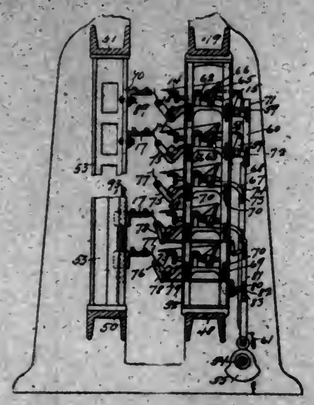
4. A post comprising a series of longitudinally disposed corrugated wire struts, and a single strand having an end in connection with the lower portion of one of the struts, the strand being thereafter coiled upwardly within said strut, wound about the upper end of the struts, and coiled about the outer edges of said struts in a downwardly direction, the end of the strand being connected to one of said struts, each inner and outer coil of the strand being seated within corrugations of the aforesaid struts to which they are secured.

1,024,911. EMBROIDERING-MACHINE. MORRIS SCHOENFELD, Rorschach, Switzerland. Filed Feb. 16, 1910. Serial No. 544,195. (Cl. 112—7.)

1. An embroidering machine embodying embroidering elements mounted upon a plurality of reciprocating, superimposed bars arranged in longitudinal rows lengthwise of the machine, and a stationary supporting frame, composed of end standards and a plurality of rigid upright frame members arranged at intervals between the end standards, and arranged to connect the said several bars longitudinally and also in vertical relation, said rigid upright frame members supporting the rows of bars at intervals along the machine, and means for supporting the said bars on said rigid frame members whereby they will reciprocate relative thereto, but be supported thereby.

2. An embroidering machine embodying a plurality of reciprocating, superimposed needle bars arranged in longi

tudinal rows lengthwise of the machine, and a stationary supporting frame, composed of end standards and a plurality of rigid upright frame members arranged at intervals between the end standards, and arranged to connect the several needle bars longitudinally and also in vertical relation, said rigid upright frame members supporting the rows of needle bars at intervals along the machine, and means for supporting the needle bars on said rigid frame members whereby they will reciprocate relative thereto, but be supported thereby.



3. An embroidering machine embodying a plurality of shuttle tracks, arranged in a plurality of superimposed rows lengthwise of the machine, and a stationary supporting frame, composed of end standards and a plurality of rigid upright frame members arranged at intervals between the end standards, and arranged to connect the several rows of shuttle tracks longitudinally and also in vertical relation, said rigid upright frame members supporting the rows of shuttle tracks at intervals along the machine, and means for connecting said end standards and rigid upright frame members longitudinally in a rigid whole.

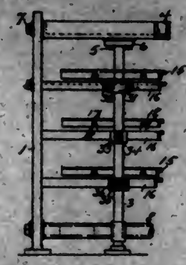
4. An embroidering machine embodying a plurality of reciprocating, superimposed needle bars arranged in longitudinal rows lengthwise of the machine, and a stationary supporting frame, composed of end standards and a plurality of rigid upright frame members arranged at intervals between the end standards, and arranged to connect the several needle bars longitudinally and also in vertical relation, said rigid upright frame members supporting the rows of needle bars at intervals along the machine, means for supporting the needle bars on said rigid frame members whereby they will reciprocate relative thereto but be supported thereby and means supported by said rigid upright frame members and adapted to support thread supplying elements underneath and close to, the said needle bars, to give an unobstructed view of the embroidering operations.

5. An embroidering machine comprising a frame embodying end standards and stationary intermediate upright frame sections disposed at intervals along the machine, means uniting the said sections in a rigid whole, embroidering elements arranged in longitudinal superimposed rows and independently supported upon said upright frame sections whereby their weight will be carried thereby at intervals along the machine, said rows of embroidering elements being individually and vertically adjustable on the upright frame sections, whereby the rapport rows may be spaced varying distances apart.

[Claims 6 to 12 not printed in the Gazette.]

1,024,912. EMBROIDERING-MACHINE. MORRIS SCHOENFELD, Rorschach, Switzerland. Filed Feb. 16, 1910. Serial No. 544,199. (Cl. 112—7.)

1. An embroidering machine comprising a frame composed of end standards and a plurality of rigid, stationary, upright posts arranged at intervals between the end standards, opposite each other in the front and rear of the machine, means uniting the standards and posts in a rigid whole, longitudinal superimposed bars and embroidering elements carried thereon, said bars being supported at intervals throughout their length by said upright posts through members engaging around said posts and vertically adjustable thereon.



2. An embroidering machine comprising a frame composed of end standards and a plurality of rigid, stationary upright posts arranged at intervals between the end standards in the front and rear of the machine, means uniting the standards and posts in a rigid whole, longitudinal bars and embroidering elements carried thereon, said bars being supported at intervals throughout their length by said upright posts through elements having a threaded engagement with the posts, whereby said bars may be vertically adjusted on the upright posts.

1,024,913. CURTAIN-FIXTURE. STANISLAU SKWARCZEWSKI, West Lynn, Mass. Filed Nov. 25, 1911. Serial No. 662,257. (Cl. 156—19.)



A curtain fixture comprising a pair of brackets having the inner ends thereof provided with heads and screws, said brackets having their outer ends bent to provide flat eyes, a top plate having its ends provided with lugs extending into said eyes whereby said plate is connected to said brackets, a front plate depending from said top plate and having inturned ends, a rail connecting the ends of said front plate, and curved rollers traveling upon said rails and provided with means for suspending a curtain.

1,024,914. ADJUSTABLE HANDLE-BARS. WILLIAM J. SLEPPEL, Cleveland, Ohio, assignor to The Kirk-Latty Manufacturing Company, Cleveland, Ohio, a Corporation of Ohio. Filed Mar. 22, 1911. Serial No. 616,064. (Cl. 208—120.)



1. The combination of two distinct handle-bars, having like polygonal apertures in their adjacent ends; a stem post having a laterally extending head, said head being externally of the same size and shape as the apertures in said handle-bars so as to be adapted to variously engage therewith, and thereby prevent rotative movement of said handles about said head; and means adapted to hold said handle-bars and said stem post in fixed engagement.

2. The combination of two distinct handle-bars, having like polygonal apertures in their adjacent ends; a stem post having a hole therein and an extension head alined with such hole, said extension head being externally of the same size and shape as said polygonal apertures and being adapted variously to engage such apertures in said handle-bars, thereby preventing rotative movement of the same about said extension head; and means adapted to hold said handle-bars and said stem post in fixed engagement, said means comprising a removable bolt adapted to engage such hole in said stem post, and a nut for said bolt.

3. The combination of two distinct handle-bars, having like polygonal apertures correspondingly disposed in their adjacent ends; a stem post having a laterally extending head, said head being externally of the same size and shape as the apertures in said handle-bars, so as to be adapted variously to engage therewith, and having its engaging faces symmetrically disposed with respect to a line parallel with said post; and means adapted to secure said handle-bars against said stem post with the apertures therein fitted over said head.

4. The combination of two distinct handle-bars, having like polygonal apertures correspondingly disposed in their adjacent ends; a stem post having a laterally extending head, said head being externally of the same size and shape as the apertures in said handle-bars, so as to be adapted variously to engage therewith, and having its engaging faces symmetrically disposed with respect to a line parallel with said post; and means adapted to secure said handle-bars against said stem post with the apertures therein fitted over said head, said means comprising a removable bolt adapted to engage such hole in said stem post, and a nut for said bolt.

1,024,915. LAMINATED-COHESIVE-INTERWOUND FABRIC. LAWRENCE A. BURRES, Cleveland, Ohio. Filed Jan. 31, 1910. Serial No. 540,982. (Cl. 154—52.)



1. In a laminated fabric, a series of parallel equally spaced fibrous members, a second similar series of fibrous parallel equally spaced members crossing the said first series at an angle, a third series of equally spaced fibrous members wound or laid thereon over the spaces between the members of the first series, a fourth series of similar equally spaced fibrous members wound or laid parallel to said second series and over the spaces between the said series the said fabric compressed together whereby the said second and fourth series of fibrous members are interwound or interlaid between the members of the first and third series to fill all spaces between them and an adhesive vulcanizable binding material for said fibrous members.

2. In a laminated unwoven fabric formed of equally spaced cohering fibrous members, series of parallel equally spaced fibrous members running in one direction and alternately wound or laid series of parallel equally spaced members running at an angle thereto, the spaced parallel series running in one direction being wound or laid at different times with intervening similar series running in the other direction, each series as wound or laid being interwound or interlaid with parallel series, the fabric finally compressed, whereby the spaces between the bands are all completely filled and the edges of the fibrous members of one series engage the edges of the parallel fibrous members of other series, and an adhesive vulcanizable binding material for said fibrous members.

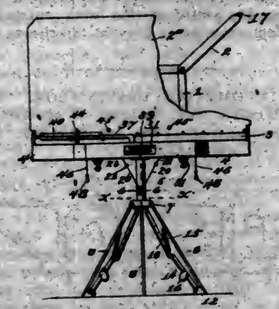
3. In a laminated unwoven fabric composed of cohering fibrous members, a plural series of parallel equally spaced fibrous members running in one direction, and plural series of parallel equally spaced fibrous members running at an angle thereto, a series running in one direction alternating with a series running in the other direction, the subsequently laid series laid over the spaces between the first laid series until all spaces are filled, the fabric afterward compressed to force the subsequently laid series into the spaces between parallel first laid series.

4. In a laminated unwoven fabric composed of cohering regularly spaced twisted cords, a first laid series of regularly spaced cords, a second series of regularly spaced cords crossing the first series at an angle, subsequently wound or laid series of equally spaced cords running alternately parallel with the first series and with the second laid series, the subsequently laid series of regularly spaced cords being parallel with and adapted to be interwound or interlaid with the first and second wound or laid series, to form a two ply fabric, the cords of each embedded in the spaces between the cords of parallel series.

5. In a laminated, unwoven fabric composed of cohering regularly spaced twisted cords, a first wound or laid series of parallel regularly spaced cords, a second similar series wound or laid at right angles therewith, subsequently wound or laid series alternately parallel with the first and second wound or laid series, the cords of the subsequently wound or laid series interwound or interlaid with the cords of the first and second laid series and the fabric compressed, the cords in each series being alternately in one ply and in the other whereby the spaces between the regularly spaced cords are filled.

[Claims 6 and 7 not printed in the Gazette.]

1,024,916. MUSIC-LEAF TURNER. HASKELL H. TIMMONS and ELBERT L. SMITH, Fredonia, Kans. Filed Aug. 22, 1911. Serial No. 645,404. (Cl. 84—17.)



The combination, with a music rack, a tripod support for the rack, and a music leaf turner comprising a casing attachable to the rack, leaf turning arms journaled in the casing and projecting therefrom, and mechanism contained within the casing for turning the arms, of means for operating said mechanism comprising a pair of levers fulcrumed to the legs of the tripod and having hooked ends, a foot piece projecting from the levers between the fulcrum and the hooked end of each, cords working through the head of the tripod, adjusting straps connecting the cords with the levers, spiral springs attached to the hooked ends and to the legs of the tripod so as to hold the levers and the straps substantially parallel with the legs, and cords working through the casing and connecting the strap-cords with said mechanism.

1,024,917. BOTTLE-CLOSURE. GEORGE W. TREXLER, Pittsburgh, Pa., assignor of one-half to Henry Sonnenberg, Turtle Creek, Pa. Filed May 28, 1910. Serial No. 563,876. (Cl. 215—12.)

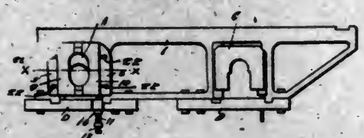
1. As a means for sealing bottles having a neck formed with an annular bead at its open end, a skirt having a length to project below said bead, said skirt being formed

of flexible material of low heat conductivity, and a malleable vitreous cap having its skirt also projecting below said bead and adapted to have its projecting portion contracted below said bead by heat, said skirts being of a relative length to permanently prevent contact of the contracting portion of the malleable skirt and the neck of the bottle, whereby the heat of the malleable cap during the contracting operation and of the instrument providing such operation will not affect the neck of the bottle.



2. In combination, a bottle neck formed with an annular bead at its open end, a closure within said open end, and a sealing structure carried by said neck, said structure comprising an asbestos cap having its skirt projecting below said bead, and a glass cap also having a skirt of a length to project below said bead, said cap skirts being of a size to normally pass over said bead and adapted to be contracted around the neck of the bottle below said bead by heat application to the glass cap skirt, said skirts being of a relative length to permanently prevent contact of the contracting portion of the glass cap skirt and the neck of the bottle, whereby said asbestos skirt will insulate the neck of the bottle from the heated portion being contracted during the contracting operation to prevent injuries to the bottle neck.

1,024,918. LOCOMOTIVE DRIVING-BOX. FRANK A. WALSH, Marshall, Tex., assignor of one-half to J. E. Votaw, Marshall, Tex. Filed Apr. 24, 1911. Serial No. 623,129. (Cl. 105—113.)



1. A knock down driving box for locomotives having a removable cellar and a retaining screw therefor, a flangeless shoe and a flangeless wedge for centering the driving box, and retaining plates for said shoe and wedge and constituting the means of taking up the lateral thrust.

2. A driving box for locomotives comprising a box having flanges on the hub side thereof, a shoe and a wedge for centering said box, and bearing plates retaining said shoe and wedge in place and taking up the lateral thrust of the wheel.

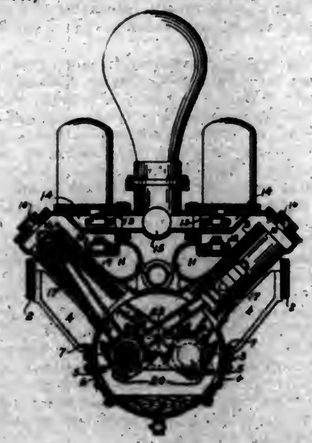
3. A driving box for locomotives comprising a box having flanges on the hub side thereof, bearing plates for taking up the lateral thrust of the wheel, and a flangeless shoe and a flangeless wedge retained in place by said flanges and bearing plates for centering the box.

4. In a driving box for locomotives, provided with a frame, a box mounted in said frame, a flangeless shoe and a flangeless wedge for centering said box in the jaws of said frame, and bearing plates attached to said frame for retaining said shoe and wedge in place and for taking up the lateral thrust of the wheel.

5. In a driving box for locomotives, provided with a frame, a box mounted in said frame, bearing plates attached to said frame for taking up the lateral thrust of the wheel, and a flangeless shoe and a flangeless wedge held in place by said bearing plates for centering said box in the jaws of said frame.

[Claims 6 to 9 not printed in the Gazette.]

1,024,919. PUMP. FREDERICK L. WATEROUS, St. Paul, Minn. Filed Dec. 21, 1910. Serial No. 598,645. (Cl. 103—77.)



1. A pump comprising a crank case, cylinders mounted in pairs side by side and radiating from said crank case on diverging lines on opposite sides of the longitudinal center of said crank case, pistons for said cylinders, a shaft having double crank rods connecting said pistons with said cranks, said rods being so disposed with respect to said cranks that when a piston of one cylinder is drawn inwardly the piston of the other cylinder on the same side of the crank case will be forced outwardly, said cylinders having openings in their outer ends the full diameter of the cylinders, housings disposed on each side of the longitudinal center line of said crank case and having inlet chambers located near the inner ends of said cylinders and extending along beside the inner walls thereof and communicating with the open ends of said cylinders, inlet valves disposed opposite the middle portion of said cylinders and separating the lower portions of said inlet chambers from the open ends of said cylinders, said housings also having outlet chambers disposed above said inlet chambers and also on opposite sides of the longitudinal center line of said crank case and provided with ports communicating with said inlet chambers, and valves for said ports, said valves being disposed above said inlet valves, and a centrally arranged outlet pipe communicating with said outlet chambers.

2. A pump comprising a crank case, a frame provided on each side of said crank case, brackets mounted on said crank case and having bearings at their outer ends on said frame, said crank case being centrally disposed in said frame, cylinders mounted in pairs side by side and radiating from said crank case on diverging lines and on opposite sides of the longitudinal center line thereof, said cylinders having open outer ends above and near said frame, housings disposed between said cylinders and also on opposite sides of the longitudinal center line of said crank case, said housings having inlet chambers provided with ports communicating with the open ends of said cylinders and valves for said ports, said housings also having outlet chambers and ports in the walls thereof communicating with the open ends of said cylinders, and valves for said outlet ports, a centrally disposed outlet pipe communicating with both of said outlet chambers and separated from said inlet ports and chambers, said cylinders, and said inlet and outlet chambers being readily removable from said crank case to allow convenient access thereto.

1,024,920. ELASTIC-FLUID TURBINE. GEORGE D. ATWOOD, New York, N. Y. Filed Dec. 30, 1909. Serial No. 535,625. (Cl. 121—57.)



1. The elastic fluid turbine comprising a sectional casing formed with an admission chamber, a wheel chamber and an exhaust chamber, a shaft having a wheel running in said wheel chamber, substantially radially arranged blades provided with intermediate blade partitions mounted on said wheel to form a plurality of radially displaced rows of buckets between the adjacent blades, nozzles cooperating with said buckets and a series of expanding sectioned angularly arranged curved return passages having separating diaphragms mounted adjacent each nozzle in angular planes on both sides of said buckets and radially displaced with respect thereto to receive the fluid from one row of buckets and discharge the same adjacent the central portion of another row of buckets to pass the fluid from each nozzle a plurality of times through said rows of buckets before discharging the same into said exhaust chamber.

2. The elastic fluid turbine comprising a casing formed with wheel chamber, a shaft having a wheel running in said wheel chamber, substantially radially arranged blades provided with intermediate blade partitions mounted on said wheel to form a plurality of radially displaced rows of buckets between the adjacent blades, nozzles coöperating with said buckets and a series of expanding sectioned angularly arranged U-shaped return passages having separating diaphragms mounted adjacent each nozzle on both sides of said buckets and radially displaced with respect thereto to receive the fluid from one row of buckets and discharge the same adjacent the central portion of another row of buckets to pass the fluid from each nozzle a plurality of times through the wheel buckets before finally discharging the same therefrom.

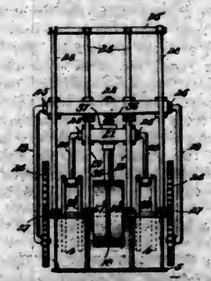
3. The elastic fluid turbine comprising a casing formed with a wheel chamber, a wheel running in said chamber and having substantially radially arranged blades provided with intermediate blade partitions to form a plurality of radially displaced rows of wheel buckets, a nozzle coöperating with said wheel buckets and an overlapping series of angularly arranged rearwardly directed U-shaped return passages having separating diaphragms mounted adjacent said nozzle on both sides of said buckets and radially displaced with respect thereto to receive the fluid from one row of buckets and discharge the same adjacent the central portion of another row of buckets to pass the fluid a plurality of times through said wheel buckets before finally discharging the same therefrom.

4. The elastic fluid turbine comprising a casing formed with a wheel chamber, a wheel running in said wheel chamber, and provided with substantially radially arranged blades to form wheel buckets, a nozzle coöperating with said wheel buckets to discharge fluid transversely therethrough and a series of overlapping, rearwardly directed U-shaped return passages mounted adjacent said nozzle on both sides of said buckets and radially displaced with respect thereto to each receive the fluid discharged from one portion of said wheel buckets and discharge the same into a radially displaced portion of said wheel buckets to pass the fluid from said nozzle a plurality of times through said wheel buckets before finally discharging the same therefrom.

5. The elastic fluid turbine comprising a casing formed with a wheel chamber, a wheel running in said chamber and provided with substantially radially arranged blades to form wheel buckets, a nozzle coöperating with said wheel buckets to discharge fluid transversely therethrough and an overlapping series of rearwardly directed curved return passages located adjacent said nozzle in angular planes on both sides of said buckets to each receive the fluid discharged from one portion of said wheel buckets and discharge the same into a radially displaced portion of said wheel buckets to pass the fluid from said nozzle a plurality of times through said wheel buckets before finally discharging the same therefrom.

[Claims 6 to 10 not printed in the Gazette.]

1,024,921. PUMP-JACK FOR DOUBLE-ACTING PUMPS. FRED W. AXTELL, Fort Worth, Tex. Filed Nov. 8, 1911. Serial No. 659,232. (Cl. 74—5.)



1. A pump-jack for double acting pumps comprising a base consisting of two bearing members each having two bearing walls formed of an integral structure and a curved flanged binding member bolted to each of said members and making said members rigid with each other, the front ends of said bearing members having four sockets formed therein in alinement with each other, four vertical guide rods rifled in said sockets, an interior piston cross-head adapted to move vertically on all of said guide rods, an exterior piston cross-head adapted to move vertically on the two central guide rods, gear wheels for driving said interior piston cross-head having shafts journaled in the exterior walls of said bearing members and pitmen operatively connecting said cross-head with said gear wheels, crank disks for driving said exterior piston cross-head operated by said gear wheels, and pitmen operatively connecting said cross-head and said disks, and means for driving said gear wheels.

2. A pump-jack having a rigid base consisting of two pairs of walls, each pair having an integral connection at the ends and throughout the bottoms thereof, constituting bearing walls and means for making said bearing walls rigid with each other, sockets for guide rods being formed in said walls, vertical guide rods rigid in said sockets, cross-heads adapted to move on said guide rods, gearing and pitman rods operatively connected with said gearing and with said cross-heads, shafts for said gearing, and bearings for said shafts offset in said bearing walls relative to the centers of said guide rods and cross-heads.

3. A pump-jack having a base consisting of two bearing members rigid with each other and each having two bearing walls, the front ends of said walls having sockets formed therein, four parallel vertical guide rods rifled in said sockets, an interior piston cross-head adapted to move on all of said guide rods, an exterior piston cross-head adapted to move on the two central guide rods, gear wheels and pitmen for driving said interior piston cross-head, shafts for driving the said gear wheels journaled in the exterior walls of said bearing members, crank disks and pitmen for driving said exterior piston cross-head, a pair of disks being connected to each pitman, the exterior disk for each pitman being rigid with the shaft of the adjacent gear wheel, a shaft for the interior disks journaled in the interior walls of said bearing members, a shaft journaled in all of said walls, and gearing on said shaft for driving said gear wheels, and means for driving said shaft.

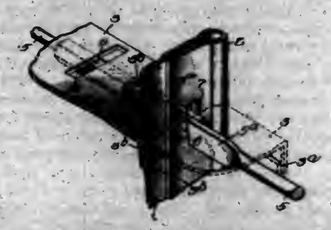
4. A pump-jack having a base consisting of four rigid parallel bearing walls having sockets formed in the front ends thereof, four parallel guide rods rifled in said sockets and a tie-bar connected to the upper ends of the guide rods, an interior piston cross-head adapted to move on all

of said rods, an exterior piston cross-head adapted to move on the two central guide rods, pitmen and gearing operatively connected with said cross-heads and with said bearing walls for moving said cross-heads, braces for the two exterior guide rods rigidly connected to said tie-bar and to the rear ends of the exterior bearing walls, and braces for the two interior guide rods rigidly connected thereto at points between the travel of said cross-heads and to the rear ends of the interior bearing walls.

5. A pump-jack having a rigid base consisting of bearing walls and means for making said walls rigid with each other, sockets for guide rods formed in said bearing walls, vertical guide rods rigid in said sockets, cross-heads adapted to move on said guide rods, gearing and pitman rods operatively connected with said gearing and said cross-heads, shafts for said gearing journaled in said bearing walls, means for driving said gearing, and a pipe centerer at the front end of the pump-jack consisting of a vertical cylinder having laterally extending arms projected under the two adjacent bearing walls, said bearing walls having cutouts thereunder to receive said arms, and dogs pivotally mounted in said cylinder for engaging the pipe.

[Claim 6 not printed in the Gazette.]

1,024,922. SHELVING. HERBERT P. BESCHER, Aurora, Ill., assignor to Lyon Metallic Manufacturing Company, Aurora, Ill., a Corporation of Illinois. Filed Nov. 13, 1911. Serial No. 659,964. (Cl. 217—27.)



1. Shelving comprising uprights having apertures therein, shelves between said uprights, and tie rods having heads thereon adapted to penetrate the uprights and engage the same at the said apertures therein, said shelves having slots in the ends for permitting the rise of the rods whose major portions are located on the opposite side of the upright.

2. Shelving comprising uprights having apertures therein, shelves between the uprights, tie rods having notched ends adapted to drop into the apertures in the uprights and turn buckles for tightening the rods, the ends of the shelves having slots for permitting the rods on the opposite side of the uprights to be lifted out, said shelves having transverse slots therein to facilitate manipulation of the turn buckles.

3. Shelving comprising uprights having apertures therein, and tie rods for holding the uprights in position, the tie rods being provided with turn buckles and having notched ends adapted to drop into the apertures in the uprights, the ends of the rods being flattened and the apertures in the uprights being of a width slightly more than twice the thickness of the flattened ends, whereby the ends of the rods may lie side by side in pairs and be freely placed and removed and yet be prevented from rotating when the turn buckle is tightened or loosened.

1,024,923. PROCESS OF DRYING CEMENT CLAMPS FOR FILAMENTS OF ELECTRIC LAMPS. HARRY W. BASSLER, Charlottenburg, Germany, assignor, by mesne assignments, to General Electric Company, a Corporation of New York. Filed May 11, 1909. Serial No. 495,261. (Cl. 176—7.)

1. The process of heating cement clamps for lamp filaments which comprises immersing the filament and clamps in a reducing atmosphere, discharging a jet of oxidising gas into said atmosphere adjacent to said clamps, and igniting the localised combustible mixture so formed and maintained at the point of delivery of oxygen.

2. The method of heating the joint between a filament and its holder which consists in bringing the joint into proximity to a jet of oxidising gas burning in a reducing atmosphere in which the parts are immersed and thus localising the heating effect at the joint and keeping the parts wholly under reducing conditions.

3. The method of heating a portion of an object while protecting the remainder from chemical attack which consists in immersing the object in an atmosphere inert with respect to said object and causing combustion between gas from said atmosphere and a gaseous jet conducted into said atmosphere in proximity to the portion of the object to be heated.

4. The method of heating a portion of an object while protecting the remainder from chemical attack which consists in immersing the object in an atmosphere inert with respect to said object and burning a gaseous jet in said atmosphere in proximity to the portion of the object to be heated.

1,024,924. CIGAR-TIP CUTTER. EDWARD BRUNHOFF, Cincinnati, Ohio. Filed Apr. 21, 1911. Serial No. 622,528. (Cl. 131—38.)



1. In a cigar tip cutter, a supporting member provided with a tip hole, a blade pivotally attached to said supporting member and having a cutting edge adapted to pass across said tip hole, a spring, a cap pivotally supported by and adjustable relative to said supporting member, and means to lock said cap to its adjusted position relative to said supporting member, said spring being compressed between said blade and cap to hold said blade in contact with said supporting member, and opposite ends of said spring respectively engaging said blade and cap to automatically retract said blade from said tip hole.

2. In a cigar tip cutter, a supporting member provided with a tip hole and a projecting tubular internally threaded post, a blade pivotally supported upon said post and having a curved cutting edge adapted to pass across said tip hole, a spring adapted to be coiled about said post, a cap pivotally supported and adjustable relative to said post, and means engaging the threaded interior of said post to lock said cap to its adjusted position relative to said post, said spring serving to hold said blade in contact with said supporting member, and opposite ends of said spring respectively engaging said blade and cap to automatically restract said blade from said tip hole.

3. In a cigar tip cutter, a supporting member provided with a tip hole and a projecting post, a blade concave on its face adjacent to said supporting member, pivotally supported upon said post and having a curved cutting edge adapted to pass across said tip hole, a cap fitting over the outer end of said post and having a cylindrical section forming a housing for a spring, said cap being adjustably supported relative to said post, and a spring seated upon said post within the cylindrical portion of said cap and interposed between said blade and cap to hold the blade in contact with said supporting member, opposite ends of said spring respectively being in engagement with said blade and cap to normally retract said blade from said tip hole.

4. In a cigar tip cutter, a supporting member provided with a tip hole and a projecting post adjacent to said tip hole, a blade concave on its face adjacent to said supporting member, said blade being pivotally supported upon said post and provided with a cutting edge adapted to pass across said tip hole, a cap pivotally supported and adjustable relative to said post, means to lock said cap to its adjusted position relative to said post, a spring coiled about said post between said blade and cap and with its opposite ends respectively engaging said blade and cap to normally retract said blade from said tip hole.

5. In a cigar tip cutter, a supporting member provided with a tip hole and an integral projecting post adjacent to said tip hole, a blade pivotally supported upon said post and having a cutting edge to pass across said tip hole, a spring, a cap pivotally supported upon the outer end of said post and adjustable relative thereto, and means to lock said cap relative to said post, said spring being compressed between said blade and cap to hold said blade in contact with said supporting member and opposite ends of said spring respectively engaging said blade and cap to automatically retract said blade from said tip hole.

1,024,925. FUEL-BURNING APPARATUS. CLYDE J. COLEMAN, New York, N. Y. Filed Apr. 18, 1907. Serial No. 368,910. (Cl. 67—64.)



1. A wick-lamp comprising a source of liquid fuel, a rotatable circular wick exposed to the seat of combustion at a rotating part thereof, and automatic means actuated commensurately to fuel consumption for rotating the wick relative to the seat of combustion to vary the point of ignition, such means including a circular device having a rolling contact with the wick for supplying fuel thereto.

2. A wick lamp comprising a source of liquid fuel, a rotatable circular wick exposed to the seat of combustion at a peripheral point of ignition, and automatic means actuated commensurately to fuel consumption for rotating the wick relative to the seat of combustion to vary the point of ignition, such means including a circular device having rolling contact with the wick for supplying fuel thereto.

3. A wick lamp comprising a rotatable circular wick exposed to the seat of combustion at a rotating part thereof, fuel-supplying means for the wick having rolling frictional contact therewith for supplying fuel to the wick and for communicating rotation to the wick for shifting the wick relative to the seat of combustion to vary the point of ignition, a source of liquid fuel and automatic means actuated commensurately to fuel consumption for actuating the fuel-supplying means, and thereby rotating the wick.

4. A wick lamp comprising a rotatable circular wick exposed to the seat of combustion at a peripheral point of ignition, fuel-supplying means for the wick having rolling frictional contact therewith for supplying fuel to the wick and for communicating rotation to the wick for shifting the wick relative to the seat of combustion to vary the point of ignition, a source of liquid fuel, and automatic means actuated commensurately to fuel consumption for actuating the fuel-supplying means, and thereby rotating the wick.

5. Fuel-burning apparatus comprising a source of liquid fuel, a rotatable circular ignition-wick having a rotating point of ignition, a rotatable circular feed-wick having peripheral frictional driving contact with the ignition-wick, and automatic means actuated commensurately to fuel consumption to rotate the feed-wick and thereby rotate the ignition-wick to circumferentially vary the point of ignition.

[Claims 6 to 22 not printed in the Gazette.]

1,024,926. PAINT AND VARNISH REMOVER. THOMAS M. DUVINE, Cleveland, Ohio, assignor to The Ohio Varnish Company, Cleveland, Ohio, a Corporation of Ohio. Filed Aug. 21, 1911. Serial No. 645,231. (Cl. 87—5.)

1. A paint or varnish remover, the constituent ingredients of which are a comparatively large proportion of alcohol and benzol and a comparatively small proportion of caustic soda or potash, carbolic acid, and spermaceti dissolved in a portion of the benzol and forming in the vessel a protective layer over the other constituents.

2. A paint or varnish remover consisting of caustic soda or potash, carbolic acid, alcohol and benzol, and spermaceti in a top protective layer.

3. A paint or varnish remover consisting of carbolic acid or its equivalent a solvent for paint or varnish and an evaporation retarder adapted to stand in the vessel dissolved in a portion of the solvent as a protective layer.

4. In a paint or varnish remover, the combination of a plurality of solvents for paint or varnish and a substance soluble in one of the solvents but not in another, the substance forming with its solvent a protective layer above the other solvent or solvents.

5. A water soluble paint or varnish remover consisting of solvents for paint or varnish constituents, a caustic alkali adapted to saponify with some of such constituents, and a substance soluble in one of the solvents and adapted to float therein on the rest of the solvents in the vessel and form a protective layer thereover as well as to retard evaporation when applied.

[Claim 6 not printed in the Gazette.]

1,024,927. METHOD AND APPARATUS FOR DRAPING DUMMIES FROM AN UNCUT LENGTH OF CLOTH. RICHARD F. DOWNEY, Milwaukee, Wis., assignor to Tailors' Form Company, Milwaukee, Wis. Filed Feb. 16, 1912. Serial No. 678,118. (Cl. 211—13.)



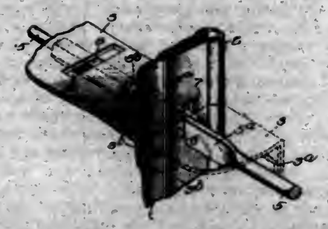
1. A method of draping a dummy to simulate one-half of a completed trousers and coat consisting of longitudinally folding a garment length of cloth whereby it is halved as to width, adjusting one end of the folded cloth about the foot of the dummy and wrapping said cloth about the waist-line thereof, securing one edge of the folded cloth in the crotch of the dummy and around the leg of the same adjacent to the foot to simulate a trousers leg, thereafter looping the confined cloth downward from the waist-line to provide a coat length, draping the remainder of the folded goods over the shoulder of the dummy, confining the same at the shoulder of said dummy by attaching a sleeve-frame thereto, refolding the free end of the cloth over the shoulder whereby the sleeve-frame is concealed, and tucking and confining the cloth edges about the sleeve-frame to show a complete sleeve outline.

of said rods, an exterior piston cross-head adapted to move on the two central guide rods, pitmen and gearing operatively connected with said cross-heads and with said bearing walls for moving said cross-heads, braces for the two exterior guide rods rigidly connected to said tie-bar and to the rear ends of the exterior bearing walls, and braces for the two interior guide rods rigidly connected thereto at points between the travel of said cross-heads and to the rear ends of the interior bearing walls.

5. A pump-jack having a rigid base consisting of bearing walls and means for making said walls rigid with each other, sockets for guide rods formed in said bearing walls, vertical guide rods rigid in said sockets, cross-heads adapted to move on said guide rods, gearing and pitman rods operatively connected with said gearing and said cross-heads, shafts for said gearing journaled in said bearing walls, means for driving said gearing, and a pipe centerer at the front end of the pump-jack consisting of a vertical cylinder having laterally extending arms projected under the two adjacent bearing walls, said bearing walls having cutouts thereunder to receive said arms, and dogs pivotally mounted in said cylinder for engaging the pipe.

[Claim 6 not printed in the Gazette.]

1,024,922. SHELVING. HERBERT P. BEECHER, Aurora, Ill., assignor to Lyon Metallic Manufacturing Company, Aurora, Ill., a Corporation of Illinois. Filed Nov. 13, 1911. Serial No. 659,964. (Cl. 217—27.)



1. Shelving comprising uprights having apertures therein, shelves between said uprights, and tie rods having heads thereon adapted to penetrate the uprights and engage the same at the said apertures therein, said shelves having slots in the ends for permitting the rise of the rods whose major portions are located on the opposite side of the upright.

2. Shelving comprising uprights having apertures therein, shelves between the uprights, tie rods having notched ends adapted to drop into the apertures in the uprights and turn buckles for tightening the rods, the ends of the shelves having slots for permitting the rods on the opposite side of the uprights to be lifted out, said shelves having transverse slots therein to facilitate manipulation of the turn buckles.

3. Shelving comprising uprights having apertures therein, and tie rods for holding the uprights in position, the tie rods being provided with turn buckles and having notched ends adapted to drop into the apertures in the uprights, the ends of the rods being flattened and the apertures in the uprights being of a width slightly more than twice the thickness of the flattened ends, whereby the ends of the rods may lie side by side in pairs and be freely placed and removed and yet be prevented from rotating when the turn buckle is tightened or loosened.

1,024,923. PROCESS OF DRYING CEMENT CLAMPS FOR FILAMENTS OF ELECTRIC LAMPS. HARRY W. BASSLER, Charlottenburg, Germany, assignor, by mesne assignments, to General Electric Company, a Corporation of New York. Filed May 11, 1909. Serial No. 495,261. (Cl. 176—7.)

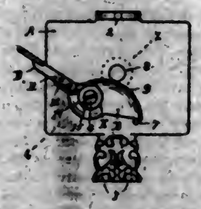
1. The process of heating cement clamps for lamp filaments which comprises immersing the filament and clamps in a reducing atmosphere, discharging a jet of oxidising gas into said atmosphere adjacent to said clamps, and igniting the localised combustible mixture so formed and maintained at the point of delivery of oxygen.

2. The method of heating the joint between a filament and its holder which consists in bringing the joint into proximity to a jet of oxidising gas burning in a reducing atmosphere in which the parts are immersed and thus localising the heating effect at the joint and keeping the parts wholly under reducing conditions.

3. The method of heating a portion of an object while protecting the remainder from chemical attack which consists in immersing the object in an atmosphere inert with respect to said object and causing combustion between gas from said atmosphere and a gaseous jet conducted into said atmosphere in proximity to the portion of the object to be heated.

4. The method of heating a portion of an object while protecting the remainder from chemical attack which consists in immersing the object in an atmosphere inert with respect to said object and burning a gaseous jet in said atmosphere in proximity to the portion of the object to be heated.

1,024,924. CIGAR-TIP CUTTER. EDWARD BRUNHOFF, Cincinnati, Ohio. Filed Apr. 21, 1911. Serial No. 622,528. (Cl. 131—38.)



1. In a cigar tip cutter, a supporting member provided with a tip hole, a blade pivotally attached to said supporting member and having a cutting edge adapted to pass across said tip hole, a spring, a cap pivotally supported by and adjustable relative to said supporting member, and means to lock said cap to its adjusted position relative to said supporting member, said spring being compressed between said blade and cap to hold said blade in contact with said supporting member, and opposite ends of said spring respectively engaging said blade and cap to automatically retract said blade from said tip hole.

2. In a cigar tip cutter, a supporting member provided with a tip hole and a projecting tubular internally threaded post, a blade pivotally supported upon said post and having a curved cutting edge adapted to pass across said tip hole, a spring adapted to be coiled about said post, a cap pivotally supported and adjustable relative to said post, and means engaging the threaded interior of said post to lock said cap to its adjusted position relative to said post, said spring serving to hold said blade in contact with said supporting member, and opposite ends of said spring respectively engaging said blade and cap to automatically restract said blade from said tip hole.

3. In a cigar tip cutter, a supporting member provided with a tip hole and a projecting post, a blade concave on its face adjacent to said supporting member, pivotally supported upon said post and having a curved cutting edge adapted to pass across said tip hole, a cap fitting over the outer end of said post and having a cylindrical section forming a housing for a spring, said cap being adjustably supported relative to said post, and a spring seated upon said post within the cylindrical portion of said cap and interposed between said blade and cap to hold the blade in contact with said supporting member, opposite ends of said spring respectively being in engagement with said blade and cap to normally retract said blade from said tip hole.

4. In a cigar tip cutter, a supporting member provided with a tip hole and a projecting post adjacent to said tip hole, a blade concave on its face adjacent to said supporting member, said blade being pivotally supported upon said post and provided with a cutting edge adapted to pass across said tip hole, a cap pivotally supported and adjustable relative to said post, means to lock said cap to its adjusted position relative to said post, a spring coiled about said post between said blade and cap and with its opposite ends respectively engaging said blade and cap to normally retract said blade from said tip hole.

5. In a cigar tip cutter, a supporting member provided with a tip hole and an integral projecting post adjacent to said tip hole, a blade pivotally supported upon said post and having a cutting edge to pass across said tip hole, a spring, a cap pivotally supported upon the outer end of said post and adjustable relative thereto, and means to lock said cap relative to said post, said spring being compressed between said blade and cap to hold said blade in contact with said supporting member and opposite ends of said spring respectively engaging said blade and cap to automatically retract said blade from said tip hole.

1,024,925. FUEL-BURNING APPARATUS. CLYDE J. COLEMAN, New York, N. Y. Filed Apr. 16, 1907. Serial No. 368,910. (Cl. 67—64.)



1. A wick-lamp comprising a source of liquid fuel, a rotatable circular wick exposed to the seat of combustion at a rotating part thereof, and automatic means actuated commensurately to fuel consumption for rotating the wick relative to the seat of combustion to vary the point of ignition, such means including a circular device having a rolling contact with the wick for supplying fuel thereto.

2. A wick lamp comprising a source of liquid fuel, a rotatable circular wick exposed to the seat of combustion at a peripheral point of ignition, and automatic means actuated commensurately to fuel consumption for rotating the wick relative to the seat of combustion to vary the point of ignition, such means including a circular device having rolling contact with the wick for supplying fuel thereto.

3. A wick lamp comprising a rotatable circular wick exposed to the seat of combustion at a rotating part thereof, fuel-supplying means for the wick having rolling frictional contact therewith for supplying fuel to the wick and for communicating rotation to the wick for shifting the wick relative to the seat of combustion to vary the point of ignition, a source of liquid fuel and automatic means actuated commensurately to fuel consumption for actuating the fuel-supplying means, and thereby rotating the wick.

4. A wick lamp comprising a rotatable circular wick exposed to the seat of combustion at a peripheral point of ignition, fuel-supplying means for the wick having rolling frictional contact therewith for supplying fuel to the wick and for communicating rotation to the wick for shifting the wick relative to the seat of combustion to vary the point of ignition, a source of liquid fuel, and automatic means actuated commensurately to fuel consumption for actuating the fuel-supplying means, and thereby rotating the wick.

5. Fuel-burning apparatus comprising a source of liquid fuel, a rotatable circular ignition-wick having a rotating point of ignition, a rotatable circular feed-wick having peripheral frictional driving contact with the ignition-wick, and automatic means actuated commensurately to fuel consumption to rotate the feed-wick and thereby rotate the ignition-wick to circumferentially vary the point of ignition.

[Claims 6 to 22 not printed in the Gazette.]

1,024,926. PAINT AND VARNISH REMOVER. THOMAS M. DAVIES, Cleveland, Ohio, assignor to The Ohio Varnish Company, Cleveland, Ohio, a Corporation of Ohio. Filed Aug. 21, 1911. Serial No. 646,231. (Cl. 87—5.)

1. A paint or varnish remover, the constituent ingredients of which are a comparatively large proportion of alcohol and benzol and a comparatively small proportion of caustic soda or potash, carbolic acid, and spermaceti dissolved in a portion of the benzol and forming in the vessel a protective layer over the other constituents.

2. A paint or varnish remover consisting of caustic soda or potash, carbolic acid, alcohol and benzol, and spermaceti in a top protective layer.

3. A paint or varnish remover consisting of carbolic acid or its equivalent a solvent for paint or varnish and an evaporation retarder adapted to stand in the vessel dissolved in a portion of the solvent as a protective layer.

4. In a paint or varnish remover, the combination of a plurality of solvents for paint or varnish and a substance soluble in one of the solvents but not in another, the substance forming with its solvent a protective layer above the other solvent or solvents.

5. A water soluble paint or varnish remover consisting of solvents for paint or varnish constituents, a caustic alkali adapted to saponify with some of such constituents, and a substance soluble in one of the solvents and adapted to float therein on the rest of the solvents in the vessel and form a protective layer thereover as well as to retard evaporation when applied.

[Claim 6 not printed in the Gazette.]

1,024,927. METHOD AND APPARATUS FOR DRAPING DUMMIES FROM AN UNCUT LENGTH OF CLOTH. RICHARD F. DOWNEY, Milwaukee, Wis., assignor to Tailors' Form Company, Milwaukee, Wis. Filed Feb. 16, 1912. Serial No. 678,118. (Cl. 211—13.)



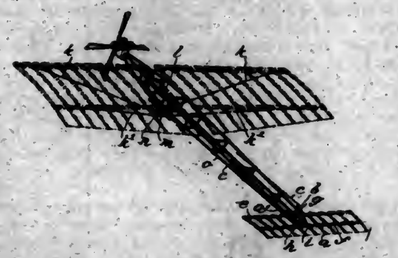
1. A method of draping a dummy to simulate one-half of a completed trousers and coat consisting of longitudinally folding a garment length of cloth whereby it is halved as to width, adjusting one end of the folded cloth about the foot of the dummy and wrapping said cloth about the waist-line thereof, securing one edge of the folded cloth in the crotch of the dummy and around the leg of the same adjacent to the foot to simulate a trousers leg, thereafter looping the confined cloth downward from the waist-line to provide a coat length, draping the remainder of the folded goods over the shoulder of the dummy, confining the same at the shoulder of said dummy by attaching a sleeve-frame thereto, refolding the free end of the cloth over the shoulder whereby the sleeve-frame is concealed, and tucking and confining the cloth edges about the sleeve-frame to show a complete sleeve outline.

2. A method of draping a dummy to simulate one-half of a completed trousers and coat consisting of longitudinally folding a garment length of cloth whereby it is halved as to width, adjusting one end of the folded cloth about the foot of the dummy and wrapping said cloth about the waist-line thereof, securing one edge of the folded cloth in the crotch of the dummy and around the leg of the same adjacent to the foot to simulate a trousers leg, thereafter looping the confined cloth downward from the waist-line to provide a coat length, thereafter draping the remainder of the goods over the shoulder of the dummy and folding the same to form a lapel, confining the same at the shoulder of said dummy by attaching a sleeve-frame thereto, refolding the free end of the cloth over the shoulder whereby the sleeve-frame is concealed, and tucking and confining the cloth edges about the sleeve-frame to show a complete sleeve outline.

3. A method of draping a dummy to simulate one-half of a coat consisting of draping the goods lengthwise from the shoulder of the dummy to the desired length for a coat, thereafter folding the front edge of the cloth into V-shape at the breast-line to form a lapel, and draping the remainder of the folded goods over the shoulder of said dummy, confining the same at the shoulder by attaching a sleeve-frame thereto, refolding the free end of the cloth over the shoulder whereby the sleeve-frame is concealed, and tucking and confining the cloth edges about the sleeve-frame to show the complete sleeve outline.

4. A dummy for draping uncut lengths of material to simulate a suit comprising detachable means for securing cloth to one leg of the dummy, means for securing cloth about the waist of a dummy, means for looping the cloth from the waist of the dummy, a detachable sleeve-form for securing the cloth about the shoulder of the dummy, and means for holding the cloth about said sleeve-form.

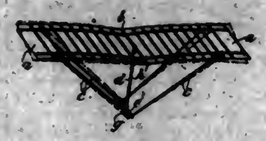
1,024,928. AEROPLANE. ROBERT ESNAULT-PELTERIE, Billancourt, France. Filed May 19, 1908. Serial No. 433,789. (Cl. 244—14.)



An aeroplane comprising oppositely extending supporting wings, front connecting means between said wings at the front, rear connecting means between said wings at the rear, each of said connecting means being mounted to yield laterally to permit the rising of part of a wing at one side and to cause the lowering of part of the corresponding wing at the other, and a reversing lever between the front connecting means and the rear connecting means and having its longer arm connected to the rear connecting means.

1,024,929. AEROPLANE. ROBERT ESNAULT-PELTERIE, Billancourt, France. Filed July 14, 1909. Serial No. 507,576. (Cl. 244—12.)

1. In an aeroplane, the combination of a supporting surface and means for varying the incidence of said supporting surface simultaneously on both sides of the longitudinal axis thereof or varying the incidence thereof on one side of said axis relatively to that on the other side, said means comprising a rotatively mounted rod and a cross piece rotatively mounted on said rod, and connections between the ends of said cross piece and said supporting surface, movement of said rod operating to vary the incidence of said supporting surface on one side of its longitudinal axis relatively to that on the other, and a separate movement of said cross piece operating to vary the incidence of said supporting surface simultaneously on both sides of said axis.

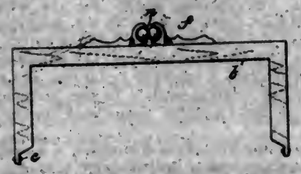


2. In an aeroplane, the combination of a supporting surface and means for varying the incidence of said supporting surface simultaneously on both sides of the longitudinal axis thereof or varying the incidence thereof on one side of said axis relatively to that on the other side, said means comprising a rotatively mounted rod, having a cross arm upon one end and cross pieces pivotally mounted on the ends of said cross-arm, and connections between said supporting surface and the ends of said cross-pieces, movement of said rod operating to vary the incidence of said supporting surface on one side of its longitudinal axis relatively to that on the other, and separate movement of said cross piece operating to vary the incidence of said supporting surface simultaneously on both sides of said axis.

3. In an aeroplane, the combination of a supporting surface and means located in the medial plane of the aeroplane and beneath the supporting surface for varying the incidence of said supporting surface simultaneously on both sides of the longitudinal axis thereof or varying the incidence thereof on one side of said axis relatively to that on the other side, said means comprising a part having rotary movement in two planes, and connections between said part and said supporting surface, movement of said part in one plane operating to vary the incidence of said supporting surface simultaneously on both sides of its longitudinal axis and movement of said part in its other plane operating to vary the incidence of said supporting surface on one side of said axis relatively to that on the other, and an appendage in the form of intersecting horizontal and vertical planes.

4. In an aeroplane, the combination of a supporting surface and means for varying the incidence of said supporting surface simultaneously on both sides of the longitudinal axis thereof or varying the incidence thereof on one side of said axis relatively to that on the other side, said means comprising a rotatively mounted rod and a cross piece rotatively mounted on said rod, and connections between the ends of said cross piece and said supporting surface, movement of said rod operating to vary the incidence of said supporting surface on one side of its longitudinal axis relatively to that on the other, and separate movement of said cross piece operating to vary the incidence of said supporting surface simultaneously on both sides of said axis, and an appendage in the form of intersecting horizontal and vertical planes.

1,024,930. BAG-FASTENER. FRANZ A. FULLER, Newark, N. J., assignor to The J. E. Mergott Company, Newark, N. J., a Corporation of New Jersey. Filed Aug. 3, 1911. Serial No. 642,057. (Cl. 70—116.)



In a purse or bag fastener, the combination with a pair of hinged frame members, of a catch member mounted on each of said frame members for mutual coöperation, each catch member comprising a base provided with a fork-shaped ball receiving end and a ball rotatably arranged in said fork-shaped end.

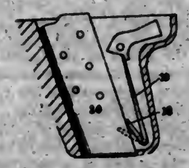
1,024,931. METER CONNECTION-BOX. FRANK C. GRADY, Indianapolis, Ind. Filed Sept. 15, 1910. Serial No. 582,158. (Cl. 247—12.)



1. The combination of a box-like member provided with a back plate, a neck movable relatively to said box-like member and provided with a portion for engaging a meter and with a flat portion having a slot, a bolt extending through said slot and engaging said plate for the purpose of clamping said neck relatively to said box-like member.

2. The combination of a box-like member provided with a back plate, a neck movable relatively to said box-like member and provided with a portion engaging said back plate, means for clamping said portion in different positions relative to said back plate, an electric meter engaging said neck, binding posts upon said meter, binding posts mounted within said box-like member, and conductors extending from said binding posts upon said meter to said binding posts within said box-like member.

1,024,932. SMALL-ARM. GEORGES VANDER HAEGHEN, Liege, Belgium. Filed Aug. 22, 1910. Serial No. 578,418. (Cl. 42—7.)



1. An automatic fire arm having a cartridge magazine, a percussion member, a percussion spring bearing against said member and upon said magazine and tensioned by the latter, the tension being removed by withdrawal of the magazine.

2. An automatic fire arm having a cartridge magazine, a percussion member, a resilient device bearing against said percussion member and upon said magazine and tensioned by the latter, the tension being removed by withdrawal of the magazine.

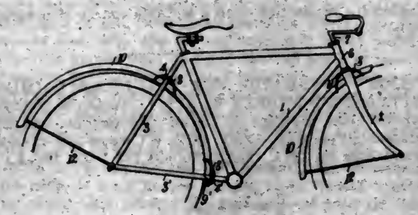
1,024,933. SMALL-ARM. GEORGES VANDER HAEGHEN, Liege, Belgium. Filed Sept. 1, 1910. Serial No. 580,089. (Cl. 42—7.)

An automatic fire arm having a cartridge magazine, an automatic safety, a spring pressed member bearing normally on the magazine and tensioned thereby, the tension being removed by the withdrawal of the magazine and said member being operable automatically on the removal of



the tension to block the automatic safety and prevent movement of the trigger.

1,024,934. MUD-GUARD FASTENER. ALLEN SHEUMAN HALL, Kokomo, Ind. Filed Aug. 15, 1911. Serial No. 644,096. (Cl. 208—140.)



1. A fastener for vehicle mud guards, comprising resilient means having hook portions formed at its opposite ends, said means adapted to be bent around a portion of the frame of the vehicle to bring the hook portions in position to engage the mud guard.

2. A fastener for vehicle mud guards, comprising elongated resilient means having hooks formed at the opposite ends thereof, said resilient means being adapted to be bent around a part of the frame of the vehicle to bring the hook ends into position to engage the edges of the mud guard.

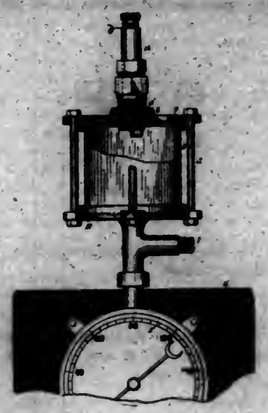
3. A fastener for vehicle mud guards, comprising resilient means having a hook portion formed at one end adapted to be passed through an aperture adjacent the end of the mud guard, and having a hook portion formed at its opposite end, said resilient means being adapted to be bent around a portion of the frame adjacent the end of the mud guard to be secured, to bring said last-named hook into engagement with the edges of the mud guard.

4. A fastener for vehicle mud guards, comprising a pair of resilient means having hook portions formed adjacent their ends, said means adapted to be bent around a part of the frame of the vehicle to bring the hook portions into engagement with the edges of the mud guard, to hold the guard securely in position, and a link connecting said fasteners together.

1,024,935. PORTABLE FAULTFINDING DEVICE FOR ELECTRICAL IGNITION APPARATUS. SAMUEL P. HEDGES, Greenport, N. Y. Filed July 26, 1910. Serial No. 573,937. (Cl. 73—51.)

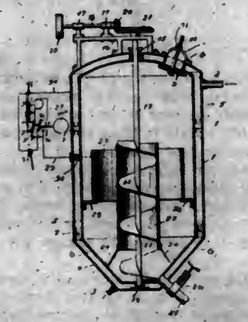
The combination of a pressure gage adapted to be secured to a suitable support, a chamber above the said pressure gage and comprising top and base plates, a transparent cylinder between the plates, and bolts connecting said plates, the top plate having a threaded aperture for the reception of the spark plug, and a pipe extending verti-

cally from the pressure gage and into the base of said chamber, and provided with an intermediate lateral branch



threaded for connection with a suitable source of pressure supply.

1,024,936. APPARATUS FOR USE IN RECLAIMING VULCANIZED-RUBBER WASTE. CHARLES S. HELLER, Akron, Ohio, assignor to Moore Architectural and Engineering Company, Akron, Ohio, a Corporation of Ohio. Filed June 22, 1911. Serial No. 634,737. (Cl. 18—2.)



1. In apparatus of the character described, a normally closed receptacle for holding a reclaiming solution and rubber waste, means for conducting a heating medium in proximity to said receptacle, and means for sending an electric current through said reclaiming solution in one direction and then sending said current through the same in a reverse direction.

2. In apparatus of the character described, a normally closed receptacle for holding a reclaiming solution and rubber waste, means for conducting a heating medium in proximity to said receptacle, means for agitating the reclaiming solution and rubber waste, a source of electrical energy, means connecting said receptacle with one pole of said source of electrical energy, a metallic member disposed within the receptacle and insulated therefrom, means electrically connecting said metallic member and said source of current, and means for changing the polarity of said receptacle and metallic member whereby a current is sent through the reclaiming solution in one direction and then through the same in a reverse direction.

3. In apparatus of the character described, a normally closed receptacle for holding a reclaiming solution and rubber waste, and means for sending a current through the reclaiming solution in one direction and then sending said current through the same in a reverse direction.

4. In apparatus of the character described, a normally closed receptacle for holding a reclaiming solution and rubber waste, electrodes having connection with a source of current to send an electrical current through the reclaiming solution, and means for changing the polarity of said electrodes whereby the current is sent through the reclaiming solution in a reverse direction.

5. In apparatus of the character described, a normally closed receptacle for holding a reclaiming solution and rubber waste, means for conducting a heating medium in proximity to said receptacle, means for agitating the reclaiming solution, means including electrodes for sending a current through the reclaiming solution, and means for changing the polarity of said electrodes whereby the current is sent through the reclaiming solution in a reverse direction.

[Claims 6 to 11 not printed in the Gazette.]

1,024,937. PROCESS FOR RECLAIMING VULCANIZED-RUBBER WASTE. CHARLES S. HELLER, Akron, Ohio, assignor to Moore Architectural and Engineering Company, Akron, Ohio, a Corporation of Ohio. Filed June 22, 1911. Serial No. 634,738. (Cl. 18—52.)

1. The herein described process of reclaiming vulcanized rubber waste, which consists in subjecting the vulcanized rubber waste to the action of a solution containing caustic alkali, subjecting the mass to the action of an electric current by sending the current through the mass in one direction and then in a reverse direction, and washing the rubber waste to remove the solution therefrom.

2. The herein described process of reclaiming vulcanized rubber waste, which consists in subjecting the vulcanized rubber waste to the action of a reclaiming solution containing caustic alkali, and ferric hydroxid, subjecting the mass to the action of an electric current by sending the current through the mass in one direction and then through the same in a reverse direction, and treating the rubber waste to remove all traces of the reclaiming solution therefrom.

3. The herein described process of reclaiming vulcanized rubber waste, which consists in subjecting the vulcanized rubber waste to the action of a reclaiming solution containing caustic alkali and ferric hydroxid in the presence of heat and under pressure, subjecting the mass to the action of an electric current by placing electrodes in contact with the mass and changing the polarity of said electrodes, and washing said rubber waste to remove the reclaiming solution from the same.

4. The herein described process of reclaiming vulcanized rubber waste, which consists in subjecting the vulcanized rubber waste to the action of a reclaiming solution containing caustic alkali and a compound of iron, agitating the mass in the presence of heat and under pressure, subjecting the mass to the action of an electric current by sending the current through the mass in one direction and then in a reverse direction, and washing the rubber waste to remove the reclaiming solution therefrom.

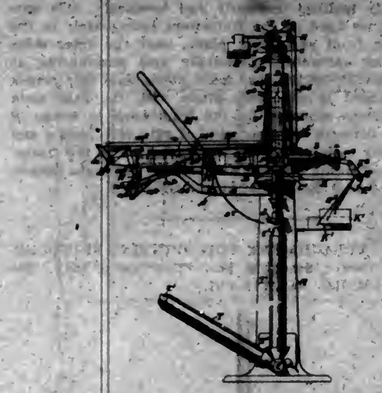
5. The herein described process of reclaiming vulcanized rubber waste, which consists in subjecting the vulcanized rubber waste to the action of a reclaiming solution containing caustic alkali, agitating the mass in the presence of heat and under pressure, subjecting the mass to the action of an electric current by sending the current through the mass in one direction and then through the same in a reverse direction, and treating the rubber waste to remove all traces of the reclaiming solution.

[Claims 6 to 15 not printed in the Gazette.]

1,024,938. MACHINE FOR MANUFACTURING PAPER BOTTLES AND OTHER CONTAINERS. HENRY R. HEYL, Philadelphia, Pa., assignor to The American Paper Bottle Company, Philadelphia, Pa., a Corporation of Pennsylvania. Filed Dec. 6, 1909. Serial No. 531,550. (Cl. 93—36.)

1. The combination in a machine for breaking down the flanges of paper tubes, of a form, a rotated shaft, a disk carried thereby and arranged at an angle to the shaft,

means for rotating the shaft, means for exerting pressure upon the shaft to force the disk toward the form as the shaft is rotated, and means for raising the disk.



2. The combination of a hub, means for rotating said hub, a series of forms projecting from the hub, a shaft, a bearing carried by said shaft, a stem mounted in the bearing, a disk carried by the stem, means for rotating said shaft, means for exerting pressure upon the shaft to force the disk toward the form, and means for raising the disk.

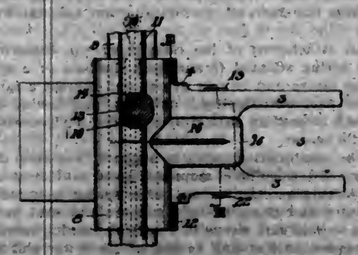
3. The combination of a frame, a hub mounted in bearings on said frame, a series of arms on said hub, forms on each arm to receive a cylinder of paper or other material, means for breaking down the projecting end of the cylinder, and means for applying a reinforcing band to the cylinder.

4. The combination of a frame, a hub mounted on the said frame having a series of arms, forms on the arms for receiving a paper cylinder, a rotating means for breaking down the end of the paper cylinder when the form is in one position, means for applying paste to a portion of the cylinder, and means for applying a reinforcing ring to one cylinder while the breaking down mechanism is acting upon another cylinder.

5. The combination of a frame, a hub having a series of arms projecting therefrom, a form on each arm for receiving a paper cylinder, a rotating shaft, a disk carried thereby for breaking down the end of the cylinder when the hub is moved so as to bring a cylinder in line with said mechanism, means for forcing a reinforcing ring onto the cylinder, and means for discharging the cylinder after the end has been broken down and the ring applied.

[Claims 6 to 13 not printed in the Gazette.]

1,024,939. METALLIC TIE AND RAIL-FASTENER. FREDERICK P. HUNKLE and CHARLES NORDWELDT, McKeesport, Pa. Filed Jan. 20, 1912. Serial No. 672,420. (Cl. 238—6.)



1. In a metallic tie and rail fastener, the combination with rails having the webs thereof provided with openings, of a tie having a top plate provided with a central longitudinal opening and longitudinal slots outer rail fasteners formed integral with the top plate of said tie and bracing the outer sides of said rails, inner rail fasteners bracing the inner sides of said rails and having the ends thereof provided with hooks to engage under the longitudinal edges of the top plate of said tie, pins carried by said inner fasteners and extending into the openings of the webs of said rails, lateral extensions carried by said inner fasteners and extending over the slots in the top plate of said tie, and means located within said tie and adapted to lock said extensions in engagement with the top plate thereof.

2. In a metallic tie and rail fastener, the combination with rails, of a tie having a top plate provided with slots, outer fasteners carried by said tie for bracing the outer sides of said rails, inner fasteners bracing the inner sides of said rails and having the ends thereof provided with depending hooks to engage with the top plate of said tie, lateral extensions carried by said inner fasteners and extending over the slots in the top plate of said tie, depending L-shaped members carried by said extensions, and means arranged within said tie and engaging said members for locking said extensions upon said tie.

3. In a metallic tie and rail fastener, the combination with rails, of a tie having the top plate thereof provided with slots, webs bracing the top plate of said tie, outer fasteners carried by the top plate of said tie for bracing the outer sides of said rails, inner fasteners bracing the inner sides of said rails and having depending hooks engaging under the longitudinal edges of the top plate of said tie, extensions carried by said inner fasteners, depending members carried by said extensions and extending into said tie, and means interposed between said members and the webs of said tie for locking said inner fasteners upon the top plate of said tie and in engagement with said rails.

4. In a metallic tie and rail fastener, the combination with rails, of a tie having the top plate thereof provided with slots, webs bracing the top plate of said tie, outer fasteners carried by the top plate of said tie for bracing the outer sides of said rails, inner fasteners bracing the inner sides of said rails and having depending hooks engaging under the longitudinal edges of the top plate of said tie, extensions carried by said inner fasteners, depending members carried by said extensions and extending into said tie, means interposed between said members and the webs of said tie for locking said inner fasteners upon the top plate of said tie and in engagement with said rails, said means including tapering keys having the small ends thereof locked in engagement with one of the walls of said tie.

1,024,940. GRANITE-CHISEL. JOSEPH HENRY JENKINS, Mount Vernon, Ohio, assignor to The Jenkins-Pirie Tool Company, Barre, Vt. Filed July 1, 1911. Serial No. 636,359. (Cl. 125—19.)

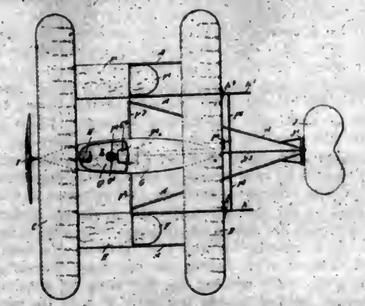


1. A device of the class described comprising a holder a recess in the holder, a plurality of blades contained within the recess, openings in opposite sides of the holder,

the openings communicating with the said recess, together with a tapered locking key extending through the said openings, the intermediate portion of the key being in engagement with the end blade, the said key extending upwardly with reference to the bottom of the holder.

2. A device of the class described comprising a holder, a recess in the holder, a number of blades contained in the recess, openings of different sizes in the opposite sides of the holder and communicating with the recess, the smaller opening being at a higher elevation than the larger one, together with a tapered locking key entering the said openings, the intermediate portion thereof being in engagement with the end blade whereby as the device is in use the impact of the blades will tend to maintain the key tightly in engagement with the said blade.

1,024,941. AEROPLANE. FREDERICK C. LAMBERT, New York, N. Y. Filed Oct. 16, 1911. Serial No. 654,832. (Cl. 244—29.)



1. An aeroplane, comprising a framework, main sustaining planes fixed on the said framework one in front of the other and each slightly inclined upwardly and forwardly, side sustaining planes fixed on the said framework and extending rearwardly from the front main sustaining plane and terminating at their rear ends between the forward and rear main planes, and movable ailerons at the rear end of the said sides sustaining planes.

2. An aeroplane, comprising a framework, main sustaining planes fixed on the said framework one in front of the other and each slightly inclined upwardly and forwardly, side sustaining planes fixed on the said framework and extending between the ends of the said main sustaining planes and in the same plane therewith, and a basket attached to the said framework and extending with its front and rear ends under the said main sustaining planes.

3. An aeroplane, comprising a framework, main sustaining planes fixed on the said framework one in front of the other and each inclined upwardly and forwardly, side sustaining planes fixed on the said framework and extending rearwardly from the front main plane, said side planes being arranged in the same plane with the main planes and having their rear ends terminating at points forwardly of the rear main plane, and a basket attached to the framework and extending between and beneath the forward and rear main planes.

4. An aeroplane, comprising a framework, a front sustaining plane, a rear sustaining plane spaced from the said front sustaining plane, both planes being fixed to the said framework and slightly inclined upwardly and forwardly, side sustaining planes fixed on the framework immediately in the rear of the front sustaining plane and near the outer sides thereof, said side planes extending rearwardly from said front plane and terminating at points intermediate the front and rear main planes, ailerons mounted to swing up and down on the framework in the rear of the said side sustaining planes and in the spaces between the same and the rear main plane, and manually-controlled means for moving the said ailerons simultaneously and in opposite directions one relative to the other.

5. An aeroplane, comprising a framework, a front sustaining plane, a rear sustaining plane spaced from the said front plane, both planes being fixed to the said framework and slightly inclined upwardly and forwardly, side sustaining planes fixed on the framework immediately in the rear of the front sustaining plane, near the outer sides thereof, and extending rearwardly and terminating at points forwardly of the rear main plane, said side planes being arranged in the same plane with the said main planes, ailerons mounted on the framework to swing in the spaces between the rear ends of said side planes and the said rear main plane, and a basket fixed to the framework and extending between and beneath the main planes.

[Claims 6 to 9 not printed in the Gazette.]

1,024,942. ATTACHMENT FOR SPINNING-SPINDLES. THOMAS LEWIS, Scranton, Pa. Filed Jan. 6, 1911. Serial No. 601,075. (Cl. 118—27.)



1. The combination with a support, a sleeve carried thereby, a retaining member for said sleeve, and a spindle mounted upon said sleeve, of a helical spring mounted directly upon said sleeve and engaging said member and serving to hold the same resiliently in position relative to said support, and having one end constituting a keeper for holding said spindle in position relative to said sleeve.

2. An attachment of the class described, comprising a spring directly applicable to and serving for holding a spindle-carrying sleeve in a normal position relative to its support, and having a keeper adapted to prevent the accidental displacement of the spindle from the sleeve, and having, furthermore, a lock to prevent the accidental displacement from the sleeve of a retaining nut associated therewith.

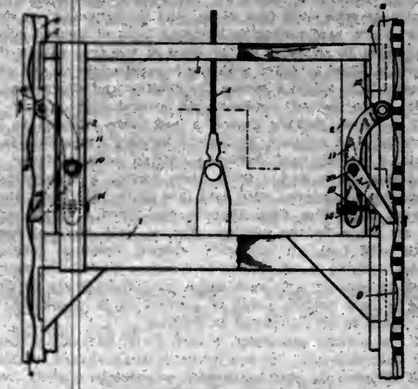
3. An attachment of the class described, comprising a spring for holding a spindle-carrying sleeve in a normal position relative to its support, and having an end formed into a keeper adapted to prevent the accidental displacement of the spindle from the sleeve, and having another end constituting a lock to prevent the accidental displacement from the sleeve of the retaining nut associated therewith.

4. An attachment of the class described, comprising a helical spring adapted to surround the base of a spindle-carrying sleeve and having at one end thereof a laterally disposed part constituting a nut lock, and having at the other end thereof an outwardly extended part constituting a spindle keeper.

5. The combination, with a support, a sleeve carried thereby, and a spindle mounted upon said sleeve, said sleeve having a retaining nut, of a spring mounted upon said sleeve and engaging said support and said nut, and serving to hold said sleeve in a normal position relative to said support, said spring having at the lower end a part constituting a lock for said nut, and having at the upper end an arm constituting a keeper to prevent the accidental displacement of said spindle from said sleeve.

[Claims 6 and 7 not printed in the Gazette.]

1,024,943. SAFETY DEVICE FOR ELEVATORS. VOLNEY W. MASON, Providence, R. I. Filed Apr. 24, 1911. Serial No. 623,019. (Cl. 187—77.)



1. A device of the class described comprising a suitable framework, a lever carried thereby having a roller at its upper end, a bolt carried by the framework on which the said lever is pivotally supported, a dog also mounted on the said bolt and extending adjacent the lower end of the lever, a bolt carried by the lever and extending transversely thereof, one end of the bolt engaging the dog whereby the relation of the dog with respect to the lever may be varied, a serpentine rack, the roller on the said lever following the serpentine outline of the rack whereby the end of the dog is brought to follow the contour of the rack, the said dog being adjustable with respect to the lever by means of the said transversely extending bolt so that when a certain speed is passed the end of the dog may engage the teeth of the said rack.

2. A device of the class described comprising a suitable framework, a lever having a roller at its upper end carried by the framework and pivotally supported thereon at an intermediate portion, a bolt carried by the framework on which the lever is supported, a dog pivotally supported on the said bolt, a transversely extending bolt carried adjacent the lower end of the lever and bearing against the side of the said dog, the lower end of the lever being provided with a lug having a threaded opening therein through which the said bolt extends, the dog being freely movable in one direction and held against movement in the opposite direction by reason of engagement with the said bolt, movement of the bolt moving the dog, whereby the relation of the lower end of the dog with the lower end of the lever may be varied, a serpentine rack, the roller and the lever being in engagement with the serpentine rack and following the outline thereof, whereby the lower end of the dog is also brought to follow the contour of the rack, the position of the dog relatively to the lever determining the speed at which the dog will come into engagement with the teeth of the rack as the roller travels over the rack.

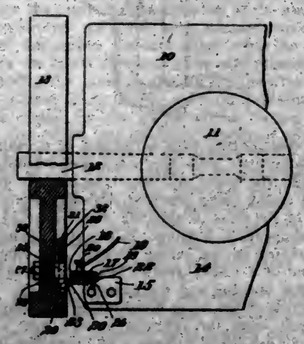
1,024,944. COMBINATION CHAIR AND COUCH. PHILIP F. MCCARTHEY, New York, N. Y. Filed Feb. 11, 1911. Serial No. 608,154. (Cl. 155—6.)

1. A combination chair and couch, comprising a frame having a middle section provided with legs, a foot and seat section hinged to one end of the said middle section and adapted to be folded thereon, the said foot and seat section having rabbets at the top and bottom and being provided at its free end with legs, and a head and back section hinged to the other end of the said middle section, a cushion fitting interchangeably into either top or bottom rabbet of the said foot section, cushions held on the said middle section and the said head and back section, and links adjustably connecting the said head and back section with the said middle section.



2. A combination chair and couch, comprising a frame having a middle section provided with legs, a foot and seat section hinged to one end of the said middle section and adapted to be folded thereon, the said foot and seat section having rabbets at the top and bottom and being provided at its free end with legs, and a head and back and back section hinged to the other end of the said middle section, a cushion fitting interchangeably into either top or bottom rabbet of the said foot section, cushions held on the said middle section and the said head and back section, links adjustably connecting the said head and back section with the said middle section, a head rest and filling piece adapted to rest on the outer end of the said head and back section and adapted to fit onto the inner end of the said head and back section, and fastening means for fastening the said head rest in position on the outer end of the said head and back section.

1,024,945. REVERSING MECHANISM FOR EXPLOSIVE-ENGINES. JOHN B. MOORE, Washington, D. C. Filed Feb. 1, 1911. Serial No. 606,016. (Cl. 123—41.)



1. In a reversing mechanism for explosive engines, the combination with a fly wheel, and a radially movable operating member carried thereby, of an ignition circuit including a stationary contact and a movable contact the latter being adapted to intercept the path of movement of said operating member, whereby said movable contact may be shifted.

2. In a reversing mechanism for explosive engines, the combination with a fly wheel, of a radially disposed guide secured to said fly wheel, an operating member movably mounted in said guide, an ignition circuit including a stationary contact and a movable contact, the latter being adapted to intercept the path of movement of said operating member, whereby said movable contact may be shifted.

3. In a reversing mechanism for explosive engines, the combination with a fly wheel, of a radially disposed guide secured to said fly wheel, a movable operating member mounted in said guide, a spring acting to hold said member normally retracted, and an ignition circuit including a stationary contact and a movable contact, the latter being adapted to intercept the path of movement of said operating member, whereby said movable contact may be shifted.

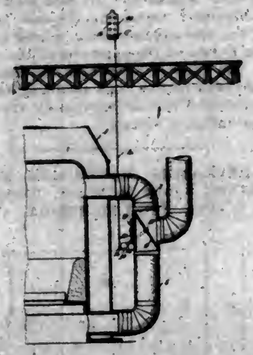
4. In a reversing mechanism for explosive engines, the combination with a fly wheel, and a radially movable op-

erating member carried thereby and provided with a conical head, of an ignition circuit including a stationary contact and a movable contact, the latter being adapted to intercept the path of movement of said conical head, whereby said movable contact may be shifted.

5. In a reversing mechanism for explosive engines, the combination with a fly wheel, and a radially movable operating member carried thereby, a bracket, an ignition circuit, a stationary contact in said circuit and carried by said bracket, said contact having a bent end, and a movable contact in said circuit also carried by said bracket and cooperating with the bent end of the stationary contact, said movable contact being adapted to intercept the path of movement of said operating member.

[Claims 6 to 10 not printed in the Gazette.]

1,024,946. DAMPER. WILLIS J. MORELAND, Mottville, N. Y. Filed Mar. 28, 1911. Serial No. 617,884. (Cl. 126—293.)



1. The combination with a furnace, of a casing having one end connected with the combustion chamber of the furnace and the other end with the ash pit of the furnace, said casing being provided with oppositely arranged openings in its sides, a chimney flue connected with one of the said openings, a damper in the other opening, and a damper pivoted in the casing opposite the side openings thereof and of a length greater than the diameter of the chimney flue opening and the damper opening.

2. A device of the class described, comprising a casing having open ends for connection with the combustion chamber and ash pit of a furnace and provided in its sides with oppositely arranged openings, one for connection with a chimney flue, a damper in the other side opening, and a damper pivoted in the casing opposite the side openings thereof and of a length greater than the diameter of said openings.

1,024,947. BLADE-SHARPENER. JAMES E. MORSE, Canandaigua, N. Y. Filed June 30, 1911. Serial No. 636,263. (Cl. 76—86.)



1. A blade sharpener, comprising a face plate having a series of recesses extending downwardly from its upper edge and having a pair of inclined shoulders extending downwardly and inwardly from the outer edge to each of said recesses, a pair of equilaterally shaped cutting tools, each having one edge resting on each of said shoulders, means removably holding each of said cutting tools in position with one of its edges extending into one of said recesses, a front plate disposed in contact with said cutting tools and having a transversely adjustable engagement with said face plate, and an extension on said front plate, said extension having a pair of beveled edges extending at an angle to the edge of the tool within the recess adapted to coact with the beveled edges on the cutting tools to afford a means for guiding and sharpening a knife blade inserted between said beveled edges.

2. In a sharpening device, a bed plate adapted to be fastened to a support, having an upwardly-extending face plate, a cutting tool having a cutting edge, fastened to said face plate, and a front plate having a transversely disposed engagement with said face plate, said front plate having a guiding edge thereon positioned adjacent and at an angle to the cutting edge of said tool, to form with said tool, an angularly shaped opening through which opening is adapted to be drawn a blade to be sharpened by contact with said edges, said front plate permitting a new cutting point of contact to be presented to the blade to be sharpened as desired.

3. In a knife sharpener, a face plate, having an opening therethrough, an, equilateral-triangle-shaped cutting tool disposed on said plate with an edge projecting over said opening, and a front plate adjustable with reference to said face plate, said front plate having a guiding edge angularly disposed with reference to the cutting edge of the tool, to form between said edges, an angularly shaped opening, whereby when a knife to be sharpened is placed in said opening, a new cutting edge may be presented to the knife, and said tool and plates are mutually braced in position.

4. In a knife sharpener, a face plate, a tool having a cutting edge disposed on said plate, a front plate adjustable with reference to said face plate, said front plate having a guiding edge angularly disposed with reference to the cutting edge of the tool, to form between said edges, an angularly shaped opening, whereby when a knife to be sharpened is placed in said opening, the adjustment of the front plate will present a new cutting point at the apex of said opening, and means removably holding said tool on said face plate.

1,024,948. RELEASING DEVICE. CONRAD MÜLLER, New York, N. Y. Filed Sept. 23, 1911. Serial No. 650,927. (Cl. 119—116.)



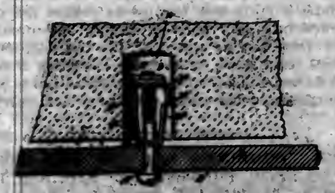
1. In a releasing device, the combination of a support, a sectional arc-shaped ring carried by said support having separated ends, said ring having a plurality of teeth formed on its edge, and a pinion meshing with said teeth, said pinion serving to move said ring to open and closed position.

2. In a releasing device, the combination of a support, a sectional arc-shaped ring having its ends spaced apart mounted to slide in said support, said ring having gear teeth formed on its outer edge, a pinion to mesh with said gear teeth, and means for operating said pinion to move said ring to open and closed position.

3. In a releasing device, the combination of a support, a sectional arc-shaped ring having separated ends, secured to said support, said support having an opening therethrough extending perpendicular to the plane of said ring and having a recess formed in its edge communicating with said opening, said ring having a plurality of gear teeth formed thereon, and a pinion mounted in said support and meshing with said teeth on the sectional ring to move said ring to open or close said recess.

4. In a releasing device, the combination of a support, a pinion having a hub carried by said support, the hub and the surfaces of the support contacting therewith being, correspondingly curved to form a ball-and-socket mounting for said pinion, a sectional arc-shaped ring also carried by said support, said support having a recess extending inward through its edge in position to be opened and closed by said ring, said ring having a plurality of gear teeth on its edge, said gear teeth being engaged by said pinion, and means for revolving said pinion to move said ring to open and closed position.

1,024,949. EXPANSION-BOLT. HERBERT W. MUSCHE, New York, N. Y. Filed Apr. 12, 1911. Serial No. 620,599. (Cl. 85—2.4.)



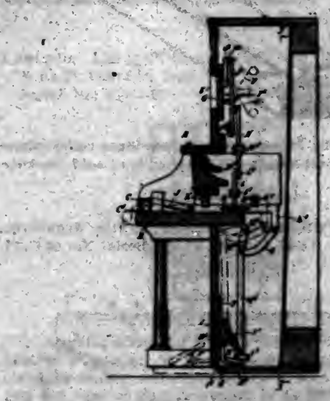
1. An expansion bolt comprising an expansion member formed of a strip of metal having a central opening and side portions provided with angular ends secured in overlapping relation between the side portions, each of said side portions comprising two obtusely angular sections, one of which has engaging spurs bent outwardly at the point of connection of the sections, said overlapping ends being provided with a threaded aperture in line with said central opening, and a bolt extending through said central opening and said aperture and engaging the threads of the latter.

2. An expansion bolt comprising an expansion member formed of a strip of metal having a central opening and side portions provided with angular ends secured in overlapping relation, each of said side portions comprising two obtusely angular sections transversely slitted, one of said sections having its material bent outwardly at the sides of certain of the slits to form engaging spurs, and the other of said sections having its material curved transversely, said overlapping ends being provided with a threaded aperture in line with said central opening, and a bolt extending through said central opening and said aperture and engaging the threads of the latter.

1,024,950. PIANO-CASING. FRANK KENNEK, New York, N. Y. Filed Jan. 31, 1911. Serial No. 606,792. (Cl. 84—159.)

1. In a player piano, having bellows and controlling mechanism, a casing for said player piano having a movable panel for the music roll opening, folding pedals for the bellows of the player piano, a movable covering for the controlling mechanism of the player piano, and means connecting the said movable covering with the said panel and pedals for simultaneously opening the panel and moving the pedals into active position on opening the covering and for closing the panel and swinging the pedals into folded position on closing the covering.

2. In a player piano having bellows and controlling mechanism, a casing for said player piano having a movable panel for the music roll opening, folding pedals for the bellows of the player piano, a movable covering for the controlling mechanism of the player piano, and means connecting the said panel, pedals and covering with each other whereby the movement of the said covering in one direction by an operator simultaneously moves the said pedals into active position and opens the panel, and the movement of the said covering by the operator in the other direction, simultaneously swings the pedals into folded position and closes the panel.



3. In a player piano having a controlling mechanism, a casing for the player piano, having a panel for the music roll opening made in slidably mounted sections, a pivoted covering for the controlling mechanism of the player piano, a slide connected with the said pivoted covering, and mechanism connecting the said panel with the said slide for opening the panel on opening the said pivoted covering and for closing the panel on closing the covering.

4. In a player piano having controlling mechanism and bellows, a casing for the player piano, having a sliding panel for the music roll opening, a pivoted covering for the controlling mechanism of the player piano, pedals for the bellows of the player piano, a hinged pedal-carrying board, the said casing being provided with an opening adapted to be closed by the said pedal-carrying board, and means connecting the said panel, covering and pedal-carrying board with each other, so that on moving the covering the said panel and the said pedal-carrying board and pedals move with it.

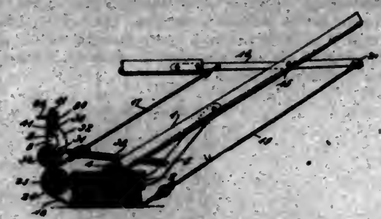
5. In a player piano having controlling levers and bellows, a casing for the player piano, provided with a panel made in sections mounted to slide toward and from each other, a pivoted covering for the controlling levers of the player piano, pedals for actuating the bellows of the player piano, a pedal-carrying board mounted to swing to move the pedals into open or folded position, and means connecting the said covering with the said panel sections and the said pedal-carrying board, to simultaneously move the panel sections into an open or closed position, and to swing the pedals into an open or folded position on swinging the said covering into an open or closed position.

[Claims 6 to 15 not printed in the Gazette.]

1,024,951. COMBINED MOP HOLDER AND WRINGER. GEORGE OTIS RENSHAW, Olathe, Colo. Filed Sept. 26, 1911. Serial No. 651,715. (Cl. 15—44.)

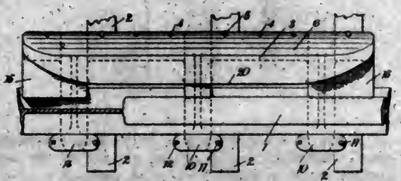
In a combined mop holder and wringer, the combination with a head, a handle, a framework connecting them and having upturned slotted elbows at its front ends, an idle roller journalled in said elbows, a rock lever having a loop pivoted across the handle, a mop cloth passing around said roller and head, and flexible connections between its extremities and said loop above and below its pivot; of a cross shaft adjustably mounted in said slots and having nuts at its extremities, curved brackets whose upper ends are pivoted on said shaft, whose bodies are deflected to the rear and thence forward between said elbows, and whose

lower extremities have outturned lips engaging the front edges of said elbows, contractile springs connecting said



brackets with the framework, and a wringer roller whose trunnions are journaled in the lower ends of said brackets.

1,024,952. GUARD-RAIL. PHILLIP DANIEL SERRURIER, Savanna, Ill. Filed June 21, 1911. Serial No. 634,417. (Cl. 239—17.)



1. A guard rail adapted to coöperate with a track rail, comprising a body portion having the corners of the side thereof facing said track rail cut away to permit the entrance of the wheels of a car between said track rail and said guard rail, and foot guards located beneath these cut-away portions and adapted to prevent the entrapping of a foot between said guard rail and said track rail, said foot guards extending into the channel formed between the head and flange of said track rail, and also coming in close juxtaposition to said head.

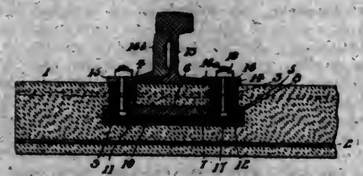
2. A guard rail adapted to extend alongside of a track rail to prevent the wheels of a car from leaving said track rail, said guard rail comprising a body portion, and a plurality of arms extending from one side of said body portion and adapted to extend under said track rail, said arms having brackets thereon projecting from either side thereof and extending upwardly so as to engage the flange of said track rail on the opposite side of said track rail from which said body portion is located, said body portion having enlargements connected thereto and co-extensive with said arms, said enlargements overhanging the opposite flange of said track rail from which said brackets engage, whereby said guard rail is secured to said track rail.

3. A guard rail adapted to extend alongside of a track rail to prevent the wheels of a car from leaving said track rail, said guard rail comprising a body portion, and a plurality of arms extending from one side of said body portion and adapted to extend under said track rail, said arms having brackets thereon projecting from either side thereof and extending upwardly so as to engage the flange of said track rail on the opposite side of said track rail from which said body portion is located, said body portion having enlargements connected thereto and co-extensive with said arms, said enlargements overhanging the opposite flange of said track rail from which said brackets engage, whereby said guard rail is secured to said track rail, said body portion and said brackets having apertures therein, whereby said guard rail may be spiked to the ties supporting said track rail.

4. A guard rail adapted to extend alongside of a track rail to prevent the wheels of a car from leaving said track rail, said guard rail comprising a body portion, and a plurality of arms extending from one side of said body portion and adapted to extend under said track rail, said arms having brackets thereon projecting from either side thereof and extending upwardly so as to engage the flange of said track rail on the opposite side of said track rail from which said body portion is located, said body portion having enlargements connected thereto and co-extensive with said arms, said enlargements overhanging the opposite flange of said track rail from which said brackets engage, whereby said guard rail is secured to said track rail, said arms having ribs extending downwardly therefrom and adapted to engage in the roadbed supporting said track rail, to prevent longitudinal movement of said guard rail.

5. A guard rail adapted to coöperate with a track rail, comprising a body portion having the corners of the side thereof facing said track rail cut-away to permit the entrance of the wheels of a car between said track rail and said guard rail, foot guards located beneath these cut-away portions and adapted to prevent the entrapping of a foot between said guard rail and said track rail, said foot guards extending into the channel formed between the head and flange of said track rail, and also coming in close juxtaposition to said head, arms projecting from one side of said body portion, and brackets secured to the free ends of said arms and projecting from each side thereof, said brackets extending above the upper face of said arms so as to form a projection adapted to engage the flange on said track rail, said brackets having apertures therein, whereby they may be spiked to the ties supporting said track rail, said arms having ribs extending downwardly from their under sides, whereby the guard rail is prevented from longitudinal movement relative to said track rail.

1,024,953. COMBINED TIE AND RAIL-FASTENER. EDWARD STACK, Pittsburgh, Pa. Filed Aug. 18, 1911. Serial No. 644,761. (Cl. 238—4.)



In combination, a tie provided near each end with a longitudinally extending pocket 5 and a pair of vertically disposed openings communicating with said pocket inwardly of the ends thereof, an anchoring plate mounted in and conforming to the contour of said pocket and provided near each end with a longitudinally extending opening registering with a vertical opening, said plate having its lower face provided with a rectangular pocket, the upper wall of said recess at each end being provided with a transverse notch intersecting a rectangular opening and extending in a plane central of the length of the said opening, said notches providing seats, T-bolts extending up through said registering openings and having their heads engaging said seat to prevent withdrawal of the bolts, rail fastening devices mounted upon said tie inclosing said vertical openings and extended to engage the base of a rail for maintaining it in position, said bolts extending through said fasteners, and means mounted upon the projecting ends of the bolts for securing the fasteners in position.

1,024,954. CUSPIDOR. ANTONY SZABADOS, New Michel, British Columbia, Canada, assignor of one-sixth to Helena Mueller, one-sixth to Mike Unoka, and one-sixth to George Hekeli, New Michel, Canada. Filed Dec. 29, 1911. Serial No. 668,557. (Cl. 4—40.)

1. A cuspidor comprising a receptacle, a shell supported by said receptacle, an inclined annular partition arranged in said shell and having an opening formed therein, radially disposed vertical partitions arranged upon said annular partition and providing a plurality of compartments, a platform arranged in each compartment, means arranged in said shell and adapted when released to elevate said platforms, an annular hollow rim carried by said shell and adapted to supply water to said platforms for cleansing said platforms.

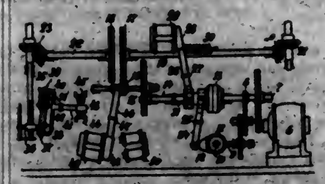


2. A cuspidor comprising a receptacle, a shell supported by said receptacle, an inclined annular partition arranged in said shell and having an opening formed therein, radially disposed vertical partitions arranged upon said annular partition and providing a plurality of compartments, a platform arranged in each compartment, means arranged in said shell and adpted when released to elevate said platforms, an annular hollow rim carried by said shell and adapted to supply water to said platforms for cleansing said platforms, and valves arranged in said rim and adapted to control the supply of water to said platforms.

3. A cuspidor comprising a receptacle, a shell supported by said receptacle, an inclined annular partition arranged in said shell and having an opening formed therein, radially disposed vertical partitions arranged upon said annular partition and providing a plurality of compartments, a platform arranged in each compartment, means arranged in said shell and adapted when released to elevate said platforms, an annular hollow rim carried by said shell and adapted to supply water to said platforms for cleansing said platforms, valves arranged in said rim and adapted to control the supply of water to said platforms, and means including keepers and locking members adapted to normally retain said platforms upon said annular partition.

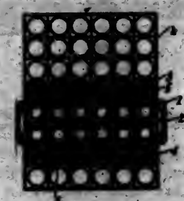
4. A cuspidor comprising a receptacle, a shell supported by said receptacle, an inclined annular partition arranged in said shell and having an opening formed therein, radially disposed vertical partitions arranged upon said annular partition and providing a plurality of compartments, a platform arranged in each compartment, means arranged in said shell and adapted when released to elevate said platforms, an annular hollow rim carried by said shell and adapted to supply water to said platforms for cleansing said platforms, valves arranged in said rim and adapted to control the supply of water to said platforms, means including keepers and locking members adapted to normally retain said platforms upon said annular partition, and means including a spring actuated valve arranged in said receptacle and adapted to close the opening of said partition.

1,024,955. PICTURE-EXHIBITING APPARATUS. CARL LAURITZ THOMSEN, Copenhagen, Denmark. Filed May 18, 1911. Serial No. 627,905. (Cl. 40—53.)



The combination of a pair of rollers over which a web travels, shafts having connection with respective ones of said rollers, and each provided with a gear wheel, a shaft in two parts, a clutch connecting said shaft parts, means to constantly drive one of said shaft parts, a gear wheel shiftable to engage either of said first named gear wheels and having connection with the other shaft part, means to shift said last named gear wheel at the end of the travel of the web in one direction, and means to intermittently engage and disengage said clutch.

1,024,956. LIFTING-FRAME FOR STORAGE VESSELS. JOHN P. VOELKER, New York, N. Y. Filed July 17, 1911. Serial No. 638,910. (Cl. 57—9.)



1. A lifting frame for storage vessels, comprising a body having a number of perforations therethrough, spring clamping fingers surrounding each of said perforations, to grip the tops of storage vessels to be lifted, means adjacent said spring fingers to prevent the same from being bent or broken, a leaf movable with respect to said base, and a plurality of knobs or projections carried by said leaf in position to pass through said openings after the storage vessels have been lifted, to engage the tops thereof and release the same from said spring fingers.

2. A lifting frame for storage vessels, comprising a base having a number of perforations therethrough, spring fingers surrounding each of said perforations, to engage the tops of vessels to be lifted, a protecting ring surrounding the clamping fingers adjacent each of said openings, a leaf movable with respect to the base, and knobs or projections carried by said leaf in position to pass through said openings and press down upon the tops of the storage vessels after the same have been lifted, to release the same.

3. A lifting frame for storage vessels, comprising a base having a number of perforations therethrough, spring clamping fingers surrounding each of said perforations, each of said fingers supporting a strip of anti-friction material, the ends of said material passing through slots in said fingers, means adjacent said fingers to protect the same from injury, a leaf movable with respect to said base, and knobs or projections carried by said leaf in position to pass through the openings and press upon the tops of the storage vessels after the same have been lifted, to release the same.

4. A lifting frame for storage vessels, comprising a body, spring means carried by said body in position to grip the sides of storage vessels to be lifted adjacent one end thereof, means adjacent said spring means to protect the same and prevent the first-named means from being bent or broken, and means movable with respect to said base to engage the said storage vessels after they have been lifted, to release the same.

1,024,957. DRESS-WEIGHT TAPE. ADOLPH WEIN, New York, N. Y. Filed Feb. 21, 1911. Serial No. 609,864. (Cl. 2—124.)



As a new article of manufacture, a dress weight tape, consisting of a strip of open mesh fabric, and spaced

weights on the fabric and each having both the warp and weft threads of the fabric embedded therein, the weights being of less diameter than the width of the strip and arranged at the center of width of said strip.

1,024,958. SPOOL AND IMPLEMENT HOLDER. DAVID C. WILLIAMS, Wilkeson, Wash. Filed Feb. 27, 1911, Serial No. 611,102. Renewed Mar. 7, 1912. Serial No. 682,089. (Cl. 223—56.)



1. In a device of the class described, the combination with a back plate provided with parallel brackets adapted to support a spool shaft and having openings where they join said back plate, of a second plate between said brackets parallel to the back plate and in close relation thereto, and puncturable material between said plates to which access may be had through said openings in the brackets.

2. In a device of the class described, the combination with a back plate provided with parallel brackets adapted to support a spool shaft and having openings where they join said back plate, of a second plate between said brackets parallel to the back plate and in close relation thereto, said plate being held in place by projections engaging said openings in the bracket, puncturable material between said plates to receive pins inserted through the openings in said brackets, and a spring finger on said second plate adapted to bear on the back plate over which finger a thimble may be slipped and held by the resiliency of said finger.

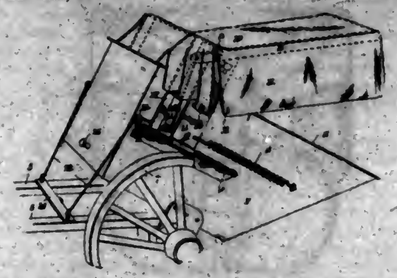
3. In a device of the class described, the combination with a back plate provided with parallel forwardly projecting integral brackets, having recesses to receive the ends of the spool shaft, and a slot in each bracket where it joins the back plate, a second plate between said brackets held in place by projections extending through said slots and folded, a spool shaft fitted to said recesses, and a spring secured in each of said folded projections formed with a hump so disposed as to yieldably retain an end of said shaft in the recesses but permit the withdrawal and insertion of said shaft.

4. In a device of the class described, the combination with a back plate provided with integral parallel forwardly projecting brackets adapted to support a removable spool shaft and having a downwardly extending tongue formed with a thread eye, of a second plate between said brackets parallel to the back plate and in close relation thereto connected to said bracket by lateral projections, and a strip integral with said second plate projecting downwardly therefrom and bearing lightly on said tongue to provide a tension for the spool thread passing through the eye in the tongue.

5. In a device of the class described, the combination with a back plate provided with parallel forwardly projecting brackets adapted to support a spool shaft and having a downwardly extending tongue formed with a thread eye, of a second plate between said brackets parallel to the back plate and in close relation thereto, a strip projecting downwardly from said second plate and bearing lightly on said tongue to provide a tension for the spool thread passing through the eye in the tongue, and a loop formed in said strip to receive a needle case.

[Claim 6 not printed in the Gazette.]

1,024,959. DUMPING-CART. LESSER WOLF, New York, N. Y., assignor of one-half to Herbert Blankfort, Brooklyn, N. Y. Filed May 2, 1911. Serial No. 624,536. (Cl. 21—20.)



1. In a dumping cart a member, a body pivoted relatively thereto, a guideway on the body, a support having a guide for traveling on the guideway, a hood mounted on the support, and connecting means between the support and the member for holding the support and preventing its movement with the body when the body is rotated.

2. In a dumping cart a member, a body pivoted relatively thereto, guideways at the sides of the body, supports having guides for traveling on the guideways, a hood mounted on the supports, connecting means between the supports and the member for holding the supports and preventing their movement with the body when the body it rotated, and springs connecting the supports with the body.

3. In a dumping cart a member, a body pivoted relatively thereto, a guidway on the body, a support having a guide for traveling on the guidway, an arm pivoted to the support, a hood mounted on the arm, and connecting means between the arm and the member for moving the arm relatively to the support, and the support relatively to the body, when the body it rotated.

4. In a dumping cart a member, a body pivoted relatively thereto, a guideway on the body, a support having a guide for traveling on the guideway, an arm pivoted to the support, a hood mounted on the arm, a pulley secured to the support, and a cord secured at one terminal to the arm, the cord being disposed around the pulley with its other terminal secured to the said member.

5. In a dumping cart a member, a body pivoted relatively thereto, guideways on the sides of the body, supports having guides disposed for traveling on the guideways, arms pivoted to the supports, a hood mounted on the arms, pulleys on the supports, cords having one set of terminals secured to the arms, the cords being disposed around the pulleys, with their other set of terminals secured to the member and springs for holding the supports yieldingly rearward.

[Claims 6 to 8 not printed in the Gazette.]

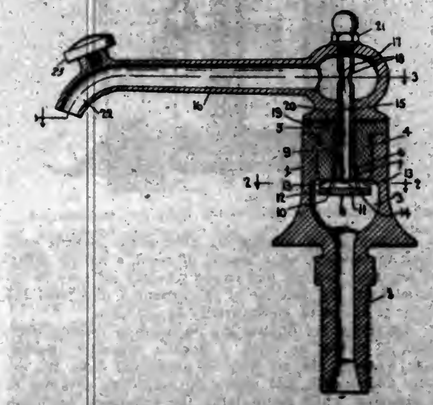
1,024,960. SPIRAL TOOL-DRIVER. MAX WOLIN, New York, N. Y. Filed July 27, 1911. Serial No. 640,830. (Cl. 145—54.)



1. In a spiral screw-driver, a hollow holding box, a rod having right and left-handed spiral grooves therein passing through said box, a longitudinally-extending spring mounted in said box, a key carried by each end of said spring, each key adapted to engage within one of said spiral grooves, a keeper slidably mounted on said box, engaging said spring to maintain one of said keys out of engagement with its groove in the rod.

2. In a spiral screw-driver, a rod having a right and left-handed undercut groove arranged spirally thereon, a box surrounding said rod, an engaging key carried by said box, the rod-engaging surface of said key having two grooves therein extending parallel to each other and diametrically across the length of the key, one groove extending beneath the other to form an undercut, said undercut adapted to engage the undercut of the groove in the rod.

1,024,961. FAUCET. CHARLES WRIGHT, Youngswood, Pa. Filed May 11, 1911. Serial No. 626,514. (Cl. 137—7.)

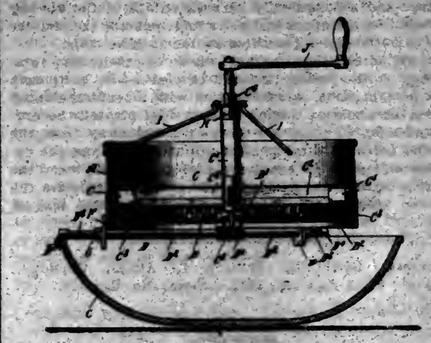


1. In a faucet comprising a standard having a suitable water supply connection and a reservoir in communication therewith, a cap removably secured to and closing the upper end of said standard and having apertures formed in its lower reduced end for the free passage of the water therethrough, a lining of fiber located within said cap, a valve plug freely passing through said lining and having a lower conical end for frictional engagement with the correspondingly shaped portion of the said lining, said valve plug having a longitudinal passage formed therein and communicating with apertures located in the bottom of the plug, a discharge pipe fixedly mounted upon the upper end of the stem of the valve plug and communicating with openings formed in said stem, and a binding nut screwed into the upper open end of the stem of the plug to adjustably hold the parts together, whereby the discharge pipe operates as a lever for turning the valve plug for regulating the supply of water.

2. In a faucet the combination with a valve standard forming a reservoir, of a cap removably secured within the upper open end of the standard, a fiber lining confined within the cap, a valve plug having a lower conical end, said plug having a passage therethrough and open at the top and openings communicating with said passage and registering with apertures formed in the lower reduced end of the cap, a discharge pipe fixedly mounted upon the projecting upper end of the valve plug and communicating with oppositely positioned openings formed in the plug, a nut screwed into the upper open end of the plug and in binding contact with the connected end of the discharge pipe, and a gasket seated in the cap and surrounding the valve plug against which the connecting end of the supply pipe is adapted to bear.

1,024,962. FLOUR-SIFTER. JOHN H. ERBURN, Boundbrook, N. J. Filed Dec. 26, 1911. Serial No. 667,756. (Cl. 83—60.)

1. A flour sifter, comprising a support having a central step and arms radiating therefrom, a sifter body adapted to rest on the said arms and having a bottom sieve and a central bearing underneath the sieve, the bearing resting on the said step, adjustable clamping lugs on the said arms and engaging the said sifter body, and a revoluble agitating member journaled on the said sifter body and operating over the said bottom sieve.



2. A flour sifter, comprising a support having a central step and arms radiating therefrom, a sifter body adapted to rest on the said arms and having a bottom sieve and a central bearing underneath the sieve, the bearing resting on the said step, adjustable clamping lugs on the said arms and extending above and below the same, the upper portions of the lugs being adapted to engage the said sifter body and the lower portions of the said lugs being adapted to engage the rim of a bowl, and a revoluble agitating member journaled on the said sifter body and operating over the said bottom sieve.

3. A flour sifter, comprising a support having a central step and arms radiating therefrom, a sifter body adapted to rest on the said arms and having a bottom sieve and a central bearing underneath the sieve, the bearing resting on the said step, adjustable clamping lugs on the said arms and extending above and below the same, the upper portions of the lugs being adapted to engage the said sifter body and the lower portions of the said lugs being adapted to engage the rim of a bowl, and a revoluble agitating member journaled on the said sifter body and operating over the said bottom sieve.

4. A flour sifter, comprising a support having a central step and arms radiating therefrom, a sifter body adapted to rest on the said arms and having a bottom sieve and a central bearing underneath the sieve, the bearing resting on the said step, adjustable clamping lugs on the said arms and extending above and below the same, the upper portions of the lugs being adapted to engage the said sifter body and the lower portions of the said lugs being adapted to engage the rim of a bowl, a revoluble agitating member journaled on the said sifter body and operating over the said bottom sieve, and extension members adjustably held on the arms of the said support, each extension member having a fixed lug for engagement with the rim of a bowl.

1,024,963. ALTERNATING-CURRENT REGULATOR. THOMAS EDGAR ADAMS, Cleveland, Ohio, assignor to The Adams-Bagnall Electric Company, Cleveland, Ohio. Filed Jan. 19, 1906. Serial No. 296,856. (Cl. 171—242.)



1. An alternating current regulator comprising stationary cores having exposed poles, stationary coils encircling the cores, in combination with a counterbalanced laminated armature pivotally mounted to be moved to-

ward and away from the stationary poles by varying magnetic attraction and the opposing action of the counterbalance and automatically vary the width of the air gap between the armature and poles and regulate the counter electro-motive-force generated in the magnet coils.

2. An alternating current regulator comprising stationary cores having exposed beveled ends, stationary coils on said cores, in combination with a counterbalanced laminated armature having beveled sides pivotally mounted and adapted to be moved toward and away from the beveled poles by varying magnetic attraction and the opposing action of the counterbalance and thereby vary the air gap between the armature and poles and regulate the counter electro-motive-force generated in the magnet coils.

1,024,964. IGNITER. HORACE L. ALLEN, Okmulgee, Okla. Filed July 28, 1911. Serial No. 641,029. (Cl. 161—1.)

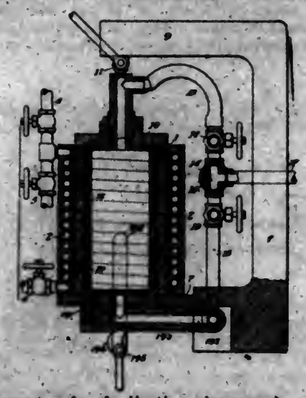


1. An explosive igniter for shooting gas or oil wells, the same comprising an elongated casing adapted to be introduced into the well, a detachable closure at one end of the casing, a battery arranged in said casing approximate to its closed end, a time controlled device adjacent to the detachable cover and between said cover and the battery and substantially in alinement with the latter, the time controlled device comprising a movable contact and a stationary contact insulated from said device, circuit wiring connecting the battery with the body of the time controlled device and with the insulated stationary contact and leading to a point exterior to the casing, and a member in the casing supporting said time controlled device.

2. An igniter for exploding gas or oil wells comprising an elongated casing adapted to be introduced into the oil well, said casing being closed at one end and having a detachable cover at its opposite end, a battery arranged in the casing adjacent to its closed end, a partition arranged in the casing and holding said battery from displacement, and a time controlled device supported by said partition and including a body of conductive substance, a stationary contact insulated from said body, and a movable contact electrically connected with the body for cooperation with the stationary contact, and circuit wires, one of which is connected to the insulated contact aforesaid and to the battery and extending through the partition to a point of connection with the battery, the other circuit wire being electrically connected to the body of the time controlled device and to the battery.

1,024,965. APPARATUS FOR DUPLICATING SOUND-RECORDS. JONAS W. AYLSWORTH, East Orange, N. J., assignor, by mesne assignments, to Thomas A. Edison Incorporated, West Orange, N. J., a Corporation of New Jersey. Original application filed Dec. 6, 1905, Serial No. 290,540. Divided and this application filed Sept. 11, 1907. Serial No. 392,250. (Cl. 181—16.)

1. Apparatus for duplicating phonograph records comprising in combination a matrix or mold, means for closing the ends thereof, a flexible expander therein, and means whereby air may be exhausted from the interior of the matrix or mold, substantially as set forth.



2. Apparatus for duplicating phonograph records comprising in combination a matrix or mold, a hollow inflatable expander therein, and means whereby air may be exhausted from the interior of the expander and from the interior of the mold, substantially as set forth.

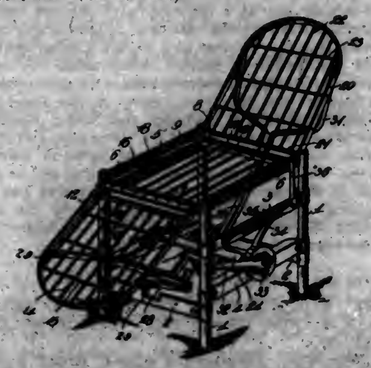
3. Apparatus for duplicating phonograph records, comprising a matrix or mold, a flexible expander therein, means whereby the air may be exhausted from the expander and matrix, and means for admitting pressure to the expander while maintaining the exhausted condition within the matrix, substantially as set forth.

4. Apparatus for duplicating phonograph records, comprising a matrix or mold, means for closing the ends thereof, means for heating and cooling the same, a flexible expander within the matrix or mold, and means whereby the air may be exhausted from the matrix or mold, substantially as set forth.

5. Apparatus for duplicating phonograph records, comprising a matrix or mold, a heating and cooling pipe surrounding the same and embedded in a fusible metal jacket, and a flexible expander within the matrix or mold, substantially as set forth.

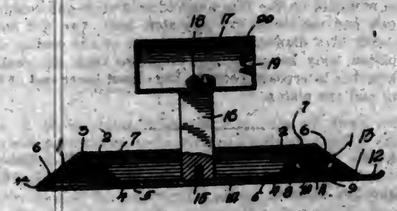
[Claims 6 to 20 not printed in the Gazette.]

1,024,966. OPERATING-TABLE. JAMES M. BABER, Henrietta, N. C., assignor of one-half to R. F. Kistler, Henrietta, N. C. Filed Oct. 12, 1911. Serial No. 654,379. (Cl. 45—50.)



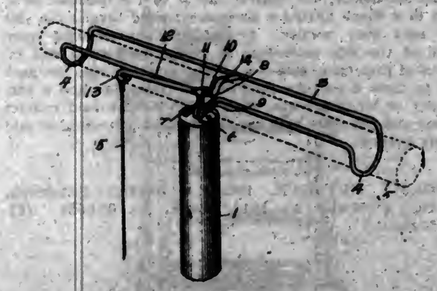
The combination of a main supporting frame of a chair and operating table having longitudinal seat supporting bars of angle iron with vertical and horizontal members, longitudinal bars below the seat support, a seat frame pivoted at its rear end to the rear ends of the vertical members of the seat support, a yielding connection between the horizontal member and the seat frame intermediate their ends, a leg frame pivotally connected to the front end of the seat frame, a cross shaft journaled in bearings on the lower longitudinal bars, and pivotally mounted links connecting the cross shaft and the leg frame.

1,024,967. ELECTRIC RAT-TRAP. JOHN BALINT, Cincinnati, Ohio. Filed Dec. 29, 1911. Serial No. 668,512. (Cl. 43—84.)



An electric rat trap comprising a rectangular frame of insulating material and of inverted V-shape in cross section at any point throughout its length, said frame at the apex thereof provided with a rectangular rib extending entirely around the same, said frame further having the bottom thereof at each side formed with a flange, metallic plates mounted upon the outer face of said frame at both sides thereof and abutting against said rib and said flanges, binding posts carried by said plates and extending through said frame into the interior thereof, leading-in-wires attached to said binding posts, a center plate of insulating material secured to the inwardly extending flanges of said frame, a pedestal attached to said center plate, and a bait holder mounted upon said pedestal.

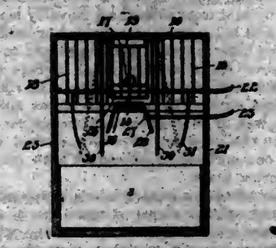
1,024,968. CURTAIN-POLE-REMOVING DEVICE. ALFON W. BEGLINGER, Crafton, Pa. Filed Nov. 10, 1911. Serial No. 659,653. (Cl. 57—110.)



1. A curtain pole removing device comprising the combination with a vertically disposed handle, of an oblong member formed from a single length of round stock, said member having each end thereof bent downwardly to provide a U-shaped support, said support having each of its ends bent at right angles with respect to said member and rearwardly therefrom, said ends of said stock further bent downwardly and engaging into the top of the handle, a pair of vertically disposed apertured ears arranged at the top of said handle and each provided with a laterally extending flange fixed to the handle, each of said ears furthermore provided with a clamping portion, said clamping portions engaging the right angular bends of said stock for supporting the same, a lever pivotally mounted between said ears and having one arm projecting over said member for maintaining the curtain pole therein, and means for maintaining said lever in closed position.

2. A curtain pole removing device comprising the combination with a vertically disposed handle, of an oblong member formed from a single length of round stock, said member having each end thereof bent downwardly to provide a U-shaped support, said support having each of its ends bent at right angles with respect to said member and rearwardly therefrom, said ends of said stock further bent downwardly and engaging into the top of the handle, a pair of vertically disposed apertured ears arranged at the top of said handle and each provided with a laterally extending flange fixed to the handle, each of said ears furthermore provided with a clamping portion, said clamping portions engaging the right angular bends of said stock for supporting the same, a lever pivotally mounted between said ears and having one arm projecting over said member for maintaining the curtain pole therein, a spring attached to said arm and to said handle for maintaining the arm in closed position, and a cable attached to the other arm of said lever and constituting means for shifting the first mentioned arm to open position.

1,024,969. ELECTRIC TRAP. CHARLES A. BOWEN, Riverview, Pa., assignor of one-half to Fred Bickerton, Elrama, Pa. Filed Jan. 24, 1912. Serial No. 673,201. (Cl. 43—84.)



1. In an electric rat trap, the combination with a suitable source of electrical energy, of a box-like structure having the front wall thereof provided with an opening, a platform arranged within said structure at the rear wall thereof, a bait holder arranged upon said platform, a metallic gate suspended from the top of said structure in front of said bait holder, an insulated wire extending into said structure across said platform and in circuit with said source of electrical energy, said wire having a portion of the insulation thereof stripped whereby said gate can contact with said wire, a bar connected to said platform and the front wall of said structure adjacent to the opening thereof, and a metallic contact plate arranged upon said bar and connected to the opposite terminal of said source of electrical energy.

2. In an electric rat trap, the combination with a suitable source of electrical energy, of a box-like structure having the front wall thereof provided with an opening, a platform arranged within said structure at the rear wall thereof, a bait holder arranged upon said platform, a metallic gate suspended from the top of said structure in front of said bait holder, an insulated wire extending into said structure across said platform and in circuit with said source of electrical energy, said wire having a portion of the insulation thereof stripped whereby said gate can contact with said wire, a bar connected to said platform and the front wall of said structure adjacent to the opening thereof, a metallic contact plate arranged upon said bar and connected to the opposite terminal of said source of electrical energy, branch wires carried by said wire, and metallic side plates suspended within said structure adjacent to said contact plate and adapted to be swung by a rat's body to engage said branch wires and complete an electric circuit between said wires and said contact plate through the rat's body.

1,024,970. TROLLEY-WHEEL. WILLIAM M. BOYER, Johnstown, Pa. Filed Dec. 4, 1911. Serial No. 663,695. (Cl. 191—39.)

1. In a trolley wheel, a hub, an annular web carried thereby, an annular rim supported by said web and having

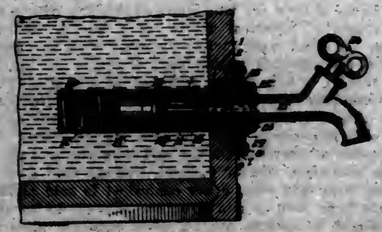
a trolley wire base, side plates movably mounted upon the ends of said hub, flanges carried by said side plates and overlapping said rim to coöperate with the latter in providing a groove for a trolley wire, inwardly projecting pins carried by said side plates and extending through the web of said wheel means extending through said pins to limit the outward movement of said side plates, and means engaging said side plates for retaining the rim flanges thereof normally upon said rim.



2. In a trolley wheel, a hub, a web carried thereby, a rim carried by said web, side plates movably mounted upon the ends of said hub, rim flanges carried by said side plates and extending onto said first mentioned rim to provide an annular groove for a trolley wire, springs adapted to yieldably hold said rim flanges upon said rim, inwardly projecting pins carried by said side plates and extending through the web of said wheel and means carried by the pins to limit the outward movement of said side plates, the pins of one plate being staggered with respect to the pins of the other plate.

3. A trolley wheel comprising a hub, a web carried thereby and formed with a series of openings, a rim carried by the web and of greater width than the width of the web, side plates movably mounted upon the ends of the hub and provided with inwardly extending flanges overlapping said rim to provide an annular groove for the trolley wire, coiled springs seated in the openings of said web, means whereby the ends of said springs are connected to said side plates for yieldingly holding said rim flanges upon said rim, inwardly projecting pins carried by said side plates and extending through said web, and means carried by the said pins for limiting the outward movement of said side plates.

1,024,971. BARREL-TAP. EVERETT WESLEY BEAGUE, Clarington, Ohio. Filed June 28, 1911. Serial No. 634,941. (Cl. 137—27.)



1. In a barrel tap, a cylindrical valve body provided with a flanged outer end and an exteriorly screw-threaded reduced open inner end, a cylindrical casing connected with said threaded inner end of the valve body and provided with openings near the connected end thereof and closed at its inner end, a spider mounted in the reduced inner end of the valve body, a stem mounted for longitudinal movement in said spider and provided with a threaded inner end, a piston mounted on the threaded end of said stem and comprising end washers and a body, said end washers being of a diameter to fit the bore of the casing and the body being of less diameter than the bore of said casing, and a spring interposed between the piston and the closed inner end of the casing.

2. In a barrel tap, a cylindrical valve body, exteriorly and interiorly threaded at its outer end, the interiorly threaded outer end of the valve bore adapted to receive a spigot therein, the exteriorly threaded outer end of the valve body adapted to secure the same within a bung opening, said valve body having an exteriorly threaded open inner end, a casing connected to said reduced inner end of the valve body and provided with openings near its connected end and closed at its inner end, a spider in the reduced inner end of the valve body, a stem mounted to move longitudinally in said spider, a piston mounted on the inner end of said stem and comprising two end members, and a piston body, the end members being of a diameter to fit the bore of the casing, and the piston body being of less diameter than the casing, and a spring interposed between the closed inner end of the casing and the piston.

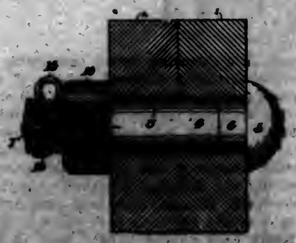
1,024,972. BURGLAR-ALARM ATTACHMENT. GEORGE A. BRAWLEY, New York, N. Y. Filed May 17, 1911. Serial No. 627,667. (Cl. 177—66.)



1. As an article of manufacture, a burglar alarm attachment having a body portion provided with a resilient tongue; a binding post electrically connected with said body portion; a terminal contact mounted upon said body portion and insulated therefrom; a binding post electrically connected with said terminal contact; and a resilient member fixedly connected with said body portion adapted to normally rest upon said terminal contact and to be moved therefrom when said attachment is forced between adjacent members.

2. As an article of manufacture, a burglar alarm attachment having a body portion provided with three parallel extensions, the central one of said extensions being set to a shape having a portion extended beyond the side of said body portion; a contact plate mounted upon one of the side extensions of said body portion and insulated therefrom, said plate being extended into the path of to form a rest for said central extension; and a plurality of binding posts, one connected with said contact plate and the other with the opposite side extension of said body portion.

1,024,973. NUT-LOCK. HENRY M. BURRELL, Pittsburgh, Pa. Filed Oct. 11, 1911. Serial No. 654,034. (Cl. 151—31.)



In combination a bolt, provided with a slit extending through the threaded portion and into the smooth portion thereof, said bolt further having in proximity to the outer terminus of its threaded portion a transverse opening intersecting said slit, a nut mounted upon the threaded portion of the bolt, an apertured wedge mounted in the outer portion of the slit of the bolt for expanding the end of the latter and binding the threads of the bolt against the threads of the nut, and a headed malleable pin extending through said opening and through said wedge and bent to frictionally engage the nut, thereby binding the pin in position, said pin constituting means to prevent the slipping out of the wedge.

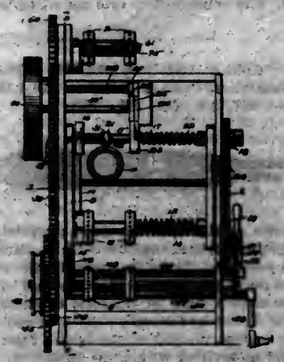
1,024,974. ROPE-CLAMP. GEORGE W. CAMERON, Hondo, Tex. Original application filed June 10, 1911, Serial No. 632,362. Divided and this application filed Aug. 14, 1911. Serial No. 643,977. (Cl. 24—135.)



1. A cable clamp comprising a pair of disks having grooved peripheries to receive the ends of a cable, attaching flanges extending laterally from the disks, stems carried by the flanges on opposite sides of said pair of disks, plates slidably mounted on the stems, between which plates the disks are located, shoes carried by the plates opposite the peripheries of the disks, one of the shoes being opposite the periphery of one of the disks and the other shoe being opposite the periphery of the other disk and means for adjusting the plates to engage the shoes with the ends of the cable and clamp the same to the disks.

2. A cable clamp comprising a pair of disks having grooved peripheries to receive the ends of a cable, attaching flanges extending from the disks, stems carried by the flanges, and shoes adjustably mounted on the stems for clamping the ends of the cables to the disks, said shoes being located, respectively, above and below the disks, and one of the shoes being opposite the periphery of one of the disks and the other shoe being opposite the periphery of the other disk.

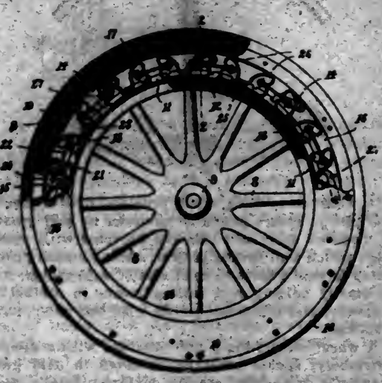
1,024,975. MOVING-PICTURE MACHINE. FRANK A. COLE, Patton, Pa. Filed Feb. 1, 1910. Serial No. 541,831. (Cl. 88—17.)



1. The combination with a moving picture machine arranged with means for passing a film therethrough, and causing the movement of the film to be intermittent, of a shutter operating cam, a sleeve for operating said cam, a spring for rotating said sleeve, means for connecting said spring with the means for moving said film, a shutter, means operated by said cam associated with said shutter for opening and closing said shutter, and means for causing the intermittent movement of said sleeve in timed relationship to the intermittent movement of the film for causing the shutter to close during the movement of the film.

2. The combination with a moving picture machine arranged with means for passing a film therethrough, of a shutter designed to close during the movement of said film, an arm for opening and closing said shutter, a cam for moving said arm, a sleeve for rotating said cam, a spring connected at one end to said sleeve, a gear wheel connected with the end of said spring not connected to said sleeve, means for transmitting power to said gear wheel from the means operating said film, and means for causing an intermittent movement of said sleeve in timed relationship to the intermittent movement of the film, whereby the shutter is closed while the film is moving.

1,024,976. RESILIENT TIRE FOR VEHICLE-WHEELS. ALFRED A. CURRY, Bridgeport, Conn. Filed June 13, 1911. Serial No. 632,832. (Cl. 152—36.)



1. In a resilient tire of the class described, the combination with a suitable hollow tire, of a detachable chain of resilient springs detachably placed into said tire, and comprising a series of alternately bowed and straight sheet metal pieces pivotally connected together, and separable U shaped sheet metal springs arranged in between the bowed pieces to strengthen the same.

2. In a resilient tire of the class described, the combination with a suitable hollow tire, of a detachable chain of resilient springs detachably placed into said tire and comprising a series of pairs of oppositely bowed sheet metal spring pieces with their end portions returned and disposed inwardly toward each other, and straight sheet metal spring pieces pivotally connected to such end portions of the bowed pieces.

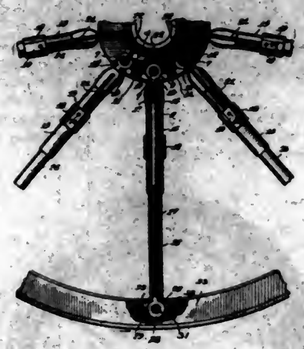
3. In a resilient tire of the class described the combination with a suitable hollow tire, of a detachable endless chain of resilient springs adapted to be inserted into said tire and comprising a series of pairs of oppositely bowed sheet metal spring pieces, straight sheet metal springs pivotally connected intermediate of the end portions of the spring loops, and detachable U shaped sheet metal springs arranged within the loops and between the end of the straight springs.

4. In a resilient tire of the class described, the combination with a suitable hollow tire, of a detachable endless chain of resilient springs adapted to be inserted into said tire, and comprising a series of pairs of bowed sheet metal spring pieces having their ends returned and disposed parallel with each other, straight sheet metal spring pieces having their ends disposed between and pivotally connected intermediate of said pairs of returned ends to form a pivotal and flexible connection.

1,024,977. SPRING-WHEEL. ELVIN EAST, Sheffield, Ala. Filed Apr. 27, 1911. Serial No. 623,085. (Cl. 152—47.)

1. A wheel comprising a hub having an annular groove and a plurality of sockets formed in the inner wall of said groove, spokes pivotally mounted within said sockets, a plate mounted upon said hub and provided with a plurality of openings through which said spokes pass, a sealing member positioned upon each side of each of said spokes, springs positioned between said sealing members to cen-

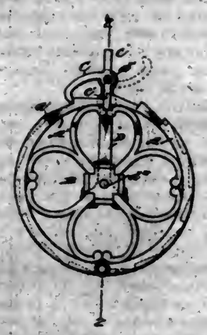
mally hold said sealing members in a position to close said openings through which said spokes pass, and a rim secured to the outer ends of said spokes.



2. A wheel comprising a hub provided with a groove in its periphery, spokes pivotally mounted in said groove, a plate mounted upon said hub and provided with openings through which said spokes project, sealing means pivotally mounted in said groove to each side of said spokes, means for normally holding said sealing means in contact with said spokes, and a rim connected with the outer ends of said spokes.

3. A wheel comprising a hub provided with a groove in its periphery, spokes pivotally mounted in said groove, substantially triangular sealing devices pivotally mounted in said groove to each side of each spoke, elastic means positioned between said sealing devices and normally holding said sealing devices in contact with said spokes and a band surrounding the periphery of said hub and provided with openings through which said spokes pass.

1,024,978. CLOTHES-LINE REEL. FREDERICK EICHE, Lincoln, Nebr. Filed Dec. 5, 1911. Serial No. 663,985. (Cl. 242—100.)

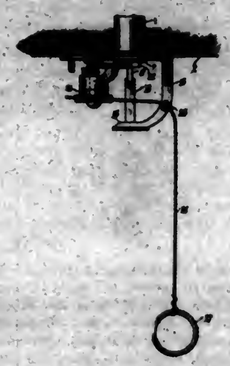


The combination of a rotatable reel having a ratchet rim, with a support comprising a bracket adapted to be secured to a wall and having a lateral spindle, on and off which the reel is adapted to slide, and a pawl pivoted to the bracket and having a transverse base portion comprising alined arms projecting in opposite directions from the pivot of the pawl, said arms being thus adapted for engagement with and disengagement from the ratchet rim, as and for the purpose specified,

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1,024,979. AUTOMATIC SPRINKLER. SIGVALD B. ERICKSON, Providence, R. I. Filed Aug. 22, 1911. Serial No. 645,368. (Cl. 169—5.)

1. In an automatic sprinkler, a base, an outlet in said base, a cap for closing the outlet, a supporting post for said cap mounted on the base adjacent to the outlet, and means to move said cap about and along its supporting post to shut off the flow of water.



2. In an automatic sprinkler, a base, an outlet in said base, a cap for closing the outlet, a supporting post therefor mounted on the base adjacent to the outlet, a spring to hold said cap away from said outlet, a sliding collar mounted on said post and carrying said cap, a cam on said post for raising said collar, and a guide stop for said collar.

3. In an automatic sprinkler, a base, an outlet in said base, a cap for closing the outlet, a collar carrying said cap, a supporting post for said collar mounted on the base adjacent the outlet, a spring to hold said cap away from said outlet, and a revolving cam for moving said collar along said post.

4. In an automatic sprinkler, a base, an outlet in said base, a cap for closing the outlet, a supporting post therefor mounted on the base adjacent to the outlet, a spring to hold said cap away from said outlet, means for moving said cap along said post to close said outlet, and a depending cord or wire connected to said operating means.

1,024,980. CIGAR AND CIGARETTE HOLDER. JOSÉ VILA FERNANDEZ, Camaguey, Cuba. Filed May 17, 1911. Serial No. 627,711. (Cl. 131—10.)



1. A device of the class described comprising a mouth piece, a holding portion, together with a chamber between the mouth piece and the holding portion, the said chamber adapted to contain a suitable filter, and an operating rod adapted to expel a cigar or cigarette extending longitudinally of the device and having a hook at one end thereof adapted to engage the end of the mouth piece whereby it may be held in position within the device.

2. In a device of the class described a mouth piece, a tobacco holding portion, a chamber between the mouth piece and the tobacco holding portion containing a suitable filter, together with an operating rod adapted to expel a cigar or cigarette extending longitudinally of the said device and having a hook at one end thereof adapted to engage the outer end of the mouth piece in order to hold the rod in inoperative position, there being resilient means within the device for moving the said operating rod to eject tobacco from the holding portion when the aforesaid hook is released.

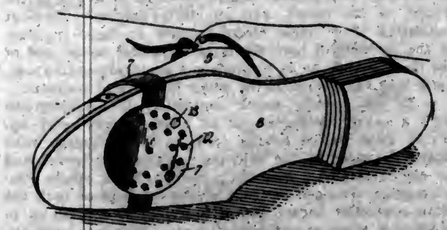
3. A device of the class described comprising a mouth piece, a chamber between the mouth piece and the holding portion containing a filter, an operating rod adapted to expel a cigar or cigarette extending longitudinally of the said device, the outer end of the rod being provided with means for engagement with the inner portion of the said tobacco, resilient means whereby the said operating device is actuated, one end of the rod being provided with a hook whereby it may engage the end of the mouth piece and be held in inoperative position, release of the hook permitting the resilient means to actuate the rod and eject the tobacco from the holding portion.

4. A device of the class described comprising a mouth piece, a tobacco holding portion, a chamber between the mouth piece and the holding portion and containing a filter, an operating rod adapted to expel a cigar or cigarette extending longitudinally of the device, a spring in engagement with the said rod and means at one end of the rod for engagement with the end of the mouth piece whereby the rod may be held in inoperative position, release of the said means permitting the spring to actuate the rod to eject the tobacco from the holding portion.

5. In a device of the class described, a mouth piece, a tobacco holding portion, an operating rod extending through the said device and having means comprising a U-shaped member at one end thereof having a portion adapted to engage the outer end of the mouth piece, together with resilient means surrounding the said operating rod and in engagement therewith whereby when the said U-shaped member is released, the said spring will forcibly eject the tobacco from the said holding portion.

[Claims 6 to 12 not printed in the Gazette.]

1,024,981. ANTISLIPPING DEVICE. WILLIAM FINDLAY, New York, N. Y. Filed Aug. 4, 1911. Serial No. 642,329. (Cl. 36—62.)



1. As an article of manufacture, an anti-slipping device comprising a pair of plates of sheet metal, each provided with teeth, said plates being so located relatively to each other that said teeth carried by one plate extend in a direction opposite to that of the teeth carried by the other plate, and a strap extending between said plates for supporting the same upon a wearer's foot.

2. A device of the character described, comprising a pair of plates of sheet metal, each plate being provided with teeth formed integrally with it, the teeth of one plate extending in a direction opposite to that of the teeth of the other plate, a plurality of rivets extending through both plates for holding them together, said rivets being spaced apart, and a strap extending between said plates for supporting the same upon a wearer's foot.

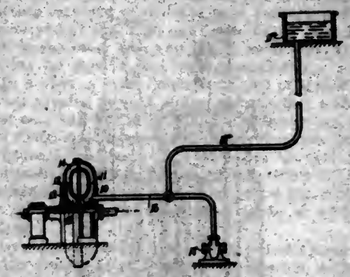
3. As an article of manufacture, a pair of plates of sheet metal, each plate being provided with teeth integral with it, the teeth of one plate extending in a direction opposite to that of the teeth of the other plate, and a plurality of fastening members connecting said plates together, said plates being bent slightly apart so as to permit the passage of a strap between said plates.

4. A device of the character described, comprising a reversible anti-slipping member, and a retaining strap adapted to secure said anti-slipping member in position with either face uppermost.

5. A device of the character described, comprising a pair of duplicate anti-friction plates, a projection formed on each plate, means for securing said plates together so that said projections will extend in opposite directions, and a retaining strap adapted to secure said plates in position with either plate uppermost.

[Claim 6 not printed in the Gazette.]

1,024,982. POWER-TRANSMISSION MECHANISM. HERMANN FÖTTINGER, Zoppot, near Danzig, Germany. Filed July 21, 1910. Serial No. 573,455. (Cl. 188—8.)



1. An apparatus for transmitting or transforming power, having a turbine to transmit energy to a fluid, and a turbine capable of receiving power from an energised fluid, the two turbines having passages arranged with respect to each other in such a manner that they form a curved circuit in which said fluid circulates, whereby the rotation of said second turbine is secured solely through the movement of the fluid, and means for maintaining said fluid under pressure in said passages by an extraneous source.

2. The combination with a casing containing a confined volume of liquid, of a shaft rotatably mounted therein, a centrifugal pump impeller secured to said shaft, a turbine wheel located in said casing, said impeller being adapted to direct liquid to said turbine wheel, whereby the turbine is actuated solely by the movement of the liquid, and a pump communicating with said casing for the purpose of maintaining the same under pressure and returning escaping working fluid thereto.

3. In combination, a casing, two members arranged in said casing, each having radial passages, the outlets from the passages of one of said members being constructed to direct a liquid against the other member, and extraneous means for maintaining the fluid in said casing under pressure.

4. An apparatus for transmitting or transforming power, having a turbine to transmit energy to a fluid, a turbine capable of receiving power from the energised fluid, means for controlling the flow of the fluid, whereby the second-mentioned turbine is rotated solely by the action of the fluid delivered from the first-mentioned turbine, and means for maintaining said fluid under pressure by an extraneous source.

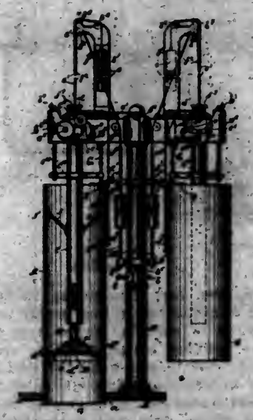
1,024,983. DEVICE FOR SEVERING GLASS CYLINDERS. ROBERT L. FRINK, Cleveland, Ohio. Filed June 20, 1907. Serial No. 379,846. (Cl. 49—48.)

1. A device for severing glass cylinders, comprising exteriorly supported cylinder gripping means adapted to engage the interior of the section of cylinder to be severed, a rotatable glass-cutting tool borne by said gripping means within such cylinder and adapted to contact with the latter at a point below said gripping means, and means adapted to rotate said tool.

2. A device for severing glass cylinders, comprising exteriorly supported cylinder gripping means adapted to engage the interior of the section of cylinder to be severed, a rotatable glass-cutting tool borne by said gripping means within such cylinder and adapted to contact with the latter at a point below said gripping means, said tool lying normally out of contact with such cylinder, means adapted to move said tool into such contact and means adapted to rotate said tool.

3. A device for severing glass cylinders, comprising a rotatable shaft adapted to be centrally supported within the cylinder to be severed, a tubular shaft reciprocably mounted upon said first shaft, an arm borne by said first shaft so as to rotate therewith and connected with said

tubular shaft so as to be positively actuated outwardly and inwardly upon reciprocation of the latter, and glass-cutting means mounted upon the outer end of said arm.



4. A device for severing glass cylinders, comprising a rotatable shaft adapted to be centrally supported within the cylinder to be severed, a tubular shaft reciprocably mounted upon said first shaft, an arm borne by said first shaft so as to rotate therewith and connected with said tubular shaft so as to be positively actuated outwardly and inwardly upon reciprocation of the latter, an extension pivotally attached to the outer end of said arm, and a glass-cutting tool borne by said extension.

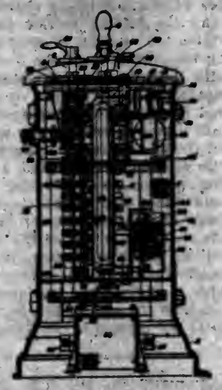
5. A device for severing glass cylinders, comprising exteriorly supported casing adapted to depend centrally within the cylinder to be severed, a shaft rotatably supported in said casing, two tubular shafts reciprocably mounted, one within the other, upon said rotatable shaft, an arm borne by the lower projecting end of the latter so as to rotate therewith and connected with the inner of said tubular shafts so as to be actuated outwardly upon reciprocation of the same, glass-cutting means mounted upon the outer end of said arm, arms pivoted at their inner ends to the outer of said tubular shafts and having sliding pivotal engagement with said casing, and means borne by the outer ends of said arms adapted upon outward actuation thereof to grip the inner walls of the cylinder.

[Claims 6 to 17 not printed in the Gazette.]

1,024,984. CONTROLLER FOR ELECTRIC MOTORS. JOSEPH RICHARDSON GARNER and MAX RICHARD HUGO MUELLER, Aston, Birmingham, England, assignors to Electric and Ordnance Accessories Company Limited, Aston, England, a Corporation of Great Britain. Filed June 20, 1911. Serial No. 636,232. (Cl. 172—179.)

1. In an electric motor controller, a main circuit, a controller barrel, a main switch comprising a spring-controlled bell-crank lever movable in a plane perpendicular to the barrel shaft and having one arm provided with a contact segment adapted to engage terminals in the main circuit, a no-volt coil connected in shunt with the main circuit and provided with a core which is connected with the other arm of the switch lever, and means upon the controller barrel for closing the shunt circuit on the initial movement of the handle so as to energize the no-volt coil in order to take the switch into its "on" position.

2. In an electric motor controller, the combination, with a main circuit and a main switch, of a controller barrel, a no-volt coil connected in shunt with the main circuit, means for closing the shunt circuit upon the initial movement of the controller barrel so as to energize the no-volt coil for taking the switch into its "on" position, and a reducing resistance which is cut out by the controller barrel when the latter is moved into its initial position for closing the shunt circuit, but which is introduced into the said circuit when the barrel is turned past its initial position so as to reduce the voltage and thereby prevent the switch from being actuated and the main circuit remade, in the event of the latter being broken due to the deenergizing of the no-volt coil, except by moving the barrel to the "off" position.



3. In an electric motor controller, the combination with a controller barrel, of a main switch having contacts which engage with fingers arranged in line with the fingers of the barrel, and an electro-magnetic blow-out consisting of a single electro-magnet arranged in front of the contacts of both the main controller barrel and of the main switch, so as to produce a spark-preventing magnetic field that contains the whole of the said contacts.

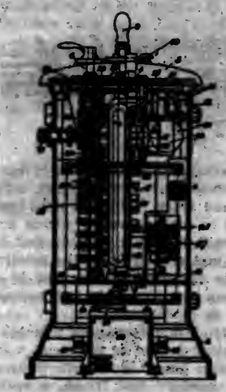
4. In an electric motor controller, the combination with a controller barrel, of an electro-magnetically operated main switch having contacts which engage with fingers arranged in line with the fingers of the barrel, and an electro-magnetic blow-out consisting of a single electro-magnet arranged in front of the contacts of both the main controller barrel and of the main switch, so as to produce a spark-preventing magnetic field that contains the whole of the said contacts, said blow-out magnet being pivotally mounted so that it can be swung aside to admit of access being obtained to the contacts and connections.

5. In an electric motor controller, the combination with a controller barrel, of a main switch, a no-volt coil for operating said switch, and an electro-magnetic blow-out consisting of a single electro-magnet arranged in front of the contacts of both the barrel and the main switch, and provided upon its inner face with a strip of refractory material carrying a series of partition pieces which extend between each pair of adjacent contact fingers.

[Claims 6 to 10 not printed in the Gazette.]

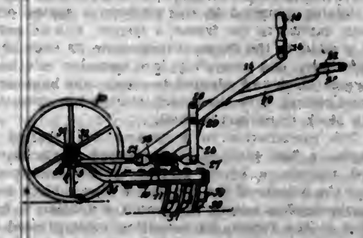
1,024,985. CONTROLLER FOR ELECTRIC MOTORS. JOSEPH RICHARDSON GARNER and MAX RICHARD HUGO MUELLER, Aston, Birmingham, England, assignors to Electric and Ordnance Accessories Company Limited, Aston, England, a Corporation of Great Britain. Filed June 30, 1911. Serial No. 636,233. (Cl. 172—179.)

A combination appliance for controlling and regulating electric motors comprising a casing, a horizontal partition disposed within the lower portion of said casing for dividing the interior thereof into separate main and base chambers, said partition being provided with a bearing, a member disposed in the upper portion of the main chamber and provided with a bearing in line with the first-named bearing, a barrel type controller and a main electro-magnetic switch disposed within said main chamber, said controller including a vertical shaft which is journaled at its opposite ends in said bearings and projects at its lower end into said base chamber, a handle for rotating said shaft, a shunt regulator disposed within said base chamber and including an operating lever, and an arm connecting the



projecting end of said shaft with said lever, whereby said shunt regulator will be operated during the rotation of said shaft.

1,024,986. CULTIVATOR. CHARLES WILLIAM GIST, Waynesboro, Pa. Filed Sept. 14, 1911. Serial No. 649,258. (Cl. 97—42.)



1. In a plow, a frame comprising spaced bars, a cross bar pivoted at each end to the bars near their rear ends, a plow support comprising vertically spaced plates, plow shanks received between the plates, each shank having a longitudinal slot, bolts connecting the plates, and passing through the slots of the shanks, plow points on the shanks, said plates being inclined with respect to the line of draft of the frame, a link connected with each end of the plates and extending forwardly, a wheel at the front end of the frame bars, a shaft on which the wheel is journaled, angle plates each having one side connected with an end of the shaft, a pivotal connection between the other side of the plates, the front end of the frame bars and the front ends of the links, a push bar adjustably connected to the cross bar of the frame, a handle bar connected with each frame bar in front of the cross bar, a plate connecting the handle bars, and a handle at each end of the plate.

2. A plow comprising a frame composed of spaced bars, a cross bar pivoted at each end to the frame bars, a wheel at the front ends of the said bars, a shaft on which the wheel is journaled, a pivotal connection between each end of the shaft and the adjacent frame bar, a plow supporting frame below the main frame and supported thereby, a link connecting each end of the said plow supporting frame to the front end of the adjacent frame bar, a push bar connected to the cross bar, a handle bar connected with each frame bar, a plate pivotally connecting the handle bars, and a handle at each end of the plate.

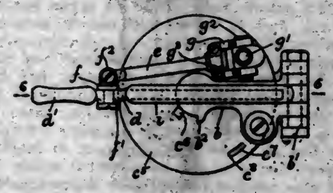
3. A plow comprising a frame composed of spaced bars, a cross bar pivoted at each end to the frame bars, a wheel at the front ends of the said bars, a shaft on which the wheel is journaled, a pivotal connection between each end of the shaft and the adjacent frame bar, a plow supporting frame below the main frame and supported thereby, a link connecting each end of the said plow supporting frame to the front end of the adjacent frame bar, a push bar connected to the cross bar, and means connected with each frame bar for moving said bar longitudinally.

4. In a plow, a main frame composed of spaced bars, a cross bar pivoted at each end to a frame bar, a shaft pivoted at each end to the front end of a frame bar, a wheel on the shaft, a plow supporting frame supported below the main frame, a link connecting each end of the said frame to the adjacent frame bar, a push bar connected to the cross bar, a handle bar connected to each frame bar, a plate pivotally connecting said bars, and a handle at each end of the plate.

5. In a plow, a main frame composed of spaced bars, a cross bar pivoted at each end to a frame bar, a shaft pivoted at each end to the front end of a frame bar, a wheel on the shaft, a plow supporting frame supported below the main frame, a link connecting each end of the said frame to the adjacent frame bar, a push bar connected to the cross bar, a handle bar connected to each frame bar, and a handle at the rear end of each handle bar.

[Claims 6 to 9 not printed in the Gazette.]

1,024,987. CLOSING MECHANISM AND THE LIKE. WALTER VILLA GILBERT, London, England. Filed June 10, 1911. Serial No. 632,402. (Cl. 89—20.)



1. In means for transforming movement from one plane to another, in combination, a member adapted to turn in one plane, a lever adapted to turn in a plane at an angle to the plane in which the first member turns, a link, and articulative means connecting the link to the lever and the first member, the articulative means comprising a joint with three axes of movement, and the articulative connection of the link to the lever being situated at the end of the latter to which the actuating force is applied, substantially as described.

2. In means for transforming movement from one plane to another, in combination, a member adapted to turn in one plane, a lever adapted to turn in a plane at an angle to the plane in which the first member turns, a link, and articulative means connecting the link to the lever and the first member, the articulative means comprising a joint with three axes of movement, and the link, from the point where it connects to the first member, extending away from and so as not to approach the lever's fulcrum, substantially as described.

3. In means for transforming movement from one plane to another, in combination, a member adapted to turn in one plane, a lever adapted to turn in a plane at an angle to the plane in which the first member turns, a link, and articulative means connecting the link to the lever and the first member, the articulative means comprising a joint with three axes of movement, and the point of connection of the link to the first member being arranged so as to move away from the lever's fulcrum when the lever is turned away from the first member, substantially as described.

4. A device having an opening therein, and means for closing the opening comprising, in combination, a turnable carrier, a closing piece mounted on the carrier and adapted to turn in a plane at an angle to the plane in which the carrier turns, co-acting locking parts on the closing piece

and on the device, a lever mounted so as to turn in a plane at an angle to the plane in which the closing piece turns, a link, and suitable articulative means connecting the ends of the link to the lever and the closing piece, the articulative connection of the link to the lever being situated at the end of the latter to which the actuating force is applied, substantially as described.

5. A device having an opening therein, and means for closing the opening comprising, in combination, a turnable carrier, a closing piece mounted on the carrier and adapted to turn in a plane at an angle to the plane in which the carrier turns, co-acting locking parts on the closing piece and on the device, a lever mounted so as to turn in a plane at an angle to the plane in which the closing piece turns, a link, and suitable articulative means connecting the ends of the link to the lever and the closing piece, the link from the point where it connects to the closing piece extending away from and so as not to approach the lever's fulcrum, substantially as described.

[Claim 6 not printed in the Gazette.]

1,024,988. RECEPTACLE FOR MUSTARD AND OTHER CONDIMENTS. ALFRED JOHN GREAVES, Richmond, England. Filed Oct. 28, 1911. Serial No. 657,350. (Cl. 65—45.)



1. In a receptacle for mustard and other condiments the combination of a hollow bi-part rod and a piston carried by said rod which is adapted to mix the material by forcing the liquid portion thereof from the lower to the upper part of the receptacle through said hollow bi-part rod and to eject a quantity of the material.

2. In a receptacle for mustard and other condiments the combination of a hollow bi-part rod, an outlet valve and a plunger carried by said bi-part rod which is adapted to mix the material by forcing the liquid portion thereof from the lower to the upper part of the receptacle through said hollow bi-part rod and then eject a quantity of the material through said outlet valve.

3. In a receptacle for mustard and other condiments the combination of a hollow bi-part rod, a pressure operated valve and a plunger carried by said-part rod which is adapted to mix the material by forcing the liquid portion thereof from the lower to the upper part of the receptacle through said hollow bi-part rod and then eject a quantity of the material past said pressure operated valve.

4. In a receptacle for mustard and other condiments the combination of a tubular member, a piston secured to said tubular member, a spring controlled hollow member inclosed within said tubular member and adapted to be moved relatively thereto to place the lower and upper parts of the receptacle in communication during the first part of the movement of the piston and to interrupt such communication during the final stage of the movement of the piston.

5. In a receptacle for mustard and other condiments the combination of a hollow bi-part rod, a plunger secured to said rod, a disk loosely mounted on said rod and acting in conjunction with said plunger and bi-part rod to mix and discharge the material contained in the receptacle.

[Claims 6 and 7 not printed in the Gazette.]

1,024,989. FIREARM. GEORGE W. GRUVER, Bakersfield, Cal. Filed Apr. 19, 1911. Serial No. 622,064. (Cl. 42—21.)



1. The combination in a firearm, of a breech mechanism, comprising a receiver carried by the stock, a frame carried by the receiver and stock, a breech block removably and slidably mounted in the receiver, a spring actuated hammer carried in said frame, a trigger, and an actuating lever having one end projecting in the receiver and operably connected to the breech block and in the path to engage the hammer for setting the hammer and operating the breech block to extract.

2. The combination in a firearm, of a breech mechanism, comprising a receiver carried by the stock, a frame mounted in the receiver, a breech block removably and slidably mounted in the receiver and frame, a spring actuated hammer carried by the frame, a spring actuated trigger lock carried by said hammer, a trigger to engage said lock, and an actuating lever pivoted in the frame and operably connected with the breech block for sliding the same into and out of cartridge locking position and for cocking the hammer.

3. The combination in a firearm, of a breech mechanism, comprising a receiver carried by the stock, a frame carried by the receiver and the stock, a breech block removably and slidably mounted in the receiver, a spring actuated hammer carried in the frame, a trigger, and an actuating lever pivoted to the frame intermediate its ends and having its inner end extending into operable relation with the breech block and adapted to engage the hammer below the engagement with the breech block when operating the breech block to extract a shell.

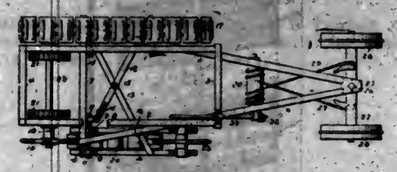
4. The combination in a firearm, of a barrel and a magazine, a butt-stock, a receiver open at its bottom attached thereto, a frame carried by the butt-stock and closing the bottom of the receiver, a breech block mounted for reciprocation within the frame, a trigger, a hammer pivoted to the frame, an actuating lever pivoted in the frame and operably connected to the breech block, and means carried by the hammer and in the path of the lever, whereby the hammer is engaged by the lever during the extracting action of the breech block to set the hammer.

5. The combination in a firearm, of a breech mechanism, comprising a receiver and a stock, a frame carried by the receiver and having two upwardly projecting plates, a breech block slidably mounted between said plates and in the receiver, said breech block forming a closure for the receiver when in locked position, cartridge locking and elevating means mounted between said plates below the breech block, a spring actuated hammer carried by the frame, a trigger, and means operably connected with the breech block and cartridge locking and elevating means for operating both simultaneously and in train.

[Claims 6 to 18 not printed in the Gazette.]

1,024,990. PIVOTED REAR TRACTION-TRUCKS. PLINY E. HOLT, Stockton, Cal. Filed July 1, 1909. Serial No. 505,386. (Cl. 21—114.)

1. A tractor running gear comprising a main farme composed of a rectangular frame and a triangular frame having its apex extended beyond the front and its base extended across and beyond the sides of the said rectangular frame; traction trucks pivoted to the base beam of the said triangular frame; transverse braces pivoted on the same center with the truck pivots and extending obliquely across the main frame and fixed to the adjacent truck frame; buffer springs interposed between the triangular frame and the oblique braces at the points of conjuncture; a wheeled truck pivoted under the apex of the triangular frame; means for steering said wheeled truck; driving sprockets bracketed to the main frame; idle sprockets journaled in said traction trucks; supporting rollers journaled in said traction trucks; and traction belts encircling said traction trucks and engaging said driving and idle sprockets.



2. A tractor running gear comprising a main frame composed of a rectangular frame combined with a triangular frame having its apex extended beyond the front and its base extended across and beyond the sides of the said rectangular frame; traction trucks pivoted to the base beam of the said triangular frame; transverse braces pivoted on the base beam of the triangular frame and extending obliquely across the main frame and fixed to the adjacent truckframe; buffer springs interposed between the oblique braces and the main frame; a wheeled truck pivoted under the apex of the triangular frame; and means for steering said wheeled truck.

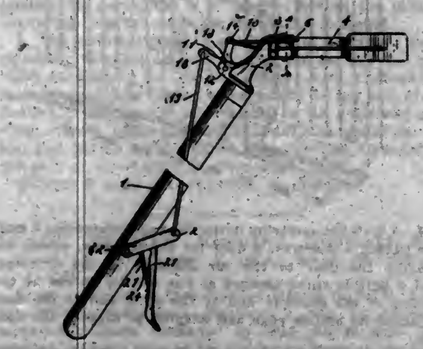
3. In a running gear for tractors, a combined rectangular and triangular main frame; traction belts encircling supplemental frames pivoted on the said main frame and actuated by a driving sprocket journaled therein; braces extending obliquely across the said main frame, pivoted thereon and each fixed to the opposite supplemental frame; and buffer springs interposed between said braces and said main frame.

4. A tractor running gear comprising a main frame composed of a rectangular frame and a triangular frame having its apex and base angles extended beyond the said rectangular frame; a wheeled steering truck pivoted to the main frame; and traction trucks pivoted at the sides of the main frame.

5. A tractor running gear comprising a triangular main frame, a steering truck pivoted to the main frame, and traction trucks on each side of the main frame and pivoted to the base beam of said triangular frame, said traction trucks having transverse braces extending across and pivoted on the opposite side of the main frame.

[Claims 6 to 11 not printed in the Gazette.]

1,024,991. PACKAGE-LIFTER. FRANK LEWIS HUNT, Cincinnati, Ohio. Filed Mar. 28, 1911. Serial No. 617,404. (Cl. 57—113.)



1. A package lifter consisting of a pole having an obtuse angular bifurcated head thereon, jaws pivoted to said head and means for opening and closing said jaws, said jaws being pivoted intermediate of their inner ends and a horizontally disposed one piece loop connecting said ends, said loop being flexible, a bell crank mounted on said head and connected to said loop, said bell crank operating rearwardly of said head, a rod connected to said bell crank and extending diagonally of said pole.

2. A package lifter consisting of a pole having an obtuse angular bifurcated head thereon, jaws pivoted to said head and means for opening and closing the jaws, said jaws being pivoted intermediate of their inner ends and a horizontally disposed one piece loop connecting said ends, said loop being flexible, a bell crank mounted on said head and connected to said loop, said bell crank operating rearwardly of said head, a rod connected to said bell crank and extending diagonally of said pole, said means for closing said jaws consisting of a crank handle pivoted to the lower end of said pole and to said rod.

3. A package lifter consisting of a pole having an obtuse angular bifurcated head thereon, jaws pivoted to said head and means for opening and closing said jaws, said jaws being pivoted intermediate of their inner ends and a horizontally disposed one piece loop connecting said ends, said loop being flexible, a bell crank mounted on said head and connected to said loop, said bell crank operating rearwardly of said head, a rod connected to said bell crank and extending diagonally of said pole, said means for closing said jaws consisting of a crank handle pivoted to the lower end of said pole and to said rod, said means for opening said jaws consisting of a spiral spring mounted on a pin and inclosed with sockets formed in said jaws, the ends thereof being connected to opposing jaws.

4. A package lifter consisting of a pole having an obtuse angular bifurcated head thereon, jaws pivoted to said head and means for opening and closing said jaws, said jaws being pivoted intermediate of their inner ends and a horizontally disposed one piece loop connecting said ends, said loop being flexible, a bell crank mounted on said head and connected to said loop, said bell crank operating rearwardly of said head, a rod connected to said bell crank and extending diagonally of said pole, said means for closing said jaws consisting of a crank handle pivoted to the lower end of said pole and to said rod, said means for opening said jaws consisting of a spiral spring mounted on a pin and inclosed with sockets formed in said jaws, the ends thereof being connected to opposing jaws and means for holding said jaws closed.

5. In a package lifter the combination of a handle having a birfurcated obtuse angled head thereon, a pair of jaws pivotally held in the bifurcated part of said head by means of a pin passing through openings in said jaws, said openings being larger than said pin, a spring mounted in said openings and having its ends fixed to opposing jaws whereby said jaws are normally held apart, a flexible loop connecting said jaws and means for operating said loop on a plane with said jaws whereby they may be closed.

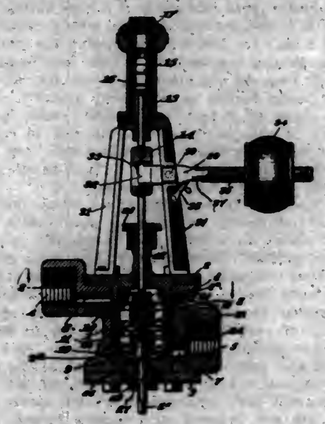
1,024,992. FLUID-PRESSURE REGULATOR. HARRY H. KELLEY, Atlanta, Ga. Filed Aug. 31, 1911. Serial No. 647,102. (Cl. 103—92.)

1. In a fluid pressure regulator, the combination of a valve casing adapted to be connected with a pump; a valve comprising sections mounted to operate in the casing; an adjustable connection between said sections whereby to position the valve within said casing; and a fluid pressure, and manually actuated means for positioning the valve, substantially as described.

2. In a fluid pressure regulator, the combination of a valve casing adapted to be connected with a pump; a valve in said casing; means for manually setting the valve in different working positions; means for holding the valve in such positions; and a fluid pressure actuated means adapted to automatically effect the release of said holding means and thereafter regulate the working position of the valve, substantially as described.

3. In a fluid pressure regulator, the combination of a valve casing adapted to be connected with a pump; a valve in said casing; a stem on said valve; a fulcrumed lever connected with the valve stem; a weight adjustably mounted on the lever; a pawl adapted to hold the weighted lever in different adjusted positions to set the valve; and a fluid pressure piston connected with the valve stem

and adapted to automatically effect the release of the weighted lever and thereafter regulate the position of the valve, substantially as described.



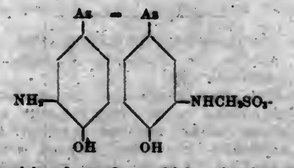
4. The combination with a sectional valve and a casing providing a working chamber therefor; of an adjustable connection between the valve sections whereby to position the valve in the casing; and means for actuating the valve, substantially as described.

5. The combination with a sectional valve and a casing providing a working chamber therefor; of an adjustable connection between the valve sections comprising, a screw-threaded stud on one of the sections and a screw-threaded aperture in the other section receiving said stud; and a shaft engaging with one of the sections for turning the same to position the valve in the casing; and means for actuating the valve, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

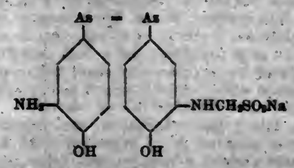
1,024,993. DERIVATIVES OF DIAMINODIOXYARSENOBENZENE. GEORG KORNDÖRFER, Höchst-on-the-Main, Germany, assignor to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany, a Corporation of Germany. Filed Feb. 24, 1912. Serial No. 679,663. (Cl. 23—24.)

1. As new products, derivatives of the 3.3¹-diamino-4.4¹-dioxyarsenobensene, the radicals of which have the formula:



being yellowish-red powders which, when heated, decompose without fusion.

2. As a new product, the derivative of the 3.3¹-diamino-4.4¹-dioxyarsenobensene, having the formula:



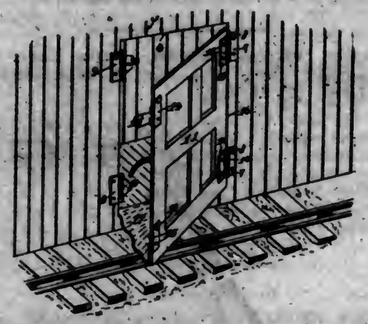
being a yellowish-red powder, which readily dissolves in water with a neutral reaction, and which, when heated, decomposes without fusion.

1,024,994. BLIND-STOP. GERARD H. LABIZ, Galveston, Tex. Filed Sept. 30, 1911. Serial No. 652,090. (Cl. 16—1.)



The combination with a blind frame having a plurality of slat sections, each comprising a plurality of movable slats, swivel bars connecting each series of slats, means for adjusting said slats, said means also connecting the swivel bar on one section with that of the adjacent section and comprising angular brackets connected to the blind frame between each section of slats, each of said brackets having a segmental slot, a slotted plate, a thumb screw adjustably connecting one end of said plate with said bracket, a second thumb screw adjustably connecting the said plate to the adjacent swivel bar and passing through the slot therein, and a link pivotally connected to the first-named set screw and to the swivel bar of the adjacent series of slats, whereby said sections of slats may operate simultaneously and the slats of each series operate independently of those of an adjacent series.

1,024,995. MAIL-RECEIVER. ROBERT C. LAMBERT, Crawford, Nebr. Filed Dec. 22, 1910. Serial No. 598,760. (Cl. 105—230.)



1. A mail bag receiving device for cars comprising a mail car having a doorway, a door for the doorway, means for hinging the door to the car disposed in the doorway, and a flexible apron secured at one end to the car at the bottom of the doorway and at the other end to the door adjacent its bottom edge and adapted to support the mail bag.

2. In combination, a mail car having a doorway, a door disposed in the doorway throughout its height, hinge leaves secured to the car near one side of the doorway, hinge leaves secured to the car near the other side of the doorway, hinge leaves secured to the opposite vertical edges of the door and adapted to engage the hinge leaves of the car, a pintle for detachably securing the hinge leaves of the door to the hinge leaves of the car, and a flexible and foldable apron secured to the lower edge of the door and to the car and adapted to support a mail bag.

1,024,996. SEAL-PADLOCK. CLAUDE B. LAWLER, Amarillo, Tex. Filed June 19, 1911. Serial No. 634,034. (Cl. 70—57.)



1. The combination with a padlock, of means mounted on the padlock for supporting a seal on the padlock across the key hole thereof, and a plunger movable into and out of engagement with the seal and adapted to lock the same in the said supporting means and arranged to be operated by the shackle of the padlock.

2. The combination with a padlock, of means mounted thereon for supporting a seal exterior to the padlock across the key hole thereof, a plunger slidably mounted on the padlock and movable into and out of engagement with the seal, said seal and plunger having co-acting interlocking parts and the said plunger being arranged in the path of and adapted to be moved into engagement with the seal by the shackle of the padlock in the closing movement thereof.

3. The combination of a padlock provided in its casing with an opening, a shell attached to the wall of the padlock over the opening, means for supporting a seal upon the casing of the padlock across the key hole thereof, and a plunger mounted in the shell and movable into and out of engagement with the seal and having an arm extending through the said opening into the path of the shackle of the padlock, whereby the plunger is moved into engagement with the seal by the said shackle in the closing movement thereof.

4. The combination with a padlock, of means for supporting a seal on the exterior of the padlock across the key hole thereof, a slidably mounted plunger arranged to engage the seal and located in the path of and adapted to be actuated by the shackle of the padlock in the closing movement thereof, said plunger and seal having co-acting interlocking parts, and a spring for moving the plunger outwardly from the seal when the shackle is opened.

5. The combination with a padlock, of a vertical guide exteriorly mounted on the casing of the padlock and provided adjacent to the key hole thereof with a transverse passage adapted to support a seal across the key hole of the padlock, a plunger slidably mounted in the guide and provided at its lower end with means for engaging the seal and having an arm at its upper portion arranged in the path of the shackle of the padlock.

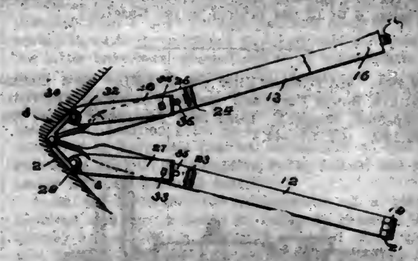
[Claims 6 to 10 not printed in the Gazette.]

1,024,997. BRACKET. MELVILLE L. LONGWORTH, Richmond, Va. Filed Sept. 2, 1911. Serial No. 647,439. (Cl. 248—18.)

1. In a bracket, a base member formed in parts, a pin for hinging said parts together, a pair of pivotally mounted brackets connected by said pin to said base member, whereby each of the brackets swings on the same center, and means for locking said brackets in any of their adjusted positions.

2. In a bracket, a base member formed in parts, means for hinging said parts together, a pair of pivotally mounted brackets connected with said base member, and means for locking said brackets in any of their adjusted positions.

3. A bracket comprising a base member formed of a pair of hinged portions, a pair of bracing arms hinged to said base member, and a pair of locking arms pivotally connected with said base member and engaging said first mentioned arms for locking the same in any desired position.



4. A bracket comprising a base member formed in two parts and provided with ears near the top and near the bottom, a pintle for the ears at the top of the base member for pivotally connecting the same together, a pintle at the bottom of the base member extending through said ears, a pair of bracing arms formed with ears on the ends, the ears on one end being engaged by the top pintle, and the ears on the lower end being engaged by the bottom pintle, and bracing means engaging said arms and pivotally connected with said base member for locking said bracing arms in any adjusted position.

5. A bracket comprising a base member formed of a pair of strips, each strip being provided with ears designed to interlock, said ears being arranged at each end of said strips, a pintle for the ears at each end of said strips, a pair of bracing arms formed with ears at the ends designed to have said pintles pass therethrough for pivotally connecting said bracing arms with said base member, a pair of locking members pivotally connected with said base, and means for adjustably clamping said locking members to said supporting arms.

[Claims 6 to 8 not printed in the Gazette.]

1,024,998. ELECTRIC HEATING ELEMENT. JOHN CHARLES CAMPBELL MACDONOGH, London, England. Filed Sept. 12, 1911. Serial No. 648,986. (Cl. 219—71.)



1. An electric heating element comprising in combination a holding frame, an electric heating coil in said frame and insulating holding members for said coil said holding members being of substantially the length of the coil and having side wall parts located on either side of the coil and overhanging wall parts projecting toward one another and leaving a space between said projecting parts to expose the continuous outer surface of said coil.

2. In combination with an electric heating coil, insulating means for separating and holding adjacent coil lengths having a dividing wall part and overhanging wall parts projecting over adjacent coil parts for an amount less than the half diameter of the coils, said insulating means extending the full length of the coil and exposing the outer surface thereof.

3. In combination with an electric heating coil, insulating means for separating and holding adjacent coil lengths having a dividing wall part and overhanging wall parts projecting over adjacent coil parts for an amount less than half diameter of the coils, the upper surfaces of said overhanging parts being higher than the uppermost part of the coil, said insulating means extending the full length of the coil and exposing the outer surface thereof.

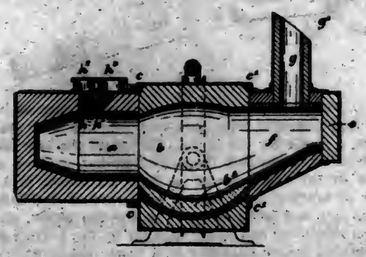
4. In combination with a coil laid sinuously a dividing wall between adjacent lengths of coil and overhanging

parts on said wall, said overhanging parts having less overhang than half diameter of the coil, and extending the full length of the coil.

5. In combination with an electric heating coil, a continuous insulating wall on either side of said coil and insulating projections from said walls above and below the coil said walls and projections being dimensioned to embrace the coil partially and leave parts of said coil open.

[Claims 6 to 13 not printed in the Gazette.]

1,024,999. MANUFACTURE OF STEEL. TOM DARKE MACKIE, Bowes Park, and GEORGE FREDERICK FORWOOD, Limpsfield, England. Filed Nov. 24, 1911. Serial No. 662,200. (Cl. 75—44.)



1. The process for the conversion of iron into steel which consists in treating the charge on the hearth of a furnace with oxid of iron, removing the slag from said charge, then blowing the charge with a reducing gas in order to deoxidize the same while a gaseous mixture in a state of combustion is maintained exclusively in the upper portion of the furnace.

2. In the process for the conversion of iron into steel, the steps which consist in maintaining a supply of deoxidizing gas in contact with a surface of the metal, and a suitably restricted supply of a combustion supporting gas in the upper portion of the furnace out of contact with the metal, the former serving to protect the metal from oxidation, and ultimately on reaching the upper portion of the furnace, mingling with the combustion supporting gas and there burning, substantially as set forth.

1,025,000. TIRE-FILLING COMPOUND AND PROCESS INVOLVING THE SAME. HOWARD I. MANLEY, Kansas City, Mo. Filed June 6, 1911. Serial No. 631,558. (Cl. 154—13.)

1. A process of making a tire filling compound which consists in mixing glycerin with a gelatinous binder while hot, then adding to the hot mixture potassium bichromate, and immediately excluding the resulting product from the action of light and air.

2. A process of making a tire filling compound which consists in mixing gelatin, glycerin and balsam of fir; heating the mixture; then adding to the hot mixture potassium bichromate; excluding the mixture from the action of light and air; and finally filling the mixture into a tire and allowing the same to set.

3. A process of making a filled tire which consists in mixing gelatin, glycerin, and balsam of fir in the approximate proportions of forty parts each of gelatin and glycerin and three parts of balsam of fir; heating the mixture for a short time; then adding about five parts of fine cork to the mixture; then adding about twelve parts of potassium bichromate to the mixture; excluding the mixture from the action of light and air; and finally filling it into a tire and allowing the same to set.

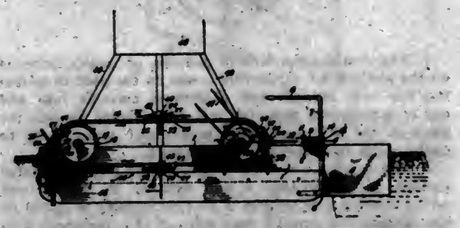
4. A tire filling compound consisting of the following ingredients and combined in substantially the following proportions, to wit:—gelatin 40%, glycerin 40%, balsam of fir 3%, fine cork 5%, and potassium bichromate 12%.

1,025,001. CIGAR-LIGHTER. ABRAHAM R. MANN, Jr., Weisel, Pa. Filed Nov. 26, 1910. Serial No. 594,287. (Cl. 131—52.)



A lighting attachment for cigars consisting of an inflammable tube one end of which is adapted to receive and be fitted to the lighting end of a cigar, and the other end of which is provided with a readily ignitible fuse in the form of a bead encircling the tube.

1,025,002. CURRENT-MOTOR. JAMES H. MARTIN, Springfield, Mo. Filed Nov. 22, 1911. Serial No. 661,662. (Cl. 138—11.)



1. A current motor comprising a flume composed of spaced floats rigidly connected together, a shaft journaled transversely of the floats at the front ends thereof, a stub shaft on the rear end of each float, said shafts being in alinement, a sprocket wheel on each stub shaft, a sprocket wheel at each end of the transverse shaft, an endless chain supported on the wheels adjacent to each float, shafts connecting the chains at spaced intervals, each chain having a link provided with spaced bearing lugs for the adjacent end of the shaft, a disk secured to the shaft between each pair of lugs and provided with a lug on its periphery having its faces radial to the shaft, a pawl pivoted to the adjacent link on each side of the shaft and engaging the lug when the chain links are in alinement, springs holding the pawls in engaging position, a disk on each shaft adjacent to the chain, each disk having a stop having one face radial to the shaft and the other merging gradually into the periphery of the disk, a vane journaled on each shaft between the last named disks, each vane consisting of three sections, two of the sections being in the same plane and on opposite sides of the shaft, one of the sections being of greater width than the other, the third section being at right angles to the first named sections and perpendicular to the axis of the shaft, and a pawl on the vane at each end thereof engaging the notch of the adjacent disk to hold the alined section vertical with the wider section below the shaft and to prevent the said wide section from swinging in front of the shaft.

2. A current motor comprising spaced endless chains, wheels for supporting the chains, shafts connecting the chains at spaced intervals and journaled in the links of the chains, a vane on each shaft, each vane comprising alined sections on opposite sides of the shaft, one of the sections being of greater width than the other, and a section at right angles to the other sections and perpendicular to the shaft, means engaging the shafts for preventing angular movement of the shafts when the links are in alinement and for permitting angular movement when the shafts pass around the wheels, and means for holding the vanes with the alined planes vertical on the lower runs of the chains and with the wide sections below the shafts, said means comprising a disk secured on the shaft at each end of each vane, each disk having a tooth, and a pawl at each end of the narrow section of the alined sections of the vane.

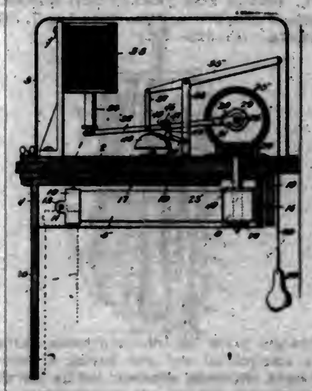
3. A current motor comprising spaced endless chains, wheels for supporting the chains, shafts connecting the chains at spaced intervals and journaled in the links of the chains, a vane on each shaft, each vane comprising alined sections on opposite sides of the shaft, one of the sections being of greater width than the other, and a section at right angles to the other sections and perpendicular to the shaft, and means for holding the vanes with the alined planes vertical on the lower runs of the chains and with the wide sections below the shafts, said means comprising a disk secured on the shaft at each end of each vane, each disk having a tooth, and a pawl at each end of the narrow section of the alined section of the vane.

4. In a current motor comprising laterally spaced endless chains, shafts connecting the chains at spaced intervals and journaled in the links of the chains at their ends, spaced sprocket wheels for supporting each chain and a vane on each shaft, a disk secured to each shaft adjacent to each chain, each disk having a lug on its periphery, both faces of the lug being radial to the disk, a pawl pivoted to the chain at each side of the shaft and engaging the adjacent face of the lug when the links of the chain are alined, and a spring holding each pawl in engagement with the lug.

5. In a current motor comprising laterally spaced endless chains, shafts connecting the chains at spaced intervals and journaled in the links of the chains at their ends, spaced sprocket wheels for supporting each chain and a vane on each shaft, each shaft having a radial stop adjacent to each chain, a pawl pivoted to the chain on each side of the shaft and engaging the stop when the links of the chain are alined, and a spring for holding each pawl in engagement with the stop.

[Claims 6 and 7 not printed in the Gazette.]

1,025,003. INDICATOR FOR RAILWAY-CARS. AUGUSTUS MAY, New Orleans, La. Filed Aug. 24, 1911. Serial No. 645,786. (Cl. 40—103.)



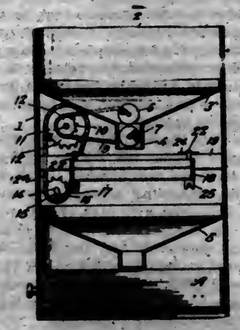
1. In an indicator, the combination of a carriage; a series of indicator elements carried thereby; supporting means initially engaged with all of said elements; means for operating said supporting means for releasing said elements successively from engagement therewith; and a loader for reengaging all of said elements at one time with said supporting means.

2. In an indicator, the combination of a carriage; a series of indicator elements carried thereby and provided with registering openings; a vertically-arranged supporting device initially inserted through the openings in all of said elements; means for operating said supporting device to release said elements successively; and a tubular loader adapted to be inserted through the openings in all of said elements after the same have been released, and to be subsequently fitted upon said supporting device, to permit the transfer of all of said elements simultaneously from said loader to said supporting device.

3. In an indicator, the combination of a carriage; a series of indicating elements carried thereby and provided with registering openings; a vertically-arranged spindle initially inserted through the openings in all of said elements and provided with a pivotally-mounted pin for supporting the same; means for operating said spindle to release said elements successively; and a tubular loader provided with a slotted upper end and adapted to be inserted through the openings in all of said elements after the latter have been released and to be subsequently fitted upon said spindle to permit the transfer of all of said elements simultaneously from said loader to said spindle, said pin being arranged for movement from operative to inoperative position prior to such transfer, and from inoperative to operative position subsequent to the same, and being adapted for reception in the slotted end of said loader when in operative position.

4. In an indicator, the combination of a pivotally-mounted carriage; a series of indicator elements carried thereby at one end; a vertically-arranged supporting device initially engaged with all of said elements at the opposite end thereof; means for operating said supporting device to release said elements successively, said carriage being arranged to turn gradually upon its pivot under the weight of the released elements, during the successive releasing operations, to maintain said released elements in vertical position; and a loader for raising said carriage and all of said elements into horizontal position and for reengaging the latter with said supporting device.

1,025,004. FLOUR-SIFTING MACHINE. EDWARD C. MAY, Watertown, Wis. Filed Sept. 13, 1911. Serial No. 649,104. (Cl. 83—60.)



1. In a flour sifter the combination of a frame provided with a screen, supports having flared recesses, suspending means for the frame having journals mounted upon the strips and having parts pendent from the journals which enter the flared recesses and engage opposite walls thereof to impart a jar to the sieve at the end of its movement in each direction, and means for imparting vibratory movement to the sieve.

2. A flour sifter comprising a frame, strips for supporting the frame having flared recesses, bails of substantially U form supporting the sifter and having journals at the upper ends of their side members extending over the recesses in the strips and supporting the screen, the journals of the bails having pendent portions to enter the flared recesses and engage with the walls thereof, and means for imparting a vibratory movement to the sifter.

1,025,005. ELECTRIC-LAMP FIXTURE. ARTHUR G. MCARDLE, San Francisco, Cal. Filed Sept. 28, 1911. Serial No. 650,928. (Cl. 240—115.)

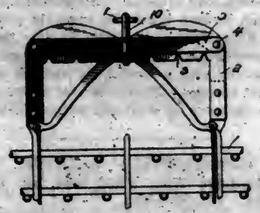
In a fixture of the class described, the combination with a body, of a globe supporting ring consisting of two sections one of which is fixedly secured to the body and

the other of which is pivoted at one end to one end of the fixed section and adapted at its opposite end to interlock with the free end of the fixed section, the said fixed section being provided on its inner surface with rigid studs,



while the movable section is provided with an adjusting screw, said studs and screw being adapted to engage a flange at the neck of the globe when the said sections are interlocked.

1,025,006. REVERSIBLE DRAFT. MURRAY B. METCALF, Cowanesque, Pa. Filed Sept. 30, 1911. Serial No. 652,094. (Cl. 97—4.)



1. In a device for the purpose set forth, a notched frame, curved levers pivotally connected to the opposite ends of the frame, a yoke adapted to engage one of the notches and to be contacted by one or both of the levers, and flexible elements secured to the levers for swinging the yoke out of one of the notches and into the direction of any of the opposite notches.

2. In a device for the purpose set forth, the combination with a U-shaped frame, the connecting member of the frame having its inner face notched, studs upon the opposite ends of the connecting members, an inwardly curved arm pivotally connected with each of the studs, a connecting bar for the studs, a substantially U-shaped yoke surrounding the connecting bar, the frame and the levers, said yoke adapted to engage within one of the notches, and flexible elements connected with the levers for swinging the yoke out of the notch and directing the yoke toward any of the remaining notches.

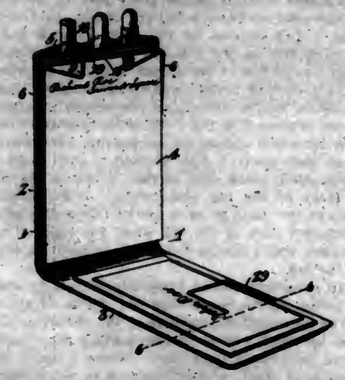
1,025,007. POCKET MEMORANDUM-BOOK. ADAM MIELDEN, Deadwood, Cal. Filed Jan. 6, 1911. Serial No. 601,090. (Cl. 11—11.)

1. A memorandum book provided with a clip mounted on the cover and including inner and outer resilient clamping portions located at the inner and outer faces of the cover, and an attaching portion located interiorly of the cover and connecting the inner and outer clamping portions.

2. A memorandum book provided with a clip mounted on the cover and constructed of a single piece of resilient material and consisting of inner and outer resilient clamping portions located at the inner and outer faces of the cover, and an intermediate attaching portion piercing the cover and connecting the inner and outer clamping portions.

3. A memorandum book provided with a clip mounted on the cover and including an approximately U-shaped loop located at the inner face of the cover, a resilient tongue operating at the opposite face of the cover, and an intermediate attaching portion piercing the cover and connecting the loop and the tongue.

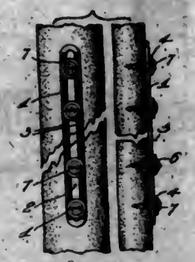
4. A memorandum book provided with a clip mounted on the cover and including an approximately U-shaped clamping loop located at the inner face of the cover, a resilient clamping tongue located at the opposite face of the cover, and a connecting portion provided with an outwardly projecting arm connected with the tongue and supporting the latter in an angular position with relation to the plane of the cover.



5. A memorandum book provided with a clip mounted on the cover and including an approximately U-shaped clamping loop located at the inner face of the cover, a resilient clamping tongue operating at the opposite face of the cover, and an angularly bent portion connecting the loop and the tongue and forming a plurality of spring bends.

[Claims 6 to 22 not printed in the Gazette.]

1,025,008. BRACE FOR FRACTURED BONES. LUCIEN LUTTRELL MINER, Bisbee, Ariz. Filed Aug. 7, 1911. Serial No. 642,674. (Cl. 128—52.)



1. A bracing plate for fractured bones having formed therein a longitudinal slot and having a serrated outer surface, screw receiving washers having on their inner sides centrally disposed ribs adapted to slidably engage the slot in said plate and having on each side of said rib serrated surfaces adapted to engage and coact with the serrated surface of the plate, whereby said washers are secured in adjustable engagement with the plate and fastening screws adapted to be inserted through said washers and slot in the plate to fasten the plate to the ends of the bone.

2. A bracing plate for fractured bones having a longitudinal slot therein and provided with serrations, screw receiving washers having ribs adapted to enter said slot in said plate and provided with serrations adapted to engage and co-act with the serrations of the plate whereby the washers are secured in adjustable engagement with the plate, and fastening screws adapted to be inserted through said washers and slot in the plate to fasten the plate to the ends of the bone.

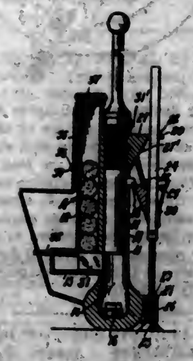
1,025,009. RAILWAY-SPIKE. WILLIAM A. MOONEY, La Cygne, Kans. Filed Apr. 11, 1910. Serial No. 554,788. (Cl. 85—13.)



1. A railway rail spike having its stock divided longitudinally to form two equal portions with two of the edges of said portions extending in parallel relations and the two opposite edges inclined to the longitudinal plane of the stock, each of said divided portions having a reversely inclined face at its free end, the terminals of the inclined faces being in alinement transversely of the stock.

2. A railway rail spike having its stock divided longitudinally to form two equal members, the forward edge of one of said members being parallel with the rear edge of the second member and the forward edge of the second member and the rear edge of the first member being inclined toward each other the driving edge of the one being in alinement with the driving edge of the other.

1,025,010. TORPEDO-CANE. HERBERT F. NEU, Brookfield, Wis. Filed June 8, 1911. Serial No. 632,002. (Cl. 46—46.)



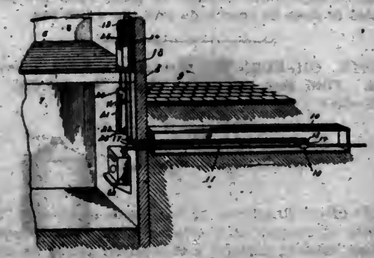
1. In a device of the character described, the combination with a cane, of a casing secured thereto having a magazine chamber and a hammer chamber, the latter of which terminates at one end in an explosive chamber and communicates with said magazine chamber, a hammer mounted for movement in the hammer and explosive chamber normally closing communication between the hammer chamber and the magazine chamber, a spring constantly tending to force said hammer into the explosive chamber, means for moving said hammer against the influence of said spring and then automatically releasing same to said influence to fire a charge contained within the explosive chamber, and means operated during the movement of the hammer against the influence of said spring for delivering an explosive charge from the magazine chamber into the explosive chamber.

2. In a device of the character described, the combination with a cane of a casing secured thereto having an explosive chamber, a hammer mounted for movement in said chamber, a spring constantly tending to move said hammer in one direction, and means actuated by a constant pressure exerted upon the cane for moving said hammer against the influence of said spring and then releasing the hammer to said influence to explode a charge contained within the explosive chamber.

3. In a device of the character described, the combination with a cane, of a casing secured thereto having an explosive chamber and provided with a longitudinal slot in its wall, a hammer mounted in said casing for movement into said explosive chamber to fire a charge contained therein, means constantly tending to move said hammer into said explosive chamber, a lug on said hammer extending through said slot, a rod slidably mounted on said casing, a sear pivoted to said rod, a spring carried by said rod normally holding said sear in engagement with the lug, whereby the sliding of said rod will produce a corresponding movement of the hammer, and means for automatically releasing said sear from engagement with the lug on the hammer at the termination of the movement of said rod in one direction.

4. In a device of the class described, the combination with a cane, of a casing secured thereto having a magazine chamber and a hammer chamber, the latter of which terminates at one end in an explosive chamber which communicates with said magazine chamber, a hammer mounted for movement in the hammer and explosive chambers normally closing communication between the hammer chamber and the magazine chamber, a spring constantly tending to force said hammer into the said explosive chamber, means for moving said hammer against the influence of said spring and then automatically releasing same to said influence to fire a charge contained within the explosive chamber, a plunger mounted in said casing for movement in line with the opening between the magazine chamber and the hammer chamber and across one end of the magazine chamber, and connections between said plunger and the hammer operating means whereby the plunger is operated toward the passage between the magazine chamber and the hammer chamber when said hammer is moved against the influence of said spring.

1,025,011. FLUID-CUT-OFF DEVICE. HUBERT NOLD, Cincinnati, Ohio. Filed Sept. 5, 1911. Serial No. 647,548. (Cl. 137—69.)

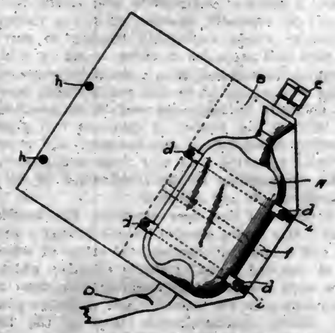


1. The combination with a gas inlet pipe having a normally open cut-off valve therein, of an operating device comprising a manually operated turning wheel having peripheral grooves, a pulley wheel connected with the valve, a chain trained over the pulley wheel and having its end reversely trained over the turning wheel, a tension spring connected with one end of the chain and also with a stationary support, and a pull ring connected with the other end of the chain.

2. The combination with a gas inlet pipe adapted to lead from a street surface main into the cellar of a building, of a valve located in the pipe and having a stem, a pulley fixed to the stem, a support rising from a floor above the cellar of such building, a turning wheel rotatably connected with said support, guide pulleys fixed to one wall of the cellar above the inlet pipe, a pull chain trained over the guide pulleys and also about the first-named pulley, the ends of the chain being reversely trained over the

turning wheel, a coiled retractile spring fixed at one end to a wall of such building and connected to one end of the chain, a pull ring fixed to the other end of the chain, and means engaging the turning wheel to hold the same normally locked.

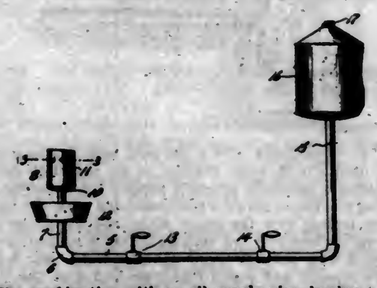
1,025,012. WATER-BAG RETAINER. ELISE R. NORWOOD, San Francisco, Cal. Filed June 22, 1909. Serial No. 503,767. (Cl. 128—39.)



1. In combination with a rubber water bag, a retainer comprising a strip of textile fabric of proper width, when folded upon itself to inclose the bag, and provided with fastening devices for detachably fastening the folded over portion along the edges so as to cover the bag, a strap on one end of the said strip and a fastening device on the opposite end adapted to secure the folded strip in position on the part to be treated, and fastening devices on the inner side of the strip and the edge of the water bag for detachably securing the bag in place.

2. The combination with a water bag, of a retainer therefor comprising a strip of fabric of proper width, when folded upon itself to inclose the bag, and provided at its edges with fastening devices for detachably securing the folded over portion of the retainer so as to cover the bag, and a strap and a fastening device applied to the ends of the retainer, the said strap and fastening device being arranged to secure the retainer in place upon the person, and also to close its open ends over the water bag.

1,025,013. OIL-BURNER. WILLIAM G. NUTT, Jonesboro, Ark. Filed Sept. 13, 1911. Serial No. 649,036. (Cl. 158—53.)



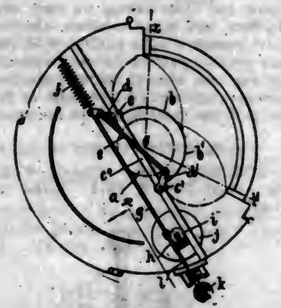
The combination with an oil supply pipe, having a vertical portion, threads formed on the vertical portion at the free end and also on the pipe, a pan surrounding the vertical portion of the pipe and having a central threaded aperture engaging the threads on the pipe at the medial point thereof, and a hollow cylindrical burner body having a threaded aperture in one end engaging the threads at the free end of the pipe and also a plurality of apertures in its side walls spaced from the top thereof, the said burner body being further provided with a concave bottom.

1,025,014. BOX-FASTENING. JOHN O. OLSON, Zumbrota, Minn. Filed July 20, 1911. Serial No. 639,638. (Cl. 70—81.)



The combination with a box and cover, the box having slotted cleats and provided with a recess or opening, a pin projecting into said recess or opening, the cleat having a bore extending from the recess or opening to the slot, a spring-actuated bolt slidable in the bore, said bolt having a head on the end in the recess in position to be hooked over the pin by turning the bolt to hold the bolt drawn against the action of the spring and a bar extending from the cover into the slot and having an eye in position to receive the bolt.

1,025,015. OCCULTING DEVICE FOR FLASH-LIGHTS FOR OPTICAL TELEGRAPHY. EMILE LEON PAUL PAILLIARD-TURENNE, Paris, France. Filed May 4, 1911. Serial No. 625,022. (Cl. 116—22.)

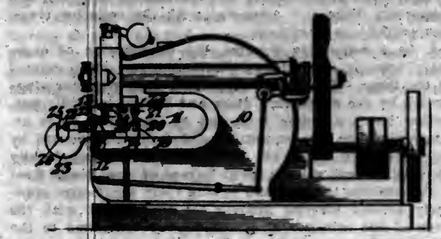


In an occulting device for flash-lights for optical telegraphy, the combination with a lamp of shutters inclosing one side of same, an arm secured to each shutter, said arms extending in opposite directions, a link connecting the arms, an intermittently operated electro-magnet, a pivoted lever actuated by the electro-magnet, a rod connecting the lever and one of said arms, a spring connected to the last named arm for returning the shutters to normal position, and a pivoted key connected to said rod for manually opening the shutters should the electro-magnet become inoperative, substantially as described.

1,025,016. ATTACHMENT FOR PUNCHING AND SHEARING MACHINES. ALFRED PARFITT, Topeka, Kans. Filed July 24, 1908. Serial No. 445,190. (Cl. 164—86.)

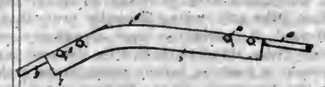
1. In an attachment of the character set forth, the combination with a base having an outstanding head provided with a recessed work-receiving seat, of a die member located on one side of the seat, a plunger slidably mounted on the head on the opposite side of the seat, an actuating device connected to the plunger, said base fitting into the recessed work-receiving seat of a punching and shearing machine, and means for securing the base to said punching and shearing machine in place of the die block of said machine, said means including a tension bolt adjustably mounted on the base and engaging the upper wall of the seat.

2. In an attachment of the character set forth, the combination with a base having a head at one end provided with a work-receiving seat, of a die mounted on the head on one side of the seat and a reciprocatory plunger mounted on the head on the other side of the seat, means for securing the base in the recessed work-receiving seat of a punching and shearing machine, said means including bolts



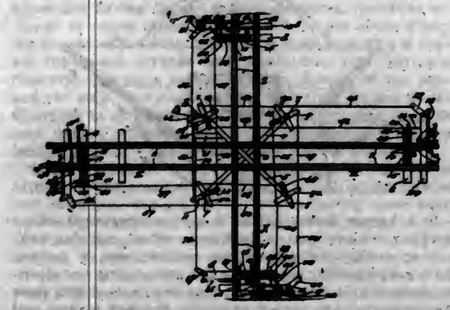
that pass through the bolt holes of said machine, and a tension bolt threaded into the base and having a head that bears against the upper side of the seat.

1,025,017. TOOL-HOLDER. JOHN D. PATNAUDE, Manchester, N. H. Filed Sept. 22, 1910. Serial No. 583,237. (Cl. 29—96.)



A tool holder comprising a body having a curvature therein spaced from one end thereof, the upper face of said body being provided with parallel spaced tool receiving grooves, each of said grooves having a depth equal to the thickness of a tool whereby the same may lie therein so as to permit the upper face of the tool to be flush with the upper face of the holder, and binding screws threaded transversely into the body for engagement with the tools when seated within said grooves.

1,025,018. AUTOMATIC SIGNAL SYSTEM FOR RAILWAYS. SAMUEL C. PERRY, London, Ky. Filed Oct. 18, 1911. Serial No. 655,445. (Cl. 246—45.)



1. In a signal system as set forth, railway tracks intersecting at right angles to one another, signals arranged adjacent each track on each side of the intersection, means arranged adjacent each track in advance of the intersection thereof adapted to be operated by the flanges of the wheels for throwing the signals of the track running at right angles at danger, and connections between the means of each track and the signals of the track running at right angles, said means having a universal connection at one end with one of the rail ties, so as to permit it to be moved laterally of the rail or downwardly thereof.

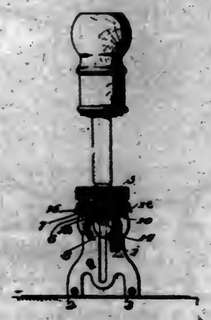
2. In a signal system as set forth, railway tracks intersecting at right angles to one another, signals arranged adjacent each track on each side of the intersection, means

arranged adjacent each track in advance of the intersection thereof adapted to be operated by the flanges of the wheels for throwing the signals of the track running at right angles at danger, and connections between the means of each track and the signals of the track running at right angles, and means coöperating with the connections, for locking the signals.

3. In a signal system as set forth, railway tracks intersecting at right angles to one another, signals arranged adjacent each track on each side of the intersection, means arranged adjacent each track in advance of the intersection thereof adapted to be operated by the flanges of the wheels for throwing the signals of the track running at right angles at danger, and connections between the means of each track and the signals of the track running at right angles, and means coöperating with the connections, for locking the signals, and means actuated by the flanges of the car wheels for releasing the locking means.

4. In a signal system as set forth, railway tracks intersecting at right angles to one another, signals arranged adjacent each track on each side of the intersection, means arranged adjacent each track in advance of the intersection thereof adapted to be operated by the flanges of the wheels for throwing the signals of the track running at right angles at danger, and connections between the means of each track and the signals of the track running at right angles, said means having a universal connection at one end with one of the rail ties, so as to permit it to be moved laterally of the rail or downwardly thereof, means coöperative with the connections, for locking the signals, and means actuated by the flanges of the car wheels for releasing the locking means.

1,025,019. HAND-STAMP. MAX C. PRICE, Muskegon, Mich., assignor to Hill-Independent Mfg. Co., Muskegon, Mich., a Corporation of Illinois. Filed Aug. 22, 1911. Serial No. 645,348. (Cl. 101—70.)



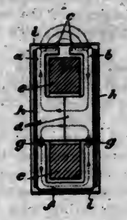
1. In a hand stamp and in combination with the frame thereof, a die plate movable with respect to said frame from an inking position to a printing position, and a tension strap coöperating with said die plate and part of the frame when said die plate is in the printing position, substantially as described.

2. In a hand stamp and in combination with the frame thereof, a die plate, and a tension strap supported by said die plate and coöperating with part of said frame when the die plate is in the printing position, substantially as described.

3. In a hand stamp and in combination with the frame thereof having cross brace rods, a die plate, a tension strap moving with said die plate and co-acting with said brace rods when the die plate is in the printing position, substantially as described.

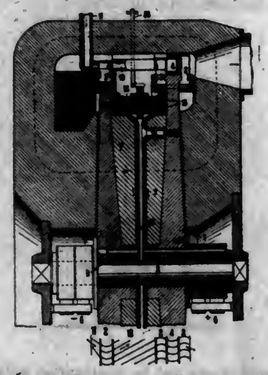
4. In a hand stamp and in combination with the frame thereof, a die plate, and a tension strap moving with said die plate and having two spring tongues co-acting with part of the frame when the die plate is in the printing position, substantially as described.

1,025,020. ELECTROMAGNET. ALFRED QUASTHOFFEN, Erfurt, Germany. Filed Nov. 2, 1911. Serial No. 658,207. (Cl. 175—21.)



An electro-magnet comprising a body provided with poles forming part of a cylinder and with a yoke forming the axis of such cylinder; a coil surrounding said yoke and arranged approximately concentric with said poles; a series of horse-shoe-shaped iron bars disposed above the portion of the coil left free by the poles to form auxiliary magnets, the ends of the said bars being held at a suitable distance from the yoke of the main magnet; and diamagnetic material securing said bar ends in position, whereby magnetic shunt fields are formed at the end faces of the cylinder near the axis thereof, the neutral zones of the said auxiliary magnets being situated above the outer surface of said coil.

1,025,021. HOMOPOLAR, ACYCLIC, OR UNIPOLAR DYNAMO-ELECTRIC MACHINE. OTTO SCHULZ, Charlottenburg, and WILHELM HEINRICH EYERMANN, Friedenau, near Berlin, Germany. Filed Feb. 8, 1911. Serial No. 607,295. (Cl. 171—212.)



1. In a homopolar dynamo, the combination of oppositely rotating supporting disks, a collector ring fixed to the inner side of each disk, rollers in engagement with the collector rings, conductors connected to said collector rings, and conductor disks carried by the supporting disks and in engagement with said conductors, substantially as described.

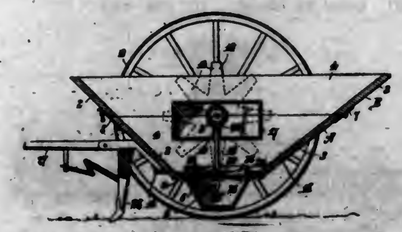
2. In a homopolar dynamo, the combination of oppositely rotating supporting disks, collector rings fixed to the inner side of each disk, a frame arranged between said disks, rollers carried by said frame and in engagement with the collector rings, conductors connected to said collector rings, and conductor disks carried by the supporting disks and in engagement with said conductors, substantially as described.

3. In a homopolar dynamo, the combination of oppositely rotating supporting disks, collector rings fixed to the inner side of each supporting disk and having inwardly projecting teeth, a frame composed of concentric rings, rollers carried by the frame and arranged between the rings thereof, each roller comprising a plurality of sheet disks arranged in pairs and having their peripheries oppositely beveled to form grooves for engagement with the teeth of the collector rings, and conductors carried by the supporting disks and connected with the collector rings, substantially as described.

4. In a homopolar dynamo, the combination of oppositely rotating supporting disks, supporting rings carried by the inner side of each supporting disk, collector rings carried by the supporting disks and having inwardly projecting teeth, a frame composed of concentric rings arranged between the supporting disks, spindles carried by the concentric rings of the frame, a bushing loosely mounted on each spindle, disks formed of sheet metal fixed to the bushing in pairs and having their peripheries oppositely beveled forming grooves for engagement with the teeth of the collector rings, conductors connected to the collector rings, conductor disks carried by the supporting disks and in engagement with the conductor disks, and brushes connected with the conductor disks, substantially as described.

5. In a homopolar dynamo, the combination of supporting disks, turbine blades carried by each disk and being oppositely arranged to rotate the disks in opposite directions, a casing inclosing the blades and having an inlet and an outlet, a supporting ring carried by the inner side of each supporting disk, collector rings carried by the supporting disks and having inwardly projecting teeth, a frame formed of concentric rings arranged between the supporting disks, spindles carried by the concentric rings of the frame, a bushing loosely mounted on each spindle between the concentric rings, disks of sheet metal fixed to the bushing in pairs and having their peripheries oppositely beveled forming grooves for engagement with the teeth of the collector rings, conductors connected to the collector rings, filling members secured to the supporting disks, conductor disks fixed to the filling members and having connection with the conductor rings, and brushes for taking off electric current from the conductor disks, substantially as described.

1,025,022. COTTON-PLANTER AND FERTILIZER-DISTRIBUTER. JOHN W. SHARP, Kenyon, Ark. Filed Oct. 28, 1911. Serial No. 657,238. (Cl. 111—7.)



1. A hopper casing having a seed compartment and a fertilizer compartment, a transverse wheel carrying axle, a gear casing in the fertilizer compartment, a vertical shaft supported for rotation in the gear casing and deriving motion from the wheel carrying axle, a feed disk upon the vertical shaft having obliquely disposed blades, and a casing open at the top and extending through the bottom of the fertilizer compartment in which the distributing disk operates, said casing having a discharge opening in the bottom thereof.

2. In a device of the character described, a hopper casing having a longitudinal partition, a top extension frame hingedly connected with said hopper frame and also having a longitudinal partition, a wheel carrying axle supported for rotation between the hopper casing and the extension frame, a cross brace connecting the longitudinal partition of the extension frame with one of the side walls of said frame, a gear casing in one of the compartments of the hopper casing, a shaft supported for rotation in the gear casing and in the transverse brace of the extension frame, a feed disk on said shaft, and means for transmitting motion from the axle to the vertical shaft.

3. In a device of the character described, a hopper casing having a bottom member, a feed casing supported by and extending through said bottom member, said casing having an open top and an apertured bottom, a feed disk operating in the feed casing and having a vertically disposed shaft, a wheel carrying axle, and means for transmitting motion from the latter to the feed disk carrying shaft.

1,025,023. METALLIC DOOR. CHARLES M. SINCLAIR, Chicago, Ill. Filed Apr. 1, 1911. Serial No. 618,380. (Cl. 189—53.)



1. In a metallic door, a hollow stile having flanges turned within the hollow of the stile and diverging, a panel having flanges extending within the stile and turned upon an angle corresponding to the angle of the flange of the stile, a mold positioned upon the panel, a securing strip engaging the mold and bent at an angle to correspond with the angle of the flanges of the panel and stile and located between such flanges and a securing strip having panels proportioned to embrace the adjacent ends of the flanges of the panel and the stile and the securing strip.

2. In a metallic door, a hollow stile having flanges turned within the hollow of the stile and diverging and spaced apart, panels spaced apart and having flanges extending within the hollow of the stiles and turned at angles corresponding to the angles of the diverging flanges of the stile, and a clamping strip having a channel proportioned to be seated between the panels, and other diverging channels proportioned to engage the adjacent edges of the flanges of the panel and the stile, and an insulating sheet positioned within the stile and engaging within the spacing channel.

3. In a metallic door, a stile having flanges turned within the hollow of the stile, and diverging, such flanges being spaced apart to produce an opening, panels spaced apart and having flanges extending within the stiles and turned at angles corresponding to the angles of the diverging flanges of the stile, a clamping strip providing a channel interposed between the panels and with diverging channels embracing and locking the flanges of the panel and the stile, and a rail having outwardly turned flanges diverging to correspond with and located within the stile, such flanges being also engaged by the clamping strip extending over such flanges and the flanges of the stile.

4. In a metallic door, a hollow stile having flanges turned inwardly and diverging, providing a space between such diverging flanges, spaced panels having their edges inserted through such space and turned outwardly to form diverging flanges corresponding to the angle of the diverging flanges of the stile, molds disposed upon the panels, securing strips engaging the molds and turned inwardly between the flanges of the panel and the flange of the stile, a rail having outwardly turned flanges within the stile and corresponding to the angle of the flange of the stile, and a clamping strip engaged over the adjacent ends of the flanges of the stile and rail and over the adjacent ends of the flanges of the panel and stile and the interlying securing strip.

5. In a metallic door, a hollow stile having flanges turned within the hollow of such stile and diverging producing a space, spaced panels inserted through the space of the stile and having their edges turned outwardly to form flanges diverging to correspond to the flanges of the stile, molds located upon the panels, securing strips engaging the molds and having their ends turned inwardly between the flanges of the panel and the flange of the stile and turned over the latter as a channel, a rail having outwardly turned diverging flanges inserted through the opening in the stile with the flanges adjacent, and a clamping strip having a channel portion interposed between the spaced panels and within the rail and with diverging panel portions embracing the adjacent flanges of the rail and stile and the adjacent flanges of the panel, stile and interlying securing strip.

[Claims 6 to 8 not printed in the Gazette.]

1,025,024. END-GATE FOR WAGONS. CHARLES SKIDMORE, Homer, Nebr. Filed Feb. 25, 1911. Serial No. 610,886. (Cl. 21—21.)



1. The combination with a wagon body, of an end gate comprising a board adapted to fit between the sides of the body, a transverse cross bar secured to the rear face of the end gate board and extending beyond the sides thereof, right angle flanges formed on the ends of the cross bar embracing the sides of the wagon body, the flanges of the cross bar being provided with right angle stops at their forward ends, said flanges and stops being provided with horizontal notches, bolts secured in the sides of the wagon body and adapted to engage in said notches, and tail nuts on said bolts adapted to engage said stops and prevent the bolts from leaving the notches and to clamp the parts together.

2. An end gate for a wagon body comprising a board adapted to fit between the sides of the wagon body, angle iron cross bars secured to the rear side of the end gate board, projecting beyond the sides thereof and provided with right angle forwardly projecting flanges, side members secured to said flanges and adapted to embrace the sides of the wagon body, rearward extensions on said members projecting beyond the rear of the end gate board and provided with horizontal openings, and a tie bolt passing through said openings in the rear of the end gate board.

3. The combination with a wagon body, of an end gate pivoted to the body near its top, comprising a board adapted to fit between the sides of the wagon body, a latch plate secured to the rear lower edge of said board and provided with hooks on its opposite ends projecting laterally beyond the sides of the body, supporting plates secured to the bottom of the wagon body and adapted to receive the lower edges of said latch plate, spring retracted links on the opposite sides of the wagon body adapted to engage the hooks of the latch plate, and a spring catch secured to the bottom of the body and adapted to engage the bottom edge of the latch plate.

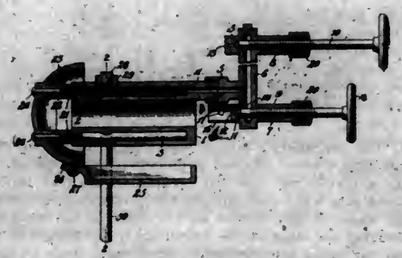
4. The combination with a wagon body, of an end gate pivoted to the body near its top, comprising a board adapted to fit between the sides of the wagon body, a latch plate secured to the rear lower edge of said board and provided with hooks on its opposite ends projecting laterally beyond the sides of the body, a spring catch on the bottom of the body adapted to engage said latch plate, cylinders secured to the opposite sides of the wagon body, eye bolts slidably mounted in said cylinders, retracting springs on said bolts, and links loosely connected to the outer ends of the bolts and engaging with the hooks on the ends of the latch plates.

5. The combination with a wagon body provided with notched extensions projecting beyond the rear ends of the middle portions of the sides thereof, of an end gate comprising a board pivoted to the body near its top, cross bars secured to the rear face of the end gates and projecting laterally beyond the sides of the wagon body,

side members resting against the outer faces of the side of the wagon body, right angle flanges on the ends of the cross bars secured to said side members, extensions on the side members provided with horizontal openings coinciding with the throat of the notches in the extensions of the sides of the body, and tie bolts passing through said openings and in the rear of the end gate and engaging in said notches.

[Claim 6 not printed in the Gazette.]

1,025,025. BURNER. EDWARD J. SPINK, Council Bluffs, Iowa, assignor of one-third to Joseph A. Miller and one-third to Robert S. Humphrey, Council Bluffs, Iowa. Filed Apr. 20, 1911. Serial No. 622,417. (Cl. 158—62.)



1. In a burner, a gasifying device for a liquid hydrocarbon comprising a chambered member having a passage therethrough and freely exposed on its exterior, a burner at one end of said passage in position to direct a flame therethrough, and a deflector located at and confined to the other end of the passage for returning the flame in enveloping relation to the exterior of the gasifying member.

2. In a burner, a gasifying device for liquid hydrocarbon comprising a cylindrical member having a freely exposed exterior and an interior, unobstructed, annular chamber formed therein and a central passage extending entirely therethrough, a burner in axial relation to the central passage in position to direct a flame therethrough, and a deflector carried by the other or exit end of the cylindrical member and of greater diameter than and confined to the exit end of the said cylindrical member for directing the flame extending through the central passage through the cylindrical member into enveloping relation to the exterior of said gasifying member.

3. In a burner, a gasifying device comprising an elongated cylindrical member having a freely exposed exterior and an interior, unobstructed, annular chamber therein and a central passage entirely therethrough, a burner in alinement with the central passage and located adjacent one end thereof for directing a flame therethrough, and a substantially semi-spherical deflector carried by the other end of the cylindrical member and having its open end directed toward the burner end of the gasifying member.

4. In a burner, a gasifying device comprising an elongated cylindrical member having a freely exposed exterior and an interior, unobstructed, annular chamber therein and a central passage entirely therethrough, a burner in alinement with the central passage and located adjacent one end thereof for directing a flame therethrough, and a substantially semi-spherical deflector carried by the other end of the cylindrical member and having its open end directed toward the burner end of the gasifying member, said semi-spherical deflector having its center of curvature interior to the passage through the cylindrical member, and its open end in surrounding relation to the corresponding end of the said cylindrical member and also having interior bosses for spacing the deflector with relation to the cylindrical member, said bosses having passages therethrough for fastening means connecting the deflector with the said cylindrical member.

5. In a burner, a gasifying device for liquid fuel comprising a one piece cylindrical member having a freely exposed exterior and an interior, unobstructed, annular chamber formed therein and a central passage entirely therethrough, a burner at one end of the cylindrical member in substantial alinement with the central passage for directing a flame therethrough, a substantially semi-spherical deflector carried by the end of the cylindrical member remote from the burner and in spaced embracing relation to the corresponding end of said cylindrical member, a priming pan or cup carried by the deflector in operative relation to the cylindrical member, means for introducing fuel into the chamber within the cylindrical member, and means for conducting the gasified fuel from the chamber.

[Claims 6 to 8 not printed in the Gazette.]

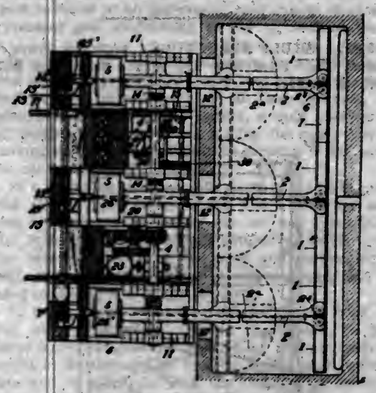
1,025,026. HOLDER FOR ELECTRIC LIGHTS, TELEPHONES, AND THE LIKE. CLARENCE W. SPRAGUE, Philadelphia, Pa. Filed June 4, 1909. Serial No. 500,093. (Cl. 248—10.)



1. A support of the character described, comprising a yoke having arms provided with laterally turned upper ends having their outer faces in the arc of a circle, the said outer surface having bayonet slots, an enlarged circular laterally extending portion formed integral with the yoke and having a notch in its upper face, a shaft carried by the center of the enlarged portion and integral therewith, a spring drum mounted upon said shaft and composed of ends connected by transverse bolts, a bearing portion between said web and resting upon said bolts, a helical spring within the bearing portion and secured to the shaft and the opposite end secured to one of the bolts, and pawls loosely mounted upon two oppositely arranged bolts on the outside of the end and adapted to engage the notch in the yoke, and a cable wound upon the drum and having its free end carrying a light.

2. A support of the character described, comprising a yoke having arms provided with laterally turned upper ends having outer faces in the arc of a circle, the said outer surface having bayonet slots, an enlarged circular laterally extending portion formed integral with the yoke and having a notch in its upper face, a shaft carried by the center of the enlarged portion and integral therewith, a spring drum mounted upon said shaft and composed of ends connected by transverse bolts, a bearing portion between said web and resting upon said bolts, a helical spring within the bearing portion and secured to the shaft and secured to one of the bolts, pawls loosely mounted upon two oppositely arranged bolts on the outside of the end and adapted to engage the notch in the yoke, a laterally extending shaft formed integral with the lower end of the stem of the yoke, a roller rotatably mounted upon said shaft, a cable wound upon the drum and having free ends passing down over the roller and carrying a light and a canopy having inwardly extending pins interlocking with the bayonet slots in the laterally turned ends of the yoke.

1,025,027. MEANS FOR REMOVING SLAG FROM HEARTH-FURNACES. KARL STOBRAWA Gleiwitz, Germany. Filed July 31, 1911. Serial No. 641,431. (Cl. 75—24.)



1. In an apparatus for removing slag from furnaces, the combination of a truck, a rotating shaft mounted on the truck, means for rotating the shaft, levers mounted on the shaft, scrapers on the levers, means for balancing the scrapers, and means for reciprocating the truck.

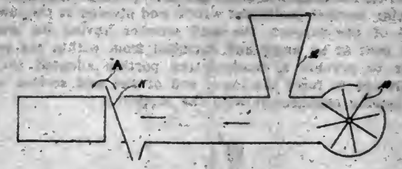
2. In an apparatus for removing slag from furnaces, the combination of a truck, including an axle, a motor for operating the truck, the truck including gearing between said motor and the axle, a rotatable shaft mounted on the truck, means for rotating the shaft, slag scrapers supported on the shaft, and counterbalancing means on the levers for causing the scrapers to float on the molten mass.

3. In an apparatus for removing slag from furnaces, the combination of a truck, means for operating the truck, a rotatable shaft on the truck, a toothed segment on the shaft, levers loosely mounted on said shaft, each of said levers having a clutch member, clutch members on the shaft to coöperate with the clutch members on the levers whereby to lock the levers to the shaft, means engaging with the toothed segment to impart motion thereto to rotate the shafts, and scrapers on the levers to remove slag when the truck is operated.

4. In an apparatus for removing slag from furnaces the combination of a truck, a plurality of levers mounted on the truck, pivoted scrapers mounted at the ends of the levers, means for horizontally rotating the scrapers, means for balancing the levers to cause the scrapers to float on the mass of molten metal being acted on, and means for reciprocating the truck and scrapers.

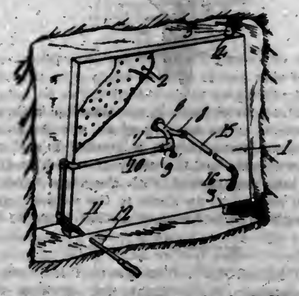
5. In an apparatus for removing slag from furnaces, the combination of a truck, a shaft mounted on the truck, a motor for rotating the shaft, a series of levers mounted on the shaft, means for clutching the levers to the shaft, pivotally mounted scrapers at the free end of said levers each of said scrapers having gear teeth, a shaft carried by each lever, a worm on each said shaft to mesh with the gear teeth on the scraper, a scraper-operating motor on the truck, means for coupling and uncoupling the lever shafts with the scraper-operating motor to control the horizontal position of the scrapers, counterbalance for each lever, and a motor for operating the truck.

1,025,028. PROCESS OF GRADING COTTON-SEED. JOHN O. B. STREET, Okemah, Okla. Filed Dec. 22, 1910. Serial No. 598,792. (Cl. 130—17.)



A method of grading cotton seed according to its weight consisting of coating the seed with a binder which will hold down the lint and subjecting the seed thus coated to an air blast.

1,025,029. APPARATUS FOR TUNNELING ROCK. HARVEY F. SUTTON, Salt Lake City, Utah. Filed Mar. 7, 1911. Serial No. 612,740. (Cl. 125—14.)



1. Apparatus for tunneling rock, including a hollow head having a mixing chamber therein, said head having a working face formed with a plurality of minute apertures, means for pivotally supporting the head close to the surface to be acted upon, means for directing fuel into the head, valves for controlling the passage of fuel through said means, and means for directing air under pressure into the head.

2. Apparatus for tunneling rock, including main fuel and air conducting pipes, a hollow head, upper and lower alining pivot devices upon the head, said head being shiftable about the axis of the pivot devices and into and out of operative relation to the surface to be acted upon, the working face of the head having a plurality of minute apertures, a fuel pipe opening into the head, a valve for controlling the passage of fuel therethrough, an air pipe opening into the head, said fuel and air pipes being movable with the head, and flexible pipe connections between the movable fuel and air pipes and the main fuel and air pipes respectively.

1,025,030. ARTICLE-HANGER. GUNDER SIVERSON, Tioga, N. D. Filed June 21, 1911. Serial No. 634,449. (Cl. 248—24.)

1. In an article holder, in combination with a support having a longitudinal recess and a keeper, of an arm comprising connected sections adapted to be moved into the recess so as to be made flush with the face of the said support, a locking member carried by one of the said sections, the said section having its lower end formed to provide a cam actuating surface adapted to force the said locking member into locking engagement with the support on movement of the said section to an open position.

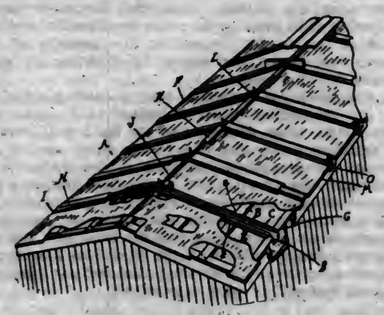
2. In an article holder, in combination with a support having a central longitudinal disposed recess and a keeper, of an arm comprising connected sections adapted to be positioned within the said recess to be made flush with

the face of the support, means carried by the lower end of one of the said sections adapted to be moved in locking engagement with the support on movement of the said arm to an open position, and a vertically disposed releasing member positioned within and pivoted at the lower end of the support, the said member having its lower end bent at an angle and extended from within the support to provide a manipulating portion adapted to be depressed to force the lower end of the said section out of locking engagement with the support.



3. In an article hanger, in combination with a support having a recess and a keeper; of an arm comprising connected sections, one of which is pivoted to and yieldingly held in the recess, and the other of which is adapted to be moved into engagement with the keeper and hold the first named section at an angle to the support, and means for disengaging the last named section from the keeper.

1,025,031. CAR-ROOF. WILLIAM D. THOMPSON, Detroit, Mich., assignor to Hutchins Car Roofing Company, Detroit, Mich., a Corporation of Michigan. Filed June 11, 1909. Serial No. 501,612. (Cl. 105—5.)



1. In a car roof, a substructure comprising purlins and trough-shaped carlines, of supporting strips independent and arranged upon opposite sides of each carline, forming lateral extensions therefor, the strips being arranged in a number of transverse series upon the purlins and flush with their tops, and roofing plates upon the purlins overlapping at their side edges the supporting strips.

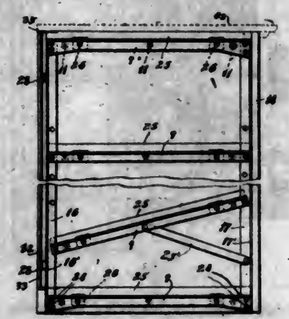
2. In a car roof, the combination with a series of wooden purlins, of a metallic trough-shaped carline, a plurality of wooden supporting strips extending transversely of the purlins beside the carline, and lying flush with the purlin tops, the strip ends resting within recesses formed within the purlins, and the recesses for adjoining strip ends being spaced, leaving unbroken portions of the purlins intermediate the strips, and a roofing sheet overlapping at its side edge the supporting strips.

3. In a car roof, the combination with a sub-structure comprising purlins and carlines formed with upstanding flanges thereon, of supporting strips independent of and adjoining the carlines forming lateral extensions therefor, and roofing plates upon the purlins overlapping at their side edges the supporting strips.

4. In a car roof, the combination with a substructure comprising purlins and carlines, of independent supporting strips arranged adjacent the carlines and having their upper faces in the plane of the upper face of the purlin, and roofing plates resting upon said purlins and said strips.

5. In a car roof, the combination with the carlines and the purlins, of supporting strips extending between the purlins independent of and adjoining the carlines, and roofing plates resting upon the supporting strips.

1,025,032. SHELF STRUCTURE. WILLIAM TIETZ, Richmond, Va. Filed May 18, 1911. Serial No. 627,953. (Cl. 211—27.)



1. A sectional shelving construction comprising a series of vertical angle bar supports arranged in contacting pairs, a series of shelf supports adjustable on said vertical supports, shelves adapted to be locked to the shelf supports and to be adjustable therewith, and lateral tongues extending from a part of the vertical supports and end panels provided with locking devices having notches adapted to engage the tongues.

2. A sectional shelving construction comprising vertical angle bar supports arranged in contacting pairs, a series of horizontal shelving supports adjustable on said vertical angle bar supports, a part of said vertical angle bar supports having flanges forming tenons, vertical members secured to the supports and end panels having vertical grooves adapted to receive the tenons and be interlocked with the angle bar supports carrying said tenons.

3. In a sectional shelving construction, a series of vertical angle bar supports, vertical members secured to said supports, the end vertical angle bar supports being provided with lateral tongues, a series of horizontal shelf supports adjustable on the vertical end angle bar supports, a series of end panels having grooves adapted to receive portions of the end vertical angle bar supports, and notch locking device secured to the end panels adapted to lockingly engage the tongues of said vertical end supports.

4. A shelving construction including vertical supports, shelving supports adapted to be secured at either end to the vertical supports, and braces pivoted medially of the shelving supports and adapted to be secured to the vertical supports for holding said shelving supports in inclined positions and adapted to be secured to either set of the vertical supports, whereby the shelving supports may be inclined in either direction.

5. In combination, a series of vertical supports formed of angle iron, means for connecting the supports in spaced relation, and a top shelf adapted to be interlocked to said connecting means and having a depending flange on its rear edge.

[Claim 6 not printed in the Gazette.]

1,025,033. AEROPLANE. ZACHARIAH TISHER, Spokane, Wash. Filed June 8, 1911. Serial No. 631,981. (Cl. 244—29.)



1. In a device of the class described, a car body, planes carried thereby, propelling means and a steering device comprising a rudder mounted on the forward end of the car and movable in all directions, said rudder having one end recessed and conforming to the surface of the car body.

2. In a device of the class described, a car body, planes carried thereby, propelling means and a steering device carried by the forward end of the body portion, such steering device comprising a rudder, a staff therefor and a ball and socket joint for supporting the staff, said rudder having one end recessed and conforming to the surface of the car body.

3. In a device of the class described, a car body, planes carried thereby, propelling means and a steering device carried by the forward end of the car and comprising a rudder including blade portions projecting longitudinally of the forward portion of the body and perpendicularly thereof, said rudder having one end recessed and conforming to the surface of the car body.

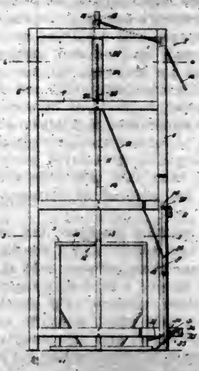
4. In a device of the class described, a car body, propelling means therefor, steering mechanism, a plane mounted upon the forward portion of the car body and arranged to be inclined at various angles with reference thereto and to coöperate with the steering mechanism in controlling the elevation and direction of travel of the car, said steering mechanism including a rudder capable of movement in all directions and such rudder having a V-shaped portion with the flaring sides disposed adjacent to the body of the car and arranged to lie perpendicular to the adjacent portion of the surface of the car body when the rudder is in position with its axis coincident with the axis of the car.

5. In a device of the class described, a car body having an approximately conical nose portion, propelling means, a plane mounted above the body and immediately to the rear of the nose portion, means for deflecting the plane at various angles with reference to the body of the car, and a steering device comprising a rudder, a staff therefor, and means for mounting the staff at the point of the nose portion, permitting said staff to have a movement causing the rudder to assume a position at any angle with reference to the body of the car and such rudder having a V-shaped portion with the flaring sides disposed adjacent to the body of the car and arranged to lie perpendicular to the adjacent portion of the surface of the car body when the rudder is in position with its axis coincident with the axis of the car.

1,025,034. AUTOMATIC CATCHING DEVICE. JOHN W. TREW and CHARLES MCGAUGHEY, Staunton, Ill. Filed Sept. 23, 1911. Serial No. 650,869. (Cl. 187—64.)

1. The combination with a shaft, and a movable lift traversable therein, of lifting devices arranged for sliding movement near the head of the shaft, a swinging chute pivoted to one side of the shaft near the lower end thereof, connections between the lifting devices and the said chute for the swinging of the latter at an angle below the lift on the engagement thereof with the said lifting devices, and means operated by the lift for locking the chute out of the path of movement of the lift on the descending of the latter.

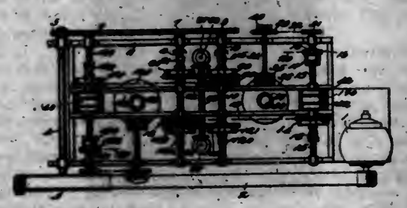
2. The combination with a shaft, and a movable lift traversable therein, of lifting devices arranged for sliding movement near the head of the shaft, a swinging chute pivoted to one side of the shaft near the lower end thereof, connections between the lifting devices and the said chute for the swinging of the latter at an angle below the lift on the engagement thereof with the said lifting devices, means operated by the lift for locking the chute out of the path of movement of the lift on the descending of the latter, and means for raising and lowering said lift.



3. The combination with a shaft, and a lift adapted for travel therein, of a chute pivoted to one side of the shaft and adapted to swing from normal perpendicular position to an inclination, means engageable with the lift near the top of the shaft for bringing the chute to inclined position when the lift is ascending in the shaft, and means for locking the chute in perpendicular position on the lowering of the lift and for unlocking said chute on the raising of the said lift.

4. The combination with a shaft, and a lift adapted for travel therein, of a chute pivoted to one side of the shaft and adapted to swing from normal perpendicular position to an inclination, means engageable with the lift near the top of the shaft for bringing the chute to inclined position when the lift is ascending in the shaft, means for locking the chute in perpendicular position on the lowering of the lift and for unlocking said chute on the raising of the said lift, and means for raising and lowering the lift in the shaft.

1,025,035. PIPE-MAKING MACHINE. ARTHUR C. TUNISON, Boise, Idaho, assignor to Atlas Cement Pipe and Machinery Co., Boise, Idaho, a Corporation of Idaho. Filed Apr. 5, 1911. Serial No. 619,146. (Cl. 25—37.)



1. In a pipe molding machine, the combination of a power shaft; a feed hopper and a mixing member; clutch and sprocket connections between said shaft and member for rotating the latter; a feed pipe registering with said hopper; a valve located between said pipe and hopper; connections between said shaft and feed pipe adapted to rotate said pipe; connections comprising a lever between said shaft and pipe adapted to reciprocate said pipe; and a tamping mechanism adapted to be rotated and reciprocated by said pipe, substantially as described.

2. In a pipe molding machine, the combination of a power shaft; a feed hopper and a mixing member; chain and sprocket connections between said shaft and member for rotating the latter; a feed pipe registering with said hopper; frictionally engaging connections between said

shaft and feed pipe adapted to rotate said pipe; connections comprising eccentrics carried by said shaft between said shaft and pipe adapted to reciprocate said pipe; and a tamping mechanism adapted to be rotated and reciprocated by said pipe, substantially as described.

3. In a pipe molding machine, the combination of a power shaft; a feed hopper and a mixing member; chain and sprocket connections between said shaft and member for rotating the latter; a feed pipe registering with said hopper; connections between said shaft and feed pipe adapted to rotate said pipe; connections between said shaft and pipe adapted to reciprocate said pipe; a tamping mechanism adapted to be rotated and reciprocated by said pipe; and a mold having a cavity located below and adapted to receive material from said feed pipe and in which said tamping means are adapted to operate, substantially as described.

4. In a pipe molding machine, the combination of a power shaft; a feed hopper and a mixing member; chain and sprocket connections between said shaft and member for rotating the latter; a feed pipe registering with said hopper; connections between said shaft and feed pipe adapted to rotate said pipe; eccentric and lever connections between said shaft and pipe adapted to reciprocate said pipe; a tamping mechanism adapted to be rotated and reciprocated by said pipe; and a mold casing and core forming a mold cavity located below adapted to receive material from said pipe and in which said tamping means are located, substantially as described.

5. In a pipe molding machine, the combination of a mixing means; a feed pipe adapted to receive the mixed material from said means; mechanism for rotating said pipe; means comprising an eccentric for reciprocating said pipe; tamping means provided with a frictional connection with said pipe; a mold having a core associated with said tamping means; and means for continuously rotating said core after said pipe is formed, substantially as described.

[Claims 6 to 12 not printed in the Gazette.]

1,025,036. CONCRETE BUILDING. CLAUDE A. P. TURNER, Minneapolis, Minn. Filed Jan. 21, 1910. Serial No. 539,352. (Cl. 72—15.)



1. The combination of a slab of concrete, slab supports arranged to form a rectangular panel of the slab, groups of rods in the slab forming a concentration of rods at and cutting across the corners of the panel and overlapping the supports, series of rods extending diagonally of the panel and supported by said corner rods, and series of rods extending normal to the supports.

2. The combination of a slab of concrete, slab supports arranged to form a rectangular panel of the slab, groups of rods in the same horizontal plane in the slab forming a concentration of rods at and cutting across the corners of the panel and overlapping the supports, series of rods extending diagonally of the panel and supported by said corner rods, and series of rods extending normal to the supports.

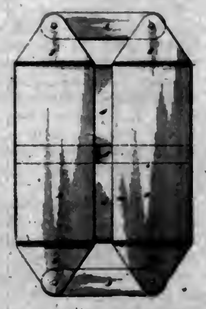
3. The combination of a slab of concrete, slab supports arranged to form a rectangular panel of the slab, groups of rods in the lower part of the slab forming a concentration of rods at and cutting across the corners of the panel and overlapping the supports, series of rods extending diagonally of the panel and supported by said corner rods, and series of rods extending normal to the supports.

4. The combination of a slab of concrete, ribs cast integral with the slab arranged to form rectangular panels of the slab, groups of rods in the slab forming a concentration of rods at and cutting across the corners of the panel and overlapping the ribs, a series of rods extending diagonally of the panel and supported by said corner rods, and rods extending normal to the ribs.

5. The combination of a concrete slab, supports therefor arranged in the form of a rectangle, groups of rods in the slab forming a concentration of rods at and cutting across the corners of the rectangle to the contiguous side supports and overlapping the supports, whereby the diagonal span is shortened, and series of rods extending diagonally through the slab and supported by said corner rods.

[Claims 6 to 8 not printed in the Gazette.]

1,025,037. COLLAPSIBLE SUIT AND HAT BOX. HARRISON B. WALTER, Danville, Ill., assignor to National Fibre Box Company, Danville, Ill., a Corporation of Illinois. Filed Sept. 28, 1911. Serial No. 651,780. (Cl. 229—32.)



1. A collapsible box, comprising a bottom having sides and ends connected thereto and adapted to be bent from the bottom to a vertical position, integral end flaps connected to the sides and extending at right angles thereto, and straps pivotally connected to the end flaps for supporting the ends and side members in a vertical position.

2. A box, comprising a bottom having sides and ends adapted to be folded to a vertical position, end flaps connected to the side members, and straps pivotally connected to the end flaps for holding the side members and ends in a vertical position, said side and end members adapted to be folded down upon the bottom of the box when the box is in a collapsed condition, and the end flaps and straps extending along the underside of the box.

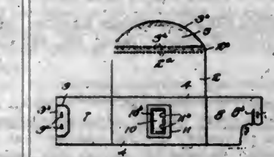
3. A box, comprising a bottom having sides and ends hinged thereto, adapted to be swung to a vertical position, end flaps connected to each of the side members pivotally connected together, said sides and ends adapted to be folded down upon the bottom of the box when in a collapsed condition, and the flaps swung beneath the bottom of the box.

1,025,038. MOTOR-CAR SEAT. LUDWIG WILKENING, Hanover, Germany. Filed Feb. 15, 1910. Serial No. 543,999. (Cl. 21—42.)

In a seat, a plurality of curved supporting members, a plurality of cross bars connected therewith, a supporting spring located beneath one of said supporting members and curved to correspond therewith, an additional supporting device coöperating with the spring, and flexible means connecting the cross bars.



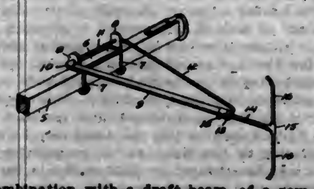
1,025,039. MAILING DEVICE. WILLIAM LAURENCE WILLIAMS and JOHN LEWIS OLMSTEAD, West Brownsville, Pa.; said Williams assignor to Ernest Carlson, Monongahela, Pa. Filed Oct. 22, 1909. Serial No. 524,069. (Cl. 229—78.)



1. In a mailing device, a body having a face wall and back wall and side flaps hinged to the back wall and a foldable portion hinged to the back wall and adapted to lie against said back wall, one of said side flaps being formed with a transversely disposed slot located near the outer end thereof and the other side flap being formed with an end tongue adapted to enter the slot of the first side flap, a sealing flap extending from the face wall and adapted to be sealed to the back wall, and a metallic strip secured to the foldable portion and provided with bendable tongues adapted to be interlocked with the end flaps and hold the tongue of one of said flaps in the slot of the other flap.

2. In a mailing device, a body formed with a face wall and back wall and side flaps and a foldable portion hinged to said back wall, each of said side flaps being provided with slots near their outer ends, one of said side flaps being provided with an end tongue having slots therein, said end tongue being insertible in the end portion of the other side flap, a tissue strip secured to the foldable portion and provided with a perforated portion forming an easily detachable central section, a metallic seal secured over said tissue strip to the foldable portion and provided with bendable tongues adapted to enter a part of the slots in the end flaps and to hold said flaps in interlocking engagement, the tongue of one of the end flaps being provided with a piece of material adapted to be sealed to the central section of the tissue strip, and a sealing flap connected with the face wall and adapted to be sealed to the back wall.

1,025,040. ROW-MARKER. THOMAS B. WOODS and CHARLES E. WILLIAMS, Headland, Ala. Filed May 9, 1911. Serial No. 625,985. (Cl. 111—24.)



The combination with a draft beam, of a row marking attachment, comprising a supporting plate adapted for horizontal and detachable connection with the draft beam and having upturned perforated ear terminals, an inner tubular section extending at right angles to said plate, an outer tubular section slidably engaged in the inner tubular section, an elbow union on the inner end of said inner tubular section, a brace rod disposed rearwardly of the inner tubular section and having an eye section at its outer end for engaging the outer end of said inner tubular section, the inner end of said brace rod being bent at an angle upon itself and passing through said ear terminals to form a pivot portion, the inner extremity of said rod engaging said union, and means for adjustably clamping said plate upon said draft beam.

1,025,041. FERROCONCRETE RIBBED CEILING. JULIUS HEINRICH ALBERT WRISSENBERG, Bremen, Germany, assignor to The Firm of Gebrüder Bölken, Eisenbeton-Hohldecken-Patente "System Wrissenberg," Bremen, Germany. Filed Feb. 1, 1910. Serial No. 541,279. (Cl. 72—66.)



1. A ferro-concrete ribbed ceiling of the character described, comprising a plurality of cylindrical members disposed in pairs, the spaces between the cylindrical members of each pair being filled with concrete, a thrust member having generally the form of a plate and also made of concrete, said thrust member being integral with the concrete masses between the cylindrical members of each pair and forming a continuous plate extending from pair to pair, and a filling of lighter material disposed between one pair of cylindrical members and the next successive pair.

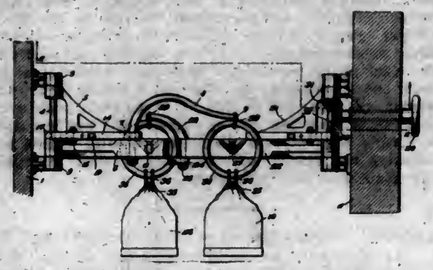
2. A ferro-concrete ribbed ceiling of the character described, comprising a pair of tubular members arranged in pairs, the tubular members of each pair being spaced apart by a little distance and each pair being spaced from each successive pair by a greater distance, a thrust member of concrete having generally the form of a plate extending from pair to pair of tubular members and provided with portions extending between the tubular members of each pair, fastening members for holding together the tubular members of each pair, metallic bars engaging said fastening members and also engaging said portion of said thrust member extending between the tubular members of each pair, and a filling of light material disposed between the pairs of tubular members.

3. A ferro-concrete ribbed ceiling of the character described comprising a plurality of cylindrical members each provided with conically folded ends, said members being arranged in pairs, the members of one pair being spaced from the members of the next successive pair, a thrust member made of concrete and provided with portions extending between the members of a pair, said thrust member having generally the form of a plate extending from pair to pair of tubular members, the thickness of which at predetermined points is greater than the thickness at the other points in consequence of the reduction of the ends of the cylindrical members, and a filling of light slag cement disposed between said pairs.

1,025,042. MAIL-BAG CATCHER AND DELIVERER. JOHN L. ADAM, New Orleans, La., assignor to American Railway Mail Device Company, New Orleans, La., a Corporation of Louisiana. Filed Oct. 16, 1911. Serial No. 655,011. (Cl. 105—231.)

1. In a mail bag catcher and deliverer, the combination of a vertical fixed shaft, a bracket rotatably mounted on the shaft, means for supporting a mail bag from the bracket, a catcher arm projecting from the bracket, and a pawl for securing the bracket to the shaft and for auto-

matically releasing the bracket upon the pawl being struck, substantially as described.



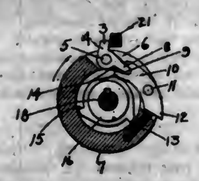
2. In a mail bag catcher and deliverer, the combination of a vertical fixed shaft, a bracket rotatably mounted on the shaft, means for supporting a mail bag from the bracket, a catcher arm projecting from the bracket, a notched disk fixed to the shaft, pawls pivotally connected to the sides of the bracket for engaging the disk to secure the bracket in a set position and for automatically releasing the bracket upon the pawls being struck, and means for holding one of the pawls out of engagement with said disk, substantially as described.

3. In a mail bag catcher and deliverer, the combination of a vertical fixed shaft, a bracket rotatably mounted on the shaft, means for securing the bracket to the shaft and for automatically releasing the bracket, a catcher arm projecting from the bracket, a finger bar carried by the bracket, a ring detachably supported by the finger bar, and a bag holder comprising a pair of pivotally connected hooks for suspending a mail bag from the ring, substantially as described.

4. In a mail bag catcher and deliverer, the combination of a vertical fixed shaft, a bracket rotatably mounted on the shaft, means for securing the bracket to the shaft and for automatically releasing the bracket, a catcher arm projecting from the bracket, a finger bar pivoted in the bracket, a ring supported by the finger bar, a ring holder fixed to the finger bar for engaging the ring, and means for detachably supporting a mail bag from the ring, substantially as described.

5. In a mail bag catcher and deliverer, the combination of a rotatably mounted bracket, a finger bar projecting upwardly and extending forwardly from the bracket, means for detachably supporting a mail bag from the finger bar, a catcher arm projecting laterally from the bracket, the catcher arm terminating in an upwardly turned hook and having forwardly extending hooks near its inner end, and means for holding the bracket in a set position and for automatically releasing same, substantially as described.

1,025,043. CLUTCH. FRED R. ALLEN, Providence, R. I., assignor to Eugene F. Bowen, Providence, R. I. Filed Apr. 28, 1911. Serial No. 623,925. (Cl. 192—6.)

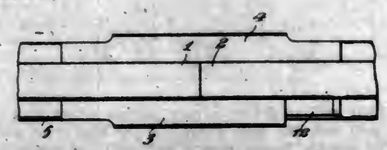


1. The combination with two shafts in alinement, of a clutch member carried by each, one of said members having a peripheral tooth, the other of said members carrying a spring pressed pawl adapted to engage said tooth and also carrying a dog for controlling the position of said pawl, and a movable tripper adapted to engage said dog disengage said pawl and stop the dog carrying member.

2. The combination with two shafts in alinement of a socket clutch member carried by one shaft, a toothed clutch member carried by the other shaft and extending into the socket of the first named member, a spring actuated pawl carried by the socket member for engaging the toothed member, a dog also carried by said socket member for controlling the position of said pawl, and a movable tripper adapted to engage said dog disengage said pawl and stop the socket member.

3. The combination with two shafts in alinement, a clutch member provided with a socket carried by one shaft, a toothed clutch member carried by the other shaft and extending into the socket of the first named member, a pawl, and a dog both operatively mounted and substantially inclosed in the rim of said socket member, said pawl adapted to engage the toothed member and said dog adapted to control the position of said pawl, the latter also having a member projecting beyond the face of its supporting member, and a movable tripper adapted to extend into the path of said projection to move said dog to disengage the pawl and stop the socket member.

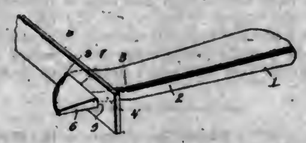
1,025,044. JOINT-CHAIR. GEORGE BARCLAY, Avonmore, Pa. Filed Nov. 25, 1911. Serial No. 662,412. (Cl. 238—6.)



1. A joint chair comprising fish plate members adapted to embrace the webs and base flanges of the rails, interlocking T-heads on the members adapted to connect the same beneath the rail, a tapered bar inserted between one of the members and the base flange of the rail for drawing the T-heads into interlocking engagement, and means acting when the T-heads are drawn together for drawing the members together.

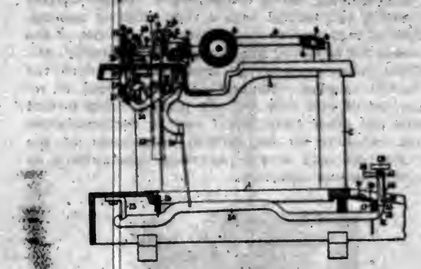
2. A joint chair comprising a pair of fish plate members adapted to embrace the webs and base flanges of the rails to be connected, interlocking T-heads formed on the bottom of said members, said T-heads having oppositely disposed inclined faces which act to draw the members toward each other when the T-heads are drawn to interlocking engagement, and means for drawing the T-heads into interlocking engagement.

1,025,045. SWINGLETREE. LAMBERT E. BARNES, Greenwood, Miss. Filed Nov. 30, 1910. Serial No. 594,878. (Cl. 21—79.)



The combination with a trace having a swingletree opening, of a swingletree, said swingletree having its rear faces beveled adjacent its ends, a shoulder forming the terminal of each of said beveled portions, a flat wall integral with the shoulder at right angles thereto, the ends of the swingletree beyond such beveled portions being rounded, said flat walls and rounded ends being of a length corresponding to the similar dimension of the swingletree opening in the trace, and the said shoulder forming a pivot about which the trace may be swung in the application of the latter to the swingletree whereby the trace may be arranged at right angles to the swingletree, said shoulder and end serving to prevent accidental displacement of the trace substantially as described.

1,025,046. TYPE-WRITING MACHINE. WALTER J. BARRON, New York, N. Y., assignor, by mesne assignments, to Union Typewriter Company, Jersey City, N. J., a Corporation of New Jersey. Filed Aug. 30, 1910. Serial No. 579,628. (Cl. 197—88.)



1. In a typewriting machine, the combination of a traveling carriage, carriage feeding devices, and key controlled means operative at will independently of movement of said carriage feeding devices to lock certain of said devices.

2. In a typewriting machine, the combination of a traveling carriage, carriage feeding devices, and key controlled means operative at will independently of movement of said carriage feeding devices to lock certain of said devices and thereby to prevent movement of said carriage in printing direction.

3. In a typewriting machine, the combination of a traveling carriage, carriage feeding devices including a toothed member, and key controlled means coöperative at will with the teeth of said member to lock said carriage against movement in printing direction, the position of said member being the same after the locking operation as prior thereto.

4. In a typewriting machine, the combination of a traveling carriage, carriage feeding devices including a toothed member, a coöperating locking member independently of said carriage feeding devices and normally separated from said toothed member, and key controlled mechanism for moving at will said locking member into engagement with said toothed member to lock said carriage against movement in printing direction.

5. In a typewriting machine, the combination of a traveling carriage, carriage feeding mechanism including a dog, and key controlled means operative at will independently of said dog element to lock said carriage against movement in printing direction, said means comprising a key lever, devices for limiting the movement of said key lever, and locking devices for holding said key lever in operated position.

[Claims 6 to 15 not printed in the Gazette.]

1,025,047. ELECTRIC GAS LIGHTING AND EXTINGUISHING APPARATUS. JOSIAH SAMUEL BENTON, Johnstown, Pa., assignor to The Ideal Epworth Acetylene Company, Johnstown, Pa., a Corporation of Pennsylvania. Filed July 16, 1910. Serial No. 572,240. (Cl. 175—115.)

1. In an electric gas lighting and extinguishing apparatus, a gas chamber comprising a casing, a hollow post mounted upon the top of said casing, a valve seat in said post, a valve, and a valve stem disposed in the interior of said post, a spiral spring for maintaining the valve normally in a closed position, one end of said valve stem extending into said gas chamber and being provided with an adjustable nut, a pair of armatures disposed within said gas chamber, one of said armatures being arranged to straddle said valve stem and to engage said nut, the other of said armatures being provided with an extension arranged to engage the first named armature to lock it in its shifted position, a magnet secured to the exterior of said gas chamber for operating the first named armature and a magnet secured to the exterior of said gas chamber for operating the second named armature and causing the release of the first one.



2. In an electric gas lighting and extinguishing apparatus, a gas chamber comprising a casing, a hollow post mounted upon the top of said casing, a pair of magnets mounted upon the top of said casing in close proximity to said hollow post, the cores of said magnets extending through the top of the casing, an armature for said magnets disposed within said casing adjacent to said magnet cores, a second pair of magnets mounted on the opposite sides of said posts, the cores of said second pair of magnets also extending through the top of the casing, an armature for said second pair of magnets disposed within said casing in close proximity to said cores, a valve, and a valve stem disposed in the interior of said post, a bushing at the bottom of said post for guiding the valve stem, a spiral spring disposed about said valve stem, the lower end of the spiral spring bearing against said bushing and the upper end against the valve, one of said armatures being arranged to operate said valve stem and the other of said armatures serving as a locking member for said first-named armature.

1,025,048. MANUFACTURE OF CASK-STAVES. CHARLES ELLIS BRATT, London, England. Filed Aug. 30, 1909. Serial No. 515,309. (Cl. 144—309.)

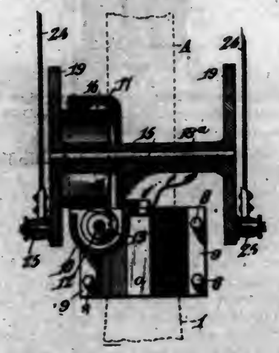


The herein described process of producing staves for the manufacture of tight bilged casks and barrels, which consists in cutting a piece of timber of any suitable width sufficient to give a plurality of staves, but of twice the thickness of the required stave, to the right length of the required stave; next shaping said piece transversely at the top and bottom to the required curved contour of the outer face or back of each stave, and to the width thereof; then cutting from said piece a strip equal to the width of the staves; next shaping both the edges of said strip to conform to the required configuration of the stave for fitting its neighbor on assembly, that is to say simultaneously grooving and tonguing or otherwise jointing, beveling and fashioning it longitudinally; and finally cutting said strip in halves whereby two staves of the desired dimensions and shape are obtained, finished except for the ordinary subsequent operation of chiming, crozing and howeling, substantially as described.

1,025,049. MECHANISM FOR TRANSMITTING POWER FOR PUMPING PURPOSES. JAMES A. BROWN, Cedar Rapids, Iowa, assignor of one-half to Iowa Windmill & Pump Co., Cedar Rapids, Iowa. Filed Dec. 8, 1909. Serial No. 532,505. (Cl. 103—62.)

1. A power-transmitting attachment for pumps comprising a sleeve composed of detachable parts adapted

to embrace the barrel of the pump, one part having a laterally-extending bracket, bearings on the bracket, a worm shaft mounted in the bearings, a worm on the shaft disposed between the bearings, a hood or casing supported on the bracket, a gear arranged in the said casing and meshing with the said worm, a second shaft supporting the gear and arranged at right angles to the first shaft, crank disks mounted on the ends of the second shaft, one of the said disks forming a connection between the gear and the second shaft, crank pins on the disks arranged in alinement, pitmen connected with the crank pins, and a cross head hingedly connected with both pitmen and also connected to the piston rod of the pump.



2. A power-transmitting attachment for pumps comprising a bracket having a sleeve at its inner end for embracing the barrel of the pump and provided with bearings, a worm shaft mounted in the bearings, a worm on the shaft, a casing mounted upon the bracket over the worm shaft and open at one side, said casing containing a tubular bearing extending transversely over the worm shaft, a crank shaft mounted in the tubular bearing with its ends projecting beyond each side of the pump barrel and provided with a gear meshing with the worm, crank disks fastened to the ends of the crank shaft, one of the disks being disposed at and partially closing the open side of the casing and supporting the said gear, pitmen connected with the crank disks, and a crosshead connected with the pitmen and adapted to be connected with the piston of the pump

3. A power-transmitting attachment for pumps comprising a two-part sleeve for embracing the barrel of the pump, one part of the sleeve being formed integral with a horizontally extending bracket which is offset from the center of the sleeve and is provided with bearings, a hood or casing mounted on the bracket, a worm shaft mounted in the bearings of the bracket and extending in a tangential relation to the pump barrel, a worm mounted on the shaft, a gear meshing with the worm, said casing containing a bearing extending transversely to and above the worm shaft, a crank shaft mounted in the bearing of the casing with its ends projecting therefrom at opposite sides of the pump barrel, crank disks fastened to the ends of the crank shaft, said crank disks being disposed on opposite sides of the worm shaft, pitmen connected with the crank disks, and a cross head connected with the pitmen and adapted to be connected to the piston of the pump.

1,025,050. IGNITION-TUBE. ALPHONSE BUTSCH, St. Lucia, British West Indies. Filed Dec. 17, 1910. Serial No. 597,807. (Cl. 123—145.)

1. The combination of an explosive engine including a cylinder formed with spaced openings, an igniting device, a by-pass casting secured to the cylinder and having port bores communicating with said openings, one of said openings having communication with the combustion chamber of the cylinder, and the other of said openings being positioned to be normally closed by the engine piston so as to prevent the escape of gas from the igniting device, said second-named opening adapted to be uncovered by the engine piston when the same reaches its highest point of compression whereby to release the gases in the igniting device, said igniting device comprising a plunger carried by the casting and formed with a right angular opening, one section of said opening communicating with one of the bores, means for adjusting the plunger longitudinally, and an ignition tube, arranged in communication with the second-named opening, said casting being formed to receive one end of said tube and the plunger being formed to receive the other end thereof and in communication therewith, whereby in the vertical adjustment of the plunger the tube may be fixed in place, substantially as and for the purpose described.



2. The combination of an explosive engine including a cylinder formed with spaced openings, an igniting device, a by-pass casting secured to the cylinder and having port bores communicating with said openings, one of said openings having communication with the combustion chamber of the cylinder, and the other of said openings being positioned to be normally closed by the engine piston so as to prevent the escape of gas from the igniting device, said second-named opening adapted to be uncovered by the engine piston when the same reaches its highest point of compression whereby to release the gases in the igniting device, said igniting device comprising sleeves formed integral with said by-pass casting and in communication with the bores thereof and in parallel relation with the cylinder, a plunger adjustably mounted in the upper one of said sleeves and having communication at one end with the opening in the combustion chamber and its opposite end in communication with the igniting device and provided on its upper surface with a non-circular projection, a plug cap removably mounted in said sleeve above the said plunger and formed with a non-circular recess adapted to receive said projection, and an adjusting nut carried by said plunger and engaging the lower end of said sleeve, said adjusting nut permitting longitudinal movement of the plunger relative to the said sleeve and plug cap, and an ignition tube, one end of said tube being carried by one of the said sleeves and the plunger being formed to receive the other end thereof, whereby in the longitudinal movement of the plunger the tube may be fixed in place.

1,025,051. SPRING-WHEEL. CHARLES P. CARRICK, Flint, Mich. Filed Oct. 4, 1911. Serial No. 652,889. (Cl. 152—28.)

1. A spring wheel comprising in combination, a hub, a series of flat springs radiating therefrom and terminating in interiorly threaded sockets, a felly, a series of spokes each consisting of inner and outer members movable longitudinally one within the other, the inner member consisting of a rod having its inner end engaged within a respective socket and the outer member consisting of

an open ended tube having an interiorly threaded outer end, a threaded plug engaged within the outer end of the tube, an ear projecting from the plug and having pivotal connection with the felly, and a coil spring within the hub intermediate the outer end of the inner member and the inner end of the plug.



2. In a spring wheel comprising in combination, a hub, a series of flat springs radiating therefrom and terminating in interiorly threaded sockets, a felly, a series of spokes each consisting of inner and outer members movable longitudinally one within the other, the inner member consisting of a rod having its inner end engaged within a respective socket and the outer member consisting of an open ended tube having an interiorly threaded outer end, a threaded plug engaged within the outer end of the tube, an ear projecting from the plug and having pivotal connection with the felly, said ear having its base projecting beyond the plug to form consequent shoulders for frictionally engaging the outer end of the tube, and a coil spring within the tube intermediate the outer end of the inner member and the inner end of the plug.

1,025,052. NOZZLE FOR OIL AND OTHER CANS. SALVATORE CARUSO, Providence, R. I. Filed Dec. 26, 1911. Serial No. 667,702. (Cl. 221—19.)

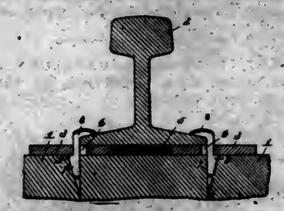


In a device of the kind described, the combination of a can wall having apertures and upturned flanges surrounding the same, and also having an exterior circular flange; a rotatable plate arranged in the said exterior flange and bearing on the upturned flanges and having apertures adapted to be moved into and out of registration with the flanged apertures in the can wall; a washer interposed between the said can wall and rotatable plate and surrounding the said upturned flanges of the can wall; and a nozzle fixed with respect to the rotatable plate and arranged over and in permanent communication with one of the apertures thereof.

1,025,053. RAIL-FASTENING. JOHN W. CUTHBERT, Bay City, Mich. Filed Oct. 25, 1911. Serial No. 656,556. (Cl. 238—2.)

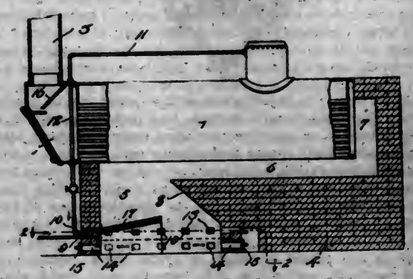
1. Fastening means for a railroad rail, the same consisting of a plate arranged between the tie and rail and provided with a spike opening, a spike driven through the spike opening of the plate into the tie and having its head engaging over the foot of the rail, said spike having a shoulder upon one side near the head thereof to engage under the plate after the spike has been driven a proper distance into the tie, and a spring normally exerting a force upon the plate to hold the same in engagement with the shoulder of the spike.

2. A railroad rail fastening, the same comprising a pair of plates arranged between the tie and rail, each of the plates having a spike opening, spikes driven into the tie through the spike openings of the plates and having heads



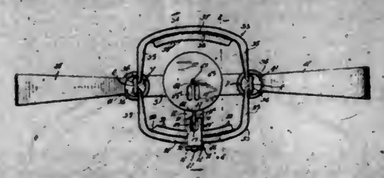
to engage over the foot of the rail and provided upon their outer sides with shoulders to engage under the respective plates, and means for drawing the plates together to prevent disengagement thereof from the shoulders of the spikes.

1,025,054. HYDROCARBON-FURNACE. JACOB A. DARST, Caldwell, Kans., and MONROE BRITTAIN, Chickasha, Okla. Filed Mar. 25, 1911. Serial No. 616,962. (Cl. 158—1.)



In a steam boiler furnace, a burner fitted to a vertical wall of the combustion chamber and adapted to direct a flame into the combustion chamber, the latter having openings in the opposite wall, a jet nozzle located in one of said openings, a damper for controlling the other opening, said combustion chamber having a plurality of air openings in its side walls, and jet nozzles applied to the side openings for directing jets into the combustion chamber.

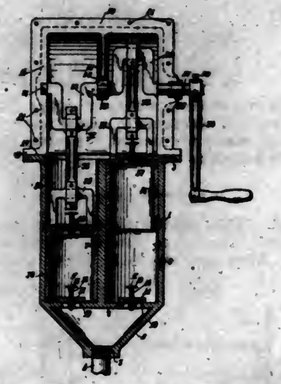
1,025,055. TRAP. DAVID L. DAVIDSON, Milam, Tex. Filed Mar. 13, 1911. Serial No. 614,087. (Cl. 43—23.)



The combination in a trap of a base member having upturned apertured ends, jaws pivoted within said apertures, said jaws being provided with longitudinal grooves in their inner faces, rounded engaging surfaces and toothed engaging surfaces formed upon said jaw, springs located upon the upturned ends of the base member and engaging the jaws, a transversely extending plate secured to the base plate and having an upturned bifurcated end, lugs extending inwardly from said bifurcated end, a locking plate pivoted to the said lugs, said locking plate having a bifurcated end, inwardly extending ears formed upon the bifurcated end of the locking plate and being beveled outwardly, a trigger pivoted to the trans-

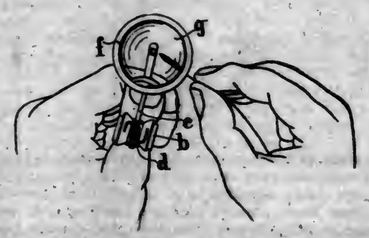
verse plate and extending inwardly therefrom to overlie the base member, said trigger extending between the bifurcated ends of the locking plate, and a pin passing through said trigger and resting upon the beveled ears of the said locking plate as and for the purpose set forth.

1,025,056. PUMPING APPARATUS. JOSEPH J. GROETKEN, Tulsa, Okla. Filed May 29, 1911. Serial No. 630,073. (Cl. 103—81.)



In a pump, the combination with a lower casing having piston chambers formed therein, and pistons operating in said chambers, of an upper sectional casing mounted upon said lower casing, means for securing said sectional casing to said lower casing, said sectional casing comprising two members provided with flanges upon their abutting edges for securing the same together, the abutting edges of said sections being provided with alined half bearings registering with each other to form complete bearings when said sections are joined together, a crank shaft mounted in said bearings, connecting rods between said crank shaft and said pistons for operating the same, and an arm formed at the upper edge of one of said sections and depending downwardly into said upper casing, said arm having a bearing formed at its free end to provide a central bearing for said crank shaft whereby to render additional support to said crank shaft and to retain the same in the said half bearings of one section when the complement section is removed.

1,025,057. MAGNIFYING-GLASS. JOHN HAMPSON, Chilworth, England, assignor to Third Hand Patents Limited, London, England. Filed Mar. 17, 1911. Serial No. 615,094. (Cl. 88—39.)



1. The combination of a magnifying glass, a clip consisting of a pair of pivotally connected members having oppositely curved jaws for gripping a thumb below the joint, a spring for holding the jaws of said members in their gripping positions, means for opening the members, a lining on the inner sides of the jaws of the members, and an adjustable connection fixing the magnifying glass to the clip, substantially as described.

2. The combination of a magnifying glass, a clip consisting of a pair of members, the members comprising oppositely curved jaws forming a clamp for gripping a thumb below the joint and handles having lugs extending inwardly, a rod passing through said lugs and connected to the magnifying glass, and a spring on the rod between the lugs and having its free ends engaging the handles tending to hold the jaws in their gripping positions, substantially as described.

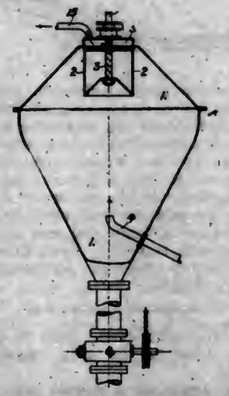
1,025,058. FASTENING DEVICE. JOHN HAMPSON, Chilworth, England, assignor to Third Hand Patents Limited, London, England. Filed Mar. 17, 1911. Serial No. 615,095. (Cl. 24—85.)



1. A holding device comprising a spring plate, clamping means fixed to the forward end of the plate, gripping teeth projecting upwardly from the surface of the rear end of the plate, the plate being slitted longitudinally intermediate its ends and the slitted portions bulged in opposite directions, whereby the plate will fit different sized spaces substantially as described.

2. A holding device comprising a spring plate, the plate carrying clamping means at its forward end, gripping teeth projecting upwardly from the surface of the plate at its rear end, the plate being provided with a plurality of longitudinal slits intermediate its ends leaving a central portion and an outer portion at each side thereof, and the central portion being bulged in one direction and the outer portions being bulged in the opposite direction to provide a compressible body portion, whereby the central portion and the outer portions will engage the opposite walls of different sized openings, substantially as described.

1,025,059. PROCESS OF CENTRIFUGAL SEPARATION. JOSEPH ELEUTERIO HATTON and JOSÉ PABLO SALA, Habana, Cuba. Filed Feb. 24, 1911. Serial No. 610,556. (Cl. 127—3.)



1. The method of separating solids or matters contained in a liquid, from said liquid, consisting in rotating and centrifugally treating a liquid by a body revolving in it; introducing the liquid to be treated into and passing through a portion of the rotating and centrifuging liquid which is away from said revolving body and effecting the separation of the matter to be removed in the body of liquid thereby, without coming in contact with the revolving body; substantially as set forth.

2. The method of separating solids or matters contained in a liquid, from said liquid, consisting in centrifuging and rotating the liquid; introducing liquid to be treated into the rotating and centrifuging liquid under treatment, at a pressure above that of the liquid at the point of discharge such as specified, which will overcome the centrifugal force; effecting separation in the body of centrifuging liquid; and withdrawing it from a point where centrifuged liquid exists; substantially as set forth.

3. In a method of centrifugally separating solids from liquids, introducing the liquid to be treated directly into the interior of a body of centrifuging liquid at a pressure above that of the liquid at the point of discharge.

4. In a method of centrifugally separating solids from liquids, introducing the liquid to be treated into the interior of a body of centrifuging liquid, at a point in line with the axis about which the liquid is centrifuged, and between the opposite ends of the body of centrifuging liquid.

5. In a method of centrifugally separating solids from liquids, introducing the liquid to be treated into a body of centrifuging liquid, and centrifuging the interior portion of the body of liquid at a higher angular velocity than the outer portion.

[Claims 6 to 12 not printed in the Gazette.]

1,025,060. FENCE-POST BRACE. JOHN HEVERLY, near Bluffton, Ind. Filed Sept. 19, 1911. Serial No. 650,124. (Cl. 39—134.)



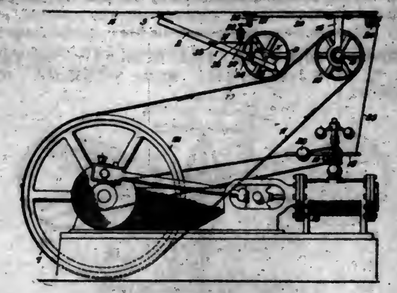
1. The combination with a post, of a plate engaging one side of the post and having its extremities projecting beyond the sides of the post, a member engaging the post on the opposite side thereof and having a bolted connection with one extremity of the plate, a rod loosely engaging the other extremity of the plate and anchored in the ground and means coacting with the plate to secure the post to the rod in any adjusted position.

2. The combination with a post, of a plate secured to the post on one side thereof, a rod adjustably carried by the plate and having one end anchored in the ground, a second plate secured to the opposite side of the post having a bolted connection to the first named plate and having a block projecting laterally therefrom, said block having a downwardly extending opening adapted to support an anchoring rod.

3. The combination with a post, of a plate secured to the post on one side thereof, a rod adjustably carried by the plate and having one end anchored in the ground, a second plate secured to the opposite side of the post having a bolted connection to the first named plate and having a block projecting laterally therefrom, said block having a plurality of downwardly extending openings which intersect at their lower ends.

1,025,061. ATTACHMENT FOR GOVERNORS. JAMES RILEY HODGEN, Atmore, Ala., assignor of one-half to John Strickland, Atmore, Ala. Filed Feb. 14, 1911. Serial No. 608,566. (Cl. 121—111.)

1. An attachment for governors including an inclined belt tightener hinged at its upper end and arranged to bear against the upper flight of a belt, flexible connections extending upwardly from the lever of the governor to a point above the belt and then longitudinally thereof to a point above the tightener and then downwardly therefrom to the tightener, and means for attaching the said flexible connections adjustably to the tightener so as to allow for the longitudinal adjustment of said connections toward and from the free end of the tightener.

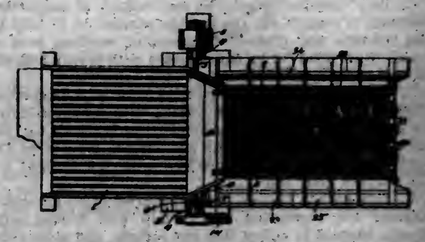


2. An attachment for governors including a pivotal member having a pulley to bear against a belt and adapted to be actuated by variations in the said belt, a rod carried by the pivotal frame and extending longitudinally thereof, a slide adjustable along the rod, and connections between the slide and the lever of a governor.

3. An attachment for governors including a pivotal member having a pulley to bear against a belt and actuated by variations in the same, a device adjustable along the pivotal member to vary the effective stroke of the same, and connections extending from the adjustable device to the lever of a governor and having adjusting means for varying the length of the said connections.

4. An attachment for governors including a belt tightener comprising an inclined frame hinged at the top, a pulley mounted in the lower end of the frame and arranged to bear against the belt, an approximately horizontal rod secured at one end to the frame, an arm mounted on the frame and supporting the other end of the rod, a slide adjustable along the rod and having means for engaging the same, and means for connecting the slide with the lever of a governor, whereby the movement of the belt tightener will actuate the valve of the governor.

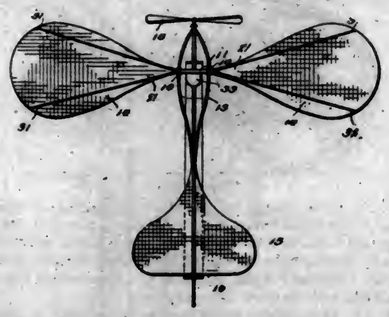
1,025,062. FRUIT-CLEANING MACHINE. EUGENE D. HOWARD, Duarte, Cal. Filed Nov. 23, 1909. Serial No. 529,644. (Cl. 146—14.)



The combination in a fruit cleaning machine, of a feed chute, a frame adjacent the chute, a plurality of brushes journaled in said frame longitudinally thereof and in communication with the chute, each of said brushes including a plurality of spaced sections arranged in series, the brushes of each section being of spiral formation, the spirals of one section having direct communication with those of an adjacent section and forming passageways diagonally of the frame whereby the fruit may be conveyed from one brush to the other by way of the spiral sections of the brushes and in a direction diagonally of the machine, and a member arranged longitudinally of the frame and at one side of the brushes therein and inclined relatively thereto, said member being adapted to receive the fruit from each of the passageways formed by the

spirals of the brushes and discharge the said fruit back upon the brushes so that the former may travel the full length of the machine, substantially as, and for the purpose, described.

1,025,063. AEROPLANE. JERRY HÜBSCHMAN, New York, N. Y. Filed June 24, 1911. Serial No. 635,109. (Cl. 244—12.)



In an airship of the mono-plane type, a frame comprising a horizontal frame, vertical and parallel bars carried thereby, planes pivotally mounted on said vertical bars, the inner ends of said planes being reduced to form handles, said reduced portions receiving said parallel bars and said handles extending between said bars for manipulation of said planes, swivel brackets carried by said parallel bars above and below said planes, guy wires connecting said swivel brackets to the ends of said planes, a fixed plane secured to the rear of said frame and the area of each of said planes being in substantially the same plane.

1,025,064. CURTAIN-HANGER. WILLIAM H. HUFFMAN, Harrisburg, Pa. Filed Nov. 15, 1911. Serial No. 660,485. (Cl. 156—19.)



1. In a curtain hanger, the combination of supporting brackets, a support for the curtain adapted to be held by the brackets, and formed of telescoping sections, each of which is provided for its entire length with prongs adapted to engage the curtain for the purpose described.

2. In a curtain hanger, the combination of a supporting element for the curtain and formed with prongs adapted to embed into the curtain, supporting brackets for the opposite ends of the element and latches pivoted to the brackets and adapted to interlock with the element for the purpose described.

3. In a curtain hanger, the combination of an extensible element for supporting the curtain and formed with prongs adapted to embed into the curtain, and supporting brackets for the opposite ends of the element having lugs adapted to bear on one side portion of the element and pivoted latches adapted to interlock with and bear on the opposite side portion of the element for the purpose described.

1,025,065. BLASTING-FUSE AND CAP. WESLEY E. INGRAM, Austin, Nev. Filed July 28, 1911. Serial No. 641,039. (Cl. 102—9.)

1. The combination of a fuse shaped to form a looped stub portion and having a vent, a cap receiving the loop portion and vent of the fuse, and explosive disposed in the cap and adapted to be ignited by fire from the fuse.

2. The combination of a fuse shaped to form a looped stub portion and having a vent, a cap receiving the loop portion and vent of the fuse; said cap being open at one end, explosive disposed in the cap and adapted to be ignited by fire from the fuse, and means sealing the open end of the cap and the vent in the fuse and adapted to transmit fire from said vent to the explosive.



3. The combination of a fuse shaped to form a looped stub portion and having a vent, a cap receiving the loop portion and vent of the fuse; said cap being open at one end, explosive disposed in the cap and adapted to be ignited by fire from the fuse, and material that is soft and combustible interposed between the explosive and the fuse and sealing the open end of the cap and the vent in the fuse.

4. The combination of a fuse shaped to form a looped stub portion and having a vent, a cap receiving the loop portion and vent of the fuse and crimped on the stub portion only of the fuse, and explosive disposed in the cap and adapted to be ignited by fire from the fuse.

5. As a new article of manufacture, a fuse cap open at one end and containing an explosive and a protective body covering the explosive and arranged between the same and the open end of the cap and in communication with said open end; the said protective body being composed of a substance that is combustible and is also soft, whereby when the cap is applied to a fuse the excess portion of the soft and combustible substance will be squeezed into and fully occupy the space between the cap and the fuse to seal the open end of the former.

[Claims 6 and 7 not printed in the Gazette.]

1,025,066. PLOW. CHARLES A. INTRUP, Wilburn, Va. Filed June 14, 1911. Serial No. 633,094. (Cl. 97—21.)

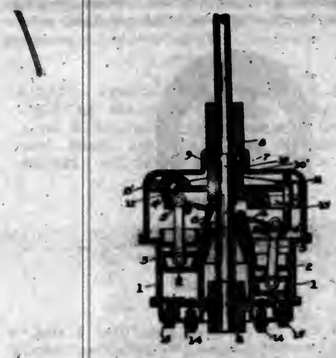


A subsoiling attachment for plows comprising a flat approximately L-shaped bar having a long and a short arm, the latter arm being vertically disposed, a keeper connected with the short arm and extending horizontally beneath the long arm, and a subsoiling cutter consisting of a flat blade of a thickness not exceeding that of the vertical arm, said blade being mounted in the keeper with its back in contact with the forward edge of the short arm.

1,025,067. FLUID-PUMP. GEORGE HARTFORD IRWIN, JOHN PERCIVAL CULLON, and FREDERICK KNOWLSON, Lindsay, Ontario, Canada. Filed Nov. 9, 1910. Serial No. 591,473. (Cl. 103—77.)

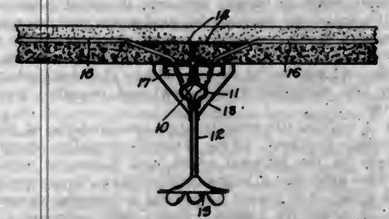
A fluid pump comprising a plurality of cylinders, suction and discharge valves in the heads thereof, pistons reciprocating in the cylinders, an annular member, connecting rods with universal joints at both ends connecting the pistons and said annular member, a driving shaft

having suitable bearings, a wheel secured to the shaft and a main operating roller journaled in suitable bearings attached to the wheel or disk, and a following roller jour-



naled in like bearings and adapted to eliminate vibration of the annular member operatively connected to the pistons as specified.

1,025,068. FIXTURE-HANGER. JULIAN GORDON KNIGHT, Brooklyn, N. Y., assignor to Norman P. Findley. Filed July 8, 1910. Serial No. 570,979. (Cl. 240—85.)



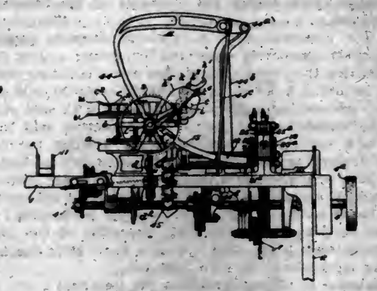
In combination, a pair of supporting bars arranged in contacting relation and with their upper ends disposed angularly to the lower ends and embedded in a ceiling, a member secured to the lower ends of said bars and having external threads thereon, a flanged member having an opening to receive said first member and adapted to brace said first member to a ceiling and having wire receiving openings, a hollow member threaded on said first member and provided with wire receiving openings, a fixture pipe threaded to said hollow member and adapted to receive wires extended through said hollow member and a shield having a contracted lower end contacting with said fixture pipe and an upper end disposed outwardly of the flanged member adapted to contact with the ceiling and brace said fixture pipe thereto.

1,025,069. MACHINE FOR CUTTING AND WRAPPING CANDY KISSES, &c. EUSTACE R. KNOTT, Sharon, Mass., assignor to E. R. Knott Machine Company, Boston, Mass., a Corporation of Massachusetts. Filed Jan. 10, 1910. Serial No. 537,117. (Cl. 107—4.)

1. The combination with a cutting device, wrapping mechanism, and a conveyer by which pieces of candy from the said device are transferred to the said mechanism to be wrapped, of a fly coacting with the cutting device and delivering to the said conveyer.

2. The combination with a cutting device, wrapping mechanism, and a conveyer traveling below such device and by which pieces of candy supplied by the said device are transferred to the said mechanism to be wrapped, of a fly working downwardly and delivering from the cutting device to the said conveyer.

3. The combination with a rotary cutting device, a conveyer having buckets, and wrapping mechanism to which the contents of the buckets are delivered in turn to be successively wrapped, of a rotating fly having fingers which work in the openings between the cutter-blades and feed the cut pieces into the successive pockets of the conveyer.

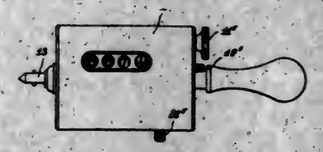


4. The combination with wrapping mechanism, a moving conveyer delivering to the said mechanism pieces of candy to be wrapped, and a device by which candy is cut into pieces, of a rotating carrier having a finger working between the said device and said conveyer which engages with the said pieces and delivers them to the conveyer, and means to cause a retracting movement of such finger to clear the pieces received by the conveyer.

5. The combination with wrapping mechanism, and a conveyer having buckets, of a rotating carrier having a finger by which articles are fed into such buckets, and means to cause such finger to retract on arriving at the buckets, clear of the contents thereof.

[Claims 6 to 11 not printed in the Gazette.]

1,025,070. SPEEDOMETER. ROBERT BERTIN AUGUSTE LEMAIGNEN, Rouen, France. Filed June 11, 1910. Serial No. 566,402. (Cl. 235—104.)



1. The combination of a rotatable element; counting mechanism operatively connected therewith; a clock train for limiting the period of operation of the counting mechanism including a rotatable main element; zero-setting mechanism connected with said counting mechanism including a rotatable main element; and a gear train connecting the main element of said zero-setting mechanism with the main element of said clock-train, for winding the clock-train when the zero-setting mechanism is operated.

2. The combination of a rotatable element; counting mechanism operatively connected therewith and comprising a series of drums, a spring-controlled lever for operating the head drum, and carrying devices between said drum and the remaining drums; a clock train for limiting the period of operation of the counting mechanism, including a barrel; and a controlling lever having one of its ends arranged to normally support the first-named lever in inoperative position, the other end of said controlling lever and said barrel being provided with co-acting means for normally holding the latter against rotation and for terminating such rotation.

3. The combination of a rotatable element; counting mechanism operatively connected therewith and comprising a series of drums, a spring-controlled lever for operating the head drum, and carrying devices between said

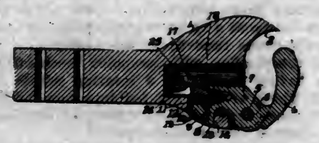
drum and the remaining drums; a clock train for limiting the period of operation of the counting mechanism including a barrel; a controlling lever for said clock train arranged to normally hold the first-named lever in inoperative position; zero-setting mechanism connected with said counting mechanism; and a gear train connecting said barrel and said zero-setting mechanism for winding the clock train during the operation of the last-named mechanism.

4. The combination of a rotatable element; counting mechanism operatively connected therewith; a clock train for limiting the period of operation of the counting mechanism including a barrel; a controlling lever for said clock train; zero-setting mechanism connected with said counting mechanism; and a gear train connecting said barrel and said zero-setting mechanism for winding the clock train during the operation of the last-named mechanism.

5. The combination of a rotatable element; counting mechanism operatively connected therewith; zero-setting mechanism connected with said counting mechanism; and means for preventing subsequent operation of the counting mechanism when once operated until after the zero-setting mechanism has been operated.

[Claims 6 to 17 not printed in the Gazette.]

1,025,071. CAR-COUPLING. ALVA A. LORIMOR, Chama, N. Mex. Filed Dec. 20, 1910. Serial No. 598,295. Cl. 213—10.)



1. A car coupler comprising a head, a knuckle pivoted thereto and having a tail, a member carried by the head rotating on a horizontal axis, a cam finger upon the rotating member, said operating finger traveling in a path to engage a portion of the knuckle tail and adapted to throw the knuckle tail to partially open position in a predetermined movement of the rotating member, said finger adapted to engage another portion of said knuckle tail for throwing the knuckle to partially closed position upon the reverse movement of the rotating member, means carried by the rotating member for completing the closing movement of the knuckle and to lock the same in closed position, and a counter weight carried by the rotating member for holding the same in locking position.

2. A car coupler comprising a head, a knuckle pivoted thereto and having a tail with a lateral finger, a member carried by the head and rotating at right angles to the axis of movement of the tail, a cam finger carried by the member and moving in a path to engage said tail to throw the knuckle to partially open position, said finger apapted to engage the lateral finger to throw the knuckle to partially closed position, a second cam carried by the rotating member for engaging the tail to complete the closing movement of the knuckle and to lock the same in closed position, and a weight on the rotating member for holding the same in either position.

1,025,072. SPRING-CUSHIONED TIRE FOR VEHICLE-WHEELS. WILLIAM W. LOWER, Tyrone, Pa. Filed Jan. 2, 1912. Serial No. 669,045. (Cl. 152—37.)

1. In a cushion tire, the combination of an annular series of U-shaped members provided with inwardly projecting rubbing flanges on their adjacent edges, a semi-tubular rim surrounding the annular series of members, and provided with notches in its sides to accommodate said rubbing flanges, and cushioning devices interposed between the members and the rim intermediate the rubbing flanges.

2. In a cushioning tire, the combination of an annular series of U-shaped members provided with inwardly projecting rubbing flanges on their adjacent edges, a semi-tubular rim surrounding the annular series of members, the sides of the rim telescoping with the said members and having notches to accommodate the flanges on the members, and helical springs interposed between the members and the rim intermediate the rubbing flanges.



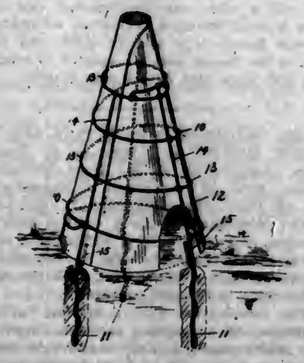
3. A cushion tire for vehicles, comprising a ring, a series of studs attached thereto and projecting radially therefrom, U-shaped members slipped over the studs onto the rim and provided with inwardly projecting rubbing flanges on their adjacent edges, an annular semi-tubular rim surrounding the series of members and having its sides notched to accomodate the rubbing flanges, cap plates secured within the rim opposite the studs, and helical springs strung on the studs and engaging the cap plates, substantially as described.

4. A cushion tire for vehicle wheels, comprising an annular series of closely adjacent U-shaped members, a semi-tubular rim surrounding said series and telescoping therewith, a stud projecting radially outward within each member, cap plates attached to the rim opposite the studs, and cushioning devices within the U-shaped members and surrounding the studs and engaging the cap plates.

5. A cushion tire comprising an annular series of closely adjacent U-shaped plates having inwardly projecting flanges on the adjacent edges, the flanges on adjacent sections abutting, a hollow semi-tubular rim surrounding said series of U-shaped plates and telescoping therewith, a stud, projecting radially within each member, a cap plate attached to the rim opposite each stud, and helical expansion springs seated within each U-shaped member and surrounding the studs and engaging the cap plates.

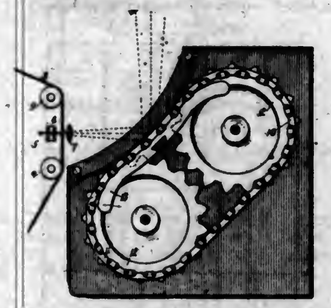
[Claim 6 not printed in the Gazette.]

1,025,073. PLANT-PROTECTOR. WILLIAM H. RAGAN, Siloam Springs, Ark. Filed July 6, 1910. Serial No. 570,669. (Cl. 47—22.)



A plant protector comprising a frame composed of a series of circular members having a common axis and graduated in diameter and side wires joined thereto, the side wires being twisted to form legs and holding clips, each clip consisting of the free up-turned end of a side wire contiguous to the body portion of said side wire, and a cover formed of loosely wound sheet material within the frame with one end engaged by said clips and the other end protruding above the frame.

1,025,074. PROJECTING APPARATUS FOR MOVING-PICTURE MACHINES. GILBS E. RIPLEY and WILLIAM N. GLADSON, Fayetteville, and ROSE E. THOMPSON, Heber, Ark. Filed Oct. 14, 1910. Serial No. 587,022. (Cl. 88—17.)



1. In a projecting apparatus for moving picture mechanisms, a series of reflecting members successively movable into a position to receive and reflect the picture rays, the adjacent members forming a reëntrant angle with each other during their reflecting period to cause the image of one picture to fade into the next.

2. In a projecting apparatus for moving picture mechanisms, a series of reflecting members successively movable in a path concave toward the film and into position to receive and reflect the picture rays, the curvature of the said path causing adjacent members to assume such an angle to each other during their reflecting period as to make the image of one picture fade into the next.

3. In a projecting apparatus for moving picture mechanisms, an endless carrier, an arc adjacent to said carrier concave toward the film, a series of reflecting members carried by the carrier adapted to be successively brought into an active position on said arc to receive and reflect the rays passing from the picture, and means keeping said reflectors in engagement with said arc.

4. The combination of a moving picture machine having a picture film moving in one direction, and an endless carrier having a series of reflecting members arranged to successively pass in the lighted field of the machine on a curved arc to cause one picture to fade into the next when the carrier is driven in a direction to cause the said members in crossing said field to travel oppositely to the picture film.

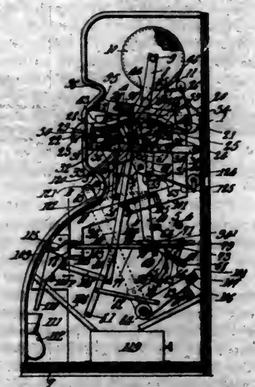
5. In an exhibit apparatus for moving picture mechanisms, an endless carrier, a series of reflecting members carried by the carrier and arranged to successively move into a position to receive and reflect the picture rays, and guiding arcs to cause adjacent members to assume an angle to each other during their reflecting period.

[Claim 6 not printed in the Gazette.]

1,025,075. VENDING-MACHINE. FRANK J. SCHUMANN, Bethlehem, Pa. Filed May 7, 1910. Serial No. 560,055. (Cl. 194—73.)

1. In a vending machine, a coin chute, a coin receiving lever having its coin receiving end at the discharge end of the chute, another lever having its free end movable through the coin receiving end of the coin lever, an actuating means accessible to a customer, and connections between the said actuating means and the second named lever for causing the movement of said second named lever with said actuating means.

2. In a vending machine, a vending means, an actuating means therefor movable at all times to the full extent of its travel, a coin responsive lever having at one end a coin receiving member with a recess longitudinal of said lever, means controlled by said lever for causing the coupling of the actuating means to the vending means, another lever movable longitudinally of the first named lever and into the recess in the coin receiving member, and connections between the second named lever and the actuating means.



3. In a vending machine, a vending means, an actuating means therefor, coin responsive means for coupling the vending and actuating means on the insertion of a proper coin, coin removing means for the coin responsive means connected to the actuating means and a coin directing means in the path of a coin removed from the coin responsive means and coupled to the vending means.

4. In a vending machine, a vending means, an actuating means therefor, coin responsive means for coupling the vending and actuating means on the insertion of a proper coin, coin removing means for the coin responsive means connected to the actuating means and a coin chute in the path of a coin removed from the coin responsive means, said chute having a pivoted coin directing wall connected to the vending means and movable therewith.

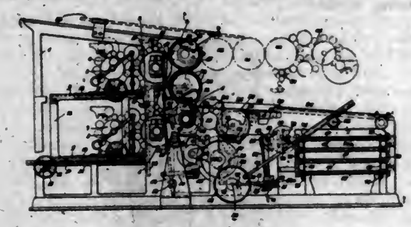
5. In a vending machine, a vending means, an actuating means therefor, coin responsive means for coupling the vending and actuating means on the insertion of a proper coin, and a coin chute leading from the coin responsive means to the exterior of the machine, said coin chute being provided with coin directing means connected to the vending means for directing a coin to the interior of the machine into a suitable receptacle on the operation of the vending means.

1,025,076. PRINTING-MACHINE. WALTER SCOTT, Plainfield, N. J.; Isabella Scott and David John Scott executors of said Walter Scott, deceased. Filed June 16, 1904. Serial No. 212,774. (Cl. 101—90.)

1. In a printing machine, the combination of a multi-revolution impression cylinder, delivery mechanism, a sheet path extending from the impression cylinder to the delivery mechanism, a multirevolution receiving cylinder located adjacent the sheet path and adapted to make more than one revolution to each sheet received by it, and sheet retaining means on the receiving cylinder adapted to receive and divert certain sheets from the sheet path and to allow other sheets to pass unhindered to the delivery mechanism.

2. In a printing machine, the combination of a multi-revolution impression cylinder, delivery mechanism operating once to a number of sheets printed by the impression cylinder, a multirevolution receiving cylinder adapted to make more than one revolution to each sheet received

by it, a sheet path adapted to convey sheets from the impression cylinder to the receiving cylinder or to the delivery mechanism direct, sheet retaining devices on the receiving cylinder adapted to receive and divert certain sheets from the sheet path and to allow others to pass unhindered to the delivery mechanism, the said devices being arranged to release the diverted sheets into the sheet path so as to associate them with the sheets passing unhindered to the delivery mechanism.



3. In a printing machine, the combination of a plurality of impression cylinders making more than one revolution to each impression, a transfer cylinder interposed between adjacent impression cylinders, all located one above the other, a plurality of plate cylinders also making more than one revolution to each impression, arranged one above the other at one side of the impression cylinders, inking apparatus for the said plate cylinders, and means for moving the impression cylinders out of contact with the plate cylinders once to each impression.

4. In a printing machine, the combination with a feedboard, of a plurality of impression cylinders making more than one revolution to each impression, a transfer cylinder interposed between adjacent impression cylinders, all arranged one above the other, a plurality of plate cylinders making more than one revolution to each impression, located one above the other, at one side of the impression cylinders underneath the feedboard, inking apparatus for the said plate cylinders and means for moving the impression cylinders out of contact with the plate cylinders once to each impression.

5. In a printing machine, the combination of an impression cylinder making a plurality of revolutions to each impression, a delivery mechanism, a sheet path interposed between the impression cylinder, and delivery mechanism, and a cylinder making a plurality of revolutions to each sheet printed for diverting every other sheet out of the sheet path and for delivering it in the same course with the next succeeding sheet said cylinder not forming a part of the sheet path.

[Claims 6 to 26 not printed in the Gazette.]

1,025,077. NOTE-SHEET FOR PLAYER-PIANOS AND THE LIKE. CHARLES F. STODDARD, Boston, Mass. Filed Mar. 30, 1912. Serial No. 687,307. (Cl. 84—162.)

1. A note-sheet for player-pianos and the like, having note perforations therein with their advance ends relatively located to sound their notes in desired musical sequence; and having selected perforations prolonged beyond lengths corresponding to the notation on the score or record from which the sheet is made, said prolongations extending beyond the rear ends of non-selected perforations to add to the next succeeding harmony indicated on the score or record, the selected tones to the exclusion of the non-selected tones.

2. A note-sheet for player-pianos and the like, having note perforations therein with their advance ends relatively located to sound their notes in desired musical sequence; and having selected perforations prolonged beyond lengths corresponding to the notation on the score or record from which the sheet is made, said prolongations extending beyond the rear ends of non-selected perforations and overlapping following perforations to augment the tone volume of the latter by the addition of the selected tones to the exclusion of the non-selected tones.

3. A note-sheet for player-pianos and the like, having note perforations therein with their advance ends relatively located to sound their notes in desired musical sequence, and arranged to correspond with a succession of musical phrases; sections of the note-sheet corresponding to respective phrases being characterized by having perforations prolonged beyond lengths coresponding to the notation on the score or record from which the sheet is made, said prolonged perforations overlapping in succession along the lengths of the respective phrase sections and coöperating to produce a substantially continuous "singing tone" within the respective phrases.



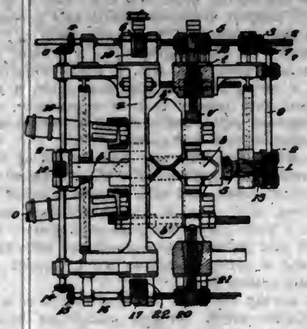
4. A note-sheet for player-pianos and the like, having note perforations therein with their advance ends relatively located to sound their notes in desired musical sequence and to produce a succession of different musical harmonies; a section of the note sheet corresponding to one such harmony being characterized by having one or more perforations prolonged in said section beyond lengths corresponding to the notation on the score or record from which the sheet is made; and another section of the note-sheet corresponding to a different subsequent harmony, being characterized by having one or more selected perforations of said first section prolonged into said other section to the exclusion of non-selected perforations which are terminated short of said other section.

5. A note-sheet for player-pianos and the like, having note perforations therein with their advance ends relatively located to sound their notes in desired musical sequence and to produce a succession of musical harmonies; sections of the note-sheet corresponding respectively to such musical harmonies being characterized by having perforations prolonged beyond lengths corresponding to the notation on the score or record from which the sheet is made and such prolongations extending from one such section into a subsequent section to augment the tone volume produced by the latter section beyond that indicated by the score or record.

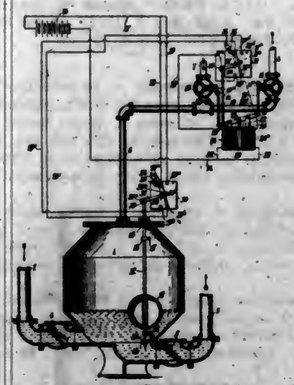
[Claims 6 to 11 not printed in the Gazette.]

1,025,078. ROLLING-MILL. WILHELM VASSEN, Aachen-Forst, Germany. Filed Sept. 8, 1910. Serial No. 581,029. (Cl. 80—59.)

In a method of rolling girders, columns, and the like pieces of H and I cross section with parallel flanges, passing a blank consisting of a block of rectangular cross section through a four roller block rolling mill whose rollers are adjustable on all sides and whose passes are open at the four corners, and in which the block is given a cross section with flanges inclined to each other at 60° to 90°; passing the bar through a second similar set of rolls in which the flanges are flattened out to 120° to 135°; operating upon the edges of the flanges in another set of rolls; and straightening out the flanges and finishing the bar in a final set of four rollers with cylindrical vertical rollers.



1,025,079. WATER AND SEWAGE LIFT. ARTHUR C. WELLS, Amityville, N. Y. Filed July 25, 1910, Serial No. 573,023. Renewed Mar. 14, 1912. Serial No. 683,703. (Cl. 103—8.)



1. In a water and sewage lift, a tank for receiving a liquid, having an inlet and outlet, each commanded by a check valve, a conduit leading to the tank, having two branches, two valves, one commanding each of the branches, two solenoids, a lever, two armatures articulated to the lever, one commanded by each of the solenoids, links connecting the lever with the valves commanding the branches respectively, two circuits connected with the solenoids respectively, a double switch in the circuits, and means for moving the switch when the liquid in the tank reaches a predetermined height.

2. In a water and sewage lift, a tank for receiving a liquid, having an inlet and outlet, each commanded by a check valve, a conduit leading to the tank, having two branches, two valves, one commanding each of the branches, two solenoids, a lever, two armatures articulated to the lever, one commanded by each of the solenoids, links connecting the lever with the valves commanding the branches respectively, two circuits connected with the solenoids respectively, two double switches in the circuits, each adapted for breaking one circuit as the other is closed respectively, means for operating one of the switches, adapted to be actuated by the lever, a float in the tank, and means for operating the other switch, adapted to be actuated by the float.

3. In a water and sewage lift, a tank having an inlet and an outlet, each commanded by a check valve, a conduit leading to the tank, having two branches, two valves, one commanding each of the branches, two solenoids, a pivoted lever, two armatures articulated to the lever, commanded by the solenoids respectively, links connecting the lever with the valves commanding the branches, two circuits connected with the solenoids respectively, a double switch in the circuits for breaking one circuit as the other is closed, respectively, a float in the tank, and means connecting the float with the switch, for operating the switch.

4. In a water and sewage lift, a tank having an inlet and outlet, each commanded by a check valve, a conduit leading to the tank, having two branches, two valves, one commanding each of the branches, two solenoids, a pivoted lever, two armatures articulated to the lever, commanded by the solenoids respectively, links connecting the lever with the valves commanding the branches, two circuits connected with the solenoids respectively, a double switch in the circuits for breaking one circuit as the other is closed respectively, a rod with collars, disposed in the tank and extending through an opening therein, a float disposed in the tank and slidably mounted on the rod between the collars, and means by which the rod is adapted for operating the switch.

5. In a water and sewage lift, a tank having an inlet and an outlet, each commanded by a check valve, a conduit leading to the tank, having two branches, two valves, one commanding each of the branches, two solenoids, a pivoted lever, two armatures articulated to the lever, commanded by the solenoids respectively, links connecting the lever with the valves commanding the branches, two circuits connected with the solenoids respectively, a double arm switch for closing one circuit as the other is opened respectively, a weighted arm on the switch for holding it in position when moved to close one of the circuits, a pivoted arm having lugs for engaging the arm of the switch for operating it, a float in the tank, and means connecting the float with the pivoted arm.

[Claims 6 to 19 not printed in the Gazette.]

1,025,080. SPRING-WHEEL. CHARLES COUGHLIN, Jersey City, N. J. Filed June 28, 1911. Serial No. 635,703. (Cl. 152—29.)



In a spring wheel a tire having side beads, clamps comprising similar parts, each part consisting of a hook and a shank, the hooks fitting about the beads of the tire and the shanks coming together, a collar slipped upon the shanks to hold the clamp members in position, an inner rim, sockets fitted to the inner rim, inner helical springs fitted in the sockets and having their outer ends encircling the inner ends of the shanks of the clamps and in contact with the collars, and outer springs fitted in the sockets and having their outer ends encircling the shanks and collars of the clamps.

1,025,081. SEAL. DON D. DAVIS, Saginaw, Mich. Filed June 24, 1911. Serial No. 635,097. (Cl. 70—99.)

1. In a car seal, the combination with a flexible strap having an aperture near one end, and a housing or casing secured to the opposite end, and into which the apertured end of the strap is inserted, of a mount stationary within the casing, comprising a substantially U-shaped or folded member formed with a longitudinally-extending slot in the upper and lower leaves thereof, a latch having catch fingers supported on the mount, the body-portion of the latch

lying at the forward end of the slot in the path of the inserted end of the flexible strap to be contacted thereby, and shifted along the slot until the catch fingers pass off of the mount and snap into the locking aperture, and confining walls on the mount projecting above the plane of the slot and of the mount, to prevent accidental dislocation of the latch by guiding the body-portion thereof and preventing lateral movement.

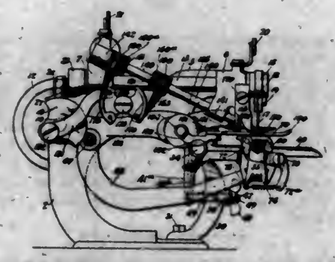


2. In a seal, the combination with a flexible strap having a locking opening near its free end, of a flanged housing at its opposite end provided with a single entrance, a carrier stationary within the housing and formed independently of the strap, a latch on the carrier in position to be struck and tripped by the free end of the strap when inserted in the housing to lock the strap in the housing, and a transversely projecting lug on said carrier seated in a recess formed in the housing and extending at an angle to the path of travel of the strap when inserted in the housing, to hold said carrier stationary.

3. A car seal comprising a flexible strap having a locking opening near one end and a housing at its opposite end, a mount within the housing, and a latch on the mount, said latch comprising a substantially annular resilient coil, the ends of the coil crossing and projecting away from the coil and from each other, and finally curving toward each other to form opposing catch fingers which tend to enter the locking opening and overlap to hold the free end of the strap, the latch approximating a figure 8 in shape.

4. In a seal, the combination with a strap having a housing at one end, and a locking opening near its opposite end, said last-named end adapted for insertion within the housing, of a stationary mount or carrier within the housing and having a slot, a latch supported by the mount and lying in the slot in position to be tripped by the free end of the strap to lock the strap in the housing, and guides on the mount other than the edges of the slot, to hold the latch against accidental displacement.

1,025,082. WORK HOLDING AND FEEDING MEANS FOR SEWING-MACHINES. CHARLES A. DEARBORN, New York, N. Y., assignor to David J. Newland, New York, N. Y. Original application filed Aug. 12, 1910, Serial No. 576,793. Divided and this application filed Dec. 22, 1910. Serial No. 598,752. (Cl. 112—24.)



1. In a sewing machine, the combination of suitable stitch forming mechanism, and suitable work feeding mechanism, with a spring sustained work support pivoted transversely of the line of feed, a presser foot presented above said work support and having a restricted yielding movement with relation thereto, and an oscillating toothed ridge forming rib mounted upon said work support.

2. In a sewing machine, the combination of a suitable frame, having an overhanging arm, a presser foot pivotally mounted upon said arm, a spring confined upon said arm, a yoke projecting from said presser foot in engagement with the spring upon said arm, and a spring sustained work support arranged beneath said presser foot.

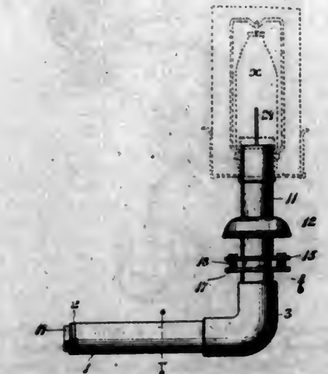
3. In a sewing machine, the combination of a suitable frame, having an overhanging arm, a presser foot pivotally mounted upon said arm, a guide projecting from said arm, a spring confined upon said guide, a yoke projecting from said presser foot in engagement with the spring upon said guide, and a spring sustained work support arranged beneath said presser foot.

4. In a sewing machine, the combination of a suitable frame, having an overhanging arm, a presser foot pivotally mounted upon said arm, a slotted guide pin projecting from said arm, a spring confined upon said guide pin, a yoke projecting from said presser foot into the slot of said guide pin in engagement with the spring thereon, and a spring sustained work support arranged beneath said presser foot.

5. In a sewing machine, the combination of a suitable frame, suitable stitch forming mechanism including a reciprocating needle, a stationary guide for said needle, a spring sustained work support pivoted transversely of the line of stitching, a pivotally mounted presser foot presented above said work support, and a spring yieldingly holding said presser foot in operative relation to said work support.

[Claims 6 to 21 not printed in the Gazette.]

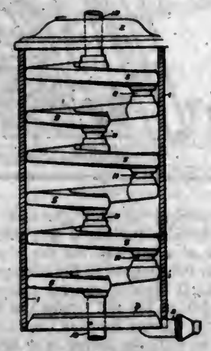
1,025,083. GAS-BURNER. EDWIN C. DICKINSON, Talcott, W. Va. Filed May 3, 1911. Serial No. 624,687. (Cl. 67—116.)



1. The combination with a gas supply pipe, of a burner connected thereto and including a tube, and a sleeve telescoping over said tube, a mixing chamber for air and gas formed by the sleeve and tube, a resilient connection between the sleeve and tube, a rod pivoted in the supply pipe, a valve carried at the end of said rod and controlling the gas channel to the supply pipe, a thermostatic rod extending through the burner and pivoted at its lower end to the first-mentioned rod, the construction and arrangement being such that the valve is elevated to permit gas to enter the supply pipe when the rod is expanded by the heat from the burner, said valve being closed upon the contraction of the rod.

2. The combination with a supply pipe, a channeled block located in the supply pipe, a rod pivoted in the supply pipe, a valve formed integral with the rod at one end thereof and closing the channel in the block, a gas burner connected to said supply pipe and comprising a stationary tube, a sleeve sliding on said tube, a resilient connection between the sleeve and tube, a diaphragm in the tube having an opening for the flow of gas therethrough, said tube and sleeve having alining openings for the admission of air, and resilient connections between the sleeve and tube, a metallic rod extending through the tubes and connected intermediate its length to the sliding sleeve near the top of the latter and connected at its lower end to the valve carrying rod, the construction and arrangement being such that said valve is open when the rod is expanded by the heat of the burner, and closed when said rod contracts.

1,025,084. HOT-WATER HEATER. ARTHUR J. GOSMANN, New Albany, Ind., assignor to Anchor Stove & Range Company, New Albany, Ind. Filed July 15, 1910, Serial No. 572,177. Renewed Mar. 25, 1912. Serial No. 686,130. (Cl. 122—214.)



1. In a water-heater, a plurality of scroll-shaped sections, adjoining sections being reversely arranged.

2. In a water heater, a plurality of scroll-shaped sections, each provided with an opening near its central portion and with a corresponding opening on the opposite side, near its outer edge, and a burner located beneath the sections.

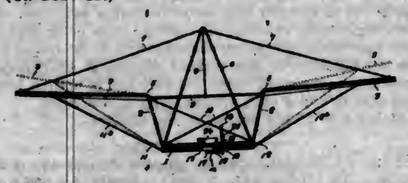
3. In a water heater, a plurality of scroll-shaped sections and a burner arranged beneath the sections.

4. In a water heater, a plurality of scroll-shaped sections, a burner and a casing surrounding said sections and burner.

5. In a water heater, a plurality of scroll-shaped sections, thinner at their outer edges than at their inner edges and a burner located beneath the sections.

[Claims 6 to 12 not printed in the Gazette.]

1,025,085. MONOPLANE. JOSEPH A. GOODWIN, Millville, N. J. Filed Dec. 3, 1910. Serial No. 595,405. (Cl. 244—12.)



1. A monoplane flying machine embodying a central supporting surface, dihedral-angled adjustable laterally extending supporting surfaces arranged at an elevation above and beyond the lateral extremities of said central supporting surface, dihedral-angled upright vanes connecting the lateral extremities of said central supporting surface with the inner extremities of said lateral supporting surfaces, and controlling means for permitting said laterally extending supporting surfaces to move to different dihedral positions under air pressure, said means operating upon the upward movement of one of said laterally extending supporting surfaces under air pressure to permit the other laterally extending supporting surface to automatically move upward to a corresponding dihedral position.

2. A monoplane flying machine embodying a central supporting surface, upright vanes extending from the lateral extremities of said surface, vertically adjustable laterally extending supporting surfaces projecting from the upper extremities of the vanes, and controlling means for permitting said laterally extending supporting surfaces to move to different dihedral positions under air pressure, said means operating upon the upward movement of one of said laterally extending supporting surfaces under air pressure to permit the other laterally extending supporting surface to automatically move upward to a corresponding dihedral position.

3. A flying machine embodying a central supporting surface, upright surfaces rising from said central supporting surfaces, vertically adjustable wings extending from said upright surfaces, and means for securing movement of both wings to correspondingly inclined positions under the excess pressure of air upon either wing.

4. A flying machine embodying a central supporting surface, upright surfaces rising from the central supporting surface, wings extending from said upright surfaces, and means for securing movement of both wings to correspondingly inclined positions under the excess pressure of air upon either wing.

5. A flying machine embodying a central supporting surface, dihedrally inclined upright surfaces rising from the central supporting surface, dihedrally inclined wings extending from said upright surfaces, and means for securing movement of both wings to correspondingly inclined positions under the excess pressure of air upon either wing.

[Claims 6 to 18 not printed in the Gazette.]

1,025,086. LEVEL. GEORGE F. HARRIS, Logansport, Ind. Filed July 18, 1911. Serial No. 639,170. (Cl. 73—70.)



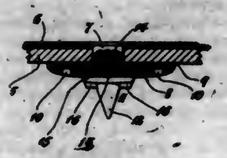
1. A level comprising a body portion having an orifice extending therethrough from side to side, and slots in the side edges of the body portion communicating with the orifice, flanges surrounding the orifice, transparent sheets retained at the flanges, a tubular ring arranged within the orifice, retaining arms extending from said ring, to the walls of the orifice, holding means abutting against the said arms and projecting into the slots communicating with the orifice, transparent plates overlying said slots, and slotted plates extending over the transparent plates at the side edges of the body.

2. A level comprising a body portion having an orifice extending therethrough from side to side, and slots formed in the side edges of the body portion and communicating therewith, a ring arranged in the orifice concentric with the outer walls thereof, said ring being filled with a liquid, radially extending arms connected to the tubular ring and to the adjacent walls of the orifice, wedge-shaped members lying within the slotted side edges and bearing against said arms, and a slotted plate at each side edge overlying the slot communicating with the orifice.

1,025,087. BOOT OR SHOE CALK. JOHN B. HART, Hartford, Conn., assignor to The North and Pfeiffer Manufacturing Company, Hartford, Conn., a Corporation of Connecticut. Filed Nov. 17, 1911. Serial No. 660,752. (Cl. 36—67.)

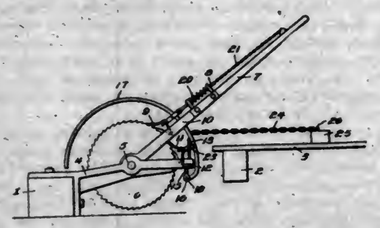
1. In a device of the class described, the combination of a carrier having a pendent lug, a washer threaded onto said lug, and a calk threaded into the lug.

2. In a device of the class described, the combination of a carrier having a pendent lug, a washer threaded onto



said lug, and a calk threaded into said lug and provided with a disk overlying said washer.

1,025,088. INTERMITTENT GRIP DEVICE. CLARENCE HESS, Union, Oreg. Filed May 13, 1911. Serial No. 626,887. (Cl. 74—16.)



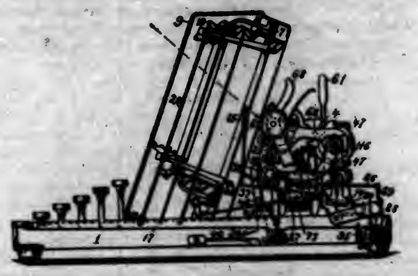
1. The combination with supporting brackets, a shaft journaled in said brackets, a ratchet wheel on said shaft, a lever pivoted to the shaft, a spring pressed rod carried by the lever, said rod having a pivoted fork at its lower end, a feed pawl pivotally connected with the lever and fork, a segment pivotally supported at its rear end by the brackets and extending between the arms of said pivoted fork, a pin carried by the fork and bearing against the segment, a locking pawl pivotally supported by the brackets and pivotally connected with the pivoted end of the segment, and stop devices carried by the bracket to engage the arms of the lever fork to limit the rearward movement of said lever.

2. The combination with a pair of spaced brackets, of a shaft journaled in said brackets, a ratchet wheel mounted on said shaft, a lever having a forked lower end pivotally engaging the shaft, a spring depressed pull rod carried by the lever and provided with a pivoted fork at its lower end, a feed pawl pivoted to the lever and fork, a supporting plate carried by the brackets, a segment pivotally connected at its rear end with said plate and extending through the fork of the lever and the said pivoted fork, a pin carried by the pivoted fork and engaging the segment whereby the segment may be tilted upward on the retractive movement of the rod, a locking pawl pivoted to the plate and pivotally connected with the pivoted end of the segment, stop rods projecting upward from the plate and lying in the path of movement of the arms of the lever fork, an engaging member, and a chain connected at one end with the pivoted end of the segment and adapted to have its links connected with said engaging member.

1,025,089. TYPE-WRITING MACHINE. FREDERIC W. HILLARD, Tottenville, N. Y. Filed Aug. 25, 1896. Serial No. 603,845. (Cl. 197—72.)

1. In a typewriting machine, the combination of a carriage, a platen carried thereby, a series of type-bars each bearing a plurality of characters, a carriage guide rail, a carriage shifting rail, both the carriage and the carriage shifting rail being mounted to turn about the axis of the carriage guide rail, and means for manually moving the platen to an observation position at any time, substantially as described.

2. In a typewriting machine provided with a platen shiftable to upper case and lower case printing positions, the combination of a carriage for the platen, a carriage guide rail, spacing mechanism whereby the carriage is fed on the rail lengthwise thereof, a shift key and means for thereby rotating the carriage about the axis of the rail to shift the platen from one printing position to the other, and means for rotating the carriage about the axis of the rail independently of the shift key, substantially as described.



3. In a typewriting machine provided with a platen shiftable to upper case and lower case printing positions, the combination of a carriage for the platen, a carriage guide rail, means for supporting the carriage upon the rail and for fastening it thereon, spacing mechanism whereby the carriage is fed on the rail lengthwise thereof, a shift key and means for thereby rotating the carriage about the axis of the rail to shift the platen from one printing position to the other, and means for rotating the carriage about the axis of the rail independently of the shift key, substantially as described.

4. In a typewriting machine provided with a platen shiftable to upper case and lower case printing positions, the combination of a carriage for the platen, a carriage guide rail, grooves in the carriage and corresponding grooves in the rail and bearing balls in the grooves whereby the carriage is supported upon the rail and fastened thereon, spacing mechanism whereby the carriage is fed on the rail lengthwise thereof, a shift key and means for thereby rotating the carriage about the axis of the rail to shift the platen from one printing position to the other, and means for rotating the carriage about the axis of the rail independently of the shift key, substantially as described.

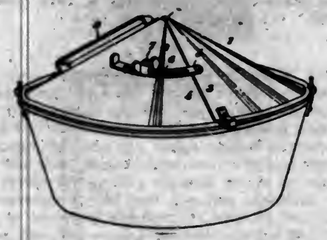
5. In a typewriting machine wherein the same keys operate both lower case letters and upper case letters for printing, the combination of a carriage, a carriage guide rail, carriage spacing mechanism comprising carriage propelling power and a toothed member mounted on the carriage and controlled by escapement dogs whereby the carriage is fed on the rail lengthwise thereof, a shift key and means for thereby rotating the carriage from lower case to upper case printing position about the axis of the rail, and a guide for holding the said toothed member in its carriage controlling engagement when the carriage is shifted from lower case to upper case, substantially as described.

[Claims 6 to 26 not printed in the Gazette.]

1,025,090. UTENSIL-COVER. HOMER E. HOLMES, Burlington, Vt. Filed Feb. 7, 1911. Serial No. 607,016. (Cl. 53—8.)

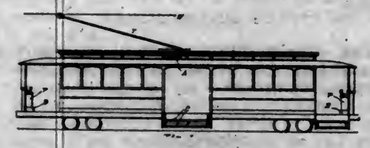
1. A cover for the purpose set forth, comprising a flexible disk, said disk being centrally provided with an opening slitted from said opening to the edge of the disk, one of the portions of the disk provided by the said slit adapted to overlie the second portion, the said overlying portion being provided with a pivoted strap, and means provided upon the underlying portion of the disk for securing the strap to retain the disk either in a contracted or expanded position.

2. A cover of the class described comprising a flexible disk, said disk being centrally provided with an opening and being slitted from the said opening to the edge of the disk whereby one of the portions adjacent the said slit may be permitted to overlie the second portion, an arcuate strap pivotally connected with the overlying portion, the said strap having one of its ends upturned, a handle upon the disk adjacent the upturned end of the strap, the said



strap being further provided with an arcuate slot, a threaded pin upon the underlying portion adapted to pass through the slot, and a thumb nut for the said pin and adapted to contact the strap to sustain the underlying portion in an adjusted position with relation to the overlying portion.

1,025,091. SAFETY DEVICE FOR PASSENGER-CARRYING CONVEYANCES PROPELLED BY ELECTRICITY. WELLINGTON B. HOPKINS, Denver, Colo., assignor, by direct and mesne assignments, to The Schoolfield Safety Appliance Company, a Corporation of Arizona. Filed Oct. 4, 1909. Serial No. 520,995. (Cl. 172—179.)



1. In a safety device, a car, a movable step, a circuit-closer operated by said step, car propelling means, a control circuit including said circuit-closer for rendering said car propelling means ineffective, and means for interrupting said control circuit when the car is moving, substantially as described.

2. In a safety device, a car, a movable step, car propelling means, a control circuit for said car propelling means, means in said control circuit operated by said step for rendering said car propelling means inoperative, and means for rendering said control circuit ineffective when the car is in motion, substantially as described.

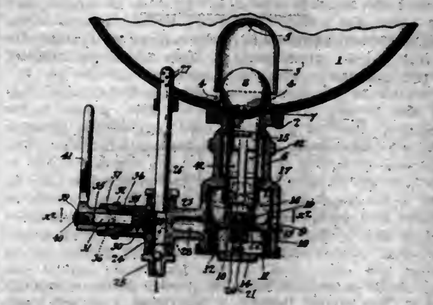
3. In a safety device, a car, a movable member on said car, a motor, a motor circuit, a control circuit for said motor circuit, and means in said control circuit operated by said movable member for shunting the current from said motor circuit into said control circuit.

4. In a safety device, a car, a movable step, a motor circuit, a secondary circuit, and means to divert current from said motor circuit into said secondary circuit and retain it there when pressure is present upon said step, substantially as described.

5. In a safety device, a car, a movable member on said car, a motor circuit, a control circuit independent of the motor circuit, and means to divert current from the motor circuit into said control circuit and retain it there when said movable member is forced from its normal position, substantially as described.

[Claims 6 to 10 not printed in the Gazette.]

1,025,092. FLUSHING-VALVE. WILLIAM A. HUNTER, Jr., and FOSTER W. BASSETT, Los Angeles, Cal. Filed Oct. 11, 1910. Serial No. 586,547. (Cl. 4—5.)



1. A tank, a discharge pipe, a valve for controlling the passage of water from the tank to the discharge pipe, a compression chamber in communication with said valve, a cylinder below said chamber, a piston in the cylinder, and means for admitting water on one side of said piston, said piston having a passage communicating directly with said compression chamber for the water to pass through to compress air in the chamber on the other side thereof and cause said compressed air to open said valve.

2. A tank, a discharge pipe therefor, a valve for controlling the passage of water from the tank to the discharge pipe, a compression chamber in communication with said valve, a cylinder below said chamber, a piston in the cylinder, the piston having a vertical port communicating directly with the compression chamber permitting a limited amount of water to pass from below the piston to above the piston to compress air above the piston under the valve to lift the latter, and means for admitting water into said cylinder at one side of said piston to operate the latter and cause air to be compressed in the chamber to open said valve.

3. A tank, a discharge pipe, a valve for controlling the passage of water from the tank to the discharge pipe, a compression chamber in communication with said valve, a cylinder below said chamber, a piston in said cylinder having a port communicating with the space above and below the piston, water supply means for supplying water to said cylinder at one side of the piston, the water passing through the piston and compressing air to lift said valve, and a valve for controlling said water supply means, whereby water may be admitted to the cylinder to operate the piston and compress the air to open said first valve.

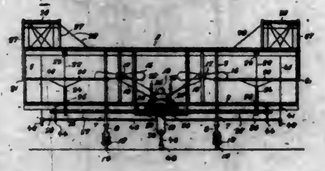
4. A tank, a casing secured thereto, an outlet pipe connected with the casing, a valve normally preventing water from entering the casing from the tank, a cylinder formed in said casing, a piston in the cylinder, a sleeve carried by the piston and having ports communicating with the cylinder when the piston is in its lower position, said ports being shut when the piston and sleeve are moved into their upper position, said piston having a port communicating directly with the space above and below the piston, and means for admitting water into said cylinder below the piston and through the piston to lift the same and also compress air above the piston to lift said valve.

5. A tank, a casing secured thereto, an outlet pipe connected with the casing, a valve normally preventing water from entering the casing from the tank, a compression chamber below said valve, a cylinder formed in said casing, a piston in the cylinder, a sleeve carried by the piston and having ports communicating with the cylinder when the piston is in its lower position, said ports being shut when the piston and sleeve are moved into their upper position, means for admitting water into said cylinder below the piston to lift the same, a port extending vertically through said piston and communicating directly with the compres-

sion chamber, and a check valve permitting the upward passage of water through said port and preventing the downward passage of water therethrough.

[Claim 6 not printed in the Gazette.]

1,025,093. FLYING-MACHINE. HERMAN JORDAN, Detroit, Mich. Filed Oct. 15, 1910. Serial No. 587,301. (Cl. 244—14.)



1. A flying machine including a main frame, a supporting surface carried thereby, a tail frame, a curved transversely extending stabilizing plane fixed to the rear end of the tail frame, said plane having flexible rear corner portions, a vertical rudder mounted upon the tail frame adjacent to and in advance of said stabilizing plane, guides upon the sides of the tail frame in advance of said rudder, a pivoted operating device on the main frame, motion controlling cords leading from said operating device through said guide to the flexible corner portions of the stabilizing plane, said cords being arranged in cross relation between the guides and plane, and branch cords connected at their forward ends with said main cords at a point in advance of the crossing point of said main cords and at their rear ends with the rudder in rear of said crossing point of the main cords, whereby the flexible corners of the stabilizing plane may be simultaneously flexed upward and downward and the rudder turned.

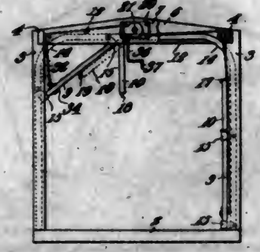
2. A flying machine including a main frame, a supporting surface carried thereby, vertically swinging balancing planes pivoted intermediate their front and rear edges and arranged on opposite sides of the longitudinal center of the frame, longitudinally extending shafts carrying sprocket wheels, guides upon the main frame above the balancing planes, looped upper cords engaging said guides and connected with the front and rear edges of the balancing planes, looped lower cords connected with the front and rear edges of the balancing planes and including chain sections engaging the sprocket wheels on said longitudinally extending shafts, and sets of gearing for independently turning said shafts to adjust the balancing planes.

3. A flying machine comprising a main frame, a supporting surface carried thereby, stabilizing planes fixed to the main frame above the rear portion of the supporting surface, said stabilizing planes having resilient rear edges, a shaft mounted upon the main frame and provided with arms arranged at different angles, cords connecting said arms with the resilient portions of the respective stabilizing planes, a laterally swinging pendulum, and gearing between the pendulum and shaft.

4. A flying machine comprising a main frame, a supporting surface carried thereby, elevated stabilizing planes having flexible rear edges, a shaft mounted on the main frame, arms arranged at different angles on said shaft, cords connecting said arms with the flexible edges of the stabilizing planes, a skid carrying bracket forming a laterally swinging pendulum pivotally mounted on the frame, gearing between said bracket and the shaft, and means for locking said gearing against movement.

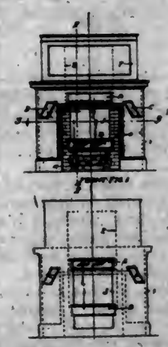
5. A flying machine including a main frame, a supporting surface carried thereby, stabilizing planes rigidly mounted at their front ends above said supporting surface and having flexible rear ends extending rearwardly beyond said supporting surface, a transversely extending shaft journaled on the main frame, a pendulum mounted to swing transversely of the main frame, gearing between the pendulum and shaft for rotating the latter forwardly or rearwardly on opposite swinging movements of said pendulum, weighted arms connected with the shaft, cords connecting said weighted arms with the flexible ends of the stabilizing planes, said arms being arranged at different angles upon the shaft, and means for fixing the pendulum against movement.

1,025,094. GRAIN-DOOR FOR FREIGHT-CARS. HENRY KALER, Rantoul, Ill. Filed May 8, 1911. Serial No. 625,790. (Cl. 20—32.)



A device of the class described comprising a structure having oppositely disposed doorways; a track for each doorway, extended at its upper end transversely of the structure; doors upon opposite sides of the structure, each door engaging one track; a single shaft journaled for rotation in the top of the structure, between the doorways; and flexible elements extended in opposite directions from the shaft, each flexible element being connected to one door; each door being provided upon its upper edge with a hinged section, the hinged sections being independent of the tracks, whereby the hinged sections may swing into vertical positions, adjacent the shaft, when the doors are elevated, thereby permitting the doors to be drawn close to the shaft, and to permit an uncovering of the doorways.

1,025,095. ART OF PHOTOGRAPHY. JOHN LEROY KELLOGG, Denver, Colo. Filed Jan. 20, 1910. Serial No. 539,188. (Cl. 95—82.)



The combination with an imitation fire place or mantel having an aperture in its rear wall and a fire place opening in the front wall thereof, of a mirror hinged to the lower edge of the aperture in the rear wall and disposed below the same so that light rays entering said aperture do not fall directly on said mirror, a mirror hinged to the upper edge of the fire place opening and adjustable with relation to said lower mirror, and other mirrors disposed upon opposite sides of said upper and lower mirrors and between the same, said latter mirrors and the upper mirror directly receiving the light rays and deflecting the same upon said lower mirror, whence they are reflected outwardly through the fire place opening upon the subject to be photographed.

1,025,096. INSERTED-LEAF HOLDER FOR BOOKS AND THE LIKE. FRED T. LOFTIN and GEORGE W. EVERETT, Indianapolis, Ind.; said Everett assignor to Lizzie K. Loftin, Indianapolis, Ind. Filed June 16, 1910. Serial No. 567,194. (Cl. 129—38.)



1. A device for holding inserted leaves in connection with magazines, books and the like which includes a back adapted to be placed adjacent the back of the magazine, book and the like, means connected with said back adapted to extend between the leaves of the magazine, book and the like, and inserted leaves secured to said means.

2. A device for holding inserted leaves in connection with magazines, books and the like including a back adapted to be placed adjacent the back of the magazine, book and the like, a longitudinally slotted bar through which a leaf may be inserted and held in the magazine, book and the like and pivotally connected at one end of said back, and means for releasably securing the outer end of said bar to said back.

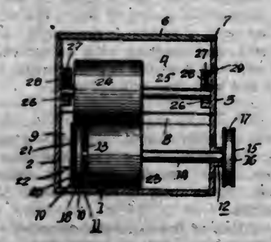
3. A device for holding inserted leaves in connection with magazines, books and the like, a back adapted to be placed adjacent the back of the magazine, book and the like, a bar pivotally connected at one end with said back and provided with a pair of stop notches between the ends thereof for limiting the longitudinal movement of the leaf which is secured thereto, and means for releasably securing the other end to said back.

4. A device for holding inserted leaves in connection with magazines, books and the like including a back adapted to be placed adjacent the back of the magazine, book and the like, a bar pivotally connected at one end to said back, an inserted leaf, means secured to said leaf that is looped about said bar for holding the leaf thereon, and means for releasably securing the other end of said bar to said back.

5. A device for holding inserted leaves in connection with magazines, books and the like including a back adapted to be placed adjacent the back of the magazine, book and the like, inserted leaf-holding bars pivotally connected at one end to said back and adapted to extend between the leaves of the magazine, book and the like and provided with notches in their free ends, a looped plate adapted to engage the notched ends of said bars, and means secured to said back for holding the inner portion of said looped plate from outward movement so that said bars will be locked in position when applied to a magazine, book and the like.

[Claim 6 not printed in the Gazette.]

1,025,097. ENVELOP-MOISTENING DEVICE. JOHN W. LOVAJOY, Steel, Ohio. Filed June 15, 1911. Serial No. 633,223. (Cl. 120—6.)



1. An envelop moistener comprising a casing, a receptacle arranged therein having one wall thereof slotted, a set of feeding rolls, one arranged at one side of said receptacle, a revolving head positioned in said receptacle and carried by the shaft of that roll arranged at one side of the receptacle; absorbent material secured to one side of the head and projecting through said slotted wall for moistening the flap of an envelop as the flap is fed by said rolls, flap-folding means extending from said feeding rolls, means for carrying the envelop through said folding means after the envelop leaves the feeding roll, and a set of sealing rolls for taking up the envelop from the flap folding means and sealing the envelop.

2. An envelop moistener comprising a casing, a receptacle arranged therein having one wall thereof slotted, a set of feeding rolls, one arranged at one side of said receptacle, a revolving head positioned in said receptacle and carried by the shaft of that roll arranged at one side of the receptacle, absorbent material secured to one side of the head and projecting through said slotted wall for moistening the flap of an envelop as the flap is fed by said rolls, means for carrying the envelop through said folding means after the envelop leaves the feeding roll, and a set of sealing rolls for taking up the envelop from the flap folding means and sealing the envelop, and means for operating the feeding rolls, said carrying means and the sealing rolls in unison.

1,025,098. SUSPENSION FOR CABLES. MYRON MOREY, Milford, Mass. Filed May 1, 1911. Serial No. 624,503. (Cl. 248—33.)



1. In a suspension for cables of the character described, comprising a single piece, a laterally formed supporting wire engaging loop intermediate its free ends, two semi-circular cable engaging loops with inner surfaces crowned on each half, intermediate supporting wire engaging loop and free ends, and portions of said single piece connecting cable engaging loops and at free ends containing locking devices substantially as set forth.

2. In a suspension for cables of the character described comprising a single piece, a laterally formed supporting wire engaging loop intermediate its free ends, two semi-circular cable engaging loops with inner surfaces crowned on each half intermediate supporting wire engaging loop and free ends, portions of said single piece connecting cable engaging loops and at free ends containing locking devices, said locking devices consisting of lugs perpendicular to inner surface of said connecting portion, and at free end, said lugs containing notches, said notches engaging slots in corresponding component parts to hold in operative position.

3. In a suspension for cables of the character described comprising a single piece, a laterally formed supporting wire engaging loop intermediate its free ends, two semi-circular cable engaging loops with inner surfaces crowned on each half intermediate supporting wire engaging loop and free ends, portions of said single piece connecting cable engaging loops and at free ends containing locking devices, said locking devices consisting of lugs perpendicular to inner surface of said connecting portion and at free end, said lugs containing notches, said notches engaging slots in corresponding component part and means for increasing the flexibility of supporting wire engaging loop by a lateral centrally located slot in supporting wire engaging loop substantially and for the purpose described.

4. In a suspension for cables of the character described, comprising a single piece with one semicircular cable engaging loop with inner surface crowned intermediate its center and free ends on each half, lips containing locking devices at free ends, said locking device consisting of a lug perpendicular to inner surface of said lips on one half, said lug containing notch, said notch engaging slot in lip of corresponding component part at free end, a laterally formed supporting wire engaging loop connecting members containing cable engaging loops and lips containing locking devices at free ends, and means for increasing the flexibility of said supporting wire engaging loop by a laterally centrally located slot in supporting wire loop, substantially as described.

1,025,099. SHOE. MARTIN RASMUSSEN, Racine, Wis. Filed May 25, 1911. Serial No. 629,371. (Cl. 36—15.)



1. In a shoe, a stationary sole having formed in its edge a groove, an upper having its lower edge engaged with and secured in said groove of the sole, a detachable half sole adapted to be applied to said stationary sole, and an attaching rim secured to said detachable half sole and adapted to be sprung into engagement with the groove in said stationary sole whereby said detachable half sole is secured in operative position on the stationary sole.

2. In a shoe, a stationary sole having a groove in its edge, a detachable half sole adapted to be applied to the stationary sole, and an attaching rim secured to the detachable half sole and adapted to be sprung into the groove in the edge of the stationary sole.

3. A detachable half sole for shoes provided with a channel in its upper outer edge and an attachable rim having its lower edge seated and secured in said channel and its upper edge extended upward and adapted to engage the edge of the stationary sole.

1,025,100. PUNCTURE-ALARM. FREDERICK D. SCHNEIDER, Bedford, Ohio. Filed Dec. 12, 1910. Serial No. 596,765. (Cl. 116—1.)



1. In a puncture alarm, the combination with a resilient actuating arm provided intermediately of its ends with a recessed portion, of a buckled member fixedly secured thereto and overlying said recessed portion, said arm being further provided with a finger abutting said member and fixed relative to the movement of said arm.

2. In a puncture alarm, the combination with a resilient actuating arm provided with a recess, of a buckled member secured to said arm over said recess.

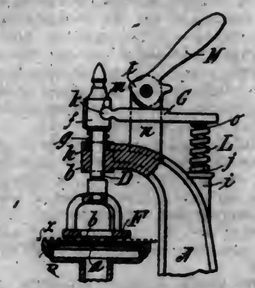
3. In a puncture alarm, the combination with a resilient actuating arm having a cup-shaped portion, of a buckled member secured thereto and closing said portion.

4. In a puncture alarm, the combination of a wheel comprising a spoke and pneumatic tire, a laterally resilient actuating arm provided intermediately of its ends with a recessed portion and connected with said spoke, adapted to be engaged by said tire, and a clicker comprising a buckled disk fixedly secured to said member and covering said recessed portion.

5. In a puncture alarm, the combination of a wheel comprising a pneumatic tire, an angularly bent member having one arm secured to said wheel, the other of said arms being resilient relative thereto and adapted to be engaged by said tire, said resilient arm being provided intermediately of its ends with a buckled portion, and a finger secured to said member and abutting said buckled portion, said finger being fixed relative to the movement of said resilient arm.

[Claim 6 not printed in the Gazette.]

1,025,101. PAPER-TESTING MACHINE. JOHN O. STANLEY, South Hadley Falls, Mass., assignor to B. F. Perkins and Son, Incorporated, Holyoke, Mass., a Corporation of Massachusetts. Filed Dec. 14, 1911. Serial No. 665,629. (Cl. 73—51.)

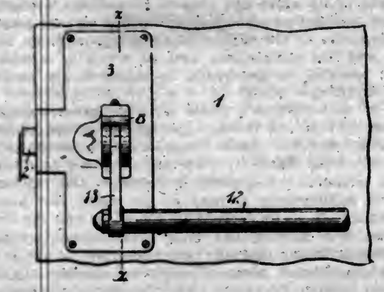


1. In a paper testing machine, in combination with a standard having a paper supporting platform and having a guiding head thereabove, a stem, vertically movable in said head, having a paper clamping foot, a spring exerting a force upwardly relatively to said stem, a substantially horizontal bar having one end thereof engaged with the stem, a spring on which the other end portion of the bar rests, and a cam-lever pivoted to an upper part of the standard, and coacting with an intermediate portion of said bar.

2. In a paper testing machine, in combination with a standard having a paper supporting platform and having a vertically apertured guiding head thereabove, a stem, vertically movable through said head, having a paper clamping foot, and having an enlargement at an upper portion thereof, made with a circular sidewise opening recess, a substantially horizontal bar having one end thereof of rounded form and engaged in said recess of the stem enlargement, a spring on which the other end portion of the bar rests, a cam-lever pivoted to an upper part of the standard, and coacting with an intermediate portion of said bar, and a spring in compression between the guiding head and said stem enlargement.

1,025,102. PANIC-LOCK. HENRY G. VOIGHT, New Britain, Conn., assignor to The American Hardware Corporation, New Britain, Conn., a Corporation of Connecticut. Filed June 1, 1911. Serial No. 630,585. (Cl. 70—120.)

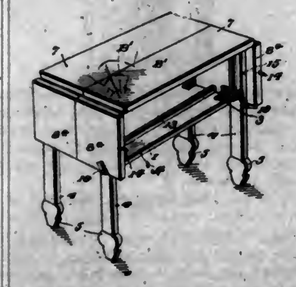
1. In a door lock of the character described, a latch operating spindle, an escutcheon having a spindle bearing and constituting a mounting for said spindle, suitable operating mechanism and a separate combined support and housing therefor arranged to be detachably secured to said escutcheon to bring said operating mechanism in coöperative relation to said spindle, means for detachably securing said support and housing to said escutcheon, said spindle operating mechanism including a slide, a guide in said housing for said slide, an exposed operating member extending transversely of the door to operate said slide, and means of connection between said slide and exposed operating member.



2. In a door lock of the character described, a lock frame comprising a face plate and an escutcheon plate, a latch bolt projecting through said face plate, a latch operating spindle projecting through said escutcheon plate, a lever arranged to swing to and fro and adapted to operate said spindle when swung in either direction, means for operatively connecting said lever with said spindle, a mounting for said operating lever and said connecting means, and means for detachably securing said mounting to said escutcheon.

3. In a door lock of the character described, a latch, a latch operating spindle, an escutcheon, a housing detachably secured to the front of the escutcheon, a lever carried by said housing, and operative means of connection between the inner end of said lever and the adjacent end of the spindle whereby an oscillation of the lever will impart an oscillation to said spindle, said means including a connection between said lever and the end of said spindle, said connection being in the form of a rack and pinion.

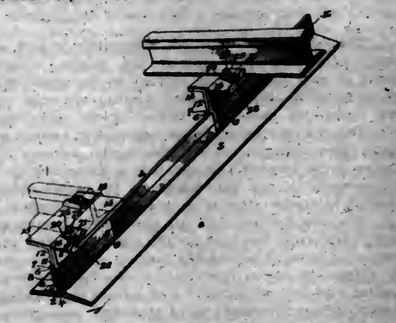
1,025,103. KNOCKDOWN FURNITURE. FRED L. VORDENFELDE, Celina, Ohio, assignor of one-half to Dalton Miller, Celina, Ohio. Filed Aug. 11, 1910. Serial No. 576,736. (Cl. 45—48.)



1. An article of knock-down furniture, including a board embodying an intermediate section and two end sections hingedly connected thereto and formed with side extensions adapted to embrace the side edges of the intermediate section with the three sections arranged in the same plane, another board of the same length as the first-named board and embodying an intermediate section of a length to extend from one end section to the other of the first-named board when the end sections and side extensions of said board are arranged in perpendicular relation to the intermediate section thereof, the second-named board also embodying end sections hingedly connected to the intermediate section of said board and adapted to engage the end sections of the first-named board in overlapping relation thereto, and means for connecting together the overlapped end sections of the respective boards.

2. An article of furniture including a board embodying an intermediate section and two end sections hingedly connected thereto and formed with side extensions adapted to embrace the side edges of the intermediate section with the three sections arranged in the same plane, another board embodying an intermediate section of a length equal to the intermediate section of the first named board, the second-named board also embodying end sections hingedly connected to the intermediate section of such board and arranged for overlapping relation with the end sections of the first-named board when the end sections of both boards are arranged in perpendicular relation to the intermediate sections thereof, and means for detachably connecting together the overlapping end sections of the respective boards, said two boards being of equal length and rectangular in outline.

1,025,104. RAIL-SECURING MEANS. GEORGE W. WHITEMAN, Philadelphia, Pa. Original application filed Feb. 10, 1911, Serial No. 607,761. Divided and this application filed Apr. 27, 1911. Serial No. 623,578. (Cl. 238—5.)



1. The combination of rail supporting means having an abutment, a clip contacting with said abutment and overlying a rail flange and having a convex face engaging the edge of the rail, said clip having a recess therein, and a flat curved spring within said recess and contacting with the rail flange to compensate for wear between the rail flange and the clip, and fastening devices for said clip.

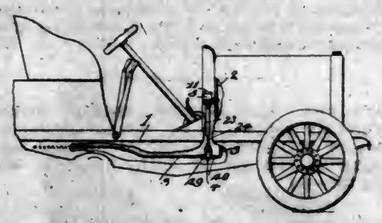
2. As a new article of manufacture, a clip having an aperture therethrough and having its underface angularly recessed for engagement with the rail, one wall of said recess having a convex face for engagement with the edge of the rail flange, and a flat spring located within the other wall of said recess for engagement with the top of the rail flange to compensate for wear between the rail flange and the clip.

3. The combination of rail supporting means having an abutment, a clip contacting with said abutment and overlying a rail flange and having a convex face engaging the edge of the rail, said clip having a recess therein extending longitudinally of the rail, a curved spring having its ends seated in said recess and its central portion contacting with the rail flange to compensate for wear between the rail and clip, a resilient washer interlocking with said clip, and fastening devices for securing the parts in assembled position.

4. The combination of rail supporting plates having vertical portions provided with reinforcing ribs and laterally extending rail supporting portions having abutments, of clips intermediate said abutments and the rail and having portions overlying the rail flange and provided with recesses in their under faces, a spring of curved formation having its end contained within said recess and engaging the rail flange, and means for securing said clips in position.

5. As a new article of manufacture, a clip having an angularly inclined rib at one side thereof and provided with a slot extending parallel with said side and having its other side angularly recessed, one wall of said recess forming a convex face, the other wall of said recess having a transversely extending recess therein, a flat curved spring having its ends contained within said recess, and its central portion extending slightly below the face of the recessed wall in which it is seated.

1,025,105. LOCKING AND CONTROLLING MEANS FOR TURNING PLUGS. FRED ELLIOTT YOUNOS, Detroit, Mich. Filed July 8, 1908. Serial No. 442,543. (Cl. 21—90.)



1. The combination with an automobile having an oil supply pipe from the tank to the engine, controlling means in said pipe, a lock carried by the dash-board of the automobile, and operating means connected to the pipe controlling means and locked by the said lock.

2. The combination with an automobile having an oil supply pipe from the tank to the engine, a valve in said pipe, a valve operating mechanism, a lock-carrying housing secured to the dash-board of the automobile and adapted to control the valve operating mechanism.

3. The combination with an automobile having an oil supply pipe from the tank to the engine, a valve in said pipe, of a housing adjustably secured to the automobile, an extensible valve operating connection between the bushing and the valve, and a lock within the housing and controlling the extensible valve operating connection.

4. The combination with an automobile having an oil supply pipe from the tank to the engine, a valve in said pipe, of a housing secured to the dash-board of the automobile, means carried by the housing for operating the valve in the oil supply pipe, and a lock within the housing and controlling the valve operating means.

5. The combination with an automobile having an oil supply pipe from the tank to the engine, of an adjustable housing secured to the automobile, a rotatable cylinder within the housing, a valve in the oil supply pipe, a valve stem carried by the valve and an extensible connection between the cylinder and the valve stem, and a lock controlling said cylinder.

[Claims 6 to 13 not printed in the Gazette.]

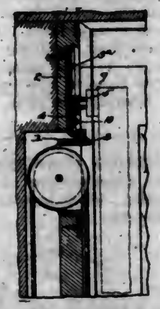
1,025,106. AIRSHIP. RUDOLPH ANDERS, Bridgeport, Conn. Filed Nov. 25, 1911. Serial No. 662,282. (Cl. 244—29.)



1. In an aeroplane, a frame of an elongated triangular contour in plan and having upper and lower spaced apart oppositely disposed planes corresponding in shape to the contour of the frame, an elevating elongated equilibrium plane extending transversely of the frame and fulcrumed therein substantially midway of its width, and located approximately centrally between the upper and the lower frames, with substantially equal correspondingly shaped portions extending laterally upon either side of the frame, a keel equilibrium plane of elongated substantially triangular contour fulcrumed under the frame substantially midway of its width and adapted to oscillate laterally, a rudder equilibrium plane fulcrumed in a vertical position substantially at the rear of the frame to oscillate laterally, and like mechanisms, each of which is capable of being operated independently, to independently oscillate each equilibrium plane.

2. In an aeroplane, a frame of an elongated triangular contour in plan and having upper and lower spaced apart oppositely disposed planes corresponding in shape to the contour of the frame, an elevating elongated equilibrium plane extending transversely of the frame and fulcrumed therein substantially midway of its width, and located approximately centrally between the upper and the lower frames, with substantially equal correspondingly shaped portions extending laterally upon either side of the frame, a keel equilibrium plane of elongated substantially triangular contour fulcrumed under the frame substantially midway of its width and adapted to oscillate laterally, a rudder equilibrium plane fulcrumed in a vertical position substantially at the rear of the frame to oscillate laterally, and like mechanisms, each of which is capable of being operated independently, to independently oscillate each equilibrium plane, and a propelling mechanism for the aeroplane.

1,025,107. SASH-CORD-PULLEY AND SHADE HOLDER. ALFRED D. BEBO, Minneapolis, Minn. Filed Aug. 19, 1911. Serial No. 644,047. (Cl. 156—24.)



1. As a new article of manufacture, a metal sash cord pulley box having an integral vertically extending guide-way an outwardly projecting stop arranged between the guide-way and the said box and vertically movable means for supporting an end of a shade roller, said means working in the said guide-way.

2. A device of the kind described consisting of a metal pulley block, a vertical extension integral therewith, said extension being provided with an undercut vertical groove, a shade roller support movable vertically in said groove, means for locking the same in an adjusted position and a window stop formed upon the outer face of the pulley box, and at the lower end of said groove, as and for the purpose set forth.

1,025,108. PULLEY. LEROY A. BIEGAR, Oneida, N. Y., assignor to Oneida Steel Pulley Company, Oneida, N. Y., a Corporation of New York. Filed Mar. 1, 1910. Serial No. 546,713. (Cl. 64—45.)

1. A metal pulley having a rim comprising two bands, one within the other, the outer band having apertures and inserts mounted therein and having their inner ends resting on the inner band, the outer band being supported directly by the inner band and at a fixed distance therefrom.

2. A metal pulley having a rim comprising two bands, one within the other, the inner band having an outturned flange butting against the outer band, said outer band having apertures and inserts mounted therein and resting on the inner band.



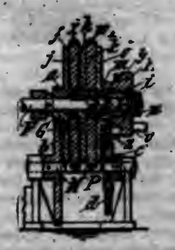
3. A metal pulley having a rim comprising two bands concentrically mounted one within the other and having oppositely extending flanges, the flange on the inner band bearing against the outer band, said outer band having apertures and inserts mounted in said apertures, the inner ends resting on the inner band.

1,025,109. AUGER-BIT. GEORGE P. BUTLER, New Haven, Conn., assignor to The W. A. Ives Mfg. Co., Wallingford, Conn., a Corporation. Filed June 18, 1910. Serial No. 567,740. (Cl. 145—117.)



A bit having a double twist extending throughout the length of the auger, one of the twists carrying a floor lip and the other a spur lip, a portion of the twist carrying the spur lip cut away.

1,025,110. OPERATING MECHANISM FOR PAPER-TESTING MACHINES. FRED P. CLEVELAND, Holyoke, Mass., assignor to B. F. Perkins and Son, Incorporated, Holyoke, Mass., a Corporation of Massachusetts. Filed Nov. 23, 1911. Serial No. 661,918. (Cl. 74—50.)



1. The combination with the rotative operating shaft having a clutch member affixed thereon, of a sleeve longitudinally movable but non-rotative relatively to the shaft and formed with screw threads, and also provided with a clutch member, a member made with screw threads in engagement with the threaded sleeve, and rotative, but axially immovable, relatively to the shaft, an annular clutch member adjacent said screw threaded member, surrounding, and endwise movable on, but non-rotative relatively to the sleeve, a pulley revolubly movable about the sleeve and having its faces in close relation to the clutch member of the shaft and the clutch member of the sleeve, and another pulley between the sleeve clutch member and the sleeve-surrounding clutch member, means for revolubly driving the pulleys simultaneously in reverse directions.

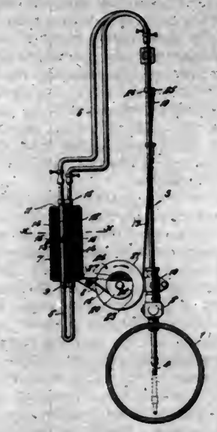
2. The combination with a rotative operating shaft having a fixed flange thereon, a sleeve splined on and capable of endwise movement relatively to, the sleeve having a flange at an intermediate portion thereof and provided at its outer end portion with external screw threads, a pulley loosely revoluble about the sleeve between one side of the flange thereof and the shaft flange, another pulley loosely revoluble about the sleeve at the other side of the flange thereof, an annular member spline engaged with, and endwise movable relatively to, the sleeve having a flange adjacent the second named pulley, a rotatively operable ring nut constrained against axial movement relatively to the shaft and having a screw engagement with the threaded portion of the sleeve, and means for revolubly driving the pulleys in reverse directions.

3. The combination with the rotative operating shaft having a clutch member affixed thereon, of a sleeve longitudinally movable but non-rotative relatively to the shaft and formed with screw threads, and also provided with a clutch member, a member made with screw threads in engagement with the threaded sleeve, and rotative but axially immovable relatively to the shaft, an annular clutch member adjacent said screw threaded member, surrounding, and endwise movable on, but non-rotative relatively to the sleeve, a pulley revolubly movable about the sleeve and having its faces in close relation to the clutch member of the shaft and the clutch member of the sleeve, and another pulley between the sleeve clutch member and the sleeve-surrounding clutch member, means for revolubly driving the pulleys simultaneously in reverse directions, and means operated by the shaft, and operative upon the screw threaded member, for rotatively moving the latter and thereby endwise shifting the sleeve, after rotations in a given direction of the shaft.

4. The combination with the rotative operating shaft having a clutch member affixed thereon, and provided with a gear wheel, of a sleeve longitudinally movable but non-rotative relatively to the shaft and formed with screw threads, and also provided with a clutch member, a member made with screw threads in engagement with the threaded sleeve, and rotative but axially immovable relatively to the shaft, and provided with an eccentrically located projection, an annular clutch member adjacent said screw threaded member, surrounding, and endwise movable on, but non-rotative relatively to the sleeve, a pulley revolubly movable about the sleeve and having its faces in close relation to the clutch member of the shaft and the clutch member of the sleeve, another pulley between the sleeve clutch member and the sleeve-surrounding clutch member, means for revolubly driving the pulleys simultaneously in reverse directions, a revolubly mounted gear wheel having an eccentrically located projection revoluble in a path intersecting the location of the projection of the aforesaid screw threaded member, and intermediate gearing between said shaft gear and said projection provided gear.

5. The combination with a rotative operating shaft having a gear wheel and a fixed flange thereon, a sleeve, splined on, and capable of endwise movement relatively to, the shaft, having a flange at an intermediate portion thereof and provided at its outer end portion with external screw threads, a pulley loosely revoluble about the sleeve between one side of the flange thereof and the shaft flange, another pulley loosely revoluble about the sleeve at the other side of the flange thereof, an annular member spline engaged with, and endwise movable relatively to, the sleeve having a flange adjacent the second named pulley, a rotatively operable ring nut, constrained against axial movement relatively to the shaft having a screw engagement with the threaded portion of the sleeve, and provided with an eccentrically located stud, means for revolubly driving the pulleys in reverse directions, a countershaft, a gear wheel thereon in mesh with the aforesaid shaft gear and another smaller gear wheel thereon, and a second countershaft having a gear wheel thereon which is meshed by the smaller gear wheel of the first countershaft and which is provided with an eccentrically located stud revoluble in a path intersected by the stud of the ring nut.

1,025,111. HYDRAULIC TRAVERSE MECHANISM. EDWARD S. COLE, Montclair, N. J. Filed July 8, 1909, Serial No. 506,499. Renewed Oct. 9, 1911. Serial No. 653,729. (Cl. 234—1.)



1. In a hydraulic traverse mechanism, the combination with a rod-meter and manometer, of a record-carrying device, and means interposed between the latter and the rod-meter for causing said carrier to automatically and positively follow the movements of the rod-meter.

2. In a hydraulic traverse mechanism, the combination with a revoluble record-carrying drum, of a manually operated stylus disposed before the drum, a rod-meter, and mechanism for revolving the drum in unison with the longitudinal movements of the rod-meter.

3. In a hydraulic traverse mechanism, the combination with a rod-meter, a manometer and recording drum, of spring-retracted reducing devices connected respectively to the rod-meter and drum whereby the drum follows the movements of the rod-meter.

4. A hydraulic traverse mechanism consisting of the combination with a rod-meter, a tap in which the latter works, a bracket adapted to be clamped to the tap, and a manometer and record-drum mounted in juxtaposition to each other on said bracket.

1,025,112. METHOD OF CONCRETING PILES. ALFRED H. DAVIS, St. Petersburg, Fla., assignor, by mesne assignments, to International Concrete Piling Co., Inc., Jamestown, N. Y., a Corporation of New York. Original application filed Aug. 15, 1910, Serial No. 577,365. Divided and this application filed Nov. 14, 1910. Serial No. 592,149. (Cl. 61—43.)

1. The method which consists in creating around a pile within the water surrounding the same, an annular zone devoid of water, filling said zone with concrete, and isolating said concrete from the pile during the filling process.

2. The method of coating a submerged pile with concrete, which consists of creating a dry zone around a pile below the level of the tide, placing a filling of properly mixed concrete within said zone, isolating said concrete from the pile, and excluding the surrounding water from intermingling with said concrete while it is undergoing the setting process.

3. The method of casting a concrete jacket around a pile which consists of creating a dry zone within an annular mold placed below the tide, filling said zone with concrete of proper consistency, isolating said concrete from the surrounding sea water during its setting stage, and withdrawing said mold.

4. The method of forming concrete jackets around a pile which consists of creating a dry zone around a submerged pile filling said zone with concrete, isolating the concrete from the pile while lowering it to the ground foundation, allowing the concrete to come in contact with the pile, and maintaining said zone isolated from the surrounding sea water during the initial set of the concrete.



5. Method of casting concrete jackets around a pile below the surface of the water, consisting of creating a zone around the pile devoid of water below the level of the tide, placing concrete properly mixed within said zone, isolating the concrete from the pile, lowering the concrete to the ground foundation into which the pile is driven, allowing the concrete while in plastic condition to come in contact with the pile, and allowing a setting thereof without the intermingling therewith of the surrounding sea water.

[Claims 6 to 15 not printed in the Gazette.]

1,025,113. MANIFOLD-BOOK. PAUL AUSCHER and CHARLES DEHAINAULT, Paris, France; said Dehainault assignor to said Auscher. Original application filed Sept. 21, 1906, Serial No. 335,641. Divided and this application filed Nov. 10, 1908. Serial No. 461,989. (Cl. 11—23.)



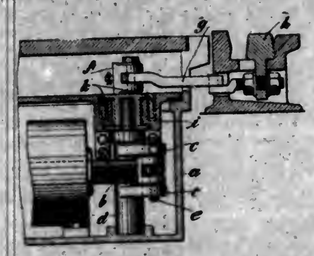
1. A manifold device comprising a book of folded entry sheets, a rigid writing support superposed thereover, carbonaceous material on the upper face of said writing support, the top entry sheet, in position for use, lying folded directly upon the upper face of said writing support, whereby a reversed copy is made upon the portion of said sheet which is juxtaposed to the face of said support, substantially as described.

2. A manifold device comprising a book of folded entry sheets, a rigid writing support flexibly mounted thereover to permit ready access to said entry sheets, carbonaceous material on the upper face of said writing support, the top entry sheet, in position for use, lying folded directly upon the upper face of said writing support, whereby a reversed copy is made upon the portion of said sheet which is juxtaposed to the face of said support, substantially as described.

3. A manifold device comprising a book of folded entry sheets, a rigid writing support and flexible means for constantly maintaining said support superposed over said book of entry sheets, carbonaceous material on the upper face of said writing support, the top entry sheet, in position for use, lying folded directly upon the upper face of said writing support whereby a reversed copy is made upon the portion of said sheet which is juxtaposed to the face of said support.

REISSUES.

13,409. MOISTURE-PROOF PACKING. ROY V. COLLINS, New York, N. Y., assignor to American Automatic Switch Company, New York, N. Y., a Corporation of New York. Filed Nov. 4, 1910. Serial No. 590,767. Original No. 908,647, dated Jan. 5, 1909, Serial No. 414,856. (Cl. 104—155.)



1. The combination with an electric switch mechanism, of a box inclosing said mechanism and having an inner and an outer cover, a shaft in operative relation with said mechanism and journaled in said box, said shaft having one end projecting through the inner cover into the space between the two covers, a cup formed in the inner cover around the projecting end of the shaft, an annular flange extending into the cup and secured to the shaft, and a connecting arm in said space secured to the projecting end of the shaft.

2. An apparatus of the class described comprising a housing, a switch throwing device adapted to be connected to a switch, operating means connected to and adapted to operate said switch throwing device and inclosed in said housing, a horizontal partition separating said switch throwing device and operating means, and a seal interposed between said switch throwing device and said operating means embodying a cup depending from said partition and containing a body of liquid having a specific gravity greater than water for excluding water from the operating means.

3. An apparatus of the class described comprising a housing provided with a horizontal partition forming a liquid tight compartment, a switch throwing device arranged exteriorly of said compartment, operating means connected to said switch throwing device and contained in said compartment, and a seal interposed between said switch throwing device and said operating means embodying a cup depending from said partition and containing a body of mercury for excluding water or other liquid from the said compartment.

4. An apparatus of the class described comprising a housing, switch operating mechanism inclosed in a compartment therein and having a part extending through a wall of said compartment, a switch throwing device connected to said part, and a seal surrounding that part of the switch operating mechanism which extends through the wall of the compartment embodying a cup depending from said wall and containing a liquid of a specific gravity greater than water for excluding water therefrom.

5. A switch throwing mechanism comprising a housing provided with a partition forming a lower compartment therein, a switch throwing device arranged above said partition, switch operating mechanism contained in the compartment beneath said partition and having a shaft extending through the partition and connected to the switch throwing device, and a seal surrounding said shaft embodying a cup depending from said partition and containing a body of mercury forming a liquid-tight joint between it and said partition.

6. An apparatus of the class described comprising a housing provided with a partition forming an inclosed compartment, a switch throwing device arranged at one side of said partition, switch operating mechanism inclosed in said compartment at the opposite side of said partition, and a seal located below the plane of said partition for preventing the entrance of water or moisture to said compartment embodying a liquid having a specific gravity greater than that of water.

7. A switch throwing mechanism comprising a housing provided with a partition forming a lower inclosed compartment, a switch throwing device arranged at the outer side of said partition, switch operating mechanism inclosed in said compartment at the lower side of said partition and having a shaft extending through the latter and connected to the switch throwing device, and means for preventing the entrance of water to said compartment comprising a basin depending from said partition and containing a liquid having a specific gravity greater than that of water, and a flange depending into said liquid.

8. A switch throwing mechanism comprising a housing provided with a partition forming a compartment beneath it, a switch throwing device arranged above said partition, switch operating mechanism inclosed in said compartment beneath said partition and having a rotatable shaft extending through the partition and connected to said switch throwing device, and means for preventing the entrance of water to said compartment comprising an annular basin surrounding said shaft and depending below said partition, and a flange also surrounding the shaft and rotatable therewith, said flange depending into said basin, the latter containing a liquid having a specific gravity greater than that of water.

9. A switch throwing mechanism comprising a housing provided with a partition forming an inclosed compartment beneath it, a switch throwing device arranged above said partition, switch operating mechanism inclosed in said compartment beneath said partition and embodying a shaft which extends through the partition and is connected to said switch throwing device, a basin supported by and depending below said partition and having an inner sleeve forming a journal for said shaft, a body of mercury contained in said basin, and an annular flange surrounding said shaft and depending into the body of mercury to form a water seal between the opposite sides of said partition.

10. In a switch throwing mechanism a means having an inclosed chamber for the operating means, a movable member operated by said last mentioned means, and extending upwardly through a wall of the chamber means, and a liquid seal between said wall and said movable member, said seal located below the upper surface of said wall.

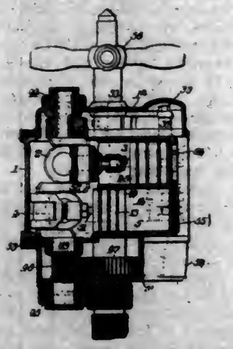
11. A structure comprising a housing having a horizontal partition separating a switch throwing device and operating means and a seal interposed between said switch throwing device and said operating means embodying a cup depending from said partition and containing a body of liquid having a specific gravity greater than water.

12. The combination of a switch throwing mechanism comprising a housing provided with a partition forming an inclosed compartment beneath it, a switch throwing device arranged above the partition, a switch operating mechanism inclosed in said compartment beneath said partition and embodying a shaft which extends through said partition and connected to the switch throwing device and a basin below the partition and a flange carried by the shaft and entering the basin below the partition and a sealing liquid in the basin into which the flange enters.

13. A switch-throwing mechanism comprising a housing provided with a partition forming a liquid-tight lower compartment, a switch-throwing device arranged above said partition and having a crank adapted for connection to a switch point, electro-magnetic switch operating mechanism contained in the compartment beneath said partition and having a crank shaft extending through the partition and connected to said crank of the switch-throwing device, and a mercury seal for preventing the passage of water between said partition and the operating part extending therethrough embodying a mercury containing cup on the partition and a flange member between the crank shaft and the cup and immersed in the mercury in said cup.

14. A switch operating mechanism comprising a stationary housing having a water-tight compartment below a partition, solenoids located in said compartment, a shaft extending upwardly through a hole in the partition, said shaft having below the partition a crank which is operatively related to the solenoids, and above the partition a crank which is operatively connected to a switch-point, so that when the shaft is turned by the solenoids the switch-point will be moved, and a mercury seal between the partition and shaft.

13,410. PNEUMATIC DRILL OR LIKE MACHINE. GEORGE HARRY HAYES, Chicago, Ill., assignor to Chicago Pneumatic Tool Company, a Corporation of New Jersey. Filed Aug. 2, 1906. Serial No. 328,967. Original No. 723,960, dated July 21, 1903, Serial No. 133,906. (Cl. 121—27.)



1. A portable pneumatic motor comprising a plurality of sets of power-cylinders, arranged at an angle to each other, pistons in said cylinders, a crank-shaft with which the said pistons are connected, the cylinders of each set being parallel with each other and having their central axes in a plane which is radial with respect to the axis of the crank-shaft, valves for said cylinders embracing rotative valve-plugs the central axes of which are parallel with the axis of the crank-shaft and each of which is common to all of the cylinders of one set of cylinders, and operative connections between the crank-shaft and said valve-plugs for actuating the latter.

2. A portable pneumatic motor comprising a plurality of sets of power-cylinders arranged at an angle to each other, pistons in said cylinders and a crank-shaft with which the said pistons are connected, the cylinders of each set being parallel with each other and having their central axes in a plane which is radial to the axes of the crank-shaft, and rotative valves, embracing valve-plugs, the central axes of which are parallel with the axis of the crank-shaft and each of which is common to all of the cylinders of one set of cylinders, said valve-plugs each having a plurality of sets of valve ports or passages, one set for each cylinder of its associated set of cylinders, and operative connections between the crank-shaft and the said valve-plugs for giving motion to the latter.

3. A portable pneumatic motor comprising a casing which is provided with a plurality of sets of power-cylinders arranged at an angle to each other, a supply-chamber for the pressure fluid, and valve-chambers interposed between said supply-chamber and the said sets of power-cylinders, the cylinders of each set having their central axes parallel with each other and in a plane which is radial to the axis of the crank-shaft, rotative plug-valves located in said valve chambers, each of which is common to all of the cylinders of one set of cylinders and the central axes of which are parallel with the axis of the crank-shaft, said plug-valves each having a plurality of sets of valve ports or passages, one for each cylinder of its associated set of cylinders, and operative connections between the crank-shaft and the said valve-plugs for giving motion to the latter.

4. A portable pneumatic motor comprising a casing provided with a plurality of sets of power-cylinders, pistons in said cylinders and a crank-shaft with which said pistons are connected, the cylinders of the several sets having their central axes in planes which are radial with respect to the axis of the crank-shaft and are at an angle to each other, said casing being also provided between the outer ends of the cylinders, with a supply-chamber for the pressure fluid, located between the outer ends of said cylinder and also having, between said supply-chamber and the cylinders, cylindric valve chambers the central axes of which are at right angles to the axes of the cylinders and parallel with the crank-shaft, rotative valve-plugs located in said chambers, said valve-plugs each having a plurality of sets of valve ports or passages, one for each of the cylinders associated therewith, and the valve-casing having ports or passages leading from the said supply-chamber to the said valve-chambers and connections between the crank-shaft and the said valve-plugs for giving motion to the latter.

5. A portable pneumatic motor comprising a casing which is provided with a plurality of sets of power-cylinders, pistons in said cylinders, and a crank-shaft with which the said pistons are connected, the cylinders of the several sets having their central axes in planes which are radial to the axis of the crank-shaft and are at an angle to each other, rotative valve-plugs which are common to all of the cylinders of one set, and the central axes of which are parallel with the axis of the crank-shaft, said valves each having a plurality of sets of valve ports or passages one for each cylinder of the associated set of cylinders, eccentrics on the said crank-shaft, actuating arms on said valve-plugs, and means connecting said eccentrics with said arms for giving oscillatory motion to the valve-plugs.

6. A portable pneumatic motor comprising a casing provided with a power-cylinder and a pressure-fluid-supply chamber, a crank-shaft, a piston in the cylinder connected with the crank-shaft, an oscillatory valve-plug mounted in the casing parallel with the crank-shaft, and a valve-chamber for said plug-valve, the wall of which constitutes part of the wall of the said supply-chamber, said chamber being provided with a port or opening connecting the same with said supply-chamber, and with another port or opening connecting the same with the cylinder, and the valve-plug being provided with an admission and an exhaust port, said admission-port being adapted to communicate with both of said ports or openings in the valve-casing.

7. A portable pneumatic motor comprising a crank-shaft, a power-cylinder, a valve for controlling the admission of pressure fluid to and its exit from said cylinder, said valve embracing a rotative valve-plug the axis of which is at right angles to the central axis of the cylinder and parallel with the crank-shaft, an admission-port in said valve-plug through which pressure fluid is admitted to the outer end of the cylinder and an exhaust-port in said plug connected with an exhaust-passage which extends longitudinally through the plug and opens through one end of the same.

8. A portable pneumatic motor comprising a main casing provided with two sets of parallel cylinders arranged at an angle to each other and with a supply-chamber located between the cylinders, a crank-shaft, pistons in the cylinders connected with the crank-shaft, oscillatory valve-plugs mounted in the casing parallel with the crank-shaft between the said supply-chambers and the cylinders and actuating means for the said valve-plugs embracing eccentrics on the crank-shaft, actuating-arms mounted in the casing and connected with the valve-plugs, and operative connections between the said eccentrics and the said actuating-arms.

9. In a hand portable pneumatic tool of the type set forth, a fluid-pressure cylinder, a piston working therein, a crank-shaft connected to said piston, an oscillating controlling and reversing valve consisting of a single part arranged across or at right angles to said cylinder, a sleeve on the machine-handle, and means operatively connecting said valve and the sleeve whereby the valve may be moved longitudinally for the purpose of reversing the revolution of the crank-shaft and tool.

10. In a portable pneumatic tool comprising at least two sets of fluid-pressure cylinders and the cylinders in one set arranged substantially at right angles with the cylinders in the other set, a central transverse fluid-pressure passage in the machine-body between the sets of cylinders, two controlling-valve chambers between and at right angles to the sets of cylinders and to the fluid-pressure passage, a partially-rotating cylindrical valve in each chamber, means on the crank-shaft for oscillating said valves so as to control the admission of fluid-pressure to and its exhaust from the cylinders, and means on the machine-handle operatively connected to said valves so as to move both valves simultaneously for reversing the working of the machine, substantially as set forth.

11. A hand portable pneumatic tool, having a main casing or body comprising at least four fluid-pressure cylinders arranged in pairs, two controlling-valve chambers arranged transversely to and between the pairs of cylinders, a central transverse fluid-pressure passage connecting directly with the valve chambers and with the pressure-inlet in the machine-handle, an oscillating controlling and reversing valve in each chamber for controlling the admission of pressure to and its exhaust from a pair of cylinders, a collar slidably mounted on each valve and held against rotation on the valve, means connecting said collars with eccentrics on the crank-shaft, and a T-shaped yoke connecting said valves and itself operatively connected to a sleeve on the machine-handle, substantially as described.

12. In a portable pneumatic tool, the combination of multiple cylinders, pistons working in said cylinders, a crank-shaft connected to said pistons, an oscillating, controlling and reversing valve, consisting of a hollow part arranged transversely to said cylinders, and having a double set of inlet-ports and a double set of exhaust-ports connecting with the fluid-supply and the exterior of the casing respectively, means connecting the crank-shaft with the valve for oscillating the latter, and means connected with the machine-handle for moving the valve longitudinally to reverse the operation of the machine, substantially as described.

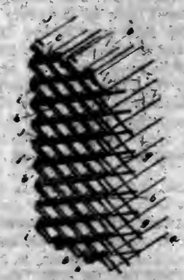
13. In a portable pneumatic tool, the combination of multiple cylinders, pistons working in said cylinders, a crank-shaft connected to said pistons, an oscillating, controlling and reversing valve, consisting of a hollow part arranged transversely to said cylinders, and having a double set of inlet ports on the exterior of the valve and a double set of exhaust-ports, connecting with the interior of the valve, means connecting the crank-shaft with the valve for oscillating the latter, and means connected with the machine-handle for moving the valve longitudinally to reverse the operation of the machine, substantially as described.

14. In a portable pneumatic tool, an oil-bath gear-case comprising an annular section or part 58 detachably connected to the machine-body, an annular cover part or neck 59^a detachably connected to the machine-body and to the gear-case, and fluid-pressure exhaust-ports in the gear-case and cover said ports registering with the controlling-valve chambers in the machine-body, substantially as described.

13,411. RADIATOR. LEON LOMANO, Paris, France, assignor, by mesne assignments, to Societe Anonyme Montbarbon, Neuilly-sur-Seine, France, a Corporation of France. Filed July 15, 1911. Serial No. 638,787. Original No. 944,450, dated Dec. 28, 1909, Serial No. 490,314. (Cl. 62—28.)

1. A honey-comb radiator comprising metal sheets bent in zig-zag form and having superposed angles, with holes in the angles, and wires passing cross-wise through the holes of the contiguous angles of the said sheets.

2. A honey-comb radiator comprising metal sheets bent in zig-zag form and having superposed angles, with holes in the angles, wires passing cross-wise through the holes of the contiguous angles of the said sheets, and means for securing the ends of the wires.



3. A honey-comb radiator comprising metal sheets bent in zig-zag form and having superposed angles and wires g passing cross-wires through the holes b of the contiguous angles of the said sheets, the ends i, j, of said wires being bent.

4. A honey-comb radiator formed of zig-zag sheets sewed together by cross wires, said wires passing through holes in the sheets.

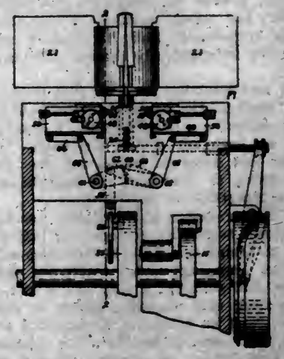
5. A honey-comb radiator formed of sheets of metal bent to zig-zag form, with holes near the edges and located in the angles, two sets of cross wires passing through the holes, the crossing of wires of the two sets being located within a hole.

6. A honey-comb radiator formed of sheets of metal bent to zig-zag form, and having superposed angles, openings at the angles, cross wires passing through said openings, and supported solely by the sheets and partly or wholly closing the ends of the spaces between the sheets.

7. A honey-comb radiator formed of sheets of metal bent to zig-zag form, and having superposed angles, cross wires passing through holes in the sheets, and holding them together without extraneous support.

8. A honeycomb radiator formed of sheets of metal bent to zigzag shape and having superposed angles, said sheets having openings, wires crossing at an angle between the sheets and passing through the openings, and solder closing the ends of the spaces between sheets.

13,412. CASING-IN MACHINE FOR BOOKS. WILLIAM L. NORTON, Boston, Mass. Filed May 31, 1911. Serial No. 630,531. Original No. 988,651, dated Apr. 4, 1911, Serial No. 562,624. (Cl. 11—2.)

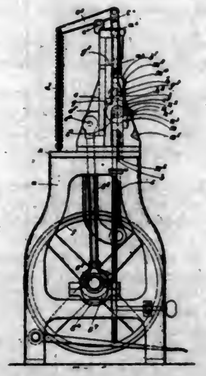


1. In a casing-in machine for books, the combination of a paste-box, a paste-applying-roll, and a paste-distributing-means arranged to deliver to the paste-applying-roll, at two widely separated portions thereof, thin layers of paste,

and a thicker layer of paste therebetween, substantially as described.

2. In a casing-in machine for books, the combination of a paste-box containing a paste-distributing-roll and a paste-applying-roll arranged close to the paste distributing-roll, means for revolving said rolls in one direction to apply paste to the book and in the other direction to accumulate paste on the applying-roll, and two scrapers arranged under and adjacent the paste applying-roll at widely separated points, corresponding to the ends of the book to be pasted, which reduce the thickness of the layer of paste which is delivered to the paste applying-roll at such portions thereof, substantially as described.

13,413. HEEL-BREASTING MACHINE. BRADFORD B. WATERMAN, East Bridgewater, Mass., assignor to United Shoe Machinery Company, Paterson, N. J., a Corporation of New Jersey. Filed Oct. 18, 1904. Serial No. 229,029. Original No. 738,502, dated Sept. 8, 1903, Serial No. 123,386. (Cl. 12—47.)



1. In a heel-breasting machine, the combination of a knife and knife-holder, an actuator for said knife-holder, means for returning the knife-holder independently of its actuator, and means for disengaging the knife-holder from its actuator whereby it is free to return independently thereof, substantially as described.

2. In a heel-breasting machine, the combination of a knife and knife-holder, an actuator for said knife-holder, means for returning the knife-holder independently of its actuator, a stop for controlling the descent of said knife-holder, and means operated by said stop for disengaging the knife-holder from its actuator whereby it is free to return independently thereof, substantially as described.

3. In a heel-breasting machine, the combination of a knife and knife-holder, an actuator for said knife-holder, means for returning said knife-holder independently of its actuator, an engaging device interposed between said knife-holder and actuator, and means for operating said engaging device to disengage the knife-holder from its actuator, substantially as described.

4. In a heel-breasting machine, the combination of a knife and knife-holder, an actuator for said knife-holder, means for returning said knife-holder independently of its actuator, an engaging device interposed between said knife-holder and actuator, a stop and means operated by it for operating said engaging device to disengage the knife-holder from its actuator, substantially as described.

5. In a heel-breasting machine, the combination of a knife and knife-holder, an actuator for said knife-holder, an engaging device interposed between said knife-holder and actuator, clutch mechanism for controlling the operation of said engaging device, and a stop for operating said clutch mechanism to in turn operate the engaging device to disengage the knife-holder from its actuator, whereby said knife-holder is free to return independently of its actuator, substantially as described.

6. In a heel-breasting machine, the combination of a knife and knife-holder, an actuator for said knife-holder, an engaging device interposed between said knife-holder and actuator, clutch mechanism for controlling the operation of said engaging device, a stop for operating said clutch mechanism to in turn operate the engaging device to disengage the knife-holder from its actuator, whereby said knife-holder is free to return independently of its actuator and means for restoring said clutch mechanism, the operation of which is controlled by said actuator, substantially as described.

7. In a heel-breasting machine, the combination of a knife, a vertically-movable knife-holder, a vertically-movable actuator for said knife-holder, an engaging device interposed between said actuator and knife-holder, means for operating said engaging device to disengage the knife-holder from its actuator, and a spring for returning said knife-holder independently of its actuator, when disengaged therefrom, substantially as described.

8. In a heel-breasting machine, the combination of a knife, a knife-holder, an actuator for said knife-holder having a projection, a shaft carried by the knife-holder having a segmental portion adapted to be engaged by said projection and also having a dog, clutch mechanism which said dog engages, also carried by said knife-holder and a stop movably connected with said knife-holder for operating said clutch mechanism to release the dog, substantially as described.

9. In a heel-breasting machine, the combination with a knife and knife-holder, an actuator for said knife-holder, means for returning said knife-holder independently of its actuator, an engaging device interposed between said knife-holder and actuator, a stop movably connected with said knife-holder and means operated by it for operating said engaging device, substantially as described.

10. In a heel-breasting machine, the combination of a knife and knife-holder, an actuator for said knife-holder, means for returning the knife-holder independently of its actuator, a stop for controlling the descent of said knife-holder movably connected therewith, and means operated by said stop for disengaging the knife-holder from its actuator whereby it is free to return independently thereof, substantially as described.

11. A heel breasting machine, having, in combination, a knife, actuating means, mechanism for transmitting motion from the actuating means to the knife arranged to become ineffective to impart movement to the knife, a plurality of members arranged for relative movement, means for frictionally connecting said members, means actuated by engagement with the sole of the shoe for disconnecting said members, and means for controlling said mechanism in accordance with the relation between said members.

12. A heel breasting machine, having in combination, a knife, a knife carrier, actuating means therefor, mechanism for transmitting motion from the actuating means to the knife including parts constructed for relative movement to render said mechanism ineffective to transmit said motion and arranged to cause said relative movement of said parts to be effective by reaction to pressure transmitted to the knife, means for normally retaining said mechanism in effective condition and means for automatically rendering it ineffective whereby the cutting movement of the knife is checked.

13. A heel breasting machine, having in combination, a knife, actuating means, mechanism for transmitting motion from the actuating means to the knife including parts constructed for relative movement to render said mechanism ineffective to transmit said motion and arranged to cause said relative movement of said parts to be effected by reaction to pressure transmitted to the knife, means for normally retaining said mechanism in effective condition, means for automatically releasing said mechanism to check the cutting movement of the knife and means for automatically restoring said mechanism to its effective condition.

14. A heel breasting machine having, in combination, a knife, actuating means therefor, and mechanism including a make and break connection for transmitting motion from the actuating means to the knife, said mechanism being constructed and arranged to set up, as a result of the reaction to pressure transmitted to the knife to force it through the work, stresses tending to break such connection and produce an interruption of the cutting stroke of the knife, and means operated by prearranged resistance encountered during the operative stroke to release said stresses, substantially as described.

15. A heel breasting machine, having in combination, a knife, a knife carrier, an actuator therefor, mechanism for transmitting movement from the actuator to the knife carrier including a member pivotally mounted for turning movement to render said mechanism ineffective to transmit movement to the knife carrier, said actuator and said member being relatively constructed and arranged so that a turning force is imparted to said member by the actuator during the movement of the knife through the work, means for normally restraining the turning movement of said member and means for automatically releasing said restraining means to check the cutting movement of the knife.

16. A heel breasting machine having, in combination, a knife, actuating means therefor, mechanism for transmitting motion from the actuating means to the knife so constructed and arranged that the reaction to pressure transmitted to the knife during its passage through the work tends to render said mechanism ineffective and means arranged for contact with the work to trip said mechanism and permit it to become ineffective.

17. A heel breasting machine, having, in combination, a knife, a knife carrier, actuating means therefor, mechanism for transmitting motion from the actuating means to the knife carrier constructed and arranged so that resistance offered to the movement of the knife tends to disconnect said mechanism from said carrier, means restraining said mechanism from disconnection and means acting when the knife has reached the shank portion of the shoe to permit the disconnection of the carrier from the actuator.

18. A heel breasting machine, having, in combination, a knife, a knife carrier, retracting means for the carrier, an actuator, mechanism between the actuator and the carrier for moving the carrier to effect the cutting stroke of the knife, said mechanism being constructed and arranged to be disconnected from the actuator by pressure applied through the knife in the direction of its movement, means restraining said mechanism from disconnection, and means actuated by contact with the shoe to permit such pressure to become effective when the knife has reached the edge of the heel next the shank.

19. A heel breasting machine, having in combination, an actuator having a reciprocating movement, a knife carrier arranged for movement in the same direction as the actuator, means upon one of said parts arranged to rotate about an axis extending transverse to said reciprocating movement and having a portion to one side of its axis lying in the path of a portion of the other of said parts whereby it tends to rotate about said axis and the parts are constrained to move together in one direction when said rotatable means is held from rotation, said rotatable means being constructed and arranged to clear each other when permitted to rotate, means normally restraining said rotatable means from rotation and means carried by a moving part arranged to release said rotatable means when the movement of said moving means is stopped.

20. A heel breasting machine, having, in combination, an actuator having a constant stroke, a knife carrier arranged for movement parallel therewith, rotatable means mounted upon said carrier on an axis transverse to the direction of movement of the carrier and arranged in the path of a portion of said actuator for movement of the carrier by the actuator, said means being constructed and arranged to clear said other part when permitted to rotate, means normally restraining said rotatable means from rotation, and shoe engaging means carried by the carrier arranged to release said rotatable means when the motion of said shoe engaging means is stopped.

21. A heel breasting machine having, in combination, a knife, a knife carrier, actuating means therefor including a power driven actuator, means on the carrier mounted for movement into and out of the path of the actuator and through which the actuator operates to drive the knife carrier, said means being so mounted that pressure of the actuator thereupon tends constantly to move the same out of the path of the actuator, means for holding said means in the path of the actuator, and means for releasing the said holding means after a predetermined movement of the knife relatively to the shoe.

22. A heel breasting machine having, in combination, a knife carrier, an actuator therefor, a pivoted detent on one of said parts lying normally in the path of the other part, the pressure of which upon the detent tends to turn it out of said path, means for holding the detent against movement and means operating upon contact with the shoe for releasing the detent.

DESIGNS.

42,428. BASE FOR GEM-SETTINGS. HENRY ACKERMAN, Weehawken, N. J. Filed Dec. 2, 1911. Serial No. 663,616. Term of patent 14 years.



The ornamental design for a base for a gem setting, as shown.

42,429. BRAID OR TRIMMING. RAYMOND H. AVERNS, Coventry, England. Filed Nov. 9, 1911. Serial No. 659,450. Term of patent 3½ years.



The ornamental design for braid or trimming as shown.

42,430. BRAID OR TRIMMING. RAYMOND H. AVERNS, Coventry, England. Filed Nov. 9, 1911. Serial No. 659,451. Term of patent 3½ years.



The ornamental design for braid or trimming as shown.

42,431. BOTTLE. GEORGE B. BEIDERHASE, New York, N. Y., assignor to Joseph Fahys & Co., New York, N. Y., a Corporation of New York. Filed July 23, 1910. Serial No. 573,587. Term of patent 7 years.



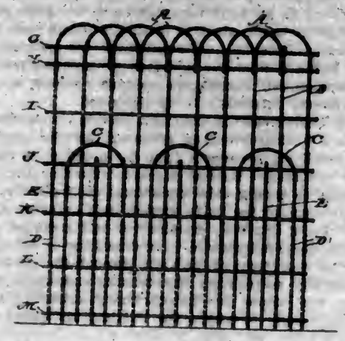
The ornamental design for a bottle, as shown.

42,432. NECKTIE-HOLDER. THEODORE BROMMENSCHENKEL, Aurora, Ill. Filed Feb. 16, 1912. Serial No. 678,113. Term of patent 7 years.



The ornamental design for a necktie holder, as shown.

42,433. WIRE FENCE. HERBERT L. BROWN, Cincinnati, Ohio, assignor to The H. L. Brown Fence and Manufacturing Company, Cincinnati, Ohio. Filed Jan. 9, 1912. Serial No. 670,802. Term of patent 14 years.



The ornamental design for a wire fence, as shown and described.

42,434. STREET-LAMP. CHARLES E. CLEVELAND, Fond du Lac, Wis. Filed Jan. 16, 1912. Serial No. 671,525. Term of patent 7 years.



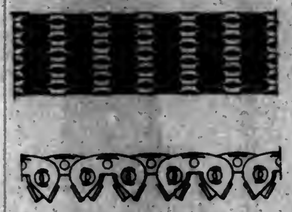
The ornamental design for a street-lamp, as shown.

42,435. FACIAL-MASSAGE DEVICE. JAMES L. ERSKINE, Upper Montclair, N. J. Filed Sept. 22, 1911. Serial No. 650,861. Term of patent 14 years.



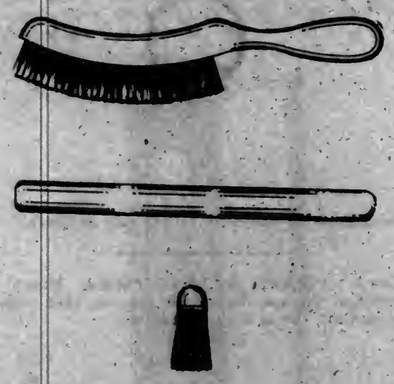
The ornamental design for a facial massage device as shown.

42,436. CHAIN. HENRY E. HAYWARD, Philadelphia, Pa., assignor to Link-Belt Company, Chicago, Ill., a Corporation of Illinois. Filed Dec. 9, 1911. Serial No. 664,881. Term of patent 14 years.



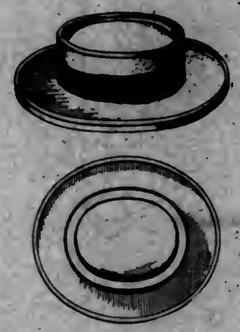
The ornamental design for a chain, as shown.

42,437. BRUSH. JOSEPH GAZHAM MACKENZIE, Toledo, Ohio. Filed Apr. 14, 1911. Serial No. 621,154. Term of patent 7 years.



The ornamental design for a brush, substantially as shown.

42,438. HAT. SAMUEL MUNDHEIM, New York, N. Y. Filed Feb. 1, 1911. Serial No. 606,053. Term of patent 3½ years.



The ornamental design for a hat, as shown.

42,439. RUG. ADOLPH PETZOLD, Philadelphia, Pa., assignor to John H. Bromley and Edward Bromley, Copartners trading as John Bromley & Sons, Philadelphia, Pa. Filed Jan. 29, 1912. Serial No. 674,213. Term of patent 3½ years.



The ornamental design for a rug, as shown.

42,440. RUG. ADOLPH PETZOLD, Philadelphia, Pa., assignor to John H. Bromley and Edward Bromley, Copartners trading as John Bromley & Sons, Philadelphia, Pa. Filed Jan. 29, 1912. Serial No. 674,214. Term of patent 3½ years.



The ornamental design for a rug, as shown.

42,441. SALT-SHAKER. ANDREW J. SANFORD, Newark, Ohio, assignor to A. H. Heisey & Co. Inc., Newark, Ohio, a Corporation of West Virginia. Filed Jan. 18, 1912. Serial No. 672,001. Term of patent 14 years.



The ornamental design for a salt shaker, as shown.

42,442. STAND FOR ELECTRICALLY-DRIVEN MACHINES. HERBERT W. SPELLMAN, New Britain, Conn., assignor to Landers, Frary and Clark, New Britain, Conn., a Corporation. Filed Nov. 5, 1910. Serial No. 590,908. Term of patent 14 years.



The ornamental design for a stand for an electrically driven machine, as shown.

42,443. SAD-IRON. OTTO SPAHR and CHARLES STICHLER, Philadelphia, Pa. Filed Nov. 22, 1911. Serial No. 661,869. Term of patent 14 years.



The ornamental design for a sad iron as shown and described.

42,444. CLOCK-CASE. ELMER E. STOCKTON, Bristol, Conn., assignor to The E. Ingraham Co., Bristol, Conn., a Corporation. Filed Dec. 18, 1911. Serial No. 666,609. Term of patent 7 years.



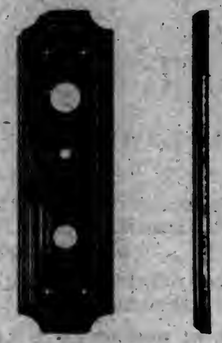
The ornamental design for a clock case as shown.

42,445. POCKET BOTTLE-OPENER. HARRY L. VAUGHAN, Chicago, Ill. Filed Sept. 8, 1911. Serial No. 648,407. Term of patent 14 years.



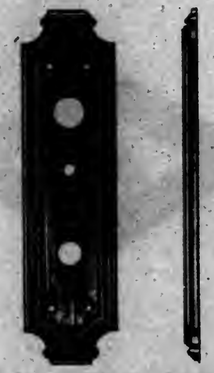
The ornamental design for a pocket bottle opener as shown.

42,446. ESCUTCHEON-PLATE. HENRY G. VOIGHT, New Britain, Conn. Filed Jan. 16, 1912. Serial No. 671,526. Term of patent 7 years.



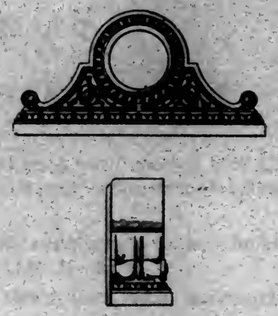
The ornamental design for an escutcheon plate, as shown.

42,447. ESCUTCHEON-PLATE. HENRY G. VOIGHT, New Britain, Conn. Filed Jan. 16, 1912. Serial No. 671,527. Term of patent 7 years.



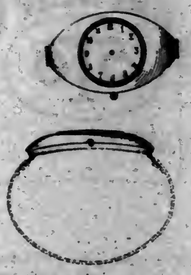
The ornamental design for an escutcheon plate, as shown.

42,448. MANTEL-CLOCK CASE. JOHN FRANKLIN WHITMAN, Elkins Park, Pa. Filed Feb. 17, 1911. Serial No. 609,268. Term of patent 14 years.



The ornamental design for a mantel clock case as shown and described.

42,449. BRACELET-WATCH. EMILE JEAN WITTNAUER, New York, N. Y., assignor to A. Wittnauer & Co., New York, N. Y. Filed Nov. 9, 1911. Serial No. 659,446. Term of patent 7 years.



The ornamental design for a bracelet watch as shown.

TRADE-MARKS

PUBLISHED APRIL 30, 1912.

The following trade-marks are published in compliance with section 6 of the act of February 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of this date.

Marks applied for "under the ten-year proviso" are registrable under the provision in clause (b) of section 5 of said act as amended February 18, 1911.

As provided by section 14 of said act, a fee of ten dollars must accompany each notice of opposition.

Ser. No. 7,509. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GOODRICH DRUG CO., Omaha, Nebr. Filed June 5, 1905.



Particular description of goods.—Flavoring Extracts.
Claims use since Nov. 1, 1903.

Ser. No. 31,139. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GEORGE A. MADISON, St. Paul, Minn. Filed Nov. 12, 1907.

Perorol

Particular description of goods.—Tooth-Paste, Face-Creme, Shaving-Cream, Bath-Powder, Talcum Powder, and Face-Powder.
Claims use since May 10, 1907.

Ser. No. 40,587. (CLASS 20. LINOLEUM AND OILED CLOTH.) STANDARD OIL CLOTH CO., New York, N. Y. Filed Feb. 16, 1909.

MERITAS OTC

Particular description of goods.—Table, Shelf, Stair, Enamel, and Floor Oil-Cloth.
Claims use since Dec. 17, 1904.

Ser. No. 40,588. (CLASS 20. LINOLEUM AND OILED CLOTH.) STANDARD OIL CLOTH CO., New York, N. Y. Filed Feb. 16, 1909.

SANITAS OTC

Particular description of goods.—Oil-Cloth Wall-Coverings.
Claims use since May 1, 1903.

Ser. No. 40,619. (CLASS 20. LINOLEUM AND OILED CLOTH.) STANDARD OIL CLOTH CO., New York, N. Y. Filed Feb. 17, 1909.

MERITAS

Particular description of goods.—Table, Shelf, Stair, Enamel, and Floor Oil-Cloths.
Claims use since Dec. 17, 1904.

Ser. No. 40,898. (CLASS 13. HARDWARE AND PLUMBING AND STEAM-FITTING SUPPLIES.) SCHACHT & Co., Goshen, Ind. Filed Mar. 2, 1909.



The portrait being that of Mrs. W. F. Schacht.
Particular description of goods.—Sink, Bath, and Basin Stoppers; Sink, Bath, and Basin Plugs, Bumpers, Force-Cups, and Hand-Cups.
Claims use since Feb. 15, 1909.

Ser. No. 44,809. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MARIA SZABÓ, Budapest, Hungary. Filed Sept. 20, 1909.

PORCELAIN

Particular description of goods.—Toilet Powder, Perfumes, Perfumed and Powdered Papers, Perfumed and Powdered Buckskins, Powder-Puffs, Borax, Borax Lotions, Embrocations, Disinfectants, Face-Creams, Cold-Cream, Massage-Milk, Cosmetic for the Hands, Crayons for Penciling Eye Brows and Lashes, Tooth-Polishing Dentifrice, Tooth-Powder, Hair-Dying Tincture, Toilet Water, Liquid Shampoo Preparation, and a Preparation for the Removal of Superfluous Hair.
Claims use since Aug. 19, 1909.

Ser. No. 47,733. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) WATSON W. AYERS, West Allis, Wis. Filed Feb. 11, 1910.

NI-NO

Particular description of goods.—Combined Numerical Card and Die Games.
Claims use since Feb. 3, 1910.

Ser. No. 47,914. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) GULLIVER & MERWINE, Kittanning, Pa. Filed Feb. 18, 1910.

G.&M.

Particular description of goods.—Veterinary Medicines Consisting of a Remedy for Bone and Bog Spavin, Splints, Ring-Bone, and Joint Enlargements.
Claims use since Jan. 1, 1903.

Ser. No. 50,019. (CLASS 15. OILS AND GREASES.) STANDARD OIL COMPANY OF NEW YORK, New York, N. Y. Filed May 31, 1910.

PHOTOLITE

Particular description of goods.—Refined Petroleum for Illuminating, Heating, and Power Purposes.
Claims use since 1869.

Ser. No. 52,696. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GOLDBERG, BOWEN & CO., San Francisco, Cal. Filed Nov. 10, 1910.

WORLD

Particular description of goods.—Canned Fruits and Vegetables, Mustard, Flavoring Extracts, Jellies, Preserves, Sweet Pickles, White Pepper, and Coffee.
Claims use since Sept. 1, 1899.

Ser. No. 52,955. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) AGRIPPINA IVANOVNA MAGHINA, St. Petersburg, Russia. Filed Nov. 26, 1910.



Particular description of goods.—A Skin-Softening Compound and Medical Compounds for Eczema and other Skin Diseases.
Claims use since 1907.

Ser. No. 53,020. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BURKE & JAMES, Chicago, Ill., assignor to Burke & James, Inc., a Corporation of Delaware. Filed Nov. 29, 1910.

IDEAL

Particular description of goods.—Reducing-Powders, Platinum Solution, Metol-Quinol Developer, and Potassium and Bromid Solution.
Claims use since May, 1897.

Ser. No. 52,573. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HARRISONBURG MILLING COMPANY, Harrisonburg, Va. Filed Dec. 30, 1910.



The portrait shown being a fanciful picture.
Particular description of goods.—Wheat-Flour.
Claims use since Sept. 10, 1910.

Ser. No. 55,227. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) THE SAMURAI PERFUME CO., New York, N. Y. Filed Mar. 21, 1911.

MURA

Particular description of goods.—Perfumes, Perfume Extracts, Toilet Waters, Sachets, Toilet Creams, Massage-Creams, Skin-Lotions, Face and Skin Powders, and Rouge.
Claims use since Feb. 28, 1911.

Ser. No. 55,595. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) JACOB E. DECKER & SONS, Mason City, Iowa. Filed Apr. 7, 1911.

VICTOR

Particular description of goods.—Hams, Bacon, and Boiled Hams.
Claims use since on or about Mar. 18, 1911.

Ser. No. 56,399. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ALBERTINA W. WALBERG, Springfield, Mass. Filed May 17, 1911.



Particular description of goods.—A Nerve-Tonic and Blood-Purifier.
Claims use since on or about Mar. 7, 1911.

Ser. No. 56,702. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) BERRYMAN & SCHLEGELMILCH, Philadelphia, Pa. Filed June 2, 1911.



No claim being made for the words "Ozonised," "Ice," "Hygienic," and "Water."
Particular description of goods.—Ice Made from Ozonised, Raw, or Distilled Water.
Claims use since Mar. 15, 1911.

Ser. No. 57,275. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) BAUER & CIE., Berlin, Germany. Filed June 24, 1911.

Lactumin

Particular description of goods.—Dietetic Preparations to be Used as a Remedy for Nervous Diseases, Weakness, and Anemic Conditions.
Claims use since Apr. 27, 1910.

Ser. No. 58,012. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) YANTIC WOOLEN COMPANY, Yantic, Conn. Filed Aug. 3, 1911.



Particular description of goods.—Woolen Fabrics.
Claims use since July 1, 1857.

Ser. No. 58,037. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) JOSEPH GRETSCHEL, Long Island City, N. Y. Filed Aug. 4, 1911.



The use of the words "Beats All" is disclaimed.
Particular description of goods.—A Compound of Bitter Herbs.
Claims use since Aug. 10, 1909.

Ser. No. 58,179. (CLASS 12. CONSTRUCTION MATERIALS.) THE STANDARD PAINT COMPANY, Boundbrook, N. J., and New York, N. Y. Filed Aug. 12, 1911.

KA[illegible]

Particular description of goods.—Flexible Protective and Weatherproof Coverings for Roofings, Walls, Ceilings, and other Purposes.
Claims use since July 20, 1911.

Ser. No. 58,321. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) THE TATTERSALL COMPANY, Trenton, N. J. Filed Aug. 22, 1911.

"coalspuds"

Particular description of goods.—Coal and Coal Briquets.
Claims use since Aug. 2, 1911.

Ser. No. 58,572. (CLASS 26. MUSICAL INSTRUMENTS AND SUPPLIES.) THE RANDALL-FAICHNEY COMPANY, Boston, Mass. Filed Sept. 7, 1911.

JUBILEE

Particular description of goods.—Mechanically-Operated Horns, Whistles, and Similar Signal-Producing Devices for Automobiles and other Vehicles.
Claims use since Apr. 10, 1911.

Ser. No. 58,616. (CLASS 32. FURNITURE AND UPHOLSTERY.) FREDERICK GRUNDE and ROBERT J. BELFORD, Los Angeles, Cal. Filed Sept. 11, 1911.



The trade-mark consists of the representation of a crescent moon with a plurality of stars within the umbra and the words "Typewriter Silencer-Cabinet" surrounding the upper portion of the figure, no claim being made to the words "Typewriter Silencer-Cabinet."
Particular description of goods.—Type-Writer Cabinets.
Claims use since Apr. 12, 1911.

Ser. No. 58,628. (CLASS 18. OILS AND GREASES.) WADHAMS OIL COMPANY, Milwaukee, Wis. Filed Sept. 11, 1911.

FV

Particular description of goods.—Lubricating-Oils.
Claims use since the month of May, 1910.

Ser. No. 58,869. (CLASS 39. CLOTHING.) C. KENYON Co., Brooklyn, N. Y. Filed Sept. 27, 1911.

Kenreign

Particular description of goods.—Hats, Shoes Made of Leather, Rubber, and Canvas.
Claims use since May 25, 1906.

Ser. No. 58,907. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) ADAMS AND STINNBAUGH, Seattle, Wash. Filed Sept. 28, 1911.

CHARCRETE

Particular description of goods.—Plastic Compositions.
Claims use since June 1, 1911.

Ser. No. 58,954. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) D. H. BURRELL & COMPANY, Little Falls, N. Y. Filed Sept. 30, 1911.

SIMPLEX

Particular description of goods.—Bottle-Washers, Milk-Pumps, Cream-Ripeners, and Cream-Separators.
Claims use since Jan. 1, 1903.

Ser. No. 58,955. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) D. H. BURRELL & COMPANY, Little Falls, N. Y. Filed Sept. 30, 1911.

B&W

Particular description of goods.—Milk Check-Pumps.
Claims use since Jan. 1, 1901.

Ser. No. 59,056. (CLASS 47. WINES.) GOLDSMITH, BOWEN & Co., San Francisco, Cal. Filed Oct. 7, 1911.

BIG TREE

Particular description of goods.—California Wine.
Claims use since Sept. 20, 1911.

Ser. No. 59,113. (CLASS 31. FILTERS AND REFRIGERATORS.) AKTIEBOLAGET FRIGATOR, Stockholm, Sweden. Filed Oct. 11, 1911.

FRIGATOR

Particular description of goods.—Refrigerators.
Claims use since Apr. 5, 1909.

Ser. No. 59,165. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) NATIONAL CHEMICAL CO., Washington, D. C. Filed Oct. 14, 1911.

Gem

Particular description of goods.—Floor-Oil.
Claims use since about Oct. 1, 1910.

Ser. No. 59,220. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE BULLARD MACHINE TOOL CO., Bridgeport, Conn. Filed Oct. 18, 1911.

MAXI-MILL

Particular description of goods.—Boring-Mills and Lathes.
Claims use since September, 1910.

Ser. No. 59,228. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) BUFFALO OIL PAINT & VARNISH COMPANY, Buffalo, N. Y. Filed Oct. 19, 1911.



Particular description of goods.—House-Paints in Liquid and Paste Form, Enamel Paints, Linseed-Oil, Varnish-Oil, and Varnishes.
Claims use since April, 1905.

Ser. No. 59,241. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) BURR-SCOTT COMPANY, Detroit, Mich. Filed Oct. 20, 1911.

Buscoby

Particular description of goods.—Fire-Extinguishers.
Claims use since January, 1911.

Ser. No. 59,338. (CLASS 48. MALT EXTRACTS AND LIQUORS.) JOS. SCHLITZ BREWING COMPANY, Milwaukee, Wis. Filed Oct. 25, 1911. Under ten-year proviso.



Particular description of goods.—Lager-Beer.
Claims use since May 15, 1894.

Ser. No. 59,400½. (CLASS 39. CLOTHING.) THE BOSS MANUFACTURING COMPANY, Kewanee, Ill. Filed Oct. 28, 1911.

The Boss

Particular description of goods.—Gloves and Mittens.
Claims use since on or about Jan. 1, 1894.

Ser. No. 59,473. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) SHERMAN W. BLANDIN, Racine, Wis. Filed Nov. 1, 1911.

"WORKO"

Particular description of goods.—A Metal Carbon-Remover.
Claims use since Aug. 29, 1911.

Ser. No. 59,545. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MERRELL-SOULE COMPANY, Syracuse, N. Y. Filed Nov. 4, 1911.

ARMY AND NAVY

Particular description of goods.—Dried Milk, Dried Eggs, and Mince-Meat.
Claims use since Oct. 27, 1911.

Ser. No. 59,577. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE PROGRESSIVE MFG. CO., Torrington, Conn. Filed Nov. 6, 1911.

BLACK

Particular description of goods.—Spark-Plugs.
Claims use since on or about Sept. 18, 1911.

Ser. No. 59,599. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) W. E. PRUDEN HARDWARE CO., New York, N. Y. Filed Nov. 7, 1911.

WE PCO CO

Particular description of goods.—Saws.
Claims use since June, 1897.

Ser. No. 59,785. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE DE VILBISS MANUFACTURING COMPANY, Toledo, Ohio. Filed Nov. 18, 1911.

AERON

Particular description of goods.—Air-Compressors and Fluid-Actuated Atomisers for the Spraying of Paints, Varnishes, Lacquer, Bronze, and other Surface-Coating Materials.
Claims use since Oct. 20, 1911.

Ser. No. 59,829. (CLASS 10. FERTILIZERS.) CHEROKEE FERTILIZER CO., Macon, Ga. Filed Nov. 21, 1911.

WARRIOR

Particular description of goods.—Fertilizer.
Claims use since Jan. 21, 1911.

Ser. No. 59,967. (CLASS 3. BAGGAGE, HORSE EQUIPMENTS, PORTFOLIOS, AND POCKET-BOOKS.) U. S. HAMB COMPANY, Buffalo, N. Y. Filed Nov. 27, 1911.

Lone Star

Particular description of goods.—Hames.
Claims use since August, 1902.

Ser. No. 59,984. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) THE NON-CORRODING METAL COMPANY, New York, N. Y. Filed Nov. 28, 1911.

CUPROR

Particular description of goods.—Metal Having the Appearance of Gold.
Claims use since May, 1910.

Ser. No. 60,116. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) WILLIAM KENNEDY, Montreal, Canada, assignor to Joseph Simson, Montreal, Canada. Filed Dec. 7, 1911.

STEREAU

Particular description of goods.—Sterilized Water.
Claims use since Oct. 21, 1911.

Ser. No. 60,136. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) COLUMBIA ENGINEERING WORKS, Portland, Oreg. Filed Dec. 9, 1911.

SKOOKUM

Particular description of goods.—Logging-Blocks.
Claims use since Aug. 22, 1906.

Ser. No. 60,246. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE DAVIS MILLING COMPANY, St. Joseph, Mo. Filed Dec. 15, 1911.

TEEPEE

Particular description of goods.—Cornmeal.
Claims use since Nov. 22, 1911.

Ser. No. 60,301. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHEMISCHE FABRIK BANNEWITZ ORLOFF HANSEN, Bannewitz, near Dresden, Germany. Filed Dec. 18, 1911.

Hansen

Particular description of goods.—Peroxid of Hydrogen, Peroxid of Magnesium, Peroxid of Zinc, Perborate of Soda, Perborate of Magnesium, Blanc Fixe, and Glycerin.
Claims use since June 29, 1911.

Ser. No. 60,335. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) THE STUDEBAKER CORPORATION, South Bend, Ind. Filed Dec. 18, 1911. Under ten-year proviso.

Studebaker

Particular description of goods.—Automobiles, Carriages, Carts, Wagons, Runabouts, Buckboards, Buggies, Phaetons, Surreys, Stanhopes, Street-Sprinklers, Street-Sweepers, Vehicles for Distribution of All Kinds of Road-Building and Dust-Laying Materials, Pneumatic Air-Pressure Street-Flushers, Uniform-Pressure Power Street-Flushers, Street-Cleaners' Carts, Passenger-Wagonettes, Trucks, Drays, Bottom-Dump Boxes, Sleighs, Bob-Sleds, Ice-Wagons, Coal-Wagons, Oil-Wagons, Dump-Wagons, and Ambulances.
Claims use since 1867.

Ser. No. 60,438. (CLASS 38. PRINTS AND PUBLICATIONS.) ELECTRICITY MAGAZINE CORPORATION, Chicago, Ill. Filed Dec. 26, 1911.

IGNITION

Particular description of goods.—Magazines Published Monthly.
Claims use since Aug. 3, 1911.

Ser. No. 60,549. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FANNIE JOHNSON, La Monte, Mo. Filed Jan. 2, 1912.



The portrait being that of the applicant.
Particular description of goods.—A Remedy for Coughs, Colds, Bronchitis, Catarrh, Asthma, and Consumption.
Claims use since Dec. 1, 1911.

Ser. No. 60,593. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ACTIEN-GESELLSCHAFT FÜR ANILIN-FABRIKATION, Berlin, Germany. Filed Jan. 4, 1912.

Prof. Liermann

Consisting of the facsimile signature of Professor Liermann, of Denan, Germany.
Particular description of goods.—Pharmaceutical Preparations Containing Fullers' Earth for Use as Skin and Wound Disinfectants.
Claims use since July 25, 1911.

Ser. No. 60,645. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) HARRIS C. WILKINSON, Chicago, Ill. Filed Jan. 5, 1912.

ROYAL PEPSIN GUM

No claim being made to the words "Pepsin" and "Gum."
Particular description of goods.—Chewing-Gum.
Claims use since Oct. 2, 1911.

Ser. No. 60,661. (CLASS 12. CONSTRUCTION MATERIALS.) GENERAL ROOFING MANUFACTURING COMPANY, East St. Louis, Ill. Filed Jan. 6, 1912.

Certain-teed

Particular description of goods.—Roofing-Felt, Deadening-Felt, Building-Papers, and Roofing-Paper.
Claims use since Jan. 2, 1912.

Ser. No. 60,668. (CLASS 24. LAUNDRY APPLIANCES AND MACHINES.) RICHMOND CEDAR WORKS, Richmond, Va. Filed Jan. 6, 1912.

SPEEDWAY

Particular description of goods.—Laundry Washing-Machines.
Claims use since Dec. 9, 1911.

Ser. No. 60,769. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) ALBERT KRAMER, Richmond, Va. Filed Jan. 12, 1912.



Particular description of goods.—Remedies for Indigestion, Dyspepsia, Constipation, Malaria, Headache, Colds, Rheumatism, and Diseases of the Liver, Kidneys, and Blood.
Claims use since September, 1911.

Ser. No. 60,856. (CLASS 42. KNITTED, NETTED, AND TEXTILE FABRICS.) WILLIAM HOLLINS & COMPANY, LIMITED, London, England. Filed Jan. 16, 1912.



Particular description of goods.—A Cloth or Shirting Comprised of a Mixture of Wool and Cotton.
Claims use since April, 1911.

Ser. No. 60,901. (CLASS 19. VEHICLES, NOT INCLUDING ENGINES.) AMERICAN ASBESTOS COMPANY, Norristown, Pa. Filed Jan. 18, 1912.

Motorbestos

Particular description of goods.—Brake-Linings and Clutch-Facings Made from Woven Asbestos and Reinforced with Wire, the Wire Being Interwoven with the Asbestos.
Claims use since Sept. 15, 1909.

Ser. No. 60,905. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) S. W. FLOWER & COMPANY, Toledo, Ohio. Filed Jan. 19, 1912.

PANSY

Particular description of goods.—Clover, Alsike, Alfalfa, and Timothy Seeds.
Claims use since about Aug. 13, 1904.

Ser. No. 60,906. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) S. W. FLOWER & COMPANY, Toledo, Ohio. Filed Jan. 19, 1912.

LOTUS

Particular description of goods.—Clover, Alsike, Alfalfa, and Timothy Seeds.
Claims use since about Jan. 7, 1909.

Ser. No. 60,908. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) S. W. FLOWER & COMPANY, Toledo, Ohio. Filed Jan. 19, 1912.

RAM

Particular description of goods.—Clover, Alsike, Alfalfa, and Timothy Seeds.
Claims use since about Feb. 3, 1900.

Ser. No. 60,909. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) S. W. FLOWER & COMPANY, Toledo, Ohio. Filed Jan. 19, 1912.

PEARL

Particular description of goods.—Clover, Alsike, Alfalfa, and Timothy Seeds.
Claims use since about Feb. 12, 1910.

Ser. No. 60,966. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) KATE SMITH, Denver, Colo. Filed Jan. 22, 1912.

REMOLINE

Particular description of goods.—A Toilet Wash.
Claims use since about Jan. 17, 1912.

Ser. No. 61,040. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) THE COLUMBUS PUMP SUPPLY CO., Columbus, Ohio. Filed Jan. 26, 1912.

SLAVE

Particular description of goods.—Internal-Combustion Engines.
Claims use since about Jan. 1, 1911.

Ser. No. 61,043. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) MARKT & CO., New York, N. Y. Filed Jan. 26, 1912. Under ten-year proviso.



Particular description of goods.—Hay-Forks, Manure-Forks, Rakes, Spades, Shovels, Coke-Forks, Scythes, Snathes, Grass-Hooks, Hay-Knives, Hoes, Tool-Handles.
Claims use since Jan. 1, 1889.

Ser. No. 61,050. (CLASS 29. BROOMS, BRUSHES, AND DUSTERS.) BRYANT, GOBB & BOWMAN SALES CO., St. St. Louis, Mo. Filed Jan. 26, 1912.



No claim being made to registration of the word "Bristlite."
Particular description of goods.—Tooth, Nail, Shoe, Paint, Clothes, Hair, Toilet, and Scrubbing Brushes.
Claims use since about Jan. 1, 1912.

Ser. No. 61,111. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) J. F. HILLERICH & SON CO., INCORPORATED, Louisville, Ky. Filed Jan. 29, 1912.



The portrait being that of Frank Baker and the signature being his facsimile signature. The representation of base-ball bats is hereby specifically disclaimed, the same forming no part of the said trade-mark.
Particular description of goods.—Base-Ball Bats.
Claims use since Nov. 20, 1911.

Ser. No. 61,118. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) MISSOURI VALLEY GROCERY CO., Mandan, N. D. Filed Jan. 29, 1912.

Mocaloo

Particular description of goods.—Pepper, Allspice, Cloves, Cinnamon, Ginger, Mustard, Sage, White Pepper, Red Pepper, Canned Lemon Cling-Peaches, Red Raspberries, Strawberries, Apricots, Muscat-Grapes, String-Beans, Bartlett Pears, White Cherries, Sliced Lemon Cling-Peaches, Yellow Peaches, Early June Peas, Golden Wax-Beans, Egg-Plums, Green-Gage Plums, Sifted Early June Peas, Sweet Corn, Sauer-Kraut, Tomatoes, and Sweet Potatoes.
Claims use since Dec. 1, 1911.

Ser. No. 61,150. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) LAYTON PURE FOOD COMPANY, East St. Louis, Ill. Filed Jan. 31, 1912.



No claim being made to the word "Quick."
Particular description of goods.—Baking-Powder and Baking-Soda.
Claims use since Jan. 1, 1908.

Ser. No. 61,160. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) GEEE BROS. & CO. INC., San Francisco, Cal. Filed Jan. 31, 1912.

TRIUMPH

Particular description of goods.—An Oleaginous Cooking Compound.
Claims use since Dec. 18, 1900.

Ser. No. 61,364. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) PETER LUDWIG SCHMIDT, Elberfeld, Germany. Filed Feb. 8, 1912.

ELBERSMIT

Particular description of goods.—Razors, Scissors, Pocket-Scissors, Pocket-Knives.
Claims use since Apr. 25, 1906.

Ser. No. 61,365. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) PETER LUDWIG SCHMIDT, Elberfeld, Germany. Filed Feb. 8, 1912.

DISPATCH

Particular description of goods.—Razors, Scissors, Pocket-Scissors, Pocket-Knives.
Claims use since Jan. 9, 1896.

Ser. No. 61,366. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) PETER LUDWIG SCHMIDT, Elberfeld, Germany. Filed Feb. 8, 1912.

Treff

Particular description of goods.—Razors, Scissors, Pocket-Scissors, Pocket-Knives.
Claims use since Jan. 24, 1907.

Ser. No. 61,403. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) THE PATTERSON-SARGENT COMPANY, Cleveland, Ohio. Filed Feb. 10, 1912.

OPTICO

Particular description of goods.—Dry and Mixed Paints, Wall-Finishes, Stains, Enamels, Varnishes, Fillers, and Lacs.
Claims use since Jan. 6, 1912.

Ser. No. 61,409. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) WILLIAM E. CRATZ, Toledo, Ohio. Filed Feb. 10, 1912.

ADMIRAL CLOVER

Except that the word "Clover" forms no part of my trade-mark.
Particular description of goods.—Clover-Seeds.
Claims use since Jan. 1, 1902.

Ser. No. 61,445. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) NATIONAL STARCH CO., New York, N. Y. Filed Feb. 12, 1912. Under ten-year proviso.

KINGSFORD'S OSWEGO SILVERGLOSS STARCH

Particular description of goods.—Starch for Laundry Purposes.
Claims use since 1878.

Ser. No. 61,453. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) EISENMANN & CO., London, England. Filed Feb. 14, 1912.

FIFI

Particular description of goods.—Toys.
Claims use since Oct. 18, 1911.

Ser. No. 61,455. (CLASS 22. GAMES, TOYS, AND SPORTING GOODS.) EISENMANN & CO., London, England. Filed Feb. 14, 1912.

TUBBY

Particular description of goods.—Toys.
Claims use since Oct. 18, 1911.

Ser. No. 61,466. (CLASS 15. OILS AND GREASES.) STANDARD OIL COMPANY OF BRAZIL, New York, N. Y. Filed Feb. 14, 1912.

MOTANO

Particular description of goods.—Naphtha, Gasolene, and Benzin.
Claims use since Feb. 8, 1912.

Ser. No. 61,518. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) CRUIKSHANK BROTHERS COMPANY, Pittsburgh, Pa. Filed Feb. 15, 1912.

Particular description of goods.—Preserved Fruits and Pickles.
Claims use since Jan. 1, 1905.

Ser. No. 61,528. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) CHARLES A. WOLF, Philadelphia, Pa. Filed Feb. 15, 1912.

CROTALIN

R. H. Spangler, M.D.

Consisting of the word "Crotalin" and the facsimile signature of R. H. Spangler, M. D.
Particular description of goods.—A Medicament for Epilepsy.
Claims use since March, 1909.

Ser. No. 61,547. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) U. S. SLICING MACHINE COMPANY, Chicago, Ill. Filed Feb. 16, 1912.

W. A. Van Berkel

The same being the autograph signature of W. A. Van Berkel.
Particular description of goods.—Meat-Slicing Machines and Meat-Slicers.
Claims use since February, 1912.

Ser. No. 61,548. (CLASS 23. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) U. S. SLICING MACHINE COMPANY, Chicago, Ill. Filed Feb. 16, 1912.



The same being a portrait of W. A. Van Berkel.
Particular description of goods.—Meat-Slicing Machines and Meat-Slicers.
Claims use since Feb. 6, 1912.

Ser. No. 61,575. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) WILLIAM B. HOUGH, Chicago, Ill. Filed Feb. 17, 1912.

CIRC

Particular description of goods.—Metallic Reinforcing Bars and Members.
Claims use since Nov. 14, 1911.

Ser. No. 61,582. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) FORSTER MANUFACTURING COMPANY, Dixfield, Me. Filed Feb. 17, 1912.



Particular description of goods.—Toothpicks.
Claims use since Jan. 1, 1912.

Ser. No. 61,583. (CLASS 44. DENTAL, MEDICAL, AND SURGICAL APPLIANCES.) FORSTER MANUFACTURING COMPANY, Dixfield, Me. Filed Feb. 17, 1912.

ANCHOR

Particular description of goods.—Toothpicks.
Claims use since Jan. 1, 1912.

Ser. No. 61,639. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILBUR JOHN LEIB, Camden, N. J. Filed Feb. 20, 1912.

W. J. Leib

Consisting of a facsimile of my signature.
Particular description of goods.—Laxative Pills and Dyspepsia Tonic.
Claims use since July 1, 1911.

Ser. No. 61,644. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) HEDDEN & EBERHARDT, New York, N. Y. Filed Feb. 21, 1912.

INDRA

Particular description of goods.—Perfumes, Toilet Waters, Sachet-Powders, Face-Powders.
Claims use since May 7, 1910.

Ser. No. 61,681. (CLASS 37. PAPER AND STATIONERY.) BRYANT, GOBB & BOWMAN SALES CO., St. Louis, Mo. Filed Feb. 23, 1912.

HESPERIAN

Particular description of goods.—Fountain-Pens, Pen-Points, Penholders, Pencils, Chalk, and Crayons.
Claims use since about Jan. 25, 1912.

Ser. No. 61,697. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FARBWERKE VORM. MEISTER LUCIUS & BRÜNING, Höchst-on-the-Main, Germany. Filed Feb. 24, 1912.

Hediosit

Particular description of goods.—A Nutritious and Entirely-Digestible Carbohydrate for Diabetes.
Claims use since Jan. 3, 1912.

Ser. No. 61,698. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) FARBWERKE VORM. MEISTER LUCIUS & BRÜNING, Höchst-on-the-Main, Germany. Filed Feb. 24, 1912.

Camphexin

Particular description of goods.—An Internal Antiseptic for the Uropoietic System.
Claims use since Jan. 3, 1912.

Ser. No. 61,711. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) LURA S. BRAINERD, Meriden, Conn. Filed Feb. 24, 1912.

DELEKTA

Particular description of goods.—Patterns for Wearing-Apparel.
Claims use since Feb. 17, 1912.

Ser. No. 61,714. (CLASS 39. CLOTHING.) FRANK W. SMITH & COMPANY, Birmingham, Ala. Filed Feb. 24, 1912.

OSCAR W. UNDERWOOD

Comprising the name "Oscar W. Underwood," accompanied by his portrait.
Particular description of goods.—Hats.
Claims use since Feb. 11, 1912.

Ser. No. 61,725. (CLASS 28. CUTLERY, MACHINERY, AND TOOLS, AND PARTS THEREOF.) SMITH MFG. CO., East Peoria, Ill. Filed Feb. 26, 1912.

ADVANCE

Particular description of goods.—Broadcast Distributers, End-Gate Seeders, and Seeding-Machines.
Claims use since September, 1905.

Ser. No. 61,730. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE ADRIAN CEREAL COMPANY, Adrian, Mich. Filed Feb. 26, 1912.

Aunt Chloe's
Breakfast Barley



The words "Breakfast Barley" are not claimed.
Particular description of goods.—Cereal Breakfast Foods.
Claims use since Jan. 10, 1911.

Ser. No. 61,736. (CLASS 16. PAINTS AND PAINTERS' MATERIALS.) LIBERTY PAINT COMPANY INC., New York, N. Y. Filed Feb. 26, 1912.



Particular description of goods.—A Hot-Water Calcimine in Dry Powder Form.
Claims use since about May, 1906.

Ser. No. 61,747. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) C. E. MCMAHAN & CO., Houston, Tex. Filed Feb. 26, 1912.

CAUSEWAY BRAND

Particular description of goods.—Rice.
Claims use since Apr. 15, 1911.

Ser. No. 61,748. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) C. E. MCMAHAN & CO., Houston, Tex. Filed Feb. 26, 1912.

CREAM OF RICE

Particular description of goods.—Rice.
Claims use since Apr. 15, 1911.

Ser. No. 61,755. (CLASS 11. INKS AND INKING MATERIALS.) TRENTON INK CO., Trenton, N. J. Filed Feb. 26, 1912.

Particular description of goods.—An Acid-Proof and Waterproof Writing Fluid.
Claims use since Jan. 2, 1912.

Ser. No. 61,814. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) WILLIAM P. CABLER, Fort Wayne, Ind. Filed Feb. 29, 1912.

HARSHONE

Particular description of goods.—A Remedy for the Stomach, Liver, Kidneys, Bowels, and Blood.
Claims use since Oct. 1, 1911.

Ser. No. 61,819. (CLASS 15. OILS AND GREASES.) THE TEXAS COMPANY, Houston and Port Arthur, Tex., and New York, N. Y. Filed Feb. 29, 1912.

AMMOTEX

Particular description of goods.—Lubricating-Oils.
Claims use since Dec. 10, 1911.

Ser. No. 61,820. (CLASS 15. OILS AND GREASES.) THE TEXAS COMPANY, Houston and Port Arthur, Tex., and New York, N. Y. Filed Feb. 29, 1912.

TURBOTEX

Particular description of goods.—Lubricating-Oils.
Claims use since Dec. 10, 1911.

Ser. No. 61,844. (CLASS 6. CHEMICALS, MEDICINES, AND PHARMACEUTICAL PREPARATIONS.) MYERS GAS GENERATOR COMPANY, Buffalo, N. Y. Filed Mar. 1, 1912.

MYRINE

Particular description of goods.—A Gaseous Liquid for Combustion, Illuminating, and Power Purposes.
Claims use since Feb. 15, 1911.

Ser. No. 61,912. (CLASS 26. MEASURING AND SCIENTIFIC APPLIANCES.) AMERICAN OPTICAL COMPANY, Southbridge, Mass. Filed Mar. 4, 1912.

UNI

Particular description of goods.—Lenses.
Claims use since Feb. 20, 1912.

Ser. No. 61,928. (CLASS 21. ELECTRICAL APPARATUS, MACHINES, AND SUPPLIES.) THE SIMPLEX ELECTRICAL CO., Boston, Mass. Filed Mar. 4, 1912. Under ten-year proviso.

CAOUTCHOUC

Particular description of goods.—Insulated Electric Conductors.
Claims use since the latter part of 1891.

Ser. No. 62,034. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed Mar. 8, 1912.

TOYLAND

Particular description of goods.—Biscuit.
Claims use since Mar. 2, 1912.

Ser. No. 62,075. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) ANTONIO RICCHEZZA, Philadelphia, Pa. Filed Mar. 9, 1912.



Particular description of goods.—Macaroni.
Claims use since Mar. 1, 1911.

Ser. No. 62,076. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NAPA FRUIT CO., Napa, Cal. Filed Mar. 9, 1912. Under ten-year proviso.

Headlight

Particular description of goods.—Dried Fruits.
Claims use since about Jan. 1, 1894.

Ser. No. 62,077. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NAPA FRUIT CO., Napa, Cal. Filed Mar. 9, 1912.

TUXEDO

Particular description of goods.—Dried Fruits.
Claims use since about Jan. 1, 1900.

Ser. No. 62,089. (CLASS 14. METALS AND METAL CASTINGS AND FORGINGS.) AMERICAN BRAKE SHOE & FOUNDRY COMPANY, Mahwah, N. J. Filed Mar. 9, 1912.



Particular description of goods.—Castings Made from Metal.
Claims use since July 1, 1911.

Ser. No. 62,092. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) ONEIDA LEATHER CO., New York and Chadwicks, N. Y. Filed Mar. 9, 1912.

Olco

Particular description of goods.—Leather in the Piece.
Claims use since Feb. 20, 1912.

Ser. No. 62,099. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) THE SOUTHWESTERN MILLING COMPANY, Jersey City, N. J., and Kansas City, Mo. Filed Mar. 11, 1912.

AINO

Particular description of goods.—Wheat-Flour.
Claims use since Mar. 10, 1910.

Ser. No. 62,168. (CLASS 46. FOODS AND INGREDIENTS OF FOODS.) NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y. Filed Mar. 14, 1912.

MOTHER GOOSE

Particular description of goods.—Biscuit.
Claims use since May 4, 1906.

Ser. No. 62,199. (CLASS 45. BEVERAGES, NON-ALCOHOLIC.) CUNNINGHAM SUPPLY COMPANY, Philadelphia, Pa. Filed Mar. 16, 1912.

DIANOLA

Particular description of goods.—Carbonated Beverages and Beverages Containing Syrups.
Claims use since on or about Dec. 14, 1911.

Ser. No. 62,215. (CLASS 39. CLOTHING.) EDWIN C. BURT COMPANY, New York, N. Y. Filed Mar. 16, 1912.

CANTILEVER

Particular description of goods.—Leather Boots, Shoes, and Slippers.
Claims use since about Oct. 1, 1911.

Ser. No. 62,270. (CLASS 39. CLOTHING.) MARSHALL FIELD & COMPANY, Chicago, Ill. Filed Mar. 19, 1912.

Monopole

Particular description of goods.—Kid and Fabric Gloves.
Claims use since about 1900.

Ser. No. 62,300. (CLASS 1. RAW OR PARTLY-PREPARED MATERIALS.) MOORE & MUNGER, New York, N. Y. Filed Mar. 20, 1912.



No claim being made to the words "English Ball Clay."
Particular description of goods.—Clay.
Claims use since Jan. 27, 1912.

Ser. No. 62,303. (CLASS 38. PRINTS AND PUBLICATIONS.) THE NOVELTY NEWS CO., Chicago, Ill. Filed Mar. 20, 1912.



The picture being fanciful.
Particular description of goods.—A Magazine.
Claims use since June 1, 1905.

TRADE-MARKS

REGISTERED APRIL 30, 1912.

86,261. MANGANESE-STEEL CASTINGS. EDGAR ALLEN AMERICAN MANGANESE STEEL COMPANY, Augusta, Me., and Chicago, Ill.
Filed September 15, 1911. Serial No. 58,692. PUBLISHED FEBRUARY 27, 1912.

86,262. LEATHER BELTING, LEATHER HOSE, AND LEATHER LACING. AMERICAN BELTING & TANNING CO., Boston, Mass.
Filed August 30, 1911. Serial No. 58,449. PUBLISHED FEBRUARY 20, 1912.

86,263. SALES-BOOKS. AMERICAN SALES BOOK COMPANY, LIMITED, Toronto, Ontario, Canada, and Niagara Falls, Elmira, and Glendale, N. Y.
Filed January 10, 1912. Serial No. 60,926. PUBLISHED FEBRUARY 27, 1912.

86,264. OLEOMARGARIN. AMMON & PERSON, Jersey City, N. J.
Filed November 29, 1911. Serial No. 59,998. PUBLISHED FEBRUARY 20, 1912.

86,265. PHOTOGRAPHIC DEVELOPING-PAPER. ANSCO COMPANY, Binghamton, N. Y.
Filed January 12, 1912. Serial No. 60,759. PUBLISHED FEBRUARY 27, 1912.

86,266. LEATHER BOOTS AND SHOES. ARCHITECT SHOE COMPANY, Schenectady, N. Y.
Filed November 9, 1911. Serial No. 59,621. PUBLISHED FEBRUARY 27, 1912.

86,267. WATCHES AND WATCHCASES. BACH & COMPANY, Chicago, Ill.
Filed December 15, 1911. Serial No. 60,238. PUBLISHED FEBRUARY 27, 1912.

86,268. CERTAIN CONSTRUCTION MATERIALS. BARRETT MANUFACTURING COMPANY, New York, N. Y.
Filed November 29, 1910. Serial No. 53,009. PUBLISHED FEBRUARY 20, 1912.

86,269. LADIES' AND CHILDREN'S CLOTHING. BENJAMIN & JOHNES, Newark, N. J.
Filed November 13, 1911. Serial No. 59,683. PUBLISHED FEBRUARY 20, 1912.

86,270. CERTAIN STATIONERY SUPPLIES. J. C. BLAIR COMPANY, Huntingdon, Pa.
Filed June 15, 1911. Serial No. 57,048. PUBLISHED FEBRUARY 20, 1912.

86,271. ANISETTES. Bosch & Co., Badalona, near Barcelona, Spain.
Filed April 15, 1910. Serial No. 49,121. PUBLISHED FEBRUARY 27, 1912.

86,272. PAPER FOOD-CONTAINERS. ERASTUS BRAINERD, Seattle, Wash.
Filed January 9, 1912. Serial No. 60,709. PUBLISHED FEBRUARY 20, 1912.

86,273. CERTAIN FOODS. THE J. S. BROWN & BRO. MER. CO., Denver, Colo.
Filed February 14, 1910. Serial No. 47,809. PUBLISHED FEBRUARY 20, 1912.

86,274. CERTAIN FOODS. THE J. S. BROWN & BRO. MER. CO., Denver, Colo.
Filed February 14, 1910. Serial No. 47,810. PUBLISHED FEBRUARY 20, 1912.

86,275. MINCED PORK. LOUIS BURK, Philadelphia, Pa.
Filed September 20, 1911. Serial No. 58,742. PUBLISHED FEBRUARY 20, 1912.

86,276. WRITING-PAPER. BYRON WESTON COMPANY, Dalton, Mass.
Filed January 3, 1912. Serial No 60,585. PUBLISHED FEBRUARY 27, 1912.

86,277. CERTAIN NON-ALCOHOLIC BEVERAGES. CHARLES W. CAMPBELL, Lancaster, Pa.
Filed September 22, 1911. Serial No. 58,819. PUBLISHED FEBRUARY 27, 1912.

86,278. CIGARS, CHEROOTS, AND CIGARETTES MADE OF CIGAR-TOBACCO. CAYEY-CAGUAS TOBACCO COMPANY, New York, N. Y.
Filed January 2, 1912. Serial No. 60,569. PUBLISHED FEBRUARY 27, 1912.

86,279. NON-ALCOHOLIC BEVERAGE. THE CHERRY-CHEER COMPANY, INC., Sidney, Ohio.
Filed October 28, 1911. Serial No. 59,417. PUBLISHED FEBRUARY 27, 1912.

86,280. BLENDED COFFEE, TEA, SPICES, FLAVORING EXTRACTS, COCOA, AND BIRD-SEED. CLARK & HOST CO., Milwaukee, Wis.
Filed April 4, 1911. Serial No. 55,526. PUBLISHED FEBRUARY 20, 1912.

86,281. MACARONIC PASTE FOODS. THE CLEVELAND MACARONI COMPANY, Cleveland, Ohio.
Filed December 23, 1911. Serial No. 60,420. PUBLISHED FEBRUARY 20, 1912.

86,282. CERTAIN NON-ALCOHOLIC BEVERAGES. CONSUMERS COMPANY, Chicago, Ill.
Filed December 18, 1911. Serial No. 60,302. PUBLISHED FEBRUARY 27, 1912.

86,283. CLARETS AND SAUTERNES. CRUSE & FILS FRERES, Bordeaux, France.
Filed September 24, 1910. Serial No. 51,947. PUBLISHED FEBRUARY 20, 1912.

86,284. CERTAIN FANCY GOODS AND NOTIONS. JOHN DAVID, New York, N. Y.
Filed November 10, 1911. Serial No. 59,645. PUBLISHED FEBRUARY 27, 1912.

86,285. WALL-PAPERS. FRANK C. DAVIDGE, Toronto, Ontario, Canada, assignor to T. C. Davidge & Co., Toronto, Canada, a Firm.
Filed December 21, 1911. Serial No. 60,387. PUBLISHED FEBRUARY 20, 1912.

86,286. CARBON-PAPER AND TYPE-WRITING RIBBON. DE FI MANUFACTURING COMPANY, New York, N. Y.
Filed May 24, 1909. Serial No. 42,649. PUBLISHED FEBRUARY 20, 1912.

86,287. LADIES' TUB-DRESSES. HENRY A. DIX & SONS COMPANY, New York, N. Y.
Filed June 9, 1911. Serial No. 56,915. PUBLISHED FEBRUARY 27, 1912.

86,288. COCOA. DROSTE & Co., Haarlem, Netherlands.
Filed October 26, 1911. Serial No. 59,348. PUBLISHED FEBRUARY 20, 1912.

86,289. FANS FOR PERSONAL USE. CHARLES H. DUNCAN, New York, N. Y.
Filed January 8, 1912. Serial No. 60,678. PUBLISHED FEBRUARY 27, 1912.

86,290. HAT-PINS MADE OF BASE METAL. EDITH ELSPA DUNN, Woodfield, Uppingham, England.
Filed September 23, 1911. Serial No. 58,880. PUBLISHED FEBRUARY 27, 1912.

86,291. PENCILS, PENHOLDERS, AND RUBBER ERASERS. EBERHARD FABER, New York, N. Y.
Filed October 26, 1911. Serial No. 59,353. PUBLISHED FEBRUARY 27, 1912.

86,292. COTTON PIECE GOODS. FALL RIVER BLEACHERY, Fall River, Mass.
Filed December 15, 1911. Serial No. 60,251. PUBLISHED FEBRUARY 27, 1912.

86,293. CRACKERS AND BISCUITS. HORACE FLETCHER Co., New York, N. Y.
Filed August 11, 1911. Serial No. 58,144. PUBLISHED FEBRUARY 20, 1912.

86,294. WOMEN'S HATS, WOMEN'S HAT-FRAMES, MUFFS, AND WRAPS. FLORETTE, New York, N. Y.
Filed September 21, 1911. Serial No. 58,783. PUBLISHED FEBRUARY 27, 1912.

86,295. ORANGES, GRAPE-FRUIT, LEMONS, TANGERINES, AND CUMQUATS. FLORIDA EAST COAST COMPANY, INC., Wilmington, Del.; Delespine, Fla., and Philadelphia, Pa.
Filed October 23, 1911. Serial No. 59,296. PUBLISHED FEBRUARY 20, 1912.

86,296. SOAP. J. M. GROSVENOR & Co., Boston, Mass.
Filed September 12, 1911. Serial No. 58,646. PUBLISHED FEBRUARY 27, 1912.

86,297. TEA. H. HAMSTRA & Co., Grand Rapids, Mich.
Filed December 15, 1911. Serial No. 60,253. PUBLISHED FEBRUARY 20, 1912.

86,298. APPLE CIDER. WALTER H. HILDICK Co., New York, N. Y.
Filed November 7, 1911. Serial No. 59,592. PUBLISHED FEBRUARY 27, 1912.

86,299. BUILDING, SHEATHING, ROOFING, INSULATING, AND CASE-LINING PAPERS. THE HYDREX FELT & ENGINEERING COMPANY, Portland, Me.; New York, N. Y., and Rahway, N. J.
Filed December 21, 1911. Serial No. 60,395. PUBLISHED FEBRUARY 20, 1912.

86,300. AUTOMOBILES AND AUTOTRUCKS. IDEAL AUTO COMPANY, Fort Wayne, Ind.
Filed December 26, 1911. Serial No. 60,443. PUBLISHED FEBRUARY 20, 1912.

86,301. METAL USED IN CASTINGS FOR FLUID-OPERATED TOOLS. INGERSOLL-RAND Co., Phillipsburg, N. J., and New York, N. Y.
Filed January 20, 1912. Serial No. 60,950. PUBLISHED FEBRUARY 27, 1912.

86,302. TOOTHPICKS. INTERNATIONAL MFG. Co., Phillips, Me.
Filed November 17, 1911. Serial No. 59,774. PUBLISHED FEBRUARY 27, 1912.

86,303. CANNED FRUITS. THE JOHNSON-LOCKE MERCANTILE Co., San Francisco, Cal.
Filed December 21, 1911. Serial No. 60,396. PUBLISHED FEBRUARY 20, 1912.

86,304. LINING, WRAPPING, PRINTING, AND WRITING PAPER. KATAHDIN PULP AND PAPER COMPANY, Lincoln, Me.
Filed August 23, 1911. Serial No. 58,341. PUBLISHED FEBRUARY 27, 1912.

86,305. MEMORANDUM BLANK BOOKS. KIGGINS & TOOKER Co., New York, N. Y.
Filed August 11, 1911. Serial No. 58,162. PUBLISHED FEBRUARY 27, 1912.

86,306. PIANOS, ORGANS, PLAYER-PIANOS, AND SEPARATE PLAYERS THEREFOR. KRELL FRENCH PIANO COMPANY, Newcastle, Ind.
Filed November 29, 1911. Serial No. 60,006. PUBLISHED FEBRUARY 20, 1912.

86,307. MEN'S UNDERWEAR—NAMELY, KNITTED AND TEXTILE UNDERSHIRTS AND DRAWERS. A. KUEHNERT & Co., New York, N. Y.
Filed August 8, 1911. Serial No. 58,068. PUBLISHED FEBRUARY 20, 1912.

86,308. CIGARS. B. LEGARDA, Manila, Philippine Islands.
Filed August 3, 1911. Serial No. 58,002. PUBLISHED FEBRUARY 27, 1912.

86,309. WHITE SAPPHIRES. FRANCIS E. LESTER, Melilla Park, N. Mex.
Filed December 29, 1911. Serial No. 60,506. PUBLISHED FEBRUARY 20, 1912.

86,310. STRAW HATS. CHARLES LEVY'S SONS, New York, N. Y.
Filed October 26, 1911. Serial No. 59,352. PUBLISHED FEBRUARY 27, 1912.

86,311. LEATHER AND CANVAS BOOTS AND SHOES. W. H. MCELWAIN COMPANY, Boston, Mass.
Filed September 1, 1911. Serial No. 58,498. PUBLISHED FEBRUARY 20, 1912.

86,312. MILK PRODUCTS IN DRY FORM. MERRELL-SOULE Co., Syracuse, N. Y.
Filed November 28, 1911. Serial No. 59,989. PUBLISHED FEBRUARY 20, 1912.

86,313. SOUPS, BUTTER, PRESERVED VEGETABLES, AND CANNED VEGETABLES. MERRELL-SOULE Co., Syracuse, N. Y.
Filed December 7, 1911. Serial No. 60,117. PUBLISHED FEBRUARY 20, 1912.

86,314. CERTAIN RAW OR PARTLY-PREPARED MATERIALS. F. & J. MEYER, New York, N. Y.
Filed September 7, 1911. Serial No. 58,576. PUBLISHED FEBRUARY 20, 1912.

86,315. TONIC BEVERAGE. ISAIAH MILLER, Prattville, Ala.
Filed April 13, 1911. Serial No. 55,734. PUBLISHED FEBRUARY 27, 1912.

86,316. COTTON PIECE GOODS. MUSTARD & COMPANY, New York, N. Y., and Shanghai, China.
Filed November 24, 1911. Serial No. 59,896. PUBLISHED FEBRUARY 27, 1912.

86,317. COTTON PIECE GOODS. MUSTARD & COMPANY, New York, N. Y., and Shanghai, China.
Filed November 27, 1911. Serial No. 59,944. PUBLISHED FEBRUARY 27, 1912.

86,318. BISCUIT. NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y.
Filed December 9, 1911. Serial No. 60,147. PUBLISHED FEBRUARY 20, 1912.

86,319. BISCUIT. NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y.
Filed December 9, 1911. Serial No. 60,149. PUBLISHED FEBRUARY 20, 1912.

86,320. BISCUIT. NATIONAL BISCUIT COMPANY, Jersey City, N. J., and New York, N. Y.
Filed December 20, 1911. Serial No. 60,381. PUBLISHED FEBRUARY 20, 1912.

86,321. PETTICOATS. NATIONAL CLOAK & SUIT Co., New York, N. Y.
Filed September 9, 1911. Serial No. 58,614. PUBLISHED FEBRUARY 27, 1912.

86,322. CLOTHING. NATIONAL CLOAK & SUIT Co., New York, N. Y.
Filed September 9, 1911. Serial No. 58,615. PUBLISHED FEBRUARY 27, 1912.

86,323. CERTAIN STATIONERY SUPPLIES. THE O. K. MANUFACTURING COMPANY, Syracuse, N. Y.
Filed December 1, 1911. Serial No. 60,025. PUBLISHED FEBRUARY 20, 1912.

86,324. DISPLAY-FIGURES. EMIL T. PALMENBERG, New York, N. Y.
Filed December 18, 1911. Serial No. 60,307. PUBLISHED FEBRUARY 20, 1912.

86,325. MANUFACTURED BOARD FOR INTERIOR FINISH. PARAFFINE PAINT COMPANY, San Francisco, Cal.
Filed October 30, 1911. Serial No. 59,419. PUBLISHED FEBRUARY 20, 1912.

86,326. HOSIERY. PARAMOUNT KNITTING COMPANY, Chicago, Ill.
Filed November 11, 1911. Serial No. 59,657. PUBLISHED FEBRUARY 20, 1912.

86,327. HOSIERY. PARAMOUNT KNITTING COMPANY, Chicago, Ill.
Filed November 11, 1911. Serial No. 59,659. PUBLISHED FEBRUARY 20, 1912.

86,328. WALL-PAPERS. PEERLESS WALL PAPER MANUFACTURING COMPANY, Hoboken, N. J.
Filed November 15, 1911. Serial No. 59,742. PUBLISHED FEBRUARY 20, 1912.

86,329. CANE, PARASOL, AND UMBRELLA TIP PROTECTOR. ALOYSIUS POZZI, Trenton, N. J.
Filed January 10, 1912. Serial No. 60,715. PUBLISHED FEBRUARY 27, 1912.

86,330. SUBSTITUTES FOR LINSEED-OIL. RED STAR OIL COMPANY, Philadelphia, Pa.
Filed January 15, 1912. Serial No. 60,830. PUBLISHED FEBRUARY 27, 1912.

86,331. INCANDESCENT MANTLES. RHENANIA GLÜHLICHT COMP. G. M. B. H., Cologne, Germany.
Filed February 8, 1910. Serial No. 47,657. PUBLISHED FEBRUARY 27, 1912.

86,332. FLAT LEATHER BELTING. J. E. RHOADS & SONS, Philadelphia, Pa.
Filed October 7, 1911. Serial No. 59,062. PUBLISHED FEBRUARY 20, 1912.

86,333. CEMENT FOR FILLING TEETH. RICHTER & HOFFMANN THE HARVARD DENTAL MANUFACTURING COMPANY GESELLSCHAFT MIT BESCHRÄNKTER HAFTUNG, Berlin, Germany.
Filed August 8, 1910. Serial No. 51,317. PUBLISHED FEBRUARY 20, 1912.

86,334. CIGARS. LOUIS H. ROSENBERG, Boise, Idaho.
Filed June 1, 1911. Serial No. 56,724. PUBLISHED FEBRUARY 20, 1912.

86,335. HORSESHOES. THE ROWE CALK COMPANY, Hartford, Conn.
Filed December 12, 1911. Serial No. 60,189. PUBLISHED FEBRUARY 20, 1912.

86,336. HYPODERMIC SYRINGES AND SURGICAL THERMOMETERS. SCHMIDT & ADE, Chicago, Ill.
Filed December 22, 1909. Serial No. 46,657. PUBLISHED FEBRUARY 20, 1912.

86,337. FLOUR. SEABOARD FLOUR COMPANY, Boston, Mass.
Filed December 11, 1911. Serial No. 60,174. PUBLISHED FEBRUARY 20, 1912.

86,338. WHEAT-FLOUR. SEGUIN MILLING & POWER Co., Seguin, Tex.
Filed December 15, 1911. Serial No. 60,271. PUBLISHED FEBRUARY 20, 1912.

86,339. CIGARS, CIGARETTES, AND MANUFACTURED TOBACCO. LUTGARDA GENER Y SEYCHER, Habana, Cuba.
Filed November 27, 1911. Serial No. 59,959. PUBLISHED FEBRUARY 27, 1912.

86,340. CIGARS, CIGARETTES, AND MANUFACTURED TOBACCO. LUTGARDA GENER Y SEYCHER, Habana, Cuba.
Filed November 27, 1911. Serial No. 59,960. PUBLISHED FEBRUARY 27, 1912.

86,341. POPCORN AND FOAM CANDY. THE SNYDER-CHAFFEE Co., Columbus, Ohio.
Filed December 15, 1911. Serial No. 60,272. PUBLISHED FEBRUARY 20, 1912.

86,342. ORANGES, LEMONS, GRAPE-FRUIT, TANGERINES, AND LIMES. SOUTH LAKE APOPKA CITRUS GROWERS ASSOCIATION, Oakland, Fla.
Filed December 26, 1911. Serial No. 60,450. PUBLISHED FEBRUARY 20, 1912.

86,343. TYPE-WRITING MACHINES AND PARTS THEREOF. STANDARD TYPEWRITER COMPANY, Groton, N. Y.
Filed December 9, 1911. Serial No. 60,151. PUBLISHED FEBRUARY 27, 1912.

86,344. HAMS, BACON, LARD, AND SAUSAGE. H. STATTER, Sioux City, Iowa.
Filed December 27, 1911. Serial No. 60,474. PUBLISHED FEBRUARY 20, 1912.

86,345. MIXTURE OF MAPLE-SUGAR, CANE-SUGAR, AND CORN-SYRUP. ST. PAUL STRUP REFINING COMPANY, St. Paul, Minn.
Filed November 11, 1910. Serial No. 52,720. PUBLISHED FEBRUARY 20, 1912.

86,346. CANNED SALMON. TAKU CANNING & COLD STORAGE Co., Seattle, Wash.
Filed December 19, 1911. Serial No. 60,361. PUBLISHED FEBRUARY 20, 1912.

86,347. CANNED SALMON. TAKU CANNING & COLD STORAGE Co., Seattle, Wash.
Filed December 19, 1911. Serial No. 60,362. PUBLISHED FEBRUARY 20, 1912.

86,348. CANNED SALMON. TAKU CANNING & COLD STORAGE Co., Seattle, Wash.
Filed December 19, 1911. Serial No. 60,363. PUBLISHED FEBRUARY 20, 1912.

86,349. CANNED SALMON. TAKU CANNING & COLD STORAGE Co., Seattle, Wash.
Filed December 19, 1911. Serial No. 60,364. PUBLISHED FEBRUARY 20, 1912.

86,350. ANTISEPTIC SOAP. JOHN W. THOMAS, Habana, Cuba.
Filed November 20, 1911. Serial No. 59,806. PUBLISHED FEBRUARY 27, 1912.

86,351. CLOTH-CLEANING PADS. JOSEPH THOMPSON, Sioux City, Iowa.
Filed December 11, 1911. Serial No. 60,178. PUBLISHED FEBRUARY 20, 1912.

86,352. CAMBRICS, LINENS, AND MUSLINS IN THE PIECE. M. P. TUTTLE COMPANY, Chadwicks, N. Y.
Filed December 12, 1911. Serial No. 60,192. PUBLISHED FEBRUARY 27, 1912.

86,353. CAMBRICS, LINENS, AND MUSLINS IN THE PIECE. M. P. TUTTLE COMPANY, Chadwicks, N. Y.
Filed December 12, 1911. Serial No. 60,193. PUBLISHED FEBRUARY 27, 1912.

86,354. BREAD. CLAUDE S. WALLIN, Peoria, Ill.
Filed August 17, 1911. Serial No. 58,242. PUBLISHED FEBRUARY 20, 1912.

86,355. SCOTCH WHISKY. JAMES WATSON & COMPANY, LIMITED, Dundee, Scotland.
Filed January 11, 1912. Serial No. 60,738. PUBLISHED FEBRUARY 27, 1912.

86,356. CLOCKS AND WATCHES. THE WESTERN CLOCK MANUFACTURING Co., Peru, Ill.
Filed January 19, 1912. Serial No. 60,912. PUBLISHED FEBRUARY 27, 1912.

86,357. STEEL FORGINGS, STEEL CASTINGS, AND STEEL BARS. A. P. WITTEMAN COMPANY, Philadelphia, Pa.
Filed January 18, 1912. Serial No. 60,898. PUBLISHED FEBRUARY 27, 1912.

LABELS

REGISTERED APRIL 30, 1912.

16,309.—*Title:* "PERSIAN BALM." (For a Skin-Tonic.) ADRIAN & VENN CO., Pittsburgh, Pa. Filed March 12, 1912.

16,310.—*Title:* "PRIVATE STOCK." (For Cigars.) AMERICAN LITHOGRAPHIC COMPANY, New York, N. Y. Filed Apr. 12, 1912.

16,311.—*Title:* "NEVERUST." (For Carpet-tacks.) THE CROSSMAN TACK COMPANY, Dighton, Mass. Filed March 28, 1912.

16,312.—*Title:* "EL MERITO." (For Blended Coffee.) THE DEAN LILLY COFFEE AND SPICE CO., Memphis, Tenn. Filed April 8, 1912.

16,313.—*Title:* "DODSON'S LIVER TONE." (For a Medicinal Preparation.) JAMES G. DODSON, Americus, Ga. Filed February 29, 1912.

16,314.—*Title:* "JAMES STUART." (For Cigars.) FRANCISCO BOLAÑO & CO., Chicago, Ill. Filed February 7, 1912.

16,315.—*Title:* "HOME BRAND." (For Sliced Oranges.) GROWERS HOME CANNING COMPANY, Los Angeles, Cal. Filed March 14, 1912.

16,316.—*Title:* "HALLMARK COLOR FAST WARRANTY BOND." (For Shirts.) HALL, HARTWELL & COMPANY, Troy, N. Y. Filed March 25, 1912.

16,317.—*Title:* "OLD AGE." (For Beer.) JETTER BREWING COMPANY, South Omaha, Nebr. Filed April 1, 1912.

16,318.—*Title:* "PAN-A-MA MINTOS." (For Confection.) L. DEMARTINI SUPPLY CO., San Francisco, Cal. Filed December 29, 1911.

16,319.—*Title:* "PURE WHITE PASTE MANY-CELL JAR." (For Paste.) NATIONAL GUM & MICA COMPANY, New York, N. Y. Filed March 18, 1912.

16,320.—*Title:* "SCHÜHLE'S PURE GRAPE JUICE." (For Grape-Juice.) SCHÜHLE'S PURE GRAPE JUICE CO., Highland, N. Y. Filed March 8, 1912.

PRINTS

REGISTERED APRIL 30, 1912.

3,014.—*Title:* "SPILLNO TOOTH POWDER." (For Tooth-Powder.) ARTHUR F. HETHERINGTON, New York, N. Y. Filed March 23, 1912.

3,015.—*Title:* "THE EXQUISITE NOTE IN SHOES." (For Shoes.) J. AND T. COUSINS COMPANY, Brooklyn, N. Y. Filed March 28, 1912.

3,016.—*Title:* "MAMMA SAYS 'BORAX BRIGHTENS COLORS AND PREVENTS FADING.'" (For 20-Mule-Team Borax.) PACIFIC COAST BORAX CO., New York, N. Y. Filed March 28, 1912.

3,017.—*Title:* "MAMMA SAYS 'ITS THE BORAX WITH THE SOAP THAT SAVES THE CLOTHES.'" (For 20-Mule-Team Borax.) PACIFIC COAST BORAX CO., New York, N. Y. Filed March 28, 1912.

3,018.—*Title:* "MAMMA SAYS '20 MULE TEAM BORAX SOFTENS HARD WATER.'" (For 20-Mule-Team Borax.) PACIFIC COAST BORAX CO., New York, N. Y. Filed March 28, 1912.

3,019.—*Title:* "SENECA CAMERAS." (For Plates-Film Pack Roll Film.) SENECA CAMERA MFG. CO., Rochester, N. Y. Filed March 27, 1912.

3,020.—*Title:* "SILVER MOON CANNEL." (For Coal.) SENOR T. WALBOLT, Toledo, Ohio. Filed March 4, 1912.

DECISIONS

OF THE

COMMISSIONER OF PATENTS

AND OF

UNITED STATES COURTS IN PATENT CASES.

COMMISSIONER'S DECISIONS.

EX PARTE DEAN.

Decided February 15, 1912.

APPLICATION—PROSECUTION—FINAL REJECTION.

A final rejection entered in response to a request for reconsideration, accompanied by a statement that the patentability of the claims would be clear in view of an amendment to the specification, *Held* not premature.

ON PETITION.

RINGER.

Mr. F. O. Richey for the applicant.

MOORE, *Commissioner:*

This is a petition that the Examiner be instructed that the final rejection of June 20, 1911, was premature.

The rejection in question applied to claims 7 and 8 and was entered in response to the following request by applicant:

Reconsideration of claims 8 and 9 (now claims 7 and 8) is requested. The patentability of these claims will be clear in view of the amendment to the specification.

Applicant contends that the final rejection was premature because he was under the impression at the time that the Examiner did not understand a certain part of the specification, which, it is alleged, referred to the subject-matter of these claims, and that he did not think a final rejection would be given without a full understanding thereof.

The record of the case, however, shows no basis for such an impression on the part of the applicant. In the first Office letter the Examiner stated that the subject-matter contained on page 4, lines 18 to 26, was not clear and was not understood by the Examiner. In response the applicant submitted an explanation under the head of "Remarks." The Examiner then stated that, in his opinion, the subject was not made "clear in the specification," and applicant was requested to place the explanation in the specification. In the following amendment this was not done by the applicant. The next action was the final rejection in question, and no objection was made therein to the specification as amended. It is clear, therefore, that there is no reason why the applicant should believe the Examiner did not understand the subject-matter of the claims sufficiently to act upon the merits. Indeed, the very fact that action on the merits was given in itself indicates that the Examiner understood the subject-matter of the claims and considered himself in a position to make such action.

The petition is denied.

EX PARTE EAGLE PENCIL COMPANY.

Decided April 8, 1912.

TRADE-MARKS—CIRCUMFERENTIAL BANDS OF CONTRASTING COLORS FOR PEN AND PENCIL HOLDERS, ETC.—ANTICIPATION.

A trade-mark for pen and pencil holders, etc., consisting of a circumferential band of a red color contrasting with a yellow or gilt color on each side thereof *Held* properly refused registration in view of prior registrations of marks differing therefrom only in the colors used, (citing *A. Leschen & Sons Rope Company* v. *Broderick & Bascom Rope Company*, 164 O. G., 977; 36 App. D. C., 451.)

ON APPEAL.

TRADE-MARK FOR PEN AND PENCIL HOLDERS, PENHOLDERS, ETC.

Mr. Marcellus Bailey for the applicant.

MOORE, *Commissioner:*

This is an appeal from the decision of the Examiner of Trade-Marks refusing to register a mark for pen and pencil holders, penholders, pencil-holders, point-protectors, rubber erasers, and pencil-lengtheners, which is described by the applicant as follows:

The trade-mark consists of a circumferential band of red color contrasting with a yellow or gilt color on each side thereof, and produced upon the body of the holder or other article as shown in the accompanying drawing which represents a metallic pencil holder having a band of red color the body on each side thereof being of yellow or gilt color as above specified.

Registration was refused on the ground that the red circumferential band claimed by appellant was anticipated, under the decision of the Court of Appeals of the District of Columbia in *A. Leschen & Sons Rope Co.* v. *Broderick & Bascom Rope Co.*, (164 O. G., 977; 36 App. D. C., 451,) by the following references: Eberhard Faber, No. 43,074, August 2, 1904; Eberhard Faber, No. 51,227, April 10, 1906; Eberhard Faber, No. 52,417; May 8, 1906; American Lead Pencil Company, No. 60,469, February 12, 1907; American Lead Pencil Company, No. 66,976, January 7, 1908; Eberhard Faber, No. 71,436; November 24, 1908; Eberhard Faber Pencil Co., No. 73,468; April 20, 1909; American Lead Pencil Company, No. 73,691, May 11, 1909; American Lead Pencil Company, No. 73,692, May 11, 1909; American Lead Pencil Company, No. 73,693, May 11, 1909;

American Lead Pencil Company, No. 75,289, September 21, 1909.

The marks of these registrations consist of circumferential bands of uniform width of green, yellow, blue, and other colors applied to goods of the same character as those of appellant.

No question is raised but that the goods upon which the marks are used in the references are of the same descriptive properties as those upon which the mark of this application is used; but appellant contends that a red color-band is not shown in any of the references, that it is the custom of manufacturers of this class of goods to mark their goods with a distinctive color-band for the purpose of indicating the origin of the goods, and that it has been the long-continued practice of the Office in this class of goods to register different color-band marks to different manufacturers for the same article.

The Examiner admits that such was formerly the practice of the Office, as shown by the references cited above; but he holds that the decision of the Court of Appeals of the District of Columbia in the case of *A. Leschen & Sons Rope Co.* v. *Broderick & Bascom Rope Co., supra*, precludes a continuation of such practice.

In the case just cited this Office was of the opinion that a yellow stripe of uniform width spirally disposed around the surface of a wire rope was not so similar to a mark consisting of a red stripe of uniform width similarly placed by painting one of the strands of the wire rope as to cause confusion. The court reversed this holding of the Office and said:

> The only difference in the marks is that of color. They are both used upon wire rope, and are both applied in substantially the same manner. It is admitted that appellant has used its mark for more than twenty years, and if this were a case of unfair competition there would be little doubt as to appellant's right to relief, for while color, generally speaking, is not a proper subject of a trade-mark, a rival dealer may not appropriate another's mark by merely changing its color. It is manifest that if appellee is entitled to use precisely the same mark as that used by appellant but colored yellow instead of red, every color of the rainbow may be appropriated by other wire-rope manufacturers and may be similarly applied. Such a result, in our opinion, would lead to no end of confusion, the value of appellant's mark would be destroyed, and the purchasing public would be liable to imposition. The Patent Office has held that there is no conflict; but both marks are before us and, in the language of the Circuit Court of Appeals for the Eighth Circuit "the evidence of the eyes is more persuasive and satisfactory than any other." (*Layton Pure Food Co.* v. *Church & Dwight Co.*, 182 Fed., 24.)

In an opinion rendered at the same time in the case of *A. Leschen & Sons Rope Co.* v. *American Steel & Wire Co. of New Jersey* (164 O. G., 978; 36 App. D. C., 456) the Court of Appeals of the District of Columbia held that a trade-mark for wire rope consisting of a blue stripe of uniform width spirally disposed around the surface of the rope was so similar to a mark consisting of a red stripe similarly placed on a rope as to be likely to cause confusion and deceive purchasers.

The Court of Appeals of the District of Columbia is an appellate tribunal to the Patent Office in trade-mark cases, and its interpretation of the law controls the action of the tribunals of the Patent Office. Under its ruling in the above-mentioned cases I am of the opinion that there can be no question but that appellant's mark is anticipated by the references cited. Appellant attempts to distinguish this case from those mentioned above in that affidavits have been filed in the present case alleging that it is the custom of manufacturers of these goods to identify their goods by various color-bands, that the red color-band is recognized in the trade as belonging to appellant, and that no confusion results in the trade, but each manufacturer respects the color-band marks of the others. This distinction between the two cases, however, does not appear to exist. In the excerpt from the opinion quoted above, after calling attention to the fact that the Patent Office held that there was no conflict between the two marks and that the appellant insisted that the evidence failed to show such a conflict, the court stated that the marks were before the court and that—

> the evidence of the eyes is more persuasive and satisfactory than any other.

In connection with his appeal appellant asks for a ruling upon the following objections of the Examiner:

(1) That the description of the mark is indefinite in that it does not give the precise location of the red band upon the articles to which it is applied, and,

(2) That the specimen indicating the use of the mark upon rubber erasers does not conform to the description of the mark set forth in the statement of the application.

Concerning the first objection, appellant admits that it has long been the practice of the Office to require that the mark be definitely located. The drawing showing the mark for which registration is sought indicates the location of the color-bands, and the requirement of the Examiner that the description should give the location of the band is well taken.

Regarding the second objection, it is apparent from an inspection of the rubber erasers submitted that it does not disclose a mark—

> consisting of a circumferential band of red color contrasting with a yellow or gilt color on each side thereof—

and the Examiner is also sustained in this objection.

The decision of the Examiner of Trade-Marks is affirmed.

WHITNEY v. BREWER.

Decided May 4, 1910.

INTERFERENCE — PRIORITY — REDUCTION TO PRACTICE — CONCEALMENT.

Held that W. is entitled to award of priority, although B. was the first to conceive the invention, since the device built by B. prior to W.'s reduction to practice was either an abandoned experiment or, if a reduction to practice of the invention, was so concealed by B. that he forfeited his right to a patent in favor of W.

APPEAL from Examiners-in-Chief.

MANIFOLD-BOOK.

Mr. Charles C. Gill and *Mr. William G. Henderson* for Whitney.

Mr. Bernard Cowen for Brewer.

BILLINGS, *First Assistant Commissioner*:

This is an appeal by Whitney from the decision of the Examiners-in-Chief reversing the decision of

the Examiner of Interferences and awarding priority in favor of Brewer.

The issue is in two counts, as follows:

1. A manifold sales-book comprising three cover portions arranged in successive order in the direction of the longitudinal axis of the cover and hinged together along their adjacent ends, a pad of duplicate checks carried on the back of the lower cover portion and secured thereto along the left-hand edge thereof, a pad of original checks carried on the face of the intermediate cover portion and means for securing such pad to the cover and for permitting the separate checks to be swung upward from the intermediate cover and turned clear back upon the upper cover and made to lie thereon throughout their entire lengths without bending.

2. A manifold sales-book comprising three cover portions arranged in successive order in the direction of the longitudinal axis of the cover and hinged together along their adjacent ends, a pad of duplicate checks carried on the back of the lower cover portion and secured thereto along the left-hand edge thereof, a pad of original checks carried on the face of the intermediate cover portion and means for securing such pad upon the cover and for permitting the separate checks to be swung clear back throughout their entire lengths and made to lie without bending upon the cover, such means including a removable ring having hinged portions adapted to be opened to permit the removal or replacement of the separate original checks.

Both parties are applicants, the application of Brewer having been filed on November 16, 1905, and that of Whitney on February 10, 1906.

The Examiner of Interferences found that while Brewer's proofs seem to establish that he completed the invention in June, 1902, he concealed and suppressed the same until the filing date of his application, that during this period Whitney independently entered the field, completed the invention, and gave it to the public in commercial form and under circumstances such as to afford Brewer a likely opportunity of becoming aware of his activities, and therefore awarded priority of invention to Whitney in accordance with the doctrine of patent law laid down in *Mason* v. *Hepburn*, (84 O. G., 147; 13 App. D. C., 86;) *Mower* v. *Duell*, (88 O. G., 191; 15 App. D. C., 144;) *Howard* v. *Bowes*, (137 O. G., 733; 31 App. D. C., 619;) *Mattkes* v. *Burt*, (114 O. G., 764; 24 App. D. C., 265;) *Warner* v. *Smith*, (84 O. G., 311; 13 App. D. C., 111.)

The Examiners-in-Chief reversed the decision of the Examiner of Interferences on the ground that the case does not come within the doctrine set forth in the decisions noted above and stated in their decision as follows:

> In regard to the question of forfeiture, however, we are unable to find that Brewer was spurred into activity by knowledge that Whitney was in the field. Brewer admits that Whitney was engaged in the commercial exploitation of manifold-books embodying the invention in controversy, as early as September 1, 1905, which, it will be seen, is two and one-half months earlier than November 16, 1905, on which date Brewer filed his interfering application; but as we read the record there is no evidence affirmatively showing that Brewer was cognizant of Whitney's activity as a commercial rival. In the absence of definite proof that Brewer's period of concealment was broken only by knowledge that Whitney was in the field, it cannot be held that Brewer, the senior party, has forfeited the invention.

The testimony has been carefully briefed and analyzed in the decision of the Examiner of Interferences. It will be necessary to refer only to so much thereof as relates to the questions of abandoned experiment and equitable estoppel, upon which the case turns.

It appears from the testimony that in the spring of 1902 Brewer's attention was directed to duplicate-check systems for use by waiters in hotels and restaurants, and he undertook to improve upon the existing devices. As a result of his efforts he filed an application in the Patent Office on August 7, 1902, which application he allowed to become abandoned. The drawing accompanying that application is reproduced opposite page 56 of Brewer's record and shows several modifications of Brewer's early device, but does not disclose the invention of the present interference issue. On December 17, 1903, Brewer filed another application for a different form of device from that of this interference, on which he received Patent No. 780,857 on January 24, 1905.

Brewer claims that he made his sketch "drawing of June 6, 1902," illustrating the invention of the issue, and disclosed it to Sanneman on June 6, 1902; also, that on June 15, 1902, he made the sales-book embodying the invention of the issue, which was introduced in evidence and marked "Brewer's Exhibit, Sales Book." Brewer states that he disclosed this sketch and sales-book, together with many other sketches and books illustrating different forms of his invention, to Sanneman, Patten, and others in his office in 1902 and that they experimented with them and compared their practicability.

Sanneman, who states that he was at that time connected with Brewer in the printing business, corroborates Brewer as to the disclosure of the sketch and sales-book and identifies the signature on the sketch as his own. Comparing the book of the issue with the device which Brewer placed on the market in 1902, Sanneman states the objections to the book of the issue as follows, (X-Q. 45:)

> The fact that the duplicates were confined on a flap and in order to get a check into working, necessitated the raising of this flap and laying the check on top of the duplicate; another feature detrimental was the two rings which held the checks; also an unsatisfactory way of holding the duplicates on the above-mentioned flap.

Patten states that at one time he conducted a concert tour with Brewer, but that in 1902 he was "merely a friend" and received his mail at Brewer's office. Patten identified Brewer's exhibit sales-book introduced in evidence and in answer to question 18 stated:

> I am able to identify this exhibit, not only by its crude construction, but also due to the fact that I believe it was made out of an old stock-book that I had in Mr. Brewer's office which he told me he had used because he knew it was of no value to me and I would not object and it contained the leather, pliable back or hinge which he wanted to demonstrate his device.

In answer to the question "Has this exhibit device worked satisfactorily?" he said, (Q. 19:)

> Yes, I never knew any of Mr. Brewer's models not to work. They seemed to be a success. Do you refer to these individual checks? I cannot tell about the individual checks. I simply refer to the cover business.

Brewer states that he preferred the form of device shown in his patent to that of this interference, because it was more convenient, lighter, and less expensive, and that he made no effort to place the latter device upon the market. During January or February, 1903, he entered into a contract with Whitney, the other party to this interference, whereby the latter became sales agent for the books, which contract was canceled by mutual agreement in July or August, 1903.

Whitney then went into the business on his own

account. On August 11, 1903, Whitney filed the application on which his Patent No. 756,306 issued on April 15, 1905, and on November 5, 1903, he filed another application, on which he received Patent No. 754,361 on March 8, 1904. Neither of these patents embodied the issue of this interference.

Brewer and Whitney found themselves competitors and rivals in business, which engendered much hostility and resulted in the bringing of a suit by Brewer, before his patent issued, against Whitney for unfair competition in trade and appropriation of orders and other suits by Brewer for infringement of his patent against Whitney's customers. Whitney states that as a result of Brewer's threats and suits and acting on the advice of his attorney to avoid trouble with Brewer and infringement of his patent he devised the book of the issue and substituted the new books for the books that he had already placed upon the market.

Whitney's Exhibit No. 1, embracing the invention of the issue, was made about July 18, 1905, and as early as August 8, 1905, the Climax Stationery Company manufactured fifty of the books of the issue for Whitney. As pointed out by the Examiner of Interferences, the evidence shows that up to January 8, 1906, said company had made 662 of these books for Whitney; also, that prior to the date of filing of Brewer's present application 561 of these books had been placed by Whitney in the hands of his customers.

Brewer did nothing with the invention of the issue commercially until May, 1907, when he filed his first order (RD. Q. 206.)

The evidence referred to above shows that Brewer did not file his application for the invention of the issue until after Whitney had placed the device quite extensively on the market and until some three months after Whitney had commenced to replace the old book with the new device; also, that Brewer did not commercially use the device until May, 1907, nearly two years later.

The testimony of Brewer as to his conception of the invention and the construction of his experimental book, involving the invention of the issue, in the spring of 1902 is corroborated merely by the testimony of Sanneman and Patten, taken some six and a half years later, and they refer in their testimony to many sketches and devices shown them by Brewer. In view of the fact that the date of invention sought to be established by Brewer is earlier than the filing date of his abandoned application, or the application that resulted in his Patent No. 708,857, it seems strange that neither of these applications, which show various forms of duplicating-books, disclosed the invention of the issue.

Conceding that Brewer made his exhibit sales-book, introduced in evidence, in 1902, the facts that he filed no application thereon for four and a half years, although in the meantime he filed at least two other applications, and that he made no attempt to do anything with it commercially until six years later and after Whitney had placed the device extensively upon the market, which was common to both, together with the direct testimony of Brewer and Sanneman as to the disadvantages of the device compared with the other form in which Brewer had built up a large trade, is believed to satisfactorily establish that Brewer's early device was merely an abandoned experiment.

This is a case where on account of the relation of the parties and the fact that their testimony on material points is in direct conflict their actions as measured by the ordinary laws governing human conduct are entitled to more weight than their direct testimony. Certainly Brewer's conduct regarding his exhibit device of the issue makes it clear that he regarded it merely as an abandoned experiment.

The facts in this case are very similar to those in the case of *Warner* v. *Smith, supra*, where the Court of Appeals of the District of Columbia emphasized the doctrine of abandoned experiment. In that case, where the invention was a button, a very simple device, the court said:

> That the device constructed by the appellee in January of 1892 could have been used and worn upon the person and might to some extent have served the purpose for which it was designed might perhaps be conceded; but this does not necessarily constitute reduction to practice. Without entering into any special examination of the record for the purpose of supporting our opinion that what the appellee did in January, 1892, was no more than a mere experimental model, discarded by him as soon as made and apparently forgotten by him for several years afterward—for which we need only adopt the opinion of the Board of Examiners, in which we fully concur—we are disposed to rest our conclusion upon a broader basis.

In the case of *Gilman and Brown* v. *Hinson* (122 O. G., 731; 26 App. D. C., 409) the court of appeals stated:

> We agree with the Commissioner of Patents that the facts of this case bring it within the scope of those decisions of this court in which it was held that what was done by the claimants falls short of a reduction to practice and amounted to nothing more than an abandoned experiment.
>
> The appellants' device appears to have been an experimental model abandoned or laid aside and lost by its makers and recalled to mind afterward by the advertisement of the appellee's similar device.
>
> The decisions upon this point are very numerous, and among them we only cite *Glidden* v. *Noble*, (5 App. Cas. D. C. 480;) *Guilbert* v. *Killinger*, (13 App. Cas. D. C., 107;) *in re Mower*, (15 App. Cas. D. C., 144;) *Paul* v. *Hess*, (24 App. Cas. D. C., 462.)

In *Paul* v. *Hess* (24 App. Cas. D. C., 468) this court said:

> "Long delay in making use of an invention claimed to have been reduced to practice, or in applying for a patent, have always been regarded as potent circumstances tending to show that the alleged reduction to practice was nothing more than an unsatisfactory or abandoned experiment, and this is specially the case where, in the meantime, the inventor has been engaged in the prosecution of similar inventions, or others, without reasonable explanation, have been adopted for manufacture and commercial use."
>
> The device of the appellants in 1898 was neglected while its inventors sought to devise other devices for the same purpose, and they developed commercially their prior patented device for such purpose. They did nothing toward obtaining a patent until after Hinson had marketed his device and the appellants then only applied on March 14, 1904. The appellants slept on their rights, and for more than five years they failed to bring their invention to a complete and operative form.

In the present case there was no test by Brewer of his exhibit device under conditions of actual use. It is not claimed that this device was a commercial article nor anything more than an experimental device made by the inventor out of some old book-covers. So far as there was any test it was merely by experimental manipulation. The Examiners-in-Chief did not find that the device had been tested successfully, but took the ground that it belonged to that class of simple devices which re-

quire no test. Certainly this device, however, which involved several manipulations of the parts in its proper use, required demonstration by successful use much more than the simple button of the *Warner* v. *Smith* case in order to constitute a reduction to practice.

Looking at the question from the standpoint of the Examiners-in-Chief and assuming that the construction of the Brewer exhibit sales-book constituted a reduction to practice, I am unable to agree with that tribunal in its holding that the doctrine of equitable estoppel does not apply to this case. The finding of the Examiners-in-Chief that there is no direct testimony to the effect that Brewer was aware that Whitney was in the field with his new book may be literally true. The relation of the parties as commercial rivals seeking trade from the same hotels and restaurants in New York city, the fact that they had been involved in a suit in the courts and that suits were instituted by Brewer against two of Whitney's customers in July and September, 1905, (stipulations, Whitney's record, pp. 49 and 51,) and the close watch Brewer was evidently keeping on his rival, make it practically certain that Whitney did not put out his 561 books, which occurred before Brewer filed his application, without Brewer's being aware of the fact. Brewer's letter of December 20, 1905, in his application involved in this interference is conclusive evidence that at said date he was aware of Whitney's invention. In it he says:

> I inclose herewith an amendment to the application of William Brewer, filed November 16, 1905, Serial No. 287,700. The new claims cover more specifically applicant's invention and no doubt will meet any limited claims that may be drawn in the application of Linwood G. Whitney which is pending in the Patent Office.

In this connection the following statement on page 9 of Brewer's brief is suggestive:

> It was in August, 1905, that Brewer, realizing that his business demanded the protection of the other modification of sales-books capable of conjoint use with the system that he had introduced and perhaps divining the possibility of Whitney's shifting to another form of sales-book to avoid infringement of his patent, instructed his attorney to prepare an application that would cover the other modifications, including among others the sales-book involved herein (Brewer, Q. 60).

From all the circumstances of the case it seems clear that the only conclusion that can be drawn is that knowledge had come to Brewer of the commercial exploitation by Whitney of the invention of the issue and that the filing of the Brewer application resulted therefrom. Brewer did not place the device upon the market until nearly two years later, and how did it happen that Brewer suddenly realized that his business demanded the protection of the other modifications of sales-books and that he divined the possibility of Whitney's shifting to another form of sales-book at the precise time Whitney was diligently replacing his old books with the new ones unless Brewer had knowledge thereof?

A further holding of the Examiners-in-Chief that there must be—

> definite proof that Brewer's period of concealment was broken only by knowledge that Whitney was in the field—

is not in accord with the holding of the authorities. Where a long period of concealment is broken, following knowledge that another party has entered the field, the holding of the courts is to the effect that the law will presume that period of concealment was broken because of such knowledge.

The contention of Brewer that he did not conceal and suppress his invention is not borne out by the testimony. The only parties to whom he mentions disclosing his invention are Sanneman and Patten, and in answer to cross-question 142 he states:

> X-Q. 142. Were they friends in whom you had confidence that when you showed them these inventions they would not disclose them to your detriment?
>
> A. They were friends, and I had no such fear.

It is noted that Brewer was the first to file his application; but this fact is not believed to bring his case outside the doctrine of equitable estoppel, provided Brewer had knowledge prior to the filing of his application of the commercial activity of Whitney and his period of concealment was broken and his application filed in view thereof. The courts make no distinction in their application of the doctrine as to whether the party who is stirred into activity and his period of concealment broken by knowledge that the other party has placed the invention upon the market and given it to the public is the first or the last to file his application.

In the case of *Matthes* v. *Burt* (114 O. G., 764; 24 App. D. C., 265) the Court of Appeals of the District of Columbia stated:

> Having, then, completed the invention and satisfied himself of its utility, as claimed, Matthes deliberately concealed it, suppressing its use and withholding it from the public. How long he might have pursued this policy with no rival in the field is of course conjectural; but it is certain that he showed no substantial intention of change of policy until he had obtained definite knowledge of Burt's exploitation of the same invention.

In *Howard* v. *Bowes, supra*, the same court held:

> His invention, according to his own statement, was perfected some time in the fall of 1904, and yet he did nothing toward asserting his rights until more than a year had elapsed, and his reason for then acting, as above stated, was that Bowes had placed his rack upon the market. Howard was under no obligation to give the public the benefit of his discovery, but by failing to do so he assumed the risk that some other inventor might do so and thus in the eyes of the law become the prior inventor, and as such entitled to a patent. (*Mason* v. *Hepburn*, 13 App. D. C., 86; *Thompson* v. *Weston*, 19 App. D. C., 373; *Matthes* v. *Burt*, 24 App. D. C., 265; *Bliss* v. *McElroy*, 29 App. D. C., 120; *Richards* v. *Burkholder*, 29 App. D. C., 485.)

In the recent case of *International Tel. Mfg. Co.* v. *Kellogg S. B. & S. Co.* (171 Fed. Rep., 651) the Circuit Court of Appeals of the Seventh Circuit said concerning equitable estoppel:

> Dean was the first and true inventor of the device in suit. There being no abandonment, no public use or sale and no publication, within the terms of section 4886, Rev. St. (U. S. Comp. St. 1901, p. 3382), his right to the patent is not assailable on statutory grounds. So far as equities are concerned, Dean, in spite of his delay, was the first to put the device into commercial use and the first to apply for a patent. If, during Dean's suspension of activities, McCormick had either patented the device or brought it into public use without a patent, the public would have been indebted to McCormick for benefits conferred, and Dean might well be held estopped by his delay from claiming the public grant; but in our judgment neither reason nor authority sanctions an estoppel against the first and true inventor unless the later comer has cut in between and made the public his debtor by being the first to get to the Patent Office or the market. (*Kendall* v. *Winsor*, 21 How., 328; 16 L. Ed., 165; *Consolidated Fruit Jar Co.* v. *Wright*, 94 U. S., 92; 24 L. Ed., 68; *Savery* v. *Leuth*, Fed. Cas. No. 12,380; *White* v. *Allen*, Fed. Cas. No. 17,535.) The decision in *Universal Adding Mach. Co.* v. *Comptograph Co.* (146 Fed., 984; 77 C. C. A., 227) is to the same effect, when the general expressions are read, as they should be, in the light of the particular facts.

It is held, first, that Brewer's device of 1902 constitutes merely an abandoned experiment and not a reduction to practice, and, second, that if Brewer's

early device be considered a reduction to practice instead of an abandoned experiment by reason of his long delay and concealment of the invention he forfeited his rights in favor of Whitney, who was the first to place the device upon the market and give it to the public.

Concerning the denial by the Examiner of Interferences of Whitney's motion to strike out the entire depositions of Brewer and Patten, because of their refusal to answer certain questions asked them, it is believed the decision below was right, since it does not appear that Whitney was entitled to the information sought or that it could have any bearing upon the present controversy.

The decision of the Examiners-in-Chief is reversed, and priority of invention is awarded to Linwood G. Whitney.

KLENK *v.* KRUSE.

Decided February 15, 1912.

INTERFERENCE—AMENDMENT OF PRELIMINARY STATEMENT—ACCEPTANCE OF TESTIMONY.

Record reviewed and *Held* to show no abuse of discretion on the part of the Examiner of Interferences in allowing the junior party to amend his preliminary statement and in accepting such testimony as in his opinion was properly presented thereunder.

ON PETITION.

PACKING-CASE.

Mr. H. H. Bliss for Klenk.

Mr. Obed C. Billman for Kruse.

TENNANT, *Assistant Commissioner:*

This is a petition by Kruse—

for the exercise of the supervisory power of the Commissioner of Patents to purge the records of improper and surreptitious matter filed without authority, and for the correction of clear and palpable errors apparent on the face of the record.

The grounds given as a basis for this petition are to the effect that the party Klenk, under date of January 27, 1910, filed an amended preliminary statement, the legal effect of which was to shift the date of reduction to practice of the invention in issue from September 1, 1907, to August 15, 1906, which it is alleged was—

contrary to the ruling of the Examiner of Interferences on his motion to amend, and without serving a copy of said amended statement upon his opponent.

It is asserted that the permission given by the Examiner of Interferences was merely to insert the dimensions of a certain device said to have been constructed on or about August 15, 1906, and did not permit that this device should be considered as a reduction to practice of the invention. It is urged that by reason of this fact all testimony in behalf of Klenk as to the device made in 1906 was irrelevant and should be suppressed. The party Kruse therefore prays—

that the amended statement filed by Klenk without authority and contrary to the ruling of the Examiner of Interferences be stricken from the files; that all testimony taken on behalf of Klenk not proper under the terms of the original preliminary statement and the ruling of the then Examiner of Interferences, Fairfax Bayard, denying Klenk's motion to amend his preliminary statement, be treated as null and void; that the Commissioner issue an order upon the Examiner of Interferences directing him to grant an early rehearing of this cause in accordance with such further directions as the Commissioner may deem proper; that the time set for taking an appeal and all further proceedings in this case be suspended, and that the Commissioner issue such other and further orders in the premises as may be required under the principles of equity and good conscience.

There is, in my opinion, absolutely no basis for the bringing of this petition. The party Klenk filed a preliminary statement in which he alleged, *inter alia*—

that he first embodied his invention in a model which was made about the 15th day of August, 1906.

After the approval of the preliminary statements on January 6, 1910, he filed a motion to amend his preliminary statement by omitting the term "model" and inserting the statement that—

he first embodied his invention in a full-sized crate capable of operative use,

which was made about the 15th day of August, 1906.

In his decision upon this motion the Examiner of Interferences said:

It seems plain that there has been no new discovery of fact in this case, and it is believed that under the ruling of *Doy* v. *Adt.* v. *Hardy* (125 O. G., 2765) relief should be given from any possibility of embarrassment through the use of the word "model" in the preliminary statement. It is not clear, however, that the proposed preliminary statement accompanying the motion should be accepted. I am not prepared to rule at this time that the exhibit offered by Klenk at the hearing is a full size device and I do not believe that he should be permitted to designate it so in an amended preliminary statement or to move back his date of constructing a full size device in an amended preliminary statement. It would seem that a new preliminary statement should be filed by Klenk in which expressions of conclusions such as "model" and "full size device" are omitted and, in the place thereof, the exact facts are set forth. For instance, the devices made can be designated by measurements, number of compartments, capacity of bottle to be carried, etc.

Klenk's motion to amend his preliminary statement is denied but leave is granted him to file an amended statement of the character indicated on or before January 28, 1910.

Pursuant to the permission given an amended statement was filed by Klenk on January 27, 1910, one day within the limit fixed by the Examiner of Interferences. This statement was approved and testimony duly taken.

In respect to the allegation contained in the petition that a copy of the amended statement was not served upon the opponent, the inference being that because of the lack of such service counsel for the opponent was not advised of the amendment of the preliminary statement, it is sufficient to say that on February 1, 1910, the following order was received from Obed C. Billman, attorney of record for Kruse:

Inclosed find remittance of $2.00 to cover cost of amended preliminary statement filed by Klenk in interference No. 30,932. I am not sure that Klenk has filed such an amended statement, but by a decision rendered by the Examiner January 13, 1910, Klenk was granted leave to file an amended statement on or before January 28, 1910.

The indorsement upon the back of this paper shows that the order was filed on February 5, 1910. It is clear from the facts above stated that counsel for Kruse was aware that the amended preliminary statement filed on January 27, 1911, had been accepted by the Examiner of Interferences and the testimony was taken pursuant thereto.

The Examiner of Interferences did not in any way abuse the discretion vested in him in granting Klenk permission to file an amended preliminary statement, nor did his successor err in accepting such testimony as in his opinion was properly presented under the amended statement. There is clearly no reason for exercising the supervisory authority of the Commissioner in the manner prayed for in this petition.

The petition is denied.

ADJUDICATED PATENTS.

(U. S. C. C. A.) The Smith patent, No. 392,973, for a pedal-shaft bearing for bicycles, *Held* void for lack of invention. *Pope Mfg. Co.* v. *Arnold, Schwinn & Co.*, 193 Fed. Rep., 649.

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TO THE

DECISIONS OF THE COMMISSIONER OF PATENTS AND OF THE UNITED STATES COURTS.

APRIL, 1912.

[Decisions of the Supreme Court of the District of Columbia are indicated by the letter *, of the Court of Appeals of the District of Columbia by a star (*), and of the Supreme Court of the United States by two stars (**).]

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DIGEST

OF THE

DECISIONS OF THE COMMISSIONER OF PATENTS AND OF THE UNITED STATES COURTS.

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ABANDONED EXPERIMENTS.

See Priority of Invention, 4.

ABANDONMENT OF TRADE-MARKS.

See Trade-Marks, 6, 7.

AMENDMENT TO PRELIMINARY STATEMENT.

1. INTERFERENCE—MATTERS OF RECORD.
It is well settled that where an amendment sought to be made to a preliminary statement merely sets up matters of record or the dates of applications on file in the Patent Office the rule respecting the showing required is applied less strictly.
[Cramer and Hodge v. Carrier, 769.

2. SAME—DISCRETION OF THE EXAMINER OF INTERFERENCES.
The question of amending a preliminary statement is largely within the discretion of the Examiner of Interferences, and his decision on this question will not be disturbed unless it is shown that such discretion has been abused. [Id.

3. SAME—DISCRETION OF THE COMMISSIONER OF PATENTS.
The rule requiring preliminary statements is a salutary one, its obvious object being to elicit from each of the parties certain vital information before any party is informed as to the statements of any other. Owing to the purpose of the rule, the exercise of the Commissioner's discretion in passing upon motions to amend such statements will not be disturbed unless it is plain that there has been an abuse of that discretion.
[*Thomas v. Weintraub, 772.

4. SAME—DISCRETION OF THE EXAMINER OF INTERFERENCES—ACCEPTANCE OF TESTIMONY.
Record reviewed and *Held* to show no abuse of discretion on the part of the Examiner of Interferences in allowing the junior party to amend his preliminary statement and in accepting such testimony as in his opinion was properly presented thereunder.
[Klenk v. Kruse, 1300.

ANTICIPATION.

See Interference, 1, 2; Trade-Marks, 8.

APPEAL.

See Refundment of Fees.

APPEAL FROM THE EXAMINERS-IN-CHIEF.

See Patentability, 1.

APPLICATIONS.

See Bankruptcy; Delay in Filing Applications; Renewal of Forfeited Applications.

ASSIGNMENTS.

See Suits Upon Contracts, 1.

1. PATENT OFFICE HAS NO JURISDICTION TO ADJUDICATE THE VALIDITY THEREOF.
It is well settled that the Patent Office has no jurisdiction to adjudicate the validity of assignments and that the function of recording the same is merely ministerial. [*Ex parte* Palter, 241.

2. RETURNED TO PARTY FILING THE SAME.
A party who files an assignment for record is entitled to have the same returned to him. [Id.

ATTORNEYS.

See Renewal of Forfeited Applications.

AUTHORITY OF THE COMMISSIONER OF PATENTS.

See Trade-Marks, 4.

BANKRUPTCY.

1. OWNER OF APPLICATION FOR PATENT—TITLE OF TRUSTEE.
Where the owner of an application for patent is declared a bankrupt, *Held* that the title to the interest in the patent about to be granted is transferred by operation of law to the trustee in bankruptcy. [*In re* Stebler, 1044.

2. SAME—PROSECUTION OF APPLICATION AND ISSUANCE OF PATENT.
Where the trustee in bankruptcy sells certain applications for patent owned by a bankrupt, and that sale is confirmed by a court of competent jurisdiction, and the order of the court and the bill of sale by the trustee are recorded in this Office, *Held* that the transferee should be recognized in the prosecution of the application and the patent thereon be issued to him. [Id.

BILL OF SALE.

See Bankruptcy, 2.

CANCELATION OF TRADE-MARK REGISTRATION.

See Trade-Marks, 5.

COLOR.

See Trade-Marks, 8.

COMBINATION.

See Reduction to Practice.

COMMISSIONER OF PATENTS.

See Amendment to Preliminary Statement, 3; Trade-Marks 4.

CONCEALMENT OF INVENTION.

See Priority of Invention, 4.

CONCEPTION OF INVENTION.

See Priority of Invention, 1, 4.

CONSTRUCTION OF CLAIMS.

See Patentability, 2.

CONSTRUCTION OF RULES.

See Patentability, 1.

CONSTRUCTION OF STATUTES.

See Interference, 2.

CONSTRUCTION OF TRADE-MARK STATUTES.

See Trade-Marks, 5.

CONTRACTS.

See Suits Upon Contracts.

DATE OF FILING APPLICATIONS.

See Priority of Invention, 2.

DELAY IN FILING APPLICATIONS.

NEW OATH—DIVISIONAL APPLICATION.

Held that the ruling in *ex parte Brenna* (97 O. G., 2533) as to the requirement for a new oath where there has been a delay in the filing of the application is not applicable to a divisional application. [*Ex parte* Davison, 241.

DESCRIPTIVE TERMS.

See Trade-Marks, 2.

DILIGENCE.

See Priority of Invention.

DISCLOSURE OF INVENTION.

See Interference, 2; Priority of Invention, 3.

DISCRETION OF THE COMMISSIONER OF PATENTS.

See Amendment to Preliminary Statement, 1.

DISCRETION OF THE EXAMINER OF INTERFERENCES.

See Amendment to Preliminary Statement, 2, 4.

DIVISIONAL APPLICATIONS.

See Delay in Filing Applications.

EARLIER APPLICATIONS.

See Priority of Invention, 3.

EVIDENCE.

See Reduction to Practice, 2; Trade-Marks, 7.

EXAMINER OF INTERFERENCES.

See Amendment to Preliminary Statement, 2, 4.

EXPIRED REGISTRATION OF TRADE-MARK.

See Trade-Marks, 5.

FEES.

See Refundment of Fees.

FINAL HEARING.

See Motion to Amend Preliminary Statement; Patentability, 1.

FORFEITED APPLICATIONS.

See Priority of Invention, 2; Renewal of Forfeited Applications.

FORMER DECISIONS CITED.

See Delay in Filing Applications; Jurisdiction of the Federal Courts; Motion to Amend Preliminary Statement; Patentability, 1; Trade-Marks, 3, 6, 8.

GRANT OF PATENT.

See Bankruptcy, 2.

INFRINGEMENT.

See Particular Patents; Priority of Invention.

INJUNCTION.

See Suits Upon Contracts, 2.

INTERFERENCE.

See Amendment to Preliminary Statement; Motion to Amend Preliminary Statement; Motion to Dissolve Interference; Patentability; Priority of Invention; Reduction to Practice; Trade-Marks, 7.

1. SUSPENSION IN VIEW OF A REFERENCE—GRANTED ONLY WHERE ANTICIPATION IS CLEAR.

It is well settled that after testimony has been taken an interference will not be suspended for the purpose of considering the pertinency of a reference unless the anticipation is clearly apparent. [Graham *v.* Langhaar, 240.

2. SAME.

Permission to take testimony to establish the date of publication of a catalogue refused where such motion was not brought until after testimony had been taken and it was doubtful whether the catalogue was a publication within the meaning of section 4886, Revised Statutes, and whether the invention in issue was disclosed therein. [Id.

3. RIGHT TO MAKE CLAIMS.

The record reviewed and *Held* that H. has a right to make certain of the claims in issue. [Smith and Larsen *v.* Hill, 523.

JURISDICTION OF THE FEDERAL COURTS.

PATENTS.

"The Federal courts have exclusive jurisdiction of all cases arising under the patent laws, but not of all questions in which a patent may be the subject-matter of the controversy. For courts of a State may try questions of title, and may construe and enforce contracts relating to patents. (*Wade* v. *Lawder*, 165 U. S., 627.)"

[**The New Marshall Engine Company and Marshall *v.* The Marshall Engine Company, by Van Blarcom, its receiver, 1047.

JURISDICTION OF THE PATENT OFFICE.

See Assignments, 1.

JURISDICTION OF THE STATE COURTS.

See Jurisdiction of the Federal Courts; Suits Upon Contracts.

MISTAKE.

See Refundment of Fees.

MOTION TO AMEND PRELIMINARY STATEMENT.

See Amendment to Preliminary Statement, 3.

INTERFERENCE—TESTIMONY.

Where the testimony was taken with notice of a motion to amend the preliminary statement by one of the parties, and in order to properly determine whether such motion should be granted a consideration of a large part of the testimony is necessary, *Held* that the consideration of the motion should be postponed until final hearing, (citing *Bauer* v. *Crane*, 111 O.G., 1039.) [Forsberg *v.* Bradbury, 239.

MOTION TO DISSOLVE INTERFERENCE.

TRANSMISSION.

A motion to dissolve the interference on the ground of non-patentability of the issue *Held* sufficiently definite in view of the character of the invention.

[Herbert *v.* Payne and Simms *v.* Friedlander, 1046.

NEW OATH.

See Delay in Filing Application.

ORDER OF THE COURT.

See Bankruptcy, 2.

PARTICULAR PATENTS.

PATENTABILITY—INFRINGEMENT.

The patent to Twitchell, No. 927,268, *Held* valid and infringed. [*Twitchell *v.* Rudolph & West Company, 527.

PATENTABILITY.

See Motion to Dissolve Interference.

1. NOT CONSIDERED.

It is well settled that the patentability of the issue over the prior art is not a matter which can be raised at final hearing on priority, and, further, that no appeal lies from the refusal of the Examiners-in-Chief to make a recommendation as to the patentability under Rule 126. (*Welsh* v. *Hallbauer*, 94 O. G., 223; *Woods* v. *Waddell*, 106 O. G., 2017.) (Smith and Larsen *v.* Hill, 523.

2. PAD FOR ARTIFICIAL TEETH.

Claims for a pad to be worn between the gums and a plate for artificial teeth *Held* unpatentable over the prior art.

[*Ex parte*, Moore, 772.

PATENTS.

See Jurisdiction of the Federal Courts; Suits Upon Contracts.

PRACTICE IN THE PATENT OFFICE.

See Amendment to Preliminary Statement; Assignments, 1; Interference, 1; Patentability, 1; Trade-Marks, 6.

PRELIMINARY STATEMENTS.

See Amendment to Preliminary Statement; Motion to Amend Preliminary Statement.

PRINTED PUBLICATIONS.

See Interference, 2.

PRIORITY OF ADOPTION AND USE.

See Trade-Marks, 7.

PRIORITY OF INVENTION.

See Patentability, 1; Reduction to Practice.

1. REDUCTION TO PRACTICE—DILIGENCE.

Where H., who was the first to conceive the invention in issue, delayed the reduction to practice thereof until it could be determined whether his invention would be an infringement of any prior existing patent and whether it would be necessary to modify the device, so as to avoid such prior patent, and in the meantime W. conceived the invention and reduced the same to practice, *Held* that H. was lackin in diligence, and priority was properly awarded to W. [*Hawkins *v.* Ward, 242.

2. INTERFERENCE.

Priority *Held* properly awarded to N., the senior party, since the junior party did not allege a date of invention prior to the original filing of N.'s application which became forfeited and was renewed. [Le Brou *v.* Nix, 771.

3. SAME—DISCLOSURE.

Priority *Held* properly awarded to W., since the earlier applications relied upon by T. did not disclose the invention in issue.

[*Thomas *v.* Weintraub, 772.

4. SAME—REDUCTION TO PRACTICE—CONCEALMENT.

Held that W. is entitled to award of priority, although B. was the first to conceive the invention, since the device built by B. prior to W.'s reduction to practice was either an abandoned experiment or, if a reduction to practice of the invention, was so concealed by B. that he forfeited his right to a patent in favor of W.

[Whitney *v.* Brewer, 1296.

PRIOR PATENTS.

See Priority of Invention, 1; Suits upon Contract, 2.

PROSECUTION OF APPLICATIONS

See Bankruptcy, 2.

RECORDING ASSIGNMENTS.

See Assignments.

REDUCTION TO PRACTICE.

See Priority of Invention.

1. INTERFERENCE—PRIORITY.

Where the claim constituting the issue of an interference is for a combination of elements, it must be considered as such, and in order to determine whether the invention in issue has been reduced to practice it is necessary to decide whether this combination was reduced to practice and not whether any element thereof is such that by itself the mere making thereof would constitute a reduction to practice. [Huff *v.* Gulick, 525.

2. SAME—SAME.

Evidence considered and *Held* insufficient to establish beyond a reasonable doubt that H. reduced the invention in issue to practice before G. filed his application. [Id.

REFERENCES.

See Interference, 1, 2.

REFUNDMENT OF FEES.

APPEAL—MISTAKE.

Where, in his answer to the appeal, the Examiner cited certain published decisions in view of which the applicant withdrew his appeal, *Held* that applicant's mistake in appealing, if any, was one of law and that the fee could not be refunded.

[*Ex parte* William Paterman, Inc., 240.

REGISTRABILITY.

See Trade-Marks, 1, 2, 3, 7, 8.

RENEWAL OF FORFEITED APPLICATIONS.

See Priority of Invention, 2.

ATTORNEY OF RECORD HAS AUTHORITY TO FILE.

Held that the attorney of record in an application which was allowed and became forfeited has authority to sign and file a petition for the renewal of the same. [Le Brou *v.* Nix 771

RETURN OF ASSIGNMENTS.

See Assignments, 2.

RIGHT TO MAKE CLAIMS.

See Interference, 3.

SECOND REGISTRATION OF TRADE-MARK.

See Trade-Marks, 4.

SIMILARITY OF MARKS.

See Trade-Marks, 1.

STATE OF THE ART.

See Patentability.

SUITS UPON CONTRACTS.

1. SUIT TO COMPEL ASSIGNMENT—JURISDICTION OF STATE COURT.
A suit to compel assignment of a patent because the patent is an improvement on an earlier one and instituted as a covenant to convey all such improvements is based on general principles of equity and is within the jurisdiction of the State court.
[*]The New Marshall Engine Company and Marshall v. The Marshall Engine Company, by Van Blarcom, its receiver, 1047.

2. SAME—SAME.
Where the injunction granted against sale of articles manufactured under a patent is only an incident to a decree for specific performance of a contract to convey the patent as an improvement of an earlier one, the relief is appropriate and is within the jurisdiction of the State courts. [*]Id.

SUSPENSION OF INTERFERENCE.

See Interference, 1, 2.

TESTIMONY.

See Amendment to Preliminary Statement, 4; Interference, 1, 2; Motion to Amend Preliminary Statement.

TITLE TO PATENT.

See Bankruptcy, 1.

TRADE-MARKS.

1. SIMILARITY—"EJCo" IN A MONOGRAM AND "E. J. CO."
The letters "EJCo" arranged in the form of a monogram *Held* deceptively similar to the prior registered trade-mark "E. J. Co." [*Ex parte* Elliott Jewelry Company, 242.

2. REPRESENTATION OF BALL-BEARING AND LETTERS "F & S" FOR BALL-BEARING—DESCRIPTIVE.
A mark consisting of the representation of a ball-bearing intertwined with the letters "F & S" *Held* descriptive as applied to ball-bearings, since its most prominent feature is the figure representing a ball-bearing and so accurately describes the articles to which it is applied as would the printed words "Ball-Bearing." [*] *In re* Schweinfurter Praeasions-Kugel-Lager-Werke Fichtel & Sachs, 249.

3. REGISTRABILITY.
In considering whether a trade-mark is registrable the mark must be considered in its entirety. (Johnson v. Brandon, 120 O. G., 732; 32 App. D. C., 348.) [*]Id.

4. DUPLICATE REGISTRATIONS.
Held that the Commissioner has authority to grant a second registration of a trade-mark to the same party and that where good and sufficient reasons are shown to justify such action the second registration should be granted.
[*Ex parte* Shinola Company, 824.

5. CANCELATION—REGISTRATIONS UNDER THE ACT OF 1870.
A petition for the cancelation of a trade-mark registration effected under the law of 1870 *Held* properly dismissed, since such registration was granted for a period of thirty years and therefore if valid would have expired before the petition for cancelation was filed.
[Walter Baker & Company, Ltd., *v.* Werth, 770.

6. ABANDONMENT.
It is well settled that the mere non-use of a trade-mark does not establish abandonment thereof, but that one who contends that the mark has been abandoned must establish that the original owner of the mark not only discontinued its use but intended to abandon the same. (*Saxlehner et al.* v. *Cusenier*, 221 U. S., 260, 507, and cases therein cited.)
[Madame Irene *v.* Schweinburg, 1043

7. INTERFERENCE—RIGHT OF JUNIOR PARTY TO REGISTRATION.
Registration *Held* properly refused the junior party, since the senior party was the first to adopt and use the mark in issue and the evidence did not establish that he had lost his rights thereto by abandonment. [Id.

8. CIRCUMFERENTIAL BANDS OF CONTRASTING COLORS FOR PEN AND PENCIL HOLDERS, ETC.—ANTICIPATION.
A trade-mark for pen and pencil holders, etc., consisting of a circumferential band of a red color contrasting with a yellow or gilt color on each side thereof *Held* properly refused registration in view of prior registrations of marks differing therefrom only in the colors used, (citing *A. Locher & Sons Rope Company* v. *Broderick & Bascom Rope Company*, 104 O. G., 977; 26 App. D. C., 451.) [*Ex parte* Eagle Pencil Company, 1296.

TRANSMISSION OF MOTIONS.

See Motion to Dissolve Interference.

TRUSTEES.

See Bankruptcy.

VALID PATENTS.

See Particular Patents.

VALID REGISTRATION OF TRADE-MARKS.

See Trade-Marks, 5.

VALIDITY OF ASSIGNMENT.

See Assignments, 1.

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ALPHABETICAL LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED DURING THE MONTH OF APRIL, 1912.

[Abbreviations: "Sp."—Monthly Volume of Specifications; "Gaz."—Official Gazette.]

A. B. Dick Company. (See Dick, Albert B., assignor.)
A. H. & F. H. Lippincott. (See Lippincott, Fisher H., assignor.)
A. & J. Mfg. Company. (See Jackson, William A., assignor.)
Aalborg, Christian, Wilkinsburg, assignor, by mesne assignments, to Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa. Wheel-brake. No. 1,024,489; Apr. 30; Sp. p. 6553; Gaz. vol. 177; p. 1051.
Abbett, Charles H. (See Epperson, Landy D., assignor.)
Abbott, Benjamin F., Hebron Falls, Me. Warping-cleaver for looms. No. 1,023,703; Apr. 16; Sp. p. 4106; Gaz. vol. 177; p. 721.
Abbott, Delos H., Vandemere, N. C. Cultivating-machine. No. 1,023,704; Apr. 16; Sp. p. 4106; Gaz. vol. 177; p. 721.
Abbott, Linn B., assignor to Harvey Hubbell, Incorporated, Bridgeport, Conn. Electric switch. No. 1,022,800; Apr. 9; Sp. p. 2267; Gaz. vol. 177; p. 388.
Abel, John A., Woodhaven, N. Y. Mounting or setting. No. 1,024,048; Apr. 23; Sp. p. 4887; Gaz. vol. 177; p. 866.
Acker, Julius J., Horton, Kans., assignor of fifty-one one-hundredths to W. P. Murphy, Chicago, Ill., and twenty-four-and-one-half one-hundredths to C. L. Bundy, Kingsland, N. J. Slack-adjuster for brakes. No. 1,023,790; Apr. 23; Sp. p. 4269; Gaz. vol. 177; p. 777.
Ackerman, Bert, Chester, Vt. Rotary rasp. No. 1,023,406; Apr. 16; Sp. p. 3533; Gaz. vol. 177; p. 629.
Acme Refrigerating Company. (See Bossé, Adolph E., assignor.)
Acton, Joseph E., *et al.* (See Smith, William E., assignor.)
Adam, Folger. (See Bates and Adam.)
Adam, John L., assignor to American Railway Mail Device Company, New Orleans, La. Mail-bag catcher and deliverer. No. 1,025,042; Apr. 30; Sp. p. 7074; Gaz. vol. 177; p. 1243.
Adams-Bagnall Electric Company, The. (See Adams, Thomas E., assignor.)
Adams, Earnest E., and J. L. Dudek, Schuyler, Nebr. Pig-forceps. No. 1,023,705; Apr. 16; Sp. p. 4111; Gaz. vol. 177; p. 722.
Adams, Gideon S., Seaville, assignor to Eureka Double Resilient Tire Mfg. Co., Camden, N. J. Resilient tire. No. 1,022,220; Apr. 2; Sp. p. 988; Gaz. vol. 177; p. 159.
Adams, Thomas E., assignor to The Adams-Bagnall Electric Company, Cleveland, Ohio. Alternating-current regulator. No. 1,024,963; Apr. 30; Sp. p. 6926; Gaz. vol. 177; p. 1217.
Adams & Westlake Company, The. (See Hamm and Legge, assignors.)
Adams & Westlike Company, The. (See Patridge, Elmer L., assignor.)
Adamson, Cecil F., East Palestine, Ohio. Tire-vulcanizing repair apparatus. No. 1,022,289; Apr. 2; Sp. p. 1128; Gaz. vol. 177; p. 180.
Adder Machine Company, The. (See McFarland, Charles N., assignor.)
Adler, Sigismund L., New York, N. Y. Corset-fitting chart. No. 1,023,060; Apr. 9; Sp. p. 2781; Gaz. vol. 177; p. 473.
Adt, Leo F., Albany, N. Y. Bridge-spring for eyeglasses. No. 1,024,814; Apr. 30; Sp. p. 6622; Gaz. vol. 177; p. 1165.
Aerators Limited. (See Campbell, Robert H., assignor.)
Aginskee, Abraham. (See Staunard and Aginskee.)
Aiken Engineering Company. (See Aiken, Robert H., assignor.)
Aiken, Robert H., Winthrop Harbor, Ill., assignor, by mesne assignments, to Aiken Engineering Company. Method and apparatus for constructing concrete buildings. No. 1,023,849; Apr. 16; Sp. p. 3419; Gaz. vol. 177; p. 610.
Aktiebolaget Pyro. (See Post, Hans A. von, assignor.)
Aktiebolaget Svenska Kullagerfabriken. (See Olsson and Winquist, assignors.)
Aktiengesellschaft der Maschinenfabriken Escher Wyss & Cie. (See Boltshauser, Heinrich, assignor.)
Albert Sechrist Manufacturing Company, The. (See Sechrist, Albert, assignor.)
Albrecht, Frederick W., assignor of one-half to C. H. Shields, Toledo, Ohio. Work gaging and holding means. No. 1,023,407; Apr. 16; Sp. p. 3535; Gaz. vol. 177; p. 629.
Alcohol Heating & Lighting Company. (See Sharp, William E., assignor.)
Alexander, Julius M., assignor of one-third to C. W. Weaver, Healdsburg, Cal. Antislipping attachment for footwear. No. 1,023,350; Apr. 16; Sp. p. 3420; Gaz. vol. 177; p. 611.
Alexander Milburn Company, The. (See Jenkins, Alexander F., assignor.)
Alladin Manufacturing Company, The. (See Kronenberger, Ferdinand, assignor.)
Allee, James F. (See Stashigren, Karl A. A., assignor.)
Allen, Edward B., Bridgeport, Conn., assignor to The Singer Manufacturing Company. Sewing-machine drip-pan. No. 1,023,351; Apr. 16; Sp. p. 3422; Gaz. vol. 177; p. 611.
Allen, Edward B., Bridgeport, Conn., assignor to The Singer Manufacturing Company. Buttonhole-stitching machine. No. 1,024,490; Apr. 30; Sp. p. 5854; Gaz. vol. 177; p. 1051.
Allen, Fred R., assignor to E. F. Bowen, Providence, R. I. Clutch. No. 1,025,043; Apr. 30; Sp. p. 7076; Gaz. vol. 177; p. 1244.
Allen, George L., Wilmington, N. C. Car-ventilator. No. 1,022,018; Apr. 9; Sp. p. 2488; Gaz. vol. 177; p. 424.
Allen, George W., Corvallis, Oreg. Combined square and level. No. 1,022,396; Apr. 9; Sp. p. 1347; Gaz. vol. 177; p. 247.
Allen, Horace L., Okmulgee, Okla. Igniter. No. 1,024,964; Apr. 30; Sp. p. 6928; Gaz. vol. 177; p. 1218.
Allen, Sam. and F. L. Bailey, Okmulgee, Okla. Concrete-block-molding machine. No. 1,023,778; Apr. 16; Sp. p. 4236; Gaz. vol. 177; p. 744.
Allen, Sherman T., assignor to Triplex Tire Company, Detroit, Mich. Vehicle-tire. No. 1,023,779; Apr. 16; Sp. p. 4238; Gaz. vol. 177; p. 745.
Allen, William H., Welch, W. Va. Car-rerailer. No. 1,024,049; Apr. 23; Sp. p. 4889; Gaz. vol. 177; p. 866.
Allender, Robert B., Claysville, Pa. Nut-locking device. No. 1,022,810; Apr. 9; Sp. p. 2269; Gaz. vol. 177; p. 388.
Allis-Chalmers Company. (See Bogen, Louis E., assignor.)
Allis-Chalmers Company. (See Cheney, Herbert W., assignor.)
Allis-Chalmers Company. (See De Wein, George F., assignor.)
Allis-Chalmers Company. (See Fischer, Charles A., assignor.)
Allis-Chalmers Company. (See Frankenfeld, Budd, assignor.)
Allis-Chalmers Company. (See Lieber, William H., assignor.)
Allis-Chalmers Company. (See Pfau, Arnold, assignor.)
Allis-Chalmers Company. (See Tomlinson, Clifford J., assignor.)
Allis-Chalmers Company. (See Zimmerman, James G., assignor.)
Allsopp & Allsopp. (See Allsopp, Thomas, assignor.)
Allsopp, Thomas, Newark, N. J., assignor to Allsopp & Allsopp. Mesh fabric. No. 1,024,050; Apr. 23; Sp. p. 4890; Gaz. vol. 177; p. 866.
Alquist, Karl, Schenectady, N. Y., assignor to General Electric Company. Centrifugal elastic-fluid compressor. No. 1,023,408; Apr. 16; Sp. p. 3538; Gaz. vol. 177; p. 630.
Altgelt, Herman E. (See Altgelt, Rudolph J. and H. E.)
Altgelt, Rudolph J. and H. E., assignors to Oliver Chilled Plow Works, South Bend, Ind. Planting-machine. No. 1,024,962; Apr. 30; Sp. p. 6905; Gaz. vol. 177; p. 1111.
Altick, Harry M., Dayton, Ohio. Cartridge-pocket for hunting coats, jackets, &c. No. 1,023,489; Apr. 16; Sp. p. 3665; Gaz. vol. 177; p. 654.
Alvey, Benjamin H., and M. U. Bernheim, Louisville, Ky., assignors, by mesne assignments, to The Alvey-Ferguson Company, Oakley, Cincinnati, Ohio. Package-conveying system. No. 1,022,526; Apr. 9; Sp. p. 1628; Gaz. vol. 177; p. 290.

Alvey-Ferguson Company, The. (See Alvey and Bernheim, assignors.)
Amadeo, Paul, Shenandoah, Pa. Shoe-shining machine. No. 1,021,814; Apr. 2; Sp. p. 118; Gaz. vol. 177; p. 24.
Amadeo, Paul, Shenandoah, Pa. Razor-sharpening machine. No. 1,024,815; Apr. 30; Sp. p. 6624; Gaz. vol. 177; p. 1165.
Amalgamated Oil Company. (See O'Neil, Schneider, and Kellett, assignors.)
Ambruster, Cornelius. (See Beck and Ambruster.)
Amend, Gustav H., Des Moines, Iowa. Adjustable lamp-holder and reflector. No. 1,022,618; Apr. 9; Sp. p. 1830; Gaz. vol. 177; p. 320.
American Automatic Switch Company. (See Collins, Roy V., assignor.) (Reissue.)
American Automotoneer Company. (See Ebersole, Cyrus P., assignor.)
American Can Company. (See Graham, Thomas, assignor.)
American Can Company. (See Phelps, Henry W., assignor.)
American Can Company. (See Rudolphi, Frank, assignor.)
American Can Company. (See Rudolphi and Tevander, assignors.)
American Car and Foundry Company. (See Ames, John M., assignor.)
American Car and Foundry Company. (See Summa, Victor M., assignor.)
American Car and Foundry Company. (See Weisbrod, Jacob H., assignor.)
American Case & Register Company, The. (See Peterson, Fredolf J., assignor.)
American Circular Loom Company. (See Lutz, George A., assignor.)
American Cystoscope Makers. (See Wappler, Reinhold H., assignor.)
American Cystoscope Makers. (See Wappler and Jung, assignors.)
American Eagle Motor Car Company. (See Mueller, Frank, assignor.)
American Graphophone Company. (See Macdonald, Thomas H., assignor.)
American Hardware Corporation, The. (See Dyson, Louis M., assignor.)
American Hardware Corporation, The. (See Voight, Henry G., assignor.)
American Hardware Corporation, The. (See Voight and Hurd, assignors.)
American Ignition Company. (See Schaefer, Joseph E., Jr., assignor.)
American Machinery Company, The. (See Reynolds, Robert A., assignor.)
American Mono Service Company. (See Taylor, Elmer Z., assignor.)
American Moving Picture Machine Company. (See Uebelmesser, Charles R., assignor.)
American Multigraph Company, The. (See Bates, Albert H., assignor.)
American Multigraph Company, The. (See Osborn, Henry C., assignor.)
American Oil & Supply Company. (See Brinkman, Louis H., assignor.)
American Paper Bottle Company, The. (See Heyl, Henry R., assignor.)
American Railway Mail Device Company. (See Adam, John L., assignor.)
American Rotary Valve Company. (See Moorhead, Albert E., assignor.)
American Seeding Machine Company, The. (See Packham, Frank R., assignor.)
American Sheet & Tin Plate Company. (See Bennett, Charles W., assignor.)
American Stamp & Ticket Vending Machine Co. (See Oehring, Oscar, assignor.)
American Steel and Wire Company of New Jersey, The. (See Sprague and Mulroyan, assignors.)
American Stopper Company. (See Perry, Eugene L., assignor.)
Ames, John M., Dongan Hills, N. Y., assignor to American Car and Foundry Company, St. Louis, Mo. Cross-bearer. No. 1,021,000; Apr. 2; Sp. p. 329; Gaz. vol. 177; p. 55.
Amme, Giesecke & Konegen, Aktiengeselischaft, Braunschweig. (See Roth, Hugo, assignor.)
Anchor Stove & Range Company. (See Gohmann, Arthur J., assignor.)
Anders, Rudolph, Bridgeport, Conn. Airship. No. 1,025,106; Apr. 30; Sp. p. 7216; Gaz. vol. 177; p. 1264.
Andersen, Laurits W., Waterbury, Conn., assignor to The Pinme and Atwood Manufacturing Company. Electric-lighting device. No. 1,022,010; Apr. 9; Sp. p. 2491; Gaz. vol. 177; p. 424.
Anderson, Adolf F., Chicago, Ill. Load-supporting column for building structures. No. 1,024,761; Apr. 30; Sp. p. 6512; Gaz. vol. 177; p. 1147.
Anderson, Anton G., Chicago, Ill. Clysterising apparatus. No. 1,023,452; Apr. 16; Sp. p. 3624; Gaz. vol. 177; p. 642.
Anderson, Barngrover Manufacturing Company. (See Langer, Gotthold L., assignor.)
Anderson, Carl J., Chicago, Ill. Electric-motor-starting device. No. 1,023,491; Apr. 16; Sp. p. 3700; Gaz. vol. 177; p. 655.
Anderson, Clay, and M. Silver, Passi, Philippine Islands. Diving-suit. No. 1,022,007; Apr. 9; Sp. p. 2647; Gaz. vol. 177; p. 452.
Anderson, Emil, assignor to H. S. Todd, New York, N. Y. Turbine. No. 1,024,111; Apr. 23; Sp. p. 5026; Gaz. vol. 177; p. 888.
Anderson, Emil H., assignor of one-half to F. M. Timmins, Indianapolis, Ind. Overhead-trolley switch. No. 1,021,857; Apr. 2; Sp. p. 229; Gaz. vol. 177; p. 38.
Anderson, George M., Gordon, Nebr. Wire-clamp. No. 1,023,700; Apr. 16; Sp. p. 4112; Gaz. vol. 177; p. 722.
Anderson, Hans J. (See Donahue, Anderson, and Gregg.)
Anderson, John H., St. Paul, Minn. Harrow-tooth fastening. No. 1,023,492; Apr. 16; Sp. p. 3703; Gaz. vol. 177; p. 655.
Anderson, John L., Ogden, Utah. Universal electric induction heating element. No. 1,023,791; Apr. 23; Sp. p. 4270; Gaz. vol. 177; p. 777.
Anderson, Joseph, Providence, R. I. Pin-point guard. No. 1,024,762; Apr. 30; Sp. p. 6513; Gaz. vol. 177; p. 1147.
Anderson, Leo M. and M. L., Ramsey, N. J. Combination feeder, fountain, and heater. No. 1,023,352; Apr. 16; Sp. p. 3423; Gaz. vol. 177; p. 611.
Anderson, May L. (See Anderson, Leo M. and M. L.)
Anderson, Olof, Chicago, Ill. Box-car ladder. No. 1,022,765; Apr. 9; Sp. p. 2179; Gaz. vol. 177; p. 373.
Anderson, Oscar, Gloucester, Mass. Easel. No. 1,023,117; Apr. 16; Sp. p. 2927; Gaz. vol. 177; p. 531.
Anderson, Oscar, East Lake, Minn. Spark-arrester. No. 1,023,792; Apr. 23; Sp. p. 4272; Gaz. vol. 177; p. 778.
Anderson, Oscar T., Waterloo, Iowa. Tool for cutting teeth on worm-wheels. No. 1,023,353; Apr. 16; Sp. p. 3425; Gaz. vol. 177; p. 612.
Anderson, Rufus L., Plant City, Fla. Brush. No. 1,022,920; Apr. 9; Sp. p. 2493; Gaz. vol. 177; p. 425.
Anderson, Sarah, Ridgewood, N. J. Table-service device. No. 1,022,290; Apr. 2; Sp. p. 1129; Gaz. vol. 177; p. 180.
Anderson, William C., San Jose, Cal. Air-cooling apparatus for fruit. No. 1,024,763; Apr. 30; Sp. p. 6514; Gaz. vol. 177; p. 1147.
Andrew, James A., Victoria, British Columbia, Canada. Automatic leaf-turner. No. 1,022,921; Apr. 9; Sp. p. 2495; Gaz. vol. 177; p. 425.
Andrews, George C., and E. H. Williams, Minneapolis, Minn. Hot-water and steam radiator. No. 1,023,793; Apr. 23; Sp. p. 4273; Gaz. vol. 177; p. 778.
Andrews, James H., Washington, D. C. Attachment for picture-frames. No. 1,024,160; Apr. 23; Sp. p. 5168; Gaz. vol. 177; p. 907.
Andrews, William S., Schenectady, N. Y., assignor to General Electric Company. Electric heater. No. 1,022,016; Apr. 2; Sp. p. 567; Gaz. vol. 177; p. 89.
Andrews, William S., and T. Van Aller, Schenectady, N. Y. Igniting device. No. 1,024,713; Apr. 30; Sp. p. 6413; Gaz. vol. 177; p. 1129.
Angell, Hans, Missoula, Mont. Saw-filing machine. No. 1,024,387; Apr. 23; Sp. p. 5586; Gaz. vol. 177; p. 980.
Angenend, Peter A. (See Lagarde and Angenend.)
Ansley, Frank, Spokane, Wash. Smoking-pipe. No. 1,021,963; Apr. 2; Sp. p. 460; Gaz. vol. 177; p. 73.
Ansonia Clock Company, The. (See Treganza, Howard J., assignor.)
Anthony, Alfred R., assignor to The Anthony Company, New York, N. Y. Combined oil and gas burner. No. 1,022,640; Apr. 9; Sp. p. 1897; Gaz. vol. 177; p. 331.
Anthony, Alfred R., assignor to The Anthony Company, New York, N. Y. Hydrocarbon-burner. No. 1,023,707; Apr. 16; Sp. p. 4113; Gaz. vol. 177; p. 722.
Anthony Company, The. (See Anthony, Alfred R., assignor.)
Anthony, Wendell P., Eddystone, assignor to Wm. Simpson & Sons, Philadelphia, Pa. Mowing-machine. No. 1,022,291; Apr. 2; Sp. p. 1130; Gaz. vol. 177; p. 180.
Anthony, Wendell P., Eddystone, assignor to Wm. Simpson & Sons, Philadelphia, Pa. Mowing-machine. No. 1,022,292; Apr. 2; Sp. p. 1131; Gaz. vol. 177; p. 181.
Antisdel, Lloyd S., Chicago, Ill. Card business system. No. 1,022,170; Apr. 2; Sp. p. 888; Gaz. vol. 177; p. 141.
Antoine, Alfred D. (See Travis, Davis, and Antoine.)
Applas, Clarence S., Moline, Ill. Vehicle-curtain. No. 1,024,305; Apr. 23; Sp. p. 5453; Gaz. vol. 177; p. 955.
Appleby, John F., Chicago, Ill., assignor to Dixie Cotton Picker Co., Reddeid, S. D. Cotton-harvesting machine. No. 1,024,714; Apr. 30; Sp. p. 6414; Gaz. vol. 177; p. 1130.
Applegate, Samuel T., Louisville, Ky. Indicator. No. 1,024,051; Apr. 23; Sp. p. 4892; Gaz. vol. 177; p. 866.
Archer, James E., Chico, Cal. Apparatus for riveting cloth, leather, and similar material. No. 1,023,061; Apr. 9; Sp. p. 2782; Gaz. vol. 177; p. 474.
Archer, Wesley, Los Angeles, Cal. Cigar and cigarette holder. No. 1,024,052; Apr. 23; Sp. p. 4893; Gaz. vol. 177; p. 867.
Armbrust, Charles W., Crystal Lake, assignor of one-fourth to S. Stein, Chicago, Ill. Brake-shoe. No. 1,022,397; Apr. 9; Sp. p. 1340; Gaz. vol. 177; p. 247.
Armbrust, Charles W., Crystal Lake, assignor of one-half to H. W. Armbrust, North Crystal Lake, Ill. Brake-head. No. 1,024,112; Apr. 23; Sp. p. 5031; Gaz. vol. 177; p. 889.
Armbrust, Harriet W. (See Armbrust, Charles W., assignor.)
Armington, William A. (See Roessler and Armington.)
Armstrong Brothers Tool Company. (See Sprink, Isaac W., assignor.)

Arnason, Olafer, Cottonwood, Minn. Reloading-tool. No. 1,023,913; Apr. 23; Sp. p. 4605; Gaz. vol. 177; p. 820.
Arun, Albert, Little Ferry, N. J. Hanger for false work. No. 1,023,192; Apr. 16; Sp. p. 3117; Gaz. vol. 177; p. 558.
Arnold, Emmer B., Los Angeles, Cal. Wave-force-utilising device. No. 1,024,816; Apr. 30; Sp. p. 6626; Gaz. vol. 177; p. 1166.
Arnold, Horace L., New York, N. Y. Crank-shaft. No. 1,024,817; Apr. 30; Sp. p. 6628; Gaz. vol. 177; p. 1166.
Arons, Leo, and M. Fuss, Berlin, Germany, assignors to General Electric Company. Series lighting system. No. 1,023,289; Apr. 16; Sp. p. 3307; Gaz. vol. 177; p. 591.
Arrow Electric Company, The. (See Peterson, Johann G., assignor.)
Arrow Electric Company, The. (See Rowntree, Frank L., assignor.)
Arsem, William C., Schenectady, N. Y., assignor to General Electric Company. Reduction of oxids. No. 1,023,290; Apr. 16; Sp. p. 3308; Gaz. vol. 177; p. 591.
Arundel, Clarence E., assignor of one-twelfth to A. A. Wright, one-twelfth to R. L. Ray, and one-sixth to C. L. Parker, Washington, D. C. Soap-lather generating and applying device. No. 1,023,708; Apr. 16; Sp. p. 4115; Gaz. vol. 177; p. 722.
Ashley, Frank M., New York, N. Y. Fountain-pen. No. 1,022,718; Apr. 9; Sp. p. 2080; Gaz. vol. 177; p. 357.
Ashley-Reavis, James A., Denver, Colo. Weighing-means or scale for wagons. No. 1,022,811; Apr. 9; Sp. p. 2270; Gaz. vol. 177; p. 388.
Ashton, Orrell, Lawrence, assignor to United Shoe Machinery Company, Boston, Mass. Pegging-machine. No. 1,021,815; Apr. 2; Sp. p. 121; Gaz. vol. 177; p. 24.
Ashton, Orrell, Lawrence, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for assembling parts of boots and shoes. No. 1,023,794; Apr. 23; Sp. p. 4275; Gaz. vol. 177; p. 778.
Ashworth, John W., Peoria, Ill. Elevating attachment. No. 1,023,981; Apr. 23; Sp. p. 4745; Gaz. vol. 177; p. 842.
Atherton, Herbert, Wimbledon Park, England. Advertising-machine. No. 1,024,242; Apr. 23; Sp. p. 5339; Gaz. vol. 177; p. 935.
Atkinson, Asher, New Brunswick, N. J. Reinforcement. No. 1,024,663; Apr. 30; Sp. p. 6307; Gaz. vol. 177; p. 1112.
Atlanta Utility Works. (See Nash, Walter D., assignor.)
Atlas Acetylene Lighting Company. (See Crowner, James M., assignor.)
Atlas Cement Pipe and Machinery Co. (See Tunison, Arthur C., assignor.)
Atwood, George D., New York, N. Y. Elastic-fluid turbine. No. 1,024,020; Apr. 30; Sp. p. 6845; Gaz. vol. 177; p. 1203.
Atwood, James F., Claremont, N. H. Fastening device for shoes and the like. (Reissue.) No. 13,392; Apr. 2; Sp. p. 1333; Gaz. vol. 177; p. 216.
Audet, Armel L. (See Boullillard, Victor A., assignor.)
Augenbraun, Peter F., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Indicator for locks. No. 1,022,221; Apr. 2; Sp. p. 989; Gaz. vol. 177; p. 159.
Augenbraun, Peter F., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Strike-plate for door-locks. No. 1,022,222; Apr. 2; Sp. p. 991; Gaz. vol. 177; p. 160.
Aukerman, George W. (See Freeland, Charles E., assignor.)
Auld, Harry D., The Dalles, Oreg. Fruit-jar opener. No. 1,022,574; Apr. 9; Sp. p. 1735; Gaz. vol. 177; p. 306.
Auscher, Paul, and C. Debainault, Paris, France; said Debainault assignor to said Auscher. Manifold-book. No. 1,025,118; Apr. 30; Sp. p. 7229; Gaz. vol. 177; p. 1266.
Austin, De Roy, Omaha, Nebr. Shoe. No. 1,022,458; Apr. 9; Sp. p. 1498; Gaz. vol. 177; p. 268.
Austin, Frederick C. (See Bathrick, Charles E., assignor.)
Austin, Frederick C., Chicago, Ill. Table-piece and fountain. No. 1,023,854; Apr. 16; Sp. p. 3426; Gaz. vol. 177; p. 612.
Austin, William L., assignor, by mesne assignments, to The Baldwin Locomotive Works, Philadelphia, Pa. Car-truck. No. 1,022,922; Apr. 9; Sp. p. 2490; Gaz. vol. 177; p. 426.
Auto Strop Company. (See Gaisman, Henry J., assignor.)
Autocall Company, The. (See Reynolds, Will S., assignor.)
Automatic Chain Company, The. (See Coulter, James, assignor.)
Automatic Chain Company, The. (See Ryan, Michael B., assignor.)
Automatic Machinery Company. (See Gaynor, Miller, and Remler, assignors.)
Automatic Movable Headlight Company, The. (See McElliott, Joseph P., assignor.)
Automatic Sprinkler Company of America. (See Hamilton, John R., assignor.)
Automatic Traction Implement Company, The. (See Helvig and Danielson, assignors.)
Automatic Weighing Machine Company. (See Tremaine, Edward G., assignor.)
Autoplano Co. (See O'Connor, James, assignor.) (Reissue.)
Axelrod, Salomon, Oberschöneweide, Germany, assignor to General Electric Company. Coloring metals. No. 1,023,201; Apr. 16; Sp. p. 3309; Gaz. vol. 177; p. 591.
Axtell, Fred W., Fort Worth, Tex. Pump-jack for double-acting pumps. No. 1,024,921; Apr. 30; Sp. p. 6848; Gaz. vol. 177; p. 1203.
Aylesworth, Jonas W., East Orange, assignor, by mesne assignments, to Thomas A. Edison Incorporated, West Orange, N. J. Apparatus for duplicating sound-records. No. 1,024,965; Apr. 30; Sp. p. 6929; Gaz. vol. 177; p. 1218.
B. F. Goodrich Company, The. (See Smith, Frank L., assignor.)
B. F. Perkins and Son. (See Cleveland, Fred P., assignor.)
B. F. Perkins and Son. (See Stanley, John O., assignor.)
Baber, James M., assignor of one-half to R. F. Kistler, Henrietta, N. C. Operating-table. No. 1,024,966; Apr. 30; Sp. p. 6933; Gaz. vol. 177; p. 1218.
Bacchi, Abdenago, Quincy, Mass. Shock-absorbing device. No. 1,023,795; Apr. 23; Sp. p. 4286; Gaz. vol. 177; p. 778.
Bachten, Louis, and J. Gallay, Geneva, Switzerland. Surface-cooler for automobiles. No. 1,023,453; Apr. 16; Sp. p. 3625; Gaz. vol. 177; p. 643.
Backinger, Christian, Seattle, Wash. Hydrocarbon-burner. No. 1,022,348; Apr. 2; Sp. p. 1240; Gaz. vol. 177; p. 199.
Badeau, Charles C., assignor to S. B. Condit, Jr., Boston, Mass. Circuit-breaker. No. 1,023,102; Apr. 9; Sp. p. 2665; Gaz. vol. 177; p. 488.
Badger, Luther, St. Johns, Oreg. Ball-bearing pivoted and balanced device. No. 1,023,600; Apr. 16; Sp. p. 3948; Gaz. vol. 177; p. 693.
Badgley, Samuel F., Toronto, Ontario, Canada, assignor to Eastman Kodak Co., Rochester, N. Y. Apparatus for forming photographic mats and masks. No. 1,023,914; Apr. 23; Sp. p. 4607; Gaz. vol. 177; p. 820.
Badische Anilin & Soda Fabrik. (See Bosch and Mittasch, assignors.)
Baechle, Nicholas W., Cincinnati, Ohio. Adjustable driver or carrier for lathes, &c. No. 1,022,118; Apr. 2; Sp. p. 777; Gaz. vol. 177; p. 128.
Baeumle, John, Milwaukee, Wis. Necktie holder and shield. No. 1,022,398; Apr. 9; Sp. p. 1351; Gaz. vol. 177; p. 247.
Bahr, Georg, Berlin-Charlottenburg, Germany. Device for producing writing characters. No. 1,022,384; Apr. 2; Sp. p. 1311; Gaz. vol. 177; p. 212.
Bailey, Frank L. (See Allen and Bailey.)
Bailey, George T., St. Petersburg, Fla. Cooling device for bottles and packages. No. 1,023,116; Apr. 9; Sp. p. 2903; Gaz. vol. 177; p. 493.
Bailey, Samuel R., Amesbury, Mass. Belt-shifter. No. 1,022,650; Apr. 9; Sp. p. 1899; Gaz. vol. 177; p. 332.
Baker, Charles H., Cedarville, Cal. Fruit-picker. No. 1,023,709; Apr. 16; Sp. p. 4122; Gaz. vol. 177; p. 723.
Baker, Edward B., Paris, Tex. Hydrocarbon-stove. No. 1,024,053; Apr. 23; Sp. p. 4895; Gaz. vol. 177; p. 867.
Baker, James H., assignor to Flexible Bolt Company, Pittsburgh, Pa. Manufacturing stay-bolts. No. 1,022,996; Apr. 9; Sp. p. 2652; Gaz. vol. 177; p. 452.
Baker, Michael B., and J. A. Kender, Whiting, Ind. Duck-decoy. No. 1,021,910; Apr. 2; Sp. p. 330; Gaz. vol. 177; p. 55.
Baker, Reuben C., Coalinga, Cal. Anchor for well-tubing. No. 1,023,292; Apr. 16; Sp. p. 3310; Gaz. vol. 177; p. 591.
Balass, John, Michel, British Columbia, Canada. Hat-pin-point protector. No. 1,023,710; Apr. 16; Sp. p. 4124; Gaz. vol. 177; p. 723.
Balass, John, assignor of one-fourth to U. Mihalj, one-fourth to M. Balint, and one-fourth to G. Hekkel, Michel, British Columbia, Canada. Safety elevator device. No. 1,023,711; Apr. 16; Sp. p. 4124; Gaz. vol. 177; p. 724.
Balass, John, assignor of one-fourth to U. Mihalj, one-fourth to M. Balint, and one-fourth to G. Hekkel, Michel, British Columbia, Canada. Tire for vehicle-wheels. No. 1,023,712; Apr. 16; Sp. p. 4125; Gaz. vol. 177; p. 724.
Balch, Reuben E., Long Island, Ala., assignor of one-half to J. T. Thomasson, Chattanooga, Tenn. Animal-shoeing apparatus. No. 1,022,399; Apr. 9; Sp. p. 1352; Gaz. vol. 177; p. 248.
Baldauf, Gustav, Augsburg, and E. Presser, Berlin, Germany, assignors to General Electric Company. Arc-lamp. No. 1,023,293; Apr. 16; Sp. p. 3312; Gaz. vol. 177; p. 592.
Baldwin Locomotive Works, The. (See Austin, William L., assignor.)
Baldwin Locomotive Works, The. (See Hobson, Walter, assignor.)
Bales, William H., Farmland, Ind. Cement vault. No. 1,023,118; Apr. 16; Sp. p. 2928; Gaz. vol. 177; p. 531.
Balint, John, Cincinnati, Ohio. Electric rat-trap. No. 1,024,967; Apr. 30; Sp. p. 6934; Gaz. vol. 177; p. 1219.
Balint, Mandi, *et al.* (See Balass, John, assignor.)
Ball, Charles A., Philadelphia, Pa., assignor to Warren Webster & Co., Camden, N. J. Operating steam-heating systems. No. 1,024,546; Apr. 30; Sp. p. 6031; Gaz. vol. 177; p. 1071.
Ball, Charles A., Philadelphia, Pa., assignor to Warren Webster & Company. Steam-heating system. No. 1,024,547; Apr. 30; Sp. p. 6036; Gaz. vol. 177; p. 1072.
Ballard, Charles R., Midway, Pa. Valve. No. 1,022,171; Apr. 2; Sp. p. 890; Gaz. vol. 177; p. 142.

Ballinger, Bert A., Los Angeles, Cal. Truck. No. 1,024,460; Apr. 23; Sp. p. 5806; Gaz. vol. 177; p. 1009.
Baltz, Louis J., Buffalo, N. Y. Suction-tube for hydraulic dredging-machines. No. 1,024,664; Apr. 30; Sp. p. 6306; Gaz. vol. 177; p. 1112.
Bancroft, John S., and M. C. Indahl, assignors to Lanston Monotype Machine Company, Philadelphia, Pa. Stop-bar. No. 1,024,491; Apr. 30; Sp. p. 5880; Gaz. vol. 177; p. 1052.
Bancroft, John S., and M. C. Indahl, assignors to Lanston Monotype Machine Company, Philadelphia, Pa. Type casting and composing machine. No. 1,024,492; Apr. 30; Sp. p. 5882; Gaz. vol. 177; p. 1052.
Bancroft, William M., New Orleans, La. Bearing for mill-rolls. No. 1,023,355; Apr. 16; Sp. p. 3428; Gaz. vol. 177; p. 612.
Banks, Theodore H., San Antonio, Tex. Vehicle-tire. No. 1,024,431; Apr. 23; Sp. p. 5710; Gaz. vol. 177; p. 994.
Bantom, Joseph L., Chicago, Ill. Milk-bottle holder. No. 1,022,223; Apr. 2; Sp. p. 998; Gaz. vol. 177; p. 160.
Baracs, Henry. (See Kiell, Albert, assignor.)
Barbour, James A., Johannesburg, Transvaal. Valve. No. 1,024,876; Apr. 30; Sp. p. 6750; Gaz. vol. 177; p. 1188.
Barbour, James A., Johannesburg, Transvaal. Valve. No. 1,024,877; Apr. 30; Sp. p. 6751; Gaz. vol. 177; p. 1188.
Barclay, George, Avonmore, Pa. Joint-chair. No. 1,025,044; Apr. 30; Sp. p. 7077; Gaz. vol. 177; p. 1244.
Barker, John C., Leeds, England. Outer cover for pneumatic tires. No. 1,021,816; Apr. 2; Sp. p. 141; Gaz. vol. 177; p. 24.
Barker, Wendell A., Chicago, Ill. Multiple hoist. No. 1,022,349; Apr. 2; Sp. p. 1243; Gaz. vol. 177; p. 190.
Barlow, Vaneas O., and J. Holman, Carney, Mich. Derrick. No. 1,024,665; Apr. 30; Sp. p. 6311; Gaz. vol. 177; p. 1112.
Barnard, Walter E., Hartford, Conn., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,022,766; Apr. 9; Sp. p. 2180; Gaz. vol. 177; p. 374.
Barnes, Howard T., Montreal, Quebec, Canada. Method of and apparatus for recording marine conditions. No. 1,022,526; Apr. 9; Sp. p. 1632; Gaz. vol. 177; p. 290.
Barnes, John S., assignor to W. F. & John Barnes Company, Rockford, Ill. Variable-speed gearing. No. 1,024,816; Apr. 30; Sp. p. 6630; Gaz. vol. 177; p. 1167.
Barnes, Lambert E., Greenwood, Miss. Swingletree. No. 1,025,045; Apr. 30; Sp. p. 7077; Gaz. vol. 177; p. 1244.
Barnes, Thomas H., Crawfordsville, Iowa. Rail-protector. No. 1,022,932; Apr. 23; Sp. p. 4748; Gaz. vol. 177; p. 842.
Barnes, Walter D., Salt Lake City, Utah. Trunk-fastener. No. 1,024,054; Apr. 23; Sp. p. 4896; Gaz. vol. 177; p. 867.
Barnett, Thomas K., Shelby, N. C. Seed and grain separator. No. 1,023,983; Apr. 23; Sp. p. 4750; Gaz. vol. 177; p. 843.
Barney, Frank P., Chartley, Mass. Front for articles of jewelry. No. 1,024,055; Apr. 23; Sp. p. 4897; Gaz. vol. 177; p. 868.
Baroody, Assad M., Richmond, Va. Bottle-capping machine. No. 1,024,493; Apr. 30; Sp. p. 5884; Gaz. vol. 177; p. 1052.
Barr, George, La Center, Wash. Clamp-truck. No. 1,022,812; Apr. 9; Sp. p. 2272; Gaz. vol. 177; p. 388.
Barr, George, Pittsburgh, Pa. Spike-machine. No. 1,024,666; Apr. 30; Sp. p. 6312; Gaz. vol. 177; p. 1113.
Barrett Adding Machine Company. (See Barrett, Glenn J., assignor.)
Barrett, Glenn J., Grand Rapids, Mich., assignor, by mesne assignments, to Union Typewriter Company, Jersey City, N. J. Type-writing machine. No. 1,021,817; Apr. 2; Sp. p. 142; Gaz. vol. 177; p. 25.
Barrett, Glenn J., assignor to Barrett Adding Machine Company, Grand Rapids, Mich. Calculating-machine. No. 1,023,235; Apr. 16; Sp. p. 3193; Gaz. vol. 177; p. 571.
Barrick, Christopher C., assignor to The Union Metal Manufacturing Company, Canton, Ohio. Column. No. 1,023,119; Apr. 16; Sp. p. 2929; Gaz. vol. 177; p. 531.
Barron, Miles K., Coffeyville, Kans. Bolt-clipper. No. 1,024,432; Apr. 23; Sp. p. 5712; Gaz. vol. 177; p. 994.
Barron, Walter J., New York, N. Y., assignor, by mesne assignments, to Union Typewriter Company, Jersey City, N. J. Type-writing machine. No. 1,023,795; Apr. 23; Sp. p. 4289; Gaz. vol. 177; p. 779.
Barron, Walter J., New York, N. Y., assignor, by mesne assignments, to Union Typewriter Company, Jersey City, N. J. Type-writing machine. No. 1,025,046; Apr. 30; Sp. p. 7078; Gaz. vol. 177; p. 1245.
Bartec, Stanko. (See Strba, Michal, assignor.)
Bartel, Otto, New York, N. Y. Torch. No. 1,023,610; Apr. 16; Sp. p. 3950; Gaz. vol. 177; p. 693.
Bartels, Victor J., *et al.* (See Crosbie, Daniel L., assignor.)
Barter, John D., assignor of one-half to M. Barter, New York, N. Y. Attachment for phonographs and like machines. No. 1,023,544; Apr. 16; Sp. p. 3803; Gaz. vol. 177; p. 671.
Barter, Mary. (See Barter, John D., assignor.)
Bartholomae, William, New York, assignor to H. Zimmerman, Brooklyn, N. Y. Musical toy. No. 1,024,878; Apr. 30; Sp. p. 6752; Gaz. vol. 177; p. 1188.
Bartholow, William P., assignor to The Dobbins Manufacturing Company, Minneapolis, Minn. Combined soldering-iron and blow-torch. No. 1,024,170; Apr. 23; Sp. p. 5170; Gaz. vol. 177; p. 908.
Barti, Franz, New York, N. Y. Spark-plug. No. 1,023,493; Apr. 16; Sp. p. 3704; Gaz. vol. 177; p. 655.
Bartlett, George H., New London, Conn. Tool-holding box. No. 1,024,336; Apr. 23; Sp. p. 5588; Gaz. vol. 177; p. 980.
Bartlett, Lowell A., Danville, Vt. Self-righting lamp. No. 1,023,062; Apr. 9; Sp. p. 2789; Gaz. vol. 177; p. 474.
Barton, William E., Hartford, Conn. Safety appliance. No. 1,022,119; Apr. 2; Sp. p. 778; Gaz. vol. 177; p. 123.
Barton, William W. (See Butler, Washington A., assignor.)
Bartoszewicz, Dominik, St. Joseph, Mich. Current-motor. No. 1,023,494; Apr. 16; Sp. p. 3706; Gaz. vol. 177; p. 656.
Bary, Henry M. B., Philadelphia, Pa. Weighing-scale. No. 1,023,495; Apr. 16; Sp. p. 3709; Gaz. vol. 177; p. 656.
Bary, Henry M. B., Philadelphia, Pa. Weighing-scale. No. 1,023,496; Apr. 16; Sp. p. 3712; Gaz. vol. 177; p. 657.
Baselli, Antonio, assignor to Society of Chemical Industry in Basle, Basel, Switzerland. Alkyl esters of diiodo fatty acids of high molecular weight. No. 1,024,171; Apr. 23; Sp. p. 5171; Gaz. vol. 177; p. 908.
Basshaw, John N., Lake Geneva, Wis. Automobile shaft-coupling. No. 1,022,909; Apr. 9; Sp. p. 2654; Gaz. vol. 177; p. 453.
Bassett, Foster W. (See Hunter and Bassett.)
Bassford, Lowell C., La Grange, Ill. Window-screen. No. 1,023,063; Apr. 9; Sp. p. 2790; Gaz. vol. 177; p. 474.
Bassick, Edgar W., Bridgeport, assignor to The M. B. Schenk Co., Meriden, Conn. Caster. No. 1,022,056; Apr. 2; Sp. p. 650; Gaz. vol. 177; p. 103.
Bassler, Frank B. (See Culver, Edward, assignor.)
Batdorf, Charles S., Brooklyn, N. Y. Moving-picture apparatus. No. 1,023,797; Apr. 23; Sp. p. 4292; Gaz. vol. 177; p. 779.
Bate, William. (See Harrison, Bate, and Perks.)
Bateman Manufacturing Company. (See Willis, Leland, assignor.)
Bates, Albert H., assignor to The American Multigraph Company, Cleveland, Ohio. Printing mechanism. No. 1,021,855; Apr. 2; Sp. p. 231; Gaz. vol. 177; p. 35.
Bates, Benjamin, assignor of one-half to M. Goldring, Belfast, Ireland. Safety device or guard for use in connection with passenger elevators or lifts. No. 1,023,611; Apr. 16; Sp. p. 3951; Gaz. vol. 177; p. 694.
Bates, Hamilton C., Chester, Conn. Nail-buffer. No. 1,023,915; Apr. 23; Sp. p. 4610; Gaz. vol. 177; p. 820.
Bates, Harry H., and F. Adam, Joliet, Ill. Electrolytic process. No. 1,023,545; Apr. 16; Sp. p. 3805; Gaz. vol. 177; p. 671.
Bates, Lillie F. (See Ford, Raymond S., assignor.)
Bates, Madison F., Lansing, Mich. Internal-combustion engine. No. 1,023,546; Apr. 16; Sp. p. 3808; Gaz. vol. 177; p. 672.
Bates, William H., Empire, Canal Zone. Rail clamp or stay. No. 1,024,611; Apr. 30; Sp. p. 6196; Gaz. vol. 177; p. 1094.
Bathrick, Charles E., assignor to F. C. Austin, Chicago, Ill. Excavating-machine. No. 1,023,356; Apr. 16; Sp. p. 3429; Gaz. vol. 177; p. 612.
Battee, Henry S. (See Valentine and Battee.)
Batulis, Josaf, Antrim, Pa. Coal-pick. No. 1,023,400; Apr. 16; Sp. p. 3539; Gaz. vol. 177; p. 630.
Bauer & Black. (See Bauer, Perry S., assignor.)
Bauer, Christian. (See Lucas and Bauer.)
Bauer, Egbert W., Chicago, Ill. Milk or cream bottle receptacle. No. 1,024,548; Apr. 30; Sp. p. 6042; Gaz. vol. 177; p. 1073.
Bauer, John, Akron, Ohio. Water-motor. No. 1,022,813; Apr. 9; Sp. p. 2275; Gaz. vol. 177; p. 389.
Bauer, Perry S., assignor to Bauer & Black, Chicago, Ill. Adhesive-plaster spool. No. 1,023,236; Apr. 16; Sp. p. 3196; Gaz. vol. 177; p. 572.
Baumann, Robert. (See Wurmb and Baumann.)
Bausman, Alonzo L., Chicopee, and D. C. Cottrell, assignors to The National Equipment Company, Springfield, Mass. Packing-table. No. 1,023,103; Apr. 9; Sp. p. 2869; Gaz. vol. 177; p. 488.
Bay State Gas Company. (See Roessler and Armington, assignors.)
Bayer, Joseph, Jr., New York, N. Y. Fastening device. No. 1,023,237; Apr. 16; Sp. p. 3197; Gaz. vol. 177; p. 572.
Baynes, Cyril. (See Hall and Baynes.)
Beach, David S., Bridgeport, Conn. Railway-tie. No. 1,023,798; Apr. 23; Sp. p. 4298; Gaz. vol. 177; p. 780.
Beall, Albert E., and C. F. Skellenger, Clinton, Iowa, assignors to J. C. Smith. Paper-baler. No. 1,023,964; Apr. 23; Sp. p. 4752; Gaz. vol. 177; p. 843.
Beam, Willie C., Rockford, Ill. Pulley-covering. No. 1,024,667; Apr. 30; Sp. p. 6315; Gaz. vol. 177; p. 1113.
Beamer, Frank H., Buffalo, N. Y. Resilient vehicle-wheel. No. 1,023,497; Apr. 16; Sp. p. 3713; Gaz. vol. 177; p. 657.
Beasecker, Clarence H., Sparta, Mich. Folding and convertible go-cart. No. 1,021,964; Apr. 2; Sp. p. 461; Gaz. vol. 177; p. 73.
Beaudett, Alcide E., Albuquerque, N. Mex. Aeroplane. No. 1,023,000; Apr. 9; Sp. p. 2657; Gaz. vol. 177; p. 458.
Beaudry, Zotique, Lynn, Mass., assignor to United-Xpedite Finishing Company, Berwick, Me. Tool for finishing the heels of boots and shoes. No. 1,024,612; Apr. 30; Sp. p. 6199; Gaz. vol. 177; p. 1094.

Beaulieu, Louis E., Sorel, Quebec, Canada. Fish-plate bolt. No. 1,023,985; Apr. 23; Sp. p. 4765; Gaz. vol. 177; p. 844.
Beaver Dam Manufacturing Company. (See Broman, Peter, assignor.)
Bechtold, William S., New York, N. Y. Barrette. No. 1,023,064; Apr. 9; Sp. p. 2792; Gaz. vol. 177; p. 475.
Beck, Arthur. (See Beck, Charles and A.)
Beck Automatic Electrical Safety and Signal Switch Company, The. (See Beck, Charles and A., assignors.)
Beck, Charles and A., assignors to The Beck Automatic Electrical Safety and Signal Switch Company, St. Louis, Mo. Electric signal-switch. No. 1,023,416; Apr. 16; Sp. p. 3540; Gaz. vol. 177; p. 630.
Beck, Harold M., and C. Ambruster, Chicago, Ill. Battery-current-limiting device. No. 1,023,490; Apr. 16; Sp. p. 3696; Gaz. vol. 177; p. 654.
Becke, Max, assignor to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany. Production of peculiar color effects on textile fabrics. No. 1,024,668; Apr. 30; Sp. p. 6315; Gaz. vol. 177; p. 1113.
Becker, Benjamin F., Glencoe, Ill. Suit-case. No. 1,023,238; Apr. 16; Sp. p. 3198; Gaz. vol. 177; p. 572.
Becker, Mathias B., Chicago, Ill. Ornamenting prepared roofing. No. 1,024,549; Apr. 30; Sp. p. 6043; Gaz. vol. 177; p. 1073.
Becker, Mathias B., Chicago, Ill. Prepared roofing. No. 1,024,550; Apr. 30; Sp. p. 6045; Gaz. vol. 177; p. 1073.
Beckwith, Edward P., Schenectady, N. Y., assignor to General Electric Company. Mounting filaments. No. 1,023,357; Apr. 16; Sp. p. 3431; Gaz. vol. 177; p. 613.
Bedard, Lewis A., Boston, Mass. Buffer for automobile-doors. No. 1,022,651; Apr. 9; Sp. p. 1904; Gaz. vol. 177; p. 332.
Beecher, Herbert P., assignor to Lyon Metallic Manufacturing Company, Aurora, Ill. Shelving. No. 1,024,922; Apr. 30; Sp. p. 6360; Gaz. vol. 177; p. 1204.
Beechlyn, John T., Lynn, Mass., assignor to General Electric Company. Arc-lamp hanger. No. 1,022,527; Apr. 9; Sp. p. 1636; Gaz. vol. 177; p. 290.
Beebler, James F., St. Louis, Mo. Box-fastener. No. 1,022,575; Apr. 9; Sp. p. 1735; Gaz. vol. 177; p. 306.
Beebler, James F., St. Louis, Mo. Box-fastener. No. 1,022,576; Apr. 9; Sp. p. 1737; Gaz. vol. 177; p. 306.
Beehler, William, assignor of one-half to B. K. Boyd, Owosso, Mich. Crate. No. 1,022,814; Apr. 9; Sp. p. 2277; Gaz. vol. 177; p. 389.
Beer, Hans, assignor to Metallpapier-Bronzefarben-Blattmetallwerke Aktiengesellschaft, Munich, Germany. Manufacturing leaf metal foils. No. 1,023,713; Apr. 16; Sp. p. 4126; Gaz. vol. 177; p. 724.
Beglinger, Alfon W., Crafton, Pa. Curtain-pole-removing device. No. 1,024,068; Apr. 30; Sp. p. 6035; Gaz. vol. 177; p. 1219.
Behr, Hans C., Johannesburg, Transvaal. Pneumatic percussive apparatus. No. 1,024,660; Apr. 30; Sp. p. 6317; Gaz. vol. 177; p. 1113.
Behrmann, Fredrich, Ridgeville township, Henry county, Ohio. Feed-regulator. No. 1,023,411; Apr. 16; Sp. p. 3543; Gaz. vol. 177; p. 631.
Beinkamp, Frank B., Cincinnati, Ohio, and L. L. Harding, Canon City, Colo., assignors to The Vocalstyle Music Company, Cincinnati, Ohio. Tone-volume indicator. No. 1,022,528; Apr. 9; Sp. p. 1636; Gaz. vol. 177; p. 291.
Beistle, Martin L., Shippensburg, Pa. Child's chair. No. 1,022,767; Apr. 9; Sp. p. 2181; Gaz. vol. 177; p. 374.
Belhommet, Frédéric, Brussels, Belgium. Preserving the yolk of eggs. No. 1,024,056; Apr. 23; Sp. p. 4899; Gaz. vol. 177; p. 868.
Belknap, Thomas M., Omaha, Nebr. Postage stamping and recording apparatus. No. 1,024,380; Apr. 23; Sp. p. 5590; Gaz. vol. 177; p. 980.
Bell, Charles W., assignor to The Electric Storage Battery Company, Philadelphia, Pa. Means for charging storage-battery cells. No. 1,023,496; Apr. 16; Sp. p. 3716; Gaz. vol. 177; p. 657.
Bell, Fred C., Alameda, assignor to Pacific Refrigerating Machine Company, San Francisco, Cal. Accumulator and separator attachment for gas-liquefying apparatus. No. 1,024,433; Apr. 23; Sp. p. 5713; Gaz. vol. 177; p. 995.
Bell, Raley H., New York, N. Y. Collapsible capsule. No. 1,023,400; Apr. 16; Sp. p. 3717; Gaz. vol. 177; p. 658.
Bell, William N., Norfolk, Va. Ship locater and raiser. No. 1,021,818; Apr. 2; Sp. p. 143; Gaz. vol. 177; p. 25.
Bender, Lillian M., Seattle, Wash. Face-mask. No. 1,023,358; Apr. 16; Sp. p. 3433; Gaz. vol. 177; p. 613.
Benhoff, Adam, assignor of one-half to C. F. Smith, Canton, Md. Detachable cue-tip. No. 1,022,172; Apr. 2; Sp. p. 892; Gaz. vol. 177; p. 142.
Benjamin Electric Manufacturing Company. (See Benjamin, Reuben B., assignor.)
Benjamin, Reuben B., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill. Separable attachment-plug. No. 1,022,815; Apr. 9; Sp. p. 2278; Gaz. vol. 177; p. 390.
Benjamin, Reuben B., assignor to Benjamin Electric Manufacturing Company, Chicago, Ill. Lamp-socket. No. 1,023,916; Apr. 23; Sp. p. 4611; Gaz. vol. 177; p. 821.
Benn, Edward H., Weymouth, Mass. Spark-plug holder and spark-indicator. No. 1,024,819; Apr. 30; Sp. p. 6631; Gaz. vol. 177; p. 1167.
Bennetch, Harry C., Cocalico, Pa. Wrench. No. 1,023,091; Apr. 9; Sp. p. 2658; Gaz. vol. 177; p. 453.
Bennett, Albert, Seattle, Wash. Fresh-air sleeping-hood. No. 1,022,459; Apr. 9; Sp. p. 1500; Gaz. vol. 177; p. 268.
Bennett, Charles W., assignor to American Sheet & Tin Plate Company, Pittsburgh, Pa. Machine for bundling scrap. No. 1,023,799; Apr. 23; Sp. p. 4300; Gaz. vol. 177; p. 780.
Bennett, Dwight W., Somerton, Pa. Hot-bed sash. No. 1,024,112; Apr. 23; Sp. p. 5034; Gaz. vol. 177; p. 892.
Bennett, Edward, Pittsburgh, Pa., assignor to Westinghouse Electric & Manufacturing Company. Conducting material and producing the same. No. 1,023,917; Apr. 23; Sp. p. 4613; Gaz. vol. 177; p. 821.
Bennett, Joseph, Dayton, Ohio. Buggy-top support. No. 1,023,800; Apr. 23; Sp. p. 4302; Gaz. vol. 177; p. 781.
Bennett, Lincoln, assignor to A. P. Prouts, Renovo, Pa. Rivet-head drill. No. 1,023,002; Apr. 9; Sp. p. 2659; Gaz. vol. 177; p. 454.
Bennett, Robert J., Moline, Ill. Automatic playing attachment for musical instruments. No. 1,024,494; Apr. 30; Sp. p. 5885; Gaz. vol. 177; p. 1053.
Bennett, Walter J., Michigan City, Ind. Pedestal-support for railway-car seats. No. 1,023,294; Apr. 16; Sp. p. 3313; Gaz. vol. 177; p. 592.
Bensinger, Carl, Mannheim, Germany. Manufacture of galvanic metal reproductions of articles of the plastic arts. No. 1,023,612; Apr. 16; Sp. p. 3953; Gaz. vol. 177; p. 694.
Benton, Josiah S., assignor to The Ideal Epworth Acetylene Company, Johnstown, Pa. Electric gas lighting and extinguishing apparatus. No. 1,025,047; Apr. 30; Sp. p. 7083; Gaz. vol. 177; p. 1245.
Berg, Alfred D., Minneapolis, Minn. Sash-cord-pulley and shade-holder. No. 1,025,107; Apr. 30; Sp. p. 7218; Gaz. vol. 177; p. 1264.
Berg, Peter, Enderlin, N. D. Hat packing-ring. No. 1,024,243; Apr. 23; Sp. p. 5340; Gaz. vol. 177; p. 936.
Berger, Fritz, Berlin, Germany. Folding stereoscope. No. 1,024,613; Apr. 30; Sp. p. 6202; Gaz. vol. 177; p. 1094.
Bergsten, Oscar J. F., assignor of one-half to N. Bjork, Worcester, Mass. Drill-chuck. No. 1,024,172; Apr. 23; Sp. p. 5172; Gaz. vol. 177; p. 908.
Berlien, John, St. Louis, Mo. Rail-joint. No. 1,022,460; Apr. 9; Sp. p. 1500; Gaz. vol. 177; p. 268.
Bernheim, Morris U. (See Alvey and Bernheim.)
Berry, George A., Ely, Nev. Distributer. No. 1,022,577; Apr. 9; Sp. p. 1788; Gaz. vol. 177; p. 306.
Berryman, Craton, Reno, Nev. Logging-railway truck. No. 1,022,895; Apr. 2; Sp. p. 1320; Gaz. vol. 177; p. 216.
Berthoff, Psalm G., Goshen, N. Y. Air-heating attachment for stoves. No. 1,023,193; Apr. 16; Sp. p. 3118; Gaz. vol. 177; p. 558.
Bertrand, Frederic E., Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Sole-channeling machine. No. 1,023,801; Apr. 23; Sp. p. 4304; Gaz. vol. 177; p. 781.
Berven, Knute, Portland, Oreg. Shade and curtain fixture. No. 1,024,745; Apr. 30; Sp. p. 6417; Gaz. vol. 177; p. 1130.
Best, Otto. (See Kassander and Best.)
Beth, Otto, Lynbrook, N. Y. Biplane kite. No. 1,022,293; Apr. 2; Sp. p. 1124; Gaz. vol. 177; p. 181.
Bettis, William L., Houston, Tex., assignor of one-half to J. G. Gray, Vinton, La. Sampling device for Artesian wells. No. 1,023,918; Apr. 23; Sp. p. 4615; Gaz. vol. 177; p. 821.
Betts, Benjaman E., St. Louis, Mo., assignor to Positive Rail Anchor Company, Louisville, Ky. Combined tie-plate and anchor for railway-rails. No. 1,024,114; Apr. 23; Sp. p. 5035; Gaz. vol. 177; p. 889.
Betts, Benjaman F., Goldroad, Ariz. Drill-extractor. No. 1,024,173; Apr. 23; Sp. p. 5175; Gaz. vol. 177; p. 909.
Betz, William G., Steger, assignor to Steger & Sons Piano Manufacturing Company, Chicago, Ill. Pneumatic piano. No. 1,023,613; Apr. 16; Sp. p. 3954; Gaz. vol. 177; p. 694.
Betz, William G., Chicago Heights, assignor to Steger & Sons Piano Manufacturing Company, Chicago, Ill. Tracking device for pneumatic pianos. No. 1,024,174; Apr. 23; Sp. p. 5177; Gaz. vol. 177; p. 909.
Beust, Anton von. (See Lengerke and Beust.)
Beyette, William H., Houston, Tex. Attachment for display-figures. No. 1,024,244; Apr. 23; Sp. p. 5341; Gaz. vol. 177; p. 936.
Bibb, George H., Silverton, Colo. Portable rock-drill. No. 1,022,578; Apr. 9; Sp. p. 1739; Gaz. vol. 177; p. 307.
Bickel, August H., Bridgeport, Conn. Sad-iron. No. 1,024,306; Apr. 23; Sp. p. 5454; Gaz. vol. 177; p. 956.
Bickerton, Fred. (See Bowen, Charles A., assignor.)
Bickford & Sweet. (See Levy, Charles, assignor.)
Bickford, William H., Washington, Iowa. Gravity carrier system. No. 1,022,017; Apr. 2; Sp. p. 569; Gaz. vol. 177; p. 89.
Bidwell, Frank E. (See Fletcher, Morris D., assignor.)
Biebes, William H. (See King, Jesse C., assignor.)
Bieracki, John W., New Haven, Conn. Guard for hat-pins. No. 1,022,120; Apr. 2; Sp. p. 779; Gaz. vol. 177; p. 124.
Bierschenk, Joseph, Ivry Port, France. Ball-bearing. No. 1,023,614; Apr. 16; Sp. p. 3956; Gaz. vol. 177; p. 695.

Biggar, Leroy A., assignor to Oneida Steel Pulley Company, Oneida, N. Y. Pulley. No. 1,025,108; Apr. 30; Sp. p. 7219; Gaz. vol. 177; p. 1264.

Bignell, Edward, Lincoln, Nebr. Piling construction. No. 1,024,820; Apr. 30; Sp. p. 6633; Gaz. vol. 177; p. 1167.

Bignell, Edward, Lincoln, Nebr. Caisson construction. No. 1,024,821; Apr. 30; Sp. p. 6636; Gaz. vol. 177; p. 1168.

Bignell, Edward, Lincoln, Nebr. Sheet-piling. No. 1,024,822; Apr. 30; Sp. p. 6639; Gaz. vol. 177; p. 1168.

Bignell, Edward, Lincoln, Nebr. Self-sinking caisson. No. 1,024,823; Apr. 30; Sp. p. 6641; Gaz. vol. 177; p. 1169.

Billings, Walter H., Newton, assignor to Milton Chemical Company, Cambridge, Mass. Mop-holder. No. 1,022,816; Apr. 9; Sp. p. 2282; Gaz. vol. 177; p. 390.

Billman, Gustus S., Shelbyville, Ind. Machine for cleaning intestines. No. 1,023,547; Apr. 16; Sp. p. 3809; Gaz. vol. 177; p. 672.

Bingham, Herbert B., Nashua, N. H. Eyeglass-reel. No. 1,024,115; Apr. 23; Sp. p. 5038; Gaz. vol. 177; p. 890.

Binkley, John T., Chicago, Ill. Locking device for traveling-cases, sample-cases, &c. No. 1,022,817; Apr. 9; Sp. p. 2283; Gaz. vol. 177; p. 390.

Bird, Charles S. (See Wyman, George R., assignor.)

Bird, Charles S., East Walpole, Mass. Reinforcing paper boxes. No. 1,022,923; Apr. 9; Sp. p. 2500; Gaz. vol. 177; p. 426.

Birnbaum, Theodore, London, England, assignor to Victor Talking Machine Company. Automatic brake for talking-machines. No. 1,021,756; Apr. 2; Sp. p. 1; Gaz. vol. 177; p. 3.

Birrell, James and W., Seattle, Wash., assignors, by mesne assignments, to Water Vacuum Cleaner Co. Inc. Induced suction for vacuum-cleaners. No. 1,023,359; Apr. 16; Sp. p. 3434; Gaz. vol. 177; p. 613.

Birrell, William. (See Birrell, James and W.)

Bishop, Frederick E., North Attleboro, Mass. Eyeglass-holder. No. 1,024,434; Apr. 23; Sp. p. 5714; Gaz. vol. 177; p. 995.

Bissell, Joseph, Birmingham, England. Grinding pen-nibs. No. 1,024,435; Apr. 23; Sp. p. 5715; Gaz. vol. 177; p. 995.

Bjork, Nils. (See Bergsten, Oscar J. F., assignor.)

Bjorkland, Gustave, Bayonne, N. J. Pneumatic action for player-pianos and similar musical instruments. No. 1,023,986; Apr. 23; Sp. p. 4756; Gaz. vol. 177; p. 844.

Black, Allen G., Springfield, Mass. Gas-controlling apparatus for automobiles. No. 1,023,003; Apr. 9; Sp. p. 2661; Gaz. vol. 177; p. 454.

Black, Allen G., Springfield, Mass. Gas controlling and lighting apparatus for automobiles. No. 1,023,004; Apr. 9; Sp. p. 2662; Gaz. vol. 177; p. 454.

Black, Elery E., Detroit, Mich. Pneumatic tire for vehicle-wheels. No. 1,023,454; Apr. 16; Sp. p. 3626; Gaz. vol. 177; p. 643.

Black Rock Machine Company, The. (See Noyes, Henry F., assignor.)

Blackham, Charles C., Bridgeport, Conn. Telephone. No. 1,022,350; Apr. 2; Sp. p. 1247; Gaz. vol. 177; p. 200.

Blackmore, William, assignor to The National Malleable Castings Company, Cleveland, Ohio. Coupling and yoke. No. 1,022,652; Apr. 9; Sp. p. 1905; Gaz. vol. 177; p. 332.

Blaisdell, Philo C., New York, N. Y. Coal-pocket. No. 1,021,757; Apr. 2; Sp. p. 5; Gaz. vol. 177; p. 3.

Blakeslee, George S. (See Nolan and Pierce, assignors.)

Blakeslee, Oscar S., Lansing, Mich. Cloth-measuring machine. No. 1,024,764; Apr. 30; Sp. p. 6518; Gaz. vol. 177; p. 1148.

Blaney, William, assignor of one-half to B. G. Melvin, Marblehead, Mass. Billiard-cue. No. 1,022,173; Apr. 2; Sp. p. 893; Gaz. vol. 177; p. 142.

Blank, August, Leverkusen, near Cologne, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Azo dye. No. 1,023,120; Apr. 16; Sp. p. 2931; Gaz. vol. 177; p. 532.

Blankfort, Herbert. (See Wolf, Lesser, assignor.)

Blattle, Herman L., assignor of two-thirds to P. Newman, Providence, R. I. Sad-iron shoe. No. 1,023,802; Apr. 23; Sp. p. 4315; Gaz. vol. 177; p. 781.

Bleeck, Wilhelm A. F., Brisbane, Queensland, Australia. Primary battery. No. 1,021,859; Apr. 2; Sp. p. 235; Gaz. vol. 177; p. 38.

Bleoo, John H. (See May and Bleoo.)

Bliss, Elmer J., Edgartown, Mass. Order-guide. No. 1,024,716; Apr. 30; Sp. p. 6418; Gaz. vol. 177; p. 1130.

Bliss, William L., Brooklyn, N. Y. Incandescent electric lighting. No. 1,022,057; Apr. 2; Sp. p. 651; Gaz. vol. 177; p. 103.

Bliss, William L., Brooklyn, N. Y. Electrical apparatus. No. 1,022,058; Apr. 2; Sp. p. 652; Gaz. vol. 177; p. 104.

Block, Emanuel. (See Strale, Allan N. H., assignor.)

Blodgett, Samuel, Oakdale, Cal. Tug and shaft attachment. No. 1,022,529; Apr. 9; Sp. p. 1637; Gaz. vol. 177; p. 291.

Bloomingdale, Harry, *et al.* (See Ehinger, Frank, assignor.)

Blount, Albert H., Detroit, Mich. Flying-machine. No. 1,024,670; Apr. 30; Sp. p. 6320; Gaz. vol. 177; p. 1114.

Boccardo, Giovanni, Genoa, Italy. Apparatus for measuring the velocity and direction of the marine undercurrents. No. 1,022,385; Apr. 2; Sp. p. 1312; Gaz. vol. 177; p. 213.

Bock, Alfred C. O., assignor to Donnellan-Bock Manufacturing Company, Brooklyn, N. Y. Coin counting and wrapping machine. No. 1,024,057; Apr. 23; Sp. p. 4599; Gaz. vol. 177; p. 868.

Bock, Charles de, Leie, Belgium. Sucking-bottle. No. 1,023,805; Apr. 23; Sp. p. 4317; Gaz. vol. 177; p. 782.

Boden, Clarence S., San Francisco, Cal. Hammer. No. 1,024,390; Apr. 23; Sp. p. 5593; Gaz. vol. 177; p. 981.

Boeckel, Robert C., York, Pa. Candy-holding tray. No. 1,023,714; Apr. 16; Sp. p. 4127; Gaz. vol. 177; p. 724.

Bogdánffy, Alexander, New York, assignor to International Cork Company, Brooklyn, N. Y. Automatic feeder for the metallic caps of crown corks. No. 1,022,818; Apr. 9; Sp. p. 2287; Gaz. vol. 177; p. 391.

Bogen, Louis E., Milwaukee, Wis., assignor to Allis-Chalmers Company. System of electrical distribution. No. 1,023,500; Apr. 16; Sp. p. 3718; Gaz. vol. 177; p. 658.

Bohaček, Paul, assignor to Moenus Machine Works, Frankfort-on-the-Main, Germany. Pulling-over and toe-lasting machine for use in the manufacture of boots and shoes. No. 1,023,104; Apr. 16; Sp. p. 3120; Gaz. vol. 177; p. 558.

Bohland, Carl P., Seattle, Wash. Pile-driving head. No. 1,023,615; Apr. 16; Sp. p. 3958; Gaz. vol. 177; p. 695.

Boby, Alfred, Hockley, Iowa. Pick-handle. No. 1,022,024; Apr. 9; Sp. p. 2502; Gaz. vol. 177; p. 427.

Boldiss, Mike, Sterling, Ill. Cuspidor. No. 1,023,616; Apr. 16; Sp. p. 3959; Gaz. vol. 177; p. 695.

Boles, Robert, Eldersville, Pa. Nut-lock. No. 1,024,307; Apr. 23; Sp. p. 5455; Gaz. vol. 177; p. 956.

Bölken Eisenbeton-Hohldecken-Patente "System Wrissenberg Gebrüder." (See Wrissenberg, Julius H. A., assignor.)

Bolton, Arthur T., New York, N. Y. Product-number indicator. No. 1,021,065; Apr. 2; Sp. p. 463; Gaz. vol. 177; p. 74.

Boltshauser, Heinrich, assignor to Aktiengesellschaft der Maschinenfabriken Escher Wyss & Cie., Zurich, Switzerland. Nozzle of axial-flow turbines. No. 1,024,391; Apr. 23; Sp. p. 5595; Gaz. vol. 177; p. 981.

Boman, Claes W., New York, assignor to C. J. Tagliabue, Brooklyn, N. Y. Clinical-thermometer casing. No. 1,024,824; Apr. 30; Sp. p. 6624; Gaz. vol. 177; p. 1169.

Boness, John, Ozone Park, N. Y. Hinge. No. 1,022,174; Apr. 2; Sp. p. 894; Gaz. vol. 177; p. 142.

Bonine, Charles E., Philadelphia, Pa. Electric-lighting system. No. 1,023,121; Apr. 16; Sp. p. 2932; Gaz. vol. 177; p. 532.

Bonine, Charles E., Philadelphia, Pa. Electric lighting and engine-starting system. No. 1,023,122; Apr. 16; Sp. p. 2938; Gaz. vol. 177; p. 532.

Boniventure, Robert A., New York, N. Y. Telephone. No. 1,022,175; Apr. 2; Sp. p. 896; Gaz. vol. 177; p. 143.

Booraem, John V. V. (See Jacquart and Booraem.)

Booth, Edgar and N. R., Halifax, England. Electric-lighting system. No. 1,024,495; Apr. 30; Sp. p. 5889; Gaz. vol. 177; p. 1053.

Booth, Norman R. (See Booth, Edgar and N. R.)

Boothby, William T., assignor of one-half to G. B. H. Sandford, Marietta, Ohio. Attachment for woodworking-machines. No. 1,022,176; Apr. 2; Sp. p. 898; Gaz. vol. 177; p. 143.

Borbeck, Martin O., Tracy, Minn. Fountain-pen. No. 1,024,245; Apr. 23; Sp. p. 5343; Gaz. vol. 177; p. 936.

Borchert, Fred M., Chicago, Ill. Food composition. No. 1,023,910; Apr. 23; Sp. p. 4617; Gaz. vol. 177; p. 821.

Borden's Condensed Milk Company. (See Chewning, Stapleton S., assignor.)

Bordges, William R., Salinas, Cal. Levee-machine. No. 1,022,768; Apr. 9; Sp. p. 2184; Gaz. vol. 177; p. 374.

Borkman, Carl O., Victor, Colo. Drill forging and sharpening machine. No. 1,022,925; Apr. 9; Sp. p. 2503; Gaz. vol. 177; p. 427.

Borron, Earl, New Boston, Mo. Penholder. No. 1,022,294; Apr. 2; Sp. p. 1134; Gaz. vol. 177; p. 181.

Bosch, Carl, and A. Mittasch, assignors to Badische Anilin & Soda Fabrik, Ludwigshafen-on-the-Rhine, Germany. Producing cyanide and cyanamids. No. 1,022,351; Apr. 2; Sp. p. 1248; Gaz. vol. 177; p. 200.

Bosch, Firm of Robert. (See Honold, Gottlob, assignor.)

Bosch, Firm of Robert. (See Zähringer, Arnold, assignor.)

Bosel, Albert C., Crosby, Minn. Metallic railway-tie and means for securing a rail to the same. No. 1,023,987; Apr. 23; Sp. p. 4758; Gaz. vol. 177; p. 844.

Bosenius, Hugo, Bochum, Germany. Ball-jointed cleaning device for gas-receivers. No. 1,023,239; Apr. 16; Sp. p. 3200; Gaz. vol. 177; p. 572.

Bösinger, Engelbert, Dresden, Germany. Manufacture of glass sign-boards. No. 1,024,551; Apr. 30; Sp. p. 6046; Gaz. vol. 177; p. 1074.

Bossé, Adolph E., Pittsburgh, Pa., assignor to Acme Refrigerating Company. Check or safety valve. No. 1,021,758; Apr. 2; Sp. p. 7; Gaz. vol. 177; p. 4.

Bostwick, John R., Clifton Springs, N. Y. Sanitary milk-can. No. 1,022,819; Apr. 9; Sp. p. 2289; Gaz. vol. 177; p. 391.

Boswell, Francis G., Washington, D. C. Electro post-marking-machine. No. 1,024,552; Apr. 30; Sp. p. 6047; Gaz. vol. 177; p. 1074.

Boswell, George G. F., assignor of one-half to J. L. Peetz, Indianapolis, Ind. Starter for internal-combustion engines. No. 1,022,820; Apr. 9; Sp. p. 2291; Gaz. vol. 177; p. 391.

Both, Tonjes A. C., assignor to I. S. Rosenheim, New York, N. Y. Socket-shell. No. 1,024,671; Apr. 30; Sp. p. 6324; Gaz. vol. 177; p. 1114.

Bottesse, Shearman, Washington, D. C. Truck. No. 1,023,417; Apr. 16; Sp. p. 3960; Gaz. vol. 177; p. 696.

Bottle, Edward K., assignor to The Carter-Crume Company, Limited, Niagara Falls, N. Y. Manifolding sales-book. No. 1,024,496; Apr. 30; Sp. p. 5891; Gaz. vol. 177; p. 1053.

Boucher, Philias J., assignor to Standard Optical Company, Geneva, N. Y. Spectacle-frame. No. 1,022,653; Apr. 9; Sp. p. 1907; Gaz. vol. 177; p. 333.

Bould, Isam W., Pittsburgh, Pa. Driving and steering mechanism for power-operated vehicles. No. 1,023,804; Apr. 23; Sp. p. 4317; Gaz. vol. 177; p. 782.

Boulter, Arthur H. (See Steele, Boulter, and Hargreaves.)

Bourlon, Jules F., Everett, Mass. Rotary internal-combustion engine. No. 1,023,195; Apr. 16; Sp. p. 3123; Gaz. vol. 177; p. 558.

Bowen, Charles A., Riverview, assignor of one-half to F. Bickerton, Elrama, Pa. Electric trap. No. 1,024,969; Apr. 30; Sp. p. 6036; Gaz. vol. 177; p. 1219.

Bowen, Eugene F. (See Allen, Fred R., assignor.)

Bowen, George W., Auburn, N. Y. Lubricant-cup. No. 1,024,672; Apr. 30; Sp. p. 6327; Gaz. vol. 177; p. 1115.

Bowen, George W., Auburn, N. Y. Grease-cup. No. 1,024,673; Apr. 30; Sp. p. 6328; Gaz. vol. 177; p. 1115.

Bowen, William D., Fulton, Miss. Churn. No. 1,021,966; Apr. 2; Sp. p. 465; Gaz. vol. 177; p. 74.

Bower, George G., Bainbridge, Ga. Propeller. No. 1,023,501; Apr. 16; Sp. p. 3719; Gaz. vol. 177; p. 658.

Bowes, Robert H., *et al.* (See Power, Michael, assignor.)

Bowie, William, Mansfield, Ohio. Poultry drinking-fountain. No. 1,023,240; Apr. 16; Sp. p. 3201; Gaz. vol. 177; p. 573.

Bowman, Gustaf R., Rockford, Ill. Trousers-hanger. No. 1,022,295; Apr. 2; Sp. p. 1136; Gaz. vol. 177; p. 181.

Bowne, Emma R. (See Murray, Archibald B., assignor.)

Bowron, John, Roanoke, Va. Vehicle-support. No. 1,023,618; Apr. 16; Sp. p. 3963; Gaz. vol. 177; p. 696.

Boyd, Bertron K. (See Beehler, William, assignor.)

Boyd, David C., administrator. (See Boyd, William S.)

Boyd, William S., deceased, Los Angeles, Cal.; D. C. Boyd, administrator. Tractor. No. 1,021,911; Apr. 2; Sp. p. 334; Gaz. vol. 177; p. 56.

Boye, James H., assignor to J. L. Flannery, Chicago, Ill. Faucet. No. 1,024,175; Apr. 23; Sp. p. 5177; Gaz. vol. 177; p. 909.

Boyens, William, Brooklyn, N. Y. Go-cart. No. 1,024,176; Apr. 23; Sp. p. 5179; Gaz. vol. 177; p. 910.

Boyer, William M., Johnstown, Pa. Trolley-wheel. No. 1,024,070; Apr. 30; Sp. p. 6037; Gaz. vol. 177; p. 1219.

Boyland, Clarence J., Indianapolis, Ind. Insulator-pin. No. 1,022,121; Apr. 2; Sp. p. 780; Gaz. vol. 177; p. 134.

Boyle, James C., Calgary, Alberta, Canada. System and apparatus for starting internal-combustion engines. No. 1,022,926; Apr. 9; Sp. p. 2506; Gaz. vol. 177; p. 427.

Boyrie, Harry E. (See Tracy and Boyrie.)

Bradley, Philo R., assignor of one-half to G. Winkler, West New York, N. J. Pipe or hose coupling. No. 1,022,027; Apr. 9; Sp. p. 2510; Gaz. vol. 177; p. 428.

Bradley, William H., Philadelphia, Pa. Advertising apparatus. No. 1,024,177; Apr. 23; Sp. p. 5182; Gaz. vol. 177; p. 910.

Bradshaw, George B., Brooklyn, N. Y. Treating paloamarillo and similar gums. No. 1,024,178; Apr. 23; Sp. p. 5185; Gaz. vol. 177; p. 911.

Bradshaw, William T., Berkeley, Cal. Illuminating-sign. No. 1,022,928; Apr. 9; Sp. p. 2511; Gaz. vol. 177; p. 428.

Brady, Harry V., assignor to Robb Engineering Company, Ltd., South Framingham, Mass. Steam-boiler. No. 1,024,058; Apr. 23; Sp. p. 4006; Gaz. vol. 177; p. 869.

Braeckel Concentrator Company, The. (See Dunham, Orson W., assignor.)

Brague, Everett W., Clarington, Ohio. Barrel-tap. No. 1,024,971; Apr. 30; Sp. p. 6039; Gaz. vol. 177; p. 1220.

Bramad, Oliver A. (See Fulcher, Clark A., assignor.)

Bramschreiber, Ernst H. (See Haaths, Ernest, assignor.)

Brandell, Claus O., assignor to Ideal Concrete Machinery Company, South Bend, Ind. Core-actuator. No. 1,023,920; Apr. 23; Sp. p. 4617; Gaz. vol. 177; p. 822.

Brandenburg, William A., New York, N. Y. Truck. No. 1,024,614; Apr. 30; Sp. p. 6203; Gaz. vol. 177; p. 1094.

Branyan, Jasper N., Blue Springs, Miss. Match-box. No. 1,024,392; Apr. 23; Sp. p. 5597; Gaz. vol. 177; p. 982.

Bratt, Charles E., London, England. Manufacture of cask-staves. No. 1,025,048; Apr. 30; Sp. p. 7085; Gaz. vol. 177; p. 1245.

Brauer, August, Independence, Mo. Rotary engine. No. 1,023,360; Apr. 16; Sp. p. 3484; Gaz. vol. 177; p. 613.

Braun, Jacob G., Chicago, Ill. Hinge. No. 1,021,012; Apr. 2; Sp. p. 337; Gaz. vol. 177; p. 56.

Bray, William E., Pryor Creek, Okla. Garment. No. 1,022,461; Apr. 9; Sp. p. 1501; Gaz. vol. 177; p. 269.

Brayshaw, Edmund R., Manchester, England. Gas-burner. No. 1,024,393; Apr. 23; Sp. p. 5598; Gaz. vol. 177; p. 982.

Brazelle, Benjamin, Kirkwood, assignor to Brazelle Motor Company, St. Louis, Mo. Internal-combustion motor. No. 1,022,177; Apr. 2; Sp. p. 900; Gaz. vol. 177; p. 144.

Brazelle, Benjamin, Kirkwood, assignor to Brazelle Motor Company, St. Louis, Mo. Internal-combustion motor. No. 1,022,178; Apr. 2; Sp. p. 903; Gaz. vol. 177; p. 144.

Brazelle Motor Company. (See Brazelle, Benjamin, assignor.)

Breisacher, Leo, *et al.* (See Jennings, Jarvis S., Jr., assignor.)

Breisford, William E., Triumph, Ill. Wagon-body. No. 1,022,296; Apr. 2; Sp. p. 1137; Gaz. vol. 177; p. 182.

Brendel, Paul A. (See Poole and Brendel.)

Brennan, Thomas, Jr., assignor to The Monitor Drill Company, Minneapolis, Minn. Scraper for furrow-openers. No. 1,022,352; Apr. 2; Sp. p. 1250; Gaz. vol. 177; p. 201.

Bresler, Harry, Charlottenburg, Germany, assignor, by mesne assignments, to General Electric Company. Manufacture of metallic filaments for incandescent electric lamps. No. 1,023,295; Apr. 16; Sp. p. 3315; Gaz. vol. 177; p. 593.

Bresler, Harry W., Charlottenburg, Germany, assignor, by mesne assignments, to General Electric Company. Drying cement clamps for filaments of electric lamps. No. 1,024,023; Apr. 30; Sp. p. 6852; Gaz. vol. 177; p. 1204.

Brettelle, Ambrose K., Chicago, Ill. Carpet-sweeper attachment. No. 1,022,050; Apr. 2; Sp. p. 654; Gaz. vol. 177; p. 104.

Brewster, George A., New York, N. Y. Burglar-alarm attachment. No. 1,024,972; Apr. 30; Sp. p. 6040; Gaz. vol. 177; p. 1220.

Briand, Charles C., Revere, Mass., assignor to Peter Gray & Sons, Lantern or lamp. No. 1,022,821; Apr. 9; Sp. p. 2293; Gaz. vol. 177; p. 392.

Bridenbaugh, Elmer H., Dayton, Ohio. Automatic pump-regulator. No. 1,024,179; Apr. 23; Sp. p. 5187; Gaz. vol. 177; p. 911.

Bridgeport Brass Company. (See Stapley, William S., assignor.)

Bridger, Herbert K. (See Hurst and Bridger.)

Bridges, William W., Marine City, Mich. Lock for fluid-feed pipes. No. 1,024,180; Apr. 23; Sp. p. 5189; Gaz. vol. 177; p. 911.

Bridgwater, Herbert E., assignor, by mesne assignments, to Secor Typewriter Company, Derby, Conn. Typewriting machine. No. 1,023,805; Apr. 23; Sp. p. 4320; Gaz. vol. 177; p. 783.

Bridgwater, Herbert E., assignor to Secor Typewriter Company, Derby, Conn. Detachable type-bar for writing-machines. No. 1,023,806; Apr. 23; Sp. p. 4326; Gaz. vol. 177; p. 783.

Briggs, Charles L., Attleboro, Mass. Machine for cutting hand-holes. No. 1,023,619; Apr. 16; Sp. p. 3966; Gaz. vol. 177; p. 697.

Briggs, Daniel, New York, assignor to Wyckoff, Seamans & Benedict, Ilion, N. Y. Type-writing machine. No. 1,023,361; Apr. 16; Sp. p. 3436; Gaz. vol. 177; p. 614.

Briggs-Detroiter Company. (See Lee, William S., assignor.)

Briggs, Francis W., Hendrum, Minn. Pocket-case. No. 1,024,674; Apr. 30; Sp. p. 6330; Gaz. vol. 177; p. 1116.

Briggs, George E., *et al.* (See Mayo, William C., assignor.)

Briggs, Irving L., Newport, Del. Mechanical charging mechanism for smelting furnaces and the like. No. 1,022,654; Apr. 9; Sp. p. 1908; Gaz. vol. 177; p. 333.

Brihaye, Médéric, Glageon, France. Boot or shoe. No. 1,021,810; Apr. 2; Sp. p. 149; Gaz. vol. 177; p. 26.

Brill, Max. (See Morgenstern and Brill.)

Brine, John J., Lowell, Mass. Assorting and sizing machine. No. 1,022,655; Apr. 9; Sp. p. 1911; Gaz. vol. 177; p. 333.

Brink, Carl A., Bay Spring, R. I. Indicator and stop device. No. 1,021,820; Apr. 2; Sp. p. 151; Gaz. vol. 177; p. 26.

Brink, Parley K., Liverpool, Pa. Bundle-tying device. No. 1,022,482; Apr. 9; Sp. p. 1503; Gaz. vol. 177; p. 269.

Brinkman, Louis H., Glen Ridge, assignor to American Oil & Supply Company, Newark, N. J. Grinding and buffing wheel. No. 1,023,807; Apr. 23; Sp. p. 4328; Gaz. vol. 177; p. 783.

Brintnall, Thomas M., Oakland, assignor of one-half to W. D. Hammond, Los Angeles, Cal. Sidewalk-trap. No. 1,024,059; Apr. 23; Sp. p. 4007; Gaz. vol. 177; p. 869.

Bristol, Harold B., Maplewood, Mo. Leaf-carrier for loose-leaf binders. No. 1,023,715; Apr. 16; Sp. p. 4128; Gaz. vol. 177; p. 724.

Brittain, Monroe. (See Darst and Brittain.)

Britten, William M., assignor of one-half to C. Harshman, Los Angeles, Cal. Rotary oil-burner. No. 1,022,122; Apr. 2; Sp. p. 782; Gaz. vol. 177; p. 124.

Brock, Matthias, Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Lasting-machine. No. 1,021,860; Apr. 2; Sp. p. 235; Gaz. vol. 177; p. 38.

Brodton, Edward R., assignor of one-half to J. A. Garland, Boston, Mass., and one-fourth to R. M. Stephens, Hackettstown, N. J. Automobile starting device. No. 1,024,394; Apr. 23; Sp. p. 5599; Gaz. vol. 177; p. 982.

Brody, Leon, New York, N. Y. Safety-pin. No. 1,024,717; Apr. 30; Sp. p. 6420; Gaz. vol. 177; p. 1131.

Brogden, David C., Paragould, Ark. Wire-clamp for wire-stretching machines. No. 1,024,825; Apr. 30; Sp. p. 6647; Gaz. vol. 177; p. 1170.

Broman, Peter, assignor to Beaver Dam Manufacturing Company, Beaver Dam, Wis. Grain-drill. No. 1,022,530; Apr. 9; Sp. p. 1639; Gaz. vol. 177; p. 291.

Bronnert, Emile, Niedermorschweiler, assignor to Vereinigte Glanzstoff-Fabriken A. G., Elberfeld, Germany. Recovering ammonia in the cuprammonium cellulose precipitation. No. 1,023,548; Apr. 16; Sp. p. 3811; Gaz. vol. 177; p. 672.

Brookes, Fred M., Fayetteville, Ark. Winding and measuring machine. No. 1,024,246; Apr. 23; Sp. p. 5344; Gaz. vol. 177; p. 936.

Brothers, Eli, Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Last. No. 1,021,821; Apr. 2; Sp. p. 157; Gaz. vol. 177; p. 26.

Brough, Rupert L., Middlebury, Vt. Flying-machine. No. 1,022,018; Apr. 2; Sp. p. 572; Gaz. vol. 177; p. 90.

Broussouse, Fernand, Liége, Belgium. Screw-propeller. No. 1,021,822; Apr. 2; Sp. p. 158; Gaz. vol. 177; p. 26.

Brown, Alexander P., Syracuse, N. Y. Type-writing machine. No. 1,023,808; Apr. 23; Sp. p. 4330; Gaz. vol. 177; p. 784.

Brown, Charles H., New York, N. Y., assignor of one-third to E. D. Ferguson and one-third to E. W. Ferguson, Bayonne, N. J. Curling-iron protector. No. 1,023,716; Apr. 16; Sp. p. 4131; Gaz. vol. 177; p. 725.

Brown, Edward W., Forest Gate, England. Contrivance for intermittently displaying sheets. No. 1,022,179; Apr. 2; Sp. p. 906; Gaz. vol. 177; p. 144.

Brown, George H., Jefferson, Tex. Wood-sawing machine. No. 1,023,296; Apr. 16; Sp. p. 3315; Gaz. vol. 177; p. 593.

Brown, Harold P., Montclair, N. J. Magnetic rail-bonding clamp. No. 1,023,921; Apr. 23; Sp. p. 4619; Gaz. vol. 177; p. 822.

Brown, Harry M., Brooklyn, N. Y., assignor to R. A. Canfield, Providence, R. I. Stopper. No. 1,022,060; Apr. 2; Sp. p. 656; Gaz. vol. 177; p. 104.

Brown Hoisting Machinery Company, The. (See Dowd, John P., assignor.)

Brown Hoisting Machinery Company, The. (See Monroe, Will K., assignor.)

Brown, James A., assignor of one-half to Iowa Windmill & Pump Co., Cedar Rapids, Iowa. Mechanism for transmitting power for pumping purposes. No. 1,025,049; Apr. 30; Sp. p. 7086; Gaz. vol. 177; p. 1245.

Brown, James T., Detroit, Mich. Boiler. No. 1,021,759; Apr. 2; Sp. p. 8; Gaz. vol. 177; p. 4.

Brown, John W. Jr., assignor to The Enterprise Manufacturing Company of Pennsylvania, Philadelphia, Pa. Sprue-raising mechanism for molding-machines. No. 1,022,297; Apr. 2; Sp. p. 1139; Gaz. vol. 177; p. 182.

Brown, Lillie M. (See Brown, Luther P., assignor.)

Brown, Luther P., Ramsey, N. J., assignor to L. M. Brown. Machine for making dilers. No. 1,023,989; Apr. 23; Sp. p. 4761; Gaz. vol. 177; p. 844.

Brown, Ralph H., Worcester, Mass. Socket-joint. No. 1,024,615; Apr. 30; Sp. p. 6204; Gaz. vol. 177; p. 1095.

Brown, Samuel G., Lynn, Mass. Drain-trap. No. 1,021,823; Apr. 2; Sp. p. 159; Gaz. vol. 177; p. 26.

Brown, Stewart, Chicago, Ill. Wind-shield frame. No. 1,022,719; Apr. 9; Sp. p. 2082; Gaz. vol. 177; p. 358.

Browne, John E., Brookline, and H. H. Colson, Everett, Mass. Automobile lamp-bracket. No. 1,022,463; Apr. 9; Sp. p. 1504; Gaz. vol. 177; p. 269.

Browning, John B., assignor to Victor Talking Machine Company, Camden, N. J. Talking-machine. No. 1,022,180; Apr. 2; Sp. p. 907; Gaz. vol. 177; p. 145.

Bruck, Firm of Friedr. C. vom. (See Bruck, Friedrich C. vom, assignor.)

Bruck, Friedrich C. vom, Dusseldorf, assignor to Firm of F. C. vom Bruck, Velbert, Germany. Bolt for doors and windows. No. 1,023,455; Apr. 16; Sp. p. 3627; Gaz. vol. 177; p. 643.

Bruckner, Rudolph E., New York, N. Y., and C. A. McCune, Jersey City, N. J., assignors to The Commercial Acetylene Company, New York, N. Y. Incandescent-mantle holder and guard. No. 1,021,967; Apr. 2; Sp. p. 467; Gaz. vol. 177; p. 74.

Brühl, Paul, Duesseldorf, Germany. Support ball-bearing. No. 1,022,531; Apr. 9; Sp. p. 1041; Gaz. vol. 177; p. 202.

Brunhoff, Edward, Cincinnati, Ohio. Cigar-tip cutter. No. 1,024,924; Apr. 30; Sp. p. 6853; Gaz. vol. 177; p. 1204.

Bruns, Hans T., Nuremberg, Germany. Means for driving the pumps of internal-combustion engines. No. 1,023,241; Apr. 16; Sp. p. 3203; Gaz. vol. 177; p. 573.

Brunswick-Balke-Collender Company of New York. (See Hobbs, Francis C., assignor.)

Brunswick, William F., Akron, Ohio, assignor to The Reverse Draft Furnace Co. Furnace and stove structure. No. 1,024,826; Apr. 30; Sp. p. 6649; Gaz. vol. 177; p. 1170.

Brunt, Henry C. C., Collingswood, N. J., assignor to Victor Talking Machine Company. Friction-brake. No. 1,022,656; Apr. 9; Sp. p. 1913; Gaz. vol. 177; p. 334.

Bryant Electric Company, The. (See Goodridge, Gilbert W., assignor.)

Bryant Electric Company, The. (See Poole and Brendel, assignors.)

Bubb, Abram M. C., Woodbridge, Va. Automatic gas cut-off. No. 1,022,822; Apr. 9; Sp. p. 2294; Gaz. vol. 177; p. 392.

Buchanan, Challey H. (See Buchanan, Jesse H., assignor.)

Buchanan, Charles G., Brooklyn, N. Y. Crushing-machine. No. 1,024,497; Apr. 30; Sp. p. 5893; Gaz. vol. 177; p. 1054.

Buchanan, Jesse H., assignor of one-fourth to C. H. Buchanan, Midway, Tex. Air-propeller. No. 1,023,065; Apr. 9; Sp. p. 2793; Gaz. vol. 177; p. 475.

Bucherer, Hans, assignor to Kalle & Company, Aktiengesellschaft, Biebrich, Germany. Amino-oxy-naphthalene sulfonic acid and making same. No. 1,022,019; Apr. 2; Sp. p. 574; Gaz. vol. 177; p. 90.

Bucherer, Hans, assignor to Kalle and Company, Aktiengesellschaft, Biebrich, Germany. Manufacture of azo coloring-matters containing a carbazole derivative. No. 1,024,308; Apr. 23; Sp. p. 5456; Gaz. vol. 177; p. 956.

Buck, Herman J., Minneapolis, assignor to Mathews Gravity Carrier Company, St. Paul, Minn. Gravity-carrier. No. 1,022,823; Apr. 9; Sp. p. 2296; Gaz. vol. 177; p. 392.

Buck, John M. (See Cave and Buck.)

Buckham, George T. (See Dawson and Buckham.)

Buckius, Albert O. Jr., Chicago, Ill., assignor to The National Malleable Castings Company, Cleveland, Ohio. Journal-box-securing mechanism. No. 1,023,809; Apr. 23; Sp. p. 4335; Gaz. vol. 177; p. 784.

Buckley, John P., assignor to Larkin Manufacturing Company, Dayton, Ohio. Coupling attaching and testing machine. No. 1,022,720; Apr. 9; Sp. p. 2083; Gaz. vol. 177; p. 358.

Buck's Stove and Range Company, The. (See Pamplin, Peter A., assignor.)

Buckwalter, Tracy V., Altoona, assignor of one-half to A. S. Vogt, Philadelphia, Pa. Combined coupling and steering mechanism. No. 1,024,675; Apr. 30; Sp. p. 6332; Gaz. vol. 177; p. 1116.

Buddie, George T., Chicago, Ill. Door-latch. No. 1,022,760; Apr. 9; Sp. p. 2186; Gaz. vol. 177; p. 375.

Buell, Young K., New York, N. Y. Lamp-chimney. No. 1,022,353; Apr. 2; Sp. p. 1252; Gaz. vol. 177; p. 201.

Buettner, William A., and A. Shelburne, Terre Haute, Ind. Cutter-chain for mining-machines. No. 1,023,549; Apr. 16; Sp. p. 3812; Gaz. vol. 177; p. 673.

Buffington, Calvin A., Berkshire, N. Y. Chair. No. 1,023,717; Apr. 16; Sp. p. 4132; Gaz. vol. 177; p. 725.

Bugg, Claude, Clinton, Ky. Automobile steering-guide. No. 1,023,810; Apr. 23; Sp. p. 4336; Gaz. vol. 177; p. 784.

Buhoup, Harry C., Chicago, Ill. Uncoupling device for car-couplings. No. 1,021,913; Apr. 2; Sp. p. 338; Gaz. vol. 177; p. 56.

Buhoup, Harry C., Chicago, Ill. Coupling-release rigging. No. 1,021,914; Apr. 2; Sp. p. 340; Gaz. vol. 177; p. 57.

Buigué, Franz de, Magdeburg, Germany. Delivery-pipe for casting apparatus. No. 1,024,553; Apr. 30; Sp. p. 6067; Gaz. vol. 177; p. 1074.

Bulita, Elton B., Arrowsmith, Ill. Cultivator. No. 1,022,354; Apr. 2; Sp. p. 1254; Gaz. vol. 177; p. 201.

Bullard, Edward P., Jr., Bridgeport, Conn. Adjusting device for feed-shafts. No. 1,024,309; Apr. 23; Sp. p. 5459; Gaz. vol. 177; p. 957.

Buller, Fred A., Springfield, S. D. Gambrel. No. 1,022,208; Apr. 2; Sp. p. 1140; Gaz. vol. 177; p. 183.

Bundy, Cyrus L., et al. (See Acker, Julius J., assignor.)

Bunyan, Rush, Lestershire, N. Y. Attachment for shoe-lasting machines. No. 1,022,299; Apr. 2; Sp. p. 1141; Gaz. vol. 177; p. 183.

Burford, Charles H., Meade, Kans. Safety device for flying-machines. No. 1,024,676; Apr. 30; Sp. p. 6333; Gaz. vol. 177; p. 1116.

Burge, Harry. (See Macfarlane and Burge.)

Burge, Joseph E., Denver, Colo. Combined chair and desk attachment. No. 1,023,620; Apr. 16; Sp. p. 3968; Gaz. vol. 177; p. 697.

Burke, Alfred W., Pittsburgh, Pa. Horn-gap switch and lightning-arrester. No. 1,022,619; Apr. 9; Sp. p. 1831; Gaz. vol. 177; p. 320.

Burnett, Richard W., Montreal, Quebec, Canada. Uncoupling mechanism for cars. No. 1,022,579; Apr. 9; Sp. p. 1741; Gaz. vol. 177; p. 307.

Burnham, George A., Saugus, assignor to S. B. Condit, Jr., Boston, Mass. Protecting means for electrical distribution systems. No. 1,022,355; Apr. 2; Sp. p. 1255; Gaz. vol. 177; p. 202.

Burns, Henry H., Battle Creek, Mich., assignor, by mesne assignments, to T. D. Palmer, Syracuse, N. Y. Pressing-machine. No. 1,023,066; Apr. 9; Sp. p. 2794; Gaz. vol. 177; p. 475.

Burns, James. (See Struble, James F., assignor.)

Burrell, Henry M., Pittsburgh, Pa. Nut-lock. No. 1,024,973; Apr. 30; Sp. p. 6941; Gaz. vol. 177; p. 1220.

Burroughs Adding Machine Company. (See Pasinski, Walter J., assignor.)

Burroughs Adding Machine Company. (See Vincent, Jesse G., assignor.)

Burrows, William R., assignor to Glass Products Company, Newark, N. J. Machine for making vials and the like. No. 1,024,116; Apr. 23; Sp. p. 5040; Gaz. vol. 177; p. 890.

Burrell, Charles, Guymon, Okla. Hoof-parer. No. 1,023,990; Apr. 23; Sp. p. 4763; Gaz. vol. 177; p. 845.

Buscher, Hermann, Langerfeld, near Barmen, Germany. Lace fabric. No. 1,024,247; Apr. 23; Sp. p. 5348; Gaz. vol. 177; p. 937.

Bush, William, Cincinnati, Ohio. Vegetable-slicer. No. 1,021,968; Apr. 2; Sp. p. 468; Gaz. vol. 177; p. 75.

Busky, John S., Jr., New York, N. Y. Shoe-last. No. 1,023,718; Apr. 16; Sp. p. 4133; Gaz. vol. 177; p. 725.

Butler, George P., New Haven, assignor to The W. A. Ives Mfg. Co., Wallingford, Conn. Auger-bit. No. 1,025,109; Apr. 30; Sp. p. 7220; Gaz. vol. 177; p. 1265.

Butler, James L., Alliance, Ohio. Grab-bucket. No. 1,024,627; Apr. 30; Sp. p. 6651; Gaz. vol. 177; p. 1170.

Butler, Washington A., assignor of one-half to W. W. Barton, San Francisco, Cal. Dumping apparatus. No. 1,023,719; Apr. 16; Sp. p. 4138; Gaz. vol. 177; p. 726.

Butler, William F., Indianapolis, Ind. Can-flanging machine. No. 1,022,464; Apr. 9; Sp. p. 1505; Gaz. vol. 177; p. 270.

Butsch, Alphonse, St. Lucia, British West Indies. Ignition-tube. No. 1,025,050; Apr. 30; Sp. p. 7088; Gaz. vol. 177; p. 1246.

Buttner, John, Fayette City, Pa. Nut-lock. No. 1,022,657; Apr. 9; Sp. p. 1916; Gaz. vol. 177; p. 334.

Buttress, Joseph A., assignor, by mesne assignments, of one-fourth to S. Herlinger, Los Angeles, Cal. Air-gage. No. 1,021,915; Apr. 2; Sp. p. 343; Gaz. vol. 177; p. 57.

Buxton, Benjamin C. (See Cunningham and Buxton.)

Byce, Lyman C., assignor to Petaluma Incubator Co., Petaluma, Cal. Incubator. No. 1,022,824; Apr. 9; Sp. p. 2297; Gaz. vol. 177; p. 393.

Bye, Olaf M., Princeton, Minn. Clevis. No. 1,022,300; Apr. 2; Sp. p. 1143; Gaz. vol. 177; p. 183.

Byers, Firm B., New York, N. Y. Anti-rail-creeper and splice-bar. No. 1,023,991; Apr. 23; Sp. p. 4765; Gaz. vol. 177; p. 845.

Byers, Jacob J., Chicago, Ill., assignor to The National Malleable Castings Company, Cleveland, Ohio. Rail-anchor. (Reissue.) No. 13,407; Apr. 23; Sp. p. 5849; Gaz. vol. 177; p. 1017.

C. J. White Manufacturing Company. (See White, Charles J., assignor.)

C. W. Raymond Company, The. (See Heuss, Hermann, assignor.)

Cabasino, Thomas H., and T. W. Vrana, New York, N. Y. Self-adjusting attachment for piano-players. No. 1,023,005; Apr. 9; Sp. p. 2664; Gaz. vol. 177; p. 455.

Cahill, Daniel, Belfast, Ireland. Liquid-meter. No. 1,023,821; Apr. 16; Sp. p. 3971; Gaz. vol. 177; p. 697.

Cairns, Thomas H., et al. (See Smith, William E., assignor.)

Callahan, Henry, Dayton, Ohio. Eaves-trough fastener. No. 1,023,456; Apr. 16; Sp. p. 3628; Gaz. vol. 177; p. 643.

Callanan, William A., Denver, Colo. Fastening device. No. 1,023,502; Apr. 16; Sp. p. 3722; Gaz. vol. 177; p. 655.

Caloric Company, The. (See Gronberg and Hodson, assignors.)

Calvert, Oma N., Kahoka, Mo. Electric animal-exterminator. No. 1,024,060; Apr. 23; Sp. p. 4908; Gaz. vol. 177; p. 870.

Cambridge, Allan S., Keighley, England. Apparatus for generating or producing gas. No. 1,024,117; Apr. 23; Sp. p. 5055; Gaz. vol. 177; p. 891.

Cameron, George W., Hondo, Tex. Automatic reversing mechanism. No. 1,024,765; Apr. 30; Sp. p. 6520; Gaz. vol. 177; p. 1148.

Cameron, George W., Hondo, Tex. Rope-clamp. No. 1,024,074; Apr. 30; Sp. p. 6942; Gaz. vol. 177; p. 1221.

Camino, Attilio. (See Tosco and Camino.)

Cammack, Horace, Des Moines, Iowa. Gearing for washing-machines. No. 1,022,825; Apr. 9; Sp. p. 2300; Gaz. vol. 177; p. 393.

Camp, Peter B., Washington, Ill. Elevator and conveyer. No. 1,021,760; Apr. 2; Sp. p. 10; Gaz. vol. 177; p. 4.

Campbell, Charles D., et al. (See Haley, Harrison Y., assignor.)

Campbell, Harold F., et al. (See Haley, Harrison Y., assignor.)

Campbell, John E., New Castle, Pa. Oil-indicator for automobiles. No. 1,021,824; Apr. 2; Sp. p. 161; Gaz. vol. 177; p. 27.

Campbell, Leon J., assignor to J. T. Healy, trustee, Chicago, Ill. Variable-speed transmission mechanism. No. 1,023,811; Apr. 23; Sp. p. 4338; Gaz. vol. 177; p. 785.

Campbell, Robert H., assignor to Aerators Limited, Edmonton, England. Container or cylinder for compressed or liquefied gas. No. 1,022,301; Apr. 2; Sp. p. 1145; Gaz. vol. 177; p. 183.

Campbell, Sterling H., St. Louis, Mo. Journal-bearing for railway-cars. No. 1,022,400; Apr. 9; Sp. p. 1353; Gaz. vol. 177; p. 248.

Candee, Robert M., Fort Dodge, Iowa. Tile-unloading machine. No. 1,024,828; Apr. 30; Sp. p. 6653; Gaz. vol. 177; p. 1171.

Candland, Arthur C., Provo City, Utah. Metallic rail-tie and fastener therefor. No. 1,024,470; Apr. 23; Sp. p. 5807; Gaz. vol. 177; p. 1009.

Canfield, Richard A. (See Brown, Harry M., assignor.)

Canfield, Roger H., Mooringsport, La. Apparatus for boring wells. No. 1,024,310; Apr. 23; Sp. p. 5460; Gaz. vol. 177; p. 957.

Canton Steel Foundry Company, The. (See Pennock, Willard, assignor.)

Canty, John W., Florence, Colo. Fluid-operated tool. No. 1,024,895; Apr. 23; Sp. p. 5001; Gaz. vol. 177; p. 983.

Capper, Phillip H., and L. F. McCreary, Pittsburgh, Pa. Combination binding-post. No. 1,024,248; Apr. 23; Sp. p. 5349; Gaz. vol. 177; p. 937.

Cara, John B., Wilmette, Ill. Water-treating process. No. 1,021,761; Apr. 2; Sp. p. 12; Gaz. vol. 177; p. 5.

Carbonnelle, Henri, Uccle, Belgium. Machine for the electromechanical reproduction of drawings, writings, photographs, blocks, and the like. No. 1,024,616; Apr. 30; Sp. p. 6205; Gaz. vol. 177; p. 1095.

Carden, Glenn, Phoenix, Ala. Track-lifting jack. No. 1,023,922; Apr. 23; Sp. p. 4622; Gaz. vol. 177; p. 822.

Carlberg, Carl S., assignor of one-half to E. Lundquist, Seattle, Wash. Radiator. No. 1,022,620; Apr. 9; Sp. p. 1833; Gaz. vol. 177; p. 321.

Carlin, Charles H. (See Dirand, Louis J., assignor.)

Carlson, Carl G., Chicago, Ill. Fire-alarm. No. 1,023,123; Apr. 16; Sp. p. 2941; Gaz. vol. 177; p. 533.

Carlson, Ernest. (See Williams and Olmstead, assignors.)

Carpenter, Charles R., Racine, Wis. Grinding-machine. No. 1,022,224; Apr. 2; Sp. p. 905; Gaz. vol. 177; p. 160.

Carpenter, Paul, Chicago, Ill. Alarm-valve. No. 1,023,104; Apr. 9; Sp. p. 2871; Gaz. vol. 177; p. 489.

Carpenter, Varnum F., Cleveland, Ohio. Power-driven machine for aerial navigation. No. 1,022,302; Apr. 2; Sp. p. 1145; Gaz. vol. 177; p. 184.

Carr, Edward H., et al. (See White, Charles B., assignor.)

Carr, James, et al. (See White, Charles B., assignor.)

Carr, John L., et al. (See White, Charles B., assignor.)

Carrabine, Oscar, New York, N. Y. Bathing-suit. No. 1,024,181; Apr. 23; Sp. p. 5190; Gaz. vol. 177; p. 912.

Carrick, Charles P., Flint, Mich. Spring-wheel. No. 1,025,051; Apr. 30; Sp. p. 7090; Gaz. vol. 177; p. 1246.

Carriker, John W., Harrisburg, N. C. Loading and unloading apparatus. No. 1,023,006; Apr. 9; Sp. p. 2627; Gaz. vol. 177; p. 455.

Carrington, Charles P. (See Susemihl and Carrington.)

Carroll, John H., Montreal, Quebec, Canada. Necktie. No. 1,023,196; Apr. 16; Sp. p. 3125; Gaz. vol. 177; p. 559.

Carsalade du Pont, Paul de, assignor of one-half to G. Escarras, Paris, France. Syllable-writing machine. No. 1,024,679; Apr. 30; Sp. p. 6342; Gaz. vol. 177; p. 1118.

Cartault, Paul J., Paris, France. Apparatus for changing the temperature of liquids. No. 1,024,436; Apr. 23; Sp. p. 5719; Gaz. vol. 177; p. 996.

Carter, Chapel S. (See Munger and Carter.)

Carter-Crume Company, The. (See Bottle, Edward K., assignor.)

Carter-Crume Company, The. (See Mowat, Alexander G., assignor.)

Carter, James R., West Newton, Mass. Protector for milk-bottles. No. 1,024,879; Apr. 30; Sp. p. 6754; Gaz. vol. 177; p. 1188.

Carter, Lemuel A., J. C. Jones, and J. C. Spotts, New Orleans, La. Heating or cooling apparatus. No. 1,024,564; Apr. 30; Sp. p. 6068; Gaz. vol. 177; p. 1074.

Caruso, Salvatore, Providence, R. I. Nozzle for oil and other cans. No. 1,025,052; Apr. 30; Sp. p. 7092; Gaz. vol. 177; p. 1247.

Case, Henry. (See Pieper and Case.)

Case, William F., et al. (See Pieper and Case, assignors.)

Casey, Patrick H. (See Kershaw, Douglass B., assignor.)

Cash, Arthur W. (See Matthews, Johnstone, and Cash.)

Caspary, Ernst, Altena, Germany. Collar-supporter. No. 1,021,916; Apr. 2; Sp. p. 346; Gaz. vol. 177; p. 57.

Cassell, Oscar R., New York, N. Y. Flying-machine. No. 1,024,766; Apr. 30; Sp. p. 6522; Gaz. vol. 177; p. 1148.

Cassidy, John H., Sault Ste. Marie, Ontario, Canada. Rail-bending machine. No. 1,024,820; Apr. 30; Sp. p. 6655; Gaz. vol. 177; p. 1171.

Cast Steel Platform Company. (See Westlake, Charles T., assignor.)

Caster, William H., Angels Camp, assignor to D. D. Demarest Co., San Francisco, Cal. Self-locking drill-chuck. No. 1,023,667; Apr. 9; Sp. p. 2797; Gaz. vol. 177; p. 476.

Caudell, Henry W., Homer, Ga. Hoe. No. 1,023,720; Apr. 16; Sp. p. 4140; Gaz. vol. 177; p. 727.

Cavagnaro, Frank L., Winsted, Conn. Composition of matter for belt-dressings. No. 1,023,992; Apr. 23; Sp. p. 4766; Gaz. vol. 177; p. 846.

Cave, Thomas P., and J. M. Buck, assignors of one-half to F. Reichelsheimer and one-half to S. Roth, Columbus, Ohio. Adjustable shade-fixture. No. 1,023,812; Apr. 23; Sp. p. 4342; Gaz. vol. 177; p. 785.

Caverno, Xenophon, Kewanee, Ill. Pumping apparatus. No. 1,021,861; Apr. 2; Sp. p. 241; Gaz. vol. 177; p. 30.

Chabot, Alme, Jr., Spratt, Mich. Cushioning device. No. 1,022,225; Apr. 2; Sp. p. 1000; Gaz. vol. 177; p. 161.

Chalmers-Detroit Motor Company. (See Coffin, Howard E., assignor.)

Chalmers Motor Company, The. (See Dunham, George W., assignor.)

Chambers, George A., assignor to Montague Mailing Machinery Company, New York, N. Y. Filing-case. No. 1,023,297; Apr. 16; Sp. p. 3317; Gaz. vol. 177; p. 593.

Chambers, Harry, Lakewood, N. J. Mail-box. No. 1,024,617; Apr. 30; Sp. p. 6208; Gaz. vol. 177; p. 1095.

Chandler, Edwin N., Brockton, assignor to Simplex Electric Heating Company, Boston, Mass. Electrically-heated branding-head. No. 1,022,061; Apr. 2; Sp. p. 657; Gaz. vol. 177; p. 104.

Chapman, Frank S., assignor to The National Electric Specialty Company, Toledo, Ohio. Manufacture of vacuum lightning-arresters. No. 1,024,555; Apr. 30; Sp. p. 6070; Gaz. vol. 177; p. 1075.

Chapman, John V., Scott, Kans. Pump. No. 1,023,298; Apr. 16; Sp. p. 3319; Gaz. vol. 177; p. 593.

Chapman, Joseph M., Macedonia, Iowa. Colter attachment for plows. No. 1,023,412; Apr. 16; Sp. p. 3545; Gaz. vol. 177; p. 631.

Chard, Nicholas D., assignor to The Lodge & Shipley Machine Tool Company, Cincinnati, Ohio. Lathe. No. 1,022,721; Apr. 9; Sp. p. 2087; Gaz. vol. 177; p. 358.

Charles, Albion P., Iola, Kans. Rotary engine. No. 1,023,993; Apr. 23; Sp. p. 4767; Gaz. vol. 177; p. 846.

Charter Shirt Company. (See Straus, Philip E., assignor.)

Chase, Aurin M., assignor to Syracuse Chilled Plow Company, Syracuse, N. Y. Sulky-plow. No. 1,024,437; Apr. 23; Sp. p. 5720; Gaz. vol. 177; p. 996.

Chatfield, Franklin, assignor of one-fourth to E. J. Couper, one-fourth to F. M. Stowell, and one-fourth to C. L. Pillsbury, Minneapolis, Minn. Anchor for concrete construction. No. 1,022,826; Apr. 9; Sp. p. 2302; Gaz. vol. 177; p. 394.

Chatham, Sheldon C., Philadelphia, Pa. Bed-spring. No. 1,023,721; Apr. 16; Sp. p. 4141; Gaz. vol. 177; p. 727.

Cheney, Herbert W., Milwaukee, Wis., assignor to Allis-Chalmers Company. High-potential relay. No. 1,023,503; Apr. 16; Sp. p. 3723; Gaz. vol. 177; p. 659.

Cheney, John W., assignor of one-half to A. J. Killeen, Los Angeles, Cal. Fruit-grating machine. No. 1,021,909; Apr. 2; Sp. p. 469; Gaz. vol. 177; p. 75.

Chester, Christian L., Monessen, Pa. Torch. No. 1,023,622; Apr. 16; Sp. p. 3975; Gaz. vol. 177; p. 698.

Chester, Frank E., Providence, R. I. Ball. No. 1,023,504; Apr. 16; Sp. p. 3725; Gaz. vol. 177; p. 659.

Chevrolet, Louis, and E. Planche, assignors to Chevrolet Motor Company, Detroit, Mich. Control-lever for automobiles. No. 1,022,401; Apr. 9; Sp. p. 1355; Gaz. vol. 177; p. 248.

Chevrolet Motor Company. (See Chevrolet and Planche, assignors.)

Chewning, Stapleton S., New Berlin, assignor to Borden's Condensed Milk Company, New York, N. Y. Means for regulating the feed of solder in can-soldering machines. No. 1,022,770; Apr. 9; Sp. p. 2188; Gaz. vol. 177; p. 375.

Chicago Car Heating Company. (See Manchester, Thomas H., assignor.)

Chicago Coach & Carriage Co. (See Webster, James, assignor.)

Chicago Octagon Rotary Engine Company. (See Leiger, George F., assignor.)

Chicago Pneumatic Tool Company. (See Hayes, George H., assignor.) (Reissue.)

Chicago Railway Equipment Company. (See Le Beau, Ernest A., assignor.)

Chicago Railway Equipment Company. (See Robischung, Henry B., assignor.)

Chicago Railway Equipment Company. (See White, Edward L., assignor.)

Chick, Walter, Dayton, Ky., assignor to United Shoe Machinery Company, Paterson, N. J. Lasting-machine. No. 1,022,402; Apr. 9; Sp. p. 1356; Gaz. vol. 177; p. 248.

Childs, Earl T., Corsopolis, Pa. Drawing instrument. No. 1,023,242; Apr. 16; Sp. p. 3205; Gaz. vol. 177; p. 574.

Childs, Jesse, Russellton, assignor of one-half to J. McHarg, Harmarville, Pa. Sifter and separator. No. 1,024,240; Apr. 23; Sp. p. 5351; Gaz. vol. 177; p. 938.

China, Erie W., and J. T. Harris, Columbia, Mo. Road-scraper. No. 1,023,068; Apr. 9; Sp. p. 2708; Gaz. vol. 177; p. 476.

Choumbrot, Max, Paris, France. Automatic emergency-brake. No. 1,023,623; Apr. 16; Sp. p. 3977; Gaz. vol. 177; p. 698.

Christensen, Norman V. (See Jackson, Andrew J., assignor.)

Christenson, George, New York, N. Y., assignor to H. W. Johns-Manville Company. Loose-spring piston-packing expander. No. 1,023,813; Apr. 23; Sp. p. 4343; Gaz. vol. 177; p. 785.

Christenson, George, New York, N. Y., assignor to H. W. Johns-Manville Company. Piston-packing expander. No. 1,023,814; Apr. 23; Sp. p. 4345; Gaz. vol. 177; p. 786.

Christofferson, Christian A., St. Paul, Minn., assignor to General Railway Signal Company, Gates, N. Y. Insulating tie-bar. No. 1,023,923; Apr. 23; Sp. p. 4622; Gaz. vol. 177; p. 822.

Christopher, Eugene, Urbana, Ill. Fertilizer-distributer. No. 1,022,062; Apr. 2; Sp. p. 659; Gaz. vol. 177; p. 105.

Christopher, William E., Thomas, assignor of one-half to J. R. Wilkerson, Ensley, Ala. Steering mechanism. No. 1,024,182; Apr. 23; Sp. p. 5191; Gaz. vol. 177; p. 912.

Church, Joseph W., San Francisco, Cal. Means for recovering stranded ships. No. 1,022,771; Apr. 9; Sp. p. 2100; Gaz. vol. 177; p. 376.

Cincinnati Bickford Tool Company, The. (See Norris, Henry M., assignor.)

Cincinnati Shaper Company, The. (See Murray, Aristides R., assignor.)

Cincinnati Time Recorder Company, The. (See Morrison, James, assignor.)

Clapham, Fred, Glen Mills, Pa. Electric-light-socket handle. No. 1,024,311; Apr. 23; Sp. p. 5462; Gaz. vol. 177; p. 957.

Clark, Amasa B., New York, N. Y. Pile-driving engine. No. 1,023,243; Apr. 16; Sp. p. 3206; Gaz. vol. 177; p. 574.

Clark, Charles C., Guyandotte, W. Va. Electric gas-alarm. No. 1,024,061; Apr. 23; Sp. p. 4010; Gaz. vol. 177; p. 870.

Clark, John T., New York, N. Y. Elevator. No. 1,023,124; Apr. 16; Sp. p. 2942; Gaz. vol. 177; p. 533.

Clark, Melville, Chicago, Ill. Note-sheet for autopneumatic piano-players. No. 1,022,403; Apr. 9; Sp. p. 1353; Gaz. vol. 177; p. 249.

Clark, Melville, Chicago, Ill. Solo-playing automatic piano. No. 1,024,677; Apr. 30; Sp. p. 6335; Gaz. vol. 177; p. 1117.

Clark, William K., Amsterdam, N. Y. Device for marking goods. No. 1,023,505; Apr. 16; Sp. p. 3726; Gaz. vol. 177; p. 659.

Clarke, Graham, assignor to The Ohio Chemical & Manufacturing Company, Cleveland, Ohio. Attachment for anesthetising-machines. No. 1,024,556; Apr. 30; Sp. p. 6071; Gaz. vol. 177; p. 1075.

Clarke, Marcus S., Houston, Tex. Ironing-board. No. 1,022,404; Apr. 9; Sp. p. 1361; Gaz. vol. 177; p. 249.

Clarke, May E. (See Lange, Lucy M., assignor.)

Clarkson, Michael, Chicago, Ill. Manhole and well for subways. No. 1,023,815; Apr. 23; Sp. p. 4347; Gaz. vol. 177; p. 786.

Class & Flentje, Gesellschaft mit beschränkter Haftung. (See Gosbel, Carl, assignor.)

Clausen, Henry P., Chicago, Ill., assignor, by mesne assignments, to Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y. Telephone system. No. 1,024,498; Apr. 30; Sp. p. 5895; Gaz. vol. 177; p. 1054.

Clauss, Henrie. (See Jeremias, Charles, assignor.)

Cleland, McKenzie. (See Shlosberg, Maris, assignor.)

Clement, Edward E., Washington, D. C. Telephone-exchange system. No. 1,023,480; Apr. 16; Sp. p. 3676; Gaz. vol. 177; p. 651.

Clement, Edward E., Washington, D. C. Telephone-exchange system. No. 1,024,487; Apr. 23; Sp. p. 5843; Gaz. vol. 177; p. 1016.

Clements, William N. (See Knight and Clements.)

Clemmer, George B., Trenton, N. J. Condiment-holder. No. 1,023,413; Apr. 16; Sp. p. 3546; Gaz. vol. 177; p. 631.

Cleveland, Fred P., assignor to B. F. Perkins and Son, Incorporated, Holyoke, Mass. Operating mechanism for paper-testing machines. No. 1,025,110; Apr. 30; Sp. p. 7220; Gaz. vol. 177; p. 1265.

Cline, Edward S., Phoenixville, Pa. Boiler-cleaner. No. 1,022,063; Apr. 2; Sp. p. 660; Gaz. vol. 177; p. 105.

Clinger, Thomas H., assignor to himself and E. G. Schmidt, Philadelphia, Pa. Box-board cutting and scoring mechanism. No. 1,022,722; Apr. 9; Sp. p. 2090; Gaz. vol. 177; p. 350.

Clinker, Reginald C., Rugby, England, assignor to General Electric Company. Apparatus for determining the acceleration of rotating bodies. No. 1,024,183; Apr. 23; Sp. p. 5192; Gaz. vol. 177; p. 912.

Clouston, Herbert, Mohall, N. D. Gravity fuel-feeding device. No. 1,022,772; Apr. 9; Sp. p. 2191; Gaz. vol. 177; p. 376.

Cluts, Oliver, W. Salisbury, and J. W. Turall, Cuba, Ill. Drilling-machine. No. 1,023,722; Apr. 16; Sp. p. 4142; Gaz. vol. 177; p. 727.

Clyne, Robert G., Upper Alton, Ill. Mechanical movement. No. 1,022,621; Apr. 9; Sp. p. 1835; Gaz. vol. 177; p. 321.

Coates, Leonard R., Baltimore, Md. Fertilizer and producing the same. No. 1,024,880; Apr. 30; Sp. p. 6785; Gaz. vol. 177; p. 1189.

Coburn, George A., assignor to Draper Company, Hopedale, Mass. Take-up mechanism for looms. No. 1,023,904; Apr. 23; Sp. p. 4770; Gaz. vol. 177; p. 847.

Cochran, Eugene S., *et al.* (See Galvin, Carroll D., assignor.)

Cochran, George F. (See Payne and Cochran.)

Coene, Emile, *et al.* (See Garlick, Walter J., assignor.)

Coffin, Howard E., assignor to Chalmers-Detroit Motor Company, Detroit, Mich. Lubricator. No. 1,022,622; Apr. 9; Sp. p. 1836; Gaz. vol. 177; p. 321.

Coffin, Howard E., Detroit, Mich. Explosion-engine. No. 1,024,618; Apr. 30; Sp. p. 6209; Gaz. vol. 177; p. 1095.

Coffin, Howard E., Detroit, Mich. Explosion-engine. No. 1,024,610; Apr. 30; Sp. p. 6210; Gaz. vol. 177; p. 1096.

Coggeshall, Charles A., Providence, R. I. Holder-reel. No. 1,023,816; Apr. 23; Sp. p. 4349; Gaz. vol. 177; p. 786.

Coggin, Frank F., assignor to Economy Car Heating Company, New York, N. Y. Car-heating system. No. 1,024,062; Apr. 23; Sp. p. 4911; Gaz. vol. 177; p. 870.

Colbert, Lucian R., Massaponax, Va. Automobile-door. No. 1,023,007; Apr. 9; Sp. p. 2068; Gaz. vol. 177; p. 455.

Coldwell, Harry T., Newburgh, N. Y. Tea-harvester. No. 1,024,499; Apr. 30; Sp. p. 5901; Gaz. vol. 177; p. 1055.

Cole, Calvin J., Jacksonville, Fla. Safety device for elevators. No. 1,022,886; Apr. 2; Sp. p. 1316; Gaz. vol. 177; p. 213.

Cole, Edward S., Montclair, N. J. Hydraulic traverse mechanism. No. 1,025,111; Apr. 30; Sp. p. 7223; Gaz. vol. 177; p. 1266.

Cole, Francis J., Schenectady, N. Y. Reverse-gear for steam-engines. No. 1,023,995; Apr. 23; Sp. p. 4773; Gaz. vol. 177; p. 847.

Cole, Francis J., Schenectady, N. Y. Locomotive-engine. No. 1,024,020; Apr. 30; Sp. p. 6212; Gaz. vol. 177; p. 1096.

Cole, Frank A., Patton, Pa. Moving-picture machine. No. 1,024,975; Apr. 30; Sp. p. 6043; Gaz. vol. 177; p. 1221.

Cole, James T., Baskerville, Va. Curtain-support. No. 1,023,069; Apr. 9; Sp. p. 2800; Gaz. vol. 177; p. 476.

Cole, Noel S., Newbern, Tenn. Belt-flight. No. 1,023,008; Apr. 9; Sp. p. 2670; Gaz. vol. 177; p. 455.

Cole, Raymond T., South Portland, Me. Graphite metal and producing it. No. 1,022,465; Apr. 9; Sp. p. 1508; Gaz. vol. 177; p. 270.

Coleman, Clarence W., deceased; K. Coleman, administratrix, Westfield, N. J., assignor to The Hall Signal Company. Electric contact device. No. 1,024,718; Apr. 30; Sp. p. 6421; Gaz. vol. 177; p. 1131.

Coleman, Clarence W., deceased; K. Coleman, administratrix, Westfield, N. J., assignor to The Hall Signal Company. Electric contact device. No. 1,024,719; Apr. 30; Sp. p. 6423; Gaz. vol. 177; p. 1131.

Coleman, Clyde J., New York, N. Y. Fuel-burning apparatus. No. 1,024,925; Apr. 30; Sp. p. 6354; Gaz. vol. 177; p. 1205.

Coleman, Katharine, administratrix. (See Coleman, Clarence W.)

Collins, George F. (See Overmyer and Collins.)

Collins, Roy V., assignor to American Automatic Switch Company, New York, N. Y. Moisture-proof packing. (Reissue.) No. 13,409; Apr. 30; Sp. p. 7231; Gaz. vol. 177; p. 1267.

Colona Manufacturing Company. (See Shrum, Rae, and Ripper, assignors.)

Colonial Fireplace Co. (See Guy, Walter W., assignor.)

Colonial Trust Company, The, trustee. (See Seaver, Edward, Jr., assignor.)

Colonial Trust Company, The. (See Snyder, John E., assignor.)

Colonial Trust Company, The. (See Sweet, Charles E., assignor.)

Colson, Henry H. (See Browne and Colson.)

Colvin, George A., Coquille, Oreg. Crosscut-saw gage. No. 1,023,550; Apr. 16; Sp. p. 3813; Gaz. vol. 177; p. 673.

Commercial Acetylene Company, The. (See Bruckner and McCune, assignors.)

Company Rudolph Böcking & Cie., Erben Stumm-Halberg und Rud. Böcking G. m. b. H. (See Müller, Johannsen, and Pape, assignors.)

Company "Wulfing, Dahl & Co., Actiengesellschaft." (See Ulrichs, Ernst, assignor.)

Comstock, Clark S., Sr., East Orange, N. J. Button-fastener. No. 1,024,118; Apr. 23; Sp. p. 5056; Gaz. vol. 177; p. 891.

Conant, William S. (See Luehrs and Conant.)

Condit, S. B., Jr. (See Burnham, George A., assignor.)

Condit, Sears B., Jr. (See Badeau, Charles C., assignor.)

Conley, Michael R., assignor to R. Florence, trustee, New York, N. Y. Electric furnace. No. 1,023,996; Apr. 23; Sp. p. 4775; Gaz. vol. 177; p. 847.

Conley, Roy H., Los Angeles, Cal. Automatic railway-switch. No. 1,022,803; Apr. 2; Sp. p. 1148; Gaz. vol. 177; p. 184.

Connable, Frank L., Wilmington, Del. Apparatus for practising golf. No. 1,023,125; Apr. 16; Sp. p. 2944; Gaz. vol. 177; p. 533.

Consaul Company, The. (See Lumley, Wilfrid, assignor.)

Connecticut Shock Absorber Company, The. (See Lawton, Burton L., assignor.)

Connell, Howard R., Brackenridge, Pa., assignor to General Electric Company. Making meter-jewels. No. 1,023,299; Apr. 16; Sp. p. 3320; Gaz. vol. 177; p. 594.

Connell, James. (See Mariatt, Robert, assignor.)

Connell, William J., and A. F. Dickey, Huntington, W. Va. Concrete-structure stiffener. No. 1,024,312; Apr. 23; Sp. p. 5463; Gaz. vol. 177; p. 957.

Conrad, Frank, Swissvale, Pa., assignor to Westinghouse Electric and Manufacturing Company. System of electric-motor control. No. 1,024,557; Apr. 30; Sp. p. 6073; Gaz. vol. 177; p. 1076.

Consolidated Car Heating Company. (See McElroy, James F., assignor.)

Continental Gin Company. (See Wilson, Ralph E., assignor.)

Continuous Rail Company. (See Noll, John, assignor.)

Conway, James M., Bessemer, Ala. Railway-tie plate. No. 1,023,551; Apr. 16; Sp. p. 3815; Gaz. vol. 177; p. 673.

Cook, Arthur L., North Heath, Mass. Cross-line buckle. No. 1,024,830; Apr. 30; Sp. p. 6656; Gaz. vol. 177; p. 1171.

Cook, Roswell F., New York, N. Y. Latch. No. 1,023,624; Apr. 16; Sp. p. 3976; Gaz. vol. 177; p. 699.

Cook, Stanley S. (See Ridsdale and Cook.)

Cooke, Dwight I., assignor to Vacuum Car Ventilating Company, Chicago, Ill. Car-ventilating system. No. 1,024,438; Apr. 23; Sp. p. 5725; Gaz. vol. 177; p. 997.

Cooke, Dwight I., assignor to Vacuum Car Ventilating Co., Chicago, Ill. Car-ventilating system for sleeping-cars. No. 1,024,439; Apr. 23; Sp. p. 5727; Gaz. vol. 177; p. 997.

Cookson, Clarence F. (See Merhige and Cookson.)

Coonrod, Jeremy B., Rock Rapids, Iowa. Armor for vehicle-tires. No. 1,023,414; Apr. 16; Sp. p. 3547; Gaz. vol. 177; p. 631.

Cooper, Ashley R., Mooresville, Ind. Threshing-machine. No. 1,021,917; Apr. 2; Sp. p. 647; Gaz. vol. 177; p. 57.

Corbett, Edward J., Sacramento, Cal. Flexible joint. No. 1,023,924; Apr. 23; Sp. p. 4625; Gaz. vol. 177; p. 823.

Corcoran, Cornelius B., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,021,970; Apr. 2; Sp. p. 472; Gaz. vol. 177; p. 75.

Corcoran, Cornelius B., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,022,580; Apr. 9; Sp. p. 1742; Gaz. vol. 177; p. 307.

Cordell, Henry. (See Mock, Gerber, and Cordell.)

Corey, George W., San Francisco, Cal. Window-screen. No. 1,023,625; Apr. 16; Sp. p. 3979; Gaz. vol. 177; p. 699.

Cork Insert Company, The. (See Whitcomb, Lawrence, assignor.)

Corlew, Clarence M., assignor of one-third to J. Mundt, Sioux Falls, S. D. Rail-joint. No. 1,024,313; Apr. 23; Sp. p. 5465; Gaz. vol. 177; p. 958.

Cormican, John E., Glidden, Wis. Saw gage and jointer. No. 1,023,415; Apr. 16; Sp. p. 3549; Gaz. vol. 177; p. 632.

Cornell, Joseph D., *et al.* (See Crosbie, Daniel L., assignor.)

Cornwell, Frank S., New Haven, Conn. Dial for watches or clocks. No. 1,024,558; Apr. 30; Sp. p. 6076; Gaz. vol. 177; p. 1076.

Corrugated Bar Company. (See Hickman, Harvey H., assignor.)

Cossey, Myron, Brooklyn, assignor to Reliance Ball-Bearing Door Hanger Company, New York, N. Y. Operating mechanism for sliding doors. No. 1,023,723; Apr. 16; Sp. p. 4143; Gaz. vol. 177; p. 727.

Côté, Henry, West Warren, assignor to Ware Machine & Loom Company, Ware, Mass. Picker-check. No. 1,023,197; Apr. 16; Sp. p. 3126; Gaz. vol. 177; p. 559.

Côté, Henry, West Warren, assignor to Ware Machine & Loom Company, Ware, Mass. Picker-stick check. No. 1,023,362; Apr. 16; Sp. p. 3439; Gaz. vol. 177; p. 614.

Côté, Henry, West Warren, and R. C. Snow, assignors to Ware Machine & Loom Company, Ware, Mass. Picker-check. No. 1,024,036; Apr. 23; Sp. p. 4859; Gaz. vol. 177; p. 861.

Cottle, John B., Rosebud, Tex. Ironing-board. No. 1,024,720; Apr. 30; Sp. p. 6425; Gaz. vol. 177; p. 1132.

Cotton, Herbert M. (See Cotton, Orville D. and H. M.)

Cotton, Orville D. and H. M., Dayton, Ohio. Furnace. No. 1,023,817; Apr. 23; Sp. p. 4351; Gaz. vol. 177; p. 787.

Cottrell, Daniel C. (See Bausman and Cottrell.)

Coughlin, Charles, Jersey City, N. J. Spring-wheel. No. 1,025,080; Apr. 30; Sp. p. 7154; Gaz. vol. 177; p. 1255.

Coulston, Harry, assignor to The Philadelphia Textile Machinery Company, Philadelphia, Pa. Conveyer. No. 1,022,929; Apr. 9; Sp. p. 2513; Gaz. vol. 177; p. 428.

Coulter, Curtis C., Rock Island, Ill. Shaft and tongue coupling. No. 1,022,804; Apr. 2; Sp. p. 1150; Gaz. vol. 177; p. 184.

Coulter, James., Bridgeport, Conn., assignor, by mesne assignments, to The Automatic Chain Company, Buffalo, N. Y. Wire-chain machine. No. 1,023,126; Apr. 16; Sp. p. 2947; Gaz. vol. 177; p. 534.

Couper E. J., *et al.* (See Chatfield, Franklin, assignor.)

Court, Edward, assignor of one-half to M. J. Fischbach, Milwaukee, Wis. Bottle-tray. No. 1,023,925; Apr. 23; Sp. p. 4626; Gaz. vol. 177; p. 823.

Courts, Benjamin D., assignor, by mesne assignments, to Dixie Cotton Felt Mattress Company, Chicago, Ill. Filling mattresses. No. 1,021,971; Apr. 2; Sp. p. 477; Gaz. vol. 177; p. 76.

Courts, Benjamin D., assignor, by mesne assignments, to Dixie Cotton Felt Mattress Company, Chicago, Ill. Apparatus for severing or separating sheets of material. No. 1,022,930; Apr. 9; Sp. p. 2514; Gaz. vol. 177; p. 429.

Coutu, George J., Lowell, Mass. Fire-extinguishing apparatus. No. 1,023,506; Apr. 16; Sp. p. 3728; Gaz. vol. 177; p. 659.

Couture, William L., assignor of one-tenth to Z. Moore, San Francisco, Cal. Level. No. 1,024,831; Apr. 30; Sp. p. 6658; Gaz. vol. 177; p. 1172.

Cowen, Max, New York, N. Y. Riding-habit. No. 1,022,405; Apr. 9; Sp. p. 1362; Gaz. vol. 177; p. 250.

Cowie, John A., and J. C. Marshall, Summerset, Iowa. Car-coupling. No. 1,023,818; Apr. 23; Sp. p. 4354; Gaz. vol. 177; p. 787.

Cox, Edwin G., Walla Walla, Wash. Sanding-machine. No. 1,022,827; Apr. 9; Sp. p. 2303; Gaz. vol. 177; p. 394.

Cox, Ezekiel B., Newtown, Pa., assignor to E. B. Cox Manufacturing Co., Hopewell, N. J. Apparatus for treating grain. No. 1,024,832; Apr. 30; Sp. p. 6659; Gaz. vol. 177; p. 1172.

Cox, Thomas F., Elizabeth, N. J. Tug-boat. No. 1,024,119; Apr. 23; Sp. p. 5057; Gaz. vol. 177; p. 891.

Coy, Reuben D., Glencoe, Ill. Printing-press. No. 1,022,406; Apr. 9; Sp. p. 1363; Gaz. vol. 177; p. 250.

Crage, Frederick W., Port Elizabeth, Cape Colony. Gearing. No. 1,022,161; Apr. 2; Sp. p. 910; Gaz. vol. 177; p. 145.

Craggs, Ross V., Baltimore, Md., assignor, by mesne assignments, to The National Exchange Bank of Baltimore. Can-crimping die. No. 1,021,825; Apr. 2; Sp. p. 166; Gaz. vol. 177; p. 27.

Craig, Edward G., Florence, Italy. Stage-scenery. No. 1,022,020; Apr. 2; Sp. p. 576; Gaz. vol. 177; p. 90.

Cramer, Robert, assignor to F. J. Matchette, Milwaukee, Wis. Auxiliary controller. No. 1,022,407; Apr. 9; Sp. p. 1366; Gaz. vol. 177; p. 250.

Crandall, Melvin E., Northfield, Minn. Concrete-mixer. No. 1,023,724; Apr. 16; Sp. p. 4145; Gaz. vol. 177; p. 729.

Crawford, Andrew, assignor to T. Smith, Paterson, N. J. Tension device. No. 1,021,919; Apr. 2; Sp. p. 350; Gaz. vol. 177; p. 58.

Creamery Package Manufacturing Company. (See Macnish, Frederick J., assignor.)

Crecelius, Louis J., assignor to C. A. Thompson, St. Louis, Mo. Machine for grinding bottle-stoppers. No. 1,023,131; Apr. 16; Sp. p. 2978; Gaz. vol. 177; p. 536.

Crichton, William A., Paris, Ontario, Canada. Elevator. No. 1,023,626; Apr. 16; Sp. p. 3981; Gaz. vol. 177; p. 699.

Cripe, Daniel E., Hillsburg, Ind. Compound for removing carbon from engine-cylinders. No. 1,022,466; Apr. 9; Sp. p. 1509; Gaz. vol. 177; p. 271.

Crompton and Company Limited. (See Macfarlane and Burge, assignors.)

Crompton & Knowles Loom Works. (See Ryon, Eppa H., assignor.)

Crompton & Knowles Loom Works. (See Wyman, Horace, assignor.)

Crook, Charles M., assignor, by mesne assignments, to E. E. Yaxley, Chicago, Ill. Time-controlled electric switch. No. 1,022,532; Apr. 9; Sp. p. 1642; Gaz. vol. 177; p. 292.

Crosbie, Daniel L., assignor of one-third to J. D. Cornell and V. J. Bartels, Sacramento, Cal. Resilient wheel. No. 1,023,416; Apr. 16; Sp. p. 3550; Gaz. vol. 177; p. 632.

Crosfield & Sons Limited, Joseph. (See Paal, Carl, assignor.)

Cross, Frank L., Detroit, Mich. Means for controlling flow through conduits or mains. No. 1,021,762; Apr. 2; Sp. p. 14; Gaz. vol. 177; p. 5.

Crossley, James, W., Banks, Ark. Tool. No. 1,024,120; Apr. 23; Sp. p. 5058; Gaz. vol. 177; p. 891.

Crossman, Daniel F., Boston, Mass. Corset-fastener. No. 1,024,063; Apr. 23; Sp. p. 4914; Gaz. vol. 177; p. 871.

Crow, Levi H., Wichita Falls, Tex. Closet. No. 1,021,763; Apr. 2; Sp. p. 17; Gaz. vol. 177; p. 5.

Crowdes, Jackson G., Boston, Mass. Engine. No. 1,024,440; Apr. 23; Sp. p. 5729; Gaz. vol. 177; p. 997.

Crowner, James M., Batavia, assignor to Atlas Acetylene Lighting Company, Ottumwa, Iowa. Acetylene-gas generator. No. 1,022,356; Apr. 2; Sp. p. 1257; Gaz. vol. 177; p. 202.

Cullon, John P. (See Irwin, Cullon, and Knowlson.)

Culp, Earle E. (See Rothe and Culp.)

Culver, Edward, assignor of one-half to F. B. Bassler, Chicago, Ill. Swinging window. No. 1,021,862; Apr. 2; Sp. p. 243; Gaz. vol 177; p. 39.

Cummings, Frederick L., Boston, Mass. Bottle-carrier. No. 1,022,533; Apr. 9; Sp. p. 1645; Gaz. vol. 177; p. 292.

Cunniff, John V., Fall River, assignor to J. K. Lanning, Boston, Mass. Bobbin-clutching spinning-spindle. No. 1,024,396; Apr. 23; Sp. p. 5607; Gaz. vol. 177; p. 983.

Cunningham, Allan S., Oskaloosa, Iowa, and B. C. Burton, Barrington, Ill., assignors of one-fourth to E. Henley, Oskaloosa, Iowa. Portable railway construction. No. 1,022,467; Apr. 9; Sp. p. 1509; Gaz. vol. 177; p. 271.

Cunningham, Andrew C., Washington, D. C. Floating dry-dock. No. 1,022,931; Apr. 9; Sp. p. 2516; Gaz. vol. 177; p. 429.

Cunningham, Richard H., New York, N. Y. Dual ignition system. No. 1,022,828; Apr. 9; Sp. p. 2306; Gaz. vol. 177; p. 304.

Cunningham, Richard H., New York, N. Y. Dual ignition system. No. 1,023,552; Apr. 16; Sp. p. 3816; Gaz. vol. 177; p. 674.

Cunningham, William J., Philadelphia, Pa. Machine for capping bottles. No. 1,022,829; Apr. 9; Sp. p. 2310; Gaz. vol. 177; p. 395.

Cuntz, Hermann F., Hartford, Conn. Door. No. 1,022,468; Apr. 9; Sp. p. 1511; Gaz. vol. 177; p. 271.

Cuntz, Hermann F., Hartford, Conn. Tally-chart. No. 1,023,457; Apr. 16; Sp. p. 3629; Gaz. vol. 177; p. 644.

Cureton, Albert. (See Oliver and Cureton.)

Currence, Bony C., Tiffin, Ohio. Trowel. No. 1,024,559; Apr. 30; Sp. p. 6077; Gaz. vol. 177; p. 1076.

Currie, Otis C. (See Stafford and Currie.)

Curry, Alfred A., Bridgeport, Conn. Resilient tire for vehicle-wheels. No. 1,024,976; Apr. 30; Sp. p. 6847; Gaz. vol. 177; p. 1221.

Curtis, Charles H., Argos, Ind. Preserving wood. No. 1,022,064; Apr. 2; Sp. p. 661; Gaz. vol. 177; p. 106.

Curtis, Lewis B., Bridgeport, Conn. Burner for inflammable volatile fluids. No. 1,023,363; Apr. 16; Sp. p. 3441; Gaz. vol. 177; p. 614.

Curtis Publishing Company, The. (See Sargent, William P., assignor.)

Custer, Edgar A., assignor to The Custer Sandless Casting Company, Philadelphia, Pa. Non-annealed car-wheel. No. 1,022,723; Apr. 9; Sp. p. 2092; Gaz. vol. 177; p. 359.

Custer, Edgar A., assignor to The Custer Sandless Casting Company, Philadelphia, Pa. Producing castings having chilled and machinable surfaces in permanent molds. No. 1,022,724; Apr. 9; Sp. p. 2093; Gaz. vol. 177; p. 359.

Custer, George M., Mattoon, Ill. Wrench. No. 1,022,534; Apr. 9; Sp. p. 1646; Gaz. vol. 177; p. 293.

Custer, Levitt L., Dayton, Ohio. Indicator for indicating the ascending and descending movements of aerial vehicles. No. 1,023,122; Apr. 16; Sp. p. 2979; Gaz. vol. 177; p. 536.

Custer Sandless Casting Company, The. (See Custer, Edgar A., assignor.)

Cuthbert, John W., Bay City, Mich. Rail-fastening. No. 1,025,053; Apr. 30; Sp. p. 7093; Gaz. vol. 177; p. 1247.

Cutler, Isabel M. (See Leonard and Cutler, assignors.)

Cutler, William C. (See Leonard and Cutler.)

Czimeg, Georg, Gratz, Austria-Hungary. Cross-joint between flat iron bars. No. 1,022,387; Apr. 2; Sp. p. 1317; Gaz. vol. 177; p. 213.

D. D. Demarest Co. (See Caster, William H., assignor.)

D. H. Burrell & Co. (See Klein, Daniel, assignor.)

D. H. Burrell & Company. (See Feldmeier and Miner, assignors.)

D. H. Burrell & Company. (See Gillies, Alexander, assignor.)

D'Eaubonne, Etienne. (See Sabonadier and D'Eaubonne.)

D'Esposito, Joshua, Oakmont, Pa. Railway-terminal. No. 1,022,659; Apr. 9; Sp. p. 1910; Gaz. vol. 177; p. 334.

D'Espujols, Robert L., Alfort, France. Hydrocarbon-burner. No. 1,023,422; Apr. 16; Sp. p. 3559; Gaz. vol. 177; p. 634.

Dabelstein, Charles, Detroit, Mich. Tire-guard. No. 1,022,658; Apr. 9; Sp. p. 1917; Gaz. vol. 177; p. 334.

Dahl, Jacob, Columbus, Ohio, assignor of one-third to M. Dahl and one-third to R. W. Poelma, Chicago, Ill. Weed-puller. No. 1,024,500; Apr. 30; Sp. p. 5904; Gaz. vol. 177; p. 1055.

Dahl, Martin, *et al.* (See Dahl, Jacob, assignor.)

Dahlenburg, Henry. (See Martin and Dahlenburg.)

Daimler Motoren-Gesellschaft. (See Daimler, Paul, assignor.)

Daimler Motorengesellschaft. (See Moewes and Vischer, assignors.)

Daimler, Paul, Cannstatt, assignor to Daimler Motoren-Gesellschaft, Stuttgart, Germany. Change-speed gearing. No. 1,023,553; Apr. 16; Sp. p. 3819; Gaz. vol. 177; p. 674.

Dale, William B., Chicago, Ill., assignor to Street & Kent Mfg. Co. Self-packing connection for pipes or the like. No. 1,024,560; Apr. 30; Sp. p. 6078; Gaz. vol. 177; p. 1076.

Dalfond, Octavien, Fall River, Mass., assignor to The Standard Equipment Company. Friction let-off. No. 1,024,064; Apr. 23; Sp. p. 4915; Gaz. vol. 177; p. 871.

Danckwardt, Paul, Galena, S. D. Power-producing process. No. 1,023,819; Apr. 23; Sp. p. 4356; Gaz. vol. 177; p. 787.

Danenhower, William J., Los Angeles, Cal. Garment-pressing machine. No. 1,022,535; Apr. 9; Sp. p. 1647; Gaz. vol. 177; p. 293.

Daniels, James E., Monroe, Cal. Seam-ripper. No. 1,021,863; Apr. 2; Sp. p. 244; Gaz. vol. 177; p. 40.

Danielson, Edven. (See Helvig and Danielson.)

Danielson, Gustave F., Youngstown, Ohio. Truck. No. 1,023,097; Apr. 23; Sp. p. 4777; Gaz. vol. 177; p. 848.

Darmstädter, Georg. Darmstadt, Germany. Automatic balance with sliding weights. No. 1,024,881; Apr. 30; Sp. p. 6758; Gaz. vol. 177; p. 1189.

Darst, Jacob A., Caldwell, Kans., and M. Brittain, Chickasha, Okla. Hydrocarbon-furnace. No. 1,025,054; Apr. 30; Sp. p. 7094; Gaz. vol. 177; p. 1247.

Davey, John F., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Work-support. No. 1,023,300; Apr. 16; Sp. p. 3321; Gaz. vol. 177; p. 594.

David, Leon and P., San Francisco, Cal.; said Leon David assignor to said P. David. Manufacturing grate-bars. No. 1,022,773; Apr. 9; Sp. p. 2193; Gaz. vol. 177; p. 376.

David Lupton's Sons Company. (See Wilkinson, Eleazar T., assignor.)

David, Paul. (See David, Leon and P.)

Davidson, David L., Milam, Tex. Trap. No. 1,025,055; Apr. 30; Sp. p. 7095; Gaz. vol. 177; p. 1247.

Davis, Alfred H., St. Petersburg, Fla., assignor, by mesne assignments, to International Concrete Piling Co., Inc., Jamestown, N. Y. Concreting piles. No. 1,025,112; Apr. 30; Sp. p. 7225; Gaz. vol. 177; p. 1266.

Davis, Bethuel M. (See Travis, Davis, and Antoine.)

Davis, Burt F., assignor to L. H. Hollbert, Jackson, Ohio. Level. No. 1,023,301; Apr. 16; Sp. p. 3327; Gaz. vol. 177; p. 594.

Davis, Charles E., assignor to Warner Gear Company, Muncie, Ind. Power-transmission unit for automobiles. No. 1,024,121; Apr. 23; Sp. p. 5059; Gaz. vol. 177; p. 892.

Davis, Don D., Saginaw, Mich. Seal. No. 1,025,081; Apr. 30; Sp. p. 7155; Gaz. vol. 177; p. 1255.

Davis & Furber Machine Company. (See Stevens, Frank C., assignor.)

Davis, Harold E., Smock, Pa. Nail-extractor. No. 1,023,725; Apr. 16; Sp. p. 4147; Gaz. vol. 177; p. 728.

Davis, Irwin, Kirksville, Mo. Knockdown chicken-coop. No. 1,024,441; Apr. 23; Sp. p. 5730; Gaz. vol. 177; p. 997.

Davis, John, Aurora, Ill. Cable-hanger. No. 1,022,226; Apr. 2; Sp. p. 1008; Gaz. vol. 177; p. 161.

Davis, John E., Cortland, N. Y. Press. No. 1,024,721; Apr. 30; Sp. p. 6426; Gaz. vol. 177; p. 1132.

Davis, John T., Alameda, assignor to The Technical Development Company, San Francisco, Cal. Distillation apparatus. No. 1,023,244; Apr. 16; Sp. p. 3212; Gaz. vol. 177; p. 574.

Davis Locomotive Wheel Company, (See Westlake, Charles T., assignor.)

Davis, Luther M., Portland, Oreg. Electric trolley. No. 1,022,357; Apr. 2; Sp. p. 1260; Gaz. vol. 177; p. 202.

Davis, Milton E., Canastota, N. Y. Tire. No. 1,023,554; Apr. 16; Sp. p. 3821; Gaz. vol. 177; p. 674.

Davison, Percy R., Gravesend, England. Crane. No. 1,023,507; Apr. 16; Sp. p. 3730; Gaz. vol. 177; p. 660.

Davock, Clarence W., assignor to Detroit Steel Products Company, Detroit, Mich. Clip for metallic window-sash. No. 1,022,123; Apr. 2; Sp. p. 783; Gaz. vol. 177; p. 125.

Davoren, John J., assignor of one-half to W. T. Davoren, Denver, Colo. Composition of matter. No. 1,024,561; Apr. 30; Sp. p. 6080; Gaz. vol. 177; p. 1076.

Davoren, William T. (See Davoren, John T., assignor.)

Dawkins, John R., and D. Parks, St. Louis, Mo.; said Parks assignor to said Dawkins. Brickmaking-machine. No. 1,024,122; Apr. 23; Sp. p. 5060; Gaz. vol. 177; p. 892.

Dawson, Arthur T., and G. T. Buckham, Westminster, London, assignors, by mesne assignments, to Vickers Limited, Westminster, England. Breech-loading ordnance. No. 1,022,124; Apr. 2; Sp. p. 784; Gaz. vol. 177; p. 125.

Dawson, Arthur T., and G. T. Buckham, Westminster, London, assignors to Vickers Limited, Westminster, England. Cartridge extracting and ejecting mechanism for breech-loading ordnance. No. 1,022,469; Apr. 9; Sp. p. 1513; Gaz. vol. 177; p. 271.

Dawson, Harriet G., Atlanta, Ga. Armor for battleships. No. 1,023,627; Apr. 16; Sp. p. 3984; Gaz. vol. 177; p. 700.

Day, John M. (See Emery and Day.)

De Jahn, Fredrik W., assignor to General Chemical Company, New York, N. Y. Production of nitric acid. No. 1,023,183; Apr. 16; Sp. p. 2961; Gaz. vol. 177; p. 536.

De Julio, Christ, San Francisco, Cal. Dispenser. No. 1,022,774; Apr. 9; Sp. p. 2194; Gaz. vol. 177; p. 376.

De Laski, Albert, Weehawken, and P. D. Thropp, assignors to De Laski & Thropp Circular Woven Tire Company, Trenton, N. J. Fabric and yarn therefor. (Reissue.) No. 13,393; Apr. 2; Sp. p. 1534; Gaz. vol. 177; p. 217.

De Laski & Thropp Circular Woven Tire Company. (See De Laski and Thropp, assignors.) (Reissue.)

De Maine, William A. (See Llet and De Maine.)

De Noon, Clyde W., Braddock, Pa. Paint-can. No. 1,022,830; Apr. 9; Sp. p. 2313; Gaz. vol. 177; p. 395.

De Reamer, Frank C., Schenectady, N. Y., assignor to General Electric Company. Snap-switch. No. 1,022,536; Apr. 9; Sp. p. 1650; Gaz. vol. 177; p. 293.

De Voe, Albert H., Westfield, N. J., assignor to The Singer Manufacturing Company. Strip folding and guiding attachment for sewing-machines. No. 1,024,316; Apr. 23; Sp. p. 5468; Gaz. vol. 177; p. 959.

De Vore, Thomas L., Jacksonville, Oreg. Tip-protector for shoes. No. 1,023,417; Apr. 16; Sp. p. 3551; Gaz. vol. 177; p. 632.

De Wein, George F., assignor to Allis-Chalmers Company, Milwaukee, Wis. Coal-feeder. No. 1,023,418; Apr. 16; Sp. p. 3552; Gaz. vol. 177; p. 632.

Deakin, Gerald, Berkeley, Cal. Automatic telephone-exchange system. No. 1,024,184; Apr. 23; Sp. p. 5194; Gaz. vol. 177; p. 913.

Dean Electric Company, The. (See Dean, William W., assignor.)

Dean Electric Company, The. (See Libby, Albion D. T., assignor.)

Dean Electric Company, The. (See Manson, Ray H., assignor.)

Dean, Henry S., London, England. Apparatus for packing or stuffing articles. No. 1,022,306; Apr. 2; Sp. p. 1151; Gaz. vol. 177; p. 185.

Dean, James H., Chicago, Ill., assignor to Empire Voting Machine Company, Jamestown, N. Y. Voting-machine. No. 1,024,123; Apr. 23; Sp. p. 5065; Gaz. vol. 177; p. 892.

Dean, William W., assignor to The Dean Electric Company, Elyria, Ohio. Telephone-receiver. No. 1,021,920; Apr. 2; Sp. p. 352; Gaz. vol. 177; p. 58.

Dean, William W., assignor to The Dean Electric Company, Elyria, Ohio. Ringer. No. 1,022,065; Apr. 2; Sp. p. 663; Gaz. vol. 177; p. 106.

Dearborn, Charles A., assignor to D. J. Newland, New York, N. Y. Work holding and feeding means for sewing-machines. No. 1,025,082; Apr. 30; Sp. p. 7155; Gaz. vol. 177; p. 1256.

Debrowsky, George. (See Kenits and Debrowsky.)

Decker, Frank, Rochester, N. Y. Cheese-cutting machine. No. 1,022,125; Apr. 2; Sp. p. 786; Gaz. vol. 177; p. 125.

Deckert, Harry C., St. Louis, Mo. Candle-holder. No. 1,021,921; Apr. 2; Sp. p. 355; Gaz. vol. 177; p. 59.

Dehalnault, Charles. (See Auscher and Dehalnault.)

Dehle, John C. (See Stein, Leo, assignor.)

Deitz, John H., Allenport, Pa. Curtain-fixture. No. 1,022,227; Apr. 2; Sp. p. 1010; Gaz. vol. 177; p. 162.

Delafield, Benjamin T., assignor of one-fourth to J. E. Weaver, Kansas City, Mo. Boat. No. 1,022,725; Apr. 9; Sp. p. 2094; Gaz. vol. 177; p. 360.

Delafond, Elie, Mexico, Mexico. Decorticating-machine. No. 1,023,508; Apr. 16; Sp. p. 3731; Gaz. vol. 177; p. 660.

Delorme, Louis A., *et al.* (See Lord, Peter, assignor.)

Dempster, John, Knoxville, Tenn. Roach-trap. No. 1,024,767; Apr. 30; Sp. p. 6524; Gaz. vol. 177; p. 1149.

Dempster, John T. H., Schenectady, N. Y., assignor to General Electric Company. Wire-drawing. No. 1,022,182; Apr. 2; Sp. p. 911; Gaz. vol. 177; p. 145.

Dempster, Leonard E., Schenectady, N. Y., assignor to General Electric Company. Machine for forming filaments. No. 1,024,185; Apr. 23; Sp. p. 5211; Gaz. vol. 177; p. 913.

Denlinger, Harry T., Lancaster, Pa. Figure toy. No. 1,024,314; Apr. 23; Sp. p. 5406; Gaz. vol. 177; p. 958.

Denman, Frederick, Highland Park, Ill. Vehicle-spring. No. 1,022,775; Apr. 9; Sp. p. 2195; Gaz. vol. 177; p. 377.

Denninger, Henry, *et al.* (See McKaig, Eddy T., assignor.)

Dennis, Samuel K., Chicago, Ill., assignor to International Harvester Company. Corn-planter. No. 1,024,768; Apr. 30; Sp. p. 6528; Gaz. vol. 177; p. 1149.

Dennison, Wilburn N., Merchantville, N. J., assignor to Victor Talking Machine Company. Talking-machine. No. 1,022,126; Apr. 2; Sp. p. 759; Gaz. vol. 177; p. 126.

Dennison, Wilburn N., Merchantville, N. J., assignor to Victor Talking Machine Company. Air-compressor. No. 1,023,820; Apr. 23; Sp. p. 4361; Gaz. vol. 177; p. 788.

Denver Rock Drill and Machinery Co., The. (See Waugh, Daniel S., assignor.)

Denver Rock Drill and Machinery Company, The. (See Waugh, Daniel S., assignor.) (Reissue.)

Denzler, Carl, Detroit, Mich. Lock. No. 1,021,864; Apr. 2; Sp. p. 245; Gaz. vol. 177; p. 40.

Deogeorge, Raoul. (See Lebreil and Deogeorge.)

Deussel, Leo G., *et al.* (See Williams, Andrew J. and C. E., assignors.)

Detable, Pierre O., Paris, France. Automatically-stabilized supporting-plane for aeroplanes and the like. No. 1,024,315; Apr. 23; Sp. p. 5467; Gaz. vol. 177; p. 958.

Detroit Fuse & Manufacturing Company. (See Horton, Bryson D., assignor.)

Detroit Fuse & Manufacturing Company. (See Kling and Horton, assignors.)

Detroit Steel Products Company. (See Davock, Clarence W., assignor.)

Detroit Typomarker Company. (See Scott, Burton W., assignor.)

Dettelbach, Edward, Cleveland, Ohio. Tire. No. 1,022,127; Apr. 2; Sp. p. 791; Gaz. vol. 177; p. 126.

Deutsche Gasglühlicht Aktiengesellschaft (Auergesellschaft). (See Süssmann, Heinrich, assignor.)

Devine, Thomas M., assignor to The Ohio Varnish Company, Cleveland, Ohio. Paint and varnish remover. No. 1,024,926; Apr. 30; Sp. p. 6850; Gaz. vol. 177; p. 1205.

Dewey, Frederic L., assignor to Parlin & Orendorff Company, Canton, Ill. Lister-cultivator. No. 1,021,826; Apr. 2; Sp. p. 167; Gaz. vol. 177; p. 27.

Dewey, Guy C., Carthage, N. Y. Winder-shaft collar. No. 1,023,419; Apr. 16; Sp. p. 3554; Gaz. vol. 177; p. 633.

Dexter Folder Company. (See Dexter and Jones, assignors.)

Dexter, Talbot C., and R. E. Jones, assignors to Dexter Folder Company, Pearl River, N. Y. Paper-feeding machine. No. 1,022,776; Apr. 9; Sp. p. 2197; Gaz. vol. 177; p. 377.

Di Medio, Joseph, Camden, N. J. Phonographic-disk cabinet. No. 1,023,385; Apr. 16; Sp. p. 3487; Gaz. vol. 177; p. 622.

Diamond Electric Company. (See Parkhurst, Leon F., assignor.)

Diamond Electric Company. (See Parkhurst and Weeks, assignors.)

Dick, Albert B., Lake Forest, assignor to A. B. Dick Company, Chicago, Ill. Stencil-duplicating apparatus. No. 1,024,186; Apr. 23; Sp. p. 5212; Gaz. vol. 177; p. 913.

Dickens, Norman F. (See Lindley and Dickens.)

Dickey, Albert F. (See Connell and Dickey.)

Dickinson, Edgar D. (See Junggren and Dickinson.)

Dickinson, Edwin C., Talcott, W. Va. Gas-burner. No. 1,025,083; Apr. 30; Sp. p. 7163; Gaz. vol. 177; p. 1256.

Dickinson, Joseph H., Montclair, N. J. Cableway logging apparatus. No. 1,024,833; Apr. 30; Sp. p. 6662; Gaz. vol. 177; p. 1172.

Dickson, Frank H., Oswego, N. Y. Chain wrench. No. 1,023,198; Apr. 16; Sp. p. 3128; Gaz. vol. 177; p. 560.

Dickson, Robert G., *et al.* (See Power, Michael, assignor.)

Dieckmann, George P., assignor of one-half to H. B. Hasbrouck, Mason City, Iowa. Compound for waterproofing cement and the like and making same. No. 1,023,926; Apr. 23; Sp. p. 4628; Gaz. vol. 177; p. 823.

Diescher, Samuel E., Pittsburgh, Pa. Pickling sheets, &c. No. 1,023,458; Apr. 16; Sp. p. 3631; Gaz. vol. 177; p. 644.

Dietz, William, Chicago, Ill., assignor to McCord Manufacturing Company, Detroit, Mich. Radiator-assembling machine. No. 1,024,124; Apr. 23; Sp. p. 5060; Gaz. vol. 177; p. 893.

Dillon, John, Philadelphia, Pa., assignor to Otis Elevator Company, Jersey City, N. J. Alternating-current-motor-controlling apparatus. No. 1,023,134; Apr. 16; Sp. p. 2983; Gaz. vol. 177; p. 537.

Dillon Safety Razor Co., The. (See Dillon, Stephen V. assignor.)

Dillon, Stephen V., Butler, Pa., assignor to The Dillon Safety Razor Co. Safety-razor. No. 1,023,364; Apr. 16; Sp. p. 3442; Gaz. vol. 177; p. 615.
Dinkey, Alva C., Pittsburg, Pa. Metal rail-tie. No. 1,024,065; Apr. 23; Sp. p. 4916; Gaz. vol. 177; p. 871.
Dinsmore, Samuel, Lyons, Kans. Pressure-gage. No. 1,023,821; Apr. 23; Sp. p. 4362; Gaz. vol. 177; p. 788.
Dinwiddie, Howard E., Onawa, Iowa. Manure-spreader. No. 1,023,302; Apr. 16; Sp. p. 3329; Gaz. vol. 177; p. 595.
Dion, Léon, New York, N. Y., assignor to Eureka Machinery Company. Filtering-faucet. No. 1,022,470; Apr. 9; Sp. p. 1515; Gaz. vol. 177; p. 272.
Dirand, Louis J., assignor of one-half to C. H. Carlin, Torrington, Conn. Spark-plug. No. 1,024,834; Apr. 30; Sp. p. 6664; Gaz. vol. 177; p. 1173.
Direct Drive Gear Company. (See McBrair, Henry C., assignor.)
Dishman, Charles H., Henderson, Ky. Excavating-scraper. No. 1,023,303; Apr. 16; Sp. p. 3331; Gaz. vol. 177; p. 595.
Dissle, Henry, Washington, D. C. Aerial navigation. No. 1,022,777; Apr. 9; Sp. p. 2204; Gaz. vol. 177; p. 378.
Ditsworth, Oliver, Mount Carroll, Ill. Pulley. No. 1,021,764; Apr. 2; Sp. p. 19; Gaz. vol. 177; p. 6.
Dix, Joseph J., St. Louis, Mo. Coal furnace and stove. No. 1,023,459; Apr. 16; Sp. p. 3633; Gaz. vol. 177; p. 644.
Dixie Cotton Felt Mattress Company. (See Courts, Benjamin D., assignor.)
Dixie Cotton Picker Co. (See Appleby, John F., assignor.)
Dixon, Robert M., East Orange, and G. E. Hulse, Jersey City, N. J., assignors to The Safety Car Heating & Lighting Company. Lighting apparatus. No. 1,024,501; Apr. 30; Sp. p. 5905; Gaz. vol. 177; p. 1056.
Doak, James G., Philadelphia, Pa. Roller-skate. No. 1,024,835; Apr. 30; Sp. p. 6668; Gaz. vol. 177; p. 1173.
Dobbins Manufacturing Company, The. (See Bartholow, William P., assignor.)
Doblin, Charles. (See Everett, George W., assignor.)
Dodson, Charles I., Pittsburg, Kans., assignor to The Dodson Manufacturing Company, Phoenix, Ariz. Means for exploding charges. No. 1,024,621; Apr. 30; Sp. p. 6215; Gaz. vol. 177; p. 1097.
Dodson, Charles I., Pittsburg, Kans., assignor to The Dodson Manufacturing Company, Phoenix, Ariz. Means for exploding charges. No. 1,024,622; Apr. 30; Sp. p. 6220; Gaz. vol. 177; p. 1007.
Dodson Manufacturing Company, The. (See Dodson, Charles I., assignor.)
Doherty, Henry L., New York, N. Y. Increasing the temperature of combustion in gas-fired furnaces. No. 1,024,678; Apr. 30; Sp. p. 6338; Gaz. vol. 177; p. 1117.
Domestic Appliances Company. (See Flynt, Louis W. G., assignor.)
Domizi, David F., Franklin, Pa. Chuck for piston-rings. No. 1,024,882; Apr. 30; Sp. p. 6759; Gaz. vol. 177; p. 1189.
Donahue, Edward R., H. J. Anderson, and H. B. Gregg, Bradford, Pa. Pull-line coupling. No. 1,022,306; Apr. 2; Sp. p. 1153; Gaz. vol. 177; p. 185.
Donaldson, William W., Kewanee, Ill. Combined advertising medium and fly-trap. No. 1,024,187; Apr. 23; Sp. p. 5217; Gaz. vol. 177; p. 914.
Donnellan-Bock Manufacturing Company. (See Bock, Alfred C. O., assignor.)
Donovan, Silas S., assignor to The Wilcox & White Company, Meriden, Conn. Player-piano action. No. 1,022,066; Apr. 2; Sp. p. 665; Gaz. vol. 177; p. 106.
Dorneth, Julius, assignor to Typograph G. m. b. H., Berlin, Germany. Matrix-setting and line-casting machine. No. 1,021,827; Apr. 2; Sp. p. 171; Gaz. vol. 177; p. 28.
Dorneth, Julius, assignor to Typograph G. m. b. H., Berlin, Germany. Typograph-machine. No. 1,021,828; Apr. 2; Sp. p. 172; Gaz. vol. 177; p. 28.
Dorr, John V. (See Nevill, David J., assignor.)
Dosch, Peter, Stratford, Conn. Boot and shoe. No. 1,022,537; Apr. 9; Sp. p. 1651; Gaz. vol. 177; p. 293.
Doty, John C., Mount Vernon, Ohio. Flying-machine. No. 1,023,927; Apr. 23; Sp. p. 4630; Gaz. vol. 177; p. 823.
Double Body Bolster Company. (See Westlake, Charles T., assignor.)
Dougherty, John W., Steelton, Pa. Furnace-charging device. No. 1,024,623; Apr. 30; Sp. p. 6224; Gaz. vol. 177; p. 1097.
Dougherty, Owen T. (See Myer, Albert P., assignor.)
Dougins, James T., Kenosha, Wis. Hydraulic-power plant. No. 1,024,188; Apr. 23; Sp. p. 5218; Gaz. vol. 177; p. 914.
Douglas, Edwin R., Glenside, Pa. Buffing-machine. No. 1,022,128; Apr. 2; Sp. p. 793; Gaz. vol. 177; p. 126.
Douglas, John, Newark, N. J., assignor to The Singer Manufacturing Company. Multiple-tuck folder for sewing-machines. No. 1,024,317; Apr. 23; Sp. p. 5472; Gaz. vol. 177; p. 959.
Douglass, Harry J., Bellingham, Wash. Feeding mechanism. No. 1,022,581; Apr. 9; Sp. p. 1745; Gaz. vol. 177; p. 308.
Douthitt, James S., *et al.* (See Vargyas, Eugene von, assignor.)
Doutney, George, New York, N. Y. Automatic feed-bag. No. 1,022,183; Apr. 2; Sp. p. 913; Gaz. vol. 177; p. 146.
Dow, Alexander, New York, N. Y. Rubber tire for vehicles. No. 1,024,189; Apr. 23; Sp. p. 5221; Gaz. vol. 177; p. 915.
Dow, James M., Everett, Mass. Method and apparatus for making stereotype-plates. No. 1,022,067; Apr. 2; Sp. p. 668; Gaz. vol. 177; p. 107.
Dow, John L., Melrose Highlands, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Forepart-form for shoe-turning machines. No. 1,022,660; Apr. 9; Sp. p. 1921; Gaz. vol. 177; p. 335.
Dowd, John P., assignor to The Brown Hoisting Machinery Company, Cleveland, Ohio. Mechanism for operating cranes. No. 1,024,836; Apr. 30; Sp. p. 6670; Gaz. vol. 177; p. 1174.
Dowden, John W., assignor of one-half to P. G. Gimnich, Reeves, La. Firearm. No. 1,024,190; Apr. 23; Sp. p. 5222; Gaz. vol. 177; p. 915.
Downey, Richard F., assignor to Tailors' Form Company, Milwaukee, Wis. Method and apparatus for draping dummies from an uncut length of cloth. No. 1,024,027; Apr. 30; Sp. p. 6860; Gaz. vol. 177; p. 1205.
Downs, John H., New York, N. Y. Wire fence. No. 1,023,509; Apr. 16; Sp. p. 3733; Gaz. vol. 177; p. 661.
Draper Company. (See Coburn, George A., assignor.)
Draper Company. (See Lussier, Henry, assignor.)
Draper Company. (See Rhoades, Alonzo E., assignor.)
Dressler, Conrad, Earl's Court, London, England. Oven for use in the manufacture of tiles, pottery, and the like. No. 1,023,628; Apr. 16; Sp. p. 3985; Gaz. vol. 177; p. 700.
Drey, Wilfred J., Catawissa, Pa., assignor to United Shoe Machinery Company, Paterson, N. J. Making welt-shoes. No. 1,023,535; Apr. 16; Sp. p. 3822; Gaz. vol. 177; p. 675.
Drohan, Thomas F., Schenectady, N. Y. Pillow. No. 1,023,629; Apr. 16; Sp. p. 3989; Gaz. vol. 177; p. 700.
Drucker, Harry N., Cincinnati, Ohio. Wardrobe-trunk. No. 1,024,125; Apr. 23; Sp. p. 5073; Gaz. vol. 177; p. 893.
Drukman, Isaac. (See Eisenberg, Rubin, assignor.)
Drummond, William J., Philadelphia, Pa. Burial-box. No. 1,024,471; Apr. 23; Sp. p. 5810; Gaz. vol. 177; p. 1010.
Druschel, Henry, Manheim, Pa. Friction-clutch. No. 1,021,972; Apr. 2; Sp. p. 480; Gaz. vol. 177; p. 76.
Du Pont, Francis I., assignor to The E. I. du Pont de Nemours Powder Company, Wilmington, Del. Removal of acids from nitrocellulose and centrifugal machine therefor. No. 1,024,624; Apr. 30; Sp. p. 6227; Gaz. vol. 177; p. 1098.
Dubay, Arthur, Gardiner, Me. Teething-finger. No. 1,023,822; Apr. 23; Sp. p. 4363; Gaz. vol. 177; p. 788.
Dubé, Alfred, Edmonton, Alberta, Canada. Tongue-lock. No. 1,022,932; Apr. 9; Sp. p. 2519; Gaz. vol. 177; p. 429.
Dubilier, William, Seattle, Wash. High-frequency apparatus. No. 1,023,135; Apr. 16; Sp. p. 2985; Gaz. vol. 177; p. 537.
Ducsay, Steve, Cannonsburg, Pa. Latch. No. 1,022,831; Apr. 9; Sp. p. 2318; Gaz. vol. 177; p. 395.
Dudek, John L. (See Adams and Dudek.)
Duemer, Louis, Hamilton, Ohio. Furnace. No. 1,023,136; Apr. 16; Sp. p. 2987; Gaz. vol. 177; p. 537.
Duff, Alfred B., Pittsburgh, Pa. Blower for gas-producers. No. 1,022,388; Apr. 2; Sp. p. 1313; Gaz. vol. 177; p. 214.
Dufield, Martha J., Woodbury, N. J. Sad-iron heater. No. 1,023,137; Apr. 16; Sp. p. 2988; Gaz. vol. 177; p. 538.
Dulin, William T., Philadelphia, Pa. Blank-handling mechanism. No. 1,023,138; Apr. 16; Sp. p. 2989; Gaz. vol. 177; p. 538.
Dull, Andrew J. (See Weatherby, Joseph, Jr., assignor.)
Dull, Andrew J. (See Weatherby and Dull.)
Duner, John C., Wheaton, Ill. Door. No. 1,022,661; Apr. 9; Sp. p. 1922; Gaz. vol. 177; p. 335.
Dunham, Carl E., Maddock, N. D. Starting device for gas-engines. No. 1,022,538; Apr. 9; Sp. p. 1652; Gaz. vol. 177; p. 294.
Dunham Company, The. (See Dunham, Wiley J., assignor.)
Dunham, George W., assignor to The Chalmers Motor Company, Detroit, Mich. Radiator. No. 1,022,662; Apr. 9; Sp. p. 1924; Gaz. vol. 177; p. 335.
Dunham, Orson W., assignor, by mesne assignments, to The Braeckel Concentrator Company, Joplin, Mo. Sludge-table. No. 1,023,009; Apr. 9; Sp. p. 2671; Gaz. vol. 177; p. 456.
Dunham, Wiley J., assignor to The Dunham Company, Berea, Ohio. Soil-pulverizer. No. 1,023,139; Apr. 16; Sp. p. 2994; Gaz. vol. 177; p. 538.
Dunkel, Wilber R., Pana, assignor of one-half to C. B. Scroggin, Harristown, Ill. Automobile-primer. No. 1,021,765; Apr. 2; Sp. p. 20; Gaz. vol. 177; p. 6.
Dunn, Clifford E., New York, N. Y. Safety-razor. No. 1,022,623; Apr. 9; Sp. p. 1837; Gaz. vol. 177; p. 322.
Dunn, Peter S., assignor of one-third to D. E. Fitz Gerald and one-third to T. F. Fitzsimmons, New Haven, Conn. Valve. No. 1,022,471; Apr. 9; Sp. p. 1518; Gaz. vol. 177; p. 272.
Dunn, Sola B., Chicago, Ill. Mouth-speculum. No. 1,022,068; Apr. 2; Sp. p. 670; Gaz. vol. 177; p. 107.
Dupuis, Joseph A., Portland, Oreg. Hinge. No. 1,024,837; Apr. 30; Sp. p. 6672; Gaz. vol. 177; p. 1174.
Durbin, Alfred, McConnelsville, Ohio. Magneto for internal-combustion engines. No. 1,022,832; Apr. 9; Sp. p. 2316; Gaz. vol. 177; p. 396.
Duschen, Elmer, Silver Springs, N. Y. Evener-bar. No. 1,024,318; Apr. 23; Sp. p. 5475; Gaz. vol. 177; p. 960.

Dustin, John E., Pittsfield, N. H. Automatic trap-nest. No. 1,024,319; Apr. 23; Sp. p. 5476; Gaz. vol. 177; p. 960.
Dustman, Edward J., New York, N. Y. Outlet-box. No. 1,023,460; Apr. 16; Sp. p. 3636; Gaz. vol. 177; p. 645.
Dutton, Walter N., Oak Park, Ill. Heating apparatus. No. 1,022,184; Apr. 2; Sp. p. 915; Gaz. vol. 177; p. 146.
Dyer, Frank L., Montclair, N. J. Portable electric heater. No. 1,021,974; Apr. 2; Sp. p. 483; Gaz. vol. 177; p. 77.
Dyer, Frank L., Montclair, N. J., assignor, by mesne assignments to Thomas A. Edison, Incorporated, West Orange, N. J. Making sound-records. No. 1,021,973; Apr. 2; Sp. p. 482; Gaz. vol. 177; p. 76.
Dyer, William J., and A. F. Ewart, assignors to Honolulu Iron Works Company, Honolulu, Hawaii. Sugar-cane mill. No. 1,021,829; Apr. 2; Sp. p. 177; Gaz. vol. 177; p. 29.
Dyson, Louis M., assignor to The American Hardware Corporation, New Britain, Conn. Button for suit-case locks. No. 1,023,823; Apr. 23; Sp. p. 4364; Gaz. vol. 177; p. 789.
E. B. Cox Manufacturing Co. (See Cox, Ezekiel B., assignor.)
E. B. Van Wagner Manufacturing Company. (See Sherman, Orrin M., assignor.)
E. I. du Pont de Nemours Powder Company. (See Du Pont, Francis I., assignor.)
E. R. Knott Machine Company. (See Knott, Eustace R., assignor.)
E. W. Bliss Company. (See Gabriel, Charles R., assignor.)
E. W. Bliss Company. (See Leavitt, Frank M., assignor.)
Eames, John C., San Francisco, Cal. Trolley-wheel for electric cars. No. 1,022,374; Apr. 2; Sp. p. 1291; Gaz. vol. 177; p. 209.
East, Elvin, Sheffield, Ala. Spring-wheel. No. 1,024,977; Apr. 30; Sp. p. 6949; Gaz. vol. 177; p. 1221.
Eastern Flexible Conduit Company. (See Hinsky, Anthony P., assignor.)
Eastman Kodak Co. (See Badgley, Samuel F., assignor.)
Eastman Kodak Co. (See Folmer, William F., assignor.)
Eastman Kodak Co. (See Ruttan and Hutchings, assignors.)
Eastman Kodak Company. (See Hutchings, Charles E., assignor.)
Eaton, Drusilla E., Syracuse, N. Y. Toy figure. No. 1,023,420; Apr. 16; Sp. p. 3555; Gaz. vol. 177; p. 633.
Eberhart, William C., and S. Glaser, Sayre, Pa. Roller-bearing hub. No. 1,022,307; Apr. 2; Sp. p. 1154; Gaz. vol. 177; p. 185.
Eberle, Frank L. (See Watts and Eberle.)
Ebersole, Cyrus P., assignor to American Automotoneer Company, Philadelphia, Pa. Controller-regulator. No. 1,024,769; Apr. 30; Sp. p. 6527; Gaz. vol. 177; p. 1149.
Ecaubert, Frederic, New York, N. Y. Escapement-regulator. No. 1,023,140; Apr. 16; Sp. p. 2995; Gaz. vol. 177; p. 539.
Eckert, William F., and W. C. Whitcomb, Rochelle, Ill., assignors to George D. Whitcomb Company. Gearing. No. 1,024,562; Apr. 30; Sp. p. 6080; Gaz. vol. 177; p. 1077.
Eckhart, Emma B., Philadelphia, Pa. Hat-pin protector. No. 1,024,563; Apr. 30; Sp. p. 6084; Gaz. vol. 177; p. 1077.
Economy Car Heating Company. (See Coggin, Frank F., assignor.)
Eddins, Sextus A., Charlottesville, Va., assignor to O. A. Miller Treeing Machine Company, Portland, Me. Machine for breaking-in shoes. No. 1,023,510; Apr. 16; Sp. p. 3736; Gaz. vol. 177; p. 661.
Eder, Charles H. (See Nettenstrom, David, assignor.)
Edgerton, Charles, Philadelphia, Pa. Apparatus for extracting grease and oils. No. 1,024,838; Apr. 30; Sp. p. 6674; Gaz. vol. 177; p. 1174.
Edison, Thomas A. (See Aylsworth, Jonas W., assignor.)
Edison, Thomas A. (See Dyer, Frank L., assignor.)
Edison, Thomas A. (See Hibbard, Charles L., assignor.)
Edison, Thomas A. (See Pierman, Alexander N., assignor.)
Edison, Thomas A., Llewellyn Park, Orange, assignor, by mesne assignments, to Thomas A. Edison, Incorporated, West Orange, N. J. Phonographic recording-stylus. No. 1,024,839; Apr. 30; Sp. p. 6677; Gaz. vol. 177; p. 1175.
Edmonson, Edgar, Greenfield, Ohio. Casket truck or bier. No. 1,023,070; Apr. 9; Sp. p. 2802; Gaz. vol. 177; p. 476.
Edwards, Arthur H., Stoke Newington, London, England. Aeroplane or the like or analogous machine or device. No. 1,023,556; Apr. 16; Sp. p. 3827; Gaz. vol. 177; p. 675.
Edwards, Bruce V., Bayonne, N. J. Wrapping-machine. No. 1,023,824; Apr. 23; Sp. p. 4365; Gaz. vol. 177; p. 789.
Edwards & Co. (See Lungen, Adam, assignor.)
Edwards, Oliver C., Jr., Troy, N. Y. Caisson. No. 1,023,825; Apr. 23; Sp. p. 4383; Gaz. vol. 177; p. 789.
Edwards, Richard J., Galena, Ill. Vehicle-spring. No. 1,022,228; Apr. 2; Sp. p. 1011; Gaz. vol. 177; p. 162.
Edwards, Stillman B., Villisca, Iowa. Spring-wheel. No. 1,024,191; Apr. 23; Sp. p. 5234; Gaz. vol. 177; p. 915.
Edwards, William S., Bridport, England. Stretching device for lawn-tennis nets. No. 1,023,928; Apr. 23; Sp. p. 4631; Gaz. vol. 177; p. 824.
Egnér, Carl E., Stockholm, and J. G. Holmström, Saltsjö-Storängen, Sweden. Multiple telephone-transmitter. No. 1,023,557; Apr. 16; Sp. p. 3829; Gaz. vol. 177; p. 676.
Ehinger, Frank, assignor of one-third to H. Bloomingdale and one-third to W. W. Levy, New Bedford, Mass. Harness-stop-motion device. No. 1,024,680; Apr. 30; Sp. p. 6344; Gaz. vol. 177; p. 1118.
Ehmann, Jacob, Arlington, N. J. Clasp. No. 1,022,663; Apr. 9; Sp. p. 1925; Gaz. vol. 177; p. 336.
Ehmsen, Carl F., assignor to Metall-Industrie Schönebeck A. G., Schönebeck-on-the-Elbe, Germany. Key-cap for type-writing and similar machines. No. 1,021,975; Apr. 2; Sp. p. 485; Gaz. vol. 177; p. 77.
Ehrenberg, Charles, *et al.* (See Buhr, Emil, assignor.)
Ehrhardt, Heinrich, Dusseldorf, assignor to Rheinische Metallwaaren- und Maschinenfabrik, Dusseldorf-Derendorf, Germany. Manufacture of cartridge-cases of brass or other alloys of copper. No. 1,024,840; Apr. 30; Sp. p. 6679; Gaz. vol. 177; p. 1175.
Ehrsam, William J., trustee. (See Morscher, Lawrence N., assignor.)
Eiche, Frederick, Lincoln, Nebr. Clothes-line reel. No. 1,024,978; Apr. 30; Sp. p. 6950; Gaz. vol. 177; p. 1222.
Eichelkraut, Walter, Zehlendorf, near Berlin, Germany. Safety device for cash-desks. No. 1,023,461; Apr. 16; Sp. p. 3638; Gaz. vol. 177; p. 645.
Eicken, Hubert. (See Windrath and Eicken.)
Eifert, Carl F. (See Eifert, Roy W. and C. F.)
Eifert, Roy W. and C. F., Huntsville, Ill. Road-drag. No. 1,023,421; Apr. 16; Sp. p. 3557; Gaz. vol. 177; p. 633.
Eilert, Henry F., Cleveland, Ohio. Convertible window-sash. No. 1,023,726; Apr. 16; Sp. p. 4147; Gaz. vol. 177; p. 728.
Eisenberg, Rubin, assignor of one-half to I. Drukman, Baltimore, Md. Soldering-iron heater. No. 1,024,320; Apr. 23; Sp. p. 5478; Gaz. vol. 177; p. 960.
Eisenhise, Harry W., Reading, Pa. Fire-fighting apparatus. No. 1,023,141; Apr. 16; Sp. p. 2998; Gaz. vol. 177; p. 539.
Ekker, Charles, Hammond, La. Hat-pin-point protector. No. 1,022,833; Apr. 9; Sp. p. 2318; Gaz. vol. 177; p. 396.
Ekman, Carl. (See Sinclair and Ekman.)
Elbel, Karl, assignor to Kalle and Company, Aktiengesellschaft, Biebrich, Germany. Manufacture of beta-naphthol-ortho-oxy-azo dye. No. 1,023,199; Apr. 16; Sp. p. 3130; Gaz. vol. 177; p. 560.
Elder, Edward H., Chicopee Falls, assignor to National Blank Book Company, Holyoke, Mass. Loose-leaf binder. No. 1,024,472; Apr. 23; Sp. p. 5812; Gaz. vol. 177; p. 1010.
Elder, Gordon W., Malden, Mass. Separator. No. 1,023,462; Apr. 16; Sp. p. 3639; Gaz. vol. 177; p. 646.
Eldred, Frank R., assignor to The Eli Lilly & Company, Indianapolis, Ind. Ampoule. No. 1,022,060; Apr. 2; Sp. p. 675; Gaz. vol. 177; p. 108.
Electric-Export Werke G. m. b. H. (See Gottschalck, Emil, assignor.)
Electric and Ordnance Accessories Company Limited. (See Garner and Mueller, assignors.)
Electric Storage Battery Company, The. (See Bell, Charles W., assignor.)
Electro-Clock Company, The. (See Vincent, Sidney C., assignor.)
Electro-Magnetic Tool Company. (See Rowe, George H., assignor.)
Electromotors Limited *et al.* (See Hamilton, John H., assignor.)
Eli Lilly & Company, The. (See Eldred, Frank R., assignor.)
Elkhart Musical Instrument Company. (See Reid, William C., assignor.)
Elkins, Ransom M., Poplar Bluff, Mo. Rinsing-faucet. No. 1,023,630; Apr. 16; Sp. p. 3990; Gaz. vol. 177; p. 701.
Elkins, Thomas M., Duffau, Tex. Cotton or drag sack protector. No. 1,022,308; Apr. 2; Sp. p. 1155; Gaz. vol. 177; p. 185.
Elliot Frog & Switch Company. (See Elliot, Henry, assignor.)
Elliot, Henry, St. Louis, Mo., assignor to Elliot Frog & Switch Company, East St. Louis, Ill. Rail-chair. No. 1,024,883; Apr. 30; Sp. p. 6761; Gaz. vol. 177; p. 1189.
Elliott, Burton A., Cass City, Mich. Automatically-operated stock-feeder. No. 1,022,309; Apr. 2; Sp. p. 1156; Gaz. vol. 177; p. 186.
Elliott, Percy M., Chicago, Ill. Car-door mechanism. No. 1,024,502; Apr. 30; Sp. p. 6911; Gaz. vol. 177; p. 1056.
Elliott, Richard C., Clapham, London, England, assignor to Lanston Monotype Machine Company, Philadelphia, Pa. Line-measuring and automatic justifying mechanism for composing-machines. No. 1,024,503; Apr. 30; Sp. p. 5912; Gaz. vol. 177; p. 1056.
Ellis, Albert H., New York, assignor to Wyckoff, Seamans & Benedict, Ilion, N. Y. Adding-machine, &c. No. 1,024,397; Apr. 23; Sp. p. 5612; Gaz. vol. 177; p. 984.
Ellis, Alvarado L., Lynn, Mass., assignor to General Electric Company. Electrical measuring instrument. No. 1,023,304; Apr. 16; Sp. p. 3232; Gaz. vol. 177; p. 596.
Ellis Engine Company. (See Ellis, Lewis M., assignor.)

Ellis, George H., assignor, by mesne assignments, to Northern Insulating Company, St. Paul, Minn. Machine for making insulating fabric. No. 1,022,778; Apr. 9; Sp. p. 2206; Gaz. vol. 177; p. 378.

Ellis, Lewis M., assignor to Ellis Engine Company, Detroit, Mich. Carburating apparatus. No. 1,022,664; Apr. 9; Sp. p. 1926; Gaz. vol. 177; p. 336.

Ellis, Sidney C. (See Pierce and Ellis.)

Ellis, Simeon T. (See Palmer, James F., assignor.)

Ellis, William, Harrod, Ohio. Spark-plug. No. 1,024,321; Apr. 23; Sp. p. 5479; Gaz. vol. 177; p. 961.

Ellson, Edward C., Ellson, Minn. Stump-puller. No. 1,021,922; Apr. 2; Sp. p. 356; Gaz. vol. 177; p. 50.

Ellsworth, Dighton B., assignor of one-third to C. E. Houston and one-third to H. L. Lane, Portland, Oreg. Equilibrator for airships. No. 1,024,398; Apr. 23; Sp. p. 5651; Gaz. vol. 177; p. 984.

Ellsworth, Frank H., Benton Harbor, Mich. Sanitary drinking-cup. No. 1,023,998; Apr. 23; Sp. p. 4778; Gaz. vol. 177; p. 848.

Ellsworth, Henry E., assignor to The Ensign-Bickford Company, Simsbury, Conn. Fuse. No. 1,023,142; Apr. 16; Sp. p. 3001; Gaz. vol. 177; p. 540.

Elsas, Marshal, Scott, Kans. Harrow. No. 1,021,977; Apr. 2; Sp. p. 488; Gaz. vol. 177; p. 78.

Elsden, Ethel M., (now by marriage Ethel M. Jones,) Hamilton, Bermuda. Spool-holder for sewing-machines. No. 1,022,185; Apr. 2; Sp. p. 917; Gaz. vol. 177; p. 146.

Elspass, John H. (See Galland, Walter A., assignor.)

Elsum, Thomas, Newark, N. J. Skate-runner sharpener. No. 1,022,665; Apr. 9; Sp. p. 1928; Gaz. vol. 177; p. 336.

Emery, Arthur G., Alliance, Ohio. Bail for paint-buckets and the like. No. 1,024,841; Apr. 30; Sp. p. 6661; Gaz. vol. 177; p. 1175.

Emery, Thomas O., and J. M. Day, Wood Lake, Nebr.; said Emery assignor to said Day. Gate-fastener. No. 1,022,389; Apr. 2; Sp. p. 1319; Gaz. vol. 177; p. 214.

Emmons, Fanny J. (See Emmons, Louis C., assignor.)

Emmons, Louis C., assignor to F. J. Emmons, Cedar Falls, Iowa. Knockdown heating apparatus for corn-cribs. No. 1,023,787; Apr. 16; Sp. p. 4254; Gaz. vol. 177; p. 747.

Empire Voting Machine Company. (See Dean, James H., assignor.)

Enderlin, Camille. (See Raclot and Enderlin.)

Engberg, Arvid L., Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for use in the manufacture of boots and shoes. No. 1,023,826; Apr. 23; Sp. p. 4391; Gaz. vol. 177; p. 789.

Englander Spring Bed Company, The. (See Halpin, Michael J., assignor.)

Engler, Armand, Paris, France. Device for ball games. No. 1,022,186; Apr. 2; Sp. p. 918; Gaz. vol. 177; p. 147.

English, John C., Camden, N. J., assignor to Victor Talking Machine Company. Amplifier for sound-reproducing devices. No. 1,022,582; Apr. 9; Sp. p. 1747; Gaz. vol. 177; p. 308.

Englund, Edwin H. L., Muskegon, Mich. Hose-coupling. No. 1,022,624; Apr. 9; Sp. p. 1839; Gaz. vol. 177; p. 322.

Engstrom, Jacob B., Manchester, Iowa. Tile-machine. No. 1,022,033; Apr. 9; Sp. p. 2322; Gaz. vol. 177; p. 430.

Enos, Frank, Jr., assignor to The Norwich Automatic Feeder Co., Norwich, Conn. Poultry feeder and exerciser. No. 1,023,365; Apr. 16; Sp. p. 3443; Gaz. vol. 177; p. 615.

Ensign-Bickford Company, The. (See Ellsworth, Henry E., assignor.)

Ensslen, Jacob, Pittsburgh, Pa. Process and apparatus for casting ingots. No. 1,024,722; Apr. 30; Sp. p. 6428; Gaz. vol. 177; p. 1132.

Enterprise Manufacturing Company of Pennsylvania, The. (See Brown, John W., Jr., assignor.)

Enterprise Optical Mfg. Company, The. (See Roebuck, Alvah C., assignor.)

Eppenstein, Otto, assignor to Firm of C. Zeiss, Jena, Germany. Telemeter. No. 1,022,358; Apr. 2; Sp. p. 1261; Gaz. vol. 177; p. 206.

Epperson, Landy D., assignor of one-third to C. H. Abbett, Kansas City, Mo. Rotary-magazine fuse-box. No. 1,023,029; Apr. 23; Sp. p. 4633; Gaz. vol. 177; p. 824.

Eppler, Andrew, Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Thread-waxing device. No. 1,023,071; Apr. 9; Sp. p. 2803; Gaz. vol. 177; p. 477.

Erickson, John, assignor, by mesne assignments, to First Trust and Savings Bank, trustee, Chicago, Ill. Electrical-impulse-transmitting device. No. 1,023,200; Apr. 16; Sp. p. 3130; Gaz. vol. 177; p. 560.

Erickson, John A., Fairview, Utah. Combined harrow and seed-planter. No. 1,023,631; Apr. 16; Sp. p. 3991; Gaz. vol. 177; p. 701.

Erickson, John E., St. Paul, Minn. Feeding mechanism for machines for cutting and creasing blanks. No. 1,023,558; Apr. 16; Sp. p. 3831; Gaz. vol. 177; p. 676.

Erickson, Sigvald B., Providence, R. I. Automatic sprinkler. No. 1,024,979; Apr. 30; Sp. p. 6951; Gaz. vol. 177; p. 1222.

Ermold, Edward, New York, N. Y. Bottle-labeling machine. No. 1,023,143; Apr. 16; Sp. p. 3003; Gaz. vol. 177; p. 540.

Escarras, Gabriel. (See Carsalade du Pont, Paul de, assignor.)

Esche, Moritz S., Chemnitz, Germany. Welting mechanism for flat hosiery-frames. No. 1,024,842; Apr. 30; Sp. p. 6683; Gaz. vol. 177; p. 1176.

Esler, Peter G., North Kaukauna, Wis. Hose-carriage. No. 1,022,583; Apr. 9; Sp. p. 1760; Gaz. vol. 177; p. 308.

Esnault-Pelterie, Robert, Billancourt, France. Aeroplane. No. 1,024,928; Apr. 30; Sp. p. 6862; Gaz. vol. 177; p. 1206.

Esnault-Pelterie, Robert, Billancourt, France. Aeroplane. No. 1,024,929; Apr. 30; Sp. p. 6864; Gaz. vol. 177; p. 1206.

Essberger, John A., Berlin-Schöneberg, Germany. Electrically-operated driving-gear. No. 1,022,666; Apr. 9; Sp. p. 1929; Gaz. vol. 177; p. 337.

Estell, Samuel F., Florence, Cal. Electrical fuse. No. 1,022,834; Apr. 9; Sp. p. 2319; Gaz. vol. 177; p. 396.

Estes, Charles N., assignor of one-half to R. B. Estes and one-half to J. F. Wylie, Atlanta, Ga. Sash-lock. No. 1,024,681; Apr. 30; Sp. p. 6347; Gaz. vol. 177; p. 1118.

Estes, James H., Union City, Ga. Back-band hook. No. 1,023,999; Apr. 23; Sp. p. 4779; Gaz. vol. 177; p. 848.

Estes, Rufus B., et al. (See Estes, Charles N., assignor.)

Etchison, Roy P., Swissvale, Pa. Rail-joint. No. 1,022,835; Apr. 9; Sp. p. 2321; Gaz. vol. 177; p. 307.

Etsold, John A., and R. H. North, Detroit, Mich. Adjustable reamer. No. 1,024,399; Apr. 23; Sp. p. 5657; Gaz. vol. 177; p. 985.

Eureka Double Resilient Tire Mfg. Co. (See Adams, Gideon S., assignor.)

Eureka Machinery Company. (See Dion, Léon, assignor.)

Eustis, Frank D. (See McLendon and Eustis, assignors.)

Eustis, Robert I. (See McLendon and Eustis.)

Evans, Charles P., Milton, Mass. Clasp. No. 1,023,550; Apr. 16; Sp. p. 3840; Gaz. vol. 177; p. 676.

Evans, Cullen C., Minneapolis, Minn. Vulcanizer. No. 1,023,727; Apr. 16; Sp. p. 4149; Gaz. vol. 177; p. 728.

Evans Stamping & Plating Company. (See Tuttle, Henry A., assignor.)

Evans, William T., and B. F. Reilly, Wilkes-Barre, Pa. Adjustable drilling-bit. No. 1,022,129; Apr. 2; Sp. p. 805; Gaz. vol. 177; p. 127.

Eveleigh, Preston J., Charleston, S. C. Shade and curtain hanger. No. 1,022,187; Apr. 2; Sp. p. 910; Gaz. vol. 177; p. 147.

Everett, Edward A. (See Sellew and Everett.)

Everett, George W. (See Loftin and Everett.)

Everett, George W., assignor to C. Doblin, New York, N. Y. Automatic cigar-lighter. No. 1,024,843; Apr. 30; Sp. p. 6685; Gaz. vol. 177; p. 1176.

Everhart, Charles O., assignor of one-half to A. Miles, Warren, Pa. Pressure-gage. No. 1,022,310; Apr. 2; Sp. p. 1158; Gaz. vol. 177; p. 186.

Everly, William D., Sanger, Tex. Engine-starter. No. 1,024,000; Apr. 23; Sp. p. 4780; Gaz. vol. 177; p. 848.

Ewart, Arthur F. (See Dyer and Ewart.)

Ewell, George G. (See Lee, William D., assignor.)

Eyermann, Wilhelm H. (See Schuls and Eyermann.)

F. W. Gault, Jr., Brazing & Manufacturing Company. (See Gault, Frank W., Jr., assignor.)

F. W. Webb Manufacturing Company. (See Thorndike, Herbert W., assignor.)

Fabian, Edwin, and F. Widmark, St. Paul, Minn. Power-transmitter. No. 1,023,306; Apr. 16; Sp. p. 3445; Gaz. vol. 177; p. 615.

Faehrmann, Hermann, New York, N. Y. Airship. No. 1,023,367; Apr. 16; Sp. p. 3449; Gaz. vol. 177; p. 616.

Fallenstein, Rudolf, Marseille, France, assignor to The Monarch Typewriter Company, Syracuse, N. Y. Tabulating device for type-writing machines. No. 1,023,827; Apr. 23; Sp. p. 4394; Gaz. vol. 177; p. 790.

Famous Door Check Company. (See Schmidt, John C., assignor.)

Fancher, Rosman L., Baldwinsville, assignor of one-half to F. L. Fuller, Syracuse, N. Y. Loose pulley. No. 1,022,779; Apr. 9; Sp. p. 2209; Gaz. vol. 177; p. 378.

Fanti, Alfred, New York, N. Y. Pocket. No. 1,023,632; Apr. 16; Sp. p. 3994; Gaz. vol. 177; p. 701.

Farbenfabriken vorm. Friedr. Bayer & Co. (See Blank, August, assignor.)

Farbenfabriken vorm. Friedr. Bayer & Co. (See Friedmann, Hermann, assignor.)

Farbenfabriken vorm. Friedr. Bayer & Co. (See Jordan and Neelmeier, assignors.)

Farbenfabriken vorm. Friedr. Bayer & Co. (See Schweitzer and Zart, assignors.)

Farbenfabriken vorm. Friedr. Bayer & Co. (See Taub, Ludwig, assignor.)

Farbenfabriken vorm. Friedr. Bayer & Co. (See Taub and Hahl, assignors.)

Farbenfabriken vorm. Friedr. Bayer & Co. (See Weller, Max, assignor.)

Farbenfabriken vorm. Friedr. Bayer & Co. (See Wintermeyer, Otto, assignor.)

Farbenfabriken vorm. Friedr. Bayer & Co. (See Zart, Arthur, assignor.)

Farbwerke vorm. Meister Lucius & Brüning. (See Becke, Max, assignor.)

Farbwerke vorm. Meister Lucius & Brüning. (See Hoesenland, Max, assignor.)

Farbwerke vorm. Meister Lucius & Brüning. (See Korndörfer, Georg, assignor.)

Faries Manufacturing Company. (See Lucas, Clarence W., assignor.)

Farnsworth, Hiland R., assignor to The Sandusky Foundry & Machine Company, Sandusky, Ohio. Thread-cutting machine. No. 1,022,934; Apr. 9; Sp. p. 2526; Gaz. vol. 177; p. 431.

Farquhar, Edmund H., Schenectady, N. Y., assignor to General Electric Company. Space-block. No. 1,022,021; Apr. 2; Sp. p. 577; Gaz. vol. 177; p. 91.

Farrell, Howard, Lestershire, N. Y. Aeroplane. No. 1,021,830; Apr. 2; Sp. p. 179; Gaz. vol. 177; p. 29.

Farrington, Frank H., Roanoke, Ala. Folding or collapsible bed. No. 1,022,022; Apr. 2; Sp. p. 578; Gaz. vol. 177; p. 91.

Fasy, Joseph I., Germantown, Pa. Chaplet. No. 1,023,633; Apr. 16; Sp. p. 3995; Gaz. vol. 177; p. 701.

Fauber, William H., Nanterre, France. Construction of boats and ships. No. 1,024,682; Apr. 30; Sp. p. 6348; Gaz. vol. 177; p. 1119.

Faulk, Dulaney W., Coatesville, Pa. Printing-frame. No. 1,023,828; Apr. 23; Sp. p. 4396; Gaz. vol. 177; p. 790.

Faust, Casper, et al. (See Sanford, Melvin E., assignor.)

Fawcus, Thomas, Pittsburgh, Pa. Gear-cutting machine. No. 1,022,626; Apr. 9; Sp. p. 1840; Gaz. vol. 177; p. 322.

Fawcus, Thomas, Pittsburgh, Pa. Gear-cutting machine. No. 1,022,667; Apr. 9; Sp. p. 1933; Gaz. vol. 177; p. 337.

Fay, Alpheus, Louisville, Ky. Churn. No. 1,023,368; Apr. 16; Sp. p. 3451; Gaz. vol. 177; p. 616.

Fegley, Thomas J., assignor to North Bro's M'f'g Co., Philadelphia, Pa. Spiral screw-driver and drill. No. 1,022,311; Apr. 2; Sp. p. 1160; Gaz. vol. 177; p. 186.

Felbel, Jacob, New York, N. Y., assignor, by mesne assignments, to Union Typewriter Company, Jersey City, N. J. Type-writing machine. No. 1,024,250; Apr. 23; Sp. p. 5352; Gaz. vol. 177; p. 938.

Felch, Theodore E., Newark, assignor of one-half to W. J. Osborne, Asbury Park, N. J. Fountain-pen clasp. No. 1,021,978; Apr. 2; Sp. p. 489; Gaz. vol. 177; p. 78.

Feldmeier, Harvey, Little Falls, and R. K. Miner, Oriskany Falls, assignors to D. H. Burrell & Company, Little Falls, N. Y. Centrifugal liquid-separator. No. 1,024,844; Apr. 30; Sp. p. 6686; Gaz. vol. 177; p. 1176.

Felker, Charles H., Avon, Mass. Dry-food hopper. No. 1,022,668; Apr. 9; Sp. p. 1937; Gaz. vol. 177; p. 337.

Felley, Louis J., Peoria, Ill. Bevel-protractor. No. 1,023,144; Apr. 16; Sp. p. 3009; Gaz. vol. 177; p. 540.

Felt, Charles E., Chicago, Ill. Combined bottle soaking, rinsing, and cleaning machine. No. 1,023,829; Apr. 23; Sp. p. 4400; Gaz. vol. 177; p. 791.

Felt, Charles E., Chicago, Ill. Bottle-washing machine. No. 1,023,830; Apr. 23; Sp. p. 4403; Gaz. vol. 177; p. 791.

Ferencsy, Frank I., Wauseon, Ohio. Surface-treating machine. No. 1,022,836; Apr. 9; Sp. p. 2322; Gaz. vol. 177; p. 307.

Ferguson, Edmund D., et al. (See Brown, Charles H., assignor.)

Ferguson, Elias W., et al. (See Brown, Charles H., assignor.)

Ferguson, George W., Sheboygan, Wis. Target-board. No. 1,023,634; Apr. 16; Sp. p. 3996; Gaz. vol. 177; p. 702.

Ferguson, John L., Akron, Ohio. Stream-dividing apparatus. No. 1,021,766; Apr. 2; Sp. p. 22; Gaz. vol. 177; p. 7.

Ferguson, Samuel, Schenectady, N. Y., assignor to General Electric Company. Filament apparatus. No. 1,023,305; Apr. 16; Sp. p. 3336; Gaz. vol. 177; p. 596.

Fernandez, José V., Camaguey, Cuba. Cigar and cigarette holder. No. 1,024,080; Apr. 30; Sp. p. 6952; Gaz. vol. 177; p. 1222.

Ferrero, Manfredo, Turin, Italy. Apparatus for aerial navigation. No. 1,023,369; Apr. 16; Sp. p. 3452; Gaz. vol. 177; p. 616.

Ferringer, John R., Emlenton, Pa. Cross-arm for telephone or telegraph poles. No. 1,021,831; Apr. 2; Sp. p. 182; Gaz. vol. 177; p. 30.

Ferris, Henry L., assignor to Hunt, Helm, Ferris & Company, Harvard, Ill. Tank-heater. No. 1,023,463; Apr. 16; Sp. p. 3641; Gaz. vol. 177; p. 646.

Ferry, Edward T., Chester, Pa. Clothes-drier. No. 1,021,976; Apr. 2; Sp. p. 486; Gaz. vol. 177; p. 77.

Fessenden, Reginald A., Washington, D. C., assignor to The National Electric Signaling Company, Pittsburgh, Pa. Receiver for electromagnetic waves. No. 1,022,539; Apr. 9; Sp. p. 1655; Gaz. vol. 177; p. 294.

Fessenden, Reginald A., Brant Rock, Mass., assignor to National Electric Signaling Company, Pittsburgh, Pa. Wireless signaling. No. 1,022,540; Apr. 9; Sp. p. 1658; Gaz. vol. 177; p. 294.

Fessenden, Reginald A., Brant Rock, Mass., assignor to National Electric Signaling Company, Pittsburgh, Pa. Determining frequency of periodic impulses. No. 1,022,584; Apr. 9; Sp. p. 1752; Gaz. vol. 177; p. 300.

Fetner, Allen H., Galion, Ohio. Universal joint. No. 1,021,923; Apr. 2; Sp. p. 357; Gaz. vol. 177; p. 59.

Fetner, Allen H., Galion, Ohio. Universal joint. No. 1,021,924; Apr. 2; Sp. p. 358; Gaz. vol. 177; p. 59.

Fielding, George T., Jr., New York, N. Y. Switch for progressive lighting. No. 1,024,251; Apr. 23; Sp. p. 5356; Gaz. vol. 177; p. 938.

Fiko, Joseph E., and M. Kilian, Pittsburgh, Pa. Advertising device. No. 1,024,252; Apr. 23; Sp. p. 5358; Gaz. vol. 177; p. 939.

Findlay, William, New York, N. Y. Antislipping device. No. 1,024,961; Apr. 30; Sp. p. 6955; Gaz. vol. 177; p. 1223.

Findley, Norman P. (See Knight, Julian G., assignor.)

Fink, Louis. (See Schade, John, Jr., assignor.)

Firm, Joseph L., Berwyn, assignor to The Goss Printing Press Company, Chicago, Ill. Printing-press. No. 1,024,473; Apr. 23; Sp. p. 5814; Gaz. vol. 177; p. 1010.

Firmin, John D., Philadelphia, Pa. Variable-speed dynamic control for electric motors. No. 1,023,105; Apr. 9; Sp. p. 2875; Gaz. vol. 177; p. 489.

Firoben, John B., Columbus, Ohio. Roofing-tile. No. 1,024,322; Apr. 23; Sp. p. 5480; Gaz. vol. 177; p. 961.

First Trust and Savings Bank, trustee. (See Erickson, John, assignor.)

Fischbach, Martin J. (See Court, Edward, assignor.)

Fischer, Carl R., and J. E. Stoll, Milwaukee, Wis. Branding-machine. No. 1,021,767; Apr. 2; Sp. p. 23; Gaz. vol. 177; p. 7.

Fischer, Charles A., Chicago, Ill., assignor to Allis-Chalmers Company, Milwaukee, Wis. End-play device. No. 1,023,245; Apr. 16; Sp. p. 3213; Gaz. vol. 177; p. 575.

Fish, Nathaniel, and H. Hodgkinson, Darwen, England. Mechanism for putting cover on cloth in looms for weaving. No. 1,022,229; Apr. 2; Sp. p. 1012; Gaz. vol. 177; p. 162.

Fisher, Oliver W., Madison, Ohio. Vegetable-sorter. No. 1,021,979; Apr. 2; Sp. p. 490; Gaz. vol. 177; p. 78.

Fiseltbaler, Fritz, Salzburg, Austria-Hungary. Conveyer. No. 1,022,359; Apr. 2; Sp. p. 1262; Gaz. vol. 177; p. 203.

Fitch, De Leslie C., Baton Rouge, La. Press. No. 1,023,145; Apr. 16; Sp. p. 3012; Gaz. vol. 177; p. 541.

Fitts, James L., Pensauken township, Camden county, N. J., and R. M. Hunter, Philadelphia, Pa., assignors to Warren Webster & Company. Valve. No. 1,024,884; Apr. 30; Sp. p. 6761; Gaz. vol. 177; p. 1189.

Fitz Gerald, David E., et al. (See Dunn, Peter S., assignor.)

Fitzsimmons, Thomas F., et al. (See Dunn, Peter S., assignor.)

Fitzsimmons, Oscar S., assignor to The Novelty Manufacturing Company, Waterbury, Conn. Flag-holder attachment for automobile-radiators, &c. No. 1,022,360; Apr. 2; Sp. p. 1263; Gaz. vol. 177; p. 203.

Flagg, Arthur B., Worcester, and W. H. Livermore, assignors to Livermore Pay Station Company, Boston, Mass. Coin-separator. No. 1,024,442; Apr. 23; Sp. p. 5733; Gaz. vol. 177; p. 998.

Flanagan, John B. (See Krenz, Frank A., assignor.)

Flanders, Walter E. (See Heaslet, James G., assignor.)

Flannery, John L. (See Boye, James H., assignor.)

Fleming, Douglas P., assignor to Simplex Metal Bound Box Company, Chicago, Ill. Box. No. 1,022,780; Apr. 9; Sp. p. 2210; Gaz. vol. 177; p. 378.

Fleming, Edward, Columbus, assignor of one-half to W. M. Myers, Lockbourne, and one-fourth to W. D. Hopkins, Columbus, Ohio. Picture-holder. No. 1,023,072; Apr. 9; Sp. p. 2805; Gaz. vol. 177; p. 477.

Fleming, Richard, Swampscott, and E. J. Guay, Lynn, Mass., assignors to General Electric Company. Arc-lamp. No. 1,022,541; Apr. 9; Sp. p. 1660; Gaz. vol. 177; p. 295.

Fletcher, Bernard M., London, England. Protecting device for books. No. 1,021,832; Apr. 2; Sp. p. 182; Gaz. vol. 177; p. 30.

Fletcher, Henry M., Plainview, Tex. Traction-vehicle. No. 1,024,066; Apr. 23; Sp. p. 4918; Gaz. vol. 177; p. 872.

Fletcher, Morris D., assignor to F. E. Bidwell, Springfield, Mass. Wheel-dresser and tool-holder. No. 1,024,126; Apr. 23; Sp. p. 5075; Gaz. vol. 177; p. 893.

Flexible Bolt Company. (See Baker, James H., assignor.)

Flitch, Casper, Warner, Alberta, Canada. Reel-carrier. No. 1,022,408; Apr. 9; Sp. p. 1868; Gaz. vol. 177; p. 251.

Flood, Harry J. (See Turner and Flood.)

Florence, J. Esdaile, trustee. (See Conley, Michael R., assignor.)

Florian, Onorato, Genoa, Italy. Combined folding stool and table. No. 1,024,192; Apr. 23; Sp. p. 5225; Gaz. vol. 177; p. 916.

Flues, Robert C., New York, N. Y. Window-insert for umbrellas. No. 1,023,635; Apr. 16; Sp. p. 3999; Gaz. vol. 177; p. 702.

Flynt, Louis W. G., assignor to Domestic Appliances Company, Rochester, N. Y. Steam-generator. No. 1,024,845; Apr. 30; Sp. p. 6688; Gaz. vol. 177; p. 1177.

Foerster, Harry E. J., St. Louis, Mo. Spring-wheel. No. 1,023,010; Apr. 9; Sp. p. 2676; Gaz. vol. 177; p. 456.

Fokkes, Adelbert A., Raymond, S. D. Flying-machine. No. 1,021,925; Apr. 2; Sp. p. 359; Gaz. vol. 177; p. 60.

Folding Umbrella Co. (See Lundquist, Frank A., assignor.)

Folger, Harry S., Chicago, Ill. Stamp-pad. No. 1,024,193; Apr. 23; Sp. p. 5227; Gaz. vol. 177; p. 916.

Folmer, William F., assignor to Eastman Kodak Co., Rochester, N. Y. Photographic camera. No. 1,023,930; Apr. 23; Sp. p. 4636; Gaz. vol. 177; p. 825.

Folmer, William F., assignor to Eastman Kodak Co., Rochester, N. Y. Camera. No. 1,023,931; Apr. 23; Sp. p. 4641; Gaz. vol. 177; p. 825.

Folmer, William F., assignor to Eastman Kodak Co., Rochester, N. Y. Photographic camera. No. 1,023,932; Apr. 23; Sp. p. 4646; Gaz. vol. 177; p. 826.

Folmer, William F., assignor to Eastman Kodak Company, Rochester, N. Y. Film-winding key for cameras. No. 1,023,933; Apr. 23; Sp. p. 4646; Gaz. vol. 177; p. 826.

Fonger, William, Chicago, Ill. Guard or fender for street-cars or the like. No. 1,023,464; Apr. 16; Sp. p. 3642; Gaz. vol. 177; p. 646.

Foote Axle Company. (See Foote and Schabinger, assignors.)

Foote, Frank M., and C. H. Schabinger, assignors to Foote Axle Company, Marshall, Mich. Thill-coupling attachment. No. 1,023,106; Apr. 9; Sp. p. 2877; Gaz. vol. 177; p. 489.

Foote, John B., Oak Park, Ill. Fruit-pitting machine. No. 1,024,564; Apr. 30; Sp. p. 6085; Gaz. vol. 177; p. 1077.

Foote, John B., Oak Park, Ill. Fruit-pitting machine. No. 1,024,625; Apr. 30; Sp. p. 6229; Gaz. vol. 177; p. 1098.

Ford, Raymond S., assignor to L. F. Bates, Cuba, N. Y. Display-rack. No. 1,024,253; Apr. 23; Sp. p. 5359; Gaz. vol. 177; p. 939.

Ford, Thomas B., Fairfield, Iowa. Adjustable window-screen. No. 1,023,780; Apr. 16; Sp. p. 4240; Gaz. vol. 177; p. 745.

Fore River Shipbuilding Company. (See Rice, Walter F., assignor.)

Forlanini, Enrico, Milan, Italy. Hydroaeroplane. No. 1,024,067; Apr. 23; Sp. p. 4920; Gaz. vol. 177; p. 872.

Forman, Louis O., South Orange, N. J., assignor to Gillis & Geoghegan, New York, N. Y. Hoisting apparatus. No. 1,024,885; Apr. 30; Sp. p. 6764; Gaz. vol. 177; p. 1190.

Forster Manufacturing Company. (See Hall, Albert H., assignor.)

Forsyth, William D., Youngstown, Ohio. Sheet-metal window-frame. No. 1,024,001; Apr. 23; Sp. p. 4782; Gaz. vol. 177; p. 849.

Fortier, George, assignor of one-half to J. Geoffroy, Warren, R. I. Shedding mechanism. No. 1,024,846; Apr. 30; Sp. p. 6691; Gaz. vol. 177; p. 1177.

Fortin, Benjamin P., Hartford, Conn., assignor to Underwood Typewriter Company, New York, N. Y. Typewriting machine. No. 1,023,788; Apr. 16; Sp. p. 4256; Gaz. vol. 177; p. 748.

Forward, Mary A., Elkhart, Ind. Heat-deflecting and soot-catching attachment for hot-air registers. No. 1,021,980; Apr. 2; Sp. p. 492; Gaz. vol. 177; p. 78.

Forwood, George F. (See Mackie and Forwood.)

Foster, Charles H., St. Louis, Mo. Expansion-tank support. No. 1,022,409; Apr. 9; Sp. p. 1369; Gaz. vol. 177; p. 251.

Foster Machine Company. (See McKean, John O., assignor.)

Foster, Merriam and Company. (See Palmer, Harry A., assignor.)

Foster, Samuel A. (See Foster, Samuel G. and S. A.)

Foster, Samuel G., Westfield, and S. A. Foster, Rahway, N. J. Adjustable window-screen. No. 1,022,312; Apr. 2; Sp. p. 1161; Gaz. vol. 177; p. 187.

Foster, William J., Schenectady, N. Y., assignor to General Electric Company. Dynamo-electric machine. No. 1,022,023; Apr. 2; Sp. p. 580; Gaz. vol. 177; p. 91.

Föttinger, Hermann, Zoppot, near Danzig, Germany. Power-transmission mechanism. No. 1,024,982; Apr. 30; Sp. p. 6956; Gaz. vol. 177; p. 1223.

Fountain, John, Jr., Elizabeth, N. J., and B. Jones, Jr., New York, N. Y.; said Jones assignor to said Fountain. Floor-box. No. 1,023,246; Apr. 16; Sp. p. 3215; Gaz. vol. 177; p. 575.

Four Wheel Drive Auto Company. (See Zachow, Otto, assignor.)

Fournier, Emeric, San Diego, Cal. Clamp-hook. No. 1,024,002; Apr. 23; Sp. p. 4784; Gaz. vol. 177; p. 849.

Foust, Orson W., Cogswell, N. D. Harvester attachment for engines. No. 1,023,011; Apr. 9; Sp. p. 2677; Gaz. vol. 177; p. 456.

Fox, Edgar P., Greeley, Colo. Mold for tanks. No. 1,023,465; Apr. 16; Sp. p. 3644; Gaz. vol. 177; p. 647.

France, Frank, Chicago, Ill. Well-drill. No. 1,022,472; Apr. 9; Sp. p. 1520; Gaz. vol. 177; p. 273.

Francisco, Charles F., San Diego, Cal. Wall or dam construction. No. 1,024,068; Apr. 23; Sp. p. 4924; Gaz. vol. 177; p. 872.

Francisco, Charles F., San Diego, Cal. Pile splicing and driving device. No. 1,024,069; Apr. 23; Sp. p. 4925; Gaz. vol. 177; p. 873.

Frank, Adolph, Charlottenburg, Germany. Meter. No. 1,024,886; Apr. 30; Sp. p. 6766; Gaz. vol. 177; p. 1190.

Frank, Edward M., Chicago, Ill. Game apparatus. No. 1,024,194; Apr. 23; Sp. p. 5228; Gaz. vol. 177; p. 916.

Frank, Louis, Wilkes-Barre, Pa. Counter display and storage case. No. 1,024,323; Apr. 23; Sp. p. 5481; Gaz. vol. 177; p. 961.

Frank Ridlon Company. (See Shields, Robert, assignor.)

Frankenfield, Budd, Los Angeles, Cal., assignor to Allis-Chalmers Company. Dynamo-electric machine. No. 1,023,511; Apr. 16; Sp. p. 3744; Gaz. vol. 177; p. 662.

Franklin, Ray W., Waterloo, Iowa. Carrier. No. 1,022,130; Apr. 2; Sp. p. 806; Gaz. vol. 177; p. 127.

Frees, Thomas B., assignor to V. Weber & Company, Chicago, Ill. Constant-temperature bath. No. 1,024,565; Apr. 30; Sp. p. 6091; Gaz. vol. 177; p. 1078.

Freedman, Herman N., New York, N. Y. Skirt. No. 1,022,410; Apr. 9; Sp. p. 1370; Gaz. vol. 177; p. 251.

Freeland, Charles E., Wheeling W. Va., assignor of one-half to G. W. Aukerman, Cadiz, Ohio. Check-lock. No. 1,022,473; Apr. 9; Sp. p. 1521; Gaz. vol. 177; p. 273.

Freeman, Louis G. (See McCoy, William W., assignor.) (Reissue.)

Frees, Chancy A., New York, N. Y. Artificial leg. No. 1,023,247; Apr. 16; Sp. p. 3219; Gaz. vol. 177; p. 575.

French, Charles B., Kingston, Pa. Pneumatic hammer. No. 1,022,837; Apr. 9; Sp. p. 2323; Gaz. vol. 177; p. 397.

Frickey, Edward H. (See Williams and Frickey.)

Friedmann, Hermann, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Vat dye. No. 1,022,781; Apr. 9; Sp. p. 2212; Gaz. vol. 177; p. 378.

Friedmann, Hermann, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Vat dye. No. 1,023,248; Apr. 16; Sp. p. 3220; Gaz. vol. 177; p. 576.

Fries, Karl A. (A.) E., Stockholm, Sweden. Narcotizing-mask. No. 1,021,865; Apr. 2; Sp. p. 248; Gaz. vol. 177; p. 40.

Frink, Francis G. (See Watt, Sern P., assignor.)

Frink, Francis G., Seattle, Wash. Excavating-bucket. No. 1,023,370; Apr. 16; Sp. p. 3454; Gaz. vol. 177; p. 617.

Frink, Robert L., Cleveland, Ohio. Device for severing glass cylinders. No. 1,024,983; Apr. 30; Sp. p. 6958; Gaz. vol. 177; p. 1223.

Fritz, Andy, Portland, Oreg. Yielding tool-holder. No. 1,023,073; Apr. 9; Sp. p. 2806; Gaz. vol. 177; p. 477.

Fritz, Karl, Wyomissing, Pa. Molding-machine. No. 1,023,201; Apr. 16; Sp. p. 3133; Gaz. vol. 177; p. 560.

Frusher, Tom, New York, N. Y. Bleaching and dyeing machine. No. 1,024,003; Apr. 23; Sp. p. 4784; Gaz. vol. 177; p. 849.

Fry, Charles A., assignor to Link-Belt Company, Philadelphia, Pa. Cover for conveyers. No. 1,023,636; Apr. 16; Sp. p. 4000; Gaz. vol. 177; p. 702.

Fry, William, Edinburg, Va. Nut-lock. No. 1,022,542; Apr. 9; Sp. p. 1664; Gaz. vol. 177; p. 295.

Fulcher, Clark A., assignor of one-half to O. A. Braman, Monroe, Mich. Fly-trap for window and door screens. No. 1,022,669; Apr. 9; Sp. p. 1939; Gaz. vol. 177; p. 338.

Fuller, Albert. (See Hiering and Fuller.)

Fuller, Carl T., East Orange, N. J., assignor to General Electric Company. Electric furnace. No. 1,023,371; Apr. 16; Sp. p. 3455; Gaz. vol. 177; p. 617.

Fuller, Duncan M. (See Schultz and Fuller.)

Fuller, Frank L. (See Fancher, Rosman I., assignor.)

Fuller, Franz A., assignor to The J. E. Mergott Company, Newark, N. J. Bag-fastener. No. 1,024,930; Apr. 30; Sp. p. 6867; Gaz. vol. 177; p. 1206.

Fuller, Frederick L., assignor to The National Cash Register Company, Dayton, Ohio. Total-printing cash-register. No. 1,022,230; Apr. 2; Sp. p. 1013; Gaz. vol. 177; p. 162.

Funk, Levi L., Chicago, Ill. Dental broach. No. 1,022,838; Apr. 9; Sp. p. 2325; Gaz. vol. 177; p. 398.

Fuss, Max. (See Arons and Fuss.)

Gabler, Johannes, Mülhausen, Germany. Mechanism for threading shuttles. No. 1,023,831; Apr. 23; Sp. p. 4406; Gaz. vol. 177; p. 791.

Gabriel, Charles R., New York, assignor to E. W. Bliss Company, Brooklyn, N. Y. Mine-anchor. No. 1,023,832; Apr. 23; Sp. p. 4407; Gaz. vol. 177; p. 792.

Gadd, Charles J., Lebanon, Pa. Railway-track fastening. No. 1,024,127; Apr. 23; Sp. p. 5077; Gaz. vol. 177; p. 893.

Gaffney, Patrick J., Toledo, Ohio. Coupling. No. 1,021,833; Apr. 2; Sp. p. 184; Gaz. vol. 177; p. 30.

Gage, Jack. (See Hyde and Gage.)

Gahl, Rudolf, Morenci, Ariz. Treating copper ores. No. 1,021,768; Apr. 2; Sp. p. 25; Gaz. vol. 177; p. 7.

Gahl, Rudolf, Morenci, Ariz. Treating ores. No. 1,021,769; Apr. 2; Sp. p. 27; Gaz. vol. 177; p. 8.

Gaide, Albert, Chicago, Ill. Apparatus for drying air. No. 1,024,887; Apr. 30; Sp. p. 6767; Gaz. vol. 177; p. 1191.

Gaines, Frederick F., Savannah, Ga. Flush car-door. No. 1,023,833; Apr. 23; Sp. p. 4410; Gaz. vol. 177; p. 792.

Gaisman, Henry J., New York, N. Y., assignor to Auto Strop Company. Safety-razor. No. 1,022,726; Apr. 9; Sp. p. 2096; Gaz. vol. 177; p. 360.

Gaisman, Henry J., New York, N. Y., assignor to Auto Strop Company. Razor. No. 1,022,727; Apr. 9; Sp. p. 2102; Gaz. vol. 177; p. 360.

Gaisman, Henry J., assignor to Auto Strop Company, New York, N. Y. Safety-razor. No. 1,022,728; Apr. 9; Sp. p. 2107; Gaz. vol. 177; p. 361.

Gaisman, Henry J., assignor to Auto Strop Company, New York, N. Y. Safety-razor. No. 1,022,729; Apr. 9; Sp. p. 2108; Gaz vol. 177; p. 361.

Gaisman, Henry J., assignor to Auto Strop Company, New York, N. Y. Safety-razor. No. 1,022,730; Apr. 9; Sp. p. 2110; Gaz. vol. 177; p. 362.

Gaisman, Henry J., assignor to Auto Strop Company, New York, N. Y. Safety-razor. No. 1,022,731; Apr. 9; Sp. p. 2112; Gaz. vol. 177; p. 362.

Gaisman, Henry J., assignor to Auto Strop Company, New York, N. Y. Safety-razor. No. 1,022,732; Apr. 9; Sp. p. 2113; Gaz. vol. 177; p. 362.

Gales, Nicholas W., assignor to William Galloway Company, Waterloo, Iowa. Friction-clutch. No. 1,023,249; Apr. 16; Sp. p. 3221; Gaz. vol. 177; p. 576.

Galland, Walter A., assignor to J. H. Bispham, Denver, Colo. Pulverising-mill. No. 1,021,981; Apr. 2; Sp. p. 493; Gaz. vol. 177; p. 79.

Gallay, Jean. (See Bachten and Gallay.)

Gallia, Société Anonyme. (See Perigny, Jean M., assignor.)

Galminowsky, Hugo, St. Bernard, Ohio. Treatment of artificial marble. No. 1,022,585; Apr. 9; Sp. p. 1753; Gaz. vol. 177; p. 309.

Galloway, David E., Clifton Heights, Pa., assignor to United Shoe Machinery Company, Paterson, N. J. Tip-measuring apparatus. No. 1,024,504; Apr. 30; Sp. p. 6921; Gaz. vol. 177; p. 1057.

Galvin, Carroll D., Merchantville, N. J., assignor of one-sixth to C. Jacobsen, one-sixth to E. S. Cochran, and one-sixth to A. F. Jorss, Washington, D. C. Pneumatic tube for vehicle and other wheels. No. 1,023,728; Apr. 16; Sp. p. 4150; Gaz. vol. 177; p. 729.

Gangelhoff, Gearhart, Jr., and M. Jordan, Minneapolis, Minn. Bed-spring fabric. No. 1,022,131; Apr. 2; Sp. p. 808; Gaz. vol. 177; p. 128.

Ganss, William H., Toledo, Ohio. Fastening device. No. 1,022,132; Apr. 2; Sp. p. 810; Gaz. vol. 177; p. 128.

Ganter, Francis X., Baltimore, Md. Show-case. No. 1,024,324; Apr. 23; Sp. p. 5482; Gaz. vol. 177; p. 961.

Gardner, Martin, Dolgeville, Cal. Piano-hammer molding and gluing machine. No. 1,022,861; Apr. 2; Sp. p. 1264; Gaz. vol. 177; p. 204.

Gare, Thomas, New Brighton, England. Manufacture, molding, and remolding of india-rubber goods. No. 1,023,729; Apr. 16; Sp. p. 4155; Gaz. vol. 177; p. 729.

Gareis, John G., Philadelphia, Pa. Bookbinding. No. 1,023,466; Apr. 16; Sp. p. 3645; Gaz. vol. 177; p. 647.

Gareis, John G., Philadelphia, Pa. Bookbinding. No. 1,023,834; Apr. 23; Sp. p. 4413; Gaz. vol. 177; p. 793.

Garey, John A., Mound City, Mo. Mold for bases for telephone and other poles. No. 1,023,231; Apr. 2; Sp. p. 1021; Gaz. vol. 177; p. 163.

Garlick, Walter J., assignor to N. A. Hover, deceased, (M. Hover, executrix,) and E. Coene, Paterson, N. J. Stop-motion mechanism for warping-machines. No. 1,023,730; Apr. 16; Sp. p. 4155; Gaz. vol. 177; p. 729.

Garlock Auto Specialty Co. (See Whiting, Herman E., assignor.)

Garner, Joseph R., and M. R. H. Mueller, Aston, Birmingham, assignors to Electric and Ordnance Accessories Company Limited, Aston, England. Controller for electric motors. No. 1,024,984; Apr. 30; Sp. p. 6962; Gaz. vol. 177; p. 1224.

Garner, Joseph R., and M. R. H. Mueller, Aston, Birmingham, assignors to Electric and Ordnance Accessories Company Limited, Aston, England. Controller for electric motors. No. 1,024,985; Apr. 30; Sp. p. 6969; Gaz. vol. 177; p. 1224.

Garret, Jean, Pittsburgh, Pa. Safety-razor. No. 1,023,372; Apr. 16; Sp. p. 3457; Gaz. vol. 177; p. 617.

Garrett, Robert E., Nashville, Tenn. Lathe attachment. No. 1,024,254; Apr. 23; Sp. p. 5361; Gaz. vol. 177; p. 939.

Garrett, William R., Chavies, Ala. Saw-set. No. 1,023,835; Apr. 23; Sp. p. 4415; Gaz. vol. 177; p. 793.

Gartland, Joseph A., *et al.* (See Brodton, Edward R., assignor.)

Gattie, Alfred W., London, and A. G. Seaman, Altrincham, England. Apparatus for handling, sorting, and delivering parcels and the like. No. 1,022,935; Apr. 9; Sp. p. 2531; Gaz. vol. 177; p. 431.

Gault, Frank W., Jr., Louisville, Ky., assignor to F. W. Gault, Jr., Brazing & Manufacturing Company. Gas-burner. No. 1,024,443; Apr. 23; Sp. p. 5736; Gaz. vol. 177; p. 998.

Gautsch, Conrad, Berlin, Germany. Extinguishing fires in telephone installations. No. 1,023,107; Apr. 9; Sp. p. 2870; Gaz. vol. 177; p. 490.

Gaynor, John J., E. W. Miller, and C. Remler, Indianapolis, Ind., assignors to Automatic Machinery Company. Feed mechanism for bottling-machines. No. 1,023,074; Apr. 9; Sp. p. 2807; Gaz. vol. 177; p. 478.

Gebauer, Fritz. (See Haas, Lambert, assignor.)

Geiser, August P. (See Taylor, Alton B., assignor.)

Geissinger, Harry G., assignor to Geissinger Regulator Company, New York, N. Y. Compensating system of temperature control. No. 1,022,188; Apr. 2; Sp. p. 921; Gaz. vol. 177; p. 147.

Geissinger, Harry G., assignor to Geissinger Regulator Company, New York, N. Y. Remote temperature control. No. 1,022,189; Apr. 2; Sp. p. 924; Gaz. vol. 177; p. 148.

Geissinger Regulator Company. (See Geissinger, Harry G., assignor.)

Gendron Wheel Company. (See Nauts, Frank A., assignor.)

General Chemical Company. (See De Jahn, Fredrik W., assignor.)

General Chemical Company. (See Strickler, Emerson H., assignor.)

General Electric Company. (See Alquist, Karl, assignor.)

General Electric Company. (See Andrews, William S., assignor.)

General Electric Company. (See Arons and Fuss, assignors.)

General Electric Company. (See Arsem, William C., assignor.)

General Electric Company. (See Axelrod, Salomon, assignor.)

General Electric Company. (See Baldauf and Presser, assignors.)

General Electric Company. (See Beckwith, Edward P., assignor.)

General Electric Company. (See Beechlyn, John T., assignor.)

General Electric Company. (See Bresler, Harry, assignor.)

General Electric Company. (See Bresler, Harry W., assignor.)

General Electric Company. (See Clinker, Reginald C., assignor.)

General Electric Company. (See Connell, Howard E., assignor.)

General Electric Company. (See De Reamer, Frank C., assignor.)

General Electric Company. (See Dempster, John T. H., assignor.)

General Electric Company. (See Dempster, Leonard E., assignor.)

General Electric Company. (See Ellis, Alvarado L., assignor.)

General Electric Company. (See Farquhar, Edmund H., assignor.)

General Electric Company. (See Ferguson, Samuel, assignor.)

General Electric Company. (See Fleming and Guay, assignors.)

General Electric Company. (See Foster, William J., assignor.)

General Electric Company. (See Fuller, Carl T., assignor.)

General Electric Company. (See Glaser, Ludwig, assignor.)

General Electric Company. (See Guay, Emile J., assignor.)

General Electric Company. (See Gullot, Frank, assignor.)

General Electric Company. (See Hirden, Johannes, assignor.)

General Electric Company. (See Haskins, Caryl D., assignor.)

General Electric Company. (See Hawkins, Laurence A., assignor.)

General Electric Company. (See Hewlett, Edward M., assignor.)

General Electric Company. (See Hill, George H., assignor.)

General Electric Company. (See Howell, John W., assignor.)

General Electric Company. (See Hunter, Matthew A., assignor.)

General Electric Company. (See Hurwitz, Eugen, assignor.)

General Electric Company. (See Jones, Allen G., assignor.)

General Electric Company. (See Junggren and Dickinson, assignors.)

General Electric Company. (See Kilser, Walter, assignor.)

General Electric Company. (See Kingwell, Kenneth F., assignor.)

General Electric Company. (See Lemp, Hermann, assignor.)

General Electric Company. (See Libby, Sam H., assignor.)

General Electric Company. (See McClair, Charles, assignor.)

General Electric Company. (See Paine, Sidney B., assignor.)

General Electric Company. (See Pratt, William H., assignor.)

General Electric Company. (See Price, Edgar, assignor.)

General Electric Company. (See Riddell, John, assignor.)

General Electric Company. (See Ryan, Walter D., assignor.)

General Electric Company. (See Schmidt, Louis M., assignor.)

General Electric Company. (See Stevens, George E., assignor.)

General Electric Company. (See Thomson, Elihu, assignor.)

General Electric Company. (See Van Aller, Tycho, assignor.)

General Electric Company. (See Webster, Carroll J., assignor.)

General Electric Company. (See Weintraub, Ezechiel, assignor.)

General Electric Company. (See Weintraub, George, assignor.)

General Electric Company. (See Wheeler, Horace, assignor.)

General Electric Company. (See White, Harold E., assignor.)

General Electric Company. (See Whiting, Max A., assignor.)

General Electric Company. (See Whitney, Willis E., assignor.)

General Electric Company. (See Wiler, Carl, assignor.)

General Electric Company. (See Winston, Earle G., assignor.)

General Electric Company. (See Zweigbergk, Thorsten von, assignor.)

General Manifold and Printing Company, The. (See Lewis, Edward Z., assignor.)

General Railway Signal Company. (See Christofferson, Christian A., assignor.)

General Railway Signal Company. (See Howe, Winthrop K., assignor.)
Geno, Samuel, *et al.* (See Graves, Eugene A., assignor.)
Gentry, John H., Greentown, Ind. Valve-gear. No. 1,022,232; Apr. 2; Sp. p. 1023; Gaz. vol. 177; p. 163.
Geoffroy, Joseph. (See Fortier, George, assignor.)
George D. Whitcomb Company. (See Eckert and Whitcomb, assignors.)
George E. Belcher Last Company. (See Reinhardt, Louis W., assignor.)
Georgeff, Evan, Portland, Oreg. Sash-balancing mechanism. No. 1,023,781; Apr. 16; Sp. p. 4158; Gaz. vol. 177; p. 730.
Georges, Henri. (See Valentin, Zerreiss, and Georges.)
Georgeson, Peter J., Tustin, Wis. Pulley-block. No. 1,022,411; Apr. 9; Sp. p. 1371; Gaz. vol. 177; p. 251.
Gerber, Arthur U. (See Mock, Gerber, and Cordell.)
Gerdes, August, Gretna, La. Cane-harvester. No. 1,022,313; Apr. 2; Sp. p. 1163; Gaz. vol. 177; p. 187.
Gerlach, George. (See Saurenmann, Jacob G., assignor.)
Gerlach, Gustav, Carrick, Pa. Mortising-machine. No. 1,023,306; Apr. 16; Sp. p. 3337; Gaz. vol. 177; p. 596.
Gerschi, John, Chicago, Ill. Hasp-fastener. No. 1,022,830; Apr. 9; Sp. p. 2826; Gaz. vol. 177; p. 398.
Gibbs, Arthur E., assignor to The Gibbs Manufacturing Company, Canton, Ohio. Top. No. 1,021,926; Apr. 2; Sp. p. 362; Gaz. vol. 177; p. 60.
Gibbs, Frederick H. (See Handy, Levin G., assignor.)
Gibbs Manufacturing Company, The. (See Gibbs, Arthur E., assignor.)
Gibford Specialty Co. (See Watson, Richard M., assignor.)
Gibney, Gilbert J., Mobile, Ala. Water-alarm for steam-boilers. No. 1,022,936; Apr. 9; Sp. p. 2546; Gaz. vol. 177; p. 431.
Gibson, Charles B. (See Randall and Gibson.)
Giddings, Squire R., Timnath, Colo. Beet-puller. No. 1,023,836; Apr. 23; Sp. p. 4417; Gaz. vol. 177; p. 793.
Giese, Charles H., Jr., Newark, N. J. Hat-pin protector or guard. No. 1,024,325; Apr. 23; Sp. p. 5484; Gaz. vol. 177; p. 962.
Gifford, Charles A., Newark, N. J. Coupling device or clasp. No. 1,024,566; Apr. 30; Sp. p. 6095; Gaz. vol. 177; p. 1078.
Gift, Charles W., Waynesboro, Pa. Cultivator. No. 1,024,986; Apr. 30; Sp. p. 6971; Gaz. vol. 177; p. 1225.
Gilbert, Fred E., Jacksonville, Fla. Automatic funnel. No. 1,023,012; Apr. 9; Sp. p. 2678; Gaz. vol. 177; p. 457.
Gilbert, Henry J., Saginaw, Mich. Pulley. No. 1,022,840; Apr. 9; Sp. p. 2327; Gaz. vol. 177; p. 398.
Gilbert, Walter V., London, England. Closing mechanism and the like. No. 1,024,987; Apr. 30; Sp. p. 6973; Gaz. vol. 177; p. 1225.
Gilda, John R., St. Louis, Mo. Churn. No. 1,023,075; Apr. 9; Sp. p. 2809; Gaz. vol. 177; p. 478.
Gile, Frank J., Lawrence, Mass. Air-pressure regulator for force-pumps. No. 1,023,146; Apr. 16; Sp. p. 3014; Gaz. vol. 177; p. 541.
Giletti, Secondo, East Oakland, Cal. Building construction. No. 1,022,841; Apr. 9; Sp. p. 2332; Gaz. vol. 177; p. 398.
Giletti, Secondo, Oakland, Cal. Tile-press. No. 1,023,512; Apr. 16; Sp. p. 3745; Gaz. vol. 177; p. 662.
Gilkeson, Rush S., Detroit, Mich. Attachment for children's vehicles. No. 1,023,467; Apr. 16; Sp. p. 3649; Gaz. vol. 177; p. 647.
Gill, Edwin R., Yonkers, assignor, by mesne assignments, to H. E. Merrell, New York, N. Y., and O. J. Hamlin, Smethport, Pa. Automatic signal-operator. No. 1,024,444; Apr. 23; Sp. p. 5737; Gaz. vol. 177; p. 996.
Gill, Edwin R., Yonkers, assignor, by mesne assignments, to H. E. Merrell, New York, N. Y., and O. J. Hamlin, Smethport, Pa. Selective signaling system. No. 1,024,445; Apr. 23; Sp. p. 5744; Gaz. vol. 177; p. 999.
Gill, Edwin R., Yonkers, assignor, by mesne assignments, to H. E. Merrell, New York, N. Y., and O. J. Hamlin, Smethport, Pa. Signaling system. No. 1,024,446; Apr. 23; Sp. p. 5747; Gaz. vol. 177; p. 999.
Gillenwater, Jesse D., Peru, Ind. Window shade and curtain fixture. No. 1,024,255; Apr. 23; Sp. p. 5363; Gaz. vol. 177; p. 940.
Gillern, Alois F. von, Vienna, Austria-Hungary. Boot and shoe lace guide. No. 1,024,888; Apr. 30; Sp. p. 6771; Gaz. vol. 177; p. 1191.
Gillespie, John J., Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Work-support. No. 1,022,412; Apr. 9; Sp. p. 1372; Gaz. vol. 177; p. 252.
Gillet, Victoria. (See MacLeod, Donald M., assignor.)
Gillette, Frank A., Philadelphia, Pa. Bolt-cutting machine. No. 1,023,013; Apr. 9; Sp. p. 2680; Gaz. vol. 177; p. 457.
Gillies, Alexander, Heidelberg, Victoria, Australia, assignor to D. H. Burrell & Company, Little Falls, N. Y. Teat-cup. No. 1,024,847; Apr. 30; Sp. p. 6694; Gaz. vol. 177; p. 1178.
Gillis & Geoghegan. (See Forman, Louis O., assignor.)
Gilman, James E. (See Shrader and Gilman.)
Gilman, John H., assignor to King & Hamilton Company, Ottawa, Ill. Conveying apparatus. No. 1,021,866; Apr. 2; Sp. p. 250; Gaz. vol. 177; p. 41.
Gilmore, Almer H., Seattle, Wash. Lathing-securing tack-strip. No. 1,023,837; Apr. 23; Sp. p. 4419; Gaz. vol. 177; p. 794.
Gilmore, Steele F., Indianapolis, Ind. Anchorage for dental bridges and plates. No. 1,022,070; Apr. 2; Sp. p. 676; Gaz. vol. 177; p. 108.
Gilmore, Willis B., Idaho Springs, Colo. Spinning-top. No. 1,023,637; Apr. 16; Sp. p. 4001; Gaz. vol. 177; p. 702.
Gilson, Joshua. (See Wegner, Lewis E., assignor.)
Gilstrap, James M., Fresno, Cal. Steering-gear for vehicles. No. 1,024,505; Apr. 30; Sp. p. 5926; Gaz. vol. 177; p. 1057.
Gimnich, P. G. (See Dowden, John W., assignor.)
Giolitti, Federico, Rome, assignor to Societa Anonima Italiana Gio. Ansaldo Armstrong & Co., Genoa, Italy. Manufacturing steel plates. No. 1,024,770; Apr. 30; Sp. p. 6530; Gaz. vol. 177; p. 1149.
Girard, Louis B., assignor to The Girard Manufacturing Company, Los Angeles, Cal. Rolling-off machine for shade-cloth. No. 1,022,024; Apr. 2; Sp. p. 581; Gaz. vol. 177; p. 91.
Girard Manufacturing Company, The. (See Girard, Louis B., assignor.)
Giskie, Walter P., Los Angeles, Cal. Can-opener. No. 1,023,838; Apr. 23; Sp. p. 4420; Gaz. vol. 177; p. 794.
Gist, Hiram C., Redkey, Ind. Hardy-operating device. No. 1,024,848; Apr. 30; Sp. p. 6696; Gaz. vol. 177; p. 1178.
Givens, Jeremiah A., assignor of one-half to G. A. Richards, Los Angeles, Cal. Vehicle direction-indicator. No. 1,023,732; Apr. 16; Sp. p. 4160; Gaz. vol. 177; p. 730.
Glacken, Raymond M., Baltimore, Md. Canning acid fruits or vegetables. No. 1,021,770; Apr. 2; Sp. p. 30; Gaz. vol. 177; p. 8.
Gladson, William N. (See Ripley, Gladson, and Thompson.)
Glaser, Elizabeth R., North Dover, Ohio. Fruit-jar. No. 1,023,560; Apr. 16; Sp. p. 3842; Gaz. vol. 177; p. 677.
Glaser, Ludwig, Berlin, Germany, assignor to General Electric Company. Holder for lamp-filaments. No. 1,022,543; Apr. 9; Sp. p. 1665; Gaz. vol. 177; p. 296.
Glaser, Ludwig, Pankow, Germany, assignor to General Electric Company. Incandescent lamp. No. 1,023,307; Apr. 16; Sp. p. 3340; Gaz. vol. 177; p. 596.
Glaser, Simon. (See Eberhart and Glaser.)
Glass, Ernest, Chicago, Ill. Concertina-action. No. 1,024,771; Apr. 30; Sp. p. 6532; Gaz. vol. 177; p. 1150.
Glass Products Company. (See Burrows, William R., assignor.)
Glessner, Arthur W. (See Scherer, Albert G., assignor.)
Glowacki, Kasimierz. (See Jasiecki and Glowacki.)
Goebel, Carl, assignor to Class & Flentje Gesellschaft mit beschränkter Haftung, Mülhausen, Germany. Automatic take-up device for flat-knitting machines. No. 1,022,233; Apr. 2; Sp. p. 1025; Gaz. vol. 177; p. 163.
Goebel, Franz, Hann-Münden, Germany. Free-wheel back-pedaling brake. No. 1,023,076; Apr. 9; Sp. p. 2813; Gaz. vol. 177; p. 479.
Goebel, Fritz, *et al.* (See Jennings, Jarvis S., Jr., assignor.)
Goehr, Louis, San Francisco, Cal. Dish-drying rack. No. 1,022,544; Apr. 9; Sp. p. 1666; Gaz. vol. 177; p. 296.
Gohmann, Arthur, assignor to Stettiner Chamotte-Fabrik Actien-Gesellschaft vorm. Didier, Stettin, Germany. Gas-producing oven. No. 1,024,128; Apr. 23; Sp. p. 5078; Gaz. vol. 177; p. 894.
Gohmann, Arthur J., assignor to Anchor Stove & Range Company, New Albany, Ind. Hot-water heater. No. 1,025,084; Apr. 30; Sp. p. 7165; Gaz. vol. 177; p. 1257.
Gold, Edward E., New York, N. Y. Lock for couplings. No. 1,021,982; Apr. 2; Sp. p. 495; Gaz. vol. 177; p. 70.
Gold, Edward E., New York, N. Y. Convertible steam car-heater. No. 1,024,626; Apr. 30; Sp. p. 6234; Gaz. vol. 177; p. 1099.
Gold, Edward E., New York, N. Y. Valve for steam-heating systems. No. 1,024,723; Apr. 30; Sp. p. 6430; Gaz. vol. 177; p. 1135.
Gold, Egbert H., Chicago, Ill. Hose-coupling. No. 1,024,627; Apr. 30; Sp. p. 6236; Gaz. vol. 177; p. 1099.
Goldberg, Abraham, New York, N. Y. Garment. No. 1,022,100; Apr. 2; Sp. p. 927; Gaz. vol. 177; p. 148.
Golden, James W., Hodges, Mont. Fence-post. No. 1,022,314; Apr. 2; Sp. p. 1169; Gaz. vol. 177; p. 188.
Goldrick, Maurice. (See Bates, Benjamin, assignor.)
Goldstine, William H., Flint, Mich. Lower crank-case for combustion-engines. No. 1,022,413; Apr. 9; Sp. p. 1375; Gaz. vol. 177; p. 252.
Gomes, Joseph, Jacksonville, Ill. Liquid-fuel burner. No. 1,024,070; Apr. 23; Sp. p. 4926; Gaz. vol. 177; p. 873.
Gonard, Jean L., Coytesville, N. J. Machine for cutting concave facets in cut diamonds. No. 1,023,513; Apr. 16; Sp. p. 3747; Gaz. vol. 177; p. 662.
Good, Titus E., Brunner, Tex. Safety-lock for keyholes. No. 1,022,474; Apr. 9; Sp. p. 1523; Gaz. vol. 177; p. 273.
Gooderham, Albert E., Toronto, Ontario, Canada. Automobile-front. No. 1,024,567; Apr. 30; Sp. p. 6097; Gaz. vol. 177; p. 1078.
Goodman, Bessie S. (See Goodman and Ruff, assignors.)
Goodman, Joseph E., and E. S. Ruff; said E. S. Ruff assignor to B. S. Goodman, Stockton, Cal. Vehicle-tire. No. 1,023,733; Apr. 16; Sp. p. 4161; Gaz. vol. 177; p. 730.
Goodridge, Gilbert W., Bridgeport, Conn., assignor to The Bryant Electric Company. Shade-holder. No. 1,022,234; Apr. 2; Sp. p. 1028; Gaz. vol. 177; p. 164.

Goodridge, Gilbert W., assignor to The Bryant Electric Company, Bridgeport, Conn. Electric-lamp socket. No. 1,024,129; Apr. 23; Sp. p. 5083; Gaz. vol. 177; p. 894.
Goodwin, Edward L., Portland, Mich. Washing-machine. No. 1,022,475; Apr. 9; Sp. p. 1525; Gaz. vol. 177; p. 274.
Goodwin, Joseph A., Millville, N. J. Monoplane. No. 1,025,085; Apr. 30; Sp. p. 7166; Gaz. vol. 177; p. 1257.
Goodwin, Margaret B., assignor of one-half to D. W. Paine, Denver, Colo. Garment-fastening hook for women and children. No. 1,023,514; Apr. 16; Sp. p. 3751; Gaz. vol. 177; p. 663.
Gordon, F. M. (See Tessmer, Earl, assignor.)
Gordon, Wiley P., Lakeland, Fla. Coaster-brake. No. 1,022,937; Apr. 9; Sp. p. 2548; Gaz. vol. 177; p. 432.
Gorlick, Andrew J., Cleveland, Ohio, assignor to The Rickersberg Brass Company. Faucet and bib-cock. No. 1,022,071; Apr. 2; Sp. p. 677; Gaz. vol. 177; p. 108.
Goss-Acrey Calculator Company. (See Goss, George W., assignor.)
Goss, Charles E. (See Goss, George W. and C. E.)
Goss, George W., Orla, Tex., assignor to Goss-Acrey Calculator Company, St. Louis, Mo. Tax-calculating device. No. 1,024,071; Apr. 23; Sp. p. 4927; Gaz. vol. 177; p. 873.
Goss, George W., assignor to Goss-Acrey Calculator Company, St. Louis, Mo. Calculating-machine. No. 1,024,072; Apr. 23; Sp. p. 4929; Gaz. vol. 177; p. 873.
Goss, George W. and C. E., Baltimore, Ohio. Gate-latch. No. 1,023,908; Apr. 16; Sp. p. 3342; Gaz. vol. 177; p. 597.
Goss Printing Press Company, The. (See Firm, Joseph L., assignor.)
Goss Printing Press Company. (See Seymour, Ralph C., assignor.)
Goss, William, Chicago, Ill. Hanger-support. No. 1,021,867; Apr. 2; Sp. p. 252; Gaz. vol. 177; p. 41.
Göthberg, Nathanael, assignor of one-half to E. Grill, Chicago, Ill. Means for imparting instruction. No. 1,024,195; Apr. 23; Sp. p. 5232; Gaz. vol. 177; p. 917.
Gottschalck, Emil, assignor to Electric-Export Werke G. m. b. H., Berlin, Germany. Portable electric lamp. No. 1,022,072; Apr. 2; Sp. p. 679; Gaz. vol. 177; p. 108.
Gottschalck, Emil, assignor to Electric-Export-Werke G. m. b. H., Berlin, Germany. Portable electric lamp. No. 1,022,073; Apr. 2; Sp. p. 681; Gaz. vol. 177; p. 109.
Gough, Evan, and E. H. Miller, St. Louis, Mo. Wire-rope machine. No. 1,024,196; Apr. 23; Sp. p. 5236; Gaz. vol. 177; p. 917.
Gould, Frank I., New Liskeard, Ontario, Canada. Bed-frame. No. 1,022,038; Apr. 9; Sp. p. 2550; Gaz. vol. 177; p. 432.
Gowdey, Arthur, Riverside, Cal. Smoke-purifier and dust-collector. No. 1,024,326; Apr. 23; Sp. p. 5485; Gaz. vol. 177; p. 962.
Graber, Julius, New York, N. Y. Transfer mechanism for calculating-machines. No. 1,023,839; Apr. 23; Sp. p. 4422; Gaz. vol. 177; p. 794.
Graber, Julius, New York, N. Y. Transfer mechanism for calculating-machines. No. 1,023,840; Apr. 23; Sp. p. 4423; Gaz. vol. 177; p. 794.
Graber, Julius, New York, N. Y. Key mechanism for calculating-machines. No. 1,023,841; Apr. 23; Sp. p. 4425; Gaz. vol. 177; p. 795.
Graddick, Fletcher C., Albemarle, N. C. Roving-clamp. No. 1,023,688; Apr. 16; Sp. p. 4002; Gaz. vol. 177; p. 703.
Grady, Frank C., Indianapolis, Ind. Meter connection-box. No. 1,024,931; Apr. 30; Sp. p. 6868; Gaz. vol. 177; p. 1207.
Graham, Emery E., Denver, Colo. Surveying instrument. No. 1,023,373; Apr. 16; Sp. p. 3458; Gaz. vol. 177; p. 617.
Graham, George E., assignor to W. J. Payne, Candor, N. Y. Combination of reflecting means for enabling one to see the back of the head or neck. No. 1,024,506; Apr. 30; Sp. p. 5927; Gaz. vol. 177; p. 1057.
Graham, George H., Jersey City, N. J., assignor to Universal Stamping Machine Company, New York, N. Y. Mail-marking machine. No. 1,022,191; Apr. 2; Sp. p. 928; Gaz. vol. 177; p. 148.
Graham, George L., Florence, S. C. Mail-crane. No. 1,023,202; Apr. 16; Sp. p. 3134; Gaz. vol. 177; p. 561.
Graham, James S., assignor of one-half to O. F. H. Redemann, Magdalena, N. Mex. Hose-clamp. No. 1,023,639; Apr. 16; Sp. p. 4006; Gaz. vol. 177; p. 703.
Graham, John, Glasgow, Scotland. Boat's davit and the raising and lowering gear therefor. No. 1,024,507; Apr. 30; Sp. p. 5929; Gaz. vol. 177; p. 1058.
Graham, Thomas, Baltimore, Md., assignor to American Can Company, New York, N. Y. Friction-top can. No. 1,022,074; Apr. 2; Sp. p. 683; Gaz. vol. 177; p. 109.
Grant, Daniel, San Jacinto, Cal. Beeswax-cleaner. No. 1,023,640; Apr. 16; Sp. p. 4007; Gaz. vol. 177; p. 703.
Gras, Joseph, New York, N. Y. Table. No. 1,024,724; Apr. 30; Sp. p. 6433; Gaz. vol. 177; p. 1135.
Graves, Eugene A., Rutland, Vt., assignor of forty-five one-hundredths to F. W. Savage, Granville, N. Y., and ten one-hundredths to S. Geno, Rutland, Vt. Propelling mechanism for vessels. No. 1,023,515; Apr. 16; Sp. p. 3762; Gaz. vol. 177; p. 663.
Graves, James R., Amesbury, Mass. Seat. No. 1,023,423; Apr. 16; Sp. p. 3562; Gaz. vol. 177; p. 634.
Gray, Edward, assignor to Riverside Engine Company, Oil City, Pa. Motor-cooling system. No. 1,024,474; Apr. 23; Sp. p. 5817; Gaz. vol. 177; p. 1011.
Gray, Emmet P., Detroit, Mich. Whistle. No. 1,024,683; Apr. 30; Sp. p. 6356; Gaz. vol. 177; p. 1119.
Gray, John G. (See Bettis, William L., assignor.)
Greaves, Alfred J., Richmond, England. Receptacle for mustard and other condiments. No. 1,024,988; Apr. 30; Sp. p. 6976; Gaz. vol. 177; p. 1226.
Green, Byron E., Ilion, N. Y. Blackboard-marker. No. 1,023,581; Apr. 16; Sp. p. 3843; Gaz. vol. 177; p. 677.
Green, George B. (See Horvath and Green.)
Greene, Augustine E., Hartford, Conn. Work-holder. No. 1,024,256; Apr. 23; Sp. p. 5365; Gaz. vol. 177; p. 940.
Greenfield Automatic Fastener Company. (See Greenfield, Edwin T., assignor.)
Greenfield, Edwin T., Kiamesha, assignor to Greenfield Automatic Fastener Company, New York, N. Y. Stapling-machine. No. 1,024,889; Apr. 30; Sp. p. 6772; Gaz. vol. 177; p. 1191.
Greenleaf, George E., Plainfield, assignor to Niles-Bement-Pond Company, Jersey City, N. J. Lathe appliance. No. 1,021,771; Apr. 2; Sp. p. 32; Gaz. vol. 177; p. 8.
Greer, George T., Roanoke, Va. Tooth-brush holder. No. 1,023,641; Apr. 16; Sp. p. 4008; Gaz. vol. 177; p. 704.
Gregg, Harry B. (See Donahue, Anderson, and Gregg.)
Gremel, Frank J., Detroit, Mich. Explosive-engine. No. 1,022,476; Apr. 9; Sp. p. 1526; Gaz. vol. 177; p. 274.
Grey, Charles M., East Orange, N. J. Mechanical movement. No. 1,022,670; Apr. 9; Sp. p. 1940; Gaz. vol. 177; p. 338.
Grill, Elizabeth. (See Göthberg, Nathanael, assignor.)
Grill, William F., Detroit, Mich. Pattern-stripping machine. No. 1,024,890; Apr. 30; Sp. p. 6774; Gaz. vol. 177; p. 1192.
Grimes, Harry S., Portsmouth, Ohio. Cinder-guard. No. 1,024,327; Apr. 23; Sp. p. 5486; Gaz. vol. 177; p. 962.
Groebli, Joseph A., New York, N. Y. Decorated fabric. No. 1,024,891; Apr. 30; Sp. p. 6775; Gaz. vol. 177; p. 1192.
Groebli, Joseph A., New York, N. Y. Counterbalancing mechanism for embroidering-machines. No. 1,024,892; Apr. 30; Sp. p. 6777; Gaz. vol. 177; p. 1192.
Groetken, Joseph J., Tulsa, Okla. Pumping apparatus. No. 1,025,056; Apr. 30; Sp. p. 7097; Gaz. vol. 177; p. 1248.
Gronberg, John G., Grand Rapids, Mich., and W. D. Hodson, assignors to The Caloric Company, Janesville, Wis. Electric oven. No. 1,022,545; Apr. 9; Sp. p. 1667; Gaz. vol. 177; p. 296.
Gronek, John, Philadelphia, Pa. Combination time and percussion fuse. No. 1,022,075; Apr. 2; Sp. p. 685; Gaz vol. 177; p. 109.
Gross, Carl. (See Gross, Louis, assignor.)
Gross, Louis, Homestead, assignor to C. Gross, McKees Rocks, Pa. Composition of matter. No. 1,023,642; Apr. 16; Sp. p. 4010; Gaz. vol. 177; p. 704.
Grosser, Michael E., Waterville, N. Y. Root-puller. No. 1,024,828; Apr. 23; Sp. p. 5487; Gaz. vol. 177; p. 962.
Grotenhuis, William J., assignor to Sanitary Steel Couch Company, Chicago, Ill. Bed or couch fabric. No. 1,021,772; Apr. 2; Sp. p. 33; Gaz. vol. 177; p. 8.
Grotenhuis, William J., assignor of one-half to P. A. Salisbury, Chicago, Ill. Stamping device. No. 1,022,076; Apr. 2; Sp. p. 687; Gaz. vol. 177; p. 110.
Grout, Robert C., Denver, Colo. Fuse-changer. No. 1,023,077; Apr. 9; Sp. p. 2814; Gaz. vol. 177; p. 479.
Grover, George B., Lynn, Mass. Buffing-machine. No. 1,024,628; Apr. 30; Sp. p. 6242; Gaz. vol. 177; p. 1100.
Grow, Archie L., Beaumont, Kans. Sanitary attachment for bath-tubs. No. 1,024,320; Apr. 23; Sp. p. 5488; Gaz. vol. 177; p. 962.
Grub, Albert, assignor of one-fourth to F. Grub and one-fourth to B. Grub, Chicago, Ill. Leg-lifting-caster device. No. 1,021,773; Apr. 2; Sp. p. 35; Gaz. vol. 177; p. 9.
Grub, Benjamin, *et al.* (See Grub, Albert, assignor.)
Grub, Frederick, *et al.* (See Grub, Albert, assignor.)
Gruener, Hugo A., Pittsburgh, Pa. Feed-bag. No. 1,023,643; Apr. 16; Sp. p. 4010; Gaz. vol. 177; p. 704.
Gruenwald, Teodoro, Genoa, Italy. Fluid-jet blower. No. 1,023,078; Apr. 9; Sp. p. 2816; Gaz. vol. 177; p. 479.
Grüter, Reinhold, Charlottenburg, Germany. Mixture suitable for baking-powder. No. 1,024,330; Apr. 23; Sp. p. 5495; Gaz. vol. 177; p. 963.
Gruver, George W., Bakersfield, Cal. Firearm. No. 1,024,969; Apr. 30; Sp. p. 6979; Gaz. vol. 177; p. 1226.
Guell, Henry A., Paris, France. Splint-positioning device for match-machines. No. 1,024,772; Apr. 30; Sp. p. 6534; Gaz. vol. 177; p. 1150.
Guay, Emile J. (See Fleming and Guay.)
Guay, Emile J., Lynn, Mass., assignor to General Electric Company. Machine for forming and electrically welding tubes. No. 1,022,025; Apr. 2; Sp. p. 583; Gaz. vol. 177; p. 92.
Guest, William W., Alameda, Cal. Pneumatic wheel. No. 1,023,516; Apr. 16; Sp. p. 3758; Gaz. vol. 177; p. 663.
Guett, Monroe, assignor to The Hart & Hegeman Manufacturing Company, Hartford, Conn. Regulation of electric circuits. No. 1,021,774; Apr. 2; Sp. p. 36; Gaz. vol. 177; p. 9.
Guillot, Frank, Schenectady, N. Y., assignor to General Electric Company. Trolley-frog. No. 1,022,546; Apr. 9; Sp. p. 1671; Gaz. vol. 177; p. 296.

Guthrie, Joseph A., assignor to Guthrie-Mitchell Company, Little Rock, Ark. Insulator. No. 1,022,026; Apr. 2; Sp. p. 586; Gaz. vol. 177; p. 92.

Guthrie-Mitchell Company. (See Guthrie, Joseph A., assignor.)

Guy, Walter W., assignor to Colonial Fireplace Co., Chicago, Ill. Fireplace. No. 1,024,508; Apr. 30; Sp. p. 5031; Gaz. vol. 177; p. 1058.

Guy, Webb W., and O. L. Richards, Cushing, Tex. Combined window-awning and fire-protector. No. 1,022,939; Apr. 9; Sp. p. 2551; Gaz. vol. 177; p. 432.

Gyllenberg, John A., assignor of one-half to J. L. Rand, Baker, Oreg. Safety air-brake appliance for railway-cars. No. 1,024,331; Apr. 23; Sp. p. 5496; Gaz. vol. 177; p. 963.

Gyro Motor Company. (See Moore and Simmons, assignors.)

H. Mueller Manufacturing Company. (See Mueller, Henry, assignor.)

H. Mueller Manufacturing Company, The. (See Mueller, Philip, assignor.)

H. Mueller Manufacturing Company. (See Mueller and Mason, assignors.)

H. B. Hardenburg and Company. (See Specht, John, assignor.)

H. C. Cook Company, The. (See Munger and Carter, assignors.)

H. J. Keith Company. (See Keith, Simeon C., Jr., assignor.)

H. K. Porter Co. (See Hodges, Charles B., assignor.)

H. K. Porter Co. (See Murphy, Daniel R., assignor.)

H. W. Caldwell & Son Company. (See Pearce, Robert T., assignor.)

H. W. Johns-Manville Company. (See Christenson, George, assignor.)

H. W. Kearns & Company *et al.* (See Hamilton, John H., assignor.)

Haas, Lambert, Vienna, Austria-Hungary, assignor to F. Gebauer, Berlin, Germany. Calender for dyeing, starching, and mercerising machines. No. 1,023,734; Apr. 16; Sp. p. 4162; Gaz. vol. 177; p. 731.

Haas, Samuel, New York, N. Y. Spool-rack. No. 1,022,077; Apr. 2; Sp. p. 688; Gaz. vol. 177; p. 110.

Haberman, Alter, New York, N. Y. Folding bed. No. 1,023,562; Apr. 16; Sp. p. 3846; Gaz. vol. 177; p. 677.

Hacker, Bertalan. (See Polifka and Hacker.)

Hadaway, John B., Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Splitting-machine. No. 1,022,414; Apr. 9; Sp. p. 1376; Gaz. vol. 177; p. 252.

Hager, John E., New York, N. Y. Bottle-stopper. No. 1,023,735; Apr. 16; Sp. p. 4163; Gaz. vol. 177; p. 731.

Hagerman, William A., assignor of one-half to W. J. Hill, London, Ontario, Canada. Holdback. No. 1,022,626; Apr. 9; Sp. p. 1844; Gaz. vol. 177; p. 323.

Hahl, Hans. (See Taub and Hahl.)

Hahn, John, Los Angeles, Cal. Fluid-packing pump-piston. No. 1,024,130; Apr. 23; Sp. p. 5084; Gaz. vol. 177; p. 894.

Hahn, Robert M., London, England. Fastening device for corsets and other like garments. No. 1,023,374; Apr. 16; Sp. p. 3462; Gaz. vol. 177; p. 618.

Hailwood, Ernest A., Morley, England. Miner's safety-lamp. No. 1,023,563; Apr. 16; Sp. p. 3848; Gaz. vol. 177; p. 678.

Haines, C. L. N. (See Wilson and Mathey, assignors.)

Haines, Elbridge S., St. John, New Brunswick, Canada. Sawing-machine. No. 1,023,079; Apr. 9; Sp. p. 2817; Gaz. vol. 177; p. 490.

Haines, William, Philadelphia, Pa. Watch. No. 1,022,078; Apr. 2; Sp. p. 690; Gaz. vol. 177; p. 110.

Hajoe, Albin, Chattanooga, Tenn. Cushion-tire. No. 1,021,983; Apr. 2; Sp. p. 496; Gaz. vol. 177; p. 79.

Halbleib, Edward A., assignor to Northeast Electric Company, Rochester, N. Y. Starting device for internal-combustion engines. No. 1,024,447; Apr. 23; Sp. p. 5750; Gaz. vol. 177; p. 1000.

Halbleib, Edward A., assignor to Northeast Electric Company, Rochester, N. Y. Battery-charging apparatus. No. 1,024,448; Apr. 23; Sp. p. 5752; Gaz. vol. 177; p. 1000.

Haley, Harrison Y., Rushsylvania, assignor of one-third to H. F. Campbell, Rossburg, and C. D. Campbell, Bellefontaine, Ohio. Detector for party-line telephones. No. 1,024,131; Apr. 23; Sp. p. 5087; Gaz. vol. 177; p. 905.

Hall, Albert H., Peru, assignor to Forster Manufacturing Company, Dixfield, Me. Machine for stacking toothpicks and the like. No. 1,024,773; Apr. 30; Sp. p. 5538; Gaz. vol. 177; p. 1151.

Hall, Albert H., Peru, assignor to Forster Manufacturing Company, Dixfield, Me. Mechanism for stacking and conveying toothpicks. No. 1,024,774; Apr. 30; Sp. p. 5541; Gaz. vol. 177; p. 1151.

Hall, Alice A., Hollywood, Cal. Skirt-marker. No. 1,023,842; Apr. 23; Sp. p. 4426; Gaz. vol. 177; p. 795.

Hall, Allen S., Kokomo, Ind. Mud-guard fastener. No. 1,024,934; Apr. 30; Sp. p. 6373; Gaz. vol. 177; p. 1207.

Hall, Edward C., *et al.* (See Rupley, George H., assignor.)

Hall, John J., Bucksport, Me. Bilge-discharging device. No. 1,023,843; Apr. 23; Sp. p. 4429; Gaz. vol. 177; p. 795.

Hall, John W., and C. Baynes, London, England. Detachable rim for resilient tires. No. 1,022,842; Apr. 9; Sp. p. 2334; Gaz. vol. 177; p. 390.

Hall, Joseph, Manchester, England. Exhaust-muffler. No. 1,023,644; Apr. 16; Sp. p. 4011; Gaz. vol. 177; p. 704.

Hall, Mabel H., executrix. (See Rupley, George H.)

Hall, Oscar E., assignor to H. J. Stevens, Pawnee City, Nebr. Railway cross-tie. No. 1,022,362; Apr. 2; Sp. p. 1270; Gaz. vol. 177; p. 204.

Hall Signal Company, The. (See Coleman, Clarence W., assignor.)

Hall Signal Company, The. (See Lee, Thomas L., Jr., assignor.)

Halloran, James R., New Britain, Conn. Coin-controlled vending device. No. 1,022,782; Apr. 9; Sp. p. 2218; Gaz. vol. 177; p. 379.

Halpin, Michael J., New York, assignor to The Englander Spring Bed Company, Brooklyn, N. Y. Folding leg for couch-beds. No. 1,024,197; Apr. 23; Sp. p. 5237; Gaz. vol. 177; p. 917.

Halvorsen, Birger F., Christiania, Norway. Treating iron ores. No. 1,024,629; Apr. 30; Sp. p. 6249; Gaz. vol. 177; p. 1100.

Hambright, Frank M. (See Harris, Richard G., assignor.)

Hamilton, John H., Manchester, assignor to Electromotors Limited, Openshaw, Manchester, and H. W. Kearns & Company Limited, Broadheath, near Manchester, England. Machine-tool. No. 1,023,203; Apr. 16; Sp. p. 3136; Gaz. vol. 177; p. 561.

Hamilton, John R. (See Thompson and Hamilton.)

Hamilton, John R., Yonkers, assignor to Automatic Sprinkler Company of America, New York, N. Y. Fusible link. No. 1,024,725; Apr. 30; Sp. p. 6434; Gaz. vol. 177; p. 1134.

Hamilton, Pinckney W., Pittsburgh, Pa. Cooking utensil. No. 1,023,645; Apr. 16; Sp. p. 4012; Gaz. vol. 177; p. 704.

Hamilton, Thomas S., King City, Cal. Hay or grain gathering machine. No. 1,022,733; Apr. 9; Sp. p. 2117; Gaz. vol. 177; p. 363.

Hamilton, Thomas S., King City, Cal. Scarf-holding collar attachment. No. 1,022,734; Apr. 9; Sp. p. 2119; Gaz. vol. 177; p. 363.

Hamlin, Orlo J., *et al.* (See Gill, Edwin R., assignor.)

Hamm, William S., Hubbard Woods, and T. A. Legge, Chicago, Ill., assignors to The Adams & Westlake Company. Closet-seat. No. 1,024,568; Apr. 30; Sp. p. 6100; Gaz. vol. 177; p. 1079.

Hammack, Martin V., Springfield, Mo. Device for creasing and pressing trousers. No. 1,022,671; Apr. 9; Sp. p. 1944; Gaz. vol. 177; p. 338.

Hammer, Edwin L., Rochester, N. Y. Daylight developing-tank for photographic films. No. 1,022,477; Apr. 9; Sp. p. 1527; Gaz. vol. 177; p. 275.

Hammer, Peter, Marlboro, N. Y. Shoe attachment. No. 1,022,672; Apr. 9; Sp. p. 1945; Gaz. vol. 177; p. 338.

Hammond, John H., Jr., Gloucester, Mass. Naval-war-game apparatus. No. 1,023,375; Apr. 16; Sp. p. 3464; Gaz. vol. 177; p. 618.

Hammond-Knowlton, Clarence A., New York, N. Y. Thread-ometer. No. 1,024,332; Apr. 23; Sp. p. 5499; Gaz. vol. 177; p. 963.

Hammond, W. D. (See Brintnall, Thomas M., assignor.)

Hampson, John, Chilworth, assignor to Third Hand Patents Limited, London, England. Magnifying-glass. No. 1,025,057; Apr. 30; Sp. p. 7099; Gaz. vol. 177; p. 1248.

Hampson, John, Chilworth, assignor to Third Hand Patents Limited, London, England. Fastening device. No. 1,025,058; Apr. 30; Sp. p. 7101; Gaz. vol. 177; p. 1248.

Hanchett Swage Works. (See Hedstrom, John P., assignor.)

Hancock, John A. (See Pitts and Hancock.)

Handy, Levin G., Rutherford, N. J., assignor to F. H. Gibbs, New York, N. Y. Flush car-door. No. 1,024,803; Apr. 30; Sp. p. 6781; Gaz. vol. 177; p. 1193.

Hanhart, Louis J., assignor to J. A. Fay & Egan Company, Cincinnati, Ohio. Sawmill set-works. No. 1,024,775; Apr. 30; Sp. p. 6544; Gaz. vol. 177; p. 1152.

Hanisch, Paul, Cologne, and J. Rosemeyer, Cologne-Lindenthal, Germany. Arc-lamp. No. 1,023,424; Apr. 16; Sp. p. 3563; Gaz. vol. 177; p. 634.

Hanna, Gustav H. (See Watkins, Evan, assignor.)

Hannam, William H., Sydney, New South Wales, Australia. Metal-slat Venetian blind. No. 1,022,415; Apr. 9; Sp. p. 1379; Gaz. vol. 177; p. 253.

Hannam, William H., and W. E. Murray, assignors to Western Sugar Refining Company, San Francisco, Cal. Apparatus for drying sugar. No. 1,024,073; Apr. 23; Sp. p. 4933; Gaz. vol. 177; p. 874.

Hansen, Anders. (See Neble and Hansen.)

Hansen, Charles C., Easton, Pa., assignor to Ingersoll-Rand Company, New York, N. Y. Rotation device for rock-drills. No. 1,023,517; Apr. 16; Sp. p. 3756; Gaz. vol. 177; p. 664.

Hansen, Charles C., Easton, Pa., assignor to Ingersoll-Rand Company, New York, N. Y. Rotation device for hammer-drills. No. 1,023,518; Apr. 16; Sp. p. 3757; Gaz. vol. 177; p. 664.

Hansen, John S., Brockton, Mass., assignor to O. A. Miller Treeing Machine Company, Portland, Me. Shoe-tree. No. 1,021,834; Apr. 2; Sp. p. 185; Gaz. vol. 177; p. 30.

Hansen, Julius, Texas City, Tex. Wax-press. No. 1,023,844; Apr. 23; Sp. p. 4430; Gaz. vol. 177; p. 796.

Hansen, Louis, Omaha, Nebr. Combined screen and storm door. No. 1,022,547; Apr. 9; Sp. p. 1671; Gaz. vol. 177; p. 297.

Hanson, Albertus E., Mason City, Iowa. Ditching-machine and tile-distributer. No. 1,022,843; Apr. 9; Sp. p. 2338; Gaz. vol. 177; p. 390.

Hanson, Albertus E., Mason City, Iowa. Window-sash lock. No. 1,023,014; Apr. 9; Sp. p. 2681; Gaz. vol. 177; p. 457.

Hanson, Haaken P., Albert Lea, Minn. Safety snap-hook. No. 1,022,940; Apr. 9; Sp. p. 2553; Gaz. vol. 177; p. 433.

Hanson, Nils K. F., Stockholm, Sweden. Wood-barking machine. No. 1,024,198; Apr. 23; Sp. p. 5239; Gaz. vol. 177; p. 918.

Hanson, Thomas C., Rockford, Ill. Spike. No. 1,024,776; Apr. 30; Sp. p. 6546; Gaz. vol. 177; p. 1152.

Härden, Johannes, Schenectady, N. Y., assignor to General Electric Company, Electrode. No. 1,024,257; Apr. 23; Sp. p. 5371; Gaz. vol. 177; p. 941.

Hardenburgh, Guy T., and J. A. Schroyer, Ira, Iowa. Automatic railway-crossing guard. No. 1,023,015; Apr. 9; Sp. p. 2683; Gaz. vol. 177; p. 457.

Harding, Charles K., Chicago, Ill. Inverted incandescent mantle. No. 1,022,133; Apr. 2; Sp. p. 811; Gaz. vol. 177; p. 128.

Harding, Henry, Buffalo, Ohio. Gate. No. 1,024,400; Apr. 23; Sp. p. 5058; Gaz. vol. 177; p. 985.

Harding, Lebbeus L. (See Belnkamp and Harding.)

Harding, Samuel, Buffalo, N. Y. Clothes-stick. No. 1,024,401; Apr. 23; Sp. p. 5660; Gaz. vol. 177; p. 985.

Hardisty, Arlington L., Silver Spring, Md. Antislipping overshoe for horses. No. 1,023,845; Apr. 23; Sp. p. 4431; Gaz. vol. 177; p. 796.

Hardy, Charles S., San Diego, Cal. Combined cutter and mixer. No. 1,022,315; Apr. 2; Sp. p. 1170; Gaz. vol. 177; p. 188.

Hargreaves, Joseph. (See Steele, Boulter, and Hargreaves.)

Harlan, Thomas S., Salt Lake City, Utah. Sanitary dental waste-receptacle. No. 1,022,816; Apr. 2; Sp. p. 1172; Gaz. vol. 177; p. 188.

Harlé, Emile, assignor to Société Harlé & Cie., Paris, France. Regulator for steam-accumulators. No. 1,023,376; Apr. 16; Sp. p. 3466; Gaz. vol. 177; p. 619.

Harleston, George B., Stuttgart, Ark. Line-holder. No. 1,024,333; Apr. 23; Sp. p. 5500; Gaz. vol. 177; p. 964.

Harley, William S., Milwaukee, Wis. Seat-support. No. 1,024,684; Apr. 30; Sp. p. 6357; Gaz. vol. 177; p. 1119.

Harley, William S., Milwaukee, Wis. Seat-support. No. 1,024,685; Apr. 30; Sp. p. 6359; Gaz. vol. 177; p. 1120.

Harman, Benjiman F., Tulsa, Okla. Incandescent-mantle chimney. No. 1,024,334; Apr. 23; Sp. p. 5502; Gaz. vol. 177; p. 964.

Harman, Joseph, Hambleton, W. Va. Rock-picker for picking up rocks, &c. No. 1,023,736; Apr. 16; Sp. p. 4164; Gaz. vol. 177; p. 731.

Harmon, Frank L., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Skiving-machine. No. 1,024,569; Apr. 30; Sp. p. 6101; Gaz. vol. 177; p. 1079.

Harmon, Frank P., Dallas, Tex. Rotary engine. No. 1,023,468; Apr. 16; Sp. p. 3652; Gaz. vol. 177; p. 647.

Harpham, Julius C., Lincoln, Nebr. Harness. No. 1,023,147; Apr. 16; Sp. p. 3015; Gaz. vol. 177; p. 541.

Harrington, Frank B., Elk City, Okla. Weighing apparatus for refrigerators. No. 1,024,335; Apr. 23; Sp. p. 5503; Gaz. vol. 177; p. 964.

Harrington, Joseph A., South Boston, assignor of one-half to M. J. Lydon, Boston, Mass. Stropping device. No. 1,024,074; Apr. 23; Sp. p. 4935; Gaz. vol. 177; p. 874.

Harris Automatic Press Company, The. (See Johnston, Robert T., assignor.)

Harris, George F., Logansport, Ind. Level. No. 1,025,086; Apr. 30; Sp. p. 7170; Gaz. vol. 177; p. 1257.

Harris, Henry E., London, England. Gas-burner. No. 1,024,849; Apr. 30; Sp. p. 6696; Gaz. vol. 177; p. 1179.

Harris, John F., Pickens, S. C. Foot-pocket. No. 1,022,285; Apr. 2; Sp. p. 1029; Gaz. vol. 177; p. 164.

Harris, Joseph T. (See Chinn and Harris.)

Harris, Noah, Indianapolis, Ind. Resilient tire. No. 1,024,336; Apr. 23; Sp. p. 5504; Gaz. vol. 177; p. 965.

Harris, Richard G., assignor of one-half to F. M. Hambright, Knoxville, Tenn. Vehicle-lamp. No. 1,023,510; Apr. 16; Sp. p. 3758; Gaz. vol. 177; p. 664.

Harrison, Charles, W. Bate, and W. G. Perks, Hayle, England. Recovering volatile liquids. No. 1,022,416; Apr. 9; Sp. p. 1380; Gaz. vol. 177; p. 253.

Harrison, Herbert C., Lockport, N. Y. Multibladed razor. No. 1,024,509; Apr. 30; Sp. p. 5933; Gaz. vol. 177; p. 1068.

Harrison, Joseph J., Los Angeles, Cal. Wall-safe. No. 1,023,425; Apr. 16; Sp. p. 3565; Gaz. vol. 177; p. 634.

Harrison, Philip B., and A. P. Rissler, Chicago, Ill. Core-box-clamping machine. No. 1,022,863; Apr. 2; Sp. p. 1272; Gaz. vol. 177; p. 204.

Harrison Safety Boiler Works. (See Wallem, Axel B., assignor.)

Harrison, Thomas J., Sabula, Iowa. Fountain-mold. No. 1,021,927; Apr. 2; Sp. p. 363; Gaz. vol. 177; p. 60.

Harry, Spencer P., London, England, assignor to The Monarch Typewriter Company, Syracuse, N. Y. Type-writing machine. No. 1,021,835; Apr. 2; Sp. p. 187; Gaz. vol. 177; p. 31.

Harry Vissering and Company. (See Vissering, Harry, assignor.)

Harshman, Clyde. (See Britten, William M., assignor.)

Hart, Benjamin F., Jr., Hoboken, N. J. Water-cooling tower. No. 1,023,564; Apr. 16; Sp. p. 3849; Gaz. vol. 177; p. 678.

Hart, Harry S., assignor to Rodger Ballast Car Company, Chicago, Ill. Dump-car. No. 1,022,079; Apr. 2; Sp. p. 691; Gaz. vol. 177; p. 111.

Hart & Hegeman Manufacturing Company, The. (See Guett, Monroe, assignor.)

Hart, John B., assignor to The North and Pfeiffer Manufacturing Company, Hartford, Conn. Boot or shoe calk. No. 1,025,087; Apr. 30; Sp. p. 7171; Gaz. vol. 177; p. 1257.

Hartman, August H., Seattle, Wash. Drinking-cup. No. 1,022,548; Apr. 9; Sp. p. 1673; Gaz. vol. 177; p. 297.

Hartman, Henry H. (See Hartman, John and H. H.)

Hartman, John and H. H., Morral, Ohio. Gambrel. No. 1,023,148; Apr. 16; Sp. p. 3016; Gaz. vol. 177; p. 542.

Hartman Manufacturing Company. (See Wygant, Lewis E., assignor.)

Hartman Trunk Company, The. (See Wheary, George H., assignor.) (Reissue.)

Hartness, James, Springfield, Vt. Cutter for metal-working tools. No. 1,021,868; Apr. 2; Sp. p. 253; Gaz. vol. 177; p. 41.

Hartt, Jennie W. (See Hartt, John C., assignor.)

Hartt, John C., assignor of one-half to J. W. Hartt, East Liverpool, Ohio. Type-writer. No. 1,022,673; Apr. 9; Sp. p. 1948; Gaz. vol. 177; p. 339.

Harttung, Felix C. (See Rumberg and Harttung.)

Harvey Hubbell, Incorporated. (See Abbott, Linn B., assignor.)

Harvey, Samuel B., Chicago, Ill. Gas-lamp. No. 1,024,199; Apr. 23; Sp. p. 5242; Gaz. vol. 177; p. 918.

Hasbrouck, Homer B. (See Dieckmann, George P., assignor.)

Haskins, Caryl D., deceased; F. J. Haskins, executrix, Schenectady, N. Y., assignor to General Electric Company. Electric pile-driver. No. 1,022,586; Apr. 9; Sp. p. 1754; Gaz. vol. 177; p. 309.

Haskins, Frances J., executrix. (See Haskins, Caryl D.)

Haslett, John D. S., Philadelphia, Pa. Cartridge. No. 1,023,469; Apr. 16; Sp. p. 3654; Gaz. vol. 177; p. 648.

Hatton, Joseph E., and J. P. Sala, Habana, Cuba. Centrifugal separation. No. 1,025,059; Apr. 30; Sp. p. 7102; Gaz. vol. 177; p. 1248.

Hauser, Martin, Richmond Hill, N. Y. Safety-razor. No. 1,024,570; Apr. 30; Sp. p. 6104; Gaz. vol. 177; p. 1080.

Hauswirth, Frederick, St. Louis, Mo. Steam-condenser. No. 1,021,775; Apr. 2; Sp. p. 39; Gaz. vol. 177; p. 10.

Havemeyer, John F., Ardsley-on-Hudson, N. Y. Reinforcing means for composite structures. No. 1,023,149; Apr. 16; Sp. p. 3017; Gaz. vol. 177; p. 542.

Havener, Arthur R., Waltham, Mass., assignor to Judson L. Thomson M'f'g Co. Multiple-rivet-setting machine. No. 1,021,869; Apr. 2; Sp. p. 256; Gaz. vol. 177; p. 41.

Havens, Amos M., Lowell, Mich. Combined clevis and clip. No. 1,022,941; Apr. 9; Sp. p. 2554; Gaz. vol. 177; p. 433.

Haverkamp, Ernst, *et al.* (See Suhr, Emil, assignor.)

Hawes, George E., Bridgeport, Conn. Corset-stay. No. 1,022,364; Apr. 2; Sp. p. 1274; Gaz. vol. 177; p. 205.

Hawkins, Laurence A., Schenectady, N. Y., assignor to General Electric Company. Automatic sectionalising device. No. 1,023,377; Apr. 16; Sp. p. 3469; Gaz. vol. 177; p. 619.

Hawks, Moses L., New York, N. Y. Gyroscopic top. No. 1,022,236; Apr. 2; Sp. p. 1030; Gaz. vol. 177; p. 164.

Hay, Alexander M. (See Neil, James M., assignor.)

Hay, John, Junction City, Kans. Turbine water-wheel. No. 1,023,378; Apr. 16; Sp. p. 3473; Gaz. vol. 177; p. 620.

Hay, John B., Youngstown, Ohio. Canvas belting. No. 1,022,080; Apr. 2; Sp. p. 694; Gaz. vol. 177; p. 111.

Hayden, Arthur C., Brockton, Mass., Razor stropper and honer. No. 1,022,549; Apr. 9; Sp. p. 1675; Gaz. vol. 177; p. 297.

Hayes, George H., Chicago, Ill., assignor to Chicago Pneumatic Tool Company. Pneumatic drill or like machine. (Reissue.) No. 13,410; Apr. 30; Sp. p. 7234; Gaz. vol. 177; p. 1268.

Hayes, Mary A., La Crosse, Wis. Cooking utensil. No. 1,022,287; Apr. 2; Sp. p. 1033; Gaz. vol. 177; p. 165.

Haynes, William T., East Atlanta, Ga. Milk-turner. No. 1,023,737; Apr. 16; Sp. p. 4165; Gaz. vol. 177; p. 731.

Haythorpe, Charles, Kennington, London, England. Mechanical method of treatment of feed-water to boilers for prevention of incrustation, corrosion, or pitting. No. 1,022,365; Apr. 2; Sp. p. 1276; Gaz. vol. 177; p. 205.

Hayton, Thomas R., Hannibal, Mo. Centrifugal pump. No. 1,022,478; Apr. 9; Sp. p. 1530; Gaz. vol. 177; p. 275.

Hayward Company, The. (See Morris, Charles A., assignor.)

Hayward, Frank J., Spencer, Wis. Snow-plow. No. 1,021,928; Apr. 2; Sp. p. 365; Gaz. vol. 177; p. 60.

Hayward, Henry E., Philadelphia, Pa., assignor to Link-Belt Company, Chicago, Ill. Chain-link. No. 1,022,942; Apr. 9; Sp. p. 2555; Gaz. vol. 177; p. 433.

Hazard, Frederick J. H., Toronto, Ontario, Canada. Amusement device. No. 1,022,674; Apr. 9; Sp. p. 1953; Gaz. vol. 177; p. 339.

Healy, James T., trustee. (See Campbell, Leon J., assignor.)

Heaslet, James G., Detroit, assignor of one-half to W. E. Flanders, Pontiac, Mich. Casing for universal joints for automobiles. No. 1,024,132; Apr. 23; Sp. p. 5089; Gaz. vol. 177; p. 895.
Heater-Muffler Co. (See Lewis, Edward D., assignor.)
Heaton, Herbert, Rockledge, Pa. Knitting-needle. No. 1,022,235; Apr. 2; Sp. p. 1034; Gaz. vol. 177; p. 165.
Heberer, Adam, Alameda, and H. A. Hyne, Belmont, Cal. Apparatus for feeding fuel to furnaces. No. 1,022,550; Apr. 9; Sp. p. 1678; Gaz. vol. 177; p. 297.
Hebert, Joseph A. H., et al. (See Lord, Peter, assignor.)
Heckert, John E., Claremont, Cal. Window-cleaner. No. 1,022,134; Apr. 2; Sp. p. 813; Gaz. vol. 177; p. 129.
Hedges, Samuel P., Greenport, N. Y. Portable faultfinding device for electrical ignition apparatus. No. 1,024,935; Apr. 30; Sp. p. 6874; Gaz. vol. 177; p. 1207.
Hedstrom, John P., assignor to Hanchett Swage Works, Big Rapids, Mich. Rest for saw-sharpening machines. No. 1,022,479; Apr. 9; Sp. p. 1532; Gaz. vol. 177; p. 275.
Heeley, John S., Gallatin, Pa. Envelop. No. 1,024,258; Apr. 23; Sp. p. 5372; Gaz. vol. 177; p. 941.
Heeney, Henry J., Brookline, Mass., assignor to Holtzer-Cabot Electric Company. Gong-striking mechanism. No. 1,024,449; Apr. 23; Sp. p. 5755; Gaz. vol. 177; p. 1001.
Heffner, Samuel H. J. (See Kissinger and Heffner.)
Heichert, Herman S., Ford City, assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa. Apparatus for making plaster-board. No. 1,023,934; Apr. 23; Sp. p. 4650; Gaz. vol. 177; p. 826.
Heidenreich, William F., et al. (See Vargyas, Eugene von, assignor.)
Heilbrun, Louis I., New York, N. Y. Box-lid-attaching means. No. 1,024,571; Apr. 30; Sp. p. 6105; Gaz. vol. 177; p. 1060.
Heinemann, Albert, Berlin, Germany. Carafe and stopper. No. 1,024,894; Apr. 30; Sp. p. 6788; Gaz. vol. 177; p. 1193.
Heinkel, Christian F., and J. Muth, Cleveland, Ohio; said Muth assignor to said Heinkel. Drill. No. 1,022,135; Apr. 2; Sp. p. 816; Gaz. vol. 177; p. 129.
Heins, William E. (See Schwelkert and Heins.)
Heitsmann, Fritz, Freiburg, Germany. Manufacture of manifold-writing books and pads. No. 1,021,776; Apr. 2; Sp. p. 41; Gaz. vol. 177; p. 10.
Heismann, Charles E., Reading, Pa. Automobile-horn. No. 1,023,016; Apr. 9; Sp. p. 2686; Gaz. vol. 177; p. 458.
Hekell, George, et al. (See Szabados, Antony, assignor.)
Hekkel, G., et al. (See Balasz, John, assignor.)
Helberger, Hugo, Munich, Germany. Electrical resistance furnace. No. 1,023,309; Apr. 16; Sp. p. 3343; Gaz. vol. 177; p. 597.
Heil-Cushion Drive Limited, The. (See Perry and Jones, assignors.)
Heller, Charles S., assignor to Moore Architectural and Engineering Company, Akron, Ohio. Apparatus for use in reclaiming vulcanized-rubber waste. No. 1,024,936; Apr. 30; Sp. p. 6875; Gaz. vol. 177; p. 1208.
Heller, Charles S., assignor to Moore Architectural and Engineering Company, Akron, Ohio. Reclaiming vulcanized-rubber waste. No. 1,024,937; Apr. 30; Sp. p. 6878; Gaz. vol. 177; p. 1208.
Heller, Ernst, St. Louis, Mo. Generator-furnace. No. 1,022,480; Apr. 9; Sp. p. 1534; Gaz. vol. 177; p. 276.
Heller Tool Company. (See Lyons, William W., assignor.)
Hellmund, Rudolf E., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Magnetizable wedge for dynamo-electric machines. No. 1,024,572; Apr. 30; Sp. p. 6107; Gaz. vol. 177; p. 1060.
Helm, Amos J., Floydada, Tex. Aerodrome. No. 1,023,150; Apr. 16; Sp. p. 3019; Gaz. vol. 177; p. 542.
Helvig, Gilbert O., and E. Danielson, Dawson, assignors to The Automatic Traction Implement Company, Minneapolis, Minn. Combined motor and traction operated implement. No. 1,023,151; Apr. 16; Sp. p. 3021; Gaz. vol. 177; p. 542.
Hemmeter, Henry C., assignor of one-half to C. C. Van Wagoner, Pontiac, Mich. Attachment to spark-plugs. No. 1,022,102; Apr. 2; Sp. p. 934; Gaz. vol. 177; p. 149.
Hempel, Albert, Leipsig-Oetzsch, Germany. Medicinal bath. No. 1,022,627; Apr. 9; Sp. p. 1845; Gaz. vol. 177; p. 323.
Hendee, Edward T., Chicago, Ill. Boiler-flue rattler. No. 1,023,379; Apr. 16; Sp. p. 3475; Gaz. vol. 177; p. 620.
Henderson, Alexander M. (See Henderson, William and A. M.)
Henderson, Edwin D., Jr. (See Wenig, John, assignor.)
Henderson, Eugene V., Leavenworth, Kans. Aquatic life-preserver. No. 1,023,380; Apr. 16; Sp. p. 3478; Gaz. vol. 177; p. 620.
Henderson, Robert H., East Orange, N. J., assignor to Westinghouse Lamp Company. Electric illuminating device. No. 1,024,573; Apr. 30; Sp. p. 6108; Gaz. vol. 177; p. 1060.
Henderson, William and A. M., Aurora, Ill. Capsule. No. 1,024,259; Apr. 23; Sp. p. 5373; Gaz. vol. 177; p. 941.
Henderson, William G., Cleveland, Ohio. Grip-control mechanism for motor-cycles. No. 1,022,081; Apr. 2; Sp. p. 695; Gaz. vol. 177; p. 111.
Hendricks, James S., Colville, Wash. Gate. No. 1,024,630; Apr. 30; Sp. p. 6250; Gaz. vol. 177; p. 1100.
Hendricks, James S., Colville, Wash. Farm-gate. No. 1,024,686; Apr. 30; Sp. p. 6360; Gaz. vol. 177; p. 1120.
Hendricksen, Carl, Seattle, Wash. Running-gear for motor-cycles. No. 1,022,675; Apr. 9; Sp. p. 1956; Gaz. vol. 177; p. 340.
Henley, Edward. (See Cunningham and Buxton, assignors.)
Henley, Frank H. (See Snideman and Henley.)
Henrich, Henry, New York, N. Y. Ring-forming machine. No. 1,024,004; Apr. 23; Sp. p. 4780; Gaz. vol. 177; p. 850.
Hepworth, Cecil M., London, England. Apparatus for synchronously operating combined kinematographs and sound-production apparatus. No. 1,023,846; Apr. 23; Sp. p. 4434; Gaz. vol. 177; p. 796.
Herald, John W., Galveston, Tex. Making salve. No. 1,022,239; Apr. 2; Sp. p. 1035; Gaz. vol. 177; p. 165.
Herbert, William P., Philadelphia, Pa. Air-pressure-creating device for gasolene-supply to engines, &c. No. 1,023,565; Apr. 16; Sp. p. 3850; Gaz. vol. 177; p. 678.
Herlinger, S. (See Buttress, Joseph, assignor.)
Hermann, Louis, Chicago, Ill. Wrench. No. 1,022,783; Apr. 9; Sp. p. 2214; Gaz. vol. 177; p. 379.
Herndon, William T., assignor of one-half to G. H. Russell, Laurinburg, N. C. Steriliser. No. 1,023,646; Apr. 16; Sp. p. 4014; Gaz. vol. 177; p. 705.
Heron, William E. (See Upton, Frank B., assignor.)
Herring-Hall-Marvin Safe Company. (See Jacobson, Ole, assignor.)
Herron, John, assignor of one-half to J. R. Ryan, Sault Ste. Marie, Mich. Wrench. No. 1,024,078; Apr. 23; Sp. p. 4937; Gaz. vol. 177; p. 875.
Herstad, Frederik C. A. Finspång, Sweden. Device for the facilitation of the exchange of bores in rock-drills. No. 1,024,574; Apr. 30; Sp. p. 6109; Gaz. vol. 177; p. 1061.
Hertzberg, Harry, Brooklyn, assignor to A. A. Low, Horseshoe, M. J. Wohl, New York, and H. Hertzberg, Brooklyn, N. Y., trustees. Marine compass. No. 1,022,676; Apr. 9; Sp. p. 1957; Gaz. vol. 177; p. 340.
Hertzberg, Harry, Brooklyn, assignor to A. A. Low, Horseshoe, M. J. Wohl, New York, and H. Hertzberg, Brooklyn, N. Y., trustees. Marine compass. No. 1,022,784; Apr. 9; Sp. p. 2216; Gaz. vol. 177; p. 379.
Hertzberg, Harry, Brooklyn, assignor to A. A. Low, Horseshoe, M. J. Wohl, New York, and H. Hertzberg, Brooklyn, N. Y., trustees. Marine compass. No. 1,022,785; Apr. 9; Sp. p. 2218; Gaz. vol. 177; p. 380.
Herzog, Mathias S., New York, N. Y. Vapor-burner. No. 1,024,578; Apr. 30; Sp. p. 6110; Gaz. vol. 177; p. 1061.
Hess-Bright Manufacturing Company, The. (See Hess, Henry, assignor.)
Hess, Clarence, Union, Oreg. Intermittent-grip device. No. 1,025,088; Apr. 30; Sp. p. 7173; Gaz. vol. 177; p. 1258.
Hess, Harry, Frankfort, Germany, assignor to H. Strauss, New York, N. Y. Safety-razor. No. 1,024,402; Apr. 23; Sp. p. 5091; Gaz. vol. 177; p. 985.
Hess, Henry, assignor to The Hess-Bright Manufacturing Company, Philadelphia, Pa. Ball-bearing. No. 1,023,017; Apr. 9; Sp. p. 2688; Gaz. vol. 177; p. 459.
Hess, Henry, assignor to The Hess-Bright Manufacturing Company, Philadelphia, Pa. Machine for forming grooves and the like upon the sides of rollers, &c. No. 1,023,381; Apr. 16; Sp. p. 3479; Gaz. vol. 177; p. 621.
Hessenland, Max, assignor to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany. Alizarin-red vat dyestuff and making same. No. 1,023,847; Apr. 23; Sp. p. 4438; Gaz. vol. 177; p. 797.
Heulings, William H. (See Malocsay, Francis X., assignor.)
Heuss, Hermann, assignor to The C. W. Raymond Company, Dayton, Ohio. Drier for clayware. No. 1,022,082; Apr. 2; Sp. p. 696; Gaz. vol. 177; p. 111.
Hewitt, Herbert H. (See Sill, Samuel J., assignor.)
Hewitt, Herbert H., London, England. Making radio-active beverages. No. 1,022,551; Apr. 9; Sp. p. 1681; Gaz. vol. 177; p. 298.
Hewlett, Edward M., Schenectady, N. Y., assignor to General Electric Company. Oil-switch. No. 1,023,310; Apr. 16; Sp. p. 3346; Gaz. vol. 177; p. 597.
Hewlett, Maddra J., Kewanee, Ill. Molding apparatus. No. 1,022,240; Apr. 2; Sp. p. 1036; Gaz. vol. 177; p. 165.
Heydlauff, Victor W., Havre, Mont. Fire-escape. No. 1,022,417; Apr. 9; Sp. p. 1381; Gaz. vol. 177; p. 253.
Heyerly, John, near Bluffton, Ind. Fence-post brace. No. 1,025,060; Apr. 30; Sp. p. 7105; Gaz. vol. 177; p. 1249.
Heyl, Henry R., assignor to The American Paper Bottle Company, Philadelphia, Pa. Machine for manufacturing paper bottles and other containers. No. 1,024,988; Apr. 30; Sp. p. 6882; Gaz. vol. 177; p. 1208.
Hibbard, Charles L., East Orange, assignor, by mesne assignments, to Thomas A. Edison, Incorporated, West Orange, N. J. Phonograph. No. 1,023,250; Apr. 16; Sp. p. 3222; Gaz. vol. 177; p. 577.
Hickey, Catherine L., Saginaw, Mich. Display-stand. No. 1,024,777; Apr. 30; Sp. p. 6547; Gaz. vol. 177; p. 1152.
Hickman, Harvey H., assignor to Corrugated Bar Company, St. Louis, Mo. Spacing and supporting device for reinforcing-bars. No. 1,024,260; Apr. 23; Sp. p. 5374; Gaz. vol. 177; p. 941.

Hierling, Christian, and A. Fuller, assignors to The J. E. Mergott Company, Newark, N. J. Bag-frame. No. 1,024,695; Apr. 30; Sp. p. 6790; Gaz. vol. 177; p. 1193.
Higginbottom, James, Liverpool, England. Apparatus for separating small particles from larger particles. No. 1,022,587; Apr. 9; Sp. p. 1757; Gaz. vol. 177; p. 310.
Higgins, Frank A. (See Hummel, Franklin P., assignor.)
Hill, Edward, Salt Lake City, Utah, assignor of one-half to T. A. Hill, Denver, Colo. Window-lock. No. 1,023,647; Apr. 16; Sp. p. 4015; Gaz. vol. 177; p. 705.
Hill, Elwin K., Cleveland, Ohio. Bottle-opener. No. 1,024,403; Apr. 23; Sp. p. 5062; Gaz. vol. 177; p. 966.
Hill, George H., Schenectady, N. Y., assignor to General Electric Company. Electromagnetically-operated switch. No. 1,024,396; Apr. 30; Sp. p. 6792; Gaz. vol. 177; p. 1194.
Hill, Harrison B., East Providence, R. I. Adjustable-arm protractor. No. 1,023,738; Apr. 16; Sp. p. 4166; Gaz. vol. 177; p. 731.
Hill-Independent Mfg. Co. (See Price, Max C., assignor.)
Hill, Joel E., near Lexington, N. C. Indicator for acetylene-gas generators. No. 1,024,850; Apr. 30; Sp. p. 6696; Gaz. vol. 177; p. 1179.
Hill, John A., Leechburg, Pa. Hot-water heater. No. 1,022,844; Apr. 9; Sp. p. 2340; Gaz. vol. 177; p. 400.
Hill, Raymond E., and O. P. Underwood, Indianola; said Underwood assignor to H. C. Mills, Des Moines, Iowa. Carbureter. No. 1,023,470; Apr. 16; Sp. p. 3656; Gaz. vol. 177; p. 648.
Hill, Thomas A. (See Hill, Edward, assignor.)
Hill, Wesley J. (See Hagerman, William A., assignor.)
Hilliard, Frederic W., Tottenville, N. Y. Type-writing machine. No. 1,025,080; Apr. 30; Sp. p. 7174; Gaz. vol. 177; p. 1268.
Hiller, Nicolai H., Carbondale, Pa. Evaporating apparatus. No. 1,024,576; Apr. 30; Sp. p. 6112; Gaz. vol. 177; p. 1061.
Hilton, Ervin, and A. Veitl, Spearfish, S. D. Window-pane fastener. No. 1,023,080; Apr. 9; Sp. p. 2820; Gaz. vol. 177; p. 480.
Himes-Cox, Florence, New York, N. Y. Adjustable lamp-stand. No. 1,021,918; Apr. 2; Sp. p. 349; Gaz. vol. 177; p. 58.
Himes, Samuel H., Windber, Pa. Feed-trough. No. 1,023,018; Apr. 9; Sp. p. 2689; Gaz. vol. 177; p. 459.
Himmel, Solomon. (See Miller, Andrew K., assignor.)
Hines, Charles S. (See Hines, Christian and C. S.)
Hines, Christian and C. S., Napoleon, Ohio. Filter. No. 1,022,126; Apr. 2; Sp. p. 815; Gaz. vol. 177; p. 129.
Hinkle, William H. (See Johnson, Charles E., assignor.)
Hinsky, Anthony P., assignor to Eastern Flexible Conduit Company, Brooklyn, N. Y. Conduit. No. 1,022,943; Apr. 9; Sp. p. 2556; Gaz. vol. 177; p. 433.
Hippin, William H. J., Philadelphia, Pa. Variable-speed gearing. No. 1,022,845; Apr. 9; Sp. p. 2341; Gaz. vol. 177; p. 400.
Hirner, Emil A., Allentown, Pa. Plating device. No. 1,023,311; Apr. 16; Sp. p. 3349; Gaz. vol. 177; p. 598.
Hirner, Emil A., Allentown, Pa. Knitting-machine. No. 1,023,312; Apr. 16; Sp. p. 3353; Gaz. vol. 177; p. 598.
Hirner, Emil A., Allentown, Pa. Knitting seamless plated hosiery. No. 1,023,313; Apr. 16; Sp. p. 3356; Gaz. vol. 177; p. 599.
Hirschberg, Solomon C., New York, N. Y. Spectacle or eyeglass case. No. 1,024,006; Apr. 23; Sp. p. 4787; Gaz. vol. 177; p. 850.
Hite, Charles E., Burlington, N. J. Primary battery. No. 1,024,577; Apr. 30; Sp. p. 6115; Gaz. vol. 177; p. 1062.
Hobbs, Francis C., assignor to The Brunswick-Balke-Collender Company of New York, New York, N. Y. Bowling-alley. No. 1,022,083; Apr. 2; Sp. p. 696; Gaz. vol. 177; p. 112.
Hobson, Walter, assignor, by mesne assignments, to The Baldwin Locomotive Works, Philadelphia, Pa. Car-truck. No. 1,023,019; Apr. 9; Sp. p. 2691; Gaz. vol. 177; p. 459.
Hocker, Charles, and B. Wendholt, Huntingburg, Ind. Automatic coal-feed for moving coal-tenders. No. 1,023,935; Apr. 23; Sp. p. 4652; Gaz. vol. 177; p. 827.
Hodge, Sheldon, assignor to Pratt & Lambert, Inc., Buffalo, N. Y. Display device. No. 1,022,137; Apr. 2; Sp. p. 820; Gaz. vol. 177; p. 130.
Hodgen, James R., assignor of one-half to J. Strickland, Atmore, Ala. Attachment for governors. No. 1,025,061; Apr. 30; Sp. p. 7107; Gaz. vol. 177; p. 1249.
Hodges, Charles B., assignor to H. K. Porter Co., Pittsburgh, Pa. Compressed-air engine. No. 1,024,778; Apr. 30; Sp. p. 6548; Gaz. vol. 177; p. 1153.
Hodges, Henry C., Detroit, Mich. Roller-bearing. No. 1,024,851; Apr. 30; Sp. p. 6700; Gaz. vol. 177; p. 1179.
Hodgkinson, Henry. (See Fish and Hodgkinson.)
Hodinger, Otto A., Oneida, N. Y. Umbrella. No. 1,022,944; Apr. 9; Sp. p. 2557; Gaz. vol. 177; p. 434.
Hodson, Walter D. (See Gronberg and Hodson.)
Hoff, Emil E., San Rafael, Cal. Resilient tire. No. 1,022,735; Apr. 9; Sp. p. 2120; Gaz. vol. 177; p. 363.
Hofman, Peter M., Chicago, Ill. Automobile number-plate. No. 1,023,471; Apr. 16; Sp. p. 3658; Gaz. vol. 177; p. 649.
Hogan, James T., Jersey City, N. J., assignor to The Singer Manufacturing Company. Overseaming mechanism for sewing-machines. No. 1,023,814; Apr. 16; Sp. p. 4360; Gaz. vol. 177; p. 509.
Holbrook, Frank, assignor of one-half to T. C. Bowen, Lynn, Mass. Machine for driving tacks and the like. No. 1,022,481; Apr. 9; Sp. p. 1535; Gaz. vol. 177; p. 276.
Holland-Letz, Lud, Chicago, Ill., assignor to International Harvester Company. Wheel-hub and bearing-sleeve. No. 1,024,726; Apr. 30; Sp. p. 6486; Gaz. vol. 177; p. 1134.
Hollberg, Louis H. (See Davis, Burt F., assignor.)
Holle, Alexander A., Oist, Netherlands. Steam-engine. No. 1,023,648; Apr. 16; Sp. p. 4016; Gaz. vol. 177; p. 705.
Hollier, Walter J., St. Louis, assignor of one-half to E. H. McCord, Kansas City, Mo. Machine for decorticating flax. No. 1,023,152; Apr. 16; Sp. p. 3025; Gaz. vol. 177; p. 543.
Hollingsworth, Frank I., Denver, Colo. Attachment for electrollers. No. 1,023,649; Apr. 16; Sp. p. 4017; Gaz. vol. 177; p. 705.
Holman, John. (See Barlow and Holman.)
Holmberg, Per, Glemcoe, assignor of one-half to A. G. Leonard, Chicago, Ill. Reinforced concrete structure. No. 1,024,852; Apr. 30; Sp. p. 6701; Gaz. vol. 177; p. 1180.
Holmdahl, Torsten, New York, N. Y. Duplex hand-mirror. No. 1,024,510; Apr. 30; Sp. p. 5934; Gaz. vol. 177; p. 1059.
Holmes, Frank H., Oil City, Pa. Connecting device for pipe-elevators. No. 1,021,984; Apr. 2; Sp. p. 500; Gaz. vol. 177; p. 80.
Holmes, Homer E., Burlington, Vt. Utensil-cover. No. 1,025,090; Apr. 30; Sp. p. 7183; Gaz. vol. 177; p. 1258.
Holmes, John W., assignor of one-half to P. A. Maclae, Troy, N. Y. Folding-machine. No. 1,022,736; Apr. 9; Sp. p. 2121; Gaz. vol. 177; p. 364.
Holmquist, John O., Chicago, Ill. Curtain-stretcher. No. 1,022,737; Apr. 9; Sp. p. 2124; Gaz. vol. 177; p. 364.
Holmström, Johan G. (See Egnér and Holmström.)
Holt, Pliny E., Stockton, Cal. Pivoted rear traction-trucks. No. 1,024,990; Apr. 30; Sp. p. 6983; Gaz. vol. 177; p. 1226.
Holtz, Emerson E., assignor of one-fourth to H. B. Stridiron and one-fourth to E. Kowalk, Billings, Mont. Metal flume or trough. No. 1,022,138; Apr. 2; Sp. p. 821; Gaz. vol. 177; p. 130.
Holtzer-Cabot Electric Company. (See Heeney, Henry J., assignor.)
Holtzer-Cabot Electric Company. (See Tormin, Egmont M., assignor.)
Honold, Gottlob, assignor to Firm of R. Bosch, Stuttgart, Germany. Current interrupter and distributor for electrical ignition apparatus. No. 1,022,241; Apr. 2; Sp. p. 1040; Gaz. vol. 177; p. 166.
Honold, Gottlob, assignor to Firm of R. Bosch, Stuttgart, Germany. Mechanical interrupter for electrical ignition systems. No. 1,023,936; Apr. 23; Sp. p. 4654; Gaz. vol. 177; p. 827.
Honolulu Iron Works Company. (See Dyer and Ewart, assignors.)
Hoofnagle, William T., Bloomfield, N. J., assignor of one-half to R. Watson, Washington, D. C. Machine for justifying lines of type. No. 1,022,418; Apr. 9; Sp. p. 1383; Gaz. vol. 177; p. 254.
Hopkins, Isabella G., St. Augustine, Fla. Supporting attachment for ice-cream freezers. No. 1,024,779; Apr. 30; Sp. p. 6550; Gaz. vol. 177; p. 1153.
Hopkins, Wellington B., Denver, Colo., assignor to The Schoolfield Safety Appliance Company. Safety device for passenger-carrying conveyances propelled by electricity. No. 1,025,001; Apr. 30; Sp. p. 7164; Gaz. vol. 177; p. 1259.
Hopkins, William D., et al. (See Fleming, Edward, assignor.)
Horn, Joseph, Philadelphia, Pa. Rotary tooth-brush. No. 1,022,139; Apr. 2; Sp. p. 823; Gaz. vol. 177; p. 130.
Hornby, Frank, Liverpool, England. Toy or game. No. 1,022,419; Apr. 9; Sp. p. 1407; Gaz. vol. 177; p. 254.
Horner, John W., Chicago, Ill. Razor-stropping device. No. 1,024,404; Apr. 23; Sp. p. 5064; Gaz. vol. 177; p. 966.
Horning, Frank E., Wayne county, Ind. Excavating-machine. No. 1,021,777; Apr. 2; Sp. p. 42; Gaz. vol. 177; p. 10.
Horton, Bryson D. (See Kling and Horton.)
Horton, Bryson D., assignor to Detroit Fuse & Manufacturing Company, Detroit, Mich. Mechanism for actuating electrical switches. No. 1,022,628; Apr. 9; Sp. p. 1846; Gaz. vol. 177; p. 323.
Horvath, Geza, and G. E. Green, Wheeling, W. Va. Cap-hemming machine. No. 1,022,552; Apr. 9; Sp. p. 1682; Gaz. vol. 177; p. 298.
Horvath, Julius W., Bridgeport, Conn. Spring-bed. No. 1,022,723; Apr. 9; Sp. p. 2126; Gaz. vol. 177; p. 363.
Hoss, William C., Jackson, Cal. Sickle for mowers. No. 1,022,617; Apr. 9; Sp. p. 1960; Gaz. vol. 177; p. 340.
Hostetter, Melvin V., King county, Wash. Knockdown bin or tank. No. 1,024,133; Apr. 23; Sp. p. 5090; Gaz. vol. 177; p. 895.
Hotchkiss, William M., New Rockford, N. D. Sash holder and lock. No. 1,024,780; Apr. 30; Sp. p. 6553; Gaz. vol. 177; p. 1154.
Houghton, Lewis T., Worcester, Mass. Creel-supporting rail for spinning-frames. No. 1,022,193; Apr. 2; Sp. p. 935; Gaz. vol. 177; p. 149.

Houghton, Willard, Seattle, Wash. Combined car stake and bunk. No. 1,022,084; Apr. 2; Sp. p. 702; Gaz. vol. 177; p. 112.
Houlehan, John, *et al.* (See Mayo, William C., assignor.)
Houston, C. E., *et al.* (See Ellsworth, Dighton B., assignor.)
Hovagimian, Manuel, Worcester, Mass. Curtain-rod. No. 1,023,650; Apr. 16; Sp. p. 4018; Gaz. vol. 177; p. 705.
Hover, Mary, executrix. (See Garlick, Walter J., assignor.)
Hover, Nicholas A., *et al.* (See Garlick, Walter J., assignor.)
Hovey, Charles F. (See Vogelmann and Hovey.)
Hovey, Edward, Minneapolis, Minn. Land-worker and seeder. No. 1,021,929; Apr. 2; Sp. p. 366; Gaz. vol. 177; p. 61.
Hovland, Anton L., St. Paul, Minn. Gearing. No. 1,024,897; Apr. 30; Sp. p. 6795; Gaz. vol. 177; p. 1194.
Howard, Bloomfield H. (See Turner, Ernest J., assignor.)
Howard, Clarence H., assignor to Locomotive Tender Frame Company, St. Louis, Mo. Cast-steel underframe for cars. No. 1,022,366; Apr. 2; Sp. p. 1277; Gaz. vol. 177; p. 205.
Howard, Eugene D., Duarte, Cal. Fruit-cleaning machine. No. 1,025,062; Apr. 30; Sp. p. 7109; Gaz. vol. 177; p. 1249.
Howard, Henry A., Lloydminster, Saskatchewan, Canada. Traction-vehicle. No. 1,024,578; Apr. 30; Sp. p. 6116; Gaz. vol. 177; p. 1082.
Howe, Winthrop K., Rochester, assignor to General Railway Signal Company, Gates, N. Y. Means for operating semaphores. No. 1,024,853; Apr. 30; Sp. p. 6704; Gaz. vol. 177; p. 1180.
Howell, James B. (See Whiting and Howell.)
Howell, John W., Newark, N. J., assignor to General Electric Company. Filament connection. No. 1,022,482; Apr. 9; Sp. p. 1537; Gaz. vol. 177; p. 276.
Howell, John W., Newark, N. J., assignor to General Electric Company. Fusing lamp-filaments to leading-in wires. No. 1,022,553; Apr. 9; Sp. p. 1691; Gaz. vol. 177; p. 298.
Howell, John W., Newark, N. J., assignor to General Electric Company. Welding filaments to metal wires. No. 1,022,554; Apr. 9; Sp. p. 1692; Gaz. vol. 177; p. 299.
Howell, John W., Newark, N. J., assignor to General Electric Company. Filament-support. No. 1,024,898; Apr. 30; Sp. p. 6797; Gaz. vol. 177; p. 1195.
Howlett, Thomas J., New York, N. Y. Apparatus for brewing tea, coffee, and other beverages. No. 1,024,076; Apr. 23; Sp. p. 4939; Gaz. vol. 177; p. 875.
Hubbell, Harvey, Bridgeport, Conn. Lock-guard for incandescent lamps. No. 1,022,739; Apr. 9; Sp. p. 2128; Gaz. vol. 177; p. 365.
Hubbell, Harvey, Bridgeport, Conn. Guard for incandescent lamps. No. 1,022,740; Apr. 9; Sp. p. 2130; Gaz. vol. 177; p. 365.
Hubert, Conrad, New York, N. Y. Portable lighter. No. 1,022,140; Apr. 2; Sp. p. 824; Gaz. vol. 177; p. 131.
Hübschman, Jerry, New York, N. Y. Aeroplane. No. 1,025,063; Apr. 30; Sp. p. 7111; Gaz. vol. 177; p. 1250.
Hudson, George H., assignor of one-half to J. McTernan, New York, N. Y. Grease-cup plug. No. 1,022,317; Apr. 2; Sp. p. 1174; Gaz. vol. 177; p. 188.
Huff, Russell, assignor, by mesne assignments, to Packard Motor Car Company, Detroit, Mich. Combined tank-bracket and step for motor-vehicles. No. 1,023,848; Apr. 23; Sp. p. 4439; Gaz. vol. 177; p. 797.
Huff, Russell, assignor to Packard Motor Car Company, Detroit, Mich. Crank-case. No. 1,024,579; Apr. 30; Sp. p. 6118; Gaz. vol. 177; p. 1083.
Huff, Russell, assignor to Packard Motor Car Company, Detroit, Mich. Lubricating system for motors. No. 1,024,727; Apr. 30; Sp. p. 6437; Gaz. vol. 177; p. 1135.
Huffman, William H., Harrisburg, Pa. Curtain-hanger. No. 1,025,064; Apr. 30; Sp. p. 7112; Gaz. vol. 177; p. 1250.
Huffmaster, Charles A., San Leandro, Cal. Hat-pin protector. No. 1,024,337; Apr. 23; Sp. p. 5508; Gaz. vol. 177; p. 965.
Hug, Samuel, Highland, Ill. Bundle-loading device. No. 1,024,854; Apr. 30; Sp. p. 6706; Gaz. vol. 177; p. 1180.
Huggins, Frank L., assignor of one-half to J. P. Moore, Jr., Wilmington, N. C. Recovering resin from waste products. No. 1,022,194; Apr. 2; Sp. p. 937; Gaz. vol. 177; p. 149.
Hughes, Evan E., Meriden, Conn. Floor-surfacing machine. No. 1,023,251; Apr. 16; Sp. p. 3224; Gaz. vol. 177; p. 577.
Hughes, Marion, Bartlesville, Okla. Door-catch. No. 1,024,781; Apr. 30; Sp. p. 6553; Gaz. vol. 177; p. 1154.
Hughes, William B., assignor to The Wellman-Seaver-Morgan Company, Cleveland, Ohio. Gas-producer. No. 1,022,678; Apr. 9; Sp. p. 1961; Gaz. vol. 177; p. 340.
Hughes, William E., Mineral Ridge, Ohio. Gun-cleaning device. No. 1,022,945; Apr. 9; Sp. p. 2559; Gaz. vol. 177; p. 434.
Hugo, Theodor, Berlin, Germany. Machine for making paper bags. No. 1,021,778; Apr. 2; Sp. p. 46; Gaz. vol. 177; p. 11.
Huish, Orvon P., Payson, Utah. Rake. No. 1,023,849; Apr. 23; Sp. p. 4440; Gaz. vol. 177; p. 797.
Huling, Greene, Hampton, Conn. Locking device for dump-carts. No. 1,024,338; Apr. 23; Sp. p. 5506; Gaz. vol. 177; p. 965.
Hull, Foster J., assignor to The Thomas W. Pangborn Company, New York, N. Y. Sight-feed lubricator. No. 1,022,946; Apr. 9; Sp. p. 2560; Gaz. vol. 177; p. 434.
Hulse, George E. (See Dixon and Hulse.)
Humbert, Solomon B., Cedar Falls, Iowa. Rail-tie. No. 1,023,651; Apr. 16; Sp. p. 4020; Gaz. vol. 177; p. 706.
Hummel, Franklin P., assignor of one-third to F. A. Higgins, Bellevue, Ohio. Rotary engine. No. 1,023,782; Apr. 16; Sp. p. 4244; Gaz. vol. 177; p. 746.
Humphrey, Robert S., *et al.* (See Spink, Edward J., assignor.)
Hunkie, Frederick P., and C. Nordfeldt, McKeesport, Pa. Metallic tie and rail-fastener. No. 1,024,939; Apr. 30; Sp. p. 6886; Gaz. vol. 177; p. 1200.
Hunt, Frank L., Cincinnati, Ohio. Package-lifter. No. 1,024,991; Apr. 30; Sp. p. 6985; Gaz. vol. 177; p. 1227.
Hunt, Helm, Ferris & Company. (See Ferris, Henry L., assignor.)
Hunter, Caroline L., Los Angeles, Cal. Combination-cabinet. No. 1,023,204; Apr. 16; Sp. p. 3130; Gaz. vol. 177; p. 562.
Hunter, Harrison A., Mankato, Kans. Pole and shafts. No. 1,022,555; Apr. 9; Sp. p. 1693; Gaz. vol. 177; p. 299.
Hunter, Hugh M., assignor to The National Acme Manufacturing Company, Cleveland, Ohio. Roller-clutch. No. 1,024,580; Apr. 30; Sp. p. 6120; Gaz. vol. 177; p. 1083.
Hunter, Matthew A., Schenectady, N. Y., assignor to General Electric Company. Metal filament. No. 1,023,315; Apr. 16; Sp. p. 3562; Gaz. vol. 177; p. 599.
Hunter, Rudolph M. (See Fitts and Hunter.)
Hunter, William A., Jr., and F. W. Bassett, Los Angeles, Cal. Flushing-valve. No. 1,025,092; Apr. 30; Sp. p. 7188; Gaz. vol. 177; p. 1259.
Huntoon, Charles F. (See Perry and Huntoon.)
Hunsiker, Adolph A., assignor to Woodward & Tiernan Printing Company, St. Louis, Mo. Temporary binder. No. 1,023,566; Apr. 16; Sp. p. 3852; Gaz. vol. 177; p. 678.
Hurd, Norman B. (See Voight and Hurd.)
Hurst, Daniel, and H. K. Bridger, London, England. Bottle, jar, and the like and stopper therefor. No. 1,022,141; Apr. 2; Sp. p. 826; Gaz. vol. 177; p. 131.
Hurwitz, Eugen, Berlin, Germany, assignor to General Electric Company. Apparatus for drawing wires. No. 1,023,316; Apr. 16; Sp. p. 3363; Gaz. vol. 177; p. 600.
Huston, Frank P., Dumont, N. J. Pliers for stripping insulation from electric wires. No. 1,022,679; Apr. 9; Sp. p. 1962; Gaz. vol. 177; p. 341.
Huston, George H., Cincinnati, Ohio. Gas-burner. No. 1,024,261; Apr. 23; Sp. p. 5376; Gaz. vol. 177; p. 941.
Hutchings, Charles E. (See Ruttan and Hutchings.)
Hutchings, Charles E., assignor, by mesne assignments, to Eastman Kodak Company, Rochester, N. Y. Photographic camera. No. 1,024,200; Apr. 23; Sp. p. 5246; Gaz. vol. 177; p. 919.
Hutchins Car Roofing Company. (See Thompson, William D., assignor.)
Huth, Ferdinand, Schiffbek, near Hamburg, Germany. Safety-brake for elevators, hoists, and lifts. No. 1,023,252; Apr. 16; Sp. p. 3226; Gaz. vol. 177; p. 577.
Hüttinger, Wilhelm R., Beverly, N. J. Gas-producer. No. 1,023,567; Apr. 16; Sp. p. 3853; Gaz. vol. 177; p. 678.
Hyde, Hiram, and J. Gage, Geneseo, Kans. Hydrocarbon-engine. No. 1,022,027; Apr. 2; Sp. p. 587; Gaz. vol. 177; p. 93.
Hyde, James M., Basin, Mont. Concentration of mineral substances. No. 1,022,085; Apr. 2; Sp. p. 703; Gaz. vol. 177; p. 112.
Hylton, John C., Chicago, Ill. Hinge. No. 1,022,588; Apr. 9; Sp. p. 1759; Gaz. vol. 177; p. 310.
Hyne, Henry A. (See Heberer and Hyne.)
I. E. Palmer Co., The. (See Palmer, Isaac E., assignor.)
Ideal Concrete Machinery Company. (See Brandell, Claus O., assignor.)
Ideal Epworth Acetylene Company, The. (See Benton, Josiah S., assignor.)
Iffert, Charles A., Monroe, Wis. Mail delivering and receiving apparatus. No. 1,022,028; Apr. 2; Sp. p. 589; Gaz. vol. 177; p. 93.
Imperial Car Shipbuilding and Dry Dock Corporation. (See Leigh, Frederick J., assignor.)
Imperial Machinery Company. (See Valentine and Battee, assignors.)
"Impregnator" Impregnating Company Limited. (See Polifka and Hacker, assignors.)
Imrecse, Lajos, *et al.* (See Tömör, John, assignor.)
Indahl, Maurits C. (See Bancroft and Indahl.)
Ingersoll, John W., Jr., Belmont, Wis. Gate. No. 1,023,153; Apr. 16; Sp. p. 3031; Gaz. vol. 177; p. 544.
Ingersoll-Rand Company. (See Hansen, Charles C., assignor.)
Ingersoll-Rand Company. (See Preilwitz, William, assignor.)
Ingoldsby, Frank S., St. Louis, Mo. Automatic sampling mechanism. No. 1,024,134; Apr. 23; Sp. p. 5093; Gaz. vol. 177; p. 896.
Ingram, Wesley E., Austin, Nev. Blasting-fuse and cap. No. 1,025,065; Apr. 30; Sp. p. 7113; Gaz. vol. 177; p. 1250.
International Concrete Piling Co. (See Davis, Alfred H., assignor.)

International Cork Company. (See Bogdanffy, Alexander, assignor.)
International Harvester Company. (See Dennis, Samuel K., assignor.)
International Harvester Company. (See Holland-Letz, Ltd, assignor.)
International Harvester Company. (See Johnson, Arthur, assignor.)
International Machine Corporation. (See McConnell, William H., assignor.)
International Machine Corporation. (See Wood, James N., assignor.)
International Steam Pump Company. (See Scott, Clarence N., assignor.)
Intrup, Charles A., Wilburn, Va. Plow. No. 1,025,066; Apr. 30; Sp. p. 7115; Gaz. vol. 177; p. 1250.
Iowa Windmill & Pump Company. (See Brown, James A., assignor.)
Ipson Indicator Company. (See Tucker, John B., assignor.)
Irling, William, New York, N. Y. Rail-fastening. No. 1,022,786; Apr. 9; Sp. p. 2219; Gaz. vol. 177; p. 380.
Irving, James A., New York, N. Y. Propeller. No. 1,023,846; Apr. 9; Sp. p. 2343; Gaz. vol. 177; p. 400.
Irwin, George H., J. P. Cullon, and F. Knowlson, Lindsay, Ontario, Canada. Fluid-pump. No. 1,025,067; Apr. 30; Sp. p. 7116; Gaz. vol. 177; p. 1250.
Irwin, James W. (See King and Irwin.)
Isaksen, Robert. (See Marshall and Isaksen.)
Itzweire, Gustave, *et al.* (See Lord, Peter, assignor.)
J. Stevens Arms & Tool Company. (See Lewis, George S., assignor.)
J. A. Fay & Egan Company. (See Hanhart, Louis J., assignor.)
J. E. Mergott Company, The. (See Fuller, Franz A., assignor.)
J. E. Mergott Company, The. (See Hiering and Fuller, assignors.)
J. I. Case Plow Works. (See Sobey, William, assignor.)
J. P. Karns Tunneling Machine Co. (See Karns, John P., assignor.)
Jacaard, Gustave J., New York, N. Y. Game. No. 1,022,847; Apr. 9; Sp. p. 2245; Gaz. vol. 177; p. 401.
Jack, Louis, Moylan, Pa. Adjustable form for smoke-chamber construction for chimneys having open fireplaces. No. 1,021,985; Apr. 2; Sp. p. 501; Gaz. vol. 177; p. 80.
Jackson, Andrew J., assignor of one-tenth to N. V. Christensen, Chicago, Ill. Reciprocating engine. No. 1,024,581; Apr. 30; Sp. p. 6123; Gaz. vol. 177; p. 1083.
Jackson, Charles J., Vineland, N. J. Vise. No. 1,024,728; Apr. 30; Sp. p. 6439; Gaz. vol. 177; p. 1135.
Jackson, John W., Pinepark, Ga. Cane-stripper. No. 1,022,242; Apr. 2; Sp. p. 1042; Gaz. vol. 177; p. 166.
Jackson, Simeon S., Boston, assignor to The Stafford Company, Readville, Boston, Mass. Weft-parter device for looms. No. 1,023,108; Apr. 9; Sp. p. 2381; Gaz. vol. 177; p. 490.
Jackson, Taylor, Kansas City, Kans. Canopy. No. 1,021,930; Apr. 2; Sp. p. 360; Gaz. vol. 177; p. 61.
Jackson, William A., assignor to A. & J. Mfg. Company, Binghamton, N. Y. Implement for mashing potatoes, &c. No. 1,023,317; Apr. 16; Sp. p. 3364; Gaz. vol. 177; p. 600.
Jackson, William G., Santa Rosa, Cal. Animal-trap. No. 1,024,782; Apr. 30; Sp. p. 6555; Gaz. vol. 177; p. 1154.
Jacob, Ferdinand, Cologne, Germany. Waterproof material. No. 1,024,185; Apr. 23; Sp. p. 5095; Gaz. vol. 177; p. 896.
Jacobi Gebruder. (See Pechstein, Bruno M., assignor.)
Jacobs, Maurice I., Brooklyn, N. Y. Greenhouse construction. No. 1,022,947; Apr. 9; Sp. p. 2562; Gaz. vol. 177; p. 435.
Jacobs, Maurice I., Brooklyn, N. Y. Greenhouse-gutter. No. 1,022,948; Apr. 9; Sp. p. 2563; Gaz. vol. 177; p. 435.
Jacobsen, Charles, *et al.* (See Galvin, Carroll D., assignor.)
Jacobson, Ole, assignor to Herring-Hall-Marvin Safe Company, Hamilton, Ohio. Electric protective circuit. No. 1,022,848; Apr. 9; Sp. p. 2248; Gaz. vol. 177; p. 401.
Jacquart, Bernard, South River, N. J., and J. V. V. Boorsem, New York, N. Y. Clay-cleaning machine. No. 1,024,262; Apr. 23; Sp. p. 5378; Gaz. vol. 177; p. 942.
James, Edward W., Mechanicsburg, Ill. Combined hatchet and adz. No. 1,021,931; Apr. 2; Sp. p. 370; Gaz. vol. 177; p. 61.
James, Henry D., Pittsburgh, Pa., assignor to Westinghouse Electric and Manufacturing Company. Control system for electric motors. No. 1,024,631; Apr. 30; Sp. p. 6252; Gaz. vol. 177; p. 1100.
James, Richard R., Brooklyn, N. Y. Automatic valve for water-heaters. No. 1,024,263; Apr. 23; Sp. p. 5382; Gaz. vol. 177; p. 942.
James, Stephen, Youngstown, Ohio. Rail-joint. No. 1,024,450; Apr. 23; Sp. p. 5757; Gaz. vol. 177; p. 1001.
James, William T., Chicago, Ill. Mechanism for carrying materials. No. 1,022,787; Apr. 9; Sp. p. 2221; Gaz. vol. 177; p. 380.
Janek, Paul, Cleveland, Ohio. Automobile brake and jack. No. 1,021,779; Apr. 2; Sp. p. 47; Gaz. vol. 177; p. 11.
Jann, John H., Chicago, Ill. Turret-operating mechanism. No. 1,022,066; Apr. 2; Sp. p. 708; Gaz. vol. 177; p. 113.
Janpole, William M., Los Angeles, Cal. Apparatus for constructing coverings. No. 1,022,867; Apr. 2; Sp. p. 1278; Gaz. vol. 177; p. 206.
Janpole, William M., Los Angeles, Cal. Making structural elements. No. 1,024,687; Apr. 30; Sp. p. 6362; Gaz. vol. 177; p. 1121.
Japanese Tissue Mills. (See Pope, Charles E., assignor.)
Jaggott, John, Christopher, Ill. Instrument of precision. No. 1,022,849; Apr. 9; Sp. p. 2252; Gaz. vol. 177; p. 402.
Jasiecki, Kazimier, and K. Glowacki, Philadelphia, Pa. Rail-supporting plate. No. 1,024,855; Apr. 30; Sp. p. 6708; Gaz. vol. 177; p. 1181.
Jasiecki, Kazimier, and K. Glowacki, Philadelphia, Pa. Rail-joint. No. 1,024,856; Apr. 30; Sp. p. 6709; Gaz. vol. 177; p. 1181.
Jass, Carl, Horicon, Wis. Seed-planting mechanism. No. 1,023,894; Apr. 23; Sp. p. 4543; Gaz. vol. 177; p. 812.
Jenkins, Alexander F., assignor to The Alexander Milburn Company, Baltimore, Md. Acetylene-generator. No. 1,023,850; Apr. 23; Sp. p. 4441; Gaz. vol. 177; p. 798.
Jenkins, Alexander F., assignor to The Alexander Milburn Company, Baltimore, Md. Contractor's torch. No. 1,023,851; Apr. 23; Sp. p. 4443; Gaz. vol. 177; p. 798.
Jenkins, Charles F., Washington, D. C. Starting device for internal-combustion engines. No. 1,024,077; Apr. 23; Sp. p. 4940; Gaz. vol. 177; p. 875.
Jenkins, Charles F., Washington, D. C. Tire-repair device. No. 1,024,078; Apr. 23; Sp. p. 4941; Gaz. vol. 177; p. 876.
Jenkins, Joseph H., Mount Vernon, Ohio, assignor to The Jenkins-Pirie Tool Company, Barre, Vt. Granite-chisel. No. 1,024,940; Apr. 30; Sp. p. 6887; Gaz. vol. 177; p. 1209.
Jenkins-Pirie Tool Company, The. (See Jenkins, Joseph H., assignor.)
Jenkins, William E., assignor of one-half to C. A. Kopp, Kansas City, Mo. Cigar-molding machine. No. 1,024,632; Apr. 30; Sp. p. 6256; Gaz. vol. 177; p. 1101.
Jenney, Charles D., Indianapolis, Ind. Automobile-starter. No. 1,022,087; Apr. 2; Sp. p. 712; Gaz. vol. 177; p. 113.
Jennings, Irving C., South Norwalk, Conn. Internal-combustion generator. No. 1,024,079; Apr. 23; Sp. p. 4942; Gaz. vol. 177; p. 876.
Jennings, Jarvis S., Jr., assignor of one-third to B. Siegel, P. O'Brien, and L. Breisacher and one-third to F. Goebel, Detroit, Mich. Internal-combustion engine. No. 1,022,390; Apr. 2; Sp. p. 1320; Gaz. vol. 177; p. 214.
Jensen, Frantz, Copenhagen, Denmark. Water-current propulsion for vessels. No. 1,023,205; Apr. 16; Sp. p. 3140; Gaz. vol. 177; p. 562.
Jensen, Hans H., Milwaukee, Wis. Rod-bending machine. No. 1,021,932; Apr. 2; Sp. p. 371; Gaz. vol. 177; p. 62.
Jeremias, Charles, assignor to H. Clauss, Fremont, Ohio. Safety-razor. No. 1,023,206; Apr. 16; Sp. p. 3142; Gaz. vol. 177; p. 562.
Jerram, Arthur E., Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J. Lasting-machine. No. 1,022,420; Apr. 9; Sp. p. 1408; Gaz. vol. 177; p. 254.
Jerram, Arthur E., Leicester, England, assignor to United Shoe Machinery Company, Paterson, N. J. Shoe-support. No. 1,023,318; Apr. 16; Sp. p. 3366; Gaz. vol. 177; p. 600.
Jerrems, Thomas W., St. Paul, Minn., assignor of one-half to E. H. Steiger, Oshkosh, Wis. Grass-twine machine. No. 1,023,081; Apr. 9; Sp. p. 2821; Gaz. vol. 177; p. 480.
Jespersen, Carsten. (See Wienberg, Jörgensen, Jespersen, and Jörgensen.)
Johannes, James, Calcutta, India. Treating lac. No. 1,024,783; Apr. 30; Sp. p. 6557; Gaz. vol. 177; p. 1155.
Johannsen, Otto. (See Müller, Johannsen, and Pape.)
John Aktiengesellschaft, J. A. (See Klein, Alois, assignor.)
Johnson, Alexander L., *et al.* (See Pieper and Case, assignors.)
Johnson, Arthur, Chicago, Ill., assignor to International Harvester Company. Motor attachment for harvesting-machines. No. 1,024,201; Apr. 23; Sp. p. 5248; Gaz. vol. 177; p. 919.
Johnson, Arthur D., Philadelphia, Pa. Nut-lock. No. 1,022,318; Apr. 2; Sp. p. 1175; Gaz. vol. 177; p. 180.
Johnson, Benona, Elmira, N. Y. Newspaper-vending machine. No. 1,022,680; Apr. 9; Sp. p. 1964; Gaz. vol. 177; p. 341.
Johnson, Billie, Temple, Tex. Machine for picking and cleaning cotton. No. 1,022,142; Apr. 2; Sp. p. 827; Gaz. vol. 177; p. 132.
Johnson, Carl G., Manchester, N. H., assignor to United Shoe Machinery Company, Paterson, N. J. Lasting-plate clamp. No. 1,022,421; Apr. 9; Sp. p. 1421; Gaz. vol. 177; p. 255.
Johnson, Carl W., St. Joseph, Mo. Orchard-heater and vaporizer. No. 1,024,633; Apr. 30; Sp. p. 6258; Gaz. vol. 177; p. 1101.
Johnson, Charles E., assignor of one-half to W. H. Hinkle, Degraff, Ohio. Loading attachment for manure-spreaders. No. 1,022,068; Apr. 2; Sp. p. 715; Gaz. vol. 177; p. 114.
Johnson, Charles H., Eureka, Utah. Propeller. No. 1,024,339; Apr. 23; Sp. p. 5507; Gaz. vol. 177; p. 965.
Johnson, Charles X., Morris Run, Pa. Car-starter. No. 1,022,089; Apr. 2; Sp. p. 717; Gaz. vol. 177; p. 114.

Johnson, Ernest V., Chicago, Ill. Fireproof floor construction for buildings. No. 1,021,780; Apr. 2; Sp. p. 49; Gaz. vol. 177; p. 11.

Johnson, Gustaf, and N. J. Russell, Rockford, Ill. Pump. No. 1,022,556; Apr. 9; Sp. p. 1695; Gaz. vol. 177; p. 299.

Johnson, Howard, Littell, Wash. Friction-clutch. No. 1,024,006; Apr. 23; Sp. p. 4789; Gaz. vol. 177; p. 850.

Johnson, Iens C., Tonica, Ill. Crossing-gate. No. 1,024,899; Apr. 30; Sp. p. 6798; Gaz. vol. 177; p. 1195.

Johnson, John A., Black Diamond, Cal. Spud-operating mechanism for dredgers. No. 1,021,933; Apr. 2; Sp. p. 373; Gaz. vol. 177; p. 62.

Johnson, John A., New Britain, Conn. Clamping device. No. 1,021,986; Apr. 2; Sp. p. 502; Gaz. vol. 177; p. 80.

Johnson, John T., Williamstown, W. Va. Fluid-spraying device. No. 1,023,852; Apr. 23; Sp. p. 4445; Gaz. vol. 177; p. 798.

Johnson, Mark W., Jr., Birmingham, Ala. Dry cleaner for gas. No. 1,024,784; Apr. 30; Sp. p. 6558; Gaz. vol. 177; p. 1155.

Johnson, Mark W., Jr., assignor of one-half to K. Landgrebe, Bnaley, Ala. Furnace gas-valve. No. 1,024,785; Apr. 30; Sp. p. 6565; Gaz. vol. 177; p. 1155.

Johnson, Niel V., Seattle, Wash. Hydraulic motor. No. 1,024,340; Apr. 23; Sp. p. 5509; Gaz. vol. 177; p. 965.

Johnson, Niel V., Tacoma, Wash. Water-motor. No. 1,024,341; Apr. 23; Sp. p. 5510; Gaz. vol. 177; p. 965.

Johnson, Richard, Sr., Freeport, Ill. Automatic belt-guide. No. 1,022,949; Apr. 9; Sp. p. 2564; Gaz. vol. 177; p. 435.

Johnson, Robert C., and D. S. McEwing, Chicago, Ill. Combined car and grain door. No. 1,022,422; Apr. 9; Sp. p. 1423; Gaz. vol. 177; p. 255.

Johnston, Andrew, assignor to Massey-Harris Co., Limited, Toronto, Ontario, Canada. Lever mechanism. No. 1,021,836; Apr. 2; Sp. p. 190; Gaz. vol. 177; p. 31.

Johnston, Harry B., Salt Lake City, Utah, assignor, by mesne assignments, to Model Manufacturing Company. Button-sewing attachment. No. 1,024,202; Apr. 23; Sp. p. 5250; Gaz. vol. 177; p. 920.

Johnston, Henry H., Minneapolis, Minn., assignor to Minnesota Manufacturers Association. Elevator. No. 1,022,661; Apr. 9; Sp. p. 1970; Gaz. vol. 177; p. 342.

Johnston, Robert T., Scotch Plains, N. J., assignor to The Harris Automatic Press Company, Niles, Ohio. Bed-movement. No. 1,022,557; Apr. 9; Sp. p. 1697; Gaz. vol. 177; p. 299.

Johnstone, Robert L. (See Matthews, Johnstone, and Cash.)

Jones, Aaron G., and P. K. Millar, Cornish, Okla. Rail. No. 1,023,652; Apr. 16; Sp. p. 4021; Gaz. vol. 177; p. 706.

Jones, Alban S. (See Perry and Jones.)

Jones, Allen G., San Francisco, Cal., assignor to General Electric Company. Protective device. No. 1,024,857; Apr. 30; Sp. p. 6710; Gaz. vol. 177; p. 1181.

Jones, Anna A., Philadelphia, Pa. Washboard. No. 1,021,870; Apr. 2; Sp. p. 260; Gaz. vol. 177; p. 42.

Jones, Bassett, Jr. (See Fountain and Jones.)

Jones, David E., Utica, N. Y. Auxiliary picker-rod stand. No. 1,022,483; Apr. 9; Sp. p. 1539; Gaz. vol. 177; p. 276.

Jones, Ethel M. (See Elsden, Ethel M.)

Jones, Harris, Watertown, N. Y. Foot-scraper. No. 1,022,950; Apr. 9; Sp. p. 2566; Gaz. vol. 177; p. 436.

Jones, James C. (See Carter, Jones, and Spotts.)

Jones, James S., Harrison, Ark. Syrup-pitcher. No. 1,024,786; Apr. 30; Sp. p. 6570; Gaz. vol. 177; p. 1156.

Jones, Richard E. (See Dexter and Jones.)

Jones, Sherman, Newark, N. J. Door-operating mechanism. No. 1,024,582; Apr. 30; Sp. p. 6123; Gaz. vol. 177; p. 1084.

Jonson, Herman, New York, N. Y., assignor, by mesne assignments, to Mantle Machinery and Patents Company. Machine for inserting pucker-cords in tubular structures. No. 1,023,426; Apr. 16; Sp. p. 3566; Gaz. vol. 177; p. 635.

Jonson, Herman, New York, N. Y., assignor, by mesne assignments, to Mantle Machinery and Patents Company. Running-stitch-sewing machine. No. 1,023,427; Apr. 16; Sp. p. 3571; Gaz. vol. 177; p. 635.

Jordan, Frank R., Ocean Beach, Cal. Saw-file guide. No. 1,023,428; Apr. 16; Sp. p. 3574; Gaz. vol. 177; p. 635.

Jordan, George A., New York, N. Y. Branch block for electric moldings or conduits. No. 1,022,423; Apr. 9; Sp. p. 1427; Gaz. vol. 177; p. 256.

Jordan, Heinrich, and W. Neelmeier, Leverkusen, near Cologne, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Azo dye. No. 1,024,080; Apr. 23; Sp. p. 4947; Gaz. vol. 177; p. 876.

Jordan, Heinrich, and W. Neelmeier, Leverkusen, near Cologne, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Azo dye. No. 1,024,081; Apr. 23; Sp. p. 4948; Gaz. vol. 177; p. 876.

Jordan, Herman, Detroit, Mich. Flying-machine. No. 1,025,093; Apr. 30; Sp. p. 7191; Gaz. vol. 177; p. 1200.

Jordan, Llewellyn. (See Murray, Eugene, assignor.)

Jordan, Michael. (See Gangelhoff and Jordan.)

Jörgensen, Jorgen K. (See Wienberg, Jörgensen, Jespersen, and Jörgensen.)

Jörgensen, Lars. (See Wienberg, Jörgensen, Jespersen, and Jörgensen.)

Jorss, Amandus F., *et al.* (See Galvin, Carroll D., assignor.)

Joseph, Eddard, Berlin, Germany. Manufacturing fodder composed of peat and molasses. No. 1,022,243; Apr. 2; Sp. p. 1045; Gaz. vol. 177; p. 166.

Joss, Edgard J., New York, N. Y. Decorative sheathed wall. No. 1,022,951; Apr. 9; Sp. p. 2567; Gaz. vol. 177; p. 436.

Joyce, Roy E., assignor of one-half to W. H. Shepard, Coffeyville, Kans. Meter-tester. No. 1,023,789; Apr. 16; Sp. p. 4167; Gaz. vol. 177; p. 732.

Judson L. Thomson M'f'g Co. (See Havener, Arthur R., assignor.)

Juengst, Charles A., Croton Falls, N. Y. Signature-gathering machine. No. 1,023,566; Apr. 16; Sp. p. 3553; Gaz. vol. 177; p. 679.

Juengst, Charles A., Croton Falls, N. Y. Device for applying adhesive material to the backs of books in covering-machines. No. 1,023,569; Apr. 16; Sp. p. 3562; Gaz. vol. 177; p. 680.

Jung, John A., Cincinnati, Ohio. Flying-machine. No. 1,023,937; Apr. 23; Sp. p. 4656; Gaz. vol. 177; p. 828.

Jung, Robert. (See Wappler and Jung.)

Junggren, Oscar, and E. D. Dickinson, Schenectady, N. Y., assignors to General Electric Company. Governing mechanism for turbines. No. 1,023,319; Apr. 16; Sp. p. 3367; Gaz. vol. 177; p. 601.

Justi & Son, H. D. (See Smith, Henry J., assignor.)

Kaczynski, Feliks, Cohoes, N. Y. Bottle-closure. No. 1,023,653; Apr. 16; Sp. p. 4022; Gaz. vol. 177; p. 706.

Kadia, Stanley, Tullisville, Saskatchewan, Canada. Fishing-reel. No. 1,023,553; Apr. 23; Sp. p. 4447; Gaz. vol. 177; p. 799.

Kaech, Edward E., Minneapolis, Minn. Check-holder. No. 1,022,682; Apr. 9; Sp. p. 1972; Gaz. vol. 177; p. 342.

Kaler, Henry, Rantoul, Ill. Grain-door for freight-cars. No. 1,025,094; Apr. 30; Sp. p. 7194; Gaz. vol. 177; p. 1260.

Kalle and Company, Aktiengesellschaft. (See Bucherer, Hans, assignor.)

Kalle and Company Aktiengesellschaft. (See Elbel, Karl, assignor.)

Kane, Martin J., Bayonne, N. J. Reflector-support. No. 1,024,900; Apr. 30; Sp. p. 6799; Gaz. vol. 177; p. 1195.

Kane, Thomas H., Youngstown, Ohio, assignor to Trumed Concrete Steel Company, Detroit, Mich. Window construction. No. 1,022,938; Apr. 23; Sp. p. 4661; Gaz. vol. 177; p. 828.

Karle, George J., Buffalo, N. Y. Saw-jointer. No. 1,024,007; Apr. 23; Sp. p. 4792; Gaz. vol. 177; p. 851.

Karns, John P., assignor to J. P. Karns Tunneling Machine Co., Boulder, Colo. Drilling-machine. No. 1,023,654; Apr. 16; Sp. p. 4023; Gaz. vol. 177; p. 706.

Kasindorf, Isaac, New York, N. Y. Watch-album. No. 1,022,090; Apr. 2; Sp. p. 718; Gaz. vol. 177; p. 114.

Kassander, Leopold, and O. Best, assignors to Nathan Manufacturing Company, New York, N. Y. Lubricator. No. 1,022,741; Apr. 9; Sp. p. 2131; Gaz. vol. 177; p. 365.

Kassander, Leopold, and O. Best, assignors to Nathan Manufacturing Company, New York, N. Y. Lubricator. No. 1,022,952; Apr. 9; Sp. p. 2570; Gaz. vol. 177; p. 436.

Kaufeld, Louis, Star City, W. Va. Making reflectors. No. 1,024,264; Apr. 23; Sp. p. 5384; Gaz. vol. 177; p. 943.

Kaufman, Adam W., assignor to Rex Manufacturing Company, Milwaukee, Wis. Detachable roller. No. 1,023,939; Apr. 23; Sp. p. 4662; Gaz. vol. 177; p. 828.

Kaufmann, Jacob, Wilmersdorf, near Berlin, Germany. Inlaying metal in masses such as celluloid, ebonite, and the like. No. 1,024,203; Apr. 23; Sp. p. 5252; Gaz. vol 177; p. 920.

Kaull, Burt J., La Fayette, Ind. Corn-picker. No. 1,023,320; Apr. 16; Sp. p. 3360; Gaz. vol. 177; p. 601.

Kay, Robert D. (See Walsh and Kay.)

Kaye, Frank, and R. W. Rogers, Meridian, Miss. Box. No. 1,024,482; Apr. 23; Sp. p. 5833; Gaz. vol. 177; p. 1014.

Kayser, Frank, Toledo, Ohio. Pottery-machine. No. 1,024,511; Apr. 30; Sp. p. 5935; Gaz. vol. 177; p. 1059.

Keith, Henry M., Eldorado, Ill. Fan-driving mechanism. No. 1,023,655; Apr. 16; Sp. p. 4031; Gaz. vol. 177; p. 707.

Keith, Simeon C., Jr., Somerville, assignor to H. J. Keith Company, Boston, Mass. Belt-guiding mechanism. No. 1,023,253; Apr. 16; Sp. p. 3220; Gaz. vol. 177; p. 578.

Kelber, Armin, Strassburg, Germany. Toy. No. 1,023,472; Apr. 16; Sp. p. 3650; Gaz. vol. 177; p. 649.

Kelleher, Jeremiah J., and C. D. Porter, Philadelphia, Pa. Car-roof construction. No. 1,022,091; Apr. 2; Sp. p. 719; Gaz. vol. 177; p. 115.

Keller, George S. (See Thelsen and Keller.)

Kellett, Thomas N. (See O'Neil, Schneider, and Kellett.)

Kelley, Green B., Las Cruces, N. Mex. Well-drilling machine. No. 1,023,207; Apr. 16; Sp. p. 3144; Gaz. vol. 177; p. 563.

Kelley, Harry H., Atlanta, Ga. Fluid-pressure regulator. No. 1,024,092; Apr. 30; Sp. p. 6987; Gaz. vol. 177; p. 1227.

Kelley, Samuel D., Boston, Mass. Store-front construction. No. 1,021,871; Apr. 2; Sp. p. 261; Gaz. vol. 177; p. 42.

Kellogg, John L., Denver, Colo. Photography. No. 1,025,095; Apr. 30; Sp. p. 7196; Gaz. vol. 177; p. 1260.

Kellogg Switchboard & Supply Company. (See Webster, Harry G., assignor.)

Kellogg, Walter B., Superior, Wis. Cap and fuse holder for dynamite cartridges. No. 1,021,934; Apr. 2; Sp. p. 374; Gaz. vol. 177; p. 62.

Kellom, Charles F., Philadelphia, Pa. Spout for cans. No. 1,022,195; Apr. 2; Sp. p. 939; Gaz. vol. 177; p. 150.

Kellum, Orlando E., assignor to National Street and Station Indicator Company, Los Angeles, Cal. Indicator-actuating mechanism. No. 1,022,742; Apr. 9; Sp. p. 2134; Gaz. vol. 177; p. 366.

Kellum, Orlando E., assignor to National Street and Station Indicator Company, Los Angeles, Cal. Exhibit device. No. 1,022,743; Apr. 9; Sp. p. 2136; Gaz. vol. 177; p. 366.

Kellum, Orlando E., assignor to National Street and Station Indicator Company, Los Angeles, Cal. Exhibit device. No. 1,022,744; Apr. 9; Sp. p. 2138; Gaz. vol. 177; p. 367.

Kelly, David J., assignor to Kelly Filter Press Company, Salt Lake City, Utah. Filtering apparatus. No. 1,024,082; Apr. 23; Sp. p. 4949; Gaz. vol. 177; p. 877.

Kelly Filter Press Company. (See Kelly, David J., assignor.)

Kelly, William H., Los Angeles, Cal. Reducing ores and metals. No. 1,024,136; Apr. 23; Sp. p. 5096; Gaz. vol. 177; p. 896.

Kelly, William J., Clinton, Iowa. Veneer-taping machine. No. 1,022,002; Apr. 2; Sp. p. 721; Gaz. vol. 177; p. 115.

Kelso, Joseph. (See Kelso, William and J.)

Kelso, William and J., assignors to McConway & Torley Company, Pittsburgh, Pa. Car-coupling. No. 1,024,083; Apr. 23; Sp. p. 4952; Gaz. vol. 177; p. 877.

Kempf, John W., Goehner, Nebr. Core for making concrete culverts. No. 1,023,429; Apr. 16; Sp. p. 3576; Gaz. vol. 177; p. 636.

Kender, Joseph A. (See Baker and Kender.)

Kenerson, William H., Providence, R. I. Hydrostatic weighing-machine. No. 1,023,154; Apr. 16; Sp. p. 3023; Gaz. vol. 177; p. 544.

Kenitz, Otto, and G. Debrowsky, Passaic, N. J. Curtain-bracket. No. 1,022,319; Apr. 2; Sp. p. 1176; Gaz. vol. 177; p. 189.

Kern, Adam, Frankenmuth, Mich. Tile-molding machine. No. 1,023,656; Apr. 16; Sp. p. 4033; Gaz. vol. 177; p. 707.

Kerr, Daniel, Youngstown, Ohio. Concrete-reinforcing bar. No. 1,022,850; Apr. 9; Sp. p. 2353; Gaz. vol. 177; p. 402.

Kershaw, Douglass B., assignor to P. H. Casey, Lynchburg, Va. Film fire-screen. No. 1,022,320; Apr. 2; Sp. p. 1177; Gaz. vol. 177; p. 189.

Kerstetter, Aaron D., deceased, Oriental, Pa.; I. W. Kerstetter, administrator. Bridge structure. No. 1,023,781; Apr. 16; Sp. p. 4242; Gaz. vol. 177; p. 745.

Kerstetter, I. W., administrator. (See Kerstetter, Aaron D.)

Kesselman, Edward H., assignor of one-fourth to M. Kesselman, Butler, one-fourth to J. McMichael, and one-fourth to E. McMichael, Chicora, Pa. Gas-burner for furnaces. No. 1,022,558; Apr. 9; Sp. p. 1698; Gaz. vol. 177; p. 300.

Kesselman, Margaret, *et al.* (See Kesselman, Edward H., assignor.)

Kestner Evaporator Company. (See Kestner, Paul, assignor.)

Kestner, Paul, Lille, France, assignor to Kestner Evaporator Company, Philadelphia, Pa. Concentrating liquids. No. 1,022,321; Apr. 2; Sp. p. 1179; Gaz. vol. 177; p. 190.

Keyes, Eugene L., Boston, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for use in the manufacture of shoes. No. 1,023,854; Apr. 23; Sp. p. 4449; Gaz. vol. 177; p. 799.

Keystone Nut Lock Manufacturing Company. (See Stafford, Benjamin E. D., assignor.)

Kidney, James W., Point Pleasant, W. Va. Steam-generator. No. 1,021,935; Apr. 2; Sp. p. 375; Gaz. vol. 177; p. 62.

Kidstun, Robert W., Youngstown, Ohio. Baggage-truck. No. 1,024,342; Apr. 23; Sp. p. 5512; Gaz. vol. 177; p. 966.

Kiefer, Jacob, Cleveland, Ohio. Device for mending shoes. No. 1,023,155; Apr. 16; Sp. p. 3034; Gaz. vol. 177; p. 544.

Kiefer, Karl, Cincinnati, Ohio. Bottle-rinsing machine. No. 1,022,196; Apr. 2; Sp. p. 940; Gaz. vol. 177; p. 150.

Kiefer, Karl, Cincinnati, Ohio. Filter. No. 1,023,254; Apr. 16; Sp. p. 3232; Gaz. vol. 177; p. 578.

Kiel, Clemens A., Louisville, Ky. Ball-and-socket pipe-joint. No. 1,022,197; Apr. 2; Sp. p. 944; Gaz. vol. 177; p. 151.

Kienast, Arnold, Leipzig, Germany. Turbine. No. 1,022,683; Apr. 9; Sp. p. 1976; Gaz. vol. 177; p. 343.

Kiesel, William F., Jr., Altoona, Pa. Brake-rigging. No. 1,022,424; Apr. 9; Sp. p. 1430; Gaz. vol. 177; p. 256.

Kieser, Walter, Charlottenburg, Germany, assignor to General Electric Company. Packing for elastic-fluid turbines. No. 1,022,788; Apr. 9; Sp. p. 2224; Gaz. vol. 177; p. 381.

Kight, William K., Dexter, Mo. Lens for eyeglasses. No. 1,022,789; Apr. 9; Sp. p. 2225; Gaz. vol. 177; p. 381.

Killeen, Andrew J. (See Cheney, John W., assignor.)

Killian, Maximilian. (See Fiko and Killian.)

Kimmel, Earl G., Johnstown, Pa. Mail-bag. No. 1,021,837; Apr. 2; Sp. p. 192; Gaz. vol. 177; p. 31.

Kindermann, Jacob, Leipzig, Germany. Destruction and deodorization of smoke. No. 1,024,204; Apr. 23; Sp. p. 5253; Gaz. vol. 177; p. 920.

Kindler, Eduard, Friedenau-Berlin, Germany. Suspension device for trolley-wires. No. 1,022,143; Apr. 2; Sp. p. 833; Gaz. vol. 177; p. 132.

King, Albert K., and J. W. Irwin, Maricopa, Cal. Pump cross-head. No. 1,023,855; Apr. 23; Sp. p. 4461; Gaz. vol. 177; p. 799.

King, Clifford G., Providence, R. I. Brooch. No. 1,023,040; Apr. 23; Sp. p. 4663; Gaz. vol. 177; p. 829.

King, Edward R., Asheville, N. C. Reclining porch-swing. No. 1,023,657; Apr. 16; Sp. p. 4035; Gaz. vol. 177; p. 707.

King & Hamilton Company. (See Gilman, John H., assignor.)

King, Jesse C., assignor of one-third to W. H. Bieber, La Junta, Colo. Rotary engine. No. 1,024,787; Apr. 30; Sp. p. 6571; Gaz. vol. 177; p. 1156.

Kingan, James B., and H. F. Ripken, Minneapolis, Minn. Device for valve-gear. No. 1,023,520; Apr. 16; Sp. p. 3759; Gaz. vol. 177; p. 664.

Kingsbury, William M., Cleveland, Ohio. Garbage and waste-paper receptacle. No. 1,021,872; Apr. 2; Sp. p. 262; Gaz. vol. 177; p. 42.

Kingsley, Henry M., Chicago, Ill. Asphalt-melting wagon. No. 1,021,781; Apr. 2; Sp. p. 52; Gaz. vol. 177; p. 12.

Kingwell, Kenneth F., Rugby, England, assignor to General Electric Company. Motor-control system. No. 1,022,029; Apr. 2; Sp. p. 591; Gaz. vol. 177; p. 93.

Kinney, Daniel B., Eaton, Colo. Folding luggage and hat rack. No. 1,021,838; Apr. 2; Sp. p. 194; Gaz. vol. 177; p. 32.

Kinney, John F., Shelby, Nebr. Stamp-vending machine. No. 1,023,020; Apr. 9; Sp. p. 2003; Gaz. vol. 177; p. 460.

Kintner, Alcuin E., Painesville, Ohio. Traction-increasing and safety device. No. 1,024,084; Apr. 23; Sp. p. 4955; Gaz. vol. 177; p. 877.

Kinzer, John J., assignor to Pittsburgh Brake Shoe Company, Pittsburgh, Pa. Brake-shoe. No. 1,024,285; Apr. 23; Sp. p. 5386; Gaz. vol. 177; p. 943.

Kip, Frederic E., Montclair, N. J. Photograph-holder. No. 1,024,583; Apr. 30; Sp. p. 6125; Gaz. vol. 177; p. 1084.

Kirby, Robert C., assignor to A. I. Wood, Rockford, Ill. Bolt and nut lock. No. 1,023,430; Apr. 16; Sp. p. 3577; Gaz. vol. 177; p. 636.

Kirk-Latty Manufacturing Company, The. (See Bleffel, William J., assignor.)

Kirkendall, Emit A., Baker, Oreg. Staple. No. 1,024,008; Apr. 23; Sp. p. 4793; Gaz. vol. 177; p. 851.

Kirkpatrick, Charles C., *et al.* (See Matthews, Robert E., assignor.)

Kirkpatrick, John S. (See Lamar, William J., assignor.)

Kirksey, John R., Dysortville, N. C. Envelop. No. 1,023,382; Apr. 16; Sp. p. 3481; Gaz. vol. 177; p. 621.

Kirtley, Simeon B., Columbia, Mo. Index for loose-leaf records and the like. No. 1,023,941; Apr. 23; Sp. p. 4664; Gaz. vol. 177; p. 829.

Kissinger, James M., and S. H. J. Heffner, Pottsville, Pa. Fence-post. No. 1,024,858; Apr. 30; Sp. p. 6712; Gaz. vol. 177; p. 1182.

Kistler, E. F. (See Baber, James M., assignor.)

Kitchen, Joseph M. W., East Orange, N. J. Heating system. No. 1,024,788; Apr. 30; Sp. p. 6574; Gaz. vol. 177; p. 1157.

Kitsee, Isidor, Philadelphia, Pa. Printing telegraphy. No. 1,024,205; Apr. 23; Sp. p. 5254; Gaz. vol. 177; p. 921.

Klein, Albin, Erfurt, assignor to J. A. John Aktiengesellschaft, Erfurt-Ilversgehofen, Germany. Roof-light. No. 1,021,782; Apr. 2; Sp. p. 58; Gaz. vol. 177; p. 12.

Klein, Daniel, Spokane, Wash., assignor to D. H. Burrell & Co., Little Falls, N. Y. Milking-machine. No. 1,024,859; Apr. 30; Sp. p. 6714; Gaz. vol. 177; p. 1182.

Kleinbaum, Elihu N., Brooklyn, N. Y. Pay-as-you-enter door. No. 1,022,684; Apr. 9; Sp. p. 1978; Gaz. vol. 177; p. 343.

Kleinschmidt, Carl G., Herne, Germany. Wheel-rim for pneumatic tires. No. 1,021,783; Apr. 2; Sp. p. 59; Gaz. vol. 177; p. 13.

Klell, Albert, West Park, assignor of one-half to H. Baracs, Cleveland, Ohio. Convertible automobile. No. 1,024,634; Apr. 30; Sp. p. 6259; Gaz. vol. 177; p. 1102.

Klement, Wilhelm, Neu-Finkenkrug-Falkenhain, assignor to Siemens-Schuckert Werke, G. m. b. H., Berlin, Germany. Lamp-holder. No. 1,023,942; Apr. 23; Sp. p. 4666; Gaz. vol. 177; p. 829.

Kline, Amos G. and C. A., New Memphis, Ill. Conveyer. No. 1,022,244; Apr. 2; Sp. p. 1046; Gaz. vol. 177; p. 166.

Kline, Charles A. (See Kline, Amos G. and C. A.)

Kline, Jacob Y., Florin, Pa. Lifting-jack. No. 1,024,860; Apr. 30; Sp. p. 6716; Gaz. vol. 177; p. 1182.

Kling, Alpha H., and B. D. Horton, assignors to Detroit Fuse & Manufacturing Company, Detroit, Mich. Electrical switch. No. 1,022,629; Apr. 9; Sp. p. 1849; Gaz. vol. 177; p. 323.

Kluge, Gustav A., Chicago, Ill. Dust-collector. No. 1,023,082; Apr. 9; Sp. p. 2826; Gaz. vol. 177; p. 481.

Klussman, William G., Irving, Oreg. Poultry-fountain. No. 1,023,658; Apr. 16; Sp. p. 4037; Gaz. vol. 177; p. 708.

Knack, Fred, Cleveland, Ohio. Air-coupling valve. No. 1,022,351; Apr. 9; Sp. p. 2354; Gaz. vol. 177; p. 402.

Knapp, David R., Philadelphia, Pa. Indicating and protective device. No. 1,023,043; Apr. 23; Sp. p. 4667; Gaz. vol. 177; p. 829.

Knapp, Isaac N., Ardmore, assignor to The United Gas Improvement Company, Philadelphia, Pa. Treating natural gas. No. 1,023,783; Apr. 16; Sp. p. 4249; Gaz. vol. 177; p. 740.

Knauss, Frank V., Portsmouth, Ohio. Fireback for stoves. No. 1,022,630; Apr. 9; Sp. p. 1854; Gaz. vol. 177; p. 324.

Knaust, Henry E., St. Louis, Mo. Bottle-crown shield. No. 1,024,584; Apr. 30; Sp. p. 6126; Gaz. vol. 177; p. 1084.

Kneifel, Fredrick, and T. H. Watt, Barberton, Ohio. Cooking utensil. No. 1,022,245; Apr. 2; Sp. p. 1048; Gaz. vol. 177; p. 167.

Knight, Amos L., and W. N. Clements, assignors to Lanston Monotype Machine Company, Philadelphia, Pa. Type-mold. No. 1,024,512; Apr. 30; Sp. p. 5937; Gaz. vol. 177; p. 1059.

Knight, Julian G., Brooklyn, N. Y., assignor to N. P. Findley. Fixture-hanger. No. 1,025,068; Apr. 30; Sp. p. 7117; Gaz. vol. 177; p. 1251.

Knight, Norman W., Spangle, Wash. Combined parachute and helicopter. No. 1,021,784; Apr. 2; Sp. p. 61; Gaz. vol. 177; p. 13.

Knott, Eustace R., Sharon, assignor to E. R. Knott Machine Company, Boston, Mass. Machine for cutting and wrapping candy kisses, &c. No. 1,025,069; Apr. 30; Sp. p. 7117; Gaz. vol. 177; p. 1251.

Knowlson, Frederick. (See Irwin, Cullon, and Knowlson.)

Knox, David M., St. Louis, Mo., assignor of one-half to W. J. Knox Dubois, Pa. Brake-beam safety-support. No. 1,024,789; Apr. 30; Sp. p. 6579; Gaz. vol. 177; p. 1157.

Knox, William J. (See Knox, David M., assignor.)

Kobich, George, New York, N. Y. Picture-exhibitor. No. 1,022,198; Apr. 2; Sp. p. 945; Gaz. vol. 177; p. 151.

Köbner, Max. (See Raschig and Köbner.)

Koenig, George G. C. (See Roesch, Reinhard, assignor.)

Kokernot, Alexander B., New Orleans, La. Hat-pin. No. 1,023,659; Apr. 16; Sp. p. 4038; Gaz. vol. 177; p. 708.

Kokko, John, Ellis Bay, Quebec, Canada. Bark-stripping machine. No. 1,024,137; Apr. 23; Sp. p. 5099; Gaz. vol. 177; p. 896.

Kolassa, Anton, Vienna, Austria-Hungary. Spacing-machine. No. 1,023,740; Apr. 16; Sp. p. 4169; Gaz. vol. 177; p. 732.

Kommers, Isaac, Jr. (See Oling, Abraham J., assignor.)

Konyha, Steve, *et al.* (See Tössér, John, assignor.)

Koons, Virgil C., Colorado Springs, Colo. Package or paper holder for mail-boxes or the like. No. 1,024,266; Apr. 23; Sp. p. 5389; Gaz. vol. 177; p. 943.

Kopf, Joseph B., Rockville Center, N. Y. Non-slipping overshoe for horses. No. 1,023,431; Apr. 16; Sp. p. 3578; Gaz. vol. 177; p. 636.

Kopp, Charles A. (See Jenkins, William E., assignor.)

Kops Bros. (See Kops, Waldemar, assignor.)

Kops, Waldemar, assignor to Kops Bros., New York, N. Y. Elastic webbing and weaving the same. No. 1,024,206; Apr. 23; Sp. p. 5256; Gaz. vol. 177; p. 921.

Kops, Waldemar, assignor to Kops Bros., New York, N. Y. Elastic fabric. No. 1,024,207; Apr. 23; Sp. p. 5258; Gaz. vol. 177; p. 921.

Koretz, Emerick, Cleveland, Ohio. Dinner-bucket. No. 1,022,246; Apr. 2; Sp. p. 1049; Gaz. vol. 177; p. 167.

Korges, Emil H., Moulton, Tex. Rail-clamp. No. 1,022,559; Apr. 9; Sp. p. 1700; Gaz. vol. 177; p. 300.

Korndörfer, Georg, assignor to Farbwerke vorm. Meister Lucius & Brüning, Höchst-on-the-Main, Germany. Derivatives of diaminodioxyarsenobenzene. No. 1,024,993; Apr. 30; Sp. p. 6980; Gaz. vol. 177; p. 1228.

Kosmin, Charles, Arlington Heights, Ill. Ditching-machine. No. 1,023,156; Apr. 16; Sp. p. 3036; Gaz. vol. 177; p. 545.

Kouyoumjian, Haroutiun K., St. Louis, Mo. Cloth-pressing machine. No. 1,024,483; Apr. 23; Sp. p. 5834; Gaz. vol. 177; p. 1014.

Kovács, Ferencz, Hannibal, Mo. Wrench. No. 1,024,901; Apr. 30; Sp. p. 6801; Gaz. vol. 177; p. 1195.

Kowalk, Elmer, *et al.* (See Holtz, Emerson E., assignor.)

Krabill, Elmer. (See Saltzman and Krabill.)

Krakau, Harry T., assignor to The National Malleable Castings Company, Cleveland, Ohio. Draft-gear. No. 1,023,109; Apr. 9; Sp. p. 2885; Gaz. vol. 177; p. 490.

Krause, Harry A., Philadelphia, Pa. Trolley. No. 1,022,144; Apr. 2; Sp. p. 834; Gaz. vol. 177; p. 132.

Krause, Hermann, St. Louis, Mo., assignor to H. Scarborough, Sr., Chicago, Ill. Bottle-washer. No. 1,022,199; Apr. 2; Sp. p. 947; Gaz. vol. 177; p. 151.

Kreher, Ernest, Tampa, Fla. Dipper-dredge. No. 1,023,660; Apr. 16; Sp. p. 4040; Gaz. vol. 177; p. 708.

Kreidl, Ignaz, Vienna, Austria-Hungary. Producing a filler for white enamels. No. 1,024,405; Apr. 23; Sp. p. 5667; Gaz. vol. 177; p. 987.

Kreith, Béla, Budapest, Austria-Hungary. Combined fire-arm and boxer. No. 1,023,741; Apr. 16; Sp. p. 4171; Gaz. vol. 177; p. 732.

Krell, Albert, assignor to Krell Auto-Grand Piano Co., Connersville, Ind. Pneumatic musical instrument. No. 1,021,785; Apr. 2; Sp. p. 62; Gaz. vol. 177; p. 13.

Krell Auto-Grand Piano Co. (See Krell, Albert, assignor.)

Krenz, Frank A., assignor of one-half to J. B. Flanagan, St. Paul, Minn. Safety device for elevators. No. 1,024,085; Apr. 23; Sp. p. 4960; Gaz. vol. 177; p. 878.

Krieger, Ferdinand, assignor to Zundmetall-Gesellschaft m. b. H., Berlin, Germany. Pyrophorous metal. No. 1,023,661; Apr. 16; Sp. p. 4043; Gaz. vol. 177; p. 709.

Kriegsmann, Hans, Leipsig-Anger, Germany. Machine for artificially lengthening the barbs of ornamental feathers. No. 1,022,093; Apr. 2; Sp. p. 724; Gaz. vol. 177; p. 115.

Kriplinger, Joseph, Brainards, N. J. Lubricator. No. 1,023,662; Apr. 16; Sp. p. 4043; Gaz. vol. 177; p. 709.

Kroeh, Charles F., Orange, N. J. Hen's nest and yard. No. 1,021,873; Apr. 2; Sp. p. 263; Gaz. vol. 177; p. 42.

Kron, Edmund, Milwaukee, Wis. Antiskidding device for automobiles. No. 1,023,255; Apr. 16; Sp. p. 3233; Gaz. vol. 177; p. 578.

Kronberger, Joe, Coney Island, assignor of one-half to L. Z. Schulhof, New York, N. Y. Switch-box. No. 1,024,902; Apr. 30; Sp. p. 6802; Gaz. vol. 177; p. 1196.

Kronenberger, Ferdinand, Corona, assignor to The Alladin Manufacturing Company, Brooklyn, N. Y. Butter substitute and making the same. No. 1,024,000; Apr. 23; Sp. p. 4794; Gaz. vol. 177; p. 851.

Kruse, Theodore H., Arvada, Colo. Fence-post mold. No. 1,022,484; Apr. 9; Sp. p. 1541; Gaz. vol. 177; p. 277.

Kruskopf, Hermann, Dortmund, Germany. Fire-extinguishing device for localizing coal-dust explosions. No. 1,022,368; Apr. 2; Sp. p. 1281; Gaz. vol. 177; p. 206.

Kubicek, Josef, Prague, Okla. Hat-pin-point protector. No. 1,023,663; Apr. 16; Sp. p. 4045; Gaz. vol. 177; p. 709.

Kuechler, Gusta C., Sacramento, Cal. Centrifugal pump. No. 1,022,425; Apr. 9; Sp. p. 1431; Gaz. vol. 177; p. 256.

Kuhn, Harry S., Waynesboro, Pa. Vise. No. 1,022,953; Apr. 9; Sp. p. 2572; Gaz. vol. 177; p. 437.

Kunkel, Fred R., Edgewood Park, assignor, by mesne assignments, to Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa. Reversible induction-motor. No. 1,024,635; Apr. 30; Sp. p. 6261; Gaz. vol. 177; p. 1102.

Kupp, William J., Pittsburgh, Pa. Tie and rail-fastener. No. 1,022,790; Apr. 9; Sp. p. 2226; Gaz. vol. 177; p. 381.

Kürsten, Eduard P., Leipsig, Germany. Convertible perambulator and bag. No. 1,022,094; Apr. 2; Sp. p. 726; Gaz. vol. 177; p. 116.

Kurz, Joseph, New York, N. Y. Box-protector. No. 1,022,745; Apr. 9; Sp. p. 2189; Gaz. vol. 177; p. 367.

Kurz, Joseph, New York, N. Y. Box-protector. No. 1,022,746; Apr. 9; Sp. p. 2140; Gaz. vol. 177; p. 367.

Labit, Girard E., Galveston, Tex. Blind-stop. No. 1,024,994; Apr. 30; Sp. p. 6990; Gaz. vol. 177; p. 1228.

Labombarde, Elie W., Nashua, N. H. Blank for folding boxes. No. 1,021,874; Apr. 2; Sp. p. 265; Gaz. vol. 177; p. 43.

Lachner, Martin, Brunswick, Germany. Gas-stove. No. 1,024,585; Apr. 30; Sp. p. 6127; Gaz. vol. 177; p. 1084.

Ladoff, Isador, Cleveland, Ohio, assignor of thirty one-hundredths to P. C. Peck, New York, N. Y. Arc-light electrode or pencil. No. 1,022,426; Apr. 9; Sp. p. 1433; Gaz. vol. 177; p. 257.

Lafeuille, Jules C. F., Charmes, near La Fère, France. Drying apparatus for bagasse. No. 1,023,157; Apr. 16; Sp. p. 3038; Gaz. vol. 177; p. 545.

Lagarde, Everette S., and P. A. Angenend, Jr., Houston, Tex. Bit-frame. No. 1,023,021; Apr. 9; Sp. p. 2696; Gaz. vol. 177; p. 460.

Laine, Walter R., Los Angeles, Cal. Blade-protecting knife. No. 1,024,086; Apr. 23; Sp. p. 4964; Gaz. vol. 177; p. 878.

Laird, William A., Jr., Chambersburg, Pa. Plumb-bob carrier. No. 1,022,791; Apr. 9; Sp. p. 2227; Gaz. vol. 177; p. 382.

Laity, Asbury F., Madison, S. D. Milk-strainer. No. 1,023,664; Apr. 16; Sp. p. 4045; Gaz. vol. 177; p. 709.

Lake, James G., Danville, Pa. Reel mechanism for picture-machines. No. 1,024,790; Apr. 30; Sp. p. 6581; Gaz. vol. 177; p. 1158.

Laland, Arthur J., Mobile, Ala. Fare-register. No. 1,024,343; Apr. 23; Sp. p. 5514; Gaz. vol. 177; p. 966.

Lally, George W., Boston, Mass. Side-dump autotruck. No. 1,024,636; Apr. 30; Sp. p. 6262; Gaz. vol. 177; p. 1102.

Lamar, William J., assignor of one-half to J. S. Kirkpatrick, Kansas City, Mo. Automatic injector for boilers. No. 1,023,110; Apr. 9; Sp. p. 2886; Gaz. vol. 177; p. 491.

Lamb, Bruce K., Bemis, W. Va. Wire-cable fastener. No. 1,022,954; Apr. 9; Sp. p. 2574; Gaz. vol. 177; p. 437.

Lambert, Frederick C., New York, N. Y. Aeroplane. No. 1,024,941; Apr. 30; Sp. p. 6886; Gaz. vol. 177; p. 1210.

Lambert, Gerard B., New York, N. Y. Vehicle-wheel. No. 1,022,869; Apr. 2; Sp. p. 1282; Gaz. vol. 177; p. 207.

Lambert, Robert C., Crawford, Nebr. Mail-receiver. No. 1,024,995; Apr. 30; Sp. p. 6992; Gaz. vol. 177; p. 1228.

Lamberton, Andrew, Coatbridge, Scotland. Two-high reversing rolling-mill and like machine. No. 1,024,475; Apr. 23; Sp. p. 5819; Gaz. vol. 177; p. 1011.

Lamoreaux, Charles, Glassport, Pa. Scythe. No. 1,023,665; Apr. 16; Sp. p. 4047; Gaz. vol. 177; p. 710.

Lampert, Carl, Frankfort-on-the-Main, Germany. Cooking articles of food. No. 1,024,637; Apr. 30; Sp. p. 6263; Gaz. vol. 177; p. 1103.

Lancaster, T. C., *et al.* (See Schweinebraten, Louis G., assignor.)

Landgrebe, Karl. (See Johnson, Mark W., Jr., assignor.)

Lane, H. L., *et al.* (See Ellsworth, Dighton B., assignor.)

Lang, George H., Boston, Mass. Tag-marking machine. No. 1,023,570; Apr. 16; Sp. p. 3864; Gaz. vol. 177; p. 680.

Lange, Lucy M., assignor of one-half to M. E. Clarke, Oakland, Cal. Chocolate-dipping machine. No. 1,022,792; Apr. 9; Sp. p. 2228; Gaz. vol. 177; p. 382.

Langell, Dale F., Apple Creek, Ohio. Coupling. No. 1,022,485; Apr. 9; Sp. p. 1542; Gaz. vol. 177; p. 277.

Langer, Gotthold L., San Francisco, assignor to Anderson, Barngrover Manufacturing Company, San Jose, Cal. Seeding-roll. No. 1,023,856; Apr. 23; Sp. p. 4462; Gaz. vol. 177; p. 799.

Langevin, Desire, Rumford, Me. Clutch-collar. No. 1,024,344; Apr. 23; Sp. p. 5515; Gaz. vol. 177; p. 966.

Langley, Ralph R., Lincoln, Nebr. Planter. No. 1,024,208; Apr. 23; Sp. p. 5259; Gaz. vol. 177; p. 922.

Langley, Ralph R., Lincoln, Nebr. Lister-planter. No. 1,024,345; Apr. 23; Sp. p. 5516; Gaz. vol. 177; p. 966.

Lanning, James K. (See Cunniff, John V., assignor.)

Lanning, James K. (See Sawtell, Albert H., assignor.)

Lanston Monotype Machine Company. (See Bancroft and Indahl, assignors.)

Lanston Monotype Machine Company. (See Elliott, Richard C., assignor.)

Lanston Monotype Machine Company. (See Knight and Clements, assignors.)

Lanston Monotype Machine Company. (See Leffingwell, Burton, assignor.)

Lanston Monotype Machine Company. (See Pierpont, Frank H., assignor.)

Lapin, John, New York, N. Y. Trench-digging machine. No. 1,023,571; Apr. 16; Sp. p. 3868; Gaz. vol. 177; p. 680.

Lappen, James E., Le Roy, assignor to Le Roy Fibre Company, St. Paul, Minn. Flax-felt machine. No. 1,023,473; Apr. 16; Sp. p. 3660; Gaz. vol. 177; p. 649.

Larkin Manufacturing Company. (See Buckley, John P., assignor.)

Larrabee, Ralph B., Anson, Me. Computing-scale. No. 1,022,030; Apr. 2; Sp. p. 593; Gaz. vol. 177; p. 94.

Larson, August, Chicago, Ill. Guitar. No. 1,022,031; Apr. 2; Sp. p. 596; Gaz. vol. 177; p. 94.

Larson, Leonard, Stanton, Iowa. Pig-extractor. No. 1,024,513; Apr. 30; Sp. p. 5941; Gaz. vol. 177; p. 1060.

Lathrop, George W., and J. W. Powles, Ramsey county, Minn. Safety appliance for elevators. No. 1,023,857; Apr. 23; Sp. p. 4464; Gaz. vol. 177; p. 800.

Lanman, John S., Western, Nebr. Starting mechanism. No. 1,023,944; Apr. 23; Sp. p. 4673; Gaz. vol. 177; p. 830.

Laughlin, James T., Boise, Idaho. Eyeglass-mounting. (Reissue.) No. 13,894; Apr. 2; Sp. p. 1335; Gaz. vol. 177; p. 217.

Laurès, Clément B. B., Paris, France. Spherical goniometer. No. 1,023,858; Apr. 23; Sp. p. 4466; Gaz. vol. 177; p. 800.

Lavallee, Charles, New Market, N. H. Let-back mechanism for looms. No. 1,022,370; Apr. 2; Sp. p. 1284; Gaz. vol. 177; p. 207.

Lavigne, John, Everett, Wash. Shade-roller support. No. 1,023,111; Apr. 9; Sp. p. 2888; Gaz. vol. 177; p. 491.

Law, Alexander H. (See Parsons and Law.)

Lawhorn, William T., and A. J. Marks, Bicknell, Ind. Automatic railway-switch. No. 1,022,631; Apr. 9; Sp. p. 1855; Gaz. vol. 177; p. 324.

Lawler, Claude B., Amarillo, Tex. Seal-padlock. No. 1,024,996; Apr. 30; Sp. p. 6992; Gaz. vol. 177; p. 1229.

Lawler, James J., Pelham, N. Y. Thermostatic valve for water. No. 1,024,729; Apr. 30; Sp. p. 6441; Gaz. vol. 177; p. 1135.

Lawnin, Louis D., assignor of one-half to N. O. Nelson Manufacturing Company, Edwardsville, Ill. Seat-actuated flushing apparatus for water-closets. No. 1,023,572; Apr. 16; Sp. p. 3870; Gaz. vol. 177; p. 681.

Lawson, Anthony D., *et al.* (See Miller, Jeremiah, assignor.)

Lawton, Burton L., assignor to The Connecticut Shock Absorber Company, Meriden, Conn. Shock-absorber adjustment. No. 1,022,145; Apr. 2; Sp. p. 836; Gaz. vol. 177; p. 133.

Layman, Lynn O., Fort Collins, Colo. Safety boiling device. No. 1,024,791; Apr. 30; Sp. p. 6583; Gaz. vol. 177; p. 1158.

Le Baron, George A., Sherbrooke, Quebec, Canada. Clothes-line pulley. No. 1,024,586; Apr. 30; Sp. p. 6129; Gaz. vol. 177; p. 1084.

Le Beau, Ernest A., assignor to Chicago Railway Equipment Company, Chicago, Ill. Brake-beam. No. 1,023,474; Apr. 16; Sp. p. 3664; Gaz. vol. 177; p. 650.

Le Beau, Ernest A., assignor to Chicago Railway Equipment Company, Chicago, Ill. Brake-beam. No. 1,024,484; Apr. 23; Sp. p. 5837; Gaz. vol. 177; p. 1015.

Le Ford, Amelia E., Boston, Mass. Disinfectant device for mouthpieces. No. 1,022,247; Apr. 2; Sp. p. 1050; Gaz. vol. 177; p. 167.

Le Roy Fibre Company. (See Lappen, James E., assignor.)

Leaver, William H., and C. H. Smith, Chicago, Ill. Stock-ringer. No. 1,023,112; Apr. 9; Sp. p. 2889; Gaz. vol. 177; p. 491.

Leavitt, Frank M., Smithtown, assignor to E. W. Bliss Company, Brooklyn, N. Y. Heater for automobile torpedoes. No. 1,022,486; Apr. 9; Sp. p. 1544; Gaz. vol. 177; p. 277.

Lebrell, Francois, Villeurbanne, and R. Desgeorge, Lyon, France. Manufacture of imitation horn, shell, and the like. No. 1,023,022; Apr. 9; Sp. p. 2697; Gaz. vol. 177; p. 460.

Lee, John I., Huntersville, W. Va. Poultry-feeding appliance. No. 1,023,945; Apr. 23; Sp. p. 4674; Gaz. vol. 177; p. 830.

Lee, Joseph, Brooklyn, N. Y. Screw inserter and remover. No. 1,022,427; Apr. 9; Sp. p. 1434; Gaz. vol. 177; p. 257.

Lee, Joseph L., Carbondale, Pa. Sprocket-chain. No. 1,021,756; Apr. 2; Sp. p. 63; Gaz. vol. 177; p. 14.

Lee, Thomas L., Jr., Westfield, N. J., assignor to The Hall Signal Company. Electric-circuit-controlling apparatus. No. 1,024,587; Apr. 30; Sp. p. 6130; Gaz. vol. 177; p. 1085.

Lee, Thomas L., Jr., Westfield, N. J., assignor to The Hall Signal Company. Electric-circuit-controlling apparatus. No. 1,024,588; Apr. 30; Sp. p. 6133; Gaz. vol. 177; p. 1085.

Lee, William D., Denver, Colo., assignor of one-half to G. G. Ewell, Phillips county, Kans. Horse-hitching weight. No. 1,024,406; Apr. 23; Sp. p. 5668; Gaz. vol. 177; p. 987.

Lee, William S., assignor, by mesne assignments, to Briggs-Detroiter Company, Detroit, Mich. Vehicle-spring. No. 1,023,859; Apr. 23; Sp. p. 4468; Gaz. vol. 177; p. 801.

Leech, Walter S., Brooten, Minn. Apparatus for testing air. No. 1,022,955; Apr. 9; Sp. p. 2576; Gaz. vol. 177; p. 437.

Leeds and Northrup Company. (See Northrup, Edwin F., assignor.)

Leffingwell, Burton, Clifton, assignor to Lanston Monotype Machine Company, Philadelphia, Pa. Type-casting machine. No. 1,024,514; Apr. 30; Sp. p. 5942; Gaz. vol. 177; p. 1060.

Legge, Thomas A. (See Hamm and Legge.)

Lehr, Frank A., Harrisburg, Pa. Game-board. No. 1,023,742; Apr. 16; Sp. p. 4173; Gaz. vol. 177; p. 733.

Leiger, George F., assignor to Chicago Octagon Rotary Engine Company, Chicago, Ill. Rotary engine. No. 1,023,321; Apr. 16; Sp. p. 3371; Gaz. vol. 177; p. 601.

Leiger, George F., assignor to Chicago Octagon Rotary Engine Company, Chicago, Ill. Rotary engine. No. 1,023,322; Apr. 16; Sp. p. 3373; Gaz. vol. 177; p. 602.

Leigh, Frederick J., assignor to Imperial Car Shipbuilding and Dry Dock Corporation, Seattle, Wash. Arm-rest for car-seats. No. 1,022,632; Apr. 9; Sp. p. 1857; Gaz. vol. 177; p. 325.

Leighton, James A., Estherwood, La. Sanitary cistern. No. 1,022,371; Apr. 2; Sp. p. 1287; Gaz. vol. 177; p. 208.

Leith, John F., Cleveland, Ohio. Runner attachment for vehicles. No. 1,024,792; Apr. 30; Sp. p. 6584; Gaz. vol. 177; p. 1158.

Leitner, Henry, Maybury, Woking, and R. N. Lucas, Dartnell Park, Byfleet, England. Means for regulating electric circuits. No. 1,024,793; Apr. 30; Sp. p. 6585; Gaz. vol. 177; p. 1158.

Leland, Harry G., Howard Park, Md. Finger-exercising machine. No. 1,023,573; Apr. 16; Sp. p. 3871; Gaz. vol. 177; p. 681.

Leluan, Charles, *et al.* (See Lord, Peter, assignor.)

Lemaignen, Robert B. A., Rouen, France. Speedometer. No. 1,025,070; Apr. 30; Sp. p. 7122; Gaz. vol. 177; p. 1251.

Lemon, John T., Columbus, Ohio. System for softening water. No. 1,022,560; Apr. 9; Sp. p. 1700; Gaz. vol. 177; p. 300.

Lemp, Hermann, Lynn, Mass., assignor to General Electric Company. Feed-regulator for heating systems. No. 1,022,032; Apr. 2; Sp. p. 597; Gaz. vol. 177; p. 94.

Lemp, Hermann, Lynn, Mass., assignor, by mesne assignments, to General Electric Company. Regulator for kerosene-burners. No. 1,024,209; Apr. 23; Sp. p. 5261; Gaz. vol. 177; p. 922.

Lengerke, Justus V., and A. von Beust, Orange, N. J. Multicoloring apparatus. No. 1,022,956; Apr. 9; Sp. p. 2579; Gaz. vol. 177; p. 438.

Lenhart Mfg. Co. (See Lenhart, William K., assignor.)

Lenhart, William K., Philadelphia, Pa., assignor to Lenhart Mfg. Co., Inc. Lamp or illuminator for autos and other vehicles. No. 1,024,210; Apr. 23; Sp. p. 5266; Gaz. vol. 177; p. 923.

Leonard, Arthur G. (See Holmberg, Per, assignor.)

Leonard, Charles R., New Rochelle, N. Y. Garment. No. 1,022,095; Apr. 2; Sp. p. 728; Gaz. vol. 177; p. 116.

Leonard, George I., and W. C. Cutler, Los Angeles, assignors to I. M. Cutler, Sawtelle, Cal. Key-operated directory. No. 1,024,211; Apr. 23; Sp. p. 5267; Gaz. vol. 177; p. 923.

Leopold, George O., assignor to North Bro's. Mfg. Co., Philadelphia, Pa. Gearing. No. 1,023,023; Apr. 9; Sp. p. 2698; Gaz. vol. 177; p. 461.

Lepage, Philibert J. A., Paris, France. Timing apparatus for billiards and like games. No. 1,022,633; Apr. 9; Sp. p. 1858; Gaz. vol. 177; p. 325.

Lephart, Frederick N., Amanda, Ohio. Fender. No. 1,023,083; Apr. 9; Sp. p. 2628; Gaz. vol. 177; p. 481.

Leemüller, August, Munich, assignor to L. Weiss, Barmen-Rittershausen, Germany. Production of pyrophorous substances for ignition and illumination. No. 1,023,208; Apr. 16; Sp. p. 3147; Gaz. vol. 177; p. 563.

Leubner, Carl W., McGregor, Tex. Cotton-chopper. No. 1,024,346; Apr. 23; Sp. p. 5518; Gaz. vol. 177; p. 967.

Leuchsenring, Konrad. (See Ott and Leuchsenring.)

Levay, Ella, Ennis, Tex. Milking device. No. 1,024,903; Apr. 30; Sp. p. 6804; Gaz. vol. 177; p. 1196.

Levering, William A., assignor to The Standard Asphalt and Rubber Company, Chicago, Ill. Sealing and protecting perishable products. No. 1,024,638; Apr. 30; Sp. p. 6264; Gaz. vol. 177; p. 1103.

Levi, Norman R., New Kensington, Pa. Roach-exterminator. No. 1,022,096; Apr. 2; Sp. p. 729; Gaz. vol. 177; p. 116.

Levillain, John H., Loring, La. Scale attachment for vehicles. No. 1,024,639; Apr. 30; Sp. p. 6265; Gaz. vol. 177; p. 1103.

Levinstein, Herbert, and M. Wyler, assignors to Levinstein Limited, Blackley, Manchester, England. Manufacture of azo dyestuffs. No. 1,024,794; Apr. 30; Sp. p. 6590; Gaz. vol. 177; p. 1159.

Levinstein Limited. (See Levinstein and Wyler, assignors.)

Lévy, Arthur, Paris, France. Folding opera-glass. No. 1,024,730; Apr. 30; Sp. p. 6443; Gaz. vol. 177; p. 1136.

Levy, Charles, assignor to Bickford & Sweet, Worcester, Mass. Slipper-sole. No. 1,023,158; Apr. 16; Sp. p. 3040; Gaz. vol. 177; p. 545.

Levy, Firm of Henri. (See Tscherne, Alois, assignor.)

Levy, Henry. (See Tscherne, Alois, assignor.)

Levy, Samuel S., Boston, Mass. Sectional wall construction. No. 1,023,946; Apr. 23; Sp. p. 4675; Gaz. vol 177; p. 830.

Levy, William W., *et al.* (See Ehinger, Frank, assignor.)

Lewandowski, Leon, assignor of one-third to N. Radzyminski, Cleveland, Ohio. Combined curtain pole and roller fixture. No. 1,024,488; Apr. 23; Sp. p. 5848; Gaz. vol. 177; p. 1017.

Lewis, Charles A., Denver, Colo. Electric search-light for automobiles. No. 1,022,634; Apr. 9; Sp. p. 1860; Gaz. vol. 177; p. 326.

Lewis, Edward D., assignor to Heater-Muffler Co., Elmira, N. Y. Muffler. No. 1,024,688; Apr. 30; Sp. p. 6363; Gaz. vol. 177; p. 1121.

Lewis, Edward Z., Chicago, Ill., assignor to The General Manifold and Printing Company, Franklin, Pa. Manifolding salesman's check. No. 1,024,731; Apr. 30; Sp. p. 6444; Gaz. vol. 177; p. 1136.

Lewis, George S., assignor to J. Stevens Arms & Tool Company, Chicopee Falls, Mass. Repeating firearm. No. 1,021,987; Apr. 2; Sp. p. 504; Gaz. vol. 177; p. 80.

Lewis, George S., assignor to J. Stevens Arms & Tool Company, Chicopee Falls, Mass. Firearm. No. 1,021,988; Apr. 2; Sp. p. 509; Gaz. vol. 177; p. 81.

Lewis Spring & Axle Company, The. (See O'Brien, Frank, assignor.)

Lewis, Thomas, Scranton, Pa. Attachment for spinning-spindles. No. 1,024,942; Apr. 30; Sp. p. 6891; Gaz. vol. 177; p. 1210.

Lewis, Walter, Philadelphia, Pa. Safety device for aeroplanes. No. 1,024,407; Apr. 23; Sp. p. 5669; Gaz. vol. 177; p. 987.

Lewis, Weldon E., Hot Springs, Ark. Grocer's cabinet. No. 1,022,685; Apr. 9; Sp. p. 1981; Gaz. vol. 177; p. 343.

Lewis, William A., and J. E. Stephen, Ashland, assignors of one-third to H. G. Rowley, Stuart, Okla. Rail tie and fastener. No. 1,021,936; Apr. 2; Sp. p. 378; Gaz. vol. 177; p. 63.

Lewis, William F., Lynn, Mass. Machine-awl. No. 1,024,795; Apr. 30; Sp. p. 6591; Gaz. vol. 177; p. 1159.

Liais, Lucien, Paris, France. Cover for pneumatic tires. No. 1,023,666; Apr. 16; Sp. p. 4048; Gaz. vol. 177; p. 710.

Libby, Albion D. T., assignor to The Dean Electric Company, Elyria, Ohio. Composite electric system. No. 1,023,256; Apr. 16; Sp. p. 3235; Gaz. vol. 177; p. 579.

Libby, Charles L., Indianapolis, Ind. Gearing. No. 1,021,875; Apr. 2; Sp. p. 267; Gaz. vol. 177; p. 43.

Libby, Sam H., East Orange, N. J., assignor to General Electric Company. Means for handling freight. No. 1,022,033; Apr. 2; Sp. p. 601; Gaz. vol. 177; p. 95.

Lichtenfeld, William F. (See Röthman, Eugene, assignor.)

Lieb, George, Newark, N. J. Bottle-closure. No. 1,024,212; Apr. 23; Sp. p. 5269; Gaz. vol. 177; p. 923.

Lieber, William H., assignor to Allis-Chalmers Company, Milwaukee, Wis. Packing-expander. No. 1,022,034; Apr. 2; Sp. p. 602; Gaz. vol. 177; p. 95.

Light, Arthur H., Los Angeles, Cal. Oil-fed furnace. No. 1,024,347; Apr. 23; Sp. p. 5521; Gaz. vol. 177; p. 967.

Lightfoot, Cecil, Buffalo, N. Y. Means for regulating rate of flow through a passage. No. 1,023,209; Apr. 16; Sp. p. 3147; Gaz. vol. 177; p. 563.

Lightfoot, Ota P. (See Ronnau, Herman, assignor.)

Ligon, Harry W., Atlanta, Ga. Automatic cut-off valve for pneumatic cotton-elevators. No. 1,022,635; Apr. 9; Sp. p. 1863; Gaz. vol. 177; p. 326.

Lillie, Samuel M., Philadelphia, Pa. Starch-conversion process. No. 1,023,257; Apr. 16; Sp. p. 3238; Gaz. vol. 177; p. 579.

Lindblad, Fredrik, New York, N. Y. Car-wheel. No. 1,023,574; Apr. 16; Sp. p. 3873; Gaz. vol. 177; p. 682.

Linden, Lucien, Brussels, Belgium. Apparatus for the mechanical treatment of impure water and other liquids. No. 1,024,451; Apr. 23; Sp. p. 5759; Gaz. vol. 177; p. 1002.

Lindenberg, Gustav, Barmen, Germany. Vacuum dust-sucker. No. 1,024,267; Apr. 23; Sp. p. 5390; Gaz. vol. 177; p. 944.

Linder, John, Meadowlands, assignor of one-half to C. Maurer, Bovey, Minn. Corn-husker. No. 1,022,428; Apr. 9; Sp. p. 1435; Gaz. vol. 177; p. 267.

Linder, Lemon M., Matthews, Ind. Surface scraper or grader. No. 1,023,210; Apr. 16; Sp. p. 3150; Gaz. vol. 177; p. 564.

Lindestrom, Hjalmar, Chicago, Ill. Pressing-machine. No. 1,023,675; Apr. 16; Sp. p. 3875; Gaz. vol. 177; p. 682.

Lindley, Arthur G., and N. F. Dickens, Schenectady, N. Y. Window-sash-adjusting device. No. 1,021,937; Apr. 2; Sp. p. 379; Gaz. vol. 177; p. 63.

Lindsay, Thomas E., Jackson, Tenn. Show-case. No. 1,023,576; Apr. 16; Sp. p. 3877; Gaz. vol. 177; p. 683.

Line, Elwood S., Omaha, Nebr. Oil-burner. No. 1,021,839; Apr. 2; Sp. p. 196; Gaz. vol. 177; p. 32.

Linha, Frank, Minot, N. D. Flax and other grain attachment for harvesters. No. 1,023,113; Apr. 9; Sp. p. 2891; Gaz. vol. 177; p. 402.

Link-Belt Company. (See Fry, Charles A., assignor.)

Link-Belt Company. (See Hayward, Henry E., assignor.)

Link-Belt Company. (See Pratt, Howell D., assignor.)

Linkmeyer, Carl R., Bremen, Germany. Manufacturing fine artificial threads. No. 1,022,097; Apr. 2; Sp. p. 729; Gaz. vol. 177; p. 116.

Linterna, William, assignor of one-half to The Nichols-Linterna Company, Cleveland, Ohio. Ventilator. No. 1,024,361; Apr. 30; Sp. p. 6718; Gaz. vol. 177; p. 1183.

Lion Machine Company. (See Terteling, Theodore B., assignor.)

Lippincott, Fisher H., assignor to A. H. & F. H. Lippincott, Inc., Philadelphia, Pa. Soda-fountain. No. 1,024,515; Apr. 30; Sp. p. 5945; Gaz. vol. 177; p. 1061.

Lishman, John J. (See Whidbourne and Lishman.)

List, Adolph, and W. A. De Maine, Cape Girardeau, Mo. Collapsible crate. No. 1,023,577; Apr. 16; Sp. p. 3879; Gaz. vol. 177; p. 683.

Lister, Charles H., St. Paul, assignor to Minnesota Manufacturers Association, Minneapolis, Minn. Automatic loader for lift-carriers. No. 1,021,870; Apr. 2; Sp. p. 270; Gaz. vol. 177; p. 43.

Litch, Lemuel W., Lynn, Mass. Corset-steel reinforcer. No. 1,024,087; Apr. 23; Sp. p. 4965; Gaz. vol. 177; p. 879.

Livermore Pay Station Company. (See Flagg and Livermore, assignors.)

Livermore, Walter H. (See Flagg and Livermore.)

Lockhart, George, New York, N. Y. Elevator-lock. No. 1,023,189; Apr. 16; Sp. p. 3041; Gaz. vol. 177; p. 545.

Locomotive Tender Frame Company. (See Howard, Clarence H., assignor.)

Lodge & Shipley Machine Tool Company, The. (See Chard, Nicholas D., assignor.)

Loewenthal, Hugo, Buenos Aires, Argentina, assignor to Süddeutsche Drahtindustrie Aktiengesellschaft, Mannheim-Waldhof, Germany. Stay for wire fences. No. 1,023,258; Apr. 16; Sp. p. 3244; Gaz. vol. 177; p. 580.

Lofland, John M., Woodsfield, Ohio. Oil-well valve. No. 1,021,840; Apr. 2; Sp. p. 197; Gaz. vol. 177; p. 32.

Lofland, John M., Woodsfield, Ohio. Rail-joint. No. 1,021,841; Apr. 2; Sp. p. 197; Gaz. vol. 177; p. 33.

Loftin, Fred T., and G. W. Everett; said Everett assignor to L. K. Loftin, Indianapolis, Ind. Inserted-leaf holder for books and the like. No. 1,025,096; Apr. 30; Sp. p. 7197; Gaz. vol. 177; p. 1261.

Loftin, Lizzie K. (See Loftin and Everett, assignors.)

Loftus, John, Albany, N. Y. Gas-engine. No. 1,022,686; Apr. 9; Sp. p. 1984; Gaz. vol. 177; p. 344.

Logan, Juna M. (See Logan, Lavalette L., assignor.) (Reissue.)

Logan, Lavalette L., deceased, Robertsdale, assignor, by mesne assignments, to J. M. Logan, Falls township, Wyoming county, Pa. Car-handling apparatus. (Reissue.) No. 13,899; Apr. 9; Sp. p. 2906; Gaz. vol. 177; p. 493.

Long, George A., Sturgis, Mich. Cooker. No. 1,024,213; Apr. 23; Sp. p. 5270; Gaz. vol. 177; p. 924.

Long, James C., Goldthwaite, Tex. Stenographer's desk. No. 1,023,432; Apr. 16; Sp. p. 3579; Gaz. vol. 177; p. 636.

Long, John J., Norfolk, Va. Knockdown box. No. 1,022,098; Apr. 2; Sp. p. 731; Gaz. vol. 177; p. 117.

Longworth, Melville L., Richmond, Va. Bracket. No. 1,024,997; Apr. 30; Sp. p. 6094; Gaz. vol. 177; p. 1229.

Lord, Peter, assignor of one-eighth to L. A. Delorme, one-fourth to J. A. H. Hebert, one-fourth to C. Leluau, and one-eighth to G. Ittweire, Montreal, Quebec, Canada. Gearing. No. 1,023,860; Apr. 23; Sp. p. 4469; Gaz. vol. 177; p. 801.

Lorenz, Edward H. (See Lorenz, William A. and E. H.)

Lorenz, William A. and E. H., Hartford, Conn. Briquetting-machine. No. 1,023,433; Apr. 16; Sp. p. 3580; Gaz. vol. 177; p. 637.

Lorenzen, Frederick G., Chicago, Ill. Pearl-sago substitute and making the same from corn-starch. No. 1,024,214; Apr. 23; Sp. p. 5272; Gaz. vol. 177; p. 924.

Lorensen, Jens N., Fremont, Ohio. Safety-razor. No. 1,024,348; Apr. 23; Sp. p. 5525; Gaz. vol. 177; p. 968.

Lorimer, George W., Piqua, Ohio, assignor, by mesne assignments, to Western Electric Company. Signal-transmitter for telephone-exchanges. No. 1,024,088; Apr. 23; Sp. p. 4966; Gaz. vol. 177; p. 879.

Lorimor, Alva A., Chama, N. Mex. Car-coupling. No. 1,025,071; Apr. 30; Sp. p. 7127; Gaz. vol. 177; p. 1252.

Los Angeles Can Company *et al.* (See McCann, Lewis E., assignor.)

Lovejoy, John W., Steel, Ohio. Curtain-pole and bracket. No. 1,022,852; Apr. 9; Sp. p. 2356; Gaz. vol. 177; p. 402.

Lovejoy, John W., Steel, Ohio. Envelop-moistening device. No. 1,025,097; Apr. 30; Sp. p. 7200; Gaz. vol. 177; p. 1261.

Lovely, Joseph, Hamilton, R. I. Power-transmission device. No. 1,022,099; Apr. 2; Sp. p. 733; Gaz. vol. 177; p. 117.

Lovendale, Theodore, Salt Lake City, Utah. Device for enamel-printing. No. 1,023,160; Apr. 16; Sp. p. 3042; Gaz. vol. 177; p. 546.

Low, Abbot A., *et al.*, trustees. (See Hertzberg, Harry, assignor.)

Lower, William W., Tyrone, Pa. Spring-cushioned tire for vehicle-wheels. No. 1,025,072; Apr. 30; Sp. p. 7128; Gaz. vol. 177; p. 1252.

Loziano, Leon, Paris, assignor, by mesne assignments, to Societe Anonyme Montbarbon, Neuilly-sur-Seine, France. Radiator. (Reissue.) No. 13,411; Apr. 30; Sp. p. 7239; Gaz. vol. 177; p. 1269.

Lubke, Adolph E. G., assignor of one-half to J. L. Ord, San Francisco, Cal. Cash-delivering device. No. 1,022,636; Apr. 9; Sp. p. 1867; Gaz. vol. 177; p. 326.

Lucas, Clarence W., assignor to Faries Manufacturing Company, Decatur, Ill. Shade-holder for electric-bulb sockets. No. 1,024,732; Apr. 30; Sp. p. 6446; Gaz. vol. 177; p. 1136.

Lucas, Richard N. (See Leitner and Lucas.)

Lucas, Valentine, and C. Bauer; said Bauer assignor to H. L. Puckett, Kansas City, Mo. Grain-drier. No. 1,024,498; Apr. 23; Sp. p. 5671; Gaz. vol. 177; p. 988.

Luce Manufacturing Company. (See Luce, Thomas C., assignor.)

Luce, Thomas C., assignor to Luce Manufacturing Company, Dalton, Mass. Adjustable bracket for lamps. No. 1,023,259; Apr. 16; Sp. p. 3245; Gaz. vol. 177; p. 580.

Ludlow Valve Manufacturing Company, The. (See Whitehouse, John H., assignor.)

Luebke, Adolph H., Montello, Wis. Fender. No. 1,022,372; Apr. 2; Sp. p. 1288; Gaz. vol. 177; p. 208.

Luehrs, Daniel M., Toledo, Ohio, and W. S. Conant, Detroit, Mich., assignors to McCreery Engineering Company, Toledo, Ohio. Air-treating apparatus. No. 1,023,260; Apr. 16; Sp. p. 3240; Gaz. vol. 177; p. 580.

Luitwieler, Samuel W., Rochester, N. Y. Variable-speed mechanism. No. 1,023,084; Apr. 9; Sp. p. 2829; Gaz. vol. 177; p. 481.

Lukács, Lázár, assignor of one-fourth to J. Sulcs, New York, N. Y. Automatic balancing mechanism for flying-machines. No. 1,022,793; Apr. 9; Sp. p. 2230; Gaz. vol. 177; p. 382.

Lumley, Wilfrid, East Conneaut, Ohio, assignor to The Conneaut Company. Folding chandelier. No. 1,023,085; Apr. 9; Sp. p. 2852; Gaz. vol. 177; p. 482.

Lund, Thomas, Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Mold-forming machine. No. 1,024,516; Apr. 30; Sp. p. 5947; Gaz. vol. 177; p. 1061.

Lundquist, Erick. (See Carlberg, Carl S., assignor.)

Lundquist, Frank A., New York, N. Y., assignor to Folding Umbrella Co. Folding umbrella. No. 1,023,211; Apr. 16; Sp. p. 3152; Gaz. vol. 177; p. 564.

Lundström, Gotthard. (See Nathorst and Lundström.)

Lundstrom, William, Margie, Minn. Trap. No. 1,024,689; Apr. 30; Sp. p. 6364; Gaz. vol. 177; p. 1121.

Lungen, Adam, assignor to Edwards & Co. Inc., New York, N. Y. Electric signaling device. No. 1,023,743; Apr. 16; Sp. p. 4174; Gaz. vol. 177; p. 733.

Lussier, Henry, Salem, assignor to Draper Company, Hopedale, Mass. Shuttle-checking means for looms. No. 1,021,842; Apr. 2; Sp. p. 198; Gaz. vol. 177; p. 33.

Luther, William H., Glasgow, Scotland. Shearing-machine. No. 1,024,409; Apr. 23; Sp. p. 5673; Gaz. vol. 177; p. 988.

Lutwyche, Edgar J., Chicago, Ill. Automobile-headlight. No. 1,022,589; Apr. 9; Sp. p. 1760; Gaz. vol. 177; p. 310.

Lutz, Charles E., Marion, Ind. Adjustable cone for fertilizer-feed. No. 1,024,796; Apr. 30; Sp. p. 6592; Gaz. vol. 177; p. 1159.

Lutz, George A., Plainfield, N. J., assignor to American Circular Loom Company, Portland, Me. Electroplating apparatus. No. 1,022,487; Apr. 9; Sp. p. 1547; Gaz. vol. 177; p. 278.

Lutz, George A., Plainfield, N. J., assignor to American Circular Loom Company, Portland, Me. Electroplating apparatus. No. 1,022,561; Apr. 9; Sp. p. 1702; Gaz. vol. 177; p. 301.

Lutz, George A., Plainfield, N. J., assignor to American Circular Loom Company, Portland, Me. Support for articles to be electroplated. No. 1,022,794; Apr. 9; Sp. p. 2233; Gaz. vol. 177; p. 383.

Lutz, George A., Plainfield, N. J., assignor to American Circular Loom Company, Portland, Me. Support for articles to be electroplated. No. 1,022,853; Apr. 9; Sp. p. 2357; Gaz. vol. 177; p. 403.

Lycett, Edward, Oltes, England. Saddle for cycles, motor-cycles, and like machines. No. 1,023,744; Apr. 16; Sp. p. 4177; Gaz. vol. 177; p. 734.

Lydon, Michael J. (See Harrington, Joseph A., assignor.)

Lyhne, Anker S., Bridgeport, Conn. Detachable chain-guide for lamp-sockets. No. 1,023,434; Apr. 16; Sp. p. 3584; Gaz. vol. 177; p. 637.

Lynch, Mary F. (See Mattoni, Henry W., assignor.)

Lyndon, George W. (See Waggoner, Albert E., assignor.)

Lyon, Algernon R., Nardin, Okla. Device for locking whips in sockets. No. 1,022,488; Apr. 9; Sp. p. 1550; Gaz. vol. 177; p. 278.

Lyon Metallic Manufacturing Company. (See Beecher, Herbert P., assignor.)

Lyons, William W., assignor to Heller Tool Company, Newark, N. J. Pincers, pliers, and the like. No. 1,022,489; Apr. 9; Sp. p. 1551; Gaz. vol. 177; p. 278.

Lytle, David A., assignor of one-fourth to W. F. Lytle and one-fourth to J. H. Lytle, Indianapolis, Ind. Adjustable floral-decoration holder. No. 1,024,215; Apr. 23; Sp. p. 5273; Gaz. vol. 177; p. 924.

Lytle, John H., *et al.* (See Lytle, David A., assignor.)

Lytle, William F., *et al.* (See Lytle, David A., assignor.)

M. B. Schenck Co., The. (See Bassick, Edgar W., assignor.)

M. B. Schenck Company, The. (See Schenck, Martin B., assignor.)

MacDonald, Jeremiah E., Pittsfield, Mass. Overshoe for horses and other hoofed animals. No. 1,023,086; Apr. 9; Sp. p. 2835; Gaz. vol. 177; p. 482.

MacDonald, John W., Wilkinsburg, Pa., assignor to The Paragon Heater Company. Heating device. No. 1,024,138; Apr. 23; Sp. p. 5101; Gaz. vol. 177; p. 897.

MacDonald, Norman, *et al.* (See Wiggins, George G., assignor.)

MacKay, Hugh, Dallas, Tex. Molding-machine. No. 1,021,938; Apr. 2; Sp. p. 383; Gaz. vol. 177; p. 64.

MacLeod, Donald M., Lake Charles, La., assignor of one half to V. Gillet, Jacksonville, Fla. Airship. No 1,023,667; Apr. 16; Sp. p. 4049; Gaz. vol. 177; p. 710.

MacRae, Fred A. (See Holmes, John W., assignor.)

Macaire, Harold C., Chicago, Ill. Water-heater. No. 1,022,637; Apr. 9; Sp. p. 1868; Gaz. vol. 177; p. 327.

Macdonald, Thomas H., assignor to American Graphophone Company, Bridgeport, Conn. Re-pressing disk sound-records. No. 1,022,100; Apr. 2; Sp. p. 735; Gaz. vol. 177; p. 117.

Macdonald, Thomas H., assignor to American Graphophone Company, Bridgeport, Conn. Support and sound-duct for sound-boxes. No. 1,024,640; Apr. 30; Sp. p. 6207; Gaz. vol. 177; p. 1103.

Macdonogh, John C. C., London, England. Electric heating element. No. 1,024,998; Apr. 30; Sp. p. 6996; Gaz. vol. 177; p. 1229.

Macfarlane, George F., Wilkes-Barre, Pa. Thread guide and clearing device. No. 1,023,578; Apr. 16; Sp. p. 3881; Gaz. vol. 177; p. 683.

Macfarlane, James C., and H. Burge, assignors to Crompton and Company Limited, Arc Works, Chelmsford, England. Rotary electric transformer and motor-generator. No. 1,024,410; Apr. 23; Sp. p. 5674; Gaz. vol. 177; p. 988.

Mackie, John M., Montreal, Quebec, Canada. Feed-water heater. No. 1,024,641; Apr. 30; Sp. p. 6260; Gaz. vol. 177; p. 1104.

Mackie, Tom D., Bowes Park, and G. F. Forwood, Limpefield, England. Manufacture of steel. No. 1,024,999; Apr. 30; Sp. p. 7000; Gaz. vol. 177; p. 1230.

Mackin, Francis M., Baltimore, Md. Flushing apparatus for water-closets. No. 1,024,010; Apr. 23; Sp. p. 4795; Gaz. vol. 177; p. 852.

Macnish, Frederick J., Oak Park, assignor to Creamery Package Manufacturing Company, Chicago, Ill. Pasteurizer. No. 1,023,523; Apr. 16; Sp. p. 3377; Gaz. vol. 177; p. 602.

Madden, Edwin C., St. Louis, Mo. Safety-razor. No. 1,022,429; Apr. 9; Sp. p. 1437; Gaz. vol. 177; p. 257.

Madden, Patrick J., Chicago, Ill. Plumbing-fixture. No. 1,022,146; Apr. 2; Sp. p. 839; Gaz. vol. 177; p. 133.

Madden, Patrick J., Chicago, Ill. Plumbing-fixture. No. 1,022,147; Apr. 2; Sp. p. 841; Gaz. vol. 177; p. 133.

Madsen, Charles P., assignor, by mesne assignments, to Pelouze Manufacturing Company, Chicago, Ill. Electric heater. No. 1,023,475; Apr. 16; Sp. p. 3667; Gaz. vol. 177; p. 650.

Magee, Walter S., Bath, S. C. Cloth-roll grip. No. 1,024,089; Apr. 23; Sp. p. 4974; Gaz. vol. 177; p. 879.

Magidson, Frank, Pittsburgh, Pa., assignor to Royal Automatic Machine Company. Machine for manufacturing sheet-metal pipe. No. 1,023,115; Apr. 9; Sp. p. 2896; Gaz. vol. 177; p. 492.

Malworm, Frank, and C. E. Mitchell, Chicago, Ill. Self-heating flat-iron. No. 1,023,047; Apr. 23; Sp. p. 4678; Gaz. vol. 177; p. 830.

Makin Heating Company, The. (See Makin and Schellman, assignors.)

Makin, John S., and H. A. Schellman, assignors to The Makin Heating Company, Philadelphia, Pa. Auxiliary water-heater. No. 1,022,148; Apr. 2; Sp. p. 842; Gaz. vol. 177; p. 133.

Makin, John S., and H. A. Schellman, assignors to The Makin Heating Company, Philadelphia, Pa. Deflector for heaters. No. 1,022,854; Apr. 9; Sp. p. 2358; Gaz. vol. 177; p. 403.

Makowacz, Martin, Pittsburgh, Pa. Folding umbrella. No. 1,022,855; Apr. 9; Sp. p. 2360; Gaz. vol. 177; p. 403.

Mallins, Charles W., Liverpool, England. Starting motor-vehicle internal-combustion engines. No. 1,023,212; Apr. 16; Sp. p. 3154; Gaz. vol. 177; p. 564.
Maloczay, Francis X., Jersey City, N. J., assignor to W. H. Heulings, Philadelphia, Pa. Car-door. No. 1,024,797; Apr. 30; Sp. p. 6594; Gaz. vol. 177; p. 1150.
Manchester, Thomas H., assignor to Chicago Car Heating Company, Chicago, Ill. Pressure-reducing device. No. 1,022,322; Apr. 2; Sp. p. 1183; Gaz. vol. 177; p. 190.
Mandt, Gunder G., assignor to William Galloway Company, Waterloo, Iowa. Carrier. No. 1,022,687; Apr. 9; Sp. p. 1987; Gaz. vol. 177; p. 344.
Maney, Thomas, Louisville, Ky. Railway-track appliance. No. 1,022,957; Apr. 9; Sp. p. 2580; Gaz. vol. 177; p. 438.
Manheimer, Abraham, St. Louis, Mo. Bow for ladies' low-cut shoes, slippers, and the like. No. 1,024,517; Apr. 30; Sp. p. 5958; Gaz. vol. 177; p. 1061.
Manley, Howard I., Kansas City, Mo. Tire-filling compound and process involving the same. No. 1,025,000; Apr. 30; Sp. p. 7001; Gaz. vol. 177; p. 1230.
Mann, Abraham R., Jr., Weisel, Pa. Cigar-lighter. No. 1,025,001; Apr. 30; Sp. p. 7003; Gaz. vol. 177; p. 1230.
Manson, Ray H., assignor to The Dean Electric Company, Elyria, Ohio. Pole-changer. No. 1,023,261; Apr. 16; Sp. p. 3250; Gaz. vol. 177; p. 581.
Mantle Machinery and Patents Company. (See Jonson, Herman, assignor.)
Maphet, Albert, Los Angeles, Cal. Drum-support. No. 1,022,149; Apr. 2; Sp. p. 843; Gaz. vol. 177; p. 134.
Maple, Warren H. (See Turner and Maple.)
Marcante, Peter F., Allentown, Pa. Shuttle-check. No. 1,023,579; Apr. 16; Sp. p. 3882; Gaz. vol. 177; p. 684.
Marchant, Arthur G. (See Marchant, Thomas B., A. G., and G. P.)
Marchant, George P. (See Marchant, Thomas B., A. G., and G. P.)
Marchant, Thomas B., A. G., and G. P., London, England. Elastic tire. No. 1,024,090; Apr. 23; Sp. p. 4975; Gaz. vol. 177; p. 880.
Marcks, Miecislaw, Lübeck, Germany. Dental impression-cup. No. 1,023,213; Apr. 16; Sp. p. 3150; Gaz. vol. 177; p. 565.
Margetts, Frederick W. and W. H., East Dulwich, England. Spring-wheel for vehicles. No. 1,022,430; Apr. 9; Sp. p. 1440; Gaz. vol. 177; p. 258.
Margetts, William H. (See Margetts, Frederick W. and W. H.)
Marinics, Frank, Expedit, Pa. Tire. No. 1,022,856; Apr. 9; Sp. p. 2361; Gaz. vol. 177; p. 403.
Marino, Pascal, London, England. Secondary battery. No. 1,023,861; Apr. 23; Sp. p. 4470; Gaz. vol. 177; p. 801.
Marino, Pascal, London, England. Treating wood for use in secondary batteries. No. 1,023,948; Apr. 23; Sp. p. 4681; Gaz. vol. 177; p. 831.
Marks, Andrew J. (See Lawhorn and Marks.)
Markus, Janos, Freeburg, Ill. Smoke-consumer. No. 1,022,857; Apr. 9; Sp. p. 2361; Gaz. vol. 177; p. 404.
Markus, John, Glen Carbon, Ill. Yieldable support for furniture. No. 1,022,858; Apr. 9; Sp. p. 2363; Gaz. vol. 177; p. 404.
Marlatt, Robert, assignor of one-half to J. Connell, Carnegie, Pa. Puppet-valve. No. 1,024,642; Apr. 30; Sp. p. 6270; Gaz. vol. 177; p. 1104.
Marot, René, Paris, France. Apparatus for preparing a mixture of air and sulfur dioxid. No. 1,024,798; Apr. 30; Sp. p. 6596; Gaz. vol. 177; p. 1160.
Marr, Robert A., Blacksburg, Va. Preserving cut timber and product thereof. No. 1,023,745; Apr. 16; Sp. p. 4179; Gaz. vol. 177; p. 784.
Marr, Robert A., Blacksburg, Va. Preserved wood and making same. No. 1,023,784; Apr. 16; Sp. p. 4250; Gaz. vol. 177; p. 747.
Marsh-Capron Manufacturing Company. (See Mosby, Alfred D., assignor.)
Marshall, Herbert E., and R. Isaksen, Brooklyn, N. Y. Power-transmission mechanism. No. 1,023,262; Apr. 16; Sp. p. 3254; Gaz. vol. 177; p. 582.
Marshall, John C. (See Cowle and Marshall.)
Martersteck, William T., Sharon, Pa. Means for transmitting power from the axles of railway-cars. No. 1,024,518; Apr. 30; Sp. p. 5960; Gaz. vol. 177; p. 1062.
Marth, Charles J., assignor to Wayne Manufacturing Company, St. Louis, Mo. Washing-machine. No. 1,023,746; Apr. 16; Sp. p. 4181; Gaz. vol. 177; p. 734.
Martin, Albert, Newark, N. J. Expansion-spike. No. 1,024,804; Apr. 30; Sp. p. 6805; Gaz. vol. 177; p. 1196.
Martin, Douglas J., New York, N. Y. Antiskid device. No. 1,023,580; Apr. 16; Sp. p. 3883; Gaz. vol. 177; p. 684.
Martin, George Y., assignor to The National Malleable Castings Company, Cleveland, Ohio. Pilot-coupling for locomotives. No. 1,022,859; Apr. 9; Sp. p. 2364; Gaz. vol. 177; p. 404.
Martin, Ira L., Portland, Oreg. Flying-machine. No. 1,021,877; Apr. 2; Sp. p. 273; Gaz. vol. 177; p. 44.
Martin, James H., Springfield, Mo. Current-motor. No. 1,025,002; Apr. 30; Sp. p. 7004; Gaz. vol. 177; p. 1230.
Martin, Noah R., and C. E. Roby, Columbus, Ohio. Spring-wheel. No. 1,024,001; Apr. 23; Sp. p. 4977; Gaz. vol. 177; p. 880.
Martin, Patrick A., Birmingham, and J. Stanley, Sparkhill, near Birmingham, England. Golf-ball. No. 1,022,248; Apr. 2; Sp. p. 1052; Gaz. vol. 177; p. 168.
Martin, Paul, Roubaix, France. Holder for printing-surfaces. No. 1,022,323; Apr. 2; Sp. p. 1188; Gaz. vol. 177; p. 191.
Martin, Phillip B., and H. Dahlenburg, Avon, S. D. Draft-equalizer. No. 1,022,490; Apr. 9; Sp. p. 1552; Gaz. vol. 177; p. 278.
Marty, Henry L., Orrville, Ohio. Pipe-wrench. No. 1,024,510; Apr. 30; Sp. p. 5961; Gaz. vol. 177; p. 1062.
Maskey, Carle L., Cleveland, Ohio. Automobile locking mechanism. No. 1,022,431; Apr. 9; Sp. p. 1442; Gaz. vol. 177; p. 258.
Mason, George N., assignor to Reading Hardware Company, Reading, Pa. Lock. No. 1,024,733; Apr. 30; Sp. p. 6447; Gaz. vol. 177; p. 1137.
Mason, Volney W., Providence, R. I. Safety device for elevators. No. 1,024,943; Apr. 30; Sp. p. 6893; Gaz. vol. 177; p. 1211.
Mason, William T. (See Mueller and Mason.)
Massachusetts Saw Works. (See McQuillan, Joseph W., assignor.)
Massey-Harris Co. (See Johnston, Andrew, assignor.)
Massohn, Richard, and J. Strathus, Hamburg, Germany; said Massohn assignor to said Strathus. Arrangement for the projection of lantern-pictures. No. 1,024,734; Apr. 30; Sp. p. 6449; Gaz. vol. 177; p. 1137.
Matalene, Henry W., New York, N. Y. Clock for automobiles and the like. No. 1,023,383; Apr. 16; Sp. p. 3482; Gaz. vol. 177; p. 621.
Matalene, Henry W., New York, N. Y. Stem winding and setting watch. No. 1,023,384; Apr. 16; Sp. p. 3485; Gaz. vol. 177; p. 622.
Matchette, Frank J. (See Cramer, Robert, assignor.)
Matheson, Donald W., Yorktown, Saskatchewan, Canada. Telescopic gun-sight attachment. No. 1,022,240; Apr. 2; Sp. p. 1053; Gaz. vol. 177; p. 168.
Mathews Gravity Carrier Company. (See Buck, Herman J., assignor.)
Mathey, Eugene F. (See Wilson and Mathey.)
Mathus, Charles W., Wichita Falls, Tex. Cotton-chopper attachment. No. 1,024,799; Apr. 30; Sp. p. 6597; Gaz. vol. 177; p. 1160.
Mattern, August, Baltimore, Md. Curtain-holder. No. 1,024,349; Apr. 23; Sp. p. 5527; Gaz. vol. 177; p. 968.
Matteson, Roy L., Santa Maria, Cal. Flying-machine. No. 1,024,011; Apr. 23; Sp. p. 4797; Gaz. vol. 177; p. 852.
Matthews, Nate J., Newark, R. L. Johnstone, Glen Ridge, and A. W. Cash, Newark, N. J. Conveyer for wrapping and labeling machines. No. 1,024,012; Apr. 23; Sp. p. 4799; Gaz. vol. 177; p. 852.
Matthews, Robert E., assignor of one-third to S. L. Powell and one-third to C. C. Kirkpatrick, San Angelo, Tex. Hasp-fastener. No. 1,023,747; Apr. 16; Sp. p. 4182; Gaz. vol. 177; p. 734.
Matthies, Robert, and J. A. Shepherd, Hammond, Ind. Dump-box. No. 1,022,562; Apr. 9; Sp. p. 1707; Gaz. vol. 177; p. 301.
Mattoni, Henry W., assignor of one-half to M. F. Lynch, New York, N. Y. Pin-guard. No. 1,024,268; Apr. 23; Sp. p. 5391; Gaz. vol. 177; p. 944.
Matus, John, Torrington, Conn. Bottle-closure. No. 1,022,101; Apr. 2; Sp. p. 737; Gaz. vol. 177; p. 118.
Maurer, Charles. (See Linder, John, assignor.)
May, Augustus, New Orleans, La. Indicator for railway-cars. No. 1,025,003; Apr. 30; Sp. p. 7007; Gaz. vol. 177; p. 1231.
May, Edward C., Watertown, Wis. Flour-sifting machine. No. 1,025,004; Apr. 30; Sp. p. 7010; Gaz. vol. 177; p. 1231.
May, Frederick, and J. H. Bleoo, New York, N. Y. Razor. No. 1,022,860; Apr. 9; Sp. p. 2365; Gaz. vol. 177; p. 405.
May, George H., Parkhead, Glasgow, Scotland. Heddle for wire-weaving. No. 1,023,263; Apr. 16; Sp. p. 3260; Gaz. vol. 177; p. 582.
Mayo, William C., El Paso, assignor of one-third to G. E. Briggs, Barstow, and one-third to J. Houlenan, El Paso, Tex. Controlling system for motor-traction cars. No. 1,022,324; Apr. 2; Sp. p. 1188; Gaz. vol. 177; p. 191.
Mazzolini, Giuseppe, Naples, Italy. Protective plates for bulkhead-openings and the like. No. 1,022,688; Apr. 9; Sp. p. 1989; Gaz. vol. 177; p. 345.
McArdle, Arthur G., San Francisco, Cal. Electric-lamp fixture. No. 1,025,005; Apr. 30; Sp. p. 7012; Gaz. vol. 177; p. 1231.
McBrair, Henry C., Middletown, N. Y., assignor to Direct Drive Gear Company, Paterson, N. J. Transmission-gearing. No. 1,023,862; Apr. 23; Sp. p. 4472; Gaz. vol. 177; p. 801.
McBride, Charles C., assignor of one-half to J. M. Sparks, Bisbee, Ariz. Stone-truck. No. 1,023,024; Apr. 9; Sp. p. 2690; Gaz. vol. 177; p. 461.
McBride, Henry. (See Sowards, Charles J., assignor.)
McCaffrey, Philip F., New York, N. Y. Combination chair and couch. No. 1,024,944; Apr. 30; Sp. p. 6894; Gaz. vol. 177; p. 1211.
McCall, Charnock H., Atlanta, Ga. Draft-regulator for fire-tube boilers. No. 1,023,949; Apr. 23; Sp. p. 4683; Gaz. vol. 177; p. 831.
McCall, Thomas A., Cincinnati, Ohio. Mechanism for automatically operating levers. No. 1,024,092; Apr. 23; Sp. p. 4979; Gaz. vol. 177; p. 880.

McCann, Lewis E., assignor of one-half to W. J. Schaefer, Ontario, and one-half to Los Angeles Can Company, Los Angeles, Cal. Means for conveying cans in exhausters, cookers, &c. No. 1,023,087; Apr. 9; Sp. p. 2837; Gaz. vol. 177; p. 483.
McCarthy, James J. (See Sullivan, Jeremiah J., assignor.)
McCarthy, Peter T., J. and E. Michmershuizen, Holland, Mich. Fumigator. No. 1,022,491; Apr. 9; Sp. p. 1553; Gaz. vol. 177; p. 279.
McClair, Charles, Schenectady, N. Y., assignor to General Electric Company. Electrical measuring instrument. No. 1,022,795; Apr. 9; Sp. p. 2235; Gaz. vol. 177; p. 383.
McCloud, Edward H., Columbus, Ohio. Automatic fire-resisting shutter. (Reissue.) No. 13,405; Apr. 16; Sp. p. 4261; Gaz. vol. 177; p. 748.
McColl, Irving G., New York, N. Y. Flash-light apparatus. No. 1,023,161; Apr. 16; Sp. p. 3044; Gaz. vol. 177; p. 546.
McConnell, William H., assignor to International Machine Corporation, Richmond, Va. Shoe-polishing machine. No. 1,024,589; Apr. 30; Sp. p. 6135; Gaz. vol. 177; p. 1086.
McConway & Torley Company. (See Kelso, William and J., assignors.)
McCord Manufacturing Company. (See Dietz, William, assignor.)
McCord, Robert H. (See Hollier, Walter J., assignor.)
McCoy, Willard E., East Liverpool, Ohio. Burner. No. 1,022,861; Apr. 9; Sp. p. 2367; Gaz. vol. 177; p. 405.
McCoy, William W., assignor to L. G. Freeman, Cincinnati, Ohio. Brush for power marking-machines. (Reissue.) No. 13,400; Apr. 9; Sp. p. 2914; Gaz. vol. 177; p. 406.
McCreary, Louis F. (See Capper and McCreary.)
McCreery Engineering Company. (See Luehrs and Conant, assignors.)
McCroskey, David C., Yazoo City, Miss. Insect-destroying apparatus. No. 1,022,200; Apr. 2; Sp. p. 953; Gaz. vol. 177; p. 152.
McCune, Charles A. (See Bruckner and McCune.)
McDaniels, David H., Lancaster, Pa. Switch-operating device. No. 1,024,735; Apr. 30; Sp. p. 6451; Gaz. vol. 177; p. 1138.
McDermott, Franklin P., Jr. (See Remy, McDermott, and Reuter.)
McDonald, Bernard C., Rockford, Ill. Holder for horses' manes. No. 1,024,690; Apr. 30; Sp. p. 6365; Gaz. vol. 177; p. 1121.
McDougall, Alexander and A. M., Duluth, Minn. Self-propelled vessel. No. 1,022,250; Apr. 2; Sp. p. 1054; Gaz. vol. 177; p. 168.
McDougall, Alexander M. (See McDougall, Alexander and A. M.)
McDowell, John G., Pittsburgh, Pa. Motor for pumps and other purposes. No. 1,023,214; Apr. 16; Sp. p. 3157; Gaz. vol. 177; p. 565.
McElliott, Joseph P., assignor to The Automatic Movable Headlight Company, Toledo, Ohio. Automatic directing means for headlights. No. 1,021,843; Apr. 2; Sp. p. 200; Gaz. vol. 177; p. 33.
McElroy, James F., Albany, N. Y., assignor to Consolidated Car Heating Company. Switch. No. 1,023,264; Apr. 16; Sp. p. 3263; Gaz. vol. 177; p. 582.
McElroy, James F., Albany, N. Y., assignor to Consolidated Car Heating Company. Car-heating coupling. No. 1,023,265; Apr. 16; Sp. p. 3265; Gaz. vol. 177; p. 583.
McEwen, Peter C., and F. W. Young, Detroit, Mich. Hernial truss-pad. No. 1,023,435; Apr. 16; Sp. p. 3585; Gaz. vol. 177; p. 637.
McEwing, Duncan S. (See Johnson and McEwing.)
McFarland, Charles N., assignor to The Adder Machine Company, Kingston, Pa. Eliminating-key for adding-machines. No. 1,024,013; Apr. 23; Sp. p. 4802; Gaz. vol. 177; p. 853.
McFell, Judson, Chicago, Ill. Selective signaling means. No. 1,024,590; Apr. 30; Sp. p. 6145; Gaz. vol. 177; p. 1086.
McGaughey, Charles. (See Trew and McGaughey.)
McGettigan, Edward J., Cleveland, Ohio. Building-block. No. 1,023,748; Apr. 16; Sp. p. 4183; Gaz. vol. 177; p. 735.
McGettigan, Edward J., Cleveland, Ohio. Building-block. No. 1,023,785; Apr. 16; Sp. p. 4252; Gaz. vol. 177; p. 747.
McGilvrey, John W. A., Albia, Iowa. Wire-stretcher. No. 1,022,102; Apr. 2; Sp. p. 738; Gaz. vol. 177; p. 118.
McGinnis, William S., Mahoningtown, Pa. Car-coupling. No. 1,022,796; Apr. 9; Sp. p. 2238; Gaz. vol. 177; p. 383.
McGoldrick, John, Baltimore, Md. Mechanism for preparing boats for launching. No. 1,022,432; Apr. 9; Sp. p. 1444; Gaz. vol. 177; p. 259.
McGonikle, Charles W., Algona, assignor of one-half to G. E. Miller, Port Orchard, Wash. Electromagnetic sounding apparatus. No. 1,023,215; Apr. 16; Sp. p. 3159; Gaz. vol. 177; p. 565.
McGrath, Peter, Denver, Colo. Potato-digger. No. 1,024,269; Apr. 23; Sp. p. 5293; Gaz. vol. 177; p. 944.
McGuire, John J., New York, N. Y. Wheel-hub. No. 1,024,270; Apr. 23; Sp. p. 5396; Gaz. vol. 177; p. 945.
McHarg, John. (See Childs, Jesse, assignor.)
McIntyre, John J., Hartford, Conn. Internal-combustion engine. No. 1,022,492; Apr. 9; Sp. p. 1554; Gaz. vol. 177; p. 279.
McKaig, Eddy T., assignor of one-half to A. E. Silk and H. Denninger, Chicago, Ill. Coin counting and packaging machine. No. 1,023,162; Apr. 16; Sp. p. 3048; Gaz. vol. 177; p. 547.
McKean, John O., assignor to Foster Machine Company, Westfield, Mass. Tension device. No. 1,024,800; Apr. 30; Sp. p. 6590; Gaz. vol. 177; p. 1160.
McKellar, Cecil G., Christchurch, New Zealand. Rear-wheel fitting of cycle-frames. No. 1,024,216; Apr. 23; Sp. p. 5276; Gaz. vol. 177; p. 925.
McKelvey, Katharine S., Pittsburgh, Pa. Curtain-stretcher. No. 1,024,905; Apr. 30; Sp. p. 6807; Gaz. vol. 177; p. 1197.
McKenzie, John D., Laurel, Miss. Baling-press. No. 1,022,035; Apr. 2; Sp. p. 604; Gaz. vol. 177; p. 96.
McKiel, James B., Marshall, Tex. Headlight for automobiles. No. 1,024,411; Apr. 23; Sp. p. 5075; Gaz. vol. 177; p. 989.
McKiel, James B., Marshall, Tex. Connector for lamps. No. 1,024,643; Apr. 30; Sp. p. 6271; Gaz. vol. 177; p. 1104.
McKinley, Joseph S., Cincinnati, Ohio. Ink-distributing roll. No. 1,022,563; Apr. 9; Sp. p. 1709; Gaz. vol. 177; p. 301.
McKinnon Chain Company. (See Ryan, Michael B., assignor.)
McLaughlin, John C., Jersey City, N. J., assignor to Underwood Typewriter Company, New York, N. Y. Type-writing machine. No. 1,022,373; Apr. 2; Sp. p. 1200; Gaz. vol. 177; p. 208.
McLaughlin, Patrick. (See Shigley, Cyrus C., assignor.)
McLean, James P., et al. (See Vargyas, Eugene von, assignor.)
McLendon, Walter R., and R. I. Eustis, assignors of one-fourth to F. D. Eustis, Los Angeles, Cal. Shoring-tool. No. 1,022,036; Apr. 2; Sp. p. 607; Gaz. vol. 177; p. 96.
McLintock, John, Glasgow, Scotland. Lubricating axle-box. No. 1,023,668; Apr. 16; Sp. p. 4052; Gaz. vol. 177; p. 711.
McMichael, Ellem, et al. (See Kesselman, Edward H., assignor.)
McMichael, James G., Chicago, Ill. Rail-joint. No. 1,024,736; Apr. 30; Sp. p. 6453; Gaz. vol. 177; p. 1138.
McMichael, Jessie, et al. (See Kesselman, Edward H., assignor.)
McMillan, Robert W., et al. (See Williams, Andrew J. and C. E., assignors.)
McMillen, Andrew, Russellton, Pa. Feed-bag. No. 1,022,862; Apr. 9; Sp. p. 2368; Gaz. vol. 177; p. 405.
McMurray, Max, Cleveland, Ohio. Blast-furnace. No. 1,024,801; Apr. 30; Sp. p. 6601; Gaz. vol. 177; p. 1160.
McMurtry, Alden L., Sound Beach, Conn. Electrical apparatus for stage effects. No. 1,021,787; Apr. 2; Sp. p. 66; Gaz. vol. 177; p. 14.
McMurtry, Alden L., Sound Beach, Conn. Garment for stage effects. No. 1,022,435; Apr. 9; Sp. p. 1447; Gaz. vol. 177; p. 259.
McNab, Alexander, assignor to The McNab Company, Bridgeport, Conn. Indicating device. No. 1,024,452; Apr. 23; Sp. p. 5761; Gaz. vol. 177; p. 1002.
McNab Company, The. (See McNab, Alexander, assignor.)
McNamara, Michael H., Chicago, Ill. Sliding-door track and cap. No. 1,023,950; Apr. 23; Sp. p. 4684; Gaz. vol. 177; p. 831.
McNamee, James, Amsterdam, N. Y. Starting device. No. 1,021,930; Apr. 2; Sp. p. 385; Gaz. vol. 177; p. 64.
McQuillan, Joseph W., Springfield, assignor to Massachusetts Saw Works, Chicopee, Mass. Hacksaw-frame. No. 1,023,216; Apr. 16; Sp. p. 3161; Gaz. vol. 177; p. 566.
McTaggart, Garnett G., Reno, Nev. Weeder. No. 1,022,103; Apr. 2; Sp. p. 739; Gaz. vol. 177; p. 118.
McTernan, John. (See Hudson, George H., assignor.)
Meaker, John W., Detroit, Mich. Explosive-engine. No. 1,023,088; Apr. 9; Sp. p. 2840; Gaz. vol. 177; p. 483.
Meath, Michael F., Sadorus, Ill. Vehicle-bound. No. 1,022,037; Apr. 2; Sp. p. 608; Gaz. vol. 177; p. 96.
Meek, Clifford P., Greensburg, Ind. Plow-beam. No. 1,022,958; Apr. 9; Sp. p. 2581; Gaz. vol. 177; p. 438.
Meeker, John F., Stampe, Ark. Flue-expander. No. 1,024,802; Apr. 30; Sp. p. 6603; Gaz. vol. 177; p. 1161.
Meeks, John J. (See Meeks, Oscar L., assignor.)
Meeks, Oscar L., Abilene, Kans., assignor of one-half to J. J. Meeks, Kansas City, Mo. Cooler. No. 1,024,014; Apr. 23; Sp. p. 4804; Gaz. vol. 177; p. 853.
Megill, William S. C., National Home, Wis. Spittoon-lifter. No. 1,023,660; Apr. 16; Sp. p. 4053; Gaz. vol. 177; p. 711.
Meier, Albert. (See Meier, Ernst, assignor.)
Meier, Albert J., Glendale, Mo. Annealing-oven. No. 1,024,217; Apr. 23; Sp. p. 5278; Gaz. vol. 177; p. 925.
Meier, Ernst, assignor of one-half to A. Meier, Rye, Tex. Music-leaf turner. No. 1,021,940; Apr. 2; Sp. p. 388; Gaz. vol. 177; p. 64.
Meier, Willi E. P., Grenaa, Denmark. Hop-scraping machine. No. 1,024,412; Apr. 23; Sp. p. 5079; Gaz. vol. 177; p. 989.
Meigs, Curtis C., Woodbury, N. J. Apparatus for making sulfuric acid. No. 1,022,493; Apr. 9; Sp. p. 1557; Gaz. vol. 177; p. 279.
Meinhardt, Hans A., Pittsfield, Mass. Resilient tire. No. 1,022,689; Apr. 9; Sp. p. 1990; Gaz. vol. 177; p. 345.
Meissner, Otto W., Westmount, Quebec, Canada. Trap-door. No. 1,022,747; Apr. 9; Sp. p. 2142; Gaz. vol. 177; p. 367.

Meissner, Otto W., Westmount, Quebec, Canada. Dump-car. No. 1,022,748; Apr. 9; Sp. p. 2144; Gaz. vol. 177; p. 368.
Meissner, Otto W., Westmount, Quebec, Canada. Trap-door. No. 1,023,951; Apr. 23; Sp. p. 4685; Gaz. vol. 177; p. 832.
Meits, August W., Grand Rapids, Mich. Valve-seating implement. No. 1,022,038; Apr. 2; Sp. p. 609; Gaz. vol. 177; p. 96.
Melber, George, Ekalaka, Mont. Washboard. No. 1,022,251; Apr. 2; Sp. p. 1055; Gaz. vol. 177; p. 168.
Mellon, George A., St. Louis, Mo. Link bed-bottom fabric. No. 1,024,503; Apr. 30; Sp. p. 6604; Gaz. vol. 177; p. 1161.
Melnik, Rose S., Upper Montclair, N. J. Garment. No. 1,021,878; Apr. 2; Sp. p. 276; Gaz. vol. 177; p. 44.
Melville, John W. (See Miller, Edwin H., assignor.)
Melville, John W., Los Angeles, Cal. Measuring-tape. No. 1,023,863; Apr. 23; Sp. p. 4475; Gaz. vol. 177; p. 802.
Melvin, Benjamin G. (See Blaney, William, assignor.)
Mengel Box Company. (See Schleicher, Robert, assignor.)
Mercer, Thomas, Preston, England. Crank manufacture. No. 1,022,434; Apr. 9; Sp. p. 1448; Gaz. vol. 177; p. 259.
Meredith, George H., San Francisco, Cal. Self-adjusting trolley-pole. No. 1,022,959; Apr. 9; Sp. p. 2582; Gaz. vol. 177; p. 439.
Mergner, Friedrich, Neumarkt, Oberpfalz, Germany. Adjustable support. No. 1,024,804; Apr. 30; Sp. p. 6605; Gaz. vol. 177; p. 1161.
Merhige, Amin, and C. F. Cookson, New York, N. Y.; said Cookson assignor to said Merhige. Cloth-cutting machine. No. 1,024,271; Apr. 23; Sp. p. 5397; Gaz. vol. 177; p. 945.
Merillat, Peter C., Winfield, Iowa. Adjustable mold for culverts and bridges. No. 1,022,960; Apr. 9; Sp. p. 2584; Gaz. vol. 177; p. 430.
Merkel, Martin, Celestine, Ind. Harrow. No. 1,023,436; Apr. 16; Sp. p. 3587; Gaz. vol. 177; p. 638.
Merrell, Howard E., *et al.* (See Gill, Edwin R., assignor.)
Merrill, Willis C., Boston, Mass. Treating oleaginous materials. No. 1,023,386; Apr. 16; Sp. p. 3488; Gaz. vol. 177; p. 622.
Merritt, James M., Los Angeles, Cal. Gearing. No. 1,023,266; Apr. 16; Sp. p. 3267; Gaz. vol. 177; p. 583.
Merritt, Louis G., Lockport, N. Y. Veneer-drying apparatus. No. 1,022,690; Apr. 9; Sp. p. 1991; Gaz. vol. 177; p. 345.
Merton, Thomas D., Grove Mill, Watford, assignor of one-half to H. M. Ridge, London, England. Roasting-furnace. No. 1,022,961; Apr. 9; Sp. p. 2588; Gaz. vol. 177 p. 439.
Messler, Matie C. (See Wattles, Luther H., assignor.)
Messner, Christian, Hibbing, Minn. Measure. No. 1,022,749; Apr. 9; Sp. p. 2146; Gaz. vol. 177; p. 368.
Metall-Industrie Schönebeck A. G. (See Ehmsen, Carl F., assignor.)
Metallpapier-Broncefarben-Blattmetallwerke Aktiengesellschaft. (See Beer, Hans, assignor.)
Metcalf, Murray B., Cowanesque, Pa. Reversible draft. No. 1,025,006; Apr. 30; Sp. p. 7013; Gaz. vol. 177; p. 1232.
Metzger, David, New York, N. Y. Making imitation-feather articles. No. 1,024,272; Apr. 23; Sp. p. 5400; Gaz. vol. 177; p. 945.
Metzger, Ferdinand F., assignor to Williams, Brown and Earle, Inc., Philadelphia, Pa. Blue-printing machine. No. 1,022,039; Apr. 2; Sp. p. 611; Gaz. vol. 177; p. 97.
Meves, Gustav N., Davenport, Iowa. Operating mechanism for power-actuated washing-machines. No. 1,022,691; Apr. 9; Sp. p. 2001; Gaz. vol. 177; p. 346.
Meyer, George A., St. Paul, Minn. Dipping-tank. No. 1,023,387; Apr. 16; Sp. p. 3493; Gaz. vol. 177; p. 623.
Meyer, Paul F., Gary, Ind. Folding pedestal. No. 1,024,453; Apr. 23; Sp. p. 5764; Gaz. vol. 177; p. 1002.
Meyer, William A., Chicago, Ill. Dust-catching attachment for brooms. No. 1,024,454; Apr. 23; Sp. p. 5765; Gaz. vol. 177; p. 1003.
Meyers, Willard F., Long Island City, N. Y. Stone-saw. No. 1,022,692; Apr. 9; Sp. p. 2003; Gaz. vol. 177; p. 346.
Meyers, Willard F., Long Island City, N. Y. Car-holder. No. 1,022,693; Apr. 9; Sp. p. 2006; Gaz. vol. 177; p. 347.
Michel, Frederick G., Albany, N. Y. Window-fastener. No. 1,024,273; Apr. 23; Sp. p. 5401; Gaz. vol. 177; p. 945.
Michels, George, Astoria, N. Y. Disinfecting device. No. 1,024,591; Apr. 30; Sp. p. 6154; Gaz. vol. 177; p. 1087.
Michener, Eugene S., New Castle, Pa. Means for removing carbon from engine-cylinders. No. 1,022,040; Apr. 2; Sp. p. 616; Gaz. vol. 177; p. 97.
Michener, Thurman J., Charlerol, Pa. Toy. No. 1,023,324; Apr. 16; Sp. p. 3379; Gaz. vol. 177; p. 603.
Michmershuizen, Edward. (See McCarthy and Michmershuizen.)
Michmershuizen, Judson. (See McCarthy and Michmershuizen.)
Mieden, Adam, Deadwood, Cal. Pocket memorandum-book. No. 1,025,007; Apr. 30; Sp. p. 7014; Gaz. vol. 177; p. 1232.
Mihalj, Unoka, *et al.* (See Balazs, John, assignor.)
Miks, Walter, Mayfield, Kans. Alfalfa-feed cutter and grinder. No. 1,024,413; Apr. 23; Sp. p. 5680; Gaz. vol. 177; p. 989.
Miles, Aquilla. (See Everhart, Charles O., assignor.)
Miles, Samuel A., Philadelphia, Pa. Engine. No. 1,023,670; Apr. 16; Sp. p. 4055; Gaz. vol. 177; p. 711.
Millar, Peter K. (See Jones and Millar.)
Miller, Andrew D., Johnstown, Pa. Nut-lock. No. 1,024,274; Apr. 23; Sp. p. 5402; Gaz. vol. 177; p. 946.
Miller, Andrew B., assignor to S. Himmel, Baltimore, Md. Display-rack. No. 1,023,789; Apr. 16; Sp. p. 4260; Gaz. vol. 177; p. 748.
Miller, Byron W., Colorado Springs, Colo. Vehicle-wheel. No. 1,023,025; Apr. 9; Sp. p. 2701; Gaz. vol. 177; p. 461.
Miller, Dalton. (See Vordemfelde, Fred L., assignor.)
Miller, Eben, Fredericton, New Brunswick, Canada. Mud-guard support. No. 1,024,644; Apr. 30; Sp. p. 6274; Gaz. vol. 177; p. 1104.
Miller, Edward W. (See Gaynor, Miller, and Remler.)
Miller, Edwin H., assignor of one-half to J. W. Melville, Los Angeles, Cal. Crank mechanism. No. 1,024,130; Apr. 23; Sp. p. 5102; Gaz. vol. 177; p. 897.
Miller, Emil, North Haledon borough, N. J. Automatic stop-motion for ribbon-looms. No. 1,022,435; Apr. 9; Sp. p. 1449; Gaz. vol. 177; p. 259.
Miller, Emil H. (See Gough and Miller.)
Miller, Frank B., Norwalk, Ohio. Poultry-feeder. No. 1,023,325; Apr. 16; Sp. p. 3380; Gaz. vol. 177; p. 603.
Miller, George E. (See McGonigle, Charles W., assignor.)
Miller, James S. and W., Beaver Falls, Pa. Detachable cuff for trousers. No. 1,023,864; Apr. 23; Sp. p. 4477; Gaz. vol. 177; p. 802.
Miller, Jeremiah, Turtle Creek, assignor of two-thirds to J. D. Perry, A. D. Lawson, and C. R. Mitchell, Danville, W. Va. Combined fork and rake. No. 1,022,902; Apr. 9; Sp. p. 2591; Gaz. vol. 177; p. 440.
Miller, Joseph A., *et al.* (See Spink, Edward J., assignor.)
Miller Lock Co. (See Soley, Frank, assignor.)
Miller, Maurice T., Scranton, Pa. Door-crape hanger. No. 1,022,963; Apr. 9; Sp. p. 2593; Gaz. vol. 177; p. 441.
Miller, Ole C., Chicago, Ill. Sandpaper-holder. No. 1,024,015; Apr. 23; Sp. p. 4805; Gaz. vol. 177; p. 853.
Miller, Philip C., Chicago, Ill. Adjustable valve for dust-collectors. No. 1,023,521; Apr. 16; Sp. p. 3760; Gaz. vol. 177; p. 665.
Miller, Thomas F., Richland, assignor of one-half to H. E. Russell, Plainwell, Mich. Package-tie. No. 1,022,964; Apr. 9; Sp. p. 2594; Gaz. vol. 177; p. 441.
Miller, Thomas S., South Orange, N. J. Hoisting-engine. No. 1,024,520; Apr. 30; Sp. p. 5962; Gaz. vol. 177; p. 1062.
Miller, Thomas S., South Orange, N. J. Friction-clutch mechanism. No. 1,024,737; Apr. 30; Sp. p. 6454; Gaz. vol. 177; p. 1138.
Miller, Walter. (See Miller, James S. and W.)
Miller, William B., Pittsburgh, Pa. Merchandise-carrier. No. 1,022,104; Apr. 2; Sp. p. 740; Gaz. vol. 177; p. 174.
Mills, Herbert S., Oak Park, Ill. Delivery-protector for vending-machines. No. 1,024,140; Apr. 23; Sp. p. 5104; Gaz. vol. 177; p. 898.
Mills, Herman C. (See Hill and Underwood, assignors.)
Mills, John H. T. (See Mills, Virgil H. and J. H. T.)
Mills Novelty Company. (See Sandell, Henry E., assignor.)
Mills, Thomas, Bartlett, Ohio, assignor of one-half to S. L. Roseburg, Pittsburgh, Pa. Bottle. No. 1,023,114; Apr. 9; Sp. p. 2894; Gaz. vol. 177; p. 492.
Mills, Virgil H. and J. H. T., Hubbard, Tex. Steam-generator. No. 1,024,521; Apr. 30; Sp. p. 5966; Gaz. vol. 177; p. 1063.
Milton Chemical Company. (See Billings, Walter H., assignor.)
Miner, Lucien L., Bisbee, Ariz. Brace for fractured bones. No. 1,025,008; Apr. 30; Sp. p. 7018; Gaz. vol. 177; p. 1232.
Miner, Ralph K. (See Feldmeier and Miner.)
Miner, William H. (See O'Connor, John F., assignor.)
Minnesota Manufacturers Association. (See Johnston, Henry H., assignor.)
Minnesota Manufacturers Association. (See Lister, Charles H., assignor.)
Minnig, Elmer L., Harrisburg, Pa. Nut-lock. No. 1,024,805; Apr. 30; Sp. p. 6606; Gaz. vol. 177; p. 1162.
Minter, Walter J., London, England. Pocket-knife. No. 1,022,494; Apr. 9; Sp. p. 1559; Gaz. vol. 177; p. 280.
Mireau, Ernest, Toronto, Ontario, Canada. Flame-deflector. No. 1,022,436; Apr. 9; Sp. p. 1450; Gaz. vol. 177; p. 260.
Miron, Joseph, Wabeno, Wis. Safety-clevis. No. 1,022,041; Apr. 2; Sp. p. 618; Gaz. vol. 177; p. 97.
Mitchell, Charles E. (See Malworn and Mitchell.)
Mitchell, Charles R., *et al.* (See Miller, Jeremiah, assignor.)
Mitchell Vance Co., The. (See Robb, James T., assignor.)
Mitchell, William C., Sydney, Nova Scotia, Canada. Tilting-pan coke-discharging apparatus. No. 1,024,141; Apr. 23; Sp. p. 5106; Gaz. vol. 177; p. 898.
Mittasch, Alwin. (See Bosch and Mittasch.)
Mock, Charles M., Kenilworth, A. U. Gerber and H. Cordell, Chicago, Ill. Piston-actuated mechanism. No. 1,023,267; Apr. 16; Sp. p. 3269; Gaz. vol. 177; p. 584.
Model Manufacturing Company. (See Johnston, Harry B., assignor.)
Moe, Peter S., Creston, Wash. Brake mechanism. No. 1,022,252; Apr. 2; Sp. p. 1056; Gaz. vol. 177; p. 168.
Moenus Machine Works. (See Bohaček, Paul, assignor.)

Mowers, Ernst, Marienfelde, near Berlin, and A. Vischer, Canstatt, assignors to Daimler Motorengesellschaft, Untertürkheim, near Stuttgart, Germany. Internal-combustion engine. No. 1,024,862; Apr. 30; Sp. p. 6720; Gaz. vol. 177; p. 1183.
Moffitt, Allison, Galeton, Pa. Vehicle-spring. No. 1,023,865; Apr. 23; Sp. p. 4478; Gaz. vol. 177; p. 802.
Moise, Harmon D., Sumter, S. C. Flush-tank apparatus. No. 1,023,522; Apr. 16; Sp. p. 3761; Gaz. vol. 177; p. 665.
Molnar, Joseph, Trenton, N. J. Switch-throwing device. No. 1,022,863; Apr. 9; Sp. p. 2369; Gaz. vol. 177; p. 405.
Moloney, Matthew, Christchurch, New Zealand. Telephone-transmitter. No. 1,022,253; Apr. 2; Sp. p. 1058; Gaz. vol. 177; p. 169.
Moloney, William J., Oakland, Cal. Car-stake. No. 1,022,105; Apr. 2; Sp. p. 744; Gaz. vol. 177; p. 119.
Molyneux, George E., Bayonne, N. J., assignor to The Singer Manufacturing Company. Sewing-machine. No. 1,024,691; Apr. 30; Sp. p. 6365; Gaz. vol. 177; p. 1121.
Monaghan, Thomas L., New York, N. Y. Swimming mitt or glove. No. 1,023,581; Apr. 16; Sp. p. 3885; Gaz. vol. 177; p. 684.
Monahan, Louis J., assignor to Termaat & Monahan Co., Oshkosh, Wis. Governor for explosive-engines. No. 1,021,879; Apr. 2; Sp. p. 278; Gaz. vol. 177; p. 45.
Monarch Typewriter Company, The. (See Fallenstein, Rudolf, assignor.)
Monarch Typewriter Company, The. (See Harry, Spencer P., assignor.)
Monarch Typewriter Company, The. (See Purdy, John, assignor.)
Monarch Typewriter Company, The. (See Steele, Herbert H., assignor.
Monarch Typewriter Company, The. (See Woodward, Horace L., assignor.)
Monarch Typewriter Company, The. (See Wyckoff, Lynn B., assignor.)
Moncrief, Stephen P., Atlanta, Ga. Self-feeding warm-air furnace. No. 1,022,965; Apr. 9; Sp. p. 2596; Gaz. vol. 177; p. 441.
Monitor Drill Company, The. (See Brennan, Thomas, Jr., assignor.)
Monitor Manufacturing Company. (See Whittingham, George H., assignor.)
Monroe, Will K., assignor to The Brown Hoisting Machinery Company, Cleveland, Ohio. Apparatus for screening coal. No. 1,023,582; Apr. 16; Sp. p. 3886; Gaz. vol. 177; p. 685.
Monsarrat, Charles N., *et al.* (See Motley, Phillips B., assignor.)
Montague Mailing Machinery Company. (See Chambers, George A., assignor.)
Montgomery, Harry B., Harrisburg, Pa. Resilient tire. No. 1,022,966; Apr. 9; Sp. p. 2598; Gaz. vol. 177; p. 441.
Montgomery, Thomas A., *et al.* (See Scow, Louis E., assignor.)
Montgomery, Thomas E., *et al.* (See Scow, Louis E., assignor.)
Montgomery, William J., Crenshaw, Miss. Wire-fence stretcher. No. 1,023,749; Apr. 16; Sp. p. 4184; Gaz. vol. 177; p. 735.
Moody, John R., Salem, Oreg. Registering mechanism for doors. No. 1,023,217; Apr. 16; Sp. p. 3162; Gaz. vol. 177; p. 566.
Moomaw, Henry E., Salem, Va. Sheet-metal roofing-plate. No. 1,021,844; Apr. 2; Sp. p. 202; Gaz. vol. 177; p. 33.
Moon-Hopkins Billing Machine Company. (See Thieme, Otto, assignor.)
Mooney, Timothy, Yorkville, N. Y. Loom-shuttle. No. 1,023,952; Apr. 23; Sp. p. 4687; Gaz. vol. 177; p. 832.
Mooney, William A., La Cygne, Kans. Railway-spike. No. 1,025,009; Apr. 30; Sp. p. 7019; Gaz. vol. 177; p. 1233.
Moore Architectural and Engineering Company. (See Heller, Charles S., assignor.)
Moore, Frederick. Stoke Newington, London, England. Self-locking nut. No. 1,022,201; Apr. 2; Sp. p. 954; Gaz. vol. 177; p. 152.
Moore, James A., Atlanta, Ga. Spring for beds. No. 1,023,080; Apr. 9; Sp. p. 2841; Gaz. vol. 177; p. 483.
Moore, John B., Washington, D. C. Reversing mechanism for explosive-engines. No. 1,024,945; Apr. 30; Sp. p. 6896; Gaz. vol. 177; p. 1211.
Moore, John P., Jr. (See Huggins, Frank L., assignor.)
Moore, John R., Allegheny, Pa. Folding stool. No. 1,023,671; Apr. 16; Sp. p. 4058; Gaz. vol. 177; p. 712.
Moore, Ralph H., Spreckels, assignor to Spreckels Sugar Company, San Francisco, Cal. Beet topping and loading apparatus. No. 1,024,142; Apr. 23; Sp. p. 5110; Gaz. vol. 177; p. 898.
Moore, Raphael A., Portsmouth, Ohio. Toy pistol. No. 1,024,350; Apr. 23; Sp. p. 5528; Gaz. vol. 177; p. 969.
Moore, Robert B., and J. L. Simmons, assignors to Gyro Motor Company, Washington, D. C. Gas-engine. No. 1,022,864; Apr. 9; Sp. p. 2370; Gaz. vol. 177; p. 406.
Moore, Warren, Loomis, Nebr. Harvester attachment. No. 1,022,325; Apr. 2; Sp. p. 1203; Gaz. vol. 177; p. 192.
Moore, Zoraida. (See Couture, William L., assignor.)
Moorhead, Albert E., San Francisco, Cal., assignor to American Rotary Valve Company, Chicago, Ill. Pneumatic cleansing apparatus. No. 1,023,090; Apr. 9; Sp. p. 2841; Gaz. vol. 177; p. 484.
Moran, Geneva, Thomaston, Me. Nursing-bottle attachment. No. 1,023,672; Apr. 16; Sp. p. 4059; Gaz. vol. 177; p. 712.
Morel, Charles, Domène, Isère, France. Vertical tubular mill for fine grinding. No. 1,024,414; Apr. 23; Sp. p. 5682; Gaz. vol. 177; p. 990.
Moreland, Willis J., Mottville, N. Y. Damper. No. 1,024,948; Apr. 30; Sp. p. 6898; Gaz. vol. 177; p. 1212.
Morette, Gaspare. (See Santilli, Angelo, assignor.)
Morey, Myron, Milford, Mass. Suspension for cables. No. 1,025,098; Apr. 30; Sp. p. 7202; Gaz. vol. 177; p. 1261.
Morgan, Frank S., Nevada City, Cal. Injector attachment for air or steam pumps. No. 1,023,585; Apr. 16; Sp. p. 3890; Gaz. vol. 177; p. 685.
Morgan, Isaiah D. (See Snodgrass, Charles C., assignor.)
Morgenstern, David, and M. Brill, New York, N. Y. Satchel-lock. No. 1,022,202; Apr. 2; Sp. p. 966; Gaz. vol. 177; p. 153.
Morin, Joseph P., assignor of one-half to T. Morin, Laconia, N. H. Mop-wringer. No. 1,024,738; Apr. 30; Sp. p. 6457; Gaz. vol. 177; p. 1138.
Morin, Thomas. (See Morin, Joseph P., assignor.)
Morris, Charles A., Montclair, N. J., assignor to The Hayward Company. Excavating-shovel. No. 1,022,638; Apr. 9; Sp. p. 1870; Gaz. vol. 177; p. 327.
Morris, Harrison R., Mapleton, Kans. Egg-candler. No. 1,023,091; Apr. 9; Sp. p. 2847; Gaz. vol. 177; p. 484.
Morrison, James, assignor to The Cincinnati Time Recorder Company, Cincinnati, Ohio. Time-recorder. No. 1,022,694; Apr. 9; Sp. p. 2009; Gaz. vol. 177; p. 347.
Morrison, Robert J., Wayne, Pa. Brad feeding and driving apparatus. No. 1,024,645; Apr. 30; Sp. p. 6275; Gaz. vol. 177; p. 1105.
Morrison, William, Des Moines, Iowa. Storage-battery electrode and making it. No. 1,021,989; Apr. 2; Sp. p. 512; Gaz. vol. 177; p. 81.
Morrison, William, Des Moines, Iowa. Binder for peroxid active material and making it. No. 1,021,990; Apr. 2; Sp. p. 514; Gaz. vol. 177; p. 81.
Morrison, William, Des Moines, Iowa. Binder for peroxid active material and making it. No. 1,021,991; Apr. 2; Sp. p. 517; Gaz. vol. 177; p. 82.
Morrison, William, Des Moines, Iowa. Binder for peroxid active material and making it. No. 1,021,992; Apr. 2; Sp. p. 520; Gaz. vol. 177; p. 82.
Morrison, William, Des Moines, Iowa. Binding the active material of positive-pole lead electrodes. No. 1,021,993; Apr. 2; Sp. p. 521; Gaz. vol. 177; p. 82.
Morrison, William, Des Moines, Iowa. Binding the active material of positive-pole lead electrodes. No. 1,021,994; Apr. 2; Sp. p. 522; Gaz. vol. 177; p. 82.
Morrison, William, Des Moines, Iowa. Binding the active material of positive-pole lead electrodes. No. 1,021,995; Apr. 2; Sp. p. 524; Gaz. vol. 177; p. 82.
Morrison, William, Des Moines, Iowa. Binding the active material of positive-pole lead electrodes. No. 1,021,996; Apr. 2; Sp. p. 526; Gaz. vol. 177; p. 83.
Morrison, William, Des Moines, Iowa. Storage-battery conductor or support. No. 1,021,997; Apr. 2; Sp. p. 528; Gaz. vol. 177; p. 83.
Morrison, William, Des Moines, Iowa. Electrolytic rectifier. No. 1,022,695; Apr. 9; Sp. p. 2012; Gaz. vol. 177; p. 348.
Morrison, William, Des Moines, Iowa. Electrolytic rectifier. No. 1,023,092; Apr. 9; Sp. p. 2849; Gaz. vol. 177; p. 484.
Morrison, William F., Cowell, Cal. Steel and concrete railway-tie. No. 1,021,845; Apr. 2; Sp. p. 208; Gaz. vol. 177; p. 34.
Morscher, Lawrence N., assignor to himself and W. J. Ehrsam, cotrustees, Enterprise, Kans. Grader. No. 1,023,750; Apr. 16; Sp. p. 4185; Gaz. vol. 177; p. 735.
Morse, James E., Canandaigua, N. Y. Blade-sharpener. No. 1,024,947; Apr. 30; Sp. p. 6900; Gaz. vol. 177; p. 1212.
Morton, Frances, Buffalo, N. Y. Spectacles. No. 1,024,275; Apr. 23; Sp. p. 5403; Gaz. vol. 177; p. 946.
Mosby, Alfred D., assignor to Marsh-Caproa Manufacturing Company, Chicago, Ill. Liquid-measuring device. No. 1,024,415; Apr. 23; Sp. p. 5683; Gaz. vol. 177; p. 990.
Moser, Fred J., Kane, Pa. Device for attaching reels to engines. No. 1,024,592; Apr. 30; Sp. p. 6155; Gaz. vol. 177; p. 1087.
Mossop, Agnes, Harley, Ontario, Canada. Envelop. No. 1,023,437; Apr. 16; Sp. p. 3588; Gaz. vol. 177; p. 638.
Motley, Phillips B., assignor to himself, C. N. Monsarrat, and J. G. Sullivan, Westmount, Quebec, Canada. Hollow section. No. 1,023,163; Apr. 16; Sp. p. 3052; Gaz. vol. 177; p. 547.
Mowat, Alexander G., Toronto, Ontario, Canada, assignor to The Carter-Crume Company, Limited, Niagara Falls, N. Y. Sales-slip. No. 1,024,522; Apr. 30; Sp. p. 5970; Gaz. vol. 177; p. 1063.
Mowbray, William J., Providence, R. I. Meter. No. 1,024,218; Apr. 23; Sp. p. 5282; Gaz. vol. 177; p. 934.
Mower, Charles H. (See Williams, Frederick W. B., assignor.)
Moxley, Ward G., Ravena, N. Y. Automobile light-turner. No. 1,023,026; Apr. 9; Sp. p. 2704; Gaz. vol. 177; p. 462.
Muckey, Jeremiah, Gorin, Mo. Mold for concrete curbs for graves. No. 1,024,646; Apr. 30; Sp. p. 6277; Gaz. vol. 177; p. 1106.

Mueller, Adolph, *et al.*, executors. (See Mueller, Henry.)
Mueller, Frank, assignor to American Eagle Motor Car Company, New York, N. Y. Hydraulic lubricator. No. 1,024,692; Apr. 30; Sp. p. 6368; Gaz. vol. 177; p. 1122.
Mueller, Frank, assignor to American Eagle Motor Car Company, New York, N. Y. Hydraulic lubricator. No. 1,024,693; Apr. 30; Sp. p. 6369; Gaz. vol. 177; p. 1122.
Mueller, Helena. (See Szabados, Antony, assignor.)
Mueller, Helena, *et al.* (See Szabados, Antony, assignor.)
Mueller, Henry, deceased; O. B. and A. Mueller, executors, assignors to H. Mueller Manufacturing Company, Decatur, Ill. Cock or faucet. No. 1,024,093; Apr. 23; Sp. p. 4982; Gaz. vol. 177; p. 881.
Mueller, John, Cleveland, Ohio. Self-closing faucet. No. 1,023,094; Apr. 23; Sp. p. 4988; Gaz. vol. 177; p. 881.
Mueller, Louis J., Jr., Milwaukee, Wis. Damper. No. 1,023,866; Apr. 23; Sp. p. 4480; Gaz. vol. 177; p. 803.
Mueller, Max R. H. (See Garner and Mueller.)
Mueller, Ora B., *et al.*, executors. (See Mueller, Henry.)
Mueller, Philip, assignor to The H. Mueller Manufacturing Company, Decatur, Ill. Multiple cock. No. 1,022,375; Apr. 2; Sp. p. 1292; Gaz. vol. 177; p. 200.
Mueller, Philip, assignor to The H. Mueller Manufacturing Company, Decatur, Ill. Device for manipulating pipe-fittings. No. 1,023,095; Apr. 23; Sp. p. 4980; Gaz. vol. 177; p. 882.
Mueller, Philip, assignor to The H. Mueller Manufacturing Company, Decatur, Ill. Tool for inserting corporation-cocks. No. 1,023,096; Apr. 23; Sp. p. 4992; Gaz. vol. 177; p. 882.
Mueller, Philip, and W. T. Mason, assignors to H. Mueller Manufacturing Company, Decatur, Ill. Hose-support for fire-hose. No. 1,023,218; Apr. 16; Sp. p. 3164; Gaz. vol. 177; p. 566.
Mühlberg, Albert, Basel, Switzerland. Shaping-machine for screw-propellers. No. 1,021,941; Apr. 2; Sp. p. 892; Gaz. vol. 177; p. 65.
Mühlberg, Albert, Basel, Switzerland. Screw-propeller. No. 1,023,584; Apr. 16; Sp. p. 3801; Gaz. vol. 177; p. 685.
Muir, Matthew C., Philadelphia, Pa. Vehicle-brake. No. 1,024,694; Apr. 30; Sp. p. 6371; Gaz. vol. 177; p. 1122.
Muirholland, Hugh, New York, N. Y. Illuminated sign. No. 1,024,695; Apr. 30; Sp. p. 6373; Gaz. vol. 177; p. 1123.
Müller, Auguste R., assignor to R. M. D. Syndicate, Limited, London, England. Material or composition and article made therefrom. No. 1,022,495; Apr. 9; Sp. p. 1560; Gaz. vol. 177; p. 280.
Müller, Conrad, New York, N. Y. Releasing device. No. 1,024,948; Apr. 30; Sp. p. 6901; Gaz. vol. 177; p. 1212.
Muller, Edward, East New Durham, N. J. Vehicle-washer. No. 1,022,042; Apr. 2; Sp. p. 619; Gaz. vol. 177; p. 98.
Müller, Friedrich, Brebach-on-the-Saar, O. Johannsen, Neufechingen, and F. Papa, Brebach-on-the-Saar, assignors to Company Rudolph Böcking & Cie. Erben Stumm- Halberg und Rud. Böcking G. m. b. H., Halbergerhutte, near Brebach, Germany. Filtration of furnace-gases. No. 1,022,496; Apr. 9; Sp. p. 1561; Gaz. vol. 177; p. 280.
Mullins, Micajah, Junction City, Kans. Educational device. No. 1,023,586; Apr. 16; Sp. p. 3997; Gaz. vol. 177; p. 686.
Mulroyan, Thomas E. (See Sprague and Mulroyan.)
Muncaster, Walter J., Cumberland, Md. Crane. No. 1,023,438; Apr. 16; Sp. p. 3580; Gaz. vol. 177; p. 638.
Mundt, John. (See Corlew, Clarence M., assignor.)
Munger, Herbert W., New York, N. Y. Expansion-bolt. No. 1,024,949; Apr. 30; Sp. p. 6903; Gaz. vol. 177; p. 1213.
Munger, Vernon D., Massillon, Ohio. Wire-basket-fabric-making machine. No. 1,024,143; Apr. 23; Sp. p. 5112; Gaz. vol. 177; p. 899.
Munger, Verrenice, and C. S. Carter, assignors to The H. C. Cook Company, Ansonia, Conn. Index-tab. No. 1,023,219; Apr. 16; Sp. p. 3165; Gaz. vol. 177; p. 567.
Murgas, Joseph, Wilkes-Barre, Pa. Casting-reel. No. 1,024,739; Apr. 30; Sp. p. 6468; Gaz. vol. 177; p. 1139.
Murphy, Daniel R., Fredericktown, assignor to H. K. Porter Co., Pittsburgh, Pa. Compressed-air engine. No. 1,024,740; Apr. 30; Sp. p. 6459; Gaz. vol. 177; p. 1139.
Murphy, Frederick M., Chicago, Ill. Fuel-feed system. No. 1,024,351; Apr. 23; Sp. p. 5529; Gaz. vol. 177; p. 969.
Murphy, John B., assignor to The North and Pfeiffer Manufacturing Company, Hartford, Conn. Boot or shoe calk. No. 1,022,106; Apr. 2; Sp. p. 747; Gaz. vol. 177; p. 119.
Murphy, Walter P., *et al.* (See Acker, Julius J., assignor.)
Murray, Archibald B., Ross, assignor of forty-five one-hundredths to E. R. Bowne, San Francisco, Cal. Gas-burner. No. 1,024,016; Apr. 23; Sp. p. 4806; Gaz. vol. 177; p. 854.
Murray, Aristides R., assignor to The Cincinnati Shaper Company, Cincinnati, Ohio. Shaping-machine. No. 1,023,268; Apr. 16; Sp. p. 3272; Gaz. vol. 177; p. 584.
Murray, Donald, London, England. Printer for multiplex printing-telegraph systems. No. 1,021,942; Apr. 2; Sp. p. 890; Gaz. vol. 177; p. 65.
Murray, Eugene, Washington, D. C., assignor to L. Jordan, Port Gibson, Miss. Pneumatic cotton-picker. No. 1,024,455; Apr. 23; Sp. p. 5766; Gaz. vol. 177; p. 1003.
Murray, Thomas E., New York, N. Y. Junction-box. No. 1,023,220; Apr. 16; Sp. p. 3167; Gaz. vol. 177; p. 567.
Murray, Thomas E., New York, N. Y. Electric cut-out. No. 1,023,326; Apr. 16; Sp. p. 3381; Gaz. vol. 177; p. 603.
Murray, Warren E. (See Hannam and Murray.)
Muth, Eugene W. (See Muth, Walter F. and E. W.)
Muth, John. (See Heinkel and Muth.)
Muth, Walter F. and E. W., Dayton, Ohio. Derrick. No. 1,023,327; Apr. 16; Sp. p. 3383; Gaz. vol. 177; p. 604.
Muther, Lorenz, Boston, Mass. Machine for covering eyelets. No. 1,022,043; Apr. 2; Sp. p. 622; Gaz. vol. 177; p. 98.
Mutter, Charles, Paterson, N. J. Game apparatus. No. 1,021,788; Apr. 2; Sp. p. 67; Gaz. vol. 177; p. 14.
Muxsy, William H., New York, N. Y., assignor to The National Cash Register Company, Dayton, Ohio. Cash-register. No. 1,024,593; Apr. 30; Sp. p. 6157; Gaz. vol. 177; p. 1087.
Myer, Albert P., Minneapolis, assignor of one-half to O. T. Dougherty, St. Paul, Minn. Sewing-machine needle. No. 1,024,416; Apr. 23; Sp. p. 5684; Gaz. vol. 177; p. 990.
Myers, Gurney, Lansdale, Pa. Carpenter's laying-out tool. No. 1,024,883; Apr. 30; Sp. p. 6722; Gaz. vol. 177; p. 1183.
Myers, Levi S., Concordia, Kans. Hand-brace for guns. No. 1,022,437; Apr. 9; Sp. p. 1452; Gaz. vol. 177; p. 260.
Myers, Phineas B., Morristown, N. J. Paper box for culture-tubes and similar articles. No. 1,021,998; Apr. 2; Sp. p. 529; Gaz. vol. 177; p. 83.
Myers, William M., *et al.* (See Fleming, Edward, assignor.)
N. O. Nelson Manufacturing Company. (See Lawnin, Louis D., assignor.)
Nachtigall, Paul F., Fort Wayne, Ind. Tombstone, sign, &c. No. 1,021,789; Apr. 2; Sp. p. 69; Gaz. vol. 177; p. 15.
Nadler, William, and M. Ressler, Montreal, Quebec, Canada. Car-fender. No. 1,023,027; Apr. 9; Sp. p. 2705; Gaz. vol. 177; p. 462.
Namur, Joseph, Kinsley, Kans. Carbureter. No. 1,022,326; Apr. 2; Sp. p. 1204; Gaz. vol. 177; p. 192.
Nangle, James H., Lynn, Mass. Beading-machine. No. 1,024,210; Apr. 23; Sp. p. 5286; Gaz. vol. 177; p. 926.
Nash, Alfred S., Williamsett, Mass. Building-block. No. 1,024,276; Apr. 23; Sp. p. 5404; Gaz. vol. 177; p. 946.
Nash, Lewis H., South Norwalk, Conn. Water-meter. No. 1,024,741; Apr. 30; Sp. p. 6462; Gaz. vol. 177; p. 1139.
Nash, Walter D., assignor to Atlanta Utility Works, Atlanta, Ga. Scale. No. 1,024,352; Apr. 23; Sp. p. 5530; Gaz. vol. 177; p. 969.
Nathan Manufacturing Company. (See Kassander and Best, assignors.)
Nathorst, Harry J. H., and G. Lundström, Gellivare Malmfält, Sweden. Machine for forming and sharpening drill-bits and the like. No. 1,023,476; Apr. 16; Sp. p. 3668; Gaz. vol. 177; p. 650.
National Acme Manufacturing Company, The. (See Hunter, Hugh M., assignor.)
National-Acme Manufacturing Company, The. (See Rindfleisch, Benjamin, assignor.)
National Automatic Vehicle Fender Company. (See Stannard and Aginskee, assignors.)
National Blank Book Company. (See Elder, Edward H., assignor.)
National Cash Register Company, The. (See Fuller, Frederick L., assignor.)
National Cash Register Company, The. (See Mussy, William H., assignor.)
National Cash Register Company, The. (See Parker, John F., assignor.)
National Cigar Company. (See Van Buren, George L., assignor.)
National Clock & Electric Manufacturing Co. (See Wurmb and Baumann, assignors.)
National Electric Signaling Company, The. (See Fessenden, Reginald A., assignor.)
National Electric Specialty Company, The. (See Chapman, Frank S., assignor.)
National Equipment Company, The. (See Bausman and Cottreal, assignors.)
National Exchange Bank of Baltimore, The. (See Craggs, Ross V., assignor.)
National Fibre Box Company. (See Walter, Harrison B., assignor.)
National Malleable Castings Company, The. (See Blackmore, William, assignor.)
National Malleable Castings Company, The. (See Buckius, Albert O., Jr., assignor.)
National Malleable Castings Company, The. (See Byers, Jacob J., assignor.) (Reissue.)
National Malleable Castings Company, The. (See Krakau, Harry T., assignor.)
National Malleable Castings Company, The. (See Martin, George V., assignor.)
National Malleable Castings Company, The. (See Pope, Henry F., assignor.)
National Malleable Castings Company, The. (See Schmidt, Ernest H., assignor.)
National Malleable Castings Company, The. (See Schroeder, William S., assignor.)
National Street and Station Indicator Company. (See Kellum, Orlando E., assignor.)

Nauts, Frank A., assignor to Gendron Wheel Company, Toledo, Ohio. Perambulator. No. 1,024,144; Apr. 23; Sp. p. 5115; Gaz. vol. 177; p. 899.
Neble, John L., and A. Hansen, Omaha, Nebr. Pallet-truck. No. 1,021,880; Apr. 2; Sp. p. 279; Gaz. vol. 177; p. 45.
Nederland, Johan, New York, N. Y. Holder for toilet-paper rolls. No. 1,023,587; Apr. 16; Sp. p. 3899; Gaz. vol. 177; p. 686.
Neelmeier, Wilhelm. (See Jordan and Neelmeier.)
Neil, James M., assignor to A. M. Hay, Toronto, Ontario, Canada. Manufacture of glues, &c. No. 1,023,523; Apr. 16; Sp. p. 3763; Gaz. vol. 177; p. 665.
Neil, James M., assignor to A. M. Hay, Toronto, Ontario, Canada. Precipitation of precious metals from cyanid solutions. No. 1,023,524; Apr. 16; Sp. p. 3763; Gaz. vol. 177; p. 665.
Neil, James M., assignor to A. M. Hay, Toronto, Ontario, Canada. Construction material. No. 1,023,673; Apr. 16; Sp. p. 4060; Gaz. vol. 177; p. 712.
Neil, James M., assignor to A. M. Hay, Toronto, Ontario, Canada. Binding or cementing material. No. 1,023,674; Apr. 16; Sp. p. 4061; Gaz. vol. 177; p. 712.
Nelson, Charles, New York, assignor to S. Sternau & Company, Brooklyn, N. Y. Culinary article. No. 1,022,438; Apr. 9; Sp. p. 1452; Gaz. vol. 177; p. 260.
Nelson, David J., Mediapolis, Iowa. Gate-closer. No. 1,022,067; Apr. 9; Sp. p. 2599; Gaz. vol. 177; p. 441.
Nelson, James D., and E. F. Smith, Cincinnati, Ohio; said Smith assignor to said Nelson. Alarm apparatus. No. 1,022,497; Apr. 9; Sp. p. 1563; Gaz. vol. 177; p. 280.
Nelson, John A., Davenport, Iowa. Automatic gas-lighter. No. 1,024,277; Apr. 23; Sp. p. 5405; Gaz. vol. 177; p. 946.
Nelson, Robert H., assignor of one-half to C. A. Robbins, Dixon, Ill. Pressure-operated controlling-valve for house water-supply systems. No. 1,022,327; Apr. 2; Sp. p. 1206; Gaz. vol. 177; p. 192.
Nelson, Oskar, Hampshire, Ill. Cow-tail holder. No. 1,023,588; Apr. 16; Sp. p. 3901; Gaz. vol. 177; p. 687.
Nettenstrom, David, assignor of one-half to C. H. Eder, Chicago, Ill. Power-transmission mechanism. No. 1,024,742; Apr. 30; Sp. p. 6463; Gaz. vol. 177; p. 1140.
Nettis, John F., Butte, Mont. Propeller. No. 1,022,203; Apr. 2; Sp. p. 957; Gaz. vol. 177; p. 153.
Neu, Herbert F., Brookfield, Wis. Torpedo-cane. No. 1,025,010; Apr. 30; Sp. p. 7020; Gaz. vol. 177; p. 1233.
Neukirch, Emmy R., Claremont, near Cape Town, South Africa. Folding extension-bed. No. 1,023,328; Apr. 16; Sp. p. 3386; Gaz. vol. 177; p. 604.
Neumayer, Ludwig, Strassburg, Germany. Apparatus for aerating liquids. No. 1,022,968; Apr. 9; Sp. p. 2601; Gaz. vol. 177; p. 442.
Nevill, David J., Denver, Colo., assignor to J. V. Dorr, Lead, S. D. Ore conveyer and classifier. No. 1,024,647; Apr. 30; Sp. p. 6279; Gaz. vol. 177; p. 1106.
Newhall, Charles H., Minneapolis, Minn. Lubricator. No. 1,021,943; Apr. 2; Sp. p. 400; Gaz. vol. 177; p. 66.
Newhall, Charles H., Minneapolis, Minn. Lubricator. No. 1,021,944; Apr. 2; Sp. p. 402; Gaz. vol. 177; p. 66.
Newhall, Charles H., Minneapolis, Minn. Lubricating-cup. No. 1,022,107; Apr. 2; Sp. p. 748; Gaz. vol. 177; p. 119.
Newhall, Henry B. (See Pleister, Henry W., assignor.)
Newland, David J. (See Dearborn, Charles A., assignor.)
Newlin, James, Burlington, N. C. Packing. No. 1,023,525; Apr. 16; Sp. p. 3765; Gaz. vol. 177; p. 665.
Newman, Bert W., Rocky Ford, assignor of one-half to A. L. Turnipseed, Creede, Colo. Receptacle. No. 1,023,675; Apr. 16; Sp. p. 4062; Gaz. vol. 177; p. 712.
Newman, Paul. (See Blattle, Herman I., assignor.)
Newton, William A., Richmond, Va. Trowel. No. 1,021,945; Apr. 2; Sp. p. 404; Gaz. vol. 177; p. 67.
Newville, William H., Delta, Colo. Tongs. No. 1,021,790; Apr. 2; Sp. p. 71; Gaz. vol. 177; p. 15.
Nice, Frederick J., Pontiac, Mich. Heating-furnace. No. 1,022,204; Apr. 2; Sp. p. 958; Gaz. vol. 177; p. 153.
Nicholls, Walter H., Charlestown, Mass. Clipper. No. 1,021,999; Apr. 2; Sp. p. 530; Gaz. vol. 177; p. 83.
Nichols-Linten Company, The. (See Linten, William, assignor.)
Nicholson, Darrel. (See Nicholson, John E., assignor.)
Nicholson, John E., Elkhart, Ill., assignor of one-half to D. Nicholson, Dexter, Kans. Combined track and trolley switch operating mechanism. No. 1,024,353; Apr. 23; Sp. p. 5532; Gaz. vol. 177; p. 969.
Nickerson, William J., New Orleans, La. Dancing figure. No. 1,023,589; Apr. 16; Sp. p. 3902; Gaz. vol. 177; p. 687.
Nicolai, Gustav, Honolulu, Hawaii. Hydraulic jack. No. 1,022,865; Apr. 9; Sp. p. 2872; Gaz. vol. 177; p. 406.
Niederlitz, Joseph D., Jersey City, N. J. Trap. No. 1,024,278; Apr. 23; Sp. p. 5407; Gaz. vol. 177; p. 947.
Niles-Bement-Pond Company. (See Greenleaf, George E., assignor.)
Nilson, Nils, Wayzata, Minn. Scale. No. 1,022,376; Apr. 2; Sp. p. 1297; Gaz. vol. 177; p. 209.
Nixon, Moses C., Peru, Ind. Baling-press. No. 1,022,393; Apr. 2; Sp. p. 1320; Gaz. vol. 177; p. 215.
Nixon, Moses C., Peru, Ind. Baling-press. No. 1,022,394; Apr. 2; Sp. p. 1328; Gaz. vol. 177; p. 216.
Nocard, Paul, Paris, France, assignor to L. T. Piver & Cie. Vanity-box. No. 1,022,254; Apr. 2; Sp. p. 1060; Gaz. vol. 177; p. 169.
Nolan, Edward E., and W. H. Pierce, assignors to G. S. Blakeslee, Chicago, Ill. Machine for cutting up ice. No. 1,024,594; Apr. 30; Sp. p. 6159; Gaz. vol. 177; p. 1088.
Nold, Hubert, Cincinnati, Ohio. Fluid-cut-off device. No. 1,025,011; Apr. 30; Sp. p. 7022; Gaz. vol. 177; p. 1233.
Nolde & Horst Co., The. (See Robinson, Frank W., assignor.)
Noll, John, New York, N. Y., assignor to Continuous Rail Company, Wilmington, Del. Apparatus for working on the upper or wearing portions of compound tram-rails. No. 1,024,906; Apr. 30; Sp. p. 6808; Gaz. vol. 177; p. 1197.
Norden, Carl S., Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Joint-machine and welt-cutter. No. 1,023,953; Apr. 23; Sp. p. 4688; Gaz. vol. 177; p. 832.
Norden, Carl S., Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for use in the manufacture of boots and shoes. No. 1,023,954; Apr. 23; Sp. p. 4691; Gaz. vol. 177; p. 832.
Nordfeldt, Charles. (See Hunkie and Nordfeldt.)
Nordlund, John, Eureka, Cal. Fishing-tackle. No. 1,023,028; Apr. 9; Sp. p. 2706; Gaz. vol. 177; p. 462.
Norell, Carl A., Stockholm, Sweden. Escapement. No. 1,023,269; Apr. 16; Sp. p. 3275; Gaz. vol. 177; p. 585.
Norris, Henry M., assignor to The Cincinnati Bickford Tool Company, Cincinnati, Ohio. Radial drill. No. 1,022,439; Apr. 9; Sp. p. 1454; Gaz. vol. 177; p. 260.
Norris, Henry M., assignor to The Cincinnati Bickford Tool Company, Cincinnati, Ohio. Automatic spindle-stop. No. 1,022,866; Apr. 9; Sp. p. 2374; Gaz. vol. 177; p. 406.
Norris, Henry M., assignor to The Cincinnati Bickford Tool Company, Cincinnati, Ohio. Gearing. No. 1,023,867; Apr. 23; Sp. p. 4481; Gaz. vol. 177; p. 803.
Norris, Henry M., assignor to The Cincinnati Bickford Tool Co., Cincinnati, Ohio. Gearing. No. 1,024,220; Apr. 23; Sp. p. 5288; Gaz. vol. 177; p. 926.
North Bros. Mf'g Co. (See Fegley, Thomas J., assignor.)
North Bro's. Mf'g Co. (See Leopold, George O., assignor.)
North, Charles H., assignor to The North Electric Company, Cleveland, Ohio. Electrical interrupter device. No. 1,021,881; Apr. 2; Sp. p. 281; Gaz. vol. 177; p. 46.
North Electric Company, The. (See North, Charles H., assignor.)
North, Fred K., Boston, Mass. Valve. No. 1,023,955; Apr. 23; Sp. p. 4697; Gaz. vol. 177; p. 833.
North and Pfeiffer Manufacturing Company, The. (See Hart, John B., assignor.)
North and Pfeiffer Manufacturing Company, The. (See Murphy, John B., assignor.)
North, Raymond H. (See Etzold and North.)
Northeast Electric Company. (See Halbleib, Edward A., assignor.)
Northern Insulating Company. (See Ellis, George H., assignor.)
Northrup, Edwin F., Philadelphia, Pa., assignor to Leeds and Northrup Company. Control apparatus. No. 1,022,498; Apr. 9; Sp. p. 1567; Gaz. vol. 177; p. 281.
Norton, William L., Boston, Mass. Casing-in machine for books. (Reissue.) No. 13,412; Apr. 30; Sp. p. 7241; Gaz. vol. 177; p. 1269.
Norwich Automatic Feeder Co., The. (See Enos, Frank, Jr., assignor.)
Norwood, Elise R., San Francisco, Cal. Water-bag retainer. No. 1,025,012; Apr. 30; Sp. p. 7023; Gaz. vol. 177; p. 1234.
Novelty Manufacturing Company, The. (See Fitzsimons, Oscar S., assignor.)
Nowak, Adolf A. K., Bous-on-the-Saar, Germany. Rolling-mill. No. 1,024,485; Apr. 23; Sp. p. 5838; Gaz. vol. 177; p. 1015.
Noyes, Henry F., assignor to The Black Rock Machine Company, Bridgeport, Conn. Combined friction and jaw clutch. No. 1,024,595; Apr. 30; Sp. p. 6161; Gaz. vol. 177; p. 1088.
Noyes, La Verne W., Chicago, Ill. Windmill. No. 1,022,205; Apr. 2; Sp. p. 960; Gaz. vol. 177; p. 153.
Nungesser Electric Battery Company, The. (See Nungesser, Philip P., assignor.)
Nungesser, Philip P., assignor to The Nungesser Electric Battery Company, Cleveland, Ohio. Spiral coil for fastening wire-terminals. No. 1,023,270; Apr. 16; Sp. p. 3276; Gaz. vol. 177; p. 585.
Nungesser, Philip P., assignor to The Nungesser Electric Battery Company, Cleveland, Ohio. Fastening device for wire-terminals. No. 1,023,271; Apr. 16; Sp. p. 3277; Gaz. vol. 177; p. 585.
Nutt, William G., Jonesboro, Ark. Oil-burner. No. 1,025,013; Apr. 30; Sp. p. 7024; Gaz. vol. 177; p. 1234.
O. A. Miller Treeing Machine Company. (See Eddins, Sextus A., assignor.)
O. A. Miller Treeing Machine Company. (See Hansen, John S., assignor.)
O'Brien, Frank, assignor to The Lewis Spring & Axle Company, Jackson, Mich. Brake. No. 1,022,039; Apr. 9; Sp. p. 1873; Gaz. vol. 177; p. 327.
O'Brien, James F., Chicago, Ill. Explosive. No. 1,021,882; Apr. 2; Sp. p. 284; Gaz. vol. 177; p. 46.
O'Brien, Patrick, *et al.* (See Jennings, Jarvis S., Jr., assignor.)
O'Connor, James, assignor to Autopiano Co., New York, N. Y. Perforated-note-sheet guide. (Reissue.) No. 13,308; Apr. 2; Sp. p. 1342; Gaz. vol. 177; p. 219.
O'Connor, John F., assignor to W. H. Miner, Chicago, Ill. Refrigerator-car door and means for operating same. No. 1,023,164; Apr. 16; Sp. p. 3053; Gaz. vol. 177; p. 547.

O'Donnell, William C., Plainfield, N. J. Game. No. 1,024,354; Apr. 23; Sp. p. 5534; Gaz. vol. 177; p. 970.
O'Neil, William, near Los Angeles, E. J. Schneider, Hollywood, and T. N. Kellett, assignors to Amalgamated Oil Company, Los Angeles, Cal. Sucker-rod elevator. No. 1,024,017; Apr. 23; Sp. p. 4307; Gaz. vol. 177; p. 854.
O'Neill, Lewis R., Montclair, N. J. Explosive-gas engine. No. 1,021,791; Apr. 2; Sp. p. 72; Gaz. vol. 177; p. 15.
O'Reilly, Michael E., Portland, Oreg. Suspensory. No. 1,023,478; Apr. 16; Sp. p. 3674; Gaz. vol. 177; p. 451.
Oakes, Ben, Detroit, Mich. Water-closet bend. No. 1,022,044; Apr. 2; Sp. p. 626; Gaz. vol. 177; p. 99.
Oakes, William H., Indianapolis, Ind. Fan. No. 1,023,272; Apr. 16; Sp. p. 3279; Gaz. vol. 177; p. 585.
Oakley, William E., Millbury, Mass. Apparatus for burning liquid fuel. No. 1,024,606; Apr. 30; Sp. p. 6163; Gaz. vol. 177; p. 1068.
Oat, William H. (See Raughtigan, Michael, assignor.)
Oehring, Oscar, Berlin, Germany, assignor to American Stamp & Ticket Vending Machine Co., New York, N. Y. Strip-feeding device. No. 1,023,165; Apr. 16; Sp. p. 3056; Gaz. vol. 177; p. 547.
Oelwerke-Stern Sonneborn Actiengesellschaft. (See Wendt, Paul, assignor.)
Oenning, Herman, Chicago, Ill. Gage. No. 1,023,166; Apr. 16; Sp. p. 3057; Gaz. vol. 177; p. 548.
Ogden, James D., Crawford, Tex. Railway-tie. No. 1,023,956; Apr. 23; Sp. p. 4608; Gaz. vol. 177; p. 833.
Ohio Chemical & Manufacturing Company, The. (See Clarke, Graham, assignor.)
Ohio Varnish Company, The. (See Devine, Thomas M., assignor.)
Ohrt, Martin, Melvin, Ill. Match-receptacle. No. 1,023,029; Apr. 9; Sp. p. 2707; Gaz. vol. 177; p. 463.
Ohye, Takanosuke, San Diego, Cal. Ellipsograph. No. 1,022,909; Apr. 9; Sp. p. 2604; Gaz. vol. 177; p. 448.
Oldenbusch, Ernest, New York, N. Y. Book-rack. No. 1,022,150; Apr. 2; Sp. p. 845; Gaz. vol. 177; p. 134.
Oldham, Joseph E., Cleveland, Ohio. Ship construction. No. 1,023,477; Apr. 16; Sp. p. 3670; Gaz. vol. 177; p. 650.
Oling, Abraham J., assignor of one-third to I. Kommers, Jr., Chicago, Ill. Pneumatic cushion for vehicles. No. 1,023,868; Apr. 23; Sp. p. 4483; Gaz. vol. 177; p. 803.
Oliver Chilled Plow Works. (See Altgelt, Rudolph J. and H. E., assignors.)
Oliver Chilled Plow Works. (See Paul, William L., assignor.)
Oliver, Henry, New York, N. Y. Partition and wall-furring. No. 1,023,526; Apr. 16; Sp. p. 3766; Gaz. vol. 177; p. 666.
Oliver, Louis E., Maywood, and A. Cureton, Chicago, Ill. Brake-rigging for railway-cars. No. 1,023,388; Apr. 16; Sp. p. 3497; Gaz. vol. 177; p. 623.
Olmstead, John L. (See Williams and Olmstead.)
Olsen, John, Watertown, N. Y. Pulp-screen. No. 1,022,750; Apr. 9; Sp. p. 2147; Gaz. vol. 177; p. 368.
Olsen, Simon D., Brooklyn, N. Y., assignor to Precision Glass Grinding Machine Company, Sioux Falls, S. D. Grinding-machine. No. 1,023,389; Apr. 16; Sp. p. 3500; Gaz. vol. 177; p. 624.
Olson, Edward W., Walla Walla, Wash. Poultry apparatus. No. 1,023,030; Apr. 9; Sp. p. 2708; Gaz. vol. 177; p. 463.
Olson, John O., Zumbrota, Minn. Box-fastening. No. 1,025,014; Apr. 30; Sp. p. 7025; Gaz. vol. 177; p. 1234.
Olson, Oscar A., Lincoln, Nebr. Valve-seating and surface-lapping machine. No. 1,024,806; Apr. 30; Sp. p. 6607; Gaz. vol. 177; p. 1162.
Olsson, Henning A., and S. G. Wingquist, assignors to Aktiebolaget Svenska Kullagerfabriken, Gottenborg, Sweden. Retainer for ball-bearings. No. 1,023,751; Apr. 16; Sp. p. 4189; Gaz. vol. 177; p. 736.
Oneida Steel Pulley Company. (See Biggar, Leroy A., assignor.)
Op de Hipt, Hermann, assignor to I. Weck. Gesellschaft mit beschränkter Haftung, Oeflingen, Germany. Sterilising apparatus. No. 1,021,946; Apr. 2; Sp. p. 405; Gaz. vol. 177; p. 67.
Ord, James L. (See Lubke, Adolph E. G., assignor.)
Orr, Robert S., Pittsburgh, Pa. Washing-machine. No. 1,022,640; Apr. 9; Sp. p. 1874; Gaz. vol. 177; p. 328.
Orr, Robert S., Pittsburgh, Pa. Washing-machine. No. 1,022,641; Apr. 9; Sp. p. 1876; Gaz. vol. 177; p. 328.
Osborn, Henry C., assignor to The American Multigraph Company, Cleveland, Ohio. Paper-feeding mechanism. No. 1,023,860; Apr. 23; Sp. p. 4486; Gaz. vol. 177; p. 804.
Osborne, William J. (See Felch, Theodore K., assignor.)
Osburn, David, Horning, Pa. Switch-throwing device. No. 1,024,270; Apr. 23; Sp. p. 5408; Gaz. vol. 177; p. 947.
Osgood, Daniel A., Jersey City, N. J. Grouting-machine. No. 1,024,221; Apr. 23; Sp. p. 5289; Gaz. vol. 177; p. 927.
Ose, John, Atlanta township, Becker county, Minn. Computing-machine. No. 1,022,890; Apr. 9; Sp. p. 1761; Gaz. vol. 177; p. 310.
Osterholm, Theodore O., assignor of one-third to A. I. Pollack and one-third to S. A. Rosen, Worcester, Mass. Pneumatic cleaner. No. 1,022,499; Apr. 9; Sp. p. 1574; Gaz. vol. 177; p. 281.
Ostrander, Allen E., Ridgewood, N. J. Cast platform-hood. No. 1,023,031; Apr. 9; Sp. p. 2710; Gaz. vol. 177; p. 464.
Oswalt, Lorenzo P., Bradley, Miss. Combined fertilizer-distributer and cotton-seed planter. No. 1,023,752; Apr. 16; Sp. p. 4190; Gaz. vol. 177; p. 736.
Otis Elevator Company. (See Dillon, John, assignor.)
Otis Elevator Company. (See Seeberger, Charles D., assignor.)
Ott, Harvey N., and K. Leuchsenring, assignors to Spencer Lens Company, Buffalo, N. Y. Nose-piece for microscopes. No. 1,023,390; Apr. 16; Sp. p. 3506; Gaz. vol. 177; p. 624.
Ott, Willard J., Chicago, Ill. Veneer-barrel-making machine. No. 1,022,970; Apr. 9; Sp. p. 2605; Gaz. vol. 177; p. 443.
Ottinger, Arthur M., Springtown, Ark. Pruning implement. No. 1,023,093; Apr. 9; Sp. p. 2850; Gaz. vol. 177; p. 484.
Overmyer, Charles G., and G. F. Collins, Coffeyville, Kans. Mail-box. No. 1,021,792; Apr. 2; Sp. p. 75; Gaz. vol. 177; p. 16.
Owen Machine Tool Company, The. (See Watts and Eberle, assignors.)
Owens, Edgar E., Cambridge City, Ind. Mechanical fishing device. No. 1,022,377; Apr. 2; Sp. p. 1298; Gaz. vol. 177; p. 210.
Owens, John B., Zanesville, Ohio. Facing-tile. No. 1,024,355; Apr. 23; Sp. p. 5535; Gaz. vol. 177; p. 970.
P. Lorillard Company. (See Whitehead, Howell G., assignor.)
P'Pool, Frank E., Snyder, Tex. Attachment for kitchen-cabinets. No. 1,023,593; Apr. 16; Sp. p. 3912; Gaz. vol. 177; p. 688.
Paal, Carl, Erlangen, assignor to Joseph Crossfield & Sons Limited, Bank Quay 1, Warrington, England. Reduction of fats and unsaturated fatty acids. No. 1,023,753; Apr. 16; Sp. p. 4191; Gaz. vol. 177; p. 736.
Pacific Refrigerating Machine Company. (See Bell, Fred C., assignor.)
Packard, James W., Lakewood, N. Y., assignor, by mesne assignments, to Packard Motor Car Company, Detroit, Mich. Motor-controlling mechanism for motor-vehicles. No. 1,022,751; Apr. 9; Sp. p. 2152; Gaz. vol. 177; p. 368.
Packard Motor Car Company. (See Huff, Russell, assignor.)
Packard Motor Car Company. (See Packard, James W., assignor.)
Packard Motor Car Company. (See Tibbetts, Milton, assignor.)
Packham, Frank R., assignor to The American Seeding Machine Company, Springfield, Ohio. Clutch mechanism. No. 1,023,221; Apr. 16; Sp. p. 3168; Gaz. vol. 177; p. 567.
Padrick, Benjamin F., Portland, Oreg. Saw-clamp. No. 1,024,743; Apr. 30; Sp. p. 6468; Gaz. vol. 177; p. 1140.
Page, Francis T., Otaki, New Zealand. Straining appliance. No. 1,024,523; Apr. 30; Sp. p. 5972; Gaz. vol. 177; p. 1063.
Page, John W., Adrian, Mich. Wire-fence fabric. No. 1,023,439; Apr. 16; Sp. p. 3592; Gaz. vol. 177; p. 639.
Pagnod, Arthur J., New York, N. Y. Electric-light attachment. No. 1,024,417; Apr. 23; Sp. p. 5086; Gaz. vol. 177; p. 990.
Pailliard-Tureune, Emile L. P., Paris, France. Occulting device for flash-lights for optical telegraphy. No. 1,025,015; Apr. 30; Sp. p. 7026; Gaz. vol. 177; p. 1234.
Paine, Daniel W. (See Goodwin, Margaret E., assignor.)
Paine, Sidney B., Newton, Mass., assignor to General Electric Company. Shock-absorbing rosette. No. 1,022,797; Apr. 9; Sp. p. 2240; Gaz. vol. 177; p. 384.
Palmer, Harry A., assignor to Foster, Merriam and Company, Meriden, Conn. Caster. No. 1,023,222; Apr. 16; Sp. p. 3171; Gaz. vol. 177; p. 568.
Palmer, Isaac E., Middletown, Conn. Trackless power-driven vehicle. No. 1,022,151; Apr. 2; Sp. p. 846; Gaz. vol. 177; p. 134.
Palmer, Isaac E., Middletown, Conn. Hammock. (Reissue.) No. 13,401; Apr. 9; Sp. p. 2917; Gaz. vol. 177; p. 497.
Palmer, Isaac E., assignor to The I. E. Palmer Co., Middletown, Conn. Combined back-rest and wind-shield. No. 1,022,696; Apr. 9; Sp. p. 2012; Gaz. vol. 177; p. 348.
Palmer, Isaac E., assignor to The I. E. Palmer Co., Middletown, Conn. Folding unitary screen. No. 1,023,094; Apr. 9; Sp. p. 2851; Gaz. vol. 177; p. 485.
Palmer, James F., Greensboro, assignor of one-half to S. T. Ellis, Hagan, Ga. Subsoiler attachment for plows. No. 1,021,793; Apr. 2; Sp. p. 76; Gaz. vol. 177; p. 16.
Palmer, Philip S., Spokane, Wash. Horseshoe-calk. No. 1,022,867; Apr. 9; Sp. p. 2375; Gaz. vol. 177; p. 407.
Palmer, T. D. (See Burns, Henry H., assignor.)
Palmrose, Alexander, Fairmont, W. Va., assignor to The Pneumelectric Machine Company, Syracuse, N. Y. Electropneumatic tool. No. 1,022,000; Apr. 2; Sp. p. 532; Gaz. vol. 177; p. 84.
Pamplin, Peter A., assignor to The Buck's Stove and Range Company, St. Louis, Mo. Base-burner. No. 1,023,167; Apr. 16; Sp. p. 3058; Gaz. vol. 177; p. 548.
Pancoast, Zygmunt, Philadelphia, Pa. Sinker. No. 1,023,676; Apr. 16; Sp. p. 4063; Gaz. vol. 177; p. 713.
Pape, Peter. (See Müller, Johannsen, and Pape.)
Paragon Heater Company, The. (See MacDonald, John W., assignor.)

Parfitt, Alfred, Topeka, Kans. Attachment for punching and shearing machines. No. 1,025,016; Apr. 30; Sp. p. 7027; Gaz. vol. 177; p. 1234.
Park, William R., Taunton, Mass., assignor to himself, as trustee. Spring. No. 1,023,870; Apr. 23; Sp. p. 4489; Gaz. vol. 177; p. 804.
Parker, C. L., et al. (See Arundel, Clarence E., assignor.)
Parker, John F., Kansas City, Mo., assignor to The National Cash Register Company, Dayton, Ohio. Cash-register. No. 1,022,152; Apr. 2; Sp. p. 850; Gaz. vol. 177; p. 135.
Parker, John F., Kansas City, Mo., assignor to The National Cash Register Company, Dayton, Ohio. Cash-register. No. 1,022,868; Apr. 9; Sp. p. 2376; Gaz. vol. 177; p. 407.
Parker Manufacturing Company. (See Porter, George, assignor.)
Parker, Rufus T., assignor of one-half to C. J. Watson, Chicago, Ill. Coin savings-bank. No. 1,024,222; Apr. 23; Sp. p. 5203; Gaz. vol. 177; p. 927.
Parkhurst, Leon F., assignor to Diamond Electric Company, Binghamton, N. Y. Electric heating apparatus. No. 1,023,755; Apr. 16; Sp. p. 4194; Gaz. vol. 177; p. 737.
Parkhurst, Leon F., and H. G. Weeks, assignors to Diamond Electric Company, Binghamton, N. Y. Electric cooking utensil. No. 1,023,754; Apr. 16; Sp. p. 4193; Gaz. vol. 177; p. 736.
Parks, Dennis. (See Dawkins and Parks.)
Parlin & Orendorff Company. (See Dewey, Frederic L., assignor.)
Parrish, James S., Richmond, Va., assignor to Richmond Cedar Works. Ice-cream freezer. No. 1,022,752; Apr. 9; Sp. p. 2155; Gaz. vol. 177; p. 369.
Parry, Frank, Brightwater, British Columbia, Canada. Propagation of fish. No. 1,023,590; Apr. 16; Sp. p. 3903; Gaz. vol. 177; p. 687.
Parry, William, Washington, D. C., Can. No. 1,024,018; Apr. 23; Sp. p. 4808; Gaz. vol. 177; p. 854.
Parsons, Arthur H., assignor to The Parsons & Parsons Company, Cleveland, Ohio. Collar for neckwear. No. 1,022,223; Apr. 16; Sp. p. 3172; Gaz. vol. 177; p. 568.
Parsons, Charles A. (See Ridsdale and Cook, assignors.)
Parsons, Charles A., and A. H. Law, Newcastle-upon-Tyne, England; said Law assignor to said Parsons. Dynamo-electric machinery. No. 1,022,255; Apr. 2; Sp. p. 1060; Gaz. vol. 177; p. 169.
Parsons, Clara, Seattle, Wash. Sash-lock. No. 1,023,391; Apr. 16; Sp. p. 3507; Gaz. vol. 177; p. 624.
Parsons, Lewis E., Lewistown, Ill. Twisting mechanism for corn-harvesters. No. 1,021,947; Apr. 2; Sp. p. 407; Gaz. vol. 177; p. 67.
Parsons, Lewis E., Lewistown, Ill. Binding mechanism for corn-harvesters. No. 1,021,948; Apr. 2; Sp. p. 414; Gaz. vol. 177; p. 68.
Parsons & Parsons Company, The. (See Parsons, Arthur H., assignor.)
Parsons, Wiley W., and H. Spalding, Hay Springs, Nebr. Insect-killer. No. 1,021,883; Apr. 2; Sp. p. 285; Gaz. vol. 177; p. 46.
Partridge, Elmer L., assignor to The Adams & Westlake Company, Chicago, Ill. Electric-lamp bracket and socket. No. 1,022,328; Apr. 2; Sp. p. 1207; Gaz. vol. 177; p. 193.
Pasinski, Walter J., assignor to Burroughs Adding Machine Company, Detroit, Mich. Adding-machine. No. 1,023,168; Apr. 16; Sp. p. 3060; Gaz. vol. 177; p. 549.
Pass, Gretel J., Grenada, Miss. Toilet-hood. No. 1,023,677; Apr. 16; Sp. p. 4064; Gaz. vol. 177; p. 713.
Patnaude, John D., Manchester, N. H. Tool-holder. No. 1,025,017; Apr. 30; Sp. p. 7029; Gaz. vol. 177; p. 1235.
Patterson, James, Rockwell, Fla. Rail-clamping device. No. 1,024,648; Apr. 30; Sp. p. 6281; Gaz. vol. 177; p. 1105.
Patterson, James B., Philadelphia, Pa. Machine for stuffing pillows and the like. No. 1,022,697; Apr. 9; Sp. p. 2015; Gaz. vol. 177; p. 348.
Patton, Herbert F., Cleveland, Ohio. Projecting apparatus. No. 1,024,356; Apr. 23; Sp. p. 5536; Gaz. vol. 177; p. 970.
Paul, William L., assignor to Oliver Chilled Plow Works, South Bend, Ind. Plow. No. 1,022,256; Apr. 2; Sp. p. 1064; Gaz. vol. 177; p. 170.
Paulson, Hans, Orting, Wash. Coffee-cooking device. No. 1,024,145; Apr. 23; Sp. p. 5118; Gaz. vol. 177; p. 900.
Paulus, William A., New York, N. Y. Package-band-fastening device. No. 1,021,684; Apr. 2; Sp. p. 286; Gaz. vol. 177; p. 47.
Payne, Charles H., Cincinnati, Ohio. Calendar-support. No. 1,023,329; Apr. 16; Sp. p. 3887; Gaz. vol. 177; p. 604.
Payne, Edward T., and G. F. Cochran, Albuquerque, N. Mex. Rail tie and fastener. No. 1,023,871; Apr. 23; Sp. p. 4490; Gaz. vol. 177; p. 804.
Payne, Robert S., Monessen, Pa. Sheet-feeder. No. 1,022,257; Apr. 2; Sp. p. 1065; Gaz. vol. 177; p. 170.
Payne, William J. (See Graham, George E., assignor.)
Peache, James C., assignor to Willans & Robinson, Limited, Rugby, England. Internal-combustion engine. No. 1,023,957; Apr. 23; Sp. p. 4609; Gaz. vol. 177; p. 833.
Pearce, J. D., et al. (See Schweinebraten, Louis G., assignor.)
Pearce, Robert T., Montclair, N. J., assignor to H. W. Caldwell & Son Company, Chicago, Ill. Journal-bearing. No. 1,021,846; Apr. 2; Sp. p. 304; Gaz. vol. 177; p. 84.
Pearson, William E., Swampscott, Mass. Reversible liquid-motor. No. 1,023,872; Apr. 23; Sp. p. 4492; Gaz. vol. 177; p. 805.
Pechstein, Bruno M., assignor to Gebruder Jacob, Zwickau, Germany. Metallic flexible hose-pipe. No. 1,023,032; Apr. 9; Sp. p. 2714; Gaz. vol. 177; p. 464.
Peck, Louis K., Syracuse, N. Y. Steam and hot-water heater. No. 1,023,591; Apr. 16; Sp. p. 3906; Gaz. vol. 177; p. 687.
Peck, Philip C. (See Ladoff, Isador, assignor.)
Pedersen, John D., Jackson, Wyo. Firearm. No. 1,023,169; Apr. 16; Sp. p. 3069; Gaz. vol. 177; p. 549.
Peel, Peter, Salinas, Cal. Animal-releasing means. No. 1,024,649; Apr. 30; Sp. p. 6282; Gaz. vol. 177; p. 1107.
Peets, John L. (See Boswell, George G. F., assignor.)
Pegrim, Raymond C., Cedar Hill, Tenn. Harrow. No. 1,022,509; Apr. 9; Sp. p. 1576; Gaz. vol. 177; p. 282.
Pelouze Manufacturing Company. (See Madsen, Charles P., assignor.)
Pennock, Willard, Minerva, Ohio. Automobile-horn. No. 1,022,564; Apr. 9; Sp. p. 1711; Gaz. vol. 177; p. 302.
Pennock, Willard, Minerva, assignor to The Canton Steel Foundry Company, Canton, Ohio. Metallic railway-tie. No. 1,023,892; Apr. 16; Sp. p. 3508; Gaz. vol. 177; p. 625.
Perez, Waldo F., Tampa, Fla. Fender for automobiles. No. 1,023,393; Apr. 16; Sp. p. 3510; Gaz. vol. 177; p. 625.
Perigny, Jean M., Lyon, France, assignor to Gallia, Société Anonyme, Geneva, Switzerland. Manufacture of cream of tartar. No. 1,023,528; Apr. 16; Sp. p. 3769; Gaz. vol. 177; p. 666.
Perkins, Harry K. (See Rumsey, Oscar C., assignor.)
Perks, Walter G. (See Harrison, Bate, and Perks.)
Perky, Henry D., deceased, Glencoe, Md.; L. Sparks, administrator, assignor, by mesne assignments, to The Shredded Wheat Company, Niagara Falls, N. Y. Machine for manufacturing grain into form for food. No. 1,022,501; Apr. 9; Sp. p. 1577; Gaz. vol. 177; p. 282.
Perri, Angelo, Haverhill, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for use in the manufacture of boots and shoes. No. 1,024,019; Apr. 23; Sp. p. 4810; Gaz. vol. 177; p. 855.
Perrin, Frederick J., Walworth, Wis. Composing-stick. No. 1,023,958; Apr. 23; Sp. p. 4701; Gaz. vol. 177; p. 834.
Perrone, Louise, administratrix. (See Perrone, Sebastian.)
Perrone, Sebastian, deceased; L. Perrone, administratrix, New York, N. Y. Hair-cutter. No. 1,023,786; Apr. 16; Sp. p. 4252; Gaz. vol. 177; p. 747.
Perry, Eugene L., assignor to American Stopper Company, New York, N. Y. Capping-machine. No. 1,022,591; Apr. 9; Sp. p. 1767; Gaz. vol. 177; p. 311.
Perry, Frederick H., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Sewing-machine shuttle. No. 1,023,033; Apr. 9; Sp. p. 2715; Gaz. vol. 177; p. 464.
Perry, George E., Chicago, Ill. Centrifugal fan-wheel. No. 1,023,873; Apr. 23; Sp. p. 4494; Gaz. vol. 177; p. 805.
Perry, Hubert M., and C. F. Huntoon, Chicago, Ill. Brake-head. No. 1,022,440; Apr. 9; Sp. p. 1455; Gaz. vol. 177; p. 261.
Perry, Jacob D., et al. (See Miller, Jeremiah, assignor.)
Perry, Samuel C., London, Ky. Automatic signal system for railways. No. 1,025,018; Apr. 30; Sp. p. 7030; Gaz. vol. 177; p. 1235.
Perry, William, and A. S. Jones, Garden Hill, Wollongong, New South Wales, assignors to The Heli-Cushion Drive Limited, Sydney, Australia. Spring drive or power shaft coupling. No. 1,024,020; Apr. 23; Sp. p. 4614; Gaz. vol. 177; p. 855.
Petaluma Incubator Co. (See Byce, Lyman C., assignor.)
Peter Gray & Sons. (See Briand, Charles C., assignor.)
Peterson, Edward M., Leland, Iowa. Swinging straw-stacker. No. 1,022,592; Apr. 9; Sp. p. 1771; Gaz. vol. 177; p. 311.
Peterson, Emil, Baraga, Mich. Attachment for logways in sawmills. No. 1,023,592; Apr. 16; Sp. p. 3911; Gaz. vol. 177; p. 688.
Peterson, Ernest, New Haven, Conn. Upholstered furniture. No. 1,024,744; Apr. 30; Sp. p. 6473; Gaz. vol. 177; p. 1114.
Peterson, Fredolf J., assignor to The American Case & Register Company, Salem, Ohio. Detachable hinge. No. 1,021,885; Apr. 2; Sp. p. 287; Gaz. vol. 177; p. 47.
Peterson, Johann G., assignor to The Arrow Electric Company, Hartford, Conn. Door-switch. No. 1,023,234; Apr. 16; Sp. p. 3175; Gaz. vol. 177; p. 565.
Peterson, Karl, Jamestown, N. Y. Sector-cutting saw. No. 1,023,959; Apr. 23; Sp. p. 4702; Gaz. vol. 177; p. 834.
Pethybridge, John S., Newton Abbot, England. Cap. No. 1,022,153; Apr. 2; Sp. p. 854; Gaz. vol. 177; p. 135.
Petrelle, Joseph, Philadelphia, Pa. Pulley. No. 1,022,960; Apr. 9; Sp. p. 2385; Gaz. vol. 177; p. 407.
Pettit, Morgan, Commersville, Ind. Child's vehicle. No. 1,022,698; Apr. 9; Sp. p. 2016; Gaz. vol. 177; p. 349.
Pettitt, Nancy E., Junction, Tex. Envelop-seal. No. 1,023,034; Apr. 9; Sp. p. 2717; Gaz. vol. 177; p. 464.
Pfau, Arnold, assignor to Allis-Chalmers Company, Milwaukee, Wis. Hydraulic turbine. No. 1,023,586; Apr. 16; Sp. p. 3895; Gaz. vol. 177; p. 685.
Pfeifer, Emil, Mascoutah, Ill. Mold. No. 1,024,857; Apr. 23; Sp. p. 5538; Gaz. vol. 177; p. 971.

Pfeiffer, Otto, Cassel, Germany. Type-writing machine. No. 1,024,745; Apr. 30; Sp. p. 6475; Gaz. vol. 177; p. 1114.

Pfeil, Christian P., Nuremberg, Germany. Apparatus for actuating toy vehicles and the like. No. 1,022,258; Apr. 2; Sp. p. 1067; Gaz. vol. 177; p. 170.

Pfouts, Arthur P. (See Bennett, Lincoln, assignor.)

Phelps, Frank, Wellston, Okla., assignor to Thomas Gin Compress Company, Little Rock, Ark. Cotton-gin. No. 1,022,259; Apr. 2; Sp. p. 1069; Gaz. vol. 177; p. 170.

Phelps, Henry W., Yonkers, assignor to American Can Company, New York, N. Y. Can-nozzle seal. No. 1,022,045; Apr. 2; Sp. p. 628; Gaz. vol. 177; p. 99.

Philadelphia Textile Machinery Company, The. (See Coniston, Harry, assignor.)

Phillipps, John, Toledo, Ohio. Water-cooling ice-tray for refrigerators. No. 1,022,565; Apr. 9; Sp. p. 1712; Gaz. vol. 177; p. 302.

Phillips, Arthur G., Foss, Okla. Wire-stretcher. No. 1,023,394; Apr. 16; Sp. p. 3512; Gaz. vol. 177; p. 625.

Pickford, Edward F., *et al.* (See Rupley, George H., assignor.)

Pieper, Alphonse F. (See Pieper, Oscar H. and A. F.)

Pieper, August, and H. Case; said Case assignor of one-half to A. L. Johnson and W. F. Case, Gloversville, N. Y. Package-tying device. No. 1,021,886; Apr. 2; Sp. p. 289; Gaz. vol. 177; p. 47.

Pieper, Oscar H. and A. F., Rochester, N. Y. Electrolytic cell. No. 1,024,597; Apr. 30; Sp. p. 6165; Gaz. vol. 177; p. 1089.

Pierce, Irwin W., New York, N. Y. Railway-signal. No. 1,023,440; Apr. 16; Sp. p. 3503; Gaz. vol. 177; p. 639.

Pierce, James H., Bay City, Mich. Gas-engine. No. 1,022,502; Apr. 9; Sp. p. 1579; Gaz. vol. 177; p. 282.

Pierce, Kirk D., Hillsboro, and S. C. Ellis, Keene, N. H. Fruit-picker. No. 1,024,358; Apr. 23; Sp. p. 5540; Gaz. vol. 177; p. 971.

Pierce, William H. (See Nolan and Pierce.)

Pierman, Alexander N., Newark, assignor, by mesne assignments, to Thomas A. Edison, Incorporated, West Orange, N. J. Sound-reproducer. No. 1,024,606; Apr. 30; Sp. p. 6375; Gaz. vol. 177; p. 1123.

Pierman, Alexander N., Newark, assignor, by mesne assignments, to Thomas A. Edison, Incorporated, West Orange, N. J. Phonograph-reproducer. No. 1,024,607; Apr. 30; Sp. p. 6376; Gaz. vol. 177; p. 1124.

Pierpont, Frank H., Horley, England, assignor to Lanston Monotype Machine Company, Philadelphia, Pa. Type-casting machine. No. 1,024,524; Apr. 30; Sp. p. 5973; Gaz. vol. 177; p. 1064.

Pietilainen, Matti, Pittsburgh, Pa. Wrench. No. 1,024,907; Apr. 30; Sp. p. 6811; Gaz. vol. 177; p. 1197.

Pilain, Emile. (See Rolland and Pilain.)

Pillsbury, C. L., *et al.* (See Chatfield, Franklin, assignor.)

Pinson, William C., Hermitage, Ark. Insect-destroyer. No. 1,024,698; Apr. 30; Sp. p. 6380; Gaz. vol. 177; p. 1124.

Pitre, James, Cut Off, La. Wire-stretcher. No. 1,024,223; Apr. 23; Sp. p. 5298; Gaz. vol. 177; p. 928.

Pitts, Matthew B., Toccoa, Ga., and J. A. Hancock, Columbia, S. C. Vending apparatus. No. 1,022,753; Apr. 9; Sp. p. 2156; Gaz. vol. 177; p. 369.

Pittsburgh Brake Shoe Company. (See Kinzer, John J., assignor.)

Pittsburgh Equipment Company. (See Pulliam, Oswald S., assignor.)

Pittsburgh Plate Glass Company. (See Heichert, Herman S., assignor.)

Piver & Cie., L. T. (See Nocard, Paul, assignor.)

Planche, Etienne. (See Chevrolet and Planche.)

Platt, Harry E., *et al.* (See Vargyas, Eugene von, assignor.)

Pleister, Henry W., Westfield, assignor to H. B. Newhall, Plainfield, N. J. Expansion-bolt anchor. No. 1,021,794; Apr. 2; Sp. p. 77; Gaz. vol. 177; p. 17.

Pleister, Henry W., Westfield, assignor to H. B. Newhall, Plainfield, N. J. Ground-clamp. No. 1,024,021; Apr. 23; Sp. p. 4816; Gaz. vol. 177; p. 855.

Plume and Atwood Manufacturing Company, The. (See Andersen, Lauritz W., assignor.)

Pneumelectric Machine Company, The. (See Palmros, Alexander, assignor.)

Podlesak, Emil, Tiffin, Ohio. Inductor-alternator. No. 1,024,418; Apr. 23; Sp. p. 5687; Gaz. vol. 177; p. 991.

Podlesak, Henry J., Chicago, Ill. Low-tension sparking mechanism for gas-engines. No. 1,022,642; Apr. 9; Sp. p. 1878; Gaz. vol. 177; p. 329.

Poe, John, Garfield, Ark., assignor of one-half to J. S. Russum, Independence, Kans. Signaling system. No. 1,022,260; Apr. 2; Sp. p. 1071; Gaz. vol. 177; p. 171.

Poelma, Richard W., *et al.* (See Dahl, Jacob, assignor.)

Polifka, Johann, and B. Hacker, assignors to "Impragnator" Impragnating Company Limited, Budapest, Austria-Hungary. Impregnation of wood. No. 1,024,864; Apr. 30; Sp. p. 6725; Gaz. vol. 177; p. 1184.

Polito, Sylvio L., San Francisco, Cal. Non-refillable bottle. No. 1,023,097; Apr. 23; Sp. p. 4905; Gaz. vol. 177; p. 882.

Pollack, A. Ivar, *et al.* (See Osterholm, Theodore O., assignor.)

Pollmiller, August V., Fort Madison, Iowa. Automatic slide-lever cylinder-cock. No. 1,021,887; Apr. 2; Sp. p. 290; Gaz. vol. 177; p. 48.

Polzer, Alois, Albert, Kans. Gate. No. 1,024,022; Apr. 23; Sp. p. 4818; Gaz. vol. 177; p. 856.

Pommier, Charles, Passaic, N. J. Shuttle. No. 1,022,046; Apr. 2; Sp. p. 628; Gaz. vol. 177; p. 100.

Pons, Arthur A., New York, N. Y. Exercising apparatus. No. 1,023,756; Apr. 16; Sp. p. 4196; Gaz. vol. 177; p. 737.

Pool, Morris W., New York, N. Y., assignor, by mesne assignments, to Union Typewriter Company, Jersey City, N. J. Type-writing machine. No. 1,024,280; Apr. 23; Sp. p. 5409; Gaz. vol. 177; p. 947.

Poole, Frederick P., and P. A. Brendel, assignors to The Bryant Electric Company, Bridgeport, Conn. Fuse. No. 1,022,320; Apr. 2; Sp. p. 1209; Gaz. vol. 177; p. 193.

Pope, Charles E., assignor of three-fifths to Japanese Tissue Mills, Holyoke, Mass. Paper-machine. No. 1,022,378; Apr. 2; Sp. p. 1300; Gaz. vol. 177; p. 210.

Pope, Charles E., assignor of three-fifths to Japanese Tissue Mills, Holyoke, Mass. Web feeding and drying apparatus for paper-machines. No. 1,022,379; Apr. 2; Sp. p. 1303; Gaz. vol. 177; p. 210.

Pope, Henry F., assignor to The National Malleable Castings Company, Cleveland, Ohio. Journal-box-securing mechanism. No. 1,024,450; Apr. 23; Sp. p. 5769; Gaz. vol. 177; p. 1003.

Porath, Richard, Pyrits, Germany. Treating the root of chicory. No. 1,022,047; Apr. 2; Sp. p. 630; Gaz. vol. 177; p. 100.

Porter, Charles D. (See Kelleher and Porter.)

Porter, Edward C., Morenci, Ariz. Slime-concentrator. No. 1,024,359; Apr. 23; Sp. p. 5541; Gaz. vol. 177; p. 971.

Porter, George, assignor to Parker Manufacturing Company, Boston, Mass. Casing for thermostatic instruments. No. 1,021,888; Apr. 2; Sp. p. 292; Gaz. vol. 177; p. 48.

Positive Rail Anchor Company. (See Betts, Benjaman B., assignor.)

Post, Hans A. von, assignor to Aktiebolaget Pyro, Stockholm, Sweden. Stove and lamp. No. 1,022,048; Apr. 2; Sp. p. 630; Gaz. vol. 177; p. 100.

Post, Valta T., Como, Tex. Plow attachment. No. 1,023,678; Apr. 16; Sp. p. 4065; Gaz. vol. 177; p. 713.

Postans, Arthur J., Brentford, England. Stropping-machine for razors. No. 1,021,795; Apr. 2; Sp. p. 70; Gaz. vol. 177; p. 17.

Potter, Frank B., Connellsville, Pa. Sewing-machine attachment. No. 1,023,005; Apr. 9; Sp. p. 2853; Gaz. vol. 177; p. 485.

Potter, Justus G., Brooklyn, N. Y. Making imitation gold-leaf. No. 1,023,960; Apr. 23; Sp. p. 4706; Gaz. vol. 177; p. 835.

Powell, Athol L., Alamo, Tenn. Grain harvester and binder. No. 1,023,035; Apr. 9; Sp. p. 2718; Gaz. vol. 177; p. 464.

Powell, Samuel L., *et al.* (See Matthews, Robert E., assignor.)

Powelson, Charles L., Sharon, Pa. Hydraulic valve. No. 1,024,909; Apr. 30; Sp. p. 6814; Gaz. vol. 177; p. 1198.

Powelson, Charles L., assignor of one-half to C. Schauweker, Sharon, Pa. Rotary valve. No. 1,024,908; Apr. 30; Sp. p. 6812; Gaz. vol. 177; p. 1198.

Power, Michael, assignor of twenty-five one-hundredths to R. H. Bowes and twenty-four one-hundredths to R. G. Dickson, Toronto, Ontario, Canada. Window-ventilator. No. 1,022,870; Apr. 9; Sp. p. 2386; Gaz. vol. 177; p. 408.

Powers, William A., Topeka, Kans. Hot-water washing and refilling system for locomotive-boilers. No. 1,023,441; Apr. 16; Sp. p. 3597; Gaz. vol. 177; p. 639.

Powles, James W. (See Lathrop and Powles.)

Prahar, Louis B., Massapequa, N. Y. Bag-fastener. No. 1,023,170; Apr. 16; Sp. p. 3071; Gaz. vol. 177; p. 550.

Pratt, Howell D., Philadelphia, Pa., assignor to Link-Belt Company, Chicago, Ill. Feeding mechanism for conveyers. No. 1,023,036; Apr. 9; Sp. p. 2723; Gaz. vol. 177; p. 465.

Pratt & Lambert. (See Hodge, Sheldon, assignor.)

Pratt, William H., Lynn, Mass., assignor to General Electric Company. Bearing for electric meters. No. 1,022,503; Apr. 9; Sp. p. 1581; Gaz. vol. 177; p. 283.

Pratt, William H., Lynn, Mass., assignor to General Electric Company. Device for measuring time intervals. No. 1,023,593; Apr. 9; Sp. p. 1774; Gaz. vol. 177; p. 312.

Preble, George L., Lynn, Mass. Making insoles. No. 1,022,391; Apr. 2; Sp. p. 1323; Gaz. vol. 177; p. 215.

Precision Glass Grinding Machine Company. (See Olsen, Simon D., assignor.)

Prellwitz, William, Easton, Pa., assignor to Ingersoll-Rand Company, New York, N. Y. Dust-collector for drills. No. 1,023,594; Apr. 16; Sp. p. 3915; Gaz. vol. 177; p. 689.

Prellwitz, William, Easton, Pa., assignor to Ingersoll-Rand Company, New York, N. Y. Mounting for mining tools or machines. No. 1,023,595; Apr. 16; Sp. p. 3917; Gaz. vol. 177; p. 689.

Prescott, Perley R., West Berlin, Mass. Speed-controller for steam-pumps. No. 1,023,171; Apr. 16; Sp. p. 3073; Gaz. vol. 177; p. 550.

Presser, Ernst. (See Baldauf and Presser.)

Price, Edgar, Schenectady, N. Y., assignor to General Electric Company. Electrically-controlled brake. No. 1,022,001; Apr. 2; Sp. p. 539; Gaz. vol. 177; p. 84.

Price, Grover C., St. Elmo, Tenn. Saw-set. No. 1,022,871; Apr. 9; Sp. p. 2388; Gaz. vol. 177; p. 408.

Price, Isaac T., Holton, Kans. Oscillating engine. No. 1,023,098; Apr. 23; Sp. p. 4997; Gaz. vol. 177; p. 883.

Price, John H. (See Whittington, Joseph H., assignor.)

Price, Max C., assignor to Hill-Independent Mfg. Co., Muskegon, Mich. Hand-stamp. No. 1,025,010; Apr. 30; Sp. p. 7083; Gaz. vol. 177; p. 1235.

Price, Thomas J., Oblong, Ill. Drinking-fountain. No. 1,023,874; Apr. 23; Sp. p. 4495; Gaz. vol. 177; p. 805.

Priest, Augustus F., Chicago, Ill. Spring-wheel for vehicles. No. 1,022,754; Apr. 9; Sp. p. 2158; Gaz. vol. 177; p. 370.

Primos, Joseph, Hammond, La. Bench-dog. No. 1,023,679; Apr. 16; Sp. p. 4066; Gaz. vol. 177; p. 713.

Prins, Raphael J., Chicago, Ill. Handle. No. 1,022,380; Apr. 2; Sp. p. 1304; Gaz. vol. 177; p. 211.

Prütt, Carl H., Rheydt, Germany. Device for spraying liquids and moistening air. No. 1,024,281; Apr. 23; Sp. p. 5412; Gaz. vol. 177; p. 947.

Protz, Hugo E., Sparta, Wis. Hasp-hook. No. 1,023,680; Apr. 16; Sp. p. 4067; Gaz. vol. 177; p. 714.

Pruess, Frederick W., Whitelaw, Wis. Cattle-stanchion. No. 1,023,757; Apr. 16; Sp. p. 4198; Gaz. vol. 177; p. 737.

Puckett, Hugh J. (See Lucas and Bauer, assignors.)

Pullen, Herbert A., Buffalo, N. Y. Dental regulator. No. 1,023,273; Apr. 16; Sp. p. 3280; Gaz. vol. 177; p. 586.

Pulliam, Oswald S., assignor to Pittsburgh Equipment Company, Pittsburgh, Pa. Car-truck side frame. No. 1,023,481; Apr. 16; Sp. p. 3680; Gaz. vol. 177; p. 652.

Purdy, John, New York, assignor to The Monarch Typewriter Company, Syracuse, N. Y. Type-writing machine. No. 1,023,172; Apr. 16; Sp. p. 3074; Gaz. vol. 177; p. 550.

Pyles, Thomas J., Columbia, S. C. Recording system for railway-signals. No. 1,023,037; Apr. 9; Sp. p. 2726; Gaz. vol. 177; p. 466.

Quastenberg, Alfred, Erfurt, Germany. Electromagnet. No. 1,025,020; Apr. 30; Sp. p. 7034; Gaz. vol. 177; p. 1236.

Quest, William O., Pittsburgh, Pa. Spraying-machine. No. 1,022,206; Apr. 2; Sp. p. 963; Gaz. vol. 177; p. 154.

Quivey, Lynn A., Cozad, Nebr. Instrument for obtaining averages. No. 1,023,961; Apr. 23; Sp. p. 4707; Gaz. vol. 177; p. 835.

R. M. D. Syndicate. (See Müller, Auguste R., assignor.)

Raaths, Ernest, Angelica, assignor of one-half to E. H. Bramschreiber, Zachow, Wis. Gate-latch. No. 1,022,872; Apr. 9; Sp. p. 2389; Gaz. vol. 177; p. 408.

Raber, Samuel M., Colony, Wyo. Sage-brush-grubbing and ditching machine. No. 1,023,173; Apr. 16; Sp. p. 3082; Gaz. vol. 177; p. 551.

Raclot, Jules, and C. Enderlin, St. Maur-des-Fossés, France. Flying-machine. No. 1,023,096; Apr. 9; Sp. p. 2854; Gaz. vol. 177; p. 486.

Radszyminski, Narcyz. (See Lewandowski, Leon, assignor.)

Rae, William C. (See Shrum, Rae, and Ripper.)

Raffel, Isaac, Baltimore, Md. Burglar-trap. No. 1,024,224; Apr. 23; Sp. p. 5209; Gaz. vol. 177; p. 928.

Ragan, William H., Siloam Springs, Ark. Plant-protector. No. 1,025,073; Apr. 30; Sp. p. 7130; Gaz. vol. 177; p. 1252.

Ragona, John, New York, N. Y. Support for piano music-desks. No. 1,022,594; Apr. 9; Sp. p. 1783; Gaz. vol. 177; p. 313.

Rahn, Hermann, Charlottenburg, Germany. Apparatus for shaping metal articles. No. 1,023,962; Apr. 23; Sp. p. 4708; Gaz. vol. 177; p. 835.

Ralston Steel Car Company, The. (See Tesseyman and Weaver, assignors.)

Ralston Steel Car Company, The. (See Weaver, Robert R., assignor.)

Rumming, Fred, Sheboygan, Wis. Curtain-pole. No. 1,023,963; Apr. 23; Sp. p. 4710; Gaz. vol. 177; p. 835.

Ramsey, Abraham L., Vincennes, Ind. Vehicle axle-spindle lubricator. No. 1,024,146; Apr. 23; Sp. p. 5119; Gaz. vol. 177; p. 900.

Ramsey, Joseph D., Boston, Mass. Fluid-pressure regulator. No. 1,022,330; Apr. 2; Sp. p. 1210; Gaz. vol. 177; p. 193.

Rand, Festus S., Providence, R. I., assignor to Universal Winding Company, Portland, Me. Warping-machine. No. 1,022,755; Apr. 9; Sp. p. 2160; Gaz. vol. 177; p. 370.

Rand, John L. (See Gyllenberg, John A., assignor.)

Randall, Karl C., Edgewood Park, and C. B. Gibson, Wilkinsburg, Pa., assignors to Westinghouse Electric and Manufacturing Company. Separating apparatus for liquids. No. 1,024,598; Apr. 30; Sp. p. 6166; Gaz. vol. 177; p. 1089.

Randerson, John P., Albany, N. Y. Automobile-fender. No. 1,021,796; Apr. 2; Sp. p. 84; Gaz. vol. 177; p. 17.

Randolph, Smith M., Oak Park, Ill. Nailing-strip. No. 1,021,847; Apr. 2; Sp. p. 206; Gaz. vol. 177; p. 84.

Ranson, Charles, Paris, France. Preparation of sincate solutions. No. 1,023,964; Apr. 23; Sp. p. 4712; Gaz. vol. 177; p. 836.

Raschig, Friedrich, and M. Köbner, assignors to F. Raschig, Ludwigshafen-on-the-Rhine, Germany. Manufacture of chlorinated phenol esters and of oxybenzyl alcohols, oxybenzaldehydes, and oxybenzoic acids. No. 1,023,758; Apr. 16; Sp. p. 4200; Gaz. vol. 177; p. 738.

Rasmussen, Martin, Racine, Wis. Shoe. No. 1,025,090; Apr. 30; Sp. p. 7203; Gaz. vol. 177; p. 1262.

Rasmussen, Martin, assignor to E. J. Schowalter, Racine, Wis. Spike. No. 1,022,261; Apr. 2; Sp. p. 1072; Gaz. vol. 177; p. 171.

Raughtigan, Michael, assignor of one-half to W. H. Oat, Norwich, Conn. Garment-hanger. No. 1,022,504; Apr. 9; Sp. p. 1582; Gaz. vol. 177; p. 283.

Ray, Paul J., Lakewood, Ohio. Automatic starting device for single-phase induction-motors. No. 1,024,807; Apr. 30; Sp. p. 6610; Gaz. vol. 177; p. 1163.

Ray, Ross L., *et al.* (See Arundel, Clarence E., assignor.)

Reading Hardware Company. (See Mason, George N., assignor.)

Reagan Clutch Company. (See Reagan, Edgar U. G., assignor.)

Reagan, Edgar U. G., assignor to Reagan Clutch Company, San Antonio, Tex. Combined elastic clutch and engine-starter. No. 1,024,099; Apr. 23; Sp. p. 5002; Gaz. vol. 177; p. 883.

Real, Joseph, East Highgate, Vt. Means for securing scythe-blades on handles. No. 1,024,650; Apr. 30; Sp. p. 6284; Gaz. vol. 177; p. 1107.

Recker, Adolph C., Oakville, assignor to Waterbury Mfg. Co., Waterbury, Conn. Capstan-screw. No. 1,024,100; Apr. 23; Sp. p. 5005; Gaz. vol. 177; p. 884.

Rectenwald, John J., Mount Oliver borough, Pa. Life-saving device. No. 1,023,759; Apr. 16; Sp. p. 4202; Gaz. vol. 177; p. 738.

Redden, Alfred C., Millis, Mass. Pieced heel. No. 1,024,699; Apr. 30; Sp. p. 6383; Gaz. vol. 177; p. 1125.

Redemann, Oscar F. H. (See Graham, James S., assignor.)

Reed, John N., Cienfuegos, Cuba. Device for collecting samples of finely-divided material. No. 1,024,282; Apr. 23; Sp. p. 5414; Gaz. vol. 177; p. 948.

Reed, Thomas P., Wellston, Okla. Attachment for cotton-pickers' sacks. No. 1,022,699; Apr. 9; Sp. p. 2019; Gaz. vol. 177; p. 349.

Reeves, Ira L., South Natick, Mass. Target. No. 1,024,651; Apr. 30; Sp. p. 6286; Gaz. vol. 177; p. 1108.

Regeczi, Joseph, Ironwood, Mich. Feed-bag. No. 1,023,681; Apr. 16; Sp. p. 4068; Gaz. vol. 177; p. 714.

Rehm, Frederick C., Detroit, Mich. Toy knitting device. No. 1,022,154; Apr. 2; Sp. p. 856; Gaz. vol. 177; p. 136.

Reichelsheimer, Fred, *et al.* (See Cave and Buck, assignors.)

Reichenstein, Aaron, Minneapolis, Minn. Power-propelled sled. No. 1,023,965; Apr. 23; Sp. p. 4713; Gaz. vol. 177; p. 836.

Reichert, Edward T., Jr., New York, N. Y. Compensating steering-gear. No. 1,022,207; Apr. 2; Sp. p. 966; Gaz. vol. 177; p. 155.

Reid, William C., assignor to Elkhart Musical Instrument Company, Elkhart, Ind. Valve for wind musical instruments. No. 1,023,330; Apr. 16; Sp. p. 3388; Gaz. vol. 177; p. 605.

Reiger, Paul J., Midland, Tex. Switch-throwing mechanism. No. 1,021,949; Apr. 2; Sp. p. 422; Gaz. vol. 177; p. 68.

Reilly, Bernard F. (See Evans and Reilly.)

Reimer, Abraham, Steinbach, Manitoba, Canada. Bag-holder. No. 1,024,360; Apr. 23; Sp. p. 5545; Gaz. vol. 177; p. 972.

Reinhardt, Louis W., Brockton, assignor to George E. Belcher Last Company, Stoughton, Mass. Shoe-form. No. 1,023,895; Apr. 16; Sp. p. 3513; Gaz. vol. 177; p. 625.

Reisbach, Gustave B., Milwaukee, Wis. Electric switch. No. 1,022,049; Apr. 2; Sp. p. 635; Gaz. vol. 177; p. 101.

Reliance Ball-Bearing Door Hanger Company. (See Cossey, Myron, assignor.)

Remhof, Charles, New York, N. Y. Curtain-pole ring. No. 1,022,873; Apr. 9; Sp. p. 2390; Gaz. vol. 177; p. 408.

Remler, Clifford. (See Gaynor, Miller, and Remler.)

Rempe, Edward H., and F. M. Ross, Oakley, Ohio. Automatic sash-lock. No. 1,023,442; Apr. 16; Sp. p. 3599; Gaz. vol. 177; p. 642.

Remy, Benjamin P. and F. I., F. P. McDermott, Jr., and I. J. Reuter, assignors to Remy Electric Company, Anderson, Ind. Electric generator. No. 1,024,225; Apr. 23; Sp. p. 5300; Gaz. vol. 177; p. 920.

Remy Electric Company. (See Remy, McDermott, and Reuter, assignors.)

Remy, Frank I. (See Remy, McDermott, and Reuter.)

Rendle, Thomas, Ottawa, Ill. Last and last-support. No. 1,023,766; Apr. 16; Sp. p. 4204; Gaz. vol. 177; p. 738.

Renek, Frank, New York, N. Y. Piano-casing. No. 1,024,950; Apr. 30; Sp. p. 6904; Gaz. vol. 177; p. 1213.

Reno, William R., Louisville, Ky. Emergency-brake. No. 1,023,682; Apr. 16; Sp. p. 4069; Gaz. vol. 177; p. 714.

Replogle, Harry H., Montreal, Quebec, Canada. Demountable wheel-rim. No. 1,024,746; Apr. 30; Sp. p. 6483; Gaz. vol. 177; p. 1114.

Res Manufacturing Company. (See Kaufman, Adam W., assignor.)

Resch, Francis X., Wanette, Okla. Boat. No. 1,024,419; Apr. 23; Sp. p. 5693; Gaz. vol. 177; p. 991.

Reshaw, George O., Olathe, Colo. Combined mop holder and wringer. No. 1,024,951; Apr. 30; Sp. p. 6907; Gaz. vol. 177; p. 1213.

Ressler, Morisz. (See Nadler and Ressler.)

Reuter, Irving J. (See Remy, McDermott, and Reuter.)

Reverse Draft Furnace Co., The. (See Brunswick, William F., assignor.)

Reymond, Max, Payerne, Switzerland. Apparatus comprising fans for generating progressing and ascending movements of a body in a fluid medium. No. 1,024,226; Apr. 23; Sp. p. 5303; Gaz. vol. 177; p. 929.
Reynolds, Charles H., Rochester, N. Y. Mold for making packing-rings. No. 1,023,761; Apr. 16; Sp. p. 4204; Gaz. vol. 177; p. 738.
Reynolds, Frank B., Providence, R. I. Collar-supporter. No. 1,024,865; Apr. 30; Sp. p. 6726; Gaz. vol. 177; p. 1184.
Reynolds, George S., San Diego, Cal. Floor finishing and surfacing machine. No. 1,022,505; Apr. 9; Sp. p. 1583; Gaz. vol. 177; p. 283.
Reynolds, Oakie F., Petersburg, Okla. Pole. No. 1,024,361; Apr. 23; Sp. p. 5546; Gaz. vol. 177; p. 972.
Reynolds, Robert A., Detroit, assignor to The American Machinery Company, Port Huron, Mich. Flour-bolter. No. 1,022,381; Apr. 2; Sp. p. 1305; Gaz. vol. 177; p. 211.
Reynolds, Will S., assignor to The Autocall Company, Shelby, Ohio. Electric signal apparatus. No. 1,023,875; Apr. 23; Sp. p. 4496; Gaz. vol. 177; p. 806.
Rheinische Metallwaaren- und Maschinenfabrik. (See Ehrhardt, Heinrich, assignor.)
Rheinische Metallwaaren- und Maschinenfabrik. (See Völler, Karl, assignor.)
Rhoades, Alonzo E., assignor to Draper Company, Hopedale, Mass. Filling-exhaustion-indicating mechanism for looms. No. 1,024,023; Apr. 23; Sp. p. 4819; Gaz. vol. 177; p. 856.
Rhodes, Ewing B., Pittsburgh, Pa. Door-opening device for vehicles. No. 1,022,262; Apr. 2; Sp. p. 1073; Gaz. vol. 177; p. 171.
Rhodes, Jay B., Kalamazoo, Mich. Route-indicator. No. 1,021,889; Apr. 2; Sp. p. 292; Gaz. vol. 177; p. 48.
Ribiet, George E., Erie, Pa. Slide-trombone. No. 1,021,890; Apr. 2; Sp. p. 296; Gaz. vol. 177; p. 49.
Rice, Charles D., Hartford, Conn. Belt-gearing. No. 1,022,756; Apr. 9; Sp. p. 2165; Gaz. vol. 177; p. 371.
Rice, Charles O., *et al.* (See Wiggins, George G., assignor.)
Rice, Walter F., Quincy, Mass., assignor to Fore River Shipbuilding Company. Pitchometer. No. 1,021,797; Apr. 2; Sp. p. 96; Gaz. vol. 177; p. 18.
Rice, William P., Shelbiana, Ky. Miner's lamp. No. 1,024,362; Apr. 23; Sp. p. 5547; Gaz. vol. 177; p. 972.
Richards, George A. (See Givens, Jeremiah A., assignor.)
Richards, Oliver L. (See Guy and Richards.)
Richardson, Amanda E., Boston, Mass. Garment-attaching means. No. 1,022,155; Apr. 2; Sp. p. 857; Gaz. vol. 177; p. 136.
Richardson, Bertha K., Attleboro, Mass. Corset-shield. No. 1,023,174; Apr. 16; Sp. p. 3082; Gaz. vol. 177; p. 551.
Richardson, Frank C., and J. T. Wood, Iola, Kans. Oil-burner. No. 1,023,529; Apr. 16; Sp. p. 3770; Gaz. vol. 177; p. 666.
Richardson, George W., assignor of one-half to P. C. Williams, Bellingham, Wash. Rotary engine. No. 1,024,363; Apr. 23; Sp. p. 5548; Gaz. vol. 177; p. 972.
Richardson, Solon O., Jr., Toledo, Ohio. Pot-furnace. No. 1,021,798; Apr. 2; Sp. p. 92; Gaz. vol. 177; p. 18.
Richmond Cedar Works. (See Parrish, James S., assignor.)
Rickereberg Brass Company, The. (See Gorlick, Andrew J., assignor.)
Ricks, Alva M., Los Angeles, Cal. Amusement device. No. 1,024,283; Apr. 23; Sp. p. 5415; Gaz. vol. 177; p. 948.
Riddell, John, Schenectady, N. Y., assignor to General Electric Company. Machine for drilling porcelain. No. 1,022,874; Apr. 9; Sp. p. 2392; Gaz. vol. 177; p. 409.
Rider, Granville S., New York, N. Y. Mantle-burner for kerosene-lamps. No. 1,022,700; Apr. 9; Sp. p. 2021; Gaz. vol. 177; p. 350.
Ridge, Harry M. (See Merton, Thomas D., assignor.)
Ridsdale, Herbert W., London, and S. S. Cook, Wallsend, assignors to C. A. Parsons, Newcastle-upon-Tyne, England. Combined ahead and astern turbine. No. 1,022,215; Apr. 2; Sp. p. 980; Gaz. vol. 177; p. 157.
Rikhoff, John L., Denver, Colo. Propeller. No. 1,024,700; Apr. 30; Sp. p. 6385; Gaz. vol. 177; p. 1125.
Riley, John F. (See Sargeant, Stephen D., assignor.)
Rindfleisch, Benjamin, assignor to The National-Acme Manufacturing Company, Cleveland, Ohio. Floating tool-holder. No. 1,021,848; Apr. 2; Sp. p. 207; Gaz. vol. 177; p. 34.
Rinner, Elijah C., Coshocton, Ohio. Paper-corrugator. No. 1,022,002; Apr. 2; Sp. p. 542; Gaz. vol. 177; p. 84.
Ripken, Hugo F. (See Kingan and Ripken.)
Ripley, Giles E., W. N. Gladson, Fayetteville, and R. E. Thompson, Heber, Ark. Projecting apparatus for moving-picture machines. No. 1,023,074; Apr. 30; Sp. p. 7131; Gaz. vol. 177; p. 1253.
Ripley, William R., Tacoma, Wash. Assembling-table for conical stave porch-columns. No. 1,024,147; Apr. 23; Sp. p. 5120; Gaz. vol. 177; p. 900.
Ripper, Joseph W. (See Shrum, Rae, and Ripper.)
Rissler, Albin P. (See Harrison and Rissler.)
Riverside Engine Company. (See Gray, Edward, assignor.)
Robb Engineering Company. (See Brady, Harry V., assignor.)
Robb, James T., assignor to The Mitchell Vance Co., New York, N. Y. Lighting-fixture. No. 1,022,875; Apr. 9; Sp. p. 2393; Gaz. vol. 177; p. 409.
Robbins, Charles A. (See Nelson, Robert H., assignor.)
Robbins, Meyer L., New York, N. Y. Bracelet. No. 1,022,798; Apr. 9; Sp. p. 2241; Gaz. vol. 177; p. 384.
Robbins, Meyer L., assignor to Untermeyer-Robbins & Company, New York, N. Y. Bracelet. No. 1,024,101; Apr. 23; Sp. p. 5006; Gaz. vol. 177; p. 884.
Robbins, Rolland, Crafton, assignor to The Sanitary Fountain and Vending Machine Company, Pittsburgh, Pa. Cup-vending machine. No. 1,023,007; Apr. 9; Sp. p. 2855; Gaz. vol. 177; p. 486.
Roberts, Frank C., Nashville, Tenn. Folding bed. No. 1,024,284; Apr. 23; Sp. p. 5418; Gaz. vol. 177; p. 949.
Roberts, George G., Toledo, Ohio. Bottle-case. No. 1,022,971; Apr. 9; Sp. p. 2607; Gaz. vol. 177; p. 443.
Roberts, John W., Sarnia, Ontario, Canada. Flexible pipe connection. No. 1,023,274; Apr. 16; Sp. p. 3283; Gaz. vol. 177; p. 586.
Robertson, Alexander, Harrison Hot Springs, British Columbia, Canada. Grafting-machine. No. 1,023,038; Apr. 9; Sp. p. 2728; Gaz. vol. 177; p. 466.
Robertson, Jeff D., Paducah, Ky. Obstetrical pad. No. 1,021,891; Apr. 2; Sp. p. 293; Gaz. vol. 177; p. 49.
Robeson, Oscar W., Carroll, Iowa. Washing-machine. No. 1,022,003; Apr. 2; Sp. p. 545; Gaz. vol. 177; p. 85.
Robinson, Frank W., assignor, by mesne assignments, to The Nolde & Horst Co., Reading, Pa. Drop-stitch mechanism for knitting-machines. No. 1,021,799; Apr. 2; Sp. p. 94; Gaz. vol. 177; p. 19.
Robinson, Frank W., assignor, by mesne assignments, to The Nolde & Horst Co., Reading, Pa. Loop-doubling mechanism. No. 1,021,800; Apr. 2; Sp. p. 96; Gaz. vol. 177; p. 19.
Robinson, Harry V., Pittsburgh, Pa. Game apparatus. No. 1,022,876; Apr. 9; Sp. p. 2396; Gaz. vol. 177; p. 410.
Robinson, Robert P. (See Tuttle, Joseph B., assignor.)
Robischung, Henry B., Cloverdale, Mich., assignor to Chicago Railway Equipment Company, Chicago, Ill. Brake-head. No. 1,022,331; Apr. 2; Sp. p. 1215; Gaz. vol. 177; p. 194.
Robson, George, Murray, Ohio. Pump. No. 1,021,892; Apr. 2; Sp. p. 299; Gaz. vol. 177; p. 49.
Roby, Clayton E. (See Martin and Roby.)
Rocic, Ivan, Hoboken, N. J. Caster-wheel. No. 1,024,227; Apr. 23; Sp. p. 5305; Gaz. vol. 177; p. 929.
Rockwell, Byrd C., Malvern, Ark. Truck. No. 1,024,701; Apr. 30; Sp. p. 6386; Gaz. vol. 177; p. 1125.
Roderick, George F., Medina, N. D. Spark arrester and consumer. No. 1,022,441; Apr. 9; Sp. p. 1457; Gaz. vol. 177; p. 261.
Rodger Ballast Car Company. (See Hart, Harry S., assignor.)
Roebuck, Alvah C., assignor to The Enterprise Optical Mfg. Company, Chicago, Ill. Reeling mechanism. No. 1,024,866; Apr. 30; Sp. p. 6728; Gaz. vol. 177; p. 1184.
Roedding, John H., Berlin, Ontario, Canada. Rubber shoe. No. 1,022,566; Apr. 9; Sp. p. 1714; Gaz. vol. 177; p. 302.
Roesch, Reinhard, assignor of one-half to G. G. C. Koenig, San Jose, Cal. Invalid-bed. No. 1,023,396; Apr. 16; Sp. p. 3515; Gaz. vol. 177; p. 626.
Roessler, Amandus C., Missoula, and W. A. Armington, New York, N. Y., assignors to Bay State Gas Company, (Delaware.) Gas-regulator. No. 1,023,596; Apr. 16; Sp. p. 3919; Gaz. vol. 177; p. 689.
Roever, Julius, New York, N. Y. Bed-spring. No. 1,023,876; Apr. 23; Sp. p. 4501; Gaz. vol. 177; p. 806.
Rogers, Charles C. (See Smith, Walter R., assignor.)
Rogers, Chester E., Beverly, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Sole-leveling machine. No. 1,022,701; Apr. 9; Sp. p. 2025; Gaz. vol. 177; p. 350.
Rogers, Hervey E., New London, Conn. Attachment for carburetors. No. 1,023,397; Apr. 16; Sp. p. 3516; Gaz. vol. 177; p. 626.
Rogers, Pearley B., Lynn, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Punching device. No. 1,023,275; Apr. 16; Sp. p. 3285; Gaz. vol. 177; p. 586.
Rogers, Robert W. (See Kaye and Rogers.)
Rogers, Thurman S., Jackson, Mich. Auxiliary heel-lining. No. 1,023,877; Apr. 23; Sp. p. 4503; Gaz. vol. 177; p. 806.
Rogestvensky, Alexis, Moscow, Russia. Flying-machine. No. 1,024,102; Apr. 23; Sp. p. 5007; Gaz. vol. 177; p. 884.
Rolland, François, and E. Pilain, Tours, France. Brake mechanism for vehicles. No. 1,022,506; Apr. 9; Sp. p. 1587; Gaz. vol. 177; p. 284.
Romano, Ralph, Brooklyn, N. Y. Hair-clipper. No. 1,024,364; Apr. 23; Sp. p. 5550; Gaz. vol. 177; p. 973.
Rounau, Herman, Evergreen Park, assignor of one-half to O. P. Lightfoot, Chicago, Ill. Roofing-tile. No. 1,023,878; Apr. 23; Sp. p. 4504; Gaz. vol. 177; p. 807.
Rontke, Albert, Bridgeport, Conn., assignor to The Singer Manufacturing Company. Guide for sewing-machines. No. 1,023,335; Apr. 16; Sp. p. 3396; Gaz. vol. 177; p. 606.
Root, Peter, Eureka, Cal. Fluid-hydrocarbon burner. No. 1,022,263; Apr. 2; Sp. p. 1076; Gaz. vol. 177; p. 171.
Rosenburg, Samuel L. (See Mills, Thomas, assignor.)
Rosemeyer, Josef. (See Hanisch and Rosemeyer.)
Rosen, Ekten A., *et al.* (See Osterholm, Theodore O., assignor.)
Rosenheim, Ida S. (See Both, Tonjes A. C., assignor.)

Rosier, Henri, La Préalle-Herstal, near Liege, Belgium. Automatic pistol. No. 1,023,966; Apr. 23; Sp. p. 4714; Gaz. vol. 177; p. 836.
Ross, Frederick M. (See Rempe and Ross.)
Ross, Marion J., Boston, Mass. Baby-holder attachment for cribs, &c. No. 1,022,507; Apr. 9; Sp. p. 1589; Gaz. vol. 177; p. 284.
Ross, Thomas W., St. Louis, Mo. Dental post-extractor. No. 1,021,893; Apr. 2; Sp. p. 305; Gaz. vol. 177; p. 50.
Ross, Vernon, Kansas City, Mo. Store-front construction. No. 1,024,420; Apr. 23; Sp. p. 5695; Gaz. vol. 177; p. 991.
Ross, William S., assignor of one-half to H. E. Sheaf, Piqua, Ohio. Foot-guard for elevators. No. 1,022,972; Apr. 9; Sp. p. 2600; Gaz. vol. 177; p. 443.
Rossi, Auguste J., Niagara Falls, assignor to The Titanium Alloy Manufacturing Company, New York, N. Y. Producing alloys of manganese and titanium. No. 1,022,595; Apr. 9; Sp. p. 1785; Gaz. vol. 177; p. 313.
Rossi, Auguste J., Niagara Falls, assignor to The Titanium Alloy Manufacturing Company, New York, N. Y. Alloys of the precious metals and increasing hardness of such alloys. No. 1,022,596; Apr. 9; Sp. p. 1786; Gaz. vol. 177; p. 313.
Rossi, Auguste J., Niagara Falls, assignor to The Titanium Alloy Manufacturing Company, New York, N. Y. Producing the binary alloy of titanium and zinc. No. 1,022,597; Apr. 9; Sp. p. 1788; Gaz. vol. 177; p. 313.
Rossi, Auguste J., Niagara Falls, assignor to The Titanium Alloy Manufacturing Company, New York, N. Y. Producing the alloy of titanium with tin. No. 1,022,598; Apr. 9; Sp. p. 1789; Gaz. vol. 177; p. 314.
Rossi, Auguste J., Niagara Falls, assignor to The Titanium Alloy Manufacturing Company, New York, N. Y. Producing the alloy of titanium with copper. No. 1,022,599; Apr. 9; Sp. p. 1790; Gaz. vol. 177; p. 314.
Rossi, Auguste J., Niagara Falls, assignor to The Titanium Alloy Manufacturing Company, New York, N. Y. Alloys of the precious metals and increasing hardness of such alloys. No. 1,022,600; Apr. 9; Sp. p. 1791; Gaz. vol. 177; p. 314.
Rossi, Auguste J., Niagara Falls, assignor to The Titanium Alloy Manufacturing Company, New York, N. Y. Producing an alloy of titanium with lead. No. 1,022,799; Apr. 9; Sp. p. 2243; Gaz. vol. 177; p. 384.
Rossi, Auguste J., Niagara Falls, assignor to The Titanium Alloy Manufacturing Company, New York, N. Y. Alloy of manganese and titanium and producing the same. No. 1,023,331; Apr. 16; Sp. p. 3390; Gaz. vol. 177; p. 605.
Rossi, Auguste J., Niagara Falls, assignor to The Titanium Alloy Manufacturing Company, New York, N. Y. Alloy of the precious metals and increasing hardness of such alloy. No. 1,023,332; Apr. 16; Sp. p. 3391; Gaz. vol. 177; p. 605.
Rossi, Auguste J., Niagara Falls, assignor to The Titanium Alloy Manufacturing Company, New York, N. Y. Alloy of titanium, copper, and silicon. No. 1,023,333; Apr. 16; Sp. p. 3393; Gaz. vol. 177; p. 606.
Rossi, Auguste J., Niagara Falls, assignor to The Titanium Alloy Manufacturing Company, New York, N. Y. Alloy of the precious metals and increasing hardness of such alloy. No. 1,023,334; Apr. 16; Sp. p. 3395; Gaz. vol. 177; p. 606.
Rossi, Auguste J., Niagara Falls, assignor to The Titanium Alloy Manufacturing Company, New York, N. Y. Article composed essentially of titanium and silver and producing the same. No. 1,024,476; Apr. 23; Sp. p. 5821; Gaz. vol. 177; p. 1012.
Roth, Charles C., Indianapolis, Ind. Starting device for explosion-engines. No. 1,024,103; Apr. 23; Sp. p. 5008; Gaz. vol. 177; p. 885.
Roth, Hugo, assignor to Amme, Giesecke & Konegen, Aktiengesellschaft, Braunschweig, Brunswick, Germany. Conveying-trough. No. 1,022,332; Apr. 2; Sp. p. 1217; Gaz. vol. 177; p. 194.
Roth, Solomon, *et al.* (See Cave and Buck, assignors.)
Rothe, Moritz, Deutz, near Cologne, Germany. Hydraulic press. No. 1,024,024; Apr. 23; Sp. p. 4824; Gaz. vol. 177; p. 856.
Rothe, William F., East St. Louis, Ill., and E. E. Culp, St. Louis, Mo. Carbureter. No. 1,022,702; Apr. 9; Sp. p. 2028; Gaz. vol. 177; p. 350.
Rothe, William F., East St. Louis, Ill., and E. E. Culp, St. Louis, Mo. Carbureter. No. 1,022,703; Apr. 9; Sp. p. 2031; Gaz. vol. 177; p. 351.
Röthman, Eugene, assignor of one-half to W. F. Lichtenfeld, Cleveland, Ohio. Self-measuring non-refillable bottle. No. 1,022,677; Apr. 9; Sp. p. 2397; Gaz. vol. 177; p. 410.
Roulliard, Victor A., assignor of one-half to A. L. Audet, Fall River, Mass. Armored tire. No. 1,022,333; Apr. 2; Sp. p. 1219; Gaz. vol. 177; p. 194.
Rouse, Frank L., Somerville, Mass. Trick cigar-case. No. 1,023,276; Apr. 16; Sp. p. 3287; Gaz. vol. 177; p. 587.
Rousset, Germain, Florafe, Pa. Safety appliance for elevators. No. 1,023,277; Apr. 16; Sp. p. 3289; Gaz. vol. 177; p. 587.
Rowe, George H., Berwyn, assignor to Electro-Magnetic Tool Company, Chicago, Ill. Percussion device. No. 1,024,025; Apr. 23; Sp. p. 4828; Gaz. vol. 177; p. 857.
Rowe, George H., Berwyn, assignor to Electro-Magnetic Tool Company, Chicago, Ill. Electromechanical device. No. 1,024,026; Apr. 23; Sp. p. 4832; Gaz. vol. 177; p. 857.
Rowe, George H., assignor to Electro-Magnetic Tool Company, Chicago, Ill. Electromechanical device. No. 1,024,027; Apr. 23; Sp. p. 4834; Gaz. vol. 177; p. 858.
Rowen, Thomas C. (See Holbrook, Frank, assignor.)
Rowley, Harry G. (See Lewis and Stephen, assignors.)
Rowntree, Frank L., assignor to The Arrow Electric Company, Hartford, Conn. Pull-socket. No. 1,024,866; Apr. 23; Sp. p. 5551; Gaz. vol. 177; p. 973.
Royal Automatic Machine Company. (See Magideon, Frank, assignor.)
Royce, Frederick H., Derby, England. Transmission-gearing. No. 1,023,683; Apr. 16; Sp. p. 4071; Gaz. vol. 177; p. 714.
Royce, Frederick H., Derby, England. Motor road-vehicle. No. 1,024,652; Apr. 30; Sp. p. 6288; Gaz. vol. 177; p. 1108.
Royce, Howard W., Chicago, Ill., assignor to Semet-Solvay Company, Solvay, N. Y. Controlling device. No. 1,023,879; Apr. 23; Sp. p. 4505; Gaz. vol. 177; p. 807.
Rubeck, Walter L., St. Paul, Nebr. Fence-post. No. 1,023,880; Apr. 23; Sp. p. 4507; Gaz. vol. 177; p. 807.
Ruch, Alfred, Minden, Iowa. Scale. No. 1,022,264; Apr. 2; Sp. p. 1077; Gaz. vol. 177; p. 172.
Rudolphi, Frank, assignor to American Can Company, New York, N. Y. Double-seaming machine. No. 1,023,039; Apr. 9; Sp. p. 2730; Gaz. vol. 177; p. 466.
Rudolphi, Frank, Chicago, and S. Tevander, Maywood, Ill., assignors to American Can Company, New York, N. Y. Key-opening can. No. 1,022,050; Apr. 2; Sp. p. 637; Gaz. vol. 177; p. 101.
Ruff, Elmus S. (See Goodman and Ruff.)
Rule, John, Jackson, Cal. Mine signaling device. No. 1,023,040; Apr. 9; Sp. p. 2734; Gaz. vol. 177; p. 467.
Rumberg, Sven S., Batavia, and F. C. Harttung, Chicago, Ill. Vaginal syringe. No. 1,022,601; Apr. 9; Sp. p. 1792; Gaz. vol. 177; p. 314.
Rumsey, Oscar C., Brockton, assignor of one-half to H. K. Perkins, Bridgewater, Mass. Insole-tack-pulling machine. No. 1,021,894; Apr. 2; Sp. p. 306; Gaz. vol. 177; p. 50.
Rupley, George H., assignor, by mesne assignments, of one-half to F. J. Seebolt, one-fourth to E. C. Hall, deceased, (M. H. hall, executrix,) Schenectady, and one-fourth to E. F. Pickford, Washington, D. C. Electric clock-winding mechanism. No. 1,023,684; Apr. 16; Sp. p. 4072; Gaz. vol. 177; p. 715.
Ruprecht, Charles C., Blakely, Ala. Separating and purifying fullers' earth and analogous materials. No. 1,023,104; Apr. 23; Sp. p. 5011; Gaz. vol. 177; p. 885.
Ruscoe, William G., Stamford, Conn. Ratchet-wrench. No. 1,022,208; Apr. 2; Sp. p. 968; Gaz. vol. 177; p. 155.
Russell, Arthur L., Hyde Park, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for use in the manufacture of boots and shoes. No. 1,024,599; Apr. 30; Sp. p. 6168; Gaz. vol. 177; p. 1089.
Russell, Beulah, Louisville, Tenn. Fruit-gathering device. No. 1,023,881; Apr. 23; Sp. p. 4508; Gaz. vol. 177; p. 807.
Russell & Erwin Manufacturing Company. (See Voight, Henry G., assignor.)
Russell & Erwin Manufacturing Company. (See Voight and Hurd, assignors.)
Russell, George, McKeesport, Pa. Can. No. 1,024,702; Apr. 30; Sp. p. 6388; Gaz. vol. 177; p. 1126.
Russell, Gilbert H. (See Herndon, William T., assignor.)
Russell, Howard E. (See Miller, Thomas F., assignor.)
Russell, James M., Jonesville, Va. Trigger mechanism. No. 1,022,973; Apr. 9; Sp. p. 2611; Gaz. vol. 177; p. 444.
Russell, Nelson J. (See Johnson and Russell.)
Russell, Thomas H., Clacton-on-Sea, England. Can-opener. No. 1,021,801; Apr. 2; Sp. p. 99; Gaz. vol. 177; p. 19.
Russell, William H., Newcastle, New Brunswick, Canada. Thrust-bearing. No. 1,024,457; Apr. 23; Sp. p. 5770; Gaz. vol. 177; p. 1003.
Russum, Jacob S. (See Poe, John, assignor.)
Rust, Otis R., Kansas City, Mo. Belt-fastening means. No. 1,022,508; Apr. 9; Sp. p. 1589; Gaz. vol. 177; p. 284.
Ruttan, Alfred A., and C. E. Hutchings, assignors to Eastman Kodak Co., Rochester, N. Y. Camera-back. No. 1,024,747; Apr. 30; Sp. p. 6485; Gaz. vol. 177; p. 1114.
Buwell, William F., Philadelphia, Pa. Compressor-pump. No. 1,023,685; Apr. 16; Sp. p. 4075; Gaz. vol. 177; p. 715.
Ryan, James R. (See Herron, John, assignor.)
Ryan, Michael B., Boston, Mass., assignor, by mesne assignments, to The Automatic Chain Company, Buffalo, N. Y. Electric chain-welding machine. No. 1,023,137; Apr. 16; Sp. p. 2956; Gaz. vol. 177; p. 534.
Ryan, Michael B., Boston, Mass., assignor to McKinnon Chain Company. Chain-welding machine. No. 1,023,129; Apr. 16; Sp. p. 2968; Gaz. vol. 177; p. 535.
Ryan, Michael B., Boston, Mass., assignor to McKinnon Chain Company. Electric welding-machine. No. 1,023,130; Apr. 16; Sp. p. 2973; Gaz. vol. 177; p. 535.
Ryan, Michael B., Bridgeport, Conn., assignor to McKinnon Chain Company. Electrical welding-machine. No. 1,023,128; Apr. 16; Sp. p. 2962; Gaz. vol. 177; p. 535.
Ryan, Michael E., Fall River, Mass. Apparatus for collecting and assorting fibers. No. 1,024,148; Apr. 23; Sp. p. 5122; Gaz. vol. 177; p. 900.
Ryan, Michael E., Fall River, Mass. Shaving-machine. No. 1,024,149; Apr. 23; Sp. p. 5123; Gaz. vol. 177; p. 901.

Ryan, Walter D., Watertown, S. D., assignor to General Electric Company. Diffusing-cluster. No. 1,022,878; Apr. 9; Sp. p. 2309; Gas. vol. 177; p. 410.

Ryon, Eppa H., Worcester, Mass., assignor to Crompton & Knowles Loom Works. Weft-replenishing loom. No. 1,022,108; Apr. 2; Sp. p. 750; Gaz. vol. 177; p. 120.

Ryon, Eppa H., Waltham, Mass., assignor to Crompton & Knowles Loom Works. Weft-replenishing loom. No. 1,022,109; Apr. 2; Sp. p. 752; Gaz. vol. 177; p. 120.

Ryther, George D., assignor to The Ryther & Pringle Company, Carthage, N. Y. Paper-stock shredder. No. 1,023,762; Apr. 16; Sp. p. 4206; Gaz. vol. 177; p. 739.

Ryther & Pringle Company, The. (See Ryther, George D., assignor.)

Sabonadier, Paul, Eaubonne, and E. D'Eaubonne, Neuilly-sur-Seine, France. Preparing warp for manufacturing pile fabric. No. 1,024,421; Apr. 23; Sp. p. 5696; Gaz. vol. 177; p. 992.

Sachse, Louis, Los Angeles, Cal. Gold and quicksilver saving apparatus. No. 1,022,110; Apr. 2; Sp. p. 756; Gaz. vol. 177; p. 121.

Sackett, James E., Monticello, N. Y. Revolving-piston rotary steam-engine. No. 1,022,265; Apr. 2; Sp. p. 1078; Gaz. vol. 177; p. 172.

Saenger, Moritz, Magdeburg, Germany. Medical spraying-syringe. No. 1,024,422; Apr. 23; Sp. p. 5700; Gaz. vol. 177; p. 992.

Safety Car Heating & Lighting Company, The. (See Dixon and Hulse, assignors.)

Sala, José P. (See Hatton and Sala.)

Salisbury, Philip A. (See Grotenhuis, William J., assignor.)

Salisbury, Walter. (See Cluts, Salisbury, and Turall.)

Salisbury, William, Stoughton, Mass. Fabric-coating machine. No. 1,023,398; Apr. 16; Sp. p. 3518; Gaz. vol. 177; p. 626.

Salsbury, George E., Arcadia, Cal. Apparatus for producing concrete pipe with waterproof lining therein. No. 1,023,336; Apr. 16; Sp. p. 3398; Gaz. vol. 177; p. 606.

Saltzman, Elmer A., Noble, and E. Krabill, Wayland, Iowa. Wagon-box. No. 1,022,266; Apr. 2; Sp. p. 1081; Gaz. vol. 177; p. 173.

Salzer, Bruno, and G. Walther, Chemnitz, Germany. Straight-knitting frame. No. 1,023,763; Apr. 16; Sp. p. 4208; Gaz. vol. 177; p. 739.

Sammel, David, Altoona, Pa. Smoke-box door. No. 1,022,757; Apr. 9; Sp. p. 2167; Gaz. vol. 177; p. 371.

Sammis, Albert V., Huntington, N. Y. Handle for satchels, &c. No. 1,023,175; Apr 16; Sp. p. 3083; Gaz. vol. 177; p. 551.

Sampson, George W., Whitman, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Last. No. 1,024,600; Apr. 30; Sp. p. 6179; Gaz. vol. 177; p. 1090.

Sandell, Henry K., assignor to Mills Novelty Company, Chicago, Ill. Lubricant device. No. 1,024,150; Apr. 23; Sp. p. 5127; Gaz. vol. 177; p. 901.

Sandford George B. H. (See Boothby, William T., assignor.)

Sandt, Julius, Pirmasens, Germany. Press provided with an oscillating pressing-arm. No. 1,024,423; Apr. 23; Sp. p. 5701; Gaz. vol. 177; p. 992.

Sandusky Foundry & Machine Company, The. (See Farnsworth, Hiland R., assignor.)

Sanford, Melvin E., Cedar Springs, assignor of one-third to J. H. Worden, Antigo, and one-third to C. Faust, Oshkosh, Wis. Skeleton column. No. 1,024,910; Apr. 30; Sp. p. 6817; Gaz. vol. 177; p. 1199.

Sanitary Fountain and Vending Machine Company, The. (See Robbins, Rolland, assignor.)

Sanitary Steel Couch Company. (See Grotenhuis, William J., assignor.)

Sanphy, Vincent, South Bend, Wash. Hose-coupling. No. 1,024,285; Apr. 23; Sp. p. 5419; Gaz. vol. 177; p. 949.

Santilli, Angelo, assignor to G. Moretto, New York, N. Y. Tool for handling electric globe-lamps. No. 1,024,286; Apr. 23; Sp. p. 5419; Gaz. vol. 177; p. 949.

Sargeant, Stephen D., assignor of two-thirds to J. F. Riley, Charleston, S. C. Tube-cleaner. No. 1,022,974; Apr. 9; Sp. p. 2612; Gaz. vol. 177; p. 444.

Sargent, Frank J., Medina, Ohio. Landing-net holder. No. 1,024,653; Apr. 30; Sp. p. 6289; Gaz. vol. 177; p. 1106.

Sargent, William P., assignor to The Curtis Publishing Company, Philadelphia, Pa. Magazine-mailing machine. No. 1,024,028; Apr. 23; Sp. p. 4837; Gaz. vol. 177; p. 858.

Sassli, Eugene H., St. Louis, Mo. Multiplane airship. No. 1,024,287; Apr. 23; Sp. p. 5421; Gaz. vol. 177; p. 950.

Sattler, Carl, Steglitz, Berlin, Germany. Machine for nailing uppers to soles. No. 1,023,337; Apr. 16; Sp. p. 3399; Gaz. vol. 177; p. 606.

Saurenmann, Jacob G., assignor of one-half to G. Gerlach, Canadian, Tex. Compressed-air-machine. No. 1,023,041; Apr. 9; Sp. p. 2736; Gaz. vol. 177; p. 467.

Savage, Frederick W., *et al.* (See Graves, Eugene A., assignor.)

Savage, Linnaeus T., New York, N. Y. Coin-tray. No. 1,022,442; Apr. 9; Sp. p. 1458; Gaz. vol. 177; p. 262.

Savoie, Joseph, Central Falls, R. I. Tire-protector. No. 1,024,458; Apr. 23; Sp. p. 5771; Gaz. vol. 177; p. 1004.

Sawtell, Albert H., Medford, assignor to J. K. Lanning, Boston, Mass. Movable-lease-rod support. No. 1,022,382; Apr. 2; Sp. p. 1307; Gaz. vol. 177; p. 211.

Sayers, Charlotte, Syracuse, N. Y. Hose-supporter. No. 1,022,267; Apr. 2; Sp. p. 1082; Gaz. vol. 177; p. 173.

Scarborough, Henry, Sr. (See Krause, Hermann, assignor.)

Schabinger, Charles H. (See Foote and Schabinger.)

Schade, John, Jr., assignor of one-half to L. Fink, New York, N. Y. Locking device for loose-leaf binders. No. 1,024,525; Apr. 30; Sp. p. 5980; Gaz. vol. 177; p. 1064.

Schaefer, Joseph E., Jr., assignor, by mesne assignments, to American Ignition Company, Detroit, Mich. Terminal-attachment-engaging device. No. 1,024,601; Apr. 30; Sp. p. 6180; Gaz. vol. 177; p. 1090.

Schaefer, William J., *et al.* (See McCann, Lewis E., assignor.)

Schanz, Richard, Heidenau, Germany. Device for facilitating basket-making. No. 1,024,602; Apr. 30; Sp. p. 6131; Gaz. vol. 177; p. 1090.

Schapringer, George von, Vienna, Austria-Hungary. Apparatus for regenerating air. No. 1,022,602; Apr. 9; Sp. p. 1705; Gaz. vol. 177; p. 315.

Schauweker, Charles. (See Powelsen, Charles L., assignor.)

Schechter, Joseph, New York, N. Y., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn. Combination-lock. No. 1,022,208; Apr. 2; Sp. p. 1083; Gaz. vol. 177; p. 173.

Schellenger, Elmer E., Riverside, Cal. Spraying device. No. 1,022,643; Apr. 9; Sp. p. 1881; Gaz. vol. 177; p. 329.

Schellenger, Elmer E., Riverside, Cal. Electric-lamp hanger. No. 1,024,029; Apr. 23; Sp. p. 4840; Gaz. vol. 177; p. 858.

Schellenger, Elmer E., Riverside, Cal. Hanger for electric lamps. No. 1,024,030; Apr. 23; Sp. p. 4842; Gaz. vol. 177; p. 859.

Scheller, John, Milwaukee, Wis. Valve-grinding tool. No. 1,023,967; Apr. 23; Sp. p. 4715; Gaz. vol. 177; p. 836.

Schellman, Henry A. (See Makin and Schellman.)

Schenck, Martin B., deceased; W. A. Schenck, executor, assignor to The M. B. Schenck Company, Meriden, Conn. Caster. No. 1,022,800; Apr. 9; Sp. p. 2244; Gaz. vol. 177; p. 384.

Schenck, William A., executor. (See Schenck, Martin B.)

Scherer, Albert G., assignor to A. W. Gleasner, Chicago, Ill. Stack-head for wall-registers. No. 1,023,278; Apr. 16; Sp. p. 3291; Gaz. vol. 177; p. 588.

Schichtl, Martin, North Yakima, Wash. Water-elevator. No. 1,021,895; Apr. 2; Sp. p. 808; Gaz. vol. 177; p. 51.

Schiefer, Paul, San Diego, Cal. Clothing-cabinet. No. 1,024,366; Apr. 23; Sp. p. 5552; Gaz. vol. 177; p. 973.

Schiesari, Mario, Turin, Italy. Monocycle skate. No. 1,023,882; Apr. 23; Sp. p. 4509; Gaz. vol. 177; p. 808.

Schilling, Louis, Maeystown, Ill. Spring-wheel. No. 1,023,098; Apr. 9; Sp. p. 2858; Gaz. vol. 177; p. 486.

Schleicher, Robert, assignor to Mengel Box Company, Louisville, Ky. Box-fastener. No. 1,022,156; Apr. 2; Sp. p. 859; Gaz. vol. 177; p. 136.

Schley, Frederick L., New York, N. Y. Plate-holder. No. 1,022,879; Apr. 9; Sp. p. 2400; Gaz. vol. 177; p. 411.

Schloss, Harry M., New York, N. Y. Window-shade adjuster. No. 1,022,704; Apr. 9; Sp. p. 2035; Gaz. vol. 177; p. 352.

Schmaltz, Peter R., Pittston, Pa. Curtain-fixture. No. 1,024,288; Apr. 23; Sp. p. 5423; Gaz. vol. 177; p. 950.

Schmidgall, Frederick, Cincinnati, Ohio. Door-locking means. No. 1,024,603; Apr. 30; Sp. p. 6183; Gaz. vol. 177; p. 1091.

Schmidhofer, Ernst C., Minneapolis, Minn. Horn. No. 1,022,509; Apr. 9; Sp. p. 1591; Gaz. vol. 177; p. 284.

Schmidt, Edward G. (See Clinger, Thomas H., assignor.)

Schmidt, Ernest H., assignor to The National Malleable Castings Company, Cleveland, Ohio. Centering device for car-couplings. No. 1,022,334; Apr. 2; Sp. p. 1220; Gaz. vol. 177; p. 195.

Schmidt, Fritz W., New Holstein, Wis. Guard-attaching bracket. No. 1,021,802; Apr. 2; Sp. p. 99; Gaz. vol. 177; p. 20.

Schmidt, John C., assignor to Famous Door Check Company, Chicago, Ill. Door-check. No. 1,021,803; Apr. 2; Sp. p. 100; Gaz. vol. 177; p. 20.

Schmidt, Louis M., Lynn, Mass., assignor to General Electric Company. Current-transformer. No. 1,022,880; Apr. 9; Sp. p. 2402; Gaz. vol. 177; p. 411.

Schneider, Anna M., Los Angeles, Cal. Armor. No. 1,021,804; Apr. 2; Sp. p. 102; Gaz. vol. 177; p. 20.

Schneider, Edward J. (See O'Neil, Schneider, and Kellett.)

Schneider, Eugene, Le Creusot, France. Torpedo-launching tube. No. 1,024,424; Apr. 23; Sp. p. 5701; Gaz. vol. 177; p. 992.

Schneider, Frederick D., Bedford, Ohio. Puncture-alarm. No. 1,025,100; Apr. 30; Sp. p. 7206; Gaz. vol. 177; p. 1262.

Schodt, Paul G. de, Namur, Belgium. Gas-lighting. No. 1,021,805; Apr. 2; Sp. p. 103; Gaz. vol. 177; p. 20.

Schoenfeld, Morris, Rorschach, Switzerland. Embroidering-machine. No. 1,024,867; Apr. 30; Sp. p. 6732; Gaz. vol. 177; p. 1185.

Schoenfeld, Morris, Rorschach, Switzerland. Embroidering-machine. No. 1,024,911; Apr. 30; Sp. p. 6819; Gaz. vol. 177; p. 1199.

Schoenfeld, Morris, Rorschach, Switzerland. Embroidering-machine. No. 1,024,912; Apr. 30; Sp. p. 6825; Gaz. vol. 177; p. 1200.

Schofer, Friedrich, Waiblingen, near Stuttgart, Germany. Combined smoke and ventilation shaft. No. 1,023,530; Apr. 16; Sp. p. 3772; Gaz. vol. 177; p. 667.

Schofield, Joseph J. (See Stewart, William, assignor.)

Schoolfield Safety Appliance Company, The. (See Hopkins, Wellington B., assignor.)

Schoonover, William J., Des Moines, Iowa. Gearing device. No. 1,022,881; Apr. 9; Sp. p. 2403; Gaz. vol. 177; p. 411.

Schorske, Henry, New York, N. Y. Coin-controlled apparatus. No. 1,024,748; Apr. 30; Sp. p. 6487; Gaz. vol. 177; p. 1142.

Schram, Alexander L., Hillsboro, Ill. Glass-gathering machine. No. 1,024,228; Apr. 23; Sp. p. 5306; Gaz. vol. 177; p. 929.

Schroeder, William S., Austin, Ill. Car-ladder. No. 1,024,654; Apr. 30; Sp. p. 6290; Gaz. vol. 177; p. 1108.

Schroeder, William S., Chicago, Ill., assignor to The National Malleable Castings Company, Cleveland, Ohio. Car-coupling. No. 1,022,335; Apr. 2; Sp. p. 1222; Gaz. vol. 177; p. 195.

Schroyer, James A. (See Hardenburgh and Schroyer.)

Schuck, John, Moon Run, Pa. Rail-joint. No. 1,024,289; Apr. 23; Sp. p. 5425; Gaz. vol. 177; p. 950.

Schulhof, Leo Z. (See Kronberger, Joe, assignor.)

Schultz, Augustus G., and D. M. Fuller, Albany, N. Y.; said Schultz assignor to said Fuller. Filling-machine. No. 1,022,603; Apr. 9; Sp. p. 1796; Gaz. vol. 177; p. 315.

Schultze, William H., Houston, Tex. Trolley-wheel. No. 1,023,338; Apr. 16; Sp. p. 3402; Gaz. vol. 177; p. 607.

Schulz, Otto, Charlottenburg, and W. H. Eyermann, Friedenau, near Berlin, Germany. Homopolar, acyclic, or unipolar dynamo-electric machine. No. 1,025,021; Apr. 30; Sp. p. 7035; Gaz. vol. 177; p. 1236.

Schulz, Reinhold A., St. Louis, Mo. Dough-divider. No. 1,021,896; Apr. 2; Sp. p. 309; Gaz. vol. 177; p. 51.

Schumann, Frank J., Bethlehem, Pa. Vending-machine. No. 1,025,075; Apr. 30; Sp. p. 7132; Gaz. vol. 177; p. 1253.

Schuster, Carl J., Milwaukee, Wis. Hunting game. No. 1,023,176; Apr. 16; Sp. p. 3085; Gaz. vol. 177; p. 551.

Schuster, Stephan W., New York, N. Y. Baking-oven. No. 1,023,483; Apr. 16; Sp. p. 3685; Gaz. vol. 177; p. 652.

Schwab, John W., Canton, Ohio. Wrench. No. 1,022,269; Apr. 2; Sp. p. 1085; Gaz. vol. 177; p. 174.

Schwarz, Heinrich, Vienna, Austria-Hungary. Roof. No. 1,024,808; Apr. 30; Sp. p. 6613; Gaz. vol. 177; p. 1163.

Schweikert, George R., Irvington, and W. E. Heinz, Newark, N. J. Chair. No. 1,024,526; Apr. 30; Sp. p. 5981; Gaz. vol. 177; p. 1064.

Schweinebraten, Louis G., assignor of one-third to T. C. Lancaster, Birmingham, and one-third to J. D. Pearce, Jefferson county, Ala. Portable crank-pin turner. No. 1,024,367; Apr. 23; Sp. p. 5554; Gaz. vol. 177; p. 974.

Schweiter, Jean, Horgen, near Zürich, Switzerland. Cross-winding machine. No. 1,022,004; Apr. 2; Sp. p. 546; Gaz. vol. 177; p. 85.

Schweitzer, Hugo, Elberfeld, and A. Zart, Vohwinkel, near Elberfeld, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Azo dye. No. 1,024,031; Apr. 23; Sp. p. 4844; Gaz. vol. 177; p. 859.

Schwenn, Ludwig J. C., New York, N. Y. Plate. No. 1,022,882; Apr. 9; Sp. p. 2404; Gaz. vol. 177; p. 411.

Schweppe, William, Pittsburgh, Pa. Trolley. No. 1,024,568; Apr. 23; Sp. p. 5555; Gaz. vol. 177; p. 974.

Schwieger, Adolf, Hanover, Germany. Cigar-case. No. 1,021,849; Apr. 2; Sp. p. 209; Gaz. vol. 177; p. 35.

Sciamengo, Carlo, Turin, Italy. Method of and device for cutting out contour-bands used in coloring kinematograph films. No. 1,022,270; Apr. 2; Sp. p. 1087; Gaz. vol. 177; p. 174.

Scott, Allen E., San Francisco, Cal. Syringe. No. 1,023,042; Apr. 9; Sp. p. 2738; Gaz. vol. 177; p. 468.

Scott, Barton W., San Jose, Cal. Propeller. No. 1,024,032; Apr. 23; Sp. p. 4845; Gaz. vol. 177; p. 859.

Scott, Burton W., assignor to Detroit Typomarker Company, Detroit, Mich. Automatic pin-ticketing machine. No. 1,023,883; Apr. 23; Sp. p. 4510; Gaz. vol. 177; p. 808.

Scott, Clarence N., Houston, Tex., assignor to International Steam Pump Company. Flap-valve. No. 1,022,157; Apr. 2; Sp. p. 860; Gaz. vol. 177; p. 136.

Scott, David J., *et al.*, executors. (See Scott, Walter.)

Scott, Isabella, *et al.*, executors. (See Scott, Walter.)

Scott, Walter, deceased, Plainfield, N. J.; I. and D. J. Scott, executors. Printing-machine. No. 1,021,897; Apr. 2; Sp. p. 310; Gaz. vol. 177; p. 51.

Scott, Walter, deceased, Plainfield, N. J.; I. and D. J. Scott, executors. Multirevolution printing-machine. No. 1,022,604; Apr. 9; Sp. p. 1797; Gaz. vol. 177; p. 315.

Scott, Walter, deceased, Plainfield, N. J.; I. and D. J. Scott, executors. Printing-machine. No. 1,025,076; Apr. 30; Sp. p. 7138; Gaz. vol. 177; p. 1253.

Scott, William M., Philadelphia, Pa. Remote control apparatus. No. 1,022,644; Apr. 9; Sp. p. 1882; Gaz. vol. 177; p. 329.

Scoville, Eugene M., Waipahu, Hawaii. Metallic packing for pumps. No. 1,024,425; Apr. 23; Sp. p. 5703; Gaz. vol. 177; p. 993.

Scow, George C., *et al.* (See Scow, Louis E., assignor.)

Scow, Louis E., assignor of one-fourth to G. C. Scow, one-fourth to T. A. Montgomery, and one-fourth to T. E. Montgomery, Portage la Prairie, Manitoba, Canada. Soil-tilling machine. No. 1,023,043; Apr. 9; Sp. p. 2739; Gaz. vol. 177; p. 468.

Scribner, Charles E., Jericho, Vt., assignor to Western Electric Company, Chicago, Ill. Party-line selective signaling system. No. 1,023,482; Apr. 16; Sp. p. 3681; Gaz. vol. 177; p. 652.

Scroggin, Carter R. (See Dunkel, Wilber R., assignor.)

Seabolt, Frank J., *et al.* (See Rupley, George H., assignor.)

Seaborne, Allever B., Hammersmith, London, England. Means for cleaning kinematograph and like films. No. 1,022,510; Apr. 9; Sp. p. 1592; Gaz. vol. 177; p. 285.

Seaman, Arthur G. (See Gattle and Seaman.)

Searle, Frank C., Wilmington, Del. Burial-vault. No. 1,024,527; Apr. 30; Sp. p. 5984; Gaz. vol. 177; p. 1065.

Seaver, Edward, Jr., assignor, by mesne assignments, to The Colonial Trust Company, trustee, Pittsburgh, Pa. Valve. No. 1,022,758; Apr. 9; Sp. p. 2169; Gaz. vol. 177; p. 372.

Sechrist, Albert, assignor to The Albert Sechrist Manufacturing Company, Denver, Colo. Chandelier. No. 1,024,369; Apr. 23; Sp. p. 5556; Gaz. vol. 177; p. 974.

Sechrist, Albert, assignor to The Albert Sechrist Manufactnring Company, Denver, Colo. Chandelier. No. 1,024,800; Apr. 30; Sp. p. 6614; Gaz. vol. 177; p. 1163.

Secor Typewriter Company. (See Bridgwater, Herbert E., assignor.)

Sedivyg, Andy, Indiana Harbor, Ind. Metallic tie and rail-fastener. No. 1,022,271; Apr. 2; Sp. p. 1088; Gaz. vol. 177; p. 174.

Seeberger, Charles D., New York, N. Y., assignor to Otis Elevator Company. Conveyer. No. 1,023,443; Apr. 16; Sp. p. 3601; Gaz. vol. 177; p. 642.

Seguin, Joseph E., Hull, Quebec, Canada. Adjustable form for routing-machines or the like. No. 1,022,883; Apr. 9; Sp. p. 2406; Gaz. vol. 177; p. 411.

Seidel, William. (See Windmueller, Paul E., assignor.)

Seifried, Earl J. and I. G., Findlay, Ohio. Resilient hub for vehicle-wheels. No. 1,022,567; Apr. 9; Sp. p. 1715; Gaz. vol. 177; p. 303.

Seifried, Isaac G. (See Seifried, Earl J. and I. G.)

Seineke, Frank G., Johannesburg, Transvaal. Means for straightening or altering the direction or course of a bore-hole. No. 1,022,705; Apr. 9; Sp. p. 2037; Gaz. vol. 177; p. 352.

Sellew, William H., Detroit, and E. A. Everett, Highland Park, Mich. Insulated rail-joint. No. 1,022,884; Apr. 9; Sp. p. 2408; Gaz. vol. 177; p. 412.

Semet-Solvay Company. (See Royce, Howard W., assignor.)

Semple, John B., Sewickley, Pa. Projectile. (Reissue.) No. 13,406; Apr. 16; Sp. p. 4264; Gaz. vol. 177; p. 749.

Senac, Ramon, Madrid, Spain. Receptacle or package of compressed paper and method of and means for making same. No. 1,023,764; Apr. 16; Sp. p. 4211; Gaz. vol. 177; p. 739.

Send, Maurice W., Detroit, Mich. Bottle-stopper. No. 1,022,443; Apr. 9; Sp. p. 1460; Gaz. vol. 177; p. 262.

Serrurier, Phillip D., Savanna, Ill. Guard-rail. No. 1,024,952; Apr. 30; Sp. p. 6909; Gaz. vol. 177; p. 1214.

Seybert, Guy W., Batson, Tex. Pump-jack. No. 1,024,033; Apr. 23; Sp. p. 4846; Gaz. vol. 177; p. 860.

Seymour, Ralph C., Larchmont, N. Y., assignor to Goss Printing Press Company, Chicago, Ill. Folding-machine. No. 1,024,459; Apr. 23; Sp. p. 5772; Gaz. vol. 177; p. 1004.

Seymour, Ralph C., Larchmont, N. Y., assignor to Goss Printing Press Company, Chicago, Ill. Sheet-handling machine. No. 1,024,460; Apr. 23; Sp. p. 5778; Gaz. vol. 177; p. 1004.

Seymour, Walter I., Chicago, Ill., assignor, by mesne assignments, to United Bifocal Company, New York, N. Y. Making bifocal-lens blanks. No. 1,024,486; Apr. 23; Sp. p. 5840; Gaz. vol. 177; p. 1016.

Shafer, Charles E., Lewistown, Md. Fish-can. No. 1,023,531; Apr. 16; Sp. p. 3773; Gaz. vol. 177; p. 667.

Shafer, Florence A., Los Angeles, Cal. Supporter for plumes for headwear and other purposes. No. 1,023,105; Apr. 23; Sp. p. 5013; Gaz. vol. 177; p. 885.

Shafer, Samuel L., Philadelphia, Pa. Apparatus for constructing concrete piers, walls, and the like. No. 1,021,806; Apr. 2; Sp. p. 105; Gaz. vol. 177; p. 21.

Shafto, Le Roy R., Elm Creek, Nebr. Hay stacker and loader. No. 1,021,808; Apr. 2; Sp. p. 313; Gaz. vol. 177; p. 52.

Shakely, Chester A. A., Oil City, Pa. Folding square. No. 1,021,850; Apr. 2; Sp. p. 210; Gaz. vol. 177; p. 35.

Shanks, Charles F., Johnstone, Scotland. Milling and boring machine. No. 1,022,051; Apr. 2; Sp. p. 638; Gaz. vol. 177; p. 101.

Shapley, Raymond R., assignor of one-half to B. F. Snavely, Harrisburg, Pa. Lathe-tool. No. 1,021,899; Apr. 2; Sp. p. 315; Gaz. vol. 177; p. 52.

Sharp, John W., Kenyon, Ark. Cotton-planter and fertilizer-distributer. No. 1,025,022; Apr. 30; Sp. p. 7033; Gaz. vol. 177; p. 1236.

Sharp, William E., assignor to Alcohol Heating & Lighting Company, Chicago, Ill. Stove. No. 1,023,968; Apr. 23; Sp. p. 4716; Gaz. vol. 177; p. 837.

Sharpton, George T. (See Smith, Thomas, assignor.)

Shaw, Clarence W., Johnstonville, Cal. Nut-lock. No. 1,022,836; Apr. 2; Sp. p. 1224; Gaz. vol. 177; p. 195.
Shaw, Dora P. (See Swinny, Ross P., assignor.)
Shaw, John N., Seattle, Wash. Coffee-cooker. No. 1,022,837; Apr. 2; Sp. p. 1226; Gaz. vol. 177; p. 196.
Sheaf, H. Elmer. (See Ross, William S., assignor.)
Sheedy, Patrick, Los Angeles, Cal. Drifting device for locomotives. No. 1,022,052; Apr. 2; Sp. p. 641; Gaz. vol. 177; p. 102.
Shek, Frank P., Brooklyn, N. Y. Rack. (Reissue.) No. 13,395; Apr. 2; Sp. p. 1337; Gaz. vol. 177; p. 217.
Shelburne, Arthur. (See Buettner and Shelburne.)
Shepard, George, Portland, Oreg. Milk-can. No. 1,022,975; Apr. 9; Sp. p. 2614; Gaz. vol. 177; p. 444.
Shepard, W. H. (See Joyce, Roy E., assignor.)
Shepard, William T., Le Mars, Iowa. Milling-machine. No. 1,021,950; Apr. 2; Sp. p. 424; Gaz. vol. 177; p. 69.
Shepherd, John A. (See Matthies and Shepherd.)
Sheriff, Albert, Covington, Ky. Tool-holder. No. 1,022,511; Apr. 9; Sp. p. 1593; Gaz. vol. 177; p. 285.
Sherlock, Edward D., assignor of one-half to G. W. Van Nortwick, Denver, Colo. Multiple embossing-die. No. 1,023,765; Apr. 16; Sp. p. 4213; Gaz. vol. 177; p. 740.
Sherman, Alvin G., Detroit, Mich. Hydrocarbon-burner. No. 1,024,368; Apr. 30; Sp. p. 6737; Gaz. vol. 177; p. 1185.
Sherman, Louis A., Pembroke, Mass. Mariner's liquid compass. No. 1,024,810; Apr. 30; Sp. p. 6616; Gaz. vol. 177; p. 1164.
Sherman, Orrin M., assignor to E. B. Van Wagner Manufacturing Company, Syracuse, N. Y. Casting apparatus. No. 1,023,884; Apr. 23; Sp. p. 4515; Gaz. vol. 177; p. 809.
Sherwood, Arthur, Plantsville, Conn. Resilient wheel. No. 1,022,885; Apr. 9; Sp. p. 2412; Gaz. vol. 177; p. 412.
Sherwood, Charles H., Long Hill, Conn. Folding carboy-support. No. 1,022,886; Apr. 9; Sp. p. 2415; Gaz. vol. 177; p. 412.
Shields, Charles H. (See Albrecht, Frederick W., assignor.)
Shields, Robert, South Boston, assignor to Frank Hidlon Company, Boston, Mass. Trolley retriever and catcher. No. 1,023,597; Apr. 16; Sp. p. 3921; Gaz. vol. 177; p. 689.
Shigley, Cyrus C., assignor of one-half to P. McLaughlin, Grand Rapids, Mich. Phonograph. No. 1,024,034; Apr. 23; Sp. p. 4846; Gaz. vol. 177; p. 860.
Shinn, Charles P., New York, N. Y. Curling-iron heater. No. 1,023,044; Apr. 9; Sp. p. 2742; Gaz. vol. 177; p. 468.
Shipley, David E., Joplin, Mo. Automobile-truck. No. 1,023,045; Apr. 9; Sp. p. 2743; Gaz. vol. 177; p. 468.
Shipman, Ralph, Sunbury, Pa. Instrument for indicating speed and running time of machines. No. 1,022,801; Apr. 9; Sp. p. 2246; Gaz. vol. 177; p. 385.
Shlosberg, Maria, assignor of one-half to M. Cleland, Chicago, Ill. Muffler for automobiles. No. 1,023,225; Apr. 16; Sp. p. 3176; Gaz. vol. 177; p. 568.
Shockley, Harlow O., Darlington, Wis. Wheel. No. 1,022,887; Apr. 9; Sp. p. 2416; Gaz. vol. 177; p. 413.
Shounard, Harold W., East Orange, N. J. Automatic controlling means for submarine vessels. No. 1,022,706; Apr. 9; Sp. p. 2039; Gaz. vol. 177; p. 353.
Shrader, Bert K., and J. R. Gilman, Louisville, Ky.; said Gilman assignor to said Shrader. Measuring device. No. 1,022,005; Apr. 2; Sp. p. 549; Gaz. vol. 177; p. 86.
Shredded Wheat Company, The. (See Perky, Henry D., assignor.)
Shrum, Peter J., Monaca, W. C. Rae, Pittsburgh, and J. W. Ripper, Glenfield, assignors to Colona Manufacturing Company, Pittsburgh, Pa. Thread-protector. No. 1,023,969; Apr. 23; Sp. p. 4713; Gaz. vol. 177; p. 837.
Shuster, Elmore F., New Haven, Conn. Wire straightening and cutting-off machine. No. 1,022,888; Apr. 9; Sp. p. 2417; Gaz. vol. 177; p. 413.
Shuster, Franklin B., deceased, New Haven, Conn.; L. F. Shuster, administratrix. Helix-coiling machine. No. 1,023,099; Apr. 9; Sp. p. 2859; Gaz. vol. 177; p. 487.
Shuster, Luella F., administratrix. (See Shuster, Franklin B.)
Sibley, Edwin E., Chelsea, Mass. Tension mechanism for looms. No. 1,024,528; Apr. 30; Sp. p. 5985; Gaz. vol. 177; p. 1065.
Sideman, Reuben, San Francisco, Cal. Fire-escape. No. 1,022,568; Apr. 9; Sp. p. 1718; Gaz. vol. 177; p. 303.
Siebert, Carl T., East Pittsburgh, Pa. Extinguisher for lanterns. No. 1,022,209; Apr. 2; Sp. p. 960; Gaz. vol. 177; p. 155.
Siegel, Benjamin, *et al.* (See Jennings, Jarvis S., Jr., assignor.)
Siemens-Schuckert Werke G. m. b. H. (See Klement, Wilhelm, assignor.)
Siggins, Forest E., Clarksburg, W. Va. Combination cane and umbrella. No. 1,023,686; Apr. 16; Sp. p. 4078; Gaz. vol. 177; p. 716.
Sikes, Simeon R., Ocilla, Ga. Fertilizer-distributer. No. 1,023,532; Apr. 16; Sp. p. 3774; Gaz. vol. 177; p. 667.
Silberrad, Oswald, Buckhurst Hill, England. Manufacture of isoprene. No. 1,022,338; Apr. 2; Sp. p. 1227; Gaz. vol. 177; p. 196.
Silk, Albert E., *et al.* (See McKaig, Eddy T., assignor.)
Sill, Samuel J., assignor of one-half to H. H. Hewitt, Buffalo, N. Y. Hose-making machine. No. 1,024,604; Apr. 30; Sp. p. 6185; Gaz. vol. 177; p. 1091.
Sills, William H., Chicago, Ill. Machine for making mica-board or the like. No. 1,024,529; Apr. 30; Sp. p. 5969; Gaz. vol. 177; p. 1066.
Silver, Myron. (See Anderson and Silver.)
Simmons, James L. (See Moore and Simmons.)
Simonsen, Adolf. (See Truelsen and Simonsen.)
Simonsen, Rasmus, Hoboken, N. J. Trunk. No. 1,022,158; Apr. 2; Sp. p. 861; Gaz. vol. 177; p. 137.
Simplex Electric Heating Company. (See Chandler, Edwin N., assignor.)
Simplex Metal Bound Box Company. (See Fleming, Douglas P., assignor.)
Simplex Roller Bearing Company. (See Upton, Colcord, assignor.)
Simpson, George W., Pittsburgh, Pa. Beach-coaster. No. 1,023,601; Apr. 16; Sp. p. 3933; Gaz. vol. 177; p. 691.
Simpson & Sons, Wm. (See Anthony, Wendell P., assignor.)
Sinclair, Charles M., New York, N. Y. Lock. No. 1,023,766; Apr. 16; Sp. p. 4214; Gaz. vol. 177; p. 740.
Sinclair, Charles M., Chicago, Ill. Metallic door. No. 1,025,023; Apr. 30; Sp. p. 7039; Gaz. vol. 177; p. 1237.
Sinclair, George B., Medford, Mass. Starter for internal-combustion engines. No. 1,023,279; Apr. 16; Sp. p. 3292; Gaz. vol. 177; p. 588.
Sinclair, Harry R., and C. Ekman, Worcester, Mass.; said Ekman assignor to said Sinclair. Pipe-wrench. No. 1,023,533; Apr. 16; Sp. p. 3776; Gaz. vol. 177; p. 668.
Sine, Allie M. (See Sine, David A., assignor.) (Reissue.)
Sine, David A., assignor of one-half to A. M. Sine, Rochester, N. Y. Drill-holder. (Reissue.) No. 13,408; Apr. 23; Sp. p. 5850; Gaz. vol. 177; p. 1017.
Singer Manufacturing Company, The. (See Allen, Edward B., assignor.)
Singer Manufacturing Company, The. (See De Voe, Albert H., assignor.)
Singer Manufacturing Company, The. (See Douglas, John, assignor.)
Singer Manufacturing Company, The. (See Hogan, James T., assignor.)
Singer Manufacturing Company, The. (See Molyneux, George E., assignor.)
Singer Manufacturing Company, The. (See Rontke, Albert, assignor.)
Singleton, George, Dover, N. J. Tension device. No. 1,024,605; Apr. 30; Sp. p. 6188; Gaz. vol. 177; p. 1092.
Sipp, Grant, Paterson, N. J. Tension device. No. 1,022,512; Apr. 9; Sp. p. 1594; Gaz. vol. 177; p. 285.
Sitmenstok, Bruno, Tompkinsville, N. Y. Airship. No. 1,023,484; Apr. 16; Sp. p. 3686; Gaz. vol. 177; p. 633.
Sjoberg, Carl A., Providence, R. I. Pocket-knife and the like. No. 1,024,749; Apr. 30; Sp. p. 6490; Gaz. vol. 177; p. 1142.
Skellenger, Charles F. (See Beall and Skellenger.)
Skidmore, Charles, Homer, Nebr. End-gate for wagons. No. 1,025,024; Apr. 30; Sp. p. 7042; Gaz. vol. 177; p. 1237.
Skwarczewski, Stanislau, West Lynn, Mass. Curtain-fixture. No. 1,024,913; Apr. 30; Sp. p. 6828; Gaz. vol. 177; p. 1200.
Sladden, Sidney C., New York, N. Y. Window-sash lock. No. 1,022,880; Apr. 9; Sp. p. 2419; Gaz. vol. 177; p. 413.
Sleffel, William J., assignor to The Kirk-Latty Manufacturing Company, Cleveland, Ohio. Adjustable handlebars. No. 1,024,914; Apr. 30; Sp. p. 6828; Gaz. vol. 177; p. 1200.
Slick, Edwin E., Pittsburgh, Pa. Metal-forging apparatus. No. 1,022,006; Apr. 2; Sp. p. 550; Gaz. vol. 177; p. 86.
Sloan, Joseph A., Seattle, Wash. Game apparatus. No. 1,022,530; Apr. 2; Sp. p. 1228; Gaz. vol. 177; p. 196.
Small, James W., Rochester, N. Y. Machine for vending and registering tickets. No. 1,022,159; Apr. 2; Sp. p. 863; Gaz. vol. 177; p. 137.
Smart, Valentine I. (See Spicer and Smart.)
Smart, Walter J., New York, N. Y. Atomising apparatus. No. 1,021,951; Apr. 2; Sp. p. 428; Gaz. vol. 177; p. 69.
Smith, Charles F. (See Benhoff, Adam, assignor.)
Smith, Charles H. (See Leaver and Smith.)
Smith, Charles H., Minneapolis, Minn. Heating and ventilating system. No. 1,024,035; Apr. 23; Sp. p. 4857; Gaz. vol. 177; p. 861.
Smith, Edman A., Pineville, Ky. Oil cup or boxing. No. 1,023,046; Apr. 9; Sp. p. 2745; Gaz. vol. 177; p. 460.
Smith, Edward F. (See Nelson and Smith.)
Smith, Edward F., assignor to The Smith Electric Tool Co., Cincinnati, Ohio. Portable power-driven hand-tool. No. 1,024,151; Apr. 23; Sp. p. 5123; Gaz. vol. 177; p. 901.
Smith, Edwin R., Paris, Tex. Drafting-pen. No. 1,022,111; Apr. 2; Sp. p. 763; Gaz. vol. 177; p. 121.
Smith, Elbert L. (See Timmons and Smith.)
Smith Electric Tool Co., The. (See Smith, Edward F., assignor.)
Smith, Eli M., Union, Nebr. Pump. No. 1,024,229; Apr. 23; Sp. p. 5309; Gaz. vol. 177; p. 930.
Smith, Fletcher, Dallas, Tex. Cultivator-hopple. No. 1,022,272; Apr. 2; Sp. p. 1089; Gaz. vol. 177; p. 174.
Smith, Frank L., assignor to The B. F. Goodrich Company, Akron, Ohio. Deckle-strap. No. 1,022,513; Apr. 9; Sp. p. 1595; Gaz. vol. 177; p. 285.
Smith, Frank W., Westfield, N. J., assignor to Sundh Electric Company, New York, N. Y. Solenoid-controller. No. 1,022,707; Apr. 9; Sp. p. 2044; Gaz. vol. 177; p. 353.

Smith, Frank W., Westfield, N. J., assignor to Sundh Electric Company, New York, N. Y. Time-switch for electric circuits. No. 1,022,708; Apr. 9; Sp. p. 2047; Gaz. vol. 177; p. 354.
Smith, Gard W., Markle, Ind. Acetylene-gas generator. No. 1,023,767; Apr. 16; Sp. p. 4216; Gaz. vol. 177; p. 740.
Smith, Grant B., Poughkeepsie, N. Y. Means for heating automobile steering-wheels. No. 1,022,273; Apr. 2; Sp. p. 1090; Gaz. vol. 177; p. 175.
Smith, Harrison B., Bayside, N. Y. Seal for receptacles. No. 1,024,370; Apr. 23; Sp. p. 5569; Gaz. vol. 177; p. 975.
Smith, Henry J., assignor to H. D. Justi & Son, Philadelphia, Pa. Method and means for producing dental plates. No. 1,024,152; Apr. 23; Sp. p. 5129; Gaz. vol. 177; p. 902.
Smith, Henry J., assignor to H. D. Justi & Son, Philadelphia, Pa. Dental plate. No. 1,024,153; Apr. 23; Sp. p. 5131; Gaz. vol. 177; p. 902.
Smith, James C. (See Beall and Skellenger, assignors.)
Smith, John E., Turlock, Cal. Watchmaker's tool. No. 1,024,530; Apr. 30; Sp. p. 5986; Gaz. vol. 177; p. 1066.
Smith, John L., Detroit, Mich. Storage battery. No. 1,021,900; Apr. 2; Sp. p. 316; Gaz. vol. 177; p. 52.
Smith, Richard B., Sydney, New South Wales, Australia. Multiple-record phonograph. No. 1,023,047; Apr. 9; Sp. p. 2740; Gaz. vol. 177; p. 469.
Smith, Robert T., Warrington, England. Vehicle-wheel. No. 1,024,154; Apr. 23; Sp. p. 5132; Gaz. vol. 177; p. 902.
Smith, Taylor J., Union City, Ga. Combined baling and compressing apparatus. No. 1,022,709; Apr. 9; Sp. p. 2051; Gaz. vol. 177; p. 354.
Smith, Thomas. (See Crawford, Andrew, assignor.)
Smith, Thomas, assignor of one-half to G. T. Sharpton, San Luis Potosi, Mexico. Valve. No. 1,023,177; Apr. 16; Sp. p. 3067; Gaz. vol. 177; p. 552.
Smith, Victor C., Dayton, Ohio. Forming composite strips for making metallic letters. No. 1,023,527; Apr. 16; Sp. p. 3767; Gaz. vol. 177; p. 666.
Smith, Walter E., Boston, assignor to C. C. Rogers, Winchester, Mass. Catnip-ball. No. 1,022,112; Apr. 2; Sp. p. 763; Gaz. vol. 177; p. 122.
Smith, Walter E., Boston, assignor to C. C. Rogers, Winchester, Mass. Catnip-ball. No. 1,022,113; Apr. 2; Sp. p. 765; Gaz. vol. 177; p. 122.
Smith, William E., assignor of one-third to J. E. Acton and one-third to T. H. Cairns, Winnipeg, Manitoba, Canada. Nut-lock. No. 1,021,807; Apr. 2; Sp. p. 107; Gaz. vol. 177; p. 21.
Smith, William H., Minneapolis, Minn. Making wood-stain. No. 1,024,531; Apr. 30; Sp. p. 5997; Gaz. vol. 177; p. 1067.
Smith, William L., Indianapolis, Ind. Shoe-stretcher. No. 1,024,369; Apr. 30; Sp. p. 6735; Gaz. vol. 177; p. 1185.
Smith, William T., Swissvale, Pa. Tie and rail-fastener. No. 1,022,890; Apr. 9; Sp. p. 2421; Gaz. vol. 177; p. 414.
Smyth, William H., Berkeley, Cal. Valve. No. 1,023,885; Apr. 23; Sp. p. 4519; Gaz. vol. 177; p. 809.
Snavely, Benjamin F. (See Shapley, Raymond R., assignor.)
Snideman, Clora J., and F. H. Healey, Wabash, Ind. Sanitary tray for chairs. No. 1,021,901; Apr. 2; Sp. p. 317; Gaz. vol. 177; p. 52.
Snodgrass, Charles C., assignor of one-half to I. D. Morgan, New Martinsville, W. Va. Trolley. No. 1,024,290; Apr. 23; Sp. p. 5426; Gaz. vol. 177; p. 950.
Snow, Renceler C. (See Côté and Snow.)
Snyder, Augustus G., Utica, N. Y. Exhaust-muffler. No. 1,024,703; Apr. 30; Sp. p. 6389; Gaz. vol. 177; p. 1126.
Snyder, John E., Swissvale, assignor, by mesne assignments, to The Colonial Trust Company, trustee, Pittsburgh, Pa. Vibration stop-governor. No. 1,023,886; Apr. 23; Sp. p. 4521; Gaz. vol. 177; p. 810.
Snyder, Robert, Los Angeles, Cal. Covered folding cot. No. 1,023,048; Apr. 9; Sp. p. 2751; Gaz. vol. 177; p. 469.
Snyder, William H., Penn Yan, N. Y. Arithmetical game-board. No. 1,024,704; Apr. 30; Sp. p. 6390; Gaz. vol. 177; p. 1126.
Sobey, William, assignor to J. I. Case Plow Works, Racine, Wis. Planter. No. 1,022,891; Apr. 9; Sp. p. 2422; Gaz. vol. 177; p. 414.
Società Anonima Italiana Gio. Ansaldo Armstrong & Co. (See Giolitti, Federico, assignor.)
Società Anonyma Montbarbon. (See Lolano, Leon, assignor.) (Reissue.)
Société Harlé & Cie. (See Harlé, Emile, assignor.)
Society of Chemical Industry in Basle. (See Bazelli, Antonin, assignor.)
Soden, Alfred J., Newark, N. J. Shell. No. 1,023,330; Apr. 16; Sp. p. 3403; Gaz. vol. 177; p. 607.
Soderholm, Carl A., Chicago, Ill. Wrench. No. 1,022,892; Apr. 9; Sp. p. 2423; Gaz. vol. 177; p. 414.
Soens, Louis H., Mancos, Colo. Whiffletree-bearing. No. 1,024,067; Apr. 23; Sp. p. 4862; Gaz. vol. 177; p. 862.
Soley, Frank, assignor to Miller Lock Co., Philadelphia, Pa. Night-latch. No. 1,024,371; Apr. 23; Sp. p. 5560; Gaz. vol. 177; p. 975.
Solomon, Nettie J., Pekin, Ill. Hen's nest. No. 1,024,372; Apr. 23; Sp. p. 5562; Gaz. vol. 177; p. 975.
Somers, Thomas F., New York, N. Y. Combined waist and hose supporter. No. 1,022,893; Apr. 9; Sp. p. 2430; Gaz. vol. 177; p. 415.
Sommers, Edward P., Portland, Oreg. Pool-ball-rack attachment. No. 1,024,155; Apr. 23; Sp. p. 5135; Gaz. vol. 177; p. 903.
Sonnenberg, Henry. (See Trexler, George W., assignor.)
Sonntag, Lincoln, San Francisco, Cal. Shoe-holder. No. 1,023,587; Apr. 23; Sp. p. 4852; Gaz. vol. 177; p. 816.
Sorensen, Severin N., Minneapolis, Minn. Smut-machine. No. 1,023,888; Apr. 23; Sp. p. 4520; Gaz. vol. 177; p. 810.
Sottile, Thomas, Union, N. J. Composition of matter. No. 1,024,156; Apr. 23; Sp. p. 5135; Gaz. vol. 177; p. 903.
Sowards, Charles J., assignor of one-half to H. McBride, Marinette, Wis. Shell construction. No. 1,024,373; Apr. 23; Sp. p. 5563; Gaz. vol. 177; p. 975.
Sowers, Marion J., Halifax, Pa. Curtain-pole. No. 1,021,902; Apr. 2; Sp. p. 318; Gaz. vol. 177; p. 53.
Spalding, Henry. (See Parsons and Spalding.)
Spaltsholz, Karl W., Leipsig, Germany. Manufacture of transparent and translucent bodies. No. 1,021,962; Apr. 2; Sp. p. 490; Gaz. vol. 177; p. 69.
Spangler, Arthur B., Avery Island, La. Culinary or kitchen utensil. No. 1,023,226; Apr. 16; Sp. p. 3176; Gaz. vol. 177; p. 568.
Sparks, James M. (See McBride, Charles C., assignor.)
Sparks, Laban, administrator. (See Perky, Henry D.)
Specht, John, New York, N. Y., assignor to H. B. Hardenburg and Company. Purse. No. 1,022,976; Apr. 9; Sp. p. 2615; Gaz. vol. 177; p. 445.
Spence, Viva E. (See Spence, William H. and V. E.)
Spence, William H. and V. E., Underwood, Ind. Scissors. No. 1,024,655; Apr. 30; Sp. p. 6292; Gaz. vol. 177; p. 1108.
Spencer, George N., Forest Grove, Oreg. Aeroplane. No. 1,023,534; Apr. 16; Sp. p. 3778; Gaz. vol. 177; p. 668.
Spencer, Ira H., assignor to The Spencer Turbine Cleaner Company, Hartford, Conn. Cleaning apparatus. No. 1,022,114; Apr. 2; Sp. p. 766; Gaz. vol. 177; p. 122.
Spencer Lens Company. (See Ott and Leuchsenring, assignors.)
Spencer Turbine Cleaner Company, The. (See Spencer, Ira H., assignor.)
Spicer, Vibe K., and V. I. Smart, Montreal, Quebec, Canada. Train-staff system. No. 1,022,605; Apr. 9; Sp. p. 1805; Gaz. vol. 177; p. 316.
Spink, Edward J., assignor of one-third to J. A. Miller and one-third to R. S. Humphrey, Council Bluffs, Iowa. Burner. No. 1,025,025; Apr. 30; Sp. p. 7045; Gaz. vol. 177; p. 1238.
Spotts, James C. (See Carter, Jones, and Spotts.)
Sprague, Arthur W., La Grange, and T. E. Mulroyan, De Kalb, Ill., assignors to The American Steel and Wire Company of New Jersey, Hoboken, N. J. Gate-latch. No. 1,024,705; Apr. 30; Sp. p. 6392; Gaz. vol. 177; p. 1126.
Sprague, Clarence W., Philadelphia, Pa. Holder for electric lights, telephones, and the like. No. 1,025,026; Apr. 30; Sp. p. 7046; Gaz. vol. 177; p. 1238.
Sprague, Elisabeth, Minneapolis, Minn. Catamenial napkin. No. 1,022,894; Apr. 9; Sp. p. 2431; Gaz. vol. 177; p. 416.
Sprague, Newton C., Minneapolis, Minn. Oil and gas cooker. No. 1,023,768; Apr. 16; Sp. p. 4218; Gaz. vol. 177; p. 741.
Spreckels Sugar Company. (See Moore, Ralph H., assignor.)
Sprink, Isaac W., Oak Park, assignor to Armstrong Brothers Tool Company, Chicago, Ill. Boring-bar. No. 1,024,650; Apr. 30; Sp. p. 6293; Gaz. vol. 177; p. 1109.
Staahlgren, Karl A. A., New York, N. Y., assignor, by mesne assignments, to J. F. Allen, Dover, Del. Windproof casing for inverted incandescent gas-burners. No. 1,023,106; Apr. 23; Sp. p. 5014; Gaz. vol. 177; p. 893.
Stack, Edward, Pittsburgh, Pa. Combined tie and rail-fastener. No. 1,024,958; Apr. 30; Sp. p. 6911; Gaz. vol. 177; p. 1214.
Stacker, Patrick L., Greenwood, S. C. Road-grading machine. No. 1,023,899; Apr. 16; Sp. p. 3523; Gaz. vol. 177; p. 627.
Stafford, Benjamin E. D., assignor to Keystone Nut Lock Manufacturing Company, Pittsburgh, Pa. Nut-lock. No. 1,024,038; Apr. 23; Sp. p. 4863; Gaz. vol. 177; p. 862.
Stafford Company, The. (See Jackson, Simeon S., assignor.)
Stafford, John, and O. C. Currie, Detroit, Mich.; said Currie assignor to said Stafford. Multiple type-writer press. No. 1,024,461; Apr. 23; Sp. p. 5782; Gaz. vol. 177; p. 1005.
Stahl, Karl M., New York, N. Y. Microscope. No. 1,022,606; Apr. 9; Sp. p. 1811; Gaz. vol. 177; p. 316.
Stahr, Garibaldi, Petaluma, Cal. Support for paint-buckets. No. 1,021,908; Apr. 2; Sp. p. 319; Gaz. vol. 177; p. 53.
Stambaugh, George W., Chicago, Ill. Toy pistol. No. 1,024,574; Apr. 23; Sp. p. 5564; Gaz. vol. 177; p. 976.
Standard Asphalt and Rubber Company, The. (See Levering, William A., assignor.)
Standard Equipment Company, The. (See Dalfond, Octavien, assignor.)
Standard Optical Company. (See Boucher, Philias J., assignor.)

Stander, Jacob, Brooklyn, N. Y. Machine for making lock-joined angular metal tubing. No. 1,023,049; Apr. 9; Sp. p. 2753; Gaz. vol. 177; p. 470.
Stanley, John. (See Martin and Stanley.)
Stanley, John O., South Hadley Falls, assignor to B. F. Perkins and Son, Incorporated, Holyoke, Mass. Paper-testing machine. No. 1,025,101; Apr. 30; Sp. p. 7206; Gaz. vol. 177; p. 1262.
Stannard, Benjamin F., and A. Aginakee, Omaha, Nebr. Locomotive smoke-box. No. 1,023,970; Apr. 23; Sp. p. 4720; Gaz. vol. 177; p. 837.
Stannard, Benjamin F., and A. Aginakee, assignors to National Automatic Vehicle Fender Company, Omaha, Nebr. Automobile-fender. No. 1,023,971; Apr. 23; Sp. p. 4724; Gaz. vol. 177; p. 838.
Stanton, William M., Milwaukee, Wis. Meat chopper and tenderer. No. 1,024,811; Apr. 30; Sp. p. 6617; Gaz. vol. 177; p. 1164.
Staples, Albert F., Canisteo, N. Y. Account-register. No. 1,023,889; Apr. 23; Sp. p. 4527; Gaz. vol. 177; p. 811.
Staples, Albert F., assignor to Superior Register Company, Canisteo, N. Y. Account-register. No. 1,022,007; Apr. 2; Sp. p. 553; Gaz. vol. 177; p. 86.
Stapley, William S., assignor to Bridgeport Brass Company, Bridgeport, Conn. Shade-holder. No. 1,022,895; Apr. 9; Sp. p. 2431; Gaz. vol. 177; p. 415.
Stark, Charles H., Strasburg, Va. Car-coupling. No. 1,023,444; Apr. 16; Sp. p. 3607; Gaz. vol. 177; p. 642.
Stark, Emil G., Altchemnitz, near Chemnitz, Germany. Treating brittle vegetable fibers of kapok and other plants. No. 1,023,890; Apr. 23; Sp. p. 4531; Gaz. vol. 177; p. 811.
Starkweather, Jennie. (See Starkweather, Rufus G., assignor.)
Starkweather, Rufus G., Jordanville, N. Y. Mail and parcel collecting and distributing system. No. 1,024,707; Apr. 30; Sp. p. 6398; Gaz. vol. 177; p. 1127.
Starkweather, Rufus G., assignor of one-sixth to J. Starkweather, Jordanville, N. Y. Mail and parcel collection and delivery system. No. 1,024,706; Apr. 30; Sp. p. 6393; Gaz. vol. 177; p. 1126.
Starman, Joseph. (See Weis and Starman.)
Starnes, Oliver P., Cheyenne, Okla. Wire-stretcher. No. 1,023,072; Apr. 23; Sp. p. 4727; Gaz. vol. 177; p. 839.
Stassano, Ernesto, Turin, Italy. Electric furnace. No. 1,024,657; Apr. 30; Sp. p. 6295; Gaz. vol. 177; p. 1109.
Steele, George H. B., A. H. Boulter, and J. Hargreaves, Perth, Western Australia, Australia. Spark-arrester. No. 1,023,769; Apr. 16; Sp. p. 4220; Gaz. vol. 177; p. 741.
Steele, Herbert H., Marcellus, assignor to The Monarch Typewriter Company, Syracuse, N. Y. Type-writing machine. No. 1,021,953; Apr. 2; Sp. p. 433; Gaz. vol. 177; p. 70.
Steele, Herbert H., Marcellus, assignor to The Monarch Typewriter Company, Syracuse, N. Y. Type-writing machine. No. 1,023,535; Apr. 16; Sp. p. 3780; Gaz. vol. 177; p. 668.
Steele, Herbert H., Marcellus, assignor to The Monarch Typewriter Company, Syracuse, N. Y. Combined type-writing and computing machine. No. 1,023,687; Apr. 16; Sp. p. 4079; Gaz. vol. 177; p. 716.
Steele, Herbert H., Marcellus, assignor to The Monarch Typewriter Company, Syracuse, N. Y. Type-writing machine. No. 1,023,891; Apr. 23; Sp. p. 4532; Gaz. vol. 177; p. 811.
Steele, Herbert H., Marcellus, assignor to The Monarch Typewriter Company, Syracuse, N. Y. Type-writing machine. No. 1,024,157; Apr. 23; Sp. p. 5136; Gaz. vol. 177; p. 903.
Steelman, Lewis, Millville, N. J. Glass-delivering machine. No. 1,021,904; Apr. 2; Sp. p. 320; Gaz. vol. 177; p. 53.
Steen, William, Uhrichsville, Ohio. Chisel-holder. No. 1,024,039; Apr. 23; Sp. p. 4864; Gaz. vol. 177; p. 862.
Steers, William E., Whitehill, Caterham, England. Sighting of short-barreled weapons. No. 1,021,905; Apr. 2; Sp. p. 322; Gaz. vol. 177; p. 53.
Steger & Sons Piano Manufacturing Company. (See Betz, William G., assignor.)
Steiger, Emil H. (See Jerrems, Thomas W., assignor.)
Steimle, Emanuel, Salt Lake City, Utah. Spring-tire. No. 1,023,770; Apr. 16; Sp. p. 4221; Gaz. vol. 177; p. 742.
Stein, Leo, New York, assignor of one-half to J. C. Dehls, Brooklyn, N. Y. Compound for use in brewing fermented beverages. No. 1,024,158; Apr. 23; Sp. p. 5145; Gaz. vol. 177; p. 903.
Stein, Peter W., Homestead, Pa. Nut-locking device. No. 1,024,291; Apr. 23; Sp. p. 5428; Gaz. vol. 177; p. 951.
Stein, Sydney. (See Armbrust, Charles W., assignor.)
Steinle, Adolf, assignor to Firm of C. Zeiss, Jena, Germany. Hinged double telescope. No. 1,022,840; Apr. 2; Sp. p. 1229; Gaz. vol. 177; p. 196.
Stephan, Louis A., St. Louis, Mo. Gearing for washing-machines. No. 1,022,977; Apr. 9; Sp. p. 2616; Gaz. vol. 177; p. 445.
Stephen, John E. (See Lewis and Stephen.)
Stephens, Louis K., Dallas, Tex. Vehicle-wheel. No. 1,023,568; Apr. 16; Sp. p. 3928; Gaz. vol. 177; p. 690.
Stephens, R. M., *et al.* (See Brodton, Edward R., assignor.)
Stephens, Samuel, West Somerville, Mass. Printer's furniture. No. 1,024,606; Apr. 30; Sp. p. 6189; Gaz. vol. 177; p. 1092.
Sternau & Company, S. (See Nelson, Charles, assignor.)
Stettiner Chamotte-Fabrik Actien-Gesellschaft vorm. Didier. (See Gohmann, Arthur, assignor.)
Stevens, Frank C., assignor to Davis & Furber Machine Company, North Andover, Mass. Toothed cylinder. No. 1,022,896; Apr. 9; Sp. p. 2483; Gaz. vol. 177; p. 416.
Stevens, George E., Lynn, Mass., assignor to General Electric Company. Arc-lamp hanger. No. 1,022,514; Apr. 9; Sp. p. 1597; Gaz. vol. 177; p. 286.
Stevens, George E., Lynn, Mass., assignor to General Electric Company. Resistance unit. No. 1,022,897; Apr. 9; Sp. p. 2434; Gaz. vol. 177; p. 416.
Stevens, George W. (See Welwoda, Mathias, assignor.)
Stevens, Hattie J. (See Hall, Oscar E., assignor.)
Stevens, Herbert A., Malden, Mass. Battery-holder. No. 1,023,178; Apr. 16; Sp. p. 3089; Gaz. vol. 177; p. 552.
Stevens, Leslie, Glen Ridge, N. J. Hat. No. 1,024,750; Apr. 30; Sp. p. 6492; Gaz. vol. 177; p. 1143.
Stevens & Sons, M. T. (See Stone, George, assignor.)
Stevenson, David B., Rankin, Pa. Utensil-handle. No. 1,022,978; Apr. 9; Sp. p. 2617; Gaz. vol. 177; p. 445.
Stevenson, James E., Puyallup, Wash. Folding storm-front for automobiles. No. 1,024,658; Apr. 30; Sp. p. 6208; Gaz. vol. 177; p. 1110.
Stevenson, Sterling S., Washington, D. C. Exhaust-controlling mechanism. No. 1,024,375; Apr. 23; Sp. p. 5565; Gaz. vol. 177; p. 976.
Stewart, William, assignor of one-half to J. J. Schofield, Providence, R. I. Globe-valve. No. 1,024,751; Apr. 30; Sp. p. 6494; Gaz. vol. 177; p. 1143.
Stine, John E. (See Stine, John W. and J. E.)
Stine, John W. and J. E., San Francisco, Cal. Hose-coupling. No. 1,022,750; Apr. 9; Sp. p. 2171; Gaz. vol. 177; p. 372.
Stobrawa, Karl, Gleiwitz, Germany. Means for removing slag from hearth-furnaces. No. 1,025,027; Apr. 30; Sp. p. 7050; Gaz. vol. 177; p. 1289.
Stock, Robert, Berlin, Germany. Steering device for power-propelled vehicles. No. 1,022,160; Apr. 2; Sp. p. 866; Gaz. vol. 177; p. 137.
Stoddard, Carlton J., Salt Lake City, Utah. Room-cooling apparatus. No. 1,024,159; Apr. 23; Sp. p. 5147; Gaz. vol. 177; p. 903.
Stoddard, Charles F., Boston, Mass. Note-sheet for player-pianos and the like. No. 1,025,077; Apr. 30; Sp. p. 7143; Gaz. vol. 177; p. 1254.
Stoecklin, Ernest, Ridgefield Park, N. J. Tool-holder. No. 1,022,760; Apr. 9; Sp. p. 2173; Gaz. vol. 177; p. 372.
Stoll, Julius E. (See Fischer and Stoll.)
Stone, George, assignor to M. T. Stevens & Sons, North Andover, Mass. Tension-governor for yarn-winding apparatus. No. 1,022,979; Apr. 9; Sp. p. 2619; Gaz. vol. 177; p. 446.
Stone, William H., Bayard, Nebr. Plow. No. 1,023,771; Apr. 16; Sp. p. 4222; Gaz. vol. 177; p. 742.
Stowell, F. M., *et al.* (See Chatfield, Franklin, assignor.)
Strale, Allan N. H., assignor of one-half to E. Block, Chicago, Ill. Fire-brick wall or lining for blast and other furnaces. No. 1,021,851; Apr. 2; Sp. p. 211; Gaz. vol. 177; p. 35.
Strathus, Julius. (See Massohn and Strathus.)
Straus, Philip R., New York, N. Y., assignor to Charter Shirt Company, Newark, N. J. Combination-garment. No. 1,024,477; Apr. 23; Sp. p. 5823; Gaz. vol. 177; p. 1012.
Strauss, Herman. (See Hess, Harry, assignor.)
Strbe, Michal, assignor of one-half to S. Bartec, Pittsburgh, Pa. Hat-pin-point protector. No. 1,023,688; Apr. 16; Sp. p. 4084; Gaz. vol. 177; p. 716.
Strecker, Otto C., Eberstadt, near Darmstadt, Germany. Etching fluid for flat printing-plates of metal. No. 1,022,274; Apr. 2; Sp. p. 1093; Gaz. vol. 177; p. 175.
Street, John O. B., Okemah, Okla. Grading cotton-seed. No. 1,025,028; Apr. 30; Sp. p. 7051; Gaz. vol. 177; p. 1239.
Street & Kent Mfg. Co. (See Dale, William B., assignor.)
Strickland, John. (See Hodgen, James R., assignor.)
Strickler, Emerson H., White Plains, assignor to General Chemical Company, New York, N. Y. Making anhydrous sulfites and bisulfites. No. 1,023,179; Apr. 16; Sp. p. 3090; Gaz. vol. 177; p. 552.
Stridiron, Hugh B., *et al.* (See Holtz, Emerson E., assignor.)
Strieth, Heinrich, Nuremberg, Germany. Plant for producing paper-pulp and freeing it from liquid. No. 1,023,448; Apr. 16; Sp. p. 3610; Gaz. vol. 177; p. 641.
Stringer, Francis G., Nelson, British Columbia, Canada. Lock for wearing-apparel. No. 1,022,980; Apr. 9; Sp. p. 2621; Gaz. vol. 177; p. 446.
Strittmatter, Thomas P., Philadelphia, Pa. Electrolier. No. 1,024,160; Apr. 23; Sp. p. 5148; Gaz. vol. 177; p. 904.
Stromberg-Carlson Telephone Manufacturing Company. (See Clausen, Henry P., assignor.)
Strong, Frederick F., St. Petersburg, Fla. Pulp-separator. No. 1,023,280; Apr. 16; Sp. p. 3293; Gaz. vol. 177; p. 583.
Stroup, Daniel W., North Braddock, Pa. Apparatus for forming axles. No. 1,024,532; Apr. 30; Sp. p. 5997; Gaz. vol. 177; p. 1067.
Struble, James F., Hanston, assignor of one-half to J. Burns, Burdett, Kans. Hydraulic propeller. No. 1,024,376; Apr. 23; Sp. p. 5566; Gaz. vol. 177; p. 976

Stuart, Harve R., Wilkinsburg, Pa., and W. H. Thompson, Springfield, Mass., assignors to Westinghouse Electric and Manufacturing Company, Omolmer. No. 1,024,533; Apr. 30; Sp. p. 6099; Gaz. vol. 177; p. 1067.
Sturdevant, Charles R., Worcester, Mass. Splice-bar and rail-bond. No. 1,022,840; Apr. 16; Sp. p. 3405; Gaz. vol. 177; p. 606.
Stvanek, Carl, Stratford, Conn. Bevel-gear chuck. No. 1,022,761; Apr. 9; Sp. p. 2174; Gaz. vol. 177; p. 373.
Subers, Lawrence A., Cleveland, Ohio. Fabric constructed of laminated cohesive interwound members. No. 1,024,040; Apr. 23; Sp. p. 4866; Gaz. vol. 177; p. 863.
Subers, Lawrence A., Cleveland, Ohio. Laminated cohesive interwound fabric. No. 1,024,915; Apr. 30; Sp. p. 6830; Gaz. vol. 177; p. 1201.
Sucholtz, Rudolph E., Detroit, Mich. Plow. No. 1,024,534; Apr. 30; Sp. p. 6001; Gaz. vol. 177; p. 1067.
Süddeutsche Drahtindustrie Aktiengesellschaft. (See Loewenthal, Hugo, assignor.)
Suhr, Emil, West Hoboken, N. J., assignor of one-third to E. Hawerkamp and one-third to C. Ehrenberg, Kings county, N. Y. Spectacle-case. No. 1,024,752; Apr. 30; Sp. p. 6495; Gaz. vol. 177; p. 1143.
Sullivan, Jeremiah J., New Decatur, Ala., assignor of one-half to himself, and one-half to J. J. McCarthy, Chicago, Ill. Packing-ring. No. 1,022,841; Apr. 2; Sp. p. 1231; Gaz. vol. 177; p. 197.
Sullivan, John G., *et al.* (See Motley, Phillips B., assignee.)
Sullivan, Richard H., La Conner, Wash. Saw-tool. No. 1,023,341; Apr. 16; Sp. p. 3406; Gaz. vol. 177; p. 608.
Sulsona, Joseph D., New York, N. Y., assignor to Taximeter Control Company, Taximeter control. No. 1,023,050; Apr. 9; Sp. p. 2755; Gaz. vol. 177; p. 470.
Summa, Victor M., assignor to American Car and Foundry Company, St. Louis, Mo. Steel underframe for box-cars. No. 1,021,852; Apr. 2; Sp. p. 213; Gaz. vol. 177; p. 36.
Summa, Victor M., assignor to American Car and Foundry Company, St. Louis, Mo. Car-underframe. No. 1,022,710; Apr. 9; Sp. p. 2063; Gaz. vol. 177; p. 355.
Summerrow, Willie F., Austin, Tex. Cotton-condenser and lint-flue. No. 1,023,772; Apr. 16; Sp. p. 4224; Gaz. vol. 177; p. 742.
Summers, Amos W., and J. V. Thompson, Spencer, W. Va. Combined door lock and bell. No. 1,022,375; Apr. 2; Sp. p. 1094; Gaz. vol. 177; p. 176.
Summers, Leland L., Chicago, Ill. Making illuminating-gas. No. 1,023,446; Apr. 16; Sp. p. 3614; Gaz. vol. 177; p. 641.
Sundh Electric Company. (See Smith, Frank W., assignor.)
Sunshine, Monroe, New York, N. Y. Sad-iron. No. 1,023,689; Apr. 16; Sp. p. 4085; Gaz. vol. 177; p. 717.
Superior Register Company. (See Staples, Albert F., assignor.)
Surber, Steven P., San Antonio, Tex. Gage or indicator for liquid-tanks. No. 1,024,377; Apr. 23; Sp. p. 5570; Gaz. vol. 177; p. 977.
Susemihl, Theodor, and C. P. Carrington, New York, N. Y. Umbrella. No. 1,024,292; Apr. 23; Sp. p. 5428; Gaz. vol. 177; p. 951.
Süssmann, Heinrich, assignor to Deutsche Gasglühlicht Aktiengesellschaft (Auergesellschaft), Berlin, Germany. Incandescent gas-burner. No. 1,024,462; Apr. 23; Sp. p. 5790; Gaz. vol. 177; p. 1006.
Sutton, Harvey F., Salt Lake City, Utah. Apparatus for tunnelling rock. No. 1,025,029; Apr. 30; Sp. p. 7052; Gaz. vol. 177; p. 1239.
Swarm, Emery E., Hampton, Ill. Wire-stretcher. No. 1,023,409; Apr. 16; Sp. p. 3525; Gaz. vol. 177; p. 627.
Swartzbaugh, Charles E., Toledo, Ohio. Noodle-cutter. No. 1,024,535; Apr. 30; Sp. p. 6003; Gaz. vol. 177; p. 1068.
Swautusch, Frank W., Butler, Ind. Stroking attachment for concrete-mixing machines. No. 1,022,607; Apr. 9; Sp. p. 1812; Gaz. vol. 177; p. 317.
Sweet, Charles B., Wilkinsburg, assignor, by mesne assignments, to The Colonial Trust Company, trustee, Pittsburgh, Pa. Blade-lashing means. No. 1,023,892; Apr. 23; Sp. p. 4539; Gaz. vol. 177; p. 812.
Sweet, Welcome F., St. Louis, Mo. Drill magazine and chuck. No. 1,022,711; Apr. 9; Sp. p. 2064; Gaz. vol. 177; p. 355.
Sweet, William H., Berkeley, Cal. Heating system. No. 1,024,167; Apr. 23; Sp. p. 5150; Gaz. vol. 177; p. 904.
Swick, Wilbert L., Glenwood Springs, Colo. Flume. No. 1,022,000; Apr. 2; Sp. p. 556; Gaz. vol. 177; p. 87.
Swiney, Eben B., assignor of one-half to D. P. Shaw, Belpre, Ohio. Gage-cock. No. 1,023,051; Apr. 9; Sp. p. 2758; Gaz. vol. 177; p. 470.
Swinton, Ralph S., Linden, N. J., assignor to W. J. Bush & Co., Incorporated, Dover, Del. Manufacture of volatile organic acids from their calcium salts. No. 1,023,231; Apr. 16; Sp. p. 3296; Gaz. vol. 177; p. 589.
Syracuse Chilled Plow Company. (See Chase, Aurin M., assignor.)
Syverson, Gunder, Tioga, N. D. Article-hanger. No. 1,025,030; Apr. 30; Sp. p. 7054; Gaz. vol. 177; p. 1239.
Szabados, Antony, assignor of one-half to H. Mueller, New Michel, British Columbia, Canada. Rail-fastener. No. 1,021,954; Apr. 2; Sp. p. 441; Gaz. vol. 177; p. 70.
Szabados, Antony, assignor of one-sixth to H. Mueller, one-sixth to M. Unoka, and one-sixth to G. Hebell, New Michel, British Columbia, Canada. Cuspidor. No. 1,024,954; Apr. 30; Sp. p. 6912; Gaz. vol. 177; p. 1214.
Szpor, Zdzislawow, Stanislawow, Austria-Hungary. Primary battery. No. 1,022,276; Apr. 2; Sp. p. 1096; Gaz. vol. 177; p. 176.
Szücs, John. (See Lukács, Lázár, assignor.)
Szuminsky, Peter, Hamilton, Ontario, Canada. Trolley. No. 1,024,293; Apr. 23; Sp. p. 5431; Gaz. vol. 177; p. 951.
Taack, Ed G., True, Tex. Spark-arrester. No. 1,022,277; Apr. 2; Sp. p. 1097; Gaz. vol. 177; p. 176.
Tagliabue, Charles J. (See Boman, Claes W., assignor.)
Tailors' Form Company. (See Downey, Richard F., assignor.)
Takács, István, Barberton, Ohio. Electric trap. No. 1,023,599; Apr. 16; Sp. p. 3929; Gaz. vol. 177; p. 690.
Tambacopolo, Constantine E. M., New York, N. Y. Condenser for smelter-furnace fumes. No. 1,023,600; Apr. 16; Sp. p. 3930; Gaz. vol. 177; p. 690.
Tamburini, Matthew, Paterson, N. J. Measuring device. No. 1,021,956; Apr. 2; Sp. p. 442; Gaz. vol. 177; p. 71.
Tangeman, Elde J., Keystone, Iowa. Gate or door lock. No. 1,022,981; Apr. 9; Sp. p. 2623; Gaz. vol. 177; p. 447.
Taplinger, Nellie. (See Taplinger, William J., assignor.)
Taplinger, William J., assignor to N. Taplinger, Philadelphia, Pa. Stand for dress-forms. No. 1,022,808; Apr. 9; Sp. p. 1814; Gaz. vol. 177; p. 317.
Tarbox, Fred O., Haverhill, Mass. Combined mop holder and wringer. No. 1,022,982; Apr. 9; Sp. p. 2624; Gaz. vol. 177; p. 447.
Taub, Ludwig, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. 2-phenylquinolin-4-carboxylic-acid ester. No. 1,022,444; Apr. 9; Sp. p. 1461; Gaz. vol. 177; p. 262.
Taub, Ludwig, and H. Hahl, assignors to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Pharmaceutical product. No. 1,022,645; Apr. 9; Sp. p. 1590; Gaz. vol. 177; p. 330.
Tauber, John C., Erie, Pa. Pneumatic cleaner. No. 1,024,041; Apr. 23; Sp. p. 4868; Gaz. vol. 177; p. 863.
Taximeter Control Company. (See Sulsona, Joseph D., assignor.)
Taylor, Alton B., assignor of one-half to A. P. Geiser, Washington, Pa. Ball-joint. No. 1,023,690; Apr. 16; Sp. p. 4087; Gaz. vol. 177; p. 717.
Taylor, Edward W., Salt Lake City, Utah. Nut-lock. No. 1,024,107; Apr. 23; Sp. p. 5016; Gaz. vol. 177; p. 886.
Taylor, Elmer Z., London, England, assignor, by mesne assignments, to American Mono Service Company, Atlantic City, N. J. Apparatus for manufacture of paper vessels. No. 1,022,052; Apr. 9; Sp. p. 2760; Gaz. vol. 177; p. 471.
Taylor, George H., Helena, Mont. Electric switch. No. 1,023,691; Apr. 16; Sp. p. 4088; Gaz. vol. 177; p. 717.
Taylor, James H., Oak Park, Ill. Making pipe-bends. No. 1,023,227; Apr. 16; Sp. p. 3178; Gaz. vol. 177; p. 569.
Taylor, James H., Oak Park, Ill. Making bosses. No. 1,023,228; Apr. 16; Sp. p. 3179; Gaz. vol. 177; p. 569.
Taylor, Job W., Montreal, Quebec, Canada. Wire-fence-stretching clamp. No. 1,023,229; Apr. 16; Sp. p. 3180; Gaz. vol. 177; p. 569.
Taylor, Lloyd B., Chicago, Ill. Traveling-bag for bowlers. No. 1,024,536; Apr. 30; Sp. p. 6004; Gaz. vol. 177; p. 1068.
Taylor, Richard L., Pine Bluff, Ark. Horseshoe. No. 1,024,426; Apr. 23; Sp. p. 5705; Gaz. vol. 177; p. 993.
Technical Development Company, The. (See Davis, John T., assignor.)
Teeter, Pliar G. (See Teeter, Samuel M. and E. G.)
Teeter, Samuel M. and E. G., St. Louis, Mo. Combined fender and apron. No. 1,022,278; Apr. 2; Sp. p. 1099; Gaz. vol. 177; p. 176.
Tellander, Axel W., St. Paul, Minn. Car-brake-setting lever. No. 1,022,445; Apr. 9; Sp. p. 1461; Gaz. vol. 177; p. 262.
Temple, John J., Kalamazoo, Mich. Plaiting device. No. 1,022,602; Apr. 9; Sp. p. 2251; Gaz. vol. 177; p. 335.
Tendler, Benard, Schulenburg, Tex. Needle for sound-reproducing machines. No. 1,022,515; Apr. 9; Sp. p. 1593; Gaz. vol. 177; p. 286.
Terbell, J. B. (See Thompson, James S., assignor.)
Termaat & Monahan Co. (See Monahan, Louis J., assignor.)
Terteling, Theodore B., assignor to Lion Machine Company, Detroit, Mich. Vending-machine. No. 1,024,870; Apr. 30; Sp. p. 6740; Gaz. vol. 177; p. 1186.
Teschemacher, Werner, Werden-on-the-Ruhr, Germany. Packing-ring. No. 1,024,204; Apr. 23; Sp. p. 5432; Gaz. vol. 177; p. 951.
Tessenyman, John F., and R. R. Weaver, assignors to The Ralston Steel Car Company, Columbus, Ohio. Drop-door mechanism for cars. No. 1,022,516; Apr. 9; Sp. p. 1600; Gaz. vol. 177; p. 286.
Tessmer, Earl, Seattle, Wash., assignor, by mesne assignments, to F. M. Gordon, Detroit, Mich. Razor-blade-sharpening machine. No. 1,022,383; Apr. 2; Sp. p. 1300; Gaz. vol. 177; p. 212.
Tevander, Swan. (See Rudolphi and Tevander.)
Thayer, Joseph E., East Bridgewater, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Bobbin-holding device for lock-stitch sewing-machines. No. 1,024,708; Apr. 30; Sp. p. 6400; Gaz. vol. 177; p. 1127.

Theisen, Bruno H., and G. S. Keller, Minneapolis, Minn. Leather-stitching machine. No. 1,024,162; Apr. 23; Sp. p. 5150; Gaz. vol. 177; p. 904.
Theme, Gustav F., Gowanda, N. Y. Root cutter and slicer. No. 1,022,973; Apr. 23; Sp. p. 4728; Gaz. vol. 177; p. 839.
Theus, Paul J., Ocala, Fla. Peanut-picker. No. 1,022,842; Apr. 2; Sp. p. 1232; Gaz. vol. 177; p. 107.
Thieme, Otto, assignor to Moon-Hopkins Billing Machine Company, St. Louis, Mo. Tripping-block for typewriting machines. No. 1,024,295; Apr. 23; Sp. p. 5483; Gaz. vol. 177; p. 952.
Thir, John, Dexter, N. Y. Curtain-pole. No. 1,022,210; Apr. 2; Sp. p. 970; Gaz. vol. 177; p. 155.
Third Hand Patents Limited. (See Hampson, John, assignor.)
Thiesen, Jacob, Kane, Pa. Resilient tire. No. 1,024,753; Apr. 30; Sp. p. 6496; Gaz. vol. 177; p. 1148.
Thomas Gin Compress Company. (See Phelps, Frank, assignor.)
Thomas, Jesse B., Boston, Mass. Fire-extinguisher. No. 1,022,211; Apr. 2; Sp. p. 972; Gaz. vol. 177; p. 156.
Thomas, L. A. (See Thomas, Richard H., assignor.)
Thomas, Richard H., assignor to L. A. Thomas, Chicago, Ill. Trap-valve. No. 1,024,163; Apr. 23; Sp. p. 5152; Gaz. vol. 177; p. 905.
Thomas, Rudolf, Charlottenburg, Germany. Matrix-setting device. No. 1,024,296; Apr. 23; Sp. p. 5434; Gaz. vol. 177; p. 952.
Thomas W. Pangborn Company, The. (See Hull, Foster J., assignor.)
Thomasson, Joseph T. (See Balch, Reuben E., assignor.)
Thompson, Augustus F., Huntington, W. Va. Incandescent lamp. No. 1,024,378; Apr. 23; Sp. p. 5572; Gaz. vol. 177; p. 977.
Thompson, Charles A. (See Crocelius, Louis J., assignor.)
Thompson Electric Clock Company. (See Thompson, William H., assignor.)
Thompson, Everett L., New York, and J. R. Hamilton, Mount Kisco, N. Y., assignors to Venturi Alarm Company, Dover, N. J. Sprinkler-alarm device. No. 1,022,446; Apr. 9; Sp. p. 1463; Gaz. vol. 177; p. 263.
Thompson, Henry, Valera, Tex. Seed-cotton cleaner. No. 1,024,297; Apr. 23; Sp. p. 5436; Gaz. vol. 177; p. 952.
Thompson, James S., assignor of one-half to J. B. Terbell, Chicago, Ill. Antitelescoping device for railway-cars. No. 1,024,164; Apr. 23; Sp. p. 5154; Gaz. vol. 177; p. 905.
Thompson, James V. (See Summers and Thompson.)
Thompson, Joseph S., Mill Valley, Cal. Means for fastening electric conductors to insulators. No. 1,022,161; Apr. 2; Sp. p. 868; Gaz. vol. 177; p. 138.
Thompson, Ross E. (See Ripley, Gladson, and Thompson.)
Thompson, Roy S., Chicago, Ill. Cherry-stemming device. No. 1,022,609; Apr. 9; Sp. p. 1815; Gaz. vol. 177; p. 317.
Thompson, Wilbur H. (See Stuart and Thompson.)
Thompson, William, New York, N. Y. Convertible bed and divan. No. 1,022,212; Apr. 2; Sp. p. 975; Gaz. vol. 177; p. 156.
Thompson, William D., assignor to Hutchins Car Roofing Company, Detroit, Mich. Car-roof. No. 1,025,031; Apr. 30; Sp. p. 7055; Gaz. vol. 177; p. 1240.
Thompson, William H., Memphis, Tenn. Motor for advertisement-display apparatus. No. 1,022,898; Apr. 9; Sp. p. 2436; Gaz. vol. 177; p. 416.
Thompson, William H., assignor to Thompson Electric Clock Company, Memphis, Tenn. Electric automobile-clock. No. 1,024,709; Apr. 30; Sp. p. 6401; Gaz. vol. 177; p. 1128.
Thomsen, Carl L., Copenhagen, Denmark. Picture-exhibiting apparatus. No. 1,024,955; Apr. 30; Sp. p. 6914; Gaz. vol. 177; p. 1215.
Thomson Electric Welding Company. (See Thomson, Elihu, assignor.)
Thomson, Elihu, Swampscott, Mass., assignor to General Electric Company. Electrical measuring instrument. No. 1,022,517; Apr. 9; Sp. p. 1602; Gaz. vol. 177; p. 287.
Thomson, Elihu, Swampscott, assignor to Thomson Electric Welding Company, Lynn, Mass. Uniting metals. No. 1,022,712; Apr. 9; Sp. p. 2067; Gaz. vol. 177; p. 355.
Thomson, Francis D., Wheeling, W. Va. Reversing driving mechanism. No. 1,024,298; Apr. 23; Sp. p. 5438; Gaz. vol. 177; p. 953.
Thorndike, Herbert W., assignor to P. W. Webb Manufacturing Company, Boston, Mass. Jet-head for drinking-fountains. No. 1,022,162; Apr. 2; Sp. p. 869; Gaz. vol. 177; p. 138.
Thowless, Orlando M., Newark, N. J. Illuminant for electrical incandescent lamps. No. 1,023,485; Apr. 16; Sp. p. 3633; Gaz. vol. 177; p. 653.
Threm, Albert J., Beans Creek, Tenn. Lock-nut. No. 1,024,427; Apr. 23; Sp. p. 5706; Gaz. vol. 177; p. 993.
Throckmorton, Ralph H., Homestead, Nebr. Manure-spreader. No. 1,023,242; Apr. 16; Sp. p. 3406; Gaz. vol. 177; p. 608.
Thropp, Peter D. (See De Laski and Thropp.) (Reissue.)
Thunberg, Oscar F., Seattle, Wash. Tripod attachment. No. 1,022,968; Apr. 9; Sp. p. 2626; Gaz. vol. 177; p. 447.
Tibbetts, Milton, assignor, by mesne assignments, to Packard Motor Car Company, Detroit, Mich. Ignition apparatus for hydrocarbon-engines. No. 1,023,180; Apr. 16; Sp. p. 3002; Gaz. vol. 177; p. 553.
Tietz, William, Richmond, Va. Shelf structure. No. 1,025,032; Apr. 30; Sp. p. 7056; Gaz. vol. 177; p. 1240.
Timmins, Forrest M. (See Anderson, Emil H., assignor.)
Timmons, Haskell H., and E. L. Smith, Fredonia, Kans. Music-leaf turner. No. 1,024,916; Apr. 30; Sp. p. 6839; Gaz. vol. 177; p. 1201.
Tisher, Zachariah, Spokane, Wash. Aeroplane. No. 1,025,033; Apr. 30; Sp. p. 7058; Gaz. vol. 177; p. 1241.
Titanium Alloy Manufacturing Company, The. (See Rossi, Auguste J., assignor.)
Todd, H. Stanley (See Anderson, Emil, assignor.)
Toledo Metal Furniture Company, The. (See Uhl, Joseph F. L., assignor.)
Toll, Niles C., Lathrop, Cal. Disappearing folding caster. No. 1,022,646; Apr. 9; Sp. p. 1891; Gaz. vol. 177; p. 390.
Tomlinson, Clifford J., West Allis, assignor to Allis-Chalmers Company, Milwaukee, Wis. Pulverizer. No. 1,021,906; Apr. 2; Sp. p. 324; Gaz. vol. 177; p. 54.
Tong, Thomas T., Gordon, Nebr. Metallic railway-tie. No. 1,024,299; Apr. 23; Sp. p. 5430; Gaz. vol. 177; p. 952.
Torkington, Alfred W., Purley, assignor to Torkington Tires (Patent Syndicate) Limited, London, England. Elastic tire. No. 1,024,042; Apr. 23; Sp. p. 4869; Gaz. vol. 177; p. 863.
Torkington Tires (Patent Syndicate) Limited. (See Torkington, Alfred W., assignor.)
Tormin, Egmont M., Brookline, Mass., assignor to Holtzer-Cabot Electric Company. Pole-changer. No. 1,024,463; Apr. 23; Sp. p. 5791; Gaz. vol. 177; p. 1006.
Tosco, Agostino, and A. Camino, San Francisco, Cal. Engine. No. 1,024,379; Apr. 23; Sp. p. 5573; Gaz. vol. 177; p. 977.
Towell, Thomas H., assignor to The United States Phonograph Company, Cleveland, Ohio. Horn for talking-machines. No. 1,024,108; Apr. 23; Sp. p. 5018; Gaz. vol. 177; p. 887.
Tömör, John, assignor of one-third to S. Konyha and one-third to L. Imrecse, New York, N. Y. Elevator safety device. No. 1,024,300; Apr. 23; Sp. p. 5440; Gaz. vol. 177; p. 953.
Tracy, Hayden H., Berkeley, and H. E. Boyrie, San Francisco, Cal. Steam-boiler structure. No. 1,022,647; Apr. 9; Sp. p. 1892; Gaz. vol. 177; p. 330.
Transom Draft Gear Company. (See Westlake, Charles T., assignor.)
Travis, Clarence C., B. M. Davis, and A. D. Antoine, Chicago, Ill.; said Davis and Antoine assignors to said Travis. Check-controlled mechanism. No. 1,024,537; Apr. 30; Sp. p. 6005; Gaz. vol. 177; p. 1068.
Treganza, Howard J., assignor to The Ansonia Clock Company, New York, N. Y. Clock. No. 1,022,213; Apr. 2; Sp. p. 977; Gaz. vol. 177; p. 157.
Tremaine, Edward J., Hackensack, assignor to Automatic Weighing Machine Company, Newark, N. J. Package-filling apparatus. No. 1,023,343; Apr. 16; Sp. p. 3409; Gaz. vol. 177; p. 608.
Tressler, Charles J. (See Tressler, John H. and C. J.)
Tressler, John H. and C. J., Glencoe, Pa. Rail-joint. No. 1,022,279; Apr. 2; Sp. p. 1100; Gaz. vol. 177; p. 176.
Trew, John W., and C. McGaughey, Staunton, Ill. Automatic catching device. No. 1,025,034; Apr. 30; Sp. p. 7060; Gaz. vol. 177; p. 1241.
Trewhella, William, Trentham, Victoria, Australia. Snatch-block. No. 1,022,569; Apr. 9; Sp. p. 1720; Gaz. vol. 177; p. 304.
Trexler, George W., Pittsburgh, assignor of one-half to H. Sonnenberg, Turtle Creek, Pa. Bottle-closure. No. 1,024,917; Apr. 30; Sp. p. 6831; Gaz. vol. 177; p. 1201.
Trinks, Franz, Brunswick, Germany. Calculating-machine. No. 1,022,280; Apr. 2; Sp. p. 1102; Gaz. vol. 177; p. 177.
Triplex Tire Company. (See Allen, Sherman T., assignor.)
Troup, Charles, Watseka, Ill. Automatic continuous rail-joint. No. 1,022,984; Apr. 9; Sp. p. 2627; Gaz. vol. 177; p. 448.
Troutt, George A., Detroit, Mich. Internal-combustion engine. No. 1,022,803; Apr. 9; Sp. p. 2255; Gaz. vol. 177; p. 385.
Trowbridge, Helen F., Port Washington, N. Y. Toy animal. No. 1,023,401; Apr. 16; Sp. p. 3526; Gaz. vol. 177; p. 628.
Troxel, David S., Elyria, Ohio. Bicycle-saddle. No. 1,022,447; Apr. 9; Sp. p. 1469; Gaz. vol. 177; p. 263.
Troy, Daniel W., Montgomery, Ala. Method and apparatus for separating materials. No. 1,024,100; Apr. 23; Sp. p. 5021; Gaz. vol. 177; p. 887.
Truelsen, Peter C., and A. Simonsen, Glendale, N. Y. Fire-lighting device. No. 1,022,058; Apr. 2; Sp. p. 642; Gaz. vol. 177; p. 102.
Trussed Concrete Steel Company. (See Kane, Thomas H., assignor.)
Tscherne, Alois, assignor to Firm of H. Levy, Rorschach, Switzerland. Apparatus for cutting the waste from embroideries. No. 1,022,610; Apr. 9; Sp. p. 1817; Gaz. vol. 177; p. 318.
Tscherne, Alois, assignor to Firm of H. Levy, Rorschach, Switzerland. Machine for cutting embroidery foundation. No. 1,022,611; Apr. 9; Sp. p. 1818; Gaz. vol. 177; p. 318.

Tscherne, Alois, assignor to Firm of H. Levy, Rorschach, Switzerland. Machine for cutting embroideries. No. 1,024,312; Apr. 30; Sp. p. 6619; Gaz. vol. 177; p. 1165.
Tucker, Harry S., West Raleigh, N. C. Pipe-wrench. No. 1,024,043; Apr. 23; Sp. p. 4871; Gaz. vol. 177; p. 864.
Tucker, John R., Aurora, Ill., assignor to Ipsen Indicator Company, Salt Lake City, Utah. Street and station indicator. No. 1,024,044; Apr. 23; Sp. p. 4873; Gaz. vol. 177; p. 864.
Tunison, Arthur C., assignor to Atlas Cement Pipe and Machinery Co., Boise, Idaho. Pipe-making machine. No. 1,025,035; Apr. 30; Sp. p. 7062; Gaz. vol. 177; p. 1241.
Turall, Jesse W. (See Cluts, Salisbury, and Turall.)
Turner, Charles, and H. J. Flood, Chicago, Ill.; said Flood assignor to said Turner. Oil-extracting device. No. 1,024,220; Apr. 23; Sp. p. 5311; Gaz. vol. 177; p. 930.
Turner, Claude A. P., Minneapolis, Minn. Concrete building. No. 1,025,036; Apr. 30; Sp. p. 7066; Gaz. vol. 177; p. 1242.
Turner, Ernest J., Pittsburgh, assignor of one-third to B. H. Howard, Aspinwall, Pa. Feeder for ingot-molds. No. 1,022,348; Apr. 2; Sp. p. 1234; Gaz. vol. 177; p. 197.
Turner, Otto F., and W. H. Maple; said Maple assignor to said Turner, Pendleton, Oreg. Cover for tea-kettles. No. 1,024,607; Apr. 30; Sp. p. 6190; Gaz. vol. 177; p. 1062.
Turner, Walter V., Edgewood, assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa. Unloading device for pumps. No. 1,021,808; Apr. 2; Sp. p. 108; Gaz. vol. 177; p. 21.
Turner, Walter V., Edgewood, assignor to The Westinghouse Air Brake Company, Pittsburgh, Pa. Engineer's brake-valve device. (Reissue.) No. 13,402; Apr. 9; Sp. p. 2918; Gaz. vol. 177; p. 497.
Turnipseed, A. L. (See Newman, Bert W., assignor.)
Tuttle, Henry A., assignor to Evans Stamping & Plating Company, Taunton, Mass. Thrust-collar. No. 1,022,518; Apr. 9; Sp. p. 1605; Gaz. vol. 177; p. 287.
Tuttle, Joseph B., assignor of one-half to R. P. Robinson, Asheville, N. C. Dinner-pail. No. 1,024,231; Apr. 23; Sp. p. 5314; Gaz. vol. 177; p. 931.
Tuttle, Washington I., Baltimore, Md. Metallic box. No. 1,023,893; Apr. 23; Sp. p. 4541; Gaz. vol. 177; p. 812.
Tuxworth, Frank E., Fullerton, La. Conveyer-cleat. No. 1,024,232; Apr. 23; Sp. p. 5316; Gaz. vol. 177; p. 931.
Twombly Motors Company. (See Twombly, Willard I., assignor.)
Twombly, Willard I., assignor to Twombly Motors Company, New York, N. Y. Coupling or union. No. 1,022,844; Apr. 2; Sp. p. 1235; Gaz. vol. 177; p. 198.
Tyrhon, Justyn A., Cloquet, Minn. Spreader for reins. No. 1,022,985; Apr. 9; Sp. p. 2629; Gaz. vol. 177; p. 448.
Tyer, Edward, Dalston, London, England. Apparatus for controlling the traffic on single-line railways. No. 1,024,233; Apr. 23; Sp. p. 5317; Gaz. vol. 177; p. 931.
Typograph G. m. b. H. (See Dorneth, Julius, assignor.)
Uebelmesser, Charles R., assignor to American Moving Picture Machine Company, New York, N. Y. Moving-picture machine. No. 1,023,053; Apr. 9; Sp. p. 2767; Gaz. vol. 177; p. 471.
Uhl, Joseph F. L., assignor to The Toledo Metal Furniture Company, Toledo, Ohio. Knockdown stand, stool, or the like. No. 1,023,181; Apr. 16; Sp. p. 3094; Gaz. vol. 177; p. 553.
Uhl, Joseph F. L., assignor to The Toledo Metal Furniture Company, Toledo, Ohio. Caster raising and lowering means for stands, &c. No. 1,023,182; Apr. 16; Sp. p. 3096; Gaz. vol. 177; p. 553.
Ulricha, Ernst, Elberfeld, assignor to Company "Wilfing, Dahl & Co., Actiengesellschaft," Barmen, Germany. Manufacture of lakes. No. 1,022,612; Apr. 9; Sp. p. 1819; Gaz. vol. 177; p. 318.
Underwood, Oliver P. (See Hill and Underwood.)
Underwood Typewriter Company. (See Barnard, Walter E., assignor.)
Underwood Typewriter Company. (See Corcoran, Cornelius B., assignor.)
Underwood Typewriter Company. (See Fortin, Benjamin P., assignor.)
Underwood Typewriter Company. (See McLaughlin, John C., assignor.)
Unger, Frank C., St. Louis, Mo. Telephone system. No. 1,022,713; Apr. 9; Sp. p. 2069; Gaz. vol. 177; p. 356.
Union Metal Manufacturing Company, The. (See Barrick, Christopher C., assignor.)
Union Switch & Signal Company, The. (See Wurts, Alexander J., assignor.)
Union Typewriter Company. (See Barrett, Glenn J., assignor.)
Union Typewriter Company. (See Barron, Walter J., assignor.)
Union Typewriter Company. (See Felbel, Jacob, assignor.)
Union Typewriter Company. (See Pool, Morris W., assignor.)
United Bifocal Company. (See Seymour, Walter I., assignor.)
United Gas Improvement Company. (See Knapp, Isaac N., assignor.)
United Iron Works. (See Yeatman, John A., assignor.)
United Shoe Machinery Company. (See Ashton, Orrell, assignor.)
United Shoe Machinery Company. (See Bertrand, Frederic E., assignor.)
United Shoe Machinery Company. (See Brock, Matthias, assignor.)
United Shoe Machinery Company. (See Brothers, Ell, assignor.)
United Shoe Machinery Company. (See Chick, Walter, assignor.)
United Shoe Machinery Company. (See Davey, John F., assignor.)
United Shoe Machinery Company. (See Dow, John L., assignor.)
United Shoe Machinery Company. (See Drey, Wilfred J., assignor.)
United Shoe Machinery Company. (See Engberg, Arvid L., assignor.)
United Shoe Machinery Company. (See Eppler, Andrew, assignor.)
United Shoe Machinery Company. (See Galloway, David E., assignor.)
United Shoe Machinery Company. (See Gillespie, John J., assignor.)
United Shoe Machinery Company. (See Hadaway, John B., assignor.)
United Shoe Machinery Company. (See Harmon, Frank L., assignor.)
United Shoe Machinery Company. (See Jerram, Arthur E., assignor.)
United Shoe Machinery Company. (See Johnson, Carl G., assignor.)
United Shoe Machinery Company. (See Keyes, Eugene L., assignor.)
United Shoe Machinery Company. (See Lund, Thomas, assignor.)
United Shoe Machinery Company. (See Norden, Carl S., assignor.)
United Shoe Machinery Company. (See Perri, Angelo, assignor.)
United Shoe Machinery Company. (See Perry, Frederick H., assignor.)
United Shoe Machinery Company. (See Rogers, Chester E., assignor.)
United Shoe Machinery Company. (See Rogers, Pearley B., assignor.)
United Shoe Machinery Company. (See Russell, Arthur L., assignor.)
United Shoe Machinery Company. (See Sampson, George W., assignor.)
United Shoe Machinery Company. (See Thayer, Joseph E., assignor.)
United Shoe Machinery Company. (See Wald, Frank, assignor.)
United Shoe Machinery Company. (See Warren, Frank H., assignor.)
United Shoe Machinery Company. (See Waterman, Bradford, B., assignor.) (Reissue.)
United States Phonograph Company, The. (See Towell, Thomas H., assignor.)
United-Xpedite Finishing Company. (See Beaudry, Zotique, assignor.)
Universal Stamping Machine Company. (See Graham, George H., assignor.)
Universal Winding Company. (See Rand, Festus S., assignor.)
Universal Winding Company. (See Wardwell, Simon W., assignor.)
Unoka, Mike, *et al.* (See Szabados, Antony, assignor.)
Untermeyer-Robbins & Company. (See Robbins, Meyer L., assignor.)
Upham, William P., Keene, N. H. Non-refillable bottle. No. 1,022,899; Apr. 9; Sp. p. 2438; Gaz. vol. 177; p. 417.
Upson, Delevan P., assignor to Upson Rotary Motor Co., Jacksonville, Fla. Rotary steam-engine. No. 1,022,570; Apr. 9; Sp. p. 1721; Gaz. vol. 177; p. 304.
Upson, Delevan P., assignor to Upson Rotary Motor Co., Jacksonville, Fla. Rotary steam-engine. No. 1,022,571; Apr. 9; Sp. p. 1723; Gaz. vol. 177; p. 304.
Upson Rotary Motor Co. (See Upson, Delevan P., assignor.)
Upton, Colcord, Baltimore, Md., assignor to Simplex Roller Bearing Company, New York, N. Y. Antifriction-bearing. No. 1,022,168; Apr. 2; Sp. p. 870; Gaz. vol. 177; p. 138.
Upton, Frank B., assignor of one-fourth to W. E. Heron, Chattanooga, Tenn. Frame construction. No. 1,022,448; Apr. 9; Sp. p. 1471; Gaz. vol. 177; p. 264.
V. Weber & Company. (See Freas, Thomas B., assignor.)
Vacuum Car Ventilating Company. (See Cooke, Dwight I., assignor.)
Vahl, Gus W., Donnybrook, N. D. Milking-apron. No. 1,023,974; Apr. 23; Sp. p. 4730; Gaz. vol. 177; p. 839.
Valentin, Auguste, J. Zerreiss, and H. Georges, Puteaux, France. Apparatus for printing engravings in intaglio. No. 1,023,773; Apr. 16; Sp. p. 4226; Gaz. vol. 177; p. 743.
Valentine, Robert D., and H. S. Battee, assignors to Imperial Machinery Company, Minneapolis, Minn. Bearing-adjusting means. No. 1,024,871; Apr. 30; Sp. p. 6742; Gaz. vol. 177; p. 1186.
Valentine, Warren R., Ford City, Pa. Briqueting. No. 1,024,428; Apr. 23; Sp. p. 5707; Gaz. vol. 177; p. 993.

Van Aller, Tycho. (See Andrews and Van Aller.)
Van Aller, Tycho, Schenectady, N. Y., assignor to General Electric Company. Electric heating unit. No. 1,024,284; Apr. 23; Sp. p. 5322; Gaz. vol. 177; p. 982.
Van Buren, George L., assignor, by mesne assignments, to National Cigar Company, Kansas City, Mo. Coin-controlled cigar-vending machine. No. 1,024,478; Apr. 23; Sp. p. 5825; Gaz. vol. 177; p. 1012.
Van Duyne, Frank, St. Paul, Minn. Refrigerator show-case. No. 1,023,975; Apr. 23; Sp. p. 4731; Gaz. vol. 177; p. 830.
Van Nortwick, George W. (See Sherlock, Edward D., assignor.)
Van Wagoner, Cassius C. (See Hemmeter, Henry C., assignor.)
Van Wart, Irving R., London, England. Cattle-branding instrument. No. 1,022,986; Apr. 9; Sp. p. 2631; Gaz. vol. 177; p. 448.
Vander Haeghen, Georges, Liege, Belgium. Small-arm. No. 1,024,932; Apr. 30; Sp. p. 6870; Gaz. vol. 177; p. 1207.
Vander Haeghen, Georges, Liege, Belgium. Small-arm. No. 1,024,933; Apr. 30; Sp. p. 6872; Gaz. vol. 177; p. 1207.
Vandonk, Cornelius H., Wells, Mich. Car-stake and pocket. No. 1,024,608; Apr. 30; Sp. p. 6192; Gaz. vol. 177; p. 1092.
Vargyas, Eugene von, assignor to J. P. McLean and W. F. Heidenreich, Pittsburgh, Pa. Collapsible receptacle. No. 1,021,853; Apr. 2; Sp. p. 218; Gaz. vol. 177; p. 36.
Vargyas, Eugene von, Pittsburgh, assignor of one-third to J. S. Douthitt and one-third to H. E. Platt, Coraopolis, Pa. Key. No. 1,022,900; Apr. 9; Sp. p. 2440; Gaz. vol. 177; p. 417.
Vassen, Wilhelm, Aachen-Forst, Germany. Rolling-mill. No. 1,025,078; Apr. 30; Sp. p. 7148; Gaz. vol. 177; p. 1254.
Veiti, Albert. (See Hilton and Veiti.)
Velten, W. Lothar, Weil-im-Dorf, near Stuttgart, Germany. Cement-pipe-stamping machine. No. 1,024,464; Apr. 23; Sp. p. 5795; Gaz. vol. 177; p. 1006.
Venner, Robert F., Addiscombe, England. Apparatus for preventing sparking at the contacts of electrically-illuminated signs. No. 1,022,907; Apr. 2; Sp. p. 326; Gaz. vol. 177; p. 54.
Venturi Alarm Company. (See Thompson and Hamilton, assignors.)
Vereinigte Glanzstoff-Fabriken A. G. (See Bronnert, Emile, assignor.)
Vickers Limited. (See Dawson and Buckham, assignors.)
Victor Talking Machine Company. (See Birnbaum, Theodore, assignor.)
Victor Talking Machine Company. (See Browning, John B., assignor.)
Victor Talking Machine Company. (See Brunt, Henry C. C., assignor.)
Victor Talking Machine Company. (See Dennison, Wilburn N., assignor.)
Victor Talking Machine Company. (See English, John C., assignor.)
Vierheller, Paul E., Victoria, Tex. Ladder. No. 1,024,380; Apr. 23; Sp. p. 5576; Gaz. vol. 177; p. 978.
Vincent, Jesse G., assignor to Burroughs Adding Machine Company, Detroit, Mich. Adding-machine. No. 1,023,895; Apr. 23; Sp. p. 4544; Gaz. vol. 177; p. 813.
Vincent, Sidney C., Baltimore, Md., assignor to The Electro-Clock Company. Electric clock. No. 1,022,987; Apr. 9; Sp. p. 2632; Gaz. vol. 177; p. 449.
Vischer, Alfred. (See Moewes and Vischer.)
Vissering, Harry, Chicago, Ill. Track-sanding apparatus. No. 1,023,100; Apr. 9; Sp. p. 2860; Gaz. vol. 177; p. 497.
Vissering, Harry, assignor to Harry Vissering and Company, Chicago, Ill. Alarm-valve. No. 1,022,613; Apr. 9; Sp. p. 1820; Gaz. vol. 177; p. 319.
Vocalstyle Music Company, The. (See Beinkamp and Harding, assignors.)
Voelker, John P., New York, N. Y. Lifting-frame for storage vessels. No. 1,024,956; Apr. 30; Sp. p. 6916; Gaz. vol. 177; p. 1215.
Vogelmann, Joseph A., and C. F. Hovey, Brooklyn, N. Y., assignors of one-tenth to Vogelmann and nine-tenths to Hovey. Fountain-pen. No. 1,023,447; Apr. 16; Sp. p. 3617; Gaz. vol. 177; p. 641.
Vogt, Axel S. (See Buckwalter, Tracy V., assignor.)
Voight, Henry G., New Britain, Conn. Night-latch. No. 1,024,479; Apr. 23; Sp. p. 5829; Gaz. vol. 177; p. 1013.
Voight, Henry G., assignor to Russell & Erwin Manufacturing Company, New Britain, Conn. Door-check cushion-stop. No. 1,024,465; Apr. 23; Sp. p. 5798; Gaz. vol. 177; p. 1007.
Voight, Henry G., assignor to Russell & Erwin Manufacturing Company, New Britain, Conn. Lock. No. 1,024,466; Apr. 23; Sp. p. 5799; Gaz. vol. 177; p. 1007.
Voight, Henry G., assignor to The American Hardware Corporation, New Britain, Conn. Panic-lock. No. 1,025,102; Apr. 30; Sp. p. 7208; Gaz. vol. 177; p. 1262.
Voight, Henry G., and N. B. Hurd, assignors to Russell & Erwin Manufacturing Company, New Britain, Conn. Lock. No. 1,024,467; Apr. 23; Sp. p. 5800; Gaz. vol. 177; p. 1007.
Voight, Henry G., and N. B. Hurd, assignors to Russell & Erwin Manufacturing Company, New Britain, Conn. Wardrobe-door lock. No. 1,024,468; Apr. 23; Sp. p. 5803; Gaz. vol. 177; p. 1008.
Voight, Henry G., and N. B. Hurd, assignors to The American Hardware Corporation, New Britain, Conn. Door-lock trimming. No. 1,024,480; Apr. 23; Sp. p. 5850; Gaz. vol. 177; p. 1013.
Völler, Karl, Dusseldorf, assignor to Rheinische Metallwaaren- und Maschinenfabrik, Dusseldorf-Derendorf, Germany. Starting device for flying-machines. No. 1,024,429; Apr. 23; Sp. p. 5708; Gaz. vol. 177; p. 994.
Vordemfelde, Fred L., assignor of one-half to D. Miller, Celina, Ohio. Knockdown furniture. No. 1,025,108; Apr. 30; Sp. p. 7200; Gaz. vol. 177; p. 1263.
Voss, Leslie M., Fillmore, N. Y. Sap-heater. No. 1,023,896; Apr. 23; Sp. p. 4558; Gaz. vol. 177; p. 813.
Vossmer, Henry A., Brighton, Mass. Hammock or swinging conch. No. 1,022,164; Apr. 2; Sp. p. 872; Gaz. vol. 177; p. 139.
Votaw, J. E. (See Walsh, Frank A., assignor.)
Vrana, Theodore W. (See Cabasino and Vrana.)
W. A. Ives Mfg. Co., The. (See Butler, George P., assignor.)
W. F. & John Barnes Company. (See Barnes, John S., assignor.)
W. J. Bush & Co. (See Swinton, Ralph S., assignor.)
Wager, Robert, Jersey City, N. J. Bridge-wall for furnaces. No. 1,024,801; Apr. 23; Sp. p. 5441; Gaz. vol. 177; p. 954.
Waggoner, Albert E., assignor of three-fourths to G. W. Lyndon, Chicago, Ill. Fire-bucket. No. 1,024,609; Apr. 30; Sp. p. 6194; Gaz. vol. 177; p. 1093.
Wagner, Henry C., Brooklyn, N. Y. Signal-lamp. No. 1,024,302; Apr. 23; Sp. p. 5445; Gaz. vol. 177; p. 954.
Wahl, Robert, Chicago, Ill. Manufacture of fermented malt beverages. No. 1,023,448; Apr. 16; Sp. p. 3618; Gaz. vol. 177; p. 642.
Waite, Harry F., Harrison, N. Y. X-ray apparatus. No. 1,024,165; Apr. 23; Sp. p. 5155; Gaz. vol. 177; p. 906.
Wakefield, Albert, Washington, D. C. Breech-block. No. 1,023,976; Apr. 23; Sp. p. 4733; Gaz. vol. 177; p. 840.
Walcott, Carleton E., Waterbury, Conn. Animal-trap. No. 1,022,115; Apr. 2; Sp. p. 769; Gaz. vol. 177; p. 122.
Wald, Frank, Dalmatia, Pa., assignor to United Shoe Machinery Company, Paterson, N. J. Sole-channeling machine. No. 1,022,714; Apr. 9; Sp. p. 2073; Gaz. vol. 177; p. 356.
Walden, Arthur M., Hicksville, N. Y. Gear for children's carriages. No. 1,023,692; Apr. 16; Sp. p. 4089; Gaz. vol. 177; p. 718.
Waldman, Charles F., Los Angeles, Cal. Elastic tire for vehicle-wheels. No. 1,023,344; Apr. 16; Sp. p. 3412; Gaz. vol. 177; p. 600.
Waldrep, Albert S., Chicago, Ill. Car-coupling. No. 1,022,614; Apr. 9; Sp. p. 1824; Gaz. vol. 177; p. 319.
Wales, Philip, Covington, Ky. Piano tone-modifier. No. 1,024,235; Apr. 23; Sp. p. 5323; Gaz. vol. 177; p. 982.
Walker, Alexander, assignor to What Cheer Tool Co., What Cheer, Iowa. Detachable pick-point. No. 1,024,754; Apr. 30; Sp. p. 6496; Gaz. vol. 177; p. 1144.
Walker, Frank H., Atwood, Kans. Starting device for internal-combustion engines. No. 1,022,281; Apr. 2; Sp. p. 1106; Gaz. vol. 177; p. 177.
Walker, Frank L., Chattaroy, Wash. Washing-machine. No. 1,024,381; Apr. 23; Sp. p. 5577; Gaz. vol. 177; p. 978.
Walker, Harry S. C., Alexandria, Pa. Brick-machine. No. 1,022,165; Apr. 2; Sp. p. 874; Gaz. vol. 177; p. 130.
Walker, John B., Ensley, Ala. Wheel-casting machine. No. 1,024,755; Apr. 30; Sp. p. 6500; Gaz. vol. 177; p. 1144.
Walker, Joseph L., Baton Rouge, La. Wheel. No. 1,023,282; Apr. 16; Sp. p. 3298; Gaz. vol. 177 p. 589.
Walker, Joseph L., Baton Rouge, La. Axle. No. 1,023,283; Apr. 16; Sp. p. 3299; Gaz. vol. 177; p. 589.
Wallace, George M., Yuba City, Cal. Wheeled scraper. No. 1,022,804; Apr. 9; Sp. p. 2258; Gaz. vol. 177; p. 386.
Wallem, Axel B., Cynwyd, assignor to Harrison Safety Boiler Works, Philadelphia, Pa. Valve. No. 1,024,236; Apr. 23; Sp. p. 5325; Gaz. vol. 177; p. 933.
Wallen, Carl J., Cleveland, Ohio. Window construction. No. 1,022,001; Apr. 9; Sp. p. 2441; Gaz. vol. 177; p. 417.
Waller, Thomas D., Memphis, Tenn. Fire-hose crossing for railways. No. 1,022,988; Apr. 9; Sp. p. 2634; Gaz. vol. 177; p. 449.
Wallmann Electric Heater Company. (See Wallmann, Johann G., assignor.)
Wallmann, Johann G., Oakland, assignor, by mesne assignments, to Wallmann Electric Heater Company, San Francisco, Cal. Electric steam-heating apparatus. No. 1,023,602; Apr. 16; Sp. p. 3934; Gaz. vol. 177; p. 691.
Walsh, Arthur Q., New York, N. Y. Combined cigarette-box and match-holder. No. 1,023,054; Apr. 9; Sp. p. 2772; Gaz. vol. 177; p. 472.
Walsh, Dennis T., Ansonia, Conn. Back-up brake for vehicles. No. 1,021,854; Apr. 2; Sp. p. 220; Gaz. vol. 177; p. 36.
Walsh, Frank A., assignor of one-half to J. E. Votaw, Marshall, Tex. Locomotive driving-box. No. 1,024,918; Apr. 30; Sp. p. 6842; Gaz. vol. 177; p. 1202.
Walsh, James, and R. D. Kay, London, England. Infant-pacifier. No. 1,023,693; Apr. 16; Sp. p. 4092; Gaz. vol. 177; p. 718.
Walsh, James D., St. Louis, Mo. Aeroplane-roundabout. No. 1,023,897; Apr. 23; Sp. p. 4560; Gaz. vol. 177; p. 813.

Walter, Alfred, Straupitz, Germany. Elastic pedal-crank for cycles. No. 1,021,967; Apr. 2; Sp. p. 443; Gaz. vol. 177; p. 71.
Walter, Harrison B., assignor to National Fibre Box Company, Danville, Ill. Collapsible suit and hat box. No. 1,025,037; Apr. 30; Sp. p. 7068; Gaz. vol. 177; p. 1241.
Walter, Joseph R., Brooklyn, N. Y. Boat propulsion. No. 1,022,969; Apr. 9; Sp. p. 2635; Gaz. vol. 177; p. 449.
Walter, Otto, De Kalb, Ill. Roofing-tile machine. No. 1,023,282; Apr. 2; Sp. p. 1115; Gaz. vol. 177; p. 178.
Walter, Torsten L., Elmhurst, N. Y. Shade-fixture. No. 1,023,345; Apr. 16; Sp. p. 3413; Gaz. vol. 177; p. 600.
Walther, Carl, Chemnitz, Germany. Speed-retarding device for thread-guide bars. No. 1,023,694; Apr. 16; Sp. p. 4093; Gaz. vol. 177; p. 718.
Walther, Carl, Chemnitz, Germany. Driving mechanism for thread-guide bars. No. 1,023,695; Apr. 16; Sp. p. 4094; Gaz. vol. 177; p. 718.
Walther, Gustav. (See Balzer and Walther.)
Wannee, Albert, Jr., Hoboken, N. J. Chair. (Reissue.) No. 13,396; Apr. 2; Sp. p. 1838; Gaz. vol. 177; p. 218.
Wappler, Reinhold H., assignor to American Cystoscope Makers, Inc., New York, N. Y. Cystoscope. No. 1,021,809; Apr. 2; Sp. p. 110; Gaz. vol. 177; p. 22.
Wappler, Reinhold H., and R. Jung, assignors to American Cystoscope Makers, Inc., New York, N. Y. Cystoscope. No. 1,021,810; Apr. 2; Sp. p. 112; Gaz. vol. 177; p. 22.
Ward, Frank F., Schoolcraft, Mich. Umbrella-rack. No. 1,022,449; Apr. 9; Sp. p. 1473; Gaz. vol. 177; p. 264.
Wardwell, Simon W., Providence, R. I., assignor to Universal Winding Company, Portland, Me. Creel. No. 1,022,283; Apr. 2; Sp. p. 1117; Gaz. vol. 177; p. 178.
Ware Machine & Loom Company. (See Côté, Henry, assignor.)
Ware Machine & Loom Company. (See Côté and Snow, assignors.)
Ware, Rodney B., Thompsonville, Conn. Machine for handling coins. No. 1,022,902; Apr. 9; Sp. p. 2442; Gaz. vol. 177; p. 418.
Warner Gear Company. (See Davis, Charles E., assignor.)
Warner, James S., Forest Gate, England. Axle-truck or undercarriage for railway, tramway, and mining vehicles. No. 1,022,054; Apr. 2; Sp. p. 643; Gaz. vol. 177; p. 102.
Warren, Frank H., Swampscott, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Machine for use in the manufacture of boots and shoes. No. 1,023,284; Apr. 16; Sp. p. 3301; Gaz. vol. 177; p. 500.
Warren Webster & Co. (See Ball, Charles A., assignor.)
Warren Webster & Company. (See Fitts and Hunter, assignors.)
Warrick, John A., Chicago, Ill. Flying-machine. No. 1,022,903; Apr. 9; Sp. p. 2457; Gaz. vol. 177; p. 418.
Warth, Nathaniel G., Columbus, Ohio. Telephone-repeater. No. 1,022,519; Apr. 9; Sp. p. 1606; Gaz. vol. 177; p. 287.
Washington, Lawrence T., Mount Rainier, D. C. Portable-incandescent-lamp handle. No. 1,023,449; Apr. 16; Sp. p. 3620; Gaz. vol. 177; p. 642.
Wassill, Nicholas E., Saxon Hill, Saskatchewan, Canada. Match-box. No. 1,023,896; Apr. 23; Sp. p. 4561; Gaz. vol. 177; p. 814.
Water Vacuum Cleaner Co. (See Birrell, James and W., assignors.)
Waterbury Farrel Foundry and Machine Company, The. (See Wilcox, Richard, assignor.)
Waterbury Mfg. Co. (See Recker, Adolph C., assignor.)
Waterman, Bradford B., East Bridgewater, Mass., assignor to United Shoe Machinery Company, Paterson, N. J. Heel-breasting machine. (Reissue.) No. 13,413; Apr. 30; Sp. p. 7243; Gaz. vol. 177; p. 1270.
Waterous, Frederick L., St. Paul, Minn. Pump. No. 1,024,019; Apr. 30; Sp. p. 6844; Gaz. vol. 177; p. 1202.
Watkins, Evan, assignor of one-half to G. H. Hanna, Cleveland, Ohio. Sidewalk-pusher. No. 1,022,845; Apr. 2; Sp. p. 1237; Gaz. vol. 177; p. 198.
Watson, Charles J. (See Parker, Rufus T., assignor.)
Watson, Richard M., assignor to Gibford Specialty Co., Detroit, Mich. Stropping-machine. No. 1,024,059; Apr. 30; Sp. p. 6299; Gaz. vol. 177; p. 1110.
Watson, Robert. (See Hoofnagle, William T., assignor.)
Watson, Simeon P., Brooklyn, N. Y. Circuit-closer. No. 1,023,183; Apr. 16; Sp. p. 3098; Gaz. vol. 177; p. 554.
Watt, Nora P., assignor of one-half to F. G. Frink, Seattle, Wash. Airship. No. 1,022,715; Apr. 9; Sp. p. 2076; Gaz. vol. 177; p. 357.
Watt, Thomas H. (See Kneifel and Watt.)
Wattles, Luther H., Providence, assignor of one-half to M. C. Messler, Pawtucket, R. I. Sparking igniter. No. 1,024,710; Apr. 30; Sp. p. 6404; Gaz. vol. 177; p. 1128.
Watts, Charles J., and F. J. Eberle, assignors to The Owen Machine Tool Company, Springfield, Ohio. Milling-machine. No. 1,023,184; Apr. 16; Sp. p. 3099; Gaz. vol. 177; p. 554.
Waugh, Daniel S., assignor to The Denver Rock Drill & Machinery Co., Denver, Colo. Lubricating mechanism. No. 1,022,284; Apr. 2; Sp. p. 1121; Gaz. vol. 177; p. 178.
Waugh, Daniel S., assignor to The Denver Rock Drill and Machinery Company, Denver, Colo. Drill-hole-cleaning attachment for hammer-drills. (Reissue.) No. 13,403; Apr. 9; Sp. p. 2021; Gaz. vol. 177; p. 498.
Waugh, Daniel S., assignor to The Denver Rock Drill and Machinery Co., Denver, Colo. Drill-hole-cleaning attachment for hammer-drills. No. 1,023,889; Apr. 23; Sp. p. 4563; Gaz. vol. 177; p. 814.
Way, John W., Edgeworth, Pa. Aeroplane. (Reissue.) No. 13,397; Apr. 2; Sp. p. 1340; Gaz. vol. 177; p. 218.
Waybright, Charles S., Staunton, Va. Churn. No. 1,022,698; Apr. 16; Sp. p. 4095; Gaz. vol. 177; p. 719.
Waymouth, Charles H., Fitchburg, Mass. Spindle-turning lathe. No. 1,022,450; Apr. 9; Sp. p. 1474; Gaz. vol. 177; p. 265.
Wayne Manufacturing Company. (See Marth, Charles J., assignor.)
Weatherby, Joseph, Jr., New Cumberland, assignor to A. J. Dull, Harrisburg, Pa. Magnetic separator. No. 1,024,538; Apr. 30; Sp. p. 6011; Gaz. vol. 177; p. 1069.
Weatherby, Joseph, New Cumberland, assignor to A. J. Dull, Harrisburg, Pa. Magnetic ore-separator. No. 1,024,539; Apr. 30; Sp. p. 6015; Gaz. vol. 177; p. 1069.
Weatherby, Joseph, Jr., and A. J. Dull, Harrisburg, Pa.; said Weatherby assignor to said Dull. Magnetic separator. No. 1,024,045; Apr. 23; Sp. p. 4870; Gaz. vol. 177; p. 864.
Weatherly, George B., Fort Worth, Tex. Wrench. No. 1,022,520; Apr. 9; Sp. p. 1615; Gaz. vol. 177; p. 288.
Weaver, Charles W. (See Alexander, Julius M., assignor.)
Weaver, John E. (See Delafield, Benjamin T., assignor.)
Weaver, Robert R. (See Tesseyman and Weaver.)
Weaver, Robert R., assignor to The Ralston Steel Car Company, Columbus, Ohio. Dumping-car. No. 1,022,521; Apr. 9; Sp. p. 1616; Gaz. vol. 177; p. 288.
Weber, Otto C., Mullica township, Atlantic county, N. J. Berry-picker. No. 1,023,697; Apr. 16; Sp. p. 4097; Gaz. vol. 177; p. 719.
Webster, Carroll J., Lynn, Mass., assignor to General Electric Company. Centrifugal switch. No. 1,022,904; Apr. 9; Sp. p. 2461; Gaz. vol. 177; p. 418.
Webster, George L., Midlothian, Tex. Toy. No. 1,023,698; Apr. 16; Sp. p. 4099; Gaz. vol. 177; p. 719.
Webster, Harry G., Chicago, Ill., assignor, by mesne assignments, to Kellogg Switchboard & Supply Company. Telephone-exchange system. No. 1,022,522; Apr. 9; Sp. p. 1619; Gaz. vol. 177; p. 288.
Webster, Harry G., Chicago, Ill., assignor, by mesne assignments, to Kellogg Switchboard & Supply Company. Telephone-exchange system. No. 1,023,185; Apr. 16; Sp. p. 3101; Gaz. vol. 177; p. 555.
Webster, Harry G., Chicago, Ill., assignor, by mesne assignments, to Kellogg Switchboard & Supply Company. Telephone system. No. 1,023,900; Apr. 23; Sp. p. 4565; Gaz. vol. 177; p. 814.
Webster, James, assignor to Chicago Coach & Carriage Co., Chicago, Ill. Wind-shield. No. 1,023,901; Apr. 23; Sp. p. 4570; Gaz. vol. 177; p. 816.
Weck, Gesellschaft mit beschränkter Haftung, I. (See Op de Hipt, Hermann, assignor.)
Weckesser, Oscar H., Ross township, Allegheny county, Pa. Tire for automobiles. No. 1,024,882; Apr. 23; Sp. p. 5578; Gaz. vol. 177; p. 978.
Weed, Howard L., Los Angeles, Cal. Rotary machine. No. 1,024,166; Apr. 23; Sp. p. 5157; Gaz. vol. 177; p. 906.
Weeks, Charles S., Pittsburgh, Pa. Cold-heading machine. No. 1,024,046; Apr. 23; Sp. p. 4879; Gaz. vol. 177; p. 865.
Weeks, Harry G. (See Parkhurst and Weeks.)
Weeks, Merton E., Lake Benton, Minn. Machine for loading grain-shocks. No. 1,022,214; Apr. 2; Sp. p. 978; Gaz. vol. 177; p. 157.
Wegmann-Eggmann, Erhard, Ennetbaden, near Baden, Switzerland. Ice-creeper. No. 1,023,603; Apr. 16; Sp. p. 3935; Gaz. vol. 177; p. 691.
Wegner, Lewis E., assignor of one-fourth to J. Gibson, Nebraska City, Nebr. Electric igniter for explosive-engines. No. 1,022,960; Apr. 9; Sp. p. 2636; Gaz. vol. 177; p. 449.
Wehmiller, William, Clarinda, Iowa. Hay-rack. No. 1,023,902; Apr. 23; Sp. p. 4572; Gaz. vol. 177; p. 815.
Weigel, Joseph, Flandreau, S. D. Ensilage-harvester. No. 1,021,855; Apr. 2; Sp. p. 223; Gaz. vol. 177; p. 37.
Weihe, Wilhelm, Allenstein, Germany. Cableway arrangement for dumping-mounds or the like. No. 1,023,530; Apr. 16; Sp. p. 3783; Gaz. vol. 177; p. 660.
Weiler, Max, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Dye. No. 1,023,977; Apr. 23; Sp. p. 4734; Gaz. vol. 177; p. 840.
Wein, Adolph, New York, N. Y. Dress-weight tape. No. 1,024,957; Apr. 30; Sp. p. 6917; Gaz. vol. 177; p. 1215.
Weintraub, Eseehiel, Schenectady, N. Y., assignor to General Electric Company. Electric-arc lamp. No. 1,022,009; Apr. 2; Sp. p. 557; Gaz. vol. 177; p. 87.
Weintraub, Eseehiel, Lynn, Mass., assignor to General Electric Company. Vapor electric device. No. 1,022,010; Apr. 2; Sp. p. 559; Gaz. vol. 177; p. 88.
Weintraub, Eseehiel, Lynn, Mass., assignor to General Electric Company. Metal casting. No. 1,023,004; Apr. 16; Sp. p. 3936; Gaz. vol. 177; p. 691.
Weintraub, George, Lynn, Mass., assignor to General Electric Company. Refractory article. No. 1,022,011; Apr. 2; Sp. p. 561; Gaz. vol. 177; p. 88.
Weir, David, Hartford, Conn. Chuck. No. 1,022,168; Apr. 2; Sp. p. 875; Gaz. vol. 177; p. 139.
Weis, Alwin W. D., Waterloo, and J. Starman, Cedar Rapids, Iowa. Cell-case interlocker. No. 1,021,988; Apr. 2; Sp. p. 444; Gaz. vol. 177; p. 71.
Weisbrod, Jacob H., St. Louis, Mo. Car-roof. No. 1,023,230; Apr. 16; Sp. p. 3181; Gaz. vol. 177; p. 568.
Weisbrod, Jacob H., assignor to American Car and Foundry Company, St. Louis, Mo. Car-underframe. No. 1,021,856; Apr. 2; Sp. p. 227; Gaz. vol. 177; p. 37.

Weismann, James H., Stillwater, Okla. Watchmaker's tool. No. 1,024,383; Apr. 23; Sp. p. 5580; Gaz. vol. 177; p. 979.

Weiss, Henry W., Quakertown, Pa. Fender for cars or other vehicles. No. 1,022,905; Apr. 9; Sp. p. 2462; Gaz. vol. 177; p. 419.

Weiss, Louis T., Jr., New York, N. Y. Self-starting device for internal-combustion engines. No. 1,023,903; Apr. 23; Sp. p. 4575; Gaz. vol. 177; p. 815.

Weiss, Ludwig. (See Loemmller, August, assignor.)

Weiss, Marcelino, Habana, Cuba. Artificial-teeth articulator. No. 1,022,055; Apr. 2; Sp. p. 646; Gaz. vol. 177; p. 103.

Welwoda, Mathias, assignor to G. W. Stevens, New York, N. Y. Float-valve for carburetors. No. 1,022,392; Apr. 2; Sp. p. 1325; Gaz. vol. 177; p. 215.

Welch, Lyman W., Grand Rapids, Mich. Show-case. No. 1,023,186; Apr. 16; Sp. p. 3104; Gaz. vol. 177; p. 555.

Welch, Lyman W., Grand Rapids, Mich. Show-case. No. 1,023,231; Apr. 16; Sp. p. 3183; Gaz. vol. 177; p. 570.

Welker, Alexander H., Berlin, Ontario, Canada. Motor-winding mechanism. No. 1,024,237; Apr. 23; Sp. p. 5328; Gaz. vol. 177; p. 933.

Wellman-Seaver-Morgan Company, The. (See Hughes, William B., assignor.)

Wells, Arthur C., Amityville, N. Y. Water and sewage lift. No. 1,025,079; Apr. 30; Sp. p. 7150; Gaz. vol. 177; p. 1255.

Wells, Frank W., Vancouver, British Columbia, Canada. Car-fender. No. 1,022,167; Apr. 2; Sp. p. 880; Gaz. vol. 177; p. 140.

Welton, John A., Canal Dover, Ohio. Apparatus for feeding fine fuel. No. 1,022,805; Apr. 9; Sp. p. 2260; Gaz. vol. 177; p. 386.

Wemple, Horace E., Elizabeth, N. J. Ball. No. 1,023,904; Apr. 23; Sp. p. 4577; Gaz. vol. 177; p. 816.

Wendholt, Benjamin. (See Hocker and Wendholt.)

Wendt, Paul, assignor to Oelwerke-Stern Sonneborn Actiengesellschaft, Hamburg, Germany. Oil-testing machine. No. 1,024,872; Apr. 30; Sp. p. 6743; Gaz. vol. 177; p. 1186.

Wenig, John, assignor of one-half to E. D. Henderson, Jr., Saginaw, Mich. Puzzle. No. 1,022,615; Apr. 9; Sp. p. 1825; Gaz. vol. 177; p. 319.

Westcott, Valorus S., Pawtucket, R. I. Knot-tier. No. 1,024,873; Apr. 30; Sp. p. 6745; Gaz. vol. 177; p. 1187.

Western Electric Company. (See Scribner, Charles E., assignor.)

Western Sugar Refining Company. (See Hannam and Murray, assignors.)

Westinghouse Air Brake Company, The. (See Turner, Walter V., assignor.)

Westinghouse Air Brake Company, The. (See Turner, Walter V., assignor.) (Reissue.)

Westinghouse Electric & Manufacturing Company. (See Aalborg, Christian, assignor.)

Westinghouse Electric & Manufacturing Company. (See Bennett, Edward, assignor.)

Westinghouse Electric and Manufacturing Company. (See Conrad, Frank, assignor.)

Westinghouse Electric and Manufacturing Company. (See Hellmund, Rudolf E., assignor.)

Westinghouse Electric and Manufacturing Company. (See James, Henry D., assignor.)

Westinghouse Electric and Manufacturing Company. (See Kunkel, Fred R., assignor.)

Westinghouse Electric and Manufacturing Company. (See Randall and Gibson, assignors.)

Westinghouse Electric and Manufacturing Company. (See Stuart and Thompson, assignors.)

Westinghouse Lamp Company. (See Henderson, Robert H., assignor.)

Westlake, Charles T., assignor to Davis Locomotive Wheel Company, St. Louis, Mo. Buffer-beam. No. 1,022,716; Apr. 9; Sp. p. 2077; Gaz. vol. 177; p. 357.

Westlake, Charles T., assignor to Cast Steel Platform Company, St. Louis, Mo. Car-underframe. No. 1,023,486; Apr. 16; Sp. p. 3690; Gaz. vol. 177; p. 653.

Westlake, Charles T., assignor, to Double Body Bolster Company, St. Louis, Mo. Railway-car. No. 1,023,906; Apr. 23; Sp. p. 4578; Gaz. vol. 177; p. 816.

Westlake, Charles T., assignor to Transom Draft Gear Company, St. Louis, Mo. Car draft-gear. No. 1,024,481; Apr. 23; Sp. p. 5331; Gaz. vol. 177; p. 1014.

Westlake, Charles T. assignor to Davis Locomotive Wheel Company, St. Louis, Mo. Buffer-beam. No. 1,024,756; Apr. 30; Sp. p. 6502; Gaz. vol. 177; p. 1145.

What Cheer Tool Co. (See Walker, Alexander, assignor.)

Wheary, George H., assignor to The Hartman Trunk Company, Racine, Wis. Wardrobe-trunk. (Reissue.) No. 13,404; Apr. 9; Sp. p. 2923; Gaz. vol. 177; p. 498.

Wheeler, Horace, Hartford, Conn., assignor to General Electric Company. Electric-lamp socket. No. 1,022,906; Apr. 9; Sp. p. 2464; Gaz. vol. 177; p. 419.

Wheeler, Lambert, Mount Vernon, Ohio. Attachment for planting-machines. No. 1,023,346; Apr. 16; Sp. p. 3414; Gaz. vol. 177; p. 609.

Wheeler, Mary J., Dallas, Tex. Combined heater and radiator. No. 1,023,450; Apr. 16; Sp. p. 3622; Gaz. vol. 177; p. 642.

Wheelock, Edwin M., Minneapolis, Minn. Housing for traction-engine gearing. No. 1,024,430; Apr. 23; Sp. p. 5709; Gaz. vol. 177; p. 994.

Whidbourne, Harry, Plymouth, and J. J. Lishman, Salcombe, England. Internal-combustion engine. No. 1,024,711; Apr. 30; Sp. p. 6408; Gaz. vol. 177; p. 1128.

Whipple, George E., Brooklyn, N. Y. Adjustable handle-clamp. No. 1,024,047; Apr. 23; Sp. p. 4886; Gaz. vol. 177; p. 865.

Whitacre, James E., Rockford, Ill. Carburetor. No. 1,022,461; Apr. 9; Sp. p. 1479; Gaz. vol. 177; p. 265.

Whitcomb, Lawrence, Brookline, Mass., assignor to The Cork Insert Company. Pipe-wrench. No. 1,024,167; Apr. 23; Sp. p. 5165; Gaz. vol. 177; p. 907.

Whitcomb, William C. (See Eckert and Whitcomb.)

White, Charles B., assignor to J. L., J., and E. H. Carr, Manchester, England. Loom for weaving warp-pile fabrics. No. 1,023,537; Apr. 16; Sp. p. 3786; Gaz. vol. 177; p. 669.

White, Charles J., New Britain, Conn. Garment-supporter. No. 1,023,538; Apr. 16; Sp. p. 3787; Gaz. vol. 177; p. 669.

White, Charles J., assignor to C. J. White Manufacturing Company, New Britain, Conn. Hose-supporter strip. No. 1,023,101; Apr. 9; Sp. p. 2863; Gaz. vol. 177; p. 487.

White, Charles P., Greensboro, N. C. Relief-valve. No. 1,023,187; Apr. 16; Sp. p. 3106; Gaz. vol. 177; p. 556.

White, Edward L., assignor to Chicago Railway Equipment Company, Chicago, Ill. Adjustable brake-head. No. 1,022,806; Apr. 9; Sp. p. 2263; Gaz. vol. 177; p. 387.

White, Ernest M., Globe, Ariz. Oiling system for automobiles. No. 1,022,901; Apr. 9; Sp. p. 2638; Gaz. vol. 177; p. 450.

White, Frank C., assignor to The Wilcox & White Company, Meriden, Conn. Controlling device for player-pianos. No. 1,023,906; Apr. 23; Sp. p. 4579; Gaz. vol. 177; p. 816.

White, Frank C., assignor to The Wilcox & White Company, Meriden, Conn. Expression-box for auto pneumatic musical instruments. No. 1,024,110; Apr. 23; Sp. p. 5024; Gaz. vol. 177; p. 887.

White, George L., Newark, N. J. Bee-feeder. No. 1,022,762; Apr. 9; Sp. p. 2176; Gaz. vol. 177; p. 373.

White, Harold E., Schenectady, N. Y., assignor to General Electric Company. Control of electrically-operated switches. No. 1,022,907; Apr. 9; Sp. p. 2467; Gaz. vol. 177; p. 420.

White, James H. (See White, Matthew and J. H.)

White, John, Boise, Idaho. Flue-damper. No. 1,023,232; Apr. 16; Sp. p. 3185; Gaz. vol. 177; p. 570.

White, John, Beaumont, Tex. Rail-joint. No. 1,024,610; Apr. 30; Sp. p. 6195; Gaz. vol. 177; p. 1093.

White, Matthew and J. H., Luton, England. Gas-generating apparatus. No. 1,023,978; Apr. 23; Sp. p. 4735; Gaz. vol. 177; p. 840.

White, Thomas J., Chicago, Ill. Boxing-mask. No. 1,023,285; Apr. 16; Sp. p. 3303; Gaz. vol. 177; p. 590.

White, Warren E., Spokane, Wash. Destroying stumps. No. 1,024,540; Apr. 30; Sp. p. 6018; Gaz. vol. 177; p. 1070.

Whitehead, Howell G., Wilson, N. C., assignor to P. Lorillard Company, Jersey City, N. J. Paper box. No. 1,022,992; Apr. 9; Sp. p. 2640; Gaz. vol. 177; p. 450.

Whitehouse, John H., assignor to The Ludlow Valve Manufacturing Company, Troy, N. Y. Hydrant. No. 1,021,959; Apr. 2; Sp. p. 447; Gaz. vol. 177; p. 72.

Whiteman, George W., Philadelphia, Pa. Rail-securing means. No. 1,025,104; Apr. 30; Sp. p. 7211; Gaz. vol. 177; p. 1263.

Whiting, Herman E., assignor to Garlock Auto Specialty Co., Palmyra, N. Y. Fixer for gaseous fuel. No. 1,023,402; Apr. 16; Sp. p. 3527; Gaz. vol. 177; p. 628.

Whiting, Kenneth, and J. B. Howell, U. S. Navy. Mechanical air device for expelling water or other liquids from the heads of torpedoes to aid in the recovery thereof after firing. No. 1,023,907; Apr. 23; Sp. p. 4581; Gaz. vol. 177; p. 817.

Whiting, Max A., Schenectady, N. Y., assignor to General Electric Company. System of motor control. No. 1,022,908; Apr. 9; Sp. p. 2470; Gaz. vol. 177; p. 420.

Whitney, James L., Cleveland, Ohio. Gas-burning hot-air furnace. No. 1,024,757; Apr. 30; Sp. p. 6503; Gaz. vol. 177; p. 1145.

Whitney, William A., Rockford, Ill. Universal joint. No. 1,022,909; Apr. 9; Sp. p. 2473; Gaz. vol. 177; p. 421.

Whitney, Willis R., Schenectady, N. Y., assignor to General Electric Company. Purification of gases. No. 1,022,012; Apr. 2; Sp. p. 562; Gaz. vol. 177; p. 88.

Whitney, Willis R., Schenectady, N. Y., assignor to General Electric Company. Concentration of solids in liquids. No. 1,022,523; Apr. 9; Sp. p. 1623; Gaz. vol. 177; p. 289.

Whitney, Willis R., Schenectady, N. Y., assignor to General Electric Company. Manufacture of quartz apparatus. No. 1,022,910; Apr. 9; Sp. p. 2474; Gaz. vol. 177; p. 421.

Whitney, Willis R., Schenectady, N. Y., assignor to General Electric Company. Vapor electric apparatus. No. 1,023,286; Apr. 16; Sp. p. 3304; Gaz. vol. 177; p. 590.

Whittier, Arthur, East Walpole, Mass. Drinking-fountain. No. 1,022,572; Apr. 9; Sp. p. 1726; Gaz. vol. 177; p. 304.

Whittingham, George H., Pikesville, assignor to Monitor Manufacturing Company, Baltimore, Md. Starter for electric motors. No. 1,023,979; Apr. 23; Sp. p. 4737; Gaz. vol. 177; p. 841.

Whittingham, George H., Pikesville, assignor to Monitor Manufacturing Company, Baltimore, Md. Motor-starter. No. 1,023,980; Apr. 23; Sp. p. 4740; Gaz. vol. 177; p. 842.

Whittington, Joseph H., Buffalo, assignor, by mesne assignments, to J. H. Price, Akron, N. Y. Back-pedaling coaster-brake. No. 1,023,847; Apr. 16; Sp. p. 3416; Gaz. vol. 177; p. 610.

Wickham, Elmer E., Windsor, Mo. Spring-wheel. No. 1,022,648; Apr. 9; Sp. p. 1896; Gaz. vol. 177; p. 331.

Widmark, Fredrick. (See Fabian and Widmark.)

Wiedebusch, William A., Fairmont, W. Va. Hot-water or steam heater. No. 1,024,660; Apr. 30; Sp. p. 6301; Gaz. vol. 177; p. 1110.

Wiegel, Albert, Cassel, Germany. Necktie-holder. No. 1,022,907; Apr. 9; Sp. p. 2265; Gaz. vol. 177; p. 387.

Wienberg, Ferdinand, Copenhagen, L. Jörgensen, C. Jespersen, and J. E. Jörgensen, Elsinore, Denmark. Machine for making cement pipes of any sectional form. No. 1,022,285; Apr. 2; Sp. p. 1123; Gaz. vol. 177; p. 179.

Wieet, Jonas H., Indianapolis, Ind. Cistern or catch-basin cleaner. No. 1,021,960; Apr. 2; Sp. p. 449; Gaz. vol. 177; p. 72.

Wiggins, George G., assignor of two-thirds to C. O. Rice and N. MacDonald, Denver, Colo. Bath apparatus. No. 1,022,346; Apr. 2; Sp. p. 1237; Gaz. vol. 177; p. 199.

Wigginton, George P., Kalamazoo, Mich. Temporary binder. No. 1,023,462; Apr. 9; Sp. p. 1481; Gaz. vol. 177; p. 265.

Wikström, Malcolm U., Storfors, Sweden. Mechanism for piercing metallic ingots or billets. No. 1,022,524; Apr. 9; Sp. p. 1626; Gaz. vol. 177; p. 289.

Wilbuschewitsch, Moses, Nischninovgorod, Kanavino, Russia. Regenerating consumed catalysts. No. 1,022,347; Apr. 2; Sp. p. 1239; Gaz. vol. 177; p. 199.

Wilbuschewitsch, Moses, Nischninovgorod, Kanavino, Russia. Converting fats, oils, and fish-oils into like bodies of higher melting-point. No. 1,024,758; Apr. 30; Sp. p. 6505; Gaz. vol. 177; p. 1145.

Wilcox, Arthur F., Kalispell, Mont. Box. No. 1,023,908; Apr. 23; Sp. p. 4584; Gaz. vol. 177; p. 817.

Wilcox, Frank E., Mechanicsburg, Pa. Fifth-wheel for vehicles. No. 1,022,013; Apr. 2; Sp. p. 563; Gaz. vol. 177; p. 88.

Wilcox, Richard L., assignor to The Waterbury Farrel Foundry and Machine Company, Waterbury, Conn. Stop mechanism. No. 1,023,539; Apr. 16; Sp. p. 3789; Gaz. vol. 177; p. 669.

Wilcox & White Company, The. (See Donovan, Silas S., assignor.)

Wilcox & White Company, The. (See White, Frank C., assignor.)

Wild, Clement A., Oldham, England. Knife-cleaner. No. 1,024,541; Apr. 30; Sp. p. 6020; Gaz. vol. 177; p. 1070.

Wilder, Charles J., Auburn, Mass. Machine for weighing liquids. No. 1,024,874; Apr. 30; Sp. p. 6746; Gaz. vol. 177; p. 1187.

Wilder, Frank B. (See Yates, Gettis W., assignor.)

Wildermann, Meyer, Ealing, London, England. Manufacture of ebonites resisting the action of chlorin. No. 1,022,014; Apr. 2; Sp. p. 564; Gaz. vol. 177; p. 89.

Wiler, Carl, Chicago, Ill., assignor, by mesne assignments, to General Electric Company. Interlocking device for remote-control switches. No. 1,024,288; Apr. 23; Sp. p. 5330; Gaz. vol. 177; p. 934.

Willey, Arthur R., Denver, Colo. Concentrator. No. 1,021,961; Apr. 2; Sp. p. 451; Gaz. vol. 177; p. 72.

Wilhelm, Oliver P., Michigan City, Ind. Air-brake-hose coupling. No. 1,022,453; Apr. 9; Sp. p. 1486; Gaz. vol. 177; p. 266.

Wilk, Anthony, Evanston, Ill. Water-craft. No. 1,023,609; Apr. 16; Sp. p. 4100; Gaz. vol. 177; p. 720.

Wilkening, Ludwig, Hanover, Germany. Motor-car seat. No. 1,025,038; Apr. 30; Sp. p. 7069; Gaz. vol. 177; p. 1242.

Wilkerson, James R. (See Christopher, William E., assignor.)

Wilkinson, Charles C., Coleman, Tex. Wire-winding device. No. 1,024,884; Apr. 23; Sp. p. 5582; Gaz. vol. 177; p. 979.

Wilkinson, Eleazar T., assignor to David Lupton's Sons Company, Philadelphia, Pa. Retaining device for window-panes. No. 1,023,479; Apr. 16; Sp. p. 3675; Gaz. vol. 177; p. 651.

Willans & Robinson. (See Peache, James C., assignor.)

Willenborg, Clemens B., Dyersville, Iowa. Litter-carrier. No. 1,022,763; Apr. 9; Sp. p. 2177; Gaz. vol. 177; p. 373.

Willi, Otto B., Youngstown, Ohio. Music-leaf holder and clamp. No. 1,023,403; Apr. 16; Sp. p. 3529; Gaz. vol. 177; p. 628.

William Galloway Company. (See Galen, Nicholas W., assignor.)

William Galloway Company. (See Mandt, Gunder G., assignor.)

Williams, Andrew J. and C. E., Sturgis, assignors to R. W. McMillan and L. G. Dessel, Vale, S. D. Tomato-peeler. No. 1,023,700; Apr. 16; Sp. p. 4102; Gaz. vol. 177; p. 720.

Williams, Brown and Earle. (See Metzger, Ferdinand F., assignor.)

Williams, Charles E. (See Williams, Andrew J. and C. E.)

Williams, Charles E. (See Woods and Williams.)

Williams, David C., Wilkeson, Wash. Spool and implement holder. No. 1,024,963; Apr. 30; Sp. p. 6918; Gaz. vol. 177; p. 1216.

Williams, Edward H. (See Andrews and Williams.)

Williams, Frederick C., San Francisco, Cal. Pencil marking and vending machine. No. 1,023,540; Apr. 16; Sp. p. 3792; Gaz. vol. 177; p. 670.

Williams, Frederick W. B., assignor of one-half to C. H. Mower, London, England. Tapping device for sleeves or screens. No. 1,022,911; Apr. 9; Sp. p. 2476; Gaz. vol. 177; p. 421.

Williams, John N., Derby, Conn. Flying-machine. No. 1,023,235; Apr. 16; Sp. p. 3188; Gaz. vol. 177; p. 571.

Williams, Milton F., and E. H. Frickey, assignors to Williams Patent Crusher & Pulverizer Company, St. Louis, Mo. Pulverizer. No. 1,022,454; Apr. 9; Sp. p. 1490; Gaz. vol. 177; p. 267.

Williams Patent Crusher & Pulverizer Company. (See Williams and Frickey, assignors.)

Williams, Phineas C. (See Richardson, George W., assignor.)

Williams, Richard S., Toronto, Ontario, Canada. Violin chin-rest. No. 1,023,234; Apr. 16; Sp. p. 3192; Gaz. vol. 177; p. 571.

Williams, William A., Newport, Ark. Combined soil-pulverizer and cultivator. No. 1,023,774; Apr. 16; Sp. p. 4227; Gaz. vol. 177; p. 743.

Williams, William E., Chicago, Ill. Machine for converting food materials into shreds or fibers. No. 1,024,168; Apr. 23; Sp. p. 5166; Gaz. vol. 177; p. 907.

Williams, William H., Statesboro, Ga. Engine-starter. No. 1,024,712; Apr. 30; Sp. p. 6411; Gaz. vol. 177; p. 1129.

Williams, William L., and J. L. Olmstead, West Brownsville; said Williams assignor to E. Carlson, Monongahela, Pa. Mailing device. No. 1,025,039; Apr. 30; Sp. p. 7070; Gaz. vol. 177; p. 1243.

Williamson, Charles, Norfolk, Va. Submarine operating apparatus. No. 1,023,541; Apr. 16; Sp. p. 3796; Gaz. vol. 177; p. 670.

Willis, George W., Beckley, W. Va. Insulator. No. 1,022,903; Apr. 9; Sp. p. 2640; Gaz. vol. 177; p. 450.

Willis, Leland, assignor to Bateman Manufacturing Company, Grenloch, N. J. Plant-spraying machine. No. 1,024,239; Apr. 23; Sp. p. 5333; Gaz. vol. 177; p. 934.

Willoughby, Hugh L., Philadelphia, Pa. Aeroplane-engine-controlling mechanism. No. 1,024,303; Apr. 23; Sp. p. 5446; Gaz. vol. 177; p. 964.

Willson, Henry, New York, N. Y. Lifting-key. No. 1,023,775; Apr. 16; Sp. p. 4230; Gaz. vol. 177; p. 743.

Wilsing, Heinrich, Bernburg, Germany. Manufacture of bleaching liquids. No. 1,023,287; Apr. 16; Sp. p. 3305; Gaz. vol. 177; p. 590.

Wilson, George S., and E. F. Mathey, Muskogee, Okla., assignors of one-third to C. L. N. Haines, Aurora, Mo. Brake. No. 1,021,962; Apr. 2; Sp. p. 459; Gaz. vol. 177; p. 73.

Wilson, Hearley H., Altoona, Pa. Means for analysing flue-gases. No. 1,023,188; Apr. 16; Sp. p. 3107; Gaz. vol. 177; p. 556.

Wilson, Howard O., Ainsworth, Nebr. Mail-delivery apparatus. No. 1,022,455; Apr. 9; Sp. p. 1493; Gaz. vol. 177; p. 267.

Wilson, James M., Atlanta, Kans. Shield attachment for sulky-rakes. No. 1,022,216; Apr. 2; Sp. p. 983; Gaz. vol. 177; p. 158.

Wilson, Luther M., Houston, Tex. Tree-beater. No. 1,023,055; Apr. 9; Sp. p. 2774; Gaz. vol. 177; p. 472.

Wilson, R. T., Greenville, Mich. Cider-mill. No. 1,022,286; Apr. 2; Sp. p. 1124; Gaz. vol. 177; p. 179.

Wilson, Ralph E., Dallas, Tex., assignor to Continental Gin Company, Birmingham, Ala. Tramper-press. No. 1,023,056; Apr. 9; Sp. p. 2775; Gaz. vol. 177; p. 472.

Winandy, Michael, Chicago, Ill. Bench for greenhouses. No. 1,022,616; Apr. 9; Sp. p. 1826; Gaz. vol. 177; p. 319.

Windmueller, Paul E., assignor of one-fourth to W. Seidel, Chicago, Ill. Safe. No. 1,023,605; Apr. 16; Sp. p. 3939; Gaz. vol. 177; p. 692.

Windrath, Hermann, and H. Eicken, Grevenbroich, Germany. Dyeing apparatus. No. 1,021,811; Apr. 2; Sp. p. 113; Gaz. vol. 177; p. 23.

Wingquist, Sven G. (See Olsson and Wingquist.)

Winkler, George. (See Bradley, Philo R., assignor.)

Winn, Norman B., Tooele, Utah. Weeder and furrower. No. 1,023,701; Apr. 16; Sp. p. 4104; Gaz. vol. 177; p. 720.

Winston, Earle G., Pittsfield, Mass., assignor to General Electric Company. Transformer-terminal. No. 1,022,912; Apr. 9; Sp. p. 2476; Gaz. vol. 177; p. 422.

Winter, Heinrich, Hamburg, Germany. Instrument for measuring bodies. No. 1,023,542; Apr. 16; Sp. p. 3799; Gaz. vol. 177; p. 671.

Wintermeyer, Otto, Leverkusen, near Cologne, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Apparatus for the manufacture of photographic films. No. 1,022,617; Apr. 9; Sp. p. 1828; Gaz. vol. 177; p. 320.

Winters, Edward B., Coffeyville, Kans. Garter. No. 1,022,217; Apr. 2; Sp. p. 984; Gaz. vol. 177; p. 158.

Wirsing, George, Baltimore, Md. Sign-support. No. 1,024,542; Apr. 30; Sp. p. 6020; Gaz. vol. 177; p. 1070.

Wisch, Ernest, Milwaukee, Wis. Metallic packing. No. 1,023,189; Apr. 16; Sp. p. 3112; Gaz. vol. 177; p. 556.

Witham, Wallace O., Salem, Oreg. Chicken-brooder. No. 1,022,218; Apr. 2; Sp. p. 955; Gaz. vol. 177; p. 168.
Witt, Carl J., Needles, Cal. Ore-concentrator. No. 1,022,909; Apr. 23; Sp. p. 4585; Gaz. vol. 177; p. 817.
Wohl, Maurice J., *et al.*, trustees. (See Hertzberg, Harry, assignor.)
Wold, Carl O., Minneapolis, Minn. Grading-machine. No. 1,023,057; Apr. 9; Sp. p. 2777; Gaz. vol. 177; p. 473.
Wolf, Lesser, New York, assignor of one-half to H. Blankfort, Brooklyn, N. Y. Dumping-cart. No. 1,024,950; Apr. 30; Sp. p. 6920; Gaz. vol. 177; p. 1216.
Wölfer, Ernst, Gotha, Germany. Can-opener. No. 1,024,543; Apr. 30; Sp. p. 6021; Gaz. vol. 177; p. 1070.
Wolff, Albert, Cologne, Germany. Preparation of chrome-leather. No. 1,023,451; Apr. 16; Sp. p. 3623; Gaz. vol. 177; p. 642.
Wolhaupter, David P., Washington, D. C. Electrical pull-socket. No. 1,024,804; Apr. 23; Sp. p. 5449; Gaz. vol. 177; p. 955.
Wolin, Max, New York, N. Y. Spiral tool-driver. No. 1,024,960; Apr. 30; Sp. p. 6921; Gaz. vol. 177; p. 1216.
Wolleson, James L., Pittsburg, Kans. Cigar-holder. No. 1,023,288; Apr. 16; Sp. p. 4306; Gaz. vol. 177; p. 591.
Wolverton, Washington I., Holton, Kans. Animal-trap. No. 1,024,875; Apr. 30; Sp. p. 6748; Gaz. vol. 177; p. 1187.
Wood, Adam I. (See Kirby, Robert C., assignor.)
Wood, Edward M., Worcester, Mass. Starting device for explosive-engines. No. 1,021,812; Apr. 2; Sp. p. 115; Gaz. vol. 177; p. 23.
Wood, Fayette H. (See Wood, Rodney J., assignor.)
Wood, James N., Richmond, Va., assignor, by mesne assignments, to International Machine Corporation. Shoe-polishing machine. No. 1,024,544; Apr. 30; Sp. p. 6022; Gaz. vol. 177; p. 1071.
Wood, John T. (See Richardson and Wood.)
Wood, Rodney J., assignor to F. H. Wood, Dayton, Ohio. Manifolding sales-book. No. 1,023,910; Apr. 23; Sp. p. 4589; Gaz. vol. 177; p. 818.
Wood, William T., Nashville, Tenn. Culinary implement. No. 1,024,240; Apr. 23; Sp. p. 5336; Gaz. vol. 177; p. 935.
Woodland, Frank O., Worcester, Mass. Labeling-machine. No. 1,023,011; Apr. 23; Sp. p. 4594; Gaz. vol. 177; p. 818.
Woodring, James H., Corry, Pa. Shock-absorber. No. 1,022,015; Apr. 2; Sp. p. 566; Gaz. vol. 177; p. 89.
Woods, Briah T., Sr., Sheldon, Iowa. Tool or instrument for ritualistic purposes. No. 1,022,219; Apr. 2; Sp. p. 987; Gaz. vol. 177; p. 150.
Woods, Henry B., San Francisco, Cal. Shoe-lacing device. No. 1,022,808; Apr. 9; Sp. p. 2265; Gaz. vol. 177; p. 387.
Woods, Thomas B., and C. E. Williams, Headland, Ala. Row-marker. No. 1,025,040; Apr. 30; Sp. p. 7071; Gaz. vol. 177; p. 1243.
Woodward, Horace L., Washington, D. C., assignor to The Monarch Typewriter Company, Syracuse, N. Y. Type-writing machine. No. 1,024,759; Apr. 30; Sp. p. 6507; Gaz. vol. 177; p. 1146.
Woodward, Roy J., Fresno, Cal. Bolster for vehicles. No. 1,022,913; Apr. 9; Sp. p. 2478; Gaz. vol. 177; p. 422.
Woodward & Tiernan Printing Company. (See Hunziker, Adolph A., assignor.)
Woodworth, Clara E., Detroit, Mich. Corset. No. 1,022,116; Apr. 2; Sp. p. 770; Gaz. vol. 177; p. 123.
Worden, James H., *et al.* (See Sanford, Melvin E., assignor.)
Wordingham, George, Milwaukee, Wis. Shirt-envelop. No. 1,024,818; Apr. 30; Sp. p. 6620; Gaz. vol. 177; p. 1166.
Worth, Mason G., New York, N. Y. Cranking device for internal-combustion engines. No. 1,024,241; Apr. 23; Sp. p. 5337; Gaz. vol. 177; p. 935.
Wratten, Samuel M., Washington, Ind. Brake mechanism. No. 1,024,385; Apr. 23; Sp. p. 5583; Gaz. vol. 177; p. 979.
Wright, Arthur A., *et al.* (See Arundel, Clarence E., assignor.)
Wright, Charles, Youngswood, Pa. Faucet. No. 1,024,961; Apr. 30; Sp. p. 6923; Gaz. vol. 177; p. 1217.
Wright, Frederic W., Yonkers, N. Y. Projecting-machine for moving pictures. No. 1,024,661; Apr. 30; Sp. p. 6303; Gaz. vol. 177; p. 1111.
Wright, Stephen G., Oak Park, Ill. Roofing material. No. 1,022,764; Apr. 9; Sp. p. 2178; Gaz. vol. 177; p. 373.
Wright, Thomas, Jersey City, N. J. Side-dump body. No. 1,023,190; Apr. 16; Sp. p. 3115; Gaz. vol. 177; p. 557.
Wright, William J., Franklin, Pa. Explosive-engine. No. 1,023,606; Apr. 16; Sp. p. 3940; Gaz. vol. 177; p. 602.
Wright, William J., Franklin, Pa. Explosive-engine. No. 1,023,607; Apr. 16; Sp. p. 3944; Gaz. vol. 177; p. 602.
Wrissenberg, Julius H. A., assignor to Gebrüder Bölken, Eisenbeton-Hohldecken-Patente "System Wrissenberg," Bremen, Germany. Ferroconcrete ribbed ceiling. No. 1,025,041; Apr. 30; Sp. p. 7072; Gaz. vol. 177; p. 1243.
Wurmb, Theodore H., and R. Baumann, assignors to National Clock & Electric Manufacturing Co., St. Louis, Mo. Electric valve-operating device. No. 1,022,914; Apr. 9; Sp. p. 2479; Gaz. vol. 177; p. 422.
Wurts, Alexander J., Pittsburgh, assignor to The Union Switch & Signal Company, Swissvale, Pa. Lightning-arrester. No. 1,022,717; Apr. 9; Sp. p. 2079; Gaz. vol. 177; p. 357.
Wyckoff, Ernest, Hightstown, N. J. Railway-tie. No. 1,024,545; Apr. 30; Sp. p. 6030; Gaz. vol. 177; p. 1071.
Wyckoff, Lynn B., Chicago, Ill., assignor to The Monarch Typewriter Company, Syracuse, N. Y. Type-writing machine. No. 1,022,168; Apr. 2; Sp. p. 882; Gaz. vol. 177; p. 140.
Wyckoff, Seamans & Benedict. (See Briggs, Daniel, assignor.)
Wyckoff, Seamans & Benedict. (See Ellis, Albert H., assignor.)
Wygant, Lewis B., assignor to Hartman Manufacturing Company, Vincennes, Ind. Disk-harrow gang-equaliser. No. 1,022,915; Apr. 9; Sp. p. 2482; Gaz. vol. 177; p. 423.
Wyler, Max. (See Levinstein and Wyler.)
Wylie, John F., *et al.* (See Estes, Charles N., assignor.)
Wyman, George R., assignor to C. S. Bird, East Walpole, Mass. Waterproof boot. No. 1,022,004; Apr. 9; Sp. p. 2642; Gaz. vol. 177; p. 451.
Wyman, Horace, Worcester, Mass., assignor to Crompton & Knowles Loom Works. Jacquard-card-punching machine. No. 1,022,673; Apr. 9; Sp. p. 1730; Gaz. vol. 177; p. 305.
Wymore, Joseph, Seattle, Wash. Combined boat and airship. No. 1,023,404; Apr. 16; Sp. p. 3531; Gaz. vol. 177; p. 629.
Yale & Towne Manufacturing Company, The. (See Augenbraun, Peter F., assignor.)
Yale & Towne Manufacturing Company, The. (See Schechter, Joseph, assignor.)
Yates, Gettis W., assignor of one-half to F. B. Wilder, Tampa, Fla. Spring-swingletree. No. 1,024,760; Apr. 30; Sp. p. 6510; Gaz. vol. 177; p. 1146.
Yawman & Erbe Manufacturing Company. (See Yawman, Philip H., assignor.)
Yawman, Philip H., assignor to Yawman & Erbe Manufacturing Company, Rochester, N. Y. Paper-file. No. 1,022,456; Apr. 9; Sp. p. 1496; Gaz. vol. 177; p. 267.
Yaxley, Ernest E. (See Crook, Charles M., assignor.)
Ybarrondo, Vincent C. de, Los Angeles, Cal. Airship. No. 1,022,117; Apr. 2; Sp. p. 772; Gaz. vol. 177; p. 123.
Yeatman, John A., assignor to United Iron Works, Oakland, Cal. Centrifugal pump. No. 1,023,776; Apr. 16; Sp. p. 4232; Gaz. vol. 177; p. 744.
Yerger, Henry N., Philadelphia, Pa. Bookbinding. No. 1,021,908; Apr. 2; Sp. p. 828; Gaz. vol. 177; p. 54.
Yochem, John W., Tiffin, Ohio. License-tag holder. No. 1,024,386; Apr. 23; Sp. p. 5584; Gaz. vol. 177; p. 980.
York, Isaac E., Waterford, Ontario, Canada. Stocking-stretching device. No. 1,022,457; Apr. 9; Sp. p. 1498; Gaz. vol. 177; p. 268.
Yorke, Norman D. M., Glasgow, Scotland. Linear measure for ropes, &c. No. 1,022,916; Apr. 9; Sp. p. 2485; Gaz. vol. 177; p. 423.
Young, Fred A., Rutland, Vt. Turf-cutter. No. 1,022,905; Apr. 9; Sp. p. 2645; Gaz. vol. 177; p. 451.
Young, Frederick W. (See McEwen and Young.)
Young, Henry, New York, N. Y. Dish-warmer. No. 1,023,101; Apr. 16; Sp. p. 3116; Gaz. vol. 177; p. 557.
Young, Jefferson D., Chattanooga, Okla. Railway-rails and means for securing the meeting ends thereof together. No. 1,023,702; Apr. 16; Sp. p. 4105; Gaz. vol. 177; p. 721.
Young, John D., Leechburg, Pa. Envelop-sealing device. No. 1,023,777; Apr. 16; Sp. p. 4235; Gaz. vol. 177; p. 744.
Younger, Walter E., Port Arthur, Tex. Combined harrow and roller. No. 1,023,058; Apr. 9; Sp. p. 2779; Gaz. vol. 177; p. 473.
Youngs, Fred E., Detroit, Mich. Locking and controlling means for turning plugs. No. 1,025,105; Apr. 30; Sp. p. 7213; Gaz. vol. 177; p. 1264.
Younie, William A., Everett, Mass. Glass-holder. No. 1,023,405; Apr. 16; Sp. p. 3532; Gaz. vol. 177; p. 629.
Zachow, Otto, assignor to Four Wheel Drive Auto Company, Clintonville, Wis. Differential gearing. No. 1,023,487; Apr. 16; Sp. p. 3691; Gaz. vol. 177; p. 653.
Zahm, Edward, Buffalo, N. Y. Sterilising filters. No. 1,023,488; Apr. 16; Sp. p. 3693; Gaz. vol. 177; p. 654.
Zähringer, Arnold, assignor to Firm of R. Bosch, Stuttgart, Germany. Operating mechanism for magneto-generators. No. 1,023,348; Apr. 16; Sp. p. 3417; Gaz. vol. 177; p. 610.
Zaniewski, William, Boston, Mass. Electric rat-trap. No. 1,023,606; Apr. 16; Sp. p. 3947; Gaz. vol. 177; p. 693.
Zart, Arthur. (See Schweitzer and Zart.)
Zart, Arthur, Vohwinkel, near Elberfeld, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Azo coloring-matter. No. 1,022,287; Apr. 2; Sp. p. 1125; Gaz. vol. 177; p. 179.
Zart, Arthur, Vohwinkel, near Elberfeld, assignor to Farbenfabriken vorm. Friedr. Bayer & Co., Elberfeld, Germany. Azo coloring-matter. No. 1,022,288; Apr. 2; Sp. p. 1126; Gaz. vol. 177; p. 179.
Zeidler, William A., New York, N. Y. Turn-down-collar edge ironing or finishing machine. No. 1,022,169; Apr. 2; Sp. p. 886; Gaz. vol. 177; p. 141.
Zeisinger, Carl E., assignor of one-half to T. J. Zeisinger, Downing, Wis. Ironing-table. No. 1,022,906; Apr. 9; Sp. p. 2646; Gaz. vol. 177; p. 451.
Zeisinger, Theodore J. (See Zeisinger, Carl E., assignor.)
Zeiss, Firm of Carl. (See Eppenstein, Otto, assignor.)
Zeiss, Firm of Carl. (See Steinle, Adolf, assignor.)
Zerreiss, Jean. (See Valentin, Zerreiss, and Georges.)

Zettervall, Andrew, Los Angeles, Cal. Register. No. 1,023,912; Apr. 23; Sp. p. 4600; Gaz. vol. 177; p. 819.
Zimmerman, Abraham M., Lancaster, Pa. Wood-sawing machine. No. 1,021,813; Apr. 2; Sp. p. 117; Gaz. vol. 177; p. 23.
Zimmerman, Harry. (See Bartholomae, William, assignor.)
Zimmerman, James G., Milwaukee, Wis., assignor to Allis-Chalmers Company. Resistance element. No. 1,023,543; Apr. 16; Sp. p. 3801; Gaz. vol. 177; p. 671.
Zimmers, Abraham M., Baltimore, Md. Building-material construction. No. 1,023,059; Apr. 9; Sp. p. 2780; Gaz. vol. 177; p. 473.
Zundmetall-Gesellschaft m. b. H. (See Krieger, Ferdinand, assignor.)
Zweigbergk, Thorsten von, Southport, England, assignor to General Electric Company. Motor-control system. No. 1,022,917; Apr. 9; Sp. p. 2487; Gaz. vol. 177; p. 424.
Zyburn, John H., Boundbrook, N. J. Flour-sifter. No. 1,024,962; Apr. 30; Sp. p. 6925; Gaz. vol. 177; p. 1217.

ALPHABETICAL LIST OF PATENTEES OF DESIGNS.

A. Wittnauer & Co. (See Wittnauer, Emile J., assignor.)
A. H. Heisey & Co. (See Sanford, Andrew J., assignor.)
Ackerman, Henry, Weehawken, N. J. Gem-setting. No. 42,428; Apr. 30; Gaz. vol. 177; p. 1271.
Allen, Grosvenor N., assignor to Oneida Community, Limited, Oneida, N. Y. Handle for spoons, forks, or similar articles. No. 42,384; Apr. 9; Gaz. vol. 177; p. 499.
Alvord, John J., and F. Karsitz, Bridgeport, Conn. Member of a pair of shears. No. 42,385; Apr. 9; Gaz. vol. 177; p. 499.
Armstrong Cork Company. (See Humphreys, Charles F., assignor.)
Averns, Raymond H., Coventry, England. Braid or trimming. Nos. 42,429–30; Apr. 30; Gaz. vol. 177; pp. 1271–2.
Belderhase, George B., assignor to Joseph Fahys & Co., New York, N. Y. Bottle. No. 42,431; Apr. 30; Gaz. vol. 177; p. 1272.
Bernstein, William, New York, N. Y. Shoe. No. 42,379; Apr. 2; Gaz. vol. 177; p. 220.
Bliss, Herbert C., Attleboro, Mass. Tubular stock for jewelry or similar articles. No. 42,411; Apr. 23; Gaz. vol. 177; p. 1018.
Bliss, Herbert C., Attleboro, Mass. Bracelet. No. 42,412; Apr. 23; Gaz. vol. 177; p. 1018.
Bloodworth, Kate, assignor to The Pantasote Company, New York, N. Y. Fabric. No. 42,413; Apr. 23; Gaz. vol. 177; p. 1018.
Broderick, John K., St. Louis, Mo. Cigar or similar article. No. 42,414; Apr. 23; Gaz. vol. 177; p. 1018.
Bromley & Sons, John. (See Petsold, Adolph, assignor.)
Brommenschenkel, Theodore, Aurora, Ill. Necktie-holder. No. 42,432; Apr. 30; Gaz. vol. 177; p. 1272.
Brown, Herbert L., assignor to The H. L. Brown Fence and Manufacturing Company, Cincinnati, Ohio. Wire fence. No. 42,433; Apr. 30; Gaz. vol. 177; p. 1272.
Case, Francis M., Canton, assignor to The Hoover-Suction Sweeper Company, New Berlin, Ohio. Casing for carpet sweepers and cleaners. No. 42,415; Apr. 23; Gaz. vol. 177; p. 1019.
Cleveland, Charles E., Fond du Lac, Wis. Street-lamp. No. 42,434; Apr. 30; Gaz. vol. 177; p. 1272.
Dailey, Clifford, New York, N. Y. Locket. Nos. 42,386–7; Apr. 9; Gaz. vol. 177; p. 500.
Doten-Dunton Desk Co. (See Dunton, Kervin R., assignor.)
Dunton, Kervin R., assignor to Doten-Dunton Desk Co., Boston, Mass. Desk. No. 42,388; Apr. 9; Gaz. vol. 177; p. 500.
E. Ingraham Co., The. (See Stockton, Elmer E., assignor.)
Ebeling, Phillip, assignor to Fostoria Glass Company, Moundsville, W. Va. Candle-lamp. No. 42,389; Apr. 9; Gaz. vol. 177; p. 500.
Eick, Otto, St. Louis, Mo. Rubber brush. No. 42,390; Apr. 9; Gaz. vol. 177; p. 500.
Ennis, John J., and W. T. Hohnhorst, Covington, Ky. Metal door-mat. No. 42,380; Apr. 2; Gaz. vol. 177; p. 221.
Erskine, James L., Upper Montclair, N. J. Facial-massage device. No. 42,435; Apr. 30; Gaz. vol. 177; p. 1272.
Fostoria Glass Company. (See Ebeling, Phillip, assignor.)
Gebelein, George C., Wellesley, Mass. Paper-weight and pen-rest. No. 42,391; Apr. 9; Gaz. vol. 177; p. 500.
Gilbert, Cornelia E., assignor to The Pantasote Company, New York, N. Y. Fabric. No. 42,416; Apr. 23; Gaz. vol. 177; p. 1019.
H. L. Brown Fence and Manufacturing Company, The. (See Brown, Herbert L., assignor.)
Haviland, Charles E., Limoges, France. Handle for dishes or bowls or similar articles of tableware. No. 42,392; Apr. 9; Gaz. vol. 177; p. 500.
Hayward, Henry E., Philadelphia, Pa., assignor to Link-Belt Company, Chicago, Ill. Chain. No. 42,436; Apr. 30; Gaz. vol. 177; p. 1273.
Henry, Frank R., assignor to Majestic Manufacturing Company, St. Louis, Mo. Stove-front. No. 42,393; Apr. 9; Gaz. vol. 177; p. 501.
Hohnhorst, William T. (See Ennis and Hohnhorst.)
Hoover-Suction Sweeper Company, The. (See Case, Francis M., assignor.)
Humphreys, Charles F., Lancaster, assignor to Armstrong Cork Company, Pittsburgh, Pa. Oil-cloth or linoleum. No. 42,394; Apr. 9; Gaz. vol. 177; p. 501.
J. G. Brill Company, The. (See Liddell, Robert B., assignor.)
Joseph Fahys & Co. (See Belderhase, George B., assignor.)
Karsitz, Frank. (See Alvord and Karsitz.)
Keach, Walter E., Cumberland, R. I. Lace edging. No. 42,417; Apr. 23; Gaz. vol. 177; p. 1019.
Keyes, Isabel C., assignor to The Pantasote Company, New York, N. Y. Fabric. No. 42,418; Apr. 23; Gaz. vol. 177; p. 1019.
Landers, Frary and Clark. (See Spellman, Herbert W., assignor.)
Liddell, Robert B., assignor to The J. G. Brill Company, Philadelphia, Pa. Car-seat support. No. 42,419; Apr. 23; Gaz. vol. 177; p. 1019.
Link-Belt Company. (See Hayward, Henry E., assignor.)
Linsauer, Eduard, Charlottenburg, Germany. Combined automatic vending apparatus. No. 42,395; Apr. 9; Gaz. vol. 177; p. 501.
Lucas, James L., Bridgeport, Conn. Chauffeur's heel-rest. No. 42,396; Apr. 9; Gaz. vol. 177; p. 501.
Mackenzie, Joseph G., Toledo, Ohio. Brush. No. 42,437; Apr. 30; Gaz. vol. 177; p. 1273.
Majestic Manufacturing Company. (See Henry, Frank R., assignor.)
Miller Rubber Company, The. (See Pfeiffer, William F., assignor.)
Muehlmatt, Adolph, Newport, Ky. Engraver's block. No. 42,397; Apr. 9; Gaz. vol. 177; p. 502.
Mundheim, Samuel, New York, N. Y. Hat. No. 42,438; Apr. 30; Gaz. vol. 177; p. 1273.
Mygatt, Otis A., New York, N. Y. Shade, reflector, or similar article. Nos. 42,420–1; Apr. 23; Gaz. vol. 177; pp. 1019–20.
Mygatt, Otis A., New York, N. Y. Sheet-glass or similar article. No. 42,422; Apr. 23; Gaz. vol. 177; p. 1020.
Oneida Community. (See Allen, Grosvenor N., assignor.)
Pantasote Company, The. (See Bloodworth, Kate, assignor.)
Pantasote Company, The. (See Gilbert, Cornelia E., assignor.)
Pantasote Company, The. (See Keyes, Isabel C., assignor.)
Petsold, Adolph, assignor to J. Bromley & Sons, Philadelphia, Pa. Rug. Nos. 42,439–40; Apr. 30; Gaz. vol. 177; p. 1273.
Pfeiffer, William F., assignor to The Miller Rubber Company, Akron, Ohio. Elastic tire for vehicles. No. 42,423; Apr. 23; Gaz. vol. 177; p. 1020.
Pressler, Adolf W., Keene, N. H. Rocking-horse. No. 42,409; Apr. 16; Gaz. vol. 177; p. 750.
Rousso, Jacques, Chicago, Ill. Towel-cabinet. No. 42,398; Apr. 9; Gaz. vol. 177; p. 502.
Sanford, Andrew J., assignor to A. H. Heisey & Co. Inc., Newark, Ohio. Salt-shaker. No. 42,441; Apr. 30; Gaz. vol. 177; p. 1274.
Silbermann, Philipp, New York, N. Y. Jewel-setting. No. 42,381; Apr. 2; Gaz. vol. 177; p. 221.
Simons, Elmer O., Los Angeles, Cal. Vase. Nos. 42,399–402; Apr. 9; Gaz. vol. 177; p. 502.
Southwick, Albert A., New York, N. Y. Handle for spoons, forks, or similar articles. No. 42,424; Apr. 23; Gaz. vol. 177; p. 1020.
Spahr, Otto, and C. Stichler, Philadelphia, Pa. Sad-iron. No. 42,443; Apr. 30; Gaz. vol. 177; p. 1274.
Spellman, Herbert W., assignor to Landers, Frary and Clark, New Britain, Conn. Stand for electrically-driven machines. No. 42,442; Apr. 30; Gaz. vol. 177; p. 1274.
Stichler, Charles. (See Spahr and Stichler.)
Stockton, Elmer E., assignor to The E. Ingraham Co., Bristol, Conn. Clock-case. No. 42,444; Apr. 30; Gaz. vol. 177; p. 1274.
Strause, Edmund A., Los Angeles, Cal. Glass-holder. No. 42,425; Apr. 23; Gaz. vol. 177; p. 1020.
Strong, James H., Steubenville, Ohio. Reflector-shade. No. 42,403; Apr. 9; Gaz. vol. 177; p. 503.
Talamini, Emil, New York, N. Y. Tile-facing. Nos. 42,404–5; Apr. 9; Gaz. vol. 177; p. 503.
Trautwein, Walter E., Fort Wayne, Ind. Display-board. No. 42,426; Apr. 23; Gaz. vol. 177; p. 1021.
Trego, Frank H., Buffalo, N. Y. Vehicle-axle. No. 42,406; Apr. 9; Gaz. vol. 177; p. 503.
Turnbull, Joseph G., New York, N. Y. Bracket. No. 42,382; Apr. 2; Gaz. vol. 177; p. 221.
Van Duzer, Isaac O., New York, N. Y. Covering for boxes or books. No. 42,410; Apr. 16; Gaz. vol. 177; p. 750.
Vaughan, Harry L., Chicago, Ill. Pocket bottle-opener. No. 42,445; Apr. 30; Gaz. vol. 177; p. 1274.
Voight, Henry G., New Britain, Conn. Escutcheon-plate. Nos. 42,446–7; Apr. 30; Gaz. vol. 177; p. 1275.
Weimer, Emanuel H., Los Angeles, Cal. Purse. No. 42,407; Apr. 9; Gaz. vol. 177; p. 503.
Whitman, John F., Elkins Park, Pa. Mantel-clock case. No. 42,448; Apr. 30; Gaz. vol. 177; p. 1275.
Williams, Angelo W., New York, N. Y. Knife-handle. No. 42,408; Apr. 9; Gaz. vol. 177; p. 503.
Winkler, Samuel M., New York, N. Y. Merchandise-display rack. No. 42,427; Apr. 23; Gaz. vol. 177; p. 1021.
Wittnauer, Emile J., assignor to A. Wittnauer & Co., New York, N. Y. Bracelet-watch. No. 42,449; Apr. 30; Gaz. vol. 177; p. 1275.
Woods, William P., Evansville, Ind. Badge, emblem, or similar article. No. 42,383; Apr. 2; Gaz. vol. 177; p. 221.

ALPHABETICAL LIST OF REGISTRANTS OF TRADE-MARKS.

A. Schoenhut Company, The, Philadelphia, Pa. Certain musical instruments. No. 86,164; Apr. 16; Gaz. vol. 177; p. 766.

A. A. Vantine & Co., New York, N. Y. Soap. No. 86,186; Apr. 16; Gaz. vol. 177; p. 767.

A. F. Young & Co., New York, N. Y.; Pittsburgh, Pa., and Boston, Mass. Oranges. No. 86,017; Apr. 2; Gaz. vol. 177; p. 237.

A. H. Hart Co., The, Paterson, N. J. Twine and cord. No. 86,221; Apr. 23; Gaz. vol. 177; p. 1030.

A. P. Witteman Company, Philadelphia, Pa. Steel forgings, castings, and bars. No. 86,357; Apr. 30; Gaz. vol. 177; p. 1293.

Allmänna Svenska Elektriska Aktiebolaget, Vesterås, Sweden. Certain electrical machines and supplies. No. 85,935; Apr. 2; Gaz. vol. 177; p. 235.

American Agricultural Chemical Co., New York, N. Y. Fertilizers. Nos. 86,116–17; Apr. 16; Gaz. vol. 177; p. 765.

American Belting & Tanning Co., Boston, Mass. Leather belting, hose, and lacing. No. 86,262; Apr. 30; Gaz. vol. 177; p. 1291.

American Electrical Heater Co., Detroit, Mich. Certain electrical apparatus. No. 86,020; Apr. 9; Gaz. vol. 177; p. 519.

American Feedograph Company, Philadelphia, Pa. Certain automatic attachment for type-writing machines. No. 86,021; Apr. 9; Gaz. vol. 177; p. 519.

American Milk Company, Chicago, Ill. Condensed milk. No. 85,936; Apr. 2; Gaz. vol. 177; p. 235.

American Paper Products Company, St. Louis, Mo. Corrugated paper. No. 86,022; Apr. 9; Gaz. vol. 177; p. 519.

American Pin Company, Waterbury, Conn. Certain plumbers' supplies. No. 86,198; Apr. 23; Gaz. vol. 177; p. 1039.

American Sales Book Company, Limited, Toronto, Ontario, Canada, and Niagara Falls, Elmira, and Glendale, N. Y. Sales-books. No. 86,263; Apr. 30; Gaz. vol. 177; p. 1291.

Ammon & Person, Jersey City, N. J. Oleomargarin. No. 86,264; Apr. 30; Gaz. vol. 177; p. 1291.

Annin & Co., New York, N. Y. Bunting. No. 86,118; Apr. 16; Gaz. vol. 177; p. 765.

Ansco Company, Binghamton, N. Y. Photographic developing-paper. No. 86,265; Apr. 30; Gaz. vol. 177; p. 1291.

Arabol M'f'g. Co., The, New York, N. Y. Rosin employed as a paper-size. No. 86,199; Apr. 23; Gaz. vol. 177; p. 1039.

Architect Shoe Company, Schenectady, N. Y. Boots and shoes. No. 86,266; Apr. 30; Gaz. vol. 177; p. 1291.

Arrow Electric Company, The, Hartford, Conn. Electric sockets and receptacles. No. 86,119; Apr. 16; Gaz. vol. 177; p. 765.

Aschéri, Antoine, Paris, France. Pneumatic tires, covers, and treads. No. 85,987; Apr. 2; Gaz. vol. 177; p. 235.

Atlantic Coast Hardware Co., Boston, Mass. Paper roofing. No. 86,200; Apr. 23; Gaz. vol. 177; p. 1039.

Atlas Portland Cement Company, The, Northampton, Pa. Lime and building-plaster compositions. No. 85,938; Apr. 2; Gaz. vol. 177; p. 235.

B. Altman & Co., New York, N. Y. Gloves. No. 86,019; Apr. 9; Gaz. vol. 177; p. 519.

Babene Manufacturing Company, The, Dover, Del., and Baltimore, Md. Medicine for certain children's diseases. No. 86,023; Apr. 9; Gaz. vol. 177; p. 519.

Bach & Company, Chicago, Ill. Watches and watchcases. No. 86,267; Apr. 30; Gaz. vol. 177; p. 1291.

Bailey, William F., Macon, Ga. Liniment. No. 86,121; Apr. 16; Gaz. vol. 177; p. 765.

Baldwin, Edward L., San Francisco, Cal. Medicine for headaches, stomach trouble, &c. No. 86,024; Apr. 9; Gaz. vol. 177; p. 519.

Balshiser, Harry, New York, N. Y. Preparation of cod-liver oil. No. 86,201; Apr. 23; Gaz. vol. 177; p. 1039.

Barrett Manufacturing Company, New York, N. Y. Sheathing-paper. No. 85,939; Apr. 2; Gaz. vol. 177; p. 235.

Barrett Manufacturing Company, New York, N. Y. Certain construction materials. No. 86,268; Apr. 30; Gaz. vol. 177; p. 1291.

Bates, Henry A., Middletown, Conn. Compound for the preservation of thread. No. 86,202; Apr. 23; Gaz. vol. 177; p. 1039.

Bates Manufacturing Company, Lewiston, Me. Cotton piece goods. No. 86,025; Apr. 9; Gaz. vol. 177; p. 519.

Benda, George, New York, N. Y. Certain painters' materials. Nos. 86,203–4; Apr. 23; Gaz. vol. 177; p. 1039.

Benjamin & Johnes, Newark, N. J. Ladies' and children's clothing. No. 86,269; Apr. 30; Gaz. vol. 177; p. 1291.

Bergstrom Stove Company, Neenah, Wis. Heating-furnaces. No. 86,026; Apr. 9; Gaz. vol. 177; p. 519.

Birken & Co., T. L., Nottingham, England. Nottingham cotton-lace curtains. No. 86,122; Apr. 16; Gaz. vol. 177; p. 765.

Blackstone Mfg. Company, Providence, R. I. Cotton piece goods. No. 86,028; Apr. 9; Gaz. vol. 177; p. 519.

Bosch & Co., Badalona, near Barcelona, Spain. Anisettes. No. 86,271; Apr. 30; Gaz. vol. 177; p. 1291.

Bowers Rubber Works, San Francisco, Cal. Rubber hose, packing, belts, and non-metallic tires. No. 86,124; Apr. 16; Gaz. vol. 177; p. 765.

Boyd, Chas. B., Sacramento, Cal. Certain pharmaceutical preparation. No. 86,126; Apr. 16; Gaz. vol. 177; p. 765.

Boyd, John, Houston, Tex. Remedy for certain diseases. No. 86,125; Apr. 16; Gaz. vol. 177; p. 765.

Brainerd, Erastus, Richmond Beach, Wash. Paper food-containers. No. 86,272; Apr. 30; Gaz. vol. 177; p. 1291.

Brandenberger, Jaques E., Thaon-les-Vosges, France. Dry-plates and paper for photographic and kinematographic use. No. 85,941; Apr. 2; Gaz. vol. 177; p. 235.

Brown, Edward, Omaha, Nebr. Metal-polish. No. 86,127; Apr. 16; Gaz. vol. 177; p. 765.

Budd, G. M., Homestead, Fla. Remedy for diseases of the feet and a deodorizer. No. 86,031; Apr. 9; Gaz. vol. 177; p. 519.

Budd, Harry, Independence, Kans. Washing-machines. No. 85,942; Apr. 2; Gaz. vol. 177; p. 235.

Burk, Louis, Philadelphia, Pa. Minced pork. No. 86,275; Apr. 30; Gaz. vol. 177; p. 1291.

Burke & James, assignors to Burke & James, Inc., Chicago, Ill. Certain chemical preparations. No. 86,205; Apr. 23; Gaz. vol. 177; p. 1039.

Burke Grease Co., Philadelphia, Pa. Lubricating-grease. No. 85,943; Apr. 2; Gaz. vol. 177; p. 235.

Burrton Milling Company, The, Burrton, Kans. Wheat-flour and cornmeal. No. 85,944; Apr. 2; Gaz. vol. 177; p. 235.

Burton, John G., Hopewell, N. J. Bottled drinking-water. No. 86,206; Apr. 23; Gaz. vol. 177; p. 1039.

Byron Weston Company, Dalton, Mass. Writing-paper. No. 86,276; Apr. 30; Gaz. vol. 177; p. 1291.

C. M. Grey Mfg. Co., East Orange, N. J. Die-castings. No. 85,964; Apr. 2; Gaz. vol. 177; p. 236.

California Wine Association, San Francisco, Cal. Wine. No. 86,032; Apr. 9; Gaz. vol. 177; p. 519.

Campbell, Charles W., Lancaster, Pa. Certain non-alcoholic beverages. No. 86,277; Apr. 30; Gaz. vol. 177; p. 1291.

Cardinal Varnish Cleaner Company, The, Akron, Ohio. Varnish-cleaners. No. 86,033; Apr. 9; Gaz. vol. 177; p. 519.

Carlyle Milling Company, Carlyle, Ill. Wheat-flour. No. 86,034; Apr. 9; Gaz. vol. 177; p. 519.

Carter & Holmes, Chicago, Ill. Handkerchiefs. No. 85,945; Apr. 2; Gaz. vol. 177; p. 235.

Cayey-Caguas Tobacco Company, New York, N. Y. Cigars, cheroots, and cigarettes. No. 86,278; Apr. 30; Gaz. vol. 177; p. 1291.

Chandler Oil Cloth & Buckram Co., Taunton, and East Taunton, Mass. Oiled duck. No. 86,128; Apr. 16; Gaz. vol. 177; p. 765.

Chemische Fabrik Helfenberg A. G. vorm. Eugen Dieterich, Helfenberg, Germany. Tapeworm remedy. No. 86,035; Apr. 9; Gaz. vol. 177; p. 519.

Cheery-Cheer Company, Inc., The, Sidney, Ohio. Non-alcoholic beverage. No. 86,279; Apr. 30; Gaz. vol. 177; p. 1291.

Chicago Consolidated Bottling Company, The, Chicago, Ill. Ginger-ale. No. 86,036; Apr. 9; Gaz. vol. 177; p. 519.

Chicago Polish Company, The, Chicago, Ill. Metal-polish. No. 85,946; Apr. 2; Gaz. vol. 177; p. 235.

Clark & Host Co., Milwaukee, Wis. Coffee, tea, spices, flavoring extracts, &c. No. 86,280; Apr. 30; Gaz. vol. 177; p. 1291.

Cleveland Macaroni Company, Cleveland, Ohio. Macaronic paste foods. No. 86,281; Apr. 30; Gaz. vol. 177; p. 1291.

Closset & Devers, Portland, Oreg. Imitation maple flavor. No. 86,129; Apr. 16; Gaz. vol. 177; p. 765.

Coast Products Company, The, St. Louis, Mo. Canned and preserved fruits and canned vegetables. No. 86,207; Apr. 23; Gaz. vol. 177; p. 1039.

Collins & Fairbanks Co., Boston, Mass. Men's and women's coats and wraps. No. 85,947; Apr. 2; Gaz. vol. 177; p. 235.

Compagnie Fermière de l'Établissement Thermal de Vichy, Paris, France. Natural mineral waters. Nos. 86,208–9; Apr. 23; Gaz. vol. 177; p. 1039.

Consumers Company, Chicago, Ill. Certain non-alcoholic beverages. No. 86,282; Apr. 30; Gaz. vol. 177; p. 1291.

Corn Products Refining Company, Jersey City, N. J., and New York, N. Y. Compound of corn and sugar syrup. No. 85,946; Apr. 2; Gaz. vol. 177; p. 235.

Corona Chemical Company, Chicago, Ill. Medicines for diseases of the skin. No. 86,210; Apr. 23; Gaz. vol. 177; p. 1039.

Corticine Floor Covering Company, Limited, The, London, England. Floor-coverings. No. 86,130; Apr. 16; Gaz. vol. 177; p. 765.

Cox, John B., Maryville, Mo. External remedy for certain diseases. No. 86,037; Apr. 9; Gaz. vol. 177; p. 519.

Cruse & Fils Freres, Bordeaux, France. Clarets and sauternes. No. 86,283; Apr. 30; Gaz. vol. 177; p. 1291.

Cummings Manufacturing Company, Morristown, N. J. Foot powder, cream, lotion, and bath tablets. No. 86,039; Apr. 9; Gaz. vol. 177; p. 519.

Daimler-Motoren-Gesellschaft, Untertürkheim, near Stuttgart, Germany. Motors, motor parts and armatures, &c. No. 85,949; Apr. 2; Gaz. vol. 177; p. 235.

Daniel, Jno. B., Atlanta, Ga. Sedative, antispasmodic, and nerve tonic. No. 86,211; Apr. 23; Gaz. vol. 177; p. 1039.

David, John, New York, N. Y. Certain fancy goods and notions. No. 86,284; Apr. 30; Gaz. vol. 177; p. 1291.

Davidge & Co., T. C. (See Davidge, Frank C.)

Davidge, Frank C., assignor to T. C. Davidge & Co., Toronto, Ontario, Canada. Wall-papers. No. 86,285; Apr. 30; Gaz. vol. 177; p. 1291.

Davis, George R., Seattle, Wash. Leather shoes and boots. No. 86,131; Apr. 16; Gaz. vol. 177; p. 765.

De Fi Manufacturing Company, New York, N. Y. Carbon-paper and type-writing ribbon. No. 86,286; Apr. 30; Gaz. vol. 177; p. 1291.

De Huy, Bernard H., Abilene, Kans. Labels. No. 85,950; Apr. 2; Gaz. vol. 177; p. 235.

De Soto Mineral Spring Company, The, Hot Springs, Ark. Natural spring-water. No. 85,953; Apr. 2; Gaz. vol. 177; p. 235.

Dempster & Place Company, The, Gloversville, N. Y. Gloves and mittens. Nos. 85,951–2; Apr. 2; Gaz. vol. 177; p. 235.

Diehm-Fansler Grocer Co., East St. Louis, Ill. Canned fruits, vegetables, salmon, and hominy. No. 85,954; Apr. 2; Gaz. vol. 177; p. 235.

Dolphin, Byron J., Seattle, Wash. Peanut-butter. No. 86,040; Apr. 9; Gaz. vol. 177; p. 519.

Dr. Fritz Müller, Basler chemisch-technisches Laboratorium, Basel, Switzerland. Composition to finish or dress textiles. No. 86,232; Apr. 23; Gaz. vol. 177; p. 1040.

Droste & Co., Haarlem, Netherlands. Cocoa. No. 86,288; Apr. 30; Gaz. vol. 177; p. 1291.

Duché & Sons, T. M., New York, N. Y. Glue and gelatin. No. 85,955; Apr. 2; Gaz. vol. 177; p. 235.

Duncan, Charles H., New York, N. Y. Fans for personal use. No. 86,289; Apr. 30; Gaz. vol. 177; p. 1291.

Dunn, Edith E., Woodfield, Uppingham, England. Hat-pins. No. 86,290; Apr. 30; Gaz. vol. 177; p. 1291.

Durham Duplex Razor Company, New York, N. Y. Razors. No. 86,041; Apr. 9; Gaz. vol. 177; p. 519.

Dwinell-Wright Company, Boston, Mass. Coffee. No. 85,956; Apr. 2; Gaz. vol. 177; p. 235.

E. Jenckes Manufacturing Company, Worcester, Mass. Belt-hooks. No. 86,064; Apr. 9; Gaz. vol. 177; p. 520.

E. Myers Lye Co., St. Louis, Mo. Lye. No. 86,148; Apr. 16; Gaz. vol. 177; p. 766.

E. C. Atkins & Company, Indianapolis, Ind. Saws, knives, and machetes. No. 86,120; Apr. 16; Gaz. vol. 177; p. 765.

E. R. Squibb & Sons, New York, N. Y. Certain pharmaceutical products. No. 86,107; Apr. 9; Gaz. vol. 177; p. 521.

Earnsdale Worsted Company, Clinton, Mass. Outer suits. No. 86,042; Apr. 9; Gaz. vol. 177; p. 519.

Edgar Allen American Manganese Steel Company, Augusta, Me., and Chicago, Ill. Manganese-steel castings. No. 86,261; Apr. 30; Gaz. vol. 177; p. 1291.

Edson, Moore & Co., Detroit, Mich. Hosiery. No. 86,043; Apr. 9; Gaz. vol. 177; p. 519.

Eisenberg, Morris, New York, N. Y. Cream-cheese. No. 86,133; Apr. 16; Gaz. vol. 177; p. 765.

Ellet-Kendall Shoe Company, Kansas City, Mo. Leather boots, shoes, and leggings. No. 85,957; Apr. 2; Gaz. vol. 177; p. 235.

Emerson-Brantingham Company, Rockford, Ill. Mowing-machines. No. 86,044; Apr. 9; Gaz. vol. 177; p. 519.

Englander Spring Bed Company, New York, N. Y. Spring-mattresses, couch-beds, divans, &c. No. 86,134; Apr. 16; Gaz. vol. 177; p. 765.

Faber, Eberhard, New York, N. Y. Pencils, penholders, and rubber erasers. No. 86,291; Apr. 30; Gaz. vol. 177; p. 1292.

Fall River Bleachery, Fall River, Mass. Cotton piece goods. No. 86,292; Apr. 30; Gaz. vol. 177; p. 1292.

Farbenfabriken of Elberfeld Company, New York, N. Y. Certain chemical. No. 86,048; Apr. 9; Gaz. vol. 177; p. 520.

Farbenfabriken of Elberfeld Company, New York, N. Y. Antiarthriticum. No. 86,049; Apr. 9; Gaz. vol. 177; p. 520.

Farbenfabriken of Elberfeld Company, New York, N. Y. Disinfectant. No. 86,212; Apr. 23; Gaz. vol. 177; p. 1039.

Finn and Meyers, New York, N. Y. Silk shirtings. No. 86,213; Apr. 23; Gaz. vol. 177; p. 1039.

Fletcher Co., Horace, New York, N. Y. Crackers and biscuits. No. 86,293; Apr. 30; Gaz. vol. 177; p. 1292.

Floretto, New York, N. Y. Women's hats, hat-frames, muffs, and wraps. No. 86,294; Apr. 30; Gaz. vol. 177; p. 1292.

Florida East Coast Company, Inc., Wilmington, Del. Delespine, Fla., and Philadelphia, Pa. Oranges, grapefruit, lemons, tangerines, and cumquats. No. 86,295; Apr. 30; Gaz. vol. 177; p. 1292.

Forchheimer & Co., M., Mobile, Ala. Wheat-flour. No. 85,958; Apr. 2; Gaz. vol. 177; p. 235.

Funk, Emil J., Cleveland, Ohio. Dust-cloths and broom-covers. No. 85,959; Apr. 2; Gaz. vol. 177; p. 235.

G. W. Bent Co., Boston, Mass. Mattresses, cushions, pillows, and bedsteads. No. 85,940; Apr. 2; Gaz. vol. 177; p. 235.

Gage-Downs Company, Chicago, Ill. Corset-stiffeners. No. 86,051; Apr. 9; Gaz. vol. 177; p. 529.

Gammel & Company, George J., Buffalo, N. Y. Cigars. No. 85,960; Apr. 2; Gaz. vol. 177; p. 235.

Geer, George J., New York, N. Y. Certain kinds of piece goods. Nos. 86,135–6; Apr. 16; Gaz. vol. 177; p. 765.

Gener y Seycher, Lutgarda, Habana, Cuba. Cigars, cigarettes, and tobacco. Nos. 86,339–40; Apr. 30; Gaz. vol. 177; p. 1293.

Geo. Borgfeldt & Co., New York, N. Y. Soap. No. 86,123; Apr. 16; Gaz. vol. 177; p. 765.

Gillam, Walter E., New York, N. Y., and Philadelphia, Pa. Cathartic preparation. No. 86,214; Apr. 23; Gaz. vol. 177; p. 1039.

Goetz Chemical Company, Dr., Brooklyn, N. Y. Face-powder. No. 86,216; Apr. 23; Gaz. vol. 177; p. 1039.

Goldsmith, Gordon, Baltimore, Md. Boots and shoes. No. 85,961; Apr. 2; Gaz. vol. 177; p. 235.

Goodyear Tire and Rubber Company, The, Akron, Ohio. Elastic vehicle-tires. No. 86,137; Apr. 16; Gaz. vol. 177; p. 765.

Gorman, Horace P., Hazleton, Pa. Preparation for nickel-plating metal. No. 86,215; Apr. 23; Gaz. vol. 177; p. 1039.

Governor and Company of Adventurers of England Trading into Hudson's Bay, Winnipeg, Manitoba, Canada. Smoking-tobacco. No. 85,962; Apr. 2; Gaz. vol. 177; p. 235.

Graham, Hedley R., St. Louis, Mo. Plastic flooring and flooring materials. No. 85,963; Apr. 2; Gaz. vol. 177; p. 236.

Green & Green Company, The, Dayton, Ohio. Crackers. No. 86,052; Apr. 9; Gaz. vol. 177; p. 520.

Grether, Gustav, Koblenz, Germany. Certain chemical preparations. No. 86,053; Apr. 9; Gaz. vol. 177; p. 520.

Grosvenor & Co., J. M., Boston, Mass. Soap. No. 86,296; Apr. 30; Gaz. vol. 177; p. 1292.

Gustav Stickley Company, New York, N. Y. Certain furniture. No. 86,006; Apr. 2; Gaz. vol. 177; p. 237.

Gyro Motor Co., The, Washington, D. C. Internal-combustion engines. No. 86,217; Apr. 23; Gaz. vol. 177; p. 1039.

H. D. Lee Mercantile Co., Salina, Kans. Certain foods. No. 86,067; Apr. 9; Gaz. vol. 177; p. 520.

Haldens Tændstikfabrik, Fredrikshald, Norway. Matches. No. 86,218; Apr. 23; Gaz. vol. 177; p. 1039.

Hall, Byron C., Oakland, Cal. Liniment. No. 86,219; Apr. 23; Gaz. vol. 177; p. 1039.

Hammel Riglander & Co., New York, N. Y. Gravers. No. 85,995; Apr. 2; Gaz. vol. 177; p. 236.

Hamstra & Co., H., Grand Rapids, Mich. Tea. No. 86,297; Apr. 30; Gaz. vol. 177; p. 1292.

Hanan & Son, Brooklyn, N. Y. Leather boots and shoes. No. 86,055; Apr. 9; Gaz. vol. 177; p. 520.

Hansen, Anton H., Cleveland, Ohio. Trading-stamps. No. 86,220; Apr. 23; Gaz. vol. 177; p. 1039.

Hatmaker, James E., Paris, France. Milk, cream, butter, and cheese. No. 86,056; Apr. 9; Gaz. vol. 177; p. 520.

Heering, Peter F., Copenhagen, Denmark. Cherry brandy. No. 86,057; Apr. 9; Gaz. vol. 177; p. 520.

Henderson, Mark M., New York, N. Y. Union suits of textile material. No. 86,138; Apr. 16; Gaz. vol. 177; p. 765.

Henry A. Dix & Sons Company, New York, N. Y. Ladies' tub-dresses. No. 86,287; Apr. 30; Gaz. vol. 177; p. 1291.

Henry N. Clark Co., Boston, Mass. Cooking-ranges, heating-stoves, and hot-air furnaces. No. 86,038; Apr. 9; Gaz. vol. 177; p. 519.

Henry's Chemical Co., Washington, D. C. Certain pharmaceutical preparations. No. 86,058; Apr. 9; Gaz. vol. 177; p. 520.

Henson, Granville H., Evona, Ky. Remedy for rheumatism, sciatic pains, &c. No. 86,222; Apr. 23; Gaz. vol. 177; p. 1039.

Hermann, Isadore, Columbus, Ga. Purgative, &c. No. 86,223; Apr. 23; Gaz. vol. 177; p. 1039.

Hirsch, Carl, New York, N. Y. Smoking-pipes. No. 85,965; Apr. 2; Gaz. vol. 177; p. 236.

Hollander & Son, S., New York, N. Y. Veiling. No. 86,059; Apr. 9; Gaz. vol. 177; p. 520.

Holzhauer, Charles W., Newark, N. J. Remedies for grip and influenza. No. 86,060; Apr. 9; Gaz. vol. 177; p. 520.

Hope Company, Providence, R. I. Cotton piece goods. No. 86,061; Apr. 9; Gaz. vol. 177; p. 520.

Hydrex Felt & Engineering Company, Portland, Me.; New York, N. Y., and Rahway, N. J. Building, sheathing, roofing, &c., papers. No. 86,299; Apr. 30; Gaz. vol. 177; p. 1292.

Hygienic Products Company, The, Canton, Ohio. Cleaning-powder. No. 86,062; Apr. 9; Gaz. vol. 177; p. 520.

Ideal Auto Company, Fort Wayne, Ind. Automobiles and autotrucks. No. 86,300; Apr. 30; Gaz. vol. 177; p. 1292.

Imperial Rubber Co., New York, N. Y. Certain electrical supplies. No. 85,967; Apr. 2; Gaz. vol. 177; p. 236.

Ingersoll-Rand Co., Phillipsburg, N. J., and New York, N. Y. Metal used in castings. No. 86,301; Apr. 30; Gaz. vol. 177; p. 1292.

International Mfg. Co., Phillips, Me. Toothpicks. No. 86,302; Apr. 30; Gaz. vol. 177; p. 1292.

International Shoe Company. (See Roberts, Johnson & Rand Shoe Company, assignor.)

Irving Hat Co., New York, N. Y. Hats and caps. No. 85,970; Apr. 2; Gaz. vol. 177; p. 236.

J. C. Blair Company, Huntingdon, Pa. Paper and stationery. Nos. 86,029–30; Apr. 9; Gaz. vol. 177; p. 510.

J. C. Blair Company, Huntingdon, Pa. Certain stationery supplies. No. 86,270; Apr. 30; Gaz. vol. 177; p. 1201.

J. S. Brown & Bro. Mer. Co., The, Denver, Colo. Certain foods. Nos. 86,273–4; Apr. 30; Gaz. vol. 177; p. 1291.

James Watson & Company, Limited, Dundee, Scotland. Whisky. No. 86,355; Apr. 30; Gaz. vol. 177; p. 1293.

Jefferson, George F., Houston, Tex. Bread. No. 86,063; Apr. 9; Gaz. vol. 177; p. 520.

John Hoffmann & Sons Co., Milwaukee, Wis. Blended coffee. No. 85,966; Apr. 2; Gaz. vol. 177; p. 236.

John Wyeth & Brother, Incorporated, Philadelphia, Pa. Remedy for certain ailments. No. 86,114; Apr. 9; Gaz. vol. 177; p. 521.

John Wyeth & Brother, Incorporated, Philadelphia, Pa. Certain medicine. No. 86,115; Apr. 9; Gaz. vol. 177; p. 521.

Johnson, George A., Attica, Ind. Remedy for stomach diseases. No. 86,224; Apr. 23; Gaz. vol. 177; p. 1039.

Johnson-Locke Mercantile Co., The, San Francisco, Cal. Canned fruits. No. 86,303; Apr. 30; Gaz. vol. 177; p. 1292.

Joseph Benn & Sons, Inc., Greystone, R. I. Alpaca and mohair piece goods. No. 86,027; Apr. 9; Gaz. vol. 177; p. 519.

Katahdin Pulp and Paper Company, Lincoln, Me. Lining, wrapping, printing, and writing papers. No. 86,304; Apr. 30; Gaz. vol. 177; p. 1292.

Kaufman, Lena, Philadelphia, Pa. Hosiery. No. 86,139; Apr. 16; Gaz. vol. 177; p. 765.

Keeton-Krueger Co., Atlanta, Ga. Prepared stock feed. No. 86,140; Apr. 16; Gaz. vol. 177; p. 765.

Kent Manufacturing Company, New York, N. Y. Certain piece goods. No. 86,225; Apr. 23; Gaz. vol. 177; p. 1039.

Kiggins & Tooker Co., New York, N. Y. Blank books. No. 86,305; Apr. 30; Gaz. vol. 177; p. 1292.

Kimball Bros. Co., Bath, Me. Certain foods. No. 85,971; Apr. 2; Gaz. vol. 177; p. 236.

Kingsley & Smith, Hartford, Conn. Butter. No. 86,065; Apr. 9; Gaz. vol. 177; p. 520.

Kingstone Ornamental & Construction Company, Los Angeles, Cal. Artificial building-stones. No. 86,141; Apr. 16; Gaz. vol. 177; p. 765.

Kirshner & Berman, Baltimore, Md. Headache remedy. No. 86,142; Apr. 16; Gaz. vol. 177; p. 765.

Krell French Piano Company, Newcastle, Ind. Pianos, organs, player-pianos, &c. No. 86,306; Apr. 30; Gaz. vol. 177; p. 1292.

Kuehnert & Co., A., New York, N. Y. Men's underwear. No. 86,307; Apr. 30; Gaz. vol. 177; p. 1292.

L. Sonneborn Sons, Inc., New York, N. Y. Certain painters' material. No. 86,105; Apr. 9; Gaz. vol. 177; p. 521.

L. Sonneborn Sons, Inc., New York, N. Y. Disinfectant. No. 86,248; Apr. 23; Gaz. vol. 177; p. 1040.

L. H. Nielsen Company, Pittsburgh, Pa. Certain electrical apparatus. No. 85,983; Apr. 2; Gaz. vol. 177; p. 236.

Leas & McVitty, Inc., Philadelphia, Pa. Sole and belting leather. No. 86,066; Apr. 9; Gaz. vol. 177; p. 520.

Legarda, B., Manila, Philippine Islands. Cigars. Nos. 86,143–4; Apr. 16; Gaz. vol. 177; p. 765.

Legarda, B., Manila, Philippine Islands. Cigars. No. 86,308; Apr. 30; Gaz. vol. 177; p. 1292.

Lehmann, Ernst P., Brandenburg-on-the-Havel, Germany. Certain toys. No. 85,972; Apr. 2; Gaz. vol. 177; p. 236.

Lester, Francis E., Mesilla Park, N. Mex. White sapphires. No. 86,309; Apr. 30; Gaz. vol. 177; p. 1292.

Leurent, Edouard, Tourcoing, France. Men's, women's, and children's clothing. No. 86,226; Apr. 23; Gaz. vol. 177; p. 1039.

Levy's Sons, Charles, New York, N. Y. Straw hats. No. 86,310; Apr. 30; Gaz. vol. 177; p. 1292.

Liebmann, Paul G., Ardmore, Okla. Ice-cream. No. 86,069; Apr. 9; Gaz. vol. 177; p. 520.

Lily of France Corset Co., New York, N. Y. Corsets. No. 85,973; Apr. 2; Gaz. vol. 177; p. 236.

Litka, Rejane, New York, N. Y. Corsets. No. 85,974; Apr. 2; Gaz. vol. 177; p. 236.

Loeb & Co., H., New York, N. Y. Knit underwear. No. 85,975; Apr. 2; Gaz. vol. 177; p. 236.

Losser, Arthur, New York, N. Y. Certain pharmaceutical preparation. No. 86,227; Apr. 23; Gaz. vol. 177; p. 1040.

Long Grate Bar Company, The, Buffalo, N. Y. Furnace and stove grates. No. 86,069; Apr. 9; Gaz. vol. 177; p. 520.

Longman & Martinez, New York, N. Y. Illuminating-oil. No. 86,070; Apr. 9; Gaz. vol. 177; p. 520.

Lonsdale Company, Providence, R. I. Cotton piece goods. Nos. 86,071–3; Apr. 9; Gaz. vol. 177; p. 520.

La-R-Sa Remedy Co., Hales Corners, Wis. Preparation for restoring gray hair to its original color. No. 86,228; Apr. 23; Gaz. vol. 177; p. 1040.

M. P. Tuttle Company, Chadwicks, N. Y. Cambrics, linens, and muslins. Nos. 86,352–3; Apr. 30; Gaz. vol. 177; p. 1293.

Madame Irène, New York, N. Y. Corsets. Nos. 85,968–9; Apr. 2; Gaz. vol. 177; p. 236.

Manchester Biscuit Co., Sioux Falls, S. D. Biscuits. No. 86,074; Apr. 9; Gaz. vol. 177; p. 520.

Marshall Field & Company, Chicago, Ill. Buttons. No. 86,050; Apr. 9; Gaz. vol. 177; p. 520.

Mattei, Andrew, Fresno, Cal. Brandies. No. 85,977; Apr. 2; Gaz. vol. 177; p. 236.

McGee, William H., Baltimore, Md. Raw oysters. No. 86,145; Apr. 16; Gaz. vol. 177; p. 765.

McGowan Bros. Company, The, Steubenville, Ohio. Canned fruits and vegetables. No. 85,978; Apr. 2; Gaz. vol. 177; p. 236.

McGraw Tire & Rubber Company, East Palestine, Ohio. Rubber automobile-tires. No. 85,979; Apr. 2; Gaz. vol. 177; p. 236.

Merrell-Soule Co., Syracuse, N. Y. Milk products in dry form. No. 86,312; Apr. 30; Gaz. vol. 177; p. 1292.

Merrell-Soule Co., Syracuse, N. Y. Soups, butter, preserved and canned vegetables. No. 86,313; Apr. 30; Gaz. vol. 177; p. 1292.

Meyer, Firm of Arnold O., Hamburg, Germany. Letter and printing paper and envelops. No. 86,075; Apr. 9; Gaz. vol. 177; p. 520.

Meyer, F. & J., New York, N. Y. Certain raw or partly-prepared materials. No. 86,314; Apr. 30; Gaz. vol. 177; p. 1292.

Michigan Milling Company, Ann Arbor, Mich. Wheat-flour. No. 86,076; Apr. 9; Gaz. vol. 177; p. 520.

Millar, Marion, Winnipeg, Canada. Hair-restorer. No. 86,229; Apr. 23; Gaz. vol. 177; p. 1040.

Miller, Isaiah, Prattville, Ala. Tonic beverage. No. 86,315; Apr. 30; Gaz. vol. 177; p. 1292.

Milliken, Wm. J., Salt Lake City, Utah. Newspapers and magazines. No. 86,230; Apr. 23; Gaz. vol. 177; p. 1040.

Milwaukee-Waukesha Brewing Company, Milwaukee, Wis. Ginger-ale and mineral water. No. 86,146; Apr. 16; Gaz. vol. 177; p. 766.

Minnesota Harness Factory, Incorporated, Winona, Minn. Horse-collars. No. 86,231; Apr. 23; Gaz. vol. 177; p. 1040.

Mitred Box Company, New York, N. Y. Dolls. No. 85,980; Apr. 2; Gaz. vol. 177; p. 236.

Moreda y Deben, Bernardo, Habana, Cuba. Cigars. No. 86,132; Apr. 16; Gaz. vol. 177; p. 765.

Muralo Company, The, New York, N. Y. Washable flat paint. No. 86,147; Apr. 16; Gaz. vol. 177; p. 766.

Mustard & Company, New York, N. Y., and Shanghai, China. Cotton piece goods. Nos. 86,316–17; Apr. 30; Gaz. vol. 177; p. 1292.

N. K. Fairbank Company, The, Chicago, Ill. Cooking compound comprising cotton-seed oil and oleo-stearin. Nos. 86,045–7; Apr. 9; Gaz. vol. 177; p. 519.

National Biscuit Company, Jersey City, N. J., and New York, N. Y. Biscuit. Nos. 85,981–5; Apr. 2; Gaz. vol. 177; p. 236.

National Biscuit Company, Jersey City, N. J., and New York, N. Y. Biscuits. No. 86,077; Apr. 9; Gaz. vol. 177; p. 520.

National Biscuit Company, Jersey City, N. J., and New York, N. Y. Biscuit. Nos. 86,318–20; Apr. 30; Gaz. vol. 177; p. 1292.

National Cloak & Suit Co., New York, N. Y. Petticoats. No. 86,321; Apr. 30; Gaz. vol. 177; p. 1292.

National Cloak & Suit Co., New York, N. Y. Clothing. No. 86,322; Apr. 30; Gaz. vol. 177; p. 1292.

National Committee of the Confederated Supply Associations, New York, N. Y. Certain plumbers' supplies. No. 86,078; Apr. 9; Gaz. vol. 177; p. 520.

National Sewing Machine Company, Belvidere, Ill. Washing-machines. No. 85,986; Apr. 2; Gaz. vol. 177; p. 236.

National Whalebone Co., New York, N. Y. Corset-stays. No. 86,233; Apr. 23; Gaz. vol. 177; p. 1040.

Negretti & Zambra, London, England. Iron and steel wire. No. 86,234; Apr. 23; Gaz. vol. 177; p. 1040.

New Columbia Shirt Company, New York, N. Y. Shirts. No. 86,150; Apr. 16; Gaz. vol. 177; p. 766.

New Jersey Asbestos Co., The, Camden, N. J. Certain machinery packing. No. 85,987; Apr. 2; Gaz. vol. 177; p. 236.

New Jersey Wood Finishing Co., Perth Amboy, N. J. Varnish. No. 86,079; Apr. 9; Gaz. vol. 177; p. 520.

New York Skirt Co., The, New York and Cortland, N. Y. Silk goods in the piece. No. 86,151; Apr. 16; Gaz. vol. 177; p. 766.

New York Stamping Company, Brooklyn, N. Y. Frying-pans, skillets, spiders, and griddles. No. 86,080; Apr. 9; Gaz. vol. 177; p. 520.

Nonotuck Silk Company, The, Northampton, Mass. Ribbons. No. 86,081; Apr. 9; Gaz. vol. 177; p. 520.
Norddeutsche Wollkämmerei & Kammgarnspinnerei, Bremen and Delmenhorst, Germany. Woolen yarn. No. 85,989; Apr. 2; Gaz. vol. 177; p. 236.
Norwine Coffee Company, St. Louis, Mo. Coffee, tea, olive-oil, and flavoring extracts. No. 86,082; Apr. 9; Gaz. vol. 177; p. 520.
O. K. Manufacturing Company, Syracuse, N. Y. Certain stationery supplies. No. 86,323; Apr. 30; Gaz. vol. 177; p. 1292.
Oachs, Milford H., New York, N. Y. Antiseptics, disinfectants, and insecticides. No. 86,235; Apr. 23; Gaz. vol. 177; p. 1040.
Obur Company, The, New York, N. Y. Hair-remover. No. 86,236; Apr. 23; Gaz. vol. 177; p. 1040.
Oehmig-Wiedlech, C. H., Zeitz, Germany. Sticky fly-paper. No. 86,083; Apr. 9; Gaz. vol. 177; p. 520.
Orman Partee Saddlery Co., Nashville, Tenn. Harness, saddles, and collars. No. 86,152; Apr. 16; Gaz. vol. 177; p. 766.
Pacific American Fisheries, Chicago, Ill. Canned salmon. Nos. 86,084–5; Apr. 9; Gaz. vol. 177; p. 521.
Packard Motor Car Company, Detroit, Mich. Casings for lamps. No. 86,153; Apr. 16; Gaz. vol. 177; p. 766.
Palmenberg, Emil T., New York, N. Y. Display-figures. No. 86,324; Apr. 30; Gaz. vol. 177; p. 1292.
Paraffine Paint Company, San Francisco, Cal. Manufactured board for interior finish. No. 86,325; Apr. 30; Gaz. vol. 177; p. 1292.
Paramount Knitting Company, Chicago, Ill. Hosiery. Nos. 86,326–7; Apr. 30; Gaz. vol. 177; p. 1293.
Parmitzky, Paul, New York, N. Y. Remedy for certain diseases. No. 86,237; Apr. 23; Gaz. vol. 177; p. 1040.
Peerless Overall Co., Huntington, W. Va. Trousers, coats, overalls, and outer shirts. No. 85,990; Apr. 2; Gaz. vol. 177; p. 236.
Peerless Rubber Manufacturing Company, New Durham, N. J., and New York, N. Y. Packing. No. 86,154; Apr. 16; Gaz. vol. 177; p. 766.
Peerless Wall Paper Manufacturing Company, Hoboken, N. J. Wall-papers. No. 86,328; Apr. 30; Gaz. vol. 177; p. 1293.
Petroleum Products Co., The, New York, N. Y. Turpentine and linseed-oil substitutes. No. 85,991; Apr. 2; Gaz. vol. 177; p. 236.
Pfrenger, Jacob, New York, N. Y. Bathing-suits. Nos. 86,155–7; Apr. 16; Gaz. vol. 177; p. 766.
Picturegraph Company, New York, N. Y. Moving-picture machines. No. 86,158; Apr. 16; Gaz. vol. 177; p. 766.
Pope Manufacturing Company, The, Hartford, Conn. Bicycles. No. 86,159; Apr. 16; Gaz. vol. 177; p. 766.
Potts, Emerson J., San Francisco, Cal. Antiphlogistic preparation. No. 86,238; Apr. 23; Gaz. vol. 177; p. 1040.
Pozzi, Aloysius, Trenton, N. J. Cane, parasol, and umbrella tip protector. No. 86,329; Apr. 30; Gaz. vol. 177; p. 1293.
Prentiss Vise Company, New York, N. Y. Vises. No. 85,993; Apr. 2; Gaz. vol. 177; p. 236.
Reaves, Edward, Banks, Ark. Preparation for tempering steel. No. 86,086; Apr. 9; Gaz. vol. 177; p. 521.
Red Star Oil Company, Philadelphia, Pa. Linseed-oil substitutes. No. 86,330; Apr. 30; Gaz. vol. 177; p. 1293.
Republic Metalware Company, The, Buffalo, N. Y. Percolators. No. 86,087; Apr. 9; Gaz. vol. 177; p. 521.
Republic of France, Paris, France. Cigarettes. No. 85,994; Apr. 2; Gaz. vol. 177; p. 236.
Reynolds, George A., Syracuse, N. Y. Foot-powders. No. 86,239; Apr. 23; Gaz. vol. 177; p. 1040.
Rhenania Glühlicht Comp. G. m. b. H., Cologne, Germany. Incandescent mantles. No. 86,331; Apr. 30; Gaz. vol. 177; p. 1293.
Rhoads & Sons, J. E., Philadelphia, Pa. Leather belting. No. 86,332; Apr. 30; Gaz. vol. 177; p. 1293.
Richter & Hoffmann The Harvard Dental Manufacturing Company Gesellschaft mit beschränkter Haftung, Berlin, Germany. Cement for filling teeth. No. 86,333; Apr. 30; Gaz. vol. 177; p. 1293.
Roberts, Johnson & Rand Shoe Company, assignor to International Shoe Company, St. Louis, Mo. Leather boots and shoes. No. 85,996; Apr. 2; Gaz. vol. 177; p. 236.
Romeo Company of New York, New York, N. Y. Index-cards. No. 86,088; Apr. 9; Gaz. vol. 177; p. 521.
Rosenberg Bros. & Co., San Francisco, Cal. Raisins. Nos. 86,089–90; Apr. 9; Gaz. vol. 177; p. 521.
Rosenberg, Louis H., Boise, Idaho. Cigars. No. 86,334; Apr. 30; Gaz. vol. 177; p. 1293.
Rosenberg & Sons, A., Chicago, Ill. Dresses. No. 86,160; Apr. 16; Gaz. vol. 177; p. 766.
Rosenheim's Son, E., New York, N. Y. Cloaks and suits. No. 86,001; Apr. 2; Gaz. vol. 177; p. 237.
Rosenstein & Traub. (See Steiner, Rosenstein & Traub, assignor.)
Rothschild, Meyers & Co., New York, N. Y. Certain surgical appliances. No. 86,240; Apr. 23; Gaz. vol. 177; p. 1040.
Rowe Calk Company, The, Hartford, Conn. Horseshoes. No. 86,335; Apr. 30; Gaz. vol. 177; p. 1293.
Royal Tea & Coffee Company. (See Royal Tea Company, assignor.)
Royal Tea Company, assignor to Royal Tea & Coffee Company, San Antonio, Tex. Tea and coffee. No. 86,161; Apr. 16; Gaz. vol. 177; p. 766.
Rubisco Company, St. Louis, Mo. Tooth-powder, rouge, face-cream, &c. No. 86,241; Apr. 23; Gaz. vol. 177; p. 1040.
Rudolph Wurlitzer Co., The, Cincinnati, Ohio. Pianos. No. 86,113; Apr. 9; Gaz. vol. 177; p. 521.
Ruppert, Jacob, New York, N. Y. Beer. No. 86,002; Apr. 2; Gaz. vol. 177; p. 237.
S. S. Stafford, Inc., New York, N. Y. Writing-inks. No. 86,171; Apr. 16; Gaz. vol. 177; p. 766.
Sackman Brothers Company, New York, N. Y. Children's outer suits. No. 86,003; Apr. 2; Gaz. vol. 177; p. 237.
Sanderson & Brother, W. S., Denver, Colo. Coffee. No. 86,091; Apr. 9; Gaz. vol. 177; p. 521.
Sanitas Fundoahl Company, The, Cleveland, Ohio. Suspensory bandages. No. 86,004; Apr. 2; Gaz. vol. 177; p. 237.
Saurer, Adolph, Arbon, Switzerland. Certain vehicles. No. 86,242; Apr. 23; Gaz. vol. 177; p. 1040.
Scherer, William J., Rochester, N. Y. Cathartic powder. No. 86,092; Apr. 9; Gaz. vol. 177; p. 521.
Schmidt & Ade, Chicago, Ill. Hypodermic syringes and surgical thermometers. No. 86,336; Apr. 30; Gaz. vol. 177; p. 1293.
Schmidt, C. S., Niederlahnstein-on-the-Rhine, Germany. Rodent-traps. No. 86,163; Apr. 16; Gaz. vol. 177; p. 766.
Schmidt, Drahtgewebe und Geflechtewerke, C. S., Niederlahnstein-on-the-Rhine, Germany. Rodent-traps. No. 86,162; Apr. 16; Gaz. vol. 177; p. 766.
Schwanhäusser, late Grossberger & Kurs, Nuremberg, Germany. Pencils. No. 86,243; Apr. 23; Gaz. vol. 177; p. 1040.
Scott Paper Company, Philadelphia, Pa. Toilet-paper. No. 86,165; Apr. 16; Gaz. vol. 177; p. 766.
Scureman, Joseph B., Nanticoke, Pa. Remedies for coughs, headache, corns, &c. No. 86,244; Apr. 23; Gaz. vol. 177; p. 1040.
Seaboard Flour Company, Boston, Mass. Flour. No. 86,337; Apr. 30; Gaz. vol. 177; p. 1293.
Seaboard Rice Milling Co., Galveston, Tex. Rice. No. 86,093; Apr. 9; Gaz. vol. 177; p. 521.
Seacoast Canning Co., Eastport, Me. Fresh herring. No. 86,094; Apr. 9; Gaz. vol. 177; p. 521.
Sealshipt Oyster System, Inc., South Norwalk, Conn., assignor to Sealshipt Oyster System, Boston, Mass. Oyster-shipping cases. Nos. 86,166–7; Apr. 16; Gaz. vol. 177; p. 766.
Seguin Milling & Power Co., Seguin, Tex. Wheat-flour. No. 86,338; Apr. 30; Gaz. vol. 177; p. 1293.
"Selas" Gesellschaft mit beschränkter Haftung, Berlin, Germany. Certain electrical apparatus and supplies. No. 86,095; Apr. 9; Gaz. vol. 177; p. 521.
Shults Bread Company, New York, N. Y. Bread. No. 86,096; Apr. 9; Gaz. vol. 177; p. 521.
Siegert & Hijos, Dr. J. G. B., Port of Spain, Trinidad. Cordials. No. 86,097; Apr. 9; Gaz. vol. 177; p. 521.
Silberman, Tanchum, Baltimore, Md. Undershirts and drawers. No. 86,168; Apr. 16; Gaz. vol. 177; p. 766.
Silverman, William, Philadelphia, Pa. Remedy for gonorrhea. No. 86,245; Apr. 23; Gaz. vol. 177; p. 1040.
Silverstein, Isaac J., New York, N. Y. Cotton and mercerised thread. No. 86,169; Apr. 16; Gaz. vol. 177; p. 766.
Simianaky & Co., M., New York, N. Y. Canvas. No. 86,170; Apr. 16; Gaz. vol. 177; p. 766.
Simpson, Frank P., Norfolk, Va. Salves. No. 86,246; Apr. 23; Gaz. vol. 177; p. 1040.
Smith & Co., E. R., Boston, Mass. Men's suits and overcoats. No. 86,098; Apr. 9; Gaz. vol. 177; p. 521.
Snyder-Chaffee Co., The, Columbus, Ohio. Popcorn and foam candy. No. 86,341; Apr. 30; Gaz. vol. 177; p. 1293.
Söderfors Bruks Aktiebolag, Falun, Sweden. Tool-steel. Nos. 86,099–101; Apr. 9; Gaz. vol. 177; p. 521.
Söderfors Bruks Aktiebolag, Falun, Sweden. Tool-steel and anvils. No. 86,102; Apr. 9; Gaz. vol. 177; p. 521.
Söderfors Bruks Aktiebolag, Falun, Sweden. Tool-steel. No. 86,103; Apr. 9; Gaz. vol. 177; p. 521.
Söderfors Bruks Aktiebolag, Falun, Sweden. Anvils. No. 86,104; Apr. 9; Gaz. vol. 177; p. 521.
Solva Waterproof Glue Co., Chicago, Ill. Glue. No. 86,247; Apr. 23; Gaz. vol. 177; p. 1040.
Sorley, John, Feilding, New Zealand. Chemical composition for destroying blight, &c., on plants. No. 86,106; Apr. 9; Gaz. vol. 177; p. 521.
South Lake Apopka Citrus Growers Association, Oakland, Fla. Oranges, lemons, grape-fruit, tangerines, and limes. No. 86,342; Apr. 30; Gaz. vol. 177; p. 1293.
Southall Bros. & Barclay, Limited, Birmingham, England. Tonic food. No. 86,249; Apr. 23; Gaz. vol. 177; p. 1040.
St. Paul Syrup Refining Company, St. Paul, Minn. Mixture of maple-sugar, cane-sugar, and corn-syrup. No 86,345; Apr. 30; Gaz. vol. 177; p. 1293.
Standard Oil Co. of New York, New York, N. Y. Refined oil for illuminating, heating, &c. No. 86,018; Apr. 2; Gaz. vol. 177; p. 237.
Standard Rule Co., Flint, Mich. Steel tapes and parts thereof. No. 86,173; Apr. 16; Gaz. vol. 177; p. 766.
Standard Typewriter Company, Groton, N. Y. Type-writing machines and parts thereof. No. 86,343; Apr. 30; Gaz. vol. 177; p. 1293.
Standard Underground Cable Company, Pittsburgh, Pa. Insulation for electrical conductors. No. 86,174; Apr. 16; Gaz. vol. 177; p. 766.

Star Seal Company, New York, N. Y. Metallic bottle-seals. No. 86,172; Apr. 16; Gaz. vol. 177; p. 766.
Statter, H., Sioux City, Iowa. Hams, bacon, lard, and sausage. No. 86,344; Apr. 30; Gaz. vol. 177; p. 1293.
Steinberger & Kallaher, New York, N. Y. Gloves. No. 86,176; Apr. 16; Gaz. vol. 177; p. 766.
Steiner, Rosenstein & Traub, New York, N. Y., assignor to Rosenstein & Traub. Veilings, nettings, mallines, chiffons, and veils. No. 86,108; Apr. 9; Gaz. vol. 177; p. 521.
Stephens, Charles I., Chicago, Ill. Remedy for sweaty, swollen, &c., feet. No. 86,250; Apr. 23; Gaz. vol. 177; p. 1040.
Stewart & Clark Manufacturing Company, Chicago, Ill. Speed-indicating instruments. No. 86,005; Apr. 2; Gaz. vol. 177; p. 237.
Suffern & Company, New York, N. Y. Cotton piece goods, sheetings, shirtings, and drills. No. 86,251; Apr. 23; Gaz. vol. 177; p. 1040.
Sulfocol Co., The, New York, N. Y. Laxative tablet. No. 86,252; Apr. 23; Gaz. vol. 177; p. 1040.
Sullivan, John E., Harrisonburg, Va. Cigars. No. 86,007; Apr. 2; Gaz. vol. 177; p. 237.
Swift, Helene, New York, N. Y. Dermatine preparation, toilet powder and cream. No. 86,176; Apr. 16; Gaz. vol. 177; p. 766.
Taku Canning & Cold Storage Co., Seattle, Wash. Canned salmon. Nos. 86,346–9; Apr. 30; Gaz. vol. 177; p. 1293.
Taylor Provision Company, The, Trenton, N. J. Pork roll. No. 86,177; Apr. 16; Gaz. vol. 177; p. 766.
Texas Refining Company, Greenville, Tex. Cooking-oil. No. 86,008; Apr. 2; Gaz. vol. 177; p. 237.
Thomas G. Plant Company, Boston, Mass. Shoes. No. 85,992; Apr. 2; Gaz. vol. 177; p. 236.
Thomas, John W., Habana, Cuba. Antiseptic soap. No. 86,350; Apr. 30; Gaz. vol. 177; p. 1293.
Thomas, Reginald C., New York, N. Y. Cosmetic cream. No. 86,109; Apr. 9; Gaz. vol. 177; p. 521.
Thompson, Joseph, Sioux City, Iowa. Cloth-cleaning pads. No. 86,351; Apr. 30; Gaz. vol. 177; p. 1293.
Tice, Claudius M., Boston, Mass. Compound of maple-sugar and cane-syrup. No. 86,178; Apr. 16; Gaz. vol. 177; p. 766.
Tim & Co., New York and Troy, N. Y. Textile collars, underdrawers, undershirts, union suits, and pajamas. No. 86,009; Apr. 2; Gaz. vol. 177; p. 237.
Trippe, Barker & Co., New York, N. Y. Cotton and linen piece goods. No. 86,179; Apr. 16; Gaz. vol. 177; p. 767.
Twining, Charles, New York, N. Y. Computing-machines. No. 86,180; Apr. 16; Gaz. vol. 177; p. 767.
U. S. E. M. Co., New York, N. Y. Electrical bell-ringers. No. 86,010; Apr. 2; Gaz. vol. 177; p. 237.
Union Petroleum Company, Philadelphia, Pa. Certain painters' materials. No. 86,110; Apr. 9; Gaz. vol. 177; p. 521.
Utah Oil Refining Company, Salt Lake City, Utah. Lubricating-oils. No. 86,181; Apr. 16; Gaz. vol. 177; p. 767.
Utah Oil Refining Company, Salt Lake City, Utah. Kerosene. No. 86,182; Apr. 16; Gaz. vol. 177; p. 767.
Utah Oil Refining Company, Salt Lake City, Utah. Lubricating-oils. No. 86,183; Apr. 16; Gaz. vol. 177; p. 767.
Utah Oil Refining Company, Salt Lake City, Utah. Cup-greases. No. 86,184; Apr. 16; Gaz. vol. 177; p. 767.
Utah Oil Refining Company, Salt Lake City, Utah. Lubricating-oils. No. 86,185; Apr. 16; Gaz. vol. 177; p. 767.
Vanadium Chemical Co., The, Pittsburgh, Pa. Nerve and tissue tonic. No. 86,253; Apr. 23; Gaz. vol. 177; p. 1040.
Vanadium Chemical Co., The, Pittsburgh, Pa. Antiseptic. No. 86,254; Apr. 23; Gaz. vol. 177; p. 1040.
Vandame, Mathilde, Goldfield, Nev. Hair-tonic. No. 86,255; Apr. 23; Gaz. vol. 177; p. 1040.
Victor Neustadt, Inc., New York, N. Y. Beer. No. 86,149; Apr. 16; Gaz. vol. 177; p. 766.
Virginia Silk Co. (Incorporated,) Richmond, Va. Silk ribbons. No. 86,011; Apr. 2; Gaz. vol. 177; p. 237.
Vogt-Applegate Co., Louisville, Ky.; Kansas City, Mo., and New Orleans, La. Chewing and smoking tobacco. No. 86,187; Apr. 16; Gaz. vol. 177; p. 767.
W. A. & J. C. Haarts, Inc., Boston, Mass. Waterproof cloth. No. 86,054; Apr. 9; Gaz. vol. 177; p. 520.
W. H. McElwain Company, Boston, Mass. Boots and shoes. No. 86,311; Apr. 30; Gaz. vol. 177; p. 1292.
Wagner, Edward H., Mineral Wells, Tex. Laxative tablets. No. 86,256; Apr. 23; Gaz. vol. 177; p. 1040.
Wakana, Kumajiro, Tokyo, Japan. Canned crabs. No. 86,012; Apr. 2; Gaz. vol. 177; p. 237.
Wallin, Claude S., Peoria, Ill. Bread. No. 86,354; Apr. 30; Gaz. vol. 177; p. 1293.
Walter H. Hildick Co., New York, N. Y. Apple cider. No. 86,298; Apr. 30; Gaz. vol. 177; p. 1292.
Walter M. Lowney Company, The, Boston, Mass. Chocolate cream drops. No. 85,976; Apr. 2; Gaz. vol. 177; p. 236.
Waltham Watch Company, Waltham and Boston, Mass. Watches and parts of watches. No. 86,188; Apr. 16; Gaz. vol. 177; p. 767.
Ward, William P., Brooklyn, N. Y. Remedy for coughs, colds, nervousness, and consumptives. No. 86,189; Apr. 16; Gaz. vol. 177; p. 767.
Ware Bros. Company, Philadelphia, Pa. Monthly magazine. No. 86,190; Apr. 16; Gaz. vol. 177; p. 767.
Warren Chemical & Manufacturing Company, New York, N. Y. Felts and papers for roofing, sheathing, waterproofing, &c. Nos. 86,191–2; Apr. 16; Gaz. vol. 177; p. 767.
Warren, Northam, New York, N. Y. Liquid cuticle-remover. No. 86,257; Apr. 23; Gaz. vol. 177; p. 1040.
Weinreben Fabrik Pharmaceutischer Präparate, Carl, Frankfort-on-the-Main, Germany. Preparation for preventing hardening of the arteries. No. 86,258; Apr. 23; Gaz. vol. 177; p. 1040.
Western Brick Company, Danville, Ill. Bricks. No. 86,013; Apr. 2; Gaz. vol. 177; p. 237.
Western Brick Company, Danville, Ill. Bricks. No. 86,193; Apr. 16; Gaz. vol. 177; p. 767.
Western Clock Manufacturing Co., Peru, Ill. Clocks and watches. No. 86,356; Apr. 30; Gaz. vol. 177; p. 1293.
Western Electric Company, Chicago, Ill., and New York, N. Y. Certain electrical apparatus. No. 86,194; Apr. 16; Gaz. vol. 177; p. 767.
Wheeler Condenser & Engineering Co., Carteret, N. J. Condenser-tubes. No. 86,111; Apr. 9; Gaz. vol. 177; p. 521.
White, Edward L., Boston, Mass. Leather for the uppers of boots and shoes. No. 86,195; Apr. 16; Gaz. vol. 177; p. 767.
Whitman & Barnes Manufacturing Co., The, Akron, Ohio. Twist-drills. No. 86,259; Apr. 23; Gaz. vol. 177; p. 1040.
Wiener Machinery Co., New York, N. Y. Machine-tools. No. 86,014; Apr. 2; Gaz. vol. 177; p. 237.
Williams Organ & Piano Co., Chicago, Ill. Organs and pianos. No. 86,112; Apr. 9; Gaz. vol. 177; p. 521.
Wittig & Co., F., Milwaukee, Wis. Charcoal and coke. No. 86,015; Apr. 2; Gaz. vol. 177; p. 237.
Wm. C. Robinson & Son, Co., Baltimore, Md., and Coraopolis, Pa. Cylinder and engine oil. No. 85,997; Apr. 2; Gaz. vol. 177; p. 236.
Wm. C. Robinson & Son, Co., Baltimore, Md., and Coraopolis, Pa. Cylinder-oil. No. 85,998; Apr. 2; Gaz. vol. 177; p. 237.
Wm. C. Robinson & Son, Co., Baltimore, Md., and Coraopolis, Pa. Engine-oil. No. 85,999; Apr. 2; Gaz. vol. 177; p. 237.
Wm. C. Robinson & Son, Co., Baltimore, Md., and Coraopolis, Pa. Valve-oil. No. 86,000; Apr. 2; Gaz. vol. 177; p. 237.
Worthington, William F., San Francisco, Cal. Skin-salve, and a remedy for seasickness. No. 86,260; Apr. 23; Gaz. vol. 177; p. 1040.
Wren, Charles F., Cleveland, Ohio. Elastic tires. No. 86,196; Apr. 16; Gaz. vol. 177; p. 767.
York Novelty Co., York, Pa. Children's sleds. No. 86,016; Apr. 2; Gaz. vol. 177; p. 237.
Zenith Embroidery Co., New York, N. Y. Embroideries. No. 86,197; Apr. 16; Gaz. vol. 177; p. 767.

ALPHABETICAL LIST OF REGISTRANTS OF LABELS.

A. Wilhelm Company, The, Reading, Pa. "Tenforone." (For Calcimine.) No. 16,295; Apr. 23; Gaz. vol. 177; p. 1041.

Adrian & Venn Co., Pittsburgh, Pa. "Persian Balm." (For a Skin-Tonic.) No. 16,309; Apr. 30; Gaz. vol. 177; p. 1294.

American Lithographic Company, New York, N. Y. "Private Stock." (For Cigars.) No. 16,310; Apr. 30; Gaz. vol. 177; p. 1294.

Boener Bros., Lawrence, Kans. "Golden Anchor." (For Cigars.) No. 16,296; Apr. 23; Gaz. vol. 177; p. 1041.

C. B. Henschel Mfg. Co., Milwaukee, Wis. "El Ginero." (For Cigars.) No. 16,273; Apr. 9; Gaz. vol. 177; p. 522.

C. B. Henschel Mfg. Co., Milwaukee, Wis. "Landseer." (For Cigars.) No. 16,298; Apr. 23; Gaz. vol. 177; p. 1041.

Canaday, Allen M., Morris, Ill. "Canaday's Weed Killer." (For Weed-Killer.) No. 16,297; Apr. 23; Gaz. vol. 177; p. 1041.

Crossman Tack Company, The, Dighton, Mass. "Neverust." (For Carpet-Tacks.) No. 16,311; Apr. 30; Gaz. vol. 177; p. 1294.

Dean Lilly Coffee and Spice Co., The, Memphis, Tenn. "El Merito." (For Blended Coffee.) No. 16,312; Apr. 30; Gaz. vol. 177; p. 1294.

Demartini Supply Co., L., San Francisco, Cal. "Pan-A-Ma Mintos." (For Confection.) No. 16,318; Apr. 30; Gaz. vol. 177; p. 1294.

Dodson, James G., Americus, Ga. "Dodson's Liver Tone." (For a Medicinal Preparation.) No. 16,313; Apr. 30; Gaz. vol. 177; p. 1294.

Dunn, Michael J., Pottsville, Pa. "Marvelous Cleaner." (For Disinfecting-Cleaner.) No. 16,274; Apr. 9; Gaz. vol. 177; p. 522.

Edwards, John C., Mobile, Ala. "Horse Tonic." (For Horse-Tonic.) No. 16,299; Apr. 23; Gaz. vol. 177; p. 1041.

Edwin R. Stimpson Company, New York, N. Y. "Thomson Rivets." (For Rivets.) No. 16,260; Apr. 2; Gaz. vol. 177; p. 238.

Edwin R. Stimpson Company, New York, N. Y. "Tubular Rivets." (For Tubular Rivets.) No. 16,286; Apr. 16; Gaz. vol. 177; p. 768.

Francisco Bolaño & Co., Chicago, Ill. "James Stuart." (For Cigars.) No. 16,314; Apr. 30; Gaz. vol. 177; p. 1294.

General Roofing Manufacturing Company, East St. Louis, Ill. "Certain-teed Roofing." (For Roofing Materials.) No. 16,287; Apr. 16; Gaz. vol. 177; p. 768.

Gottmann & Kretchmer, Chicago, Ill. "Gottmann & Kretchmer, Chicago, U. S. A." (For Chocolate.) No. 16,288; Apr. 16; Gaz. vol. 177; p. 768.

Grocers' Biscuit Company, Louisville, Ky. "Lunche-On Biscuit." (For Biscuits or Crackers.) No. 16,275; Apr. 9; Gaz. vol. 177; p. 522.

Growers' Home Canning Company, Los Angeles, Cal. "Home Brand." (For Sliced Oranges.) No. 16,315; Apr. 30; Gaz. vol. 177; p. 1294.

Hall, Hartwell & Company, Troy, N. Y. "Hallmark Color Fast Warranty Bond." (For Shirts.) No. 16,316; Apr. 30; Gaz. vol. 177; p. 1294.

Hax, J. P. & E. V., Baltimore, Md. "High Ball Lithiated." (For Ginger-Ale.) No. 16,261; Apr. 2; Gaz. vol. 177; p. 238.

Henschel Mfg. Co., C. B., Milwaukee, Wis. "El Favo." (For Cigars.) No. 16,285; Apr. 16; Gaz. vol. 177; p. 768.

Herschel & Co., A. C., Chicago, Ill. "Black Shield." (For Cigars.) No. 16,283; Apr. 16; Gaz. vol. 177; p. 768.

Horse Shoe Grist Mill, Horseshoe, N. Y. "Horse Shoe Grist Mill Cereal, The Finest of the Wheat, Natural Colour." (For Cereal.) No. 16,262; Apr. 2; Gaz. vol. 177; p. 238.

Hunt Brothers Company, San Francisco, Cal. "Hunt's Staple Quality." (For California Fruits.) No. 16,263; Apr. 2; Gaz. vol. 177; p. 238.

Hunt Brothers Company, San Francisco, Cal. "Hunt's Superior Quality." (For California Fruits.) No. 16,264; Apr. 2; Gaz. vol. 177; p. 238.

Hunt Brothers Company, San Francisco, Cal. "Hunt's Supreme Quality." (For California Fruits.) No. 16,265; Apr. 2; Gaz. vol. 177; p. 238.

J. D. Ryan Co., The, Cleveland, Ohio. "Lotus Chocolates Lotus Beauty." (For Chocolates.) No. 16,276; Apr. 9; Gaz. vol. 177; p. 522.

J. M. Robinson, Norton & Co., Louisville, Ky. "Mary Ann." (For Bleached Cotton.) No. 16,277; Apr. 9; Gaz. vol. 177; p. 522.

Jetter Brewing Company, South Omaha, Nebr. "Old Age." (For Beer.) No. 16,317; Apr. 30; Gaz. vol. 177; p. 1294.

Kirst, C. and L., Buffalo, N. Y. "Kirst's J & L Special." (For Cigars.) No. 16,284; Apr. 16; Gaz. vol. 177; p. 768.

Liquid Food Bottling Company, Kansas City, Mo. "Sparkling Fizz." (For Non-Alcoholic Beverage.) No. 16,300; Apr. 23; Gaz. vol. 177; p. 1041.

Maldehyde Chemical Company, St. Louis, Mo. "Rubi-Lyptol." (For Nose and Throat Spray.) No. 16,266; Apr. 2; Gaz. vol. 177; p. 238.

Mathues, William F., New York, N. Y. "Mathues Brothers Maat." (For Cigarettes.) No. 16,267; Apr. 2; Gaz. vol. 177; p. 238.

McBrady, John E., Chicago, Ill. "McBrady's Beauty Cake." (For Complexion-Cream.) No. 16,301; Apr. 23; Gaz. vol. 177; p. 1041.

McDuff Mercantile Co., St. Louis, Mo. "McDuff's Malt Whiskey." (For Malt Whiskies.) No. 16,302; Apr. 23; Gaz. vol. 177; p. 1041.

Mengis, Margaret, New York, N. Y. "Getthin's Salts." (For Prepared Salt.) No. 16,268; Apr. 2; Gaz. vol. 177; p. 238.

Moehle Lithographic Company, The, New York, N. Y. "Kaiser Club." (For Cigars.) No. 16,278; Apr. 9; Gaz. vol. 177; p. 522.

Moore, Charles S., Danvers, Mass. "Blue Ribbon Milk Pail." (For Milk-Pails.) No. 16,269; Apr. 2; Gaz. vol. 177; p. 238.

National Gum & Mica Company, New York, N. Y. "Pure White Paste Many-Cell Jar." (For Paste.) No. 16,319; Apr. 30; Gaz. vol. 177; p. 1294.

Palmer & Co., Sioux City, Iowa. "Palmer's Alpean Chocolates." (For Chocolates.) No. 16,270; Apr. 2; Gaz. vol. 177; p. 238.

Schield, William, St. Louis, Mo. "Red Devil Lye." (For Lye.) No. 16,272; Apr. 2; Gaz. vol. 177; p. 238.

Schlichting, Albert T., Newark, N. J. "Slick Hand Cleaner Powder." (For Powder for Cleaning the Hands.) No. 16,271; Apr. 2; Gaz. vol. 177; p. 238.

Schlichting, Albert T., Newark, N. J. "Rapid Copper Powder." (For Metal and Marble Polish.) No. 16,279; Apr. 9; Gaz. vol. 177; p. 522.

Schühle's Pure Grape Juice Co., Highland, N. Y. "Schühle's Pure Grape Juice." (For Grape-Juice.) No. 16,320; Apr. 30; Gaz. vol. 177; p. 1294.

Schwarz, Fred., New York, N. Y. "Convalescent Rye Whiskey." (For Rye Whisky.) No. 16,303; Apr. 23; Gaz. vol. 177; p. 1041.

Schwarz, Fred., New York, N. Y. "Keserü György Bor." (For Bitters.) No. 16,304; Apr. 23; Gaz. vol. 177; p. 1041.

Self & Binswanger, St. Joseph, Mo. "Old Dyer." (For Whisky.) No. 16,305; Apr. 23; Gaz. vol. 177; p. 1041.

Strachan, Alex, Los Angeles, Cal. "Silver Seal." (For Oranges.) No. 16,289; Apr. 16; Gaz. vol. 177; p. 768.

Strachan, Alex, Los Angeles, Cal. "Gold Seal." (For Oranges.) No. 16,290; Apr. 16; Gaz. vol. 177; p. 768.

Tebbel, L. M., Spokane, Wash. "Pederika." (For Antiseptic Powder for the Feet.) No. 16,306; Apr. 23; Gaz. vol. 177; p. 1041.

U. S. Hame Company, Buffalo, N. Y. "No. 920 Ushco." (For Hames.) No. 16,307; Apr. 23; Gaz. vol. 177; p. 1041.

U. S. Hame Company, Buffalo, N. Y. "No. 910 Ushco." (For Hames.) No. 16,308; Apr. 23; Gaz. vol. 177; p. 1041.

Vegetable Food Co., Providence, R. I. "Vegetable Salad." (For Vegetable Salad.) No. 16,280; Apr. 9; Gaz. vol. 177; p. 522.

Walter M. Lowney Company, The, Boston, Mass. "Lowney's Chocolates and Bonbons." (For Chocolates and Bonbons.) Nos. 16,291–3; Apr. 16; Gaz. vol. 177; p. 768.

Whiteley, Robt., Jr., Carlinville, Ill. "King Rags." (For Cigars.) No. 16,294; Apr. 16; Gaz. vol. 177; p. 768.

PRINTS.

American Axe & Tool Co., The, Glassport, Pa. "The Collie King Axe." (For the Collie King Ax.) No. 2,988; Apr. 16; Gaz. vol. 177; p. 768.

C. A. Edgarton Mfg. Co., The, Shirley, Mass. "Shirley President Suspenders." (For Suspenders.) Nos. 2,984–6; Apr. 9; Gaz. vol. 177; p. 522.

Coca-Cola Bottling Co., The, Atlanta, Ga. "Drink Coca-Cola." (For Coca-Cola.) No. 2,989; Apr. 16; Gaz. vol. 177; p. 768.

Cream of Wheat Co., Minneapolis, Minn. "Cream of Wheat for 'Sail.'" (For Wheat Breakfast Food.) No. 2,990; Apr. 16; Gaz. vol. 177; p. 768.

Curlee Clothing Co., St. Louis, Mo. "For Men and Young Men Curlee Clothes Are Always Right." (For Clothes.) No. 2,991; Apr. 16; Gaz. vol. 177; p. 768.

F. W. Ketterer Medicine Co., The, Jacksonville, Fla. "Kebp." (For Ketterer's Excelsior Blood-Purifier.) No. 2,981; Apr. 2; Gaz. vol. 177; p. 238.

F. W. Ketterer Medicine Co., The, Jacksonville, Fla. "Ketterer's Liver Klenzor." (For Ketterer's Liver-Cleanser.) No. 2,982; Apr. 2; Gaz. vol. 177; p. 238.

Hetherington, Arthur F., New York, N. Y. "Spilino Tooth Powder." (For Tooth-Powder.) No. 3,014; Apr. 30; Gaz. vol. 177; p. 1294.

J. and T. Cousins Company, Brooklyn, N. Y. "The Exquisite Note In Shoes." (For Shoes.) No. 3,015; Apr. 30; Gaz. vol. 177; p. 1294.

James S. Kirk & Company, Chicago, Ill. "The Spirit of Cleanliness" (For Soap.) No. 2,994; Apr. 23; Gaz. vol. 177; p. 1041.

Joseph Campbell Company, Camden, N. J. "Campbell's Soup." (For Soups.) Nos. 2,995–3,006; Apr. 23; Gaz. vol. 177; p. 1041.

Kolynos Co., The, New Haven, Conn. "Kolynos How clean my mouth feels." (For Dental Cream.) No. 2,992; Apr. 16; Gaz. vol. 177; p. 768.

Maldehyde Chemical Company, St. Louis, Mo. "Hysterone." (For Uterine Sedative.) No. 3,007; Apr. 23; Gaz. vol. 177; p. 1041.

Maldehyde Chemical Company, St. Louis, Mo. "Colspirin." (For Tablets for Grippe.) No. 3,008; Apr. 23; Gaz. vol. 177; p. 1041.

Maldehyde Chemical Company, St. Louis, Mo. "Nuxotone." (For a Tonic.) No. 3,009; Apr. 23; Gaz. vol. 177; p. 1041.

Maldehyde Chemical Company, St. Louis, Mo. "Nasal Tablets." (For Nasal Tablets.) No. 3,010; Apr. 23; Gaz. vol. 177; p. 1041.

Norfolk Hosiery and Underwear Mills Co., The, Norfolk, Va. "Dryfoot." (For Hosiery.) No. 3,011; Apr. 23; Gaz. vol. 177; p. 1041.

Pacific Coast Borax Co., New York, N. Y. "Mamma Says 'Borax brightens colors and prevents fading.'" (For 20-Mule-Team Borax.) No. 3,016; Apr. 30; Gaz. vol. 177; p. 1294.

Pacific Coast Borax Co., New York, N. Y. "Mamma Says 'Its the Borax with the Soap that saves the clothes.'" (For 20-Mule-Team Borax.) No. 3,017; Apr. 30; Gaz. vol. 177; p. 1294.

Pacific Coast Borax Co., New York, N. Y. "Mamma Says '20 Mule Team Borax Softens Hard Water.'" (For 20-Mule-Team Borax.) No. 3,018; Apr. 30; Gaz. vol. 177; p. 1294.

Pepsi-Cola Company, The, Newbern, N. C. "Drink Pepsi-Cola." (For Pepsi-Cola.) No. 2,983; Apr. 2; Gaz. vol. 177; p. 238.

Roberts, Johnson & Rand Shoe Co., St. Louis, Mo. "The Star Brand Girl." (For Shoes.) No. 2,993; Apr. 16; Gaz. vol. 177; p. 768.

Seneca Camera Mfg. Co., Rochester, N. Y. "Seneca Cameras." (For Plates-Film Pack Roll Film.) No. 3,019; Apr. 30; Gaz. vol. 177; p. 1294.

Steffens, Jones and Co., New York, N. Y. "Please Order by the Number Shown on Each Band." (For Cigar-Labels.) No. 3,012; Apr. 23; Gaz. vol. 177; p. 1041.

W. F. Powers Company, The, New York, N. Y. "Crême Elcaya." (For a Toilet Preparation.) No. 3,013; Apr. 23; Gaz. vol. 177; p. 1041.

Walbolt, Senor T., Toledo, Ohio. "Silver Moon Cannel." (For Coal.) No. 3,020; Apr. 30; Gaz. vol. 177; p. 1294.

Welch Grape Juice Co., The, Westfield, N. Y. "Welch's Grape Juice." (For Grape-Juice.) No. 2,987; Apr. 9; Gaz. vol. 177; p. 522.

DISCLAIMER.

Mudge, Charles A., New York, N. Y., disclaimer filed by assignee, Electro-Dynamic Company. Dynamo-electric machine. No. 856,414; disclaimer filed Apr. 3, 1912; Gaz. vol. 177; p. 775.

ALPHABETICAL LIST OF INVENTIONS

FOR WHICH

PATENTS WERE ISSUED DURING THE MONTH OF APRIL, 1912.

[Abbreviations: "Sp."—Monthly Volume of Specifications; "Gaz."—Official Gazette.]

Account-register. A. F. Staples. No. 1,022,007; Apr. 2; Sp. p. 553; Gaz. vol. 177; p. 86.

Account-register. A. F. Staples. No. 1,023,889; Apr. 23; Sp. p. 4527; Gaz. vol. 177; p. 811.

Acetylene-generator. A. F. Jenkins. No. 1,023,850; Apr. 23; Sp. p. 4441; Gaz. vol. 177; p. 798.

Acid and making same, Amino-oxy-naphthalene sulfonic. H. Bucherer. No. 1,022,019; Apr. 2; Sp. p. 574; Gaz. vol. 177; p. 90.

Acid ester, 2-phenylquinolin-4-carboxylic. L. Taub. No. 1,022,444; Apr. 9; Sp. p. 1461; Gaz. vol. 177; p. 262.

Acid-making apparatus, Sulfuric. C. C. Meigs. No. 1,022,493; Apr. 9; Sp. p. 1557; Gaz. vol. 177; p. 279.

Acid, Production of nitric. F. W. De Jahn. No. 1,023,133; Apr. 16; Sp. p. 2981; Gaz. vol. 177; p. 536.

Acids from nitrocelluloee and centrifugal machine therefor, Removal of. F. I. Du Pont. No. 1,024,624; Apr. 30; Sp. p. 6227; Gaz. vol. 177; p. 1098.

Acids from their calcium salts, Manufacture of volatile organic. R. S. Swinton. No. 1,023,281; Apr. 16; Sp. p. 3296; Gaz. vol. 177; p. 589.

Acids of high molecular weight, Alkyl esters of diiodo fatty. A. Baselli. No. 1,024,171; Apr. 23; Sp. p. 5171; Gaz. vol. 177; p. 908.

Adding-machine. W. J. Pasinski. No. 1,023,168; Apr. 16; Sp. p. 3060; Gaz. vol. 177; p. 549.

Adding-machine. J. G. Vincent. No. 1,023,895; Apr. 23; Sp. p. 4544; Gaz. vol. 177; p. 813.

Adding-machine, &c. A. H. Ellis. No. 1,024,397; Apr. 23; Sp. p. 5612; Gaz. vol. 177; p. 984.

Adding-machines, Eliminating-key for. C. N. McFarland. No. 1,024,018; Apr. 23; Sp. p. 4802; Gaz. vol. 177; p. 853.

Adhesive-plaster spool. P. S. Bauer. No. 1,023,236; Apr. 16; Sp. p. 3196; Gaz. vol. 177; p. 572.

Advertising apparatus. W. H. Bradley. No. 1,024,177; Apr. 23; Sp. p. 5182; Gaz. vol. 177; p. 910.

Advertising device. J. E. Fike and M. Killian. No. 1,024,252; Apr. 23; Sp. p. 5358; Gaz. vol. 177; p. 939.

Advertising-machine. H. Atherton. No. 1,024,242; Apr. 23; Sp. p. 5339; Gaz. vol. 177; p. 935.

Advertising medium and fly-trap, Combined. W. W. Donaldson. No. 1,024,187; Apr. 23; Sp. p. 5217; Gaz. vol. 177; p. 914.

Aerial navigation. H. Dissie. No. 1,022,777; Apr. 9; Sp. p. 2204; Gaz. vol. 177; p. 378.

Aerial-navigation apparatus. M. Ferrero. No. 1,023,369; Apr. 16; Sp. p. 3452; Gaz. vol. 177; p. 616.

Aerial navigation, Power-driven machine for. V. F. Carpenter. No. 1,022,302; Apr. 2; Sp. p. 1145; Gaz. vol. 177; p. 184.

Aerial vehicles, Indicator for indicating the ascending and descending movements of. L. L. Custer. No. 1,023,183; Apr. 16; Sp. p. 2979; Gaz. vol. 177; p. 536.

Aerodrome. A. J. Helm. No. 1,023,150; Apr. 16; Sp. p. 3019; Gaz. vol. 177; p. 542.

Aeroplane. H. Farrell. No. 1,021,830; Apr. 2; Sp. p. 170; Gaz. vol. 177; p. 29.

Aeroplane. J. W. Way. (Reissue.) No. 13,397; Apr. 2; Sp. p. 1340; Gaz. vol. 177; p. 213.

Aeroplane. A. E. Beaudett. No. 1,023,000; Apr. 9; Sp. p. 2657; Gaz. vol. 177; p. 453.

Aeroplane. G. N. Spencer. No. 1,023,534; Apr. 16; Sp. p. 3778; Gaz. vol. 177; p. 668.

Aeroplane. R. Esnault-Pelterie. No. 1,024,928; Apr. 30; Sp. p. 6862; Gaz. vol. 177; p. 1206.

Aeroplane. R. Esnault-Pelterie. No. 1,024,929; Apr. 30; Sp. p. 6864; Gaz. vol. 177; p. 1206.

Aeroplane. F. C. Lambert. No. 1,024,941; Apr. 30; Sp. p. 6888; Gaz. vol. 177; p. 1210.

Aeroplane. E. Tisher. No. 1,025,033; Apr. 30; Sp. p. 7058; Gaz. vol. 177; p. 1241.

Aeroplane. J. Hübschman. No. 1,025,063; Apr. 30; Sp. p. 7111; Gaz. vol. 177; p. 1250.

Aeroplane-engine-controlling mechanism. H. L. Willoughby. No. 1,024,303; Apr. 23; Sp. p. 5446; Gaz. vol. 177; p. 954.

Aeroplane or the like or analogous machine or device. A. H. Edwards. No. 1,023,556; Apr. 16; Sp. p. 3627; Gaz. vol. 177; p. 675.

Aeroplane-roundabout. J. D. Walsh. No. 1,023,897; Apr. 23; Sp. p. 4560; Gaz. vol. 177; p. 813.

Aeroplane safety device. W. Lewis. No. 1,024,407; Apr. 23; Sp. p. 5669; Gaz. vol. 177; p. 987.

Aeroplanes and the like, Automatically-stabilised supporting-plane for. P. O. Detable. No. 1,024,315; Apr. 23; Sp. p. 5467; Gaz. vol. 177; p. 958.

Air and sulfur dioxid, Apparatus for preparing a mixture of. R. Marot. No. 1,024,798; Apr. 30; Sp. p. 6596; Gaz. vol. 177; p. 1160.

Air-brake-hose coupling. O. P. Wilhelm. No. 1,022,453; Apr. 9; Sp. p. 1486; Gaz. vol. 177; p. 266.

Air-compressor. W. N. Dennison. No. 1,023,820; Apr. 23; Sp. p. 4361; Gaz. vol. 177; p. 788.

Air-cooling apparatus for fruit. W. C. Anderson. No. 1,024,763; Apr. 30; Sp. p. 6514; Gaz. vol. 177; p. 1147.

Air-drying apparatus. A. Gaide. No. 1,024,887; Apr. 30; Sp. p. 6707; Gaz. vol. 177; p. 1191.

Air-gage. J. A. Buttress. No. 1,021,915; Apr. 2; Sp. p. 343; Gaz. vol. 177; p. 57.

Air-propeller. J. H. Buchanan. No. 1,023,065; Apr. 9; Sp. p. 2703; Gaz. vol. 177; p. 475.

Air-regenerating apparatus. G. von. Schapringer. No. 1,022,602; Apr. 9; Sp. p. 1795; Gaz. vol. 177; p. 315.

Air-testing apparatus. W. S. Leech. No. 1,022,955; Apr. 9; Sp. p. 2576; Gaz. vol. 177; p. 437.

Air-treating apparatus. D. M. Luehrs and W. S. Conant. No. 1,023,260; Apr. 16; Sp. p. 3246; Gaz. vol. 177; p. 580.

Airship. V. C. de Ybarrondo. No. 1,022,117; Apr. 2; Sp. p. 772; Gaz. vol. 177; p. 122.

Airship. S. P. Watt. No. 1,022,715; Apr. 9; Sp. p. 2076; Gaz. vol. 177; p. 357.

Airship. H. Faehrmann. No. 1,023,367; Apr. 16; Sp. p. 3449; Gaz. vol. 177; p. 616.

Airship. B. Sitzenstok. No. 1,023,484; Apr. 16; Sp. p. 3686; Gaz. vol. 177; p. 653.

Airship. D. M. MacLeod. No. 1,023,667; Apr. 16; Sp. p. 4049; Gaz. vol. 177; p. 710.

Airship. R. Anders. No. 1,025,100; Apr. 30; Sp. p. 7216; Gaz. vol. 177; p. 1264.

Airship, Multiplane. E. H. Sassli. No. 1,024,287; Apr. 23; Sp. p. 5421; Gaz. vol. 177; p. 950.

Airships, Equilibrator for. D. B. Ellsworth. No. 1,024,393; Apr. 23; Sp. p. 5651; Gaz. vol. 177; p. 984.

Alarm: *See* Boiler water-alarm; Fire-alarm; Gas-alarm; Puncture-alarm.

Alarm apparatus. J. D. Nelson and E. F. Smith. No. 1,022,497; Apr. 9; Sp. p. 1563; Gaz. vol. 177; p. 280.

Alloy of manganese and titanium and producing the same. A. J. Rossi. No. 1,023,331; Apr. 16; Sp. p. 3390; Gaz. vol. 177; p. 605.

Alloy of the precious metals and increasing hardness of such alloy. A. J. Rossi. No. 1,023,332; Apr. 16; Sp. p. 3391; Gaz. vol. 177; p. 605.

Alloy of the precious metals and increasing hardness of such alloy. A. J. Rossi. No. 1,023,334; Apr. 16; Sp. p. 3393; Gaz. vol. 177; p. 606.

Alloy of titanium and zinc, Producing the binary. A. J. Rossi. No. 1,022,597; Apr. 9; Sp. p. 1788; Gaz. vol. 177; p. 313.

Alloy of titanium, copper, and silicon. A. J. Rossi. No. 1,023,333; Apr. 16; Sp. p. 3392; Gaz. vol. 177; p. 606.

Alloy of titanium with copper, Producing the. A. J. Rossi. No. 1,022,599; Apr. 9; Sp. p. 1790; Gaz. vol. 177; p. 314.

Alloy of titanium with lead, Producing an. A. J. Rossi. No. 1,022,790; Apr. 9; Sp. p. 2243; Gaz. vol. 177; p. 384.

Alloy of titanium with tin, Producing the. A. J. Rossi. No. 1,022,598; Apr. 9; Sp. p. 1789; Gaz. vol. 177; p. 314.

Alloys of manganese and titanium, Producing. A. J. Rossi. No. 1,022,595; Apr. 9; Sp. p. 1785; Gaz. vol. 177; p. 313.

Alloys of the precious metals and increasing hardness of such alloys. A. J. Rossi. No. 1,022,596; Apr. 9; Sp. p. 1786; Gaz. vol. 177; p. 313.

Alloys of the precious metals and increasing hardness of such alloys. A. J. Rossi. No. 1,022,600; Apr. 9; Sp. p. 1791; Gaz. vol. 177; p. 314.

Ammonia in the cuprammonium cellulose precipitation, Recovering. E. Beonnert. No. 1,023,548; Apr. 16; Sp. p. 3811; Gaz. vol. 177; p. 672.
Ampoule. F. R. Eldred. No. 1,022,069; Apr. 2; Sp. p. 675; Gaz. vol. 177; p. 108.
Amusement device. F. J. H. Hazard. No. 1,022,674; Apr. 9; Sp. p. 1953; Gaz. vol. 177; p. 339.
Amusement device. A. M. Ricks. No. 1,024,283; Apr. 23; Sp. p. 5415; Gaz. vol. 177; p. 946.
Anesthetizing-machine attachment. G. Clarke. No. 1,024,556; Apr. 30; Sp. p. 6071; Gaz. vol. 177; p. 1075.
Anhydrons sulfites and bisulfites, Making. E. H. Strickler. No. 1,023,179; Apr. 16; Sp. p. 3090; Gaz. vol. 177; p. 552.
Animal-exterminator, Electric. O. N. Calvert. No. 1,024,060; Apr. 23; Sp. p. 4908; Gaz. vol. 177; p. 870.
Animal-releasing means. P. Peel. No. 1,024,649; Apr. 30; Sp. p. 6282; Gaz. vol. 177; p. 1107.
Animal-trap. C. E. Walcott. No. 1,022,115; Apr. 2; Sp. p. 769; Gaz. vol. 177; p. 122.
Animal-trap. W. G. Jackson. No. 1,024,782; Apr. 30; Sp. p. 6655; Gaz. vol. 177; p. 1154.
Animal-trap. W. I. Wolverton. No. 1,024,875; Apr. 30; Sp. p. 6748; Gaz. vol. 177; p. 1187.
Annealing-oven. A. J. Meier. No. 1,024,217; Apr. 23; Sp. p. 5278; Gaz. vol. 177; p. 925.
Anti-rail-creeper and splice-bar. F. B. Byers. No. 1,023,991; Apr. 23; Sp. p. 4765; Gaz. vol. 177; p. 845.
Antiskid device. D. J. Martin. No. 1,023,580; Apr. 16; Sp. p. 3883; Gaz. vol. 177; p. 684.
Antislipping device. W. Findlay. No. 1,024,981; Apr. 30; Sp. p. 6965; Gaz. vol. 177; p. 1223.
Apparel, Lock for wearing. F. G. Stringer. No. 1,022,980; Apr. 9; Sp. p. 2621; Gaz. vol. 177; p. 446.
Apron, Milking. G. W. Vahl. No. 1,023,974; Apr. 23; Sp. p. 4730; Gaz. vol. 177; p. 839.
Armor. A. M. Schneider. No. 1,021,804; Apr. 2; Sp. p. 102; Gaz. vol. 177; p. 20.
Armor for battleships. H. G. Dawson. No. 1,023,627; Apr. 16; Sp. p. 3084; Gaz. vol. 177; p. 700.
Article-hanger. G. Syverson. No. 1,025,030; Apr. 30; Sp. p. 7084; Gaz. vol. 177; p. 1239.
Assorting and sizing machine. J. J. Brine. No. 1,022,655; Apr. 9; Sp. p. 1911; Gaz. vol. 177; p. 333.
Atomizing apparatus. W. J. Smart. No. 1,021,951; Apr. 2; Sp. p. 428; Gaz. vol. 177; p. 69.
Auger-bit. G. P. Butler. No. 1,025,109; Apr. 30; Sp. p. 7220; Gaz. vol. 177; p. 1265.
Automatic sprinkler. S. B. Erickson. No. 1,024,979; Apr. 30; Sp. p. 6951; Gaz. vol. 177; p. 1222.
Automobile antiskidding device. E. Kron. No. 1,023,255; Apr. 16; Sp. p. 3233; Gaz. vol. 177; p. 578.
Automobile brake and jack. P. Janek. No. 1,021,779; Apr. 2; Sp. p. 47; Gaz. vol. 177; p. 11.
Automobile control-lever. L. Chevrolet and E. Planche. No. 1,022,401; Apr. 9; Sp. p. 1355; Gaz. vol. 177; p. 248.
Automobile, Convertible. A. Klell. No. 1,024,634; Apr. 30; Sp. p. 6259; Gaz. vol. 177; p. 1102.
Automobile-door. L. R. Colbert. No. 1,023,007; Apr. 9; Sp. p. 2668; Gaz. vol. 177; p. 455.
Automobile-doors, Buffer for. L. A. Bedard. No. 1,022,651; Apr. 9; Sp. p. 1904; Gaz. vol. 177; p. 332.
Automobile-fender. J. P. Sanderson. No. 1,021,796; Apr. 2; Sp. p. 84; Gaz. vol. 177; p. 17.
Automobile-fender. W. F. Perez. No. 1,023,393; Apr. 16; Sp. p. 3510; Gaz. vol. 177; p. 625.
Automobile-fender. B. F. Stannard and A. Aginskee. No. 1,023,071; Apr. 23; Sp. p. 4724; Gaz. vol. 177; p. 838.
Automobile-front. A. E. Gooderham. No. 1,024,587; Apr. 30; Sp. p. 6097; Gaz. vol. 177; p. 1078.
Automobile-horn. W. Pennock. No. 1,022,564; Apr. 9; Sp. p. 1711; Gaz. vol. 177; p. 302.
Automobile-horn. C. R. Heizmann. No. 1,023,016; Apr. 9; Sp. p. 2636; Gaz. vol. 177; p. 458.
Automobile lamp-bracket. J. E. Browne and H. H. Colson. No. 1,022,463; Apr. 9; Sp. p. 1504; Gaz. vol. 177; p. 299.
Automobile light-turner. W. G. Moxley. No. 1,023,026; Apr. 9; Sp. p. 2704; Gaz. vol. 177; p. 462.
Automobile locking mechanism. C. L. Maskey. No. 1,022,431; Apr. 9; Sp. p. 1442; Gaz. vol. 177; p. 258.
Automobile-muffler. M. Shlosberg. No. 1,023,225; Apr. 16; Sp. p. 3176; Gaz. vol. 177; p. 568.
Automobile number-plate. P. M. Hoffman. No. 1,023,471; Apr. 16; Sp. p. 3653; Gaz. vol. 177; p. 649.
Automobile-primer. W. R. Dunkel. No. 1,021,765; Apr. 2; Sp. p. 20; Gaz. vol. 177; p. 6.
Automobile-radiators, &c., Flag-holder attachment for. O. S. Fitzsimons. No. 1,022,360; Apr. 2; Sp. p. 1263; Gaz. vol. 177; p. 203.
Automobile-starter. C. D. Jenney. No. 1,022,087; Apr. 2; Sp. p. 712; Gaz. vol. 177; p. 113.
Automobile starting device. E. R. Brodton. No. 1,024,894; Apr. 23; Sp. p. 5599; Gaz. vol. 177; p. 982.
Automobile steering-guide. C. Bagg. No. 1,023,810; Apr. 23; Sp. p. 4336; Gaz. vol. 177; p. 764.
Automobile steering-wheels, Means for heating. G. E. Smith. No. 1,022,273; Apr. 2; Sp. p. 1090; Gaz. vol. 177; p. 175.
Automobiles, Casing for universal joints for. J. G. Heaslet. No. 1,024,132; Apr. 23; Sp. p. 5089; Gaz. vol. 177; p. 895.
Automobiles, Folding storm-front for. J. E. Stevenson. No. 1,024,658; Apr. 30; Sp. p. 6298; Gaz. vol. 177; p. 1110.
Automobiles, Gas controlling and lighting apparatus for. A. G. Black. No. 1,023,004; Apr. 9; Sp. p. 2662; Gaz. vol. 177; p. 454.
Automobiles, Gas-controlling apparatus for. A. G. Black. No. 1,023,003; Apr. 9; Sp. p. 2661; Gaz. vol. 177; p. 454.
Automobiles, Oil-indicator for. J. E. Campbell. No. 1,021,824; Apr. 2; Sp. p. 161; Gaz. vol. 177; p. 27.
Automobiles, Power-transmission unit for. C. E. Davis. No. 1,024,121; Apr. 23; Sp. p. 5050; Gaz. vol. 177; p. 892.
Automobiles, Surface-cooler for. L. Bachten and J. Gallay. No. 1,023,453; Apr. 16; Sp. p. 3625; Gaz. vol. 177; p. 643.
Autotruck, Side-dump. G. W. Lally. No. 1,024,636; Apr. 30; Sp. p. 6262; Gaz. vol. 177; p. 1102.
Averages, Instrument for obtaining. L. A. Quivey. No. 1,023,961; Apr. 23; Sp. p. 4707; Gaz. vol. 177; p. 835.
Awl, Machine. W. F. Lewis. No. 1,024,795; Apr. 30; Sp. p. 6591; Gaz. vol. 177; p. 1159.
Awning and fire-protector, Combined window. W. W. Guy and O. L. Richards. No. 1,022,989; Apr. 9; Sp. p. 2561; Gaz. vol. 177; p. 432.
Axle. J. L. Walker. No. 1,023,288; Apr. 16; Sp. p. 3299; Gaz. vol. 177; p. 589.
Axle-box, Lubricating. J. McIntock. No. 1,023,668; Apr. 16; Sp. p. 4052; Gaz. vol. 177; p. 711.
Axle-forming apparatus. D. W. Stroup. No. 1,024,532; Apr. 30; Sp. p. 5997; Gaz. vol. 177; p. 1067.
Axle-spindle lubricator, Vehicle. A. L. Ramsey. No. 1,024,146; Apr. 23; Sp. p. 5119; Gaz. vol. 177; p. 900.
Axles, Means for transmitting power from railway-car. W. T. Marteresteck. No. 1,024,518; Apr. 30; Sp. p. 5960; Gaz. vol. 177; p. 1062.
Back-band hook. J. H. Estes. No. 1,023,999; Apr. 23; Sp. p. 4779; Gaz. vol. 177; p. 848.
Back-pedaling brake, Free-wheel. F. Goebel. No. 1,023,076; Apr. 9; Sp. p. 2813; Gaz. vol. 177; p. 479.
Back-rest and wind-shield, Combined. I. E. Palmer. No. 1,022,696; Apr. 9; Sp. p. 2012; Gaz. vol. 177; p. 348.
Bag: *See* Feed-bag; Mail-bag; Traveling-bag.
Bag-fastener. L. B. Prahar. No. 1,023,170; Apr. 16; Sp. p. 3071; Gaz. vol. 177; p. 550.
Bag-fastener. F. A. Fuller. No. 1,024,930; Apr. 30; Sp. p. 6867; Gaz. vol. 177; p. 1206.
Bag-frame. C. Hiering and A. Fuller. No. 1,024,895; Apr. 30; Sp. p. 6790; Gaz. vol. 177; p. 1193.
Bag-holder. A. Reiser. No. 1,024,560; Apr. 23; Sp. p. 5545; Gaz. vol. 177; p. 972.
Bagasse-drying apparatus. J. C. F. Lafeuille. No. 1,023,157; Apr. 16; Sp. p. 3038; Gaz. vol. 177; p. 545.
Bail for paint-buckets and the like. A. G. Emery. No. 1,024,841; Apr. 30; Sp. p. 6681; Gaz. vol. 177; p. 1175.
Baking-powder, Mixture suitable for. R. Grüter. No. 1,024,330; Apr. 23; Sp. p. 5495; Gaz. vol. 177; p. 963.
Balance with sliding weights, Automatic. G. Darmstädter. No. 1,024,881; Apr. 30; Sp. p. 6758; Gaz. vol. 177; p. 1189.
Baling and compressing apparatus, Combined. T. J. Smith. No. 1,022,709; Apr. 9; Sp. p. 2051; Gaz. vol. 177; p. 354.
Baling-press. J. D. McKenzie. No. 1,022,035; Apr. 2; Sp. p. 604; Gaz. vol. 177; p. 96.
Baling-press. M. C. Nixon. No. 1,022,393; Apr. 2; Sp. p. 1326; Gaz. vol. 177; p. 215.
Baling-press. M. C. Nixon. No. 1,022,394; Apr. 2; Sp. p. 1328; Gaz. vol. 177; p. 216.
Ball: *See* Catnip-ball; Golf-ball.
Ball. F. E. Chester. No. 1,023,504; Apr. 16; Sp. p. 3725; Gaz. vol. 177; p. 659.
Ball. H. R. Wemple. No. 1,023,904; Apr. 23; Sp. p. 4577; Gaz. vol. 177; p. 816.
Bank, Coin savings. R. T. Parker. No. 1,024,222; Apr. 23; Sp. p. 5293; Gaz. vol. 177; p. 927.
Bar: *See* Boring-bar; Concrete-reinforcing bar; Evener-bar; Handle-bar; Insulating tie-bar; Splice-bar; Stop-bar.
Bark-stripping machine. J. Kokko. No. 1,024,137; Apr. 23; Sp. p. 5099; Gaz. vol. 177; p. 896.
Barking machine, Wood. N. K. F. Hanson. No. 1,024,198; Apr. 23; Sp. p. 5230; Gaz. vol. 177; p. 918.
Barretta. W. S. Bechtold. No. 1,023,064; Apr. 9; Sp. p. 2792; Gaz. vol. 177; p. 478.
Base-burner. F. A. Pamplin. No. 1,023,167; Apr. 16; Sp. p. 3068; Gaz. vol. 177; p. 548.
Basket-making device. R. Schanz. No. 1,024,602; Apr. 30; Sp. p. 6131; Gaz. vol. 177; p. 1090.
Bath: *See* Medicinal bath.
Bath apparatus. G. G. Wiggins. No. 1,022,846; Apr. 2; Sp. p. 1237; Gaz. vol. 177; p. 196.
Bath-tub sanitary attachment. A. L. Grow. No. 1,024,329; Apr. 23; Sp. p. 5486; Gaz. vol. 177; p. 962.
Bathing-suit. O. Carrabine. No. 1,024,181; Apr. 23; Sp. p. 5190; Gaz. vol. 177; p. 912.
Batteries, Treating wood for use in secondary. P. Marino. No. 1,023,948; Apr. 23; Sp. p. 4681; Gaz. vol. 177; p. 831.
Battery: *See* Primary battery; Secondary battery; Storage battery.
Battery cells, Means for charging storage. C. W. Bell. No. 1,023,498; Apr. 16; Sp. p. 3710; Gaz. vol. 177; p. 657.

Battery-charging apparatus. E. A. Halbleib. No. 1,024,448; Apr. 23; Sp. p. 5752; Gaz. vol. 177; p. 1000.
Battery conductor or support, Storage. W. Morrison. No. 1,021,907; Apr. 2; Sp. p. 528; Gaz. vol. 177; p. 83.
Battery-current-limiting device. H. M. Beck and C. Ambrüster. No. 1,023,490; Apr. 16; Sp. p. 3696; Gaz. vol. 177; p. 654.
Battery-holder. H. A. Stevens. No. 1,023,178; Apr. 16; Sp. p. 3089; Gaz. vol. 177; p. 552.
Beading-machine. J. H. Nangle. No. 1,024,219; Apr. 23; Sp. p. 5286; Gaz. vol. 177; p. 926.
Bearing-adjusting means. R. D. Valentine and H. S. Battee. No. 1,024,871; Apr. 30; Sp. p. 6742; Gaz. vol. 177; p. 1186.
Bearing, Antifriction. C. Upton. No. 1,022,163; Apr. 2; Sp. p. 870; Gaz. vol. 177; p. 138.
Bearing, Ball. H. Hess. No. 1,023,017; Apr. 9; Sp. p. 2688; Gaz. vol. 177; p. 459.
Bearing, Ball. J. Bierschenk. No. 1,023,614; Apr. 16; Sp. p. 3956; Gaz. vol. 177; p. 695.
Bearing for electric meters. W. H. Pratt. No. 1,022,503; Apr. 9; Sp. p. 1581; Gaz. vol. 177; p. 283.
Bearing for mill-rolls. W. M. Bancroft. No. 1,023,355; Apr. 16; Sp. p. 3428; Gaz. vol. 177; p. 612.
Bearing, Roller. H. C. Hodges. No. 1,024,851; Apr. 30; Sp. p. 6700; Gaz. vol. 177; p. 1179.
Bearing, Support ball. P. Brühl. No. 1,022,531; Apr. 9; Sp. p. 1641; Gaz. vol. 177; p. 292.
Bearing, Thrust. W. H. Russell. No. 1,024,457; Apr. 23; Sp. p. 5770; Gaz. vol. 177; p. 1003.
Bearings, Retainer for ball. H. A. Olsson and S. G. Wingquist. No. 1,023,751; Apr. 16; Sp. p. 4189; Gaz. vol. 177; p. 736.
Bed and divan, Convertible. W. Thompson. No. 1,022,212; Apr. 2; Sp. p. 975; Gaz. vol. 177; p. 156.
Bed-bottom fabric, Link. G. A. Mellon. No. 1,024,803; Apr. 30; Sp. p. 6604; Gaz. vol. 177; p. 1161.
Bed, Folding. A. Haberman. No. 1,023,562; Apr. 16; Sp. p. 3846; Gaz. vol. 177; p. 677.
Bed, Folding. F. C. Roberts. No. 1,024,284; Apr. 23; Sp. p. 5418; Gaz. vol. 177; p. 949.
Bed, Folding extension. E. R. Neukirch. No. 1,023,328; Apr. 16; Sp. p. 3386; Gaz. vol. 177; p. 604.
Bed, Folding or collapsible. F. H. Farrington. No. 1,022,022; Apr. 2; Sp. p. 578; Gaz. vol. 177; p. 91.
Bed-frame. F. I. Gould. No. 1,022,938; Apr. 9; Sp. p. 2550; Gaz. vol. 177; p. 432.
Bed, Invalid. R. Roesch. No. 1,023,896; Apr. 16; Sp. p. 3515; Gaz. vol. 177; p. 626.
Bed-movement. R. T. Johnston. No. 1,022,557; Apr. 9; Sp. p. 1697; Gaz. vol. 177; p. 299.
Bed or couch fabric. W. J. Grotenhuis. No. 1,021,772; Apr. 2; Sp. p. 83; Gaz. vol. 177; p. 8.
Bed, Spring. J. W. Horvath. No. 1,022,738; Apr. 9; Sp. p. 2126; Gaz. vol. 177; p. 365.
Bed-spring. J. A. Moore. No. 1,023,089; Apr. 9; Sp. p. 2841; Gaz. vol. 177; p. 483.
Bed-spring. S. C. Chatham. No. 1,023,721; Apr. 16; Sp. p. 4141; Gaz. vol. 177; p. 727.
Bed-spring. J. Roever. No. 1,023,876; Apr. 23; Sp. p. 4501; Gaz. vol. 177; p. 806.
Bed-spring fabric. G. Gangelhoff, Jr., and M. Jordan. No. 1,022,131; Apr. 2; Sp. p. 806; Gaz. vol. 177; p. 128.
Beds, Folding leg for couch. M. J. Halpin. No. 1,024,197; Apr. 23; Sp. p. 5287; Gaz. vol. 177; p. 917.
Bee-feeder. G. L. White. No. 1,022,762; Apr. 9; Sp. p. 2176; Gaz. vol. 177; p. 373.
Beeswax-cleaner. D. Grant. No. 1,023,640; Apr. 16; Sp. p. 4007; Gaz. vol. 177; p. 703.
Beet-puller. S. R. Giddings. No. 1,023,836; Apr. 23; Sp. p. 4417; Gaz. vol. 177; p. 793.
Beet topping and loading apparatus. R. H. Moore. No. 1,024,142; Apr. 23; Sp. p. 5110; Gaz. vol. 177; p. 898.
Belt-dressings, Composition of matter for. F. L. Cavagnaro. No. 1,023,992; Apr. 23; Sp. p. 4766; Gaz. vol. 177; p. 846.
Belt-fastening means. O. R. Rust. No. 1,022,508; Apr. 9; Sp. p. 1580; Gaz. vol. 177; p. 284.
Belt-fight. N. S. Cole. No. 1,023,008; Apr. 9; Sp. p. 2670; Gaz. vol. 177; p. 455.
Belt-guide, Automatic. R. Johnson, Sr. No. 1,022,949; Apr. 9; Sp. p. 2564; Gaz. vol. 177; p. 435.
Belt-guiding mechanism. S. C. Keith, Jr. No. 1,023,253; Apr. 16; Sp. p. 3229; Gaz. vol. 177; p. 578.
Belt-shifter. S. R. Bailey. No. 1,022,650; Apr. 9; Sp. p. 1899; Gaz. vol. 177; p. 332.
Belting, Canvas. J. B. Hay. No. 1,022,080; Apr. 2; Sp. p. 694; Gaz. vol. 177; p. 111.
Bench: *See* Greenhouse-bench.
Bench-dog. J. Primos. No. 1,023,679; Apr. 16; Sp. p. 4066; Gaz. vol. 177; p. 713.
Berry-picker. O. C. Weber. No. 1,023,697; Apr. 16; Sp. p. 4097; Gaz. vol. 177; p. 719.
Bevel-protractor. L. J. Fellay. No. 1,023,144; Apr. 16; Sp. p. 3009; Gaz. vol. 177; p. 540.
Beverages, Compound for use in brewing fermented. L. Stein. No. 1,024,158; Apr. 23; Sp. p. 5145; Gaz. vol. 177; p. 903.
Beverages, Making radio-active. H. H. Hewitt. No. 1,022,551; Apr. 9; Sp. p. 1681; Gaz. vol. 177; p. 296.
Beverages, Manufacture of fermented malt. E. Wahl. No. 1,023,448; Apr. 16; Sp. p. 3618; Gaz. vol. 177; p. 642.
Bicycle-saddle. D. S. Troxel. No. 1,022,447; Apr. 9; Sp. p. 1469; Gaz. vol. 177; p. 268.
Bilge-discharging device. J. J. Hall. No. 1,023,843; Apr. 23; Sp. p. 4429; Gaz. vol. 177; p. 795.
Billiard-cue. W. Blaney. No. 1,022,173; Apr. 2; Sp. p. 893; Gaz. vol. 177; p. 142.
Billiards and like games, Timing apparatus for. P. J. A. Lepage. No. 1,022,633; Apr. 9; Sp. p. 1858; Gaz. vol. 177; p. 325.
Bin: *See* Knockdown bin.
Binder leaf-carrier, Loose-leaf. H. B. Bristol. No. 1,023,715; Apr. 16; Sp. p. 4128; Gaz. vol. 177; p. 724.
Binder-locking device, Loose-leaf. J. Schade, Jr. No. 1,024,525; Apr. 30; Sp. p. 5980; Gaz. vol. 177; p. 1064.
Binder, Loose-leaf. E. H. Elder. No. 1,024,472; Apr. 23; Sp. p. 5812; Gaz. vol. 177; p. 1010.
Binder, Temporary. G. P. Wigginton. No. 1,022,452; Apr. 9; Sp. p. 1481; Gaz. vol. 177; p. 265.
Binder, Temporary. A. A. Hunsiker. No. 1,023,566; Apr. 16; Sp. p. 3852; Gaz. vol. 177; p. 678.
Binding or cementing material. J. M. Nell. No. 1,023,674; Apr. 16; Sp. p. 4061; Gaz. vol. 177; p. 712.
Binding-post, Combination. P. H. Capper and L. F. McCreary. No. 1,024,248; Apr. 23; Sp. p. 5349; Gaz. vol. 177; p. 937.
Bit: *See* Auger-bit; Drilling-bit.
Bit-frame. E. S. Lagarde and P. A. Angenend, Jr. No. 1,023,021; Apr. 9; Sp. p. 2696; Gaz. vol. 177; p. 460.
Blackboard-marker. H. E. Green. No. 1,023,561; Apr. 16; Sp. p. 3843; Gaz. vol. 177; p. 677.
Blade-lashing means. C. E. Sweet. No. 1,023,892; Apr. 23; Sp. p. 4539; Gaz. vol. 177; p. 812.
Blade-protecting knife. W. R. Laine. No. 1,024,086; Apr. 23; Sp. p. 4964; Gaz. vol. 177; p. 878.
Blank-handling mechanism. W. T. Dulin. No. 1,023,138; Apr. 16; Sp. p. 2980; Gaz. vol. 177; p. 538.
Blanks, Feeding mechanism for machines for cutting and creasing. J. E. Erickson. No. 1,023,558; Apr. 16; Sp. p. 3831; Gaz. vol. 177; p. 676.
Blast-furnace. M. McMurray. No. 1,024,801; Apr. 30; Sp. p. 6601; Gaz. vol. 177; p. 1160.
Bleaching and dyeing machine. T. Frusher. No. 1,024,003; Apr. 23; Sp. p. 4784; Gaz. vol. 177; p. 849.
Bleaching liquids, Manufacture of. H. Wilsing. No. 1,023,287; Apr. 16; Sp. p. 3305; Gaz. vol. 177; p. 590.
Blind, Metal-slat Venetian. W. H. Hannam. No. 1,022,415; Apr. 9; Sp. p. 1379; Gaz. vol. 177; p. 253.
Blind-stop. G. E. Labit. No. 1,024,994; Apr. 30; Sp. p. 6990; Gaz. vol. 177; p. 1228.
Block: *See* Breech-block; Building-block; Pulley-block; Snatch-block; Space-block.
Blower, Fluid-jet. T. Gruenwald. No. 1,023,078; Apr. 9; Sp. p. 2816; Gaz. vol. 177; p. 479.
Board: *See* Game-board; Ironing-board; Target-board; Washboard.
Boat. B. T. Delafield. No. 1,022,725; Apr. 9; Sp. p. 2094; Gaz. vol. 177; p. 360.
Boat. F. X. Resch. No. 1,024,419; Apr. 23; Sp. p. 5693; Gaz. vol. 177; p. 991.
Boat and airship, Combined. J. Wymore. No. 1,023,404; Apr. 16; Sp. p. 3581; Gaz. vol. 177; p. 629.
Boat, Tug. T. F. Cox. No. 1,024,119; Apr. 23; Sp. p. 5057; Gaz. vol. 177; p. 891.
Boats and ships, Construction of. W. H. Fauber. No. 1,024,682; Apr. 30; Sp. p. 6348; Gaz. vol. 177; p. 1119.
Boats for launching, Mechanism for preparing. J. McGoldrick. No. 1,022,482; Apr. 9; Sp. p. 1444; Gaz. vol. 177; p. 259.
Boiler: *See* Steam-boiler.
Boiler. J. T. Brown. No. 1,021,759; Apr. 2; Sp. p. 8; Gaz. vol. 177; p. 4.
Boiler-cleaner. E. S. Cline. No. 1,022,063; Apr. 2; Sp. p. 660; Gaz. vol. 177; p. 105.
Boiler draft-regulator, Fire-tube. C. H. McCall. No. 1,023,949; Apr. 23; Sp. p. 4683; Gaz. vol. 177; p. 831.
Boiler-flue rattler. E. T. Hendee. No. 1,023,379; Apr. 16; Sp. p. 3475; Gaz. vol. 177; p. 620.
Boiler structure, Steam. H. H. Tracy and H. E. Boyrie. No. 1,022,647; Apr. 9; Sp. p. 1892; Gaz. vol. 177; p. 330.
Boiler water-alarm, Steam. G. J. Gibney. No. 1,022,936; Apr. 9; Sp. p. 2546; Gaz. vol. 177; p. 431.
Boilers, Hot-water washing and refilling system for locomotive. W. A. Powers. No. 1,023,441; Apr. 16; Sp. p. 3597; Gaz. vol. 177; p. 639.
Boiling device, Safety. L. O. Layman. No. 1,024,791; Apr. 30; Sp. p. 6583; Gaz. vol. 177; p. 1158.
Bolt: *See* Door and window bolt; Expansion-bolt; Fish-plate bolt.
Bolt anchor, Expansion. H. W. Pleister. No. 1,021,794; Apr. 2; Sp. p. 77; Gaz. vol. 177; p. 17.
Bolt and nut lock. R. C. Kirby. No. 1,023,480; Apr. 16; Sp. p. 3577; Gaz. vol. 177; p. 636.
Bolt-clipper. M. K. Barron. No. 1,024,432; Apr. 23; Sp. p. 5712; Gaz. vol. 177; p. 994.
Bolt-cutting machine. F. A. Gillette. No. 1,023,013; Apr. 9; Sp. p. 2680; Gaz. vol. 177; p. 457.
Book, Manifold. P. Ascher and C. Delsinault. No. 1,023,118; Apr. 30; Sp. p. 7229; Gaz. vol. 177; p. 1266.
Book, Manifolding sales. R. J. Wood. No. 1,023,910; Apr. 23; Sp. p. 4589; Gaz. vol. 177; p. 818.
Book, Manifolding sales. E. K. Bottle. No. 1,024,496; Apr. 30; Sp. p. 5891; Gaz. vol. 177; p. 1053.
Book, Pocket memorandum. A. Mieden. No. 1,025,007; Apr. 30; Sp. p. 7014; Gaz. vol. 177; p. 1232.
Book-protecting device. B. M. Fletcher. No. 1,021,832; Apr. 2; Sp. p. 182; Gaz. vol. 177; p. 30.

Book-rack. E. Oldenbusch. No. 1,022,150; Apr. 2; Sp. p. 845; Gaz. vol. 177; p. 134.
Books and pads, Manufacture of manifold-writing. F. Heitsmann. No. 1,021,776; Apr. 2; Sp. p. 41; Gaz. vol. 177; p. 10.
Books and the like, Inserted-leaf holder for. F. T. Loftin and G. W. Everett. No. 1,025,096; Apr. 30; Sp. p. 7197; Gaz. vol. 177; p. 1261.
Books, Casing-in machine for. W. L. Norton. (Reissue.) No. 13,412; Apr. 30; Sp. p. 7241; Gaz. vol. 177; p. 1269.
Books in covering-machines, Device for applying adhesive material to the backs of. C. A. Juengst. No. 1,023,569; Apr. 16; Sp. p. 3862; Gaz. vol. 177; p. 680.
Bookbinding. H. N. Yerger. No. 1,021,908; Apr. 2; Sp. p. 328; Gaz. vol. 177; p. 54.
Bookbinding. J. G. Gareis. No. 1,023,466; Apr. 16; Sp. p. 3645; Gaz. vol. 177; p. 647.
Bookbinding. J. G. Gareis. No. 1,023,834; Apr. 23; Sp. p. 4413; Gaz. vol. 177; p. 793.
Boot and shoe. P. Dosch. No. 1,022,537; Apr. 9; Sp. p. 1651; Gaz. vol. 177; p. 293.
Boot or shoe. M. Brihaye. No. 1,021,819; Apr. 2; Sp. p. 149; Gaz. vol. 177; p. 26.
Boot or shoe calk. J. B. Murphy. No. 1,022,106; Apr. 2; Sp. p. 747; Gaz. vol. 177; p. 119.
Boot or shoe calk. J. B. Hart. No. 1,025,087; Apr. 30; Sp. p. 7171; Gaz. vol. 177; p. 1257.
Boot, Waterproof. G. B. Wyman. No. 1,022,994; Apr. 9; Sp. p. 2642; Gaz. vol. 177; p. 451.
Boots and shoes, Machine for assembling parts of. O. Ashton. No. 1,023,794; Apr. 23; Sp. p. 4275; Gaz. vol. 177; p. 778.
Boots and shoes, Machine for use in the manufacture of. F. H. Warren. No. 1,023,284; Apr. 16; Sp. p. 3301; Gaz. vol. 177; p. 590.
Boots and shoes, Machine for use in the manufacture of. A. L. Engberg. No. 1,023,826; Apr. 23; Sp. p. 4391; Gaz. vol. 177; p. 789.
Boots and shoes, Machine for use in the manufacture of. C. S. Norden. No. 1,023,954; Apr. 23; Sp. p. 4691; Gaz. vol. 177; p. 832.
Boots and shoes, Machine for use in the manufacture of. A. Perri. No. 1,024,019; Apr. 23; Sp. p. 4810; Gaz. vol. 177; p. 855.
Boots and shoes, Machine for use in the manufacture of. A. L. Russell. No. 1,024,599; Apr. 30; Sp. p. 6168; Gaz. vol. 177; p. 1089.
Boots and shoes, Pulling-over and toe-lasting machine for use in the manufacture of. P. Bohaček. No. 1,023,194; Apr. 16; Sp. p. 3120; Gaz. vol. 177; p. 558.
Bore-hole, Means for straightening or altering the direction or course of a. F. G. Seineke. No. 1,022,705; Apr. 9; Sp. p. 2037; Gaz. vol. 177; p. 352.
Boring-bar. I. W. Sprink. No. 1,024,656; Apr. 30; Sp. p. 6293; Gaz. vol. 177; p. 1109.
Bottle. T. Mills. No. 1,023,114; Apr. 9; Sp. p. 2894; Gaz. vol. 177; p. 492.
Bottle attachment, Nursing-. G. Moran. No. 1,023,672; Apr. 16; Sp. p. 4059; Gaz. vol. 177; p. 712.
Bottle-capping machine. W. J. Cunningham. No. 1,022,829; Apr. 9; Sp. p. 2310; Gaz. vol. 177; p. 395.
Bottle-capping machine. A. M. Baroody. No. 1,024,493; Apr. 30; Sp. p. 5884; Gaz. vol. 177; p. 1052.
Bottle-carrier. F. L. Cummings. No. 1,022,533; Apr. 9; Sp. p. 1645; Gaz. vol. 177; p. 292.
Bottle-case. G. G. Roberts. No. 1,022,971; Apr. 9; Sp. p. 2607; Gaz. vol. 177; p. 443.
Bottle-closure. J. Matus. No. 1,022,101; Apr. 2; Sp. p. 737; Gaz. vol. 177; p. 118.
Bottle-closure. F. Kacsynski. No. 1,023,653; Apr. 16; Sp. p. 4022; Gaz. vol. 177; p. 706.
Bottle-closure. G. Lieb. No. 1,024,212; Apr. 23; Sp. p. 5269; Gaz. vol. 177; p. 923.
Bottle-closure. G. W. Trexler. No. 1,024,917; Apr. 30; Sp. p. 6841; Gaz. vol. 177; p. 1201.
Bottle-crown shield. H. E. Knaust. No. 1,024,584; Apr. 30; Sp. p. 6126; Gaz. vol. 177; p. 1084.
Bottle holder, Milk-. J. I. Bantom. No. 1,022,223; Apr. 2; Sp. p. 993; Gaz. vol. 177; p. 160.
Bottle, jar, and the like and stopper therefor. D. Hurst and H. K. Bridger. No. 1,022,141; Apr. 2; Sp. p. 826; Gaz. vol. 177; p. 131.
Bottle, Non-refillable. W. P. Upham. No. 1,022,899; Apr. 9; Sp. p. 2433; Gaz. vol. 177; p. 417.
Bottle, Non-refillable. S. L. Pollito. No. 1,024,097; Apr. 23; Sp. p. 4995; Gaz. vol. 177; p. 882.
Bottle-opener. E. K. Hill. No. 1,024,403; Apr. 23; Sp. p. 5062; Gaz. vol. 177; p. 896.
Bottle protector, Milk-. J. R. Carter. No. 1,024,879; Apr. 30; Sp. p. 6754; Gaz. vol. 177; p. 1188.
Bottle receptacle, Milk or cream. E. W. Bauer. No. 1,024,548; Apr. 30; Sp. p. 6042; Gaz. vol. 177; p. 1073.
Bottle-rinsing machine. K. Kiefer. No. 1,022,196; Apr. 2; Sp. p. 940; Gaz. vol. 177; p. 150.
Bottle, Self-measuring non-refillable. E. Böthman. No. 1,022,877; Apr. 9; Sp. p. 2397; Gaz. vol. 177; p. 410.
Bottle soaking, rinsing, and cleaning machine, Combined. C. E. Felt. No. 1,023,829; Apr. 23; Sp. p. 4400; Gaz. vol. 177; p. 791.
Bottle-stopper. M. W. Send. No. 1,022,443; Apr. 9; Sp. p. 1460; Gaz. vol. 177; p. 262.
Bottle-stopper. J. E. Hager. No. 1,023,735; Apr. 16; Sp. p. 4163; Gaz. vol. 177; p. 731.
Bottle-stopper-grinding machine. L. J. Crecelius. No. 1,023,181; Apr. 16; Sp. p. 2978; Gaz. vol. 177; p. 536.
Bottle, Sucking-. C. de Bock. No. 1,023,803; Apr. 23; Sp. p. 4817; Gaz. vol. 177; p. 782.
Bottle-washer. H. Krause. No. 1,022,199; Apr. 2; Sp. p. 947; Gaz. vol. 177; p. 151.
Bottle-washing machine. C. E. Felt. No. 1,023,830; Apr. 23; Sp. p. 4403; Gaz. vol. 177; p. 791.
Bottles and packages, Cooling device for. G. T. Bailey. No. 1,023,116; Apr. 9; Sp. p. 2903; Gaz. vol. 177; p. 493.
Bottling-machine feed mechanism. J. J. Gaynor, E. W. Miller, and C. D. Remler. No. 1,023,074; Apr. 9; Sp. p. 2807; Gaz. vol. 177; p. 478.
Bowling-alley. F. C. Hobbs. No. 1,022,083; Apr. 2; Sp. p. 696; Gaz. vol. 177; p. 112.
Box: *See* Axle-box; Burial-box; Cigarette-box; Dump-box; Floor-box; Fuse-box; Junction-box; Knockdown box; Locomotive driving-box; Mail-box; Match-box; Metallic box; Meter connection-box; Outlet-box; Paper box; Suit and hat box; Switch-box; Tool-holding box; Vanity-box; Wagon-box.
Box. D. P. Fleming. No. 1,022,780; Apr. 9; Sp. p. 2210; Gaz. vol. 177; p. 378.
Box. A. F. Wilcox. No. 1,023,908; Apr. 23; Sp. p. 4584; Gaz. vol. 177; p. 817.
Box. F. Kaye and R. W. Rogers. No. 1,024,482; Apr. 23; Sp. p. 5833; Gaz. vol. 177; p. 1014.
Box blank, Folding-. E. W. Labombarde. No. 1,021,874; Apr. 2; Sp. p. 265; Gaz. vol. 177; p. 43.
Box-board cutting and scoring mechanism. T. H. Clinger. No. 1,022,722; Apr. 9; Sp. p. 2090; Gaz. vol. 177; p. 359.
Box-fastener. R. Schleicher. No. 1,022,156; Apr. 2; Sp. p. 859; Gaz. vol. 177; p. 136.
Box-fastener. J. F. Beehler. No. 1,022,575; Apr. 9; Sp. p. 1735; Gaz. vol. 177; p. 306.
Box-fastener. J. F. Beehler. No. 1,022,576; Apr. 9; Sp. p. 1737; Gaz. vol. 177; p. 306.
Box-fastening. J. O. Olson. No. 1,025,014; Apr. 30; Sp. p. 7025; Gaz. vol. 177; p. 1234.
Box-lid-attaching means. L. I. Heilbrun. No. 1,024,571; Apr. 30; Sp. p. 6105; Gaz. vol. 177; p. 1080.
Box-protector. J. Kurz. No. 1,022,745; Apr. 9; Sp. p. 2139; Gaz. vol. 177; p. 367.
Box-protector. J. Kurz. No. 1,022,746; Apr. 9; Sp. p. 2140; Gaz. vol. 177; p. 367.
Brace: *See* Fence-post brace; Gun hand-brace.
Brace for fractured bones. L. L. Miner. No. 1,025,008; Apr. 30; Sp. p. 7018; Gaz. vol. 177; p. 1232.
Bracelet. M. L. Robbins. No. 1,022,708; Apr. 9; Sp. p. 2241; Gaz. vol. 177; p. 384.
Bracelet. M. L. Robbins. No. 1,024,101; Apr. 23; Sp. p. 5006; Gaz. vol. 177; p. 884.
Bracket: *See* Automobile lamp-bracket; Curtain-bracket; Lamp-bracket.
Bracket. M. L. Longworth. No. 1,024,097; Apr. 30; Sp. p. 6994; Gaz. vol. 177; p. 1229.
Brad feeding and driving apparatus. R. J. Morrison. No. 1,024,645; Apr. 30; Sp. p. 6275; Gaz. vol. 177; p. 1105.
Brake: *See* Automobile-brake; Back-pedaling brake; Coaster-brake; Electrically-controlled brake; Emergency-brake; Friction-brake; Safety-brake; Vehicle-brake; Vehicle back-up brake; Wheel-brake.
Brake. G. S. Wilson and E. F. Mathey. No. 1,021,962; Apr. 2; Sp. p. 459; Gaz. vol. 177; p. 73.
Brake. F. O'Brien. No. 1,022,639; Apr. 9; Sp. p. 1873; Gaz. vol. 177; p. 327.
Brake-beam. E. A. Le Beau. No. 1,023,474; Apr. 16; Sp. p. 3664; Gaz. vol. 177; p. 650.
Brake-beam. E. A. Le Beau. No. 1,024,484; Apr. 23; Sp. p. 5837; Gaz. vol. 177; p. 1015.
Brake-beam safety-support. D. M. Knox. No. 1,024,789; Apr. 30; Sp. p. 6579; Gaz. vol. 177; p. 1157.
Brake-head. H. B. Robischung. No. 1,022,581; Apr. 2; Sp. p. 1215; Gaz. vol. 177; p. 194.
Brake-head. H. M. Perry and C. F. Hunton. No. 1,022,440; Apr. 9; Sp. p. 1455; Gaz. vol. 177; p. 261.
Brake-head. C. W. Armbrust. No. 1,024,112; Apr. 23; Sp. p. 5031; Gaz. vol. 177; p. 889.
Brake-head, Adjustable. E. L. White. No. 1,022,806; Apr. 9; Sp. p. 2263; Gaz. vol. 177; p. 387.
Brake mechanism. P. S. Moe. No. 1,022,252; Apr. 2; Sp. p. 1056; Gaz. vol. 177; p. 168.
Brake mechanisms. S. M. Wratten. No. 1,024,385; Apr. 23; Sp. p. 5583; Gaz. vol. 177; p. 979.
Brake mechanism for vehicles. F. Rolland and E. Pilain. No. 1,022,506; Apr. 9; Sp. p. 1587; Gaz. vol. 177; p. 284.
Brake-rigging. W. F. Kiesel, Jr. No. 1,022,424; Apr. 9; Sp. p. 1430; Gaz. vol. 177; p. 256.
Brake-shoe. C. W. Armbrust. No. 1,022,397; Apr. 9; Sp. p. 1349; Gaz. vol. 177; p. 247.
Brake-shoe. J. J. Kinser. No. 1,024,265; Apr. 23; Sp. p. 5386; Gaz. vol. 177; p. 943.
Brake slack-adjuster. J. J. Acker. No. 1,023,790; Apr. 23; Sp. p. 4269; Gaz. vol. 177; p. 777.
Branding-head, Electrically-heated. E. N. Chandler. No. 1,022,061; Apr. 2; Sp. p. 657; Gaz. vol. 177; p. 104.
Branding instrument, Cattle-. I. R. Van Wart. No. 1,022,986; Apr. 9; Sp. p. 2631; Gaz. vol. 177; p. 448.
Branding-machine. C. R. Fischer and J. E. Stoll. No. 1,021,767; Apr. 2; Sp. p. 23; Gaz. vol. 177; p. 7.
Breech-block. A. Wakefield. No. 1,023,976; Apr. 23; Sp. p. 4733; Gaz. vol. 177; p. 840.

Brick-machine. H. S. C. Walker. No. 1,022,165; Apr. 2; Sp. p. 874; Gaz. vol. 177; p. 139.
Brick-making machine. J. R. Dawkins and D. Parks. No. 1,024,122; Apr. 23; Sp. p. 5060; Gaz. vol. 177; p. 892.
Bridge structure. A. D. Kerstetter. No. 1,023,781; Apr. 16; Sp. p. 4242; Gaz. vol. 177; p. 745.
Briqueting. W. E. Valentine. No. 1,024,428; Apr. 23; Sp. p. 5707; Gaz. vol. 177; p. 993.
Briqueting-machine. W. A. and E. H. Loreas. No. 1,023,463; Apr. 16; Sp. p. 3580; Gaz. vol. 177; p. 637.
Brooch. C. G. King. No. 1,023,940; Apr. 23; Sp. p. 4663; Gaz. vol. 177; p. 829.
Brooder, Chicken-. W. O. Witham. No. 1,022,218; Apr. 2; Sp. p. 965; Gaz. vol. 177; p. 156.
Brooms, Dust-catching attachment for. W. A. Meyer. No. 1,024,454; Apr. 23; Sp. p. 5765; Gaz. vol. 177; p. 1003.
Brush. R. L. Anderson. No. 1,022,920; Apr. 9; Sp. p. 2493; Gaz. vol. 177; p. 425.
Brush for power marking-machines. W. W. McCoy. (Reissue.) No. 13,400; Apr. 9; Sp. p. 2914; Gaz. vol. 177; p. 496.
Brush holder, Tooth-. G. T. Greer. No. 1,023,641; Apr. 16; Sp. p. 4008; Gaz. vol. 177; p. 704.
Brush, Rotary tooth-. J. Horn. No. 1,022,130; Apr. 2; Sp. p. 823; Gaz. vol. 177; p. 130.
Bucket, Dinner-. E. Koretz. No. 1,022,246; Apr. 2; Sp. p. 1049; Gaz. vol. 177; p. 167.
Bucket, Grab-. J. L. Butler. No. 1,024,827; Apr. 30; Sp. p. 6651; Gaz. vol. 177; p. 1170.
Bucket support, Paint-. G. Stahr. No. 1,021,903; Apr. 2; Sp. p. 319; Gaz. vol. 177; p. 53.
Buckle, Cross-line. A. L. Cook. No. 1,024,830; Apr. 30; Sp. p. 6656; Gaz. vol. 177; p. 1171.
Buffer-beam. C. T. Westlake. No. 1,022,716; Apr. 9; Sp. p. 2077; Gaz. vol. 177; p. 357.
Buffer-beam. C. T. Westlake. No. 1,024,756; Apr. 30; Sp. p. 6502; Gaz. vol. 177; p. 1145.
Buffer, Nail-. H. C. Bates. No. 1,023,915; Apr. 23; Sp. p. 4610; Gaz. vol. 177; p. 820.
Buffing-machine. E. R. Douglas. No. 1,022,128; Apr. 2; Sp. p. 793; Gaz. vol. 177; p. 126.
Buffing-machine. G. B. Grover. No. 1,024,628; Apr. 30; Sp. p. 6242; Gaz. vol. 177; p. 1100.
Buggy-top support. J. Bennett. No. 1,023,800; Apr. 23; Sp. p. 4302; Gaz. vol. 177; p. 781.
Building-block. E. J. McGettigan. No. 1,023,748; Apr. 16; Sp. p. 4183; Gaz. vol. 177; p. 735.
Building-block. E. J. McGettigan. No. 1,023,785; Apr. 16; Sp. p. 4252; Gaz. vol. 177; p. 747.
Building-block. A. S. Nash. No. 1,024,276; Apr. 23; Sp. p. 5404; Gaz. vol. 177; p. 946.
Building construction. S. Giletti. No. 1,022,841; Apr. 9; Sp. p. 2332; Gaz. vol. 177; p. 398.
Building-material construction. A. M. Zimmers. No. 1,023,059; Apr. 9; Sp. p. 2780; Gaz. vol. 177; p. 473.
Building structures, Load-supporting column for. A. F. Anderson. No. 1,024,761; Apr. 30; Sp. p. 6512; Gaz. vol. 177; p. 1147.
Bulkhead-openings and the like, Protective plates for. G. Mazzolini. No. 1,022,686; Apr. 9; Sp. p. 1989; Gaz. vol. 177; p. 345.
Bundle-loading device. S. Hug. No. 1,024,854; Apr. 30; Sp. p. 6706; Gaz. vol. 177; p. 1180.
Burglar-alarm attachment. G. A. Brewster. No. 1,024,972; Apr. 30; Sp. p. 6940; Gaz. vol. 177; p. 1220.
Burglar-trap. I. Raffel. No. 1,024,224; Apr. 23; Sp. p. 5299; Gaz. vol. 177; p. 928.
Burial-box. W. J. Drummond. No. 1,024,471; Apr. 23; Sp. p. 5810; Gaz. vol. 177; p. 1010.
Burner: *See* Base-burner; Gas-burner; Hydrocarbon-burner; Liquid-fuel burner; Oil-burner; Oil and gas burner; Vapor-burner.
Burner. W. E. McCoy. No. 1,022,861; Apr. 9; Sp. p. 2367; Gaz. vol. 177; p. 405.
Burner. E. J. Spink. No. 1,025,025; Apr. 30; Sp. p. 7045; Gaz. vol. 177; p. 1238.
Burner for inflammable volatile fluids. L. B. Curtis. No. 1,023,363; Apr. 16; Sp. p. 3441; Gaz. vol. 177; p. 614.
Butter substitute and making the same. F. Kronenberger. No. 1,024,009; Apr. 23; Sp. p. 4794; Gaz. vol. 177; p. 851.
Button-fastener. C. S. Comstock, Sr. No. 1,024,118; Apr. 23; Sp. p. 5056; Gaz. vol. 177; p. 891.
Button for suit-case locks. L. M. Dyson. No. 1,023,823; Apr. 23; Sp. p. 4394; Gaz. vol. 177; p. 789.
Cabinet, Clothing. P. Schiefer. No. 1,024,866; Apr. 23; Sp. p. 5552; Gaz. vol. 177; p. 972.
Cabinet, Combination-. C. L. Hunter. No. 1,023,304; Apr. 16; Sp. p. 3139; Gaz. vol. 177; p. 562.
Cabinet, Grocer's. W. E. Lewis. No. 1,022,685; Apr. 9; Sp. p. 1981; Gaz. vol. 177; p. 343.
Cabinets, Attachment for kitchen-. F. E. P'Pool. No. 1,023,593; Apr. 16; Sp. p. 3912; Gaz. vol. 177; p. 688.
Cable-hanger. J. Davis. No. 1,022,226; Apr. 2; Sp. p. 1008; Gaz. vol. 177; p. 943.
Cable suspension. M. Morey. No. 1,025,096; Apr. 30; Sp. p. 7202; Gaz. vol. 177; p. 1261.
Cableway arrangement for dumping-mounds or the like. W. Welbe. No. 1,023,536; Apr. 16; Sp. p. 3783; Gaz. vol. 177; p. 668.
Cableway logging apparatus. J. H. Dickinson. No. 1,024,833; Apr. 30; Sp. p. 6662; Gaz. vol. 177; p. 1172.
Caisson. O. C. Edwards, Jr. No. 1,023,825; Apr. 23; Sp. p. 4393; Gaz. vol. 177; p. 789.
Caisson construction. E. Bignell. No. 1,024,821; Apr. 30; Sp. p. 6636; Gaz. vol. 177; p. 1168.
Caisson, Self-sinking. E. Bignell. No. 1,024,823; Apr. 30; Sp. p. 6641; Gaz. vol. 177; p. 1169.
Calculating device, Tax-. G. W. Goss. No. 1,024,071; Apr. 23; Sp. p. 4927; Gaz. vol. 177; p. 873.
Calculating-machine. F. Trinks. No. 1,022,280; Apr. 2; Sp. p. 1102; Gaz. vol. 177; p. 177.
Calculating-machine. G. J. Barrett. No. 1,023,235; Apr. 16; Sp. p. 3198; Gaz. vol. 177; p. 571.
Calculating-machine. G. W. Goss. No. 1,024,072; Apr. 23; Sp. p. 4929; Gaz. vol. 177; p. 873.
Calculating-machines, Key mechanism for. J. Graber. No. 1,023,841; Apr. 23; Sp. p. 4425; Gaz. vol. 177; p. 795.
Calculating-machines, Transfer mechanism for. J. Graber. No. 1,023,839; Apr. 23; Sp. p. 4422; Gaz. vol. 177; p. 794.
Calculating-machines, Transfer mechanism for. J. Graber. No. 1,023,840; Apr. 23; Sp. p. 4423; Gaz. vol. 177; p. 794.
Calendar-support. C. H. Payne. No. 1,023,329; Apr. 16; Sp. p. 3337; Gaz. vol. 177; p. 604.
Calender for dyeing, starching, and mercerizing machines. L. Haas. No. 1,023,734; Apr. 16; Sp. p. 4162; Gaz. vol. 177; p. 731.
Camera. W. F. Folmer. No. 1,023,931; Apr. 23; Sp. p. 4641; Gaz. vol. 177; p. 825.
Camera-back. A. A. Ruttan and C. E. Hutchings. No. 1,024,747; Apr. 30; Sp. p. 6485; Gaz. vol. 177; p. 1114.
Camera, Photographic. W. F. Folmer. No. 1,023,930; Apr. 23; Sp. p. 4636; Gaz. vol. 177; p. 825.
Camera, Photographic. W. F. Folmer. No. 1,023,932; Apr. 23; Sp. p. 4646; Gaz. vol. 177; p. 826.
Camera, Photographic. C. E. Hutchings. No. 1,024,200; Apr. 23; Sp. p. 5246; Gaz. vol. 177; p. 919.
Cameras, Film-winding key for. W. F. Folmer. No. 1,023,933; Apr. 23; Sp. p. 4648; Gaz. vol. 177; p. 826.
Can: *See* Fish-can; Friction-top can; Key-opening can; Milk-can; Paint-can.
Can. W. Parry. No. 1,024,018; Apr. 23; Sp. p. 4808; Gaz. vol. 177; p. 854.
Can. G. Russell. No. 1,024,702; Apr. 30; Sp. p. 6388; Gaz. vol. 177; p. 1126.
Can-flanging machine. W. F. Butler. No. 1,022,464; Apr. 9; Sp. p. 1505; Gaz. vol. 177; p. 270.
Can nozzle, Oil and other. S. Caruso. No. 1,025,052; Apr. 30; Sp. p. 7092; Gaz. vol. 177; p. 1247.
Can-opener. T. H. Russell. No. 1,021,801; Apr. 2; Sp. p. 99; Gaz. vol. 177; p. 19.
Can-opener. W. P. Gieske. No. 1,023,838; Apr. 23; Sp. p. 4420; Gaz. vol. 177; p. 794.
Can-opener. E. Wölfer. No. 1,024,543; Apr. 30; Sp. p. 6021; Gaz. vol. 177; p. 1070.
Can-spout. C. F. Kellom. No. 1,022,195; Apr. 2; Sp. p. 939; Gaz. vol. 177; p. 150.
Cans in exhausters, cookers, &c., Means for conveying. L. E. McCann. No. 1,023,087; Apr. 9; Sp. p. 2887; Gaz. vol. 177; p. 483.
Canning acid fruits or vegetables. R. M. Glacken. No. 1,021,770; Apr. 2; Sp. p. 30; Gaz. vol. 177; p. 8.
Candle-holder. H. C. Deckert. No. 1,021,921; Apr. 2; Sp. p. 355; Gaz. vol. 177; p. 59.
Candy kisses, &c., Machine for cutting and wrapping. E. R. Knott. No. 1,025,069; Apr. 30; Sp. p. 7117; Gaz. vol. 177; p. 1251.
Cane and umbrella, Combination. F. E. Siggins. No. 1,023,686; Apr. 16; Sp. p. 4078; Gaz. vol. 177; p. 716.
Cane mill, Sugar-. W. J. Dyer and A. F. Ewart. No. 1,021,829; Apr. 2; Sp. p. 177; Gaz. vol. 177; p. 29.
Cane-stripper. J. W. Jackson. No. 1,022,242; Apr. 2; Sp. p. 1042; Gaz. vol. 177; p. 166.
Canopy. T. Jackson. No. 1,021,930; Apr. 2; Sp. p. 369; Gaz. vol. 177; p. 61.
Cap. J. E. Pethybridge. No. 1,022,153; Apr. 2; Sp. p. 854; Gaz. vol. 177; p. 135.
Cap-crimping die. E. V. Craggs. No. 1,021,825; Apr. 2; Sp. p. 166; Gaz. vol. 177; p. 27.
Cap-hemming machine. G. Horvath and G. E. Green. No. 1,022,552; Apr. 9; Sp. p. 1682; Gaz. vol. 177; p. 298.
Capping-machine. E. L. Perry. No. 1,022,591; Apr. 9; Sp. p. 1767; Gaz. vol. 177; p. 311.
Capstan-screw. A. C. Becker. No. 1,024,100; Apr. 23; Sp. p. 5005; Gaz. vol. 177; p. 884.
Capsule. W. and A. M. Henderson. No. 1,024,259; Apr. 23; Sp. p. 5373; Gaz. vol. 177; p. 941.
Capsule, Collapsible. E. H. Bell. No. 1,023,499; Apr. 16; Sp. p. 3717; Gaz. vol. 177; p. 658.
Car and grain door, Combined. R. C. Johnson and D. S. McEwing. No. 1,022,422; Apr. 9; Sp. p. 1423; Gaz. vol. 177; p. 255.
Car brake-rigging, Railway-. L. E. Oliver and A. Cureton. No. 1,023,388; Apr. 16; Sp. p. 3497; Gaz. vol. 177; p. 623.
Car-brake-setting lever. A. W. Tellander. No. 1,022,445; Apr. 9; Sp. p. 1461; Gaz. vol. 177; p. 262.
Car-coupling. W. S. Schroeder. No. 1,022,335; Apr. 2; Sp. p. 1222; Gaz. vol. 177; p. 195.
Car-coupling. A. S. Waldrep. No. 1,022,614; Apr. 9; Sp. p. 1824; Gaz. vol. 177; p. 319.
Car-coupling. W. S. McGinnis. No. 1,022,796; Apr. 9; Sp. p. 2238; Gaz. vol. 177; p. 383.
Car-coupling. C. H. Stark. No. 1,023,444; Apr. 16; Sp. p. 3607; Gaz. vol. 177; p. 640.

Car-coupling. J. A. Cowie and J. C. Marshall. No. 1,023,818; Apr. 23; Sp. p. 4354; Gaz. vol. 177; p. 787.
Car-coupling. W. and J. Kelso. No. 1,024,063; Apr. 23; Sp. p. 4952; Gaz. vol. 177; p. 877.
Car-coupling. A. A. Lorimor. No. 1,025,071; Apr. 30; Sp. p. 7127; Gaz. vol. 177; p. 1252.
Car-coupling uncoupling device. H. C. Buhoup. No. 1,021,913; Apr. 2; Sp. p. 338; Gaz. vol. 177; p. 56.
Car-couplings, Centering device for. E. H. Schmidt. No. 1,022,334; Apr. 2; Sp. p. 1220; Gaz. vol. 177; p. 195.
Car-door. F. X. Malocsay. No. 1,024,797; Apr. 30; Sp. p. 6594; Gaz. vol. 177; p. 1159.
Car-door, Flush. F. F. Gaines. No. 1,023,833; Apr. 23; Sp. p. 4410; Gaz. vol. 177; p. 792.
Car-door, Flush. L. G. Handy. No. 1,024,893; Apr. 30; Sp. p. 6781; Gaz. vol. 177; p. 1193.
Car-door mechanism. F. M. Elliott. No. 1,024,502; Apr. 30; Sp. p. 5911; Gaz. vol. 177; p. 1056.
Car draft-gear. C. T. Westlake. No. 1,024,481; Apr. 23; Sp. p. 5331; Gaz. vol. 177; p. 1014.
Car-drop-door mechanism. J. E. Tesseyman and R. R. Weaver. No. 1,022,516; Apr. 9; Sp. p. 1600; Gaz. vol. 177; p. 286.
Car, Dump-. H. S. Hart. No. 1,022,079; Apr. 2; Sp. p. 601; Gaz. vol. 177; p. 111.
Car, Dump-. O. W. Meissner. No. 1,022,748; Apr. 9; Sp. p. 2144; Gaz. vol. 177; p. 368.
Car, Dumping-. R. R. Weaver. No. 1,022,521; Apr. 9; Sp. p. 1616; Gaz. vol. 177; p. 288.
Car-fender. F. W. Wells. No. 1,022,167; Apr. 2; Sp. p. 880; Gaz. vol. 177; p. 140.
Car-fender. W. Nadler and M. Ressler. No. 1,023,027; Apr. 9; Sp. p. 2705; Gaz. vol. 177; p. 462.
Car grain-door, Freight-. H. Kaler. No. 1,025,094; Apr. 30; Sp. p. 7194; Gaz. vol. 177; p. 1260.
Car-handling apparatus. L. L. Logan. (Reissue.) No. 13,399; Apr. 9; Sp. p. 2906; Gaz. vol. 177; p. 493.
Car-heater, Convertible steam. E. E. Gold. No. 1,024,626; Apr. 30; Sp. p. 6234; Gaz. vol. 177; p. 1099.
Car-heating coupling. J. F. McElroy. No. 1,023,265; Apr. 16; Sp. p. 3265; Gaz. vol. 177; p. 583.
Car-heating system. F. F. Coggin. No. 1,024,062; Apr. 23; Sp. p. 4911; Gaz. vol. 177; p. 870.
Car-holder. W. F. Meyers. No. 1,022,693; Apr. 9; Sp. p. 2006; Gaz. vol. 177; p. 347.
Car indicator, Railway-. A. May. No. 1,025,003; Apr. 30; Sp. p. 7007; Gaz. vol. 177; p. 1231.
Car journal-bearing, Railway-. S. H. Campbell. No. 1,022,400; Apr. 9; Sp. p. 1353; Gaz. vol. 177; p. 248.
Car or other vehicle fender. H. W. Weiss. No. 1,022,905; Apr. 9; Sp. p. 2462; Gaz. vol. 177; p. 419.
Car, Railway-. C. T. Westlake. No. 1,023,905; Apr. 23; Sp. p. 4578; Gaz. vol. 177; p. 816.
Car-reraller. W. H. Allen. No. 1,024,049; Apr. 23; Sp. p. 4889; Gaz. vol. 177; p. 866.
Car-roof. J. H. Weisbrod. No. 1,023,230; Apr. 16; Sp. p. 3181; Gaz. vol. 177; p. 569.
Car-roof. W. D. Thompson. No. 1,025,031; Apr. 30; Sp. p. 7055; Gaz. vol. 177; p. 1240.
Car-roof construction. J. J. Kelleher and C. D. Porter. No. 1,022,091; Apr. 2; Sp. p. 719; Gaz. vol. 177; p. 115.
Car safety air-brake appliance, Railway-. J. A. Gyllenberg. No. 1,024,331; Apr. 23; Sp. p. 5496; Gaz. vol. 177; p. 963.
Car-seat arm-rest. F. J. Leigh. No. 1,022,632; Apr. 9; Sp. p. 1857; Gaz. vol. 177; p. 325.
Car seat, Motor-. L. Wilkening. No. 1,025,038; Apr. 30; Sp. p. 7069; Gaz. vol. 177; p. 1242.
Car seats, Pedestal-support for railway-. W. J. Bennett. No. 1,023,294; Apr. 16; Sp. p. 3313; Gaz. vol. 177; p. 592.
Car-stake. W. J. Moloney. No. 1,022,105; Apr. 2; Sp. p. 744; Gaz. vol. 177; p. 119.
Car stake and bunk, Combined. W. Houghton. No. 1,022,084; Apr. 2; Sp. p. 702; Gaz. vol. 177; p. 112.
Car-stake and pocket. C. H. Vandonk. No. 1,024,608; Apr. 30; Sp. p. 6192; Gaz. vol. 177; p. 1092.
Car-starter. C. X. Johnson. No. 1,022,089; Apr. 2; Sp. p. 717; Gaz. vol. 177; p. 114.
Car-uncoupling mechanism. R. W. Burnett. No. 1,022,579; Apr. 9; Sp. p. 1741; Gaz. vol. 177; p. 307.
Car-underframe. J. H. Weisbrod. No. 1,021,856; Apr. 2; Sp. p. 227; Gaz. vol. 177; p. 37.
Car-underframe. V. M. Summa. No. 1,022,710; Apr. 9; Sp. p. 2068; Gaz. vol. 177; p. 355.
Car-underframe. C. T. Westlake. No. 1,023,486; Apr. 16; Sp. p. 3690; Gaz. vol. 177; p. 653.
Car-underframe, Cast-steel. C. H. Howard. No. 1,022,366; Apr. 2; Sp. p. 1277; Gaz. vol. 177; p. 205.
Car-ventilating system. D. I. Cooke. No. 1,024,438; Apr. 23; Sp. p. 5725; Gaz. vol. 177; p. 997.
Car-ventilating system, Sleeping-. D. I. Cooke. No. 1,024,439; Apr. 23; Sp. p. 5727; Gaz. vol. 177; p. 997.
Car-ventilator. G. L. Allen. No. 1,022,918; Apr. 9; Sp. p. 2488; Gaz. vol. 177; p. 424.
Car-wheel. F. Lindblad. No. 1,023,574; Apr. 16; Sp. p. 3373; Gaz. vol. 177; p. 632.
Car-wheel, Non-annealed. E. A. Custer. No. 1,022,723; Apr. 9; Sp. p. 2092; Gaz. vol. 177; p. 359.
Cars, Antitelescoping device for railway-. J. S. Thompson. No. 1,024,164; Apr. 23; Sp. p. 5154; Gaz. vol. 177; p. 905.
Cars, Controlling system for motor-traction. W. C. Mayo. No. 1,022,324; Apr. 2; Sp. p. 1188; Gaz. vol. 177; p. 191.
Cars or the like, Guard or fender for street-. W. Fonger. No. 1,023,464; Apr. 16; Sp. p. 3642; Gaz. vol. 177; p. 646.
Cars, Steel underframe for box-. V. M. Summa. No. 1,021,852; Apr. 2; Sp. p. 213; Gaz. vol. 177; p. 36.
Carafe and stopper. A. Heinemann. No. 1,024,894; Apr. 30; Sp. p. 6788; Gaz. vol. 177; p. 1193.
Carboy-support, Folding. C. H. Sherwood. No. 1,022,886; Apr. 9; Sp. p. 2415; Gaz. vol. 177; p. 412.
Carbureter. J. Namur. No. 1,022,326; Apr. 2; Sp. p. 1204; Gaz. vol. 177; p. 192.
Carbureter. J. E. Whitacre. No. 1,022,451; Apr. 9; Sp. p. 1479; Gaz. vol. 177; p. 265.
Carbureter. W. F. Rothe and E. E. Culp. No. 1,022,702; Apr. 9; Sp. p. 2028; Gaz. vol. 177; p. 350.
Carbureter. W. F. Rothe and E. E. Culp. No. 1,022,703; Apr. 9; Sp. p. 2031; Gaz. vol. 177; p. 351.
Carbureter. R. S. Hill and O. P. Underwood. No. 1,023,470; Apr. 16; Sp. p. 3656; Gaz. vol. 177; p. 648.
Carbureter attachment. H. E. Rogers. No. 1,023,897; Apr. 16; Sp. p. 3516; Gaz. vol. 177; p. 626.
Carbureters, Float-valve for. M. Weiwoda. No. 1,022,392; Apr. 2; Sp. p. 1325; Gaz. vol. 177; p. 215.
Carbureting apparatus. L. M. Ellis. No. 1,022,664; Apr. 9; Sp. p. 1926; Gaz. vol. 177; p. 336.
Card business system. L. S. Antisdel. No. 1,022,170; Apr. 2; Sp. p. 868; Gaz. vol. 177; p. 141.
Card-punching machine, Jacquard-. H. Wyman. No. 1,022,573; Apr. 9; Sp. p. 1730; Gaz. vol. 177; p. 305.
Carpenter's laying-out tool. G. Myers. No. 1,024,863; Apr. 30; Sp. p. 6722; Gaz. vol. 177; p. 1183.
Carpet-sweeper attachment. A. K. Brettelle. No. 1,022,059; Apr. 2; Sp. p. 654; Gaz. vol. 177; p. 104.
Carriage gear, Child's-. A. M. Walden. No. 1,023,602; Apr. 16; Sp. p. 4089; Gaz. vol. 177; p. 718.
Carrier: *See* Binder leaf-carrier; Bottle-carrier; Gravity-carrier; Litter-carrier; Merchandise-carrier; Plumb-bob carrier; Reel-carrier.
Carrier. R. W. Franklin. No. 1,022,130; Apr. 2; Sp. p. 806; Gaz. vol. 177; p. 127.
Carrier. G. G. Mandt. No. 1,022,687; Apr. 9; Sp. p. 1987; Gaz. vol. 177; p. 344.
Carrier system, Gravity. W. H. Bickford. No. 1,022,017; Apr. 2; Sp. p. 569; Gaz. vol. 177; p. 89.
Carriers, Automatic loader for lift-. C. H. Lister. No. 1,021,876; Apr. 2; Sp. p. 270; Gaz. vol. 177; p. 43.
Carrying materials, Mechanism for. W. T. James. No. 1,022,787; Apr. 9; Sp. p. 2221; Gaz. vol. 177; p. 380.
Cart, Dumping-. L. Wolf. No. 1,024,959; Apr. 30; Sp. p. 6920; Gaz. vol. 177; p. 1216.
Carts, Locking device for dump-. G. Huling. No. 1,024,338; Apr. 23; Sp. p. 5506; Gaz. vol. 177; p. 965.
Cartridge. J. D. S. Haslett. No. 1,023,469; Apr. 16; Sp. p. 3654; Gaz. vol. 177; p. 648.
Cartridge-cases of brass or other alloys of copper, Manufacture of. H. Ehrhardt. No. 1,024,840; Apr. 30; Sp. p. 6679; Gaz. vol. 177; p. 1175.
Cartridge-pocket for hunting coats, jackets, &c. H. M. Altick. No. 1,023,489; Apr. 16; Sp. p. 3695; Gaz. vol. 177; p. 654.
Cartridges, Cap and fuse holder for dynamite. W. B. Kellogg. No. 1,021,934; Apr. 2; Sp. p. 374; Gaz. vol. 177; p. 62.
Case: *See* Bottle-case; Cigar-case; Crank-case; Display and storage case; Engine lower crank-case; Filing-case; Pocket-case; Show-case; Spectacle-case; Spectacle or eyeglass case; Suit-case.
Cash-delivering device. A. E. G. Lubke. No. 1,022,636; Apr. 9; Sp. p. 1867; Gaz. vol. 177; p. 326.
Cash-register. J. F. Parker. No. 1,022,152; Apr. 2; Sp. p. 850; Gaz. vol. 177; p. 135.
Cash-register. J. F. Parker. No. 1,022,868; Apr. 9; Sp. p. 2376; Gaz. vol. 177; p. 407.
Cash-register. W. H. Mussy. No. 1,024,593; Apr. 30; Sp. p. 6157; Gaz. vol. 177; p. 1087.
Cash-register, Total-printing. F. L. Fuller. No. 1,022,230; Apr. 2; Sp. p. 1013; Gaz. vol. 177; p. 162.
Caster. E. W. Bamick. No. 1,022,056; Apr. 2; Sp. p. 650; Gaz. vol. 177; p. 103.
Caster. M. B. Schenck. No. 1,022,800; Apr. 9; Sp. p. 2244; Gaz. vol. 177; p. 384.
Caster. H. A. Palmer. No. 1,023,222; Apr. 16; Sp. p. 3171; Gaz. vol. 177; p. 568.
Caster device, Leg-lifting-. A. Grub. No. 1,021,773; Apr. 2; Sp. p. 35; Gaz. vol. 177; p. 9.
Caster, Disappearing folding. N. C. Toll. No. 1,022,646; Apr. 9; Sp. p. 1891; Gaz. vol. 177; p. 330.
Caster raising and lowering means for stands, &c. J. F. L. Uhl. No. 1,023,182; Apr. 16; Sp. p. 3096; Gaz. vol. 177; p. 553.
Caster-wheel. I. Rocic. No. 1,024,227; Apr. 23; Sp. p. 5306; Gaz. vol. 177; p. 929.
Casting apparatus. O. M. Sherman. No. 1,023,884; Apr. 23; Sp. p. 4515; Gaz. vol. 177; p. 809.
Casting-apparatus delivery-pipe. F. de Buigné. No. 1,024,553; Apr. 30; Sp. p. 6067; Gaz. vol. 177; p. 1074.
Casting ingots, Process and apparatus for. J. Enamlen. No. 1,024,722; Apr. 30; Sp. p. 6428; Gaz. vol. 177; p. 1132.
Casting, Metal-. R. Weintraub. No. 1,023,604; Apr. 16; Sp. p. 3930; Gaz. vol. 177; p. 691.
Casting-reel. J. Murgas. No. 1,024,739; Apr. 30; Sp. p. 6455; Gaz. vol. 177; p. 1139.

Castings having chilled and machinable surfaces in permanent molds, Producing. H. A. Custer. No. 1,022,724; Apr. 9; Sp. p. 2093; Gaz. vol. 177; p. 359.
Catalysts, Regenerating consumed. M. Wilbuschewitsch. No. 1,022,847; Apr. 2; Sp. p. 1239; Gaz. vol. 177; p. 199.
Catamenial napkin. E. Sprague. No. 1,022,894; Apr. 9; Sp. p. 2481; Gaz. vol. 177; p. 415.
Catching device, Automatic. J. W. Trew and C. McGaugher. No. 1,025,034; Apr. 30; Sp. p. 7060; Gaz. vol. 177; p. 1241.
Catnip-bait. W. R. Smith. No. 1,022,112; Apr. 2; Sp. p. 763; Gaz. vol. 177; p. 122.
Catnip-bait. W. E. Smith. No. 1,022,113; Apr. 2; Sp. p. 765; Gaz. vol. 177; p. 122.
Ceiling, Ferrocoucrete ribbed. J. H. A. Wrissenberg. No. 1,025,041; Apr. 30; Sp. p. 7072; Gaz. vol. 177; p. 1243.
Cell-case interlocker. A. W. D. Weis and J. Starman. No. 1,021,958; Apr. 2; Sp. p. 444; Gaz. vol. 177; p. 71.
Cement and the like and making same, Compound for waterproofing. G. P. Dieckmann. No. 1,023,926; Apr. 23; Sp. p. 4628; Gaz. vol. 177; p. 823.
Cement pipes, Machine for making. F. Wiemberg, L. Jörgensen, C. Jespersen, and P. K. Jörgensen. No. 1,022,285; Apr. 2; Sp. p. 1123; Gaz. vol. 177; p. 179.
Centrifugal fan-wheel. G. E. Perry. No. 1,023,873; Apr. 23; Sp. p. 4494; Gaz. vol. 177; p. 805.
Centrifugal separation. J. E. Hatton and J. P. Sale. No. 1,025,059; Apr. 30; Sp. p. 7102; Gaz. vol. 177; p. 1248.
Centrifugal switch. C. J. Webster. No. 1,022,904; Apr. 9; Sp. p. 2461; Gaz. vol. 177; p. 418.
Chain-link. H. E. Hayward. No. 1,022,942; Apr. 9; Sp. p. 2555; Gaz. vol. 177; p. 433.
Chain machine, Wire-. J. Coulter. No. 1,023,126; Apr. 16; Sp. p. 2947; Gaz. vol. 177; p. 534.
Chain, Sprocket-. J. L. Lee. No. 1,021,786; Apr. 2; Sp. p. 63; Gaz. vol. 177; p. 14.
Chain wrench. F. H. Dickson. No. 1,023,198; Apr. 16; Sp. p. 3128; Gaz. vol. 177; p. 560.
Chair: *See* Child's chair; Joint-chair; Rail-chair.
Chair. A. Wanner, Jr. (Reissue.) No. 13,396; Apr. 2; Sp. p. 1338; Gaz. vol. 177; p. 218.
Chair. C. A. Buffington. No. 1,023,717; Apr. 16; Sp. p. 4132; Gaz. vol. 177; p. 725.
Chair. G. R. Schweikert and W. E. Heinz. No. 1,024,526; Apr. 30; Sp. p. 5981; Gaz. vol. 177; p. 1064.
Chair and couch, Combination. P. F. McCaffrey. No. 1,024,944; Apr. 30; Sp. p. 6884; Gaz. vol. 177; p. 1211.
Chair and desk attachment, Combined. J. H. Burge. No. 1,023,620; Apr. 16; Sp. p. 3968; Gaz. vol. 177; p. 697.
Chairs, Sanitary tray for. C. J. Snideman and F. H. Henley. No. 1,021,901; Apr. 2; Sp. p. 317; Gaz. vol. 177; p. 82.
Chandelier. A. Sechrist. No. 1,024,369; Apr. 23; Sp. p. 5556; Gaz. vol. 177; p. 974.
Chandelier. A. Sechrist. No. 1,024,809; Apr. 30; Sp. p. 6614; Gaz. vol. 177; p. 1163.
Chandelier, Folding. W. Lumley. No. 1,023,085; Apr. 9; Sp. p. 2832; Gaz. vol. 177; p. 482.
Chaplet. J. I. Fasy. No. 1,023,633; Apr. 16; Sp. p. 3995; Gaz. vol. 177; p. 701.
Chart, Tally-. H. F. Custz. No. 1,023,457; Apr. 16; Sp. p. 3629; Gaz. vol. 177; p. 644.
Check-controlled mechanism. C. C. Travis, B. M. Davis, and A. D. Antoine. No. 1,024,537; Apr. 30; Sp. p. 6005; Gaz. vol. 177; p. 1068.
Check-holder. E. E. Kaech. No. 1,022,682; Apr. 9; Sp. p. 1972; Gaz. vol. 177; p. 342.
Check-lock. C. E. Freeland. No. 1,022,473; Apr. 9; Sp. p. 1521; Gaz. vol. 177; p. 278.
Check, Manifolding salesman's. E. Z. Lewis. No. 1,024,731; Apr. 30; Sp. p. 6444; Gaz. vol. 177; p. 1136.
Cheese-cutting machine. F. Decker. No. 1,022,125; Apr. 2; Sp. p. 786; Gaz. vol. 177; p. 125.
Cherry-stemming device. E. B. Thompson. No. 1,022,609; Apr. 9; Sp. p. 1815; Gaz. vol. 177; p. 317.
Chicory-root Treating. R. Porath. No. 1,022,047; Apr. 2; Sp. p. 630; Gaz. vol. 177; p. 100.
Child's chair. M. L. Beistle. No. 1,022,767; Apr. 9; Sp. p. 2181; Gaz. vol. 177; p. 374.
Chimney, Incandescent-mantle. B. F. Harman. No. 1,024,334; Apr. 23; Sp. p. 5502; Gaz. vol. 177; p. 964.
Chimneys having open fireplaces, Adjustable form for smoke-chamber construction for. L. Jack. No. 1,021,985; Apr. 2; Sp. p. 501; Gaz. vol. 177; p. 80.
Chisel, Granite-. J. H. Jenkins. No. 1,024,940; Apr. 30; Sp. p. 6887; Gaz. vol. 177; p. 1209.
Chisel-holder. W. Steen. No. 1,024,039; Apr. 23; Sp. p. 4864; Gaz. vol. 177; p. 862.
Chlorinated phenol esters and of oxybenzyl alcohols, oxybenzaldehydes, and oxybenzoic acids, Manufacture of. F. Raschig and M. Köbner. No. 1,023,758; Apr. 16; Sp. p. 4200; Gaz. vol. 177; p. 733.
Chocolate-dipping machine. L. M. Lange. No. 1,022,792; Apr. 9; Sp. p. 2228; Gaz. vol. 177; p. 382.
Chopper: *See* Cotton-chopper; Meat-chopper.
Chuck. D. Weir. No. 1,022,166; Apr. 2; Sp. p. 878; Gaz. vol. 177; p. 139.
Chuck, Bevel-gear. C. Stvanek. No. 1,022,701; Apr. 9; Sp. p. 2174; Gaz. vol. 177; p. 373.
Chuck, Drill-. O. J. F. Bergsten. No. 1,024,172; Apr. 23; Sp. p. 5172; Gaz. vol. 177; p. 908.
Chuck, Piston-ring. D. F. Domizi. No. 1,024,882; Apr. 30; Sp. p. 6759; Gaz. vol. 177; p. 1189.
Chuck, Self-locking drill-. W. H. Caster. No. 1,023,067; Apr. 9; Sp. p. 2797; Gaz. vol. 177; p. 476.
Churn. W. D. D. Bowen. No. 1,021,966; Apr. 2; Sp. p. 465; Gaz. vol. 177; p. 74.
Churn. J. R. Gilda. No. 1,023,075; Apr. 9; Sp. p. 2809; Gaz. vol. 177; p. 478.
Churn. A. Fay. No. 1,023,368; Apr. 16; Sp. p. 3451; Gaz. vol. 177; p. 616.
Churn. C. S. Waybright. No. 1,023,606; Apr. 16; Sp. p. 4095; Gaz. vol. 177; p. 719.
Cider-mill. R T Wilson. No. 1,022,286; Apr. 2; Sp. p. 1124; Gaz. vol. 177; p. 179.
Cigar and cigarette holder. W. Archer. No. 1,024,052; Apr. 23; Sp. p. 4893; Gaz. vol. 177; p. 867.
Cigar and cigarette holder. J. V. Fernandes. No. 1,024,080; Apr. 30; Sp. p. 6952; Gaz. vol. 177; p. 1222.
Cigar-case. A. Schwieger. No. 1,021,849; Apr. 2; Sp. p. 209; Gaz. vol. 177; p. 35.
Cigar-case, Trick. F. L. Rouse. No. 1,023,276; Apr. 16; Sp. p. 3287; Gaz. vol. 177; p. 587.
Cigar-holder. J. L. Wolleson. No. 1,023,288; Apr. 16; Sp. p. 3306; Gaz. vol. 177; p. 591.
Cigar-lighter. A. R. Mann, Jr. No. 1,025,001; Apr. 30; Sp. p. 7003; Gaz. vol. 177; p. 1230.
Cigar-lighter, Automatic. G. W. Everett. No. 1,024,843; Apr. 30; Sp. p. 6685; Gaz. vol. 177; p. 1176.
Cigar-molding machine. W. E. Jenkins. No. 1,024,632; Apr. 30; Sp. p. 6256; Gaz. vol. 177; p. 1101.
Cigar-tip cutter. E. Brunhoff. No. 1,024,924; Apr. 30; Sp. p. 6858; Gaz. vol. 177; p. 1204.
Cigarette-box and match-holder, Combined. A. Q. Walsh. No. 1,023,054; Apr. 9; Sp. p. 2772; Gaz. vol. 177; p. 472.
Cinder-guard. H. S. Grimes. No. 1,024,327; Apr. 23; Sp. p. 5486; Gaz. vol. 177; p. 962.
Circuit-breaker. C. C. Badeau. No. 1,023,102; Apr. 9; Sp. p. 2865; Gaz. vol. 177; p. 488.
Circuit-closer. S. P. Watson. No. 1,023,183; Apr. 16; Sp. p. 3098; Gaz. vol. 177; p. 554.
Cistern or catch-basin cleaner. J. H. Wiest. No. 1,021,960; Apr. 2; Sp. p. 449; Gaz. vol. 177; p. 72.
Cistern, Sanitary. J. A. Leighton. No. 1,022,371; Apr. 2; Sp. p. 1287; Gaz. vol. 177; p. 208.
Clamp: *See* Fence-stretching clamp; Ground-clamp; Handle-clamp; Hose-clamp; Lasting-plate clamp; Rail-clamp; Rail-bonding clamp; Rope-clamp; Roving-clamp; Saw-clamp; Wire-clamp.
Clamp-hook. E. Fournier. No. 1,024,002; Apr. 23; Sp. p. 4784; Gaz. vol. 177; p. 849.
Clamping device. J. A. Johnson. No. 1,021,986; Apr. 2; Sp. p. 502; Gaz. vol. 177; p. 80.
Clasp: *See* Pen-clasp.
Clasp. J. Ehmann. No. 1,022,663; Apr. 9; Sp. p. 1925; Gaz. vol. 177; p. 336.
Clasp. C. P. Evans. No. 1,023,550; Apr. 16; Sp. p. 3840; Gaz. vol. 177; p. 676.
Clay-cleaning machine. B. Jacquart and J. V. V. Boornem. No. 1,024,262; Apr. 23; Sp. p. 5378; Gaz. vol. 177; p. 942.
Clayware-drier. H. Heuss. No. 1,022,082; Apr. 2; Sp. p. 696; Gaz. vol. 177; p. 111.
Cleaner: *See* Beeswax-cleaner; Boiler-cleaner; Cistern or catch-basin cleaner; Cotton-cleaner; Gas dry cleaner; Knife-cleaner; Pneumatic cleaner; Tube-cleaner; Window-cleaner.
Cleaning apparatus. I. H. Spencer. No. 1,022,114; Apr. 2; Sp. p. 766; Gaz. vol. 177; p. 122.
Clevis. O. M. Bye. No. 1,022,300; Apr. 2; Sp. p. 1143; Gaz. vol. 177; p. 183.
Clevis and clip, Combined. A. M. Havens. No. 1,022,941; Apr. 9; Sp. p. 2554; Gaz. vol. 177; p. 433.
Clevis, Safety-. J. Miron. No. 1,022,041; Apr. 2; Sp. p. 618; Gaz. vol. 177; p. 97.
Clip: *See* Sash-clip.
Clipper. W. H. Nicholls. No. 1,021,909; Apr. 2; Sp. p. 330; Gaz. vol. 177; p. 83.
Clock. H. J. Treganza. No. 1,022,213; Apr. 2; Sp. p. 977; Gaz. vol. 177; p. 157.
Clock, Electric. S. C. Vincent. No. 1,022,987; Apr. 9; Sp. p. 2632; Gaz. vol. 177; p. 449.
Clock, Electric automobile-. W. H. Thompson. No. 1,024,709; Apr. 30; Sp. p. 6401; Gaz. vol. 177; p. 1128.
Clock for automobiles and the like. H. W. Matalene. No. 1,023,383; Apr. 16; Sp. p. 3482; Gaz. vol. 177; p. 621.
Clock-winding mechanism, Electric. G. H. Rupley. No. 1,023,684; Apr. 16; Sp. p. 4072; Gaz. vol. 177; p. 715.
Closet. L. H. Crow. No. 1,021,763; Apr. 2; Sp. p. 17; Gaz. vol. 177; p. 5.
Closet-seat. W. S. Hamm and T. A. Lagge. No. 1,024,568; Apr. 30; Sp. p. 6100; Gaz. vol. 177; p. 1079.
Closing mechanism and the like. W. V. Gilbert. No. 1,024,987; Apr. 30; Sp. p. 6973; Gaz. vol. 177; p. 1226.
Cloth-cutting machine. A. Merhige and C. F. Cookson. No. 1,024,271; Apr. 23; Sp. p. 5397; Gaz. vol. 177; p. 945.
Cloth-pressing machine. H. K. Kouyoumjian. No. 1,024,483; Apr. 23; Sp. p. 5834; Gaz. vol. 177; p. 1014.
Cloth-reel grip. W. S. Magee. No. 1,024,069; Apr. 23; Sp. p. 4974; Gaz. vol. 177; p. 879.
Clothes-drier. E. T. Ferry. No. 1,021,976; Apr. 2; Sp. p. 486; Gaz. vol. 177; p. 77.
Clothes-line reel. F. Eiche. No. 1,024,978; Apr. 30; Sp. p. 6950; Gaz. vol. 177; p. 1222.
Clothes-stick. S. Harding. No. 1,024,401; Apr. 23; Sp. p. 5660; Gaz. vol. 177; p. 985.

Clutch. F. R. Allen. No. 1,025,043; Apr. 30; Sp. p. 7076; Gaz. vol. 177; p. 1244.
Clutch and engine-starter, Combined elastic. E. U. G. Reagan. No. 1,024,099; Apr. 23; Sp. p. 5002; Gaz. vol. 177; p. 883.
Clutch-collar. D. Langevin. No. 1,024,344; Apr. 23; Sp. p. 5515; Gaz. vol. 177; p. 966.
Clutch, Combined friction and jaw. H. F. Noyes. No. 1,024,595; Apr. 30; Sp. p. 6161; Gaz. vol. 177; p. 1088.
Clutch, Friction-. H. Druschel. No. 1,021,972; Apr. 2; Sp. p. 480; Gaz. vol. 177; p. 76.
Clutch, Friction-. N. W. Gales. No. 1,023,249; Apr. 16; Sp. p. 3221; Gaz. vol. 177; p. 576.
Clutch, Friction-. H. Johnson. No. 1,024,006; Apr. 23; Sp. p. 4789; Gaz. vol. 177; p. 850.
Clutch mechanism. F. R. Packham. No. 1,023,221; Apr. 16; Sp. p. 3168; Gaz. vol. 177; p. 567.
Clutch mechanism, Friction-. T. S. Miller. No. 1,024,737; Apr. 30; Sp. p. 6454; Gaz. vol. 177; p. 1138.
Clutch, Roller-. H. M. Hunter. No. 1,024,580; Apr. 30; Sp. p. 6120; Gaz. vol. 177; p. 1083.
Clysterising apparatus. A. G. Anderson. No. 1,023,452; Apr. 16; Sp. p. 3624; Gaz. vol. 177; p. 642.
Coal-feeder. G. F. De Wein. No. 1,023,418; Apr. 16; Sp. p. 3552; Gaz. vol. 177; p. 632.
Coal furnace and stove. J. J. Dix. No. 1,023,459; Apr. 16; Sp. p. 3633; Gaz. vol. 177; p. 644.
Coal-pocket. P. C. Blaisdell. No. 1,021,757; Apr. 2; Sp. p. 5; Gaz. vol. 177; p. 3.
Coal-screening apparatus. W. K. Monroe. No. 1,023,582; Apr. 16; Sp. p. 3886; Gaz. vol. 177; p. 685.
Coaster, Beach-. G. W. Simpson. No. 1,023,601; Apr. 16; Sp. p. 3933; Gaz. vol. 177; p. 691.
Coaster-brake. W. P. Gordon. No. 1,022,937; Apr. 9; Sp. p. 2548; Gaz. vol. 177; p. 432.
Coaster-brake, Back-pedaling. J. H. Whittington. No. 1,023,347; Apr. 16; Sp. p. 3416; Gaz. vol. 177; p. 610.
Cock, Automatic slide-lever cylinder-. A. V. Pollmiller. No. 1,021,887; Apr. 2; Sp. p. 290; Gaz. vol. 177; p. 48.
Cock, Gage-. R. B. Swinny. No. 1,023,051; Apr. 9; Sp. p. 2758; Gaz. vol. 177; p. 470.
Cock, Multiple. P. Mueller. No. 1,022,375; Apr. 2; Sp. p. 1292; Gaz. vol. 177; p. 209.
Cock or faucet. H. Mueller. No. 1,024,093; Apr. 23; Sp. p. 4982; Gaz. vol. 177; p. 831.
Cocks, Tool for inserting corporation-. P. Mueller. No. 1,024,096; Apr. 23; Sp. p. 4995; Gaz. vol. 177; p. 882.
Coin-controlled apparatus. H. Schorske. No. 1,024,748; Apr. 30; Sp. p. 6487; Gaz. vol. 177; p. 1142.
Coin counting and wrapping machine. A. C. O. Bock. No. 1,024,057; Apr. 23; Sp. p. 4890; Gaz. vol. 177; p. 868.
Coin-handling machine. R. B. Ware. No. 1,022,902; Apr. 9; Sp. p. 2442; Gaz. vol. 177; p. 418.
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Controller, Auxiliary. R. Cramer. No. 1,022,407; Apr. 9; Sp. p. 1366; Gaz. vol. 177; p. 250.
Controller-regulator. C. P. Ebersole. No. 1,024,769; Apr. 30; Sp. p. 6527; Gaz. vol. 177; p. 1149.
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Cooker. G. A. Long. No. 1,024,213; Apr. 23; Sp. p. 5270; Gaz. vol. 177; p. 924.
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Copper ores, Treating. R. Gahl. No. 1,021,768; Apr. 2; Sp. p. 25; Gaz. vol. 177; p. 7.
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Corks, Automatic feeder for the metallic caps of crown. A. Bogdanffy. No. 1,022,818; Apr. 9; Sp. p. 2287; Gaz. vol. 177; p. 391.
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Corn-picker. B. J. Kaull. No. 1,023,320; Apr. 16; Sp. p. 3360; Gaz. vol. 177; p. 601.
Corset. C. E. Woodworth. No. 1,022,110; Apr. 2; Sp. p. 770; Gaz. vol. 177; p. 123.
Corset-fastener. D. F. Crossman. No. 1,024,063; Apr. 23; Sp. p. 4814; Gaz. vol. 177; p. 871.
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Cotton-chopper attachment. C. W. Mathus. No. 1,024,799; Apr. 30; Sp. p. 6597; Gaz. vol. 177; p. 1160.
Cotton cleaner, Seed-. H. Thompson. No. 1,024,297; Apr. 23; Sp. p. 5436; Gaz. vol. 177; p. 952.
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Cotton-picker, Pneumatic. E. Murray. No. 1,024,455; Apr. 23; Sp. p. 5766; Gaz. vol. 177; p. 1003.
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Cotton picking and cleaning machine. B. Johnson. No. 1,022,143; Apr. 2; Sp. p. 827; Gaz. vol. 177; p. 132.
Counting and packaging machine, Coin. E. T. McKaig. No. 1,023,162; Apr. 16; Sp. p. 3048; Gaz. vol. 177; p. 547.
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Coupling. P. J. Gaffney. No. 1,021,833; Apr. 2; Sp. p. 184; Gaz. vol. 177; p. 30.
Coupling. D. F. Langell. No. 1,022,435; Apr. 9; Sp. p. 1442; Gaz. vol. 177; p. 277.
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Coupling and yoke. W. Blackmore. No. 1,022,652; Apr. 9; Sp. p. 1905; Gaz. vol. 177; p. 332.
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Crank-pin turner, Portable. L. G. Schweinebraten. No. 1,024,367; Apr. 23; Sp. p. 5554; Gaz. vol. 177; p. 974.
Crank-shaft. H. L. Arnold. No. 1,024,817; Apr. 30; Sp. p. 6626; Gaz. vol. 177; p. 1166.
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Crate. W. Beehler. No. 1,022,814; Apr. 9; Sp. p. 2277; Gaz. vol. 177; p. 389.
Crate, Collapsible. A. List and W. A. De Maine. No. 1,023,577; Apr. 16; Sp. p. 3879; Gaz. vol. 177; p. 683.
Cream of tartar, Manufacture of. J. M. Perigny. No. 1,023,528; Apr. 16; Sp. p. 3760; Gaz. vol. 177; p. 666.
Creel. S. W. Wardwell. No. 1,022,283; Apr. 2; Sp. p. 1117; Gaz. vol. 177; p. 178.
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Cross-bearer. J. M. Ames. No. 1,021,909; Apr. 2; Sp. p. 329; Gaz. vol. 177; p. 55.
Cross-joint between flat iron bars. G. Csimeg. No. 1,022,387; Apr. 2; Sp. p. 1317; Gaz. vol. 177; p. 213.
Crossing-gate. I. C. Johnson. No. 1,024,899; Apr. 30; Sp. p. 6798; Gaz. vol. 177; p. 1195.
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Cultivating-machine. D. H. Abbott. No. 1,023,704; Apr. 16; Sp. p. 4108; Gaz. vol. 177; p. 721.
Cultivator. E. B. Builta. No. 1,022,854; Apr. 2; Sp. p. 1254; Gaz. vol. 177; p. 201.
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Curling-iron heater. C. P. Shinn. No. 1,023,044; Apr. 9; Sp. p. 2742; Gaz. vol. 177; p. 468.
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Current regulator, Alternating-. T. E. Adams. No. 1,024,963; Apr. 30; Sp. p. 6926; Gaz. vol. 177; p. 1217.
Current-transformer. L. M. Schmidt. No. 1,022,880; Apr. 9; Sp. p. 2402; Gaz. vol. 177; p. 411.
Curtain-bracket. O. Kenits and G. Debrowsky. No. 1,022,319; Apr. 2; Sp. p. 1176; Gaz. vol. 177; p. 189.
Curtain-fixture. J. H. Deits. No. 1,022,227; Apr. 2; Sp. p. 1010; Gaz. vol. 177; p. 162.
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Curtain-hanger. W. H. Huffman. No. 1,025,064; Apr. 30; Sp. p. 7112; Gaz. vol. 177; p. 1250.
Curtain-holder. A. Mattern. No. 1,024,349; Apr. 23; Sp. p. 5527; Gaz. vol. 177; p. 968.
Curtain-pole. M. J. Sowers. No. 1,021,902; Apr. 2; Sp. p. 318; Gaz. vol. 177; p. 53.
Curtain-pole. J. Thir. No. 1,022,210; Apr. 2; Sp. p. 970; Gaz. vol. 177; p. 155.
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Curtain pole and roller fixture, Combined. L. Lewandowski. No. 1,024,488; Apr. 23; Sp. p. 5848; Gaz. vol. 177; p. 1017.
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Cushioning device. A. Chabot, Jr. No. 1,022,225; Apr. 2; Sp. p. 1006; Gaz. vol. 177; p. 161.

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Cylinder, Toothed. F. C. Stevens. No. 1,022,896; Apr. 9; Sp. p. 2433; Gaz. vol. 177; p. 416.
Cystoscope. R. H. Wappler. No. 1,021,809; Apr. 2; Sp. p. 110; Gaz. vol. 177; p. 22.
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Damper. L. J. Mueller, Jr. No. 1,023,806; Apr. 23; Sp. p. 4480; Gaz. vol. 177; p. 803.
Damper. W. J. Moreland. No. 1,024,946; Apr. 30; Sp. p. 6898; Gaz. vol. 177; p. 1212.
Damper, Flue-. J. White. No. 1,023,232; Apr. 16; Sp. p. 3185; Gaz. vol. 177; p. 570.
Davit and the raising and lowering gear therefor, Boat's. J. Graham. No. 1,024,507; Apr. 30; Sp. p. 5929; Gaz. vol. 177; p. 1058.
Deckle-strap. F. L. Smith. No. 1,022,513; Apr. 9; Sp. p. 1595; Gaz. vol. 177; p. 285.
Decorated fabric. J. A. Groebli. No. 1,024,891; Apr. 30; Sp. p. 6775; Gaz. vol. 177; p. 1192.
Decorticating-machine. E. Delafond. No. 1,023,508; Apr. 16; Sp. p. 3731; Gaz. vol. 177; p. 660.
Decorticating machine, Flax-. W. J. Hollier. No. 1,023,152; Apr. 16; Sp. p. 3025; Gaz. vol. 177; p. 543.
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Deflector, Flame-. E. Mireau. No. 1,022,436; Apr. 9; Sp. p. 1450; Gaz. vol. 177; p. 260.
Dental bridges and plates, Anchorage for. S. F. Gilmore. No. 1,022,070; Apr. 2; Sp. p. 676; Gaz. vol. 177; p. 108.
Dental broach. L. L. Funk. No. 1,022,838; Apr. 9; Sp. p. 2325; Gaz. vol. 177; p. 398.
Dental impression-cup. M. Marcks. No. 1,023,213; Apr. 16; Sp. p. 3156; Gaz. vol. 177; p. 565.
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Dental plates, Method and means for producing. H. J. Smith. No. 1,024,152; Apr. 23; Sp. p. 5129; Gaz. vol. 177; p. 902.
Dental post-extractor. T. W. Ross. No. 1,021,893; Apr. 2; Sp. p. 305; Gaz. vol. 177; p. 50.
Dental regulator. H. A. Pullen. No. 1,023,273; Apr. 16; Sp. p. 3280; Gaz. vol. 177; p. 586.
Dental waste-receptacle, Sanitary. T. S. Harlan. No. 1,022,316; Apr. 2; Sp. p. 1172; Gaz. vol. 177; p. 188.
Derrick. W. F. and E. W. Muth. No. 1,023,527; Apr. 16; Sp. p. 3383; Gaz. vol. 177; p. 604.
Derrick. V. O. Barlow and J. Holman. No. 1,024,665; Apr. 30; Sp. p. 6311; Gaz. vol. 177; p. 1112.
Desk safety device, Cash-. W. Eichelkraut. No. 1,023,461; Apr. 16; Sp. p. 3638; Gaz. vol. 177; p. 646.
Desk, Stenographer's. J. C. Long. No. 1,023,432; Apr. 16; Sp. p. 3579; Gaz. vol. 177; p. 636.
Detachable roller. A. W. Kaufman. No. 1,023,939; Apr. 23; Sp. p. 4662; Gaz. vol. 177; p. 828.
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Diamonds, Machine for cutting concave facets in cut. J. L. Gonard. No. 1,023,513; Apr. 16; Sp. p. 3747; Gaz. vol. 177; p. 662.
Die: *See* Cap-crimping die; Embossing-die.
Diffusing-cluster. W. D. Ryan. No. 1,022,878; Apr. 9; Sp. p. 2399; Gaz. vol. 177; p. 410.
Digger: *See* Potato-digger.
Digging machine, Trench-. J. Lapin. No. 1,023,571; Apr. 16; Sp. p. 3868; Gaz. vol. 177; p. 680.
Dipping-tank. G. A. Meyer. No. 1,023,387; Apr. 16; Sp. p. 3403; Gaz. vol. 177; p. 623.
Directory, Key-operated. G. I. Leonard and W. C. Cutler. No. 1,024,211; Apr. 23; Sp. p. 5267; Gaz. vol. 177; p. 923.
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Dish-warmer. H. Young. No. 1,023,191; Apr. 16; Sp. p. 3116; Gaz. vol. 177; p. 557.
Disinfectant device for mouthpieces. A. E. Le Ford. No. 1,022,247; Apr. 2; Sp. p. 1050; Gaz. vol. 177; p. 167.
Disinfecting device. G. Michels. No. 1,024,591; Apr. 30; Sp. p. 6154; Gaz. vol. 177; p. 1087.
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Display and storage case, Counter. L. Frank. No. 1,024,823; Apr. 23; Sp. p. 5481; Gaz. vol. 177; p. 961.
Display apparatus, Motor for advertisement-. W. H. Thompson. No. 1,022,898; Apr. 9; Sp. p. 2436; Gaz. vol. 177; p. 416.
Display device. S. Hodge. No. 1,022,137; Apr. 2; Sp. p. 820; Gaz. vol. 177; p. 130.
Display-figure attachment. W. H. Beyette. No. 1,024,244; Apr. 23; Sp. p. 5341; Gaz. vol. 177; p. 936.
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Display-stand. C. L. Hickey. No. 1,024,777; Apr. 30; Sp. p. 6547; Gaz. vol. 177; p. 1152.
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Distillation apparatus. J. T. Davis. No. 1,023,244; Apr. 16; Sp. p. 3212; Gaz. vol. 177; p. 574.
Distributer. G. A. Berry. No. 1,022,577; Apr. 9; Sp. p. 1738; Gaz. vol. 177; p. 306.
Ditching-machine. C. Kosmin. No. 1,023,156; Apr. 16; Sp. p. 3030; Gaz. vol. 177; p. 545.
Ditching-machine and tile-distributer. A. E. Hanson. No. 1,022,843; Apr. 9; Sp. p. 2338; Gaz. vol. 177; p. 399.
Diving-suit. C. Anderson and M. Silver. No. 1,022,997; Apr. 9; Sp. p. 2647; Gaz. vol. 177; p. 452.
Dock, Floating dry-. A. C. Cunningham. No. 1,022,931; Apr. 9; Sp. p. 2516; Gaz. vol. 177; p. 429.
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Door. J. C. Duner. No. 1,022,661; Apr. 9; Sp. p. 1922; Gaz. vol. 177; p. 335.
Door and window bolt. F. C. vom Bruck. No. 1,023,455; Apr. 16; Sp. p. 3627; Gaz. vol. 177; p. 643.
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Door-check. J. C. Schmidt. No. 1,021,803; Apr. 2; Sp. p. 100; Gaz. vol. 177; p. 20.
Door-check cushion-stop. H. G. Voight. No. 1,024,465; Apr. 23; Sp. p. 5798; Gaz. vol. 177; p. 1007.
Door, Combined screen and storm. L. Hansen. No. 1,022,547; Apr. 9; Sp. p. 1671; Gaz. vol. 177; p. 297.
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Door-locking means. F. Schmidgall. No. 1,024,603; Apr. 30; Sp. p. 6183; Gaz. vol. 177; p. 1091.
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Door, Pay-as-you-enter. E. N. Kleinbaum. No. 1,022,684; Apr. 9; Sp. p. 1978; Gaz. vol. 177; p. 343.
Door-switch. J. G. Peterson. No. 1,023,224; Apr. 16; Sp. p. 3175; Gaz. vol. 177; p. 568.
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Dough-divider. R. A. Schulz. No. 1,021,896; Apr. 2; Sp. p. 309; Gaz. vol. 177; p. 51.
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Draft, Reversible. M. E. Metcalf. No. 1,025,006; Apr. 30; Sp. p. 7013; Gaz. vol. 177; p. 1232.
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Drain-trap. S. G. Brown. No. 1,021,823; Apr. 2; Sp. p. 159; Gaz. vol. 177; p. 26.
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Drawing instrument. E. T. Childs. No. 1,023,242; Apr. 16; Sp. p. 3205; Gaz. vol. 177; p. 574.
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Dredge, Dipper-. E. Kreher. No. 1,023,660; Apr. 16; Sp. p. 4040; Gaz. vol. 177; p. 708.
Dredgers, Spud-operating mechanism for. J. A. Johnson. No. 1,021,933; Apr. 2; Sp. p. 373; Gaz. vol. 177; p. 62.
Dredging-machines, Suction-tube for hydraulic. L. J. Baltz. No. 1,024,664; Apr. 30; Sp. p. 6308; Gaz. vol. 177; p. 1112.
Dress-weight tape. A. Wein. No. 1,024,957; Apr. 30; Sp. p. 6917; Gaz. vol. 177; p. 1215.
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Drill: *See* Grain-drill; Pneumatic drill; Radial drill; Rivet-head drill; Rock-drill; Well-drill.
Drill. C. F. Heinkel and J. Muth. No. 1,022,135; Apr. 2; Sp. p. 816; Gaz. vol. 177; p. 129.

Drill-bits and the like, Machine for forming and sharpening. H. J. H. Natheorst and G. Lundström. No. 1,023,476; Apr. 16; Sp. p. 3668; Gaz. vol. 177; p. 650.
Drill-extractor. B. F. Betts. No. 1,024,173; Apr. 23; Sp. p. 5175; Gaz. vol. 177; p. 909.
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Drill-holder. D. A. Sine. (Reissue.) No. 13,408; Apr. 23; Sp. p. 5850; Gaz. vol. 177; p. 1017.
Drill magazine and chuck. W. F. Sweet. No. 1,022,711; Apr. 9; Sp. p. 2064; Gaz. vol. 177; p. 355.
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Drills, Dust-collector for. W. Prellwitz. No. 1,023,594; Apr. 16; Sp. p. 3915; Gaz. vol. 177; p. 689.
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Drinking-cup, Sanitary. F. H. Ellsworth. No. 1,023,908; Apr. 23; Sp. p. 4779; Gaz. vol. 177; p. 848.
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Drinking-fountain jet-head. H. W. Thorndike. No. 1,022,162; Apr. 2; Sp. p. 860; Gaz. vol. 177; p. 135.
Drinking-fountain, Poultry. W. Bowie. No. 1,023,240; Apr. 16; Sp. p. 3201; Gaz. vol. 177; p. 573.
Driving-gear, Electrically-operated. J. A. Esseberger. No. 1,022,656; Apr. 9; Sp. p. 1929; Gaz. vol. 177; p. 337.
Driving mechanism, Reversing. F. D. Thomson. No. 1,024,209; Apr. 23; Sp. p. 5488; Gaz. vol. 177; p. 963.
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Dumping apparatus. W. A. Butler. No. 1,023,719; Apr. 16; Sp. p. 4138; Gaz. vol. 177; p. 726.
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Dye. M. Weller. No. 1,023,977; Apr. 23; Sp. p. 4724; Gaz. vol. 177; p. 840.
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Dyestuff and making same, Alizarin-red vat. M. Hessenland. No. 1,023,847; Apr. 23; Sp. p. 4438; Gaz. vol. 177; p. 797.
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Easel. O. Anderson. No. 1,023,117; Apr. 16; Sp. p. 2927; Gaz. vol. 177; p. 531.
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Educational device. M. Mullins. No. 1,023,586; Apr. 16; Sp. p. 3807; Gaz. vol. 177; p. 686.
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Electric-bell sockets, Cable-holder for. C. W. Lucas. No. 1,024,732; Apr. 30; Sp. p. 6446; Gaz. vol. 177; p. 1136.
Electric-circuit-controlling apparatus. T. L. Lee, Jr. No. 1,024,587; Apr. 30; Sp. p. 6130; Gaz. vol. 177; p. 1085.
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Electric circuits, Time-switch for. F. W. Smith. No. 1,022,708; Apr. 9; Sp. p. 2047; Gaz. vol. 177; p. 364.
Electric conductors to insulators, Means of fastening. J. S. Thompson. No. 1,022,161; Apr. 2; Sp. p. 833; Gaz. vol. 177; p. 133.
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Electric heating unit. T. Van Aller. No. 1,024,234; Apr. 23; Sp. p. 5322; Gaz. vol. 177; p. 932.
Electric illuminating device. R. H. Henderson. No. 1,024,573; Apr. 30; Sp. p. 6106; Gaz. vol. 177; p. 1080.
Electric-light attachment. A. J. Pagned. No. 1,024,417; Apr. 23; Sp. p. 5686; Gaz. vol. 177; p. 990.
Electric-light-socket handle. F. Clapham. No. 1,024,311; Apr. 23; Sp. p. 5462; Gaz. vol. 177; p. 957.
Electric lights, telephones, &c., Holder for. C. W. Sprague. No. 1,025,026; Apr. 30; Sp. p. 7043; Gaz. vol. 177; p. 1238.
Electric lighting and engine-starting system. C. B. Bonine. No. 1,023,122; Apr. 16; Sp. p. 3088; Gaz. vol. 177; p. 532.
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Electric switch. G. H. Taylor. No. 1,023,691; Apr. 16; Sp. p. 4088; Gaz. vol. 177; p. 717.
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Electrical-impulse-transmitting device. J. Erickson. No. 1,023,200; Apr. 16; Sp. p. 3130; Gaz. vol. 177; p. 560.
Electrical interrupter device. C. E. North. No. 1,021,681; Apr. 2; Sp. p. 241; Gaz. vol. 177; p. 46.
Electrical pull-socket. D. P. Welhaupter. No. 1,024,204; Apr. 23; Sp. p. 5449; Gaz. vol. 177; p. 955.

Electrical resistance furnace. H. Helberger. No. 1,023,309; Apr. 16; Sp. p. 2343; Gaz. vol. 177; p. 597.
Electrical switch. A. H. Kling and B. D. Horton. No. 1,022,629; Apr. 9; Sp. p. 1849; Gaz. vol. 177; p. 323.
Electrically-controlled brake. E. Price. No. 1,022,001; Apr. 2; Sp. p. 539; Gaz. vol. 177; p. 84.
Electrode. J. Hirden. No. 1,024,257; Apr. 23; Sp. p. 5371; Gaz. vol. 177; p. 941.
Electrode and making it, Storage-battery. W. Morrison. No. 1,021,989; Apr. 2; Sp. p. 512; Gaz. vol. 177; p. 81.
Electrode or pencil, Arc-light. I. Ladoff. No. 1,022,426; Apr. 9; Sp. p. 1433; Gaz. vol. 177; p. 257.
Electrodes, Binding the active material of positive-pole lead. W. Morrison. No. 1,021,993; Apr. 2; Sp. p. 521; Gaz. vol. 177; p. 82.
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Electroller. T. P. Strittmatter. No. 1,024,160; Apr. 23; Sp. p. 5146; Gaz. vol. 177; p. 904.
Electroller attachment. F. I. Hollingsworth. No. 1,023,649; Apr. 16; Sp. p. 4017; Gaz. vol. 177; p. 705.
Electrolytic cell. O. H. and A. F. Pieper. No. 1,024,597; Apr. 30; Sp. p. 6165; Gaz. vol. 177; p. 1080.
Electrolytic process. H. H. Bates and F. Adam. No. 1,023,545; Apr. 16; Sp. p. 3805; Gaz. vol. 177; p. 671.
Electrolytic rectifier. W. Morrison. No. 1,022,695; Apr. 9; Sp. p. 2012; Gaz. vol. 177; p. 348.
Electrolytic rectifier. W. Morrison. No. 1,023,092; Apr. 9; Sp. p. 2849; Gaz. vol. 177; p. 484.
Electromagnet. A. Quastenberg. No. 1,025,020; Apr. 30; Sp. p. 7034; Gaz. vol. 177; p. 1236.
Electromagnetic-wave receiver. R. A. Fessenden. No. 1,022,539; Apr. 9; Sp. p. 1655; Gaz. vol. 177; p. 294.
Electromagnetically-operated switch. G. E. Hill. No. 1,024,896; Apr. 30; Sp. p. 6792; Gaz. vol. 177; p. 1194.
Electromechanical device. G. H. Rowe. No. 1,024,026; Apr. 23; Sp. p. 4832; Gaz. vol. 177; p. 857.
Electromechanical device. G. H. Rowe. No. 1,024,027; Apr. 23; Sp. p. 4834; Gaz. vol. 177; p. 858.
Electroplated, Support for articles to be. G. A. Luts. No. 1,022,794; Apr. 9; Sp. p. 2233; Gaz. vol. 177; p. 383.
Electroplated, Support for articles to be. G. A. Luts. No. 1,022,853; Apr. 9; Sp. p. 2357; Gaz. vol. 177; p. 403.
Electroplating apparatus. G. A. Luts. No. 1,022,487; Apr. 9; Sp. p. 1647; Gaz. vol. 177; p. 278.
Electroplating apparatus. G. A. Luts. No. 1,022,561; Apr. 9; Sp. p. 1702; Gaz. vol. 177; p. 301.
Elevating attachment. J. W. Ashworth. No. 1,023,981; Apr. 23; Sp. p. 4745; Gaz. vol. 177; p. 841.
Elevator: *See* Sucker-rod elevator; Water-elevator.
Elevator. H. H. Johnston. No. 1,022,681; Apr. 9; Sp. p. 1970; Gaz. vol. 177; p. 342.
Elevator. J. T. Clark. No. 1,023,124; Apr. 16; Sp. p. 2942; Gaz. vol. 177; p. 533.
Elevator. W. A. Crichton. No. 1,023,626; Apr. 16; Sp. p. 3981; Gaz. vol. 177; p. 699.
Elevator and conveyer. P. B. Camp. No. 1,021,760; Apr. 2; Sp. p. 10; Gaz. vol. 177; p. 4.
Elevator device, Safety. J. Balasa. No. 1,023,711; Apr. 16; Sp. p. 4124; Gaz. vol. 177; p. 724.
Elevator-lock. G. Lockhart. No. 1,023,159; Apr. 16; Sp. p. 3041; Gaz. vol. 177; p. 545.
Elevator safety appliance. G. Roussel. No. 1,023,277; Apr. 16; Sp. p. 3269; Gaz. vol. 177; p. 587.
Elevator safety appliance. G. W. Lathrop and J. W. Powles. No. 1,023,857; Apr. 23; Sp. p. 4464; Gaz. vol. 177; p. 800.
Elevator safety device. C. J. Cole. No. 1,022,386; Apr. 2; Sp. p. 1316; Gaz. vol. 177; p. 213.
Elevator safety device. F. A. Krens. No. 1,024,085; Apr. 23; Sp. p. 4960; Gaz. vol. 177; p. 878.
Elevator safety device. J. Tönsér. No. 1,024,300; Apr. 23; Sp. p. 5440; Gaz. vol. 177; p. 953.
Elevator safety device. V. W. Mason. No. 1,024,943; Apr. 30; Sp. p. 6893; Gaz. vol. 177; p. 1211.
Elevator safety device, Passenger. B. Bates. No. 1,023,611; Apr. 16; Sp. p. 3951; Gaz. vol. 177; p. 694.
Elevators, Automatic cut-off valve for pneumatic cotton-. H. W. Ligon. No. 1,022,635; Apr. 9; Sp. p. 1863; Gaz. vol. 177; p. 326.
Elevators, Connecting device for pipe-. F. H. Holmes. No. 1,021,984; Apr. 2; Sp. p. 500; Gaz. vol. 177; p. 80.
Elevators, Foot-guard for. W. S. Ross. No. 1,022,972; Apr. 9; Sp. p. 2209; Gaz. vol. 177; p. 443.
Ellipsograph. T. Obyrn. No. 1,022,969; Apr. 9; Sp. p. 2204; Gaz. vol. 177; p. 443.
Embossing-die, Multiple. E. D. Sherlock. No. 1,023,765; Apr. 16; Sp. p. 4213; Gaz. vol. 177; p. 740.
Embroideries, Apparatus for cutting the waste from. A. Techerne. No. 1,022,610; Apr. 9; Sp. p. 1817; Gaz. vol. 177; p. 318.
Embroideries, Machine for cutting. A. Techerne. No. 1,024,812; Apr. 30; Sp. p. 6619; Gaz. vol. 177; p. 1165.
Embroidering-machine. M. Schoenfeld. No. 1,024,867; Apr. 30; Sp. p. 6732; Gaz. vol. 177; p. 1185.
Embroidering-machine. M. Schoenfeld. No. 1,024,911; Apr. 30; Sp. p. 6819; Gaz. vol. 177; p. 1199.
Embroidering-machine. M. Schoenfeld. No. 1,024,912; Apr. 30; Sp. p. 6825; Gaz. vol. 177; p. 1200.
Embroidering-machines, Counterbalancing mechanism for. J. A. Groebli. No. 1,024,892; Apr. 30; Sp. p. 6777; Gaz. vol. 177; p. 1192.
Embroidery foundation, Machine for cutting. A. Techerne. No. 1,022,611; Apr. 9; Sp. p. 1818; Gaz. vol. 177; p. 318.
Emergency-brake. W. R. Reno. No. 1,023,682; Apr. 16; Sp. p. 4069; Gaz. vol. 177; p. 714.
Emergency-brake, Automatic. M. Choumbrot. No. 1,023,623; Apr. 16; Sp. p. 3976; Gaz. vol. 177; p. 698.
Enamels Producing a filler for white. I. Kreidl. No. 1,024,405; Apr. 23; Sp. p. 5067; Gaz. vol. 177; p. 957.
End-gate, Wagon. C. Skidmore. No. 1,025,024; Apr. 30; Sp. p. 7042; Gaz. vol. 177; p. 1237.
End-play device. C. A. Fischer. No. 1,023,245; Apr. 16; Sp. p. 3215; Gaz. vol. 177; p. 575.
Engine: *See* Compressed-air engine; Explosion-engine; Explosive-engine; Gas-engine; Hoisting-engine; Hydrocarbon-engine; Internal-combustion engine; Locomotive-engine; Oscillating engine; Pile-driving engine; Reciprocating engine; Rotary engine; Rotary internal-combustion engine; Rotary steam-engine; Steam-engine.
Engine. S. A. Miles. No. 1,023,670; Apr. 16; Sp. p. 4055; Gaz. vol. 177; p. 711.
Engine. A. Tosco and A. Camino. No. 1,024,379; Apr. 23; Sp. p. 5573; Gaz. vol. 177; p. 977.
Engine. J. G. Crowdes. No. 1,024,440; Apr. 23; Sp. p. 5729; Gaz. vol. 177; p. 997.
Engine-cranking device, Internal-combustion-. M. G. Worth. No. 1,024,241; Apr. 23; Sp. p. 5337; Gaz. vol. 177; p. 935.
Engine-cylinders, Compound for removing carbon from. D. E. Cripe. No. 1,022,466; Apr. 9; Sp. p. 1509; Gaz. vol. 177; p. 271.
Engine-cylinders, Means for removing carbon from. E. S. Michener. No. 1,022,040; Apr. 2; Sp. p. 616; Gaz. vol. 177; p. 97.
Engine gearing, Housing for traction-. E. M. Wheelock. No. 1,024,430; Apr. 23; Sp. p. 5709; Gaz. vol. 177; p. 994.
Engine lower crank-case, Combustion-. W. H. Goldstine. No. 1,022,413; Apr. 9; Sp. p. 1375; Gaz. vol. 177; p. 252.
Engine reverse-gear, Steam-. F. J. Cole. No. 1,023,995; Apr. 23; Sp. p. 4773; Gaz. vol. 177; p. 847.
Engine-reversing mechanism, Explosive-. J. B. Moore. No. 1,024,945; Apr. 30; Sp. p. 6896; Gaz. vol. 177; p. 1211.
Engine-starter. W. D. Everly. No. 1,024,000; Apr. 23; Sp. p. 4780; Gaz. vol. 177; p. 848.
Engine-starter. W. H. Williams. No. 1,024,712; Apr. 30; Sp. p. 6411; Gaz. vol. 177; p. 1129.
Engine starter, Internal-combustion-. G. G. F. Boswell. No. 1,022,820; Apr. 9; Sp. p. 2291; Gaz. vol. 177; p. 391.
Engine starter, Internal-combustion-. G. B. Sinclair. No. 1,023,279; Apr. 16; Sp. p. 3292; Gaz. vol. 177; p. 588.
Engine-starting device, Explosion-. C. C. Roth. No. 1,024,103; Apr. 23; Sp. p. 5008; Gaz. vol. 177; p. 885.
Engine-starting device, Explosive-. E. M. Wood. No. 1,021,812; Apr. 2; Sp. p. 115; Gaz. vol. 177; p. 23.
Engine-starting device, Gas-. C. E. Dunham. No. 1,022,538; Apr. 9; Sp. p. 1652; Gaz. vol. 177; p. 294.
Engine-starting device, Internal-combustion-. F. H. Walker. No. 1,022,281; Apr. 2; Sp. p. 1106; Gaz. vol. 177; p. 177.
Engine-starting device, Internal-combustion-. C. F. Jenkins. No. 1,024,077; Apr. 23; Sp. p. 4940; Gaz. vol. 177; p. 875.
Engine-starting device, Internal-combustion-. E. A. Halbleib. No. 1,024,447; Apr. 23; Sp. p. 5750; Gaz. vol. 177; p. 1000.
Engines, Device for attaching reels to. F. J. Moser. No. 1,024,592; Apr. 30; Sp. p. 6155; Gaz. vol. 177; p. 1087.
Engines, Electric igniter for explosive-. L. E. Wegner. No. 1,022,990; Apr. 9; Sp. p. 2636; Gaz. vol. 177; p. 449.
Engines, Ignition apparatus for hydrocarbon-. M. Tibbetts. No. 1,023,180; Apr. 16; Sp. p. 3092; Gaz. vol. 177; p. 553.
Engines, Low-tension sparking mechanism for gas-. H. J. Podlesak. No. 1,022,642; Apr. 9; Sp. p. 1878; Gaz. vol. 177; p. 329.
Engines, Means for driving the pumps of internal-combustion. H. T. Bruns. No. 1,023,241; Apr. 16; Sp. p. 3203; Gaz. vol. 177; p. 573.
Engines, Self-starting device for internal-combustion. L. T. Weiss, Jr. No. 1,023,906; Apr. 23; Sp. p. 4575; Gaz. vol. 177; p. 815.
Engines, Starting motor-vehicle internal-combustion. C. W. Mallins. No. 1,023,212; Apr. 16; Sp. p. 3154; Gaz. vol. 177; p. 564.
Engines, System and apparatus for starting internal-combustion. J. C. Boyle. No. 1,022,926; Apr. 9; Sp. p. 2506; Gaz. vol. 177; p. 427.
Envelop. J. R. Kirksey. No. 1,023,382; Apr. 16; Sp. p. 3481; Gaz. vol. 177; p. 631.
Envelop. A. Mossop. No. 1,023,437; Apr. 16; Sp. p. 3588; Gaz. vol. 177; p. 638.

Envelop. J. S. Healey. No. 1,024,258; Apr. 23; Sp. p. 5373; Gaz. vol. 177; p. 941.
Escapement. C. A. Norell. No. 1,023,209; Apr. 16; Sp. p. 3175; Gaz. vol. 177; p. 585.
Escapement-regulator. F. Ecaubert. No. 1,023,140; Apr. 16; Sp. p. 2995; Gaz. vol. 177; p. 539.
Evaporating apparatus. N. H. Hiller. No. 1,024,576; Apr. 30; Sp. p. 6112; Gaz. vol. 177; p. 1081.
Evener-bar. E. Duschen. No. 1,024,318; Apr. 23; Sp. p. 5475; Gaz. vol. 177; p. 960.
Excavating-bucket. F. G. Frink. No. 1,023,370; Apr. 16; Sp. p. 3454; Gaz. vol. 177; p. 617.
Excavating-machine. F. B. Horning. No. 1,021,777; Apr. 2; Sp. p. 42; Gaz. vol. 177; p. 10.
Excavating-machine. C. E. Bathrick. No. 1,023,856; Apr. 16; Sp. p. 4429; Gaz. vol. 177; p. 612.
Excavating-shovel. C. A. Morris. No. 1,022,638; Apr. 9; Sp. p. 1870; Gaz. vol. 177; p. 327.
Exercising apparatus. A. A. Fons. No. 1,023,758; Apr. 16; Sp. p. 4196; Gaz. vol. 177; p. 737.
Exhaust-controlling mechanism. S. S. Stevenson. No. 1,024,375; Apr. 23; Sp. p. 5565; Gaz. vol. 177; p. 976.
Exhibit device. O. B. Kellum. No. 1,022,743; Apr. 9; Sp. p. 2136; Gaz. vol. 177; p. 366.
Exhibit device. O. B. Kellum. No. 1,022,744; Apr. 9; Sp. p. 2138; Gaz. vol. 177; p. 367.
Expansion-bolt. H. W. Munger. No. 1,024,949; Apr. 30; Sp. p. 6903; Gaz. vol. 177; p. 1213.
Exploding charges, Means for. C. I. Dodson. No. 1,024,621; Apr. 30; Sp. p. 6215; Gaz. vol. 177; p. 1097.
Exploding charges, Means for. C. I. Dodson. No. 1,024,622; Apr. 30; Sp. p. 6220; Gaz. vol. 177; p. 1097.
Explosion-engine. H. E. Coffin. No. 1,024,618; Apr. 30; Sp. p. 6209; Gaz. vol. 177; p. 1095.
Explosion-engine. H. E. Coffin. No. 1,024,619; Apr. 30; Sp. p. 6210; Gaz. vol. 177; p. 1096.
Explosive. J. F. O'Brien. No. 1,021,882; Apr. 2; Sp. p. 284; Gaz. vol. 177; p. 46.
Explosive-engine. F. J. Gremel. No. 1,022,476; Apr. 9; Sp. p. 1520; Gaz. vol. 177; p. 274.
Explosive-engine. J. W. Meaker. No. 1,023,088; Apr. 9; Sp. p. 2840; Gaz. vol. 177; p. 482.
Explosive-engine. W. J. Wright. No. 1,023,606; Apr. 16; Sp. p. 3940; Gaz. vol. 177; p. 692.
Explosive-engine. W. J. Wright. No. 1,023,607; Apr. 16; Sp. p. 3944; Gaz. vol. 177; p. 692.
Extractor: *See* Dental post-extractor; Drill-extractor; Nail-extractor; Pig-extractor.
Eyeglass-holder. F. R. Bishop. No. 1,024,434; Apr. 23; Sp. p. 5714; Gaz. vol. 177; p. 996.
Eyeglass-lens. W. K. Kight. No. 1,022,789; Apr. 9; Sp. p. 2225; Gaz. vol. 177; p. 381.
Eyeglass-mounting. J. T. Laughlin. (Reissue.) No. 13,394; Apr. 2; Sp. p. 1235; Gaz. vol. 177; p. 217.
Eyeglass-reel. H. B. Bingham. No. 1,024,115; Apr. 23; Sp. p. 5033; Gaz. vol. 177; p. 890.
Eyeglasses, Bridge-spring for. L. F. Adt. No. 1,024,614; Apr. 30; Sp. p. 6622; Gaz. vol. 177; p. 1166.
Eyelet-covering machine. L. Muther. No. 1,022,043; Apr. 2; Sp. p. 622; Gaz. vol. 177; p. 98.
Fabric: *See* Bed-bottom fabric; Bed or couch fabric; Bed-spring fabric; Decorated fabric; Elastic fabric; Fence fabric; Lace fabric; Mesh fabric; Pile fabric.
Fabric and yarn therefor. A. De Laski. (Reissue.) No. 13,393; Apr. 2; Sp. p. 1234; Gaz. vol. 177; p. 217.
Fabric-coating machine. W. Salisbury. No. 1,023,898; Apr. 16; Sp. p. 3518; Gaz. vol. 177; p. 626.
Fabric constructed of laminated cohesive interwound members. L. A. Subera. No. 1,024,040; Apr. 23; Sp. p. 4866; Gaz. vol. 177; p. 863.
Fabrics, Production of peculiar color effects on textile. M. Becke. No. 1,024,668; Apr. 30; Sp. p. 6315; Gaz. vol. 177; p. 1113.
Fan. W. H. Oakes. No. 1,023,272; Apr. 16; Sp. p. 3279; Gaz. vol. 177; p. 585.
Fan-driving mechanism. H. M. Keith. No. 1,023,655; Apr. 16; Sp. p. 4031; Gaz. vol. 177; p. 707.
Fans for generating progressing and ascending movements of a body in a fluid medium, Apparatus comprising. M. Raymond. No. 1,024,226; Apr. 23; Sp. p. 5303; Gaz. vol. 177; p. 929.
Fare-register. A. J. Leland. No. 1,024,843; Apr. 23; Sp. p. 5514; Gaz. vol. 177; p. 966.
Farm-gate. J. S. Hendricks. No. 1,024,686; Apr. 30; Sp. p. 6330; Gaz. vol. 177; p. 1120.
Fastening device. W. H. Ganoe. No. 1,022,132; Apr. 2; Sp. p. 830; Gaz. vol. 177; p. 128.
Fastening device. J. Bayer, Jr. No. 1,023,237; Apr. 16; Sp. p. 3197; Gaz. vol. 177; p. 572.
Fastening device. W. A. Callanan. No. 1,023,502; Apr. 16; Sp. p. 3722; Gaz. vol. 177; p. 658.
Fastening device. J. Hampson. No. 1,025,058; Apr. 30; Sp. p. 7101; Gaz. vol. 177; p. 1246.
Fastening device for shoes and the like. J. F. Atwood. (Reissue.) No. 13,392; Apr. 2; Sp. p. 1233; Gaz. vol. 177; p. 216.
Fats and unsaturated fatty acids, Reduction of. C. Paal. No. 1,023,753; Apr. 16; Sp. p. 4191; Gaz. vol. 177; p. 736.
Fats, oils, and fish-oils into like bodies of higher melting-point, Converting. M. Wilbuschewitsch. No. 1,024,784; Apr. 30; Sp. p. 6505; Gaz. vol. 177; p. 1145.
Faucet. J. H. Boye. No. 1,024,175; Apr. 23; Sp. p. 5177; Gaz. vol. 177; p. 909.
Faucet. C. Wright. No. 1,024,961; Apr. 30; Sp. p. 6923; Gaz. vol. 177; p. 1217.
Faucet and bib-cock. A. J. Gorlick. No. 1,022,071; Apr. 2; Sp. p. 677; Gaz. vol. 177; p. 108.
Faucet, Filtering-. L. Dion. No. 1,022,470; Apr. 9; Sp. p. 1515; Gaz. vol. 177; p. 272.
Faucet, Rinsing-. R. M. Elkins. No. 1,023,630; Apr. 16; Sp. p. 3990; Gaz. vol. 177; p. 701.
Faucet, Self-closing. J. Mueller. No. 1,024,004; Apr. 23; Sp. p. 4988; Gaz. vol. 177; p. 881.
Feather articles, Making imitation-. D. Metager. No. 1,024,272; Apr. 23; Sp. p. 5400; Gaz. vol. 177; p. 945.
Feathers, Machine for artificially lengthening the barbs of ornamental. H. Kriegsmann. No. 1,022,095; Apr. 2; Sp. p. 724; Gaz. vol. 177; p. 115.
Feed-bag. A. McMillen. No. 1,022,862; Apr. 9; Sp. p. 2368; Gaz. vol. 177; p. 405.
Feed-bag. H. A. Gruener. No. 1,023,643; Apr. 16; Sp. p. 4010; Gaz. vol. 177; p. 704.
Feed-bag. J. Regecsi. No. 1,023,681; Apr. 16; Sp. p. 4069; Gaz. vol. 177; p. 714.
Feed-bag, Automatic. G. Doutney. No. 1,022,183; Apr. 2; Sp. p. 913; Gaz. vol. 177; p. 146.
Feed cutter and grinder, Alfalfa-. W. Miks. No. 1,024,413; Apr. 23; Sp. p. 5060; Gaz. vol. 177; p. 969.
Feed-regulator. F. Behrmann. No. 1,023,411; Apr. 16; Sp. p. 3542; Gaz. vol. 177; p. 631.
Feed-trough. S. H. Himes. No. 1,023,018; Apr. 9; Sp. p. 2699; Gaz. vol. 177; p. 459.
Feed-water heater. J. M. Mackie. No. 1,024,641; Apr. 30; Sp. p. 6269; Gaz. vol. 177; p. 1104.
Feed-water to boilers for prevention of incrustation, corrosion, or pitting, Mechanical method of treatment of. C. Haythorpe. No. 1,022,365; Apr. 2; Sp. p. 1276; Gaz. vol. 177; p. 205.
Feeder and exerciser, Poultry. F. Enos, Jr. No. 1,023,365; Apr. 16; Sp. p. 3443; Gaz. vol. 177; p. 615.
Feeder, Automatically-operated stock-. B. A. Elliott. No. 1,022,309; Apr. 2; Sp. p. 1156; Gaz. vol. 177; p. 186.
Feeder, fountain, and heater, Combination. L. M. and M. L. Anderson. No. 1,023,352; Apr. 16; Sp. p. 3423; Gaz. vol. 177; p. 611.
Feeder, Poultry-. F. B. Miller. No. 1,023,325; Apr. 16; Sp. p. 3380; Gaz. vol. 177; p. 603.
Feeding appliance, Poultry-. J. I. Lee. No. 1,023,945; Apr. 23; Sp. p. 4674; Gaz. vol. 177; p. 830.
Feeding mechanism. H. J. Douglass. No. 1,022,581; Apr. 9; Sp. p. 1745; Gaz. vol. 177; p. 308.
Fence fabric, Wire-. J. W. Legg. No. 1,023,439; Apr. 16; Sp. p. 3592; Gaz. vol. 177; p. 639.
Fence-post. J. W. Golden. No. 1,022,814; Apr. 2; Sp. p. 1160; Gaz. vol. 177; p. 188.
Fence-post. W. L. Rubeck. No. 1,023,880; Apr. 23; Sp. p. 4507; Gaz. vol. 177; p. 807.
Fence-post. J. M. Kissinger and S. H. J. Hefner. No. 1,024,358; Apr. 30; Sp. p. 6712; Gaz. vol. 177; p. 1182.
Fence-post brace. J. Heyerly. No. 1,025,060; Apr. 30; Sp. p. 7105; Gaz. vol. 177; p. 1249.
Fence-post mold. T. H. Kruse. No. 1,022,484; Apr. 9; Sp. p. 1541; Gaz. vol. 177; p. 277.
Fence stay, Wire-. H. Loewenthal. No. 1,023,268; Apr. 16; Sp. p. 3244; Gaz. vol. 177; p. 580.
Fence stretcher, Wire-. W. J. Montgomery. No. 1,023,749; Apr. 16; Sp. p. 4184; Gaz. vol. 177; p. 735.
Fence-stretching clamp, Wire-. J. W. Taylor. No. 1,023,229; Apr. 16; Sp. p. 3180; Gaz. vol. 177; p. 569.
Fence, Wire. J. H. Downs. No. 1,023,509; Apr. 16; Sp. p. 3733; Gaz. vol. 177; p. 661.
Fender: *See* Automobile-fender; Car-fender; Car or other vehicle fender.
Fender. A. H. Luebke. No. 1,022,372; Apr. 2; Sp. p. 1288; Gaz. vol. 177; p. 208.
Fender. F. N. Lephart. No. 1,023,083; Apr. 9; Sp. p. 2828; Gaz. vol. 177; p. 481.
Fender and apron, Combined. S. M. and E. G. Teeter. No. 1,022,278; Apr. 2; Sp. p. 1099; Gaz. vol. 177; p. 176.
Fertiliser and producing the same. L. B. Coates. No. 1,024,580; Apr. 30; Sp. p. 6755; Gaz. vol. 177; p. 1189.
Fertiliser-distributer. E. Christopher. No. 1,022,062; Apr. 2; Sp. p. 659; Gaz. vol. 177; p. 105.
Fertiliser-distributer. S. R. Sikes. No. 1,023,552; Apr. 16; Sp. p. 3774; Gaz. vol. 177; p. 667.
Fertiliser-distributer and cotton-seed planter, Combined. L. P. Oswalt. No. 1,023,752; Apr. 16; Sp. p. 4190; Gaz. vol. 177; p. 736.
Fertiliser-feed, Adjustable cone for. C. E. Luts. No. 1,024,796; Apr. 30; Sp. p. 6592; Gaz. vol. 177; p. 1159.
Fiber collecting and assorting apparatus. M. E. Ryan. No. 1,024,148; Apr. 23; Sp. p. 5122; Gaz. vol. 177; p. 900.
Fibers of kapok and other plants, Treating brittle vegetable. E. C. Stark. No. 1,023,890; Apr. 23; Sp. p. 4551; Gaz. vol. 177; p. 811.
Fifth-wheel, Vehicle. F. E. Wilcox. No. 1,023,013; Apr. 2; Sp. p. 563; Gaz. vol. 177; p. 93.
Figure, Dancing. W. J. Nickerson. No. 1,023,589; Apr. 16; Sp. p. 3862; Gaz. vol. 177; p. 687.
Filament apparatus. S. Ferguson. No. 1,023,805; Apr. 16; Sp. p. 2236; Gaz. vol. 177; p. 500.
Filament connection. J. W. Howell. No. 1,022,462; Apr. 9; Sp. p. 1537; Gaz. vol. 177; p. 276.
Filament-forming machine. L. E. Dempster. No. 1,024,185; Apr. 23; Sp. p. 5211; Gaz. vol. 177; p. 915.

Filament holder, Lamp-. L. Glaser. No. 1,022,543; Apr 9; Sp. p. 1665; Gaz. vol. 177; p. 296.
Filament, Metal. M. A. Hunter. No. 1,023,315; Apr. 16; Sp. p. 3362; Gaz. vol. 177; p. 590.
Filament-support. J. W. Howell. No. 1,024,898; Apr. 30; Sp. p. 6797; Gaz. vol. 177; p. 1195.
Filaments for incandescent electric lamps, Manufacture of metallic. H. Bremer. No. 1,023,295; Apr. 16; Sp. p. 3315; Gaz. vol. 177; p. 593.
Filaments, Mounting. E. P. Beckwith. No. 1,023,357; Apr. 16; Sp. p. 3431; Gaz. vol. 177; p. 613.
Filaments of electric lamps, Drying cement clamps for. H. W. Bremer. No. 1,024,925; Apr. 30; Sp. p. 6852; Gaz. vol. 177; p. 1204.
Filaments to leading-in wires, Fusing lamp-. J. W. Howell. No. 1,022,553; Apr. 9; Sp. p. 1691; Gaz. vol. 177; p. 298.
Filaments to metal wires, Welding. J. W. Howell. No. 1,022,554; Apr. 9; Sp. p. 1692; Gaz. vol. 177; p. 299.
File, Paper-. P. H. Yawman. No. 1,022,456; Apr. 9; Sp. p. 1496; Gaz. vol. 177; p. 267.
Filing-case. G. A. Chambers. No. 1,023,297; Apr. 16; Sp. p. 3317; Gaz. vol. 177; p. 593.
Fillers, Machine for making. L. P. Brown. No. 1,023,989; Apr. 23; Sp. p. 4761; Gaz. vol. 177; p. 844.
Filter. C. and C. S. Hines. No. 1,023,136; Apr. 2; Sp. p. 819; Gaz. vol. 177; p. 129.
Filter. K. Kiefer. No. 1,023,254; Apr. 16; Sp. p. 3232; Gaz. vol. 177; p. 578.
Filters, Sterilising. E. Zahm. No. 1,023,488; Apr. 16; Sp. p. 3693; Gaz. vol. 177; p. 654.
Filtering apparatus. D. J. Kelly. No. 1,024,082; Apr. 23; Sp. 4949; Gaz. vol. 177; p. 877.
Finger-exercising machine. H. G. Leland. No. 1,023,573; Apr. 16; Sp. p. 3571; Gaz. vol. 177; p. 631.
Fire-alarm. C. O. Carlson. No. 1,023,123; Apr. 16; Sp. p. 2041; Gaz. vol. 177; p. 533.
Fire-bucket. A. A. B. Wagoner. No. 1,024,609; Apr. 30; Sp. p. 6194; Gaz. vol. 177; p. 1093.
Fire-escape. V. W. Heydlauf. No. 1,022,417; Apr. 9; Sp. p. 1381; Gaz. vol. 177; p. 253.
Fire-escape. R. Sideman. No. 1,022,568; Apr. 9; Sp. p. 1718; Gaz. vol. 177; p. 303.
Fire-extinguisher. J. B. Thomas. No. 1,022,211; Apr. 2; Sp. p. 972; Gaz. vol. 177; p. 156.
Fire-extinguishing apparatus. G. J. Coutu. No. 1,023,506; Apr. 16; Sp. p. 3725; Gaz. vol. 177; p. 659.
Fire-extinguishing device for localising coal-dust explosions. H. Krustopf. No. 1,022,365; Apr. 2; Sp. p. 1281; Gaz. vol. 177; p. 206.
Fire-fighting apparatus. H. W. Eisenbise. No. 1,023,141; Apr. 16; Sp. p. 2998; Gaz. vol. 177; p. 539.
Fire-hose crossing for railways. T. D. Waller. No. 1,022,986; Apr. 9; Sp. p. 2634; Gaz. vol. 177; p. 449.
Fire-lighting device. P. C. Trueisen and A. Simonazzi. No. 1,022,663; Apr. 2; Sp. p. 642; Gaz. vol. 177; p. 102.
Fire-resisting shutter. E. H. McCloud. (Reissue.) No. 13,405; Apr. 16; Sp. p. 4261; Gaz. vol. 177; p. 748.
Fire-screen, Film. D. B. Kershaw. No. 1,022,320; Apr. 2; Sp. p. 1177; Gaz. vol. 177; p. 189.
Fires in telephone installations, Extinguishing. C. Gantsch. No. 1,023,107; Apr. 9; Sp. p. 2879; Gaz. vol. 177; p. 490.
Firearm. G. E. Lewis. No. 1,021,988; Apr. 2; Sp. p. 509; Gaz. vol. 177; p. 81.
Firearm. J. D. Pedersen. No. 1,023,169; Apr. 16; Sp. p. 3060; Gaz. vol. 177; p. 549.
Firearm. J. W. Dowden. No. 1,024,190; Apr. 23; Sp. p. 5222; Gaz. vol. 177; p. 915.
Firearm. G. W. Gruver. No. 1,024,989; Apr. 30; Sp. p. 6979; Gaz. vol. 177; p. 1226.
Firearm and boxer, Combined. B. Kreith. No. 1,023,741; Apr. 16; Sp. p. 4171; Gaz. vol. 177; p. 732.
Firearms, Repeating. G. S. Lewis. No. 1,021,987; Apr. 2; Sp. p. 504; Gaz. vol. 177; p. 80.
Fireplace. W. W. Guy. No. 1,024,508; Apr. 30; Sp. p. 5931; Gaz. vol. 177; p. 1038.
Fireproof floor construction for buildings. E. V. Johnson. No. 1,021,780; Apr. 2; Sp. p. 49; Gaz. vol. 177; p. 11.
Fish-can. C. E. Shafer. No. 1,023,531; Apr. 16; Sp. p. 3773; Gaz. vol. 177; p. 667.
Fish-plate bolt. L. E. Beaulieu. No. 1,023,985; Apr. 23; Sp. p. 4755; Gaz. vol. 177; p. 844.
Fish, Propagation of. F. Parry. No. 1,023,590; Apr. 16; Sp. p. 3903; Gaz. vol. 177; p. 687.
Fishing device, Mechanical. E. E. Owens. No. 1,022,377; Apr. 2; Sp. p. 1298; Gaz. vol. 177; p. 210.
Fishing-reel. S. Kadis. No. 1,023,853; Apr. 23; Sp. p. 4447; Gaz. vol. 177; p. 790.
Fishing-tackle. J. Nordlund. No. 1,023,023; Apr. 9; Sp. p. 2706; Gaz. vol. 177; p. 462.
Fixture-hanger. J. G. Knight. No. 1,025,068; Apr. 30; Sp. p. 7117; Gaz. vol. 177; p. 1251.
Flash-light apparatus. I. G. McColl. No. 1,023,161; Apr. 16; Sp. p. 3044; Gaz. vol. 177; p. 546.
Flat-iron, Self-heating. F. Malworm and C. E. Mitchell. No. 1,023,047; Apr. 23; Sp. p. 4678; Gaz. vol. 177; p. 830.
Flax-felt machine. J. E. Lappen. No. 1,023,473; Apr. 16; Sp. p. 3660; Gaz. vol. 177; p. 649.
Flexible joint. E. J. Corbett. No. 1,023,924; Apr. 23; Sp. p. 4625; Gaz. vol. 177; p. 823.
Floor-box. J. Fountain, Jr., and B. Jones, Jr. No. 1,023,246; Apr. 16; Sp. p. 3215; Gaz. vol. 177; p. 575.
Floor finishing and surfacing machine. G. S. Reynolds. No. 1,022,506; Apr. 9; Sp. p. 1583; Gaz. vol. 177; p. 283.
Floor-surfacing machine. H. E. Hughes. No. 1,023,251; Apr. 16; Sp. p. 3224; Gaz. vol. 177; p. 577.
Floral-decoration holder, Adjustable. D. A. Lytle. No. 1,024,215; Apr. 23; Sp. p. 5273; Gaz. vol. 177; p. 924.
Flour-bolter. E. A. Reynolds. No. 1,022,381; Apr. 2; Sp. p. 1306; Gaz. vol. 177; p. 211.
Flow through a passage, Means for regulating rate of. C. Lightfoot. No. 1,023,209; Apr. 16; Sp. p. 3147; Gaz. vol. 177; p. 563.
Flow through conduits or mains, Means for controlling. F. L. Cross. No. 1,021,762; Apr. 2; Sp. p. 14; Gaz. vol. 177; p. 5.
Flue-expander. J. F. Meeker. No. 1,024,802; Apr. 30; Sp. p. 6603; Gaz. vol. 177; p. 1161.
Fluid compressor, Centrifugal elastic. K. Alquist. No. 1,023,408; Apr. 16; Sp. p. 3538; Gaz. vol. 177; p. 630.
Fluid-pressure regulator. J. D. Ramsay. No. 1,022,330; Apr. 2; Sp. p. 1210; Gaz. vol. 177; p. 198.
Fluid-pressure regulator. H. H. Kelley. No. 1,024,902; Apr. 30; Sp. p. 6987; Gaz. vol. 177; p. 1227.
Flume. W. L. Swick. No. 1,022,008; Apr. 2; Sp. p. 556; Gaz. vol. 177; p. 87.
Flume or trough, Metal. E. E. Holtz. No. 1,022,133; Apr. 2; Sp. p. 821; Gaz. vol. 177; p. 130.
Flush-tank apparatus. H. D. Moiss. No. 1,023,522; Apr. 16; Sp. p. 3761; Gaz. vol. 177; p. 665.
Flusher, Sidewalk-. E. Watkins. No. 1,022,345; Apr. 2; Sp. p. 1237; Gaz. vol. 177; p. 198.
Flushing apparatus for water-closets, Seat-actuated. L. D. Lawnin. No. 1,023,572; Apr. 16; Sp. p. 3870; Gaz. vol. 177; p. 681.
Flushing apparatus, Water-closet-. F. M. Mackin. No. 1,024,010; Apr. 23; Sp. p. 4795; Gaz. vol. 177; p. 852.
Fly-trap for window and door screens. C. A. Fulcher. No. 1,022,669; Apr. 9; Sp. p. 1939; Gaz. vol. 177; p. 338.
Flying-machine. I. L. Martin. No. 1,021,877; Apr. 2; Sp. p. 273; Gaz. vol. 177; p. 44.
Flying-machine. A. A. Fokker. No. 1,021,925; Apr. 2; Sp. p. 350; Gaz. vol. 177; p. 60.
Flying-machine. R. L. Brough. No. 1,022,018; Apr. 2; Sp. p. 572; Gaz. vol. 177; p. 90.
Flying-machine. J. A. Warrick. No. 1,022,903; Apr. 9; Sp. p. 2457; Gaz. vol. 177; p. 418.
Flying-machine. J. Raciot and C. Enderlin. No. 1,023,006; Apr. 9; Sp. p. 2854; Gaz. vol. 177; p. 486.
Flying-machine. J. N. Williams. No. 1,023,238; Apr. 16; Sp. p. 3188; Gaz. vol. 177; p. 571.
Flying-machine. J. C. Doty. No. 1,023,927; Apr. 23; Sp. p. 4630; Gaz. vol. 177; p. 823.
Flying-machine. J. A. Jung. No. 1,023,937; Apr. 23; Sp. p. 4656; Gaz. vol. 177; p. 828.
Flying-machine. R. L. Matteson. No. 1,024,011; Apr. 23; Sp. p. 4797; Gaz. vol. 177; p. 852.
Flying-machine. A. Rogestvensky. No. 1,024,102; Apr. 23; Sp. p. 5007; Gaz. vol. 177; p. 884.
Flying-machine. A. H. Blount. No. 1,024,670; Apr. 30; Sp. p. 6320; Gaz. vol. 177; p. 1114.
Flying-machine. O. R. Cassell. No. 1,024,766; Apr. 30; Sp. p. 6522; Gaz. vol. 177; p. 1148.
Flying-machine. H. Jordan. No. 1,025,093; Apr. 30; Sp. p. 7191; Gaz. vol. 177; p. 1260.
Flying-machine safety device. C. H. Burford. No. 1,024,676; Apr. 30; Sp. p. 6333; Gaz. vol. 177; p. 1116.
Flying-machine-starting device. K. Voller. No. 1,024,420; Apr. 23; Sp. p. 5708; Gaz. vol. 177; p. 994.
Flying-machines, Automatic balancing mechanism for. L. Lukács. No. 1,022,793; Apr. 9; Sp. p. 2230; Gaz. vol. 177; p. 382.
Fodder composed of peat and molasses, Manufacturing. E. Joseph. No. 1,022,243; Apr. 2; Sp. p. 1045; Gaz. vol. 177; p. 166.
Folding-machine. J. W. Holmes. No. 1,022,736; Apr. 9; Sp. p. 2121; Gaz. vol. 177; p. 364.
Folding-machine. R. C. Seymour. No. 1,024,459; Apr. 23; Sp. p. 5772; Gaz. vol. 177; p. 1004.
Food composition. F. M. Borchert. No. 1,023,919; Apr. 23; Sp. p. 4617; Gaz. vol. 177; p. 821.
Food, Machine for manufacturing grain into form for. H. D. Perky. No. 1,022,501; Apr. 9; Sp. p. 1577; Gaz. vol. 177; p. 282.
Food materials into shreds or fibers, Machine for converting. W. E. Williams. No. 1,024,168; Apr. 23; Sp. p. 5106; Gaz. vol. 177; p. 907.
Footwear, Antislipping attachment for. J. M. Alexander. No. 1,023,350; Apr. 16; Sp. p. 3420; Gaz. vol. 177; p. 611.
Forceps, Pig-. E. E. Adams and J. L. Dudek. No. 1,023,705; Apr. 16; Sp. p. 4111; Gaz. vol. 177; p. 722.
Forging apparatus, Metal-. E. H. Slick. No. 1,022,006; Apr. 2; Sp. p. 550; Gaz. vol. 177; p. 86.
Fork and rake, Combined. J. Miller. No. 1,022,962; Apr. 9; Sp. p. 2591; Gaz. vol. 177; p. 449.
Form stand, Dress-. W. J. Taplinger. No. 1,022,608; Apr. 9; Sp. p. 1814; Gaz. vol. 177; p. 317.
Fountain: *See* Drinking-fountain; Poultry-fountain; Soda-fountain.
Fountain-mold. T. J. Harrison. No. 1,021,927; Apr. 2; Sp. p. 363; Gaz. vol. 177; p. 60.

Frame: *See* Bag-frame; Bed-frame; Bit-frame; Hacksaw-frame; Knitting-frame; Printing-frame; Spectacle-frame; Truck side frame; Wind-shield frame; Window-frame.
Frame construction. F. B. Upton. No. 1,022,446; Apr. 9; Sp. p. 1471; Gaz. vol. 177; p. 264.
Freight-handling means. S. H. Libby. No. 1,022,033; Apr. 2; Sp. p. 601; Gaz. vol. 177; p. 95.
Friction-brake. H. C. C. Brant. No. 1,022,656; Apr. 9; Sp. p. 1913; Gaz. vol. 177; p. 334.
Friction-top can. T. Graham. No. 1,022,074; Apr. 2; Sp. p. 683; Gaz. vol. 177; p. 109.
Fruit-cleaning machine. E. D. Howard. No. 1,025,062; Apr. 30; Sp. p. 7109; Gaz. vol. 177; p. 1249.
Fruit-gathering device. B. Russell. No. 1,023,861; Apr. 23; Sp. p. 4508; Gaz. vol. 177; p. 807.
Fruit-jar. E. R. Glaser. No. 1,023,560; Apr. 16; Sp. p. 3842; Gaz. vol. 177; p. 677.
Fruit-picker. C. H. Baker. No. 1,023,700; Apr. 16; Sp. p. 4122; Gaz. vol. 177; p. 723.
Fruit-picker. K. D. Pierce and S. C. Ellis. No. 1,024,858; Apr. 23; Sp. p. 5540; Gaz. vol. 177; p. 971.
Fruit-pitting machine. J. B. Foote. No. 1,024,564; Apr. 30; Sp. p. 6085; Gaz. vol. 177; p. 1077.
Fruit-pitting machine. J. B. Foote. No. 1,024,625; Apr. 30; Sp. p. 6229; Gaz. vol. 177; p. 1098.
Fuel, Apparatus for feeding fine. J. A. Welton. No. 1,022,305; Apr. 9; Sp. p. 2260; Gaz. vol. 177; p. 380.
Fuel-burning apparatus. C. J. Coleman. No. 1,024,925; Apr. 30; Sp. p. 6854; Gaz. vol. 177; p. 1205.
Fuel-feed system. F. M. Murphy. No. 1,024,351; Apr. 23; Sp. p. 5529; Gaz. vol. 177; p. 969.
Fuel-feeding device, Gravity. H. Clemston. No. 1,022,772; Apr. 9; Sp. p. 2101; Gaz. vol. 177; p. 376.
Fuel, Fixer for gaseous. H. E. Whiting. No. 1,023,402; Apr. 16; Sp. p. 3527; Gaz. vol. 177; p. 623.
Fullers' earth and analogous materials, Separating and purifying. C. C. Ruprecht. No. 1,024,104; Apr. 23; Sp. p. 5011; Gaz. vol. 177; p. 885.
Fulling-machine. A. G. Schults and D. M. Fuller. No. 1,022,603; Apr. 9; Sp. p. 1796; Gaz. vol. 177; p. 315.
Fumigator. P. T. McCarty, J. and E. Michmershuisen. No. 1,022,491; Apr. 9; Sp. p. 1553; Gaz. vol. 177; p. 279.
Funnel, Automatic. F. B. Gilbert. No. 1,023,012; Apr. 9; Sp. p. 2678; Gaz. vol. 177; p. 457.
Furnace: *See* Blast-furnace; Coal-furnace; Electric furnace; Electrical resistance furnace; Generator-furnace; Heating-furnace; Hot-air furnace; Hydrocarbon-furnace; Oil-fed furnace; Pot-furnace; Roasting-furnace; Warm-air furnace.
Furnace. L. Duemer. No. 1,023,136; Apr. 16; Sp. p. 2987; Gaz. vol. 177; p. 537.
Furnace. O. D. and H. M. Cotton. No. 1,023,617; Apr. 23; Sp. p. 4351; Gaz. vol. 177; p. 787.
Furnace and stove structure. W. F. Brunswick. No. 1,024,626; Apr. 30; Sp. p. 6649; Gaz. vol. 177; p. 1170.
Furnace bridge-wall. R. Wagur. No. 1,024,301; Apr. 23; Sp. p. 5441; Gaz. vol. 177; p. 954.
Furnace-charging device. J. W. Dougherty. No. 1,024,623; Apr. 30; Sp. p. 6224; Gaz. vol. 177; p. 1097.
Furnaces and the like, Mechanical charging mechanism for smelting-. I. L. Briggs. No. 1,022,654; Apr. 9; Sp. p. 1906; Gaz. vol. 177; p. 333.
Furnaces, Apparatus for feeding fuel to. A. Heberer and H. A. Hyne. No. 1,022,550; Apr. 9; Sp. p. 1673; Gaz. vol. 177; p. 297.
Furnaces, Fire-brick wall or lining for blast and other. A. N. H. Strale. No. 1,021,851; Apr. 2; Sp. p. 211; Gaz. vol. 177; p. 35.
Furnaces, Increasing the temperature of combustion in gas-fired. H. L. Doherty. No. 1,024,678; Apr. 30; Sp. p. 6338; Gaz. vol. 177; p. 1117.
Furnaces, Means for removing slag from hearth-. K. Stobrawa. No. 1,025,027; Apr. 30; Sp. p. 7050; Gaz. vol. 177; p. 1239.
Furniture, Knockdown. F. L. Vordemfelde. No. 1,025,103; Apr. 30; Sp. p. 7209; Gaz. vol. 177; p. 1263.
Furniture, Upholstered. E. Peterson. No. 1,024,744; Apr. 30; Sp. p. 6478; Gaz. vol. 177; p. 1114.
Furniture, Yieldable support for. J. Marius. No. 1,022,858; Apr. 9; Sp. p. 2363; Gaz. vol. 177; p. 404.
Furrow-opener scraper. T. Brennan, Jr. No. 1,022,552; Apr. 2; Sp. p. 1260; Gaz. vol. 177; p. 201.
Fuse. F. P. Poole and P. A. Brendel. No. 1,022,329; Apr. 2; Sp. p. 1209; Gaz. vol. 177; p. 193.
Fuse. H. E. Ellsworth. No. 1,023,142; Apr. 16; Sp. p. 3001; Gaz. vol. 177; p. 540.
Fuse and cap, Blasting-. W. E. Ingram. No. 1,025,065; Apr. 30; Sp. p. 7113; Gaz. vol. 177; p. 1250.
Fuse-box, Rotary-magazine. L. D. Epperson. No. 1,023,929; Apr. 23; Sp. p. 4633; Gaz. vol. 177; p. 824.
Fuse-changer. R. C. Grout. No. 1,023,077; Apr. 9; Sp. p. 2814; Gaz. vol. 177; p. 479.
Fuse, Combination time and percussion. J. Gronek. No. 1,022,075; Apr. 2; Sp. p. 685; Gaz. vol. 177; p. 109.
Fuse, Electrical. S. F. Estell. No. 1,022,834; Apr. 9; Sp. p. 2319; Gaz. vol. 177; p. 396.
Fusible link. J. R. Hamilton. No. 1,024,725; Apr. 30; Sp. p. 6434; Gaz. vol. 177; p. 1134.
Gage: *See* Air-gage; Pressure-gage; Saw-gage; Tank-gage.
Gage. H. Oenning. No. 1,023,166; Apr. 16; Sp. p. 3067; Gaz. vol. 177; p. 548.
Galvanic metal reproductions of articles of the plastic arts, Manufacture of. C. Bensinger. No. 1,023,612; Apr. 16; Sp. p. 3953; Gaz. vol. 177; p. 694.
Gambrel. F. A. Buller. No. 1,022,208; Apr. 2; Sp. p. 1140; Gaz. vol. 177; p. 183.
Gambrel. J. and H. H. Hartman. No. 1,023,148; Apr. 16; Sp. p. 3016; Gaz. vol. 177; p. 542.
Game. G. J. Jaccard. No. 1,022,847; Apr. 9; Sp. p. 2345; Gaz. vol. 177; p. 401.
Game. W. C. O'Donnell. No. 1,024,354; Apr. 23; Sp. p. 5534; Gaz. vol. 177; p. 970.
Game apparatus. C. Mutter. No. 1,021,788; Apr. 2; Sp. p. 67; Gaz. vol. 177; p. 14.
Game apparatus. J. A. Sloan. No. 1,022,339; Apr. 2; Sp. p. 1228; Gaz. vol. 177; p. 196.
Game apparatus. H. V. Robinson. No. 1,022,676; Apr. 9; Sp. p. 2396; Gaz. vol. 177; p. 410.
Game apparatus. E. M. Frank. No. 1,024,194; Apr. 23; Sp. p. 5228; Gaz. vol. 177; p. 916.
Game apparatus, Naval-war-. J. H. Hammond, Jr. No. 1,022,375; Apr. 16; Sp. p. 3464; Gaz. vol. 177; p. 618.
Game-board. F. A. Lehr. No. 1,023,742; Apr. 16; Sp. p. 4173; Gaz. vol. 177; p. 733.
Game-board, Arithmetical. W. H. Snyder. No. 1,024,704; Apr. 30; Sp. p. 6390; Gaz. vol. 177; p. 1126.
Game device, Ball-. A. Engler. No. 1,022,186; Apr. 2; Sp. p. 918; Gaz. vol. 177; p. 147.
Game, Hunting. C. J. Schuster. No. 1,023,176; Apr. 16; Sp. p. 3085; Gaz. vol. 177; p. 551.
Garbage and waste-paper receptacle. W. M. Kingsbury. No. 1,021,572; Apr. 2; Sp. p. 262; Gaz. vol. 177; p. 42.
Garment. R. S. Meinik. No. 1,021,878; Apr. 2; Sp. p. 276; Gaz. vol. 177; p. 44.
Garment. C. R. Leonard. No. 1,022,096; Apr. 2; Sp. p. 728; Gaz. vol. 177; p. 116.
Garment. A. Goldberg. No. 1,022,190; Apr. 2; Sp. p. 927; Gaz. vol. 177; p. 148.
Garment. W. E. Bray. No. 1,022,461; Apr. 9; Sp. p. 1501; Gaz. vol. 177; p. 269.
Garment-attaching means. A. E. Richardson. No. 1,022,155; Apr. 2; Sp. p. 857; Gaz. vol. 177; p. 136.
Garment, Combination-. P. R. Straus. No. 1,024,477; Apr. 23; Sp. p. 5823; Gaz. vol. 177; p. 1012.
Garment-fastening hook for women and children. M. B. Goodwin. No. 1,023,514; Apr. 16; Sp. p. 3751; Gaz. vol. 177; p. 663.
Garment for stage effects. A. L. McMurtry. No. 1,022,433; Apr. 9; Sp. p. 1447; Gaz. vol. 177; p. 259.
Garment-hanger. M. Naughtigan. No. 1,022,504; Apr. 9; Sp. p. 1582; Gaz. vol. 177; p. 283.
Garment-supporter. C. J. White. No. 1,023,538; Apr. 16; Sp. p. 3787; Gaz. vol. 177; p. 669.
Garter. E. B. Winters. No. 1,022,217; Apr. 2; Sp. p. 984; Gaz. vol. 177; p. 158.
Gas-alarm, Electric-. C. C. Clark. No. 1,024,061; Apr. 23; Sp. p. 4910; Gaz. vol. 177; p. 870.
Gas-burner. A. B. Murray. No. 1,024,016; Apr. 23; Sp. p. 4806; Gaz. vol. 177; p. 854.
Gas-burner. G. H. Huston. No. 1,024,261; Apr. 23; Sp. p. 5376; Gaz. vol. 177; p. 941.
Gas-burner. E. R. Brayshaw. No. 1,024,393; Apr. 23; Sp. p. 5598; Gaz. vol. 177; p. 982.
Gas-burner. F. W. Gault, Jr. No. 1,024,443; Apr. 23; Sp. p. 5736; Gaz. vol. 177; p. 998.
Gas-burner. H. E. Harris. No. 1,024,849; Apr. 30; Sp. p. 6698; Gaz. vol. 177; p. 1179.
Gas-burner. E. C. Dickinson. No. 1,025,083; Apr. 30; Sp. p. 7163; Gaz. vol. 177; p. 1256.
Gas-burner for furnaces. E. H. Kesselman. No. 1,022,558; Apr. 9; Sp. p. 1698; Gaz. vol. 177; p. 300.
Gas-burner, Incandescent. H. Süssmann. No. 1,024,462; Apr. 23; Sp. p. 5790; Gaz. vol. 177; p. 1006.
Gas-burners, Windproof casing for inverted incandescent. K. A. A. Staahlgren. No. 1,024,106; Apr. 23; Sp. p. 5014; Gaz. vol. 177; p. 886.
Gas, Container or cylinder for compressed or liquefied. R. H. Campbell. No. 1,022,301; Apr. 2; Sp. p. 1143; Gaz. vol. 177; p. 183.
Gas cut-off, Automatic. A. M. C. Bubb. No. 1,022,822; Apr. 9; Sp. p. 2294; Gaz. vol. 177; p. 392.
Gas dry cleaner. M. W. Johnson, Jr. No. 1,024,784; Apr. 30; Sp. p. 6558; Gaz. vol. 177; p. 1155.
Gas-engine. J. H. Pierce. No. 1,022,802; Apr. 9; Sp. p. 1579; Gaz. vol. 177; p. 282.
Gas-engine. J. Loftus. No. 1,022,686; Apr. 9; Sp. p. 1934; Gaz. vol. 177; p. 344.
Gas-engine. R. S. Moore and J. L. Simmons. No. 1,022,864; Apr. 9; Sp. p. 2370; Gaz. vol. 177; p. 406.
Gas engine, Explosive-. L. R. O'Neill. No. 1,021,791; Apr. 2; Sp. p. 72; Gaz. vol. 177; p. 15.
Gas-generating apparatus. M. and J. H. White. No. 1,023,978; Apr. 23; Sp. p. 4735; Gaz. vol. 177; p. 840.
Gas generating or producing apparatus. A. S. Cambridge. No. 1,024,117; Apr. 23; Sp. p. 5055; Gaz. vol. 177; p. 891.
Gas generator, Acetylene-. J. M. Crowner. No. 1,022,356; Apr. 2; Sp. p. 1257; Gaz. vol. 177; p. 202.
Gas generator, Acetylene-. G. W. Smith. No. 1,023,767; Apr. 16; Sp. p. 4216; Gaz. vol. 177; p. 740.
Gas generators, Indicator for acetylene-. J. E. Hill. No. 1,024,550; Apr. 30; Sp. p. 6699; Gaz. vol. 177; p. 1179.
Gas-lighter, Automatic. J. A. Nelson. No. 1,024,277; Apr. 23; Sp. p. 5405; Gaz. vol. 177; p. 944.
Gas-lighting. P. G. de Schodt. No. 1,021,805; Apr. 2; Sp. p. 103; Gaz. vol. 177; p. 20.
Gas lighting and extinguishing apparatus, Electric. J. S. Benton. No. 1,025,047; Apr. 30; Sp. p. 7083; Gaz. vol. 177; p. 1245.

Gas-liquefying apparatus. Accumulator and separator attachment for. F. C. Bell. No. 1,024,435; Apr. 23; Sp. p. 5713; Gas. vol. 177; p. 995.
Gas. Making illuminating-. L. L. Summers. No. 1,023,446; Apr. 16; Sp. p. 3614; Gas. vol. 177; p. 641.
Gas-producer. W. B. Hughes. No. 1,022,678; Apr. 9; Sp. p. 1961; Gas. vol. 177; p. 340.
Gas-producer. W. R. Hüttinger. No. 1,023,567; Apr. 16; Sp. p. 3953; Gas. vol. 177; p. 678.
Gas-producer blower. A. B. Dur. No. 1,022,388; Apr. 2; Sp. p. 1318; Gas. vol. 177; p. 214.
Gas-producing oven. A. Gohmann. No. 1,024,128; Apr. 23; Sp. p. 5078; Gas. vol. 177; p. 894.
Gas-receivers, Ball-jointed cleaning device for. H. Boesenlus. No. 1,023,239; Apr. 16; Sp. p. 3200; Gas. vol. 177; p. 572.
Gas-regulator. A. C. Roessler and W. A. Armington. No. 1,023,596; Apr. 16; Sp. p. 3919; Gas. vol. 177; p. 689.
Gas, Treating natural. L. N. Knapp. No. 1,023,783; Apr. 16; Sp. p. 4249; Gas. vol. 177; p. 746.
Gases, Filtration of furnace-. F. Müller, O. Johannsen, and P. Pape. No. 1,022,496; Apr. 9; Sp. p. 1561; Gas. vol. 177; p. 280.
Gases, Means for analyzing flue-. H. H. Wilson. No. 1,023,188; Apr. 16; Sp. p. 3107; Gas. vol. 177; p. 556.
Gases, Purification of. W. R. Whitney. No. 1,022,012; Apr. 2; Sp. p. 562; Gas. vol. 177; p. 88.
Gasolene-supply to engines, &c., Air-pressure-creating device for. W. P. Herbert. No. 1,023,565; Apr. 16; Sp. p. 3850; Gas. vol. 177; p. 678.
Gate: *See* Crossing-gate; End-gate; Farm-gate.
Gate. J. W. Ingersoll, Jr. No. 1,023,153; Apr. 16; Sp. p. 3031; Gas. vol. 177; p. 544.
Gate. A. Polser. No. 1,024,022; Apr. 23; Sp. p. 4818; Gas. vol. 177; p. 856.
Gate. H. Harding. No. 1,024,400; Apr. 23; Sp. p. 5658; Gas. vol. 177; p. 985.
Gate. J. S. Hendricks. No. 1,024,630; Apr. 30; Sp. p. 6250; Gas. vol. 177; p. 1100.
Gate-closer. D. J. Nelson. No. 1,022,967; Apr. 9; Sp. p. 2599; Gas. vol. 177; p. 441.
Gate-fastener. T. O. Emery and J. M. Day. No. 1,022,389; Apr. 2; Sp. p. 1319; Gas. vol. 177; p. 214.
Gate or door lock. E. J. Tangeman. No. 1,022,981; Apr. 9; Sp. p. 2623; Gas. vol. 177; p. 447.
Gear-cutting machine. T. Fawcus. No. 1,022,625; Apr. 9; Sp. p. 1840; Gas. vol. 177; p. 322.
Gear-cutting machine. T. Fawcus. No. 1,022,667; Apr. 9; Sp. p. 1933; Gas. vol. 177; p. 337.
Gearing. C. L. Libby. No. 1,021,875; Apr. 2; Sp. p. 267; Gas. vol. 177; p. 43.
Gearing. F. W. Crage. No. 1,022,181; Apr. 2; Sp. p. 810; Gas. vol. 177; p. 145.
Gearing. G. O. Leopold. No. 1,023,023; Apr. 9; Sp. p. 2696; Gas. vol. 177; p. 461.
Gearing. J. M. Merritt. No. 1,023,266; Apr. 16; Sp. p. 3267; Gas. vol. 177; p. 583.
Gearing. P. Lord. No. 1,023,860; Apr. 23; Sp. p. 4469; Gas. vol. 177; p. 801.
Gearing. H. M. Norris. No. 1,023,867; Apr. 23; Sp. p. 4481; Gas. vol. 177; p. 803.
Gearing. H. M. Norris. No. 1,024,220; Apr. 23; Sp. p. 5288; Gas. vol. 177; p. 926.
Gearing. W. F. Eckert and W. C. Whitcomb. No. 1,024,562; Apr. 30; Sp. p. 6080; Gas. vol. 177; p. 1077.
Gearing. A. I. Hovland. No. 1,024,897; Apr. 30; Sp. p. 6795; Gas. vol. 177; p. 1194.
Gearing, Belt-. C. D. Rice. No. 1,022,756; Apr. 9; Sp. p. 2165; Gas. vol. 177; p. 371.
Gearing, Change-speed. P. Daimler. No. 1,023,553; Apr. 16; Sp. p. 3819; Gas. vol. 177; p. 674.
Gearing device. W. J. Schoonover. No. 1,022,881; Apr. 9; Sp. p. 2403; Gas. vol. 177; p. 411.
Gearing, Differential. O. Zachow. No. 1,023,487; Apr. 16; Sp. p. 3691; Gas. vol. 177; p. 653.
Gearing, Transmission-. F. H. Royce. No. 1,023,683; Apr. 16; Sp. p. 4071; Gas. vol. 177; p. 714.
Gearing, Transmission-. H. C. McBrair. No. 1,023,862; Apr. 23; Sp. p. 4472; Gas. vol. 177; p. 801.
Gearing, Variable-speed. W. H. J. Hipple. No. 1,022,845; Apr. 9; Sp. p. 2341; Gas. vol. 177; p. 400.
Gearing, Variable-speed. J. S. Barnes. No. 1,024,818; Apr. 30; Sp. p. 6630; Gas. vol. 177; p. 1167.
Generator: *See* Acetylene-generator; Electric generator; Gas-generator; Internal-combustion generator; Steam-generator.
Generator-furnace. E. Heller. No. 1,022,480; Apr. 9; Sp. p. 1534; Gas. vol. 177; p. 276.
Glass: *See* Magnifying-glass; Opera-glass.
Glass cylinders, Device for severing. R. L. Frink. No. 1,024,983; Apr. 30; Sp. p. 6958; Gas. vol. 177; p. 1223.
Glass-delivering machine. L. Steelman. No. 1,021,904; Apr. 2; Sp. p. 320; Gas. vol. 177; p. 53.
Glass-gathering machine. A. L. Schram. No. 1,024,228; Apr. 23; Sp. p. 5306; Gas. vol. 177; p. 929.
Glass-holder. W. A. Younie. No. 1,023,405; Apr. 16; Sp. p. 3532; Gas. vol. 177; p. 620.
Glass sign-boards, Manufacture of. E. Bösinger. No. 1,024,551; Apr. 30; Sp. p. 6046; Gas. vol. 177; p. 1074.
Glues, &c., Manufacture of. J. M. Neil. No. 1,023,525; Apr. 16; Sp. p. 3763; Gas. vol. 177; p. 665.
Go-cart. W. Hoyens. No. 1,024,176; Apr. 23; Sp. p. 5179; Gas. vol. 177; p. 910.
Go-cart, Folding and convertible. C. H. Beasecker. No. 1,021,964; Apr. 2; Sp. p. 461; Gas. vol. 177; p. 73.
Gold and quicksilver saving apparatus. L. Sachse. No. 1,022,110; Apr. 2; Sp. p. 756; Gas. vol. 177; p. 121.
Gold-leaf, Making imitation. J. G. Potter. No. 1,023,960; Apr. 23; Sp. p. 4706; Gas. vol. 177; p. 835.
Golf-ball. F. A. Martin and J. Stanley. No. 1,022,248; Apr. 2; Sp. p. 1052; Gas. vol. 177; p. 166.
Golf-practising apparatus. F. L. Connable. No. 1,023,125; Apr. 16; Sp. p. 2944; Gas. vol. 177; p. 533.
Gong-striking mechanism. H. J. Heaney. No. 1,024,449; Apr. 23; Sp. p. 5755; Gas. vol. 177; p. 1001.
Goniometer, Spherical. C. B. B. Laurès. No. 1,023,858; Apr. 23; Sp. p. 4466; Gas. vol. 177; p. 800.
Governor attachment. J. R. Hodgen. No. 1,025,061; Apr. 30; Sp. p. 7107; Gas. vol. 177; p. 1249.
Governor for explosive-engines. L. J. Monahan. No. 1,021,879; Apr. 2; Sp. p. 278; Gas. vol. 177; p. 45.
Grader. L. N. Morscher. No. 1,023,750; Apr. 16; Sp. p. 4185; Gas. vol. 177; p. 735.
Grading-machine. C. O. Weld. No. 1,023,057; Apr. 9; Sp. p. 2777; Gas. vol. 177; p. 473.
Grading machine, Road-. P. L. Stacker. No. 1,023,399; Apr. 16; Sp. p. 3522; Gas. vol. 177; p. 627.
Grafting-machine. A. Robertson. No. 1,023,038; Apr. 9; Sp. p. 2728; Gas. vol. 177; p. 466.
Grain-drier. V. Lucas and C. Bauer. No. 1,024,408; Apr. 23; Sp. p. 5671; Gas. vol. 177; p. 985.
Grain-drill. P. Broman. No. 1,022,530; Apr. 9; Sp. p. 1630; Gas. vol. 177; p. 291.
Grain-treating apparatus. E. B. Cox. No. 1,024,832; Apr. 30; Sp. p. 6659; Gas. vol. 177; p. 1172.
Graphite metal and producing it. R. T. Cole. No. 1,022,465; Apr. 9; Sp. p. 1508; Gas. vol. 177; p. 270.
Grate-bars, Manufacturing. L. and P. David. No. 1,022,773; Apr. 9; Sp. p. 2193; Gas. vol. 177; p. 376.
Grating machine, Fruit-. J. W. Cheney. No. 1,021,909; Apr. 2; Sp. p. 469; Gas. vol. 177; p. 75.
Gravity-carrier. H. J. Buck. No. 1,022,823; Apr. 9; Sp. p. 2296; Gas. vol. 177; p. 392.
Grease and oil extracting apparatus. C. Edgerton. No. 1,024,838; Apr. 30; Sp. p. 6674; Gas. vol. 177; p. 1174.
Grease-cup. G. W. Bowen. No. 1,024,673; Apr. 30; Sp. p. 6328; Gas. vol. 177; p. 1115.
Grease-cup plug. G. H. Hudson. No. 1,022,317; Apr. 2; Sp. p. 1174; Gas. vol. 177; p. 188.
Greenhouse-bench. M. Wimandy. No. 1,022,616; Apr. 9; Sp. p. 1826; Gas. vol. 177; p. 319.
Greenhouse construction. M. I. Jacobs. No. 1,022,947; Apr. 9; Sp. p. 2562; Gas. vol. 177; p. 435.
Greenhouse-gutter. M. I. Jacobs. No. 1,022,948; Apr. 9; Sp. p. 2563; Gas. vol. 177; p. 435.
Grinding and buffing wheel. L. H. Brinkman. No. 1,023,607; Apr. 23; Sp. p. 4328; Gas. vol. 177; p. 783.
Grinding-machine. C. R. Carpenter. No. 1,022,224; Apr. 2; Sp. p. 995; Gas. vol. 177; p. 160.
Grinding-machine. E. D. Olsen. No. 1,023,589; Apr. 16; Sp. p. 3560; Gas. vol. 177; p. 634.
Grip device, Intermittent. C. Hess. No. 1,025,068; Apr. 30; Sp. p. 7173; Gas. vol. 177; p. 1258.
Grooves and the like upon the sides of rollers, &c., Machine for forming. H. Hess. No. 1,023,381; Apr. 16; Sp. p. 3479; Gas. vol. 177; p. 621.
Ground-clamp. H. W. Pleister. No. 1,024,021; Apr. 23; Sp. p. 4816; Gas. vol. 177; p. 855.
Grouting-machine. D. A. Osgood. No. 1,024,221; Apr. 23; Sp. p. 5289; Gas. vol. 177; p. 927.
Grubbing and ditching machine, Sage-brush-. S. M. Raber. No. 1,023,173; Apr. 16; Sp. p. 3082; Gas. vol. 177; p. 551.
Guard-attaching bracket. F. W. Schmidt. No. 1,021,802; Apr. 2; Sp. p. 99; Gas. vol. 177; p. 20.
Guitar. A. Larson. No. 1,022,081; Apr. 2; Sp. p. 596; Gas. vol. 177; p. 94.
Gums, Treating palo-amarillo and similar. G. B. Bradshaw. No. 1,024,178; Apr. 23; Sp. p. 5185; Gas. vol. 177; p. 911.
Gun-cleaning device. W. E. Hughes. No. 1,022,945; Apr. 9; Sp. p. 2559; Gas. vol. 177; p. 434.
Gun hand-brace. L. S. Myers. No. 1,022,437; Apr. 9; Sp. p. 1452; Gas. vol. 177; p. 260.
Gun-sight attachment, Telescopic. D. W. Matheson. No. 1,022,240; Apr. 2; Sp. p. 1053; Gas. vol. 177; p. 168.
Hacksaw-frame. J. W. McQuillan. No. 1,023,216; Apr. 16; Sp. p. 3161; Gas. vol. 177; p. 566.
Hair-clipper. R. Romano. No. 1,024,364; Apr. 23; Sp. p. 5550; Gas. vol. 177; p. 973.
Hair-cutter. S. Perrone. No. 1,023,786; Apr. 16; Sp. p. 4252; Gas. vol. 177; p. 747.
Hammer. C. S. Boden. No. 1,024,390; Apr. 23; Sp. p. 5593; Gas. vol. 177; p. 981.
Hammer-drills, Rotation device for. C. C. Hansen. No. 1,023,518; Apr. 16; Sp. p. 3757; Gas. vol. 177; p. 664.
Hammer, Pneumatic. C. B. French. No. 1,022,837; Apr. 9; Sp. p. 2323; Gas. vol. 177; p. 397.
Hammock. I. E. Palmer. (Reissue.) No. 13,401; Apr. 9; Sp. p. 2917; Gas. vol. 177; p. 497.
Hammock or swinging couch. H. A. Vossmer. No. 1,022,164; Apr. 2; Sp. p. 872; Gas. vol. 177; p. 139.
Handle: *See* Lamp-handle; Pick-handle; Satchel, &c., handle; Utensil-handle.
Handle. R. J. Prins. No. 1,022,880; Apr. 2; Sp. p. 1304; Gas. vol. 177; p. 211.
Handle-bars, Adjustable. W. J. Steffel. No. 1,024,914; Apr. 30; Sp. p. 6823; Gas. vol. 177; p. 1200.
Handle-clamp, Adjustable. G. E. Whipple. No. 1,024,047; Apr. 23; Sp. p. 4886; Gas. vol. 177; p. 865.

Handling, sorting, and delivering parcels and the like, Apparatus for. A. W. Gattie and A. G. Seaman. No. 1,022,935; Apr. 9; Sp. p. 2531; Gas. vol. 177; p. 431.
Hanger: *See* Article-hanger; Cable-hanger; Crape-hanger; Curtain-hanger; Eaves-trough hanger; Fixture-hanger; Garment-hanger; Lamp-hanger; Shade and curtain hanger; Trousers-hanger.
Hanger for false work. A. Arnn. No. 1,023,192; Apr. 16; Sp. p. 3117; Gas. vol. 177; p. 558.
Hanger-support. W. Goss. No. 1,021,867; Apr. 2; Sp. p. 253; Gas. vol. 177; p. 41.
Hardy-operating device. H. C. Gist. No. 1,024,848; Apr. 30; Sp. p. 6696; Gas. vol. 177; p. 1178.
Harness. J. C. Harpham. No. 1,023,147; Apr. 16; Sp. p. 3015; Gas. vol. 177; p. 541.
Harness stop-motion device. F. Ehinger. No. 1,024,680; Apr. 30; Sp. p. 6344; Gas. vol. 177; p. 1118.
Harrow. M. Elsas. No. 1,021,977; Apr. 2; Sp. p. 488; Gas. vol. 177; p. 78.
Harrow. R. C. Pegrim. No. 1,022,500; Apr. 9; Sp. p. 1576; Gas. vol. 177; p. 282.
Harrow. M. Merkel. No. 1,023,436; Apr. 16; Sp. p. 3587; Gas. vol. 177; p. 638.
Harrow and roller, Combined. W. E. Younger. No. 1,023,058; Apr. 9; Sp. p. 2779; Gas. vol. 177; p. 473.
Harrow and seed-planter, Combined. J. A. Erickson. No. 1,023,631; Apr. 16; Sp. p. 3991; Gas. vol. 177; p. 701.
Harrow gang-equaliser, Disk-. L. B. Wygant. No. 1,022,915; Apr. 9; Sp. p. 2482; Gas. vol. 177; p. 423.
Harrow-tooth fastening. J. H. Anderson. No. 1,023,492; Apr. 16; Sp. p. 3703; Gas. vol. 177; p. 655.
Harvester and binder. Grain. A. L. Powell. No. 1,023,055; Apr. 9; Sp. p. 2718; Gas. vol. 177; p. 464.
Harvester attachment. W. Moore. No. 1,022,325; Apr. 2; Sp. p. 1203; Gas. vol. 177; p. 192.
Harvester attachment for engines. O. W. Foust. No. 1,023,011; Apr. 9; Sp. p. 2677; Gas. vol. 177; p. 456.
Harvester, Cane-. A. Gerdes. No. 1,022,813; Apr. 2; Sp. p. 1163; Gas. vol. 177; p. 187.
Harvester, Ensilage-. J. Weigel. No. 1,021,855; Apr. 2; Sp. p. 223; Gas. vol. 177; p. 37.
Harvester, Tea-. H. T. Coldwell. No. 1,024,499; Apr. 30; Sp. p. 5901; Gas. vol. 177; p. 1055.
Harvesters, Binding mechanism for corn-. L. E. Parsons. No. 1,021,948; Apr. 2; Sp. p. 414; Gas. vol. 177; p. 68.
Harvesters, Flax and other grain attachment for. F. Linha. No. 1,023,113; Apr. 9; Sp. p. 2891; Gas. vol. 177; p. 492.
Harvesters, Twisting mechanism for corn-. L. E. Parsons. No. 1,021,947; Apr. 2; Sp. p. 407; Gas. vol. 177; p. 67.
Harvesting machine, Cotton-. J. F. Appleby. No. 1,024,714; Apr. 30; Sp. p. 6414; Gas. vol. 177; p. 1130.
Harvesting-machine motor attachment. A. Johnson. No. 1,024,201; Apr. 23; Sp. p. 5248; Gas. vol. 177; p. 919.
Hasp-fastener. J. Gerschi. No. 1,022,839; Apr. 9; Sp. p. 2326; Gas. vol. 177; p. 398.
Hasp-fastener. R. E. Matthews. No. 1,023,747; Apr. 16; Sp. p. 4182; Gas. vol. 177; p. 734.
Hasp-hook. H. E. Frotz. No. 1,023,680; Apr. 16; Sp. p. 4067; Gas. vol. 177; p. 714.
Hat. L. Stevens. No. 1,024,750; Apr. 30; Sp. p. 6492; Gas. vol. 177; p. 1143.
Hat packing-ring. P. Berg. No. 1,024,243; Apr. 23; Sp. p. 5340; Gas. vol. 177; p. 930.
Hat-pin. A. B. Kokernot. No. 1,023,659; Apr. 16; Sp. p. 4038; Gas. vol. 177; p. 708.
Hat-pin guard. J. W. Bieracki. No. 1,022,120; Apr. 2; Sp. p. 779; Gas. vol. 177; p. 124.
Hat-pin-point protector. C. Ekker. No. 1,022,883; Apr. 9; Sp. p. 2318; Gas. vol. 177; p. 396.
Hat-pin-point protector. J. Kubicek. No. 1,023,663; Apr. 16; Sp. p. 4045; Gas. vol. 177; p. 709.
Hat-pin-point protector. M. Strba. No. 1,023,688; Apr. 16; Sp. p. 4084; Gas. vol. 177; p. 716.
Hat-pin-point protector. J. Balasa. No. 1,023,710; Apr. 16; Sp. p. 4124; Gas. vol. 177; p. 723.
Hat-pin protector. C. A. Huffmaster. No. 1,024,837; Apr. 23; Sp. p. 5505; Gas. vol. 177; p. 965.
Hat-pin protector. E. B. Eckhart. No. 1,024,563; Apr. 30; Sp. p. 6084; Gas. vol. 177; p. 1077.
Hat-pin protector or guard. C. H. Giese, Jr. No. 1,024,325; Apr. 23; Sp. p. 5484; Gas. vol. 177; p. 962.
Hatchet and adz, Combined. E. W. James. No. 1,021,931; Apr. 2; Sp. p. 370; Gas. vol. 177; p. 61.
Hay or grain gathering machine. T. S. Hamilton. No. 1,022,733; Apr. 9; Sp. p. 2117; Gas. vol. 177; p. 363.
Hay-rack. W. Wehmiller. No. 1,023,902; Apr. 23; Sp. p. 4572; Gas. vol. 177; p. 815.
Headlight, Automobile-. E. J. Lutwyche. No. 1,022,589; Apr. 9; Sp. p. 1760; Gas. vol. 177; p. 310.
Headlight, Automobile-. J. B. McKiel. No. 1,024,411; Apr. 23; Sp. p. 5675; Gas. vol. 177; p. 989.
Headlight-directing means, Automatic. J. P. McElliott. No. 1,021,843; Apr. 2; Sp. p. 200; Gas. vol. 177; p. 33.
Heater: *See* Car-heater; Curling-iron heater; Electric heater; Feed-water heater; Hot-water heater; Hot-water or steam heater; Orchard-heater; Sad-iron heater; Sap-heater; Soldering-iron heater; Steam and hot-water heater; Tank-heater; Tree-heater; Water-heater.
Heater and radiator, Combined. M. J. Wheeler. No. 1,023,450; Apr. 16; Sp. p. 3622; Gas. vol. 177; p. 642.
Heaters, Deflector for. J. S. Makin and H. A. Schellman. No. 1,022,854; Apr. 9; Sp. p. 2358; Gas. vol. 177; p. 403.
Heating and ventilating system. C. H. Smith. No. 1,024,035; Apr. 23; Sp. p. 4857; Gas. vol. 177; p. 861.
Heating apparatus. W. N. Dutton. No. 1,022,184; Apr. 2; Sp. p. 915; Gas. vol. 177; p. 146.
Heating apparatus, Electric. L. F. Parkhurst. No. 1,023,755; Apr. 16; Sp. p. 4194; Gas. vol. 177; p. 737.
Heating apparatus, Electric steam-. J. G. Wallmann. No. 1,025,002; Apr. 16; Sp. p. 3064; Gas. vol. 177; p. 901.
Heating apparatus for corn-cribs, Knockdown. L. C. Emmons. No. 1,023,787; Apr. 16; Sp. p. 4254; Gas. vol. 177; p. 747.
Heating device. J. W. MacDonald. No. 1,024,138; Apr. 23; Sp. p. 5101; Gas. vol. 177; p. 897.
Heating element, Electric. J. C. C. Macdonogh. No. 1,024,998; Apr. 30; Sp. p. 6996; Gas. vol. 177; p. 1229.
Heating element, Universal electric induction. J. L. Anderson. No. 1,023,701; Apr. 23; Sp. p. 4270; Gas. vol. 177; p. 777.
Heating-furnace. F. J. Nice. No. 1,022,204; Apr. 2; Sp. p. 958; Gas. vol. 177; p. 153.
Heating or cooling apparatus. L. A. Carter, J. C. Jones, and J. C. Spotts. No. 1,024,554; Apr. 30; Sp. p. 6068; Gas. vol. 177; p. 1074.
Heating system. W. H. Swett. No. 1,024,161; Apr. 23; Sp. p. 5150; Gas. vol. 177; p. 904.
Heating system. J. M. W. Kitchen. No. 1,024,788; Apr. 30; Sp. p. 6574; Gas. vol. 177; p. 1157.
Heating system, Steam-. C. A. Ball. No. 1,024,547; Apr. 30; Sp. p. 6063; Gas. vol. 177; p. 1072.
Heating systems, Feed-regulator for. H. Lemp. No. 1,022,032; Apr. 2; Sp. p. 597; Gas. vol. 177; p. 94.
Heating systems, Operating steam-. C. A. Ball. No. 1,024,546; Apr. 30; Sp. p. 6031; Gas. vol. 177; p. 1071.
Heel-breasting machine. B. B. Waterman. (Reissue.) No. 13,413; Apr. 30; Sp. p. 7243; Gas. vol. 177; p. 1270.
Heel-lining, Auxiliary. T. H. Rogers. No. 1,023,877; Apr. 23; Sp. p. 4503; Gas. vol. 177; p. 806.
Heel, Pieced. A. C. Redden. No. 1,024,609; Apr. 30; Sp. p. 6383; Gas. vol. 177; p. 1125.
Heels of boots and shoes, Tool for finishing the. Z. Beaudry. No. 1,024,612; Apr. 30; Sp. p. 6199; Gas. vol. 177; p. 1094.
Helix-coiling machine. F. B. Shuster. No. 1,023,099; Apr. 9; Sp. p. 2859; Gas. vol. 177; p. 487.
High-frequency apparatus. W. Dubilier. No. 1,023,185; Apr. 16; Sp. p. 2985; Gas. vol. 177; p. 537.
Hinge. J. G. Braun. No. 1,021,912; Apr. 2; Sp. p. 337; Gas. vol. 177; p. 56.
Hinge. J. Boness. No. 1,022,174; Apr. 2; Sp. p. 894; Gas. vol. 177; p. 142.
Hinge. J. C. Hylton. No. 1,022,588; Apr. 9; Sp. p. 1759; Gas. vol. 177; p. 310.
Hinge. J. A. Dupuis. No. 1,024,887; Apr. 30; Sp. p. 6672; Gas. vol. 177; p. 1174.
Hinge, Detachable. P. J. Peterson. No. 1,021,885; Apr. 2; Sp. p. 287; Gas. vol. 177; p. 47.
Hoe. H. W. Caudell. No. 1,023,720; Apr. 16; Sp. p. 4140; Gas. vol. 177; p. 727.
Hog-scraping machine. W. E. P. Meier. No. 1,024,412; Apr. 23; Sp. p. 5679; Gas. vol. 177; p. 989.
Hoist, Multiple. W. A. Barker. No. 1,022,349; Apr. 2; Sp. p. 1245; Gas. vol. 177; p. 199.
Hoisting apparatus. L. O. Forman. No. 1,024,885; Apr. 30; Sp. p. 6764; Gas. vol. 177; p. 1190.
Hoisting-engine. T. S. Miller. No. 1,024,520; Apr. 30; Sp. p. 5962; Gas. vol. 177; p. 1062.
Holdback. W. A. Hagerman. No. 1,022,626; Apr. 9; Sp. p. 1844; Gas. vol. 177; p. 323.
Holder-reel. C. A. Coggeshall. No. 1,023,816; Apr. 23; Sp. p. 4349; Gas. vol. 177; p. 786.
Hollow section. P. B. Motley. No. 1,023,163; Apr. 16; Sp. p. 3052; Gas. vol. 177; p. 547.
Hood, Fresh-air sleeping-. A. Bennett. No. 1,022,459; Apr. 9; Sp. p. 1500; Gas. vol. 177; p. 268.
Hoof-parer. C. Bursell. No. 1,023,990; Apr. 23; Sp. p. 4763; Gas. vol. 177; p. 845.
Hook: *See* Back-band hook; Clamp-hook; Garment-fastening hook; Hasp-hook; Snap-hook.
Hopper, Dry-food. C. H. Felker. No. 1,022,668; Apr. 9; Sp. p. 1937; Gas. vol. 177; p. 337.
Horn. E. C. Schmidhofer. No. 1,022,509; Apr. 9; Sp. p. 1591; Gas. vol. 177; p. 284.
Horn-gap switch and lightning-arrester. A. W. Burke. No. 1,022,619; Apr. 9; Sp. p. 1831; Gas. vol. 177; p. 320.
Horn, shell, and the like, Manufacture of imitation. F. Lebrell and R. Desgeorge. No. 1,023,022; Apr. 9; Sp. p. 2697; Gas. vol. 177; p. 460.
Horse-hitching weight. W. D. Lee. No. 1,024,406; Apr. 23; Sp. p. 5668; Gas. vol. 177; p. 987.
Horse-overshoe, Antislipping. A. L. Hardisty. No. 1,023,845; Apr. 23; Sp. p. 4431; Gas. vol. 177; p. 796.
Horse-overshoe, Non-slipping. J. B. Kopf. No. 1,023,431; Apr. 16; Sp. p. 3573; Gas. vol. 177; p. 630.
Horses and other hoofed animals, Overshoe for. J. E. MacDonald. No. 1,023,036; Apr. 9; Sp. p. 2835; Gas. vol. 177; p. 482.
Horses' manes, Holder for. B. C. McDonald. No. 1,024,600; Apr. 30; Sp. p. 6365; Gas. vol. 177; p. 1121.
Horseshoe. E. L. Taylor. No. 1,024,426; Apr. 23; Sp. p. 5705; Gas. vol. 177; p. 993.
Horseshoe-calk. P. S. Palmer. No. 1,022,867; Apr. 9; Sp. p. 2375; Gas. vol. 177; p. 407.

Hose-carriage. P. G. Esler. No. 1,022,583; Apr. 9; Sp. p. 1750; Gaz. vol. 177; p. 308.
Hose-clamp. J. S. Graham. No. 1,023,639; Apr. 16; Sp. p. 4006; Gaz. vol. 177; p. 703.
Hose-coupling. E. H. L. Englund. No. 1,022,624; Apr. 9; Sp. p. 1839; Gaz. vol. 177; p. 322.
Hose-coupling. J. W. and J. E. Stine. No. 1,022,759; Apr. 9; Sp. p. 2171; Gaz. vol. 177; p. 372.
Hose-coupling. V. Sanphy. No. 1,024,285; Apr. 23; Sp. p. 5419; Gaz. vol. 177; p. 949.
Hose-coupling. E. H. Gold. No. 1,024,627; Apr. 30; Sp. p. 6236; Gaz. vol. 177; p. 1099.
Hose-making machine. S. J. Sill. No. 1,024,604; Apr. 30; Sp. p. 6135; Gaz. vol. 177; p. 1091.
Hose-pipe, Metallic flexible. B. M. Pechstein. No. 1,023,032; Apr. 9; Sp. p. 2714; Gaz. vol. 177; p. 464.
Hose-support for fire-hose. P. Mueller and W. T. Mason. No. 1,023,218; Apr. 16; Sp. p. 3164; Gaz. vol. 177; p. 566.
Hose-supporter. C. Sayers. No. 1,022,267; Apr. 2; Sp. p. 1082; Gaz. vol. 177; p. 173.
Hose-supporter strip. C. J. White. No. 1,023,101; Apr. 9; Sp. p. 2563; Gaz. vol. 177; p. 457.
Hosiery-frames, Welting mechanism for flat. M. S. Esche. No. 1,024,842; Apr. 30; Sp. p. 6683; Gaz. vol. 177; p. 1176.
Hot-air furnace, Gas-burning. J. L. Whitney. No. 1,024,757; Apr. 30; Sp. p. 6503; Gaz. vol. 177; p. 1145.
Hot-water heater. J. A. Hill. No. 1,022,844; Apr. 9; Sp. p. 2340; Gaz. vol. 177; p. 400.
Hot-water heater. A. J. Gohmann. No. 1,025,084; Apr. 30; Sp. p. 7165; Gaz. vol. 177; p. 1257.
Hot-water or steam heater. W. A. Wiedebusch. No. 1,024,660; Apr. 30; Sp. p. 6301; Gaz. vol. 177; p. 1110.
Hub and bearing-sleeve, Wheel-. L. Holland-Letz. No. 1,024,726; Apr. 30; Sp. p. 6436; Gaz. vol. 177; p. 1134.
Hub for vehicle-wheels, Resilient. E. J. and I. G. Seifried. No. 1,022,567; Apr. 9; Sp. p. 1715; Gaz. vol. 177; p. 303.
Hub, Roller-bearing. W. C. Eberhart and S. Glaser. No. 1,022,307; Apr. 2; Sp. p. 1154; Gaz. vol. 177; p. 185.
Hub, Wheel-. J. J. McGuire. No. 1,024,270; Apr. 23; Sp. p. 5396; Gaz. vol. 177; p. 945.
Hydrant. J. H. Whitehouse. No. 1,021,959; Apr. 2; Sp. p. 447; Gaz. vol. 177; p. 72.
Hydraulic jack. G. Nicolai. No. 1,022,865; Apr. 9; Sp. p. 2372; Gaz. vol. 177; p. 406.
Hydraulic lubricator. F. Mueller. No. 1,024,602; Apr. 30; Sp. p. 6368; Gaz. vol. 177; p. 1122.
Hydraulic lubricator. F. Mueller. No. 1,024,693; Apr. 30; Sp. p. 6369; Gaz. vol. 177; p. 1122.
Hydraulic motor. N. V. Johnson. No. 1,024,340; Apr. 23; Sp. p. 5509; Gaz. vol. 177; p. 965.
Hydraulic-power plant. J. T. Dougine. No. 1,024,188; Apr. 23; Sp. p. 5218; Gaz. vol. 177; p. 914.
Hydraulic press. M. Rothe. No. 1,024,024; Apr. 23; Sp. p. 4824; Gaz. vol. 177; p. 856.
Hydraulic traverse mechanism. E. S. Cole. No. 1,025,111; Apr. 30; Sp. p. 7223; Gaz. vol. 177; p. 1266.
Hydroaeroplane. E. Forlanini. No. 1,024,067; Apr. 23; Sp. p. 4920; Gaz. vol. 177; p. 872.
Hydrocarbon-burner. C. Backinger. No. 1,022,348; Apr. 2; Sp. p. 1240; Gaz. vol. 177; p. 199.
Hydrocarbon-burner. R. L. D'Espujols. No. 1,023,422; Apr. 16; Sp. p. 3559; Gaz. vol. 177; p. 634.
Hydrocarbon-burner. A. R. Anthony. No. 1,023,707; Apr. 16; Sp. p. 4113; Gaz. vol. 177; p. 722.
Hydrocarbon-burner. A. G. Sherman. No. 1,024,868; Apr. 30; Sp. p. 6737; Gaz. vol. 177; p. 1185.
Hydrocarbon burner, Fluid-. P. Root. No. 1,022,263; Apr. 2; Sp. p. 1075; Gaz. vol. 177; p. 171.
Hydrocarbon-engine. H. Hyde and J. Gage. No. 1,022,027; Apr. 2; Sp. p. 587; Gaz. vol. 177; p. 93.
Hydrocarbon-furnace. J. A. Darst and M. Brittain. No. 1,025,054; Apr. 30; Sp. p. 7094; Gaz. vol. 177; p. 1247.
Ice-cream freezer. J. S. Parrish. No. 1,022,752; Apr. 9; Sp. p. 2155; Gaz. vol. 177; p. 369.
Ice-cream-freezer-supporting attachment. I. G. Hopkins. No. 1,024,779; Apr. 30; Sp. p. 6550; Gaz. vol. 177; p. 1153.
Ice-creeper. E. Wegmann-Egmann. No. 1,023,603; Apr. 16; Sp. p. 3935; Gaz. vol. 177; p. 691.
Ice-cutting-up machine. E. E. Nolan and W. H. Pierce. No. 1,024,594; Apr. 30; Sp. p. 6159; Gaz. vol. 177; p. 1088.
Igniter. H. L. Allen. No. 1,024,964; Apr. 30; Sp. p. 6928; Gaz. vol. 177; p. 1218.
Igniter, Sparking. L. H. Wattles. No. 1,024,710; Apr. 30; Sp. p. 6404; Gaz. vol. 177; p. 1128.
Igniting device. W. S. Andrews and T. Van Aller. No. 1,024,718; Apr. 30; Sp. p. 6413; Gaz. vol. 177; p. 1129.
Ignition apparatus, Current interrupter and distributer for electrical. G. Honold. No. 1,022,241; Apr. 2; Sp. p. 1040; Gaz. vol. 177; p. 166.
Ignition apparatus, Portable faultfinding device for electrical. E. P. Hedges. No. 1,024,935; Apr. 30; Sp. p. 6874; Gaz. vol. 177; p. 1207.
Ignition system, Dual. R. H. Cunningham. No. 1,022,828; Apr. 9; Sp. p. 2306; Gaz. vol. 177; p. 394.
Ignition system, Dual. E. H. Cunningham. No. 1,023,552; Apr. 16; Sp. p. 3816; Gaz. vol. 177; p. 674.
Ignition systems, Mechanical interrupter for electrical. G. Honold. No. 1,023,930; Apr. 23; Sp. p. 4654; Gaz. vol. 177; p. 827.
Ignition-tube. A. Butsch. No. 1,025,050; Apr. 30; Sp. p. 7088; Gaz. vol. 177; p. 1246.
Impulses, Determining frequency of periodic. R. A. Fessenden. No. 1,022,584; Apr. 9; Sp. p. 1752; Gaz. vol. 177; p. 309.
Incandescent mantle holder and guard. R. E. Bruckner and C. A. McCune. No. 1,021,967; Apr. 2; Sp. p. 467; Gaz. vol. 177; p. 74.
Incandescent mantle, Inverted. C. K. Harding. No. 1,022,133; Apr. 2; Sp. p. 811; Gaz. vol. 177; p. 128.
Incubator. L. C. Byce. No. 1,022,824; Apr. 9; Sp. p. 2297; Gaz. vol. 177; p. 393.
Index for loose-leaf records and the like. S. B. Kirtley. No. 1,023,941; Apr. 23; Sp. p. 4664; Gaz. vol. 177; p. 829.
Index-tab. V. Munger and C. S. Carter. No. 1,023,219; Apr. 16; Sp. p. 3165; Gaz. vol. 177; p. 567.
Indicating and protective device. D. R. Knapp. No. 1,023,043; Apr. 23; Sp. p. 4667; Gaz. vol. 177; p. 829.
Indicating device. A. McNab. No. 1,024,452; Apr. 23; Sp. p. 5761; Gaz. vol. 177; p. 1002.
Indicator: *See* Car-indicator; Lock-indicator; Number-indicator; Route-indicator; Street and station indicator; Tone-volume indicator; Vehicle direction-indicator.
Indicator, S. T. Applegate. No. 1,024,061; Apr. 23; Sp. p. 4892; Gaz. vol. 177; p. 866.
Indicator-actuating mechanism. O. E. Kellum. No. 1,022,742; Apr. 9; Sp. p. 2134; Gaz. vol. 177; p. 366.
Indicator and stop device. C. A. Brink. No. 1,021,920; Apr. 2; Sp. p. 151; Gaz. vol. 177; p. 26.
Induction-motor, Reversible. F. R. Kunkel. No. 1,024,635; Apr. 30; Sp. p. 6261; Gaz. vol. 177; p. 1102.
Inductor-alternator. E. Podlesak. No. 1,024,418; Apr. 23; Sp. p. 5687; Gaz. vol. 177; p. 991.
Ingots or billets, Mechanism for piercing metallic. M. U. Wikström. No. 1,022,524; Apr. 9; Sp. p. 1626; Gaz. vol. 177; p. 280.
Injector for boilers, Automatic. W. J. Lamar. No. 1,023,110; Apr. 9; Sp. p. 2886; Gaz. vol. 177; p. 491.
Ink-distributing roll. J. S. McKinley. No. 1,022,563; Apr. 9; Sp. p. 1709; Gaz. vol. 177; p. 301.
Inlaying metal in masses such as celluloid, ebonite, and the like. J. Kaufmann. No. 1,024,203; Apr. 23; Sp. p. 5262; Gaz. vol. 177; p. 920.
Insect-destroyer. W. C. Pinson. No. 1,024,698; Apr. 30; Sp. p. 6350; Gaz. vol. 177; p. 1124.
Insect-destroying apparatus. D. C. McCroskey. No. 1,022,200; Apr. 2; Sp. p. 953; Gaz. vol. 177; p. 152.
Insect-killer. W. W. Parsons and H. Spalding. No. 1,021,883; Apr. 2; Sp. p. 285; Gaz. vol. 177; p. 46.
Insoles, Making. G. L. Preble. No. 1,022,591; Apr. 2; Sp. p. 1323; Gaz. vol. 177; p. 215.
Instruction, Means for imparting. N. Göthberg. No. 1,024,195; Apr. 23; Sp. p. 5282; Gaz. vol. 177; p. 917.
Insulating fabric, Machine for making. G. H. Ellis. No. 1,022,778; Apr. 9; Sp. p. 2200; Gaz. vol. 177; p. 376.
Insulating tie-bar. C. A. Christofferson. No. 1,023,923; Apr. 23; Sp. p. 4622; Gaz. vol. 177; p. 822.
Insulator. J. A. Guthrie. No. 1,022,026; Apr. 2; Sp. p. 586; Gaz. vol. 177; p. 92.
Insulator. G. W. Willis. No. 1,022,093; Apr. 9; Sp. p. 2640; Gaz. vol. 177; p. 450.
Insulator-pin. C. J. Boyland. No. 1,022,121; Apr. 2; Sp. p. 780; Gaz. vol. 177; p. 124.
Internal-combustion engine. J. S. Jennings, Jr. No. 1,022,890; Apr. 2; Sp. p. 1320; Gaz. vol. 177; p. 214.
Internal-combustion engine. J. J. McIntyre. No. 1,022,492; Apr. 9; Sp. p. 1554; Gaz. vol. 177; p. 279.
Internal-combustion engine. G. A. Troutt. No. 1,022,803; Apr. 9; Sp. p. 2255; Gaz. vol. 177; p. 385.
Internal-combustion engine. M. F. Bates. No. 1,023,546; Apr. 16; Sp. p. 3808; Gaz. vol. 177; p. 672.
Internal-combustion engine. J. C. Peache. No. 1,023,957; Apr. 23; Sp. p. 4699; Gaz. vol. 177; p. 833.
Internal-combustion engine. H. Whidbourne and J. J. Lishman. No. 1,024,711; Apr. 30; Sp. p. 6408; Gaz. vol. 177; p. 1128.
Internal-combustion engine. E. Moewes and A. Vischer. No. 1,024,862; Apr. 30; Sp. p. 6720; Gaz. vol. 177; p. 1183.
Internal-combustion generator. I. C. Jennings. No. 1,024,079; Apr. 23; Sp. p. 4942; Gaz. vol. 177; p. 876.
Internal-combustion motor. B. Braselle. No. 1,022,177; Apr. 2; Sp. p. 900; Gaz. vol. 177; p. 144.
Internal-combustion motor. B. Braselle. No. 1,022,178; Apr. 2; Sp. p. 903; Gaz. vol. 177; p. 144.
Interwound fabric, Laminated cohesive. L. A. Subers. No. 1,024,915; Apr. 30; Sp. p. 6830; Gaz. vol. 177; p. 1201.
Intestine-cleaning machine. G. S. Billman. No. 1,023,547; Apr. 16; Sp. p. 3809; Gaz. vol. 177; p. 672.
Iron: *See* Flat-iron; Sad-iron; Soldering-iron.
Iron ores, Treating. B. F. Halvorsen. No. 1,024,629; Apr. 30; Sp. p. 6249; Gaz. vol. 177; p. 1100.
Ironing-board. M. S. Clarke. No. 1,022,404; Apr. 9; Sp. p. 1361; Gaz. vol. 177; p. 240.
Ironing-board. J. B. Cottle. No. 1,024,720; Apr. 30; Sp. p. 6425; Gaz. vol. 177; p. 1132.
Ironing or finishing machine, Turn-down-collar edge. W. A. Zeidler. No. 1,022,169; Apr. 2; Sp. p. 886; Gaz. vol. 177; p. 141.
Ironing-table. C. E. Zeisinger. No. 1,022,996; Apr. 9; Sp. p. 2646; Gaz. vol. 177; p. 451.

Isophrane, Manufacture of. O. Silberrad. No. 1,022,336; Apr. 2; Sp. p. 1227; Gaz. vol. 177; p. 196.
Jack: *See* Hydraulic jack; Lifting-jack; Pump-jack; Track-lifting jack.
Jar: *See* Fruit-jar.
Jar opener, Fruit-. H. D. Auld. No. 1,022,574; Apr. 9; Sp. p. 1735; Gaz. vol. 177; p. 306.
Jewelry, Front for articles of. F. P. Barney. No. 1,024,055; Apr. 23; Sp. p. 4897; Gaz. vol. 177; p. 868.
Jewels, Making meter-. H. R. Connell. No. 1,023,299; Apr. 16; Sp. p. 3320; Gaz. vol. 177; p. 594.
Joint: *See* Cross-joint; Flexible joint; Pipe-joint; Rail-joint; Socket-joint; Universal joint.
Joint-chair. G. Barclay. No. 1,025,044; Apr. 30; Sp. p. 7077; Gaz. vol. 177; p. 1244.
Joint-machine and welt-cutter. C. S. Norden. No. 1,023,953; Apr. 23; Sp. p. 4668; Gaz. vol. 177; p. 832.
Journal-bearing. R. T. Pearce. No. 1,021,846; Apr. 2; Sp. p. 204; Gaz. vol. 177; p. 34.
Journal-box-securing mechanism. A. O. Buckius, Jr. No. 1,023,809; Apr. 23; Sp. p. 4835; Gaz. vol. 177; p. 784.
Journal-box-securing mechanism. H. F. Pope. No. 1,024,456; Apr. 23; Sp. p. 5769; Gaz. vol. 177; p. 1003.
Junction-box. T. E. Murray. No. 1,023,220; Apr. 16; Sp. p. 3167; Gaz. vol. 177; p. 567.
Kerosene-burner regulator. H. Lemp. No. 1,024,209; Apr. 23; Sp. p. 5261; Gaz. vol. 177; p. 922.
Key: *See* Lifting-key.
Key, E. von Varrens. No. 1,022,900; Apr. 9; Sp. p. 2440; Gaz. vol. 177; p. 417.
Key-opening can. F. Rudolphi and S. Tevander. No. 1,022,050; Apr. 2; Sp. p. 587; Gaz. vol. 177; p. 101.
Kinematograph and like films, Means for cleaning. A. B. Seaborne. No. 1,022,510; Apr. 9; Sp. p. 1592; Gaz. vol. 177; p. 285.
Kinematograph-films, Method of and device for cutting out contour-bands used in coloring. C. Sciamengo. No. 1,022,270; Apr. 2; Sp. p. 1067; Gaz. vol. 177; p. 174.
Kinematographs and sound-production apparatus, Apparatus for synchronously operating combined. C. M. Hepworth. No. 1,023,846; Apr. 23; Sp. p. 4434; Gaz. vol. 177; p. 796.
Kite, Biplane. O. Beth. No. 1,022,298; Apr. 2; Sp. p. 1124; Gaz. vol. 177; p. 181.
Knife: *See* Blade-protecting knife; Pocket-knife.
Knife-cleaner. C. A. Wild. No. 1,024,541; Apr. 30; Sp. p. 6020; Gaz. vol. 177; p. 1070.
Knitting frame, Straight-. B. Kaiser and G. Walther. No. 1,023,763; Apr. 16; Sp. p. 4206; Gaz. vol. 177; p. 739.
Knitting-machine. E. A. Hirner. No. 1,023,312; Apr. 16; Sp. p. 3353; Gaz. vol. 177; p. 598.
Knitting-machine drop-stitch mechanism. F. W. Robinson. No. 1,021,799; Apr. 2; Sp. p. 94; Gaz. vol. 177; p. 10.
Knitting machines, Automatic take-up device for flat-. C. Goebel. No. 1,022,233; Apr. 2; Sp. p. 1025; Gaz. vol. 177; p. 163.
Knitting-needle. H. Heaton. No. 1,022,238; Apr. 2; Sp. p. 1034; Gaz. vol. 177; p. 165.
Knitting seamless plated hosiery. E. A. Hirner. No. 1,023,313; Apr. 16; Sp. p. 3356; Gaz. vol. 177; p. 599.
Knockdown bin or tank. M. V. Hostetter. No. 1,024,133; Apr. 23; Sp. p. 5000; Gaz. vol. 177; p. 895.
Knockdown box. J. J. Long. No. 1,022,098; Apr. 2; Sp. p. 781; Gaz. vol. 177; p. 117.
Knockdown stand, stool, or the like. J. F. L. Uhl. No. 1,023,181; Apr. 16; Sp. p. 3094; Gaz. vol. 177; p. 553.
Knot-tier. V. S. Westcott. No. 1,024,873; Apr. 30; Sp. p. 6745; Gaz. vol. 177; p. 1187.
Labeling-machine. F. O. Woodland. No. 1,023,911; Apr. 23; Sp. p. 4594; Gaz. vol. 177; p. 818.
Labeling machine, Bottle-. E. Ernold. No. 1,023,143; Apr. 16; Sp. p. 3068; Gaz. vol. 177; p. 540.
Lac, Treating. J. Johannes. No. 1,024,788; Apr. 30; Sp. p. 6557; Gaz. vol. 177; p. 1156.
Lace fabric. H. Boecher. No. 1,024,247; Apr. 23; Sp. p. 5243; Gaz. vol. 177; p. 937.
Lace guide. Boot and shoe. A. F. von Gillern. No. 1,024,888; Apr. 30; Sp. p. 6771; Gaz. vol. 177; p. 1191.
Lacing device, Shoe-. H. B. Woods. No. 1,022,803; Apr. 9; Sp. p. 2265; Gaz. vol. 177; p. 387.
Ladder. P. E. Vierhellier. No. 1,024,380; Apr. 23; Sp. p. 5576; Gaz. vol. 177; p. 978.
Ladder, Box-car. O. Anderson. No. 1,022,765; Apr. 9; Sp. p. 2179; Gaz. vol. 177; p. 373.
Ladder, Car-. W. S. Schroeder. No. 1,024,654; Apr. 30; Sp. p. 6290; Gaz. vol. 177; p. 1108.
Lakes, Manufacture of. E. Ulrichs. No. 1,022,612; Apr. 9; Sp. p. 1819; Gaz. vol. 177; p. 318.
Lamp, Arc-. R. Fleming and E. J. Guay. No. 1,022,641; Apr. 9; Sp. p. 1660; Gaz. vol. 177; p. 295.
Lamp, Arc-. G. Baldauf and E. Presser. No. 1,023,293; Apr. 16; Sp. p. 3312; Gaz. vol. 177; p. 592.
Lamp, Arc-. P. Hanisch and J. Rosemeyer. No. 1,023,424; Apr. 16; Sp. p. 3563; Gaz. vol. 177; p. 634.
Lamp-bracket, Adjustable. T. C. Lace. No. 1,023,259; Apr. 16; Sp. p. 3245; Gaz. vol. 177; p. 580.
Lamp bracket and socket, Electric-. E. L. Partridge. No. 1,022,328; Apr. 2; Sp. p. 1207; Gaz. vol. 177; p. 193.
Lamp-chimney. Y. K. Buell. No. 1,022,353; Apr. 2; Sp. p. 1252; Gaz. vol. 177; p. 201.
Lamp-connector. J. B. McKiel. No. 1,024,643; Apr. 30; Sp. p. 6271; Gaz. vol. 177; p. 1104.
Lamp, Electric-arc. E. Weintraub. No. 1,022,009; Apr. 2; Sp. p. 557; Gaz. vol. 177; p. 87.
Lamp fixture, Electric-. A. G. McArdle. No. 1,025,005; Apr. 30; Sp. p. 7012; Gaz. vol. 177; p. 1231.
Lamp, Gas-. S. B. Harvey. No. 1,024,190; Apr. 23; Sp. p. 5242; Gaz. vol. 177; p. 918.
Lamp handle, Portable-incandescent-. L. T. Washington. No. 1,023,449; Apr. 16; Sp. p. 3620; Gaz. vol. 177; p. 642.
Lamp hanger, Arc-. G. E. Stevens. No. 1,022,514; Apr. 9; Sp. p. 1597; Gaz. vol. 177; p. 296.
Lamp hanger, Arc-. J. T. Boechlyn. No. 1,022,827; Apr. 9; Sp. p. 1635; Gaz. vol. 177; p. 290.
Lamp hanger, Electric-. E. E. Schellenger. No. 1,024,029; Apr. 23; Sp. p. 4840; Gaz. vol. 177; p. 858.
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Lamp-holder. W. Klement. No. 1,023,942; Apr. 23; Sp. p. 4666; Gaz. vol. 177; p. 829.
Lamp-holder and reflector, Adjustable. G. H. Amend. No. 1,022,618; Apr. 9; Sp. p. 1830; Gaz. vol. 177; p. 320.
Lamp, Incandescent. L. Glaser. No. 1,023,307; Apr. 16; Sp. p. 3340; Gaz. vol. 177; p. 596.
Lamp, Incandescent. A. F. Thompson. No. 1,024,378; Apr. 23; Sp. p. 5572; Gaz. vol. 177; p. 977.
Lamp, Miner's. W. P. Rice. No. 1,024,362; Apr. 23; Sp. p. 5547; Gaz. vol. 177; p. 972.
Lamp, Miner's safety-. E. A. Hallwood. No. 1,023,563; Apr. 16; Sp. p. 3848; Gaz. vol. 177; p. 678.
Lamp or illuminator for autos and other vehicles. W. K. Lenhart. No. 1,024,210; Apr. 23; Sp. p. 5266; Gaz. vol. 177; p. 923.
Lamp, Portable electric. E. Gottschalck. No. 1,022,072; Apr. 2; Sp. p. 679; Gaz. vol. 177; p. 108.
Lamp, Portable electric. E. Gottschalck. No. 1,022,073; Apr. 2; Sp. p. 681; Gaz. vol. 177; p. 109.
Lamp, Self-righting. L. A. Bartlett. No. 1,023,062; Apr. 9; Sp. p. 2789; Gaz. vol. 177; p. 474.
Lamp, Signal-. H. C. Wagner. No. 1,024,302; Apr. 23; Sp. p. 5445; Gaz. vol. 177; p. 954.
Lamp-socket. R. B. Benjamin. No. 1,023,916; Apr. 23; Sp. p. 4611; Gaz. vol. 177; p. 821.
Lamp socket, Electric-. H. Wheeler. No. 1,022,906; Apr. 9; Sp. p. 2464; Gaz. vol. 177; p. 419.
Lamp socket, Electric-. G. W. Goodridge. No. 1,024,129; Apr. 23; Sp. p. 5083; Gaz. vol. 177; p. 894.
Lamp-sockets, Detachable chain-guide for. A. S. Lyhne. No. 1,023,434; Apr. 16; Sp. p. 3584; Gaz. vol. 177; p. 637.
Lamp-stand. F. Himes-Cox. No. 1,021,918; Apr. 2; Sp. p. 349; Gaz. vol. 177; p. 58.
Lamp, Vehicle-. R. G. Harris. No. 1,023,519; Apr. 16; Sp. p. 3768; Gaz. vol. 177; p. 664.
Lamps, Guard for incandescent. H. Hubbell. No. 1,022,740; Apr. 9; Sp. p. 2130; Gaz. vol. 177; p. 365.
Lamps, Illuminant for electrical incandescent. O. M. Thowless. No. 1,023,485; Apr. 16; Sp. p. 3688; Gaz. vol. 177; p. 653.
Lamps, Lock-guard for incandescent. H. Hubbell. No. 1,022,739; Apr. 9; Sp. p. 2128; Gaz. vol. 177; p. 365.
Lamps, Mantle-burner for kerosene-. G. S. Rider. No. 1,022,700; Apr. 9; Sp. p. 2021; Gaz. vol. 177; p. 350.
Lamps, Tool for handling electric globe-. A. Santini. No. 1,024,286; Apr. 23; Sp. p. 5419; Gaz. vol. 177; p. 949.
Land-worker and seeder. E. Hovey. No. 1,021,929; Apr. 2; Sp. p. 366; Gaz. vol. 177; p. 61.
Lantern-extinguisher. C. T. Siebert. No. 1,022,209; Apr. 2; Sp. p. 969; Gaz. vol. 177; p. 155.
Lantern or lamp. C. C. Briand. No. 1,022,821; Apr. 9; Sp. p. 2293; Gaz. vol. 177; p. 392.
Last. E. Brothers. No. 1,021,821; Apr. 2; Sp. p. 157; Gaz. vol. 177; p. 26.
Last. G. W. Sampson. No. 1,024,600; Apr. 30; Sp. p. 6179; Gaz. vol. 177; p. 1090.
Last and last-support. T. Rendle. No. 1,023,760; Apr. 16; Sp. p. 4204; Gaz. vol. 177; p. 738.
Last, Shoe-. J. S. Busky, Jr. No. 1,023,718; Apr. 16; Sp. p. 4133; Gaz. vol. 177; p. 725.
Lasting-machine. M. Brock. No. 1,021,860; Apr. 2; Sp. p. 235; Gaz. vol. 177; p. 38.
Lasting-machine. W. Chick. No. 1,022,402; Apr. 9; Sp. p. 1356; Gaz. vol. 177; p. 248.
Lasting-machine. A. E. Jerram. No. 1,022,420; Apr. 9; Sp. p. 1406; Gaz. vol. 177; p. 254.
Lasting-machine attachment, Shoe-. R. Bunyan. No. 1,022,299; Apr. 2; Sp. p. 1141; Gaz. vol. 177; p. 183.
Lasting-plate clamp. C. G. Johnson. No. 1,022,421; Apr. 9; Sp. p. 1421; Gaz. vol. 177; p. 255.
Latch. S. Ducsay. No. 1,022,881; Apr. 9; Sp. p. 2315; Gaz. vol. 177; p. 395.
Latch. R. F. Cook. No. 1,023,624; Apr. 16; Sp. p. 3978; Gaz. vol. 177; p. 699.
Latch, Door-. G. T. Buddle. No. 1,022,769; Apr. 9; Sp. p. 2186; Gaz. vol. 177; p. 375.
Latch, Gate-. E. Raths. No. 1,022,872; Apr. 9; Sp. p. 2339; Gaz. vol. 177; p. 403.
Latch, Gate-. G. W. and C. E. Goss. No. 1,023,308; Apr. 16; Sp. p. 3342; Gaz. vol. 177; p. 597.
Latch, Gate-. A. W. Sprague and T. E. Mulroyan. No. 1,024,705; Apr. 30; Sp. p. 6392; Gaz. vol. 177; p. 1126.
Latch, Night-. F. Soley. No. 1,024,871; Apr. 23; Sp. p. 5569; Gaz. vol. 177; p. 975.
Latch, Night-. H. G. Voight. No. 1,024,479; Apr. 23; Sp. p. 5629; Gaz. vol. 177; p. 1013.
Lathe. N. D. Chard. No. 1,022,731; Apr. 9; Sp. p. 2087; Gaz. vol. 177; p. 358.

Lathe appliance. G. E. Greenleaf. No. 1,021,771; Apr. 2; Sp. p. 32; Gaz. vol. 177; p. 8.
Lathe attachment. R. E. Garrett. No. 1,024,254; Apr. 23; Sp. p. 5361; Gaz. vol. 177; p. 939.
Lathe, Spindle-turning. C. H. Waymoth. No. 1,022,450; Apr. 9; Sp. p. 1474; Gaz. vol. 177; p. 265.
Lathe-tool. R. R. Shapley. No. 1,021,899; Apr. 2; Sp. p. 315; Gaz. vol. 177; p. 52.
Lathes, &c., Adjustable dapper or carrier for. N. W. Baechle. No. 1,022,118; Apr. 2; Sp. p. 777; Gaz. vol. 177; p. 123.
Lathing-securing tack-strip. A. H. Gilmore. No. 1,023,837; Apr. 23; Sp. p. 4419; Gaz. vol. 177; p. 794.
Leaf-turner, Automatic. J. A. Andrew. No. 1,022,921; Apr. 9; Sp. p. 2495; Gaz. vol. 177; p. 423.
Lease-rod support, Movable. A. H. Sawtell. No. 1,022,382; Apr. 2; Sp. p. 1307; Gaz. vol. 177; p. 211.
Leather, Preparation of chrome-. A. Wolf. No. 1,023,451; Apr. 16; Sp. p. 3623; Gaz. vol. 177; p. 642.
Leather-stitching machine. B. H. Thelsen and G. S. Keller. No. 1,024,162; Apr. 23; Sp. p. 5150; Gaz. vol. 177; p. 904.
Leg, Artificial. C. A. Frees. No. 1,023,247; Apr. 16; Sp. p. 3219; Gaz. vol. 177; p. 575.
Lens blanks, Making bifocal-. W. I. Seymour. No. 1,024,486; Apr. 23; Sp. p. 5840; Gaz. vol. 177; p. 1016.
Let-off, Friction. O. Dalfond. No. 1,024,064; Apr. 23; Sp. p. 4915; Gaz. vol. 177; p. 871.
Letters, Forming composite stripe for making metallic. V. C. Smith. No. 1,023,527; Apr. 16; Sp. p. 3767; Gaz. vol. 177; p. 666.
Levee-machine. W. R. Bordges. No. 1,022,768; Apr. 9; Sp. p. 2184; Gaz. vol. 177; p. 374.
Level. B. F. Davis. No. 1,023,301; Apr. 16; Sp. p. 3327; Gaz. vol. 177; p. 594.
Level. W. L. Couture. No. 1,024,881; Apr. 30; Sp. p. 6658; Gaz. vol. 177; p. 1172.
Level. G. F. Harris. No. 1,025,086; Apr. 30; Sp. p. 7170; Gaz. vol. 177; p. 1257.
Lever mechanism. A. Johnston. No. 1,021,836; Apr. 2; Sp. p. 190; Gaz. vol. 177; p. 31.
Levers, Mechanism for automatically operating. T. A. McCall. No. 1,024,092; Apr. 23; Sp. p. 4979; Gaz. vol. 177; p. 880.
Life-preserver, Aquatic. E. V. Henderson. No. 1,023,380; Apr. 16; Sp. p. 3478; Gaz. vol. 177; p. 620.
Life-saving device. J. J. Bectenwald. No. 1,023,759; Apr. 16; Sp. p. 4202; Gaz. vol. 177; p. 738.
Lifter: *See* Package-lifter; Spittoon-lifter.
Lifting-jack. J. Y. Kline. No. 1,024,860; Apr. 30; Sp. p. 6716; Gaz. vol. 177; p. 1182.
Lifting-key. H. Willson. No. 1,023,775; Apr. 16; Sp. p. 4230; Gaz. vol. 177; p. 743.
Light: *See* Roof-light; Search-light.
Lighter, Portable. C. Hubert. No. 1,022,140; Apr. 2; Sp. p. 824; Gaz. vol. 177; p. 131.
Lighting apparatus. R. M. Dixon and G. E. Hulse. No. 1,024,501; Apr. 30; Sp. p. 5905; Gaz. vol. 177; p. 1056.
Lighting-fixture. J. T. Robb. No. 1,022,875; Apr. 9; Sp. p. 2393; Gaz. vol. 177; p. 409.
Lighting switch, Progressive-. G. T. Fielding, Jr. No. 1,024,251; Apr. 23; Sp. p. 5356; Gaz. vol. 177; p. 938.
Lighting system, Series. L. Arons and M. Fuss. No. 1,023,289; Apr. 16; Sp. p. 3307; Gaz. vol. 177; p. 591.
Lightning-arrester. A. J. Wurts. No. 1,022,717; Apr. 9; Sp. p. 2079; Gaz. vol. 177; p. 357.
Lightning-arresters, Manufacture of vacuum. F. S. Chapman. No. 1,024,555; Apr. 30; Sp. p. 6070; Gaz. vol. 177; p. 1075.
Line-holder. G. B. Harleston. No. 1,024,333; Apr. 23; Sp. p. 5500; Gaz. vol. 177; p. 964.
Liquid-aerating apparatus. L. Neumayer. No. 1,022,968; Apr. 9; Sp. p. 2601; Gaz. vol. 177; p. 442.
Liquid-fuel burner. J. Gomes. No. 1,024,070; Apr. 23; Sp. p. 4926; Gaz. vol. 177; p. 873.
Liquid-fuel-burning apparatus. W. E. Oakley. No. 1,024,596; Apr. 30; Sp. p. 6163; Gaz. vol. 177; p. 1088.
Liquid-meter. D. Cahill. No. 1,023,621; Apr. 16; Sp. p. 3971; Gaz. vol. 177; p. 697.
Liquid-motor, Reversible. W. E. Pearson. No. 1,023,872; Apr. 23; Sp. p. 4492; Gaz. vol. 177; p. 805.
Liquid-separating apparatus. K. C. Randall and C. B. Gibson. No. 1,024,598; Apr. 30; Sp. p. 6166; Gaz. vol. 177; p. 1089.
Liquid-separator, Centrifugal. H. Feldmeier and R. K. Miner. No. 1,024,844; Apr. 30; Sp. p. 6686; Gaz. vol. 177; p. 1176.
Liquids, Apparatus for changing the temperature of. P. J. Cartault. No. 1,024,436; Apr. 23; Sp. p. 5719; Gaz. vol. 177; p. 996.
Liquids, Concentrating. P. Kestner. No. 1,022,321; Apr. 2; Sp. p. 1179; Gaz. vol. 177; p. 190.
Liquids, Recovering volatile. C. Harrison, W. Bate, and W. G. Perks. No. 1,022,416; Apr. 9; Sp. p. 1380; Gaz. vol. 177; p. 253.
Litter-carrier. C. B. Willenborg. No. 1,022,763; Apr. 9; Sp. p. 2177; Gaz. vol. 177; p. 373.
Loading and unloading apparatus. J. W. Carriker. No. 1,023,006; Apr. 9; Sp. p. 2667; Gaz. vol. 177; p. 455.
Lock: *See* Bolt and nut lock; Check-lock; Combination-lock; Coupling-lock; Door-lock; Elevator-lock; Gate or door lock; Nut-lock; Panic-lock; Pipe-lock; Safety-lock; Sash-lock; Satchel-lock; Tongue-lock; Window-lock.
Lock. C. Denzler. No. 1,021,864; Apr. 2; Sp. p. 246; Gaz. vol. 177; p. 40.
Lock. C. M. Sinclair. No. 1,023,766; Apr. 16; Sp. p. 4214; Gaz. vol. 177; p. 740.
Lock. H. G. Voight. No. 1,024,466; Apr. 23; Sp. p. 5799; Gaz. vol. 177; p. 1007.
Lock. H. G. Voight and N. B. Hurd. No. 1,024,467; Apr. 23; Sp. p. 5800; Gaz. vol. 177; p. 1007.
Lock. G. N. Mason. No. 1,024,733; Apr. 30; Sp. p. 6447; Gaz. vol. 177; p. 1137.
Lock-indicator. P. F. Augenbraun. No. 1,022,221; Apr. 2; Sp. p. 989; Gaz. vol. 177; p. 159.
Lock strike-plate, Door-. P. F. Augenbraun. No. 1,022,222; Apr. 2; Sp. p. 991; Gaz. vol. 177; p. 160.
Lock trimming, Door-. H. G. Voight and N. B. Hurd. No. 1,024,490; Apr. 23; Sp. p. 5830; Gaz. vol. 177; p. 1013.
Locking device for traveling and sample cases, &c. J. T. Binkley. No. 1,022,817; Apr. 9; Sp. p. 2283; Gaz. vol. 177; p. 390.
Locomotive driving-box. F. A. Walsh. No. 1,024,918; Apr. 30; Sp. p. 6842; Gaz. vol. 177; p. 1202.
Locomotive-engine. F. J. Cole. No. 1,024,620; Apr. 30; Sp. p. 6212; Gaz. vol. 177; p. 1096.
Locomotive pilot-coupling. G. V. Martin. No. 1,022,850; Apr. 9; Sp. p. 2364; Gaz. vol. 177; p. 404.
Locomotive smoke-box. B. F. Stannard and A. Agnskee. No. 1,023,970; Apr. 23; Sp. p. 4720; Gaz. vol. 177; p. 837.
Locomotives, Drifting device for. P. Sheedy. No. 1,022,052; Apr. 2; Sp. p. 641; Gaz. vol. 177; p. 102.
Loom automatic stop-motion, Ribbon-. E. Miller. No. 1,022,435; Apr. 9; Sp. p. 1449; Gaz. vol. 177; p. 259.
Loom filling-exhaustion-indicating mechanism. A. R. Rhoades. No. 1,024,023; Apr. 23; Sp. p. 4819; Gaz. vol. 177; p. 856.
Loom for weaving warp-pile fabrics. C. B. White. No. 1,023,537; Apr. 16; Sp. p. 3785; Gaz. vol. 177; p. 669.
Loom let-back mechanism. C. Lavallee. No. 1,022,370; Apr. 2; Sp. p. 1284; Gaz. vol. 177; p. 207.
Loom-shuttle. T. Mooney. No. 1,023,952; Apr. 23; Sp. p. 4687; Gaz. vol. 177; p. 832.
Loom shuttle-checking means. H. Lussier. No. 1,021,842; Apr. 2; Sp. p. 198; Gaz. vol. 177; p. 33.
Loom take-up mechanism. G. A. Coburn. No. 1,023,994; Apr. 23; Sp. p. 4770; Gaz. vol. 177; p. 847.
Loom tension mechanism. E. E. Sibley. No. 1,024,528; Apr. 30; Sp. p. 5985; Gaz. vol. 177; p. 1065.
Loom warping-cleaver. B. F. Abbott. No. 1,023,708; Apr. 16; Sp. p. 4106; Gaz. vol. 177; p. 721.
Loom, Weft-replenishing. E. H. Ryon. No. 1,022,108; Apr. 2; Sp. p. 750; Gaz. vol. 177; p. 120.
Loom, Weft-replenishing. E. H. Ryon. No. 1,022,109; Apr. 2; Sp. p. 752; Gaz. vol. 177; p. 120.
Looms for weaving, Mechanism for putting cover on cloth in. N. Fish and H. Hodgkinson. No. 1,022,229; Apr. 2; Sp. p. 1012; Gaz. vol. 177; p. 162.
Looms, Weft-parter device for. S. S. Jackson. No. 1,023,108; Apr. 9; Sp. p. 2881; Gaz. vol. 177; p. 490.
Loop-doubling mechanism. F. W. Robinson. No. 1,021,800; Apr. 2; Sp. p. 96; Gaz. vol. 177; p. 19.
Lubricant-cup. G. W. Bowen. No. 1,024,672; Apr. 30; Sp. p. 6327; Gaz. vol. 177; p. 1115.
Lubricant device. H. K. Sandell. No. 1,024,150; Apr. 23; Sp. p. 5127; Gaz. vol. 177; p. 901.
Lubricating-cup. C. H. Newhall. No. 1,022,107; Apr. 2; Sp. p. 748; Gaz. vol. 177; p. 119.
Lubricating mechanism. D. S. Waugh. No. 1,022,284; Apr. 2; Sp. p. 1121; Gaz. vol. 177; p. 178.
Lubricator: *See* Axle-spindle lubricator; Hydraulic lubricator; Sight-feed lubricator.
Lubricator. C. H. Newhall. No. 1,021,943; Apr. 2; Sp. p. 400; Gaz. vol. 177; p. 66.
Lubricator. C. H. Newhall. No. 1,021,944; Apr. 2; Sp. p. 402; Gaz. vol. 177; p. 66.
Lubricator. H. E. Coffin. No. 1,022,622; Apr. 9; Sp. p. 1836; Gaz. vol. 177; p. 321.
Lubricator. L. Kassander and O. Best. No. 1,022,741; Apr. 9; Sp. p. 2131; Gaz. vol. 177; p. 365.
Lubricator. L. Kassander and O. Best. No. 1,022,952; Apr. 9; Sp. p. 2570; Gaz. vol. 177; p. 436.
Lubricator. J. Kriplnger. No. 1,023,662; Apr. 16; Sp. p. 4043; Gaz. vol. 177; p. 709.
Luggage and hat rack, Folding. D. R. Kinney. No. 1,021,838; Apr. 2; Sp. p. 194; Gaz. vol. 177; p. 32.
Machine-tool. J. H. Hamilton. No. 1,023,203; Apr. 16; Sp. p. 3136; Gaz. vol. 177; p. 561.
Magnetic separator. J. Weatherby, Jr., and A. J. Dull. No. 1,024,045; Apr. 23; Sp. p. 4876; Gaz. vol. 177; p. 864.
Magnetic separator. J. Weatherby, Jr. No. 1,024,538; Apr. 30; Sp. p. 6011; Gaz. vol. 177; p. 1069.
Magneto for internal-combustion engines. A. Durbin. No. 1,022,832; Apr. 9; Sp. p. 2316; Gaz. vol. 177; p. 396.
Magneto-generators, Operating mechanism for. A. Zahringer. No. 1,023,348; Apr. 16; Sp. p. 3417; Gaz. vol. 177; p. 610.
Magnifying-glass. J. Hampson. No. 1,025,057; Apr. 30; Sp. p. 7099; Gaz. vol. 177; p. 1248.
Mail and parcel collecting and distributing system. R. G. Starkweather. No. 1,024,707; Apr. 30; Sp. p. 6398; Gaz. vol. 177; p. 1127.
Mail and parcel collection and delivery system. R. G. Starkweather. No. 1,024,706; Apr. 30; Sp. p. 6393; Gaz. vol. 177; p. 1126.
Mail-bag. E. G. Kimmel. No. 1,021,837; Apr. 2; Sp. p. 192; Gaz. vol. 177; p. 31.

Mail-bag catcher and deliverer. J. L. Adam. No. 1,025,042; Apr. 30; Sp. p. 7074; Gaz. vol. 177; p. 1243.
Mail-box. C. G. Overmyer and G. F. Collins. No. 1,021,792; Apr. 2; Sp. p. 75; Gaz. vol. 177; p. 16.
Mail-box. H. Chambers. No. 1,024,617; Apr. 30; Sp. p. 6206; Gaz. vol. 177; p. 1095.
Mail-boxes, &c. Package or paper holder for. V. C. Koons. No. 1,024,366; Apr. 23; Sp. p. 5389; Gaz. vol. 177; p. 943.
Mail-crane. G. L. Graham. No. 1,023,202; Apr. 16; Sp. p. 3124; Gaz. vol. 177; p. 561.
Mail delivering and receiving apparatus. C. A. Ifert. No. 1,022,628; Apr. 2; Sp. p. 589; Gaz. vol. 177; p. 98.
Mail-delivery apparatus. H. O. Wilson. No. 1,022,455; Apr. 9; Sp. p. 1493; Gaz. vol. 177; p. 267.
Mail-marking machine. G. H. Graham. No. 1,022,191; Apr. 2; Sp. p. 928; Gaz. vol. 177; p. 148.
Mail-receiver. R. C. Lambert. No. 1,024,995; Apr. 30; Sp. p. 6992; Gaz. vol. 177; p. 1223.
Mailing device. W. L. Williams and J. L. Olmstead. No. 1,025,089; Apr. 30; Sp. p. 7070; Gaz. vol. 177; p. 1243.
Mailing machine, Magazine-. W. P. Sargent. No. 1,024,028; Apr. 23; Sp. p. 4837; Gaz. vol. 177; p. 856.
Manhole and well for subways. M. Clarkson. No. 1,023,315; Apr. 23; Sp. p. 4347; Gaz. vol. 177; p. 786.
Manure-spreader. H. R. Dinwiddie. No. 1,023,302; Apr. 16; Sp. p. 3229; Gaz. vol. 177; p. 596.
Manure-spreader. R. H. Throckmorton. No. 1,023,342; Apr. 16; Sp. p. 3406; Gaz. vol. 177; p. 606.
Manure-spreaders, Loading attachment for. C. E. Johnson. No. 1,022,088; Apr. 2; Sp. p. 715; Gaz. vol. 177; p. 114.
Marble, Treatment of artificial. H. Gallisowsky. No. 1,022,585; Apr. 9; Sp. p. 1753; Gaz. vol. 177; p. 309.
Marker, Bow-. T. B. Woods and C. H. Williams. No. 1,025,040; Apr. 30; Sp. p. 7071; Gaz. vol. 177; p. 1243.
Marking device, Goods-. W. K. Clark. No. 1,023,505; Apr. 16; Sp. p. 3726; Gaz. vol. 177; p. 659.
Mask, Boxing-. T. J. White. No. 1,023,285; Apr. 16; Sp. p. 3303; Gaz. vol. 177; p. 590.
Mask, Face-. L. M. Bender. No. 1,023,358; Apr. 16; Sp. p. 3432; Gaz. vol. 177; p. 613.
Mask, Narcotizing-. K. A. (A.) E. Fries. No. 1,021,865; Apr. 2; Sp. p. 248; Gaz. vol. 177; p. 40.
Match-box. N. E. Wassill. No. 1,023,898; Apr. 23; Sp. p. 4561; Gaz. vol. 177; p. 814.
Match-box. J. N. Branyan. No. 1,024,392; Apr. 23; Sp. p. 5597; Gaz. vol. 177; p. 982.
Match-machine splint-positioning device. H. A. Geell. No. 1,024,772; Apr. 30; Sp. p. 6554; Gaz. vol. 177; p. 1150.
Match-receptacle. M. Ohrt. No. 1,023,029; Apr. 9; Sp. p. 2707; Gaz. vol. 177; p. 463.
Material or composition and article made therefrom. A. R. Müller. No. 1,022,495; Apr. 9; Sp. p. 1560; Gaz. vol. 177; p. 280.
Matrix-setting and line-casting machine. J. Dorneth. No. 1,021,827; Apr. 2; Sp. p. 171; Gaz. vol. 177; p. 28.
Matrix-setting device. R. Thomas. No. 1,024,296; Apr. 23; Sp. p. 5434; Gaz. vol. 177; p. 952.
Mattresses, Filling. B. D. Courts. No. 1,021,971; Apr. 2; Sp. p. 477; Gaz. vol. 177; p. 76.
Measure. C. Mesmer. No. 1,022,749; Apr. 9; Sp. p. 2146; Gaz. vol. 177; p. 368.
Measure for ropes, &c., Linear. N. D. M. Yorke. No. 1,022,910; Apr. 9; Sp. p. 2485; Gaz. vol. 177; p. 423.
Measuring apparatus, Tip-. D. E. Galloway. No. 1,024,504; Apr. 30; Sp. p. 5921; Gaz. vol. 177; p. 1057.
Measuring bodies, Instrument for. H. Winter. No. 1,023,542; Apr. 16; Sp. p. 3799; Gaz. vol. 177; p. 671.
Measuring device. M. Tamburini. No. 1,021,956; Apr. 2; Sp. p. 442; Gaz. vol. 177; p. 71.
Measuring device. E. K. Shrader and J. R. Gilman. No. 1,022,006; Apr. 2; Sp. p. 549; Gaz. vol. 177; p. 86.
Measuring device, Liquid-. A. D. Mosby. No. 1,024,415; Apr. 23; Sp. p. 5683; Gaz. vol. 177; p. 990.
Measuring instrument, Electrical. E. Thomson. No. 1,022,517; Apr. 9; Sp. p. 1602; Gaz. vol. 177; p. 287.
Measuring instrument, Electrical. C. McClair. No. 1,022,795; Apr. 9; Sp. p. 2225; Gaz. vol. 177; p. 383.
Measuring instrument, Electrical. A. L. Ellis. No. 1,023,804; Apr. 16; Sp. p. 3332; Gaz. vol. 177; p. 595.
Measuring machine, Cloth-. O. S. Blakeslee. No. 1,024,764; Apr. 30; Sp. p. 6518; Gaz. vol. 177; p. 1148.
Measuring-tape. J. W. Melville. No. 1,023,868; Apr. 23; Sp. p. 4476; Gaz. vol. 177; p. 802.
Measuring the velocity and direction of the marine undercurrents, Apparatus for. G. Boccardo. No. 1,022,385; Apr. 2; Sp. p. 1312; Gaz. vol. 177; p. 218.
Measuring time intervals, Device for. W. H. Pratt. No. 1,022,599; Apr. 9; Sp. p. 1774; Gaz. vol. 177; p. 312.
Meat chopper and tenderer. W. M. Stanton. No. 1,024,511; Apr. 30; Sp. p. 6017; Gaz. vol. 177; p. 1104.
Mechanical movement. E. G. Clyne. No. 1,022,621; Apr. 9; Sp. p. 1835; Gaz. vol. 177; p. 321.
Mechanical movement. C. M. Grey. No. 1,022,670; Apr. 9; Sp. p. 1940; Gaz. vol. 177; p. 338.
Medicinal bath. A. Hempel. No. 1,022,627; Apr. 9; Sp. p. 1845; Gaz. vol. 177; p. 322.
Merchandise-carrier. W. B. Miller. No. 1,022,104; Apr. 2; Sp. p. 740; Gaz. vol. 177; p. 118.
Mesh fabric. T. Allsopp. No. 1,024,050; Apr. 23; Sp. p. 4890; Gaz. vol. 177; p. 866.
Metal articles, Apparatus for shaping. H. Raha. No. 1,023,962; Apr. 23; Sp. p. 4706; Gaz. vol. 177; p. 832.
Metal foils, Manufacturing leaf. H. Beer. No. 1,023,713; Apr. 16; Sp. p. 4126; Gaz. vol. 177; p. 724.
Metal, Pyrophorous. F. Krieger. No. 1,023,661; Apr. 16; Sp. p. 4043; Gaz. vol. 177; p. 709.
Metal, Uniting. E. Thomson. No. 1,022,712; Apr. 9; Sp. p. 2067; Gaz. vol. 177; p. 355.
Metal-working tools, Cutter for. J. Hartness. No. 1,021,866; Apr. 2; Sp. p. 253; Gaz. vol. 177; p. 41.
Metals, Coloring. S. Axelrod. No. 1,023,291; Apr. 16; Sp. p. 3309; Gaz. vol. 177; p. 591.
Metallic box. W. I. Tuttle. No. 1,023,893; Apr. 23; Sp. p. 4541; Gaz. vol. 177; p. 812.
Metallic tie and rail-fastener. A. Sedivyz. No. 1,022,271; Apr. 2; Sp. p. 1085; Gaz. vol. 177; p. 174.
Metallic tie and rail-fastener. F. P. Hunkle and C. Nordfeldt. No. 1,024,939; Apr. 30; Sp. p. 6886; Gaz. vol. 177; p. 1209.
Meter: *See* Liquid-meter; Water-meter.
Meter. W. J. Mowbray. No. 1,024,218; Apr. 23; Sp. p. 5282; Gaz. vol. 177; p. 926.
Meter. A. Frank. No. 1,024,886; Apr. 30; Sp. p. 6706; Gaz. vol. 177; p. 1190.
Meter connection-box. F. C. Grady. No. 1,024,931; Apr. 30; Sp. p. 6868; Gaz. vol. 177; p. 1207.
Meter-tester. R. E. Joyce. No. 1,023,739; Apr. 16; Sp. p. 4167; Gaz. vol. 177; p. 732.
Mica-board, &c., Machine for making. W. H. Sills. No. 1,024,529; Apr. 30; Sp. p. 5989; Gaz. vol. 177; p. 1066.
Microscope. K. M. Stahl. No. 1,022,606; Apr. 9; Sp. p. 1811; Gaz. vol. 177; p. 316.
Microscopes, Nose-piece for. H. N. Ott and K. Leuchsenring. No. 1,023,390; Apr. 16; Sp. p. 3506; Gaz. vol. 177; p. 624.
Milk-can. G. Shepard. No. 1,022,975; Apr. 9; Sp. p. 2614; Gaz. vol. 177; p. 444.
Milk-can, Sanitary. J. R. Bostwick. No. 1,022,819; Apr. 9; Sp. p. 2289; Gaz. vol. 177; p. 391.
Milk-turner. W. T. Haynes. No. 1,023,737; Apr. 16; Sp. p. 4165; Gaz. vol. 177; p. 731.
Milking device. E. Levay. No. 1,024,903; Apr. 30; Sp. p. 6804; Gaz. vol. 177; p. 1196.
Milking-machine. D. Klein. No. 1,024,859; Apr. 30; Sp. p. 6714; Gaz. vol. 177; p. 1182.
Mill: *See* Cane-mill; Cider-mill; Pulverizing-mill; Rolling-mill; Tubular mill; Windmill.
Milling and boring machine. C. F. Shanks. No. 1,022,051; Apr. 2; Sp. p. 638; Gaz. vol. 177; p. 101.
Milling-machine. W. T. Shepard. No. 1,021,950; Apr. 2; Sp. p. 424; Gaz. vol. 177; p. 69.
Milling-machine. C. J. Watts and F. J. Eberle. No. 1,023,184; Apr. 16; Sp. p. 3009; Gaz. vol. 177; p. 554.
Mine-anchor. C. R. Gabriel. No. 1,023,332; Apr. 23; Sp. p. 4407; Gaz. vol. 177; p. 792.
Mine signaling device. J. Rule. No. 1,023,040; Apr. 9; Sp. p. 2734; Gaz. vol. 177; p. 467.
Mineral substances, Concentration of. J. M. Hyde. No. 1,022,085; Apr. 2; Sp. p. 703; Gaz. vol. 177; p. 112.
Mining-machines, Cutter-chain for. W. A. Buetner and A. Shelburne. No. 1,023,540; Apr. 16; Sp. p. 3812; Gaz. vol. 177; p. 673.
Mining tools or machines, Mounting for. W. Prellwitz. No. 1,023,595; Apr. 16; Sp. p. 3917; Gaz. vol. 177; p. 689.
Mirror, Duplex hand-. T. Holmdahl. No. 1,024,510; Apr. 30; Sp. p. 5934; Gaz. vol. 177; p. 1059.
Mitt or glove, Swimming. T. L. Monaghan. No. 1,023,581; Apr. 16; Sp. p. 3885; Gaz. vol. 177; p. 684.
Mixer: *See* Concrete-mixer.
Moistening device, Envelop-. J. W. Lovejoy. No. 1,025,097; Apr. 30; Sp. p. 7200; Gaz. vol. 177; p. 1261.
Mold: *See* Fence-post mold; Fountain-mold; Packing-ring mild; Tank-mold; Type-mold.
Mold. E. Pfeifer. No. 1,024,357; Apr. 23; Sp. p. 5538; Gaz. vol. 177; p. 971.
Mold feeder, Ingot-. E. J. Turner. No. 1,022,343; Apr. 2; Sp. p. 1284; Gaz. vol. 177; p. 197.
Mold-forming machine. T. Lund. No. 1,024,516; Apr. 30; Sp. p. 5947; Gaz. vol. 177; p. 1061.
Molding apparatus. M. J. Hewlett. No. 1,022,240; Apr. 2; Sp. p. 1036; Gaz. vol. 177; p. 165.
Molding-machine. H. MacKay. No. 1,021,938; Apr. 2; Sp. p. 383; Gaz. vol. 177; p. 64.
Molding-machine. K. Fritz. No. 1,023,201; Apr. 16; Sp. p. 3133; Gaz. vol. 177; p. 560.
Molding-machines, Sprue-raising mechanism for. J. W. Brown, Jr. No. 1,022,297; Apr. 2; Sp. p. 1139; Gaz. vol. 177; p. 182.
Monoplane. J. A. Goodwin. No. 1,025,085; Apr. 30; Sp. p. 7166; Gaz. vol. 177; p. 1257.
Mop-holder. W. H. Billings. No. 1,022,816; Apr. 9; Sp. p. 2282; Gaz. vol. 177; p. 390.
Mop-holder and wringer, Combined. F. O. Tarbox. No. 1,022,982; Apr. 9; Sp. p. 2624; Gaz. vol. 177; p. 447.
Mop holder and wringer, Combined. G. O. Renshaw. No. 1,024,951; Apr. 30; Sp. p. 6907; Gaz. vol. 177; p. 1213.
Mop-wringer. J. P. Morin. No. 1,024,738; Apr. 30; Sp. p. 6457; Gaz. vol. 177; p. 1138.
Mortising-machine. G. Gerlach. No. 1,023,306; Apr. 16; Sp. p. 3337; Gaz. vol. 177; p. 596.
Motor: *See* Current-motor; Hydraulic motor; Induction-motor; Internal-combustion motor; Liquid-motor; Water-motor.

Motor and traction operated implement, Combined. G. O. Helvig and E. Danielson. No. 1,023,151; Apr. 16; Sp. p. 3021; Gaz. vol. 177; p. 542.
Motor-control system. H. F. Kingwell. No. 1,022,029; Apr. 2; Sp. p. 591; Gaz. vol. 177; p. 93.
Motor-control system. M. A. Whiting. No. 1,022,908; Apr. 9; Sp. p. 2470; Gaz. vol. 177; p. 420.
Motor-control system. T. von Zweygbergk. No. 1,022,917; Apr. 9; Sp. p. 2487; Gaz. vol. 177; p. 424.
Motor-control system, Electric. F. Conrad. No. 1,024,557; Apr. 30; Sp. p. 6073; Gaz. vol. 177; p. 1075.
Motor-control system, Electric. H. D. James. No. 1,024,631; Apr. 30; Sp. p. 6252; Gaz. vol. 177; p. 1100.
Motor controller, Electric. J. R. Garner and M. R. H. Mueller. No. 1,024,984; Apr. 30; Sp. p. 6962; Gaz. vol. 177; p. 1224.
Motor controller, Electric. J. R. Garner and M. R. H. Mueller. No. 1,024,985; Apr. 30; Sp. p. 6969; Gaz. vol. 177; p. 1224.
Motor-controlling apparatus, Alternating-current. J. Dillon. No. 1,023,134; Apr. 16; Sp. p. 2983; Gaz. vol. 177; p. 537.
Motor-controlling mechanism for motor-vehicles. J. W. Packard. No. 1,022,751; Apr. 9; Sp. p. 2152; Gaz. vol. 177; p. 368.
Motor-cooling system. E. Gray. No. 1,024,474; Apr. 23; Sp. p. 5817; Gaz. vol. 177; p. 1011.
Motor for pumps and other purposes. J. G. McDowell. No. 1,023,214; Apr. 16; Sp. p. 3157; Gaz. vol. 177; p. 565.
Motor-lubricating system. R. Huff. No. 1,024,727; Apr. 30; Sp. p. 6437; Gaz. vol. 177; p. 1135.
Motor-starter. G. H. Whittingham. No. 1,023,980; Apr. 23; Sp. p. 4740; Gaz. vol. 177; p. 841.
Motor starter, Electric. G. H. Whittingham. No. 1,023,979; Apr. 23; Sp. p. 4737; Gaz. vol. 177; p. 841.
Motor-starting device, Electric. C. J. Anderson. No. 1,023,401; Apr. 16; Sp. p. 3700; Gaz. vol. 177; p. 655.
Motor-winding mechanism. A. H. Welker. No. 1,024,237; Apr. 23; Sp. p. 5328; Gaz. vol. 177; p. 933.
Motors, Automatic starting device for single-phase induction. P. J. Ray. No. 1,024,807; Apr. 30; Sp. p. 6610; Gaz. vol. 177; p. 1163.
Motors, Variable-speed dynamic control for electric. J. D. Firmin. No. 1,023,105; Apr. 9; Sp. p. 2875; Gaz. vol. 177; p. 489.
Mounting or setting. J. A. Abel. No. 1,024,048; Apr. 23; Sp. p. 4887; Gaz. vol. 177; p. 866.
Mowing-machine. W. P. Anthony. No. 1,022,291; Apr. 2; Sp. p. 1130; Gaz. vol. 177; p. 180.
Mowing-machine. W. P. Anthony. No. 1,022,292; Apr. 2; Sp. p. 1131; Gaz. vol. 177; p. 181.
Mud-guard fastener. A. S. Hall. No. 1,024,934; Apr. 30; Sp. p. 6873; Gaz. vol. 177; p. 1207.
Mud-guard support. E. Miller. No. 1,024,644; Apr. 30; Sp. p. 6274; Gaz. vol. 177; p. 1104.
Muffler. E. D. Lewis. No. 1,024,688; Apr. 30; Sp. p. 6363; Gaz. vol. 177; p. 1121.
Muffler, Exhaust. J. Hall. No. 1,023,644; Apr. 16; Sp. p. 4011; Gaz. vol. 177; p. 704.
Muffler, Exhaust. A. G. Snyder. No. 1,024,703; Apr. 30; Sp. p. 6359; Gaz. vol. 177; p. 1126.
Multicoloring apparatus. J. V. Lengerke and A. von Beust. No. 1,022,956; Apr. 9; Sp. p. 2573; Gaz. vol. 177; p. 428.
Music-leaf holder and clamp. O. B. Willi. No. 1,023,403; Apr. 16; Sp. p. 3529; Gaz. vol. 177; p. 628.
Music-leaf turner. E. Meier. No. 1,021,940; Apr. 2; Sp. p. 388; Gaz. vol. 177; p. 64.
Music-leaf turner. H. H. Timmons and E. L. Smith. No. 1,024,916; Apr. 30; Sp. p. 6839; Gaz. vol. 177; p. 1201.
Musical instrument, Pneumatic. A. Krell. No. 1,021,785; Apr. 2; Sp. p. 62; Gaz. vol. 177; p. 13.
Musical instruments, Automatic playing attachment for. R. J. Bennett. No. 1,024,494; Apr. 30; Sp. p. 5885; Gaz. vol. 177; p. 1053.
Musical instruments, Expression-box for autopneumatic. F. C. White. No. 1,024,110; Apr. 23; Sp. p. 5024; Gaz. vol. 177; p. 887.
Musical instruments, Valve for wind. W. C. Reid. No. 1,023,330; Apr. 16; Sp. p. 3388; Gaz. vol. 177; p. 605.
Nail-extractor. H. E. Davis. No. 1,023,725; Apr. 16; Sp. p. 4147; Gaz. vol. 177; p. 728.
Nailing-strip. S. M. Randolph. No. 1,021,847; Apr. 2; Sp. p. 206; Gaz. vol. 177; p. 34.
Necktie. J. H. Carroll. No. 1,023,196; Apr. 16; Sp. p. 3125; Gaz. vol. 177; p. 559.
Necktie-holder. A. Wiegel. No. 1,022,807; Apr. 9; Sp. p. 2265; Gaz. vol. 177; p. 387.
Necktie holder and shield. J. Baeumle. No. 1,022,398; Apr. 9; Sp. p. 1351; Gaz. vol. 177; p. 247.
Nest and yard, Hen's. C. F. Kroeh. No. 1,021,873; Apr. 2; Sp. p. 263; Gaz. vol. 177; p. 42.
Nest, Automatic trap. J. E. Dustin. No. 1,024,319; Apr. 23; Sp. p. 5476; Gaz. vol. 177; p. 960.
Nest, Hen's. N. J. Solomon. No. 1,024,872; Apr. 23; Sp. p. 5562; Gaz. vol. 177; p. 975.
Net holder, Landing. F. J. Sargent. No. 1,024,653; Apr. 30; Sp. p. 6289; Gaz. vol. 177; p. 1108.
Noodle-cutter. C. E. Swartzbaugh. No. 1,024,535; Apr. 30; Sp. p. 6003; Gaz. vol. 177; p. 1068.
Note-sheet guide, Perforated. J. O'Connor. (Reissue.) No. 13,398; Apr. 2; Sp. p. 1342; Gaz. vol. 177; p. 219.
Nozzles, Making. J. H. Taylor. No. 1,023,228; Apr. 16; Sp. p. 3179; Gaz. vol. 177; p. 569.
Number indicator, Product. A. T. Bolton. No. 1,021,965; Apr. 2; Sp. p. 463; Gaz. vol. 177; p. 74.
Nut-lock. W. E. Smith. No. 1,021,907; Apr. 2; Sp. p. 107; Gaz. vol. 177; p. 21.
Nut-lock. A. D. Johnson. No. 1,022,818; Apr. 2; Sp. p. 1175; Gaz. vol. 177; p. 189.
Nut-lock. C. W. Shaw. No. 1,022,836; Apr. 2; Sp. p. 1224; Gaz. vol. 177; p. 195.
Nut-lock. W. Fry. No. 1,022,542; Apr. 9; Sp. p. 1664; Gaz. vol. 177; p. 295.
Nut-lock. J. Buttner. No. 1,022,657; Apr. 9; Sp. p. 1916; Gaz. vol. 177; p. 334.
Nut-lock. B. E. D. Stafford. No. 1,024,088; Apr. 23; Sp. p. 4863; Gaz. vol. 177; p. 862.
Nut-lock. E. W. Taylor. No. 1,024,107; Apr. 23; Sp. p. 5016; Gaz. vol. 177; p. 886.
Nut-lock. A. D. Miller. No. 1,024,274; Apr. 23; Sp. p. 5402; Gaz. vol. 177; p. 946.
Nut-lock. E. Boles. No. 1,024,307; Apr. 23; Sp. p. 5455; Gaz. vol. 177; p. 956.
Nut-lock. E. L. Minnig. No. 1,024,805; Apr. 30; Sp. p. 6606; Gaz. vol. 177; p. 1162.
Nut-lock. H. M. Burpall. No. 1,024,973; Apr. 30; Sp. p. 6941; Gaz. vol. 177; p. 1220.
Nut, Lock. A. J. Threm. No. 1,024,427; Apr. 23; Sp. p. 5706; Gaz. vol. 177; p. 993.
Nut-locking device. R. B. Allender. No. 1,022,810; Apr. 9; Sp. p. 2269; Gaz. vol. 177; p. 388.
Nut-locking device. P. W. Stein. No. 1,024,291; Apr. 23; Sp. p. 5428; Gaz. vol. 177; p. 951.
Nut, Self-locking. F. Moore. No. 1,022,201; Apr. 2; Sp. p. 954; Gaz. vol. 177; p. 152.
Obstetrical pad. J. D. Robertson. No. 1,021,891; Apr. 2; Sp. p. 298; Gaz. vol. 177; p. 49.
Oil and gas burner, Combined. A. R. Anthony. No. 1,022,649; Apr. 9; Sp. p. 1897; Gaz. vol. 177; p. 331.
Oil-burner. E. S. Line. No. 1,021,859; Apr. 2; Sp. p. 196; Gaz. vol. 177; p. 32.
Oil-burner. F. C. Richardson and J. T. Wood. No. 1,023,529; Apr. 16; Sp. p. 3770; Gaz. vol. 177; p. 666.
Oil-burner. W. G. Nutt. No. 1,025,013; Apr. 30; Sp. p. 7024; Gaz. vol. 177; p. 1234.
Oil-burner, Rotary. W. M. Britten. No. 1,022,122; Apr. 2; Sp. p. 782; Gaz. vol. 177; p. 124.
Oil cup or boxing. E. A. Smith. No. 1,023,046; Apr. 9; Sp. p. 2745; Gaz. vol. 177; p. 469.
Oil-extracting device. C. Turner and H. J. Flood. No. 1,024,230; Apr. 23; Sp. p. 5311; Gaz. vol. 177; p. 930.
Oil-fed furnace. A. H. Light. No. 1,024,347; Apr. 23; Sp. p. 5521; Gaz. vol. 177; p. 967.
Oil-switch. E. M. Hewlett. No. 1,023,310; Apr. 16; Sp. p. 3346; Gaz. vol. 177; p. 597.
Oil-testing machine. P. Wendt. No. 1,024,872; Apr. 30; Sp. p. 6743; Gaz. vol. 177; p. 1186.
Oiling system for automobiles. E. M. White. No. 1,022,091; Apr. 9; Sp. p. 2638; Gaz. vol. 177; p. 450.
Oleaginous materials, Treating. W. C. Merrill. No. 1,023,856; Apr. 16; Sp. p. 3488; Gaz. vol. 177; p. 622.
Opera-glass, Folding. A. Lavy. No. 1,024,730; Apr. 30; Sp. p. 6443; Gaz. vol. 177; p. 1136.
Operating-table. J. M. Baber. No. 1,024,966; Apr. 30; Sp. p. 6933; Gaz. vol. 177; p. 1218.
Orchard heater and vaporizer. C. W. Johnson. No. 1,024,633; Apr. 30; Sp. p. 6258; Gaz. vol. 177; p. 1101.
Order-guide. E. J. Bliss. No. 1,024,716; Apr. 30; Sp. p. 6418; Gaz. vol. 177; p. 1130.
Ordnance, Breech-loading. A. T. Dawson and G. T. Buckham. No. 1,022,124; Apr. 2; Sp. p. 784; Gaz. vol. 177; p. 125.
Ordnance, Cartridge extracting and ejecting mechanism for breech-loading. A. T. Dawson and G. T. Buckham. No. 1,022,469; Apr. 9; Sp. p. 1513; Gaz. vol. 177; p. 271.
Ore-concentrator. C. J. Witt. No. 1,023,909; Apr. 23; Sp. p. 4585; Gaz. vol. 177; p. 817.
Ore conveyer and classifier. D. J. Nevill. No. 1,024,647; Apr. 30; Sp. p. 6279; Gaz. vol. 177; p. 1106.
Ore-separator, Magnetic. J. Weatherby. No. 1,024,539; Apr. 30; Sp. p. 6015; Gaz. vol. 177; p. 1069.
Ores and metals, Reducing. W. H. Kelly. No. 1,024,136; Apr. 23; Sp. p. 5006; Gaz. vol. 177; p. 896.
Ores, Treating. R. Gahl. No. 1,021,769; Apr. 2; Sp. p. 27; Gaz. vol. 177; p. 8.
Oscillating engine. I. T. Price. No. 1,024,098; Apr. 23; Sp. p. 4997; Gaz. vol. 177; p. 893.
Outlet-box. E. J. Dustman. No. 1,023,460; Apr. 16; Sp. p. 3636; Gaz. vol. 177; p. 645.
Oven, Baking. S. W. Schuster. No. 1,023,483; Apr. 16; Sp. p. 3685; Gaz. vol. 177; p. 652.
Oven, Electric. J. G. Cronberg and W. D. Hodson. No. 1,022,545; Apr. 9; Sp. p. 1667; Gaz. vol. 177; p. 296.
Oxids, Reduction of. W. C. Arsem. No. 1,023,290; Apr. 16; Sp. p. 3303; Gaz. vol. 177; p. 591.
Ozonizer. H. R. Stuart and W. H. Thompson. No. 1,024,533; Apr. 30; Sp. p. 5999; Gaz. vol. 177; p. 1067.
Pacifier, Infant. J. Walsh and E. D. Kay. No. 1,023,893; Apr. 16; Sp. p. 4092; Gaz. vol. 177; p. 713.
Package-band-fastening device. W. A. Paulus. No. 1,021,884; Apr. 2; Sp. p. 286; Gaz. vol. 177; p. 47.
Package-conveying system. B. H. Alvey and M. U. Bernheim. No. 1,022,525; Apr. 9; Sp. p. 1628; Gaz. vol. 177; p. 290.
Package-filling apparatus. E. G. Tremaine. No. 1,023,843; Apr. 16; Sp. p. 3409; Gaz. vol. 177; p. 608.

Package-filler. F. L. Hunt. No. 1,024,901; Apr. 30; Sp. p. 6750; Gaz. vol. 177; p. 1227.
Package-tie. T. P. Miller. No. 1,022,964; Apr. 9; Sp. p. 2594; Gaz. vol. 177; p. 441.
Package-tying device. T. Pieper and H. Case. No. 1,021,886; Apr. 2; Sp. p. 289; Gaz. vol. 177; p. 47.
Packing. J. Newlin. No. 1,023,526; Apr. 16; Sp. p. 3765; Gaz. vol. 177; p. 665.
Packing-expander. W. H. Lieber. No. 1,023,034; Apr. 2; Sp. p. 602; Gaz. vol. 177; p. 95.
Packing expander, Loose-spring piston. G. Christensen. No. 1,023,813; Apr. 23; Sp. p. 4343; Gaz. vol. 177; p. 785.
Packing expander, Piston. G. Christensen. No. 1,023,814; Apr. 23; Sp. p. 4345; Gaz. vol. 177; p. 786.
Packing, Metallic. E. Wisch. No. 1,023,189; Apr. 16; Sp. p. 3112; Gaz. vol. 177; p. 556.
Packing, Moisture-proof. R. V. Collins. (Reissue.) No. 13,400; Apr. 30; Sp. p. 7231; Gaz. vol. 177; p. 1267.
Packing or stuffing articles, Apparatus for. H. S. Dean. No. 1,022,805; Apr. 2; Sp. p. 1151; Gaz. vol. 177; p. 183.
Packing-ring. J. J. Sullivan. No. 1,022,841; Apr. 2; Sp. p. 1231; Gaz. vol. 177; p. 197.
Packing-ring. W. Teschemacher. No. 1,024,294; Apr. 23; Sp. p. 5432; Gaz. vol. 177; p. 951.
Packing-ring mold. C. H. Reynolds. No. 1,023,761; Apr. 16; Sp. p. 4304; Gaz. vol. 177; p. 733.
Packing-ring, Ring. L. Baumann and A. C. Cottreal. No. 1,023,103; Apr. 9; Sp. p. 2969; Gaz. vol. 177; p. 488.
Pad: *See* Obstetrical pad; Stamp-pad; Trunk-pad.
Padlock, Seal. C. B. Lawler. No. 1,024,996; Apr. 30; Sp. p. 6992; Gaz. vol. 177; p. 1229.
Pail, Dinner. J. B. Tuttle. No. 1,024,231; Apr. 23; Sp. p. 5314; Gaz. vol. 177; p. 931.
Pail-protector. T. H. Barnes. No. 1,023,982; Apr. 23; Sp. p. 4748; Gaz. vol. 177; p. 841.
Paint and varnish remover. T. M. Devine. No. 1,024,926; Apr. 30; Sp. p. 6859; Gaz. vol. 177; p. 1205.
Paint-can. C. W. De Noon. No. 1,022,830; Apr. 9; Sp. p. 2313; Gaz. vol. 177; p. 395.
Pan: *See* Sewing-machine drip-pan.
Panic-lock. H. G. Voight. No. 1,025,102; Apr. 30; Sp. p. 7208; Gaz. vol. 177; p. 1262.
Paper-bag-making machine. T. Hugo. No. 1,021,778; Apr. 2; Sp. p. 46; Gaz. vol. 177; p. 11.
Paper-baler. A. B. Beall and C. F. Shedenger. No. 1,023,964; Apr. 23; Sp. p. 4762; Gaz. vol. 177; p. 843.
Paper bottles, Machine for manufacturing. H. R. Heyl. No. 1,024,938; Apr. 30; Sp. p. 6882; Gaz. vol. 177; p. 1206.
Paper box. H. G. Whitehead. No. 1,022,902; Apr. 9; Sp. p. 2440; Gaz. vol. 177; p. 450.
Paper box for culture-tubes and similar articles. P. B. Myers. No. 1,021,998; Apr. 2; Sp. p. 529; Gaz. vol. 177; p. 83.
Paper boxes, Reinforcing. C. S. Bird. No. 1,022,823; Apr. 9; Sp. p. 2300; Gaz. vol. 177; p. 426.
Paper-corrugator. E. C. Rinaer. No. 1,022,002; Apr. 2; Sp. p. 542; Gaz. vol. 177; p. 84.
Paper-feeding machine. T. C. Dexter and R. B. Jones. No. 1,022,778; Apr. 9; Sp. p. 2197; Gaz. vol. 177; p. 377.
Paper-feeding mechanism. H. C. Osborn. No. 1,023,869; Apr. 23; Sp. p. 4486; Gaz. vol. 177; p. 804.
Paper-machine. C. E. Pope. No. 1,022,878; Apr. 2; Sp. p. 1300; Gaz. vol. 177; p. 210.
Paper-machines, Web feeding and drying apparatus for. C. E. Pope. No. 1,022,879; Apr. 2; Sp. p. 1303; Gaz. vol. 177; p. 210.
Paper-pulp and freeing it from liquid, Plant for producing. E. Strieth. No. 1,023,445; Apr. 16; Sp. p. 3610; Gaz. vol. 177; p. 641.
Paper roller, Holder for. J. Nederland. No. 1,023,537; Apr. 16; Sp. p. 3809; Gaz. vol. 177; p. 686.
Paper-stock shredder. G. D. Ryther. No. 1,023,762; Apr. 16; Sp. p. 4306; Gaz. vol. 177; p. 733.
Paper-testing machine. J. O. Stanley. No. 1,025,101; Apr. 30; Sp. p. 7206; Gaz. vol. 177; p. 1262.
Paper-testing machines, Operating mechanism for. F. P. Cleveland. No. 1,025,110; Apr. 30; Sp. p. 7220; Gaz. vol. 177; p. 1265.
Paper vessels, Apparatus for the manufacture of. H. Z. Taylor. No. 1,023,052; Apr. 9; Sp. p. 2760; Gaz. vol. 177; p. 471.
Parachute and helicopter, Combined. N. W. Knight. No. 1,021,764; Apr. 2; Sp. p. 61; Gaz. vol. 177; p. 13.
Partition and wall-furring. H. Oliver. No. 1,023,536; Apr. 16; Sp. p. 3766; Gaz. vol. 177; p. 666.
Pasteurizer. F. J. Macnish. No. 1,023,228; Apr. 16; Sp. p. 3577; Gaz. vol. 177; p. 602.
Pattern-stripping machine. W. F. Grill. No. 1,024,800; Apr. 30; Sp. p. 6774; Gaz. vol. 177; p. 1192.
Peanut-picker. P. J. Thoen. No. 1,023,842; Apr. 2; Sp. p. 1282; Gaz. vol. 177; p. 197.
Pedestal, Folding. P. F. Meyer. No. 1,024,458; Apr. 23; Sp. p. 5764; Gaz. vol. 177; p. 1002.
Peeler, Tomato. A. J. and C. E. Williams. No. 1,023,760; Apr. 16; Sp. p. 4103; Gaz. vol. 177; p. 730.
Pegging machine. O. Ashton. No. 1,021,815; Apr. 2; Sp. p. 131; Gaz. vol. 177; p. 24.
Pen clasp, Fountain. T. K. Felch. No. 1,021,978; Apr. 2; Sp. p. 429; Gaz. vol. 177; p. 78.
Pen, Drafting. E. R. Smith. No. 1,022,111; Apr. 2; Sp. p. 763; Gaz. vol. 177; p. 121.
Pen, Fountain. F. M. Ashley. No. 1,022,718; Apr. 9; Sp. p. 2080; Gaz. vol. 177; p. 357.
Pen, Fountain. J. A. Vogelmann and C. F. Hovey. No. 1,023,447; Apr. 16; Sp. p. 3617; Gaz. vol. 177; p. 641.
Pen, Fountain. M. O. Borbeck. No. 1,024,245; Apr. 23; Sp. p. 5343; Gaz. vol. 177; p. 936.
Pen-nibs, Grinding. J. Bissell. No. 1,024,485; Apr. 23; Sp. p. 5715; Gaz. vol. 177; p. 995.
Penholder. E. Borron. No. 1,022,294; Apr. 2; Sp. p. 1134; Gaz. vol. 177; p. 161.
Pencil marking and vending machine. F. C. Williams. No. 1,023,540; Apr. 16; Sp. p. 3792; Gaz. vol. 177; p. 670.
Perambulator. F. A. Nauts. No. 1,024,144; Apr. 23; Sp. p. 5115; Gaz. vol. 177; p. 899.
Perambulator and bag, Convertible. E. P. Kürsten. No. 1,022,064; Apr. 2; Sp. p. 726; Gaz. vol. 177; p. 116.
Percussion device. G. H. Rowe. No. 1,024,025; Apr. 23; Sp. p. 4628; Gaz. vol. 177; p. 857.
Percussive apparatus, Pneumatic. H. C. Behr. No. 1,024,660; Apr. 30; Sp. p. 6317; Gaz. vol. 177; p. 1113.
Peroxid active material and making it, Binder for. W. Morrison. No. 1,021,990; Apr. 2; Sp. p. 514; Gaz. vol. 177; p. 81.
Peroxid active material and making it, Binder for. W. Morrison. No. 1,021,991; Apr. 2; Sp. p. 517; Gaz. vol. 177; p. 82.
Peroxid active material and making it, Binder for. W. Morrison. No. 1,021,992; Apr. 2; Sp. p. 520; Gaz. vol. 177; p. 82.
Pharmaceutical product. L. Taub and H. Hahl. No. 1,022,645; Apr. 9; Sp. p. 1890; Gaz. vol. 177; p. 330.
Phonograph. C. L. Hibbard. No. 1,023,250; Apr. 16; Sp. p. 3223; Gaz. vol. 177; p. 577.
Phonograph. C. C. Shipley. No. 1,024,034; Apr. 23; Sp. p. 4643; Gaz. vol. 177; p. 860.
Phonograph, Multiple-record. R. B. Smith. No. 1,023,047; Apr. 9; Sp. p. 2746; Gaz. vol. 177; p. 469.
Phonograph-reproducer. A. N. Pierman. No. 1,024,087; Apr. 30; Sp. p. 6378; Gaz. vol. 177; p. 1124.
Phonographs and like machines, Attachment for. J. D. Barter. No. 1,023,544; Apr. 16; Sp. p. 3803; Gaz. vol. 177; p. 671.
Phonographic-disk cabinet. J. Di Medio. No. 1,023,385; Apr. 16; Sp. p. 3487; Gaz. vol. 177; p. 622.
Phonographic recording-stylus. T. A. Edison. No. 1,024,329; Apr. 30; Sp. p. 6677; Gaz. vol. 177; p. 1175.
Photograph-holder. F. E. Kip. No. 1,024,583; Apr. 30; Sp. p. 6125; Gaz. vol. 177; p. 1084.
Photographic films, Apparatus for the manufacture of. O. Wintermeyer. No. 1,022,617; Apr. 9; Sp. p. 1828; Gaz. vol. 177; p. 320.
Photographic films, Daylight developing-tank for. E. L. Hammer. No. 1,022,477; Apr. 9; Sp. p. 1527; Gaz. vol. 177; p. 275.
Photographic mats and masks, Apparatus for forming. S. F. Badgley. No. 1,023,914; Apr. 23; Sp. p. 4607; Gaz. vol. 177; p. 820.
Photography. J. L. Kellogg. No. 1,025,095; Apr. 30; Sp. p. 7196; Gaz. vol. 177; p. 1260.
Piano action, Player. S. S. Donovan. No. 1,022,066; Apr. 2; Sp. p. 665; Gaz. vol. 177; p. 106.
Piano-casing. F. Renck. No. 1,024,960; Apr. 30; Sp. p. 6904; Gaz. vol. 177; p. 1213.
Piano-hammer molding and gluing machine. M. Gardner. No. 1,022,861; Apr. 2; Sp. p. 1264; Gaz. vol. 177; p. 204.
Piano music-desks, Support for. J. Ragona. No. 1,022,594; Apr. 9; Sp. p. 1783; Gaz. vol. 177; p. 313.
Piano-players, Note-sheet for autopneumatic. M. Clark. No. 1,022,403; Apr. 9; Sp. p. 1353; Gaz. vol. 177; p. 249.
Piano-players, Self-adjusting attachment for. T. H. Cabasino and T. W. Vrana. No. 1,023,005; Apr. 9; Sp. p. 2664; Gaz. vol. 177; p. 455.
Piano, Pneumatic. W. G. Betz. No. 1,023,613; Apr. 16; Sp. p. 3954; Gaz. vol. 177; p. 694.
Piano, Solo-playing automatic. M. Clark. No. 1,024,677; Apr. 30; Sp. p. 6335; Gaz. vol. 177; p. 1117.
Piano tone-modifier. P. Wales. No. 1,024,235; Apr. 23; Sp. p. 5323; Gaz. vol. 177; p. 932.
Pianos and similar musical instruments, Pneumatic action for player. G. Bjorkland. No. 1,023,936; Apr. 23; Sp. p. 4756; Gaz. vol. 177; p. 844.
Pianos, Controlling device for player. F. C. White. No. 1,023,906; Apr. 23; Sp. p. 4579; Gaz. vol. 177; p. 816.
Pianos, &c., Note-sheet for player. C. F. Stoddard. No. 1,025,077; Apr. 30; Sp. p. 7143; Gaz. vol. 177; p. 1254.
Pianos, Tracking device for pneumatic. W. G. Betz. No. 1,024,174; Apr. 23; Sp. p. 5177; Gaz. vol. 177; p. 908.
Pick, Coal. J. Batulis. No. 1,023,409; Apr. 16; Sp. p. 3539; Gaz. vol. 177; p. 630.
Pick-handle. A. Bohy. No. 1,022,924; Apr. 9; Sp. p. 2502; Gaz. vol. 177; p. 427.
Pick-point, Detachable. A. Walker. No. 1,024,754; Apr. 30; Sp. p. 6466; Gaz. vol. 177; p. 1144.
Picker: *See* Berry-picker; Corn-picker; Cotton-picker; Fruit-picker; Peanut-picker; Rock-picker.
Picker-check. H. Côté. No. 1,023,107; Apr. 16; Sp. p. 3126; Gaz. vol. 177; p. 559.
Picker-check. H. Côté and R. C. Snow. No. 1,024,036; Apr. 23; Sp. p. 4859; Gaz. vol. 177; p. 861.
Picker-rod stand, Auxiliary. D. E. Jones. No. 1,022,433; Apr. 9; Sp. p. 1539; Gaz. vol. 177; p. 276.

Picker-stick check. H. Côté. No. 1,023,362; Apr. 16; Sp. p. 3439; Gaz. vol. 177; p. 614.
Pickling sheets, &c. S. E. Diescher. No. 1,023,458; Apr. 16; Sp. p. 3631; Gaz. vol. 177; p. 644.
Picture apparatus, Moving-. C. S. Batdorf. No. 1,023,797; Apr. 23; Sp. p. 4292; Gaz. vol. 177; p. 779.
Picture-exhibiting apparatus. C. L. Thomsen. No. 1,024,955; Apr. 30; Sp. p. 6914; Gaz. vol. 177; p. 1215.
Picture-exhibitor. G. Kobich. No. 1,022,198; Apr. 2; Sp. p. 945; Gaz. vol. 177; p. 151.
Picture-frame attachment. J. H. Andrews. No. 1,024,169; Apr. 23; Sp. p. 5168; Gaz. vol. 177; p. 907.
Picture-holder. E. Fleming. No. 1,023,072; Apr. 9; Sp. p. 1806; Gaz. vol. 177; p. 477.
Picture machine, Moving-. C. R. Uebelmesser. No. 1,023,953; Apr. 9; Sp. p. 2767; Gaz. vol. 177; p. 471.
Picture machine, Moving-. F. A. Cole. No. 1,024,975; Apr. 30; Sp. p. 6943; Gaz. vol. 177; p. 1221.
Picture-machine reel mechanism. J. G. Lake. No. 1,024,790; Apr. 30; Sp. p. 6581; Gaz. vol. 177; p. 1158.
Picture machines, Projecting apparatus for moving-. G. E. Ripley, W. N. Gladson, and R. E. Thompson. No. 1,025,074; Apr. 30; Sp. p. 7181; Gaz. vol. 177; p. 1253.
Pictures, Arrangement for the projection of lantern-. R. Massohn and J. Strathus. No. 1,024,784; Apr. 30; Sp. p. 6449; Gaz. vol. 177; p. 1137.
Pictures, Projecting-machine for moving. F. W. Wright. No. 1,024,661; Apr. 30; Sp. p. 6305; Gaz. vol. 177; p. 1111.
Pie-extractor. L. Larson. No. 1,024,513; Apr. 30; Sp. p. 6941; Gaz. vol. 177; p. 1060.
Pile-driver, Electric. C. D. Haskins. No. 1,022,586; Apr. 9; Sp. p. 1754; Gaz. vol. 177; p. 309.
Pile-driving engine. A. B. Clark. No. 1,023,243; Apr. 16; Sp. p. 3206; Gaz. vol. 177; p. 574.
Pile-driving head. C. P. Bohland. No. 1,023,615; Apr. 16; Sp. p. 3958; Gaz. vol. 177; p. 695.
Pile fabric, Preparing warp for manufacturing. P. Sabonadier and E. D'Eaubonne. No. 1,024,421; Apr. 23; Sp. p. 5696; Gaz. vol. 177; p. 992.
Pile splicing and driving device. C. F. Francisco. No. 1,024,069; Apr. 23; Sp. p. 4925; Gaz. vol. 177; p. 873.
Piling construction. E. Bignell. No. 1,024,820; Apr. 30; Sp. p. 6633; Gaz. vol. 177; p. 1167.
Piling, Sheet-. E. Bignell. No. 1,024,822; Apr. 30; Sp. p. 6639; Gaz. vol. 177; p. 1168.
Pillow. T. E. Drohan. No. 1,023,629; Apr. 16; Sp. p. 3989; Gaz. vol. 177; p. 700.
Pillows and the like, Machine for stuffing. J. B. Patterson. No. 1,022,697; Apr. 9; Sp. p. 2015; Gaz. vol. 177; p. 348.
Pin: *See* Hat-pin; Insulator-pin; Safety-pin.
Pin-guard. H. W. Mattoni. No. 1,024,268; Apr. 23; Sp. p. 5391; Gaz. vol. 177; p. 944.
Pin-point guard. J. Anderson. No. 1,024,762; Apr. 30; Sp. p. 6513; Gaz. vol. 177; p. 1147.
Pincers, pliers, and the like. W. W. Lyons. No. 1,022,489; Apr. 9; Sp. p. 1551; Gaz. vol. 177; p. 278.
Pipe: *See* Casting-apparatus delivery-pipe; Smoking-pipe.
Pipe-bends, Making. J. H. Taylor. No. 1,023,227; Apr. 16; Sp. p. 3178; Gaz. vol. 177; p. 569.
Pipe connection, Flexible. J. W. Roberts. No. 1,023,274; Apr. 16; Sp. p. 3263; Gaz. vol. 177; p. 586.
Pipe-fittings, Device for manipulating. P. Mueller. No. 1,024,095; Apr. 23; Sp. p. 4989; Gaz. vol. 177; p. 882.
Pipe-joint. Ball-and-socket. C. A. Kiel. No. 1,022,197; Apr. 2; Sp. p. 944; Gaz. vol. 177; p. 151.
Pipe-lock, Fluid-feed. W. W. Bridges. No. 1,024,180; Apr. 23; Sp. p. 5189; Gaz. vol. 177; p. 911.
Pipe-making machine. A. C. Tunison. No. 1,025,035; Apr. 30; Sp. p. 7062; Gaz. vol. 177; p. 1241.
Pipe or hose coupling. P. E. Bradley. No. 1,022,927; Apr. 9; Sp. p. 2510; Gaz. vol. 177; p. 428.
Pipe-wrench. H. E. Sinclair and C. Ekman. No. 1,023,533; Apr. 16; Sp. p. 3776; Gaz. vol. 177; p. 668.
Pipe-wrench. H. S. Tucker. No. 1,024,043; Apr. 23; Sp. p. 4871; Gaz. vol. 177; p. 864.
Pipe-wrench. L. Whitcomb. No. 1,024,167; Apr. 23; Sp. p. 5165; Gaz. vol. 177; p. 907.
Pipe-wrench. H. L. Marty. No. 1,024,519; Apr. 30; Sp. p. 5961; Gaz. vol. 177; p. 1062.
Pipes, &c., Self-packing connection for. W. B. Dale. No. 1,024,560; Apr. 30; Sp. p. 6075; Gaz. vol. 177; p. 1076.
Pistol, Automatic. H. Bosier. No. 1,023,966; Apr. 23; Sp. p. 4714; Gaz. vol. 177; p. 836.
Piston-actuated mechanism. C. M. Mock, A. U. Gerber, and H. Cordell. No. 1,023,267; Apr. 16; Sp. p. 3269; Gaz. vol. 177; p. 584.
Pitcher, Syrup-. J. S. Jones. No. 1,024,786; Apr. 30; Sp. p. 6570; Gaz. vol. 177; p. 1156.
Pitchometer. W. F. Rice. No. 1,021,797; Apr. 2; Sp. p. 86; Gaz. vol. 177; p. 18.
Pivoted and balanced device, Ball-bearing. L. Badger. No. 1,023,609; Apr. 16; Sp. p. 3948; Gaz. vol. 177; p. 693.
Plaiting device. J. J. Temple. No. 1,022,802; Apr. 9; Sp. p. 2251; Gaz. vol. 177; p. 385.
Plant-protector. W. H. Ragan. No. 1,025,073; Apr. 30; Sp. p. 7130; Gaz. vol. 177; p. 1252.
Planter. W. Sobey. No. 1,022,891; Apr. 9; Sp. p. 2422; Gaz. vol. 177; p. 414.
Planter. R. R. Langley. No. 1,024,206; Apr. 23; Sp. p. 5259; Gaz. vol. 177; p. 922.
Planter and fertiliser-distributer, Cotton-. J. W. Sharp. No. 1,025,022; Apr. 30; Sp. p. 7038; Gaz. vol. 177; p. 1236.
Planter, Corn-. S. K. Dennis. No. 1,024,768; Apr. 30; Sp. p. 6526; Gaz. vol. 177; p. 1149.
Planter, Lister-. R. R. Langley. No. 1,024,345; Apr. 23; Sp. p. 5516; Gaz. vol. 177; p. 966.
Planting-machine. R. J. and H. E. Altgelt. No. 1,024,662; Apr. 30; Sp. p. 6305; Gaz. vol. 177; p. 1111.
Planting-machine attachment. L. Wheeler. No. 1,023,346; Apr. 16; Sp. p. 3414; Gaz. vol. 177; p. 609.
Planting mechanism, Seed-. C. Jass. No. 1,023,894; Apr. 23; Sp. p. 4543; Gaz. vol. 177; p. 812.
Plaster-board, Apparatus for making. H. S. Melchert. No. 1,023,984; Apr. 23; Sp. p. 4650; Gaz. vol. 177; p. 826.
Plate. L. J. C. Schwenn. No. 1,022,882; Apr. 9; Sp. p. 2404; Gaz. vol. 177; p. 411.
Plate-holder. F. L. Schley. No. 1,022,879; Apr. 9; Sp. p. 2400; Gaz. vol. 177; p. 411.
Platform-hood, Cast. A. E. Ostrander. No. 1,023,031; Apr. 9; Sp. p. 2710; Gaz. vol. 177; p. 464.
Plating device. E. A. Hirner. No. 1,023,311; Apr. 16; Sp. p. 3349; Gaz. vol. 177; p. 596.
Pliers for stripping insulation from electric wires. F. P. Huston. No. 1,022,679; Apr. 9; Sp. p. 1962; Gaz. vol. 177; p. 341.
Plow. W. L. Paul. No. 1,022,256; Apr. 2; Sp. p. 1064; Gaz. vol. 177; p. 170.
Plow. W. H. Stone. No. 1,023,771; Apr. 16; Sp. p. 4222; Gaz. vol. 177; p. 742.
Plow. R. E. Sucholtz. No. 1,024,534; Apr. 30; Sp. p. 6001; Gaz. vol. 177; p. 1067.
Plow. C. A. Instrup. No. 1,025,066; Apr. 30; Sp. p. 7115; Gaz. vol. 177; p. 1250.
Plow attachment. V. T. Post. No. 1,023,873; Apr. 16; Sp. p. 4065; Gaz. vol. 177; p. 713.
Plow-beam. C. P. Meek. No. 1,022,958; Apr. 9; Sp. p. 2581; Gaz. vol. 177; p. 438.
Plow subsoiler attachment. J. F. Palmer. No. 1,021,793; Apr. 2; Sp. p. 76; Gaz. vol. 177; p. 16.
Plow, Sulky-. A. M. Chase. No. 1,024,487; Apr. 23; Sp. p. 5720; Gaz. vol. 177; p. 996.
Plug, Separable attachment-. R. B. Benjamin. No. 1,022,815; Apr. 9; Sp. p. 2278; Gaz. vol. 177; p. 390.
Plugs, Locking and controlling means for turning. F. E. Youngs. No. 1,025,105; Apr. 30; Sp. p. 7213; Gaz. vol. 177; p. 1264.
Plumb-bob carrier. W. A. Laird, Jr. No. 1,022,791; Apr. 9; Sp. p. 2227; Gaz. vol. 177; p. 382.
Plumbing-fixture. P. J. Madden. No. 1,022,146; Apr. 2; Sp. p. 839; Gaz. vol. 177; p. 133.
Plumbing-fixture. P. J. Madden. No. 1,022,147; Apr. 2; Sp. p. 841; Gaz. vol. 177; p. 133.
Plumes for headwear and other purposes, Supporter for. F. A. Shafer. No. 1,024,105; Apr. 23; Sp. p. 5013; Gaz. vol. 177; p. 885.
Pneumatic cleaner. T. O. Osterholm. No. 1,022,499; Apr. 9; Sp. p. 1574; Gaz. vol. 177; p. 281.
Pneumatic cleaner. J. C. Tauber. No. 1,024,041; Apr. 23; Sp. p. 4863; Gaz. vol. 177; p. 863.
Pneumatic cleansing appratus. A. E. Moorhead. No. 1,022,060; Apr. 9; Sp. p. 2841; Gaz. vol. 177; p. 484.
Pneumatic cushion for vehicles. A. J. Oling. No. 1,023,868; Apr. 23; Sp. p. 4483; Gaz. vol. 177; p. 803.
Pneumatic drill or like machine. G. H. Hayes. (Reissue.) No. 13,410; Apr. 30; Sp. p. 7284; Gaz. vol. 177; p. 1263.
Pneumatic wheel. W. W. Guest. No. 1,023,516; Apr. 16; Sp. p. 3755; Gaz. vol. 177; p. 663.
Pocket. A. Fantl. No. 1,023,632; Apr. 16; Sp. p. 3994; Gaz. vol. 177; p. 701.
Pocket-case. F. W. Briggs. No. 1,024,674; Apr. 30; Sp. p. 6330; Gaz. vol. 177; p. 1116.
Pocket Foot-. J. F. Harris. No. 1,022,235; Apr. 2; Sp. p. 1029; Gaz. vol. 177; p. 164.
Pocket-knife. W. J. Minter. No. 1,022,494; Apr. 9; Sp. p. 1559; Gaz. vol. 177; p. 280.
Pocket-knife and the like, C. A. Sjoberg. No. 1,024,749; Apr. 30; Sp. p. 6490; Gaz. vol. 177; p. 1142.
Pole. O. F. Reynolds. No. 1,024,261; Apr. 23; Sp. p. 5546; Gaz. vol. 177; p. 972.
Pole and shafts. H. A. Hunter. No. 1,022,555; Apr. 9; Sp. p. 1693; Gaz. vol. 177; p. 299.
Pole-changer. R. H. Manson. No. 1,023,261; Apr. 16; Sp. p. 3250; Gaz. vol. 177; p. 581.
Pole-changer. E. M. Tornin. No. 1,024,463; Apr. 23; Sp. p. 5791; Gaz. vol. 177; p. 1006.
Pool-ball-rack attachment. E. F. Sommers. No. 1,024,155; Apr. 23; Sp. p. 5135; Gaz. vol. 177; p. 903.
Porcelain-drilling machine. J. Riddell. No. 1,022,874; Apr. 9; Sp. p. 2392; Gaz. vol. 177; p. 409.
Post: *See* Binding-post; Fence-post.
Postage stamping and recording apparatus. T. M. Belknap. No. 1,024,389; Apr. 23; Sp. p. 5590; Gaz. vol. 177; p. 980.
Postmarking-machine, Electro-. F. G. Boswell. No. 1,024,552; Apr. 30; Sp. p. 6047; Gaz. vol. 177; p. 1074.
Pot-furnace. S. O. Richardson, Jr. No. 1,021,798; Apr. 2; Sp. p. 92; Gaz. vol. 177; p. 18.
Potato-digger. P. McGrath. No. 1,024,269; Apr. 23; Sp. p. 5396; Gaz. vol. 177; p. 944.
Potatoes, &c., Implement for mashing. W. A. Jackson. No. 1,023,517; Apr. 16; Sp. p. 3364; Gaz. vol. 177; p. 600.
Pottery-machine. F. Kayser. No. 1,024,511; Apr. 30; Sp. p. 5935; Gaz. vol. 177; p. 1059.
Poultry apparatus. E. W. Olson. No. 1,023,030; Apr. 9; Sp. p. 2708; Gaz. vol. 177; p. 463.

Poultry-fountain. W. G. Klussman. No. 1,023,658; Apr. 16; Sp. p. 4037; Gaz. vol. 177; p. 706.
Power-producing process. P. Danckwardt. No. 1,023,819; Apr. 23; Sp. p. 4356; Gaz. vol. 177; p. 787.
Power-transmission device. J. Lovely. No. 1,022,099; Apr. 2; Sp. p. 733; Gaz. vol. 177; p. 117.
Power-transmission mechanism. H. E. Marshall and R. Isaksen. No. 1,023,262; Apr. 16; Sp. p. 3254; Gaz. vol. 177; p. 582.
Power-transmission mechanism. D. Nettenstrom. No. 1,024,742; Apr. 30; Sp. p. 6463; Gaz. vol. 177; p. 1140.
Power-transmission mechanism. H. Föttinger. No. 1,024,982; Apr. 30; Sp. p. 6956; Gaz. vol. 177; p. 1223.
Power-transmitter. E. Fabian and F. Widmark. No. 1,023,366; Apr. 16; Sp. p. 3445; Gaz. vol. 177; p. 616.
Precious metals from cyanid solutions, Precipitation of. J. M. Neil. No. 1,023,524; Apr. 16; Sp. p. 3763; Gaz. vol. 177; p. 665.
Precision instrument of. J. Gaggott. No. 1,022,849; Apr. 9; Sp. p. 2352; Gaz. vol. 177; p. 402.
Press: *See* Baling-press; Hydraulic press; Printing-press; Tile-press; Tramper-press; Type-writer press; Wax-press.
Press. D. C. Fitch. No. 1,023,145; Apr. 16; Sp. p. 3012; Gaz. vol. 177; p. 541.
Press. J. E. Davis. No. 1,024,721; Apr. 30; Sp. p. 6426; Gaz. vol. 177; p. 1132.
Press provided with an oscillating pressing-arm. J. Sandt. No. 1,024,429; Apr. 23; Sp. p. 5701; Gaz. vol. 177; p. 992.
Pressing-machine. H. H. Burns. No. 1,023,066; Apr. 9; Sp. p. 2794; Gaz. vol. 177; p. 475.
Pressing-machine. H. Lindestrom. No. 1,023,575; Apr. 16; Sp. p. 3875; Gaz. vol. 177; p. 682.
Pressing machine, Garment-. W. J. Danenhower. No. 1,022,835; Apr. 9; Sp. p. 1647; Gaz. vol. 177; p. 293.
Pressure-gage. C. O. Everhart. No. 1,022,310; Apr. 2; Sp. p. 1158; Gaz. vol. 177; p. 186.
Pressure-gage. S. Dinsmore. No. 1,023,821; Apr. 23; Sp. p. 4362; Gaz. vol. 177; p. 788.
Pressure-reducing device. T. H. Manchester. No. 1,022,422; Apr. 2; Sp. p. 1153; Gaz. vol. 177; p. 100.
Primary battery. W. A. F. Bleeck. No. 1,021,889; Apr. 2; Sp. p. 225; Gaz. vol. 177; p. 38.
Primary battery. Z. Espor. No. 1,022,276; Apr. 2; Sp. p. 1065; Gaz. vol. 177; p. 176.
Primary battery. C. E. Hite. No. 1,024,577; Apr. 30; Sp. p. 6115; Gaz. vol. 177; p. 1062.
Printer's furniture. S. Stephens. No. 1,024,606; Apr. 30; Sp. p. 6189; Gaz. vol. 177; p. 1092.
Printing device, Enamel-. T. Lovendale. No. 1,023,160; Apr. 16; Sp. p. 3042; Gaz. vol. 177; p. 546.
Printing engravings in intaglio, Apparatus for. A. Valentin, J. Zerreiss, and H. Georges. No. 1,023,775; Apr. 16; Sp. p. 4220; Gaz. vol. 177; p. 743.
Printing-frame. D. W. Faulk. No. 1,023,828; Apr. 23; Sp. p. 4396; Gaz. vol. 177; p. 790.
Printing-machine. W. Scott. No. 1,021,897; Apr. 2; Sp. p. 310; Gaz. vol. 177; p. 51.
Printing-machine. W. Scott. No. 1,025,076; Apr. 30; Sp. p. 7138; Gaz. vol. 177; p. 1253.
Printing machine, Blue-. F. F. Metzger. No. 1,022,039; Apr. 2; Sp. p. 611; Gaz. vol. 177; p. 97.
Printing machine, Multirevolution. W. Scott. No. 1,022,904; Apr. 9; Sp. p. 1797; Gaz. vol. 177; p. 315.
Printing mechanism. A. H. Bates. No. 1,021,858; Apr. 2; Sp. p. 231; Gaz. vol. 177; p. 38.
Printing-plates of metal, Etching fluid for flat. O. C. Strecker. No. 1,022,274; Apr. 2; Sp. p. 1093; Gaz. vol. 177; p. 175.
Printing-press. R. D. Coy. No. 1,022,406; Apr. 9; Sp. p. 1868; Gaz. vol. 177; p. 250.
Printing-press. J. L. Firm. No. 1,024,473; Apr. 23; Sp. p. 5617; Gaz. vol. 177; p. 1010.
Printing-surfaces, Holder for. P. Martin. No. 1,022,323; Apr. 2; Sp. p. 1186; Gaz. vol. 177; p. 191.
Projectile. J. B. Semple. (Reissue.) No. 13,406; Apr. 16; Sp. p. 4264; Gaz. vol. 177; p. 749.
Projecting apparatus. H. F. Patton. No. 1,024,356; Apr. 23; Sp. p. 5536; Gaz. vol. 177; p. 970.
Propeller. J. F. Nettle. No. 1,022,203; Apr. 2; Sp. p. 957; Gaz. vol. 177; p. 153.
Propeller. J. A. Irving. No. 1,022,846; Apr. 9; Sp. p. 2343; Gaz. vol. 177; p. 400.
Propeller. G. G. Bower, No. 1,023,501; Apr. 16; Sp. p. 3719; Gaz. vol. 177; p. 658.
Propeller. R. W. Scott. No. 1,024,032; Apr. 23; Sp. p. 4845; Gaz. vol. 177; p. 859.
Propeller. C. H. Johnson. No. 1,024,339; Apr. 23; Sp. p. 5507; Gaz. vol. 177; p. 965.
Propeller. J. L. Elkhoff. No. 1,024,700; Apr. 30; Sp. p. 6385; Gaz. vol. 177; p. 1125.
Propeller, Hydraulic. J. F. Struble. No. 1,024,376; Apr. 23; Sp. p. 5566; Gaz. vol. 177; p. 976.
Propeller, Screw-. F. Brouessouse. No. 1,021,822; Apr. 2; Sp. p. 155; Gaz. vol. 177; p. 26.
Propeller, Screw-. A. Mühlberg. No. 1,023,534; Apr. 16; Sp. p. 3691; Gaz. vol. 177; p. 666.
Propellers, Shaping-machine for screw-. A. Mühlberg. No. 1,021,941; Apr. 2; Sp. p. 302; Gaz. vol. 177; p. 65.
Propelling mechanism for vessels. E. A. Graves. No. 1,023,515; Apr. 16; Sp. p. 3753; Gaz. vol. 177; p. 663.
Propulsion, Boat-. J. E. Walter. No. 1,022,989; Apr. 9; Sp. p. 2635; Gaz. vol. 177; p. 449.
Propulsion for vessels, Water-current. F. Jensen. No. 1,023,205; Apr. 16; Sp. p. 3140; Gaz. vol. 177; p. 562.
Protective device. A. G. Jones. No. 1,024,857; Apr. 30; Sp. p. 6710; Gaz. vol. 177; p. 1181.
Protractor, Adjustable arm-. H. B. Hill. No. 1,023,733; Apr. 16; Sp. p. 4166; Gaz. vol. 177; p. 731.
Pruning implement. A. M. Ottinger. No. 1,023,093; Apr. 9; Sp. p. 2850; Gaz. vol. 177; p. 484.
Pull-line coupling. R. E. Donahue, H. J. Andersen, and H. B. Gregg. No. 1,022,800; Apr. 2; Sp. p. 1163; Gaz. vol. 177; p. 185.
Pull-socket. F. L. Rowntree. No. 1,024,365; Apr. 23; Sp. p. 5551; Gaz. vol. 177; p. 973.
Puller: *See* Beet-puller; Root-puller; Stump-puller; Weed-puller.
Pulley. O. Ditsworth. No. 1,021,764; Apr. 2; Sp. p. 19; Gaz. vol. 177; p. 6.
Pulley. H. J. Gilbert. No. 1,022,840; Apr. 9; Sp. p. 2347; Gaz. vol. 177; p. 398.
Pulley. J. Petrallo. No. 1,022,869; Apr. 9; Sp. p. 2395; Gaz. vol. 177; p. 407.
Pulley. L. A. Biggar. No. 1,025,108; Apr. 30; Sp. p. 7219; Gaz. vol. 177; p. 1264.
Pulley and shade holder, Sash-cord-. A. D. Berg. No. 1,025,107; Apr. 30; Sp. p. 7218; Gaz. vol. 177; p. 1264.
Pulley-block. P. J. Georgeson. No. 1,022,411; Apr. 9; Sp. p. 1371; Gaz. vol. 177; p. 251.
Pulley, Clothes-line. G. A. Le Baron. No. 1,024,586; Apr. 30; Sp. p. 6122; Gaz. vol. 177; p. 1064.
Pulley-covering. W. C. Beam. No. 1,024,667; Apr. 30; Sp. p. 6315; Gaz. vol. 177; p. 1113.
Pulley, Loose. R. I. Fancher. No. 1,022,779; Apr. 9; Sp. p. 2200; Gaz. vol. 177; p. 378.
Pulp-screen. J. Olsen. No. 1,022,750; Apr. 9; Sp. p. 2147; Gaz. vol. 177; p. 368.
Pulp-separator. F. F. Strong. No. 1,023,280; Apr. 16; Sp. p. 3293; Gaz. vol. 177; p. 583.
Pulverizer. C. J. Tomlinson. No. 1,021,906; Apr. 2; Sp. p. 324; Gaz. vol. 177; p. 54.
Pulverizer. M. F. Williams and E. H. Fricke. No. 1,022,464; Apr. 9; Sp. p. 1490; Gaz. vol. 177; p. 267.
Pulverizer and cultivator, Combined soil-. W. A. Williams. No. 1,023,774; Apr. 16; Sp. p. 4227; Gaz. vol. 177; p. 743.
Pulverizer, Soil-. W. J. Dunham. No. 1,023,139; Apr. 16; Sp. p. 2994; Gaz. vol. 177; p. 538.
Pulverizing-mill. W. A. Galland. No. 1,021,981; Apr. 2; Sp. p. 493; Gaz. vol. 177; p. 79.
Pump. G. Robson. No. 1,021,892; Apr. 2; Sp. p. 299; Gaz. vol. 177; p. 49.
Pump. G. Johnson and N. J. Russell. No. 1,022,556; Apr. 9; Sp. p. 1695; Gaz. vol. 177; p. 299.
Pump. J. V. Chapman. No. 1,023,296; Apr. 16; Sp. p. 3319; Gaz. vol. 177; p. 593.
Pump. E. M. Smith. No. 1,024,229; Apr. 23; Sp. p. 5300; Gaz. vol. 177; p. 930.
Pump. F. L. Waterous. No. 1,024,919; Apr. 30; Sp. p. 6844; Gaz. vol. 177; p. 1202.
Pump air-pressure regulator, Force-. F. J. Gile. No. 1,023,146; Apr. 16; Sp. p. 3014; Gaz. vol. 177; p. 541.
Pump, Centrifugal. G. C. Kuechler. No. 1,022,425; Apr. 9; Sp. p. 1431; Gaz. vol. 177; p. 256.
Pump, Centrifugal. T. R. Harton. No. 1,022,478; Apr. 9; Sp. p. 1530; Gaz. vol. 177; p. 275.
Pump, Centrifugal. J. A. Yeatman. No. 1,023,776; Apr. 16; Sp. p. 4232; Gaz. vol. 177; p. 744.
Pump, Compressor. W. F. Ruwell. No. 1,023,685; Apr. 16; Sp. p. 4075; Gaz. vol. 177; p. 715.
Pump cross-head. A. K. King and J. W. Irwin. No. 1,023,855; Apr. 23; Sp. p. 4461; Gaz. vol. 177; p. 799.
Pump, Fluid-. G. H. Irwin, J. P. Cullon, and F. Knowlson. No. 1,025,067; Apr. 30; Sp. p. 7116; Gaz. vol. 177; p. 1250.
Pump-jack. G. W. Seybert. No. 1,024,033; Apr. 23; Sp. p. 4846; Gaz. vol. 177; p. 860.
Pump-jack for double-acting pumps. F. W. Axtell. No. 1,024,921; Apr. 30; Sp. p. 6848; Gaz. vol. 177; p. 1202.
Pump-packing, Metallic. E. M. Scoville. No. 1,024,423; Apr. 23; Sp. p. 5703; Gaz. vol. 177; p. 993.
Pump-piston, Fluid-packing. J. Hahn. No. 1,024,130; Apr. 23; Sp. p. 5084; Gaz. vol. 177; p. 894.
Pump-regulator, Automatic. E. H. Bridenbaugh. No. 1,024,179; Apr. 23; Sp. p. 5187; Gaz. vol. 177; p. 911.
Pump-unloading device. W. V. Turner. No. 1,021,809; Apr. 2; Sp. p. 105; Gaz. vol. 177; p. 21.
Pumps, Injector attachment for air or steam. F. S. Morgan. No. 1,023,583; Apr. 16; Sp. p. 3890; Gaz. vol. 177; p. 695.
Pumps, Speed-controller for steam-. P. E. Prescott. No. 1,023,171; Apr. 16; Sp. p. 3073; Gaz. vol. 177; p. 550.
Pumping apparatus. X. Caverno. No. 1,021,861; Apr. 2; Sp. p. 241; Gaz. vol. 177; p. 39.
Pumping apparatus. J. J. Groetken. No. 1,025,056; Apr. 30; Sp. p. 7097; Gaz. vol. 177; p. 1248.
Pumping purposes, Mechanism for transmitting power for. J. A. Brown. No. 1,025,049; Apr. 30; Sp. p. 7086; Gaz. vol. 177; p. 1245.
Punching and shearing machine attachment. A. Parfitt. No. 1,025,016; Apr. 30; Sp. p. 7027; Gaz. vol. 177; p. 1234.
Punching device. P. B. Rogers. No. 1,023,275; Apr. 16; Sp. p. 3285; Gaz. vol. 177; p. 586.
Puncture-alarm. F. D. Schneider. No. 1,025,100; Apr. 30; Sp. p. 7205; Gaz. vol. 177; p. 1262.

Purse. J. Specht. No. 1,022,976; Apr. 9; Sp. p. 2615; Gaz. vol. 177; p. 445.

Puzzle. J. Wenig. No. 1,022,615; Apr. 9; Sp. p. 1825; Gaz. vol. 177; p. 319.

Pyrophorous substances for ignition and illumination, Production of. A. Lesmüller. No. 1,023,206; Apr. 16; Sp. p. 3147; Gaz. vol. 177; p. 563.

Quartz apparatus, Manufacture of. W. R. Whitney. No. 1,022,910; Apr. 9; Sp. p. 2474; Gaz. vol. 177; p. 421.

Rack: *See* Book-rack; Dish-drying rack; Display-rack; Hay-rack; Luggage and hat rack; Spool-rack; Umbrella-rack.

Rack. F. P. Shek. (Reissue.) No. 13,395; Apr. 2; Sp. p. 1337; Gaz. vol. 177; p. 217.

Radial drill. H. M. Norris. No. 1,022,489; Apr. 9; Sp. p. 1454; Gaz. vol. 177; p. 260.

Radiator. C. S. Carlberg. No. 1,022,620; Apr. 9; Sp. p. 1833; Gaz. vol. 177; p. 321.

Radiator. G. W. Dunham. No. 1,022,662; Apr. 9; Sp. p. 1924; Gaz. vol. 177; p. 335.

Radiator. L. Lodiano. (Reissue.) No. 13,411; Apr. 30; Sp. p. 7230; Gaz. vol. 177; p. 1269.

Radiator-assembling machine. W. Dietz. No. 1,024,124; Apr. 23; Sp. p. 5060; Gaz. vol. 177; p. 893.

Radiator, Hot-water and steam. G. C. Andrews and E. H. Williams. No. 1,023,793; Apr. 23; Sp. p. 4273; Gaz. vol. 177; p. 778.

Rail. A. G. Jones and P. K. Millar. No. 1,023,652; Apr. 16; Sp. p. 4021; Gaz. vol. 177; p. 706.

Rail-anchor. J. J. Byers. (Reissue.) No. 13,407; Apr. 23; Sp. p. 5849; Gaz. vol. 177; p. 1017.

Rail-bending machine. J. H. Cassidy. No. 1,024,629; Apr. 30; Sp. p. 6655; Gaz. vol. 177; p. 1171.

Rail-bonding clamp, Magnetic. H. P. Brown. No. 1,023,021; Apr. 23; Sp. p. 4619; Gaz. vol. 177; p. 822.

Rail-chair. H. Elliot. No. 1,024,583; Apr. 30; Sp. p. 6761; Gaz. vol. 177; p. 1189.

Rail-clamp. E. H. Korges. No. 1,022,559; Apr. 9; Sp. p. 1700; Gaz. vol. 177; p. 300.

Rail clamp or stay. W. H. Bates. No. 1,024,611; Apr. 30; Sp. p. 6189; Gaz. vol. 177; p. 1094.

Rail-clamping device. J. Patterson. No. 1,024,648; Apr. 30; Sp. p. 6381; Gaz. vol. 177; p. 1106.

Rail-fastener. A. Seabadoe. No. 1,021,954; Apr. 2; Sp. p. 439; Gaz. vol. 177; p. 70.

Rail-fastening. W. Irin. No. 1,022,786; Apr. 9; Sp. p. 2219; Gaz. vol. 177; p. 380.

Rail-fastening. J. W. Cuthbert. No. 1,025,066; Apr. 30; Sp. p. 7066; Gaz. vol. 177; p. 1247.

Rail Guard. P. D. Serrurier. No. 1,024,952; Apr. 30; Sp. p. 6909; Gaz. vol. 177; p. 1214.

Rail-joint. J. M. Lofland. No. 1,021,841; Apr. 2; Sp. p. 197; Gaz. vol. 177; p. 32.

Rail-joint. A. Seabadoe. No. 1,021,955; Apr. 2; Sp. p. 441; Gaz. vol. 177; p. 70.

Rail-joint. J. H. and C. J. Tressler. No. 1,022,279; Apr. 2; Sp. p. 1100; Gaz. vol. 177; p. 176.

Rail-joint. J. Berlien. No. 1,022,460; Apr. 9; Sp. p. 1500; Gaz. vol. 177; p. 268.

Rail-joint. R. P. Etchison. No. 1,022,835; Apr. 9; Sp. p. 2321; Gaz. vol. 177; p. 397.

Rail-joint. A. B. Taylor. No. 1,023,690; Apr. 16; Sp. p. 4087; Gaz. vol. 177; p. 717.

Rail-joint. J. Schuck. No. 1,024,289; Apr. 23; Sp. p. 5425; Gaz. vol. 177; p. 950.

Rail-joint. C. M. Corlew. No. 1,024,313; Apr. 23; Sp. p. 5465; Gaz. vol. 177; p. 958.

Rail-joint. S. James. No. 1,024,450; Apr. 23; Sp. p. 5757; Gaz. vol. 177; p. 1001.

Rail-joint. J. White. No. 1,024,610; Apr. 30; Sp. p. 6195; Gaz. vol. 177; p. 1093.

Rail-joint. J. G. McMichael. No. 1,024,736; Apr. 30; Sp. p. 6453; Gaz. vol. 177; p. 1138.

Rail-joint. K. Jasiecki and K. Glowacki. No. 1,024,856; Apr. 30; Sp. p. 6708; Gaz. vol. 177; p. 1181.

Rail-joint. Automatic continuous. C. Troup. No. 1,022,984; Apr. 9; Sp. p. 2627; Gaz. vol. 177; p. 448.

Rail-joint. Insulated. W. H. Sellew and E. A. Everett. No. 1,022,884; Apr. 9; Sp. p. 2408; Gaz. vol. 177; p. 412.

Rail-securing means. G. W. Whiteman. No. 1,025,104; Apr. 30; Sp. p. 7211; Gaz. vol. 177; p. 1263.

Rail-supporting plate. K. Jasiecki and K. Glowacki. No. 1,024,855; Apr. 30; Sp. p. 6708; Gaz. vol. 177; p. 1181.

Rail-tie. S. B. Humbert. No. 1,023,651; Apr. 16; Sp. p. 4020; Gaz. vol. 177; p. 706.

Rail tie and fastener. W. A. Lewis and J. E. Stephen. No. 1,021,936; Apr. 2; Sp. p. 378; Gaz. vol. 177; p. 63.

Rail tie and fastener. E. T. Payne and G. F. Cochran. No. 1,023,571; Apr. 23; Sp. p. 4490; Gaz. vol. 177; p. 804.

Rail tie and fastener therefor, Metallic. A. C. Candland. No. 1,024,470; Apr. 23; Sp. p. 5807; Gaz. vol. 177; p. 1009.

Rail-tie, Metal. A. C. Dinkey. No. 1,024,065; Apr. 23; Sp. p. 4916; Gaz. vol. 177; p. 871.

Rails, Apparatus for working on the upper or wearing portions of compound tram-. J. Noll. No. 1,024,906; Apr. 30; Sp. p. 6806; Gaz. vol. 177; p. 1197.

Railway construction, Portable. A. S. Cunningham and B. C. Buxton. No. 1,022,467; Apr. 9; Sp. p. 1509; Gaz. vol. 177; p. 271.

Railway cross-tie. O. E. Hall. No. 1,022,862; Apr. 2; Sp. p. 1270; Gaz. vol. 177; p. 204.

Railway-crossing guard, Automatic. G. T. Hardenburgh and J. A. Schroyer. No. 1,023,015; Apr. 9; Sp. p. 2683; Gaz. vol. 177; p. 457.

Railway-rails and means for securing the meeting ends thereof together. J. D. Young. No. 1,023,702; Apr. 16; Sp. p. 4105; Gaz. vol. 177; p. 721.

Railway-rails, Combined tie-plate and anchor for. B. B. Betts. No. 1,024,114; Apr. 23; Sp. p. 5085; Gaz. vol. 177; p. 889.

Railway-signal. I. W. Pierce. No. 1,023,440; Apr. 16; Sp. p. 3503; Gaz. vol. 177; p. 639.

Railway-signal-recording system. T. J. Fyler. No. 1,023,037; Apr. 9; Sp. p. 2726; Gaz. vol. 177; p. 466.

Railway-signal system, Automatic. S. C. Perry. No. 1,025,018; Apr. 30; Sp. p. 7030; Gaz. vol. 177; p. 1235.

Railway-spike. W. A. Mooney. No. 1,025,009; Apr. 30; Sp. p. 7019; Gaz. vol. 177; p. 1235.

Railway-switch, Automatic. R. H. Conley. No. 1,022,803; Apr. 9; Sp. p. 1148; Gaz. vol. 177; p. 184.

Railway-switch, Automatic. W. T. Lawhorn and A. J. Marin. No. 1,022,631; Apr. 9; Sp. p. 1655; Gaz. vol. 177; p. 324.

Railway-terminal. J. D'Esposito. No. 1,022,659; Apr. 9; Sp. p. 1919; Gaz. vol. 177; p. 334.

Railway-tie. D. S. Beach. No. 1,023,798; Apr. 23; Sp. p. 4298; Gaz. vol. 177; p. 780.

Railway-tie. J. D. Ogden. No. 1,023,956; Apr. 23; Sp. p. 4606; Gaz. vol. 177; p. 833.

Railway-tie. E. Wyckoff. No. 1,024,548; Apr. 30; Sp. p. 6030; Gaz. vol. 177; p. 1071.

Railway-tie and means for securing a rail to the same, Metallic. A. C. Bossi. No. 1,023,987; Apr. 23; Sp. p. 4758; Gaz. vol. 177; p. 844.

Railway-tie, Metallic. W. Pennock. No. 1,023,892; Apr. 16; Sp. p. 3508; Gaz. vol. 177; p. 625.

Railway-tie, Metallic. T. T. Tong. No. 1,024,290; Apr. 23; Sp. p. 5439; Gaz. vol. 177; p. 953.

Railway-tie plate. J. M. Conway. No. 1,023,551; Apr. 16; Sp. p. 3615; Gaz. vol. 177; p. 673.

Railway-tie, Steel and concrete. W. F. Morrison. No. 1,021,645; Apr. 2; Sp. p. 203; Gaz. vol. 177; p. 34.

Railway-track appliance. T. Maney. No. 1,022,957; Apr. 9; Sp. p. 2580; Gaz. vol. 177; p. 435.

Railway-track fastening. C. J. Gold. No. 1,024,127; Apr. 23; Sp. p. 5077; Gaz. vol. 177; p. 893.

Railways, Apparatus for controlling the traffic on single-line. E. Tyer. No. 1,024,283; Apr. 23; Sp. p. 5317; Gaz. vol. 177; p. 931.

Rake. O. P. Hulan. No. 1,023,849; Apr. 23; Sp. p. 4440; Gaz. vol. 177; p. 797.

Rake shield attachment. Sulky-. J. M. Wilson. No. 1,022,210; Apr. 2; Sp. p. 983; Gaz. vol. 177; p. 158.

Ramp, Rotary. B. Ackerman. No. 1,023,406; Apr. 16; Sp. p. 3533; Gaz. vol. 177; p. 629.

Rat-trap, Electric. W. Zaniewski. No. 1,023,808; Apr. 16; Sp. p. 3947; Gaz. vol. 177; p. 693.

Rat-trap, Electric. J. Ballut. No. 1,024,967; Apr. 30; Sp. p. 6934; Gaz. vol. 177; p. 1219.

Ratchet-wrench. W. G. Buscoe. No. 1,022,208; Apr. 2; Sp. p. 968; Gaz. vol. 177; p. 155.

Razor. H. J. Gaisman. No. 1,022,727; Apr. 9; Sp. p. 2102; Gaz. vol. 177; p. 360.

Razor. F. May and J. H. Bleco. No. 1,022,860; Apr. 9; Sp. p. 2365; Gaz. vol. 177; p. 405.

Razor, Multibladed. H. C. Harrison. No. 1,024,509; Apr. 30; Sp. p. 5983; Gaz. vol. 177; p. 1058.

Razor, Safety-. E. C. Madden. No. 1,022,429; Apr. 9; Sp. p. 1437; Gaz. vol. 177; p. 257.

Razor, Safety-. C. E. Dunn. No. 1,022,623; Apr. 9; Sp. p. 1837; Gaz. vol. 177; p. 322.

Razor, Safety-. H. J. Gaisman. No. 1,022,726; Apr. 9; Sp. p. 2096; Gaz. vol. 177; p. 360.

Razor, Safety-. H. J. Gaisman. No. 1,022,728; Apr. 9; Sp. p. 2107; Gaz. vol. 177; p. 361.

Razor, Safety-. H. J. Gaisman. No. 1,022,729; Apr. 9; Sp. p. 2108; Gaz. vol. 177; p. 361.

Razor, Safety-. H. J. Gaisman. No. 1,022,730; Apr. 9; Sp. p. 2110; Gaz. vol. 177; p. 362.

Razor, Safety-. H. J. Gaisman. No. 1,022,731; Apr. 9; Sp. p. 2112; Gaz. vol. 177; p. 362.

Razor, Safety-. H. J. Gaisman. No. 1,022,732; Apr. 9; Sp. p. 2113; Gaz. vol. 177; p. 362.

Razor, Safety-. C. Jeremias. No. 1,023,206; Apr. 16; Sp. p. 3142; Gaz. vol. 177; p. 562.

Razor, Safety-. S. V. Dillon. No. 1,023,364; Apr. 16; Sp. p. 3442; Gaz. vol. 177; p. 615.

Razor, Safety-. J. Garret. No. 1,023,372; Apr. 16; Sp. p. 3457; Gaz. vol. 177; p. 617.

Razor, Safety-. J. N. Lorensen. No. 1,024,348; Apr. 23; Sp. p. 5525; Gaz. vol. 177; p. 965.

Razor, Safety-. H. Hess. No. 1,024,402; Apr. 23; Sp. p. 5661; Gaz. vol. 177; p. 985.

Razor, Safety-. M. Hauser. No. 1,024,570; Apr. 30; Sp. p. 6104; Gaz. vol. 177; p. 1080.

Razor stropper and honer. A. C. Hayden. No. 1,022,549; Apr. 9; Sp. p. 1675; Gaz. vol. 177; p. 297.

Razor-stropping device. J. W. Horner. No. 1,024,404; Apr. 23; Sp. p. 5664; Gaz. vol. 177; p. 986.

Razor-stropping machine. A. J. Postano. No. 1,021,795; Apr. 2; Sp. p. 79; Gaz. vol. 177; p. 17.

Reamer, Adjustable. J. A. Etzold and E. H. North. No. 1,024,309; Apr. 23; Sp. p. 5657; Gaz. vol. 177; p. 985.

Receptacle. B. W. Newman. No. 1,023,675; Apr. 16; Sp. p. 4062; Gaz. vol. 177; p. 712.

Receptacle, Collapsible. E. von Vargyas. No. 1,021,858; Apr. 2; Sp. p. 218; Gaz. vol. 177; p. 36.

Receptacle for mustard and other condiments. A. J. Greaves. No. 1,024,038; Apr. 30; Sp. p. 6076; Gaz. vol. 177; p. 1226.

Receptacle or package of compressed paper and method of and means for making same. H. Renac. No. 1,023,784; Apr. 16; Sp. p. 4211; Gaz. vol. 177; p. 799.

Reciprocating engine. A. J. Jackson. No. 1,024,581; Apr. 30; Sp. p. 6122; Gaz. vol. 177; p. 1083.

Recorder: *See* Time-recorder.

Recording marine conditions, Method of and apparatus for. H. T. Barnes. No. 1,022,536; Apr. 9; Sp. p. 1632; Gaz. vol. 177; p. 296.

Reel: *See* Casting-reel; Clothes-line reel; Eyeglass-reel; Fishing-reel; Holder-reel; Hose-reel.

Reel-carrier. C. Flitch. No. 1,022,606; Apr. 9; Sp. p. 1808; Gaz. vol. 177; p. 281.

Reeling mechanism. A. C. Roebuck. No. 1,024,206; Apr. 30; Sp. p. 6728; vol. 177; p. 1184.

Reflecting means for enabling one to see the back of the head or neck, Combination of. G. E. Graham. No. 1,024,696; Apr. 30; Sp. p. 6967; Gaz. vol. 177; p. 1237.

Reflector-support. M. J. Kane. No. 1,024,900; Apr. 30; Sp. p. 6799; Gaz. vol. 177; p. 1195.

Reflectors, Making. L. Kaufold. No. 1,024,264; Apr. 23; Sp. p. 5384; Gaz. vol. 177; p. 942.

Refractory article. G. Weintraub. No. 1,022,021; Apr. 2; Sp. p. 561; Gaz. vol. 177; p. 98.

Refrigerator-car door and means for operating same. J. F. O'Connor. No. 1,022,164; Apr. 16; Sp. p. 3953; Gaz. vol. 177; p. 547.

Refrigerators, Water-cooling ice-tray for. J. Phillipps. No. 1,022,565; Apr. 9; Sp. p. 1712; Gaz. vol. 177; p. 302.

Register: *See* Account-register; Cash-register; Fare-register.

Register, A. Zettervall. No. 1,023,912; Apr. 23; Sp. p. 4600; Gaz. vol. 177; p. 819.

Registers, Heat-deflecting and soot-catching attachment for hot-air. M. A. Forward. No. 1,021,980; Apr. 2; Sp. p. 402; Gaz. vol. 177; p. 78.

Registers, Stack-head for wall. A. G. Scherer. No. 1,023,778; Apr. 16; Sp. p. 4201; Gaz. vol. 177; p. 798.

Registering mechanism for Geom. J. R. Moody. No. 1,023,217; Apr. 16; Sp. p. 3162; Gaz. vol. 177; p. 566.

Regulator: *See* Boiler draft-regulator; Centrifugal-regulator; Current-regulator; Dental escapement-regulator; Feed-regulator; Fluid-pressure regulator; Gas-regulator; Kerosene-burner regulator; Pump-regulator; Pump air-pressure regulator; Steam-accumulator regulator.

Reinforcement. A. Attinson. No. 1,024,968; Apr. 30; Sp. p. 6307; Gaz. vol. 177; p. 1112.

Reins, Spreader for. J. A. Tychen. No. 1,022,985; Apr. 9; Sp. p. 2620; Gaz. vol. 177; p. 448.

Relay, High-potential. H. W. Cheney. No. 1,023,503; Apr. 16; Sp. p. 3726; Gaz. vol. 177; p. 660.

Releasing device. C. Müller. No. 1,024,946; Apr. 30; Sp. p. 6901; Gaz. vol. 177; p. 1212.

Reloading-tool. O. Arnason. No. 1,023,913; Apr. 23; Sp. p. 4605; Gaz. vol. 177; p. 820.

Resilient wheel. A. Sherwood. No. 1,022,865; Apr. 9; Sp. p. 2412; Gaz. vol. 177; p. 412.

Resilient wheel. D. L. Crosbie. No. 1,023,416; Apr. 16; Sp. p. 3550; Gaz. vol. 177; p. 632.

Resin from waste products, Recovering. F. L. Huggins. No. 1,023,194; Apr. 2; Sp. p. 997; Gaz. vol. 177; p. 149.

Resistance element. J. G. Zimmerman. No. 1,023,543; Apr. 16; Sp. p. 3801; Gaz. vol. 177; p. 671.

Resistance unit. G. E. Stevens. No. 1,022,897; Apr. 9; Sp. p. 2434; Gaz. vol. 177; p. 416.

Reversing mechanism, Automatic. G. W. Cameron. No. 1,024,705; Apr. 30; Sp. p. 6520; Gaz. vol. 177; p. 1248.

Riding-habit. M. Cowen. No. 1,022,405; Apr. 9; Sp. p. 1362; Gaz. vol. 177; p. 250.

Ring: *See* Curtain-pole ring; Hat packing-ring; Packing-ring.

Ring-forming machine. H. Henrich. No. 1,024,004; Apr. 23; Sp. p. 4736; Gaz. vol. 177; p. 850.

Ringer. W. W. Dean. No. 1,022,065; Apr. 2; Sp. p. 945; Gaz. vol. 177; p. 166.

Ritualistic purposes, Tool or instrument for. B. T. Woods, Sr. No. 1,022,219; Apr. 2; Sp. p. 987; Gaz. vol. 177; p. 180.

Rivet-head drill. L. Bennett. No. 1,023,002; Apr. 9; Sp. p. 2650; Gaz. vol. 177; p. 454.

Rivet-setting machine, Multiple-. A. B. Havener. No. 1,021,969; Apr. 2; Sp. p. 556; Gaz. vol. 177; p. 41.

Riveting cloth, leather, and similar material, Apparatus for. J. E. Archer. No. 1,023,061; Apr. 9; Sp. p. 2782; Gaz. vol. 177; p. 474.

Roach-exterminator. N. B. Levi. No. 1,022,696; Apr. 2; Sp. p. 729; Gaz. vol. 177; p. 116.

Roach-trap. J. Dempster. No. 1,024,767; Apr. 30; Sp. p. 6524; Gaz. vol. 177; p. 1149.

Roasting-furnace. T. D. Morton. No. 1,023,961; Apr. 9; Sp. p. 2669; Gaz. vol. 177; p. 460.

Rock-drill, Portable. G. H. Rice. No. 1,022,578; Apr. 9; Sp. p. 1739; Gaz. vol. 177; p. 307.

Rock-drills, Device for the facilitation of the exchange of bores in. P. C. A. Ehrstad. No. 1,024,974; Apr. 30; Sp. p. 6100; Gaz. vol. 177; p. 1081.

Rock-drills, Rotation device for. C. C. Rhoades. No. 1,023,617; Apr. 16; Sp. p. 3760; Gaz. vol. 177; p. 684.

Rock-picker for picking up rocks &c. J. Harman. No. 1,023,736; Apr. 16; Sp. p. 4184; Gaz. vol. 177; p. 731.

Rod: *See* Curtain-rod.

Rod-bending machine. H. H. Jensen. No. 1,021,932; Apr. 2; Sp. p. 371; Gaz. vol. 177; p. 62.

Roller: *See* Detachable roller.

Rolling-mill. A. A. K. Nowak. No. 1,024,485; Apr. 23; Sp. p. 5638; Gaz. vol. 177; p. 1015.

Rolling-mill. W. Vassen. No. 1,025,078; Apr. 30; Sp. p. 7144; Gaz. vol. 177; p. 1254.

Rolling-mill and like machine, Two-high reversing. A. Lennerton. No. 1,024,475; Apr. 23; Sp. p. 5619; Gaz. vol. 177; p. 1011.

Roof. H. Schwarz. No. 1,024,808; Apr. 30; Sp. p. 6613; Gaz. vol. 177; p. 1165.

Roof-light. A. Klein. No. 1,021,782; Apr. 2; Sp. p. 58; Gaz. vol. 177; p. 12.

Roofing material. R. G. Wright. No. 1,022,764; Apr. 9; Sp. p. 2136; Gaz. vol. 177; p. 373.

Roofing, Commencing prepared. M. E. Becker. No. 1,024,540; Apr. 30; Sp. p. 6043; Gaz. vol. 177; p. 1073.

Roofing-plate, Sheet-metal. H. E. Meenaw. No. 1,023,944; Apr. 23; Sp. p. 203; Gaz. vol. 177; p. 32.

Roofing, Prepared. M. E. Becker. No. 1,024,550; Apr. 30; Sp. p. 6043; Gaz. vol. 177; p. 1073.

Room-cooling apparatus. C. J. Stoddard. No. 1,024,159; Apr. 23; Sp. p. 5147; Gaz. vol. 177; p. 903.

Root cutter and slicer. G. F. Thone. No. 1,023,973; Apr. 23; Sp. p. 4728; Gaz. vol. 177; p. 839.

Root-puller. M. E. Grosser. No. 1,024,328; Apr. 23; Sp. p. 5487; Gaz. vol. 177; p. 962.

Rope-clamp. G. W. Cameron. No. 1,024,974; Apr. 30; Sp. p. 6942; Gaz. vol. 177; p. 1221.

Rosette. Shock-absorbing. S. B. Paine. No. 1,022,797; Apr. 9; Sp. p. 2240; Gaz. vol. 177; p. 384.

Rotary engine. C. F. Leiger. No. 1,023,321; Apr. 16; Sp. p. 3371; Gaz. vol. 177; p. 601.

Rotary engine. C. F. Leiger. No. 1,023,322; Apr. 16; Sp. p. 3373; Gaz. vol. 177; p. 602.

Rotary engine. A. Grauer. No. 1,023,360; Apr. 16; Sp. p. 3434; Gaz. vol. 177; p. 613.

Rotary engine. F. P. Harmon. No. 1,023,466; Apr. 16; Sp. p. 3652; Gaz. vol. 177; p. 647.

Rotary engine. F. P. Hummel. No. 1,023,782; Apr. 16; Sp. p. 4244; Gaz. vol. 177; p. 746.

Rotary engine. A. P. Chesley. No. 1,023,998; Apr. 23; Sp. p. 4767; Gaz. vol. 177; p. 846.

Rotary engine. G. W. Richardson. No. 1,024,363; Apr. 23; Sp. p. 5546; Gaz. vol. 177; p. 972.

Rotary engine. J. C. King. No. 1,024,787; Apr. 30; Sp. p. 6571; Gaz. vol. 177; p. 1160.

Rotary internal-combustion engine. J. F. Bourion. No. 1,023,195; Apr. 16; Sp. p. 3122; Gaz. vol. 177; p. 558.

Rotary machine. H. L. Weed. No. 1,024,166; Apr. 23; Sp. p. 5157; Gaz. vol. 177; p. 906.

Rotary steam-engine. D. P. Upson. No. 1,022,570; Apr. 9; Sp. p. 1721; Gaz. vol. 177; p. 304.

Rotary steam-engine. D. P. Upson. No. 1,022,572; Apr. 9; Sp. p. 1723; Gaz. vol. 177; p. 304.

Rotating bodies, Apparatus for determining the acceleration of. E. C. Clinker. No. 1,024,185; Apr. 23; Sp. p. 5192; Gaz. vol. 177; p. 912.

Route-indicator. J. B. Rhodes. No. 1,021,859; Apr. 2; Sp. p. 232; Gaz. vol. 177; p. 48.

Routing-machines or the like, Adjustable form for. J. E. Berain. No. 1,022,883; Apr. 9; Sp. p. 2406; Gaz. vol. 177; p. 412.

Roving-clamp. F. C. Craddick. No. 1,023,638; Apr. 16; Sp. p. 4002; Gaz. vol. 177; p. 702.

Rubber goods, Manufacture, molding, and remolding of india-. T. Gare. No. 1,023,729; Apr. 16; Sp. p. 4155; Gaz. vol. 177; p. 729.

Rubber shoe. J. H. Roedding. No. 1,022,566; Apr. 9; Sp. p. 1714; Gaz. vol. 177; p. 302.

Rubber waste, Apparatus for use in reclaiming vulcanized-. C. S. Heller. No. 1,024,936; Apr. 30; Sp. p. 6875; Gaz. vol. 177; p. 1208.

Rubber waste, Reclaiming vulcanized-. C. S. Heller. No. 1,024,937; Apr. 30; Sp. p. 6878; Gaz. vol. 177; p. 1208.

Rud-iron. M. Sunshine. No. 1,023,689; Apr. 16; Sp. p. 4085; Gaz. vol. 177; p. 717.

Rud-iron. A. H. Bickel. No. 1,024,306; Apr. 23; Sp. p. 5454; Gaz. vol. 177; p. 956.

Rud-iron heater. M. J. Duffield. No. 1,023,137; Apr. 16; Sp. p. 2988; Gaz. vol. 177; p. 538.

Rud-iron shoe. H. I. Bisttle. No. 1,023,802; Apr. 23; Sp. p. 4315; Gaz. vol. 177; p. 781.

Safe. P. H. Windmueller. No. 1,023,605; Apr. 16; Sp. p. 3939; Gaz. vol. 177; p. 692.

Safe, Wall. J. J. Harrison. No. 1,023,425; Apr. 16; Sp. p. 3565; Gaz. vol. 177; p. 634.

Safety appliance. W. E. Barton. No. 1,022,119; Apr. 2; Sp. p. 773; Gaz. vol. 177; p. 123.

Safety-brake for elevators, hoists, and lifts. F. Ruth. No. 1,023,282; Apr. 16; Sp. p. 3226; Gaz. vol. 177; p. 577.

Safety-lock for keyholes. T. E. Good. No. 1,022,474; Apr. 9; Sp. p. 1523; Gaz. vol. 177; p. 273.

Safety-pin. L. Brody. No. 1,024,717; Apr. 30; Sp. p. 6420; Gaz. vol. 177; p. 1181.

Sago substitute and making the same from corn-starch, Pearl-. F. G. Lorensen. No. 1,024,214; Apr. 23; Sp. p. 5272; Gaz. vol. 177; p. 924.

Sales-slip. A. G. Mowat. No. 1,024,822; Apr. 30; Sp. p. 6970; Gaz. vol. 177; p. 1163.

Salve, Making. J. W. Herald. No. 1,022,239; Apr. 2; Sp. p. 1035; Gaz. vol. 177; p. 165.
Samples of finely-divided material, Device for collecting. J. N. Reed. No. 1,024,282; Apr. 23; Sp. p. 5414; Gaz. vol. 177; p. 948.
Sampling mechanism, Automatic. F. S. Ingoldsby. No. 1,024,134; Apr. 23; Sp. p. 5003; Gaz. vol. 177; p. 806.
Sanding-machine. E. G. Cox. No. 1,022,827; Apr. 9; Sp. p. 2303; Gaz. vol. 177; p. 304.
Sandpaper-holder. O. C. Miller. No. 1,024,015; Apr. 23; Sp. p. 4805; Gaz. vol. 177; p. 853.
Sap-heater. L. M. Voss. No. 1,023,896; Apr. 23; Sp. p. 4558; Gaz. vol. 177; p. 813.
Sash-adjusting device, Window-. A. G. Lindley and N. F. Dickens. No. 1,021,937; Apr. 2; Sp. p. 879; Gaz. vol. 177; p. 63.
Sash-balancing mechanism. E. Georgeff. No. 1,023,731; Apr. 16; Sp. p. 4158; Gaz. vol. 177; p. 730.
Sash clip, Metallic-window-. C. W. Davock. No. 1,022,123; Apr. 2; Sp. p. 783; Gaz. vol. 177; p. 125.
Sash, Convertible window-. H. F. Eilert. No. 1,023,726; Apr. 16; Sp. p. 4147; Gaz. vol. 177; p. 728.
Sash holder and lock. W. M. Hotchkiss. No. 1,024,780; Apr. 30; Sp. p. 6552; Gaz. vol. 177; p. 1154.
Sash, Hot-bed. D. W. Bennett. No. 1,024,113; Apr. 23; Sp. p. 5034; Gaz. vol. 177; p. 889.
Sash-lock. C. Parsons. No. 1,023,391; Apr. 16; Sp. p. 3507; Gaz. vol. 177; p. 624.
Sash-lock. C. N. Estes. No. 1,024,681; Apr. 30; Sp. p. 6347; Gaz. vol. 177; p. 1118.
Sash-lock, Automatic. E. H. Rempe and F. M. Ross. No. 1,023,442; Apr. 16; Sp. p. 3599; Gaz. vol. 177; p. 640.
Sash lock, Window-. S. C. Sladden. No. 1,022,889; Apr. 9; Sp. p. 2419; Gaz. vol. 177; p. 413.
Sash lock, Window-. A. E. Hanson. No. 1,023,014; Apr. 9; Sp. p. 2681; Gaz. vol. 177; p. 457.
Satchel, &c., handle. A. V. Sammis. No. 1,023,175; Apr. 16; Sp. p. 3083; Gaz. vol. 177; p. 551.
Satchel-lock. D. Morgenstern and M. Brill. No. 1,022,202; Apr. 2; Sp. p. 956; Gaz. vol. 177; p. 153.
Saw-clamp. B. F. Padrick. No. 1,024,743; Apr. 30; Sp. p. 6469; Gaz. vol. 177; p. 1140.
Saw-file guide. F. R. Jordan. No. 1,023,428; Apr. 16; Sp. p. 3574; Gaz. vol. 177; p. 635.
Saw-filing machine. H. Angell. No. 1,024,387; Apr. 23; Sp. p. 5580; Gaz. vol. 177; p. 980.
Saw gage and jointer. J. E. Cormican. No. 1,023,415; Apr. 16; Sp. p. 3549; Gaz. vol. 177; p. 632.
Saw gage, Crosscut-. G. A. Colvin. No. 1,023,550; Apr. 16; Sp. p. 3813; Gaz. vol. 177; p. 673.
Saw-jointer. G. J. Karle. No. 1,024,007; Apr. 23; Sp. p. 4702; Gaz. vol. 177; p. 851.
Saw, Sector-cutting. K. Peterson. No. 1,023,959; Apr. 23; Sp. p. 4702; Gaz. vol. 177; p. 834.
Saw-set. G. C. Price. No. 1,022,871; Apr. 9; Sp. p. 2388; Gaz. vol. 177; p. 408.
Saw-set. W. R. Garrett. No. 1,023,835; Apr. 23; Sp. p. 4415; Gaz. vol. 177; p. 793.
Saw-tool. R. H. Sullivan. No. 1,023,341; Apr. 16; Sp. p. 3406; Gaz. vol. 177; p. 608.
Sawing-machine. E. S. Haines. No. 1,023,079; Apr. 9; Sp. p. 2817; Gaz. vol. 177; p. 480.
Sawing machine, Wood-. A. M. Zimmerman. No. 1,021,813; Apr. 2; Sp. p. 117; Gaz. vol. 177; p. 23.
Sawing machine, Wood-. G. H. Brown. No. 1,023,206; Apr. 16; Sp. p. 3315; Gaz. vol. 177; p. 593.
Sawmill set works. L. J. Hanhart. No. 1,024,775; Apr. 30; Sp. p. 6544; Gaz. vol. 177; p. 1152.
Sawmills, Attachment for logways in. E. Peterson. No. 1,023,592; Apr. 16; Sp. p. 3911; Gaz. vol. 177; p. 688.
Scale. A. Ruch. No. 1,022,264; Apr. 2; Sp. p. 1077; Gaz. vol. 177; p. 172.
Scale. N. Nilson. No. 1,022,876; Apr. 2; Sp. p. 1297; Gaz. vol. 177; p. 206.
Scale, W. D. Nash. No. 1,024,852; Apr. 23; Sp. p. 5530; Gaz. vol. 177; p. 969.
Scale, attachment for vehicles. J. H. Levillain. No. 1,024,639; Apr. 30; Sp. p. 6265; Gaz. vol. 177; p. 1103.
Scale, Computing-. E. B. Larrabee. No. 1,022,630; Apr. 2; Sp. p. 593; Gaz. vol. 177; p. 94.
Scale, Weighing-. H. M. B. Bary. No. 1,023,495; Apr. 16; Sp. p. 3709; Gaz. vol. 177; p. 656.
Scale, Weighing-. H. M. B. Bary. No. 1,023,496; Apr. 16; Sp. p. 3712; Gaz. vol. 177; p. 657.
Scissors. W. H. and V. E. Spence. No. 1,024,655; Apr. 30; Sp. p. 6292; Gaz. vol. 177; p. 1108.
Scrap-bundling machine. C. W. Bennett. No. 1,023,799; Apr. 23; Sp. p. 4300; Gaz. vol. 177; p. 780.
Scraper, Excavating-. C. H. Dishman. No. 1,023,303; Apr. 16; Sp. p. 3331; Gaz. vol. 177; p. 595.
Scraper, Foot-. H. Jones. No. 1,022,960; Apr. 9; Sp. p. 2566; Gaz. vol. 177; p. 436.
Scraper or grader, Surface. L. M. Linder. No. 1,023,210; Apr. 16; Sp. p. 3150; Gaz. vol. 177; p. 564.
Scraper, Road-. E. W. Chinn and J. T. Harris. No. 1,023,068; Apr. 9; Sp. p. 2798; Gaz. vol. 177; p. 476.
Scraper, Wheeled. G. M. Wallace. No. 1,022,804; Apr. 9; Sp. p. 2258; Gaz. vol. 177; p. 386.
Screen: *See* Fire-screen; Pulp-screen; Unitary screen; Window-screen.
Screw-driver and drill, Spiral. T. J. Feeley. No. 1,022,311; Apr. 2; Sp. p. 1160; Gaz. vol. 177; p. 186.
Screw inserter and remover. J. Lee. No. 1,022,427; Apr. 9; Sp. p. 1484; Gaz. vol. 177; p. 257.
Scythe. C. Lamoreaux. No. 1,023,605; Apr. 16; Sp. p. 4047; Gaz. vol. 177; p. 710.
Scythe-blades on handles, Means for securing. J. Reel. No. 1,024,650; Apr. 30; Sp. p. 6284; Gaz. vol. 177; p. 1107.
Seal. D. D. Davis. No. 1,025,081; Apr. 30; Sp. p. 7155; Gaz. vol. 177; p. 1255.
Seal, Can-nozzle. H. W. Phelps. No. 1,022,045; Apr. 2; Sp. p. 628; Gaz. vol. 177; p. 99.
Seal, Envelop-. N. E. Pettitt. No. 1,023,034; Apr. 9; Sp. p. 2717; Gaz. vol. 177; p. 464.
Seal for receptacles. H. B. Smith. No. 1,024,370; Apr. 23; Sp. p. 5559; Gaz. vol. 177; p. 975.
Sealing and protecting perishable products. W. A. Levering. No. 1,024,638; Apr. 30; Sp. p. 6264; Gaz. vol. 177; p. 1103.
Sealing device, Envelop-. J. D. Young. No. 1,023,777; Apr. 16; Sp. p. 4235; Gaz. vol. 177; p. 744.
Seam-ripper. J. E. Daniels. No. 1,021,863; Apr. 2; Sp. p. 244; Gaz. vol. 177; p. 40.
Seaming machine, Double-. F. Rudolphi. No. 1,023,039; Apr. 9; Sp. p. 2730; Gaz. vol. 177; p. 466.
Search-light for automobiles, Electric. C. A. Lewis. No. 1,022,634; Apr. 9; Sp. p. 1960; Gaz. vol. 177; p. 325.
Seat: *See* Car-seat; Closet-seat.
Seat. J. R. Graves. No. 1,023,423; Apr. 16; Sp. p. 3562; Gaz. vol. 177; p. 634.
Seat-support. W. S. Harley. No. 1,024,684; Apr. 30; Sp. p. 6357; Gaz. vol. 177; p. 1119.
Seat-support. W. S. Harley. No. 1,024,685; Apr. 30; Sp. p. 6359; Gaz. vol. 177; p. 1120.
Secondary battery. P. Marino. No. 1,023,861; Apr. 23; Sp. p. 4470; Gaz. vol. 177; p. 801.
Sectionalizing device, Automatic. L. A. Hawkins. No. 1,023,377; Apr. 16; Sp. p. 3469; Gaz. vol. 177; p. 619.
Seed and grain separator. T. K. Barnett. No. 1,023,983; Apr. 23; Sp. p. 4750; Gaz. vol. 177; p. 843.
Seed, Grading cotton-. J. O. B. Street. No. 1,025,028; Apr. 30; Sp. p. 7051; Gaz. vol. 177; p. 1230.
Seeding-roll. G. L. Langer. No. 1,023,856; Apr. 23; Sp. p. 4462; Gaz. vol. 177; p. 799.
Semaphores, Means for operating. W. K. Howe. No. 1,024,353; Apr. 30; Sp. p. 6704; Gaz. vol. 177; p. 1180.
Separating materials. Method and apparatus for. D. W. Troy. No. 1,024,100; Apr. 23; Sp. p. 5021; Gaz. vol. 177; p. 887.
Separating small particles from larger particles, Apparatus for. J. Higginbottom. No. 1,022,587; Apr. 9; Sp. p. 1757; Gaz. vol. 177; p. 310.
Separator: *See* Coin-separator; Liquid-separator; Magnetic separator; Ore-separator; Pulp-separator; Seed and grain separator.
Separator. G. W. Elder. No. 1,023,462; Apr. 16; Sp. p. 3639; Gaz. vol. 177; p. 646.
Sewing attachment, Button-. H. B. Johnston. No. 1,024,202; Apr. 23; Sp. p. 5250; Gaz. vol. 177; p. 920.
Sewing-machine. G. E. Molyneux. No. 1,024,601; Apr. 30; Sp. p. 6365; Gaz. vol. 177; p. 1121.
Sewing-machine attachment. F. B. Potter. No. 1,023,005; Apr. 9; Sp. p. 2853; Gaz. vol. 177; p. 485.
Sewing-machine bobbin-holding device, Lock-stitch-. J. E. Thayer. No. 1,024,708; Apr. 30; Sp. p. 6400; Gaz. vol. 177; p. 1127.
Sewing-machine drip-pan. E. B. Allen. No. 1,023,351; Apr. 16; Sp. p. 3422; Gaz. vol. 177; p. 611.
Sewing-machine guide. A. Rontke. No. 1,023,335; Apr. 16; Sp. p. 3396; Gaz. vol. 177; p. 606.
Sewing-machine multiple-tuck folder. J. Douglas. No. 1,024,317; Apr. 23; Sp. p. 5472; Gaz. vol. 177; p. 959.
Sewing-machine needle. A. P. Myer. No. 1,024,416; Apr. 23; Sp. p. 5684; Gaz. vol. 177; p. 990.
Sewing-machine overseaming mechanism. J. T. Hogan. No. 1,023,314; Apr. 16; Sp. p. 3360; Gaz. vol. 177; p. 599.
Sewing machine, Running-stitch-. H. Jonson. No. 1,023,427; Apr. 16; Sp. p. 3571; Gaz. vol. 177; p. 635.
Sewing-machine shuttle. F. H. Perry. No. 1,023,033; Apr. 9; Sp. p. 2715; Gaz. vol. 177; p. 464.
Sewing-machine spool-holder. E. M. Elsden. (now by marriage E. M. Jones.) No. 1,022,185; Apr. 2; Sp. p. 917; Gaz. vol. 177; p. 146.
Sewing-machine strip folding and guiding attachment. A. H. De Voe. No. 1,024,516; Apr. 23; Sp. p. 5468; Gaz. vol. 177; p. 969.
Sewing-machine work holding and feeding means. C. A. Dearborn. No. 1,025,082; Apr. 30; Sp. p. 7157; Gaz. vol. 177; p. 1256.
Shade adjuster, Window-. H. M. Schloss. No. 1,022,704; Apr. 9; Sp. p. 2035; Gaz. vol. 177; p. 352.
Shade and curtain fixture. K. Berven. No. 1,024,715; Apr. 30; Sp. p. 6417; Gaz. vol. 177; p. 1130.
Shade and curtain fixture, Window-. J. D. Gillenwater. No. 1,024,255; Apr. 23; Sp. p. 5363; Gaz. vol. 177; p. 940.
Shade and curtain hanger. P. J. Eveleigh. No. 1,022,187; Apr. 2; Sp. p. 919; Gaz. vol. 177; p. 147.
Shade-cloth, Rolling-off machine for. L. B. Girard. No. 1,022,024; Apr. 2; Sp. p. 751; Gaz. vol. 177; p. 91.
Shade-fixture. T. L. Walter. No. 1,023,845; Apr. 16; Sp. p. 3413; Gaz. vol. 177; p. 609.
Shade-fixture, Adjustable. T. P. Cave and J. M. Buck. No. 1,023,612; Apr. 23; Sp. p. 4242; Gaz. vol. 177; p. 785.
Shade-holder. G. W. Goodridge. No. 1,022,284; Apr. 2; Sp. p. 1028; Gaz. vol. 177; p. 164.

Shade-holder. W. S. Stapley. No. 1,022,895; Apr. 9; Sp. p. 2431; Gaz. vol. 177; p. 415.
Shade-roller support. J. Lavigne. No. 1,023,111; Apr. 9; Sp. p. 2883; Gaz. vol. 177; p. 491.
Shaft and tongue, Coupling. C. C. Coulter. No. 1,022,304; Apr. 2; Sp. p. 1150; Gaz. vol. 177; p. 154.
Shaft-coupling, Automobile. J. N. Bashaw. No. 1,022,909; Apr. 9; Sp. p. 2654; Gaz. vol. 177; p. 453.
Shaft coupling, Spring drive or power. W. Perry and A. S. Jones. No. 1,024,020; Apr. 23; Sp. p. 4814; Gaz. vol. 177; p. 855.
Shafts, Adjusting device for feed-. R. P. Bullard, Jr. No. 1,024,300; Apr. 23; Sp. p. 5459; Gaz. vol. 177; p. 957.
Shaping-machine. A. R. Murray. No. 1,023,268; Apr. 16; Sp. p. 3272; Gaz. vol. 177; p. 584.
Sharpener, Blade-. J. E. Morse. No. 1,024,947; Apr. 30; Sp. p. 6900; Gaz. vol. 177; p. 1212.
Sharpener, Skate-runner. T. Klaum. No. 1,022,665; Apr. 9; Sp. p. 1928; Gaz. vol. 177; p. 336.
Sharpening machine, Razor-. E. Tessmer. No. 1,022,383; Apr. 2; Sp. p. 1309; Gaz. vol. 177; p. 212.
Sharpening machine, Razor-. P. Amadeo. No. 1,024,815; Apr. 30; Sp. p. 6624; Gaz. vol. 177; p. 1165.
Sharpening machines, Rest for saw-. J. P. Hedstrom. No. 1,022,479; Apr. 9; Sp. p. 1532; Gaz. vol. 177; p. 275.
Shaving-machine. M. E. Ryan. No. 1,024,149; Apr. 23; Sp. p. 5123; Gaz. vol. 177; p. 901.
Shearing-machine. W. H. Luther. No. 1,024,409; Apr. 23; Sp. p. 5678; Gaz. vol. 177; p. 988.
Shedding mechanism. G. Fortier. No. 1,024,846; Apr. 30; Sp. p. 6491; Gaz. vol. 177; p. 1177.
Sheet-feeder. R. S. Payne. No. 1,022,257; Apr. 2; Sp. p. 1065; Gaz. vol. 177; p. 170.
Sheet-handling machine. R. C. Seymour. No. 1,024,460; Apr. 23; Sp. p. 5778; Gaz. vol. 177; p. 1004.
Sheet-metal pipe, Machine for manufacturing. F. Magidson. No. 1,023,115; Apr. 9; Sp. p. 2895; Gaz. vol. 177; p. 492.
Sheets of material, Apparatus for severing or separating. B. D. Courts. No. 1,022,030; Apr. 9; Sp. p. 2514; Gaz. vol. 177; p. 420.
Shelf structure. W. Tietz. No. 1,025,032; Apr. 30; Sp. p. 7056; Gaz. vol. 177; p. 1240.
Shelving. H. P. Beecher. No. 1,024,922; Apr. 30; Sp. p. 6850; Gaz. vol. 177; p. 1204.
Shell. A. J. Boden. No. 1,023,339; Apr. 16; Sp. p. 3403; Gaz. vol. 177; p. 607.
Shell construction. C. J. Sowards. No. 1,024,373; Apr. 23; Sp. p. 5563; Gaz. vol. 177; p. 975.
Ship construction. J. R. Oldham. No. 1,023,477; Apr. 16; Sp. p. 3670; Gaz. vol. 177; p. 650.
Ship locator and raiser. W. N. Bell. No. 1,021,818; Apr. 2; Sp. p. 148; Gaz. vol. 177; p. 23.
Ships, Means for recovering stranded. J. W. Church. No. 1,022,771; Apr. 9; Sp. p. 2190; Gaz. vol. 177; p. 376.
Shirt-envelop. G. Wordingham. No. 1,024,813; Apr. 30; Sp. p. 6620; Gaz. vol. 177; p. 1165.
Shock-absorber. J. H. Woodring. No. 1,022,015; Apr. 2; Sp. p. 566; Gaz. vol. 177; p. 89.
Shock-absorber adjustment. B. L. Lawton. No. 1,022,145; Apr. 2; Sp. p. 836; Gaz. vol. 177; p. 133.
Shock-absorbing device. A. Bacchi. No. 1,023,795; Apr. 23; Sp. p. 4286; Gaz. vol. 177; p. 776.
Shock-loading machine, Grain-. M. E. Weeks. No. 1,022,214; Apr. 2; Sp. p. 978; Gaz. vol. 177; p. 157.
Shoe. D. Austin. No. 1,022,468; Apr. 9; Sp. p. 1498; Gaz. vol. 177; p. 268.
Shoe. M. Rasmussen. No. 1,025,099; Apr. 30; Sp. p. 7203; Gaz. vol. 177; p. 1262.
Shoe attachment. P. Hammer. No. 1,022,672; Apr. 9; Sp. p. 1945; Gaz. vol. 177; p. 333.
Shoe-form. L. W. Reinhardt. No. 1,023,895; Apr. 16; Sp. p. 3513; Gaz. vol. 177; p. 625.
Shoe-holder. L. Sonntag. No. 1,023,887; Apr. 23; Sp. p. 4522; Gaz. vol. 177; p. 810.
Shoe-mending device. J. Kiefer. No. 1,023,155; Apr. 16; Sp. p. 3034; Gaz. vol. 177; p. 544.
Shoe-polishing machine. J. N. Wood. No. 1,024,544; Apr. 30; Sp. p. 6022; Gaz. vol. 177; p. 1071.
Shoe-polishing machine. W. H. McConnell. No. 1,024,589; Apr. 30; Sp. p. 6135; Gaz. vol. 177; p. 1086.
Shoe-shining machine. P. Amadeo. No. 1,021,814; Apr. 2; Sp. p. 118; Gaz. vol. 177; p. 24.
Shoe-stretcher. W. L. Smith. No. 1,024,369; Apr. 30; Sp. p. 6738; Gaz. vol. 177; p. 1185.
Shoe-support. A. E. Jerram. No. 1,023,316; Apr. 16; Sp. p. 3366; Gaz. vol. 177; p. 600.
Shoe-tip protector. T. L. De Vere. No. 1,023,417; Apr. 16; Sp. p. 3551; Gaz. vol. 177; p. 632.
Shoe-tree. J. S. Hansen. No. 1,021,824; Apr. 2; Sp. p. 135; Gaz. vol. 177; p. 30.
Shoe-turning machines, Forepart-form for. J. L. Dow. No. 1,022,660; Apr. 9; Sp. p. 1921; Gaz. vol. 177; p. 335.
Shoes, Machine for breaking-in. S. A. Eddins. No. 1,023,510; Apr. 16; Sp. p. 3726; Gaz. vol. 177; p. 661.
Shoes, Machine for use in the manufacture of. E. L. Keyes. No. 1,023,854; Apr. 23; Sp. p. 4449; Gaz. vol. 177; p. 799.
Shoes, Making welt-. W. J. Dray. No. 1,023,555; Apr. 16; Sp. p. 3822; Gaz. vol. 177; p. 675.
Shoes, slippers, and the like, Bow for ladies'. A. Manheimer. No. 1,024,517; Apr. 30; Sp. p. 6056; Gaz. vol. 177; p. 1061.
Shoeing apparatus, Animal-. R. E. Balch. No. 1,022,390; Apr. 9; Sp. p. 1352; Gaz. vol. 177; p. 248.
Shoring-tool. W. R. McLendon and R. I. Eustis. No. 1,022,036; Apr. 2; Sp. p. 607; Gaz. vol. 177; p. 96.
Shovel: *See* Excavating-shovel.
Show-case. L. W. Welch. No. 1,023,186; Apr. 16; Sp. p. 3104; Gaz. vol. 177; p. 555.
Show-case. L. W. Welch. No. 1,023,231; Apr. 16; Sp. p. 3183; Gaz. vol. 177; p. 570.
Show-case. T. R. Lindsey. No. 1,023,578; Apr. 16; Sp. p. 3877; Gaz. vol. 177; p. 683.
Show-case. F. X. Ganter. No. 1,024,324; Apr. 23; Sp. p. 5462; Gaz. vol. 177; p. 963.
Show-case, Refrigerator. P. Van Duyne. No. 1,023,975; Apr. 23; Sp. p. 4731; Gaz. vol. 177; p. 839.
Shuttle. C. Pommier. No. 1,022,046; Apr. 2; Sp. p. 628; Gaz. vol. 177; p. 100.
Shuttle-check. P. F. Marcante. No. 1,023,579; Apr. 16; Sp. p. 3882; Gaz. vol. 177; p. 684.
Shuttle-threading mechanism. J. Gabler. No. 1,023,831; Apr. 23; Sp. p. 4406; Gaz. vol. 177; p. 791.
Sickle for mowers. W. C. Hoes. No. 1,022,677; Apr. 9; Sp. p. 1960; Gaz. vol. 177; p. 340.
Side-dump body. T. Wright. No. 1,023,190; Apr. 16; Sp. p. 3115; Gaz. vol. 177; p. 557.
Sidewalk-trap. T. M. Brintnall. No. 1,024,059; Apr. 23; Sp. p. 4907; Gaz. vol. 177; p. 869.
Sieves or screens, Tapping device for. F. W. R. Williams. No. 1,022,911; Apr. 9; Sp. p. 2476; Gaz. vol. 177; p. 421.
Sifter and separator. J. Childs. No. 1,024,249; Apr. 23; Sp. p. 5351; Gaz. vol. 177; p. 938.
Sifter, Flour-. J. H. Zyburn. No. 1,024,962; Apr. 30; Sp. p. 6925; Gaz. vol. 177; p. 1217.
Sifting machine, Flour-. E. C. May. No. 1,025,004; Apr. 30; Sp. p. 7010; Gaz. vol. 177; p. 1231.
Sight-feed lubricator. F. J. Hull. No. 1,022,946; Apr. 9; Sp. p. 2560; Gaz. vol. 177; p. 434.
Sign, Illuminated. H. Mulholland. No. 1,024,695; Apr. 30; Sp. p. 6378; Gaz. vol. 177; p. 1123.
Sign, Illuminating-. W. T. Bradshaw. No. 1,022,928; Apr. 9; Sp. p. 2511; Gaz. vol. 177; p. 428.
Sign-support. G. Wirsing. No. 1,024,542; Apr. 30; Sp. p. 6020; Gaz. vol. 177; p. 1070.
Signs, Apparatus for preventing sparking at the contacts of electrically-illuminated. R. F. Venner. No. 1,021,907; Apr. 2; Sp. p. 826; Gaz. vol. 177; p. 54.
Signal: *See* Railway-signal.
Signal apparatus, Electric. W. S. Reynolds. No. 1,023,875; Apr. 23; Sp. p. 4496; Gaz. vol. 177; p. 806.
Signal-operator, Automatic. E. R. Gill. No. 1,024,444; Apr. 23; Sp. p. 5737; Gaz. vol. 177; p. 998.
Signal-switch, Electric. C. and A. Beck. No. 1,023,410; Apr. 16; Sp. p. 3540; Gaz. vol. 177; p. 630.
Signaling device, Electric. A. Lungen. No. 1,023,743; Apr. 16; Sp. p. 4174; Gaz. vol. 177; p. 733.
Signaling means, Selective. J. McFell. No. 1,024,690; Apr. 30; Sp. p. 6145; Gaz. vol. 177; p. 1086.
Signaling system. J. Foe. No. 1,022,260; Apr. 2; Sp. p. 1071; Gaz. vol. 177; p. 171.
Signaling system. E. R. Gill. No. 1,024,446; Apr. 23; Sp. p. 5747; Gaz. vol. 177; p. 999.
Signaling system, Party-line selective. C. E. Scribner. No. 1,023,482; Apr. 16; Sp. p. 3681; Gaz. vol. 177; p. 652.
Signaling system, Selective. E. R. Gill. No. 1,024,445; Apr. 23; Sp. p. 5744; Gaz. vol. 177; p. 999.
Signaling, Wireless. R. A. Fessenden. No. 1,022,540; Apr. 9; Sp. p. 1658; Gaz. vol. 177; p. 294.
Signature-gathering machine. C. A. Juengst. No. 1,023,568; Apr. 16; Sp. p. 3858; Gaz. vol. 177; p. 679.
Sinker. Z. Pancoast. No. 1,023,676; Apr. 16; Sp. p. 4063; Gaz. vol. 177; p. 713.
Skate, Monocycle. M. Schiesari. No. 1,023,882; Apr. 23; Sp. p. 4509; Gaz. vol. 177; p. 808.
Skate, Roller-. J. G. Doak. No. 1,024,835; Apr. 30; Sp. p. 6668; Gaz. vol. 177; p. 1173.
Skirt. H. N. Freedman. No. 1,022,410; Apr. 9; Sp. p. 1370; Gaz. vol. 177; p. 251.
Skirt-marker. A. A. Hall. No. 1,023,842; Apr. 23; Sp. p. 4426; Gaz. vol. 177; p. 795.
Skiving-machine. F. L. Harmon. No. 1,024,569; Apr. 30; Sp. p. 6101; Gaz. vol. 177; p. 1079.
Sled, Power-propelled. A. Reichenstein. No. 1,023,965; Apr. 23; Sp. p. 4713; Gaz. vol. 177; p. 836.
Slicer, Vegetable-. W. Bush. No. 1,021,968; Apr. 2; Sp. p. 468; Gaz. vol. 177; p. 75.
Slime-concentrator. E. C. Porter. No. 1,024,359; Apr. 23; Sp. p. 5541; Gaz. vol. 177; p. 971.
Sludge-table. O. W. Dunham. No. 1,023,009; Apr. 9; Sp. p. 2671; Gaz. vol. 177; p. 456.
Small-arm. G. Vander Haeghen. No. 1,024,932; Apr. 30; Sp. p. 6870; Gaz. vol. 177; p. 1207.
Small-arm. G. Vander Haeghen. No. 1,024,933; Apr. 30; Sp. p. 6872; Gaz. vol. 177; p. 1207.
Smoke and ventilation shaft, Combined. F. Schofer. No. 1,023,530; Apr. 16; Sp. p. 3772; Gaz. vol. 177; p. 667.
Smoke-box door. D. Sammel. No. 1,022,757; Apr. 9; Sp. p. 2167; Gaz. vol. 177; p. 371.
Smoke-consumer. J. Markus. No. 1,022,857; Apr. 9; Sp. p. 2361; Gaz. vol. 177; p. 404.
Smoke, Destruction and deodorization of. J. Kindermann. No. 1,024,204; Apr. 23; Sp. p. 5253; Gaz. vol. 177; p. 920.
Smoke-purifier and dust-collector. A. Gowder. No. 1,024,326; Apr. 23; Sp. p. 5485; Gaz. vol. 177; p. 962.

Smoking-pipe. F. Ansley. No. 1,021,963; Apr. 2; Sp. p. 460; Gaz. vol. 177; p. 73.
Smut-machine. S. N. Sorensen. No. 1,023,888; Apr. 23; Sp. p. 4526; Gaz. vol. 177; p. 610.
Snap-hook, Safety. H. P. Hanson. No. 1,022,940; Apr. 9; Sp. p. 2553; Gaz. vol. 177; p. 435.
Snap-switch. F. C. De Reamer. No. 1,022,586; Apr. 9; Sp. p. 1650; Gaz. vol. 177; p. 296.
Snatch-block. W. Trewhella. No. 1,022,569; Apr. 9; Sp. p. 1720; Gaz. vol. 177; p. 304.
Snow-plow. F. J. Hayward. No. 1,021,928; Apr. 2; Sp. p. 365; Gaz. vol. 177; p. 66.
Soap-lather generating and applying device. C. E. Arundel. No. 1,023,706; Apr. 16; Sp. p. 4115; Gaz. vol. 177; p. 722.
Socket-joint. R. H. Brown. No. 1,024,615; Apr. 30; Sp. p. 6204; Gaz. vol. 177; p. 1095.
Socket-shell. T. A. C. Both. No. 1,024,671; Apr. 30; Sp. p. 6324; Gaz. vol. 177; p. 1114.
Soda-fountain. F. E. Lippincott. No. 1,024,515; Apr. 30; Sp. p. 5945; Gaz. vol. 177; p. 1061.
Soldering-iron and blow-torch, Combined. W. P. Bartholow. No. 1,024,170; Apr. 23; Sp. p. 5170; Gaz. vol. 177; p. 906.
Soldering-iron heater. R. Eisenberg. No. 1,024,320; Apr. 23; Sp. p. 5478; Gaz. vol. 177; p. 960.
Soldering machines, Means for regulating the feed of solder in can-. S. S. Chewning. No. 1,022,770; Apr. 9; Sp. p. 2188; Gaz. vol. 177; p. 375.
Sole-channeling machine. F. Wald. No. 1,022,714; Apr. 9; Sp. p. 2073; Gaz. vol. 177; p. 356.
Sole-channeling machine. F. E. Bertrand. No. 1,023,801; Apr. 23; Sp. p. 4304; Gaz. vol. 177; p. 781.
Sole-leveling machine. C. E. Rogers. No. 1,022,701; Apr. 9; Sp. p. 2025; Gaz. vol. 177; p. 350.
Sole, Slipper-. C. Levy. No. 1,023,158; Apr. 16; Sp. p. 3040; Gaz. vol. 177; p. 545.
Soles, Machine for nailing uppers to. C. Sattler. No. 1,023,337; Apr. 16; Sp. p. 3389; Gaz. vol. 177; p. 606.
Solenoid-controller. F. W. Smith. No. 1,022,707; Apr. 9; Sp. p. 2044; Gaz. vol. 177; p. 353.
Solids in liquids, Concentration of. W. R. Whitney. No. 1,022,523; Apr. 9; Sp. p. 1623; Gaz. vol. 177; p. 289.
Sound-boxes, Support and sound-duct for. T. H. Macdonald. No. 1,024,040; Apr. 30; Sp. p. 6267; Gaz. vol. 177; p. 1103.
Sound-record-duplicating apparatus. J. W. Aylesworth. No. 1,024,965; Apr. 30; Sp. p. 6029; Gaz. vol. 177; p. 1218.
Sound-records, Making. F. L. Dyer. No. 1,021,973; Apr. 2; Sp. p. 482; Gaz. vol. 177; p. 76.
Sound-records, Re-pressing disk. T. H. Macdonald. No. 1,022,100; Apr. 2; Sp. p. 735; Gaz. vol. 177; p. 117.
Sound-reproducer. A. N. Piermarini. No. 1,024,696; Apr. 30; Sp. p. 6376; Gaz. vol. 177; p. 1123.
Sound-reproducing devices, Amplifier for. J. C. English. No. 1,022,882; Apr. 9; Sp. p. 1747; Gaz. vol. 177; p. 393.
Sound-reproducing-machine needle. B. Tendler. No. 1,022,515; Apr. 9; Sp. p. 1599; Gaz. vol. 177; p. 286.
Sounding apparatus, Electromagnetic. C. W. McGonigle. No. 1,023,215; Apr. 16; Sp. p. 3159; Gaz. vol. 177; p. 565.
Space-block. E. H. Farquhar. No. 1,022,021; Apr. 2; Sp. p. 577; Gaz. vol. 177; p. 91.
Spacing and supporting device for reinforcing-bars. H. H. Hickman. No. 1,024,200; Apr. 23; Sp. p. 5374; Gaz. vol. 177; p. 941.
Spacing-machine. A. Kolasza. No. 1,023,740; Apr. 16; Sp. p. 4169; Gaz. vol. 177; p. 732.
Spark-arrester. E. G. Tasck. No. 1,022,277; Apr. 2; Sp. p. 1097; Gaz. vol. 177; p. 176.
Spark-arrester. G. H. B. Steele, A. H. Boulter, and J. Hargreaves. No. 1,023,760; Apr. 16; Sp. p. 4220; Gaz. vol. 177; p. 741.
Spark-arrester. O. Anderson. No. 1,023,792; Apr. 23; Sp. p. 4272; Gaz. vol. 177; p. 778.
Spark arrester and consumer. G. F. Roderick. No. 1,022,441; Apr. 9; Sp. p. 1457; Gaz. vol. 177; p. 261.
Spark-plug. F. Bartl. No. 1,023,493; Apr. 16; Sp. p. 3704; Gaz. vol. 177; p. 655.
Spark-plug. W. Ellis. No. 1,024,321; Apr. 23; Sp. p. 5479; Gaz. vol. 177; p. 961.
Spark-plug. L. J. Dirand. No. 1,024,834; Apr. 30; Sp. p. 6004; Gaz. vol. 177; p. 1173.
Spark-plug attachment. H. C. Hemmeter. No. 1,022,192; Apr. 2; Sp. p. 954; Gaz. vol. 177; p. 146.
Spark-plug holder and spark-indicator. E. H. Benn. No. 1,024,819; Apr. 30; Sp. p. 6031; Gaz. vol. 177; p. 1167.
Spectacle-case. E. Suhr. No. 1,024,752; Apr. 30; Sp. p. 6495; Gaz. vol. 177; p. 1143.
Spectacle-frame. P. J. Boucher. No. 1,022,653; Apr. 9; Sp. p. 1907; Gaz. vol. 177; p. 333.
Spectacle or eyeglass case. S. C. Hirschberg. No. 1,024,005; Apr. 23; Sp. p. 4797; Gaz. vol. 177; p. 850.
Spectacles. F. Morton. No. 1,024,275; Apr. 23; Sp. p. 5403; Gaz. vol. 177; p. 946.
Speculum, Mouth-. S. B. Dunn. No. 1,022,068; Apr. 2; Sp. p. 670; Gaz. vol. 177; p. 107.
Speed and running time of machines, Instrument for indicating. E. Shipman. No. 1,022,801; Apr. 9; Sp. p. 2246; Gaz. vol. 177; p. 395.
Speed mechanism, Variable-. S. W. Luitwieler. No. 1,023,694; Apr. 9; Sp. p. 2829; Gaz. vol. 177; p. 491.
Speed transmission mechanism, Variable-. L. J. Campbell. No. 1,023,811; Apr. 23; Sp. p. 4339; Gaz. vol. 177; p. 785.
Speedometer. R. B. A. Lemaignen. No. 1,025,070; Apr. 30; Sp. p. 7122; Gaz. vol. 177; p. 1251.
Spike. M. Rasmussen. No. 1,022,361; Apr. 2; Sp. p. 1072; Gaz. vol. 177; p. 171.
Spike. T. C. Hanson. No. 1,024,776; Apr. 30; Sp. p. 6546; Gaz. vol. 177; p. 1152.
Spike, Expansion-. A. Martin. No. 1,024,944; Apr. 30; Sp. p. 6805; Gaz. vol. 177; p. 1196.
Spike-machine. G. Barr. No. 1,024,695; Apr. 30; Sp. p. 6312; Gaz. vol. 177; p. 1113.
Spindle-stop, Automatic. H. M. Norris. No. 1,022,866; Apr. 9; Sp. p. 2374; Gaz. vol. 177; p. 406.
Spinning-frame creel-supporting rail. L. T. Houghton. No. 1,022,193; Apr. 2; Sp. p. 935; Gaz. vol. 177; p. 140.
Spinning-spindle attachment. T. Lewis. No. 1,024,942; Apr. 30; Sp. p. 6801; Gaz. vol. 177; p. 1210.
Spinning-spindle, Bobbin-clutching. J. V. Cunniff. No. 1,024,396; Apr. 23; Sp. p. 5607; Gaz. vol. 177; p. 993.
Spittoon-lifter. W. S. C. Megill. No. 1,023,669; Apr. 16; Sp. p. 4035; Gaz. vol. 177; p. 711.
Splice-bar and rail-bond. C. R. Brachvogel. No. 1,023,340; Apr. 16; Sp. p. 3405; Gaz. vol. 177; p. 606.
Splitting-machine. J. B. Hadaway. No. 1,022,414; Apr. 9; Sp. p. 1376; Gaz. vol. 177; p. 252.
Spool and implement holder. D. C. Williams. No. 1,024,958; Apr. 30; Sp. p. 6018; Gaz. vol. 177; p. 1216.
Spool-rack. S. Haas. No. 1,022,077; Apr. 2; Sp. p. 988; Gaz. vol. 177; p. 110.
Spraying device. E. E. Schellenger. No. 1,022,643; Apr. 9; Sp. p. 1881; Gaz. vol. 177; p. 329.
Spraying device, Fluid-. J. T. Johnson. No. 1,023,852; Apr. 23; Sp. p. 4445; Gaz. vol. 177; p. 793.
Spraying liquids and moistening air, Device for. C. H. Prott. No. 1,024,281; Apr. 23; Sp. p. 5412; Gaz. vol. 177; p. 947.
Spraying-machine. W. O. Quest. No. 1,022,206; Apr. 2; Sp. p. 963; Gaz. vol. 177; p. 154.
Spraying machine, Plant-. L. Willis. No. 1,024,230; Apr. 23; Sp. p. 5333; Gaz. vol. 177; p. 934.
Spring: *See* Bed-spring; Vehicle-spring.
Spring. W. R. Park. No. 1,023,870; Apr. 23; Sp. p. 4459; Gaz. vol. 177; p. 804.
Spring-wheel. E. E. Wickham. No. 1,022,948; Apr. 9; Sp. p. 1896; Gaz. vol. 177; p. 321.
Spring-wheel. H. E. J. Foerster. No. 1,023,010; Apr. 9; Sp. p. 2076; Gaz. vol. 177; p. 366.
Spring-wheel. L. Schilling. No. 1,023,098; Apr. 9; Sp. p. 2936; Gaz. vol. 177; p. 486.
Spring-wheel. N. R. Martin and C. E. Roby. No. 1,024,091; Apr. 23; Sp. p. 4977; Gaz. vol. 177; p. 899.
Spring-wheel. S. B. Edwards. No. 1,024,191; Apr. 23; Sp. p. 5224; Gaz. vol. 177; p. 915.
Spring-wheel. E. East. No. 1,024,977; Apr. 30; Sp. p. 6949; Gaz. vol. 177; p. 1221.
Spring-wheel. C. C. Carrick. No. 1,025,051; Apr. 30; Sp. p. 7090; Gaz. vol. 177; p. 1243.
Spring-wheel. C. Coughlin. No. 1,025,080; Apr. 30; Sp. p. 7154; Gaz. vol. 177; p. 1260.
Spring wheel, Vehicle. F. W. and W. H. Margetts. No. 1,022,430; Apr. 9; Sp. p. 1440; Gaz. vol. 177; p. 258.
Spring-wheel, Vehicle. A. F. Priest. No. 1,022,754; Apr. 9; Sp. p. 2158; Gaz. vol. 177; p. 370.
Sprinkler: *See* Automatic sprinkler.
Sprinkler-alarm device. E. L. Thompson and J. R. Hamilton. No. 1,022,446; Apr. 9; Sp. p. 1463; Gaz. vol. 177; p. 263.
Square and level, Combined. G. W. Allen. No. 1,022,396; Apr. 9; Sp. p. 1347; Gaz. vol. 177; p. 247.
Square, Folding. C. A. A. Shabsely. No. 1,021,850; Apr. 2; Sp. p. 210; Gaz. vol. 177; p. 35.
Stacker and loader, Hay. L. E. Shafto. No. 1,021,886; Apr. 2; Sp. p. 313; Gaz. vol. 177; p. 52.
Stacker, Swinging straw-. H. M. Peterson. No. 1,022,362; Apr. 9; Sp. p. 1771; Gaz. vol. 177; p. 311.
Stage effects, Electrical apparatus for. A. L. McMurtry. No. 1,021,787; Apr. 2; Sp. p. 66; Gaz. vol. 177; p. 14.
Stage-scenery. E. G. Craig. No. 1,022,020; Apr. 2; Sp. p. 576; Gaz. vol. 177; p. 90.
Stamp, Hand-. M. C. Price. No. 1,025,010; Apr. 30; Sp. p. 7033; Gaz. vol. 177; p. 1235.
Stamp-pad. H. S. Folger. No. 1,024,193; Apr. 23; Sp. p. 5227; Gaz. vol. 177; p. 916.
Stamping device. W. J. Grotenhuis. No. 1,022,076; Apr. 2; Sp. p. 687; Gaz. vol. 177; p. 110.
Stamping machine, Cement-pipe-. W. L. Velten. No. 1,024,464; Apr. 23; Sp. p. 5795; Gaz. vol. 177; p. 1006.
Stanchion, Cattle-. F. W. Preess. No. 1,023,757; Apr. 16; Sp. p. 4195; Gaz. vol. 177; p. 737.
Stand: *See* Display-stand; Form-stand; Knockdown stand; Lamp-stand; Picker-rod stand.
Staple. E. A. Kirkendall. No. 1,024,908; Apr. 23; Sp. p. 4798; Gaz. vol. 177; p. 851.
Stapling-machine. E. T. Greenfield. No. 1,024,886; Apr. 30; Sp. p. 6772; Gaz. vol. 177; p. 1191.
Starch-conversion process. S. M. Lillie. No. 1,023,257; Apr. 16; Sp. p. 4238; Gaz. vol. 177; p. 579.
Starting device. J. McNamee. No. 1,021,999; Apr. 2; Sp. p. 385; Gaz. vol. 177; p. 64.
Starting mechanism. J. S. Laufman. No. 1,023,944; Apr. 23; Sp. p. 4673; Gaz. vol. 177; p. 830.
Staves, Manufacture of cask-. C. E. Bratt. No. 1,025,048; Apr. 30; Sp. p. 7065; Gaz. vol. 177; p. 1248.

Stay-belts, Manufacturing. J. H. Baker. No. 1,022,908; Apr. 9; Sp. p. 2852; Gaz. vol. 177; p. 452.
Stay, Corset-. G. B. Hawes. No. 1,022,864; Apr. 2; Sp. p. 1274; Gaz. vol. 177; p. 205.
Steam-accumulator regulator. E. Harlé. No. 1,023,376; Apr. 16; Sp. p. 3466; Gaz. vol. 177; p. 619.
Steam and hot-water heater. L. K. Peck. No. 1,023,591; Apr. 16; Sp. p. 3906; Gaz. vol. 177; p. 681.
Steam-boiler. H. V. Brady. No. 1,024,063; Apr. 23; Sp. p. 4906; Gaz. vol. 177; p. 869.
Steam-engine. A. A. Holle. No. 1,023,648; Apr. 16; Sp. p. 4016; Gaz. vol. 177; p. 705.
Steam-engine, Revolving-piston rotary. J. E. Sackett. No. 1,022,585; Apr. 2; Sp. p. 1078; Gaz. vol. 177; p. 172.
Steam-generator. J. W. Kidney. No. 1,021,935; Apr. 2; Sp. p. 475; Gaz. vol. 177; p. 82.
Steam-generator. V. H. and J. H. T. Mills. No. 1,024,521; Apr. 30; Sp. p. 5966; Gaz. vol. 177; p. 1033.
Steam-generator. L. W. G. Flynt. No. 1,023,845; Apr. 30; Sp. p. 6688; Gaz. vol. 177; p. 1177.
Steel, Manufacture of. T. D. Mackie and G. F. Forwood. No. 1,024,990; Apr. 30; Sp. p. 7000; Gaz. vol. 177; p. 1230.
Steel plates, Manufacturing. F. Giolitti. No. 1,024,770; Apr. 30; Sp. p. 6590; Gaz. vol. 177; p. 1140.
Steering-gear, Compensating. E. T. Reichert, Jr. No. 1,022,297; Apr. 2; Sp. p. 986; Gaz. vol. 177; p. 155.
Steering mechanism. W. E. Christopher. No. 1,024,182; Apr. 23; Sp. p. 5101; Gaz. vol. 177; p. 912.
Stereoscope, Folding. F. Berger. No. 1,024,613; Apr. 30; Sp. p. 6202; Gaz. vol. 177; p. 1094.
Stereotype-plates, Method and apparatus for making. J. M. Dow. No. 1,022,067; Apr. 2; Sp. p. 663; Gaz. vol. 177; p. 107.
Steriliser. W. T. Herndon. No. 1,023,646; Apr. 16; Sp. p. 4014; Gaz. vol. 177; p. 705.
Sterilizing apparatus. H. Op de Hipt. No. 1,021,946; Apr. 2; Sp. p. 405; Gaz. vol. 177; p. 67.
Stitching machine, Buttonhole-. E. R. Allen. No. 1,024,490; Apr. 30; Sp. p. 5854; Gaz. vol. 177; p. 1051.
Stock-ringer. W. H. Leaver and C. H. Smith. No. 1,023,112; Apr. 9; Sp. p. 2839; Gaz. vol. 177; p. 491.
Stocking-stretching device. I. E. York. No. 1,022,457; Apr. 9; Sp. p. 1408; Gaz. vol. 177; p. 258.
Stone-saw. W. F. Meyers. No. 1,022,602; Apr. 9; Sp. p. 2003; Gaz. vol. 177; p. 346.
Stool and table, Combined folding. O. Florian. No. 1,024,192; Apr. 23; Sp. p. 5225; Gaz. vol. 177; p. 916.
Stool, Folding. J. R. Moore. No. 1,023,671; Apr. 16; Sp. p. 4058; Gaz. vol. 177; p. 712.
Stop-bar. J. S. Bancroft and M. C. Indahl. No. 1,024,491; Apr. 30; Sp. p. 5899; Gaz. vol. 177; p. 1052.
Stop mechanism. R. L. Wilcox. No. 1,023,530; Apr. 16; Sp. p. 3789; Gaz. vol. 177; p. 669.
Stopper: *See* Bottle-stopper.
Stopper. H. M. Brown. No. 1,022,960; Apr. 2; Sp. p. 656; Gaz. vol. 177; p. 104.
Storage battery. J. L. Smith. No. 1,021,900; Apr. 2; Sp. p. 316; Gaz. vol. 177; p. 52.
Store-front construction. S. D. Kelley. No. 1,021,871; Apr. 2; Sp. p. 261; Gaz. vol. 177; p. 42.
Store-front construction. V. Ross. No. 1,024,420; Apr. 23; Sp. p. 5006; Gaz. vol. 177; p. 901.
Stove. W. E. Sharp. No. 1,023,968; Apr. 23; Sp. p. 4716; Gaz. vol. 177; p. 837.
Stove and lamp. H. A. von Post. No. 1,022,048; Apr. 2; Sp. p. 630; Gaz. vol. 177; p. 100.
Stove-fireback. F. V. Knauss. No. 1,022,630; Apr. 9; Sp. p. 1954; Gaz. vol. 177; p. 324.
Stove, Gas-. M. Lachner. No. 1,024,585; Apr. 30; Sp. p. 6127; Gaz. vol. 177; p. 1084.
Stove, Hydrocarbon-. E. B. Baker. No. 1,024,053; Apr. 23; Sp. p. 4895; Gaz. vol. 177; p. 867.
Stoves, Air-heating attachment for. P. G. Perthoit. No. 1,023,103; Apr. 16; Sp. p. 3118; Gaz. vol. 177; p. 558.
Strainer, Milk-. A. F. Lally. No. 1,023,664; Apr. 16; Sp. p. 4045; Gaz. vol. 177; p. 709.
Straining appliance. F. T. Page. No. 1,024,523; Apr. 30; Sp. p. 5972; Gaz. vol. 177; p. 1063.
Strap: *See* Buckle-strap.
Stream-dividing apparatus. J. L. Ferguson. No. 1,021,780; Apr. 2; Sp. p. 221; Gaz. vol. 177; p. 7.
Street and station indicator. J. R. Tucker. No. 1,024,044; Apr. 23; Sp. p. 4873; Gaz. vol. 177; p. 864.
Strip-feeding device. O. Oehring. No. 1,023,165; Apr. 16; Sp. p. 3056; Gaz. vol. 177; p. 547.
Stropping device. J. A. Harrington. No. 1,024,074; Apr. 23; Sp. p. 4935; Gaz. vol. 177; p. 874.
Stropping-machine. R. M. Watson. No. 1,024,650; Apr. 30; Sp. p. 6209; Gaz. vol. 177; p. 1110.
Structural elements, Making. W. M. Jaupole. No. 1,024,687; Apr. 30; Sp. p. 6362; Gaz. vol. 177; p. 1121.
Stump-puller. L. C. Ellsen. No. 1,021,922; Apr. 2; Sp. p. 454; Gaz. vol. 177; p. 78.
Stumps, Destroying. W. E. White. No. 1,024,540; Apr. 30; Sp. p. 6018; Gaz. vol. 177; p. 1070.
Submarine, operating apparatus. C. Williamson. No. 1,023,541; Apr. 16; Sp. p. 3796; Gaz. vol. 177; p. 670.
Sucker-rod elevator. W. O'Neil, E. J. Schneider, and T. N. Kellett. No. 1,024,017; Apr. 23; Sp. p. 4807; Gaz. vol. 177; p. 854.
Sugar-drying apparatus. W. H. Hamman and W. E. Murray. No. 1,024,073; Apr. 23; Sp. p. 4933; Gaz. vol. 177; p. 874.
Suit and hat box, Collapsible. H. B. Walter. No. 1,025,037; Apr. 30; Sp. p. 7068; Gaz. vol. 177; p. 1242.
Suit-case. H. F. Becker. No. 1,023,238; Apr. 16; Sp. p. 3193; Gaz. vol. 177; p. 572.
Support, Adjustable. F. Mergner. No. 1,024,804; Apr. 30; Sp. p. 6305; Gaz. vol. 177; p. 1161.
Surface-treating machine. F. I. Ferenczy. No. 1,022,836; Apr. 9; Sp. p. 2322; Gaz. vol. 177; p. 397.
Surveying instrument. E. E. Graham. No. 1,023,373; Apr. 16; Sp. p. 3458; Gaz. vol. 177; p. 617.
Suspensory. M. E. O'Reilly. No. 1,022,478; Apr. 16; Sp. p. 3674; Gaz. vol. 177; p. 651.
Swing, Reclining porch-. E. R. King. No. 1,023,657; Apr. 16; Sp. p. 4035; Gaz. vol. 177; p. 707.
Swingletree. L. E. Barnes. No. 1,025,045; Apr. 30; Sp. p. 7077; Gaz. vol. 177; p. 1244.
Swingletree, Spring-. G. W. Yates. No. 1,024,760; Apr. 30; Sp. p. 6510; Gaz. vol. 177; p. 1146.
Switch: *See* Centrifugal switch; Door-switch; Electric switch; Electrical switch; Electromagnetically-operated switch; Horn-gap switch; Lighting-switch; Oil-switch; Railway-switch; Signal-switch; Snap-switch; Trolley-switch.
Switch. J. F. McElroy. No. 1,023,264; Apr. 16; Sp. p. 3263; Gaz. vol. 177; p. 582.
Switch-actuating mechanism, Electrical. R. D. Horton. No. 1,022,628; Apr. 9; Sp. p. 1846; Gaz. vol. 177; p. 328.
Switch-box. J. Kronberger. No. 1,024,902; Apr. 30; Sp. p. 6892; Gaz. vol. 177; p. 1196.
Switch-operating device. D. H. McDaniels. No. 1,024,735; Apr. 30; Sp. p. 6451; Gaz. vol. 177; p. 1138.
Switch operating mechanism, Combined track and trolley. J. E. Nicholson. No. 1,024,353; Apr. 23; Sp. p. 5582; Gaz. vol. 177; p. 969.
Switch-throwing device. J. Meinar. No. 1,022,863; Apr. 9; Sp. p. 2369; Gaz. vol. 177; p. 405.
Switch-throwing device. D. Deburn. No. 1,024,279; Apr. 23; Sp. p. 5408; Gaz. vol. 177; p. 947.
Switch-throwing mechanism. P. J. Reiger. No. 1,021,949; Apr. 2; Sp. p. 422; Gaz. vol. 177; p. 93.
Switches, Control of electrically-operated. H. E. White. No. 1,022,907; Apr. 9; Sp. p. 2467; Gaz. vol. 177; p. 420.
Switches, Interlocking device for remote-control. C. Wiler. No. 1,024,233; Apr. 23; Sp. p. 5330; Gaz. vol. 177; p. 934.
Syringe. A. E. Scott. No. 1,023,042; Apr. 9; Sp. p. 2733; Gaz. vol. 177; p. 466.
Syringe, Medical spraying-. M. Saenger. No. 1,024,422; Apr. 23; Sp. p. 5700; Gaz. vol. 177; p. 992.
Syringe, Vaginal. S. S. Rumberg and F. C. Hartung. No. 1,022,601; Apr. 9; Sp. p. 1792; Gaz. vol. 177; p. 314.
Table: *See* Ironing-table; Operating-table; Packing-table; Sludge-table.
Table. J. Gras. No. 1,024,724; Apr. 30; Sp. p. 6423; Gaz. vol. 177; p. 1133.
Table-piece and fountain. F. C. Austin. No. 1,023,554; Apr. 16; Sp. p. 3425; Gaz. vol. 177; p. 612.
Table-service device. S. Anderson. No. 1,022,200; Apr. 2; Sp. p. 1120; Gaz. vol. 177; p. 180.
Tack-pulling machine, Insole-. G. C. Rumsey. No. 1,021,884; Apr. 2; Sp. p. 306; Gaz. vol. 177; p. 50.
Tacks and the like, Machine for driving. F. Hellbrook. No. 1,022,481; Apr. 9; Sp. p. 1535; Gaz. vol. 177; p. 276.
Tag holder, License-. J. W. Yochem. No. 1,024,886; Apr. 23; Sp. p. 5584; Gaz. vol. 177; p. 980.
Tag-marking machine. G. H. Lang. No. 1,022,570; Apr. 16; Sp. p. 3864; Gaz. vol. 177; p. 690.
Talking-machine. W. N. Dempsey. No. 1,022,126; Apr. 2; Sp. p. 789; Gaz. vol. 177; p. 126.
Talking-machine. J. B. Browning. No. 1,022,180; Apr. 2; Sp. p. 907; Gaz. vol. 177; p. 145.
Talking-machine horn. T. H. Tewell. No. 1,024,108; Apr. 23; Sp. p. 5018; Gaz. vol. 177; p. 887.
Talking-machines, Automatic brake for. T. Birnbaum. No. 1,021,756; Apr. 2; Sp. p. 1; Gaz. vol. 177; p. 3.
Tank: *See* Dipping-tank.
Tank gage or indicator, Liquid-. S. P. Surber. No. 1,024,377; Apr. 23; Sp. p. 5570; Gaz. vol. 177; p. 977.
Tank-heater. H. L. Ferris. No. 1,023,463; Apr. 16; Sp. p. 3641; Gaz. vol. 177; p. 646.
Tank-mold. E. P. Fox. No. 1,023,465; Apr. 16; Sp. p. 3644; Gaz. vol. 177; p. 647.
Tank support, Expansion-. C. H. Foster. No. 1,022,409; Apr. 9; Sp. p. 1309; Gaz. vol. 177; p. 251.
Tap, Barrel-. E. W. Brague. No. 1,024,971; Apr. 30; Sp. p. 6939; Gaz. vol. 177; p. 1220.
Target. I. L. Reeves. No. 1,024,651; Apr. 30; Sp. p. 6286; Gaz. vol. 177; p. 1108.
Target-board. O. W. Fermoen. No. 1,023,684; Apr. 16; Sp. p. 3996; Gaz. vol. 177; p. 702.
Taximeter control. J. D. Sulcosa. No. 1,023,050; Apr. 9; Sp. p. 2765; Gaz. vol. 177; p. 470.
Tea, coffee, and other beverages, Apparatus for brewing. T. J. Howlett. No. 1,024,076; Apr. 23; Sp. p. 4930; Gaz. vol. 177; p. 873.
Tea-kettle cover. O. F. Turner and W. H. Maple. No. 1,024,607; Apr. 30; Sp. p. 6100; Gaz. vol. 177; p. 1092.
Teat-cup. A. Gillies. No. 1,024,847; Apr. 30; Sp. p. 6034; Gaz. vol. 177; p. 1175.

Teeth articulator, Artificial-. M. Weiss. No. 1,022,055; Apr. 2; Sp. p. 646; Gaz. vol. 177; p. 103.
Teething-finger. A. Dubay. No. 1,023,822; Apr. 23; Sp. p. 4363; Gaz. vol. 177; p. 788.
Telegraph systems, Printer for multiplex printing-. D. Murray. No. 1,021,942; Apr. 2; Sp. p. 396; Gaz. vol. 177; p. 65.
Telegraphy, Occulting device for flash-lights for optical. E. L. P. Paillard-Turenne. No. 1,025,015; Apr. 30; Sp. p. 7026; Gaz. vol. 177; p. 1234.
Telegraphy, Printing. I. Klose. No. 1,024,205; Apr. 23; Sp. p. 5254; Gaz. vol. 177; p. 921.
Telemeter. O. Eppenstein. No. 1,022,358; Apr. 2; Sp. p. 1261; Gaz. vol. 177; p. 203.
Telephone. R. A. Bonventure. No. 1,022,175; Apr. 2; Sp. p. 396; Gaz. vol. 177; p. 143.
Telephone. C. C. Blackham. No. 1,022,350; Apr. 2; Sp. p. 1247; Gaz. vol. 177; p. 200.
Telephone and other poles, Mold for bases of. J. A. Garey. No. 1,022,231; Apr. 2; Sp. p. 1021; Gaz. vol. 177; p. 163.
Telephone-exchange system. H. G. Webster. No. 1,022,522; Apr. 9; Sp. p. 1619; Gaz. vol. 177; p. 288.
Telephone - exchange system. H. G. Webster. No. 1,023,185; Apr. 16; Sp. p. 3101; Gaz. vol. 177; p. 555.
Telephone - exchange system. E. E. Clement. No. 1,023,480; Apr. 16; Sp. p. 3676; Gaz. vol. 177; p. 651.
Telephone-exchange system. E. E. Clement. No. 1,024,487; Apr. 23; Sp. p. 5843; Gaz. vol. 177; p. 1016.
Telephone-exchange system, Automatic. G. Deakin. No. 1,024,184; Apr. 23; Sp. p. 5194; Gaz. vol. 177; p. 918.
Telephone-exchanges, Signal-transmitter for. G. W. Lorimer. No. 1,024,088; Apr. 23; Sp. p. 4966; Gaz. vol. 177; p. 879.
Telephone or telegraph poles, Cross-arm for. J. R. Ferringer. No. 1,021,831; Apr. 2; Sp. p. 182; Gaz. vol. 177; p. 30.
Telephone-receiver. W. W. Dean. No. 1,021,920; Apr. 2; Sp. p. 352; Gaz. vol. 177; p. 58.
Telephone-repeater. N. G. Warth. No. 1,022,519; Apr. 9; Sp. p. 1606; Gaz. vol. 177; p. 287.
Telephone system. F. C. Unger. No. 1,022,713; Apr. 9; Sp. p. 2069; Gaz. vol. 177; p. 356.
Telephone system. H. G. Webster. No. 1,023,900; Apr. 23; Sp. p. 4565; Gaz. vol. 177; p. 814.
Telephone system. H. P. Clausen. No. 1,024,498; Apr. 30; Sp. p. 5895; Gaz. vol. 177; p. 1054.
Telephone-transmitter. M. Moloney. No. 1,022,253; Apr. 2; Sp. p. 1058; Gaz. vol. 177; p. 169.
Telephone-transmitter, Multiple. C. E. Egnér and J. G. Holmström. No. 1,023,557; Apr. 16; Sp. p. 3829; Gaz. vol. 177; p. 676.
Telephones, Detector for party-line. H. Y. Haley. No. 1,024,131; Apr. 23; Sp. p. 5087; Gaz. vol. 177; p. 895.
Telescope, Hinged double. A. Steinle. No. 1,022,340; Apr. 2; Sp. p. 1229; Gaz. vol. 177; p. 196.
Temperature bath, Constant-. T. B. Freas. No. 1,024,565; Apr. 30; Sp. p. 6091; Gaz. vol. 177; p. 1078.
Temperature control, Compensating system of. H. G. Geissinger. No. 1,022,188; Apr. 2; Sp. p. 921; Gaz. vol. 177; p. 147.
Temperature control, Remote. H. G. Geissinger. No. 1,022,189; Apr. 2; Sp. p. 924; Gaz. vol. 177; p. 148.
Tenders, Automatic coal-feed for moving coal-. C. Hocker and B. Wendholt. No. 1,023,935; Apr. 23; Sp. p. 4652; Gaz. vol. 177; p. 827.
Tennis nets, Stretching device for lawn-. W. S. Edwards. No. 1,023,928; Apr. 23; Sp. p. 4631; Gaz. vol. 177; p. 824.
Tension device. A. Crawford. No. 1,021,919; Apr. 2; Sp. p. 350; Gaz. vol. 177; p. 58.
Tension device. G. Sipp. No. 1,022,512; Apr. 9; Sp. p. 1594; Gaz. vol. 177; p. 285.
Tension device. G. Singleton. No. 1,024,605; Apr. 30; Sp. p. 6188; Gaz. vol. 177; p. 1092.
Tension device. J. O. McKean. No. 1,024,800; Apr. 30; Sp. p. 6599; Gaz. vol. 177; p. 1160.
Terminal-attachment-engaging device. J. E. Schaefer, Jr. No. 1,024,601; Apr. 30; Sp. p. 6180; Gaz. vol. 177; p. 1090.
Thermometer casing, Clinical-. C. W. Boman. No. 1,024,824; Apr. 30; Sp. p. 6644; Gaz. vol. 177; p. 1169.
Thermostatic instruments, Casing for. G. Porter. No. 1,021,888; Apr. 2; Sp. p. 292; Gaz. vol. 177; p. 48.
Thill-coupling attachment. F. M. Foote and C. H. Schabinger. No. 1,023,106; Apr. 9; Sp. p. 2877; Gaz. vol. 177; p. 489.
Thread-cutting machine. H. R. Farnsworth. No. 1,022,034; Apr. 9; Sp. p. 2626; Gaz. vol. 177; p. 431.
Thread guide and clearing device. G. F. Macfarlane. No. 1,023,578; Apr. 16; Sp. p. 3951; Gaz. vol. 177; p. 683.
Thread-guide bars, Driving mechanism for. C. Walther. No. 1,023,695; Apr. 16; Sp. p. 4094; Gaz. vol. 177; p. 718.
Thread-guide bars, Speed-retarding device for. C. Walther. No. 1,023,694; Apr. 16; Sp. p. 4093; Gaz. vol. 177; p. 718.
Thread-protector. J. P. Shrum, W. C. Rae, and J. W. Ripper. No. 1,023,069; Apr. 23; Sp. p. 4718; Gaz. vol. 177; p. 837.
Thread-waxing device. A. Eppler. No. 1,023,071; Apr. 9; Sp. p. 2903; Gaz. vol. 177; p. 477.
Threads, Manufacturing fine artificial. C. R. Linkmeyer. No. 1,022,097; Apr. 2; Sp. p. 720; Gaz. vol. 177; p. 116.
Threadometer. C. A. Hammond-Knowlton. No. 1,024,332; Apr. 23; Sp. p. 5499; Gaz. vol. 177; p. 963.
Threshing-machine. A. R. Cooper. No. 1,021,917; Apr. 2; Sp. p. 347; Gaz. vol. 177; p. 57.
Thrust-collar. H. A. Tuttle. No. 1,022,518; Apr. 9; Sp. p. 1605; Gaz. vol. 177; p. 287.
Ticketing machine, Automatic pin-. B. W. Scott. No. 1,023,583; Apr. 23; Sp. p. 4510; Gaz. vol. 177; p. 806.
Tie: *See* Package-tie; Rail-tie; Railway-tie; Railway cross-tie.
Tie and rail-fastener. W. J. Kupp. No. 1,022,790; Apr. 9; Sp. p. 2226; Gaz. vol. 177; p. 381.
Tie and rail-fastener. W. T. Smith. No. 1,022,890; Apr. 9; Sp. p. 2421; Gaz. vol. 177; p. 414.
Tie and rail-fastener, Combined. E. Stack. No. 1,024,963; Apr. 30; Sp. p. 6911; Gaz. vol. 177; p. 1214.
Tile, Facing-. J. B. Owens. No. 1,024,355; Apr. 23; Sp. p. 5535; Gaz. vol. 177; p. 970.
Tile-machine. J. B. Engstrom. No. 1,022,933; Apr. 9; Sp. p. 2522; Gaz. vol. 177; p. 430.
Tile machine, Roofing-. O. Walter. No. 1,022,282; Apr. 2; Sp. p. 1115; Gaz. vol. 177; p. 178.
Tile-molding machine. A. Kern. No. 1,023,656; Apr. 16; Sp. p. 4033; Gaz. vol. 177; p. 707.
Tile-press. S. Gilettl. No. 1,023,512; Apr. 16; Sp. p. 3745; Gaz. vol. 177; p. 662.
Tile, Roofing-. H. Ronnau. No. 1,023,878; Apr. 23; Sp. p. 4504; Gaz. vol. 177; p. 807.
Tile, Roofing-. J. B. Firoben. No. 1,024,322; Apr. 23; Sp. p. 5480; Gaz. vol. 177; p. 961.
Tile-unloading machine. R. M. Candee. No. 1,024,328; Apr. 30; Sp. p. 6653; Gaz. vol. 177; p. 1171.
Tiles, pottery, &c., Oven for the manufacture of. C. Dressler. No. 1,023,625; Apr. 16; Sp. p. 3985; Gaz. vol. 177; p. 700.
Tilling machine, Soil-. L. E. Scow. No. 1,023,043; Apr. 9; Sp. p. 2739; Gaz. vol. 177; p. 468.
Timber and product thereof, Preserving cut. R. A. Marr. No. 1,023,745; Apr. 16; Sp. p. 4179; Gaz. vol. 177; p. 734.
Time-recorder. J. Morrison. No. 1,022,694; Apr. 9; Sp. p. 2009; Gaz. vol. 177; p. 347.
Tire. E. Dettelbach. No. 1,022,127; Apr. 2; Sp. p. 791; Gaz. vol. 177; p. 126.
Tire. F. Marinics. No. 1,022,856; Apr. 9; Sp. p. 2361; Gaz. vol. 177; p. 403.
Tire. M. E. Davis. No. 1,023,554; Apr. 16; Sp. p. 3821; Gaz. vol. 177; p. 674.
Tire-armor, Vehicle-. J. B. Coonrod. No. 1,023,414; Apr. 16; Sp. p. 3547; Gaz. vol. 177; p. 631.
Tire, Armored. V. A. Rouilliard. No. 1,022,338; Apr. 2; Sp. p. 1219; Gaz. vol. 177; p. 194.
Tire, Automobile-. O. H. Weckesser. No. 1,024,882; Apr. 23; Sp. p. 5578; Gaz. vol. 177; p. 975.
Tire cover, Pneumatic-. L. Lials. No. 1,023,666; Apr. 16; Sp. p. 4048; Gaz. vol. 177; p. 710.
Tire, Cushion-. A. Hajos. No. 1,021,983; Apr. 2; Sp. p. 495; Gaz. vol. 177; p. 79.
Tire, Elastic. A. W. Torkington. No. 1,024,042; Apr. 23; Sp. p. 4869; Gaz. vol. 177; p. 853.
Tire, Elastic. T. B., A. G. and G. P. Marchant. No. 1,024,090; Apr. 23; Sp. p. 4975; Gaz. vol. 177; p. 880.
Tire-filling compound and process involving the same. H. L. Manley. No. 1,025,000; Apr. 30; Sp. p. 7001; Gaz. vol. 177; p. 1230.
Tire for vehicle-wheels, Elastic. C. F. Waldman. No. 1,023,344; Apr. 16; Sp. p. 3412; Gaz. vol. 177; p. 609.
Tire for vehicle-wheels, Pneumatic. E. E. Black. No. 1,023,454; Apr. 16; Sp. p. 3626; Gaz. vol. 177; p. 643.
Tire for vehicle-wheels, Resilient. A. A. Curry. No. 1,024,076; Apr. 30; Sp. p. 6047; Gaz. vol. 177; p. 1221.
Tire for vehicle-wheels, Spring-cushioned. W. W. Lower. No. 1,025,072; Apr. 30; Sp. p. 7128; Gaz. vol. 177; p. 1252.
Tire-guard. C. Dabelstein. No. 1,022,658; Apr. 9; Sp. p. 1917; Gaz. vol. 177; p. 334.
Tire-protector. J. Savoie. No. 1,024,458; Apr. 23; Sp. p. 5771; Gaz. vol. 177; p. 1004.
Tire-repair device. C. F. Jenkins. No. 1,024,078; Apr. 23; Sp. p. 4941; Gaz. vol. 177; p. 876.
Tire, Resilient. G. S. Adams. No. 1,022,220; Apr. 2; Sp. p. 988; Gaz. vol. 177; p. 159.
Tire, Resilient. H. A. Meinhardt. No. 1,022,689; Apr. 9; Sp. p. 1990; Gaz. vol. 177; p. 345.
Tire, Resilient. E. E. Hoff. No. 1,022,735; Apr. 9; Sp. p. 2120; Gaz. vol. 177; p. 363.
Tire, Resilient. H. B. Montgomery. No. 1,022,966; Apr. 9; Sp. p. 2508; Gaz. vol. 177; p. 441.
Tire, Resilient. N. Harris. No. 1,024,336; Apr. 23; Sp. p. 5504; Gaz. vol. 177; p. 965.
Tire, Resilient. J. Thimsen. No. 1,024,753; Apr. 30; Sp. p. 6496; Gaz. vol. 177; p. 1143.
Tire, Rubber vehicle-. A. Dow. No. 1,024,189; Apr. 23; Sp. p. 5221; Gaz. vol. 177; p. 915.
Tire, Spring-. E. Steimle. No. 1,023,770; Apr. 16; Sp. p. 4221; Gaz. vol. 177; p. 742.
Tire, Vehicle-. J. E. Goodman and E. S. Ruff. No. 1,023,733; Apr. 16; Sp. p. 4161; Gaz. vol. 177; p. 730.
Tire, Vehicle-. S. T. Allen. No. 1,023,779; Apr. 16; Sp. p. 4238; Gaz. vol. 177; p. 745.
Tire, Vehicle-. T. H. Banks. No. 1,024,431; Apr. 23; Sp. p. 5710; Gaz. vol. 177; p. 994.
Tire, Vehicle wheel-. J. Relasz. No. 1,023,712; Apr. 16; Sp. p. 4125; Gaz. vol. 177; p. 724.

Tire-vulcanizing repair apparatus. C. F. Adamson. No. 1,022,289; Apr. 2; Sp. p. 1123; Gaz. vol. 177; p. 180.
Tires, Detachable rim for resilient. J. W. Hall and C. Baynes. No. 1,022,842; Apr. 9; Sp. p. 2334; Gaz. vol. 177; p. 390.
Tires, Outer cover for pneumatic. J. C. Barker. No. 1,021,516; Apr. 2; Sp. p. 141; Gaz. vol. 177; p. 24.
Tires, Wheel-rim for pneumatic. C. G. Kleinschmidt. No. 1,021,783; Apr. 2; Sp. p. 59; Gaz. vol. 177; p. 15.
Titanium and silver and producing the same, Article composed essentially of. A. J. Rossi. No. 1,024,476; Apr. 23; Sp. p. 5821; Gaz. vol. 177; p. 1012.
Toilet-hood. G. J. Pass. No. 1,023,677; Apr. 16; Sp. p. 4064; Gaz. vol. 177; p. 713.
Tombstone, sign, &c. P. F. Nachtigall. No. 1,021,789; Apr. 2; Sp. p. 60; Gaz. vol. 177; p. 15.
Tone-volume indicator. F. B. Beinkamp and L. L. Harding. No. 1,022,528; Apr. 9; Sp. p. 1636; Gaz. vol. 177; p. 291.
Tongs. W. H. Newville. No. 1,021,790; Apr. 2; Sp. p. 71; Gaz. vol. 177; p. 15.
Tongue-lock. A. Dubé. No. 1,022,932; Apr. 9; Sp. p. 2510; Gaz. vol. 177; p. 429.
Tool. J. W. Crossley. No. 1,024,120; Apr. 23; Sp. p. 5059; Gaz. vol. 177; p. 891.
Tool-driver, Spiral. M. Wolin. No. 1,024,960; Apr. 30; Sp. p. 6921; Gaz. vol. 177; p. 1216.
Tool, Electropneumatic. A. Palmros. No. 1,022,000; Apr. 2; Sp. p. 532; Gaz. vol. 177; p. 84.
Tool, Fluid-operated. J. W. Canty. No. 1,024,395; Apr. 23; Sp. p. 5601; Gaz. vol. 177; p. 983.
Tool-holder. A. Shyrlf. No. 1,022,511; Apr. 9; Sp. p. 1593; Gaz. vol. 177; p. 285.
Tool-holder. E. Stoecklin. No. 1,022,760; Apr. 9; Sp. p. 2173; Gaz. vol. 177; p. 372.
Tool-holder. J. D. Patnaude. No. 1,025,017; Apr. 30; Sp. p. 7029; Gaz. vol. 177; p. 1235.
Tool-holder, Floating. B. Rindfleisch. No. 1,021,843; Apr. 2; Sp. p. 207; Gaz. vol. 177; p. 34.
Tool-holder, Yielding. A. Fritz. No. 1,023,073; Apr. 9; Sp. p. 2806; Gaz. vol. 177; p. 477.
Tool-holding box. G. H. Bartlett. No. 1,024,388; Apr. 23; Sp. p. 5588; Gaz. vol. 177; p. 980.
Tool, Portable power-driven hand-. E. F. Smith. No. 1,024,151; Apr. 23; Sp. p. 5128; Gaz. vol. 177; p. 901.
Toothpicks, &c., Machine for stacking. A. H. Hall. No. 1,024,773; Apr. 30; Sp. p. 6538; Gaz. vol. 177; p. 1151.
Toothpicks, Mechanism for stacking and conveying. A. H. Hall. No. 1,024,774; Apr. 30; Sp. p. 6541; Gaz. vol. 177; p. 1151.
Top. A. E. Gibbs. No. 1,021,926; Apr. 2; Sp. p. 362; Gaz. vol. 177; p. 60.
Top, Gyroscopic. M. L. Hawks. No. 1,022,286; Apr. 2; Sp. p. 1030; Gaz. vol. 177; p. 164.
Top, Spinning-. W. B. Gilmore. No. 1,023,637; Apr. 16; Sp. p. 4001; Gaz. vol. 177; p. 702.
Torch. O. Bartel. No. 1,023,610; Apr. 16; Sp. p. 3950; Gaz. vol. 177; p. 693.
Torch. C. L. Chester. No. 1,023,622; Apr. 16; Sp. p. 3975; Gaz. vol. 177; p. 698.
Torch, Contractor's. A. F. Jenkins. No. 1,023,851; Apr. 23; Sp. p. 4443; Gaz. vol. 177; p. 796.
Torpedo-cane. H. F. Neu. No. 1,025,010; Apr. 30; Sp. p. 7020; Gaz. vol. 177; p. 1233.
Torpedo-launching tube. E. Schneider. No. 1,024,424; Apr. 23; Sp. p. 5701; Gaz. vol. 177; p. 992.
Torpedoes, Heater for automobile. F. M. Leavitt. No. 1,022,486; Apr. 9; Sp. 1544; Gaz. vol. 177; p. 277.
Torpedoes, to aid in the recovery thereof after firing, Mechanical air device for expelling water or other liquids from the heads of. K. Whiting and J. B. Howell. No. 1,023,907; Apr. 23; Sp. p. 4581; Gaz. vol. 177; p. 817.
Toy. T. J. Michener. No. 1,023,324; Apr. 16; Sp. p. 3379; Gaz. vol. 177; p. 602.
Toy. A. Keller. No. 1,023,472; Apr. 16; Sp. p. 3659; Gaz. vol. 177; p. 649.
Toy. G. L. Webster. No. 1,023,698; Apr. 16; Sp. p. 4099; Gaz. vol. 177; p. 719.
Toy animal. H. F. Trowbridge. No. 1,023,401; Apr. 16; Sp. p. 3526; Gaz. vol. 177; p. 628.
Toy figure. D. E. Eaton. No. 1,023,420; Apr. 16; Sp. p. 3555; Gaz. vol. 177; p. 633.
Toy, Figure. H. T. Denlinger. No. 1,024,314; Apr. 23; Sp. p. 5466; Gaz. vol. 177; p. 958.
Toy knitting device. F. C. Rehm. No. 1,022,154; Apr. 2; Sp. p. 856; Gaz. vol. 177; p. 136.
Toy, Musical. W. Bartholomae. No. 1,024,878; Apr. 30; Sp. p. 6752; Gaz. vol. 177; p. 1188.
Toy or game. F. Hornby. No. 1,022,419; Apr. 9; Sp. p. 1407; Gaz. vol. 177; p. 254.
Toy pistol. E. A. Moore. No. 1,024,350; Apr. 23; Sp. p. 5524; Gaz. vol. 177; p. 969.
Toy pistol. G. W. Stambaugh. No. 1,024,374; Apr. 23; Sp. p. 5564; Gaz. vol. 177; p. 976.
Toy vehicles and the like, Apparatus for actuating. C. P. Ptell. No. 1,022,258; Apr. 2; Sp. p. 1067; Gaz. vol. 177; p. 170.
Track-lifting jack. G. Carden. No. 1,023,922; Apr. 23; Sp. p. 4622; Gaz. vol. 177; p. 822.
Track-sanding apparatus. H. Viessmann. No. 1,023,100; Apr. 9; Sp. p. 2860; Gaz. vol. 177; p. 487.
Traction-increasing and safety device. A. E. Kintner. No. 1,024,084; Apr. 23; Sp. p. 4955; Gaz. vol. 177; p. 877.
Tractor. W. S. Boyd. No. 1,021,911; Apr. 2; Sp. p. 334; Gaz. vol. 177; p. 56.
Train-staff system. V. K. Spicer and V. I. Smart. No. 1,022,605; Apr. 9; Sp. p. 1603; Gaz. vol. 177; p. 316.
Tramper-press. R. E. Wilson. No. 1,023,056; Apr. 9; Sp. p. 2775; Gaz. vol. 177; p. 472.
Transformer-terminal. E. G. Winston. No. 1,022,912; Apr. 9; Sp. p. 2476; Gaz. vol. 177; p. 422.
Transparent and translucent bodies, Manufacture of. K. W. Spaltehols. No. 1,021,052; Apr. 2; Sp. p. 420; Gaz. vol. 177; p. 69.
Trap: *See* Animal-trap; Burglar-trap; Drain-trap; Electric trap; Fly-trap; Rat-trap; Roach-trap; Sidewalk-trap.
Trap. J. D. Niederlitz. No. 1,024,278; Apr. 23; Sp. p. 5407; Gaz. vol. 177; p. 947.
Trap. W. Lundstrom. No. 1,024,689; Apr. 30; Sp. p. 6364; Gaz. vol. 177; p. 1121.
Trap. D. L. Davidson. No. 1,025,055; Apr. 30; Sp. p. 7065; Gaz. vol. 177; p. 1247.
Trap-door. O. W. Meissner. No. 1,022,747; Apr. 9; Sp. p. 2142; Gaz. vol. 177; p. 367.
Trap-door. O. W. Meissner. No. 1,023,951; Apr. 23; Sp. p. 4685; Gaz. vol. 177; p. 832.
Traveling-bag for bowlers. L. B. Taylor. No. 1,024,536; Apr. 30; Sp. p. 6004; Gaz. vol. 177; p. 1068.
Tray, Bottle-. E. Court. No. 1,023,925; Apr. 23; Sp. p. 4626; Gaz. vol. 177; p. 823.
Tray, Candy-holding. R. C. Boeckel. No. 1,023,714; Apr. 16; Sp. p. 4127; Gaz. vol. 177; p. 724.
Tree: *See* Shoe-tree.
Tree-heater. L. M. Wilson. No. 1,023,055; Apr. 9; Sp. p. 2774; Gaz. vol. 177; p. 472.
Trigger mechanism. J. M. Russell. No. 1,022,973; Apr. 9; Sp. p. 2611; Gaz. vol. 177; p. 444.
Tripod attachment. O. P. Thunberg. No. 1,022,983; Apr. 9; Sp. p. 2626; Gaz. vol. 177; p. 447.
Trolley. H. A. Krause. No. 1,022,144; Apr. 2; Sp. p. 834; Gaz. vol. 177; p. 132.
Trolley. C. C. Snodgrass. No. 1,024,290; Apr. 23; Sp. p. 5428; Gaz. vol. 177; p. 950.
Trolley. P. Szuminsky. No. 1,024,293; Apr. 23; Sp. p. 5431; Gaz. vol. 177; p. 951.
Trolley. W. Schweppe. No. 1,024,368; Apr. 23; Sp. p. 5555; Gaz. vol. 177; p. 974.
Trolley, Electric. L. M. Davis. No. 1,022,357; Apr. 2; Sp. p. 1260; Gaz. vol. 177; p. 202.
Trolley-frog. F. Guillot. No. 1,022,546; Apr. 9; Sp. p. 1671; Gaz. vol. 177; p. 296.
Trolley-pole, Self-adjusting. G. H. Meredith. No. 1,022,959; Apr. 9; Sp. p. 2582; Gaz. vol. 177; p. 439.
Trolley retriever and catcher. R. Shields. No. 1,023,597; Apr. 16; Sp. p. 3921; Gaz. vol. 177; p. 689.
Trolley switch, Overhead-. E. H. Anderson. No. 1,021,857; Apr. 2; Sp. p. 229; Gaz. vol. 177; p. 38.
Trolley-wheel. W. H. Schultze. No. 1,023,338; Apr. 16; Sp. p. 3402; Gaz. vol. 177; p. 607.
Trolley-wheel. W. M. Boyer. No. 1,024,970; Apr. 30; Sp. p. 6937; Gaz. vol. 177; p. 1219.
Trolley-wheel for electric cars. J. C. Eames. No. 1,022,374; Apr. 2; Sp. p. 1291; Gaz. vol. 177; p. 209.
Trolley-wire suspension device. E. Kindler. No. 1,022,143; Apr. 2; Sp. p. 833; Gaz. vol. 177; p. 132.
Trombone, Slide-. G. B. Riblet. No. 1,021,890; Apr. 2; Sp. p. 296; Gaz. vol. 177; p. 49.
Trough: *See* Conveying-trough; Feed-trough.
Trousers creasing and pressing device. M. V. Hammack. No. 1,022,671; Apr. 9; Sp. p. 1944; Gaz. vol. 177; p. 338.
Trousers, Detachable cuff for. J. S. and W. Miller. No. 1,023,864; Apr. 23; Sp. p. 4477; Gaz. vol. 177; p. 802.
Trousers-hanger. G. R. Bowman. No. 1,022,295; Apr. 2; Sp. p. 1136; Gaz. vol. 177; p. 181.
Trowel. W. A. Newton. No. 1,021,945; Apr. 2; Sp. p. 404; Gaz. vol. 177; p. 67.
Trowel. B. C. Currence. No. 1,024,550; Apr. 30; Sp. p. 6077; Gaz. vol. 177; p. 1076.
Truck. S. Bottcese. No. 1,023,617; Apr. 16; Sp. p. 3960; Gaz. vol. 177; p. 696.
Truck. G. F. Danielson. No. 1,023,997; Apr. 23; Sp. p. 4777; Gaz. vol. 177; p. 848.
Truck. B. A. Ballinger. No. 1,024,469; Apr. 23; Sp. p. 5806; Gaz. vol. 177; p. 1009.
Truck. W. A. Brandenburg. No. 1,024,614; Apr. 30; Sp. p. 6208; Gaz. vol. 177; p. 1094.
Truck. B. C. Rockwell. No. 1,024,701; Apr. 30; Sp. p. 6386; Gaz. vol. 177; p. 1125.
Truck, Automobile-. D. E. Shipley. No. 1,023,045; Apr. 9; Sp. p. 2743; Gaz. vol. 177; p. 468.
Truck, Baggage-. R. W. Kidston. No. 1,024,342; Apr. 23; Sp. p. 5512; Gaz. vol. 177; p. 966.
Truck, Car-. W. L. Austin. No. 1,022,922; Apr. 9; Sp. p. 2499; Gaz. vol. 177; p. 428.
Truck, Car-. W. Hobson. No. 1,023,019; Apr. 9; Sp. p. 2691; Gaz. vol. 177; p. 460.
Truck, Clamp-. G. Barr. No. 1,022,812; Apr. 9; Sp. p. 2272; Gaz. vol. 177; p. 382.
Truck, Logging-railway. C. Berryman. No. 1,022,385; Apr. 2; Sp. p. 1230; Gaz. vol. 177; p. 218.
Truck or Mer. Casket. E. Edmonson. No. 1,023,070; Apr. 9; Sp. p. 2902; Gaz. vol. 177; p. 476.
Truck or undercarriage for railway, tramway, and mining vehicles, Axle-. J. S. Warner. No. 1,022,034; Apr. 2; Sp. p. 643; Gaz. vol. 177; p. 102.

Truck, Pallet-. J. L. Noble and A. Hansen. No. 1,021,880; Apr. 2; Sp. p. 279; Gaz. vol. 177; p. 45.
Truck side frame, Car-. O. S. Pullman. No. 1,023,461; Apr. 16; Sp. p. 3680; Gaz. vol. 177; p. 652.
Truck, Stone-. C. C. McBride. No. 1,023,826; Apr. 9; Sp. p. 2699; Gaz. vol. 177; p. 461.
Trucks, Pivoted rear traction-. P. E. Holt. No. 1,024,990; Apr. 30; Sp. p. 6083; Gaz. vol. 177; p. 1226.
Trunk. R. Simonsen. No. 1,022,158; Apr. 2; Sp. p. 861; Gaz. vol. 177; p. 187.
Trunk-fastener. W. D. Barnes. No. 1,024,054; Apr. 23; Sp. p. 4896; Gaz. vol. 177; p. 867.
Trunk, Wardrobe-. G. H. Wheary. (Reissue.) No. 13,404; Apr. 9; Sp. p. 2023; Gaz. vol. 177; p. 426.
Trunk, Wardrobe-. H. N. Drucker. No. 1,024,125; Apr. 23; Sp. p. 5073; Gaz. vol. 177; p. 893.
Truss-pad, Hernial. P. C. McEwen and F. W. Young. No. 1,023,435; Apr. 16; Sp. p. 3585; Gaz. vol. 177; p. 687.
Tube: *See* Ignition-tube; Torpedo-launching tube.
Tube-cleaner. S. D. Sargeant. No. 1,022,974; Apr. 9; Sp. p. 2612; Gaz. vol. 177; p. 444.
Tubes, Machine for forming and electrically welding. E. J. Guay. No. 1,022,025; Apr. 2; Sp. p. 583; Gaz. vol. 177; p. 92.
Tubing, Machine for making lock-joined angular metal. J. Stander. No. 1,023,049; Apr. 9; Sp. p. 2753; Gaz. vol. 177; p. 470.
Tubular mill for fine grinding, Vertical. C. Morel. No. 1,024,414; Apr. 23; Sp. p. 5682; Gaz. vol. 177; p. 990.
Tubular structures, Machine for inserting pucker-cords in. H. Jonson. No. 1,023,426; Apr. 16; Sp. p. 3566; Gaz. vol. 177; p. 635.
Tug and shaft attachment. S. Blodgett. No. 1,022,529; Apr. 9; Sp. p. 1637; Gaz. vol. 177; p. 291.
Tunnelling apparatus, Rock-. H. F. Sutton. No. 1,025,029; Apr. 30; Sp. p. 7052; Gaz. vol. 177; p. 1239.
Turbine. A. Kienast. No. 1,022,683; Apr. 9; Sp. p. 1976; Gaz. vol. 177; p. 343.
Turbine. E. Anderson. No. 1,024,111; Apr. 23; Sp. p. 5026; Gaz. vol. 177; p. 888.
Turbine, Combined wheel and astern. H. W. Riesdale and S. S. Cook. No. 1,022,215; Apr. 2; Sp. p. 980; Gaz. vol. 177; p. 157.
Turbine, Elastic-fluid. G. D. Atwood. No. 1,024,020; Apr. 30; Sp. p. 6845; Gaz. vol. 177; p. 1203.
Turbine-governing mechanism. O. Junggren and E. D. Dickinson. No. 1,023,519; Apr. 16; Sp. p. 3867; Gaz. vol. 177; p. 601.
Turbine, Hydraulic. A. Pfau. No. 1,023,585; Apr. 16; Sp. p. 3805; Gaz. vol. 177; p. 665.
Turbines, Nozzle of axial-flow. H. Bottshauser. No. 1,024,391; Apr. 23; Sp. p. 5595; Gaz. vol. 177; p. 981.
Turbines, Packing for elastic-fluid. W. Kieser. No. 1,022,788; Apr. 9; Sp. p. 2224; Gaz. vol. 177; p. 331.
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Tying device, Bundle-. P. K. Brink. No. 1,022,462; Apr. 9; Sp. p. 1508; Gaz. vol. 177; p. 269.
Type casting and composing machine. J. S. Bancroft and M. C. Indahl. No. 1,024,492; Apr. 30; Sp. p. 5862; Gaz. vol. 177; p. 1052.
Type-casting machine. B. Ludingwell. No. 1,024,514; Apr. 30; Sp. p. 5942; Gaz. vol. 177; p. 1060.
Type-casting machine. F. H. Pierpont. No. 1,024,524; Apr. 30; Sp. p. 5973; Gaz. vol. 177; p. 1064.
Type-justifying machine. W. T. Hoofnagle. No. 1,022,418; Apr. 9; Sp. p. 1363; Gaz. vol. 177; p. 254.
Type-mold. A. L. Knight and W. N. Clements. No. 1,024,512; Apr. 30; Sp. p. 5937; Gaz. vol. 177; p. 1059.
Type-writer. J. C. Hartt. No. 1,022,578; Apr. 9; Sp. p. 1948; Gaz. vol. 177; p. 339.
Type-writer press, Multiple. J. Stafford and O. C. Currie. No. 1,024,461; Apr. 23; Sp. p. 5782; Gaz. vol. 177; p. 1005.
Type-writing and computing machine, Combined. H. M. Steele. No. 1,023,687; Apr. 16; Sp. p. 4079; Gaz. vol. 177; p. 716.
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Type-writing machine. S. P. Harry. No. 1,021,885; Apr. 2; Sp. p. 187; Gaz. vol. 177; p. 31.
Type-writing machine. H. H. Steele. No. 1,021,958; Apr. 2; Sp. p. 483; Gaz. vol. 177; p. 70.
Type-writing machine. C. B. Corcoran. No. 1,021,970; Apr. 2; Sp. p. 472; Gaz. vol. 177; p. 75.
Type-writing machine. L. B. Wyckoff. No. 1,022,168; Apr. 2; Sp. p. 882; Gaz. vol. 177; p. 140.
Type-writing machine. J. C. McLaughlin. No. 1,022,879; Apr. 2; Sp. p. 1290; Gaz. vol. 177; p. 206.
Type-writing machine. C. B. Corcoran. No. 1,022,580; Apr. 9; Sp. p. 1742; Gaz. vol. 177; p. 307.
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Type-writing machine. J. Purdy. No. 1,023,172; Apr. 10; Sp. p. 3074; Gaz. vol. 177; p. 550.
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Type-writing machine. H. L. Woodward. No. 1,024,750; Apr. 30; Sp. p. 6507; Gaz. vol. 177; p. 1146.
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Type-writing machine. F. W. Hillard. No. 1,025,089; Apr. 30; Sp. p. 7174; Gaz. vol. 177; p. 1258.
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Typograph-machine. J. Dorneth. No. 1,021,823; Apr. 2; Sp. p. 172; Gaz. vol. 177; p. 28.
Umbrella. O. A. Hodinger. No. 1,022,044; Apr. 9; Sp. p. 2567; Gaz. vol. 177; p. 434.
Umbrella. T. Susemihl and C. P. Carrington. No. 1,024,292; Apr. 23; Sp. p. 5428; Gaz. vol. 177; p. 951.
Umbrella, Folding. M. Makowacz. No. 1,022,855; Apr. 9; Sp. p. 2360; Gaz. vol. 177; p. 403.
Umbrella, Folding. F. A. Lundquist. No. 1,023,211; Apr. 16; Sp. p. 3152; Gaz. vol. 177; p. 564.
Umbrella-rack. F. F. Ward. No. 1,022,449; Apr. 9; Sp. p. 1473; Gaz. vol. 177; p. 264.
Umbrella window-insert. R. C. Flues. No. 1,023,635; Apr. 16; Sp. p. 3929; Gaz. vol. 177; p. 702.
Unitary screen, Folding. J. E. Palmer. No. 1,023,094; Apr. 9; Sp. p. 2851; Gaz. vol. 177; p. 485.
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Utensil-handle. D. S. Stevenson. No. 1,022,978; Apr. 9; Sp. p. 2617; Gaz. vol. 177; p. 445.
Vacuum-cleaners, Induced suction for. J. and W. Birrell. No. 1,023,359; Apr. 16; Sp. p. 3434; Gaz. vol. 177; p. 613.
Valve. C. R. Ballard. No. 1,022,171; Apr. 2; Sp. p. 890; Gaz. vol. 177; p. 142.
Valve. P. S. Dunn. No. 1,022,471; Apr. 9; Sp. p. 1518; Gaz. vol. 177; p. 272.
Valve. E. Seaver, Jr. No. 1,022,758; Apr. 9; Sp. p. 2169; Gaz. vol. 177; p. 372.
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Valve. A. B. Wallem. No. 1,024,236; Apr. 23; Sp. p. 5325; Gaz. vol. 177; p. 933.
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Valve. J. L. Fitts and R. M. Hunter. No. 1,024,884; Apr. 30; Sp. p. 6761; Gaz. vol. 177; p. 1189.
Valve, Air-coupling. F. Knack. No. 1,022,851; Apr. 9; Sp. p. 2354; Gaz. vol. 177; p. 402.
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Valve, Alarm-. P. Carpenter. No. 1,023,104; Apr. 9; Sp. p. 2871; Gaz. vol. 177; p. 490.
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Valve device, Engineer's brake-. W. V. Turner. (Reissue.) No. 13,402; Apr. 9; Sp. p. 2918; Gaz. vol. 177; p. 497.
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Valve for steam-heating systems. E. E. Gold. No. 1,024,723; Apr. 30; Sp. p. 6490; Gaz. vol. 177; p. 1183.
Valve for water-heaters, Automatic. R. R. James. No. 1,024,263; Apr. 23; Sp. p. 5382; Gaz. vol. 177; p. 942.
Valve for water, Thermostatic. J. J. Lawler. No. 1,024,729; Apr. 30; Sp. p. 6441; Gaz. vol. 177; p. 1135.

Valve, Furnace gas-. M. W. Johnson, Jr. No. 1,024,786; Apr. 30; Sp. p. 6568; Gaz. vol. 177; p. 1135.
Valve-gear. J. H. Gentry. No. 1,022,342; Apr. 2; Sp. p. 1021; Gaz. vol. 177; p. 163.
Valve-gear device. J. E. Kingan and H. F. Ripken. No. 1,022,520; Apr. 19; Sp. p. 1789; Gaz. vol. 177; p. 264.
Valve, Globe-. W. Stewart. No. 1,024,751; Apr. 30; Sp. p. 6494; Gaz. vol. 177; p. 1143.
Valve-grinding tool. J. Scheller. No. 1,023,067; Apr. 23; Sp. p. 4715; Gaz. vol. 177; p. 836.
Valve, Hydraulic. C. L. Powelson. No. 1,024,909; Apr. 30; Sp. p. 6514; Gaz. vol. 177; p. 1198.
Valve, Oil-well. J. M. Lovland. No. 1,021,840; Apr. 2; Sp. p. 197; Gaz. vol. 177; p. 32.
Valve-operating device, Electric. T. H. Wurmb and R. Baumann. No. 1,022,914; Apr. 9; Sp. p. 2479; Gaz. vol. 177; p. 422.
Valve, Puppet-. R. Marlatt. No. 1,024,642; Apr. 30; Sp. p. 6270; Gaz. vol. 177; p. 1104.
Valve, Relief-. C. P. White. No. 1,023,187; Apr. 16; Sp. p. 3106; Gaz. vol. 177; p. 556.
Valve, Rotary. C. L. Powelson. No. 1,024,908; Apr. 30; Sp. p. 6512; Gaz. vol. 177; p. 1198.
Valve-seating and surface-lapping machine. O. A. Olson. No. 1,024,806; Apr. 30; Sp. p. 6607; Gaz. vol. 177; p. 1162.
Valve-seating implement. A. W. Meltz. No. 1,022,038; Apr. 2; Sp. p. 809; Gaz. vol. 177; p. 96.
Valve, Trap-. R. H. Thomas. No. 1,024,163; Apr. 23; Sp. p. 5162; Gaz. vol. 177; p. 905.
Vanity-box. P. Nocard. No. 1,022,254; Apr. 2; Sp. p. 1060; Gaz. vol. 177; p. 169.
Vapor-burner. M. S. Hersog. No. 1,024,575; Apr. 30; Sp. p. 6110; Gaz. vol. 177; p. 1061.
Vault, Burial-. F. C. Searle. No. 1,024,527; Apr. 30; Sp. p. 5984; Gaz. vol. 177; p. 1065.
Vault, Cement. W. H. Bates. No. 1,023,118; Apr. 16; Sp. p. 2928; Gaz. vol. 177; p. 531.
Vegetable-sorter. O. W. Fisher. No. 1,021,970; Apr. 2; Sp. p. 400; Gaz. vol. 177; p. 78.
Vehicle attachment, Child's-. R. S. Gilkeson. No. 1,023,467; Apr. 16; Sp. p. 3640; Gaz. vol. 177; p. 647.
Vehicle back-up brake. D. T. Walsh. No. 1,021,854; Apr. 2; Sp. p. 220; Gaz. vol. 177; p. 36.
Vehicle-bolster. R. J. Woodward. No. 1,022,913; Apr. 9; Sp. p. 2478; Gaz. vol. 177; p. 422.
Vehicle-brake. M. C. Muir. No. 1,024,694; Apr. 30; Sp. p. 6372; Gaz. vol. 177; p. 1122.
Vehicle, Child's-. M. Pettit. No. 1,022,606; Apr. 9; Sp. p. 2010; Gaz. vol. 177; p. 349.
Vehicle-curtain. C. S. Applas. No. 1,024,305; Apr. 23; Sp. p. 5453; Gaz. vol. 177; p. 955.
Vehicle direction-indicator. J. A. Givens. No. 1,023,782; Apr. 16; Sp. p. 4160; Gaz. vol. 177; p. 730.
Vehicle door-opening device. E. E. Rhodes. No. 1,022,262; Apr. 2; Sp. p. 1073; Gaz. vol. 177; p. 171.
Vehicle driving and steering mechanism. Power-operated. J. W. Bould. No. 1,023,304; Apr. 23; Sp. p. 4317; Gaz. vol. 177; p. 782.
Vehicle-hound. M. F. Meath. No. 1,022,037; Apr. 2; Sp. p. 808; Gaz. vol. 177; p. 96.
Vehicle, Motor road-. F. H. Royce. No. 1,024,552; Apr. 30; Sp. p. 6288; Gaz. vol. 177; p. 1108.
Vehicle runner attachment. J. F. Leith. No. 1,024,792; Apr. 30; Sp. p. 6534; Gaz. vol. 177; p. 1156.
Vehicle-spring. E. J. Edwards. No. 1,022,228; Apr. 2; Sp. p. 1011; Gaz. vol. 177; p. 162.
Vehicle-spring. F. Desmaal. No. 1,022,775; Apr. 9; Sp. p. 2196; Gaz. vol. 177; p. 377.
Vehicle-spring. W. S. Lee. No. 1,023,859; Apr. 23; Sp. p. 4469; Gaz. vol. 177; p. 801.
Vehicle-spring. A. Momit. No. 1,023,905; Apr. 23; Sp. p. 4478; Gaz. vol. 177; p. 802.
Vehicle steering device, Power-propelled-. E. Stock. No. 1,022,760; Apr. 2; Sp. p. 966; Gaz. vol. 177; p. 187.
Vehicle steering-gear. J. M. Gilstrap. No. 1,024,505; Apr. 30; Sp. p. 6026; Gaz. vol. 177; p. 1057.
Vehicle-support. J. Bowron. No. 1,023,618; Apr. 16; Sp. p. 3868; Gaz. vol. 177; p. 696.
Vehicle, Trackless power-driven. J. E. Palmer. No. 1,022,181; Apr. 2; Sp. p. 946; Gaz. vol. 177; p. 134.
Vehicle, Traction-. H. M. Fletcher. No. 1,024,606; Apr. 28; Sp. p. 4918; Gaz. vol. 177; p. 872.
Vehicle, Traction-. H. A. Howard. No. 1,024,878; Apr. 30; Sp. p. 6116; Gaz. vol. 177; p. 1082.
Vehicle-washer. E. Muller. No. 1,022,642; Apr. 2; Sp. p. 619; Gaz. vol. 177; p. 98.
Vehicle-wheel. G. B. Lambert. No. 1,022,868; Apr. 2; Sp. p. 1282; Gaz. vol. 177; p. 207.
Vehicle-wheel. E. W. Miller. No. 1,023,025; Apr. 9; Sp. p. 2701; Gaz. vol. 177; p. 461.
Vehicle-wheel. L. K. Stephens. No. 1,023,808; Apr. 16; Sp. p. 3928; Gaz. vol. 177; p. 690.
Vehicle-wheel. E. T. Smith. No. 1,024,154; Apr. 23; Sp. p. 5132; Gaz. vol. 177; p. 902.
Vehicle-wheel, Resilient. P. H. Beamer. No. 1,023,497; Apr. 16; Sp. p. 3713; Gaz. vol. 177; p. 657.
Vehicles, Combined tank-bracket and step for motor-. E. Huff. No. 1,023,843; Apr. 23; Sp. p. 4439; Gaz. vol. 177; p. 797.
Vending and registering machine, Ticket. J. W. Small. No. 1,022,150; Apr. 2; Sp. p. 863; Gaz. vol. 177; p. 137.
Vending apparatus. M. B. Pitts and J. A. Heacock. No. 1,022,753; Apr. 9; Sp. p. 2150; Gaz. vol. 177; p. 369.
Vending device, Coin-controlled. J. R. Halloran. No. 1,022,782; Apr. 9; Sp. p. 2213; Gaz. vol. 177; p. 379.
Vending-machine. T. S. Terteling. No. 1,024,940; Apr. 30; Sp. p. 6740; Gaz. vol. 177; p. 1186.
Vending-machine. F. J. Schamsam. No. 1,025,075; Apr. 30; Sp. p. 7152; Gaz. vol. 177; p. 1253.
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Vending machine, Newspaper-. B. Johnson. No. 1,022,660; Apr. 9; Sp. p. 1964; Gaz. vol. 177; p. 341.
Vending machine, Stamp-. J. F. Kinney. No. 1,023,020; Apr. 9; Sp. p. 2693; Gaz. vol. 177; p. 460.
Vending-machines, Delivery-protector for. H. S. Mills. No. 1,024,140; Apr. 23; Sp. p. 5104; Gaz. vol. 177; p. 896.
Veneer-barrel-making machine. W. J. Ott. No. 1,022,970; Apr. 9; Sp. p. 2606; Gaz. vol. 177; p. 443.
Veneer-drying apparatus. L. G. Merritt. No. 1,022,690; Apr. 9; Sp. p. 1991; Gaz. vol. 177; p. 345.
Veneer-taping machine. W. J. Kelly. No. 1,022,092; Apr. 2; Sp. p. 721; Gaz. vol. 177; p. 115.
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Ventilator. W. Lintern. No. 1,024,961; Apr. 30; Sp. p. 6718; Gaz. vol. 177; p. 1183.
Vessel, Self-propelled. A. and A. M. McDougall. No. 1,022,250; Apr. 2; Sp. p. 1054; Gaz. vol. 177; p. 168.
Vessels, Automatic controlling means for submarine. H. W. Shonnard. No. 1,022,706; Apr. 9; Sp. p. 2030; Gaz. vol. 177; p. 353.
Vessels, Lifting-frame for storage. J. P. Voelker. No. 1,024,956; Apr. 30; Sp. p. 6916; Gaz. vol. 177; p. 1215.
Vials and the like, Machine for making. W. R. Burrows. No. 1,024,116; Apr. 23; Sp. p. 5040; Gaz. vol. 177; p. 890.
Vibration stop-governor. J. E. Snyder. No. 1,023,886; Apr. 23; Sp. p. 4521; Gaz. vol. 177; p. 810.
Violin chin-rest. R. S. Williams. No. 1,022,234; Apr. 16; Sp. p. 3192; Gaz. vol. 177; p. 571.
Vise. H. S. Kuhn. No. 1,022,953; Apr. 9; Sp. p. 2572; Gaz. vol. 177; p. 437.
Vise. C. J. Jackson. No. 1,024,728; Apr. 30; Sp. p. 6489; Gaz. vol. 177; p. 1135.
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Vulcanizer. C. C. Evans. No. 1,023,727; Apr. 16; Sp. p. 4149; Gaz. vol. 177; p. 726.
Wagon, Asphalt-melting. H. M. Kingsley. No. 1,021,781; Apr. 2; Sp. p. 52; Gaz. vol. 177; p. 12.
Wagon-body. W. E. Bridford. No. 1,022,296; Apr. 2; Sp. p. 1187; Gaz. vol. 177; p. 182.
Wagon-box. E. A. Saltzman and E. Krabill. No. 1,022,266; Apr. 2; Sp. p. 1081; Gaz. vol. 177; p. 173.
Waist and hose supporter, Combined. T. F. Somers. No. 1,022,893; Apr. 9; Sp. p. 2430; Gaz. vol. 177; p. 415.
Wall construction, Sectional. S. S. Levy. No. 1,023,946; Apr. 23; Sp. p. 4675; Gaz. vol. 177; p. 830.
Wall, Decorative sheathed. E. J. Joss. No. 1,022,951; Apr. 9; Sp. p. 2567; Gaz. vol. 177; p. 436.
Wall or dam construction. C. F. Francisco. No. 1,024,088; Apr. 23; Sp. p. 4924; Gaz. vol. 177; p. 872.
Warm-air furnace, Self-feeding. S. P. Moncrief. No. 1,022,965; Apr. 9; Sp. p. 2596; Gaz. vol. 177; p. 441.
Warping-machine. F. S. Rand. No. 1,022,755; Apr. 9; Sp. p. 2160; Gaz. vol. 177; p. 370.
Warping-machine stop-motion mechanism. W. J. Garlick. No. 1,023,730; Apr. 16; Sp. p. 4155; Gaz. vol. 177; p. 720.
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Washing-machine. O. W. Robeson. No. 1,022,003; Apr. 2; Sp. p. 845; Gaz. vol. 177; p. 85.
Washing-machine. E. L. Goodwin. No. 1,022,475; Apr. 9; Sp. p. 1525; Gaz. vol. 177; p. 274.
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Washing-machine. F. L. Walker. No. 1,024,331; Apr. 23; Sp. p. 5577; Gaz. vol. 177; p. 978.
Washing-machine gearing. H. Cammack. No. 1,022,825; Apr. 9; Sp. p. 2300; Gaz. vol. 177; p. 395.
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Watch. W. Haines. No. 1,023,078; Apr. 2; Sp. p. 690; Gaz. vol. 177; p. 110.
Watch-album. I. Kasindorf. No. 1,022,080; Apr. 2; Sp. p. 718; Gaz. vol. 177; p. 114.
Watch or clock dial. F. S. Cornwell. No. 1,024,563; Apr. 30; Sp. p. 6076; Gaz. vol. 177; p. 1076.
Watch, Stem winding and setting. H. W. Matalene. No. 1,023,384; Apr. 16; Sp. p. 3485; Gaz. vol. 177; p. 622.
Watchmaker's tool. J. E. Weismann. No. 1,024,388; Apr. 23; Sp. p. 5580; Gaz. vol. 177; p. 979.

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Water and sewage lift. A. C. Wells. No. 1,025,079; Apr. 30; Sp. p. 7150; Gaz. vol. 177; p. 1255.
Water-bag retainer. E. R. Norwood. No. 1,025,012; Apr. 30; Sp. p. 7023; Gaz. vol. 177; p. 1234.
Water-closet bend. B. Oakes. No. 1,022,044; Apr. 2; Sp. p. 626; Gaz. vol. 177; p. 99.
Water-cooling tower. B. F. Hart, Jr. No. 1,023,564; Apr. 16; Sp. p. 3849; Gaz. vol. 177; p. 678.
Water-craft. A. Wilk. No. 1,023,609; Apr. 16; Sp. p. 4100; Gaz. vol. 177; p. 720.
Water-elevator. M. Schichtl. No. 1,021,895; Apr. 2; Sp. p. 308; Gaz. vol. 177; p. 51.
Water-heater. H. C. Macaire. No. 1,022,637; Apr. 9; Sp. p. 1866; Gaz. vol. 177; p. 327.
Water-heater, Auxiliary. J. B. Makin and H. A. Schellman. No. 1,022,148; Apr. 2; Sp. p. 842; Gaz. vol. 177; p. 133.
Water-meter. L. H. Nash. No. 1,024,741; Apr. 30; Sp. p. 6462; Gaz. vol. 177; p. 1139.
Water-motor. J. Bauer. No. 1,022,813; Apr. 9; Sp. p. 2275; Gaz. vol. 177; p. 389.
Water-motor. N. V. Johnson. No. 1,024,341; Apr. 23; Sp. p. 5510; Gaz. vol. 177; p. 965.
Water-softening system J. T. Lemon. No. 1,022,560; Apr. 9; Sp. p. 1700; Gaz. vol. 177; p. 300.
Water-treating process. J. E. Capa. No. 1,021,761; Apr. 2; Sp. p. 12; Gaz. vol. 177; p. 5.
Water-wheel turbine. J. Hay. No. 1,023,378; Apr. 16; Sp. p. 3473; Gaz. vol. 177; p. 620.
Waterproof material. F. Jacob. No. 1,024,135; Apr. 23; Sp. p. 5095; Gaz. vol. 177; p. 896.
Wave-force-utilising device. E. B. Arnold. No. 1,024,816; Apr. 30; Sp. p. 6626; Gaz. vol. 177; p. 1166.
Wax-press. J. Hansen. No. 1,023,844; Apr. 23; Sp. p. 4430; Gaz. vol. 177; p. 796.
Weapons, Sighting of short-barreled. W. E. Steers. No. 1,021,905; Apr. 2; Sp. p. 322; Gaz. vol. 177; p. 53.
Weed-puller. J. Dahl. No. 1,024,500; Apr. 30; Sp. p. 5904; Gaz. vol. 177; p. 1055.
Weeder. G. G. McTaggart. No. 1,022,108; Apr. 2; Sp. p. 739; Gaz. vol. 177; p. 116.
Weeder and furrower. N. B. Winn. No. 1,023,701; Apr. 16; Sp. p. 4104; Gaz. vol. 177; p. 720.
Weighing apparatus for refrigerators. F. B. Harrington. No. 1,024,335; Apr. 23; Sp. p. 5503; Gaz. vol. 177; p. 964.
Weighing-machine, Hydrostatic. W. H. Kenerson. No. 1,023,154; Apr. 16; Sp. p. 3033; Gaz. vol. 177; p. 544.
Weighing machine, Liquid-. C. J. Wilder. No. 1,024,874; Apr. 30; Sp. p. 6746; Gaz. vol. 177; p. 1187.
Weighing means or scale for wagons. J. A. Ashley-Reavis. No. 1,022,811; Apr. 9; Sp. p. 2270; Gaz. vol. 177; p. 388.
Welding machine, Chain-. M. B. Ryan. No. 1,023,120; Apr. 16; Sp. p. 2968; Gaz. vol. 177; p. 535.
Welding-machine, Electric. M. B. Ryan. No. 1,023,130; Apr. 16; Sp. p. 2973; Gaz. vol. 177; p. 535.
Welding machine, Electric chain-. M. B. Ryan. No. 1,023,127; Apr. 16; Sp. p. 2956; Gaz. vol. 177; p. 534.
Welding-machine, Electrical. M. B. Ryan. No. 1,023,128; Apr. 16; Sp. p. 2962; Gaz. vol. 177; p. 535.
Well-boring apparatus. R. H. Canfield. No. 1,024,310; Apr. 23; Sp. p. 5460; Gaz. vol. 177; p. 957.
Well-drill. F. France. No. 1,022,472; Apr. 9; Sp. p. 1520; Gaz. vol. 177; p. 273.
Well-drilling machine. G. B. Kelley. No. 1,023,207; Apr. 16; Sp. p. 3144; Gaz. vol. 177; p. 563.
Well-tubing anchor. R. C. Baker. No. 1,023,202; Apr. 16; Sp. p. 3310; Gaz. vol. 177; p. 591.
Wells, Sampling device for Artesian. W. I. Bettis. No. 1,023,918; Apr. 23; Sp. p. 4615; Gaz. vol. 177; p. 821.
Wheel: *See* Car-wheel; Caster-wheel; Centrifugal fan-wheel; Fifth-wheel; Grinding and buffing wheel; Pneumatic wheel; Resilient wheel; Spring-wheel; Trolley-wheel; Vehicle-wheel; Water-wheel.
Wheel. H. O. Shockley. No. 1,022,887; Apr. 9; Sp. p. 2416; Gaz. vol. 177; p. 413.
Wheel. J. L. Walker. No. 1,023,282; Apr. 16; Sp. p. 3298; Gaz. vol. 177; p. 589.
Wheel-brake. C. Aalborg. No. 1,024,489; Apr. 30; Sp. p. 5853; Gaz. vol. 177; p. 1051.
Wheel-casting machine. J. B. Walker. No. 1,024,755; Apr. 30; Sp. p. 6500; Gaz. vol. 177; p. 1144.
Wheel-dresser and tool-holder. M. D. Fletcher. No. 1,024,126; Apr. 23; Sp. p. 5075; Gaz. vol. 177; p. 893.
Wheel-rim, Demountable. H. H. Replogle. No. 1,024,746; Apr. 30; Sp. p. 6483; Gaz. vol. 177; p. 1114.
Wheels, Pneumatic tube for vehicle and other. C. D. Galvin. No. 1,023,728; Apr. 16; Sp. p. 4151; Gaz. vol. 177; p. 720.
Whiffletree-bearing. L. H. Soens. No. 1,024,037; Apr. 23; Sp. p. 4862; Gaz. vol. 177; p. 862.
Whips in sockets, Device for locking. A. R. Lyon. No. 1,022,488; Apr. 9; Sp. p. 1550; Gaz. vol. 177; p. 278.
Whistle. E. P. Gray. No. 1,024,683; Apr. 30; Sp. p. 6356; Gaz. vol. 177; p. 1119.
Wind-shield. J. Webster. No. 1,023,901; Apr. 23; Sp. p. 4570; Gaz. vol. 177; p. 815.
Wind-shield frame. S. Brown. No. 1,022,719; Apr. 9; Sp. p. 2082; Gaz. vol. 177; p. 356.
Windmill. L. W. Noyes. No. 1,022,205; Apr. 2; Sp. p. 960; Gaz. vol. 177; p. 153.
Winder-shaft collar. G. C. Dewey. No. 1,023,419; Apr. 16; Sp. p. 3554; Gaz. vol. 177; p. 633.
Winding and measuring machine. F. M. Brookes. No. 1,024,246; Apr. 23; Sp. p. 5344; Gaz. vol. 177; p. 936.
Winding apparatus, Tension-governor for yarn-. G. Stone. No. 1,022,979; Apr. 9; Sp. p. 2619; Gaz. vol. 177; p. 446.
Winding machine, Cross-. J. Schweitzer. No. 1,022,004; Apr. 2; Sp. p. 546; Gaz. vol. 177; p. 85.
Window-cleaner. J. E. Heckert. No. 1,022,134; Apr. 2; Sp. p. 813; Gaz. vol. 177; p. 129.
Window construction. C. J. Wallen. No. 1,022,901; Apr. 9; Sp. p. 2441; Gaz. vol. 177; p. 417.
Window construction. T. H. Kane. No. 1,023,938; Apr. 23; Sp. p. 4661; Gaz. vol. 177; p. 828.
Window-fastener. F. G. Michel. No. 1,024,273; Apr. 23; Sp. p. 5401; Gaz. vol. 177; p. 945.
Window-frame, Sheet-metal. W. D. Forsyth. No. 1,024,001; Apr. 23; Sp. p. 4782; Gaz. vol. 177; p. 849.
Window-lock. E. Hill. No. 1,023,647; Apr. 16; Sp. p. 4015; Gaz. vol. 177; p. 705.
Window-pane fastener. E. Hilton and A. Veitl. No. 1,023,080; Apr. 9; Sp. p. 2820; Gaz. vol. 177; p. 480.
Window-pane-retaining device. E. T. Wilkinson. No. 1,023,479; Apr. 16; Sp. p. 3675; Gaz. vol. 177; p. 651.
Window-screen. L. C. Bamford. No. 1,023,063; Apr. 9; Sp. p. 2790; Gaz. vol. 177; p. 474.
Window-screen. G. W. Corey. No. 1,023,625; Apr. 16; Sp. p. 3979; Gaz. vol. 177; p. 699.
Window-screen, Adjustable. S. G. and S. A. Foster. No. 1,022,312; Apr. 2; Sp. p. 1161; Gaz. vol. 177; p. 187.
Window-screen, Adjustable. T. B. Ford. No. 1,023,780; Apr. 16; Sp. p. 4240; Gaz. vol. 177; p. 745.
Window, Swinging. E. Culver. No. 1,021,862; Apr. 2; Sp. p. 243; Gaz. vol. 177; p. 30.
Window-ventilator. M. Power. No. 1,022,870; Apr. 9; Sp. p. 2386; Gaz. vol. 177; p. 408.
Wire-basket-fabric-making machine. V. D. Munger. No. 1,024,143; Apr. 23; Sp. p. 5112; Gaz. vol. 177; p. 899.
Wire-cable fastener. B. K. Lamb. No. 1,022,954; Apr. 9; Sp. p. 2574; Gaz. vol. 177; p. 437.
Wire-clamp. G. M. Anderson. No. 1,023,706; Apr. 16; Sp. p. 4112; Gaz. vol. 177; p. 722.
Wire-clamp for wire-stretching machines. D. C. Brogden. No. 1,024,825; Apr. 30; Sp. p. 6647; Gaz. vol. 177; p. 1170.
Wire-drawing. J. T. H. Dempster. No. 1,022,182; Apr. 2; Sp. p. 911; Gaz. vol. 177; p. 145.
Wire-drawing apparatus. E. Hurwitz. No. 1,023,316; Apr. 16; Sp. p. 3363; Gaz. vol. 177; p. 600.
Wire-rope machine. E. Gough and E. H. Miller. No. 1,024,196; Apr. 23; Sp. p. 5236; Gaz. vol. 177; p. 917.
Wire straightening and cutting-off machine. E. F. Shuster. No. 1,022,588; Apr. 9; Sp. p. 2417; Gaz. vol. 177; p. 413.
Wire-stretcher. J. W. A. McGilvrey. No. 1,022,102; Apr. 2; Sp. p. 738; Gaz. vol. 177; p. 118.
Wire-stretcher. A. G. Phillips. No. 1,023,394; Apr. 16; Sp. p. 3512; Gaz. vol. 177; p. 625.
Wire-stretcher. E. E. Swarm. No. 1,023,400; Apr. 16; Sp. p. 3525; Gaz. vol. 177; p. 627.
Wire-stretcher. O. P. Starnes. No. 1,023,972; Apr. 23; Sp. p. 4727; Gaz. vol. 177; p. 839.
Wire-stretcher. J. Pitre. No. 1,024,223; Apr. 23; Sp. p. 5298; Gaz. vol. 177; p. 928.
Wire-terminals, Fastening device for. P. P. Nungesser. No. 1,023,271; Apr. 16; Sp. p. 3277; Gaz. vol. 177; p. 585.
Wire-terminals, Spiral coil for fastening. P. P. Nungesser. No. 1,023,270; Apr. 16; Sp. p. 3276; Gaz. vol. 177; p. 585.
Wire-weaving, Heddle for. G. H. May. No. 1,023,263; Apr. 16; Sp. p. 3260; Gaz. vol. 177; p. 582.
Wire-winding device. C. C. Wilkinson. No. 1,024,384; Apr. 23; Sp. p. 5582; Gaz. vol. 177; p. 979.
Wood and making same, Preserved. R. A. Marr. No. 1,023,784; Apr. 16; Sp. p. 4250; Gaz. vol. 177; p. 747.
Wood, Impregnation of. J. Polifka and B. Hacker. No. 1,024,864; Apr. 30; Sp. p. 6726; Gaz. vol. 177; p. 1184.
Wood, Preserving. C. H. Curtis. No. 1,022,064; Apr. 2; Sp. p. 661; Gaz. vol. 177; p. 106.
Wood-stain, Making. W. H. Smith. No. 1,024,531; Apr. 30; Sp. p. 5907; Gaz. vol. 177; p. 1067.
Woodworking-machine attachment. W. T. Boothby. No. 1,022,176; Apr. 2; Sp. p. 806; Gaz. vol. 177; p. 143.
Work gaging and holding means. F. W. Albrecht. No. 1,023,407; Apr. 16; Sp. p. 3535; Gaz. vol. 177; p. 629.
Work-holder. A. E. Greene. No. 1,024,266; Apr. 23; Sp. p. 5305; Gaz. vol. 177; p. 940.
Work-support. J. J. Gillespie. No. 1,022,412; Apr. 9; Sp. p. 1372; Gaz. vol. 177; p. 252.
Work-support. J. F. Davey. No. 1,023,300; Apr. 16; Sp. p. 3321; Gaz. vol. 177; p. 594.
Worm-wheels, Tool for cutting teeth on. O. T. Anderson. No. 1,023,553; Apr. 16; Sp. p. 3425; Gaz. vol. 177; p. 612.
Wrapping and labeling machines, Conveyer for. N. J. Matthews, R. L. Johnstone, and A. W. Cash. No. 1,024,012; Apr. 23; Sp. p. 4790; Gaz. vol. 177; p. 852.

Wrapping-machine. B. V. Edwards. No. 1,023,824; Apr. 23; Sp. p. 4365; Gaz. vol. 177; p. 789.
Wrench: *See* Chain wrench; Pipe-wrench; Ratchet-wrench.
Wrench. J. W. Schwab. No. 1,022,269; Apr. 2; Sp. p. 1085; Gaz. vol. 177; p. 174.
Wrench. G. B. Weatherly. No. 1,022,520; Apr. 9; Sp. p. 1615; Gaz. vol. 177; p. 286.
Wrench. G. M. Custer. No. 1,022,534; Apr. 9; Sp. p. 1649; Gaz. vol. 177; p. 293.
Wrench. L. Hermann. No. 1,022,783; Apr. 9; Sp. p. 2214; Gaz. vol. 177; p. 379.
Wrench. C. A. Soderholm. No. 1,022,892; Apr. 9; Sp. p. 2428; Gaz. vol. 177; p. 414.
Wrench. H. C. Benneteh. No. 1,023,001; Apr. 9; Sp. p. 2658; Gaz. vol. 177; p. 453.
Wrench. J. Herron. No. 1,024,075; Apr. 23; Sp. p. 4937; Gaz. vol. 177; p. 875.
Wrench. F. Kovács. No. 1,024,901; Apr. 30; Sp. p. 6801; Gaz. vol. 177; p. 1195.
Wrench. M. Pietilainen. No. 1,024,907; Apr. 30; Sp. p. 6811; Gaz. vol. 177; p. 1197.
Wringer: *See* Mop-wringer.
Writing characters, Device for producing. G. Bahr. No. 1,022,884; Apr. 2; Sp. p. 1811; Gaz. vol. 177; p. 212.
Writing machine, Syllable-. P. de Carsalade du Pont. No. 1,024,679; Apr. 30; Sp. p. 6342; Gaz. vol. 177; p. 1118.
Writing-machines, Detachable type-bar for. H. E. Bridgwater. No. 1,023,806; Apr. 23; Sp. p. 4326; Gaz. vol. 177; p. 783.
X-ray apparatus. H. F. Waite. No. 1,024,165; Apr. 23; Sp. p. 5155; Gaz. vol. 177; p. 906.
Zincate solutions, Preparation of. C. Ranson. No. 1,023,964; Apr. 23; Sp. p. 4712; Gaz. vol. 177; p. 836.

ALPHABETICAL LIST OF DESIGNS.

Axle, Vehicle-. F. H. Trego. No. 42,406; Apr. 9; Gaz. vol. 177; p. 503.
Badge, emblem, or similar article. W. P. Woods. No. 42,383; Apr. 2; Gaz. vol. 177; p. 221.
Bottle. G. B. Belderhase. No. 42,431; Apr. 30; Gaz. vol. 177; p. 1272.
Bottle-opener, Pocket. H. L. Vaughan. No. 42,445; Apr. 30; Gaz. vol. 177; p. 1274.
Boxes or books, Covering for. I. O. Van Duser. No. 42,410; Apr. 16; Gaz. vol. 177; p. 750.
Bracelet. H. C. Bliss. No. 42,412; Apr. 23; Gaz. vol. 177; p. 1018.
Bracket. J. G. Turnbull. No. 42,382; Apr. 2; Gaz. vol. 177; p. 221.
Braid or trimming. R. H. Averns. Nos. 42,429–30; Apr. 30; Gaz. vol. 177; pp. 1271–2.
Brush. J. G. Mackenzie. No. 42,437; Apr. 30; Gaz. vol. 177; p. 1273.
Brush, Rubber. O. Eick. No. 42,390; Apr. 9; Gaz. vol. 177; p. 500.
Cabinet, Towel-. J. Rousso. No. 42,398; Apr. 9; Gaz. vol. 177; p. 502.
Car-seat support. R. B. Liddell. No. 42,419; Apr. 23; Gaz. vol. 177; p. 1019.
Carpet sweeper and cleaner casing. F. M. Case. No. 42,415; Apr. 23; Gaz. vol. 177; p. 1019.
Chain. H. E. Hayward. No. 42,436; Apr. 30; Gaz. vol. 177; p. 1273.
Cigar or similar article. J. K. Broderick. No. 42,414; Apr. 23; Gaz. vol. 177; p. 1018.
Clock-case. E. E. Stockton. No. 42,444; Apr. 30; Gaz. vol. 177; p. 1274.
Clock case, Mantel-. J. F. Whitman. No. 42,448; Apr. 30; Gaz. vol. 177; p. 1275.
Desk. K. R. Dunton. No. 42,388; Apr. 9; Gaz. vol. 177; p. 500.
Dishes, bowls, or similar articles of tableware, Handle for. C. E. Haviland. No. 42,392; Apr. 9; Gaz. vol. 177; p. 500.
Display-board. W. E. Trautwein. No. 42,426; Apr. 23; Gaz. vol. 177; p. 1021.
Display rack, Merchandise-. S. M. Winkler. No. 42,427; Apr. 23; Gaz. vol. 177; p. 1021.
Door-mat, Metal. J. J. Ennis and W. T. Hohnhorst. No. 42,380; Apr. 2; Gaz. vol. 177; p. 221.
Electrically-driven machines, Stand for. H. W. Spellman. No. 42,442; Apr. 30; Gaz. vol. 177; p. 1274.
Engraver's block. A. Muehlmatt. No. 42,397; Apr. 9; Gaz. vol. 177; p. 502.
Escutcheon-plate. H. G. Voight. Nos. 42,446–7; Apr. 30; Gaz. vol. 177; p. 1275.
Fabric. K. Bloodworth. No. 42,413; Apr. 23; Gaz. vol. 177; p. 1018.
Fabric. C. E. Gilbert. No. 42,416; Apr. 23; Gaz. vol. 177; p. 1019.
Fabric. I. C. Keyes. No. 42,418; Apr. 23; Gaz. vol. 177; p. 1019.
Fence, Wire. H. L. Brown. No. 42,433; Apr. 30; Gaz. vol. 177; p. 1272.
Gem-setting. H. Ackerman. No. 42,428; Apr. 30; Gaz. vol. 177; p. 1271.
Glass-holder. E. A. Strause. No. 42,425; Apr. 23; Gaz. vol. 177; p. 1020.
Glass or similar article, Sheet-. O. A. Mygatt. No. 42,422; Apr. 23; Gaz. vol. 177; p. 1020.
Hat. S. Mundheim. No. 42,438; Apr. 30; Gaz. vol. 177; p. 1273.
Heel-rest, Chauffeur's. J. L. Lucas. No. 42,396; Apr. 9; Gaz. vol. 177; p. 501.
Jewel-setting. P. Silbermann. No. 42,381; Apr. 2; Gaz. vol. 177; p. 221.
Jewelry or similar articles, Tubular stock for. H. C. Bliss. No. 42,411; Apr. 23; Gaz. vol. 177; p. 1018.
Knife-handle. A. W. Williams. No. 42,408; Apr. 9; Gaz. vol. 177; p. 503.
Lace edging. W. E. Keach. No. 42,417; Apr. 23; Gaz. vol. 177; p. 1019.
Lamp, Candle-. P. Ebeling. No. 42,389; Apr. 9; Gaz. vol. 177; p. 500.
Lamp, Street-. C. E. Cleveland. No. 42,434; Apr. 30; Gaz. vol. 177; p. 1272.
Locket. C. Dalley. Nos. 42,386–7; Apr. 9; Gaz. vol. 177; p. 500.
Massage device, Facial-. J. L. Erskine. No. 42,435; Apr. 30; Gaz. vol. 177; p. 1272.
Necktie-holder. T. Brommenschenkel. No. 42,432; Apr. 30; Gaz. vol. 177; p. 1272.
Oil-cloth or linoleum. C. F. Humphreys. No. 42,394; Apr. 9; Gaz. vol. 177; p. 501.
Paper-weight and pen-rest. G. C. Gebelein. No. 42,391; Apr. 9; Gaz. vol. 177; p. 500.
Purse. E. H. Weimer. No. 42,407; Apr. 9; Gaz. vol. 177; p. 503.
Reflector-shade. J. H. Strong. No. 42,403; Apr. 9; Gaz. vol. 177; p. 503.
Rocking-horse. A. W. Pressler. No. 42,409; Apr. 16; Gaz. vol. 177; p. 750.
Rug. A. Petsold. Nos. 42,439–40; Apr. 30; Gaz. vol. 177; p. 1273.
Sad-iron. O. Spahr and C. Stichler. No. 42,443; Apr. 30; Gaz. vol. 177; p. 1274.
Salt-shaker. A. J. Sanford. No. 42,441; Apr. 30; Gaz. vol. 177; p. 1274.
Shade, reflector, or similar article. O. A. Mygatt. Nos. 42,420–1; Apr. 23; Gaz. vol. 177; pp. 1019–20.
Shears, Member of a pair of. J. J. Alvord and F. Karsitz. No. 42,385; Apr. 9; Gaz. vol. 177; p. 499.
Shoe. W. Bernstein. No. 42,379; Apr. 2; Gaz. vol. 177; p. 220.
Spoons, forks, or similar articles, Handle for. G. N. Allen. No. 42,384; Apr. 9; Gaz. vol. 177; p. 499.
Spoons, forks, or similar articles, Handle for. A. A. Southwick. No. 42,424; Apr. 23; Gaz. vol. 177; p. 1020.
Stove-front. F. R. Henry. No. 42,393; Apr. 9; Gaz. vol. 177; p. 501.
Tile-facing. E. Talamini. Nos. 42,404–5; Apr. 9; Gaz. vol. 177; p. 503.
Tire for vehicles, Elastic. W. F. Pfeiffer. No. 42,423; Apr. 23; Gaz. vol. 177; p. 1020.
Vase. E. O. Simons. Nos. 42,399–402; Apr. 9; Gaz. vol. 177; p. 502.
Vending apparatus, Combined automatic. E. Lissauer. No. 42,395; Apr. 9; Gaz. vol. 177; p. 501.
Watch, Bracelet-. E. J. Wittmauer. No. 42,449; Apr. 30; Gaz. vol. 177; p. 1275.

ALPHABETICAL LIST OF TRADE-MARKS.

Ale and mineral water, Ginger-. Milwaukee-Waukesha Brewing Company. No. 86,146; Apr. 16; Gaz. vol. 177; p. 766.

Ale, Ginger-. The Chicago Consolidated Bottling Company. No. 86,036; Apr. 9; Gaz. vol. 177; p. 519.

Alpaca and mohair piece goods. Joseph Bean & Sons. No. 86,027; Apr. 9; Gaz. vol. 177; p. 519.

Anisettes. Bosch & Co. No. 86,271; Apr. 30; Gaz. vol. 177; p. 1291.

Antiarthriticum. Farbenfabriken of Elberfeld Company. No. 86,049; Apr. 9; Gaz. vol. 177; p. 520.

Antiphlogistic preparation. E. J. Potts. No. 86,238; Apr. 23; Gaz. vol. 177; p. 1040.

Antiseptic. The Vanadium Chemical Co. No. 86,254; Apr. 23; Gaz. vol. 177; p. 1040.

Antiseptics, disinfectants, and insecticides. M. H. Oachs. No. 86,235; Apr. 23; Gaz. vol. 177; p. 1040.

Anvils. Söderfors Bruks Aktiebolag. No. 86,104; Apr. 9; Gaz. vol. 177; p. 521.

Automobiles and autotrucks. Ideal Auto Company. No. 86,300; Apr. 30; Gaz. vol. 177; p. 1292.

Bandages, Suspensory. The Sanitas Fundoshi Company. No. 86,004; Apr. 2; Gaz. vol. 177; p. 237.

Bathing-suits. J. Ifrenger. Nos. 86,155–7; Apr. 16; Gaz. vol. 177; p. 766.

Beer. J. Ruppert. No. 86,002; Apr. 2; Gaz. vol. 177; p. 237.

Beer. Victor Neustadtl, Inc. No. 86,149; Apr. 16; Gaz. vol. 177; p. 766.

Bell-ringers, Electrical. U. S. E. M. Co. No. 86,010; Apr. 2; Gaz. vol. 177; p. 237.

Belt-hooks. E. Jenckes Manufacturing Company. No. 86,064; Apr. 9; Gaz. vol. 177; p. 520.

Belting, hose, and lacing, Leather. American Belting & Tanning Co. No. 86,262; Apr. 30; Gaz. vol. 177; p. 1291.

Belting, Leather. J. E. Rhoads & Sons. No. 86,332; Apr. 30; Gaz. vol. 177; p. 1293.

Beverage, Non alcoholic. The Cherry-Cheer Company. No. 86,279; Apr. 30; Gaz. vol. 177; p. 1291.

Beverages, Certain non-alcoholic. C. W. Campbell. No. 86,277; Apr. 30; Gaz. vol. 177; p. 1291.

Beverages, Certain non-alcoholic. Consumers Company. No. 86,282; Apr. 30; Gaz. vol. 177; p. 1291.

Bicycles. The Pope Manufacturing Company. No. 86,159; Apr. 16; Gaz. vol. 177; p. 766.

Biscuit. National Biscuit Company. Nos. 85,981–5; Apr. 2; Gaz. vol. 177; p. 236.

Biscuit. National Biscuit Company. Nos. 86,318–20; Apr. 30; Gaz. vol. 177; p. 1292.

Biscuits. Manchester Biscuit Co. No. 86,074. Apr. 9; Gaz. vol. 177; p. 520.

Biscuits. National Biscuit Company. No. 86,077; Apr. 9; Gaz. vol. 177; p. 520.

Board for interior finish. Paraffine Paint Company. No. 86,325; Apr. 30; Gaz. vol. 177; p. 1292.

Books, Blank. Kiggins & Tooker Co. No. 86,305; Apr. 30; Gaz. vol. 177; p. 1292.

Books, Sales-. American Sales Book Company. No. 86,263; Apr. 30; Gaz. vol. 177; p. 1291.

Boots and shoes. W. H. McElwain Company. No. 86,311; Apr. 30; Gaz. vol. 177; p. 1292.

Boots and shoes, Leather. Roberts, Johnson & Rand Shoe Company. No. 85,996; Apr. 2; Gaz. vol. 177; p. 236.

Boots and Shoes, Leather. Hanan & Son. No. 86,055; Apr. 9; Gaz. vol. 177; p. 520.

Boots and shoes, Leather. G. R. Davis. No. 86,131; Apr. 16; Gaz. vol. 177; p. 765.

Boots and shoes, Leather. Architect Shoe Company. No. 86,266; Apr. 30; Gaz. vol. 177; p. 1291.

Boots and shoes, Leather for the uppers of. E. L. White. No. 86,195; Apr. 16; Gaz. vol. 177; p. 767.

Boots and shoes, Women's. G. Goldsmith. No. 85,961; Apr. 2; Gaz. vol. 177; p. 235.

Boots, shoes, and leggings, Leather. Eliot-Kendall Shoe Company. No. 85,967; Apr. 2; Gaz. vol. 177; p. 235.

Brandies. A. Mattei. No. 85,977; Apr. 2; Gaz. vol. 177; p. 236.

Brandy, Cherry. P. F. Heering. No. 86,057; Apr. 9; Gaz. vol. 177; p. 520.

Bread. G. F. Jefferson. No. 86,063; Apr. 9; Gaz. vol. 177; p. 520.

Bread. Rhulta Bread Company. No. 86,096; Apr. 9; Gaz. vol. 177; p. 521.

Bread. C. S. Wallin. No. 86,354; Apr. 30; Gaz. vol. 177; p. 1293.

Bricks. Western Brick Company. No. 86,013; Apr. 2; Gaz. vol. 177; p. 237.

Bricks. Western Brick Company. No. 86,193; Apr. 16; Gaz. vol. 177; p. 767.

Bunting. Annin & Co. No. 86,118; Apr. 16; Gaz. vol. 177; p. 765.

Butter. Kingsley & Smith. No. 86,065; Apr. 9; Gaz. vol. 177; p. 520.

Buttons. Marshall Field & Company. No. 86,050; Apr. 9; Gaz. vol. 177; p. 520.

Cambrics, linens, and muslins. M. P. Tuttle Company. Nos. 86,352–3; Apr. 30; Gaz. vol. 177; p. 1293.

Cane, parasol, and umbrella tip protector. A. Persi. No. 86,329; Apr. 30; Gaz. vol. 177; p. 1293.

Canned crabs. K. Wakana. No. 86,012; Apr. 2; Gaz. vol. 177; p. 237.

Canned fruits. The Johnson-Locke Mercantile Co. No. 86,303; Apr. 30; Gaz. vol. 177; p. 1292.

Canned fruits and vegetables. The McGowan Bros. Company. No. 85,978; Apr. 2; Gaz. vol. 177; p. 236.

Canned fruits, preserved fruits, and canned vegetables. The Coast Products Company. No. 86,207; Apr. 23; Gaz. vol. 177; p. 1039.

Canned fruits, vegetables, salmon, and hominy. Diehm-Fansler Grocer Co. No. 85,964; Apr. 2; Gaz. vol. 177; p. 235.

Canned salmon. Pacific American Fisheries. Nos. 86,084–5; Apr. 9; Gaz. vol. 177; p. 521.

Canned salmon. Taku Canning & Cold Storage Co. Nos. 86,346–9; Apr. 30; Gaz. vol. 177; p. 1293.

Canvas. M. Simianaky & Co. No. 86,170; Apr. 16; Gaz. vol. 177; p. 767.

Cards, Index-. Roneo Company of New York. No. 86,088; Apr. 9; Gaz. vol. 177; p. 521.

Castings, Die-. C. M. Grey Mfg. Co. No. 85,964; Apr. 2; Gaz. vol. 177; p. 236.

Cathartic powder. W. J. Scherer. No. 86,092; Apr. 9; Gaz. vol. 177; p. 521.

Cathartic preparation. W. E. Gillam. No. 86,214; Apr. 23; Gaz. vol. 177; p. 1039.

Charcoal and coke. F. Wittig & Co. No. 86,015; Apr. 2; Gaz. vol. 177; p. 237.

Cheese, Cream-. M. Eisenberg. No. 86,133; Apr. 16; Gaz. vol. 177; p. 765.

Chemical, Certain. Farbenfabriken of Elberfeld Company. No. 86,048; Apr. 9; Gaz. vol. 177; p. 520.

Chemical compositions for destroying blight and the like on plants. J. Sorley. No. 86,106; Apr. 9; Gaz. vol. 177; p. 521.

Chemical preparations, Certain. G. Grether. No. 86,053; Apr. 9; Gaz. vol. 177; p. 520.

Chemical preparations, Certain. Burke & James. No. 86,205; Apr. 23; Gaz. vol. 177; p. 1039.

Chocolate cream drops. The Walter M. Lowney Company. No. 85,976; Apr. 2; Gaz. vol. 177; p. 236.

Cider, Apple. Walter H. Hildick Co. No. 86,298; Apr. 30; Gaz. vol. 177; p. 1292.

Cigarettes. Republic of France. No. 85,994; Apr. 2; Gaz. vol. 177; p. 236.

Cigars. G. J. Gammel & Company. No. 85,960; Apr. 2; Gaz. vol. 177; p. 235.

Cigars. J. E. Sullivan. No. 86,007; Apr. 2; Gaz. vol. 177; p. 237.

Cigars. B. Moreda y Deben. No. 86,132; Apr. 16; Gaz. vol. 177; p. 765.

Cigars. B. Legarda. Nos. 86,143–4; Apr. 16; Gaz. vol. 177; p. 765.

Cigars. B. Legarda. No. 86,308; Apr. 30; Gaz. vol. 177; p. 1292.

Cigars. L. H. Rosenberg. No. 86,334; Apr. 30; Gaz. vol. 177; p. 1293.

Cigars, cheroots, and cigarettes. Cayey-Caguas Tobacco Company. No. 86,278; Apr. 30; Gaz. vol. 177; p. 1291.

Cigars, cigarettes, and tobacco. L. Gener y Seycher. Nos. 86,339–40; Apr. 30; Gaz. vol. 177; p. 1293.

Clarets and sauternes. Cruse & Fils Freres. No. 86,283; Apr. 30; Gaz. vol. 177; p. 1291.

Cleaners, Varnish-. Cardinal Varnish Cleaner Company. No. 86,033; Apr. 9; Gaz. vol. 177; p. 519.

Cleaning pads, Cloth-. J. Thompson. No. 86,351; Apr. 30; Gaz. vol. 177; p. 1293.

Cleaning-powder. The Hygienic Products Company. No. 86,063; Apr. 9; Gaz. vol. 177; p. 520.

Cloaks and suits, Children's and misses'. E. Rosenheim's Son. No. 86,001; Apr. 2; Gaz. vol. 177; p. 237.

Clocks and watches. The Western Clock Manufacturing Co. No. 86,356; Apr. 30; Gaz. vol. 177; p. 1293.

Cloth, Waterproof. W. A. & J. C. Haartz. No. 86,054; Apr. 9; Gaz. vol. 177; p. 520.

Clothing. National Cloak & Suit Co. No. 86,222; Apr. 30; Gaz. vol. 177; p. 1292.

Clothing, Ladies' and children's. Benjamin & Johnes. No. 86,289; Apr. 30; Gaz. vol. 177; p. 1291.

Clothing, Men's, women's, and children's. H. Leurent. No. 86,229; Apr. 23; Gaz. vol. 177; p. 1039.

Coats and wraps, Men's and women's. Collins & Fairbanks Co. No. 85,947; Apr. 2; Gaz. vol. 177; p. 235.
Cocoa. Droste & Co. No. 86,288; Apr. 30; Gaz. vol. 177; p. 1291.
Coffee. Dwinell-Wright Co. No. 85,956; Apr. 2; Gaz. vol. 177; p. 235.
Coffee. W. S. Sanderson & Brother. No. 86,091; Apr. 9; Gaz. vol. 177; p. 521.
Coffee, Blended. John Hofmann & Sons Co. No. 85,966; Apr. 2; Gaz. vol. 177; p. 236.
Coffee, tea, flavoring extracts, &c. Clark & Host Co. No. 86,280; Apr. 30; Gaz. vol. 177; p. 1291.
Coffee, tea, olive-oil, and flavoring extracts, Blended. Norwine Coffee Company. No. 86,082; Apr. 9; Gaz. vol. 177; p. 520.
Collars, Horse-. Minnesota Harness Factory. No. 86,231; Apr. 23; Gaz. vol. 177; p. 1040.
Collars, underdrawers, undershirts, &c. Tim & Co. No. 86,009; Apr. 2; Gaz. vol. 177; p. 237.
Computing-machines. C. Twining. No. 86,130; Apr. 16; Gaz. vol. 177; p. 767.
Condenser-tubes. Wheeler Condenser & Engineering Co. No. 86,111; Apr. 9; Gaz. vol. 177; p. 521.
Construction material Certain. Barrett Manufacturing Company. No. 86,268; Apr. 30; Gaz. vol. 177; p. 1291.
Cordials. Dr. J. G. B. Siegert & Hijos. No. 86,097; Apr. 9; Gaz. vol. 177; p. 521.
Corset-stays. National Whalebone Co. No. 86,233; Apr. 23; Gaz. vol. 177; p. 1040.
Corset-stiffeners. Gage-Downs Company. No. 86,051; Apr. 9; Gaz. vol. 177; p. 520.
Corsets. Madame Irene. Nos. 85,969–9; Apr. 2; Gaz. vol. 177; p. 236.
Corsets. Lily of France Corset Co. No. 85,973; Apr. 2; Gaz. vol. 177; p. 236.
Corsets. R. Lithe. No. 85,974; Apr. 2; Gaz. vol. 177; p. 236.
Cotton and linen piece goods. Trippe, Barker & Co. No. 86,170; Apr. 16; Gaz. vol. 177; p. 767.
Cotton piece goods. Bates Manufacturing Company. No. 86,025; Apr. 9; Gaz. vol. 177; p. 519.
Cotton piece goods. Blackstone Mfg. Company. No. 86,026; Apr. 9; Gaz. vol. 177; p. 519.
Cotton piece goods. Hope Company. No. 86,061; Apr. 9; Gaz. vol. 177; p. 520.
Cotton piece goods. Lonsdale Company. Nos. 86,071–3; Apr. 9; Gaz. vol. 177; p. 520.
Cotton piece goods. Fall River Bleachery. No. 86,292; Apr. 30; Gaz. vol. 177; p. 1292.
Cotton piece goods. Mustard & Company. Nos. 86,316–17; Apr. 30; Gaz. vol. 177; p. 1292.
Cotton piece goods, sheetings, shirtings, and drills. Suffern & Company. No. 86,251; Apr. 23; Gaz. vol. 177; p. 1040.
Crackers. The Green & Green Company. No. 86,052; Apr. 9; Gaz. vol. 177; p. 520.
Crackers and biscuits. H. Fletcher Co. No. 86,298; Apr. 30; Gaz. vol. 177; p. 1292.
Cream, Cosmetic. E. C. Thomas. No. 86,109; Apr. 9; Gaz. vol. 177; p. 521.
Curtains, Nottingham cotton-lace. T. I. Birkin & Co. No. 86,122; Apr. 16; Gaz. vol. 177; p. 768.
Cuticle-remover, Liquid. N. Warren. No. 86,257; Apr. 23; Gaz. vol. 177; p. 1040.
Disinfectant. Farbenfabriken of Elberfeld Company. No. 86,212; Apr. 23; Gaz. vol. 177; p. 1039.
Disinfectant. L. Sonneborn Sons. No. 86,248; Apr. 23; Gaz. vol. 177; p. 1040.
Display-figures. E. T. Palmenberg. No. 86,324; Apr. 30; Gaz. vol. 177; p. 1292.
Dolls. Mitred Box Company. No. 85,960; Apr. 2; Gaz. vol. 177; p. 236.
Dresses. A. Rosenberg & Sons. No. 86,160; Apr. 16; Gaz. vol. 177; p. 766.
Dresses, Ladies' tub-. Henry A. Dix & Sons Company. No. 86,287; Apr. 30; Gaz. vol. 177; p. 1291.
Dust-cloths and broom-covers. E. J. Funk. No. 85,959; Apr. 2; Gaz. vol. 177; p. 235.
Electric apparatus and supplies, Certain. "Selas" Gesellschaft mit beschränkter Haftung. No. 86,095; Apr. 9; Gaz. vol. 177; p. 521.
Electric sockets and receptacles. Arrow Electric Company. No. 86,119; Apr. 16; Gaz. vol. 177; p. 765.
Electrical apparatus, Certain. L. H. Nielsen Company. No. 85,985; Apr. 2; Gaz. vol. 177; p. 236.
Electrical apparatus, Certain. American Electrical Heater Co. No. 86,020; Apr. 9; Gaz. vol. 177; p. 519.
Electrical apparatus, Certain. Western Electric Company. No. 86,194; Apr. 16; Gaz. vol. 177; p. 767.
Electrical conductors, Insulation for. Standard Underground Cable Company. No. 86,174; Apr. 16; Gaz. vol. 177; p. 767.
Electrical machines and supplies, Certain. Aktiebolaget Svenska Elektriska Aktiebolaget. No. 85,935; Apr. 2; Gaz. vol. 177; p. 235.
Electrical supplies, Certain. Imperial Rubber Co. No. 85,967; Apr. 2; Gaz. vol. 177; p. 236.
Embroideries. Zenith Embroidery Co. No. 86,197; Apr. 16; Gaz. vol. 177; p. 767.
Engines, Internal-combustion. The Gyro Motor Co. No. 86,217; Apr. 23; Gaz. vol. 177; p. 1039.
Fancy goods and notions, Certain. J. David. No. 86,284; Apr. 30; Gaz. vol. 177; p. 1291.
Fans for personal use. C. E. Duncan. No. 86,289; Apr. 30; Gaz. vol. 177; p. 1291.
Feed, Prepared stock. Keeton-Krueger Co. No. 86,140; Apr. 16; Gaz. vol. 177; p. 765.
Felts and papers for roofing, building, waterproofing, and insulating. Warren Chemical & Manufacturing Company. Nos. 86,191–2; Apr. 16; Gaz. vol. 177; p. 767.
Fertilizers. American Agricultural Chemical Co. Nos. 86,116–17; Apr. 16; Gaz. vol. 177; p. 765.
Flavor, Imitation maple. Closset & Devers. No. 86,120; Apr. 16; Gaz. vol. 177; p. 765.
Floor-coverings. The Corticine Floor Covering Company. No. 86,130; Apr. 16; Gaz. vol. 177; p. 765.
Flooring and flooring materials, Plastic. H. R. Graham. No. 85,963; Apr. 2; Gaz. vol. 177; p. 236.
Flour. Seaboard Flour Company. No. 86,337; Apr. 30; Gaz. vol. 177; p. 1293.
Flour and cornmeal, Wheat-. The Burrton Milling Company. No. 85,944; Apr. 2; Gaz. vol. 177; p. 235.
Flour, Wheat-. M. Forchheimer & Co. No. 85,968; Apr. 2; Gaz. vol. 177; p. 235.
Flour, Wheat-. Carlyle Milling Company. No. 86,084; Apr. 9; Gaz. vol. 177; p. 519.
Flour, Wheat-. Michigan Milling Company. No. 86,076; Apr. 9; Gaz. vol. 177; p. 520.
Flour, Wheat-. Sequin Milling & Power Co. No. 86,338; Apr. 30; Gaz. vol. 177; p. 1293.
Fly-paper, Sticky. C. H. Gehmig-Wiedlich. No. 86,063; Apr. 9; Gaz. vol. 177; p. 520.
Food, Tonic. Southall Bros. & Barclay. No. 86,240; Apr. 23; Gaz. vol. 177; p. 1040.
Foods, Certain. Kimball Bros. Co. No. 85,971; Apr. 2; Gaz. vol. 177; p. 236.
Foods, Certain. The H. D. Lee Mercantile Co. No. 86,067; Apr. 9; Gaz. vol. 177; p. 520.
Foods, Certain. The J. S. Brown & Bro. Mer. Co. Nos. 86,273–4; Apr. 30; Gaz. vol. 177; p. 1291.
Furnace and stove grates. The Long Grate Bar Company. No. 86,066; Apr. 9; Gaz. vol. 177; p. 520.
Furnaces, Heating-. Bergstrom Stove Company. No. 86,020; Apr. 9; Gaz. vol. 177; p. 519.
Furniture, Certain. G. Stickley Company. No. 86,006; Apr. 2; Gaz. vol. 177; p. 237.
Gloves. B. Altman & Co. No. 86,019; Apr. 9; Gaz. vol. 177; p. 519.
Gloves. Steinberger & Kelleher. No. 86,175; Apr. 16; Gaz. vol. 177; p. 767.
Gloves and mittens. The Dempster & Place Company. Nos. 85,951–2; Apr. 2; Gaz. vol. 177; p. 235.
Glue. Selva Waterproof Glue Co. No. 86,247; Apr. 23; Gaz. vol. 177; p. 1040.
Glue and gelatin. T. M. Duché & Sons. No. 85,955; Apr. 2; Gaz. vol. 177; p. 235.
Gravers. Hammel Riglander & Co. No. 85,995; Apr. 2; Gaz. vol. 177; p. 236.
Grease, Lubricant-. Burke Grease Co. No. 85,943; Apr. 2; Gaz. vol. 177; p. 235.
Greases, Cup-. Utah Oil Refining Company. No. 86,124; Apr. 16; Gaz. vol. 177; p. 767.
Hair, Preparation for restoring gray. Lu-E-Sa Remedy Co. No. 86,228; Apr. 23; Gaz. vol. 177; p. 1040.
Hair-remover. The Obur Company. No. 86,236; Apr. 23; Gaz. vol. 177; p. 1040.
Hair-restorer. M. Millar. No. 86,229; Apr. 23; Gaz. vol. 177; p. 1040.
Hair-tonic. M. Vandame. No. 86,255; Apr. 23; Gaz. vol. 177; p. 1040.
Hams, bacon, lard, and sausage. H. Statter. No. 86,344; Apr. 30; Gaz. vol. 177; p. 1293.
Handkerchiefs. Carter & Holmes. No. 85,945; Apr. 2; Gaz. vol. 177; p. 235.
Harness, saddles, and collars. Orman Partee Saddlery Co. No. 86,152; Apr. 16; Gaz. vol. 177; p. 766.
Hat-pins. E. E. Dunn. No. 86,290; Apr. 30; Gaz. vol. 177; p. 1291.
Hats and caps. Irving Hat Co. No. 85,970; Apr. 2; Gaz. vol. 177; p. 236.
Hats, hat-frames, muffs, and wraps, Women's. Florette. No. 86,294; Apr. 30; Gaz. vol. 177; p. 1292.
Hats, Straw. C. Lowy's Sons. No. 86,310; Apr. 30; Gaz. vol. 177; p. 1292.
Herring, Fresh. Seacoast Canning Co. No. 86,094; Apr. 9; Gaz. vol. 177; p. 521.
Horseshoe-calks. The Rowe Patent Calk Company. No. 86,335; Apr. 30; Gaz. vol. 177; p. 1293.
Hosiery. Edson, Moore & Co. No. 86,043; Apr. 9; Gaz. vol. 177; p. 519.
Hosiery. L. Kaufman. No. 86,139; Apr. 16; Gaz. vol. 177; p. 765.
Hosiery. Paramount Knitting Company. Nos. 86,326–7; Apr. 30; Gaz. vol. 177; p. 1293.
Ice-cream. P. G. Liebmann. No. 86,062; Apr. 9; Gaz. vol. 177; p. 520.
Incandescent mantles. Rheinania Glühlicht Comp. G. m. b. H. No. 86,331; Apr. 30; Gaz. vol. 177; p. 1293.
Inks, Writing-. S. S. Stafford, Inc. No. 86,171; Apr. 16; Gaz. vol. 177; p. 767.
Kerosene. Utah Oil Refining Company. Nos. 86,122–3; Apr. 16; Gaz. vol. 177; p. 767.
Knit underwear. H. Loeb & Co. No. 85,975; Apr. 2; Gaz. vol. 177; p. 236.
Labels. B. H. De Huy. No. 85,960; Apr. 2; Gaz. vol. 177; p. 235.
Lamps, Casings for. Packard Motor Car Company. No. 86,153; Apr. 16; Gaz. vol. 177; p. 766.
Leather, Sole and belting. Lees & McVitty. No. 86,066; Apr. 9; Gaz. vol. 177; p. 520.

Lime and building-plaster compositions. The Atlas Portland Cement Company. No. 85,938; Apr. 2; Gaz. vol. 177; p. 235.
Liniment. W. F. Bailey. No. 86,121; Apr. 16; Gaz. vol. 177; p. 765.
Liniment. B. C. Hall. No. 86,219; Apr. 23; Gaz. vol. 177; p. 1039.
Lye. E. Myers Lye Co. No. 86,148; Apr. 16; Gaz. vol. 177; p. 766.
Macaroni paste foods. The Cleveland Macaroni Company. No. 86,281; Apr. 30; Gaz. vol. 177; p. 1291.
Machine-tools. Wiener Machinery Co. No. 86,014; Apr. 2; Gaz. vol. 177; p. 237.
Magazine, Monthly. Ware Bros. Company. No. 86,190; Apr. 16; Gaz. vol. 177; p. 767.
Matches. Haldens Tændstikfabrik. No. 86,218; Apr. 23; Gaz. vol. 177; p. 1039.
Mattresses, couch-beds, divans, &c., Spring-. Englander Spring Bed Company. No. 86,134; Apr. 16; Gaz. vol. 177; p. 765.
Mattresses, cushions, pillows, and bedsteads. G. W. Bent Co. No. 85,940; Apr. 2; Gaz. vol. 177; p. 235.
Medicine, Certain. John Wyeth & Brother. No. 86,115; Apr. 9; Gaz. vol. 177; p. 521.
Medicine for certain children's diseases. The Babene Manufacturing Company. No. 86,023; Apr. 9; Gaz. vol. 177; p. 519.
Medicine for headaches, stomach trouble, &c. E. L. Baldwin. No. 86,024; Apr. 9; Gaz. vol. 177; p. 519.
Medicines for diseases of the skin. Corona Chemical Company. No. 86,210; Apr. 23; Gaz. vol. 177; p. 1039.
Metal-polish. The Chicago Polish Company. No. 85,946; Apr. 2; Gaz. vol. 177; p. 235.
Metal-polish. E. Brown. No. 86,127; Apr. 16; Gaz. vol. 177; p. 765.
Metal, Preparation for nickel-plating. H. P. Gorman. No. 86,215; Apr. 23; Gaz. vol. 177; p. 1039.
Metal used in castings. Ingersoll-Rand Co. No. 86,301; Apr. 30; Gaz. vol. 177; p. 1292.
Milk, Condensed. American Milk Company. No. 85,936; Apr. 2; Gaz. vol. 177; p. 235.
Milk, cream, butter, and cheese. J. R. Hatmaker. No. 86,056; Apr. 9; Gaz. vol. 177; p. 520.
Milk products in dry form. Merrell-Soule Co. No. 86,312; Apr. 30; Gaz. vol. 177; p. 1292.
Motors, motor parts, armatures, &c. Daimler-Motoren-Gesellschaft. No. 85,949; Apr. 2; Gaz. vol. 177; p. 235.
Mowing-machines. Emerson-Brantingham Company. No. 86,044; Apr. 9; Gaz. vol. 177; p. 519.
Musical instruments, Certain. The A. Schoenhut Company. No. 86,164; Apr. 16; Gaz. vol. 177; p. 766.
Newspapers and magazines. W. J. Milliken. No. 86,230; Apr. 23; Gaz. vol. 177; p. 1040.
Oil and oleo-stearin, Cooking compound containing cotton-seed. The N. K. Fairbank Company. Nos. 86,045–7; Apr. 9; Gaz. vol. 177; p. 519.
Oil, Cod-liver. H. Balshiser. No. 86,201; Apr. 23; Gaz. vol. 177; p. 1039.
Oil, Cooking-. The Texas Refining Company. No. 86,008; Apr. 2; Gaz. vol. 177; p. 237.
Oil, Cylinder-. Wm. C. Robinson & Son, Co. No. 85,998; Apr. 2; Gaz. vol. 177; p. 237.
Oil, Cylinder and engine. Wm. C. Robinson & Son, Co. No. 85,997; Apr. 2; Gaz. vol. 177; p. 236.
Oil, Engine. Wm. C. Robinson & Son, Co. No. 85,999; Apr. 2; Gaz. vol. 177; p. 237.
Oil for illuminating, heating, &c. Standard Oil Co. of New York. No. 86,018; Apr. 2; Gaz. vol. 177; p. 237.
Oil, Illuminating-. Longman & Martines. No. 86,070; Apr. 9; Gaz. vol. 177; p. 520.
Oil substitutes, Linseed-. Red Star Oil Company. No. 86,330; Apr. 30; Gaz. vol. 177; p. 1293.
Oil, Valve-. Wm. C. Robinson & Son, Co. No. 86,000; Apr. 2; Gaz. vol. 177; p. 237.
Oils, Lubricating-. Utah Oil Refining Company. No. 86,131; Apr. 16; Gaz. vol. 177; p. 767.
Oils, Lubricating-. Utah Oil Refining Company. No. 86,135; Apr. 16; Gaz. vol. 177; p. 767.
Oiled duck. Chandler Oil Cloth & Buckram Co. No. 86,128; Apr. 16; Gaz. vol. 177; p. 765.
Oleomargarin. Ammon & Person. No. 86,264; Apr. 30; Gaz. vol. 177; p. 1291.
Oranges. A. F. Young & Co. No. 86,017; Apr. 2; Gaz. vol. 177; p. 237.
Oranges, grape-fruit, lemons, tangerines, and cumquats. Florida East Coast Company. No. 86,295; Apr. 30; Gaz. vol. 177; p. 1292.
Oranges, lemons, grape-fruit, tangerines, and limes. South Lake Apopka Citrus Growers Association. No. 86,342; Apr. 30; Gaz. vol. 177; p. 1293.
Organs and pianos. Williams Organ & Piano Co. No. 86,112; Apr. 9; Gaz. vol. 177; p. 521.
Oyster-shipping cases. The Sealshipt Oyster System. Nos. 86,166–7; Apr. 16; Gaz. vol. 177; p. 766.
Oysters, Raw. W. H. McGee. No. 86,145; Apr. 16; Gaz. vol. 177; p. 765.
Packing. Peerless Rubber Manufacturing Company. No. 86,154; Apr. 16; Gaz. vol. 177; p. 766.
Packing, Certain machinery. The New Jersey Asbestos Co. No. 85,987; Apr. 2; Gaz. vol. 177; p. 236.
Paint. The Muralo Company. No. 86,147; Apr. 16; Gaz. vol. 177; p. 766.
Painters' materials, Certain. L. Sonneborn Sons. No. 86,105; Apr. 9; Gaz. vol. 177; p. 521.
Painters' materials, Certain. Union Petroleum Company. No. 86,110; Apr. 9; Gaz. vol. 177; p. 521.
Painters' materials, Certain. G. Benda. Nos. 86,203–4; Apr. 23; Gaz. vol. 177; p. 1039.
Pans, skillets, spiders, and griddles, Frying-. New York Stamping Company. No. 86,080; Apr. 9; Gaz. vol. 177; p. 520.
Paper and envelops, Letter and printing. A. O. Meyer. No. 86,075; Apr. 9; Gaz. vol. 177; p. 520.
Paper and stationery. J. C. Blair Company. Nos. 86,029–30; Apr. 9; Gaz. vol. 177; p. 519.
Paper and type-writing ribbon, Carbon-. De Fi Manufacturing Company. No. 86,286; Apr. 30; Gaz. vol. 177; p. 1291.
Paper, Corrugated. American Paper Products Company. No. 86,022; Apr. 9; Gaz. vol. 177; p. 519.
Paper food-containers. E. Brainerd. No. 86,272; Apr. 30; Gaz. vol. 177; p. 1291.
Paper roofing. Atlantic Coast Hardware Co. No. 86,200; Apr. 23; Gaz. vol. 177; p. 1039.
Paper, Sheathing-. Barrett Manufacturing Company. No. 85,939; Apr. 2; Gaz. vol. 177; p. 235.
Paper, Toilet-. Scott Paper Company. No. 86,165; Apr. 16; Gaz. vol. 177; p. 766.
Paper, Writing-. Byron Weston Company. No. 86,276; Apr. 30; Gaz. vol. 177; p. 1291.
Papers, Building, sheathing, roofing, &c. The Hydrex Felt & Engineering Company. No. 86,299; Apr. 30; Gaz. vol. 177; p. 1292.
Papers, Lining, wrapping, printing, and writing. Katahdin Pulp and Paper Company. No. 86,304; Apr. 30; Gaz. vol. 177; p. 1292.
Papers, Wall-. D. C. Davidge. No. 86,285; Apr. 30; Gaz. vol. 177; p. 1291.
Papers, Wall-. Peerless Wall Paper Manufacturing Company. No. 86,328; Apr. 30; Gaz. vol. 177; p. 1293.
Peanut-butter. B. J. Dolphin. No. 86,040; Apr. 9; Gaz. vol. 177; p. 519.
Pencils. Schwanhäusser, Late Grossberger & Kurs. No. 86,243; Apr. 23; Gaz. vol. 177; p. 1040.
Pencils, penholders, and rubber erasers. E. Faber. No. 86,291; Apr. 30; Gaz. vol. 177; p. 1292.
Percolators. The Republic Metalware Company. No. 86,087; Apr. 9; Gaz. vol. 177; p. 521.
Petticoats. National Cloak & Suit Co. No. 86,321; Apr. 30; Gaz. vol. 177; p. 1292.
Pharmaceutical preparations, Certain. Henry's Chemical Co. No. 86,058; Apr. 9; Gaz. vol. 177; p. 520.
Pharmaceutical preparation, Certain. C. R. Boyd. No. 86,126; Apr. 16; Gaz. vol. 177; p. 765.
Pharmaceutical preparation, Certain. A. Loeser. No. 86,227; Apr. 23; Gaz. vol. 177; p. 1040.
Pharmaceutical products, Certain. E. R. Squibb & Sons. No. 86,107; Apr. 9; Gaz. vol. 177; p. 521.
Photographic and kinematographic dry-plates and paper. J. E. Brandenberger. No. 85,941; Apr. 2; Gaz. vol. 177; p. 235.
Photographic developing-paper. Ansco Company. No. 86,265; Apr. 30; Gaz. vol. 177; p. 1291.
Pianos. The Rudolph Wurlitzer Co. No. 86,113; Apr. 9; Gaz. vol. 177; p. 521.
Pianos, organs, player-pianos, &c. Kreil French Piano Company. No. 86,306; Apr. 30; Gaz. vol. 177; p. 1292.
Picture machines, Moving-. Picturegraph Company. No. 86,158; Apr. 16; Gaz. vol. 177; p. 766.
Piece goods, Certain. G. J. Geer. Nos. 86,135–6; Apr. 16; Gaz. vol. 177; p. 765.
Piece goods, Certain. Kent Manufacturing Company. No. 86,226; Apr. 23; Gaz. vol. 177; p. 1039.
Pipes, Smoking-. C. Hirsch. No. 85,965; Apr. 2; Gaz. vol. 177; p. 236.
Plumbers' supplies, Certain. National Committee of the Confederated Supply Associations. No. 86,078; Apr. 9; Gaz. vol. 177; p. 520.
Plumbers' supplies, Certain. American Pin Company. No. 86,198; Apr. 23; Gaz. vol. 177; p. 1039.
Popcorn and foam candy. The Snyder-Chaffee Co. No. 86,341; Apr. 30; Gaz. vol. 177; p. 1293.
Pork, Minced. L. Burk. No. 86,276; Apr. 30; Gaz. vol. 177; p. 1291.
Pork roll. The Taylor Provision Company. No. 86,177; Apr. 16; Gaz. vol. 177; p. 767.
Powder, cream, lotion, and bath tablets, Foot. Cummings Manufacturing Company. No. 86,039; Apr. 9; Gaz. vol. 177; p. 519.
Powder, Face-. Dr. Gortz Chemical Company. No. 86,216; Apr. 23; Gaz. vol. 177; p. 1039.
Powder, rouge, and face-cream, Tooth and talcum. Rubisco Company. No. 86,241; Apr. 23; Gaz. vol. 177; p. 1040.
Powders, Foot-. G. A. Reynolds. No. 86,239; Apr. 23; Gaz. vol. 177; p. 1040.
Preparation for preventing hardening of the arteries. Carl Weinreben Fabrik Pharmaceutischer Präparate. No. 86,258; Apr. 23; Gaz. vol. 177; p. 1040.
Purgative. L. Hermann. No. 86,223; Apr. 23; Gaz. vol. 177; p. 1039.
Raisins. Rosenberg Bros. & Co. Nos. 86,089–90; Apr. 9; Gaz. vol. 177; p. 521.
Ranges, heating-stoves, and hot-air furnaces, Cooking-. H. N. Clark Co. No. 86,033; Apr. 9; Gaz. vol. 177; p. 519.

Raw or partly-prepared materials, Certain. F. & J. Meyer. No. 86,314; Apr. 30; Gaz. vol. 177; p. 1292.
Razors. Durham Duplex Razor Company. No. 86,041; Apr. 9; Gaz. vol. 177; p. 519.
Remedies for coughs, headache, corns, &c. J. B. Scureman. No. 86,244; Apr. 23; Gaz. vol. 177; p. 1040.
Remedies for grippe and influenza. C. W. Holzhauer. No. 86,060; Apr. 9; Gaz. vol. 177; p. 520.
Remedy for certain ailments. John Wyeth & Brother. No. 86,114; Apr. 9; Gaz. vol. 177; p. 521.
Remedy for certain diseases. J. Boyd. No. 86,125; Apr. 16; Gaz. vol. 177; p. 765.
Remedy for certain diseases. P. Parnitsky. No. 86,237; Apr. 23; Gaz. vol. 177; p. 1040.
Remedy for coughs, colds, nervousness, and consumptives. W. P. Ward. No. 86,189; Apr. 16; Gaz. vol. 177; p. 767.
Remedy for diseases of the feet and a deodorizer. G. M. Budd. No. 86,031; Apr. 9; Gaz. vol. 177; p. 519.
Remedy for gonorrhea. W. Silverman. No. 86,245; Apr. 23; Gaz. vol. 177; p. 1040.
Remedy for pneumonia, bronchitis, &c. J. B. Cox. No. 86,037; Apr. 9; Gaz. vol. 177; p. 519.
Remedy for rheumatism, sciatic pains, &c. G. H. Henson. No. 86,222; Apr. 23; Gaz. vol. 177; p. 1039.
Remedy for stomach diseases. G. A. Johnson. No. 86,224; Apr. 23; Gaz. vol. 177; p. 1039.
Remedy for sweaty, swollen, &c., feet. C. I. Stephens. No. 86,250; Apr. 23; Gaz. vol. 177; p. 1040.
Remedy, Headache. Kirshner & Berman. No. 86,142; Apr. 16; Gaz. vol. 177; p. 765.
Remedy, Tapeworm. Chemische Fabrik Helfenberg A. G. vorm. Eugen Dieterich. No. 86,035; Apr. 9; Gaz. vol. 177; p. 519.
Ribbons. The Nonotuck Silk Company. No. 86,081; Apr. 9; Gaz. vol. 177; p. 520.
Ribbons, Silk. Virginia Silk Co. No. 86,011; Apr. 2; Gaz. vol. 177; p. 237.
Rice. Seaboard Rice Milling Co. No. 86,093; Apr. 9; Gaz. vol. 177; p. 521.
Rodent-traps. C. S. Schmidt, Drahtgewebe und Geflechtewerke. No. 86,162; Apr. 16; Gaz. vol. 177; p. 766.
Rodent-traps. C. S. Schmidt. No. 86,163; Apr. 16; Gaz. vol. 177; p. 766.
Rosin employed as paper-size. Arabol M'f'g. Co. No. 86,199; Apr. 23; Gaz. vol. 177; p. 1039.
Rubber hose, packing, and belts and non-metallic tires. Bowers Rubber Works. No. 86,124; Apr. 16; Gaz. vol. 177; p. 765.
Salve and a remedy for seasickness. W. F. Worthington. No. 86,260; Apr. 23; Gaz. vol. 177; p. 1040.
Salves. F. P. Simpson. No. 86,246; Apr. 23; Gaz. vol. 177; p. 1040.
Sapphires, White. F. E. Lester. No. 86,309; Apr. 30; Gaz. vol. 177; p. 1292.
Saws, knives, and machetes. E. C. Atkins & Company. No. 86,120; Apr. 16; Gaz. vol. 177; p. 765.
Seals, Metallic bottle-. Star Seal Company. No. 86,172; Apr. 16; Gaz. vol. 177; p. 767.
Sedative, antispasmodic, &c. J. B. Daniel. No. 86,211; Apr. 23; Gaz. vol. 177; p. 1039.
Shirts. New Columbia Shirt Company. No. 86,150; Apr. 16; Gaz. vol. 177; p. 766.
Shoes and parts thereof. Thomas G. Plant Company. No. 85,992; Apr. 2; Gaz. vol. 177; p. 236.
Silk piece goods. The New York Skirt Co. No. 86,151; Apr. 16; Gaz. vol. 177; p. 766.
Silk shirtings. Finn and Meyers. No. 86,213; Apr. 23; Gaz. vol. 177; p. 1039.
Sleds, Children's. York Novelty Co. No. 86,016; Apr. 2; Gaz. vol. 177; p. 237.
Soap. Geo. Borgfeldt & Co. No. 86,123; Apr. 16; Gaz. vol. 177; p. 765.
Soap. A. A. Vantine & Co. No. 86,186; Apr. 16; Gaz. vol. 177; p. 767.
Soap. J. M. Grosvenor & Co. No. 86,296; Apr. 30; Gaz. vol. 177; p. 1292.
Soap, Antiseptic. J. W. Thomas. No. 86,350; Apr. 30; Gaz. vol. 177; p. 1293.
Soups, butter, preserved and canned vegetables. Merrell-Soule Co. No. 86,313; Apr. 30; Gaz. vol. 177; p. 1292.
Speed-indicating instruments. Stewart & Clark Manufacturing Company. No. 86,005; Apr. 2; Gaz. vol. 177; p. 237.
Stamps, Trading-. A. H. Hansen. No. 86,220; Apr. 23; Gaz. vol. 177; p. 1039.
Stationery supplies, Certain. J. C. Blair Company. No. 86,270; Apr. 30; Gaz. vol. 177; p. 1291.
Stationery supplies, Certain. The O. K. Manufacturing Company. No. 86,323; Apr. 30; Gaz. vol. 177; p. 1292.
Steel and anvils, Tool-. Söderfors Bruks Aktiebolag. No. 86,102; Apr. 9; Gaz. vol. 177; p. 521.
Steel castings, Manganese-. Edgar Allen American Manganese Steel Company. No. 86,261; Apr. 30; Gaz. vol. 177; p. 1291.
Steel forgings, castings, and bars. A. P. Witteman Company. No. 86,357; Apr. 30; Gaz. vol. 177; p. 1293.
Steel-tempering preparation. E. Reaves. No. 86,086; Apr. 9; Gaz. vol. 177; p. 521.
Steel, Tool-. Söderfors Bruks Aktiebolag. Nos. 86,099–101; Apr. 9; Gaz. vol. 177; p. 521.
Steel, Tool-. Söderfors Bruks Aktiebolag. No. 86,103; Apr. 9; Gaz. vol. 177; p. 521.
Stones, Artificial building-. Kingstone Ornamental & Construction Company. No. 86,141; Apr. 16; Gaz. vol. 177; p. 765.
Sugar and cane-syrup, Compound of maple-. C. M. Tice. No. 86,178; Apr. 16; Gaz. vol. 177; p. 767.
Sugar, cane-sugar, and corn-syrup, Mixture of maple-. St. Paul Syrup Refining Company. No. 86,345; Apr. 30; Gaz. vol. 177; p. 1293.
Suits and overcoats, Men's. E. R. Smith & Co. No. 86,098; Apr. 9; Gaz. vol. 177; p. 521.
Suits, Children's outer. Sackman Brothers Company. No. 86,003; Apr. 2; Gaz. vol. 177; p. 237.
Suits, Outer. Earnsdale Worsted Company. No. 86,042; Apr. 9; Gaz. vol. 177; p. 519.
Suits, Union. M. M. Henderson. No. 86,138; Apr. 16; Gaz. vol. 177; p. 765.
Surgical appliances. Rothschild, Meyers & Co. No. 86,240; Apr. 23; Gaz. vol. 177; p. 1040.
Syringes and surgical thermometers, Hypodermic. Schmidt & Ade. No. 86,336; Apr. 30; Gaz. vol. 177; p. 1293.
Syrup, Compound of corn and sugar. Corn Products Refining Company. No. 85,948; Apr. 2; Gaz. vol. 177; p. 235.
Tablet, Laxative. The Sulfosol Co. No. 86,252; Apr. 23; Gaz. vol. 177; p. 1040.
Tablets, Laxative. E. H. Wagner. No. 86,256; Apr. 23; Gaz. vol. 177; p. 1040.
Tapes and parts thereof, Steel. The Standard Rule Co. No. 86,173; Apr. 16; Gaz. vol. 177; p. 767.
Tea. H. Hamstra & Co. No. 86,297; Apr. 30; Gaz. vol. 177; p. 1292.
Tea and coffee. Royal Tea Company. No. 86,161; Apr. 16; Gaz. vol. 177; p. 766.
Teeth, Cement for filling. Richter & Hoffmann The Harvard Dental Manufacturing Company Gesellschaft mit beschränkter Haftung. No. 86,333; Apr. 30; Gaz. vol. 177; p. 1293.
Textiles, Composition to finish or dress. Dr. Fritz Müller, Basler chemisch-technisches Laboratorium. No. 86,232; Apr. 23; Gaz. vol. 177; p. 1040.
Thread, Compound for the perservation of. H. A. Bates. No. 86,202; Apr. 23; Gaz. vol. 177; p. 1039.
Thread, Cotton and mercerised. I. J. Silverstein. No. 86,169; Apr. 16; Gaz. vol. 177; p. 766.
Tires, covers, and treads, Pneumatic. A. Aschérl. No. 85,937; Apr. 2; Gaz. vol. 177; p. 235.
Tires, Elastic. C. F. Wren. No. 86,196; Apr. 16; Gaz. vol. 177; p. 767.
Tires, Elastic vehicle-. The Goodyear Tire and Rubber Company. No. 86,137; Apr. 16; Gaz. vol. 177; p. 765.
Tires, Rubber automobile-. McGraw Tire & Rubber Company. No. 85,979; Apr. 2; Gaz. vol. 177; p. 236.
Tobacco, Chewing and smoking. Vogt-Applegate Co. No. 86,187; Apr. 16; Gaz. vol. 177; p. 767.
Tobacco, Smoking-. The Governor and Company of Adventurers of England Trading into Hudson's Bay. No. 85,962; Apr. 2; Gaz. vol. 177; p. 235.
Toilet preparation, powder, and cream. H. Swift. No. 86,176; Apr. 16; Gaz. vol. 177; p. 767.
Tonic beverage. I. Miller. No. 86,315; Apr. 30; Gaz. vol. 177; p. 1292.
Tonic, Nerve and tissue. The Vanadium Chemical Co. No. 86,253; Apr. 23; Gaz. vol. 177; p. 1040.
Toothpicks. International Mfg. Co. No. 86,302; Apr. 30; Gaz. vol. 177; p. 1292.
Toys, Certain. E. P. Lehmann. No. 85,972; Apr. 2; Gaz. vol. 177; p. 236.
Trousers, coats, overalls, and outer shirts. Peerless Overall Co. No. 85,990; Apr. 2; Gaz. vol. 177; p. 236.
Turpentine and linseed-oil substitutes. Petroleum Products Co. No. 85,991; Apr. 2; Gaz. vol. 177; p. 236.
Twine and cord. The A. H. Hart Co. No. 86,221; Apr. 23; Gaz. vol. 177; p. 1039.
Twist-drills. The Whitman & Barnes Manufacturing Co. No. 86,259; Apr. 23; Gaz. vol. 177; p. 1040.
Type-writing-machine attachment, Certain automatic. American Feedograph Company. No. 86,021; Apr. 9; Gaz. vol. 177; p. 519.
Type-writing machines and parts thereof. Standard Typewriter Company. No. 86,343; Apr. 30; Gaz. vol. 177; p. 1293.
Undershirts and drawers. T. Silberman. No. 86,168; Apr. 16; Gaz. vol. 177; p. 766.
Underwear, Men's. A. Kuehnert & Co. No. 86,307; Apr. 30; Gaz. vol. 177; p. 1292.
Varnish. New Jersey Wood Finishing Co. No. 86,079; Apr. 9; Gaz. vol. 177; p. 520.
Vehicles, Certain. A. Saurer. No. 86,242; Apr. 23; Gaz. vol. 177; p. 1040.
Veiling. S. Hollander & Son. No. 86,059; Apr. 9; Gaz. vol. 177; p. 520.
Veilings, nettings, malines, and veils. Steiner, Rosenstein & Traub. No. 86,109; Apr. 9; Gaz. vol. 177; p. 521.
Vises. Prentiss Vise Company. No. 85,998; Apr. 2; Gaz. vol. 177; p. 236.
Washing-machines. H. Budd. No. 85,942; Apr. 2; Gaz. vol. 177; p. 235.
Washing-machines. National Sewing Machine Company. No. 85,966; Apr. 2; Gaz. vol. 177; p. 236.
Watches and parts of watches. Waltham Watch Company. No. 86,188; Apr. 16; Gaz. vol. 177; p. 767.

Watches and watchcases. Bach & Company. No. 86,267; Apr. 30; Gaz. vol. 177; p. 1291.
Water, Bottled drinking-. J. G. Burton. No. 86,206; Apr. 23; Gaz. vol. 177; p. 1039.
Water, Natural spring-. The De Soto Mineral Spring Company. No. 85,983; Apr. 2; Gaz. vol. 177; p. 235.
Waters, Natural mineral. Compagnie Fermière de l'Établissement Thermal de Vichy. Nos. 86,208–9; Apr. 23; Gaz. vol. 177; p. 1039.
Whisky. James Watson & Company. No. 86,355; Apr. 30; Gaz. vol. 177; p. 1293.
Wine. California Wine Association. No. 86,032; Apr. 9; Gaz. vol. 177; p. 519.
Wire, Iron and steel. Negretti & Zambra. No. 86,234; Apr. 23; Gaz. vol. 177; p. 1040.
Yarn, Woolen. Norddeutsche Wollkämmerei & Kammgarnspinnerei. No. 85,989; Apr. 2; Gaz. vol. 177; p. 236.

ALPHABETICAL LIST OF LABELS.

"Black Shield." (For Cigars.) A. C. Herschel & Co. No. 16,283; Apr. 16; Gaz. vol. 177; p. 768.
"Blue Ribbon Milk Fail." (For Milk-Fails.) C. S. Moore. No. 16,269; Apr. 2; Gaz. vol. 177; p. 238.
"Canaday's Weed Killer." (For Weed-Killer.) A. M. Canaday. No. 16,297; Apr. 23; Gaz. vol. 177; p. 1041.
"Certain-teed Roofing." (For Roofing Materials.) General Roofing Manufacturing Company. No. 16,287; Apr. 16; Gaz. vol. 177; p. 768.
"Convalescent Rye Whiskey." (For Rye Whisky.) F. Schwarz. No. 16,303; Apr. 23; Gaz. vol. 177; p. 1041.
"Dodson's Liver Tonic." (For a Medicinal Preparation.) J. G. Dodson. No. 16,313; Apr. 30; Gaz. vol. 177; p. 1294.
"El Favo." (For Cigars.) C. B. Henschel Mfg. Co. No. 16,285; Apr. 16; Gaz. vol. 177; p. 768.
"El Ginero." (For Cigars.) C. B. Henschel Mfg. Co. No. 16,273; Apr. 9; Gaz. vol. 177; p. 522.
"El Merito." (For Blended Coffee.) The Dean Lilly Coffee and Spice Co. No. 16,312; Apr. 30; Gaz. vol. 177; p. 1294.
"Getthin's Selto." (For Prepared Salt.) M. Mengis. No. 16,268; Apr. 2; Gaz. vol. 177; p. 238.
"Gold Seal." (For Oranges.) A. Strachan. No. 16,290; Apr. 16; Gaz. vol. 177; p. 768.
"Golden Anchor." (For Cigars.) Boener Bros. No. 16,296; Apr. 23; Gaz. vol. 177; p. 1041.
"Gottmann & Kretchmer, Chicago, U. S. A." (For Chocolate.) Gottmann & Kretchmer. No. 16,288; Apr. 16; Gaz. vol. 177; p. 768.
"Hallmark Color Fast Warranty Bond." (For Shirts.) Hall Hartwell & Company. No. 16,316; Apr. 30; Gaz. vol. 177; p. 1294.
"High Ball Lithiated." (For Ginger-Ale.) J. P. & E. V. Hax. No. 16,261; Apr. 2; Gaz. vol. 177; p. 238.
"Home Brand." (For Sliced Oranges.) Growers Home Canning Company. No. 16,315; Apr. 30; Gaz. vol. 177; p. 1294.
"Horse Shoe Grist Mill Cereal, The Finest of the Wheat. Natural Colour." (For Cereal.) Horse Shoe Grist Mill. No. 16,262; Apr. 2; Gaz. vol. 177; p. 238.
"Horse Tonic." (For Horse-Tonic.) J. C. Edwards. No. 16,299; Apr. 23; Gaz. vol. 177; p. 1041.
"Hunt's Staple Quality." (For California Fruits.) Hunt Brothers Company. No. 16,263; Apr. 2; Gaz. vol. 177; p. 238.
"Hunt's Superior Quality." (For California Fruits.) Hunt Brothers Company. No. 16,264; Apr. 2; Gaz. vol. 177; p. 238.
"Hunt's Supreme Quality." (For California Fruits.) Hunt Brothers Company. No. 16,265; Apr. 2; Gaz. vol. 177; p. 238.
"James Stuart." (For Cigars.) F. Bolano & Co. No. 16,314; Apr. 30; Gaz. vol. 177; p. 1294.
"Kaiser Club." (For Cigars.) The Moehle Lithographic Company. No. 16,278; Apr. 9; Gaz. vol. 177; p. 522.
"Kesert Gyogy Bor." (For Bitters.) F. Schwarz. No. 16,304; Apr. 23; Gaz. vol. 177; p. 1041.
"King Rags." (For Cigars.) R. Whiteley, Jr. No. 16,294; Apr. 16; Gaz. vol. 177; p. 768.
"Kirst's J & L Special." (For Cigars.) C. and L. Kirst. No. 16,284; Apr. 16; Gaz. vol. 177; p. 768.
"Landseer." (For Cigars.) C. B. Henschel Mfg. Co. No. 16,298; Apr. 23; Gaz. vol. 177; p. 1041.
"Lotus Chocolates Lotus Beauty." (For Chocolates.) The D. J. Ryan Co. No. 16,276; Apr. 9; Gaz. vol. 177; p. 522.
"Lowney's Chocolates and Bonbons." (For Chocolates and Bonbons.) The Walter M. Lowney Company. Nos. 16,291–3; Apr. 16; Gaz. vol. 177; p. 768.
"Luncheon Biscuit." (For Biscuits or Crackers.) Grocers' Biscuit Company. No. 16,275; Apr. 9; Gaz. vol. 177; p. 522.
"Marvelous Cleaner." (For Disinfecting-Cleaner.) M. J. Dunn. No. 16,274; Apr. 9; Gaz. vol. 177; p. 522.
"Mary Ann." (For Bleached Cotton.) J. M. Robinson, Norton & Co. No. 16,277; Apr. 9; Gaz. vol. 177; p. 522.
"Mathues Brothers Maat." (For Cigarettes.) W. F. Mathues. No. 16,267; Apr. 2; Gaz. vol. 177; p. 238.
"McBrady's Beauty Cake." (For Complexion-Cream.) J. E. McBrady. No. 16,301; Apr. 23; Gaz. vol. 177; p. 1041.
"McDuff's Malt Whiskey." (For Malt Whiskies.) McDuff Mercantile Co. No. 16,302; Apr. 23; Gaz. vol. 177; p. 1041.
"Neverust." (For Carpet-Tacks.) The Crossman Tack Company. No. 16,311; Apr. 30; Gaz. vol. 177; p. 1294.
"No. 910 Ushco." (For Hames.) U. S. Hame Company. No. 16,308; Apr. 23; Gaz. vol. 177; p. 1041.
"No. 920 Ushco." (For Hames.) U. S. Hame Company. No. 16,307; Apr. 23; Gaz. vol. 177; p. 1041.
"Old Age." (For Beer.) Jetter Brewing Company. No. 16,317; Apr. 30; Gaz. vol. 177; p. 1294.
"Old Dyer." (For Whisky.) Self & Binswanger. No. 16,305; Apr. 23; Gaz. vol. 177; p. 1041.
"Palmer's Alpean Chocolates." (For Chocolates.) Palmer & Co. No. 16,270; Apr. 2; Gaz. vol. 177; p. 238.
"Pan-A-Ma Mintos." (For Confection.) L. Demartine Supply Co. No. 16,318; Apr. 30; Gaz. vol. 177; p. 1294.
"Pederika." (For Antiseptic Powder for the Feet.) L. M. Tebbel. No. 16,306; Apr. 23; Gaz. vol. 177; p. 1041.
"Persian Balm." (For a Skin-Tonic.) Adrian & Venn Co. No. 16,309; Apr. 30; Gaz. vol. 177; p. 1294.
"Private Stock." (For Cigars.) American Lithographic Company. No. 16,310; Apr. 30; Gaz. vol. 177; p. 1294.
"Pure White Paste Many-Cell Jar." (For Paste.) National Gum & Mica Company. No. 16,319; Apr. 30; Gaz. vol. 177; p. 1294.
"Rapid Copper Powder." (For Metal and Marble Polish.) A. T. Schlichting. No. 16,279; Apr. 9; Gaz. vol. 177; p. 522.
"Red Devil Lye." (For Lye.) W. Schield. No. 16,272; Apr. 2; Gaz. vol. 177; p. 238.
"Rubi-Lyptol." (For a Nose and Throat Spray.) Maidehyde Chemical Company. No. 16,266; Apr. 2; Gaz. vol. 177; p. 238.
"Schühle's Pure Grape Juice." (For Grape-Juice.) Schühle's Pure Grape Juice Co. No. 16,320; Apr. 30; Gaz. vol. 177; p. 1294.
"Silver Seal." (For Oranges.) A. Strachan. No. 16,289; Apr. 16; Gaz. vol. 177; p. 768.
"Slick Hand Cleaner Powder." (For Powder for Cleaning the Hands.) A. T. Schlichting. No. 16,271; Apr. 2; Gaz. vol. 177; p. 238.
"Sparkling Fizz." (For Non-Alcoholic Beverage.) Liquid Food Bottling Company. No. 16,300; Apr. 23; Gaz. vol. 177; p. 1041.
"Tenforone." (For Calcimine.) The A. Wilhelm Company. No. 16,295; Apr. 23; Gaz. vol. 177; p. 1041.
"Thomson Rivets." (For Rivets.) Edwin B. Stimpson Company. No. 16,260; Apr. 2; Gaz. vol. 177; p. 238.
"Tubular Rivets." (For Tubular Rivets.) Edwin B. Stimpson Company. No. 16,286; Apr. 16; Gaz. vol. 177; p. 768.
"Vegetable Salad." (For Vegetable Salad.) Vegetable Food Co. No. 16,280; Apr. 9; Gaz. vol. 177; p. 522.

PRINTS.

"Campbell's Soup." (For Soups.) Joseph Campbell Company. Nos. 2,995–3,006; Apr. 23; Gaz. vol. 177; p. 1041.
"Colspirin." (For Tablets for Grippe.) Maidehyde Chemical Company. No. 3,008; Apr. 23; Gaz. vol. 177; p. 1041.
"Cream of Wheat for 'Sail.'" (For Wheat Breakfast Food.) Cream of Wheat Co. No. 2,990; Apr. 16; Gaz. vol. 177; p. 768.
"Crème Elcaya." (For a Toilet Preparation.) The W. F. Powers Company. No. 3,013; Apr. 23; Gaz. vol. 177; p. 1041.
"Drink Coca-Cola." (For Coca-Cola.) The Coca-Cola Bottling Co. No. 2,989; Apr. 16; Gaz. vol. 177; p. 768.
"Drink Pepsi-Cola." (For Pepsi-Cola.) The Pepsi-Cola Company. No. 2,983; Apr. 2; Gaz. vol. 177; p. 238.
"Dryfoot." (For Hosiery.) The Norfolk Hosiery and Underwear Mills Co. No. 3,011; Apr. 27; Gaz. vol. 177; p. 1041.
"For Men and Young Men Curlee Clothes Are Always Right." (For Clothes.) Curlee Clothing Co. No. 2,991; Apr. 16; Gaz. vol. 177; p. 768.
"Hysterone." (For Uterine Sedative.) Maidehyde Chemical Company. No. 3,007; Apr. 23; Gaz. vol. 177; p. 1041.
"Kebp." (For Ketterer's Excelsior Blood-Purifier.) The F. W. Ketterer Medicine Co. No. 2,981; Apr. 2; Gaz. vol. 177; p. 238.
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